

Claron Polyseal® Single Acting Piston Seal FPC



Design

Claron Style FPC single acting piston seal is manufactured from fabric reinforced Nitrile Rubber suitable for mineral based hydraulic oils and water soluble fluids. The Fabric cup is a non preferred design for modern applications, but is available to meet existing design requirement within the industry.

Style FPC may also be used 'back to back' to form a double acting arrangement.

Operating Range

Temp. range	-30°C to 100°C
Max Pressure	175Bar (2500psi)
Linear Speed m/sec	0.5

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

Diametrical Clearance 'F' is calculated as the maximum permissible extrusion gap, allowing for movement due to side load, tolerances and cylinder expansion.

Pressure (Bar)	70	140	175
Gap F (mm)	0.5	0.45	0.4

Continuous operating temperature for various Fluids

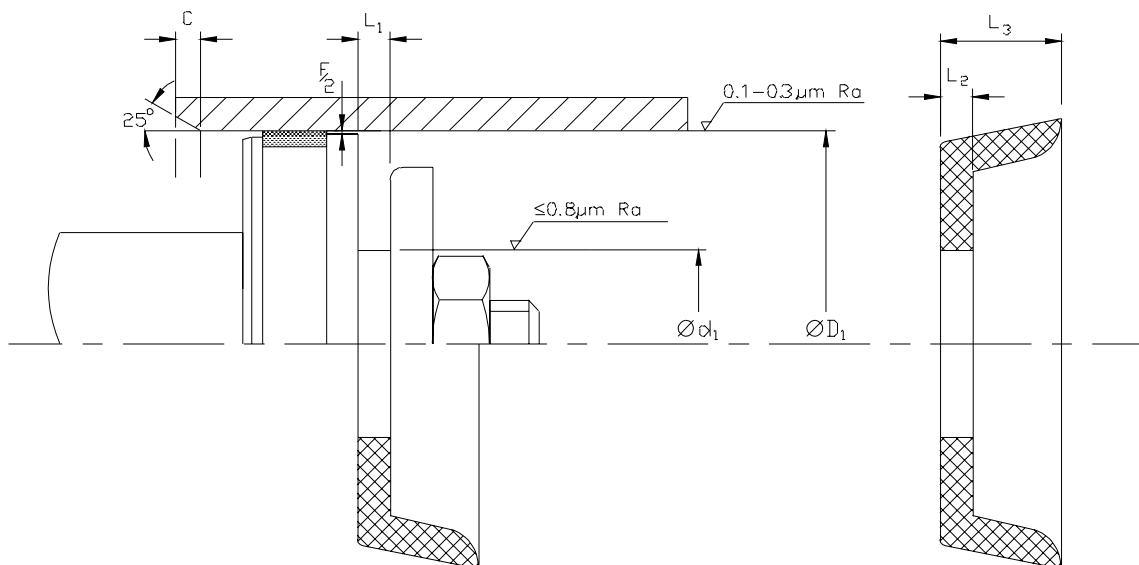
NBR Rubber		
DIN	Hydraulic Fluid Description	°C
H	Mineral oil without additives	100
H-L	Mineral Fluid with anti corrosion and anti ageing additives	100
H-LP	Mineral oil as HL plus additives reducing wear, raising load	100
H-LPD	Mineral oil as H-LP but with detergents and dispersants	100
H-V	Mineral oil 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

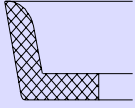
Housing

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

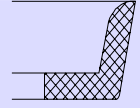
It is essential to apply a controlled squeeze to the base of the cup to avoid distortion of the heel and lip.
A location spigot of length L_1 and top plate must be used to avoid excessive wear and premature failure.
For the seal to function correctly, it is important that care be taken in fitting the seal within its housing.
For a detailed checklist, refer to Appendix 3.





ClaronPolyseal®
Single Acting Piston Seal

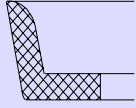
Metric



FPC

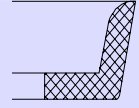
Nominal Dimensions & Machining Tolerances

