

The adjustment of the guides can be carried out as follows

- Tighten all set screws (3) uniformly until the carriage (1) or the slide (4) can hardly be moved.
- Tap lightly both sides of the carriage or slide with a rubber mallet, so that the guide rails (2) can settle. Adjust guide clearance

to about 0,1 mm.



Diagram 6

If the guide system is adjusted too tight, proceed as follows:

- Loosen set screws (3) by a quarter of a turn.
- Tap lightly along the carriage with a rubber mallet, so that the guide rails can resettle.
- Repeat adjustment as described.

5.5 Adjusting the Cushioning

The end cushioning can be adjusted using the flow regulation screws (see diagram 3). The piston must be decelerated sufficiently so that it gently touches the end stops.

Different loads require corresponding adjustment of the cushioning



6 Maintenance

6.1 Cylinder lubrication

The cylinders are lubricated with grease before leaving the factory. Oil lubrication is not absolutely necessary; however, the life of the seals is increased when oil lubrication is used. When a control unit is used, this should be placed close to the cylinder.

Insufficient lubricaton can result in so-called "Slip-stick" effects (jerk-sliding).

6.2 Lubrication of sliding surfaces The sliding surfaces should be cleaned

and lightly greased at regular intervals depending on the degree of use and the working environment.

6.3 Spares kit

Spares kits are available for all cylinders. The product number of the spares kit is derived from the cylinder type with the prefix "Q" and suffix " /*/88 " . For example a spares kit for M/46150 is QM/46150/*/88. Replace " * " by the stroke length.

The spares kit includes all seals and guide components as well as seal strip and cover strip.

Instructions to service the cylinder are supplied with each kit.

When inserting the seal strips avoid damaging the edges as this causes increased leakage and wear.



Seals are made from oil resistant nitrile rubber, polyamide or

polyurethane. Do not use any solvent when carrying out external cleaning.



5.4 Adjustment of the guide clearance The clearance of the carriage

Diagram 4: Mounting with supports

The LINTRA cylinders are shipped, using

the ports the conventional way at the left and the right end cover. By moving the plug from location 1 to 2 (see diagram 3) the cylinders with the bore diameters 25 - 80 mm can be operated from the left

The control of a LINTRA cylinder can be

carried out using standard pneumatic

valves or built-in solenoid or air valves.

5.2 Port location

5.3 Pneumatic control

It is important for a

controlled start of a cylinder that both sides of

are simultaneously

the piston

pressurized.

side only.

(1, diagram 5) and the clearance of the slide of the power transmission (4, diagram 6) should be approximately 0,1 mm.



Diagram 5



1 Short description

- Double acting cylinder with adjustable cushioning
 With or without magnetic piston
- With or without magnetic piston
 "No contact" sensing by the use of magnetic switches
- the use of magnetic switches (with or without L.E.D.)
 Due to internal air ways cylinder can be operated conventionally or from the left side only
- Wide variety of mounting options provided by dove tail and grooves

2 Technical data

Medium: Compressed air, filtered, lubricated or non-lubricated Operating pressure: 1-10 bar

1,5-10 bar (cyl. ø 16) Equipment temperature: - 30°C to + 80°C (when operating at minus temperature please pay particular attention to the condition of the air)

3 Safety

3.1 Symbol

Whenever there might be danger to personnel or a risk of demage to the cylinder you will find the following symbol.



3.2 Safety instructions

- o The LINTRA cylinder is a technically advanced product designed to work safely. However there may be a risk of danger if:
 - The cylinder is operated, installed or maintained improperly or by unskilled personnel.
 - The cylinder is used in an application for which it was not designed.
 - The advice of the legal requirements, the safety and the mounting instructions are not followed.
- Anyone responsible for the installation, operation or maintenance of this product must get familiarised with these instructions, especially those relating to safety. Customers are advised to ensure that such personnel

fully understand these instructions.

- o The installation and removal of the LINTRA cylinder and the magnetic switches must only be done by skilled and authorised personnel.
- Operations that impair function or safety of the LINTRA must be avoided.

- o The LINTRA cylinder should only be used within the operating parameters given in the technical data for this product. Norgren Martonair cannot be held responsible for any damage caused by mis use.
- When installing, removing or maintaining the unit ensure that the power supply is first disconnected
- power supply is first disconnected.
 When servicing it is recommended that the unit is removed from the area of operation.
- When connecting, adjusting or servicing the cylinder ensure that inadvertant starting by the operator or any other person is not possible.
- o Modification of the cylinder in any form is forbidden without prior consultation with Norgren Martonair.
- o Norgren Martonair must permit an intended use in any hostile environment before the cylinder is used.
- o All safety regulations and all regulations for prevention of accidents in the operating range are equally valid

Installation and maintenance instructions LINTRA rodless cylinders

5 Installation, connection and adjustment

5.1 Installation

Any existing power supply must be disconnected before installation can begin. Pay attention to the safety guidelines (section



3.2 and 5.3) regarding the installation of the LINTRA cylinder. Unless otherwise specified the fixing procedure of all screws when mounting the cylinder must adhere to the DIN regulations.

The following mounting possibilities exist:



Diagram 1: Installation with foot mounting



Diagram 2: Direct mounting

4 Unpacking and checking

Carefully unpack the unit without using any sharp or pointed instruments.

Please check that the LINTRA cylinder has not suffered any damage during transit. If you find any damage please report it to us.

NOTE:

When the unit is likely to be stored for a long period of time, please ensure that:

- It is stored in a dry and dust protected place
- It is protected from aggressive media
- Severe temperature fluctuations
- are avoided
- All port connections are plugged

To mount the cylinder, any position can be chosen. In dirty environment we recommend strongly to install the cylinder with the slot facing downwards.

When a LINTRA cylinder is ordered with a centre support; this is supplied separately and can be mounted as follows (dia. 4):

- Hook the supports (1) onto the cylinder profile in the desired position.
- Secure the supports using set screws (2).