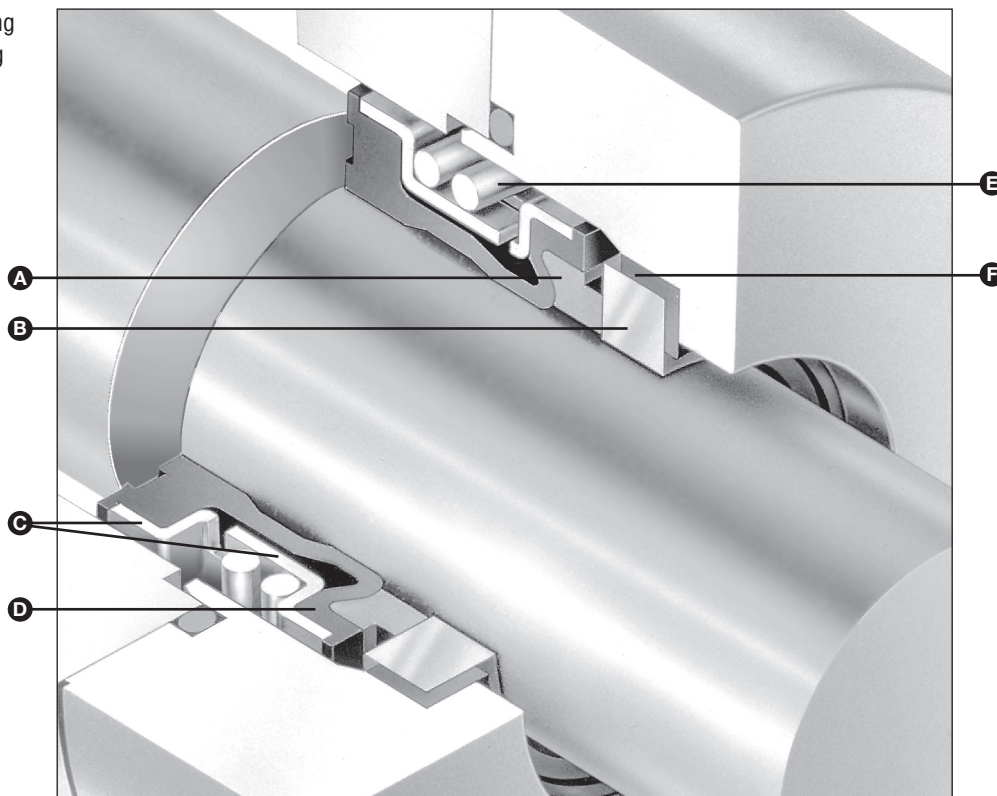




TYPE 2106

Elastomer Bellows Unitized Seal

- A – Face/Primary Ring
- B – Seat/Mating Ring
- C – Drive Band (2)
- D – Bellows
- E – Spring
- F – Seat Cup



2106

Product Description

The Type 2106 is a compact, unitized, single spring, elastomer bellows mechanical seal.

- ⁿ Type 2106 seals are designed for use in small centrifugal water pumps, deep and shallow well jet pumps, swimming pool pumps and wastewater pumps.

Design Features

- ⁿ Unitized, easy-to-fit design.
- ⁿ Flexible Bellows:
Full convolution elastomer bellows provide maximum flexibility in compensating for shaft movement. Elastomer is pre-loaded to provide positive drive and tight seal along the shaft.
- ⁿ Interlocking drive bands provide positive drive.
- ⁿ Interference fit of primary ring ensures positive drive, square seal face alignment and avoids high face distortions associated with crimped designs.
- ⁿ Balanced design reduces seal face heat generation and torque.

