

Design

Claron Style CPI is designed for use as a single acting rod seal. The seal is a precision moulded Nitrile rubber sealing element with a fabric reinforced base and an acetal back up ring to resist extrusion. The acetal back up ring allows larger clearances and 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 fluid within its surface so reducing both friction and wear. Style CP is produced with radial grooves incorporated into the top of the seal on the pressure side. This innovative design ensures a rapid energisation of the seal without excessive end float and resultant wear.

Operating Conditions

Continuous operating temperature for various fluids

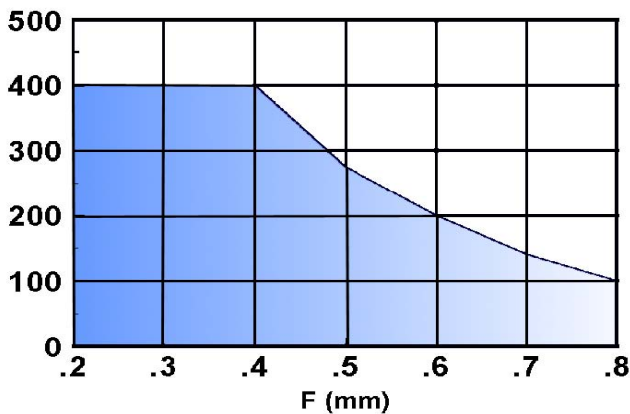
Maximum Pressure	
Max Speed	Temp. Range
m/s	-30°C to 100°C
0.50	250 Bar
0.15	400 Bar

These range parameters are Maximum simultaneous conditions.

Optimum service conditions are affected by temperature, speed, pressure, surface finish and extrusion gaps.

Refer to Appendix 1 section for further information.

Pressure Bar



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

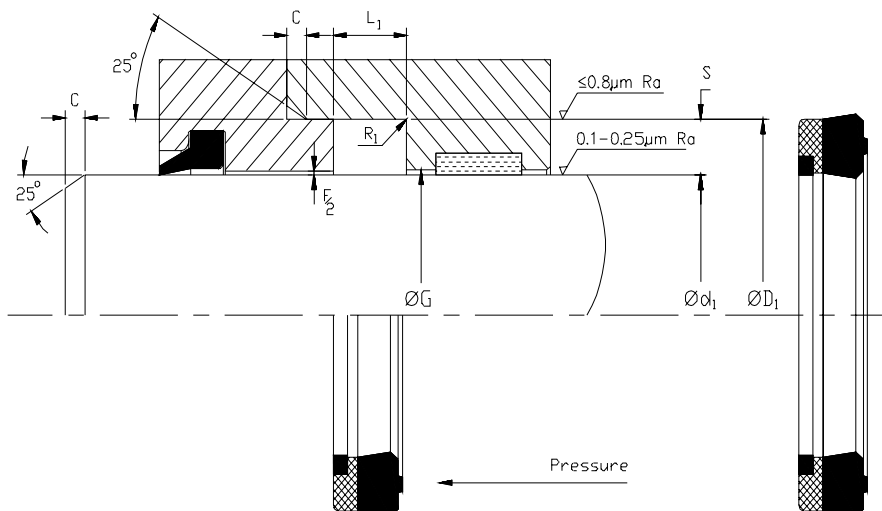
Note: Clearance gap F is the maximum permissible. i.e. gap completely on one side, in the temperature range of -30°C to 100°C. The use of a suitably selected Claron bearing ring will effectively reduce the clearance gap F max. to a value closer to F/2 thus increasing the pressure capability of the seal.

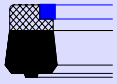
Housing

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

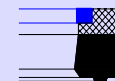
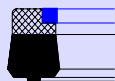
For the seal to function correctly, it is important that care be taken in fitting the seal within its housing. For a detailed checklist, refer to Appendix 3.





