

- Glob tipi iki yollu kontrol vanası
- Eşit yüzdesel kontrol eğrisi
- Flanşlı, pik döküm veya sfero döküm gövde
- Paslanmaz çelik oturma yüzeyi, mil ve klape
- Üstün sızdırmazlık
- Ontrol ve Belimo servomotorları ile uyumlu
- Doğrusal mil hareketi


Modeller

Model	Vana çapı	Kvs
VGf2-16-15	DN15 1/2"	4.0
VGf2-16-20	DN20 3/4"	6.3
VGf2-16-25	DN25 1"	10
VGf2-16-32	DN32 1 1/4"	16
VGf2-16-40	DN40 1 1/2"	25
VGf2-16-50	DN50 2"	40
VGf2-16-65	DN65 2 1/2"	63
VGf2-16-80	DN80 3"	100

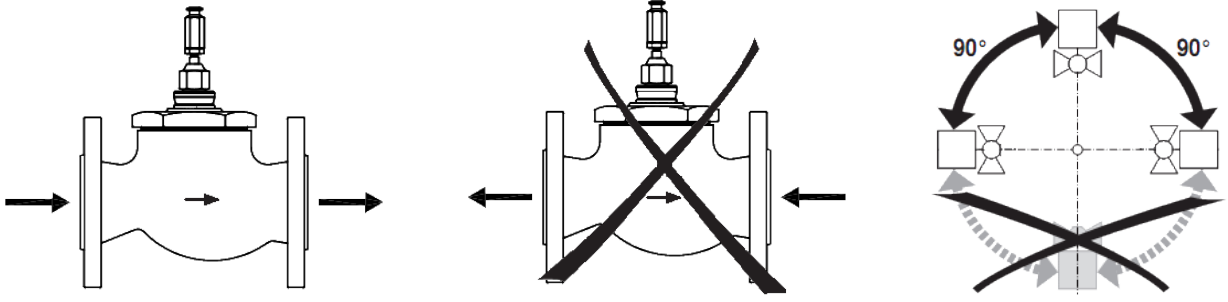
Teknik özellikler

Nominal Basınç	PN 16
Bağlantı Şekli	Flanşlı (ISO 7005-2 normuna uygun)
Akış Karakteristiği	Eşit yüzdesel
Kontrol Yeteneği	50:1
Sızdırmazlık	kvs değerinin %0.05'i (maksimum)
Mil Hareketi (Strok)	20 mm
Gövde Malzemesi	PN16 pik döküm, PN25 sfero döküm
Boyutlar ve Ağırlıklar	Sayfa 2' ye bakınız
Klape ve oturma halkası	Paslanmaz çelik
Salmastra	Yay baskılı teflon halkalar
Maks. Akışkan	120°C 16 Bar (Su için)
Basınç ve Sıcaklığı	170°C 14 Bar (Buhar için)
Min. Akışkan Sıcaklığı	2 °C
Vana Kapalı Noktası	Mil aşağıda (▼)

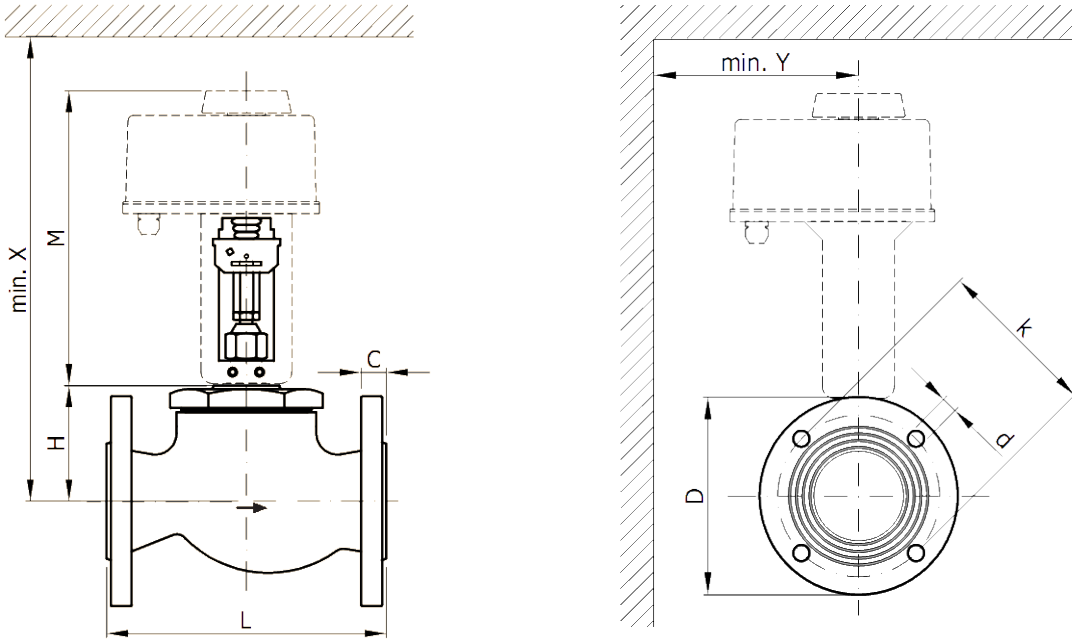
Kapatma basınçları (Bar)

		15	20	25	32	40	50	65	80
Belimo NV serisi	800 N	10	10	10	6.0	3.5	2.0	1.2	0.5
Belimo NVG serisi	1.600 N	16	16	16	14	11	7.0	4.0	2.0
MVS 20 N serisi	1.800 N	16	16	16	16	13	7.5	4.7	2.3
MVG 20 Y serisi	4.500 N	16	16	16	16	16	16	13	7.0
MVG 20 N serisi	12.500 N	16	16	16	16	16	16	16	16

Bağlantı ve montaj



Boyutlar ve ağırlıklar



DN (mm)	L (mm)	H (mm)	C (mm)	D (mm)	k (mm)	d (mm)	M (mm)	Min. X (mm)	Min. Y (mm)	Ağırlık (kg)
15	130	55	14	95	65	4x14	256	700	110	3
20	150	55	16	105	75	4x14	256	700	110	4
25	160	55	16	115	85	4x14	256	700	110	5
32	180	55	18	140	100	4x18	256	700	110	7
40	200	81	18	150	110	4x18	256	700	110	10
50	230	81	20	165	125	4x18	256	700	110	14
65	290	81	20	185	145	4x18	256	700	110	15
80	310	83	22	200	160	8x18	256	700	110	20

* "M" ölçüsü MVS N serisi Ontrol Motorlar için geçerlidir. Diğer motorlar için ilgili dökümanlara bakınız.

* VGF2-16-100, VGF2-16-125, VGF2-16-150 Vanalarda 3 yollu değerler geçerlidir.

Globe Valves Actuators

MODEL	FORCE [N]	POWER SUPPLY	DESCRIPTION
MVE504	400	24 V AC/DC	Long yoke, modulating/ floating control
MVE506	600		
MVE510	1000		
MVE515	1500		
MVE504S	400	24 V AC/DC	Short yoke, modulating/ floating control
MVE506S	600		
MVE510S	1000		
MVE515S	1500		



APPLICATION AND USE

MVE is a flexible electro mechanical actuator for the control of two and three-way globe valves in:

- heating and cooling systems;
- Air Handling Units;
- district heating plants;
- industrial temperature control systems.

The actuator can be controlled either by a proportional (modulating) signal or by an increase/decrease (Floating) signal. It is easy to mount and connect the actuator. Direct mounting is possible to any iSMA CONTROLLI flanged valve. Linkage kits are available for iSMA CONTROLLI threaded valves as well as for valves of other manufacturers (table p. 3). The actuator has a fine resolution (500 steps on the full stroke range) for exacting fluid control and it is able to self-calibrate on a different stroke without the need of any user action (this function is DIP switch selectable on the field).

MVE has intelligent behaviour and alarm functionality in case of unexpected operation, feedback of alarms to the user is provided by LEDs (GREEN and RED) on the control board.

N.B.: Do not use the actuator if not coupled with its relating valve.

TECHNICAL CHARACTERISTICS

DESCRIPTION		MVE504 MVE504S	MVE506 MVE506S	MVE510 MVE510S	MVE515 MVE515S
Supply voltage L1 Ln		AC: 24 V AC \pm 20% 50-60 Hz DC: 22-30 V DC (Reference Ln)			
Power consumption (running)		10 VA/4,5 W	13 VA/6 W	18 VA/8 W	21 VA/11 W
Power consumption (holding)		8 VA/4 W	11 VA/5 W	11 VA/5 W	13 VA/7 W
Running time	Modulating	15 s (for valves with stroke from 5 to 15 mm)			
		20 s (for valves with stroke from 15 to 25 mm)			
		30 s (for valves with stroke from 25 to 60 mm)			
	Floating	60 s			
Transformer Size [VA]		20	20	30	50
Stroke		5-60 mm (limited to 30mm for MVE.S)			
Force		400 N	600 N	1000 N	1500 N
Duty cycle		Max 50%/60 minutes			

The performances stated in this sheet can be modified without any prior notice.

DESCRIPTION	MVE504 MVE504S	MVE506 MVE506S	MVE510 MVE510S	MVE515 MVE515S
Analogue input Y M	Voltage 0-10 V DC - impedance > 100 kΩ (range: 0-10 V DC, 2-10 V DC, 0-5/2-6 V DC, 5-10/6-10 V DC) 500 Ω (range 4-20 mA)			
Digital inputs Y1 Y2	Connection to L1 or Ln when powered in AC Connection to Ln only when powered in DC			
Output V+	Voltage 16 V DC ± 0,5 V DC; max load 25 mA			
Output U	Voltage 2-10 V DC (0-100%); max load 2 mA			
Number of cycles of manual action	6.000			
Number of cycles of automatic action	100.000			
Type of action	Type 1			
Type of movement	Linear			
Room temperature	Operation -10°C to 55°C; storage -20°C to 55°C			
Room Humidity	Max 90% R.H.			
Protection degree	Nema 2 (*) / IP54 (**)			
Insulation class	III			
Printed Circuit Board	FR4 (material) PLC (Performance Level Categories) = 3 PTI (Proof Tracking Index) = 175 - 249V CTI (Comparative Tracking Index) = PTI Pollution Degree = 2			
Standard	Emission/Immunity EMC 2014/30/UE according to EN 61326-1:2013 standard			
Standard(s) for safety	UL 60730-1A Part 1: General Requirements UL 60730-2-14 Part 2: Particular Requirements for Electric Actuators CAN/CSA-E60730-1:02 Part 1: General Requirements with Amendment 1			
Material	Housing: aluminium - cover: ABS plastic			
Colour	Aluminium / white			
Weight [kg]	1,7 (MVE5xx); 1,6 (MVE5xxS)			
Date code	yy/ww			

***To guarantee "Nema Type 2" protection:**

- use flexible metal conduit (not supplied);
- Push the listed conduit fitting device (PG13,5 - not supplied) over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with listed flexible conduit. Properly terminate the conduit in a suitable junction box.

