





aerospace climate control electromechanical filtration fluid & gas handling hydraulics pneumatics process control sealing & shielding





# **Process Control Product Selection Guide**





ENGINEERING YOUR SUCCESS.



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### Parker Hannifin Corp.

Parker is the world's leading diversified manufacturer of motion and control technologies and systems, providing precision-engineered solutions for a wide variety of commercial, mobile, industrial and aerospace markets.

- · 263 manufacturing sites around the world
- 8,200 distributors
- 400,000 customers
- 3,200 product lines
- · Listed as PH on the NYSE

#### **Process Control**

Parker Hannifin is dedicated to being the global leader in the design, manufacture and distribution of high quality, critical flow and ultra high purity components for the Petrochemical, Chemical Processing, Oil and Gas, Power Generation, Water Analysis, Biopharmaceutical, Semiconductor Manufacturing and Analytical Equipment industries.

#### **Global Distribution**

With over 8,200 distributors, our worldwide distribution network is the strongest in the industry, providing comprehensive technical support and after-sales support. This global support provides optimum services for projects worldwide.



Parker Hannifin Corp. Headquarters, Cleveland, OH



### **Premier Customer Service**

Parker is driven to provide our customers with premier customer service through on time delivery of quality products and value added services such as the Veriflo Division Express Service Program, custom assemblies and tube fabrication classes.

### **Engineering Excellence**

By remaining focused on our customers we have been able to introduce products that not only solve our customer's problems but address specific industry needs and issues.

Using the latest in virtual engineering tools, Parker engineers have reduced the time to develop, test and manufacture our latest product innovations.

To assist our customers with their designs, our 2D and 3D CAD drawings are available online.

### **Heat Code Traceability**

Parker offers Heat Code Traceability (HCT) to meet or exceed all applicable specifications to assure our customers that they are working with a high quality product. It acts as an assurance for today and for tomorrow.

These specifications ensure high quality instrumentation components for use in fossil fuel power plants, chemical refineries, general instrumentation and processing plants. Requirements are now emerging in the semiconductor and pharmaceutical industries.

Not only are the materials continuously monitored, Parker adheres to a formal, documented Quality Assurance Program that controls manufacturing, marking, testing and examination procedures, cleaning and packaging.



HCT is offered on the following quality stainless steel components:

- MPI<sup>™</sup>, CPI<sup>™</sup> and A-LOK<sup>®</sup> Tube Fittings
- UltraSeal<sup>™</sup> and VacuSeal<sup>™</sup> Fittings
- Ball. Needle and Check Valves
- Instrumentation Pipe Fittings
- Orbital Tube Weld Fittings
- MiniButtweld<sup>™</sup> Fittings
- · Manifolds and Flanged Products
- Filters



# Fittings/Quick Couplings



### CPI™ Fittings (Catalog 4230/4233)

- · Three piece simple design to work on all instrumentation grade tubing
- · Molybdenum Disulfide coated nuts to prevent galling and provide lubrication
- · Single ferrule system treated with Suparcase<sup>™</sup> technology to insure sealing
- · Superior body seat surface finish to seal gases and liquids
- · Single ferrule technology to provide excellent anti-vibration performance
- Excellent in high thermo cycling applications



### A-LOK® Fittings (Catalog 4230/4233)

- Industry standard design for all instrumentation grade tubing
- · Silver coated threads to reduce galling
- · Back ferrule is treated with Suparcase<sup>™</sup> technology to provide a strong mechanical grip on the tube
- · Industry double ferrule design for system specifications



### MPI™ Fittings (Catalog 4234)

- · Compression fitting for medium pressure applications up to 15,000 psi (1,034 bar)
- · Inverted body and nut design for added strength with thick-wall tubing
- · Longer thread area for improved performance and resistance to vibration
- · Molybdenum Disulfide coated nuts to prevent galling and for higher temperature applications
- · Installation and rework time reduced by 50%



### Phastite® (Catalog 4235-PH)

- · Option for welded systems
- · Simple assembly process provides high integrity connections, first time every time
- · Installation time reduced to seconds
- · No loose parts, supplied factory pre assembled
- Permanent push fit tube connector with working pressures up to 13,300 psi (917 bar)



### Instrumentation Pipe Fittings (Catalog 4260)

- Manufactured from 316 stainless steel for superior corrosion resistance
- Available with NPT and ISO thread configurations
- · All exposed threads protected to prevent damage
- All pipe threads meet ANSI B1.20.1 requirements





### Welded Fittings (Catalog 4280)

- Available in socketweld, buttweld and automatic buttweld connections
- Manufactured to meet ASME Section III, and ANSI B31.1 and B31.7 codes
- Permanent, leak free connection
- For critical applications and high temperatures such as steam



### **Cylinder Connections** (Bulletin 25000248)

- High integrity and ultra high integrity (DISS) connections
- Complete line consists of nipples, nuts, gaskets, adapters, caps, plugs, assemblies, seal enhancers, flexible pigtails, torque wrenches
- Cleaned and packaged for O<sub>2</sub> service
- Seal enhancer improves connection integrity



### Brass Push-to-Connect Fittings (Bulletin 3500-QRG)

- Prestolok® push-to-connect fittings are designed for use with nylon, polyethylene, polyurethane and soft metal tubing
- · Ideal for pneumatic applications
- Equipped with stainless steel grab rings eliminating need for tube supports
- · No tools required for installation
- Designed for side-loading



### Quick Couplings (Catalog 4220)

- Non-Spill designs virtually eliminate fluid loss upon disconnection and drastically minimize air inclusion during connection
- Common industrial and global interchanges available
- Various body and seal materials available for transfer and sealing off media in corrosive or high purity applications
- Working pressures available up to 10,000 psi (690 bar)

Fitting	Working Pressure	Connection Type	Size Range
CPI™	Instrumentation Tubing*	Single ferrule compression	1/16" - 2"/2mm - 25mm Tube Diameter
A-LOK®	Instrumentation Tubing*	Double ferrule compression	1/16" - 2"/2mm - 25mm Tube Diameter
MPI™	Up to 15,000 psi (1,034 bar)	Inverted double ferrule compression	1/4" - 1" Tube Diameter
Phastite <sup>®</sup>	Up to 13,300 psi (917 bar)*	Permanent crimp*	1/4" - 1/2"/6mm - 12mm Tube Diameter
Weld-lok™	Instrument Tubing*	Tube Socket Weld	1/8" - 2" Tube Diameter
Pipe	Up to 6,000 psi (414 bar)	NPT Pipe Thread	1/16" - 2" Pipe Size
Pipe Adapters	Up to 6,000 psi (414 bar)	NPT, BSPT, and BSPP Pipe Threads	1/8" - 1"
Cylinder Connections	Up to 3,000 psi (207 bar)	Tube Stub, VacuSeal Male, NPT Male	1/4"
*Maximum suggested working pressure as indicated	in Instrument Tuhing Selection Guide Bulletin 4200-T	S	

