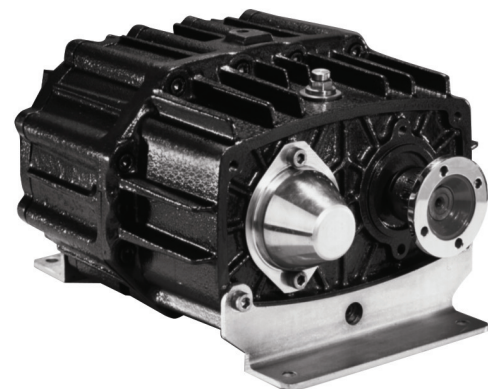


Installation, Operating & Maintenance Manual

(Original Instructions)

DRUM

X140 CONTACTLESS EXHAUSTER



4999900001
September 2013

INSTALLATION INSTRUCTIONS

PLEASE READ THESE INSTRUCTIONS THOROUGHLY BEFORE STARTING INSTALLATION.

For high altitude use (over 1000 metres), extreme temperature conditions or confined installations which may affect cooling consult Drum Representative.

For optimum life and performance it is recommended that DRUM supply a compatible full flow relief valve and non-return valve. A close coupled Reverse Flow Valve is available incorporating a check valve and relief valve for use in vacuum and pressure applications. The use of non-approved ancillaries could affect the warranty conditions.

IN CASE OF FIRE



FLUOROELASTOMER POLYMERS (VITON)



300°C +

=



HYDROGEN FLUORIDE



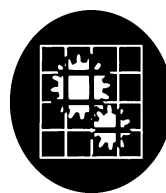
+



IMPORTANT Fluoroelastomer Polymer seals that have been exposed to temperatures of 300°C and above **MUST** not be handled with bare hands even when the seals have cooled down.



Ensure that the drive can **NOT** be engaged during installation.



Use drive line guards where shown



Care should be taken to ensure that, where necessary, this equipment is earthed in accordance with BS 5958 Part 1 (1980) and Part 2 (1983) - "Control of Undesirable Static Electricity".

Mounting

The machine is supplied with two pressed steel mounting feet. These are affixed to the end covers utilising two of the fixing bolts. At the non-drive end it is necessary to fit the supplied spacers into the counterbored holes to provide a level mounting face.

The machine must be mounted with the shafts in the horizontal plane to ensure correct oil distribution. Inclination to match propshaft angle is permissible.

Drive Rotation Options

The machine has 2 contra-rotating input shafts which will allow drive from either direction of power take off unit.

Due to symmetry of design, the machine is bidirectional.

If the input shaft is driven in the direction as shown in **# 2**, the inlet port will be the lower port and the discharge the upper port.

If the drive is in the opposite direction to that shown in **# 2**, the port functions are reversed.

Propshaft Drive

If a propshaft is fitted, its length and angle must be kept to a minimum. **The angle must not exceed 12 degrees.**

The propshaft should be balanced and the spline fitted at the end nearest the compressor.

The shaft of the machine and the driving shaft must be parallel to within 1 degrees in any plane (**# 1**).

Non-return valve

A suitable non return valve **MUST** be fitted 1 - 2 metres from the compressor outlet port.

NOTE : **The non-return valve MUST NOT be positioned between the relief valve and the compressor.**

Compressor air inlet

Do not obstruct the air inlet. Ensure only cool dry air enters the compressor.

Oil level

Ensure oil level is correct before starting the compressor by removing the magnetic plug on the compressor casing and check that the oil level reaches the base of the aperture. Note : Take care when removing plug as gearcase may be pressurised (Refer diagrams on pages 6 and 7).

Gearbox capacity 0.75 litres - ISO 220 (SAE90) SYNTHETIC OIL.

BURHAM-CASTRO OILS ALPHASYN T220	ELF OILS REDUCTELF SYNTHESE 220	SHELL OILS SHELL TIVELA WB
-------------------------------------	------------------------------------	-------------------------------

DO NOT mix different brands of oil, even when specifications appear to be the same.

