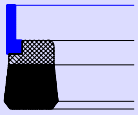
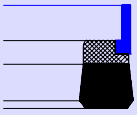


Single Acting Piston Seal
PW
Imperial



Design

Designed for use on split pistons, the seal is a precision moulded rubber element with a reinforced fabric base. The seal is fitted with Polyacetal anti-extrusion wear rings on the O.D. to allow larger machining clearances between the piston head and cylinder bore, and to permit higher working pressures. The seal is designed with sufficient radial sectional interference that on complete assembly low pressure sealing is effected. The supporting rubberised fabric has the capability of retaining the sealing media thus assisting in reducing friction and wear. Style PW has proven to be effective over a wide range of applications.

Operating Conditions

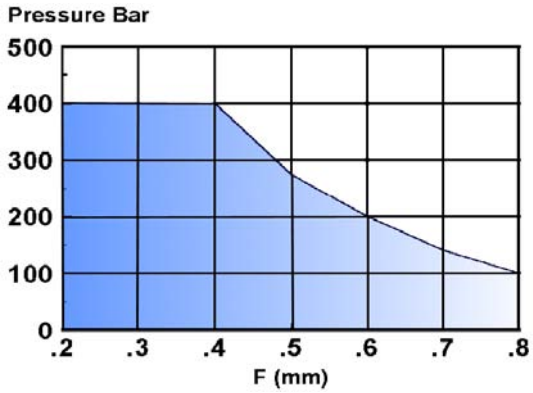
Maximum Pressure	
Max Speed	Temp. Range
m/s	-30°C to 100°C
0.50	250 Bar
0.15	400 Bar

These range perameters are Maximum simultaneous conditions. Optimum service conditions are affected by temperature, speed, pressure, surface finish and extrusion gaps.
Refer to Appendix 1 for further information.

Continuous operating temperature for various fluids

NBR Rubber		
DIN	**Hydraulic Fluid Description**	**°C**
H	Mineral oil without additives	100
H-L	Mineral Fluid with anti corrosion and anti ageing additives	100
H-LP	Mineral oil as HL plus additives reducing wear, raising load	100
H-LPD	Mineral oil as H-LP but with detergents and dispersants	100
H-V	Mineral oil as H-LP plus improved viscosity temp.	100
HFA E	Emulsions of mineral oil in water. Water content 80-95%	55
HFA S	Synthetic oil in water. Water content 80-95%	55
HFB	Emulsions of water in mineral oil. Water content 40%	60
HFC	Aqueous polymer solutions. Water content 35%	60
HFD R	Phosphoric acid ester based	NS
HFD S	Chlorinated hydrocarbon based	NS
HFD T	Mixtures of HFD R and HFD S	NS
HEPG	Polyglycol based	NS
HETG	Vegetable Oil based	60
HEES	Fully synthetic ester based	NS

Maximum Diametral Clearance F



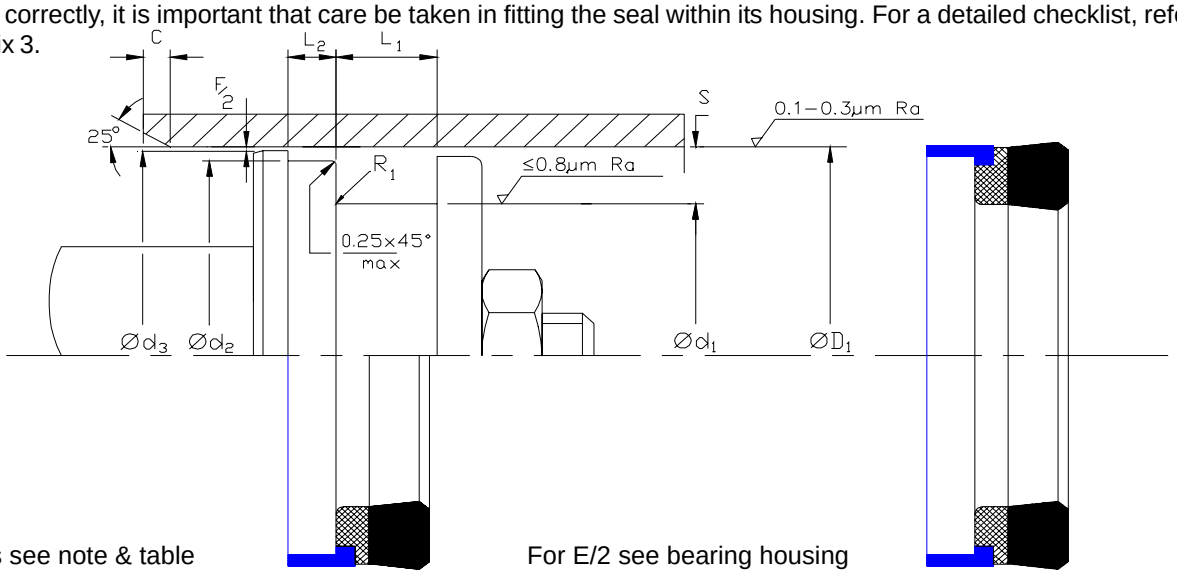
Note: Clearance gap F is the maximum permissable. i.e. gap completely on one side, in the temperature range of -30°C to 100°C The use of a suitably selected Claron bearing ring will effectively reduce the clearance gap F max. to a value closer to F/2 thus increasing the pressure capability of the seal.

