Actuator Sizing

Because the actuator sizing is so critical to the proper operation and life of a ball valve, we have chosen not to publish torque values. Misinterpretation of manual torque data can lead to undersizing, while misinterpretation of factored torque values can mislead as to ease of manual operation.

Furthermore, types of service conditions can significantly alter standard torque requirements. Balon valves facilitate ease of use, and we will be glad to provide sizing information upon request through one of our field representatives or from our Oklahoma City headquarters.

Standards and Specifications

Balon utilizes the following standards in the manufacture of ball valves. It should be noted that not all styles, configurations and materials used in Balon valves meet all of these standards in their entirety.

The user therefore, should specify a given standard if there is a need to assure total compliance with a given standard.

API. . . . . (American Petroleum Institute)
API-6FA. . . . . Fire Test For Resilient-Seated Valves
API 5B . . . . . Inspection Of Threads
API-6D. . . . . Pipeline Valves, End Closures, Connectors And Swivels.
API-Q1. . . . . Quality Programs
API-594 . . . . . Wafer Check Valves
ANSI . . . . . (American National Standard Institute)
ANSI-B. . . . . 16.5 - Pipe Flanges And Flanged Fittings
ANSI-B. . . . . 16.10 - Face-To-Face End-To-End Dimensions
ANSI-B. . . . . 16.42 Ductile Iron Pipe Flanges And Flanged Fittings
ANSI-B. . . . . 16.34 - Valves - Flanged End, ... Threaded And Butt Weld
ANSI-B. . . . . (B1.20.1) - Pipe Threads General Purpose (Inch)

MSS. . . . . (Manufacturers Standardization Society)
MSS-SP6. . . . . Standard Finishes For Contact Faces Of Pipe Flanges And Connection End Flanges Of Valves And Fittings
MSS-SP25. . . . . Standard Marking System For Valves, Fittings, Flanges And Fittings
MSS-SP72. . . . . Ball Valves With Flanged Or Butt Welding Ends For General Service
MSS-SP82. . . . . Valve Pressure Test Methods
MSS-SP84. . . . . Steel Valves - Socket Welding And Threaded Ends
NACE MR-01-75. . .Sulfide Stress Cracking, Resistant Metallic Material For Oil Field Equipment (NACE Materials Are Optional And Must Be Specified On Purchase Orders)

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Application Guide

This Balon "Media and Application Guide" provides assistance to the engineer in selecting the best material for a particular service. The final selection of materials however, requires the judgement of the user because it may be necessary to sacrifice certain physical properties of a material to take better advantage of others.

Information contained in the following chart is believed to be reliable and is intended to be used by trained personnel at their own discretion and risk. Due to many factors which affect the rate of corrosion, we suggest that final acceptability be established by test under actual operating conditions.

Ratings are based on media at ambient temperatures except as noted.

E - Excellent **G - Good** **F - Fair** **U - Unsatisfactory** **BLANK - Insufficient Data**

	VALVE MATERIAL			SEAT AND SEAL MATERIAL			
Media *	Carbon Steel	Ductile Iron	316 SS	Buna-N	Viton	Nylon	TFE
Air	E	E	E	E	E	E	E
Alcohols	G	G	E	E	E	F	E
Amines (conc.)	E	E	E	U	U	E	E
Ammonia, Anhydrous	E	G	E	F	U	E	E
- Aqueous	E	E	E	F	U	G	E
- Solutions	G	G	E	F	U	G	E
Benzene or Benzol	G	G	E	U	E	E	E
Brines	F	F	G	E	E	E	E
Bunker Oils (Fuels)	G	G	E	E	E	E	E
Butane	E	E	E	E	E	E	E
Carbolic Acid (Phenol)	U	U	G	U	G	U	E
Carbon Dioxide, Dry	E	F	E	G	G	G	E
Carbonic Acid	U	U	G	G	E	E	E
Carbon Tetrachloride, Dry	F	F	E	U	E	E	E
-Wet	U	U	G	U	E	E	E
Carbonated Water	G	G	E	E	E	G	E
Crude Oil, Sweet	E	E	E	E	E	E	E
- Sour	G	G	E	F	G	G	E
Diethylamine (DEA)	E	E	E	U	U	E	E
Diesel Fuels	E	E	E	E	E	E	E
Dowtherm A and E	G	G	E	U	E	E	E
Drilling Mud	G	G	E	E	E	E	E
Ethane	E	E	E	E	E	E	E
Ethylene	E	E	E	U	E	E	E
Ethylene Glycol	G	G	G	E	E	G	E
Fuel Oil	G	G	E	E	E	E	E
Gas, Manufactured	G	G	G	E	E	E	E
- Natural	G	G	E	E	E	E	E
- Odorizers	G	G	E	U	E	G	E
- Sour	G	G	E	F	E	E	E
Gasoline, Leaded	E	G	E	G	E	E	E
- Unleaded	E	G	E	F	E	E	E
- Aviation	E	G	E	G	E	E	E
- Motor	E	G	E	F	E	E	E
Glycols	G	G	G	E	E	G	E
Heptane	E	E	E	E	E	E	E
Hexane	E	E	E	E	E	E	E
Hydraulic Oil - Petroleum Base	E	E	E	E	E	E	E
- Phosphate Base	E	E	E	U	E	E	E
Hydrocloric Acid -Air Free	U	U	U	F	E	U	E
Hydrofloric Acid	U	U	U	U	U	U	F
Hydrogen Gas	G	G	E	E	E	E	E
Hydrogen Sulfide, Dry(Conc.)	G	G	E	F	F	E	E
Wet(Conc.)	F	U	G	U	F	E	E
Illuminating Gas	E	E	E	E	E		E
Iso-Octane	E	G	E	E	E	E	E