Claron Part Number	H 11	+0.00 -0.12	Nom. Depth Fabric Cup	Nom. Base Thickness	+0.00 -0.12	Min
	ØD ₁	Ød ₁	L ₃	L ₂	L ₁	C
FPC 157055/RA	40.00	28.00	14.00	3.00	2.70	5.00
FPC 236078/FA	60.00	32.00	20.00	4.76	4.36	5.50
FPC 275062/2FA	70.00	40.00	15.88	4.75	4.35	5.50
FPC 299078/1FA	76.00	17.00	20.00	4.00	3.60	5.50
FPC 299078/FA	76.00	38.00	20.00	4.76	4.36	5.50
FPC 314075/FA	80.00	50.00	19.00	4.75	4.35	5.50
FPC 338078/FA	86.00	17.00	20.00	4.76	4.36	5.50
FPC 354075/FA	90.00	25.40	19.05	4.74	4.31	6.35
FPC 374078/FA	95.00	17.00	20.00	4.00	3.60	6.00
FPC 393050/FA	100.00	70.00	12.70	4.75	4.35	5.50



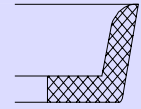
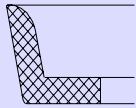
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Nominal Dimensions & Machining Tolerances

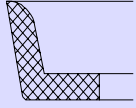
Claron Part Number	H 11	+0.000 -0.005	Nom. Depth Fabric Cup	Nom. Base Thickness	+0.000 -0.005	Min
	ØD ₁	Ød ₁	L ₃	L ₂	L ₁	C
FPC 062028/FA	0.625	0.250	0.281	0.093	0.085	0.187
FPC 062028/FB	0.625	0.180	0.281	0.093	0.085	0.187
FPC 100037/FA	1.000	0.375	0.375	0.093	0.085	0.187
FPC 125037/FA	1.250	0.250	0.375	0.125	0.115	0.187
FPC 137043/FA	1.375	0.562	0.437	0.125	0.115	0.187
FPC 137043/FB	1.375	0.687	0.437	0.125	0.115	0.187
FPC 150050/FA	1.500	0.250	0.500	0.125	0.115	0.187
FPC 150050/FB	1.500	0.875	0.500	0.125	0.115	0.187
FPC 162050/FA	1.625	0.375	0.500	0.125	0.115	0.187
FPC 162053/FA	1.625	0.405	0.531	0.156	0.140	0.187
FPC 162056/FA	1.625	0.500	0.562	0.156	0.140	0.187
FPC 168050/FA	1.687	0.687	0.500	0.125	0.115	0.187
FPC 175050/FA	1.750	0.375	0.500	0.125	0.115	0.187
FPC 175056/FA	1.750	0.405	0.562	0.187	0.170	0.187
FPC 175062/3RA	1.750	0.750	0.625	0.187	0.170	0.187
FPC 175062/4FA	1.750	1.000	0.625	0.187	0.170	0.187
FPC 178062/FA	1.781	16.5mm	0.625	0.187	0.170	0.187
FPC 200037/FA	2.000	1.125	0.375	0.125	0.115	0.187
FPC 200037/FB	2.000	1.250	0.375	0.125	0.115	0.187
FPC 200050/FA	2.000	0.375	0.500	0.125	0.115	0.187
FPC 200050/RA	2.000	0.750	0.500	0.141	0.131	0.187
FPC 200050/RB	2.000	1.250	0.500	0.141	0.131	0.187
FPC 200075/2FA	2.000	0.625	0.750	0.156	0.140	0.187
FPC 200075/FA	2.000	12.0mm	0.750	0.187	0.170	0.187
FPC 200081/FA	2.000	0.625	0.812	0.219	0.198	0.187
FPC 212062/FA	2.125	0.375	0.625	0.156	0.140	0.187
FPC 225050/2FA	2.250	1.250	0.500	0.156	0.140	0.218
FPC 225062/FA	2.50	1.312	0.625	0.156	0.140	0.218
FPC 225075/1FA	2.250	0.625	0.750	0.187	0.170	0.218
FPC 225075/1FB	2.250	1.000	0.750	0.187	0.170	0.218
FPC 225075/1FC	2.250	1.125	0.750	0.187	0.170	0.218
FPC 237075/1FA	2.375	0.687	0.750	0.187	0.170	0.218
FPC 237075/1FB	2.375	0.750	0.750	0.187	0.170	0.218
FPC 237075/1FC	2.375	0.500	0.750	0.187	0.170	0.218
FPC 237075/1FD	2.375	22.0 mm	0.750	0.187	0.170	0.218
FPC 237075/1FE	2.375	1.250	0.750	0.187	0.170	0.218
FPC 237075/1FSA	2.375	0.875	0.750	0.187	0.170	0.218
FPC 237075/FA	2.375	1.250	0.750	0.219	0.198	0.218
FPC 250062/FA	2.500	0.500	0.625	0.156	0.140	0.218
FPC 250062/FB	2.500	1.500	0.625	0.156	0.140	0.218
FPC 250062/FC	2.500	1.250	0.625	0.156	0.140	0.218
FPC 250087/FA	2.500	0.750	0.875	0.250	0.225	0.218
FPC 262075/FA	2.625	0.750	0.750	0.187	0.170	0.218
FPC 262075/FB	2.625	22.0mm	0.750	0.187	0.170	0.218
FPC 262075/FC	2.625	0.875	0.750	0.187	0.170	0.218



