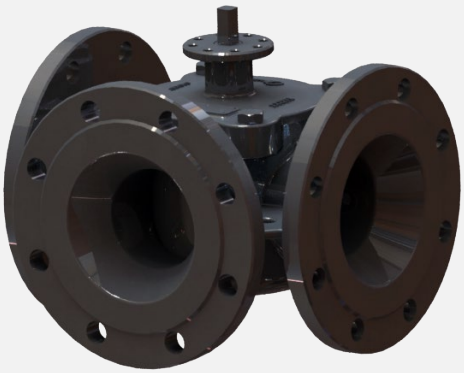
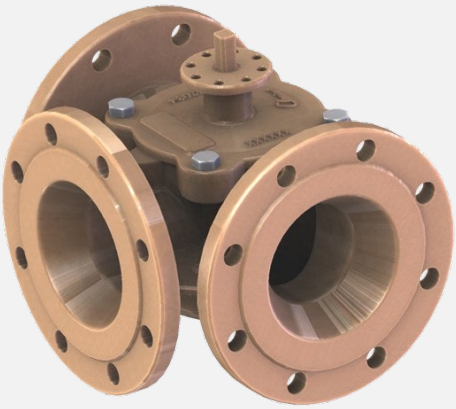




3-WAY CONTROL VALVE TYPE:

G3FMT STANDARD & ULTRA LOW LEAGKAGE (L/R & M) IN NODULAR CAST IRON

L3FMT STANDARD & ULTRA LOW LEAGKAGE (L/R) IN BRONZE

INSTRUCTION

NO.: 99.225.01 C
DATE: JULY 2025

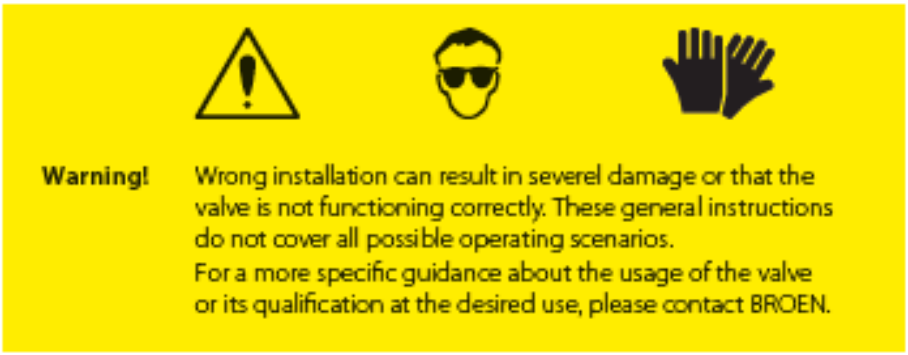
APPROVAL: JAN/JCH, GFR

Clorius CONTROLS

General safety instruction

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.

Warning information



CONTENT

This instruction is valid for the following valve types:

3-way control valve type:
- G3FMT-ULL/ULLM (Left/Right & Middle) – G3FMT-SL/SLM (Left/Right& Middle)
- L3FMT- ULL (Left & Right) & L3FMT- SL (Left & Right)

2. General information

Applications

Control valves type G3FMT-ULL/ULLM & G3FMT-SL/SLM and L3FMT-SL/ULL are a three-way control valve with a slide for quarter turn operation designed for regulating of fresh water, lubricating oil, and other liquid media. The valves are designed for use in conjunction with industrial processes, district heating and marine installations with large water or lubricating oil volumes:

- Engine Jacket Cooling Water System
- Lubricating Oil Cooling
- Central Cooling Water System etc.

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

Design

The valve body and the valve slide are made of both nodular cast iron EN-GJS-400-15 and bronze.
The valve flanges are drilled according to: EN 1092-2.
Option: JIS B 2210 5K/10K and ANSI class 150.

Function

The slide is firmly connected with the motor spindle. When the slide is in the one outer position by turning the spindle, connection A-AB is fully open, and connection B-AB is fully closed. In the other outer position connection A-AB is fully closed and connection B-AB is fully open. In the intermediate positions the opening degrees change proportionally.
The valve has a small tolerance between body and slide.
For G3FMT- ULL the PTFE sealing element and O-ring are mounted in the slider groove to minimize leakage.

Features

- Simple design secures reliable controls and reduces costly downtime
- Ultra Low Leakage rate secures energy savings - Best in class
- Most compact valve on the market
- Full flexibility on port orientation.

3. Technical data

G3FMT-SL & SLM (standard leakage class I) in nodular cast iron

Materials	
Valve body	Nodular cast iron
Slide	Nodular cast iron
O-Ring	NBR
Other technical data	
Flow characteristics	Almost linear
Leakage rate	ANSI class I
Flanges	EN 1092-2 PN 10
	JIS B 2210K/10K
	ANSI class 150
Max. pressure Δp, against which the valve can close	5 bar
Nominal pressure	PN 10
Design temperature	120°C
Optional temperature	150°C
Available actuators	CAR-H Electric actuator
	VT Pneumatic actuator

G3FMT-ULL & ULLM (Ultra-low leakage class IV)

Materials	
Valve body	Nodular cast iron
Slide	Nodular cast iron
Sealing element	Silicone
O-Ring	PTFE
Other technical data	
Flow characteristics	Almost linear
Leakage rate	ANSI class IV/EN 1349 < 0.01%
Flanges	EN 1092-2 PN 10
	JIS B 2210K/10K
	ANSI class 150
Max. pressure Δp, against which the valve can close	5 bar
Nominal pressure	PN 10
Design temperature	120°C
Optional temperature	150°C
Available actuators	CAR-H Electric actuator
	VT Pneumatic actuator

