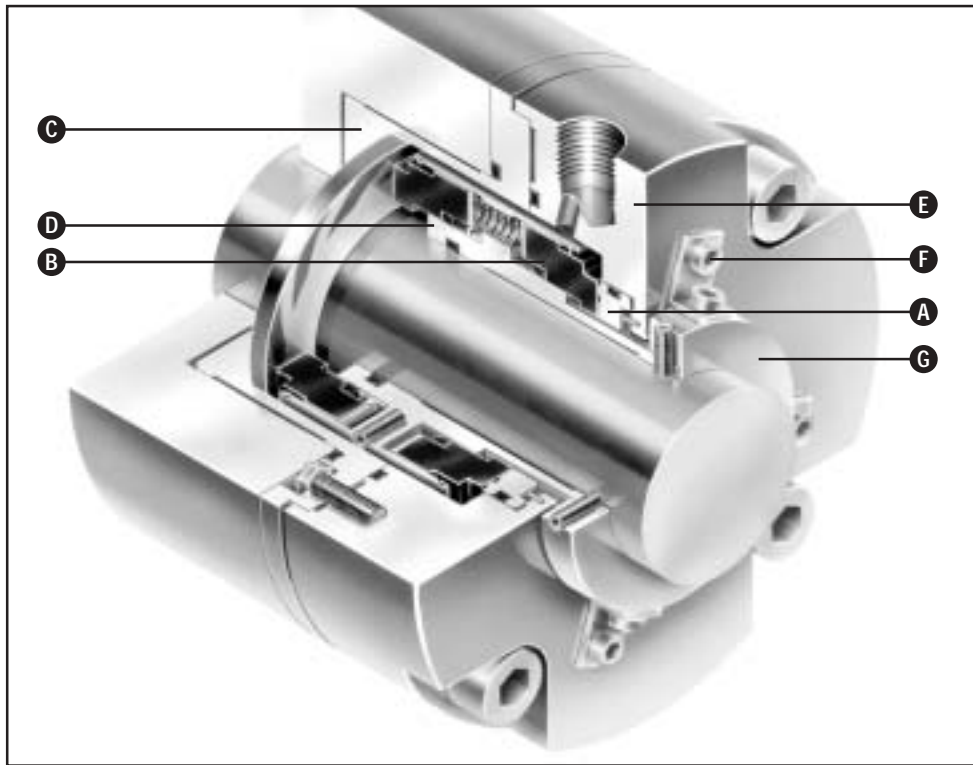




TYPE 2800 Extended Range Gas-Lubricated, Non-Contacting Double Cartridge Seal

TYPE 2800 Extended Range

- A – Seat/Mating Ring
- B – Face/Primary Ring
- C – Gland/Liner
- D – Sleeve
- E – Gland Plate
- F – Setting Clips
- G – Drive Collar



Spiral Groove Technology



Product Description

- Gas lubricated non-contact dual seal that offers the best available process containment technology in pumping services.
- For high reliability sealing of volatile and hazardous fluids in chemical and petrochemical processes.
- Double seal alternative for positive sealing of high-purity fluids without potential for product contamination.
- For use in large bore seal chambers.
- Size range covers shafts outside the typical ANSI B73 frame size.
- For sealing fluids that are sensitive to thermal gain or loss.

Design Features

- Full process containment
- Reverse Pressure Capability
- Spiral Groove Technology
- Non-Contacting Operation
- Simplified Gas Barrier Support System

Performance Capabilities*

- Temperature:
-40°C to 260°C/-40°F to 500°F
- Pressure:
Up to 21 bar g/300 psig max.
- Speed:
1450 rpm minimum

