

Model CV-1F Check Valves 2 to 12 Inch (DN50 to DN300)

General Description

The TYCO Model CV-1F Check Valve is a compact and rugged swing-type unit that allows water flow in one direction and prevents flow in the opposite direction. A resilient elastomer seal facing on the spring-loaded clapper ensures a leak-tight seal and non-sticking operation. The Model CV-1F Check Valves are designed to minimize water hammer caused by flow reversal.

The Model CV-1F Check Valve is furnished with grooved ends and can be installed using Grinnell Grooved Couplings or GRINNELL Figure 71 Flange Adapters. The Model CV-1F Check Valves have been designed with a removable cover for ease of field maintenance. These valves can be installed horizontally (with cover in the upward position) or vertically with the flow in the upward direction. Refer to Figure 4.

A Maintenance Check Valve Kit (TFP1555) is available to allow the maintenance procedure of back-flushing through the fire department connection without removing the Model CV-1F Check Valve from the pipe line.

The Model CV-1F Check Valves are a redesign for the Central Figure 590F and GRINNELL Figure 590F.

NOTICE

Never remove any piping component nor correct or modify any piping deficiencies without first de-pressurizing and draining the system. Failure to do so may result in serious personal injury, property damage, and/or impaired device performance.

The Model CV-1F Check Valves described herein must be installed and maintained in compliance with this document and with the applicable standards of the National Fire Protection Association, in addition to the standards of any authorities having jurisdiction. Failure to do so may impair the performance of this device.

Owners are responsible for maintaining their fire protection system and devices in proper operating condition. The installing contractor or manufacturer should be contacted with any questions.

Technical Data

Approvals
UL, C-UL, and FM

Sizes
2 to 12 Inch (DN50 to DN300)

Maximum Working Pressure
300 psi (20,7 bar)

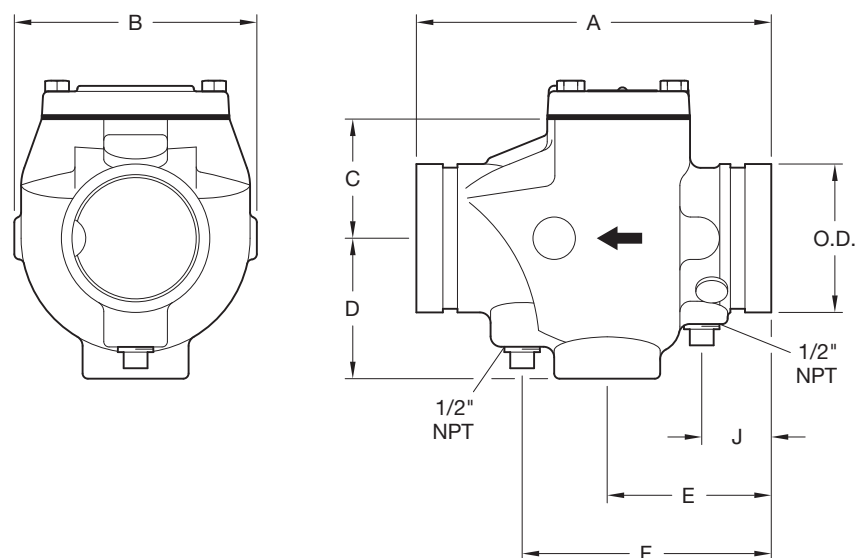
Valve Assembly Finish
Red, non-lead paint



