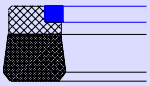
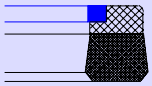


Single Acting Rod Seal

PEI

Imperial



Design

CLARON STYLE PEI is designed for use as a single acting Rod seal. The seal is a precision moulded Nitrile rubber sealing element with a bonded fabric reinforced base to resist extrusion. Style PEI also has the added benefit of a clip on POM anti-extrusion ring for larger clearances or higher pressures. Designed with initial radial interference to effect low pressure sealing, at higher pressures the seal is progressively energised thus increasing the sealing force. Rubberised fabric has the advantage of retaining the sealing media within it's surface, thus reducing friction and wear. Style PEI is an effective design 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

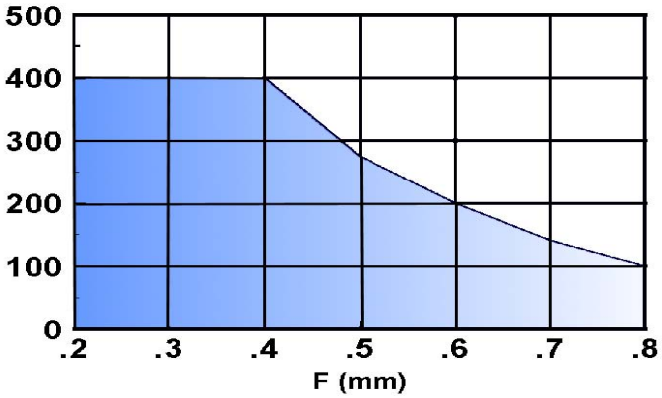
These range perameters are Maximum simultaneous conditions.

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

Pressure Bar



Maximum Diametral Clearance F

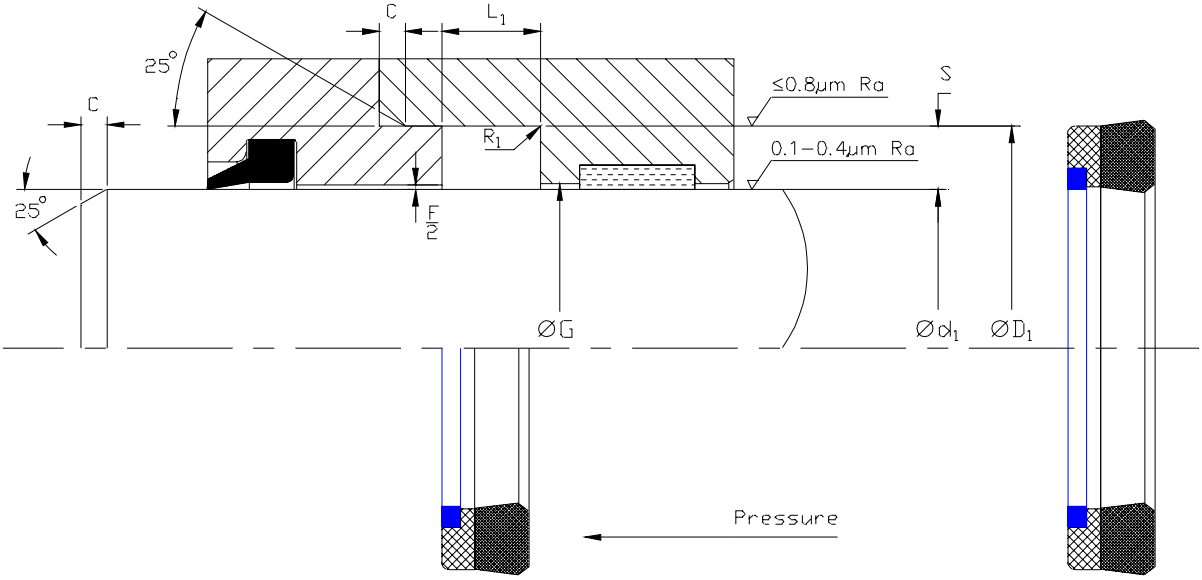
Note: Clearance gap F is the maximum permissable. i.e. gap completely on one side, in the temperature range of -30°C to 100°C The use of a suitably selected Claron bearing ring will effectively reduce the clearance gap F max. to a value closer to F/2 thus increasing the pressure capability of the seal.

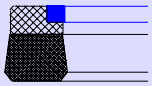
Housing

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

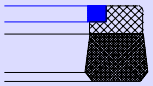
For the seal to function correctly, it is important that care be taken in fitting the seal within its housing.
For a detailed checklist, refer to Appendix 3.





