Reliable®

Model FCA2 Floor Control Assembly

cULus Listed (All Sizes)
FM Approved (2” - 8” Sizes)

Features

- Compact, light weight design
- Schedule 10 welded body (2” through 8”)
- Schedule 40 welded body (1-1/4” and 1-1/2”)
- Approved for vertical or horizontal installation
- Grooved components enable universal application

Product Description

The Model FCA2 Floor Control Assembly arrives from the factory as an assembled unit complete with butterfly valve, check valve, water flow switch, pressure gauge, and main drain as a cost-effective system riser or floor control assembly. The modular design allows all components to be independently rotated for maximum flexibility in design and installation, and the unique 90 degree orientation of the main drain and pressure gauge permits the Model FCA2 to be installed compactly in corners.

The Model FCA2 is cULus Listed in all sizes and FM Approved in 2 in. to 8 in. (50 mm to 200 mm) sizes. The main drain is available with a ball valve or Reliable TD (Test and Drain) valve available with a wide selection of test orifice K-factor choices. An optional pressure relief kit with adjustable pressure relief valve (175 - 310 psi [12.1 - 21.4 bar]) is also available.

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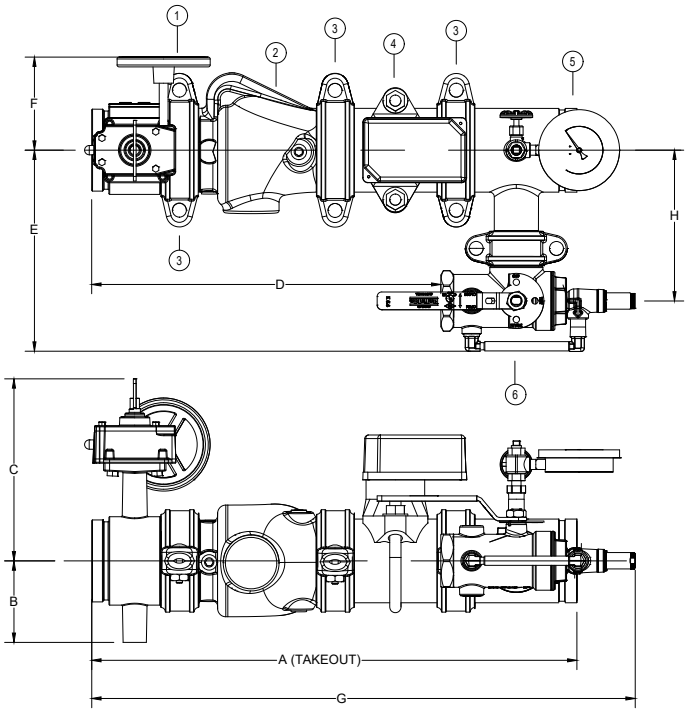
Representative Photograph (subject to change)

Model FCA2 Floor Control Assembly — **Table A**

Valve Size	Pressure Rating	Equivalent Length of Schedule 40 Pipe at C = 120 (w/ Control Valve) ft (m)	Equivalent Length of Schedule 40 Pipe at C = 120 (w/o Control Valve) ft (m)	Material	Drain Size	K-Factor for Optional Test and Drain Valve
1-1/4” (30 mm)	300 psi (20.7 bar)	12.8 (3.9)	8.3 (2.5)	Schedule 40 Steel	1” (25 mm)	2.8 (40) 4.2 (60) 5.6 (80)
1-1/2” (40 mm)	300 psi (20.7 bar)	13.3 (4)	10.3 (3.1)	Schedule 40 Steel	1” (25 mm)	
2” (50 mm)	300 psi (20.7 bar)	18.7 (5.7)	13.7 (4.2)	Schedule 10 Steel	1” (25 mm)	
2-1/2” (65 mm)	250 psi (17.2 bar)	15.7 (4.8)	10.7 (3.3)	Schedule 10 Steel	1-1/4” (30 mm)	2.8 (40) 4.2 (60) 5.6 (80) 8.0 (115) 11.2 (160)
3” (80 mm)	250 psi (17.2 bar)	15.7 (4.8)	9.7 (3)	Schedule 10 Steel	1-1/4” (30 mm)	
4” (100 mm)	250 psi (17.2 bar)	18.8 (5.7)	12.8 (3.9)	Schedule 10 Steel	2” (50 mm)	2.8 (40) 4.2 (60) 5.6 (80) 8.0 (115), 11.2 (160) 16.8 (240)
6” (150 mm)	175 psi (12.0 bar)	27.2 (8.3)	18.2 (5.5)	Schedule 10 Steel	2” (50 mm)	
8” (200 mm)	175 psi (12.0 bar)	26.8 (8.2)	19.8 (6)	Schedule 10 Steel	2” (50 mm)	

