Double Acting Piston Seal

CSPG

Imperial

Design

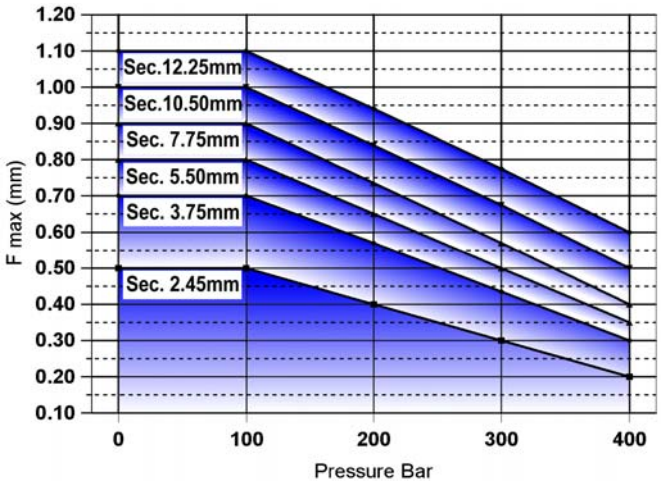
Claron composite seals Style CSPG are designed as high pressure, Low Friction Double-Acting Piston Seals for use in heavy duty hydraulic cylinders as found in mobile equipment to American designs.

Materials

Claron Style CSPG consists of a glass filled high performance P.T.F.E. sealing eliment, energised by a precision moulded rectangular section NBR rubber.

Operating Range

Temp -40°C to 120°C
Pressure upto 800 bar
Velocity upto 15m/s
These range parameters are maximum conditional values.
Optimum service conditions are affected by temperature, speed, pressure, surface finish and extrusion gaps.
Refer to Appendix 1 for further information**.**



Operating Conditions

Maximum Working Pressure for “Standard” seal applications using specified tolerances and clearances.

Temp. range	Temp. range
-30°C to 80°C	80°C to 120°C
800bar	350 bar

Diametrical Clearance F shown in the graph is calculated as the maximum permissible extrusion gap, allowing for movement due to side load, for various pressures and temperatures upto 80°C. This product is intended for use with either **STYLE** PBR or **STYLE** BGF Bearing Rings which effectively reduce the **Radial clearance** to a value nearer to F/2 thus increasing the pressure capability.
The maximum seal extrusion gap should be calculated allowing for all tolerances, movement and cylinder expansion.
For pressures **>** 400 bar, the seal extrusion gap should be reduced by utilising smaller tolerances. e.g H8 for Cylinder bore, f8 for piston diameter either side 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.

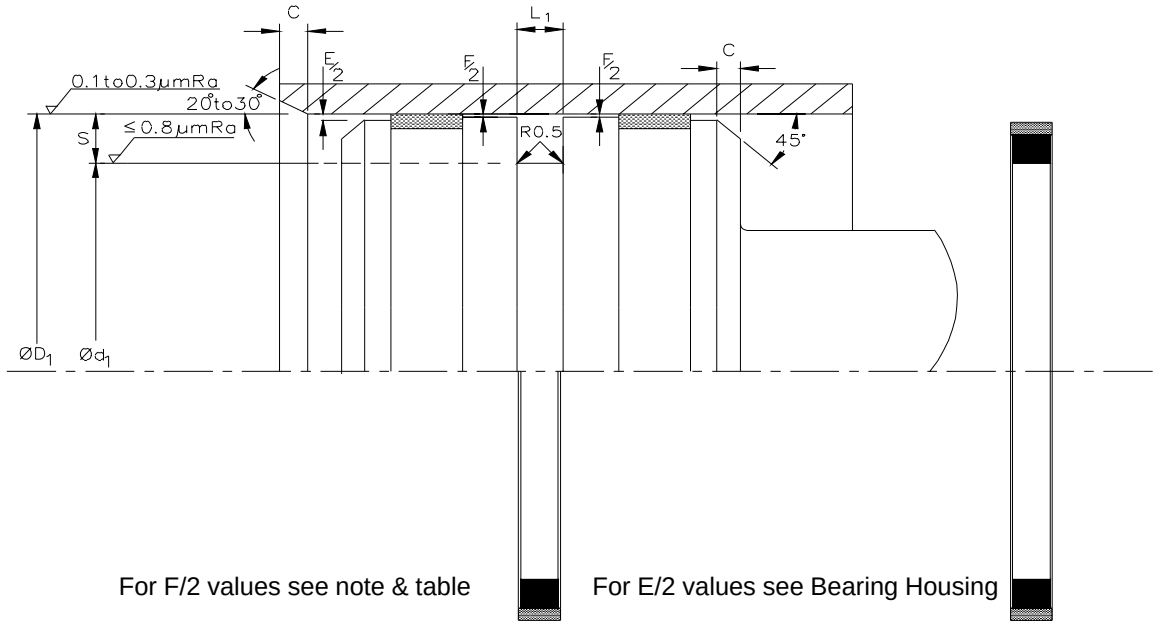
Fitting

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.

Double Acting Piston Seal

CSPG

Imperial



For F/2 values see note & table

For E/2 values see Bearing Housing

Claron Part Number	Nominal Dimensions & Machining Tolerances				
	H9 $ØD_1$	+0.00 -0.20 $Ød_1$	+0.10 -0.00 L_1	Nominal S	Nominal C
CSPG0200	2.000	1.625	0.190	0.187	0.100
CSPG0250	2.500	2.125	0.190	0.187	0.100
CSPG0275	2.750	2.375	0.190	0.187	0.100
CSPG0300	3.000	2.468	0.190	0.268	0.150
CSPG0325	3.250	2.718	0.190	0.268	0.150
CSPG0350	3.500	2.968	0.190	0.268	0.150
CSPG0375	3.750	3.218	0.190	0.333	0.150
CSPG0400	4.000	3.338	0.250	0.333	0.180
CSPG0425	4.250	3.588	0.250	0.333	0.180
CSPG0450	4.500	3.838	0.250	0.333	0.180
CSPG0475	4.750	4.088	0.250	0.383	0.180
CSPG0500	5.000	4.238	0.375	0.383	0.200
CSPG0525	5.250	4.488	0.375	0.383	0.200
CSPG0550	5.500	4.738	0.375	0.383	0.200
CSPG0600	6.000	5.102	0.375	0.451	0.250
CSPG0625	6.250	5.352	0.375	0.451	0.250
CSPG0650	6.500	5.602	0.375	0.451	0.250
CSPG0700	7.000	6.102	0.375	0.451	0.250
CSPG0725	7.250	6.352	0.375	0.451	0.250
CSPG0825	8.250	7.230	0.375	0.512	0.260
CSPG0925	9.250	8.230	0.375	0.512	0.260
CSPG1050	10.500	9.420	0.437	0.542	0.260