



High Performance Cutting Tools

HIGH SPEED STEEL TAPS



FORBES PRECISION TOOLS AND MACHINE PARTS LIMITED



FORBES PRECISION TOOLS AND MACHINE PARTS LIMITED

ABOUT US

Forbes Precision Tools and Machine Parts Limited manufacturers both carbide and high-speed steel round cutting tools under the brand 'TOTEM'.

Totem offers complete tooling solutions in Internal & External Threading, Drilling, Milling, Deburring and Reaming and as on date has over.

60 years of expertise of manufacturing high precision round cutting tools These tools are manufactured in a state-of-the-art manufacturing facility at Aurangabad India.

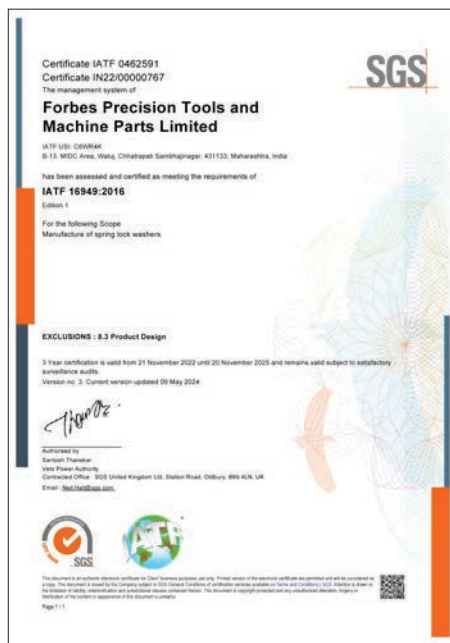
FPTMPL provides tooling solutions for a wide variety of industry sectors, including automotive, oil & gas, aerospace, defence, valve & pump, mold & die, heavy engineering, and electrical & electronics. These solutions are designed with material-specific geometries to optimize tool performance, ensuring maximum efficiency and longevity for the end-user.

Our range of products include HSS Hand and Machine Taps, Carbide Thread Mills and Taps, Solid Carbide Endmills and Drills, Tungsten Carbide Rotary Burrs, HSS Drills, Carbon Steel Taps, HSS and Carbon Steel Round and Hexagonal Dies. We are also the largest manufacturer of Spring lock washers in India serving major auto and transmission segments.

QUALITY POLICY

We will continue to delight our customers by delivering high quality, innovative products and solutions through excellent manufacturing practises, its effective monitoring, sustenance, and further continual improvements of all business processes by active participation of all our associates.

We will remain committed towards Safety, Environment and Statutory Compliance.





High Performance Cutting Tools



HIGH SPEED STEEL TAPS



High Performance Cutting Tools



SPIRAL POINT TAPS

SA SERIES

SPIRAL POINT TAPS

| SERIES | THREAD FORM | LENGTH STANDARD | WORKPIECE MATERIAL | 1ST CHOICE | 2ND CHOICE | TOOL MATERIAL | COATING | PAGE |
|--------|-------------|------------------|--------------------|------------|------------|---------------|------------|-------|
| SA1 | M | DIN 371/ DIN 376 | Steel | P0, N4 | N1, N2 | HSSE | Bright | 1.005 |
| SA3 | M | DIN 371/ DIN 376 | Steel | P0, P1 | K2, K3 | HSSE | TiN | |
| SA4 | M | DIN 371/ DIN 376 | Steel | P0-P3 | K1,K2 | HSSE | TiAlN | |
| SAF3 | M | DIN 371/ DIN 376 | Forged Steel | P1 P2 | - | HSSE | TiN | 1.006 |
| SAF5 | M | DIN 371/ DIN 376 | Forged Steel | P1- P3 | - | HSSE | TiCN | |
| SAS3 | M | DIN 371/ DIN 376 | Stainless Steel | M1 | - | HSSE | TiN | 1.007 |
| SAS5 | M | DIN 371/ DIN 376 | Stainless Steel | M1, M2 | - | HSSE | TiCN | |
| SAS6 | M | DIN 371/ DIN 376 | Stainless Steel | M1- M3 | - | HSSE | TiAlN+WC/C | |
| SAI6 | M | DIN 371/ DIN 376 | Super Alloys | S1- S4 | - | HSSE-PM | TiAlN+WC/C | 1.008 |
| SAF5 | M | DIN 371/ DIN 376 | Forged Steel | P2-P3 | - | HSSE-PM | TiCN | 1.009 |
| SAH4 | M | DIN 371/ DIN 376 | Forged Steel | P3-P5 | - | HSSE-PM | TiAlN | 1.010 |
| SA1 | MF | DIN 374 | Steel | P0, N4 | N1, N2 | HSSE | Bright | 1.011 |
| SA3 | MF | DIN 374 | Steel | P0, P1 | K2, K3 | HSSE | TiN | |
| SA4 | MF | DIN 374 | Steel | P0-P3 | K1,K2 | HSSE | TiAlN | |
| SAF3 | MF | DIN 374 | Forged Steel | P1 P2 | - | HSSE | TiN | 1.012 |
| SAF5 | MF | DIN 374 | Forged Steel | P1- P3 | - | HSSE | TiCN | |
| SAS3 | MF | DIN 374 | Stainless Steel | M1 | - | HSSE | TiN | 1.013 |
| SAS5 | MF | DIN 374 | Stainless Steel | M1, M2 | - | HSSE | TiCN | |
| SAS6 | MF | DIN 374 | Stainless Steel | M1- M3 | - | HSSE | TiAlN+WC/C | |
| SAI6 | MF | DIN 374 | Super Alloy | S1- S4 | - | HSSE-PM | TiAlN+WC/C | 1.014 |
| SA1 | UNC | DIN 371/ DIN 376 | Steel | P0, N4 | N1, N2 | HSSE | Bright | 1.015 |
| SA3 | UNC | DIN 371/ DIN 376 | Steel | P0, P1 | K2, K3 | HSSE | TiN | |
| SA4 | UNC | DIN 371/ DIN 376 | Steel | P0-P3 | K1,K2 | HSSE | TiAlN | |
| SAS3 | UNC | DIN 371/ DIN 376 | Stainless Steel | M1 | - | HSSE | TiN | 1.016 |
| SAS5 | UNC | DIN 371/ DIN 376 | Stainless Steel | M1, M2 | - | HSSE | TiCN | |
| SAS6 | UNC | DIN 371/ DIN 376 | Stainless Steel | M1- M3 | - | HSSE | TiAlN+WC/C | |

SPIRAL POINT TAPS

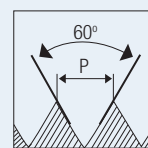
| SERIES | THREAD FORM | LENGTH STANDARD | WORKPIECE MATERIAL | 1ST CHOICE | 2ND CHOICE | TOOL MATERIAL | COATING | PAGE |
|--------|-------------|-----------------|--------------------|------------|------------|---------------|------------|-------|
| SA1 | UNF | DIN 374 | Steel | P0, N4 | N1, N2 | HSSE | Bright | 1.017 |
| SA3 | UNF | DIN 374 | Steel | P0, P1 | K2, K3 | HSSE | TiN | |
| SA4 | UNF | DIN 374 | Steel | P0-P3 | K1,K2 | HSSE | TiAIN | |
| SAS3 | UNF | DIN 374 | Stainless Steel | M1 | - | HSSE | TiN | 1.018 |
| SAS5 | UNF | DIN 374 | Stainless Steel | M1, M2 | - | HSSE | TiCN | |
| SAS6 | UNF | DIN 374 | Stainless Steel | M1- M3 | - | HSSE | TiAIN+WC/C | |
| SA1 | M | ISO 529 | Steel | P0, N4 | N1, N2 | HSSE | Bright | 1.019 |
| SA3 | M | ISO 529 | Steel | P0, P1 | K2, K3 | HSSE | TiN | |
| SA4 | M | ISO 529 | Steel | P0-P3 | K1,K2 | HSSE | TiAIN | |
| SAF3 | M | ISO 529 | Forged Steel | P1 P2 | - | HSSE | TiN | 1.020 |
| SAF5 | M | ISO 529 | Forged Steel | P1- P3 | - | HSSE | TiCN | |
| SAS3 | M | ISO 529 | Stainless Steel | M1 | - | HSSE | TiN | 1.021 |
| SAS5 | M | ISO 529 | Stainless Steel | M1, M2 | - | HSSE | TiCN | |
| SAS6 | M | ISO 529 | Stainless Steel | M1- M3 | - | HSSE | TiAIN+WC/C | |
| SAI6 | M | ISO 529 | Super Alloys | S1- S4 | - | HSSE-PM | TiAIN+WC/C | 1.022 |
| SAF5 | M | ISO 529 | Forged Steel | P2-P3 | - | HSSE-PM | TiCN | 1.023 |
| SAH4 | M | ISO 529 | Forged Steel | P3-P5 | - | HSSE-PM | TiAIN | 1.024 |
| SA1 | MF | ISO 529 | Steel | P0, N4 | N1, N2 | HSSE | Bright | 1.025 |
| SA3 | MF | ISO 529 | Steel | P0, P1 | K2, K3 | HSSE | TiN | |
| SA4 | MF | ISO 529 | Steel | P0-P3 | K1,K2 | HSSE | TiAIN | |
| SAF3 | MF | ISO 529 | Forged Steel | P1 P2 | - | HSSE | TiN | 1.026 |
| SAF5 | MF | ISO 529 | Forged Steel | P1- P3 | - | HSSE | TiCN | |
| SAS3 | MF | ISO 529 | Stainless Steel | M1 | - | HSSE | TiN | 1.027 |
| SAS5 | MF | ISO 529 | Stainless Steel | M1, M2 | - | HSSE | TiCN | |
| SAS6 | MF | ISO 529 | Stainless Steel | M1- M3 | - | HSSE | TiAIN+WC/C | |
| SAI6 | MF | ISO 529 | Super Alloy | S1- S4 | - | HSSE-PM | TiAIN+WC/C | 1.028 |

SPIRAL POINT TAPS

| SERIES | THREAD FORM | LENGTH STANDARD | WORKPIECE MATERIAL | 1ST CHOICE | 2ND CHOICE | TOOL MATERIAL | COATING | PAGE |
|--------|-------------|-----------------|--------------------|------------|------------|---------------|------------|-------|
| SA1 | UNC | ISO 529 | Steel | P0, N4 | N1, N2 | HSSE | Bright | 1.029 |
| SA3 | UNC | ISO 529 | Steel | P0, P1 | K2, K3 | HSSE | TiN | |
| SA4 | UNC | ISO 529 | Steel | P0-P3 | K1,K2 | HSSE | TiAlN | |
| SAS3 | UNC | ISO 529 | Stainless Steel | M1 | - | HSSE | TiN | 1.030 |
| SAS5 | UNC | ISO 529 | Stainless Steel | M1, M2 | - | HSSE | TiCN | |
| SAS6 | UNC | ISO 529 | Stainless Steel | M1- M3 | - | HSSE | TiAlN+WC/C | |
| SA1 | UNF | ISO 529 | Steel | P0, N4 | N1, N2 | HSSE | Bright | 1.031 |
| SA3 | UNF | ISO 529 | Steel | P0, P1 | K2, K3 | HSSE | TiN | |
| SA4 | UNF | ISO 529 | Steel | P0-P3 | K1,K2 | HSSE | TiAlN | |
| SAS3 | UNF | ISO 529 | Stainless Steel | M1 | - | HSSE | TiN | 1.032 |
| SAS5 | UNF | ISO 529 | Stainless Steel | M1, M2 | - | HSSE | TiCN | |
| SAS6 | UNF | ISO 529 | Stainless Steel | M1- M3 | - | HSSE | TiAlN+WC/C | |
| SA1 | M | JIS | Steel | P0, N4 | N1-N2 | HSSE | Bright | 1.033 |
| SA4 | M | JIS | Steel | P0-P3 | K1-K2 | HSSE | TiAlN | |
| SPPT | M | ISO 529 | General | - | - | HSS | Bright | 1.034 |
| SPPT | M | ISO 529 | General | - | - | HSS | TiN | |



Metric coarse threads



HOLE TYPE

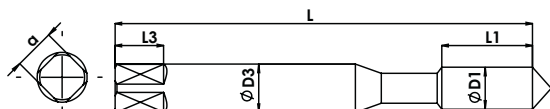


HSS-E

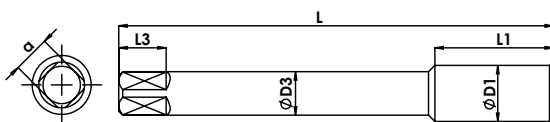
DIN 371/376

6HX

B/4-4.5P



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M20)



| Series | SA1 | SA3 | SA4 |
|-----------------------------------|--------|-------|-------|
| Material - 1 st choice | P0, N4 | P0-P1 | P0-P3 |
| Material - 2 nd choice | N1-N2 | K2-K3 | K1-K2 |
| Coating | Bright | TiN | TiAlN |
| EDP No. | | | |

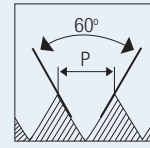
| DIN 371 | | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|------------|
| Nominal Diameter | Pitch | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0203112 | FAB0203123 | FAB0204205 |
| M 3.5 | 0.6 | 56 | 12 | 4 | 3 | 6 | 2.9 | 3 | FAB0203113 | FAB0203124 | FAB0204206 |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0203114 | FAB0203125 | FAB0204207 |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 7 | 4.2 | 3 | FAB0203115 | FAB0203126 | FAB0204208 |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 7 | 5 | 3 | FAB0203116 | FAB0203127 | FAB0204209 |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0203118 | FAB0203129 | FAB0204210 |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0203119 | FAB0203130 | FAB0204211 |

| DIN 376 | | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|------------|
| Nominal Diameter | Pitch | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 10.2 | 3 | FAB0203120 | FAB0203131 | FAB0204212 |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 12 | 3 | FAB0203121 | FAB0203132 | FAB0204213 |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 14 | 3 | FAB0203122 | FAB0203133 | FAB0204214 |
| M 18 | 2.5 | 125 | 34 | 14 | 11 | 14 | 15.5 | 4 | FAB0204201 | FAB0204203 | FAB0204215 |
| M 20 | 2.5 | 140 | 34 | 16 | 12 | 15 | 17.5 | 4 | FAB0204202 | FAB0204204 | FAB0204216 |

Unit : mm

M

Metric coarse threads



HOLE TYPE

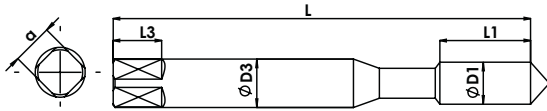


HSS-E

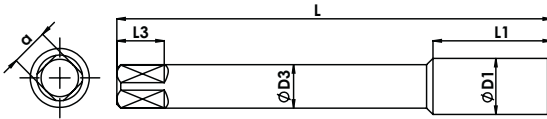
DIN 371/376

6HX

B/4-4.5P



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M20)



| | | |
|-----------------------------------|-------|-------|
| Series | SAF3 | SAF5 |
| Material - 1 st choice | P1-P2 | P1-P3 |
| Material - 2 nd choice | - | - |
| Coating | TiN | TiCN |

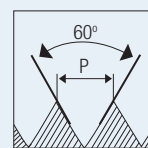
| DIN 371 | | | | | | | Coating | | EDP No. | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0204217 | FAB0204229 |
| M 3.5 | 0.6 | 56 | 12 | 4 | 3 | 6 | 2.9 | 3 | FAB0204218 | FAB0204230 |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0204219 | FAB0204231 |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 7 | 4.2 | 3 | FAB0204220 | FAB0204232 |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 7 | 5 | 3 | FAB0204221 | FAB0204233 |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0204222 | FAB0204234 |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0204223 | FAB0204235 |

| DIN 376 | | | | | | | Coating | | EDP No. | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 10.2 | 3 | FAB0204224 | FAB0204236 |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 12 | 4 | FAB0204225 | FAB0204237 |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 14 | 4 | FAB0204226 | FAB0204238 |
| M 18 | 2.5 | 125 | 34 | 14 | 11 | 14 | 15.5 | 4 | FAB0204227 | FAB0204239 |
| M 20 | 2.5 | 140 | 34 | 16 | 12 | 15 | 17.5 | 4 | FAB0204228 | FAB0204240 |

Unit : mm



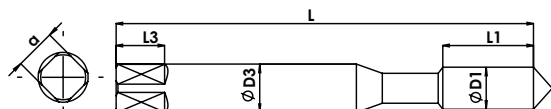
Metric coarse threads



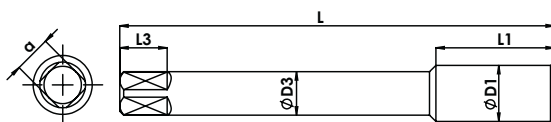
HOLE TYPE



HSS-E
DIN 371/376
GHX
B/4-4.5P



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M20)



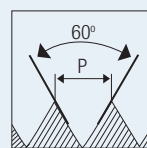
| | | | | | | | | | Series | SAS3 | SAS5 | SAS6 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|-----------------------------------|------------|------------|--------------|
| | | | | | | | | | Material - 1 st choice | M1 | M1-M2 | M1-M3 |
| | | | | | | | | | Material - 2 nd choice | - | - | - |
| | | | | | | | | | Coating | TiN | TiCN | TiAlN + WC/C |
| DIN 371 | | | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0204675 | FAB0204665 | FAB0204778 | |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0204676 | FAB0204666 | FAB0204779 | |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 7 | 4.2 | 3 | FAB0204677 | FAB0204667 | FAB0204780 | |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 7 | 5 | 3 | FAB0204678 | FAB0204668 | FAB0204781 | |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0204679 | FAB0204669 | FAB0204782 | |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0204680 | FAB0204670 | FAB0204783 | |

| DIN 376 | | | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------------------|------------|------------|---------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 10.2 | 4 | FAB0204681 | FAB0204671 | FAB0204784 | |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 12 | 4 | FAB0204682 | FAB0204672 | FAB0204785 | |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 14 | 4 | FAB0204683 | FAB0204673 | FAB0204786 | |
| M 18 | 2.5 | 125 | 34 | 14 | 11 | 14 | 15.5 | 4 | FAB0205281 | FAB0205282 | FAB0205283 | |
| M 20 | 2.5 | 140 | 34 | 16 | 12 | 15 | 17.5 | 4 | FAB0204684 | FAB0204674 | FAB0204897 | |

Unit : mm

M

Metric coarse threads



HOLE TYPE

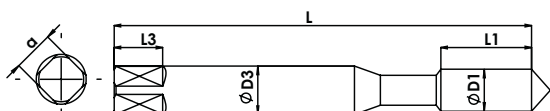


HSS-E
PM

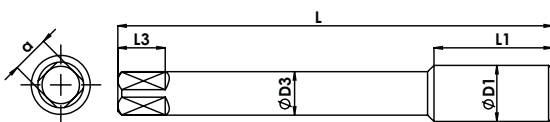
DIN
371/376

6HX

B/4-4.5P



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12)



| | |
|-----------------------------------|--------------|
| Series | SAI6 |
| Material - 1 st choice | S1-S4 |
| Material - 2 nd choice | - |
| Coating | TiAIN + WC/C |

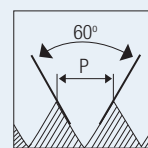
| DIN 371 | | | | | | | | | No of Flute | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---|-------------|---------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0204694 | |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0204695 | |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 7 | 4.2 | 3 | FAB0204696 | |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 7 | 5 | 3 | FAB0204697 | |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0204698 | |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0204699 | |

| DIN 376 | | | | | | | | | No of Flute | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---|-------------|---------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 10.2 | 3 | FAB0204700 | |

Unit : mm

M

Metric coarse threads



HOLE TYPE

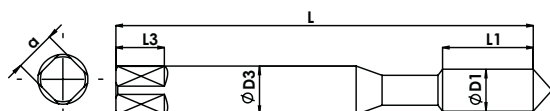


HSS-E PM

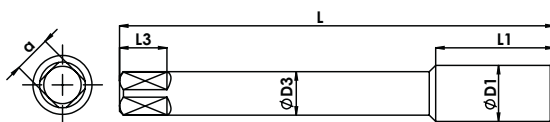
DIN 371/376

6HX

B/4-4.5P



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M16)



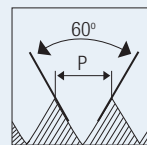
| DIN 371 | | | | | | | Series | | SAF5 | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|-----------------------------------|-------------|------------|--|
| | | | | | | | Material - 1 st choice | | P2-P3 | |
| | | | | | | | Material - 2 nd choice | | - | |
| | | | | | | | Coating | | TiCN | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0205284 | |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0205285 | |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 7 | 4.2 | 3 | FAB0205286 | |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 7 | 5 | 3 | FAB0205287 | |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0205288 | |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0205289 | |

| DIN 376 | | | | | | | Series | | SAF5 | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|-----------------------------------|-------------|------------|--|
| | | | | | | | Material - 1 st choice | | P2-P3 | |
| | | | | | | | Material - 2 nd choice | | - | |
| | | | | | | | Coating | | TiCN | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 10.2 | 4 | FAB0205290 | |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 12 | 4 | FAB0205291 | |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 14 | 4 | FAB0205292 | |

Unit : mm

M

Metric coarse threads



HOLE TYPE

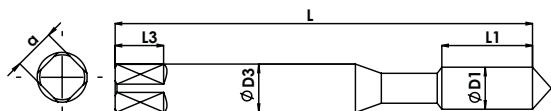


HSS-E
PM

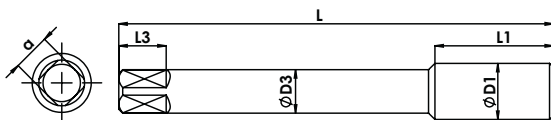
DIN
371/376

6HX

B/4-4.5P



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M16)



| | |
|-----------------------------------|-------|
| Series | SAH4 |
| Material - 1 st choice | P2-P6 |
| Material - 2 nd choice | - |
| Coating | TiAIN |

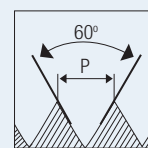
| DIN 371 | | | | | | | Coating | | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0208988 |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0208989 |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 7 | 4.2 | 3 | FAB0208990 |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 7 | 5 | 3 | FAB0208991 |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0208992 |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0208993 |

| DIN 376 | | | | | | | | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 10.2 | 3 | FAB0208994 |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 12 | 3 | FAB0208995 |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 14 | 4 | FAB0208996 |

Unit : mm

MF

Metric fine threads



HOLE TYPE

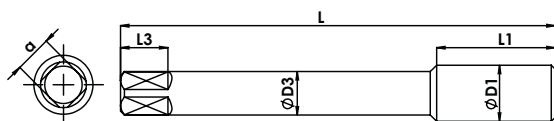


HSS-E

DIN 374

6HX

B/4-4.5P



Male Centre (M6 - M10)
Female Centre (M12 - M20)

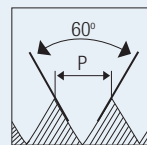


| DIN 374 | | | | | | | | | Series | SA1 | SA3 | SA4 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|-----------------------------------|------------|------------|-------|
| | | | | | | | | | Material - 1 st choice | P0, N4 | P0-P1 | P0-P3 |
| | | | | | | | | | Material - 2 nd choice | N1-N2 | K2-K3 | K1-K2 |
| | | | | | | | | | Coating | Bright | TiN | TiAlN |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 6 | 0.75 | 80 | 14 | 4.5 | 3.4 | 6 | 5.2 | 3 | FAB0204241 | FAB0204252 | FAB0204263 | |
| M 8 | 1 | 90 | 18 | 6 | 4.9 | 7 | 7 | 3 | FAB0204242 | FAB0204253 | FAB0204264 | |
| M 10 | 1.25 | 100 | 22 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0204243 | FAB0204254 | FAB0204265 | |
| M 10 | 1 | 90 | 18 | 7 | 5.5 | 8 | 9 | 3 | FAB0204244 | FAB0204255 | FAB0204266 | |
| M 12 | 1.5 | 100 | 22 | 9 | 7 | 10 | 10.5 | 3 | FAB0204245 | FAB0204256 | FAB0204267 | |
| M 12 | 1.25 | 100 | 22 | 9 | 7 | 10 | 10.8 | 3 | FAB0204246 | FAB0204257 | FAB0204268 | |
| M 14 | 1.5 | 100 | 22 | 11 | 9 | 12 | 12.5 | 3 | FAB0204247 | FAB0204258 | FAB0204269 | |
| M 14 | 1.25 | 100 | 22 | 11 | 9 | 12 | 12.8 | 3 | FAB0204248 | FAB0204259 | FAB0204270 | |
| M 16 | 1.5 | 100 | 22 | 12 | 9 | 12 | 14.5 | 3 | FAB0204249 | FAB0204260 | FAB0204271 | |
| M 18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0204250 | FAB0204261 | FAB0204272 | |
| M 20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 18.5 | 4 | FAB0204251 | FAB0204262 | FAB0204273 | |

Unit : mm

MF

Metric fine threads



HOLE TYPE

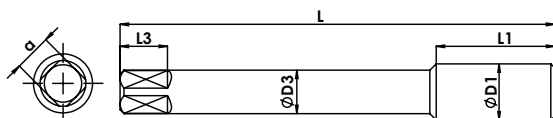


HSS-E

DIN 374

6HX

B/4-4.5P



Male Centre (M8 - M10)
Female Centre (M12 - M20)



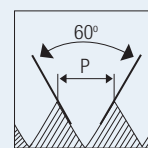
| | | |
|-----------------------------------|-------|-------|
| Series | SAF3 | SAF5 |
| Material - 1 st choice | P1-P2 | P1-P3 |
| Material - 2 nd choice | - | - |
| Coating | TiN | TiCN |

| DIN 374 | | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|
| Nominal Diameter | Pitch | | | | | | | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 8 | 1 | 90 | 18 | 6 | 4.9 | 7 | 7 | 3 | FAB0204544 | FAB0204550 |
| M 10 | 1.25 | 100 | 22 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0204545 | FAB0204551 |
| M 10 | 1 | 90 | 18 | 7 | 5.5 | 8 | 9 | 3 | FAB0204903 | FAB0204929 |
| M 12 | 1.5 | 100 | 22 | 9 | 7 | 10 | 10.5 | 4 | FAB0204547 | FAB0204553 |
| M 12 | 1.25 | 100 | 22 | 9 | 7 | 10 | 10.8 | 4 | FAB0204546 | FAB0204552 |
| M 14 | 1.5 | 100 | 22 | 11 | 9 | 12 | 12.5 | 4 | FAB0204548 | FAB0203818 |
| M 16 | 1.5 | 100 | 22 | 12 | 9 | 12 | 14.5 | 4 | FAB0204549 | FAB0204555 |
| M 18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0204904 | FAB0204930 |
| M 20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 18.5 | 4 | FAB0204905 | FAB0204931 |

Unit : mm

MF

Metric fine threads



HOLE TYPE

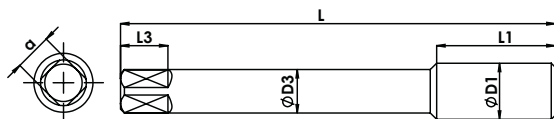


HSS-E

DIN 374

6HX

B/4-4.5P



Male Centre (M8 - M10)
Female Centre (M12 - M20)



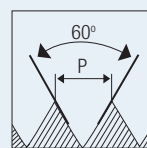
| | | | |
|-----------------------------------|------|-------|--------------|
| Series | SAS3 | SAS5 | SAS6 |
| Material - 1 st choice | M1 | M1-M2 | M1-M3 |
| Material - 2 nd choice | - | - | - |
| Coating | TiN | TiCN | TiAlN + WC/C |

| DIN 374 | | | | | | | | | Coating | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 8 | 1 | 90 | 18 | 6 | 4.9 | 7 | 7 | 3 | FAB0204832 | FAB0204858 | FAB0204787 |
| M 10 | 1.25 | 100 | 22 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0204834 | FAB0204860 | FAB0204788 |
| M 10 | 1 | 90 | 18 | 7 | 5.5 | 8 | 9 | 3 | FAB0204833 | FAB0204859 | FAB0204789 |
| M 12 | 1.5 | 100 | 22 | 9 | 7 | 10 | 10.5 | 3 | FAB0204836 | FAB0204862 | FAB0204790 |
| M 12 | 1.25 | 100 | 22 | 9 | 7 | 10 | 10.8 | 4 | FAB0204835 | FAB0204861 | FAB0204791 |
| M 14 | 1.5 | 100 | 22 | 11 | 9 | 12 | 12.5 | 4 | FAB0204837 | FAB0204863 | FAB0204792 |
| M 16 | 1.5 | 100 | 22 | 12 | 9 | 12 | 14.5 | 4 | FAB0204838 | FAB0204864 | FAB0204793 |
| M 18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0205302 | FAB0205304 | FAB0205306 |
| M 20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 18.5 | 4 | FAB0205303 | FAB0205305 | FAB0205307 |

Unit : mm

MF

Metric fine threads



HOLE TYPE

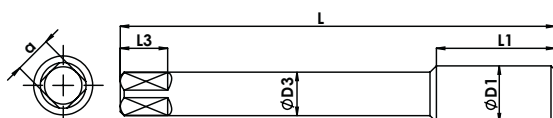


HSS-E
PM

DIN
374

6HX

B/4-4.5P



Male Centre (M8 - M10)
Female Centre (M12)



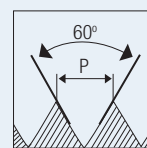
| | |
|-----------------------------------|--------------|
| Series | SAI6 |
| Material - 1 st choice | S1-S4 |
| Material - 2 nd choice | - |
| Coating | TiAIN + WC/C |

| DIN 374 | | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|
| Nominal Diameter | Pitch | | | | | | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 8 | 1 | 90 | 18 | 6 | 4.9 | 7 | 7 | 3 | FAB0204810 |
| M 10 | 1.25 | 100 | 22 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0204811 |
| M 10 | 1 | 90 | 18 | 7 | 5.5 | 8 | 9 | 3 | FAB0204812 |
| M 12 | 1.25 | 100 | 22 | 9 | 7 | 10 | 10.8 | 3 | FAB0204815 |
| M 12 | 1.5 | 100 | 22 | 9 | 7 | 10 | 10.5 | 3 | FAB0204816 |

Unit : mm

UNC

Unified coarse threads



HOLE TYPE



HSS-E

DIN 371/376

2B

B/4-4.5P

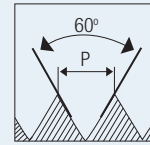
| <p>Reinforced Shank DIN371 (1/4" - 3/8")</p> | | | | | | | | | | | | |
|--|-----|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|-----------------------------------|------------|------------|-------|
| <p>Reduced Shank DIN376 (7/16" - 1")</p> | | | | | | | | | | | | |
| | | | | | | | | | Series | SA1 | SA3 | SA4 |
| | | | | | | | | | Material - 1 st choice | P0, N4 | P0-P1 | P0-P3 |
| | | | | | | | | | Material - 2 nd choice | N1-N2 | K2-K3 | K1-K2 |
| | | | | | | | | | Coating | Bright | TiN | TiAIN |
| DIN 371 | | | | | | | | | | | | |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| 1/4" | 20 | 80 | 19 | 7 | 5.5 | 8 | 5.1 | 3 | FAB0204274 | FAB0204283 | FAB0204292 | |
| 5/16" | 18 | 90 | 22 | 8 | 6.2 | 9 | 6.6 | 3 | FAB0204275 | FAB0204284 | FAB0204293 | |
| 3/8" | 16 | 100 | 24 | 10 | 8 | 11 | 8 | 3 | FAB0204276 | FAB0204285 | FAB0204294 | |

| DIN 376 | | | | | | | | | | | |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. |
| 7/16" | 14 | 100 | 24 | 8 | 6.2 | 9 | 9.4 | 3 | FAB0204277 | FAB0204286 | FAB0204295 |
| 1/2" | 13 | 110 | 28 | 9 | 7 | 10 | 10.8 | 3 | FAB0204278 | FAB0204287 | FAB0204296 |
| 5/8" | 11 | 110 | 32 | 12 | 9 | 12 | 13.5 | 3 | FAB0204279 | FAB0204288 | FAB0204297 |
| 3/4" | 10 | 125 | 34 | 14 | 11 | 14 | 16.5 | 4 | FAB0204280 | FAB0204289 | FAB0204298 |
| 7/8" | 9 | 140 | 34 | 18 | 14.5 | 17 | 19.5 | 4 | FAB0204281 | FAB0204290 | FAB0204299 |
| 1" | 8 | 160 | 38 | 18 | 14.5 | 17 | 22.25 | 4 | FAB0204282 | FAB0204291 | FAB0204300 |

Unit : mm

UNC

Unified coarse threads



HOLE TYPE

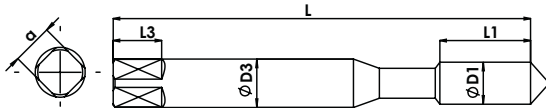


HSS-E

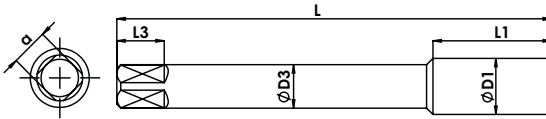
DIN 371/376

2B

B/4-4.5P



Reinforced Shank DIN371 (1/4" - 3/8")



Reduced Shank DIN376 (7/16" - 1")



| | | | |
|-----------------------------------|------|-------|--------------|
| Series | SAS3 | SAS5 | SAS6 |
| Material - 1 st choice | M1 | M1-M2 | M1-M3 |
| Material - 2 nd choice | - | - | - |
| Coating | TiN | TiCN | TiAlN + WC/C |

| DIN 371 | | | | | | Coating | | | | | |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/4" | 20 | 80 | 19 | 7 | 5.5 | 8 | 5.1 | 3 | FAB0205308 | FAB0205317 | FAB0205326 |
| 5/16" | 18 | 90 | 22 | 8 | 6.2 | 9 | 6.6 | 3 | FAB0205309 | FAB0205318 | FAB0205327 |
| 3/8" | 16 | 100 | 24 | 10 | 8 | 11 | 8 | 3 | FAB0205310 | FAB0205319 | FAB0205328 |

| DIN 376 | | | | | | | | | | | |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 7/16" | 14 | 110 | 24 | 8 | 6.2 | 9 | 9.4 | 3 | FAB0205311 | FAB0205320 | FAB0205329 |
| 1/2" | 13 | 110 | 28 | 9 | 7 | 10 | 10.8 | 4 | FAB0205312 | FAB0205321 | FAB0205330 |
| 5/8" | 11 | 110 | 32 | 12 | 9 | 12 | 13.6 | 4 | FAB0205313 | FAB0205322 | FAB0205331 |
| 3/4" | 10 | 125 | 34 | 14 | 11 | 14 | 16.5 | 4 | FAB0205314 | FAB0205323 | FAB0205332 |
| 7/8" | 9 | 140 | 34 | 18 | 14.5 | 17 | 19.6 | 4 | FAB0205315 | FAB0205324 | FAB0205333 |
| 1" | 8 | 160 | 38 | 18 | 14.5 | 17 | 22.3 | 4 | FAB0205316 | FAB0205325 | FAB0205334 |

Unit : mm



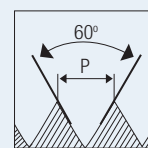
Silver cut

Spiral Point Taps

HSS TAPS

UNF

Unified fine threads



HOLE TYPE

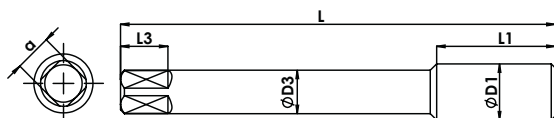


HSS-E

DIN 374

2B

B/4-4.5P



Male Centre (1/4" - 3/8")
Female Centre (7/16" - 1")

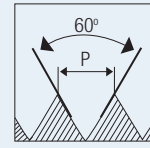


| DIN 374 | | | | | | | | | Series | SA1 | SA3 | SA4 |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|-----------------------------------|------------|------------|-------|
| | | | | | | | | | Material - 1 st choice | P0, N4 | P0-P1 | P0-P3 |
| | | | | | | | | | Material - 2 nd choice | N1-N2 | K2-K3 | K1-K2 |
| | | | | | | | | | Coating | Bright | TiN | TiAlN |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| 1/4" | 28 | 80 | 19 | 4.5 | 3.4 | 6 | 5.5 | 3 | FAB0204301 | FAB0204310 | FAB0204319 | |
| 5/16" | 24 | 90 | 22 | 6 | 4.9 | 8 | 6.9 | 3 | FAB0204302 | FAB0204311 | FAB0204320 | |
| 3/8" | 24 | 90 | 20 | 7 | 5.5 | 8 | 8.5 | 3 | FAB0204303 | FAB0204312 | FAB0204321 | |
| 7/16" | 20 | 90 | 20 | 8 | 6.2 | 9 | 9.9 | 3 | FAB0204304 | FAB0204313 | FAB0204322 | |
| 1/2" | 20 | 100 | 22 | 9 | 7 | 10 | 11.5 | 3 | FAB0204305 | FAB0204314 | FAB0204323 | |
| 5/8" | 18 | 100 | 22 | 12 | 9 | 12 | 14.5 | 3 | FAB0204306 | FAB0204315 | FAB0204324 | |
| 3/4" | 16 | 110 | 25 | 14 | 11 | 14 | 17.5 | 4 | FAB0204307 | FAB0204316 | FAB0204325 | |
| 7/8" | 14 | 125 | 25 | 18 | 14.5 | 17 | 20.5 | 4 | FAB0204308 | FAB0204317 | FAB0204326 | |
| 1" | 12 | 140 | 28 | 18 | 14.5 | 17 | 23.3 | 4 | FAB0204309 | FAB0204318 | FAB0204327 | |

Unit : mm

UNF

Unified fine threads



HOLE TYPE

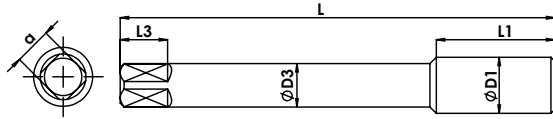


HSS-E

DIN 374

2B

B/4-4.5P



Male Centre (1/4" - 3/8")
Female Centre (7/16" - 1")



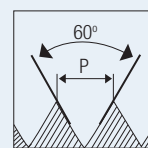
| | | | |
|-----------------------------------|------|-------|--------------|
| Series | SAS3 | SAS5 | SAS6 |
| Material - 1 st choice | M1 | M1-M2 | M1-M3 |
| Material - 2 nd choice | - | - | - |
| Coating | TiN | TiCN | TiAlN + WC/C |

| DIN 374 | | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|------------|
| Nominal Diameter | TPI | | | | | | | | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/4" | 28 | 80 | 19 | 4.5 | 3.4 | 6 | 5.5 | 3 | FAB0205335 | FAB0205344 | FAB0205353 |
| 5/16" | 24 | 90 | 22 | 6 | 4.9 | 8 | 6.9 | 3 | FAB0205336 | FAB0205345 | FAB0205354 |
| 3/8" | 24 | 90 | 20 | 7 | 5.5 | 8 | 8.5 | 3 | FAB0205337 | FAB0205346 | FAB0205355 |
| 7/16" | 20 | 90 | 20 | 8 | 6.2 | 9 | 9.9 | 3 | FAB0205338 | FAB0205347 | FAB0205356 |
| 1/2" | 20 | 100 | 22 | 9 | 7 | 10 | 11.5 | 4 | FAB0205339 | FAB0205348 | FAB0205357 |
| 5/8" | 18 | 100 | 22 | 12 | 9 | 12 | 14.5 | 4 | FAB0205340 | FAB0205349 | FAB0205358 |
| 3/4" | 16 | 110 | 25 | 14 | 11 | 14 | 17.5 | 4 | FAB0205341 | FAB0205350 | FAB0205359 |
| 7/8" | 14 | 125 | 25 | 18 | 14.5 | 17 | 20.5 | 4 | FAB0205342 | FAB0205351 | FAB0205360 |
| 1" | 12 | 140 | 28 | 18 | 14.5 | 17 | 23.3 | 4 | FAB0205343 | FAB0205352 | FAB0205361 |

Unit : mm



Metric coarse threads



HOLE TYPE



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ISO 529
6HX
B/4-4.5P

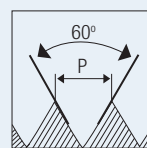
| <p>Reinforced Shank (M3 - M10) Male Centre upto M5</p> | | | | | | | | | | | | |
|--|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|-----------------------------------|------------|------------|-------|
| <p>Reduced Shank (M12 - M20)</p> | | | | | | | | | | | | |
| | | | | | | | | | Series | SA1 | SA3 | SA4 |
| | | | | | | | | | Material - 1 st choice | P0, N4 | P0-P1 | P0-P3 |
| | | | | | | | | | Material - 2 nd choice | N1-N2 | K2-K3 | K1-K2 |
| | | | | | | | | | Coating | Bright | TiN | TiAIN |
| ISO529 / IS 6175 Part 2 | | | | | | | | | | | | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0200647 | FAB0200648 | FAB0203044 | |
| M 3.5 | 0.6 | 50 | 13 | 3.55 | 2.8 | 5 | 2.9 | 3 | FAB0200653 | FAB0200654 | FAB0203045 | |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0200659 | FAB0200661 | FAB0200662 | |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | 3 | FAB0200671 | FAB0200673 | FAB0203046 | |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | 3 | FAB0200682 | FAB0200684 | FAB0200685 | |
| M 7 | 1 | 66 | 19 | 7.1 | 5.6 | 8 | 6 | 3 | FAB0203033 | FAB0203040 | FAB0203047 | |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0200694 | FAB0200696 | FAB0200697 | |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0200718 | FAB0200720 | FAB0200721 | |

| | | | | | | | | | | | |
|--------------------------------|------|-----|----|------|------|----|------|---|------------|------------|------------|
| ISO529 / IS 6175 Part 3 | | | | | | | | | | | |
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.2 | 3 | FAB0200749 | FAB0200751 | FAB0203052 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | 3 | FAB0200778 | FAB0200780 | FAB0203054 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | 3 | FAB0200799 | FAB0200801 | FAB0203055 |
| M 18 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 15.5 | 4 | FAB0203037 | FAB0203043 | FAB0203057 |
| M 20 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0203039 | FAB0200810 | FAB0203059 |

Unit : mm

M

Metric coarse threads



HOLE TYPE

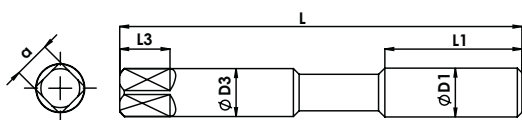


HSS-E

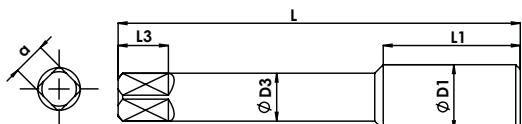
ISO 529

6HX

B/4-4.5P



Reinforced Shank (M3 - M10)
Male Centre upto M5



Reduced Shank (M12 - M20)

IS 6175 Part 2

IS 6175 Part 3

IS 6175 Part 2

IS 6175 Part 3



| | | |
|-----------------------------------|-------|-------|
| Series | SAF3 | SAF5 |
| Material - 1 st choice | P1-P2 | P1-P3 |
| Material - 2 nd choice | - | - |

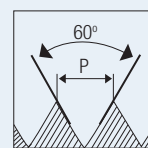
| ISO529 / IS 6175 Part 2 | | | | | | | Coating | | EDP No. | EDP No. |
|-------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0203060 | FAB0203077 |
| M 3.5 | 0.6 | 50 | 13 | 3.55 | 2.8 | 5 | 2.9 | 3 | FAB0205116 | FAB0205120 |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0203061 | FAB0203078 |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | 3 | FAB0203062 | FAB0203079 |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | 3 | FAB0203063 | FAB0203080 |
| M 7 | 1 | 66 | 19 | 7.1 | 5.6 | 8 | 6 | 3 | FAB0205117 | FAB0205121 |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0203065 | FAB0203082 |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0203068 | FAB0203085 |

| ISO529 / IS 6175 Part 3 | | | | | | | Coating | | EDP No. | EDP No. |
|-------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.2 | 4 | FAB0203070 | FAB0203087 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | 4 | FAB0203072 | FAB0203089 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | 4 | FAB0203074 | FAB0203091 |
| M 18 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 15.5 | 4 | FAB0205118 | FAB0205122 |
| M 20 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0205119 | FAB0205123 |

Unit : mm

M

Metric coarse threads



HOLE TYPE



HSS-E ISO 529 6HX B/4-4.5P

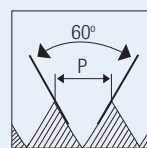
| <p>Reinforced Shank (M3 - M10) Male Centre upto M5</p> <p>Reduced Shank (M12 - M16)</p> | | | | | | | | | | | | | | | | |
|---|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|-----------------------------------|------------|------------|--|---------|--|--------------|--|
| | | | | | | | | | Series | | SAS3 | | SAS5 | | SAS6 | |
| | | | | | | | | | Material - 1 st choice | | M1 | | M1-M2 | | M1-M3 | |
| | | | | | | | | | Material - 2 nd choice | | - | | - | | - | |
| | | | | | | | | | Coating | | TiN | | TiCN | | TiAIN + WC/C | |
| ISO529 / IS 6175 Part 2 | | | | | | | | | EDP No. | | EDP No. | | EDP No. | | | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | EDP No. | EDP No. | | | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | | | | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0203094 | FAB0203103 | FAB0205137 | | | | | |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0203095 | FAB0203104 | FAB0205138 | | | | | |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | 3 | FAB0203096 | FAB0203105 | FAB0205139 | | | | | |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | 3 | FAB0203097 | FAB0203106 | FAB0205140 | | | | | |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0203098 | FAB0203107 | FAB0205141 | | | | | |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0203099 | FAB0203108 | FAB0205142 | | | | | |

| | | | | | | | | | | | |
|-------------------------|------|-----|----|------|-----|----|------|---|------------|------------|------------|
| ISO529 / IS 6175 Part 3 | | | | | | | | | | | |
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.2 | 4 | FAB0203100 | FAB0203109 | FAB0205143 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | 4 | FAB0203101 | FAB0203110 | FAB0205144 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | 4 | FAB0203102 | FAB0203111 | FAB0205145 |

Unit : mm

M

Metric coarse threads



HOLE TYPE

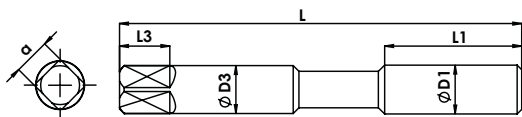


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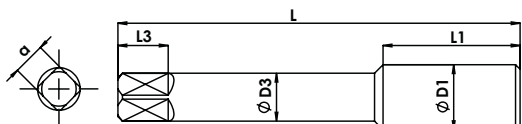
ISO
529

6HX

B/4-4.5P



Reinforced Shank (M3 - M10)
Male Centre upto M5



Reduced Shank (M12 - M16)



| | |
|-----------------------------------|--------------|
| Series | SAI6 |
| Material - 1 st choice | S1-S4 |
| Material - 2 nd choice | - |
| Coating | TiAIN + WC/C |

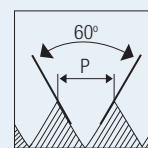
| ISO529 / IS 6175 Part 2 | | | Coating | | | | | | | TiAIN + WC/C | |
|-------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|--------------|--|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0204712 | | |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0204713 | | |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | 3 | FAB0204714 | | |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | 3 | FAB0204715 | | |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0204716 | | |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0204717 | | |

| ISO529 / IS 6175 Part 3 | | | Coating | | | | | | | TiAIN + WC/C | |
|-------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|--------------|--|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.2 | 3 | FAB0204718 | | |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | 3 | FAB0204719 | | |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | 3 | FAB0204720 | | |

Unit : mm

M

Metric coarse threads



HOLE TYPE

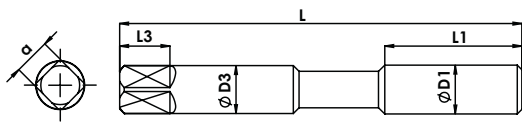


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PM

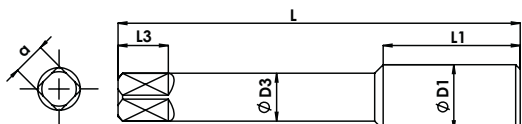
ISO
529

6HX

B/4-4.5P



Reinforced Shank (M3 - M10)
Male Centre upto M5



Reduced Shank (M12 - M16)

IS 6175 Part 2

IS 6175 Part 3



| | |
|-----------------------------------|-------|
| Series | SAF5 |
| Material - 1 st choice | P2-P3 |
| Material - 2 nd choice | - |
| Coating | TICN |

ISO529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0205146 |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0205147 |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | 3 | FAB0205148 |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | 3 | FAB0205149 |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0205150 |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0205151 |

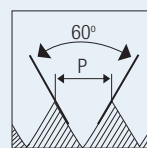
ISO529 / IS 6175 Part 3

| | | | | | | | | | |
|------|------|-----|----|------|-----|----|------|---|------------|
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.2 | 4 | FAB0205152 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | 4 | FAB0205153 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | 4 | FAB0205154 |

Unit : mm

M

Metric coarse threads



HOLE TYPE

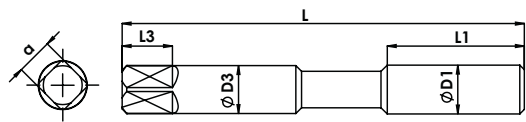


HSS-E
PM

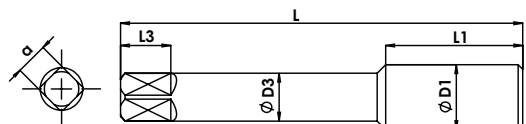
ISO
529

6HX

B/4-4.5P



Reinforced Shank (M3 - M10)
Male Centre upto M5



Reduced Shank (M12 - M16)



| | |
|-----------------------------------|-------|
| Series | SAH4 |
| Material - 1 st choice | P3-P5 |
| Material - 2 nd choice | - |
| Coating | TiAIN |

ISO529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0208997 |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0208998 |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | 3 | FAB0208999 |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | 3 | FAB0209000 |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0209001 |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0209002 |

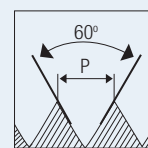
ISO529 / IS 6175 Part 3

| | | | | | | | | | |
|------|------|-----|----|------|-----|----|------|---|------------|
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.2 | 4 | FAB0209003 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | 4 | FAB0209004 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | 4 | FAB0209005 |

Unit : mm

MF

Metric fine threads



HOLE TYPE



HSS-E

ISO 529

6HX

B/4-4.5P

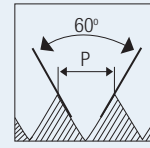
| <p>Reinforced Shank (M8 - M10)</p> | | | | | | | | | | | | |
|------------------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|------------|-------|
| <p>Reduced Shank (M12 - M20)</p> | | | | | | | | | | | | |
| | | | | | | | | | Series | SA1 | SA3 | SA4 |
| | | | | | | | | | Material - 1 st choice | P0, N4 | P0-P1 | P0-P3 |
| | | | | | | | | | Material - 2 nd choice | N1-N2 | K2-K3 | K1-K2 |
| | | | | | | | | | Coating | Bright | TiN | TiAIN |
| ISO529 / IS 6175 Part 2 | | | | | | | | | | | | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 8 | 1 | 69 | 19 | 8 | 6.3 | 9 | 7 | 3 | FAB0203034 | FAB0203041 | FAB0203048 | |
| M 10 | 1 | 76 | 20 | 10 | 8 | 11 | 9 | 3 | FAB0203035 | FAB0200702 | FAB0203049 | |
| M 10 | 1.25 | 76 | 20 | 10 | 8 | 11 | 8.8 | 3 | FAB0200708 | FAB0200710 | FAB0203050 | |

| | | | | | | | | | | | |
|--------------------------------|-----|-----|----|------|------|----|------|---|------------|------------|------------|
| ISO529 / IS 6175 Part 3 | | | | | | | | | | | |
| M 12 | 1.5 | 89 | 29 | 9 | 7.1 | 10 | 10.5 | 3 | FAB0200738 | FAB0200740 | FAB0203051 |
| M 14 | 1.5 | 95 | 30 | 11.2 | 9 | 12 | 12.5 | 3 | FAB0200769 | FAB0200771 | FAB0203053 |
| M 16 | 1.5 | 102 | 32 | 12.5 | 10 | 13 | 14.5 | 3 | FAB0200787 | FAB0200789 | FAB0200790 |
| M 18 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0203036 | FAB0203042 | FAB0203056 |
| M 20 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0203038 | FAB0200807 | FAB0203058 |

