

## Tyco Fire Products Model CV-1F Check Valve

### 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 CV-1F 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. Valves installed horizontally or inclined (flow up or down) are to be positioned with the cover facing up. Valves installed vertically may be positioned with flow up or down.

A Maintenance Check Valve Kit (TFP1555) is available to allow the maintenance procedure of backflushing 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 redesignation for the Central Figure 590F and Grinnell Figure 590F.

#### NOTICE

*The Model CV-1F Check Valve 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.*

*The owner is 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

**Sizes- Inches / DN**  
2 to 12 / DN50 to DN300

**Maximum Working Pressure**  
300 psi (20,7 bar)

**Approvals**  
UL, FM, and C-UL.

**Protective Coating**  
Valve assembly  
• Non-lead paint

### Installation

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

**Step 1.** The arrow cast on the Body must point in the direction of the flow.

**Step 2.** Valves installed vertically may be positioned with the flow up or down.

**Step 3.** Valves installed horizontally or inclined (flow up or down) are to be positioned with the Cover facing up.

**Step 4.** Grooved end pipe couplings used with the CV-1F must be installed in accordance with manufacturer's instructions.

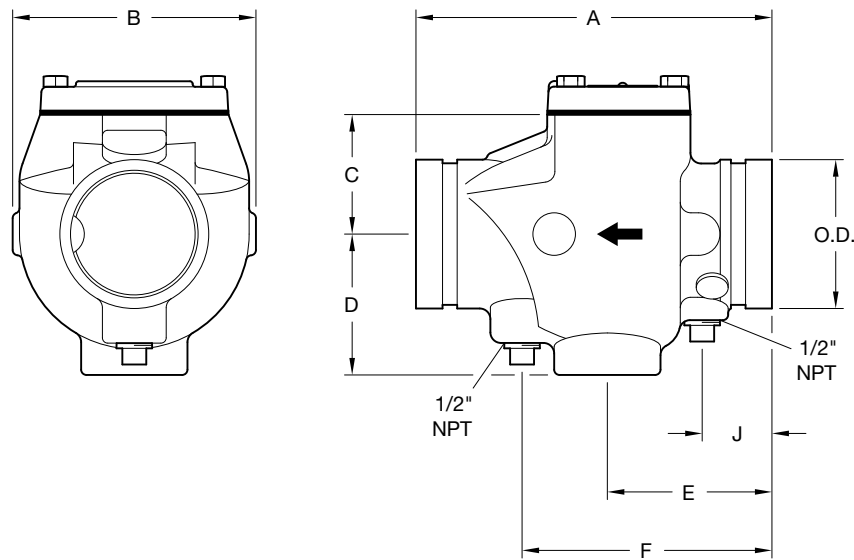


### Care and Maintenance

The owner is responsible 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 (e.g., 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 should be inspected, tested, and maintained by a qualified Inspection Service in accordance with local requirements and/or national codes.

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



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)
2½ 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)
- 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)
- 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)
- 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 2  
NOMINAL DIMENSIONS  
MODEL CV-1F CHECK VALVES**

