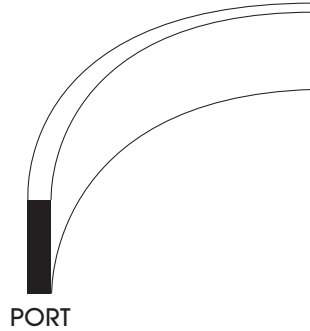


Wear Rings

PORT

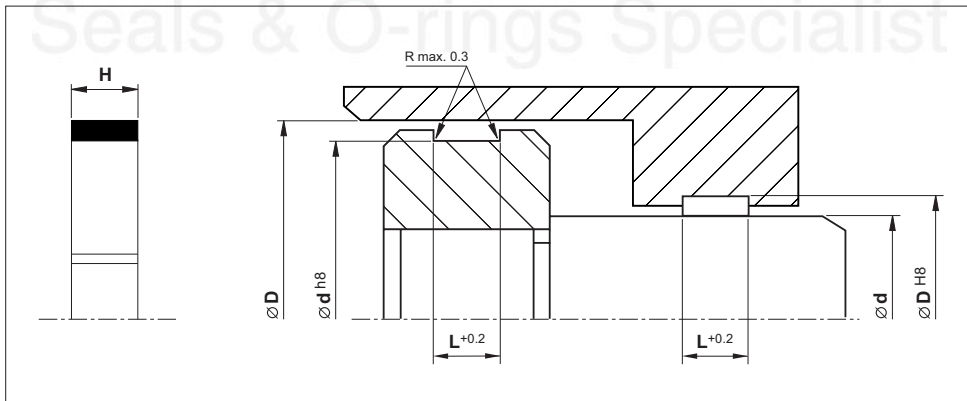
(Metric Size)



Material	Dynamic Load (N/mm ²)	Temp. (°C)	Speed (m/s)
Polyacetal	30	-30 +100	1

- High compressive strength.
- High wear resistance.
- Easy installation on pistons and rods.
- High stiffness.

Installation Recommendation



Surface roughness

Ra

Rt

Sliding surface

≤ 0.3 μm

≤ 4 μm

Surface of housing

≤ 1.8 μm

≤ 10 μm

Sides of housing

≤ 3.0 μm

≤ 16 μm

Guide Ring - PORT

(Metric Size)

Groove Dia.		Groove Width	Seal Height	Reference (For order processing)	Groove Dia.		Groove Width	Seal Height	Reference (For order processing)
Rod	Bore				Rod	Bore			
d	D	L	H		d	D	L	H	
12.0	16.0	9.6	9.4	PORT 012-016-9.6/2.0	30.0	35.0	8.2	8.0	PORT 030-035-8.2/2.5
14.0	18.0	9.6	9.4	PORT 014-018-9.6/2.0	30.0	35.0	9.7	9.5	PORT 030-035-9.7/2.5
15.0	19.0	9.6	9.4	PORT 015-019-9.6/2.0	30.0	35.0	15.2	15.0	PORT 030-035-15.2/2.5
16.0	19.0	6.0	5.8	PORT 016-019-6.0/1.5	30.0	35.0	19.4	19.2	PORT 030-035-19.4/2.5
16.0	19.1	4.0	3.8	PORT 016-019.1-4/1.5	30.0	36.0	9.5	9.3	PORT 030-036-9.5/3.0
16.0	20.0	9.6	9.4	PORT 016-020-9.6/2.0	31.0	35.0	8.0	7.8	PORT 031-035-8.0/2.0
18.0	22.0	9.6	9.4	PORT 018-022-9.6/2.0	31.0	35.0	9.6	9.5	PORT 031-035-9.6/2.0
19.0	25.0	9.6	9.4	PORT 019-025-9.6/3.0	31.0	36.0	11.4	11.2	PORT 031-036-11.4/2.5
20.0	23.1	4.0	3.8	PORT 020-023.1-4/1.5	32.0	35.0	9.7	9.5	PORT 032-035-9.7/1.5
20.0	24.0	9.6	9.4	PORT 020-024-9.6/2.0	32.0	35.1	4.0	3.8	PORT 032-035.1-4/1.5
20.0	25.0	5.6	5.4	PORT 020-025-5.6/2.5	32.0	36.0	9.7	9.5	PORT 032-036-9.7/2.0
20.0	25.0	9.7	9.5	PORT 020-025-9.7/2.5	32.0	37.0	5.6	5.4	PORT 032-037-5.6/2.5
20.0	26.0	4.0	3.8	PORT 020-026-4.0/3.0	32.0	37.0	9.7	9.5	PORT 032-037-9.7/2.5
20.0	26.0	9.7	9.5	PORT 020-026-9.7/3.0	32.0	37.0	11.2	11.0	PORT 032-037-11.2/2.5
21.0	25.0	8.0	7.8	PORT 021-025-8.0/2.0	32.0	38.0	9.6	9.4	PORT 032-038-9.6/3.0
21.0	25.0	8.2	8.0	PORT 021-025-8.2/2.0	32.0	38.0	10.0	9.8	PORT 032-038-10/3.0
