

FireLock™ Alarm Check Valve

Series 751



Series 751



Series 751 European Trim

1.0 PRODUCT DESCRIPTION

Available Sizes

- 1 ½ – 8"/40 – 200 mm

Pressure Class

- 1 ½ – 6"/40 – 152.4 mm 300 psi/2068 kPa/20 Bar
- 8"/200 mm 232 psi/1600 kPa/16 bar. See section 5.0

Valve Configurations

- Bare
- Pre-trimmed
- Vic-Quick Riser: Pre-trimmed and includes:
 - Shut Off Valve (1 ½"/40 mm: Series 728 Ball Valve, 2" – 8"/50 – 200 mm: Series 705 *FireLock* Butterfly Valve)
 - Drain Connection kit
- Fire-Pac Series 745 (refer to Victaulic [publication 30.23](#))

Pipe Preparation

- Victaulic Original Groove System

Application/Media

- For use on fire protection systems only.

2.0 CERTIFICATION/LISTINGS



ALWAYS REFER TO ANY NOTIFICATIONS AT THE END OF THIS DOCUMENT REGARDING PRODUCT INSTALLATION, MAINTENANCE OR SUPPORT.

3.0 SPECIFICATIONS – MATERIAL

Bill of Materials: Standard Trim, cULus, FM, CCC version

Body: Ductile iron, ASTM A-536 Grade 65-45-12

Clapper: Aluminum bronze UNS-C95500

Shaft: Stainless steel 17-4PH

Clapper Seal: EPDM

Seat O-Rings: Nitrile

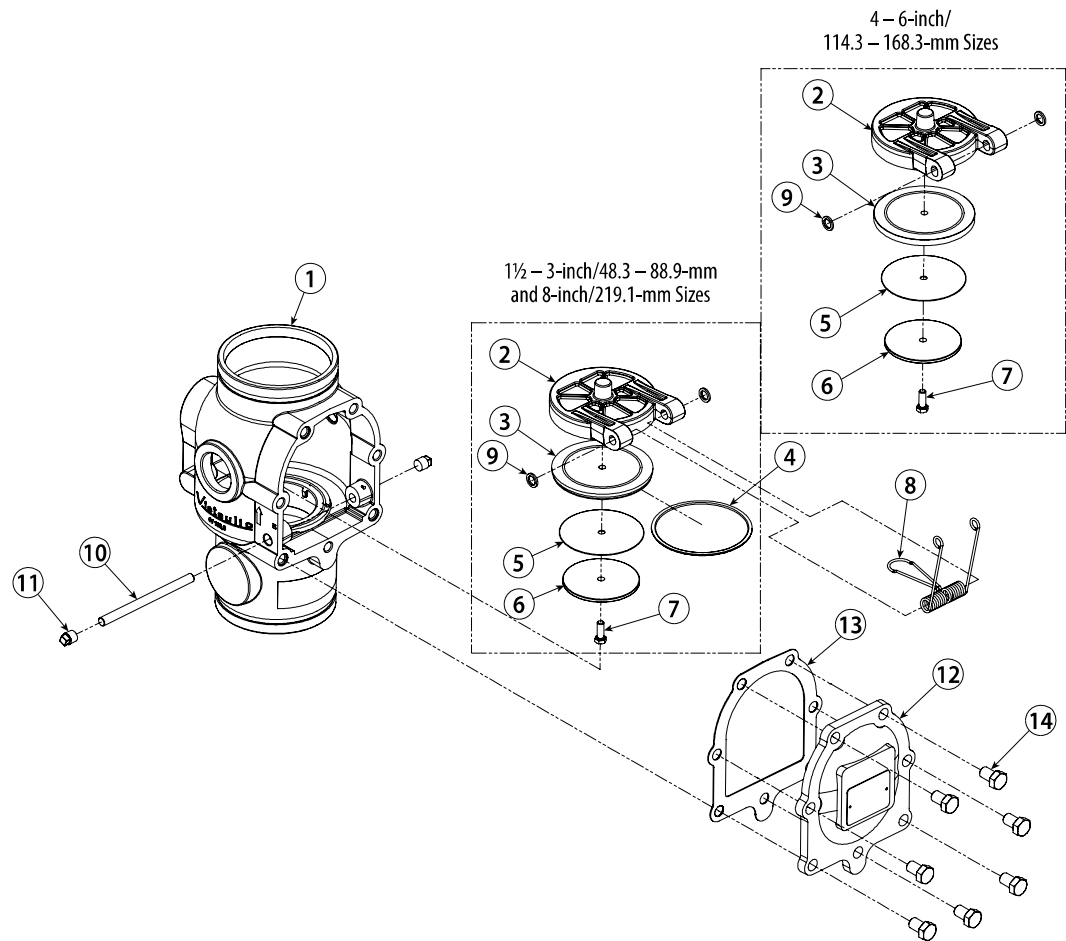
Clapper Spring: Stainless steel (302 Series)