Unit : mm

MF

Metric fine threads



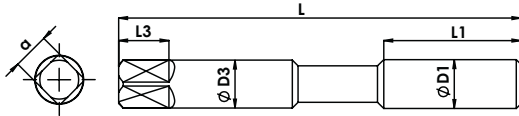
HOLE TYPE



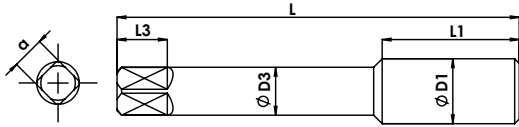
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ISO 529

6HX



Reinforced Shank (M8 - M10)



Reduced Shank (M12 - M20)

IS 6175 Part 2



IS 6175 Part 3



IS 6175 Part 2



IS 6175 Part 3



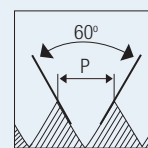
| Series | SAF3 | SAF5 | | | | | | | | |
|-----------------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Material - 1 st choice | P1-P2 | P1-P3 | | | | | | | | |
| Material - 2 nd choice | - | - | | | | | | | | |
| Coating | TiN | TiCN | | | | | | | | |
| ISO529 / IS 6175 Part 2 | | | | | | | | | | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 8 | 1 | 69 | 19 | 8 | 6.3 | 9 | 7 | 3 | FAB0203064 | FAB0203081 |
| M 10 | 1 | 76 | 20 | 10 | 8 | 11 | 9 | 3 | FAB0203066 | FAB0203083 |
| M 10 | 1.25 | 76 | 20 | 10 | 8 | 11 | 8.8 | 3 | FAB0203067 | FAB0203084 |

| ISO529 / IS 6175 Part 3 | | | | | | | | | | |
|-------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.5 | 89 | 29 | 9 | 7.1 | 10 | 10.5 | 4 | FAB0203069 | FAB0203086 |
| M 14 | 1.5 | 95 | 30 | 11.2 | 9 | 12 | 12.5 | 4 | FAB0203071 | FAB0203088 |
| M 16 | 1.5 | 102 | 32 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0203073 | FAB0203090 |
| M 18 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0203075 | FAB0203092 |
| M 20 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0203076 | FAB0203093 |

Unit : mm

MF

Metric fine threads



HOLE TYPE



HSS-E

ISO 529

6HX

B/4-4.5P

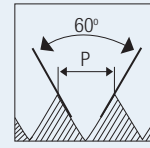
| <p>Reinforced Shank (M8 - M10)</p> | | | | | | | | | | | | |
|------------------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|------------|--------------|
| <p>Reduced Shank (M12 - M20)</p> | | | | | | | | | | | | |
| | | | | | | | | | Series | SAS3 | SAS5 | SAS6 |
| | | | | | | | | | Material - 1 st choice | M1 | M1-M2 | M1-M3 |
| | | | | | | | | | Material - 2 nd choice | - | - | - |
| | | | | | | | | | Coating | TiN | TiCN | TiAlN + WC/C |
| ISO529 / IS 6175 Part 2 | | | | | | | | | | | | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 8 | 1 | 69 | 19 | 8 | 6.3 | 9 | 7 | 3 | FAB0205172 | FAB0205180 | FAB0205585 | |
| M 10 | 1 | 76 | 20 | 10 | 8 | 11 | 9 | 3 | FAB0205173 | FAB0205181 | FAB0205586 | |
| M 10 | 1.25 | 76 | 20 | 10 | 8 | 11 | 8.8 | 3 | FAB0205174 | FAB0205182 | FAB0205587 | |

| | | | | | | | | | | | |
|-------------------------|-----|-----|----|------|------|----|------|---|------------|------------|------------|
| ISO529 / IS 6175 Part 3 | | | | | | | | | | | |
| M 12 | 1.5 | 89 | 29 | 9 | 7.1 | 10 | 10.5 | 4 | FAB0205175 | FAB0205183 | FAB0205588 |
| M 14 | 1.5 | 95 | 30 | 11.2 | 9 | 12 | 12.5 | 4 | FAB0205176 | FAB0205184 | FAB0205589 |
| M 16 | 1.5 | 102 | 32 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0205177 | FAB0205185 | FAB0205590 |
| M 18 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0205178 | FAB0205186 | FAB0205591 |
| M 20 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0205179 | FAB0205187 | FAB0205592 |

Unit : mm

MF

Metric fine threads



HOLE TYPE

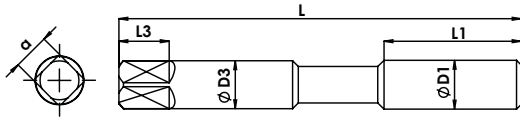


HSS-E
PM

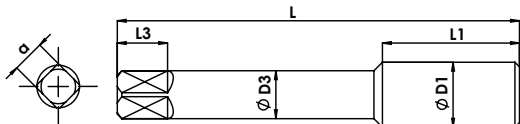
ISO
529

6HX

B/4-4.5P



Reinforced Shank (M8 - M10)



Reduced Shank (M12 - M20)



| | |
|-----------------------------------|--------------|
| Series | SAI6 |
| Material - 1 st choice | S1-S4 |
| Material - 2 nd choice | - |
| Coating | TiAIN + WC/C |

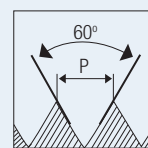
| ISO529 / IS 6175 Part 2 | | | | | | | | | |
|-------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 8 | 1 | 69 | 19 | 8 | 6.3 | 9 | 7 | 3 | FAB0205188 |
| M 10 | 1 | 76 | 20 | 10 | 8 | 11 | 9 | 3 | FAB0205189 |
| M 10 | 1.25 | 76 | 20 | 10 | 8 | 11 | 8.8 | 3 | FAB0205190 |

| ISO529 / IS 6175 Part 3 | | | | | | | | | |
|-------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 12 | 1.5 | 89 | 29 | 9 | 7.1 | 10 | 10.5 | 3 | FAB0205191 |
| M 14 | 1.5 | 95 | 30 | 11.2 | 9 | 12 | 12.5 | 3 | FAB0205192 |
| M 16 | 1.5 | 102 | 32 | 12.5 | 10 | 13 | 14.5 | 3 | FAB0205193 |
| M 18 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0205194 |
| M 20 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0205195 |

Unit : mm

UNC

Unified coarse threads



HOLE TYPE

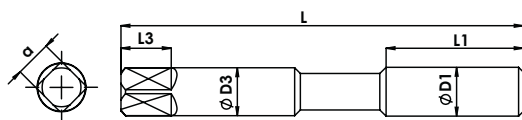


HSS-E

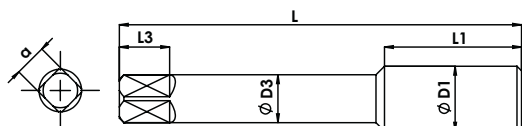
ISO 529

2B

B/4-4.5P



Reinforced Shank (1/4" - 3/8")



Reduced Shank (7/16" - 3/4")

IS 6175 Part 2

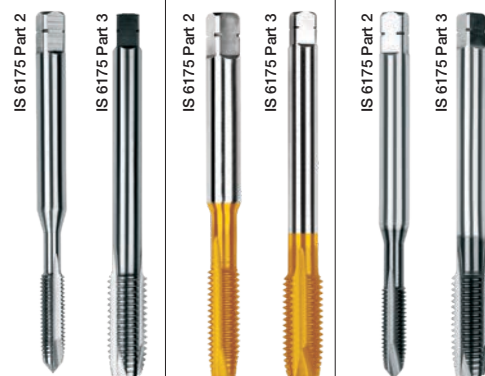
IS 6175 Part 3

IS 6175 Part 2

IS 6175 Part 3

IS 6175 Part 2

IS 6175 Part 3



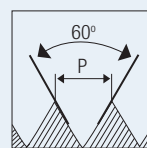
| ISO529 / IS 6175 Part 2 | | | | | | | | | Series | SA1 | SA3 | SA4 |
|-------------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|------------|-------|
| | | | | | | | | | Material - 1 st choice | P0, N4 | P0-P1 | P0-P3 |
| | | | | | | | | | Material - 2 nd choice | N1-N2 | K2-K3 | K1-K2 |
| | | | | | | | | | Coating | Bright | TiN | TiAIN |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| 1/4" | 20 | 66 | 19 | 6.3 | 5 | 8 | 5.1 | 3 | FAB0200573 | FAB0200575 | FAB0205196 | |
| 5/16" | 18 | 72 | 22 | 8 | 6.3 | 9 | 6.6 | 3 | FAB0200582 | FAB0200584 | FAB0205197 | |
| 3/8" | 16 | 80 | 24 | 10 | 8 | 11 | 8 | 3 | FAB0200593 | FAB0200595 | FAB0205198 | |

| ISO529 / IS 6175 Part 3 | | | | | | | | | | | |
|-------------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 7/16" | 14 | 85 | 25 | 8 | 6.3 | 9 | 9.4 | 3 | FAB0200603 | FAB0200605 | FAB0205199 |
| 1/2" | 13 | 89 | 29 | 9 | 7.1 | 10 | 10.8 | 3 | FAB0200614 | FAB0200616 | FAB0205200 |
| 5/8" | 11 | 102 | 32 | 12.5 | 10 | 13 | 13.5 | 3 | FAB0200627 | FAB0200629 | FAB0200630 |
| 3/4" | 10 | 112 | 37 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0200638 | FAB0200640 | FAB0205202 |

Unit : mm

UNC

Unified coarse threads



HOLE TYPE

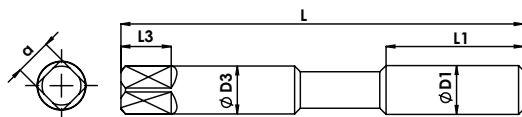


HSS-E

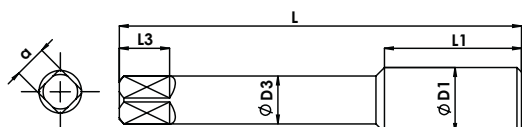
ISO 529

2B

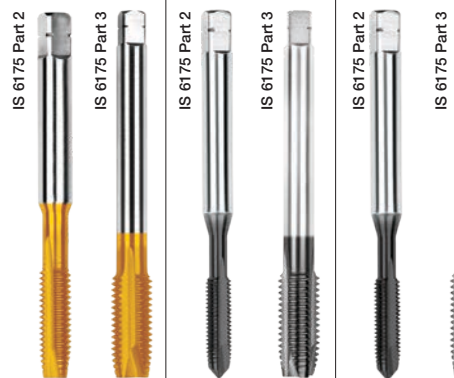
B/4-4.5P



Reinforced Shank (1/4" - 3/8")



Reduced Shank (7/16" - 3/4")



| Series | SAS3 | SAS5 | SAS6 |
|-----------------------------------|------|-------|--------------|
| Material - 1 st choice | M1 | M1-M2 | M1-M3 |
| Material - 2 nd choice | - | - | - |
| Coating | TiN | TiCN | TiAlN + WC/C |

ISO529 / IS 6175 Part 2

| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | EDP No. |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/4" | 20 | 66 | 19 | 6.3 | 5 | 8 | 5.1 | 3 | FAB0205217 | FAB0205224 | FAB0205231 |
| 5/16" | 18 | 72 | 22 | 8 | 6.3 | 9 | 6.6 | 3 | FAB0205218 | FAB0205225 | FAB0205232 |
| 3/8" | 16 | 80 | 24 | 10 | 8 | 11 | 8 | 3 | FAB0205219 | FAB0205226 | FAB0205233 |

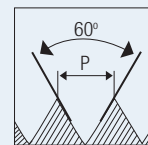
ISO529 / IS 6175 Part 3

| | | | | | | | | | | | |
|-------|----|-----|----|------|------|----|------|---|------------|------------|------------|
| 7/16" | 14 | 85 | 25 | 8 | 6.3 | 9 | 9.4 | 3 | FAB0205220 | FAB0205227 | FAB0205234 |
| 1/2" | 13 | 89 | 29 | 9 | 7.1 | 10 | 10.8 | 4 | FAB0205221 | FAB0205228 | FAB0205235 |
| 5/8" | 11 | 102 | 32 | 12.5 | 10 | 13 | 13.5 | 4 | FAB0205222 | FAB0205229 | FAB0205236 |
| 3/4" | 10 | 112 | 37 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0205223 | FAB0205230 | FAB0205237 |

Unit : mm

UNF

Unified fine threads



HOLE TYPE



HSS-E

ISO 529

2B

B/4-4.5P

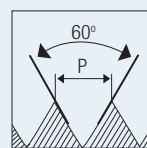
| | | | | | | | | | IS 6175 Part 2 | | IS 6175 Part 3 | | IS 6175 Part 2 | | IS 6175 Part 3 | | IS 6175 Part 2 | | IS 6175 Part 3 | |
|--------------------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|-----------------------------------|------------|----------------|--|----------------|--|----------------|--|----------------|--|----------------|--|
| | | | | | | | | | SA1 | | SA3 | | SA4 | | | | | | | |
| | | | | | | | | | Material - 1 st choice | | P0, N4 | | P0-P1 | | P0-P3 | | | | | |
| | | | | | | | | | Material - 2 nd choice | | N1-N2 | | K2-K3 | | K1-K2 | | | | | |
| | | | | | | | | | Coating | | Bright | | TiN | | TiAIN | | | | | |
| ISO529 / IS 6175 Part 2 | | | | | | | | | EDP No. | | EDP No. | | EDP No. | | | | | | | |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | | | | | | | | | | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | | | | | | | | | |
| 1/4" | 28 | 66 | 19 | 6.3 | 5 | 8 | 5.5 | 3 | FAB0200497 | FAB0200499 | FAB0205238 | | | | | | | | | |
| 5/16" | 24 | 69 | 19 | 8 | 6.3 | 9 | 6.9 | 3 | FAB0200506 | FAB0200508 | FAB0205239 | | | | | | | | | |
| 3/8" | 24 | 76 | 20 | 10 | 8 | 11 | 8.5 | 3 | FAB0200517 | FAB0200519 | FAB0205240 | | | | | | | | | |

| | | | | | | | | | | | | | | |
|--------------------------------|----|-----|----|------|------|----|------|---|------------|------------|------------|--|---------|--|
| ISO529 / IS 6175 Part 3 | | | | | | | | | EDP No. | | EDP No. | | EDP No. | |
| 7/16" | 20 | 82 | 22 | 8 | 6.3 | 9 | 9.9 | 3 | FAB0200528 | FAB0200530 | FAB0205241 | | | |
| 1/2" | 20 | 84 | 24 | 9 | 7.1 | 10 | 11.5 | 3 | FAB0200539 | FAB0200541 | FAB0205242 | | | |
| 5/8" | 18 | 95 | 25 | 12.5 | 10 | 13 | 14.5 | 3 | FAB0200552 | FAB0200554 | FAB0205243 | | | |
| 3/4" | 16 | 104 | 29 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0200563 | FAB0200565 | FAB0205244 | | | |

Unit : mm

UNF

Unified fine threads



HOLE TYPE

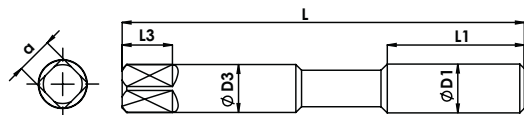


HSS-E

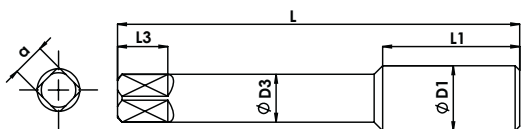
ISO 529

2B

B/4-4.5P



Reinforced Shank (1/4" - 3/8")



Reduced Shank (7/16" - 3/4")



| Series | SAS3 | SAS5 | SAS6 |
|-----------------------------------|------|-------|--------------|
| Material - 1 st choice | M1 | M1-M2 | M1-M3 |
| Material - 2 nd choice | - | - | - |
| Coating | TiN | TiCN | TiAlN + WC/C |

ISO529 / IS 6175 Part 2

| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. | EDP No. |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/4" | 28 | 66 | 19 | 6.3 | 5 | 8 | 5.5 | 3 | FAB0205259 | FAB0205266 | FAB0205273 |
| 5/16" | 24 | 69 | 19 | 8 | 6.3 | 9 | 6.9 | 3 | FAB0205260 | FAB0205267 | FAB0205274 |
| 3/8" | 24 | 76 | 20 | 10 | 8 | 11 | 8.5 | 3 | FAB0205261 | FAB0205268 | FAB0205275 |

ISO529 / IS 6175 Part 3

| | | | | | | | | | | | |
|-------|----|-----|----|------|------|----|------|---|------------|------------|------------|
| 7/16" | 20 | 82 | 22 | 8 | 6.3 | 9 | 9.9 | 3 | FAB0205262 | FAB0205269 | FAB0205276 |
| 1/2" | 20 | 84 | 24 | 9 | 7.1 | 10 | 11.5 | 4 | FAB0205263 | FAB0205270 | FAB0205277 |
| 5/8" | 18 | 95 | 25 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0205264 | FAB0205271 | FAB0205278 |
| 3/4" | 16 | 104 | 29 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0205265 | FAB0205272 | FAB0205279 |

Unit : mm



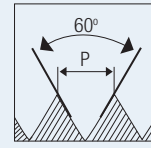
Silver cut

Spiral Point Taps

HSS TAPS

M/MF

Metric coarse & fine threads



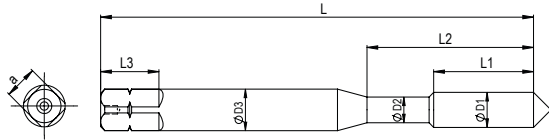
HOLE TYPE



HSS-E

JIS

6HX



Reinforced Shank (M3 - M6)
Male Centre upto M6



Reduced Shank (M8- M20)



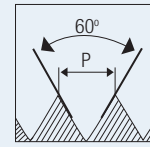
| JIS | | | | | | | | Series | SA1 | SA4 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-----------------------------------|------------|-------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | Material - 1 st choice | P0, N4 | P0-P3 |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | Material - 2 nd choice | N1-N2 | K1-K2 |
| | | | | | | | | Coating | Bright | TiAlN |
| | | | | | | | | EDP No. | EDP No. | |
| M 3 | 0.5 | 46 | 11 | 4 | 3.2 | 6 | 2.5 | FAB0205072 | FAB0205683 | |
| M 4 | 0.7 | 52 | 13 | 5 | 4 | 7 | 3.3 | FAB0205073 | FAB0205614 | |
| M 5 | 0.8 | 60 | 16 | 5.5 | 4.5 | 7 | 4.2 | FAB0205074 | FAB0205615 | |
| M 6 | 1 | 62 | 19 | 6 | 4.5 | 7 | 5 | FAB0205075 | FAB0205616 | |
| M 8 | 1.25 | 70 | 22 | 6.2 | 5 | 8 | 6.8 | FAB0205076 | FAB0205617 | |
| M 8 | 1 | 70 | 22 | 6.2 | 5 | 8 | 7 | FAB0205627 | FAB0205618 | |
| M 10 | 1.5 | 75 | 24 | 7 | 5.5 | 8 | 8.5 | FAB0205077 | FAB0205619 | |
| M 10 | 1.25 | 75 | 24 | 7 | 5.5 | 8 | 8.8 | FAB0206285 | FAB0205620 | |
| M 12 | 1.75 | 82 | 29 | 8.5 | 6.5 | 9 | 10.3 | FAB0205078 | FAB0205621 | |
| M 12 | 1.5 | 82 | 29 | 8.5 | 6.5 | 9 | 10.5 | FAB0205629 | FAB0205622 | |
| M 14 | 2 | 88 | 30 | 10.5 | 8 | 11 | 12 | FAB0205630 | FAB0205623 | |
| M 16 | 2 | 95 | 32 | 12.5 | 10 | 13 | 14 | FAB0205631 | FAB0205624 | |
| M 18 | 2.5 | 100 | 37 | 14 | 11 | 14 | 15.5 | FAB0205632 | FAB0205625 | |
| M 20 | 2.5 | 105 | 37 | 15 | 12 | 15 | 17.5 | FAB0205633 | FAB0205626 | |

Unit : mm



M

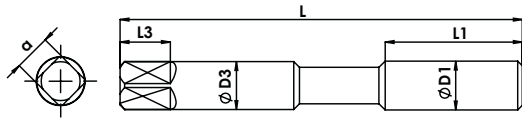
Metric coarse threads



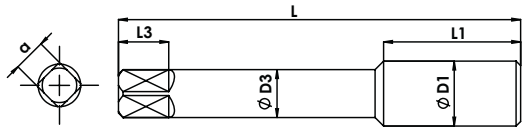
HOLE TYPE



HSS
6H
ISO 529
B/4-4.5P



Reinforced Shank (M3 - M10)
Male Centre upto M5



Reduced Shank (M12 - M20)



| | | | | | | | Coating | | Bright | TiN |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | 2 | FAA0201810 | FAB0200135 |
| M 3.5 | 0.6 | 50 | 13 | 3.55 | 2.8 | 5 | 2.9 | 2 | FAA0201841 | FAB0200139 |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | 2 | FAA0201872 | FAB0200145 |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | 2 | FAA0201922 | FAB0200154 |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | 2 | FAA0201965 | FAB0200163 |
| M 7 | 1 | 66 | 19 | 7.1 | 5.6 | 8 | 6 | 3 | FAA0201998 | FAB0200167 |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | 3 | FAA0202028 | FAB0200173 |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAA0202101 | FAB0200186 |
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.2 | 3 | FAA0202163 | FAB0200200 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | 3 | FAA0202193 | FAB0200207 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | 3 | FAA0202225 | FAB0200216 |
| M 18 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 15.5 | 4 | FAA0202259 | FAB0206711 |
| M 20 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 17.5 | 4 | FAA0202286 | FAB0200225 |
| M 24 | 3 | 130 | 45 | 18 | 14 | 18 | 21 | 4 | FAA0202345 | FAB0200234 |
| M 27 | 3 | 135 | 45 | 20 | 16 | 20 | 24 | 4 | FAA0202373 | FAB0200238 |
| M 30 | 3.5 | 138 | 48 | 20 | 16 | 20 | 26.5 | 4 | FAA0202397 | FAB0201224 |
| M 36 | 4 | 162 | 57 | 25 | 20 | 24 | 32 | 4 | FAA0202433 | FAB0206712 |

Unit : mm



High Performance Cutting Tools



SPIRAL FLUTE TAPS **SB SERIES**

SPIRAL FLUTE TAPS

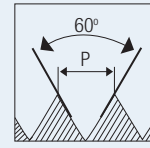
| SERIES | THREAD FORM | BLANK STANDARD | WORKPIECE MATERIAL | 1ST CHOICE | 2ND CHOICE | TOOL MATERIAL | COATING | PAGE |
|-----------|-------------|------------------|--------------------|------------|------------|---------------|--------------|-------|
| SB1 | M | DIN 371/ DIN 376 | Steel | P0-P1 | N1 N2 | HSSE | Bright | 1.038 |
| SB3 | M | DIN 371/ DIN 376 | Steel | P1-P2 | K2, N3, N4 | HSSE | TiN | |
| SB4 | M | DIN 371/ DIN 376 | Steel | P1-P2 | K1-K2 | HSSE | TiAlN | |
| SBF3 | M | DIN 371/ DIN 376 | Forged Steel | P2 | - | HSSE | TiN | 1.039 |
| SBF5 | M | DIN 371/ DIN 376 | Forged Steel | P2-P3 | - | HSSE | TiCN | |
| SBF5 P3 | M | DIN 371/ DIN 376 | Forged Steel | P3-P4 | - | HSSE | TiCN | |
| SBS5 | M | DIN 371/ DIN 376 | Stainless Steel | M1 M2 | - | HSSE | TiCN | 1.040 |
| SBS6 | M | DIN 371/ DIN 376 | Stainless Steel | M1-M3 | - | HSSE | TiAlN + WC/C | |
| SBS5 | M | DIN 371/ DIN 376 | Stainless Steel | M1-M3 | - | HSSE-PM | TiCN | 1.041 |
| SBi6 | M | DIN 371/ DIN 376 | Super Alloys | S1-S4 | - | HSSE-PM | TiAlN + WC/C | |
| SBF5 P3TC | M | DIN 371/ DIN 376 | Forged Steel | P3-P4 | - | HSSE | TiCN | 1.042 |
| SBU3 | M | DIN 371/ DIN 376 | Forged Steel | P1-P2 | - | HSSE | TiN | |
| SBU5 | M | DIN 371/ DIN 376 | Forged Steel | P1-P2 | - | HSSE | TiCN | |
| SB1 | MF | DIN 374 | Steel | P0-P1 | N1 N2 | HSSE | Bright | 1.043 |
| SB3 | MF | DIN 374 | Steel | P1-P2 | K2, N3, N4 | HSSE | TiN | |
| SB4 | MF | DIN 374 | Steel | P1-P2 | K1-K2 | HSSE | TiAlN | |
| SBF3 | MF | DIN 374 | Forged Steel | P2 | - | HSSE | TiN | 1.044 |
| SBF5 | MF | DIN 374 | Forged Steel | P2-P3 | - | HSSE | TiCN | |
| SBF5 P3 | MF | DIN 374 | Forged Steel | P3-P4 | - | HSSE | TiCN | |
| SBS5 | MF | DIN 374 | Stainless Steel | M1-M2 | - | HSSE | TiCN | 1.045 |
| SBS6 | MF | DIN 374 | Stainless Steel | M1-M3 | - | HSSE | TiAlN + WC/C | |
| SBi6 | MF | DIN 374 | Super Alloys | S1-S4 | - | HSSE-PM | TiAlN + WC/C | 1.046 |
| SBF7TC | MF | DIN 374 | Forged Steel | P2-P4 | - | HSSE | AlCrN | 1.047 |
| SBU3 | MF | DIN 374 | Forged Steel | P1-P2 | - | HSSE | TiN | |
| SBU5 | MF | DIN 374 | Forged Steel | P1-P2 | - | HSSE | TiCN | |
| SB1 | UNC | DIN 371/ DIN 376 | Steel | P0-P1 | N1 N2 | HSSE | Bright | 1.048 |
| SB3 | UNC | DIN 371/ DIN 376 | Steel | P1-P2 | K2, N3, N4 | HSSE | TiN | |
| SBU3 | UNC | DIN 371/ DIN 376 | Stainless Steel | P1-P2 | - | HSSE | TiN | 1.049 |
| SBS5 | UNC | DIN 371/ DIN 376 | Stainless Steel | P1-P2 | - | HSSE | TiCN | |
| SBS5 | UNC | DIN 371/ DIN 376 | Stainless Steel | M1-M3 | - | HSSE-PM | TiCN | 1.050 |
| SB1 | UNF | DIN 374 | Steel | P0-P1 | N1 N2 | HSSE | Bright | 1.051 |
| SB3 | UNF | DIN 374 | Steel | P1-P2 | K2, N3, N4 | HSSE | TiN | |
| SBU3 | UNF | DIN 374 | Stainless Steel | P1-P2 | - | HSSE | TiN | 1.052 |
| SBS5 | UNF | DIN 374 | Stainless Steel | M1 M2 | - | HSSE | TiCN | |
| SBS5 | UNF | DIN 374 | Stainless Steel | M1-M3 | - | HSSE-PM | TiCN | 1.053 |

SPIRAL FLUTE TAPS

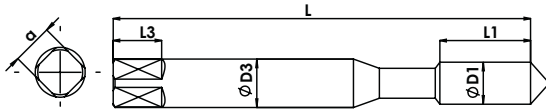
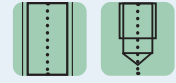
| SERIES | THREAD FORM | BLANK STANDARD | WORKPIECE MATERIAL | 1ST CHOICE | 2ND CHOICE | TOOL MATERIAL | COATING | PAGE |
|--------|-------------|----------------|--------------------|------------|------------|---------------|--------------|-------|
| SB1 | M | ISO 529 | Steel | P0-P1 | N1 N2 | HSSE | Bright | 1.054 |
| SB3 | M | ISO 529 | Steel | P1-P2 | K2, N3, N4 | HSSE | TiN | |
| SB4 | M | ISO 529 | Steel | P1-P2 | K1-K2 | HSSE | TiAlN | |
| SBF3 | M | ISO 529 | Forged Steel | P2 | - | HSSE | TiN | 1.055 |
| SBF5 | M | ISO 529 | Forged Steel | P2-P3 | - | HSSE | TiCN | |
| SBS5 | M | ISO 529 | Stainless Steel | M1 M2 | - | HSSE | TiCN | 1.056 |
| SBS6 | M | ISO 529 | Stainless Steel | M1-M3 | - | HSSE | TiAlN + WC/C | |
| SBS5 | M | ISO 529 | Stainless Steel | M1-M3 | - | HSSE-PM | TiCN | 1.057 |
| SBI6 | M | ISO 529 | Super Alloys | S1-S4 | - | HSSE-PM | TiAlN + WC/C | |
| SBU3 | M | ISO 529 | Forged Steel | P1-P2 | - | HSSE | TiN | 1.058 |
| SBU5 | M | ISO 529 | Forged Steel | P1-P2 | - | HSSE | TiN | |
| SB1 | MF | ISO 529 | Steel | P0-P1 | N1 N2 | HSSE | Bright | 1.059 |
| SB3 | MF | ISO 529 | Steel | P1-P2 | K2, N3, N4 | HSSE | TiN | |
| SB4 | MF | ISO 529 | Steel | P1-P2 | K1-K2 | HSSE | TiAlN | |
| SBF3 | MF | ISO 529 | Forged Steel | P2 | - | HSSE | TiN | 1.060 |
| SBF5 | MF | ISO 529 | Forged Steel | P2-P3 | - | HSSE | TiCN | |
| SBS5 | MF | ISO 529 | Stainless Steel | M1 M2 | - | HSSE | TiCN | 1.061 |
| SBU3 | MF | ISO 529 | Stainless Steel | P1-P2 | - | HSSE | TiN | 1.062 |
| SBU5 | MF | ISO 529 | Stainless Steel | P1-P2 | - | HSSE | TiCN | |
| SB1 | UNC | ISO 529 | Steel | P0-P1 | N1 N2 | HSSE | Bright | 1.063 |
| SB3 | UNC | ISO 529 | Steel | P1-P2 | K2, N3, N4 | HSSE | TiN | |
| SBU3 | UNC | ISO 529 | Stainless Steel | P1-P2 | - | HSSE | TiN | 1.064 |
| SBU5 | UNC | ISO 529 | Stainless Steel | P1-P2 | - | HSSE | TiCN | |
| SBS5 | UNC | ISO 529 | Stainless Steel | M1-M3 | - | HSSE-PM | TiCN | 1.065 |
| SB1 | UNF | ISO 529 | Steel | P0-P1 | N1 N2 | HSSE | Bright | 1.066 |
| SB3 | UNF | ISO 529 | Steel | P1-P2 | K2, N3, N4 | HSSE | TiN | |
| SBU3 | UNF | ISO 529 | Stainless Steel | P1-P2 | - | HSSE | TiN | 1.067 |
| SBU5 | UNF | ISO 529 | Stainless Steel | P1-P2 | - | HSSE | TiCN | |
| SBS5 | UNF | ISO 529 | Stainless Steel | M1-M3 | - | HSSE-PM | TiCN | 1.068 |
| SB1 | M | JIS | Steel | P0-P1 | N1-N2 | HSSE | Bright | 1.069 |
| SB4 | M | JIS | Steel | P1-P2 | K1-K2 | HSSE | TiAlN | |
| Spirex | M | ISO 529 | General | - | - | HSSE | Bright | 1.070 |
| Spirex | M | ISO 529 | General | - | - | HSSE | TiN | |
| | | | | | | | | 1.071 |

M

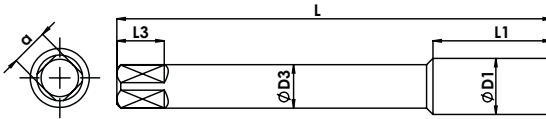
Metric coarse threads



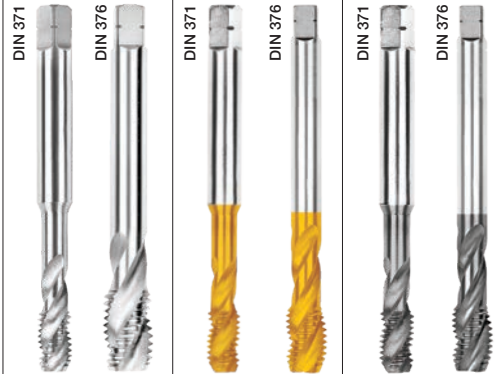
HOLE TYPE



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M20)



| Series | SB1 | SB3 | SB4 |
|-----------------------------------|--------|-----------|-------|
| Material - 1 st choice | P0-P1 | P1-P2 | P1-P2 |
| Material - 2 nd choice | N1-N2 | K2, N3-N4 | K1-K2 |
| Coating | Bright | TiN | TiAlN |
| EDP No. | | | |

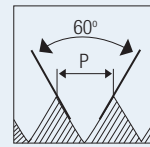
| DIN 371 | | | | | | | | | No of Flutes | EDP No. | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---|--------------|------------|------------|---------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | | | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 3 | 0.5 | 56 | 6 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0203197 | FAB0203207 | FAB0204334 | |
| M 3.5 | 0.6 | 56 | 6.5 | 4 | 3 | 6 | 2.9 | 3 | FAB0204328 | FAB0204331 | FAB0204335 | |
| M 4 | 0.7 | 63 | 7 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0203198 | FAB0203208 | FAB0200968 | |
| M 5 | 0.8 | 70 | 8 | 6 | 4.9 | 8 | 4.2 | 3 | FAB0203199 | FAB0203209 | FAB0203685 | |
| M 6 | 1 | 80 | 10 | 6 | 4.9 | 8 | 5 | 3 | FAB0203200 | FAB0203210 | FAB0203686 | |
| M 7 | 1 | 80 | 10 | 7 | 5.5 | 8 | 6 | 3 | FAB0203201 | FAB0203211 | FAB0204336 | |
| M 8 | 1.25 | 90 | 12 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0203202 | FAB0203212 | FAB0203687 | |
| M 10 | 1.5 | 100 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0203203 | FAB0203213 | FAB0203688 | |

| DIN 376 | | | | | | | | | No of Flutes | EDP No. | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---|--------------|------------|------------|---------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | | | | | |
| M 12 | 1.75 | 110 | 18 | 9 | 7 | 10 | 10.2 | 3 | FAB0203204 | FAB0203684 | FAB0203689 | |
| M 14 | 2 | 110 | 20 | 11 | 9 | 12 | 12 | 3 | FAB0203205 | FAB0203215 | FAB0204337 | |
| M 16 | 2 | 110 | 20 | 12 | 9 | 12 | 14 | 3 | FAB0203206 | FAB0203216 | FAB0204338 | |
| M 18 | 2.5 | 125 | 25 | 14 | 11 | 14 | 15.5 | 4 | FAB0204329 | FAB0204332 | FAB0204339 | |
| M 20 | 2.5 | 140 | 25 | 16 | 12 | 15 | 17.5 | 4 | FAB0204330 | FAB0204333 | FAB0204340 | |

Unit : mm



Metric coarse threads



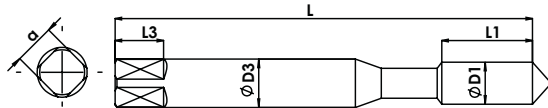
HOLE TYPE



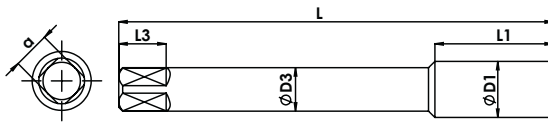
HSS-E

DIN 371/376

6HX



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M20)



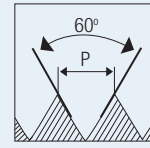
| DIN 371 | | | | | | | | | Series | SBF3 | SBF5 | SBF5 P3 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|-----------------------------------|------------|------------|---------|
| | | | | | | | | | Material - 1 st choice | P2 | P2-P3 | P3-P4 |
| | | | | | | | | | Material - 2 nd choice | - | - | - |
| | | | | | | | | | Coating | TiN | TiCN | TiCN |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 3 | 0.5 | 56 | 6 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0204556 | FAB0204341 | FAB0209006 | |
| M 3.5 | 0.6 | 56 | 6.5 | 4 | 3 | 6 | 2.9 | 3 | FAB0205535 | FAB0204342 | - | |
| M 4 | 0.7 | 63 | 7 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0204557 | FAB0204343 | FAB0209007 | |
| M 5 | 0.8 | 70 | 8 | 6 | 4.9 | 8 | 4.2 | 3 | FAB0204558 | FAB0204344 | FAB0209008 | |
| M 6 | 1 | 80 | 10 | 6 | 4.9 | 8 | 5 | 3 | FAB0204559 | FAB0204345 | FAB0209009 | |
| M 7 | 1 | 80 | 10 | 7 | 5.5 | 8 | 6 | 3 | FAB0205536 | FAB0204346 | - | |
| M 8 | 1.25 | 90 | 12 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0204560 | FAB0204347 | FAB0208758 | |
| M 10 | 1.5 | 100 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0204561 | FAB0204348 | FAB0209010 | |

| DIN 376 | | | | | | | | | | | |
|---------|------|-----|----|----|----|----|------|---|------------|------------|------------|
| M 12 | 1.75 | 110 | 18 | 9 | 7 | 10 | 10.2 | 3 | FAB0204562 | FAB0204349 | FAB0209011 |
| M 14 | 2 | 110 | 20 | 11 | 9 | 12 | 12 | 4 | FAB0204563 | FAB0204350 | FAB0209012 |
| M 16 | 2 | 110 | 20 | 12 | 9 | 12 | 14 | 4 | FAB0204564 | FAB0204351 | FAB0208760 |
| M 18 | 2.5 | 125 | 25 | 14 | 11 | 14 | 15.5 | 4 | FAB0204908 | FAB0204352 | FAB0209013 |
| M 20 | 2.5 | 140 | 25 | 16 | 12 | 15 | 17.5 | 4 | FAB0204120 | FAB0204353 | FAB0209014 |

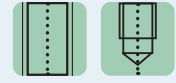
Unit : mm

M

Metric coarse threads



HOLE TYPE



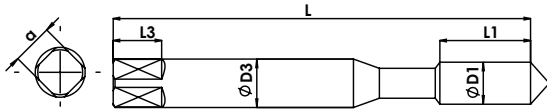
HSS-E

DIN 371/376

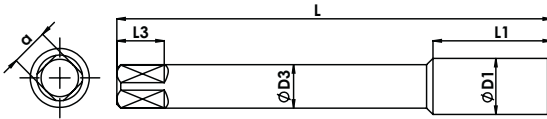
6HX

C/2-3P

45°



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M20)



| Series | SBS5 | SBS6 |
|-----------------------------------|-------|--------------|
| Material - 1 st choice | M1-M2 | M1-M3 |
| Material - 2 nd choice | - | - |
| Coating | TiCN | TiAlN + WC/C |
| EDP No. | | |

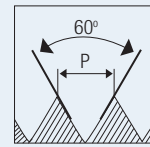
| DIN 371 | | | | | | | | | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 56 | 6 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0204655 | FAB0204794 |
| M 4 | 0.7 | 63 | 7 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0204656 | FAB0204795 |
| M 5 | 0.8 | 70 | 8 | 6 | 4.9 | 8 | 4.2 | 3 | FAB0204657 | FAB0204796 |
| M 6 | 1 | 80 | 10 | 6 | 4.9 | 8 | 5 | 3 | FAB0204658 | FAB0204797 |
| M 8 | 1.25 | 90 | 12 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0204659 | FAB0204798 |
| M 10 | 1.5 | 100 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0204660 | FAB0204799 |

| DIN 376 | | | | | | | | | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.75 | 110 | 18 | 9 | 7 | 10 | 10.2 | 4 | FAB0204661 | FAB0204800 |
| M 14 | 2 | 110 | 20 | 11 | 9 | 12 | 12 | 4 | FAB0204662 | FAB0204801 |
| M 16 | 2 | 110 | 20 | 12 | 9 | 12 | 14 | 4 | FAB0204663 | FAB0204802 |
| M 18 | 2.5 | 125 | 25 | 14 | 11 | 14 | 15.5 | 4 | - | - |
| M 20 | 2.5 | 140 | 25 | 16 | 12 | 15 | 17.5 | 4 | FAB0204664 | FAB0205601 |

Unit : mm

M

Metric coarse threads



HOLE TYPE



HSS-E
PM

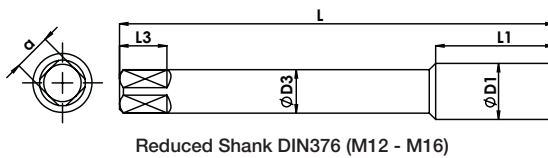
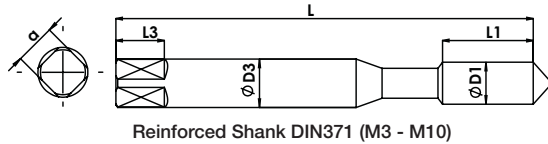
DIN
371/376

6HX

C/2-3P

45°

18°



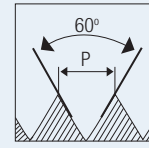
| DIN 371 | | | | | | | | | Series | SBS5 | SBI6 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|-----------------------------------|------------|--------------|
| | | | | | | | | | Material - 1 st choice | M1-M3 | S1-S4 |
| | | | | | | | | | Material - 2 nd choice | - | - |
| | | | | | | | | | Coating | TiCN | TiAlN + WC/C |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 3 | 0.5 | 56 | 6 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0205539 | FAB0204703 | |
| M 4 | 0.7 | 63 | 7 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0205540 | FAB0204704 | |
| M 5 | 0.8 | 70 | 8 | 6 | 4.9 | 8 | 4.2 | 3 | FAB0205541 | FAB0204705 | |
| M 6 | 1 | 80 | 10 | 6 | 4.9 | 8 | 5 | 3 | FAB0205542 | FAB0204706 | |
| M 8 | 1.25 | 90 | 12 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0205543 | FAB0204707 | |
| M 10 | 1.5 | 100 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0205544 | FAB0204708 | |

| DIN 376 | | | | | | | | | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.75 | 110 | 18 | 9 | 7 | 10 | 10.2 | 4 3 | FAB0205545 | FAB0204709 |
| M 14 | 2 | 110 | 20 | 11 | 9 | 12 | 12 | 4 3 | FAB0205546 | FAB0204710 |
| M 16 | 2 | 110 | 20 | 12 | 9 | 12 | 14 | 4 3 | FAB0205547 | FAB0204711 |

Unit : mm

M

Metric coarse threads



HOLE TYPE



HSS-E
DIN 371/376
6HX
C/2-3P
15°

| <p>Reinforced Shank DIN371 (M5 - M10)</p> | | | | | | | | | | | | |
|---|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|--------------|--------------|
| <p>Reduced Shank DIN376 (M12 - M20)</p> | | | | | | | | | | | | |
| | | | | | | | | | Series | SBF5 P3TC | SBU3 | SBU5 |
| | | | | | | | | | Material - 1 st choice | P3-P4 | P1-P2, M1-M2 | P1-P2, M1-M3 |
| | | | | | | | | | Material - 2 nd choice | | | - |
| | | | | | | | | | Coating | TiCN | TiN | TiCN |
| DIN 371 | | | | | | | | | EDP No. | EDP No. | EDP No. | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 3 | 0.5 | 56 | 6 | 3.5 | 2.7 | 6 | 2.5 | 3 | - | FAB0208045 | FAB0208059 | |
| M 4 | 0.7 | 63 | 7 | 4.5 | 3.4 | 6 | 3.3 | 3 | - | FAB0207885 | FAB0208060 | |
| M 5 | 0.8 | 70 | 8 | 6 | 4.9 | 8 | 4.2 | 3 | - | FAB0208046 | FAB0208061 | |
| M 6 | 1 | 80 | 10 | 6 | 4.9 | 8 | 5 | 3 | FAB0209015 | FAB0208047 | FAB0208062 | |
| M 8 | 1.25 | 90 | 12 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0209016 | FAB0208048 | FAB0208063 | |
| M 10 | 1.5 | 100 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0209017 | FAB0207818 | FAB0206986 | |

| | | | | | | | | | | | |
|----------------|------|-----|----|----|----|----|------|---|------------|------------|------------|
| DIN 376 | | | | | | | | | | | |
| M 12 | 1.75 | 110 | 18 | 9 | 7 | 10 | 10.2 | 3 | FAB0208919 | FAB0208049 | FAB0206993 |
| M 14 | 2 | 110 | 20 | 11 | 9 | 12 | 12 | 3 | FAB0209018 | FAB0208050 | FAB0208064 |
| M 16 | 2 | 110 | 20 | 12 | 9 | 12 | 14 | 3 | FAB0208759 | FAB0208051 | FAB0208065 |
| M 18 | 2.5 | 125 | 25 | 14 | 11 | 14 | 15.5 | 4 | FAB0209019 | FAB0209021 | FAB0209023 |
| M 20 | 2.5 | 140 | 25 | 16 | 12 | 15 | 17.5 | 4 | FAB0209020 | FAB0209022 | FAB0209024 |

Unit : mm

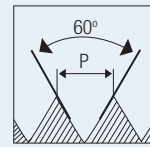


Silver cut

Spiral Flute Taps

MF

Metric fine threads



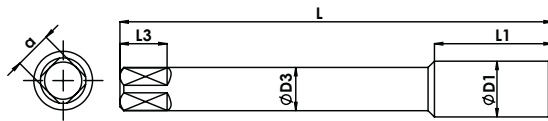
HOLE TYPE



HSS-E

DIN 374

6HX



Male centre (M6 - M10)
Female centre (M12 - M20)

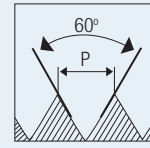


| DIN 374 | | | | | | | | | Series | SB1 | SB3 | SB4 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|------------|-------|
| | | | | | | | | | Material - 1 st choice | P0-P1 | P1-P2 | P1-P2 |
| | | | | | | | | | Material - 2 nd choice | N1-N2 | K2, N3-N4 | K1-K2 |
| | | | | | | | | | Coating | Bright | TiN | TiAIN |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 6 | 0.75 | 80 | 10 | 4.5 | 3.4 | 6 | 5.2 | 3 | FAB0204354 | FAB0204365 | FAB0204375 | |
| M 8 | 1 | 90 | 13 | 6 | 4.9 | 8 | 7 | 3 | FAB0204355 | FAB0203297 | FAB0204376 | |
| M 10 | 1.25 | 100 | 15 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0204356 | FAB0204366 | FAB0204377 | |
| M 10 | 1 | 90 | 15 | 7 | 5.5 | 8 | 9 | 3 | FAB0204357 | FAB0204367 | FAB0204378 | |
| M 12 | 1.5 | 100 | 18 | 9 | 7 | 10 | 10.5 | 3 | FAB0204358 | FAB0204368 | FAB0204379 | |
| M 12 | 1.25 | 100 | 18 | 9 | 7 | 10 | 10.8 | 3 | FAB0204359 | FAB0204369 | FAB0204380 | |
| M 14 | 1.5 | 100 | 20 | 11 | 9 | 12 | 12.5 | 3 | FAB0204360 | FAB0204370 | FAB0204381 | |
| M 16 | 1.5 | 100 | 20 | 12 | 9 | 12 | 14.5 | 3 | FAB0204362 | FAB0204372 | FAB0204383 | |
| M 18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0204363 | FAB0204373 | FAB0204384 | |
| M 20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 18.5 | 4 | FAB0204364 | FAB0204374 | FAB0204385 | |

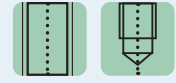
Unit : mm

MF

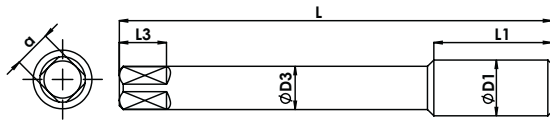
Metric fine threads



HOLE TYPE



HSS-E
DIN 374
6HX
C/2-3P
15°



Male centre (M6 - M10)
Female centre (M12 - M20)

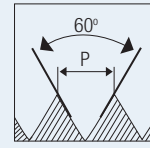


| DIN 374 | | | | | | | | | Series | SBF3 | SBF5 | SBF5 P3 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|-----------------------------------|------------|---------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | Material - 1 st choice | Material - 2 nd choice | Coating | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | TIN | TICN | TICN | |
| | | | | | | | | | EDP No. | EDP No. | EDP No. | |
| M 6 | 0.75 | 80 | 10 | 4.5 | 3.4 | 6 | 5.2 | 3 | FAB0205548 | FAB0204386 | - | |
| M 8 | 1 | 90 | 13 | 6 | 4.9 | 8 | 7 | 3 | FAB0204565 | FAB0204387 | FAB0209025 | |
| M 10 | 1.25 | 100 | 15 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0204566 | FAB0204388 | FAB0209026 | |
| M 10 | 1 | 90 | 15 | 7 | 5.5 | 8 | 9 | 3 | FAB0204737 | FAB0204389 | FAB0209027 | |
| M 12 | 1.5 | 100 | 18 | 9 | 7 | 10 | 10.5 | 3 | FAB0204568 | FAB0204390 | FAB0209028 | |
| M 12 | 1.25 | 100 | 18 | 9 | 7 | 10 | 10.8 | 3 | FAB0204567 | FAB0204391 | FAB0209029 | |
| M 14 | 1.5 | 100 | 20 | 11 | 9 | 12 | 12.5 | 4 | FAB0204569 | FAB0204392 | FAB0209030 | |
| M 16 | 1.5 | 100 | 20 | 12 | 9 | 12 | 14.5 | 4 | FAB0204570 | FAB0204394 | FAB0208810 | |
| M 18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0204912 | FAB0204395 | FAB0209031 | |
| M 20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 18.5 | 4 | FAB0204913 | FAB0204396 | FAB0209032 | |

Unit : mm

MF

Metric fine threads



HOLE TYPE



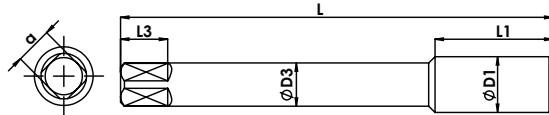
HSS-E

DIN 374

6HX

C/2-3P

45°



Male centre (M8 - M10)
Female centre (M12 - M16)

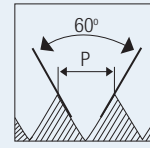


| DIN 374 | | | | | | | | | Series | SBS5 | SBS6 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|--------------|
| | | | | | | | | | Material - 1 st choice | M1-M2 | M1-M3 |
| | | | | | | | | | Material - 2 nd choice | - | - |
| | | | | | | | | | Coating | TiCN | TiAlN + WC/C |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 8 | 1 | 90 | 13 | 6 | 4.9 | 8 | 7 | 3 | FAB0204839 | FAB0204803 | |
| M 10 | 1.25 | 100 | 15 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0204840 | FAB0204804 | |
| M 10 | 1 | 90 | 15 | 7 | 5.5 | 8 | 9 | 3 | FAB0204841 | FAB0204805 | |
| M 12 | 1.5 | 100 | 18 | 9 | 7 | 10 | 10.5 | 4 | FAB0204842 | FAB0204806 | |
| M 12 | 1.25 | 100 | 18 | 9 | 7 | 10 | 10.8 | 4 | FAB0204843 | FAB0204807 | |
| M 14 | 1.5 | 100 | 20 | 11 | 9 | 12 | 12.5 | 4 | FAB0204844 | FAB0204808 | |
| M 16 | 1.5 | 100 | 20 | 12 | 9 | 12 | 14.5 | 4 | FAB0204845 | FAB0204809 | |
| M 18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 16.5 | 4 | - | - | |
| M 20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 18.5 | 4 | - | - | |

Unit : mm

MF

Metric fine threads



HOLE TYPE



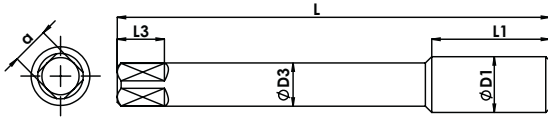
HSS-E
PM

DIN
374

6HX

C/2-3P

18°



Male centre (M8 - M10)
Female centre (M12)



