

WEIR TYPE BODY, LININGS AND DIAPHRAGM MATERIALS

DIAPHRAGM MATERIALS

Saunders diaphragms other than TFE diaphragms have positive attachment to compressor by screw or button.

All Saunders Diaphragms are suitable for vacuum service to the highest vacuum. For sizes over 3" specify 'vacuum reinforced diaphragms'.

Vacuum reinforced diaphragms (other than C(V)) have steel studs—can be used with ammonia or acetylene.

TFE Diaphragms

If operating line conditions demand a high temperature and chemical resistance, Saunders TFE diaphragm should be specified. When used with glass lined valves assembly torque should be controlled.

Diaphragm Features:

- TFE face on resilient rubber backing.
- Diaphragm is attached to compressor positively but not rigidly by 90° turn on a bayonet pin. Lack of rigidity allows uniform diaphragm pressure on weir without any load on diaphragm pin.
- Superior performance under vacuum conditions —balancing connection is not required.
- The rubber backing corrects for any creep in the TFE.
- 5 backings are available:
Butyl P1 — Normal general purpose. Supplied as standard.
Hypalon P2 — General Chlorine service.
Viton P3 — High temperature or severe Chlorine service.
Ethylene Propylene P4 — For general purpose high temperature services.
Kynar Membrane/Viton P5 — High temperature and severe services where permeation is a concern.

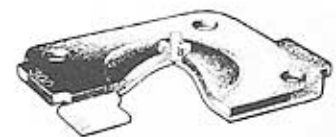
Grade	Material	Size	Temperature
AA	Natural Rubber	1/2" to 14"	-50°F to 212°F
B	Butyl Rubber	1/2" to 14"	-40°F to 212°F
C	Nitrile Rubber	1/4" to 14"	-5°F to 212°F
D (300)	Butyl Rubber (Hi Temp)	1/4" to 14"	-20°F to 265°F
E (325)	Ethylene Propylene	1/2" to 8"	-40°F to 302°F
HT	Neoprene	1/4" to 14"	-20°F to 212°F
P1 (214/300)	TFE/Butyl Backed	1/4" to 10"	-5°F to 350°F
P2 (214/237)	TFE/Hypalon Backed	1/4" to 10"	0°F to 250°F
P3 (214/226)	TFE/Viton Backed	1/4" to 10"	0°F to 350°F
P4 (214/325)	TFE/Ethylene Propylene	1/4" to 10"	-5°F to 350°F
P5 (214/K)	TFE/PVDF Viton Backed	3/4" to 6"	0°F to 350°F
Q	Natural/Synthetic Rubber	1/4" to 14"	-50°F to 212°F
U (237)	Hypalon	1/2" to 14"	0°F to 212°F
V (226)	Viton	1/4" to 14"	0°F to 300°F
W	White Natural Rubber	3/4" to 6"	-50°F to 212°F
W1 (215)	White Butyl	1/2" to 6"	-15°F to 230°F

In sizes larger than 3". Weir Type Diaphragms are specifically reinforced for vacuum service and are identified by suffix (V), e.g., Q(V). All (V) diaphragms have ferrous studs (except C(V) grade) and are specified for applications requiring all iron and steel construction. C(V) diaphragms have special bronze studs for shipboard use and are available in sizes 1" - 14". Vacuum reinforcement does not affect temperature range. B(V) diaphragms are available in sizes 1" to 14" to complete a full range of diaphragms with ferrous studs.

Weir Type Diaphragms



Rubber



TFE/Rubber Backed

BODY MATERIALS AND LININGS

Material	Screwed	Flanged
Ductile Iron	1/4" - 2"	3/4" - 8"
Cast Iron Unlined	2 1/2" - 3"	1/2" - 14"
Aluminum	1/4" - 2"	1/2" - 4"
Bronze	1/4" - 3"	1/2" - 6"
Stainless Steel ATSM A296 CF8M (Cast equivalent of AISI 316)	1/4" - 2"	1/2" - 10"
Alloy 20	1/2" - 2"	—

Butt weld and socket weld ends are available in ST, ST, and Alloy 20 body materials.

Material	Flanged
Cast Iron or Ductile Lined with:	
Hard Rubber	3/4" - 14"
Soft Rubber	3/4" - 14"
Neoprene	3/4" - 14"
Butyl	3/4" - 14"
Hypalon	3/4" - 14"
Glass	1/2" - 10"
Halar (ECTFE)	1/2" - 12"
ETFE	3/4" - 8"
PFA	3/4" - 4"
Polypropylene	3/4" - 8"
PVDF	3/4" - 8"

All screwed and flanged end connections conform to U.S. standards (API/NPT and ANSI 125 & 150). Valves with other national and international standards can be supplied.