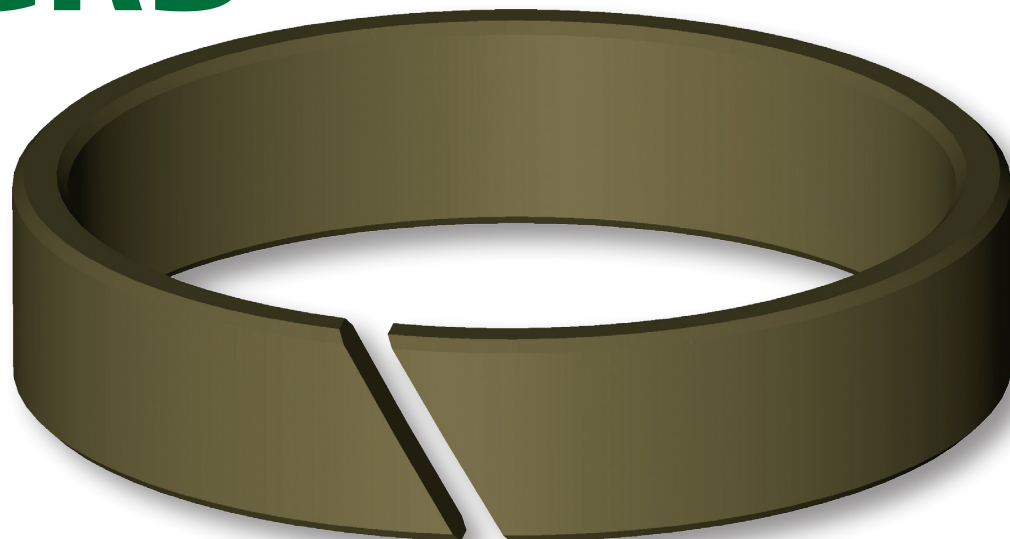


GRB



The Aston Seals GRB type guide rings have been developed to substitute traditional bronze guides in hydraulic cylinders. They guide the rod or the piston and prevent metallic contact with the cylinder when radial forces act perpendicular to the direction of movement.

Since GRB guide rings are machined, the thickness can be very accurate for high precision guiding.

The compound used for these guides assures an exceptional low friction and high speed performance, a high compatibility with nearly all media due to the chemical resistance which exceeds that of all other thermoplastics and elastomers.

- Low static and dynamic friction (also without lubrication)
- High speed allowed
- No tendency of stick-slip
- High precision of guiding
- Good damping on radial vibration
- High compatibility with nearly all fluids
- Simple design of groove and assembly
- Good mechanical stability at high temperature
- Easy installation without expensive auxiliaries
- Low resistance to heavy loads

MATERIAL



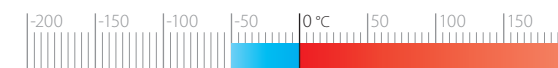
Type Polytetrafluoroethylene PTFE + Bronze
Designation SEALFLON + Bronze

FIELD OF APPLICATION

Speed
≤ 5 m/s



Temperature
-50°C ÷ +200°C



Fluids

High compatibility with nearly all media due to the chemical resistance of the material

SURFACE ROUGHNESS

Dynamic surface
Static surface

Ra ≤ 0.3 μm Rt ≤ 2.5 μm
Ra ≤ 1.6 μm Rt ≤ 6.3 μm

CHOICE OF GUIDE RING WIDTH

A rough estimate of guide width can be calculated with the following formula:

$$h_{mm} \geq \frac{F_N \times k}{p_{N/mm^2} \times d_{mm}}$$

where

h_{mm}

F_N

k

d_{mm}

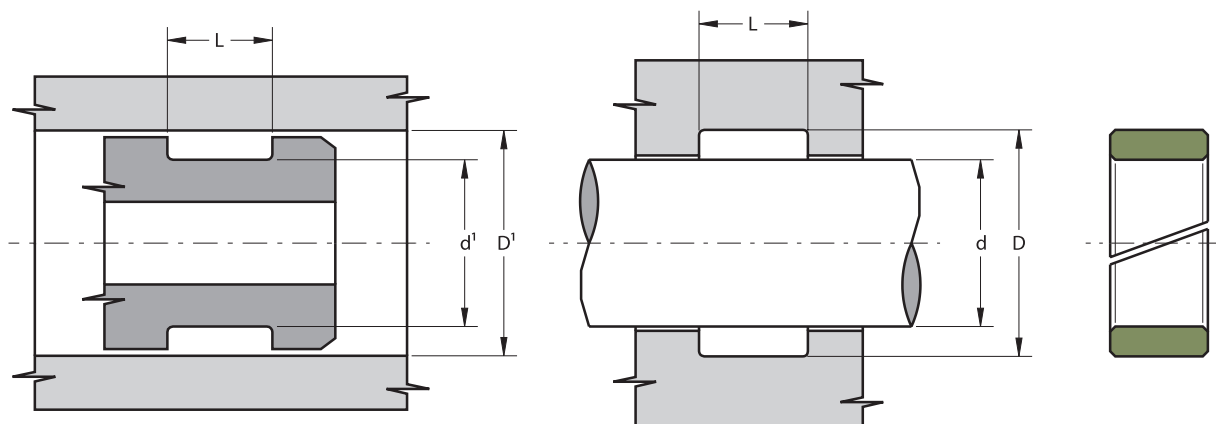
p_{N/mm^2}

- Guide ring width in mm
- Radial load in N
- Safety factor (generally 2)
- Rod diameter in mm
- Surface pressure N/mm²
14 a 20 °C
7 a 80 °C
5 a 120 °C

Before assembly good cleanliness and lubrication are recommended.

The above data are maximum values, they may be maintained for short periods and can not be used at the same time simultaneously.

GRB

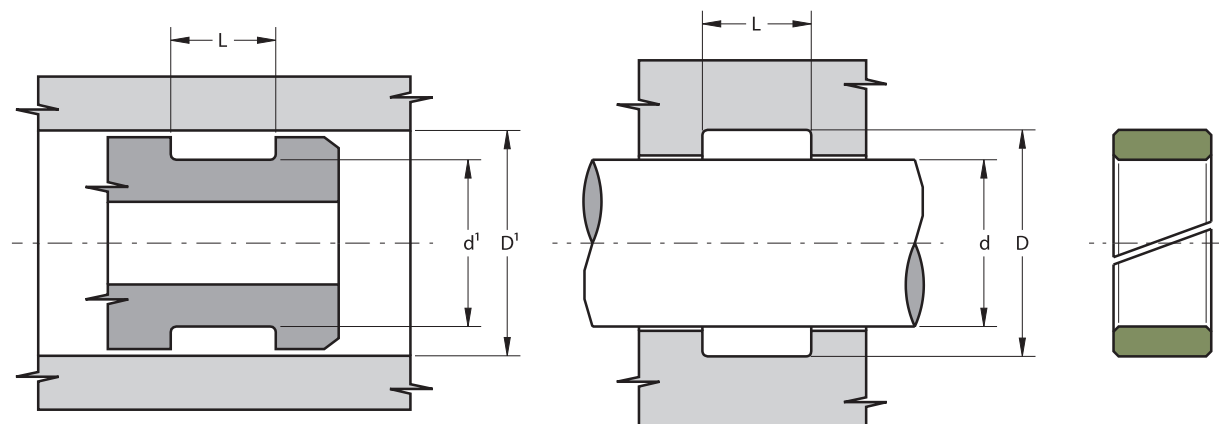


Part.	$d^{+0.05}_{-0.05}$	$D^{+0.05}_{-0.05}$	$L^{+0.2}$
GRB 15 20 6.3	15	20	6.3
GRB 20 25 6.3	20	25	6.3
GRB 25 30 6.3	25	30	6.3
GRB 30 35 6.3	30	35	6.3
GRB 30 35 8.1	30	35	8.1
GRB 30 35 9.7	30	35	9.7
GRB 35 40 6.3	35	40	6.3
GRB 35 40 8.1	35	40	8.1
GRB 35 40 9.7	35	40	9.7
GRB 40 45 6.3	40	45	6.3
GRB 40 45 8.1	40	45	8.1
GRB 40 45 9.7	40	45	9.7
GRB 40 45 15	40	45	15.0
GRB 45 50 6.3	45	50	6.3
GRB 45 50 8.1	45	50	8.1
GRB 45 50 9.7	45	50	9.7
GRB 45 50 15	45	50	15.0
GRB 50 55 6.3	50	55	6.3
GRB 50 55 8.1	50	55	8.1
GRB 50 55 9.7	50	55	9.7
GRB 50 55 15	50	55	15.0
GRB 55 60 6.3	55	60	6.3
GRB 55 60 8.1	55	60	8.1
GRB 55 60 9.7	55	60	9.7