Performance Capabilities

- ⁿ Temperature:
-20°F to 300°F/-30°C to 150°C
depending on materials used
- ⁿ Pressure:
Full Vacuum up to 150 psi(g)/10 bar(g)
- ⁿ Speed:
Up to 5000 rpm

Industries Served

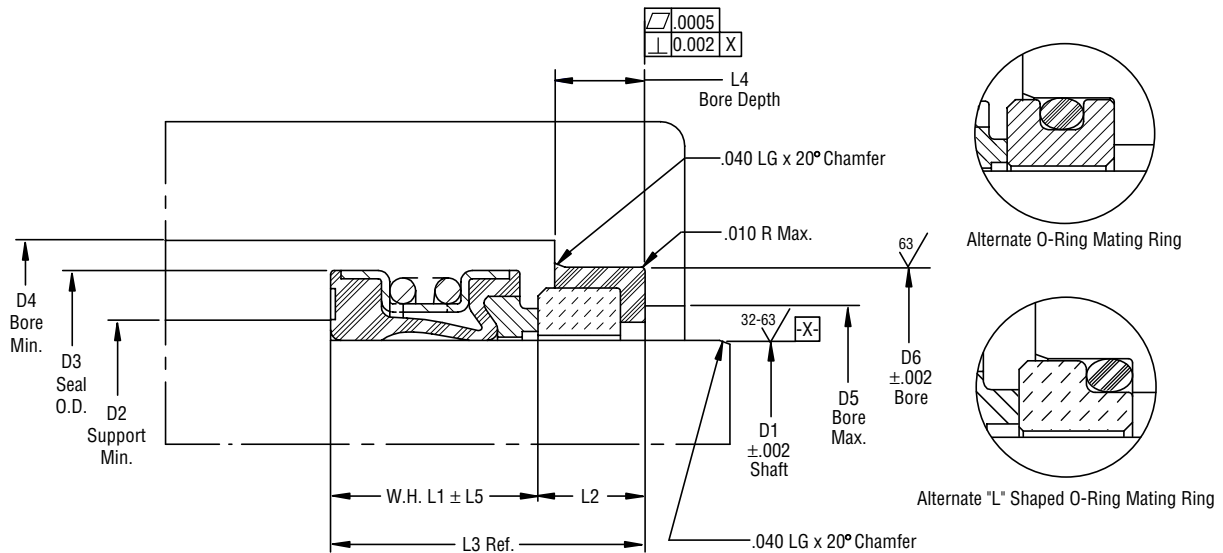
- ⁿ Pool and Spa
- ⁿ Industrial, Commercial and Residential Water Systems
- ⁿ Heating and Cooling



TYPE 2106

Elastomer Bellows Unitized Seal

Type 2106 Typical Arrangement/Dimensional Data



Type 2106 Dimensional Data (inch sizes)

	Seal Size						W.H.				
	D1	D2	D3	D4	D5	D6	L1	L2	L3	L4	L5
*	0.437	0.580	0.866	1.181	0.562	1.181	0.769	0.281	1.050	0.281	0.040
	0.500	0.656	0.945	1.125	0.562	1.000	0.591	0.312	0.906	0.281	0.040
	0.500	0.656	0.945	1.125	0.562	1.000	0.656	0.312	0.968	0.281	0.040
	0.500	0.656	0.945	1.125	0.562	1.000	0.812	0.312	1.125	0.281	0.040
	0.625	0.765	1.024	1.375	0.812	1.250	0.591	0.406	1.000	0.343	0.040
	0.625	0.765	1.024	1.375	0.812	1.187	0.591	0.343	0.937	0.343	0.040
	0.625	0.765	1.024	1.375	0.812	1.250	0.718	0.406	1.125	0.343	0.040
	0.625	0.765	1.024	1.375	0.812	1.187	0.718	0.343	1.062	0.343	0.040
	0.625	0.765	1.024	1.375	0.812	1.250	0.875	0.406	1.281	0.343	0.040
	0.625	0.765	1.024	1.375	0.812	1.187	0.875	0.343	1.218	0.343	0.040
	0.750	0.937	1.260	1.500	0.937	1.375	0.718	0.338	1.062	0.343	$^{-0.030}_{+0.060}$
	0.750	0.937	1.260	1.500	0.937	1.375	0.718	0.406	1.125	0.343	$^{-0.030}_{+0.060}$
	0.750	0.937	1.260	1.500	0.937	1.375	0.787	0.338	1.125	0.343	0.060
	0.750	0.937	1.260	1.500	0.937	1.375	0.787	0.406	1.193	0.343	0.060
	0.750	0.937	1.260	1.500	0.937	1.375	0.875	0.338	1.218	0.343	0.060
	0.750	0.937	1.260	1.500	0.937	1.375	0.875	0.406	1.281	0.343	0.060
*	0.875	1.062	1.398	1.625	1.062	1.500	0.787	0.406	1.193	0.343	0.060
	0.875	1.062	1.398	1.625	1.062	1.500	0.812	0.406	1.218	0.343	0.060
	0.875	1.062	1.398	1.625	1.062	1.500	0.937	0.406	1.343	0.343	0.060
	1.000	1.187	1.535	1.687	1.312	1.625	0.787	0.437	1.224	0.375	0.060
	1.000	1.187	1.535	1.687	1.312	1.625	0.812	0.437	1.250	0.375	0.060
	1.000	1.187	1.535	1.687	1.312	1.625	1.000	0.437	1.437	0.375	0.060