Washers: PTFE

Cover Plate Bolts: Carbon steel, zinc plated

Cover Plate Gasket: Nitrile

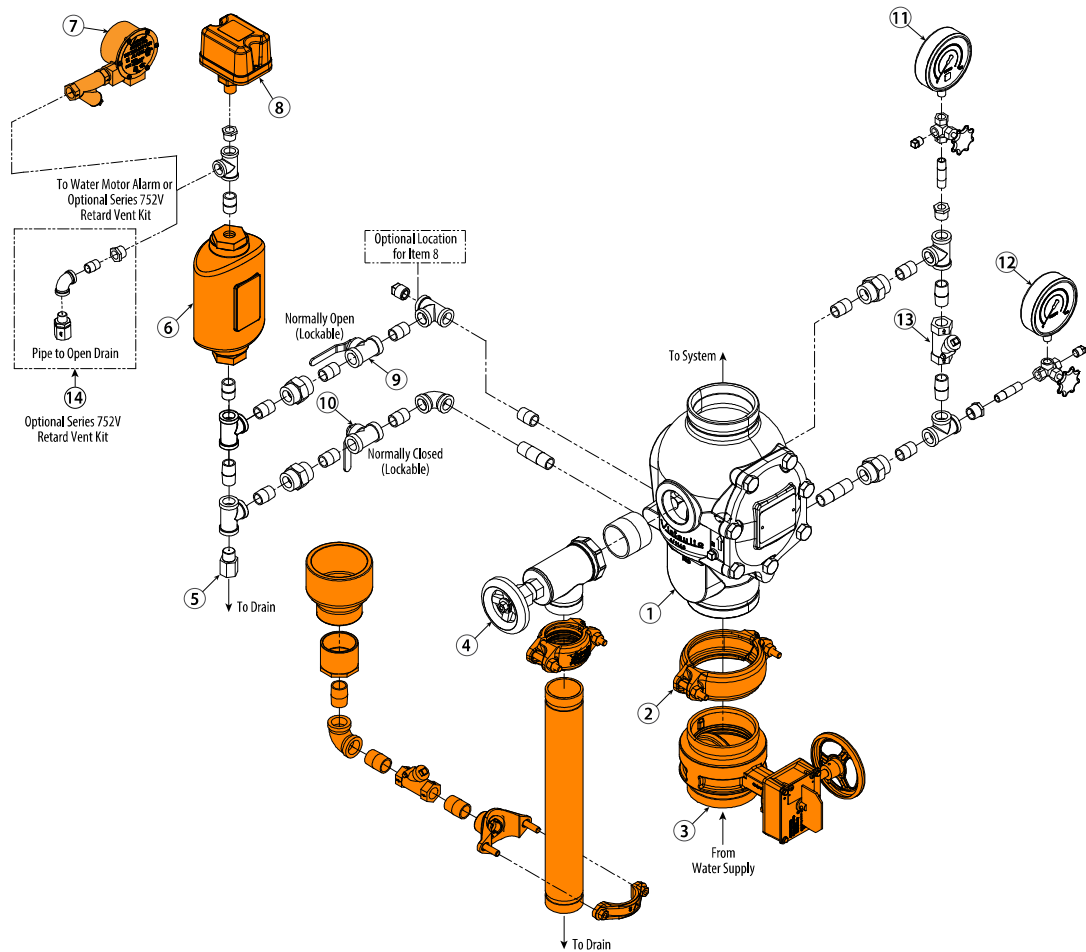
Seal Plate: Aluminum Bronze (UNS-C95400)



