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Parflange® 1025

Workshop machine for O-Lok® and Triple-Lok®



ENGINEERING YOUR SUCCESS.

Parflange® 1025

Workshop machine for O-Lok® and Triple-Lok®

The Parflange® 1025 machine is designed to cold-form high pressure tube connections for O-Lok® and Triple-Lok® connections. It uses the Parflange® orbital flaring process. The Parflange® 1025 machine smoothly compresses the tube material and achieves a high strength joint with a polished surface of the tube end. O-Lok® and SAE flange sleeves are firmly fixed onto the tube end, resulting in a very rigid high-pressure tube connection. The 1025 is the smallest machine of the Parflange® machine programme. It is recommended for low volume assembly jobs of small to medium tube dimensions.



Ideal for

- Project work
- Plant maintenance
- Workshop use
- On-site assembly





Single-button-process



Fix sleeve



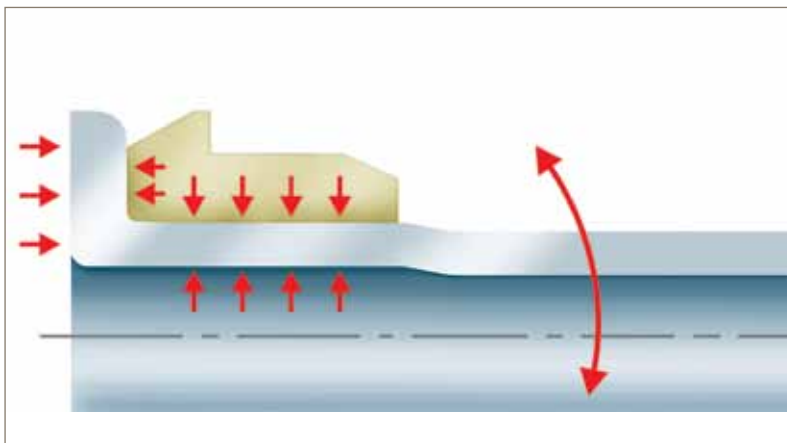
Portable

Features, advantages and benefits

- Superior sealing quality
- Superior vibration resistance
- Easy to use
- High quality
- Small bending radii
- Cost saving
- High tool lifetime
- Proven technology



ISO/SAE-conform



ENGINEERING YOUR SUCCESS.

Ordering machine

and specifications

Machine	
Parflange® 1025 Basic machine. Ready to use, including operating manual, filled with hydraulic oil and lubricant. Without Parflange® tools.	
Type	Order code
Basic machine: 400 V, 3 Phase, 50 Hz	1025-380VTRI50
Basic machine: 230 V, 1 Phase, 50 Hz	1025-220VMONO50

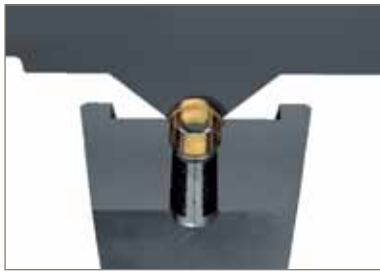
Accessories	
Type	Order code
1025 Operating manual UK/DE/FR/IT	1025/MANUAL
Standard preventive maintenance	1025/INSPECTION
Tool lubricant:	
1L EO-NIROMONT	LUBSS
Drive belt	1025/028Polyv
Came guide and with screw	1025/0281031
Hydraulic tank seal kit	1025/0281042
Lubrication kit	1025/0281200

Specifications	
Purpose	180° flanging for O-Lok®; 37° flaring for Triple-Lok®
Process	Orbital flaring and flanging according to Parflange® process
Applications	Desktop machine for workshop use, project work, plant maintenance, on-site assembly. Not for efficient mass production.
Tube material	Steel and stainless steel
Tube diameter	Metric: 6 to 25 mm, Inch: ¼" to 1"
Maximum capacity	O-Lok® (Tube O.D. x wall thickness) Steel tube: 25 x 4 (1 x 0.134) Stainless steel tube: 25 x 2.5 (1 x 0.095) Triple-Lok® (Tube O.D. x wall thickness) Steel tube: 25 x 3 (1 x 0.120) Stainless steel tube: 25 x 3 (1 x 0.120) Single tube formings of larger tube dimensions are possible
Min. U-bend	140 mm
Tube specification	Fully annealed seamless cold drawn or welded precision tube
Operation	Manual clamping, automatic flanging/flaring
Cycle time	Approx. 15 to 20 secs
Tools	Flaring pin B30... and clamping dies M40... (see catalogue 4100)
Tool clamping	Manual, by eccentric lever
Tool lubrication	Automatic lubrication device
Lubricant	EO-NIROMONT LUBSS (filled when delivered)
Hydraulic oil	HLP 23 0.5L (filled when delivered)
Installation	Rigid workbench and electrical power supply required
Dimensions	390 x 670 x 460 mm
Weight	85 Kg
Voltage	400 V, 3 Phase or 230 V, 1 Phase

