



Fluid Control Solenoid Valves for Process Market



ENGINEERING YOUR SUCCESS.



The FCSE 1121UK Catalogue is a selection of Parker FCSE products dedicated to Process applications. General catalogue FCSE 0121UK is also available and contains a comprehensive list of Parker Fluid Control Products for other markets and general purpose applications.



WARNING - USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

- This document and other information from Parker-Hannifin Corporation, its subsidiaries and authorized distributors provide product or system options for further investigation by users having technical expertise.
- The user, through its own analysis and testing, is solely responsible for making the final selection of the system and components and assuring that all performance, endurance, maintenance, safety and warning requirements of the application are met. The user must analyze all aspects of the application, follow applicable industry standards, and follow the information concerning the product in the current product catalog and in any other materials provided from Parker or its subsidiaries or authorized distributors.
- To the extent that Parker or its subsidiaries or authorized distributors provide component or system options based upon data or specifications provided by the user, the user is responsible for determining that such data and specifications are suitable and sufficient for all applications and reasonably foreseeable uses of the components or systems.

PARKER FCSE

Who we are?

The Fluid Control Solution Europe (FCSE) is a Business Unit of Parker Hannifin, the global leader in motion and control technologies.

Our core competence is the development and manufacturing of an extremely diverse range of fluid control products, including solenoid valves and pressure regulators.

Where we are?

Our European headquarters are located in Gessate (Milan-Italy), this is also where our R&D, Marketing, Application Support and Product Management functions are located.

Our Products are mainly manufactured in Gessate (Milan - Italy). The Parker Sales Companies and comprehensive distribution network support you, wherever you are.

History

Parker FCSE has been a leading player in the manufacturing and development of solenoid valve technologies for over 60 years, with continuous research and development bringing innovative solutions to the marketplace, for example leading the way in the utilisation of synthetic ruby for critical water applications or the unsurpassed reliability and precision of our pressure regulators. The expertise accumulated and developed through the years is evident in the superior quality of our solutions.

Markets

Our products are typically designed for markets including Industrial Equipment, Industrial Automation, Mobile, Transportation, Life Sciences, Food & Beverage and for Fluid and Process Control.

Benefits

The modular concept of our products, having separate solenoid valves and electrical parts, provides the customer with increased flexibility by allowing numerous combinations. This additional flexibility can enable distributors to greater reduce valve inventory levels, whilst retaining the same number of capabilities. Parker also has unrivalled experience in developing customised product solutions complying with the highest technical, environmental, energy and service life requirements.



PARKER FCSE - MILAN - ITALY



FLUID CONTROL SOLENOID VALVES FOR PROCESS MARKET

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3 & 5 WAY VALVES NAMUR DIRECT OPERATED

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MARKETS AND APPLICATIONS

PROCESS MARKET

The process market covers many different type of industries. Usually these industries prepare or modify raw materials, using different kind of processes.

The raw materials are very diverse, they can be gases, liquids, powders , fibers.

These material flow through process valves, that are controlled by pneumatic actuators, themselves operated by solenoid valves.



PROCESS INDUSTRIES

The industries covered are also very diverse: chemical and petrochemical, power generation, oil & gas, water & sewage, pulp & paper, food industry & pharmaceutical industry.

Plants can be indoor or outdoor, onshore or off shore, operating in harsh environments, with hazardous or safe areas.





PILOT VALVES

All these industries require valves that are efficient and reliable to control their process.

That is why we have designed a range of dedicated pilot valves that meetg all the requirements of the market.

This catalogue brings together the product we can offer: in order to help the customer to define and choose the right product for their application.



MARKETS AND APPLICATIONS

APPLICATIONS

The Primary application is pneumatic actuator control. Depending on the actuator type, the pilot valve required can be directly mounted on the actuator, following the NAMUR standard (VDI/VDE 3845), or externally connected to the actuator (piped valves).

The majority of pilot valves have a spring return, or fail safe, function.

For some specific applications, bistable valves are also available.



Our products can also be used in other applications such as; HVAC equipment, wellhead control panels, sampling and analyzing, fire dampers control.



BENEFITS

- Every valve body conforms to Mechanical ATEX EN 13 463-1 & 5
- Wide range of combinations valve + coil are SIL3 capable according IEC 61508 and can be used as safety valves
- ATEX electrical parts comply to European directive ATEX 2014/34/EU
- Majority of ATEX electrical parts comply to ATEX international scheme IECEx
- Electrical parts are modular: a coil can be disassembled from a valve very quickly, which is an advantage when the products have been installed, making service and maintenance simple.
- A single valve is able to receive different types of coils, including ATEX, which helps reduction of inventory for end users or distributors
- A coil or a valve can be ordered separately and assembled later by end users or distributors
- Material traceability certificate is available for Offshore applications



A MODULAR CONCEPT FOR EVERY APPLICATION

CHOOSE BETWEEN:

Actuation Modes

- Direct Operated
- Pilot Operated
- Manual Reset
- Externally Operated

Material Types

- Brass
- 303 Stainless St.
- 316L Stainless St.
- Anodized Aluminium
- POM

Mounting Solutions

- Pipe
- Sub-base
- ISO
- Banjo
- NAMUR

Control Functions

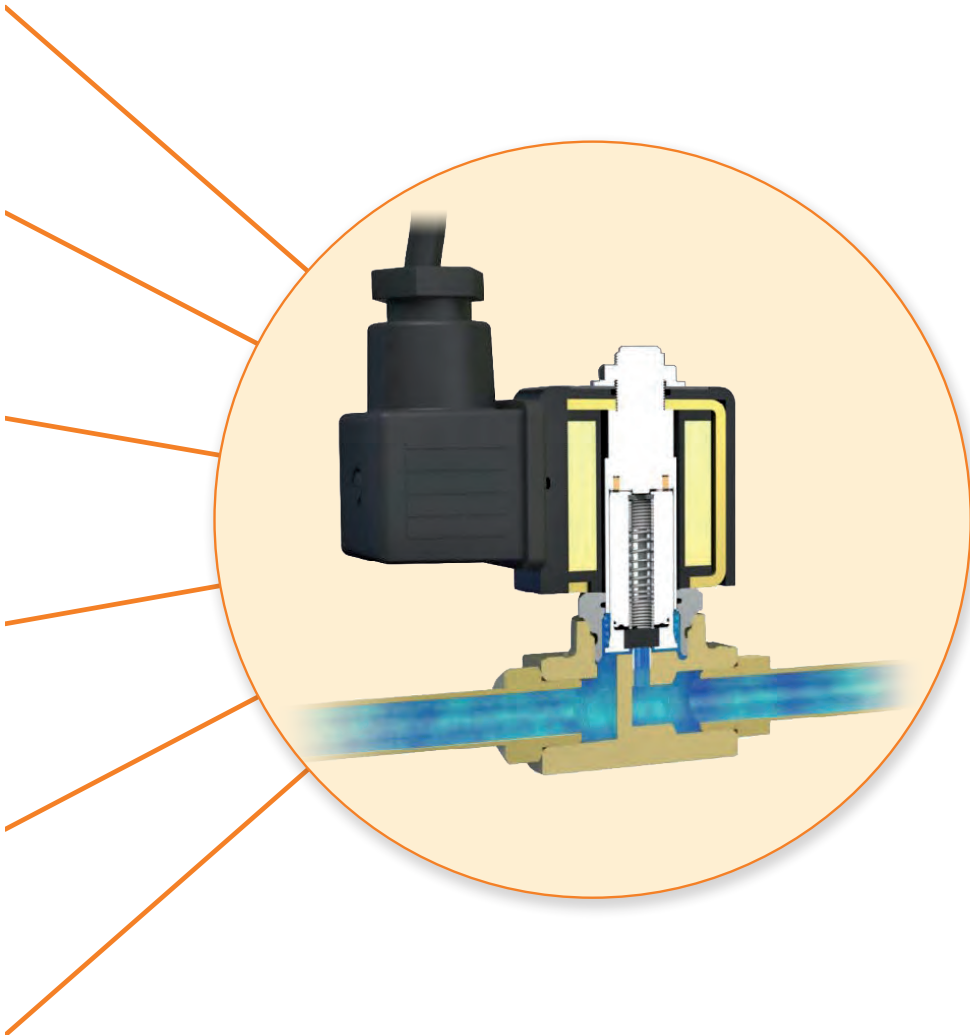
- Normally Closed
- Normally Open
- Universal
- Control by Electric Impulse
- Dual Solenoids

Internal Design

- Piston
- Poppet
- Diaphragm
- Spool

Seals

- FKM
- NBR
- EPDM
- Ruby
- PUR
- PCTFE...




ATEX CERTIFICATION



ELECTRICAL PART ATEX CERTIFICATION

A selection of electrical parts conform to the terms of the 2014/34/EU directive and are made for potentially explosive environments - zone 0/20, 1/21 and 2/22.


Within the coil section, the presence of the ATEX logo  shows that the coil is ATEX approved.

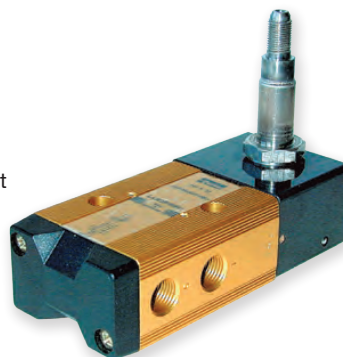


MECHANICAL PART ATEX CERTIFICATION

A selection of mechanical parts conform to the terms of the 2014/34/EU directive specific to non electrical equipment for use within potentially explosive environments - zones 0/20, 1/21 and 2/22.

NAMUR & piped valve ranges now include a marking which indicates mechanical ATEX approval.

Within the valve section, the presence of the ATEX logo  shows that the valve is ATEX approved.

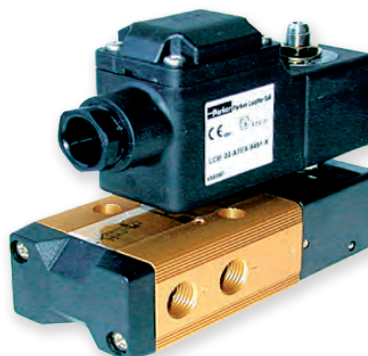


SOLENOID VALVE CERTIFICATION

When both the electrical and mechanical part are ATEX approved, the solenoid valve can be used in explosive atmospheres.

The solenoid valve will be delivered assembled and tested.

(Parker does not take the responsibility of assembly operations performed outside Parker plants)



PARKER FCSE IS MEETING WORLD CLASS STANDARDS

QUALITY STANDARDS

- ISO 9001
- ISO 14001
- OHSAS 18001

CERTIFICATIONS AND APPROVALS

Our products have been approved and are compliant with the relevant market requirements including:



- | | |
|-----------|----------|
| ● CE | ● AGA |
| ● ATEX | ● NEPSI |
| ● RoHS | ● KOSHA |
| ● UL | ● IMQ |
| ● REACH | ● NSF |
| ● IECEX | ● VDE |
| ● CSA | ● EX EAC |
| ● DIN-TUV | |



EXPLOSIVE ENVIRONMENTS



INTRODUCTION

The current European Directive concerning equipment to be installed in potentially explosive atmospheres is **2014/34/EU**. It came into force on April 19th, **2016**. With respect to the previous version, it implies the switching from EC to EU Declarations of Conformity and Type Examination Certificates; moreover, it better defines the manufacturer's, importer's and distributor's responsibilities.

Electrical and mechanical equipment for use in potentially explosive atmospheres is certified by a notified body in accordance to the relevant European technical standards concerning each protection mode (m, d, e, i, n, t, h), EN 60079-0 etc. After certification project completion, and EU Type Examination Certificate is released, entitling it to carry the distinctive marking.

EUROPEAN MEMBER COUNTRIES





DEFINITIONS

EXPLOSIVE ENVIRONMENTS

Mixture with air, under atmospheric conditions, of flammable substances in the form of gases, vapours, mists or dusts in which, after combustion has occurred, combustion spreads to the entire unburned mixture.

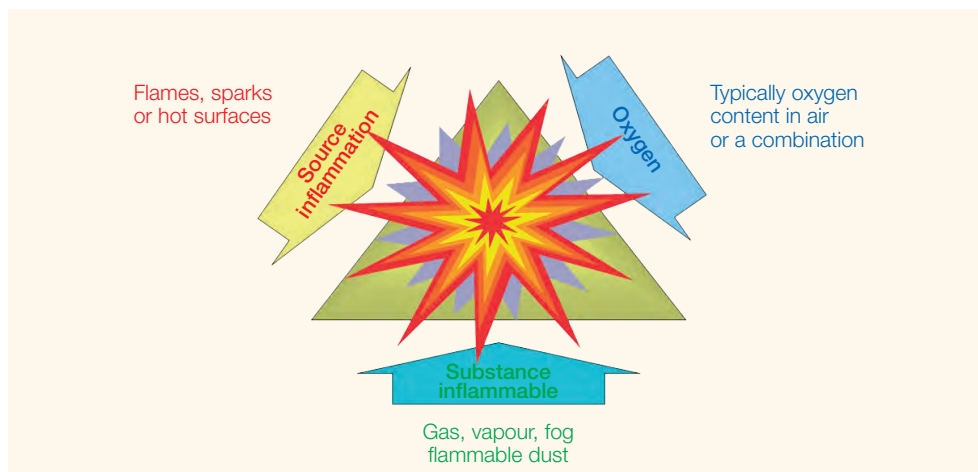
HAZARDOUS AREAS

A hazardous area is an area in which an explosive gas environment is present, or may be expected to be present, in quantities such as to require special precautions for construction, installation and use of electrical apparatus.

INGREDIENTS FOR AN EXPLOSION

- When combustible materials are mixed with air, an explosive mixture is produced. Danger of explosion therefore exists wherever these hazardous materials are handled: such a condition is to be found on the biggest chemical plant as well as at the smallest filling station.
- Nowadays with the use of electronic and electrical instrumentation in process control, the risk of combustion by electrical energy has increased sharply.
- To protect personnel and expensive equipment special precautions should be taken to prevent combustion of those dangerous substances. Conditions likely to ignite explosive mixtures are as follows:

Three conditions are enough to create an explosion.



EXPLOSIVE ENVIRONMENTS



DEFINITIONS

ZONES

The hazardous areas are classified in zones based on the frequency of the occurrence and the duration of an explosive gas environment as follows:

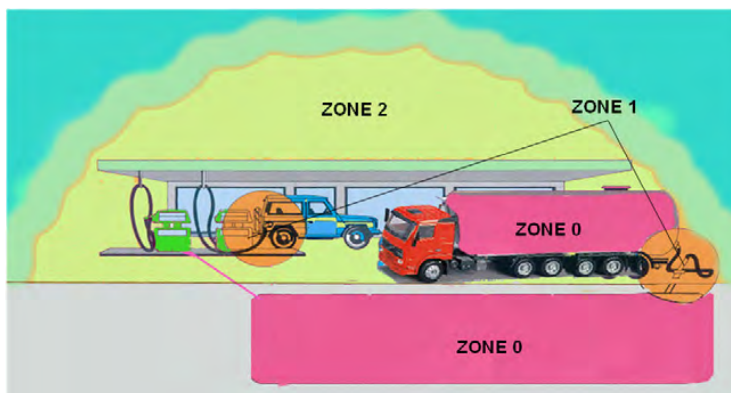
Zone 0 (20)	Zone 1 (21)	Zone 2 (22)
An area in which an explosive gas (dust) atmosphere is present CONTINUOUSLY or is present for LONG PERIODS (~1000 h/y).	An area in which an explosive gas (dust) atmosphere is present LIKELY TO OCCUR in normal operation (~10 to 999 h/y).	An area in which an explosive gas (dust) atmosphere is not LIKELY TO OCCUR and if it does occur it will exist for short period only (~1 to 10 h/y).
Mode of protection: ia - ta ...	Mode of protection: db - mb - eb - tb...	Mode of protection: ec - tc...

HAZARDOUS LOCATION CLASSIFICATION

Explosive Environment	Continuous Presence	Intermittent Presence (normal operation conditions)	Occasional Presence (abnormal operation)
IEC	Zone 0 (gas) Zone 20 (dust)	Zone 1 (gas) Zone 21 (dust)	Zone 2 (gas) Zone 22 (dust)
Europe	Zone 0 (gas) Zone 20 (dust)	Zone 1 (gas) Zone 21 (dust)	Zone 2 (gas) Zone 22 (dust)
Canada (CEC) ¹ USA (NEC) ²	Cl. I Div. 1 (gas) Cl. II Div. 1 (dust) Cl.III Div. 1 (fibres)	Cl. I Div. 1 (gas) Cl. II Div. 1 (dust) Cl.III Div. 1 (fibres)	Cl. I Div. 2 (gas) Cl. II Div. 2 (dust) Cl.III Div. 2 (fibres)

¹ (CEC): Code Canadien d'Electricité / ² (NEC): National Electrical Code

Example:





DEFINITIONS

HAZARDOUS LOCATION CLASSIFICATION

Category	Fault protection	Atmosphere	Zone	Example of protections
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EC Type examination by Notified Body → annex III

1 Very high level	2 types of protection or 2 independent faults	G (Gas)	0	"ia", "ta"...
		D (Dust)	20	

EC Type examination by Notified Body → annex III

2 High level	One type of protection Habitual frequent malfunction	G (Gas)	1	One type of protection "db", "mb", "tb"...
		D (Dust)	21	

Internal production inspection → EC declaration of conformity

3 Normal	Required level of protection	G (Gas)	2	"ec", "tc"...
		D (Dust)	22	

Hazardous Location Classification

Group	Gas Reference
I	Methane
IIA	Propane
IIB	Ethylene
IIC	Hydrogen / Acetylene

Hazardous Location Classification

Group	Dust Reference
-	-
IIA	Fibres
IIB	Non-conductive dust
IIC	Conductive dust

Surface Temperature Classes

Class Temperature	Max. Temperature	°C	Gas & Ignition Temperature
T1	450°C	600	560°C Hydrogen T1
T2	300°C	500	537°C Methane T1
T3	200°C	400	425°C Ethylene T2
T4	135°C	300	305°C Acetylene T2
T5	100°C	200	210°C Kerozene T3
T6	85°C	100	160°C Ethylether T4
		0	95°C Carbon disulphide T6



EXPLOSIVE ENVIRONMENTS



PROTECTION MODES IN PARKER FCSE PRODUCTS

Concept	Gas	Code	Dust	Gas	Zones	Dust
Flameproof enclosure	db		tb	1/2		21/22
Encapsulation	mb		tb	0/1/2		20/21/22
Increased Safety	eb		tb	1/2		21/22
Intrinsic Safety	ia		ta	0/1/2		20/21/22
Concept Cat.3 apparatus	nc		tc	2		22
Mechanical Part	h		h	0/1/2		20/21/22

In red, protection modes used by Parker FCSE.

STANDARDS AND PROTECTION MODES



ELECTRICAL EQUIPMENT FOR EXPLOSIVE GAS ATMOSPHERE EQUIPMENT GROUP II

EPL	Standards EN / IEC	Protection	Title
	60079-0	-	General requirements
Ga	60079-11	ia	Intrinsic safety
	-	-	-
	-	-	-
Gb	60079-1	db	Flameproof enclosures
	60079-7	eb	Increased safety
	60079-18	mb	Encapsulation
Gc	60079-7	ec	Increased safety
	60079-15	nc	Non sparking (C) or protected sparking (A)
	-	-	-

EPL = Equipment Protection Level
In red, protection modes used by Parker FCSE.

EXPLOSIVE ENVIRONMENTS



STANDARDS AND PROTECTION MODES

ELECTRICAL EQUIPMENT FOR EXPLOSIVE DUST ATMOSPHERE - EQUIPMENT GROUP III

EPL	Standards EN / IEC	Protection	Title
	60079-0	-	General requirements
Da	60079-31	ta	Protection by enclosure
	60079-11	ia	Intrinsic safety
	-	-	-
Db	60079-31	tb	Protection by enclosure
	60079-18	mb	Protection by encapsulation
	-	-	-
Dc	60079-31	tc	Protection by enclosure
	-	-	-
	-	-	-

EPL = Equipement Protection Level

In red, protection modes used by Parker FCSE.

NON ELECTRICAL EQUIPMENT FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERE

Standards	Protection	Title
ISO / EN ISO 80079-36	h	Basic method and requirement
ISO / EN ISO 80079-37	c, b, k	Constructional safety, control of ignition sources, liquid immersion

ZONES AND EQUIPEMENT PROTECTION LEVEL (EPL)

Zone	Gas	EPL	Zone	Dust	EPL
0		Ga	20		Da
1		Ga and Gb	21		Da and Db
2		Ga, Gb and Gc	22		Da, Db and Dc

CATEGORIES AND EQUIPEMENT PROTECTION LEVEL (EPL)

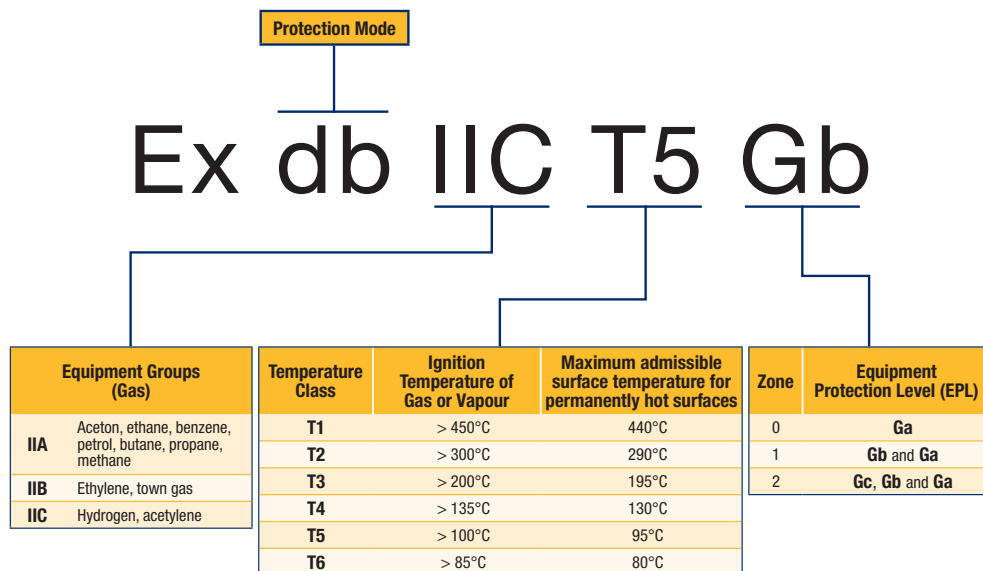
Categories	Gas	Dust	Safety
1	Ga	Da	Very high
2	Gb	Db	High
3	Gc	Dc	Normal



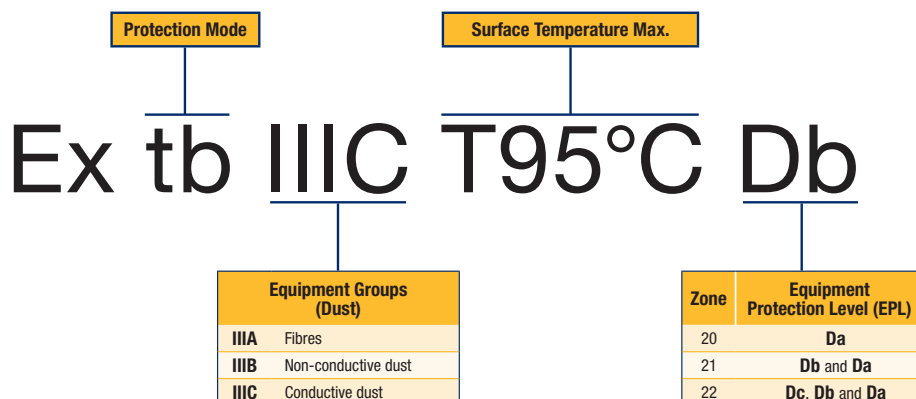


EXAMPLES OF MARKING

ELECTRICAL APPARATUS FOR EXPLOSIVE GAS ATMOSPHERES EQUIPMENT GROUP II



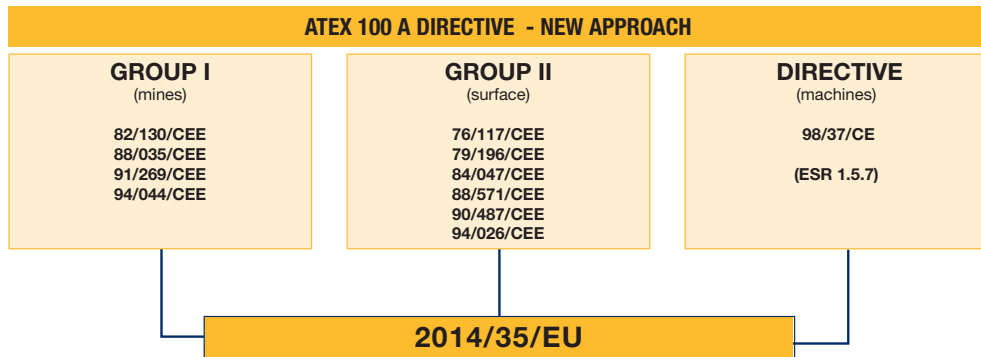
ELECTRICAL EQUIPMENT FOR USE IN AREAS WITH COMBUSTIBLE DUST - EQUIPMENT GROUP III



EXPLOSIVE ENVIRONMENTS

WHAT ABOUT THE DIRECTIVE ?

(2014/34/EU - 19.04.16)



THE FRAMEWORK OF THE DIRECTIVE

The main principles of the new directive can be summarized as follows:

- It applies to **electric** and **non-electric** equipment.
- It defines **essential health and safety requirements**.
- It takes into consideration **all potential hazards** equipment may cause, in particular at design and production level.
- **The one directive** applies to both **mines** susceptible to fire damp and **surface industries**.
- It stresses the importance of equipment being **used in accordance with its intended purpose**.
- It recognises The European Standards Committee **CEN** and the European Committee for Electrotechnical Standardisation **GENELEC** as competent bodies to fix the required harmonised standards.
- It provides for the **contribution of labour and management**.
- It defines **procedures for assessing conformity** to essential requirements, on the basis of modules which qualify equipment to carry the **CE** mark of conformity.

APPLICATIONS

The directive applies to the industrial field and concerns the following equipment:

- **Equipment** (machines, apparatus, etc.)
- **Protective systems** (discharge devices, explosion suppression devices, etc.)
- **Components** (parts with no autonomous function, terminals, etc.)
- **Safety devices, controlling devices and regulating devices** intended for use outside potentially explosive environments but required for safety with respect to explosions (relays, barriers, pressure switches, thermostats, etc.)



WHAT ABOUT THE DIRECTIVE ? (2014/34/EU - 19.04.16)



EXCLUDED FROM THE SCOPE OF THE NEW DIRECTIVE

The following equipment falls outside the scope of the new directive:

- Medical devices intended for use in a medical environment.
- Equipment and protective systems relating only to the risk of explosion of unstable chemical substances (explosives, etc.)
- Equipment intended for use in domestic and non-commercial environments.
- Personal protective equipment covered by directive 89/686/EC.
- Seagoing vessels and mobile offshore units.
- Means of transport, except for vehicles intended for use in a potentially explosive environment.

POTENTIAL IGNITION SOURCES AND OTHER HAZARDS TO BE CONTROLLED

The following all represent potential hazards:

- Various sources of ignition, such as sparks, flames, electric arcs, high surface temperature, acoustic energy, optical radiation or electromagnetic waves.
- Static electricity.
- Pressure compensation operations.
- Disturbance from external sources, such as changing environmental conditions, extraneous voltage, humidity, vibration or contamination.

Provision is also made for specific requirements governing devices used to provide additional equipment safety. These requirements necessitate detailed analysis to assess the operational reliability of such devices and their interaction with other components connected with the equipment.

SIL CERTIFICATION

FUNCTIONAL SAFETY

During 70^s and 80^s, major incidents occurred in several chemical and pharmaceutical plants. This is why standard organizations in the US and in Europe established new safety standards, like IEC 61508 (formerly DIN 19251), IEC 61511, and ISA 84.

Risk is ranked as being negligible, tolerable, or unacceptable. The starting point for any modern safety system is to reduce risk in any process to an acceptable or tolerable level. In this context, functional safety can be defined as “free of unacceptable risk”.

The formula for risk is: RISK = HAZARD FREQUENCY x HAZARD CONSEQUENCE

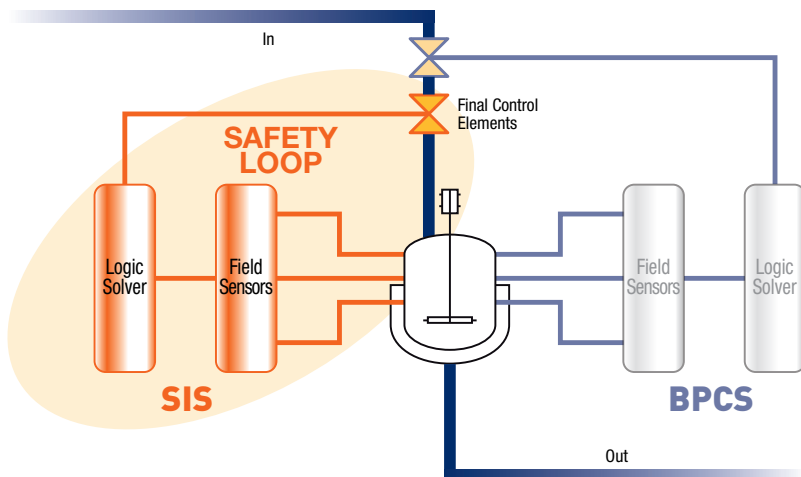
ESD: EMERGENCY SHUTDOWN DEVICES

Risk can be reduced initially by a safe process design, by the Basic Process Control System (BPCS), and finally by a safety shutdown system.

Employees and operating plant must be protected from risks. On their own unique safety precautions may not provide total security. For this reason, safety exists in multiple protective levels: a series of mechanical devices, process controls, shutdown systems and external response measures which prevent or mitigate a hazardous event. If one safety protection level should fail, the other levels are designed to take control.

The level of protective layers required is evaluated using an analysis of a process's hazards and risks known as a Process Hazards Analysis (PHA). If a study concludes that existing protection of the plant is inadequate, an Emergency Shut-down system (ESD), also call Safety Instrumented System (SIS) will be required. The ESD operates independently from Basic Process Control System, and is only used in emergency situations. The task of the ESD is to bring the operating plant back to a safe state working condition when an unsafe operating condition has occurred.

The ESD is designed with a number of safety functions, including sensors, logic solvers and final elements. The final element level is the area where Parker FCDE can provide his expertise and offer solenoid valves, as part of the safety system.



SIF and SIL

A Safety Instrumented Function (SIF) is a safety feature with a specified Safety Integrity Level (SIL) which is implemented by a SIS to achieve or maintain a safe state. SIF's sensor, logic solver, and final elements work together to detect a hazardous condition and bring the process to a safe condition.

The Process Hazards Analysis (PHA) will determine the required SIL level for each SIF.

The effectiveness of a SIS is described in terms of "the probability of the system to fail to perform its required function when requested". This is the Probability of Failure on Demand (PFD).

SIL is linked to the PFD, and is a statistical representation of the SIS integrity when a process demand occurs.

Both ISA84 and IEC 61508 use SIL to measure the reliability of a SIS.

The higher the SIL, the more reliable or effective is the system.

Both ISA and IEC use 3 levels of SIL, SILs 1, 2 & 3. IEC also includes an additional level, SIL 4.

SIL Safe Integrity Level	Availability	PFDavg	Risk Reduction	Qualitative Consequence
4	>99.99%	10^{-5} to $<10^{-4}$	100.000 to 10.000	Potential for fatalities in the community
3	99.9% to 99.99%	10^{-4} to $<10^{-3}$	10.000 to 1.000	Potential for multiple on-site fatalities
2	99% to 99.9%	10^{-3} to $<10^{-2}$	1.000 to 100	Potential for major on-site injuries or a fatality
1	90% to 99%	10^{-2} to $<10^{-1}$	100 to 10	Potential for minor on-site injuries

A PFD of 10⁻⁴ (SIL3) means 0.0001 possible failures / year or 1 failure in 10.000 years is possible

DETERMINING SIL LEVEL FOR INSTRUMENTS

SIL levels for field instruments are evaluated using two methods:

FMEDA (Failures Modes, Effects and Diagnostic Analysis) usually certified by a third party. A systematic analysis is needed to determine failure rates, failure modes and the diagnostic capability as defined by IEC61508/651511.

Proven In Use is typically used for mature instruments used in a well-known process. This approach requires sufficient product operational hours, revision history, fault reporting systems and field failure data to determine if there is evidence of systematic design faults in a product. IEC 61508 provides levels of operational history required for each SIL.

Depending on the product, Parker is able to provide necessary documentation, including third part certificates, or manufacturer declaration of conformity.

Please consult our technical support for more information: tech.support.fcse@parker.com



Example of SIL Declaration of Conformity



Example of SIL Certificate

HOW TO USE THIS CATALOGUE

This catalogue is a comprehensive list of our products. It will help to identify appropriate valves and coils and enable the user to generate ordering numbers.

This catalogue is split by product family. You will find a summary page at the beginning of each valve section. For ease of use, each valve section is divided by product series.

On the first page of each product series section, you will find an overview of the products within and their technical characteristics, to guide you to the relevant page (example below):

SECTION SUMMARY PAGE

The diagram illustrates a section summary page for '2 WAY VALVES DIRECT OPERATED'. It includes a product image, a title box, a '2/2' icon, and a technical table. Callouts point to various parts of the page:

- Product family:** Points to the main title '2 WAY VALVES DIRECT OPERATED'.
- Product series:** Points to the subtitle 'V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING'.
- Number of ways / positions:** Points to the '2/2' icon.
- Applicable Fluids:** Points to the fluid compatibility icons (oil, water, air).
- Actuation, body and function:** Points to the table below.
- Body:** Points to the 'Body' column in the table.
- Mounting:** Points to the 'Body' column in the table.
- Function:** Points to the 'Function' column in the table.
- Related page:** Points to the 'Page number' column in the table.
- Technical features:** Points to the table columns.

Actuation	Body	Function	Part Size	Orifice (mm)	Flow Factor (Kv)(mm)	MOOP (bar)	Max Fluid Temp. (°C)	Page number - see "series" sheet
Direct Operated	303 Stainless St./Pipe Mounting	Normally Closed	1/4"	1.5 to 3	4	20	100	40
	316L Stainless St./Pipe Mounting	Normally Closed	1/4"	0.8 to 1	0.6	200	100	42

For further technical information regarding Actuation, Body and Function, please refer to the technical information section at the end of the catalogue.

Ordering Information

ISO Symbol

Applicable Approvals within this page

Quick selection table with Min/Max values for all valves on the page

SECTION PRODUCT PAGE

2/2

2 WAY VALVES DIRECT OPERATED

SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING

303 STAINLESS ST. PIPE MOUNTING

NORMALLY CLOSED

Part Series	Port Size	Flow Factor	Operating Pressure	Fluid Temp.	Seal	Min	Max	Parker LHM1200 [®] Valves	ATEX Zone	Protection Mode	Power	Coil Group	Part No.				
	mm	mm	bar	°C		bar	°C	Valve Part	Housing Part	Zone	W	AC/DC					
1.5	1.5	0.09	80	0	20	20	-10	65	121V3406	-	495900	1-21	Ex db mb IIC T4	8	8	2.0	2024
1.5	1.5	0.09	80	0	20	20	-10	65	121V3406	2996	495970	2-22	Ex cc IIC T4 T3 T4	8	8	2.0	1116
1.5	1.5	0.09	80	0	20	20	-10	100	121V3406	2996	481860	-	-	8	8	2.0	1116
1.5	1.5	0.09	80	0	10	20	-20	65	121V3407	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 hc	3.0E-0.80	2024
1.5	1.5	0.09	80	0	10	10	-20	65	121V3407	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	3.0E-0.80	2024
1.5	1.5	0.09	80	0	8	20	-50	50	121V3407	2996	496120	2-22	Ex nC IIC T5 T6	-	1.6	3.0E-0.80	1116
1.5	1.5	0.09	80	0	8	20	-75	50	121V3407	2996	482740	-	-	1.6	3.0E-0.80	1116	
3	4.5	0.27	315	0	10	7	-10	65	121V3306	-	495900	1-21	Ex db mb IIC T4	8	8	2.0	2024
3	4.5	0.27	315	0	10	7	-10	65	121V3306	2996	495970	2-22	Ex cc IIC T4 T3 T4	8	8	2.0	1116
3	4.5	0.27	315	0	10	7	-10	100	121V3306	2996	481860	-	-	8	8	2.0	1116
3	3.5	0.21	220	0	4.5	20	-65	50	121V3307	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 hc	3.0E-0.80	2024
3	3.5	0.21	220	0	4.5	4	-20	65	121V3307	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	3.0E-0.80	2024
3	3.5	0.21	220	0	2	20	-65	50	121V3307	2996	496120	2-22	Ex nC IIC T5 T6	-	1.6	3.0E-0.80	1116
3	3.5	0.21	220	0	2	20	-75	50	121V3307	2996	482740	-	-	1.6	3.0E-0.80	1116	

For this page

Part size	Orifice (mm)	kv (l/min)	MOPO (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	1.5	1.5	2	-20
To	1/4"	3	4.5	20	150

Drawing 8116
Drawing 8024

Fluid Temperature Min/Max permitted *

ATEX Protection Mode

ATEX Zone where the valve can be mounted

A choice of Coil Groups compatible with the selected valve

Dimensional 2D** and 3D drawings

* Fluid temperature may be subject to modification, please always check the ATEX certificate of the valve.

** 2D drawing shown always corresponds to the standard coil.



HOW TO SELECT A VALVE

Once you are in the selected family **1** and product series **2**.

The table is designed to help you navigate to the products matching your criteria.

First decide the actuation **3**, then move across the table selecting your body material **4**, function **5** and technical requirements **6**.

After you have found products fitting within your specification, please go to the corresponding page number in the final column **7**, here you will find a selection of products that match your criteria.

1 SELECT PRODUCT FAMILY

2 SELECT PRODUCT SERIES

3 SELECT ACTUATION

4 SELECT BODY

5 SELECT FUNCTION

6 SELECT TECHNICAL DATA

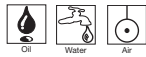
7 SELECT CORRESPONDING PAGE



2 WAY VALVES DIRECT OPERATED

V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING

2



2/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Kv(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page Parker LUBER® Valves
Direct Operated	303 Stainless SL/Pipe Mounting	Normally Closed	1/4"	1.5 to 3	4.5	20	100	40
	316L Stainless SL/Pipe Mounting	Normally Closed	1/4"	0.8 to 1	0.6	200	75	42

3

4

5

6

7



HOW TO ORDER PARKER SOLENOID VALVES

A PARKER SOLENOID VALVE IS COMPOSED OF 3 ELEMENTS:

The Valve **1** + Housing **2** + Coil **3**

1. Choose the valve reference
2. Choose the housing
3. Choose the coil

1 Choose the Valve Reference

Valve Ref.

121V5406

121V5406

121V5406

2 Select the housing depending on the protection level (IP 44 to IP 67 found in the coil section)

Housing Ref.

-

2995

2995

2/2 2 WAY VALVES DIRECT OPERATED
V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING

303 STAINLESS ST. PIPE MOUNTING
NORMALLY CLOSED

Port size	Orifice ID	Flow factor	Operating Pressure Differential	Fluid Temp. °C	Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power AC W	Power DC W	Coil Group	Draw. No.				
1.5	1.5	0.09	0	20	20	-10	65	FKM	121V5406	-	496905	1-21	Ex db mb IIC T4	8	8	2.0	8024	
1.5	1.5	0.09	80	0	20	20	-10	60	FKM	121V5406	2995	496970	2-22	Ex nc IIC T4 to T6	8	9	2.0	8116
1.5	1.5	0.09	80	0	20	20	-10	100	FKM	121V5406	2995	491965	-	-	8	9	2.0	8116
1.5	1.5	0.09	80	0	10	10	-20	65	PUF	121V5407	-	496910	0-20	Ex Ia IIC T4 to T6	-	0.3 to 2	3.0/6.0/8.0	8024
1.5	1.5	0.09	80	0	10	10	-20	65	FKM	121V5407	-	496900	1-21	Ex db mb IIC T4 to T6	2.5	2	3.0/6.0/8.0	8024
1.5	1.5	0.09	80	0	8	8	-20	50	FKM	121V5407	2995	496125	2-22	Ex nc IIC T4 to T6	-	1.6	3.0/6.0/8.0	8116
1.5	1.5	0.09	80	0	8	8	-20	75	FKM	121V5407	2995	492740	-	-	1.6	3.0/6.0/8.0	8116	
3	4.5	0.27	315	0	10	7	-10	65	FKM	121V5306	-	496905	1-21	Ex db mb IIC T4	8	8	2.0	8024
3	4.5	0.27	315	0	10	7	-10	60	FKM	121V5306	2995	496970	2-22	Ex nc IIC T4 to T6	8	9	2.0	8116
3	4.5	0.27	315	0	10	7	-10	100	FKM	121V5306	2995	491965	-	-	8	9	2.0	8116
3	3.5	0.21	220	0	-	4.5	-20	65	PUF	121V5307	-	496910	0-20	Ex Ia IIC T4 to T6	-	0.3 to 2	3.0/6.0/8.0	8024
3	3.5	0.21	220	0	4.5	4	-20	65	PUF	121V5307	-	496900	1-21	Ex db mb IIC T4 to T6	2.5	2	3.0/6.0/8.0	8024
3	3.5	0.21	220	0	-	2	-20	50	PUF	121V5307	2995	496125	2-22	Ex nc IIC T4 to T6	-	1.6	3.0/6.0/8.0	8116
3	3.5	0.21	220	0	-	2	-20	75	PUF	121V5307	2995	492740	-	-	1.6	3.0/6.0/8.0	8116	

Notes:
1. If needed in water, max admissible fluid temperature is 40°C.

Parker 40

For a given valve, several coil types are being suggested.

For a wider choice, the selected valve is also compatible with every other coil from the same coil group.

Parker coils are available in many different voltages.
Choose the one you need by putting the voltage code at the end of your ordering number.

3 Choose the coil and voltage code

Coil Ref.
495870

VAC/Hz	Code
24/50	A2
48/50	A4
110/50	A5

Valve and coil order example:

1 - 2 - 3

121V5406 - 2995 - 495870A2

Valve Reference Housing Coil and Voltage Code


EXPLOSION PROOF ELECTRICAL PARTS

COIL GROUP
2.0/2.1 ELECTRICAL PARTS "nc AC"

ELECTRICAL PART 32 mm

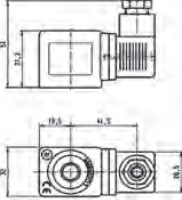
These coils can be mounted with every Parker ATEX solenoid valve corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.
Application: Control of solenoid valves in dangerous areas where explosion-proof protection. Ex nc AC IIC T3 to T4 is required.
Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Benefits:
The synthetic material encapsulation of the coil provides an effective compact housing, offering full protection against dust, oil, water, etc.
Small size for ease of mounting in confined spaces.



Reference	495870	496110	
Certificate	LCIE 05 ATEX 6003 X		
Coil Group	2.0 / 2.1		
Zone of protection	Gas II 3 G - Ex nc AC IIC T3 / T4 Dust II 3 D - Ex tc IIC - T1195°C / T130°C	II 3 G - Ex nc AC IIC T3 / T4 II 3 D - Ex tc IIC - T1195°C / T130°C	
Degree of protection	IP65 (with plug) according to IEC/EN 60529 Standards		
Insulation Class	F (155°C)		
Duty cycle	100%		
Ambient temperature	-40°C to +65°C / 50°C The application is limited also by the temperature range of the valve.		
Elect. power	DC P _{in} (W)	9 W	
	P (load) (W)	12 W	
AC	P _{in} (holding) (W)	9 W	
	Attraction cold	26 VA (9 W)	
Weight	150 g		
Voltages "Un"	24/50 A2 48/50 A4 110/50 A5 220-230/50 S0	24 C2 48 C4 110 C5 220/50-60 S6	24/50-60 P0 48/50-60 S4 110/50-60 S5 220/50-60 S6

To Order a Coil choose Coil Ref + Voltage Code, example: 495870 for 24VDC = 495870C2



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Parker

Important:

Valve, Housing and Coil must be ordered separately. In case of demand for full assemblies please consult PH Connect or your local Sales contact.



HOW TO USE COIL GROUPS

WITHIN A VALVE PAGE

One of Parker's strengths is the modularity, adaptability and flexibility of our products. When you select a solenoid valve, the coils displayed in the table have been chosen as they will fulfill the majority of application requirements.

Valve Ref.	Housing Ref.	Coil Ref.
121V5406	-	495905
121V5406	2995	495870
121V5406	2995	481865

However, in some specific cases, you will need special features that will lead you to choose another coil.

Groups have been created in order to facilitate the selection of a compatible coil with the chosen valve.

Coil Group
2.0
2.0
2.0

Example:

The valve 121V5406 is proposed with the coil 495870 but you can also choose any coil from the group 2.0.

2/2 2 WAY VALVES DIRECT OPERATED

V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING

303 STAINLESS ST. PIPE MOUNTING

NORMALLY CLOSED

Port size	Orifice (l)	Flow factor	Operating Pressure Differential (MPa)	Fluid Temp. (°C)	Seal	Coil Ref.	Housing Ref.	ATCX Zone	Protection Mode	Power		Coil Group	Comp. No.					
										AC (W)	DC (W)							
1.5	1.5	0.06	0	-20	10	65	FKM	121V5406	-	495905	2-21	Ex db mb IEC T4	8	8	2.0	0024		
1.5	1.5	0.06	0	-20	10	65	FKM	121V5406	2995	495870	2-22	Ex nc AC IEC T4	8	9	2.0	0116		
1.5	1.5	0.06	0	-20	10	100	FKM	121V5406	2995	481865	-	-	8	9	2.0	0116		
1.5	1.5	0.06	0	-20	10	65	FKM	121V5407	-	495910	0-20	Ex la IEC T4 to T6	-	-	2.0	3.0/6.0/8.0 0024		
1.5	1.5	0.06	0	-20	10	65	FKM	121V5407	-	495900	1-21	Ex db mb IEC T4 to T6	2.5	2	3.0/6.0/8.0 0024			
1.5	1.5	0.06	0	-20	10	65	FKM	121V5407	2995	496125	2-22	Ex nc AC IEC T4	8	9	2.0	0116		
1.5	1.5	0.06	0	-20	10	65	FKM	121V5407	2995	482740	-	-	8	9	2.0	0116		
1.5	1.5	0.06	0	-20	10	65	FKM	121V5406	-	495905	1-21	Ex db mb IEC T4	8	8	2.0	0024		
3	4.5	0.27	315	0	10	7	-10	60	FKM	121V5306	2995	495905	2-22	Ex nc AC IEC T4	8	9	2.0	0116
3	4.5	0.27	315	0	10	7	-10	100	FKM	121V5306	2995	481865	-	-	8	9	2.0	0116
3	3.5	0.21	220	0	-4.5	-20	65	FKM	121V5306	-	495910	0-20	Ex la IEC T4 to T6	-	0.3 to 3	3.0/6.0/8.0 0024		
3	3.5	0.21	220	0	4.5	-20	65	FKM	121V5307	-	495900	1-21	Ex db mb IEC T4 to T6	2.5	2	3.0/6.0/8.0 0024		
3	3.5	0.21	220	0	-2	-20	50	FKM	121V5307	2995	496125	2-22	Ex nc AC IEC T4	8	9	2.0	0116	
3	3.5	0.21	220	0	-2	-20	75	FKM	121V5307	2995	482740	-	-	8	9	2.0	0116	

Notes:
1. If needs in water, max. admission temperature is 40°C

It is also possible to choose the coil first and then select the valve using coil groups.

HOW TO USE COIL GROUPS

WITHIN A COIL PAGE

The coil section is at the end of the catalogue and displays the specifications of each coil, along with the reference number, class of insulation, ambient temperature, electrical power and weight.

2.0 / 2.1

As indicated before, the valve 121V5406 is proposed with coil 495870 but is also compatible with the 2.0 coil group. This means the coil 481865 is also compatible with the valve you have chosen.

When referring to the coil section you will find the coil group for each coil. This allows you to discover which other coils are compatible with the valve you have chosen.

EXPLOSION PROOF ELECTRICAL PARTS

COIL GROUP

2.0/2.1 ELECTRICAL PARTS
"nc AC"

ELECTRICAL PART 32 mm

ZONE 2/22

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.
Application: Control solenoid valves in dangerous areas where explosion-proof protection Ex nc AC T3 to T4 is required.
Ease of mounting in confined space - offers shock and corrosion protection-simplifies conversion of existing equipment to other requirements, etc.

Benefits:
The synthetic material encapsulation of the coil provides an effective compact housing, offering full protection against dust, oil, water, etc.
Small size for ease of mounting in confined spaces.

Reference	495870	496110				
Certificate	COE 05 ATEX 6003 X					
Coil Group	2.0 / 2.1					
Type of protection	Gas II 3 G - Ex nc AC IIC T3 / T4 Dust II 3 D - Ex tc IIC - T195°C / T130°C	II 3 G - Ex nc AC IIC T3 / T4 II 3 D - Ex tc IIC - T195°C / T130°C				
Degree of protection	IP65 (with plug) according to IEC/EN 60529 Standards					
Insulation Class	F (155°C)					
Duty cycle	100%					
Ambient temperature	-40°C to +65°C / 50°C The application is limited also by the temperature range of the valve.					
Elect. power	DC P (hold) 20°C	9 W	-			
	AC P _h (holding) Attraction cold	8 W 26 VA (9 W)	9 W 32 VA (10 W)			
Weight	150 g					
Voltages "Us"	VAC/Hz	Code	VDC	Code	VAC/Hz	Code
-10% to +10% of the Un	24/50	A2	24	C2	24/50-60	P0
	48/50	A4	48	C4	48/50-60	S4
	110/50	A5	110	C5	110/50-60	S5
	220-230/50	3D			220/50-60	S6

To Order a Coil choose Coil Ref + Voltage Code, example: 495870 for 24VDC = **495870C2**

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2 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING



2/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Kv(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Direct Operated	Brass/Pipe Mounting	Normally Closed	1/4"	1 to 3	4.5	60	100	36

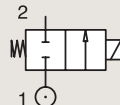
2/2

2 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING

BRASS PIPE MOUNTING

NORMALLY CLOSED



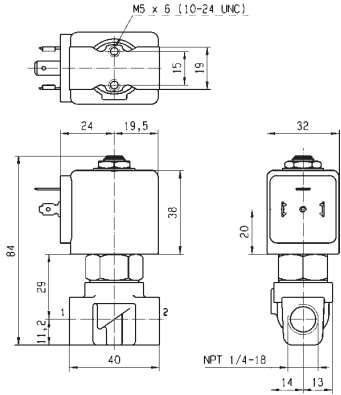
Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.		
		Kv l/min	Kv m³/h	Qn l/min	Min bar	Max(MOPD) DC bar	Min °C	Max °C							AC W	DC W				
1/4" NPT	1	0.6	0.04	36	0	-	10	-10	55	FKM	U121K0490	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	7059	
	1	0.6	0.04	36	0	-	10	-10	55	FKM	U121K0490	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	7059	
	1	0.6	0.04	36	0	10	10	-10	55	FKM	U121K0490	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	7059	
	1.5	0.6	0.04	36	0	-	10	-10	55	FKM	U121K0690	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	7059	
	1.5	0.6	0.04	36	0	-	10	-10	55	FKM	U121K0690	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	7059	
1/4"	1.5	0.6	0.04	36	0	10	10	-10	55	FKM	U121K0690	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	7059	
	1.5	1.5	0.09	80	0	60	25	-30	65	PCTFE	E121K04	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8274	
	1.5	1.5	0.09	80	0	60	25	-30	60	PCTFE	E121K04	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	3510	
	1.5	1.5	0.09	80	0	60	25	-30	75	PCTFE	E121K04	2995	481865	-	-	8	9	2.0	3510	
	1.5	1.5	0.09	80	0	20	20	-10	65	FKM	E121K0402	-	495905	1-21	Ex db mb IIC T4	8	8	2.0/3.0	8274	
	1.5	1.5	0.09	80	0	20	20	-10	60	FKM	E121K0402	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0/3.0	3510	
	1.5	1.5	0.09	80	0	20	20	-10	100	FKM	E121K0402	2995	481865	-	-	8	9	2.0/3.0	3510	
	1.5	1.5	0.09	80	0	-	10	-20	65	PUR	121K0497 ₁	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8274	
	1.5	1.5	0.09	80	0	10	10	-20	65	PUR	121K0497 ₁	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/8.0	8274	
	1.5	1.5	0.09	80	0	-	8	-20	50	PUR	121K0497 ₁	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	3510	
	1/4"	1.5	1.5	0.09	80	0	-	8	-20	75	PUR	121K0497 ₁	2995	482740	-	-	-	1.6	6.0/8.0	3510
	3	4.5	0.27	320	0	20	7	-30	65	PCTFE	E121K03	-	495905	1-21	Ex db mb IIC T4	8	8	2.0/3.0	8274	
	3	4.5	0.27	320	0	20	7	-30	60	PCTFE	E121K03	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0/3.0	3510	
	3	4.5	0.27	320	0	20	7	-30	75	PCTFE	E121K03	2995	481865	-	-	8	9	2.0/3.0	3510	
	3	4.5	0.27	320	0	10	7	-10	65	FKM	E121K0302	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8274	
3	4.5	0.27	320	0	10	7	-10	60	FKM	E121K0302	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	3510		
3	4.5	0.27	320	0	10	7	-10	100	FKM	E121K0302	2995	481865	-	-	8	9	2.0	3510		
3	3.5	0.21	250	0	-	4.5	-20	65	PUR	121K0397 ₁	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8274		
3	3.5	0.21	250	0	4.5	4	-20	65	PUR	121K0397 ₁	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/8.0	8274		
3	3.5	0.21	250	0	-	2	-20	50	PUR	121K0397 ₁	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	3510		
3	3.5	0.21	250	0	-	2	-20	75	PUR	121K0397 ₁	2995	482740	-	-	-	1.6	6.0/8.0	3510		

Notes:

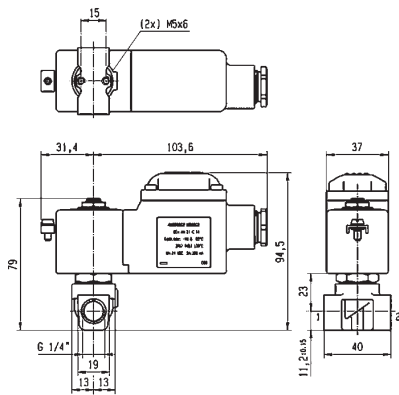
1. If media is water, max admissible fluid temperature is 40°C



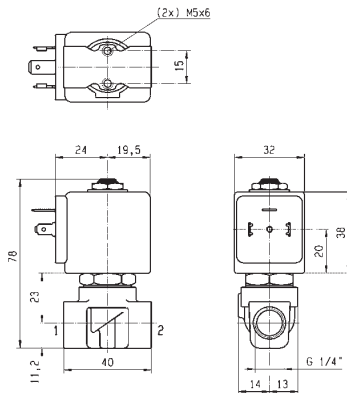
For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	1	0.6	2	-30	-20
To	1/4"	3	4.5	60	100	50



Drawing 7059



Drawing 8274



Drawing 3510





2 WAY VALVES DIRECT OPERATED

V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING



2/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Kv(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Direct Operated	303 Stainless St./Pipe Mounting	Normally Closed	1/4"	1.5 to 3	4.5	20	100	40
	316L Stainless St./Pipe Mounting	Normally Closed	1/4"	0.8 to 1	0.6	200	75	42

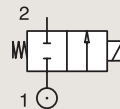
2/2

2 WAY VALVES DIRECT OPERATED

V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING

303 STAINLESS ST.

PIPE MOUNTING



NORMALLY CLOSED

Port size	Orifice Ø mm	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	AC bar	DC bar	Min °C	Max °C							AC W	DC W		
1/4"	1.5	1.5	0.09	80	0	20	20	-10	65	FKM	121V5406	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8024
	1.5	1.5	0.09	80	0	20	20	-10	60	FKM	121V5406	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8116
	1.5	1.5	0.09	80	0	20	20	-10	100	FKM	121V5406	2995	481865	-	-	8	9	2.0	8116
	1.5	1.5	0.09	80	0	-	10	-20	65	PUR	121V5497 ₁	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	3.0/6.0/8.0	8024
	1.5	1.5	0.09	80	0	10	10	-20	65	PUR	121V5497 ₁	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	3.0/6.0/8.0	8024
	1.5	1.5	0.09	80	0	-	8	-20	50	PUR	121V5497 ₁	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	3.0/6.0/8.0	8116
	1.5	1.5	0.09	80	0	-	8	-20	75	PUR	121V5497 ₁	2995	482740	-	-	-	1.6	3.0/6.0/8.0	8116
	3	4.5	0.27	315	0	10	7	-10	65	FKM	121V5306	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8024
	3	4.5	0.27	315	0	10	7	-10	60	FKM	121V5306	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8116
	3	4.5	0.27	315	0	10	7	-10	100	FKM	121V5306	2995	481865	-	-	8	9	2.0	8116
	3	3.5	0.21	220	0	-	4.5	-20	65	PUR	121V5397 ₁	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	3.0/6.0/8.0	8024
	3	3.5	0.21	220	0	4.5	4	-20	65	PUR	121V5397 ₁	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	3.0/6.0/8.0	8024
	3	3.5	0.21	220	0	-	2	-20	50	PUR	121V5397 ₁	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	3.0/6.0/8.0	8116
	3	3.5	0.21	220	0	-	2	-20	75	PUR	121V5397 ₁	2995	482740	-	-	-	1.6	3.0/6.0/8.0	8116

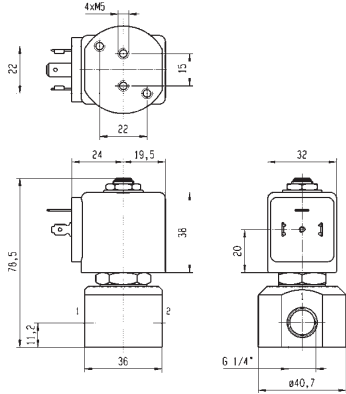
Notes:

1.If media is water, max admissible fluid temperature is 40°C

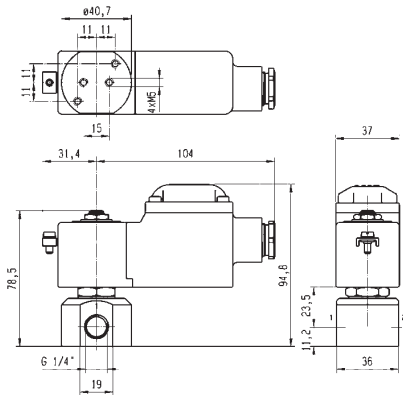




For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	1.5	1.5	2	-20	-20
To	1/4"	3	4.5	20	100	50



Drawing 8116



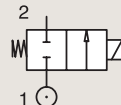
Drawing 8024

2/2

2 WAY VALVES DIRECT OPERATED

V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING

316L STAINLESS ST.
PIPE MOUNTING



NORMALLY CLOSED

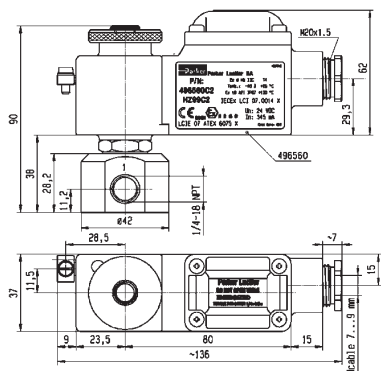
Port size	Orifice Ø mm	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max(MOPD) DC bar	Min °C	Max °C	AC W							DC W			
1/4" NPT	0.8	-	-	20	0	-	200	-25	65	PUR	U121VS3750A ₁	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8165
	0.8	-	-	20	0	-	200	-25	75	PUR	U121VS3750A ₁	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	6713
	0.8	-	-	20	0	200	200	-25	75	PUR	U121VS3750A ₁	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	6713
	0.8	-	-	20	0	200	200	-25	65	PUR	U121VS3750A ₁	-	496560	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2	8165
	0.8	-	-	20	0	200	200	-25	65	PUR	U121VS3750A ₁	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2	8165
	1	0.6	0.04	40	0	-	98	-40	75	PUR	U121V5595 ₂₃	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8165
	1	0.6	0.04	40	0	-	98	-40	75	PUR	U121V5595 ₂₃	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	6713
	1	0.6	0.04	40	0	98	98	-40	65	PUR	U121V5595 ₂₃	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2	8165
	1	0.6	0.04	40	0	98	98	-40	75	PUR	U121V5595 ₂₃	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	6713
	1	0.6	0.04	40	0	98	98	-40	65	PUR	U121V5595 ₂₃	-	496560	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2	8165
	1	0.6	0.04	40	0	98	98	-40	50	PUR	U121V5595 ₂₃	-	496895	-	-	8	8	9.0/10.1/10.2	8165
	1	0.6	0.04	40	0	-	98	-40	65	PUR	U121V7595 ₃	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2/10.3	8165
	1	0.6	0.04	40	0	98	98	-40	65	PUR	U121V7595 ₃	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2/10.3	8165
	1	0.6	0.04	40	0	98	98	-40	65	PUR	U121V7595 ₃	-	497105	1-21	Ex db IIC T4 to T6	8	8	9.0/10.1/10.2/10.3	8299
	1	0.6	0.04	40	0	98	98	-40	50	PUR	U121V7595 ₃	-	496895	-	-	8	8	9.0/10.1/10.2/10.3	8165

Notes:

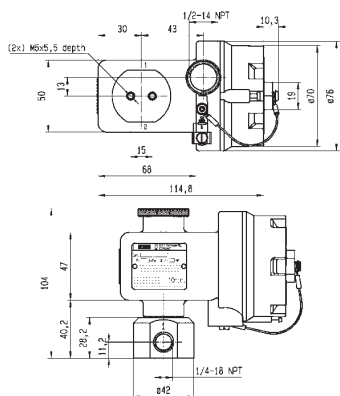
1. Valve only compatible with neutral gases
2. Valve delivered with an individual material traceability certificate (3.1 following EN10204)
3. If media is water, max admissible fluid temperature is 40°C



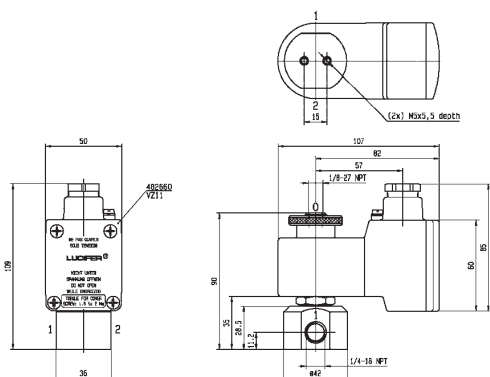
For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	0.8	-	98	-40	-40
To	1/4"	1	0.6	200	75	75



Drawing 8165



Drawing 8299



Drawing 6713

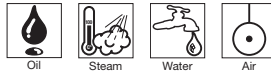






3 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING



3/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Kv(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Direct Operated	Brass/Pipe Mounting	Normally Closed	1/8"	1.5 to 2.5	3.5	15	100	46
			1/4"	1 to 2.5	3.5	30	140	48
		Normally Open	1/4"	1.5 to 2.5	2.2	16	100	54
		Universal	1/8"	1.5 to 2.5	3.5	10	100	56
			1/4"	0.8 to 2.5	3.5	30	100	58
		Control by Electric Impulse	1/4"	1.5 to 2.5	3.5	16	100	60

