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GRINNELL Model 308 Grooved End Butterfly Valve with Gear Operator 14 Inch to 24 Inch

General Description

The GRINNELL Model 308 Butterfly Valve provides dependable, long-term service and superior control of fluid flow in piping systems. Flow can be from either direction, and the valve can be positioned in any orientation. The valve is furnished with grooved ends for use with grooved couplings. The design of the body and disc provides exceptional flow characteristics and low operating torque. The disc has a streamlined profile that optimizes flow. The body is lined with an elastomer seat that is reinforced with a phenolic backing ring, reducing seat distortion and wear. The extended neck design allows adequate clearance for insulation.

The GRINNELL Model 308 Butterfly Valve is provided with a gear operator with adjustable stops at the open and shut positions.

⚠ WARNING

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 GRINNELL Model 308 Butterfly Valve 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.

The owner is responsible for maintaining their mechanical system and devices in proper operating condition. The installing contractor or device manufacturer should be contacted with any questions.

Technical Data

Valve Type
Grooved

Description

Factory assembled, lug-style valve with two flange-by-groove adapters

Sizes

14 to 24 inches / DN350 to DN600

Maximum Working Pressure

200 psi (13,8 bar) with 416 S.S. stem

Break-Away Stem Torque

Nominal Size	in.-lbs. (Nm)
14 inch (DN350)	4,870 (550)
16 inch (DN400)	6,685 (557)
18 inch (DN450)	8,958 (747)
20 inch (DN500)	11,950 (996)
24 inch (DN600)	18,680 (1554)

Temperature Rating

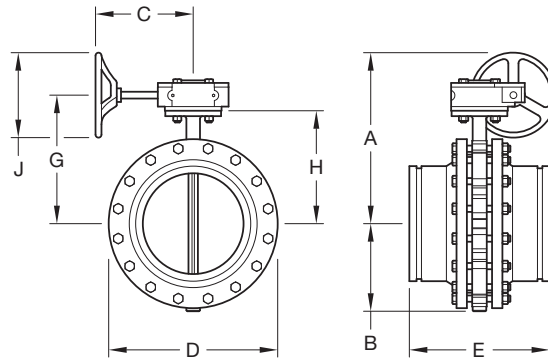
- Grade EPDM seat material, -30°F (-34°C) to +230°F (110°C), recommended for water service, dilute acids, alkalis, oil-free air and many chemical services. **NOT RECOMMENDED FOR USE IN PETROLEUM SERVICES.**
- Grade "T" Nitrile seat material, -20°F (-29°C) to +180°F (+82°C), recommended for petroleum products, air with oil vapors, vegetable oils and mineral oils. **NOT RECOMMENDED FOR USE IN HOT WATER SERVICES.**

Contact Tyco Fire Suppression & Building Products for specific recommendations on seat material. Refer to technical data sheet G610.



