EOMAT UNI assembly and flaring machine

General

The EOMAT UNI is an electro-hydraulic machine for the assembly of:

EO-2
EO PSR/DPR and
Triple-Lok® 37° flared tube fittings.

Compared to manual assembly it greatly reduces assembly time, effort and cost and also guarantees leakfree performance of constant high-quality fitting assemblies.

Common tube materials such as steel (ST 37.4 NBK, ST 52.4 NBK), stainless steel (1.4571/1.4541/316Ti or similar) and copper can be pre-assembled.

The tool range covers all metric tube sizes from 4 to 42 mm outer diameter. The required operating pressure is variable and set at the LED-Display. The unit may therefore be used for a variety of different applications. The tooling for either EO-2/ PSR/DPR pre-assembly or tube flaring may be manually replaced, without the use of tools.

Technical data

Tube diameters: 6–42 mm

Min. U-bend: 65 mm

Series: L and S

Oil:
Esso Nuto H 32 or equal, 3.5L
(Reference oil change, see label on unit)
Operating pressure:
Variable from 15 to 200 bar
Dimensions:
L 515 mm, W 535 mm, H 285 mm

Performance:

Overall cycletime: 12–15 sec.
Economic production quantity:
max. 300 assemblies per day

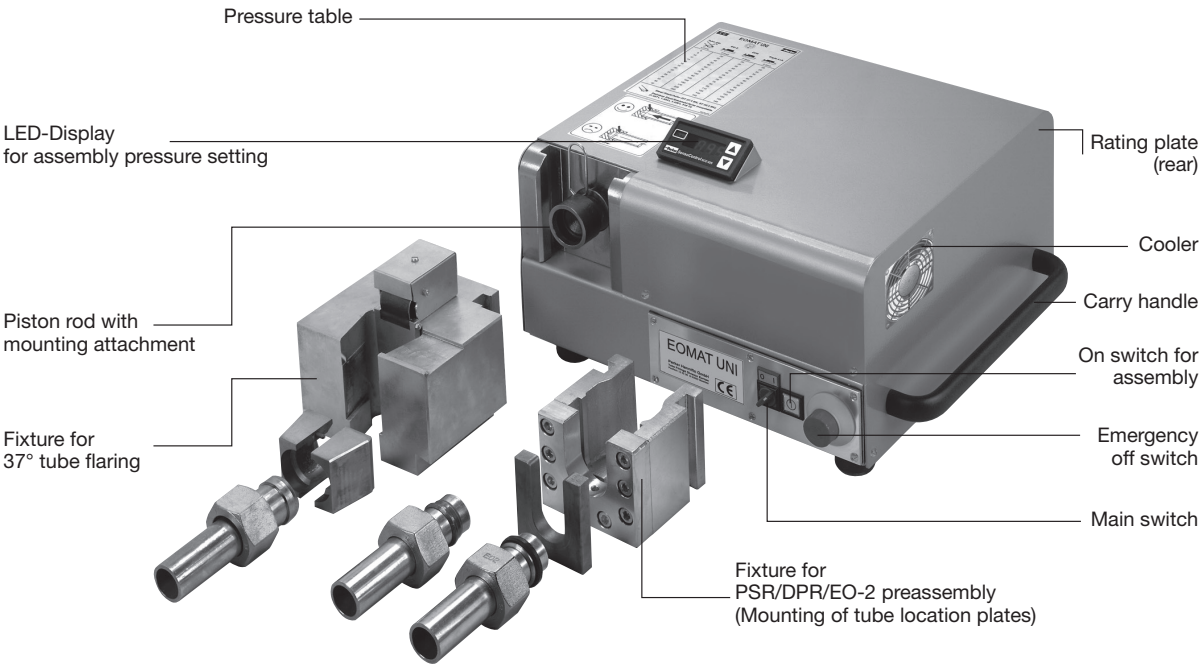
Hydraulic pump:
1.2 kW – 3.7 l/min
Electrical connection:
220–240 V/ 1~ / 50 Hz / 9.5 A
Connection cable:
5 m – Earth plug
Weight: 66 kg

We reserve the right to make modifications in the course of further technical development.

