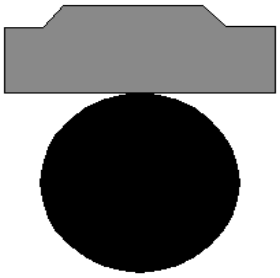
AB Seals
ADVANCED SEALING TECHNOLOGIES

PE

Design

The AB Seals PE double acting piston seal is a compact low friction seal for light to medium duty hydraulic cylinders. As standard, it comprises a tough, wear resistant thermoplastic elastomer face, (see below for face material options) which is pre-loaded by an O ring. The housing width allows a narrow width piston to be used, but it is recommended that an adequate bearing is mounted on one or both sides of the seal.



NB: Part numbers have housing sizes to meet ISO 7425-1.

Features

- Low breakout and operating friction levels
- Rapid recovery of face after assembly
- More tolerant to contamination than common PTFE equivalents
- Excellent position holding characteristics under load
- Compatible with most hydraulic fluids
- Excellent wear resistance
- Operates on a wide range of surface finishes
- Ideal for use with AB Seals 506 or 87 bearing
- ISO 7425 housing

Material Options

polyurethane-PUB
Nitrile NBR 75

Application

Mobile hydraulics
Agere culture equipment
Machine tools

Technical details	Metric	inch
Operating Condit		
Maximum speed	1.0m/sec	3ft/sec
Temperature Rar	-40	-40
Maximum Pressu	350 bar-standard 55D material 500 bar-72D material	7500 p.s.i

Maximum extrusion gap

Figures show the maximum permisslble gap all on one side using minimum rod Ø and maximum clearance Ø. refer to housing design section.

Prssure bar	100	160	250	350
Maximum Gap (5>7) mm	1	0.8	0.6	0.4
Maximum Gap (5<7) mm	0.8	0.6	0.5	0.3
Prssure p.s.i.	1,500	2400	3750	5,000

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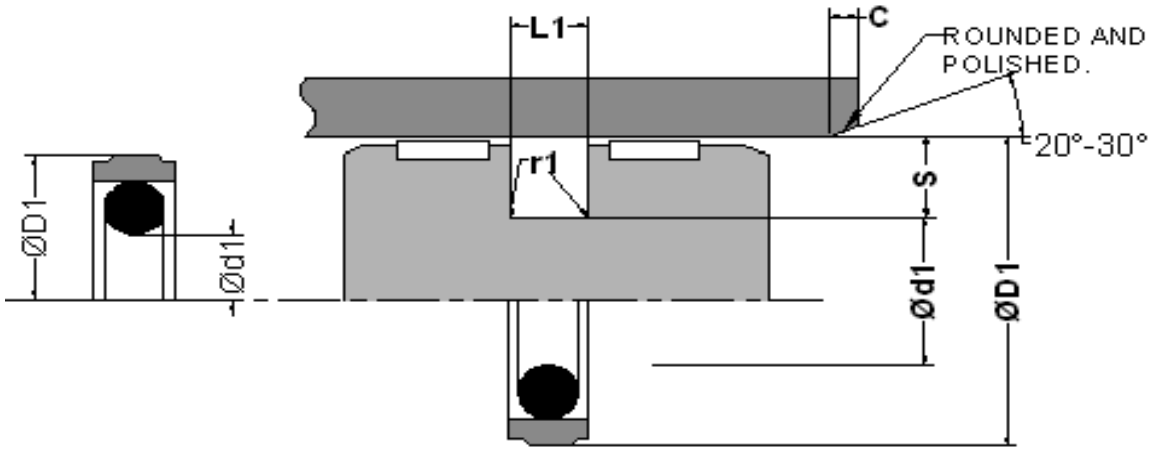
Prssure bar	160	250	400	500
Maximum Gap (5>7) mm	1	0.8	0.6	4
Maximum Gap (5<7) mm	8	0.6	0.4	2
Prssure p.s.i.	2,400	3750	6000	7,500

