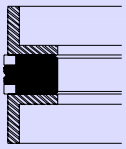
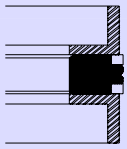


Double Acting Piston Seal SPS

Metric
Imperial



Design

Designed for use on one piece pistons, the five part assembly comprises of a precision moulded rubber sealing element to which are fitted endless P.T.F.E. anti-extrusion ring son the O.D. The anti extrusion rings are designed to be pre loaded on assembly thus effecting a more positive sealing arrangement. Split Polyacetal anti-extrusion bearing rings are added either side to provide support for the piston head.
This compact one piece piston seal has proven to be popular and effective over a wide range of applications.

Operating Conditions

Maximum Pressure		
Max Speed	Temp. Range	Temp. Range
m/s	-30°C to 80°C	-30°C to 100°C
0.50	175 Bar	110 Bar
0.15	250 Bar	160 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

Housing

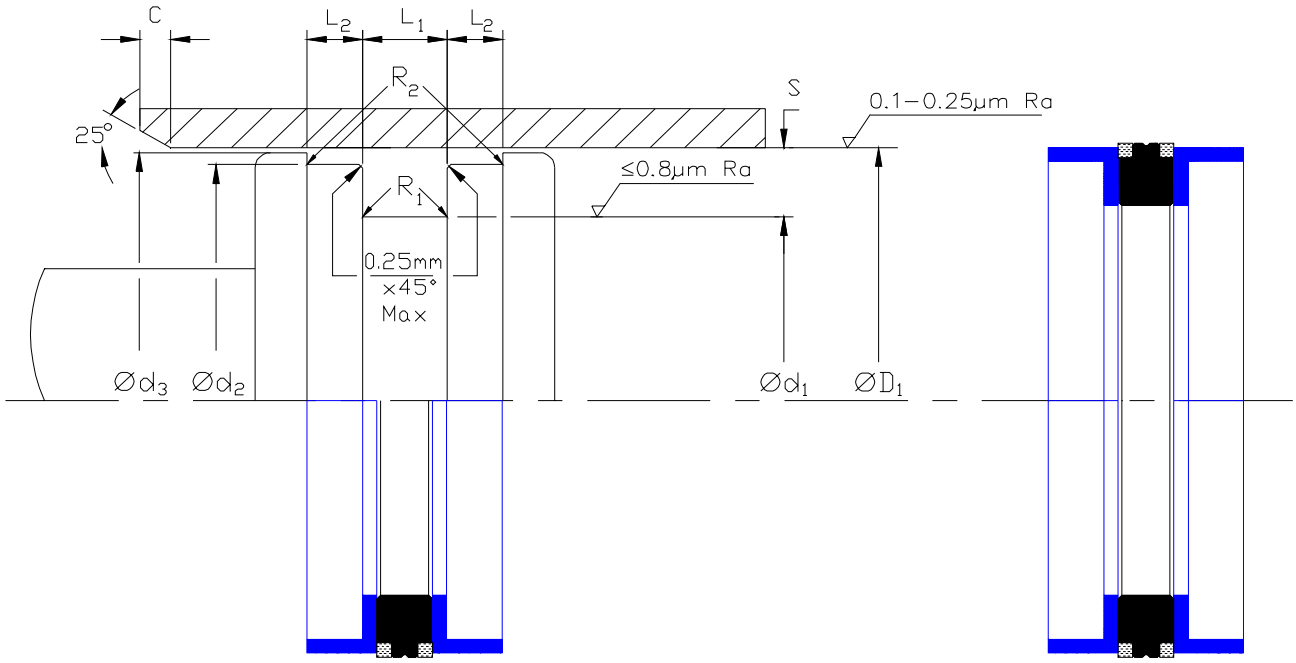
For surface finish and recommended lead in chamfers refer to the illustration below. For housing dimensions and machining tolerances refer to the catalogue page of selected seal. Refer to Appendix 4 for value of tolerance symbols.

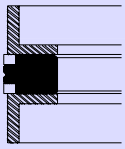
Fitting

Fit seal onto the piston in the following sequence.

1- Solid Anti Extrusion Ring.
2- Rubber Sealing Element
3- Solid Anti Extrusion Ring.
4- Polyacetal bearing rings.

