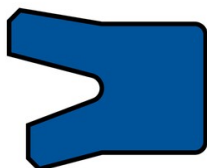


U-cup type 0020

Type 0020 is a single acting rod seal designed to have inner lip shorter than the outer lip in order to be used for rod applications.



Characteristics

Type: 0020

Max. operating pressure: 400 bar

Maximum speed: 0.5 m/s

Application

- Construction machinery , fork-lift trucks , injection moulding machines , agricultural machinery , loading platforms and standard cylinders.

Technical Information

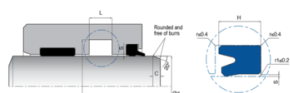
- Superior static and dynamic sealing effect
- Wide range of dimensions
- Easy assembly into closed grooves
- Simple groove design
- Economical sealing solution

Operating Principle

- Easily assembled into closed grooves according to the minimum diameter values that are given in the below table. Open grooves or special assembly tools should be used for the values that are outside this table. It is very important that the assembly tools must be of soft material and have no sharp edges. Before installation the rod seal must be oiled with system oil.

Options

- For special applications that require high temperatures , type 0020 can be produced in FKM material.



OPERATING CONDITIONS			
MEDIA	Mineral oils[DIN 51524]	HFA and HFB	HFC
TEMPERATURE	from -30°C till +100°C	from +5°C till +50°C	from -30°C till +40°C
PRESSURE	max. 400 Bar	max. 400 Bar	max. 400 Bar
SPEED	max. 0.5 m/s	max. 0.5 m/s	max. 0.5 m/s
Note: The above data are maximum values and cannot be used at the same time.			

SURFACE ROUGHNESS	Ra	Rmax
Sliding Surface	max. 0.4 µm	max. 3.2 µm
Groove Base	max. 1.6 µm	max. 10 µm
Groove Flanks	max. 3.2 µm	max. 16 µm
Note: It is recommended to have 50% to 90% of the working surface material contact area value.		

MINIMUM DIAMETER VALUES FOR CLOSED TYPE OF GROOVES							
[D-d]/2 (mm)	4	5	6	7.7	10	12.5	15
dmin (mm)	25	30	40	50	80	100	105

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PERMISSIBLE SEALING GAP			
PU	Smax (mm)		
t=[D-d]/2(mm)	150 Bar	250 Bar	400 Bar
t less/equal to 5	0.30	0.20	0.15
t above 5	0.35	0.25	0.20

Note: The largest sealing gap value occurring on the non-pressurized side of the seal does have a vital importance for the function of the seal and in this respect it is quite important to use the S value lower than the above indicated numbers.

