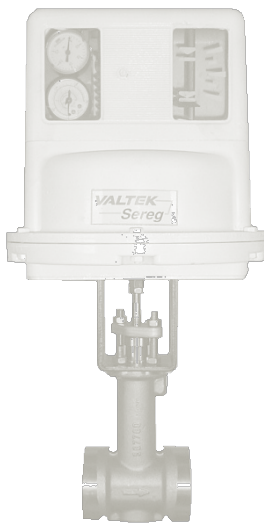


GUIDELINE

MAINTENANCE & UPGRADE

FOR EPSY CONTROL VALVES



✓ SPARE PARTS DEFINITION

✓ ACTUATOR / POSITIONER UPGRADE

✓ VALVE IMPROVEMENT EPSY → EPSY^{plus}

HISTORY – Product Line Evolution EPSY → EPSY^{Plus}

In 2012, GR SUPERVISION completed the acquisition of the Microflow Control Valve EPSY / EPSY^{Plus}, manufactured since the 70's and marketed by successively Schlumberger, Bailey, Sereg Vannes, Valtek and Flowserve, . GR SUPERVISION became the sole manufacturer / seller for EPSY / EPSY^{Plus} range genuine parts.

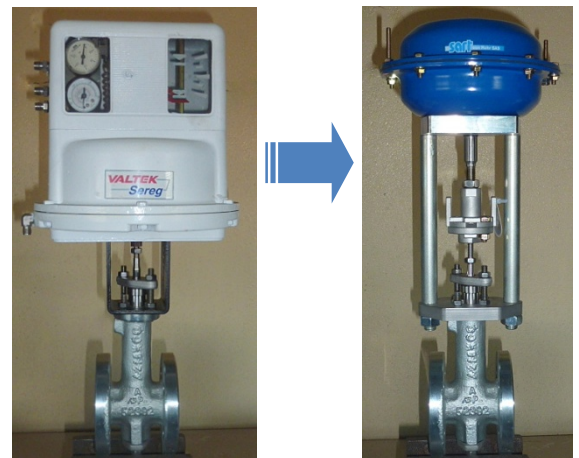
Designed in the 70's, the EPSY Microflow Control Valve (also known under MJ / CMJ type) proposes a large standard trim range, from Cv 0.005 to 3.5, applicable for a 6 mm plug stroke.

Since 2007, an additional range EPSY^{Plus} is available as standard, the connection characteristics and Cv identical but designed with a 10 mm plug stroke.

The single effect actuators type « KV », initially sold on the EPSY valves and obsolete since the 2000's, have been replacing with columns design actuators, allowing any positioner mounting in accordance with the NAMUR standard (EN 60534-6-1).



Actuator Upgrade on standard cryogenic valve



Actuator Upgrade on standard valve

This guideline, for site users, is designed to assist you in choosing your valve spare parts and associated actuators upgrades.

For any help or advices, please contact GR SUPERVISION :

