



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 tot 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

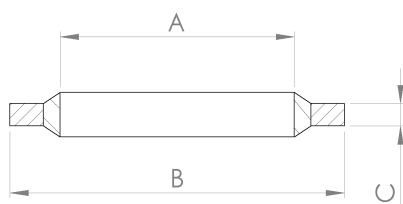
- Very wide application in general industry. Particularly in fuel, HVA, hydraulic, food and beverage, heating and oil and gas applications.
- For use in high pressure environments where copper rings cannot be used
- Reliable static sealing due to configuration with metal ring as compression stop, therefore 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:

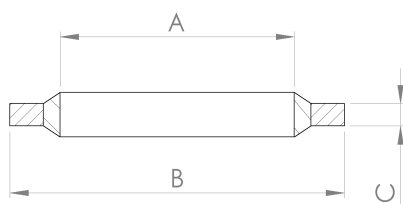
A mm	B mm	C mm
3.05	6.35	1.22
4.12	7.26	1.22
4.6	9	1
5.21	8.38	1.22
5.6	10	1
5.7	9	1
5.7	10	1
6.2	9.2	1
6.7	10	1
6.7	11	1
6.86	13.21	1.22
6.99	13.34	1.22
7	11.4	1
7.3	10.2	1
8.31	13.34	1.22
8.64	14.22	1.22
8.7	13	1
8.7	14	1
9.3	13.3	1
10.35	15.88	2
10.37	15.88	2.03
10.7	16	1.5
10.7	17	1.5
10.7	18	1.5
11.26	18.36	2.03
11.69	19.05	2.03
11.8	19.1	1.5
12.7	18	1.5
12.7	19	1.5
12.7	20	1.5
13.7	22	1.5
13.74	20.57	2.03
13.8	20.1	1.5
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



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Size table:

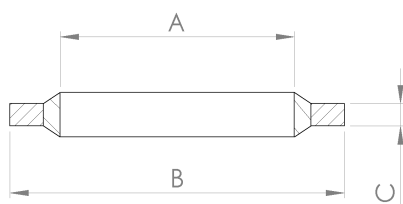
A	B	C
16.7	24	1.5
17.28	23.8	2.03
17.35	22.7	1.25
17.4	24	1.5
18	24.7	1.5
18.16	25.4	2.5
18.7	26	1.5
18.7	27	2
19.69	26.92	2.5
20.7	28	1.5
21.5	28.7	2.5
21.54	28.58	2.5
21.65	26.7	1.25
22.7	30	2
22.7	31	2
23.49	31.75	2.5
24.26	33.27	2.5
24.7	32	2
26.7	35	2
27.05	34.93	2.5
27.2	36	2
27.3	32.5	1.25
28.6	36	2
29.33	36.58	2.5
30.81	38.1	2.5
31	39	2
32.64	41.4	3.38
33.7	42	2
33.89	42.8	2.5
34.2	39.5	2
34.3	43	2
35.94	44.45	3.38
36.7	46	2
38.96	47.75	3.38
40	51	2.5
42.8	49.5	2
42.93	52.38	2.5
45.34	57.15	3.38
46	57	2.5



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Size table:

A	B	C
48.44	58.6	2.5
48.7	59	3
51.69	63.5	3.38
53.3	64.5	3
54.89	69.85	3.38
60.58	73.03	2.5
64.39	77.72	3.38
66.68	79.5	3.38
76.08	90.17	3.38
89.09	101.47	3.38
3.6	7.5	1
4.5	7	1
22.7	30	3
27	35.3	2
42.7	53	3
60.58	73.03	3.38
6.6	11	1
35.94	44.45	2.5
43	54	2.5



Material metal	Internal diameter mm	Outer diameter mm	Thickness mm	Article Max. 200 articles in the table
Mild Steel	3.05	6.35	1.22	10019874
Mild Steel	4.12	7.26	1.22	10019875
Mild Steel	4.6	9	1	11374528
Mild Steel	5.21	8.38	1.22	10019877
Mild Steel	5.6	10	1	11086259
Mild Steel	5.7	9	1	10019901
Mild Steel	5.7	10	1	10019902
Mild Steel	6.2	9.2	1	10019903
Mild Steel	6.7	10	1	10019904
Mild Steel	6.7	11	1	10019905
Mild Steel	6.86	13.21	1.22	10019878
Mild Steel	6.99	13.34	1.22	11287265
Mild Steel	7	11.4	1	10019936
Mild Steel	7.3	10.2	1	11054351
Mild Steel	8.31	13.34	1.22	11245563
Mild Steel	8.64	14.22	1.22	10019880
Mild Steel	8.7	13	1	11287268
Mild Steel	8.7	14	1	11280140
Mild Steel	9.3	13.3	1	10019909
Mild Steel	10.35	15.88	2	10019910
Mild Steel	10.37	15.88	2.03	11280395
Mild Steel	10.7	16	1.5	10019911
Mild Steel	10.7	17	1.5	12092957
Mild Steel	10.7	18	1.5	10019912