3. Technical data

L3FMT-SL (standard leakage class I) in bronze

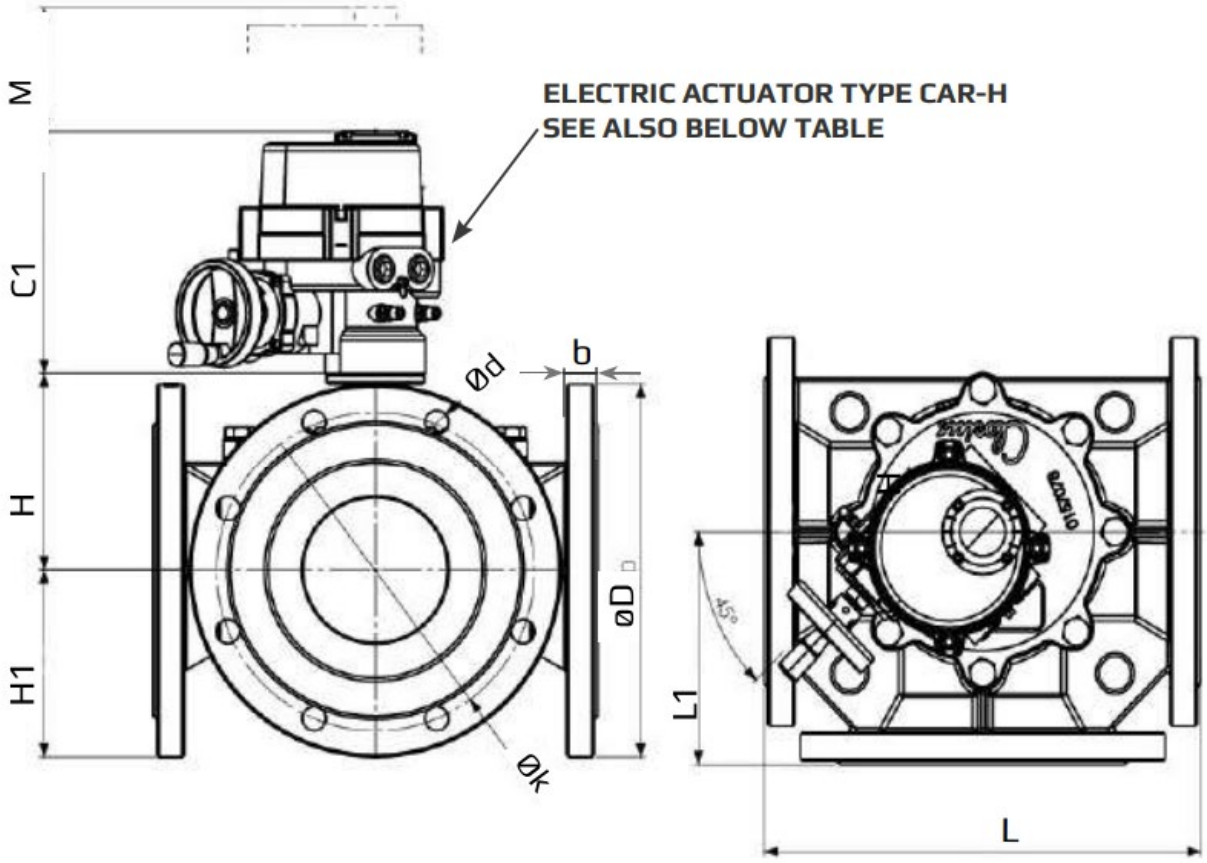
Materials	
Valve body	Bronze
Slide	Aluminum bronze
O-Ring	NBR
Other technical data	
Flow characteristics	Almost linear
Leakage rate	ANSI class I
Flanges	EN 1092-2 PN 10
	JIS B 2210K/10K
	ANSI class 150
Max. pressure Δp, against which the valve can close	5 bar
Nominal pressure	PN 10
Design temperature	120°C
Optional temperature	150°C
Available actuators	CAR-H Electric actuator
	VT Pneumatic actuator

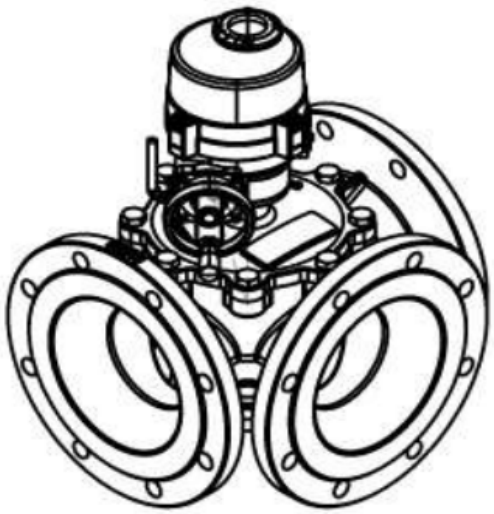
L3FMT-ULL (Ultra-low leakage class IV) in bronze

Materials	
Valve body	Bronze
Slide	Aluminum bronze
Sealing element	Silicone
O-Ring	PTFE
Other technical data	
Flow characteristics	Almost linear
Leakage rate	ANSI class IV/EN 1349 < 0.01%
Flanges	EN 1092-2 PN 10
	JIS B 2210K/10K
	ANSI class 150
Max. pressure Δp, against which the valve can close	5 bar
Nominal pressure	PN 10
Design temperature	120°C
Optional temperature	150°C
Available actuators	CAR-H Electric actuator
	VT Pneumatic actuator

3. Technical data (Dimension drawing)

For G3FMT & L3FMT Ultra-low leakage class IV valves





3. Technical data

G3FMT-ULL (Ultra-low leakage class IV)
(See also data sheet: 0-2.6.15)

TABEL 1: (Read this together with dimension drawing on page 7)

Type	L (mm)	L1 (mm)	H (mm)	H1 (mm)	b (mm)	C1 (mm)	M (mm)	Electric Actuator Type CAR-H
50 G3FMT-ULL (HF)	254	127	115	ØD/2	19	223	110	CAR-H 006
65 G3FMT-ULL	254	127	115	ØD/2	19	223	110	CAR-H 006
65 G3FMT-ULL (HF)	254	127	126	ØD/2	19	223	110	CAR-H 006
80 G3FMT-ULL	254	127	126	ØD/2	19	223	110	CAR-H 006
80 G3FMT-ULL (HF)	254	127	131	ØD/2	19	223	110	CAR-H 006
100 G3FMT-ULL	296	148	131	ØD/2	24	223	110	CAR-H 006
100 G3FMT-ULL (HF)	296	148	140	ØD/2	24	223	110	CAR-H 006
125 G3FMT-ULL	330	165	140	ØD/2	24	223	110	CAR-H 006
125 G3FMT-ULL (JIS5K)	320	160	140	ØD/2	19	223	110	CAR-H 006
150 G3FMT-ULL	356	178	149	ØD/2	25,4	223	110	CAR-H 010
200 G3FMT-ULL	410	205	182	ØD/2	28,4	261	150	CAR-H 016
250 G3FMT-ULL	480	240	202	ØD/2	31	261	150	CAR-H 016
300 G3FMT-ULL (RF)	580	290	202	ØD/2	32	261	150	CAR-H 016
300 G3FMT-ULL	560	280	237	ØD/2	32	315	180	CAR-H 035
350 G3FMT-ULL	660	330	256	ØD/2	36	315	180	CAR-H 050
400 G3FMT-ULL	720	360	278	ØD/2	38	315	180	CAR-H 050
400 G3FMT-ULL (HF)	720	360	314	ØD/2	25	352	200	CAR-H 080
450 G3FMT-ULL	780	390	314	ØD/2	26	352	200	CAR-H 080

ØD/2 – Depends on the flange types (see also table 2)
RF = Reduced flow
HF = High Flow