Installation

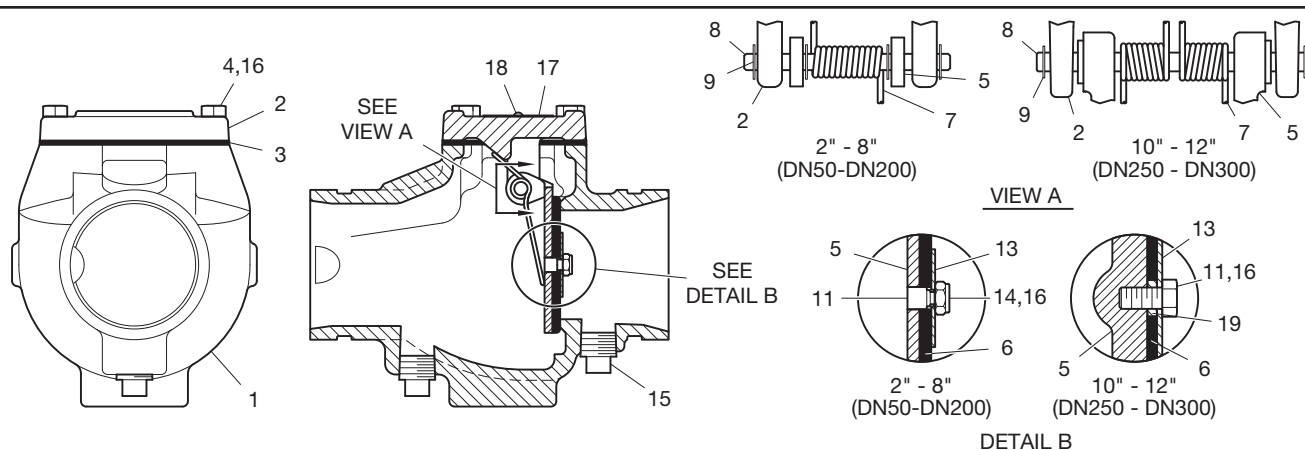
The Model CV-1F Check Valves are to be installed in accordance with the following instructions:

1. The arrow cast on the Body must point in the direction of the flow.
2. Valves installed vertically must be positioned with the flow in the upward direction.
3. Valves installed horizontally must be positioned with the Cover facing up. Refer to Figure 4.
4. Grooved end pipe couplings used with the Model CV-1F Check Valve must be installed in accordance with manufacturer's instructions.



Nominal Pipe Size		Nominal Dimensions Inches (mm)							Cover Bolt Torq. Lbs.-ft. (Nm)	Approx. Weight Lbs. (kg)
ANSI Inches DN	O.D. Inches (mm)	A	B	C	D	E	F	J		
2 DN50	2.375 (60,3)	6.75 (171,5)	4.38 (111,3)	2.55 (64,8)	2.57 (65,3)	3.25 (82,3)	4.75 (120,7)	1.62 (41,5)	18 (25)	9.0 (4,5)
2-1/2 DN65	2.875 (73,0)	8.00 (203,2)	5.80 (147,3)	3.41 (86,6)	3.40 (86,4)	3.88 (98,6)	6.00 (152,4)	1.70 (43,2)	39 (54)	10.0 (4,5)
76,1 DN65	- (76,1)	8.00 (203,2)	5.80 (147,3)	3.41 (86,6)	3.40 (86,4)	3.88 (98,6)	6.00 (152,4)	1.70 (43,2)	39 (54)	10.00 (4,5)
3 DN80	3.500 (88,9)	8.37 (212,6)	5.76 (146,3)	3.60 (91,4)	3.40 (86,4)	3.88 (98,6)	6.00 (152,4)	1.70 (43,2)	39 (54)	11.0 (5,0)
4 DN100	4.500 (114,3)	9.63 (244,6)	6.74 (171,2)	4.61 (117,1)	3.63 (92,2)	4.56 (115,1)	7.13 (181,1)	1.84 (46,7)	50 (69)	25.0 (11,3)
139.7 DN125	- (139,7)	10.50 (266,7)	7.50 (190,5)	5.29 (134,4)	4.20 (106,7)	4.90 (124,5)	7.60 (193,0)	1.90 (48,3)	39 (54)	29.0 (13,2)
5 DN125	5.563 (141,3)	10.50 (266,7)	7.50 (190,5)	5.29 (134,4)	4.20 (106,7)	4.90 (124,5)	7.60 (193,0)	1.90 (48,3)	39 (54)	29.0 (13,2)
165.1 DN150	- (165,1)	11.50 (292,1)	8.05 (204,5)	5.75 (146,1)	4.50 (114,3)	5.00 (127,0)	7.60 (193,0)	1.48 (37,6)	60 (82)	47.0 (21,3)
6 DN150	6.625 (168,3)	11.50 (292,1)	8.05 (204,5)	5.75 (146,1)	4.50 (114,3)	5.00 (127,0)	7.60 (193,0)	1.48 (37,6)	60 (82)	47.0 (21,3)
8 DN200	8.625 (219,1)	14.00 (355,6)	10.25 (260,4)	7.75 (196,9)	5.62 (142,7)	5.45 (138,4)	8.40 (213,4)	2.20 (58,9)	120 (164)	66.0 (29,9)
10 DN250	10.750 (273,1)	18.00 (457,2)	13.00 (330,2)	10.21 (259,3)	6.38 (162,1)	7.50 (190,5)	10.50 (266,7)	3.00 (76,2)	130 (178)	109.7 (49,4)
12 DN300	12.750 (323,9)	21.00 (533,4)	14.28 (362,7)	11.31 (287,2)	7.26 (184,4)	7.62 (193,5)	10.62 (269,7)	2.75 (69,9)	130 (178)	151.0 (68,0)