****To guarantee IP54 protection**

- Insert the actuator cable in the PG13,5 cable gland (not supplied).

OPERATION

The actuator translates the control signal (modulating or 3 point floating) from the controller into a valve position. A modern brushless DC motor in the actuator drive a gear train and a worm gear – screw jack mechanism convert the motor revolutions into accurate and repeatable linear movements.

Control Signal

MVE can be controlled by one of 2 main control types:

- 3 point floating ;
- Modulating (or proportional) signal with filed selectable range (e.g., 0-10V DC, 2-10 V DC, 0-5/2-6 V DC, 5-10/6-10 V DC and 4-20mA).

Manual Override

There is a manual operation handle on the actuator. When it is lowered (manual override ON), the power supply to the motor power stage circuitry is cut and the motor stops. The actuator can be operated manually and the valve positioned accordingly.

The manual override lever stays in position until it is raised again, then board and motor will be powered again. At the end of this operation the actuator moves to initial position (on the basis of DIP n. 1 setting) then it follows the control signal. When the manual override is engaged the GREEN and the RED LED are ON.

Manual operation handle can also be used to modify any DIP switch setting or as re-set function after any alarm occurrence.

The actuator is supplied with the manual override lowered (ON). It is not necessary to remove power supply to modify DIP switches setting.

Feedback Position

The actuator utilizes a 2-10Vdc position feedback (look at DIP n. 1 setting).

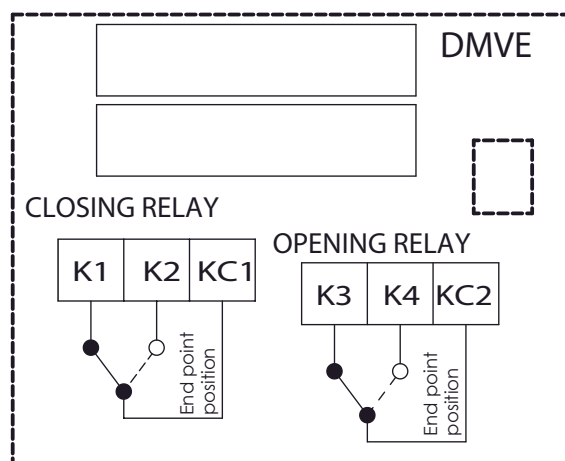
Calibration

The actuator has both auto and manual stroke calibration, DIP n. 7. In factory delivery the auto stroke calibration is enabled – manual calibration is not necessary unless maintenance is required on the valve or certain alarm functions are desired.

End Point Auxiliary Switches (accessory DMVE)

End point switches change over when the valve is fully open or closed. They are free contacts with 24V AC/DC, 4A max voltage on terminals. End point switches can be utilized to indicate valve stroke end positions and for relay control of additional plant equipment. When the actuators are controlled individually or in sequence, it is possible to use the end switches to toggle when the valve is fully open or fully closed. The auxiliary switch position according to control signal (Y) is shown in the picture below.

CONTROL SIGNAL (Y)	RELAY KC1	RELAY KC2
0-0,5 V DC	KC1 to K2	KC2 to K3
0,5-9,5 V DC	KC1 to K1	KC2 to K3
9,5-10 V DC	KC1 to K1	KC2 to K4



Diagnostic

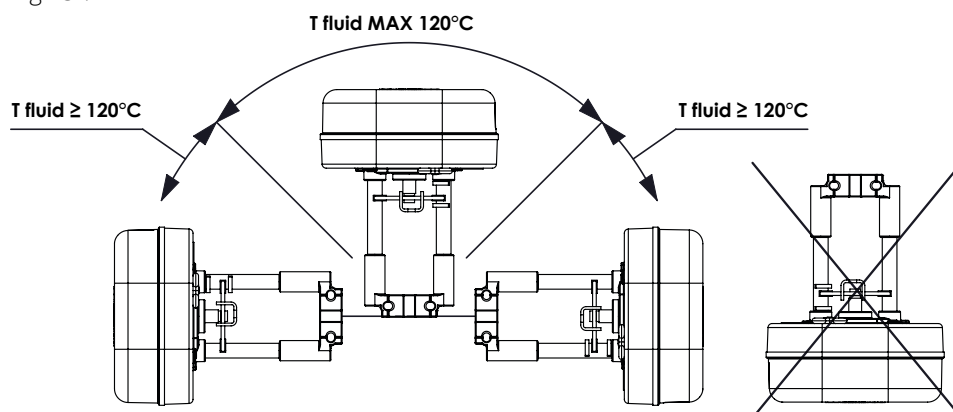
The actuator is provided with a self diagnostic algorithm able to detect faulty conditions:

- stroke calibration out of range 5-60 mm;
- unexpected stall condition (e.g. valve stuck or extra stroke due to actuator link loose);
- voltage supply out of range.

These faulty conditions are signalled through the GREEN and RED LED on the electronic board blinking accordingly (see Diagnostic – Alarm Function Table).

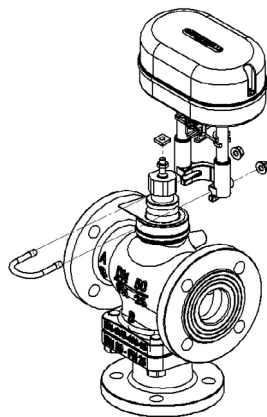
ASSEMBLING

The actuator can be mounted with any orientation but never up-side down. When the fluid temperature exceed 120°C the actuator shall be mounted leaning 45°.



To mount the actuator on to a valve, position the valve stem to the bottom of its travel, slide the actuator onto the valve neck, adju-

sting with the manual override the screw jack position so the square nut on the valve spindle fits into the groove on the cross bar. Then slide the brace into the groove on the valve neck and secure the nuts.



See mounting instructions for full details (MVE_DIM223).

MAINTENANCE

The actuator is maintenance-free.

ACCESSORIES

- DMVE** End point auxiliary switches (electrical rate 24V AC/DC, 4A max)
- GMVE** Thermal insulation for MVE actuators *
- GMVES** Thermal insulation for MVE.S actuators *
- KIT-P13.5** 10 cable glands kit (nuts and gaskets included)
- KIT-T13.5** Kit 10 caps for cable glands hole (nuts and gaskets included)
- 248** Stem heater (suggested when the fluid temperature is below 0°C) *

* It is not possible to install both thermal insulation (Gxxxx) and stem heaters.

COMPATIBLE VALVES AND ACTUATORS

iSMA CONTROLLI VALVES	MVE5XX	MVE5XXS
Current iSMA CONTROLLI valves (except for 2-3TGB.F PN16)	•	-
VSXT09PBP, VSXT10PBP	-	only with MVE504S
2-3TGB.F PN16	-	•
iSMA CONTROLLI valves with threaded M40 connections (except for VSB-VMB, VSB.F-VMB.F PN16)	with AG51	-
VSB-VMB, VSB.F-VMB.F PN16	with AG52	with AG63
OTHER MANUFATURERS VALVES	MVE5XX	MVE5XXS
Belimo H2..X-S e H3..X-S	with AG82	with AG82
Siemens *	with AG70-10 with AG70-14	-
Danfoss (VR/VF (S) models)	with AG60-07	-
TAC DN15-V298	with AG60-08	-
TAC DN15-V2XX/V3XX	with AG60-09	-
Honeywell **	with AG60-10	-
Airtek	with AG60-11 with AG60-12	-
Johnson Controls VB7816-2111	with AG66	-
Johnson Controls BM-3018-3300	with AG67	-
MUT MK DN50-150	with AG69	-
Tac Venta	•	-

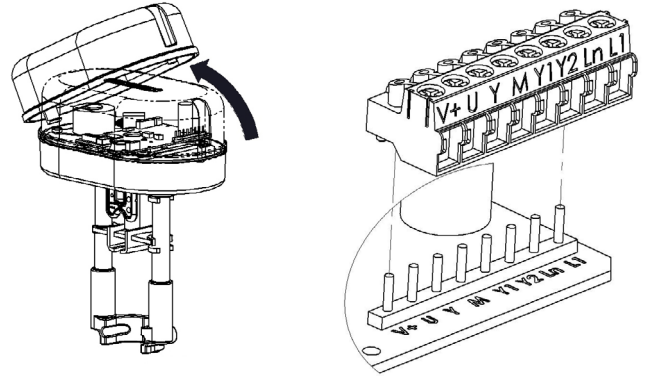
* AG70-10 for valves having stem Ø 10mm, AG70-14 for valves having stem Ø 14mm

** valid for the following models: M6: V176A,B, V538C, 1/4": V5011A

ELECTRICAL CONNECTIONS

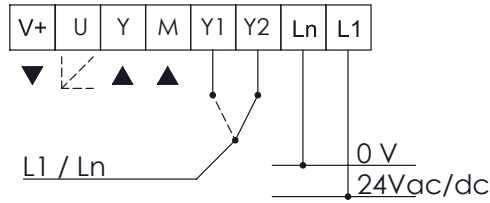
Remove the cover screw with a screwdriver and then remove the cover as shown in the picture beside.

The actuator is equipped with a 8 poles removable terminal block; the each pole of the plug is clearly marked and the same label are reported on the electronic board. Before powering up the actuator make sure the plug is properly connected to the board and the label on the plugs and on the board match.



Use PG13,5 cable gland model (not supplied).

