



HUTCHINSON Bonded seal NBR Compound PC851

The Bonded Seal is a robust solution used for static sealing of bolt heads, nuts, screw connections and flange connections. The product consists of a metal ring bonded to a trapezoidal elastomeric sealing element. As standard ERIKS offer two types of design. One without or one with self-centering [type ZC] feature. The ZC type offers ease of installation ensuring the sealing element is centralized. The chemical resistance of the Bonded Seal depends upon the combination of the metal and the elastomer type. The temperature resistance mainly depends on the rubber material.

Characteristics

Material seal: NBR

Compound: PC851

Temperature range: -30 / 100

Technical Information

- Metal material Carbon steel : Minimal Tensile Strength : 540 N/mm²
- Stainless steel 316 : Minimal Tensile Strength : 540 N/mm²
- Other metallic materials (Aluminum, Brass, etc.) upon request.
- Standard surface treatment on the Carbon Steel ring, for anti-oxidation ZnFe Zinc-iron with Cr+3 passivation Layer thickness 8 to 11 µm
- Corrosion resistance to salt spray test of approx 100 hours or more according to ASTM B117 or ISO 9227
- Other surface treatments (chrome, Nickel, etc.) upon request.

Construction

- Trapezoidal rubber inner ring
- Metal outer ring

Execution

- Standard
- ZC [Self Centralizing]

Operating Principle

- Temperature range -30 °C up to +200 °C [depending on the rubber material]
- The minimum bursting pressure depends on the tensile strength of the metal, therefore the diameters of the metal ring have an influence. When designing an application, a safety factor of 3x the maximum working pressure must be taken into account.

Selection Guideline

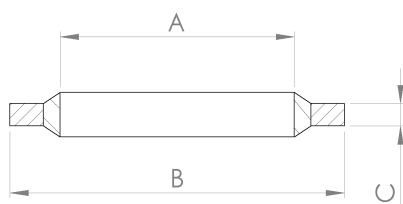
- Very wide application in general industry. Particularly in fuel, HVA, hydraulic, food and beverage, heating and oil and gas applications.
- For use in high pressure environments where copper rings cannot be used
- Reliable static sealing due to configuration with metal ring as compression stop, therefore always the correct pre-tension of the rubber element.
- Sealing both liquids and gases.
- Added self-centering lip [ZC] on the inner diameter ensures correct centering on the position.
- Medium to be sealed, temperature and environment determine which elastomer/metal combination should be used. Most commonly used combination is carbon steel with ZnFe Cr+3 coating with NBR rubber.

Options

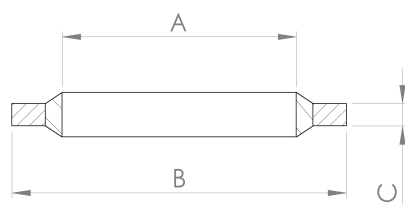
- Metric sizes
- Inch sizes
- Range inner diameter: 3mm up to 76mm.

Size table:

A mm	B mm	C mm
3.05	6.35	1.22
4.5	7	1
5.7	9	1
6.2	9.2	1
6.7	10	1
6.86	13.21	1.22
7	11.4	1
8.64	14.22	1.22
10.35	15.88	2
10.7	16	1.5
10.7	18	1.5
11.26	18.36	2.03
11.8	19.1	1.5
12.7	18	1.5
13.7	22	1.5
13.74	20.57	2.03
14	18.7	1.5
14.7	22	1.5
14.86	22.23	2.03
16.51	25.4	2.03
16.7	23	1.5
17.28	23.8	2.03
18.16	25.4	2.5
18.7	26	1.5
18.7	27	2
20.7	28	1.5
21.54	28.58	2.5
23.49	31.75	2.5
24.7	32	2
26.7	35	2
31	39	2
32.64	41.4	3.38
33.89	42.8	3.38
38.96	47.75	3.38
42.93	52.38	2.5
42.93	52.38	3.38
48.44	58.6	3.25
53.3	64.5	3



