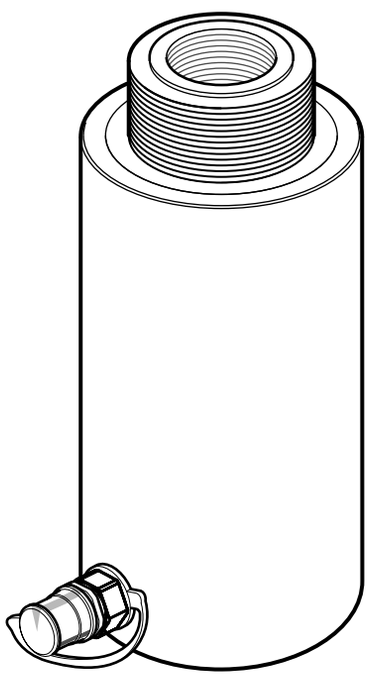


VAS 6178

BRUKSANVISNING · BRUGSANVISNING · KÄYTTÖOHJE · OPERATING INSTRUCTIONS

GEBRAUCHANWEISUNG · MODE D'EMPLOI · GEBRUIKSAANWIJZING

ISTRUZIONI PER L'USO · INSTRUCCIONES DE USO · INSTRUÇÕES DE USO

To avoid functional disturbances, we recommend that you read these instructions thoroughly before using the product.

Technical description

Capacity:	200 kN (20 ton, 22 sh ton)
Max. working pressure:	70 MPa (700 bar, 15150 psi)
Stroke:	100 mm (3.9 in)
Weight:	4.4 kg (9.7 lb)

System construction

Always plan a hydraulic system by choosing products that are suitable for the task in hand. Check product limitations regarding pressure range, lifting capacity and compatibility. The maximum working pressure of the system must not exceed the maximum working pressure of any product in the system.

We recommend the use of pressure gauges with any hydraulic system to ensure that it is operated within its safe working range.

Make sure that all hydraulic hoses, connections, etc., are connected to the right connection port (pressure or return port) on the pump, ram, valve or other hydraulic component.

Applications

Because of its design the hollow cylinder can be used for both pushing and pulling operations.

Pushing operations

Pushing/Lifting
When a hollow cylinder is used as a conventional ram we recommend the use of a solid pressure head.

Position the cylinder on or against a solid flat surface before lifting. Never lean over a pressurised cylinder or pump lever. Secure the load before lifting to make sure that it cannot roll or slip.

- Never work underneath a raised load without first securing it with blocks or some other mechanical support.

- Never disconnect a cylinder from the pump when the hydraulic system is under pressure.

Pushing onto shafts (Fig. 2)
When the cylinder is used for applications such as pushing a bearing (A) onto a shaft (B) it is important that the stop or nut (C) has as large a surface area as possible so that the force is spread over the entire base of the cylinder.

- Never stand behind a cylinder when carrying out this type of work. If the stop or shaft breaks this could result in injury.

- Never disconnect a cylinder from the pump when the hydraulic system is under pressure.

Pulling operations

Pulling operations usually exploit the fact that the cylinder is hollow.

Fitting (Fig. 3)
A rod (B) is inserted through the object to be pulled (A) and through the cylinder itself. Stops (C) are fitted to both ends of the rod (B). A pressure head with threaded hole can be used as a stop at the piston end.

Removal (Fig. 4)
A rod (B) is inserted through the object to be pulled (A), through the spacer (D) and through the cylinder itself. Stops (C) are fitted to both ends of the rod (B). A pressure head with threaded hole can be used as a stop at the piston end.

- Never stand in front of or behind a cylinder when carrying out this type of work. If the stop or shaft breaks this could result in injury.

- Never disconnect a cylinder from the pump when the hydraulic system is under pressure.

Uneven loading (Fig. 5)

Make sure the ram supports the load at right angles to the surface. Avoid uneven loading, i.e. situations where the load is not carried through the centre of the lifting plate. Uneven loading puts unäfavourable stresses on the ram and can lead to permanent damage. Avoid point loads - spread the load across the lifting plate whenever possible.

Overloading

Do not lift any load that exceeds the rated capacity of the ram. Overloading may damage the equipment and cause personal injury. A ram can support maximum load on the piston stop ring/glands. However, avoid loading a ram when it is fully extended as this causes unfavourable stresses. Therefore choose a ram with a slightly longer stroke than is necessary for the intended application.