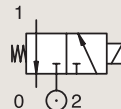
3/2

3 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING

BRASS PIPE MOUNTING

NORMALLY CLOSED



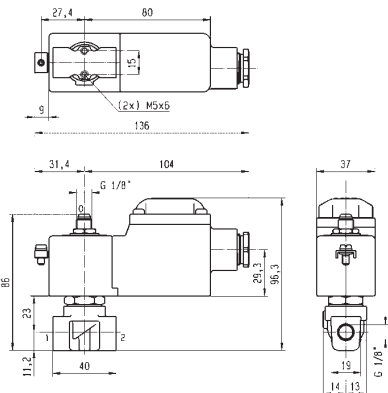
Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv	KV	Qn	Min	Max(MOPD)	Min	Max							AC W	DC W			
BSP	mm	l/min	m ³ /h	l/min	bar	AC bar	DC bar	°C	°C										
1/8"	1.5	1.5	0.09	80	0	15	15	-10	65	FKM	E131K14	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8019
	1.5	1.5	0.09	80	0	15	15	-10	60	FKM	E131K14	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	1.5	1.5	0.09	80	0	15	15	-10	100	FKM	E131K14	2995	481865	-	-	8	9	2.1	3510
	2	2.5	0.15	140	0	10	10	-10	65	FKM	131K16	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8019
	2	2.5	0.15	140	0	10	10	-10	60	FKM	131K16	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	2	2.5	0.15	140	0	10	10	-10	100	FKM	131K16	2995	481865	-	-	8	9	2.1	3510
	2	2.5	0.15	140	0	10	10	-10	65	FKM	131K1650 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8019
	2	2.5	0.15	140	0	10	10	-10	60	FKM	131K1650 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	2	2.5	0.15	140	0	10	10	-10	100	FKM	131K1650 ₁	2995	481865	-	-	8	9	2.1	3510
	2.5	3.5	0.21	220	0	7	7	-10	65	FKM	E131K13	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8019
	2.5	3.5	0.21	220	0	7	7	-10	60	FKM	E131K13	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	2.5	3.5	0.21	220	0	7	7	-10	100	FKM	E131K13	2995	481865	-	-	8	9	2.1	3510

Notes:

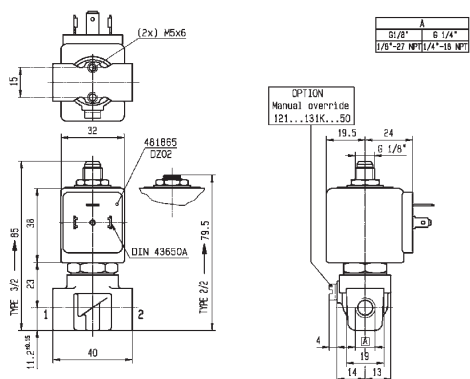
1. With manual override



For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"	1.5	1.5	7	-10	-10
To	1/8"	2.5	3.5	15	100	50



Drawing 8019



Drawing 3510

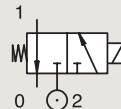
3/2

3 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING

BRASS PIPE MOUNTING

NORMALLY CLOSED



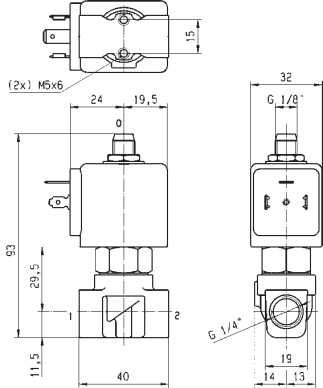
Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	Kv m³/h	Qn l/min	Min bar	AC bar	DC bar	Min °C	Max °C							AC W	DC W		
1/4"	1	0.6	0.04	36	0	-	10	-10	55	FKM	131K0490	2995		0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	7058
	1	0.6	0.04	36	0	-	10	-10	65	FKM	131K0490	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	7058
	1	0.6	0.04	36	0	10	10	-10	65	FKM	131K0490	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	7058
	1.2	0.8	0.05	50	0	30	30	-30	65	Ruby	E131K64 ₃	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8023
	1.2	0.8	0.05	50	0	30	30	-30	60	Ruby	E131K64 ₃	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8119
	1.2	0.8	0.05	50	0	30	30	-30	140	Ruby	E131K64 ₃	2995	481865	-	-	8	9	2.0	8119
	1.2	0.8	0.05	50	0	30	30	-30	65	Ruby	E131K6450 ₁₃	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	1.2	0.8	0.05	50	0	30	30	-30	60	Ruby	E131K6450 ₁₃	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8119
	1.2	0.8	0.05	50	0	30	30	-30	140	Ruby	E131K6450 ₁₃	2995	481865	-	-	8	9	2.1	8119
	1.5	1.5	0.09	80	0	-	7	-20	65	PUR	131K0497 ₂	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8023
	1.5	1.5	0.09	80	0	7	7	-20	65	PUR	131K0497 ₂	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/8.0	8023
	1.5	1.5	0.09	80	0	-	7	-20	50	PUR	131K0497 ₂	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	8023
	1.5	1.5	0.09	80	0	-	7	-20	75	PUR	131K0497 ₂	2995	482740	-	-	-	1.6	6.0/8.0	8023
	1.5	1.5	0.09	80	0	16	16	-10	65	FKM	E131K04	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8023
	1.5	1.5	0.09	80	0	16	16	-10	60	FKM	E131K04	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8119
	1.5	1.5	0.09	80	0	16	16	-10	100	FKM	E131K04	2995	481865	-	-	8	9	2.0	8119
	1.5	1.5	0.09	80	0	15	15	-10	65	FKM	E131K0450 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	1.5	1.5	0.09	80	0	15	15	-10	60	FKM	E131K0450 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8119
1.5	1.5	0.09	80	0	15	15	-10	100	FKM	E131K0450 ₁	2995	481865	-	-	8	9	2.1	8119	

Notes:

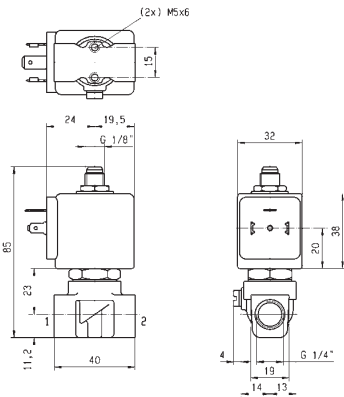
1. With manual override
2. If media is water, max admissible fluid temperature is 40°C
3. Valve not recommended for use with gases



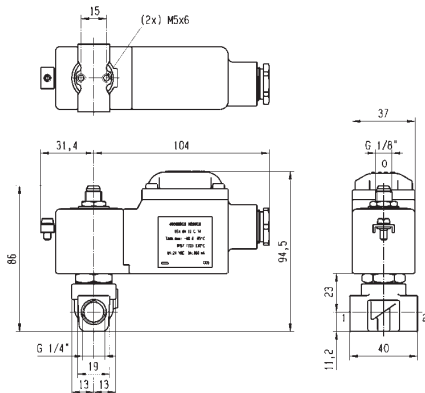
For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	1	0.6	7	-30	-20
To	1/4"	1.5	1.5	30	140	50



Drawing 7058



Drawing 8119



Drawing 8023

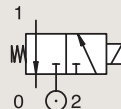
3/2

3 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING

BRASS
PIPE MOUNTING

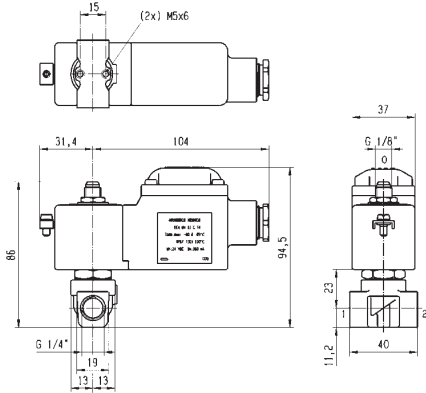
NORMALLY CLOSED



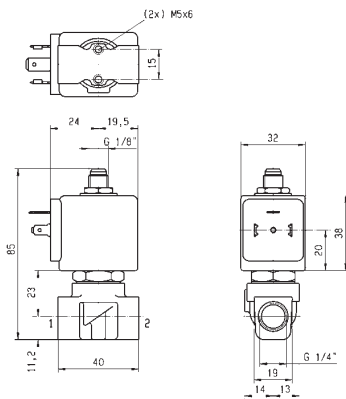
Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv	KV	Qn	Min	Max(MOPD)	Min	Max							AC W	DC W			
BSP	mm	l/min	m³/h	l/min	bar	AC bar	DC bar	°C	°C										
	2	2.5	0.15	140	0	10	10	-10	65	FKM	E131K06	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8023
1/4"	2	2.5	0.15	140	0	10	10	-10	60	FKM	E131K06	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8119
	2	2.5	0.15	140	0	10	10	-10	100	FKM	E131K06	2995	481865	-	-	8	9	2.0	8119



For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	1.8	2	10	-40	-10
To	1/4"	2	2.5	10	100	50



Drawing 8023



Drawing 8119

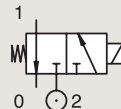
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3 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING

BRASS PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv	Kv	Qn	Min	Max(MOPD)	Min	Max	AC W							DC W				
BSP	mm	l/min	m ³ /h	l/min	bar	AC bar	DC bar	°C	°C											
2	2.5	0.15	140	0	10	10	-10	65	FKM	E131K0650	1	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3510	
2	2.5	0.15	140	0	10	10	-10	60	FKM	E131K0650	1	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510	
2	2.5	0.15	140	0	10	10	-10	100	FKM	E131K0650	1	2995	481865	-	-	8	9	2.1	3510	
2.5	3	0.18	180	0	-	2	-20	65	PUR	131K0397	2	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8023	
2.5	3	0.18	180	0	2	2	-20	65	PUR	131K0397	2	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/8.0	8023	
2.5	3	0.18	180	0	-	2	-20	50	PUR	131K0397	2	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	8023	
2.5	3	0.18	180	0	-	2	-20	75	PUR	131K0397	2	2995	482740	-	-	-	1.6	6.0/8.0	8023	
2.5	2.7	0.16	220	0.1	7	7	-10	65	FKM	E131E03	3	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	3525	
2.5	2.7	0.16	220	0.1	7	7	-10	60	FKM	E131E03	3	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	3525	
2.5	2.7	0.16	220	0.1	7	7	-10	75	FKM	E131E03	3	2995	481865	-	-	8	9	2.0	3525	
2.5	3.5	0.21	220	0	7	7	-10	65	FKM	E131K03	-	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8023	
2.5	3.5	0.21	220	0	7	7	-10	60	FKM	E131K03	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	3510		
2.5	3.5	0.21	220	0	7	7	-10	100	FKM	E131K03	2995	481865	-	-	8	9	2.0	3510		
1/4"	2.5	3.5	0.21	220	0	7	7	-40	65	PUR	E131K0308	2	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
1/4"	2.5	3.5	0.21	220	0	7	7	-40	60	PUR	E131K0308	2	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
1/4"	2.5	3.5	0.21	220	0	7	7	-40	75	PUR	E131K0308	2	2995	481865	-	-	8	9	2.1	3510
1/4"	2.5	3.5	0.21	220	0	7	7	-10	65	FKM	E131K0350	12	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
1/4"	2.5	3.5	0.21	220	0	7	7	-10	60	FKM	E131K0350	1	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
1/4"	2.5	3.5	0.21	220	0	7	7	-10	100	FKM	E131K0350	1	2995	481865	-	-	8	9	2.1	3510
1/4"	2.5	3.5	0.21	220	0	7	7	-40	65	PUR	E131K0358	12	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
1/4"	2.5	3.5	0.21	220	0	7	7	-40	60	PUR	E131K0358	12	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
1/4"	2.5	3.5	0.21	220	0	7	7	-40	75	PUR	E131K0358	12	2995	481865	-	-	8	9	2.1	3510
1/4"	2.5	3.5	0.21	220	0	7	7	-30	65	Ruby	E131K63	-	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8023
1/4"	2.5	3.5	0.21	220	0	7	7	-30	60	Ruby	E131K63	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	3510	
1/4"	2.5	3.5	0.21	220	0	7	7	-30	100	Ruby	E131K63	2995	481865	-	-	8	9	2.0	3510	
1/4"	2.5	3.5	0.21	220	0	7	7	-30	65	Ruby	E131K6350	1	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
1/4"	2.5	3.5	0.21	220	0	7	7	-30	60	Ruby	E131K6350	1	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
1/4"	2.5	3.5	0.21	220	0	7	7	-30	100	Ruby	E131K6350	1	2995	481865	-	-	8	9	2.1	3510

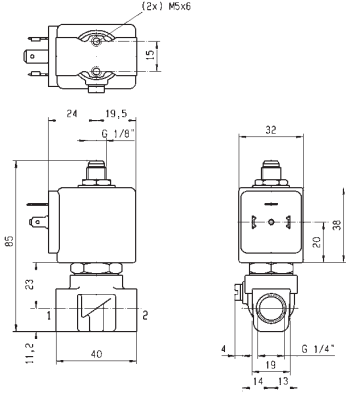
Notes:

1. With manual override
2. If media is water, max admissible fluid temperature is 40°C
3. Quick exhaust valve

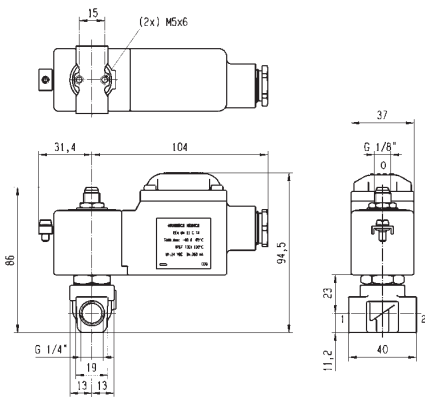




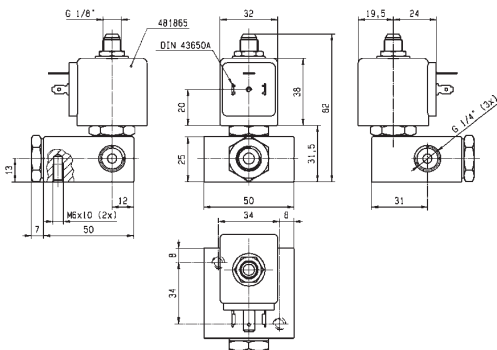
For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	2	2.5	7	-40	-40
To	1/4"	2.5	3.5	10	100	50



Drawing 3510



Drawing 8023



Drawing 3525

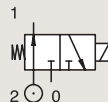
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3 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING

BRASS PIPE MOUNTING

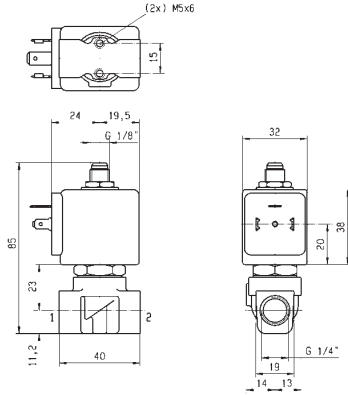
NORMALLY OPEN



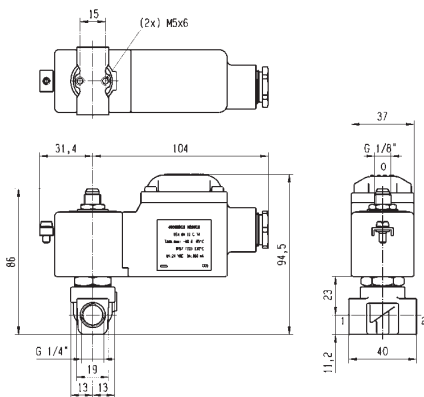
Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	AC bar	DC bar	Min °C	Max °C							AC W	DC W		
1/4"	1.5	1.4	0.08	80	0	16	16	-10	65	FKM	132K04	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	1.5	1.4	0.08	80	0	16	16	-10	60	FKM	132K04	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	1.5	1.4	0.08	80	0	16	16	-10	100	FKM	132K04	2995	481865	-	-	8	9	2.1	3510
	2	1.8	0.11	125	0	10	10	-10	65	FKM	132K06	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	2	1.8	0.11	125	0	10	10	-10	60	FKM	132K06	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	2	1.8	0.11	125	0	10	10	-10	100	FKM	132K06	2995	481865	-	-	8	9	2.1	3510
	2.5	2.2	0.13	160	0	7	7	-10	65	FKM	132K03	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	2.5	2.2	0.13	160	0	7	7	-10	60	FKM	132K03	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
2.5	2.2	0.13	160	0	7	7	-10	100	FKM	132K03	2995	481865	-	-	8	9	2.1	3510	



For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	1.5	1.4	7	-10	-10
To	1/4"	2.5	2.2	16	100	50



Drawing 3510



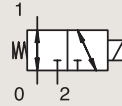
Drawing 8023

3/2

3 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING

BRASS PIPE MOUNTING

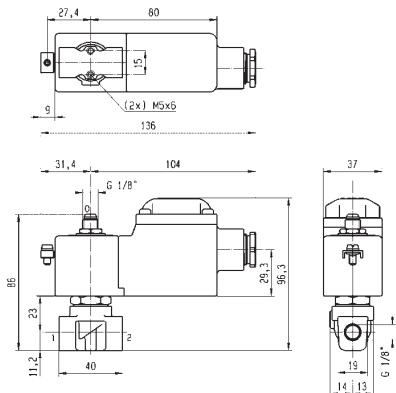


UNIVERSAL

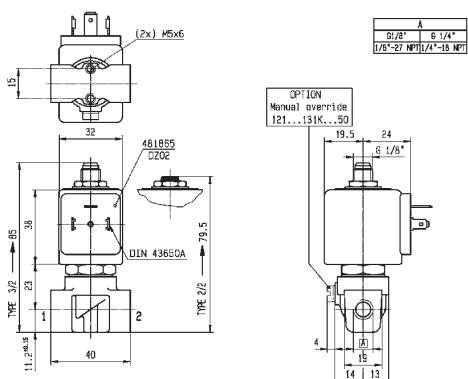
Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv	KV	Qn	Min	Max(MOPD)	Min	Max							AC W	DC W			
BSP	mm	l/min	m ³ /h	l/min	bar	AC bar	DC bar	°C	°C										
1/8"	1.5	1.5	0.09	80	0	10	10	-10	65	FKM	E133K14	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	1.5	1.5	0.09	80	0	10	10	-10	60	FKM	E133K14	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	1.5	1.5	0.09	80	0	10	10	-10	100	FKM	E133K14	2995	481865	-	-	8	9	2.1	3510
	2	2.5	0.15	145	0	7	7	-10	65	FKM	E133K16	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	2	2.5	0.15	145	0	7	7	-10	60	FKM	E133K16	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	2	2.5	0.15	145	0	7	7	-10	100	FKM	E133K16	2995	481865	-	-	8	9	2.1	3510
	2.5	3.5	0.21	220	0	4	4	-10	65	FKM	E133K13	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	2.5	3.5	0.21	220	0	4	4	-10	60	FKM	E133K13	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	2.5	3.5	0.21	220	0	4	4	-10	100	FKM	E133K13	2995	481865	-	-	8	9	2.1	3510



For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"	1.5	1.5	4	-10	-10
To	1/8"	2.5	3.5	10	100	50



Drawing 8023



Drawing 3510

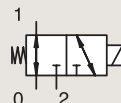
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3 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING

BRASS PIPE MOUNTING

UNIVERSAL



Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	Protection Mode		Power		Coil Group	Dwg. No.
		Kv	KV	Qn	Min	Max(MOPD)	Min	Max	AC					DC	AC	DC			
BSP	mm	l/min	m³/h	l/min	bar	AC bar	DC bar	°C	°C										
1/4"	0.8	0.3	0.02	23	0	30	30	-10	60	FKM	E133K05	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8023
	0.8	0.3	0.02	23	0	30	30	-10	60	FKM	E133K05	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	3510
	0.8	0.3	0.02	23	0	30	30	-10	100	FKM	E133K05	2995	481865	-	-	8	9	2.0	3510
	1.5	1.5	0.09	80	0	-	3	-20	65	PUR	133K0497 ₂	-	495910	0-20	Ex Ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8023
	1.5	1.5	0.09	80	0	3	3	-20	65	PUR	133K0497 ₂	-	495900	1-21	Ex db mb IIC T4 to T6 2.5	2	2	6.0/8.0	8023
	1.5	1.5	0.09	80	0	-	3	-20	50	PUR	133K0497 ₂	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	3510
	1.5	1.5	0.09	80	0	-	3	-20	75	PUR	133K0497 ₂	2995	482740	-	-	-	1.6	6.0/8.0	3510
	1.5	1.5	0.09	80	0	10	10	-10	65	FKM	E133K04	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8023
	1.5	1.5	0.09	80	0	10	10	-10	60	FKM	E133K04	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	3510
	1.5	1.5	0.09	80	0	10	10	-10	100	FKM	E133K04	2995	481865	-	-	8	9	2.0	3510
	1.5	1.5	0.09	80	0	10	10	-10	65	FKM	E133K0450 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	1.5	1.5	0.09	80	0	10	10	-10	60	FKM	E133K0450 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	1.5	1.5	0.09	80	0	10	10	-10	100	FKM	E133K0450 ₁	2995	481865	-	-	8	9	2.1	3510
	2	2.5	0.15	145	0	7	7	-10	65	FKM	E133K06	-	495905	1-21	Ex db mb IIC T4	8	8	2.0/3.0	8023
	2	2.5	0.15	145	0	7	7	-10	60	FKM	E133K06	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0/3.0	3510
	2	2.5	0.15	145	0	7	7	-10	100	FKM	E133K06	2995	481865	-	-	8	9	2.0/3.0	3510
	2	2.5	0.15	145	0	7	7	-10	65	FKM	E133K0650 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	2	2.5	0.15	145	0	7	7	-10	60	FKM	E133K0650 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
	2	2.5	0.15	145	0	7	7	-10	100	FKM	E133K0650 ₁	2995	481865	-	-	8	9	2.1	3510
	2.5	3.5	0.21	220	0	4	4	-10	65	FKM	E133K03	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8023
	2.5	3.5	0.21	220	0	4	4	-10	60	FKM	E133K03	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	3510
	2.5	3.5	0.21	220	0	4	4	-10	100	FKM	E133K03	2995	481865	-	-	8	9	2.0	3510
	2.5	3.5	0.21	220	0	4	4	-10	65	FKM	E133K0350 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8023
	2.5	3.5	0.21	220	0	4	4	-10	60	FKM	E133K0350 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3510
2.5	3.5	0.21	220	0	4	4	-10	100	FKM	E133K0350 ₁	2995	481865	-	-	8	9	2.1	3510	

Notes:

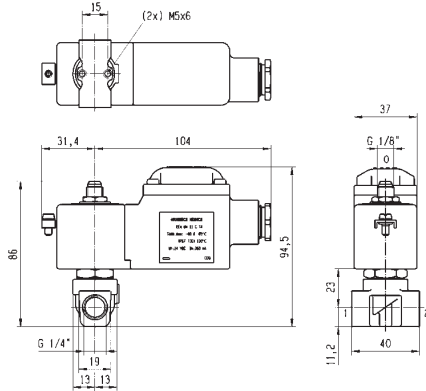
1. With manual override

2. If media is water, max admissible fluid temperature is 40°C

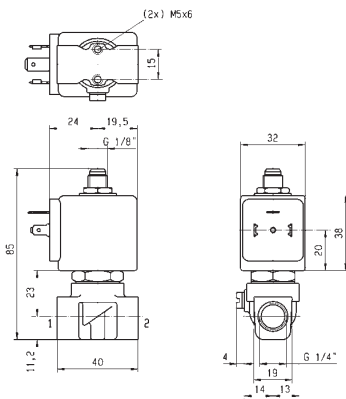




For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	0.8	0.3	3	-20	-20
To	1/4"	2.5	3.5	30	100	50



Drawing 8023



Drawing 3510

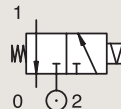
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3 WAY VALVES DIRECT OPERATED

K SERIES - BRASS VALVES FOR PIPE MOUNTING

BRASS PIPE MOUNTING

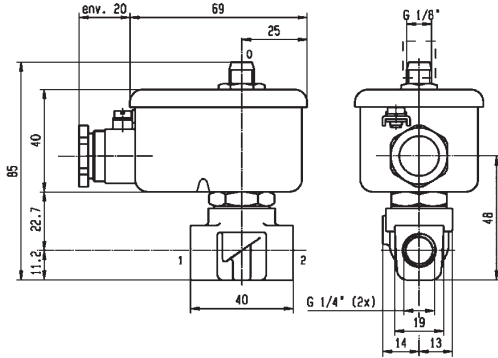
CONTROL BY ELECTRIC IMPULSE



Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	KV m ³ /h	Qn l/min	Min bar	Max(MOPD) DC bar	Min °C	Max °C							AC W	DC W		
1/4"	1.5	1.5	0.09	80	0	- 16	-10	100	FKM	135K04	4269	485400	-	-	-	13	4.0	8104
	1.5	1.5	0.09	80	0	16	-10	100	FKM	135K04	4269	484990	-	-	11	-	4.0	8104
	2.5	3.5	0.21	220	0	7	-10	100	FKM	135K03	4269	484990	-	-	11	-	4.0	8104
	2.5	3.5	0.21	220	0	- 7	-10	100	FKM	135K03	4269	485400	-	-	-	13	4.0	8104



For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	1.5	1.5	7	-10	-10
To	1/4"	2.5	3.5	16	100	50



Drawing 8104





3 WAY VALVES DIRECT OPERATED

T SERIES - BRASS VALVES, PIPE MOUNTING



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Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Kv(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Direct Operated	Brass/Pipe Mounting	Normally Closed	1/4"	2 to 4.5	7	10	75	64
		Normally Open	1/4"	2 to 3	4.5	10	75	66
		Universal	1/4"	2 to 3	4.5	7	75	68

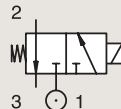
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3 WAY VALVES DIRECT OPERATED

T SERIES - BRASS VALVES, PIPE MOUNTING

BRASS PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv l/min	Kv m³/h	Qn l/min	Min bar	Max(MOPD) DC bar	Min °C	Max °C							AC W	DC W			
1/4"	2	2.5	0.15	140	0	10	10	-10	65	FKM	131T23	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8356
	2	2.5	0.15	140	0	10	10	-10	60	FKM	131T23	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8356
	2	2.5	0.15	140	0	10	10	-10	75	FKM	131T23	2995	481865	-	-	8	9	2.0	8356
	2	2.5	0.15	140	0	10	10	-10	65	FKM	131T2301	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8345
	2	2.5	0.15	140	0	10	10	-10	60	FKM	131T2301	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8345
	2	2.5	0.15	140	0	10	10	-10	75	FKM	131T2301	2995	481865	-	-	8	9	2.0	8345
	2.5	3.5	0.21	220	0	7	7	-10	65	FKM	131T29	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8356
	2.5	3.5	0.21	220	0	7	7	-10	60	FKM	131T29	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8356
	2.5	3.5	0.21	220	0	7	7	-10	75	FKM	131T29	2995	481865	-	-	8	9	2.1	8356
	2.5	3.5	0.21	220	0	7	7	-10	65	FKM	131T2901	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8345
	2.5	3.5	0.21	220	0	7	7	-10	60	FKM	131T2901	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8345
	2.5	3.5	0.21	220	0	7	7	-10	75	FKM	131T2901	2995	481865	-	-	8	9	2.1	8345
	3	4.5	0.27	355	0	10	-	-10	75	FKM	131T22	2995	492425	-	-	14	-	2.2	8356
	3	4.5	0.27	355	0	10	-	-10	75	FKM	131T22	4270	481044	-	-	14	-	2.2	8356
	4.5	7	0.42	500	0	2	2	-10	65	FKM	131T21	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8356
	4.5	7	0.42	500	0	2	2	-10	60	FKM	131T21	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8356
	4.5	7	0.42	500	0	2	2	-10	75	FKM	131T21	2995	481865	-	-	8	9	2.0	8356
	4.5	7	0.42	500	0	2	2	-10	65	FKM	131T2101	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8345
	4.5	7	0.42	500	0	2	2	-10	60	FKM	131T2101	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8345
	4.5	7	0.42	500	0	2	2	-10	75	FKM	131T2101	2995	481865	-	-	8	9	2.1	8345

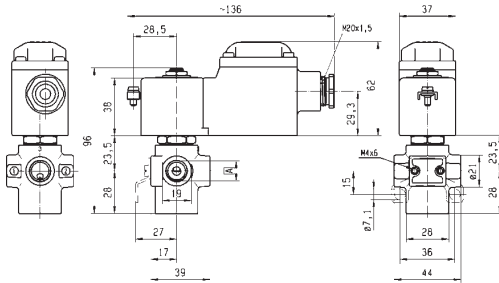
Notes:

1. With manual override

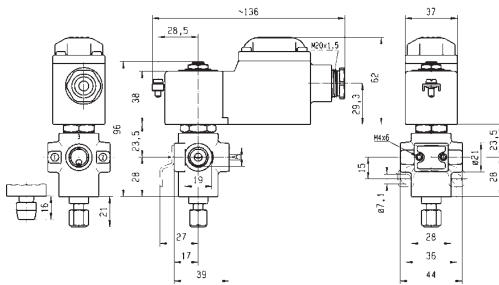




For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	2	2.5	2	-10	-10
To	1/4"	4.5	7	10	75	50



Drawing 8356



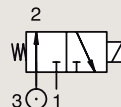
Drawing 8345

3/2

3 WAY VALVES DIRECT OPERATED

T SERIES - BRASS VALVES, PIPE MOUNTING

BRASS PIPE MOUNTING



NORMALLY OPEN

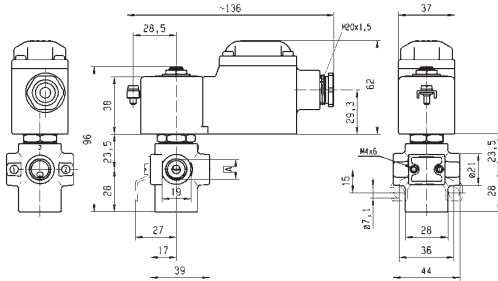
Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv l/min	KV m ³ /h	Qn l/min	Min bar	Max(MOPD) bar	Min °C	Max °C							AC W	DC W			
1/4"	2	2.5	0.15	140	0	10	5	-10	65	FKM	132T23	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8356
	2	2.5	0.15	140	0	10	5	-10	60	FKM	132T23	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8356
	2	2.5	0.15	140	0	10	5	-10	75	FKM	132T23	2995	481865	-	-	8	9	2.0	8356
	2	2.5	0.15	140	0	10	5	-10	65	FKM	132T2301 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8345
	2	2.5	0.15	140	0	10	5	-10	60	FKM	132T2301 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8345
	2	2.5	0.15	140	0	10	5	-10	75	FKM	132T2301 ₁	2995	481865	-	-	8	9	2.0	8345
	2.5	3.5	0.21	220	0	7	3.5	-10	65	FKM	132T29	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8356
	2.5	3.5	0.21	220	0	7	3.5	-10	60	FKM	132T29	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8356
	2.5	3.5	0.21	220	0	7	3.5	-10	75	FKM	132T29	2995	481865	-	-	8	9	2.0	8356
	3	4.5	0.27	355	0	7	-	-10	75	FKM	132T22	2995	492425	-	-	14	-	2.2	8356
	3	4.5	0.27	355	0	10	-	-10	75	FKM	132T22	4270	481044	-	-	14	-	2.2	8356

Notes:

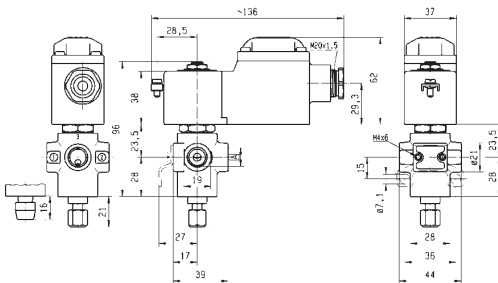
1. With manual override



For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	2	2.5	3.5	-10	-10
To	1/4"	3	4.5	10	75	50



Drawing 8356



Drawing 8345

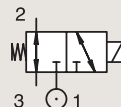
3/2

3 WAY VALVES DIRECT OPERATED

T SERIES -BRASS VALVES, PIPE MOUNTING

BRASS PIPE MOUNTING

UNIVERSAL



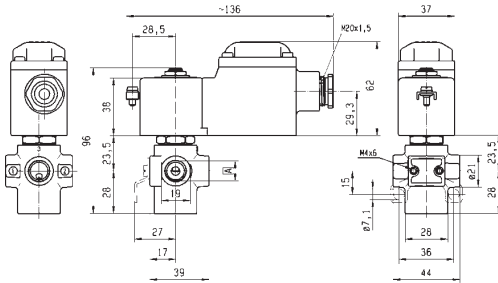
Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max(MOPD) DC bar	Min °C	Max °C	AC W							DC W			
1/4"	2	2.5	0.15	140	0	7	7	-10	65	FKM	133T23	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8356
	2	2.5	0.15	140	0	7	7	-10	60	FKM	133T23	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8356
	2	2.5	0.15	140	0	7	7	-10	75	FKM	133T23	2995	481865	-	-	8	9	2.1	8356
	2	2.5	0.15	140	0	7	7	-10	65	FKM	133T2301	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8345
	2	2.5	0.15	140	0	7	7	-10	60	FKM	133T2301	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8345
	2	2.5	0.15	140	0	7	7	-10	75	FKM	133T2301	2995	481865	-	-	8	9	2.1	8345
	3	4.5	0.27	355	0	2	2	-10	65	FKM	133T21	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8356
	3	4.5	0.27	355	0	2	2	-10	60	FKM	133T21	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8356
	3	4.5	0.27	355	0	2	2	-10	75	FKM	133T21	2995	481865	-	-	8	9	2.1	8356
	3	4.5	0.27	355	0	2	2	-10	65	FKM	133T2101	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8345
	3	4.5	0.27	355	0	2	2	-10	60	FKM	133T2101	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8345
	3	4.5	0.27	355	0	2	2	-10	75	FKM	133T2101	2995	481865	-	-	8	9	2.1	8345

Notes:

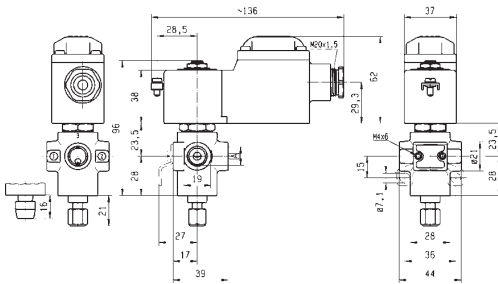
1. With manual override



For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	2	2.5	2	-10	-10
To	1/4"	3	4.5	7	75	50



Drawing 8356



Drawing 8345





3 WAY VALVES DIRECT OPERATED

F SERIES - BRASS, STAINLESS STEEL AND POM VALVES FOR FLANGE MOUNTING



3/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Kv(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Direct Operated	Brass/Sub-base Mounting	Normally Closed	5 mm	1 to 2.5	3.5	16	100	72
		Normally Open	5 mm	1.5 to 2.5	2.2	15	100	76
		Universal	5 mm	1.5 to 2.5	3.5	10	100	78
	316L Stainless St./Sub-base Mounting	Normally Closed	5 mm	1 to 2.5	3.5	15	100	80
			6 mm	2.5	3.5	12	75	82
	POM/Sub-base Mounting	Normally Closed	3 mm	2	2	10	50	84

3/2

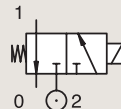
3 WAY VALVES DIRECT OPERATED

F SERIES - BRASS, STAINLESS STEEL AND POM VALVES FOR FLANGE MOUNTING

BRASS

SUB-BASE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø mm	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max(MOPD) DC bar	Min °C	Max °C	AC W							DC W				
SB	1	0.6	0.04	38	0	-	10	-10	55	FKM	131F4490	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	7057	
	1	0.6	0.04	38	0	-	10	-10	65	FKM	131F4490	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	7057	
	1	0.6	0.04	38	0	10	10	-10	65	FKM	131F4490	-	495900	1-21	Ex db mb IIC T4 to T6 2.5	2	6.0/7.0/8.0	7057		
	1.5	1.5	0.09	80	0	16	16	-10	65	FKM	131F4410	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022	
	1.5	1.5	0.09	80	0	16	16	-10	60	FKM	131F4410	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509	
	1.5	1.5	0.09	80	0	16	16	-10	100	FKM	131F4410	2995	481865	-	-	-	8	9	2.1	3509
	1.5	1.5	0.09	80	0	-	7	-20	65	PUR	131F4497 ₂	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8022	
	1.5	1.5	0.09	80	0	7	7	-20	65	PUR	131F4497 ₂	-	495900	1-21	Ex db mb IIC T4 to T6 2.5	2	6.0/8.0	8022		
	1.5	1.5	0.09	80	0	-	7	-20	50	PUR	131F4497 ₂	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	3509	
	1.5	1.5	0.09	80	0	-	7	-20	75	PUR	131F4497 ₂	2995	482740	-	-	-	1.6	6.0/8.0	3509	
	1.5	1.5	0.09	80	0	15	15	-10	65	FKM	E131F44	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022	
	1.5	1.5	0.09	80	0	15	15	-10	60	FKM	E131F44	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509	
	1.5	1.5	0.09	80	0	15	15	-10	100	FKM	E131F44	2995	481865	-	-	-	8	9	2.1	3509
	1.5	1.5	0.09	80	0	15	15	-10	65	FKM	E131F4450 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022	
	1.5	1.5	0.09	80	0	15	15	-10	60	FKM	E131F4450 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509	
	1.5	1.5	0.09	80	0	15	15	-10	100	FKM	E131F4450 ₁	2995	481865	-	-	-	8	9	2.1	3509
	2	2.5	0.15	140	0	10	10	-10	65	FKM	131F46	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022	
	2	2.5	0.15	140	0	10	10	-10	60	FKM	131F46	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509	
	2	2.5	0.15	140	0	10	10	-10	100	FKM	131F46	2995	481865	-	-	-	8	9	2.1	3509
	2	2.5	0.15	140	0	7	7	-10	65	FKM	131F4650 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022	
2	2.5	0.15	140	0	7	7	-10	60	FKM	131F4650 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509		
2	2.5	0.15	140	0	7	7	-10	100	FKM	131F4650 ₁	2995	481865	-	-	-	8	9	2.1	3509	

Notes:

1. With manual override

2. If media is water, max admissible fluid temperature is 40°C



3/2

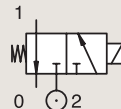
3 WAY VALVES DIRECT OPERATED

F SERIES - BRASS, STAINLESS STEEL AND POM VALVES FOR FLANGE MOUNTING

BRASS

SUB-BASE MOUNTING

NORMALLY CLOSED



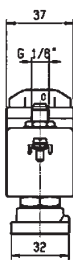
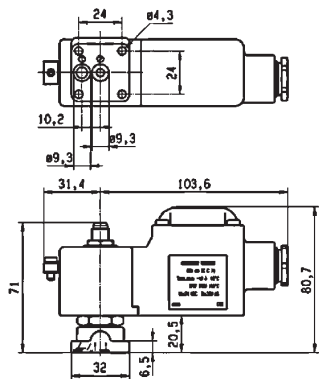
Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max(MOPD) bar	DC bar	Min °C	Max °C							AC W	DC W		
SB	2.5	3.5	0.21	220	0	9	9	-30	65	PUR	131F4310 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	2.5	3.5	0.21	220	0	9	9	-30	60	PUR	131F4310 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	2.5	3.5	0.21	220	0	9	9	-30	75	PUR	131F4310 ₁	2995	481865	-	-	8	9	2.1	3509
	2.5	3	0.18	180	0	-	2	-20	65	PUR	131F4397 ₁	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8022
	2.5	3	0.18	180	0	2	2	-20	65	PUR	131F4397 ₁	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/8.0	8022
	2.5	3	0.18	180	0	-	2	-20	50	PUR	131F4397 ₁	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	3509
	2.5	3	0.18	180	0	-	2	-20	75	PUR	131F4397 ₁	2995	482740	-	-	-	1.6	6.0/8.0	3509
	2.5	3.5	0.21	220	0	7	7	-10	65	FKM	E131F43	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	2.5	3.5	0.21	220	0	7	7	-10	60	FKM	E131F43	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	2.5	3.5	0.21	220	0	7	7	-10	100	FKM	E131F43	2995	481865	-	-	8	9	2.1	3509
	2.5	3.5	0.21	220	0	7	7	-10	65	FKM	E131F4350 ₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	2.5	3.5	0.21	220	0	7	7	-10	60	FKM	E131F4350 ₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	2.5	3.5	0.21	220	0	7	7	-10	100	FKM	E131F4350 ₂	2995	481865	-	-	8	9	2.1	3509

Notes:

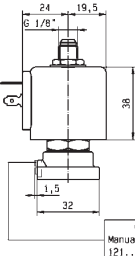
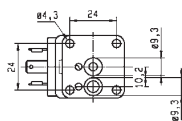
- 1. Valve only compatible with air and neutral gases
- 2. With manual override



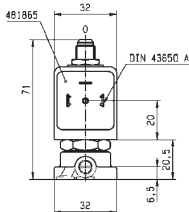
For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	5 mm	2.5	3	2	-30	-30
To	5 mm	2.5	3.5	9	100	50



Drawing 8022



OPTION
Manual override
121...131F...50



Drawing 3509

3/2

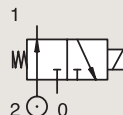
3 WAY VALVES DIRECT OPERATED

F SERIES - BRASS, STAINLESS STEEL AND POM VALVES FOR FLANGE MOUNTING

BRASS

SUB-BASE MOUNTING

NORMALLY OPEN



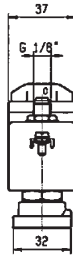
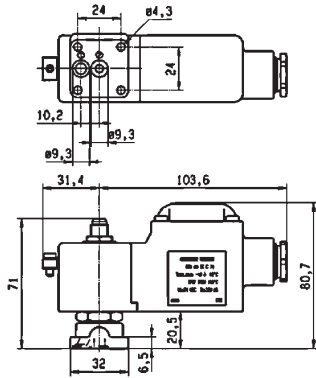
Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv	KV	Qn	Min	Max(MOPD)	Min	Max	AC W							DC W			
	mm	l/min	m ³ /h	l/min	bar	AC bar	DC bar	°C	°C										
SB	1.5	1.4	0.08	80	0	15	15	-10	65	FKM	132F44	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	1.5	1.4	0.08	80	0	15	15	-10	60	FKM	132F44	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	1.5	1.4	0.08	80	0	15	15	-10	100	FKM	132F44	2995	481865	-	-	8	9	2.1	3509
	2	1.8	0.11	125	0	10	10	-10	65	FKM	132F46	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	2	1.8	0.11	125	0	10	10	-10	60	FKM	132F46	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	2	1.8	0.11	125	0	10	10	-10	100	FKM	132F46	2995	481865	-	-	8	9	2.1	3509
	2.5	2.2	0.13	160	0	7	7	-10	65	FKM	132F43	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	2.5	2.2	0.13	160	0	7	7	-10	60	FKM	132F43	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	2.5	2.2	0.13	160	0	7	7	-10	100	FKM	132F43	2995	481865	-	-	8	9	2.1	3509
	2.5	2.2	0.13	160	0	7	7	-10	65	PUR	132F4301 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
2.5	2.2	0.13	160	0	7	7	-10	60	PUR	132F4301 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509	
2.5	2.2	0.13	160	0	7	7	-10	75	PUR	132F4301 ₁	2995	481865	-	-	8	9	2.1	3509	

Notes:

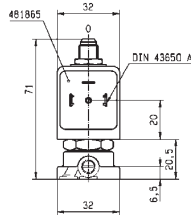
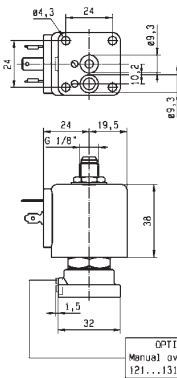
1. Valve only compatible with air and neutral gases



For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	5 mm	1.5	1.4	7	-10	-10
To	5 mm	2.5	2.2	15	100	50



Drawing 8022



Drawing 3509

3/2

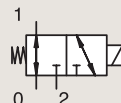
3 WAY VALVES DIRECT OPERATED

F SERIES - BRASS, STAINLESS STEEL AND POM VALVES FOR FLANGE MOUNTING

BRASS

SUB-BASE MOUNTING

UNIVERSAL



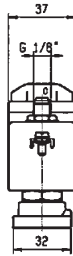
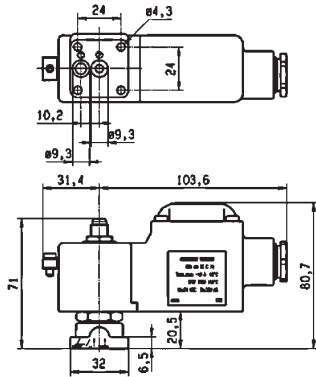
Port size	Orifice Ø mm	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	Kv m ³ /h	Qn l/min	Min bar	Max(MOPD) DC bar	Min °C	Max °C	AC W							DC W			
SB	1.5	1.5	0.09	80	0	10	10	-10	65	FKM	E133F44	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	1.5	1.5	0.09	80	0	10	10	-10	60	FKM	E133F44	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	1.5	1.5	0.09	80	0	10	10	-10	100	FKM	E133F44	2995	481865	-	-	8	9	2.1	3509
	1.5	1.5	0.09	80	0	10	10	-10	65	FKM	E133F4450	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	1.5	1.5	0.09	80	0	10	10	-10	60	FKM	E133F4450	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	1.5	1.5	0.09	80	0	10	10	-10	100	FKM	E133F4450	2995	481865	-	-	8	9	2.1	3509
	2	2.5	0.15	140	0	7	7	-10	65	FKM	133F46	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	2	2.5	0.15	140	0	7	7	-10	60	FKM	133F46	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	2	2.5	0.15	140	0	7	7	-10	100	FKM	133F46	2995	481865	-	-	8	9	2.1	3509
	2	2.5	0.15	140	0	7	7	-10	65	FKM	133F4650	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	2	2.5	0.15	140	0	7	7	-10	60	FKM	133F4650	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	2	2.5	0.15	140	0	7	7	-10	100	FKM	133F4650	2995	481865	-	-	8	9	2.1	3509
	2.5	3.5	0.21	220	0	4	4	-10	40	FKM	E133F43	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8022
	2.5	3.5	0.21	220	0	4	4	-10	60	FKM	E133F43	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	2.5	3.5	0.21	220	0	4	4	-10	100	FKM	E133F43	2995	481865	-	-	8	9	2.1	3509

Notes:

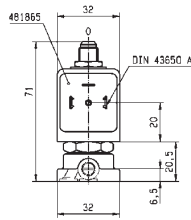
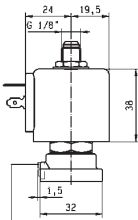
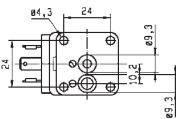
1. With manual override



For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	5 mm	1.5	1.5	4	-10	-10
To	5 mm	2.5	3.5	10	100	50



Drawing 8022



OPTION
Manual override
121...131F...50



Drawing 3509

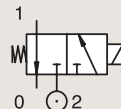
3/2

3 WAY VALVES DIRECT OPERATED

F SERIES - BRASS, STAINLESS STEEL AND POM VALVES FOR FLANGE MOUNTING

316L STAINLESS ST.
SUB-BASE MOUNTING

NORMALLY CLOSED



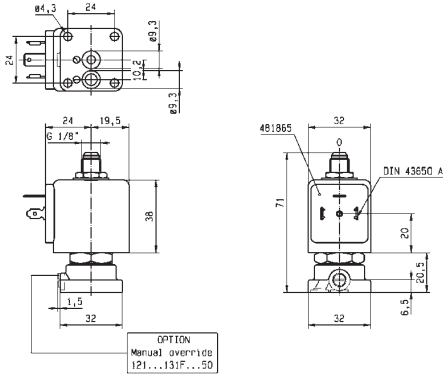
Port size	Orifice Ø mm	Flow factor			Operating Pressure Differential (MOPD)			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max bar	Min °C	Max °C	AC W							DC W			
SB	1.5	1.5	0.09	80	0	15	15	-10	65	FKM	131F5406	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8174
	1.5	1.5	0.09	80	0	15	15	-10	60	FKM	131F5406	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3509
	1.5	1.5	0.09	80	0	15	15	-10	100	FKM	131F5406	2995	481865	-	-	8	9	2.1	3509
	2.5	3.5	0.21	220	0	-	12	-25	65	FKM	U131F5695 ₁	-	492965.01	0-20	Ex ia IIC T6	-	0.3 to 3	9.0/10.1/10.2	3782
	2.5	3.5	0.21	220	0	-	12	-25	45	FKM	U131F5695 ₁	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8174
	2.5	3.5	0.21	220	0	-	12	-25	65	FKM	U131F5695 ₁	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	3782
	2.5	3.5	0.21	220	0	12	12	-25	75	FKM	U131F5695 ₁	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	3782
	2.5	3.5	0.21	220	0	12	12	-25	65	FKM	U131F5695 ₁	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2	8174
	2.5	3.5	0.21	220	0	12	12	-25	55	FKM	U131F5695 ₁	-	496560	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2	8174
	2.5	3.5	0.21	220	0	12	12	-25	50	FKM	U131F5695 ₁	-	496895	-	-	8	8	9.0/10.1/10.2	8174

Notes:

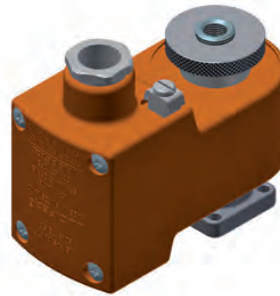
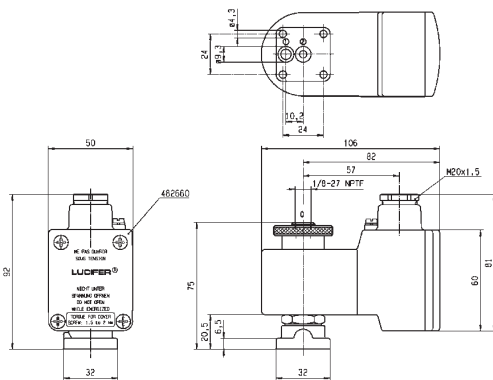
1. Valve delivered with an individual material traceability certificate (3.1 following EN10204)



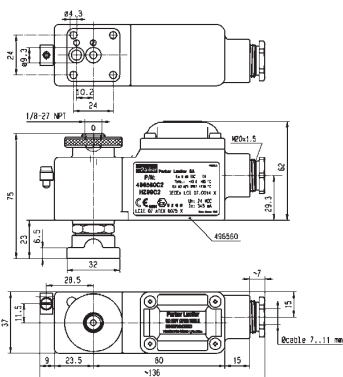
For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	5 mm	1.5	1.5	12	-25	-25
To	5 mm	2.5	3.5	15	100	50



Drawing 3509



Drawing 3782



Drawing 8174

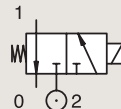
3/2

3 WAY VALVES DIRECT OPERATED

F SERIES - BRASS, STAINLESS STEEL AND POM VALVES FOR FLANGE MOUNTING

316L STAINLESS ST.
SUB-BASE MOUNTING

NORMALLY CLOSED



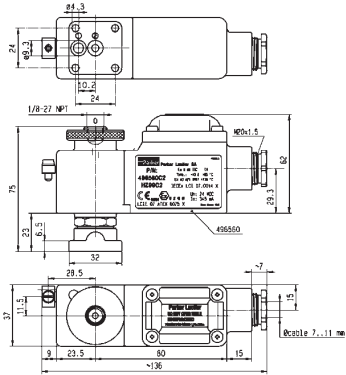
Port size	Orifice Ø	Flow factor			Operating Pressure Differential (MOPD)		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv l/min	KV m ³ /h	Qn l/min	Min bar	Max bar	Min °C	Max °C							AC W	DC W			
SB	2.5	3.5	0.21	220	0	-	12	-25	75	FKM	U131F5295 ₁	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8174
	2.5	3.5	0.21	220	0	12	12	-25	65	FKM	U131F5295 ₁	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2	8174
	2.5	3.5	0.21	220	0	12	12	-25	65	FKM	U131F5295 ₁	-	496560	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2	8174
	2.5	3.5	0.21	220	0	-	12	-25	75	FKM	U131F5295 ₁	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	8343
	2.5	3.5	0.21	220	0	12	12	-25	75	FKM	U131F5295 ₁	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	8343
	2.5	3.5	0.21	220	0	12	12	-25	50	FKM	U131F5295 ₁	-	496895	-	-	8	8	9.0/10.1/10.2	8174
	2.5	3.5	0.21	220	0	-	12	-25	50	FKM	U131F7695	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2/10.3	8174
	2.5	3.5	0.21	220	0	12	12	-25	75	FKM	U131F7695	-	497105	1-21	Ex db IIC T4 to T6	8	8	9.0/10.1/10.2/10.3	8302
	2.5	3.5	0.21	220	0	12	12	-25	65	FKM	U131F7695	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2/10.3	8174
	2.5	3.5	0.21	220	0	12	12	-25	50	FKM	U131F7695	-	496895	-	-	8	8	9.0/10.1/10.2/10.3	8174

Notes:

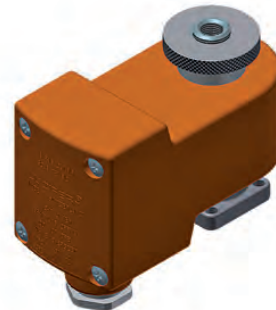
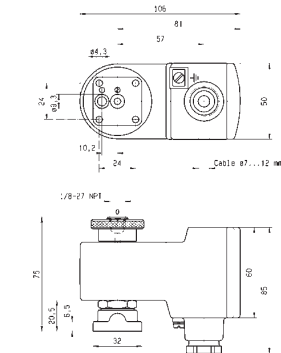
1. Valve only compatible with air and neutral gases



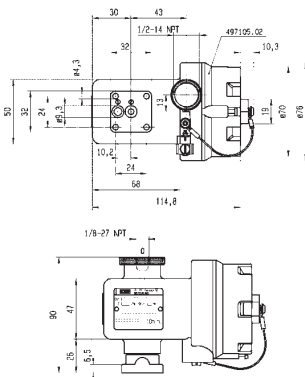
For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	6 mm	2.5	3.5	12	-25	-25
To	6 mm	2.5	3.5	12	75	50



Drawing 8174



Drawing 8343



Drawing 8302



3/2

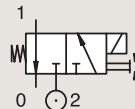
3 WAY VALVES DIRECT OPERATED

F SERIES - BRASS, STAINLESS STEEL AND POM VALVES FOR FLANGE MOUNTING

POM

SUB-BASE MOUNTING

NORMALLY CLOSED



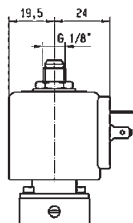
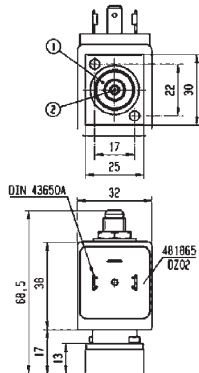
Port size	Orifice Ø mm	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	KV m ³ /h	Qn l/min	Min bar	Max(MOPD) bar	AC bar	DC bar	Min °C							Max °C	AC W		
SB	2	2	0.12	140	0	10	10	-10	50	FKM	E131F26 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1/3.0	3601
	2	2	0.12	140	0	10	10	-10	50	FKM	E131F26 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1/3.0	3601
	2	2	0.12	140	0	10	10	-10	50	FKM	E131F26 ₁₂	2995	481865	-	-	8	9	2.1/3.0	3601

Notes:

1. With manual override
2. 20% Switch-on - max. 2 min



For this page	Port size	Orifice (mm)	kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	3 mm	2	2	10	-10	-10
To	3 mm	2	2	10	50	50



Drawing 3601





3 WAY VALVES DIRECT OPERATED

V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING



3/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Kv(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Direct Operated	316L Stainless St./Pipe Mounting	Universal	1/4"	2 to 2.5	3.5	12	75	88
	303 Stainless St./Pipe Mounting	Normally Closed	1/4"	1 to 2.5	3.5	15	180	90
		Universal	1/4"	1.5 to 2.5	3.5	10	100	94

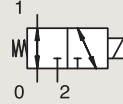
3/2

3 WAY VALVES DIRECT OPERATED

V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING

316L STAINLESS ST.
PIPE MOUNTING

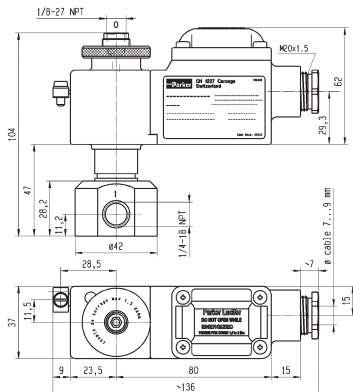
UNIVERSAL



Port size	Orifice Ø mm	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	Kv m³/h	Qn l/min	Min bar	Max(MOPD) DC bar	Min °C	Max °C	AC W							DC W			
1/4" NPT	2	2.5	0.15	140	0	-	12	-25	65	FKM	U133V5595	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1	8024
	2	2.5	0.15	140	0	12	12	-25	65	FKM	U133V5595	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1	6713
	2	2.5	0.15	140	0	12	12	-25	65	FKM	U133V5595	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1	8024
	2	2.5	0.15	140	0	12	12	-25	65	FKM	U133V5595	-	496560	1-21	Ex db mb IIC T4	8	8	9.0/10.1	8024
	2	2.5	0.15	140	0	12	12	-25	50	FKM	U133V5595	-	496895	-	-	8	8	9.0/10.1	8024
	2	2.5	0.15	140	0	-	12	-25	65	FKM	U133V7595	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.3	8166
	2	2.5	0.15	140	0	12	12	-25	65	FKM	U133V7595	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.3	8166
	2	2.5	0.15	140	0	12	12	-25	65	FKM	U133V7595	-	497105	1-21	Ex db IIC T4 to T6	8	8	9.0/10.1/10.3	8299
	2	2.5	0.15	140	0	12	12	-25	50	FKM	U133V7595	-	496895	-	-	8	8	9.0/10.1/10.3	8166
	2.5	3.5	0.21	220	0	-	8.5	-25	65	FKM	U133V5695	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1	8024
	2.5	3.5	0.21	220	0	8.5	8.5	-25	75	FKM	U133V5695	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1	6713
	2.5	3.5	0.21	220	0	8.5	8.5	-25	65	FKM	U133V5695	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1	8024
	2.5	3.5	0.21	220	0	8.5	8.5	-25	65	FKM	U133V5695	-	496560	1-21	Ex db mb IIC T4	8	8	9.0/10.1	8024
	2.5	3.5	0.21	220	0	8.5	8.5	-25	50	FKM	U133V5695	-	496895	-	-	8	8	9.0/10.1	8024
	2.5	3.5	0.21	220	0	-	8.5	-25	65	FKM	U133V7695	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.3	8166
	2.5	3.5	0.21	220	0	8.5	8.5	-25	65	FKM	U133V7695	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.3	8166
	2.5	3.5	0.21	220	0	8.5	8.5	-25	65	FKM	U133V7695	-	497105	1-21	Ex db IIC T4 to T6	8	8	9.0/10.1/10.3	8299
	2.5	3.5	0.21	220	0	8.5	8.5	-25	50	FKM	U133V7695	-	496895	-	-	8	8	9.0/10.1/10.3	8166

Notes:

1. Valve delivered with an individual material traceability certificate (3.1 following EN10204)

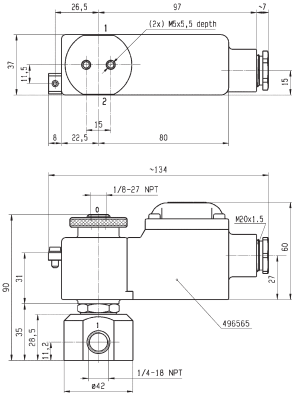


Drawing 8166

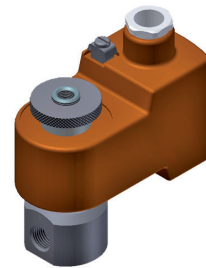
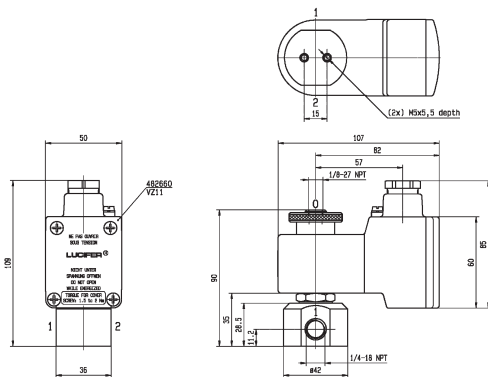




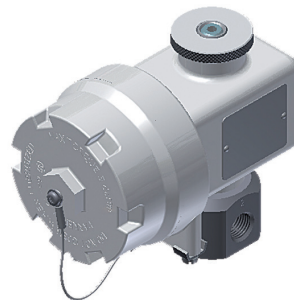
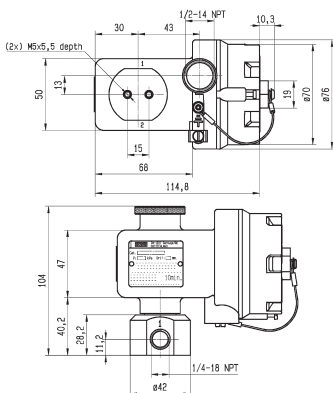
For this page	Port size	Orifice (mm)	Kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	2	2.5	8.5	-25	-25
To	1/4"	2.5	3.5	12	75	50



Drawing 8024



Drawing 6713



Drawing 8299



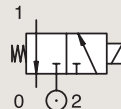
3/2

3 WAY VALVES DIRECT OPERATED

V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING

303 STAINLESS ST.
PIPE MOUNTING

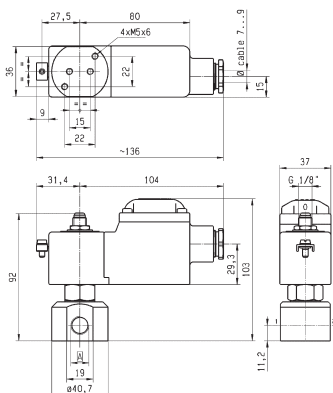
NORMALLY CLOSED



Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv	Qn	AC	DC	Min	Max	AC W	DC W										
BSP	mm	l/min	m ³ /h	bar	bar	bar	°C	°C											
1/4"	1	0.6	0.04	32	0	-	10	-10	55	FKM	131V5490	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	6740
	1	0.6	0.04	32	0	-	10	-10	65	FKM	131V5490	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	8344
	1	0.6	0.04	32	0	-	10	-10	65	FKM	131V5490	-	495900	1-21	Ex db mb IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	8344
	1.5	1.5	0.09	80	0	15	15	-10	65	FKM	131V5406	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8024
	1.5	1.5	0.09	80	0	15	15	-10	60	FKM	131V5406	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8024
	1.5	1.5	0.09	80	0	15	15	-10	100	FKM	131V5406	2995	481865	-	-	8	9	2.1	8116
	1.5	1.5	0.09	80	0	15	15	-10	65	Ruby	131V5463 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8024
	1.5	1.5	0.09	80	0	15	15	-10	60	Ruby	131V5463 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8024
	1.5	1.5	0.09	80	0	15	15	-10	100	Ruby	131V5463 ₁	2995	481865	-	-	8	9	2.1	8116
	1.5	1.5	0.09	80	0	-	7	-20	65	PUR	131V5497 ₂	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	3.0/6.0/8.0	8024
	1.5	1.5	0.09	80	0	7	7	-20	65	PUR	131V5497 ₂	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	3.0/6.0/8.0	8024
	1.5	1.5	0.09	80	0	-	7	-20	50	PUR	131V5497 ₂	2995	496125	2-22	Ex nc IIC T5/T6	-	1.6	3.0/6.0/8.0	8116
	1.5	1.5	0.09	80	0	-	7	-20	75	PUR	131V5497 ₂	2995	482740	-	-	-	1.6	3.0/6.0/8.0	8116