Item	Description	Item	Description
1	Valve Body	8	Clapper Spring
2	Clapper	9	Washer
3	Clapper Seal	10	Shaft
4	Seal Ring	11	Clapper Shaft Retaining Plug
5	Seal Washer	12	Cover Plate
6	Seal Plate	13	Cover Plate Gasket
7	Screw, Self Sealing	14	Cover Plate Bolts

3.1 SPECIFICATIONS – MATERIAL

Standard Trim: cULus, FM, CCC version
Series 751 *FireLock* Alarm Check Valve



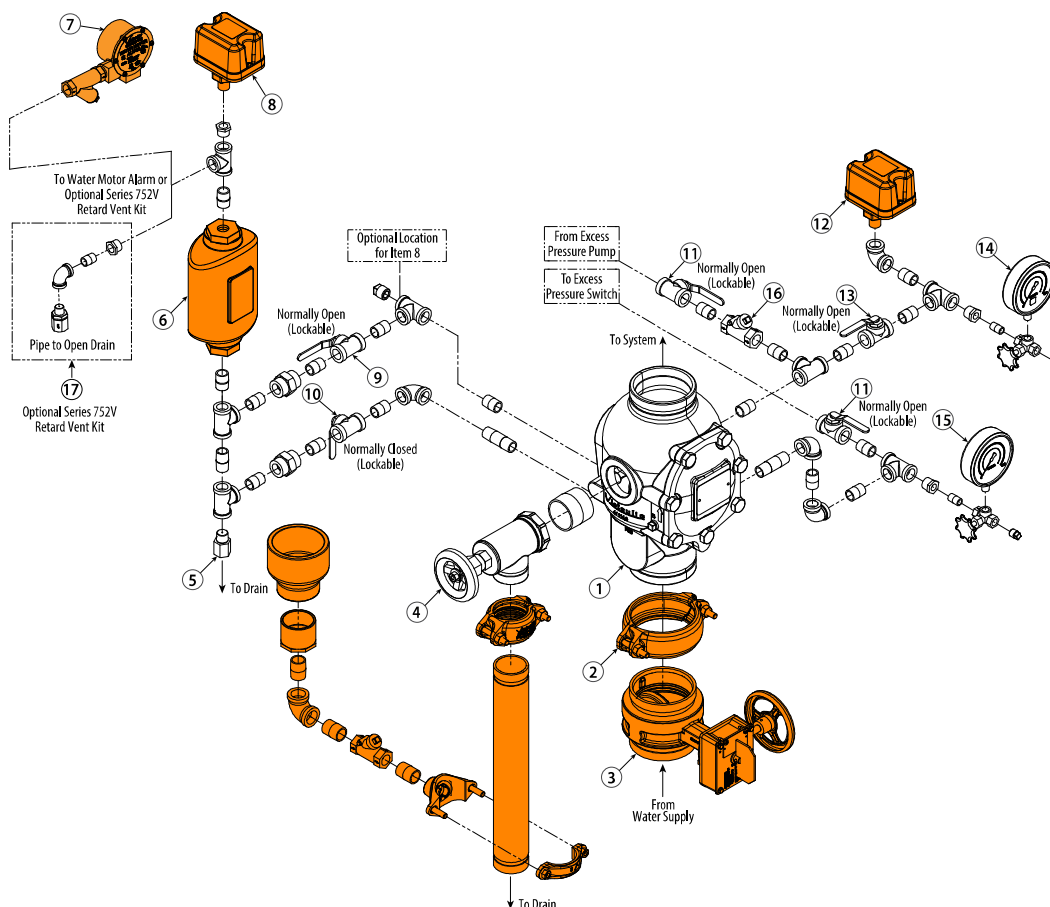
Item	Description	Item	Description
1	Series 751 <i>FireLock</i> Alarm Check Valve	8	Alarm Pressure Switch (Optional/Sold Separately)
2	<i>FireLock</i> Rigid Coupling (Optional/Sold Separately)	9	Alarm Line Ball Valve (Normally Open)
3	Water Supply Main Control Valve (Optional/Sold Separately)	10	Alarm Test Line Ball Valve (Normally Closed)
4	System Main Drain Valve	11	System Pressure Gauge/Gauge Valve Assembly (0-300 psi/0-2068 kPa)
5	Alarm Line Drain Restrictor (1/16-inch)	12	Water Supply Pressure Gauge/Gauge Valve Assembly (0-300 psi/0-2068 kPa)
6	Series 752 Retard Chamber Assembly (Optional/Sold Separately)	13	Swing Check Valve
7	Series 760 Water Motor Alarm Assembly (Optional/Sold Separately)	14	Series 752V Retard Vent Kit ¹ (Optional/Sold Separately)