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## **Ball/Plug Valves**



## MB Series (Catalog 4121-BV)

- · One piece compact barstock design
- · Center off position for 3-way
- 2-way, inline, angle; 3-way, 4-way and 5-way
- Standard drop-in replacement



### B Series (Catalog 4121-BV)

- 2-way, 3-way diverting or spring loaded 3-way selector designs
- Wide temperature application range -65°F (18°C) to +450°F (232°C)
- Rated for up to 6,000 psi (413.7 bar)
- Widest variety of seats, seals and port connections
- Connections include CPI™, A-LOK®, male and female NPT, UltraSeal™ and VacuSeal™



### **SWB Series** (Catalog 4121-BV)

- Zero clearance body allows repairs in field
- · Spring loaded seats and stem seals
- · Fully enclosed body bolts
- ISO-type actuator mounting design
- Available up to 1" full flow design



### HB Series (Catalog 4121-BV)

- Compact FNPT version for tight work areas
- Full operating pressure in any port
- PEEK<sup>™</sup> trunnion bearings provide high cycle life
- 10,000 psi (689 bar) rating with PEEK<sup>™</sup> seats
- Excellent for CNG



## MPB Series Ball Valve (Catalog 4234 and Catalog 4121-BV)

- 2-way and 3-way ball valve for severe service applications
- Designed for 1/4 and 1/2 turn media shutoff or switching applications



### PR Series (Catalog 4121-BV)

- Low operating torque
- Optional locking device, downstream vent and metal tee handles
- Typically used in laboratories
- $\bullet$  Most compact 90° actuated valve

**-**Parker





### Pneumatic/Electric Actuators (Catalog 4121-BV)

- 60 Series pneumatic actuators provide 90° and 180° rotation in both double acting and spring return models
- 70, 80 and 90 Series electric actuators provide 90° and 180° actuation for our B, MB, HB, SWB series ball valves



## HBV Series (Catalog 4190-HBV)

- Suitable for the most demanding applications in the oil, gas and process control industries
- Integral compression ends available, eliminating taper threads and thread sealants
- Two piece barstock design reduces body leakage paths
- Complies with ANSI/ASME B16.34 requirements where applicable
- NACE MR-01-75/ISO 15156 compliant materials available
- · Fire safe option



### 20K Hi-Pro Ball Valve (Catalog 4190-HH/20K)

- Designed for cold working pressure applications of up to 20,000 psi (1,379 bar)
- · Two piece body design
- Bi-directional

- Low torque operation
- Tru-Loc® anti-vibration locking system on gland adjuster for 100% security

				Tempe	rature	Cv	Body	/ Mat	erial	Ac	tuati	on			S	Seat/S	eal Ma	iteria	ı			End Con Size F	nection Range	
Valve Groups	Model Series	Product Description	Maximum Operating Pressure	Min	Max	Max	Brass	Stainless Steel	Alloy	Manual	Pneumatic	Electric	PCTFE	Buna-N Rubber	Ethylene Propylene Rubber	Highly Fluorinated Fluorocarbon	Fluorocarbon Rubber	PFA	GRAF01L®	PEEK	PTFE	Min	Max	Catalog
	MB	Mini Barstock Ball Valve	3,000 psi 207 bar	-65 F -54 C	300 F 149 C	11.00	χ	Х		Х	Х	Х						χ				1/16 in 3mm	3/4 in 12mm	4121-BV
	В	Ball Valve	6,000 psi 414 bar	-65 F -54 C	400 F 204 C	6.40	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х			Х	Х	1/16 in 3mm	3/4 in 12mm	4121-BV
	SWB	Swing Out Ball Valve	2,500 psi 172 bar	-65 F -54 C	600 F 316 C	35.00		Х		Х	Х	Х		Х	χ		Х		Х	Х	Х	1/4 in n/a mm	1 in n/a mm	4121-BV
Ball/Plug	НВ	Ball Valve	10,000 psi 689 bar	-65 F -54 C	400 F 204 C	1.00		Х		Х	Х	Х	Х	Х	χ		Х			Х		1/4 in 6mm	1/2 in 12mm	4121-BV
Valves	MPB	Med. Pressure Ball Valve	20,000 psi 1379 bar	-10 F -23C	400 F 204 C	8.80		Х		Х	Х	Х		Х	Х	Х	Х			Χ		1/8 in n/a mm	1 in n/a mm	4234 and 4121-BV
	PR	Plug Valve	3,000 psi 207 bar	-10 F -23C	400 F 204 C	3.20	Х	Х						Х	Х	χ	Х					1/8 in 3mm	1/2 in 12mm	4121-BV
	HBV	Ball Valve	10,000 psi 689 bar	-65 F -54 C	450 F 232 C			Х	Х	Х	Х								Х	Х	Х	1/8 in 6mm	1 in 25mm	4190-HBV
	20K HPBV	Hi-Pro Ball Valve	20,000 psi 1379 bar	- 4F -20C	392 F 200 C	1.56		Х												Х		1/4 in 6mm	9/16 in 14mm	4190-HH 20K



## **Check Valves**



### C Series (Catalog 4135-CV)

- Resilient, custom molded, seat design
- Back stopped poppet to minimize spring stress
- Cracking Pressures: ½, 1, 5, 10, 25, 50, 75 and 100 psi (.023, .069, .345, .69, 1.72, 3.45, 5.17, 6.9 bar)
- Port connections include male and female NPT, CPI<sup>™</sup>, A-LOK<sup>®</sup>, UltraSeal<sup>™</sup>, VacuSeal<sup>™</sup>, BSP, SAE and Seal-Lok<sup>®</sup>



### CO Series (Catalog 4135-CV)

- Suitable for applications requiring high integrity leak rates and re-sealing capabilities
- Seal integrity to 4 x 10<sup>-9</sup> std. atm-cc/sec
- Back stopped poppet to minimize spring stress
- Cracking Pressures: ½, 1, 5, 10, 25, 50, 75 and 100 psi (.023, .069, .345, .69, 1.72, 3.45, 5.17, 6.9 bar)
- Available with highly fluorinated fluorocarbon rubber
- Only check valve with published helium leak rate



#### CB Series (Catalog 4135-CV)

- Reduces maintenance while improving performance requirements on dual fuel turbines
- Cracking Pressures: 1, 5, 10, 25, 50, 75, 100 and 120 psi (.023, .069, .345, .69, 1.72, 3.45, 5.17, 6.9, 8.27 bar)
- Rugged ball design for demanding applications
- For high temperatures with highly viscous medias



### MPC Series (Catalogs 4234 and 4135-CV)

- · Variety of elastomeric poppet seals
- 5 psi (.345 bar) cracking pressure
- MPI<sup>™</sup>, cone & thread and female NPT connections available
- For pressures up to 20,000 psi (1,379 bar)





### MPCB Series (Catalogs 4234 and 4135-CV)

- Metal to metal seat for use in applications that cannot accept fluorocarbon rubber
- 5 psi (.345 bar) cracking pressure
- MPI<sup>™</sup>, cone & thread and female NPT connections available
- For pressures up to 20,000 psi (1379 bar)



