



EUROPEAN UNION
EUROPEAN REGIONAL DEVELOPMENT FUND
INVESTMENT IN YOUR FUTURE

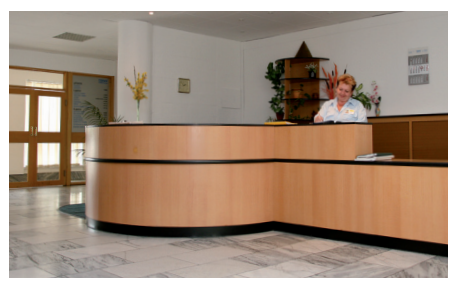


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| | |
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| | | 800 N/mm ² | | 1 100 N/mm ² | | | | | | | | | | | | | | | |
|--|--|---|------|-------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| ● Doporučené užití / Recommended use / Optimal | | | | | | | | | | | | | | | | | | | |
| ● Možno použít / Possible use / Geeignet | | | | | | | | | | | | | | | | | | | |
| Rezný kužel / Chamfer / Anschnitt | | | | | | | | | | | | | | | | | | | |
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| | | UNI | | 1 400 N/mm ² | | | | | | | | | | | | | | | |
| | | INOX | | AL | | | | | | | | | | | | | | | |
| | | | | GG | | | | | | | | | | | | | | | |
| | | STROJNÍ ZÁVITNÍKY MACHINE TAPS MASCHINENGEWINDEBOHRER | | | | | | | | | | | | | | | | | |
| | | TiN | | TiN | | TiN | | OX | | TiN | | OX | | TiN | | OX | | | |
| Katalogové číslo / Cat. No. / Kat. Nr. | | 100X | 101X | 300X | 301X | 150X | 151X | 154X | 175X | 350X | 351X | 354X | 205X | 206X | 209X | 405X | 406X | 409X | |
| Strana katalogu Catalogue page No. Siehe Katalog Seite | M | X=0 | 30 | 30 | 31 | 31 | 32 | 32 | 32 | 33 | 33 | 33 | 34 | 34 | 34 | 35 | 35 | 35 | |
| | MF | X=0 | | | 49 | 49 | | | | 49 | 49 | 49 | | | | 51 | 51 | 51 | |
| | G | X=2 | | | 59 | 59 | | | | 59 | 59 | | | | | 60 | 60 | | |
| | UNC | X=4 | 62 | 62 | 63 | 63 | 62 | 62 | | | 63 | 63 | | 64 | 64 | | 64 | 64 | |
| | UNF | X=5 | | | 65 | 65 | | | | | 65 | 65 | | | | 66 | 66 | | |
| Řezný kužel / Chamfer / Anschnitt | | C | C | C | C | B | B | B | B | B | B | B | C | C | C | C | C | C | |
| Druh otvoru / Hole type / Lochart | | | | | | | | | | | | | | | | | | | |
| 1 | Měkké konstrukční oceli s pevností do 500 N/mm ² / Soft structural steels up to 500 N/mm ² / Weiche Baustähle bis 500 N/mm ² | 1.1. Konstruktivní oceli / Structural steels / Baustähle | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| | | 1.2. Nelegované lité oceli / Plain cast steels / Unlegierte Gussstähle | | | | | ● | ● | ● | ● | ● | ● | ● | | | | | | |
| 2 | Automatové a konstrukční oceli s pevností do 800 N/mm ² / Free cutting steels and structural steels up to 800 N/mm ² / Automatenstähle und Baustähle bis 800 N/mm ² | 2.1. Automatové oceli / Free cutting steels / Automatenstähle | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | |
| | | 2.2. Konstruktivní a zušlechťené oceli / Structural steels and heat-treated steels / Baustähle und Vergütungsstähle | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| | | 2.3. Nelegované lité oceli / Plain cast steels / Unlegierte Gussstähle | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 3 | Zušlechťené a nástrojové oceli s pevností do 1100 N/mm ² / Heat-treated steels and tool steels up to 1100 N/mm ² / Vergütungsstähle und Werkzeugstähle bis 1100 N/mm ² | 3.1. Cementační a nitridační oceli / Case hardened steels and nitriding steels / Einsatzstähle und Nitrierstähle | | | | | | | | | | | | | | | | | |
| | | 3.2. Zušlechťené oceli / Heat-treated steels / Vergütungsstähle | | | | | | | | | | | | | | | | | |
| | | 3.3. Nástrojové oceli / Tool steels / Werkzeugstähle | | | | | | | | | | | | | | | | | |
| 4 | Vysoce legované a zušlechťené oceli s pevností do 1400 N/mm ² / High-alloyed steels and heat-treated steels up to 1400 N/mm ² / Hochlegiertestähle und Vergütungsstähle bis 1400 N/mm ² | 4.1. Vysoce legované oceli / High-alloyed steels / Hochlegiertestähle | | | | | | | | | | | | | | | | | |
| | | 4.2. Zušlechťené oceli / Heat-treated steels / Vergütungsstähle | | | | | | | | | | | | | | | | | |
| 5 | Nerezavějící a žáruvzdorné oceli / Stainless steels and heat resisting steels / Rostfreistähle und Hitzebeständigstähle | 5.1. S pevností 450 - 800 N/mm ² / With strength 450 - 800 N/mm ² / Mit Festigkeit bis 450 - 800 N/mm ² | | | | | | | | | | | | | | | | | |
| | | 5.2. S pevností 600 - 1000 N/mm ² / With strength 600 - 1000 N/mm ² / Mit Festigkeit bis 600 - 1000 N/mm ² | | | | | | | | | | | | | | | | | |
| 6 | Litiny / Cast iron / Gusswerkstoffe | 6.1. Šedá litina / Grey cast iron / Grauguss | ● | ● | ● | ● | | | | | | | | | | | | | |
| | | 6.2. Tvárná a temperovaná litina / Spheroidal graphite cast iron and malleable cast iron / Sphäroguss und Temperguss | | | | | ● | ● | | | ● | ● | | ● | ● | | ● | ● | |
| 7 | Hliník měkký / Unalloyed aluminium / Reinaluminium | | | | | | | | | | | | | | | | | | |
| 8 | Hliník legovaný / Aluminium alloys / Aluminiumlegierungen | 8.1. S obsahem Si < 10% / Si content < 10% / Si-Gehalt < 10% | | | | | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | |
| | | 8.2. S obsahem Si > 10% / Si content > 10% / Si-Gehalt > 10% | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| 9 | Měď čistá / Unalloyed copper / Reinkupfer | | | | | | | | | | | | | | | | | | |
| 10 | Slitiny mědi / Copper alloys / Kupferlegierungen | 10.1. Krátká drobná tříška / Short chipping / Kurzspanend | ● | ● | ● | ● | ● | ● | | ● | ● | | | | | | | | |
| | | 10.2. Dlouhá vinutá tříška / Long chipping / Langspanend | | | | | | | | | | | ● | ● | | ● | ● | | |
| 11 | Zinek / Zinc / Zink | | | | | | | ● | | | | ● | | | ● | | | ● | |



