

Grinnell®

GRINNELL Model CB800 Circuit Balancing Valve

General Description

The GRINNELL Model CB800 Balancing Valve, offers features necessary to achieve accurate and efficient balancing of hydronic heating or cooling systems. One valve serves five functions: throttling, measuring (pressure & temperature), positive shutoff, draining and filling.

The Y pattern provides minimum pressure drop across the valve. The CB800 globe style design ensures precise throttling. Both the hand-wheel and test ports are located on the same side for easy access. The digital/vernier hand-wheel may be reoriented a minimum of 70 unique positions to allow for easy reading. The built in handwheel lock feature prevents unauthorized hand-wheel movement. A built-in memory stop ensures return to the balanced position after shutoff.

Self-sealing pressure/temperature test ports use standard insertion probes to eliminate additional components. The Model CB800 Valve can be installed horizontally or vertically in the supply or return line - with the flow in the direction of the arrow cast in the body. It can also be installed with the hand-wheel up, down or on the side. An optional hose connection with ball valve for either test port allows the pipe to be drained regardless of whether the valve is in the supply or return piping system.

⚠WARNING

The GRINNELL Model CB800 Balancing Valves described herein must be installed and maintained in compliance with this document, in addition to the standards of any other authorities having jurisdiction. Failure to do so may result in serious personal injury or impair the performance of these devices.

IMPORTANT

Refer to Technical Data Sheet G1100 for warnings pertaining to regulatory and health information.

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.

It is the designer's responsibility to select products suitable for the intended service and to ensure that pressure ratings and performance data are not exceeded.

Material and gasket selection should be verified for compatibility with the specific application. Always read and understand the installation instructions.

The owner is responsible for maintaining their mechanical system and devices in proper operating condition. Contact the installing contractor or product manufacturer with any questions.

Technical Data

Sizes

1/2 in. to 2 in. (DN15 to DN50)
Female NPT

1/2 in. to 2 in. (DN15 to DN50)
Female Solder

2-1/2 in. to 12 in. (DN65 to DN300)
Grooved

2-1/2 in. to 12 in. (DN65 to DN300)
Flanged

Maximum Working Pressure

- 300 psi (20,7 bar)
Grooved Connection
- 235 psi (16,0 bar)
Flanged, NPT, Solder Connection



**10
YEAR
LIMITED
WARRANTY**

Materials of Construction

- **Body**
Dezincification resistant brass
(Female NPT and Solder)
Cast Iron conforming to ASME/
ANSI B16.5 (ASTM A48 (2-1/2 in. to
6 in.), A536 (8 in. to 12 in.)
(Flanged and Grooved)
- **Stem**
Dezincification resistant brass
- **Valve Disc**
1/2 to 2 inch - Dezincification
resistant brass
2-1/2 to 12 inch - Bronze
- **O - Ring**
EPDM
- **Hand-wheel**
Thermoplastic

Nominal Pipe Size		Nominal Dimensions Inches mm			Approx. Weight Lbs. kg	Limits psi/°F bar/°C
ANSI Inches DN	O.D. Inches mm	A	B	C		
2-1/2 65	2.875 73,0	11.44 290,6	7.38 187,5	4.33 110,0	19.7 8,9	300/300 20,7/150
76,1 mm 65	3.000 76,1	11.44 290,6	7.38 187,5	4.33 110,0	19.7 8,9	300/300 20,7/150
3 80	3.500 88,9	12.25 311,2	8.00 203,2	4.33 110,0	27.8 12,6	300/300 20,7/150
4 100	4.500 114,3	13.75 349,3	9.44 239,8	6.30 160,0	45.3 20,6	300/300 20,7/150
139,7 mm 125	5.500 139,7	15.75 400,0	11.13 282,7	6.30 160,0	70.0 31,8	300/300 20,7/150
5 125	5.563 141,3	15.75 400,0	11.13 282,7	6.30 160,0	70.0 31,8	300/300 20,7/150
165,1 mm 150	6.500 165,3	18.88 479,6	11.25 285,8	6.30 160,0	95.7 43,5	300/300 20,7/150
6 150	6.625 168,3	18.88 479,6	11.25 285,8	6.30 160,0	95.7 43,5	300/300 20,7/150
8 200	8.625 219,1	23.63 600,2	18.44 468,4	11.80 300,0	255.2 116,0	300/300 20,7/150
10 250	10.750 273,1	28.75 730,3	18.88 479,6	11.80 300,0	377.3 171,5	300/300 20,7/150
12 300	12.750 323,9	33.44 849,4	20.25 514,4	11.80 300,0	520.3 236,5	300/300 20,7/150