21.0	25.0	9.6	9.4	PORT 021-025-9.6/2.0	33.0	36.0	4.0	3.8	PORT 033-036-4.0/1.5
22.0	25.0	4.2	4.0	PORT 022-025-4.2/1.5	33.0	37.0	8.0	7.8	PORT 033-037-8.0/2.0
22.0	26.0	9.6	9.4	PORT 022-026-9.6/2.0	34.0	38.0	9.6	9.4	PORT 034-038-9.6/2.0
22.0	27.0	6.3	6.1	PORT 022-027-6.3/2.5	34.0	40.0	9.6	9.4	PORT 034-040-9.6/3.0
24.0	28.0	9.6	9.4	PORT 024-028-9.6/2.0	35.0	39.0	6.5	6.3	PORT 035-039-6.5/2.0
25.0	28.1	4.0	3.8	PORT 025-028.1-4/1.5	35.0	39.0	8.0	7.8	PORT 035-039-8.0/2.0
25.0	29.0	9.6	9.4	PORT 025-029-9.6/2.0	35.0	39.0	9.7	9.5	PORT 035-039-9.7/2.0
25.0	30.0	5.6	5.4	PORT 025-030-5.6/2.5	35.0	39.0	12.8	12.5	PORT 035-039-12.8/2.0
25.0	30.0	9.7	9.5	PORT 025-030-9.7/2.5	35.0	39.4	6.0	5.8	PORT 035-039.4-6/2.2
25.0	31.0	9.6	9.4	PORT 025-031-9.6/3.0	35.0	40.0	4.5	4.3	PORT 035-040-4.5/2.5
26.0	30.0	9.6	9.4	PORT 026-030-9.6/2.0	35.0	40.0	5.6	5.4	PORT 035-040-5.6/2.5
26.0	32.0	10.0	9.8	PORT 026-032-10/3.0	35.0	40.0	6.3	6.1	PORT 035-040-6.3/2.5
27.0	32.0	5.6	5.4	PORT 027-032-5.6/2.5	35.0	40.0	9.7	9.5	PORT 035-040-9.7/2.5
28.0	31.0	5.6	5.4	PORT 028-031-5.6/1.5	35.0	40.0	9.9	9.7	PORT 035-040-9.9/2.5
28.0	32.0	9.7	9.5	PORT 028-032-9.7/2.0	35.0	40.0	15.2	15.0	PORT 035-040-15.2/2.5
28.0	33.0	5.6	5.4	PORT 028-033-5.6/2.5	35.0	41.0	9.6	9.4	PORT 035-041-9.6/3.0
28.0	33.0	6.4	6.2	PORT 028-033-6.4/2.5	35.0	41.0	12.7	12.5	PORT 035-041-12.7/3.0
28.0	34.0	9.7	9.5	PORT 028-034-9.7/3.0	35.0	41.0	19.7	19.5	PORT 035-041-19.7/3.0
28.9	32.0	4.0	3.8	PORT 028.9-032-4.0/1.5	35.0	41.0	20.0	19.8	PORT 035-041-20/3.0
29.0	35.0	9.6	9.4	PORT 029-035-9.6/3.0	36.0	40.0	5.0	4.8	PORT 036-040-5.0/2.0
29.0	35.0	10.0	9.8	PORT 029-035-10/3.0	36.0	40.0	8.0	7.8	PORT 036-040-8.0/2.0
30.0	34.0	9.7	9.5	PORT 030-034-9.7/2.0	36.0	40.0	9.7	9.5	PORT 036-040-9.7/2.0
30.0	35.0	5.6	5.4	PORT 030-035-5.6/2.5	36.0	41.0	5.6	5.4	PORT 036-041-5.6/2.5
30.0	35.0	6.3	6.1	PORT 030-035-6.3/2.5	36.0	41.0	6.3	6.1	PORT 036-041-6.3/2.5