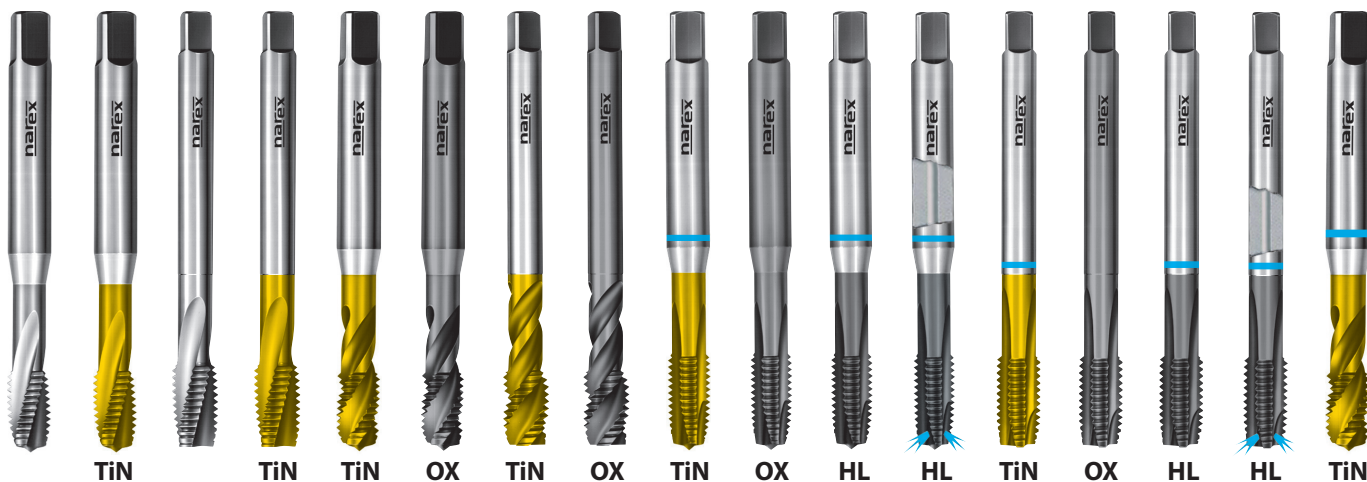
NAREX Žďanice, spol. s r. o. se svou 80 letou tradicí je specializována zejména na výrobu závitníků z výkonných a vysoce výkonných rychlořezných ocelí a je dnes jejich největším výrobcem v České republice a jedním z největších výrobců ve střední Evropě. Standardní výrobní sortiment obsahuje závitníky strojní, závitníky tvářecí, závitníky maticové a závitníky sadové, soupravy závitových nástrojů a závitové kruhové čelisti. Nejen tradice, ale především moderní výrobní technologie s využitím nejmodernějších CNC strojů, práce kvalifikovaných odborníků a v roce 1997 zavedený certifikovaný systém managementu jakosti v oboru „Vývoj a výroba závitových nástrojů, tepelné zpracování kovů“ podle evropské normy EN ISO 9001:2008 jsou zárukou vysoké a stabilní kvality našich výrobků. Vedle standardního výrobního sortimentu vyrábíme na zakázku podle požadavků zákazníků také speciální závitové nástroje a závitové kalibry. V kooperaci pak provádíme tepelné zpracování - kalení, popouštění, cementování všech ocelí na nejmodernějších zařízeních a dále popisování výrobků laserem. Pracovníci NAREX Žďanice, spol. s r. o. Vám rádi poskytnou technické poradenství při používání závitových nástrojů, technické poradenství při zavádění nových výrob se závitovacími