Surface roughness	umRa	umRt	Uin CLA	UIN RMS
Dynamic Sealing FaceØD1	0.1<> 0.4	4 max	4<>16	5<>18
static sealing face Ød1	1.6 max	10 max	63 max	70 max
static housing faces L1	3.2 max	16 max	125 max	140 max

chamafers & Radll				
Grove section < 5 mm	3.75	5.5	7.75	10.5
Min Chamfer C mm	2	2.5	5	5
Max Fillet rad r1 mm	0.4	0.8	1.2	1.6
Grove section < 5 in	0.15	0.22	0.31	0.41
Min Chamfer C in	0.08	0.1	0.2	0.2
Max Fillet rad r1 in	0.016	0.032	0.047	0.063

Tolerance	ØD1	Ød1	L1 mm	l1 in
mm	H9	h9	0.2	0.008



METRIC

ØD1	TOL H9	Ød1	TOL h9	L1 0.2	PART NO.	ØD1	TOL H9	Ød1	TOL h9	L1 0.2	PART NO.
15	0.04 0	7.5	0 -0.036	3.2	PE-15X7.5X3.2	32	0.06 0	24.5	0 -0.052	3.2	PE-32X24.5X3.2
16	0.04 0	8.5	0 -0.036	3.2	PE-16X8.5X3.2	35	0.06 0	27.5	0 -0.052	3.2	PE-35X27.5X3.2
20	0.05 0	12.5	0 -0.043	3.2	PE-20X12.5X3.2	36	0.06 0	28.5	0 -0.052	3.2	PE-36X28.5X3.2
25	0.05 0	17.5	0 -0.052	3.2	PE-25X17.5X3.2	40	0.06 0	29	0 -0.052	4.2	PE-40X29X4.2
28	0.05 0	20.5	0 -0.052	3.2	PE-005	40	0.06 0	32.5	0 -0.062	3.2	PE-40X32.5X3.2
30	0.05 0	22.5	0 -0.052	3.2	PE-30X22.5X3.2	42	0.06 0	31	0 -0.062	4.2	PE-42X31X4.2

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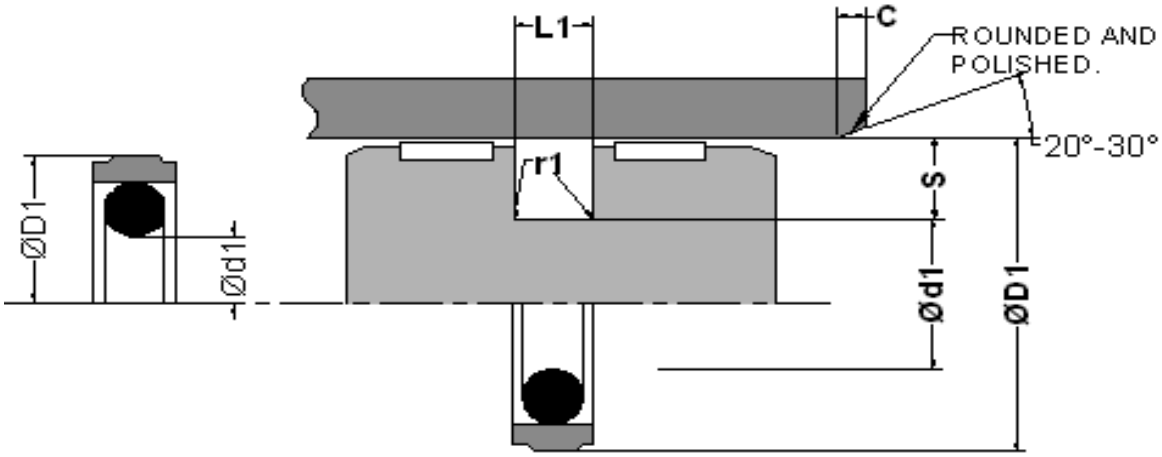

