

# ENGINEERING SPECIFICATIONS

## DESIGN & TESTING

Milwaukee Valve butterfly valves are designed and tested in accordance with the latest editions of the Manufacturers Standardizations Society SP-67, and the American Petroleum Institute API-609. Available in both wafer and lug styles, all bodies are provided with extended necks to allow for up to 2" of insulation. Approved by U.S. Coast Guard for use in category "A" service as described in Title 46 code of Federal Regulations 46.20-15.

## RATED WORKING PRESSURE

The maximum rated working pressure is 200 psi for 2" through 12" valves and 150 psi for 14" through 24". If necessary, H-Series (Hi-Pressure) valves can be ordered with a maximum working pressure of 250 psi for 2" through 12" valves and 200 psi for 14" through 24".

Lug body valves are recommended for applications where dead end service is required to remove downstream piping for maintenance. Placement of a downstream flange is still always advised for safety; extreme care should always be taken with hot fluids. The pressure rating of Milwaukee butterfly valves in dead end service is a function of size and liner material. For valves in sizes 2" to 12" inclusive, the ratings are liner material dependent, and given in the table below. All valves 14" through 24" inclusive are rated at 150 psi (unidirectional) for dead end service, regardless of liner material. Valves larger than 24" should not be used in dead-end service.

## ELASTOMER GUIDE

Material	Continuous Use Temp. (F)	Uses	Dead End Rating
EPDM	-30 to 275	Also known as EP or Nordel, EPDM is a general service elastomer for use in hot water and HVAC glycol systems. It is compatible with a wide range of fluids, including alcohol and acetone, but should never be used where even a trace of oil or hydrocarbon products may be present.	Bidirectional to 200 psig in all sizes from 2" through 12", inclusive.
Buna-N	+10 to 180	Also known as Nitrile, Buna-N has good strength and toughness, as well as good general chemical resistance, including most hydrocarbons. It's a good general service material for use in water, vacuum, acid, alts, alkalines, fats, oils, greases, hydraulic oils and glycols. Buna-N is not recommended for acetone, ketones, and nitrated or chlorinated hydrocarbons.	Bidirectional to 200 psig in all sizes from 2" through 12", inclusive.
Viton®	-20 to 300	Viton® is a registered trademark of DuPont, and is a fluorinated hydrocarbon elastomer with good overall resistance to petroleum based products in general. Viton is not recommended for steam or hot water service over 120 F, nor for concentrated alkalines.	Unidirectional to 150 psig in all sizes from 2" through 12" inclusive.
Neoprene (FDA Approved)	0 to 180	As an FDA approved material, Neoprene (available in black or white), is used in many food and beverage applications. Beyond these, it's recommended for moderate acids, oils, fats, greases and solvents.	Unidirectional to 150 psig in all sizes from 2" through 12" inclusive.
Hypalon®	0 to 180	Hypalon® is a registered trademark of DuPont. It is a chlorosulfonated polyethylene with good resistance to acids, hydrocarbon oils and fuels. It is not recommended for use with most esters, ethers, and ketones.	Unidirectional to 150 psig in all sizes from 2" through 12" inclusive

The information presented on this sheet is correct at time of publication. Milwaukee Valve reserves the right to change design and/or materials without notice. For our Installation, Operation and Maintenance Manual and the most current product information go to [www.milwaukeevalve.com](http://www.milwaukeevalve.com).  
⚠ State of California Prop 65 **WARNING:** Cancer and Reproductive Harm. For more information visit [www.p65warnings.ca.gov](http://www.p65warnings.ca.gov).