¹ The Series 752V Retard Vent Kit is required any time an air break is needed above the Series 752 VdS Retarding Chamber Assembly. In addition, the Series 752V Retard Vent Kit is required if multiple valves are tied into one water motor alarm and a check valve isolates each line.

3.2 SPECIFICATIONS – MATERIAL

Standard Trim: cULus, FM, CCC version

Series 751 *FireLock* Alarm Check Valve Trim for Use with Excess Pressure Pump



Item	Description	Item	Description
1	Series 751 <i>FireLock</i> Alarm Check Valve	10	Alarm Test Line Ball Valve (Normally Closed)
2	<i>FireLock</i> Rigid Coupling (Optional/Sold Separately – Comes Standard when VQR Assembly is Ordered)	11	Excess Pressure Pump Isolation Ball Valve (Normally Open)
3	Water Supply Main Control Valve (Optional/Sold Separately – Comes Standard when VQR Assembly is Ordered)	12	Excess Pressure Pump Pressure Switch (Sold Separately/Not Provided by Victaulic)
4	System Main Drain Valve	13	Excess Pressure Pump Pressure Switch Isolation Ball Valve (Normally Open)
5	Alarm Line Drain Restrictor (1/16-inch)	14	System Pressure Gauge (0-300 psi/0-2068 kPa)
6	Series 752 Retard Chamber Assembly (Optional/Sold Separately)	15	Water Supply Pressure Gauge (0-300 psi/0-2068 kPa)
7	Series 760 Water Motor Alarm Assembly (Optional/Sold Separately)	16	Swing Check Valve
8	Alarm Pressure Switch (Optional/Sold Separately)	17	Series 752V Retard Vent Kit ¹ (Optional/Sold Separately)
9	Alarm Line Ball Valve (Normally Open)		

¹ The Series 752V Retard Vent Kit is required any time an air break is needed above the Series 752 VdS Retarding Chamber Assembly. In addition, the Series 752V Retard Vent Kit is required if multiple valves are tied into one water motor alarm and a check valve isolates each line.