Guide Ring - PORT

(Metric Size)

Groove Dia.		Groove Width	Seal Height	Reference (For order processing)	Groove Dia.		Groove Width	Seal Height	Reference (For order processing)
Rod	Bore				Rod	Bore			
d	D	L	H		d	D	L	H	
36.0	41.0	9.7	9.5	PORT 036-041-9.7/2.5	46.0	50.0	9.7	9.5	PORT 046-050-9.7/2.0
36.0	42.0	9.6	9.4	PORT 036-042-9.6/3.0	46.0	50.0	10.0	9.8	PORT 046-050-10/2.0
36.0	42.0	9.8	9.6	PORT 036-042-9.8/3.0	46.0	50.0	10.2	10.0	PORT 046-050-10.2/2.0
37.0	42.0	6.0	9.6	PORT 037-042-6.0/2.5	46.0	50.0	15.2	15.0	PORT 046-050-15.2/2.0
38.0	41.0	21.0	20.8	PORT 038-041-21/1.5	46.0	52.0	9.6	9.4	PORT 046-052-9.6/3.0
38.0	42.0	4.2	4.0	PORT 038-042-4.2/2.0	47.0	53.0	13.0	2.8	PORT 047-053-13/3.0
38.0	42.0	9.6	9.4	PORT 038-042-9.6/2.0	48.0	53.0	13.0	12.8	PORT 048-053-13/2.5
39.0	44.0	15.4	15.2	PORT 039-044-15.4/2.5	48.0	54.0	9.7	9.5	PORT 048-054-9.7/3.0
39.0	45.0	9.6	9.4	PORT 039-045-9.6/3.0	49.0	55.0	9.6	9.4	PORT 049-055-9.6/3.0
39.0	45.0	10.0	9.8	PORT 039-045-10/3.0	49.0	55.0	10.0	9.8	PORT 049-055-10/3.0
40.0	44.0	6.5	6.3	PORT 040-044-6.5/2.0	49.0	55.0	12.7	12.5	PORT 049-055-12.7/3.0
40.0	44.0	9.7	9.5	PORT 040-044-9.7/2.0	50.0	55.0	5.6	5.4	PORT 050-055-5.6/2.5
40.0	45.0	5.0	4.8	PORT 040-045-5.0/2.5	50.0	55.0	8.2	8.0	PORT 050-055-8.2/2.5
40.0	45.0	5.6	5.4	PORT 040-045-5.6/2.5	50.0	55.0	9.7	9.5	PORT 050-055-9.7/2.5
40.0	45.0	9.7	9.5	PORT 040-045-9.7/2.5	50.0	55.0	10.0	9.8	PORT 050-055-10/2.5
40.0	45.0	10.0	9.8	PORT 040-045-10/2.5	50.0	55.0	15.2	15.0	PORT 050-055-15.2/2.5
40.0	45.0	15.2	15.0	PORT 040-045-15.2/2.5	50.0	55.0	20.2	20.0	PORT 050-055-20.2/2.5
40.0	45.0	20.2	20.0	PORT 040-045-20.2/2.5	50.0	56.0	9.7	9.5	PORT 050-056-9.7/3.0
40.0	46.0	9.6	9.4	PORT 040-046-9.6/3.0	50.0	56.0	12.7	12.5	PORT 050-056-12.7/3.0
40.0	46.0	9.8	9.6	PORT 040-046-9.8/3.0	50.25	57.16	6.1	5.9	PORT 050.25-057.16-6.1/3.5
40.0	46.0	12.7	12.5	PORT 040-046-12.7/3.0	50.8	57.15	19.25	19.05	PORT 050.8-057.15-19.25/3.1
40.0	46.0	13.0	12.8	PORT 040-046-13/3.0	51.0	55.0	9.6	9.4	PORT 051-055-9.6/2.0
41.0	45.0	9.6	9.4	PORT 041-045-9.6/2.0	51.0	55.0	10.0	9.8	PORT 051-055-10/2.0
41.0	45.0	10.2	10.0	PORT 041-045-10.2/2.5	52.0	58.0	9.6	9.4	PORT 052-058-9.6/3.0
41.0	46.0	5.6	5.4	PORT 041-046-5.6/2.5	53.0	59.0	9.6	9.4	PORT 053-059-9.6/3.0
42.0	46.0	9.6	9.4	PORT 042-046-9.6/2.0	54.0	60.0	9.6	9.4	PORT 054-060-9.6/3.0
42.0	48.0	9.6	9.4	PORT 042-048-9.6/3.0	54.0	60.0	12.7	12.5	PORT 054-060-12.7/3.0
43.0	49.0	9.6	9.4	PORT 043-049-9.6/3.0	55.0	59.0	8.0	7.8	PORT 055-059-8.0/2.0
44.0	50.0	9.6	9.4	PORT 044-050-9.6/3.0	55.0	60.0	5.6	5.4	PORT 055-060-5.6/2.5
44.0	50.0	12.7	12.5	PORT 044-050-12.7/3.0	55.0	60.0	5.8	5.6	PORT 055-060-5.8/2.5
44.45	50.8	12.7	12.5	PORT 044.45-050.8-12.7/3.1	55.0	60.0	8.2	8.0	PORT 055-060-8.2/2.5
44.45	50.8	19.25	19.05	PORT 044.45-050.8-19.25/3.1	55.0	60.0	9.7	9.5	PORT 055-060-9.7/2.5
45.0	49.0	20.0	19.8	PORT 045-049-20/2.0	55.0	60.0	9.9	9.7	PORT 055-060-9.9/2.5
45.0	50.0	5.6	5.4	PORT 045-050-5.6/2.5	55.0	60.0	15.2	15.0	PORT 055-060-15.2/2.5
45.0	50.0	9.7	9.5	PORT 045-050-9.7/2.5	55.0	60.0	20.2	20.0	PORT 055-060-20.2/2.5
45.0	50.0	10.0	9.8	PORT 045-050-10/2.5	55.0	61.0	9.7	9.5	PORT 055-061-9.7/3.0
45.0	50.0	15.2	15.0	PORT 045-050-15.2/2.5	55.0	61.0	12.7	12.5	PORT 055-061-12.7/3.0
45.0	50.0	19.4	19.2	PORT 045-050-19.4/2.5	56.0	60.0	8.1	7.9	PORT 056-060-8.1/2.0
45.0	51.0	9.7	9.5	PORT 045-051-9.7/3.0	56.0	60.0	9.6	9.4	PORT 056-060-9.6/2.0
45.0	51.0	12.7	12.5	PORT 045-051-12.7/3.0	56.0	60.0	9.8	9.6	PORT 056-060-9.8/2.0

Guide Ring - PORT



(Metric Size)

