CS 1 Imperial
CS 3 Metric

Double Acting Rod Seals

CS1 CS3

Design

Claron composite seals styles CS1 and CS 3 are designed for use in light duty hydraulic or pneumatic rod applications. Style CS1 covers the range of imperial sizes, and the CS3 metric sizes.
For advice on installation, refer to Appendix.

Materials

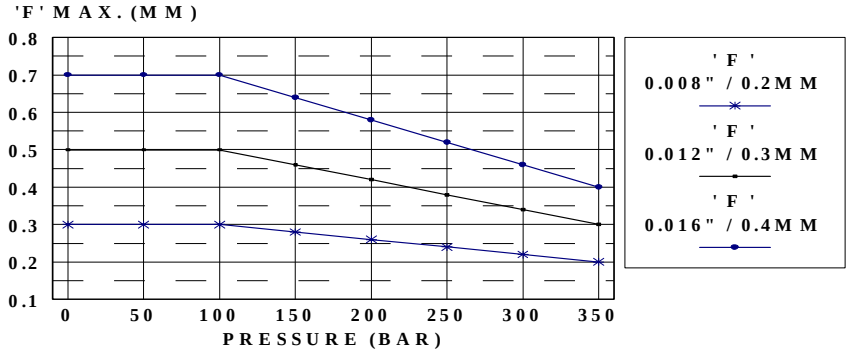
Claron composite seals style CS1 and CS3 as standard comprise of a Virgin PTFE inner sleeve and are energised by a 75° shore hardness Nitrile rubber O-Ring. A full range of materials are available to suit a variety of applications.
See tables in Appendix.

Operating Conditions

Maximum Working Pressure for “Standard” seal applications using specified tolerances.
Temp Range: -40°C to +120°C (Dependent upon energiser material. See Appendix)
Max. Pressure: 350 Bar
Max. Linear Speed: 15m/s
These range parameters are maximum conditional values
Optimum service conditions are affected by temperature, speed pressure, surface finish and extrusion gaps..
Refer to Appendix 1 for further information**.**

Diametral Clearance 'F'

'F' shown in the size tables is based upon Virgin P.T.F.E., temperatures up to 80°C and 350 Bar pressure in designs where PTFE guide tape is utilised. For other pressures, refer to the graph shown below.

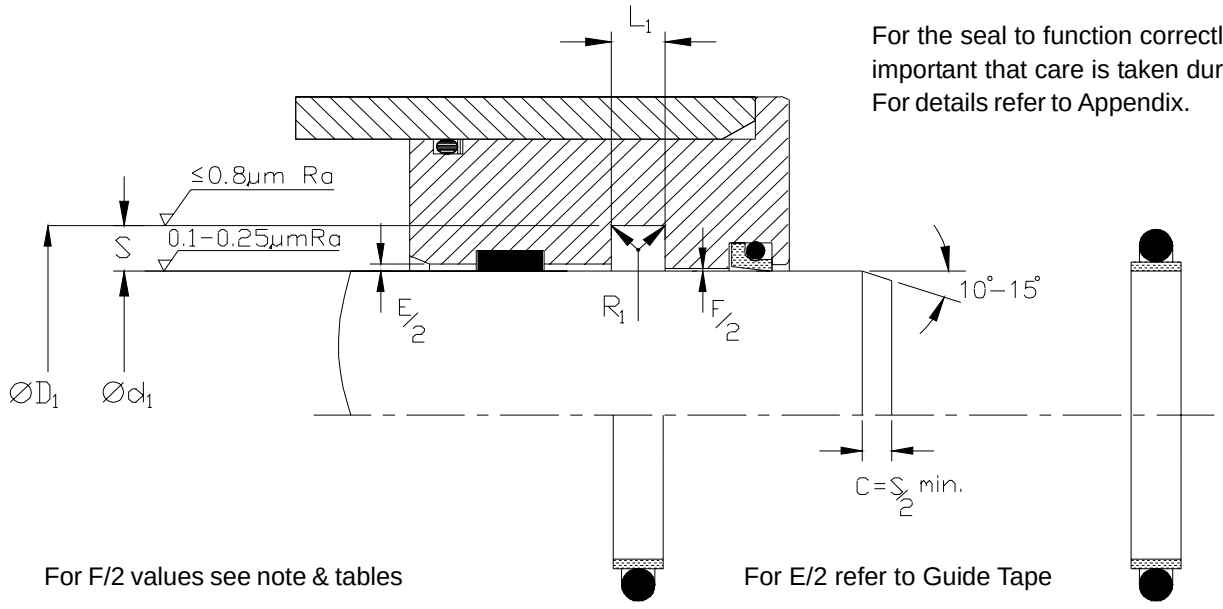


To use this graph, refer to the tables on page for the max. value of 'F' at 350 Bar then apply the relevant curve for the various pressures.

