

ClaronPolyseal® Single Acting Piston Seal

CP

Metric



Design

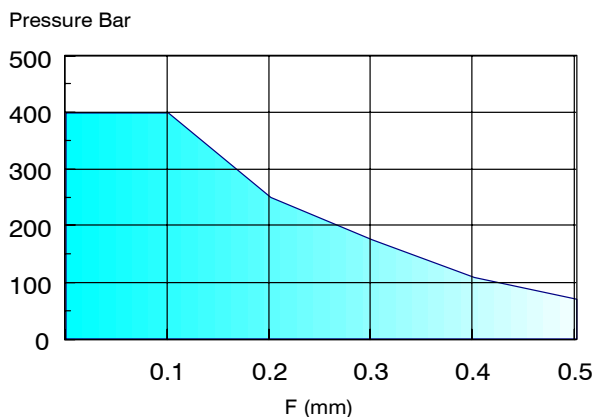
CLARON STYLE CP is designed with a symmetrical profile for use as a single acting piston or rod seal. The seal is a precision moulded Nitrile rubber sealing element with a bonded fabric reinforced base to resist extrusion. Designed with initial radial interference to effect low pressure sealing, at higher pressures the seal is 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 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

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 for further information.

Maximum Diametral Clearance F



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

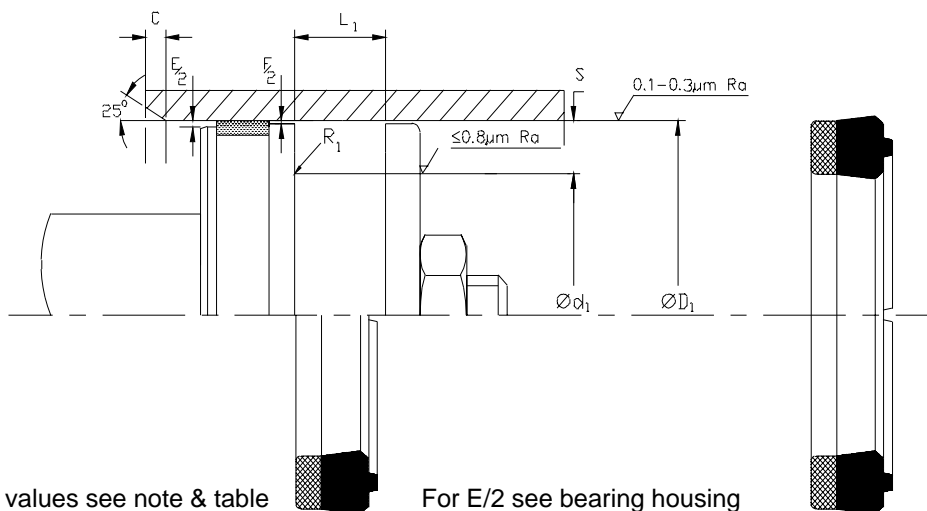
Note: Clearance gap F is the maximum permissible. i.e. gap completely on one side, in the temperature range of -30°C to 100°C. The use of a suitably selected Claron bearing ring will effectively reduce the clearance gap F max. to a value closer to F/2 thus increasing the pressure capability of the seal.

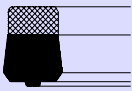
Housing

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. For Rod applications see Section C.

Fitting

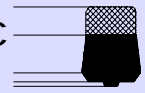
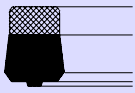
For the seal to function correctly, it is important that care be taken in fitting the seal within its housing. For a detailed checklist, refer to Appendix 3.





