

# Metal O Rings - External Pressure:

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| Seal dimension |                                 |               |                    | Groove dimensions     |                         |                        |                    | Load         | SB                   |                   |
|----------------|---------------------------------|---------------|--------------------|-----------------------|-------------------------|------------------------|--------------------|--------------|----------------------|-------------------|
| AS             |                                 | Material code | MT                 | DC                    | DG                      | GD                     | WG                 | R            | N/mm Circumference * | Spring Back in mm |
| Axial section  | Tolerance on AS (cross section) |               | Material thickness | Diametrical clearance | Diameter Groove (range) | Groove Depth (min/max) | Width Groove (min) | Radius (max) |                      |                   |
| 0,89           | +0,08 / -0,03                   | M             | 0,15               | 0,20                  | 6,35-25                 | 0,64-0,69              | 1,40               | 0,25         | 140                  | 0,03              |
| 1,19           | +0,08 / -0,03                   | H             | 0,20               | 0,25                  | 10-50                   | 0,94-1,02              | 1,78               | 0,30         | 100                  | 0,03              |
| 1,57           | +0,08 / -0,03                   | M             | 0,25               | 0,28                  | 12-200                  | 1,14-1,27              | 2,29               | 0,38         | 140                  | 0,05              |
|                |                                 | H             | 0,36               |                       |                         |                        |                    |              | 200                  | 0,04              |
| 2,39           | +0,08 / -0,03                   | M             | 0,25               | 0,33                  | 25-200                  | 1,88-2,01              | 3,18               | 0,51         | 100                  | 0,05              |
|                |                                 | H             | 0,46               |                       |                         |                        |                    |              | 200                  | 0,04              |
| 3,18           | +0,08 / -0,03                   | M             | 0,25               | 0,43                  | 50-400                  | 2,54-2,67              | 4,06               | 0,76         | 60                   | 0,08              |
|                |                                 | H             | 0,51               |                       |                         |                        |                    |              | 180                  | 0,05              |
| 3,96           | + 0,10                          | M             | 0,41               | 0,61                  | 75-650                  | 3,18-3,30              | 5,08               | 1,27         | 90                   | 0,10              |
|                |                                 | H             | 0,51               |                       |                         |                        |                    |              | 135                  | 0,08              |
| 4,78           | + 0,13                          | M             | 0,51               | 0,71                  | 100-800                 | 3,84-3,99              | 6,35               | 1,27         | 95                   | 0,14              |
|                |                                 | H             | 0,64               |                       |                         |                        |                    |              | 200                  | 0,10              |
| 6,35           | + 0,13                          | M             | 0,64               | 0,76                  | 200-1200                | 5,05-5,28              | 8,89               | 1,52         | 100                  | 0,20              |
|                |                                 | H             | 0,81               |                       |                         |                        |                    |              | 250                  | 0,15              |
| 9,53           | + 0,13                          | M             | 0,97               | 1,02                  | 300-2000                | 8,26-8,51              | 12,7               | 1,52         | 150                  | 0,25              |
|                |                                 | H             | 1,24               |                       |                         |                        |                    |              | 300                  | 0,20              |
| 12,7           | + 0,15                          | M             | 1,27               | 1,27                  | 800-3000                | 11,05-11,43            | 16,51              | 1,52         | 200                  | 0,30              |
|                |                                 | H             | 1,65               |                       |                         |                        |                    |              | 350                  | 0,20              |

\* Load and springback figures are based on Inconel X750 in the work hardened condition. 321 stainless steel will only generate 1/3 of the given Inconel figures. Actual load figures and to a lesser extent springback can differ hugely from the given data. Tolerances on groove depth, plating, diametrical clearance and differences in material batches can create differences of up to 100% for the smaller cross sections, down to 50% for the bigger cross section.