3. Technical data (G3FMT-ULL)

G3FMT-ULL (Ultra-low leakage class IV) in nodular cast iron
(See also data sheet: 0-2.6.15)

TABEL 2: (Read this together with dimension drawing on page 7)

	EN 1092-2			ANSI Class 150			JIS B 2210 5K			JIS B 2210 10K		
Flange connections	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)
DN50	165	125	19x(4)	152	121	19x(4)	130	105	15x(4)	155	120	19x(4)
DN65	185	145	19x(4)	178	140	19x(4)	155	130	15x(4)	175	140	19x(4)
DN80	200	160	19x(8)	190	152	19x(4)	180	145	19x(4)	185	150	19x(8)
DN100	220	180	19x(8)	230	191	19x(8)	200	165	19x(8)	210	175	19x(8)
DN125	250	210	19x(8)	255	216	22x(8)	235	200	19x(8)	250	210	23x(8)
DN150	285	240	23x(8)	280	241	22x(8)	265	230	19x(8)	280	240	23x(8)
DN200	343	295	22x(8)	343	298	22x(8)	320	280	23x(8)	330	290	23x(12)
DN250	405	350	23x(12)	405	362	25x(12)	385	345	23x(12)	400	355	25x(12)
DN300	455	400	23x(12)	483	432	25x(12)	430	390	23x(12)	445	400	25x(16)
DN350	505	460	23x(16)	533	476	29x(12)	480	435	25x(12)	490	445	25x(16)
DN400	565	515	28x(16)	597	540	29x(16)	540	495	25x(16)	560	510	27x(16)
DN450	620	565	28x(20)	620	578	32x(16)	620	555	25x(16)	620	565	27X(20)

3. Technical data (G3FMT-ULL)

G3FMT-ULL (Ultra-low leakage class IV) in nodular cast iron
(See also data sheet: 0-2.6.15)

TABEL 3

Type	Flange connection DN in mm	KvS m3/h**	Torque Nm For inlet P*	Weight kg
DN50 (HF)	50	67	30	16
DN65	65	67	30	18
DN65 (HF)	65	120	35	19
DN80	80	100	35	21
DN80 (HF)	80	180	38	21
DN100	100	180	38	26
DN100 (HF)	100	270	40	28
DN125	125	260	40	34
DN150	150	430	90	42
DN200	200	770	120	67
DN250	250	1.230	150	95
DN300 (RF)	300	1.190	150	140
DN300	300	2.030	320	130
DN350	350	2.850	418	175
DN400	400	3.760	530	220
DN400 (HF)	400	5.200	654	212
DN450	450	4.600	654	227

*Torque calculated at max Δ P for: DN50 - 450 - 5 Bar

**NOTE: KvS is max. KvS value

RF = Reduced Flow
HF = High Flow

3. Technical data

G3FMT-ULLM (Ultra-low leakage class IV) in nodular cast iron
(See also data sheet: 0-2.6.17)

TABEL 1: (Read this together with dimension drawing on page 7)

Type	L (mm)	L1 (mm)	H (mm)	H1 (mm)	b (mm)	C1 (mm)	M (mm)	Electric Actuator Type CAR-H
50 G3FMT - ULL (HF)	254	127	115	ØD/2	19	223	110	CAR-H 006
65 G3FMT-ULL	254	127	115	ØD/2	19	223	110	CAR-H 006
65 G3FMT-ULL (HF)	254	127	126	ØD/2	19	223	110	CAR-H 006
80 G3FMT-ULL	254	127	126	ØD/2	19	223	110	CAR-H 006
80 G3FMT-ULL (HF)	254	127	131	ØD/2	19	223	110	CAR-H 006
100 G3FMT-ULL	296	148	131	ØD/2	24	223	110	CAR-H 006
100 G3FMT-ULL (HF)	296	148	140	ØD/2	24	223	110	CAR-H 006
125 G3FMT-ULL	330	165	140	ØD/2	24	223	110	CAR-H 006
125 G3FMT-ULL	320	160	140	ØD/2	19	223	110	CAR-H 006
150 G3FMT-ULL	356	178	149	ØD/2	25,4	223	110	CAR-H 016
200 G3FMT-ULL	410	205	182	ØD/2	28,4	261	150	CAR-H 016
250 G3FMT-ULL	480	240	202	ØD/2	31	261	150	CAR-H 020
300 G3FMT-ULL	560	280	237	ØD/2	32	315	180	CAR-H 050
350 G3FMT-ULL	660	330	256	ØD/2	36	315	180	CAR-H 050
400 G3FMT-ULL	720	360	278	ØD/2	38	315	180	CAR-H 080

ØD/2 - Depends on flange type (see also table 2)

HF = High Flow

3. Technical data

G3FMT-ULLM (Ultra-low leakage class IV) in nodular cast iron
(See also data sheet: 0-2.6.17)

TABEL 2: (Read this together with dimension drawing on page 7)

	EN 1092-2			ANSI Class 150			JIS B 2210 5K			JIS B 2210 10K		
Flange connections	**D** (dia.) (mm)	**k** (dia.) (mm)	**d** mm dia. (number)	**D** (dia.)	**k** (dia.) (mm)	**d** mm dia. (number)	**D** (dia.) (mm)	**k** (dia.) (mm)	**d** mm dia. (number)	**D** (dia.)	**k** (dia.) (mm)	**d** mm dia. (number)
DN50	165	125	19x(4)	152	124	19x(4	130	105	19x(4	155	120	19x(4
DN65	185	145	19x(4	178	140	19x(4	155	130	19x(4	175	140	19x(4
DN80	200	160	19x(8)	190	152	19x(4)	180	145	19x(4)	185	150	19x(8)
DN100	220	180	19x(8)	230	191	19x(8)	200	165	19x(8)	210	175	19x(8)
DN125	250	210	19x(8)	255	216	22x(8)	235	200	19x(8)	250	210	23x(8)
DN150	285	240	23x(8)	280	241	22x(8)	265	230	19x(8)	280	240	23x(8)
DN200	343	295	22x(8)	343	298	22x(8)	320	280	23x(8)	330	290	23x(12)
DN250	405	350	23x(12)	405	362	25x(12)	385	345	23x(12)	400	355	25x(12)
DN300	455	400	23x(12)	483	432	25x(12)	430	390	23x(12)	445	400	25x(16)
DN350	505	460	23x(16)	533	476	29x(12)	480	435	25x(12)	490	445	25x(16)
DN400	565	515	28x(16)	597	540	29x(16)	540	495	25x(16)	560	510	27x(16)

3. Technical data

G3FMT-ULLM (Ultra-low leakage class IV) in nodular cast iron
(See also data sheet: 0-2.6.17)