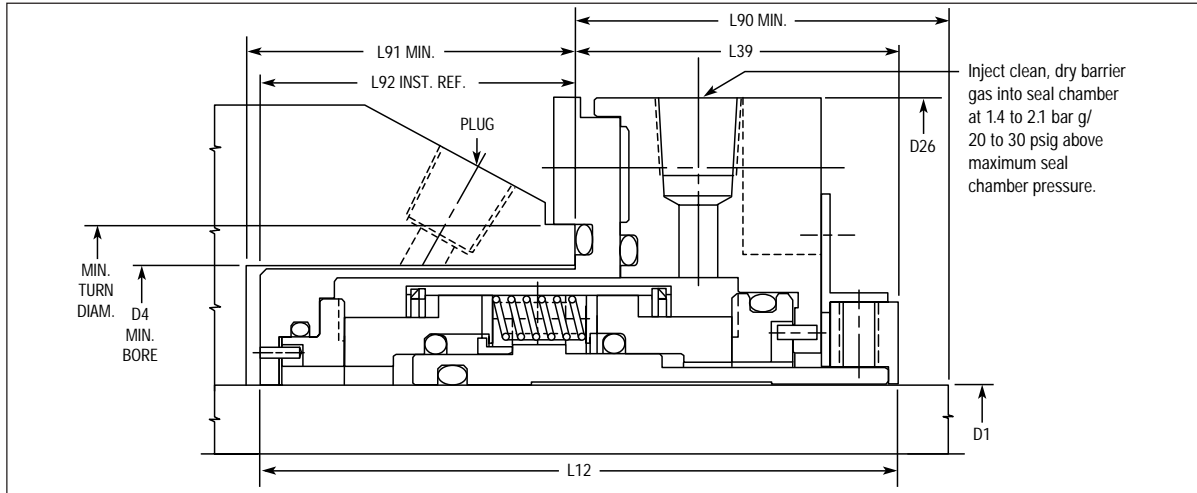
* Conditions that vary from those listed above can be sealed using other 2800 Series products. Consult John Crane Engineering at the locations on the back page.



TYPE 2800 Extended Range

Gas-Lubricated, Non-Contacting Double Cartridge Seal

Type 2800 Typical Arrangement / Dimensional Data



Type 2800 Dimensional Data (inches)

Seal Size (inches)	D1	D4	D26	L12	L39	L90 Min	L91 Min	L92 Inst. Ref	Min. Turn Diam.	Min. Stud Diam.	Gland Stud PCD
1 1/8"	28.58	66.68	114.30	109.52	57.15	58.72	56.37	52.37	79.38	M10	95.25
1 3/8"	34.93	73.03	127.00	103.20	52.40	60.33	54.80	50.80	85.73	M10	101.60
1 1/2"	38.10	76.20	139.70	103.20	50.80	60.33	56.40	52.40	95.20	M12	114.30
1 5/8"	41.28	85.73	136.53	119.67	53.67	69.00	70.00	66.00	98.43	M10	112.70
1 3/4"	44.45	88.90	165.10	119.93	65.96	71.42	57.97	53.97	110.24	M12	139.70
1 7/8"	47.63	92.08	149.23	132.94	78.54	92.08	58.41	54.41	104.78	M12	127.00
2"	50.80	95.25	146.05	116.65	64.28	65.07	56.37	52.37	111.13	M10	127.00
2 1/8"	53.98	98.42	180.98	118.30	65.17	72.21	57.13	53.13	119.66	M16	152.40
2 3/8"	60.33	107.95	180.98	117.04	55.55	64.29	65.49	61.49	133.35	M16	152.40
2 1/2"	63.50	114.30	200.03	117.09	52.39	73.03	68.70	64.70	138.56	M16	171.45
2 5/8"	66.68	117.48	177.80	117.05	52.35	103.17	68.70	64.70	130.18	M12	152.40
2 3/4"	69.85	120.65	200.03	124.82	62.92	72.39	65.90	61.90	138.56	M16	171.45
3"	76.20	127.00	203.20	124.99	67.84	121.44	61.15	57.15	146.05	M16	171.45
3 1/4"	82.55	133.35	195.25	131.33	71.00	119.99	64.33	60.33	146.05	M16	165.00
3 1/2"	88.90	142.88	210.34	142.44	82.11	133.35	64.33	60.33	158.75	M16	177.80
3 3/4"	95.25	152.40	239.70	147.65	65.15	82.55	86.50	82.50	171.40	M16	209.55
4"	101.60	158.75	248.00	157.47	113.17	127.00	48.30	44.30	185.00	M20	215.00