*Standard Lengths

**Special Mating Ring Lengths

Custom Mating Ring Designs Can Be Accommodated.

Reference Drawings:

Seal Assembly for Carbon: TAB-1145

Seal Assembly for Silicon Carbide: TAB-1146

Typical Installation with Cup Mounted Mating Ring: TAB-1147

Typical Installation with "L" shape O-Ring Mating Ring: TAB-1191

Typical Installation with O-Ring Mating Ring: TAB-1148



TYPE 2106

Elastomer Bellows Unitized Seal

Type 2106 Dimensional Data (metric sizes)

Seal Size D1	D2	D3	D4	D5	D6	W.H. L1	L2	L3	L4	L5
10.00	13.60	20.00	22.00	17.00	21.00	15.00	5.0	20.00	5.5	1.0
12.00	16.00	22.00	24.00	19.00	23.00	15.00	6.0	21.00	5.5	1.0
14.00	17.80	24.00	26.00	21.00	25.00	15.00	6.0	21.00	5.5	1.0
15.00	18.50	25.00	27.00	22.00	26.00	15.00	6.0	21.00	5.5	1.0
16.00	19.50	26.00	28.00	23.00	27.00	15.00	6.0	21.00	5.5	1.0
18.00	22.75	32.00	34.00	27.00	33.00	20.00	6.0	21.00	7.0	1.5
20.00	24.75	34.00	36.00	29.00	35.00	20.00	6.0	21.00	7.0	1.5
22.00	26.75	36.00	38.00	31.00	37.00	20.00	6.0	21.00	7.0	1.5
24.00	28.75	38.00	40.00	33.00	39.00	20.00	6.0	21.00	7.0	1.5
25.00	29.75	39.00	41.00	34.00	40.00	20.00	6.0	21.00	7.0	1.5

Custom Mating Ring Designs Can Be Accommodated.

Reference Drawings:

Typical Installation of Metric sizes with Cup Mounted Mating Rings: TAB-1423

REFERENCE ONLY-Type 2106 Dimensional Data/3CU Style Mating Ring (inch sizes)

Seal Size D1	Size Code	D2	D3	D4	D5	D6	W.H. L1	L2	L3	L4	L5
Type 2106 HV Range											
0.500	0127	0.656	0.945	1.125	0.687*	1.000	0.656	0.312	0.968	0.281	0.040
0.625	0158	0.765	1.024	1.375	0.812	1.250	0.718	0.406	1.125	0.343	0.040
0.750	0190	0.937	1.260	1.500	0.937	1.375	0.718	0.406	1.125	0.343	0.060
0.875	0222	1.062	1.398	1.625	1.062	1.500	0.812	0.406	1.218	0.343	0.060
1.000	0254	1.187	1.535	1.687	1.312	1.625	0.812	0.437	1.250	0.375	0.060
Type 2106 CU Range											
0.500	0127	0.656	0.945	1.125	0.687*	1.000	0.812	0.312	1.125	0.281	0.040
0.625	0158	0.765	1.024	1.375	0.812	1.250	0.875	0.406	1.281	0.343	0.040
0.750	0190	0.937	1.260	1.500	0.937	1.375	0.875	0.406	1.281	0.343	0.060
0.875	0222	1.062	1.398	1.625	1.062	1.500	0.937	0.406	1.343	0.343	0.060
1.000	0254	1.187	1.535	1.687	1.312	1.625	1.000	0.437	1.437	0.375	0.060
Type 2106 S Range											
0.500	0127	0.656	0.945	1.125	0.687*	1.000	0.591	0.312	0.906	0.281	0.040
0.625	0158	0.765	1.024	1.375	0.812	1.250	0.591	0.406	1.000	0.343	0.040
0.750	0190	0.937	1.260	1.500	0.937	1.375	0.718	0.406	1.125	0.343	+0.060/-0.030
0.875	0222	1.062	1.398	1.625	1.062	1.500	0.787	0.406	1.193	0.343	0.060
1.000	0254	1.187	1.535	1.687	1.312	1.625	0.787	0.437	1.224	0.375	0.060

*For L shaped/alternate mating ring D5 Max. is 0.562".