The maximum extrusion gap 'F/2' should be calculated allowing for all movements due to tolerances, side-loads and cylinder expansion.

How To Order

When ordering, quote the size reference shown on the dimensions table.
If an energiser material other than the standard nitrile type is required, consult Claron for the part number to be used.



For the seal to function correctly it is important that care is taken during fitting. For details refer to Appendix.

For F/2 values see note & tables

For E/2 refer to Guide Tape

CS 1 Imperial Sizes

Nominal Dimensions & Machining Tolerances

Claron	h9 Ød$_1$	±0.003 L$_1$	S	Tol. On S	Max R$_1$	Max 350 Bar F
CS 10025	0.250	0.094	0.080	+0.002 -0	0.010	0.008
CS 10031	0.312					
CS 10037	0.375					
CS 10043	0.437					
CS 10050	0.500	0.141	0.111	+0.003 -0	0.020	0.008
CS 10056	0.562					
CS 10062	0.625					
CS 10068	0.687					
CS 10075	0.750					
CS 10081	0.812					
CS 10087	0.875					
CS 10093	0.937					
CS 10100	1.000					
CS 10106	1.062					
CS 10112	1.125	0.188	0.152	+0.004 -0	0.030	0.008
CS 10118	1.187					
CS 10125	1.250					
CS 10131	1.312					
CS 10137	1.375					
CS 10143	1.437					
CS 10150/1	1.500					
CS 10156	1.562					
CS 10168	1.687					
CS 10150	1.500					
CS 10162	1.625					
CS 10175	1.750					
CS 10187	1.875					
CS 10200	2.000					
CS 10212	2.125					
CS 10225	2.250					
CS 10237	2.375					
CS 10250	2.500					
CS 10262	2.625					
CS 10275	2.750					
CS 10287	2.875					
CS 10300	3.000	0.281	0.244	+0.004 -0	0.040	0.012
CS 10312	3.125					
CS 10325	3.250					
CS 10337	3.375					
CS 10350	3.500					
CS 10362	3.625					
CS 10375	3.750					
CS 10387	3.875					
CS 10400	4.000					
CS 10412	4.125					
CS 10425	4.250					
CS 10437	4.375					
CS 10450	4.500					
CS 10462	4.625					
CS 10475	4.750					
CS 10487	4.875					
CS 10500	5.000					
CS 10512	5.125					
CS 10525	5.250	0.375	0.328	+0.005 -0	0.040	0.016
CS 10537	5.375					
CS 10550	5.500					
CS 10562	5.625					
CS 10575	5.750					
CS 10587	5.875					
CS 10600	6.000					
CS 10800	8.000					

CS 3 Metric Sizes

Nominal Dimensions & Machining Tolerances

Claron	h9 Ød$_1$	±0.075 L$_1$	S	Tol. On S	Max R$_1$	Max 350 Bar F
CS 3007	7					
CS 3008	8					
CS 3009	9					
CS 3010	10					
CS 3011	11					
CS 3012	12	3.60	3.00	+0.075 -0	0.50	0.20
CS 3013	13					
CS 3014	14					
CS 3015	15					
CS 3016	16					
CS 3017	17					
CS 3018	18					
CS 3020	20					
CS 3022	22					
CS 3023	23					
CS 3024	24					
CS 3025	25					
CS 3026	26					
CS 3027	27					
CS 3028	28					
CS 3029	29					
CS 3030	30					
CS 3031	31					
CS 3032	32	4.80	4.00	+0.10 -0	0.75	0.20
CS 3033	33					
CS 3034	34					
CS 3035	35					
CS 3036	36					
CS 3037	37					
CS 3038	38					
CS 3039	39					
CS 3040	40					
CS 3041	41					
CS 3042	42					
CS 3043	43					
CS 3044	44					
CS 3045	45					
CS 3050	50					
CS 3053	53					
CS 3055	55					
CS 3056	56					
CS 3060	60					
CS 3063	63					
CS 3065	65					
CS 3070	70	7.15	6.20	+0.10 -0	1.00	0.30
CS 3075	75					
CS 3080	80					
CS 3085	85					
CS 3090	90					
CS 3095	95					
CS 3100	100					
CS 3105	105					
CS 3110	110					
CS 3120	120					
CS 3125	125					
CS 3130	130					
CS 3135	135	9.50	8.40	+0.10 -0	1.00	0.40
CS 3140	140					
CS 3145	145					
CS 3150	150					
CS 3155	155					
CS 3160	160					