Heat

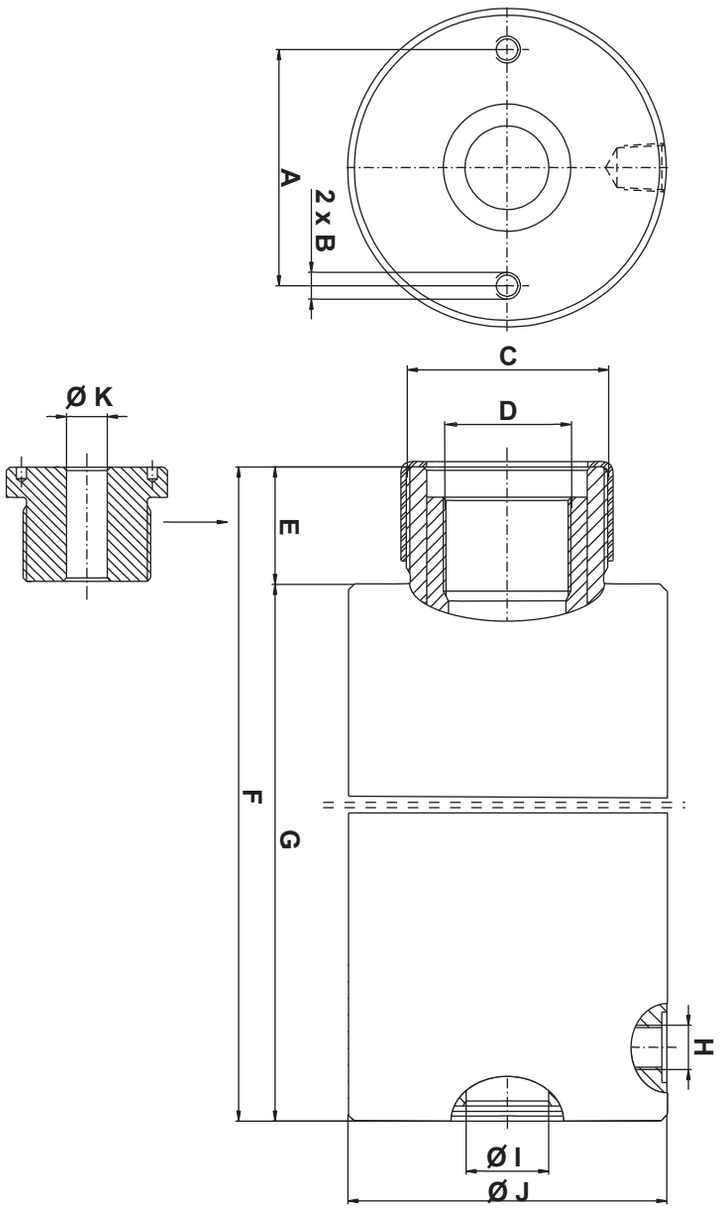
Avoid exposing hydraulic equipment to temperatures higher than 50^{O}C. Heat can destroy gaskets and hoses.

Bleeding the hydraulic system

Air can collect in the hydraulic system when hoses or tools are connected and this can lead to problems in operation. To bleed the äsystem run the tool or ram through 3-4 cycles (pumping to full extension then releasing) without any load. At the same time make sure that the tool or ram is kept lower then the pump so that air can travel back to the oil reservoir in the pump. Then bleed the pump oil reservoir. Top up the pump with oil if necessary.

Maintenance

Hydraulic equipment must be serviced and maintained regularly to keep it in good working condition. For safety reasons it is important that hydraulic products are serviced and maintained by experienced personnel. If in any doubt, contact your dealer for information about the nearest authorised service agent.
Always use original spare parts. Lubricate moving parts as necessary with a high quality grease. Always use high quality hydraulic oil with good low temperature äproperties.



	mm	in
A	70	2,76
B	M8 x 12	M8 x 12
C	M60 x 2	M60 x 2
D	M38 x 1.5	m38 x 1.5
E	35	1,38
F	260	10,24
G	225	8,86
H	G 1/4"	G 1/4"
I	24,5	0,96
J	95	3,74
K	12,3	0,48

