



Check Valve

Lift Type

- Pump check valve
- One-way zone isolation
- Return flow prevention

The Model 70N Check Valve is a non-slam, lift type, non return valve that opens to allow flow in the required direction and smoothly closes drip tight to prevent back flow.

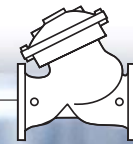


Features and Benefits

- **Non-slam closing** – Eliminates system surges
- **In-line serviceable** – Easy maintenance
- **Flexible design** – Convertible to hydraulic valve
- **"Y" or angle, wide body** – Minimized pressure loss
- **Semi-straight flow** – Non-turbulent flow
- **Stainless Steel raised seat** – Cavitation damage resistant
- **Obstacle free, full bore** – Uncompromising reliability

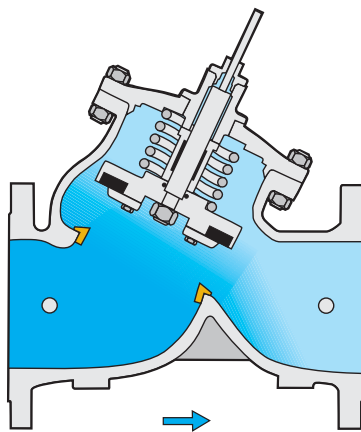
Major Additional Features

- Valve position indicator – 70N-I
- Electric limit switch – 70N-S
- Double check valve – 72N

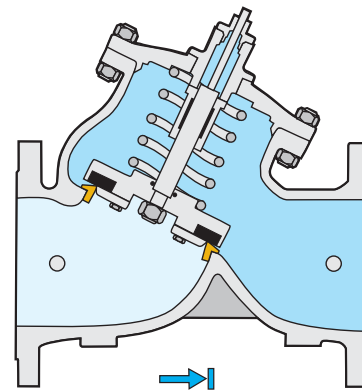


Operation

The Model 70N is built on a standard 700 Series body assembly and reacts to differential pressure across its seal disk. It opens and closes in a non-slam manner according to the flow. A spring provides additional closing force.



Normal flow



Back flow prevented

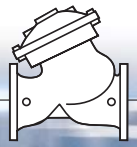
Engineer Specifications

The Check Valve shall open to allow flow in the required direction and close drip-tight with no slam to prevent back flow.

Main Valve: The main valve shall be a globe valve of either oblique (Y) or angle pattern design. The body shall have a replaceable, raised, stainless steel seat ring. The body and cover shall be ductile iron. All external bolts, nuts, and studs shall be Duplex® coated. All valve components shall be accessible and serviceable without removing the valve from the pipeline.

Actuator: The entire internal assembly (seal disk to cover) shall be removable from the valve. The stainless steel valve shaft shall be center guided by a bearing in the cover and shall accept a valve position indicator with limit switch. The replaceable radial seal disk shall include a resilient seal.

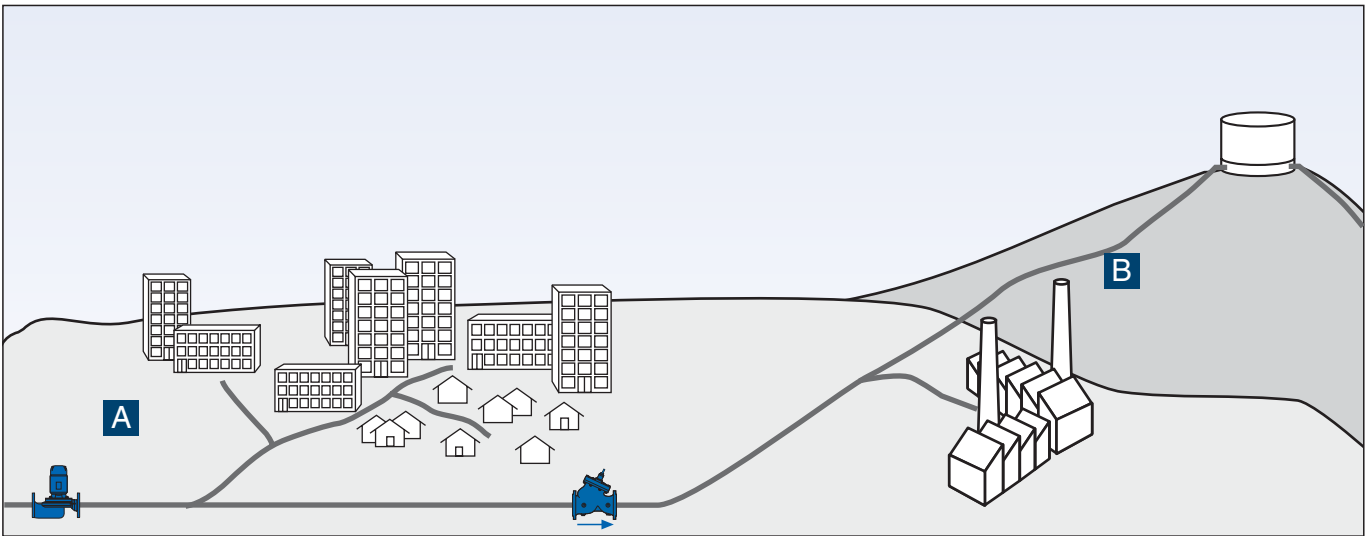
Quality Assurance: The assembled valve shall be hydraulically tested. The valve manufacturer shall be certified according to the ISO 9001 Quality Assurance Standard. The valve shall be certified as a complete drinking water valve according to NSF, WRAS, and other recognized standards.