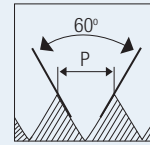
| | |
|-----------------------------------|--------------|
| Series | SBI6 |
| Material - 1 st choice | S1-S4 |
| Material - 2 nd choice | - |
| Coating | TiAlN + WC/C |

| DIN 374 | | | | | | | | | Coating | | TiAlN + WC/C | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|--|--------------|--|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 8 | 1 | 90 | 13 | 6 | 4.9 | 8 | 7 | 3 | FAB0204738 | | | |
| M 10 | 1.25 | 100 | 15 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0204813 | | | |
| M 10 | 1 | 90 | 15 | 7 | 5.5 | 8 | 9 | 3 | FAB0204814 | | | |
| M 12 | 1.5 | 100 | 18 | 9 | 7 | 10 | 10.5 | 3 | FAB0204739 | | | |
| M 12 | 1.25 | 100 | 18 | 9 | 7 | 10 | 10.8 | 3 | FAB0204898 | | | |

Unit : mm

MF

Metric fine threads



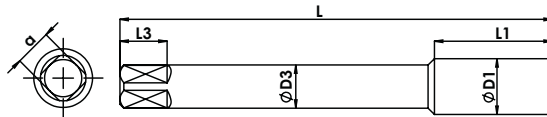
HOLE TYPE



HSS-E

DIN 374

6HX



Male centre (M8 - M10)
Female centre (M12)

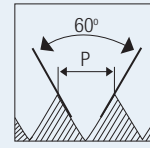


| DIN 374 | | | | | | | | | Series | SBF5 P3TC | SBU3 | SBU5 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|--------------|--------------|
| | | | | | | | | | Material - 1 st choice | P3-P4 | P1-P2, M1-M2 | P1-P2, M1-M3 |
| | | | | | | | | | Material - 2 nd choice | - | - | - |
| | | | | | | | | | Coating | TiCN | TiN | TiCN |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 8 | 1 | 90 | 13 | 6 | 4.9 | 8 | 7 | 3 | FAB0209033 | FAB0208052 | FAB0208066 | |
| M 10 | 1.25 | 100 | 15 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0209034 | FAB0208054 | FAB0208068 | |
| M 10 | 1 | 90 | 15 | 7 | 5.5 | 8 | 9 | 3 | FAB0209035 | FAB0208053 | FAB0208067 | |
| M 12 | 1.5 | 100 | 18 | 9 | 7 | 10 | 10.5 | 3 | FAB0209036 | FAB0208056 | FAB0208070 | |
| M 12 | 1.25 | 100 | 18 | 9 | 7 | 10 | 10.8 | 3 | FAB0209037 | FAB0208055 | FAB0208069 | |
| M 14 | 1.5 | 100 | 20 | 11 | 9 | 12 | 12.5 | 3 | FAB0209038 | FAB0208057 | FAB0208071 | |
| M 16 | 1.5 | 100 | 20 | 12 | 9 | 12 | 14.5 | 3 | FAB0209039 | FAB0208058 | FAB0208072 | |
| M 18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0209040 | FAB0204165 | FAB0209042 | |
| M 20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 18.5 | 4 | FAB0209041 | FAB0204166 | FAB0209043 | |

Unit : mm

UNC

Unified coarse threads



HOLE TYPE



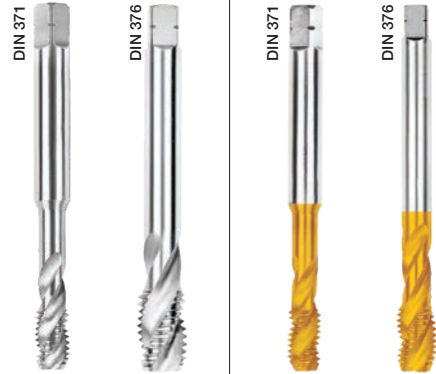
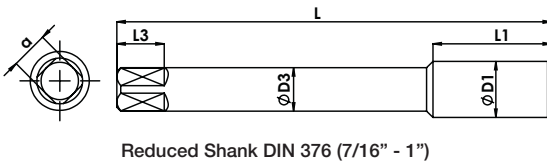
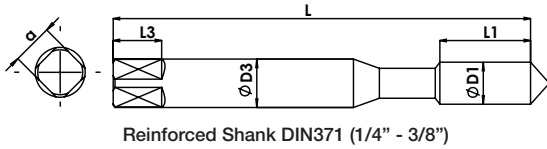
HSS-E

DIN
371/376

2B

C/2-3P

35°



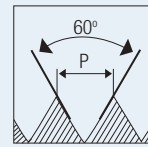
| Series | | SB1 | | SB3 | | | | | | |
|-----------------------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|------------|
| Material - 1 st choice | | P0-P1 | | P1-P2 | | | | | | |
| Material - 2 nd choice | | N1-N2 | | K2, N3-N4 | | | | | | |
| Coating | | Bright | | TiN | | | | | | |
| DIN 371 | | Coating | | Bright | | TiN | | | | |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 1/4" | 20 | 80 | 10 | 7 | 5.5 | 8 | 5.1 | 3 | FAB0204397 | FAB0204406 |
| 5/16" | 18 | 90 | 13 | 8 | 6.2 | 9 | 6.6 | 3 | FAB0204398 | FAB0204407 |
| 3/8" | 16 | 100 | 15 | 9 | 7 | 10 | 8 | 3 | FAB0204399 | FAB0204408 |

| DIN 376 | | Coating | | Bright | | TiN | | | | |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 7/16" | 14 | 100 | 18 | 8 | 6.2 | 9 | 9.4 | 3 | FAB0204400 | FAB0204409 |
| 1/2" | 13 | 110 | 18 | 9 | 7 | 10 | 10.8 | 3 | FAB0204401 | FAB0204410 |
| 5/8" | 11 | 110 | 20 | 12 | 9 | 12 | 13.5 | 3 | FAB0204402 | FAB0204411 |
| 3/4" | 10 | 125 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0204403 | FAB0204412 |
| 7/8" | 9 | 140 | 25 | 18 | 14.5 | 17 | 19.5 | 4 | FAB0204404 | FAB0204413 |
| 1" | 8 | 160 | 30 | 18 | 14.5 | 17 | 22.25 | 4 | FAB0204405 | FAB0204414 |

Unit : mm

UNC

Unified coarse threads



HOLE TYPE



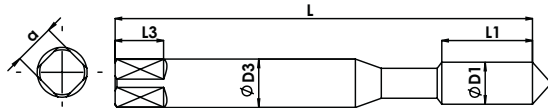
HSS-E

DIN 371/376

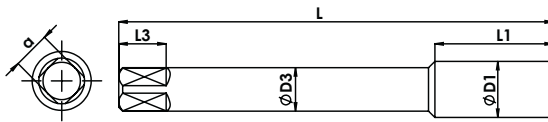
2B

C/2-3P

45°



Reinforced Shank DIN371 (1/4" - 3/8")



Reduced Shank DIN376 (7/16" - 1")



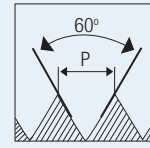
| DIN 371 | | | | | | | | | Series | SBU3 | SBS5 |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|-----------------------------------|-----------------------------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | Material - 1 st choice | Material - 2 nd choice | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | Coating | | |
| 1/4" | 20 | 80 | 10 | 7 | 5.5 | 8 | 5. | 3 | TiN | TiCN | |
| 5/16" | 18 | 90 | 13 | 8 | 6.2 | 9 | 6.6 | 3 | | | |
| 3/8" | 16 | 100 | 15 | 9 | 7 | 10 | 8 | 3 | | | |
| | | | | | | | | | EDP No. | | EDP No. |
| | | | | | | | | | FAB0209044 | | FAB0205549 |
| | | | | | | | | | FAB0209045 | | FAB0205550 |
| | | | | | | | | | FAB0209046 | | FAB0205551 |

| DIN 376 | | | | | | | | | | |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. |
| 7/16" | 14 | 100 | 18 | 8 | 6.2 | 9 | 9.4 | 3 | FAB0209047 | FAB0205552 |
| 1/2" | 13 | 110 | 18 | 9 | 7 | 10 | 10.8 | 3 4 | FAB0209048 | FAB0205553 |
| 5/8" | 11 | 110 | 20 | 12 | 9 | 12 | 13.5 | 3 4 | FAB0209049 | FAB0205554 |
| 3/4" | 10 | 125 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0209050 | FAB0205555 |
| 7/8" | 9 | 140 | 25 | 18 | 14.5 | 17 | 19.5 | 4 | FAB0208738 | FAB0205556 |
| 1" | 8 | 160 | 30 | 18 | 14.5 | 17 | 22.25 | 4 | FAB0209051 | FAB0205557 |

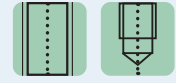
Unit : mm

UNC

Unified coarse threads



HOLE TYPE



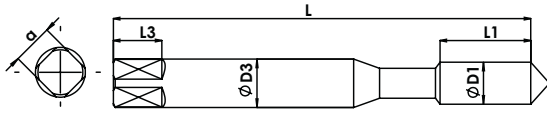
HSS-E
PM

DIN
371/376

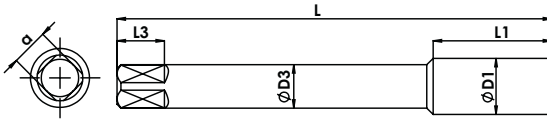
2B

C/2-3P

45°



Reinforced Shank DIN371 (1/4" - 3/8")



Reduced Shank DIN376 (7/16" - 1")



| | |
|-----------------------------------|-------|
| Series | SBS5 |
| Material - 1 st choice | M1-M3 |
| Material - 2 nd choice | - |

| DIN 371 | | | | | | | Coating | | TICN |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| 1/4" | 20 | 80 | 10 | 7 | 5.5 | 8 | 5.1 | 3 | FAB0205558 |
| 5/16" | 18 | 90 | 13 | 8 | 6.2 | 9 | 6.6 | 3 | FAB0205559 |
| 3/8" | 16 | 100 | 15 | 9 | 7 | 10 | 8 | 3 | FAB0205560 |

| DIN 376 | | | | | | | | | |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| 7/16" | 14 | 100 | 18 | 8 | 6.2 | 9 | 9.4 | 3 | FAB0205561 |
| 1/2" | 13 | 110 | 18 | 9 | 7 | 10 | 10.8 | 4 | FAB0205562 |
| 5/8" | 11 | 110 | 20 | 12 | 9 | 12 | 13.5 | 4 | FAB0205563 |
| 3/4" | 10 | 125 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0205564 |
| 7/8" | 9 | 140 | 25 | 18 | 14.5 | 17 | 19.5 | 4 | FAB0205565 |
| 1" | 8 | 160 | 30 | 18 | 14.5 | 17 | 22.25 | 4 | FAB0205566 |

Unit : mm



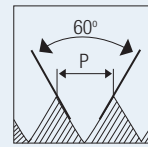
Silver cut

Spiral Flute Taps

HSS TAPS

UNF

Unified fine threads



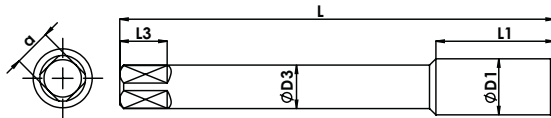
HOLE TYPE



HSS-E

DIN 374

2B



Male centre (1/4" - 3/8")
Female centre (7/16" - 1")

DIN 371



DIN 374



DIN 371



DIN 374

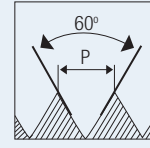


| DIN 374 | | | | | | | | | Series | SB1 | SB3 |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|-----------------------------------|------------|-----------|
| | | | | | | | | | Material - 1 st choice | P0-P1 | P1-P2 |
| | | | | | | | | | Material - 2 nd choice | N1-N2 | K2, N3-N4 |
| | | | | | | | | | Coating | Bright | TiN |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/4" | 28 | 80 | 10 | 7 | 5.5 | 8 | 5.5 | 3 | FAB0204415 | FAB0204424 | |
| 5/16" | 24 | 90 | 13 | 8 | 6.2 | 9 | 6.9 | 3 | FAB0204416 | FAB0204425 | |
| 3/8" | 24 | 100 | 15 | 9 | 7 | 10 | 8.5 | 3 | FAB0204417 | FAB0204426 | |
| 7/16" | 20 | 100 | 18 | 8 | 6.2 | 9 | 9.9 | 3 | FAB0204418 | FAB0204427 | |
| 1/2" | 20 | 100 | 18 | 9 | 7 | 10 | 11.5 | 3 | FAB0204419 | FAB0204428 | |
| 5/8" | 18 | 100 | 20 | 12 | 9 | 12 | 14.5 | 3 | FAB0204420 | FAB0204429 | |
| 3/4" | 16 | 110 | 25 | 14 | 11 | 14 | 17.5 | 4 | FAB0204421 | FAB0204430 | |
| 7/8" | 14 | 125 | 25 | 18 | 14.5 | 17 | 20.5 | 4 | FAB0204422 | FAB0204431 | |
| 1" | 12 | 140 | 30 | 18 | 14.5 | 17 | 23.3 | 4 | FAB0204423 | FAB0204432 | |

Unit : mm

UNF

Unified fine threads



HOLE TYPE



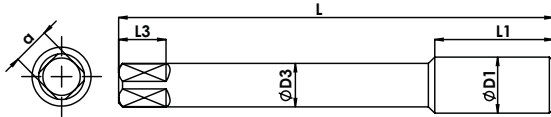
HSS-E

DIN 374

2B

C/2-3P

45°



Male centre (1/4" - 3/8")
Female centre (7/16" - 1")



| | | |
|-----------------------------------|--------------|-------|
| Series | SBU3 | SBS5 |
| Material - 1 st choice | P1-P2, M1-M2 | M1-M2 |
| Material - 2 nd choice | - | - |

| DIN 374 | | | | | | | Coating | | TiN | TiCN |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 1/4" | 28 | 80 | 10 | 7 | 5.5 | 8 | 5.5 | 3 | FAB0209052 | FAB0205567 |
| 5/16" | 24 | 90 | 13 | 8 | 6.2 | 9 | 6.9 | 3 | FAB0209053 | FAB0205568 |
| 3/8" | 24 | 100 | 15 | 9 | 7 | 10 | 8.5 | 3 | FAB0209054 | FAB0205569 |
| 7/16" | 20 | 100 | 18 | 8 | 6.2 | 9 | 9.9 | 3 | FAB0209055 | FAB0205570 |
| 1/2" | 20 | 100 | 18 | 9 | 7 | 10 | 11.5 | 3 4 | FAB0209056 | FAB0205571 |
| 5/8" | 18 | 100 | 20 | 12 | 9 | 12 | 14.5 | 3 4 | FAB0209057 | FAB0205572 |
| 3/4" | 16 | 110 | 25 | 14 | 11 | 14 | 17.5 | 4 | FAB0209058 | FAB0205573 |
| 7/8" | 14 | 125 | 25 | 18 | 14.5 | 17 | 20.5 | 4 | FAB0209059 | FAB0205574 |
| 1" | 12 | 140 | 30 | 18 | 14.5 | 17 | 23.3 | 4 | FAB0209060 | FAB0205575 |

Unit : mm



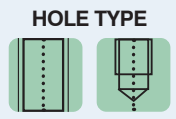
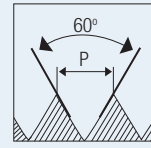
Silver cut

Spiral Flute Taps

HSS TAPS

UNF

Unified fine threads



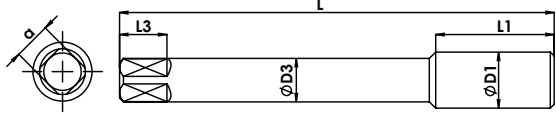
HSS-E
PM

DIN
374

2B

C/2-3P

45°



Male centre (1/4" - 3/8")
Female centre (7/16" - 1")



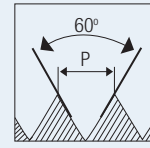
| | |
|-----------------------------------|-------|
| Series | SBS5 |
| Material - 1 st choice | M1-M3 |
| Material - 2 nd choice | - |
| Coating | TICN |

| DIN 374 | | | | | | | | | Coating | | TICN | |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|--|------|--|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flutes | EDP No. | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| 1/4" | 28 | 80 | 10 | 7 | 5.5 | 8 | 5.5 | 3 | FAB0205576 | | | |
| 5/16" | 24 | 90 | 13 | 8 | 6.2 | 9 | 6.9 | 3 | FAB0205577 | | | |
| 3/8" | 24 | 100 | 15 | 9 | 7 | 10 | 8.5 | 3 | FAB0205578 | | | |
| 7/16" | 20 | 100 | 18 | 8 | 6.2 | 9 | 9.9 | 3 | FAB0205579 | | | |
| 1/2" | 20 | 100 | 18 | 9 | 7 | 10 | 11.5 | 3 | FAB0205580 | | | |
| 5/8" | 18 | 100 | 20 | 12 | 9 | 12 | 14.5 | 3 | FAB0205581 | | | |
| 3/4" | 16 | 110 | 25 | 14 | 11 | 14 | 17.5 | 4 | FAB0205582 | | | |
| 7/8" | 14 | 125 | 25 | 18 | 14.5 | 17 | 20.5 | 4 | FAB0205583 | | | |
| 1" | 12 | 140 | 30 | 18 | 14.5 | 17 | 23.3 | 4 | FAB0205584 | | | |

Unit : mm

M

Metric coarse threads



HOLE TYPE



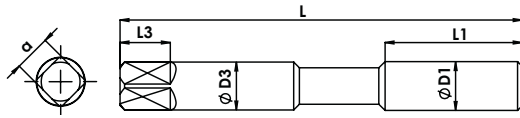
HSS-E

ISO 529

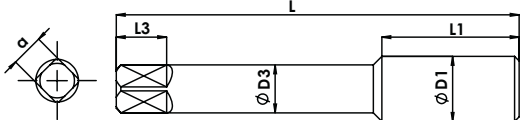
6HX

C/2-3P

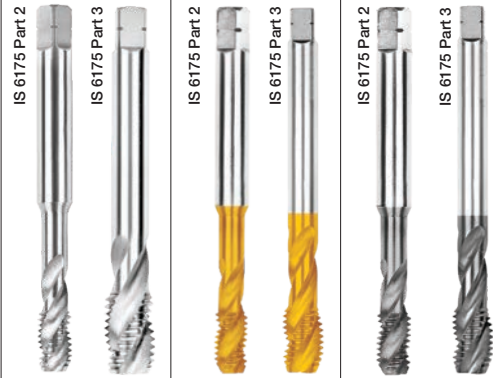
35°



Reinforced Shank (M3 - M10)
Male centre upto M5



Reduced Shank (M12 - M20)



| | | | |
|-----------------------------------|-------|-----------|-------|
| Series | SB1 | SB3 | SB4 |
| Material - 1 st choice | P0-P1 | P1-P2 | P1-P2 |
| Material - 2 nd choice | N1-N2 | K2, N3-N4 | K1-K2 |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | Coating | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|------------|
| | | | | | | | | | Bright | TiN | TiAlN |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | EDP No. | EDP No. | EDP No. | |
| M 3 | 0.5 | 48 | 5 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0200649 | FAB0200650 | FAB0203145 |
| M 3.5 | 0.6 | 50 | 6 | 3.55 | 2.8 | 5 | 2.9 | 3 | FAB0203134 | FAB0203142 | FAB0203146 |
| M 4 | 0.7 | 53 | 7 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0200663 | FAB0200665 | FAB0200666 |
| M 5 | 0.8 | 58 | 8 | 5 | 4 | 7 | 4.2 | 3 | FAB0200674 | FAB0200676 | FAB0200677 |
| M 6 | 1 | 66 | 10 | 6.3 | 5 | 8 | 5 | 3 | FAB0200686 | FAB0200688 | FAB0200689 |
| M 7 | 1 | 66 | 10 | 7.1 | 5.6 | 8 | 6 | 3 | FAB0203135 | FAB0203143 | FAB0203147 |
| M 8 | 1.25 | 72 | 13 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0200698 | FAB0200700 | FAB0200701 |
| M 10 | 1.5 | 80 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0200722 | FAB0200724 | FAB0200725 |

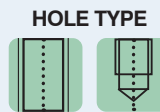
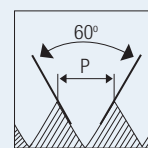
ISO 529 / IS 6175 Part 3

| | | | | | | | | | | | |
|------|------|-----|----|------|------|----|------|---|------------|------------|------------|
| M 12 | 1.75 | 89 | 18 | 9 | 7.1 | 10 | 10.2 | 3 | FAB0200752 | FAB0200754 | FAB0200755 |
| M 14 | 2 | 95 | 20 | 11.2 | 9 | 12 | 12 | 3 | FAB0200781 | FAB0200782 | FAB0203152 |
| M 16 | 2 | 102 | 20 | 12.5 | 10 | 13 | 14 | 3 | FAB0200802 | FAB0200804 | FAB0203153 |
| M 18 | 2.5 | 112 | 25 | 14 | 11.2 | 14 | 15.5 | 4 | FAB0203139 | FAB0202155 | FAB0203155 |
| M 20 | 2.5 | 112 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0203141 | FAB0200812 | FAB0203157 |

Unit : mm

M

Metric coarse threads



HSS-E
ISO 529
6HX
C/2-3P
15°

Reinforced Shank (M3 - M10)
Male centre upto M5

Reduced Shank (M12 - M20)

| | | | | | | | | | Series | SBF3 | SBF5 |
|--|--|--|--|--|--|--|--|--|-----------------------------------|------|-------|
| | | | | | | | | | Material - 1 st choice | P2 | P2-P3 |
| | | | | | | | | | Material - 2 nd choice | - | - |
| | | | | | | | | | Coating | TiN | TiCN |

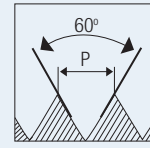
| ISO 529 / IS 6175 Part 2 | | | | | | | | | | |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 48 | 5 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0204636 | FAB0203158 |
| M 3.5 | 0.6 | 50 | 6 | 3.55 | 2.8 | 5 | 2.9 | 3 | FAB0205427 | FAB0205431 |
| M 4 | 0.7 | 53 | 7 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0204637 | FAB0203159 |
| M 5 | 0.8 | 58 | 8 | 5 | 4 | 7 | 4.2 | 3 | FAB0204638 | FAB0203160 |
| M 6 | 1 | 66 | 10 | 6.3 | 5 | 8 | 5 | 3 | FAB0204639 | FAB0203161 |
| M 7 | 1 | 66 | 10 | 7.1 | 5.6 | 8 | 6 | 3 | FAB0205428 | FAB0205432 |
| M 8 | 1.25 | 72 | 13 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0204640 | FAB0203163 |
| M 10 | 1.5 | 80 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0204641 | FAB0203166 |

| ISO 529 / IS 6175 Part 3 | | | | | | | | | | |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.75 | 89 | 18 | 9 | 7.1 | 10 | 10.2 | 3 | FAB0204642 | FAB0203169 |
| M 14 | 2 | 95 | 20 | 11.2 | 9 | 12 | 12 | 4 | FAB0204643 | FAB0203171 |
| M 16 | 2 | 102 | 20 | 12.5 | 10 | 13 | 14 | 4 | FAB0204644 | FAB0203173 |
| M 18 | 2.5 | 112 | 25 | 14 | 11.2 | 14 | 15.5 | 4 | FAB0205429 | FAB0205433 |
| M 20 | 2.5 | 112 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0205430 | FAB0203176 |

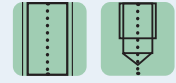
Unit : mm

M

Metric coarse threads



HOLE TYPE



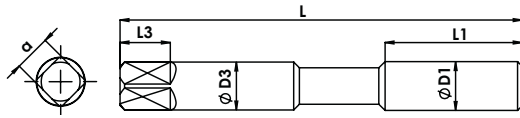
HSS-E

ISO 529

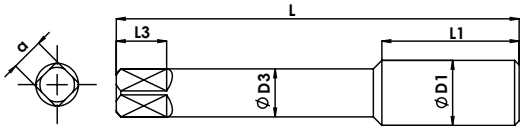
6HX

C/2-3P

45°



Reinforced Shank (M3 - M10)
Male centre upto M5



Reduced Shank (M12 - M20)

IS 6175 Part 2

IS 6175 Part 3

IS 6175 Part 2

IS 6175 Part 3



| | | |
|-----------------------------------|-------|--------------|
| Series | SBS5 | SBS6 |
| Material - 1 st choice | M1-M2 | M1-M3 |
| Material - 2 nd choice | - | - |
| Coating | TiCN | TiAlN + WC/C |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 48 | 5 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0203187 | FAB0205447 |
| M 4 | 0.7 | 53 | 7 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0203188 | FAB0205448 |
| M 5 | 0.8 | 58 | 8 | 5 | 4 | 7 | 4.2 | 3 | FAB0203189 | FAB0205449 |
| M 6 | 1 | 66 | 10 | 6.3 | 5 | 8 | 5 | 3 | FAB0203190 | FAB0205450 |
| M 8 | 1.25 | 72 | 13 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0203191 | FAB0205451 |
| M 10 | 1.5 | 80 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0203192 | FAB0205452 |

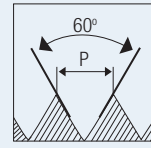
ISO 529 / IS 6175 Part 3

| | | | | | | | | | | |
|------|------|-----|----|------|------|----|------|---|------------|------------|
| M 12 | 1.75 | 89 | 18 | 9 | 7.1 | 10 | 10.2 | 4 | FAB0203193 | FAB0205453 |
| M 14 | 2 | 95 | 20 | 11.2 | 9 | 12 | 12 | 4 | FAB0203194 | FAB0205454 |
| M 16 | 2 | 102 | 20 | 12.5 | 10 | 13 | 14 | 4 | FAB0203195 | FAB0205455 |
| M 20 | 2.5 | 112 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0203196 | FAB0205456 |

Unit : mm

M

Metric coarse threads



HOLE TYPE



HSS-E
PM

ISO
529

6HX

C/2-3P

45°

18°

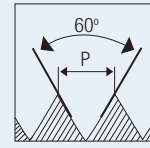
| <p>Reinforced Shank (M3 - M10) Male centre upto M5</p> <p>Reduced Shank (M12 - M16)</p> | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|--|------------|--------|------|------|-----------------------------------|-------|-------|-----------------------------------|---|---|---------|------|--------------|---------|--|--|
| | | | | | | | | | <table border="1"> <tr> <th>Series</th> <td>SBS5</td> <td>SBI6</td> </tr> <tr> <th>Material - 1st choice</th> <td>M1-M3</td> <td>S1-S4</td> </tr> <tr> <th>Material - 2nd choice</th> <td>-</td> <td>-</td> </tr> <tr> <th>Coating</th> <td>TiCN</td> <td>TiAIN + WC/C</td> </tr> <tr> <th>EDP No.</th> <td></td> <td></td> </tr> </table> | | Series | SBS5 | SBI6 | Material - 1 st choice | M1-M3 | S1-S4 | Material - 2 nd choice | - | - | Coating | TiCN | TiAIN + WC/C | EDP No. | | |
| Series | SBS5 | SBI6 | | | | | | | | | | | | | | | | | | | | | | | |
| Material - 1 st choice | M1-M3 | S1-S4 | | | | | | | | | | | | | | | | | | | | | | | |
| Material - 2 nd choice | - | - | | | | | | | | | | | | | | | | | | | | | | | |
| Coating | TiCN | TiAIN + WC/C | | | | | | | | | | | | | | | | | | | | | | | |
| EDP No. | | | | | | | | | | | | | | | | | | | | | | | | | |
| ISO 529 / IS 6175 Part 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | | | | | | | | | | | | | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | | | | | | | | | | | | | | |
| M 3 | 0.5 | 48 | 5 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0205457 | FAB0204721 | | | | | | | | | | | | | | | |
| M 4 | 0.7 | 53 | 7 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0205458 | FAB0204722 | | | | | | | | | | | | | | | |
| M 5 | 0.8 | 58 | 8 | 5 | 4 | 7 | 4.2 | 3 | FAB0205459 | FAB0204723 | | | | | | | | | | | | | | | |
| M 6 | 1 | 66 | 10 | 6.3 | 5 | 8 | 5 | 3 | FAB0205460 | FAB0204724 | | | | | | | | | | | | | | | |
| M 8 | 1.25 | 72 | 13 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0205461 | FAB0204725 | | | | | | | | | | | | | | | |
| M 10 | 1.5 | 80 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0205462 | FAB0204726 | | | | | | | | | | | | | | | |

| | | | | | | | | | | |
|--------------------------|------|-----|----|------|-----|----|------|---|------------|------------|
| ISO 529 / IS 6175 Part 3 | | | | | | | | | | |
| M 12 | 1.75 | 89 | 18 | 9 | 7.1 | 10 | 10.2 | 4 | FAB0205463 | FAB0204727 |
| M 14 | 2 | 95 | 20 | 11.2 | 9 | 12 | 12 | 4 | FAB0205464 | FAB0204728 |
| M 16 | 2 | 102 | 20 | 12.5 | 10 | 13 | 14 | 4 | FAB0205465 | FAB0204729 |

Unit : mm

M

Metric coarse threads



HOLE TYPE



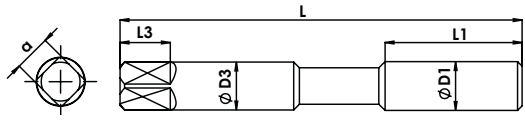
HSS-E

ISO 529

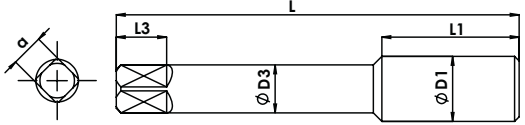
6HX

C/2-3P

40°



Reinforced Shank (M3 - M10)
Male centre upto M5



Reduced Shank (M12 - M20)

IS 6175 Part 2



IS 6175 Part 3



| | | |
|-----------------------------------|--------------|--------------|
| Series | SBU3 | SBU5 |
| Material - 1 st choice | P1-P2, M1-M2 | P1-P2, M1-M3 |
| Material - 2 nd choice | - | - |
| Coating | TiN | TiCN |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 48 | 5 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0208015 | FAB0207340 |
| M 4 | 0.7 | 53 | 7 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0208016 | FAB0208030 |
| M 5 | 0.8 | 58 | 8 | 5 | 4 | 7 | 4.2 | 3 | FAB0208017 | FAB0208031 |
| M 6 | 1 | 66 | 10 | 6.3 | 5 | 8 | 5 | 3 | FAB0208018 | FAB0208032 |
| M 8 | 1.25 | 72 | 13 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0208019 | FAB0208033 |
| M 10 | 1.5 | 80 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0208020 | FAB0208034 |

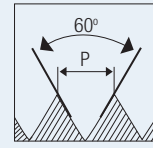
ISO 529 / IS 6175 Part 3

| | | | | | | | | | | |
|------|------|-----|----|------|------|----|------|---|------------|------------|
| M 12 | 1.75 | 89 | 18 | 9 | 7.1 | 10 | 10.2 | 3 | FAB0208021 | FAB0208035 |
| M 14 | 2 | 95 | 20 | 11.2 | 9 | 12 | 12 | 3 | FAB0208022 | FAB0208036 |
| M 16 | 2 | 102 | 20 | 12.5 | 10 | 13 | 14 | 3 | FAB0208023 | FAB0208037 |
| M 20 | 2.5 | 112 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0208977 | - |

Unit : mm

MF

Metric fine threads



HOLE TYPE



HSS-E

ISO 529

6HX

C/2-3P

35°

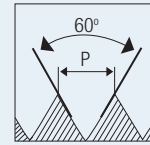
| <p>Reinforced Shank (M3 - M10) Male centre upto M5</p> | | | | | | | | | | | | |
|--|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|------------|-------|
| <p>Reduced Shank (M12 - M20)</p> | | | | | | | | | | | | |
| | | | | | | | | | Series | SB1 | SB3 | SB4 |
| | | | | | | | | | Material - 1 st choice | P0-P1 | P1-P2 | P1-P2 |
| | | | | | | | | | Material - 2 nd choice | N1-N2 | K2, N3-N4 | K1-K2 |
| | | | | | | | | | Coating | Bright | TiN | TiAlN |
| ISO 529 / IS 6175 Part 2 | | | | | | | | | EDP No. | EDP No. | EDP No. | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 8 | 1 | 72 | 13 | 8 | 6.3 | 9 | 7 | 3 | FAB0203136 | FAB0202157 | FAB0203148 | |
| M 10 | 1 | 80 | 15 | 10 | 8 | 11 | 9 | 3 | FAB0203137 | FAB0200703 | FAB0203149 | |
| M 10 | 1.25 | 80 | 15 | 10 | 8 | 11 | 8.8 | 3 | FAB0200711 | FAB0200713 | FAB0203150 | |

| | | | | | | | | | | | |
|---------------------------------|------|-----|----|------|------|----|-------|---|------------|------------|------------|
| ISO 529 / IS 6175 Part 3 | | | | | | | | | | | |
| M 12 | 1.25 | 89 | 18 | 9 | 7.1 | 10 | 10.75 | 3 | FAB0200732 | FAB0200733 | FAB0204653 |
| M 12 | 1.5 | 89 | 18 | 9 | 7.1 | 10 | 10.5 | 3 | FAB0200741 | FAB0200743 | FAB0200744 |
| M 14 | 1.5 | 95 | 20 | 11.2 | 9 | 12 | 12.5 | 3 | FAB0200772 | FAB0200774 | FAB0203151 |
| M 16 | 1.5 | 102 | 20 | 12.5 | 10 | 13 | 14.5 | 3 | FAB0200791 | FAB0200793 | FAB0200794 |
| M 18 | 1.5 | 112 | 25 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0203138 | FAB0203144 | FAB0203154 |
| M 20 | 1.5 | 112 | 25 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0203140 | FAB0200808 | FAB0203156 |

Unit : mm

MF

Metric fine threads



HOLE TYPE



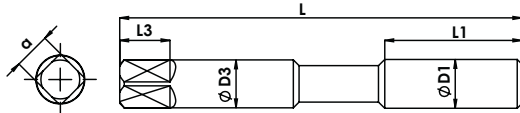
HSS-E

ISO 529

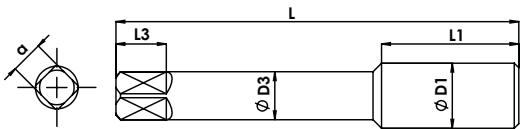
6HX

C/2-3P

15°



Reinforced Shank (M8 - M10)



Reduced Shank (M12 - M20)



| Series | SBF3 | SBF5 |
|-----------------------------------|------|-------|
| Material - 1 st choice | P2 | P2-P3 |
| Material - 2 nd choice | - | - |
| Coating | TiN | TiCN |
| EDP No. | | |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| M 8 | 1 | 72 | 13 | 8 | 6.3 | 9 | 7 | 3 |
| M 10 | 1 | 80 | 15 | 10 | 8 | 11 | 9 | 3 |
| M 10 | 1.25 | 80 | 15 | 10 | 8 | 11 | 8.8 | 3 |

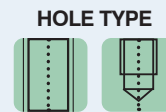
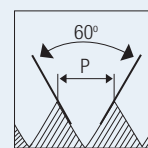
ISO 529 / IS 6175 Part 3

| | | | | | | | | | | |
|------|------|-----|----|------|------|----|------|---|------------|------------|
| M 12 | 1.5 | 89 | 18 | 9 | 7.1 | 10 | 10.5 | 3 | FAB0204648 | FAB0203168 |
| M 12 | 1.25 | 89 | 18 | 9 | 7.1 | 10 | 10.8 | 3 | FAB0204647 | FAB0203167 |
| M 14 | 1.5 | 95 | 20 | 11.2 | 9 | 12 | 12.5 | 4 | FAB0204649 | FAB0203170 |
| M 16 | 1.5 | 102 | 20 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0204650 | FAB0203172 |
| M 18 | 1.5 | 112 | 25 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0205478 | FAB0203174 |
| M 20 | 1.5 | 112 | 25 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0205479 | FAB0203175 |

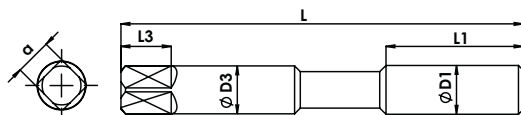
Unit : mm

MF

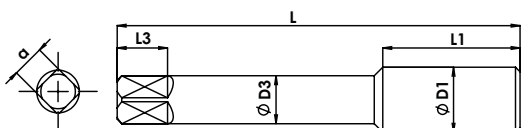
Metric fine threads



HSS-E ISO 529 6HX C/2-3P 45°



Reinforced Shank (M8 - M10)



Reduced Shank (M12 - M20)



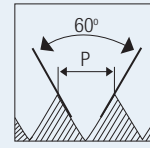
| | | | | | | | | | Series | SBS5 |
|---------------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|-------|
| | | | | | | | | | Material - 1 st choice | M1-M2 |
| | | | | | | | | | Material - 2 nd choice | - |
| | | | | | | | | | Coating | TICN |
| ISO 529 / IS 6175 Part 2 | | | | | | | | | | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 8 | 1 | 72 | 13 | 8 | 6.3 | 9 | 7 | 3 | FAB0205489 | |
| M 10 | 1 | 80 | 15 | 10 | 8 | 11 | 9 | 3 | FAB0205490 | |
| M 10 | 1.25 | 80 | 15 | 10 | 8 | 11 | 8.8 | 3 | FAB0205491 | |

| | | | | | | | | | | |
|---------------------------------|------|-----|----|------|------|----|------|---|------------|--|
| ISO 529 / IS 6175 Part 3 | | | | | | | | | | |
| M 12 | 1.5 | 89 | 18 | 9 | 7.1 | 10 | 10.5 | 4 | FAB0205492 | |
| M 12 | 1.25 | 89 | 18 | 9 | 7.1 | 10 | 10.8 | 4 | FAB0205493 | |
| M 14 | 1.5 | 95 | 20 | 11.2 | 9 | 12 | 12.5 | 4 | FAB0205494 | |
| M 16 | 1.5 | 102 | 20 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0205495 | |
| M 18 | 1.5 | 112 | 25 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0205496 | |
| M 20 | 1.5 | 112 | 25 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0205497 | |

Unit : mm

MF

Metric fine threads



HOLE TYPE



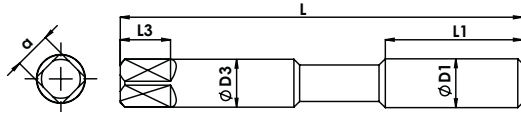
HSS-E

ISO 529

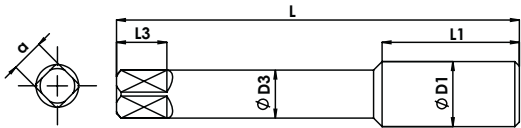
6HX

C/2-3P

45°



Reinforced Shank (M8 - M10)



Reduced Shank (M12 - M20)

IS 6175 Part 2



IS 6175 Part 3



| Series | SBU3 | SBU5 |
|-----------------------------------|--------------|--------------|
| Material - 1 st choice | P1-P2, M1-M2 | P1-P2, M1-M3 |
| Material - 2 nd choice | | - |
| Coating | TiN | TiCN |
| EDP No. | | |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 8 | 1 | 72 | 13 | 8 | 6.3 | 9 | 7 | 3 | FAB0208024 | FAB0208038 |
| M 10 | 1 | 80 | 15 | 10 | 8 | 11 | 9 | 3 | FAB0208026 | FAB0208040 |
| M 10 | 1.25 | 80 | 15 | 10 | 8 | 11 | 8.8 | 3 | FAB0208025 | FAB0208039 |

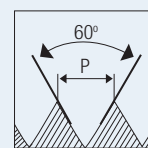
ISO 529 / IS 6175 Part 3

| | | | | | | | | | | |
|------|------|-----|----|------|------|----|------|---|------------|------------|
| M 12 | 1.5 | 89 | 18 | 9 | 7.1 | 10 | 10.5 | 3 | FAB0208028 | FAB0208042 |
| M 12 | 1.25 | 89 | 18 | 9 | 7.1 | 10 | 10.8 | 3 | FAB0208027 | FAB0208041 |
| M 14 | 1.5 | 95 | 20 | 11.2 | 9 | 12 | 12.5 | 3 | FAB0209061 | FAB0208043 |
| M 16 | 1.5 | 102 | 20 | 12.5 | 10 | 13 | 14.5 | 3 | FAB0208029 | FAB0208044 |
| M 18 | 1.5 | 112 | 25 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0208620 | FAB0209063 |
| M 20 | 1.5 | 112 | 25 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0209062 | FAB0209064 |

Unit : mm

UNC

Unified coarse threads



HOLE TYPE



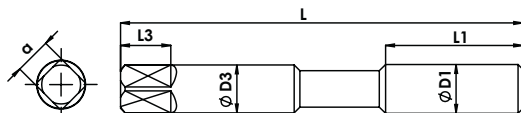
HSS-E

ISO 529

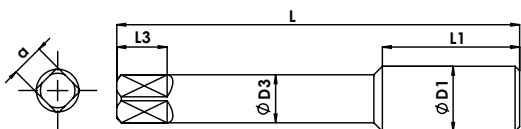
2B

C/2-3P

35°



Reinforced Shank (1/4" - 3/8")



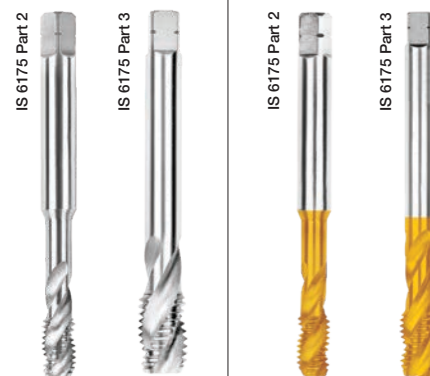
Reduced Shank (7/16" - 3/4")

IS 6175 Part 2

IS 6175 Part 3

IS 6175 Part 2

IS 6175 Part 3



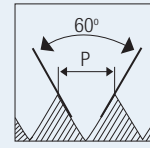
| ISO 529 / IS 6175 Part 2 | | | | | | | | | Series | SB1 | SB3 |
|-----------------------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|-----|
| Material - 1 st choice | | | | | | | | | P0-P1 | | |
| Material - 2 nd choice | | | | | | | | | N1-N2 | | |
| Coating | | | | | | | | | Bright | | TiN |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/4" | 20 | 66 | 10 | 6.3 | 5 | 8 | 5.5 | 3 | FAB0200576 | FAB0200578 | |
| 5/16" | 18 | 72 | 13 | 8 | 6.3 | 9 | 6.9 | 3 | FAB0200585 | FAB0200587 | |
| 3/8" | 16 | 80 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0200596 | FAB0200598 | |

| ISO 529 / IS 6175 Part 3 | | | | | | | | | | |
|--------------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 7/16" | 14 | 85 | 19 | 8 | 6.3 | 9 | 9.2 | 3 | FAB0200606 | FAB0200608 |
| 1/2" | 13 | 89 | 18 | 9 | 7.1 | 10 | 11.5 | 3 | FAB0200617 | FAB0200619 |
| 5/8" | 11 | 102 | 20 | 12.5 | 10 | 13 | 14.5 | 3 | FAB0200631 | FAB0200633 |
| 3/4" | 10 | 112 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0200641 | FAB0200643 |

Unit : mm

UNC

Unified coarse threads



HOLE TYPE



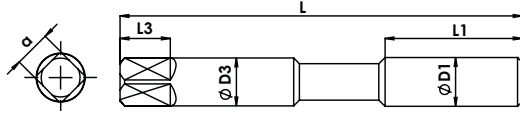
HSS-E

ISO 529

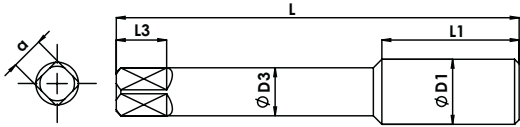
2B

C/2-3P

45°



Reinforced Shank (1/4" - 3/8")



Reduced Shank (7/16" - 3/4")

IS 6175 Part 2



IS 6175 Part 3



IS 6175 Part 2



IS 6175 Part 3



| Series | SBU3 | SBU5 |
|-----------------------------------|-------------|-------------|
| Material - 1 st choice | P1-P2 M1-M2 | P1-P2 M1-M3 |
| Material - 2 nd choice | - | - |
| Coating | TiN | TiCN |
| EDP No. | | |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| 1/4" | 20 | 66 | 10 | 6.3 | 5 | 8 | 5.5 | 3 |
| 5/16" | 18 | 72 | 13 | 8 | 6.3 | 9 | 6.9 | 3 |
| 3/8" | 16 | 80 | 15 | 10 | 8 | 11 | 8.5 | 3 |

ISO 529 / IS 6175 Part 3

| | | | | | | | | | | |
|-------|----|-----|----|------|------|----|-------|---|------------|------------|
| 7/16" | 14 | 85 | 19 | 8 | 6.3 | 9 | 9.2 | 3 | FAB0209067 | FAB0209071 |
| 1/2" | 13 | 89 | 19 | 9 | 7.1 | 10 | 11.5 | 3 | FAB0208968 | FAB0209072 |
| 5/8" | 11 | 102 | 20 | 12.5 | 10 | 13 | 14.5 | 3 | FAB0208969 | FAB0209073 |
| 3/4" | 10 | 112 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0208970 | FAB0209074 |
| 7/8" | 9 | 118 | 30 | 16 | 22.5 | 16 | 19.5 | 4 | FAB0207817 | FAB0209075 |
| 1" | 8 | 130 | 32 | 18 | 14 | 18 | 22.25 | 4 | FAB0208868 | FAB0209076 |

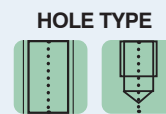
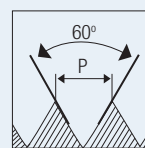
Unit : mm



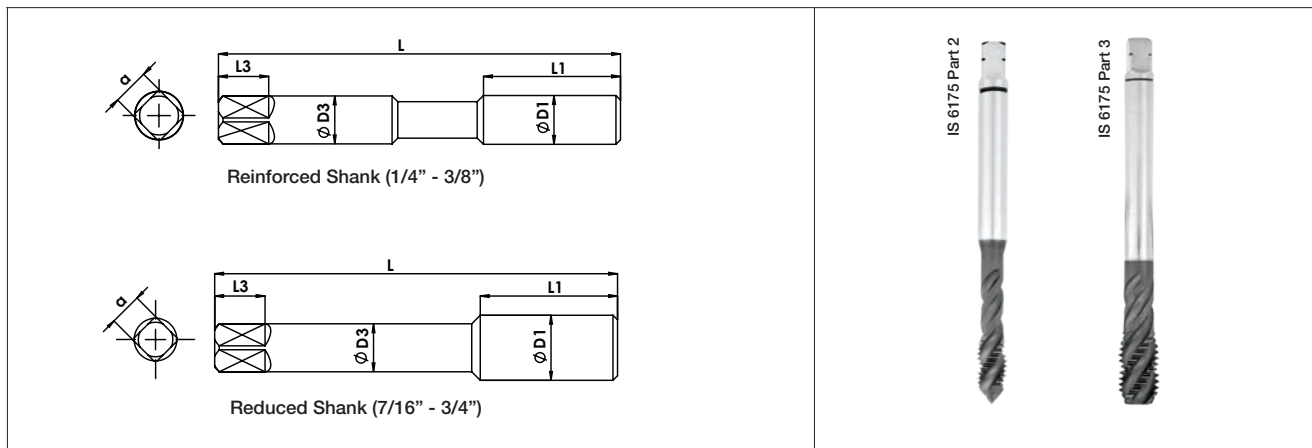
Spiral Flute Taps

HSS TAPS

UNC Unified coarse threads



HSS-E PM
ISO 529
2B
C/2-3P
45°



| | |
|-----------------------------------|-------|
| Series | SBS5 |
| Material - 1 st choice | M1-M3 |
| Material - 2 nd choice | - |
| Coating | TICN |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| 1/4" | 20 | 66 | 10 | 6.3 | 5 | 8 | 5.5 | 3 | FAB0205514 |
| 5/16" | 18 | 72 | 13 | 8 | 6.3 | 9 | 6.9 | 3 | FAB0205515 |
| 3/8" | 16 | 80 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0205516 |

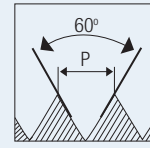
ISO 529 / IS 6175 Part 3

| | | | | | | | | | |
|-------|----|-----|----|------|------|----|------|---|------------|
| 7/16" | 14 | 85 | 19 | 8 | 6.3 | 9 | 9.2 | 3 | FAB0205517 |
| 1/2" | 13 | 89 | 19 | 9 | 7.1 | 10 | 11.5 | 4 | FAB0205518 |
| 5/8" | 11 | 102 | 20 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0205519 |
| 3/4" | 10 | 112 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0205520 |

Unit : mm

UNF

Unified fine threads



HOLE TYPE



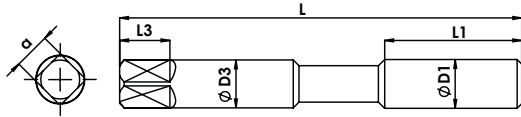
HSS-E

ISO 529

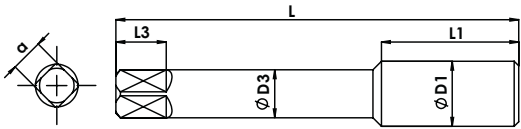
2B

C/2-3P

35°



Reinforced Shank (1/4" - 3/8")



Reduced Shank (7/16" - 3/4")

IS 6175 Part 2



IS 6175 Part 3



IS 6175 Part 2



IS 6175 Part 3



| | | |
|-----------------------------------|--------|-----------|
| Series | SB1 | SB3 |
| Material - 1 st choice | P0-P1 | P1-P2 |
| Material - 2 nd choice | N1-N2 | K2, N3-N4 |
| Coating | Bright | TiN |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 1/4" | 28 | 66 | 10 | 6.3 | 5 | 8 | 5.5 | 3 | FAB0200500 | FAB0200501 |
| 5/16" | 24 | 69 | 13 | 8 | 6.3 | 9 | 6.9 | 3 | FAB0200510 | FAB0200512 |
| 3/8" | 24 | 76 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0200520 | FAB0200522 |

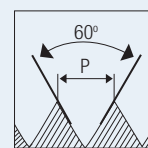
ISO 529 / IS 6175 Part 3

| | | | | | | | | | | |
|-------|----|-----|----|------|------|----|------|---|------------|------------|
| 7/16" | 20 | 82 | 19 | 8 | 6.3 | 9 | 9.9 | 3 | FAB0200531 | FAB0200533 |
| 1/2" | 20 | 84 | 19 | 9 | 7.1 | 10 | 11.5 | 3 | FAB0200542 | FAB0200544 |
| 5/8" | 18 | 95 | 20 | 12.5 | 10 | 13 | 14.5 | 3 | FAB0200555 | FAB0200557 |
| 3/4" | 16 | 104 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0200566 | FAB0200568 |