Notes:

1. Valve only compatible with hydraulic oil and neutral liquids
2. If media is water, max admissible fluid temperature is 40°C

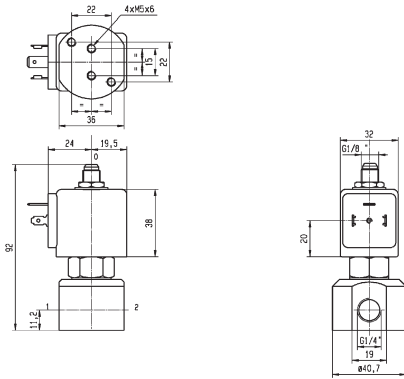


Drawing 8344

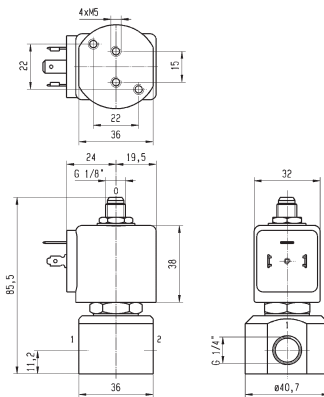




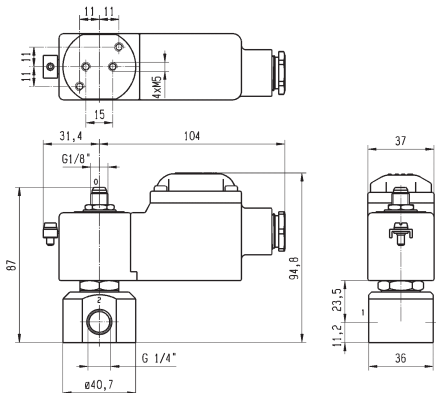
For this page	Port size	Orifice (mm)	Kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	1	0.6	7	-20	-20
To	1/4"	1.5	1.5	15	100	50



Drawing 6740



Drawing 8116



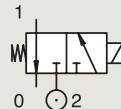
3/2

3 WAY VALVES DIRECT OPERATED

V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING

303 STAINLESS ST.
PIPE MOUNTING

NORMALLY CLOSED



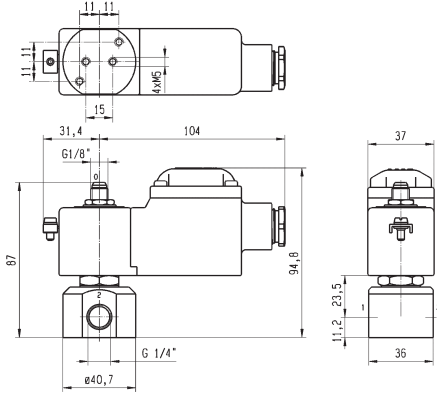
Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv	KV	Qn	Min	Max(MOPD)	Min	Max	AC W							DC W			
BSP	mm	l/min	m ³ /h	l/min	bar	AC bar	DC bar	°C	°C										
1/4"	2.5	3.5	0.21	220	0	7	7	-10	65	FKM	131V5306	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8024
	2.5	3.5	0.21	220	0	7	7	-10	60	FKM	131V5306	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8116
	2.5	3.5	0.21	220	0	7	7	-10	100	FKM	131V5306	2995	481865	-	-	8	9	2.1	8116
	2.5	3.5	0.21	220	0	7	7	-30	65	Ruby	131V5363 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8024
	2.5	3.5	0.21	220	0	7	7	-30	60	Ruby	131V5363 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8116
	2.5	3.5	0.21	220	0	7	7	-30	100	Ruby	131V5363 ₁	2995	481865	-	-	8	9	2.0	8116
	2.5	3.5	0.21	220	0	7	7	-30	180	Ruby	131V5363 ₁	4270	486265	-	-	14	14	2.0	8116
	2.5	3	0.18	180	0	-	2	-20	65	PUR	131V5397 ₂	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8024
	2.5	3	0.18	180	0	2	2	-20	65	PUR	131V5397 ₂	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/8.0	8024
	2.5	3	0.18	180	0	-	2	-20	50	PUR	131V5397 ₂	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	8116
	2.5	3	0.18	180	0	-	2	-20	75	PUR	131V5397 ₂	2995	482740	-	-	-	1.6	6.0/8.0	8116

Notes:

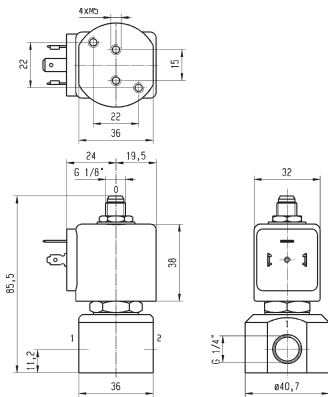
1. Valve only compatible with hydraulic oil and neutral liquids
2. If media is water, max admissible fluid temperature is 40°C



For this page	Port size	Orifice (mm)	Kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	2.5	3.0	2	-30	-20
To	1/4"	2.5	3.5	7	180	50



Drawing 8024



Drawing 8116

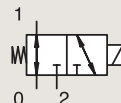
3/2

3 WAY VALVES DIRECT OPERATED

V SERIES - STAINLESS STEEL VALVES FOR PIPE MOUNTING

303 STAINLESS ST.
PIPE MOUNTING

UNIVERSAL



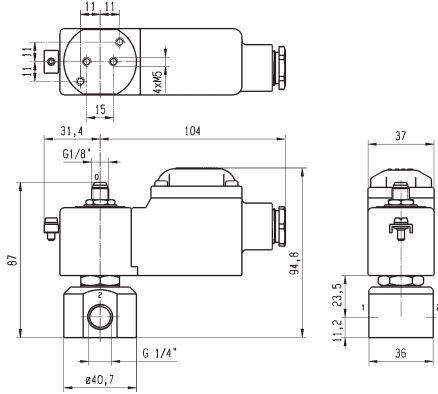
Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	AC bar	DC bar	Min °C	Max °C							AC W	DC W		
1/4"	1.5	1.5	0.09	80	0	10	10	-10	65	FKM	133V5406	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8024
	1.5	1.5	0.09	80	0	10	10	-10	60	FKM	133V5406	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8116
	1.5	1.5	0.09	80	0	10	10	-10	100	FKM	133V5406	2995	481865	-	-	8	9	2.1	8116
	1.5	1.5	0.09	80	0	10	10	-30	65	Ruby	133V5463 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8024
	1.5	1.5	0.09	80	0	4	4	-30	60	Ruby	133V5463 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8116
	1.5	1.5	0.09	80	0	4	4	-30	100	Ruby	133V5463 ₁	2995	481865	-	-	8	9	2.0	8116
	2.5	3.5	0.21	220	0	4	4	-10	65	FKM	133V5306	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8024
	2.5	3.5	0.21	220	0	4	4	-10	60	FKM	133V5306	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8116
	2.5	3.5	0.21	220	0	4	4	-10	100	FKM	133V5306	2995	481865	-	-	8	9	2.1	8116
	2.5	3.5	0.21	220	0	4	4	-30	65	Ruby	133V5363 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.0	8024
	2.5	3.5	0.21	220	0	4	4	-30	60	Ruby	133V5363 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0	8116
	2.5	3.5	0.21	220	0	4	4	-30	100	Ruby	133V5363 ₁	2995	481865	-	-	8	9	2.0	8116

Notes:

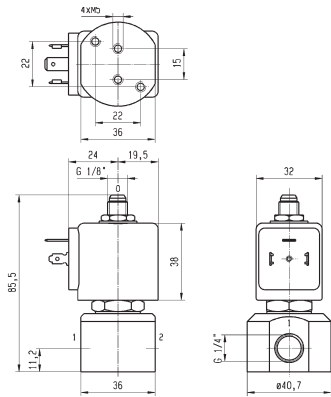
1. Valve only compatible with hydraulic oil and neutral liquids



For this page	Port size	Orifice (mm)	Kv (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	1.5	1.5	4	-30	-10
To	1/4"	2.5	3.5	10	100	50



Drawing 8024



Drawing 8116





3 WAY VALVES DIRECT OPERATED

X SERIES - BRASS, ALUMINIUM, STAINLESS STEEL VALVES FOR PIPE MOUNTING



3/2

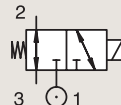
Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Direct Operated	Brass/Pipe Mounting	Universal	1/4"	6	680	12	75	98
	316L Stainless St./Pipe Mounting	Universal	1/4"	6	680	12	75	100
			3/8"	6	680	12	65	102
	316L Stainless St./Sub-base Mounting	Universal	1/4"	6	680	12	75	106
	Anodized Aluminium/Pipe Mounting	Universal	1/4"	6	680	12	75	108

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3 WAY VALVES DIRECT OPERATED

X SERIES - BRASS, ALUMINIUM, STAINLESS STEEL VALVES FOR PIPE MOUNTING

BRASS
PIPE MOUNTING



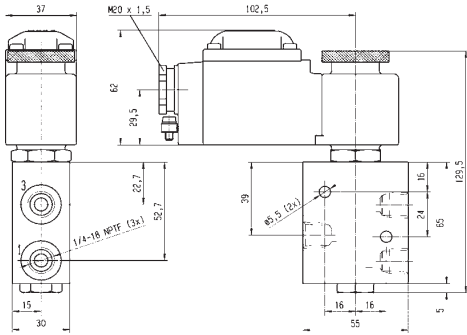
UNIVERSAL

Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min bar	Max(MOPD) AC bar	DC bar	Min °C	Max °C							AC W	DC W		
1/4" NPT	6	680	0	-	12	-25	65	NBR	U133X0111	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8280
	6	680	0	12	12	-25	65	NBR	U133X0111	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	7422
	6	680	0	12	12	-25	65	NBR	U133X0111	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8280
	6	680	0	12	12	-25	65	NBR	U133X0111	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8280
	6	680	0	-	12	-25	65	NBR	U133X0111	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	7422
	6	680	0	12	12	-25	50	NBR	U133X0111	-	496895	-	-	8	8	9.0/10.1/10.2	8280

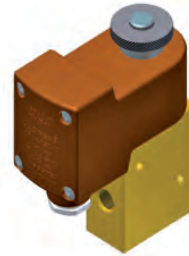
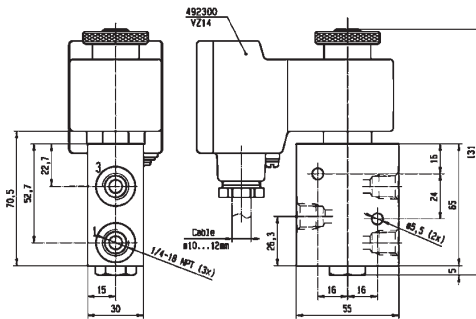




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	6	680	12	-25	-25
To	1/4"	6	680	12	65	65



Drawing 8280



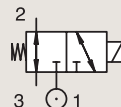
Drawing 7422

3/2

3 WAY VALVES DIRECT OPERATED

X SERIES - BRASS, ALUMINIUM, STAINLESS STEEL VALVES FOR PIPE MOUNTING

316L STAINLESS ST.
PIPE MOUNTING



UNIVERSAL

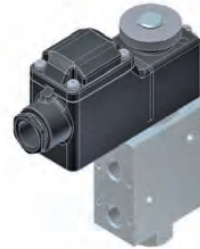
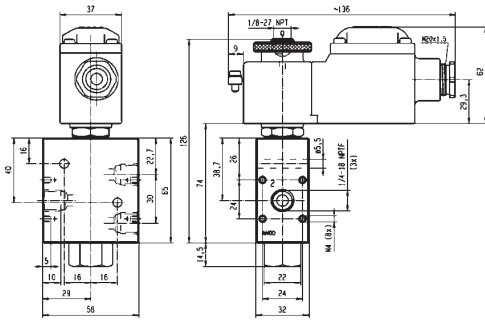
Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min bar	Max(MOPD) DC bar	AC bar	Min °C	Max °C							AC W	DC W		
1/4" NPTF	6	680	0	-	12	-25	65	NBR	U133X5156 ₁₂	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8168
	6	680	0	-	12	-25	65	NBR	U133X5156 ₁₂	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	7770
	6	680	0	12	12	-25	65	NBR	U133X5156 ₁₂	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	7770
	6	680	0	12	12	-25	65	NBR	U133X5156 ₁₂	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8168
	6	680	0	12	12	-25	65	NBR	U133X5156 ₁₂	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8168
	6	680	0	12	12	-25	50	NBR	U133X5156 ₁₂	-	496895	-	-	8	8	9.0/10.1/10.2	8168
	6	680	0	-	12	-25	65	NBR	U133X5196 ₂	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8169
	6	680	0	-	12	-25	65	NBR	U133X5196 ₂	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	8169
	6	680	0	12	12	-25	65	NBR	U133X5196 ₂	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	8169
	6	680	0	12	12	-25	65	NBR	U133X5196 ₂	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8169
	6	680	0	12	12	-25	65	NBR	U133X5196 ₂	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8169
	6	680	0	12	12	-25	50	NBR	U133X5196 ₂	-	496895	-	-	8	8	9.0/10.1/10.2	8169

Notes:

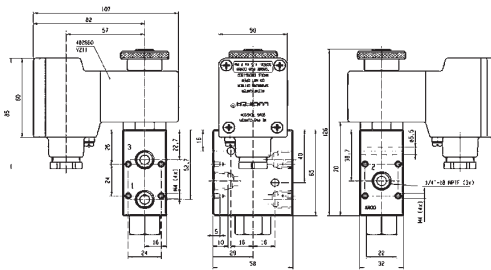
1. With manual override
2. Valve delivered with an individual material traceability certificate (3.1 following EN10204)



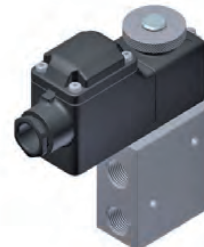
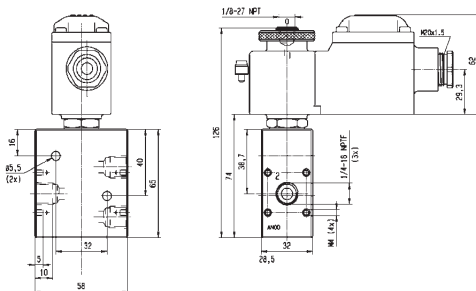
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	6	680	12	-25	-25
To	1/4"	6	680	12	65	65



Drawing 8168



Drawing 7770



Drawing 8169

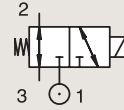


3/2

3 WAY VALVES DIRECT OPERATED

X SERIES - BRASS, ALUMINIUM, STAINLESS STEEL VALVES FOR PIPE MOUNTING

316L STAINLESS ST.
PIPE MOUNTING

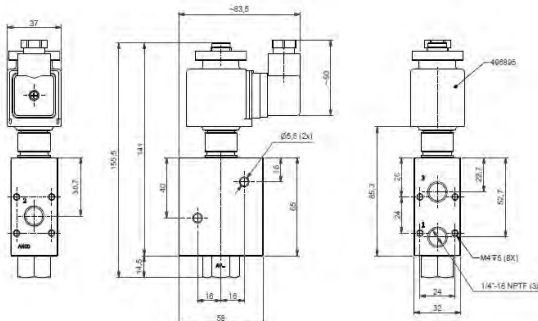


UNIVERSAL

Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
			Min	Max(MOPD)	DC bar	Min	Max						AC W	DC W			
1/4" NPTF	6	680	0	12	12	-40	65	VMQ	U133X7759 ₂	-	496895	-	-	8	8	9.0;10.1;10.2;10.3	8544
	6	680	0	-	12	-40	65	VMQ	U133X7759 ₂	-	496565	-	0-20 Ex ia IIB/IIC T4 to T6	-	0.3	9.0;10.1;10.2;10.3	8539
	6	680	0	12	12	-40	65	VMQ	U133X7759 ₂	-	497105	-	1-21 Ex db IIC T4 to T6	8	8	9.0;10.1;10.2;10.3	8537
	6	680	0	12	12	-40	65	VMQ	U133X7759 ₂	-	496700	-	1-21 Ex db mb IIC T4 to T6	6	6	9.0;10.1;10.2;10.3	8545
	6	680	0	12	12	-40	65	VMQ	U133X7759 ₂	-	492310	-	1-21 Ex db II T4 to T5	9	8	9.0;10.1;10.2;10.3	8548
	6	680	0	-	12	-40	65	VMQ	U133X7759 ₂	-	492210	-	1-21 Ex eb mb IIC T5 to T6	-	1.8	9.0;10.1;10.2;10.3	8548
	6	680	0	12	12	-40	65	VMQ	U133X7709 ₂	-	496895	-	-	8	8	9.0;10.1;10.2;10.3	8551
	6	680	0	-	12	-40	65	VMQ	U133X7709 ₂	-	496565	-	0-20 Ex ia IIB/IIC T4 to T6	-	0.3	9.0;10.1;10.2;10.3	8550
	6	680	0	12	12	-40	65	VMQ	U133X7709 ₂	-	497105	-	1-21 Ex db IIC T4 to T6	-	-	9.0;10.1;10.2;10.3	8537
	6	680	0	12	12	-40	65	VMQ	U133X7709 ₂	-	496700	-	1-21 Ex db mb IIC T4 to T6	-	-	9.0;10.1;10.2;10.3	8545
	6	680	0	12	12	-40	65	VMQ	U133X7709 ₂	-	492310	-	1-21 Ex mb II T4 to T5	-	-	9.0;10.1;10.2;10.3	8548
	6	680	0	-	12	-40	65	VMQ	U133X7709 ₂	-	492210	-	1-21 Ex eb mb IIC T5 to T6	-	-	9.0;10.1;10.2;10.3	8548
3/8" NPTF	6	680	0	-	12	-25	65	NBR	U133X5296 ₂	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8169
	6	680	0	12	12	-25	65	NBR	U133X5296 ₂	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	7669
	6	680	0	12	12	-25	65	NBR	U133X5296 ₂	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8169
	6	680	0	-	12	-25	65	NBR	U133X5296 ₂	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	7669
	6	680	0	12	12	-25	65	NBR	U133X5296 ₂	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8169
	6	680	0	12	12	-25	50	NBR	U133X5296 ₂	-	496895	-	-	8	8	9.0/10.1/10.2	8169

Notes:

1. With manual override
2. Valve delivered with an individual material traceability certificate (3.1 following EN10204)

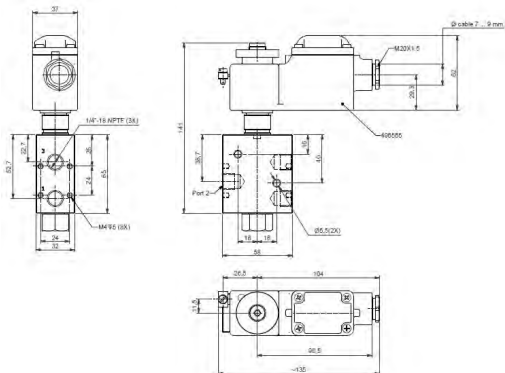


Drawing 8544



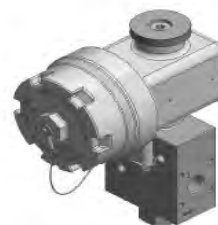
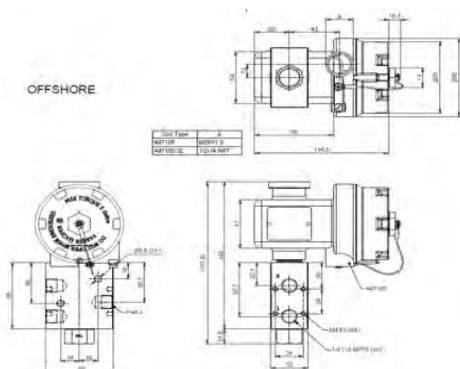


For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	6	680	12	-40	-25
To	3/8"	6	680	12	65	65

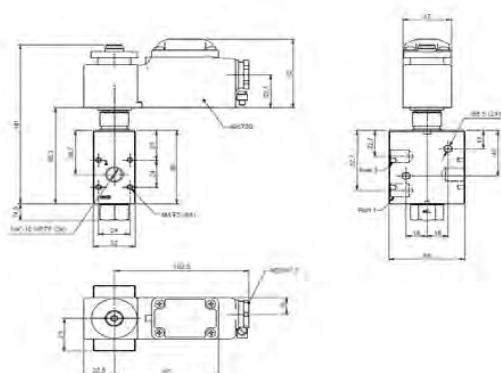


Drawing 8539

OFFSHORE



Drawing 8537



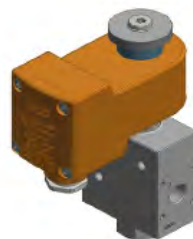
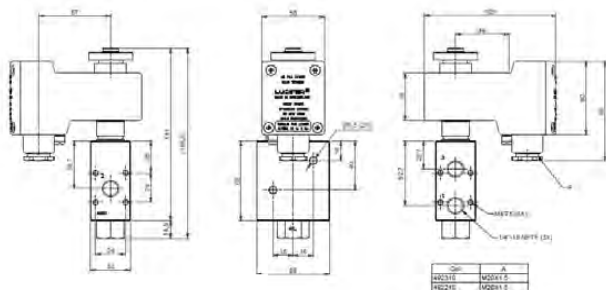
Drawing 8545



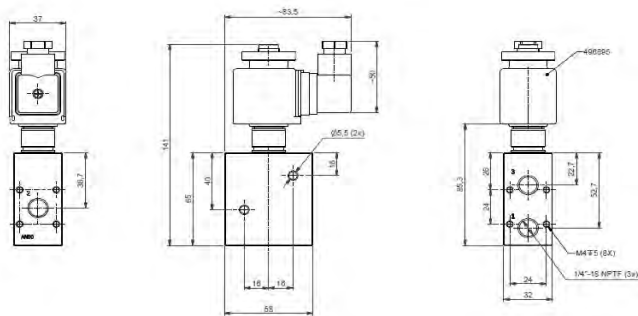
3/2

3 WAY VALVES DIRECT OPERATED

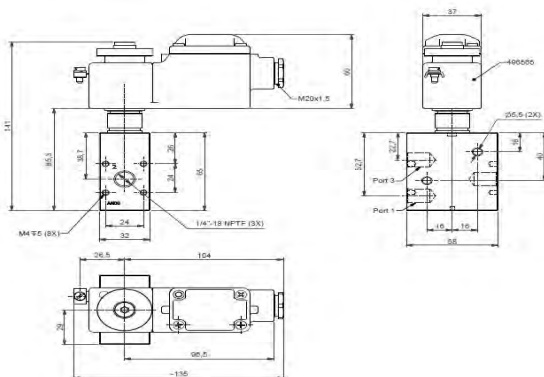
X SERIES - BRASS, ALUMINIUM, STAINLESS STEEL VALVES FOR PIPE MOUNTING



Drawing 8546



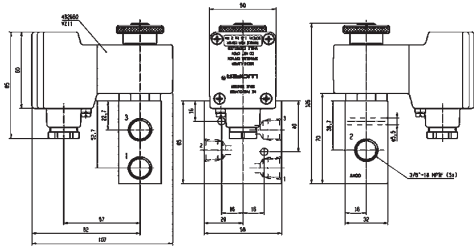
Drawing 8551



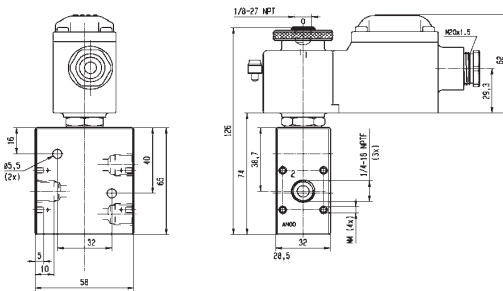
Drawing 8550



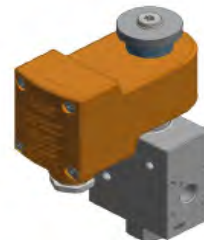
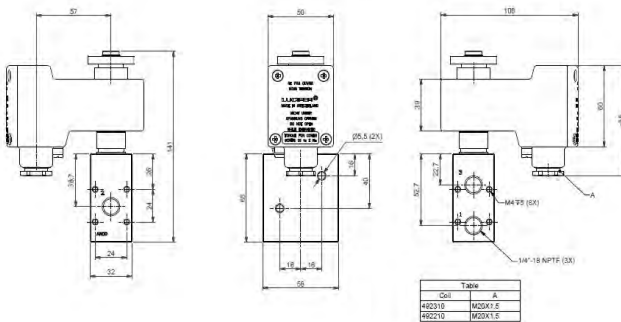
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	6	680	12	-40	-25
To	3/8"	6	680	12	65	65



Drawing 7669



Drawing 8169



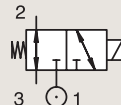
Drawing 8548

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3 WAY VALVES DIRECT OPERATED

X SERIES - BRASS, ALUMINIUM, STAINLESS STEEL VALVES FOR PIPE MOUNTING

316L STAINLESS ST.
SUB-BASE MOUNTING

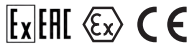


UNIVERSAL

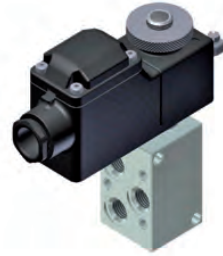
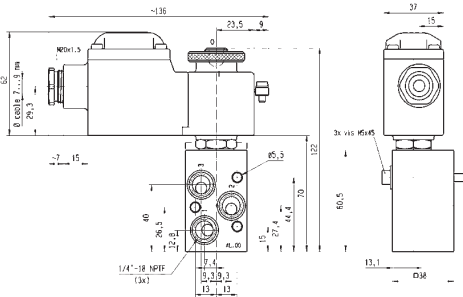
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
			Min	Max(MOPD)	DC	Min	Max							AC W	DC W			
1/4" NPTF	6	680	0	-	12	-25	65	FKM	U133X5195	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8172	
					12	12	-25	65	FKM	U133X5195	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	3572
					12	12	-25	65	FKM	U133X5195	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8172
					12	12	-25	65	FKM	U133X5195	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	3572
					12	12	-25	65	FKM	U133X5195	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8172
					12	12	-25	50	FKM	U133X5195	-	496895	-	-	8	8	9.0/10.1/10.2	8172

Notes:

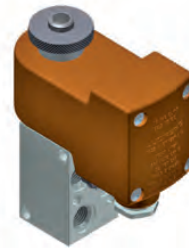
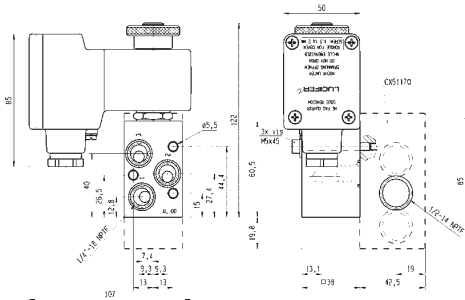
1. Valve delivered with an individual material traceability certificate (3.1 following EN10204)



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	6	680	12	-25	-25
To	1/4"	6	680	12	65	65



Drawing 8172



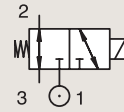
Drawing 3572

3/2

3 WAY VALVES DIRECT OPERATED

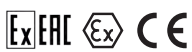
X SERIES - BRASS, ALUMINIUM, STAINLESS STEEL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM PIPE MOUNTING

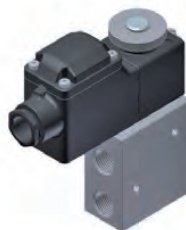
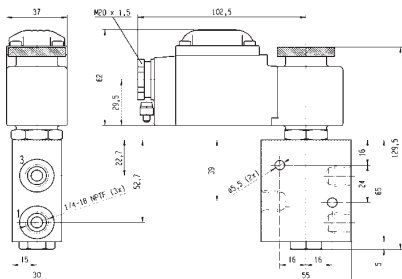


UNIVERSAL

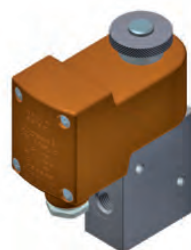
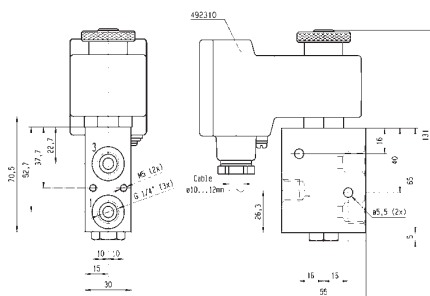
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W			
1/4"	BSP	6	680	0	-	12	-25	65	NBR	133X01	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8280
		6	680	0	12	12	-25	75	NBR	133X01	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	6960
		6	680	0	12	12	-25	65	NBR	133X01	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8280
		6	680	0	12	12	-25	65	NBR	133X01	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8280
		6	680	0	-	12	-25	65	NBR	133X01	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	6960
		6	680	0	12	12	-25	50	NBR	133X01	-	496895	-	-	8	8	9.0/10.1/10.2	8280
1/4" NPT		6	680	0	-	12	-25	65	NBR	U133X01	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8280
		6	680	0	12	12	-25	65	NBR	U133X01	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8280
		6	680	0	-	12	-25	65	NBR	U133X01	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	6960
		6	680	0	12	12	-25	65	NBR	U133X01	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	6960
		6	680	0	12	12	-25	65	NBR	U133X01	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8280
		6	680	0	12	12	-25	50	NBR	U133X01	-	496895	-	-	8	8	9.0/10.1/10.2	8280



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	6	680	12	-25	-25
To	1/4"	6	680	12	75	65



Drawing 8280



Drawing 6960





3 WAY VALVES DIRECT OPERATED

X SERIES MANUAL RESET - BRASS, STAINLESS STEEL VALVES FOR PIPE MOUNTING



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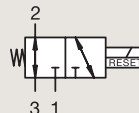
Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Manual Reset	Brass/Pipe Mounting	Universal	1/4"	6	680	12	65	112
	316L Stainless St./Pipe Mounting	Universal	1/4"	6	680	12	65	112
			3/8"	6	680	12	65	114

3/2

3 WAY VALVES DIRECT OPERATED

X SERIES MANUAL RESET - BRASS, STAINLESS STEEL VALVES FOR PIPE MOUNTING

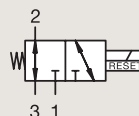
BRASS PIPE MOUNTING



UNIVERSAL- MANUAL RESET

Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC	Min	Max							AC W	DC W		
1/4" NPT	6	680	0	-	12	-25	65	NBR	U033X0111	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2/12.0	8347
	6	680	0	12	12	-25	65	NBR	U033X0111	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2/12.0	8347
	6	680	0	12	12	-25	65	NBR	U033X0111	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2/12.0	8347
	6	680	0	-	12	-25	65	NBR	U033X0111	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2/12.0	8347
	6	680	0	12	12	-25	65	NBR	U033X0111	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2/12.0	8347
	6	680	0	12	12	-25	65	NBR	U033X0111	-	496895	-	-	8	8	9.0/10.1/10.2/12.0	8347

316L STAINLESS ST. PIPE MOUNTING



UNIVERSAL- MANUAL RESET

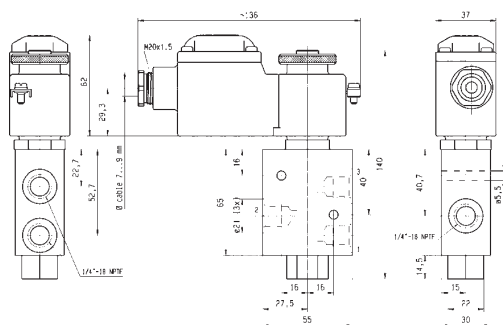
Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC	Min	Max							AC W	DC W		
1/4" NPT	6	680	0	12	12	-25	65	NBR	U033X5156 ¹	-	492310	1-21	Ex mb II T4 to T5	6	6	10.1/10.2/12.0	7029
	6	680	0	12	12	-25	65	NBR	U033X5156 ¹	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	10.1/10.2/12.0	8168
	6	680	0	12	12	-25	65	NBR	U033X5156 ¹	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	10.1/10.2/12.0	8168
	6	680	0	12	12	-25	65	NBR	U033X5156 ¹	-	496895	-	-	8	8	10.1/10.2/12.0	8168

Notes:

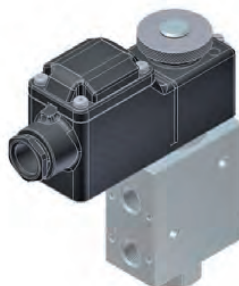
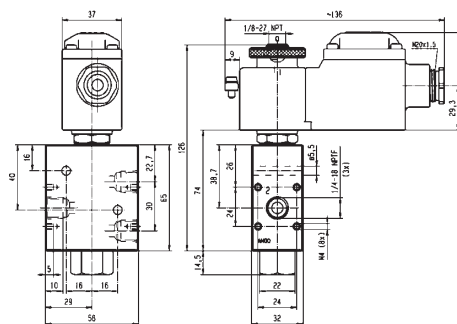
1. Valve delivered with an individual material traceability certificate (3.1 following EN10204)



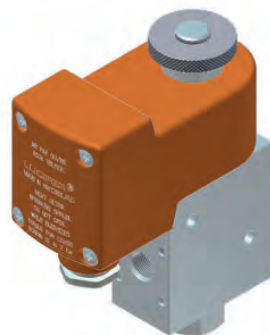
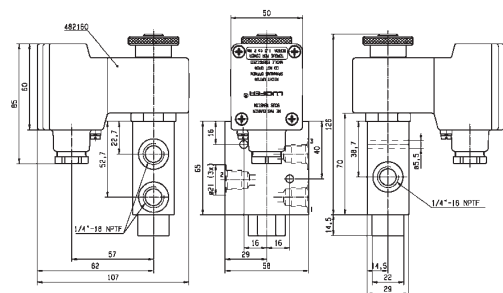
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	6	680	12	-25	-25
To	1/4"	6	680	12	65	65



Drawing 8347



Drawing 8168



Drawing 7029



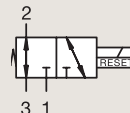
3/2

3 WAY VALVES DIRECT OPERATED

X SERIES MANUAL RESET - BRASS, STAINLESS STEEL VALVES FOR PIPE MOUNTING

316L STAINLESS ST.
PIPE MOUNTING

UNIVERSAL - MANUAL RESET



Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/4" NPTF	6	560	0	-	12	-25	65	NBR	U033X5195 ₁	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2/12.0	8348
	6	560	0	12	12	-25	65	NBR	U033X5195 ₁	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2/12.0	8348
	6	560	0	12	12	-25	65	NBR	U033X5195 ₁	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2/12.0	8348
	6	560	0	-	12	-25	65	NBR	U033X5195 ₁	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2/12.0	8348
	6	560	0	12	12	-25	65	NBR	U033X5195 ₁	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2/12.0	8348
	6	560	0	12	12	-25	65	NBR	U033X5195 ₁	-	496895	-	-	8	8	9.0/10.1/10.2/12.0	8348
	6	680	0	12	12	-40	65	VMQ	U033X7759 ₁	-	496895	-	-	8	8	9.0/10.1/10.2/10.3	8544
	6	680	0	12	12	-40	65	VMQ	U033X7759 ₁	-	497105	1-21	Ex db mb IIC T4 to T6	8	8	9.0/10.1/10.2/10.3	8537
	6	680	0	12	12	-40	65	VMQ	U033X7759 ₁	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2/10.3	8545
	6	680	0	12	12	-40	65	VMQ	U033X7759 ₁	-	492310	1-21	Ex mb II T4 to T5	9	8	9.0/10.1/10.2/10.3	8546
3/8" NPTF	6	680	0	-	12	-25	65	NBR	U033X5256 ₁	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2/12.0	8349
	6	680	0	12	12	-25	65	NBR	U033X5256 ₁	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2/12.0	8349
	6	680	0	12	12	-25	65	NBR	U033X5256 ₁	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2/12.0	8349
	6	680	0	-	12	-25	65	NBR	U033X5256 ₁	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2/12.0	8349
	6	680	0	12	12	-25	65	NBR	U033X5256 ₁	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2/12.0	8349
	6	680	0	12	12	-25	65	NBR	U033X5256 ₁	-	496895	-	-	8	8	9.0/10.1/10.2/12.0	8349

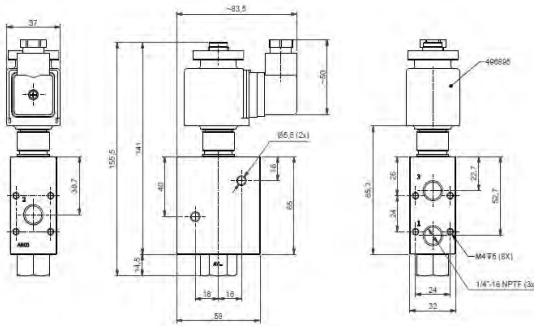
Notes:

1. Valve delivered with an individual material traceability certificate (3.1 following EN10204)

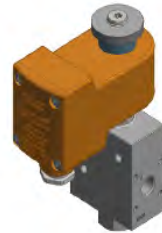
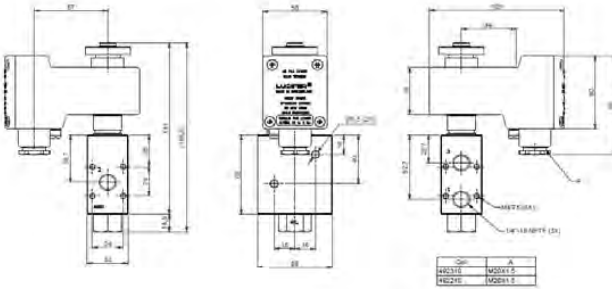
3/2

3 WAY VALVES DIRECT OPERATED

X SERIES MANUAL RESET - BRASS, STAINLESS STEEL VALVES FOR PIPE MOUNTING



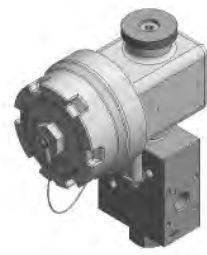
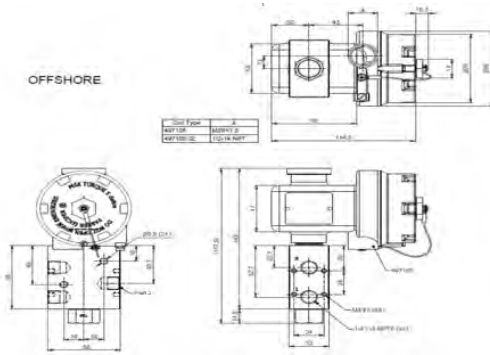
Drawing 8544



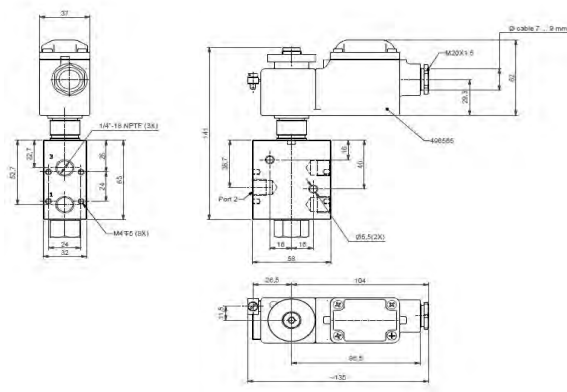
Drawing 8546



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	6	560	12	-25	-25
To	3/8"	6	680	12	65	65



Drawing 8537



Drawing 8545







DIRECT OPERATED SOLENOID VALVE

LOW POWER A03 SERIES MANUAL RESET, STAINLESS STEEL VALVES
FOR PIPE MOUNTING

3/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Direct operated	316L Stainless Steel	Universal	1/4"	5,7	7,5	10	100	120
Manual reset	316L Stainless Steel	Universal	1/4"	5,7	7,5	10	100	120

3/2

3 WAY VALVES DIRECT OPERATED

LOW POWER A03 SERIES MANUAL RESET, STAINLESS STEEL VALVES
FOR PIPE MOUNTING

316L STAINLESS ST.
PIPE MOUNTING



UNIVERSAL

Port size	Orifice Ø mm	Flow factory KV		Operating Pressure Differential (bar)		Ambient Temp. ⁽¹⁾		Basic part number AISI 316L	Power level ~/=	Power (cold)		Dwg. No.
		m³/h	l/min	Min	Max ~/=	Min °C	Max °C			AC W	DC W	
1/4" NPT	5.7	0.45	7.5	0	10	-45	100	A03RN*24** -R	RP	3.6	3.6	1
	5.7	0.45	7.5	0	10	-45	100	A03RN*24** -L	LP	-	1.8	1

Notes:

Please define the complete ordering system in accordance with the desired configuration.
The Numbering system configurator is shown below:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
A	0	3	R	N	2	4	M	0	-	L	R	D	N	C	2

4 : Body material

R	SS, 316L
---	----------

8,9: Manual operator selection

MN	None manual operator function
MO	Manual operator function
MS	Manual reset function

12,13,14 : Coil type and cable thread

ADM	NPT 1/2	Flameproof-Aluminium, "d" type Ex housing (EN/IEC 60079-31)
ADM	M20X1.5	Flameproof-316 SS, "d" type Ex housing (EN/IEC 60079-31)
RDN	NPT 1/2	Flameproof-316 SS, "d" type Ex housing (EN/IEC 60079-31)
RDM	M20X1.5	Flameproof-316 SS, "d" type Ex housing (EN/IEC 60079-31)

5,6 : Body pipe size

N2	1/4" NPT
G2	1/4" BSPP

11: Coil power level

R	Reduce power, 3, 2-3, 6 W
L	Low power, 1.5-1.8 W (1)

7: Ambient temp.

4	-45°C to 100°C
---	----------------

15,16: Coil voltage

C1	12VDC	RP/LP Available
C2	24VDC	RP/LP Available
C4	48VDC	RP/LP Available
C5	110VDC	RP/LP Available
3N	125VDC	RP Available
B1	24 W / 50 Hz	RP Available
B2	24 W / 60 Hz	RP Available
E6	100 V / 50 Hz	RP Available
0A	110-120 V / 50 Hz	RP Available
F2	200 V / 50 Hz	RP Available
3D	220-230 V / 50 Hz	RP Available
K7	110 V / 60 Hz	RP Available
3K	100-120 V / 60 Hz	RP Available
J2	200 V / 60 Hz	RP Available
7J	220-230 V / 60 Hz	RP Available

Notes:

(1). For MS type low power version is not available



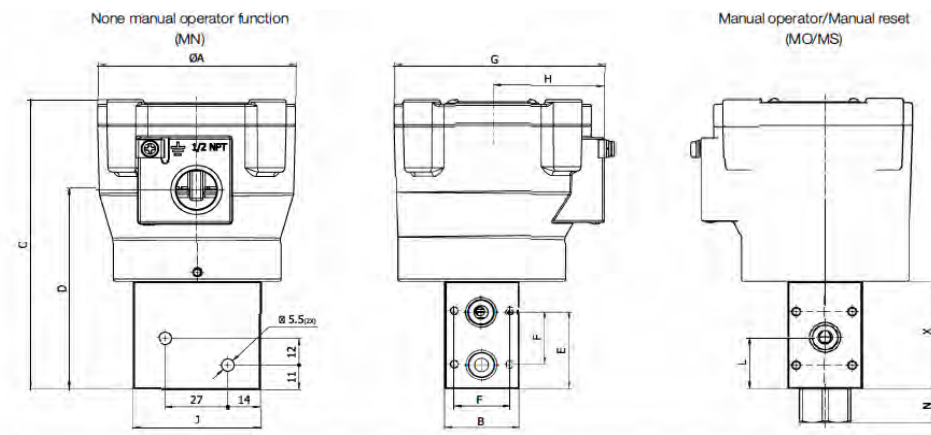
Coil specification	Reduced Power (RP)		Low Power (LP)	
	hot	cold	hot	cold
	3.2 W	3.6 W	1.5 W	1.8 W
Safety code	II2G Ex d IIC Gb T6/T5/T4 II2D Ex t IIIC Db		II2G Ex d IIC Gb T6/T5/T4 II2D Ex t IIIC Db	
Electrical enclosure protection (EN 60529)	IP66/67, Al/SS		IP66/67, Al/SS	
Operator ambient temperature range (C)	-60 to + 65/80/110°C		-60 to + 65/80/110°C	

(1) Valve temperature range:

The valve temperature range (TS) is determined by the selected seal material, the temperature range for proper operations of the valve and sometimes by the fluid

(2) Operator ambient temperature range:

The operator ambient temperature range is determined by the selected power level and the safety code.



Drawing 1

Power Level	Coil Type	A	B	C	D	E	F	G	H	J	L	N	X	Weight (Kg)
L	RDN,RDM	85	32	140	100	35	24	90.5	48	55	23	15	58.2	2.85
	ADN,ADM	85	32	140	100	35	24	90.5	48	55	23	15	58.2	1.82
R	RDN,RDM	85	32	130	90	35	24	90.5	48	55	23	15	48.2	2.78
	ADN,ADM	85	32	130	90	35	24	90.5	48	55	23	15	48.2	1.75





3 WAY VALVES DIRECT OPERATED

B04-B14 SERIES - BANJO VALVES



3/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Direct Operated	Anodized Aluminium/Banjo	Normally Closed	1/8"	1.2	50	10	50	124
			1/4"-1/8"	1.2	50	10	50	124

3/2

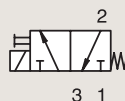
3 WAY VALVES DIRECT OPERATED

B04-B14 SERIES - BANJO VALVES

ANODIZED ALUMINIUM

BANJO

NORMALLY CLOSED



Port size	Orifice Ø	Flow factor	Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
			Min	Max(MOPD)	Min	Max							AC W	DC W			
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/8"	1.2	50	0	10	10	-10	50	NBR	131B14 ₁₂	-	496131	-	-	3	3	1.2	8227
	1.2	50	0	10	10	-10	50	NBR	131B14 ₁₂	-	496482	-	-	3	3	1.2	8227
	1.2	50	0	10	10	-10	50	NBR	131B14 ₁₂	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8227

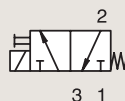
Notes:

1. With manual override
2. Valve only compatible with air and neutral gases

ANODIZED ALUMINIUM

BANJO

NORMALLY CLOSED



Port size	Orifice Ø	Flow factor	Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
			Min	Max(MOPD)	Min	Max							AC W	DC W			
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/4"	1.2	50	0	10	10	-10	50	NBR	131B04 ₁₂	-	496131	-	-	3	3	1.2	8226
	1.2	50	0	10	10	-10	50	NBR	131B04 ₁₂	-	496482	-	-	3	3	1.2	8226
	1.2	50	0	10	10	-10	50	NBR	131B04 ₁₂	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8226

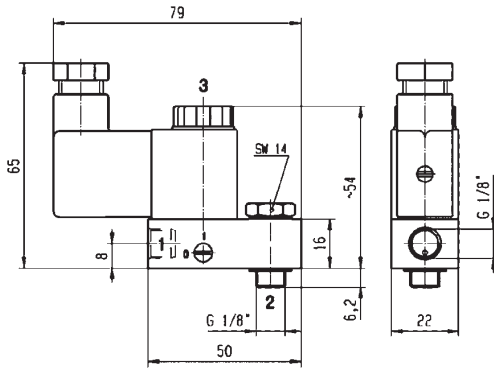
Notes:

1. With manual override
2. Valve only compatible with air and neutral gases

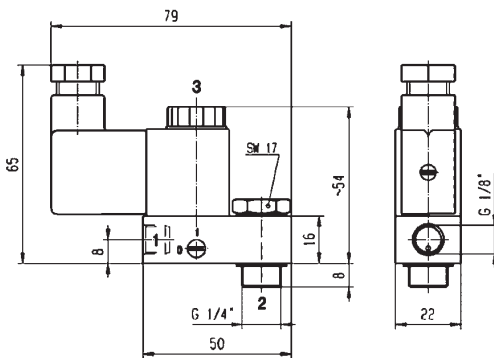




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"	1.2	50	10	-10	-10
To	1/4"-1/8"	1.2	50	10	50	50



Drawing 8227



Drawing 8226





3 AND 5 WAY VALVES PILOT OPERATED

F SERIES - BRASS AND ALUMINIUM VALVES FOR FLANGE MOUNTING



3/2
5/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Pilot Operated	Brass/Sub-base Mounting	Normally Closed	14 mm	14	2100	13	50	128
	Anodized Aluminium/Sub-base Mounting	Normally Closed	6 mm	6	630	10	75	130
		Control by Electric Impulse	6 mm	6	630	10	75	130

3/2 5/2

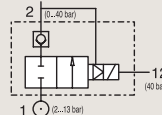
3 AND 5 WAY VALVES PILOT OPERATED

F SERIES - BRASS AND ALUMINIUM VALVES FOR FLANGE MOUNTING

BRASS

SUB-BASE MOUNTING

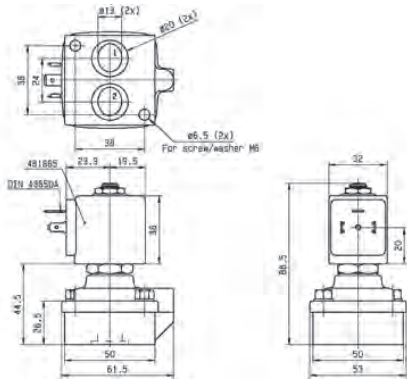
NORMALLY CLOSED



Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min bar	Max(MOPD) AC bar	DC bar	Min °C	Max °C							AC W	DC W		
SB	14	2100	2	13	13	-10	50	PUR	421F35	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3520
	14	2100	2	13	13	-10	50	PUR	421F35	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3520
	14	2100	2	13	13	-10	50	PUR	421F35	2995	481865	-	-	8	9	2.1	3520



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	14 mm	14	2100	13	-10	-10
To	14 mm	14	2100	13	50	50



Drawing 3520

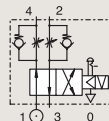
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

F SERIES - BRASS AND ALUMINIUM VALVES FOR FLANGE MOUNTING

ANODIZED ALUMINIUM SUB-BASE MOUNTING

NORMALLY CLOSED



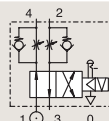
Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp. °C		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min bar	Max(MOPD) AC bar	DC bar	Min °C	Max °C							AC W	DC W		
SB	6	630	1	10	10	-10	65	FKM	341F34 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.0/2.1	3287
	6	630	1	10	10	-10	60	FKM	341F34 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0/2.1	3287
	6	630	1	10	10	-10	75	FKM	341F34 ₁	2995	481865	-	-	8	9	2.0/2.1	3287
	6	630	1	10	10	-10	65	FKM	341F3403	-	495905	1-21	Ex db mb IIC T4	8	8	2.0/2.1	3287
	6	630	1	10	10	-10	60	FKM	341F3403	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0/2.1	3287
	6	630	1	10	10	-10	75	FKM	341F3403	2995	481865	-	-	8	9	2.0/2.1	3287
	6	630	1	10	10	-25	65	PUR	341F3440	-	495905	1-21	Ex db mb IIC T4	8	8	2.0/2.1	3287
	6	630	1	10	10	-25	60	PUR	341F3440	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.0/2.1	3287
6	630	1	10	10	-25	75	PUR	341F3440	2995	481865	-	-	8	9	2.0/2.1	3287	

Notes:

1. With flow regulator

ANODIZED ALUMINIUM SUB-BASE MOUNTING

CONTROL BY ELECTRIC IMPULSE



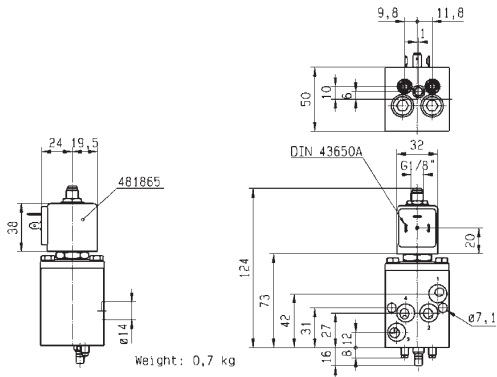
Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp. °C		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min bar	Max(MOPD) AC bar	DC bar	Min °C	Max °C							AC W	DC W		
SB	6	630	1	10	-	-10	75	FKM	345F34 ₁	4269	484990	-	-	11	-	4.0	3287
	6	630	1	-	10	-10	75	FKM	345F34 ₁	4269	485400	-	-	-	13	4.0	3287

Notes:

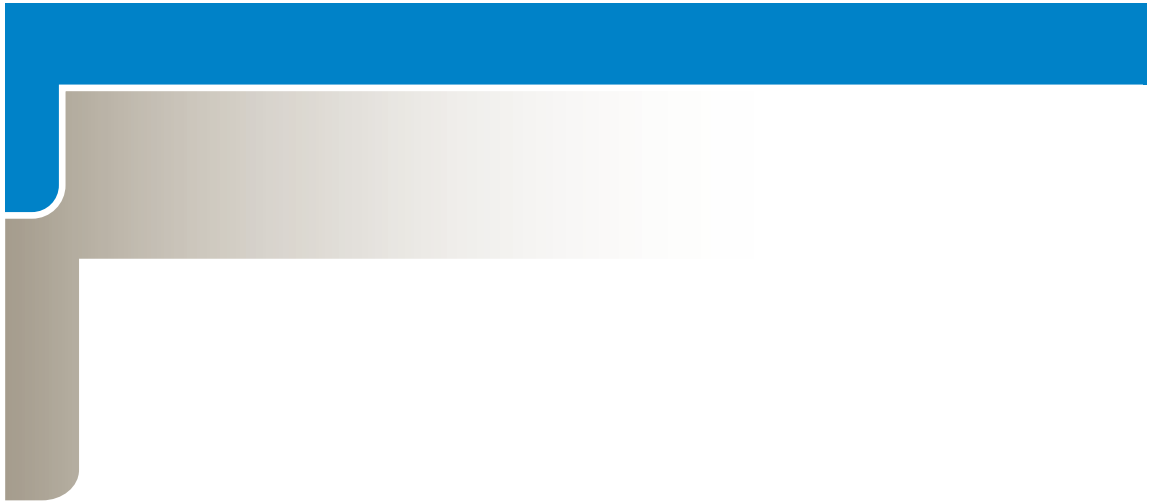
1. With flow regulator



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	14 mm	14	2100	13	-10	-10
To	14 mm	14	2100	13	50	50



Drawing 3287





3 AND 5 WAY VALVES PILOT OPERATED

B SERIES - ALUMINIUM POPPET VALVES FOR PIPE MOUNTING



3/2
5/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Pilot Operated	Anodized Aluminium/ Pipe Mounting	Normally Closed	1/4"	6 to 8	1100	40	75	134
			1/2"	14	2500	15	75	134
		Normally Open	1/4"	8	1100	40	75	144
			1/2"	14	2500	15	100	146
		Control by Electric Impulse	1/4"	6 to 8	1100	15	75	148
			1/2"	14	2500	15	75	148

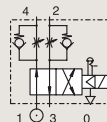
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

B SERIES - ALUMINIUM POPPET VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

NORMALLY CLOSED



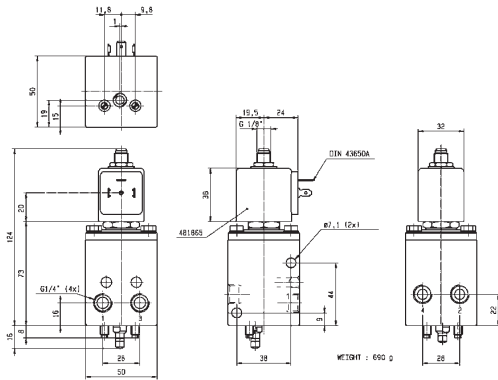
Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv	KV	Qn	Min	Max(MOPD)	Min	Max							AC W	DC W			
BSP	mm	l/min	m³/h	l/min	bar	DC bar	°C	°C											
1/4"	6	9	0.54	630	1	10	10	-10	65	NBR	341B34 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3286
	6	9	0.54	630	1	10	10	-10	60	NBR	341B34 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3286
	6	9	0.54	630	1	10	10	-10	75	NBR	341B34 ₁₂	2995	481865	-	-	8	9	2.1	3286
	6	9	0.54	630	1	10	10	-10	65	NBR	341B3403 ₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3286
	6	9	0.54	630	1	10	10	-10	60	NBR	341B3403 ₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3286
	6	9	0.54	630	1	10	10	-10	75	NBR	341B3403 ₂	2995	481865	-	-	8	9	2.1	3286
	6	9	0.54	560	1	-	10	-10	55	NBR	341B3490	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	3561
	6	9	0.54	560	1	-	10	-10	65	NBR	341B3490	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	3561
6	9	0.54	560	1	10	10	-10	65	NBR	341B3490	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	3561	

Notes:

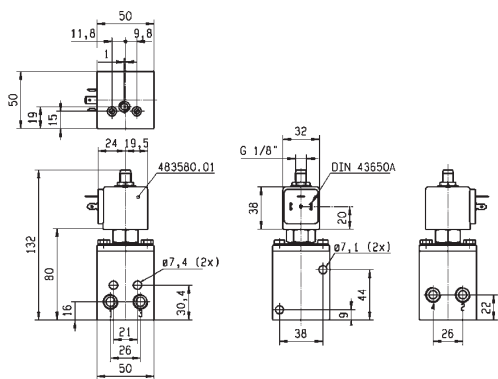
1. With flow regulator
2. With manual override



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	6	560	10	-10	-10
To	1/4"	6	630	10	75	50



Drawing 3286



Drawing 3561

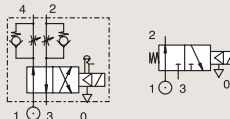
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

B SERIES - ALUMINIUM POPPET VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø	Flow factor			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv	KV	Qn	Min	Max(MOPD)	Min	Max	AC W							DC W			
BSP	mm	l/min	m ³ /h	l/min	bar	DC bar	°C	°C											
1/4"	6	9	0.54	630	1	10	10	-25	65	PUR	341B3440 ₃	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3286
	6	9	0.54	630	1	10	10	-25	60	PUR	341B3440 ₃	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3286
	6	9	0.54	630	1	10	10	-25	75	PUR	341B3440 ₃	2995	481865	-	-	8	9	2.1	3286
	6.5	10	0.60	645	1	-	10	-10	55	NBR	331B7490 ₁	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	8270
	6.5	10	0.60	645	1	-	10	-10	65	NBR	331B7490 ₁	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	8270
	6.5	10	0.60	645	1	10	10	-10	65	NBR	331B7490 ₁	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	8270
	6.5	10	0.60	750	1	10	10	-10	65	NBR	E331B74 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3240
	6.5	10	0.60	750	1	10	10	-10	60	NBR	E331B74 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3240
6.5	10	0.60	750	1	10	10	-10	75	NBR	E331B74 ₁₂	2995	481865	-	-	8	9	2.1	3240	

Notes:

1. Valve only compatible with air and neutral gases
2. With manual override
3. With flow regulator

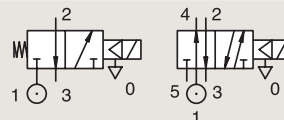
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

B SERIES - ALUMINIUM POPPET VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv l/min	KV m ³ /h	Qn l/min	Min bar	Max(MOPD) bar	Min °C	Max °C							AC W	DC W			
1/4"	8	10	0.60	750	1	40	40	-10	65	NBR	331B02 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8114
	8	10	0.60	750	1	40	40	-10	60	NBR	331B02 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8114
	8	10	0.60	750	1	40	40	-10	75	NBR	331B02 ₁	2995	481865	-	-	8	9	2.1	8114
	8	10	0.60	640	1	40	40	-10	65	NBR	341B02 ₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8115
	8	10	0.60	640	1	40	40	-10	60	NBR	341B02 ₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8115
	8	10	0.60	640	1	40	40	-10	75	NBR	341B02 ₂	2995	481865	-	-	8	9	2.1	8115

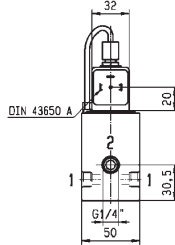
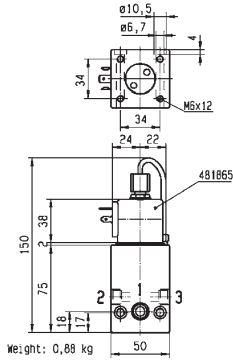
Notes:

1. Pilot seat discs in Kel-F (PCTFE); valve with pilot return pipe
2. Valve with pilot return pipe on exhaust port

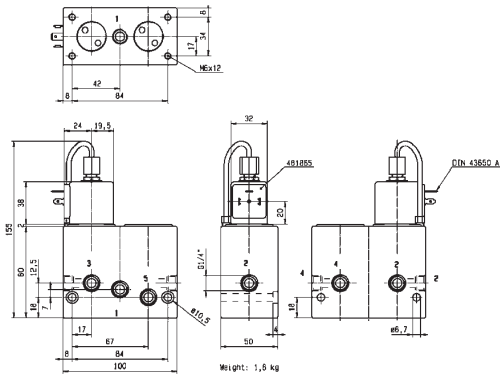




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	8	640	40	-10	-10
To	1/4"	8	750	40	75	50



Drawing 8114



Drawing 8115

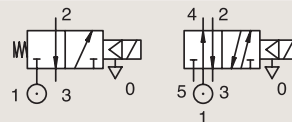
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

B SERIES - ALUMINIUM POPPET VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

NORMALLY CLOSED



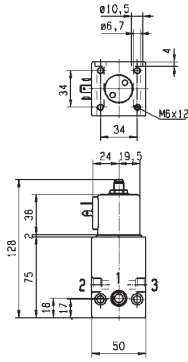
Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv l/min	KV m ³ /h	Qn l/min	Min bar	Max(MOPD) bar	Min °C	Max °C							AC W	DC W			
1/4"	8	20	1.20	1100	1	15	15	-10	65	FKM	E331B01 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3234
	8	20	1.20	1100	1	15	15	-10	60	FKM	E331B01 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3234
	8	20	1.20	1100	1	15	15	-10	75	FKM	E331B01 ₁	2995	481865	-	-	8	9	2.1	3234
	8	16	0.96	1000	1	15	15	-10	65	NBR	E341B01 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3309
	8	16	0.96	1000	1	15	15	-10	60	NBR	E341B01 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3309
	8	16	0.96	1000	1	15	15	-10	75	NBR	E341B01 ₁	2995	481865	-	-	8	9	2.1	3309

Notes:

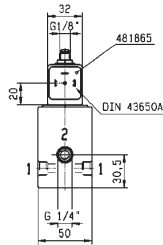
1. Valve only compatible with hydraulic oil and air/neutral gases



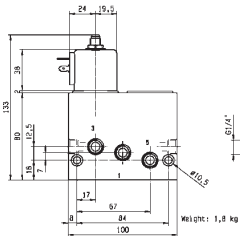
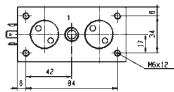
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	8	1000	15	-10	-10
To	1/4"	8	1100	15	75	50