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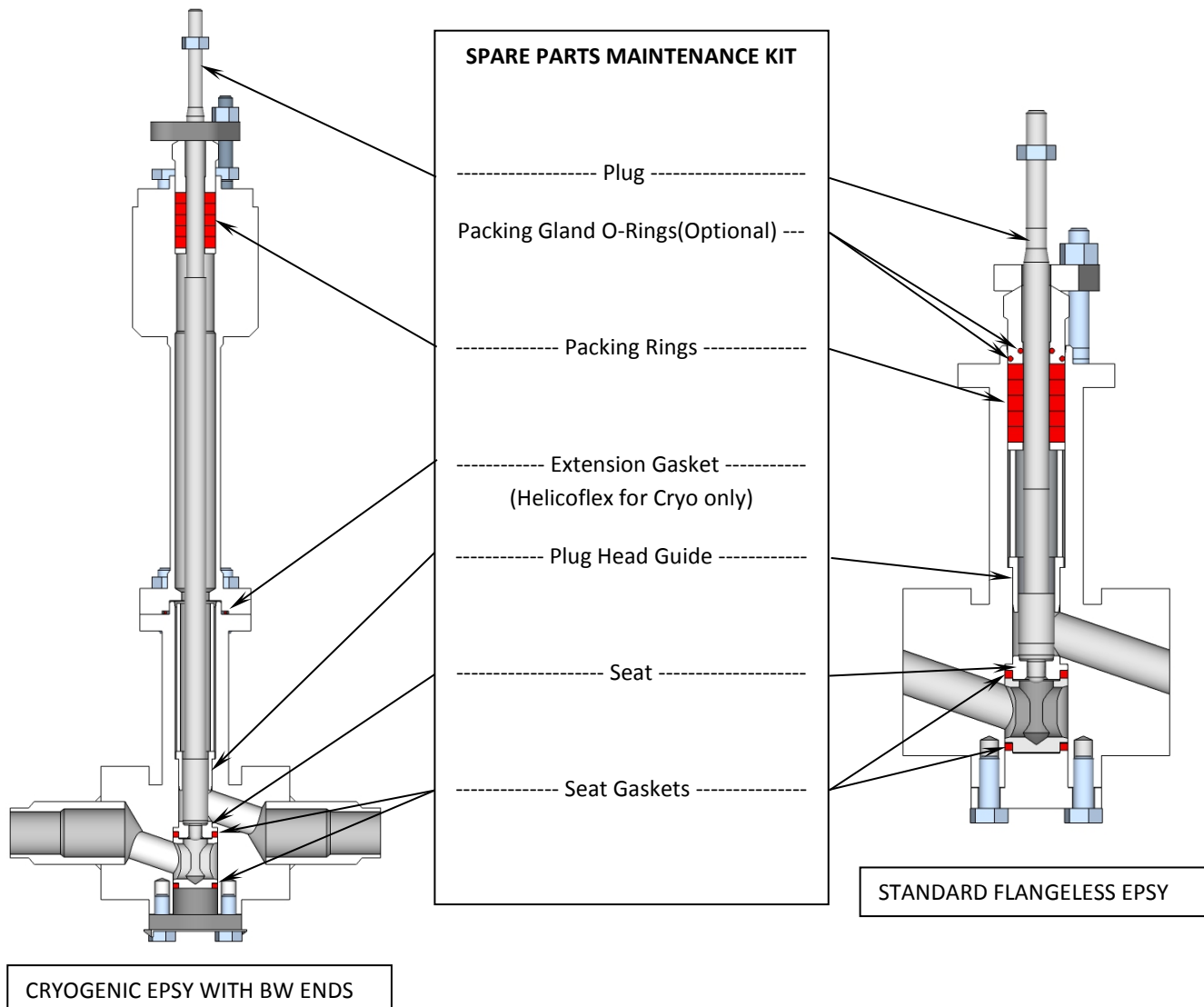
Maintenance Guideline

Before proceeding to the order, the needs must be clearly defined:

- Trim replacement
- Actuator Maintenance
- Actuator / Accessories Upgrade
- Combined Valve / Actuator Maintenance

• TRIM REPLACEMENT :

- Check the Serial Number (SN) stamped on the Valve Firm Plate.
This information is the main data for component identification
- Check for overlap the Equipment Trim Number, Law, Cv and Packing type.
- Check and confirm the Valve Stroke (usually EPSY with 6 mm stroke, but could be EPSY^{plus} with 10 mm stroke)
- Refer to « Maintenance Kit Code » table on next page to define the kit code.



• **ACTUATOR MAINTENANCE :**

Many different kind of Single Effect Diaphragm Actuators have been provided on the valves since the 70's :



Actuator type « KV » **(obsolet)**
Only diaphragm available
as spare part



Actuator type « 2109 »



Actuator type « P2 »
NEW STANDARD FOR EPSY
Optional Top-Mounted Handwheel



Actuator type « MA3-16 »

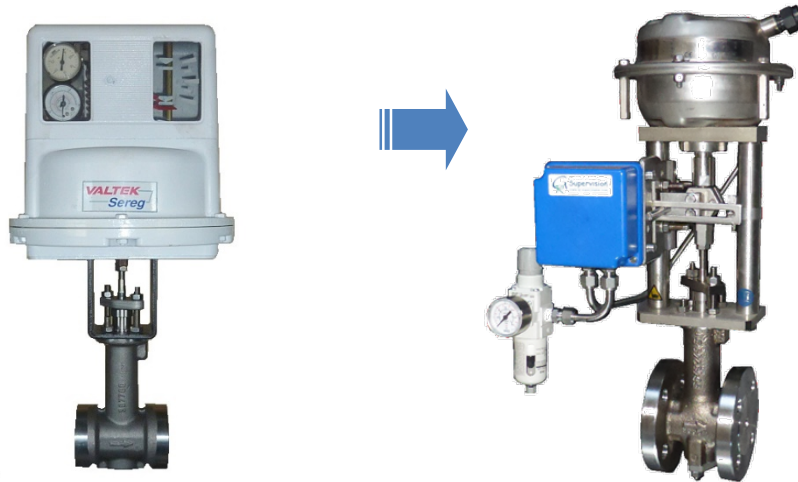


Actuator carbon steel +
epoxy painting type « PA35 »