### LC Series (Catalog 4135-CV)

- For extreme temperature applications
- The gravity assisted poppet uses reverse flow to achieve a seal to within 99.9% of forward flow

			Tempe	rature	Cv	Cracking Pressure	Bo Mate	dy erial				Seal M	ateria	l			End Con	nections	
Valve Groups	Model Series	Maximum Operating Pressure	Min	Max	Max	Max	Brass	Stainless Steel	Parkerfill/ Parkercarbon	Buna-N Rubber	Ethylene Propylene Rubber	Highly Fluorinated Fluorocarbon	Fluorocarbon Rubber	Neoprene Rubber	Metal	PTFE	Min	Max	Catalog
	С	6,000 psi 414 bar	-65 F -54 C	400 F 204 C	6.70	100 psi 6.9 bar	Х	Х		Х	Х	Х	Х	Х		Х	1/8 in 3 mm	1 in 25 mm	4135-CV
	CO	6,000 psi 414 bar	-15 F -26 C	400 F 204 C	2.70	100 psi 6.9 bar		Х		Х	Х	Х	Х				1/4 in 6mm	1/2 in 12mm	4135-CV
Check	СВ	3,000 psi 207 bar	-65 F -54 C	450 F 232 C	6.00	120 psi 8.27 bar		Х	Х								3/8 in	3/4 in	4135-CV
Valves	MPC	20,000 psi 1379 bar	-10 F -23C	400 F 204 C		5 psi .345 bar		Х		Х	Х	Х	Х				1/4 in	1 in	4234 and 4135-CV
	MPCB	20,000 psi 1379 bar	-100 F -73 C	600 F 316 C		5 psi .345 bar		Х							Х		1/4 in	1 in	4234 and 4135-CV
	LC	6,000 psi 414 bar	-100 F -73 C	900 F 482 C	2.30			Х							Х		1/8 in	1/2 in	4135-CV



## **Filters**



### F Series (Catalog 4135-CV)

- Replaceable sintered 316 stainless steel filter element
- Optional 250 and 450 micron wire cloth filter elements



### FT Series (Catalog 4135-CV)

- Filter elements are easily replaced without disconnecting the tube lines
- Fast Loop bypass option enables a continuous self cleaning flow
- Replaceable sintered 316 stainless steel filter element
- · Optional 250 and 450 micron wire cloth filter elements



### MPF Series (Catalogs 4234 and 4135-CV)

- · High pressure applications up to 20,000 psi (1,379 bar)
- Sintered 316 stainless steel filter disc
- Inline filters help protect valuable equipment in the process system
- MPI<sup>™</sup>, cone & thread and female NPT connections available

				Tempe	erature	Cv		Body M	laterial			Sea	I Mate	rial			<b>End Con</b>	nections	
Valve Groups	Model Series	Product Description	Maximum Operating Pressure	Min	Max	Max	Micron Range	Brass	Stainless Steel	Fluorocarbon Rubber	Buna-N Rubber	Ethylene Propylene Rubber	Highly Fluorinated Fluorocarbon	Neoprene Rubber	PTFE	Silver Plated Nickel Alloy	Min	Max	Catalog
	F	Inline Filter	6,000 psi 414 bar	-65 F -54 C	400 F 204 C	3.40	.5 to 500	Х	Х	Х	Х	Х		Х	Х		1/8 in 3mm	1 in 25mm	4135-CV
Filters	FT	Tee Filter	6,000 psi 414 bar	-100 F -73 C	900 F 482 C	2.50	.5 to 500	Х	χ	Х	Х	Х	Х	Х	Х	Х	1/8 in 6mm	1/2 in 12mm	4135-CV
	MPF	Medium Pressure Filter	20,000 psi 1379 bar	-10 F -23C	400 F 204 C	0.59	.5 to 100		Х						Х		1/4 in	9/16 in	4234 and 4135-CV



## **Relief Valves**



## RL4 Series (Catalog 4135-CV)

- · Handle for field maintenance
- Externally adjustable pressure settings while valve is in operation
- · Seven different springs
- Manual override option with positive stem retraction is available for the full working pressure range
- Color coded springs and labels indicate spring cracking range



### RH4 Series (Catalog 4135-CV)

- · Eight springs
- Manual override option with positive stem retraction is available for pressures up to 1,500 psi (103 bar)
- Preset from factory and comes with standard springs



### **HPRV – PED High Pressure Proportional Relief Valve**

(Catalog 4190-HPRV)

- Captured moulded seat design is blow-out and chip resistant
- Color coded springs and labels indicate spring cracking range
- Unique Tru-Loc facility prevents accidental adjustment
- Low friction stem seal design prevents friction which increases accuracy of cracking pressure and reseat pressure
- Balanced poppet design ensures consistent cracking pressure regardless of system back pressure
- Multiple end connections available



### **HPRV – PED Low Pressure Proportional Relief Valve**

(Catalog 4190-HPRV)

- Pressure settings are externally adjustable. Six different spring ranges provide greater system sensitivity and enhanced performance
- Back pressure has minimum effect on cracking pressure
- Color coded springs and labels indicate spring cracking range
- Orifice sizes: 5.2mm (0.203")
- Lock wire feature secures a given pressure setting
- Multiple end connections available

			Tempe	erature	Cv	Body Material		S	eal Materia	al		End Con	nections	
Valve Groups	Model Series	Maximum Operating Pressure	Min	Max	Max	Stainless Steel	Buna-N Rubber	Ethylene Propylene Rubber	Highly Fluorinated Fluorocarbon	Fluorocarbon Rubber	Neoprene Rubber	Min	Max	Catalog
	RL	400 psi 28 bar	-70 F -57C	400 F 204 C	0.8	Х	Х	Х	Х	Х	Х	1/4 in 6mm	1/4 in 8mm	4135-CV
Relief	RH	6,000 psi 414 bar	-70 F -57C	400 F 204 C	0.4	Х	Х	Х	Х	Х	Х	1/4 in 6mm	1/4 in 8mm	4135-CV
Valves	HPRV – High Pressure	6,000 psi 414 bar	-45 F -43C	250 F 121 C	.41	Х		Х	Х	Х	Х	1/4 in 6mm	1/4 in 6mm	4190-HPRV
	HPRV – Low Pressure	400 psi 27.6 bar	-45 F -43C	250 F 121 C	.41	Х		Х	Х	Х	Х	1/4 in 6mm	1/4 in 6mm	4190-HPRV

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# **Bleed and Purge Valves**



### BV Series (Catalog 4135-CV)

- · Recommended for use in bleeding hydraulic systems
- Valve vents line pressure to atmosphere or to containment
- · Multi-valve manifolds or gauge/root valves



### PG Series (Catalog 4135-CV)

- · Vent hole in the cap bleeds, drains or purges system pressure
- Optional PTFE ball requires only finger-tight torque to achieve a leak-tight seal
- · Crimped cap ensures safe relief of system pressures