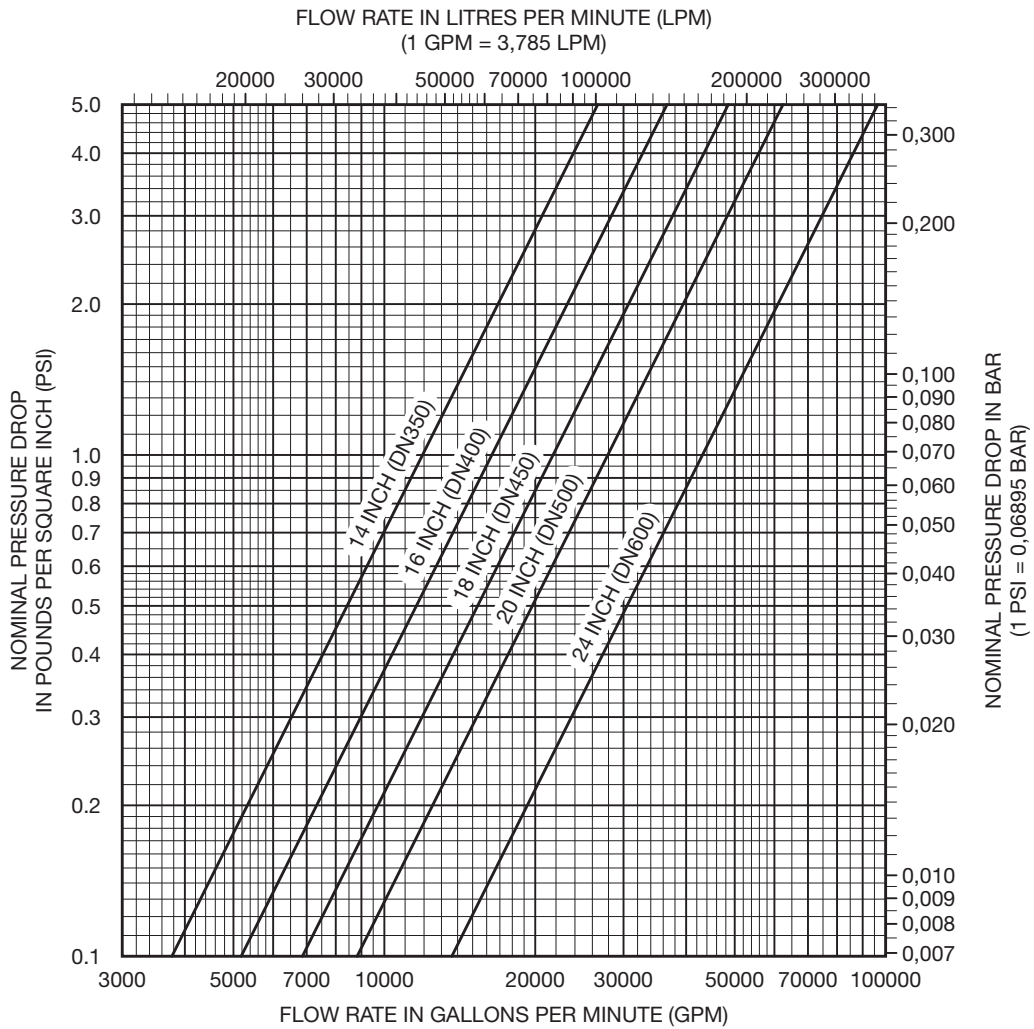
Materials of Construction

- **Valve Body**
Ductile iron conforming to ASTM A 536
- **Valve Body Seat (Liner)**
EPDM rubber or Nitrile rubber
- **Disc**
Aluminum bronze conforming to ASTM B 148 Alloy C95400
Nickel-plated ductile iron conforming to ASTM A 536 Grade 65-45-12
Other options available upon request
- **Stem**
Stainless steel conforming to ASTM A 582 Type 416 with bronze bushings
- **Flange**
Carbon steel conforming to ASTM A 53
- **Flange Coating**
Lead-free orange paint
- **Gear Operator**
Cast iron housing



Nominal Pipe Size		Nominal Dimensions								Approx Weight Lbs. (kg)
ANSI Inches DN	O.D. Inches (mm)	A Inches (mm)	B Inches (mm)	C Inches (mm)	D Inches (mm)	E Inches (mm)	G Inches (mm)	H Inches (mm)	J Inches (mm)	
14 DN350	14.000 (355,6)	22.13 (562,1)	10.50 (266,7)	8.94 (227,1)	21.00 (533,4)	19.13 (485,9)	16.13 (409,7)	14.50 (368,3)	11.81 (300,0)	414.0 (187,8)
16 DN400	16.000 (406,4)	23.97 (608,8)	12.22 (310,4)	11.82 (300,2)	23.50 (596,9)	19.54 (496,3)	17.97 (456,4)	15.70 (398,8)	11.81 (300,0)	603.0 (273,5)
18 DN450	18.000 (457,2)	24.87 (631,7)	12.93 (328,4)	11.82 (300,2)	25.00 (635,0)	20.29 (515,4)	18.87 (479,3)	16.60 (421,6)	15.75 (400,0)	678.0 (307,5)
20 DN500	20.000 (508,0)	27.17 (690,1)	14.22 (361,2)	11.82 (300,2)	27.50 (698,5)	21.31 (541,3)	21.17 (537,7)	18.90 (480,1)	11.81 (300,0)	948.0 (430,0)
24 DN600	24.000 (609,6)	31.23 (793,2)	15.34 (389,6)	13.78 (350,0)	32.00 (812,8)	22.14 (562,3)	25.23 (640,8)	22.10 (561,3)	11.81 (300,0)	1274.0 (577,9)

FIGURE 1
NOMINAL DIMENSIONS
GRINNELL MODEL 308 GROOVED END BUTTERFLY VALVE



Note: For design purposes, a safety factor of 15% to 20% should be applied to the values in the above table.

FIGURE 2
GRINNELL MODEL 308 GROOVED END BUTTERFLY VALVE
PRESSURE LOSS DATA

Installation

In piping systems, butterfly valves should be located where operation, inspection, and maintenance are readily accessible.

When a valve "closes hard", it may be due to debris lodged in the sealing area. This condition may be corrected by backing-off the hand-wheel and closing it again, several times if necessary. The valve should never be forced to seat by applying a wrench to the hand-wheel as such action can distort the valve components or score the sealing surfaces.

To prevent rotation of the valve, it is recommended that the GRINNELL Model 308 Grooved End Butterfly Valve be installed with rigid couplings. If flexible couplings are used, additional support is needed to prevent rotation.

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 or maintenance, corrosion, or other external sources of damage. 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 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

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 quantity, size, working pressure, Body Seat Liner (EDPM rubber or Nitrile rubber), and Disc (aluminum bronze or ductile iron).