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Material metal	Internal diameter	Outer diameter	Thickness	Article
	mm	mm	mm	Max. 200 articles in the table
Mild Steel	11.26	18.36	2.03	10019881
Mild Steel	11.69	19.05	2.03	11009516
Mild Steel	11.8	19.1	1.5	10019913
Mild Steel	12.7	18	1.5	10019914
Mild Steel	12.7	19	1.5	11384342
Mild Steel	12.7	20	1.5	11287271
Mild Steel	13.7	22	1.5	10019916
Mild Steel	13.74	20.57	2.03	10019892
Mild Steel	13.8	20.1	1.5	12251495
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	16.7	24	1.5	10019919
Mild Steel	17.28	23.8	2.03	10019893
Mild Steel	17.35	22.7	1.25	12484851
Mild Steel	17.4	24	1.5	10019920
Mild Steel	18	24.7	1.5	11066851
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	19.69	26.92	2.5	10019894
Mild Steel	20.7	28	1.5	10019922
Mild Steel	21.5	28.7	2.5	10019923
Mild Steel	21.54	28.58	2.5	11265079
Mild Steel	21.65	26.7	1.25	12492910
Mild Steel	22.7	30	2	10019924
Mild Steel	22.7	31	2	11191177
Mild Steel	23.49	31.75	2.5	10019895
Mild Steel	24.26	33.27	2.5	11280142
Mild Steel	24.7	32	2	10019925
Mild Steel	26.7	35	2	10019926
Mild Steel	27.05	34.93	2.5	10019896
Mild Steel	27.2	36	2	11287272
Mild Steel	27.3	32.5	1.25	12493016
Mild Steel	28.6	36	2	10019939
Mild Steel	29.33	36.58	2.5	10019886
Mild Steel	30.81	38.1	2.5	11280396
Mild Steel	31	39	2	10019928
Mild Steel	32.64	41.4	3.38	10019887
Mild Steel	33.7	42	2	11057258
Mild Steel	33.89	42.8	2.5	10019897
Mild Steel	34.2	39.5	2	11534766
Mild Steel	34.3	43	2	11287273
Mild Steel	35.94	44.45	3.38	11280393
Mild Steel	36.7	46	2	11287274
Mild Steel	38.96	47.75	3.38	10019888
Mild Steel	40	51	2.5	11287256
Mild Steel	42.8	49.5	2	12492909
Mild Steel	42.93	52.38	2.5	10019898
Mild Steel	45.34	57.15	3.38	11272361
Mild Steel	46	57	2.5	11398645

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	mm	mm	mm	Max. 200 articles in the table
Mild Steel	48.44	58.6	2.5	11025401
Mild Steel	48.7	59	3	11287275
Mild Steel	51.69	63.5	3.38	10019890
Mild Steel	53.3	64.5	3	10019934
Mild Steel	54.89	69.85	3.38	10019899
Mild Steel	60.58	73.03	2.5	12092934
Mild Steel	64.39	77.72	3.38	12092951
Mild Steel	66.68	79.5	3.38	11092380
Mild Steel	76.08	90.17	3.38	10019935
Mild Steel	89.09	101.47	3.38	12249285
Stainless steel 316	3.05	6.35	1.22	11131830
Stainless steel 316	3.6	7.5	1	11228982
Stainless steel 316	4.12	7.26	1.22	11240154
Stainless steel 316	4.5	7	1	11021694
Stainless steel 316	5.21	8.38	1.22	10019832
Stainless steel 316	5.7	9	1	11915836
Stainless steel 316	6.7	10	1	11607469
Stainless steel 316	6.7	11	1	11154246
Stainless steel 316	8.31	13.34	1.22	12224829
Stainless steel 316	8.64	14.22	1.22	11348568
Stainless steel 316	8.7	13	1	11240900
Stainless steel 316	10.35	15.88	2	12767007
Stainless steel 316	10.37	15.88	2.03	11348569
Stainless steel 316	10.7	16	1.5	11554742
Stainless steel 316	10.7	17	1.5	12583519
Stainless steel 316	10.7	18	1.5	14015318
Stainless steel 316	12.7	18	1.5	11271521
Stainless steel 316	12.7	20	1.5	12467624
Stainless steel 316	16.7	24	1.5	12092945
Stainless steel 316	17.28	23.8	2.03	12092939
Stainless steel 316	17.4	24	1.5	11655404
Stainless steel 316	19.69	26.92	2.5	12176882
Stainless steel 316	20.7	28	1.5	11234981
Stainless steel 316	21.5	28.7	2.5	11182068
Stainless steel 316	21.54	28.58	2.5	12092940
Stainless steel 316	22.7	30	2	11620604
Stainless steel 316	22.7	30	3	11954311
Stainless steel 316	23.49	31.75	2.5	12092950
Stainless steel 316	27	35.3	2	11114447
Stainless steel 316	27.05	34.93	2.5	12092941
Stainless steel 316	27.2	36	2	11486416
Stainless steel 316	30.81	38.1	2.5	12092942
Stainless steel 316	31	39	2	12139191
Stainless steel 316	33.89	42.8	2.5	12092943
Stainless steel 316	38.96	47.75	3.38	12219047
Stainless steel 316	42.7	53	3	11114448
Stainless steel 316	42.93	52.38	2.5	12092944
Stainless steel 316	48.7	59	3	12141688
Stainless steel 316	51.69	63.5	3.38	11555444
Stainless steel 316	60.58	73.03	3.38	11587418
Stainless steel 316	66.68	79.5	3.38	11289728
Stainless steel 316	76.08	90.17	3.38	11398303
Mild Steel	4.5	7	1	10019868