Unit : mm

UNF

Unified fine threads



HOLE TYPE



HSS-E

ISO 529

2B

C/2-3P

45°

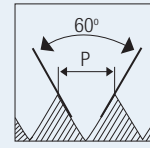
| <p>Reinforced Shank (1/4" - 3/8")</p> | | <p>Reduced Shank (7/16" - 3/4")</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------|-------------------------------------|---------------|---|-------------|---------------|------------------------|--------------------------|-----------------------------------|--------------|--------------|-----------------------------------|---|---|---------|-----|---------|---------|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|--|--|-----|---|---|----|-----|---|----|-----|--|--|--|------|----|----|----|-----|---|---|-----|---|------------|------------|-------|----|----|----|---|-----|---|-----|---|------------|------------|------|----|----|----|----|---|----|-----|---|------------|------------|
| | | | | <table border="1"> <tr> <th>Series</th> <td>SBU3</td> <td>SBU5</td> </tr> <tr> <th>Material - 1st choice</th> <td>P1-P2, M1-M2</td> <td>P1-P2, M1-M3</td> </tr> <tr> <th>Material - 2nd choice</th> <td>-</td> <td>-</td> </tr> <tr> <th>Coating</th> <td>TiN</td> <td>TiCN</td> </tr> </table> | | Series | SBU3 | SBU5 | Material - 1 st choice | P1-P2, M1-M2 | P1-P2, M1-M3 | Material - 2 nd choice | - | - | Coating | TiN | TiCN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Series | SBU3 | SBU5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material - 1 st choice | P1-P2, M1-M2 | P1-P2, M1-M3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Material - 2 nd choice | - | - | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coating | TiN | TiCN | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th colspan="9">ISO 529 / IS 6175 Part 2</th> <th>EDP No.</th> <th>EDP No.</th> </tr> <tr> <th>Nominal Diameter</th> <th>TPI</th> <th>Overall Length</th> <th>Thread Length</th> <th>Shank Diameter</th> <th>Square Size</th> <th>Square Length</th> <th>Tapping Drill Diameter</th> <th>No. of Flutes</th> <th></th> <th></th> </tr> <tr> <th>ØD1</th> <th>p</th> <th>L</th> <th>L1</th> <th>ØD3</th> <th>a</th> <th>L3</th> <th>Ød1</th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>1/4"</td> <td>28</td> <td>66</td> <td>10</td> <td>6.3</td> <td>5</td> <td>8</td> <td>5.5</td> <td>3</td> <td>FAB0209077</td> <td>FAB0209086</td> </tr> <tr> <td>5/16"</td> <td>24</td> <td>69</td> <td>13</td> <td>8</td> <td>6.3</td> <td>9</td> <td>6.9</td> <td>3</td> <td>FAB0209078</td> <td>FAB0209087</td> </tr> <tr> <td>3/8"</td> <td>24</td> <td>76</td> <td>15</td> <td>10</td> <td>8</td> <td>11</td> <td>8.5</td> <td>3</td> <td>FAB0209079</td> <td>FAB0209088</td> </tr> </tbody> </table> | | | | | | | | ISO 529 / IS 6175 Part 2 | | | | | | | | | EDP No. | EDP No. | Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | | | ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | 1/4" | 28 | 66 | 10 | 6.3 | 5 | 8 | 5.5 | 3 | FAB0209077 | FAB0209086 | 5/16" | 24 | 69 | 13 | 8 | 6.3 | 9 | 6.9 | 3 | FAB0209078 | FAB0209087 | 3/8" | 24 | 76 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0209079 | FAB0209088 |
| ISO 529 / IS 6175 Part 2 | | | | | | | | | EDP No. | EDP No. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/4" | 28 | 66 | 10 | 6.3 | 5 | 8 | 5.5 | 3 | FAB0209077 | FAB0209086 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/16" | 24 | 69 | 13 | 8 | 6.3 | 9 | 6.9 | 3 | FAB0209078 | FAB0209087 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3/8" | 24 | 76 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0209079 | FAB0209088 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| ISO 529 / IS 6175 Part 3 | | | | | | | | | | |
|--------------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 7/16" | 20 | 82 | 19 | 8 | 6.3 | 9 | 9.9 | 3 | FAB0209080 | FAB0209089 |
| 1/2" | 20 | 84 | 19 | 9 | 7.1 | 10 | 11.5 | 3 | FAB0209081 | FAB0209090 |
| 5/8" | 18 | 95 | 20 | 12.5 | 10 | 13 | 14.5 | 3 | FAB0209082 | FAB0209091 |
| 3/4" | 16 | 104 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0209083 | FAB0209092 |
| 7/8" | 14 | 113 | 20 | 16 | 12.5 | 16 | 20.4 | 4 | FAB0209084 | FAB0209093 |
| 1" | 12 | 120 | 22 | 18 | 14 | 18 | 23.25 | 4 | FAB0209085 | FAB0209094 |

Unit : mm

UNF

Unified fine threads



HOLE TYPE



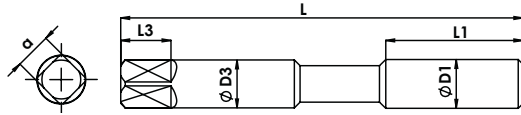
HSS-E
PM

ISO
529

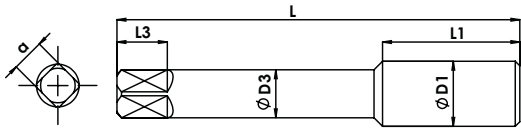
2B

C/2-3P

45°



Reinforced Shank (1/4" - 3/8")



Reduced Shank (7/16" - 3/4")

IS 6175 Part 2



IS 6175 Part 3



| | |
|-----------------------------------|-------|
| Series | SBS5 |
| Material - 1 st choice | M1-M3 |
| Material - 2 nd choice | - |
| Coating | TiCN |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| 1/4" | 28 | 66 | 10 | 6.3 | 5 | 8 | 5.5 | 3 | FAB0205528 |
| 5/16" | 24 | 69 | 13 | 8 | 6.3 | 9 | 6.9 | 3 | FAB0205529 |
| 3/8" | 24 | 76 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0205530 |

ISO 529 / IS 6175 Part 3

| | | | | | | | | | |
|-------|----|-----|----|------|------|----|------|---|------------|
| 7/16" | 20 | 82 | 19 | 8 | 6.3 | 9 | 9.9 | 3 | FAB0205531 |
| 1/2" | 20 | 84 | 19 | 9 | 7.1 | 10 | 11.5 | 4 | FAB0205532 |
| 5/8" | 18 | 95 | 20 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0205533 |
| 3/4" | 16 | 104 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0205534 |

Unit : mm



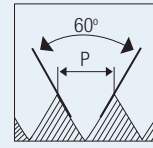
Silver cut

Spiral Flute Taps

HSS TAPS

M/MF

Metric coarse & fine threads



HOLE TYPE

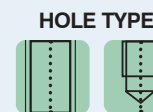
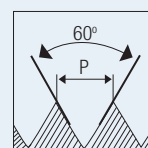


| | | | | | | | | | | |
|---|-------|----------------|---------------|----------------|-------------|---------------|------|-----------------------------------|------------|---------|
| <p>Reinforced Shank (M3 - M6) Male Centre upto M6</p> <p>Reduced Shank (M8 - M20)</p> | | | | | | | | | | |
| | | | | | | | | Series | SB1 | SB4 |
| | | | | | | | | Material - 1 st choice | P0-P1 | P1-P2 |
| | | | | | | | | Material - 2 nd choice | N1-N2 | K1-K2 |
| | | | | | | | | Coating | Bright | TIAIN |
| JIS | | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Ød1 | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 46 | 11 | 4 | 3.2 | 6 | 2.5 | FAB0205079 | FAB0205674 | |
| M 4 | 0.7 | 52 | 13 | 5 | 4 | 7 | 3.3 | FAB0205080 | FAB0205675 | |
| M 5 | 0.8 | 60 | 16 | 5.5 | 4.5 | 7 | 4.2 | FAB0205081 | FAB0205676 | |
| M 6 | 1 | 62 | 19 | 6 | 4.5 | 7 | 5 | FAB0205082 | FAB0205677 | |
| M 8 | 1.25 | 70 | 22 | 6.2 | 5 | 8 | 6.8 | FAB0205083 | FAB0205678 | |
| M 8 | 1 | 70 | 22 | 6.2 | 5 | 8 | 7 | FAB0206328 | - | |
| M 10 | 1.5 | 75 | 24 | 7 | 5.5 | 8 | 8.5 | FAB0205084 | FAB0205680 | |
| M 10 | 1.25 | 75 | 24 | 7 | 5.5 | 8 | 8.8 | FAB0206286 | - | |
| M 12 | 1.75 | 82 | 29 | 8.5 | 6.5 | 9 | 10.3 | FAB0205085 | FAB0205682 | |
| M 12 | 1.5 | 82 | 29 | 8.5 | 6.5 | 9 | 10.5 | FAB0205609 | FAB0205602 | |
| M 14 | 2 | 88 | 30 | 10.5 | 8 | 11 | 12 | FAB0205610 | FAB0205603 | |
| M 16 | 2 | 95 | 32 | 12.5 | 10 | 13 | 14 | FAB0205611 | FAB0205604 | |
| M 18 | 2.5 | 100 | 37 | 14 | 11 | 14 | 15.5 | FAB0205612 | FAB0205605 | |
| M 20 | 2.5 | 105 | 37 | 15 | 12 | 15 | 17.5 | FAB0205613 | FAB0205606 | |

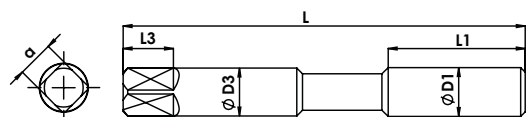
Unit : mm

M

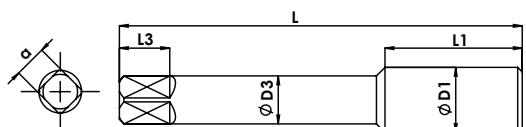
Metric coarse threads



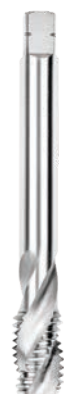
HSSE
6H
ISO 529
35°
C/2-3P



Reinforced Shank (M3 - M10)
Male centre upto M5



Reduced Shank (M12 - M20)



| | | | | | | | Coating | Bright | TiN |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 3 | 0.5 | 48 | 5 | 3.15 | 2.5 | 5 | 2.5 | FAB0201290 | FAB0201292 |
| M 3.5 | 0.6 | 50 | 6 | 3.55 | 2.8 | 5 | 2.9 | FAB0201293 | FAB0206709 |
| M 4 | 0.7 | 53 | 7 | 4 | 3.15 | 6 | 3.3 | FAB0201295 | FAB0201296 |
| M 5 | 0.8 | 58 | 8 | 5 | 4 | 7 | 4.2 | FAB0201299 | FAB0201300 |
| M 6 | 1 | 66 | 10 | 6.3 | 5 | 8 | 5 | FAB0201303 | FAB0201304 |
| M 7 | 1 | 66 | 10 | 7.1 | 5.6 | 8 | 6 | FAB0201310 | FAB0201311 |
| M 8 | 1.25 | 72 | 13 | 8 | 6.3 | 9 | 6.8 | FAB0201314 | FAB0201315 |
| M 10 | 1.5 | 80 | 15 | 10 | 8 | 11 | 8.5 | FAB0201324 | FAB0201325 |
| M 12 | 1.75 | 89 | 18 | 9 | 7.1 | 10 | 10.2 | FAB0201334 | FAB0201335 |
| M 14 | 2 | 95 | 20 | 11.2 | 9 | 12 | 12 | FAB0201341 | FAB0201342 |
| M 16 | 2 | 102 | 20 | 12.5 | 10 | 13 | 14 | FAB0201347 | FAB0201348 |
| M 18 | 2.5 | 112 | 25 | 14 | 11.2 | 14 | 15.5 | FAB0201351 | FAB0201352 |
| M 20 | 2.5 | 112 | 25 | 14 | 11.2 | 14 | 17.5 | FAB0201355 | FAB0201356 |
| M 24 | 3 | 130 | 30 | 18 | 14 | 18 | 21 | FAB0201360 | FAB0201362 |
| M 27 | 3 | 135 | 30 | 20 | 16 | 20 | 24 | FAB0201365 | FAB0206710 |
| M 30 | 3.5 | 138 | 35 | 20 | 16 | 20 | 26.5 | FAB0201366 | FAB0204001 |
| M 36 | 4 | 162 | 40 | 25 | 20 | 24 | 32 | FAB0201368 | FAB0202149 |

Unit : mm



High Performance Cutting Tools

BLU SERIES TAPS



HSS SPIRAL FLUTED TAPS

MANUFACTURED FROM HIGH
GRADE HSS STEEL

SPECIAL BLU COATING
FOR HIGHER LIFE

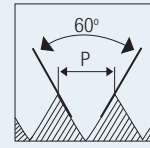
SUITABLE FOR
GENERAL APPLICATION



Spiral Flute Taps

M/MF

Metric coarse & fine threads



HOLE TYPE



HSS
BLD
ISO 529
6HX
C/2-3P
40°



| ISO 529 / IS 6175 Part 2 | | | | | | | | | Series |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|
| | | | | | | | | | Material - 1 st choice |
| | | | | | | | | | Material - 2 nd choice |
| | | | | | | | | | Coating |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M3 | 0.5 | 48 | 5 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0209314 |
| M4 | 0.7 | 53 | 7 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0209315 |
| M5 | 0.8 | 58 | 8 | 5 | 4 | 7 | 4.2 | 3 | FAB0209316 |
| M6 | 1 | 66 | 10 | 6.3 | 5 | 8 | 5 | 3 | FAB0209317 |
| M8 | 1.25 | 72 | 13 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0209318 |
| M10 | 1.5 | 80 | 15 | 10 | 8 | 11 | 8.5 | 3 | FAB0209319 |

| ISO 529 / IS 6175 Part 3 | | | | | | | | | |
|--------------------------|------|-----|----|------|------|----|------|---|------------|
| M12 | 1.75 | 89 | 18 | 9 | 7.1 | 10 | 10.2 | 3 | FAB0209320 |
| M14 | 2 | 95 | 20 | 11.2 | 9 | 12 | 12 | 3 | FAB0209321 |
| M16 | 2 | 102 | 20 | 12.5 | 10 | 13 | 14 | 3 | FAB0209322 |
| M18 | 2.5 | 112 | 25 | 14 | 11.2 | 14 | 15.5 | 4 | FAB0209323 |
| M20 | 2.5 | 112 | 25 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0209324 |
| M22 | 2.5 | 115 | 25 | 16 | 12.5 | 16 | 19.5 | 4 | FAB0209325 |
| M24 | 3 | 130 | 30 | 18 | 14 | 18 | 21 | 4 | FAB0209326 |

| ISO 529 / IS 6175 Part 2 | | | | | | | | | |
|--------------------------|------|----|----|-----|-----|----|------|---|------------|
| MF6 | 0.75 | 66 | 8 | 6.3 | 5 | 8 | 5.25 | 3 | FAB0209327 |
| MF8 | 1 | 72 | 13 | 8 | 6.3 | 9 | 7 | 3 | FAB0209328 |
| MF10 | 1.25 | 80 | 15 | 10 | 8 | 11 | 8.8 | 3 | FAB0209329 |

| ISO 529 / IS 6175 Part 3 | | | | | | | | | |
|--------------------------|------|-----|----|------|------|----|-------|---|------------|
| MF12 | 1.25 | 89 | 18 | 9 | 7.1 | 10 | 10.75 | 3 | FAB0209330 |
| MF12 | 1.5 | 89 | 18 | 9 | 7.1 | 10 | 10.5 | 3 | FAB0209331 |
| MF14 | 1.5 | 95 | 20 | 11.2 | 9 | 12 | 12.5 | 3 | FAB0209332 |
| MF16 | 1.5 | 102 | 20 | 12.5 | 10 | 13 | 14.5 | 3 | FAB0209333 |
| M18 | 1.5 | 112 | 25 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0209334 |
| M20 | 1.5 | 112 | 25 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0209335 |



High Performance Cutting Tools



STRAIGHT FLUTE TAPS
SC SERIES

STRAIGHT FLUTE TAPS

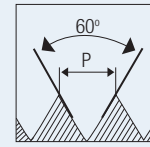
| SERIES | THREAD FORM | LENGTH STANDARD | WORKPIECE MATERIAL | 1ST CHOICE | 2ND CHOICE | TOOL MATERIAL | COATING | PAGE |
|--------|-------------|-----------------|--------------------|------------|------------|---------------|---------|-------|
| SC3 | M | DIN 371/DIN 376 | Cast Iron | K1,K2 | N2,N3 | HSSE | TiN | 1.076 |
| SC4 | M | DIN 371/DIN 376 | Cast Iron | K1-K3 | - | HSSE | TiAIN | |
| SCF5 | M | DIN 371/DIN 376 | Steel | P2-P3 | - | HSSE | TiCN | 1.077 |
| SC4TC | M | DIN 371/DIN 376 | Cast Iron | K1-K3 | - | HSSE | TiAIN | |
| SC4 | M | DIN 371/DIN 376 | Cast Iron | K1-K3 | - | HSSE PM | TiAIN | 1.078 |
| SC4TC | M | DIN 371/DIN 376 | Cast Iron | K1-K3 | - | HSSE PM | TiAIN | |
| SC3 | MF | DIN 374 | Cast Iron | K1,K2 | N2,N3 | HSSE | TiN | 1.079 |
| SC4 | MF | DIN 374 | Cast Iron | K1-K3 | - | HSSE | TiAIN | |
| SCF5 | MF | DIN 374 | Steel | P2-P3 | - | HSSE | TiCN | 1.080 |
| SC4TC | MF | DIN 374 | Cast Iron | K1-K3 | - | HSSE | TiAIN | |
| SC3 | UNC | DIN 371/DIN 376 | Cast Iron | K1-K2 | N2,N3 | HSSE | TiN | 1.081 |
| SC4 | UNC | DIN 371/DIN 376 | Cast Iron | K1,K3 | - | HSSE | TiAIN | |
| SC3 | UNF | DIN 374 | Cast Iron | K1,K2 | N2,N3 | HSSE | TiN | 1.082 |
| SC4 | UNF | DIN 374 | Cast Iron | K1,K3 | - | HSSE | TiAIN | |
| SC3 | M | ISO 529 | Cast Iron | K1,K2 | N2,N3 | HSSE | TiN | 1.083 |
| SC4 | M | ISO 529 | Cast Iron | K1-K3 | - | HSSE | TiAIN | |

STRAIGHT FLUTE TAPS

| SERIES | THREAD FORM | LENGTH STANDARD | WORKPIECE MATERIAL | 1ST CHOICE | 2ND CHOICE | TOOL MATERIAL | COATING | PAGE |
|--------|-------------|-----------------|--------------------|------------|------------|---------------|---------|-------|
| SCF5 | M | ISO 529 | Steel | P2-P3 | - | HSSE | TiCN | 1.084 |
| SC4TC | M | ISO 529 | Cast Iron | K1-K3 | - | HSSE | TiAlN | |
| SC4 | M | ISO 529 | Cast Iron | K1-K3 | - | HSSE PM | TiAlN | 1.085 |
| SC4TC | M | ISO 529 | Cast Iron | K1-K3 | - | HSSE PM | TiAlN | |
| SC3 | MF | ISO 529 | Cast Iron | K1,K2 | N2,N3 | HSSE | TiN | 1.086 |
| SC4 | MF | ISO 529 | Cast Iron | K1-K3 | - | HSSE | TiAlN | |
| SCF5 | MF | ISO 529 | Steel | P2-P3 | - | HSSE | TiCN | 1.087 |
| SC4TC | MF | ISO 529 | Cast Iron | K1-K3 | - | HSSE | TiAlN | |
| SC3 | UNC | ISO 529 | Cast Iron | K1,K2 | N2,N3 | HSSE | TiN | 1.088 |
| SC4 | UNC | ISO 529 | Cast Iron | K1-K3 | - | HSSE | TiAlN | |
| SC3 | UNF | ISO 529 | Cast Iron | K1,K2 | N2,N3 | HSSE | TiN | 1.089 |
| SC4 | UNF | ISO 529 | Cast Iron | K1-K3 | - | HSSE | TiAlN | |
| SC3 | M | JIS | Cast Iron | K1-K2 | N2,N3 | HSSE | TiN | 1.090 |
| SC4 | M | JIS | Cast Iron | K1-K3 | - | HSSE | TiAlN | |



Metric coarse threads



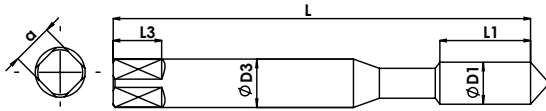
HOLE TYPE



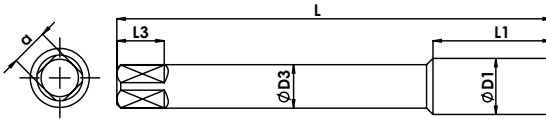
HSS-E

DIN 371/376

6H



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M20)



| | | |
|-----------------------------------|-------|-------|
| Series | SC3 | SC4 |
| Material - 1 st choice | K1-K2 | K1-K3 |
| Material - 2 nd choice | N2-N3 | - |

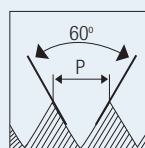
| DIN 371 | | | | | | | Coating | | TIN | TIAlN |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. Of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0204433 | FAB0204441 |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0204434 | FAB0204442 |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 8 | 4.2 | 3 | FAB0203676 | FAB0204443 |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 8 | 5 | 3 | FAB0203677 | FAB0203679 |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0203678 | FAB0203680 |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0200969 | FAB0203682 |

| DIN 376 | | | | | | | | | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. Of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 10.2 | 4 | FAB0200975 | FAB0203683 |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 12 | 4 | FAB0204437 | FAB0204446 |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 14 | 4 | FAB0204438 | FAB0204447 |
| M 18 | 2.5 | 125 | 34 | 14 | 11 | 14 | 15.5 | 4 | FAB0204439 | FAB0204448 |
| M 20 | 2.5 | 140 | 34 | 16 | 12 | 15 | 17.5 | 4 | FAB0204440 | FAB0204449 |

Unit : mm

M

Metric coarse threads



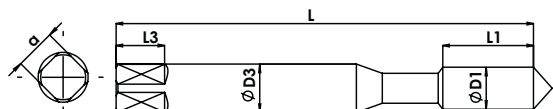
HOLE TYPE



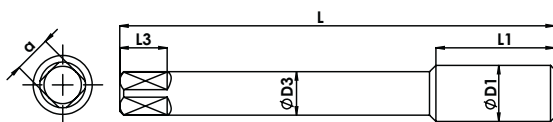
HSS-E

DIN 371/376

6HX



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M20)

DIN 371

DIN 376

DIN 371

DIN 376



| | | |
|-----------------------------------|-------|-------|
| Series | SCF5 | SC4TC |
| Material - 1 st choice | P2-P3 | K1-K3 |
| Material - 2 nd choice | - | - |
| Coating | TiCN | TiAlN |

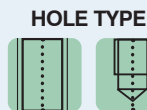
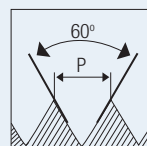
| DIN 371 | | | | | | | | | Coating | | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|--|--|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0204586 | FAB0204873 | | |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0204587 | FAB0204874 | | |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 8 | 4.2 | 3 | FAB0204588 | FAB0204875 | | |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 8 | 5 | 3 | FAB0204589 | FAB0204876 | | |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0204590 | FAB0204877 | | |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0204591 | FAB0204878 | | |

| DIN 376 | | | | | | | | | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 10.2 | 4 | FAB0204592 | FAB0204879 |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 12 | 4 | FAB0204593 | FAB0204880 |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 14 | 4 | FAB0204594 | FAB0204881 |
| M 18 | 2.5 | 125 | 34 | 14 | 11 | 14 | 15.5 | 4 | FAB0204939 | FAB0204882 |
| M 20 | 2.5 | 140 | 34 | 16 | 12 | 15 | 17.5 | 4 | FAB0204940 | FAB0204883 |

Unit : mm

M

Metric coarse threads

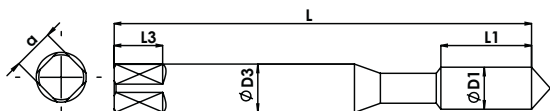


HSS-E
PM

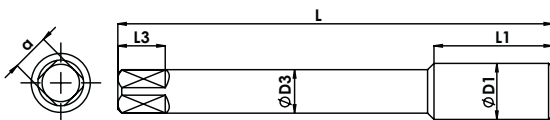
DIN
371/376

6H

E/1.5-2P



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M20)

DIN 371

DIN 376

DIN 371

DIN 376

| Series | SC4 | SC4TC |
|-----------------------------------|-------|-------|
| Material - 1 st choice | K1-K3 | K1-K3 |
| Material - 2 nd choice | - | - |
| Coating | TiAIN | TiAIN |
| EDP No. | | |

| DIN 371 | | | | | | | | | Coating | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. Of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.5 | 3 | FAB0205405 | FAB0205416 |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.3 | 3 | FAB0205406 | FAB0205417 |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 8 | 4.2 | 3 | FAB0205407 | FAB0205418 |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 8 | 5 | 3 | FAB0205408 | FAB0205419 |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 6.8 | 3 | FAB0205409 | FAB0205420 |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0205410 | FAB0205421 |

| DIN 376 | | | | | | | | | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. Of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 10.2 | 4 | FAB0205411 | FAB0205422 |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 12 | 4 | FAB0205412 | FAB0205423 |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 14 | 4 | FAB0205413 | FAB0205424 |
| M 18 | 2.5 | 125 | 34 | 14 | 11 | 14 | 15.5 | 4 | FAB0205414 | FAB0205425 |
| M 20 | 2.5 | 140 | 34 | 16 | 12 | 15 | 17.5 | 4 | FAB0205415 | FAB0205426 |

Unit : mm



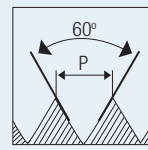
Silver cut

Straight Flute Tap

HSS TAPS

MF

Metric fine threads



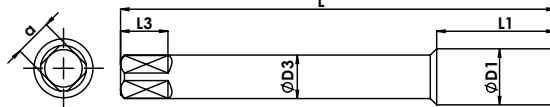
HOLE TYPE



HSS-E

DIN 374

6H



Male centre (M8 - M10)
Female centre (M12 - M20)

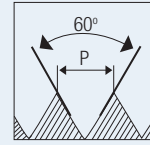


| DIN 374 | | | | | | | | | Series | SC3 | SC4 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|-------|
| | | | | | | | | | Material - 1 st choice | K1-K2 | K1-K3 |
| | | | | | | | | | Material - 2 nd choice | N2-N3 | - |
| | | | | | | | | | Coating | TiN | TiAIN |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. Of Flutes | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 8 | 1 | 90 | 22 | 6 | 4.9 | 8 | 7 | 3 | FAB0204451 | FAB0204460 | |
| M 10 | 1.25 | 100 | 24 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0203681 | FAB0204461 | |
| M 10 | 1 | 90 | 20 | 7 | 5.5 | 8 | 9 | 4 | FAB0204452 | FAB0204462 | |
| M12 | 1.5 | 100 | 22 | 9 | 7 | 10 | 10.5 | 4 | FAB0204453 | FAB0204463 | |
| M12 | 1.25 | 100 | 22 | 9 | 7 | 10 | 10.8 | 4 | FAB0204454 | FAB0204464 | |
| M14 | 1.5 | 100 | 22 | 11 | 9 | 12 | 12.5 | 4 | FAB0204455 | FAB0204465 | |
| M16 | 1.5 | 100 | 22 | 12 | 9 | 12 | 14.5 | 4 | FAB0204456 | FAB0204466 | |
| M18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0204457 | FAB0204467 | |
| M20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 18.5 | 4 | FAB0204458 | FAB0204468 | |

Unit : mm

MF

Metric fine threads



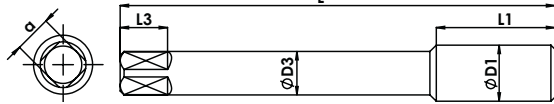
HOLE TYPE



HSS-E

DIN 374

6HX



Male centre (M8 - M10)
Female centre (M12 - M20)



| | | |
|-----------------------------------|-------|-------|
| Series | SCF5 | SC4TC |
| Material - 1 st choice | P2-P3 | K1-K3 |
| Material - 2 nd choice | - | - |

| DIN 374 | | | | | | | | | Coating | TiCN | TiAlN |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|-------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. Of Flutes | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 8 | 1 | 90 | 22 | 6 | 4.9 | 8 | 7 | 3 | FAB0204595 | FAB0204886 | |
| M 10 | 1.25 | 100 | 24 | 7 | 5.5 | 8 | 8.8 | 3 | FAB0204596 | FAB0204888 | |
| M 10 | 1 | 90 | 20 | 7 | 5.5 | 8 | 9 | 4 | FAB0204943 | FAB0204887 | |
| M 12 | 1.5 | 100 | 22 | 9 | 7 | 10 | 10.5 | 4 | FAB0204598 | FAB0204890 | |
| M 12 | 1.25 | 100 | 22 | 9 | 7 | 10 | 10.8 | 4 | FAB0204597 | FAB0204889 | |
| M 14 | 1.5 | 100 | 22 | 11 | 9 | 12 | 12.5 | 4 | FAB0204599 | FAB0204891 | |
| M 16 | 1.5 | 100 | 22 | 12 | 9 | 12 | 14.5 | 4 | FAB0204600 | FAB0204892 | |
| M 18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 16.5 | 4 | FAB0204944 | FAB0204893 | |
| M 20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 18.5 | 4 | FAB0204945 | FAB0204894 | |

Unit : mm

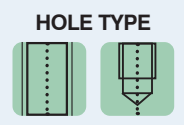
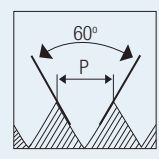


Silver cut

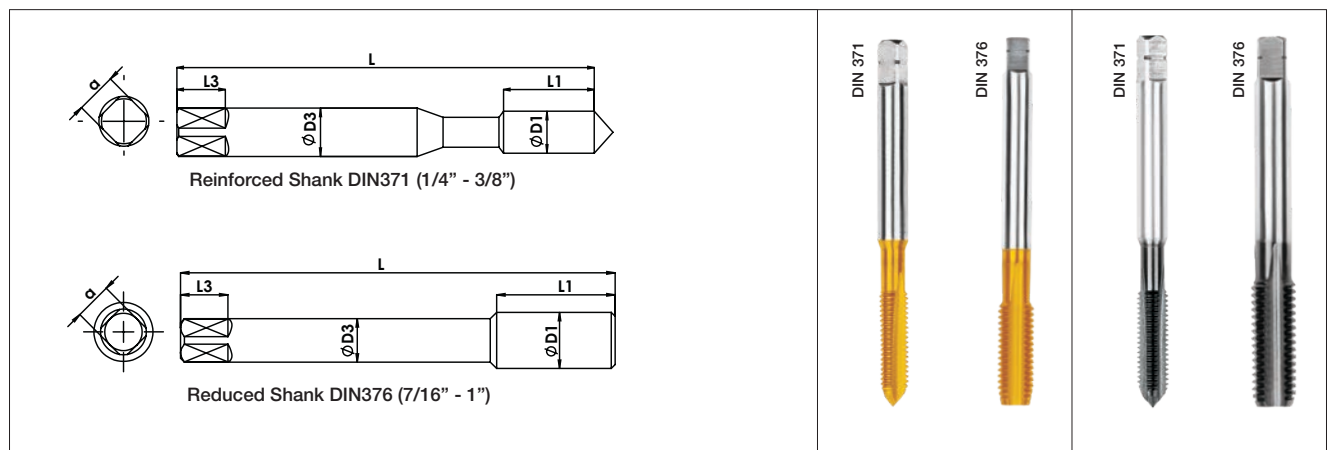
Straight Flute Tap

HSS TAPS

UNC Unified coarse threads



HSS-E
DIN 371/376
2B
E/1.5-2P



| DIN 371 | | Series | | SC3 | | SC4 | | | | |
|------------------|-----|-----------------------------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| | | Material - 1 st choice | | K1-K2 | | K1-K3 | | | | |
| | | Material - 2 nd choice | | N2-N3 | | - | | | | |
| | | Coating | | TiN | | TiAlN | | | | |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. Of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 1/4" | 20 | 80 | 19 | 7 | 5.5 | 8 | 5.1 | 3 | FAB0204469 | FAB0204478 |
| 5/16" | 18 | 90 | 22 | 8 | 6.2 | 9 | 6.6 | 4 | FAB0204470 | FAB0204479 |
| 3/8" | 16 | 100 | 24 | 10 | 8 | 11 | 8 | 4 | FAB0204471 | FAB0206259 |

| DIN 376 | | Series | | SC3 | | SC4 | | | | |
|------------------|-----|-----------------------------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| | | Material - 1 st choice | | K1-K2 | | K1-K3 | | | | |
| | | Material - 2 nd choice | | N2-N3 | | - | | | | |
| | | Coating | | TiN | | TiAlN | | | | |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. Of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 7/16" | 14 | 110 | 24 | 8 | 6.2 | 9 | 9.4 | 4 | FAB0204472 | FAB0204481 |
| 1/2" | 13 | 110 | 28 | 9 | 7 | 10 | 10.8 | 4 | FAB0204473 | FAB0206260 |
| 5/8" | 11 | 110 | 32 | 12 | 9 | 12 | 13.5 | 4 | FAB0204474 | FAB0206261 |
| 3/4" | 10 | 125 | 34 | 14 | 11 | 14 | 16.5 | 4 | FAB0204475 | FAB0206262 |
| 7/8" | 9 | 140 | 34 | 18 | 14.5 | 17 | 19.5 | 4 | FAB0204476 | FAB0206263 |
| 1" | 8 | 160 | 38 | 18 | 14.5 | 17.5 | 22.3 | 4 | FAB0204477 | FAB0204486 |

Unit : mm

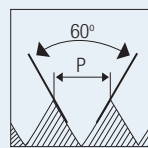


Silver cut

Straight Flute Tap

UNF

Unified fine threads



HOLE TYPE

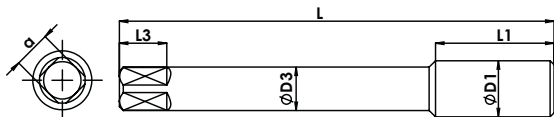


HSS-E

DIN 374

2B

E/1.5-2P



Male centre (1/4" - 3/8")
Female centre (7/16" - 1")



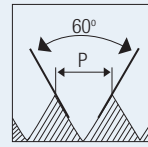
| Series | SC3 | SC4 |
|-----------------------------------|-------|--------|
| Material - 1 st choice | K1-K2 | K1, K3 |
| Material - 2 nd choice | N2-N3 | - |
| Coating | TiN | TiAlN |
| EDP No. | | |

| DIN 374 | | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. Of Flutes |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|
| Nominal Diameter | TPI | L | L1 | ØD3 | a | L3 | Ød1 | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| 1/4" | 28 | 80 | 19 | 5.5 | 4.3 | 7 | 5.5 | 3 |
| 5/16" | 24 | 90 | 22 | 6 | 4.9 | 8 | 6.9 | 4 |
| 3/8" | 24 | 100 | 20 | 7 | 5.5 | 8 | 8.5 | 4 |
| 7/16" | 20 | 100 | 22 | 8 | 6.2 | 9 | 9.9 | 4 |
| 1/2" | 20 | 100 | 22 | 9 | 7 | 10 | 11.5 | 4 |
| 5/8" | 18 | 100 | 22 | 12 | 9 | 12 | 14.5 | 4 |
| 3/4" | 16 | 110 | 25 | 14 | 11 | 14 | 17.5 | 4 |
| 7/8" | 14 | 125 | 25 | 18 | 14.5 | 17 | 20.5 | 4 |
| 1" | 12 | 140 | 28 | 18 | 14.5 | 17 | 23.25 | 4 |

Unit : mm

M

Metric coarse threads



HOLE TYPE



HSS-E

ISO 529

6H

E/1.5-2P

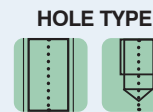
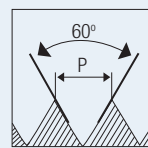
| <p>Reinforced Shank (M3 - M10) Male centre upto M5</p> | | | | | | | | | | |
|--|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|
| <p>Reduced Shank (M12 - M20)</p> | | | | | | | | | | |
| | | | | | | | | | Series | |
| | | | | | | | | | Material - 1 st choice | |
| | | | | | | | | | Material - 2 nd choice | |
| | | | | | | | | | Coating | |
| | | | | | | | | | TiAlN | |
| ISO529 / IS 6175 Part 2 | | | | | | | | | | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0200645 | FAB0200646 |
| M 3.5 | 0.6 | 50 | 13 | 3.55 | 2.8 | 5 | 2.9 | 3 | FAB0200652 | FAB0203220 |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0200657 | FAB0200658 |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | 3 | FAB0200669 | FAB0200670 |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | 3 | FAB0200680 | FAB0200681 |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | 4 | FAB0200692 | FAB0200693 |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | 4 | FAB0200716 | FAB0200717 |

| | | | | | | | | | | |
|-------------------------|------|-----|----|------|------|----|------|---|------------|------------|
| ISO529 / IS 6175 Part 3 | | | | | | | | | | |
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.2 | 4 | FAB0200747 | FAB0200871 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | 4 | FAB0200776 | FAB0200777 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | 4 | FAB0200797 | FAB0200798 |
| M 20 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0203219 | FAB0200809 |

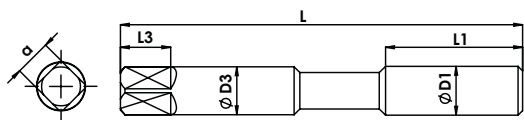
Unit : mm

M

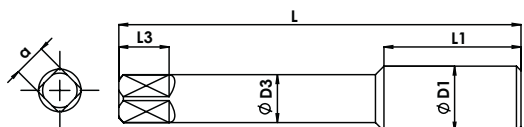
Metric coarse threads



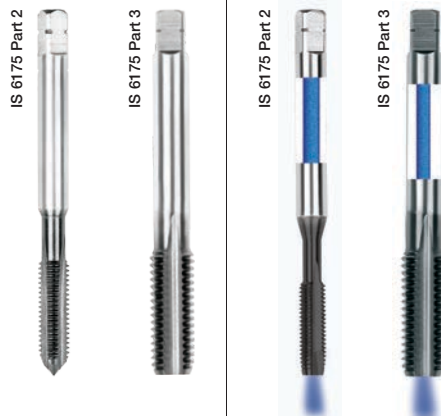
HSS-E ISO 529 6HX E/1.5-2P



Reinforced Shank (M3 - M10)
Male centre upto M5



Reduced Shank (M12 - M20)



| | | |
|-----------------------------------|-------|-------|
| Series | SCF5 | SC4TC |
| Material - 1 st choice | P2-P3 | K1-K3 |
| Material - 2 nd choice | - | - |
| Coating | TiCN | TiAlN |

ISO529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0204616 | - |
| M 3.5 | 0.6 | 50 | 13 | 3.55 | 2.8 | 5 | 2.9 | 3 | - | - |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0204617 | - |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | 3 | FAB0204618 | FAB0205365 |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | 3 | FAB0204619 | FAB0205366 |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | 3 | FAB0204620 | FAB0205367 |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | 3 | FAB0204621 | FAB0205368 |

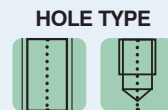
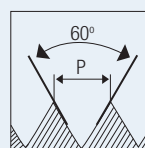
ISO529 / IS 6175 Part 3

| | | | | | | | | | | |
|------|------|-----|----|------|------|----|------|---|------------|------------|
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.2 | 4 | FAB0204622 | FAB0205369 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | 4 | FAB0204623 | FAB0205370 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | 4 | FAB0204624 | FAB0205371 |
| M 20 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0205362 | FAB0205372 |

Unit : mm

M

Metric coarse threads

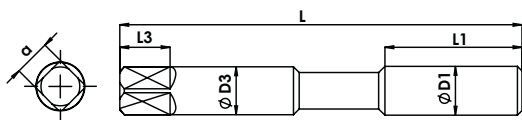


HSS-E
PM

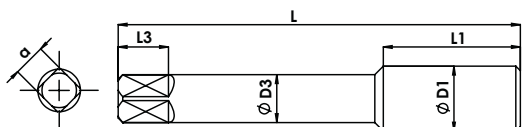
ISO
529

6H

E/1.5-2P



Reinforced Shank (M3 - M10)
Male centre upto M5



Reduced Shank (M12 - M20)

IS 6175 Part 2

IS 6175 Part 3

IS 6175 Part 2

IS 6175 Part 3



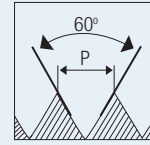
| | | | | | | | | | Series | SC4 | SC4TC |
|-------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|-------|
| | | | | | | | | | Material - 1 st choice | K1-K3 | |
| | | | | | | | | | Material - 2 nd choice | - | |
| | | | | | | | | | Coating | TIAlN | TIAlN |
| ISO529 / IS 6175 Part 2 | | | | | | | | | EDP No. | EDP No. | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | 3 | FAB0205373 | - | |
| M 3 | 0.6 | 50 | 13 | 3.55 | 2.8 | 5 | 2.9 | 3 | FAB0205374 | - | |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | 3 | FAB0205375 | - | |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | 3 | FAB0205376 | FAB0205387 | |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | 3 | FAB0205377 | FAB0205388 | |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | 4 | FAB0205378 | FAB0205389 | |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | 4 | FAB0205379 | FAB0205390 | |

| | | | | | | | | | EDP No. | EDP No. | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|--|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.2 | 4 | FAB0205380 | FAB0205391 | |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | 4 | FAB0205381 | FAB0205392 | |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | 4 | FAB0205382 | FAB0205393 | |
| M 20 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0205383 | FAB0205394 | |

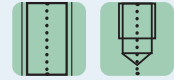
Unit : mm

MF

Metric fine threads



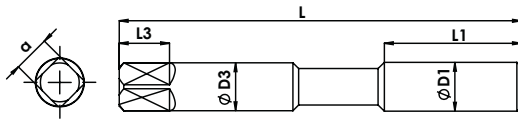
HOLE TYPE



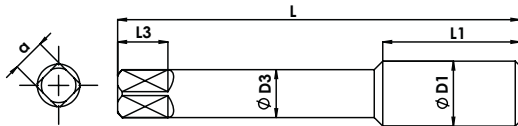
HSS-E

ISO 529

6H



Reinforced Shank (M8 - M10)



Reduced Shank (M12 - M20)

IS 6175 Part 2

IS 6175 Part 3

IS 6175 Part 2

IS 6175 Part 3



| Series | SC3 | SC4 |
|-----------------------------------|------------|------------|
| Material - 1 st choice | K1-K2 | K1, K3 |
| Material - 2 nd choice | N2-N3 | - |
| Coating | TiN | TiAlN |
| ISO529 / IS 6175 Part 2 | | |
| Nominal Diameter | EDP No. | |
| Pitch | EDP No. | |
| Overall Length | EDP No. | |
| Thread Length | EDP No. | |
| Shank Diameter | EDP No. | |
| Square Size | EDP No. | |
| Square Length | EDP No. | |
| Tapping Drill Diameter | EDP No. | |
| No. of Flutes | EDP No. | |
| M 8 | FAB0202976 | FAB0203740 |
| M 10 | FAB0200706 | FAB0200707 |

| ISO529 / IS 6175 Part 3 | | | | | | | | | | |
|-------------------------|------|-----|----|------|------|----|------|---|------------|------------|
| M 12 | 1.25 | 84 | 24 | 9 | 7.1 | 10 | 10.8 | 4 | FAB0200727 | FAB0200728 |
| M12 | 1.5 | 89 | 29 | 9 | 7.1 | 10 | 10.5 | 4 | FAB0200736 | FAB0200737 |
| M 14 | 1.5 | 95 | 30 | 11.2 | 9 | 12 | 12.5 | 4 | FAB0200767 | FAB0200768 |
| M 16 | 1.5 | 102 | 32 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0200785 | FAB0200786 |
| M 18 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0203217 | FAB0200805 |
| M 20 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0203218 | FAB0200806 |

Unit : mm



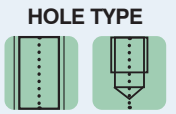
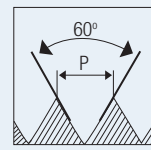
Silver cut

Straight Flute Tap

HSS TAPS

MF

Metric fine threads



HSS-E
ISO 529
6HX
E/1.5-2P

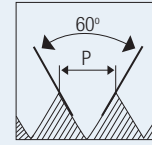
| <p>Reinforced Shank (M8 - M10)</p> | | | | | | | | | | | |
|------------------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|-----------------------------------|------------|-------|
| <p>Reduced Shank (M12 - M20)</p> | | | | | | | | | | | |
| | | | | | | | | | Series | SCF5 | SC4TC |
| | | | | | | | | | Material - 1 st choice | P2-P3 | K1-K3 |
| | | | | | | | | | Material - 2 nd choice | - | - |
| | | | | | | | | | Coating | TiCN | TiAlN |
| ISO529 / IS 6175 Part 2 | | | | | | | | | EDP No. | EDP No. | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 8 | 1 | 69 | 19 | 8 | 6.3 | 9 | 7 | 3 | FAB0204625 | FAB0205397 | |
| M 10 | 1.25 | 76 | 20 | 10 | 8 | 11 | 8.8 | 3 | FAB0204626 | FAB0205398 | |

| ISO529 / IS 6175 Part 3 | | | | | | | | | | |
|-------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | | |
| M 12 | 1.25 | 84 | 24 | 9 | 7.1 | 10 | 10.8 | 4 | FAB0204627 | FAB0205399 |
| M 12 | 1.5 | 89 | 29 | 9 | 7.1 | 10 | 10.5 | 4 | FAB0204628 | FAB0205400 |
| M 14 | 1.5 | 95 | 30 | 11.2 | 9 | 12 | 12.5 | 4 | FAB0204629 | FAB0205401 |
| M 16 | 1.5 | 102 | 32 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0204630 | FAB0205402 |
| M 18 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 16.5 | 4 | FAB0205395 | FAB0205403 |
| M 20 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 18.5 | 4 | FAB0205396 | FAB0205404 |

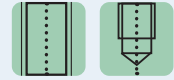
Unit : mm

UNC

Unified coarse threads



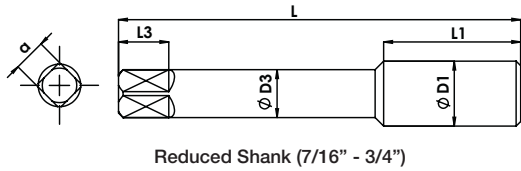
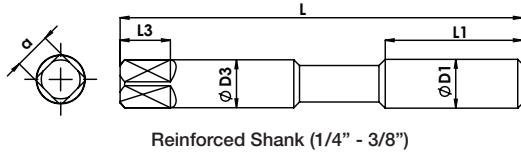
HOLE TYPE



HSS-E

ISO 529

2B



IS 6175 Part 2

IS 6175 Part 3

IS 6175 Part 2

IS 6175 Part 3



| | | |
|-----------------------------------|-------|-------|
| Series | SC3 | SC4 |
| Material - 1 st choice | K1-K2 | K1-K3 |
| Material - 2 nd choice | N2-N3 | - |
| Coating | TiN | TiAlN |

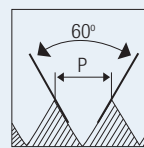
| ISO529 / IS 6175 Part 2 | | | | | | | | | Coating | | TiN | TiAlN |
|-------------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|-----|-------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | EDP No. | | | |
| 1/4" | 20 | 66 | 19 | 6.3 | 5 | 8 | 5.5 | 3 | FAB0200571 | FAB0200572 | | |
| 5/16" | 18 | 72 | 22 | 8 | 6.3 | 9 | 6.9 | 4 | FAB0200581 | FAB0203289 | | |
| 3/8" | 16 | 80 | 24 | 10 | 8 | 11 | 8.5 | 4 | FAB0200591 | FAB0200592 | | |

| ISO529 / IS 6175 Part 2 | | | | | | | | | | |
|-------------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|---------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | EDP No. | |
| 7/16" | 14 | 85 | 25 | 8 | 6.3 | 9 | 9.9 | 4 | FAB0200601 | FAB0200602 |
| 1/2" | 13 | 89 | 29 | 9 | 7.1 | 10 | 11.5 | 4 | FAB0200612 | FAB0200613 |
| 5/8" | 11 | 102 | 32 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0200625 | FAB0200626 |
| 3/4" | 10 | 112 | 37 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0200636 | FAB0200637 |

Unit : mm

UNF

Unified fine threads



HOLE TYPE



HSS-E

ISO 529

2B

E/1.5-2P

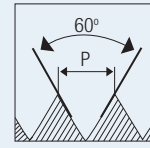
| <p>Reinforced Shank (1/4" - 3/8")</p> | | | | | | | | | | |
|---------------------------------------|-----|----------------|---------------|----------------|-------------|---------------|-----------------------------------|---------------|------------|------------|
| <p>Reduced Shank (7/16" - 3/4")</p> | | | | | | | | | | |
| | | | | | | | Series | SC3 | SC4 | |
| | | | | | | | Material - 1 st choice | K1-K2 | K1, K3 | |
| | | | | | | | Material - 2 nd choice | N2-N3 | - | |
| | | | | | | | Coating | TiN | TiAlN | |
| ISO529 / IS 6175 Part 2 | | | | | | | | | | |
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No. of Flutes | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 1/4" | 28 | 66 | 19 | 6.3 | 5 | 8 | 5.5 | 3 | FAB0200495 | FAB0200496 |
| 5/16" | 24 | 69 | 19 | 8 | 6.3 | 9 | 6.9 | 4 | FAB0200504 | FAB0200505 |
| 3/8" | 24 | 76 | 20 | 10 | 8 | 11 | 8.5 | 4 | FAB0200515 | FAB0200516 |

| | | | | | | | | | | |
|--------------------------------|----|-----|----|------|------|----|------|---|------------|------------|
| ISO529 / IS 6175 Part 3 | | | | | | | | | | |
| 7/16" | 20 | 82 | 22 | 8 | 6.3 | 9 | 9.9 | 4 | FAB0200526 | FAB0200527 |
| 1/2" | 20 | 84 | 24 | 9 | 7.1 | 10 | 11.5 | 4 | FAB0200537 | FAB0200538 |
| 5/8" | 18 | 95 | 25 | 12.5 | 10 | 13 | 14.5 | 4 | FAB0200550 | FAB0200551 |
| 3/4" | 16 | 104 | 29 | 14 | 11.2 | 14 | 17.5 | 4 | FAB0200561 | FAB0200562 |

Unit : mm

M/MF

Metric coarse & fine threads



HOLE TYPE

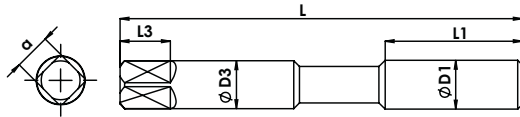


HSS-E

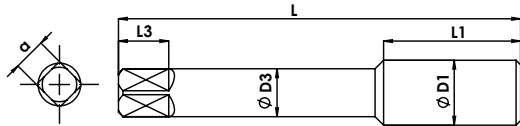
JIS

6H

B/4-4.5P



Reinforced Shank (M3 - M10)
Male Centre upto M5



Reduced Shank (M12 - M20)



| | | |
|-----------------------------------|--------|-------|
| Series | SC3 | SC4 |
| Material - 1 st choice | P0, N4 | P0-P3 |
| Material - 2 nd choice | N1-N2 | K1-K2 |
| Coating | TiN | TiAlN |

| JIS | | | | | | | Coating | | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|---------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 46 | 11 | 4 | 3.2 | 6 | 2.5 | FAB0205644 | FAB0205659 | |
| M 4 | 0.7 | 52 | 13 | 5 | 4 | 7 | 3.3 | FAB0205645 | FAB0205660 | |
| M 5 | 0.8 | 60 | 16 | 5.5 | 4.5 | 7 | 4.2 | FAB0205646 | FAB0205661 | |
| M 6 | 1 | 62 | 19 | 6 | 4.5 | 7 | 5 | FAB0205647 | FAB0205662 | |
| M 8 | 1.25 | 70 | 22 | 6.2 | 5 | 8 | 6.8 | FAB0205648 | FAB0205663 | |
| M 8 | 1 | 70 | 22 | 6.2 | 5 | 8 | 7 | FAB0205649 | FAB0205664 | |
| M 10 | 1.5 | 75 | 24 | 7 | 5.5 | 8 | 8.5 | FAB0205650 | FAB0205665 | |
| M 10 | 1.25 | 75 | 24 | 7 | 5.5 | 8 | 8.8 | FAB0205651 | FAB0205666 | |
| M 12 | 1.75 | 82 | 29 | 8.5 | 6.5 | 9 | 10.3 | FAB0205652 | FAB0205667 | |
| M 12 | 1.5 | 82 | 29 | 8.5 | 6.5 | 9 | 10.5 | FAB0205653 | FAB0205668 | |
| M 12 | 1.25 | 82 | 29 | 8.5 | 6.5 | 9 | 10.8 | FAB0205654 | FAB0205669 | |
| M 14 | 2 | 88 | 30 | 10.5 | 8 | 11 | 12 | FAB0205655 | FAB0205670 | |
| M 16 | 2 | 95 | 32 | 12.5 | 10 | 13 | 14 | FAB0205656 | FAB0205671 | |
| M 18 | 2.5 | 100 | 37 | 14 | 11 | 14 | 15.5 | FAB0205657 | FAB0205672 | |
| M 20 | 2.5 | 105 | 37 | 15 | 12 | 15 | 17.5 | FAB0205658 | FAB0205673 | |