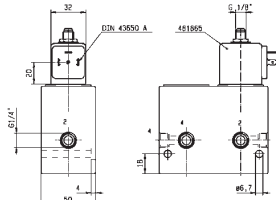
Weight: 0.68 kg



Drawing 3234



Weight: 1.8 kg



Drawing 3309

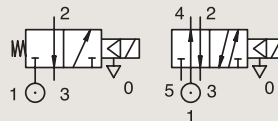
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

B SERIES - ALUMINIUM POPPET VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

NORMALLY CLOSED



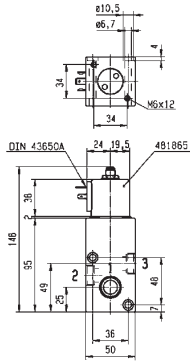
Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max(MOPD) DC bar	Min °C	Max °C							AC W	DC W			
1/2"	14	-	-	2500	1	15	15	-10	65	FKM	E331B21 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3238
	14	-	-	2500	1	15	15	-10	60	FKM	E331B21 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3238
	14	-	-	2500	1	15	15	-10	75	FKM	E331B21 ₁	2995	481865	-	-	8	9	2.1	3238
	14	-	-	2500	1	15	15	-10	65	NBR	E341B21 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3315
	14	-	-	2500	1	15	15	-10	60	NBR	E341B21 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3315
	14	-	-	2500	1	15	15	-10	75	NBR	E341B21 ₁	2995	481865	-	-	8	9	2.1	3315

Notes:

1. Valve only compatible with air and neutral gases



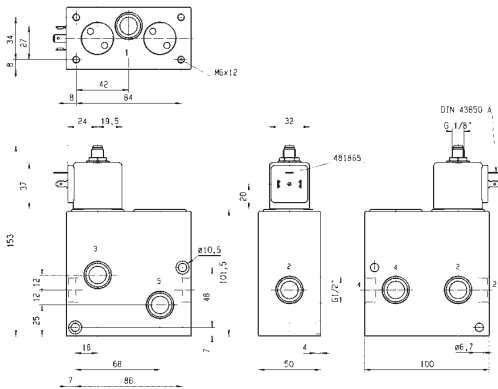
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/2"	14	2500	15	-10	-10
To	1/2"	14	2500	15	75	50



Weight: 0,98 kg



Drawing 3238



Drawing 3315

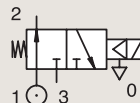
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

B SERIES - ALUMINIUM POPPET VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

NORMALLY OPEN



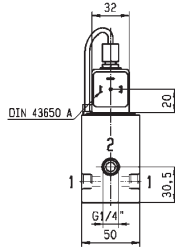
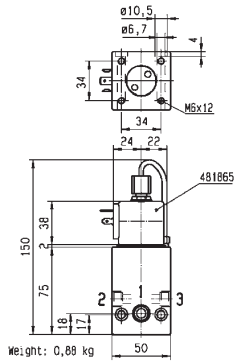
Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv l/min	KV m ³ /h	Qn l/min	Min bar	Max(MOPD) bar	Min °C	Max °C							AC W	DC W			
1/4"	8	10	0.60	750	1	40	40	-10	65	NBR	332B02 ¹²	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8114
	8	10	0.60	750	1	40	40	-10	60	NBR	332B02 ¹²	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8114
	8	10	0.60	750	1	40	40	-10	75	NBR	332B02 ¹²	2995	481865	-	-	8	9	2.1	8114
	8	20	1.20	1100	1	15	15	-10	65	FKM	E332B01 ²	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3234
	8	20	1.20	1100	1	15	15	-10	60	FKM	E332B01 ²	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3234
	8	20	1.20	1100	1	15	15	-10	75	FKM	E332B01 ²	2995	481865	-	-	8	9	2.1	3234

Notes:

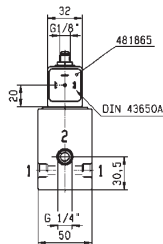
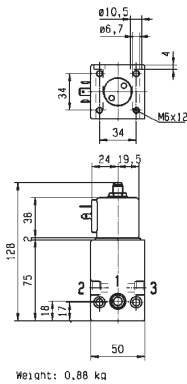
1. Pilot seat discs in Kel-F (PCTFE); valve with pilot return pipe
2. Valve only compatible with hydraulic oil and air/neutral gases



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	8	750	15	-10	-10
To	1/4"	8	1100	40	75	50



Drawing 8114



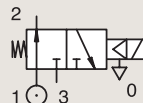
Drawing 3234

3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

B SERIES - ALUMINIUM POPPET VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING



NORMALLY OPEN

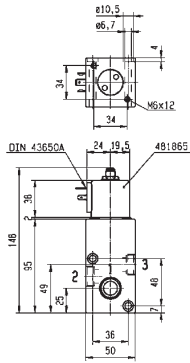
Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
		Kv	KV	Qn	Min	Max(MOPD)	Min	Max							AC W	DC W		
BSP	mm	l/min	m ³ /h	l/min	bar	AC bar	DC bar	°C	°C									
14	-	-	2500	1	15	15	-10	65	FKM	E332B21 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3238
1/2"	14	-	2500	1	15	15	-10	60	FKM	E332B21 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3238
	14	-	2500	1	15	15	-10	100	FKM	E332B21 ₁	2995	481865	-	-	8	9	2.1	3238

Notes:

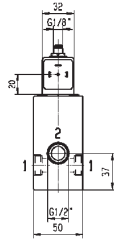
1. Valve only compatible with air and neutral gases



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/2"	14	2500	15	-10	-10
To	1/2"	14	2500	15	100	50



Weight: 0.98 kg



Drawing 3238

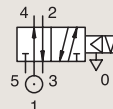
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

B SERIES - ALUMINIUM POPPET VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

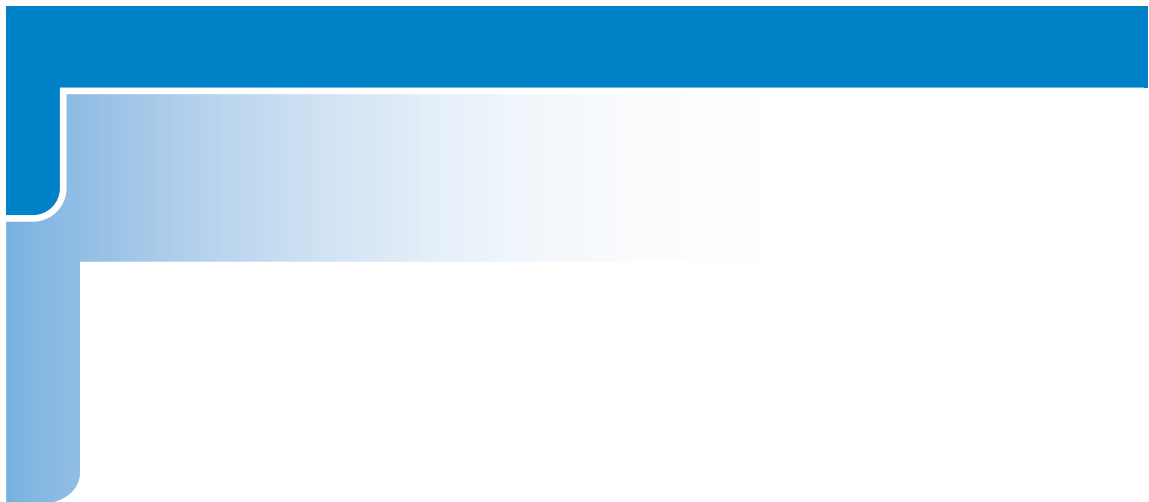
CONTROL BY ELECTRIC IMPULSE



Port size	Orifice Ø	Flow factor			Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max(MOPD) bar	Min °C	Max °C							AC W	DC W			
1/4"	6	9	0.54	630	1	10	-	-10	75	NBR	345B34 ¹²	4269	484990	-	-	11	-	4.0	3286
	6	9	0.54	630	1	-	10	-10	75	NBR	345B34 ¹²	4269	485400	-	-	-	13	4.0	3286
	8	16	0.96	1000	1	15	-	-10	75	NBR	345B04	4269	484990	-	-	11	-	4.0	3309
	8	16	0.96	1000	1	-	15	-10	75	NBR	345B04	4269	485400	-	-	-	13	4.0	3309
1/2"	14	40	2.40	2500	1	15	-	-10	75	NBR	345B24	4269	484990	-	-	11	-	4.0	3315
	14	40	2.40	2500	1	-	15	-10	75	NBR	345B24	4269	485400	-	-	-	13	4.0	3315

Notes:

1. With flow regulator
2. Valve only compatible with air and neutral gases





3 AND 5 WAY VALVES PILOT OPERATED

P03-P04 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES FOR PIPE MOUNTING



3/2
5/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Pilot Operated	Anodized Aluminium/Pipe Mounting	Normally Closed	1/4"	7	1250	10	50	152
			1/2"	12	3000	10	50	154
		Dual Solenoids	1/4"	7	1250	10	50	156
			1/2"	12	3000	10	50	158

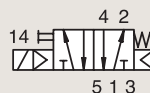
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

P03-P04 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

NORMALLY CLOSED



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min °C	Max °C							AC W	DC W		
1/4"	7	1250	2.5	10	10	-20	50	NBR	341P03 ₁	-	496131	-	-	3	3	1.2	8218
	7	1250	2.5	10	10	-20	50	NBR	341P03 ₁	-	496482	-	-	3	3	1.2	8218
	7	1250	2.5	10	10	-20	50	NBR	341P03 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8218
	7	1250	2.5	10	10	-20	50	NBR	341P33 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8219
	7	1250	2.5	10	10	-20	50	NBR	341P33 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8219
	7	1250	2.5	10	10	-20	50	NBR	341P33 ₁₂	2995	481865	-	-	8	9	2.1	8219

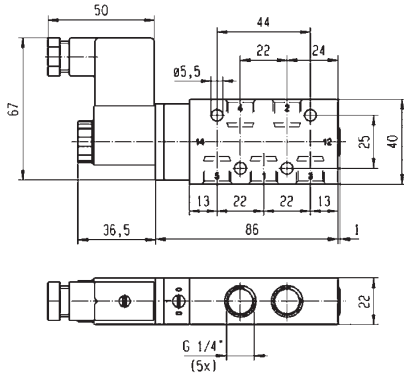
Notes:

1. With manual override
2. Pilot seat in FKM

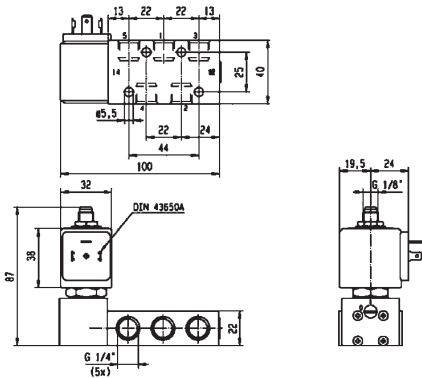




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	7	1250	10	-20	-20
To	1/4"	7	1250	10	50	50



Drawing 8218



Drawing 8219

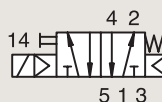
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

P03-P04 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

NORMALLY CLOSED



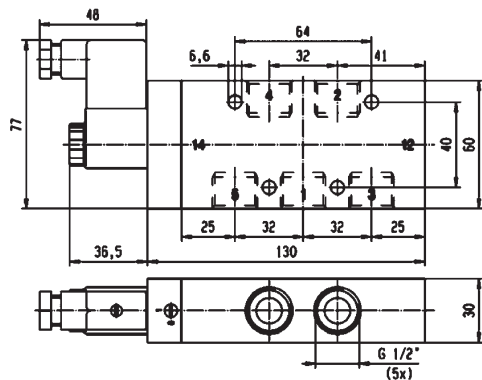
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/2"	12	3000	2.5	10	10	-20	50	NBR	341P04 ₁	-	496131	-	-	3	3	1.2	8220
	12	3000	2.5	10	10	-20	50	NBR	341P04 ₁	-	496482	-	-	3	3	1.2	8220
	12	3000	2.5	10	10	-20	50	NBR	341P04 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8220
	12	3000	2.5	10	10	-20	50	NBR	341P34 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8221
	12	3000	2.5	10	10	-20	50	NBR	341P34 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8221
	12	3000	2.5	10	10	-20	50	NBR	341P34 ₁₂	2995	481865	-	-	8	9	2.1	8221

Notes:

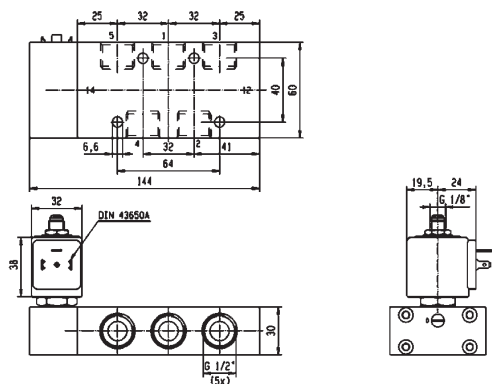
1. With manual override
2. Pilot seat in FKM



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/2"	12	3000	10	-20	-20
To	1/2"	12	3000	10	50	50



Drawing 8220



Drawing 8221

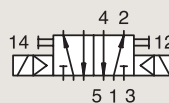
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

P03-P04 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

DUAL SOLENOIDS



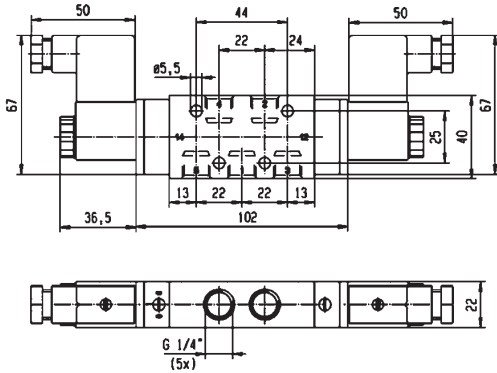
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/4"	7	1250	2.5	10	10	-20	50	NBR	347P03 ₁	-	496131	-	-	3	3	1.2	8222
	7	1250	2.5	10	10	-20	50	NBR	347P03 ₁	-	496482	-	-	3	3	1.2	8222
	7	1250	2.5	10	10	-20	50	NBR	347P03 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8222
	7	1250	2.5	10	10	-20	50	NBR	347P33 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8223
	7	1250	2.5	10	10	-20	50	NBR	347P33 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8223
	7	1250	2.5	10	10	-20	50	NBR	347P33 ₁₂	2995	481865	-	-	8	9	2.1	8223

Notes:

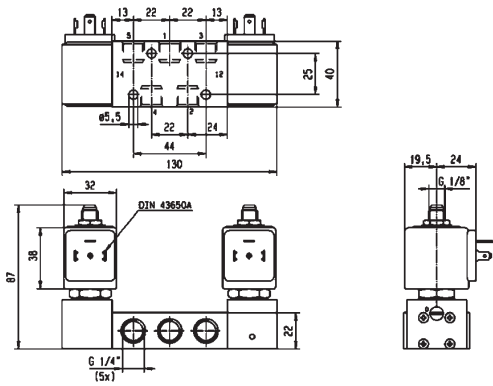
1. With manual override
2. Pilot seat in FKM



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	7	1250	10	-20	-20
To	1/4"	7	1250	10	50	50



Drawing 8222



Drawing 8223

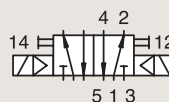
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

P03-P04 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

DUAL SOLENOIDS



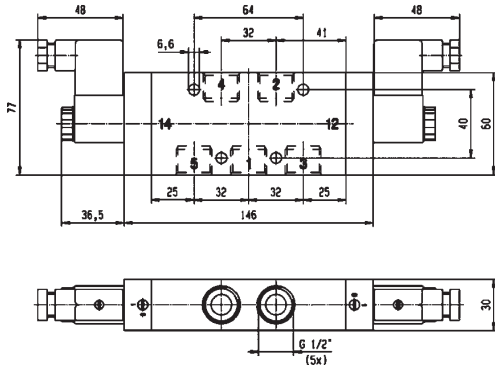
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode		Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max						AC W	DC W				
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C											
1/2"	12	3000	2.5	10	10	-20	50	NBR	347P04 ₁	-	496131	-	-	3	3	1.2	8224	
	12	3000	2.5	10	10	-20	50	NBR	347P04 ₁	-	496482	-	-	3	3	1.2	8224	
	12	3000	2.5	10	10	-20	50	NBR	347P04 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8224	
	12	3000	2.5	10	10	-20	50	NBR	347P34 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8225	
	12	3000	2.5	10	10	-20	50	NBR	347P34 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8225	
	12	3000	2.5	10	10	-20	50	NBR	347P34 ₁₂	2995	481865	-	-	8	9	2.1	8225	

Notes:

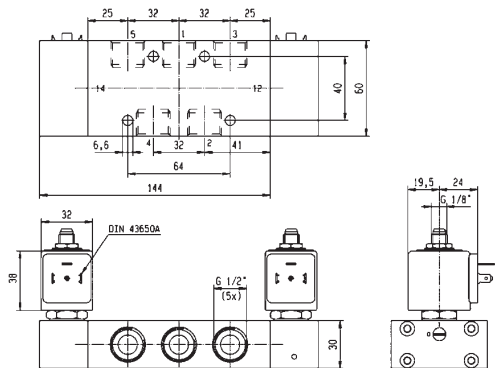
1. With manual override
2. Pilot seat in FKM



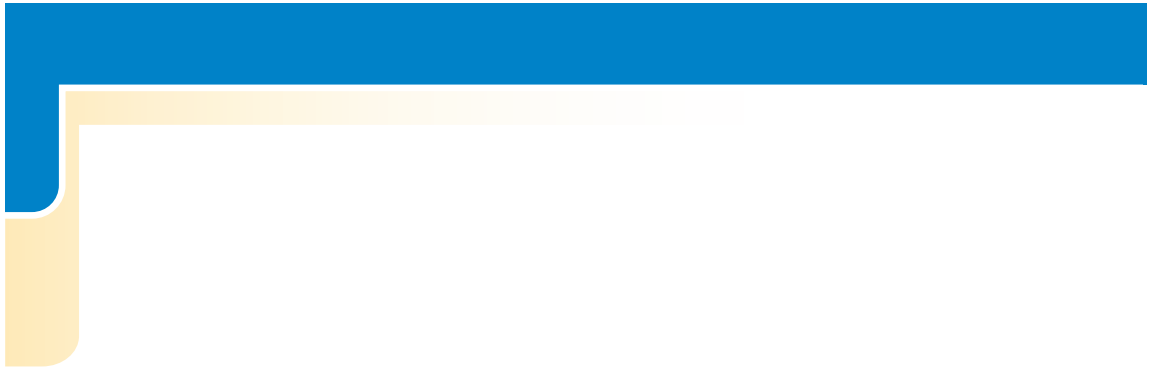
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/2"	12	3000	10	-20	-20
To	1/2"	12	3000	10	50	50



Drawing 8224



Drawing 8225





3 AND 5 WAY VALVES PILOT OPERATED

P01-P02 SERIES - SPOOL VALVES FOR PIPE MOUNTING



3/2
5/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page	
Pilot Operated	316L Stainless St./Pipe Mounting	Normally Closed	3/8"	8	1400	10	80	162	
		Dual Solenoids	3/8"	8	1400	10	80	164	
		Air operated - spring return	3/8"	8	1400	10	80	162	
	Anodized Aluminium/Pipe Mounting	Normally Closed	1/8"	4 to 15	600	10	80	166	
			1/4"	8	1400	10	80	170	
		Control by Electric Impulse	1/8"	4	600	10	80	172	
			Dual Solenoids	1/8"	4	600	10	80	172
				1/4"	8	1400	10	80	176

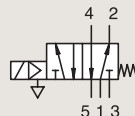
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

P01-P02 SERIES - SPOOL VALVES FOR PIPE MOUNTING

316L STAINLESS ST.
PIPE MOUNTING

NORMALLY CLOSED



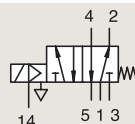
Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
			Min bar	Max(MOPD) DC bar	Min °C	Max °C							AC W	DC W			
3/8" -1/4" NPT	8	1400	2	10	10	-25	80	NBR	U341P0250 ₁	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7558
	8	1400	2	10	10	-25	80	NBR	U341P0250 ₁	8993	488980	-	-	2	2.5	1.1	7558
	8	1400	2	10	10	-25	65	NBR	U341P3250 ₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8350
	8	1400	2	10	10	-25	60	NBR	U341P3250 ₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8350
	8	1400	2	10	10	-25	80	NBR	U341P3250 ₂	2995	481865	-	-	8	9	2.1	8350
	8	1400	2	-	10	-25	75	NBR	U341P3295 ₁	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1	8350
	8	1400	2	10	10	-25	65	NBR	U341P3295 ₁	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1	8350
	8	1400	2	10	10	-25	75	NBR	U341P3295 ₁	-	496895	-	-	8	8	9.0/10.1	8350

Notes:

- 1. With manual override
- 2. Pilot seat in FKM

316L STAINLESS ST.
PIPE MOUNTING

AIR OPERATED - SPRING RETURN - W1



Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
			Min bar	Max(MOPD) DC bar	Min °C	Max °C							AC W	DC W			
3/8" -1/4" NPT	8	1400	2	10	10	-25	65	NBR	U441P3250 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7565
	8	1400	2	10	10	-25	60	NBR	U441P3250 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7565
	8	1400	2	10	10	-25	80	NBR	U441P3250 ₁₂	2995	481865	-	-	8	9	2.1	7565

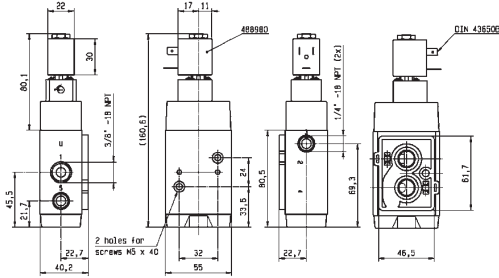
Notes:

- 1. Pilot seat in FKM
- 2. Valve with external pilot pressure minimum 4 bar

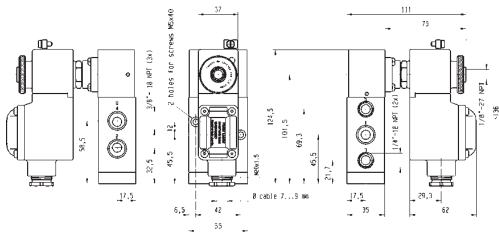




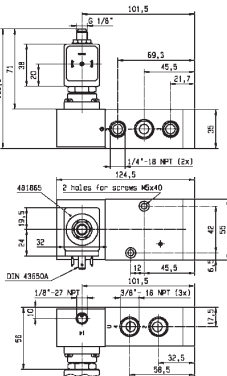
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	3/8"	8	1400	10	-25	-25
To	3/8"	8	1400	10	80	50



Drawing 7558



Drawing 8350



Drawing 7565

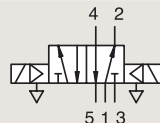


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3 AND 5 WAY VALVES PILOT OPERATED

P01-P02 SERIES - SPOOL VALVES FOR PIPE MOUNTING

316L STAINLESS ST.
PIPE MOUNTING



DUAL SOLENOIDS

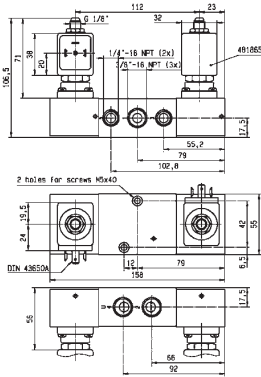
Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
3/8"- 1/4" NPT	8	1400	2	10	10	-25	65	NBR	U347P3250 ₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7563
	8	1400	2	10	10	-25	60	NBR	U347P3250 ₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7563
	8	1400	2	10	10	-25	80	NBR	U347P3250 ₂	2995	481865	-	-	8	9	2.1	7563
	8	1400	2	-	10	-25	75	NBR	U347P3295 ₁₂	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2.8351	
	8	1400	2	10	10	-25	75	NBR	U347P3295 ₁₂	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2.7564	
	8	1400	2	10	10	-25	65	NBR	U347P3295 ₁₂	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2.8351	
	8	1400	2	-	10	-25	75	NBR	U347P3295 ₁₂	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2.7564	
	8	1400	2	10	10	-25	65	NBR	U347P3295 ₁₂	-	496560	1-21	Ex db mb IIC T4	8	8	9.0/10.1/10.2.8351	
8	1400	2	10	10	-25	75	NBR	U347P3295 ₁₂	-	496895	-	-	8	8	9.0/10.1/10.2.8351		

Notes:

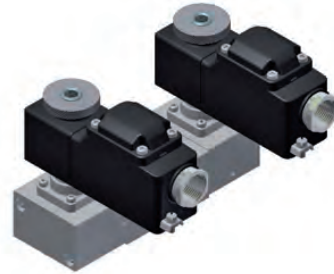
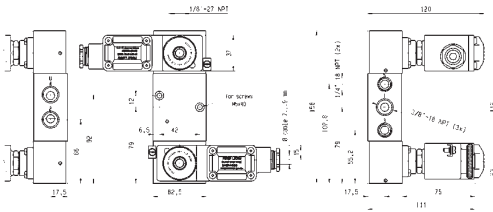
1. With manual override
2. Pilot seat in FKM



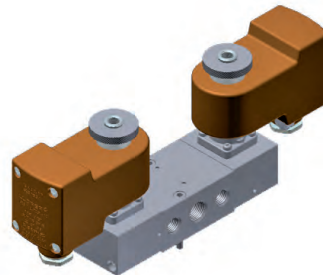
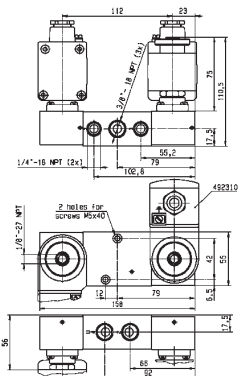
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	3/8"	8	1400	10	-25	-25
To	3/8"	8	1400	10	80	50



Drawing 7563



Drawing 8351



Drawing 7564



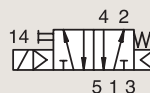
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

P01-P02 SERIES - SPOOL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

NORMALLY CLOSED



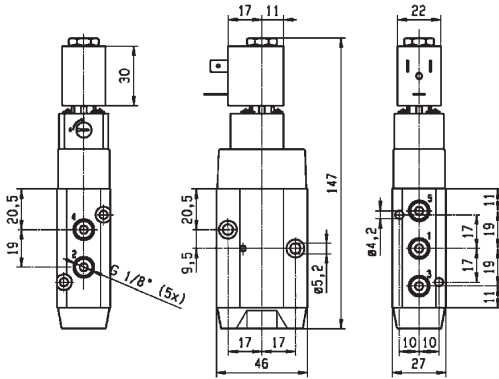
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min °C	Max °C							AC W	DC W		
1/8"	4	600	2	10	10	-25	50	NBR	341P01 ₁₂	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7302
	4	600	2	10	10	-25	80	NBR	341P01 ₁₂	8993	488980	-	-	2	2.5	1.1	7302
	4	600	2	10	10	-25	65	NBR	341P21 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7296
	4	600	2	10	10	-25	60	NBR	341P21 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7296
	4	600	2	10	10	-25	80	NBR	341P21 ₁₂	2995	481865	-	-	8	9	2.1	7296
	4	600	2	10	10	-40	65	NBR	341P2108 ₃	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7296
	4	600	2	10	10	-40	60	NBR	341P2108 ₃	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7296
	4	600	2	10	10	-40	65	NBR	341P2108 ₃	2995	481865	-	-	8	9	2.1	7296

Notes:

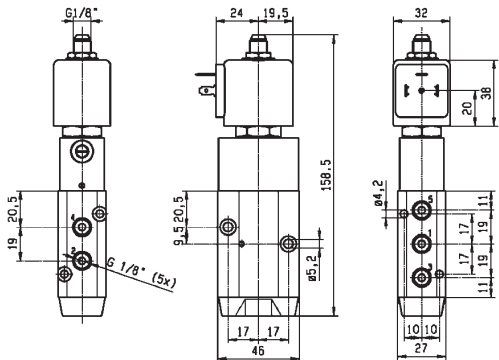
1. With manual override
2. Pilot seat in FKM
3. Pilot seat in PUR



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"	4	600	10	-40	-40
To	1/8"	4	600	10	80	50



Drawing 7302



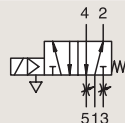
Drawing 7296

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3 AND 5 WAY VALVES PILOT OPERATED

P01-P02 SERIES - SPOOL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING



NORMALLY CLOSED

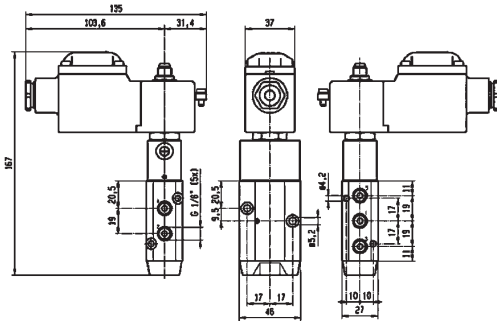
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/8"	4	600	2	-	10	-20	65	NBR	341P2197 ¹²	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	8027
	4	600	2	10	10	-20	65	NBR	341P2197 ¹²	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	8027
	4	600	2	-	10	-20	65	NBR	341P2197 ¹²	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/7.0/8.0	8027
	4	600	2	-	10	-20	65	NBR	341P2197 ¹²	2995	482740	-	-	-	1.6	6.0/7.0/8.0	8027
	4	600	2	-	10	-10	55	NBR	341P2190	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	7351
	4	600	2	-	10	-10	65	NBR	341P2190	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	7351
	4	600	2	10	10	-10	65	NBR	341P2190	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	7351

Notes:

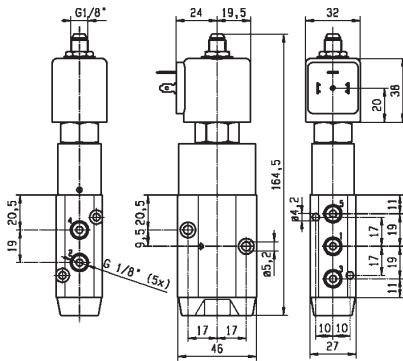
1. With manual override
2. Pilot seat in PUR



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"	4	600	10	-20	-25
To	1/8"	15	600	10	65	65



Drawing 8027



Drawing 7351

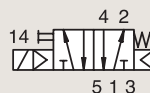
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

P01-P02 SERIES - SPOOL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

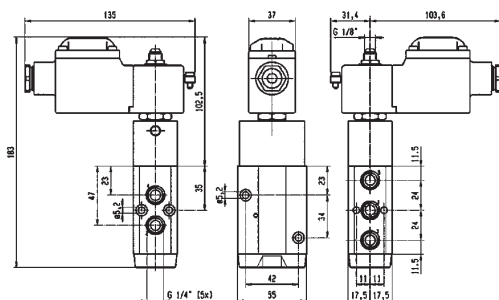
NORMALLY CLOSED



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/4"	8	1400	2	10	10	-25	50	NBR	341P02 ₁	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7314
	8	1400	2	10	10	-25	80	NBR	341P02 ₁	8993	488980	-	-	2	2.5	1.1	7314
	8	1400	2	10	10	-25	65	NBR	341P22 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8030
	8	1400	2	10	10	-25	60	NBR	341P22 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7319
	8	1400	2	10	10	-25	80	NBR	341P22 ₁₂	2995	481865	-	-	8	9	2.1	7319
	8	1400	2	-	10	-25	55	NBR	341P2290	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	7352
	8	1400	2	-	10	-25	65	NBR	341P2290	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	7352
	8	1400	2	10	10	-25	65	NBR	341P2290	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	7352
	8	1400	2	-	10	-20	65	NBR	341P2297 ₁₃	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8030
	8	1400	2	10	10	-20	65	NBR	341P2297 ₁₃	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/8.0	8030
	8	1400	2	-	10	-20	65	NBR	341P2297 ₁₃	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	7319
	8	1400	2	-	10	-20	80	NBR	341P2297 ₁₃	2995	482740	-	-	-	1.6	6.0/8.0	7319

Notes:

1. With manual override
2. Pilot seat in FKM
3. Pilot seat in PUR

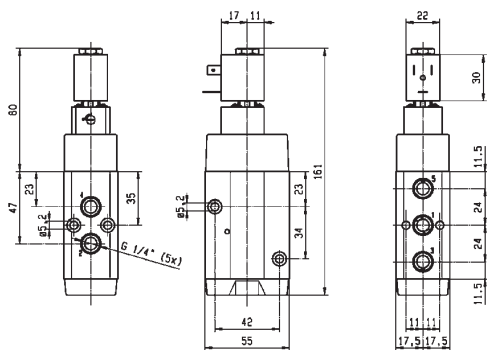


Drawing 8030

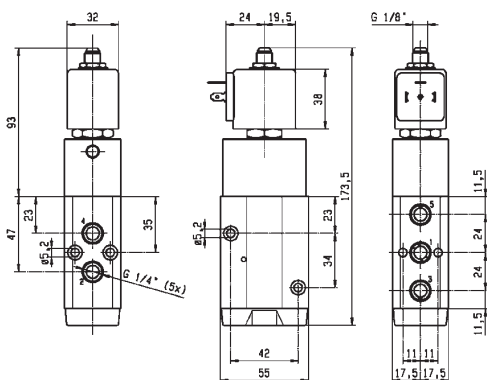




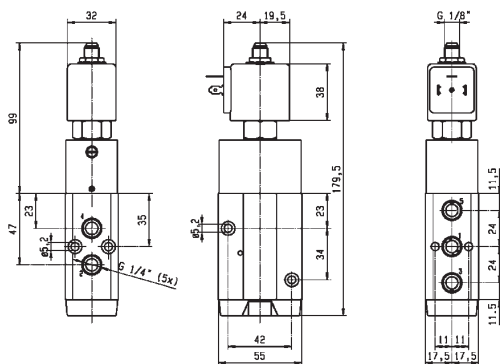
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	8	1400	10	-25	-25
To	1/4"	8	1400	10	80	50



Drawing 7314



Drawing 7319



Drawing 7352



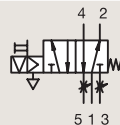
3/2 5/2

3 AND 5 WAY VALVES PILOT OPERATED

P01-P02 SERIES - SPOOL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING

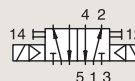
CONTROL BY ELECTRIC IMPULSE



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/8"	4	600	2	10	-	-25	80	NBR	345P21	4269	484990	-	-	11	-	4.0	8123
	4	600	2	-	10	-25	80	NBR	345P21	4269	485400	-	-	-	13	4.0	8123

ANODIZED ALUMINIUM
PIPE MOUNTING

DUAL SOLENOIDS



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/8"	4	400	2	10	10	-25	50	NBR	347P01 ₁₂	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7306
	4	400	2	10	10	-25	80	NBR	347P01 ₁₂	8993	488980	-	-	2	2.5	1.1	7306
	4	400	2	10	10	-25	65	NBR	347P21 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7298
	4	400	2	10	10	-25	60	NBR	347P21 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7298
	4	400	2	10	10	-25	80	NBR	347P21 ₁₂	2995	481865	-	-	8	9	2.1	7298

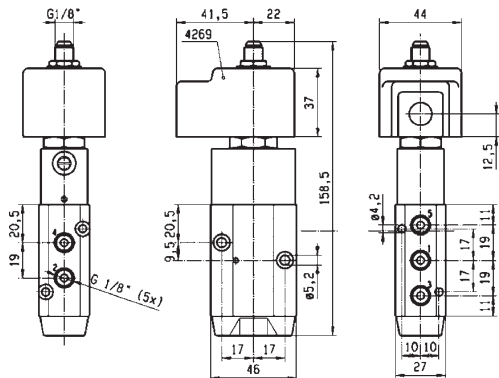
Notes:

1. With manual override
2. Pilot seat in FKM

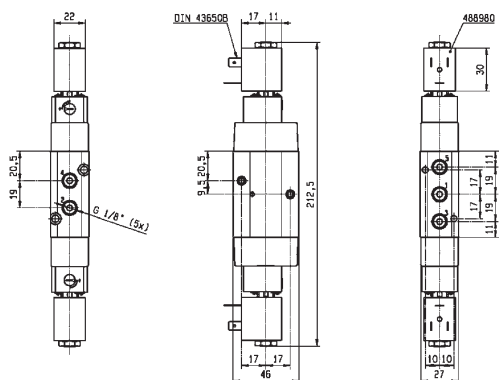




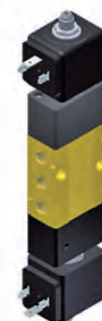
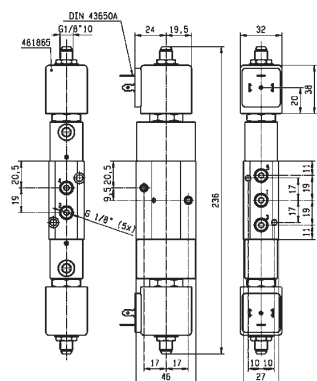
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"	4	400	10	-25	-25
To	1/8"	4	600	10	80	50



Drawing 8123



Drawing 7306



Drawing 7298

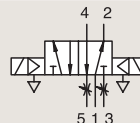


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3 AND 5 WAY VALVES PILOT OPERATED

P01-P02 SERIES - SPOOL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING



DUAL SOLENOIDS

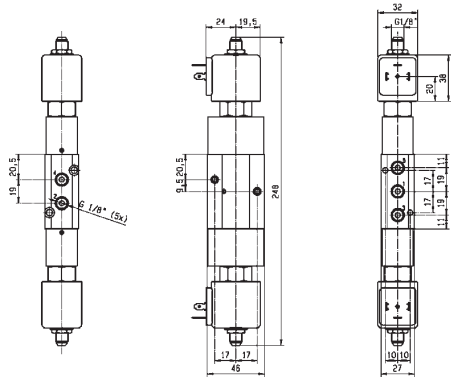
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/8"	4	400	2	-	10	-25	55	NBR	347P2190 ₂	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	7353
	4	400	2	-	10	-25	65	NBR	347P2190 ₂	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	7353
	4	400	2	10	10	-25	65	NBR	347P2190 ₂	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	7353
	4	400	2	-	10	-25	65	NBR	347P2197 ₁	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8028
	4	400	2	10	10	-25	65	NBR	347P2197 ₁	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/8.0	8028
	4	400	2	-	10	-25	65	NBR	347P2197 ₁	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	8028
	4	400	2	-	10	-25	65	NBR	347P2197 ₁	2995	482740	-	-	-	1.6	6.0/8.0	8028

Notes:

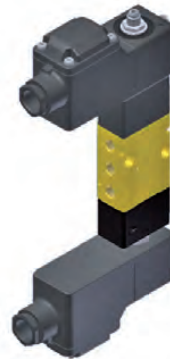
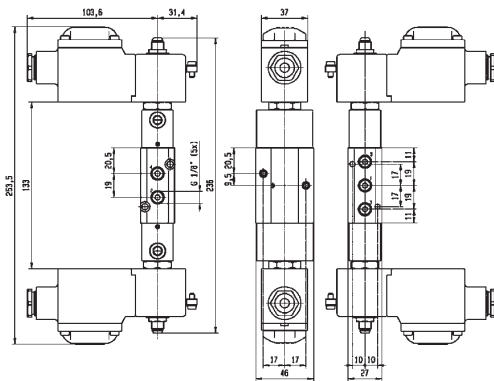
1. With manual override
2. Pilot seat in FKM



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"	4	400	10	-25	-25
To	1/8"	4	400	10	65	50



Drawing 7353



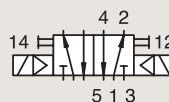
Drawing 8028

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3 AND 5 WAY VALVES PILOT OPERATED

P01-P02 SERIES - SPOOL VALVES FOR PIPE MOUNTING

ANODIZED ALUMINIUM
PIPE MOUNTING



DUAL SOLENOIDS

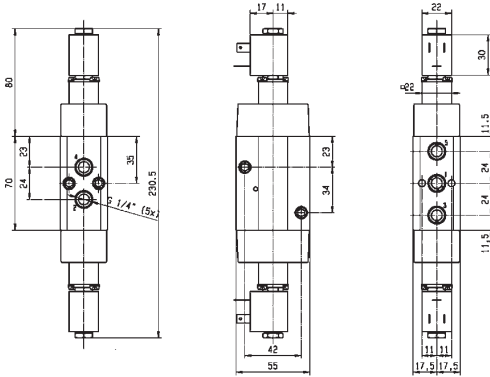
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/4"	8	1400	2	10	10	-25	50	NBR	347P02 ₁	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7316
	8	1400	2	10	10	-25	80	NBR	347P02 ₁	8993	488980	-	-	2	2.5	1.1	7316
	8	1400	2	10	10	-25	65	NBR	347P22 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7321
	8	1400	2	10	10	-25	60	NBR	347P22 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7321
	8	1400	2	10	10	-25	80	NBR	347P22 ₁₂	2995	481865	-	-	8	9	2.1	7321

Notes:

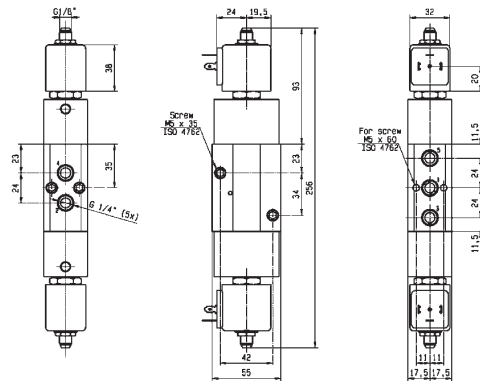
1. With manual override
2. Pilot seat in FKM



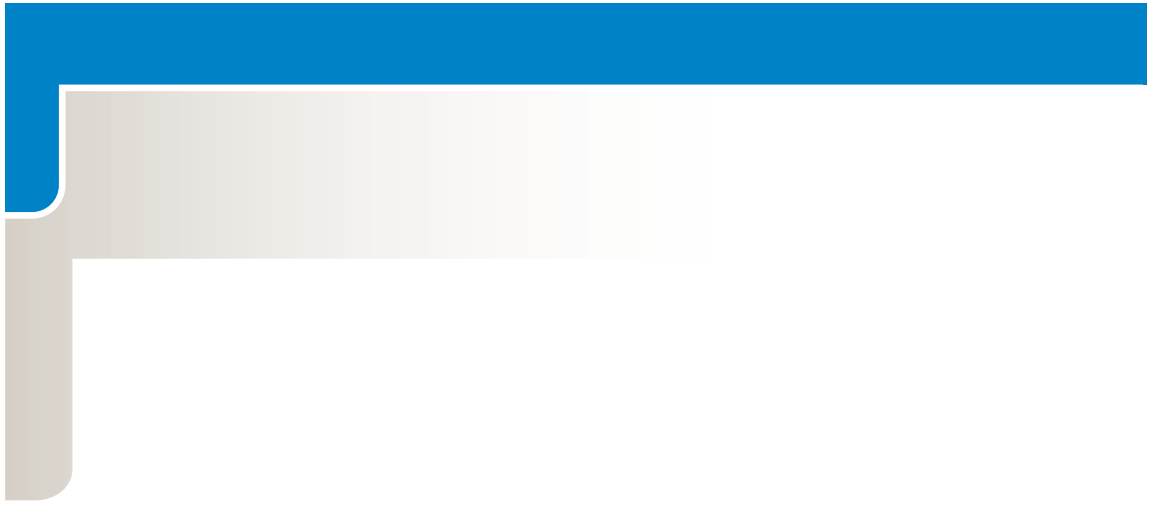
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	8	1400	10	-25	-25
To	1/4"	8	1400	10	80	50



Drawing 7316



Drawing 7321





3 AND 5 WAY VALVES PILOT OPERATED

U331SERIES - HIGH FLOW LARGE POPPET VALVES FOR PIPE MOUNTING



3/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Pilot Operated	Brass/Pipe Mounting	Normally Closed	1/2"	14	2500	15	65	180
Pilot Operated	316L/Pipe Mounting	Normally Closed	1/2"	14	2500	15	65	182

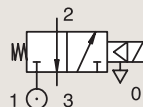
3/2

3 AND 5 WAY VALVES PILOT OPERATED

U331BS SERIES - HIGH FLOW BRASS POPPET VALVES FOR PIPE MOUNTING

BRASS
PIPE MOUNTING

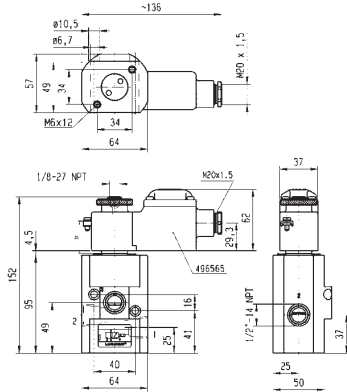
NORMALLY CLOSED



Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min bar	Max(MOPD) DC bar	Max °C	Min °C	AC W							DC W			
1/2" NPTF	14	2500	2	-	15	-30	65	NBR	U331BS9369	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8316
	14	2500	2	15	15	-30	65	NBR	U331BS9369	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8316
	14	2500	2	-	15	-30	65	NBR	U331BS9369	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	8316
	14	2500	2	15	15	-30	65	NBR	U331BS9369	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	8316
	14	2500	2	15	15	-30	65	NBR	U331BS9369	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8316
	14	2500	2	15	15	-30	65	NBR	U331BS9369	-	496895	-	-	8	8	9.0/10.1/10.2	8316



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/2"	14	2500	15	-30	-30
To	1/2"	14	2500	15	65	65



Drawing 8316

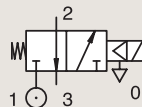
3/2

3 AND 5 WAY VALVES PILOT OPERATED

U331X SERIES - HIGH FLOW BRASS POPPET VALVES FOR PIPE MOUNTING

STAINLESS ST.
PIPE MOUNTING

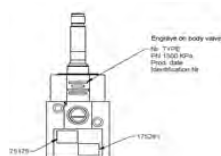
NORMALLY CLOSED



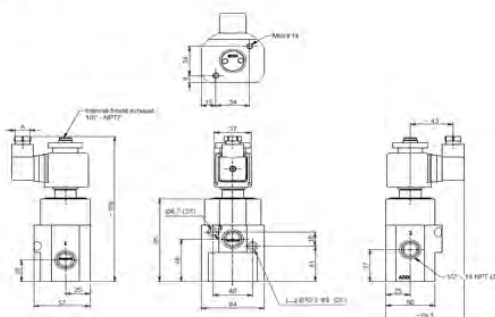
Port size	Orifice Ø mm	Flow factor On l/min	Operating Pressure Differential Min Max(MOPD)		Fluid Temp. Min Max °C		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			AC bar	DC bar	°C	°C							AC W	DC W		
1/2" NPT	14	2500	3	-15 15	-30 65	65	VMQ	U331X2309 ₁	-	496895	-	-	8	8	9.0/10.1/10.2/10.3	8315
	14	2500	3	15 15	-30 65	65	VMQ	U331X2309 ₁	-	497105	1-21	Ex db IIC T4 to T6	8	8	9.0/10.1/10.2/10.3	8316
	14	2500	3	15 15	-30 65	65	VMQ	U331X2309 ₁	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2/10.3	8359
	14	2500	3	15 15	-30 65	65	VMQ	U331X2309 ₁	-	492310	1-21	Ex mb II T4 to T5	9	8	9.0/10.1/10.2/10.3	8360
	14	2500	3	15 15	-30 65	65	VMQ	U331X2309 ₁	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2/10.3	8317
	14	2500	3	15 15	-30 65	65	VMQ	U331X2309 ₁	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2/10.3	8317

Notes:

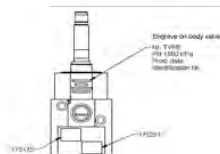
1. Valve delivered with an individual material traceability certificate (3.1 following EN10204)



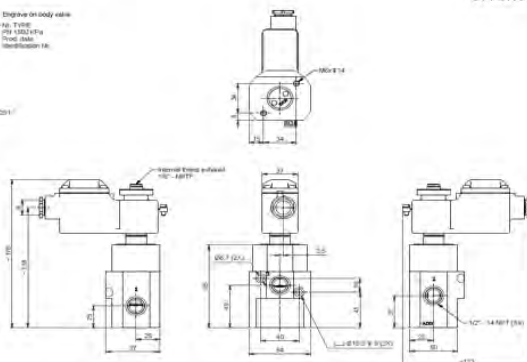
OFFSHORE



Drawing 8315

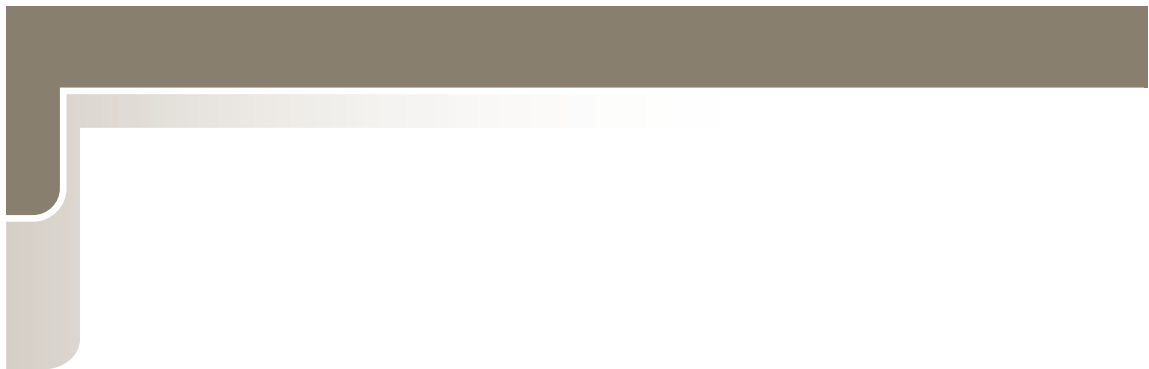


OFFSHORE



Drawing 8317







3 AND 5 WAY VALVES NAMUR DIRECT OPERATED

X SERIES - ALUMINIUM, STAINLESS STEEL VALVES WITH NAMUR INTERFACE



3/2
5/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Direct Operated	316L Stainless St./NAMUR	Normally Closed	3/8"	6	680	12	65	186
	Anodized Aluminium/NAMUR	Normally Closed	1/4"	6	680	12	75	188

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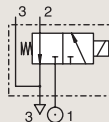
3 AND 5 WAY VALVES NAMUR DIRECT OPERATED

X SERIES - ALUMINIUM, STAINLESS STEEL VALVES WITH NAMUR INTERFACE

316L STAINLESS ST.

NAMUR

NORMALLY CLOSED



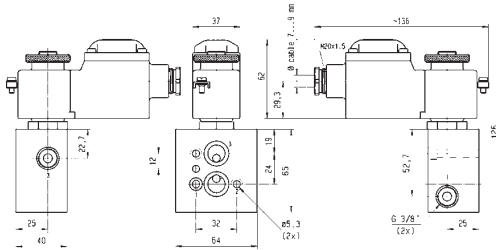
Port size	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode		Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	Min	Max						AC W	DC W				
3/8" NPT	6	680	0	- 12	-25	65	NBR	U131X1201	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8352	
	6	680	0	12 12	-25	65	NBR	U131X1201	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	7668	
	6	680	0	12 12	-25	65	NBR	U131X1201	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8352	
	6	680	0	- 12	-25	65	NBR	U131X1201	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	7668	
	6	680	0	12 12	-25	65	NBR	U131X1201	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8352	
	6	680	0	12 12	-25	50	NBR	U131X1201	-	496895	-	-	8	8	9.0/10.1/10.2	7668	

Notes:

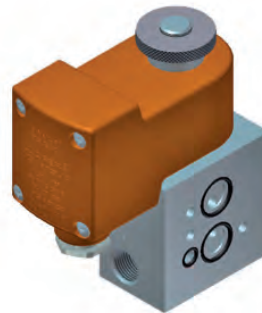
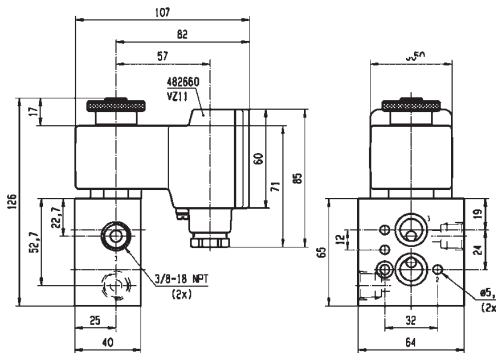
1. Valve delivered with an individual material traceability certificate (3.1 following EN10204)



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	3/8"	6	680	12	-25	-25
To	3/8"	6	680	12	65	65



Drawing 8352



Drawing 7668



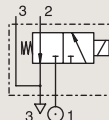
3/2 5/2

3 AND 5 WAY VALVES NAMUR DIRECT OPERATED

X SERIES - ALUMINIUM, STAINLESS STEEL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

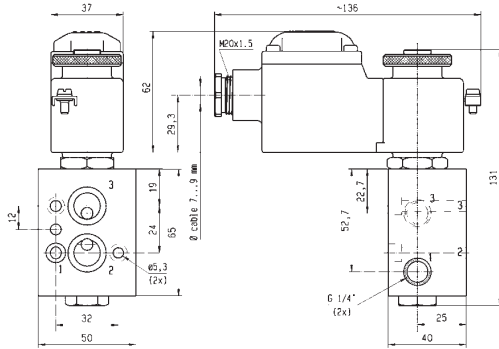
NORMALLY CLOSED



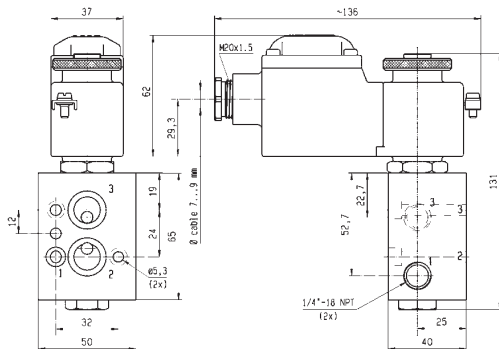
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.		
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W				
1/4"	BSP	6	680	0	-	12	-25	65	NBR	131X1101	-	496565	0-20	Ex Ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8346	
		6	680	0	12	12	-25	65	NBR	131X1101	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8346	
		6	680	0	12	12	-25	75	NBR	131X1101	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	8346	
		6	680	0	-	12	-25	75	NBR	131X1101	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	8346	
		6	680	0	12	12	-25	65	NBR	131X1101	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8346	
		6	680	0	12	12	-25	50	NBR	131X1101	-	496895	-	-	8	8	9.0/10.1/10.2	8346	
		6	680	0	-	12	-25	65	NBR	131X1131	-	496565	0-20	Ex Ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8346	
		6	680	0	12	12	-25	65	NBR	131X1131	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8346	
		6	680	0	12	12	-25	65	NBR	131X1131	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8346	
		6	680	0	12	12	-25	65	NBR	131X1131	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	8346	
		6	680	0	-	12	-25	65	NBR	131X1131	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	8346	
		6	680	0	12	12	-25	50	NBR	131X1131	-	496895	-	-	8	8	9.0/10.1/10.2	8346	
	1/4" NPT		6	680	0	-	12	-25	55	NBR	U131X1101	-	496565	0-20	Ex Ia IIB/IIC T4 to T6	-	0.3	9.0/10.1/10.2	8353
			6	680	0	12	12	-25	65	NBR	U131X1101	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8353
		6	680	0	12	12	-25	65	NBR	U131X1101	-	496700	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1/10.2	8353	
		6	680	0	12	12	-25	65	NBR	U131X1101	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1/10.2	7336	
		6	680	0	-	12	-25	65	NBR	U131X1101	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1/10.2	7336	
		6	680	0	12	12	-25	50	NBR	U131X1101	-	496895	-	-	8	8	9.0/10.1/10.2	8353	



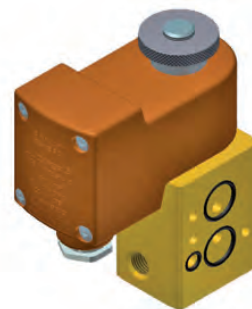
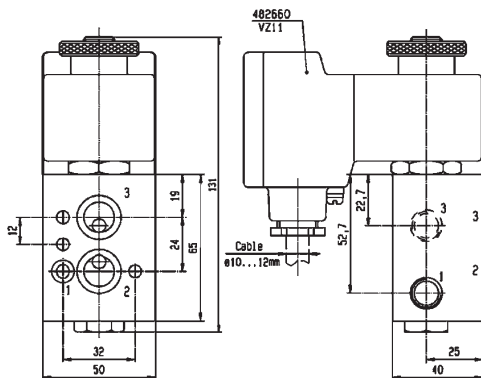
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	6	680	12	-25	-25
To	1/4"	6	680	12	65	65



Drawing 8346



Drawing 8353



Drawing 7336







3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE



3/2
5/2
5/3

Way	Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
3/2	Pilot Operated	Anodized Aluminium/NAMUR	Solenoid operated - spring return	1/2"	12	3000	10	50	192
				1/4"	7	1250	10	50	192
	Externally Operated	Anodized Aluminium/NAMUR	Air operated - spring return	1/2"	12	3000	10	50	196
				1/4"	7	1250	10	50	196
3/2 - 5/2	Pilot Operated	Anodized Aluminium/NAMUR	Solenoid operated - spring return	1/4"	7	1250	10	50	200
5/2	Pilot Operated	Anodized Aluminium/NAMUR	Solenoid operated - spring return	1/2"	12	3000	10	50	202
				1/4"	7	1250	10	50	202
			Dual Solenoids	1/2"	12	3000	10	50	206
				1/4"	7	1250	10	50	204
	Externally Operated	Anodized Aluminium/NAMUR	Air operated - spring return	1/2"	12	3000	10	50	208
				1/4"	7	1250	10	50	208
			Air operated and return	1/4"	7	1250	10	50	208
5/3	Pilot Operated	Anodized Aluminium/NAMUR	W1 closed center position	1/4"	7	1250	10	50	210
			W3 exhausted in center position	1/4"	7	1250	10	50	212

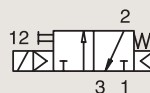
3/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

SOLENOID OPERATED - SPRING RETURN



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/4"	7	1250	2.5	10	10	-20	50	NBR	331N03 ₁	-	496131	-	-	3	3	1.2	8056
	7	1250	2.5	10	10	-20	50	NBR	331N03 ₁	-	496482	-	-	3	3	1.2	8056
	7	1250	2.5	10	10	-20	50	NBR	331N03 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8056
1/2"	12	3000	2	10	10	-20	50	NBR	331N04 ₁	-	496131	-	-	3	3	1.2	8060
	12	3000	2	10	10	-20	50	NBR	331N04 ₁	-	496482	-	-	3	3	1.2	8060
	12	3000	2	10	10	-20	50	NBR	331N04 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8060
	12	3000	2	10	10	-20	50	NBR	331N0402	-	496131	-	-	3	3	1.2	8251
	12	3000	2	10	10	-20	50	NBR	331N0402	-	496482	-	-	3	3	1.2	8251
	12	3000	2	10	10	-20	50	NBR	331N0402	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8251

Notes:

1. With manual override

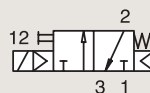
3/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

SOLENOID OPERATED - SPRING RETURN



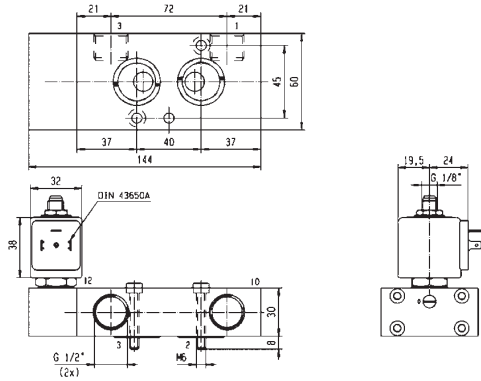
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/2"	12	3000	2.5	10	10	-20	50	NBR	331N34 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8210
	12	3000	2.5	10	10	-20	50	NBR	331N34 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8210
	12	3000	2.5	10	10	-20	50	NBR	331N34 ₁₂	2995	481865	-	-	8	9	2.1	8210
	12	3000	2.5	10	10	-20	50	NBR	331N3402	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8252
	12	3000	2.5	10	10	-20	50	NBR	331N3402	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8252
	12	3000	2.5	10	10	-20	50	NBR	331N3402	2995	481865	-	-	8	9	2.1	8252

Notes:

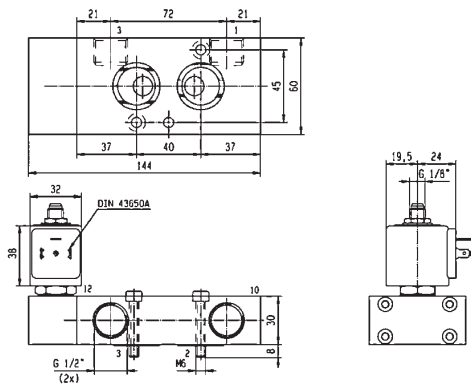
1. With manual override
2. Pilot seat in FKM



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/2"	12	3000	10	-20	-20
To	1/2"	12	3000	10	65	50



Drawing 8210



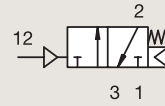
Drawing 8252

3/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

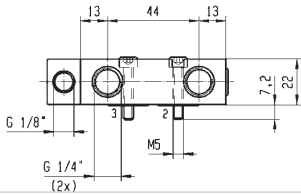
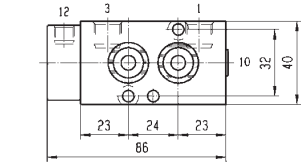


AIR OPERATED - SPRING RETURN

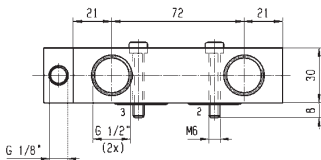
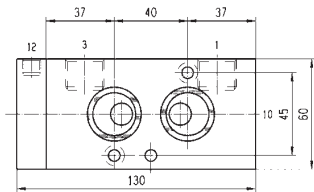
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min °C	Max °C							AC W	DC W		
1/4"	7	1250	2.5	10	10	-20	50	NBR	531N03	-	-	-	-	-	-	-	8058
1/2"	12	3000	2.5	10	10	-20	50	NBR	531N04	-	-	-	-	-	-	-	8061



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	7	1250	10	-20	-20
To	1/2"	12	3000	10	50	50



Drawing 8058



Drawing 8061

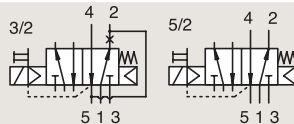
3/2 5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

SOLENOID OPERATED - SPRING RETURN



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min °C	Max °C							AC W	DC W		
1/4"	7	1250	2.5	10	10	-20	50	NBR	341N05 ₁₂	-	496131	-	-	3	3	1.2	8162
	7	1250	2.5	10	10	-20	50	NBR	341N05 ₁₂	-	496482	-	-	3	3	1.2	8162
	7	1250	2.5	10	10	-20	50	NBR	341N05 ₁₂	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8162
	7	1200	2.5	10	10	-20	50	NBR	341N0502 ₂	-	496131	-	-	3	3	1.2	8253
	7	1200	2.5	10	10	-20	50	NBR	341N0502 ₂	-	496482	-	-	3	3	1.2	8253
	7	1200	2.5	10	10	-20	50	NBR	341N0502 ₂	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8253