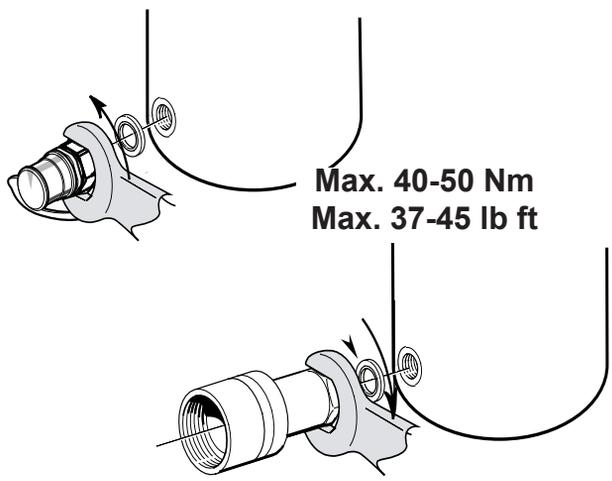


Fig. 1

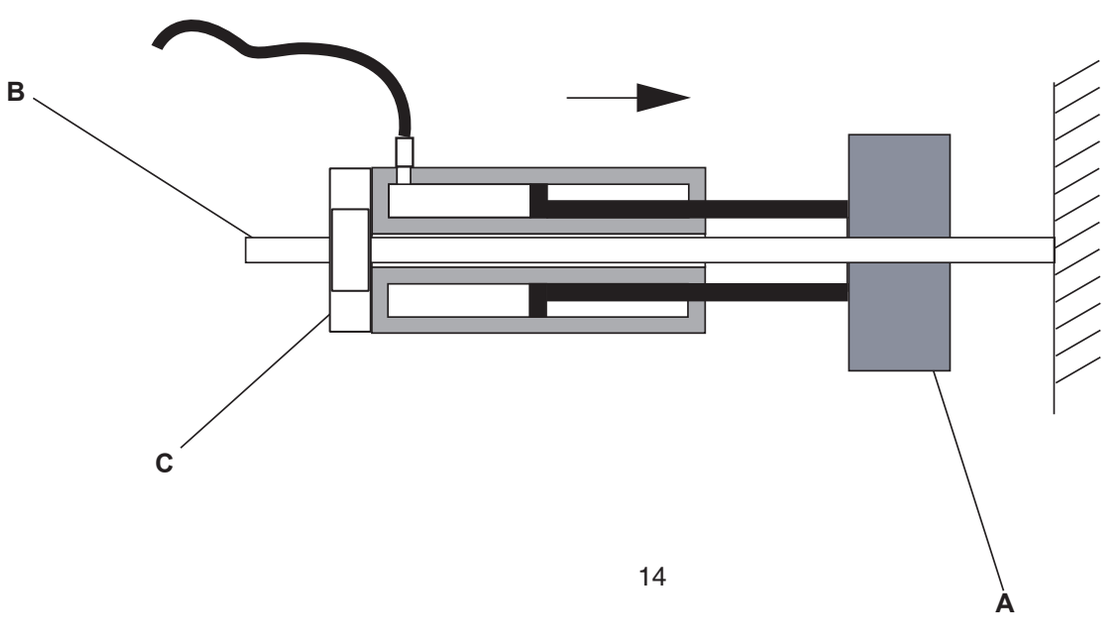


Fig. 2

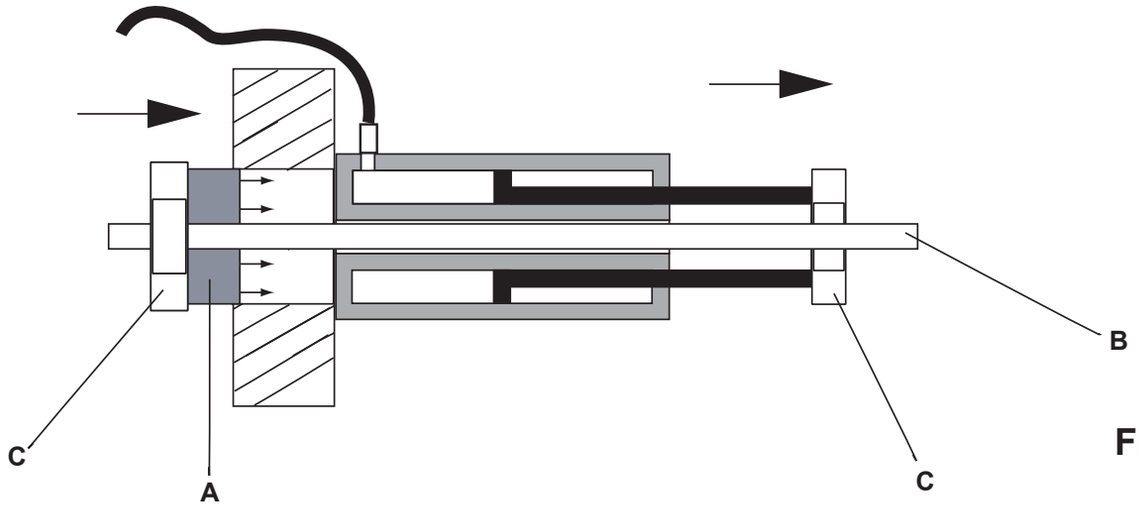