Unit : mm



High Performance Cutting Tools



FORMING TAPS SD SERIES

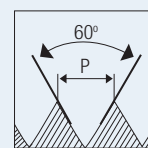
FORMING TAPS

| SERIES | THREAD FORM | BLANK STANDARD | WORKPIECE MATERIAL | 1ST CHOICE | 2ND CHOICE | TOOL MATERIAL | COATING | PAGE |
|--------|-------------|-----------------|--------------------|--------------|------------|---------------|---------|-------|
| SD1 | M | DIN 371/DIN 376 | Non-Ferrous | N1-N2 | - | HSSE | Bright | 1.093 |
| SD3 | M | DIN 371/DIN 376 | Non-Ferrous | P0-P2, N1-N3 | - | HSSE | TiN | |
| SD5 | M | DIN 371/DIN 376 | Steel | P1-P2 | - | HSSE | TiAlN | 1.094 |
| SD1* | M | DIN 371/DIN 376 | Non-Ferrous | N1-N2 | - | HSSE | Bright | 1.095 |
| SD3* | M | DIN 371/DIN 376 | Non-Ferrous | P0-P2 | N1-N3 | HSSE | TiN | |
| SDF5 | M | DIN 371/DIN 376 | Steel | P1-P2 | - | HSSE | TiCN | 1.096 |
| SD1 | MF | DIN 374 | Non-Ferrous | N1-N2 | - | HSSE | Bright | 1.097 |
| SD3 | MF | DIN 374 | Non-Ferrous | P0-P2, N1-N3 | - | HSSE | TiN | |
| SD4 | MF | DIN 374 | Steel | P1-P2 | - | HSSE | TiAlN | 1.098 |
| SD1 | M | ISO 529 | Non-Ferrous | N1-N2 | - | HSSE | Bright | 1.099 |
| SD3 | M | ISO 529 | Non-Ferrous | P0-P2, N1-N3 | - | HSSE | TiAlN | |
| SDF5 | M | ISO 529 | Steel | P1-P2 | - | HSSE | TiCN | 1.100 |
| SD1 | MF | ISO 529 | Non-Ferrous | N1-N2 | - | HSSE | Bright | 1.101 |
| SD3 | MF | ISO 529 | Non-Ferrous | P0-P2, N1-N3 | - | HSSE | TiN | |
| SDF5 | MF | ISO 529 | Steel | P1-P2 | - | HSSE | TiAlN | 1.102 |
| SD1 | M / MF | JIS | Non-Ferrous | N1-N2 | - | HSSE | Bright | 1.103 |
| SD3 | M / MF | JIS | Non-Ferrous | P0-P2, N1-N3 | - | HSSE | TiN | |

* without oil groove

M

Metric coarse threads



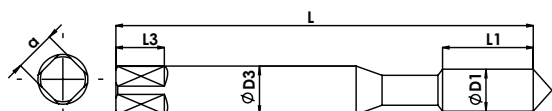
HOLE TYPE



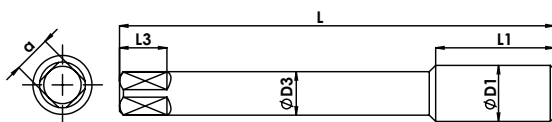
HSS-E

DIN 371/376

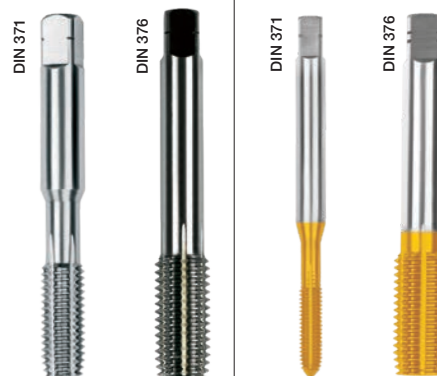
6HX



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M16)



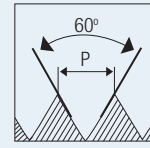
| DIN 371 | | | | | | | Series | SD1 | SD3 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|-----------------------------------|------------|--------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Material - 1 st choice | N1-N2 | P0-P2, N1-N3 |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Material - 2 nd choice | - | - |
| | | | | | | | Coating | Bright | TiN |
| | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.8 | FAB0200954 | FAB0200961 |
| M 3.5 | 0.6 | 56 | 12 | 4 | 3 | 6 | 3.3 | FAB0204505 | FAB0204507 |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.7 | FAB0200955 | FAB0200962 |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 8 | 4.7 | FAB0200956 | FAB0200963 |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 8 | 5.5 | FAB0200957 | FAB0200964 |
| M 7 | 1 | 80 | 19 | 7 | 5.5 | 8 | 6.5 | FAB0204506 | FAB0204508 |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 7.4 | FAB0200958 | FAB0200965 |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 9.3 | FAB0200959 | FAB0200966 |

| DIN 376 | | | | | | | Series | SD1 | SD3 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|-----------------------------------|------------|--------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Material - 1 st choice | N1-N2 | P0-P2, N1-N3 |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Material - 2 nd choice | - | - |
| | | | | | | | Coating | Bright | TiN |
| | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 11.2 | FAB0200960 | FAB0200967 |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 13.1 | FAB0203285 | FAB0203287 |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 15.1 | FAB0203286 | FAB0203288 |

Unit : mm

M

Metric coarse threads



HOLE TYPE

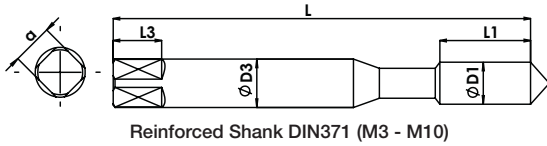


HSS-E

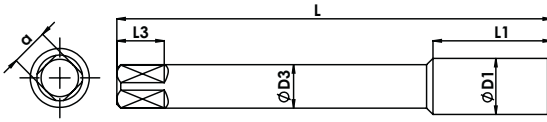
DIN 371/376

6HX

C/2-3P



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M16)



| | |
|-----------------------------------|-------|
| Series | SD5 |
| Material - 1 st choice | P1-P2 |
| Material - 2 nd choice | - |
| Coating | TIAIN |

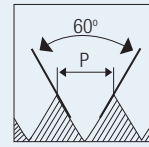
| DIN 371 | | | | | | | Tapping Drill Diameter | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Ød1 | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.8 | FAB0204509 |
| M 3.5 | 0.6 | 56 | 12 | 4 | 3 | 6 | 3.3 | FAB0204510 |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.7 | FAB0204511 |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 8 | 4.7 | FAB0204512 |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 8 | 5.5 | FAB0204513 |
| M 7 | 1 | 80 | 19 | 7 | 5.5 | 8 | 6.5 | FAB0204514 |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 7.4 | FAB0204515 |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 9.3 | FAB0204516 |

| DIN 376 | | | | | | | Tapping Drill Diameter | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Ød1 | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 11.2 | FAB0204517 |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 13.1 | FAB0204518 |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 15.1 | FAB0204519 |

Unit : mm



**Metric coarse threads
(without oil groove)**



HOLE TYPE

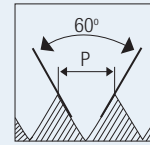


| | | | | | | | | | | |
|--|-------|----------------|---------------|----------------|-------------|---------------|-----|-----------------------------------|------------|--------------|
| <p>Reinforced Shank DIN371 (M3 - M8)</p> | | | | | | | | | | |
| | | | | | | | | | | Series |
| | | | | | | | | Material - 1 st choice | N1-N2 | P0-P2, N1-N3 |
| | | | | | | | | Material - 2 nd choice | - | - |
| | | | | | | | | Coating | Bright | TiN |
| DIN 371 | | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Ød1 | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | | | | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.8 | FAB0203614 | FAB0203619 | |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.7 | FAB0203615 | FAB0203620 | |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 8 | 4.7 | FAB0203616 | FAB0203621 | |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 8 | 5.5 | FAB0203617 | FAB0203622 | |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 7.4 | FAB0203618 | FAB0203623 | |

Unit : mm

M

Metric coarse threads



HOLE TYPE

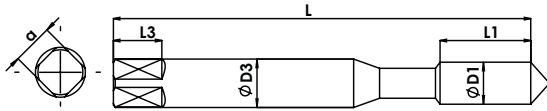


HSS-E

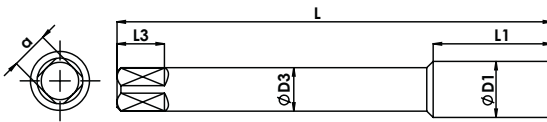
DIN 371/376

6HX

C/2-3P



Reinforced Shank DIN371 (M3 - M10)



Reduced Shank DIN376 (M12 - M16)



| | |
|-----------------------------------|-------|
| Series | SDF5 |
| Material - 1 st choice | P1-P3 |
| Material - 2 nd choice | |

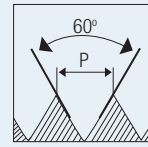
| DIN 371 | | | | | | | Coating | TICN |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| M 3 | 0.5 | 56 | 11 | 3.5 | 2.7 | 6 | 2.8 | FAB0205097 |
| M 3.5 | 0.6 | 56 | 12 | 4 | 3 | 6 | 3.3 | FAB0205098 |
| M 4 | 0.7 | 63 | 13 | 4.5 | 3.4 | 6 | 3.7 | FAB0205099 |
| M 5 | 0.8 | 70 | 16 | 6 | 4.9 | 8 | 4.7 | FAB0205100 |
| M 6 | 1 | 80 | 19 | 6 | 4.9 | 8 | 5.5 | FAB0205101 |
| M 7 | 1 | 80 | 19 | 7 | 5.5 | 8 | 6.5 | FAB0205102 |
| M 8 | 1.25 | 90 | 22 | 8 | 6.2 | 9 | 7.4 | FAB0205103 |
| M 10 | 1.5 | 100 | 24 | 10 | 8 | 11 | 9.3 | FAB0205104 |

| DIN 376 | | | | | | | | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| M 12 | 1.75 | 110 | 28 | 9 | 7 | 10 | 11.2 | FAB0205105 |
| M 14 | 2 | 110 | 30 | 11 | 9 | 12 | 13.1 | FAB0205106 |
| M 16 | 2 | 110 | 32 | 12 | 9 | 12 | 15.1 | FAB0205107 |

Unit : mm

MF

Metric fine threads



HOLE TYPE

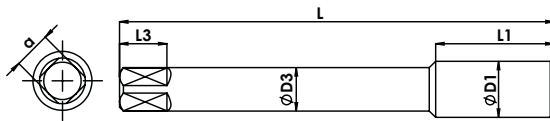


HSS-E

DIN 374

6HX

C/2-3P



Male Centre (M8 - M10)
Female Centre (M12 - M20)

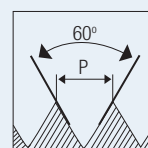


| DIN 374 | | | | | | | | Series | SD1 | SD3 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-----------------------------------|------------|-------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | Material - 1 st choice | N1-N2 | N1-N3 |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | Material - 2 nd choice | - | P0-P2 |
| | | | | | | | | Coating | Bright | TiN |
| | | | | | | | | EDP No. | EDP No. | |
| M 8 | 1 | 90 | 17 | 6 | 4.9 | 8 | 7.5 | FAB0204520 | FAB0204528 | |
| M 10 | 1.25 | 100 | 22 | 7 | 5.5 | 8 | 9.4 | FAB0204521 | FAB0204529 | |
| M 12 | 1.5 | 100 | 22 | 9 | 7 | 10 | 11.3 | FAB0204522 | FAB0204530 | |
| M 12 | 1.25 | 100 | 22 | 9 | 7 | 10 | 11.4 | FAB0204523 | FAB0204531 | |
| M 14 | 1.5 | 100 | 22 | 11 | 9 | 12 | 13.3 | FAB0204524 | FAB0204532 | |
| M 16 | 1.5 | 100 | 22 | 12 | 9 | 12 | 15.3 | FAB0204525 | FAB0204533 | |
| M 18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 17.3 | FAB0204526 | FAB0204534 | |
| M 20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 19.3 | FAB0204527 | FAB0204535 | |

Unit : mm

MF

Metric fine threads



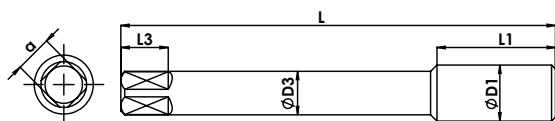
HOLE TYPE



HSS-E

DIN
374

6HX



Male Centre (M8 - M10)
Female Centre (M12 - M20)

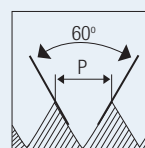


| DIN 374 | | | | | | | | Series | SD4 |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|-----------------------------------|-------|
| | | | | | | | | Material - 1 st choice | P1-P2 |
| | | | | | | | | Material - 2 nd choice | - |
| | | | | | | | | Coating | TiAIN |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 8 | 1 | 90 | 17 | 6 | 4.9 | 8 | 7.5 | FAB0204536 | |
| M 10 | 1.25 | 100 | 22 | 7 | 5.5 | 8 | 9.4 | FAB0204537 | |
| M 12 | 1.5 | 100 | 22 | 9 | 7 | 10 | 11.3 | FAB0204538 | |
| M 12 | 1.25 | 100 | 22 | 9 | 7 | 10 | 11.4 | FAB0204539 | |
| M 14 | 1.5 | 100 | 22 | 11 | 9 | 12 | 13.3 | FAB0204540 | |
| M 16 | 1.5 | 100 | 22 | 12 | 9 | 12 | 15.3 | FAB0204541 | |
| M 18 | 1.5 | 110 | 25 | 14 | 11 | 14 | 17.3 | FAB0204542 | |
| M 20 | 1.5 | 125 | 25 | 16 | 12 | 15 | 19.3 | FAB0204543 | |

Unit : mm

M

Metric coarse threads



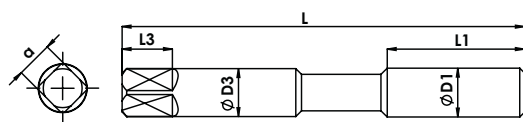
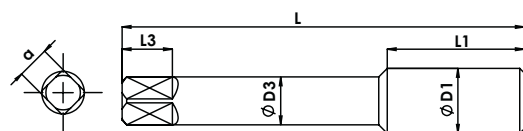
HOLE TYPE



HSS-E

ISO
529

6HX

Reinforced Shank (M3 - M10)
Male Centre upto M5

Reduced Shank (M12 - M16)

DIN 371



DIN 376



DIN 371



DIN 376



Series

SD1

SD3

Material - 1st choice

N1-N2

N1-N3

Material - 2nd choice

-

P0-P2

Coating

Bright

TiN

ISO 529 / IS 6175 Part 2

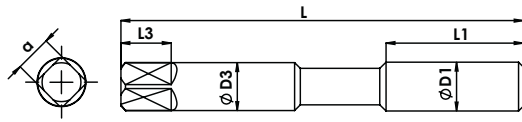
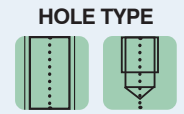
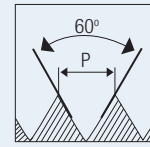
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.8 | FAB0201417 | FAB0202740 |
| M 3.5 | 0.6 | 50 | 13 | 3.55 | 2.8 | 5 | 3.3 | FAB0203221 | FAB0203231 |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.7 | FAB0201421 | FAB0202747 |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.7 | FAB0201420 | FAB0202748 |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5.5 | FAB0201422 | FAB0202749 |
| M 7 | 1 | 66 | 19 | 7.1 | 5.6 | 8 | 6.5 | FAB0203222 | FAB0203232 |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 7.4 | FAB0201425 | FAB0202750 |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 9 | 9.3 | FAB0201426 | FAB0202751 |

ISO 529 / IS 6175 Part 3

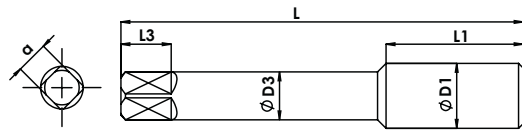
| | | | | | | | | | |
|------|------|-----|----|------|-----|----|------|------------|------------|
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 11.2 | FAB0201428 | FAB0202752 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 13.1 | FAB0203228 | FAB0203238 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 15.1 | FAB0203230 | FAB0203240 |

Unit : mm

M Metric coarse threads



Reinforced Shank (M3 - M10)
Male Centre upto M5



Reduced Shank (M12 - M16)



| | |
|-----------------------------------|-------|
| Series | SDF5 |
| Material - 1 st choice | P1-P2 |
| Material - 2 nd choice | - |
| Coating | TiCN |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.8 | FAB0203241 |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.7 | FAB0203242 |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.7 | FAB0203243 |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5.5 | FAB0203244 |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 7.4 | FAB0203246 |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 9 | 9.3 | FAB0203249 |

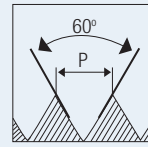
ISO 529 / IS 6175 Part 3

| | | | | | | | | |
|------|------|-----|----|------|-----|----|------|------------|
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 11.2 | FAB0203251 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 13.1 | FAB0205095 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 15.1 | FAB0205096 |

Unit : mm

MF

Metric fine threads



HOLE TYPE

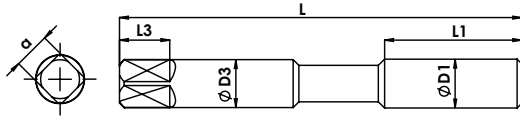


HSS-E

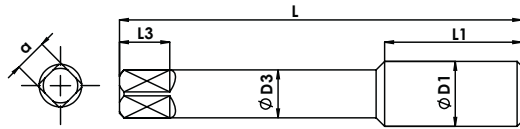
ISO 529

6HX

C/2-3P



Reinforced Shank (M8 - M10)



Reduced Shank (M12 - M16)

IS 6175 Part 2



IS 6175 Part 3



IS 6175 Part 2



IS 6175 Part 3



| Series | SD1 | SD3 |
|-----------------------------------|---------|---------|
| Material - 1 st choice | N1-N3 | N1-N3 |
| Material - 2 nd choice | - | P0-P2 |
| Coating | Bright | TiN |
| EDP No. | EDP No. | EDP No. |

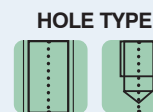
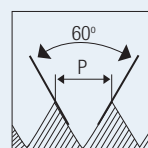
ISO 529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 |
| M 8 | 1 | 69 | 19 | 8 | 6.3 | 9 | 7.5 |
| M 10 | 1 | 76 | 20 | 10 | 8 | 11 | 9.5 |
| M 10 | 1.25 | 76 | 20 | 10 | 8 | 11 | 9.4 |
| M 12 | 1.5 | 89 | 29 | 9 | 7.1 | 10 | 11.3 |
| M 14 | 1.5 | 95 | 30 | 11.2 | 9 | 12 | 13.3 |
| M 16 | 1.5 | 102 | 32 | 12.5 | 10 | 13 | 15.3 |

Unit : mm

MF

Metric fine threads

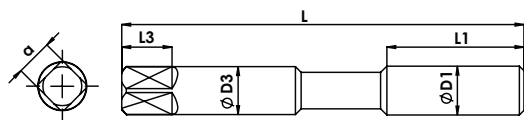


HSS-E

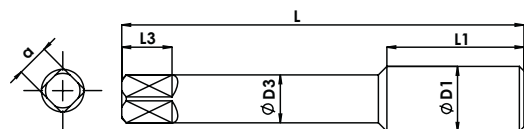
ISO 529

6HX

C/2-3P



Reinforced Shank (M8 - M10)



Reduced Shank (M12 - M16)



| | |
|-----------------------------------|-------|
| Series | SDF5 |
| Material - 1 st choice | P1-P2 |
| Material - 2 nd choice | - |
| Coating | TiCN |

ISO 529 / IS 6175 Part 2

| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| M 8 | 1 | 69 | 19 | 8 | 6.3 | 9 | 7.5 | FAB0203245 |
| M 10 | 1 | 76 | 20 | 10 | 8 | 11 | 9.5 | FAB0203247 |
| M 10 | 1.25 | 76 | 20 | 10 | 8 | 11 | 9.4 | FAB0203248 |

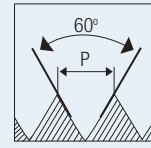
ISO 529 / IS 6175 Part 3

| | | | | | | | | |
|------|-----|-----|----|------|-----|----|------|------------|
| M 12 | 1.5 | 89 | 29 | 9 | 7.1 | 10 | 11.3 | FAB0203250 |
| M 14 | 1.5 | 95 | 30 | 11.2 | 9 | 12 | 13.3 | FAB0203252 |
| M 16 | 1.5 | 102 | 32 | 12.5 | 10 | 13 | 15.3 | FAB0203253 |

Unit : mm

M/MF

Metric coarse & fine threads



HOLE TYPE



HSS-E

JIS

6HX



| | | | | | | | | | | |
|---|-------|----------------|---------------|----------------|-------------|---------------|------|-----------------------------------|------------|--------------|
| <p>Reinforced Shank (M3 - M6) Male Centre upto M5</p> | | | | | | | | | | |
| <p>Reduced Shank (M8 - M12)</p> | | | | | | | | | | |
| | | | | | | | | Series | SD1 | SD3 |
| | | | | | | | | Material - 1 st choice | N1-N2 | P0-P2, N1-N3 |
| | | | | | | | | Material - 2 nd choice | - | - |
| | | | | | | | | Coating | Bright | TiN |
| JIS | | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Ød1 | | | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.5 | 46 | 11 | 4 | 3.2 | 6 | 2.8 | FAB0205634 | FAB0205060 | |
| M 4 | 0.7 | 52 | 13 | 5 | 4 | 7 | 3.7 | FAB0205635 | FAB0205061 | |
| M 5 | 0.8 | 60 | 16 | 5.5 | 4.5 | 7 | 4.7 | FAB0205636 | FAB0205062 | |
| M 6 | 1 | 62 | 19 | 6 | 4.5 | 7 | 5.5 | FAB0205637 | FAB0205063 | |
| M 8 | 1.25 | 70 | 22 | 6.2 | 5 | 8 | 7.4 | FAB0205638 | FAB0205064 | |
| M 8 | 1 | 70 | 22 | 6.2 | 5 | 8 | 7.5 | FAB0205639 | FAB0205065 | |
| M 10 | 1.5 | 75 | 24 | 7 | 5.5 | 8 | 9.3 | FAB0205640 | FAB0205066 | |
| M 10 | 1.25 | 75 | 24 | 7 | 5.5 | 8 | 9.4 | FAB0205641 | FAB0205067 | |
| M 12 | 1.75 | 82 | 29 | 8.5 | 6.5 | 9 | 11.2 | FAB0205642 | FAB0205069 | |
| M 12 | 1.5 | 82 | 29 | 8.5 | 6.5 | 9 | 11.3 | FAB0205643 | FAB0205070 | |

Unit : mm



High Performance Cutting Tools



CARBIDE TAPS

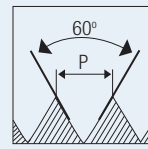
Totem's new range of Solid Carbide Taps suitable for mass production with high wear resistance and extreme toughness.

- ✓ Special submicron grade carbide with high TRS state of art carbide grades
- ✓ CNC Blank grinder is used to prepare carbide tap blanks to achieve high level of dimensional accuracy as well as surface finish to establish close tolerance control
- ✓ Totem Solid carbide taps are manufactured on state of art machines. Special tooling attachments are used to get high accuracy on thread form
- ✓ Tap scanning, critical to quality measurements & surface measurements are being done with 3-D scanning equipment
- ✓ Ideal for mass production with cutting speeds upto 4X higher compared to HSS-E taps
- ✓ Fewer tool changes due to high wear resistance, resulting in optimum machine output and high tool life
- ✓ Internal coolant option with radial or axial coolant outlet for improve swarf management and longer tool life

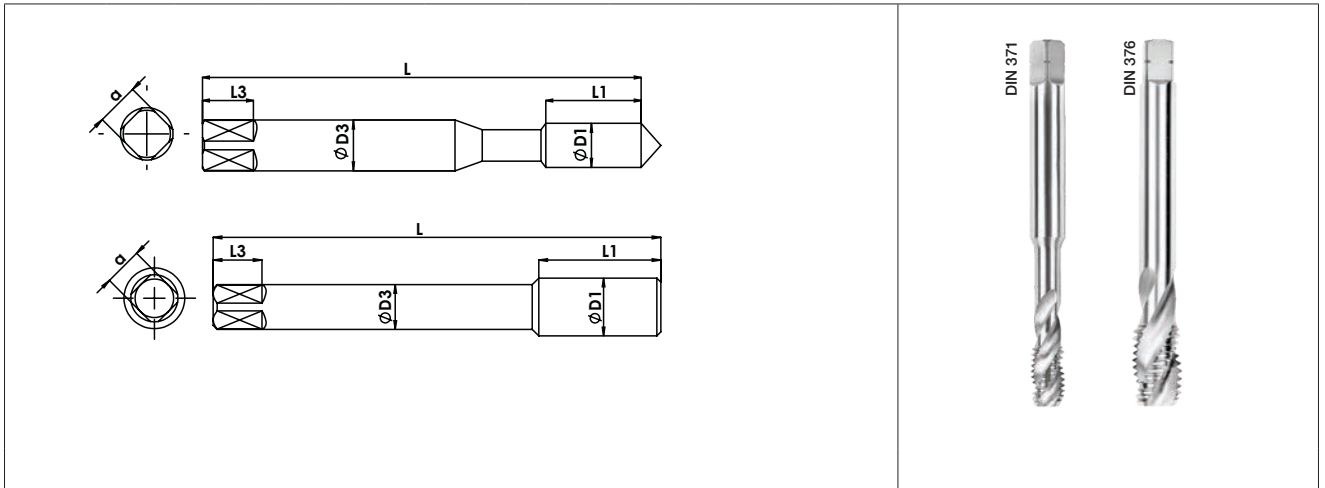
| | |
|----------------------|--|
| Industry Segment | Automotive |
| Tap series | SDK1 (Carbide Roll Tap) |
| Size | M6 X 1 SDK1 DIN 371 |
| Component | Crank Case (Motorbike) |
| Work material | ADC12 (upto 12% Silicon) |
| Type of hole | Blind hole / Through hole |
| Hole dia | 5.50 mm |
| Drill depth | 18.0 mm |
| Tapping depth | 14.0 mm |
| Machine | Vertical Machining Centre |
| Tapping direction | Vertical |
| Speed (Vc) | 50 m/min |
| Coolant | Water Soluble Oil (external flood coolant) |
| Tool Life | 8.1 km |
| Competitor tool life | 4.0 km |



Carbide spiral flutes taps



HOLE TYPE



| | |
|-----------------------------------|-------|
| Series | SBK |
| Material - 1 st choice | P2-P3 |
| Material - 2 nd choice | - |

DIN 371

| Nominal Diameter | Pitch | Overall Length | Thread Length | Recess Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. |
|------------------|-------|----------------|---------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|
| ØD1 | p | L | L1 | mm | ØD3 | a | L3 | Ød1 | | |
| M 3 | 0.5 | 56 | 8.0 | 18.0 | 3.5 | 2.7 | 6.0 | 2.5 | 3 | FBU0200040 |
| M 4 | 0.7 | 63 | 10.0 | 21.0 | 4.5 | 3.4 | 6.0 | 3.3 | 3 | FBU0200041 |
| M 5 | 0.8 | 70 | 10.0 | 25.0 | 6 | 4.9 | 8.0 | 4.2 | 3 | FBU0200042 |
| M 6 | 1 | 80 | 12.0 | 30.0 | 6 | 4.9 | 8.0 | 5 | 3 | FBU0200043 |
| M 8 | 1.25 | 90 | 16.0 | 35.0 | 8 | 6.2 | 9.0 | 6.8 | 3 | FBU0200044 |
| M 10 | 1.5 | 100 | 18.0 | 39.0 | 10 | 8 | 11.0 | 8.5 | 3 | FBU0200045 |

DIN 376

| | | | | | | | | | | |
|------|------|-----|----|---|----|---|----|------|---|------------|
| M 12 | 1.75 | 110 | 18 | - | 9 | 7 | 10 | 10.2 | 4 | FBU0200046 |
| M 14 | 2 | 110 | 20 | - | 11 | 9 | 12 | 12 | 4 | FBU0200047 |
| M 16 | 2 | 110 | 20 | - | 12 | 9 | 12 | 14 | 4 | FBU0200048 |

- ✓ New geometry suitable for short and long chipping materials
- ✓ Special flute geometry for excellent chip evacuation
- ✓ Edge polishing done on cutting edges which avoids chipping off
- ✓ Steel - 700 N/mm² to 1100 N/mm²

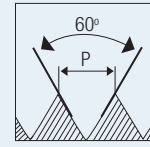
Note: Also available in TiN/TiCN/TiAlN coatings on request



Carbide taps

M

Carbide straight flutes tap



HOLE TYPE

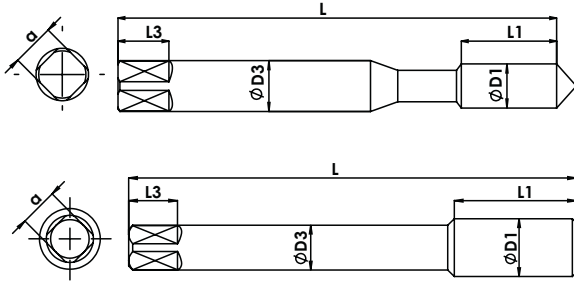


Carbide

DIN 371/376

6HX

E/1.5-2P



| DIN 371 | | | | | | | | | | |
|------------------|-------|----------------|---------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Recess Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. |
| ØD1 | p | L | L1 | mm | ØD3 | a | L3 | Ød1 | | |
| M 3 | 0.5 | 56 | 8.0 | 18.0 | 3.5 | 2.7 | 6.0 | 2.5 | 3 | FBU0200037 |
| M 4 | 0.7 | 63 | 10.0 | 21.0 | 4.5 | 3.4 | 6.0 | 3.3 | 3 | FBU0200017 |
| M 5 | 0.8 | 70 | 10.0 | 25.0 | 6 | 4.9 | 8.0 | 4.2 | 3 | FBU0200018 |
| M 6 | 1 | 80 | 12.0 | 30.0 | 6 | 4.9 | 8.0 | 5 | 4 | FBU0200019 |
| M 8 | 1.25 | 90 | 16.0 | 35.0 | 8 | 6.2 | 9.0 | 6.8 | 4 | FBU0200020 |
| M 10 | 1.5 | 100 | 18.0 | 39.0 | 10 | 8 | 11.0 | 8.5 | 4 | FBU0200021 |

| DIN 376 | | | | | | | | | | |
|------------------|-------|----------------|---------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Recess Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. |
| ØD1 | p | L | L1 | mm | ØD3 | a | L3 | Ød1 | | |
| M 12 | 1.75 | 110 | 18 | - | 9 | 7 | 10 | 10.2 | 4 | FBU0200022 |
| M 14 | 2 | 110 | 20 | - | 11 | 9 | 12 | 12 | 4 | FBU0200038 |
| M 16 | 2 | 110 | 20 | - | 12 | 9 | 12 | 14 | 4 | FBU0200039 |

- ✓ This cutting edge geometry produces short chips even in long chipping materials
- ✓ High speed & higher productivity results in less CPC
- ✓ Also internal through coolant taps available which enables optimum transportation of swarf
- ✓ Grey Cast Iron & SG Iron

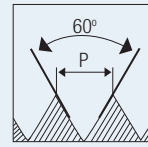
* SCK TC - Available on request
 Note: Also available in TIN/TICN/TIAlN coatings on request



Carbide taps



Carbide forming taps



HOLE TYPE

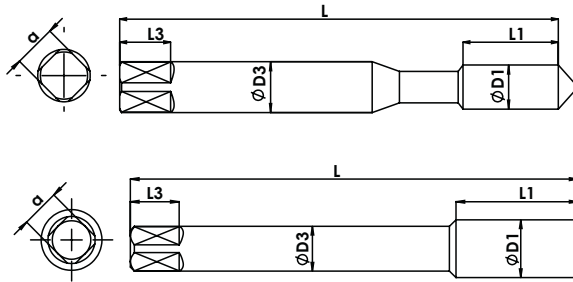


Carbide

DIN 371

6HX

C/2-3P



| | |
|-----------------------------------|-------|
| Series | SDK |
| Material - 1 st choice | P2-P3 |
| Material - 2 nd choice | - |

| DIN 371 | | Nominal Diameter | Pitch | Overall Length | Thread Length | Recess Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. |
|---------|------|------------------|-------|----------------|---------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|
| ØD1 | p | L | L1 | mm | ØD3 | a | L3 | Ød1 | | | | |
| M 3 | 0.5 | 56 | 6 | 18.0 | 3.5 | 2.7 | 6.0 | 2.8 | | | | FBU0200049 |
| M 4 | 0.7 | 63 | 7.5 | 21.0 | 4.5 | 3.4 | 6.0 | 3.7 | | | | FBU0200050 |
| M 5 | 0.8 | 70 | 8.5 | 25.0 | 6 | 4.9 | 8.0 | 4.7 | | | | FBU0200051 |
| M 6 | 1 | 80 | 11 | 30.0 | 6 | 4.9 | 8.0 | 5.5 | | | | FBU0200001 |
| M 8 | 1.25 | 90 | 14 | 35.0 | 8 | 6.2 | 9.0 | 7.4 | | | | FBU0200016 |
| M 10 | 1.5 | 100 | 16 | 39.0 | 10 | 8 | 11.0 | 9.3 | | | | FBU0200052 |

Unit : mm

- ✓ New chamfer geometry for uniform load distribution
- ✓ Optimised lobe form reduces friction and increases tool life
- ✓ High parameters and higher productivity for optimum output
- ✓ Aluminium & Aluminium Alloys / Steel

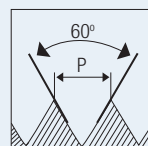
Note: Also available in TiN/TiCN/TiAlN coatings on request



Carbide taps

M

Carbide forming taps with internal coolant

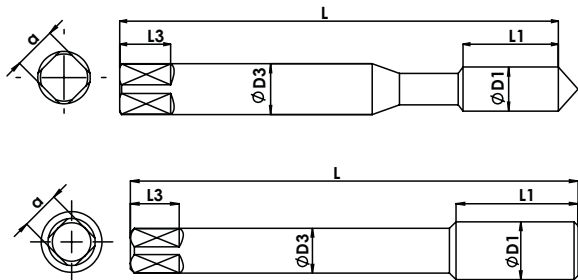


HOLE TYPE



DIN
371

6HX



| DIN 371 | | | | | | | | | | |
|------------------|-------|----------------|---------------|---------------|----------------|-------------|---------------|------------------------|-------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Recess Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | No of Flute | EDP No. |
| ØD1 | p | L | L1 | mm | ØD3 | a | L3 | Ød1 | | |
| M 3 | 0.5 | 56 | 6 | 18.0 | 3.5 | 2.7 | 6.0 | 2.8 | | FBU0200053 |
| M 4 | 0.7 | 63 | 7.5 | 21.0 | 4.5 | 3.4 | 6.0 | 3.7 | | FBU0200003 |
| M 5 | 0.8 | 70 | 8.5 | 25.0 | 6 | 4.9 | 8.0 | 4.7 | | FBU0200004 |
| M 6 | 1 | 80 | 11 | 30.0 | 6 | 4.9 | 8.0 | 5.5 | | FBU0200005 |
| M 8 | 1.25 | 90 | 14 | 35.0 | 8 | 6.2 | 9.0 | 7.4 | | FBU0200007 |
| M 10 | 1.5 | 100 | 16 | 39.0 | 10 | 8 | 11.0 | 9.3 | | FBU0200054 |

Unit : mm

✓ Forming taps available in Axial and Radial internal coolant

Note: Also available in TIN/TICN/TIAlN coatings on request



High Performance Cutting Tools

NIB TAPS

High Performance Nut Taps for Mild Steel, High Tensile Steel and Stainless Steel



Manufactured from High grade HSSE Steel

Tight thread tolerance for better consistency and higher life

Special treatment for stress relieving

Surface treatment - TiN / TiCN

STANDARD NIB TAPS

This tap can be directly put on the machine or can be connected to bent shank

RANGE

M3 to M30 (Coarse & Fine pitch)

3/16" to 3/4" Imperial sizes
(BSW / UNC / UNF)

COUPLER TYPE NIB TAPS

The tap has got threaded shank & the bent shank can be connected with Coupler

RANGE

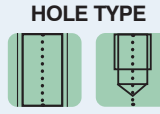
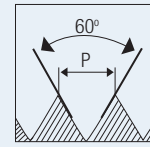
M8 to M36 (Coarse & Fine pitch)

5/16" to 1" Imperial sizes
(UNC / UNF)



M/MF

NIB taps for mild steel and high tensile steel



HSS-E

6HX

| | | | | | | | | Series | NIB | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|-------------|------------|-----|--|
| | | | | | | | | Coating | TiN | |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | No of Flute | EDP No. | | |
| ØD1 | p | L | L1 | mm | ØD3 | a | | | | |
| M3 | 0.5 | 66 | 15 | 2.3 | 1.8 | 4 | 3 | FAB0206874 | | |
| M4 | 0.7 | 65 | 21 | 3 | 2.5 | 4 | 3 | FAB0206875 | | |
| M5 | 0.8 | 70 | 24 | 3.8 | 3.15 | 4 | 3 | FAB0206876 | | |
| M6 | 1.0 | 75 | 30 | 4.5 | 3.55 | 4 | 3 | FAB0206877 | | |
| M6 | 1.0 | 75 | 30 | 4.5 | 3.55 | 4 | 5 | FAB0206878 | | |
| M8 | 1.0 | 82 | 30 | 6.4 | 4.9 | 4 | 5 | FAB0206886 | | |
| M8 | 1.25 | 82 | 38 | 6.05 | 4.9 | 4 | 5 | FAB0206879 | | |
| M10 | 1.0 | 92 | 30 | 8.4 | 6.3 | 5 | 5 | FAB0206887 | | |
| M10 | 1.3 | 96 | 38 | 8.1 | 6.3 | 5 | 5 | FAB0206888 | | |
| M10 | 1.5 | 95 | 45 | 7.8 | 6.3 | 5 | 5 | FAB0206880 | | |
| M12 | 1.3 | 110 | 38 | 10.1 | 8 | 6 | 5 | FAB0206889 | | |
| M12 | 1.5 | 110 | 45 | 9.8 | 8 | 6 | 5 | FAB0206890 | | |
| M12 | 1.75 | 110 | 53 | 9.5 | 8 | 6 | 5 | FAB0206881 | | |
| M14 | 1.5 | 122 | 45 | 11.8 | 10 | 7 | 5 | FAB0206891 | | |
| M14 | 2.0 | 122 | 60 | 11.2 | 9 | 6 | 5 | FAB0206882 | | |
| M16 | 1.5 | 140 | 45 | 13.8 | 11.2 | 10 | 5 | FAB0206892 | | |
| M16 | 2.0 | 140 | 60 | 13.1 | 10 | 10 | 5 | FAB0206883 | | |
| M18 | 1.5 | 145 | 45 | 15.8 | 12.5 | 8 | 5 | FAB0206893 | | |
| M18 | 2.5 | 143 | 75 | 14.5 | 11.2 | 7 | 5 | FAB0206884 | | |
| M20 | 1.5 | 150 | 45 | 17.7 | 14 | 14 | 5 | FAB0206894 | | |
| M20 | 2.5 | 150 | 75 | 16.5 | 12.5 | 14 | 5 | FAB0206885 | | |

Coupler type NIB taps



Note: Coupler NIB Taps available on request



High Performance Cutting Tools



**HAND TAPS /
SHORT MACHINE TAPS**

HSS HAND TAPS



These are straight flute general purpose taps which can be used for both machine or hand tapping. They are generally the most economical tool for use on production runs, but are best on materials that produce chips, or where the swarf breaks readily. Where deep holes are to be tapped, in materials which produce stringy swarf, other types of taps may be needed, especially for coarse threads.

Hand taps can be supplied in sets of three; bottom, second and taper leads, or individually.

BOTTOM TAPS have a chamfer (lead) of 1–2 threads, the angle of the lead being around 18 degrees per side. They are used to produce threads close to the bottom of blind holes.

SECOND TAPS have a lead of 3-5 threads at 8 degrees per side. They are the most popular and can be used for through holes, or blind holes where the thread does not need to go right to the bottom.

TAPER TAPS have a lead of 7-10 threads at 5 degrees per side. The taper lead distributes the cutting force over a large area, and the taper shape helps the thread to start. They can therefore be used to start a thread prior to use of second or bottom leads, or for through holes.

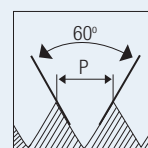
HSS HAND TAPS

| THREAD FORM | BLANK STANDARD | TOLERANCE | LEAD CHAMFER | COATING | PAGE |
|-------------|----------------|-----------|--------------|---------|-------|
| M | ISO | 6H | T/S/B | Bright | 1.114 |
| MF | ISO | 6H | T/B | Bright | 1.116 |
| M | ISO Long Shank | 6H | 5° | Bright | 1.119 |
| M | ISO Long Shank | 6H | 10° | Bright | 1.120 |
| M/MF | ISO Long Shank | 6H | 20° | Bright | 1.121 |
| M/MF | ISO Long Shank | 6H | B/4-4.5P | Bright | 1.123 |
| M | ISO | 6H | Serial Form | Bright | 1.124 |
| BSW | ISO | Class 2 | T/S/B | Bright | 1.125 |
| BSF | ISO | Class 2 | T/S/B | Bright | 1.126 |
| BA | ISO | Class 2 | T/S/B | Bright | 1.127 |
| BSB | ISO | Class 2 | T/S/B | Bright | 1.128 |
| BS Con | ISO | Class 2 | T/B | Bright | 1.129 |
| ME | ISO | Class 2 | T/S/B | Bright | 1.130 |
| BSP | ISO 2284 | - | T/B | Bright | 1.131 |
| BSPT | ISO 2284 | - | T/B | Bright | 1.132 |
| UNC | ISO | 2B | T/S/B | Bright | 1.133 |
| UNF | ISO | 2B | T/S/B | Bright | 1.135 |
| NPT | ANSI | - | T/B | Bright | 1.137 |
| NPS | ANSI | - | T/B | Bright | 1.138 |



M

Metric coarse threads



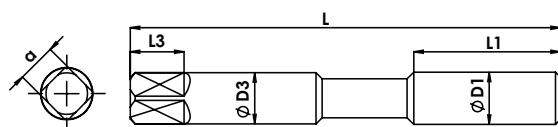
HOLE TYPE



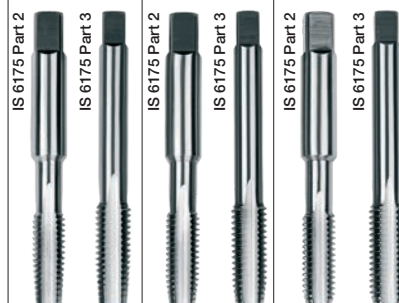
HSS

ISO 529

6H



Reinforced Shank (M3 - M10)



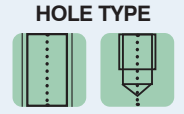
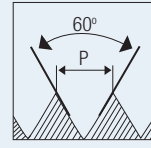
| ISO 529 / IS 6175 Part 1 | | | | | | | Lead Chamfer | Taper | Second | Bottom | Set |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 1.6 | 0.35 | 41 | 8 | 2.5 | 2 | 4 | 1.25 | FAA0201730 | FAA0201731 | FAA0201732 | FAA0201729 |
| M 2.0 | 0.4 | 41 | 8 | 2.5 | 2 | 4 | 1.6 | FAA0201747 | FAA0201750 | FAA0201753 | FAA0201745 |
| M 2.2 | 0.45 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 1.75 | FAA0201762 | FAA0201763 | FAA0201764 | FAA0201761 |
| M 2.3 | 0.4 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 1.9 | FAA0201767 | FAA0201768 | FAA0201769 | FAA0201766 |
| M 2.5 | 0.45 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 2.05 | FAA0201772 | FAA0201773 | FAA0201775 | FAA0201771 |
| M 2.6 | 0.45 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 2.15 | FAA0201783 | FAA0201784 | FAA0201785 | FAA0201782 |

| ISO 529 / IS 6175 Part 2 | | | | | | | Lead Chamfer | Taper | Second | Bottom | Set |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 3.0 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | FAA0201792 | FAA0201798 | FAA0201804 | FAA0201787 |
| M 3.5 | 0.6 | 50 | 13 | 3.55 | 2.8 | 5 | 2.9 | FAA0201832 | FAA0201835 | FAA0201838 | FAA0201828 |
| M 4.0 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | FAA0201854 | FAA0201861 | FAA0201866 | FAA0201847 |
| M 4.5 | 0.75 | 53 | 13 | 4.5 | 3.55 | 6 | 3.75 | FAA0201892 | FAA0201893 | FAA0201894 | FAA0201889 |
| M 5.0 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | FAA0201904 | FAA0201910 | FAA0201917 | FAA0201897 |
| M 6.0 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | FAA0201947 | FAA0201953 | FAA0201959 | FAA0201939 |
| M 7.0 | 1 | 66 | 19 | 7.1 | 5.6 | 8 | 6 | FAA0201989 | FAA0201992 | FAA0201995 | FAA0201985 |
| M 8.0 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.75 | FAA0202009 | FAA0202014 | FAA0202020 | FAA0202003 |
| M 9.0 | 1.25 | 72 | 22 | 9 | 7.1 | 10 | 7.75 | FAA0202055 | FAA0202059 | FAA0202063 | FAA0202051 |
| M 10.0 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | FAA0202080 | FAA0202086 | FAA0202093 | FAA0202072 |

Unit : mm

M

Metric coarse threads



HSS **ISO 529** **6H**

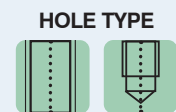
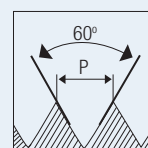
Reduced Shank (M12 - M30)

| ISO 529 / IS 6175 Part 3 | | | | | | | Lead Chamfer | Taper | Second | Bottom | Set |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 11.0 | 1.5 | 85 | 25 | 8 | 6.3 | 9 | 9.5 | FAA0202127 | FAA0202131 | FAA0202136 | FAA0202123 |
| M 12.0 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.25 | FAA0202147 | FAA0202153 | FAA0202157 | FAA0202141 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | FAA0202181 | FAA0202185 | FAA0202189 | FAA0202177 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | FAA0202209 | FAA0202214 | FAA0202219 | FAA0202204 |
| M 18 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 15.5 | FAA0202251 | FAA0202253 | FAA0202256 | FAA0202247 |
| M 20 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 17.5 | FAA0202271 | FAA0202276 | FAA0202281 | FAA0202265 |
| M 22 | 2.5 | 118 | 38 | 16 | 12.5 | 16 | 19.5 | FAA0202306 | FAA0202310 | FAA0202314 | FAA0202302 |
| M 24 | 3 | 130 | 45 | 18 | 14 | 18 | 21 | FAA0202330 | FAA0202335 | FAA0202340 | FAA0202325 |
| M 27 | 3 | 135 | 45 | 20 | 16 | 20 | 24 | FAA0202364 | FAA0202367 | FAA0202370 | FAA0202360 |
| M 30 | 3.5 | 138 | 48 | 20 | 16 | 20 | 26.5 | FAA0202385 | FAA0202389 | FAA0202393 | FAA0202381 |
| M 33 | 3.5 | 151 | 51 | 22.4 | 18 | 22 | 29.5 | FAA0202408 | FAA0202409 | FAA0202410 | FAA0202405 |
| M 36 | 4 | 162 | 57 | 25 | 20 | 24 | 32 | FAA0202421 | FAA0202425 | FAA0202429 | FAA0202418 |
| M 39 | 4 | 170 | 60 | 28 | 22.4 | 26 | 35 | FAA0202443 | FAA0202444 | FAA0202445 | FAA0202440 |
| M 42 | 4.5 | 170 | 60 | 28 | 22.4 | 26 | 37.5 | FAA0202452 | FAA0202454 | FAA0202455 | FAA0202449 |
| M 45 | 4.5 | 187 | 67 | 31.5 | 25 | 28 | 40.5 | FAA0202462 | FAA0202463 | FAA0202464 | FAA0202459 |
| M 48 | 5 | 187 | 67 | 31.5 | 25 | 28 | 43 | FAA0202471 | FAA0202472 | FAA0202473 | FAA0202468 |
| M 52 | 5 | 200 | 70 | 35.5 | 28 | 31 | 47 | FAA0202478 | FAA0202479 | FAA0202480 | FAA0202477 |
| M 56 | 5.5 | 200 | 70 | 35.5 | 28 | 31 | 50.5 | FAA0202482 | FAA0202483 | FAA0202484 | FAA0202481 |

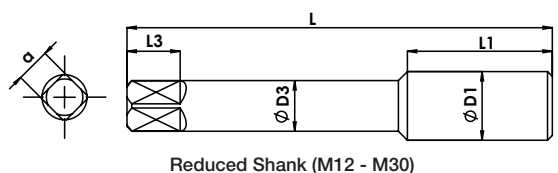
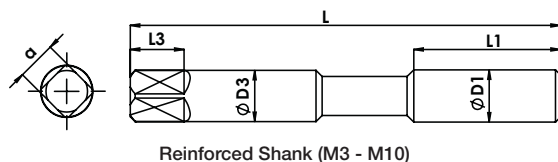
Unit : mm

MF

Metric fine threads



HSS **ISO 529** **6H**



| ISO 529 / IS 6175 Part 2 | | | | | | | Lead Chamfer | Taper | Bottom | Pair |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 3 | 0.35 | 48 | 11 | 3.15 | 2.5 | 5 | 2.12 | FAA0202551 | FAA0202555 | FAA0202535 |
| M 3 | 0.6 | 48 | 11 | 3.15 | 2.5 | 5 | 2.12 | FAA0202542 | FAA0202544 | FAA0202541 |
| M 4 | 0.5 | 53 | 13 | 4 | 3.15 | 6 | 2.8 | FAA0202565 | FAA0202569 | FAA0202564 |
| M 4 | 0.75 | 53 | 13 | 4 | 3.15 | 6 | 2.8 | FAA0202576 | FAA0202578 | FAA0202575 |
| M 5 | 0.5 | 58 | 16 | 5 | 4 | 7 | 3.55 | FAA0202589 | FAA0202593 | FAA0202588 |
| M 5.5 | 0.9 | 62 | 17 | 5.6 | 4.5 | 7 | 4 | FAA0202615 | FAA0202616 | FAA0202614 |
| M 6 | 0.5 | 66 | 19 | 6.3 | 5 | 8 | 4.5 | FAA0202627 | FAA0202629 | FAA0202626 |
| M 6 | 0.75 | 66 | 19 | 6.3 | 5 | 8 | 4.5 | FAA0202634 | FAA0202640 | FAA0202633 |
| M 7 | 0.75 | 66 | 19 | 7.1 | 5.6 | 8 | 5.3 | FAA0202666 | FAA0202670 | FAA0202665 |
| M 8 | 1 | 69 | 19 | 8 | 6.3 | 9 | 6 | FAA0202698 | FAA0202704 | FAA0202697 |
| M 9 | 1 | 69 | 19 | 9 | 7.1 | 10 | 7.1 | FAA0202732 | FAA0202736 | FAA0202731 |
| M 10 | 1 | 76 | 20 | 10 | 8 | 11 | 7.5 | FAA0202759 | FAA0202764 | FAA0202758 |
| M 10 | 1.25 | 76 | 20 | 10 | 8 | 11 | 7.5 | FAA0202787 | FAA0202793 | FAA0202786 |

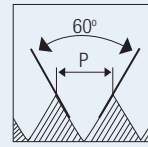
| ISO 529 / IS 6175 Part 3 | | | | | | | Lead Chamfer | Taper | Bottom | Pair |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 11 | 1.25 | 82 | 22 | 8 | 6.3 | 9 | 9.8 | FAA0202830 | FAA0202831 | FAA0202829 |
| M 12 | 1 | 84 | 24 | 9 | 7.1 | 10 | 11 | FAA0202846 | FAA0202855 | FAA0202845 |
| M 12 | 1.25 | 84 | 24 | 9 | 7.1 | 10 | 10.8 | FAA0202870 | FAA0202874 | FAA0202869 |
| M 12 | 1.5 | 89 | 29 | 9 | 7.1 | 10 | 10.5 | FAA0202895 | FAA0202903 | FAA0202893 |
| M 14 | 1 | 87 | 22 | 11.2 | 9 | 12 | 13 | FAA0202946 | FAA0202951 | FAA0202945 |
| M 14 | 1.25 | 90 | 25 | 11.2 | 9 | 12 | 12.8 | FAA0202967 | FAA0202973 | FAA0202966 |
| M 14 | 1.5 | 95 | 30 | 11.2 | 9 | 12 | 12.5 | FAA0202989 | FAA0202997 | FAA0202988 |

