CPU.../P

Design

The Claron style CPU.../P is an asymmetrical profiled lip seal manufactured in a high performance grade of Polyurethane and is suitable for piston sealing. The sealing lips are machine trimmed to ensure dimensional consistency and good low pressure sealing. Polyurethane exhibits outstanding abrasion and extrusion resistance. The offset lip design allows rapid energization of the seal without excessive axial movement.

Operating Conditions

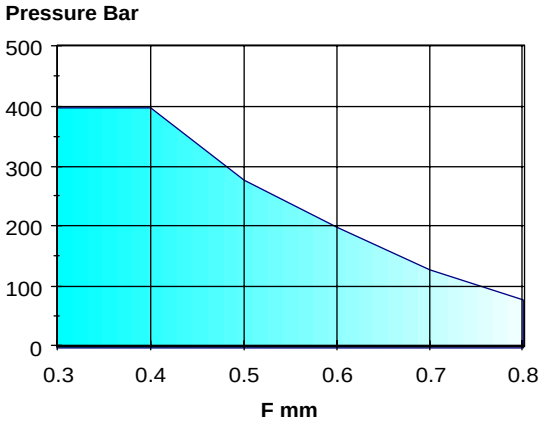
Maximum Pressure		
Max Speed	Temp. Range	Temp. Range
m/s	-40°C to 80°C	-40°C to 110°C
0.50	280 Bar	250 Bar
0.15	400 Bar	350 Bar

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

AU Polyurethane		
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%	40
HFA S	Synthetic oil in water. Water content 80-95%	40
HFB	Emulsions of water in mineral oil. Water content 40%	40
HFC	Aqueous polymer solutions. Water content 35%	ns
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	60

Maximum Diametral clearance F



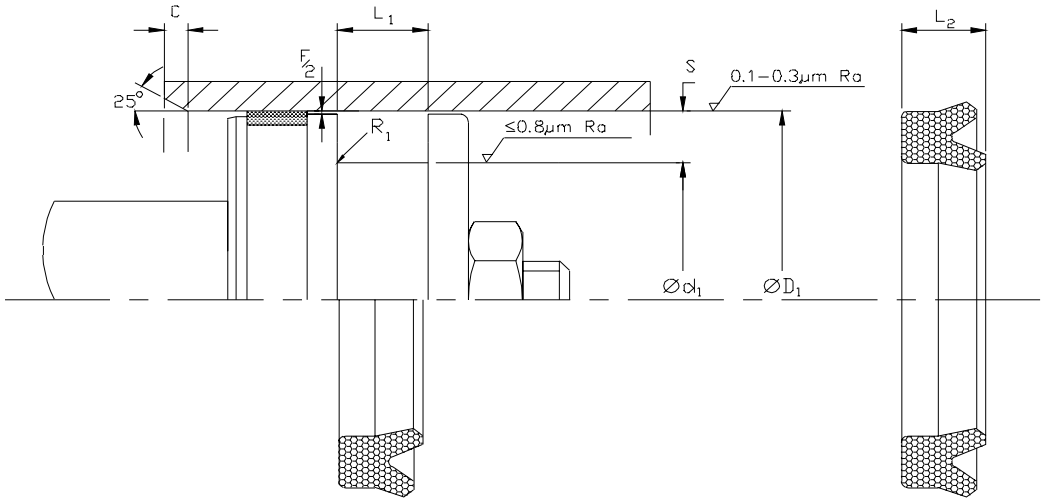
Note: Clearance gap F is the maximum permissable. i.e. gap completely on one side, in the temperature range of -30°C to 80°C
The use of a suitably selected Claron bearing ring will effectively reduce the clearance gap F max. to a value closer to F/2 thus increasing the pressure capability of the seal.

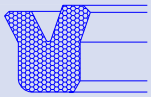
Housing

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

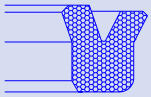
For the seal to function correctly, it is important that care be taken in fitting the seal within its housing.
For a detailed checklist, refer to Appendix 3.





Single Acting AU Piston Seal Metric

CPU.../P



Nominal Dimensions & Machining Tolerances

Claron Part Number	H9 $ØD_1$	js11 $Ød_1$	+0.25 -0.00 L_1	Nominal L_2	Nominal S	Min C	Max. R_1
CPU 125098/P	32.00	25.00	5.60	5.00	3.50	3.00	0.20
CPU 196157/P	50.00	40.00	8.00	7.30	5.00	3.50	0.40
CPU 255216/1P	65.00	55.00	8.00	7.30	16.50	3.50	0.40
CPU 314185/P	80.00	47.00	17.00	16.00	12.50	8.00	1.60
CPU 393295/P	100.00	75.00	19.00	18.00	5.00	7.00	1.20

Style CPUO is fitted with an anti-extrusion ring on the OD

CPUO 236196/P	60.00	50.00	8.00	7.30	5.00	3.50	0.40