


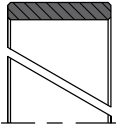



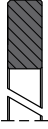



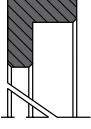



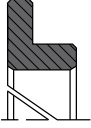



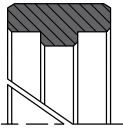



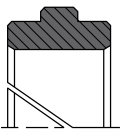


| application | profile | description | temperature | max. speed | max. specific load | material |
|--|---|--|---------------------|------------|-----------------------|----------------|
|    |  | <p>G01 guide ring</p> <p>most common guide ring for rod or piston application. used in many standard cylinders, majority of applications require split version for installation into closed housing, non split design available (bushings)</p> | - 50 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | POM |
| | | | - 40 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | PA* |
| | | | -200 °C ... +200 °C | 4,0 m/s | 3 N/mm ² | PTFE glass |
| | | | -200 °C ... +200 °C | 5,0 m/s | 4,5 N/mm ² | PTFE bronze 40 |
| | | | -200 °C ... +200 °C | 5,0 m/s | 7,5 N/mm ² | PTFE bronze 60 |
| | | | - 40 °C ... +130 °C | 1,0 m/s | 90 N/mm ² | TEX*** |
|    |  | <p>G02 guide ring</p> <p>for rod or piston application, split and non split design available. not only used as guiding, also as plain washer or spacer.</p> | - 50 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | POM |
| | | | - 40 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | PA* |
| | | | -200 °C ... +200 °C | 4,0 m/s | 3 N/mm ² | PTFE glass |
| | | | -200 °C ... +200 °C | 5,0 m/s | 4,5 N/mm ² | PTFE bronze 40 |
| | | | -200 °C ... +200 °C | 5,0 m/s | 7,5 N/mm ² | PTFE bronze 60 |
| | | | - 40 °C ... +130 °C | 1,0 m/s | 90 N/mm ² | TEX*** |
|    |  | <p>G03 guide ring</p> <p>for piston application. angled design combines guide ring and back-up ring function. split and non split design available.</p> | - 50 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | POM |
| | | | - 40 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | PA* |
| | | | -200 °C ... +200 °C | 4,0 m/s | 3 N/mm ² | PTFE glass |
| | | | -200 °C ... +200 °C | 5,0 m/s | 4,5 N/mm ² | PTFE bronze 40 |
| | | | -200 °C ... +200 °C | 5,0 m/s | 7,5 N/mm ² | PTFE bronze 60 |
| | | | - 40 °C ... +130 °C | 1,0 m/s | 90 N/mm ² | TEX*** |
|    |  | <p>G04 guide ring</p> <p>as profile G03 but for rod application.</p> | - 50 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | POM |
| | | | - 40 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | PA* |
| | | | -200 °C ... +200 °C | 4,0 m/s | 3 N/mm ² | PTFE glass |
| | | | -200 °C ... +200 °C | 5,0 m/s | 4,5 N/mm ² | PTFE bronze 40 |
| | | | -200 °C ... +200 °C | 5,0 m/s | 7,5 N/mm ² | PTFE bronze 60 |
| | | | - 40 °C ... +130 °C | 1,0 m/s | 90 N/mm ² | TEX*** |
|    |  | <p>G05 guide ring</p> <p>with integrated collar on inside diameter, for piston application. split and non split design available.</p> | - 50 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | POM |
| | | | - 40 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | PA* |
| | | | -200 °C ... +200 °C | 4,0 m/s | 3 N/mm ² | PTFE glass |
| | | | -200 °C ... +200 °C | 5,0 m/s | 4,5 N/mm ² | PTFE bronze 40 |
| | | | -200 °C ... +200 °C | 5,0 m/s | 7,5 N/mm ² | PTFE bronze 60 |
| | | | - 40 °C ... +130 °C | 1,0 m/s | 90 N/mm ² | TEX*** |
|    |  | <p>G06 guide ring</p> <p>with integrated collar on outside diameter, for rod application. split and non split design available.</p> | - 50 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | POM |
| | | | - 40 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | PA* |
| | | | -200 °C ... +200 °C | 4,0 m/s | 3 N/mm ² | PTFE glass |
| | | | -200 °C ... +200 °C | 5,0 m/s | 4,5 N/mm ² | PTFE bronze 40 |
| | | | -200 °C ... +200 °C | 5,0 m/s | 7,5 N/mm ² | PTFE bronze 60 |
| | | | - 40 °C ... +130 °C | 1,0 m/s | 90 N/mm ² | TEX*** |



not bolded symbols: please consult our technical dpmt. for application limitations

