



OP 160 ED/1
OP 160 ED/E/1
OP 170 ED/1
OP 170 ED/E/1

20 100
20 103
20 101
20 104

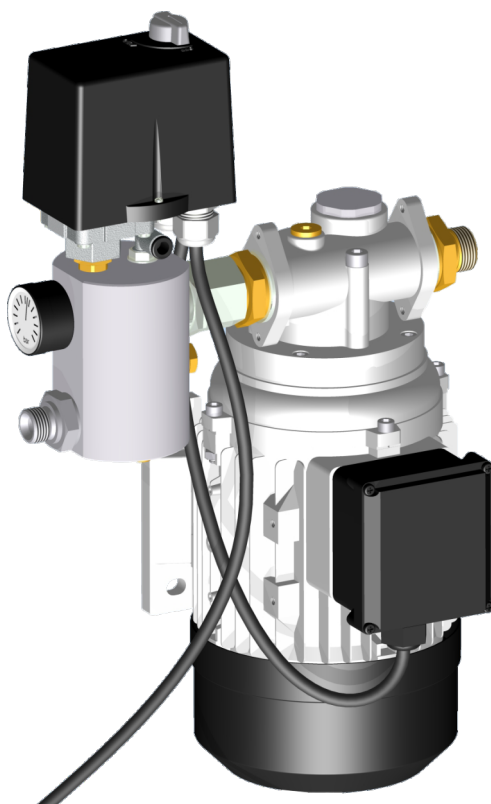


Abb. OP 170 ED/E/1

OPERATION MANUAL

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1. Safety instructions



Please observe: This operation manual contains all necessary information. Please read carefully to avoid damages and faults. All Rapid pieces of equipment are checked carefully before delivery for their perfect composition and function. In case of improper use all rights to claim under guarantee are void.



Make sure that only skilled staff is working with this device in order to prevent damages and accidents caused by improper use.



Environmental conditions i.e. humidity, low temperatures, sunlight and contamination may damage device.



Before using the device make sure that it is not contaminated to prevent any injury. Avoid any contamination of device as well as of environment. In case of any contamination during operation of device take care that it is immediately and professionally removed.



Always wear safety cloths respecting the applicable regulations for accident prevention



Only use this device conforming to its purpose and function. Improper use can cause severe injuries.



Caution – moving parts, sharp edges, hot machine parts or exhausting steam can cause severe injuries.



Before use always check the device for damages and leaks. In case of any damage or leak make sure that it is repaired professionally before use. Operation of defect device may cause severe injuries.



In case of any sign of damage or malfunction during operation of device stop device immediately to prevent injuries. Before next use make sure that the device professionally repaired.



Take care that in case of an accident all emergency measures are on hand

2. General advice

- 2.1** During working pauses and shutdowns pump has to be shut off to current supply to avoid unintentional charging i.e. in case of a leak within the pipeline or in case of a leaking hose.
- 2.2** Only licensed electricians are allowed to work on electric equipments.
- 2.3** The electric main must be fitted with a separate fuse.
- 2.4** Only special companies licensed according German Law § 19 I WHG (water management act) are allowed to work on oil installations.
- 2.5** In case of permanent installed oil pipe lines a relief valve as a security valve must be built in at the pump. It's reverse hose must lead into the oil storage container.

3. Technical data

Model	OP 160	OP 170
Power supply AC	400V / 50 Hz	
Power	0,55kW	0,75 kW
Pump type	self priming gear type pump	
Deliveryrate Q _{max}	14 l/min	24 l/min
Delivery pressure P _{max}	12 bar	
Fluid	Oil with viscosity of 50 - 2000 cSt	
Working temperature max	60°C	
Suction line	DN20 / R 3/4"	DN25 / R 1"
Delivery line	R 3/4"	R 1"

4. Description

Model	Type of switch	calibratable
E/1	Hand switch	no
E/E/1	Hand switch	yes
ED/1	Pressure switch	no
ED/E/1	Pressure switch	yes

5. Assembling / Installation

The pump should preferably build in vertical (see picture 1). In case this is not possible, it has to be build in horizontal according to picture 2.