TERMINAL BLOCK



LABEL	DESCRIPTION	FUNCTION	CABLE TYPE	MAX. WIRE LENGTH
L1	24 V AC/DC	Power supply	AWG 16 (min 1 mm ² - max 1,5 mm ²)	75 m
Ln	0 V			
Y	0-10 V DC	Modulating control input	AWG 20 (min 0,5 mm ² - max 1,5 mm ²)	200 m
M	0 V (common)			
Y1	Open	Floating control input	AWG 20 (min 0,5 mm ² - max 1,5 mm ²)	200 m
Y2	Close			
V+	16 V DC	Voltage output max 25mA	AWG 20 (min 0,5 mm ² - max 1,5 mm ²)	200 m
M	0V (common)			
U	2-10 V DC	Feedback output signal	AWG 20 (min 0,5 mm ² - max 1,5 mm ²)	200 m
M	0 V (common)			

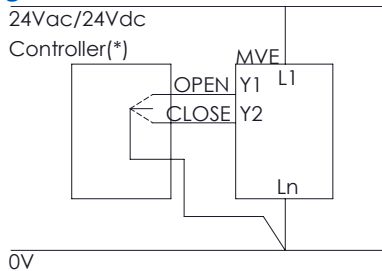
Note: To avoid damages to electronic components caused by the PCB bending, do not press too much while fixing the terminal block.

Matching between MVE terminal block and others iSMA CONTROLLI actuators

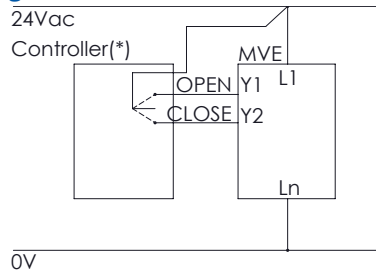
1	2	3	4	5	SH500
L1	L2	M	V+	Y	MVB5-MVL5-MDL5
G	GO	MX	G1	X1	MVF-MVH5-MVL5-F
L1	LN	M	V+	Y	MVE

WIRING DIAGRAMS

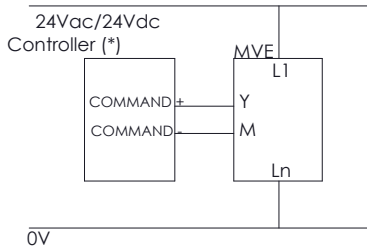
3 point floating control (sink connection)



3 point floating control (source connection)



Modulating control (0-10 Vcc)



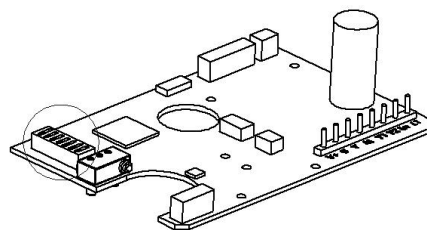
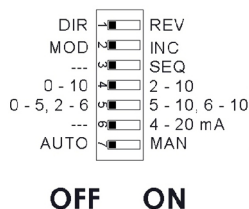
N.B.: M and Ln signals are internally connected.

(*) MVE contain a single half-wave rectifier power supply. They must not be powered with transformers that are used to power other devices using not isolated double half-wave rectifier power supply.

DIP SWITCHES SETTINGS

Set the DIP switches according to the tables here below. Power down and power up again the actuator or act on the manual override to be sure that settings will be recognized.

Factory settings



DIP SWITCH	OFF	ON
1	Direct Action U= feedback U = 2V U = 10V	Reverse Action U= feedback U = 10V U = 2V
2	Modulating Control (MOD) (Input between Y [+] and M [-]) 	3 point floating (INC) (Y1 open-extend , Y2 close-retract connected L1 or Ln if powered in V AC; if powered in Vdc connected necessarily to Ln)
3	-	Selection of sequence mode, control range defined by DIP n. 5
4	Modulating Control 0-10 V DC (DIP n. 2 OFF only)	Modulating Control 2-10 V DC (DIP n. 2 OFF only)
5	Sequence Control 0-5 V DC with DIP n. 4 OFF only Sequence Control 2-6V DC with DIP n. 4 ON only (DIP n. 3 ON only)	Sequence Control 5-10V DC with DIP n. 4 OFF only Sequence Control 6-10V DC with DIP n. 4 ON only (DIP n. 3 ON only)
6	Voltage Input Signal (input between Y [+] and M [-])	Current Input Signal 4-20 mA (input between Y [+] and M [-]). In this case DIP n. 4 must be set to ON.
7	Automatic Calibration: the actuator updates the stroke range every time an unexpected mechanical stop is detected for at least 10s	Manual Calibration: the actuator calibration is started moving the DIP from OFF to ON or vice versa. With DIP in ON in case of extra stroke or if an unexpected endpoint is detected, the actuator will never update the stroke

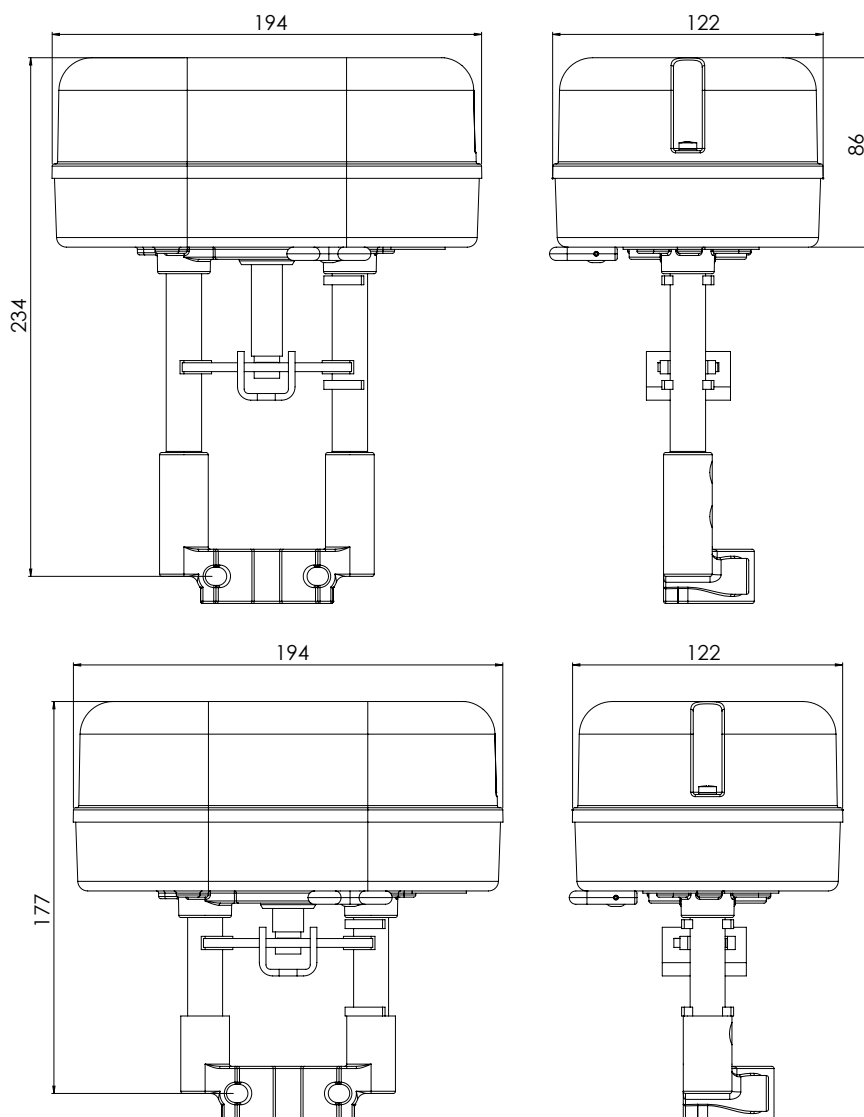
DIAGNOSTIC - ALARM FUNCTIONS

N°	LEDS BEHAVIOUR	ERROR	ACTUATOR USE	ACTUATOR BEHAVIOUR		TYPICAL TROUBLE SHOOTING CONDITION	RESET PROCEDURE
				AUTOMATIC CALIBRATION (DIP N. 7 OFF)	MANUAL CALIBRATION (DIP N. 7 ON)		
1	RED ON	Valve stroke less than 5mm	Calibration/first installation	The actuator pushes/pulls 2 times (unexpected stall) trying to remove the possible obstacle. After 2 tries an alarm is signalled and the actuator moves to initial position and does not respond to control signal. Stroke value is not updated because out of range	The actuator pushes/pulls 2 times against endpoint during calibration and the actuator moves to the initial position and then it does not respond to the control signal. The actuator keeps the previous stroke	Valve with a stroke length lower than 5mm	Remove power and power up again
2	RED quick blinking + GREEN ON	Stroke longer than 60mm	Calibration/first installation	The actuator exits the 60mm stroke range and it moves toward the new stroke limit signalling an anomaly. The actuator pushes/pulls 2 times against the new stroke limit, then it goes back to the initial position still signalling the anomaly until it is not within 60mm. The actuator does not calibrate the stroke after 10s (wrong range)	The actuator exits the 60mm stroke range and it moves toward the new stroke limit signalling an anomaly. The actuator pushes/pulls 2 times against the new stroke limit, then it goes back to the initial position still signalling the anomaly until it is not within 60mm. The actuator does not calibrate the stroke after 10s (wrong range)	Valve with a stroke length longer than 60mm	Remove power and power up again
3	RED Quick Blinking	Unexpected stall within the calibrated stroke range	normal operation	The actuator tries 5 times against the new stall condition and then after 10s the actuator updates the new stroke length	The actuator tries 5 times against the new stall condition. At the end of the attempts the fault will be signalled. The actuator does not update the new stroke length, but after 60s makes other attempts to verify the stall condition	Valve stuck	Inverted control signal
4	RED Quick Blinking	Stroke longer than expected	Normal operation	The actuator moves toward the new stall condition with a lower speed; after 10s the actuator updates the new stroke value	The actuator moves toward the new stall condition with a lower speed; after 10s the actuator does not update the new stroke value	Stem connection loose or valve damaged	Inverted control signal
5	RED slow Blinking	Low Power Voltage	Normal operation	The actuator is still working but performance cannot be guaranteed	The actuator is still working but performance cannot be guaranteed	1. Wrong transformer size 2. Unstable power	Correct Voltage Power
6	RED slow Blinking	High Power Voltage	Normal operation	The actuator is still working but performance cannot be guaranteed	The actuator is still working but performance cannot be guaranteed	1. Wrong transformer size 2. Unstable power	Correct Voltage Power