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Size table:

A	B	C
54.89	69.85	3.38
27	35.3	2
6.6	11	1
10.37	15.88	2.03
16.7	24	1.5
22.7	30	2
27.05	34.93	2.5
30.81	38.1	2.5
33.89	42.8	2.5
42.7	53	3
48.44	58.6	2.5
60.58	73.03	2.5

Material metal	Internal diameter mm	Outer diameter mm	Thickness mm	Article
Mild Steel	3.05	6.35	1.22	10019874
Mild Steel	4.5	7	1	10019876
Mild Steel	5.7	9	1	10019901
Mild Steel	6.2	9.2	1	10019903
Mild Steel	6.7	10	1	10019904
Mild Steel	6.86	13.21	1.22	10019878
Mild Steel	7	11.4	1	10019936
Mild Steel	8.64	14.22	1.22	10019880
Mild Steel	10.35	15.88	2	10019910
Mild Steel	10.7	16	1.5	10019911
Mild Steel	10.7	18	1.5	10019912
Mild Steel	11.26	18.36	2.03	10019881
Mild Steel	11.8	19.1	1.5	10019913
Mild Steel	12.7	18	1.5	10019914
Mild Steel	13.7	22	1.5	10019916
Mild Steel	13.74	20.57	2.03	10019892
Mild Steel	14	18.7	1.5	10019917
Mild Steel	14.7	22	1.5	10019918
Mild Steel	14.86	22.23	2.03	10019882
Mild Steel	16.51	25.4	2.03	10019883
Mild Steel	16.7	23	1.5	10019937
Mild Steel	17.28	23.8	2.03	10019893
Mild Steel	18.16	25.4	2.5	10019884
Mild Steel	18.7	26	1.5	10019921
Mild Steel	18.7	27	2	10019938
Mild Steel	20.7	28	1.5	10019922
Mild Steel	21.54	28.58	2.5	11265079
Mild Steel	23.49	31.75	2.5	10019895
Mild Steel	24.7	32	2	10019925
Mild Steel	26.7	35	2	10019926
Mild Steel	31	39	2	10019928
Mild Steel	32.64	41.4	3.38	10019887
Mild Steel	33.89	42.8	3.38	12667964

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Material metal	Internal diameter	Outer diameter	Thickness	Article
	mm	mm	mm	
Mild Steel	38.96	47.75	3.38	10019888
Mild Steel	42.93	52.38	2.5	10019898
Mild Steel	42.93	52.38	3.38	12667969
Mild Steel	48.44	58.6	3.25	11413626
Mild Steel	53.3	64.5	3	10019934
Mild Steel	54.89	69.85	3.38	10019899
Stainless steel 316	27	35.3	2	11114447
Mild Steel	5.7	9	1	10019869
Mild Steel	6.6	11	1	10019873
Mild Steel	10.37	15.88	2.03	11261701
Mild Steel	12.7	18	1.5	11287270
Mild Steel	13.74	20.57	2.03	10019859
Mild Steel	14.7	22	1.5	11055461
Mild Steel	16.7	24	1.5	11197391
Mild Steel	17.28	23.8	2.03	10019861
Mild Steel	18.16	25.4	2.5	10019856
Mild Steel	20.7	28	1.5	10019872
Mild Steel	21.54	28.58	2.5	10019862
Mild Steel	22.7	30	2	11222733
Mild Steel	23.49	31.75	2.5	10019863
Mild Steel	27.05	34.93	2.5	10019864
Mild Steel	30.81	38.1	2.5	10019865
Mild Steel	33.89	42.8	2.5	10019866
Mild Steel	42.7	53	3	10019931
Mild Steel	42.93	52.38	2.5	11287259
Mild Steel	48.44	58.6	2.5	11287260
Mild Steel	60.58	73.03	2.5	11035434

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