

CLORIUS CONTROLS ROTARY 2-WAY & 3-WAY CONTROL VALVES
L2FM-T, G2FM-T, S2FM-T, L3FM-T, G3FM-T & S3FM-T

Instructions for

- Installation
- Commissioning
- Operation and maintenance
- Transport and storage
- Spare parts



General safety instructions

The valves must be installed and serviced by fully trained and qualified personnel only, observing the accepted industry codes and practices. Make sure employees or third persons are not exposed to any danger.

Design

The slide is firmly connected with the actuator spindle.

The valve has a small tolerance between body and slide. To minimize the leakage an O-ring is mounted in a groove on the slide.

The leakage rate is less than 0.5% of the full flow.

Technical Data

- Slide, cover and body material is the same. Refer to datasheet for the corresponding valve.
- Colour: RAL7024

Installation and commissioning

It is recommended to use a strainer in front of the control valve if the liquid contains suspended particles.

The valve connections are marked A, B and AB. The slide is operating between A and B. Check slide position before installation in the pipe. The slide position is marked on the top of the shaft.

The valves can be installed with vertical as well as horizontal spindles. The valves must be mounted in a way that the valve actuator will be exposed to a minimum of moisture and unnecessary vibrations.

Flow directional marking

The Kvs value of the valve used for either mixing or diverting is different. Please refer to the corresponding datasheet.

The valve is marked with an arrow indicating the flow direction of the media and port numbering. The arrow is located on the attached valve label.



Operation

The valves are designed for use in conjunction with valve motor type CAR with handle for manual operation or for use in conjunction with a pneumatic actuator.

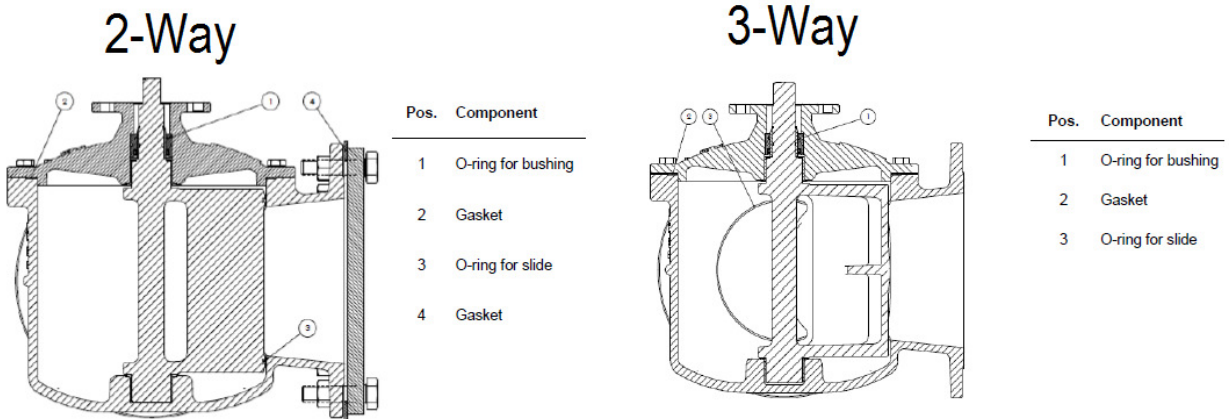
Maintenance schedule – age management.

The sealings have a durability of approximately 10 years at continuous use. However, it is recommended that the gaskets are inspected and changed every 5 years if possible.

Maintenance: disassembly actuator from the valve:

- a. Follow the separate instructions manual according to the actuator type which is installed on the valve.

Maintenance



- Remove actuator (and positioner if installed) following separate actuator instructions.
- Replace gaskets positions 2 (&4).
- Replace O-ring position 3.
- Replace flange gaskets.
- Follow separate instructions for the actuator how to install the actuator.

Important! Use Loctite for all screw connections that were disassembled.

Transport and storage

The valve must be transported and stored dry and clean. In humid rooms, a drying material or heating must be used to avoid condensation.

During transport and intermediate storage the valve should not be exposed to temperatures lower than -10°C.

The valves are painted (top coated) on the outside. This coating must remain without damage, otherwise the faulty spots must be repaired immediately.

The standard packaging protects valves and equipment against rain and snow during trucking.

For critical transports, such as sea freight, equipment will be protected by VCI (Volatile Corrosion Inhibitor) material.

If protected by VCI do not remove the packaging until the equipment is going to be installed.