Model FCA2 Dimensions and Weight: Reliable Test and Drain

Figure 1



Legend	
Item	**Description**
1	Control Valve
2	Check Valve
3	Grooved Coupling
4	Water Flow Indicator
5	Pressure Gauge
6	Test and Drain Valve

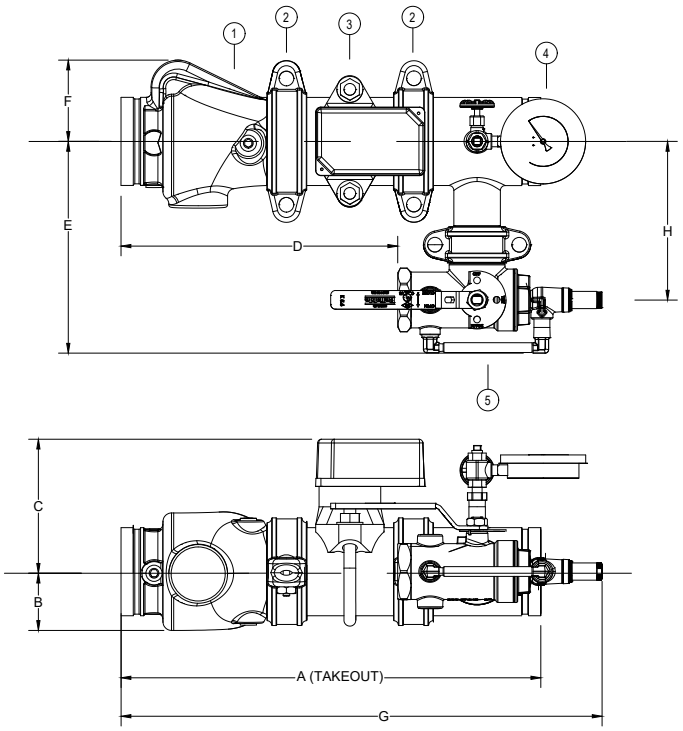
Size	A	B	C	D	E	F	G	H	Weight (approx. w/ control valve)
1-1/4” (30 mm)	23-1/4” (587 mm)	1-3/4” (44 mm)	6-1/2” (165 mm)	16-1/2” (419 mm)	6-7/8” (175 mm)	2-1/4” (57 mm)	25-3/8” (645 mm)	4-3/4” (121 mm)	19 lbs (8.6 kg)
1-1/2” (50 mm)	23-1/4” (590 mm)	1-3/4” (44 mm)	6-1/2” (165 mm)	16-3/4” (425mm)	7” (178 mm)	2-3/8” (60 mm)	25-5/8” (651 mm)	4-3/4” (121 mm)	23 lbs (10.4 kg)
2” (50 mm)	23-5/8” (616 mm)	2” (51 mm)	7-1/2” (191 mm)	17” (432 mm)	7” (178 mm)	5” (127 mm)	25-3/4” (645 mm)	5-3/4” (146 mm)	30 lbs (13.6 kg)
2-1/2” (65 mm)	24” (610 mm)	2-5/8” (67 mm)	8-1/4” (210 mm)	17-3/8” (441 mm)	9” (229 mm)	5” (127 mm)	26-3/8” (670 mm)	6-3/4” (171 mm)	42 lbs (19.1 kg)
3” (76 mm)	24-1/2” (620 mm)	2-7/8” (73 mm)	8-5/8” (219 mm)	17-3/4” (451 mm)	9-1/4” (248 mm)	5” (127 mm)	26-7/8” (683 mm)	7-1/8” (181 mm)	49 lbs (22.3 kg)
4” (100 mm)	26” (660 mm)	3-3/4” (95 mm)	9-3/4” (248 mm)	18-3/4” (476 mm)	10-3/4” (273 mm)	5” (127 mm)	29-1/4” (743 mm)	8-1/8” (206 mm)	65 lbs (29.5 kg)
6” (150 mm)	29” (735 mm)	4-3/4” (121 mm)	11” (279 mm)	21-3/4” (552 mm)	11-7/8” (302 mm)	6-5/8” (168 mm)	32-1/4” (819 mm)	9-1/4” (235 mm)	112 lbs (51 kg)
8” (200 mm)	30-3/4” (880 mm)	5-3/4” (146 mm)	12-5/8” (321 mm)	23-3/8” (594 mm)	12-3/4” (324 mm)	6-5/8” (168 mm)	33-7/8” (860 mm)	10-1/4” (260 mm)	165 lbs (75 kg)