TABEL 3: (Read this together with dimension drawing on page 6)

Type	Flange connection DN in mm	KvS m3/h	Torque Nm For inlet P	Weight kg
DN50 (HF)	50	N/A	N/A	N/A
DN65	65	N/A	N/A	N/A
DN 65 (HF)	65	N/A	N/A	N/A
DN80	80	75	35	21,5
DN80 (HF)	80	N/A	N/A	N/A
DN100	100	120	38	27
DN100 (HF)	100	175	40	29,5
DN125	125	165	40	36
DN150	150	310	90	44,5
DN200	200	550	120	71
DN250	250	N/A	N/A	N/A
DN300	300	N/A	N/A	N/A
DN350	350	N/A	N/A	N/A
DN400	400	N/A	N/A	N/A

*Torque calculated at max Δ P for: DN50 - 400 - 5 Bar

**NOTE: KvS is max. KvS value

HF = High Flow

N/A = comming soon

3. Technical data

L3FMT-ULL (Ultra-low leakage class IV) – in bronze
(See also data sheet: 0-2.6.21)

TABEL 1: (Read this together with dimension drawing on page 6)

Type	L (mm)	L1 (mm)	H (mm)	H1 (mm)	b (mm)	C1 (mm)	M (mm)	Electric Actuator Type CAR-H
50 L3FMT- ULL (HF)	254	127	115	ØD/2	19	223	110	CAR-H 006
65 L3FMT - ULL	254	127	115	ØD/2	19	223	110	CAR-H 006
65 L3FMT - ULL (HF)	254	127	126	ØD/2	19	223	110	CAR-H 006
80 L3FMT-ULL	254	127	126	ØD/2	19	223	110	CAR-H 006
80 L3FMT-ULL (HF)	254	127	131	ØD/2	19	223	110	CAR-H 006
100 L3FMT-ULL	296	148	131	ØD/2	24	223	110	CAR-H 006
100 L3FMT-ULL (HF)	296	148	140	ØD/2	24	223	110	CAR-H 006
125 L3FMT-ULL	330	165	140	ØD/2	24	223	110	CAR-H 006
150 L3FMT-ULL	356	178	149	ØD/2	25,4	223	110	CAR-H 010
200 L3FMT-ULL	410	205	182	ØD/2	28,4	261	150	CAR-H 016
250 L3FMT-ULL	480	240	202	ØD/2	31	261	150	CAR-H -016
300 L3FMT-ULL (RF)	580	290	202	ØD/2	32	261	180	CAR-H -016
300 L3FMT-ULL	560	280	237	ØD/2	32	315	180	CAR-H -035
350 L3FMT-ULL	660	330	256	ØD/2	36	315	180	CAR-H 050
400 L3FMT-ULL	720	360	278	ØD/2	38	315	180	CAR-H 080
400 L3FMT-ULL (HF)	720	360	314	ØD/2	25	352	200	CAR-H 080

ØD/2 – Depends on the flange types (see also table 2)
RF = Reduced flow
HF = High Flow

3. Technical data

L3FMT-ULL (Ultra-low leakage class IV) – in bronze
(See also data sheet: 0-2.6.21)

TABEL 2: (Read this together with dimension drawing on page 6)

	EN 1092-2			ANSI Class 150			JIS B 2210 5K			JIS B 2210 10K		
Flange connections	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)
DN50	165	125	19x(4)	152	121	19x(4)	130	105	15x(4)	155	120	19x(4)
DN65	185	145	19x(4)	178	140	19x(4)	155	130	15x(4)	175	140	19x(4)
DN80	200	160	19x(8)	190	152	19x(4)	180	145	19x(4)	185	150	19x(8)
DN100	220	180	19x(8)	230	191	19x(8)	200	165	19x(8)	210	175	19x(8)
DN125	250	210	19x(8)	255	216	22x(8)	235	200	19x(8)	250	210	23x(8)
DN150	285	240	23x(8)	280	241	22x(8)	265	230	19x(8)	280	240	23x(8)
DN200	343	295	22x(8)	343	298	22x(8)	320	280	23x(8)	330	290	23x(12)
DN250	405	350	23x(12)	405	362	25x(12)	385	345	23x(12)	400	355	25x(12)
DN300	455	400	23x(12)	483	432	25x(12)	430	390	23x(12)	445	400	25x(16)
DN350	505	460	23x(16)	533	476	29x(12)	480	435	25x(12)	490	445	25x(16)
DN400	565	515	28x(16)	597	540	29x(16)	540	495	25x(16)	560	510	27x(16)

3. Technical data

L3FMT-ULL (Ultra-low leakage class IV) in bronze
(See also data sheet: 0-2.6.21)

