Single Acting Rod Seal

HBTY

Metric

Design

Claron style HBTY is a single acting seal for gland applications useing the same housing designs as Style HBI and Style HBT. Designed as a high pressure, low friction seal for use in second generation tandem sealing arrangements where the lower friction seal is used on the pressure side, and a 'low leak' but higher friction seal on the non pressure side to collect the oil film during the positive stroke. This type of arrangement is used where both low friction and low leakage are required. The seals high pressure resistance makes it suitable for
use in heavy duty applications where shock loads and pressure spikes occur, as found in mobile plant equipment.

Materials

Both the inner sealing element and the energiser are available in a wide range of materials to suit a variety of applications. The inner sealing element is manufactured from high performance glass filled PTFE, energised by an NBR Sqaure section Ring as standard. Materials can be specified by a part number suffix E.g. HBTY065/B Bronze Filled PTFE.

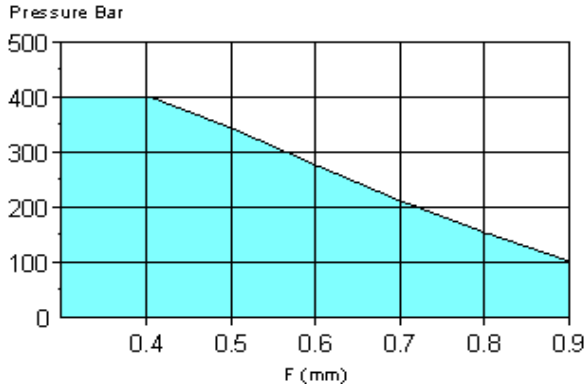
Operating Range

Maximum Working Pressure Bar (For Standard Materials)

Temp. Range	Temp. Range
-30°C to 80°C	80°C to 120°C
400 Bar	350 Bar

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



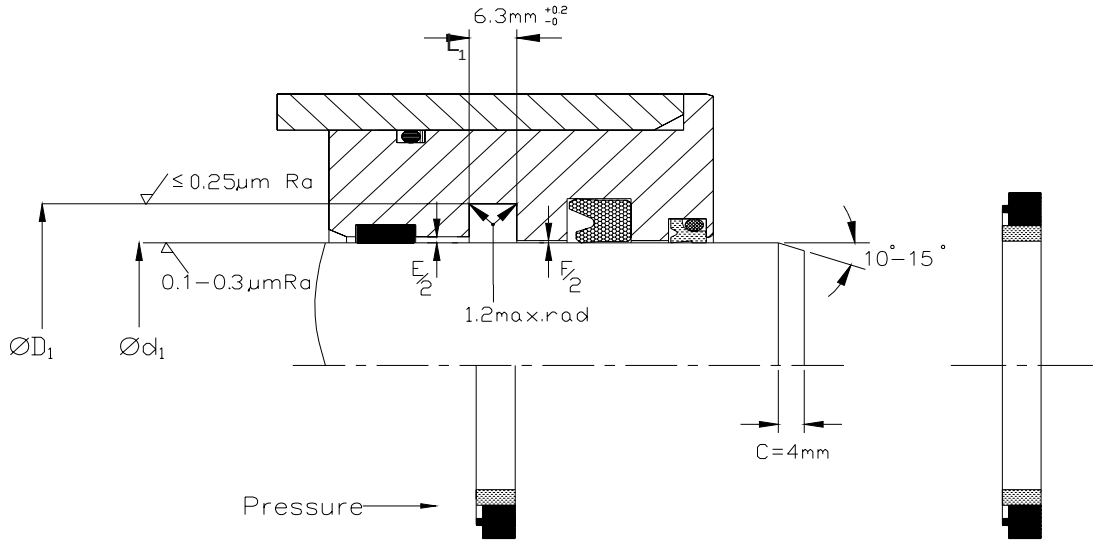
Note: Clearance gap F is the maximum permissable. i.e. gap completely on one side, in the temperature range of -30°C to 80°C The use of a suitably selected Claron bearing ring will effectively reduce the clearance gap F max. to a value closer to F/2 thus increasing the pressure capability of the seal.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

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. For value of E/2, refer to the bearing ring requirements.
Refer to Appendix 4 for value of tolerance symbols.

Fitting

Style HBT may be deformed and fitted into a closed groove. 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.



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Nominal Dimensions & Machining Tolerances

Claron Part Number	f8 Ød$_1$	H9 ØD$_1$	+0.20 -0.00 L$_1$	Nominal C
HBTY 050	50	65.5	6.3	4
HBTY 055	55	70.5	6.3	4
HBTY 060	60	75.5	6.3	4
HBTY 065	**65**	**80.5**	**6.3**	**4**
HBTY 070	**70**	**85.5**	**6.3**	**4**
HBTY 075	75	90.5	6.3	4
HBTY 080	**80**	**95.5**	**6.3**	**4**
HBTY 085	85	100.5	6.3	4
HBTY 090	**90**	**105.5**	**6.3**	**4**
HBTY 095	95	110.5	6.3	4
HBTY 100	**100**	**115.5**	**6.3**	**4**
HBTY 105	105	120.5	6.3	4
HBTY 110	110	125.5	6.3	4
HBTY 115	115	130.5	6.3	4
HBTY 120	120	135.5	6.3	4
HBTY 130	130	145.5	6.3	4

Items in **BOLD** are to suit ISO7425-2 housings.