Unit : mm



MF

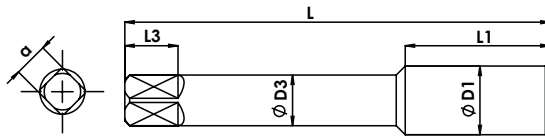
Metric fine threads



HOLE TYPE



HSS **ISO 529** **6H**



Reduced Shank (M12 - M30)



| ISO 529 / IS 6175 Part 3 | | | | | | | Lead Chamfer | Taper | Bottom | Pair |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| M 16 | 1 | 92 | 22 | 12.5 | 10 | 13 | 15 | FAA0203042 | FAA0203046 | FAA0203041 |
| M 16 | 1.5 | 102 | 32 | 12.5 | 10 | 13 | 14.5 | FAA0203064 | FAA0203072 | FAA0203063 |
| M 18 | 1 | 97 | 22 | 14 | 11.2 | 14 | 17 | FAA0203098 | FAA0203101 | FAA0203097 |
| M 18 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 16.5 | FAA0203107 | FAA0203115 | FAA0203106 |
| M 18 | 2 | 112 | 37 | 14 | 11.2 | 14 | 16 | FAA0203130 | FAA0203132 | FAA0203129 |
| M 20 | 1 | 102 | 27 | 14 | 11.2 | 14 | 19 | FAA0203147 | FAA0203149 | FAA0203146 |
| M 20 | 1.5 | 104 | 29 | 14 | 11.2 | 14 | 18.5 | FAA0203156 | FAA0203164 | FAA0203155 |
| M 20 | 2 | 112 | 37 | 14 | 11.2 | 14 | 18 | FAA0203181 | FAA0203185 | FAA0203180 |
| M 22 | 1 | 109 | 29 | 16 | 12.5 | 16 | 21 | FAA0203196 | FAA0203198 | FAA0203195 |
| M 22 | 1.5 | 113 | 33 | 16 | 12.5 | 16 | 20.5 | FAA0203202 | FAA0203208 | FAA0203201 |
| M 22 | 2 | 118 | 38 | 16 | 12.5 | 16 | 20 | FAA0203219 | FAA0203221 | FAA0203218 |
| M 24 | 1 | 114 | 29 | 18 | 14 | 18 | 23 | FAA0203228 | FAA0203229 | FAA0203227 |
| M 24 | 1.5 | 120 | 35 | 18 | 14 | 18 | 22.5 | FAA0203234 | FAA0203239 | FAA0203233 |
| M 24 | 2 | 120 | 35 | 18 | 14 | 18 | 22 | FAA0203254 | FAA0203258 | FAA0203253 |
| M 25 | 1 | 114 | 29 | 18 | 14 | 18 | 24 | FAA0203267 | FAA0203269 | FAA0203266 |
| M 25 | 1.5 | 120 | 35 | 18 | 14 | 18 | 23.5 | FAA0203274 | FAA0203278 | FAA0203273 |
| M 27 | 1.5 | 127 | 37 | 20 | 16 | 20 | 25.5 | FAA0203307 | FAA0203309 | FAA0203306 |
| M 27 | 2 | 127 | 37 | 20 | 16 | 20 | 25 | FAA0203316 | FAA0203320 | FAA0203315 |
| M 28 | 1.5 | 127 | 37 | 20 | 16 | 20 | 26.5 | FAA0203329 | FAA0203331 | FAA0203328 |
| M 30 | 1.5 | 127 | 37 | 20 | 16 | 20 | 28.5 | FAA0203344 | FAA0203348 | FAA0203343 |

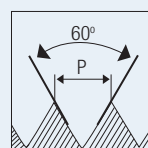
Unit : mm



HSS Machine Taps

MF

Metric fine threads



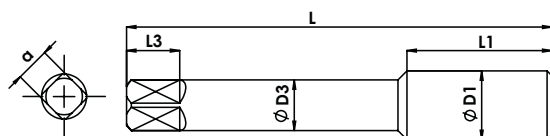
HOLE TYPE



HSS

ISO 529

6H



Reduced Shank (M12 - M30)

IS 6175 Part 3



IS 6175 Part 3



| ISO 529 / IS 6175 Part 3 | | | | | | | Lead Chamfer | | Taper | Bottom | Pair |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 30 | 2 | 127 | 37 | 20 | 16 | 20 | 28 | FAA0203359 | FAA0203363 | FAA0203358 | |
| M 30 | 3 | 138 | 48 | 20 | 16 | 20 | 27 | FAA0203371 | FAA0203373 | FAA0203370 | |
| M 32 | 1.5 | 137 | 37 | 22.4 | 18 | 22 | 30.5 | FAA0203385 | FAA0203389 | FAA0203384 | |
| M 33 | 1.5 | 137 | 37 | 22.4 | 18 | 22 | 31.5 | FAA0203398 | FAA0203399 | FAA0203397 | |
| M 33 | 2 | 137 | 37 | 22.4 | 18 | 22 | 31 | FAA0203403 | FAA0203405 | FAA0203402 | |
| M 33 | 3 | 151 | 51 | 22.4 | 18 | 22 | 30 | FAA0203409 | FAA0203411 | FAA0203408 | |
| M 36 | 1.5 | 144 | 39 | 25 | 20 | 24 | 34.5 | FAA0203435 | FAA0203437 | FAA0203434 | |
| M 36 | 2 | 144 | 39 | 25 | 20 | 24 | 34 | FAA0203442 | FAA0203444 | FAA0203441 | |
| M 36 | 3 | 162 | 57 | 25 | 20 | 24 | 33 | FAA0203450 | FAA0203452 | FAA0203449 | |
| M 39 | 1.5 | 149 | 39 | 28 | 22.4 | 26 | 37.5 | FAA0203464 | FAA0203465 | FAA0203463 | |
| M 39 | 2 | 149 | 39 | 28 | 22.4 | 26 | 37 | | FAA0203467 | FAA0203466 | |
| M 39 | 3 | 170 | 60 | 28 | 22.4 | 26 | 36 | FAA0203470 | FAA0203472 | FAA0203469 | |
| M 40 | 1.5 | 149 | 39 | 28 | 22.4 | 26 | 38.5 | FAA0203477 | FAA0203479 | FAA0203476 | |
| M 42 | 1.5 | 149 | 39 | 28 | 22.4 | 26 | 40.5 | FAA0203490 | FAA0203491 | FAA0203489 | |
| M 42 | 3 | 170 | 60 | 28 | 22.4 | 26 | 39 | FAA0203500 | FAA0203502 | FAA0203499 | |
| M 45 | 1.5 | 165 | 45 | 31.5 | 25 | 28 | 43.5 | FAA0203521 | FAA0203522 | FAA0203520 | |
| M 45 | 3 | 187 | 67 | 31.5 | 25 | 28 | 42 | FAA0203529 | FAA0203531 | FAA0203528 | |
| M 48 | 1.5 | 165 | 45 | 31.5 | 25 | 28 | 46.5 | FAA0203533 | FAA0203534 | FAA0203532 | |
| M 48 | 2 | 165 | 45 | 31.5 | 25 | 28 | 46 | FAA0203539 | FAA0203541 | FAA0203538 | |
| M 48 | 3 | 187 | 67 | 31.5 | 25 | 28 | 45 | FAA0203546 | FAA0203548 | FAA0203545 | |

Unit : mm

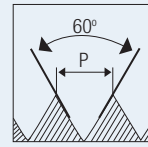


HSS Machine Taps

HSS TAPS



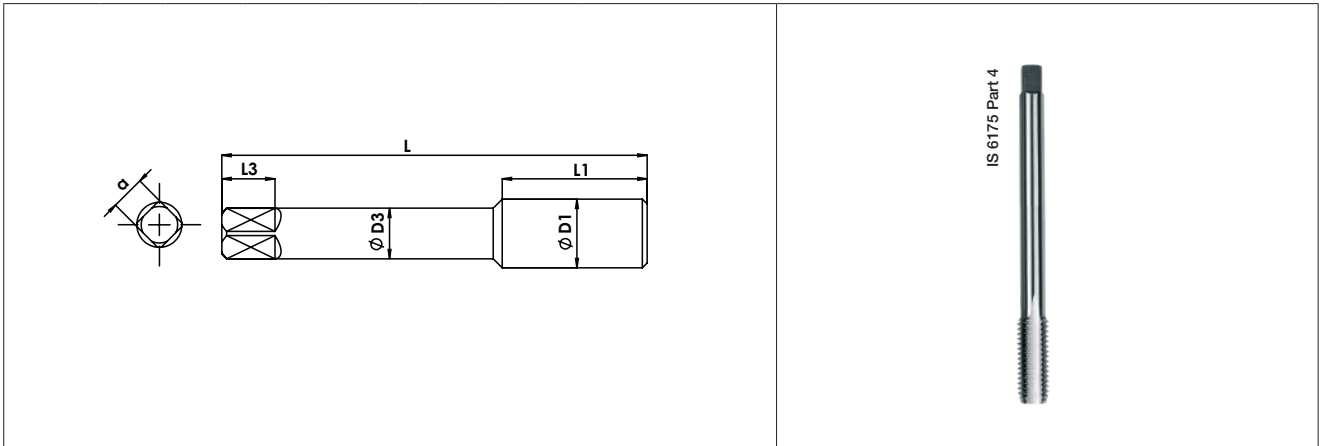
**Metric long shank coarse threads
(Taper-Type A)**



HOLE TYPE



HSS **ISO 2283** **6H**

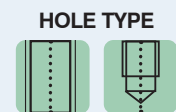
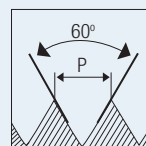


| ISO 2283 / IS 6175 Part 4 | | | | | | | Lead Chamfer | 5° |
|---------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| M 3 | 0.5 | 66 | 11 | 2.24 | 1.8 | 4 | 2.5 | FAA0203714 |
| M 4 | 0.7 | 73 | 13 | 3.15 | 2.5 | 5 | 3.3 | FAA0203721 |
| M 5 | 0.8 | 79 | 16 | 4 | 3.15 | 6 | 4.2 | FAA0203738 |
| M 6 | 1 | 89 | 19 | 4.5 | 3.55 | 6 | 5 | FAA0203747 |
| M 8 | 1.25 | 97 | 22 | 6.3 | 5 | 8 | 6.75 | FAA0203770 |
| M 10 | 1.5 | 108 | 24 | 8 | 6.3 | 9 | 8.5 | FAA0203794 |
| M 12 | 1.75 | 119 | 29 | 9 | 7.1 | 10 | 10.25 | FAA0203816 |
| M 14 | 2 | 127 | 30 | 11.2 | 9 | 12 | 12.5 | FAA0207063 |
| M 16 | 2 | 137 | 32 | 12.5 | 10 | 13 | 14 | FAA0203852 |
| M 18 | 2.5 | 149 | 37 | 14 | 11.2 | 14 | 15.5 | FAA0203867 |
| M 20 | 2.5 | 149 | 37 | 14 | 11.2 | 14 | 17.5 | FAA0203884 |

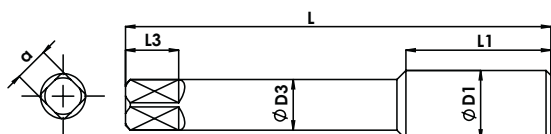
Unit : mm



ISO metric long shank coarse threads (Second-Type D)



HSS
ISO 2283
6H



| ISO 2283 / IS 6175 Part 4 | | | | | | | Lead Chamfer | 10° |
|---------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| M 3 | 0.5 | 66 | 11 | 2.24 | 0.1 | 4 | 2.5 | FAA0203715 |
| M 4 | 0.7 | 73 | 13 | 3.15 | 2.5 | 5 | 3.3 | FAA0203722 |
| M 5 | 0.8 | 79 | 16 | 4 | 3.15 | 6 | 4.2 | FAA0203739 |
| M 6 | 1 | 89 | 19 | 4.5 | 3.55 | 6 | 5 | FAA0203748 |
| M 8 | 1.25 | 97 | 22 | 6.3 | 5 | 8 | 6.75 | FAA0203771 |
| M 10 | 1.5 | 108 | 24 | 8 | 6.3 | 9 | 8.5 | FAA0203795 |
| M 12 | 1.75 | 119 | 29 | 9 | 7 | 10 | 10.25 | FAA0203817 |
| M 14 | 2 | 127 | 30 | 11.2 | 9 | 12 | 12 | FAA0207305 |
| M 16 | 2 | 137 | 32 | 12.5 | 10 | 13 | 14 | FAA0203853 |
| M 18 | 2.5 | 149 | 37 | 14 | 11.2 | 14 | 15.5 | FAA0207306 |
| M 20 | 2.5 | 149 | 37 | 14 | 11.2 | 14 | 17.5 | FAA0203885 |

Unit : mm

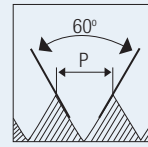


HSS Machine Taps

HSS TAPS

M/MF

Metric long shank coarse & fine threads (Bottom-Type C)



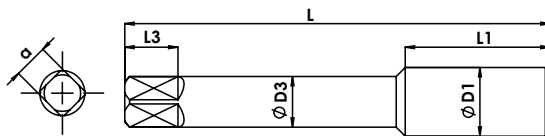
HOLE TYPE



HSS

ISO 2283

6H



| ISO 2283 / IS 6175 Part 4 | | | | | | | Lead Chamfer | 20° |
|---------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| M 3 | 0.5 | 66 | 11 | 2.24 | 1.8 | 4 | 2.5 | FAA0203716 |
| M 3.5 | 0.6 | 68 | 13 | 2.5 | 2 | 4 | 2.9 | FAA0203719 |
| M 4 | 0.7 | 73 | 13 | 3.15 | 2.5 | 5 | 3.3 | FAA0203723 |
| M 5 | 0.8 | 79 | 16 | 4 | 3.15 | 6 | 4.2 | FAA0203740 |
| M 6 | 1 | 89 | 19 | 4.5 | 3.55 | 6 | 5 | FAA0203749 |
| M 7 | 1 | 89 | 19 | 5.6 | 4.5 | 7 | 6 | FAA0203759 |
| M 8 | 1 | 97 | 19 | 6.3 | 5 | 8 | 7 | FAA0203767 |
| M 8 | 1.25 | 97 | 22 | 6.3 | 5 | 8 | 6.75 | FAA0203772 |
| M 9 | 1.25 | 97 | 22 | 7.1 | 5.6 | 8 | 7.75 | FAA0203781 |
| M 10 | 1 | 108 | 20 | 8 | 6.3 | 9 | 9 | FAA0203786 |
| M 10 | 1.25 | 108 | 20 | 8 | 6.3 | 9 | 8.75 | FAA0203792 |
| M 10 | 1.5 | 108 | 24 | 8 | 6.3 | 9 | 8.5 | FAA0203796 |
| M 12 | 1.25 | 119 | 24 | 9 | 7.1 | 10 | 10.75 | FAA0203808 |
| M 12 | 1.5 | 119 | 29 | 9 | 7.1 | 10 | 10.5 | FAA0203813 |

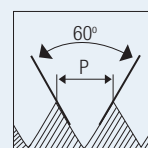
Unit : mm



HSS Machine Taps

M/MF

Metric long shank coarse & fine threads (Bottom-Type C)



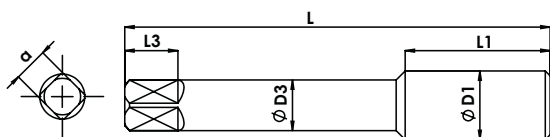
HOLE TYPE



HSS

ISO 2283

6H



| ISO 2283 / IS 6175 Part 4 | | | | | | | Lead Chamfer | 20° |
|---------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | |
| M 12 | 1.75 | 119 | 29 | 9 | 7.1 | 10 | 10.25 | FAA0203818 |
| M 14 | 1.25 | 127 | 25 | 11.2 | 9 | 12 | 12.75 | FAA0203828 |
| M 14 | 1.5 | 127 | 30 | 11.2 | 9 | 12 | 12.5 | FAA0203832 |
| M 14 | 2 | 127 | 30 | 11.2 | 9 | 12 | 12 | FAA0203841 |
| M 16 | 1.5 | 137 | 32 | 12.5 | 10 | 13 | 14.5 | FAA0203849 |
| M 16 | 2 | 137 | 32 | 12.5 | 10 | 13 | 14 | FAA0203854 |
| M 18 | 1.5 | 149 | 29 | 14 | 11.2 | 14 | 16.5 | FAA0203864 |
| M 18 | 2.5 | 149 | 37 | 14 | 11.2 | 14 | 15.5 | FAA0203868 |
| M 20 | 1.5 | 149 | 29 | 14 | 11.2 | 14 | 18.5 | FAA0203875 |
| M 20 | 2.5 | 149 | 37 | 14 | 11.2 | 14 | 17.5 | FAA0203886 |
| M 22 | 2.5 | 158 | 38 | 16 | 12.5 | 16 | 19.5 | FAA0203902 |
| M 24 | 3 | 172 | 45 | 18 | 14 | 18 | 21 | FAA0203918 |
| M 27 | 3 | 180 | 45 | 20 | 16 | 20 | 24 | FAA0203940 |
| M 30 | 3.5 | 183 | 48 | 20 | 16 | 20 | 26.5 | FAA0203955 |

Unit : mm

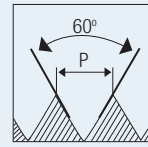


HSS Machine Taps

HSS TAPS

M/MF

Metric long shank coarse & fine threads (SPPT-Type B)



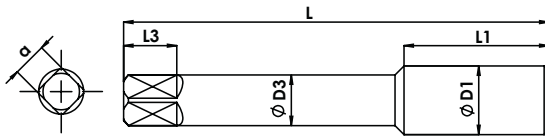
HOLE TYPE



HSS

ISO 2283

6H



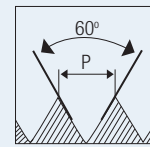
| ISO 2283 / IS 6175 Part 4 | | | | | | | | Spiral Point with 10° lead chamfer | |
|---------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------------------------------|--|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | |
| M 3 | 0.5 | 66 | 11 | 2.24 | 1.8 | 4 | 2.5 | FAA0203717 | |
| M 3.5 | 0.6 | 68 | 13 | 2.5 | 2 | 4 | 2.9 | FAA0203720 | |
| M 4 | 0.7 | 73 | 13 | 3.15 | 2.5 | 5 | 3.3 | FAA0203726 | |
| M 5 | 0.8 | 79 | 16 | 4 | 3.15 | 6 | 4.2 | FAA0203743 | |
| M 6 | 1 | 89 | 19 | 4.5 | 3.55 | 6 | 5 | FAA0203753 | |
| M 8 | 1.25 | 97 | 22 | 6.3 | 5 | 8 | 6.75 | FAA0203775 | |
| M 10 | 1.25 | 108 | 20 | 8 | 6.3 | 9 | 8.75 | FAA0203793 | |
| M 10 | 1.5 | 108 | 24 | 8 | 6.3 | 9 | 8.5 | FAA0203798 | |
| M 12 | 1.5 | 119 | 29 | 9 | 7.1 | 10 | 10.5 | FAA0203815 | |
| M 12 | 1.75 | 119 | 29 | 9 | 7.1 | 10 | 10.25 | FAA0203821 | |
| M 14 | 1.5 | 127 | 30 | 11.2 | 9 | 12 | 12.5 | FAA0203835 | |
| M 14 | 2 | 127 | 30 | 11.2 | 9 | 12 | 12 | FAA0203842 | |
| M 16 | 1.5 | 137 | 32 | 12.5 | 10 | 13 | 14.5 | FAA0203851 | |
| M 16 | 2 | 137 | 32 | 12.5 | 10 | 13 | 14 | FAA0203857 | |
| M 18 | 1.5 | 142 | 29 | 14 | 11.2 | 14 | 16.5 | FAA0203865 | |
| M 18 | 2.5 | 149 | 37 | 14 | 11.2 | 14 | 15.5 | FAA0203869 | |
| M 20 | 1.5 | 142 | 29 | 14 | 11.2 | 14 | 18.5 | FAA0203878 | |
| M 20 | 2.5 | 149 | 37 | 14 | 11.2 | 14 | 17.5 | FAA0203888 | |
| M 22 | 2.5 | 158 | 38 | 16 | 12.5 | 16 | 19.5 | FAA0203903 | |
| M 24 | 3 | 172 | 45 | 18 | 14 | 18 | 21 | FAA0203920 | |

Unit : mm

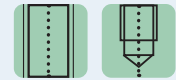


M

Metric serial form coarse threads



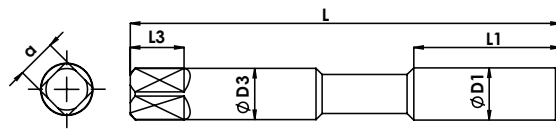
HOLE TYPE



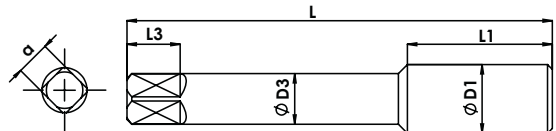
HSS

ISO 529

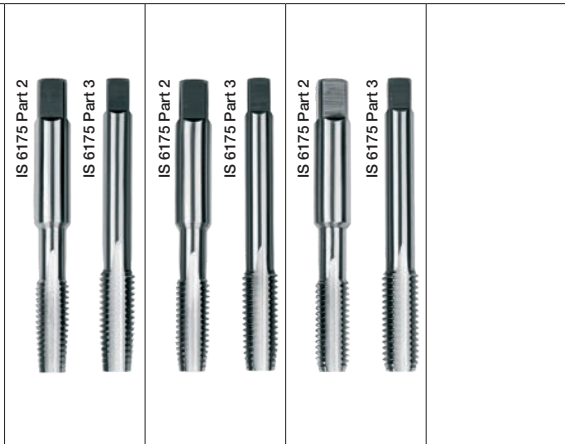
6H



Reinforced Shank (M3 - M10)



Reduced Shank (M12 - M30)



| ISO 529 / IS 6175 Part 2 | | | | | | | Lead Chamfer | Rougher | Intermediate | Finisher | Set |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|--------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 3 | 0.5 | 48 | 11 | 3.15 | 2.5 | 5 | 2.5 | FAA0201821 | FAA0201822 | FAA0201804 | FAA0201820 |
| M 4 | 0.7 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | FAA0201881 | FAA0201882 | FAA0201866 | FAA0201880 |
| M 5 | 0.8 | 58 | 16 | 5 | 4 | 7 | 4.2 | FAA0201932 | FAA0201933 | FAA0201917 | FAA0201931 |
| M 6 | 1 | 66 | 19 | 6.3 | 5 | 8 | 5 | FAA0201977 | FAA0201978 | FAA0201959 | FAA0201976 |
| M 8 | 1.25 | 72 | 22 | 8 | 6.3 | 9 | 6.75 | FAA0202037 | FAA0202038 | FAA0202020 | FAA0202036 |
| M 10 | 1.5 | 80 | 24 | 10 | 8 | 11 | 8.5 | FAA0202108 | FAA0202109 | FAA0202093 | FAA0202107 |

| ISO 529 / IS 6175 Part 3 | | | | | | | | | | | |
|--------------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| M 12 | 1.75 | 89 | 29 | 9 | 7.1 | 10 | 10.25 | FAA0202171 | FAA0202172 | FAA0202157 | FAA0202170 |
| M 14 | 2 | 95 | 30 | 11.2 | 9 | 12 | 12 | FAA0202198 | FAA0202199 | FAA0202189 | FAA0202197 |
| M 16 | 2 | 102 | 32 | 12.5 | 10 | 13 | 14 | FAA0202233 | FAA0202234 | FAA0202219 | FAA0202232 |
| M 18 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 15.5 | FAA0202263 | FAA0202264 | FAA0202256 | FAA0202262 |
| M 20 | 2.5 | 112 | 37 | 14 | 11.2 | 14 | 17.5 | FAA0202293 | FAA0202294 | FAA0202281 | FAA0202292 |
| M 22 | 2.5 | 118 | 38 | 16 | 12.5 | 16 | 19.5 | FAA0202306 | FAA0202310 | FAA0202314 | FAA0202321 |
| M 24 | 3 | 130 | 45 | 18 | 14 | 18 | 21 | FAA0202349 | FAA0202350 | FAA0202340 | FAA0202348 |
| M 27 | 3 | 135 | 45 | 20 | 16 | 20 | 24 | FAA0202376 | FAA0202377 | FAA0202370 | FAA0202375 |
| M 30 | 3.5 | 138 | 48 | 20 | 16 | 20 | 26.5 | FAA0202401 | FAA0202402 | FAA0202393 | FAA0202400 |

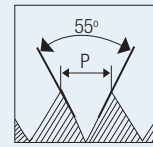
Unit : mm



HSS Hand Taps

BSW

Whitworth coarse threads



HOLE TYPE



HSS

ISO 529

Class 2

| | | | | | | | Lead Chamfer | Taper | Second | Bottom | Set |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/8" | 40 | 48 | 11 | 3.15 | 2.5 | 5 | 2.55 | FAA0200011 | FAA0200013 | FAA0200015 | FAA0200009 |
| 5/32" | 32 | 53 | 13 | 4 | 3.15 | 6 | 3.2 | FAA0200022 | FAA0200024 | FAA0200026 | FAA0200020 |
| 3/16" | 24 | 58 | 16 | 5 | 4 | 7 | 3.7 | FAA0200038 | FAA0200042 | FAA0200045 | FAA0200034 |
| 1/4" | 20 | 66 | 19 | 6.3 | 5 | 8 | 5.1 | FAA0200065 | FAA0200070 | FAA0200075 | FAA0200061 |
| 5/16" | 18 | 72 | 22 | 8 | 6.3 | 9 | 6.5 | FAA0200098 | FAA0200102 | FAA0200106 | FAA0200094 |
| 3/8" | 16 | 80 | 24 | 10 | 8 | 11 | 7.9 | FAA0200120 | FAA0200124 | FAA0200127 | FAA0200115 |
| 7/16" | 14 | 85 | 25 | 8 | 6.3 | 9 | 9.3 | FAA0200143 | FAA0200147 | FAA0200151 | FAA0200139 |
| 1/2" | 12 | 89 | 29 | 9.5 | 7.5 | 10 | 10.5 | FAA0200162 | FAA0200165 | FAA0200168 | FAA0200159 |
| 9/16" | 12 | 95 | 30 | 11.2 | 9 | 12 | 12.1 | FAA0200178 | FAA0200180 | FAA0200182 | FAA0200177 |
| 5/8" | 11 | 102 | 32 | 12.5 | 10 | 13 | 13.5 | FAA0200193 | FAA0200197 | FAA0200201 | FAA0200189 |
| 11/16" | 11 | 112 | 37 | 14 | 11.2 | 14 | 15.1 | FAA0200231 | FAA0200232 | FAA0200233 | FAA0200230 |
| 3/4" | 10 | 112 | 37 | 14 | 11.2 | 14 | 16.25 | FAA0200213 | FAA0200217 | FAA0200221 | FAA0200211 |
| 7/8" | 9 | 118 | 38 | 16 | 12.5 | 16 | 19.25 | FAA0200237 | FAA0200241 | FAA0200245 | FAA0200235 |
| 1" | 8 | 130 | 45 | 18 | 14 | 18 | 22 | FAA0200257 | FAA0200261 | FAA0200265 | FAA0200254 |
| 1.1/8" | 7 | 138 | 48 | 20 | 16 | 20 | 24.75 | FAA0200275 | FAA0200277 | FAA0200279 | FAA0200274 |
| 1.1/4" | 7 | 151 | 51 | 22.4 | 18 | 22 | 28 | FAA0200282 | FAA0200284 | FAA0200286 | FAA0200281 |
| 1.3/8" | 6 | 162 | 57 | 25 | 20 | 24 | 30.1 | FAA0200291 | FAA0200292 | FAA0200293 | FAA0200290 |
| 1.1/2" | 6 | 170 | 60 | 28 | 22.4 | 26 | 33.5 | FAA0200295 | FAA0200297 | FAA0200299 | FAA0200294 |
| 1.5/8" | 5 | 170 | 60 | 28 | 22.4 | 26 | 35.7 | - | - | FAA0200303 | FAA0200302 |
| 1.3/4" | 5 | 187 | 67 | 31.5 | 25 | 28 | 39 | FAA0200305 | FAA0200306 | FAA0200307 | FAA0200304 |
| 1.7/8" | 4.5 | 187 | 67 | 31.5 | 25 | 28 | 41.3 | FAA0200309 | FAA0200310 | FAA0200311 | FAA0200308 |
| 2" | 4.5 | 200 | 70 | 35.5 | 28 | 31 | 44.5 | FAA0200313 | FAA0200314 | FAA0200315 | FAA0200312 |

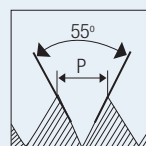
Unit : mm



HSS Hand Taps

BSF

Whitworth fine threads



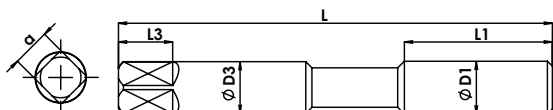
HOLE TYPE



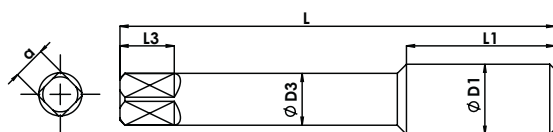
HSS

ISO 529

Class 2



Reinforced Shank (3/16" - 3/8")



Reduced Shank (7/16" - 2")



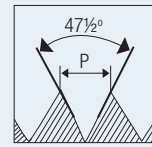
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Lead Chamfer | Taper | Second | Bottom | Set |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 3/16" | 32 | 58 | 16 | 5 | 4 | 7 | 4 | FAA0200348 | FAA0200349 | FAA0200350 | FAA0200346 |
| 1/4" | 26 | 66 | 19 | 6.3 | 5 | 8 | 5.3 | FAA0200363 | FAA0200366 | FAA0200369 | FAA0200360 |
| 5/16" | 22 | 72 | 22 | 8 | 6.3 | 9 | 6.8 | FAA0200383 | FAA0200385 | FAA0200387 | FAA0200381 |
| 3/8" | 20 | 80 | 24 | 10 | 8 | 11 | 8.3 | FAA0200397 | FAA0200399 | FAA0200401 | FAA0200394 |
| 7/16" | 18 | 85 | 25 | 8 | 6.3 | 9 | 9.7 | FAA0200409 | FAA0200412 | FAA0200415 | FAA0200407 |
| 1/2" | 16 | 89 | 29 | 9.5 | 7.5 | 10 | 11.1 | FAA0200421 | FAA0200423 | FAA0200425 | FAA0200419 |
| 9/16" | 16 | 95 | 30 | 11.2 | 9 | 12 | 12.7 | FAA0200432 | FAA0200433 | FAA0200434 | FAA0200431 |
| 5/8" | 14 | 102 | 32 | 12.5 | 10 | 13 | 14 | FAA0200440 | FAA0200443 | FAA0200446 | FAA0200437 |
| 11/16" | 14 | 112 | 37 | 14 | 11.2 | 14 | 15.5 | FAA0200451 | FAA0200452 | FAA0200453 | FAA0200450 |
| 3/4" | 12 | 112 | 37 | 14 | 11.2 | 14 | 16.75 | FAA0200455 | FAA0200457 | FAA0200459 | FAA0200454 |
| 7/8" | 11 | 118 | 38 | 16 | 12.5 | 16 | 19.75 | FAA0200464 | FAA0200466 | FAA0200467 | FAA0200462 |
| 1" | 10 | 130 | 45 | 18 | 14 | 18 | 22.75 | FAA0200472 | FAA0200474 | FAA0200476 | FAA0200470 |
| 1.1/8" | 9 | 138 | 48 | 20 | 16 | 20 | 25.5 | FAA0200479 | FAA0200480 | FAA0200481 | FAA0200478 |
| 1.1/4" | 9 | 151 | 51 | 22.4 | 18 | 22 | 28.5 | FAA0200483 | FAA0200484 | FAA0200485 | FAA0200482 |
| 1.3/8" | 8 | 162 | 57 | 25 | 20 | 24 | 31.5 | FAA0200487 | FAA0200488 | FAA0200489 | FAA0200486 |
| 1.1/2" | 8 | 170 | 60 | 28 | 22.4 | 26 | 34.5 | FAA0200491 | FAA0200492 | FAA0200493 | FAA0200490 |
| 1.5/8" | 8 | 170 | 60 | 28 | 22.4 | 26 | 37.7 | FAA0200496 | - | - | FAA0200494 |
| 1.3/4" | 7 | 187 | 67 | 31.5 | 25 | 28 | 41 | - | - | - | FAA0200495 |
| 2" | 7 | 200 | 70 | 35.5 | 28 | 31 | 47 | FAA0200498 | FAA0200499 | FAA0200500 | FAA0200497 |

Unit : mm



BA

British association threads



HOLE TYPE



HSS

ISO 529

Class 2

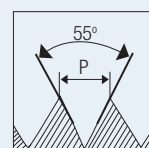
| | | | | | | | | Lead Chamfer | | | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|--------------|------------|------------|------------|
| | | | | | | | | Taper | Second | Bottom | Set |
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 12 | 90.9 | 40 | 7 | 2.5 | 2 | 4 | 1.05 | FAA0200647 | FAA0200648 | FAA0200649 | FAA0200646 |
| 11 | 81.9 | 41 | 8 | 2.5 | 2 | 4 | 1.2 | FAA0200643 | FAA0200644 | FAA0200645 | FAA0200642 |
| 10 | 72.6 | 41 | 8 | 2.5 | 2 | 4 | 1.4 | FAA0200635 | FAA0200637 | FAA0200639 | FAA0200632 |
| 9 | 65.1 | 41 | 8 | 2.5 | 2 | 4 | 1.55 | FAA0200625 | FAA0200627 | FAA0200629 | FAA0200623 |
| 8 | 59.1 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 1.8 | FAA0200616 | FAA0200618 | FAA0200620 | FAA0200613 |
| 7 | 52.9 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 2.05 | FAA0200603 | FAA0200606 | FAA0200609 | FAA0200601 |
| 6 | 47.9 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 2.3 | FAA0200590 | FAA0200593 | FAA0200596 | FAA0200588 |
| 5 | 43 | 48 | 11 | 3.15 | 2.5 | 5 | 2.65 | FAA0200578 | FAA0200581 | FAA0200584 | FAA0200576 |
| 4 | 38.5 | 50 | 13 | 3.55 | 2.8 | 5 | 3 | FAA0200564 | FAA0200567 | FAA0200570 | FAA0200562 |
| 3 | 34.8 | 53 | 13 | 4.5 | 3.55 | 6 | 3.4 | FAA0200555 | FAA0200557 | FAA0200559 | FAA0200552 |
| 2 | 31.4 | 58 | 16 | 5 | 4 | 7 | 4 | FAA0200541 | FAA0200544 | FAA0200547 | FAA0200539 |
| 1 | 28.2 | 62 | 17 | 5.6 | 4.5 | 7 | 4.5 | FAA0200529 | FAA0200532 | FAA0200535 | FAA0200527 |
| 0 | 25.4 | 66 | 19 | 6.3 | 5 | 8 | 5.1 | FAA0200517 | FAA0200520 | FAA0200523 | FAA0200515 |

Unit : mm



BSB

British brass threads



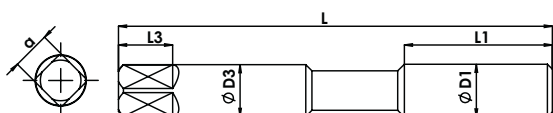
HOLE TYPE



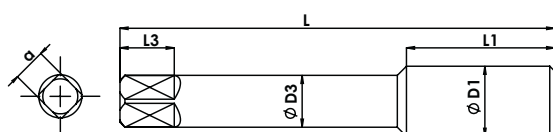
HSS

ISO 529

Class 2



Reinforced Shank (1/8" - 3/8")



Reduced Shank (7/16" - 2")



| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Lead Chamfer | Taper | Second | Bottom | Set |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/4" | 26 | 66 | 19 | 6.3 | 5 | 8 | 5.3 | FAA0200653 | FAA0200654 | FAA0200655 | FAA0200651 |
| 5/16" | 26 | 69 | 19 | 8 | 6.3 | 9 | 5.8 | FAA0200658 | FAA0200659 | FAA0200660 | FAA0200656 |
| 3/8" | 26 | 76 | 20 | 10 | 8 | 11 | 8.4 | FAA0200663 | FAA0200664 | FAA0200665 | FAA0200661 |
| 7/16" | 26 | 82 | 22 | 8 | 6.3 | 9 | 10 | FAA0200668 | FAA0200669 | FAA0200670 | FAA0200666 |
| 1/2" | 26 | 84 | 24 | 9 | 7.1 | 10 | 11.5 | FAA0200673 | FAA0200674 | FAA0200675 | FAA0200671 |
| 9/16" | 26 | 90 | 25 | 11.2 | 9 | 12 | 13.1 | FAA0200678 | FAA0200679 | FAA0200680 | FAA0200676 |
| 5/8" | 26 | 95 | 25 | 12.5 | 10 | 13 | 14.7 | FAA0200683 | FAA0200684 | FAA0200685 | FAA0200681 |
| 3/4" | 26 | 104 | 29 | 14 | 11.2 | 14 | 17.8 | FAA0200687 | FAA0200688 | FAA0200689 | FAA0200686 |
| 7/8" | 26 | 113 | 33 | 16 | 12.5 | 16 | 21 | FAA0200691 | FAA0200692 | FAA0200693 | FAA0200690 |
| 1" | 26 | 120 | 35 | 18 | 14 | 18 | 24.2 | FAA0200694 | - | FAA0200695 | FAA0207315 |

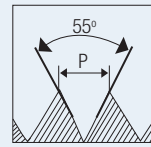
Unit : mm



HSS Hand Taps

BS Con

British standard conduit threads



HOLE TYPE



HSS

ISO 529

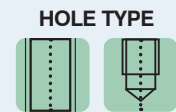
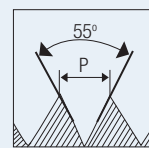
Class 2

| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 1/2" | 18 | 84 | 24 | 9 | 7.1 | 10 | 11.5 | FAA0200697 | FAA0200698 | FAA0200696 |
| 5/8" | 18 | 95 | 25 | 12.5 | 10 | 13 | 14.2 | - | FAA0200700 | FAA0200699 |
| 3/4" | 16 | 104 | 29 | 14 | 11.2 | 14 | 17.5 | FAA0200702 | FAA0200704 | FAA0200701 |
| 1" | 16 | 120 | 35 | 18 | 14 | 18 | 23.8 | FAA0200707 | FAA0200708 | FAA0200706 |

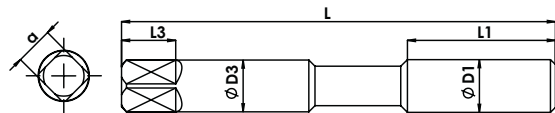
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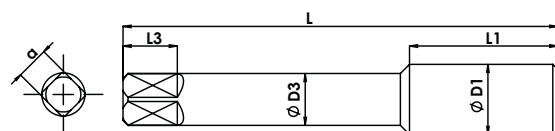
Model engineer



HSS **ISO 529** **Class 2**



Reinforced Shank (1/8" - 3/8")



Reduced Shank (7/16" - 2")



| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Lead Chamfer | | | EDP No. | |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| | | | | | | | Tapping Drill Diameter | Taper | Second | | Bottom |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | EDP No. | EDP No. | EDP No. | Set |
| 1/8" | 40 | 48 | 11 | 3.15 | 2.5 | 5 | 2.55 | | | | FAA0207317 |
| 5/32" | 40 | 53 | 13 | 4 | 3.15 | 6 | 3.3 | FAA0200720 | FAA0200721 | FAA0200722 | FAA0200718 |
| 3/16" | 40 | 58 | 16 | 5 | 4 | 7 | 4 | FAA0200724 | FAA0200725 | FAA0200726 | FAA0200723 |
| 7/32" | 40 | 62 | 17 | 5.6 | 4.5 | 7 | 4.8 | FAA0200729 | FAA0200730 | FAA0200731 | FAA0200727 |
| 1/4" | 40 | 66 | 13 | 6.3 | 5 | 8 | 5.5 | FAA0200733 | FAA0200734 | FAA0200735 | FAA0200732 |
| 9/32" | 32 | 66 | 19 | 7.1 | 5.6 | 8 | 6.1 | FAA0200739 | FAA0200740 | FAA0200741 | FAA0200737 |
| 5/16" | 32 | 66 | 16 | 8 | 6.3 | 9 | 7 | FAA0200743 | FAA0200744 | FAA0200745 | FAA0200742 |
| 3/8" | 32 | 73 | 16 | 10 | 8 | 11 | 8.6 | FAA0200748 | FAA0200749 | FAA0200750 | FAA0200746 |
| 7/16" | 32 | 80 | 20 | 8 | 6.3 | 9 | 10.3 | - | - | - | FAA0207320 |
| 1/2" | 32 | 80 | 20 | 9 | 10 | 7.1 | 11.9 | - | - | - | FAA0207324 |

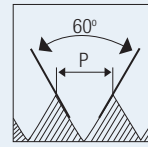
Unit : mm



HSS Hand Taps

BSP

British pipe threads



HOLE TYPE



HSS

ISO 2284

| | | | | | | | Lead Chamfer | Taper | Second | Bottom | Set |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/8" | 28 | 59 | 15 | 8 | 6.3 | 9 | 8.8 | FAA0204606 | FAA0204610 | FAA0204614 | FAA0204602 |
| 1/4" | 19 | 67 | 19 | 10 | 8 | 11 | 11.8 | FAA0204627 | FAA0204631 | FAA0204634 | FAA0204623 |
| 3/8" | 19 | 75 | 21 | 12.5 | 10 | 13 | 15.25 | FAA0204648 | FAA0204652 | FAA0204656 | FAA0204644 |
| 1/2" | 14 | 87 | 26 | 16 | 12.5 | 16 | 19 | FAA0204665 | FAA0204669 | FAA0204673 | FAA0204662 |
| 5/8" | 14 | 91 | 26 | 18 | 14 | 18 | 21 | FAA0204680 | FAA0204682 | FAA0204684 | FAA0204678 |
| 3/4" | 14 | 96 | 28 | 20 | 16 | 20 | 24.5 | FAA0204689 | FAA0204692 | FAA0204695 | FAA0204686 |
| 7/8" | 14 | 102 | 29 | 22.4 | 18 | 22 | 28.25 | FAA0204702 | - | FAA0204704 | FAA0204700 |
| 1" | 11 | 109 | 33 | 25 | 20 | 24 | 30.75 | FAA0204708 | FAA0204713 | FAA0204715 | FAA0204706 |
| 1.1/4" | 11 | 119 | 36 | 31.5 | 25 | 28 | 39.5 | FAA0204722 | FAA0204724 | FAA0204727 | FAA0204721 |
| 1.1/2" | 11 | 125 | 37 | 35.5 | 28 | 31 | 45 | FAA0204733 | FAA0204735 | FAA0204738 | FAA0204732 |
| 1.3/4" | 11 | 132 | 39 | 35.5 | 28 | 31 | 51 | FAA0204743 | - | FAA0204744 | FAA0204742 |
| 2" | 11 | 140 | 41 | 40 | 31.5 | 34 | 57 | FAA0204746 | - | FAA0204749 | FAA0204745 |

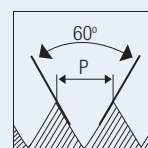
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HSS Hand Taps

BSPT

British taper pipe threads

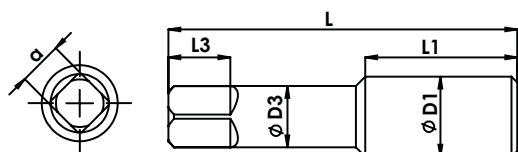


HOLE TYPE



HSS

ISO
2284



| | | | | | | | Lead Chamfer | Taper | Bottom | Pair |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 1/8" | 28 | 59 | 15 | 8 | 6.3 | 9 | 8.8 | FAA0204836 | FAA0204840 | FAA0204833 |
| 1/4" | 19 | 67 | 19 | 10 | 8 | 11 | 11.8 | FAA0204849 | FAA0204852 | FAA0204846 |
| 3/8" | 19 | 75 | 21 | 12.5 | 10 | 13 | 15.25 | FAA0204857 | FAA0204859 | FAA0204855 |
| 1/2" | 14 | 87 | 26 | 16 | 12.5 | 16 | 19 | FAA0204865 | FAA0204868 | FAA0204863 |
| 3/4" | 14 | 96 | 28 | 20 | 16 | 20 | 24.5 | FAA0204873 | FAA0204876 | FAA0204871 |
| 1" | 11 | 109 | 33 | 25 | 20 | 24 | 30.75 | FAA0204881 | FAA0204883 | FAA0204880 |
| 1.1/4" | 11 | 119 | 36 | 31.5 | 25 | 28 | 39.5 | FAA0204890 | FAA0204891 | FAA0204889 |
| 1.1/2" | 11 | 125 | 37 | 35.5 | 28 | 31 | 45 | FAA0204893 | FAA0204894 | FAA0204892 |
| 2" | 11 | 140 | 41 | 40 | 31.5 | 34 | 57 | - | - | FAA0204895 |

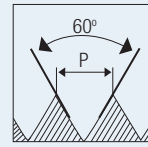
Unit : mm



HSS Hand Taps

UNC

Unified coarse threads



HOLE TYPE



HSS

ISO 529

2B

| | | | | | | | Lead Chamfer | Taper | Second | Bottom | Set |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/4" | 20 | 66 | 19 | 6.3 | 5 | 8 | 5.1 | FAA0200880 | FAA0200885 | FAA0200891 | FAA0200875 |
| 5/16" | 18 | 72 | 22 | 8 | 6.3 | 9 | 6.6 | FAA0200912 | FAA0200916 | FAA0200920 | FAA0200907 |
| 3/8" | 16 | 80 | 24 | 10 | 8 | 11 | 8 | FAA0200945 | FAA0200949 | FAA0200953 | FAA0200940 |
| 7/16" | 14 | 85 | 25 | 8 | 6.3 | 9 | 9.4 | FAA0200984 | FAA0200987 | FAA0200990 | FAA0200980 |
| 1/2" | 13 | 89 | 29 | 9 | 7.1 | 10 | 10.8 | FAA0201011 | FAA0201014 | FAA0201017 | FAA0201007 |
| 9/16" | 12 | 95 | 30 | 11.2 | 9 | 12 | 12.2 | FAA0201044 | FAA0201046 | FAA0201048 | FAA0201042 |
| 5/8" | 11 | 102 | 32 | 12.5 | 10 | 13 | 13.5 | FAA0201062 | FAA0201065 | FAA0201068 | FAA0201058 |
| 3/4" | 10 | 112 | 37 | 14 | 11.2 | 14 | 16.5 | FAA0201095 | FAA0201098 | FAA0201101 | FAA0201092 |
| 7/8" | 9 | 118 | 38 | 16 | 12.5 | 16 | 19.5 | FAA0201127 | FAA0201130 | FAA0201133 | FAA0201125 |
| 1" | 8 | 130 | 45 | 18 | 14 | 18 | 22.25 | FAA0201155 | FAA0201158 | FAA0201161 | FAA0201151 |
| 1.1/8" | 7 | 138 | 48 | 20 | 16 | 20 | 25 | FAA0201182 | FAA0201183 | FAA0201184 | FAA0201181 |
| 1.1/4" | 7 | 151 | 51 | 22.4 | 18 | 22 | 28 | FAA0201193 | FAA0201194 | FAA0201195 | FAA0201192 |
| 1.3/8" | 6 | 162 | 57 | 25 | 20 | 24 | 30.75 | FAA0201201 | FAA0201202 | FAA0201203 | FAA0201200 |
| 1.1/2" | 6 | 170 | 60 | 28 | 22.4 | 26 | 34 | FAA0201209 | FAA0201210 | FAA0201211 | FAA0201208 |
| 1.3/4" | 5 | 187 | 67 | 31.5 | 25 | 28 | 39.5 | FAA0201220 | FAA0201221 | FAA0201222 | FAA0201219 |
| 2" | 4.5 | 200 | 70 | 35.5 | 28 | 31 | 45 | FAA0201225 | FAA0201226 | FAA0201227 | FAA0201224 |

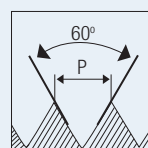
Unit : mm



HSS Hand Taps

UNC

Unified coarse threads



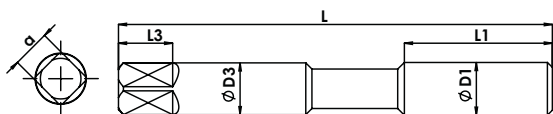
HOLE TYPE



HSS

ISO
529

2B



| | | | | | | | Lead Chamfer | Taper | Second | Bottom | Set |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1 | 64 | 41 | 8 | 2.5 | 2 | 4 | 1.55 | FAA0200811 | FAA0200812 | FAA0200813 | FAA0200810 |
| 2 | 56 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 1.85 | FAA0200815 | FAA0200816 | FAA0200817 | FAA0200814 |
| 3 | 48 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 2.1 | FAA0200820 | FAA0200821 | FAA0200822 | FAA0200819 |
| 4 | 40 | 48 | 11 | 3.15 | 2.5 | 5 | 2.35 | FAA0200826 | FAA0200828 | FAA0200830 | FAA0200824 |
| 5 | 40 | 48 | 11 | 3.15 | 2.5 | 5 | 2.65 | FAA0200834 | FAA0200835 | FAA0200836 | FAA0200833 |
| 6 | 32 | 50 | 13 | 3.55 | 2.8 | 5 | 2.85 | FAA0200839 | FAA0200840 | FAA0200841 | FAA0200838 |
| 8 | 32 | 53 | 13 | 4.5 | 3.55 | 6 | 3.5 | FAA0200847 | FAA0200849 | FAA0200851 | FAA0200845 |
| 10 | 24 | 58 | 16 | 5 | 4 | 7 | 3.9 | FAA0200857 | FAA0200859 | FAA0200862 | FAA0200855 |
| 12 | 24 | 62 | 17 | 5.6 | 4.5 | 7 | 4.5 | FAA0200867 | FAA0200868 | FAA0200869 | FAA0200866 |

Unit : mm

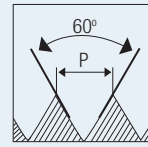


HSS Hand Taps

HSS TAPS

UNF

Unified fine threads



HOLE TYPE



HSS

ISO 529

2B

| | | | | | | | Lead Chamfer | Taper | Second | Bottom | Set |
|------------------|-----|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/4" | 28 | 66 | 19 | 6.3 | 5 | 8 | 5.5 | FAA0201319 | FAA0201324 | FAA0201329 | FAA0201315 |
| 5/16" | 24 | 69 | 19 | 8 | 6.3 | 9 | 6.9 | FAA0201353 | FAA0201357 | FAA0201362 | FAA0201349 |
| 3/8" | 24 | 76 | 20 | 10 | 8 | 11 | 8.5 | FAA0201394 | FAA0201398 | FAA0201402 | FAA0201390 |
| 7/16" | 20 | 82 | 22 | 8 | 6.3 | 9 | 9.9 | FAA0201433 | FAA0201436 | FAA0201439 | FAA0201430 |
| 1/2" | 20 | 84 | 24 | 9 | 7.1 | 10 | 11.5 | FAA0201457 | FAA0201460 | FAA0201463 | FAA0201455 |
| 9/16" | 18 | 90 | 25 | 11.2 | 9 | 12 | 12.9 | FAA0201489 | FAA0201491 | FAA0201493 | FAA0201488 |
| 5/8" | 18 | 95 | 25 | 12.5 | 10 | 13 | 14.5 | FAA0201506 | FAA0201509 | FAA0201512 | FAA0201503 |
| 3/4" | 16 | 104 | 29 | 14 | 11.2 | 14 | 17.5 | FAA0201532 | FAA0201535 | FAA0201538 | FAA0201528 |
| 7/8" | 14 | 113 | 33 | 16 | 12.5 | 16 | 20.4 | FAA0201557 | FAA0201560 | FAA0201563 | FAA0201555 |
| 1" | 12 | 120 | 35 | 18 | 14 | 18 | 23.25 | FAA0201588 | FAA0201591 | FAA0201594 | FAA0201586 |
| 1.1/8" | 12 | 127 | 37 | 20 | 16 | 20 | 26.5 | FAA0201611 | FAA0201612 | FAA0201613 | FAA0201610 |
| 1.1/4" | 12 | 137 | 37 | 22.4 | 18 | 22 | 29.5 | FAA0201623 | FAA0201624 | FAA0201625 | FAA0201622 |
| 1.3/8" | 12 | 144 | 37 | 25 | 20 | 24 | 32.75 | FAA0201630 | FAA0201631 | FAA0201632 | FAA0201629 |
| 1.1/2" | 12 | 149 | 39 | 28 | 22.4 | 26 | 36 | FAA0201638 | FAA0201639 | FAA0201640 | FAA0201637 |

