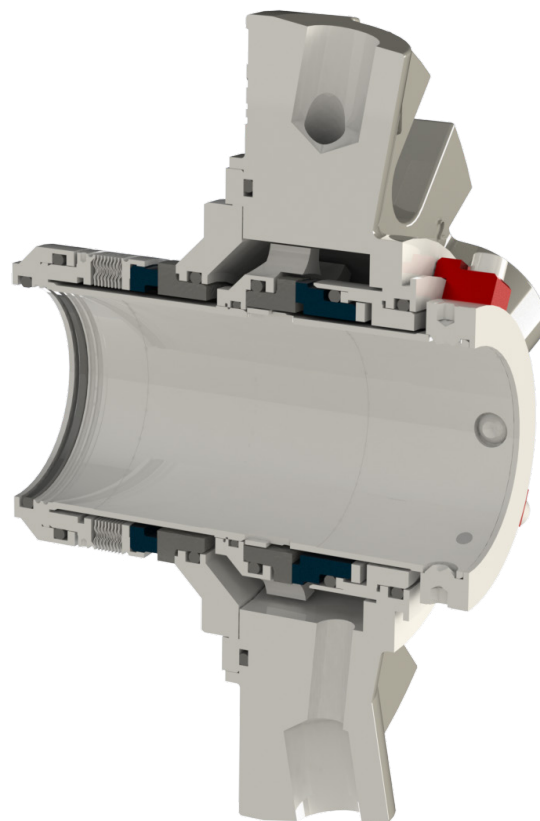


VDRBSMS / VBDRBSMS

ANSI / Industrial Hybrid Welded Metal Bellows and Multi-Spring Dual Mechanical Seal

FEATURES

- Simple cartridge seal installation.
- Innovative Hybrid design with Rotating Welded Metal Bellows Primary Seal and Stationary Multi-Spring Secondary.
- Cost effective solution to challenging applications that requires Welded Metal Bellows.
- Sleeve is isolated from process fluid.
- 3/8" NPT barrier connection allows for cooling.
- Vantage dual seal glands include four (4) barrier in and out connections for maximum piping flexibility.
- Angled gland connections allow for easier pipe fitting.
- Setting clips provide positive axial and radial setting of the Vantage cartridge seal to ensure proper seal installation. The Vantage setting clips are easy to access for simple removal.
- Only one Allen wrench required to tighten screws and remove the setting clips.



MATERIALS OF CONSTRUCTION

Rotating Seal Face	Carbon, Tungsten Carbide, Sintered Silicon Carbide
Stationary Seal Face	Sintered Silicon Carbide
Bellows	Hastelloy® C276
Metallurgy	316 SS
Elastomers	Viton®, Ethylene Propylene, Aflas®, Buna, Neoprene, Perfluorelastomer
Gland Gasket	Glass-Filled Teflon™
Throttle Bushing	Glass-Filled Teflon™

