Parflange® 50 WorkCenter

Bins can be stored on top platforms

Easy refill of tool lubricant

The Parflange® 50 WorkCenter is the top-of-the-range machine for orbital flaring & flanging of O-Lok® and Triple-Lok® tube assemblies. It combines the practical EO2-FORM F3 WorkCenter concept with the proven Parflange® technology.
Due to the robust design and the precise process control, the Parflange® 50 WorkCenter achieves consistent high quality results and high productivity. Machine housing, cycle programming and all operating elements are designed for good ergonomics, optimum workflow and highest security. The compact Parflange unit and the compact housing allow the forming of small and complex tube bends. Maximum tool lifetime is achieved by the automatic lubrication system as well as easy visibility and accessability of the tooling area. The integrated tool compartments and designated space for bins for nuts and sleeves make it comfortable and efficient to work with the Parflange® 50.

Parflange® advantages over brazing or welding

Faster and lower cost – 9 to 12 times the speed of comparable induction brazing.
Flexibility – Small batch quantities are practical due to short tool change times.
Simple tube preparation – The Parflange® process does not require any special pre- or post-flange cleaning of the tube and sleeve.
Safety – Unlike brazing, the Parflange® process does not require any flux, braze alloy, post braze cleaner or rust inhibitor. An environmentally safe lubricant applied to the flanging pin is the only additive associated with the Parflange®.
Environment – The Parflange® process is environmentally clean and safe. It does not require open flame or any form of heating. Additionally, there is no emission of hazardous fumes, as is typical with welding and brazing.
Energy – The Parflange® process uses only a fraction of the energy needed for welding or brazing.
Corrosion resistance – The Parflange® process accommodates the use of plated or unplated components (i.e. tube and sleeve). Thus, the high costs of electro-plating assemblies after fabrication is eliminated by using pre-plated tube.
Excellent surface quality – The Parflange® process eliminates the potential leak path present at the braze or weld joint.

Features and benefits

1. **Cost saving** – Compared to welding or brazing, orbital flanging is much less time consuming. Special tube preparation and finishing are not necessary. Flanging uses only a fraction of the energy needed for brazing or welding.
2. **Zinc plated tubing** – The Parflange® process allows the use of zinc-plated tubing. The cost for cleaning post process plating, or painting can be saved.
3. **High tool lifetime** – The Parflange® 50 machine is equipped with an automatic lubrication device. The operator does not have to lubricate the tools ensure long pin life.
4. **Use of existing tools** – All existing Parflange® tools (M40 dies and B30/B40 pins) fit into the new machine generation.
5. **WorkCenter concept** – When the doors are opened, the machine body turns into a WorkCenter for production of O-Lok® and Triple-Lok® tube assemblies. All tools are available for rapid and convenient machine setup and tool change.
6. **Low-cost mass production** – The machine can be ordered with an automated sleeve feeder. The Parflange® 50 then is the perfect solution for low-cost mass production.
7. **Universal** – The Parflange® 50 can do 37° flaring for Triple-Lok® connectors and flange tubes for O-Lok® fittings (ORFS). Parflange® tools cover metric tube from 6 to 50 mm O.D. and inch tube from 1/4 to 2˝ O.D.
8. **Flange Seal** – The Parflange® 50 is also capable for the innovative Flange Seal connection, which contributes to reduce component cost and assembly time.
9. **Heavy duty** – The rigid machine design allows use for mass production of even large stainless steel tube connections.
10. **Process/Product concept** – Parflange® machines are especially designed to match O-Lok®, Triple-Lok® and SAE-flange standards. Machine, tools and products are fine-tuned for reliable performance.
11. **Superior sealing performance** – The Parflange® process achieves a sealing surface of unique surface quality and mechanical strength.
12. **Superior vibration resistance –** Unlike conventional flaring, the Parflange® process results in a rigid connection of the O-Lok® sleeve on the tube-end. Parflange®/O-Lok® connections perform much better under reversed bending stress conditions.
13. **Efficient** – The short cycle time and the automatic process allow efficient mass production.
14. **Quality** – Tube clamping, tool control and even lubrication is fully automated so that high and consistent quality results are achieved without manual adjustments.
15. **Easy to use** – The clamping and flanging process is fully automated. Manual tool manipulation is not required. The process is initiated by pushing the tube end into the tooling.
16. **Bin holder** – The top surface is designed to store two standard bins for fitting nuts and Parflange® sleeves. Everything is easy to reach for the operator.
17. **Illuminated tooling area** – Insertion of Parflange® sleeves and condition monitoring of tools is easy.
18. **Practical lubricant refill** – The container for tool lubricant is easily accessible by a hatch on the machine side.
19. **Side drawer** – Chips, dirt and dropped components like Parflange® sleeves can be removed by a small drawer. This allows to keep the working area clear and avoid jamming of moving parts.
20. **Clean** – The Parflange® process is environmentally clean and safe. As no heat or chemicals are used, hazards from fumes or heat do not occur.
21. **Perfect for project work** – After finishing a piping project, the machine can be put aside. Tools don't get lost and dirty. For the next project, the machine just needs to be transported to the new side and unfolded into the WorkCenter. This is particularly useful for piping projects in shipyards, paper mills, offshore platforms or steel mills.
22. **Ready to go** – The Parflange® WorkCenter is delivered including all necessary details like electrical plug, operator manual, short instruction pictograms on machine housing and dimensional charts for tube preparation.
23. **New Generation** – The Parflange® 50 WorkCenter replaces the Parflange® 1040 machine, which has been successful in the market for more than 12 years.