STANDARD LEDs BEHAVIOR

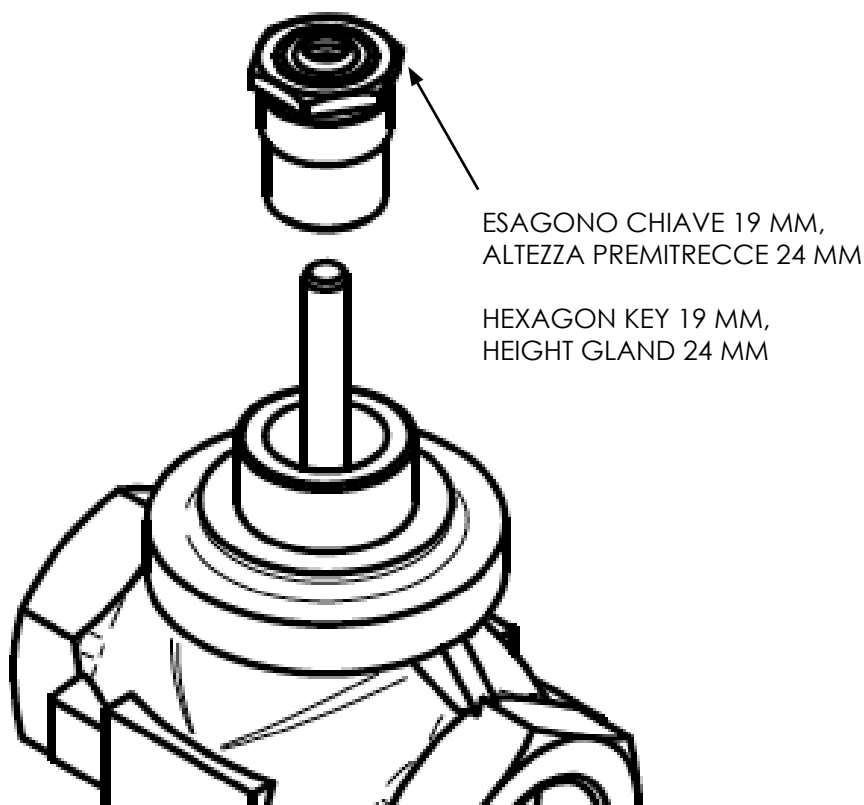
N°	LED	ACTUATOR STATUS
1	GREEN ON	The actuator arrived at the extreme point of the stroke read
2	GREEN BLINKING	The actuator arrived at the intermediate point of the stroke read
3	RED GREEN BLINKING	The actuator is reading the stroke or it is going to initial position
4	RED GREEN ON	Manual control ON, the actuators ignores the control signal. ATTENTION! The electronic board is electrically supplied

DIMENSIONS [mm]



PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
51938	Complesso premitrecce per valvole gas MVGS1 Glands assembly for MVGS1 gas valves



Istruzioni per la sostituzione

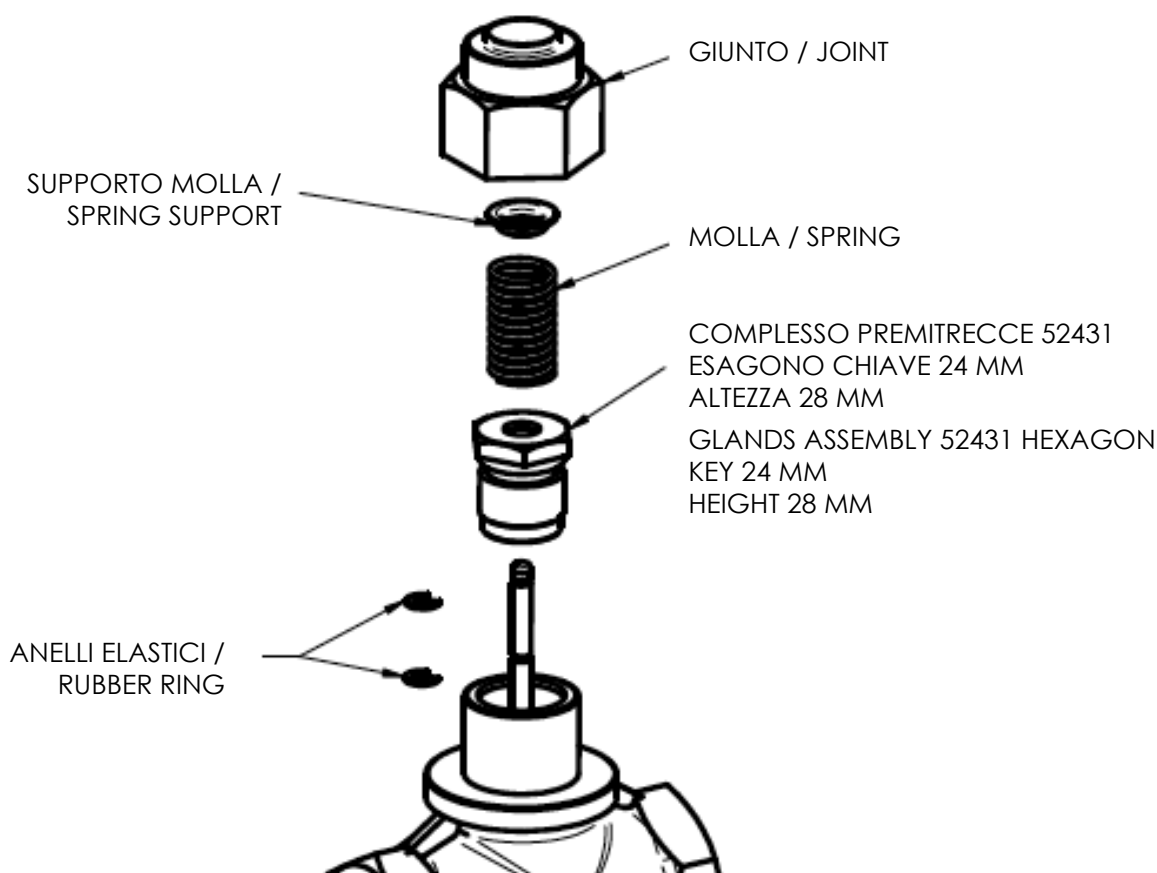
Svitare il vecchio premitrecce.
Pulire la filettatura sul corpo valvola.
Guarnire la filettatura del premitrecce con mastice ed avvitarlo sul collo della valvola.

Replacing instruction

Unscrew the old gland.
Clean the thread on the valve body.
Garnish the thread of the gland nut with mastic and then screw it onto the valve neck.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
52431	Complesso premitrecce per stelo Ø 5 mm (valvole VSBT-VMBT) Glands assembly for stem Ø 5 mm (VSBT-VMBT valves)



Istruzioni per la sostituzione

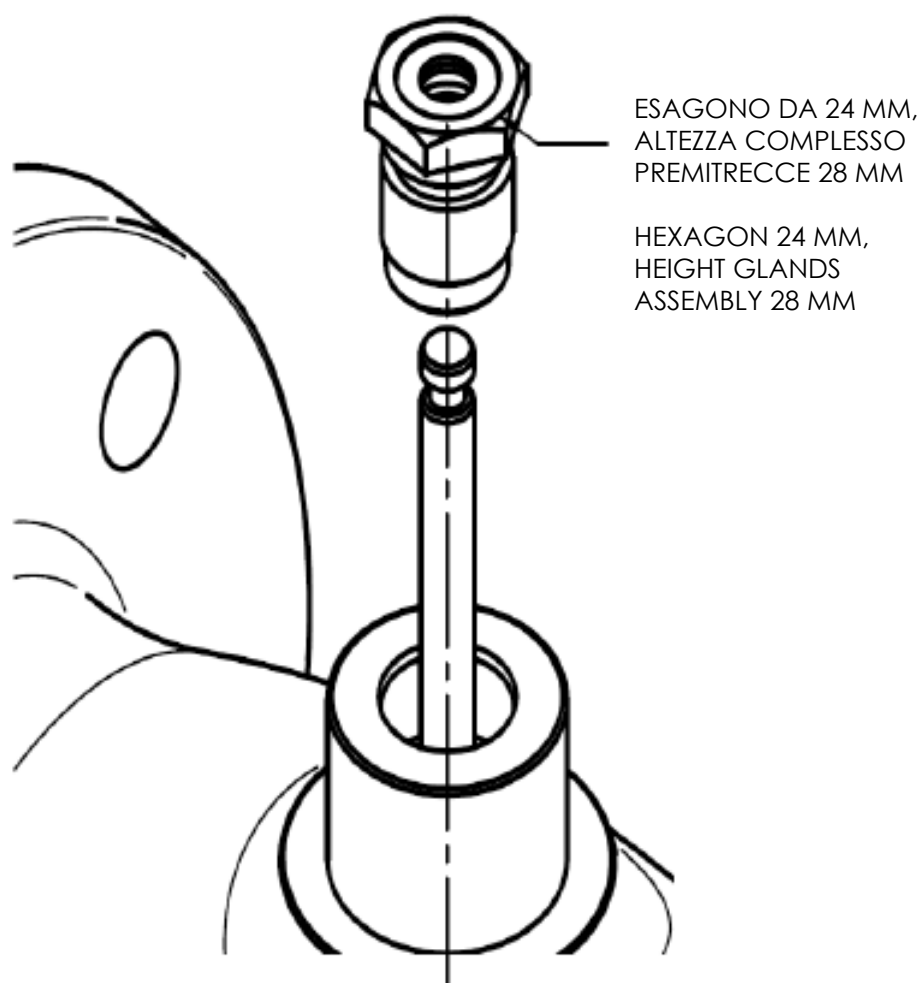
1. Svitare il giunto dalla valvola.
2. Togliere l'anello elastico superiore e quindi il supporto molla e la molla. Togliere l'anello elastico inferiore e quindi svitare il vecchio complesso premitrecce, facendo attenzione a tenere ben saldo lo stelo in modo da non lasciare cadere l'otturatore.
3. Avvitare sul collo della valvola il nuovo complesso premitrecce.
4. Rimontare l'anello elastico inferiore, quindi la molla, il supporto molla e l'anello elastico superiore.
5. Riavvitare il giunto sulla valvola.