Nominal Dimensions & Machining Tolerances

Claron Part Number	Js 11	f8	H9	+0.25 -0.00	Nominal	Min	Max
	ØD ₁	d ₁	ØG	L ₁	S	C	R ₁
CPI 094063	24.00	16.00		6.30	4.00	2.00	0.20
CPI 106078	27.00	20.00		6.40	3.50	2.00	0.20
CPI 110070	28.00	18.00		6.30	5.00	2.00	0.20
CPI 110078	28.00	20.00		7.00	4.00	2.00	0.20
CPI 118086	30.00	22.00		7.00	4.00	2.00	0.20
CPI 129098	33.00	25.00		7.00	4.00	2.00	0.20
CPI 129098/1	33.00	25.00		6.30	4.00	2.00	0.20
CPI 129098/2	33.00	25.00		7.50	4.00	2.00	0.20
CPI 137098	35.00	25.00		8.00	5.00	2.50	0.40
CPI 149110	38.00	28.00		8.50	5.00	2.50	0.40
CPI 149110/1	38.00	28.00		8.00	5.00	2.50	0.40
CPI 149118	38.00	30.00		6.40	4.00	2.00	0.20
CPI 157110	40.00	28.00		9.00	6.00	3.00	0.40
CPI 157118	40.00	30.00		7.50	5.00	2.50	0.40
CPI 157125	40.00	32.00		9.00	4.00	2.00	0.20
CPI 157125/2	40.00	32.00		8.50	4.00	2.00	0.20
CPI 165125	42.00	32.00		8.00	5.00	2.50	0.40
CPI 169141	43.00	36.00		6.40	3.50	2.00	0.20
CPI 173125	44.00	32.00		12.00	6.00	3.00	0.40
CPI 177118	45.00	30.00		9.50	7.50	4.00	0.80
CPI 177137	45.00	35.00		7.00	5.00	2.50	0.40
CPI 177137/3	45.00	35.00		10.50	5.00	2.50	0.40
CPI 181141/1	46.00	36.00		8.00	5.00	2.50	0.40
CPI 196137/2	50.00	35.00		11.00	7.50	4.00	0.80
CPI 196157/1	50.00	40.00		10.50	5.00	2.50	0.40
CPI 196157/2	50.00	40.00		13.50	5.00	2.50	0.40
CPI 196157/3	50.00	40.00		8.00	5.00	2.50	0.40
CPI 216157	55.00	40.00		8.00	7.50	4.00	0.80
CPI 216157/1	55.00	40.00		10.50	7.50	4.00	0.80
CPI 216177	55.00	45.00		8.00	5.00	2.50	0.40
CPI 216177/1	55.00	45.00		11.00	5.00	2.50	0.40
CPI 236188/1	60.00	48.00		11.00	6.00	3.00	0.40
CPI 236196	60.00	50.00		8.00	5.00	2.50	0.40
CPI 236196/1	60.00	50.00		10.50	5.00	2.50	0.40
CPI 236196/3	60.00	50.00		14.50	5.00	2.50	0.40
CPI 244196/1	62.00	50.00		9.50	6.00	3.00	0.40
CPI 255196	65.00	50.00		11.00	7.50	4.00	0.80
CPI 255216	65.00	55.00		10.50	5.00	2.50	0.40
CPI 259220	66.00	56.00		10.50	5.00	2.50	0.40
CPI 275216	70.00	55.00		10.50	7.50	4.00	0.80
CPI 275236	70.00	60.00		13.00	5.00	2.50	0.40
CPI 275236/3	70.00	60.00		8.00	5.00	2.50	0.40
CPI 279220	71.00	56.00		12.50	7.50	4.00	0.80
CPI 295236	75.00	60.00		13.00	7.50	4.00	0.80
CPI 307248	78.00	63.00		12.50	7.50	4.00	0.80



Nominal Dimensions & Machining Tolerances

Claron Part Number	Js 11	f8	H9	+0.25 -0.00	Nominal	Min	Max
	ØD ₁	d ₁	ØG	L ₁	S	C	R ₁
CPI 314236	80.00		60.00	14.50	10.00	5.00	0.80
CPI 314275	80.00		70.00	12.50	5.00	2.50	0.40
CPI 322275	82.00		70.00	10.50	6.00	3.00	0.40
CPI 326248	83.00		63.00	14.50	10.00	5.00	0.80
CPI 334255	85.00		65.00	14.50	10.00	5.00	0.80
CPI 334275	85.00		70.00	12.50	7.50	4.00	0.80
CPI 354275	90.00		70.00	14.50	10.00	5.00	0.80
CPI 374295	95.00		75.00	14.50	10.00	5.00	0.80
CPI 374314	95.00		80.00	13.00	7.50	4.00	0.80
CPI 374314/1	95.00		80.00	12.50	7.50	4.00	0.80
CPI 393314	100.00		80.00	14.50	10.00	5.00	0.80
CPI 413354/1	105.00		90.00	12.50	7.50	4.00	0.80
CPI 433354	110.00		90.00	12.50	10.00	5.00	0.80
CPI 452374	115.00		95.00	14.50	10.00	5.00	0.80
CPI 452413	115.00		105.00	10.50	5.00	2.50	0.40
CPI 472393	120.00		100.00	14.50	10.00	5.00	0.80
CPI 511433	130.00		110.00	12.50	10.00	5.00	0.80
CPI 551492/1	140.00		125.00	13.00	7.50	4.00	0.80
CPI 629551	160.00		140.00	12.50	10.00	5.00	0.80
CPI 669590/1	170.00		150.00	14.50	10.00	6.00	0.80