	VALVE MATERIAL			SEAT AND SEAL MATERIAL			
Media *	Carbon Steel	Ductile Iron	316 SS	Buna-N	Viton	Nylon	TFE
Isopropyl Alcohol	G	G	G	G	E	G	E
- Ether	E	G	E	G	U	E	E
JP-4 Fuel	E	E	E	E	E	E	E
JP-5 Fuel	E	E	E	E	E	E	E
JP-6 Fuel	E	E	E	E	E	E	E
Kerosene	G	G	E	E	E	E	E
Liquified Pet. Gas (LPG)	G	G	G	E	E	E	E
Lubricating Oil	E	E	E	E	E	E	E
Mercaptan (Conc.)	G	G	E	F	E	G	E
Methane	E	E	E	E	E	E	E
Muratic Acid	U	U	U	G	E	U	E
Naphtha	G	G	E	G	E	E	E
Naphthalene	E	G	E	U	E	E	E
Natural Gas	E	E	E	E	E	E	E
Nitrogen	E	E	E	E	E	E	E
Oil, Animal	E	E	E	E	E		E
- Cottonseed	F	F	G	E	E	E	E
- Fish	G	G	E	E	E	E	E
- Fuel	G	G	E	E	E	E	E
- Lube	E	E	E	E	E	E	E
- Mineral	G	G	E	E	E	E	E
- Petroleum, Refined	E	G	E	E	E	E	E
Oil-Water Mixtures	E	E	E	E	E	E	E
Parafin	G	G	E	G	E	E	E
Pentane	G	G	E	U	E	E	E
Producer Gas	G	G	G	E	E	E	E
Propane	E	E	E	E	E	E	E
Propyl Alcohol	E	E	E	E	E	E	E
Propylene Glycol	E	E	E	E	E	F	E
Sea Water	U	U	E	E	E	E	E
Sodium Acetate	G	G	G	G	U	G	E
- Hydroxide, Cold, 20%	E	E	E	G	G	E	E
- Hydroxide, Hot, 20%	F	F	G	G	G	G	E
- Hydroxide, Cold, 50%	G	G	G	F	F	F	F
- Hydroxide, Hot, 50%	G	G	G	U	F	U	F
- Hydroxide, Cold, 70%	F	F	G	U	F		F
- Hydroxide, Hot, 70%	G	F	G	U	F		U
Steam (212˚ F)	E	E	E	U	U	U	E
Stoddard Solvent	G	G	G	E	E	G	E
Sulfur Dioxide (Dry)	G	G	E	U	U	F	E
Sulfuric Acid, 0-7%	F	F	G	F	E	G	E
- 20%	U	U	F	U	E	U	E
- 50%	U	U	U	U	E	U	E
- 100%	U	U	U	U	E	U	E
Toluene or Toluol	E	E	E	U	E	E	E
Water, Distilled, Aerated	U	U	E	E	G	E	E
- Fresh	F	F	E	E	E	E	E
- Sea	U	U	E	E	E	E	E
Wax Emulsions	E	G	E	E	E	E	E
Waxes	E	E	E	E	E	E	E
Xylene, Dry	E	E	E	U	E	E	E