Notes:

1. Dimensions will vary based on make-up tolerances.
2. Shown with grooved inlet test and drain valve for 2-1/2” through 8” models. On 1-1/4”, 1-1/2”, and 2” models, test and drain valve has threaded inlet. All test and drain valves have an NPT outlet of the drain size described in Table A.
3. Flow switch must be on the top portion of the piping. The flow switch may not be rotated more than 90 degrees from vertical.

Model FCA2 Dimensions and Weight: Reliable Test and Drain w/o Control Valve

Figure 2



Legend	
Item	**Description**
1	Check Valve
2	Grooved Coupling
3	Water Flow Indicator
4	Pressure Gauge
5	Test and Drain Valve

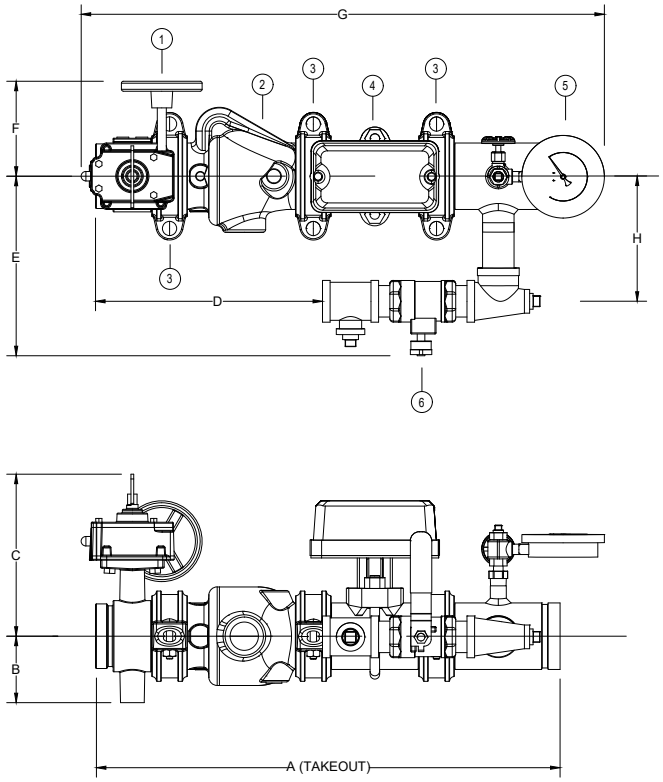
Size	A	B	C	D	E	F	G	H	Weight (approx. w/ out control valve)
1-1/4" (30 mm)	20-5/8" (524 mm)	2-1/4" (57 mm)	6" (152 mm)	13-7/8" (352 mm)	6-7/8" (175 mm)	2-1/4" (57 mm)	22-3/4" (578 mm)	4-3/4" (121 mm)	15 lbs (6.8 kg)
1-1/2" (50 mm)	20-3/8" (518 mm)	2-3/8" (60 mm)	6" (152 mm)	13-7/8" (352 mm)	7" (178 mm)	2-3/8" (60 mm)	22-3/4" (578 mm)	4-3/4" (121 mm)	19 lbs (8.6 kg)
2" (50 mm)	19-3/4" (502 mm)	2-3/4" (70 mm)	6-1/2" (165 mm)	13-1/8" (333 mm)	7" (178 mm)	2-3/4" (70 mm)	21-7/8" (556 mm)	5-3/4" (146 mm)	20.1 lbs (9.1 kg)
2-1/2" (65 mm)	20-1/8" (511 mm)	3-3/8" (86 mm)	6-1/2" (165 mm)	13-1/2" (343 mm)	9" (229 mm)	3-3/8" (86 mm)	22-1/2" (572 mm)	6-3/4" (171 mm)	31.9 lbs (14.5 kg)