OPERATING PARAMETERS

Temperature	400 °F (200 °C)
Pressure	300 psi (20 bar)
Speed	6,000 fpm

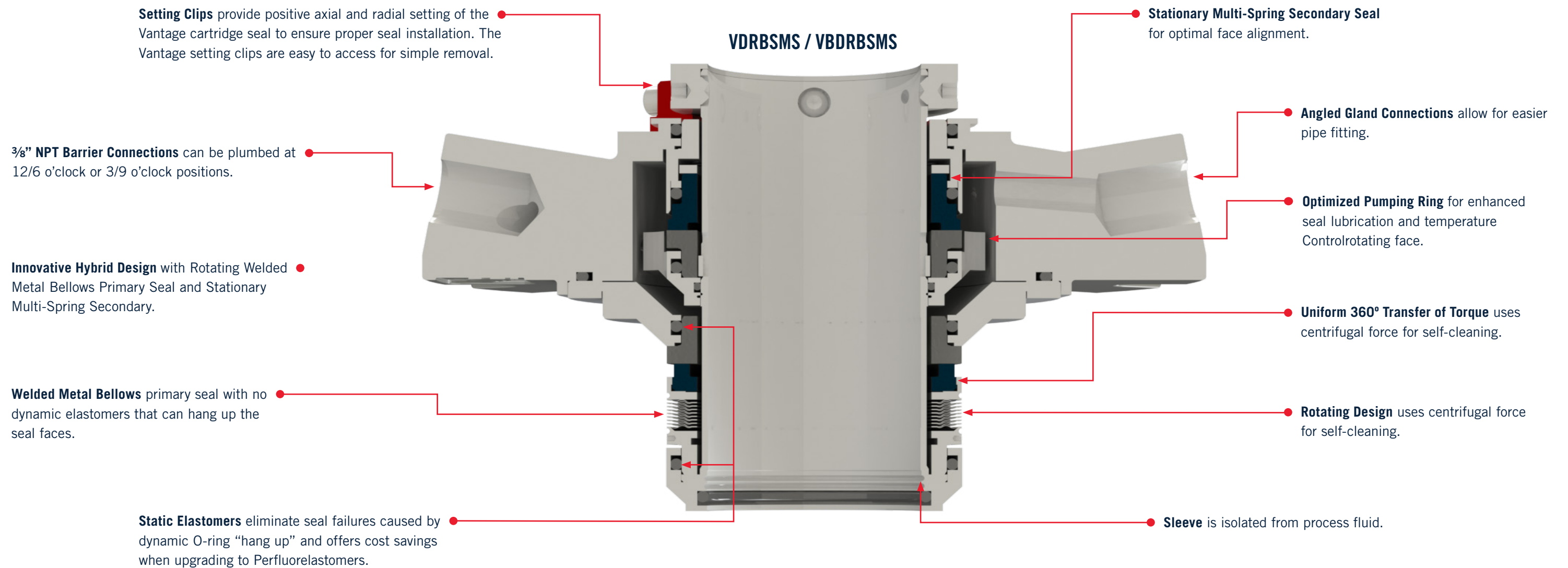
*Maximum temperature / speed / pressure / runout indicates operating extremes independently and does not imply the seal will function at these extremes at the same time.

Registered Trademarks:

Viton® - Dupont Performance Elastomers; Aflas® - Asahi Glass Co.; Teflon® - E.I. DuPont de Nemours and Co; Hastelloy® - Haynes International, Inc.

VANTAGE TANDEM CARTRIDGE FEATURES

DESIGN FEATURES & BENEFITS



VANTAGE FAMILY DUAL SEAL - TYPICAL ARRANGEMENT

Dual Seal VTSMS, VTRB, VDRBSMS

DIMENSIONAL DATA (INCHES)