Parflange® 50 BASIC WorkCenter

Technical description 50 BASIC WorkCenter:

The Parflange® 50 is a production WorkCenter for orbital flaring and flanging of high pressure tube connections. The unique feature of the Parflange® process is that the deformation of the tube end is achieved by rolling rather than by just pushing a tool into the tube end.

The Parflange® machine smoothly compresses the tube material and achieves a high strength joint with a polished surface of the tube end.

O-Lok® sleeves are firmly fixed onto the tube end, resulting in a robust and vibration-resistant tube connection.

The Parflange® 50 is the heavy-duty, mass production WorkCenter of the Parflange® machine programme.

It is recommended for industrial production of all sizes Triple-Lok® and O-Lok® tube connections.

Maximum tube capacity is 50 mm/2″ tube O.D.

The powerful drive and the fast, automatic process allow short cycle times for efficient production. Its advantage is the quick and easy change of tooling and the simple operation without manual adjustments or programming. Tube clamping and tool lubrication are done automatically.

The Parflange® 50 comes ready to be used. Parflange® tools have to be purchased separately. For each tube dimension, special clamping dies and Parflange® pins are required. The machine can be moved on wheels, by forklift truck and crane. For basic use, just an electrical power supply is required.

Machine specification 50 BASIC WorkCenter:

Purpose:	90° Flanging for O-Lok® and 37° Flaring for Triple-Lok®
Process:	Orbital flaring and flanging according to Parflange® process
Design:	WorkCenter for industrial production
Tube material:	Steel and stainless steel tube
Tube diameter:	Metric: 6 to 50 mm Inch: 1/4″ to 2″
Min. U-bend:	120 mm
Maximum capacity:	Steel tube (ST 37, ST 52, …) Metric: 38×5/50×3 mm (tube O.D. × wall thickness) Inch: 2″×0.120 Stainless steel tube (1.4571, 316, …) Metric: 38×4 mm Inch: 1 1/2″×0.156
Tube specification:	Fully annealed seamless cold drawn or welded and redrawn precision tube
Operation:	Automatic clamping, automatic flanging/flaring
Continuous operating:	100 %
Speed:	5–8 sec. flanging time/15–20 sec. total cycle time
Economic production quantity:	max. 500 flarings per day
Tools:	Flaring pin B30 … or B40 … Clamping dies M40 …
Tool compartments:	10 die sets, 10 pins
Tool clamping:	Automatic
Tool lubrication:	Automatic lubrication device
Lubricant:	EO-NIROMONT (filled when delivered)
Hydraulic oil:	HLP 46 (filled when delivered)
Installation:	Electrical power
Dimensions (L×W×H):	840×700×1035 mm
Platform for bins:	2 platforms, 300×500 mm, max. 5 kg each
Weight:	380 kg
Electrical power:	400 V, 3 Phase, 50 Hz, 4.5 kW
Transport options:	On wheels, by forklift truck, lifting attachments

Parflange® 50 PRO WorkCenter

Technical description 50 Pro WorkCenter:

For industrial mass production of O-Lok® connections, special machines Parflange® 50 PRO with O-Lok® sleeve feeder are available. This sleeve feeding device increases the productivity, particularly of high volume – single tube dimension jobs.

In “Feeder ON – mode”, O-Lok® sleeves just need to be inserted into feeder rails. First cycle start is initiated by manually closing the safety cover. Then, all following cycles are started by pushing the tube into the pre-clamped dies. All other machine activities, like tube clamping, flanging, tube release, insertion of O-Lok® sleeves into dies, pre-clamping of dies and the operation of safety cover run fully automatic. The operator just is handling the tubes and refilling the sleeve-feeder from times to times with O-Lok® sleeves.