Relief valve

The X140 Exhauster must never be operated without a suitable pressure relief valve connected to the compressor discharge line. The relief valve must be the first valve in the discharge pipework. The relief valve should be mounted in the pipework, no more than 1 metre away from the machine. The valve must vent directly to the atmosphere. The set pressure of the relief valve must never exceed 1.0 bar G.

Reverse Flow Valve

A reverse flow valve can be supplied which fixes to the ports via an adaptor. The RFV incorporates a vacuum breaker valve preset at 20" Hg. (0.7 Bar). A relief valve (set at 0.4 Bar) is fitted into the adaptor fabrication.

Discharge pipework

The discharge pipework near the compressor can reach surface temperatures of 200° C. Do not touch, or allow combustible material to come into contact with the discharge pipework.

Cleaning

The X140 is a bladeless, contactless machine and the inner surfaces are coated with a nonstick coating. This enables the machine to be cleaned in the event of a blow-back. Small quantities of hot water with a mild detergent can be introduced into the suction port while the machine is rotated at low speed to flush the machine.

NOTE : Store in a dry, heated building.

WARRANTY : Failure to adhere to installation and operating instructions may affect terms of warranty.

MAINTENANCE INSTRUCTIONS

Power Take Off Unit

Refer to the manufacturer's information concerning the maintenance of the PTO.

Compressor Unit

The product label contains information regarding ;-

the type / model of the machine
maximum speed and pressure
a unique identification number
the year of construction

and should be quoted if enquiring about service / maintenance.

Gearcase Oil

Check gearcase oil level weekly (cold condition) by :

Remove the magnetic plug and check that the oil level reaches the base of the plug aperture. Note: Take care when removing the plug as gearcase may be pressurised. If oil is required, remove the filler/breather and top up as necessary. Replace filler/ breather.

BURHAM-CASTROL OILS ALPHASYN T220	ELF OILS REDUCTELF SYNTHESE 220	SHELL OILS SHELL TIVELA WB
---	---	--------------------------------------

NOTE 1: Do not mix different brands of oil even when the specifications appear to be the same

NOTE2: Reduct Elf Synthese 220 supplied as standard on assembly.

Drain the gearcase and clean the oil filter annually or after 1000 hours of running (whichever is sooner) whilst the oil is **warm** as follows :

Remove oil drain plug in base of gearcase and allow oil to drain. Note: Take care when removing plug as gearcase may be pressurised

