ChemCast® Piston Seal

On-Demand

Single piece orders in stock, shipped same day to your job site

ChemCast piston seals provide flawless sealing at temperatures over 300°F and pressures exceeding 50,000 psi. They eliminate hydraulic piston drift, cold flow, and metal-to-metal contact.

The ChemCast piston ring is made of reinforced thermoplastic material, molded into a sturdy, hard, non-porous, permanently lubricated seal. It is extremely adaptable to wide pressure and temperature ranges, and rugged enough to operate in cylinder bores with sub-standard surfaces between 8 and 32aa.

The innovative joint seal (upper photo) allows pressure application from either side, making a single ring completely effective in single or double-acting cylinders.

Parker now makes it easy to use our premium piston seal set by stocking standard sizes in our Houston Services Center that can be purchased in quantities of 1 up to 25 pieces and shipped same day to your job site.

Contact Information:

Parker Hannifin Corporation
Integrated Sealing Systems Division
Parker Service Center – Houston
3423 North Sam Houston Pkwy. W.
– Suite 301
Houston, TX 77086

phone 713 856 7130
fax 713 856 5603

www.parker.com

Product Features

- 300°F temperature range
- 50,000 psi pressure range
- Bi-directional pressure acceptance
- Port pass-over capability
- Easy installation with step-joint design
- Zero drift
- Non-contaminating
- Sizesup to 8.5 inches

Benefits

- Maintenance friendly
- Long wear life
- High contamination tolerance
- Safe port passing
- Single seal design
- High contamination tolerance
- Eliminates cold flo at extensive clearances
- In-stock single piece orders

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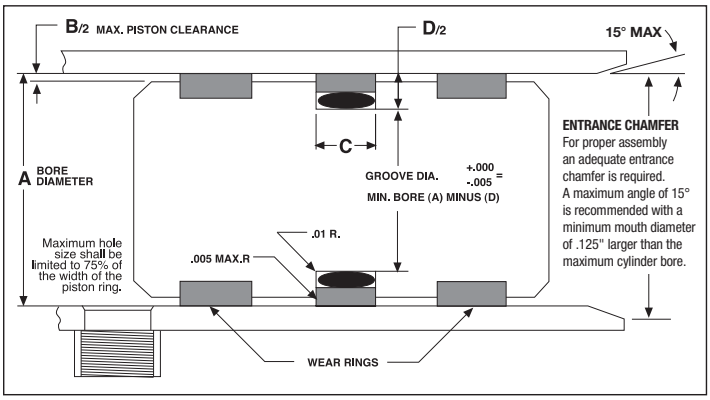


Standard Sizes Available

Part Number	Size		Groove Width		Groove Diameter	
	inch	mm	inch	mm	inch	mm
090200011B	2.000	50.80	0.282	7.16	1.462	37.13
090250011B	2.500	63.50	0.282	7.16	1.962	49.83
090275011B	2.750	69.85	0.282	7.16	2.212	56.18
090300011B	3.000	76.20	0.282	7.16	2.442	62.08
090300021B	3.000	76.20	0.312	7.92	2.408	61.16
090325011B	3.250	82.55	0.282	7.16	2.692	68.38
090350011B	3.500	88.90	0.282	7.16	2.935	74.56
090350021B	3.500	88.90	0.312	7.92	2.908	73.86
090375011B	3.750	95.25	0.282	7.16	3.912	81.08
090400011B	4.000	101.60	0.282	7.16	3.442	87.43
090400021B	4.000	101.60	0.312	7.92	3.408	86.56
090409811B	4.098	104.90	0.282	7.16	3.538	89.85
090450011B	4.500	114.30	0.282	7.16	3.942	100.13
090450021B	4.500	114.30	0.312	7.92	3.908	99.26
090500011B	5.000	127.00	0.282	7.16	4.442	112.83
090500021B	5.000	127.60	0.375	9.53	4.226	107.34
090550011B	5.500	139.70	0.375	9.53	4.740	120.40
090600011B	6.000	152.40	0.375	9.53	5.240	133.10
090625011B	6.250	158.75	0.375	9.53	5.490	139.45
090650011B	6.500	165.10	0.375	9.53	5.740	145.80
090750011B	7.500	190.50	0.375	9.53	6.740	171.20
090850011B	8.500	215.90	0.375	9.53	7.740	196.60

Additional sizes available by special order call for more information.

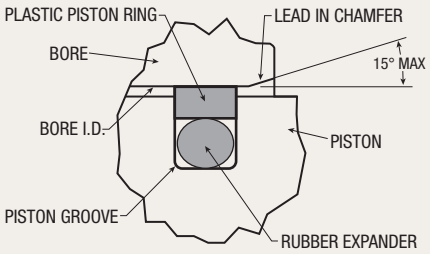
ChemCast Properties

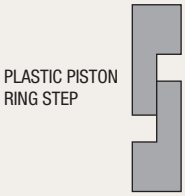
Property	Value	ASTM Test Method
Tensile strength	20,000-22,000 psi	D-638
Elongation	5% - 10%	D-638
Tensile modulus	1,000,000-1,350,000 psi	D-638
Shear strength	10,500-11,000 psi	D-732
Flexural strength (yield)	28,000-30,000 psi	D-790
Flexural modulus	1,200,000-1,350,000 psi	D-790
Hardness, Rockwell	119-120R 94R	D-785
Deformation under load at 4,000 psi, 122°F	0.2% - 4%	D-621
Compressive strength	22,000-24,000 psi	D-695
Water absorption in 24 hours	.55% - 1.3%	D-570
Water absorption to saturation	4.5% - 5.7%	D-570
Coefficient of linear thermal expansion	in./in./°F 1.1-1.8x10-5A.-20°F-73°F 1.3-1.9x10-5B.-40°F-200°F	D-696

Properties shown are typical average or range values.

ASSEMBLY PROCESS:

1. Inspect piston for sharp edges, gouges, and/or dirt which will be detrimental to performance.
2. Inspect the bore and its *lead in chamfer for nicks, gouges, and dirt that can damage the plastic piston ring. (*Lead in chamfer – Maximum angle of 15° with a minimum diameter of 0.125" larger than the maximum
3. Apply a thin film of hydraulic fluid to the rubber expander, plastic piston ring, and bore ID to ease system assembly.
4. Using both hands, stretch rubber expander over piston and slide the ring in the piston groove. (If a tool is needed for assistance, refrain from using anything with sharp edges, gouges, or dirt)
5. Slide the plastic piston ring over piston and position in the piston groove. Making sure to expand diameter of the plastic piston ring only enough to slip over the piston. ***Excessive stretching can weaken the plastic piston ring.***
6. Install the piston into bore so that the plastic piston ring step is approximately opposite the cylinder port. During assembly, it is important that the plastic piston ring remains located in piston groove.





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