operacemi, technické poradenství při stavbě jednouúčelových strojů s použitím závitových nástrojů a konzultace při potížích s řezáním závitů. Naším hlavním cílem je zachování Vaší příznivě a posílení důvěry ve značku výrobků NAREX. Company **NAREX Žďanice, spol. s r. o.** with 80 years old tradition, is specialized on production of taps of high-speed steels and extra high-speed steels. We have long-term experience in production of tread cutting tools and today we are the biggest producer in Czech Republic and one of the largest producers in middle Europe. Between standard assortment produced here are included: machine taps for full variety of different materials, forming taps, nut taps, hand taps and dies. Our qualified employees, the state-of-the-art production facilities and a company-wide quality assurance system by EN ISO 9001:2008 guarantee the consistently high quality standard of our products and services. Beside the standard production programme we also produce special thread-cutting tools. Our major aim is to keep Your favour and strengthen Your trust into mark of NAREX products.

NAREX Žďanice, spol. s r. o. blickt auf eine 80-jährige Firmengeschichte zurück. Seit 1938 hat sich unser Unternehmen auf die Herstellung von leistungsfähigen Gewindebohrern aus Hochleistungs-Schnellschneidstählen spezialisiert. In der Tschechischen Republik ist NAREX der größte Hersteller von dieser Werkzeugen- und einer der Führenden in Mitteleuropa. Unser Standardprogramm beinhaltet Maschinen-gewindebohrer, Gewindeformer, Muttergewinde-bohrer, Handgewindebohrer, Sätze von Gewinde-schneidwerkzeugen, sowie Schneideisen. Neben unserer Erfahrung in der Herstellung von Präzisionwerkzeugen garantieren unser moder-ner Maschinenpark und unsere hochqualifizier-ten Mitarbeiter eine gleichbleibende Qualität der NAREX-Produkte auf sehr hohem Niveau. Im Jahre 1997 wurde NAREX Žďanice, spol. s r. o. nach EN ISO 9001:2008 zertifiziert. Die Zertifizie-rung beinhaltet alle Bereiche der Entwicklung, der Wärmebehandlung der Stähle und der Fertigung. Neben unserem Standardprogramm fertigen wir auch Gewinde-Sonderwerkzeuge nach den Vor-gaben unsere Kunden. Unser Hauptziel ist Ihre Zufriedenheit mit unseren Produkten und unserem Service, als Grundlage ei-ner vertrauensvollen Zusammenarbeit zwischen NAREX und Ihrem Unternehmen.



STROJNÍ ZÁVITNÍKY
MACHINE TAPS
MASCHINENGWENDEBOHRER



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TiN

TiN

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OX

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| | 240X | 241X | 440X | 441X | 236X | 239X | 436X | 439X | 166X | 169X | 187X | 187X IKZN | 366X | 369X | 387X | 387X IKZN | 226X |
|--|------|------|------|------|------|------|------|------|------|------|------|--------------|------|------|------|--------------|------|
| | 36 | 36 | 37 | 37 | 36 | 36 | 37 | 37 | 38 | 38 | 38 | 38 | 39 | 39 | 39 | 39 | 40 |
| | | | | | | | | | | | | | 53 | 53 | | | |
| | | | | | | | | | | | | | 61 | 61 | | | |
| | C | C | C | C | C | C | C | C | B | B | B | B | B | B | B | B | C |
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STROJNÍ ZÁVITNÍKY
MACHINE TAPS
MASCHINENGWINDEBOHRER



| | OX | HL | HL | TiN | OX | HL | HL | TiCN | OX | TiCN | OX | TiCN | OX | TiCN | OX | FNT | FNT | FNT | FNT |
|--|------|------|-------------|----------------|----------------|------|-------------|------|------|-----------------|----------|------|------|-----------------|----------|------|------|------|------|
| | 229X | 232X | 232X IKZ | 426X | 429X | 432X | 432X IKZ | 158X | 159X | 358X | 359X | 268X | 269X | 468X | 469X | 192X | 392X | 282X | 287X |
| | 40 | 40 | 40 | 41 53 61 | 41 53 61 | 41 | 41 | 42 | 42 | 43 55 | 43 55 | 42 | 42 | 43 55 | 43 55 | 44 | 44 | 44 | 44 |
| | C | C | C | C | C | C | C | B | B | B | B | C | C | C | C | B | B | D | C |
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| STROJNÍ ZÁVITNÍKY MACHINE TAPS MASCHINENGEWINDEBOHRER | | | STROJNÍ KRÁTKÉ ZÁVITNÍKY SHORT MACHINE TAPS KURZE MASCHINENGEWINDEBOHRER | | | TVÁŘECÍ ZÁVITNÍKY FORMING TAPS FORMGEWINDEBOHRER | | MATICOVÉ ZÁVITNÍKY NUT TAPS MUTTERGEWINDEBOHRER | RUČNÍ SADOVÉ ZÁVITNÍKY HAND TAPS HANDGEWINDEBOHRER | | |
|---|-------------|-------------|--|-------------|-------------|--|-------------|---|--|-------------|-------------|
| | | | | | | | | | | | |
| TiN | TiN | TiN | | | | TiN | TiN | | | | OX |
| 371X | 221X | 421X | 055X | 060X | 065X | 291X | 296X | 500X | 020X | 030X | 029X |
| 48 | 48 | 48 | 67 | 67 | 67 | 68 | 68 | 69 | 70 | 72 | 71 |
| | | | | | | | | | 74 | | |
| | | | | | | | | | 75 | 76 | |
| B | C | C | B | C | C | C | C | | C | C | C |
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