Rod diameter	Groove diameter	Groove width	Seal height	Material seal	Temperature range	Article
mm	mm	mm	mm		°C	Max. 200 articles in the table
4	12	7	6	PUR	-40 / 100	11274407
5	9	3.5	3	PUR	-40 / 100	14192830
6	10	3.5	3	PUR	-40 / 100	14192831
6	12	4.5	4	PUR	-40 / 100	14192832
6	13	6	5	PUR	-40 / 100	14192833
6	14	6.8	5.8	PUR	-40 / 100	14192834
8	14	4.5	4	PUR	-40 / 100	14192835
9	14	2.75	2.25	PUR	-40 / 100	14192836
10	13.6	2.8	2.3	PUR	-40 / 100	14192841
10	14	4.5	4	PUR	-40 / 100	14192839
10	16	5	4.5	PUR	-40 / 100	14192838
10	18	6.5	5.5	PUR	-40 / 100	14192837
10	20	5	4.5	PUR	-40 / 100	14192840
11.11	19.05	4.46	3.96	PUR	-40 / 100	14192842
12	16	3.5	3	PUR	-40 / 100	12995165
12	17	4.2	3.7	PUR	-40 / 100	14192844
12	18	5	4.5	PUR	-40 / 100	14192846
12	19	6.7	5.7	PUR	-40 / 100	14192848
12	20	6.5	5.5	PUR	-40 / 100	14192843
12	22	6	5	PUR	-40 / 100	14192845
12	22	8.5	7.5	PUR	-40 / 100	14192847
12	22	9	8	PUR	-40 / 100	12249458
13	17.5	3.3	2.8	PUR	-40 / 100	14192851
13	23	9	8	PUR	-40 / 100	14192849
13.49	21.43	5.26	4.76	PUR	-40 / 100	14192850
14	22	6.5	5.5	PUR	-40 / 100	14192852
14.28	20.63	5.26	4.76	PUR	-40 / 100	14192853
15	23	7	6	PUR	-40 / 100	14192854
15.87	22.22	5.26	4.76	PUR	-40 / 100	14192855
16	20.5	6	5	PUR	-40 / 100	14192856
16	22	6	5	PUR	-40 / 100	14192857
16	23	6.5	5.5	PUR	-40 / 100	14192860
16	24	6	5	PUR	-40 / 100	14192862
16	24	6.5	5.5	PUR	-40 / 100	14192858
16	24	7.5	6.5	PUR	-40 / 100	14192859
16	26	6	5	PUR	-40 / 100	14192861
16	26	8	7	PUR	-40 / 100	12249462
18	24	6	5	PUR	-40 / 100	14192863
18	25	6	5	PUR	-40 / 100	14192864
18	25	6.5	5.5	PUR	-40 / 100	14192865
18	26	5	4.5	PUR	-40 / 100	14192866
19.05	25.4	5.3	4.76	PUR	-40 / 100	14192867
20	26	4	3.5	PUR	-40 / 100	13391401

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Rod diameter	Groove diameter	Groove width	Seal height	Material seal	Temperature range	Article
mm	mm	mm	mm		°C	Max. 200 articles in the table
20	28	6.5	5.5	PUR	-40 / 100	14192873
20	30	7	6	PUR	-40 / 100	14192868
20	30	8	7	PUR	-40 / 100	10018074
20	30	8.5	7.5	PUR	-40 / 100	14192874
20	30	9	8	PUR	-40 / 100	12249494
20	30	11	10	PUR	-40 / 100	14192871
20	32	7	6	PUR	-40 / 100	14192869
20	32	8.5	7.5	PUR	-40 / 100	14192872
20.63	28.57	5.26	4.76	PUR	-40 / 100	14192870
22	29	6	5	PUR	-40 / 100	14192878
22	30	6.5	5.5	PUR	-40 / 100	14192876
22	30	8	7	PUR	-40 / 100	10018076
22	30	9	8	PUR	-40 / 100	12249496
22	32	7	6	PUR	-40 / 100	14192875
22.22	31.75	5.26	4.76	PUR	-40 / 100	14192879
22.22	31.75	7.35	6.35	PUR	-40 / 100	14192877
23	31	6.5	5.5	PUR	-40 / 100	14192880
23.81	36.51	7.35	6.35	PUR	-40 / 100	14192881
25	32	6.5	5.5	PUR	-40 / 100	14192884
25	32	7	6	PUR	-40 / 100	14192887
25	33	6.5	5.5	PUR	-40 / 100	14192882
25	33	11	10	PUR	-40 / 100	11913068
25	35	7	6	PUR	-40 / 100	13561809
25	35	8.5	7.5	PUR	-40 / 100	14192889
25	35	9	8	PUR	-40 / 100	12249498
25	35	11	10	PUR	-40 / 100	14192888
25	37	7	6	PUR	-40 / 100	14192885
25	40	11	10	PUR	-40 / 100	14192886
25.4	38.1	7.35	6.35	PUR	-40 / 100	14192883
28	35	8	7	PUR	-40 / 100	14192891
28	36	6.5	5.5	PUR	-40 / 100	14192895
28	36	6.7	5.7	PUR	-40 / 100	14192897
28	36	9	8	PUR	-40 / 100	14192892
28	38	7	6	PUR	-40 / 100	14192890
28	38	8	7	PUR	-40 / 100	14192896
28	38	9	8	PUR	-40 / 100	12249499
28	38	11	10	PUR	-40 / 100	14192894
28.58	41.28	8.93	7.93	PUR	-40 / 100	14192893
30	38	6.5	5.5	PUR	-40 / 100	14192902
30	38	6.7	5.7	PUR	-40 / 100	14192903
30	38	6.7	5.7	PUR	-40 / 100	10018249
30	38	7	6	PUR	-40 / 100	14192901
30	38	7.3	6.3	PUR	-40 / 100	14192900
30	38	9	8	PUR	-40 / 100	10018083
30	40	7	6	PUR	-40 / 100	14192899
30	40	8	7	PUR	-40 / 100	11339728
30	40	9	8	PUR	-40 / 100	14192898
30	42	8.5	7.5	PUR	-40 / 100	14192904
30.16	38.1	7.35	6.35	PUR	-40 / 100	14192905
31.75	44.45	7.35	6.35	PUR	-40 / 100	14192906
32	42	8	7	PUR	-40 / 100	12249501
32	48	9	8	PUR	-40 / 100	14192907
33	40	6.5	5.5	PUR	-40 / 100	14192908