Features, advantages and benefits:

1. **Universal** – Assembly of EO-2, EO-PSR/DPR and 37° flaring for Triple-Lok® can be done with just 1 machine.
2. **Efficient** – With a cycle time of some 15 seconds the EOMAT UNI greatly saves assembly time and effort. The investment pays back quickly.
3. **Safe** – Proper pre-assembly greatly reduces the danger of leaking fittings or even hazardous tube blow out.
4. **Strong** – Even 37° flaring of larger sized stainless steel tube is done within few seconds.
5. **Flexible** – All tube dimensions from 4 to 42 mm can be pre-assembled. All common tube materials are covered.
6. **Workshop tool** – At 66 kg, the EOMAT UNI can be brought to an assembly site.
7. **Marking ridge** – All MOK tools feature a special ridge in the bottom surface which is designed to make a circular groove into the tube-end at assembly. No mark indicates that the tube-end has not been properly bottomed at assembly.
8. **Reliable** – For more than 20 years, hundreds of machines are operated under heavy duty workshop conditions.

H



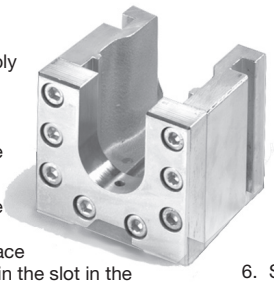
Tel: +45 63 12 83 00 | Email: ps@hymatik.com | www.hymatik.com | Hvidkaervej 27a, DK-5250 Odense SV, Denmark

EOMAT UNI assembly and flaring machine

Basic operation for EO-2 Functional nuts

See EO-2 instructions for fitting assembly

1. Adjust EO-2 pressure according to chart (A)
2. Insert the pre-assembly fixture in the tool mounting (weight approx. 5.5 kg).
3. Select the assembly cone (MOK) and backing plate (GHP) in accordance with the tube size and type.
4. Place and lock the assembly cone in the tool holder. Place the backing plate in the slot in the fixture.



5. Slide the EO-2 functional nut onto the tube, which has been cut off square and deburred.
6. Place the tube with the EO-2 functional nut in the pre-assembly fixture between backing plate and assembly cone.
7. Press the tube against the stop in the assembly cone. Hold the tube in this position. Press and hold the start button until the pre-assembly process is complete.
8. Take the assembled tube connection out of the location plate. See EO-2 assembly instruction (chapter E) for assembly check and installation instructions.
9. Check assembly result before final installation.

Basic operation for EO PSR/DPR ferrules

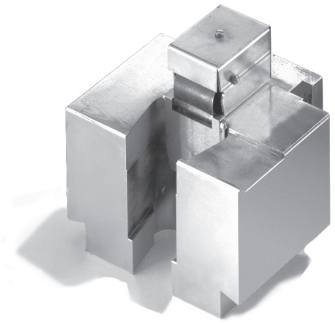
See PSR/DPR instructions for fitting assembly

1. Adjust PSR/DPR pressure according to chart (A)
2. Insert the pre-assembly fixture in the tool mounting (weight approx. 5.5 kg).
3. Select the assembly cone (MOK) and backing plate (GHP) in accordance with the tube size and type. Check the assembly cone using a cone-template.
4. Place the assembly cone in the tool holder. Place the backing plate in the slot in the fixture.
5. Oil the ring, nut and assembly cone.
6. Slide the nut and ring onto the tube, which has been cut off square and deburred.
7. Place the tube with nut and progressive ring or cutting ring in the pre-assembly fixture between backing plate and assembly cone.
8. Press the tube against the stop in the assembly cone. Hold the tube in this position. Press and hold the start button until the pre-assembly process is completed.
9. Take the pre-assembled tube out of the backing plate. See EO PSR/DPR assembly instruction (chapter E) for assembly check and installation instructions.
10. Check assembly result before final installation.

Basic operation for 37° tube flaring

See Triple-Lok® instructions for fitting assembly

1. Adjust Triple-Lok® pressure according to chart (A)
2. Insert the tube flaring fixture in the toolmounting (weight approx. 19.5 kg).