TABEL 3

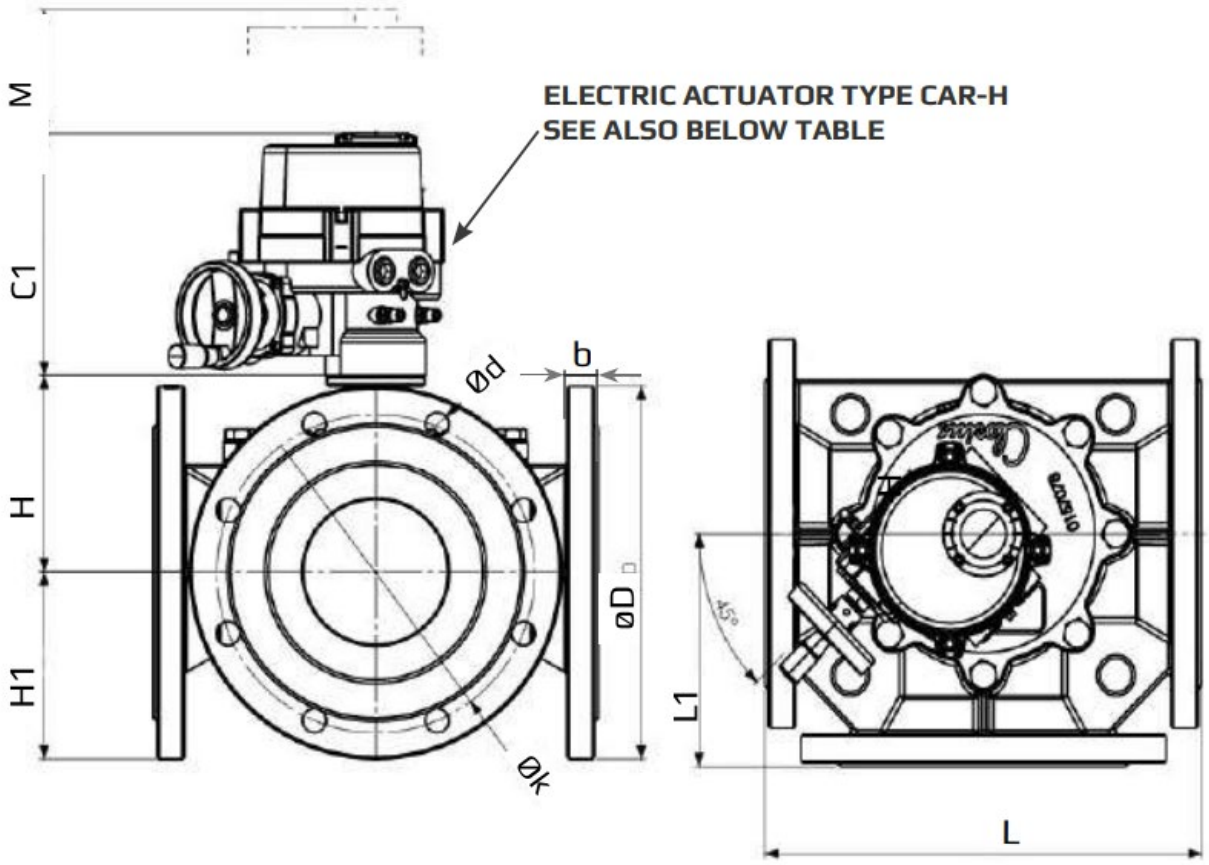
Type	Flange connection DN in mm	KvS m3/h**	Torque Nm For inlet P*	Weight kg
DN50 (HF)	50	67	30	19
DN65	65	67	30	22
DN65 (HF)	65	120	30	23
DN80	80	100	35	24
DN80 (HF)	80	180	35	26
DN100	100	180	38	32
DN100 (HF)	100	270	38	34
DN125	125	260	40	41
DN150	150	430	90	50
DN200	200	770	120	80
DN250	250	1.230	150	114
DN300	300	2.030	320	153
DN350	350	2.850	418	210
DN400	400	3.760	530	258
DN400 (HF)	400	5.200	650	248

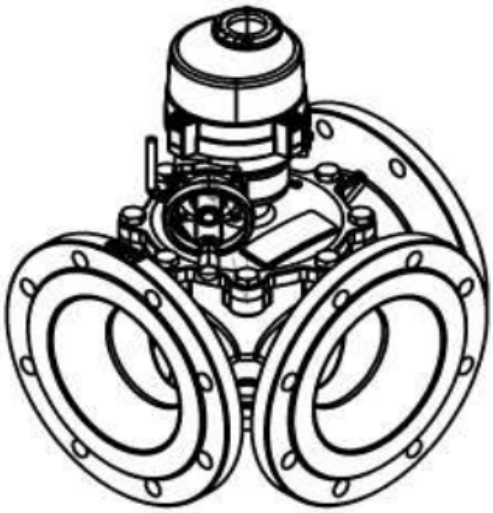
Torque calculated at max **Δ P for: DN50 – DN400 – 5 bar.**

** NOTE: KvS is max. KvS value
HF = High Flow

3. Technical data (Dimension drawing)

For G3FMT & L3FMT standard leakage class I valves





3. Technical data

G3FMT-SL (Standard leakage Class I) in nodular cast iron
(See also data sheet 2.6.16)

TABEL 1: (Read this together with dimension drawing on page 17)

Type	L (mm)	L1 (mm)	H (mm)	H1 (mm)	b (mm)	C1 (mm)	M (mm)	Electric Actuator Type CAR-H
50 G3FMT-SL (HF)	254	127	114,5	ØD/2	19	223	110	CAR-H 006
65 G3FMT-SL	254	127	114,5	ØD/2	19	223	110	CAR-H 006
65 G3FMT-SL (HF)	254	127	125,5	ØD/2	19	223	110	CAR-H 006
80 G3FMT-SL	254	127	125,5	ØD/2	19	223	110	CAR-H 006
80 G3FMT-SL (HF)	254	127	130,5	ØD/2	19	223	110	CAR-H 006
100 G3FMT-SL	296	148	130,5	ØD/2	24	223	110	CAR-H 006
100 G3FMT-SL (HF)	296	148	134,5	ØD/2	24	223	110	CAR-H 006
125 G3FMT-SL	330	165	139,5	ØD/2	24	223	110	CAR-H 006
125 G3FMT-SL JIS5K	320	160	139,5	ØD/2	19	223	110	CAR-H 006
150 G3FMT-SL	356	178	148,5	ØD/2	25,4	223	110	CAR-H 006
200 G3FMT-SL	410	205	181,5	ØD/2	28,4	223	110	CAR-H 010
250 G3FMT-SL	480	240	202	ØD/2	31	223	110	CAR-H 010
300 G3FMT-SL (RF)	580	290	202	ØD/2	32	223	110	CAR-H 010
300 G3FMT-SL	560	280	237	ØD/2	32	261	150	CAR-H 020
350 G3FMT-SL	660	330	256	ØD/2	36	261	150	CAR-H 024
400 G3FMT-SL	720	360	277,5	ØD/2	38	315	180	CAR-H 035
400 G3FMT-SL (HF)	720	360	314	ØD/2	25	315	180	CAR-H 035
450 G3FMT-SL	780	390	314	ØD/2	26	315	180	CAR-H 035
500 G3FMT-SL	840	420	320	ØD/2	32	315	180	CAR-H 050
550 G3FMT-SL	840	420	320	ØD/2	32	315	180	CAR-H 050
600 G3FMT-SL	950	475	339	ØD/2	32	352	200	CAR-H 080
650 G3FMT-SL	950	475	339	ØD/2	32	352	200	CAR-H 080

RF = Reduced Flow
HF = High Flow

ØD/2 - Depends on flange type (see also table 2)

3. Technical data

G3FMT-SL (Standard leakage Class I) in nodular cast iron
(See also data sheet 2.6.16)

TABEL 2: (Read this together with dimension drawing on page 17)