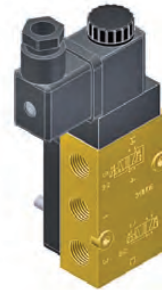
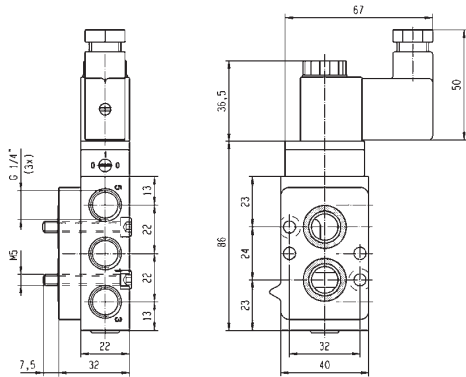
Notes:

1. With manual override
2. Valve delivered with the 3/2 - 5/2 conversion plate

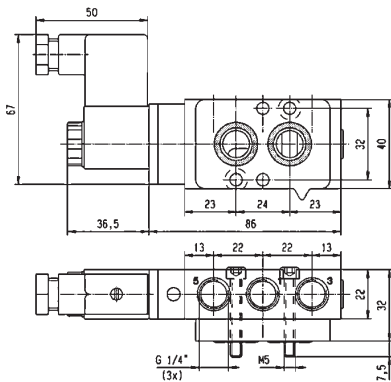




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	7	1200	10	-20	-20
To	1/4"	7	1250	10	50	50



Drawing 8162



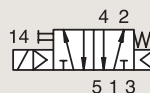
Drawing 8253

3/2 5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR



SOLENOID OPERATED - SPRING RETURN

Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
			Min	AC bar	DC bar	Min	Max							AC W	DC W			
1/4"	BSP	7	1200	2.5	10	10	-20	50	NBR	341N35 ₁₂₃	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8213
		7	1200	2.5	10	10	-20	50	NBR	341N35 ₁₂₃	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8213
		7	1200	2.5	10	10	-20	50	NBR	341N35 ₁₂₃	2995	481865	-	-	8	9	2.1	8213
		7	1200	2.5	10	10	-20	50	NBR	341N3502 ₂₃	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8254
		7	1200	2.5	10	10	-20	50	NBR	341N3502 ₂₃	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8254
		7	1200	2.5	10	10	-20	50	NBR	341N3502 ₂₃	2995	481865	-	-	8	9	2.1	8254
		7	1200	2	-	10	-20	50	NBR	341N3590 ₃	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	8.0	8254
		7	1200	2	-	10	-20	50	NBR	341N3590 ₃	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	8.0	8254
	7	1200	2	10	10	-20	50	NBR	341N3590 ₃	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	8.0	8254	

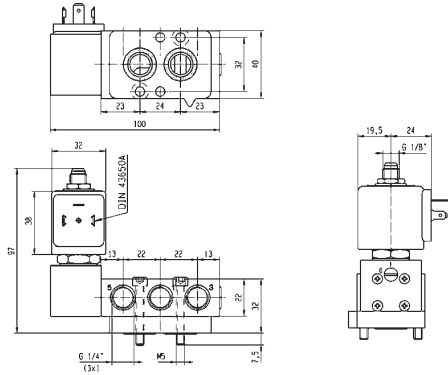
Notes:

1. With manual override
2. Pilot seat in FKM
3. Valve delivered with the 3/2 - 5/2 conversion plate

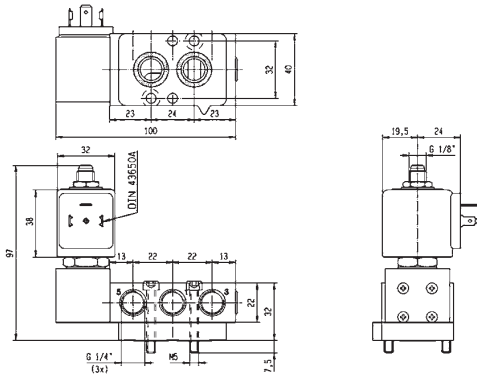




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	7	1200	10	-20	-20
To	1/4"	7	1200	10	50	50



Drawing 8213



Drawing 8254

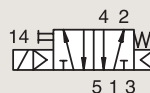
5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

SOLENOID OPERATED - SPRING RETURN



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/4"	7	1250	2.5	10	10	-20	50	NBR	341N03 ₁	-	496131	-	-	3	3	1.2	8063
	7	1250	2.5	10	10	-20	50	NBR	341N03 ₁	-	496482	-	-	3	3	1.2	8063
	7	1250	2.5	10	10	-20	50	NBR	341N03 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8063
1/2"	12	3000	2	10	10	-20	50	NBR	341N04 ₁	-	496131	-	-	3	3	1.2	8065
	12	3000	2	10	10	-20	50	NBR	341N04 ₁	-	496482	-	-	3	3	1.2	8065
	12	3000	2	10	10	-20	50	NBR	341N04	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8065
	12	3000	2.5	10	10	-20	50	NBR	341N34 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8211
	12	3000	2.5	10	10	-20	50	NBR	341N34 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8211
	12	3000	2.5	10	10	-20	50	NBR	341N34 ₁₂	2995	481865	-	-	8	9	2.1	8211

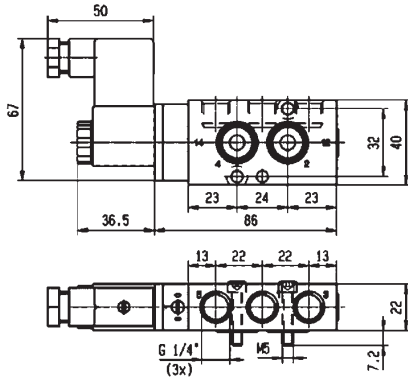
Notes:

1. With manual override
2. Pilot with FKM seal

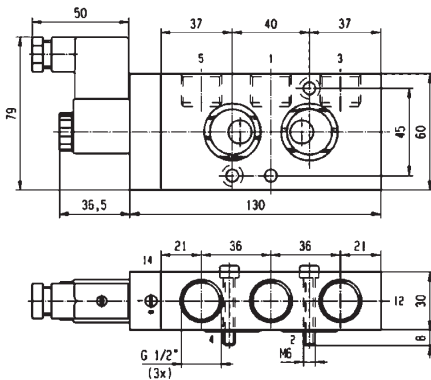




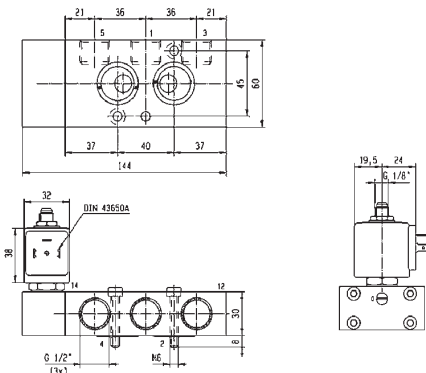
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	7	1250	10	-20	-20
To	1/2"	12	3000	10	50	50



Drawing 8063



Drawing 8065



Drawing 8211



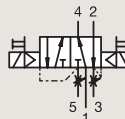
5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

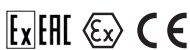
DUAL SOLENOIDS



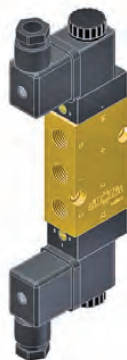
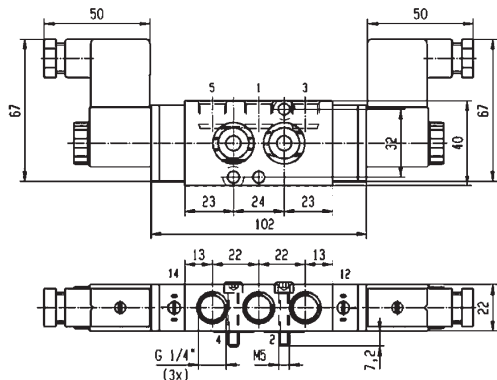
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode		Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max						AC W	DC W				
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C											
1/4"	7	1250	1.5	10	10	-20	50	NBR	347N03 ₁	-	496131	-	-	3	3	1.2	8057	
	7	1250	1.5	10	10	-20	50	NBR	347N03 ₁	-	496482	-	-	3	3	1.2	8057	
	7	1250	1.5	10	10	-20	50	NBR	347N03 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8057	
	7	1250	2.5	10	10	-20	50	NBR	347N33 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8209	
	7	1250	2.5	10	10	-20	50	NBR	347N33 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8209	
	7	1250	2.5	10	10	-20	50	NBR	347N33 ₁₂	2995	481865	-	-	8	9	2.1	8209	

Notes:

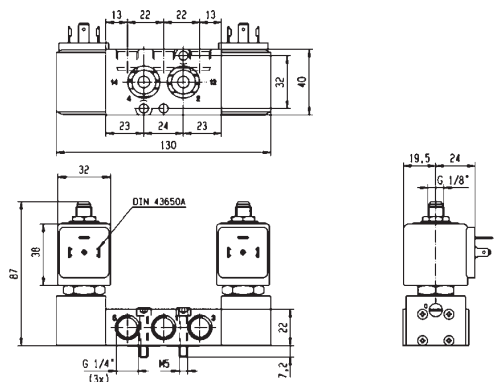
1. With manual override
2. Pilot seat in FKM



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	7	1250	10	-20	-20
To	1/4"	7	1250	10	50	50



Drawing 8057



Drawing 8209

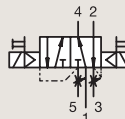
5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

DUAL SOLENOIDS



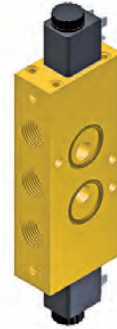
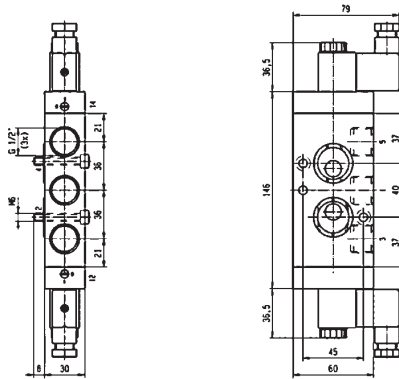
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/2"	12	3000	2	10	10	-20	50	NBR	347N04 ₁	-	496131	-	-	3	3	1.2	8154
	12	3000	2	10	10	-20	50	NBR	347N04 ₁	-	496482	-	-	3	3	1.2	8154
	12	3000	2	10	10	-20	50	NBR	347N04 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8154
	12	3000	2.5	10	10	-20	50	NBR	347N34 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8212
	12	3000	2.5	10	10	-20	50	NBR	347N34 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8212
	12	3000	2.5	10	10	-20	50	NBR	347N34 ₁₂	2995	481865	-	-	8	9	2.1	8212

Notes:

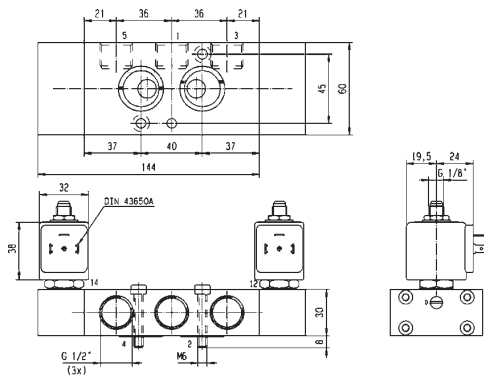
1. With manual override
2. Pilot seat in FKM



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/2"	12	3000	10	-20	-20
To	1/2"	12	3000	10	50	50



Drawing 8154



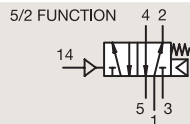
Drawing 8212

5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

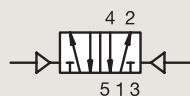
ANODIZED ALUMINIUM
NAMUR



AIR OPERATED - SPRING RETURN

Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/4"	7	1250	2.5	10	10	-20	50	NBR	541N03	-	-	-	-	-	-	-	8064
1/2"	12	3000	2.5	10	10	-20	50	NBR	541N04	-	-	-	-	-	-	-	8066

ANODIZED ALUMINIUM
NAMUR

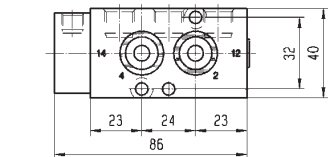


AIR OPERATED AND RETURN

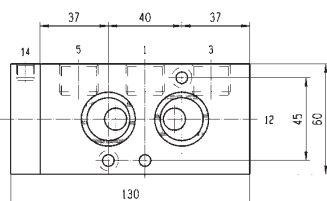
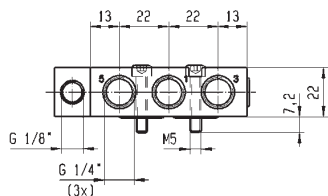
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/4"	7	1250	1.5	10	10	-20	50	NBR	547N03	-	-	-	-	-	-	-	8059



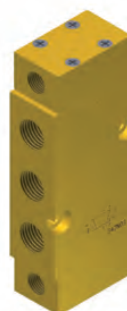
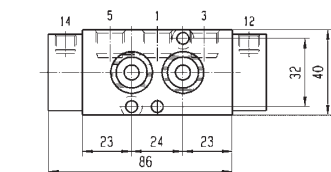
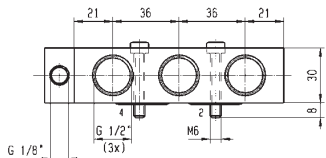
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	7	1250	10	-20	-20
To	1/2"	12	3000	10	50	50



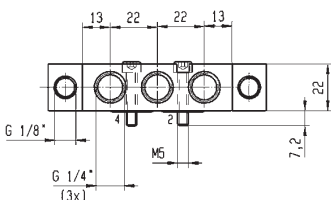
Drawing 8064



Drawing 8066



Drawing 8059



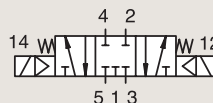
5/3

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

W1 CLOSED CENTER POSITION



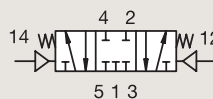
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/4"	7	1250	3	10	10	-20	50	NBR	342N03 ₁	-	496131	-	-	3	3	1.2	8057
	7	1250	3	10	10	-20	50	NBR	342N03 ₁	-	496482	-	-	3	3	1.2	8057
	7	1250	3	10	10	-20	50	NBR	342N03 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8057
	7	1250	2.5	10	10	-20	50	NBR	342N33 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	8209
	7	1250	2.5	10	10	-20	50	NBR	342N33 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	8209
	7	1250	2.5	10	10	-20	50	NBR	342N33 ₁₂	2995	481865	-	-	8	9	2.1	8209

Notes:

1. With manual override
2. Pilot seat in FKM

ANODIZED ALUMINIUM
NAMUR

AIR OPERATED W1 CLOSED CENTER



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/4"	7	1250	2.5	10	10	-20	50	NBR	542N03	-	-	-	-	-	-	-	8059



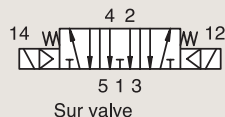
5/3

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N03-N04-N05 SERIES - HIGH FLOW ALUMINIUM SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

W3 EXHAUSTED IN CENTER POSITION



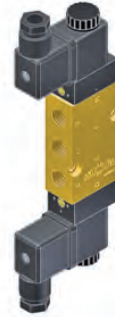
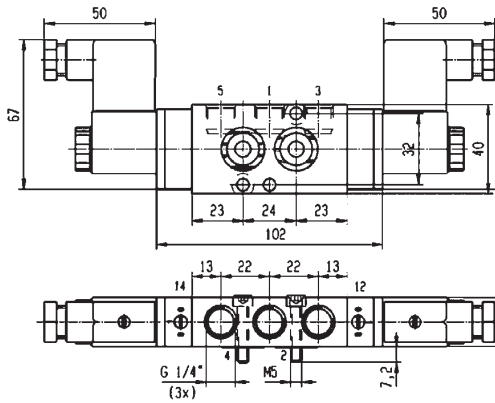
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min °C	Max °C							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
	7	1250	3	10	10	-20	50	NBR	343N03 ₁	-	496131	-	-	3	3	1.2	8057
1/4"	7	1250	3	10	10	-20	50	NBR	343N03 ₁	-	496482	-	-	3	3	1.2	8057
	7	1250	3	10	10	-20	50	NBR	343N03 ₁	-	496637	22	Ex tD A22 IP65 - T95°C	3	3	1.2	8057

Notes:

1. With manual override



For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"-1/4"	4	355	10	-20	-20
To	1/4"	7	1250	10	50	50



Drawing 8057





3 AND 5 WAY VALVES NAMUR PILOT OPERATED

L95 SERIES - ALUMINIUM POPPET VALVES WITH NAMUR INTERFACE



3/2
5/2

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
Pilot Operated	Anodized Aluminium/NAMUR	Solenoid operated - spring return	1/8" - 1/4"	4	355	10	75	216

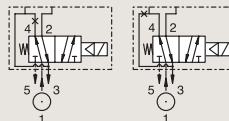
3/2 5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

L95 SERIES - ALUMINIUM POPPET VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

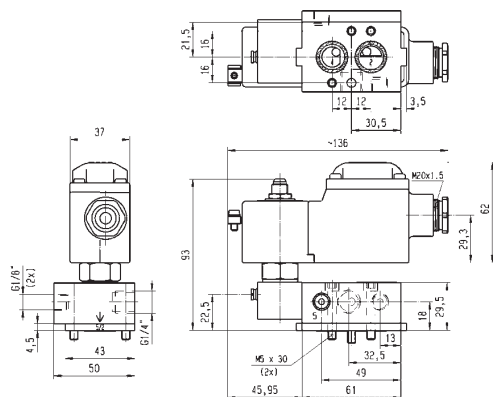
SOLENOID OPERATED - SPRING RETURN



Port size	Orifice Ø	Flow factor	Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
			Min	Max(MOPD)	Min	Max							AC W	DC W			
1/8"- 1/4"	4	355	1	10	10	-10	50	NBR	341L9504 ₁₂₃	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7009
	4	355	1	10	10	-10	75	NBR	341L9504 ₁₂₃	8993	488980	-	-	2	2.5	1.1	7009
	4	355	1	10	10	-10	65	NBR	341L9534 ₁₂₃	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	3990
	4	355	1	10	10	-10	60	NBR	341L9534 ₁₂₃	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	3990
	4	355	1	10	10	-10	75	NBR	341L9534 ₁₂₃	2995	481865	-	-	8	9	2.1	3990
	4	355	2	-	10	-10	55	NBR	341L9594 ₂₃	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	3992
	4	355	1	-	10	-10	65	NBR	341L9594 ₂₃	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	8354
	4	355	1	10	10	-10	65	NBR	341L9594 ₂₃	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	8354

Notes:

1. With manual override
2. Pilot seat in FKM
3. Valve delivered with the 3/2 - 5/2 conversion plate

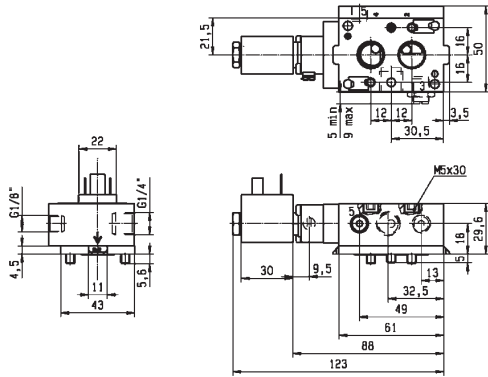


Drawing 8354

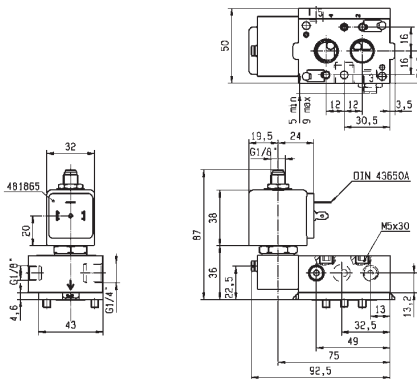




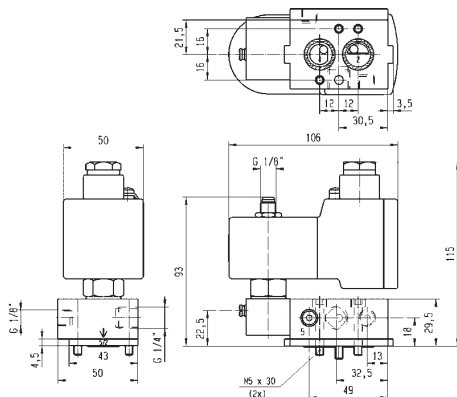
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"-1/4"	4	355	10	-10	-10
To	1/8"-1/4"	4	355	10	75	50



Drawing 7009



Drawing 3990



Drawing 3992



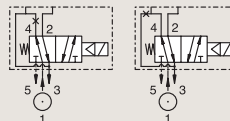
3/2 5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

L95 SERIES - ALUMINIUM POPPET VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

SOLENOID OPERATED - SPRING RETURN



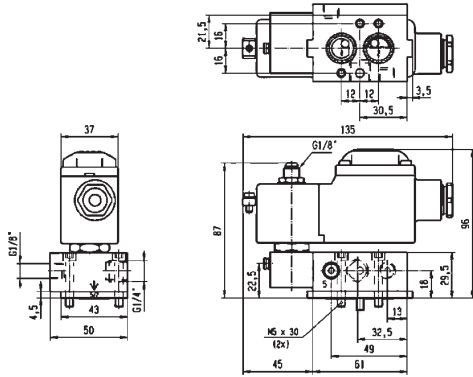
Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/8"- 1/4"	4	355	2	-	10	-10	65	NBR	341L9597 ¹²³	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	8025
	4	355	2	10	10	-10	65	NBR	341L9597 ¹²³	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/8.0	8025
	4	355	2	-	10	-10	65	NBR	341L9597 ¹²³	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	8025
	4	355	2	-	10	-10	75	NBR	341L9597 ¹²³	2995	482740	-	-	-	1.6	6.0/8.0	8025
	4	355	2	-	10	-25	55	NBR	341L9598 ²³	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	3992
	4	355	2	-	10	-25	65	NBR	341L9598 ²³	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	8354
4	355	2	10	10	-25	65	NBR	341L9598 ²³	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	8354	

Notes:

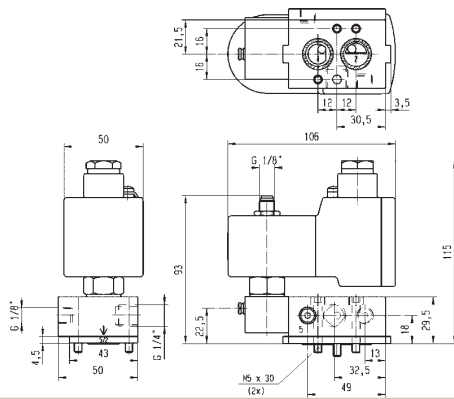
1. With manual override
2. Valve delivered with the 3/2 - 5/2 conversion plate
3. Pilot seat in PUR

IECEX certified

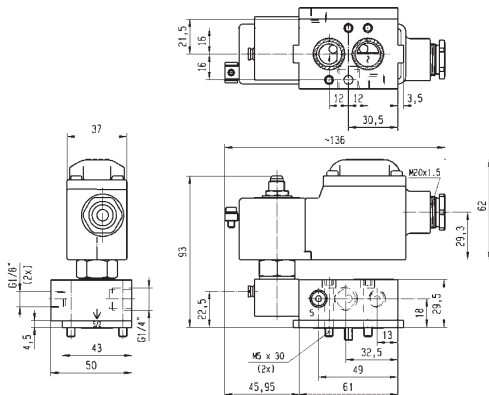
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"-1/4"	4	355	10	-10	-10
To	1/8"-1/4"	4	355	10	75	50



Drawing 8025

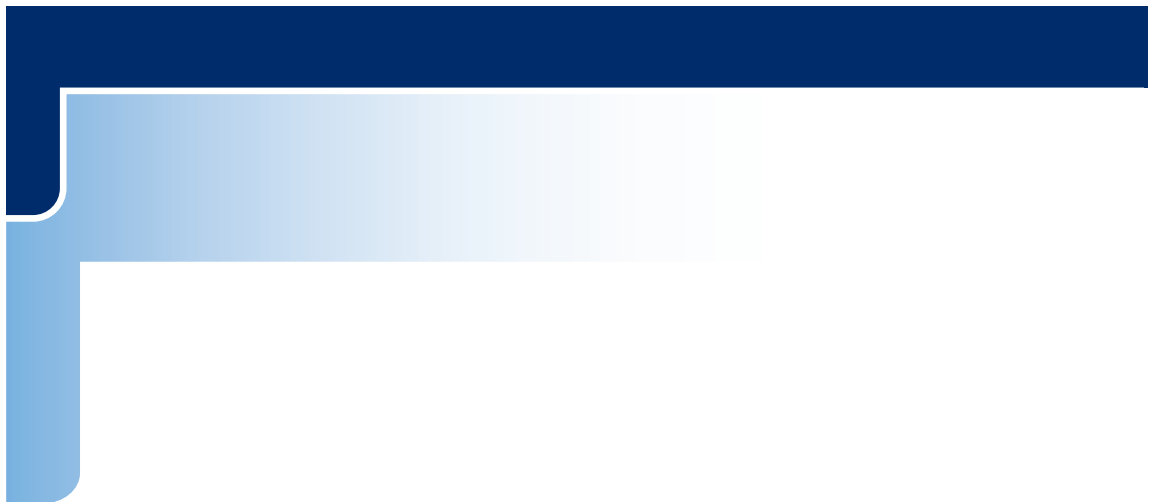


Drawing 3992



Drawing 8354







3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE



3/2
5/2
5/3

Way	Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Qn(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
3/2 - 5/2	Pilot Operated	316L Stainless St./NAMUR	Normally Closed	3/8"-1/4"	8	1400	10	80	222
			Solenoid operated - spring return	3/8"-1/4"	8	1400	10	80	224
	Pilot Operated	Anodized Aluminium/NAMUR	Solenoid operated - spring return	1/4"	8	1400	10	80	226
				1/8"-1/4"	4 to 8	1400	10	80	228
			External Operated	Anodized Aluminium/NAMUR	Air operated - spring return	1/8"-1/4"	4	1400	10
Pilot Operated	Anodized Aluminium/NAMUR	Control by Electric Impulse	1/8"-1/4"	4	1400	10	80	236	
5/2	Pilot Operated	316L Stainless St./NAMUR	Dual Solenoids	3/8"-1/4"	8	1400	10	80	238
		Anodized Aluminium/NAMUR	Dual Solenoids	1/4"	8	1400	10	80	240
			1/8"-1/4"	4	1400	10	80	242	
5/3	Pilot Operated	Anodized Aluminium/NAMUR	W1 closed center position	1/4"	4	1400	10	65	244
				1/8"-1/4"	4	1400	10	80	244

3/2-5/2

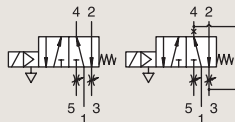
3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

316L STAINLESS ST.

NAMUR

NORMALLY CLOSED



Port size NPT	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
3/8"- 1/4"	8	1400	2	10	10	-25	65	NBR	U341N3250 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7554
	8	1400	2	10	10	-25	60	NBR	U341N3250 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7554
	8	1400	2	10	10	-25	80	NBR	U341N3250 ₁	2995	481865	-	-	8	9	2.1	7554
	8	1400	2	-	10	-25	55	NBR	U341N3292 ₁	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0	7556
	8	1400	2	10	10	-25	65	NBR	U341N3292 ₁	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0	7556
	8	1400	2	10	10	-25	65	NBR	U341N3292 ₁	-	495910	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0	7556
	8	1400	2	-	10	-25	80	NBR	U341N3295 ₁	-	496565	0-20	Ex ia IIB/IIC T4 to T6	-	0.3	9.0/10.1	7554
	8	1400	2	10	10	-25	75	NBR	U341N3295 ₁	-	492310	1-21	Ex mb II T4 to T5	6	6	9.0/10.1	7696
	8	1400	2	10	10	-25	65	NBR	U341N3295 ₁	-	496800	1-21	Ex db mb IIC T4	8	8	9.0/10.1	7554
	8	1400	2	-	10	-25	75	NBR	U341N3295 ₁	-	492210	1-21	Ex eb mb IIC T5 to T6	-	1 to 1.8	9.0/10.1	7696
	8	1400	2	10	10	-25	80	NBR	U341N3295 ₁	-	496555	1-21	Ex db mb IIC T4 to T6	6	6	9.0/10.1	7554
	8	1400	2	10	10	-25	75	NBR	U341N3295 ₁	-	496895	-	-	8	8	9.0/10.1	7554

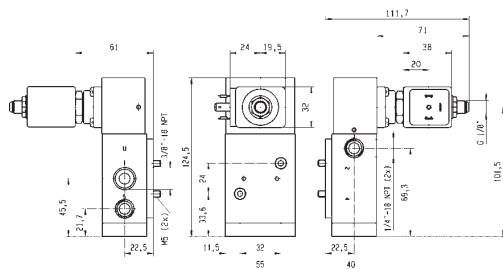
Notes:

1. Pilot seal in FKM

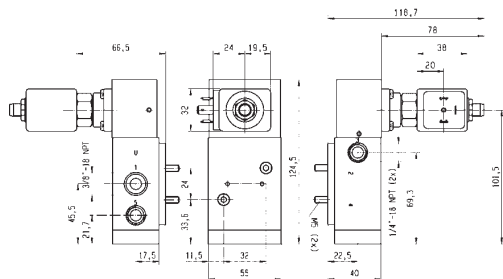




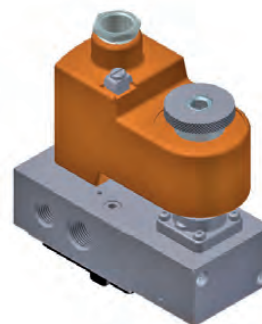
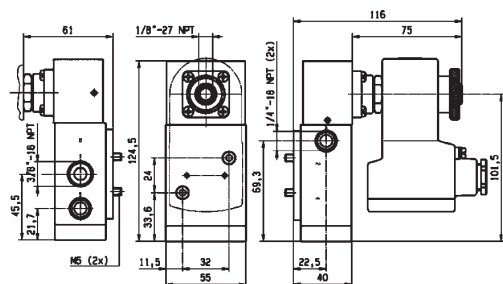
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	3/8"-1/4"	8	0	10	-25	-25
To	3/8"-1/4"	8	1400	10	80	0



Drawing 7554



Drawing 7556



Drawing 7696



3/2-5/2

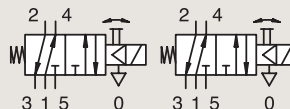
3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

316L STAINLESS ST.

NAMUR

SOLENOID OPERATED - SPRING RETURN



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
NPT	mm	Qn l/min	bar	bar	bar	°C	°C										
3/8"	8	1400	2	10	10	-25	50	NBR	U341N0250 ₁₂₃	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7577
1/4"	8	1400	2	10	10	-25	80	NBR	U341N0250 ₁₂₃	8993	488980	-	-	2	2.5	1.1	7577

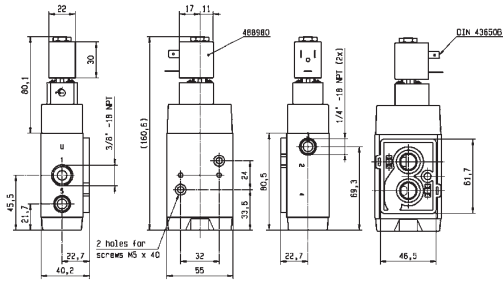
Notes:

1. With manual override
2. With captured exhaust
3. Pilot seal in FKM



IECEX certified

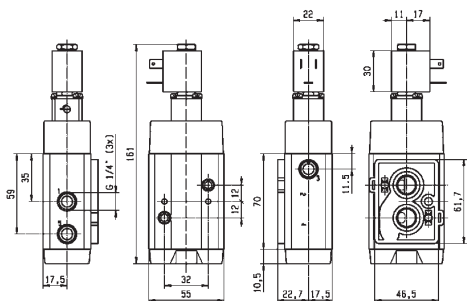
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	3/8"-1/4"	8	1400	10	-25	-25
To	3/8"-1/4"	8	1400	10	80	50



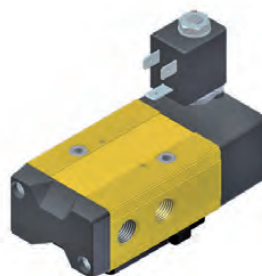
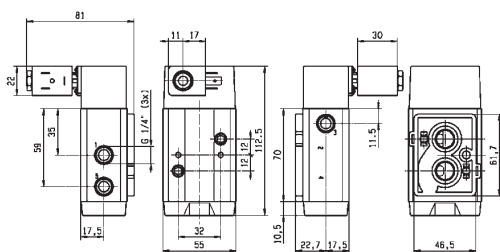
Drawing 7577



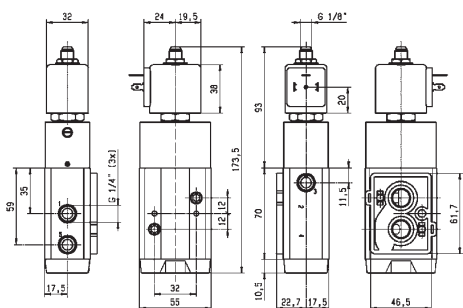
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	8	1400	10	-25	-25
To	1/4"	8	1400	10	80	50



Drawing 7313



Drawing 7312



Drawing 7318



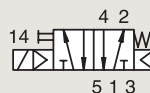
3/2-5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

SOLENOID OPERATED - SPRING RETURN



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC	Min	Max							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/8"-1/4"	4	600	2	10	10	-25	50	NBR	341N01 ¹²³	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7301
	4	600	2	10	10	-25	80	NBR	341N01 ¹²³	8993	488980	-	-	2	2.5	1.1	7301
	4	600	2	10	10	-25	50	NBR	341N11 ¹²³	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7300
	4	600	2	10	10	-25	80	NBR	341N11 ¹²³	8993	488980	-	-	2	2.5	1.1	7300
	4	600	2	10	10	-25	65	NBR	341N21 ¹³	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7311
	4	600	2	10	10	-25	60	NBR	341N21 ¹³	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7311
	4	600	2	10	10	-25	80	NBR	341N21 ¹³	2995	481865	-	-	8	9	2.1	7311

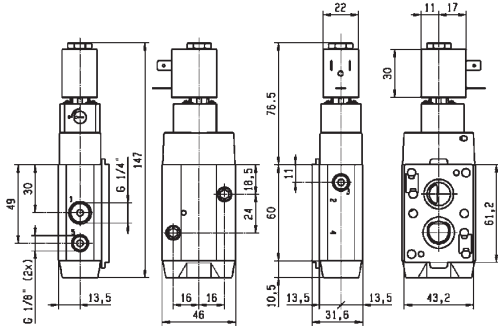
Notes:

1. With manual override
2. With captured exhaust
3. Pilot with FKM seal

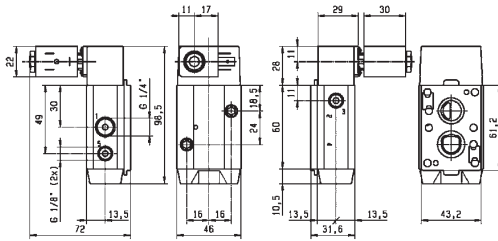




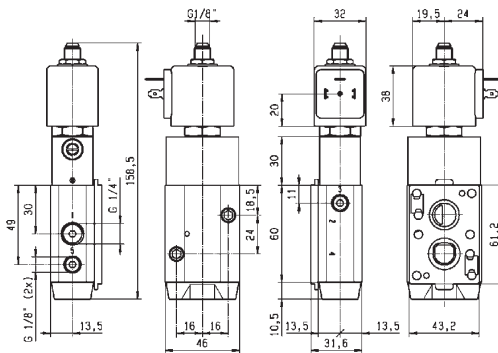
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"-1/4"	4	600	10	-25	-25
To	1/8"-1/4"	4	600	10	80	50



Drawing 7301



Drawing 7300



Drawing 7311



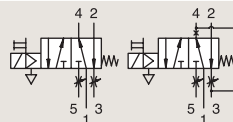
3/2-5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

SOLENOID OPERATED - SPRING RETURN



Port size BSP	Orifice Ø mm	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	AC bar	DC bar	Min °C	Max °C							AC W	DC W		
1/8"- 1/4"	4	600	2	-	10	-25	55	NBR	341N2190 ₂	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	7874
	4	600	2	-	10	-25	55	NBR	341N2190 ₂	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	7874
	4	600	2	10	10	-25	55	NBR	341N2190 ₂	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	7874
	4	600	2	10	10	-25	65	NBR	341N31 ₁₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7295
	4	600	2	10	10	-25	60	NBR	341N31 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7295
	4	600	2	10	10	-25	80	NBR	341N31 ₁₂	2995	481865	-	-	8	9	2.1	7295
	4	600	2	10	10	-25	65	NBR	341N3102 ₂	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7295
	4	600	2	10	10	-25	60	NBR	341N3102 ₂	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7295
	4	600	2	10	10	-25	80	NBR	341N3102 ₂	2995	481865	-	-	8	9	2.1	7295
	4	600	2	10	10	-40	65	NBR	341N3108 ₁₃	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7295
	4	600	2	10	10	-40	60	NBR	341N3108 ₁₃	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7295
	4	600	2	10	10	-40	65	NBR	341N3108 ₃	2995	481865	-	-	8	9	2.1	7295
	4	600	2	10	10	-40	65	NBR	341N3128 ₃	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7295
	4	600	2	10	10	-40	60	NBR	341N3128 ₃	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7295
	4	600	2	10	10	-40	65	NBR	341N3128 ₃	2995	481865	-	-	8	9	2.1	7295
	4	600	2	-	10	-25	65	NBR	341N3130 ₁₂	-	495905	1-21	Ex db mb IIC T4	-	8	2.1	7295
	4	600	2	-	10	-25	60	NBR	341N3130 ₁₂	2995	495870	2-22	Ex nc AC IIC T3/T4	-	9	2.1	7295
	4	600	2	-	10	-25	80	NBR	341N3130 ₁₂	2995	481865	-	-	-	9	2.1	7295

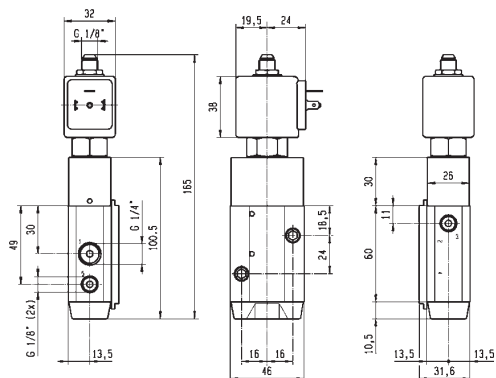
Notes:

1. With manual override
2. Pilot with FKM seal
3. Pilot with PUR seal

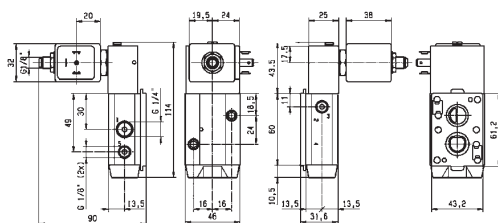




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"-1/4"	4	600	10	-40	-25
To	1/8"-1/4"	4	600	10	80	50



Drawing 7874



Drawing 7295

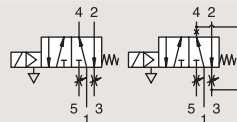
3/2-5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

SOLENOID OPERATED - SPRING RETURN



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/8"-1/4"	4	600	2	-	10	-10	55	NBR	341N3190 ₃	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	7349
	4	600	2	-	10	-10	65	NBR	341N3190 ₃	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	7349
	4	600	2	10	10	-10	65	NBR	341N3190 ₃	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	7349
	4	600	2	-	10	-25	65	NBR	341N3196 ₂	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	8017
	4	600	2	-	10	-25	55	NBR	341N3196 ₂	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	8017
	4	600	2	10	10	-25	65	NBR	341N3196 ₂	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	8017
	4	600	2	-	10	-25	65	NBR	341N3197 ₁₂	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	8017
	4	600	2	10	10	-25	65	NBR	341N3197 ₁₂	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	8017
	4	600	2	-	10	-25	65	NBR	341N3197 ₁₂	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/7.0/8.0	8017
4	600	2	-	10	-25	65	NBR	341N3197 ₁₂	2995	482740	-	-	-	1.6	6.0/7.0/8.0	8017	

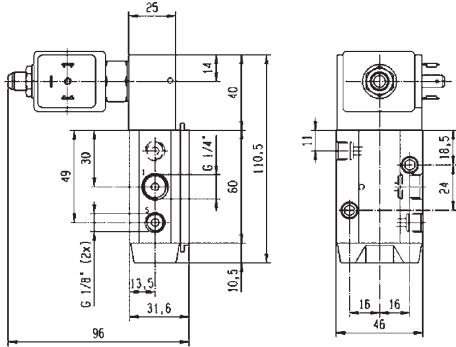
Notes:

1. With manual override
2. Pilot seal in FKM
3. Pilot seal in PUR

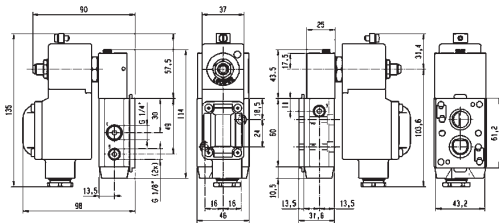




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"-1/4"	4	600	10	-25	-25
To	1/8"-1/4"	4	600	10	65	50



Drawing 7349



Drawing 8017

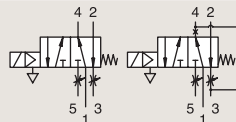
3/2-5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

SOLENOID OPERATED - SPRING RETURN



Port size	Orifice Ø	Flow factor	Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	Min	Max							AC W	DC W		
1/8"-1/4"	8	1400	2	- 10	-25 55	NBR	341N3290 ₃	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	7350	
	8	1400	2	- 10	-25 65	NBR	341N3290 ₃	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	7350	
	8	1400	2	10 10	-25 65	NBR	341N3290 ₃	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	7350	
	8	1400	2	- 10	-25 65	NBR	341N3296 ₂	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	8029	
	8	1400	2	- 10	-25 55	NBR	341N3296 ₂	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	6.0/7.0/8.0	8029	
	8	1400	2	10 10	-25 65	NBR	341N3296 ₂	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	8029	
	8	1400	2	- 10	-25 65	NBR	341N3297 ₁₂	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/7.0/8.0	8029	
	8	1400	2	10 10	-25 65	NBR	341N3297 ₁₂	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/7.0/8.0	8029	
8	1400	2	- 10	-25 65	NBR	341N3297 ₁₂	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/7.0/8.0	8029		
8	1400	2	- 10	-25 65	NBR	341N3297 ₁₂	2995	482740	-	-	-	1.6	6.0/7.0/8.0	8029		

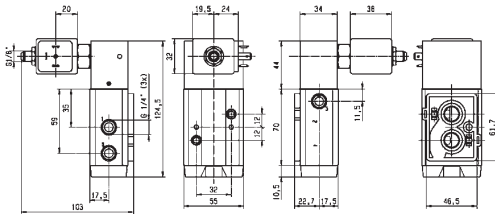
Notes:

1. With manual override
2. Pilot with PUR seal
3. Pilot with FKM seal

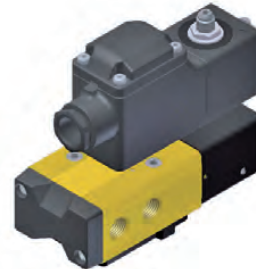
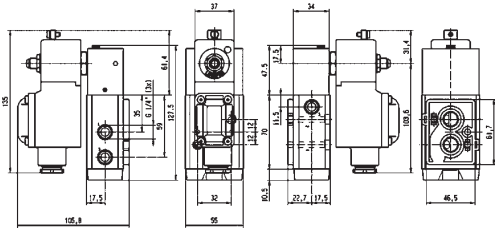




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"-1/4"	8	1400	10	-25	-25
To	1/8"-1/4"	8	1400	10	65	50



Drawing 7350



Drawing 8029

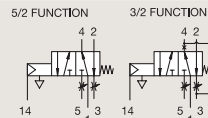
3/2-5/2

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

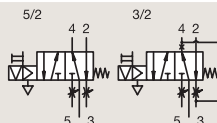
AIR OPERATED - SPRING RETURN



Port size	Orifice Ø	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/8"-1/4"	4	600	2	10	10	-25	80	NBR	541N01	-	-	-	-	-	-	-	7309
1/4"	4	600	2	10	10	-40	50	NBR	541N0108	-	-	-	-	-	-	-	7309

ANODIZED ALUMINIUM
NAMUR

CONTROL BY ELECTRIC IMPULSE



Port size	Orifice Ø	Flow factor Qn l/min	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/8"-1/4"	4	600	2	-	10	-25	80	NBR	345N31 ¹²	4269	485400	-	-	-	13	4.0	7295

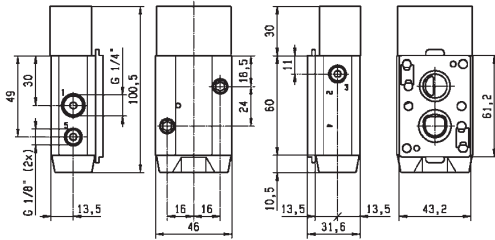
Notes:

1. With manual override
2. Pilot seal in FKM

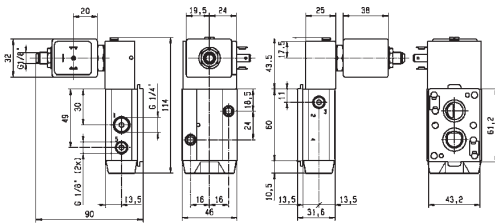




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"-1/4"	4	600	10	-25	-25
To	1/8"-1/4"	4	600	10	80	50



Drawing 7309



Drawing 7295

5/2

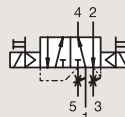
3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

316L STAINLESS ST.

NAMUR

DUAL SOLENOIDS



Port size	Orifice Ø	Flow factor	Operating Pressure Differential		Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.	
			Min	Max(MOPD)	Min	Max							AC W	DC W			
NPT	mm	Qn l/min	bar	DC bar	°C	°C											
8	1400	2	10	10	-25	65	NBR	U347N3250 ₁	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7557	
3/8"-1/4"	8	1400	2	10	10	-25	60	NBR	U347N3250 ₁	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7557
8	1400	2	10	10	-25	80	NBR	U347N3250 ₁	2995	481865	-	-	8	9	2.1	7557	

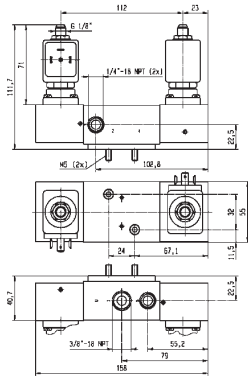
Notes:

1. Pilot seal in FKM





For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	3/8"-1/4"	8	1400	10	-25	-25
To	3/8"-1/4"	8	1400	10	80	50



Drawing 7557

5/2

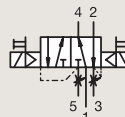
3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM

NAMUR

DUAL SOLENOIDS



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min °C	Max °C							AC W	DC W		
1/4"	8	1400	2	10	10	-25	50	NBR	347N12 ₁₂₃	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7315
	8	1400	2	10	10	-25	80	NBR	347N12 ₁₂₃	8993	488980	-	-	2	2.5	1.1	7315
	8	1400	2	10	10	-25	65	NBR	347N32 ₁₃	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7320
	8	1400	2	10	10	-25	60	NBR	347N32 ₁₃	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7320
	8	1400	2	10	10	-25	80	NBR	347N32 ₁₃	2995	481865	-	-	8	9	2.1	7320

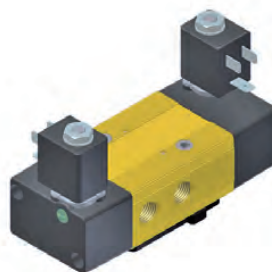
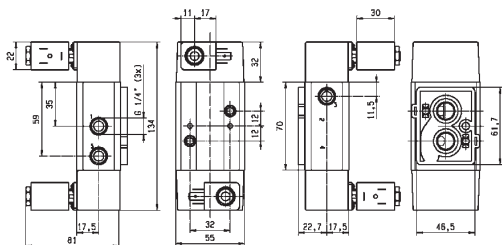
Notes:

1. With manual override
2. With captured exhaust
3. Pilot with FKM seal

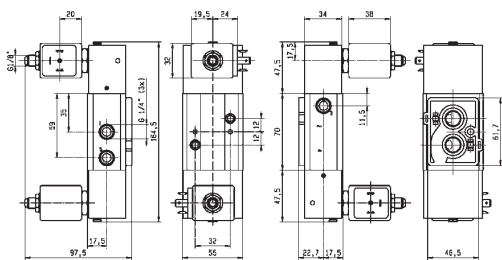




For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/4"	8	1400	10	-25	-25
To	1/4"	8	1400	10	80	50



Drawing 7315



Drawing 7320



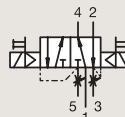
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3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR

DUAL SOLENOIDS



Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min	Max							AC W	DC W		
1/8" 1/4"	4	400	2	10	10	-25	50	NBR	347N11 ₁₂₄	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7305
	4	400	2	10	10	-25	80	NBR	347N11 ₁₂₄	8993	488980	-	-	2	2.5	1.1	7305
	4	400	2	10	10	-25	65	NBR	347N31 ₁₄	-	495905	1-21	Ex db mb IIC T4	8	8	2.1	7297
	4	400	2	10	10	-25	60	NBR	347N31 ₁₄	2995	495870	2-22	Ex nc AC IIC T3/T4	8	9	2.1	7297
	4	400	2	10	10	-25	80	NBR	347N31 ₁₄	2995	481865	-	-	8	9	2.1	7297
	4	400	2	-	10	-25	55	NBR	347N3190 ₄	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	7.0/8.0	8141
	4	400	2	-	10	-25	55	NBR	347N3190 ₄	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	7.0/8.0	8141
	4	400	2	10	10	-25	65	NBR	347N3190 ₄	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	7.0/8.0	8141
	4	400	2	-	10	-25	55	NBR	347N3196 ₃	2995	483580.01	0-20	Ex ia IIC T6	-	0.5 to 3	8.0	7297
	4	400	2	-	10	-25	65	NBR	347N3196 ₃	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	8.0	7297
	4	400	2	10	10	-25	65	NBR	347N3196 ₃	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	8.0	7297
	4	400	2	-	10	-25	65	NBR	347N3197 ₁₃	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	3.0/6.0/8.0	7297
	4	400	2	10	10	-25	65	NBR	347N3197 ₁₃	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	3.0/6.0/8.0	7297
	4	400	2	-	10	-25	65	NBR	347N3197 ₁₃	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	3.0/6.0/8.0	7297
	4	400	2	-	10	-25	65	NBR	347N3197 ₁₃	2995	482740	-	-	-	1.6	3.0/6.0/8.0	7297

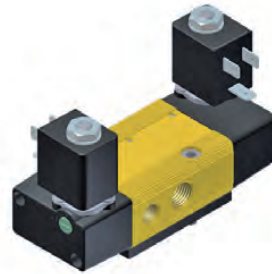
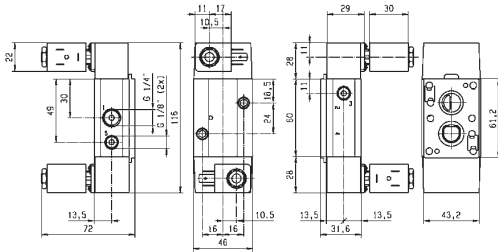
Notes:

1. With manual override
2. With captured exhaust
3. Pilot with PUR seal
4. Pilot with FKM seal

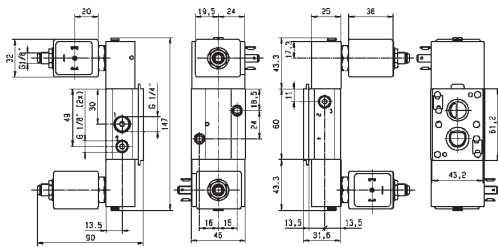




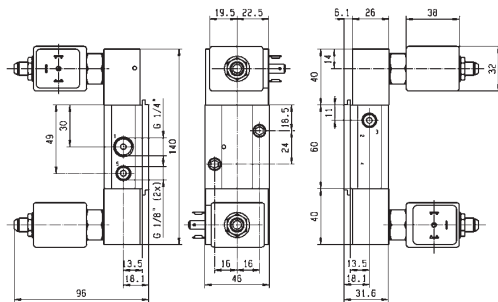
For this page	Port size	Orifice (mm)	Q _n (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"-1/4"	4	400	10	-25	-25
To	1/8"-1/4"	4	400	10	80	50



Drawing 7305



Drawing 7297



Drawing 8141

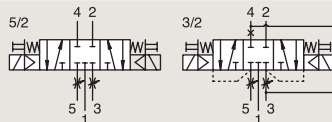


5/3

3 AND 5 WAY VALVES NAMUR PILOT OPERATED

N01 N02 SERIES - SPOOL VALVES WITH NAMUR INTERFACE

ANODIZED ALUMINIUM
NAMUR



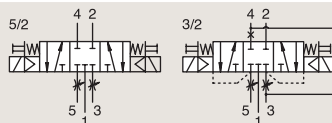
W1 CLOSED CENTER POSITION

Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min °C	Max °C							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
	4	400	2	-	10	-25	65	NBR	342N3197 ¹²	-	495910	0-20	Ex ia IIC T4 to T6	-	0.3 to 3	6.0/8.0	7297
1/4"-1/8"	4	400	2	10	10	-25	65	NBR	342N3197 ¹²	-	495900	1-21	Ex db mb IIC T4 to T6	2.5	2	6.0/8.0	7305
	4	400	2	-	10	-25	65	NBR	342N3197 ¹²	2995	496125	2-22	Ex nAC IIC T5/T6	-	1.6	6.0/8.0	7305
	4	400	2	-	10	-25	65	NBR	342N3197 ¹²	2995	482740	-	-	-	1.6	6.0/8.0	7305

Notes:

1. With manual override
2. Pilot seal in PUR

ANODIZED ALUMINIUM
NAMUR



W1 CLOSED CENTER POSITION

Port size	Orifice Ø	Flow factor	Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	ATEX Zone	Protection Mode	Power		Coil Group	Dwg. No.
			Min	Max(MOPD)	DC bar	Min °C	Max °C							AC W	DC W		
BSP	mm	Qn l/min	bar	AC bar	DC bar	°C	°C										
1/8"-1/4"	4	400	2	10	10	-25	50	NBR	342N11 ¹²³	-	482606	1-21	Ex mb IIC T4/T5	2	2.5	1.1	7305
	4	400	2	10	10	-25	80	NBR	342N11 ¹²³	8993	488980	-	-	2	2.5	1.1	7305

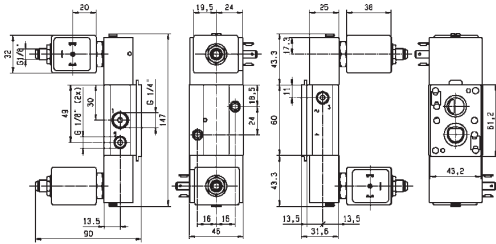
Notes:

1. With manual override
2. With captured exhaust
3. Pilot seal in FKM

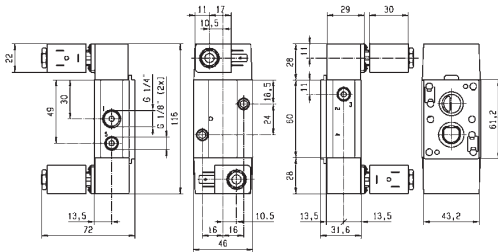




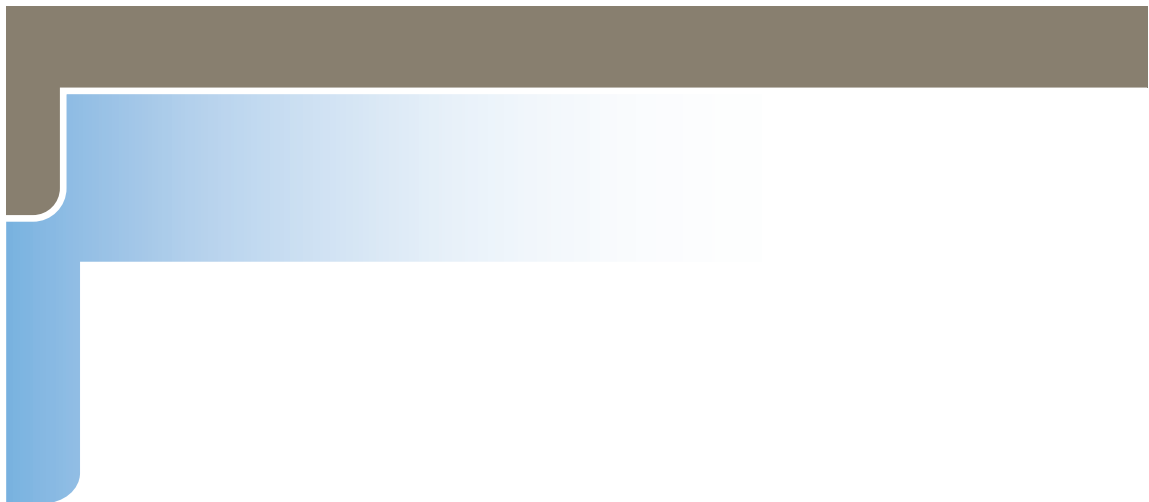
For this page	Port size	Orifice (mm)	Qn (l/min)	MOPD (bar)	Fluid Temp (°C)	Amb Temp (°C)
From	1/8"-1/4"	4	400	10	-25	-25
To	1/4"	4	400	10	80	50



Drawing 7297



Drawing 7305

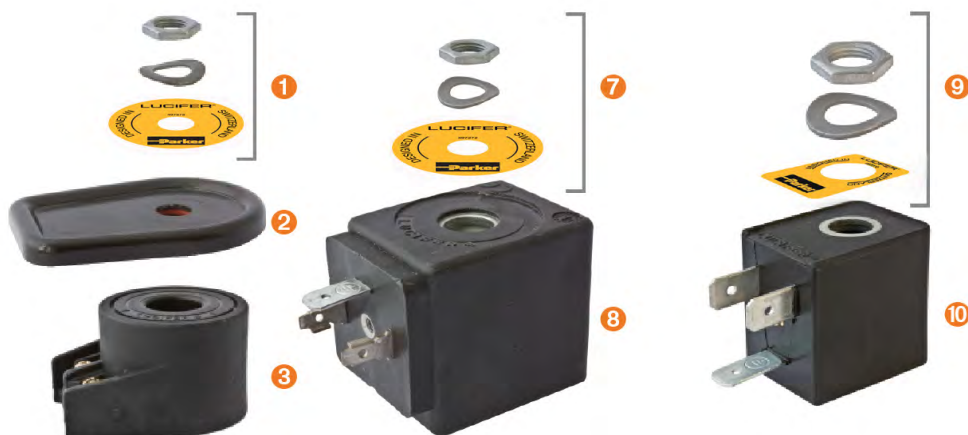


A COMPLETE RANGE OF COILS, HOUSINGS AND ELECTRICAL PARTS FOR SOLENOID VALVES



DEFINITIONS

HOUSINGS OR COIL ASSEMBLY KITS, COILS AND ELECTRICAL PARTS



Housing:

We define a **housing** as the combination of the fixing elements including the nameplate **1**, the cover **2** or the subplate **6** and the envelope itself **4** or **5** which protects the coil and its electrical components. The housings may be made of metal or plastic material.

Coil assembly kit:

The coil assembly kit **7** or **9** is the set comprising a plate, washer and nut. Sometimes coil assembly kits consist only of a nut or a special fixing device.

Coil:

This consists of the winding and its plastic moulding. There are three different types of coils distinguished by their shape and dimensions: 40 mm **3**, 32 mm **8** and 22 mm **10**.

Electric part:

The electric part is the set comprising the housing, the assembly kit and the coil.

Attention:

Any Parker FCSE coil or electrical part may be energised only when mounted on a valve. Otherwise there is a risk of damaging the product and its surroundings (overheating, explosion, fire, etc.).

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INDEX FOR EXPLOSION PROOF ELECTRICAL PARTS

Coil Reference	Coil Group	Designation	Power DC Pn (W)	Power AC Pn (W)	Ambient Temperature	UL	Degree of Protection	ATEX or NEMA 4X Protection (Gas)	Page
496637	1.2	Explosion proof electrical part "nc AC", 22 mm, double frequency	3.0	3.0	-40°C to +50°C	-	IP65	II 3 GD Ex tc IIC T 95°C	273
495880	2.0/2.2	Explosion proof electrical part "nc AC", 32 mm	14.0	14.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3	277
496155	2.0/2.2	Explosion proof increased safety electrical part "nc AC", 50 mm	14.0	14.0	-40°C to +65°C	-	IP67	II 3 GD Ex nc AC IIC T3	279
495915	4.0	Explosion proof increased safety electrical part "nc AC", 50 mm	13.0	11.0	-40°C to +65°C	-	IP67	II 3 GD Ex nc AC IIC T3	278
495870	2.0/2.1	Explosion proof electrical part "nc AC", 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	274
495875	2.0/2.1	Explosion proof electrical part "nc AC", 32 mm	7.0	6.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	276
496110	2.0/2.1	Explosion proof electrical part "nc AC", 32 mm	-	9.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	274
495865	1.1	Explosion proof electrical part "nc AC", low power, 22 mm	2.5	2.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T5	272
496125	6.0	Explosion proof electrical part "nc AC", low power, 32 mm	1.6	-	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T5 / T6	275
492670	2.0/2.1	Explosion proof encapsulated electrical part "mb", 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T4 / T5	282
482605	1.1	Explosion proof encapsulated electrical part "mb", 32 mm	5.0	4.0	-40°C to +65°C	-	IP65	II 2 GD Ex mb II T4 / T5	281
482606	1.1	Explosion proof encapsulated electrical part "mb", low power, 32 mm	2.5	2.0	-40°C to +65°C	-	IP65	II 2 GD Ex mb II T4 / T5	281
492070	2.0/2.1	Explosion proof encapsulated electrical part "mb", with water proof metal housing, 50 mm	8.0	9.0	-40°C to +65°C	-	IP67	II 2 GD Ex mb II T4 / T5	283
HZ10	2.0/2.1	Explosion proof encapsulated electrical part "mb", double frequency	8.0	8.0	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T3 / T5	284
HZ11	2.0/2.2	Explosion proof encapsulated electrical part "mb", double frequency	14.0	14	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T3 / T5	285
497105	10.3	Flame proof electrical part "db", 50 mm	8.0	8.0	-50°C to +80°C	-	IP66	Ex db IIC T4 / T5 / T6	280
493640	2.0/2.1	Flame proof encapsulated electrical part "db mb", double frequency	8.0	8.0	-40°C to +75°C	-	IP65	II 2 GD Ex db mb IIC T4 / T5	290
495905	2.0/2.1	Flame proof encapsulated electrical part "db mb", 37 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4	287
496560	10.1	Flame proof encapsulated electrical part "db mb", 37 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4	288
496800	10.1	Flame proof encapsulated electrical part "db mb", 37 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4	289
495900	6.0	Flame proof encapsulated electrical part "db mb", low power, 37 mm	2.0	2.5	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4 / T5 / T6	286
496555	10.2	Flame proof encapsulated electrical part "db mb", 37 mm	6.0	6.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4 / T5 / T6	288
496700	10.2	Flame proof encapsulated electrical part "db mb", 37 mm	6.0	6.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4 / T5 / T6	289
494040	2.0/2.1	Explosion proof increased safety electrical part "eb", 50 mm	8.0	8.0	-40°C to +90°C	-	IP67	II 2 GD Ex eb IIC T3 / T4	291
483371	2.0/2.1	Explosion proof increased safety electrical part "eb", 50 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex eb IIC T4	291
492190	2.0/2.1	Explosion proof increased safety and encapsulated elect. part "eb", 50 mm	9.0	11.0	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T3 / T4	294
492310	10.1	Explosion proof increased safety and encapsulated electrical part "eb", 50 mm	6.0	6.0	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T4 / T5	292
492210	9.0	Explosion proof increased safety and encapsulated electrical part "eb", "Booster", 50 mm	1.0 to 1.8	-	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T5 / T6	293
495910	8.0	Explosion proof intrinsically safe electrical part "ia", "booster", 37 mm	0.3 to 1.2	-	-40°C to +80°C	-	IP67	II 1 GD Ex ia IIC T6 / T5 / T4	296
496565	9.0	Explosion proof intrinsically safe electrical part "ia", "Booster", 37 mm	0.77 to 2.58	-	-40°C to +80°C	-	IP67	II 1 GD Ex ia IIC T6 / T5 / T4	297
483580.01	7.0	Explosion proof intrinsically safe electrical part "ia", 32 mm	3.0	-	-40°C to +55°C	-	IP65	II 1 GD Ex ia IIC T6	295
488650.01	7.0	Explosion proof intrinsically safe electrical part "ia", 50 mm	0.3 to 3.0	-	-40°C to +65°C	-	IP66	II 1 GD Ex ia IIC T6	300
492965.01	9.0	Explosion proof intrinsically safe electrical part "ia", "Booster", 50 mm	0.3 to 2.3	-	-40°C to +65°C	-	IP66	II 1 GD Ex ia IIC T6	298
482870.01	12.0	Explosion proof intrinsically safe electrical part "ia", 50 mm	3.0	-	-40°C to +65°C	-	IP66	II 1 GD Ex ia IIC T6	299

LIST OF COIL GROUPS

Parker coils and electrical parts are classified by groups determining their compatibility with Parker solenoid valves.