Drawing Matrix

Style	inch/mm	from	to	Dwg. Number and Mating Ring Style		
2106 BE	mm	10mm	25mm	TAB-1491	1BE Style	TAB-1456 BS Style
2106 CU	inch	0.500"	1.000"	TAB-1147	3CU Style	
2106 DIN	mm	10mm	25mm	TAB-1423	M Style	
2106 HV	inch	0.437"	1.000"	TAB-1147	3CU Style	
2106 HV	mm	16mm	25mm	—	3CU Style	TAB-1456 BS Style
2106 K	mm	10mm	25mm	TAB-1423	M Style	
2106 S	inch	0.500"	1.000"	TAB-1147	3CU Style	
2106 S	mm	10mm	25mm	—	M Style	

Detailed reference drawings available upon request.



TYPE 2106

Elastomer Bellows Unitized Seal

Materials of Construction

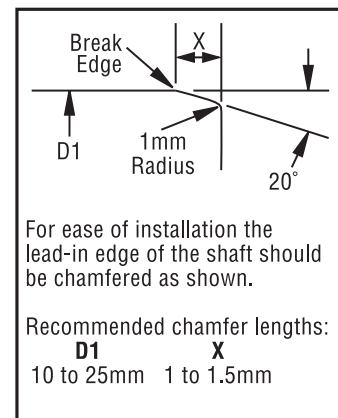
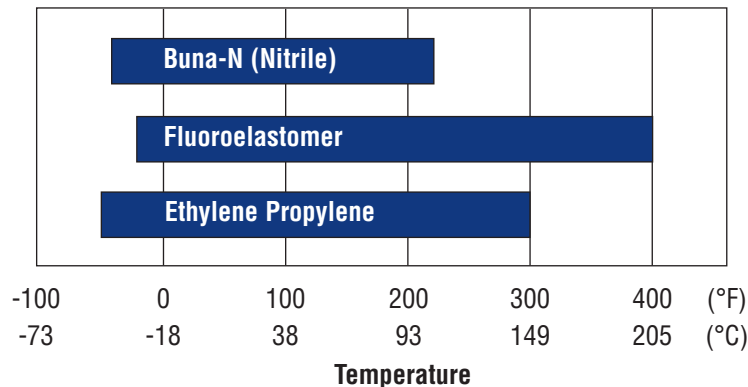
SEAL COMPONENTS	MATERIALS (Standard)	OPTIONS
Primary Ring	Carbon	Sealide-C™
Mating Ring	Ceramic	Sealide-C™
Drive Bands	Stainless Steel 304SS	316SS
Secondary Seals (Bellows, Seat Cup, or O-Ring)	Buna-N (Nitrile)	Ethylene Propylene Fluoroelastomer
Spring	Stainless Steel 304SS	316SS

Sealide-C is a registered trademark of John Crane Inc.

Criteria for Installation

Shaft/Sleeve	Limits
Surface Finish (Shaft or Sleeve)	0.8 to 1.6µm/32 to 63µ-inch Ra
Ovality/Out of Roundness (Shaft)	<0.05mm/0.002"
End Play/Axial Float Allowance	<0.08/0.003"FIM

Elastomer Temperature Limits



For your nearest John Crane facility, please contact one of the locations below.

North America
Morton Grove, IL, USA
1-800-SEALING
Tel: 1-847-967-2400
Fax: 1-847-967-3915

Europe
Slough, UK
Tel: 44-1753-224000
Fax: 44-1753-224224

Latin America
São Paulo, Brazil
Tel: 55-11-3371-2500
Fax: 55-11-3371-2599

Middle East & Africa
Dubai, United Arab Emirates
Tel: 971-481-27800
Fax: 971-488-62830

Asia Pacific
Singapore
Tel: 65-6518-1800
Fax: 65-6518-1803

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