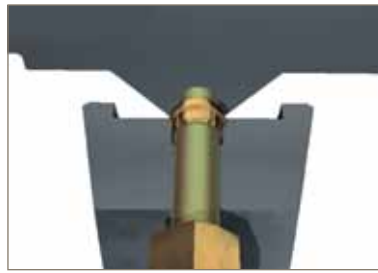


- Ideal for small quantities
- Rapid tool change
- Easy use
- No programming or adjustments necessary
- Delivered „Ready to use“

The Parflange® process



For O-Lok®, the sleeve is placed into clamping dies first



Tube is inserted into the tools until it firmly touches the stop at the end



After starting the process, the dies clamp the tube and the flanging pin starts the orbital movement and the forward stroke



While moving, the front pin expands the tube wall from the inside



As soon as the flat working surface of the pin contacts the tube end, the flanging process begins



The front surface is continuously rolled and compressed. From the inside, the tube surface is slightly expanded to clamp the sleeve



As soon as the defined flange contour is achieved, the orbital movement stops and the pin withdraws



The tube end is released and can be taken out of the machine



The connection is ready for assembly

The Parflange® technology

With the Parflange® process, the tube to sleeve attachment is achieved mechanically during an orbital cold forming process with a Parflange® machine. The process progressively flares then flanges the tube. The final dwell action in the cycle ensures that the seal surface produced is smooth and flat, and also eliminates springback effects in the material. This flange provides both the holding power and sealing surface (eliminating the braze joint, and hence, a potential leak path found with brazed sleeve attachment). The only sealing point is between the fitting body and the tube flange face via the high durometer O-ring. The flanging process is very fast and requires very little cleaning prior to or after flanging. Thus, the process enhances the integrity of the joint and reduces cost. The Parflange® process utilises an orbital cold flow forming process to produce a flat, smooth, rigidly supported 90° sealing surface on the tube end. The process progressively flares then flanges the tube.

The Parflange® process conforms to the requirements for mechanical tube forming shown in the SAE J1453 standard, and has been specified after extensive testing by the majority of the large mobile equipment manufacturers. Flanging with Parflange® eliminates the need for welding or brazing of the sleeve to the tube end.

Parflange® advantages over brazing or welding

Faster

9 to 12 times the speed of comparable induction brazing.

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 flaring 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 electroplating assemblies after fabrication is eliminated by using pre-plated tube.

Leakfree

The Parflange® process eliminates the potential leak path present at the braze or weld joint.

Parflange® 1025 process instructions



O-Lok® flanging

- Preferred method
- Most efficient method
- Parflange® recommended
- Tube selection and tube preparation see CAT 4100
- For machine details see operation manual
- Final fitting installation acc. to CAT 4100



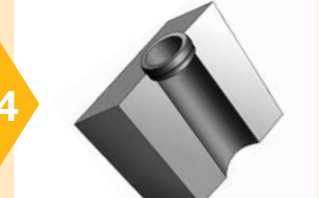
- Select flaring pin according to tube dimensions
- Use special "SS" pin for stainless steel tube
- Pin must be clean and free of wear, damage and metal particles
- Keep flaring pin clean and lubricate regularly



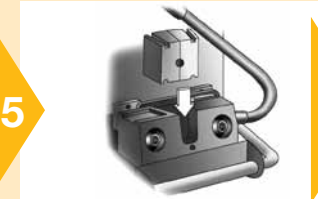
- Select flanging dies according to tube dimensions
- Use special "SS" dies for stainless steel tube to avoid contact corrosion
- Grip surface must be clean and free of wear
- Use only genuine Parker tooling for flanging O-Lok®



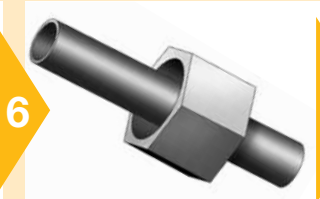
- Load pin into machine
- Ensure lubricating system is filled with oil EO-NIROMONT (LUBSS)



- Place sleeve in lower die half
- Locate upper die half onto lower half



- Place the dies in the die housing



- Slide nut onto tube before flanging!
- Open threads towards machine

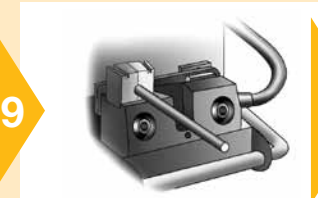


- ⚠ Press tube firmly into the die against the tube stop



- Pull down the handle to clamp the tube in the dies
- Hold the tube firmly
- Press button to start flanging cycle
- ⚠ Keep hands clear off the working area

