

ISO 7092

Plain washers - Small series



|                |                                |        |                         |
|----------------|--------------------------------|--------|-------------------------|
| Standard       | ISO 7092                       |        |                         |
| Product Type   | Plain washers - Small series   |        |                         |
| Material       | Stainless Steel, Carbon Steel  |        |                         |
| Property Class | 200 HV, 300 HV                 |        |                         |
| Surface Finish | Passivated, Plain, Zinc Plated |        |                         |
| Size Range     | M1.6 - M36                     | Thread | ISO metric coarse pitch |

| BASIS OF SPECIFICATION                              |                 | WHICH STANDARD GOVERNS WHAT |
|-----------------------------------------------------|-----------------|-----------------------------|
| Dimensions to                                       | ISO 7092:2000   |                             |
| Carbon steel / Alloy steel mechanical properties to | ISO 898-3:2018  |                             |
| Stainless steel mechanical properties to            | ISO 3506-7:2024 |                             |
| Product grade                                       | A               |                             |

| HARDNESS REQUIREMENTS |             | REQUIRED VALUES PER ISO 7092                    |          |
|-----------------------|-------------|-------------------------------------------------|----------|
| Class                 | Hardness    | Governing property                              | Source   |
| 200 HV                | min. 200 HV | Hardness class (upper limit per standard table) | ISO 7092 |
| 300 HV                | min. 300 HV | Hardness class (upper limit per standard table) | ISO 7092 |

| DIMENSIONAL DATA - SIZES WE SUPPLY |                     |                     |                     |                     | ALL DIMENSIONS PER THE STANDARD |                |                |
|------------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------------------|----------------|----------------|
| d                                  | d1                  | d1 (max)            | d2                  | d2 (min)            | h                               | h (max)        | h (min)        |
| Diameter - mm                      | Inner Diameter - mm | Inner Diameter - mm | Outer Diameter - mm | Outer Diameter - mm | Washer Thickness - mm           | Thickness - mm | Thickness - mm |
| M3                                 | 3.2                 | 3.38                | 6                   | 5.7                 | 0.5                             | 0.55           | 0.45           |
| M4                                 | 4.3                 | 4.48                | 8                   | 7.64                | 0.5                             | 0.55           | 0.45           |
| M5                                 | 5.3                 | 5.48                | 9                   | 8.64                | 1                               | 1.1            | 0.9            |
| M6                                 | 6.4                 | 6.62                | 11                  | 10.57               | 1.6                             | 1.8            | 1.4            |
| M8                                 | 8.4                 | 8.62                | 15                  | 14.57               | 1.6                             | 1.8            | 1.4            |
| M10                                | 10.5                | 10.77               | 18                  | 17.57               | 1.6                             | 1.8            | 1.4            |
| M12                                | 13                  | 13.27               | 20                  | 19.48               | 2                               | 2.2            | 1.8            |
| M16                                | 17                  | 17.27               | 28                  | 27.48               | 2.5                             | 2.7            | 2.3            |
| M20                                | 21                  | 21.33               | 34                  | 33.38               | 3                               | 3.3            | 2.7            |
| M24                                | 25                  | 25.33               | 39                  | 38.38               | 4                               | 4.3            | 3.7            |
| M30                                | 31                  | 31.39               | 50                  | 49.38               | 4                               | 4.3            | 3.7            |
| M36                                | 37                  | 37.62               | 60                  | 58.8                | 5                               | 5.6            | 4.4            |

**FURTHER SIZES IN THIS STANDARD**

ALL DIMENSIONS PER THE STANDARD

Not held in stock. Available to order; minimum order quantity applies.

| <b>d</b><br>Diameter - mm | <b>d1</b><br>Inner Diameter - mm | <b>d1 (max)</b><br>Inner Diameter - mm | <b>d2</b><br>Outer Diameter - mm | <b>d2 (min)</b><br>Outer Diameter - mm | <b>h</b><br>Washer Thickness - mm | <b>h (max)</b><br>Thickness - mm | <b>h (min)</b><br>Thickness - mm |
|---------------------------|----------------------------------|----------------------------------------|----------------------------------|----------------------------------------|-----------------------------------|----------------------------------|----------------------------------|
| <b>M1.6</b>               | 1.7                              | 1.84                                   | 3.5                              | 3.2                                    | 0.3                               | 0.35                             | 0.25                             |
| <b>M2</b>                 | 2.2                              | 2.34                                   | 4.5                              | 4.2                                    | 0.3                               | 0.35                             | 0.25                             |
| <b>M2.5</b>               | 2.7                              | 2.84                                   | 5                                | 4.7                                    | 0.5                               | 0.55                             | 0.45                             |
| <b>M3.5</b>               | 3.7                              | 3.88                                   | 7                                | 6.64                                   | 0.5                               | 0.55                             | 0.45                             |
| <b>M14</b>                | 15                               | 15.27                                  | 24                               | 23.48                                  | 2.5                               | 2.7                              | 2.3                              |
| <b>M18</b>                | 19                               | 19.33                                  | 30                               | 29.48                                  | 3                                 | 3.3                              | 2.7                              |
| <b>M22</b>                | 23                               | 23.33                                  | 37                               | 36.38                                  | 3                                 | 3.3                              | 2.7                              |
| <b>M27</b>                | 28                               | 28.33                                  | 44                               | 43.38                                  | 4                                 | 4.3                              | 3.7                              |
| <b>M33</b>                | 34                               | 34.62                                  | 56                               | 54.8                                   | 5                                 | 5.6                              | 4.4                              |

**MARKING**

Carbon steel / Alloy steel

Head marking to ISO 898-3:2018

Stainless steel

Head marking to ISO 3506-7:2024

Marking requirements are set by the material standard named above, not by the product standard. Confirm the ordered property class before production.

**INSPECTION DOCUMENTS WE CAN ISSUE**

EN 10204 3.1 material certificate

Can be included when agreed in the order.

Dimensional inspection report

Can be provided for the agreed inspection scope.

Certificate of conformity

Can be issued against the confirmed order requirements.

Mechanical test report

Available when the required tests are agreed before production.

Chemical analysis report

Available when the material verification scope is agreed.

Coating inspection report

Can record the coating checks agreed for the order.

**REFERENCES & NOTES**

Note: Dimensional values follow the selected execution standard. Material properties and batch test results are included only when declared or supported by the applicable certificate or test report.