

## **CPM Series**

Durable single and dual cartridge seals

*CPM Series seals succeed in the challenging application demands* of the Corn Wet Milling industry. The combination of single and dual cartridge pusher seal configurations provide versatility to satisfy a full range of exacting conditions from the solids of corn steep to the light specific gravity applications of ethanol refining. CPM seals have proven performance in field applications and are capable of meeting the market's high performance expectations.



## Features and Benefits

- Robust rotary face design is flexibly mounted, enhancing the ability to survive shock and face distortion typically found in clamped seal face designs.
- Automatic face on face alignment is a result of the floating stationary assembly's ability to accommodate out-of-square misalignment of the pump
- Springs located outside the process fluid deter chemical stress corrosion and spring clogging by dirty process fluids.
- Direct sintered silicon carbide and graphitized sintered silicon carbide hard face combinations tolerate abrasive slurries and periodic off design pump operating excursions.
- Hydraulically balanced seal design reduces friction, heat and wear with lower loading forces while maintaining a lubrication film between the mating faces.
- Dual seal designs are double balanced allowing for pres-surized or non-pressurized operation.
- Gland specifications to fit large bore seal chambers or standard bore stuffing boxes are standard.

- Maximized flow design for cooler seal operation with dual seal buffer/barrier circulation.
- Flush port standard for single seal configurations.
- Throttle bushing option available for increased safety on single seals.
- Factory pre-assembled and air tested for reliable equipment start-up.



**Experience In Motion** 

# FLOWSERVE

## **Operating Parameters**

Maximum Pressure	vacuum to 400 psig (27 bar)
Temperature	-40 to 400°F (-40 to 204°C)
Maximum Speed	100 ft/min (30 m/s)
Specific Gravity	>0.6

Material	s of	Const	ruction
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Metal Parts	316 Stainless Steel
Mating Ring	Direct Sintered Silicon Carbide (DSSC)
Primary Ring	Carbon, Graphitized Sintered Silicon Carbide
Elastomers	Aflas <sup>1</sup> , Fluoroelastomer
Springs	Alloy C-276 $ \begin{array}{c} \overbrace{I} = G \xrightarrow{K} \\ \downarrow = F \xrightarrow{K} J \xrightarrow{I} \end{array} $
<sup>1</sup> Registered Traden	ark of Asahi Glass Co., Ltd

NPT

NPT Drair (optional)

#### Dimensional Data for standard bore seal chambers (inches) CPM PX Single Seals

Α	C	;	D	Ε	F	G	J	K	L	М
Shaft & Seal Size	Box I (Min)	Bore (Max)	Gasket OD	Gland OD	INBD Seal Dim	Box Depth (Min)	OTBD Seal Dim	Dist to Obst. (Min)	Slot Bolt Circle	Bolt Slot Dia
1.125	1.750	2.135	2.375	4.000	1.052	1.114	1.636	1.698	2.868	0.438
1.375	2.000	2.385	2.625	4.000	1.052	1.114	1.636	1.698	3.212	0.531
1.750	2.500	2.760	3.000	5.500	1.052	1.114	1.636	1.698	3.587	0.531
1.875	2.625	2.885	3.125	5.500	1.052	1.114	1.636	1.698	3.712	0.531
2.000	2.750	3.010	3.250	5.400	1.052	1.114	1.636	1.698	3.837	0.531
2.125	2.875	3.135	3.375	6.000	1.052	1.114	1.636	1.698	4.118	0.688
2.375	3.375	3.885	4.125	6.000	1.052	1.114	1.636	1.698	4.864	0.688
2.500	3.250	3.760	4.000	6.000	1.052	1.114	1.636	1.698	4.989	0.688
2.625	3.625	4.135	4.375	6.000	1.052	1.114	1.636	1.698	5.114	0.688
2.750	3.750	4.260	4.500	7.000	0.887	0.949	1.801	1.863	5.239	0.688
3.000	4.000	4.510	4.750	8.000	0.887	0.949	1.801	1.863	5.489	0.688
3.250	4.375	5.135	5.375	8.000	1.548	1.610	2.298	2.360	6.345	0.813
3.750	4.750	5.510	5.750	8.750	0.920	0.982	1.801	1.863	6.708	0.813
4.750	5.750	6.573	6.813	9.500	1.324	1.386	2.271	2.333	7.719	0.813

#### Dimensional Data for standard bore seal chambers (inches) CPM PP Dual Seals

A Shaft & Seal Size	C Box E (Min)	Bore (Max)	D Gasket OD	E Gland OD	<b>F</b> INBD Seal Dim	G Box Depth (Min)	<b>J</b> OTBD Seal Dim	K Dist to Obst. (Min)	L Slot Bolt Circle	M Bolt Slot Dia
1.125	1.750	2.135	2.375	4.000	2.035	2.097	2.119	2.181	2.868	0.438
1.375	2.000	2.385	2.625	4.000	2.035	2.097	2.119	2.181	3.212	0.531
1.750	2.500	2.760	3.000	5.500	2.035	2.097	2.119	2.181	3.587	0.531
1.875	2.625	2.885	3.125	5.500	2.035	2.097	2.119	2.181	3.712	0.531
2.000	2.750	3.010	3.250	5.400	2.035	2.097	2.119	2.181	3.837	0.531
2.125	2.875	3.135	3.375	6.000	2.035	2.097	2.119	2.181	4.118	0.688
2.375	3.375	3.885	4.125	6.000	1.945	2.007	2.119	2.181	4.864	0.688
2.500	3.250	3.760	4.000	6.000	2.035	2.097	2.119	2.181	4.989	0.688
2.625	3.625	4.135	4.375	6.000	1.945	2.007	2.119	2.181	5.114	0.688
2.750	3.750	4.260	4.500	7.000	1.820	1.882	2.244	2.306	5.239	0.688
3.000	4.000	4.510	4.750	8.000	1.820	1.882	2.244	2.306	5.489	0.688
3.250	4.375	5.135	5.375	8.000	2.468	2.530	3.073	3.135	6.345	0.813
3.750	4.750	5.510	5.750	8.750	1.688	1.750	2.798	2.860	6.708	0.813
4.750	5.750	6.573	6.813	9.500	2.230	2.292	3.048	3.110	7.719	0.813

#### FSD199eng REV 07-10 Printed in USA

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