Type 2800 Dimensional Data (mm)

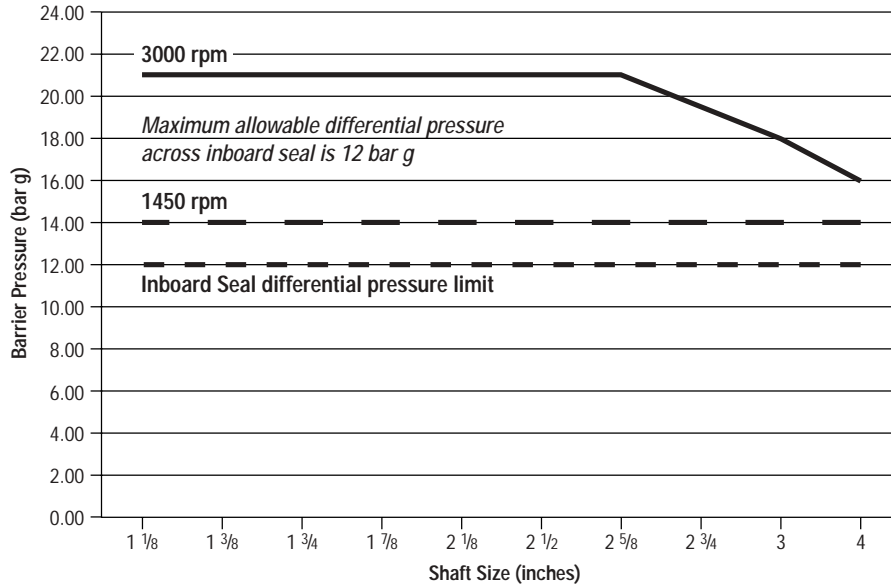
Seal Size (mm)	D1	D4	D26	L12	L39	L90 Min	L91 Min	L92 Inst. Ref	Min. Turn Diam.	Min. Stud Diam.	Gland Stud PCD
28mm	28.00	66.68	114.30	109.52	57.15	58.72	56.37	52.37	79.38	M10	95.25
35mm	35.00	73.03	127.00	103.20	52.40	60.33	54.80	50.80	85.73	M10	101.60
38mm	38.00	76.20	139.70	103.20	50.80	60.33	56.40	52.40	95.20	M12	114.30
40mm	40.00	85.73	136.53	119.67	53.67	69.00	70.00	66.00	98.43	M10	112.70
45mm	45.00	88.90	165.10	119.93	65.96	71.42	57.97	53.97	110.24	M12	139.70
48mm	48.00	92.08	149.23	132.94	78.54	92.08	58.41	54.41	104.78	M12	127.00
50mm	50.00	95.25	146.05	116.65	64.28	65.07	56.37	52.37	111.13	M10	127.00
55mm	55.00	98.42	180.98	118.30	65.17	72.21	57.13	53.13	119.66	M16	152.40
60mm	60.00	107.95	180.98	117.04	55.55	64.29	65.49	61.49	133.35	M16	152.40
63mm	63.00	114.30	200.03	117.09	52.39	73.03	68.70	64.70	138.56	M16	171.45
65mm	65.00	117.48	177.80	117.05	52.35	103.17	68.70	64.70	130.18	M12	152.40
70mm	70.00	120.65	200.03	124.82	62.92	72.39	65.90	61.90	138.56	M16	171.45
75mm	75.00	127.00	203.20	124.99	67.84	121.44	61.15	57.15	146.05	M16	171.45
80mm	80.00	133.35	195.25	131.33	71.00	119.99	64.33	60.33	146.05	M16	165.00
90mm	90.00	142.88	210.34	142.44	82.11	133.35	64.33	60.33	158.75	M16	177.80
95mm	95.00	152.40	239.70	147.65	65.15	82.55	86.50	82.50	171.40	M16	209.55
100mm	100.00	158.75	248.00	157.47	113.17	127.00	48.30	44.30	185.00	M20	215.00

Consult John Crane Engineering for larger standard sizes and non standard sizes.