Groove Dia.		Groove Width	Seal Height	Reference (For order processing)	Groove Dia.		Groove Width	Seal Height	Reference (For order processing)
Rod	Bore				Rod	Bore			
d	D	L	H		d	D	L	H	
56.0	60.0	10.0	9.8	PORT 056-060-10/2.0	63.0	69.0	12.7	12.5	PORT 063-069-12.7/3.0
56.0	60.0	10.2	10.0	PORT 056-060-10.2/2.0	63.0	69.0	30.5	30.0	PORT 063-069-30.5/3.0
56.0	61.0	5.6	5.4	PORT 056-061-5.6/2.5	64.0	70.0	9.6	9.4	PORT 064-070-9.6/3.0
56.0	61.0	9.7	9.5	PORT 056-061-9.7/2.5	64.0	70.0	12.7	12.5	PORT 064-070-12.7/3.0
56.0	62.0	9.6	9.4	PORT 056-062-9.6/3.0	65.0	69.0	10.0	9.8	PORT 065-069-10/2.0
56.0	62.0	12.7	12.5	PORT 056-062-12.7/3.0	65.0	70.0	5.6	5.4	PORT 065-070-5.6/2.5
56.0	62.0	20.2	20.0	PORT 056-062-20.2/3.0	65.0	70.0	7.0	6.8	PORT 065-070-7.0/2.5
57.0	63.0	9.6	9.4	PORT 057-063-9.6/3.0	65.0	70.0	9.7	9.5	PORT 065-070-9.7/2.5
57.0	63.0	10.0	9.8	PORT 057-063-10/3.0	65.0	70.0	15.0	14.7	PORT 065-070-15/2.5
57.0	63.0	12.7	12.5	PORT 057-063-12.7/3.0	65.0	70.0	15.2	15.0	PORT 065-070-15.2/2.5
57.15	63.5	12.7	12.5	PORT 057.15-063.5-12.7/3.1	65.0	71.0	12.7	12.5	PORT 065-071-12.7/3.0
57.18	62.18	19.8	19.6	PORT 057.18-062.18-19.8/2.5	66.0	70.0	10.0	9.8	PORT 066-070-10/2.0
58.0	63.0	5.6	5.4	PORT 058-063-5.6/2.5	66.0	70.0	10.2	10.0	PORT 066-070-10.2/2.0
58.0	63.0	9.7	9.5	PORT 058-063-9.7/2.5	66.0	72.0	12.8	12.6	PORT 066-072-12.8/3.0
58.0	63.0	10.0	9.8	PORT 058-063-10/2.5	67.0	72.0	5.6	5.4	PORT 067-072-5.6/2.5
58.0	64.0	12.7	12.5	PORT 058-064-12.7/3.0	68.0	74.0	12.8	12.6	PORT 068-074-12.8/3.0
59.0	63.0	9.7	9.5	PORT 059-063-9.7/2.0	69.0	75.0	9.6	9.4	PORT 069-075-9.6/3.0
59.0	63.0	10.0	9.8	PORT 059-063-10/2.0	69.0	75.0	12.7	12.5	PORT 069-075-12.7/3.0
59.0	65.0	12.7	12.5	PORT 059-065-12.7/3.0	69.85	76.2	9.52	9.32	PORT 069.85-076.2-9.52/3.1
60.0	64.0	10.0	9.8	PORT 060-064-10/2.0	69.85	76.2	19.25	19.05	PORT 069.85-076.2-19.25/3.1
60.0	64.0	10.2	10.0	PORT 060-064-10.2/2.0	70.0	74.0	15.0	14.8	PORT 070-074-15/2.0
60.0	64.0	19.5	19.3	PORT 060-064-19.5/2.0	70.0	75.0	5.6	5.4	PORT 070-075-5.6/2.5
60.0	65.0	5.6	5.4	PORT 060-065-5.6/2.5	70.0	75.0	9.7	9.5	PORT 070-075-9.7/2.5
60.0	65.0	8.2	8.0	PORT 060-065-8.2/2.5	70.0	75.0	10.0	9.8	PORT 070-075-10/2.5
60.0	65.0	9.7	9.5	PORT 060-065-9.7/2.5	70.0	75.0	15.0	14.7	PORT 070-075-15/2.5
60.0	65.0	15.2	15.0	PORT 060-065-15.2/2.5	70.0	75.0	15.2	15.0	PORT 070-075-15.2/2.5
60.0	65.0	19.4	19.2	PORT 060-065-19.4/2.5	70.0	76.0	9.6	9.4	PORT 070-076-9.6/3.0
60.0	65.0	20.2	20.0	PORT 060-065-20.2/2.5	70.0	76.0	10.2	10.0	PORT 070-076-10.2/3.0
60.0	65.0	30.0	29.5	PORT 060-065-30/2.5	70.0	76.0	12.7	12.5	PORT 070-076-12.7/3.0
60.0	66.0	9.6	9.4	PORT 060-066-9.6/3.0	70.0	76.0	19.2	19.0	PORT 070-076-19.2/3.0
60.0	66.0	9.9	9.7	PORT 060-066-9.9/3.0	70.0	76.0	25.5	25.0	PORT 070-076-25.5/3.0
60.0	66.0	12.7	12.5	PORT 060-066-12.7/3.0	70.0	76.0	27.0	26.5	PORT 070-076-27/3.0
60.0	66.0	15.0	14.8	PORT 060-066-15.0/3.0	71.0	75.0	15.0	14.8	PORT 071-075-15/2.0
61.0	66.0	9.7	9.5	PORT 061-066-9.7/2.5	71.2	76.2	20.0	19.8	PORT 071.2-076.2-19.8/2.5
62.0	65.0	19.7	19.5	PORT 062-065-19.7/1.5	72.0	78.0	12.5	12.3	PORT 072-078-12.5/3.0
62.0	65.0	20.0	19.8	PORT 062-065-20/1.5	72.0	80.0	6.2	6.0	PORT 072-080-6.2/4.0
62.0	68.0	12.7	12.5	PORT 062-068-12.7/3.0	73.0	79.0	12.8	12.6	PORT 073-079-12.8/3.0
63.0	67.0	6.5	6.3	PORT 063-067-6.5/2.0	74.0	80.0	12.7	12.5	PORT 074-080-12.7/3.0
63.0	68.0	5.6	5.4	PORT 063-068-5.6/2.5	75.0	79.0	8.0	7.8	PORT 075-079-8.0/2.0
63.0	68.0	9.7	9.5	PORT 063-068-9.7/2.5	75.0	80.0	5.6	5.4	PORT 075-080-5.6/2.5

Guide Ring - PORT

(Metric Size)