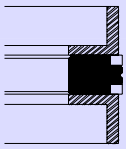
It is important that care be taken in fitting the seal within its housing.
Refer to appendix 3 for check list.





SPS

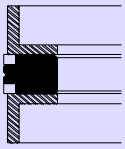
Metric



Nominal Dimensions & Machining Tolerances

Claron Part Number	H10 $ØD_1$	h9 $Ød_1$	h9 $Ød_2$	h9 $Ød_3$	+0.40 +0.13 L_1	+0.0 -0.13 L_2	Nominal S	Minimum C	Maximum R_1	Maximum R_2
* SPS 098068	25	17.5	21.3	24.0	8.5	3.25	3.75	2.0	0.2	
SPS 118082/4	30	21.0	27.0	29.0	13.5	2.0	4.5	2.5	0.2	
SPS 125086	32	22.0	27.5	31.0	11.0	4.0	5.0	2.5	0.2	
SPS 157118	40	30.0	35.5	39.0	11.0	4.0	5.0	2.5	0.2	
SPS 196157	50	40.0	45.5	49.0	11.0	4.0	5.0	2.5	0.2	
SPS 216177	55	45.0	50.5	54.0	11.0	4.0	5.0	2.5	0.2	
SPS 248208	63	53.0	58.5	61.5	11.0	4.0	5.0	2.5	0.2	
SPS 314275	80	70.0	75.5	78.5	11.0	4.0	5.0	2.5	0.2	
SPS 393342	100	87.0	93.8	98.5	14.0	6.0	6.5	4.0	0.4	
SPS 492440	125	112.0	118.8	123.5	14.0	6.0	6.5	4.0	0.4	

* This size comprises Rubber Sealing Element and two Split Bearing Rings only.

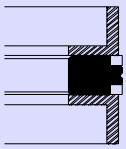


ClaronPolyseal®

Double Acting Piston Seal

SPS

Imperial



Claron Part Number	Nominal Dimensions & Machining Tolerances									
	H10 $ØD_1$	h9 $Ød_1$	h9 $Ød_2$	h9 $Ød_3$	+0.015" +0.005" L_1	-0.005 +0.000 L_2	Nominal S	Minimum C	Maximum R_1	Maximum R_2
*SPS 100068	1.000	0.687	0.829	0.937	0.343	0.125	0.156	0.078	0.008	
*SPS 106075	1.062	0.750	0.900	1.000	0.312	0.062	0.156	0.093	0.008	
*SPS 125094	1.250	0.937	1.079	1.187	0.343	0.125	0.156	0.078	0.008	
SPS 150112	1.500	1.125	1.324	1.437	0.437	0.150	0.187	0.093	0.008	
SPS 175137	1.750	1.375	1.574	1.687	0.437	0.150	0.187	0.093	0.008	
SPS 175137/1	1.750	1.375	1.638	1.710	0.490	0.245	0.187	0.093	0.008	
SPS 200162	2.000	1.625	1.824	1.937	0.437	0.150	0.187	0.093	0.008	
SPS 200162/1	2.000	1.625	1.888	1.960	0.490	0.245	0.187	0.093	0.008	
SPS 237200	2.375	2.000	2.195	2.312	0.437	0.150	0.187	0.093	0.008	
SPS 250200	2.500	2.000	2.320	2.460	0.650	0.245	0.250	0.125	0.008	
SPS 250212	2.500	2.125	2.325	2.437	0.437	0.150	0.187	0.093	0.008	
SPS 275225	2.750	2.250	2.570	2.710	0.650	0.250	0.250	0.125	0.008	
SPS 275237	2.750	2.375	2.575	2.687	0.437	0.150	0.187	0.093	0.008	
SPS 300237	3.000	2.375	2.772	2.960	0.775	0.245	0.312	0.156	0.016	
SPS 300262	3.000	2.625	2.825	2.937	0.437	0.150	0.187	0.093	0.008	
SPS 325287	3.250	2.875	3.075	3.187	0.437	0.150	0.187	0.093	0.008	
SPS 350300	3.500	3.000	3.270	3.437	0.562	0.210	0.250	0.125	0.008	
SPS 375325	3.750	3.250	3.520	3.687	0.562	0.210	0.250	0.125	0.008	
SPS 400350	4.000	3.500	3.770	3.937	0.562	0.210	0.250	0.125	0.008	

Items marked * comprise of Sealing Element and two Split Bearing Rings only.