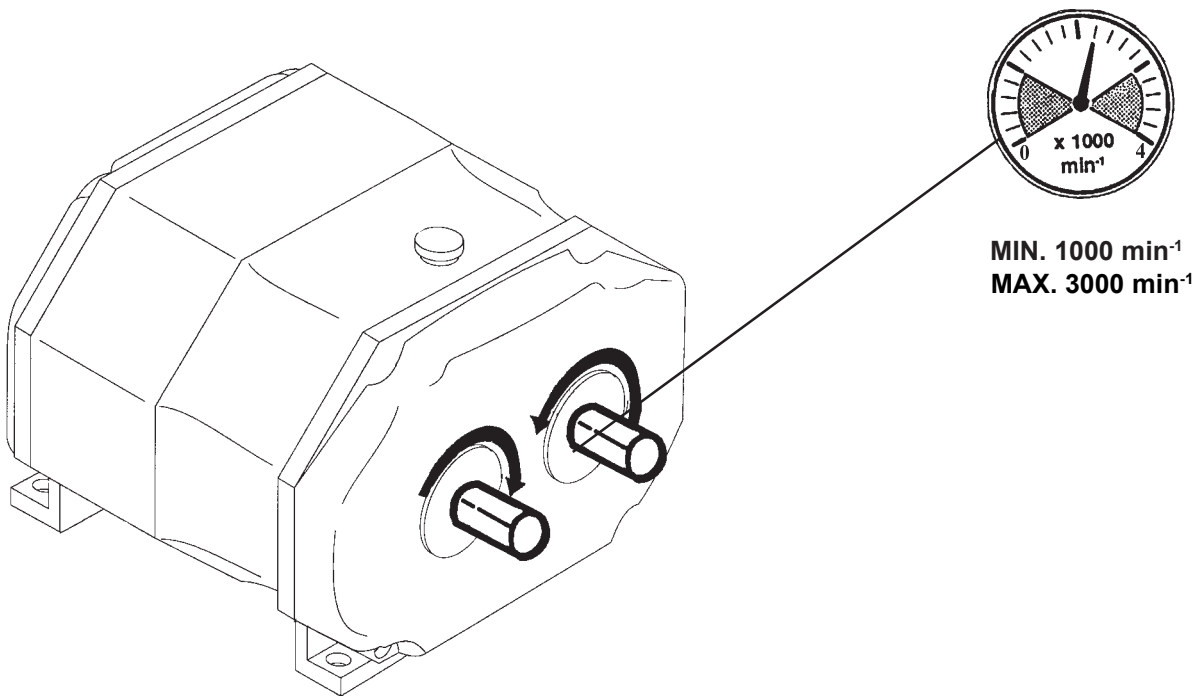
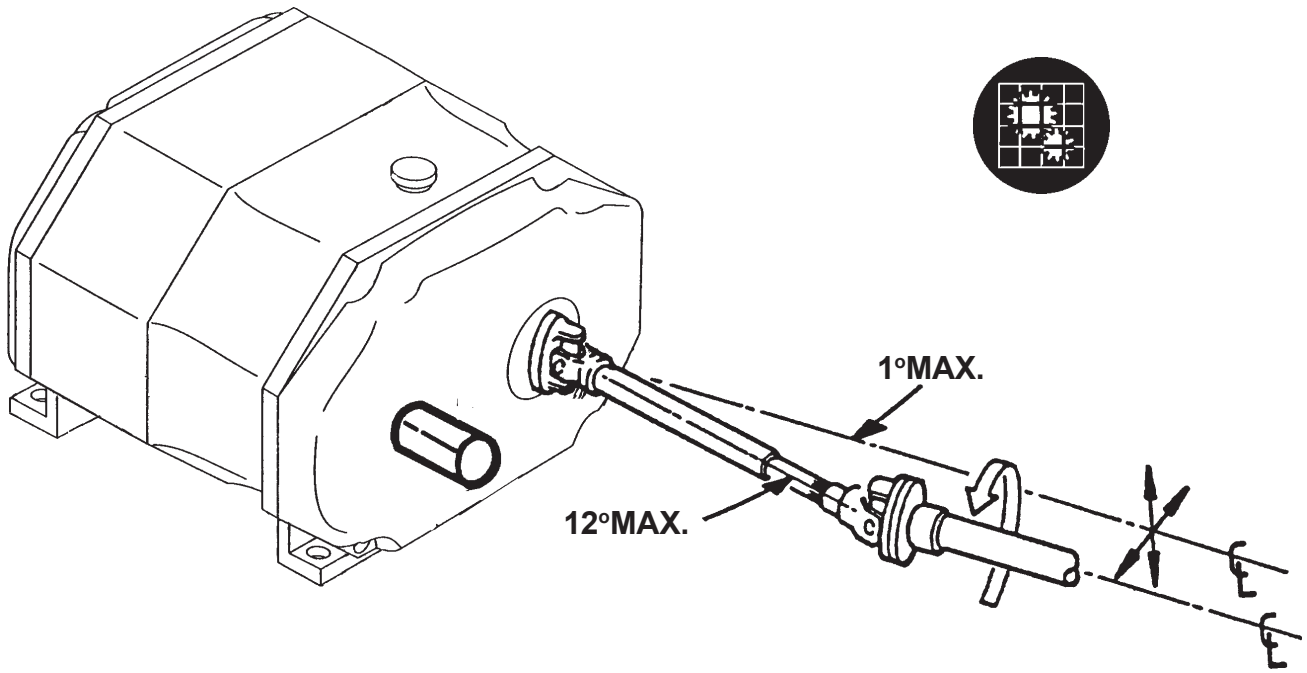
Replace drain plug.

