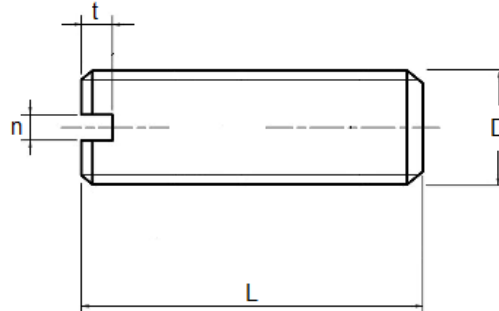


Metric DIN 551 Slotted Set Screws with Flat Point

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Dimensions of Metric DIN 551 Slotted Set Screws with Flat Point

| Thread size D | M1 | M1.2 | M1.4 | M1.6 | M2 | M2.5 | M3 | (M3.5) | M4 | M5 | M6 | M8 | M10 | |
|----------------|-------------------|-------|-------|-------|-------|-------|------|--------|------|------|------|------|------|------|
| P | 0.25 | 0.25 | 0.3 | 0.35 | 0.4 | 0.45 | 0.5 | 0.6 | 0.7 | 0.8 | 1 | 1.25 | 1.5 | |
| n | Nom | 0.2 | 0.2 | 0.2 | 0.25 | 0.25 | 0.4 | 0.4 | 0.5 | 0.6 | 0.8 | 1 | 1.2 | 1.6 |
| | max. | 0.26 | 0.26 | 0.26 | 0.31 | 0.31 | 0.46 | 0.46 | 0.56 | 0.66 | 0.86 | 1.06 | 1.26 | 1.66 |
| | min. | 0.4 | 0.4 | 0.4 | 0.45 | 0.45 | 0.6 | 0.6 | 0.7 | 0.8 | 1 | 1.2 | 1.51 | 1.91 |
| t | nom= min. | 0.4 | 0.4 | 0.48 | 0.56 | 0.64 | 0.72 | 0.8 | 0.96 | 1.12 | 1.28 | 1.6 | 2 | 2.4 |
| | max. | 0.52 | 0.52 | 0.63 | 0.74 | 0.84 | 0.95 | 1.05 | 1.21 | 1.45 | 1.63 | 2 | 2.5 | 3 |
| L | Weight kg/1000pcs | | | | | | | | | | | | | |
| Nominal | | | | | | | | | | | | | | |
| 2 | 0.007 | 0.011 | 0.015 | 0.021 | | | | | | | | | | |
| 2.5 | 0.009 | 0.014 | 0.019 | 0.027 | | | | | | | | | | |
| 3 | 0.011 | 0.017 | 0.023 | 0.033 | 0.048 | 0.075 | 0.11 | 0.15 | | | | | | |
| 4 | 0.015 | 0.024 | 0.031 | 0.047 | 0.067 | 0.11 | 0.15 | 0.21 | 0.26 | 0.4 | | | | |
| 5 | | | 0.04 | 0.061 | 0.068 | 0.14 | 0.2 | 0.27 | 0.34 | 0.52 | 0.72 | | | |
| 6 | | | | 0.075 | 0.1 | 0.17 | 0.24 | 0.33 | 0.41 | 0.65 | 0.9 | 1.6 | | |
| 8 | | | | | 0.14 | 0.23 | 0.33 | 0.45 | 0.57 | 0.9 | 1.25 | 2.3 | | |
| 10 | | | | | | | 0.42 | 0.56 | 0.72 | 1.15 | 1.6 | 3 | 4.2 | |
| 12 | | | | | | | | 0.68 | 0.87 | 1.4 | 1.95 | 3.7 | 5.2 | |
| 14 | | | | | | | | | | 1.65 | 2.3 | 4.4 | 6.2 | |
| 16 | | | | | | | | | | 1.9 | 2.65 | 2.1 | 7.2 | |
| 20 | | | | | | | | | | | 3.35 | 6.5 | 9.2 | |
| 25 | | | | | | | | | | | | 8.3 | 11.7 | |
| 30 | | | | | | | | | | | | | 14.2 | |

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Metric DIN 551 are slotted set screws with flat chamfered point. These are headless screws with a slot cut out on one end allowing for easy tightening with a slotted screwdriver and are typically made of steel or stainless steel. Set screws are typically part of an assembly and when tightened exert a compressional force through the point against the surface of an inner object. Aspen Fasteners offers the following sizes for immediate delivery from stock: Diameters ranging from M6 to M10. View available parts by clicking on the following link: [metric DIN 551 are slotted set screws with flat chamfered point](#)

DIN (**D**eutsches **I**nstitut für **N**ormung - German Institute for Standardization) standards are issued for a variety of components including industrial fasteners as metric DIN 551 slotted set screws with flat point. The DIN standards remain common in Germany, Europe and globally even though the transition to ISO standards is taking place. DIN standards continue to be used for parts which do not have ISO equivalents or for which there is no need for standardization. The ISO equivalent for DIN 551 slotted set screws with flat point is ISO 4766.