Groove Dia.		Groove Width	Seal Height	Reference (For order processing)	Groove Dia.		Groove Width	Seal Height	Reference (For order processing)
Rod	Bore				Rod	Bore			
d	D	L	H		d	D	L	H	
75.0	80.0	8.2	8.0	PORT 075-080-8.2/2.5	86.0	90.0	15.0	14.8	PORT 086-090-15.0/2.0
75.0	80.0	9.7	9.5	PORT 075-080-9.7/2.5	86.0	92.0	12.7	12.5	PORT 086-092-12.7/3.0
75.0	80.0	10.0	9.8	PORT 075-080-10/2.5	88.0	94.0	12.8	12.6	PORT 088-094-12.8/3.0
75.0	80.0	15.0	14.7	PORT 075-080-15/2.5	88.9	93.9	19.8	19.6	PORT 088.9-093.9-19.8/2.5
75.0	80.0	19.4	19.2	PORT 075-080-19.4/2.5	89.0	95.0	12.7	12.5	PORT 089-095-12.7/3.0
75.0	80.0	15.2	15.0	PORT 075-080-15.2/2.5	90.0	94.0	15.0	14.8	PORT 090-094-15/2.0
75.0	81.0	12.7	12.5	PORT 075-081-12.7/3.0	90.0	94.0	15.2	15.0	PORT 090-094-15.2/2.0
75.0	81.0	19.2	19.0	PORT 075-081-19.2/3.0	90.0	95.0	5.8	5.6	PORT 090-095-5.8/2.5
76.0	80.0	10.0	9.8	PORT 076-080-10/2.0	90.0	95.0	9.7	9.5	PORT 090-095-9.7/2.5
76.0	80.0	15.0	14.8	PORT 076-080-15/2.0	90.0	95.0	10.0	9.8	PORT 090-095-10/2.5
76.0	81.0	9.7	9.5	PORT 076-081-9.7/2.5	90.0	95.0	15.0	14.7	PORT 090-095-15/2.5
76.0	82.0	12.8	12.6	PORT 076-082-12.8/3.0	90.0	95.0	15.2	15.0	PORT 090-095-15.2/2.5
76.5	82.5	12.7	12.5	PORT 076.5-082.5-12.7/3.0	90.0	95.0	19.4	19.2	PORT 090-095-19.4/2.5
78.0	84.0	12.8	12.6	PORT 078-084-12.8/3.0	90.0	96.0	12.7	12.5	PORT 090-096-12.7/3.0
79.0	85.0	12.7	12.5	PORT 079-085-12.7/3.0	90.0	96.0	14.0	13.8	PORT 090-096-14/3.0
80.0	84.0	9.5	9.3	PORT 080-084-9.5/2.0	90.0	96.0	19.2	19.0	PORT 090-096-19.2/3.0
80.0	85.0	5.6	5.4	PORT 080-085-5.6/2.5	90.0	96.0	30.0	29.5	PORT 090-096-30/3.0
80.0	85.0	9.7	9.5	PORT 080-085-9.7/2.5	90.0	96.0	30.5	30.0	PORT 090-096-30.5/3.0
80.0	85.0	10.0	9.8	PORT 080-085-10/2.5	92.0	97.0	9.7	9.5	PORT 092-097-9.7/2.5
80.0	85.0	12.8	12.6	PORT 080-085-12.8/2.5	94.0	100.0	12.7	12.5	PORT 094-100-12.7/3.0
80.0	85.0	15.0	14.7	PORT 080-085-15/2.5	94.0	100.0	13.0	12.8	PORT 094-100-13/3.0
80.0	85.0	15.2	15.0	PORT 080-085-15.2/2.5	94.0	100.0	30.0	29.5	PORT 094-100-30/3.0
80.0	85.0	19.7	19.5	PORT 080-085-19.7/2.5	95.0	100.0	5.6	5.4	PORT 095-100-5.6/2.5
80.0	85.0	20.0	19.8	PORT 080-085-20/2.5	95.0	100.0	9.7	9.5	PORT 095-100-9.7/2.5
80.0	86.0	12.7	12.5	PORT 080-086-12.7/3.0	95.0	100.0	15.0	14.7	PORT 095-100-15/2.5
80.0	86.0	15.0	14.8	PORT 080-086-15/3.0	95.0	100.0	15.2	15.0	PORT 095-100-15.2/2.5
80.0	86.0	19.2	19.0	PORT 080-086-19.2/3.0	95.0	100.0	20.0	19.8	PORT 095-100-20/2.5
80.0	86.0	24.7	24.4	PORT 080-086-24.7/3.0	95.0	101.0	12.7	12.5	PORT 095-101-12.7/3.0
80.0	86.0	25.3	24.8	PORT 080-086-25.3/3.0	95.0	101.0	19.2	19.0	PORT 095-101-19.2/3.0
80.0	86.0	30.5	30.0	PORT 080-086-30.5/3.0	96.0	100.0	10.0	9.8	PORT 096-100-10/2.0
82.0	88.0	12.7	12.5	PORT 082-088-12.7/3.0	96.0	100.0	15.0	14.8	PORT 096-100-15/2.0
84.0	90.0	10.0	9.8	PORT 084-090-10/3.0	99.0	105.0	12.7	12.5	PORT 099-105-12.7/3.0
84.0	90.0	12.7	12.5	PORT 084-090-12.7/3.0	99.0	105.0	19.2	19.0	PORT 099-105-19.2/3.0
85.0	90.0	5.7	5.5	PORT 085-090-5.7/2.5	100.0	104.0	15.2	15.0	PORT 100-104-15.2/2.0
85.0	90.0	9.7	9.5	PORT 085-090-9.7/2.5	100.0	105.0	5.6	5.4	PORT 100-105-5.6/2.5
85.0	90.0	9.9	9.7	PORT 085-090-9.9/2.5	100.0	105.0	9.7	9.5	PORT 100-105-9.7/2.5
85.0	90.0	15.0	14.7	PORT 085-090-15/2.5	100.0	105.0	15.0	14.7	PORT 100-105-15/2.5
85.0	90.0	15.2	15.0	PORT 085-090-15.2/2.5	100.0	105.0	15.2	15.0	PORT 100-105-15.2/2.5
85.0	91.0	12.7	12.5	PORT 085-091-12.7/2.5	100.0	106.0	12.7	12.5	PORT 100-106-12.7/3.0
85.0	91.0	24.3	24.0	PORT 085-091-24.3/3.0	100.0	106.0	19.2	19.0	PORT 100-106-19.0/3.0

Guide Ring - PORT

(Metric Size)