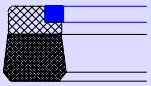
Single Acting Rod Seal Imperial

PEI

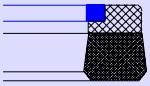


Nominal Dimensions & Machining Tolerances

Claron Part Number	Js 11 $ØD_1$	f8 $Ød_1$	H9 ØG	+0.025 -0.015 L_1	Nominal S	Min C	Max R_1
PEI 100062	1.000	0.625		0.281	0.187	0.093	0.010
PEI 109075	1.093	0.750		0.281	0.171	0.093	0.010
PEI 112075	1.125	0.750		0.312	0.187	0.093	0.010
PEI 125075/1	1.250	0.750		0.312	0.250	0.125	0.015
PEI 125075/2	1.250	0.750		0.375	0.250	0.125	0.015
PEI 125100	1.250	1.000		0.187	0.125	0.093	0.010
PEI 137087/1	1.375	0.875		0.250	0.250	0.125	0.015
PEI 137100	1.375	1.000		0.250	0.187	0.093	0.010
PEI 137112	1.375	1.125		0.187	0.125	0.093	0.010
PEI 143093	1.437	0.937		0.375	0.250	0.125	0.015
PEI 150100	1.500	1.000		0.375	0.250	0.125	0.015
PEI 150100/1	1.500	1.000		0.250	0.250	0.125	0.015
PEI 150100/2	1.500	1.000		0.437	0.250	0.125	0.015
PEI 156112	1.562	1.125		0.343	0.218	0.093	0.010
PEI 162112	1.625	1.125		0.375	0.250	0.125	0.015
PEI 162125	1.625	1.250		0.281	0.187	0.093	0.010
PEI 162125/1	1.625	1.250		0.250	0.187	0.093	0.010
PEI 175112	1.750	1.125		0.437	0.312	0.156	0.015
PEI 175125	1.750	1.250		0.375	0.250	0.125	0.015
PEI 187125	1.875	1.250		0.437	0.312	0.156	0.015
PEI 187125/2	1.875	1.250		0.500	0.312	0.156	0.015
PEI 187150/1	1.875	1.500		0.250	0.187	0.093	0.010
PEI 187150/2	1.875	1.500		0.281	0.187	0.093	0.010
PEI 200150	2.000	1.500		0.375	0.250	0.125	0.010
PEI 200150/1	2.000	1.500		0.468	0.250	0.125	0.010
PEI 200162/1	2.000	1.625		0.281	0.187	0.093	0.010
PEI 212150/1	2.125	1.500		0.437	0.312	0.156	0.015
PEI 212175/1	2.125	1.750		0.300	0.187	0.093	0.010
PEI 212175/2	2.125	1.750		0.281	0.187	0.093	0.010
PEI 225175/1	2.250	1.750		0.375	0.250	0.125	0.010
PEI 231200	2.312	2.000		0.250	0.156	0.093	0.010
PEI 237175	2.375	1.750		0.437	0.312	0.156	0.015
PEI 237198	2.375	1.980		0.360	0.197	0.093	0.010
PEI 250175	2.500	1.750		0.500	0.375	0.187	0.032
PEI 250198	2.500	1.980		0.360	0.260	0.125	0.010
PEI 250200/1	2.500	2.000		0.375	0.250	0.125	0.010
PEI 250212	2.500	2.125		0.312	0.187	0.093	0.010
PEI 262200	2.625	2.000		0.437	0.312	0.156	0.015
PEI 275200/1	2.750	2.000		0.625	0.375	0.187	0.032
PEI 275225	2.750	2.250		0.375	0.250	0.125	0.010
PEI 300250	3.000	2.500		0.312	0.250	0.125	0.010
PEI 306250	3.062	2.500		0.437	0.281	0.125	0.010
PEI 325225	3.250	2.250		0.875	0.500	0.250	0.032
PEI 325250/1	3.250	2.500		0.562	0.375	0.187	0.032
PEI 350275	3.500	2.750		0.562	0.375	0.187	0.032



Single Acting Rod Seal
PEI
Imperial



Nominal Dimensions & Machining Tolerances

Claron Part Number	Js11 $ØD_1$	f8 $Ød_1$	H9 ØG	+0.025 -0.015 L_1	Nominal S	Min C	Max R_1
PEI 375300	3.750	3.000		0.562	0.375	0.187	0.032
PEI 425348	4.250	3.480		0.450	0.385	0.187	0.032
PEI 425350/1	4.250	3.500		0.562	0.375	0.187	0.032
PEI 475400/1	4.750	4.000		0.687	0.375	0.187	0.032
PEI 500400	5.000	4.000		0.750	0.500	0.250	0.032