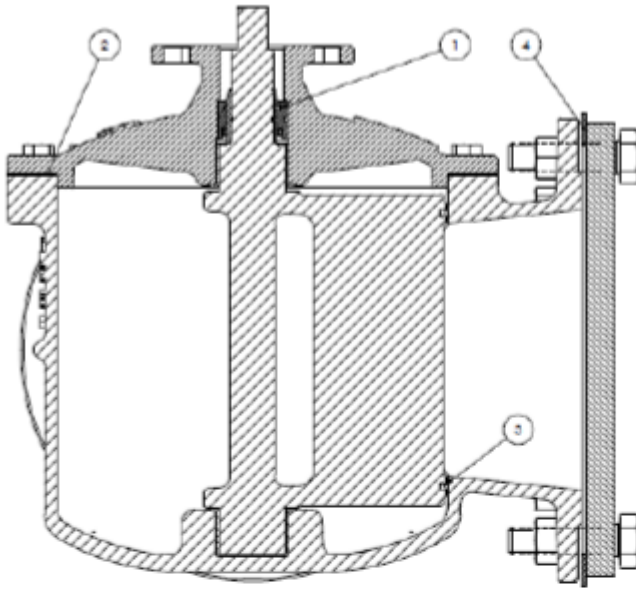
APPENDIX – Spare part manual

L2FM-T SPARE PARTS

2-way Control Valves

Gun metal, PN 16, DN 100-300 mm / PN 10, DN 350-500 mm

S-2.2.11-A



Pos.	Component
1	O-ring for bushing
2	Gasket
3	O-ring for slide
4	Gasket

Order Information:

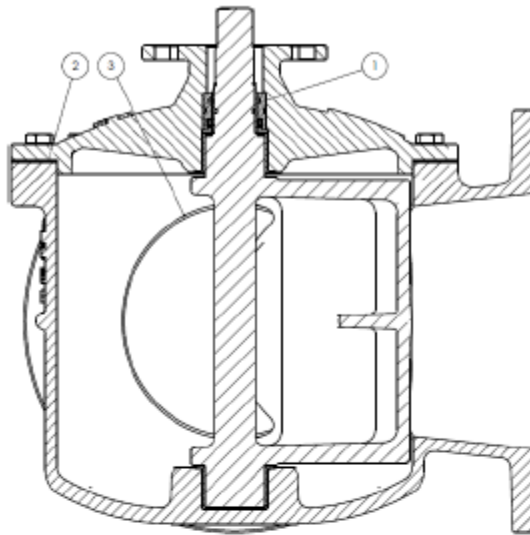
Packing set components pos.	Pos.	Valve	Item No.
	1 to 4	100 L2FM -T	1-2991540
	1 to 4	125 L2FM -T	1-2991541
	1 to 4	150 L2FM -T	1-2991542
	1 to 4	200 L2FM -T	1-2991543
	1 to 4	250 L2FM -T	1-2991544
	1 to 4	300 L2FM -T	1-2991545
	1 to 4	350 L2FM -T	1-2991546
	1 to 4	400 L2FM -T	1-2991547
	1 to 4	450 L2FM -T	1-2991548
	1 to 4	500 L2FM -T	1-2991549

L3FM-T SPARE PARTS

3-way Control Valves

Gun metal, PN 10, DN 100-300 mm / PN 6, DN 350-500 mm

S-2.2.10-A



Pos.	Component
1	O-ring for bushing
2	Gasket
3	O-ring for slide

Order Information:

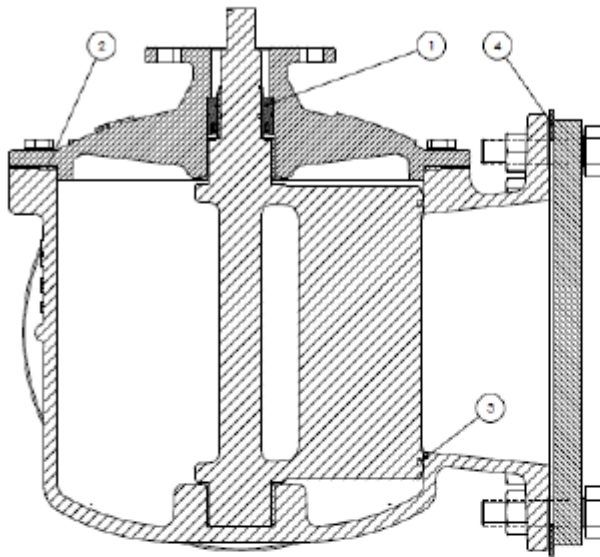
Packing set	Pos.	Valve	Item No.
components pos.	1 to 3	100 L3FM -TL	1-2991510
	1 to 3	125 L3FM -TL	1-2991511
	1 to 3	150 L3FM -TL	1-2991512
	1 to 3	200 L3FM -TL	1-2991513
	1 to 3	250 L3FM -TL	1-2991514
	1 to 3	300 L3FM -TL	1-2991515
	1 to 3	350 L3FM -TL	1-2991516
	1 to 3	400 L3FM -TL	1-2991517
	1 to 3	450 L3FM -TL	1-2991518
	1 to 3	500 L3FM -TL	1-2991519