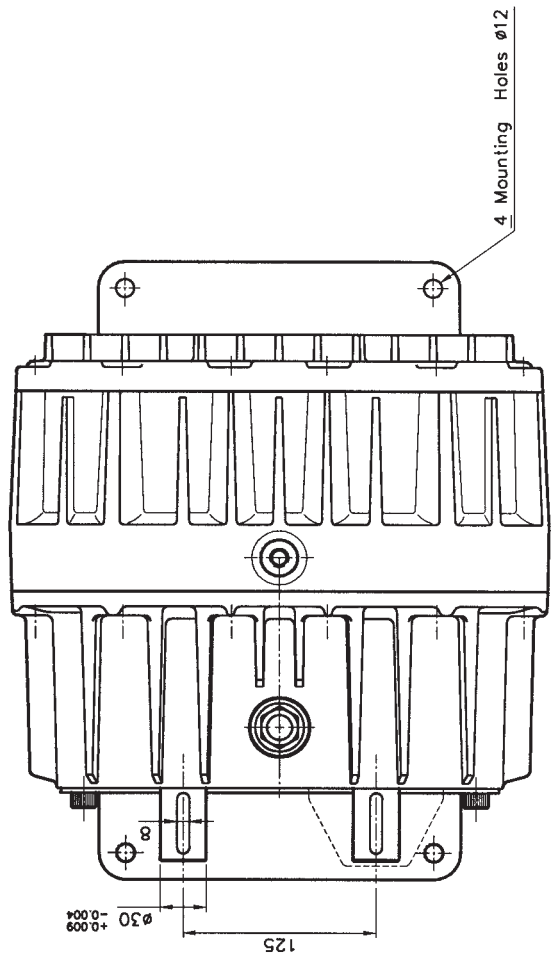
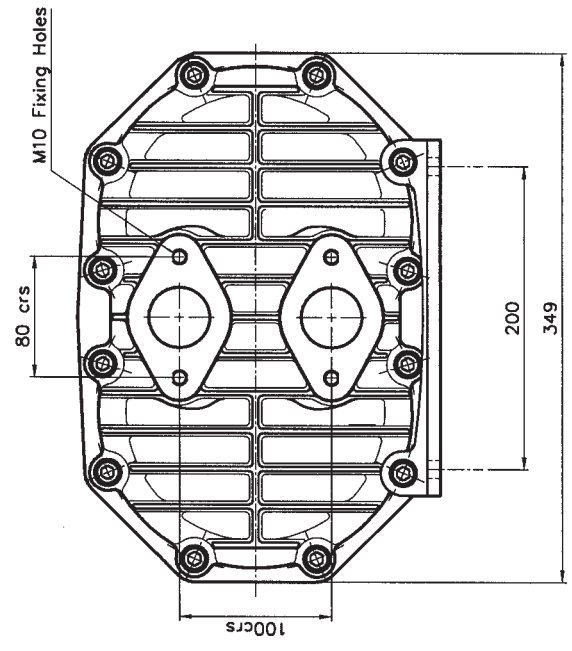
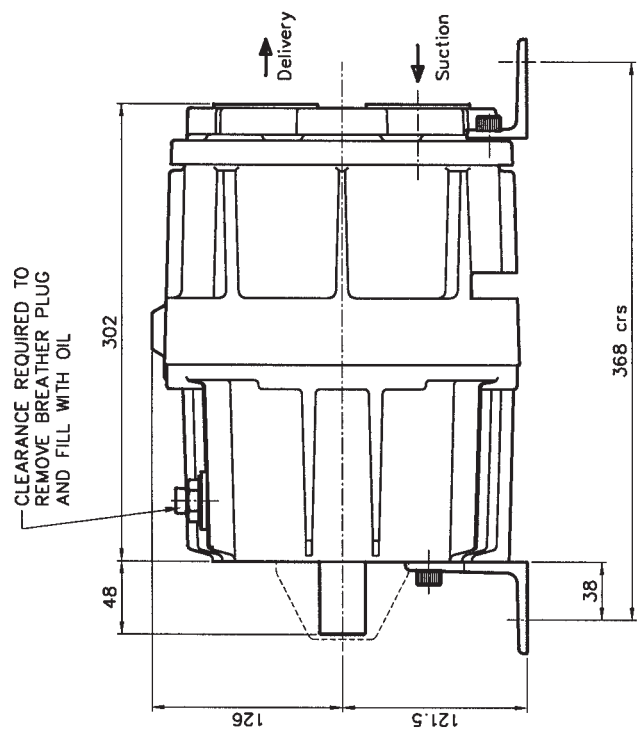
