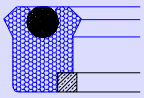
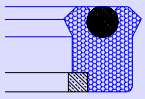


# CPUI.../OR



## Design

Claron style CPUI.../OR is a Polyurethane U-seal incorporating an O-Ring energiser. This guarantees the pre-loading of the seal lips for low pressure sealing, thus optimising seal performance. Polyurethane provides outstanding abrasion and wear resistance ensuring that the seal operates in the most arduous conditions. The anti-extrusion ring which is energised at high pressures, increases the maximum working pressure as well as protecting the seal against pressure spikes.

## Operating Conditions

| Maximum Pressure | | |
|---|---|---|
| Max Speed | Temp. Range | Temp. Range |
| m/s | -40°C to 80°C | -40°C to 110°C |
| **0.50** | 350 Bar | 300 Bar |
| **0.15** | 500 Bar | 450 Bar |

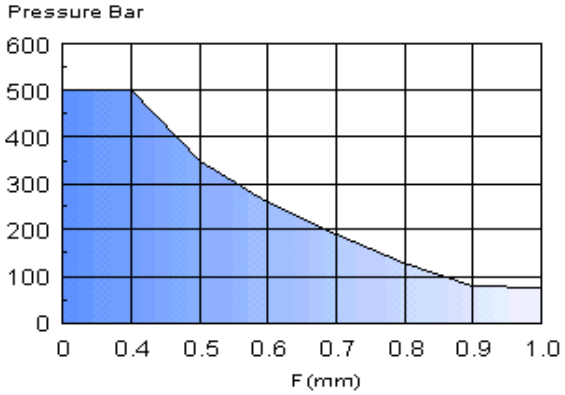
These range perameters are Maximum simultaneous conditions.

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*



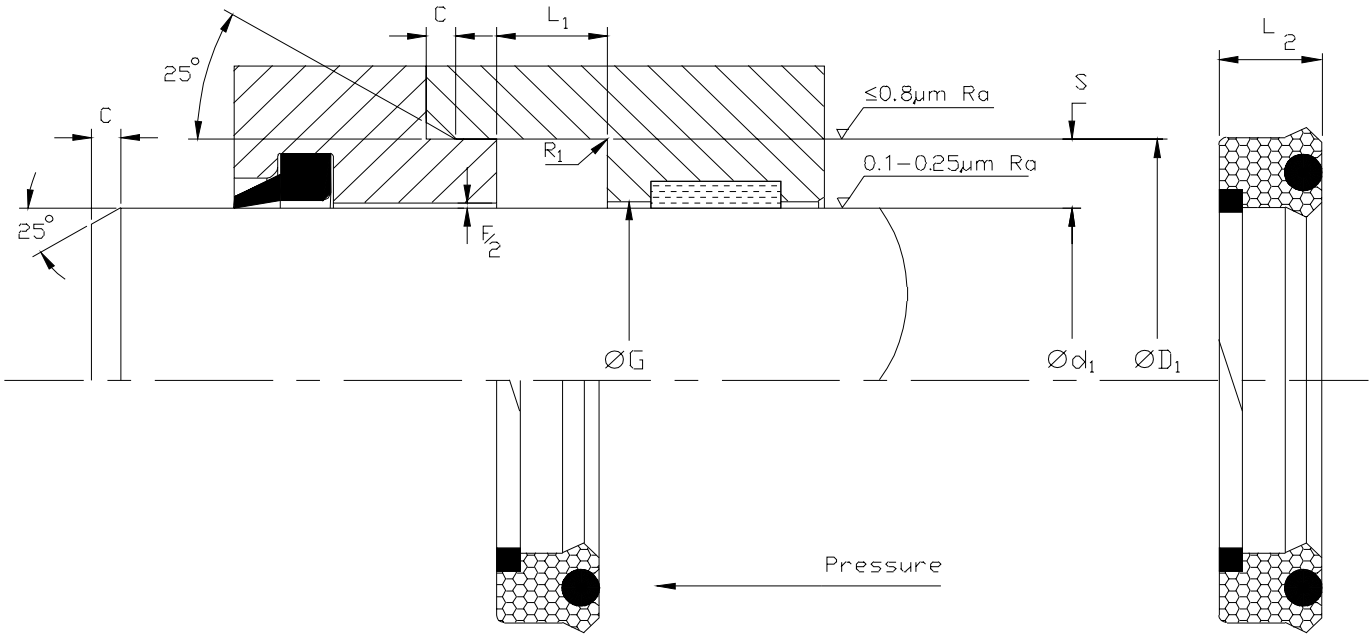

**Note:** Clearance gap F is the maximum permissable. i.e. gap completely on one side, in the temperature range of -30°C to 80°C The use of a suitably selected Claron bearing ring will effectively reduce the clearance gap F max. to a value closer to F/2 thus increasing the pressure capability of the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

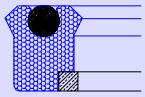
## Housing

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

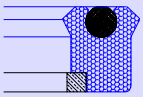
For the seal to function correctly, it is important that care be taken in fitting the seal within its housing.
For a detailed checklist, refer to Appendix 3.





# Single Acting Rod Seal
# CPUI.../OR

Metric



## Nominal Dimensions & Machining Tolerances

| Claron Part Number | f8 H9 $Ød_1$ ØG | H10 $ØD_1$ | +0.25 -0.00 $L_1$ | Nominal $L_2$ | Nominal S | Min C | Max. $R_1$ |
|---|---|---|---|---|---|---|---|
| CPUI 216157/OR | 40 | 55 | 12.5 | 11.4 | 7.5 | 5.0 | 0.4 |
| CPUI 255196/OR | 50 | 65 | 12.5 | 11.4 | 7.5 | 5.0 | 0.4 |
| CPUI 295236/OR | 60 | 75 | 12.5 | 11.4 | 7.5 | 5.0 | 0.4 |
| CPUI 314255/OR | 65 | 80 | 12.5 | 11.4 | 7.5 | 5.0 | 0.4 |
| CPUI 413354/OR | 90 | 105 | 12.5 | 11.3 | 7.5 | 5.0 | 0.4 |
| CPUI 433354/OR | 90 | 110 | 12.5 | 11.3 | 10.0 | 6.5 | 0.6 |