** Consult Oklahoma City office for compatibility of Aluminum Bronze Material*

Application Guide

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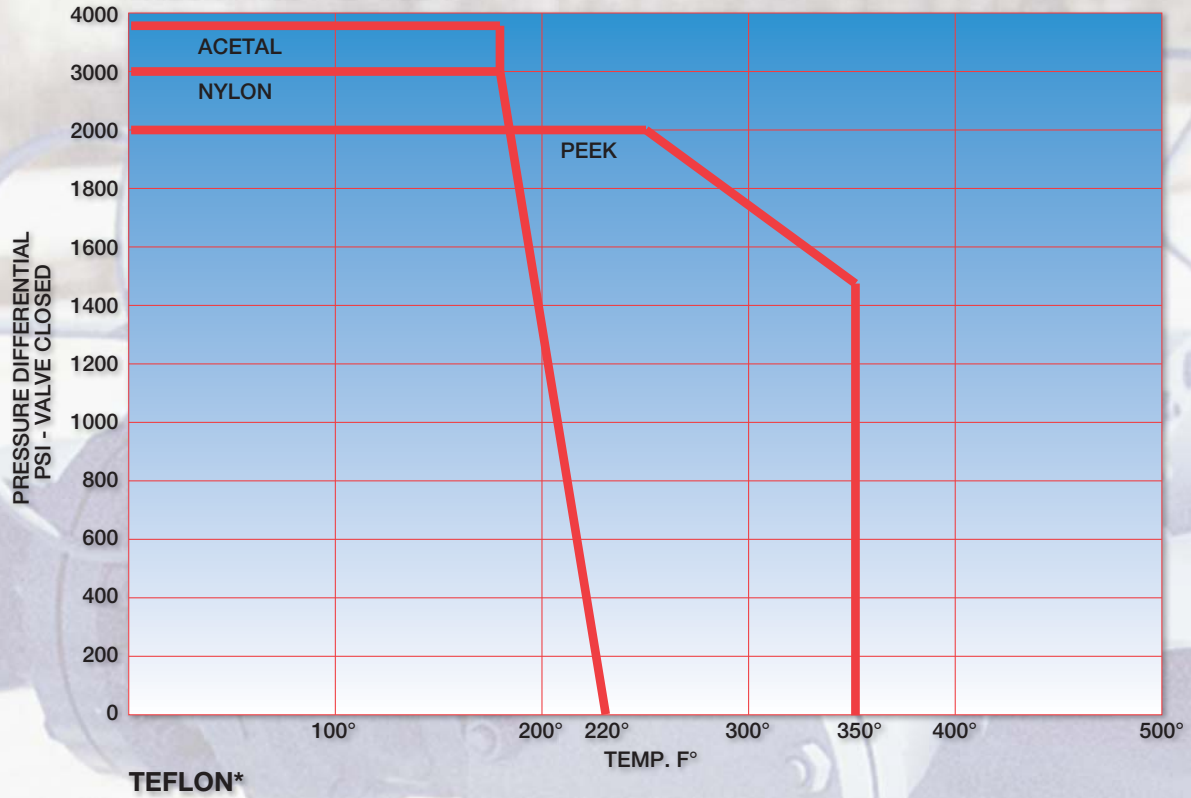
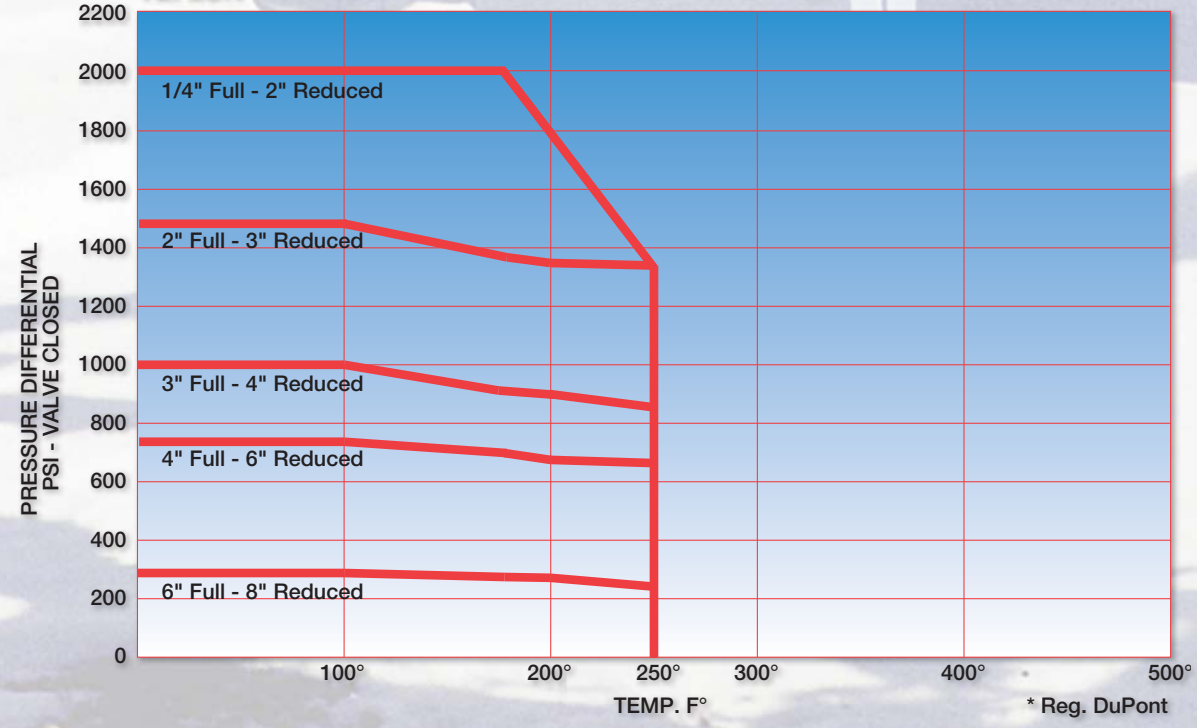
Seat Pressure Ratings

Seat Pressure & Temperature Ratings

NYLON / ACETAL / PEEK



TEFLON*



* Reg. DuPont

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Safety Is No Accident, We Do It by Design.

Seat Pressure & Temperature Ratings