Please contact GR SUPERVISION to get your quote within 48 hours

• **« KV » SINGLE EFFECT ACTUATOR UPGRADE :**

It is strongly recommended to carry out a replacement of the obsolete « KV » actuator with the new P2 standard.



Spring Action	Valve Seat Configuration	Handwheel Option	Valve Stroke	
			EPSY 6mm	EPSY ^{plus} 10mm
CLOSE (Air to Open)	Hard/Metal	None	P2004-ATO-C6	P2014-ATO-C10
		Top Mounted	P2004-HW-ATO-C6	P2014-HW-ATO-C10
	Soft	None	P2003-ATO-C6	P2013-ATO-C10
		Top Mounted	P2003-HW-ATO-C6	P2013-HW-ATO-C10
OPEN (Air to Close)	Hard/Metal/Soft	None	P2003-ATC-C6	P2013-ATC-C10
		Top Mounted	P2003-HW-ATC-C6	P2013-HW-ATC-C10

The standard design is Stainless Steel/Carbon Steel + Epoxy paint
The Carbon Steel + Epoxy paint Design is also available.

IMPORTANT :

CAREFULLY CHECK THE ACTUATOR MOUNTING ON THE VALVE BEFORE ORDERING ACTUATOR.

FOR EPSY/ EPSY^{plus}, THE MOUNTING IS ENSURED BY 4 x M8 BOLTS.

IF DIFFERENT (1 YOKE BOLT M35), THIS MUST BE IDENTIFIED ON YOUR DEMAND.

Please contact GR SUPERVISION to get your quote within 48 hours

- **POSITIONERS :**

The new P2 standard actuator is designed in accordance with NAMUR, IEC 60534-6

→ **Analogic Positioner**



SRI986

4-20 mA Input Signal (Ex ia / Ex d)



SRP981

0.2 – 1 bar Input Signal

BOTH KIND ARE AVAILABLE WITH SPLIT RANGE

→ **Numeric Positioners**

Flowserve - Logix



Logix500si Ex ia



Logix500MD Ex ia
Advanced diagnostic



Logix400 Ex d

Foxboro – SRD



SRD991 Ex ia



SRD960 Ex d

Siemens - SIPART



PS2 Ex ia



PS2 Ex d

ABB – TZID



TZID-C Ex ia



TZID-C200 Ex d

For any other requirement, please contact GR SUPERVISION.

EPSY^{plus} – Design improvement

Whole End-Connexions and Cv Values are identical to previous EPSY design.

The plug contour has been modified to comply with a 10 mm stroke, allowing more accurate regulation. In this case, the actuator must also comply with this 10 mm stroke requirement.

If a combined Actuator / Trim maintenance is required, it is strongly recommended to move to this design. The plug is the unique component change in the valve itself.

For a complete new valve (new project or rewamping), the EPSY^{plus} will be proposed as installation is done instead of the former.

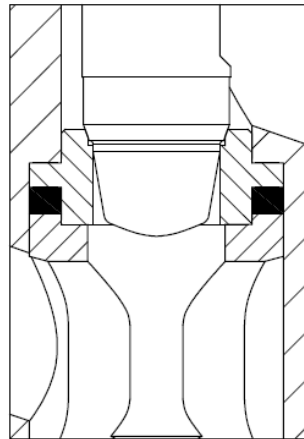
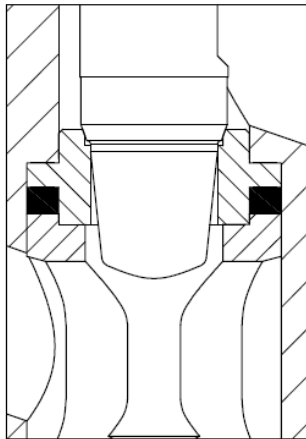
EPSY^{plus}

EPSY

Plug stroke 10 mm

Plug stroke 6 mm

Valve Closed



Valve Opened

100% stroke