3" (76 mm)	20-5/8" (524 mm)	3-3/8" (86 mm)	7" (178 mm)	13-7/8" (352 mm)	9-1/4" (235 mm)	3-3/8" (86 mm)	23" (584 mm)	7-1/8" (181 mm)	37.8 lbs (17.1 kg)
4" (100 mm)	21-4/9" (545 mm)	4-1/8" (105 mm)	7-1/4" (184 mm)	14-1/4" (360 mm)	10-3/4" (273 mm)	4-1/8" (105 mm)	24-5/8" (627 mm)	8-1/8" (206 mm)	50 lbs (22.7 kg)
6" (150 mm)	23-1/8" (587 mm)	5-1/4" (133 mm)	8-1/4" (210 mm)	15-7/8" (403 mm)	11-7/8" (302 mm)	5-1/4" (133 mm)	26-3/8" 670 mm)	9-1/4" (235 mm)	79.6 lbs (36.1 kg)
8" (200 mm)	25-1/2" (648 mm)	6-3/4" (171 mm)	9-1/4" (235 mm)	18-1/8" (460 mm)	12-3/4" (324 mm)	6-3/4" (171 mm)	28-5/8" (727 mm)	10-1/4" (260 mm)	123.6 lbs (56 kg)

Notes:

1. Dimensions will vary based on make-up tolerances.
2. Shown with grooved inlet test and drain valve for 2-1/2" through 8" models. On 1-1/4", 1-1/2", and 2" models, test and drain valve has threaded inlet. All test and drain valves have an NPT outlet of the drain size described in Table A.
3. Flow switch must be on the top portion of the piping. The flow switch may not be rotated more than 90 degrees from vertical.

Model FCA2 Dimensions and Weight: Ball Valve Drain

Figure 3



Legend	
Item	**Description**
1	Control Valve
2	Check Valve
3	Grooved Coupling
4	Water Flow Indicator
5	Pressure Gauge
6	Ball Valve