3. Lubricate the flaring pin.
4. Insert the flaring die set corresponding to the tube size.
5. Push the nut and support sleeve onto the tube.
6. Push the tube through the flaring die hole to the stop plate. To prevent misalignment, longer tubes are to be supported during the flaring process.
7. Press and hold START button until flaring process is completed.
8. Lift the tube with the flaring die upwards out of the fixture.
9. To release the tube, place the flaring die set in the opening provided in the fixture and tilt the tube to one side.
10. Check assembly result before final installation.

Important!

Only proceed with pre-assembly when a tube with nut and cutting ring has been placed in the fixture (failure to observe this can result in damage to the tools). Longer tubes are to be suitably supported during pre-assembly.The assembly cones are to be regularly checked for correct dimensions using the cone-template and should be replaced when necessary.

Caution: do not reach into the working area of the pre-assembly fixture while it is operating!

Important!

Do not drive the flaring pin into the flaring die without a tube in position. The roughened surface of the flaring die must be absolutely free of oil and grease to prevent the tube from slipping.

Caution: do not reach into the working area of the flaring fixture while it is operating!

EOMAT UNI assembly and flaring machine

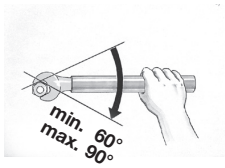
Pressure setting chart A

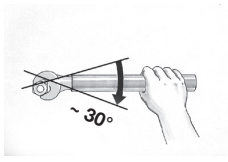
EOMAT UNI

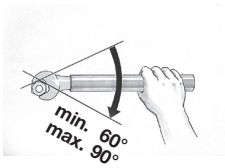
Tube-O.D.	EO-2	PSR/DPR	Triple-Lok®
Ø (mm)	P (bar)	P (bar)	P (bar)
6	30	25	20
8	35	30	25
10	45	35	35
12	50	40	35
14	60	50	45
15	60	50	60
16	70	55	60
18	70	55	70
20	100	80	95
22	80	75	95
25	130	100	105
28	100	90	125
30	180	125	135
35	150	110	155
38	200	170	165
42	180	140	185



Installation







Steel (ST 37.4 NBK, ST 52.4 NBK, ...)

Stainless Steel (ST 1.4571, 1.4541, 1.4301, 316 Ti, ...)

The given values are a guide. The results of pre-assembly and/or tube flaring are therefore always to be checked.
For detailed instructions on tube preparation, tool selection, assembly check and final installation see chapter E.

Tel: +45 63 12 83 00 | Email: ps@hymatik.com | www.hymatik.com | Hvidkaervej 27a, DK-5250 Odense SV, Denmark

EOMAT UNI assembly and flaring machine

Ordering

Type	Order code
EOMAT UNI Basic machine Ready to use, including operation manual Filled with hydraulic oil Without EO assembly fixture/Flaring fixture Without tools for EO-assembly/37° flaring Basic machine 230 V, 1 Phase, 50 Hz Rental (monthly usage)	 EOMATUNI230V EOMATRENTFEE
Fixture for PSR/DPR/EO-2 assembly	EOMATSCHNEIDRX
37° Flaring fixture for Triple-Lok® including flaring pin	EOMATBOERDELBX
EOMAT UNI promotion leaflet UK	4042/UK
EOMAT UNI promotion leaflet DE	4042/DE
EOMAT UNI operating manual UK/DE/FR/IT	EOMATUNI/MANUAL
Standard preventive maintenance	EOMATUNI/INSPECTION

Assembly fixtures, tools, cone-templates, and lubricant must be ordered separately

Assembly tools for PSR/DPR/EO-2 see page H19.

37° flaring tools for Triple-Lok® see page H37.

Spare parts

Type	Order code
Fixing clip for MOK	EOMAT/CLIP
37° flaring pin	EOMAT/FLAREPIN
O-ring for flaring pin	EOMAT/0212500
Tube stop assembly for flaring block	EOMAT/0213800
Pressure chart sticker	EOMATUNI/CHART
Spring for flaring block	EOMAT/0213500