Nominal Shaft Size	FAS Dash Size (16ths)	Inboard length (L1)	Outboard length (L2)	Seal Outer Diameter (D1)	Min. Bore (D2)	Max. Bore (D3)	Min. Depth (L3)	Min. Dist. to Nearest Obstruction (L4)	Bolt suface (L5)	Gland OD (D4)	Slot Diameter (D5)	Slot width (W1)
0.938	-15	1.840	2.017	1.575	1.625	2.005	1.903	2.080	0.770	4.000	2.963	0.525
1.000	-16	1.840	2.017	1.575	1.625	2.005	1.903	2.080	0.770	4.000	2.963	0.525
1.063	-17	1.840	2.017	1.700	1.750	2.130	1.903	2.080	0.770	4.250	2.963	0.525
1.125	-18	1.840	2.017	1.700	1.750	2.130	1.903	2.080	0.770	4.250	2.963	0.525
1.188	-19	1.840	2.017	1.825	1.875	2.255	1.903	2.080	0.677	4.250	3.111	0.525
1.250	-20	1.840	2.017	1.825	1.875	2.255	1.903	2.080	0.677	4.250	3.111	0.525
1.313	-21	1.840	2.017	1.950	2.000	2.380	1.903	2.080	0.770	4.250	3.250	0.525
1.375	-22	1.840	2.017	1.950	2.000	2.380	1.903	2.080	0.770	4.250	3.250	0.525
1.438	-23	1.930	2.125	2.200	2.250	2.680	1.994	2.188	0.770	4.500	3.574	0.563
1.500	-24	1.930	2.125	2.200	2.250	2.680	1.994	2.188	0.770	4.500	3.574	0.563
1.563	-25	1.930	2.125	2.320	2.374	2.800	1.994	2.188	0.750	5.000	3.620	0.563
1.625	-26	1.930	2.125	2.320	2.374	2.800	1.994	2.188	0.750	5.000	3.620	0.563
1.688	-27	1.930	2.125	2.445	2.500	2.926	1.994	2.188	0.770	5.500	3.820	0.563
1.750	-28	1.930	2.125	2.445	2.500	2.926	1.994	2.188	0.770	5.500	3.820	0.563
1.813	-29	1.930	2.125	2.575	2.625	2.990	1.994	2.188	0.770	5.500	3.875	0.563
1.875	-30	1.930	2.125	2.575	2.625	2.990	1.994	2.188	0.770	5.500	3.875	0.563
1.938	-31	1.930	2.125	2.700	2.750	3.240	1.994	2.188	0.761	5.500	4.260	0.688
2.000	-32	1.930	2.125	2.700	2.750	3.240	1.994	2.188	0.761	5.500	4.260	0.688
2.063	-33	1.930	2.125	2.825	2.875	3.240	1.994	2.188	0.770	6.000	4.375	0.688
2.125	-34	1.930	2.125	2.825	2.875	3.240	1.994	2.188	0.770	6.000	4.375	0.688
2.188	-35	1.930	2.125	2.950	3.000	3.365	1.994	2.188	0.770	6.500	4.500	0.688
2.250	-36	1.930	2.125	2.950	3.000	3.365	1.994	2.188	0.770	6.500	4.500	0.688
2.313	-37	2.173	2.434	3.195	3.250	3.615	2.236	2.497	0.770	6.375	4.625	0.688
2.375	-38	2.173	2.434	3.195	3.250	3.615	2.236	2.497	0.770	6.375	4.625	0.688
2.438	-39	2.173	2.434	3.320	3.375	3.740	2.236	2.497	0.770	6.500	4.750	0.688
2.500	-40	2.173	2.434	3.320	3.375	3.740	2.236	2.497	0.770	6.500	4.750	0.688
2.563	-41	2.173	2.434	3.485	3.625	3.990	2.236	2.497	0.770	6.500	5.019	0.688
2.625	-42	2.173	2.434	3.485	3.625	3.990	2.236	2.497	0.770	6.500	5.019	0.688
2.688	-43	2.507	2.100	3.650	4.000	4.115	3.620	2.163	0.770	6.875	5.268	0.688
2.750	-44	2.507	2.100	3.650	4.000	4.115	3.620	2.163	0.770	6.875	5.268	0.688
2.813	-45	2.194	2.612	3.775	3.875	4.240	2.257	2.675	1.015	7.000	5.312	0.688
2.875	-46	2.194	2.612	3.775	3.875	4.240	2.257	2.675	1.015	7.000	5.312	0.688
2.938	-47	2.194	2.612	3.900	4.000	4.450	2.257	2.675	0.948	7.750	5.720	0.813
3.000	-48	2.194	2.612	3.900	4.000	4.450	2.257	2.675	0.948	7.750	5.720	0.813

Dual Seal Big/Taper Bore VBTSMS, VBTRB, VBDRBSMS

DIMENSIONAL DATA (INCHES)