| ČSN (Czech) | Wr.Nr. | DIN (Germany) | AISS (U.S.A.) | AFNOR (France) | Strana |
|--|--------|-------------------|------------------|------------------|-----------|
| 1 - Měkké konstrukční oceli s pevností do 500 N/mm² / Soft structural steels up to 500 N/mm² / Weiche Baustähle bis 500 N/mm² | | | | | 9 |
| 1.1 Konstrukční oceli / Structural steels / Baustähle | | | | | |
| 10004 | 1.0035 | St 33 | | A33 | |
| 11320 | 1.0320 | St 22 | | Fd1, Fd2 | |
| 11364 | 1.0345 | H I | | | |
| 11373 | 1.0037 | St 37-2 | A 283 Gr.C | E 24-2 | |
| 11378 | 1.0116 | St 37-3 | A 284 Gr.D | E 24-3 | |
| 11474 | 1.0445 | H IV | | | |
| 1.2 Nelegované lité oceli / Plain cast steels / Unlegierte Gussstähle | | | | | |
| 422630 | 1.0416 | GS 38 | | | |
| 2 - Automatové a konstrukční oceli s pevností do 800 N/mm² / Free cutting steels and structural steels up to 800 N/mm² / Automatenstähle und Baustähle bis 800 N/mm² | | | | | 11 |
| 2.1 Automatové oceli / Free cutting steels / Automatenstähle | | | | | |
| 11109 | 1.0715 | 9SMn28 | 1213 | S 250 | |
| 11110 | 1.0721 | 10S20 | 1108, 1109 | 10 F1 | |
| 2.2 Konstrukční a zušlechťené oceli / Structural steels and heat-treated steels / Baustähle und Vergütungsstähle | | | | | |
| 11500 | 1.0050 | St 50-2 | A 570 Gr.50 | A 5D-2 | |
| 11523 | 1.0570 | St 52-3 | A 714 Gr.III | E 36-3 | |
| 11600 | 1.0060 | St 60-2 | A 572 Gr.65 | A 60-2 | |
| 11700 | 1.0070 | St 70-2 | | A 70-2 | |
| 12010 | 1.0305 | C 10 | 1010 | | |
| 12040 | 1.0501 | C 35 | 1035 | 1 C 35 | |
| 12050 | 1.0503 | C 45 | 1045 | 1 C 45 | |
| 12060 | 1.0535 | C 55 | 1055 | 1 C 55 | |
| 2.3 Nelegované lité oceli / Plain cast steels / Unlegierte Gussstähle | | | | | |
| 422640 | 1.0443 | GS 45 | | | |
| 422660 | 1.0558 | GS 60 | | | |
| 3 - Zušlechťené a nástrojové oceli s pevností do 1100 N/mm² / Heat-treated steels and tool steels up to 1100 N/mm² / Vergütungsstähle und Werkzeugstähle bis 1100 N/mm² | | | | | 14 |
| 3.1 Cementační a nitridační oceli / Case hardened steels and nitriding steels / Einsatzstähle und Nitrierstähle | | | | | |
| 14220 | 1.7131 | 16MnCr5 | 5115 | 16 MC 4 | |
| 16420 | 1.5752 | 14NiCr14 | A 646 Gr.1 | 13 NiCr14 | |
| 3.2 Zušlechťené oceli / Heat-treated steels / Vergütungsstähle | | | | | |