Motor oil	SG20-1,5	Art.Nr. 20 511
Motor oil	SG20-2,5	Art.Nr. 20 512
Motor oil	SG25-3,0	Art.nr. 20 618
Gear oil	SG32-1,5	Art.Nr. 20 711
Gear oil	SG32-2,5	Art.Nr. 20 712

Loud noises of the running pump are mostly due to too narrow suction hoses.

- 5.1** The connection to the pipe line must be erected by a flexible connection hose. We recommend the according TRBF 231 regulation licensed FLEX pipe ÖRF ½ 20.
- 5.2** For protecting the pipe line a security valve for example ÜVS 14 Art.-No. 20 568, has to be installed directly behind the pumping set.
- 5.3** Irrespective from size of pressure outlet of the pipe following pipe dimensions are recommended:

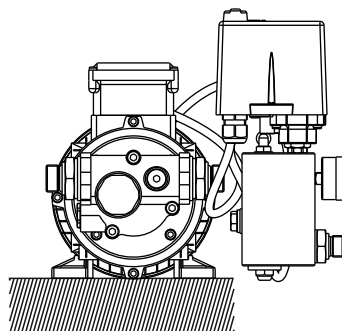
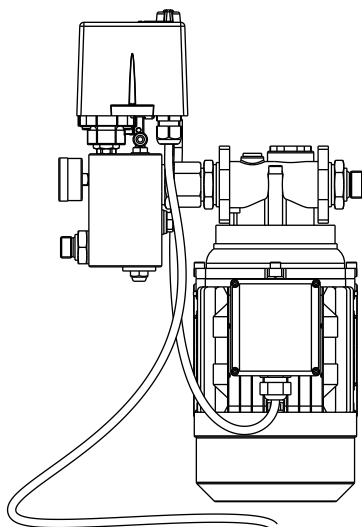
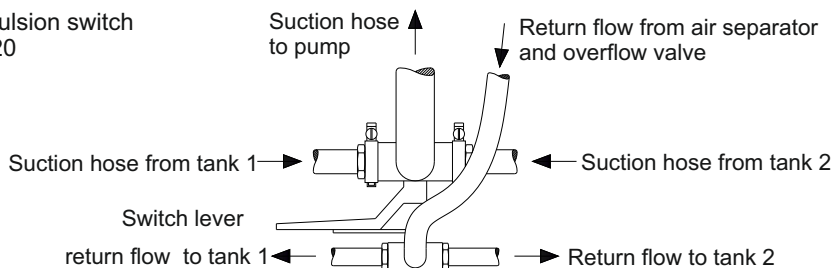
Length of delivery line	10m	30m	50m
Motor oil	-	R1"	R1 1/4"
Gear oil	R1"	R1 1/4"	R1 1/2"

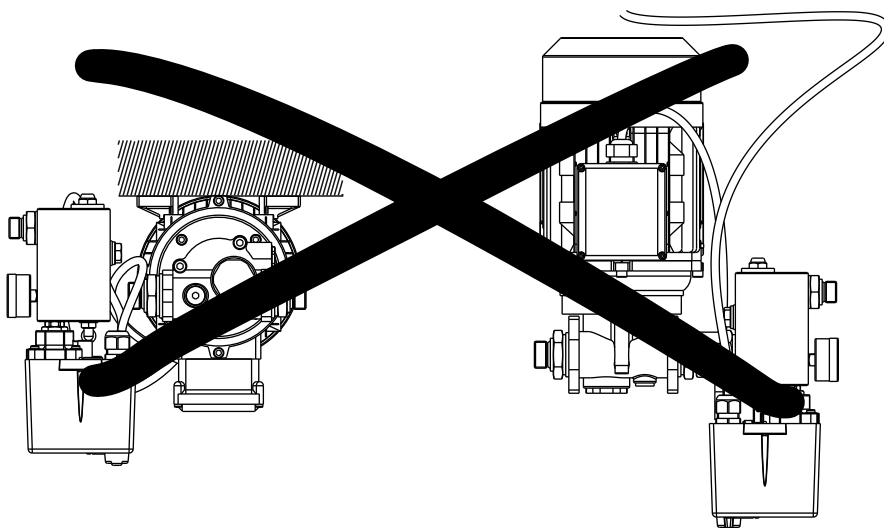
Only use licensed pipe qualities for example gas pipe DIN 2441, black, in no case zinc coated. The pipes must be furnished with protective varnish in the identification colour brown RAL 8001.