Typical Applications

One-Way Zone Isolation

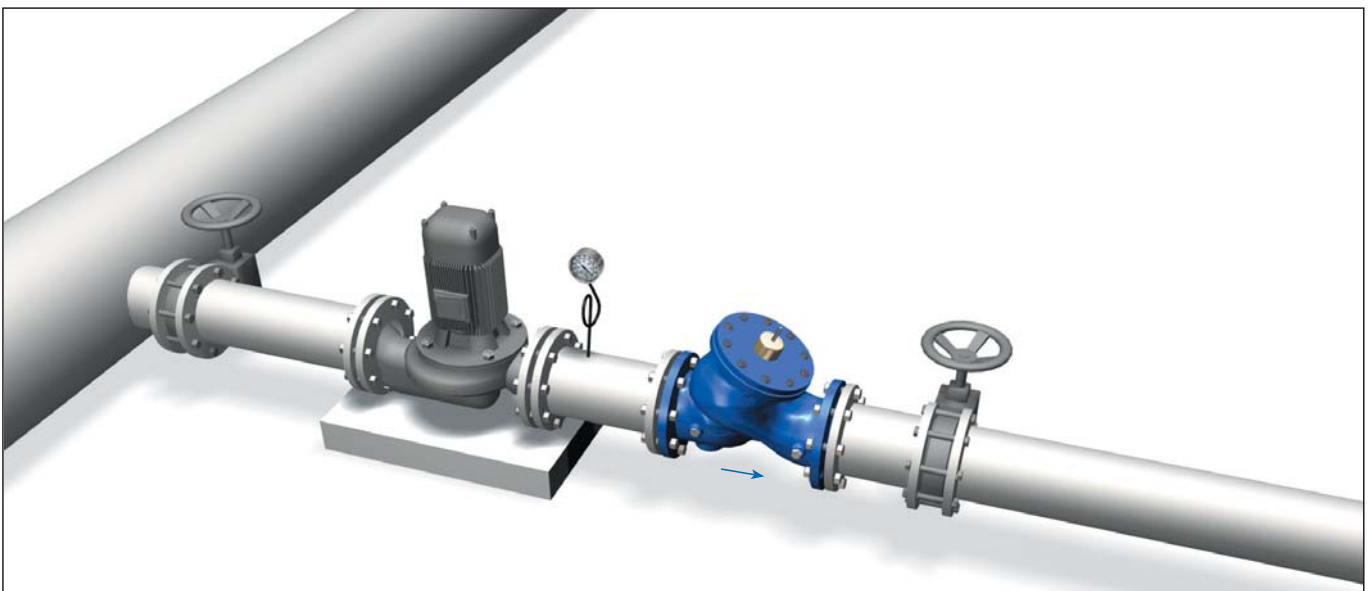
In complex distribution networks, multiple zones are supplied from multiple sources. Each zone has its own characteristic demands and each source has its characteristic capacity. Often each source is designated to serve a specific zone, with a backup supply designed into the system.



In this system, source **A** supplies zone **A** and backs up the farther zone. Source **B** supplies zone **B**, but does not have enough capacity to backup any other zone.

The Model 70N Check Valve, installed between the zones, allows flow from source **A** to zone **B**, but not from source **B** to zone **A**.