3.2 SPECIFICATIONS – MATERIAL (CONTINUED)

- ☐ Standard Trim Package

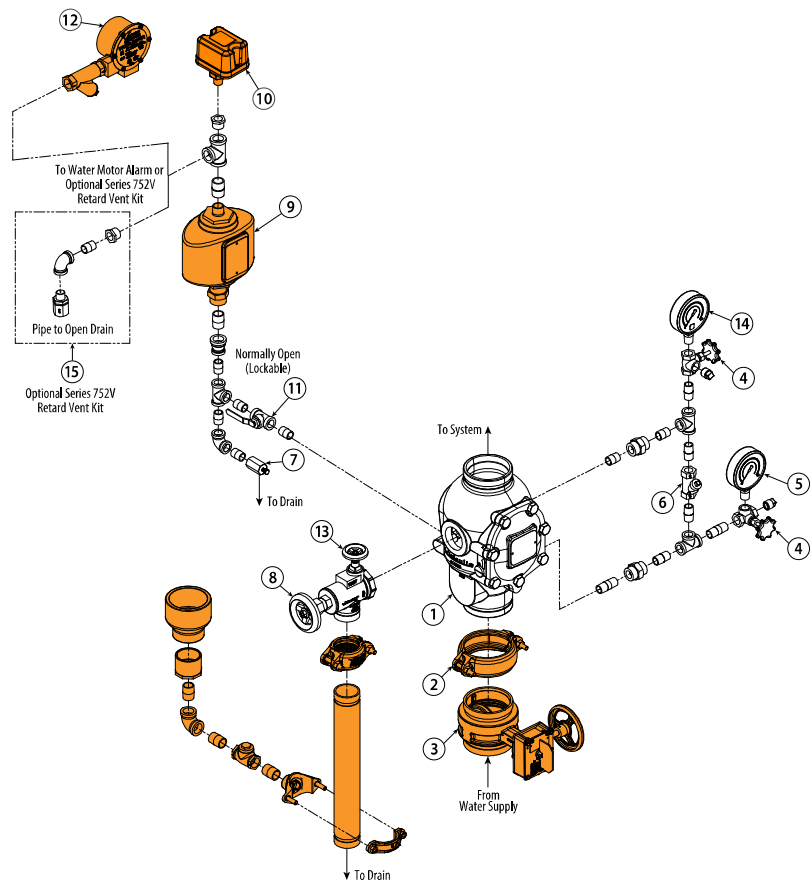
Optional Accessories (specify choice):

- ☐ Series 752 Retard Chamber – Required when the Series 751 FireLock Alarm Check Valve is installed in a variable pressure installation in order to reduce the possibility of false alarms. (Refer to [30.01](#)).
- ☐ Series 752V Retard Vent Kit – Required when an electric pressure switch is installed on the retard chamber without a water motor alarm.
- ☐ Series 760 Water Motor Alarm – The Series 751 FireLock Alarm Check Valve is designed to activate a mechanical alarm when a sustained flow of water (such as an open sprinkler) causes the alarm check's clapper to lift from its seat. (Refer to [30.32](#)).
- ☐ Alarm pressure switch – The Series 751 FireLock Alarm Check Valve is designed to allow the installation of pressure switches to activate electric alarms and control panels when a sustained flow of water (such as an open sprinkler) causes the alarm check's clapper to lift from its seat.
- ☐ Waterflow Detectors – Waterflow detectors are available for installation on the riser.
- ☐ Trim kit available for configuration with excess pressure pump.

3.4 SPECIFICATIONS – MATERIAL

European Trim: VdS, CE, LPCB, FM, EAC version

Series 751 *FireLock* Alarm Check Valve with Vertical Trim



Item	Description	Item	Description
1	Series 751 <i>FireLock</i> European Alarm Check Valve	9	Series 752 VdS Retarding Chamber Assembly (Optional/Sold Separately) Alarm Pressure Switch
2	<i>FireLock</i> Rigid Coupling	10	Alarm pressure switch (Optional/Sold Separately)
3	Water Supply Main Control Valve	11	Alarm Line Ball Valve (Lockable – Normally Open) Series 760 European Water Motor Alarm Assembly (Optional/Sold Separately)
4	Gauge Valve	12	Series 760 Water Motor Alarm (Optional/Sold Separately)
5	Water Supply Pressure Gauge (0-25 Bar)	13	System Test Valve
6	Swing Check Valve	14	System Pressure Gauge (0-25 Bar)
7	Restricted Orifice/Alarm Line Drain	15	Series 752V Retard Vent Kit¹ (Optional/Sold Separately)
8	System Main Drain Valve		