Group	For application with
1.1	Standard valves or on 2000 Series with standard pilot
1.2	Standard valves or on 2000 Series for high flow
2.0	Standard valves or on 7000 Series with standard pilot
2.1	Standard valves or on 7000 Series, for coils 8 - 9 W
2.2	Standard valves or on 7000 Series, for coils 14 W
3.0	Standard valves or on 7000 Series with reduced power
4.0	Standard valves or on 7000 Series, for bistable (Impulse) coils or electrical parts
6.0	Special valves "97" or on 7000 Series, for Intrinsically safe coils or electrical parts
7.0	Special valves "90", for coils and intrinsically safe electrical parts
8.0	Special valves "97" or on 7000 Series, for Intrinsically safe coils or electrical parts with booster
9.0	Special valves "xx" or on 9000 Series, for Intrinsically safe coils or electrical parts with booster
10.1	Standard valves or on 9000 Series with standard pilot
10.2	Standard valves or on 9000 Series "db mb"
10.3	Special valves or on 8000 Series "d"
12.0	Standard valves or on 9000 Series with manual reset

COILS



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COILS

COIL GROUP

2.0/2.1

COILS FOR DIN PLUG CONNECTION



COILS 32 mm

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.



Specification		Standard			Double frequency		
Ref. (without DIN plug) Ref. (with DIN plug)		481865			483510		
Coil Group		2.0 / 2.1					
Degree of protection		IP65 according to IEC / EN 60529 standards (with DIN plug).					
Class of insulation		F 155°C					
Electrical connection		The coil is connected with a 2 P + E plug according to EN 175301-803 type A					
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.					
Elect. Power	DC	Pn (hot)	9 W		-		
		P (cold) 20°C	12 W		-		
	AC	Pn (holding)	8 W		9 W		
		Attraction cold	26 VA (9 W)		32 VA (10 W)		
Weight		130 g (without plug)					
Voltages "Un"		VAC/Hz	Code	VDC	Code	VAC/Hz	Code
-10% to +10% of the Un		24/50	A2	24	C2	24/50, 24/60	P0
		48/50	A4	48	C4	48/50, 48/60	S4
		110/50	A5	110	C5	110-115/50, 120/60	S5
		220-230/50	3D			220-240/50, 240/60	S6

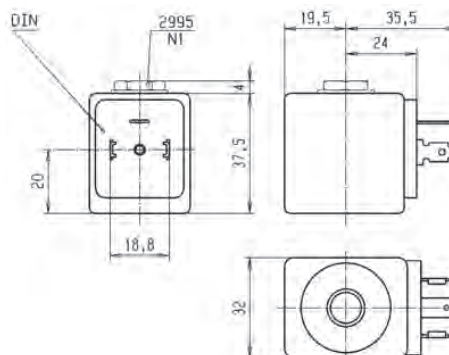
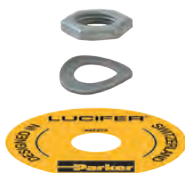
To Order a Coil choose Coil Ref + Voltage Code, example: 481865 for 24 VDC = **481865C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see example below:

The coil assembly kit **Ref. 2995** corresponds to the "housing".

It is composed of a nameplate giving details of the valve type, a round washer and a nut to ensure the fixing between 32 mm coil and the valve.



COIL GROUP
2.0/2.1
2.2

COILS FOR DIN PLUG CONNECTION



HIGH TEMPERATURE COILS 32 mm

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.



Specification		High temperature				High temp. + high power				
Ref. (without DIN plug) Ref. (with DIN plug)		492453				492425				
Coil Group		2.0 / 2.1				2.0 / 2.2				
Degree of protection		IP65 according to IEC / EN 60529 standards (with DIN plug).								
Class of insulation		H 180°C								
Electrical connection		The coil is connected with a 2 P + E plug according to EN 175301-803 type A								
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.								
Elect. Power	DC	Pn (hot)	9 W				14 W			
		P (cold) 20°C	12 W				21 W			
	AC	Pn (holding)	8 W				14 W			
		Attraction cold	26 VA (9 W)				55 VA (18 W)			
Weight		130 g (without plug)								
Voltages "Un"		VAC/Hz	Code	VDC	Code	VAC/Hz	Code	VDC	Code	
-10% to +10% of the Un		24/50	A2	24	C2	24/50	A2	24	C2	
		110/50	A5	110	C5	110/50	A5			
		220/50-230/50	3D			230/50	F4			

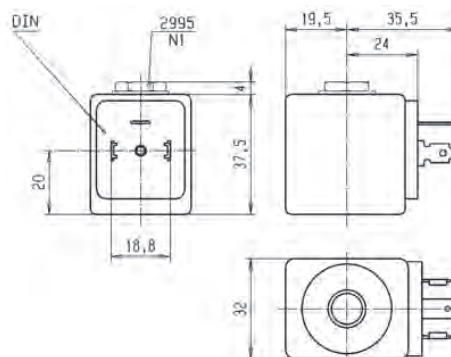
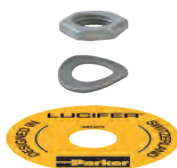
To Order a Coil choose Coil Ref + Voltage Code, example: 492453 for 24VDC= **492453C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see example below:

The coil assembly kit **Ref. 2995** corresponds to the "housing".

It is composed of a nameplate giving details of the valve type, a round washer and a nut to ensure the fixing between 32 mm coil and the valve.



COILS

COIL GROUP

3.0

COILS FOR DIN PLUG CONNECTION



REDUCED POWER COIL 32 mm

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.



Specification		Reduced power			
Ref. (without DIN plug)		482730			
Ref. (with DIN plug)		482735			
Coil Group		3.0			
Degree of protection		IP65 according to IEC / EN 60529 standards (with DIN plug).			
Class of insulation		F 155°C			
Electrical connection		The coil is connected with a 2 P + E plug according to EN 175301-803 type A			
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.			
Elect. Power	DC	Pn (hot)	7 W		
		P (cold) 20°C	9 W		
	AC	Pn (holding)	6 W		
		Attraction cold	20 VA (7 W)		
Weight		130 g (without plug)			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		220-230/50	3D	24	C2

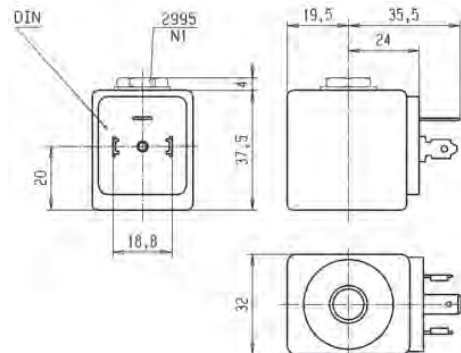
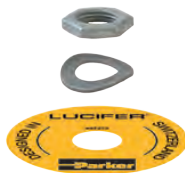
To Order a Coil choose Coil Ref + Voltage Code, example: 482730 for 24VDC = **482730C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see example below:

The coil assembly kit **Ref. 2995** corresponds to the "housing".

It is composed of a nameplate giving details of the valve type, a round washer and a nut to ensure the fixing between 32 mm coil and the valve.



COIL GROUP
6.0
**COILS FOR
DIN PLUG CONNECTION**

LOW POWER COIL 32 mm

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.



Specification		Miniwatt	
Reference (without DIN plug)		482740	
Reference (with DIN plug)			
Coil Group		6.0	
Degree of protection		IP65 according to IEC / EN 60529 standards (with DIN plug).	
Class of insulation		F 155°C	
Electrical connection		The coil is connected with a 2 P + E plug according to EN 175301-803 type A	
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.	
Elect. Power	DC	Pn (hot)	1.6 W
		P (cold) 20°C	2.1 W
	AC	Pn (holding)	-
		Attraction cold	-
Weight		130 g (without plug)	
Voltages "Un"		VDC	Code
-10% to +10% of the Un		24	C2

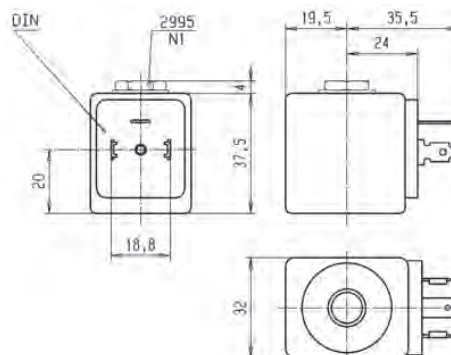
To Order a Coil choose Coil Ref + Voltage Code, example: 482740 for 24VDC = **482740C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see example below:

The coil assembly kit **Ref. 2995** corresponds to the "housing".

It is composed of a nameplate giving details of the valve type, a round washer and a nut to ensure the fixing between 32 mm coil and the valve.



COILS

COIL GROUP

2.0/2.1

COILS FOR DIN PLUG CONNECTION



UL COIL 32 mm

This coil can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.

DIN plug connector to be ordered separately (see coil accessories section)



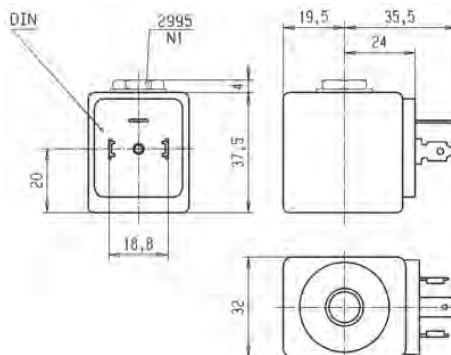
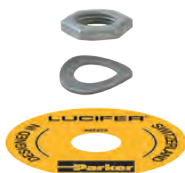
Specification		UL-recognized coil - UL File E200N - designation AMIF			
Reference (without DIN plug)		491514			
Coil Group		2.0 / 2.1			
Degree of protection		IP65 according to IEC / EN 60529 standards (with DIN plug).			
Class of insulation		F (155°C)			
Electrical connection		The coil is connected with a 2 P + E plug according to EN 175301-803 type A			
Ambient temperature		-40°C to 50°C The application is limited also by the temperature range of the valve.			
Elect. Power	DC	Pn (hot)	-	12 W	
		P (cold) 20°C	-	16 W	
	AC	Pn (holding)	11 W	-	
		Attraction cold	40 VA (13 W)	-	
Weight		130 g (without plug)			
Voltages "Un"		VAC/Hz	Code	VDC	Code
- 15% to +10% of the Un		110/50-120/60	P3	24	C2
		220/50-240/60	Q3		

To Order a Coil choose Coil Ref + Voltage Code, example: 491514 for 24VDC = **491514C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see example below:

The coil assembly kit **Ref. 2995** with non UL valve and Ref. 2995.03 with UL valve correspond to the "housing". It is composed of a nameplate giving details of the valve type, a round washer and a nut to ensure the fixing between 32 mm coil and the valve.



COIL GROUP
1.1
**COILS FOR
DIN PLUG CONNECTION**

COILS 22 mm

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

This coil is designed for valves equipped with a miniature tube assembly (2000 series valves). This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Coil conforms to the IEC/CENELEC safety standards and complies with European low-voltage directive.



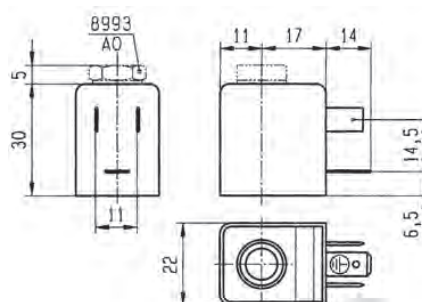
Specification		Low power				High power				
Ref. (without DIN plug) Ref. (with DIN plug)		488980				481180				
Coil Group		1.1								
Degree of protection		IP65 according to IEC / EN 60529 standards (with DIN plug).								
Class of insulation		F 155°C								
Electrical connection		The coil is connected with a 2 P + E plug according to EN 175301-803 type B.								
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.								
Elect. Power	DC	Pn (hot)	2.5 W				5 W			
		P (cold) 20°C	3 W				6.5 W			
	AC	Pn (holding)	2 W				4 W			
		Attraction cold	5.7 VA (2.5 W)				8.9 VA (5 W)			
Weight		100 g with DIN Plug								
Voltages "Un"		VAC/Hz	Code	VDC	Code	VAC/Hz	Code	VDC	Code	
-10% to +10% of the Un		24/50	A2	24	C2	24/50	A2	24	C2	
		48/50	A4	48	C4	110/50-115/50	0A			
		110/50-115/50	0A	110	C5	220/50-230/50	3D			
		220/50-230/50	3D							

To Order a Coil choose Coil Ref + Voltage Code, example: 488980 for 24VDC = **488980C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see example below:

The coil assembly kit **Ref. 8993** corresponds to the valve housings. It is composed of a nameplate with the details of the valve type, a washer and a nut to secure the 22 mm coil to the valve.



COILS

COIL GROUP

1.1

COILS FOR DIN PLUG CONNECTION



UL COIL 22 mm

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

This coil is designed for valves equipped with a miniature tube assembly (2000 series valves). This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Coil conforms to the IEC/CENELEC safety standards and complies with European low-voltage directive.



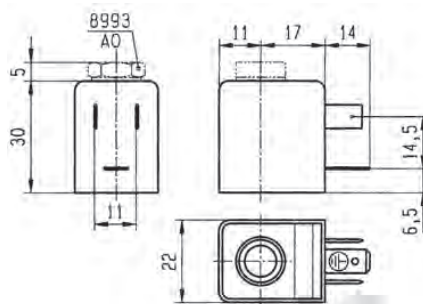
Specification		Standard UL (only if used with 321K, 121M, 131M valves)			
Reference (without DIN plug)		492912			
Reference (with DIN plug)					
Coil Group		1.1			
Degree of protection		IP65 according to IEC / EN 60529 standards (with DIN plug).			
Class of insulation		A 105°C for UL/CSA			
Electrical connection		The coil is connected with a 2 P + E plug according to EN 175301-803 type B.			
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.			
Elect. Power	DC	Pn (hot)	4 W		
		P (cold) 20°C	4.5 W		
	AC	Pn (holding)	3 W		
		Attraction cold	7.5 VA (4 W)		
Weight		100 g with DIN Plug			
Voltages "Un"		VAC/Hz	Code	VDC	Code
- 15% to +10% of the Un		230/50-240/60	T1	24	C2

To Order a Coil choose Coil Ref + Voltage Code, example: 492912 for 24VDC = **492912C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see example below:

The coil assembly kit **Ref. 8993** corresponds to the valve housings. It is composed of a nameplate with the details of the valve type, a washer and a nut to secure the 22 mm coil to the valve.



COIL GROUP
1.1
**COILS FOR
DIN PLUG CONNECTION**

DOUBLE FREQUENCY COIL 22 mm

This coil can be mounted with every Parker solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

This coil is designed for valves equipped with a miniature tube assembly (2000 series valves). This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc. Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc. Coil conforms to the IEC/CENELEC safety standards and complies with European low-voltage directive.

DIN plug connector to be ordered separately (see coil accessories section).



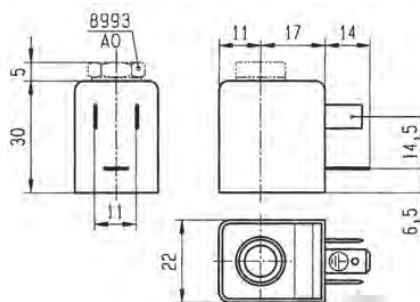
Specification		Double frequency	
Reference (without DIN plug)		483590	
Coil group		1.1	
Degree of protection		IP65 according to IEC / EN 60529 standards (with DIN plug).	
Class of insulation		F 155°C	
Electrical connection		The coil is connected with a 2 P + E plug according to EN 175301-803 type B.	
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.	
Elect. Power	DC	Pn (hot)	-
		P (cold) 20°C	-
	AC	Pn (holding)	3 W
		Attraction cold	7.5 VA (4 W)
Weight		100 g with DIN Plug	
Voltages "Un"		VAC/Hz	Code
-10% to +10% of the Un		24/50-60	P0
		48/50-60	S4
		110-115/50, 120/60	S5
		220-240/50, 240/60	S6

To Order a Coil choose Coil Ref + Voltage Code, example: 483590 for 24/50,24/60 = **483590P0**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see example below:

The coil assembly kit **Ref. 8993** corresponds to the valve housings. It is composed of a nameplate with the details of the valve type, a washer and a nut to secure the 22 mm coil to the valve.



COILS

COIL GROUP

1.2

COILS FOR DIN PLUG CONNECTION



DOUBLE FREQUENCY COIL 22 mm

This coil can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

This coil is designed for valves equipped with a miniature tube assembly (2000 series valves). This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Coil conforms to the IEC/CENELEC safety standards and complies with European low-voltage directive.

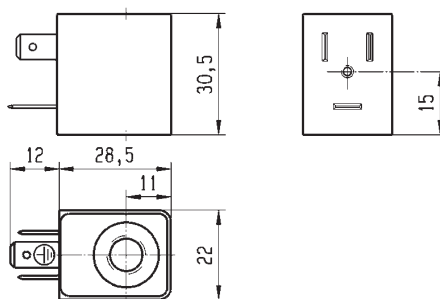
DIN plug connector to be ordered separately (see coil accessories section).



Specification		Double frequency			
Reference (without DIN Plug)		496131			
Coil group		1.2			
Degree of protection		IP65 according to IEC / EN 60529 standards (with DIN plug).			
Class of insulation		F 155°C			
Electrical connection		The coil is connected with a 2 P + E plug according to EN 175301-803 type B.			
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.			
Elect. Power	DC	Pn (hot)	3 W		
		P (cold) 20°C	-		
AC		Pn (holding)	3 W		
		Attraction cold	-		
Weight		60 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		24/50-60	P0	24 V	C2
		110/50-60	P2	48 V	C4
		230/50-60	P9	110 V	C5
		48/50-60	S4		

To Order a Coil choose Coil Ref + Voltage Code, example: 496131 for 24VDC = **496131C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.



COIL GROUP
1.2
**COILS FOR
DIN PLUG CONNECTION**

DOUBLE FREQUENCY COIL 22 mm

This coil can be mounted with every Parker solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

This coil is designed for valves equipped with a miniature tube assembly (2000 series valves). This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc. Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc. Coil conforms to the IEC/CENELEC safety standards and complies with European low-voltage directive.

DIN plug connector included.

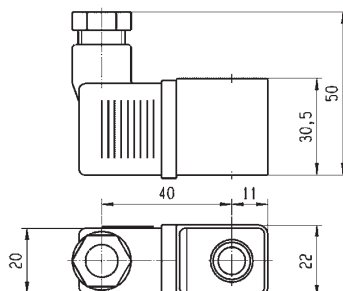


Specification		Double frequency			
Reference		496482			
Coil group		1.2			
Degree of protection		IP65 according to IEC / EN 60529 standards (with DIN plug).			
Class of insulation		F 155°C			
Electrical connection		The coil is connected with a 2 P + E plug according to EN 175301-803 type B.			
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.			
Elect. Power	DC	Pn (hot)	3 W		
		P (cold) 20°C	-		
	AC	Pn (holding)	3 W		
		Attraction cold	-		
Weight		75 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		24/50-60	P0	24 V	C2
		110/50-60	P2	48 V	C4
		230/50-60	P9	110 V	C5
		48/50-60	S4		

To Order a Coil choose Coil Ref + Voltage Code, example: 496482 for 24VDC = **496482C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

"The housing kit is already included in the valve reference, it is not needed to order it separately."



COILS

COIL GROUP

10.1

COILS FOR DIN PLUG CONNECTION



COIL FOR OIL AND GAS 37 mm

This coil can be mounted with every Parker solenoid valves corresponding to the specified Coil Group.

See column "Coil Group" within valve pages.

This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.

DIN plug connector included.

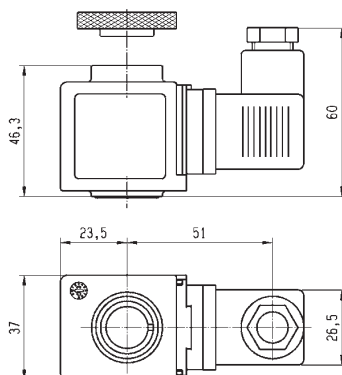


Specification		Coil for Oil and Gas			
Reference (with DIN plug)		496895			
Coil group		10.1			
Degree of protection		IP65 according to IEC / EN 60529 standards			
Class of insulation		H 180°C			
Electrical connection		With DIN plug 492459 (AC) or 486586 (DC)			
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.			
Elect. Power	DC	Pn (hot)	8 W		
		P (cold) 20°C	-		
	AC	Pn (holding)	8 W		
		Attraction cold	-		
Weight		273 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		230/50-60	P9	24	C2
		24/50-60	P0	48	C4
					C5

To Order a Coil choose Coil Ref + Voltage Code, example: 496895 for 24VDC = **496895C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

The fixing nut (housing kit) is already included in the coil kit.



COIL GROUP
2.0/2.1
COILS WITH FLYING LEADS

COIL 32 mm IP67

This coil can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

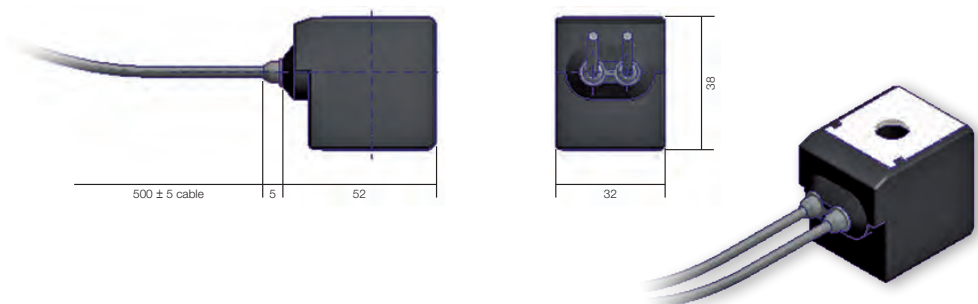
Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.



Specification		Coil with two 500 mm flying leads			
Reference		496081			
Coil Group		2.0 / 2.1			
Degree of protection		IP67 according to IEC / EN 60529 standards			
Class of insulation		F 155°C			
Ambient temperature		- 10 °C to +50°C The application is limited also by the temperature range of the valve.			
Elect. Power	DC	Pn (hot)	9 W		
		P (cold) 20°C	-		
	AC	Pn (holding)	9 W		
		Attraction cold	32 VA		
Weight		180 g			
Voltages "Un"		VAC/Hz	Order Number	VDC	Order Number
-10% to +10% of Un for AC		24/50 - 24/60	P0	24	C2
- 5 % to + 10 % for Un DC		110-115/50 - 120/60	S5	12	C1
		220-240/50 - 240/60	S6		

To Order a Coil: Use 6 digits ordering number - **Code Example:** 496081 for 24VDC = **496081C2**
More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

Please order housing Ref: 2995



COILS

COIL GROUP

2.0/2.2

COILS WITH FLYING LEADS



COIL 32 mm IP67 UL

This coil can be mounted with every Parker solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

This is an encapsulated assembly comprising a coil, integral magnetic iron path and snap-on plug connection.

The synthetic material encapsulation provides an effective compact housing, offering full protection against dust, oil, water, etc.

Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

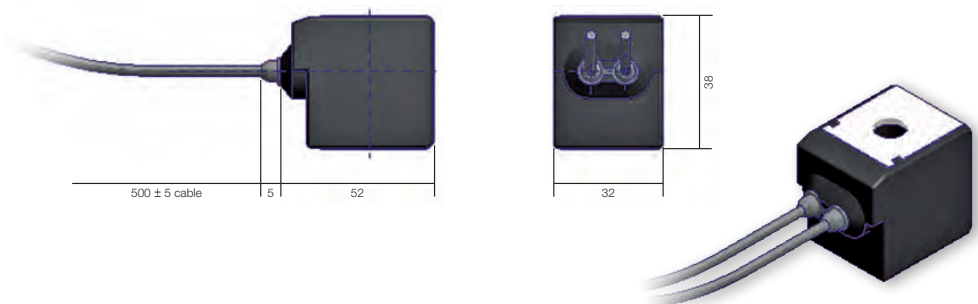
Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.



Specification		UL Coil with two 500 mm flying leads			
Reference		496082			
Coil Group		2.0 / 2.2			
Degree of protection		IP67 according to IEC / EN 60529 standards			
Class of insulation		F 155°C			
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.			
Elect. Power	DC	Pn (hot)	12 W		
		P (cold) 20°C	16 W		
	AC	Pn (holding)	13-14 W		
		Attraction cold	40 VA		
Weight		180 g			
Voltages "Un"		VAC/Hz	Order Number	VDC	Order Number
-10% to +10% of Un for AC		220/50 - 240/60	Q3	24	C1
-5% to +10% for Un DC				12	C2

To Order a Coil: Use 6 digits ordering number - Code Example: 496082 for 24VDC= 496082C2
More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

Valves please order housing Ref: 2995



COIL GROUP
2.0/2.1
**COILS WITH
SCREW TERMINALS**

STANDARD COILS 40 mm

These coils can be mounted with every Parker Solenoid Valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

They can be mounted with all metal housings.

The coil winding is completely encapsulated in synthetic material.

Easy mounting in confined spaces. Electrical connection with screw terminals for wire up to 1.5 mm².

Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.

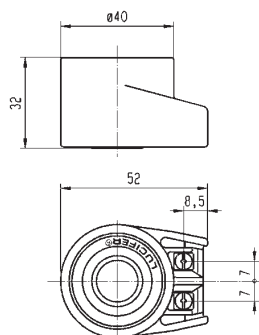


Specification		Standard			Double Frequency	
Reference		481000			483520	
Coil Group		2.0 / 2.1				
Class of insulation		F 155°C				
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve..				
Elect. Power	DC	Pn (hot)	8W			-
		P (cold) 20°C	9W			-
	AC	Pn (holding)	8W			9W
		Attraction cold	32 VA (9 W)			36 VA (10 W)
Weight		130 g			130 g	
Voltages "Un"		VAC/Hz	Code	VDC	Code	VAC/Hz
-10% to +10% of the Un		24/50	A2	24	C2	24/50-60
(-15 % to +5 % for double-frequency coil with voltage code S6 if 240 V/50/Hz is used).		110/50-115/50	A4	48	C4	220-240/50-240/60
		220/50-230/50	3D	110	C5	

To Order a Coil choose Coil Ref + Voltage Code, example: 481000 for 24VDC = **481000C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see examples below:



Ref. 4270 - Protectio IP 44 according to IEC / EN 60529 standard (with cable gland)



Ref. 4538 - Protectio IP 67 according to IEC / EN 60529 standard



COILS

COIL GROUP

2.0/2.2

COILS WITH SCREW TERMINALS



HIGH POWER COILS 40 mm

This coil can be mounted with every Parker Solenoid Valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

They can be mounted with all metal housings.

The coil winding is completely encapsulated in synthetic material.

Easy mounting in confined spaces. Electrical connection with screw terminals for wire up to 1.5 mm².

Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.

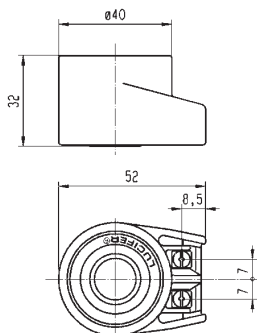


Specification		High Power	
Reference		481044	
Coil Group		2.0 / 2.2	
Class of insulation		F 155°C	
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.	
Elect. Power	DC	Pn (hot)	-
		P (cold) 20°C	-
	AC	Pn (holding)	14 W
		Attraction cold	56 VA (20 W)
Weight		130 g	
Voltages "Un"		VAC/Hz	Code
-10% to +10% of the Un		24/50	A2
		110/50	A5
		220/50	A7
		230/50	F4

To Order a Coil choose Coil Ref + Voltage Code, example: 481044 for 24VAC/50Hz = 481044A2

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see examples below:



Ref. 4270 - Protectio IP 44 according to IEC / EN 60529 standard (with cable gland)



Ref. 8520 - Protectio IP 67 according to IEC / EN 60529 standard



COIL GROUP
2.0/2.1
2.2

**COILS WITH
 SCREW TERMINALS**



HIGH TEMPERATURE COILS 40 mm

These coils can be mounted with every Parker Solenoid Valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

They can be mounted with all metal housings.

The coil winding is completely encapsulated in synthetic material.

Easy mounting in confined spaces. Electrical connection with screw terminals for wire up to 1.5 mm².

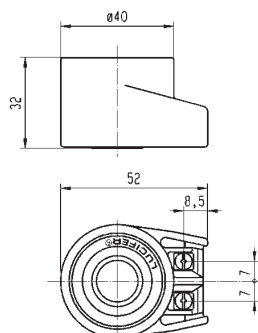
Coils conform to the IEC/CENELEC safety standards and complies with European low-voltage directive.



Specification		High Temperature			High Temperature & High Power				
Reference		485100			486265				
Coil Group		2.0 / 2.1			2.0 / 2.2				
Class of insulation		H 180°C							
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.							
Elect. Power	DC	Pn (hot)	8 W		14 W				
		P (cold) 20°C	9 W		21 W				
	AC	Pn (holding)	8 W		14 W				
		Attraction cold	32 VA (9 W)		56 VA (20 W)				
Weight		140 g							
Voltages "Un"		VAC/Hz	Code	VDC	Code	VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		24/50	A2	24	C2	24/50	A2	24	C2
		220/50-230/50	3D			110/50	A5		
						220/50	A7		
						230/50	F4		

To Order a Coil choose Coil Ref + Voltage Code, example: 485100 for 24VAC/50Hz = **485100A2**
 More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

These coils must be used with suitable housings, see examples below:



Ref. 4270 - Protectio IP 44 according to IEC / EN 60529 standard (with cable gland)



Ref. 8520 - Protectio IP 67 according to IEC / EN 60529 standard



COILS

COIL GROUP

4.0

COILS WITH SCREW TERMINALS



BISTABLE COILS 40 mm FOR IMPULSE APPLICATIONS

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group.

See column "Coil Group" within valve pages.

These coils are specially designed for bistable (or impulse or magnetic latch) solenoid valves for Heating Applications.



Specification		Bistable (Impulse)			
Reference		484990		485400	
Coil Group		4.0			
Class of insulation		F 155°C			
Ambient temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.			
Length of impulses		Switch on (terminals A-B): minimum 50 ms Switch off (terminals A-C): minimum 35 ms			
Electr. Power consumption	DC	Attraction (hot)	-	13 W	
		Attraction (cold)	-	19 W	
		Release (hot)	-	8 W	
		Release (cold)	-	10 W	
	AC	Attraction (hot)	11 W	-	-
		Attraction (cold)	17 W	-	-
		Release (hot)	4 W	-	-
		Release (cold)	7 W	-	-
Weight		150 g			
Voltages "Un" -10% to +10% of the Un	VAC/Hz	Code	VDC	Code	
	24/50-24/60	P0	24	C2	
	48/50-48/60	S4	48	C4	
	110-115/50-115/60	1P	110	C5	
	220-230/50-60	3P			

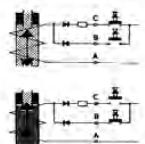
To Order a Coil choose Coil Ref + Voltage Code, example: 485400 for 24VDC = **485400C2**

More voltage possibilities can be found in the table of voltage codes at the end of the coil section.

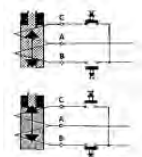
These coils must be used with suitable housings, see examples below:

DIAGRAM

Alternating Current



Direct Current



Only an electrical impulse given to terminals A-C reverses the magnetic field. This magnetic field demagnetises the reversible magnet enough to allow the return spring to bring the plunger back to its initial position and close the valve.



Ref. 4269 - Protection IP 44



Ref. 4538 - Protection IP 67



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**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

1.1

**ELECTRICAL PARTS
"nc AC"**



ZONE 2/22

ELECTRICAL PART LOW POWER 22 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.

See column "Coil Group" within valve pages.

Application:

Control of solenoid valves in dangerous areas where explosion-proof protection Ex nc AC IIC T5 is required.

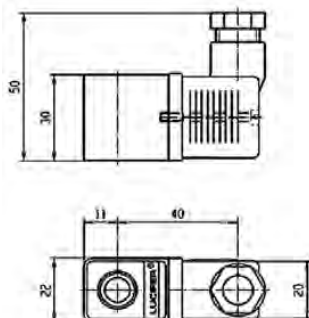
Benefits:

The synthetic material encapsulation of the coil provides an effective compact housing, offering full protection against dust, oil, water, etc. Small size for ease of mounting in confined spaces.



Reference		495865			
Certificate		LCIE 05 ATEX 6003 X			
Coil Group		1.1			
Type of protection	Gas	II 3 G - Ex nc AC IIC T5			
	Dust	II 3 D - Ex tc IIIC - T 95°C			
Degree of protection		IP65 (with plug) according to IEC/EN 60529 Standards			
Ambiant temperature		-40°C to +50°C The application is limited also by the temperature range of the valve.			
Insulation Class		F 155°C			
Electrical connection		These coils with connection 2P + G - when mounted together with the supplied Pg 9 plug (delivered with the coil),			
Elect. Power	DC	Pn (hot)	2.5 W		
		P (cold) 20°C	3 W		
	AC	Pn (holding)	2 W		
		Attraction cold	5.7 VA (2.5 W)		
Weight		120 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		24/50	A2	24	C2
		48/50	A4	48	C4
		110/50-115/50	0A	110	C5
		220/50-230/50	3D		

To Order a Coil choose Coil Ref + Voltage Code, example: 495865 for 24VDC = **495865C2**



COIL GROUP
1.2
**ELECTRICAL PARTS
"nc AC"**

ZONE 2/22
ELECTRICAL PART DOUBLE FREQUENCY 22 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.

See column "Coil Group" within valve pages.

Application:

Control of solenoid valves in dangerous areas where explosion-proof protection Ex nc AC IIC T5 is required.

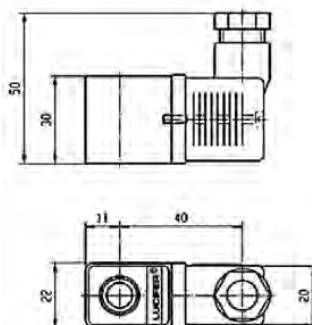
Benefits:

The synthetic material encapsulation of the coil provides an effective compact housing, offering full protection against dust, oil, water, etc. Small size for ease of mounting in confined spaces.



Specification		Double Frequency			
Reference		496637			
Certificate		ATEX			
Coil group		1.2			
Type of protection	Gas	II 3 G - Ex nc AC IIC T5			
	Dust	II 3 D - Ex tc IIC - T 95°C			
Degree of protection		IP65 (with plug) according to IEC/EN 60529 Sandards			
Ambiant temperature		-20°C to +50°C The application is limited also by the temperature range of the valve.			
Insulation Class		F 155°C			
Elect. Power	DC	Pn (hot)	3 W		
		P (cold) 20°C	-		
	AC	Pn (holding)	3 W		
		Attraction cold	5.7 VA (2.5 W)		
Weight		75 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		24/50-60	P0	24 V	C2
		110/50-60	P2	48 V	C4
		230/50-60	P9	110 V	C5
		48/50-60	S4		

To Order a Coil choose Coil Ref + Voltage Code, example: 496637 for 24VDC = 496637C2



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

**2.0/2.1 ELECTRICAL PARTS
"nc AC"**



ZONE 2/22

ELECTRICAL PART 32 mm

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex nc AC IIC T3 to T4 is required.
Ease of mounting in confined space - offers shock and corrosion protection-simplifies conversion of existing equipment to other requirements, etc.

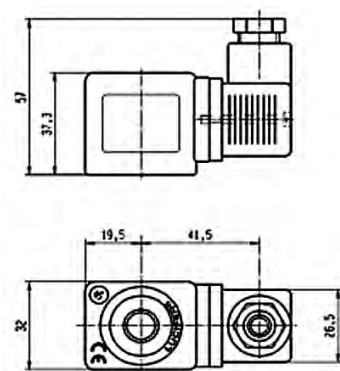
Benefits:

The synthetic material encapsulation of the coil provides an effective compact housing, offering full protection against dust, oil, water, etc.
Small size for ease of mounting in confined spaces.



Reference		495870			496110		
Certificate		LCIE 05 ATEX 6003 X					
Coil Group		2.0 / 2.1					
Type of protection	Gas	II 3 G - Ex nc AC IIC T3 / T4			II 3 G - Ex nc AC IIC T3 / T4		
	Dust	II 3 D - Ex tc IIC - T195°C / T130°C			II 3 D - Ex tc IIC - T195°C / T130°C		
Degree of protection		IP65 (with plug) according to IEC/EN 60529 Standards					
Insulation Class		F (155°C)					
Duty cycle		100%					
Ambiant temperature		-40°C to +65°C / 50°C The application is limited also by the temperature range of the valve.					
Elect. Power	DC	Pn (hot)	9 W			-	
		P (cold) 20°C	12 W			-	
	AC	Pn (holding)	8 W			9 W	
		Attraction cold	26 VA (9 W)			32 VA (10 W)	
Weight		150 g					
Voltages "Un"		VAC/Hz	Code	VDC	Code	VAC/Hz	Code
-10% to +10% of the Un		24/50	A2	24	C2	24/50-60	P0
		48/50	A4	48	C4	48/50-60	S4
		110/50	A5	110	C5	110/50-60	S5
		220-230/50	3D			220/50-60	S6

To Order a Coil choose Coil Ref + Voltage Code 495870 24VDC = **495870C2**



COIL GROUP
6.0
**ELECTRICAL PARTS
"nc AC"**

ZONE 2/22
ELECTRICAL PART LOW POWER 32 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex nc AC IIC T5 to T6 is required.

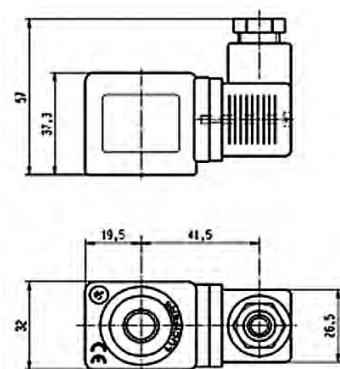
Ease of mounting in confined space - offers shock and corrosion protection-simplifies conversion of existing equipment to other requirements, etc. **Benefits:**

The synthetic material encapsulation of the coil provides an effective compact housing, offering full protection against dust, oil, water, etc.
Small size for ease of mounting in confined spaces.



Reference		496125	
Certificate		LCIE 05 ATEX 6003 X	
Coil group		6.0	
Type of protection	Gas	II 3 G - Ex nc AC IIC T5 / T6	
	Dust	II 3 D - Ex tc IIC - T80°C / T95°C	
Degree of protection		IP65 (with plug) according to IEC/EN 60529 Standards	
Insulation Class		F (155°C)	
Duty cycle		100%	
Ambiant temperature		-40°C to +65°C / 50°C The application is limited also by the temperature range of the valve.	
Elect. Power	DC	Pn (hot)	1.6 W
		P (cold) 20°C	2.1 W
	AC	Pn (holding)	-
		Attraction cold	-
Weight		150 g	
Voltages "Un"		VDC	Code
-10% to +10% of the Un		24	C2
		48	C4
		110	C5

To Order a Coil choose Coil Ref + Voltage Code, example: 496125 for 24VDC = **496125C2**



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

**2.0/2.1 ELECTRICAL PARTS
"nc AC"**



ZONE 2/22

ELECTRICAL PART 32 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex nc AC IIC T3 to T4 is required.
Ease of mounting in confined space - offers shock and corrosion protection-simplifies conversion of existing equipment to other requirements, etc.

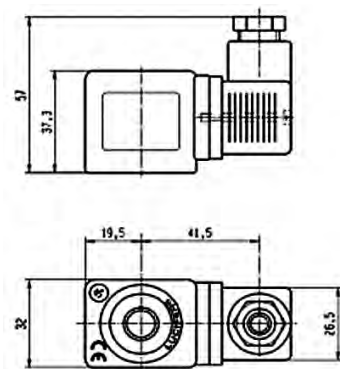
Benefits:

The synthetic material encapsulation of the coil provides an effective compact housing, offering full protection against dust, oil, water, etc.
Small size for ease of mounting in confined spaces.



Specification		32 mm Coil "nc AC"			
Reference		495875			
Certificate		LCIE 05 ATEX 6003 X			
Coil Group		2.0 / 2.1			
Type of protection	Gas	II 3 G - Ex nc AC IIC T3 / T4			
	Dust	II 3 D - Ex tc IIC - T195°C / T130°C			
Degree of protection		IP65 (with plug) according to IEC/EN 60529 Standards			
Insulation Class		F 155°C			
Duty cycle		100%			
Ambiant temperature		-40°C to +65°C / 50°C The application is limited also by the temperature range of the valve.			
Elect. Power	DC	Pn (hot)	7 W		
		P (cold) 20°C	-		
	AC	Pn (holding)	6 W		
		Attraction cold	-		
Weight		180 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		220-230/50	3D	24	C2

To Order a Coil choose Coil Ref + Voltage Code, example: 495875 for 24VDC = **495875C2**



COIL GROUP
2.0/2.2
**NON ENCAPSULATED
ELECTRICAL PARTS
"nc AC"**


ELECTRICAL PART 32 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex nc AC IIC T3 is required.
Ease of mounting in confined space - offers shock and corrosion protection - simplifies conversion of existing equipment to other requirements, etc.

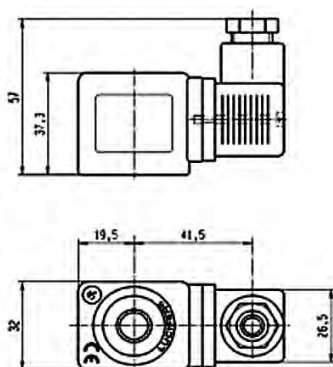
Benefits:

The synthetic material encapsulation of the coil provides an effective compact housing, offering full protection against dust, oil, water, etc.
Small size for ease of mounting in confined spaces.


ZONE 2/22

Specification		32 mm Coil "nc AC"			
Reference		495880			
Certificate		LCIE 05 ATEX 6003X			
Coil Group		2.0 / 2.2			
Type of protection	Gas	II 3 G - Ex nc AC IIC T3			
	Dust	II 3D - Ex tc IIC - T195°C			
Degree of protection		IP65 (with plug) according to IEC/EN 60529 Standards			
Insulation Class		H 180°C			
Duty cycle		100%			
Ambient temperature		-40°C to +65°C The application is limited also by the temperature range of the valve.			
Elect. Power	DC	Pn (hot)	14 W		
		P (cold) 20°C	-		
	AC	Pn (holding)	14 W		
		Attraction cold	-		
Weight		180 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		24/50	A2	24	C2
		110/50	A5		
		230/50	F4		

To Order a Coil choose Coil Ref + Voltage Code, example: 495880 for 24VDC = 495880C2



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

4.0

**INCREASED SAFETY
ELECTRICAL PARTS
"nc AC"**



ZONE 2/22

495915 - ELECTRICAL PARTS 50 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection - Ex nc AC IIC T3 is required.

Benefits: Rotatable housing 360°, epoxy varnished steel with internal and external screw terminals for earth connection.

Small size for ease of mounting in confined space. Simplifies conversion of existing equipment to hazardous area requirements.



Reference		495915			
Certificate		LCIE 05 ATEX 6010 X			
Coil group		4.0			
Type of protection	Gas	II 3 G - Ex nc AC IIC T3			
	Dust	II 3 D - Ex tc IIIC - T 195°C			
Degree of protection		IP67 according to IEC/EN 60529 Standards			
Ambient temperature		-40°C to +65°C The application is limited also by the temperature range of the valve.			
Insulation Class		F 155°C			
Electrical connection		By special cable gland M20 x 1.5 on screw terminals for wires up to 1.5 mm ² . Cable with outside diameter 6.5 mm to 13.5 mm can be simply sealed using the rubber gland with resilient sealing rings supplied			
Consumption Electrique	AC	Attraction (hot)	11 W	-	
		Attraction (cold) 20°C	17 W	-	
		Release (hot)	4 W	-	
		Release (cold) 20°C	7 W	-	
	DC	Attraction (hot)	-	13 W	
		Attraction (cold) 20°C	-	19 W	
		Release (hot)	-	8 W	
		Release (cold) 20°C	-	10 W	
Weight		320 g			
Duty cycle		Continuous duty solenoid (ED 100%)			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		110-115/50-60	1P	24	C2
		220-230/50-60	3P	48	C4
		48/50-60	S4		
		24/50-60	P0		

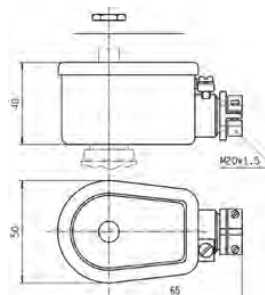
To Order a Coil choose Coil Ref + Voltage Code,
example: 495915 for 24VDC = **495915C2**

Schema



As soon as an electrical impulse is given to the terminals A-B, the electromagnetical force attracts the plunger and simultaneously magnetizes a reversible permanent magnet ring. This magnet retains the plunger in place. It stays in position even without current. Only an electrical impulse given to terminals A-C reserves the magnetic field. This magnetic field demagnetises the reversible magnet enough to allow the return spring to bring the plunger back to its initial position and close the valve.

Switch: Switch on (terminals A-B); Minimum 50 ms (maximum 1 s)
AC: Switch off (terminals A-C); Minimum 35 ms (maximum 1 s)



COIL GROUP
2.0/2.2
**INCREASED SAFETY
ELECTRICAL PARTS
"nc AC"**

ZONE 2/22

3.5.1 ELECTRICAL PARTS 496155

These coils can be mounted with every Parker solenoid valves corresponding to the specified Coil Group.

See column "Coil Compatibility Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex nAC IIC T3 is required.

Benefits: Rotatable housing 360°, epoxy varnished steel with internal and external screw terminals for earth connection.

Small size for ease of mounting in confined space. Simplifies conversion of existing equipment to hazardous area requirements.

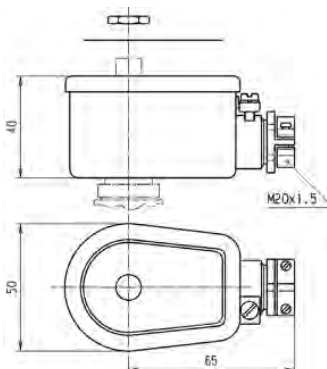


Reference		496155			
Certificate		LCIE 05 ATEX 6010 X			
Coil Group		2.0/2.2			
Type of protection	Gas	II 3 G D - Ex nc AC IIC T3			
	Dust	II 3 G D - Ex tc III C - T 195 °C			
Degree of protection		IP67 according to IEC/EN 60529 Standards			
Ambiant temperature		-40°C to +65°C The application is limited also by the temperature range of the valve.			
Insulation Class		F 155°C			
Electrical connection		By special cable gland or M20x1.5 on screw terminals for wires up to 1.5 mm ² . Cables with outside diameter 6.5 mm to 13.5 mm can be simply sealed using the rubber gland with resilient sealing rings supplied.			
Elect. Power	DC	P_n (hot)	14 W		
		P (cold) 20°C	21 W		
	AC	P_n (holding)	14 W		
		Attraction cold	56 VA (20 W)		
Weight		320 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		24/50	A2	24	C2
		110/50	A5	48	C4
		230/50	F4		

To Order a Coil choose Coil Ref + Voltage Code, example: 496155 for 24VAC/50Hz = 496155A2

Fuses:

Both electrical parts have to be connected in series with a safety fuse according to IEC 60127-3.



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

10.3

**FLAMEPROOF
ELECTRICAL PARTS "db"**



ZONE 1/21

497105 & 497105.02 - ELECTRICAL PARTS

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex db IIC T4 / T5 / T6 is required.

Benefits: Rotatable 360°, stainless steel with internal and external screw terminals for earth connection.

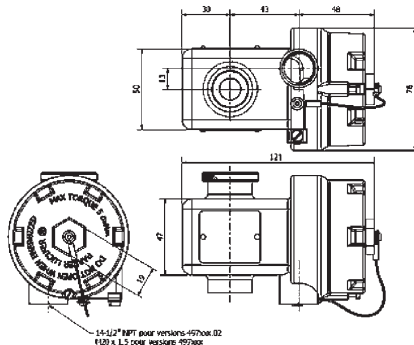
Small size for ease of mounting in confined space. Simplifies conversion of existing equipment to hazardous area requirements.



Reference		497105 (M20x1.5) 497105.02 (NPT 1/2")			
Certificate		INERIS 12ATEX0041X - IECEx INE 12.0034X			
Coil Group		10.3			
Type of protection	Gas	II 2 G - Ex db IIC T4 / T5 / T6			
	Dust	II 2 D - Ex tb IIC - 130°C / 95°C / 80°C			
Degree of protection		IP66 (with relevant cable gland) according to IEC/EN 60529 Standards			
Ambient temperature		-50°C to +80°C / +60°C / +40°C The operating temperature of the valve/coil can be limited by that of the valve			
Insulation Class		F 155°C			
Electrical connection		Electric connection is done in the connection chamber on an easily accessible connector terminals. The cable entry to the connection chamber is made through a 1/2" NPT or M20x1.5 thread in which an approved Exdb IIC cable gland must be installed.			
Electrical consumption	DC	Pn (hot)	8 W		
		P (cold) 20°C	9 W		
	AC	Pn (holding)	8 W		
		Attraction cold	9 W		
Voltage Tolerance		+/- 10% of nominal voltage			
Emergising Cuty		ED 100%			
Voltages		VAC/Hz	Code	VDC	Code
		24/50-60	P0	12	C1
		110-115 / 50-60	1P	24	C2
		220-230 / 50-60	3P	48	C4
				110	C5

To Order a Coil choose Coil Ref + Voltage Code, example: 497105 for 24VDC = **497105C2**

Coil delivered with an individual material traceability certificate (3.1 following EN10204)



COIL GROUP
1.1
**ENCAPSULATED
ELECTRICAL PARTS
"mb"**

ZONE 1/21
ELECTRICAL PART LOW POWER 22 mm

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

Application:

Control of solenoid valves in dangerous areas where explosion-proof protection Ex mb II T4 or T5 is required.

Benefits:

Coil and magnetic circuit encapsulated in synthetic material - offering shock and corrosion protection. AC coils with integrated thermal fuse. Small size for ease of mounting in confined spaces.



Reference	482605		482606 or 482606.160*			
Certificate	LCIE 02 ATEX 6014 X - IECEx LCI 07.0026 X					
Coil Group	1.1					
Type of protection	Gas	II 2 G - Ex mb IIC T4 / T5				
	Dust	II 2 D - Ex tb IIIC - T130°C / 95°C				
Degree of protection	IP65 (with plug) according to IEC/EN 60529 Standards					
Ambiant temperature	-40°C to +65°C / +40°C		-40°C to +65°C / +35°C			
	The application is limited also by the temperature range of the valve.					
Insulation Class	F 155°C					
Electrical connection	Cable connection (3 x 0.75 mm ²) encapsulated with coil, cable material according to application					
Elect. Power	DC	Pn (hot)	5 W		2.5 W	
		P (cold) 20°C	6.5 W		3 W	
	AC	Pn (holding)	4 W		2 W	
		Attraction cold	8.9 VA (5 W)		5.7 VA (2.5 W)	
Weight	150 g					
Voltages "Un"	VDC	Code	VAC/Hz	Code	VDC	Code
	-10% to +10% of the Un	12 24	C1 C2	24/50 48/50 110/50-115/50 220/50-230/50	A2 A4 0A 3D	24 48 110

To Order a Coil choose Coil Ref + Voltage Code, example: 482605 for 24VDC = **482605C2**

* 482606.160 - 6 m cable length

Fuses:

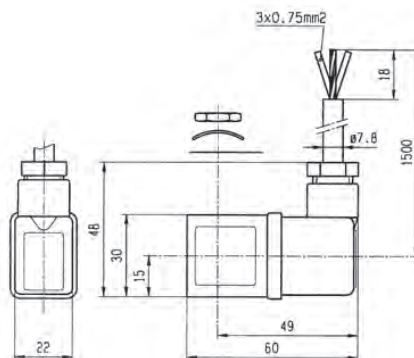
Both electrical parts 482605 & 482606 have to be connected in series with a safety fuse according to CEI 60127-3. Indicating example below:

482605:

DC: 12 V, 1000 mA - 24 V, 500 mA - 48 V, 200 mA - 110 V, 100 mA
AC 50 Hz: 24 V, 500 mA - 48 V, 250 mA - 110/115 V, 100 mA - 220/230 V, 3 mA
AC 60 Hz: 24 V, 630 mA - 110/115 V, 125 mA - 220/230 V, 63 mA

482606:

DC: 12 V, 400 mA - 24 V, 200 mA - 48 V, 100 mA - 110 V, 50 mA
AC 50 Hz: 24 V, 250 mA - 48 V, 125 mA - 110/115 V, 63 mA - 220/230 V, 32 mA
AC 60 Hz: 24 V, 315 mA - 110/115 V, 63 mA - 220/230 V, 32 mA



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

2.0/2.1

**ENCAPSULATED
ELECTRICAL PARTS
"mb"**



ZONE 1/21

ELECTRICAL PART 32 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex mb II T4 is required.

Benefits: Coil and magnetic circuit encapsulated in synthetic material offering shock and corrosion protection. AC/DC coils with integrated thermal fuse. DC coils with integrated surge suppression diode.

Small size for ease of mounting in confined spaces. This electrical



Reference		492670			
Certificate		LCIE 02 ATEX 6015 X			
Coil Group		2.0 / 2.1			
Type of protection	Gas	II 2 G - Ex mb IIC T4			
	Dust	II 2 D - Ex tb IIIC - T130°C			
Degree of protection		IP65 (With DIN Plug connector) according to IEC/EN 60529 standards			
Ambiant temperature		-40°C to +40°C The application is limited also by the temperature range of the valve.			
Class of insulation		F 155°C			
Electrical connection		Cable connection (3 x 1.5 mm ²) encapsulated with coil, cable material according to application			
Elect. Power	DC	Pn (hot)	9 W		
		P (cold) 20°C	12 W		
	AC	Pn (holding)	8 W		
		Attraction cold	26 VA (9 W)		
Weight		320 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		48/50	A4	24	C2
		230/50	F4	48	C4
				110	C5

To Order a Coil choose Coil Ref + Voltage Code, example: 492670 for 24VDC = **492670C2**

* 492670 3 m cable length

** 492670.160 - 6 m cable length

Special conditions:

The supply connection lines have to be fixed and positioned in such a way that they are protected against mechanical damages.

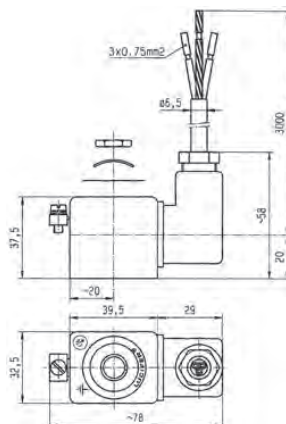
It is necessary to use a safety fuse with a nominal current corresponding to the coil current (max. 3 x nominal according to IEC 60127 and IEC 60269) against short-circuits.

Recommended values:

DC: 12 V, 1250 mA - 24 V, 630 mA - 48 V, 315 mA - 110 V, 125 mA

AC 50 Hz: 24 V, 1000 mA - 48 V, 500 mA - 110 V, 250 mA - 230 V, 100 mA

AC 60 Hz: 240 V, 100 mA



COIL GROUP
2.0/2.1
**ENCAPSULATED
ELECTRICAL PARTS
"mb"**

**IECEx
certified**

WITH WATER PROOF METAL HOUSING 50 mm

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex mb II T4 or T5 is required.

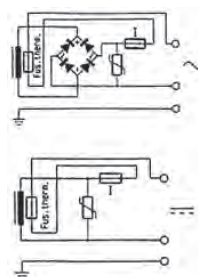
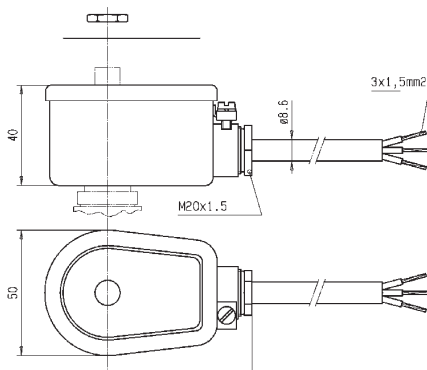
Benefits: Epoxy-vernished steel housing - solenoid coil, rectifier (silicium diodes), fuse and varistor protection element are completely encapsulated in the coil housing by means of epoxy resin.

Small size for ease of mounting in confined space. Simplifies conversion of existing equipment to hazardous area requirements.


ZONE 1/21

Reference	492070 (with 3m cable length) 492070.160 (with 6m cable length)			
Certificate	LCIE 02 ATEX 6017 X - IECEx LCI 09.0024 X			
Coil Group	2.0 / 2.1			
Type of protection	Gas	II 2 G - Ex mb IIC T4/ T5		
	Dust	II 2 D - Ex tb IIIc - T130 / 95°C		
Degree of protection	IP67 according to IEC/EN 60529 standards			
Ambient temperature	-40°C to +65°C / 40°C The application is limited also by the temperature range of the valve.			
Insulation Class	F 155°C			
Electrical connection	Cable connection (3 x 1.5 mm ²) with cable gland M20 x 1.5, external earth screw connection.			
Elect. Power	DC	Pn (hot)	8 W	
		P (cold) 20°C	10 W	
	AC	Pn (holding)	9 W	
		Attraction cold	11 W	
Weight	500 g			
Voltages "Un"	VAC/Hz	Code	VDC	Code
-10% to +10% of the Un	24/50-60	P0	24	C2
	110/50-60	P2	48	C4
	220/50-60	R5	110	C5
	230/50-60	P9		
	240/50-60	Q1		

To Order a Coil choose Coil Ref + Voltage Code, example: 492070 for 24VDC = 492070C2



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

2.0/2.1

**ENCAPSULATED
ELECTRICAL PARTS
"mb"**



IECEx
certified

ZONE 1/21

HZ10 COIL DOUBLE FREQUENCY

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

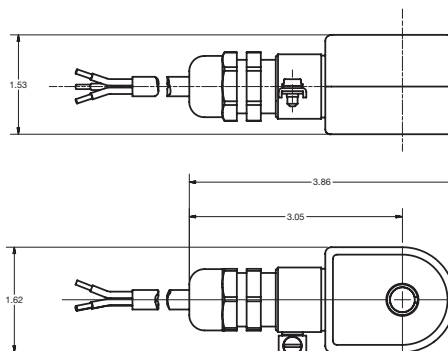
Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex mb II T4 or T5 is required.

The coil is delivered with a 3m cable.



Specification		Double Frequency			
Reference		HZ10			
Certificate		LCIE 02 ATEX 6020 X - IECEx LCI 08.0027 X			
Coil Group		2.0 / 2.1			
Type of protection	Gas	II 2 G - Ex mb IIC T3/T4/T5			
	Dust	II 2 D - Ex tb IIIIC T195°C / 130°C / 95°C			
Degree of protection		IP65 (with plug) according to IEC/EN 60529 Standards			
Ambient temperature		-40°C to +80°C / 65°C / 40°C The application is limited also by the temperature range of the valve.			
Insulation Class		H 180°C			
Duty cycle		100% continuous			
Electrical connection		Cable connection (3 x 1.5 mm ²) with cable gland M20 x 1.5, external earth screw connection.			
Elect. Power	DC	Pn (hot)	8 W		
		P (cold) 20°C	-		
	AC	Pn (holding)	8 W		
		Attraction cold	-		
Weight		299 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		110/50-120/60	P3	12	C1
		220/50-240/60	Q3	24	C2
				120	C6

To Order a Coil choose Coil Ref + Voltage Code, example: HZ10 for 24VDC = HZ10C2



Dimensions in Inches.



COIL GROUP
2.0/2.2
**ENCAPSULATED
ELECTRICAL PARTS**
"mb"

IECEx
 certified

HZ11 COIL DOUBLE FREQUENCY

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.

See column "Coil Group" within valve pages.

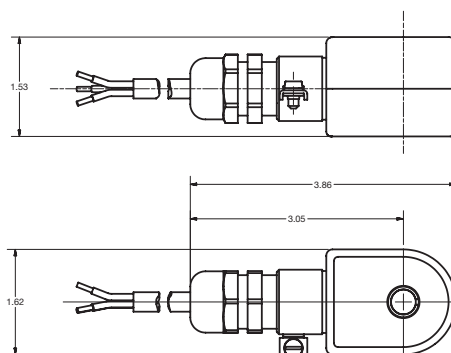
Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex mb II T4 or T5 is required.

The coil is delivered with a 3m cable.


ZONE 1/21

Specification		Double Frequency			
Reference		HZ11			
Certificate		LCIE 02 ATEX 6020 X - IECEx LCI 08.0027 X			
Coil Group		2.0 / 2.2			
Type of protection	Gas	II 2 G - Ex mb IIC T4/T5			
	Dust	II 2 D - Ex tb IIIC T130°C / 95°C			
Degree of protection		IP65 (with plug) according to IEC/EN 60529 Standards			
Ambient temperature		-40°C to + 65°C / 40°C The application is limited also by the temperature range of the valve.			
Insulation Class		H 180 °C			
Duty cycle		100% continuous			
Elect. Power	DC	Pn (hot)	14 W		
		P (cold) 20°C	-		
	AC	Pn (holding)	14 W		
		Attraction cold	-		
Weight		299 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		110/50-120/60 220/50-240/60	P3 Q3	24	C2

To Order a Coil: Coil Ref + Voltage Code, example: HZ11 for 24VDC = **HZ11C2**



Dimensions in Inches.



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUPS

6.0

**FLAME PROOF ENCAPSULATED
ELECTRICAL PARTS
"db mb"**



ZONE 1/21

495900 - LOW POWER ELECTRICAL PARTS 37 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex db mb IIC T4 to T6 is required.