	Maximum	lempe	rature	Cv		Body Materia		End Con	nections	
Model Series	Operating Pressure	Min	Max	0.1	Brass	Stainless Steel	Alloy	Min	Max	Catalog
BV	10,000 psi 690 bar	-65 F -54 C	850 F 454 C	Х		Х	Х	1/4"	1/2"	4135-CV
PG	4,000 psi 276 bar	-65 F -54 C	400 F 204 C		Х	Х	Х	1/8"	1/2"	4135-CV
MPBV	30,000 psi 2068 bar	-10 F -23C	400 F 204 C			Х		9/16"	9/16"	4234 and 4135-CV
	Series BV PG	Model Series         Operating Pressure           BV         10,000 psi 690 bar           PG         4,000 psi 276 bar           MMRM         30,000 psi	Model Series         Operating Pressure         Min           BV         10,000 psi 690 bar         -54 C           PG         4,000 psi 276 bar         -54 C           MARRY         30,000 psi         -10 F	Model Series         Operating Pressure         Min         Max           BV         10,000 psi 690 bar         -65 F -54 C         850 F 454 C           PG         4,000 psi 276 bar         -65 F -54 C         400 F 204 C           MARRY         30,000 psi         -10 F         400 F	Model Series         Operating Pressure         Min         Max         0.1           BV         10,000 psi 690 bar         -65 F -54 C         850 F 454 C         x           PG         4,000 psi 276 bar         -65 F -54 C         400 F 204 C           MMRN/         30,000 psi         -10 F         400 F	Model Series         Operating Pressure         Min         Max         0.1         Brass           BV         10,000 psi 690 bar         -65 F -54 C         850 F 454 C         x           PG         4,000 psi 276 bar         -65 F -54 C         400 F 204 C         x           MARRY         30,000 psi         -10 F         400 F	Model Series         Operating Pressure         Min         Max         0.1         Brass         Steel           BV         10,000 psi 690 bar -56 F 690 bar -54 C 454 C         x         x           PG         4,000 psi 276 bar -54 C 204 C 204 C         x         x           MMRIV         30,000 psi -10 F 400 F         400 F	Model Series         Operating Pressure         Min         Max         0.1         Brass         Stainless Steel         Alloy           BV         10,000 psi 690 bar -54 C         -65 F 454 C         x         x         x         x           PG         4,000 psi 276 bar -54 C         -54 C         204 C         x         x         x           MMPD// 30,000 psi -10 F         -10 F         400 F         x         x         x	Model Series         Operating Pressure         Min         Max         0.1         Brass         Stainless Steel         Alloy         Min           BV         10,000 psi 690 bar         -65 F -54 C         454 C         x         x         x         x         1/4"           PG         4,000 psi 276 bar -54 C         -65 F -54 C         204 C         x         x         x         x         1/8"           MMPDV         30,000 psi -10 F         400 F         x         x         2016"         x         2016"	Model Series         Operating Pressure         Min         Max         0.1         Brass         Stainless Steel         Alloy         Min         Max           BV         10,000 psi 690 bar -54 C         -65 F 454 C         X         X         X         X         1/4"         1/2"           PG         4,000 psi 276 bar -54 C         -54 C         204 C         X         X         X         X         1/8"         1/2"           MMPDV         30,000 psi -10 F         400 F         X         2046"         X         2046"         2046"



# **Metering Valves**



### N Series (Catalog 4170-MV)

- · Panel or in-line mounting
- · Angle or in-line patterns
- Valve stem threads not in contact with process fluid



### HR Series (Catalog 4170-MV)

- Bubble tight shut-off capability
- High resolution metering valve with limited hysteresis
- Seven optional valve stem tapers



### Cartridge Valve (Catalog FM-1058)

- Valve pin o-ring guarantees positive shut off without stem damage
- Self-lubricating orifice liner
- Seven available needle tapers

			Tempe	rature	Cv	Body M	laterial		Se	at Mater	rial		End Con	nections	
Valve Groups	Model Series	Maximum Operating Pressure	Min	Max	Max	Brass	Stainless Steel	Buna-N Rubber	Ethylene Propylene Rubber	Highly Fluorinated Fluorocarbon	Fluorocarbon Rubber	Neoprene Rubber	Min	Max	Catalog
	NS	2,000 psi 138 bar	-50 F -46 C	400 F 204 C	0.040	Х	Х	Х	Х	Х	Х	Х	1/16 in 3mm	1/4 in 6mm	4170-MV
	NM	1,000 psi 69 bar	-50 F -46 C	400 F 204 C	0.100	Х	Х	Х	Х	Х	Х	Х	1/8 in 3mm	1/4 in 6mm	4170-MV
Metering Valves	NL	1,000 psi 69 bar	-50 F -46 C	400 F 204 C	0.200	Х	Х	Х	Х	Х	Х	Х	1/8 in 6mm	3/8 in	4170-MV
	HR	250 psi 17 bar	-50 F -46 C	400 F 204 C	0.100	Х	Х	Х	Х	Х	Х	Х	1/16 in 3mm	1/4 in 6mm	4170-MV
	Cartridge Valve	250 psi 17.2 bar													



## **Needle Valves**



### V Series (Catalog 4110-NV)

- For positive leak tight shut-off and regulation of fluids
- Choice of three stem types
- Wide variety of size and end connections



### SN6 Series (Catalog 4110-NV)

- Provides shut-off and coarse regulation of liquids and gases
- · Choice of two stem types
- In-line and angle patterns
- · Ideal cylinder valve



### VQ Series (Catalog 4110-NV)

- In-line and angle patterns
- Panel mountable
- · Color-coded handles
- Quick actuation for low pressure applications



### NP6 Series (Catalog 4110-NV)

- Choice of two non-rotating stem types
- Packing below power threads
- Panel mountable
- Fracture resistant nylon handle



### PV Series (Catalog 4110-NV)

- · Roddable, straight through flow path
- Gauge port option
- Bonnet lock plate resists accidental bonnet disengagement
- PEEK<sup>™</sup>, Acetal, PFA seat materials available



### U Series (Catalog 4110-NV)

- Stem packing below the threads isolates the thread lubricant from the flow
- · Severe service applications
- Panel mountable
- · Ideal for steam blowdown



Email: ps@hymatik.com

### HNV Series (Catalog 4190-HV)

- Compact needle valves
- For applications up to 10,000 psi (690 bar)
- Available with integral A-LOK® or CPI™ connections, reducing leak paths and reducing installation costs
- Soft tipped optional seating available for gaseous applications

**-**Parker





### RPV Series (Catalog 4190-HV)

- For fluids containing high levels of contamination frequently found in oil and gas processing facilities
- Straight through flow pattern, roddable design
- 100% repeatable bubble tight shut off



### **HGV Series** (Catalog 4190-HV)

- Up to 10,000 psig (690 barg)
- Compact single and multi port gauge valves
- Soft tipped optional seating available for gaseous applications