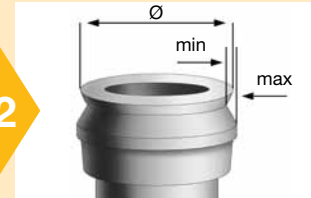
Checking of flange



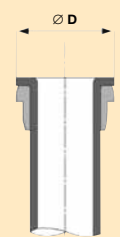
- Unclamp the dies
- Remove tube end with dies from the machine
- Use die separator to free tube



- Clean flange for inspection
- ⚠ Check sealing surface for cracks, burrs, scratches and pitting



- Dimensional check of the flare
- Flare O.D. should not exceed outside sleeve diameter
- Flare O.D. should not be less than smaller diameter of front of sleeve
- When in doubt, measure



Tube O.D.		Ø D	
mm	inch	min. [mm]	max. [mm]
6	1/4"	12.10	12.75
8		14.85	15.75
10	3/8"	14.85	15.75
12	1/2"	18.00	18.90
14		22.20	23.45
15		22.20	23.45
16	5/8"	22.20	23.45
18		26.60	27.85
20	3/4"	26.60	27.85
22		32.95	34.20
25	1"	32.95	34.20
28		39.35	40.55
30		39.35	40.55
32	1 1/4"	39.35	40.55
35		47.25	48.50
38	1 1/2"	47.25	48.50
50	2"	58.90	60.60

Parflange® 1025 process instructions

Parflange® 1025



Triple-Lok® 37° flaring

- Preferred method
- Most efficient method
- Parflange® recommended
- Tube selection and tube preparation see CAT 4100
- For machine details see operation manual
- Final fitting installation acc. to CAT 4100

1



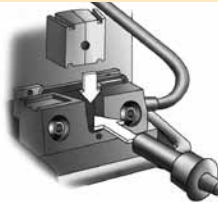
- Select flaring pin according to tube dimensions
- Use special "SS" pin for stainless steel tube
- Pin must be clean and free of wear, damage
- Load tooling into machine
- Keep flaring pin clean and lubricate regularly

2



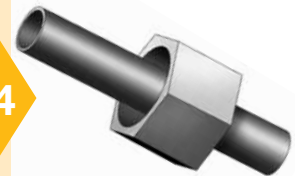
- Select flanging dies according to tube dimensions
- Use special "SS" dies for stainless steel tube
- Grip surface must be clean and free of wear
- Use only genuine Parker tooling for flaring Triple-Lok®

3



- Keep sliding surfaces clean and lubricated
- Ensure lubricant system is filled with EO-NIROMONT (LUBSS)

4



- Slide nut and sleeve as shown onto the tube end

5



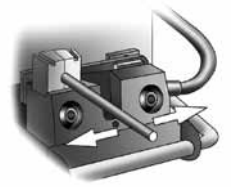
- Operate clamping lever
- ⚠ Keep hands clear off the working area

6



- Hold tube firmly
- Press Start button
- ⚠ Keep hands clear off the working area

7



- Unclamp the dies
- Remove tube end with dies from the machine
- Use die separator to free tube

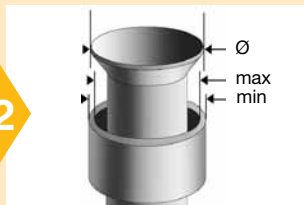
Checking of flange

1

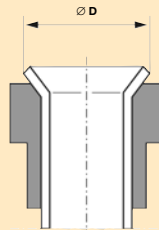


- Clean flange for inspection
- ⚠ Check sealing surface for cracks, burrs, scratches and pitting

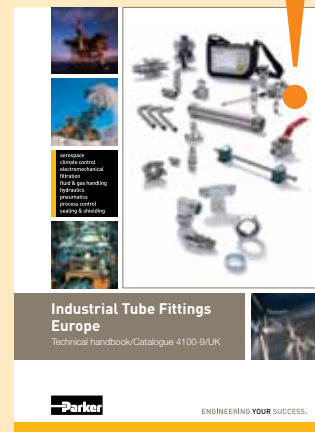
2



- Dimensional check of the flare
- Flare O.D. should not exceed outside sleeve diameter
- Flare O.D. should not be less than smaller diameter of front of sleeve
- When in doubt, measure



Tube O.D.		Ø D	
mm	inch	Min.	Max.
6	1/4"	8.6	9.7
8	5/16"	10.2	11.3
10	3/8"	11.7	12.7
12	1/2"	16.0	17.3
14		19.3	20.2
15		19.3	20.2
16	5/8"	19.3	20.2
18		23.4	24.7
20	3/4"	23.4	24.7
22	7/8"	26.5	27.8
25	1"	29.7	31.0
28		37.6	38.9
30		37.6	38.9
32	1 1/4"	37.6	38.9
35		43.2	45.3
38	1 1/2"	43.2	45.3
42		52.0	54.8
50	2"	59.2	61.2



- Checking instructions and tool settings see CAT 4100

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