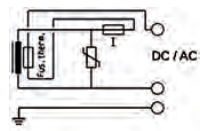
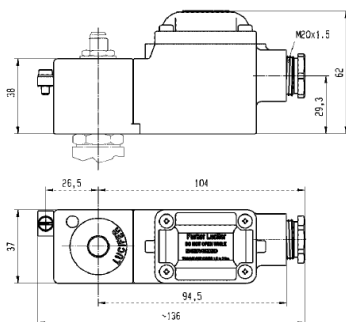
Benefits: Rotatable 360° fibreglass-reinforced plastic housing (class H). Solenoid coil, rectifier (silicium diodes), fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection.

The plastic housing is delivered with M20 x 1.5 cable gland certified for use "db" protection. Small size for ease of mounting in confined space.



Reference		495900 VAC		495900 VDC	
Certificate		LCIE 03 ATEX 6451 X - IECEx LCI 06.0004 X			
Coil Group		6.0			
Type of protection	Gas	II 2 G - Ex db mb IIC T4 / T5 / T6		II 2 G - Ex db mb IIC T4 / T5 / T6	
	Dust	II 2 D Ex tb IIIC - 130°C / 95°C / 80°C		II 2 D Ex tb IIIC - T130°C / 95°C / 80°C	
Degree of protection		IP67 according to IEC/EN 60529 Standards			
Ambient temperature		-40°C to +80°C / 55°C / 40°C		-40°C to +80°C / 65°C / 55°C	
		The application is limited also by the temperature range of the valve.			
Class of insulation		H (180 °)			
Electrical connection		Electric connection is done in the connection box on an easily accessible connector terminals. The introduction of the cable (Ø min 5 mm, Ømax. 11 mm, section max. 2.5 mm²) in the connection box passes by the built in M20 x 1.5 cable gland			
Elect. Power	DC	Pn (hot)	-		2 W
		P (cold) 20°C	-		2.5 W
	AC	Pn (holding)	2.5 W		-
		Attraction cold	3 W		-
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of Un for AC		24/50	A2	24	C2
-10% to +10% for Un DC.		48/50	A4	48	C4
		115/50	E5	110	C5
		230/50	F4		

To Order a Coil: Coil Ref + Voltage Code 495900 24VDC = 495900C2



COIL GROUPS
2.0/2.1
**FLAME PROOF ENCAPSULATED
ELECTRICAL PARTS
"db mb"**

ZONE 1/21
495905 - ELECTRICAL PARTS 37 mm

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex db mb IIC T4 is required.

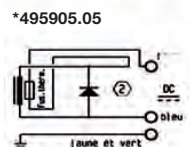
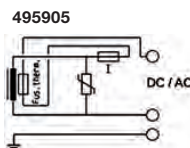
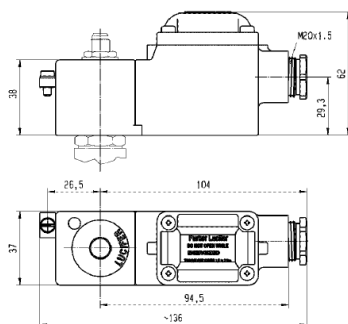
Benefits: Rotatable 360° fibreglass-reinforced plastic housing (class H). Solenoid coil, rectifier (silicium diodes), fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection.

The plastic housing is delivered with M20 x 1.5 cable gland certified for use "db" protection. Small size for ease of mounting in confined space.



Reference	495905		495905.05	
Certificate	LCIE 03 ATEX 6451 X - IECEx LCI 06.0004 X			
Coil Group	2.0 / 2.1			
Type of protection	Gas	II 2 G - Ex db mb IIC T4		
	Dust	II 2 D - Ex tb III C - 130°C		
Degree of protection	IP67 according to IEC/EN 60529 Standards			
Ambient temperature	-40°C to +80°C The application is limited also by the temperature range of the valve.			
Class of insulation	H (180 °)			
Electrical connection	Electric connection is done in the connection box on an easily accessible connector terminals. The introduction of the cable (Ø min 5 mm, Ømax. 11 mm, section max. 2.5 mm²) in the connection box passes by the built in M20 x 1.5 cable gland.			
Elect. Power	DC	Pn (hot)	8 W	
		P (cold) 20°C	9 W	
	AC	Pn (holding)	8 W	
		Attraction cold	9 W	
Voltages "Un"	VAC/Hz	Code	VDC	Code
-10% to +10% of Un for AC	24/50	A2	24	C2
-10% to +10% for Un DC.	48/50	A4	48	C4
	115/50	E5	110	C5
	230/50	F4		

To Order a Coil choose Coil Ref + Voltage Code, example: 495905 for 24VDC = 495905C2



**EXPLOSION PROOF
ELECTRICAL PARTS**

**COIL GROUP
10.2/10.1**

**FLAME PROOF ENCAPSULATED
ELECTRICAL PARTS
"db mb"**



ZONE 1/21

496555 & 496560 - ELECTRICAL PARTS 37 mm

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex db mb IIC T4 to T6 is required.

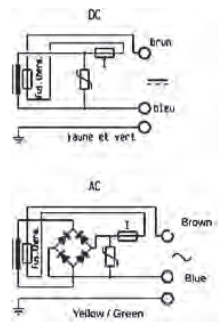
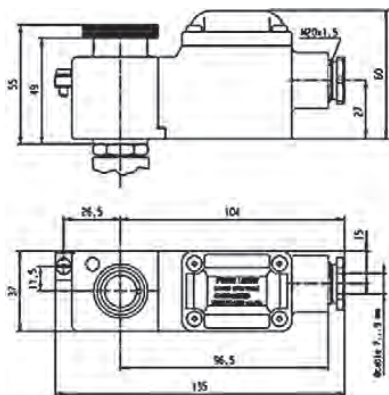
Benefits: Rotatable 360° fibreglass-reinforced plastic housing (class H). Solenoid coil, rectifier (silicium diodes), fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection.

The plastic housing is delivered with M20 x 1.5 cable gland certified for use "db" protection. Small size for ease of mounting in confined space.



Reference		496555				496560			
Certificate		LCIE 07 ATEX 6075 X - IECEx LCI 07.0014X							
Coil Group		10.2				10.1			
Type of protection	Gas	II 2 G - Ex db mb IIC T4 / T5 / T6				II 2 G - Ex db mb IIC T4			
	Dust	II 2 D - Ex tb IIC - T130°C / 95°C / 80°C				II 2 D - Ex tb IIC - T130°C			
Degree of protection		IP 67 according to IEC/EN 60529 Standards							
Ambiant temperature		-40°C to +65 / 50 / 35°C				-40°C to +65°C			
Class of insulation		H (180 °)							
Electrical connection		Electric connection is done in the connection box on an easily accessible connector terminals. The introduction of the cable (Ø min 5 mm, Ømax. 11 mm, section max. 2.5 mm²) in the connection box passes by the built in M20 x 1.5 cable gland.							
Elect. Power	DC	Pn (hot)	-	6 W	-	-	8 W	-	-
		P (cold) 20°C	-	7.5 W	-	-	10.5 W	-	-
	AC	Pn (holding)	6 W	-	-	8 W	-	-	-
		Attraction cold	7.5 W	-	-	10.5 W	-	-	-
Voltages "Un"		VAC/Hz	Code	VDC	Code	VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		230/50-60	P9	24	C2	230/50-60	P9	24	C2
		110/50-60	P2	48	C4	110/50-60	P2	48	C4
		24/50-60	P0	110	C5	24/50-60	P0	110	C5
		48/50-60	S4	-	-	48/50-60	S4	-	-

To Order a Coil choose Coil Ref + Voltage Code, example: 496555 for 24VDC = 496555C2



COIL GROUP
10.2/10.1
**FLAME PROOF ENCAPSULATED
ELECTRICAL PARTS
"db mb"**

496700 & 496800 - ELECTRICAL PARTS 37 mm

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex db mb IIC T4 to T6 is required.

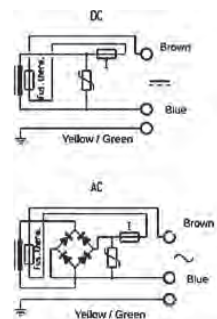
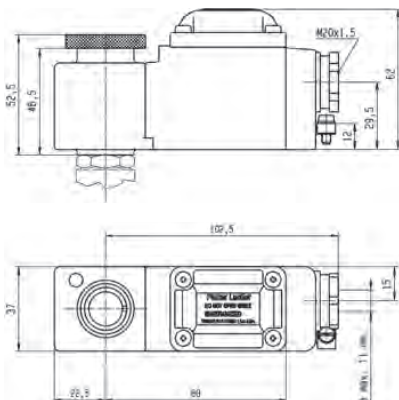
Benefits: Rotatable 360° fibreglass-reinforced plastic housing (class H). Solenoid coil, rectifier (silicium diodes), fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection.

The plastic housing is delivered with 1/2" NPT or M20 x 1.5 threaded hole for wide range of cable glands. Small size for ease of mounting in confined space.


ZONE 1/21

Reference	496700 or 496700.02 (NPT)				496800 or 496800.02 (NPT)				
Certificate	LCIE 10 ATEX 3059 X - IECEx LCI 10.0023X								
Coil Group	10.2				10.1				
Type of protection	Gas	II 2 G - Ex db mb IIC T4 / T5 / T6				II 2 G - Ex db mb IIC T4			
	Dust	II 2 D - Ex tb IIC - T130 / 95 / 80°C				II 2 D - Ex tb IIC - T130°C			
Degree of protection	IP67 according to IEC/EN 60529 Standards								
Ambiant temperature	-40°C to +35°C / +50°C / +65°C The application is limited also by the temperature range of the valve.				-40°C to +65°C				
Class of insulation	H (180°)								
Electrical connection	Electric connection is done in the connection box passes through a 1/2 NPT or M20x1.5 thread in which a certified Ex dBIIc cable gland must be installed								
Elect. Power	DC	Pn (hot)	-	6 W	-	8 W			
		P (cold) 20°C	-	7.5 W	-	10.5 W			
	AC	Pn (holding)	6 W	-	8 W	-	-		
		Attraction cold	7.5 W	-	10.5 W	-	-		
Voltages "Un"	VAC/Hz	Code	VDC	Code	VAC/Hz	Code	VDC	Code	
-10% to +10% of the Un	230/50-60	P9	24	C2	230/50-60	P9	24	C2	
	110/50-60	P2	48	C4	110/50-60	P2	48	C4	
	24/50-60	P0	110	C5	24/50-60	P0	110	C5	
	48/50-60	S4			48/50-60	S4			

To Order a Coil choose Coil Ref + Voltage Code, example: 496700 for 24VDC = **496700C2**



COIL GROUP
2.0/2.1
**INCREASED SAFETY
ELECTRICAL PARTS
"eb"**


483371 & 494040 - ELECTRICAL PARTS 50 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex eb IIC T3 or T4 is required.

Benefits: Rotatable housing 360°, epoxy varnished steel with internal and external screw terminals for earth connection.

Small size for ease of mounting in confined space. Simplifies conversion of existing equipment to hazardous area requirements.


ZONE 1/21

Reference	483371				494040					
Certificate	LCIE 02 ATEX 6011 X				LCIE 02 ATEX 6013 X					
Coil Group	2.0 / 2.1									
Type of protection	Gas	II 2 G - Ex eb IIC T4				II 2 G - Ex eb IIC T3 / T4				
	Dust	II 2 D - Ex tb III C - T130°C				II 2 D - Ex tb III C - T195°C / T130 °C				
Degree of protection	IP67 according to IEC/EN 60529 Standards									
Ambiant temperature	-40°C to +65°C				-40°C to +90°C / to +65°C					
	The application is limited also by the temperature range of the valve.									
Class of insulation	F 155°C				F (180°)					
Electrical connection	By special cable gland or M20 x 1.5 "Ex eb" on screw terminals for wires up to 1.5 mm². Cables with outside diameter 6.5 mm to 13.5 mm can be simply sealed using the rubber gland with resilient sealing rings supplied.									
Elect. Power	DC	Pn (hot)	8 W				8 W			
		P (cold) 20°C	9 W				9 W			
	AC	Pn (holding)	8 W				8 W			
		Attraction cold	32 VA (9 W)				32 VA (9 W)			
Weight	320 g									
Voltages "Un"	-10% to +10% of the Un	VAC/Hz	Code	VDC	Code	VAC/Hz	Code	VDC	Code	
		24/50	A2	24	C2	220-230/50	3D	24	C2	
		48/50	A4	48	C4					
		110-115/50	0A	110	C5					
		3D								

To Order a Coil choose Coil Ref + Voltage Code, example: 483371 for 24VDC = **483371C2**

Fuses:

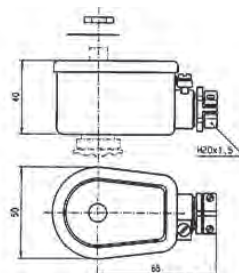
Both electrical parts have to be connected in series with a safety fuse according to IEC 60127-3.

483371:

DC: 24 V, 400 mA - 48V, 250 mA - 110 V, 100 mA
AC 50Hz: 24 V, 630 mA - 48V, 315 mA - 110 V, 160 mA - 220/230 V, 80 mA

494040:

DC: 12 V, 400 mA - 24V, 200 mA - 48 V, 100 mA - 110V, 50 mA
AC 50Hz: 24 V, 250 mA - 48V, 125 mA - 110/115 V, 63 mA - 220/230 V, 32 mA



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

10.1

**INCREASED SAFETY
AND ENCAPSULATED
ELECTRICAL PARTS "eb mb"**



ZONE 1/21

492310 - ELECTRICAL PARTS 50 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex eb mb II T4 to T5 is required.

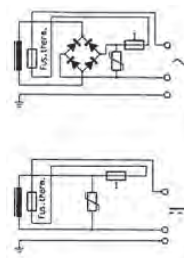
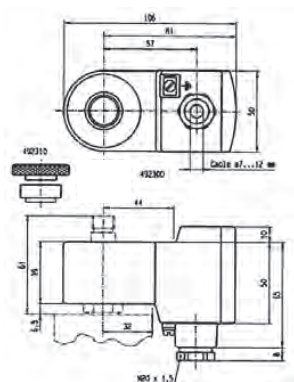
Benefits: Rotatable 360° fibreglass-reinforced plastic housing. Solenoid coil, rectifier (silicium diodes), fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection.

Small size for ease of mounting in confined space.



Reference	492310				
Certificate	LCIE 02 ATEX 6023 X - IECEx LCI 06.0011 X				
Coil group	10.1				
Type of protection	Gas	II 2 G - Ex eb mb II T4 / T5			
	Dust	II 2 D - Ex tb III C - T130°C / T95°C			
Degree of protection	IP66 according to IEC/EN 60529 Standards				
Ambiant temperature	-40°C to +75°C / to +40°C The operating temperature of the valve/coil can be limited by that of the valve				
Class of insulation	F 155°C				
Electrical connection	Connection box with terminals and cable entry via gland M20 x 1.5 - Possibility for additional earth via external screw.				
Elect. Power	DC	Pn (hot)	6 W		
		P (cold) 20°C	7.5 W		
	AC	Pn (holding)	6 W		
		Attraction cold	7.5 W		
Weight	500 g				
Voltagess "Un"	-10% to +10% of the Un	VAC/Hz	Code	VDC	Code
		110/50-60 230/50-60	P2 P9	24 48	C2 C4

To Order a Coil choose Coil Ref + Voltage Code, example: 492310 for 24VDC = **492310C2**



COIL GROUP
9.0
**INCREASED SAFETY
AND ENCAPSULATED
ELECTRICAL PARTS "eb mb"**


492210 - ELECTRICAL PARTS "BOOSTER" 50 mm

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection - Ex eb mb IIC T5/T6 is required.

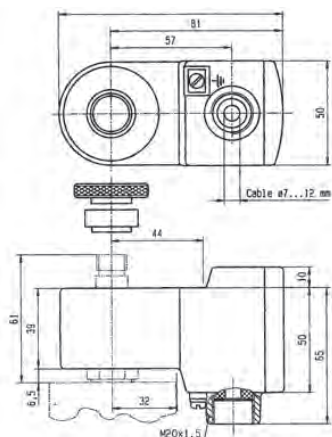
Benefits: Rotatable 360° fibreglass-reinforced plastic housing. Solenoid coil, fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection. Small size for ease of mounting in confined space. Simplifies conversion of existing equipment to hazardous area requirements.

Available only in 24VDC (suffix code : C2)

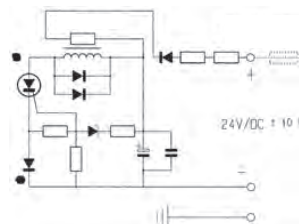

ZONE 1/21

Reference	492210	
Certificate	LCIE 02 ATEX 6023 X - IECEx LCI 06.0011 X	
Coil group	9.0	
Type of protection	Gas	II 2 G - Ex eb mb IIC T5 / T6
	Dust	II 2 D - Ex tb IIIC - T95°C / T80°C
Degree of protection	IP66 according to IEC/EN 60529 Standards	
Ambient temperature	-40°C to +75°C / +40°C The operating temperature of the valve/coil can be limited by that of the valve	
Insulation Class	F 155°C	
Electrical connection	Connection box with terminals and cable entry via gland M20 x 1.5 Possibility for additional earth via external screw	
Power consumption DC	1 to 1.8 W according to length of cable	
Attraction current	I min = 60 mA (I nominal = 75 mA)	
Voltage DC	U nominal = 24 VDC (C2), Umin = 21.6 VDC	
Resistance	23 Ω + (R = 270 Ω)	
Inductance	0 mH	
Capacitance	0 μF	
Response time	2 - 4 s	
Weight	500 g	

To Order a Coil choose Coil Ref + Voltage Code, example: 492210 for 24VDC = **492210C2**


Indications:

Booster for Offshore valves



These electrical parts need an external fuse of I = 100 mA



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

2.0/2.1

**INCREASED SAFETY
AND ENCAPSULATED
ELECTRICAL PARTS "eb mb"**



ZONE 1/21

492190 - ELECTRICAL PARTS 50 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex eb mb IIC T3 to T4 is required.

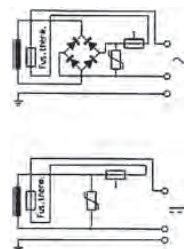
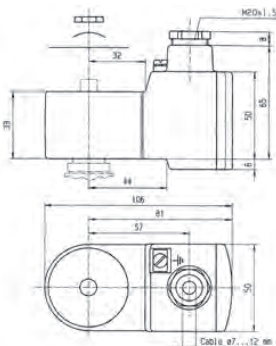
Benefits: Rotatable 360°, fiberglass -reinforced plastic housing. Solenoid coil, rectifier (silicium diodes), fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection.

Small size for ease of mounting in confined space.



Reference		492190			
Certificate		LCIE 02 ATEX 6023 X - IECEx LCI 06.0011 X			
Coil Group		2.0 / 2.1			
Type of protection	Gas	II 2 G - Ex eb mb IIC T3 / T4			
	Dust	II 2 D - Ex tb IIIC - 195°C / 130°C			
Degree of protection		IP66 according to IEC/EN 60529 Standards			
Ambient temperature		-40°C to +75°C / +40°C The operating temperature of the valve/coil can be limited by that of the valve			
Insulation Class		F 155°C			
Electrical connection		Connection box with terminals and cable entry via gland M20 x 1.5 Possibility for additional earth via external screw			
Electrical consumption	DC	Pn (hot)	9 W		
		P (cold) 20°C	11 W		
	AC	Pn (holding)	11 W		
		Attraction cold	13 W		
Weight		320 g			
Voltages "Un"		VAC/Hz	Code	VDC	Code
-10% to +10% of the Un		24/50-60	P0	24	C2
		110/50-60	P2	48	C4
		230/50-60	P9	110	C5
		240/50-60	Q1	220	C7

To Order a Coil choose Coil Ref + Voltage Code, example: 492190 for 24VDC = **492190C2**



COIL GROUP
7.0
**INTRINSICALLY SAFE
ELECTRICAL PARTS
"ia"**


483580 - 483960 ELECTRICAL PARTS 32 mm "IS"

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.

See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex ia or ib IIC T6 is required.

Benefits: Fully encapsulated assembly comprising a coil, metal armature, three diodes circuit and DIN plug connection.

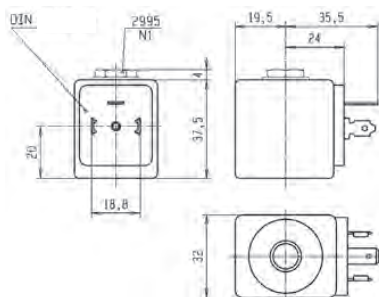
The encapsulation provides an effective compact housing offering full protection against dust, oil, water, etc.

Small size for ease of mounting in confined space. Available only in 28VDC (suffix code : N7)


ZONE 0/20

Reference (without plug) (with plug)		483580.01 483960.01
Certificate		LCIE 02 ATEX 6065 X - IECEx LCI 07.0025 X
Coil Group		7.0
Type of protection	Gas	II 1 G - Ex ia IIC - T6
	Dust	II 1 D - Ex ta IIC - T80°C
Degree of protection		IP65 with plug according to IEC/EN 60529 Standards
Ambiant temperature		- 40°C à + 55°C The operating temperature of the valve/coil can be limited by that of the valve.
Class of insulation		F 155°C
Electrical connection		The coil is connected with a 2P + E plug according to EN 175301-803 type A Contact 1 is marked as the positive pole ⊕.
Maximum supply voltage		28 VDC (N7) - 110 mA The minimum operating voltage at maximum 60°C is 14 VDC.
Power	DC	
	Minimum Maximum	500 mW 3 W
		Depending on applied voltage, IS barrier type and resistance of connected cable
Coil resistance at 20°C		340 Ω
Impedance		340 Ω
Apparent inductance		0 mH
Apparent capacitance		0 μF
Weight		160 g (with plug)

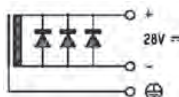
To Order a Coil choose Coil Ref + Voltage Code, example: 483580 for 28VDC = 483580N7



Important

The intrinsically safe supply circuit should have enough capacity in all environmental conditions to assure a **minimum operating current of 35 mA** through the coil.

The minimal holding current is 20 mA.



For the barrier compatibility see the corresponding table in in appendix section.

These coil must be used with suitable housing : **Ref. 2995**



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

8.0

**INTRINSICALLY SAFE
ELECTRICAL PARTS
"ia"**



ZONE 0/20

**495910 - MINIWATT - 0.3 W
ELECTRICAL PARTS "IS" "BOOSTER" 37 mm**

These coils can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex ia IIC T4 to T6 is required.

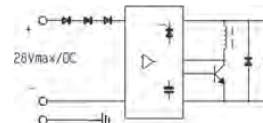
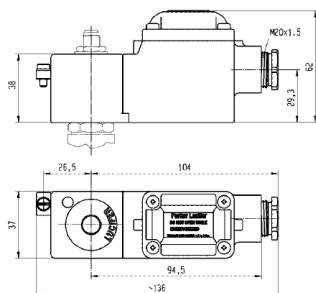
Benefits: Rotatable 360° fibreglass-reinforced plastic housing (class H). Solenoid coil, rectifier (silicium diodes), fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection.

The plastic housing is delivered with M20 x 1.5 cable gland. Small size for ease of mounting in confined space. Available only in 28VDC (code : N7)



Reference	495910		495910.02 (Blue Cable Gland)	
Certificate	LCIE 03 ATEX 6464 X - IECEx LCI 07.0006 X			
Coil Group	8.0			
Type of protection	Gas	II 1 G - Ex ia IIC - T4 / T5 / T6		
	Dust	II 1 D - Ex ta IIC T80 / 95 / 130°C		
Degree of protection	IP67 according to IEC/EN 60529 Standards			
Ambiant temperature	- 40°C to +80°C / 75°C / 65°C The application is limited also by the temperature range of the valve..			
Class of insulation	H 180°C			
Electrical connection	Electric connection is done in the connection box on an easily accessible connector terminals. The introduction of the cable (Ø min 7 mm, Ømax. 11 mm, section max. 2.5 mm²) in the connection box passes by the built in M20 x 1.5 cable gland			
Power	DC	Maximum supply voltage	28 VDC (N7) - 110 mA	28 VDC (N7) - 280 mA
		Minimum	0.3 W (with 13 VDC)	0.3 W (with 13 VDC)
		Maximum	1.2 W (with 24 VDC)	2.58 W (with 24 VDC)
Depending on applied voltage, IS barrier type and resistance of connected cable				
Line check	4 mA or 5 VDC max			
Coil resistance at 20°C	Charge ~ 550 Ω - Holding ~ 500 Ω			
Impedance	0 mH			
Apparent inductance	0 µF			
Apparent capacitance				
Response time	2 - 3 s			
Weight	500 g			

To Order a Coil choose Coil Ref + Voltage Code, example: 495910 for 28VDC = 495910N7



COIL GROUP
9.0
**INTRINSICALLY SAFE
ELECTRICAL PARTS
"ia"**

ZONE 0/20

496565 ELECTRICAL PARTS "BOOSTER" "IS" 37 mm

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.
See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex ia IIC T4 to T6 is required.

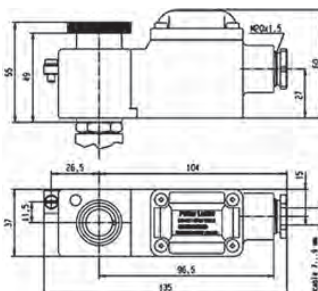
Benefits: Rotatable 360° fibreglass-reinforced plastic housing (class H). Solenoid coil, rectifier (silicium diodes), fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection.

The plastic housing is delivered with M20 x 1.5 cable gland. Small size for ease of mounting in confined space. Available only in 28VDC (code : N7)



Reference	496565	
Certificate	LCIE 08 ATEX 6071 X - IECEx LCI 08.0030 X	
Coil group	9.0	
Type of protection	Gas	II 1 G - Ex ia IIC - T4 / T5 / T6
	Dust	II 1 D - Ex ta IIC - T80 / T95 T130°C
Degree of protection	IP67 according to IEC/EN 60529 Standards	
Ambiant temperature	- 40°C to +80 / 75 / 65°C The application might also be limited by the temperature range of the valve.	
Electrical connection	Cable connection through a plastic cable gland M20 x 1.5 allowing use of cable diameter from 7 to 12 mm. Additional earth connection possible with external screw terminal.	
Class of insulation	H180°C	
Minimum Courant of function	20 mA	
Minimum voltage of function at 60°C	28 VDC (N7)	
Safety parameters	28 V / 110 mA / 0.77 W	28 V / 280 mA / 1.96 W
Maximum acceptable values: Ui (V) / Ii (mA) / Pi (W)	27 V / 120 mA / 0.81 W	27 V / 320 mA / 2.16 W
	26 V / 135 mA / 0.88 W	26 V / 350 mA / 2.27 W
	25 V / 150 mA / 0.94 W	25 V / 390 mA / 2.43 W
	24 V / 170 mA / 1.02 W	24 V / 430 mA / 2.58 W
Line check	4 mA or 5 VDC max	
Apparent Impedance Typ.	Attraction ~ 600 Ω - Holding ~ 570 Ω	
Apparent Inductance	0 mH	
Apparent Capacitance	0 μF	
Response Time Typ.	2 - 4 s	
Weight	500 g	

To Order a Coil choose Coil Ref + Voltage Code,
example: 496565 for 28VDC = **496565N7**



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

9.0

**INTRINSICALLY SAFE
ELECTRICAL PARTS
"ia"**



ZONE 0/20

**492965 ELECTRICAL PART
"BOOSTER" "IS" 50 mm**

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group. See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex ia or ib IIC T6 is required.

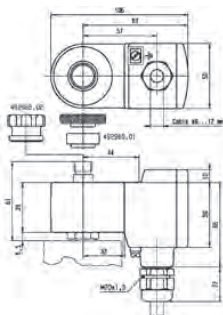
Benefits: Rotatable 360° fibreglass-reinforced plastic housing. Solenoid coil, fuses and varistor protection are completely encapsulated into the coil housing by epoxy resin for shock and corrosion protection. Small size for ease of mounting in confined space. Simplifies conversion of existing equipment to hazardous area requirements.

Small size for ease of mounting in confined space. Available only in 28VDC.



Reference	492965.01 - (Stainless steel fixation) 492965.02 - (Plastic fixation)	
Certificate	LCIE 02 ATEX 6066 X - IECEx LCI 07.0007 X	
Coil Group	9.0	
Type of protection	Gas	II 1 G - Ex ia IIC - T6
	Dust	II 1 D - Ex ta IIIC - T80°C
Degree of protection	IP66 according to IEC/EN 60529 Standards	
Ambiant temperature	- 40°C to +65°C The application is limited also by the temperature range of the valve.	
Electrical connection	Cable connection through a plastic or stainless steel cable gland M20 x 1.5 allowing use of cable diameter from 10 to 12 mm. Additional earth connection possible with external screw terminal.	
Class of insulation	H180°C	
Maximum supply voltage	28 VDC (N7) - 110 mA	
Power	DC	Minimum
		Maximum
		0.3 W (with 13 VDC)
		2.3 W (with 24 VDC)
Line check	Depending on applied voltage, IS barrier type and resistance of connected cable	
	4 mA or 5 VDC max	
Coil resistance at 20°C	85 Ω	
Impedance	275 Ω (with 13 VDC) - 260 Ω (with 24 VDC)	
Apparent inductance	0 mH	
Apparent capacitance	0 μF	
Response time	2 - 4 s	
Weight	500 g	

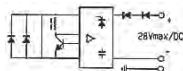
To Order a Coil choose Coil Ref + Voltage Code, example: 492965.01 for 28VDC = 492965.01N7



Important

The intrinsically safe supply circuit should have enough capacity in all environmental conditions to assure a **minimum operating current of 29 mA** through the coil.

The minimal holding current is 20 mA.



For the barrier compatibility see the corresponding table in appendix section.



**EXPLOSION PROOF
ELECTRICAL PARTS**

COIL GROUP

7.0

**INTRINSICALLY SAFE
ELECTRICAL PARTS
"ia"**



ZONE 0/20

**488650.01 & 490885 "NEMA"
ELECTRICAL PARTS "IS" 50 mm**

This coil can be mounted with every Parker ATEX solenoid valves corresponding to the specified Coil Group.

See column "Coil Group" within valve pages.

Application: Control of solenoid valves in dangerous areas where explosion-proof protection Ex ia or ib IIC T6 is required.

Benefits: Rotatable 360° housing, polyamid with fibreglass housing and cover. Coil, electronic circuits and other elements required for intrinsic safety are completely encapsulated in the housing with epoxy material for shock and corrosion protection.

Small size for ease of mounting in confined space.



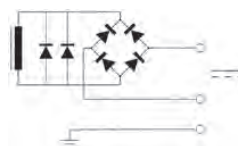
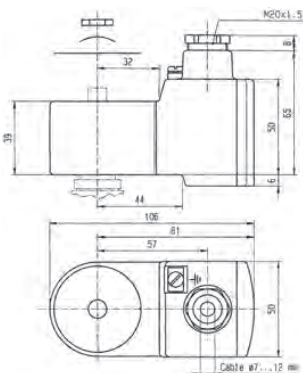
Reference	488650.01	
Certificate	LCIE 02 ATEX 6024 X	
Coil Group	7.0	
Type of protection	Gas	II 1 G - Ex ia IIC - T6
	Dust	II 1 D - Ex ta IIIC - T80°C
Degree of protection	IP66 according to IEC/EN 60529 Standards	
Ambiant temperature	- 40°C to +65°C The operating temperature of the valve/coil can be limited by that of the valve.	
Electrical connection	Cable entry through a cable gland M20 x1.5. Screw terminals for leads 3 x 1.5 mm² max. Additional earth connection possible with external screw terminal	
Class of insulation	H180°C	
Maximum supply voltage	28 VDC (N7) - 110 mA The minimum operating voltage at maximum 60°C is 11.5 VDC.	
Power	DC	300 mW
	Maximum	3 W
	Dependent on the applied voltage, type of barrier IS and the resistance of the connected cable	
Coil resistance at 20°C	295 Ω	
Impedance	345 Ω	
Apparent inductance	0 mH	
Apparent capacitance	0 μF	
Weight	500 g	

To Order a Coil choose Coil Ref + Voltage Code, example: 488650.01 for 30VDC = **488650.01L8**

Important

The intrinsically safe supply circuit should have enough capacity in all environmental conditions to assure a **minimum operating current of 29 mA** through the coil.

The minimal holding current is 20 mA.



For the barrier compatibility see the corresponding table in appendix section.



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Level of protection "mb"	281
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Level of protection "eb mb"	292
Level of protection "ia"	295

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HOUSINGS

HOUSING

4270

COIL STANDARD HOUSING WITH SCREW TERMINALS

Standard housing:

Reference:	4270
Material:	Epoxy varnished steel with cathaphoresis traitement
Degree of protection:	IP according to IEC/EN 60529 IP 10 with armoured conduit IP 44 with cable gland
Electrical connection:	Can be made with armoured conduit or cable gland M12x1.5. Parts No. 495740 (cable gland M12x1.5) and 484093 to be ordered separately. Grounding connection by screw M3 on the inside of housing base plate.
Weight:	120 g



Benefits:

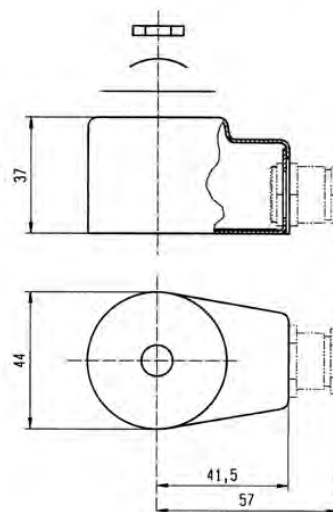
This metal housing offers the ideal protection against shocks and corrosion- rotatable 360° - easy mounting in confined spaces - single-nut mounting - light weight - simplifies conversion of existing equipment to other requirements.

Application:

The majority of the valves can be fitted with this standard housing, and can be mounted with several compatible coils group.

Compatible coils:

- **481000 - Standard Coil**
8 W Class F (155°C)
- **483520 - Double-Frequency Coil**
9 W Class F (155°C)
- **481044 - Standard High-Power Coil**
14 W Class F (155°C)
- **485100 - Standard High-Temperature Coil**
8 W Class H (180°C)
- **486265 - High-Temperature and High-Power Coil**
14 W Class H (180°C)



HOUSING
4269
**HOUSING FOR BISTABLE
(IMPULSE) COILS**
Housing for bistable coil:

Reference:	4269
Material:	Epoxy varnished steel
Degree of protection:	IP according to IEC/EN 60529 IP 10 with armoured conduit IP 44 with cable gland
Electrical connection:	Can be made with armoured conduit or cable gland M12x1.5. Parts No. 484092 and 484093 to be ordered separately. Grounding connection by screw M3 on the inside of housing base plate.
Weight:	120 g


Benefits:

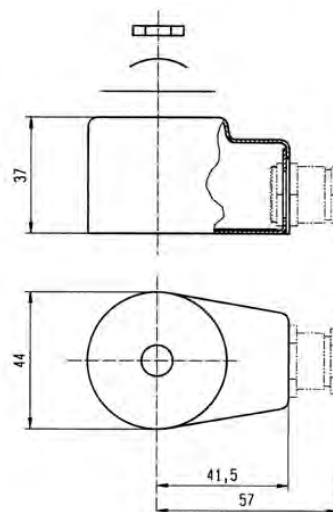
This metal housing offers the ideal protection against shocks and corrosion- rotatable 360° - easy mounting in confined spaces - single-nut mounting - light weight - simplifies conversion of existing equipment to other requirements.

Application:

This housing is specially designed for group 706 coils and can be mounted only with valves controlled by electrical impulses.

Compatible coils:

- **484990 - Impulse coil for AC**
11 W Class F (155°C)
- **485400 - Impulse coil for DC**
13 W Class F (155°C)



HOUSINGS

HOUSING

4538

WATERPROOF AND DUSTPROOF HOUSING

Waterproof housing:

Reference:	4538
Material:	Epoxy varnished steel
Degree of protection:	IP according to IEC/EN 60529 IP 67 with cable gland
Electrical connection:	Cable connection by cable gland M12x1.5 according to DIN 46320. Cable with outer diameter 6.5 - 13.5 mm can be simply sealed using a rubber gland with resilient sealing rings. The enclosure is internally and externally fitted with grounding and earthing screw terminals.
Weight:	180 g



Benefits:

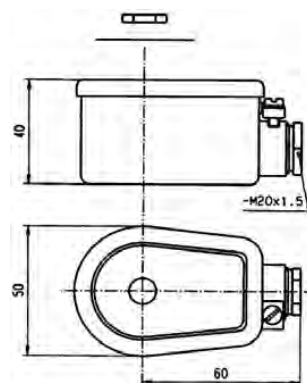
This enclosure is dust- and waterproof. It corresponds to the degree of "International Protection" IP 67 according to IEC / EN 60529. Corrosion resistant, the metal housing offers good protection for the coil against shocks and other outside influences - rotatable 360° - easy mounting in confined spaces - easy access to the screw terminals - single-nut mounting - light weight - simple conversion of existing electrical equipment to other requirements without interruption of fluid passage in the valve.

Application:

This housing can be equipped with several coils of our programme, like the standard, double-frequency and magnetic latch coils.

Compatible coils:

- **481000 - Standard Coil**
8 W Class F (155°C)
- **483520 - Double-Frequency Coil**
9 W Class F (155°C)
- **484990 - Impulse Coil for AC**
11 W Class F (155°C)
- **485400 - Impulse Coil for DC**
13 W Class H (180°C)



HOUSING
8520
**WATERPROOF HOUSING
FOR HIGH-TEMPERATURE COILS**
Waterproof housing:

Reference:	8520
Material:	Epoxy varnished steel
Degree of protection:	IP according to IEC/EN 60529 IP 67 with cable gland
Electrical connection:	Cable connection by cable gland M12x1.5 according to European standards. Cable with outer diameter 6.5 - 13.5 mm can be simply sealed using a rubber gland with resilient sealing rings. The enclosure is internally and externally fitted with grounding and earthing screw terminals.
Weight:	180 g


Benefits:

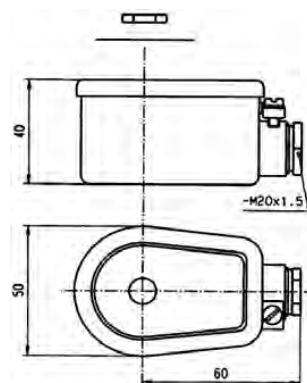
This enclosure is dust- and waterproof. It corresponds to the degree of "International Protection" IP 67 according to IEC / EN 60529. Corrosion resistant, the metal housing offers good protection for the coil against shocks and other outside influences - rotatable 360° - easy mounting in confined spaces - easy access to the screw terminals - single-nut mounting - light weight - simple conversion of existing electrical equipment to other requirements without interruption of fluid passage in the valve.

Application:

The majority of the valves can be fitted with this housing and can be mounted with several compatible coils for high temperature (14 W, 8 W Class F or H).

Compatible coils:

- **481044 - High Power Coil**
14 W Class F (155°C)
- **486265 - High Power Coil**
14 W Class H (180°C)
- **485100 - Coil for High Temperature**
8 W Class H (180°C)



COIL ACCESSORIES

22 mm
32 mm

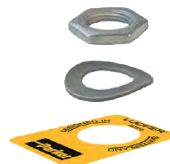
COIL ASSEMBLY KITS

COIL ASSEMBLY KIT FOR 22 mm COIL

The coil assembly kit corresponds to the numbering system for valve housings (Valve - housing - coil/voltage).

It is composed of a nameplate with the details of the valve type, a washer and a nut to secure the 22 mm coil to the valve.

Caution: these coil assembly kits for 22 mm coils are not adapted for high flow valves, ask your distributor for the adapted kit.

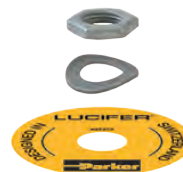


Reference	Specification	Application
8993	Standard - aluminium nameplate - passivated washer and nut - pressure indication in [bar]	Standard valves
8993.03	Standard - aluminium nameplate - passivated washer and nut - pressure indication in [psi]	Standard valves
8122	Special - aluminium nameplate - stainless steel washer and nut - pressure indication in [psi]	316L St. Steel Valves
8567	Special - knurled flat aluminium nut	Valves- series 321K3...

COIL ASSEMBLY KIT FOR 32 mm COIL

The coil assembly kit corresponds to the "housing" of valve numbering system (Valve - housing - coil/voltage).

It is composed of a nameplate giving details of the valve type, a round washer and a nut to ensure the fixing between 32 mm coil and the valve.



Reference	Specification	Application
2995	Standard - Aluminium nameplate - Passivated iron washer and nut - Pressure indication in [bar]	Standards valves
2995.03	Standard - Aluminium nameplate - Passivated iron washer and nut - Pressure indication in [psi]§q	UL / CSA valves
8132	Special - Aluminium nameplate - Stainless steel washer and nut - Pressure indication in [psi]	316L St. Steel valves
2161	Special - Aluminium nameplate - Passivated iron washer and nut - Pressure indication in [bar]	Transportation valves
2168	Special AD Blue - Aluminium nameplate - Passivated iron washer and nut - Pressure indication in [bar]	Transportation valves
2169	Special AD Blue - Aluminium nameplate - Passivated iron washer and nut - Pressure indication in [bar]	Transportation valves



ACCESSORIES

DIN PLUG CONNECTOR ACCORDING TO EN 175301-803 -B

No. 481043 for Parker coil
No. 600040 for Parker coil

Electrical connection suitable for all 22 mm coils
(e.g. 488980, 481180)



DIN PLUG CONNECTOR ACCORDING TO EN 175301-803 - A

No. 486586 for standard Parker version
No. 492645 for high temperature Parker version
No. 600004 for Parker version

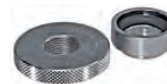
Electrical connection suitable for all 32 mm coils
(e.g. 481865, 492425)



METALIC ASSEMBLY KIT

Nut No. 482213 M14 x 1+ Ring No. 482214 +
O-Ring No. 483917

Coil assembly kit for offshore electrical parts
(e.g. 482870.01, 492210, 492965.01, 496565, 496700)



CABLE GLAND

No. 493426 - 1/2"-14 NPT

Electrical connection and mooring cable with 6 to 12 mm diameter,
for flameproof approved electrical parts
(e.g. 493640)



COIL APPENDICES



GUIDANCE CHART FOR IS-BARRIERS

Manufacturer	Reference	Ex	IS Standard Electrical Parts						IS Booster Electrical Parts				
			Ex ia IIC T6 488650.01/02 488660.01 488670.01 LCIE/AUS	Ex ia IIC T6 490885 (490895)	Ex ia IIC T6 483580.01/03 483960.01/03	Ex ia 490880 (493997)	Ex ia IIB T6 482160,01	Ex ia IIC T6 482870,01	Ex ia 492335	Ex ia IIC T6 492965.01/02	Ex ia IIC T6 496565	Ex ia IIC T6 495910	
A puissance 3	NAEV 22-140	ia	●	-	●	-	●	●	-	●	●	●	
	NAEV 26-100	ia	●	-	●	-	●	●	-	●	●	●	
ABB	V171132-54	ib	●	-	●	-	●	●	-	●	●	●	
	V171132-55	ib	●	-	-	-	●	●	-	●	●	●	
	V171132-61	ia	●	-	-	-	●	●	-	●	●	●	
	DO 890	ib	●	-	-	-	●	●	-	●	●	●	
	S900-DO4-EX	ib	●	-	-	-	●	●	-	●	●	●	
BRADLEY	FEX-EX 24V	ia	●	●	●	●	●	-	●	●	●		
COOPER	LB 2101	ia	●	●	●	●	●	●	●	●	●	●	
	LB 2105	ia	●	●	●	●	●	●	●	●	●	●	
	LB 2112	ia	●	●	●	●	●	●	●	●	●	●	
ELCON	1881 / 1882	ia	●	●	●	●	●	●	●	●	●	●	
	471 / 472	ia	●	●	●	●	●	●	●	●	●	●	
	2871/2872	ia	●	●	●	●	●	●	●	●	●	●	
	2874/2875/2876	ia	●	●	●	●	●	●	●	●	●	●	
GEORGIN	AVB 122	ia	●	-	●	-	●	●	-	●	●	●	
	AVB 125	ia	●	-	●	-	●	●	-	●	●	●	
	AVB 128	ia	●	-	●	-	●	●	-	●	●	●	
Hima	F3328A	ib	●	-	●	-	●	●	-	●	●	●	
	F3335	ib	●	-	-	-	●	●	-	●	●	●	
	H4007	ib	●	-	●	-	●	●	-	●	●	●	
MTL	728P, 7128P, 7728P	ia	-	-	-	-	●	-	-	-	●	●	
	728, 7028, 7128, 7728	ia	●	●	●	●	●	●	●	●	●	●	
	3021, 4021, 4021S	ia	●	-	●	-	●	●	-	●	●	●	
	3022	ia	-	-	-	-	●	●	-	-	-	-	
	4023	ia	-	-	-	-	●	●	-	-	-	-	
	4024	ia	●	-	●	-	●	●	-	●	●	●	
	4025	ia	●	●	●	●	●	●	●	●	●	●	
	5021, 5023, 5024	ia	●	-	●	-	●	●	-	●	●	●	
	5025	ia	●	-	●	-	●	●	-	●	●	●	
	4521 / 4523 / 4524	ia	●	-	-	-	●	●	-	●	●	●	
	5521 / 5523 / 5524	ia	●	-	-	-	●	●	-	●	●	●	
	Pepperl & Fuchs	Z 728	ia	●	●	●	●	●	●	●	●	●	●
		Z 779	ia	●	●	●	●	●	●	●	●	●	●
EGA-041-3		ia	-	●	●	●	●	●	-	●	●	●	
KFD2-SD-EX1.36		ia	-	-	-	-	-	●	-	-	-	-	
KFD2-SL-EX1.36		ia	-	-	-	-	-	●	-	-	-	-	
KFD2-SD-EX1.48		ia	-	●	-	-	-	-	●	-	●	●	
KFD2-SL-EX1.48		ia	-	●	-	-	-	-	●	-	●	●	
KFD2-SL- EX1.48.90A		ia	-	-	-	-	-	-	-	●	●	●	
KFD2-SL- EX1.48.90A		ia	-	-	-	-	-	-	-	●	●	●	
KFD2-SL2-EX1.LK		ia	-	●	-	●	-	●	●	●	●	●	
KFD2-SL2-EX2		ia	-	●	-	●	-	●	●	●	●	●	
KSD2-BO-EX		ia	-	●	●	●	-	-	●	-	●	●	
RSD-BO-EX4		ib	-	●	-	●	-	-	●	-	●	●	
RSD-VO-EX8		ib	-	-	-	-	-	-	-	●	●	●	





GUIDANCE CHART FOR IS-BARRIERS

Manufacturer	Reference	Ex	IS Standard Electrical Parts						IS Booster Electrical Parts			
			Ex ia IIC T6 488650.01/02 488660.01 488670.01 LCIE/AUS	Ex ia IIC T6 490885 (490895)	Ex ia IIC T6 483580.01/03 483960.01/03	Ex ia 490880 (493997)	Ex ia IIB T6 482160,01	Ex ia IIC T6 482870,01	Ex ia 492335	Ex ia IIC T6 492965.01/02	Ex ia IIC T6 496565	Ex ia IIC T6 495910
			LCIE/FM/CSA	LCIE/AUS	LCIE/FM/CSA	LCIE	LCIE	LCIE/FM/CSA	LCIE	LCIE	LCIE	
SIEMENS	5RD00-0AB0	ib	-	-	-	-	-	-	●	-	-	
	7RD00-0AB0	ia	-	-	-	-	-	-	●	●	●	
	7RD01-0AB0	ia	-	-	-	-	-	-	●	●	●	
	7RD10-0AB0	ia	-	-	-	-	-	-	●	●	●	
	7RD11-0AB0	ia	-	-	-	-	-	-	●	●	●	
	7RD20-0AB0	ia	-	-	-	-	-	-	●	●	●	
	7RD21-0AB0	ia	-	-	-	-	-	-	●	●	●	
STAHL	9001/01-252-100-14	ia	●	●	27 V	27 V	●	●	●	●	●	
	9001/01-280-100-10	ia	●	●	24 V	24 V	●	●	●	●	●	
	9001/01-280-110-10	ia	●	-	24 V	-	●	●	-	●	●	
	9002/13-280-100-04	ia	24 V	24 V	27 V	27 V	24 V	24 V	24 V	17 V	17 V	
	9311/52-11-10	ia	-	●	●	25 V	25 V	●	●	15 V	15 V	
	9111/63-11-00	ia	-	●	●	25 V	25 V	●	●	15 V	15 V	
	9351/10-15-10	ia	-	●	●	-	-	●	●	●	●	
	9351/10-16-10	ia	-	●	●	-	-	●	●	●	●	
	9351/10-17-10	ia	-	-	-	-	-	●	-	-	-	
	9381/10-187-050-10	ib	-	●	●	●	●	●	●	●	●	
	9381/10-246-055-10	ib	-	●	●	●	●	●	●	●	●	
	9381/10-246-070-10	ib	-	●	●	●	●	●	●	●	●	
	9465/12-04-11	ib	-	●	●	-	-	●	●	●	●	
	9475/12-04-21	ia/lb	-	●	-	●	-	●	●	●	●	
	9475/12-04-31	ia/lb	-	-	-	-	-	-	●	●	●	
	9475/12-08-41	ia/lb	-	-	-	-	-	-	-	-	-	
	9475/12-08-51	ib	-	-	-	-	-	-	●	●	●	
	9475/12-08-61	ia/lb	-	-	-	-	-	-	-	●	●	
	Turck	MK72-S01-EX	ib	-	-	-	-	●	●	-	●	●
		MK72-S02-EEX	ib	-	-	-	-	●	●	-	●	●
MK72-S04-EEX		ib	●	-	●	-	●	●	-	●	●	
MK72-S05-EEX		ib	●	-	-	-	●	●	-	●	●	
MK72-S06-EEX		ib	●	-	●	-	●	●	-	●	●	
MK72-S07-EEX		ib	●	-	-	-	●	●	-	●	●	
MK72-S09-EEX		ia	-	-	-	-	-	-	-	-	-	
MK72-S12-EEX		ia	●	-	●	-	●	●	-	●	●	
MC72 - 41		ia	●	-	●	-	●	●	-	●	●	
MC72 - 43		ia	●	-	●	-	●	●	-	●	●	
BARTEC	07-7331-2301/1000	ia	●	-	-	-	●	●	-	●	-	
	07-7331-2301/1100	ia	●	-	●	-	●	●	-	●	-	

If barrier reference not listed, consult factory for compatibility (tech.support.fcse@parker.com)



COIL APPENDICES

TABLE OF VOLTAGE CODES FOR COILS AND ELECTRICAL PARTS

This table is showing the most commonly used voltage codes, for other voltages, please ask us.

VOLTAGE CODES			C1	C2	N7	L8	C4	C5	C7	P1	A5	0A	S5	P2	1P	6J	0P	P3	K8	
Coil	Group	Sub-Group	12 DC	24 DC	28 DC	30 DC	48 DC	110 DC	220 DC	100/50-60	110/50	110-115/50	110-115/60 120/60	110/50-60	110-115/60-80	110-115/60	100/50-115/60	110/50-120/60	115/60	
481180	1.1	-	•	•								•								
482605	1.1	-	•	•																
482606	1.1	-	•	•			•	•				•								
483590	1.1	-											•							
488980	1.1	-	•	•			•	•				•				•				
492912	1.1	-		•																
496131	1.2	-	•	•			•	•						•						•
496482	1.2	-	•	•			•	•						•						•
496637	1.2	-	•	•			•							•						•
481000	2.0	2.1	•	•			•	•	•			•				•				
481865	2.0	2.1	•	•			•	•			•									•
483371	2.0	2.1	•	•			•	•	•			•				•				
483510	2.0	2.1											•							
483520	2.0	2.1																		
485100	2.0	2.1		•	•				•											
488553	2.0	2.1																		
491514	2.0	2.1		•															•	
492070	2.0	2.1	•	•			•	•						•						
492190	2.0	2.1	•	•			•	•	•					•						
492453	2.0	2.1	•	•			•	•			•									
492670	2.0	2.1	•	•			•	•			•									
493640	2.0	2.1		•			•				•								•	
494040	2.0	2.1		•					•			•								
495870	2.0	2.1		•			•	•			•									
495875	2.0	2.1		•																
495905	2.0	2.1		•			•	•												•
496081	2.0	2.1	•	•									•							
496110	2.0	2.1											•							
HZ10	2.0	2.1																	•	

COIL APPENDICES

TABLE OF VOLTAGE CODES FOR COILS AND ELECTRICAL PARTS

This table is showing the most commonly used voltage codes, for other voltages, please ask us.

VOLTAGE CODES			C1	C2	N7	L8	C4	C5	C7	P1	A5	0A	S5	P2	1P	6J	0P	P3	K8
Coil	Group	Sub-Group	12 DC	24 DC	28 DC	30 DC	48 DC	110 DC	220 DC	100/50-60	110/50	110-115/50	110-115/50 120/60	110/50-60	110-115/60-60	110-115/60	100/50-115/60	110/50-120/60	115/60
481044	2.0	2.2									•						•		
486265	2.0	2.2	•	•			•				•						•		
492425	2.0	2.2	•	•							•								
495880	2.0	2.2		•							•								
496155	2.0	2.2		•			•				•								
HZ11	2.0	2.2	•	•			•											•	
482730	3.0	-		•			•				•								•
484990	4.0	-													•				
485400	4.0	-	•	•			•	•											
495915	4.0	-		•			•								•				
482740	6.0	-		•			•	•											
495900	6.0	-	•	•			•	•											•
496125	6.0	-		•			•	•											
483580.01	7.0	-			•														
488650.01	7.0	-			•														
495910	8.0	-			•														
492210	9.0	-		•															
492965.01	9.0	-			•														
496565	9.0	-			•														
492310	10.1	-	•	•			•	•	•					•					
496560	10.1	-		•			•												
496800	10.1	-		•			•												
496895	10.1	-		•			•												
496555	10.2	-		•			•												
496700	10.2	-		•			•												
497105	10.3	-	•	•			•	•							•				

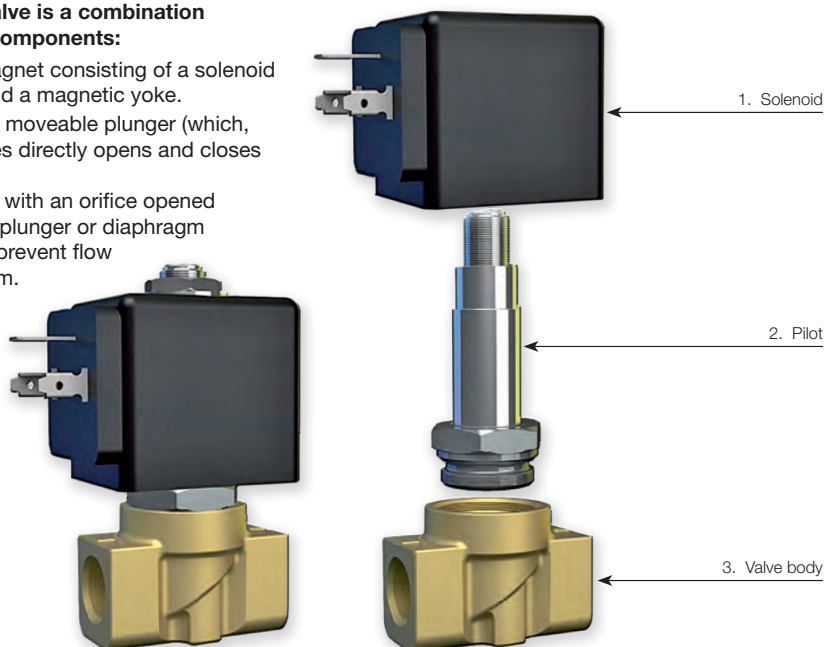
TECHNICAL INFORMATION ABOUT SOLENOID VALVES

General Information

Solenoid valves are electro-mechanical devices used for interrupting or diverting the flow of fluids by opening or closing one or more orifices.

The solenoid valve is a combination of three basic components:

1. An electromagnet consisting of a solenoid (windings) and a magnetic yoke.
2. A pilot with a moveable plunger (which, in some cases directly opens and closes the valve).
3. A valve body with an orifice opened or closed by plunger or diaphragm to enable or prevent flow of the medium.



Operating principles

The term solenoid refers to operator and coil, also known as pilot or magnetic actuator.

The coil consists of copper wire wound on a support reel. When electric current is applied into the coil, magnetic flow lines are generated which are stronger in the coil center.

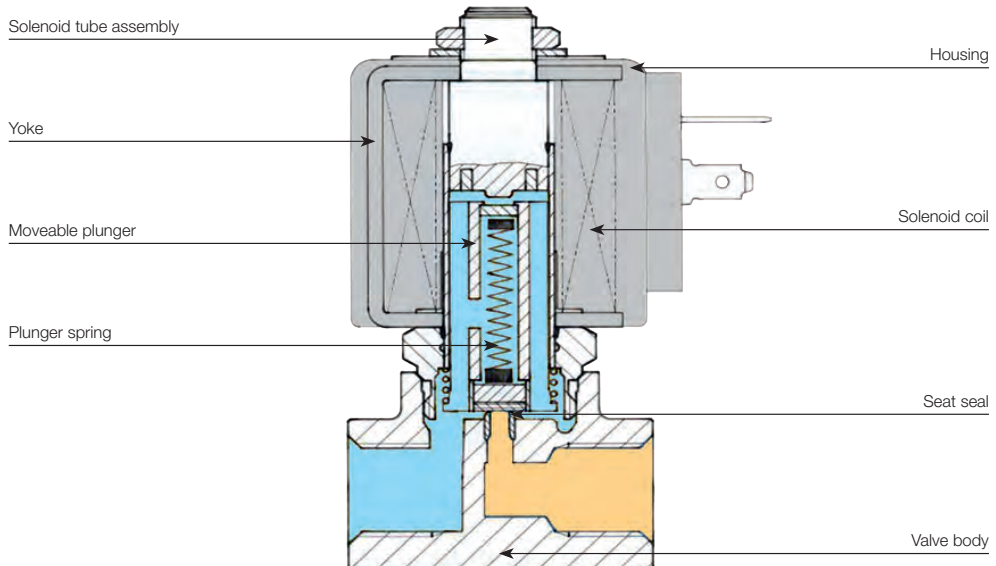
This magnetic flow raises the moveable plunger in the coil until it brings it into contact with the pole piece. The valve body has an orifice through which the fluid flows when the valve is open.

The moveable plunger has an integral seat which when the solenoid coil is energised, moves off the valve (direct operated) orifice or diaphragm (pilot operated) orifice opening the valve.

When the coil is de-energised, a return spring brings the plunger back to the original closing position, thus cutting off the flow of the fluid.

BASIC COMPONENTS OF A SOLENOID VALVE

- Valve body:** Main part of the solenoid valve including ports, seat and orifices.
- Solenoid tube assembly:** Cylinder, in stainless steel, hermetically sealed and closed at one extremity. It is the guide channel of the moveable plunger which is moved magnetically. The solenoid coil is fitted on the external side of the enclosing tube.
- Moveable plunger:** Made by ferritic stainless steel, it is attracted by the solenoid magnetic field and slides inside the tube.
- Plunger spring (or return spring):** Used to hold the moveable plunger in position and to return it when de-energized.
- Seat seal:** Part of the moveable plunger, it is used to close a valves main orifice or pilot orifice.
- Electromagnet (or solenoid coil):** Electrical part consisting of a copper windings (solenoid) along, with a magnetic yoke (armature), when electric current flows through, it generates a magnetic field attracting the moveable plunger.
- Housing:** Part that contains and protects the coil.
- Yoke:** Metallic case surrounding the coil and concentrating electro-magnetic force on the moveable plunger.



**TECHNICAL
INFORMATION**

TECHNICAL VOCABULARY USED IN TABLES

Actuation	Body	Function	Port Size	Orifice (mm)	Flow Factor Kv(l/min)	MOPD (bar)	Max Fluid Temp. (°C)	Page
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NORMALLY CLOSED

Port size BSP	Orifice Ø mm	Flow factors			Operating Pressure Differential			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv l/min	KV m³/h	Qn l/min	Min bar	Max(MOPD) AC bar	DC bar	Min °C	Max °C					AC W	DC W		

The basic technical features of each solenoid valve are indicated in the tables, the terminology used is shown and explained below. Please notice that in certain sections you will have the choice between two product ranges: Parker valves, within blue tables and the Parker Lucifer valves, within orange tables.

- Actuation:** The mechanical method used to control the flow.
- Body:** Main part of the solenoid valve with the ports, seats and orifice needed.
- Function:** The way the valve operates when de-energised.
- Port Size:** Fitting dimensions are defined as threaded in inches (G), in BSP or Sub-base, when a flat interface for ports is adopted.
- Orifice (mm):** Main orifice diameter in millimetres (nominal diameter).
- Flow Factors:** Define the quantity of water which flows through the solenoid valve with a pressure drop of 1 bar during one minute. Expressed in l/min and m³/h.
- Max Fluid Temperature:** Maximum fluid temperature the valve can withstand.
- Max Ambient Temperature:** Maximum ambient temperature the valve can withstand.
- Minimum Operating Pressure Differential:** The lowest differential pressure required for operation (bar).
- Maximum Operating Pressure Differential (MOPD):** The highest working differential pressure with 90% of the rated voltage (-10% Vn) applied to the solenoid coil (for AC) and 95% of the rated voltage (-5% Vn)(for DC).



Fluid Temperature:	Minimum and Maximum admissible temperature for the media used (°C).
Seat seal:	Material used for the seat discs.
Valve ref.:	It identify the pressure vessel
Valve type:	Refers to the Parker valve type
Housing ref.:	Element to fix the coil on the valve
Coil Ref.:	Compatible coil reference.
Coil type:	Compatible coil advised.
Power:	Power consumption of a specific electrical part on selected pressure vessel, rated by AC and DC (W). Power consumption must be considered in cold conditions for the coil, at T _{Amb} : +20°C. For 483510, 481865 and 496081 series, power consumption indicated in the tables must be considered in warm conditions.
Coil group:	Please refer to the specific section for the coil compatibility groups.
Dwg. No.:	Drawing number.

TECHNICAL INFORMATION

Solenoid valves are highly engineered products that can be used in many diverse applications.

In addition to operational functionality, media compatibility and suitability for the operating environment when selecting the best product for a given application.

This section provides a brief overview of the components, actuation and function modes of solenoid valves available from Parker Hannifin - FCSE.