### 20K H-Series (Catalog 4190-HH/20K)

- Designed for cold working pressure applications of up to 20,000 psi (1,379 bar)
- Non-rotating spindle for bubble tight shut off
- · Externally adjustable gland
- Fine threaded stem raiser gives increased stem sensitivity and accuracy
- Tru-Loc® anti-vibration locking system on gland adjuster for 100% security

			Tempe	rature	Cv		dy erial	Actu	ation			Seat/S	eal Mater	ial			End Con	nections	
Valve Groups	Model Series	Maximum Operating Pressure	Min	Max	Max	Stainless Steel	Alloy	Manual	Pneumatic	PTFE	Buna-N Rubber	Ethylene Propylene Rubber	Highly Fluorinated Fluorocarbon	Fluorocarbon Rubber	Silicon Rubber	GRAF01L®	Min	Max	Catalog
	٧	6,000 psi 414 bar	-65 F -54 C	450 F 232 C	1.30	Х	Х	Х		Χ	Х	Х		Х			1/8 in 3mm	3/4 in 12	4110-NV
	SN6	6,000 psi 414 bar	-65 F -54 C	450 F 232 C	0.30	Х		Х		χ						Х	1/4 in	1/4 in	4110-NV
	VQ	300 psi 21 bar	-20 F -29 C	200 F 93 C	0.80	Х		χ	Х	χ	χ	Х	Х	Х			1/8 in 3mm	1/2 in 10mm	4110-NV
	NP6	6,000 psi 414 bar	-70 F -57 C	700 F 371 C	0.60	χ		Х		χ	χ	Х	Х	Х		Х	1/4 in 6mm	3/8 in 8mm	4110-NV
	PV	6,000 psi 414 bar	-20 F -29 C	400 F 204 C	2.00	Х		Х			χ	Х	Х	Х	χ		1/4 in	3/4 in	4110-NV
	U	6,000 psi 414 bar	-65 F -54 C	1200 F 649 C	2.70	Х		Х		χ					χ		1/8 in 6mm	1 in 25mm	4110-NV
Needle	MPN	20,000 psi 1379 bar	-65 F -54 C	800 F 427 C		Х		Χ	Х	χ					χ		1/4 in	1 in	4234 and 4110-NV
Valves	MPGV	30,000 psi 2068 bar	-10 F -23C	400 F 204 C		χ		χ			Х	Х	Х	Х			9/16 in	9/16 in	4234 and 4110-NV
	HNV	10,000 psi 690 bar	-65 F -54 C	1000 F 538 C	0.35	Х	Х	χ		χ						Х	1/4 in 6mm	1/2 in 12mm	4190-HV
	HRPV	10,000 psi 690 bar	-65 F -54 C	1000 F 538 C	1.80	χ	χ	χ		Х						Х	1/4 in 6mm	1/2 in 12mm	4190-HV
	HGV	10,000 psi 690 bar	-65 F -54 C	1000 F 538 C	0.35	χ	Х	χ		Х						Х	1/4 in 6mm	1/2 in 12mm	4190-HV
	HVG	6,000 psi 414 bar	-65 F -54 C	1000 F 538 C	0.35	Х	Х	Х		Χ						Х	1/4 in 6mm	1/2 in 12mm	4190-HV
	HYNV	10,000 psi 690 bar	-65 F -54 C	1000 F 538 C	0.35	Х				Х						Х	1/4 in 6mm	1/2 in 12mm	4190-HV
	20K HNV	20,000 psi 1379 bar	-63 F -54 C	392F 200 C	0.66	Х				Х							1/4 in 6mm	9/16 in 14mm	4190-HH 20K



## Manifold Valves



## CCIMS® (Catalog 4190-CCIMS)

- Close coupled solution for flow measurement applications
- Reductions in installation time of up to 75%
- Reductions in connections and leak paths of up to 85%
- Features phastfit® for rapid transmitter removal and connection



### Monoflange (Catalog 4190-FP)

- Compact double block and bleed valves, featuring needle valves
- Reducing installations cost while improving safety through a reduction in leak paths
- Configurable options include single block, double block and double block and bleed
- Available in a range of materials including carbon steel, stainless steel, duplex, alloy 625



### Pro-Bloc® (Catalog 4190-FP)

- Compact double block and bleed valves, featuring needle or ball valve options
- Reducing installations cost while improving safety through a reduction in leak paths
- Configurable options include single block, double block and double block and bleed
- Available in a range of materials including carbon steel, stainless steel, duplex, alloy 625



### Monoflange (Fe) & Pro-Bloc® (Fe) (Catalog 4190-FP)

- ISO 15848 approved
- Highest possible 'A' class leakage rates achieved
- All threads sealed from the media
- · All ball valves are bi-directional
- Firesafe design available





### **H-Series** (Catalogs 4190-PM and 4190-FM)

- A comprehensive range of 2, 3 and 5 valve manifolds for pressure and flow measurement applications
- Available with integral PTFree® connections, reducing leakpaths and installation cost
- Available in stainless steel and many exotic alloys, including Hastelloy<sup>®</sup>, 6Mo, Monel<sup>®</sup>, and Alloy 625
- · Direct or remote mounting options



## HBM Series (Catalog 4190-HBM)

- A complete range of ball valves 10mm ball and needle valve manifolds
- Including block and bleed, and double block and bleed manifold options
- Working pressures up to 10,000 psi (690 bar)
- Available with integral A-LOK® or CPI<sup>™</sup> connections, reducing leak paths and installation costs

				Tempe	erature	Bod	y Mate	rial	Pac	king		Seat	/Tip		<b>End Connection</b>	on Size Range	
Valve Groups	Model Series	Product Description	Maximum Operating Pressure	Min	Max	Carbon Steel	Stainless Steel	Alloy	GRAF01L®	PTFE	316SS	PEEK™	PCTFE	PTFE	Min	Max	Catalog
	MF	double block and bleed	ANSI 2,500 API 10,000	-65 F -54 C	1000 F 538 C	Х	Χ	Х	Х	Х	Χ	Х	Х		1/4 in 6mm	1/2 in 12mm	4190-FP
	PB	double block and bleed	ANSI 2,500 API 10,000	-65 F -54 C	450 F 232 C	Х	Χ	Х	Х	Х		Х		Х	1/4 in 6mm	1 in 25mm	4190-FP
Manifolds	H2	2 valve manifolds - needle style	10,000 psi 689 bar	-65 F -54 C	1000 F 538 C		Χ	Х	Х	Х	Х	Х	Х		1/4 in 6mm	1/2 in 12mm	4190-PM
Wallius	НЗ	3 valve manifolds - needle style	10,000 psi 689 bar	-65 F -54 C	1000 F 538 C		Χ	Х	Х	Х	Х	Х	Χ		1/4 in 6mm	1/2 in 12mm	4190-FM
	H5	5 valve manifolds - needle style	10,000 psi 689 bar	-65 F -54 C	1000 F 538 C		Χ	Х	χ	Х	Χ	Х	χ		1/4 in 6mm	1/2 in 12mm	4190-FM
	НВМ	2 & 3 valve manifolds ball style	10,000 psi 689 bar	-65 F -54 C	450 F 232 C		Χ	Х	χ	Х		Х		Х	1/4 in 6mm	1/2 in 12mm	4190-HBM