Grooved Connection

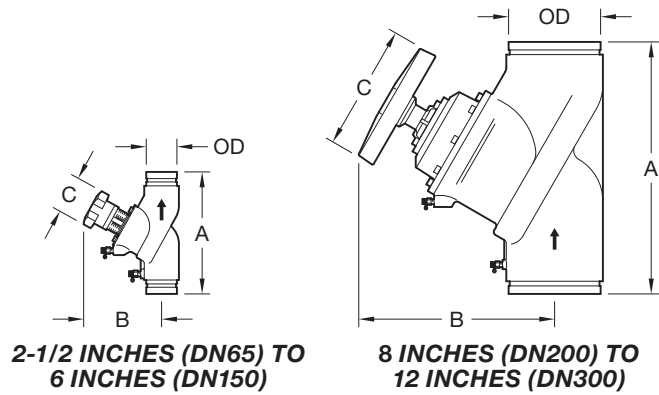
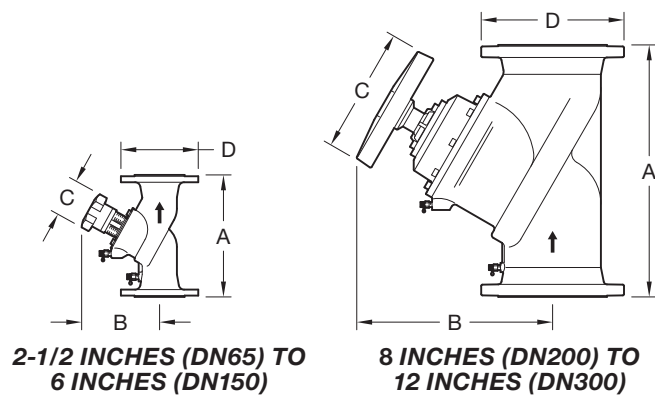


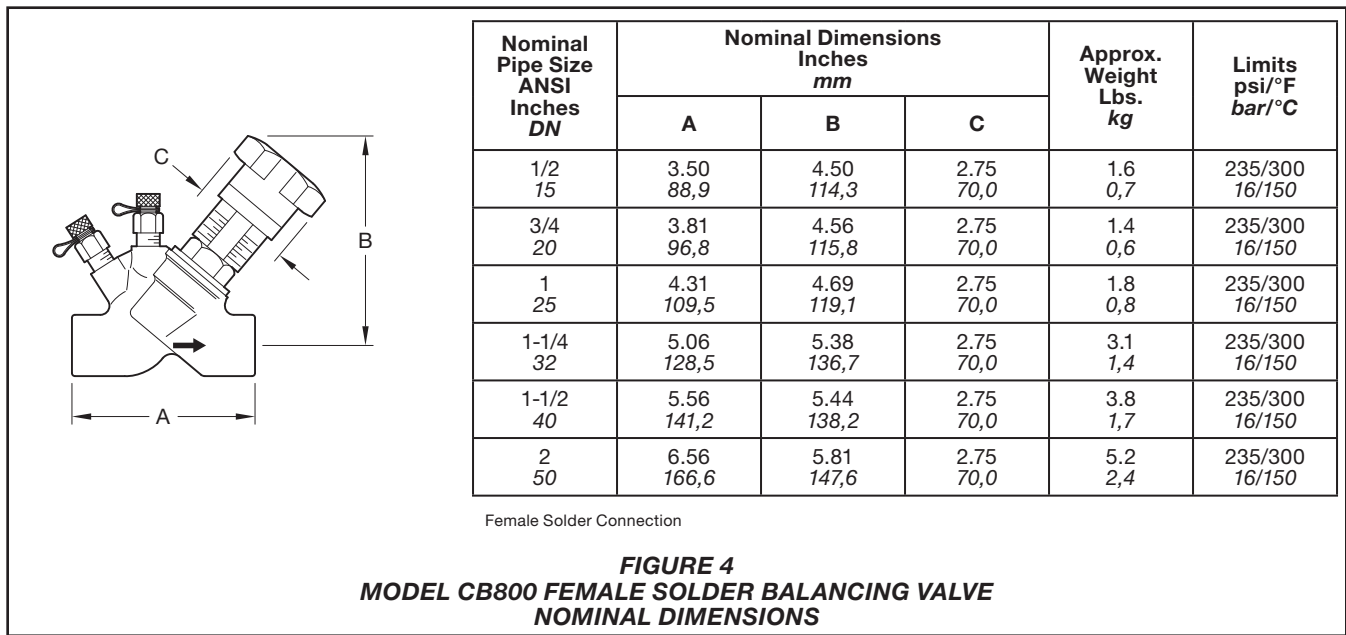
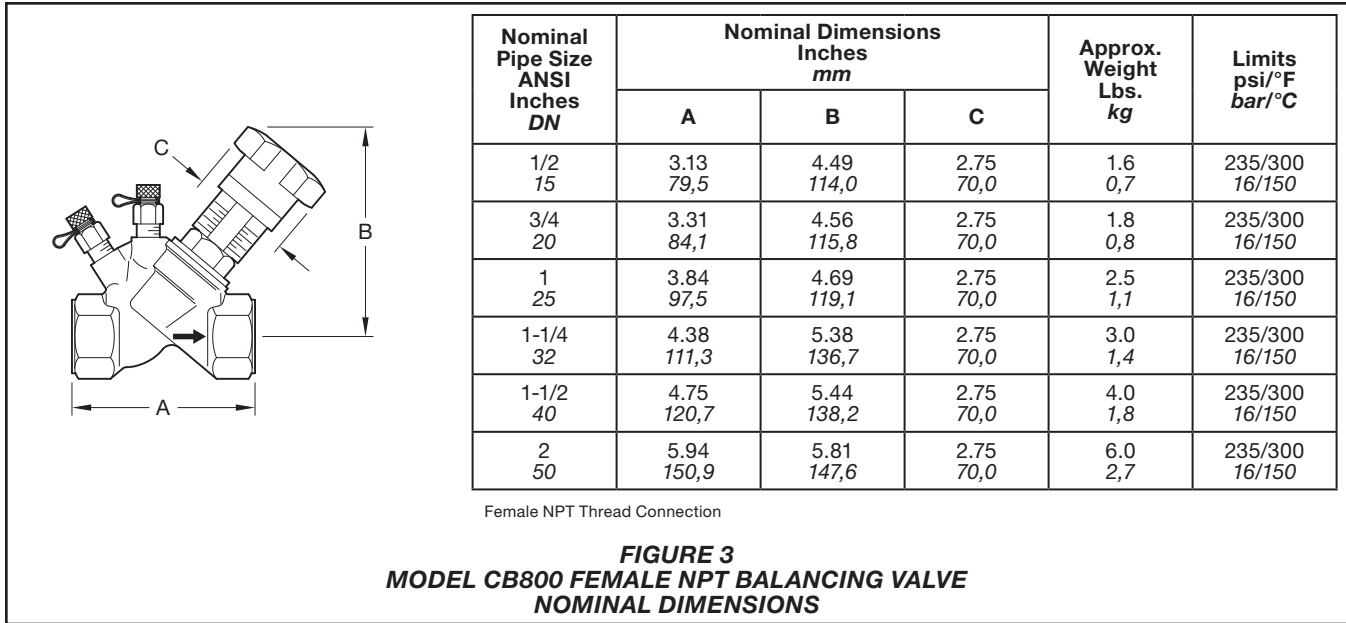
FIGURE 1
MODEL CB800 GROOVED BALANCING VALVE
NOMINAL DIMENSIONS