FPC

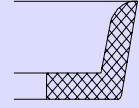
Nominal Dimensions & Machining Tolerances

Claron Part Number	H 11	+0.000 -0.005	Nom. Depth Fabric Cup	Nom. Base Thickness	+0.000 -0.005	Min
	ØD ₁	Ød ₁	L ₃	L ₂	L ₁	C
FPC 262075/FD	2.625	1.500	0.750	0.187	0.170	0.218
FPC 262075/FE	2.625	0.500	0.750	0.187	0.170	0.218
FPC 262081/FA	2.625	0.875	0.812	0.219	0.198	0.218
FPC 262100/RA	2.625	0.875	1.000	0.250	0.225	0.218
FPC 264075/FA	2.645	0.875	0.750	0.187	0.170	0.218
FPC 275062/1FA	2.750	0.687	0.625	0.187	0.170	0.218
FPC 275062/FA	2.750	0.687	0.625	0.219	0.198	0.218
FPC 275075/FA	2.750	0.500	0.750	0.187	0.170	0.218
FPC 275075/FB	2.750	0.750	0.750	0.187	0.170	0.218
FPC 275075/FC	2.750	0.875	0.750	0.187	0.170	0.218
FPC 287062/FA	2.875	1.000	0.625	0.187	0.170	0.218
FPC 287087/FA	2.875	1.000	0.875	0.187	0.170	0.218
FPC 291062/FA	2.915	1.000	0.625	0.187	0.170	0.218
FPC 300062/FA	3.000	0.500	0.625	0.156	0.140	0.218
FPC 300062/FB	3.000	0.750	0.625	0.156	0.140	0.218
FPC 300062/FC	3.000	1.500	0.625	0.156	0.140	0.218
FPC 300062/FD	3.000	1.875	0.625	0.156	0.140	0.218
FPC 300075/FA	3.000	0.812	0.750	0.219	0.198	0.218
FPC 300075/FB	3.000	0.750	0.750	0.219	0.198	0.218
FPC 300075/FC	3.000	1.250	0.750	0.219	0.198	0.218
FPC 300081/FA	3.000	1.500	0.812	0.156	0.140	0.218
FPC 312075/FA	3.125	22.0mm	0.750	0.187	0.170	0.250
FPC 312075/FB	3.125	0.500	0.750	0.187	0.170	0.250
FPC 312075/FSA	3.125	0.875	0.750	0.187	0.170	0.250
FPC 325062/FA	3.250	0.687	0.625	0.219	0.198	0.250
FPC 325075/1FA	3.250	1.000	0.750	0.219	0.198	0.250
FPC 325075/FA	3.250	0.750	0.750	0.187	0.170	0.250
FPC 325075/FB	3.250	22.0mm	0.750	0.187	0.170	0.250
FPC 325075/FC	3.250	0.500	0.750	0.187	0.170	0.250
FPC 325075/FD	3.250	2.000	0.750	0.187	0.170	0.250
FPC 325081/1FA	3.250	1.250	0.812	0.250	0.225	0.250
FPC 325081/FA	3.250	1.000	0.812	0.219	0.198	0.250
FPC 325100/2RA	3.250	1.000	1.000	0.250	0.225	0.250
FPC 328075/FA	3.280	1.000	0.750	0.187	0.170	0.250
FPC 350075/FA	3.500	0.500	0.750	0.187	0.170	0.250
FPC 350075/FB	3.500	0.750	0.750	0.187	0.170	0.250
FPC 350075/FC	3.500	2.125	0.750	0.187	0.170	0.250
FPC 350087/FA	3.500	1.000	0.875	0.250	0.225	0.250
FPC 362050/FA	3.625	2.562	0.500	0.187	0.170	0.250
FPC 362068/FA	3.625	2.375	0.687	0.187	0.170	0.250
FPC 362068/FB	3.625	0.625	0.687	0.187	0.170	0.250
FPC 362075/FA	3.625	0.812	0.750	0.219	0.198	0.250
FPC 362075/FB	3.625	1.250	0.750	0.219	0.198	0.250
FPC 362075/FC	3.625	1.750	0.750	0.219	0.198	0.250
FPC 375062/FA	3.750	0.687	0.625	0.219	0.198	0.250



