





OPERATING MANUAL

Accessories

Description	Part no.
Grease pump M-08, manual	59800
Including 2 of Grease cartridges.	49811

Grease cartridges can be ordered separately.

We strongly recommend Blasolube 301.

Please see section Technical Specification - Pressurizing medium.

Spare parts list

Position	Description	Part no.
1	Hydraulic connector	49828
2	High pressure hose	49831
	Gauge set	59864
3	Gauge, 0-600 bar, glycerin	
4	Washer	
	Rotary coupling set	59863
4	Washer	
5	Rotary coupling	
6	Seal ring	
7	Compression spring	
8	Valve bolt	
9	Ball 4.8 mm	
10	Valve seat	
11	O-Ring	
	Valve set	59865
12	Seal ring	
13	Washer	
14	Check valve	
15	Air release valve	
16	Seal ring	
17	Pressure release screw	
18	Ball 4.0 mm	
19	Valve seat	
20	O-Ring	

Exploded view drawing

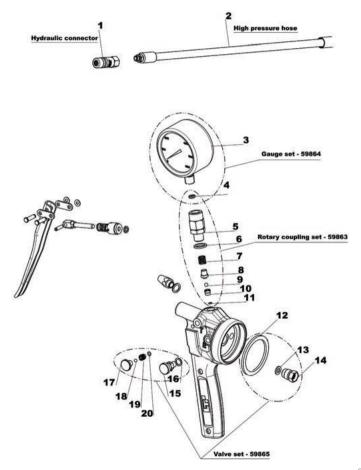


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Safety Warning

Read this Operating manual through carefully in order to familiarise yourself with the safe and efficient operation of this product. Keep this manual for reference purposes. This Operating manual contains important instructions and directives for the safe and proper operation of the product. It should also help operating and maintenance personnel to minimise dangers, repair costs and down times and increase the reliability and operational life of the product. For that reason it is important to assure at all times access to this document to everyone who is assigned with the supervision of this product.

Proper Use

The product may only be used in the operational conditions for which it is designed. Any use that goes beyond this is deemed improper. The manufacturer is not liable for any damages resulting from improper use. Also included in proper use are:

- Observing and following all instructions and warnings in this Operating manual
- · Completion of inspection and maintenance work as scheduled.

Operator's Obligations

The party responsible for the safety of the product must make sure that:

- only qualified personnel are assigned to work with the product,
- these persons have the Operating manual ready to hand during all of their work and are required to follow it consistently,
- the rules and regulations for the prevention of accidents that apply at the site of use are followed and that the scheduled service and maintenance is completed on time.

Basic Safety Instructions

For the safe handling and smooth operation of this product, you must heed the following:

- · The product may not be used for purposes for which it was not designed.
- · No modifications may be made to the product.
- Safe operational condition must be assured at all times. On request, we will hold a training session for the device in order to provide your personnel with the knowledge they need.
- All lines, hoses and screw connections need to be checked for tightness regularly and for externally visible damage. Any damage must be immediately repaired by technicians and if needed replaced with original parts.

Safety- and Danger Symbols



WARNING: DANGEROUS LOCATION

Warnings are information about dangers that can lead to bodily injuries and/or property damage.



INSTRUCTION

The instruction symbols give you valuable information and tips on operation.



ENVIRONMENTAL HAZARD

Protect the environment by properly disposing of the various materials or assuring they are properly transported to disposal.

Safety Instructions for the Use of the Product

All parts and assembly groups have been developed and constructed in accord with the recognised rules of safety engineering. However, if it is handled or operated improperly, this can result in dangers to the user or third parties or hazards to the product or to their property.

The product must only be used:

- · For its intended purposes.
- In a proper condition in terms of its safety engineering features.

Maintenance, Service and Troubleshooting

- Prescribed calibration and maintenance work following the maintenance schedule must be completed in a timely fashion.
- · Inform the operating personnel prior to any calibration or maintenance work.
- · Turn off the main switch (if there is one).
- Pneumatic and/ or hydraulic systems must be de-pressurised.
- · Check all screw connections and armatures for proper fit.
- Once all work is completed check all safety equipment and operational functions.