Different Technologies:

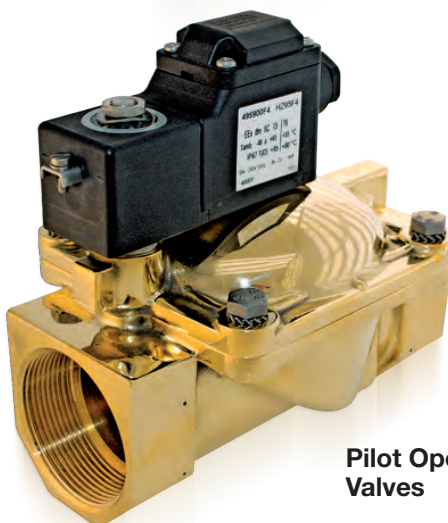
Solenoid valves are electrically operated devices used to control flow. The most common types of solenoid valve are:



**Direct Operated
Valves**



Magnalift Valves

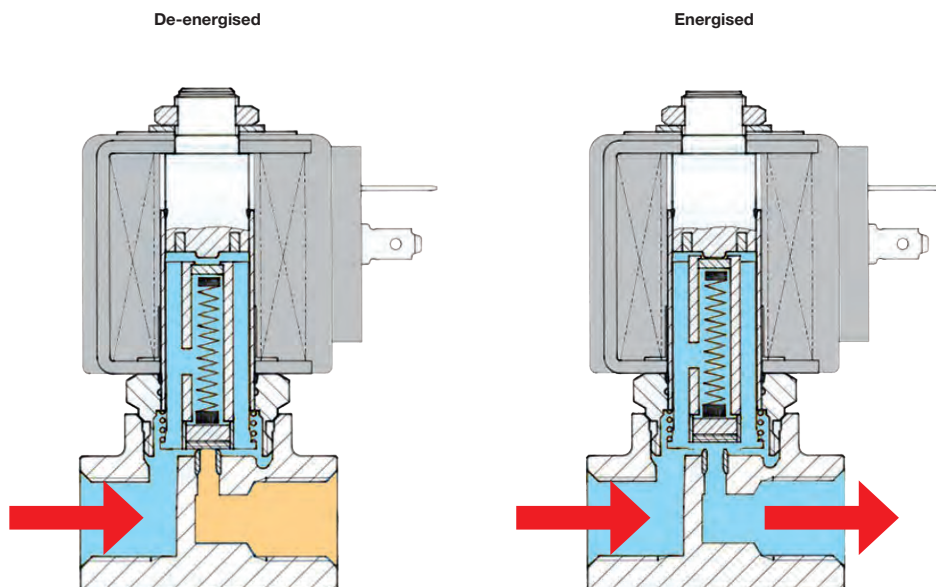


**Pilot Operated
Valves**

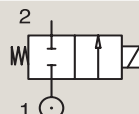
DIRECT OPERATED VALVE

Magnetic force is used directly to open or close the plunger which controls the passage of the fluid. Performances are limited by the coil, the pressure, and the valve orifice size. For direct operated valves, the minimum working pressure is 0 bar and the maximum pressure relies on the combination (valve/coil) chosen.

Direct Operated Valve


Example:

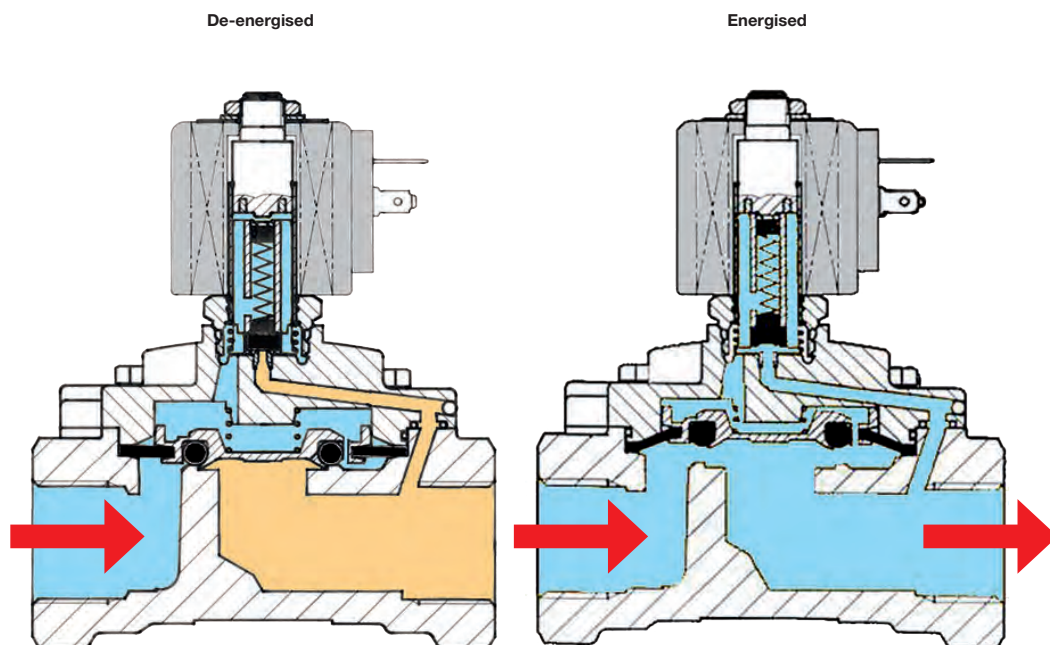
- 121 Series



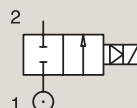
PILOT OPERATED VALVE

To control a higher flow, it is necessary to use pilot operated valves. The supply pressure enters the direct operated "pilot stage" which directs the flow to a "pilot chamber" which, in turn, applies the pilot pressure over a large area (generally a diaphragm or piston). Therefore, a large force is generated to move the main sealing elements against higher pressure or over a large orifice. One condition of operation is to have a minimum pressure available to shift the valve (indicated in the catalogue). In most applications, this presents no particular problems (refer to magnalift valve section). The pressure rating of the valve starts between 0.1 to 0.5 bar (depending on the valve). (NB. Pilot Operated Valves are also called Servo Operated Valves).

Pilot Operated Valve


Example:

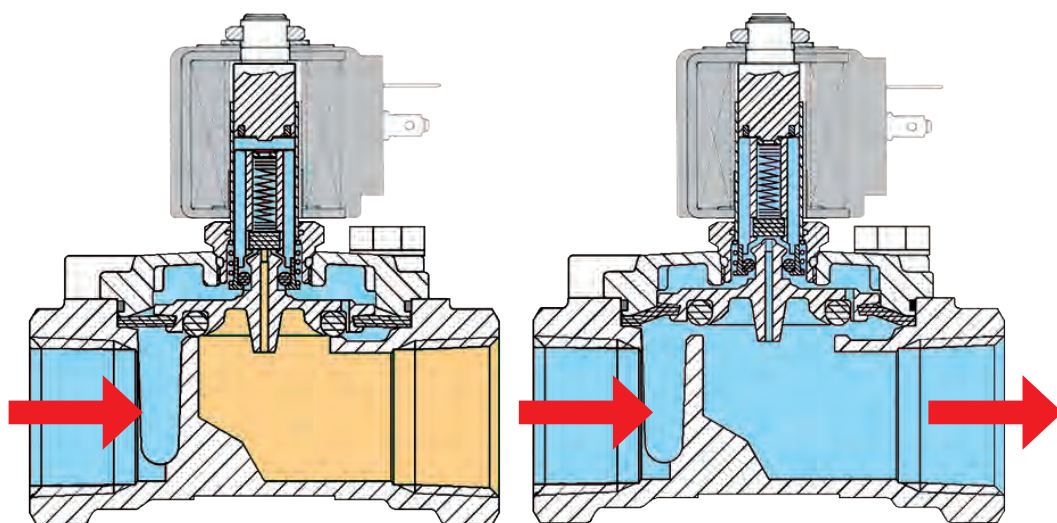
- 321 Series
- 7321B Series



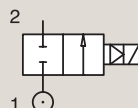
MAGNALIFT VALVE

The magnalift valves combine the features of the direct operated and pilot operated valves. A mechanical link between the plunger and diaphragm retainer allows the valve to operate as a direct operated valve at low pressures and as a pilot operated valve at higher pressures. Magnalift valves are specially designed for applications where 0 pressure is needed to operate the valve, as well as bigger flow than a direct operated valve.

Magnalift Operated Valve

De-energised
Energised

Example:

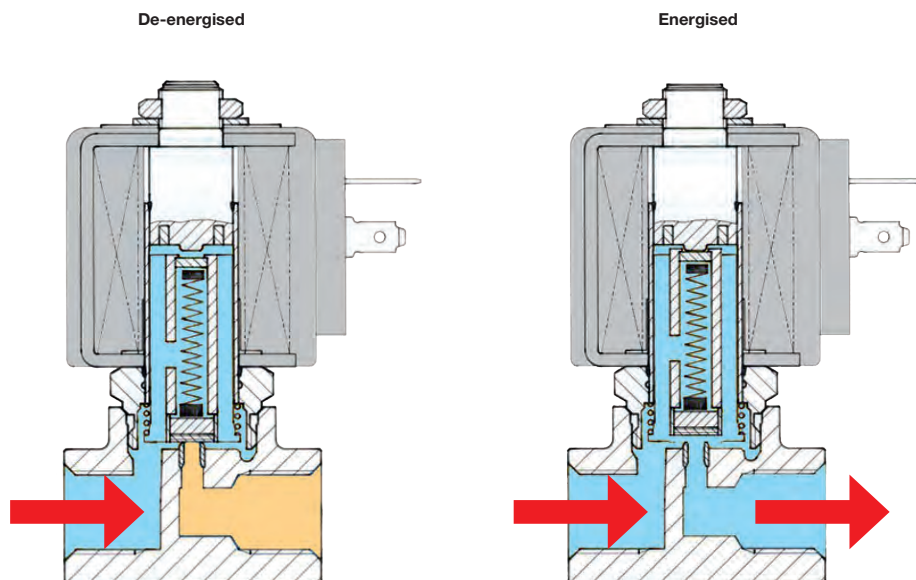
- 221 Series



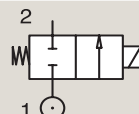
NORMALLY CLOSED VALVE

Most of our valves are available in normally closed and normally open configuration when not energized. In certain applications, you may require a normally open valve (open function in case of current failure). The differentiating factor of design of this technology, is based upon the design of the seat seal, which is reversed in comparison to a normally closed valve.

Normally Closed Valve


Example:

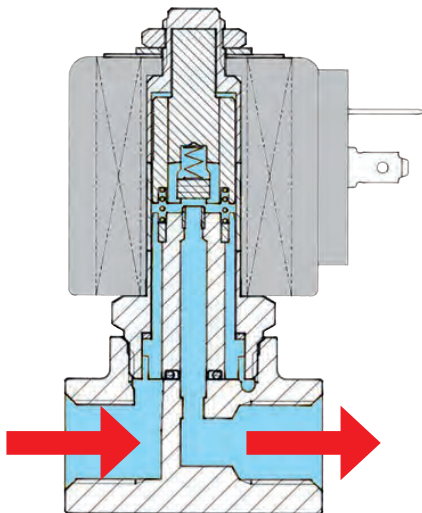
- 121 Series



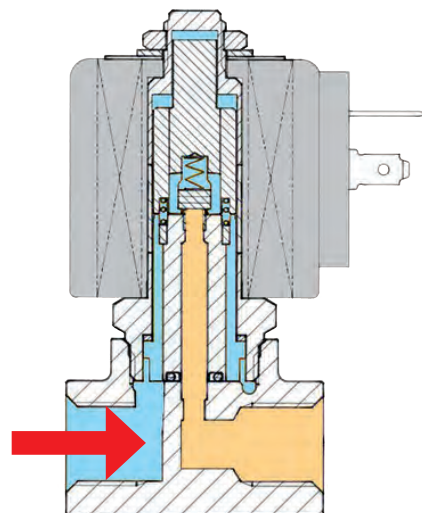
NORMALLY OPEN VALVE

Normally Open Valve

De-energised

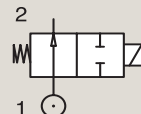


Energised



Example:

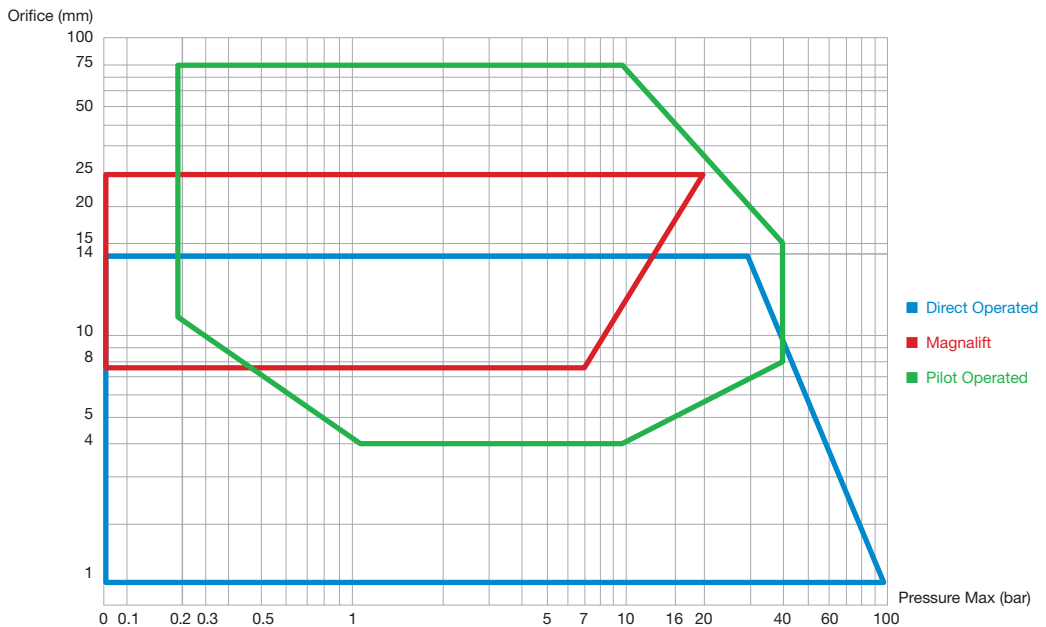
- 122 Series



FLOW AND PRESSURE RANGES

Area of operation:

Each valve principle, as described in the previous pages, has a defined area of operation related to its pressure and flow capabilities. The following graph shows which type of valve is suitable for a certain situation.



Areas of operation of Parker solenoid valves.

SIZING SOLENOID VALVES

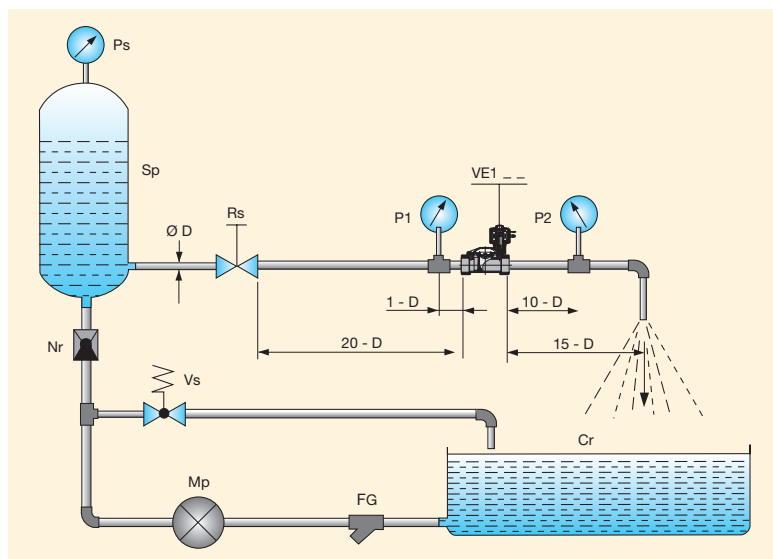
The correct choice of solenoid valve is essential as it determines the regulation and performance required for practical application on a system. In order to decide on the exact type of solenoid valve, various parameters have to be known.

However the calculation method, based on the flow coefficient K_v , has proved highly practical as it can be determined on the basis of:

- Required flow rate
- Type of fluid and relative viscosity
- Flow resistance
- Specific gravity and temperature

This flow coefficient K_v is determined as defined in the VDI/VDE 2173 standards.

It represents the flow of water in m³/h or L/min with a temperature from 5 to 30°C which passes through the solenoid valve with a pressure drop of 1 bar.


Note:

The flow coefficient used in the USA is known as C_v and represents the water flow rate in US gallons per minute with a pressure drop ΔP of 1 psi.

To convert C_v in K_v and vice versa use:

$$1 K_v = 0.862 C_v$$

$$1 C_v = 1.16 K_v$$

FG = Grid Filter Mp = Pump Vs = Safety Valve Nr = Check Valve Sp = Pressure Tank Ps = Static Pressure Manometer

After existing conditions have been converted into this factor K_v , the type of valve is found by referring to the pages in the related sections in this catalogue.

Parameters used for selecting the solenoid valve are in the table next page.

Consult conversion tables of the various units of measurement as defined by the ISO (International Standards Organisation) - I.S. (International System) set out in this catalogue.

FLOW AND PRESSURE RANGES

Pressure

symbol (P)
unit of measurement [bar]
Working pressure

Pressure drop

symbol (ΔP)
unit of measurement [bar]
Pressure difference between inlet (P_1) and outlet (P_2) of the solenoid valve when a medium is flowing through the valve ($\Delta P = P_1 - P_2$).

Flow coefficient

symbol (Kv)
unit of measurement [m^3/h]

Specific gravity of the medium

symbol (γ)
unit of measurement [Kg/dm^3]

Temperature of the medium

symbol (t)
unit of measurement [$^{\circ}C$]

Flow rate

- for liquids
 - symbol (Q)
 - unit of measurement [m^3/h]
- for gases
 - symbol (Qn)
 - unit of measurement [Nm^3/h]
- for steam
 - symbol (Qv)
 - unit of measurement [Kg/h]

Specific volume

symbol (Vs)
unit of measurement [m^3/Kg]

a) Solenoid valves for liquids:

Flow rate: $Q = K_v \cdot \sqrt{\frac{\Delta P}{\gamma}}$ where: $Q = m^3/h$
 $\Delta P = bar$
 $\gamma = Kg/dm^3$

Flow coefficient:
 $K_v = Q \cdot \sqrt{\frac{\gamma}{\Delta P}}$

In the case of liquids with viscosity greater than $3^{\circ}E$ (22 cStokes) the Kv is modified according to the formula:

$$K_{v_1} = K_v + C \quad C = \frac{\delta \cdot \sqrt{K_v}}{200 \cdot Q} + 1$$

where C is the viscosity correction factor calculated by means of the formula:

where:

δ = kinematic viscosity of the fluid expressed in centistokes

K_v = flow rate factor of the solenoid valve

Q = flow rate in m^3/h .

Pressure drop:

$$\Delta P = \gamma \cdot \left(\frac{Q}{K_v}\right)^2$$

b) Solenoid valves for gases:

If $\Delta P \leq 1/2 P_1$ use the following formulae:

Flow rate: $Q_n = 514 \cdot K_v \cdot \sqrt{\frac{\Delta P \cdot P_2}{\gamma_n \cdot (273 + t)}}$

where: $Q_n = \text{Nm}^3/\text{h}$ $P_1 = \text{bar}$ $P_2 = \text{bar}$

Flow coefficient: $K_v = \frac{Q_n}{514} \cdot \sqrt{\frac{(273+t) \cdot \gamma_n}{\Delta P \cdot P_2}}$

$t = \text{°C}$
 $\gamma_n = \text{Kg/m}^3$

Pressure drop: $\Delta P = \frac{(273 + t) \cdot \gamma_n \cdot Q_n^2}{P_2 \cdot (514 \cdot K_v)^2}$

If $\Delta P > 1/2 P_1$ use the following formula:

$$Q_n = 757 \cdot K_v \cdot \sqrt{\frac{\Delta P \cdot P_2}{(273 + t) \cdot \gamma_n}}$$

c) Solenoid valves for steam:

If $\Delta P \leq 1/2 P_1$ use the following formulae:

Flow rate: $Q_v = 31,7 \cdot K_v \cdot \sqrt{\frac{\Delta P}{V_s}}$

where: $Q_v = \text{Kg/h}$ $\Delta P = \text{bar}$ $V_s = \text{m}^3/\text{Kg}$

Flow coefficient: $K_v = \frac{Q_v}{31,7} \cdot \sqrt{\frac{V_s}{\Delta P}}$

Pressure drop: $\Delta P = V_s \cdot \frac{Q_v^2}{(31,7 \cdot K_v)^2}$

If $\Delta P > 1/2 P_1$ use the following formula:

$$Q_v = 22,4 \cdot K_v \cdot \sqrt{\frac{P_1}{V_s}}$$

Notes:

1) Should the value ΔP not be specified, use the following, which is based on experience:

- For liquids only in the case of free discharge $\Delta P = 90\%$ of the input pressure (P_1).
- For gases never use a ΔP of more than 50% of the absolute inlet pressure, since the excessive pressure drop may cause an irregular flow rate. In most cases, ΔP can be considered as 10% of the input pressure.

2) Specific volume value (V_s) for dry saturated steam, see the table in diagram 3.



**TECHNICAL
INFORMATION**

FLOW RATE FOR LIQUIDS

The liquid flow through a pipe or a valve is given by:

$$Q = K_v \cdot \sqrt{\frac{\Delta P}{\gamma}}$$

- Where **Q** = Flow [l/min]
- ΔP** = Differential Pressure [bar]
- γ** = Density of the fluid [kg/dm³]
(water γ = 1 [kg/d m³])
- kv** = Flow Factor [m³/h]

Flow factor kv:

The kv flow factor of a valve is defined as the flow rate of water in litres per minute with a pressure drop of 1 bar across the valve. Valve manufacturers use different definitions for kv. It may be expressed in l/h or m³/h. Care should therefore be taken when comparing values.

Maximum flow rate Qmax.

For particular 2-way valves the maximum flow must be limited for reasons of mechanical resistance and durability. A very high flow velocity may dislocate a poppet sealing or a diaphragm. Maximum flow rates are indicated in the catalogue.

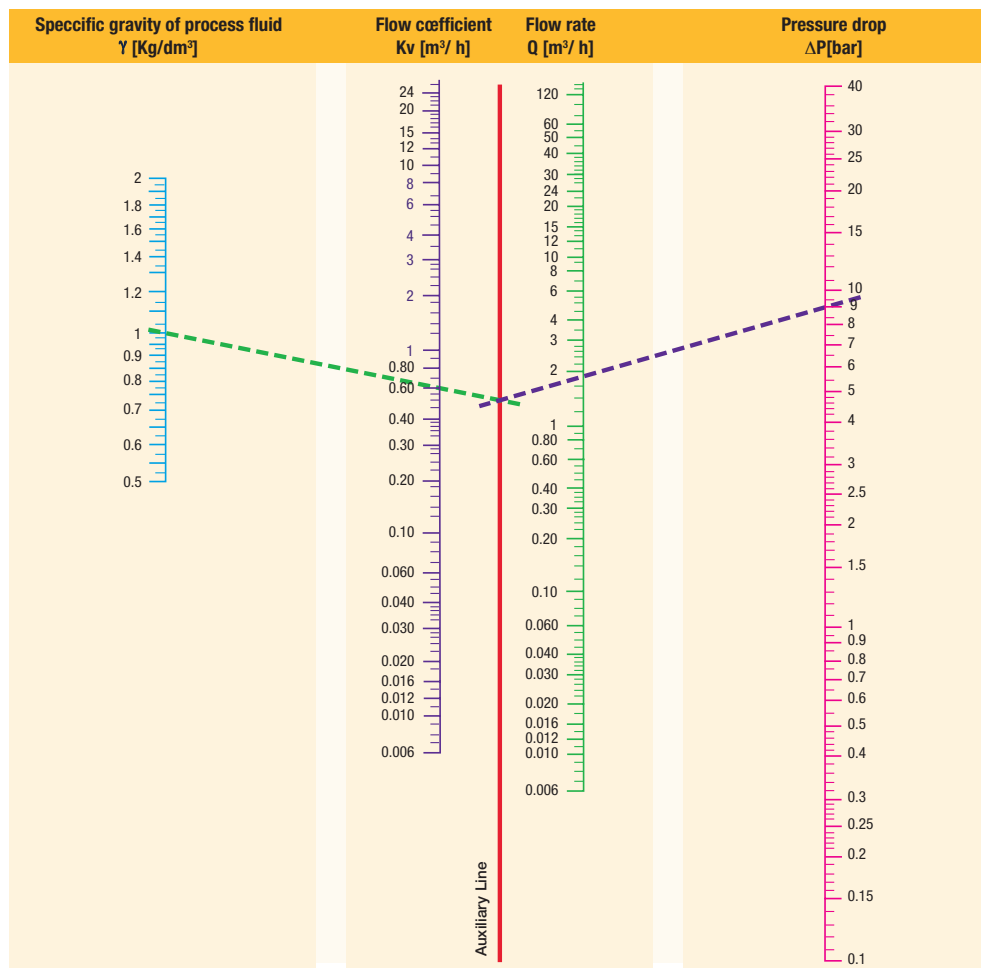
Flow factors

Kv l/min	KV m ³ /h	Qn l/min
--------------------	--------------------------------	--------------------

NORMALLY CLOSED

Port size	Orifice Ø	Flow factors			Operating Pressure Differential (MOPD)			Fluid Temp.		Seat Seal	Valve Ref.	Housing Ref.	Coil Ref.	Power		Coil Group	Dwg. No.
		Kv l/min	KV m ³ /h	Qn l/min	Min	Max	Min	Max	AC W					DC W			
BSP	mm				bar	AC bar	DC bar	°C	°C								





Monogram for liquid flow calculation

Specific gravity of the most common fluids ($\gamma = \text{Kg/dm}^3$) - ($t = 15^\circ\text{C}$ - $P = 760 \text{ mm Hg}$)			
Acetone	0.76	Benzenol	0.90
Water	1.00	Beer	1.02
Sea water	1.02	Hexane	0.66
Ethyl alcohol	0.79	Ethane	0.68
Methyl alcohol	0.81	Diesel oil	0.70
Petrol	0.68	Milk	1.03
		Naphtha	0.76
		Pentane	0.63
		Vegetable oil	0.92
		Hydraulic oil	0.92
		Wine	0.95

FLOW RATE FOR GASES

The gas flow through a valve is given by:

$$Q = C \cdot P_1 \cdot k_T \cdot \omega \cdot \gamma_{\text{air}} / \gamma_{\text{gas}}$$

Where

- Q** = Flow Rate [**dm³/s**]
- C** = Conductance [**dm³/s.bar**]
- P₁** = Inlet Pressure [**bar abs**]
- γ** = Specific Weight [**kg/m³**]
- k_T** = Temperature Correction Factor

$$\omega = \sqrt{1 - \frac{P_2/P_1 - b}{1 - b}}$$

$$k_T = \sqrt{\frac{293}{273 + \text{Temp. } ^\circ\text{C}}}$$

Nominal Flow Q_n:

Calculations can be made with specific flow factors based on the CETOP RP 50P standard. For practical purposes and ease of valve selection the catalogue shows the nominal flow Q_n. The nominal flow Q_n is defined as the flow rate (L/min) of air across the valve when the inlet pressure P₁ = 6 bar and the pressure drop ΔP = 1 bar.

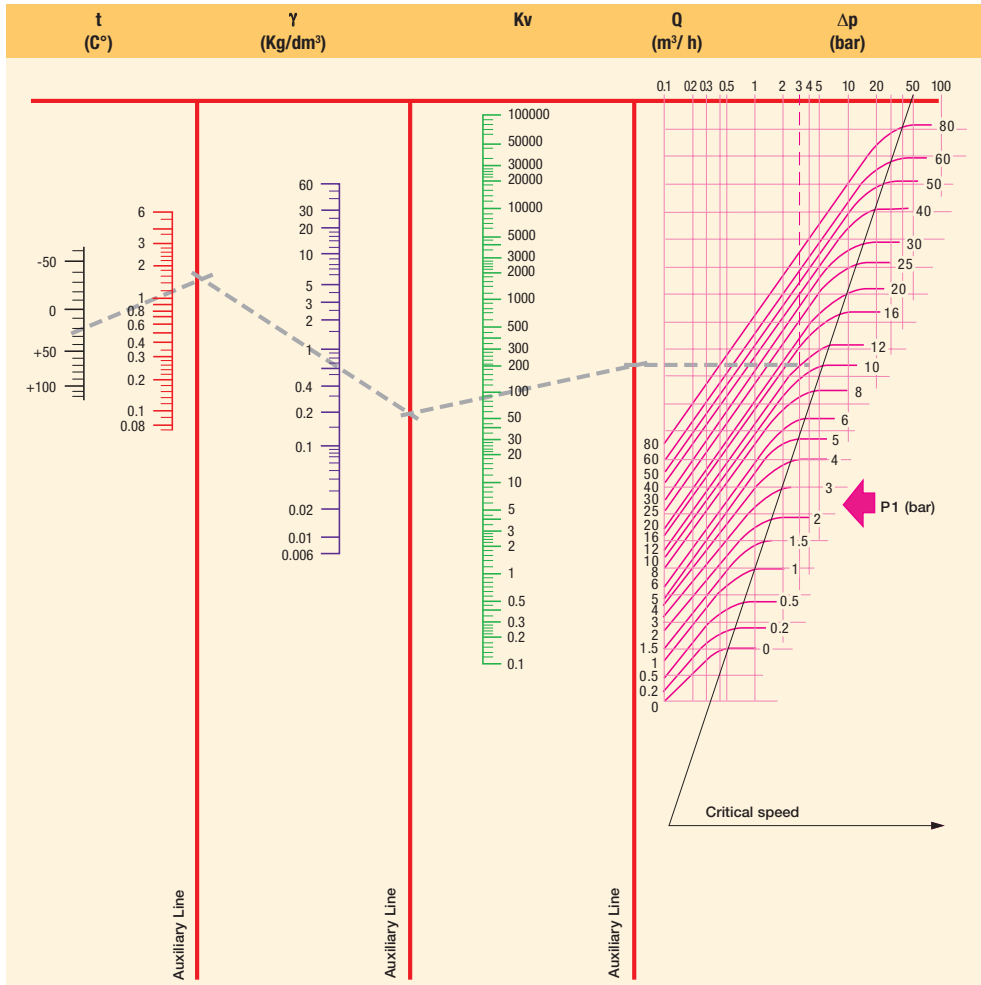
N.B.

The values of the flow factors and flow rates mentioned in catalogues are subject to +/-15% tolerances.

Pneumatic application: $\gamma_{\text{air}} / \gamma_{\text{gas}} = 1$

- a) **Choked flow conditions** $P_2 \leq b \cdot P_1$
in this case $\omega = 1 \rightarrow Q = C \cdot P_1 \cdot k_T$
- b) **Free flow conditions** $P_2 > b \cdot P_1$
in this case $\rightarrow Q = C \cdot P_1 \cdot k_T \cdot \omega$





t = Fluid Temperature γ N = Specific Gravity Kv = Flow Coefficient Qn = Flow Rate Δp = Pressure Drop P₁ = Inlet Pressure

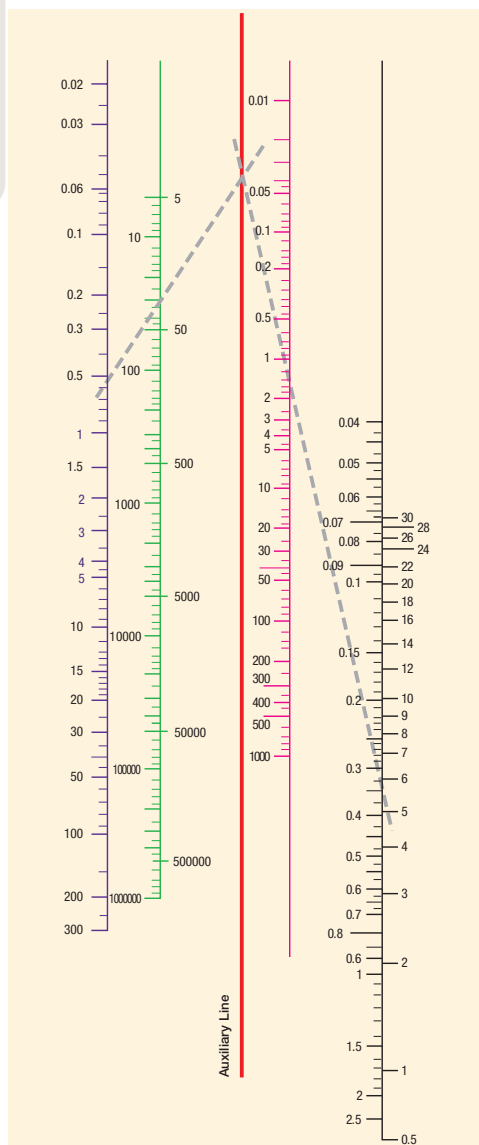
Specific gravity of the most common gases ($\gamma = \text{Kg/m}^3$) - (t = 0°C - P = 760mm Hg)

Acetylene	1.176	Helium	0.179	Natural gas	0.723
Carbon dioxide	1.965	Ethane	1.035	Methane	0.722
Air	1.293	Ethylene	1.259	Carbon monoxide	1.250
Argon	1.780	Hydrogen	0.089	Oxygen	1.429
Nitrogen	1.255			Propane	1.520
Butane	2.000			Steam	0.805

TECHNICAL INFORMATION

Diagram 3 for Dry Saturated Steam

Steam (Dry Saturated) Data



P_2 bar	Temp. °C	V_s m ³ /Kg	P_2 bar	Temp. °C	V_s m ³ /Kg
0.01	6.6	131.600	10.00	179.0	0.200
0.02	17.1	68.300	110.00	183.2	0.181
0.03	23.7	46.500	120.00	187.1	0.176
0.04	28.6	35.500	13.00	190.7	0.155
0.05	32.5	28.700	14.00	194.1	0.144
0.06	35.8	24.200	15.00	197.4	0.135
0.08	41.1	18.500	16.00	200.4	0.126
0.10	45.4	15.000	17.00	203.4	0.119
0.20	59.7	7.800	18.00	206.2	0.113
0.30	68.7	5.330	19.00	208.8	0.107
0.40	75.4	4.070	20.00	211.4	0.102
0.50	80.9	3.300	22.00	216.2	0.093
0.60	85.5	2.790	24.00	220.8	0.085
0.70	89.5	2.410	26.00	225.0	0.079
0.80	93.0	2.130	28.00	229.0	0.073
0.90	96.2	1.910	30.00	232.8	0.068
1.00	99.1	1.730	32.00	236.4	0.064
1.50	110.8	1.180	34.00	239.8	0.060
2.00	119.6	0.900	36.00	243.1	0.057
2.50	126.8	0.730	38.00	246.2	0.053
3.00	132.9	0.620	40.00	249.2	0.051
3.50	138.2	0.530	45.00	256.2	0.045
4.00	142.9	0.470	50.00	262.7	0.040
4.50	147.2	0.420	55.00	268.7	0.036
5.00	151.1	0.380	60.00	274.3	0.033
5.50	154.7	0.350	65.00	279.6	0.030
6.00	158.1	0.320	70.00	284.5	0.028
6.50	161.2	0.300	80.00	293.6	0.024
7.00	164.2	0.280	90.00	301.9	0.021
7.50	167.0	0.260	100.00	309.5	0.018
8.00	169.6	0.250	150.00	340.5	0.011
8.50	172.1	0.230	200.00	364.2	0.006
9.00	174.5	0.220	225.00	374.0	0.003
9.50	176.8	0.210			

K_v = Flow Coefficient

Q_v = Flow Rate

Δp = Pressure Drop

V_s = Specific Volume

P_2 = Outlet Pressure



VISCOSITY CONVERSION TABLE

Centistokes cStokes mm ² /S	°Engler °E	Saybolt Universal Second SSU	Rewood Second N°1 SRW N°1
1	1	-	-
12	2	65	55
22	3	100	90
30	4	140	120
28	5	175	155
45	6	210	185
60	8	275	245
75	10	345	305
90	12	415	370
115	15	525	465
150	20	685	610
200	26	910	810
300	39	1 385	1 215
400	53	1 820	1 620
500	66	2 275	2 025
750	97	3 365	2 995
1 500	197	6 820	6 075

OTHER USEFUL FORMULAS

Formulas:

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \times 5/9$$

$$^{\circ}\text{F} = (^{\circ}\text{C} \times 9/5) + 32$$

$$\text{m}^3/\text{h} = \text{l}/\text{min} \times 0.06$$

$$\text{l}/\text{min} = \text{m}^3/\text{h} \times 16,67$$

$$\text{m}^3/\text{sec} = \text{m}^3/\text{h} \times 2,778 \times 10^{-4}$$

$$\text{m}^3/\text{sec} = \text{l}/\text{min} \times 1,667 \times 10^{-5}$$

Examples:

$$(167^{\circ}\text{F} - 32) \times 5/9 = 75^{\circ}\text{C}$$

$$(30^{\circ}\text{C} \times 9/5) + 32 = 86^{\circ}\text{F}$$

$$100 \text{ l}/\text{min} \times 0.06 = 6 \text{ m}^3/\text{h}$$

$$9 \text{ m}^3/\text{h} \times 16,67 = 150 \text{ l}/\text{min}$$

$$18.000 \text{ m}^3/\text{h} \times 2.778 \times 10^{-4} = 5 \text{ m}^3/\text{sec}$$

$$479.904 \text{ l}/\text{min} \times 1.667 \times 10^{-5} = 8 \text{ m}^3/\text{sec}$$



INDEX FOR EXPLOSION PROOF ELECTRICAL PARTS

Coil Reference	Coil Group	Designation	Power DC Pn (W)	Power AC Pn (W)	Ambient Temperature	UL	Degree of Protection	ATEX or NEMA 4X Protection (Gas)	Page
496637	1.2	Explosion proof electrical part "nc AC", 22 mm, double frequency	3.0	3.0	-40°C to +50°C	-	IP65	II 3 GD Ex tc IICT 95°C	273
495880	2.0/2.2	Explosion proof electrical part "nc AC", 32 mm	14.0	14.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3	277
496155	2.0/2.2	Explosion proof increased safety electrical part "nc AC", 50 mm	14.0	14.0	-40°C to +65°C	-	IP67	II 3 GD Ex nc AC IIC T3	279
495915	4.0	Explosion proof increased safety electrical part "nc AC", 50 mm	13.0	11.0	-40°C to +65°C	-	IP67	II 3 GD Ex nc AC IIC T3	278
495870	2.0/2.1	Explosion proof electrical part "nc AC", 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	274
495875	2.0/2.1	Explosion proof electrical part "nc AC", 32 mm	7.0	6.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	276
496110	2.0/2.1	Explosion proof electrical part "nc AC", 32 mm	-	9.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	274
495865	1.1	Explosion proof electrical part "nc AC", low power, 22 mm	2.5	2.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T5	272
496125	6.0	Explosion proof electrical part "nc AC", low power, 32 mm	1.6	-	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T5 / T6	275
492670	2.0/2.1	Explosion proof encapsulated electrical part "mb", 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T4	282
482605	1.1	Explosion proof encapsulated electrical part "mb", 32 mm	5.0	4.0	-40°C to +65°C	-	IP65	II 2 GD Ex mb II T4 / T5	281
482606	1.1	Explosion proof encapsulated electrical part "mb", low power, 32 mm	2.5	2.0	-40°C to +65°C	-	IP65	II 2 GD Ex mb II T4 / T5	281
492070	2.0/2.1	Explosion proof encapsulated electrical part "mb", with water proof metal housing, 50 mm	8.0	9.0	-40°C to +65°C	-	IP67	II 2 GD Ex mb II T4 / T5	283
HZ10	2.0/2.1	Explosion proof encapsulated electrical part "mb", double frequency	8.0	8.0	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T3 / T5	284
HZ11	2.0/2.2	Explosion proof encapsulated electrical part "mb", double frequency	14.0	14	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T3 / T5	285
497105	10.3	Flame proof electrical part "db", 50 mm	8.0	8.0	-50°C to +80°C	-	IP66	Ex db IIC T4 / T5 / T6	280
493640	2.0/2.1	Flame proof encapsulated electrical part "db mb", double frequency	8.0	8.0	-40°C to +75°C	-	IP65	II 2 GD Ex db mb IIC T4 / T5	290
495905	2.0/2.1	Flame proof encapsulated electrical part "db mb", 37 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4	287
496560	10.1	Flame proof encapsulated electrical part "db mb", 37 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4	288
496800	10.1	Flame proof encapsulated electrical part "db mb", 37 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4	289
495900	6.0	Flame proof encapsulated electrical part "db mb", low power, 37 mm	2.0	2.5	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4 / T5 / T6	286
496555	10.2	Flame proof encapsulated electrical part "db mb", 37 mm	6.0	6.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4 / T5 / T6	288
496700	10.2	Flame proof encapsulated electrical part "db mb", 37 mm	6.0	6.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4 / T5 / T6	289
494040	2.0/2.1	Explosion proof increased safety electrical part "eb", 50 mm	8.0	8.0	-40°C to +90°C	-	IP67	II 2 GD Ex eb IIC T3 / T4	291
483371	2.0/2.1	Explosion proof increased safety electrical part "eb", 50 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex eb IIC T4	291
492190	2.0/2.1	Explosion proof increased safety and encapsulated elect. part "eb", 50 mm	9.0	11.0	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T3 / T4	294
492310	10.1	Explosion proof increased safety and encapsulated electrical part "eb", 50 mm	6.0	6.0	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T4 / T5	292
492210	9.0	Explosion proof increased safety and encapsulated electrical part "eb", "Booster", 50 mm	1.0 to 1.8	-	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T5 / T6	293
495910	8.0	Explosion proof intrinsically safe electrical part "ia", "booster", 37 mm	0.3 to 1.2	-	-40°C to +80°C	-	IP67	II 1 GD Ex ia IIC T6 / T5 / T4	296
496565	9.0	Explosion proof intrinsically safe electrical part "ia", "Booster", 37 mm	0.77 to 2.58	-	-40°C to +80°C	-	IP67	II 1 GD Ex ia IIC T6 / T5 / T4	297
483580.01	7.0	Explosion proof intrinsically safe electrical part "ia", 32 mm	3.0	-	-40°C to +55°C	-	IP65	II 1 GD Ex ia IIC T6	295
488650.01	7.0	Explosion proof intrinsically safe electrical part "ia", 50 mm	0.3 to 3.0	-	-40°C to +65°C	-	IP66	II 1 GD Ex ia IIC T6	300
492965.01	9.0	Explosion proof intrinsically safe electrical part "ia", "Booster", 50 mm	0.3 to 2.3	-	-40°C to +65°C	-	IP66	II 1 GD Ex ia IIC T6	298
482870.01	12.0	Explosion proof intrinsically safe electrical part "ia", 50 mm	3.0	-	-40°C to +65°C	-	IP66	II 1 GD Ex ia IIC T6	299

APPENDIX

INDEX BY COIL REFERENCE

Coil Reference	Coil Group	Designation	Power DC Pn (W)	Power AC Pn (W)	Ambient Temperature	UL	Degree of Protection	ATEX or NEMA 4X Protection (Gas)	Page
481000	2.0/2.1	Coil with screw terminal, 40 mm	8.0	8.0	-40°C to +50°C	-	IP 44 to 67	-	267
481044	2.0/2.2	Coil with screw terminal High power, 40 mm	-	14.0	-40°C to +50°C	-	IP 44 to 67	-	268
481180	1.1	Coil for DIN plug connection, 22 mm	5.0	4.0	-40°C to +50°C	-	IP65	-	259
481865	2.0/2.1	Coil for DIN plug connection, 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	-	254
482605	1.1	Explosion proof encapsulated electrical part "mb", 22 mm	5.0	4.0	-40°C to +65°C	-	IP65	II 2 GD Ex mb II T4 / T5	281
482606	1.1	Explosion proof encapsulated electrical part "mb", low power, 22 mm	2.5	2.0	-40°C to +65°C	-	IP65	II 2 GD Ex mb II T4 / T5	281
482730	3.0	Coil for DIN plug connection, reduced power, 32 mm	7.0	6.0	-40°C to +50°C	-	IP65	-	256
482740	6.0	Coil for DIN plug connection, low power, 32 mm	1.6	-	-40°C to +50°C	-	IP65	-	257
482870.01	12.0	Explosion proof intrinsically safe electrical part "ia", 50 mm	3.0	-	-40°C to +65°C	-	IP66	II 1 GD Ex ia IIC T6	299
483371	2.0/2.1	Explosion proof increased safety electrical part "eb", 50 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex eb IIC T4	291
483510	2.0/2.1	Coil for DIN plug connection, 32 mm	-	9.0	-40°C to +50°C	-	IP65	-	254
483520	2.0/2.1	Coil with screw terminal, double frequency, 40 mm	-	9.0	-40°C to +50°C	-	IP 44 to 67	-	267
483580.01	7.0	Explosion proof intrinsically safe electrical part "ia", 32 mm	3.0	-	-40°C to +55°C	-	IP65	II 1 GD Ex ia IIC T6	295
483590	1.1	Coil for DIN plug connection, double frequency, 22 mm	-	3.0	-40°C to +50°C	-	IP65	-	261
484990	4.0	Coil with screw terminal, bistable, for impulse applications, 40 mm	-	11.0	-40°C to +50°C	-	IP44	-	270
485100	2.0/2.1	Coil with screw terminal, high temperature, 40 mm	8.0	8.0	-40°C to +50°C	-	IP 44 to 67	-	269
485400	4.0	Coil with screw terminal, bistable, for impulse applications, 40 mm	13.0	-	-40°C to +50°C	-	IP44	-	270
486265	2.0/2.2	Coil with screw terminal, high temperature-high power, 40 mm	14.0	14.0	-40°C to +50°C	-	IP 44 to 67	-	269
488650.01	7.0	Explosion proof intrinsically safe electrical part "ia", 50 mm	0.3 to 3.0	-	-40°C to +65°C	-	IP66	II 1 GD Ex ia IIC T6	300
488980	1.1	Coil for DIN plug connection, low power, 22 mm	2.5	2.0	-40°C to +50°C	-	IP65	-	259
491514	2.0/2.1	Coil for DIN plug connection, 32 mm, UL class F	-	11.0	-40°C to +50°C	●	IP65	-	258
492070	2.0/2.1	Explosion proof encapsulated electrical part "mb", with water proof metal housing, 50mm	8.0	9.0	-40°C to +65°C	-	IP67	II 2 GD Ex mb II T4 / T5	283
492190	2.0/2.1	Explosion proof increased safety and encapsulated electrical part "eb", 50 mm	9.0	11.0	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T3 / T4	294
492210	9.0	Explosion proof increased safety and encapsulated electrical part "eb", "Booster", 50 mm	1.0 to 1.8	-	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T5 / T6	293
492310	10.1	Explosion proof increased safety and encapsulated electrical part "eb", 50 mm	6.0	6.0	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T4 / T5	292
492425	2.0/2.2	Coil for DIN plug connection, high temperature, 32 mm	14.0	14.0	-40°C to +50°C	-	IP65	-	255
492453	2.0/2.1	Coil for DIN plug connection, high temperature, 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	-	255
492670	2.0/2.1	Explosion proof encapsulated electrical part "mb", 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T4	282
492912	1.1	Coil for DIN plug connection, 22 mm, UL	4.0	3.0	-40°C to +50°C	●	IP65	-	260
492965.01	9.0	Explosion proof intrinsically safe electrical part "ia", "Booster", 50 mm	0.3 to 2.3	-	-40°C to +65°C	-	IP66	II 1 GD Ex ia IIC T6	298
493640	2.0/2.1	Flame proof encapsulated electrical part "db mb", double frequency	8.0	8.0	-40°C to +75°C	-	IP65	II 2 GD Ex db mb IIC T4	290

INDEX BY COIL REFERENCE

Coil Reference	Coil Group	Designation	Power DC Pn (W)	Power AC Pn (W)	Ambient Temperature	UL	Degree of Protection	ATEX or NEMA 4X Protection (Gas)	Page
494040	2.0/2.1	Explosion proof increased safety electrical part "eb", 50 mm	8.0	8.0	-40°C to +90°C	-	IP67	II 2 GD Ex eb IIC T3 / T4	291
495870	2.0/2.1	Explosion proof electrical part "nc AC", 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	274
495875	2.0/2.1	Explosion proof electrical part "nc AC", 32 mm	7.0	6.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	276
495880	2.0/2.2	Explosion proof electrical part "nc AC", 32 mm	14.0	14.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3	277
495900	6.0	Flame proof encapsulated electrical part "db mb", low power, 37 mm	2.0	2.5	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4 / T5 / T6	286
495905	2.0/2.1	Flame proof encapsulated electrical part "db mb", 37 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4	287
495910	8.0	Explosion proof intrinsically safe electrical part "ia", "booster", 37 mm	0.3 to 1.2	-	-40°C to +80°C	-	IP67	II 1 GD Ex ia IIC T6 / T5 / T4	296
495915	4.0	Explosion proof increased safety electrical part "nc AC", 50 mm	13.0	11.0	-40°C to +65°C	-	IP67	II 3 GD Ex nc AC IIC T3	278
496081	2.0/2.1	Coil with flying leads, IP 67, 32 mm	9.0	9.0	-40°C to +50°C	-	IP67	-	265
496082	2.0/2.2	Coil with flying leads, IP 67, 32 mm, UL	16.0	13.0-14.0	-40°C to +120°C	●	IP67	-	266
496110	2.0/2.1	Explosion proof electrical part "nc AC", 32 mm	-	9.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	274
496125	6.0	Explosion proof electrical part "nc AC", low power, 32 mm	1.6	-	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T5 / T6	275
496131	1.2	Coil for DIN plug connection, double frequency, 22 mm	3.0	3.0	-40°C to +50°C	-	IP65	-	262
496155	2.0/2.2	Explosion proof increased safety electrical part "nc AC", 50 mm	14.0	14.0	-40°C to +65°C	-	IP67	II 3 GD Ex nc AC IIC T3	279
496482	1.2	Coil for DIN plug connection, double frequency coil, 22 mm	3.0	3.0	-40°C to +50°C	-	IP65	-	263
496555	10.2	Flame proof encapsulated electrical part "db mb", 37 mm	6.0	6.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4 / T5 / T6	288
496560	10.1	Flame proof encapsulated electrical part "db mb", 37 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4	288
496565	9.0	Explosion proof intrinsically safe electrical part "ia", "Booster", 37 mm	0.77 to 2.58	-	-40°C to +80°C	-	IP67	II 1 GD Ex ia IIC T6 / T5 / T4	297
496637	1.2	Explosion proof electrical part "nc AC", double frequency, 22 mm	3.0	3.0	-40°C to +50°C	-	IP65	II 3 D Ex TC IIC T 95°C	273
496700	10.2	Flame proof encapsulated electrical part "db mb", 37 mm	6.0	6.0	-40°C to +65°C	-	IP67	II 2 G Ex db mb IIC T4 / T5 / T6	289
496800	10.1	Flame proof encapsulated electrical part "db mb", 37 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4	289
496895	10.1	Coil for DIN plug connection for oil and gas, 37 mm	8.0	8.0	-40°C to +50°C	-	IP65	-	264
497105	10.3	Flame proof stainless steel electrical part "db"	8.0	8.0	-50°C to +80°C	-	IP66	II 2 GD Ex db IIC T4 / T5 / T6	280
HZ10	2.0/2.1	Explosion proof encapsulated electrical part "mb", double frequency	8.0	8.0	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T4 / T5	284
HZ11	2.0/2.2	Explosion proof encapsulated electrical part "mb", double frequency	14.0	14.0	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T4 / T5	285

APPENDIX

INDEX BY COIL GROUP

Coil Group	Coil Reference	Designation	Power DC Pn (W)	Power AC Pn (W)	Ambient Temperature	UL	Degree of Protection	ATEX or NEMA 4X Protection (Gas)	Page
1.1	48980	Coil for DIN plug connection, low power, 22 mm	2.5	2.0	-40°C to +50°C	-	IP65	-	259
1.1	492912	Coil for DIN plug connection, UL, 22 mm	4.0	3.0	-40°C to +50°C	●	IP65	-	260
1.1	481180	Coil for DIN plug connection, 22 mm	5.0	4.0	-40°C to +50°C	-	IP65	-	259
1.1	483590	Coil for DIN plug connection, double frequency, 22 mm	-	3.0	-40°C to +50°C	-	IP65	-	261
1.1	482606	Explosion proof encapsulated electrical part "mb", low power, 22 mm	2.5	2.0	-40°C to +65°C	-	IP65	II 2 GD Ex mb II T4 / T5	281
1.1	482605	Explosion proof encapsulated electrical part "mb", 22 mm	5.0	4.0	-40°C to +65°C	-	IP65	II 2 GD Ex mb II T4 / T5	281
1.2	496131	Coil for DIN plug connection, double frequency, 22 mm	3.0	3.0	-40°C to +50°C	-	IP65	-	262
1.2	496482	Coil for DIN plug connection, double frequency coil, 22 mm	3.0	3.0	-40°C to +50°C	-	IP65	-	263
1.2	496637	Explosion proof electrical part "nc AC", 22 mm, double frequency	3.0	3.0	-40°C to +50°C	-	IP65	II 3 D Ex tc IIC T 95°C	273
2.0/2.1	481000	Coil with screw terminal, 40 mm	8.0	8.0	-40°C to +50°C	-	IP 44 to 67	-	267
2.0/2.1	485100	Coil with screw terminal, high temperature, 40 mm	8.0	8.0	-40°C to +50°C	-	IP 44 to 67	-	269
2.0/2.1	481865	Coil for DIN plug connection, 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	-	254
2.0/2.1	492453	Coil for DIN plug connection, high temperature, 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	-	255
2.0/2.1	496081	Coil with flying leads, IP 67, 32 mm	9.0	9.0	-10°C to +50°C	-	IP67	-	265
2.0/2.1	483510	Coil for DIN plug connection, 32 mm	-	9.0	-40°C to +50°C	-	IP65	-	254
2.0/2.1	483520	Coil with screw terminal, double frequency, 40 mm	-	9.0	-40°C to +50°C	-	IP 44 to 67	-	267
2.0/2.1	491514	Coil for DIN plug connection, 32 mm, UL	-	11.0	-40°C to +50°C	●	IP65	-	258
2.0/2.1	495875	Explosion proof electrical part "nc AC", 32 mm	7.0	6.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	276
2.0/2.1	495870	Explosion proof electrical part "nc AC", 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	274
2.0/2.1	496110	Explosion proof electrical part "nc AC", 32 mm	-	9.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3 / T4	274
2.0/2.1	492670	Explosion proof encapsulated electrical part "mb", 32 mm	9.0	8.0	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T4	282
2.0/2.1	492070	Explosion proof encapsulated electrical part "mb", with water proof metal housing, 50 mm	8.0	9.0	-40°C to +65°C	-	IP67	II 2 GD Ex mb II T4 / T5	283
2.0/2.1	493640	Flame proof encapsulated electrical part "db mb", double frequency	8.0	8.0	-40°C to +75°C	-	IP65	II 2 GD Ex db mb IIC T4	290
2.0/2.1	495905	Flame proof encapsulated electrical part "db mb", 37 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex db mb IIC T4	287
2.0/2.1	494040	Explosion proof increased safety electrical part "eb", 50 mm	8.0	8.0	-40°C to +90°C	-	IP67	II 2 GD Ex eb IIC T3 / T4	291
2.0/2.1	483371	Explosion proof increased safety electrical part "eb", 50 mm	8.0	8.0	-40°C to +65°C	-	IP67	II 2 GD Ex eb IIC T4	291
2.0/2.1	492190	Explosion proof increased safety and encapsulated electrical part "eb", 50 mm	9.0	11.0	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T3 / T4	294
2.0/2.1	HZ10	Explosion proof encapsulated electrical part "mb", double frequency	8.0	8.0	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T4 / T5	284
2.0/2.2	486265	Coil with screw terminal, high temperature-high power, 40 mm	14.0	14.0	-40°C to +50°C	-	IP 44 to 67	-	269
2.0/2.2	492425	Coil for DIN plug connection, high temperature, 32 mm	14.0	14.0	-40°C to +50°C	-	IP65	-	255

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Coil Group	Coil Reference	Designation	Power DC Pn (W)	Power AC Pn (W)	Ambient Temperature	UL	Degree of Protection	ATEX or NEMA 4X Protection (Gas)	Page
2.0/2.2	481044	Coil with screw terminal High power, 40 mm	-	14.0	-40°C to +50°C	-	IP 44 to 67	-	268
2.0/2.2	495880	Explosion proof electrical part "nc AC", 32 mm	14.0	14.0	-40°C to +50°C	-	IP65	II 3 GD Ex nc AC IIC T3	277
2.0/2.2	496082	Coil with flying leads, IP 67, 32 mm, UL	16.0	13.0-14.0	-40°C to +120°C	●	IP67	-	266
2.0/2.2	496155	Explosion proof increased safety electrical part "nc AC", 50 mm	14.0	14.0	-40°C to +65°C	-	IP67	II 3 GD Ex nc AC IIC T3	279
2.0/2.2	HZ11	Explosion proof encapsulated electrical part "mb", double frequency	14.0	14.0	-40°C to +50°C	-	IP65	II 2 GD Ex mb II T4 / T5	285
3.0	482730	Coil for DIN plug connection, reduced power, 32 mm	7.0	6.0	-40°C to +50°C	-	IP65	-	256
4.0	485400	Coil with screw terminal, bistable, for impulse applications, 40 mm	13.0	-	-40°C to +50°C	-	IP44	-	270
4.0	484990	Coil with screw terminal, bistable, for impulse applications, 40 mm	-	11.0	-40°C to +50°C	-	IP44	-	270
4.0	495915	Explosion proof increased safety electrical part "nc AC", 50 mm	13.0	11.0	-40°C to +65°C	-	IP67	II 3 GD Ex nc AC IIC T3	278
6.0	482740	Coil for DIN plug connection, low power, 32 mm	1.6	-	-40°C to +50°C	-	IP65	-	257
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9.0	492210	Explosion proof increased safety and encapsulated electrical part "eb", "Booster", 50 mm	1.0 to 1.8	-	-40°C to +75°C	-	IP66	II 2 GD Ex eb mb II T5 / T6	293
9.0	496565	Explosion proof intrinsically safe electrical part "ia", "Booster", 37 mm	0.77 to 2.58	-	-40°C to +80°C	-	IP67	II 1 GD Ex ia IIC T6 / T5 / T4	297
9.0	492965.01	Explosion proof intrinsically safe electrical part "ia", "Booster", 50 mm	0.3 to 2.3	-	-40°C to +65°C	-	IP66	II 1 GD Ex ia IIC T6	298
10.1	496895	Coil for DIN plug connection for oil and gas, 37 mm	8.0	8.0	-40°C to +50°C	-	IP65	-	264
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Transports
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Helicopters
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Military aircraft
Missiles
Power generation
Regional transports
Unmanned aerial vehicles

Key Products

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Engine systems & components
Fluid conveyance systems & components
Fluid metering, delivery & atomization devices
Fuel systems & components
Fuel tank inerting systems
Hydraulic systems & components
Thermal management
Wheels & brakes



Climate Control

Key Markets

Agriculture
Air conditioning
Construction Machinery
Food & beverage
Industrial machinery
Life sciences
Oil & gas
Precision cooling
Process
Refrigeration
Transportation

Key Products

Accumulators
Advanced actuators
CO₂ controls
Electronic controllers
Filter driers
Hand shut-off valves
Heat exchangers
Hose & fittings
Pressure regulating valves
Refrigerant distributors
Safety relief valves
Smart pumps
Solenoid valves
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Agriculture
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Machine tools
Marine
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Mining
Oil & gas
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Renewable energy
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Key Products

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Electrohydraulic actuators
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Hydraulic cylinders
Hydraulic motors & pumps
Hydraulic systems
Hydraulic valves & controls
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Power units
Rotary actuators
Sensors



Pneumatics

Key Markets

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Factory automation
Life science & medical
Machine tools
Packaging machinery
Transportation & automotive

Key Products

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Brass fittings & valves
Manifolds
Pneumatic accessories
Pneumatic actuators & grippers
Pneumatic valves & controls
Quick disconnects
Rotary actuators
Rubber & thermoplastic hose & couplings
Structural extrusions
Thermoplastic tubing & fittings
Vacuum generators, cups & sensors



Electromechanical

Key Markets

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 Life science & medical
 Machine tools
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 Paper machinery
 Plastics machinery & converting
 Primary metals
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Key Products

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Filtration

Key Markets

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 Food & beverage
 Industrial plant & equipment
 Life sciences
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 Mobile equipment
 Oil & gas
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 Process
 Transportation
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Key Products

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Fluid & Gas Handling

Key Markets

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 Agriculture
 Bulk chemical handling
 Construction machinery
 Food & beverage
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 Marine
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 Mobile
 Oil & gas
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 Transportation

Key Products

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Key Markets

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 Food & beverage
 Marine & shipbuilding
 Medical & dental
 Microelectronics
 Nuclear Power
 Offshore oil exploration
 Oil & gas
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 Pulp & paper
 Steel
 Water/wastewater

Key Products

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 Process control fittings, valves, regulators & manifold valves



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Key Markets

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 Consumer
 Fluid power
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 Life sciences
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 Military
 Oil & gas
 Power generation
 Renewable energy
 Telecommunications
 Transportation

Key Products

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Tel: +43 (0)7224 66201
parker.austria@parker.com

AZ – Azerbaijan, Baku
Tel: +994 50 2233 458
parker.azerbaijan@parker.com

BE/NL/LU – Benelux,
Hendrik Ido Ambacht
Tel: +31 (0)541 585 000
parker.nl@parker.com

BG – Bulgaria, Sofia
Tel: +359 2 980 1344
parker.bulgaria@parker.com

BY – Belarus, Minsk
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

CH – Switzerland, Etoy
Tel: +41 (0)21 821 87 00
parker.switzerland@parker.com

CZ – Czech Republic, Klecany
Tel: +420 284 083 111
parker.czechrepublic@parker.com

DE – Germany, Kaarst
Tel: +49 (0)2131 4016 0
parker.germany@parker.com

DK – Denmark, Ballerup
Tel: +45 43 56 04 00
parker.denmark@parker.com

ES – Spain, Madrid
Tel: +34 902 330 001
parker.spain@parker.com

FI – Finland, Vantaa
Tel: +358 (0)20 753 2500
parker.finland@parker.com

FR – France, Contamine s/Arve
Tel: +33 (0)4 50 25 80 25
parker.france@parker.com

GR – Greece, Piraeus
Tel: +30 210 933 6450
parker.greece@parker.com

HU – Hungary, Budaörs
Tel: +36 23 885 470
parker.hungary@parker.com

IE – Ireland, Dublin
Tel: +353 (0)1 466 6370
parker.ireland@parker.com

IL – Israel
Tel: +39 02 45 19 21
parker.israel@parker.com

IT – Italy, Corsico (MI)
Tel: +39 02 45 19 21
parker.italy@parker.com

KZ – Kazakhstan, Almaty
Tel: +7 7273 561 000
parker.easteurope@parker.com

NO – Norway, Asker
Tel: +47 66 75 34 00
parker.norway@parker.com

PL – Poland, Warsaw
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

PT – Portugal
Tel: +351 22 999 7360
parker.portugal@parker.com

RO – Romania, Bucharest
Tel: +40 21 252 1382
parker.romania@parker.com

RU – Russia, Moscow
Tel: +7 495 645-2156
parker.russia@parker.com

SE – Sweden, Borås
Tel: +46 (0)8 59 79 50 00
parker.sweden@parker.com

SK – Slovakia, Banská Bystrica
Tel: +421 484 162 252
parker.slovakia@parker.com

SL – Slovenia, Novo Mesto
Tel: +386 7 337 6650
parker.slovenia@parker.com

TR – Turkey, Istanbul
Tel: +90 216 4997081
parker.turkey@parker.com

UA – Ukraine, Kiev
Tel: +48 (0)22 573 24 00
parker.poland@parker.com

UK – United Kingdom, Warwick
Tel: +44 (0)1926 317 878
parker.uk@parker.com

ZA – South Africa, Kempton Park
Tel: +27 (0)11 961 0700
parker.southafrica@parker.com

North America

CA – Canada, Milton, Ontario
Tel: +1 905 693 3000

US – USA, Cleveland
Tel: +1 216 896 3000

Asia Pacific

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