Fig.3

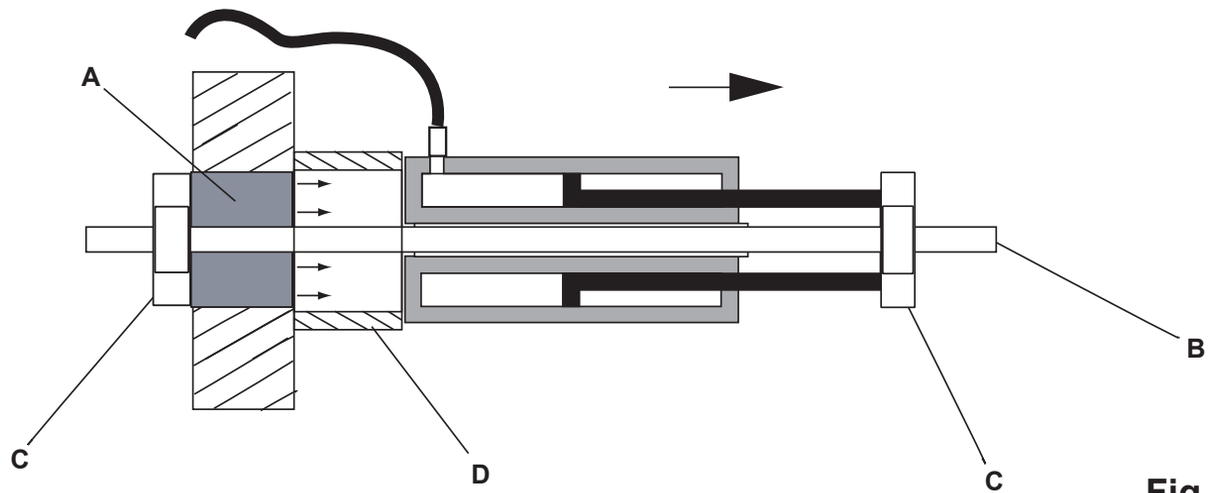


Fig.4

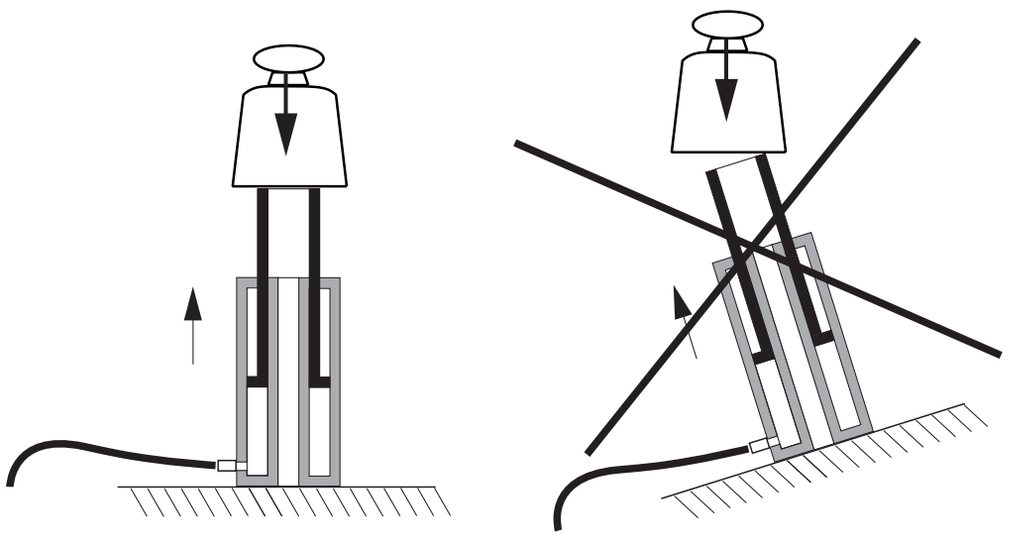


Fig.5