| 15142 | 1.7225 | 42CrMo4 | 4140, 4142 | 42 CD 4 | |
| 15260 | 1.8159 | 50CrV4 | A 646 Gr.14 | 50 CD 4 | |
| 19552 | 1.2343 | X38CrMoV5-1 | H 11 | Z 38 CDV 5 | |
| 19720 | 1.2567 | X30WCrV5-3 | | Z 32 WCV 5 | |
| 19751 | 1.2622 | X60WCrMoV9-4 | | | |
| 3.3 Nástrojové oceli v přírodním stavu / Tool steels / Werkzeugstähle | | | | | |
| 19312 | 1.2842 | 90MnCrV8 | 2 | 90 MV 8 | |
| 19436 | 1.2080 | X210Cr12 | D3 | Z 200 C 12 | |
| 19552 | 1.2343 | X38CrMoV5-1 | H 11 | Z 38 CDV 5 | |
| 19751 | 1.2622 | X60WCrMoV9-4 | | | |
| 19830 | 1.3343 | S6-5-2 | M 2 | Z85WDCV | |
| 19852 | 1.3243 | S6-5-2-5 | M 35 | Z85WDKCV | |
| 4 - Vysoce legované a zušlechťené oceli s pevností do 1400 N/mm² / High-alloyed steels and heat-treated steels up to 1400 N/mm² / Hochlegiertestähle und Vergütungsstähle bis 1400 N/mm² | | | | | 16 |
| 4.1 Vysoce legované oceli / High-alloyed steels / Hochlegiertestähle | | | | | |
| 15330 | 1.7707 | 30CrMoV9 | G43406 | 30CrMoV9 | |
| Inconel 718 | 2.4668 | NiCr19Fe19Nb5Mo3 | Unitemp 718 | | |
| HARDOX 400 | | | | | |
| 4.2 Zušlechťené oceli po tepelném zpracování / Heat-treated steels / Vergütungsstähle | | | | | |
| 15142 | 1.7225 | 42CrMo4 | 4140, 4142 | 42 CD 4 | |
| 15260 | 1.8159 | 50CrV4 | A 646 Gr.14 | 50 CD 4 | |
| 16523 | 1.5860 | 4NiCr18 | | | |
| 19452 | 1.2101 | 62SiMnCr4 | | | |
| 19552 | 1.2343 | X38CrMoV5-1 | H 11 | Z 38 CDV 5 | |
| 19573 | 1.2379 | X155CrVMo12-1 | A 681 Type D2 | | |
| 5 - Nerezavějící a žáruvzdorné oceli / Stainless steels and heat resisting steels / Rostfreistähle und Hitzebeständigstähle | | | | | 17 |
| 5.1 S pevností 450 - 800 N/mm ² / With strength 450 - 800 N/mm ² / Mit Festigkeit bis 450 - 800 N/mm ² | | | | | |
| 17022 | 1.4021 | X20Cr13 | 420 | Z 20 C 13 | |
| 17040 | 1.4016 | X6Cr17 | 430 | Z 8 C 17 | |
| 17240 | 1.4301 | X5CrNi18-10 | 304 | Z 6 CN 18.09 | |
| 17241 | 1.4310 | X10CrNi18-8 | 304 LN | Z 3 C 18.07Az | |
| 17246 | 1.4878 | X10CrNiTi18-10 | A 479 Type 312 H | Z 6 CNT 18-12 B | |
| 17350 | 1.4435 | X2CrNiMo18-14-3 | 316 L | Z 3 CND 17.12.03 | |
| 17347 | 1.4571 | X6CrNiMoTi17-12-2 | A368 Type 316 Ti | Z 6 CNDT 17-12 | |
| 422905 | 1.4006 | X12Cr13 | 410 | Z 10 C 13 | |