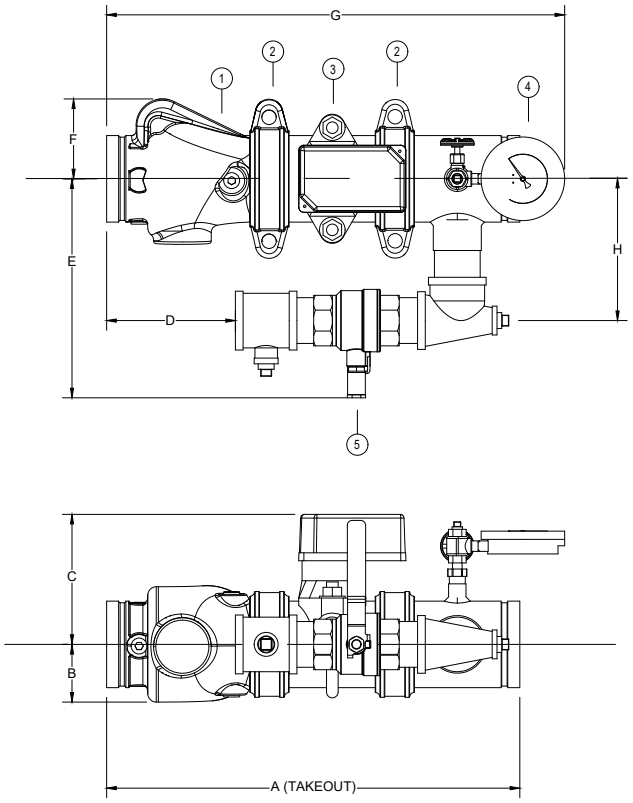
Size	A	B	C	D	E	F	G	H	Weight (approx. w/ control valve)
1-1/4” (30 mm)	23-1/4” (587 mm)	1-3/4” (44 mm)	6-1/2” (165 mm)	12-1/2” (318 mm)	6-7/8” (174 mm)	2-1/4” (57 mm)	25-3/8” (645 mm)	4-1/2” (114 mm)	19 lbs (8.6 kg)
1-1/2” (50 mm)	23-1/4” (590 mm)	1-3/4” (44 mm)	6-1/2” (165 mm)	12-5/8” (321 mm)	6-7/8” (174 mm)	2-3/8” (60 mm)	25-5/8” (651 mm)	4-5/8” (117 mm)	23 lbs (10.4 kg)
2” (50 mm)	23-5/8” (616 mm)	2” (51 mm)	7-1/2” (191 mm)	12-3/4” (324 mm)	7” (178 mm)	5” (127 mm)	27-1/8” (689 mm)	4-3/4” (121 mm)	30 lbs (13.6 kg)
2-1/2” (65 mm)	24” (610 mm)	2-5/8” (67 mm)	8-1/4” (210 mm)	11-1/4” (286 mm)	9-1/8” (231 mm)	5” (127 mm)	27-1/4” (692 mm)	6-1/4” (159 mm)	42 lbs (19.1 kg)
3” (76 mm)	24-1/2” (620 mm)	2-7/8” (73 mm)	8-5/8” (219mm)	12” (305 mm)	9-1/2” (241 mm)	5” (127 mm)	27-1/2” (699 mm)	6-5/8” (168 mm)	49 lbs (22.3 kg)
4” (100 mm)	26” (660mm)	3-3/4” (95 mm)	9-3/4” (248 mm)	11-1/4” (286 mm)	11-3/8” (289 mm)	5” (127 mm)	28-3/4” (730mm)	7-3/8” (187 mm)	65 lbs (29.5 kg)
6” (150 mm)	29” (735 mm)	4-3/4” (121 mm)	11” (279 mm)	14-3/8” (365 mm)	12-3/8” (314 mm)	6-5/8” (168 mm)	31-3/8” (797 mm)	8-3/8” (213 mm)	112 lbs (51 kg)
8” (200 mm)	30-3/4” (880 mm)	5-3/4” (146 mm)	12-5/8” (321 mm)	16-1/8” (410 mm)	13-3/8” (340 mm)	6-5/8” (168 mm)	33-1/8” (841 mm)	9-3/8” (238 mm)	165 lbs (75 kg)

Notes:

1. Dimensions will vary based on make-up tolerances.
2. Flow switch must be on the top portion of the piping. The flow switch may not be rotated more than 90 degrees from vertical.

Model FCA2 Dimensions and Weight: Ball Valve Drain w/o Control Valve

Figure 4



Legend	
Item	**Description**
1	Check Valve
2	Grooved Coupling
3	Water Flow Indicator
4	Pressure Gauge
5	Ball Valve