Nominal Shaft Size	FAS Dash Size (16ths)	Inboard length (L1)	Outboard length (L2)	Seal Outer Diameter (D1)	Min. Bore (D2)	Max. Bore (D3)	Min. Depth (L3)	Min. Dist. to Nearest Obstruction (L4)	Bolt suface (L5)	Gland OD (D4)	Slot Diameter (D5)	Slot width (W1)
1.375	-22	1.840	2.017	1.950	2.875	3.125	1.903	2.080	0.770	5.250	4.000	0.525
1.750	-28	1.930	2.125	2.445	3.500	3.820	1.994	2.188	0.770	6.500	4.750	0.625
1.875	-30	1.930	2.125	2.575	3.625	3.945	1.994	2.188	0.770	5.875	5.000	0.625
2.125	-34	1.930	2.125	2.825	3.875	4.195	1.994	2.188	0.770	7.250	5.750	0.750
2.500	-40	2.173	2.434	3.320	4.750	5.070	2.236	2.497	0.770	8.000	6.375	0.750
2.625	-42	2.173	2.434	3.485	4.625	4.945	2.236	2.497	0.770	7.000	6.000	0.625

Dual Seal VTSMS, VTRB, VDRBSMS

DIMENSIONAL DATA (MM)

Nominal Shaft Size	Inboard length (L1)	Outboard length (L2)	Seal Outer Diameter (D1)	Min. Bore (D2)	Max. Bore (D3)	Min. Depth (L3)	Min. Dist. to Nearest Obstruction (L4)	Bolt suface (L5)	Gland OD (D4)	Slot Diameter (D5)	Slot width (W1)
24mm	46.7	51.2	40.0	41.3	50.9	48.3	52.8	19.6	101.6	75.3	13.3
25mm	46.7	51.2	40.0	41.3	50.9	48.3	52.8	19.6	101.6	75.3	13.3
28mm	46.7	51.2	43.2	44.5	54.1	48.3	52.8	19.6	108.0	75.3	13.3
30mm	46.7	51.2	46.4	47.6	57.3	48.3	52.8	17.2	108.0	79.0	13.3
32mm	46.7	51.2	46.4	47.6	57.3	48.3	52.8	17.2	108.0	79.0	13.3
33mm	46.7	51.2	49.5	50.8	60.5	48.3	52.8	19.6	108.0	82.6	13.3
35mm	46.7	51.2	49.5	50.8	60.5	48.3	52.8	19.6	108.0	82.6	13.3
38mm	49.0	54.0	55.9	57.2	68.1	50.6	55.6	19.6	114.3	90.8	14.3
40mm	49.0	54.0	58.9	60.3	71.1	50.6	55.6	19.1	127.0	93.8	14.3
43mm	49.0	54.0	62.1	63.5	74.3	50.6	55.6	19.6	139.7	97.0	14.3
45mm	49.0	54.0	62.1	66.7	74.3	50.6	55.6	19.6	139.7	97.0	14.3
48mm	49.0	54.0	65.4	66.7	75.9	50.6	55.6	19.6	139.7	98.4	14.3
50mm	49.0	54.0	68.6	69.9	82.3	50.6	55.6	19.3	139.7	108.2	17.5
53mm	49.0	54.0	71.8	73.0	82.3	50.6	55.6	19.6	152.4	111.1	17.5
55mm	49.0	54.0	74.9	76.2	85.5	50.6	55.6	19.6	165.1	114.3	17.5
58mm	55.2	61.8	81.2	82.6	91.8	56.8	63.4	19.6	161.9	117.5	17.5
60mm	55.2	61.8	81.2	82.6	91.8	59.9	63.4	19.6	161.9	117.5	17.5
63mm	55.2	61.8	84.5	85.7	95.0	56.8	63.4	19.6	165.1	120.7	17.5
65mm	55.2	61.8	88.5	92.1	101.3	56.8	63.4	19.6	165.1	127.5	17.5
68mm	63.7	53.3	92.7	101.6	104.5	91.9	54.9	19.6	174.6	133.8	17.5
70mm	63.7	53.3	92.7	101.6	104.5	91.9	54.9	19.6	174.6	133.8	17.5
75mm	55.7	66.3	99.1	101.6	113.0	57.3	67.9	24.1	196.9	145.3	20.6

VANTAGE FAMILY DUAL SEAL - TYPICAL ARRANGEMENT

Reference Diagrams