Groove Dia.		Groove Width	Seal Height	Reference (For order processing)	Groove Dia.		Groove Width	Seal Height	Reference (For order processing)
Rod	Bore				Rod	Bore			
d	D	L	H		d	D	L	H	
101.0	105.0	15.2	15.0	PORT 101-105-15.2/2.0	119.0	125.0	19.2	19.0	PORT 119-125-19.2/3.0
101.0	105.0	20.0	19.8	PORT 101-105-20/2.0	120.0	125.0	5.6	5.4	PORT 120-125-5.6/2.5
103.0	108.0	20.0	19.8	PORT 103-108-20/2.5	120.0	125.0	9.7	9.5	PORT 120-125-9.7/2.5
104.0	110.0	10.2	10.0	PORT 104-110-10.2/3.0	120.0	125.0	15.0	14.7	PORT 120-125-15/2.5
104.0	110.0	12.7	12.5	PORT 104-110-12.7/3.0	120.0	125.0	15.2	15.0	PORT 120-125-15.2/2.5
104.0	110.0	19.2	19.0	PORT 104-110-19.2/3.0	120.0	126.0	12.7	12.5	PORT 120-126-12.7/3.0
104.0	110.0	25.4	25.1	PORT 104-110-25.4/3.0	120.0	126.0	19.2	19.0	PORT 120-126-19.2/3.0
105.0	110.0	8.2	8.0	PORT 105-110-8.2/2.5	120.0	126.0	25.4	25.1	PORT 120-126-25.4/3.0
105.0	110.0	9.7	9.5	PORT 105-110-9.7/2.5	122.0	127.0	9.7	9.5	PORT 122-127-9.7/2.5
105.0	110.0	10.0	9.8	PORT 105-110-10/2.5	122.0	127.0	19.4	19.2	PORT 122-127-19.4/2.5
105.0	110.0	15.0	14.7	PORT 105-110-15/2.5	123.0	129.0	12.8	12.6	PORT 123-129-12.8/3.0
105.0	110.0	17.0	16.8	PORT 105-110-17/2.5	124.0	130.0	12.7	12.5	PORT 124-130-12.7/3.0
105.0	110.0	19.4	19.2	PORT 105-110-19.4/2.5	124.0	130.0	19.2	19.0	PORT 124-130-19.2/3.0
105.0	111.0	12.7	12.5	PORT 105-111-12.7/3.0	125.0	130.0	7.2	7.0	PORT 125-130-7.2/2.5
105.0	111.0	19.2	19.0	PORT 105-111-19.2/3.0	125.0	130.0	15.0	14.7	PORT 125-130-15/2.5
105.0	115.0	17.2	17.0	PORT 105-115-17.2/5.0	125.0	130.0	15.2	15.0	PORT 125-130-15.2/2.5
106.0	110.0	15.0	14.8	PORT 106-110-15/2.0	125.0	130.0	16.0	15.8	PORT 125-130-16/2.5
106.0	110.0	20.0	19.8	PORT 106-110-20/2.0	125.0	131.0	12.7	12.5	PORT 125-131-12.7/3.0
109.0	115.0	12.7	12.5	PORT 109-115-12.7/3.0	125.0	131.0	19.2	19.0	PORT 125-131-19.2/3.0
109.0	115.0	19.2	19.0	PORT 109-115-19.2/3.0	129.0	135.0	12.8	12.6	PORT 129-135-12.8/3.0
109.0	115.0	10.0	9.8	PORT 109-115-10/3.0	129.0	135.0	19.2	19.0	PORT 129-135-19.2/3.0
110.0	115.0	9.7	9.5	PORT 110-115-9.7/2.5	130.0	135.0	9.7	9.5	PORT 130-135-9.7/2.5
110.0	115.0	15.0	14.7	PORT 110-115-15/2.5	130.0	135.0	15.0	14.7	PORT 130-135-15/2.5
110.0	115.0	20.2	20.0	PORT 110-115-20.2/2.5	130.0	136.0	12.7	12.5	PORT 130-136-12.7/3.0
110.0	115.0	25.0	24.7	PORT 110-115-25/2.5	130.0	136.0	19.2	19.0	PORT 130-136-19.2/3.0
110.0	116.0	12.7	12.5	PORT 110-116-12.7/3.0	130.0	136.0	25.4	25.1	PORT 130-136-25.4/3.0
110.0	116.0	14.0	13.8	PORT 110-116-14/3.0	132.0	136.0	7.7	7.5	PORT 132-136-7.7/2.0
110.0	116.0	19.2	19.0	PORT 110-116-19.2/3.0	134.0	140.0	12.7	12.5	PORT 134-140-12.7/3.0
110.0	116.0	25.4	25.1	PORT 110-116-25.4/3.0	134.0	140.0	20.0	19.8	PORT 134-140-20/3.0
114.0	119.0	15.0	14.8	PORT 114-119-15/2.5	134.0	140.0	25.4	25.1	PORT 134-140-25.4/3.0
114.0	120.0	12.7	12.5	PORT 114-120-12.7/3.0	135.0	140.0	9.7	9.5	PORT 135-140-9.7/2.5
115.0	120.0	9.7	9.5	PORT 115-120-9.7/2.5	135.0	140.0	15.0	14.7	PORT 135-140-15/2.5
115.0	120.0	15.0	14.7	PORT 115-120-15/2.5	135.0	140.0	15.2	15.0	PORT 135-140-15.2/2.5
115.0	121.0	12.7	12.5	PORT 115-121-12.7/3.0	135.0	140.0	16.0	15.8	PORT 135-140-16/2.5
115.0	121.0	19.2	19.0	PORT 115-121-19.2/3.0	135.0	141.0	12.7	12.5	PORT 135-141-12.7/3.0
115.0	121.0	25.4	25.1	PORT 115-121-25.4/3.0	136.0	140.0	12.7	12.5	PORT 136-140-12.7/2.0
119.0	125.0	12.7	12.5	PORT 119-125-12.7/3.0	136.0	140.0	20.0	19.8	PORT 136-140-20/2.0
119.0	125.0	15.0	14.8	PORT 119-125-15/3.0	139.0	145.0	19.2	19.0	PORT 139-145-19.2/3.0
119.0	125.0	15.2	15.0	PORT 119-125-15.2/3.0	139.0	145.0	12.8	12.6	PORT 139-145-12.8/3.0
119.0	125.0	16.0	15.8	PORT 119-125-16/3.0	140.0	145.0	20.0	19.8	PORT 140-145-20/2.5