FIGURE 1
MODEL CV-1F CHECK VALVES
NOMINAL DIMENSIONS



Detail	Part	Material	Qty.	Detail	Part	Material	Qty.	Detail	Part	Material	Qty.
1	Body	Ductile Iron	1	6	Clapper Facing	EPDM Grade "E"	1	14	Locknut	Stainless Steel	1
2	Cover	Ductile Iron	1	7	Spring	Stainless Steel	1	15	Plug-1/2"-14 NPT	Cast Iron	2
3	Cover Gasket	Nitrile Rubber	1	8	Hinge Shaft	Stainless Steel	1	16	Adhesive	Thread Sealer	AR
4	Hex Cap Screw	Steel, Zinc Plated	AR	9	Retaining Ring	Stainless Steel	AR	17	Nameplate	Aluminum	1
5	Clapper 2" - 8" (DN50-200)	Stainless Steel	1	11	Retention Bolt	Stainless Steel	1	18	Rivet	Steel	2
	Clapper 10" - 12" (DN250-300)	Ductile Iron		13	Retaining Disc	Stainless Steel	1	19	Spacer	Stainless Steel	1

FIGURE 2
MODEL CV-1F CHECK VALVES
ASSEMBLY

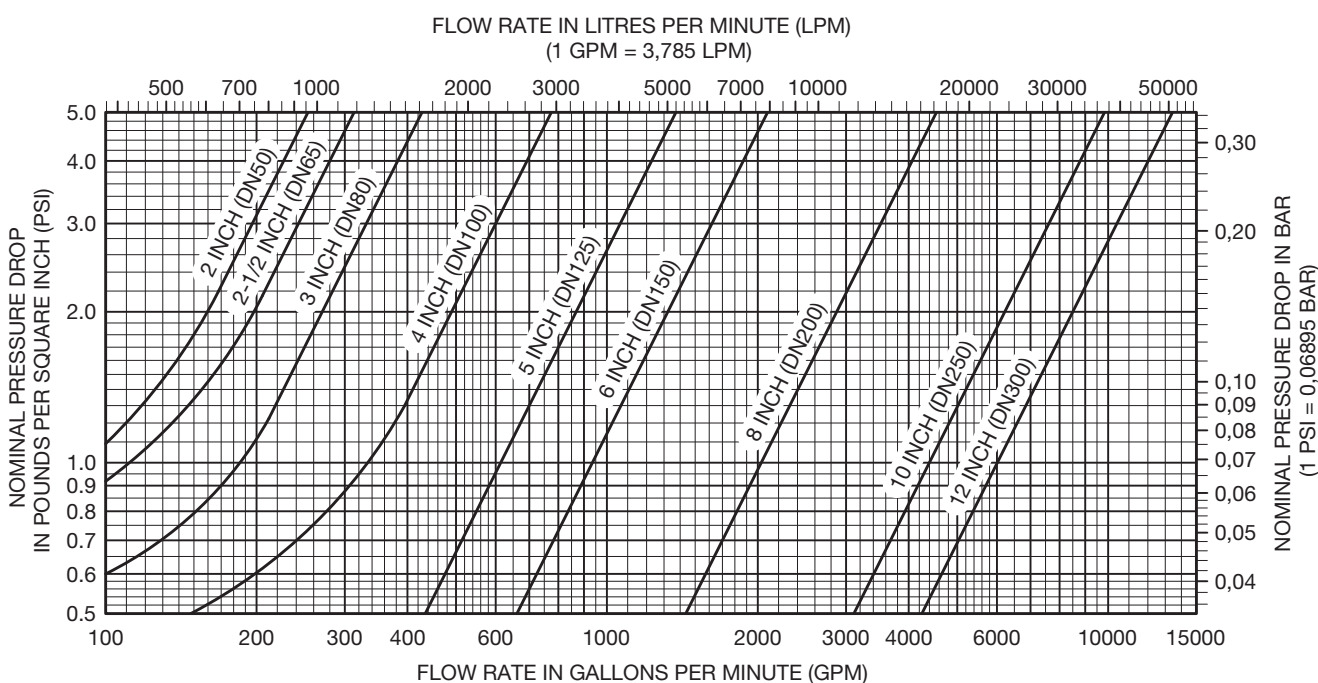


FIGURE 3
MODEL CV-1F CHECK VALVES
PRESSURE LOSS DATA

Care and Maintenance

NOTICE

Before closing a fire protection system main control valve for maintenance work on the fire protection system that it controls, obtain permission to shut down the affected fire protection system from the proper authorities and notify all personnel who may be affected by this decision.

After placing a fire protection system in service, notify the proper authorities and advise those responsible for monitoring proprietary and/or central station alarms.

Responsibility lies with owners for the inspection, testing, and maintenance of their fire protection system and devices in compliance with this document, as well as with the applicable standards of the National Fire Protection Association (for example, NFPA 25), in addition to the standards of any authority having jurisdiction. The installing contractor or product manufacturer should be contacted relative to any questions. Any impairments must be immediately corrected.

Automatic sprinkler systems are recommended to be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national codes.

Limited Warranty