ØD1	TOL H9	Ød1	TOL h9	L1 0.2	PART NO.	ØD1	TOL H9	Ød1	TOL h9	L1 0.2	PART NO.
45	0.06 0	34	0 -0.062	4.2	PE-45X34X4.2	75	0.07 0	59.5	0 -0.074	6.3	PE-75X59.5X6.3
50	0.06 0	34.5	0 -0.062	6.3	PE-50X34.5X6.3	75	0.07 0	64	0 -0.074	4.2	PE-75X64X4.2
50	0.06 0	39	0 -0.062	4.2	PE-50X39X4.2	80	0.07 0	64.5	0 -0.074	6.3	PE-80X64.5X6.3
55	0.07 0	39.5	0 -0.062	6.3	PE-55X39.5X6.3	80	0.07 0	69	0 -0.074	4.2	PE- 80X69X4.2
55	0.07 0	44	0 -0.062	4.2	PE-55X44X4.2	85	0.09 0	69.5	0 -0.074	6.3	PE-85X69.5X6.3
60	0.07 0	44.5	0 -0.062	6.3	PE-60X44.5X6.3	90	0.09 0	74.5	0 -0.074	6.3	PE-90X74.5X6.3
60	0.07 0	49	0 -0.062	4.2	PE-60X49X4.2	95	0.09 0	84	0 -0.074	4.2	PE- 95X84X4.2
63	0.07 0	47.5	0 -0.062	6.3	PE-63X47.5X6.3	95	0.09 0	79.5	0 -0.074	6.3	PE-95X69.5X6.3
63	0.07 0	50	0 -0.062	6.3	PE-63X50X6.3	100	0.09 0	84.5	0 -0.087	6.3	PE- 100X84.5X6.3
63	0.07 0	52	0 -0.074	4.2	PE-63X52X4.2	105	0.09 0	89.5	0 -0.087	6.3	PE- 105X89.5X6.3
65	0.07 0	49.5	0 -0.062	6.3	PE-65X49.5X6.3	110	0.09 0	94.5	0 -0.087	6.3	PE- 110X94.5X6.3
65	0.07 0	52	0 -0.074	6.3	PE-65X52X6.3	115	0.09 0	94	0 -0.087	8.1	PE-115X94X8.1
65	0.07 0	54	0 -0.074	4.2	PE-65X54X4.2	115	0.09 0	99.5	0 -0.087	6.3	PE- 115X99.5X6.3
70	0.07 0	54.5	0 -0.074	6.3	PE-70X54.5X6.3	120	0.09 0	99	0 -0.087	8.1	PE-120X99X8.1
70	0.07 0	57	0 -0.074	6.3	PE-70X57X6.3	120	0.09 0	104.5	0 -0.087	6.3	PE- 120X104.5X6.3
70	0.07 0	59	0 -0.074	4.2	PE-70X59X4.2	125	0.1 0	104	0 -0.087	8.1	PE- 125X104X8.1

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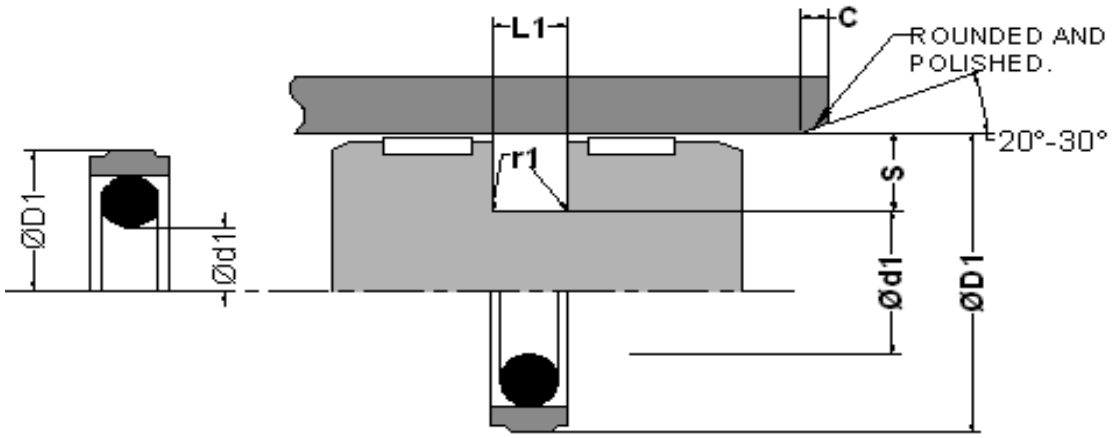