Housing

For surface finish and recommended lead in chamfers refer to the illustration below. For housing dimensions and machining tolerances refer to the catalogue page of selected seal. Refer to Appendix 4 for value of tolerance symbols.

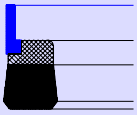
Fitting

Style PW is designed to be fitted onto a split piston and may be used with Claron seal retainer Style PSR. For the seal to function correctly, it is important that care be taken in fitting the seal within its housing. For a detailed checklist, refer to Appendix 3.



For F/2 values see note & table

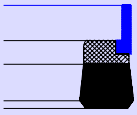
For E/2 see bearing housing



Single Acting Piston Seal

PW

Imperial



Nominal Dimensions & Machining Tolerances

Claron Part Number	H 10 $ØD_1$	js 11 $Ød_1$	js 10 $Ød_2$	js 11 $Ød_3$	+0.025 +0.015 L_1	+0.004 -0.000 L_2	Nominal S	Min C	Max R_1	Max R_2
PW 100062	1.000	0.625	0.883	0.964	0.281	0.250	0.187	0.093	0.008	0.008
PW 125075/2	1.250	0.750	1.111	1.208	0.375	0.250	0.250	0.125	0.015	0.008
PW 150100	1.500	1.000	1.360	1.458	0.375	0.250	0.250	0.125	0.015	0.008
PW 168118	1.687	1.187	1.547	1.645	0.312	0.250	0.250	0.125	0.015	0.008
PW 175112	1.750	1.125	1.570	1.698	0.437	0.250	0.312	0.156	0.025	0.008
PW 200137/1	2.000	1.375	1.820	1.948	0.375	0.250	0.312	0.156	0.025	0.008
PW 200137/2	2.000	1.375	1.820	1.948	0.437	0.250	0.312	0.156	0.025	0.008
PW 200137/3	2.000	1.375	1.820	1.948	0.500	0.250	0.312	0.156	0.025	0.008
PW 225162	2.250	1.625	2.069	2.198	0.437	0.250	0.312	0.156	0.025	0.008
PW 237175	2.375	1.750	2.194	2.322	0.437	0.250	0.312	0.156	0.025	0.008
PW 250187	2.500	1.875	2.319	2.446	0.437	0.250	0.312	0.156	0.025	0.008
PW 250200	2.500	2.000	2.360	2.447	0.312	0.250	0.250	0.125	0.025	0.008
PW 275200	2.750	2.000	2.522	2.685	0.437	0.250	0.375	0.187	0.032	0.008
PW 275200/1	2.750	2.000	2.522	2.685	0.625	0.250	0.375	0.187	0.032	0.008
PW 275200/2	2.750	2.000	2.522	2.685	0.562	0.250	0.375	0.187	0.032	0.008
PW 300225/1	3.000	2.250	2.772	2.935	0.500	0.250	0.375	0.187	0.032	0.008
PW 300225/2	3.000	2.250	2.772	2.935	0.562	0.250	0.375	0.187	0.032	0.008
PW 312237	3.125	2.375	2.896	3.070	0.562	0.250	0.375	0.187	0.032	0.008
PW 325250/1	3.250	2.500	3.069	3.190	0.562	0.250	0.375	0.187	0.032	0.008
PW 350275	3.500	2.750	3.271	3.437	0.562	0.250	0.375	0.187	0.032	0.008
PW 375275	3.750	2.750	3.508	3.685	0.500	0.250	0.500	0.218	0.046	0.015
PW 400325/1	4.000	3.250	3.770	3.933	0.562	0.250	0.375	0.187	0.032	0.008
PW 450350/1	4.500	3.500	4.229	4.422	0.562	0.250	0.500	0.218	0.046	0.015
PW 500400	5.000	4.000	4.728	4.920	0.750	0.250	0.500	0.218	0.046	0.015
PW 700600	7.000	6.000	6.724	5.919	0.750	0.250	0.500	0.218	0.046	0.015
PW 725600	7.250	6.000	6.979	7.170	1.000	0.250	0.625	0.250	0.046	0.015