# **Diaphragm Valves**



### **NV17** (Bulletin 25000222)

- General purpose, high cycle, compact valve
- For regulator outlet valve, gas control panels and analyzer sampling system applications
- · Air operated (NC & NO), spin handwheel, lever, indicating handwheel and mini lever options



### **NV55** (Bulletin 25000053)

- · General purpose, high flow compact valve
- For flowing large volumes of corrosive and non-corrosive fluids





### **FS190** (Bulletin 25000034)

- · Excess flow shut-off valve
- Manual or pneumatic actuation
- Non-attitude sensitive
- Six pressure/flow limit settings
- · Available with welded fittings as well as 1/4" NPT female fittings
- · Clear indication of operating position – either "Open (Reset)" or "Auto (Shut Off)"



### **16 Series** (Bulletin 25000232)

- High pressure valve for gas manifold/box systems
- 316L SST machined body design
- Metal-to-metal diaphragm seal
- Packless valve design

				Tempe	rature	C	v	В	ody Materi	al	Actua	ation	
Valve Groups	Model Series	Product Description	Maximum Operating Pressure	Min	Max	Min	Max	Brass	Stainless Steel	Alloy	Manual	Pneumatic	Bulletin
	NV17	Diaphragm Springless	250 psig 17 barg	-15 F -26 C	150 F 66 C	0.15	0.17	Х	Х	Х	х	Х	25000222
Diaphragm Valves	NV55	Diaphragm Springless	250 psig 17 barg	-15 F -26 C	150 F 66 C	0.48	0.55		Х		Х	Х	25000053
	16 Series	Diaphragm Spring	3,000 psig 207 barg	-65 F -54 C	150 F 60 C	0.3	0.3		Х		χ	Х	25000232



# Regulators

## **Pressure Regulators**



### IR4000 Series (Bulletins 25000226, 25000223, 25000233)

- · Internally threadless design
- Convoluted Hastelloy C-22® diaphragm
- Available in 316L SST, Brass, Hastelloy C-22®, Monel®, and 316L SST Welded Body
- Seals available for nitrous oxide and hydrocarbon applications
- · Low dead volume
- General purpose for instrument/analyzer and semiconductor applications



#### **IR6000 Series** (Bulletins 25000141, 25000224, 25000227)

- · Dual stage regulator
- · Internally threadless design
- Convoluted Hastelloy C-22® diaphragm
- Available in 316L SST, Brass, Hastelloy C-22®, Monel®, and 316L SST Welded Body
- Virtually eliminates supply pressure effect
- Provides cylinder gas pressure reduction in refineries, process analytical systems and specialty gases



### IR5000 Series (Bulletins 25000157, 25000229)

- · Internally threadless design
- Large convoluted Hastelloy C-22® diaphragm
- Available in 316L SST, 316L SST Welded Body
- Greater sensitivity for precise pressure control
- For analyzer system gas management and instrument calibration



### **HFR900** (Bulletin 25000035)

- · High flow regulator
- Self-contained replaceable valve seat
- For corrosive and noncorrosive fluid applications
- Available in 316L SST and Brass



### **HF1200** (Bulletins 25000198, 25000217)

- High flow regulator
- Inlet pressure up to 1,250 psig (86 barg)
- · Available welded and threaded
- 1.2 Cv
- Large convoluted diaphragm provides stable pressure control



### **APR66** (Bulletin 25000027)

- High pressure piston sensing regulator
- · Low actuating torque
- Pressures up to 6,000 psig (413.7 barg)
- Available in 316L SST and Brass

**-**Parker





### **HPR 800** (Bulletin 25000039)

- · High pressure diaphragm regulator
- For corrosive and non-corrosive applications
- Inlet pressure up to 5,000 psig (345 barg)
- · Low actuating torque
- Available in 316L Stainless Steel and Brass
- Outlet pressures up to 2,500 psig (172 barg)



#### MIR700 (Bulletin 25000046)

- Compact single stage regulator
- For low to medium pressure applications that require pressure control in a compact space
- Available in 316L Stainless Steel and Brass
- Precise flexing Hastelloy C-22 diaphragm



### NPR4100 (Bulletin 25000153)

- · Negative pressure regulation
- · Internally threadless design
- Convoluted Hastelloy C-22<sup>®</sup> diaphragm
- For delivery of low pressure gases from liquid sources
- White knob indicates negative pressure



### Instrument Pressure Regulators (Catalog FM- 1057)

- All models are direct acting, non-relieving and cleaned for analytical instrument service
- Designed specifically to provide high resolution control at the low flow rates typical in instrumentation applications
- Available with special port locations, manifold mount configurations or with the regulator integrated into a larger, multi-functional package

			Pre	essure	Ü	V		Roay I	nateriai			Ü	onnections		
Regulator Groups	Model Series	Туре	Maximum Inlet Pressure	Maximum Outlet Pressure	Min	Max	316L SS	Brass	Hastelloy C-22®	Monel®	Min FNPT	Max FNPT	Compression	Face Seal or Tube	Bulletin
	IR4000	General Purpose	4,000 psig 276 barg	500 psig 35 barg	0.02	0.15	х	Х	х	X	1/8"	1/2"	х		25000226, 25000223, 25000233
	IR5000	Sensitive	3,500 psig 241 barg	250 psig 17 barg	0.02	0.15	Х		Х	Х	1/8"	1/2"	Х		25000157, 25000229
	HFR900	High Flow	500 psig 35 barg	150 psig 10 barg	0.	85	Х	Х			1/4"	1/2"	Х		25000035
Single Stage	APR66	High Pressure	6,000 psig 414 barg	6000 psig 414 barg	0.	05	Х	Х			1/8"	1/4"			25000027
Staye	HPR800	High Pressure	5,000 psig 345 barg	2500 psig 172 barg	0.	02	Х	Х			1/4"	1/4"			25000039
	MIR700	Low Pressure	3,000 psig 207 barg	200 psig 14 barg	0.	02	Х	Х			1/8"	1/4"		Х	25000046
	NPR4100	Absolute Pressure	250 psig 17 barg	-26 in Hg to 10 psig -1.8 in Hg to .7 barg	0.02	0.15	Х	Х	Х	Х	1/8"	3/8"	Х		25000153
	HF1200	High Flow	1,250 psig 86 barg	200 psig 14 barg	1	.2	Х				1/2"	3/4"	Х	Х	25000198, 25000217
Dual Stage	IR1600	High Pressure	4,000 psig 276 barg	250 psig 17 barg	0.02	0.15	х	Х	х	Х	1/8"	1/2"	Х		25000141, 25000224, 25000227

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# Regulators

# **Back Pressure Regulators**



## **ABP1** (Bulletin 25000021)

- · Reduce contamination and accurately control back pressure
- · Internally threadless design
- Convoluted Hastelloy C-22® diaphragm
- Integral diaphragm stop
- Available in 316L SST, Hastelloy C-22®, Monel®