- 5.4** The electrical connection has to be done by approved specialist company. Each pump has to be fused according to its connexion value.
- 5.5** For starting up the piping systems has to be ventilated. After a flow rate of 50l the sieve of the suction pipe as well as eventually other dust traps placed before the delivery spots must be cleaned.

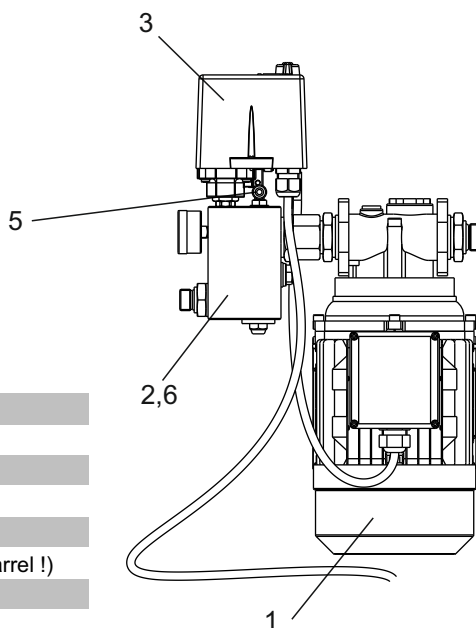
- 5.6 **Only for versions possible for calibration:** For calibration contact the responsible board of weight and measures and show the pre-approval certificate of the meter. The label of the meter, must always be visible.
It is essential to respect the installation position Picture 1 vertical picture 2 horizontal.

Compulsion switch
ZSG 20





6. Spare parts and accessories



Pos.	Description
1	Electric pump
2	Air separator
3	Pressure switch
4	Suction line min. DN 20 max. 3,5m
5	Reflux hose (must be inserted to the barrel !)
6	Ventilation part
7	Measuring system label

7. Operation

- 7.1 Generally for all types the switch (1) must be pressed. For the models E and E/E the pump starts operation immediately. For the models ED and ED/E pump starts operation only when opening the delivery organ.
- 7.2 Open delivery valve and take the requested quantity of oil.
- 7.3 After closing the delivery gun switch off the pump. For the models ED and ED/E the pump is switched off automatically after closing the delivery organ.
- 7.4 Prevent that the pump operates more than 3 minutes with a closed delivery organ.

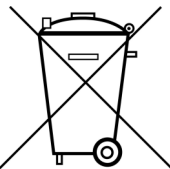
8. Maintenance and trouble shooting

- 8.1 Before every use all parts of the unit which are getting in contact with the medium, pump, hoses and delivery organ as well as the electric connection have to be checked carefully for leaks or damages and if so eliminate.
- 8.2 In case of spilled waste oil pick it up with suitable means and remove it properly. No waste oil may pollute soil or sewerage system.

Problem	Cause	Solution
Pump does not draw in	Dust trap within suction line clogged	Clean dust trap
	Suction hose or pipe is too long	Shorten it
	Air within suction line	Ventilate suction line and pump
Delivery capacity is too low	Dust trap within suction line clogged	Clean dust trap
	Oil temperature less than 18°C	Warm up oil
Air within the supplying line	Suction line is leaking	Seal leakage
	Reflux hose is bended or blocked	Repair it
Pump is working, but does not supply	Barrel or tank is empty	Change or refill

9. Disposal

- 9.1 Completely empty all parts of the equipment (hoses, pumps , tanks , etc) and given case blown out with air .
- 9.2 Dangerous parts of the appliance must be made unusable f.e. perforate pressure vessel , deform hose reels , etc.
- 9.3 Rubber , metals, glass ect. must be separated .
Dispose material fractions according to the local laws and regula.



YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

The pertinent regulations for the registration, setting up and operation of equipment for dealing with materials hazardous to water must always be complied with by the user.

10. Warranty

- 10.1 In case of insufficient maintenance, faults on operation, use of not adequate spare parts or attachments all liabilities and rights of claim under guarantee are void.
- 10.2 The manufacturer is not liable for improper use of the container or ignoring the safety instructions.
- 10.3 Technical modifications are subject to change without announcement.