Size	A	B	C	D	E	F	G	H	Weight (approx. w/ out control valve)
1-1/4" (30 mm)	20-5/8" (524 mm)	2-1/4" (57 mm)	6" (152 mm)	9-7/8" (251 mm)	6-7/8" (175 mm)	2-1/4" (57 mm)	22-3/4" (578 mm)	4-1/2" (114 mm)	15 lbs (6.8 kg)
1-1/2" (50 mm)	20-3/8" (518 mm)	2-3/8" (60 mm)	6" (152 mm)	9-3/4" (248 mm)	6-7/8" (175 mm)	2-3/8" (60 mm)	22-3/4" (578 mm)	4-5/8" (117 mm)	19 lbs (8.6 kg)
2" (50 mm)	19-3/4" (502 mm)	2-3/4" (70 mm)	6-1/2" (165 mm)	8-7/8" (225 mm)	7" (178 mm)	2-3/4" (70 mm)	23-1/4" (591 mm)	4-3/4" (121 mm)	20.1 lbs (9.1 kg)
2-1/2" (65 mm)	20-1/8" (511 mm)	3-3/8" (86 mm)	6-1/2" (165 mm)	7-3/8" (187 mm)	9-1/8" (232 mm)	3-3/8" (86 mm)	23-3/8" (594 mm)	6-1/4" (159 mm)	31.9 lbs (14.5 kg)
3" (76 mm)	20-5/8" (524 mm)	3-3/8" (86 mm)	7" (178 mm)	8-1/8" (206 mm)	9-1/2" (241 mm)	3-3/8" (86 mm)	23-5/8" (600 mm)	6-5/8" (168 mm)	37.8 lbs (17.1 kg)
4" (100 mm)	21-4/9" (545 mm)	4-1/8" (105 mm)	7-1/4" (184 mm)	6-2/3" (170 mm)	11-3/8" (289 mm)	4-1/8" (105 mm)	24-1/5" (614 mm)	7-3/8" (187 mm)	50 lbs (22.7 kg)
6" (150 mm)	23-1/8" (587 mm)	5-1/4" (133 mm)	8-1/4" (210 mm)	8-1/2" (216 mm)	12-3/8" (314 mm)	5-1/4" (133 mm)	25-1/2" (648 mm)	8-3/8" (213 mm)	79.6 lbs (36.1 kg)
8" (200 mm)	25-1/2" (648 mm)	6-3/4" (171 mm)	9-1/4" (235 mm)	10-7/8" (276 mm)	13-3/8" (340 mm)	6-3/4" (171 mm)	27-7/8" (708 mm)	9-3/8" (238 mm)	123.6 lbs (56 kg)

Notes:

1. Dimensions will vary based on make-up tolerances.
2. Flow switch must be on the top portion of the piping. The flow switch may not be rotated more than 90 degrees from vertical.

Installation

The Reliable Model FCA2 Floor Control Assembly shall be installed in accordance with the requirements of applicable NFPA standards and any authorities having jurisdiction. Failure to follow installation instructions and/or revisions to the arrangement of the devices may void the warranty and/or listing of the product.

Protect system from freezing temperatures. The Model CR2 and supply piping SHALL NOT be located in an area where exposure to freezing temperatures or mechanical damage may occur. Install the Model CR2 in an accessible and visible location that is maintained at or above a minimum temperature of 40ºF (4ºC.).

Prior to installation, verify compatibility of the Model FCA2 materials with the water supply and the environment where the valve will be installed.

Flow switch must be on the top portion of the piping. The flow switch may not be rotated more than 90 degrees from vertical.

Connect the inlet of the device to the water supply and the outlet of the device to the fire protection system. Ensure proper direction of flow using the diagrams contained in this bulletin and on the device. Drain should be piped to a location that will avoid damage to property and injury to personnel.

Relief valve is adjustable from 175 to 310 psi (12.1 to 21.4 bar). The pressure markings on the adjustment cap are for reference only. Use a system gauge to verify proper relief setting.

It is not necessary to remove the adjustable relief valve to perform a hydrostatic test. The adjustable relief valve may be adjusted temporarily to a pressure above the test pressure. Verify that the adjustable relief valve is returned to its normal setting after completing the hydrostatic test.

Maintenance

The owner is responsible for maintaining the fire protection system in proper operating condition. Any system maintenance or testing that involves placing a system out of service may eliminate the fire protection that is provided by the fire protection system. Notify any required authorities having jurisdiction and implement appropriate precautions prior to proceeding.