Nominal Pipe Size ANSI Inches DN	Nominal Dimensions Inches mm				Approx. Weight Lbs. kg	Limits psi/°F bar/°C
	A	B	C	D		
2-1/2 65	11.44 290,6	7.38 187,5	4.33 110,0	7.25 184,2	31.7 14,4	235/300 16/150
76,1 mm 65	11.44 290,6	7.38 187,5	4.33 110,0	7.25 184,2	31.7 14,4	235/300 16/150
3 80	12.25 311,2	8.00 203,2	4.33 110,0	7.88 200,2	39.8 18,0	235/300 16/150
4 100	13.75 349,3	9.50 241,3	6.30 160,0	8.69 220,7	61.3 27,8	235/300 16/150
139,7 mm 125	15.75 400,1	11.13 282,7	6.30 160,0	9.88 250,9	89.9 40,9	235/300 16/150
5 125	15.75 400,1	11.13 282,7	6.30 160,0	9.88 250,9	89.9 40,9	235/300 16/150
165,1 mm 150	18.88 479,6	11.25 285,8	6.30 160,0	11.25 285,8	113.9 51,8	235/300 16/150
6 150	18.88 479,6	11.25 285,8	6.30 160,0	11.25 285,8	113.9 51,8	235/300 16/150
8 200	23.63 600,2	18.38 466,9	11.80 300,0	13.38 339,9	361.9 164,5	235/300 16/150
10 250	28.75 730,3	18.94 481,1	11.80 300,0	15.94 404,9	431.2 196,0	235/300 16/150
12 300	33.50 850,9	20.25 514,4	11.80 300,0	18.13 460,5	581.9 264,5	235/300 16/150

Flanges are available drilled for ANSI B16.1 (Class 125), B16.5 (Class 150), and B16.42 (Class 250) or PN16/10. Specify when ordering.



**FIGURE 2
MODEL CB800 FLANGED BALANCING VALVE
NOMINAL DIMENSIONS**



Ordering Procedure

GRINNELL Mechanical Products are available globally through a network of distribution centers. Visit www.grinnell.com for the nearest distributor.

When placing an order, indicate the full product name. Specify the valve model number, size, type of end connection, and quantity.