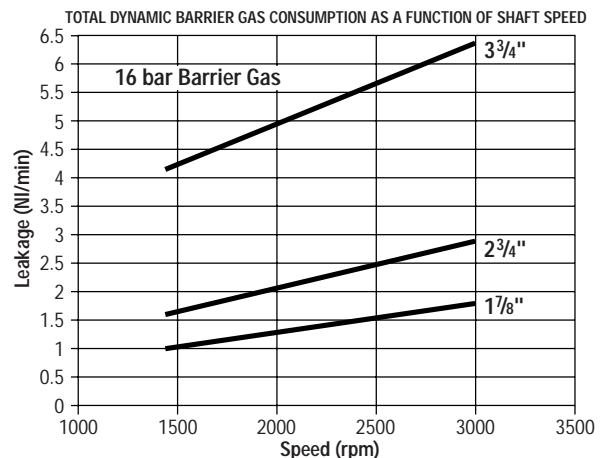
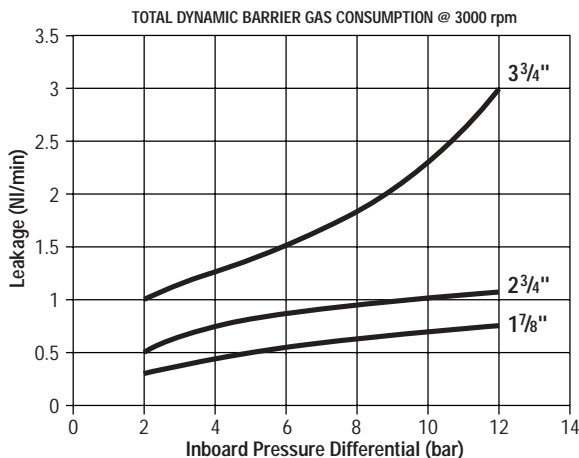
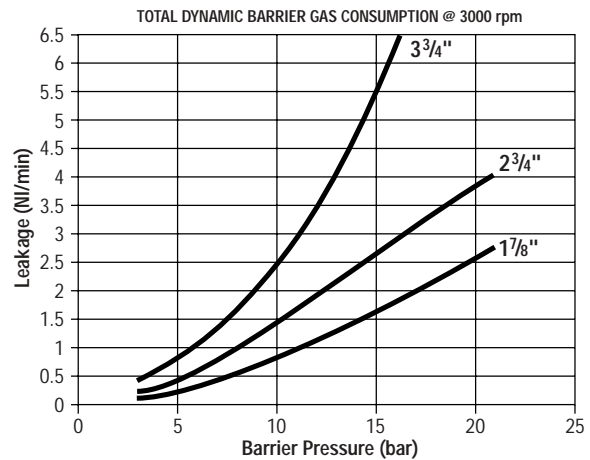
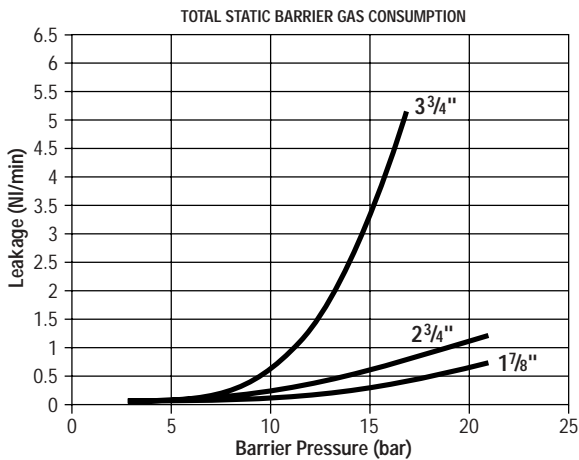
TYPE 2800 Extended Range Gas-Lubricated, Non-Contacting Double Cartridge Seal

Barrier Gas Pressure Limits



Barrier gas should be set at a minimum of 1.4 to 2.1 bar g (20 to 30 psig) above maximum seal chamber pressure.