ØD1	TOL H9	Ød1	TOL h9	L1 0.2	PART NO.	ØD1	TOL H9	Ød1	TOL h9	L1 0.2	PART NO.
125	0.1 0	109.5	0 -0.087	6.3	PE-125X109.5X6.3	180	0.1 0	159	0 -0.1	8.1	PE-180X159X8.1
130	0.1 0	109	0 -0.087	8.1	PE-130X109X8.1	190	0.12 0	169	0 -0.1	8.1	PE-190X169X8.1
130	0.1 0	114.5	0 -0.087	6.3	PE-130X114.5X6.3	200	0.12 0	179	0 -0.1	8.1	PE-200X179X8.1
135	0.1 0	114	0 -0.087	8.1	PE-135X114X8.1	210	0.12 0	189	0 -0.115	8.1	PE-210X189X8.1
140	0.1 0	119	0 -0.087	8.1	PE-140X119X8.1	220	0.12 0	199	0 -0.115	8.1	PE-220X199X8.1
140	0.1 0	124.5	0 -0.1	6.3	PE-140X124.5X6.3	225	0.12 0	204	0 -0.115	8.1	PE-225X204X8.1
150	0.1 0	129	0 -0.1	8.1	PE-150X129X8.1	230	0.12 0	209	0 -0.115	8.1	PE-230X209X8.1
160	0.1 0	139	0 -0.1	8.1	PE-160X139X8.1	240	0.12 0	219	0 -0.115	8.1	PE-240X219X8.1
165	0.1 0	144	0 -0.1	8.1	PE-165X144X8.1	250	0.12 0	229	0 -0.115	8.1	PE-250X229X8.1
170	0.1 0	149	0 -0.1	8.1	PE-170X149X8.1	300	0.13 0	279	0 -0.13	8.1	PE-300X279X8.1

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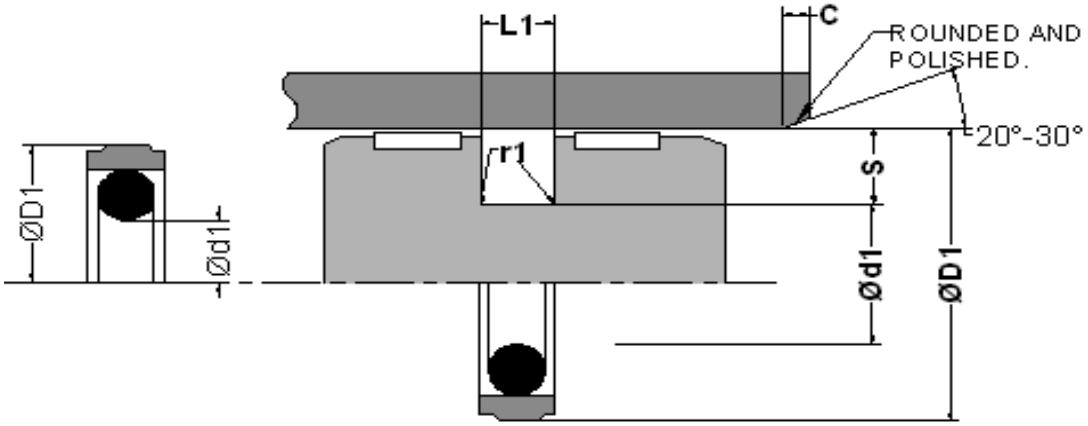

Inch

ØD1	TOL H9	Ød1	TOL h9	L1 0.008	PART NO.	ØD1	TOL H9	Ød1	TOL h9	L1 0.008	PART NO.
1.25	0.003 0	0.974	0 -0.002	0.126	PE-001	2.75	0.003 0	2.318	0 -0.003	0.165	PE-007
1.375	0.003 0	1.079	0 -0.002	0.126	PE-002	2.75	0.003 0	2.14	0 -0.003	0.248	PE-008
1.5	0.003 0	1.067	0 -0.002	0.165	PE-003	3.25	0.003 0	2.64	0 -0.003	0.248	PE-009
1.5	0.003 0	1.204	0 -0.003	0.125	PE-004	4	0.003 0	3.39	0 -0.004	0.248	PE-010
2	0.003 0	1.567	0 -0.003	0.165	PE-005	5	0.004 0	4.39	0 -0.004	0.248	PE-011
2.5	0.003 0	2.067	0 -0.003	0.165	PE-006						

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