* POM up to ø260 mm, PA above ø260 mm

** attention: not suitable for mineral oils!

Guide Ring

| application | profile | description | temperature | max. speed | max. specific load | material |
|-------------|---------|---|---------------------|------------|-----------------------|----------------|
| | | G07 guide ring with groove on inside diameter, for piston application. split and non split design available. | - 50 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | POM |
| | | | - 40 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | PA* |
| | | | -200 °C ... +200 °C | 4,0 m/s | 3 N/mm ² | PTFE glass |
| | | | -200 °C ... +200 °C | 5,0 m/s | 4,5 N/mm ² | PTFE bronze 40 |
| | | | -200 °C ... +200 °C | 5,0 m/s | 7,5 N/mm ² | PTFE bronze 60 |
| | | | - 40 °C ... +130 °C | 1,0 m/s | 90 N/mm ² | TEX*** |
| | | G08 guide ring with integrated collar on outside diameter, for rod application. split and non split design available. | - 50 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | POM |
| | | | - 40 °C ... +100 °C | 4,0 m/s | 25 N/mm ² | PA* |
| | | | -200 °C ... +200 °C | 4,0 m/s | 3 N/mm ² | PTFE glass |
| | | | -200 °C ... +200 °C | 5,0 m/s | 4,5 N/mm ² | PTFE bronze 40 |
| | | | -200 °C ... +200 °C | 5,0 m/s | 7,5 N/mm ² | PTFE bronze 60 |
| | | | - 40 °C ... +130 °C | 1,0 m/s | 90 N/mm ² | TEX*** |

Back Up Ring

| application | profile | description | temperature | max. speed | material |
|---------------------|---------|--|---------------------|------------|------------|
| | | B08 back up ring common inactive back-up ring, mainly used with o-ring to avoid gap extrusion. split and non split design available. | - 50 °C ... +100 °C | | POM |
| | | | - 40 °C ... +100 °C | | PA* |
| | | | -200 °C ... +260 °C | | PTFE |
| | | | -200 °C ... +260 °C | | PTFE glass |
| | | | - 30 °C ... +110 °C | | PU |
| | | | - 20 °C ... +110 °C | | HPU |
| | | | - 50 °C ... +110 °C | | LTPU |
| - 30 °C ... +110 °C | | GPU | | | |
| | | B09 back up ring common inactive back-up ring especially for o-ring to avoid gap extrusion. split and non split design available. | -200 °C ... +260 °C | | PTFE |
| | | | - 30 °C ... +110 °C | | PU |
| | | | - 20 °C ... +110 °C | | HPU |
| | | | - 50 °C ... +110 °C | | LTPU |
| - 30 °C ... +110 °C | | GPU | | | |
| | | B10 back up ring standard active back-up ring for piston seal type PD. normally already included in PD-type seal profiles, designed for automatic pressure activation. split and non split design available. | - 50 °C ... +100 °C | | POM |
| | | | - 40 °C ... +100 °C | | PA* |
| | | | -200 °C ... +260 °C | | PTFE glass |
| | | B11 back up ring standard active back-up ring for rod seal type PD. normally already included in PD type seal profiles, designed for automatic pressure activation. split and non split design available. | - 50 °C ... +100 °C | | POM |
| | | | - 40 °C ... +100 °C | | PA* |
| | | | -200 °C ... +260 °C | | PTFE glass |

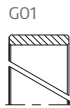
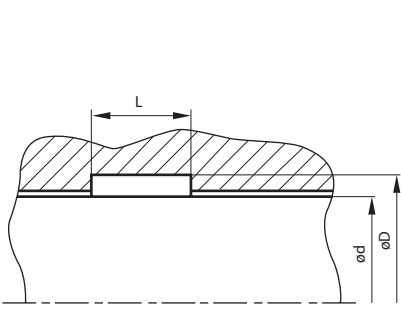
guide ring seal housing details and recommendations for static application

our standard guide rings are available in 45°-splitted versions. those can be ordered as well as endless -90°-splitted versions on yard ware.

housing recommendations

guide rings
rod

the listing below is our suggestion for standard housing dimensions. please note that we are able to produce those profiles to your specific need or any non standard housing.

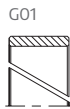
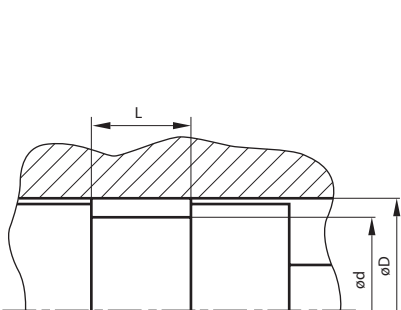


| $\varnothing d$ | $\varnothing D$ | L | c/s |
|-----------------|-------------------|-----|-----|
| 6 - 29,9 | $\varnothing d+3$ | 4 | 1,5 |
| 30 - 39,9 | $\varnothing d+3$ | 5,6 | 1,5 |
| 50 - 99,9 | $\varnothing d+5$ | 9,7 | 2,5 |
| 100 - 799,9 | $\varnothing d+5$ | 15 | 2,5 |
| 800 - 1.000 | $\varnothing d+8$ | 25 | 4 |
| > 1.000 | $\varnothing d+8$ | 25 | 4 |

housing recommendations

guide rings
rod

the listing below is our suggestion for standard housing dimensions. please note that we are able to produce those profiles to your specific need or any non standard housing.



| $\varnothing d$ | $\varnothing D$ | L | c/s |
|-----------------|-------------------|-----|-----|
| 6 - 29,9 | $\varnothing d+3$ | 4 | 1,5 |
| 30 - 39,9 | $\varnothing d+3$ | 5,6 | 1,5 |
| 50 - 99,9 | $\varnothing d+5$ | 9,7 | 2,5 |
| 100 - 799,9 | $\varnothing d+5$ | 15 | 2,5 |
| 800 - 1.000 | $\varnothing d+8$ | 25 | 4 |
| > 1.000 | $\varnothing d+8$ | 25 | 4 |