In “Feeder OFF – mode”, the Parflange® 50 PRO operates like the Parflange® 50 BASIC without O-Lok® sleeve feeder. This mode is useful for maximum size flexibility and Triple-Lok® assembly. For quick changeover and safety reasons, the O-Lok® sleeve feeder is just switched OFF but not be removed from the Parflange® 50 PRO WorkCenter.

For operation of O-Lok® PRO machines, compressed air supply is required, even when sleeve feeder is not used.

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Machine specification 50 PRO WorkCenter:

Specific differences of Parflange® 50 Pro versus Parflange® 50 Basic

Design:	Parflange® 50 with additional O-Lok® sleeve feeder
Normal Operation:	Same as Parflange® 50 Basic when feeder is switched off
Feeder Operation:	Work-cycle is initiated by inserting tube end Automatic clamping, automatic flanging/flaring Automatic insertion of O-Lok® sleeves into dies Automatic operation of safety cover Automatic pre-clamping of dies
Manual operation:	like Parflange® 50 Basic
Cycle time:	5–8 sec. flanging time/approx. 15 to 20 sec. total cycle time
Economic production quantity:	max. 1200 flarings per day
Tools:	Same tools as Parflange® 50 BASIC

Feeder:	Feeder is delivered in separate box and must be firmly attached to machine. Feeder can be switched ON and OFF but must not be removed.
Feeder rails:	Feeder rail kits must be ordered separately for each O-Lok® sleeve size.
Feeder setup:	Installation of matching rail kit by knurled nuts and adjustment of scale wheel according to chart
Installation:	Electrical power, for feeder type machines: compressed air supply (6 bar)
Dimensions:	700×840×2030 mm
Weight:	410 kg

Parflange® 50 Ordering

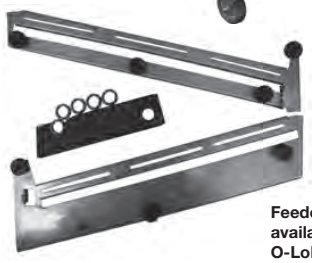
Type	Order code
Parflange® 50 Basic machine Ready to use, including operation manual, filled with hydraulic oil and lubricant Without Parflange® tools Basis machine Europe version (not prepared for O-Lok® sleeve feeder)	
Purchase: EU-Version US-Version	1050EU400VBASIC 1050US440V60HZBASIC
Leasing (2 year hire purchase)	1050BASICLEASEFEE
Rent (monthly)	1050BASICRENTFEE

Parflange® 50 BASIC

Type	Order code
Parflange® 50 Pro machine Europe version including O-Lok® sleeve feeder without feeder rails	
Purchase: EU-Version US-Version	1050EU400VPRO 1050US440V60HZPRO
Leasing (2 year hire purchase)	1050PROLEASEFEE
Rent (monthly)	not available

Parflange® 50 PRO for mass production of O-Lok® assemblies

Sleeve feeder rails for Parflange® 50 Pro	Tube O.D.	Order code
O-Lok® sleeve feeding rail	6 mm/¼″	1050/RAIL04
O-Lok® sleeve feeding rail	8, 10 mm/$^{3}/_{8}$″	1050/RAIL06
O-Lok® sleeve feeding rail	12 mm/½″	1050/RAIL08
O-Lok® sleeve feeding rail	14, 15, 16 mm/$^{5}/_{8}$″	1050/RAIL10
O-Lok® sleeve feeding rail	18, 20 mm/¾″	1050/RAIL12
O-Lok® sleeve feeding rail	22, 25 mm/1″	1050/RAIL16
O-Lok® sleeve feeding rail	28, 30, 32 mm/1¼″	1050/RAIL20
O-Lok® sleeve feeding rail	35, 38 mm/1½″	1050/RAIL24



Feeder rail kits are available for each O-Lok® size

50 promotion leaflet	4391-1 via Parker catalogue service EMDC
50 operating manual UK/DE/FR/IT/ES	1050/MANUAL
Standard preventive maintenance	1050/INSPECTION

Tool lubricant refill qty: 1L EO-NIROMONT	LUBSS
Replacement cartridge for spindle lubrication	1050/22900001801

High-Performance lubricant for Parflange®

Parflange® machines and feeders are shipped in special containers which should be kept for future transports to avoid damage. Please don't dispose the transport boxes!!!