	EN 1092-2			ANSI Class 150			JIS B 2210 5K			JIS B 2210 10K		
Flange connections	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)
DN50	165	125	19x(4)	152	121	19x(4)	130	105	15x(4)	155	120	19x(4)
DN65	185	145	19x(4)	178	140	19x(4)	155	130	15x(4)	175	140	19x(4)
DN80	200	160	19x(8)	190	152	19x(4)	180	145	19x(4)	185	150	19x(8)
DN100	220	180	19x(8)	230	191	19x(8)	200	165	19x(8)	210	175	19x(8)
DN125	250	210	19x(8)	255	216	22x(8)	235	200	19x(8)	250	210	23x(8)
DN150	285	240	23x(8)	280	241	22x(8)	265	230	19x(8)	280	240	23x(8)
DN200	343	295	22x(8)	343	298	22x(8)	320	280	23x(8)	330	290	23x(12)
DN250	405	350	23x(12)	405	362	25x(12)	385	345	23x(12)	400	355	25x(12)
DN300	455	400	23x(12)	483	432	25x(12)	430	390	23x(12)	445	400	25x(16)
DN350	505	460	23x(16)	533	476	29x(12)	480	435	25x(12)	490	445	25x(16)
DN400	565	515	28x(16)	597	540	29x(16)	540	495	25x(16)	560	510	27x(16)
DN450	620	565	28x(20)	620	578	32x(16)	620	555	25x(16)	620	565	27x(20)
DN500	670	620	28x(20)	699	635	32x(20)	655	605	25x(20)	675	620	27x(20)
DN550	-	-	-	-	-	-	720	665	27x(20)	745	680	33x(20)
DN600	780	725	31x(20)	813	749	22x(8)	770	715	27x(20)	795	730	33x(24)
DN650	-	-	-	-	-	-	825	770	27x(24)	845	780	33x(24)

3. Technical data

G3FMT-SL (Standard leakage class I) in nodular cast iron
(See also data sheet 2.6.16)

TABEL 3:

Type	Flange connection	KvS m3/h	Torque Nm	Weight kg
DN50 (HF)	50	67	30	16
DN65	65	67	30	18
DN65 (HF)	65	120	35	19
DN80	80	100	35	21
DN80 (HF)	80	180	38	21
DN100	100	180	38	26
DN100 (HF)	100	270	40	28
DN125	125	260	40	34
DN150	150	430	45	42
DN200	200	770	90	67
DN250	250	1.230	115	96
DN300 (RF)	300	1.190	115	142
DN300	300	2.030	160	130
DN350	350	2.850	210	175
DN400	400	3.760	265	230
DN400 (HF)	400	5.200	330	212
DN450	450	4.600	330	230
DN500	500	5.400	400	250
DN550	550	5.400	400	270
DN600	600	5.760	550	440
DN650	650	5.890	550	480

*Torque calculated at max Δ P for: DN50 - 650 - 5 Bar

**NOTE: KvS is max. KvS value

RF = Reduced Flow
HF = High Flow

3. Technical data

G3FMT-SLM (Standard leakage Class I) in nodular cast iron
(See also data sheet 2.6.18)

TABEL 1: (Read this together with dimension drawing on page 17)

Type	L (mm)	L1 (mm)	H (mm)	H1 (mm)	b (mm)	C1 (mm)	M (mm)	Electric Actuator Type CAR-H
100 G3FMT-SLM (*HF)	296	148	140	ØD/2	24	223	110	CAR-H 006
125 G3FMT-SLM	330	165	140	ØD/2	24	223	110	CAR-H 006
125 G3FMT-SLM (JIS5K)	320	160	140	ØD/2	19	223	110	CAR-H 006
150 G3FMT-SLM	356	178	149	ØD/2	25,4	223	110	CAR-H 006
200 G3FMT-SLM	410	205	182	ØD/2	28,4	223	110	CAR-H 010
200 G3FMT-SLM (**L)	484	242	182	ØD/2	28,4	223	110	CAR-H -010
250 G3FMT-SLM	480	240	202	ØD/2	31	223	110	CAR-H -010

L = Long version
HF = High Flow

ØD/2 - Depends on flange type (see also table 2)

TABEL 2: (Read this together with dimension drawing on page 17)

	EN 1092-2			ANSI Class 150			JIS B 2210 5K			JIS B 2210 10K		
Flange connections	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)
DN100	220	180	19x(8)	230	191	19x(8)	200	165	19x(8)	210	175	19x(8)
DN125	250	210	19x(8)	255	216	22x(8)	235	200	19x(8)	250	210	23x(8)
DN150	285	240	23x(8)	280	241	22x(8)	265	230	19x(8)	280	240	23x(8)
DN200	343	295	22x(8)	343	298	22x(8)	320	280	23x(8)	330	290	23x(12)
DN250	405	350	23x(12)	405	362	25x(12)	385	345	23x(12)	400	355	25x(12)

3. Technical data

G3FMT-SLM (Standard leakage Class I) in nodular cast iron
(See also data sheet 2.6.18)

TABEL 3:

Type	Flange connection DN in mm	Kv5 m3/h	Torque Nm For inlet P	Weight kg
DN100 (*HF)	100	179	40	27
DN125	125	179	40	36
DN150	150	310	45	44,5
DN200	200	550	90	71
DN250	250	830	115	102

Torque calculated at max Δ P for: DN100 - 250 - 5 Bar

HF = High Flow

3. Technical data

L3FMT-SLM (Standard leakage class I) in bronze
(See also data sheet 2.6.23)

TABEL 1: (Read this together with dimension drawing on page 17)

Type	L (mm)	L1 (mm)	H (mm)	H1 (mm)	b (mm)	C1 (mm)	M (mm)	Electric Actuator Type CAR-H
50 G3FMT-SL (HF)	254	127	114,5	ØD/2	19	223	110	CAR-H 006
65 G3FMT-SL	254	127	114,5	ØD/2	19	223	110	CAR-H 006
65 G3FMT-SL (HF)	254	127	125,5	ØD/2	19	223	110	CAR-H 006
80 G3FMT-SL	254	127	125,5	ØD/2	19	223	110	CAR-H 006
80 G3FMT-SL (HF)	254	127	130,5	ØD/2	19	223	110	CAR-H 006
100 G3FMT-SL	296	148	130,5	ØD/2	24	223	110	CAR-H 006
100 G3FMT-SL (HF)	296	148	134,5	ØD/2	24	223	110	CAR-H 006
125 G3FMT-SL	330	165	139,5	ØD/2	24	223	110	CAR-H 006
125 G3FMT-SL JIS5K	320	160	139,5	ØD/2	19	223	110	CAR-H 006
150 G3FMT-SL	356	178	148,5	ØD/2	25,4	223	110	CAR-H 006
200 G3FMT-SL	410	205	181,5	ØD/2	28,4	223	110	CAR-H 010
250 G3FMT-SL	480	240	202	ØD/2	31	223	110	CAR-H 010
300 G3FMT-SL (RF)	580	290	202	ØD/2	32	223	110	CAR-H 010
300 G3FMT-SL	560	280	237	ØD/2	32	261	150	CAR-H 020
350 G3FMT-SL	660	330	256	ØD/2	36	261	--	CAR-H 024
400 G3FMT-SL	720	360	277,5	ØD/2	38	315	180	CAR-H 035
400 G3FMT-SL (HF)	720	360	314	ØD/2	25	315	180	CAR-H 035