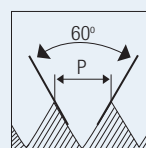
Unit : mm



HSS Hand Taps

UNF

Unified fine threads



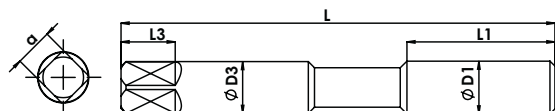
HOLE TYPE



HSS

ISO 529

2B



| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Lead Chamfer | Taper | Second | Bottom | Set |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 0 | 80 | 41 | 8 | 2.5 | 2 | 4 | 1.25 | FAA0201237 | FAA0201238 | FAA0201239 | FAA0201236 |
| 1 | 72 | 41 | 8 | 2.5 | 2 | 4 | 1.55 | - | FAA0201241 | FAA0201242 | FAA0201240 |
| 2 | 64 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 1.9 | FAA0201244 | FAA0201245 | FAA0201246 | FAA0201243 |
| 3 | 56 | 44.5 | 9.5 | 2.8 | 2.24 | 5 | 2.15 | FAA0201249 | FAA0201250 | FAA0201251 | FAA0201248 |
| 4 | 48 | 48 | 11 | 3.15 | 2.5 | 5 | 2.4 | FAA0201254 | FAA0201255 | FAA0201256 | FAA0201253 |
| 5 | 44 | 48 | 11 | 3.15 | 2.5 | 5 | 2.7 | FAA0201259 | FAA0201260 | FAA0201261 | FAA0201258 |
| 6 | 40 | 50 | 13 | 3.55 | 2.8 | 5 | 2.95 | FAA0201264 | FAA0201265 | FAA0201266 | FAA0201263 |
| 8 | 36 | 53 | 13 | 4.5 | 3.55 | 6 | 3.5 | FAA0201269 | FAA0201270 | FAA0201271 | FAA0201268 |
| 10 | 32 | 58 | 16 | 5 | 4 | 7 | 4.1 | FAA0201276 | FAA0201280 | FAA0201283 | FAA0201275 |
| 12 | 28 | 62 | 17 | 5.6 | 4.5 | 7 | 4.7 | FAA0201303 | FAA0201305 | FAA0201307 | FAA0201302 |

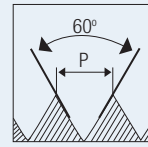
Unit : mm



HSS Hand Taps

NPT

Pipe threads



HOLE TYPE



HSS

ANSI 94.9

| | | | | | | | Lead Chamfer | Taper | Bottom | Pair |
|------------------|------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|
| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | |
| 1/16" | 27 | 2.1/8 | 11/16 | 0.312 | 0.234 | 3/8 | 6.3 | FAA0204897 | FAA0204898 | FAA0204896 |
| 1/8" | 27 | 2.1/8 | 3/4 | 0.437 | 0.328 | 3/8 | 8.7 | FAA0204901 | FAA0204903 | FAA0204899 |
| 1/4" | 18 | 2.7/16 | 1.1/16 | 0.562 | 0.421 | 7/16 | 11.1 | FAA0204911 | FAA0204914 | FAA0204909 |
| 3/8" | 18 | 2.9/16 | 1.1/16 | 0.7 | 0.531 | 1/2 | 14.5 | FAA0204921 | FAA0204925 | FAA0204919 |
| 1/2" | 14 | 3.1/8 | 1.3/8 | 0.687 | 0.515 | 5/8 | 18 | FAA0204932 | FAA0204934 | FAA0204928 |
| 3/4" | 14 | 3.1/4 | 1.3/8 | 0.906 | 0.679 | 11/16 | 23.25 | FAA0204943 | FAA0204946 | FAA0204942 |
| 1" | 11.5 | 3.3/4 | 1.3/4 | 1.125 | 0.843 | 13/16 | 29 | FAA0204951 | FAA0204954 | FAA0204950 |
| 1.1/4" | 11.5 | 4 | 1.3/4 | 1.312 | 0.984 | 15/16 | 38 | FAA0204958 | FAA0204959 | FAA0204957 |
| 1.1/2" | 11.5 | 4.1/4 | 1.3/4 | 1.5 | 1.125 | 1 | 44 | FAA0204963 | FAA0204964 | FAA0204962 |
| 2" | 11.5 | 4.1/2 | 1.3/4 | 1.875 | 1.406 | 1.1/8 | 56 | FAA0204969 | FAA0204968 | FAA0204967 |
| 2.1/2" | 8 | 5.1/2 | 2.9/16 | 2.25 | 1.687 | 1.1/4 | 65.48 | - | - | FAA0204970 |
| 3" | 8 | 6 | 2.5/8 | 2.625 | 1.968 | 1.3/8 | - | - | - | FAA0207340 |

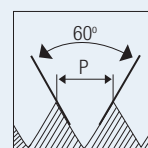
Unit : mm



HSS Hand Taps

NPS

Pipe threads special

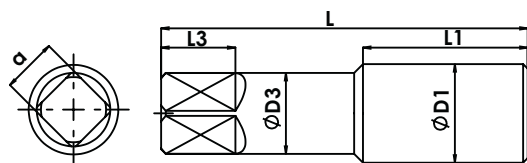


HOLE TYPE



HSS

ANSI
94.9



| Nominal Diameter | TPI | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Lead Chamfer | Taper | Second | Bottom | Set |
|------------------|------|----------------|---------------|----------------|-------------|---------------|------------------------|------------|------------|------------|------------|
| | | | | | | | Tapping Drill Diameter | EDP No. | EDP No. | EDP No. | EDP No. |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 | | | | |
| 1/16" | 27 | 2.1/8 | 11/16 | 0.312 | 0.234 | 3/8 | 6.3 | - | - | - | FAA0207341 |
| 1/8" | 27 | 2.1/8 | 3/4 | 0.437 | 0.328 | 3/8 | 8.7 | FAA0205003 | FAA0205004 | FAA0205005 | FAA0205002 |
| 1/4" | 18 | 2.7/16 | 1.1/16 | 0.562 | 0.421 | 7/16 | 11.1 | FAA0205006 | FAA0205007 | FAA0205008 | FAA0207342 |
| 3/8" | 18 | 2.9/16 | 1.1/16 | 0.7 | 0.531 | 1/2 | 14.5 | FAA0205009 | FAA0205010 | FAA0205011 | FAA0207343 |
| 1/2" | 14 | 3.1/8 | 1.3/8 | 0.687 | 0.515 | 5/8 | 18 | FAA0205012 | FAA0205013 | FAA0205014 | FAA0207344 |
| 3/4" | 14 | 3.1/4 | 1.3/8 | 0.906 | 0.679 | 11/16 | 23.25 | FAA0205015 | FAA0205016 | FAA0205017 | FAA0207345 |
| 1" | 11.5 | 3.3/4 | 1.3/4 | 1.125 | 0.843 | 13/16 | 29 | - | - | - | FAA0207346 |
| 1.1/4" | 11.5 | 4 | 1.3/4 | 1.312 | 0.984 | 15/16 | 38 | - | - | FAA0205018 | FAA0207349 |
| 1.1/2" | 11.5 | 4.1/4 | 1.3/4 | 1.5 | 1.125 | 1 | 44 | - | - | - | FAA0207351 |
| 2" | 11.5 | 4.1/2 | 1.3/4 | 1.875 | 1.406 | 1.1/8 | 56 | - | - | - | FAA0207354 |

Unit : mm

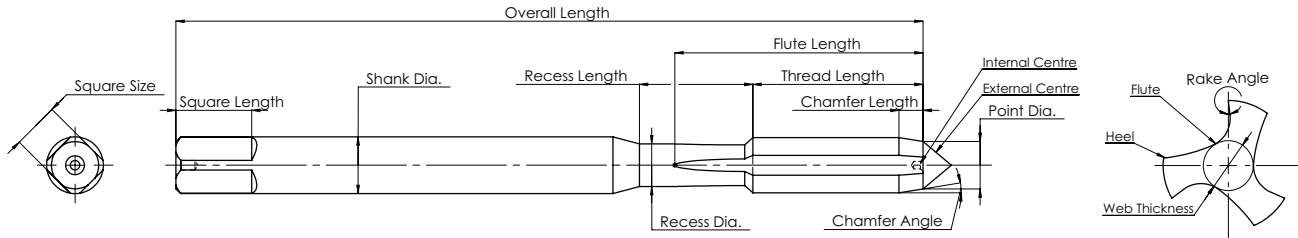


High Performance Cutting Tools



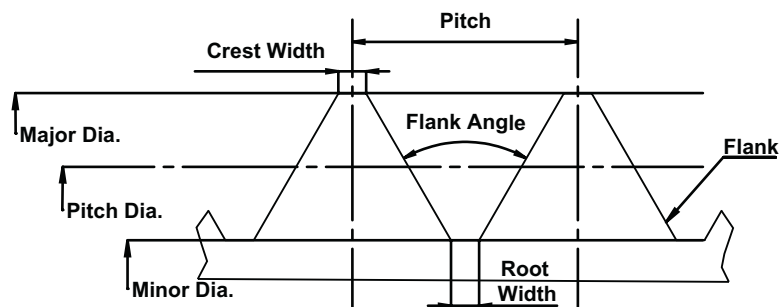
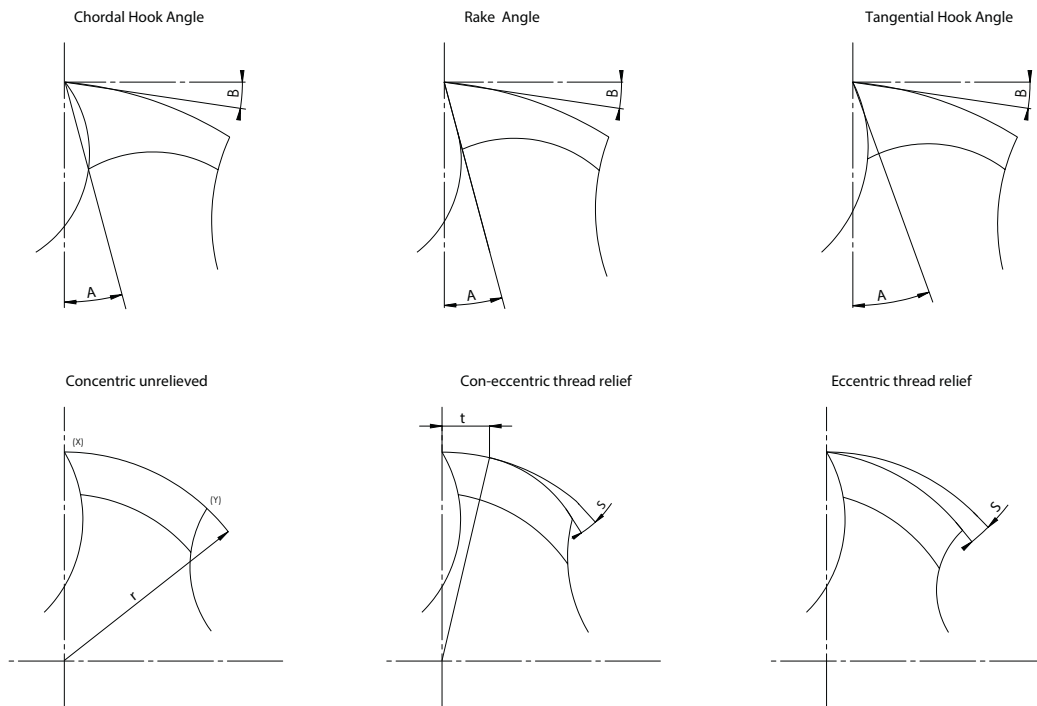
TECHNICAL DETAILS

Tap nomenclature



- **THREAD LENGTH:** It is a total length of threaded portion.
- **OVERALL LENGTH:** The axial distance between the two extreme ends of a tap is called as the overall length of the tap.
- **SQUARE:** The square end of the tap shank, for holding it in the tap wrench.
- **SHANK :** It is the cylindrical part of tap which is used for hold or drive.
- **CUTTING EDGE :** The edge formed by the intersection of the flute face and the form of the thread, imposed on the land
- **FLUTE :** It is the groove in the body of tap which provides cutting edge. Permits removal of chips and allows coolant or lubricant to reach the cutting edge.
- **LAND :** It is the surface between cutting edge and non-cutting edge
- **WEB :** The central portion of tap which joins the land and extends along the fluted portion of tap
- **WEB TAPER :** It is the increase in the web thickness from the entering end of the Tap towards the shank end of the flutes.
- **HEEL :** It is the edge formed by the intersection of the relieved surface behind the cutting edge and the flute
- **CHAMFER :** The taper on the threads at the front end of the tap made by grinding and relieving the crest of the first few teeth
- **RAKE ANGLE :** The angular relationship of the straight cutting face of the tooth with respect to a radial line through the crest of the tooth of cutting edge. There are three types of rake angle. The details given below. Positive rake means that the crest of the cutting face is angularly ahead. Negative rake means that the crest of the cutting face is angularly behind. Zero radial rake means the cutting face is directly on a radial line
- **CREST :** It is the prominent part of thread i.e. Top surface joining the two sides of thread
- **ROOT :** It is the bottom of groove between sides of two adjacent threads
- **FLANK :** The flank angle is the angle between individual flank and perpendicular to axis of thread, it is equal to half angle of thread
- **INCLUDED ANGLE :** It is the angle between two flanks of thread

Tap nomenclature



Thread Profile

- **DEPTH OF THREAD :** It is the distance between the crest and root of single thread
- **MINOR DIAMETER :** It is the diameter between the two root of opposite thread.
- **THREAD RELIEF :** The clearance produced on the land by gradually reducing the diameter of the entire thread form between the cutting edge and the non cutting edge
- **EFFECTIVE DIAMETER (PCD) :** The pitch circle diameter of thread as generated by straight line parallel to axis of tap. This straight line is called as Pitch line. Along the pitch line the width of threads and width of spaces are equal on a perfect thread. This is the important parameter in screw thread and it decides the quality of fit between the two threaded assembly.
- **MAJOR DIAMETER :** It is the diameter over the crest of thread. Basic major diameter, it is the nominal diameter

USE YOUR TAPS SELECTOR

HSS TAPS

Select execution of tool considering blind or through hole



Select thread form and find page number, select from DIN/ISO/JIS standard length



Select your work piece material from this table with desired Vc



| DIN 371 / DIN 376 / DIN 374 / ISO 529 / JIS | | | | | | | | | | | | |
|---|--------------|--------------|--------------|----------------|----------------|----------------|----------------|--------------|--------------|--------------|--------------|--------------|
| Series | SA1 | SA3 | SA4 | SB1 | SB3 | SB4 | SD4 | SAF3 | SAF5 | SAF7 | SAF5 | SAF7 |
| Execution | Spiral Point | Spiral Point | Spiral Point | Spiral Flute | Spiral Flute | Spiral Flute | Forming | Spiral Point | Spiral Point | Spiral Point | Spiral Point | Spiral Point |
| Tool Material | HSSE | HSSE | HSSE | HSSE | HSSE | HSSE | HSSE | HSSE | HSSE | HSSE | HSSE-PM | HSSE-PM |
| Helix | - | - | - | 35 | 35 | 35 | - | - | - | - | - | - |
| Coating | Bright | TiN | TiAlN | Bright | TiN | TiAlN | TiAlN | TiN | TiCN | AlCrN | TiCN | AlCrN |
| Chamfer | B/ 4-4.5P | B/ 4-4.5P | B/ 4-4.5P | C/2-3P | C/2-3P | C/2-3P | C/ 2-3P | B/ 4-4.5P | B/ 4-4.5P | B/ 4-4.5P | B/ 4-4.5P | B/ 4-4.5P |
| Hole Type | Through | Through | Through | Blind/ Through | Blind/ Through | Blind/ Through | Through/ Blind | Through | Through | Through | Through | Through |
| Coolant Feed | No | No | No | No | No | No | No | No | No | No | No | No |
| Oil Groove | - | - | - | - | - | - | Yes | - | - | - | - | - |
| P0 | 10-12 | 15-20 | 20-25 | 8-12 | | | | | | | | |
| P1 | | 15-20 | 15-20 | 8-12 | 10-15 | 15-20 | 15-20 | 15-20 | 15-25 | | | |
| P2 | | | 15-20 | | 8-15 | 10-18 | 12-15 | 15-20 | 15-25 | 15-25 | 25-30 | 25-30 |
| P3 | | | 8-12 | | | | | | 15-20 | 15-20 | 20-25 | 20-25 |
| P4 | | | | | | | | | | | | 12-16 |
| P5 | | | | | | | | | | | | |
| P6 | | | | | | | | | | | | |
| M1 | | | | | | | | | | | | |
| M2 | | | | | | | | | | | | |
| M3 | | | | | | | | | | | | |
| K1 | | | 30-35 | | | 10-20 | | | | | | |
| K2 | | 15-20 | 20-25 | | 8-12 | 8-12 | | | | | | |
| K3 | | 12-15 | | | | | | | | | | |
| N1 | 15-20 | | | 15-25 | | | | | | | | |
| N2 | 15-20 | | | 15-25 | | | | | | | | |
| N3 | | | | | 15-20 | | | | | | | |
| N4 | 25-30 | | | | 20-25 | | | | | | | |
| S1 | | | | | | | | | | | | |
| S2 | | | | | | | | | | | | |
| S3 | | | | | | | | | | | | |
| S4 | | | | | | | | | | | | |



Go to desired page number find your tool on the page

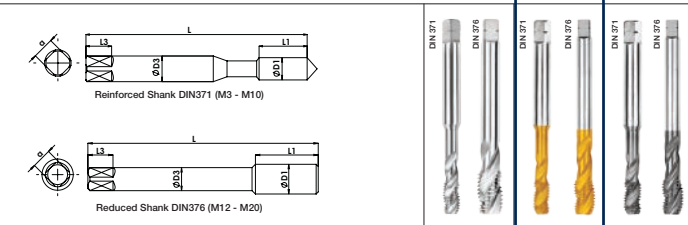
SB
DIN
HSS TAPS

TOTEM Silver cut Spiral Flute Taps

M Metric coarse threads

HOLE TYPE: Through, Blind

HSS-E DIN 371/376 6HX C/2-3P 35°



| DIN 371 | | SB1 | | SB3 | | SB4 | |
|------------------|-------|----------------|---------------|----------------|-------------|---------------|------------------------|
| Nominal Diameter | Pitch | Overall Length | Thread Length | Shank Diameter | Square Size | Square Length | Tapping Drill Diameter |
| ØD1 | p | L | L1 | ØD3 | a | L3 | Ød1 |
| M 3 | 0.5 | 56 | 6 | 3.5 | 2.7 | 6 | 2.5 |
| M 3.5 | 0.6 | 56 | 7 | 4 | 3 | 6 | 2.9 |
| M 4 | 0.7 | 63 | 8 | 4.5 | 3.4 | 6 | 3.3 |
| M 5 | 0.8 | 70 | 8 | 6 | 4.9 | 8 | 4.2 |
| M 6 | 1 | 80 | 10 | 6 | 4.9 | 8 | 5 |
| M 7 | 1 | 80 | 10 | 7 | 5.5 | 8 | 6 |
| M 8 | 1.25 | 90 | 13 | 8 | 6.2 | 9 | 6.8 |
| M 10 | 1.5 | 100 | 15 | 10 | 8 | 11 | 8.5 |

| Series | SB1 | SB3 | SB4 |
|-----------------------------------|------------|------------|------------|
| Material - 1 st choice | P0-P1 | P1-P2 | P1-P2 |
| Material - 2 nd choice | N1-N2 | K2, N3-N4 | K1-K2 |
| Coating | Bright | TiN | TiAlN |
| EDP No. | FAB0203197 | FAB0203207 | FAB0204334 |
| | FAB0204328 | FAB0204331 | FAB0204335 |
| | FAB0203198 | FAB0203208 | FAB0200968 |
| | FAB0203199 | FAB0203209 | FAB0203685 |
| | FAB0203200 | FAB0203210 | FAB0203686 |
| | FAB0203201 | FAB0203211 | FAB0204336 |
| | FAB0203202 | FAB0203212 | FAB0203687 |
| | FAB0203203 | FAB0203213 | FAB0203688 |

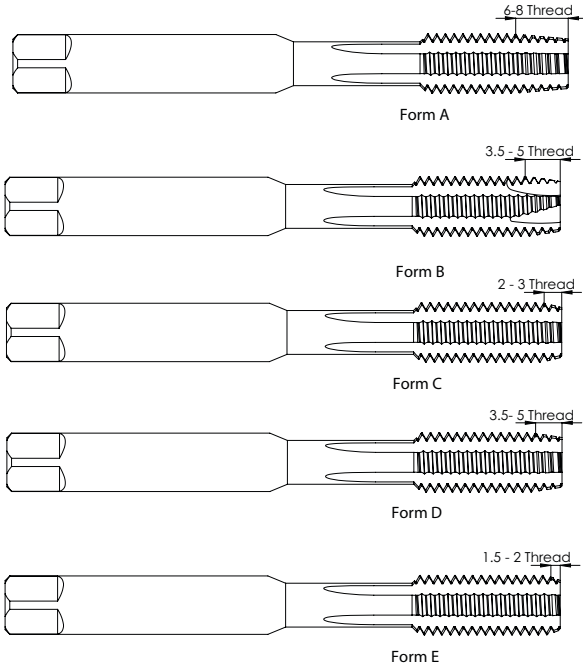
Select the size of nominal diameter required



* For best result use Totem range of pre tapping drills

sales@forbesprecision.co.in

Chamfer forms



Form A

6 - 8 threads for short through hole

Form B

3.5 - 5 threads with spiral point for all through holes and deep tapping holes

Form C

2 - 3 threads for blind holes; generally for aluminium and grey cast iron.

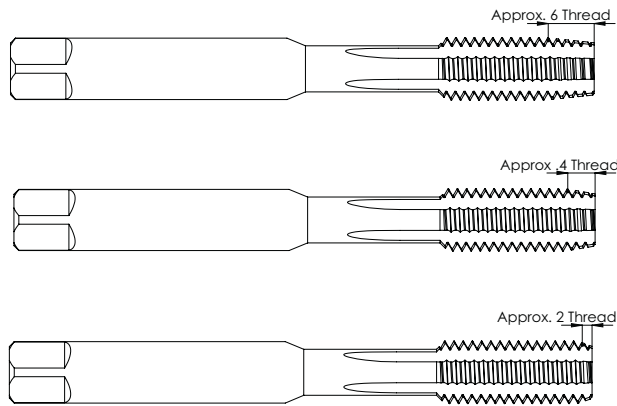
Form D

3.5 - 5 threads for short through hole

Form E

1.5 - 2 threads for blind holes with small run-out depth

Chamfer length for set of 3 taps



Taper Tap

6 threads approx.

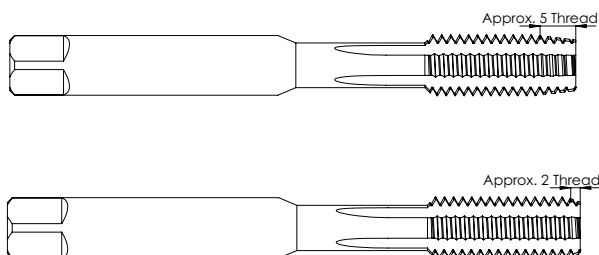
Second Tap

4 threads approx.

Bottom Tap

2 threads approx.

Chamfer length for set of 2 taps (Pairs)



Taper Tap

5 threads approx.

Bottom Tap

2 threads approx.

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Material details

| Material Group | Material Description | Content | Tensile Strength RM (MPa)* | Hardness (HB) | Hardness (HRC) | Torque Constant (Kc) N/mm ² | |
|------------------|----------------------|---|----------------------------|---------------|----------------|--|------|
| Steels | P0 | Low-Carbon Steels, Long Chipping | C <0,25% | <530 | <125 | — | 2000 |
| | P1 | Low-Carbon Steels, Short Chipping, Free Machining | C <0,25% | <530 | <125 | — | 2100 |
| | P2 | Medium- and High-Carbon Steels | C >0,25% | <530 | <220 | <25 | 2200 |
| | P3 | Alloy Steels and Tool Steels | C >0,25% | 600-850 | <330 | <35 | 2400 |
| | P4 | Alloy Steels and Tool Steels | C >0,25% | 850-1400 | 340-450 | 35-48 | 2500 |
| | P5 | Ferritic, Martensitic, and PH Stainless Steels | — | 600-900 | <330 | <35 | — |
| | P6 | High-Strength Ferritic, Martensitic, and PH Stainless Steels | — | 900-1350 | 350-450 | 35-48 | 2600 |
| Stainless Steels | M1 | Austenitic Stainless Steel | — | <600 | 130-200 | - | 2300 |
| | M2 | High-Strength Austenitic Stainless and Cast Stainless Steels | — | 600-800 | 150-230 | <25 | 2600 |
| | M3 | Duplex Stainless Steel | — | <800 | 135-275 | <30 | 3000 |
| Cast Iron | K1 | Grey Cast Iron | — | 125-500 | 120-290 | <32 | 1600 |
| | K2 | Low- and Medium-Strength Ductile Irons (Nodular Irons) and Compacted Graphite Irons (CGI) | — | <600 | 130-260 | <28 | 1700 |
| | K3 | High-Strength Ductile Irons and Austempered Ductile Iron (ADI) | — | >600 | 180-350 | <43 | 2000 |
| Non-Ferrous | N1 | Wrought Aluminium | — | — | — | — | 700 |
| | N2 | Low-Silicon Aluminium Alloys and Magnesium Alloys | Si <12,2% | — | — | — | 800 |
| | N3 | High-Silicon Aluminium Alloys and Magnesium Alloys | Si > 12,2% | — | — | — | 1000 |
| | N4 | Copper, Brass, Zinc-Based on Machinability Index Range of 70-100 | — | — | — | — | 800 |
| | N5 | Nylon, Plastics, Rubbers, Phenolics, Resins, Fibreglass | — | — | — | — | — |
| | N6 | Carbon, Graphite Composites, CFRP | — | — | — | — | — |
| | N7 | Metal Matrix Composites (MMC) | — | — | — | — | — |
| Special Alloys | S1 | Iron-Based, Heat-Resistant Alloys | — | 500-1200 | 160-260 | 25-48 | — |
| | S2 | Cobalt-Based, Heat-Resistant Alloys | — | 1000-1500 | 250-450 | 25-48 | — |
| | S3 | Nickel-Based, Heat-Resistant Alloys | — | 600-1700 | 160-450 | <48 | 2000 |
| | S4 | Titanium and Titanium Alloys | — | 900-1600 | 300-400 | 33-48 | 2300 |
| Hardened Steels | H1 | Hardened Materials | — | — | — | 44-48 | 2600 |
| | H2 | Hardened Materials | — | — | — | 48-55 | 2900 |
| | H3 | Hardened Materials | — | — | — | 56-60 | 2900 |
| | H4 | Hardened Materials | — | — | — | >60 | — |

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Material details

| Material Group | ANSI | DIN | |
|------------------|------|---|---|
| Steels | P0 | A36, 1008, 1010, 1018 through 1029; 1108, 1117 | |
| | P1 | 10L18, 1200 Series, 1213, 12L14 | C15, Ck22, ST37-2, S235JR, 9SMnPb28, GS38 |
| | P2 | 1035, 1045, 10L45, 1050, 10L50, 1080, 1137, 1144, 11L44, 1525, 1545, 1572 | ST52, S355JR, C35, GS60, Cf53 |
| | P3 | 1300, 2000, 3000, 4000, 5000, 8000, P20, SAE: A, D, H, O, S, M, T | 16MnCr5, Ck45, 21CrMoV5-7, 38SMn28 |
| | P4 | 1300, 2000, 3000, 4000, 5000, 8000, P20, SAE: A, D, H, O, S, M, T | 100Cr6, 30CrNiMo8, 42CrMo4, C70W2, S6525, X120Mn12 |
| | P5 | 15-5 PH, 13-8 PH, 17-4 PH, 400 and 500 Series | 100Cr6, 30CrNiMo8, 42CrMo4, C70W2, S6525, X120Mn12 |
| | P6 | 15-5 PH, 13-8 PH, 17-4 PH, 400 and 500 Series | X102CrMo17, G-X120Cr29 |
| Stainless Steels | M1 | 200 Series, 301, 302, 304, 304L, 309 | X5CrNi 18 10, X2CrNiMo 17 13 2, G-X25CrNiSi18 9, X15CrNiSi 20 12 |
| | M2 | 310, 316, 316L, 321, 347, 384 ASTM Cast XM-1, XM-5, XM-7, XM-21 | X2CrNiMo 13 4, X5NiCr 32 21, X5CrNiNb 18 10, G-X15CrNi 25-20 |
| | M3 | 323, 329, F55, 2205, S329000 | X8CrNiMo27 5, X2CrNiMoN22 5 3, X20CrNiSi25 4, G-X40CrNiSi27 4 |
| Cast Iron | K1 | class 20, 25, 30, 35, 40, 45, 50, 55, 60, G1800, G3000, G3500, G4000 | GG15, GG25, GG30, GG40, GTW40 |
| | K2 | 60-40-18, 65-45-12, 80-55-06, SAE J434:D4018, D4512, D5506, ASTM A47: Grade 32510, 35018, SAE J158: Grade M3210, M4504, M5003, M5503, M7002, ASTM A842: Grade 250, 300, 350, 400, 450 | GGG40, GTS35 |
| | K3 | ASTM A536:100-70-03, 120-90-02, SAE J434: D7003, SAE J158:Grade M8501AST A897: 125-80-10, 150-100-7, 175-125-4, 200-150-1, 230-185 | GGG60, GTW55, GTS65 |
| Non-Ferrous | N1 | 2025, 5050, 7050, 1000, 2017 | AlMg1, Al99.5, AlCuMg1, AlCuBiPb, AlMgSi1, ALMgSiPb |
| | N2 | 2024, 6061, 7075 | GAISiCu4, GDAISi10Mg |
| | N3 | — | G-ALSi12, G-AISi17Cu4, G-AISi21CuNiMg |
| | N4 | C81500 | CuZn40, Ms60, G-CuSn5ZnPb, CuZn37, CuSi3Mn |
| | N5 | — | LEXAN®, HOSTALEN™, Polystyrol, Makralon® |
| | N6 | Graphite, CFK, CFRP | CFK, GFK |
| | N7 | C63000 | — |
| Special Alloys | S1 | INCOLOY® 800 Series, A608, A567, Discaloy™, INVAR®, N-155, 16-25-6, 19-9 DL; Cast: ASTM A-297, A-351, A-567, A-608 | X1NiCrMoCu32 28 7, X12NiCrSi36 16, X5NiCrAlTi31 20, X40CoCrNi20 20 |
| | S2 | Haynes® 25 (L605), Haynes 188, J-1570, Stellite®, AiResist 213; Cast: AiResist 13, Haynes 21, MAR-M302, MAR-M509, NASA Co-W-Re, WI-52 | Haynes® 188, Stellite® 6,21,31 |
| | S3 | Astrolay™, Hastelloy® B/C/ C-276 /X, INCONEL® 600 and 700 Series, IN102, INCOLOY 900 Series, Rene 41, Waspalloy®, Monel®, K-500, MAR-M20, NIMONIC®, UDIMET® | INCONEL® 690, INCONEL 625, Hastelloy®, NIMONIC® 75 |
| | S4 | Pure: Ti 98.8, Ti 98.9, Ti 99.9; Alloyed: Ti 5Al-2.5Sn, Ti6Al-4V, Ti6Al-2Sn-4Zr-2Mo, Ti-3Al-8V-6Cr-4Mo-4Zr, Ti-10V-2Fe-3Al, Ti-13V-11Cr-3Al | Ti1, TiAl5Sn2, TiAl6V4, TiAl4Mo4Sn2 |
| Hardened Steels | H1 | Tool Steel H10, H11, H13, D2, D3, 4340, P20 | GX260NiCr42, GX330NiCr42, GX300CrNiSi952, GX300CrMo153, HARDOX® 400 |
| | H2 | Tool Steel H10, H11, H13, D2, D3, 4340, P20 | — |
| | H3 | Tool Steel H10, H11, H13, D2, D3, 4340, P20 | — |
| | H4 | Tool Steel H10, H11, H13, D2, D3, 4340, P20 | — |

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.



P-Steel

Steel is the most used workpiece material in metal cutting. Steel as a material is comprised mainly of iron and carbon, often with a modest mixture of alloying elements. Steel has a typical carbon content of 0.05% to 1.5 %

Plain Carbon Steel

This category of steels includes those materials that are a combination of iron and carbon with no alloying elements. As the carbon content in these materials is increased, the ductility of the material is reduced. The carbon content is usually 0.8%. The hardness varies from 90 up to 350HB

Typical uses of this steel include: Axles, shafts, tubes, forgings, welded constructions, structural steel, deep drawn and stamped products, pressure vessel steel, and a variety of cast steels.

Alloy Steels

Plain carbon steels are made up primarily of iron and carbon, while alloy steels include these same elements with many other elemental additions. The purpose of alloying steel is either to enhance the material's physical properties or its ultimate manufacturability. The physical property enhancements include improved toughness, tensile strength, hardenability, ductility and wear resistance. Alloyed steels have a carbon content lower than 1.7 % and alloying elements such as Ni, Cr, Mo, V and W.

The machinability of steel differs, depending on alloying elements, heat treatment and manufacturing process (forged, rolled, cast, etc.).

Components manufactured from this steel include Crank Shafts, Connecting Rods, Cam Shafts, Hubs, Axles, Shafts, other forging components.

M-Stainless steel

As the name implies, this group of materials is designed to resist oxidation and other forms of corrosion, in addition to heat in some instances. These materials tend to have significantly greater corrosion resistance and strength at high temperatures than their plain or alloy steel counterparts due to the substantial additions of Chromium, Nickel, Molybdenum, Niobium and Titanium supply different characteristics, such as resistance towards corrosion and strength at high temperatures. These additions combine with Oxygen to create a passivating layer on the surface of the steel, which provides a non-corrosive property to the material.

Stainless steels are used extensively in the food processing, medical – surgical implants, chemical and petroleum industries to transfer corrosive liquids between processing and storage facilities. Stainless steels can be cold formed, forged, machined, welded or extruded.

Ferritic and martensitic stainless steel

Ferritic steels have magnetic properties. Martensitic stainless steels have relatively high carbon content, which make them hardenable. Weldability is low for both ferritic and martensitic and medium to low resistance against corrosion, which increases with a larger Cr-content.

Austenitic stainless steel

Austenitic Stainless steel are the most common and familiar types of stainless steel. They are most easily recognized as nonmagnetic. They are extremely formable and weldable, and they can be successfully used from cryogenic temperatures to the red-hot temperatures of furnaces and jet engines. They contain between about 16 and 25% chromium, and they can also contain nitrogen in solution, both of which contribute to their high corrosion resistance. Were it not for the cost of the nickel that helps stabilize their austenitic structure, these alloys would be used even more widely.

Work hardening produces hard surfaces and hard chips, which in turn lead to notch wear. It also creates adhesion and produces built-up edge. It has a relative machinability of 60%. The hardening condition can tear coating and substrate material from the edge, resulting in chipping and bad surface finish. Austenite produces tough, long, continuous chips, which are difficult to break. Generates lot of heat during machining.

K-Cast iron

Cast iron is an iron carbon mixture that is generally used to pour sand castings, as opposed to making billets or bar stock. It has excellent flow properties and therefore, when it is heated to extreme temperatures. Ideal material for complex cast shapes and intricate moulds.

This material is often used for automotive engine blocks, cylinder heads, valve bodies, manifolds, heavy equipment oil pans and machine bases.

Grey Cast Iron

Grey cast iron is an extremely versatile, very machinable relatively low strength cast iron used for pipe, automotive engine blocks, farm implements and fittings. This material receives its dark grey colour from the excess carbon in the form of graphite flakes, which give it its name. It has graphite in typical flake form and the main properties are low impact strength, good thermal conductivity, less heat when engine operates and low heat in cutting process; good dampening properties, absorbs the vibrations in the engine.

Malleable Cast Iron

When white cast iron castings are annealed, malleable iron castings are formed. Malleable iron castings result when hard, brittle cementite in white iron castings is transformed into tempered carbon or graphite in the form of rounded nodules or aggregate. The resulting material is a strong, ductile, tough and very machinable product that is used on a broad scope of applications.

Nodular Cast Iron

Nodular or Ductile iron is used to manufacture a wide range of automotive engine components including cam shafts, crank shafts, bearing caps and cylinder heads. This material is also frequently used for heavy equipment cast parts as well as heavy machinery faceplates and guides. Nodular iron is strong, ductile, tough and extremely shock resistant.

Components manufactured from this material include hubs, tubing, rollers, exhaust manifolds, crankshafts, differential housings, bearing caps, exhaust manifolds, bedplates, turbo charger housings, clutch plates and fly wheels.

N-Non-ferrous materials

Non-ferrous metals are metals that do not contain iron. Non-ferrous metals are used because of desirable properties such as low weight (e.g., Aluminium), higher conductivity (e.g., Copper), non-magnetic property or resistance to corrosion (e.g., Zinc).

Aluminium (Al) alloys comprising less than 12-13% Silicon (Si) represent the largest part.

LM2 (ADC 12)

One of the two most widely used alloys for all types of die-castings. Mainly used in Automobile Industry for manufacturing components like Crank case, cylinder head, transmission housings, brackets.

LM4

The most versatile of the alloys, has very good casting characteristics and is used for a very wide range of applications.

LM5

Suitable for sand and chill castings requiring maximum corrosion resistance. Mainly used for castings in marine application.

LM6

Suitable for large, intricate and thin walled castings in all types of moulds. Also used where corrosion resistance or ductility is required.

LM9

Used for applications especially in low pressure die casting, requiring the characteristics of LM6 with higher tensile strength after heat treatment.

LM13

Used in applications where thermal stresses are more e.g. Piston. This alloy can withstand higher temperature and load. It has a good wear resistance properties and machinability. But it requires heat treatment.

LM 24

Suitable for large, intricate and thin walled castings in all types of moulds, also used where corrosion resistance or ductility is required



Formulas

TAP DRILL SIZE

- A. Tap Drill Size (Inch Size Cut Taps)
 Drill \emptyset = Basic O.D. OF Thread – ((0.0130 X % of Full Thread)/Pitch (T.P.I.))
- B. Tap Drill Size (Inch Size Roll Form Taps)
 Drill \emptyset = BASIC O.D. OF Thread – ((0.0068 X % of Full Thread)/Pitch (T.P.I.))
- C. Tap Drill Size (Metric Size Cut Taps)
 Drill \emptyset = Basic O.D. OF Thread – ((Pitch in mm X % of Full Thread)/76.98)
- D. Tap Drill Size (Metric Size Roll Form Taps)
 DRILL \emptyset = BASIC O.D. OF THD – ((Pitch in mm X % of Full Thread)/147.06).

OR

Drill Diameter = Nominal diameter - Pitch

INCH – METRIC CONVERSIONS

- A. INCHES TO MILLIMETERS MM = INCH X 25.4
- B. MILLIMETERS TO INCHES INCH = MM/25.4 - OR – INCH = MM X 0.03937

THREADING FORMULAS

$$\text{Cutting Speed (Vc)} = \frac{N \times 3.14 \times D}{1000} \text{ (m/min)}$$

$$\text{RPM (N)} = \frac{Vc \times 1000}{3.14 \times D} \text{ (RPM)}$$

$$\text{Torque (Md)} = \frac{P^2 \times D \times Kc}{8000} \text{ (Nm)}$$

$$\text{Power (P)} = \frac{Md \times 2 \times 3.14 \times N}{60} \text{ (KW)}$$

Vc - Cutting Speed (m/min)

P - Pitch (mm)

Kc - Specific cutting force (N/mm²)

P - Power (KW)

Md - Torque (Nm)

D - Nominal Dia (mm)

N - RPM

Hardness and tensile strength

| Vickers Hardness No. HV | Rockwell C. Scale Hardness No. HRC | Brinell Hardness No. HB | Tensile strength N/mm ² |
|-------------------------|------------------------------------|-------------------------|------------------------------------|
| 940 | 68 | | |
| 900 | 67 | | |
| 864 | 66 | | |
| 829 | 65 | | |
| 800 | 64 | | |
| 773 | 63 | | |
| 745 | 62 | | |
| 720 | 61 | | |
| 698 | 60 | | |
| 675 | 59 | | |
| 655 | 58 | 2200 | |
| 650 | 618 | 2180 | |
| 640 | 608 | 2145 | |
| 639 | 57 | 607 | 2140 |
| 630 | 599 | 2105 | |
| 620 | 589 | 2070 | |
| 615 | 56 | 584 | 2050 |
| 610 | 580 | 2030 | |
| 600 | 570 | 1995 | |
| 596 | 55 | 567 | 1980 |
| 590 | 561 | 1955 | |
| 580 | 551 | 1920 | |
| 578 | 54 | 549 | 1910 |
| 570 | 542 | 1880 | |
| 560 | 53 | 532 | 1845 |
| 550 | 523 | 1810 | |
| 544 | 52 | 517 | 1790 |
| 540 | 513 | 1775 | |
| 530 | 504 | 1740 | |
| 527 | 51 | 501 | 1730 |
| 520 | 494 | 1700 | |
| 514 | 50 | 488 | 1680 |
| 510 | 485 | 1665 | |
| 500 | 475 | 1630 | |
| 497 | 49 | 472 | 1620 |
| 490 | 466 | 1595 | |
| 484 | 48 | 460 | 1570 |
| 480 | 456 | 1555 | |
| 473 | 47 | 449 | 1530 |
| 470 | 447 | 1520 | |
| 460 | 437 | 1485 | |
| 458 | 46 | 435 | 1480 |
| 450 | 428 | 1455 | |
| 446 | 45 | 424 | 1440 |
| 440 | 418 | 1420 | |

| Vickers Hardness No. HV | Rockwell C. Scale Hardness No. HRC | Brinell Hardness No. HB | Tensile strength N/mm ² |
|-------------------------|------------------------------------|-------------------------|------------------------------------|
| 434 | 44 | 413 | 1400 |
| 423 | 43 | 402 | 1360 |
| 413 | 42 | 393 | 1330 |
| 403 | 41 | 383 | 1300 |
| 392 | 40 | 372 | 1260 |
| 382 | 39 | 363 | 1230 |
| 373 | 38 | 354 | 1200 |
| 364 | 37 | 346 | 1170 |
| 355 | 36 | 337 | 1140 |
| 350 | 333 | 1125 | |
| 345 | 35 | 328 | 1110 |
| 340 | 323 | 1095 | |
| 336 | 34 | 319 | 1080 |
| 330 | 314 | 1060 | |
| 327 | 33 | 311 | 1050 |
| 320 | 304 | 1030 | |
| 317 | 32 | 301 | 1020 |
| 310 | 31 | 295 | 995 |
| 302 | 30 | 287 | 970 |
| 300 | 285 | 965 | |
| 295 | 280 | 950 | |
| 293 | 29 | 278 | 940 |
| 290 | 276 | 930 | |
| 287 | 28 | 273 | 920 |
| 285 | 271 | 915 | |
| 280 | 27 | 266 | 900 |
| 275 | 261 | 880 | |
| 272 | 26 | 258 | 870 |
| 270 | 257 | 865 | |
| 268 | 25 | 255 | 860 |
| 265 | 252 | 850 | |
| 260 | 24 | 247 | 835 |
| 255 | 23 | 242 | 820 |
| 250 | 22 | 238 | 800 |
| 245 | 233 | 785 | |
| 243 | 21 | 231 | 780 |
| 240 | 228 | 770 | |
| 235 | 223 | 755 | |
| 230 | 219 | 740 | |
| 225 | 214 | 720 | |
| 220 | 209 | 705 | |
| 215 | 204 | 690 | |
| 210 | 199 | 675 | |
| 205 | 195 | 660 | |
| 200 | 190 | 640 | |

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

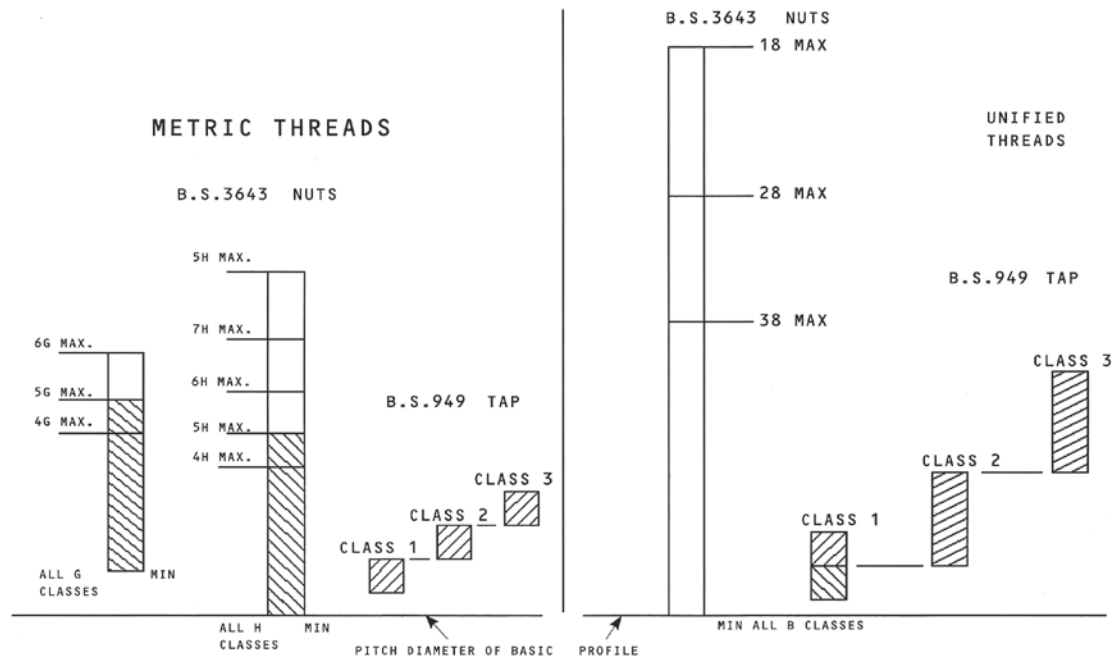
Table cutting speeds

| M/min | 5 | 8 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 150 |
|----------------------|------------------------------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Tool dia mm /inch | Revolutions Per Minute (RPM) | | | | | | | | | | | | | | | |
| 1 | 1592 | 2546 | 3138 | 4775 | 6366 | 7958 | 9549 | 12732 | 15916 | 19099 | 22282 | 25465 | 28648 | 31831 | 35014 | 47747 |
| 1.5 | 1061 | 1698 | 2122 | 3183 | 4244 | 5305 | 6366 | 8488 | 10610 | 12732 | 14854 | 16977 | 19099 | 21221 | 23343 | 31831 |
| 2 | 796 | 1273 | 1592 | 2387 | 3183 | 3979 | 4775 | 6366 | 7958 | 9549 | 11141 | 12732 | 14324 | 15916 | 17507 | 23873 |
| 2.5 | 637 | 1019 | 1273 | 1910 | 2546 | 3183 | 3820 | 5093 | 6366 | 7639 | 8913 | 10186 | 11459 | 12732 | 14006 | 19099 |
| 3 | 531 | 849 | 1061 | 1592 | 2122 | 2653 | 3183 | 4244 | 5305 | 6366 | 7427 | 8488 | 9549 | 10610 | 11671 | 15916 |
| 1/8" | 500 | 801 | 1001 | 1501 | 2002 | 2502 | 3003 | 4004 | 5005 | 6006 | 7007 | 8008 | 9009 | 10010 | 11011 | 15015 |
| 3.5 | 455 | 728 | 909 | 1364 | 1819 | 2274 | 2728 | 3638 | 4547 | 5457 | 6366 | 7176 | 8185 | 9095 | 10004 | 13642 |
| 4 | 398 | 637 | 796 | 1194 | 1592 | 1989 | 2387 | 3183 | 3979 | 4775 | 5570 | 6366 | 7162 | 7958 | 8754 | 11937 |
| 4.5 | 354 | 566 | 707 | 1061 | 1415 | 1768 | 2122 | 2829 | 3537 | 4244 | 4951 | 5659 | 6366 | 7074 | 7781 | 10610 |
| 3/16" | 334 | 535 | 669 | 1003 | 1337 | 1672 | 2006 | 2675 | 3344 | 4012 | 4681 | 5350 | 6018 | 6687 | 7356 | 10031 |
| 5 | 318 | 509 | 637 | 955 | 1273 | 1592 | 1910 | 2546 | 3183 | 3820 | 4456 | 5093 | 5730 | 6366 | 7003 | 9549 |
| 6 | 265 | 424 | 531 | 796 | 1061 | 1326 | 1592 | 2122 | 2653 | 3183 | 3714 | 4244 | 4775 | 5305 | 5836 | 7958 |
| 1/4" | 251 | 401 | 501 | 752 | 1003 | 1253 | 1504 | 2005 | 2506 | 3008 | 3509 | 4010 | 4511 | 5013 | 5514 | 7519 |
| 7 | 227 | 364 | 455 | 682 | 909 | 1137 | 1364 | 1819 | 2274 | 2728 | 3183 | 3638 | 4093 | 4547 | 5002 | 6821 |
| 5/16" | 200 | 321 | 401 | 601 | 802 | 1002 | 1203 | 1604 | 2004 | 2405 | 2806 | 3207 | 3608 | 4009 | 4410 | 6013 |
| 8 | 199 | 318 | 398 | 597 | 796 | 995 | 1194 | 1592 | 1989 | 2387 | 2785 | 3183 | 3581 | 3979 | 4377 | 5968 |
| 9 | 177 | 283 | 354 | 531 | 707 | 884 | 1061 | 1415 | 1768 | 2122 | 2476 | 2829 | 3183 | 3537 | 3890 | 5305 |
| 3/8" | 167 | 267 | 334 | 501 | 668 | 835 | 1002 | 1336 | 1670 | 2004 | 2338 | 2672 | 3006 | 3340 | 3674 | 5010 |
| 10 | 159 | 255 | 318 | 477 | 637 | 796 | 955 | 1273 | 1592 | 1910 | 2228 | 2546 | 2865 | 3183 | 3501 | 4775 |
| 7/16" | 143 | 229 | 287 | 430 | 573 | 716 | 860 | 1146 | 1433 | 1719 | 2006 | 2292 | 2579 | 2865 | 3152 | 4298 |
| 12 | 133 | 212 | 265 | 398 | 531 | 663 | 796 | 1061 | 1326 | 1592 | 1857 | 2122 | 2387 | 2653 | 2918 | 3979 |
| 1/2" | 125 | 201 | 251 | 376 | 501 | 627 | 752 | 1003 | 1253 | 1504 | 1754 | 2005 | 2256 | 2506 | 2757 | 3760 |
| 14 | 114 | 182 | 227 | 341 | 455 | 568 | 682 | 909 | 1137 | 1364 | 1592 | 1819 | 2046 | 2274 | 2501 | 3410 |
| 9/16" | 111 | 178 | 223 | 334 | 446 | 557 | 668 | 891 | 1114 | 1337 | 1559 | 1782 | 2005 | 2228 | 2450 | 3341 |
| 15 | 106 | 170 | 212 | 318 | 424 | 531 | 637 | 849 | 1061 | 1273 | 1485 | 1698 | 1910 | 2122 | 2334 | 3183 |

Recommended tap tolerances

| Tap Tolerance BS 949 | Class 1 | Class 2 | Class 3 |
|----------------------|----------------|--------------------|--------------------|
| Metric BS 3643 | Classes 4H, 5H | Classes 6H, 4G, 5G | Classes 7H, 8H, 9G |
| Unified BS 1580 | Class 3B | Class 2B | Class 1B |
| Whitworth BS 84 | Close Class | Medium Class | Normal Class |
| B.A. BS 93 | - | Normal Class | - |