Replacing instruction

1. Unscrew the joint from the valve.
2. Remove the upper rubber ring then the spring support and the spring. Remove the lower rubber ring and then unscrew the old assembly gland, being careful to hold firmly the stem so as not to leave the shutter falling.
3. Screw the new assembly glands onto the valve neck.
4. Reassemble the lower rubber ring, then the spring, the support spring and the upper rubber ring.
5. Screw the joint back on.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
52554	Complesso premitrecce in ottone per stelo Ø 9 mm per valvole VSB-VMB, 2-3FGB e 2FGB.B Brass glands assembly for stem Ø 9 mm for VSB-VMB, 2-3FGB and 2FGB.B valves
52554-02	Variante in AISI303 / AISI303 variant



Istruzioni per la sostituzione

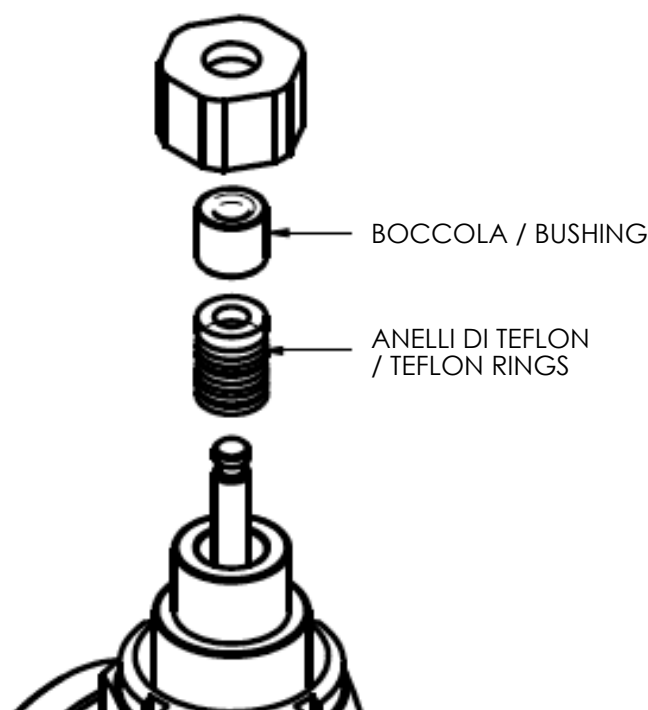
Svitare il vecchio complesso premitrecce ed avvitare quello nuovo sul collo della valvola.
Su valvole tre vie tipo VB, smontare e rimontare l'anello elastico presente sullo stelo, facendo attenzione a tenere ben saldo l'otturatore durante l'operazione di smontaggio del premitrecce.

Replacing instruction

Unscrew the old gland assembly and screw the new one on the valve neck.
For three-way valves type VB, remove and reassemble the rubber ring on the stem, be careful to lock down the shutter during the remove of the glands.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
52756*A	Guarnizione in teflon per valvole con stelo Ø 9 mm - 1 rondella 18x10x1 mm, utilizzata nei complessi premitrecce 52758*A, 54186, 54182 e 52777 Teflon seal for valves with stem Ø 9 mm - 1 washer 18x10x1 mm, used in glands for valves 52758*A, 54186, 54182 e 52777



Istruzioni per la sostituzione

1. Togliere il dado premitrecce e sfilare la boccia.
2. Con una punta metallica, estrarre la serie di guarnizioni in teflon usurate.
3. Rimontare i particolari in questa serie:
 - anelli in teflon nuovi (con i vertici degli incavi a V verso l'alto)
 - boccia premitrecce
4. Rimontare il dado premitrecce e avvitarlo assicurandosi che lo stelo si muova libero e non venga eccessivamente frenato.

All'avviamento dell'impianto, verificare la tenuta del premitrecce e, se necessario stringere il dado.

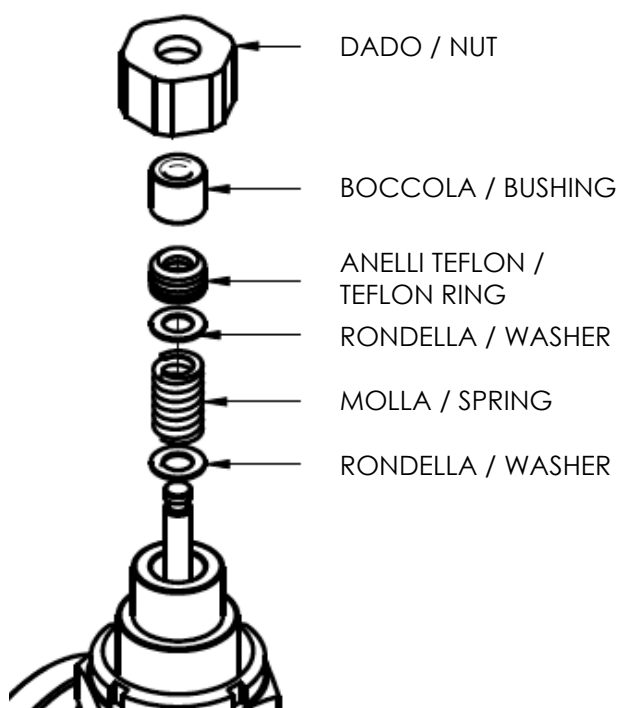
Replacing instruction

1. Unscrew the gland nut and remove the bushing.
2. Using a metal point, remove the set of worn teflon rings, being careful to not scratch the valve stem and the seal chamber.
3. Reassemble the new items in this order:
 - new teflon rings (with V grooves upwards)
 - bushing
4. Reassemble the gland nut, sure that the stem is free to move and is not overly hampered.

At the start-up of the plant, check the gland and if necessary tighten the nut.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
52758*A	Complesso premitrecce per SSGA, SSAA, 3VAA, 3VSA sino a DN80 e VBAA (stelo Ø 9 mm - 1 rondella 18x10x1 mm) Glands assembly for SSGA, SSAA, 3VAA, 3VSA up to DN80 and VBAA (stem Ø 9 mm - 1 washer 18x10x1 mm)



Istruzioni per la sostituzione

- Togliere il dado premitrecce e sfilare la boccia.
- Con una punta metallica, estrarre la serie di guarnizioni in teflon usurate, ponendo particolare attenzione a non rigare lo stelo della valvola e la camera di tenuta.
- Montare i nuovi particolari in questa serie:
 - rondella
 - molla
 - rondella (sopra la molla)
 - anelli in teflon (con i vertici degli incavi a V verso l'alto)
 - boccia premitrecce
- Rimontare il dado premitrecce e avvitarlo assicurandosi che lo stelo si muova libero e non venga eccessivamente frenato.

All'avviamento dell'impianto, verificare la tenuta del premitrecce e se necessario stringere il dado.

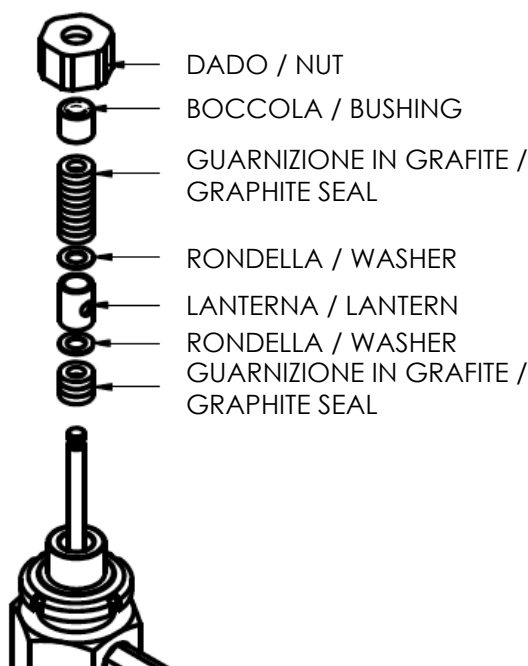
Replacing instruction

- Unscrew the gland nut and remove the bushing.
- Using a metal point, remove the set of worn teflon rings, being careful to not scratch the valve stem and the seal chamber.
- Assembly the new items in this order:
 - washer
 - spring
 - washer (above the spring)
 - Teflon rings (with V grooves upwards)
 - bushing
- Reassemble the gland nut, sure that the stem is free to move and is not overly hampered.

At the start-up of the plant, check the gland and if necessary tighten the nut.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
52776	Complesso premitrecce per valvole olio diatermico SSAACP, 3VAACP (stelo Ø 9 mm) sino DN80 Glands assembly for SSAACP, 3VAACP diathermic oil valves (stem Ø 9 mm) up to DN80



Istruzioni per la sostituzione

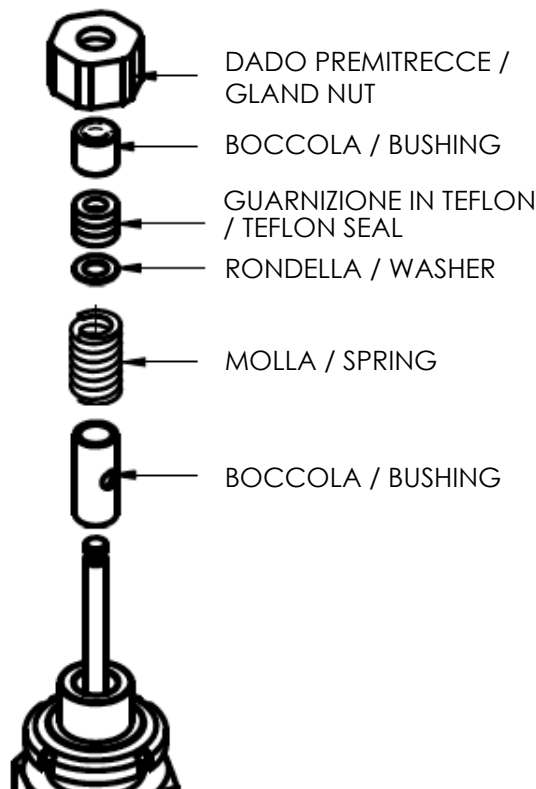
1. Togliere il dado premitrecce e sfilare la boccola premitrecce.
2. Con una punta metallica estrarre la serie superiore di guarnizioni, le due rondelle e la boccola forata lateralmente. Quindi estrarre le guarnizioni costituenti la serie inferiore, ponendo particolare attenzione a non rigare lo stelo della valvola e la camera di tenuta. Applicare la nuova serie inferiore di guarnizioni. **NOTA:** gli anelli di guarnizione devono essere lubrificati con grasso al silicone e inseriti con taglio sfalsato di 90° (tra un anello e l'altro) per ottenere una tenuta migliore.
3. Montare la prima rondella, rimontare la boccola forata facendo attenzione che il foro sia allineato con l'ingrassatore onde permettere il passaggio del lubrificante, quindi montare l'altra rondella e applicare le nuove serie superiori di guarnizioni.
4. Inserire la boccola, rimettere il dado premitrecce e avvitare solo parzialmente assicurandosi che lo stelo scorra libero nella sua sede e non venga eccessivamente frenato. Riempire l'ingrassatore con grasso al silicone e stringere parzialmente la vite relativa. All'avviamento dell'impianto, verificare la tenuta del premitreccia e dell'ingrassatore, e se necessario stringere il dado e/o l'ingrassatore.