Products manufactured by Tyco Fire Suppression & Building Products (TFSBP) are warranted solely to the original Buyer for ten (10) years against defects in material and workmanship when paid for and properly installed and maintained under normal use and service. This warranty will expire ten (10) years from date of shipment by TFSBP. No warranty is given for products or components manufactured by companies not affiliated by ownership with TFSBP or for products and components which have been subject to misuse, improper installation, corrosion, or which have not been installed, maintained, modified or repaired in accordance with applicable Standards of the National Fire Protection Association, and/or the standards of any other Authorities Having Jurisdiction. Materials found by TFSBP to be defective shall be either repaired or replaced, at TFSBP's sole option. TFSBP neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. TFSBP shall not be responsible for sprinkler system design errors or inaccurate or incomplete information supplied by Buyer or Buyer's representatives.

In no event shall TFSBP be liable, in contract, tort, strict liability or under any other legal theory, for incidental, indirect, special or consequential damages, including but not limited to labor charges, regardless of whether

TFSBP was informed about the possibility of such damages, and in no event shall TFSBP's liability exceed an amount equal to the sales price.

The foregoing warranty is made in lieu of any and all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose.

This limited warranty sets forth the exclusive remedy for claims based on failure of or defect in products, materials or components, whether the claim is made in contract, tort, strict liability or any other legal theory.

This warranty will apply to the full extent permitted by law. The invalidity, in whole or part, of any portion of this warranty will not affect the remainder.

Ordering Procedure

Contact your local distributor for availability. When placing an order, indicate the full product name and Part Number (P/N).

Model CV-1F Check Valves
Specify: size and P/N (below).

2" (DN50)	P/N 59-590-0-020
2-1/2" (DN65)	P/N 59-590-0-025
76,1 mm (DN65)	P/N 59-590-0-076
3" (DN80)	P/N 59-590-0-030
4" (DN100)	P/N 59-590-0-040
139,7 mm (DN125)	P/N 59-590-0-139
5" (DN125)	P/N 59-590-0-050
165,1 mm (DN150)	P/N 59-590-0-165
6" (DN150)	P/N 59-590-0-060
8" (DN200)	P/N 59-590-0-080
10" (DN250)	P/N 59-590-0-100
12" (DN300)	P/N 59-590-0-120

