

# Recommendations for use



# EXCEPT SPECIFIC INDICATIONS SPECIFIED IN THE SPECIFICATIONS

## 1. GENERAL:

The optimum lifespan will be obtained when used in accordance with technical characteristics of each type of cylinder and the recommendations for use.

If the use of the cylinder goes beyond this, the specific conditions of use must be stipulated in the customer requirements specifications.

## 2. GETTING STARTED:

- ❖ Before their mounting, the installation piping, the distribution and regulation devices as well as the tanks will be completely free of any rust or foreign bodies.
- ❖ The warning circuit must not generate shocks, transverse loads, vibrations or bending efforts.
- ❖ The cylinder is designed to operate with a hydraulic mineral oil or equivalent, with a viscosity between 2 and 5 ° Engler.
- ❖ A filtration level of 10 µ is suitable.
- ❖ The air purge will be done naturally by going back and forth over the entire stroke or through MINIMESS sockets.
- ❖ When the cylinder is new, if during the first maneuvers, the seal is not perfectly tight, do not replace it immediately.
- ❖ A light break-in is sometimes necessary to remove any seepage and allow the evacuation of excess mounting grease.
- ❖

**Important:** In the case of an installation operating on accumulators, make sure that the flow control devices do not allow a speed higher than that accepted by the cylinder.

### 3. MAINTENANCE:

La fréquence d'examen d'un vérin hydraulique dépend de son utilisation.

The frequency of examination of a hydraulic cylinder depends on its use.

- ❖ Cylinder mountings that require lubrication such as pins, bearings, ball joints, etc. must be lubricated regularly.
- ❖ Carry out a periodic check to detect and follow the evolution of any apparent leaks.
- ❖ Regularly check the cylinder mountings and its support (blocking of nuts, tightening of mounting screws...)
- ❖ In case of loss of power, without finding an external leak, a deep examination must be undertaken at the level of the entire hydraulic circuit and its components.

#### **Disassembly:**

#### **Important :**

The vertical position, body locked in a vertical vice and rod attached to a hoist is recommended.

If for any reason the cylinder is in a horizontal position, for the entire duration of the dismantling operation, the rod must be kept in line with the bore, either by a wheel or by any other ways ensuring the same guarantees.

Make sure that the cylinder does not remain under pressure or that an internal spring is not under tension.

This way of operating will avoid:

- ❖ The marking of the bore due to jamming caused by the weight of the rod
- ❖ Other damage up to and including destruction of the cylinder without possible catching up (deep scratches in the cylinder for example)
- ❖ On the cylinder, check that there are no scratches or traces of corrosion in the bore
- ❖ On the rod, check that the coating does not show any scratches or traces of impact as well as corrosion
- ❖ Control the ovalization and the degree of wear of the bronze ring (if present)

➔ Change the synthetic seals and guides after each dismantling.

## **Reassembly:**

The reassembly is carried out in the reverse order of disassembly, ensuring the extreme cleanliness of the reassembled components.

- ❖ Be sure to clean the grooves in the joints (corrosion, scratches produced during disassembly of the joints).
- ❖ Avoid impacts on sliding surfaces.
- ❖ Before reassembly, the seals must be wiped down and then coated with hydraulic oil.
- ❖ No specific tools are required to replace the seals, nor is it necessary to preheat the seals.
- ❖ The piston seals will be fitted paying attention to the direction of the sealing lips (see overall plan).
- ❖ Never force to penetrate a seal on the sliding face (risk of overturning) but facilitate assembly by penetrating in slight rotation.
- ❖ Respect the recommended tightening torques, do not forget the contact washers.

## **4. STORAGE:**

- ❖ In order to avoid premature deterioration due to surface oxidation or aging of the seals, any cylinder stored over a prolonged period must be partially filled with hydraulic oil (max. 80%) with an anticorrosive additive, and capped.
- ❖ The rod must be in the retracted position, the protruding parts of the body being protected from impact and oxidation.
- ❖ About every 3 months, it is necessary to maneuver the cylinders over the entire useful stroke as well as re-protect them if storage is to be prolonged.
- ❖ Storage must be done in a place sheltered from significant temperature variations (ideal between 10 and 40 ° C).

The aim of these operations is to avoid significant deterioration such as the deep stitching of rectified or lapped parts, hardening of the seals, etc. which can lead to the scrap of the cylinder when it is put into service.

## **5. PACKAGING:**

### **❖ *Standard packaging***

Our cylinders are packaged on filmed and strapped pallets

### **❖ *Seaworthy packaging***

The cylinders must be transported in a waterproof cover with a bag of dehumidification.

Maritime-type packaging must protect them from the risk of occasional impact.

The cylinders will always be transported with the rod retracted.