Guide Ring - PORT

(Metric Size)

Groove Dia.		Groove Width	Seal Height	Reference (For order processing)	Groove Dia.		Groove Width	Seal Height	Reference (For order processing)
Rod	Bore				Rod	Bore			
d	D	L	H		d	D	L	H	
140.0	145.0	15.2	15.0	PORT 140-145-15.2/2.5	160.0	166.0	25.4	25.2	PORT 160-166-25.4/3.0
140.0	145.0	25.0	24.5	PORT 140-145-25/2.5	160.0	166.0	31.7	31.2	PORT 160-166-31.7/3.0
140.0	146.0	12.7	12.5	PORT 140-146-12.7/3.0	164.0	170.0	19.2	19.0	PORT 164-170-19.2/3.0
140.0	146.0	19.2	19.0	PORT 140-146-19.2/3.0	165.0	170.0	15.0	14.7	PORT 165-170-15/2.5
140.0	146.0	25.4	25.2	PORT 140-146-25.4/3.0	165.0	170.0	25.0	24.5	PORT 165-170-25/2.5
140.0	146.0	31.7	31.5	PORT 140-146-31.7/3.0	165.0	171.0	19.2	19.0	PORT 165-171-19.2/3.0
141.0	147.0	12.8	12.6	PORT 141-147-12.8/3.0	169.0	175.0	12.7	12.5	PORT 169-175-12.7/3.0
143.0	149.0	12.8	12.6	PORT 143-149-12.8/3.0	169.0	175.0	19.2	19.0	PORT 169-175-19.2/3.0
144.0	150.0	12.7	12.5	PORT 144-150-12.7/3.0	170.0	175.0	15.0	14.7	PORT 170-175-15/2.5
144.0	150.0	19.2	19.0	PORT 144-150-19.2/3.0	170.0	175.0	15.2	15.0	PORT 170-175-15.2/2.5
145.0	150.0	15.0	14.7	PORT 145-150-15/2.5	170.0	175.0	25.0	24.5	PORT 170-175-25/2.5
145.0	150.0	16.0	15.8	PORT 145-150-16/2.5	170.0	176.0	19.2	19.0	PORT 170-176-19.2/3.0
145.0	150.0	25.0	24.5	PORT 145-150-25/2.5	174.0	180.0	13.0	12.8	PORT 174-180-13.0/3.0
145.0	151.0	12.7	12.5	PORT 145-151-12.7/3.0	174.0	180.0	19.2	19.0	PORT 174-180-19.2/3.0
146.0	150.0	10.2	10.0	PORT 146-150-10.2/2.0	174.0	180.0	31.7	31.2	PORT 174-180-31.7/3.0
149.0	155.0	19.2	19.0	PORT 149-155-19.2/3.0	175.0	180.0	9.7	9.5	PORT 175-180-9.7/2.5
150.0	154.0	15.2	15.0	PORT 150-154-15.0/2.0	175.0	180.0	15.0	14.7	PORT 175-180-15/2.5
150.0	155.0	15.0	14.7	PORT 150-155-15/2.5	175.0	180.0	25.0	24.5	PORT 175-180-25/2.5
150.0	155.0	15.2	15.0	PORT 150-155-15.2/2.5	175.0	181.0	19.2	19.0	PORT 175-181-19.2/3.0
150.0	155.0	25.0	24.5	PORT 150-155-25/2.5	176.0	180.0	25.0	24.5	PORT 176-180-25/2.0
150.0	155.0	25.3	24.8	PORT 150-155-25.3/2.5	179.0	185.0	19.2	19.0	PORT 179-185-19.2/3.0
150.0	156.0	12.7	12.5	PORT 150-156-12.7/3.0	179.0	185.0	25.4	25.1	PORT 179-185-25.4/3.0
150.0	156.0	19.2	19.0	PORT 150-156-19.2/3.0	180.0	185.0	15.0	14.7	PORT 180-185-15/2.5
150.0	156.0	25.4	25.1	PORT 150-156-25.4/3.0	180.0	185.0	15.2	15.0	PORT 180-185-15.2/2.5
150.0	156.0	31.7	31.2	PORT 150-156-31.7/3.0	180.0	185.0	25.0	24.5	PORT 180-185-25/2.5
150.0	160.0	35.3	34.8	PORT 150-160-35.3/5.0	180.0	186.0	19.2	19.0	PORT 180-186-19.2/3.0
154.0	160.0	12.7	12.5	PORT 154-160-12.7/3.0	180.0	186.0	25.0	24.5	PORT 180-186-25/3.0
154.0	160.0	19.2	19.0	PORT 154-160-19.2/3.0	180.0	186.0	25.4	25.1	PORT 180-186-25.4/3.0
155.0	160.0	15.0	14.7	PORT 155-160-15/2.5	180.0	186.0	31.7	31.2	PORT 180-186-31.7/3.0
155.0	160.0	15.2	15.0	PORT 155-160-15.2/2.5	184.0	190.0	19.2	19.0	PORT 184-190-19.2/3.0
155.0	160.0	16.0	15.8	PORT 155-160-16/2.5	185.0	190.0	15.0	14.7	PORT 185-190-15/2.5
155.0	160.0	25.0	24.5	PORT 155-160-25/2.5	185.0	190.0	25.0	24.5	PORT 185-190-25/2.5
155.0	161.0	19.2	19.0	PORT 155-161-19.2/3.0	185.0	191.0	19.2	19.0	PORT 185-191-19.2/3.0
158.0	164.0	13.0	12.8	PORT 158-164-13/3.0	189.0	195.0	19.2	19.0	PORT 189-195-19.2/3.0
159.0	165.0	19.2	19.0	PORT 159-165-19.2/3.0	190.0	195.0	15.0	14.7	PORT 190-195-15/2.5
160.0	165.0	15.0	14.7	PORT 160-165-15/2.5	190.0	195.0	15.2	15.0	PORT 190-195-15.2/2.5
160.0	165.0	15.2	15.0	PORT 160-165-15.2/2.5	190.0	195.0	25.0	24.5	PORT 190-195-25/2.5
160.0	165.0	25.0	24.5	PORT 160-165-25/2.5	190.0	196.0	19.2	19.0	PORT 190-196-19.2/3.0
160.0	166.0	12.7	12.5	PORT 160-166-12.7/3.0	190.0	198.0	30.0	29.5	PORT 190-198-30/4.0
160.0	166.0	19.1	18.9	PORT 160-166-19.1/3.0	194.0	200.0	19.2	19.0	PORT 194-200-19.2/3.0