1) Mechanical properties of stainless steel for metric DIN 551 slotted set screws with flat point

Stainless steels can be divided into three groups of steel - austenitic, ferritic and martensitic. Austenitic steel is by far the most common type (>90% of commercial fasteners). The steel groups and strength classes are designated by a four-digit sequence of letters and numbers (eg A2-70) as shown in the following table. DIN EN ISO 3506 governs screws and nuts made from stainless steel.

| Steel group | Steel grade | Strength class | Screws, Nuts and Bolts | | | |
|-------------|-------------|----------------|------------------------------------|----------------------|-----------|----------------------------|
| | | | Tensile strength N/mm ² | Tensile strength PSI | Dia range | Nut Load N/mm ² |
| Austenitic | A2 and A4 | 50 | 500 | 70,000 | <=M39 | 500 |
| | | 70 | 700 | 100,000 | <=M20 | 700 |
| | | 80 | 800 | 118,000 | <=M20 | 800 |

The tensile stress is calculated with reference to the tensile stress area (see DIN EN ISO 3506-1979). Nuts to be paired with same grade of stainless steel screws

| Steel group | Property Strength class | Made From | Characteristics |
|-------------|-------------------------|-----------|--|
| Austenitic | 50 | A1, A2 | Soft; cold worked, turned and soft pressed fasteners |
| | 70 | A2, A4 | Cold worked, normal strength formed fasteners |
| | 80 | A2, A4 | Extreme cold worked, high strength, special applications |

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2) Chemical composition of stainless steel metric DIN 551 slotted set screws with flat point

| Grade | USA Grade | Material designation | Material no. | C % | Si ≤ % | Mn ≤ % | Cr % | Mo % | Ni % |
|------------|------------|----------------------|--------------|--------|--------|--------|--------------|------------|--------------|
| A 2 | 304 | X 5Cr Ni 1810 | 1.4301 | ≤ 0.07 | 1.0 | 2.0 | 17.5 to 19.5 | - | 8.0 to 10.5 |
| | | X 2 Cr Ni 1811 | 1.4306 | ≤ 0.03 | 1.0 | 2.0 | 18.0 to 20.0 | - | 10 to 12.0 |
| | | X 8 Cr Ni 19/10 | 1.4303 | ≤ 0.07 | 1.0 | 2.0 | 17.0 to 19.0 | - | 11.0 to 13.0 |
| A 4 | 316 | X 5 Cr Ni Mo 1712 | 1.4401 | ≤ 0.07 | 1.0 | 2.0 | 16.5 to 18.5 | 2.0 to 2.5 | 10.0 to 13.0 |
| | | X 2 Cr Ni Mo 1712 | 1.4404 | ≤ 0.03 | 1.0 | 2.0 | 16.5 to 18.5 | 2.0 to 2.5 | 10 to 13 |

3) Chemical composition of steel metric DIN 551 slotted set screws with flat point

| PROPERTY CLASS | MATERIAL AND TREATMENT | CHEMICAL COMPOSITION LIMITS % | | | | TEMPERING TEMP °C MIN. |
|--------------------|--|-------------------------------|------|-------|-------|------------------------|
| | | C | | P | S | |
| | | min. | max. | max. | max. | |
| 4.6, 4.8, 5.8, 6.8 | Low or medium carbon steel | - | 0.55 | 0.05 | 0.06 | - |
| 8.8 | Medium carbon steel quenched, tempered | 0.25 | 0.55 | 0.04 | 0.05 | 425 |
| 9.8 | Medium carbon steel quenched, tempered | 0.25 | 0.55 | 0.04 | 0.05 | 425 |
| 10.9 | Medium carbon steel additives e.g. boron, Mn, Cr or Alloy steel - quenched, tempered | 0.20 | 0.55 | 0.04 | 0.05 | 425 |
| 12.9 | Alloy steel - quenched, tempered | 0.20 | 0.50 | 0.035 | 0.035 | 380 |

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4) Mechanical properties of steel for metric DIN 551 slotted set screws with flat point

| MECHANICAL PROPERTY | | PROPERTY CLASS | | | | | | | | | |
|---|----------|----------------|-----|-----|-----|------------|-----------|-----|------|------|--|
| | | 4.8 | 5.6 | 5.8 | 6.8 | 8.8 | | 9.8 | 10.9 | 12.9 | |
| | | | | | | Up to M 16 | Over M 16 | | | | |
| Tensile Strength (Rm, N/mm ²) | nom. | 400 | 500 | | 600 | 800 | | 900 | 1000 | 1200 | |
| | min. | 420 | 500 | 520 | 600 | 800 | 830 | 900 | 1040 | 1220 | |
| Vickers Hardness | min. | 130 | 155 | 160 | 190 | 250 | 255 | 290 | 320 | 385 | |
| | max. | 250 | | | | 320 | 336 | 360 | 380 | 435 | |
| Brinell Hardness | min. | 124 | 147 | 152 | 181 | 319 | 242 | 266 | 295 | 353 | |
| | max. | 238 | | | | 385 | 319 | 342 | 363 | 412 | |
| Rockwell Hardness | min. HR | 71 | 79 | 82 | 89 | - | | | | | |
| | HRC | - | - | - | - | 20 | 23 | 28 | 32 | 39 | |
| | HR | 95 | | | | 99 | - | | | | |
| | max. HRC | - | - | - | - | 32 | 34 | 37 | 39 | 44 | |
| Yield Stress ReL. N/mm ² | nom. | 320 | 300 | 400 | 480 | - | | | | | |
| | min. | 340 | 300 | 420 | 480 | - | | | | | |
| Stress at permanent set limit N/mm ² | nom. | - | | | | 640 | | 720 | 900 | 1080 | |
| | min. | - | | | | 640 | 660 | 720 | 940 | 1100 | |

Disclaimer

Dimensional data and technical information for metric DIN 551 slotted set screws with flat point was obtained from publicly available sources and not acquired through standards agencies. It has been completed and compiled for reference purposes only; where discrepancies are found they are subject to change without notice. Aspen Fasteners makes no warranties or representations regarding the accuracy and validity of the compiled information and data. Contact the relevant standards authorities for accurate and detailed information.