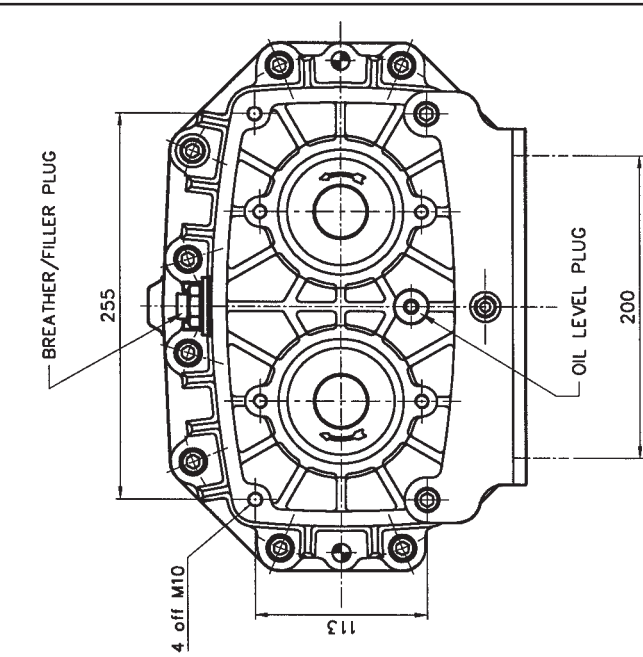
Re-fill gearcase with oil until level reaches base of magnetic plug aperture.