The Reliable Model FCA2 Floor Control Assembly shall periodically be given a thorough inspection and test. NFPA 25, “Inspection, Testing and Maintenance of Water Based Fire Protection Systems,” provides minimum maintenance requirements. Replace any components found to be corroded, damaged, worn or non-operable. Increase the frequency of inspections when the valve is exposed to corrosive conditions or chemicals that could impact materials and/or operation of the assembly.

Guarantee

For Reliable Automatic Sprinkler, Co., Inc. guarantee, terms, and conditions, visit www.reliablesprinkler.com.

Ordering Information

Specify:

1. Reliable Model FCA2 Floor Control Assembly
2. Size
3. Test and Drain Orifice Size
4. Optional Adjustable Pressure Relief Valve

Notes:

1. All Model FCA2 Floor Control Assemblies come with a 300 psi (20.7 bar) pressure gauge for 175 psi (12.1 bar) applications. If the Model FCA2 Floor Control Assembly is to be installed in a higher pressure application, please purchase a 600 psi (41.4 bar) (P/N 98248005) pressure gauge. This gauge may or may not be UL Listed at the time of purchase.
2. The water flow switch for the 1-1/4” (30 mm) and 1-1/2” (40 mm) Model FCA2 is a proprietary component only available for replacement from Reliable. When ordering, please specify part number 96556923.

For International Use:

When using with 76 mm and 165 mm pipe, the following RASCO grooved transition couplings may be ordered:

76 mm pipe with 2-1/2” (65 mm) FCA2: PN 7U99004002
165 mm pipe with 6” (150 mm) FCA2: PN 7U99004003

Related Product

Reliable Streamline™ Drain Hoses are specifically designed for the Model CR2, FCA2, and other Reliable valve producs, and offer a time- and money - saving option for the tedius work of making drain connections. Please reference Technical Bulletin 442 for additional information.

FCA2 Floor Control Assembly Ordering Information Part Number **Figure 5**

6A WW 0 V X YY Z

Size WW	Control Valve V	Water Flow Detector X	Drain Valve Options YY	Pressure Relief Valve Z
01 = 1-1/4" (30 mm) 03 = 1-1/2" (40 mm) 10 = 2" (50 mm)	F =With Control Valve (Standard Offering) G =Without Control Valve	P = Potter Electric VSR or VSR-S (Standard) X = Potter Electric VSR-FEX Explosion Proof (2" [50 mm] - 8" [200 mm] only) A = Potter Electric VSR-AT Auto-Test (2" [50 mm] - 8" [200 mm] only)	00 = 1" (25 mm) BALL VALVE 03 = 1" (25 mm) RASCO T&D VALVE K2.8 04 = 1" (25 mm) RASCO T&D VALVE K4.2 05 = 1" (25 mm) RASCO T&D VALVE K5.6	0 = None A = Adjustable
12 = 2-1/2" (65 mm) 14 = 3" (80 mm)			01 = 1-1/4" (30 mm) BALL VALVE 26 = 1-1/4" (30 mm) RASCO T&D VALVE K2.8 06 = 1-1/4" (30 mm) RASCO T&D VALVE K4.2 07 = 1-1/4" (30 mm) RASCO T&D VALVE K5.6 08 = 1-1/4" (30 mm) RASCO T&D VALVE K8.0 09 = 1-1/4" (30 mm) RASCO T&D VALVE K11.2	
16 = 4" (100 mm) 18 = 6" (150 mm) 19 = 8" (200 mm)			02 = 2" (50 mm) BALL VALVE 27 = 2" (50 mm) RASCO T&D VALVE K2.8 28 = 2" (50 mm) RASCO T&D VALVE K4.2 10 = 2" (50 mm) RASCO T&D VALVE K5.6 11 = 2" (50 mm) RASCO T&D VALVE K8.0 12 = 2" (50 mm) RASCO T&D VALVE K11.2 13 = 2" (50 mm) RASCO T&D VALVE K16.8	