## **ABP3** (Bulletin 25000022)

- · Internally threadless design
- · Provides sensitive pressure adjustments
- Large convoluted Hastelloy C-22® diaphragm
- Integral diaphragm stop
- · Available in 316L SST, Hastelloy C-22®



### **BPR50** (Bulletin 25000030)

- · For use with corrosive and non-corrosive fluids
- Adjustable from 100 psi (7 bar) to 2,000 psi (138 bar)
- · Piston sensed high pressure back pressure regulator
- · Available in 316L SST

				Pressure	Cv		Body Material			Connections		
	Regulator Groups	Model Series	Туре	Maximum Inlet Pressure	Min	Max	316L SS	Hastelloy C-22®	Monel®	Min FNPT	Max FNPT	Bulletin
	Back Pressure	ABP1	General Purpose	Up to 500 psig 35 barg	0.06	0.30	X	Х	Х	1/8"	1/4"	25000021
		ABP3	Sensitive	Up to 60 psig 4 barg	0.06	0.30	Χ	Χ		1/8"	1/4"	25000022
		BPR50	High Pressure	Up to 2,000 psig 138 barg	0.45		X			1/4"	1/4"	25000030



# **Vaporizing Regulators**



## **AVR3** (Bulletin 25000138)

- Steam heat design
- · Internally threadless design
- Available in 316L SST, Monel<sup>®</sup>, Hastelloy C-22<sup>®</sup>
- Internal liquid volume only .5cc
- Convoluted Hastelloy C-22® diaphragm



#### **AVR4** (Bulletin 25000137)

- · Electrical heat design
- Field serviceable heat transfer element
- · CSA, Cenelec, and ATEX certified
- · Internally threadless design
- 120v or 240v, 50/60 Hz
- Convoluted Hastelloy C-22® diaphragm
- Available in 316L SST, Monel<sup>®</sup>, Hastelloy C-22<sup>®</sup>

				Pressure		Cv		Body Material			Conne	ctions	
	Regulator Groups	Model Series	Туре	Maximum Inlet Pressure	Maximum Outlet Pressure	Min	Max	316L SS	Monel®	Hastelloy C-22®	Min FNPT	Max FNPT	Bulletin
	Vaporizing	AVR3	Steam Heated	3,500 psig 241 barg	500 psig 35 barg	0.06		X	Х	Х	1/8"	1/8"	25000138
	Regulators	AVR4	Electrically Heated	3,500 psig 241 barg	500 psig 35 barg	0.	06	Χ	Х	Х	1/8"	1/8"	25000137

## **Tied Diaphragm Regulators**



#### **735 Series** (Bulletin 25000004)

- · Dual stage tied diaphragm regulator
- Greater consistency in outlet pressure regardless of inlet pressure fluctuations
- Provides shut off of corrosive or hazardous gases for added safety
- Available in 316L SST or Hastelloy C-22®



### 959 Series (Bulletin 25000019)

- Tied diaphragm design to minimize regulator creep
- · Internally threadless design
- Metal to metal diaphragm seal
- Available in 316L SST and Hastelloy C-22®

				Pressure		Cv		Body Material		Connections		
	Regulator Groups	Model Series	Туре	Maximum Inlet Pressure	Maximum Outlet Pressure	Min	Max	316L SS	Hastelloy C-22®	Min FNPT	Max FNPT	Bulletin
	Tied	735	Two Stage	3,500 psig 240 barg	100 psig 7 barg	0.0	04	Х	Х	1/4"	1/4"	25000004
	Diaphragm Regulators	959	Single stage	3,500 psig 240 barg	150 psig 10 barg	0.04	0.20	Х	Χ	1/4"	1/4"	25000019



# Flowmeters/Flow Controllers



### Gas Mass Flow Controllers (Catalogs FM-1041 & FM 441)

- Models available with flow ranges of 0-5 sccm to 0-1000slpm N2
- Responds to a step change in setpoint in less than one second
- Accuracy options down to 1% of rate
- Available with Analog or Digital I/O including ModBus, ProfiBus and DeviceNet
- Local or remote setpoint and display capability



### Variable Area Purgemeter (Catalog FM-1058)

- Variable area flowmeters include 65mm and 150mm scale length tube assemblies
- Available in either forged body or side-plate construction
- Interchangeable flow tube assemblies and valves allow configuration changes without removal from process system



#### LC223S (Bulletin 25000043)

- High pressure gas or liquid flow controller
- For liquid chromatography, chemical injection and sampling
- Provides constant flow with varying downstream pressure
- Wide flow range: from 25scc/m to 40 slpm



### **SC423XL** (Bulletin 25000054)

- For air and analyzing sampling systems
- Reliable, adjustable precision flow control as low as 1scc/m
- Stable flows over a wide temperature band
- Consistent flow control as vacuum pressure changes from 28 in.
   Hg to 5 in. Hg



### VCD-1000 (Catalog FM-1058)

- Turn vs. flow relationship is linear regardless of pressure fluctuations
- Flow rates from 5sccm to 1,500sccm
- Standard panel mount configuration





### **Severe Duty Gas Mass Flow Controllers** (Bulletin FM-1164)

- NEMA 4X / IP66 certified and available in Class1, Div. 2, ATEX Zone 2 and IEC Ex certified versions with industry standard connectors
- Available with Analog or Digital I/O including ModBus, ProfiBus and DeviceNet
- Models available with flow ranges of 100sccm to 100SLPM and accuracy of 1% rate



### Acrylic Flowmeters (Bulletin FM-1160)

- Brass, PVC or stainless steel process connections
- Metering tube of machined cast acrylic
- Scales can be produced in any volumetric unit



### Glass Tube Flowmeters (Bulletin FM-1163)

- Available in 35 flow ranges in 6 tube sizes
- Industry standard dimensions
- · Latching reed switch alarm option



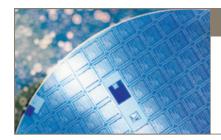
### **Metal Tube Variable Area Flowmeters**

(Bulletins FM-1158, FM-1161, FM-1162)

- Multiple process connection options including NPT and ANSI flanges
- Optional inductive slot sensor alarms and 4-20 mA transmitter
- 316SS, Monel® or Hastelloy® construction



# **PFA/PTFE Products**



## Fluoropolymer Components

Durable, leak free fluoropolymer products are used in a variety of industries, including semiconductor manufacturing, chemical/food/pharmaceutical/biomedical processing, as well as analytical instrumentation.

Partek fluoropolymer products are recommended for applications that encounter pressures below 120 psig (8.27 barg), and corrosive media at temperatures up to 400°F (204°C). Fluoropolymer valves and fittings offer corrosion protection and are used to ensure media/system purity. The wetted surfaces of all products are of chemically inert corrosion resistant PFA or PTFE. Partek products are available from 1/8" up to 1" in size.