Replacing instruction

1. Unscrew the gland nut and remove the bushing.
2. Using a metal point remove the upper set of seals, the two washers and the bushing with side hole. Then remove the lower set of seals, being careful to not scratch the valve stem and the seal chamber. Apply the new set of lower seals. **NOTE:** the seals rings must be lubricated with silicone grease and placed with staggered cut of 90° (between one ring and the other) to achieve a better seal.
3. Assembly the first washer, replace the bushing with side hole and being careful that the hole is aligned with the lubricator to facilitate the passage of the lubricant, then fit the other washer and apply above the new set of seals.
4. Fit the bushing, apply the gland nut and screw it only partially making sure that the stem is moving free and it is not overly hampered. Fill the lubricator with silicone grease and tighten the screw partially. At the start-up of the plant, check the gland and the lubricator and if necessary tighten the gland nut and/or the lubricator.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
52777	Complesso premitrecce per valvole per basse temperature 3VAACP (stelo Ø 9 mm) sino DN80, SSAACP15B, SSAACP32B e SSAACP50B. Glands assembly for low temperature valves 3VAACP (stem Ø 9 mm) up to DN80, SSAACP15B, SSAACP32B e SSAACP50B.



Istruzioni per la sostituzione

1. Togliere il dado premitrecce e sfilare la boccola.
2. Con una punta metallica estrarre le guarnizioni in teflon, la rondella, la molla e la boccola forata lateralmente, ponendo particolare attenzione a non rigare lo stelo della valvola e la camera di tenuta.
3. Rimontare la boccola forata facendo attenzione che il foro sia allineato con l'ingrassatore onde permettere il passaggio del lubrificante, quindi montare la molla, la rondella e applicare le nuove serie di guarnizioni.
4. Inserire la boccola, rimettere il dado premitrecce e avvitare solo parzialmente assicurandosi che lo stelo scorra libero nella sua sede e non venga eccessivamente frenato. Riempire l'ingrassatore con grasso al silicone e stringere parzialmente la vite relativa.

All'avviamento dell'impianto, verificare la tenuta del premitrecce e dell'ingrassatore, e se necessario stringere il dado e/o l'ingrassatore.

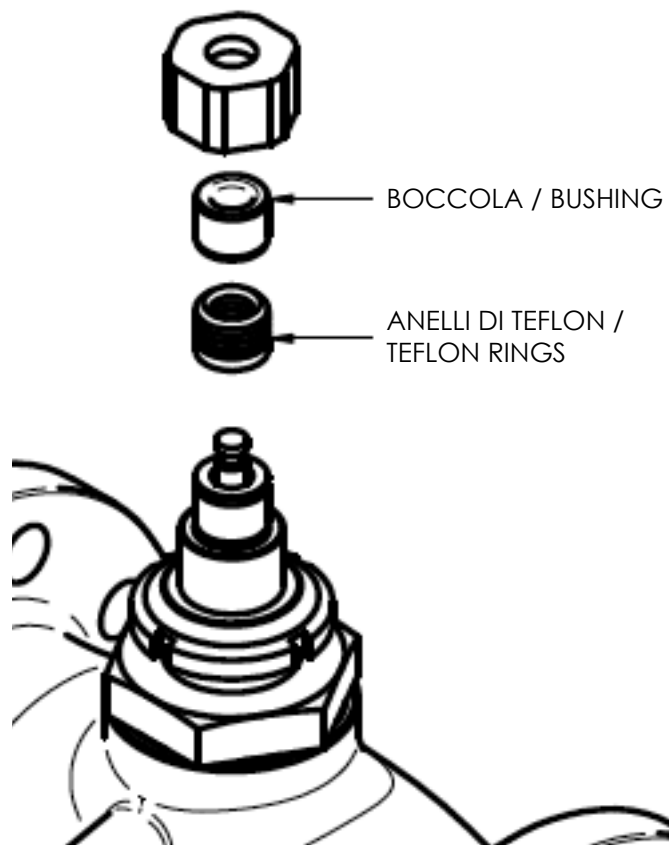
Replacing instruction

1. Unscrew the gland nut and remove the bushing.
2. Using a metal point, remove the set of worn teflon seals, the washer, the spring and the bushing with side hole, being careful to not scratch the valve stem and the seal chamber.
3. Replace the perforated bushing, being careful that the hole is aligned with the lubricator to facilitate the passage of the lubricant, then reassemble the spring, the washer and the new set of teflon seals.
4. Fit the bushing, screw the gland nut only partially, making sure that the stem is moving free and is not overly hampered. Fill the lubricator with silicone grease and tighten the screw partially.

At the start-up of the plant, check the gland and the lubricator and if necessary tighten the gland nut and/or the lubricator.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
52968*A	Guarnizione in teflon per valvole con stelo Ø 12 mm - 1 rondella 21x12x1 mm, utilizzata in complessi premitrecce 52980*A e 54197*A Teflon seal for valves with stem Ø 12 mm - 1 washer 21x12x1 mm, used in glands for valves 52980*A e 54197*A



Istruzioni per la sostituzione

1. Togliere il dado premitrecce e sfilare la boccola.
2. Con una punta metallica, estrarre la serie di guarnizioni in teflon usurate.
3. Rimontare i particolari in questa serie:
 - anelli in teflon nuovi (con i vertici degli incavi a V verso l'alto)
 - boccola premitrecce
4. Rimontare il dado premitrecce e avvitarlo assicurandosi che lo stelo si muova libero e non venga eccessivamente frenato.

All'avviamento dell'impianto, verificare la tenuta del premitrecce e, se necessario stringere il dado.

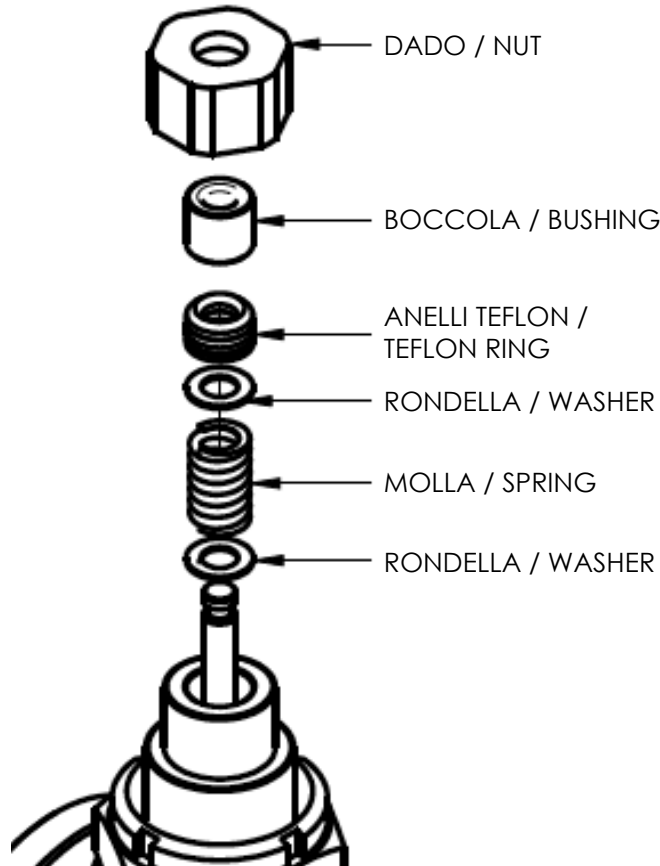
Replacing instruction

1. Unscrew the old gland nut and remove the bushing.
2. Using a metal point, remove the set of worn teflon rings.
3. Reassemble the new items in this order:
 - new teflon rings (with V grooves upwards)
 - bushing
4. Reassemble the gland nut, sure that the stem is free to move and is not overly hampered.

At the start-up of the plant, check the gland, and if necessary tighten the nut

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
52980*A	Complesso premitrecce con anelli in teflon per valvole SSAA100, DSGA125-150-200, VBS, 3VGA, 3VSATS, DSAA125-150, VMS, VMSTS (stelo Ø 12 mm - 1 rondella 21x12x1 mm) Glands assembly in teflon for SSAA100, 3VAA100-125, DSGA125-150-200, VBS, 3VSATS, DSAA125-150, VMS, VMSTS and VSS valves (stem Ø 12 mm - 1 washer 21x12x1 mm)



Istruzioni per la sostituzione

- Togliere il dado premitrecce e sfilare la boccia.
- Con una punta metallica, estrarre la serie di guarnizioni in teflon usurate, ponendo particolare attenzione a non rigare lo stelo della valvola e la camera di tenuta.
- Montare i nuovi particolari in questa serie:
 - rondella
 - molla
 - rondella (sopra la molla)
 - anelli in teflon (con i vertici degli incavi a V verso l'alto)
 - boccia premitrecce
- Rimontare il dado premitrecce e avvitarlo assicurandosi che lo stelo si muova libero e non venga eccessivamente frenato.

All'avviamento dell'impianto, verificare la tenuta del premitrecce e se necessario stringere il dado.

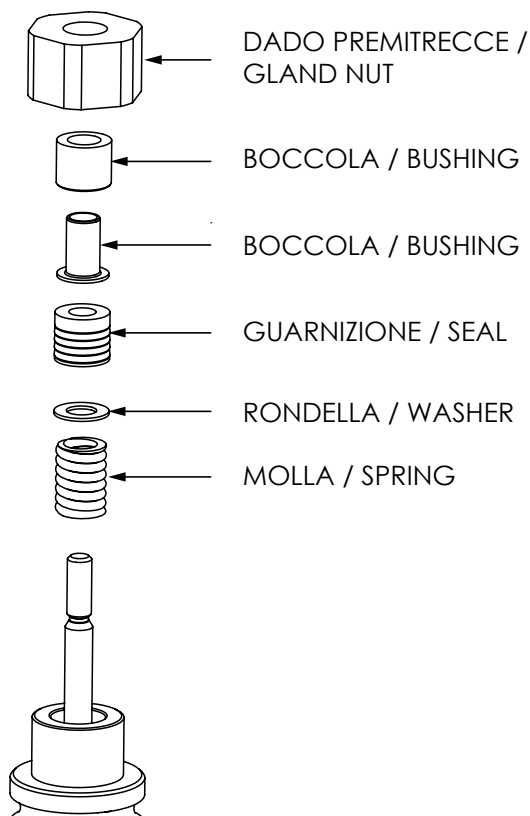
Replacing instruction

- Unscrew the gland nut and remove the bushing.
- Using a metal point, remove the set of worn teflon rings, being careful to not scratch the valve stem and the seal chamber.
- Assembly the new items in this order:
 - washer
 - spring
 - washer (above the spring)
 - Teflon rings (with V grooves upwards)
 - bushing
- Reassemble the gland nut, sure that the stem is free to move and is not overly hampered.