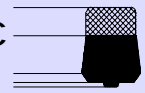
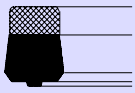
Nominal Dimensions & Machining Tolerances

Claron Part Number	H10	js11	+0.25 -0.00	Nominal	Min	Max
	ØD ₁	Ød ₁	L ₁	S	C	R ₁
CP 078047	20.00	12.00	6.30	4.00	2.00	0.20
CP 094063/1	24.00	16.00	7.50	4.00	2.00	0.20
CP 094063/2	24.00	16.00	6.30	4.00	2.00	0.20
CP 098047	25.00	12.00	10.00	6.50	2.50	0.40
CP 098070	25.00	18.00	7.00	3.50	2.00	0.20
CP 102062/1	26.00	16.00	8.00	5.00	2.50	0.40
CP 102066	26.00	17.00	5.70	4.50	2.00	0.20
CP 102070	26.00	18.00	6.30	4.00	2.00	0.20
CP 102078	26.00	20.00	5.50	3.00	1.50	0.20
CP 106059	27.00	15.00	7.00	6.00	2.50	0.40
CP 110070	28.00	18.00	6.30	5.00	2.50	0.40
CP 110078	28.00	20.00	7.00	4.00	2.00	0.20
CP 110078/1	28.00	20.00	6.30	4.00	2.00	0.20
CP 114074	29.00	19.00	8.00	5.00	2.50	0.40
CP 118078/1	30.00	20.00	8.00	5.00	2.50	0.40
CP 118086/1	30.00	22.00	6.30	4.00	2.00	0.20
CP 118086/2	30.00	22.00	7.50	4.00	2.00	0.20
CP 125086	32.00	22.00	7.50	5.00	2.50	0.40
CP 125094	32.00	24.00	7.00	4.00	2.00	0.20
CP 129098/1	33.00	25.00	6.30	4.00	2.00	0.20
CP 137098	35.00	25.00	8.00	5.00	2.50	0.40
CP 141110/1	36.00	28.00	6.40	4.00	2.00	0.20
CP 149110/1	38.00	28.00	8.00	5.00	2.50	0.40
CP 149118	38.00	30.00	6.40	4.00	2.00	0.20
CP 149118/1	38.00	30.00	8.50	4.00	2.00	0.20
CP 157118	40.00	30.00	7.50	5.00	2.50	0.40
CP 157125/1	40.00	32.00	6.40	4.00	2.00	0.20
CP 165125	42.00	32.00	8.00	5.00	2.50	0.40
CP 169137	43.00	35.00	6.40	4.00	2.00	0.20
CP 173141	44.00	36.00	6.40	4.00	2.00	0.20
CP 173141/1	44.00	36.00	8.50	4.00	2.00	0.20
CP 177118/1	45.00	30.00	9.00	7.50	4.00	0.80
CP 177137/1	45.00	35.00	9.00	5.00	2.50	0.40
CP 177137/5	45.00	35.00	8.00	5.00	2.50	0.40
CP 181141/1	46.00	36.00	8.00	5.00	2.50	0.40
CP 181149	46.00	38.00	6.30	4.00	2.00	0.20
CP 185125	47.00	32.00	11.00	7.50	4.00	0.80
CP 188157	48.00	40.00	6.40	4.00	2.00	0.20
CP 196137/1	50.00	35.00	12.50	7.50	4.00	0.80
CP 196137/2	50.00	35.00	11.00	7.50	4.00	0.80
CP 196157	50.00	40.00	11.00	5.00	2.50	0.40
CP 196157/2	50.00	40.00	13.50	5.00	2.50	0.40
CP 196157/3	50.00	40.00	7.50	5.00	2.50	0.40
CP 196165	50.00	42.00	6.30	4.00	2.00	0.20
CP 200141	51.00	36.00	11.50	7.50	4.00	0.80