Part.	$d^{+0.05}_{-0.05}$	$D^{+0.05}_{-0.05}$	$L^{+0.2}$
GRB 55 60 15	55	60	15.0
GRB 60 65 6.3	60	65	6.3
GRB 60 65 8.1	60	65	8.1
GRB 60 65 9.7	60	65	9.7
GRB 60 65 15	60	65	15.0
GRB 65 70 6.3	65	70	6.3
GRB 65 70 8.1	65	70	8.1
GRB 65 70 9.7	65	70	9.7
GRB 65 70 15	65	70	15.0
GRB 70 75 6.3	70	75	6.3
GRB 70 75 8.1	70	75	8.1
GRB 70 75 9.7	70	75	9.7
GRB 70 75 15	70	75	15.0
GRB 75 80 6.3	75	80	6.3
GRB 75 80 8.1	75	80	8.1
GRB 75 80 9.7	75	80	9.7
GRB 75 80 15	75	80	15.0
GRB 80 85 8.1	80	85	8.1
GRB 80 85 9.7	80	85	9.7
GRB 80 85 15	80	85	15.0
GRB 85 90 8.1	85	90	8.1
GRB 85 90 9.7	85	90	9.7
GRB 85 90 15	85	90	15.0
GRB 90 95 8.1	90	95	8.1

Part.	$d^{+0.05}_{-0.05}$	$D^{+0.05}_{-0.05}$	$L^{+0.2}$
GRB 90 95 9.7	90	95	9.7
GRB 90 95 15	90	95	15.0
GRB 95 100 8.1	95	100	8.1
GRB 95 100 9.7	95	100	9.7
GRB 95 100 15	95	100	15.0
GRB 100 105 8.1	100	105	8.1
GRB 100 105 9.7	100	105	9.7
GRB 100 105 15	100	105	15.0
GRB 105 110 8.1	105	110	8.1
GRB 105 110 9.7	105	110	9.7
GRB 105 110 15	105	110	15.0
GRB 110 115 8.1	110	115	8.1
GRB 110 115 9.7	110	115	9.7
GRB 110 115 15	110	115	15.0
GRB 115 120 8.1	115	120	8.1
GRB 115 120 9.7	115	120	9.7
GRB 115 120 15	115	120	15.0
GRB 120 125 8.1	120	125	8.1
GRB 120 125 9.7	120	125	9.7
GRB 120 125 15	120	125	15.0
GRB 125 130 8.1	125	130	8.1
GRB 125 130 9.7	125	130	9.7
GRB 125 130 15	125	130	15.0
GRB 130 135 9.7	130	135	9.7

GRB



Part.	d_1^{+h8} d_{f8}	D_1^{+H9} D_{H8}	$L_{+0.2}$
GRB 130 135 15	130	135	15.0
GRB 135 140 9.7	135	140	9.7
GRB 135 140 15	135	140	15.0
GRB 140 145 9.7	140	145	9.7
GRB 140 145 15	140	145	15.0
GRB 145 150 9.7	145	150	9.7
GRB 145 150 15	145	150	15.0
GRB 150 155 9.7	150	155	9.7
GRB 150 155 15	150	155	15.0
GRB 155 160 9.7	155	160	9.7
GRB 155 160 15	155	160	15.0
GRB 160 165 9.7	160	165	9.7
GRB 160 165 15	160	165	15.0

Part.	d_1^{+h8} d_{f8}	D_1^{+H9} D_{H8}	$L_{+0.2}$
GRB 165 170 9.7	165	170	9.7
GRB 165 170 15	165	170	15.0
GRB 170 175 9.7	170	175	9.7
GRB 170 175 15	170	175	15.0
GRB 175 180 9.7	175	180	9.7
GRB 175 180 15	175	180	15.0
GRB 180 185 9.7	180	185	9.7
GRB 180 185 15	180	185	15.0
GRB 185 190 9.7	185	190	9.7
GRB 185 190 15	185	190	15.0
GRB 190 195 15	190	195	15.0
GRB 195 200 15	195	200	15.0