At the start-up of the plant, check the gland and if necessary tighten the nut.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
54182	Complesso premitrecce per 2FGA, 2FAA, 3FAA, 3FSA80, 3FSA80S, 2FSA.B, 2FGA200B, 2FAA150B, 2FAA.B (stelo Ø 9 mm - 1 rondella 18x10x1 mm) Glands assembly for 2FGA, 2FAA, 3FAA, 3FSA80, 3FSA80S, 2FSA.B, 2FGA200B, 2FAA150B, 2FAA.B (stem Ø 9 mm - 1 washer 18x10x1 mm)



Istruzioni per la sostituzione

1. Togliere il dado premitrecce e sfilare le boccole.
2. Con una punta metallica, estrarre la serie di guarnizioni usurate, la rondella e la molla, ponendo particolare attenzione a non rigare lo stelo della valvola e la camera di tenuta.
3. Lubrificare con grasso al silicone le nuove guarnizioni. Montare i nuovi particolari in questa serie:
 - molla
 - rondella
 - guarnizione
 - boccole premitrecce (vedi figura)
4. Rimontare il dado premitrecce e avvitarlo assicurandosi che lo stelo si muova libero e non venga eccessivamente frenato.

All'avviamento dell'impianto, verificare la tenuta del premitrecce e se necessario stringere il dado.

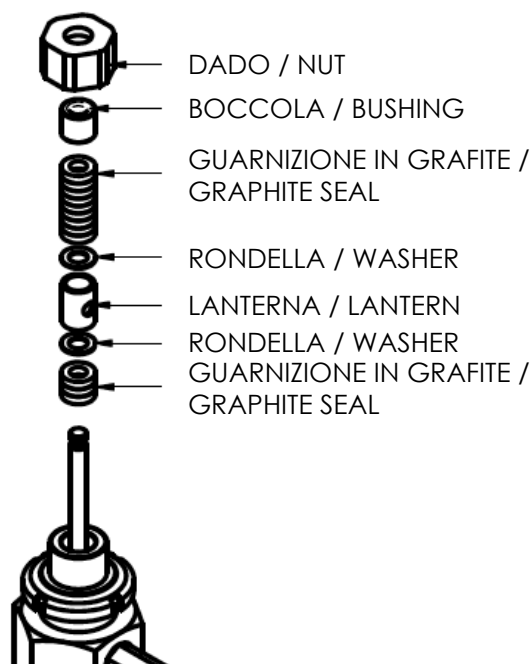
Replacing instruction

1. Unscrew the gland nut and remove the bushings.
2. Using a metal point, remove the set of worn seals, the washer and the spring, being careful to not scratch the valve stem and the seal chamber.
3. Lubricate with silicone grease the new set of seals. Assembly the new items in this order:
 - spring
 - washer
 - seal
 - bushings (see figure)
4. Reassemble the gland nut, sure that the stem is free to move and is not overly hampered.

At the start-up of the plant, check the gland and if necessary tighten the nut.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
54184	Complesso premitrecce per valvole olio diatermico 2FAA.P, 3FAA.P (stelo Ø 9 mm) Glands assembly for 2FAA.P, 3FAA.P diathermic oil valves (stem Ø 9 mm)



Istruzioni per la sostituzione

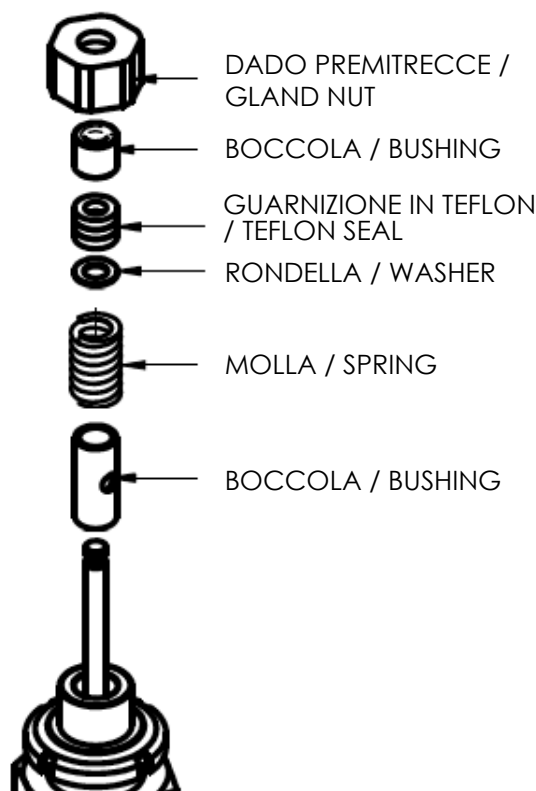
1. Togliere il dado premitrecce e sfilare la boccola premitrecce.
2. Con una punta metallica estrarre la serie superiore di guarnizioni, le due rondelle e la boccola forata lateralmente. Quindi estrarre le guarnizioni costituenti la serie inferiore, ponendo particolare attenzione a non rigare lo stelo della valvola e la camera di tenuta. Applicare la nuova serie inferiore di guarnizioni.
NOTA: gli anelli di guarnizione devono essere lubrificati con grasso al silicone e inseriti con taglio sfalsato di 90° (tra un anello e l'altro) per ottenere una tenuta migliore.
3. Montare la prima rondella, rimontare la boccola forata facendo attenzione che il foro sia allineato con l'ingrassatore onde permettere il passaggio del lubrificante, quindi montare l'altra rondella e applicare le nuove serie superiori di guarnizioni.
4. Inserire la boccola, rimettere il dado premitrecce e avvitare solo parzialmente assicurandosi che lo stelo scorra libero nella sua sede e non venga eccessivamente frenato. Riempire l'ingrassatore con grasso al silicone e stringere parzialmente la vite relativa. All'avviamento dell'impianto, verificare la tenuta del premitreccia e dell'ingrassatore, e se necessario stringere il dado e/o l'ingrassatore.

Replacing instruction

1. Unscrew the gland nut and remove the bushing.
2. Using a metal point remove the upper set of seals, the two washers and the bushing with side hole. Then remove the lower set of seals, being careful to not scratch the valve stem and the seal chamber. Apply the new set of lower seals.
NOTE: the seals rings must be lubricated with silicone grease and placed with staggered cut of 90° (between one ring and the other) to achieve a better seal.
3. Assembly the first washer, replace the bushing with side hole and being careful that the hole is aligned with the lubricator to facilitate the passage of the lubricant, then fit the other washer and apply above the new set of seals.
4. Fit the bushing, apply the gland nut and screw it only partially making sure that the stem is moving free and it is not overly hampered. Fill the lubricator with silicone grease and tighten the screw partially. At the start-up of the plant, check the gland and the lubricator and if necessary tighten the gland nut and/or the lubricator.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
54186	Complesso premitrecce per valvole bassa temperatura 2FAA.T, 3FAA.T (stelo Ø 9 mm) Glands assembly for 2FAA.T, 3FAA.T low temperature valves (stem Ø 9 mm)



Istruzioni per la sostituzione

1. Togliere il dado premitrecce e sfilare la boccola.
2. Con una punta metallica estrarre le guarnizioni in teflon, la rondella, la molla e la boccola forata lateralmente, ponendo particolare attenzione a non rigare lo stelo della valvola e la camera di tenuta.
3. Rimontare la boccola forata facendo attenzione che il foro sia allineato con l'ingrassatore onde permettere il passaggio del lubrificante, quindi montare la molla, la rondella e applicare le nuove serie di guarnizioni.
4. Inserire la boccola, rimettere il dado premitrecce e avvitare solo parzialmente assicurandosi che lo stelo scorra libero nella sua sede e non venga eccessivamente frenato. Riempire l'ingrassatore con grasso al silicone e stringere parzialmente la vite relativa.

All'avviamento dell'impianto, verificare la tenuta del premitrecce e dell'ingrassatore, e se necessario stringere il dado e/o l'ingrassatore.

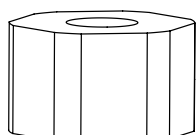
Replacing instruction

1. Unscrew the gland nut and remove the bushing.
2. Using a metal point, remove the set of worn teflon seals, the washer, the spring and the bushing with side hole, being careful to not scratch the valve stem and the seal chamber.
3. Replace the perforated bushing, being careful that the hole is aligned with the lubricator to facilitate the passage of the lubricant, then reassemble the spring, the washer and the new set of teflon seals.
4. Fit the bushing, screw the gland nut only partially, making sure that the stem is moving free and is not overly hampered. Fill the lubricator with silicone grease and tighten the screw partially.

At the start-up of the plant, check the gland and the lubricator and if necessary tighten the gland nut and/or the lubricator.

PARTI DI RICAMBIO / SPARE PARTS

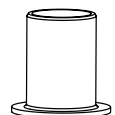
Codice / Code	Descrizione / Description
54197	Complesso premitrecce per 2FSA, 3FSA, 3FSA.S (stelo Ø 12 mm - 1 rondella 21x12x1 mm) Glands assembly for 2FSA, 3FSA, 3FSA.S (stem Ø 12 mm - 1 washer 21x12x1 mm)



DADO PREMITRECCE /
GLAND NUT



BOCCOLA / BUSHING



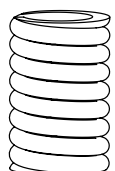
BOCCOLA / BUSHING



GUARNIZIONE / SEAL



RONDELLA / WASHER



MOLLA / SPRING

Istruzioni per la sostituzione

1. Rimuovere il dado premitrecce e sfilare le boccole.
2. Con una punta metallica, estrarre la serie di guarnizioni usurate, la rondella e la molla, ponendo particolare attenzione a non rigare lo stelo della valvola e la camera di tenuta.
3. Lubrificare con grasso al silicone le nuove guarnizioni. Montare i nuovi particolari in questa serie:
 - molla
 - rondella
 - guarnizione
 - boccole premitrecce (vedi figura)
4. Rimontare il dado premitrecce e avvitarlo assicurandosi che lo stelo si muova libero e non venga eccessivamente frenato.