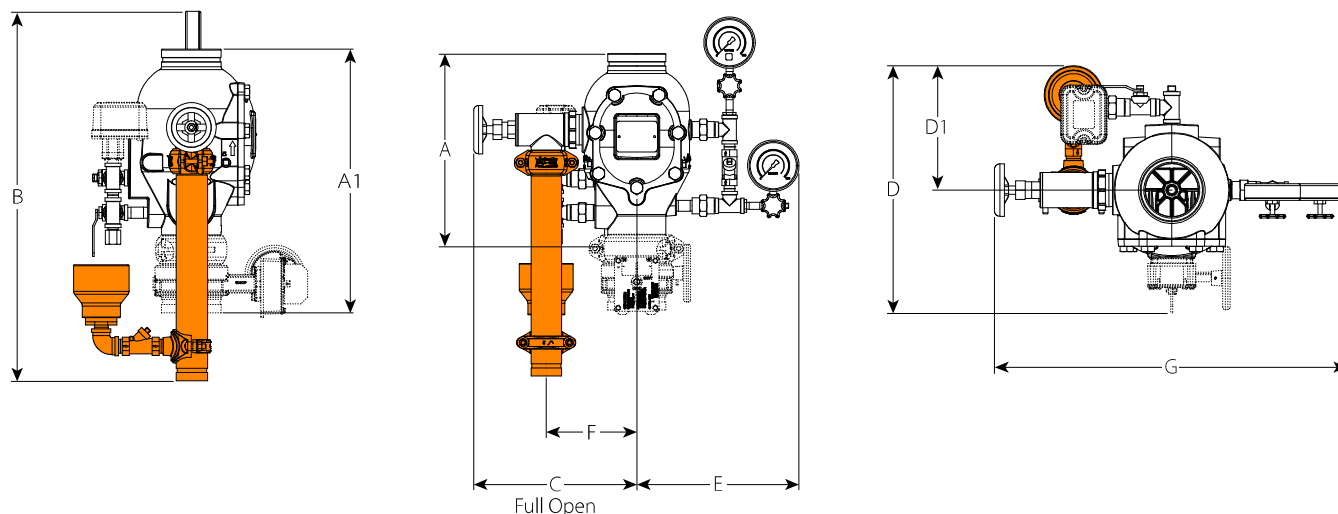
¹ The Series 752V Retard Vent Kit is required any time an air break is needed above the Series 752 VdS Retarding Chamber Assembly. In addition, the Series 752V Retard Vent Kit is required if multiple valves are tied into one water motor alarm and a check valve isolates each line.

4.0 DIMENSIONS

Standard Trim Dimensions: cULus, FM, CCC Version

Standard trim and trim for use with excess pressure pump (with drain connection kit and water supply main control valve options).

A 4-inch/114.3 mm Series 751 *FireLock* Alarm Check Valve with optional drain connection kit and water supply main control valve is shown below.



NOTES

- The "A" dimension is the actual takeout dimension of the valve body.
- The "A1" dimension is the actual takeout dimension of the valve body with optional water supply main control valve.
- For systems with the optional Series 752 Retard Chamber Assembly, add 12 inches/305 mm to the "B" dimension to account for the additional height. The "D" and "D1" dimensions are not fixed measurements. The drip cup of the drain connection kit option can be rotated to provide more clearance at the back of the trim.
- Components shown as dotted lines denote optional equipment.
- The recommended drain connection kit option (shaded in orange) is shown for reference and takeout dimensions.

