

210 Set-Stop Valve and 200 Series Valve Packages Elastomer Selection

Application Bulletin

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Applies To: Model 210, 2" through 6", Hydraulic Set-Stop Valves and 200 Series Valve Packages

1. Valve Temperature and Pressure Limits

The 150 ANSI flanged valve temperature range is -20°F to 100°F @ 285 PSI maximum working pressure for valve material ASTM A 216 WCB per ASME B16.5. The maximum working pressure is reduced at temperatures above 100°F per ASME B16.5. The temperature range of the valve elastomers are in the table below.

Valve Elastomer	Elastomer Temperature Range	
LS (Low Swell) Buna	-20°F to 200°F (-28°C to 93°C)	
Buna-N	-20°F to 200°F (-28°C to 93°C)	
Viton	-20°F to 350°F (-28°C to 177°C)	

2. Low Temperature Applications

For colder climate applications use Elastomer Group 1 and replace Buna-LS (Low Swell) diaphragm with Buna-N diaphragm for improved consistent response of the valve. The elastomers must be compatible with the liquid product in all cases.

3. LPG Applications

Use Elastomer Group 2.

4. 200 Series Valve Pilot Elastomers

The control pilots used with 200 series valves will have the base elastomer of the valve; i.e., Low Swell Buna valve will have Buna-N pilot elastomers or Viton-A valve will have Viton-A pilot elastomers.

Elastomer Selection by Product

PRODUCT:	Elastomer GROUP 1	Elastomer GROUP 2	Elastomer GROUP 3	Elastomer GROUP 4
Valve Diaphragm	Buna-LS (Low Swell)	Buna-LS (Low Swell)	Buna-LS (Low Swell)	Viton-A
Retainer O-Ring (Seat)	Buna-LS	Buna-LS	Buna-LS	Viton-A
Static O-Rings	Buna-N	Buna-N	Buna-N	Viton-A
Solenoids	Viton-F	Buna-N	Chemraz	Viton-F

PRODUCT:	GROUP 1	GROUP 2	GROUP 3	GROUP 4
Diesel Fuels				
- Low Sulfur Diesel ¹				
Ultra Low Sulfur Diesel ¹				
- Biodiesel-Neat and Blends				
- Sulfur Based Diesel				
ETBE-Neat				•
Ethanol-Neat and Blends				
Fuel Oils				
Jet Fuels				
Kerosene				
Leaded Gasoline				
LPG				
Lube Oils				
Methanol-Neat				
MTBE-Neat				
Raffinate				
Unleaded Gasoline Blends:				
- MTBE-All Blends				
- MTBE-All Blends				
- Methanol-All Blends				
Unleaded Gasoline Straight				

¹ LSD and ULSD elastomers may incur increased wear if lubricity additive is not present before flowing through the valve.

Revisions included in AB03003 Issue/Rev. 1.2 (11/10): Ethanol-Neat and Blends added - Group 4.

The specifications contained herein are subject to change without notice and any user of said specifications should verify from the manufacturer that the specifications are currently in effect. Otherwise, the manufacturer assumes no responsibility for the use of specifications which may have been changed and are no longer in effect.

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