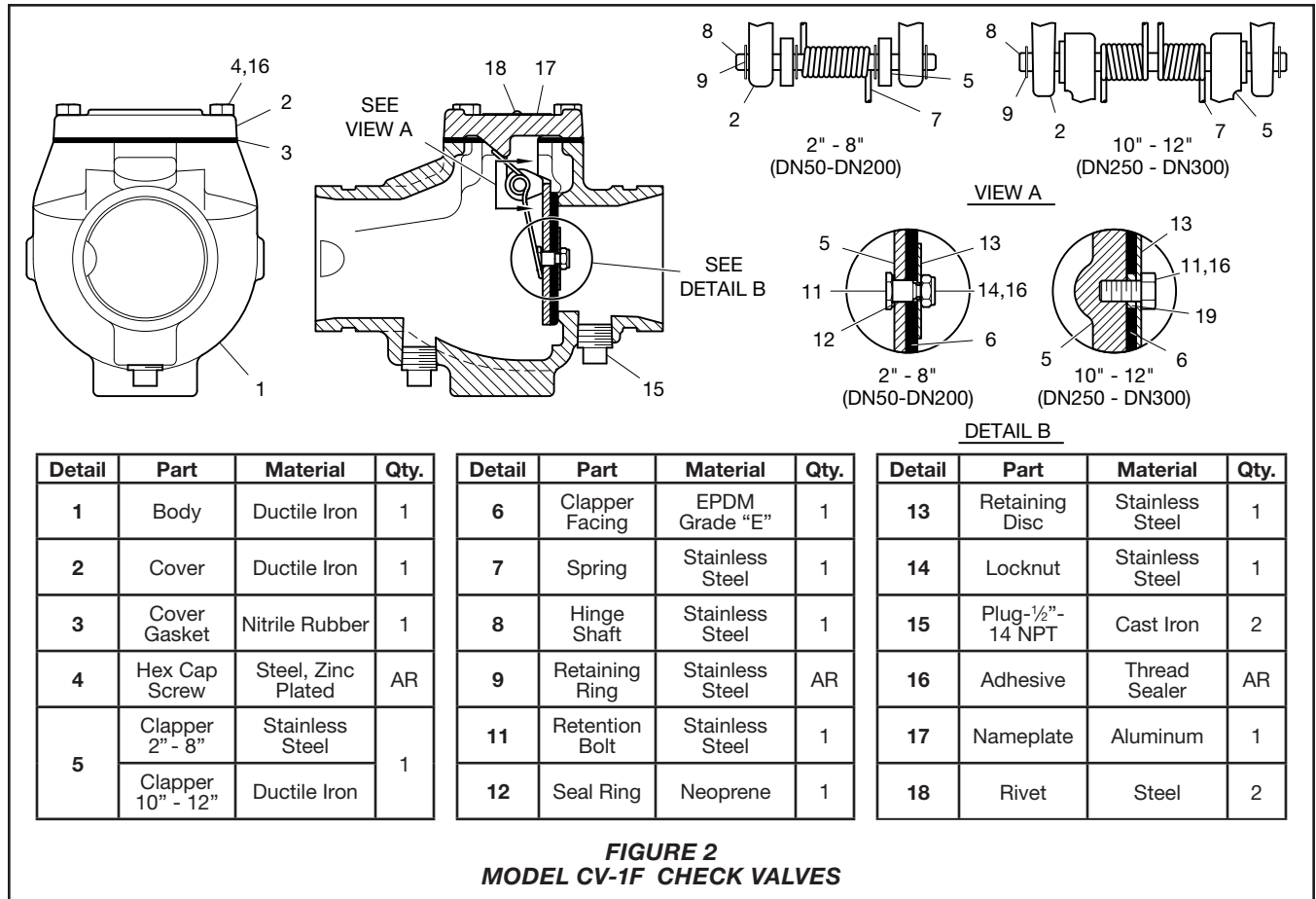


FIGURE 2  
MODEL CV-1F CHECK VALVES

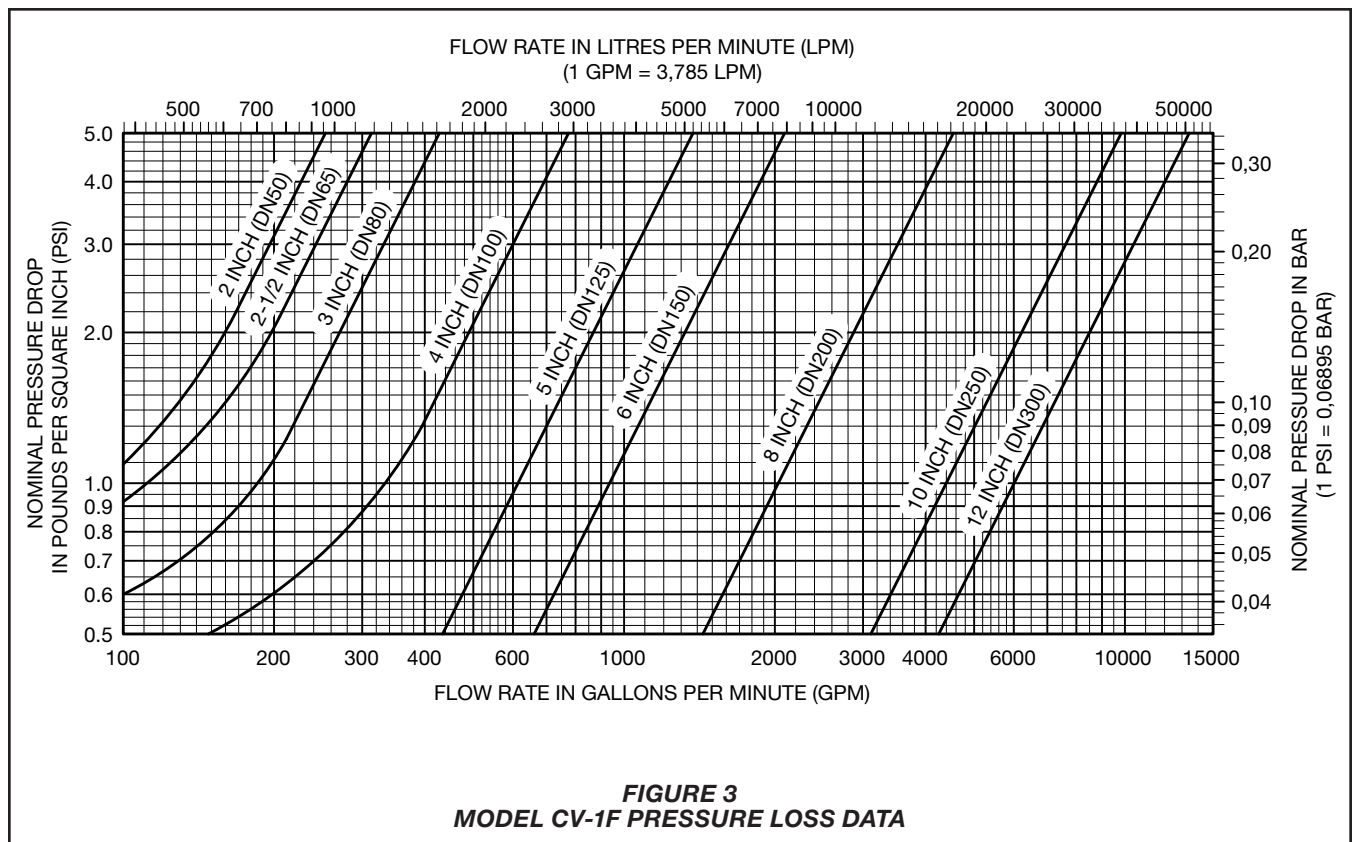


FIGURE 3  
MODEL CV-1F PRESSURE LOSS DATA

## Limited Warranty

Products manufactured by Tyco Fire & Building Products (TFBP) 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 TFBP. No warranty is given for products or components manufactured by companies not affiliated by ownership with TFBP 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 TFBP to be defective shall be either repaired or replaced, at TFBP's sole option. TFBP neither assumes, nor authorizes any person to assume for it, any other obligation in connection with the sale of products or parts of products. TFBP 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 TFBP 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 TFBP was informed about the possibility of such damages, and in no event shall TFBP'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

### The Model CV-1F Check Valves:

Specify: (specify size) Model CV-1F Check Valve, P/N (specify)

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

### Replacement Valve Parts

Specify: (specify description) for use with (specify size) Model CV-1F Check Valve, P/N (specify)

#### 2" (DN50) Valves

Cover Gasket	976-705-01
Clapper Facing	976-709-01

#### 2-1/2" (DN65) Valves

Cover Gasket	975-618-01
Clapper Facing	975-621-01

#### 3" (DN80) Valves

Cover Gasket	975-618-01
Clapper Facing	975-491-01

#### 4" (DN100) Valves

Cover Gasket	975-120-01
Clapper Facing	975-003-01

#### 5" (DN125) Valves

Cover Gasket	975-120-01
Clapper Facing	975-219-01

#### 6" (DN150) Valves

Cover Gasket	975-218-01
Clapper Facing	975-006-01

#### 8" (DN200) Valves

Cover Gasket	975-479-01
Clapper Facing	975-463-01

#### 10" (DN250) Valves

Cover Gasket	976-000-01
Clapper Facing	975-977-01

#### 12" (DN300) Valves

Cover Gasket	976-472-01
Clapper Facing	976-474-01