

## DIN 7985

Cross Recessed Pan Head Screw



|                |                                                                     |              |          |
|----------------|---------------------------------------------------------------------|--------------|----------|
| Standard       | DIN 7985                                                            |              |          |
| Product Type   | Cross Recessed Pan Head Screw                                       |              |          |
| Material       | Stainless Steel, Carbon Steel                                       |              |          |
| Property Class | A2-70, A4-80 (ISO 3506-1) · 4.8, 8.8 (ISO 898-1)                    |              |          |
| Surface Finish | Passivated, Plain, Zinc Plated, Nickel Plated, Phosphate, Blackened |              |          |
| Size Range     | M1.6 - M10                                                          | Length Range | 6-300 mm |
| Thread         | ISO metric coarse pitch                                             |              |          |

### BASIS OF SPECIFICATION

WHICH STANDARD GOVERNS WHAT

|                                                     |                    |
|-----------------------------------------------------|--------------------|
| Dimensions to                                       | DIN 7985:1990-08   |
| Carbon steel / Alloy steel mechanical properties to | DIN ISO 898 part 1 |
| Stainless steel mechanical properties to            | ISO 3506-1:2020    |
| Length tolerance                                    | to be agreed       |
| Thread length                                       | to be agreed       |
| Minimum usable thread length                        | to be agreed       |

### MECHANICAL PROPERTIES

REQUIRED VALUES PER ISO 3506-1

| Class | Rm min. | Yield requirement  | Elongation requirement | Hardness | Source     |
|-------|---------|--------------------|------------------------|----------|------------|
| A2-70 | 700 MPa | Rp0.2 min. 450 MPa | 0,4d mm                | -        | ISO 3506-1 |
| A4-80 | 800 MPa | Rp0.2 min. 600 MPa | 0,3d mm                | -        | ISO 3506-1 |

### MECHANICAL PROPERTIES

REQUIRED VALUES PER ISO 898-1

| Class | Rm min. | Yield requirement                   | Elongation requirement | Hardness     | Source              |
|-------|---------|-------------------------------------|------------------------|--------------|---------------------|
| 4.8   | 420 MPa | Rpf min. 340 MPa (not a test value) | Af min. 0.24           | 130 - 220 HV | ISO 898-1           |
| 8.8   | 800 MPa | Rp0.2 min. 640 MPa                  | A min. 12 %            | 250 - 320 HV | ISO 898-1 (d ≤ M16) |

**DIMENSIONAL DATA - SIZES WE SUPPLY**

ALL DIMENSIONS PER THE STANDARD

| <b>d</b><br>Diameter - mm | <b>P</b><br>Thread Pitch - mm | <b>dk</b><br>Head Diameter - mm | <b>k</b><br>Nominal Head Height - mm |
|---------------------------|-------------------------------|---------------------------------|--------------------------------------|
| <b>M3</b>                 | 0.5                           | 6                               | 2.4                                  |
| <b>M4</b>                 | 0.7                           | 8                               | 3.1                                  |
| <b>M5</b>                 | 0.8                           | 10                              | 3.8                                  |
| <b>M6</b>                 | 1                             | 12                              | 4.6                                  |
| <b>M8</b>                 | 1.25                          | 16                              | 6                                    |
| <b>M10</b>                | 1.5                           | 20                              | 7.5                                  |

**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>P</b><br>Thread Pitch - mm | <b>dk</b><br>Head Diameter - mm | <b>k</b><br>Nominal Head Height - mm |
|---------------------------|-------------------------------|---------------------------------|--------------------------------------|
| <b>M1.6</b>               | 0.35                          | 3.2                             | 1.3                                  |
| <b>M2</b>                 | 0.4                           | 4                               | 1.6                                  |
| <b>M2.5</b>               | 0.45                          | 5                               | 2                                    |
| <b>M3.5</b>               | 0.6                           | 7                               | 2.7                                  |

**MARKING**

Carbon steel / Alloy steel      Head marking to DIN ISO 898 part 1

Stainless steel      Head marking to ISO 3506-1:2020

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: DIN 7985 is a withdrawn legacy standard; the current standard for this product is ISO 7045. This sheet is built to DIN 7985. Dimensions can differ between the two - check the recorded correspondence on our website before substituting one for the other.