RF = Reduced Flow
HF = High Flow

ØD/2 - Depends on flange type (see also table 2)

3. Technical data

L3FMT-SLM (Standard leakage class I) in bronze
(See also data sheet 2.6.23)

TABEL 2: (Read this together with dimension drawing on page 17)

	EN 1092-2			ANSI Class 150			JIS B 2210 5K			JIS B 2210 10K		
Flange connections	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)	D (dia.) (mm)	k (dia.) (mm)	d mm dia. (number)
DN50	165	125	19x(4)	152	121	19x(4)	130	105	15x(4)	155	120	19x(4)
DN65	185	145	19x(4)	178	140	19x(4)	155	130	15x(4)	175	140	19x(4)
DN80	200	160	19x(8)	190	152	19x(4)	180	145	19x(4)	185	150	19x(8)
DN100	220	180	19x(8)	230	191	19x(8)	200	165	19x(8)	210	175	19x(8)
DN125	250	210	19x(8)	255	216	22x(8)	235	200	19x(8)	250	210	23x(8)
DN150	285	240	23x(8)	280	241	22x(8)	265	230	19x(8)	280	240	23x(8)
DN200	343	295	22x(8)	343	298	22x(8)	320	280	23x(8)	330	290	23x(12)
DN250	405	350	23x(12)	405	362	25x(12)	385	345	23x(12)	400	355	25x(12)
DN300	455	400	23x(12)	483	432	25x(12)	430	390	23x(12)	445	400	25x(16)
DN350	505	460	23x(16)	533	476	29x(12)	480	435	25x(12)	490	445	25x(16)
DN400	565	515	28x(16)	597	540	29x(16)	540	495	25x(16)	560	510	27x(16)

3. Technical data

L3FMT-SLM (Standard leakage class I) in bronze
(See also data sheet 2.6.23)

TABEL 3:

Type	Flange connection	Kv5 m3/h	Torque Nm	Weight kg
DN50 (HF)	50	67	30	19
DN65	65	67	30	22
DN65 (HF)	65	120	35	23
DN80	80	100	35	24
DN80 (HF)	80	180	38	26
DN100	100	180	38	32
DN100 (HF)	100	270	40	34
DN125	125	260	40	41
DN150	150	430	45	50
DN200	200	770	90	80
DN250	250	1.230	115	114
DN300	300	2.030	160	153
DN300 (RF)	300	1.190	115	165
DN350	350	2.850	210	210
DN400	400	3.760	265	258
DN400 (HF)	400	5.200	330	248

*Torque calculated at max Δ P for: DN50 - 400 - 5 Bar

**NOTE: Kv5 is max. Kv5 value

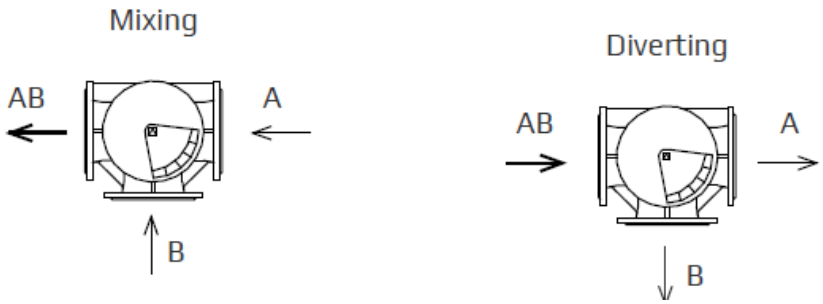
RF = Reduced Flow
HF = High Flow

4. Installation and commission

Installation and port numbering for G3FMT-ULL and SL (Left and right)

PORT NUMBERING: AB RIGHT

PORT NUMBERING: AB LEFT



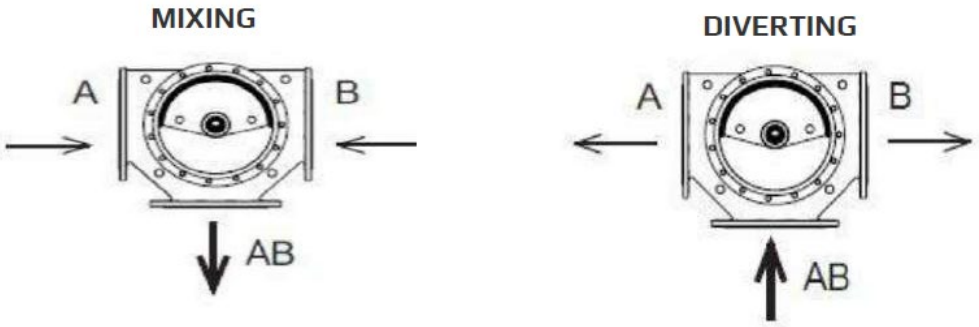
MOUNTING

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.

4. Installation and commissioning

Installation and port numbering for G3FMT-ULLM and SLM (Middle)

PORT NUMBERING: AB MIDDLE



MOUNTING

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.

4. 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 the 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.

5. Operation

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

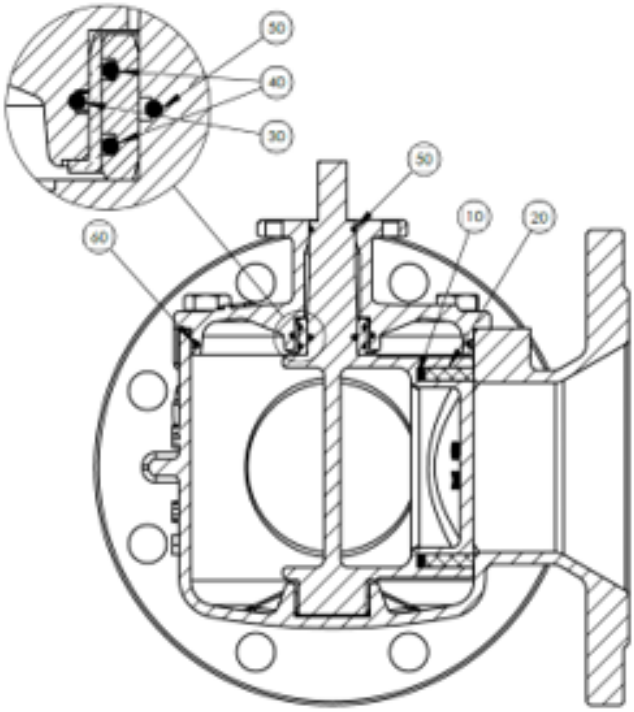
6. Maintenance schedule

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

7. Spare Parts

3 WAY CONTROL VALVE L & G3FMT-ULL – PACKING SET

Nodular cast iron, Bronze - PN10, DN100 - 300 mm (R/L/M CLASS – IV)