Size		Dimensions									Approx Weight Each	
Nominal	Actual Outside Diameter	A	A1	B	C	D	D1	E	F	G	Without Trim	With Trim
inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	inches	lbs.	lbs.
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	kg
1 ½	1.900	9.00	16.25	24.50	9.25	14.00	7.50	11.25	5.75	20.50	16.7	43.0
DN40	48.3	229	413	622	235	356	191	286	146	521	7.6	19.5
2	2.875	9.00	13.75	24.50	9.25	14.00	7.50	11.25	5.75	20.50	17.0	43.0
DN50	60.3	229	349	622	235	356	191	286	146	521	7.7	19.5
2 ½	2.875	12.50	16.50	26.25	11.25	16.50	9.00	11.75	6.50	23.00	41.0	65.0
	73.0	318	419	667	286	419	229	298	165	584	18.7	29.5
DN65	3.000	12.50	16.50	26.25	11.25	16.50	9.00	11.75	6.50	23.00	41.0	65.0
	76.1	318	419	667	286	419	229	298	165	584	18.7	29.5
3	3.500	12.50	16.50	26.25	11.25	16.50	9.00	11.75	6.50	23.00	41.0	65.0
DN80	88.9	318	419	667	286	419	229	298	165	584	18.7	29.5
4	4.500	15.00	19.75	25.50	13.00	18.00	9.25	13.00	7.50	26.00	59.0	95.0
DN100	114.3	381	502	648	330	457	235	330	191	660	26.7	43.0
	6.625	16.00	22.13	25.25	13.50	20.75	9.25	13.75	7.75	27.25	80.0	116.0
165.1mm	168.3	406	562	641	343	527	235	349	197	692	36.2	52.6
6	6.500	16.00	22.13	25.25	13.50	20.75	9.25	13.75	7.75	27.25	80.0	116.0
DN150	165.1	406	562	641	343	527	235	349	197	692	36.2	52.6
8	8.625	17.50	23.00	26.75	14.75	24.00	10.50	14.50	9.25	29.25	122.0	158.0
DN200	219.1	445	584	679	375	610	267	368	235	743	55.3	71.6

5.0 PERFORMANCE (CONTINUED)

Maximum Working Pressure

Standard Trim:

Size		cULus	FM	CCC
Nominal inches DN	Actual Outside Diameter inches DN	psi kPa bar	psi kPa bar	psi kPa bar
1 ½ DN40	1.900 48.3	300 2068 21	300 2068 21	-
2 DN50	2.375 60.3	300 2068 21	300 2068 21	-
2 ½	2.875 73.0	300 2068 21	300 2068 21	-
DN65	3.000 76.1	300 2068 21	300 2068 21	-
3 DN80	3.500 88.9	300 2068 21	300 2068 21	232 1600 16
4 DN100	4.500 114.3	300 2068 21	300 2068 21	232 1600 16
6 DN150	6.625 168.3	300 2068 21	300 2068 21	232 1600 16
	6.500 165.1	300 2068 21	300 2068 21	232 1600 16
8 DN200	8.625 219.1	232 1600 16	232 1600 16	232 1600 16

European Trim:

Size		FM	EAC	VdS	LPCB	CE
Nominal inches DN	Actual Outside Diameter inches DN	psi kPa bar	psi kPa bar	psi kPa bar	psi kPa bar	psi kPa bar
3 DN80	3.500 88.9	232 1600 16	232 1600 16	232 1600 16	232 1600 16	232 1600 16
4 DN100	4.500 114.3	232 1600 16	232 1600 16	232 1600 16	232 1600 16	232 1600 16
6 DN150	6.625 168.3	232 1600 16	232 1600 16	232 1600 16	232 1600 16	232 1600 16
	6.500 165.1	232 1600 16	232 1600 16	232 1600 16	232 1600 16	232 1600 16
8 DN200	8.625 219.1	232 1600 16	232 1600 16	232 1600 16	232 1600 16	232 1600 16