G2FM-T SPARE PARTS

2-way Control Valves

Nodular cast iron, PN 16, DN 100–300 mm / PN 10, DN 350–500 mm

S-2.5.05.01-A



Pos.	Component
1	O-ring for bushing
2	Gasket
3	O-ring for slide
4	Gasket

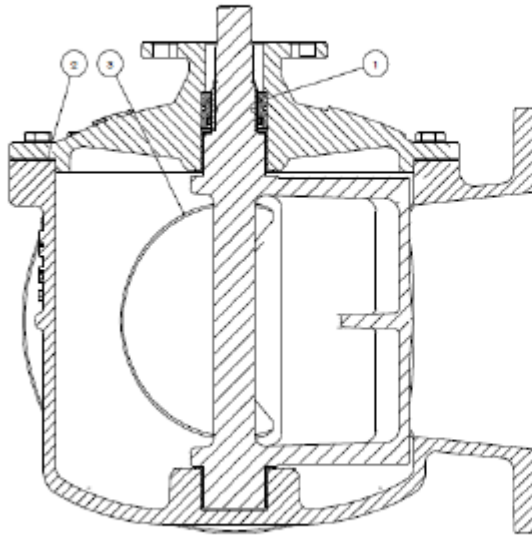
Order Information:

Packing set components pos.	Pos.	Valve	Item No.
	1 to 4	100 G2FM -T	1-2991540
	1 to 4	125 G2FM -T	1-2991541
	1 to 4	150 G2FM -T	1-2991542
	1 to 4	200 G2FM -T	1-2991543
	1 to 4	250 G2FM -T	1-2991544
	1 to 4	300 G2FM -T	1-2991545
	1 to 4	350 G2FM -T	1-2991546
	1 to 4	400 G2FM -T	1-2991547
	1 to 4	450 G2FM -T	1-2991548
	1 to 4	500 G2FM -T	1-2991549

G3FM-TL(AB-Left) SPARE PARTS**S-2.6.03-A**

3-way Control Valves

Nodular cast iron, PN 16, DN 100-300 mm / PN 10, DN 350-600 mm



Pos.	Component
1	O-ring for bushing
2	Gasket
3	O-ring for slide

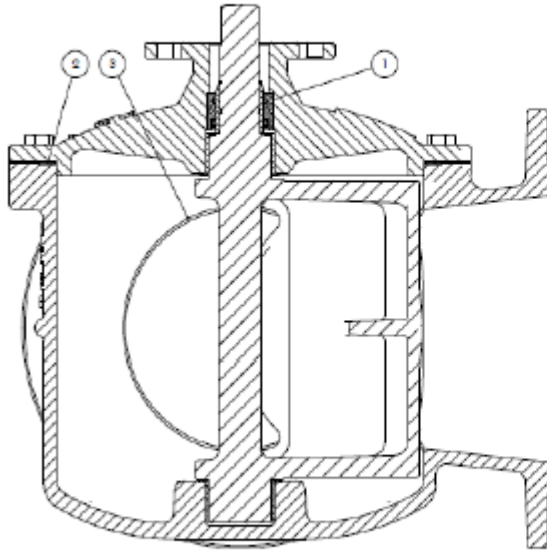
Order Information:

Packing set components pos.	Pos.	Valve	Item No.
	1 to 3	100 G3FM-TL	1-2991510
	1 to 3	125 G3FM-TL	1-2991511
	1 to 3	150 G3FM-TL	1-2991512
	1 to 3	200 G3FM-TL	1-2991513
	1 to 3	250 G3FM-TL	1-2991514
	1 to 3	300 G3FM-TL	1-2991515
	1 to 3	350 G3FM-TL	1-2991516
	1 to 3	400 G3FM-TL	1-2991517
	1 to 3	450 G3FM-TL	1-2991518
	1 to 3	500 G3FM-TL	1-2991519
	1 to 3	550 G3FM-TL	1-2991520
	1 to 3	600 G3FM-TL	1-2991521

G3FM-TR(AB-Right) SPARE PARTS**S-2.6.02-A**

3-way Control Valves, Nodular cast iron

PN 25, DN100–125 mm / PN16, DN 150-300 mm / PN 10, DN 350–600 mm



Pos.	Component
1	O-ring for bushing
2	Gasket
3	O-ring for slide

Order Information:

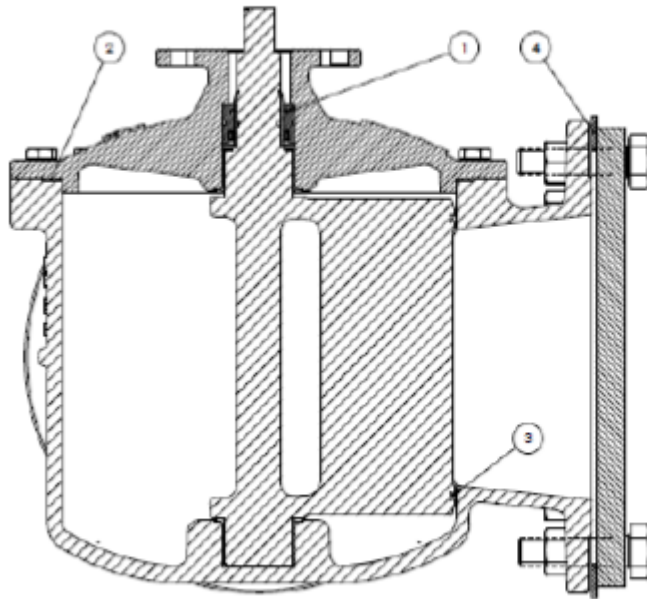
Packing set	Pos.	Valve	Item No.
components pos.	1 to 3	100 G3FM-TR	1-2991510
	1 to 3	125 G3FM-TR	1-2991511
	1 to 3	150 G3FM-TR	1-2991512
	1 to 3	200 G3FM-TR	1-2991513
	1 to 3	250 G3FM-TR	1-2991514
	1 to 3	300 G3FM-TR	1-2991515
	1 to 3	350 G3FM-TR	1-2991516
	1 to 3	400 G3FM-TR	1-2991517
	1 to 3	450 G3FM-TR	1-2991518
	1 to 3	500 G3FM-TR	1-2991519
	1 to 3	550 G3FM-TR	1-2991520
	1 to 3	600 G3FM-TR	1-2991521

S2FM-T SPARE PARTS

2-way Control Valves

Stainless steel, PN 16, DN 100-300 mm / PN 10, DN 350-500 mm

S-2.7.04-A



Pos.	Component
1	O-ring for bushing
2	Gasket
3	O-ring for slide
4	Gasket

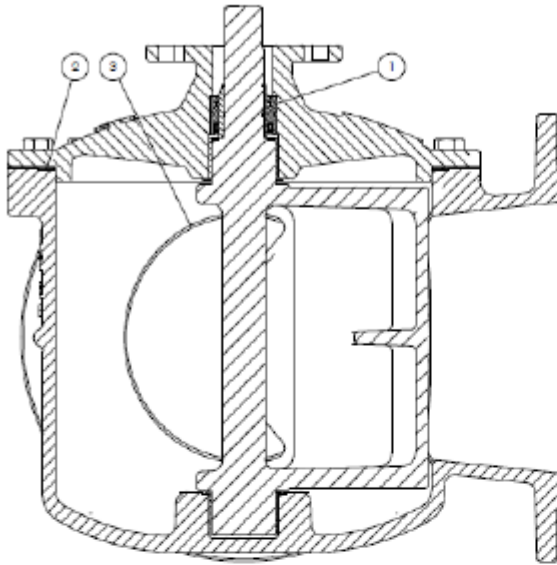
Order Information:

Packing set	Pos.	Valve	Item No.
components pos.	1 to 4	100 S2FM -T	1-2991540
	1 to 4	125 S2FM -T	1-2991541
	1 to 4	150 S2FM -T	1-2991542
	1 to 4	200 S2FM -T	1-2991543
	1 to 4	250 S2FM -T	1-2991544
	1 to 4	300 S2FM -T	1-2991545
	1 to 4	350 S2FM -T	1-2991546
	1 to 4	400 S2FM -T	1-2991547
	1 to 4	450 S2FM -T	1-2991548
	1 to 4	500 S2FM -T	1-2991549