ClaronPolyseal®
Single Acting Piston Seal
FPC

Imperial



Claron Part Number	Nominal Dimensions & Machining Tolerances					
	H 11 ØD ₁	+0.000 -0.005 Ød ₁	Nom. Depth Fabric Cup L ₃	Nom. Base Thickness L ₂	+0.000 -0.005 L ₁	Min C
FPC 375075/1FA	3.750	0.500	0.750	0.187	0.170	0.250
FPC 375075/1FB	3.750	0.750	0.750	0.187	0.170	0.250
FPC 375075/FA	3.750	0.625	0.750	0.250	0.225	0.250
FPC 387050/FA	3.875	0.750	0.500	0.150	0.135	0.250
FPC 387075/FA	3.875	22.0mm	0.750	0.187	0.170	0.250
FPC 387075/FB	3.875	0.750	0.750	0.187	0.170	0.250
FPC 387081/FA	3.875	1.125	0.812	0.219	0.198	0.250
FPC 387100/1RA	3.875	1.125	1.000	0.219	0.198	0.250
FPC 400075/FA	4.000	0.750	0.750	0.187	0.170	0.250
FPC 400075/FB	4.000	22.0mm	0.750	0.187	0.170	0.250
FPC 400075/FC	4.000	2.500	0.750	0.187	0.170	0.250
FPC 400075/FD	4.000	0.500	0.750	0.187	0.170	0.250
FPC 400075/FSA	4.000	0.875	0.750	0.187	0.170	0.250
FPC 400075/RA	4.000	1.000	0.750	0.187	0.170	0.250
FPC 412087/FA	4.125	1.000	0.875	0.250	0.225	0.250
FPC 425062/FA	4.250	2.500	0.625	0.125	0.115	0.250
FPC 425075/FA	4.250	0.687	0.750	0.187	0.170	0.250
FPC 425075/FB	4.250	0.750	0.750	0.187	0.170	0.250
FPC 450075/FA	4.500	0.500	0.750	0.187	0.170	0.250
FPC 475081/FA	4.750	1.250	0.812	0.219	0.198	0.250
FPC 475100/1RA	4.750	1.250	1.000	0.219	0.198	0.250
FPC 475100/FA	4.750	22.0mm	1.000	0.250	0.225	0.250
FPC 500075/FA	5.000	3.500	0.750	0.187	0.170	0.250
FPC 500075/FB	5.000	0.500	0.750	0.187	0.170	0.250
FPC 500075/FC	5.000	1.500	0.750	0.250	0.225	0.250
FPC 500087/FA	5.000	1.000	0.875	0.250	0.225	0.250
FPC 500100/FA	5.000	22.0mm	1.000	0.250	0.225	0.250
FPC 500100/FSA	5.000	0.875	1.000	0.250	0.255	0.250
FPC 525050/FA	5.250	3.750	0.500	0.187	0.170	0.250
FPC 525050/FB	5.250	0.750	0.500	0.187	0.170	0.250
FPC 550075/RA	5.500	0.750	0.750	0.187	0.170	0.250
FPC 575081/FA	5.750	1.500	0.812	0.219	0.198	0.250
FPC 600075/FA	6.000	1.500	0.750	0.250	0.225	0.250
FPC 600087/FA	6.000	1.000	0.875	0.250	0.225	0.250
FPC 600100/FA	6.000	22.0mm	1.000	0.250	0.225	0.250
FPC 600100/FSA	6.000	0.875	1.000	0.250	0.225	0.250
FPC 650100/2FA	6.500	4.000	1.000	0.250	0.225	0.250
FPC 650100/2FB	6.500	4.500	1.000	0.250	0.225	0.250
FPC 650100/2FC	6.500	0.750	1.000	0.250	0.225	0.250
FPC 650100/2FD	6.500	1.500	1.000	0.250	0.225	0.250
FPC 700087/FA	7.000	1.375	0.875	0.250	0.225	0.250
FPC 700087/RA	7.000	1.000	0.875	0.219	0.198	0.250
FPC 700100/1FA	7.000	2.750	1.000	0.219	0.198	0.250
FPC 700100/FA	7.000	22.0mm	1.000	0.250	0.225	0.250
FPC 700100/RA	7.000	2.500	1.000	0.250	0.225	0.250
FPC 825100/RA	8.250	2.500	1.000	0.250	0.225	0.250
FPC 825100/RB	8.250	2.750	1.000	0.250	0.225	0.250