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Rod diameter	Groove diameter	Groove width	Seal height	Material seal	Temperature range	Article
mm	mm	mm	mm		°C	Max. 200 articles in the table
33.33	40.64	5.26	4.76	PUR	-40 / 100	14192909
34	44	8	7	PUR	-40 / 100	14192910
34.92	50.8	8.93	7.93	PUR	-40 / 100	14192911
35	43	7	6	PUR	-40 / 100	14192915
35	43	9	8	PUR	-40 / 100	11275795
35	45	7	6	PUR	-40 / 100	14192914
35	45	8	7	PUR	-40 / 100	11171374
35	45	9	8	PUR	-40 / 100	14192912
35	45	11	10	PUR	-40 / 100	12249503
35	50	9	8	PUR	-40 / 100	14192913
36	44	6	5	PUR	-40 / 100	14192917
36	44	9	8	PUR	-40 / 100	12944128
36	46	8	7	PUR	-40 / 100	10018413
36	46	9	8	PUR	-40 / 100	14192916
36	46	11	10	PUR	-40 / 100	12249504
36	51	11	10	PUR	-40 / 100	11471614
38.1	50.8	10.52	9.52	PUR	-40 / 100	14192918
39.69	55.96	10.52	9.52	PUR	-40 / 100	14192919
40	48	6.4	5.4	PUR	-40 / 100	14192920
40	48	6.8	5.8	PUR	-40 / 100	14192921
40	48	9	8	PUR	-40 / 100	10018084
40	50	9	8	PUR	-40 / 100	11609370
40	50	11	10	PUR	-40 / 100	10018117
41.27	50.8	6.56	5.56	PUR	-40 / 100	14192922
42	52	8	7	PUR	-40 / 100	14192923
42.86	53.97	10.52	9.52	PUR	-40 / 100	14192924
44.45	57.15	8.93	7.93	PUR	-40 / 100	14192925
45	55	8	7	PUR	-40 / 100	10018415
45	55	11	10	PUR	-40 / 100	14192926
45	55	11	10	PUR	-40 / 100	10018119
45	60	10	9	PUR	-40 / 100	14192928
45	65	11	10	PUR	-40 / 100	14192927
50	58	9	8	PUR	-40 / 100	10018086
50	60	7	6	PUR	-40 / 100	11172462
50	60	8	7	PUR	-40 / 100	11475094
50	60	11	10	PUR	-40 / 100	10018122
50	62	9	8	PUR	-40 / 100	11306751
50	65	11	10	PUR	-40 / 100	10018121
50.8	60.33	10.52	9.52	PUR	-40 / 100	14192929
52	62	11	10	PUR	-40 / 100	14192930
52	69	10	9	PUR	-40 / 100	14192931
55	64	8.3	7.3	PUR	-40 / 100	14192932
55	65	8.3	7.3	PUR	-40 / 100	14192933
55	65	11	10	PUR	-40 / 100	10018124
56	66	8	7	PUR	-40 / 100	10018088
56	66	9	8	PUR	-40 / 100	10018089
56	66	11	10	PUR	-40 / 100	14192935
56	68	8.5	7.5	PUR	-40 / 100	14192937
56	68	9.5	8.5	PUR	-40 / 100	14192934
56	71	12.4	11.4	PUR	-40 / 100	14192936
56	71	12.4	11.4	PUR	-40 / 100	11412948
60	70	8	7	PUR	-40 / 100	10018090
60	70	9.5	8.5	PUR	-40 / 100	14192939