All'avviamento dell'impianto, verificare la tenuta del premitrecce e se necessario stringere il dado.

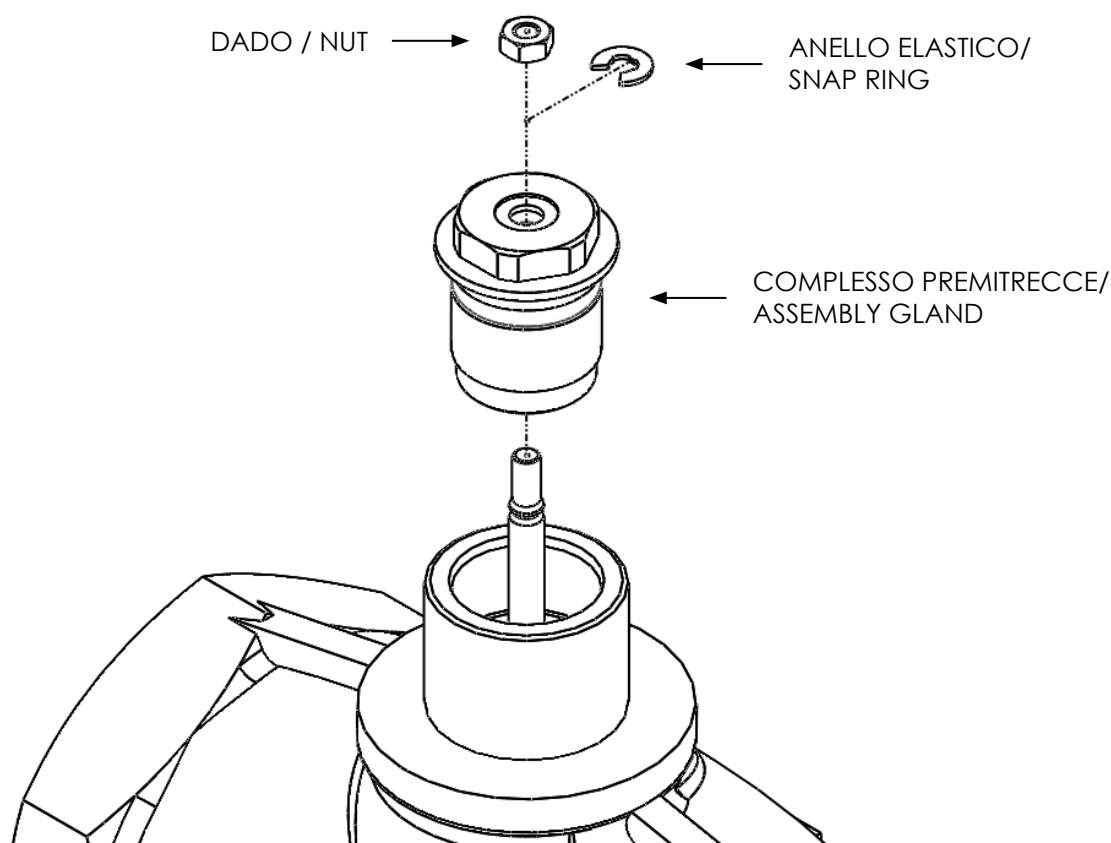
Replacing instruction

1. Unscrew the gland nut and remove the bushings.
2. Using a metal point, remove the set of worn seals, the washer and the spring, being careful to not scratch the valve stem and the seal chamber.
3. Lubricate with silicone grease the new set of seals. Assembly the new items in this order:
 - spring
 - washer
 - seal
 - bushings (see figure)
4. Reassemble the gland nut, sure that the stem is free to move and is not overly hampered.

At the start-up of the plant, check the gland and if necessary tighten the nut.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
54710	Complesso premitrecce per stelo Ø 5 mm (valvole VSB.T-VMB.T) Glands assembly for stem Ø 5 mm (VSB.T-VMB.T valves)



Istruzioni per la sostituzione

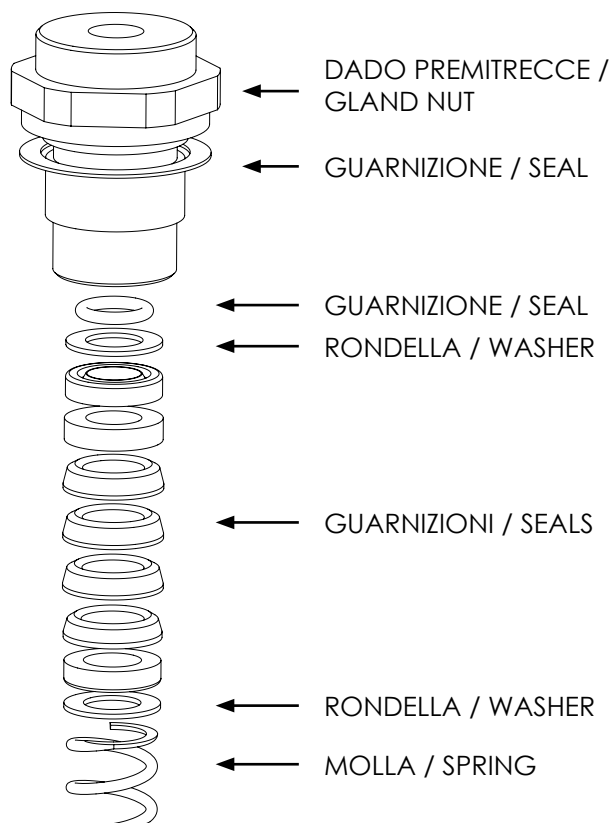
1. Rimuovere il dado M4, togliere l'anello elastico e quindi svitare il vecchio complesso premitrecce facendo attenzione a tenere ben saldo lo stelo in modo da non lasciare cadere l'otturatore.
2. Avvitare sul collo della valvola il nuovo complesso premitrecce.
3. Rimontare l'anello elastico e riavvitare il dado M4.

Replacing instruction

1. Remove the M4 nut and the snap ring, then unscrew the old assembly gland, being careful to hold firmly the stem so as not to leave the shutter falling.
2. Screw the new assembly gland onto the valve neck.
3. Reassemble the snap ring and screw the M4 nut.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
54981	Complesso premitrecce per valvole CONTROLLI 2TBB e 3TBB Glands assembly for 2TBB and 3TBB CONTROLLI valves



Istruzioni per la sostituzione

1. Togliere il dado premitrecce e sfilare le boccole.
2. Con una punta metallica, estrarre la serie di guarnizioni usurate, la rondella e la molla, ponendo particolare attenzione a non rigare lo stelo della valvola e la camera di tenuta.
3. Lubrificare con grasso al silicone le nuove guarnizioni. Montare i nuovi particolari in serie (vedi figura).
4. Rimontare il dado premitrecce e avvitarlo assicurandosi che lo stelo si muova libero e non venga eccessivamente frenato.

All'avviamento dell'impianto, verificare la tenuta del premitrecce e se necessario stringere il dado.

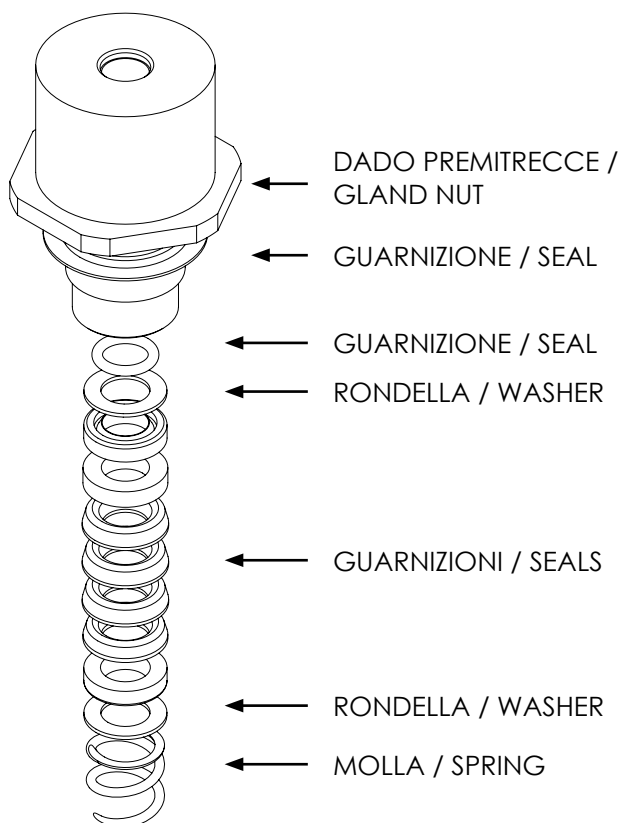
Replacing instruction

1. Unscrew the gland nut and remove the bushings.
2. Using a metal point, remove the set of worn seals, the washer and the spring, being careful to not scratch the valve stem and the seal chamber.
3. Lubricate with silicone grease the new set of seals. Assembly the new items in order (see figure).
4. Reassemble the gland nut, sure that the stem is free to move and is not overly hampered.

At the start-up of the plant, check the gland and if necessary tighten the nut.

PARTI DI RICAMBIO / SPARE PARTS

Codice / Code	Descrizione / Description
55157	Complesso premitrecce per valvole CONTROLLI 2TBB.T e 3TBB.T Glands assembly for 2TBB.T and 3TBB.T CONTROLLI valves



Istruzioni per la sostituzione

1. Togliere il dado premitrecce e sfilare le boccole.
2. Con una punta metallica, estrarre la serie di guarnizioni usurate, la rondella e la molla, ponendo particolare attenzione a non rigare lo stelo della valvola e la camera di tenuta.
3. Lubrificare con grasso al silicone le nuove guarnizioni. Montare i nuovi particolari in serie (vedi figura).
4. Rimontare il dado premitrecce e avvitarlo assicurandosi che lo stelo si muova libero e non venga eccessivamente frenato.

All'avviamento dell'impianto, verificare la tenuta del premitrecce e se necessario stringere il dado.

Replacing instruction

1. Unscrew the gland nut and remove the bushings.
2. Using a metal point, remove the set of worn seals, the washer and the spring, being careful to not scratch the valve stem and the seal chamber.
3. Lubricate with silicone grease the new set of seals. Assemble the new items in order (see figure).
4. Reassemble the gland nut, sure that the stem is free to move and is not overly hampered.

At the start-up of the plant, check the gland and if necessary tighten the nut.