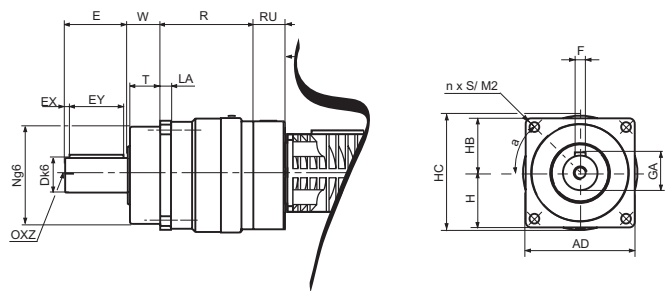




**This manual is to be given  
to the end user**



## Pjs

### Servo gearboxes

#### Installation and maintenance

**Pjs**  
**Servo gearboxes**  
 NOTE - CAUTION - CONTENTS

**NOTE**

LERROY-SOMER reserves the right to modify the characteristics of its products at any time in order to incorporate the latest technological developments. The information contained in this document may therefore be changed without notice. LERROY-SOMER gives no contractual guarantee whatsoever concerning the information published in this document and cannot be held responsible for any errors it may contain, nor for any damage resulting from its use.

**CAUTION**



Throughout the manual, this symbol warns of consequences which may arise from inappropriate use of the servo gearbox Pjs since risks may lead to material or physical damage.

Despite all the care taken in the manufacture and checking of this equipment, LERROY-SOMER cannot guarantee that lubricant will not escape during the product's lifetime. If slight leaks could have serious consequences for the safety of people and property, the installer and user should take all necessary precautions to avoid such consequences.

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# Pjs

## Servo gearboxes

### STORAGE - INSTALLATION RECOMMENDATIONS - LUBRICATION

## 1 - STORAGE

Pjs servo gearboxes can be stored horizontally in a dry place at a temperature between 0° and 30°C in their original packaging (for a maximum of one year). (Unpainted machined parts are protected with grease).



This manual contains important information concerning maintenance. This information must be observed to ensure technical performance and compliance with the conditions of the warranty.

## 2 - INSTALLATION RECOMMENDATIONS

### Servo gearbox :

For the installation of Pjs servo gearbox, follow the "Recommendations" chapter in the general manual (ref. 2557). Unpack the unit, remove the protection devices and clean the shaft. The servo gearbox must be assembled on its holder without placing stress upon the housing. 12.9 screws must be used to secure the gearbox to the machine (see screw tightening torque in the table below). Pinions or pulleys must be mounted without any impact on the output shaft. Only use appropriate tools.

### Servo motor :

For connection of the complete drive system (with brake), follow the instructions of corresponding maintenance delivered with the goods in the parcel.

## 3 - LUBRICATION

For operation in ambient temperature from -20°C to +50°C and a servo gearbox housing temperature of 90°C, Pjs servo gearbox is delivered, as standard, lubricated with a synthetic oil with 220 cst viscosity at 40°C.



**You must use an oil of the recommended type. Please observe the oil quantities specified in the table (section 3.3).** (Magnetic plugs make filling, pressure relieving and draining easier, and retain any metallic particles)

**POLYGLYCOL LUBRICANTS CANNOT BE MIXED WITH MINERAL OR SYNTHETIC LUBRICANTS OF A DIFFERENT TYPE.**

### 3.1 - Maintenance, draining

Draining should preferably be carried out every 10,000 hours. For harsh applications, please consult Leroy-Somer. **Observe the recommended draining intervals and oil quantities.**

- Drain the servo gearbox while warm (after 15 to 30 minutes of operation) via the lower plug by loosening the upper plug to facilitate the flow.
- Close the drain plug.
- Rinse the servo gearbox by maintaining the same quantity of oil and operating the servo gearbox for a few minutes in each direction of rotation.

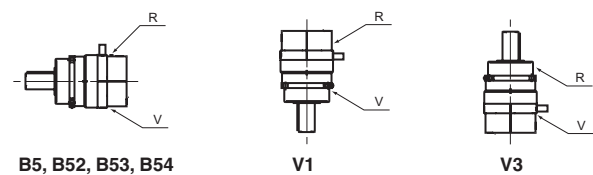
- After redraining, refill the oil taking care to seal the various plugs (Loctite 573, for example).

### 3.2 - Plugs position

a - Servo gearboxes have an upper plug for **refilling** and a lower plug for **draining**. The position of these plugs depends on the operating position of the servo gearbox, which must be **specified at the time of ordering**.

b - For continuous operation at rated speed, the optional breather plug must be installed. After installing the servo gearbox on site, insert the breather plug in the place of the fill plug.