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Rod diameter	Groove diameter	Groove width	Seal height	Material seal	Temperature range	Article
mm	mm	mm	mm		°C	Max. 200 articles in the table
60	70	11	10	PUR	-40 / 100	12249509
60	70	13	12	PUR	-40 / 100	10018129
60	72	9.5	8.5	PUR	-40 / 100	14192940
60	74	9	8	PUR	-40 / 100	14192938
60	75	13	12	PUR	-40 / 100	14192828
63	73	7.5	6.5	PUR	-40 / 100	14192941
63	73	13	12	PUR	-40 / 100	11232755
63	75	9.5	8.5	PUR	-40 / 100	14192943
63	78	11	10	PUR	-40 / 100	10018130
63.5	76.2	10.5	9.52	PUR	-40 / 100	14192942
65	75	11	10	PUR	-40 / 100	14192944
69.85	85	14	13	PUR	-40 / 100	14192945
70	78	9	8	PUR	-40 / 100	10018091
70	80	13	12	PUR	-40 / 100	10018132
70	85	11	10	PUR	-40 / 100	14192946
70	85	12.5	11.5	PUR	-40 / 100	14192829
70	90	14.5	13.5	PUR	-40 / 100	14192947
70	90	15.5	14.5	PUR	-40 / 100	14192948
75	85	13	12	PUR	-40 / 100	14192949
75	87	9.6	8.6	PUR	-40 / 100	10018258
75	95	13	12	PUR	-40 / 100	14192950
80	90	8	7	PUR	-40 / 100	12684440
80	90	13	12	PUR	-40 / 100	10018135
80	95	11	10	PUR	-40 / 100	12961553
80	100	14.5	13.5	PUR	-40 / 100	14192951
82.5	95.25	10.52	9.52	PUR	-40 / 100	14192952
85	95	8	7	PUR	-40 / 100	14192954
85	95	13	12	PUR	-40 / 100	14192953
85	100	10	9	PUR	-40 / 100	14192955
90	100	13	12	PUR	-40 / 100	14192956
90	105	12.4	11.4	PUR	-40 / 100	10018665
90	110	12.5	11.5	PUR	-40 / 100	14192957
95	105	13	12	PUR	-40 / 100	14192958
95	110	10	9	PUR	-40 / 100	14192960
95	110	13	12	PUR	-40 / 100	14192959
98	118	10	9	PUR	-40 / 100	14192961
100	110	15	14	PUR	-40 / 100	14192962
100	115	10	9	PUR	-40 / 100	14192963
100	115	13	12	PUR	-40 / 100	10018418
100	120	15.5	14.5	PUR	-40 / 100	10018419
110	125	11.9	10.9	PUR	-40 / 100	12249518
130	150	16	15	PUR	-40 / 100	10018425
150	170	14.5	13.5	PUR	-40 / 100	12961548
150	170	16	15	PUR	-40 / 100	10018426
160	180	16	15	PUR	-40 / 100	10018427
180	200	13	12	PUR	-40 / 100	11353431
200	220	16	15	PUR	-40 / 100	12249523
200	225	16	15	PUR	-40 / 100	11064279
220	240	16	15	PUR	-40 / 100	10018430
250	270	16	15	PUR	-40 / 100	11140796

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