CLASS IV – AB-R/L

POS.	DESCRIPTION	PCS
10	O-RING FOR SLIDE	1
20	PTFE SEALING SEAT	1
30	O-RING Ø46X2.5	1
40	O-RING Ø36x2.5	2
50	O-RING Ø23x2.5	2
60	O-RING FOR COVER	1

CLASS IV – AB-M

POS.	DESCRIPTION	PCS
10	O-RING FOR SLIDE	2
20	PTFE SEALING SEAT	2
30	O-RING Ø46X2.5	1
40	O-RING Ø36x2.5	2
50	O-RING Ø23x2.5	2
60	O-RING FOR COVER	1

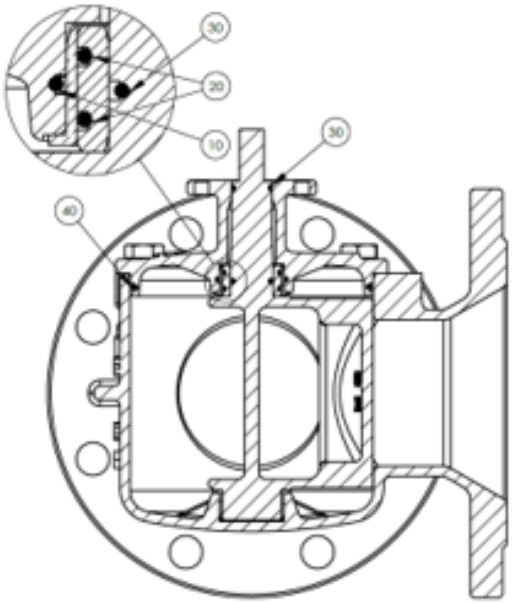
PACKING SET FOR G3FMT – ULL AB-R/L CLASS IV		
POS.	DESCRIPTION	ORDER NO.
10 - 60	DN100 – G3FMT-ULL	1-2991583
10 - 60	DN125 – G3FMT-ULL	1-2991583
10-60	DN150 – G3FMT-ULL	1-2991581
10 - 60	DN200 – G3FMT-ULL	1-2991577
10 - 60	DN250 – G3FMT-ULL	1-2991579
10 - 60	DN300 – G3FMT-ULL	N/A

PACKING SET FOR G3FMT – ULL AB-M CLASS IV		
POS.	DESCRIPTION	ORDER NO.
10 - 60	DN100 – G3FMT-ULL	1-2991585
10 - 60	DN125 – G3FMT-ULL	1-2991585
10 - 60	DN150 – G3FMT-ULL	1-2991586
10 - 60	DN200 – G3FMT-ULL	1-2991587
10 - 60	DN250 – G3FMT-ULL	1-2991588
10 - 60	DN300 – G3FMT-ULL	N/A

7. Spare Parts

SPARE PART FOR 3 WAY CONTROL VALVE L & G3FMT-SL (STANDARD FLOW) - PACKING SET

Nodular cast iron/Bronze, PN10, DN100 - 250 mm (R/L/M CLASS – I)



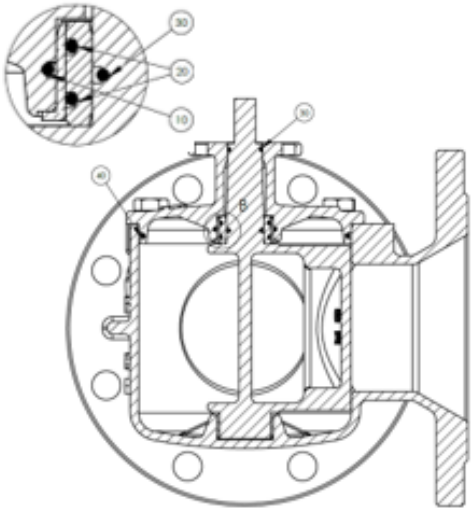
POS.	DESCRIPTION	PCS
10	O-RING Ø46x2.5	1
20	O-RING Ø36x2.5	2
30	O-RING Ø23x2.5	2
40	O-RING FOR COVER	1

PACKING SET FOR G3FMT – SL (R/L/M) CLASS I		
POS.	DESCRIPTION	ORDER NO.
10 - 40	DN100 – G3FMT-SL	1-2991584
10 - 40	DN125 – G3FMT-SL	1-2991584
10 - 40	DN150 – G3FMT-SL	1-2991582
10 - 40	DN200 – G3FMT-SL	1-2991578
10 - 40	DN250 – G3FMT-SL	1-2991580

7. Spare Parts

3 WAY CONTROL VALVE L & G3FMT-SL
(STANDARD FLOW) – PACKING SET

Nodular cast iron/Bonze, PN10, DN300 - 400 mm (R/L CLASS – I)



POS.	DESCRIPTION	PCS
10	O-RING Ø60x3	1
20	O-RING Ø48x3	2
30	O-RING Ø38x3	2
40	O-RING FOR COVER	1

PACKING SET FOR G3FMT – SL (R/L) CLASS I		
POS.	DESCRIPTION	ORDER NO.
10 - 40	DN300 – G3FMT-SL	1-2991589
10 - 40	DN350 – G3FMT-SL	1-2991590
10 - 40	DN400 – G3FMT-SL	1-2991591

8. Transport and storage

The valve must be transported and stored dry and clean. In humid rooms, a drying material or heating is always to be used, this 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 transport, such as sea freight, equipment is protected by VCI (Volatile Corrosion Inhibitor) material.

If protected by VCI do not remove the packaging until the equipment is ready for installation.

9. Related Documentation

Data sheets	Description
0-2.6.15	3-way control valve type G3FMT-ULL Ultra Low Leakage (Left & Right)
0-2.6.16	3-way control valve type G3FMT-SL Standard Leakage (Left & Right)
0.2.6.17	3-way control valve type G3FMT-ULLM Ultra Low Leakage (Middle)
0-2.6.18	3-way control valve type G3FMT-SLM Standard Leakage Middle)
0.2.6.21	3-way control valve type L3FMT-ULL Ultra Low Leakage (Left & Right)
0.2.6.23	3-way control valve type L3FMT-SL Standard Leakage (Left & Right)
S-2.6.15	Packing set: 3-way control valve type L & G3FMT-ULL (Left, Right & Middle)
S-2.6.16-1	Packing set: 3-way control valve type L & G3FMT-SL (Left & Right)
S-2.6.16-2	Packing set: 3-way control valve type G3FMT-SL (Left, Right & Middle)
0-4.11.09	Electric valve actuator type CAR-H
0-6.5.16	Pneumatic actuator type VT double acting

Or write to Clorius Controls**: mail@cloriuscontrols.com**

See also **www.cloriuscontrols.com** for further information

End of instruction