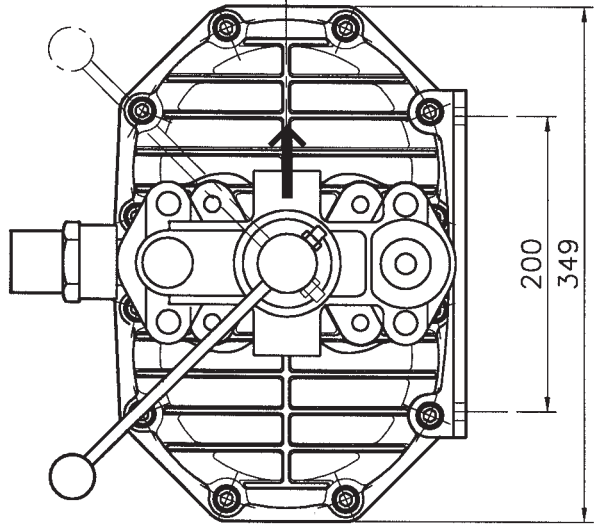
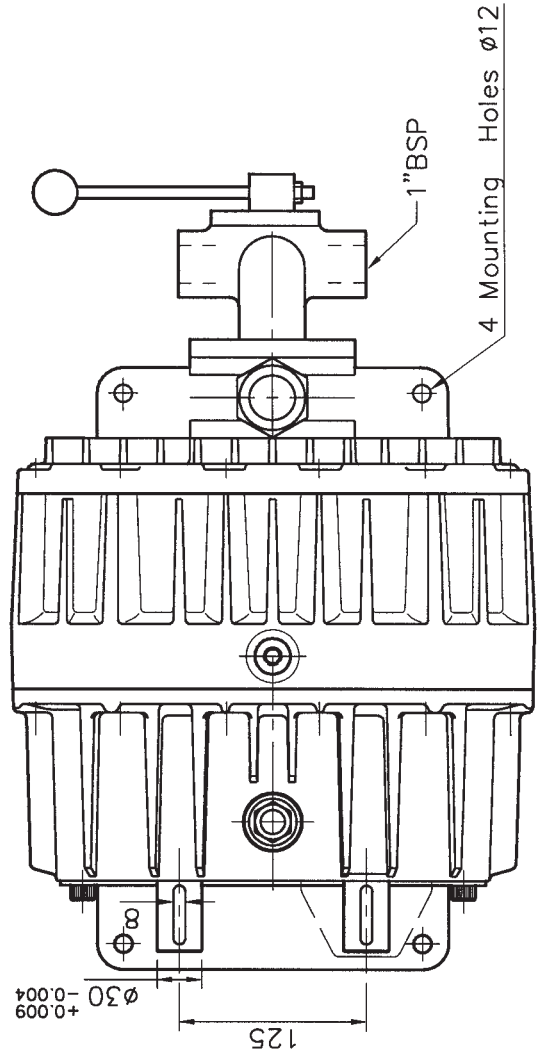
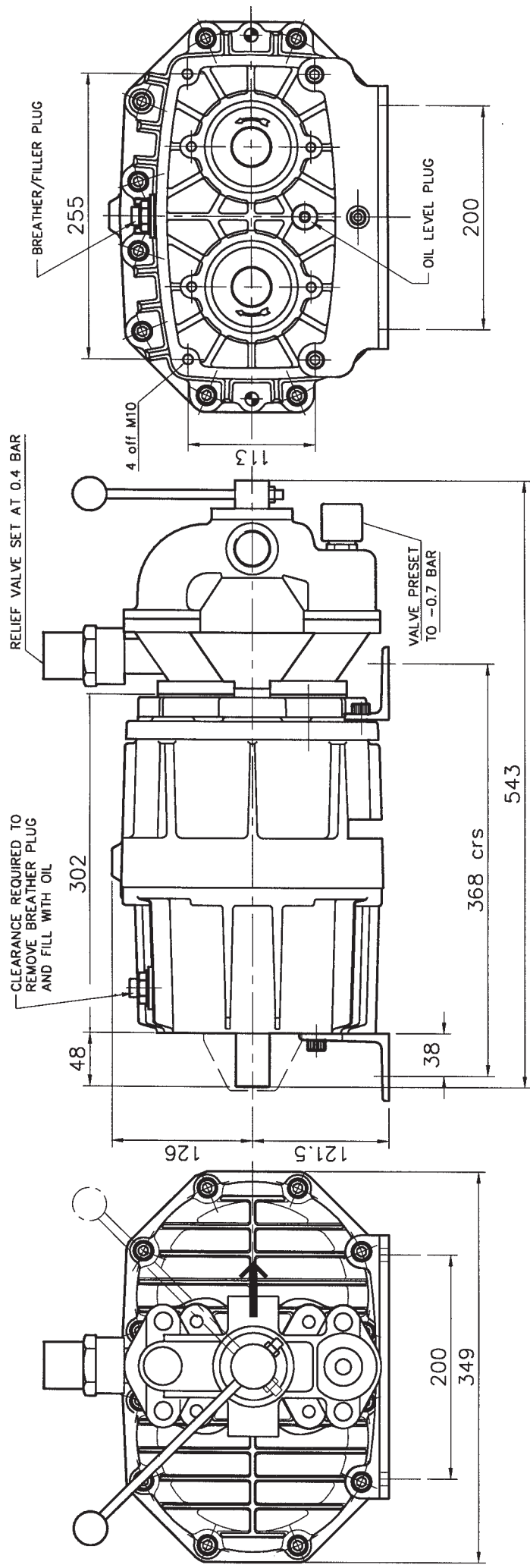
Relief Valve