Pump Check Valve





Technical Data

Dimensions and Weights

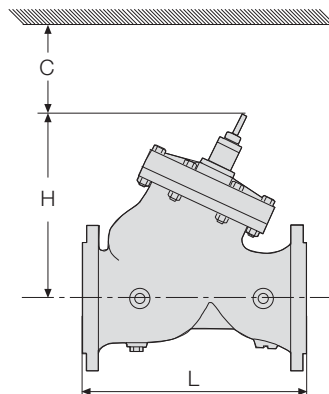
| Size | | L | | L1 | | H | | W | | W1 | | C | |
|------|--------|------|------|------|------|-----|------|-----|------|-----|------|-----|------|
| mm | inch | mm | inch | mm | inch | mm | inch | kg | lbs | kg | lbs | mm | inch |
| 40 | 1 1/2" | 205 | 8.1 | 205 | 8.1 | 125 | 4.9 | 7.0 | 15.4 | 9.0 | 19.8 | 180 | 7 |
| 50 | 2" | 210 | 8.3 | 210 | 8.3 | 125 | 4.9 | 8.0 | 17.6 | 10 | 22 | 180 | 7 |
| 65 | 2 1/2" | 222 | 8.7 | 222 | 8.7 | 125 | 4.9 | 11 | 24.3 | 14 | 30.9 | 180 | 7 |
| 80 | 3" | 250 | 9.8 | 264 | 10.4 | 170 | 6.7 | 18 | 39.7 | 21 | 46.3 | 230 | 9 |
| 100 | 4" | 320 | 12.6 | 335 | 13.2 | 210 | 8.3 | 30 | 66.1 | 36 | 79.4 | 275 | 11 |
| 150 | 6" | 415 | 16.3 | 433 | 17.0 | 270 | 10.6 | 52 | 115 | 62 | 137 | 385 | 15 |
| 200 | 8" | 500 | 19.7 | 524 | 20.6 | 330 | 13.0 | 85 | 187 | 106 | 234 | 460 | 18 |
| 250 | 10" | 605 | 23.8 | 637 | 25.1 | 420 | 16.5 | 147 | 324 | 175 | 386 | 580 | 23 |
| 300 | 12" | 725 | 28.5 | 762 | 30.0 | 480 | 18.9 | 254 | 560 | 295 | 650 | 685 | 27 |
| 350 | 14" | 733 | 28.9 | 767 | 30.2 | 480 | 18.9 | 265 | 584 | 318 | 701 | 685 | 27 |
| 400 | 16" | 990 | 39.0 | 1024 | 40.3 | 620 | 24.4 | 575 | 1268 | 630 | 1389 | 965 | 38 |
| 450 | 18" | 1000 | 39.4 | 1030 | 40.5 | 620 | 24.4 | 690 | 1521 | 775 | 1708 | 965 | 38 |
| 500 | 20" | 1100 | 43.3 | 1136 | 44.7 | 620 | 24.4 | 800 | 1764 | 890 | 1962 | 965 | 38 |

L, W – ISO 10 & 16; ANSI 150

L1, W1 – ISO 25; ANSI 300

"L", ISO standard lengths available

"C" enables removing the actuator in one unit



Specifications

Patterns: "Y" (globe) & angle

Size Range: 1 1/2" - 20" (40-500 mm)

End Connections (Pressure Ratings):

Flanged: ISO PN16, PN25

(ANSI Class 150, 300)

Threaded: BSP or NPT

Others: Available on request

Working Temperature:

Water up to 80°C (180°F)

Standard Materials:

Body: Ductile Iron

Cover: Steel

Internals:

Stainless Steel, Bronze,

coated Steel & Delerine

Seals: NBR

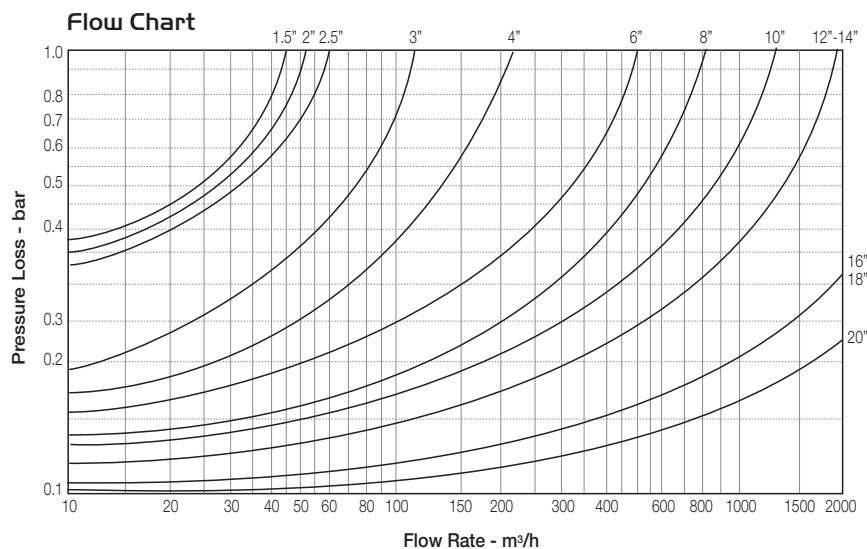
Coating:

Fusion Bonded Epoxy, RAL 5005 (Blue)

NSF & WRAS approved or Electrostatic

Polyester Powder, RAL 6017 (Green)

Flow Chart



How to Order

| Sector | Size | Primary Feature | Pattern | Body Material | End Connections | Coating | Additional Attributes |
|------------|--------------|-----------------|--|--|--|--|---|
| WW | 6" | 70N | Y | C | 16 | EB | I |
| Waterworks | 1 1/2" - 20" | Check valve | Oblique (up to 20") Angle (up to 18") | Ductile Iron Standard Cast Steel St. Steel 316 | ISO-16 16 ISO-25 25 ANSI-150 A5 ANSI-300 A3 JIS-16 J6 JIS-20 J2 | Epoxy FB Blue EB Polyester Green PG Polyester Blue PB Uncoated UC | Valve Position Indicator I Electric Limit Switch S |