- Parflare PFA Tube Fittings: Parflare fittings provide low dead volume, which decreases the possibility of particle entrapment and bacterial growth.
- Pargrip PFA Tube Fittings: Perfect for applications where ease of assembly is a requirement. Grooved tubing is not required.
- Parbond PFA Fusible Pipe Fittings: Parbond fittings welded design eliminates threaded connections and entrapment areas
- PFA Pipe Fittings: Available in a variety of configurations,
- PFA Valves, Gauge Protectors, Thermocouple Fittings and Spray Guns: High cycle life, all fluoropolymer construction, with application tested and proven designs.
- PTFE Valves, Regulators, and Flowmeters: Wetted areas are manufactured from fluoropolymer material which offers





# **Analytical Systems**



### Vent Master™ (Catalog 4142-VM)

- Pre-engineered compact instrument panel that includes regulators, gauges, rotometer, an eductor and a separate pressure controller
- Creates a stable pressure within the analyzer shelter vent header system
- Provide analysis accuracy with .06% over a vent header flow of 0-18SLPM



## IntraFlow<sup>™</sup> (Catalog 4250)

- ISA/ANSI SP 76.00.02-2002 compliant
- Modular process analytic sample system and lab fluid delivery system platform
- · Factory system design support
- Wide selection of top work components including valves, regulators, filters, stream switching and more
- Pressure rating from vacuum to 3,600 psi (248 bar)



### **R-max<sup>™</sup>** (Catalog 4140-R)

- Surface mount technology for stream switching valves
- Low internal volume to reduce system purge time
- Low pressure actuation of valves-40 psig (-2.76)
- Rated from vacuum to 500 psig (34 barg)



### ChangeOver System (Bulletin 25000214)

- Compact turnkey module designed for continuous gas management
- Optional outlet regulator to control application specific outlet pressure
- Audio/visual alarm annunciator available
- Available in 316L stainless steel and brass
- Suitable for oxygen service



### **COSM** (Bulletin 25000234)

- Compact turnkey module designed for continuous gas management
- Outlet regulator to control application specific outlet pressure
- Maximum inlet pressure of 3,000 psig (207 barg) with 4 delivery options
- Available in 316L stainless steel and brass



### Pilot Pro (Catalog 4250-Pilot Pro)

- Communication interface for process sample conditioning systems
- Applications include: Logic Control, I/O Module Application, Non-Hazardous PLC and I/O Interface, Solenoid Valve Control
- I/O capability up to 24
- Accommodates multiple PLC types
- · Allows use of basic analyzer systems

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# Hose/Tubing



### Push-Lok® Plus Hose (Bulletins 4480-B137 and 4480-B140)

- Unique seal ensures reliability and durability for clean-environment use
- No clamps or special tools required for installation
- Increased working pressures to 350 psi (24.13 bar)
- Increased temperature ratings to 257°F (125°C)
- Approved for both HY (crimp) and 82 (push-on) series fittings
- Broadest size range (-4 through -16)
- Inner liner is an extruded, synthetic rubber, resistant to petroleum-base oil, air and water



### Stainless Steel Metal Hose (Catalog 4690-MH-2)

- For extreme conditions where other hoses fail
- For temperatures up to 1,500°F (816°C)
- Frequently used for the conveyance of liquid nitrogen
- Provides the lowest permeation rate of any hose available



### Multitube® Instrument and Heat Trace Tubing

(Catalog 4200-M-2)

- Available in a variety of configurations
- For containment, transmission and control of pneumatic signals, gases and liquids
- Materials include copper, stainless steel, metal alloys and PFA/PTFE



### Parker Tracking System (Bulletin 4480-B149)

- The Parker Tracking System is designed to help customers reduce vehicle or asset downtime through increases in the speed, timing and accuracy of necessary repairs. Using a Web-based application, PTS generates a unique identification code for each hose assembly which is printed on a durable barcode or RFID label. PTS labels are specifically engineered to withstand harsh chemicals, temperatures, UV exposure and other challenging conditions.
- PTS captures, records and recalls unique hose assembly information on demand





### Fluoropolymer Tubing (Catalog 4150-55D)

- For use in temperatures up to 500°F (260°C) and/or corrosive chemical applications or where high purity is needed
- Materials include PFA, High Purity PFA, FEP and PTFE
- Available in Smoothbore, Heat Shrink, Convoluted, Corrugated or Paratubing design
- Use of materials compliant to FDA and USP Class VI. Certified to ISO 9001:2008 and EN/JISQ/AS9100:2004



### Fluoropolymer Hose (Catalog 5162E)

- For temperatures up to 500°F (260°C) and/or corrosive chemical applications or where high purity is needed
- Inner core materials include PFA, High Purity PFA, and PTFE; braiding materials include Stainless Steel, PVDF, Polypropylene, and Nomex
- Available with a smoothbore or convoluted seamless inner core
- The use of materials compliant to FDA, USDA, 3A, European Pharmacopoeia and USP Class VI. Certified to ISO 9001:2008 and EN/JISQ/AS9100:2004.

# **Tools/Accessories/Complementary Products**



#### **Tube Fabrication Equipment** (Catalog 4290)

- High quality hand benders, tube cutters, deburr tools and preset tools
- Tube benders from <sup>1</sup>/<sub>8</sub>" to 1" size
- Tube cutter rated for 316 stainless steel tubing
- Par-Lok® wrenches with 360° snap-action for flexibility
- Preset installation kits for assembling tube fittings in close spaces



#### Sample Cylinders (Catalog 4110-NV)

- 1,800 psig (124 barg) DOT rated sample cylinders
- Stainless steel construction
- ANSI/ASME B1.20.1 internal pipe threads



#### Texas Thermowells (Catalog 4240)

- Flanged thermowells are available in partial penetration and full penetration welds
- Each thermowell is stamped to provide full material traceability
- Teflon® coating and Wake Frequency Calculations available
- Wide variety of special alloy material in stock ready for manufacturing

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# **Sanitary and Biopharmaceutical**



### Sanitary Fittings (Catalog 4270)

- Buttweld, clamp, bevel seat and other fitting styles available
- ASME-BPE fittings for use in pharmaceutical and biotech applications
- Finishes from unpolished to 10RA electropolish available
- A large variety of threaded, socket-weld, flanged and DIN adapters is also available



### Sanitary Valves (Catalog 4270-VFC)

- Sanitary versions of 3-pc ball, butterfly, check and sample valves
- Flow components such as sightglasses also available
- Electric and pneumatic actuators with options such as limit switches, position indicators and solenoid valves



### Sanitary Gaskets (Catalog 4270)

- Sanitary gaskets and o-rings that meet all applicable 3A and Pharmacopia Class 6 standards
- Wide variety of size and materials such as Buna, EPDM, silicone, PTFE, SFY and exotic compounds for specialty applications
- Color-Grip gaskets available in a variety of colors to support SOP programs and eliminate cross contamination
- Screen, orifice, metal and sampling gaskets for tough or unique applications



## **Product Selection Guide CD Operating Instructions**

Parker's Product Selection Guide CD contains electronic versions of all catalogs referenced in the Product Selection Guide document as well as additional Parker product lines.

#### To use the CD

Simply place the disc in your CD drive.

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