S3FM-TR (AB-Right) SPARE PARTS

3-way Control Valves

Stainless Steel, PN 16, DN 100-300 mm / PN 10, DN 350-500 mm

S-2.7.01-A

Pos.	Component
1	O-ring for busing
2	Gasket
3	O-ring for slide

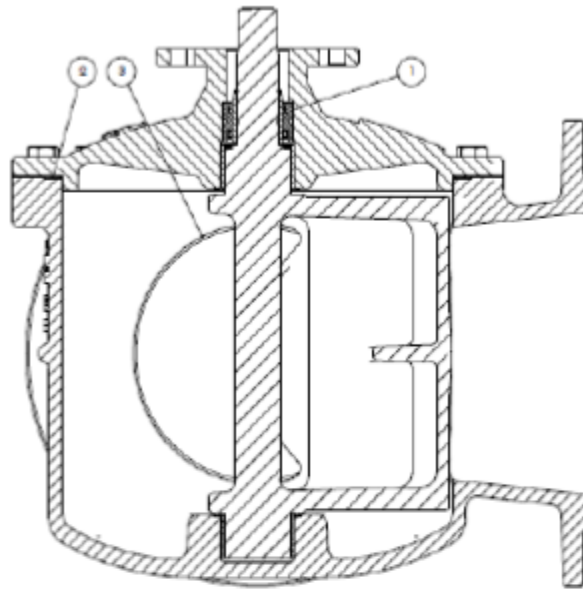
Order Information:

Packing set	Pos.	Valve	Item No.
components pos.	1 to 3	100 S3FM -TR	1-2991510
	1 to 3	125 S3FM -TR	1-2991511
	1 to 3	150 S3FM -TR	1-2991512
	1 to 3	200 S3FM -TR	1-2991513
	1 to 3	250 S3FM -TR	1-2991514
	1 to 3	300 S3FM -TR	1-2991515
	1 to 3	350 S3FM -TR	1-2991516
	1 to 3	400 S3FM -TR	1-2991517
	1 to 3	450 S3FM -TR	1-2991518
	1 to 3	500 S3FM -TR	1-2991519

S3FM-TL (AB-Left) SPARE PARTS**S-2.7.02-A**

3-way Control Valves

Stainless Steel, PN 16, DN 100-300 mm / PN 10, 350-500 mm



Pos.	Component
1	O-ring for busing
2	Gasket
3	O-ring for slide

Order Information:

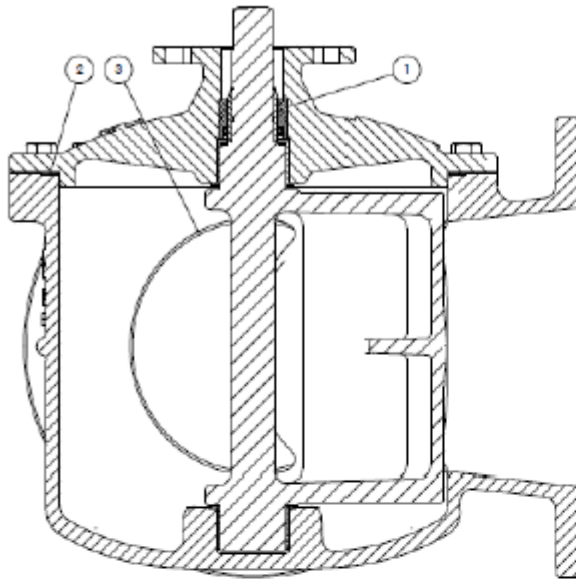
Packing set	Pos.	Valve	Item No.
components pos.	1 to 3	100 S3FM -TL	1-2991510
	1 to 3	125 S3FM -TL	1-2991511
	1 to 3	150 S3FM -TL	1-2991512
	1 to 3	200 S3FM -TL	1-2991513
	1 to 3	250 S3FM -TL	1-2991514
	1 to 3	300 S3FM -TL	1-2991515
	1 to 3	350 S3FM -TL	1-2991516
	1 to 3	400 S3FM -TL	1-2991517
	1 to 3	450 S3FM -TL	1-2991518
	1 to 3	500 S3FM -TL	1-2991519

S3FM-TM (AB-Middle) SPARE PARTS

3-way Control Valves

Stainless Steel, PN 16, DN 100-300 mm / PN 10, DN 350-500 mm

S-2.7.03-A



Pos.	Component
1	O-ring for bushing
2	Gasket
3	O-ring for slide

Order Information:

Packing set	Pos.	Valve	Item No.
components pos.	1 to 3	100 S3FM -TM	1-2991525
	1 to 3	125 S3FM -TM	1-2991526
	1 to 3	150 S3FM -TM	1-2991527
	1 to 3	200 S3FM -TM	1-2991528
	1 to 3	250 S3FM -TM	1-2991529
	1 to 3	300 S3FM -TM	1-2991530
	1 to 3	350 S3FM -TM	1-2991531
	1 to 3	400 S3FM -TM	1-2991532
	1 to 3	450 S3FM -TM	1-2991533
	1 to 3	500 S3FM -TM	1-2991534