Warranty and Liability

Warranty and liability claims are excluded in cases of personal injury and property damage if they derive from one or more of the following causes:

- · Improper use of the product.
- · Work completed by unqualified persons.
- Improper transportation, storage, assembly, operational start-up, operation and maintenance of the product.
- Failure to heed the instructions in the Operating manual regarding safety, transport, storage, assembly, operation, operational start-up, maintenance and equipping the product.
- Operating the product if safety equipment is defective or not properly installed or if the safety and protective equipment is not functional.
- · Structural modifications to the product.
- Changing the pressure ratios in the pressure safety and operating at pressures higher than those for which the product is designed.
- · Improper inspection of the abrasion from mechanical parts.
- · Inappropriate repairs and usage of foreign material.



CAUTION

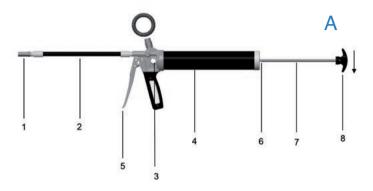
Any and all work on the product may only be carried out when it is idle.

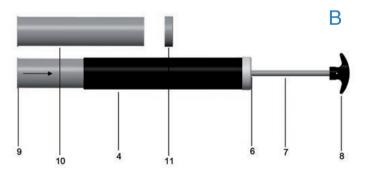


ENVIRONMENTAL HAZARD

The various materials/liquids are to be handled properly and separately disposed of in compliance with the applicable national regulations.

Designations of the components shown (Figure A-B)





- 1. Hydraulic connector
- 2. High-pressure hose
- 3. Air release valve
- 4. Cylinder
- 5. Actuating lever
- 6. Locking notch

- 7. Piston rod
- 8. Handle
- 9. Front cover cap
- 10. Cartridge
- 11. Rear cover cap

Assembly / Installation

The product is to be set up or installed at the intended use site under due consideration of the following conditions:

- At the location and site all applicable provisions of law must be clarified and compliance with them assured.
- The operation and storage in aggressive or humid environments or outdoors can lead to corrosion damages.

Directions for use

The high pressure one-hand pump is completely delivered with a hydraulic connector and a 600 mm high pressure hose.

Operation, Filling - with cartridge

- 1. Pull back the handle completely (Figure A/No. 8) and engage in locking groove.
- 2. Remove the cylinder (Figure A/No. 4) from the high pressure one-hand pump (right-hand thread).
- 3. Remove and dispose of the empty cartridge (Figure B/No. 10).
- 4. Remove the rear cover cap from the new cartridge (Figure B/No. 11).
- 5. Insert the new cartridge, with the open end first, into the cylinder (Figure B/No. 4).
- 6. Remove the front cover cap (Figure B/No. 9).
- 7. Reinstall the cylinder (Figure A/No. 4) (right-hand thread).
- 8. Open the air release valve (Figure A/No. 3).
- 9. Release the piston rod (Figure A/No. 7) from the locking position and slide it back into the cylinder.
- 10. Operate the actuating lever (Figure A/No. 5) several times until grease comes out constantly.
- 11. Close the air release valve (Figure A/No. 3).



DANGER

Filling with high-pressure lubrication systems is prohibited due to the risk of bursting. This could lead to severe damage to property, serious physical injuries or death.



NOTE

Avoid filling by hand if possible.

This can lead to air pockets and therefore malfunctions.

Operating instructions

Connecting

- Place hydraulic-connector at end of hose on the high pressure valve.
 Ensure that the valve is free of impurities!
- 2 Close the air release screw

Applying pressure

3. Actuate lever until gauge indicates pre-selected pressure.

Disconnecting

- It is imperative that the following procedure is adhered to, otherwise the valve may come off or the nozzle may be damaged.
- Turn pressure release screw half a turn to the left. Never unscrew it completely. Grease will flow back into reservoir. Wait until pressure has decreased.
- 6. Remove hydraulic-connector with a slight turn from the high-pressure valve.
- 7. Close pressure release screw.



Packing, Transport and Storage

The product will be prepared for transport to its first destination by ETP. The packing unit may not be subjected to any excess load. The packaging and its content must be protected from moisture. The transport temperature must be kept between -20° C and $+40^{\circ}$ C.