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	mm	mm	mm	Max. 200 articles in the table
Mild Steel	5.7	9	1	10019869
Mild Steel	6.6	11	1	10019873
Mild Steel	6.7	11	1	12092956
Mild Steel	8.7	14	1	11287261
Mild Steel	10.7	16	1.5	10019871
Mild Steel	10.7	17	1.5	11254357
Mild Steel	10.7	18	1.5	11118755
Mild Steel	12.7	18	1.5	11287270
Mild Steel	12.7	20	1.5	12092955
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	18.7	26	1.5	11118757
Mild Steel	19.69	26.92	2.5	12605611
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	24.7	32	2	11055455
Mild Steel	26.7	35	2	11395293
Mild Steel	27.05	34.93	2.5	10019864
Mild Steel	28.6	36	2	12694107
Mild Steel	30.81	38.1	2.5	10019865
Mild Steel	33.7	42	2	12772678
Mild Steel	33.89	42.8	2.5	10019866
Mild Steel	34.3	43	2	11278697
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	54.89	69.85	3.38	12718958
Mild Steel	60.58	73.03	2.5	11035434
Stainless steel 316	4.5	7	1	11154245
Stainless steel 316	5.7	9	1	12098289
Stainless steel 316	5.7	10	1	11908990
Stainless steel 316	6.6	11	1	14015339
Stainless steel 316	6.7	10	1	11228279
Stainless steel 316	6.86	13.21	1.22	14015340
Stainless steel 316	8.31	13.34	1.22	14015341
Stainless steel 316	8.7	13	1	14015342
Stainless steel 316	8.7	14	1	14015343
Stainless steel 316	10.7	16	1.5	12694105
Stainless steel 316	11.26	18.36	2.03	14015319
Stainless steel 316	11.8	19.1	1.5	14015320
Stainless steel 316	12.7	19	1.5	14015321
Stainless steel 316	13.74	20.57	2.03	14015322
Stainless steel 316	14.7	22	1.5	14015323
Stainless steel 316	14.86	22.23	2.03	14015324
Stainless steel 316	16.51	25.4	2.03	14015325
Stainless steel 316	16.7	24	1.5	12585458
Stainless steel 316	17.28	23.8	2.03	11282353
Stainless steel 316	17.4	24	1.5	12408382

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Material metal	Internal diameter	Outer diameter	Thickness	Article
	mm	mm	mm	Max. 200 articles in the table
Stainless steel 316	18.16	25.4	2.5	14015326
Stainless steel 316	18.7	26	1.5	11336506
Stainless steel 316	19.69	26.92	2.5	14015327
Stainless steel 316	21.54	28.58	2.5	12962270
Stainless steel 316	22.7	30	2	14015328
Stainless steel 316	23.49	31.75	2.5	14015329
Stainless steel 316	24.26	33.27	2.5	14015330
Stainless steel 316	24.7	32	2	14015331
Stainless steel 316	26.7	35	2	14015332
Stainless steel 316	27.05	34.93	2.5	14015333
Stainless steel 316	30.81	38.1	2.5	14015334
Stainless steel 316	33.89	42.8	2.5	14015335
Stainless steel 316	34.3	43	2	12452316
Stainless steel 316	35.94	44.45	2.5	14015336
Stainless steel 316	42.93	52.38	2.5	14015337
Stainless steel 316	43	54	2.5	14015338

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