

## ISO 15481

Cross-recessed pan head drilling screws with tapping screw thread



|                |                                                                   |              |           |
|----------------|-------------------------------------------------------------------|--------------|-----------|
| Standard       | ISO 15481                                                         |              |           |
| Product Type   | Cross-recessed pan head drilling screws with tapping screw thread |              |           |
| Material       | Stainless Steel, Carbon Steel                                     |              |           |
| Surface Finish | Passivated, Plain, Zinc Plated, Dacromet, Ruspert, Phosphate      |              |           |
| Size Range     | ST2.9 - ST6.3                                                     | Length Range | 9.5-50 mm |
| Thread         | Tapping screw thread (ST) per ISO 1478                            |              |           |

### BASIS OF SPECIFICATION

WHICH STANDARD GOVERNS WHAT

|                                                     |                 |
|-----------------------------------------------------|-----------------|
| Dimensions to                                       | ISO 15481:1999  |
| Carbon steel / Alloy steel mechanical properties to | ISO 2702:2022   |
| Stainless steel mechanical properties to            | ISO 3506-4:2025 |
| Product grade                                       | A               |
| Thread length                                       | to be agreed    |
| Minimum usable thread length                        | to be agreed    |

### DIMENSIONAL DATA - SIZES WE SUPPLY

ALL DIMENSIONS PER THE STANDARD

| d             | P                 | a (max)            | da (max)                | dk                 | dk (min)           | k                        | k (min)                 | r (min)          | rf (ref)         | Recess Number | m (ref)                  | (max)                   | (min)                   | m (ref)                    |
|---------------|-------------------|--------------------|-------------------------|--------------------|--------------------|--------------------------|-------------------------|------------------|------------------|---------------|--------------------------|-------------------------|-------------------------|----------------------------|
| Diameter - mm | Thread Pitch - mm | Thread Runout - mm | Underhead Diameter - mm | Head Diameter - mm | Head Diameter - mm | Nominal Head Height - mm | Head Height Radius - mm | Head Radius - mm | Head Radius - mm |               | Type H Recess Width - mm | Type H Penetration - mm | Type H Penetration - mm | Type Z / Socket Width - mm |
| ST3.5         | 1.3               | 1.3                | 4.1                     | 7                  | 6.64               | 2.6                      | 2.35                    | 0.1              | 6                | 2             | 3.9                      | 1.9                     | 1.4                     | 4                          |
| ST4.2         | 1.4               | 1.4                | 4.9                     | 8                  | 7.64               | 3.1                      | 2.8                     | 0.2              | 6.5              | 2             | 4.4                      | 2.4                     | 1.9                     | 4.4                        |
| ST4.8         | 1.6               | 1.6                | 5.6                     | 9.5                | 9.14               | 3.7                      | 3.4                     | 0.2              | 8                | 2             | 4.9                      | 2.9                     | 2.4                     | 4.8                        |
| ST5.5         | 1.8               | 1.8                | 6.3                     | 11                 | 10.57              | 4                        | 3.7                     | 0.25             | 9                | 3             | 6.4                      | 3.1                     | 2.6                     | 6.2                        |
| ST6.3         | 1.8               | 1.8                | 7.3                     | 12                 | 11.57              | 4.6                      | 4.3                     | 0.25             | 10               | 3             | 6.9                      | 3.6                     | 3.1                     | 6.8                        |

| d             | (max)                   | (min)                   | (min)                  | (max)                  |
|---------------|-------------------------|-------------------------|------------------------|------------------------|
| Diameter - mm | Type Z Penetration - mm | Type Z Penetration - mm | Drilling Capacity - mm | Drilling Capacity - mm |
| ST3.5         | 1.9                     | 1.5                     | 0.7                    | 2.25                   |
| ST4.2         | 2.35                    | 1.95                    | 1.75                   | 3                      |
| ST4.8         | 2.75                    | 2.3                     | 1.75                   | 4.4                    |
| ST5.5         | 3                       | 2.55                    | 1.75                   | 5.25                   |
| ST6.3         | 3.5                     | 3.05                    | 2                      | 6                      |

**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>a (max)</b><br>Thread Runout - mm | <b>da (max)</b><br>Underhead Diameter - mm | <b>dk</b><br>Head Diameter - mm | <b>dk (min)</b><br>Head Diameter - mm | <b>k</b><br>Nominal Head Height - mm | <b>k (min)</b><br>Head Height - mm | <b>r (min)</b><br>Radius - mm | <b>rf (ref)</b><br>Head Radius - mm | Recess Number | <b>m (ref)</b><br>Type H Recess Width - mm | <b>(max)</b><br>Type H Penetration - mm | <b>(min)</b><br>Type H Penetration - mm | <b>m (ref)</b><br>Type Z / Socket Width - mm |
|---------------------------|-------------------------------|--------------------------------------|--------------------------------------------|---------------------------------|---------------------------------------|--------------------------------------|------------------------------------|-------------------------------|-------------------------------------|---------------|--------------------------------------------|-----------------------------------------|-----------------------------------------|----------------------------------------------|
| ST2.9                     | 1.1                           | 1.1                                  | 3.5                                        | 5.6                             | 5.3                                   | 2.4                                  | 2.15                               | 0.1                           | 5                                   | 1             | 3                                          | 1.8                                     | 1.4                                     | 3                                            |

| <b>d</b><br>Diameter - mm | <b>(max)</b><br>Type Z Penetration - mm | <b>(min)</b><br>Type Z Penetration - mm | <b>(min)</b><br>Drilling Capacity - mm | <b>(max)</b><br>Drilling Capacity - mm |
|---------------------------|-----------------------------------------|-----------------------------------------|----------------------------------------|----------------------------------------|
| ST2.9                     | 1.75                                    | 1.45                                    | 0.7                                    | 1.9                                    |

**TECHNICAL SPECIFICATIONS**

|                |                                                              |
|----------------|--------------------------------------------------------------|
| Surface Finish | Passivated, Plain, Zinc Plated, Dacromet, Ruspert, Phosphate |
|----------------|--------------------------------------------------------------|

**MARKING**

|                            |                                 |
|----------------------------|---------------------------------|
| Carbon steel / Alloy steel | Head marking to ISO 2702:2022   |
| Stainless steel            | Head marking to ISO 3506-4:2025 |

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.