Transport Damages

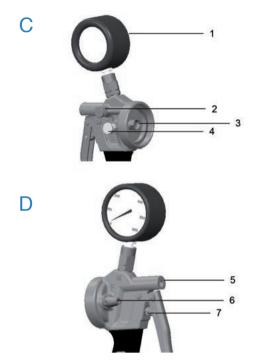
If transport damages are discovered during the inspection of incoming goods, this procedure must be followed:

- Inform delivering party (freight carrier, etc.)
- · Make record of damages
- · Inform supplier

Storage

Storage and temporary storage in aggressive or humid environments or outdoors can lead to corrosion and other damages. The storage temperature must be kept from -20 $^{\circ}$ C to +40 $^{\circ}$ C.

Fault Localisation, Troubleshooting



Designation of the components (Figure C-D)

- 1. Pressure gauge
- 2. Pressure release screw
- 3. Suction valve
- 4. Air release valve
- 5. Connection to the high pressure hose or rigid feed tube
- 6. Filler
- 7. Pressure Piston



CAUTION! Remediation of any of the faults described below may only be carried out by a trained technician.

No pressure built-up

The product dame up		
Symtom / Check	Cause	Solution
Check if pressure release screw (Figure C/No.2) is closed.	Open pressure release screw (Figure C/No.2)	Close pressure release screw. (Figure C/No.2)
Handle with piston-rod can only be pulled back with force.	Grease cartridge empty.	Insert new cartridge(see filling instructions)
Did you fill the cartridge yourself? It is almost impossible to avoid enclosures of air in doing so. It saves you time and trouble if you use only quality cartridges.	Air in the system.	Bleed all air out; open release valve (Figure C/No.4) and pump. Close release valve when grease flows continuosley and airbubble free from the opening by the valve.
The pressure reached is a little above zero.	Pressure relief valve (Figure C/No.2) and/or Air release valve (Figure C/No.4) leaks or is dirty.	Dismantle and clean valve. If necessary, replace it.
No grease flows.	Check valve (Figure C/No.4) leaks or is dirty.	Dismantle and clean valve.If necessary, replace it.
Grease leaks from behind the piston seal.	Defective piston seal.	Renew seal.
Cartridge empty after short time.	Cartridge is not complying with standards. Grease leaks between cylinder and cartridge. Or the sealing member is not used.	Use quality cartridges. Use the sealing member.

Pressure is built up but lost immediately

1 ressure is built up but lost illilliculately				
Symtom / Check	Cause	Solution		
Grease leaks at the corresponding places.	Leakage between: hose and h-connector or hose and valve head.	Replace copper sealing ring. Tighten bolt connection. Replace copper rotation ring. Seal with Loctite 601.		
	Defective seal on manometer.	Replace seal.		
	High pressure valve on clamping piece leaky.	Replace Inlet Valve.		

Training of Personnel

Only trained and instructed personnel who have read and understood all points of the Operating Manual may work on the product. Likewise the individual operating states must be mastered, and the related safe aspects must be known and they must be able to implement them. Personnel undergoing training may only work on the product under the supervision of qualified personnel.

Customer Service/Support

ETP TRANSMISSION AB

Roxtorpsgatan 22
S-582 73 Linköping

Tel. +46 (0)13 24 71 00
E-Mail service@etp.se
Internet www.etp.se

De-Commissioning

Interruptions: In the event of interruptions (overnight or just over the weekend), release tension of the product. The system must be de-pressurised.

Drawings and Replacement Parts

Accessories, Spare Parts List as well as an Exploded view drawing can be found on pages 2-3.

Idling and Disposal

When de-commissioning/idling the product, please heed the following points:

- Switch off the main switch (if any)
- · Unplug the main power plug from the main supply (if any)
- · The system must be depressurised.
- · The medium must be removed and properly disposed of.



ENVIRONMENTAL HAZARD

The various materials /liquids must be properly and separately handled and disposed of in compliance with the applicable national ordinances. Lubricants are considered hazardous waste.

Re-Sale

This Operating manual is a component of the product and belongs in the scope of delivery in the event of re-sale.



ETP HYDRO-GRIP High pressure pump M-08

Supplier:

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info@etp.se www.etp.se

ETP Part nb. 59800

Manufacturer:

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