Operating position



R : Fill plug  
V : Drain plug

### 3.3 - Oil capacity (cm<sup>3</sup>)

The volumes of oil required (these vary depending on the operating position of the servo gearbox, which must be specified at the time of ordering) are indicated in the table below:

Operating position

Type Pjs	Operating position			Other positions (B5 ± 90°)
	B5, B52, B53, B54	V1	V3	
Pjs 0601	18	18	18	18
Pjs 0602	30	35	38	38
Pjs 0751	35	35	35	35
Pjs 0752	45	65	65	65
Pjs 1001	75	75	75	75
Pjs 1002	120	160	160	160
Pjs 1401	150	150	150	150
Pjs 1402	250	335	335	335
Pjs 1801	450	450	550	550
Pjs 1802	450	650	450	650
Pjs 2101	800	800	800	800
Pjs 2102	800	1300	1100	1300
Pjs 2401	1200	1200	1200	1200
Pjs 2402	1100	2100	1600	2100

The oils in the table below can also be used.

# Pjs Servo gearboxes

## TECHNICAL CHARACTERISTICS - INSTRUCTIONS FOR DISMANTLING AND REBUILDING

### Lubricants:

Brands	Reference	Viscosity at 40°C
BP	Energyn SG-XP 220	220 cst
FUCHS	Renolin PG 220	220 cst
KLUBER	Klübersynth GH 6-220	220 cst
MOBIL	Glygoyle 30	220 cst
OPTIMOL	Optiflex 220	220 cst
SHELL	Tivela WB	220 cst
TOTAL FINA ELF	Carter SY 220 (contains silicone)	220 cst

Approved lubricant



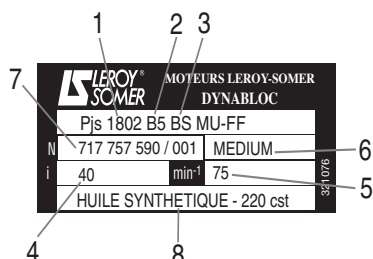
Do not mix oils from different manufacturers or oils that differ in terms of quality.

## 4 - TECHNICAL CHARACTERISTICS

Necessary information

a) from the servo gearbox nameplate :

- 1- servo gearbox model and size
- 2- operating position
- 3- fixing form : BS
- 4- exact reduction
- 5- output speed (min<sup>-1</sup>)
- 6- backlash : MEDIUM
- 7- serial number
- 8- lubrication



b) Where a servo motor is fitted to the servo gearbox, from the servo motor nameplate :

(for the servo motor : see the corresponding manual)

- servo motor type, example : **95UMB300CACAA**

## 5 - INSTRUCTIONS FOR DISMANTLING AND REBUILDING



Only use appropriate tools (adequately-sized torque wrenches, calibrated screwdrivers, etc.) or contact a service centre (see back of servo motor manual) or a Leroy-Somer approved centre.

Contact one of the centres to ensure the original standard of the product is maintained.

### 5.1 - Dismantling

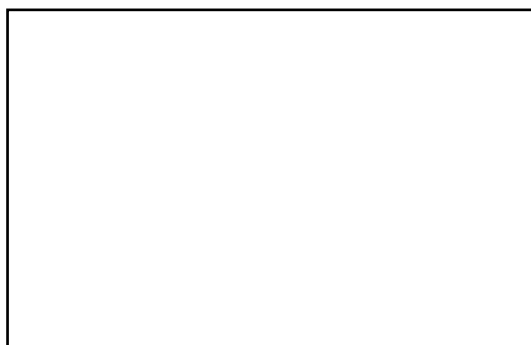
- Uncouple the servo gearbox from the machine.
- Remove the servo motor.
- Dismantle the servo gearbox.

### 5.2 - Rebuilding

- Proceed in the reverse order to dismantling.
- The servo gearbox has a slotted ring coupling. The coupling bore is adapted to the servo motor shaft.
- The servo motor is positioned in relation to the servo gearbox by the shaft and not by the centring of the flange.
- If the servo motor shaft is keyed, remove the key and check that there is no burr on the groove.
- Degrease the servo motor shaft, the sleeve bore and the mating surface of the flange.
- Position the slotted ring coupling so that the locking screws can be accessed via the appropriate openings in the housing.
- If possible, assemble in a vertical position with the servo motor above.
- Enable access to the coupling screws. Bring into contact the two coupling screws and gradually tighten them one after the other (3 steps, minimum) until the tightening torques indicated in the table below are reached.
- Prevent access to the screws using plastic plugs.

Type Pjs	Servo motor (according to Ø)	Locking screw (12.9)	Tightening torque (N.m)	Ø of key hole
Pjs 0601 and Pjs 0602	75 A to D 95 A	M4 M4	5 5	8 8
Pjs 0751 and Pjs 0752	75 A to D 95 A to E 115 A to C	M5 M5 M5	9,5 9,5 9,5	15 15 15
Pjs 1001 and Pjs 1002	95 A 95 B to E, 115 A to C 115 D and E, 142 and 190	M5 M6 M8	9,5 16 39	18 18 18
Pjs 1401 and Pjs 1402	115 A to C 115 D and E, 142 190	M6 M8 M10	16 39 77	20 20 20
Pjs 1801 and Pjs 1802	115 A to C 115 D and E, 142 190	M6 M8 M10	16 39 77	20 20 20
Pjs 2101	142, 190	M12	135	20
Pjs 2102	142, 190	M10	77	20
Pjs 2401	140, 190	M12	330	20
Pjs 2402	140, 190	M10	77	20





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