Gas Consumption





TYPE 2800 Extended Range Gas-Lubricated, Non-Contacting Double Cartridge Seal

Materials of Construction

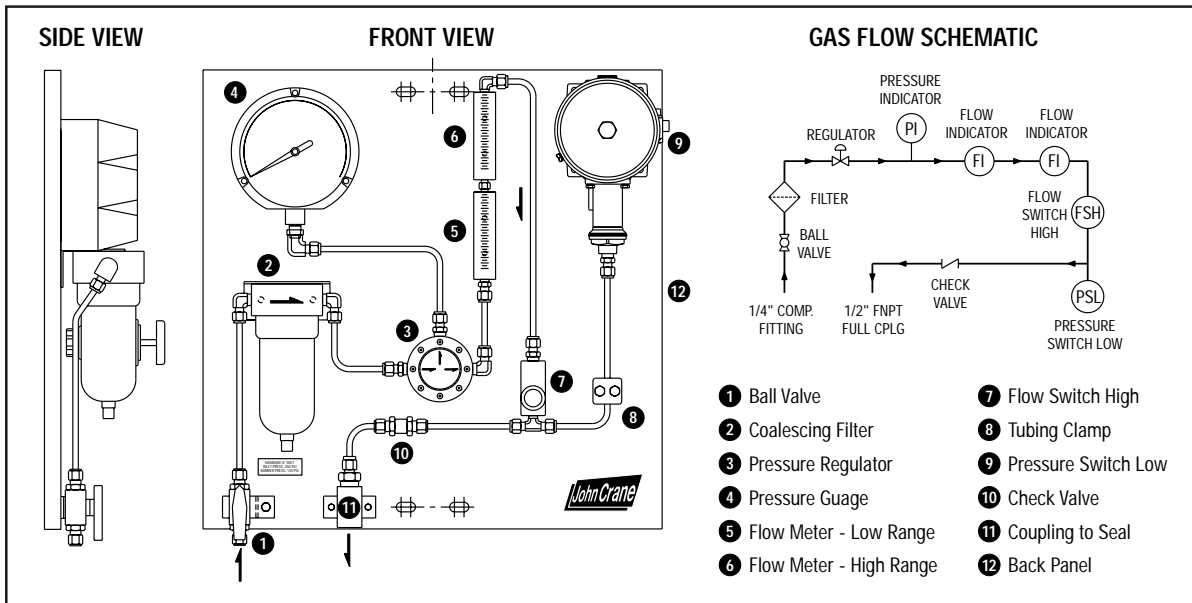
SEAL COMPONENT	MATERIAL	CODE
PRIMARY RING		
- Standard	Nickel Chrome Carbon	605
- Options	None	-
MATING RING		
- Standard	* Tungsten Carbide	005
- Options	* Silicon Carbide	277
O-RINGS		
- Standard	Fluorocarbon	134
- Options	* Perfluoroelastomer Nitrile	394 130
GASKETS		
- Standard	PTFE	138
- Options	None	-

SEAL COMPONENT	MATERIAL	CODE
SPRINGS		
- Standard	Stainless Steel	001
- Options	Hastelloy C-276 (UNS N 10276)	033
OTHER		
TYPICAL HARDWARE		
- Gland Plate	316 Stainless Steel	001
- Sleeve	316 Stainless Steel	001
- Retainer, Thrust Ring	316 Stainless Steel	001
- Drive Collar/Screws	316 Stainless Steel	001
- Options	Hastelloy C-276 (UNS N 10276)	033

* Other grades of WC / SiC / FFKM are also available

Gas Control Panel

Instrumentation requirements which differ from the panel pictured can be accommodated. Contact John Crane Lemco at 918 835-7325 with requirements.



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Fax: 44-1753-224224

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Middle East, Africa, Asia
Dubai, United Arab Emirates
Tel: 971-4-3438940
Fax: 971-4-3438970

North America
Morton Grove, Illinois USA
1-800-SEALING
Tel: 1-847-967-2400
Fax: 1-847-967-3915

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For your nearest John Crane facility, please contact one of the locations above.

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