Nominal Dimensions & Machining Tolerances

Claron Part Number	H10	js11	+0.25 -0.00	Nominal Sec. S	Min	Max
	ØD ₁	Ød ₁	L ₁		C	R ₁
CP 216157/2	55.00	40.00	11.50	7.50	4.00	0.80
CP 216177	55.00	45.00	8.00	5.00	2.50	0.40
CP 216177/3	55.00	45.00	10.50	5.00	2.50	0.40
CP 228196	58.00	50.00	8.50	4.00	2.00	0.20
CP 236177/1	60.00	45.00	11.50	7.50	4.00	0.80
CP 236196	60.00	50.00	8.00	5.00	2.50	0.40
CP 236196/3	60.00	50.00	14.50	5.00	2.50	0.40
CP 244196/1	62.00	50.00	9.50	6.00	3.00	0.40
CP 248188/2	63.00	48.00	11.00	7.50	4.00	0.80
CP 255196/1	65.00	50.00	11.00	7.50	4.00	0.80
CP 255216	65.00	55.00	10.50	5.00	2.50	0.40
CP 255216/1	65.00	55.00	8.00	5.00	2.50	0.40
CP 259220	66.00	56.00	8.00	5.00	2.50	0.40
CP 275196	70.00	50.00	14.50	10.00	5.00	0.80
CP 275236/3	70.00	60.00	8.00	5.00	2.50	0.40
CP 275236/4	70.00	60.00	14.50	5.00	2.50	0.40
CP 279220	71.00	56.00	12.50	7.50	4.00	0.80
CP 283236	72.00	60.00	10.0	6.00	3.00	0.40
CP 283236/2	72.00	60.00	11.00	6.00	3.00	0.40
CP 295248	75.00	63.00	9.60	6.00	3.00	0.40
CP 303255	77.00	65.00	9.60	6.00	3.00	0.40
CP 307248	78.00	63.00	12.50	7.50	4.00	0.80
CP 314236	80.00	60.00	14.50	10.00	5.00	0.80
CP 314255	80.00	65.00	11.50	7.50	4.00	0.80
CP 314275/1	80.00	70.00	8.00	5.00	2.50	0.40
CP 314275/3	80.00	70.00	12.00	5.00	2.50	0.40
CP 322275/1	82.00	70.00	9.60	6.00	3.00	0.40
CP 322275/2	82.00	70.00	11.00	6.00	3.00	0.40
CP 334255	85.00	65.00	14.50	10.00	5.00	0.80
CP 334275	85.00	70.00	12.50	7.50	4.00	0.80
CP 334295/1	85.00	75.00	8.00	5.00	2.50	0.40
CP 342295	87.00	75.00	9.50	6.00	3.00	0.40
CP 354275/1	90.00	70.00	10.50	10.00	5.00	0.80
CP 358318	91.00	81.00	8.00	5.00	2.50	0.40
CP 362314	92.00	80.00	9.60	6.00	3.00	0.40
CP 362314/1	92.00	80.00	11.00	6.00	3.00	0.40
CP 374295	95.00	75.00	14.50	10.00	5.00	0.80
CP 374314	95.00	80.00	13.00	7.50	4.00	0.80
CP 374314/1	95.00	80.00	12.50	7.50	4.00	0.80
CP 374334	95.00	85.00	8.00	5.00	2.50	0.40
CP 393314	100.00	80.00	14.50	10.00	5.00	0.80
CP 393334	100.00	85.00	12.50	7.50	4.00	0.80
CP 393354	100.00	90.00	10.50	5.00	2.50	0.40
CP 401354	102.00	90.00	9.60	6.00	3.00	0.40
CP 413334/1	105.00	85.00	13.00	10.00	5.00	0.80



Nominal Dimensions & Machining Tolerances

Claron Part Number	H10	js11	+0.25 -0.00	Nominal	Min	Max
	ØD ₁	Ød ₁	L ₁	Sec. S	C	R ₁
CP 413354	105.00	90.00	9.50	7.50	4.00	0.80
CP 413354/1	105.00	90.00	12.50	7.50	4.00	0.80
CP 421374	107.00	95.00	12.50	6.00	3.00	0.40
CP 433342	110.00	87.00	8.00	11.50	5.00	0.80
CP 433342/1	110.00	87.00	18.50	11.50	5.00	0.80
CP 452393/1	115.00	100.00	12.00	7.50	4.00	0.80
CP 452413	115.00	105.00	11.00	5.00	2.50	0.40
CP 472393	120.00	100.00	14.50	10.00	5.00	0.80
CP 492433	125.00	110.00	12.00	7.50	4.00	0.80
CP 492452	125.00	115.00	8.00	5.00	2.50	0.40
CP 523484	133.00	123.00	8.00	5.00	2.50	0.40
CP 590492	150.00	125.00	14.50	12.50	6.50	1.20
CP 629551/2	160.00	140.00	12.00	10.00	5.00	0.80
CP 661602	168.00	153.00	12.50	7.50	4.00	0.80
CP 669590/1	170.00	150.00	14.50	10.00	5.00	0.80