DISPOSITION OF TAP TOLERANCES IN RELATION TO NUT TOLERANCES FOR METRIC AND UNIFIED THREADS



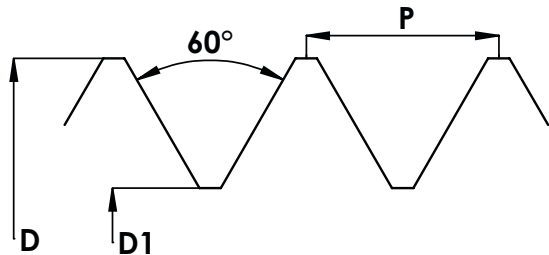
THREAD TOLERANCES FOR TAP TO ANSI 9-49

| | | |
|-----------------------------|------|--|
| up to 1" Diameter | GH 2 | Basic pitch diameter, plus 0.0005", plus 0.0010" |
| up to 1" Diameter | GH 3 | Basic pitch diameter, plus 0.0010", plus 0.0015" |
| up to 1" Diameter | GH 4 | Basic pitch diameter, plus 0.0015", plus 0.0020" |
| Over 1" Dia. to 1 1/2" Dia. | GH 4 | Basic pitch diameter, plus 0.0010", plus 0.0020" |
| Over 1 1/2" Dia. | GH 7 | Basic pitch diameter, plus 0.0015", plus 0.0035" |

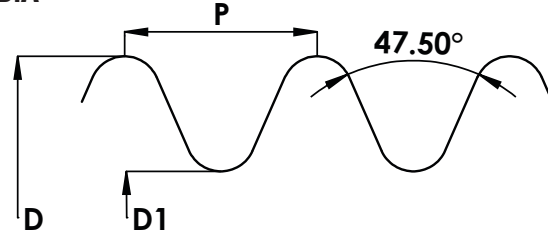
Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Thread forms

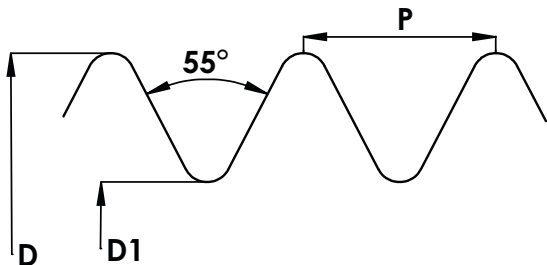
Metric ISO - UNC - UNF



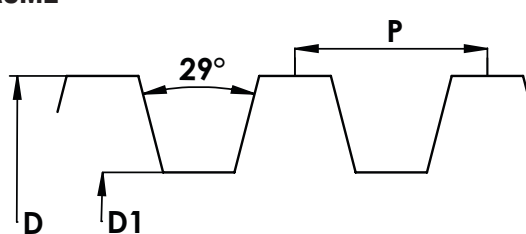
B.A



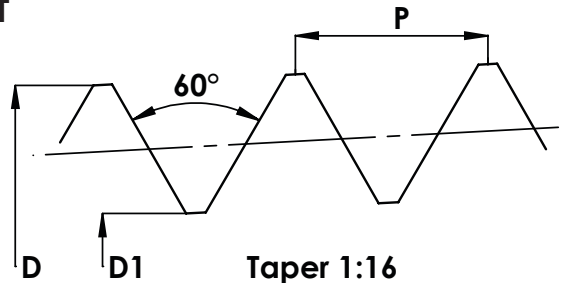
BSW - BSF - BSP



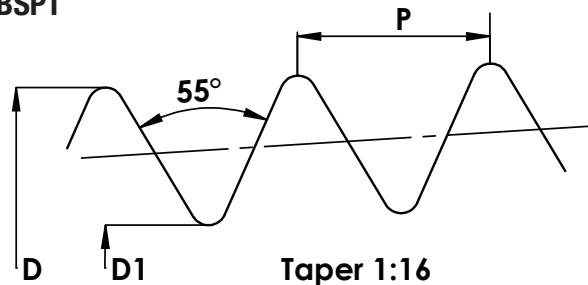
ACME



NPT



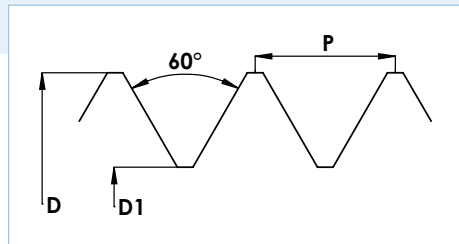
BSPT



| | |
|------|---|
| ACME | : Acme Thread |
| BA | : British Association Standard Thread |
| BSF | : British Standard Fine Thread Series |
| BSP | : British Standard Pipe |
| BSPT | : British Standard Taper Pipe Thread |
| BSW | : British Standard Whitworth Coarse Thread Series |
| M | : Metric Screw Thread Series |
| NGT | : National Gas Taper Thread (See "SGT") |
| NPS | : for Tap marking only (See NPSC, NPSM) |
| NPSF | : Dryseal American National Standard Fuel Internal Straight Pipe Thread |
| NPSI | : Dryseal American National Standard Intermediate Internal Straight Pipe Thread |

| | |
|------|---|
| NPT | : American National Standard Taper Pipe Thread |
| NPTF | : Dryseal American National Standard Taper Pipe Thread |
| PG | : Panzer Gewinder |
| STI | : Special Thread for Helical Coil Wire Screw Thread Inserts |
| UN | : Unified Constant Pitch Thread Series |
| UNC | : Unified Coarse Thread Series |
| UNEF | : Unified Extra Fine Thread Series |
| UNF | : Unified Fine Thread Series |
| UNS | : Unified Thread-Special |
| WW | : British Standard Whitworth Special Thread |

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Recommended tap drill sizes


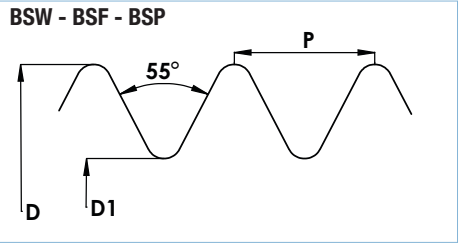
| Metric Coarse | | |
|------------------|-------|------------|
| Nominal Diameter | Pitch | Drill Size |
| ØD | | |
| 2 | 0.4 | 1.6 |
| 2.2 | 0.45 | 1.75 |
| 2.3 | 0.4 | 1.9 |
| 2.5 | 0.45 | 2.05 |
| 2.6 | 0.45 | 2.1 |
| 3 | 0.5 | 2.5 |
| 3.5 | 0.6 | 2.9 |
| 4 | 0.7 | 3.3 |
| 4.5 | 0.75 | 3.7 |
| 5 | 0.8 | 4.2 |
| 6 | 1 | 5 |
| 7 | 1 | 6 |
| 8 | 1.25 | 6.8 |
| 9 | 1.25 | 7.8 |
| 10 | 1.5 | 8.5 |
| 11 | 1.5 | 9.5 |
| 12 | 1.75 | 10.2 |
| 14 | 2 | 12 |
| 16 | 2 | 14 |
| 18 | 2.5 | 15.5 |
| 20 | 2.5 | 17.5 |
| 22 | 2.5 | 19.5 |
| 24 | 3 | 21 |
| 27 | 3 | 24 |
| 30 | 3.5 | 26.5 |
| 33 | 3.5 | 29.5 |
| 36 | 4 | 32 |
| 39 | 4 | 35 |
| 42 | 4.5 | 37.5 |
| 45 | 4.5 | 40.5 |
| 48 | 5 | 43 |
| 52 | 5 | 47 |
| 56 | 5.5 | 50.5 |
| 60 | 5.5 | 54.5 |
| 64 | 6 | 58 |
| 68 | 6 | 62 |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |

| Metric Fine | | |
|------------------|-------|------------|
| Nominal Diameter | Pitch | Drill Size |
| ØD | | |
| 2.5 | 0.35 | 2.15 |
| 3 | 0.35 | 2.65 |
| 3.5 | 0.35 | 3.15 |
| 4 | 0.5 | 3.5 |
| 4.5 | 0.5 | 4 |
| 5 | 0.5 | 4.5 |
| 6 | 0.75 | 5.2 |
| 7 | 0.75 | 6.2 |
| 8 | 0.75 | 7.2 |
| 8 | 1 | 7 |
| 9 | 1 | 8 |
| 10 | 0.75 | 9.2 |
| 10 | 1 | 9 |
| 10 | 1.25 | 8.8 |
| 11 | 1 | 10 |
| 12 | 1 | 11 |
| 12 | 1.25 | 10.8 |
| 12 | 1.5 | 10.5 |
| 14 | 1 | 13 |
| 14 | 1.25 | 12.8 |
| 14 | 1.5 | 12.5 |
| 15 | 1 | 14 |
| 15 | 1.5 | 13.5 |
| 16 | 1 | 15 |
| 16 | 1.5 | 14.5 |
| 17 | 1 | 16 |
| 17 | 1.5 | 15.5 |
| 18 | 1.5 | 16.5 |
| 18 | 2 | 16 |
| 20 | 1 | 19 |
| 20 | 1.5 | 18.5 |
| 20 | 2 | 18 |
| 22 | 1 | 21 |
| 22 | 1.5 | 20.5 |
| 22 | 2 | 20 |
| 24 | 1 | 23 |
| 24 | 1.5 | 22.5 |
| 24 | 2 | 22 |
| 24 | 1 | 24 |
| 25 | 1.5 | 23.5 |

| Metric Fine | | |
|------------------|-------|------------|
| Nominal Diameter | Pitch | Drill Size |
| ØD | | |
| 26 | 1.5 | 24.5 |
| 27 | 1 | 26 |
| 27 | 1.5 | 25.5 |
| 27 | 2 | 25 |
| 28 | 1.5 | 26.5 |
| 28 | 2 | 26 |
| 30 | 1 | 29 |
| 30 | 1.5 | 28.5 |
| 30 | 2 | 28 |
| 32 | 1.5 | 30.5 |
| 32 | 2 | 30 |
| 33 | 1.5 | 31.5 |
| 33 | 2 | 31 |
| 33 | 3 | 30 |
| 35 | 1.5 | 33.5 |
| 36 | 1.5 | 34.5 |
| 36 | 2 | 34 |
| 36 | 3 | 33 |
| 38 | 1.5 | 36.5 |
| 39 | 1.5 | 37.5 |
| 39 | 2 | 37 |
| 39 | 3 | 36 |
| 40 | 1.5 | 38.5 |
| 40 | 2 | 38 |
| 40 | 3 | 37 |
| 42 | 1.5 | 40.5 |
| 42 | 2 | 40 |
| 42 | 3 | 39 |
| 45 | 1.5 | 43.5 |
| 45 | 2 | 43 |
| 45 | 3 | 42 |
| 48 | 1.5 | 46.5 |
| 48 | 2 | 46 |
| 48 | 3 | 45 |
| 50 | 1.5 | 48.5 |
| 50 | 2 | 48 |
| 50 | 3 | 47 |
| 52 | 1.5 | 50.5 |
| 52 | 2 | 50 |
| 52 | 3 | 49 |

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Recommended tap drill sizes

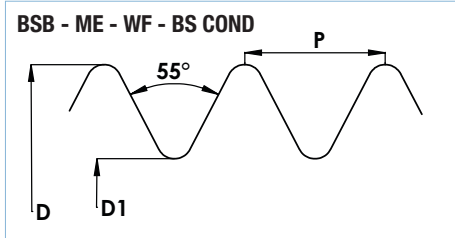


| BSW | | |
|------------------|-----|------------------|
| Nominal Diameter | TPI | Drill Size in mm |
| Ø D | | |
| 1/16" | 60 | 1.2 |
| 3/32" | 48 | 1.9 |
| 1/8" | 40 | 2.6 |
| 5/32" | 32 | 3.2 |
| 3/16" | 24 | 3.7 |
| 7/32" | 24 | 4.5 |
| 1/4" | 20 | 5.1 |
| 9/32" | 20 | 5.8 |
| 5/16" | 18 | 6.5 |
| 3/8" | 16 | 7.9 |
| 7/16" | 14 | 9.3 |
| 1/2" | 12 | 10.5 |
| 9/16" | 12 | 12.1 |
| 5/8" | 11 | 13.5 |
| 11/16" | 11 | 15.1 |
| 3/4" | 10 | 16.3 |
| 7/8" | 9 | 19.3 |
| 15/16" | 9 | 20.6 |
| 1" | 8 | 22.0 |
| 1.1/8" | 7 | 24.8 |
| 1.1/4" | 7 | 28.0 |
| 1.3/8" | 6 | 30.5 |
| 1.1/2" | 6 | 33.5 |
| 1.5/8" | 5 | 36.0 |
| 1.3/4" | 5 | 39.0 |
| 1.7/8" | 4 ½ | 41.3 |
| 2" | 4 ½ | 44.5 |

| BSF | | |
|------------------|-----|------------------|
| Nominal Diameter | TPI | Drill Size in mm |
| Ø D | | |
| 3/16" | 32 | 4 |
| 7/32" | 28 | 4.6 |
| 1/4" | 26 | 5.30 |
| 9/32" | 26 | 6.00 |
| 5/16" | 22 | 6.80 |
| 3/8" | 20 | 8.30 |
| 7/16" | 18 | 9.70 |
| 1/2" | 16 | 11.10 |
| 9/16" | 16 | 12.70 |
| 5/8" | 14 | 14.00 |
| 11/16" | 14 | 15.50 |
| 3/4" | 12 | 16.75 |
| 7/8" | 11 | 19.75 |
| 15/16" | 11 | 21.50 |
| 1" | 10 | 22.75 |
| 1.1/8" | 9 | 25.50 |
| 1.1/4" | 9 | 28.50 |
| 1.3/8" | 8 | 31.50 |
| 1.1/2" | 8 | 34.50 |
| 1.5/8" | 8 | 37.70 |
| 1.3/4" | 7 | 41.00 |
| 1.7/8" | 7 | 43.70 |
| 2" | 7 | 47.00 |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |

| BSP | | |
|------------------|-----|------------------|
| Nominal Diameter | TPI | Drill Size in mm |
| Ø D | | |
| 1/8" | 28 | 8.80 |
| 1/4" | 19 | 11.80 |
| 3/8" | 19 | 15.25 |
| 1/2" | 14 | 19.00 |
| 5/8" | 14 | 21.00 |
| 3/4" | 14 | 24.50 |
| 7/8" | 14 | 28.25 |
| 1" | 11 | 30.75 |
| 1.1/4" | 11 | 39.50 |
| 1.1/2" | 11 | 45.00 |
| 1.3/4" | 11 | 51.00 |
| 2" | 11 | 57.00 |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | - |

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Recommended tap drill sizes


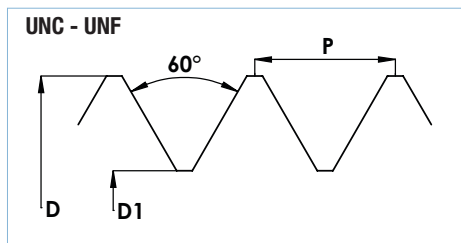
| BSB | | |
|------------------|-----|------------------|
| Nominal Diameter | TPI | Drill Size in mm |
| ØD | | |
| 1/4" | 26 | 5.3/4 |
| 9/32" | 26 | 6.10 |
| 5/16" | 26 | 6.90 |
| 3/8" | 26 | 8.40 |
| 7/16" | 26 | 10.00 |
| 1/2" | 26 | 11.50 |
| 9/16" | 26 | 13.1/13 |
| 5/8" | 26 | 14.70 |
| 11/16" | 26 | 16.50 |
| 3/4" | 26 | 17.80 |
| 7/8" | 26 | 21.00 |
| 1" | 26 | 24.20 |
| 1.1/8" | 26 | 27.50 |
| 1.1/4" | 26 | 30.50 |
| 1.3/8" | 26 | 33.70 |
| 1.1/2" | 26 | 36.90 |
| 2 | 26 | 49.60 |

| ME | | |
|------------------|-----|------------------|
| Nominal Diameter | TPI | Drill Size in mm |
| ØD | | |
| 1/8" | 40 | 2.55 |
| 5/32" | 40 | 3.30 |
| 3/16" | 40 | 4.00 |
| 7/32" | 40 | 4.80 |
| 1/4" | 40 | 5.50 |
| 9/32" | 32 | 6.10 |
| 5/16" | 32 | 7.00 |
| 3/8" | 32 | 8.60 |
| 7/16" | 26 | 10.00 |
| 1/2" | 26 | 11.50 |

| BS COND. | | |
|------------------|-----|------------------|
| Nominal Diameter | TPI | Drill Size in mm |
| ØD | | |
| 1/2" | 18 | 11.50 |
| 5/8" | 18 | 14.20 |
| 3/4" | 16 | 17.50 |
| 7/8" | 16 | 20.60 |
| 1" | 16 | 23.80 |
| 1.1/4" | 16 | 30.10 |
| 1.1/2" | 14 | 36.10 |
| 2 | 14 | 48.80 |

| WHITWORTH FORM SPECIAL | | |
|------------------------|----------|------------------|
| Nominal Diameter | TPI | Drill Size in mm |
| ØD | | |
| 1/4" | 24/28/32 | 5.3, 5.4, 5.5 |
| 5/16" | 24/40 | 6.75, 7.3 |
| 3/8" | 24,40 | 8.4, 8.9 |
| 7/16" | 20/24/40 | 9.8/10, 10.5 |
| 1/2" | 20/24/40 | 11.5, 11.9, 12 |
| 9/16" | 20 | 13.1 |
| 5/8" | 20 | 14.5 |
| 11/16" | 20 | 16.2 |
| 3/4" | 14/20 | 17.1, 17.8 |
| 7/8" | 14/16/20 | 20.0, 20.6, 21.0 |
| 1" | 12/20 | 23.0, 24.0 |

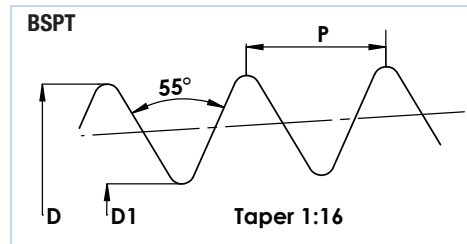
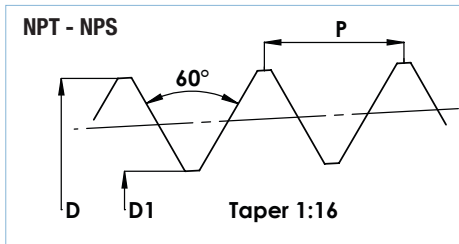
Recommended tap drill sizes



| UNC | | |
|------------------|-------|------------|
| Nominal Diameter | Pitch | Drill Size |
| $\varnothing D$ | | |
| #1 | 64 | 1.5 |
| #2 | 56 | 1.8 |
| #3 | 48 | 2.1 |
| #4 | 40 | 2.3 |
| #5 | 40 | 2.6 |
| #6 | 32 | 2.85 |
| #8 | 32 | 3.5 |
| #10 | 24 | 3.9 |
| #12 | 24 | 4.5 |
| 1/4" | 20 | 5.2 |
| 5/16" | 18 | 6.6 |
| 3/8" | 16 | 8 |
| 7/16" | 14 | 9.4 |
| 1/2" | 13 | 10.75 |
| 9/16" | 12 | 12.25 |
| 5/8" | 11 | 13.5 |
| 3/4" | 10 | 16.5 |
| 7/8" | 9 | 19.5 |
| 1" | 8 | 22.25 |
| 1.1/8" | 7 | 25 |
| 1.1/4" | 7 | 28.25 |
| 1.3/8" | 6 | 30.75 |
| 1.1/2" | 6 | 34 |
| 1.3/4" | 5 | 39.5 |
| 2" | 4.5 | 45.25 |

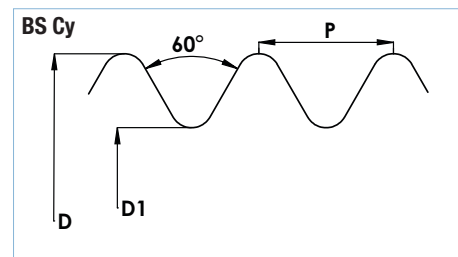
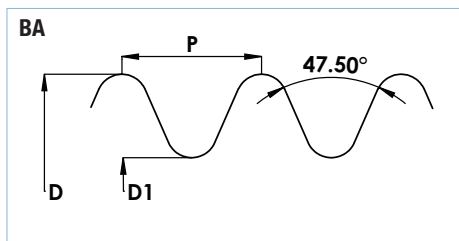
| UNF | | |
|------------------|-------|------------|
| Nominal Diameter | Pitch | Drill Size |
| $\varnothing D$ | | |
| #1 | 80 | 1.3 |
| #2 | 72 | 1.6 |
| #3 | 64 | 1.9 |
| #4 | 56 | 2.1 |
| #5 | 48 | 2.4 |
| #6 | 44 | 2.7 |
| #8 | 40 | 3 |
| #10 | 36 | 3.5 |
| #12 | 32 | 4.1 |
| 1/4" | 28 | 4.7 |
| 5/16" | 28 | 5.5 |
| 3/8" | 24 | 6.9 |
| 7/16" | 24 | 8.5 |
| 1/2" | 20 | 9.9 |
| 9/16" | 20 | 11.5 |
| 5/8" | 18 | 12.9 |
| 3/4" | 18 | 14.5 |
| 7/8" | 16 | 17.5 |
| 1" | 14 | 20.5 |
| 1.1/8" | 12 | 23.25 |
| 1.1/4" | 12 | 26.5 |
| 1.3/8" | 12 | 29.5 |
| 1.1/2" | 12 | 32.7 |
| 2" | 12 | 36 |

Recommended tap drill sizes



| NPT & NPS | | | |
|------------------------|------|---------------------|------------------------|
| Nominal Diameter ØD | TPI | Drill Size in mm | |
| | | Tapping With Reamer | Tapping Without Reamer |
| 1/16" | 27 | 6.00 | 6.30 |
| 1/8" | 27 | 8.40 | 8.70 |
| 1/4" | 18 | 10.70 | 11.10 |
| 3/8" | 18 | 14.25 | 14.50 |
| 1/2" | 14 | 17.50 | 18.00 |
| 3/4" | 14 | 22.75 | 23.25 |
| 1" | 11.5 | 28.50 | 29.00 |
| 1.1/4" | 11.5 | 37.50 | 38.00 |
| 1.1/2" | 11.5 | 43.50 | 44.00 |
| 2" | 11.5 | 55.00 | 56.00 |

| BSPT | | |
|------------------------|-----|------------------|
| Nominal Diameter ØD | TPI | Drill Size in mm |
| | | |
| 1/4" | 19 | 11.80 |
| 3/8" | 19 | 15.25 |
| 1/2" | 14 | 19.00 |
| 5/8" | 14 | 21.00 |
| 3/4" | 14 | 24.50 |
| 7/8" | 14 | 28.25 |
| 1" | 11 | 30.75 |
| 1.1/4" | 11 | 39.50 |
| 1.1/2" | 11 | 45.00 |
| 1.3/4" | 11 | 51.00 |
| 2 | 11 | 57.00 |



| BA | | | |
|------|----------|------|------------------|
| Size | Diameter | TPI | Drill Size in mm |
| 0 | 0.2362 | 25.4 | 5.10 |
| 1 | 0.2087 | 28.2 | 4.50 |
| 2 | 0.1850 | 31.4 | 4.00 |
| 3 | 0.1614 | 34.8 | 3.40 |
| 4 | 0.1417 | 38.5 | 3.00 |
| 5 | 0.1260 | 43 | 2.65 |
| 6 | 0.1102 | 47.9 | 2.30 |
| 7 | 0.0984 | 52.9 | 2.05 |
| 8 | 0.0866 | 59.1 | 1.80 |
| 9 | 0.0748 | 65.1 | 1.55 |
| 10 | 0.0669 | 72.6 | 1.40 |
| 11 | 0.0591 | 81.9 | 1.20 |
| 12 | 0.0512 | 90.9 | 1.05 |

| BS Cy | | |
|-------|-----|------------------|
| Size | TPI | Drill Size in mm |
| 1/8" | 40 | 2.65 |
| 5/32" | 32 | 3.30 |
| 3/16" | 32 | 4.10 |
| 7/32" | 26 | 4.80 |
| 1/4" | 26 | 5.60 |
| 5/16" | 26 | 7.20 |
| 3/8" | 26 | 8.70 |
| 7/16" | 26 | 10.30 |
| 1/2" | 26 | 11.90 |
| 9/16" | 26 | 13.50 |
| 5/8" | 26 | 15.00 |
| 3/4" | 26 | 18.20 |
| 1" | 24 | 24.50 |

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.



Surface treatment

While selecting the correct type of tap for a job, the material to be tapped should also be considered. This may determine the surface coating that should be applied to the tap in order to extend its life. Most taps are supplied with no surface treatment. They are referred to as 'Bright Finish'. These taps are mainly for use on non-ferrous materials, or steels that do not cold weld. Bright finish taps are therefore suitable for all hand operations, where speeds are too low for cold welding to occur, and for most machine operations.

STEAM OXIDE:

A black oxidized surface (Fe_3O_4) produced on the surface of a finished tap by means of a steam furnace. This oxidized surface is porous and helps retain cutting fluid in the working portion of the tap. The materials on which steam oxide has shown improvement in performance are stainless steels, steel forgings, tool and die steels, hot and cold rolled steels, and high nickel alloys.

TITANIUM NITRIDE (TiN):

A thin deposit (approx. 0.0001") applied to the surface of a finished tap utilizing PVD coating technology. TiN coating increases the surface hardness and wear resistance. Use of TiN coating on standard tools will help increase tool life in harder materials (up to 32 HRC), such as stainless steels, steel forgings, tool and die steels and hot and cold rolled steels. TiN coating also works very well with water-base cutting fluids.

TITANIUM CARBONITRIDE (TiCN):

Similar to TiN, TiCN is applied utilizing PVD coating technology. This coating combines high hardness (approx. 2800 vickers) with the anti-seizure properties of Nitride. A lower coefficient of friction helps reduce welding by 75% over TiN coated tools. These features make TiCN especially beneficial in non-ferrous material and hardened steels.

TITANIUM ALUMINUM NITRIDE (TiAlN):

TiAlN is applied using PVD coating technology. The addition of aluminum reduces friction and increases the coating oxidation temperature. As a result, TiAlN has increased resistance to heat and oxidation wear. This makes TiAlN better suited for High Speed/High Heat applications. TiAlN coating is incorporated into many of our tools.

Cutting speeds based on machining condition

Tapping speeds are determined by many factors. The main ones are:-

- a) Thread pitch
- b) Material being tapped
- c) Hole depth
- d) Hole type, through or blind
- e) Depth of thread
- f) Lubricant quality and flow rate

Tapping speeds should be decreased if :-

- a) Lubricant is poor, or flow is restricted
- b) Bottom lead or Spiral flute taps are used
- c) Thread depth (%) increases.
- d) Thread pitch is coarse
- e) Cutting taper threads (50% normal speed)
- f) Cutting Acme or Trapezoidal threads (40% normal speed)

Tapping speeds can be increased if:-

- a) Thread depth decreases
- b) Thread pitch is fine
- c) Coolant flow and quality is good
- d) Spiral point or Fluteless (Roll) taps are used



Troubleshooting

Many factors can affect the quality of a tapped thread.
Some more common problems are listed along with probable causes.

POOR THREAD FINISH

Misalignment of tap and work piece
Incorrect feed rate
Chips/swarf not being cleared properly
Tapping device or machine faulty
Insufficient or incorrect lubricant
Incorrectly ground or blunt tap
Wrong tap selection

OVERSIZE/BELL MOUTHED

Misalignment
Incorrect feed rate
Incorrect tapping drill
Tapping device or machine faulty
Insufficient or incorrect lubricant
Incorrectly ground or eccentric tap
Wrong tap selection

EXCESSIVE TAP WEAR

Wrong tap selection
Blunt or incorrectly sharpened tap
Insufficient or incorrect lubricant
Tapping speed too high
Hole work hardened
Taps Technical Information

COLD WELDING

Wrong material composition
Blunt or incorrectly sharpened tap
Insufficient or incorrect lubricant
Tapping speed too high
Material too soft

TAP BREAKING

Incorrectly sharpened/blunt tap
Tap hits bottom of hole
Machine or tapping device faulty
Wrong tap selection
Incorrect or insufficient lubricant
Tapping speed too high
Hole work hardened
Inefficient chip or swarf removal
Incorrect tapping drill size

TAP TEETH CHIPPING

Incorrectly sharpened/blunt tap
Tap hits bottom of hole
Machine or tapping device faulty

In order to minimize problems the following rules should be followed:-

- 1) Use a pitch controlled tapping attachment
- 2) Choose the correct lubricant
- 3) Use the correct type of tap for the job
- 4) Use the correct tapping drill size
- 5) Choose the correct speeds and feeds
- 6) Keep taps sharp. Regrind with a proper machine
- 7) Ensure accurate alignment
- 8) Check hardness of material, especially when changing batches
- 9) Ensure thread gauging is recently certified

Case studies

| Industry Segment | Automotive |
|----------------------|---------------------------|
| Tap series | SA3 |
| Size | M8 X 1.25 SA3 6HX DIN 371 |
| Component | Bush |
| Work material | EN8 |
| Type of hole | Through hole |
| Hole dia | 6.8 mm |
| Drill depth | 12 mm |
| Tapping depth | 12 mm |
| Machine | Radial drilling |
| Tapping direction | Vertical |
| Speed (Vc) | 20 m/min |
| Coolant | Tapping Oil |
| Tool Life | 40m |
| Competitor tool life | 25m |

| Industry Segment | Automotive |
|----------------------|-----------------------|
| Tap series | SAF5 |
| Size | M12X1.25 SAF5 DIN 374 |
| Component | Wheel Hub |
| Work material | 16MnCr5 |
| Type of hole | Through hole |
| Hole dia | 10.75 mm |
| Drill depth | 12 mm |
| Tapping depth | 12 mm |
| Machine | HMC (2 spindle) |
| Tapping direction | Horizontal |
| Speed (Vc) | 22 m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 754 nos |
| Competitor tool life | 400 nos |

| Industry Segment | Automotive |
|----------------------|-----------------------|
| Tap series | SA3 |
| Size | M3 X 0.5 SA3 |
| Component | Hub |
| Work material | S45C |
| Type of hole | Through hole (4holes) |
| Hole dia | 2.5 mm |
| Drill depth | 6.0 mm |
| Tapping depth | 6.0 mm |
| Machine | Tapping Machine |
| Tapping direction | Vertical |
| Speed (Vc) | 25 m/min |
| Coolant | Neat cutting oil |
| Tool Life | 730 nos |
| Competitor tool life | 600 nos |

| Industry Segment | Automotive |
|----------------------|-------------------|
| Tap series | SBF5 |
| Size | M14 X 1.5 SBF5 |
| Component | Housing |
| Work material | C40 |
| Type of hole | Blind hole |
| Hole dia | 12.5 mm |
| Drill depth | 40.0 mm |
| Tapping depth | 35.0 mm |
| Machine | Tapping Machine |
| Tapping direction | Vertical |
| Speed (Vc) | 15 m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 470 nos |
| Competitor tool life | 430 nos |

| Industry Segment | Automotive |
|----------------------|-------------------------|
| Tap series | SC4 |
| Size | M8 X 1.25 SC4 DIN 371 |
| Component | Cylinder Head |
| Work material | Grey Cast Iron (220BHN) |
| Type of hole | Blind hole |
| Hole dia | 6.8 mm |
| Drill depth | 20.0 mm |
| Tapping depth | 16.0 mm |
| Machine | Makino HMC |
| Tapping direction | Horizontal |
| Speed (Vc) | 50 m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 67 mtrs |
| Competitor tool life | 58 mtrs |

| Industry Segment | Automotive |
|----------------------|--------------------|
| Tap series | SD3 |
| Size | M6 X 1 SD3 DIN 371 |
| Component | Under Bracket |
| Work material | EN8D |
| Type of hole | Through hole |
| Hole dia | 5.55 mm |
| Drill depth | 10.0 mm |
| Tapping depth | 10.0 mm |
| Machine | AMS - VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 20 m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 2200 nos |
| Competitor tool life | 800 nos |

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Case studies

| Industry Segment | Automotive |
|----------------------|--------------------|
| Tap series | SD3 |
| Size | M6 X 1 SD3 DIN 371 |
| Component | Bracket |
| Work material | AC4C (Al. Casting) |
| Type of hole | Blind hole |
| Hole dia | 5.55 mm |
| Drill depth | 23.0 mm |
| Tapping depth | 20.0 mm |
| Machine | AMS |
| Tapping direction | Vertical |
| Speed (Vc) | 30 m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 353 mtrs |
| Competitor tool life | 240 mtrs |

| Industry Segment | Automotive |
|----------------------|--------------------------|
| Tap series | SAF5 |
| Size | HPT 12X1.25 SAF5 OAL 110 |
| Component | Bearing Hub |
| Work material | C56 E2 |
| Type of hole | Through hole (4nos) |
| Hole dia | 10.75 mm |
| Drill depth | 12.0 mm |
| Tapping depth | 12.0 mm |
| Machine | Hyundai - VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 20 m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 505 comp |
| Competitor tool life | 400 comp |

| Industry Segment | Automotive |
|----------------------|--------------------------|
| Tap series | SBF TC |
| Size | 7/16 UNF SBF3 1B OAL 110 |
| Component | Crank Shaft |
| Work material | 41Cr4 (30 - 32 HRC) |
| Type of hole | Blind hole |
| Hole dia | 9.2 mm |
| Drill depth | 77.0 mm |
| Tapping depth | 70.0 mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 300 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 26 mtrs |
| Competitor tool life | 21 mtrs |

| Industry Segment | Automotive |
|----------------------|---------------------|
| Tap series | SBF |
| Size | M24X1.5 SBF3 ISO |
| Component | Axle |
| Work material | Forged Steel |
| Type of hole | Blind Hole |
| Hole dia | 22.5 mm |
| Drill depth | 45.0 mm |
| Tapping depth | 39.0 mm |
| Machine | Radial Drilling M/c |
| Tapping direction | Vertical |
| Speed (Vc) | 150 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 20 mts |
| Competitor tool life | 18 mts |

| Industry Segment | Automotive |
|----------------------|----------------------------|
| Tap series | SD3 |
| Size | M6X1X100 OAL SD3 |
| Component | Crank Case |
| Work material | ADC12 |
| Type of hole | Blind hole (8holes / Comp) |
| Hole dia | 5.5 mm |
| Drill depth | 9.0 mm |
| Tapping depth | 8.0 mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 2100 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 118 mtrs |
| Competitor tool life | 96 mtrs |

| Industry Segment | Automotive |
|----------------------|---------------------------------|
| Tap series | SBF TC |
| Size | M14X1.5 SBF7 TC DIN 374 |
| Component | Tie Rod |
| Work material | S45C Forged Steel (220-260 BHN) |
| Type of hole | Blind hole |
| Hole dia | 12.50 mm |
| Drill depth | 45.0 mm |
| Tapping depth | 38.0 mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 300 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 17.6 mtrs |
| Competitor tool life | 16.5 mtrs |

Case studies

| Industry Segment | Automotive |
|----------------------|-----------------------|
| Tap series | SA3 |
| Size | M6X1 SA3 6G ISO |
| Component | Hub |
| Work material | S45C (25 - 30 HRC) |
| Type of hole | Through hole (4holes) |
| Hole dia | 5.0 mm |
| Drill depth | 6.0 mm |
| Tapping depth | 6.0 mm |
| Machine | Tapping Machine |
| Tapping direction | Vertical |
| Speed (Vc) | 515 RPM |
| Coolant | Neat cutting oil |
| Tool Life | 30 mtrs |
| Competitor tool life | 22 mtrs |

| Industry Segment | Automotive |
|----------------------|---------------------------|
| Tap series | SC4 |
| Size | M12X1.75 SC4 ISO |
| Component | Flange |
| Work material | S.G. Iron (200 - 230 BHN) |
| Type of hole | Blind / Through hole |
| Hole dia | 10.25 mm |
| Drill depth | 16.0 mm |
| Tapping depth | 12.0 mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 650 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 13.2 mtrs |
| Competitor tool life | 11.3 mtrs |

| Industry Segment | Automotive |
|----------------------|-----------------------------|
| Tap series | SB3 |
| Size | M6X1 SB3 ISO |
| Component | Housing STR MTR |
| Work material | Aluminium Casting |
| Type of hole | Blind (2 holes / component) |
| Hole dia | 5mm |
| Drill depth | 27mm |
| Tapping depth | 17mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 1000 RPM |
| Coolant | Castrol |
| Tool Life | 68 mts |
| Competitor tool life | 41 mts |

| Industry Segment | Automotive |
|----------------------|------------------------------|
| Tap series | SB4 |
| Size | M8X1.25 SB4 DIN 371 |
| Component | Cylinder Head |
| Work material | Aluminium Casting |
| Type of hole | Blind (17 holes / component) |
| Hole dia | 6.8mm |
| Drill depth | 23mm |
| Tapping depth | 18mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 800 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 107 mts |
| Competitor tool life | 87 mts |

| Industry Segment | Electrical |
|----------------------|--------------------------|
| Tap series | SA4 |
| Size | M5 X 0.8 SA4 6HX DIN 371 |
| Component | Motor Cover |
| Work material | Grey Cast Iron (25HRC) |
| Type of hole | Through hole |
| Hole dia | 4.2mm |
| Drill depth | 8mm |
| Tapping depth | 8mm |
| Machine | Radial Drilling Machine |
| Tapping direction | Vertical |
| Speed (Vc) | 510 RPM |
| Coolant | Tapping Oil |
| Tool Life | 62 mts |
| Competitor tool life | 49 mts |

| Industry Segment | Automotive |
|----------------------|-------------------|
| Tap series | SBF3 |
| Size | M10X1.25 SBF5 7G |
| Component | Crown Wheel |
| Work material | 16MnCr5 (210 BHN) |
| Type of hole | Blind hole |
| Hole dia | 8.75mm |
| Drill depth | 14.5mm |
| Tapping depth | 11mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 500 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 40 mts |
| Competitor tool life | 36 mts |

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

Case studies

| Industry Segment | Valve & Pump |
|----------------------|--------------------------|
| Tap series | SBS |
| Size | M10 X 1.5 SBS3 DIN 371 |
| Component | Piston Valve Body |
| Work material | A105 Cast Steel (30 HRC) |
| Type of hole | Through hole (2holes) |
| Hole dia | 8.5 mm |
| Drill depth | 20.5 mm |
| Tapping depth | 19.5 mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 300 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 24 mts |
| Competitor tool life | 18 mts |

| Industry Segment | Automotive |
|----------------------|-------------------------|
| Tap series | SBF5 |
| Size | M12 X 1.25 SBF5 LH 7GX |
| Component | SN Valve Body |
| Work material | A350 LF2 (Forged Steel) |
| Type of hole | Through hole |
| Hole dia | 10.8 mm |
| Drill depth | 6.0 mm |
| Tapping depth | 6.0 mm |
| Machine | HMC |
| Tapping direction | Horizontal |
| Speed (Vc) | 210 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 750 nos |
| Competitor tool life | 954 nos |

| Industry Segment | Automotive |
|----------------------|-----------------------------|
| Tap series | SBF5 |
| Size | M12 X 1.75 SBF5 7GX TC PM |
| Component | Output Shaft |
| Work material | 20MnCr5 |
| Type of hole | Blind hole |
| Hole dia | 10.3 mm |
| Drill depth | 24.0 mm |
| Tapping depth | 22.0 mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 16 m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 20 mtrs (CPC reduction 20%) |
| Competitor tool life | 20 mtrs |

| Industry Segment | Automotive |
|----------------------|--------------------|
| Tap series | SD3 |
| Size | M6 X 1 SD3 DIN 371 |
| Component | Clutch Cover |
| Work material | ADC12 |
| Type of hole | Blind Hole |
| Hole dia | 5.48 mm |
| Drill depth | 16.0 mm |
| Tapping depth | 13.0 mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 2000 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 457 mts |
| Competitor tool life | 250 mts |

| Industry Segment | Medical |
|----------------------|---------------------------------|
| Tap series | SBI |
| Size | M7 X 1 LS SBI6 PM |
| Component | Nail – A493011210 |
| Work material | Titanium Alloy |
| Type of hole | Blind hole |
| Hole dia | 6.0 mm |
| Drill depth | 20.0 mm |
| Tapping depth | 17.6 mm |
| Machine | Tapping Machine |
| Tapping direction | Vertical |
| Speed (Vc) | 50 RPM |
| Coolant | Neat Cutting Oil |
| Tool Life | 100 Comp (consistency achieved) |
| Competitor tool life | 40 Comp (Tap breakage) |

| Industry Segment | Automotive |
|----------------------|------------------------|
| Tap series | SBF3 |
| Size | M6 X 1 SBF3 TC DIN 371 |
| Component | Balancing Shaft |
| Work material | 41Cr4 (30 - 32 HRC) |
| Type of hole | Blind Hole |
| Hole dia | 5.0 mm |
| Drill depth | 20.0 mm |
| Tapping depth | 12.5 mm |
| Machine | VMC - Makino |
| Tapping direction | Vertical |
| Speed (Vc) | 350 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 200 comp |
| Competitor tool life | 560 comp |

Case studies

| Industry Segment | Valve & Pump |
|----------------------|---------------------|
| Tap series | SBS |
| Size | M6 X 1 SBS5 DIN 371 |
| Component | Upper Body Cover |
| Work material | WCC (32 HRC) |
| Type of hole | Blind hole (8holes) |
| Hole dia | 5.0 mm |
| Drill depth | 20.0 mm |
| Tapping depth | 15.0 mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 16m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 40 Comp |
| Competitor tool life | 31 Comp |

| Industry Segment | Automotive |
|----------------------|------------------------------|
| Tap series | SC |
| Size | M12 X 1.75 SC4'E' TC DIN 376 |
| Component | S02 Cover |
| Work material | S.G Iron |
| Type of hole | Blind Hole |
| Hole dia | 10.3 mm |
| Drill depth | 21.0 mm |
| Tapping depth | 18.0 mm |
| Machine | VMC - Makino |
| Tapping direction | Vertical |
| Speed (Vc) | 34m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 80 mts |
| Competitor tool life | 160 mts |

| Industry Segment | Valve & Pump |
|----------------------|-----------------------------|
| Tap series | SC |
| Size | M5 X 0.8 SC5 PM DIN 371 |
| Component | Cylinder Block (Compressor) |
| Work material | Grey Cast Iron (200BHN) |
| Type of hole | Blind hole (4 holes) |
| Hole dia | 4.2 mm |
| Drill depth | 22.0 mm |
| Tapping depth | 18.0 mm |
| Machine | VMC Fine ATC |
| Tapping direction | Vertical |
| Speed (Vc) | 550 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 5800 Comp |
| Competitor tool life | 5200 Comp |

| Industry Segment | Valve & Pump |
|----------------------|-----------------------------|
| Tap series | SBS |
| Size | M6 X 1 SBS5 |
| Component | XI Job |
| Work material | SS202 |
| Type of hole | Blind hole |
| Hole dia | 5.0 mm |
| Drill depth | 21.0 mm |
| Tapping depth | 17.0 mm |
| Machine | Geedee Weiler Turing Center |
| Tapping direction | Horizontal |
| Speed (Vc) | 600 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 25.5 mts |
| Competitor tool life | 20 mts |

| Industry Segment | Automotive |
|----------------------|-----------------------|
| Tap series | SC |
| Size | M8 X 1.25 SC4 DIN 371 |
| Component | Axial Housing |
| Work material | Grey Cast Iron |
| Type of hole | Blind Hole (2 holes) |
| Hole dia | 6.8 mm |
| Drill depth | 20.0 mm |
| Tapping depth | 15.0 mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 20m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 3000 Comp |
| Competitor tool life | 3200 Comp |

| Industry Segment | Automotive |
|----------------------|-------------------------|
| Tap series | SC |
| Size | 3/4" UNF SB4 SPL |
| Component | Axle Housing |
| Work material | Forged Steel |
| Type of hole | Blind Hole |
| Hole dia | mm |
| Drill depth | 42.0 mm |
| Tapping depth | 40.0 mm |
| Machine | Radial Drilling Machine |
| Tapping direction | Vertical |
| Speed (Vc) | 12m/min |
| Coolant | Water Soluble Oil |
| Tool Life | 27 mts |
| Competitor tool life | 32 mts |

Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.

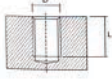
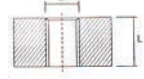



Case studies

| Industry Segment | Automotive |
|----------------------|-----------------------------|
| Tap series | SCF |
| Size | M12 X 1.25 SCC5 OH2 HSSE PM |
| Component | Crankshaft |
| Work material | Ductile Cast Iron |
| Type of hole | Blind Hole |
| Hole dia | 10.8 mm |
| Drill depth | 17.0 mm |
| Tapping depth | 13.0 mm |
| Machine | SPM |
| Tapping direction | Horizontal |
| Speed (Vc) | 120 RPM |
| Coolant | Neat Cutting Oil |
| Tool Life | 800 Comp (Reduction in CPC) |
| Competitor tool life | 800 Comp |

| Industry Segment | Automotive |
|----------------------|-----------------------|
| Tap series | SA |
| Size | M8 X1.25 SA3 DIN 371 |
| Component | Rear Axle Plate |
| Work material | Forged Steel (22 HRC) |
| Type of hole | Through hole |
| Hole dia | 6.8 mm |
| Drill depth | 20.0 mm |
| Tapping depth | 15.0 mm |
| Machine | VMC |
| Tapping direction | Vertical |
| Speed (Vc) | 800 RPM |
| Coolant | Water Soluble Oil |
| Tool Life | 48 mts |
| Competitor tool life | 40 mts |

Custom tool request form - HSS taps

| | | | |
|---|---|--|--|
| Customer: | | | |
| Customer Name | | | Date |
| Address: | | | |
| Contact Person: | | | |
| Contact No. | Tel. _____ | Mobile: _____ | |
| | Email : _____ | | |
| Tap Details: | | Work material Details: | |
| Tap Size : | | Component Name: | |
| Tolerance/Gauge Details: | | Material Type: | |
| Standard: | | Hardness: | |
| Tap Dimensional Details (For Special) | | Tensile Strength | |
| Pre Tapping Hole | | | |
| Type Of Hole | | | |
| <input type="checkbox"/> Drilled | <input type="checkbox"/> Reamed | <input type="checkbox"/> Punched | <input type="checkbox"/> Cast |
| <input type="checkbox"/> Blind Hole | <input type="checkbox"/> Through Hole | <input type="checkbox"/> Stepped Hole | |
|  |  |  | |
| Drill /Hole Dia | Hole Depth: | Thread Depth: | |
| Machine Details | | | |
| Machine make/ Type : | | | |
| Operation: | <input type="checkbox"/> Vertical | <input type="checkbox"/> Horizontal | <input type="checkbox"/> Angular |
| | <input type="checkbox"/> Hand Tapping | <input type="checkbox"/> Machine Tapping | |
| Type Of Tap Holder: | <input type="checkbox"/> Rigid Type | <input type="checkbox"/> Floating Type | <input type="checkbox"/> Collect Chuck |
| Cutting Speed | _____RPM | _____M/Min | M/c Power:_____hp |
| Lubrication | <input type="checkbox"/> Oil | <input type="checkbox"/> Water Soluble | <input type="checkbox"/> Brush |
| | <input type="checkbox"/> Air/Dry | <input type="checkbox"/> Other | |
| Type Of Chips: | <input type="checkbox"/> Continuous | <input type="checkbox"/> Semi Continuous | <input type="checkbox"/> Short |
| | <input type="checkbox"/> Powder | | |
| Coatings: | <input type="checkbox"/> Tin | <input type="checkbox"/> TiAIN | <input type="checkbox"/> TiCn |
| | <input type="checkbox"/> Other | | |
| Current Supplier's Detail | | | |
| Tool Make: | Consumption/mth.: _____ | | |
| Tool Size: _____ | Tool Price: _____ | | |
| Tool Life : _____ | Cost Per Component: _____ | | |
| Additional Information if any: | | | |
| | | | |
| Sales Engineer | | Branch Manager | |
| DSO: | | | |

Note: Trial tool/custom tool request form can be downloaded from our website www.forbesprecision.co.in
 Technical data provided should be considered advisory only as variations may be necessary depending on the particular application.



Trial tool results form

| | | | |
|---------------------------------------|--|---|--------|
| Customer Name | | Ref No. | |
| Address | | Date | |
| | | Sales/Apl. Engg.: | |
| Contact Person's Name & Dept.: | | Contact No.: | |
| Tool Description: | | | |
| Component Details: | | Operation Details: | |
| Component Name: | | Type : | |
| Material: | | Hole/Drill Depth: | |
| Hardness: | | Hole Type: | |
| Tensile Strength: | | Gauge Details: | |
| Recommended Parameters: | | | |
| Size: | | Coolant: | |
| Speed: | | These parameters are for only as a guide can vary according to working conditions | |
| Feed: | | | |
| Machine/Tapping Details: | | | |
| Present Status | | Trial Status | |
| M/c. Type | | Tool-1 | Tool-2 |
| Spindle rpm: | | | |
| Speed: | | | |
| Feed: | | | |
| Coolant: | | | |
| Tap Make: | | | |
| No Of Flutes: | | | |
| Type /Tool No: | | | |
| Life Obtained | | | |
| Kind of Failure | | Thread Chip off / Thread worn out / No Go answering / Go Tight / Tap Breakage / Reverse Cutting / Chip Clogging / Built up edge | |
| Tool Consumption /Quarter: | | | |
| Cost / Component: | | | |
| Cycle time of operation: | | | |
| Trial Result Summary: | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| Additional Information if any: | | | |
| | | | |
| Sales Engineer | | Branch Manager | |
| DSO: | | | |

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FORBES PRECISION TOOLS AND MACHINE PARTS LIMITED

VISION

To be a market leader by empowering customers with innovative solutions in precision cutting tools and machine parts through world-class practices.

MISSION

- To inculcate innovation led organizational culture to be a front runner in the field of technology
- To add value to the customer's business while adhering to our core value of QPD: Quality, Price, Delivery and 5C's: Convenience, Comfort, Care, Commitment and Customer Satisfaction (Customer Delight)
- To develop a strong inhouse Design and Development skill set to enhance the Quality of Solutions
- To establish the cost leadership through World Class Manufacturing and Operational Excellence
- To be accountable towards the interest of all stakeholders, environment and society at large through all our actions and decisions.

REGISTERED OFFICE

Forbes Building, Charanjit Rai Marg, Fort, Mumbai - 400 001 Telephone: +91 (0) 22 69138900

DIVISIONAL SALES OFFICES ADDRESS / PH. NO.

AHMEDABAD

1st Floor, Pran Vijay Building,
Opp. Bata Showroom, Near Times Of India,
Ashram Road, Ahmedabad - 380 009
Telephone: +91 (0) 79 - 26587769, 079 - 26583753

BENGALURU

24, 3rd Floor, Classic Building, Richmond Road,
Bangaluru – 560 025.
Telephone +91 80 25258713

CHENNAI

Ground Floor, Catholic Centre 108,
Armenian Street, Broadway,
Chennai - 600 001
Tel: 044-25390259 / 80126 96089

NEW DELHI

Flat No. 8F, 8th Floor,
Vandana Building, Tolstoy Marg,
New Delhi - 110 001

JAMSHEDPUR

Office No.- 6, Second Floor, Dream Heights
Q-Road, South Park, Bistupur
Jamshedpur Pin - 831 001 (Jharkhand)
Telephone: 0657-2914636

PUNE

H.No.1195/5, Bhosale Heights, 4th Floor,
Opp. Deendayal Hospital, Fergusson College Road,
Pune 411 005
Telephone: +91 (0) 20 48509111

CHHATRAPATI SAMBHAJINAGAR

B 13, Waluj MIDC,
Chhatrapati Sambhajinagar - 431 133
Telephone: +91 (0) 240 2553422



REGISTERED OFFICE

Forbes Precision Tools and Machine Parts Limited

Forbes Building, Charanjit Rai Marg, Fort, Mumbai 400 001

Telephone: +91 (0) 22 69138900

Email: sales@forbesprecision.co.in

Website: www.forbesprecision.co.in

CIN: L29256MH2022PLC389649