Check correct operation of relief valve fitted to system at weekly intervals. It is important that the valve opens at the correct pressure (0.4 bar) and prevents further rise of pressure.

DRIVE SYSTEMS







ARRANGEMENT WITH REVERSE FLOW VALVE

4

Contact Us

Americas

Gardner Denver, Inc.
Industrial Products Group - Americas
1800 Gardner Expressway
Quincy, IL. 62305
Toll Free: 1-800-682-9868
Phone: 217-222-5400
Fax: 217-221-8780

email: mobilesolutions@gardnerdenver.com

France

Gardner Denver France SA
Division Compresseurs
42, rue du Montmurier, BP 604
38070 Saint-Quentin-Fallavier, France
Phone: +33 (0)474941673
Fax: +33 (0)474941689

email: contact.lyon@gardnerdenver.com

UK Sales & Service

Gardner Denver UK Ltd
PO Box 468
Cross Lane, Tong
Bradford, West Yorkshire
United Kingdom
BD4 0SU
Phone: +44 (0)1274 683131
Fax: +44 (0)1274 651006

email: sales.uk@gardnerdenver.com

Australia

Gardner Denver Ind. Australia Pty Ltd
30 Bearing Road
Seven Hills
New South Wales
2147 Australia
Phone: +61 2 96207000
Fax: +61 2 96207955

email: hermant.malik@gardnerdenver.com

Germany

Gardner Denver Deutschland GmbH
Am Dorn 14
48308 Senden
Germany
Phone: +49 (0)253634840
Fax: +49 (0)25363484010

email: info.de@gardnerdenver.com

Spain

Gardner Denver Iberica S.L.
Calle Primavera, 20
Poligono Industrial Las Monjas
28850 Torrejon de Ardoz
Madrid, Spain
Phone: +34 (0)916560056
Fax: +34 (0)916770496

email: aurelio.fernandez@gardnerdenver.com

Belgium

Gardner Denver Belgium N.V.
Luithagen 7A
Haven 200
B-2030 Antwerpen
Belgium
Phone: +32 (0)3 5415040
Fax: +32 (0)3 5416509

email: info.be@gardnerdenver.com

Netherlands

Gardner Denver Nederland BV
Barwoutswaarder 3B
3449 He Woerden
The Netherlands
Phone: +31 (0)348410150
Fax: +31 (0)348418079

email: sales.nl@gardnerdenver.com

Rest of the World

Gardner Denver Ltd
PO Box 178
Springmill Street
Bradford, West Yorkshire
United Kingdom
BD5 7YH
Phone: +44 (0)1274 718100
Fax: +44 (0)1274 655272

email: gdtransportsales@gardnerdenver.com

For additional information, contact your local representative or

The logo for Gardner Denver, featuring the word "Gardner" in a large, bold, black sans-serif font, with a thick red horizontal line underneath it. Below the line, the word "Denver" is written in a smaller, bold, black sans-serif font.

Gardner Denver Ltd
PO Box 178,
Springmill Street,
Bradford,
West Yorkshire, UK
BD5 7YH

Tel: +44 (0)1274 718100

Fax: +44 (0)1274 655272

Email: gdtransportsales@gardnerdenver.com

Web: www.gd-transport.com