Guide Ring - PORT



(Metric Size)

Groove Dia.		Groove Width	Seal Height	Reference (For order processing)	Groove Dia.		Groove Width	Seal Height	Reference (For order processing)
Rod	Bore				Rod	Bore			
d	D	L	H		d	D	L	H	
194.0	200.0	25.4	25.1	PORT 194-200-25.4/3.0	239.0	245.0	19.2	19.0	PORT 239-245-19.2/3.0
194.0	200.0	31.7	31.2	PORT 194-200-31.7/3.0	240.0	245.0	25.0	24.5	PORT 240-245-25/2.5
195.0	200.0	15.2	15.0	PORT 195-200-15.2/2.5	240.0	246.0	19.2	19.0	PORT 240-246-19.2/3.0
195.0	200.0	25.0	24.5	PORT 195-200-25/2.5	244.0	250.0	19.2	19.0	PORT 244-250-19.2/3.0
195.0	201.0	19.2	19.0	PORT 195-201-19.2/3.0	245.0	250.0	25.0	24.5	PORT 245-250-25/2.5
196.0	200.0	25.0	24.5	PORT 196-200-25/2.0	245.0	251.0	19.2	19.0	PORT 245-251-19.2/3.0
199.0	205.0	19.2	19.0	PORT 199-205-19.2/3.0	249.0	255.0	19.2	19.0	PORT 249-255-19.2/3.0
200.0	205.0	15.2	15.0	PORT 200-205-15.2/2.5	250.0	255.0	25.0	24.5	PORT 250-255-25/2.5
200.0	205.0	25.0	24.5	PORT 200-205-25/2.5	250.0	256.0	19.2	19.0	PORT 250-256-19.2/3.0
200.0	206.0	19.2	19.0	PORT 200-206-19.2/3.0	254.0	260.0	19.2	19.0	PORT 254-260-19.2/3.0
200.0	206.0	31.7	31.2	PORT 200-206-31.7/3.0	255.0	261.0	19.2	19.0	PORT 255-261-19.2/3.0
204.0	210.0	19.2	19.0	PORT 204-210-19.2/3.0	259.0	265.0	19.2	19.0	PORT 259-265-19.2/3.0
205.0	210.0	25.0	24.5	PORT 205-210-25/2.5	260.0	266.0	19.2	19.0	PORT 260-266-19.2/3.0
205.0	211.0	19.2	19.0	PORT 205-211-19.2/3.0	264.0	270.0	19.2	19.0	PORT 264-270-19.2/3.0
209.0	215.0	19.2	19.0	PORT 209-215-19.2/3.0	265.0	271.0	19.2	19.0	PORT 265-271-19.2/3.0
210.0	215.0	25.0	24.5	PORT 210-215-25/2.5	269.0	275.0	19.2	19.0	PORT 269-275-19.2/3.0
210.0	216.0	19.2	19.0	PORT 210-216-19.2/3.0	270.0	276.0	19.2	19.0	PORT 270-276-19.2/3.0
214.0	220.0	19.2	19.0	PORT 214-220-19.2/3.0	274.0	280.0	19.2	19.0	PORT 274-280-19.2/3.0
214.0	220.0	31.7	31.2	PORT 214-220-31.7/3.0	275.0	281.0	19.2	19.0	PORT 259-265-19.2/3.0
215.0	220.0	25.0	24.5	PORT 215-220-25/2.5	279.0	285.0	19.2	19.0	PORT 279-285-19.2/3.0
215.0	221.0	19.2	19.0	PORT 215-221-19.2/3.0	280.0	286.0	19.2	19.0	PORT 280-286-19.2/3.0
219.0	225.0	19.2	19.0	PORT 219-225-19.2/3.0	284.0	290.0	19.2	19.0	PORT 284-290-19.2/3.0
220.0	225.0	25.0	24.5	PORT 220-225-25/2.5	285.0	291.0	19.2	19.0	PORT 285-291-19.2/3.0
220.0	226.0	19.2	19.0	PORT 220-226-19.2/3.0	289.0	295.0	19.2	19.0	PORT 289-295-19.2/3.0
224.0	230.0	19.2	19.0	PORT 224-230-19.2/3.0	290.0	296.0	19.2	19.0	PORT 290-296-19.2/3.0
225.0	230.0	25.0	24.5	PORT 225-230-25/2.5	294.0	300.0	19.2	19.0	PORT 294-300-19.2/3.0
225.0	231.0	19.2	19.0	PORT 225-231-19.2/3.0	295.0	301.0	19.2	19.0	PORT 295-301-19.2/3.0
227.0	233.0	19.2	19.0	PORT 227-233-19.2/3.0	300.0	306.0	19.2	19.0	PORT 300-306-19.2/3.0
227.0	233.0	25.4	25.1	PORT 227-233-25.4/3.0					
229.0	235.0	19.2	19.0	PORT 229-235-19.2/3.0					
230.0	235.0	25.0	24.5	PORT 230-235-25/2.5					
230.0	236.0	19.2	19.0	PORT 230-236-19.2/3.0					
234.0	240.0	19.2	19.0	PORT 234-240-19.2/3.0					
235.0	240.0	25.0	24.5	PORT 235-240-25/2.5					
235.0	241.0	19.2	19.0	PORT 235-241-19.2/3.0					