| ČSN | Wr.Nr. | DIN (Germany) | AISI (U.S.A.) | AFNOR (France) | Strana |
|--|--------|------------------|-----------------|------------------|-----------|
| 5.2 S pevností 600 - 1000 N/mm ² / With strength 600 - 1000 N/mm ² / Mit Festigkeit bis 600 - 1000 N/mm ² | | | | | |
| 17241 | 1.4310 | X10CrNi18-8 | 304 LN | Z 3 C 18.07Az | |
| 17359 | 1.4406 | X2CrNiMo17-11-2 | 316 LN | Z 3 CND 17.11.02 | |
| 17360 | 1.4429 | X2CrNiMoN17-13-3 | A 312 Gr.TP 316 | Z 3 CND 17.12 Az | |
| 17381 | 1.4462 | X2CrNiMoN22-5-3 | A 890 Gr.4 A | Z 3 CND 25-05 Az | |
| 6 - Litiny / Cast iron / Gusswerkstoffe | | | | | 18 |
| 6.1 Šedá litina / Grey cast iron / Grauguss | | | | | |
| 422410 | 0.6010 | GG 10 | A 48-20 B | Ft 10 D | |
| 422415 | 0.6015 | GG 15 | A 48-25 B | Ft 20 D | |
| 422420 | 0.6020 | GG 25 | A 48-30 B | Ft 25 D | |
| 422425 | 0.6025 | GG 25 | A 48-40 B | Ft 30 D | |
| 422430 | 0.6030 | GG 30 | A 48-45 B | Ft 30 D | |
| 422435 | 0.6035 | GG 35 | A 48-50 B | Ft 35 D | |
| 6.2 Tvárná a temperovaná litina / Spheroidal graphite cast iron and malleable cast iron / Sphäroguss und Temperguss | | | | | |
| 422304 | 0.7040 | GGG 40 | 60-40-18 | FGS 400.12 | |
| 422305 | 0.7050 | GGG 50 | 65-45-12 | FGS 500.7 | |
| 422306 | 0.7060 | GGG 60 | 80-55-06 | FGS 600.3 | |
| 422540 | 0.8040 | GTW 40 | | | |
| 422545 | 0.8145 | GTS 45 | | | |
| 422555 | 0.8155 | GTS 55 | | | |
| 7 - Hliník / Unalloyed aluminium / Reinaluminium | | | | | 21 |
| 7.1 Čistý hliník bez přísad / Unalloyed aluminium / Reinaluminium | | | | | |
| 424002 | 3.0255 | Al99,5 | | | |
| 424003 | 3.0275 | Al99,7 | | | |
| 424005 | 3.0285 | Al99,8 | | | |
| 424412 | 3.3315 | AlMg1 | 5005 A | A-G0,6 | |
| 424413 | 3.3535 | AlMg3 | 5754 | | |
| 424432 | 3.0515 | AlMn1 | 3103 | A-G3M | |
| 8 - Hliník legovaný / Aluminium alloys / Aluminiumlegierungen | | | | | 22 |
| 8.1 S obsahem Si < 10% / Si content < 10% / Si-Gehalt < 10% | | | | | |
| 424332 | 3.2371 | G-AlSi7Mg | | A7-S10G | |
| 424338 | 3.2162 | GD-AlSi8Cu3 | | | |
| 424381 | 3.2134 | G-AlSi5Cu1Mg | 355.1 | A-S4 GV | |
| 8.2 S obsahem Si > 10% / Si content > 10% / Si-Gehalt > 10% | | | | | |
| 424331 | 3.2211 | G-AlSi11 | | | |
| 424336 | 3.2581 | G-AlSi12 | A 413 | A-513 | |
| 424384 | 3.2381 | G-AlSi10Mg | A 360 | A-S10G | |
| 9 - Měď čistá / Unalloyed copper / Reinkupfer | | | | | 25 |
| 9.1 Měď čistá bez přísad / Unalloyed copper / Reinkupfer | | | | | |
| 423003 | 2.0080 | Cu99,85 | | Cu-FRTP | |
| 423005 | 2.0120 | Cu99,5 | | C-Cu | |
| 423007 | 2.1203 | CuAg0,1 | | CuAg 0.10 | |
| 10 - Slitiny mědi / Copper alloys / Kupferlegierungen | | | | | 26 |
| 10.1 Krátká drobná tříška / Short chipping / Kurzspanend | | | | | |
| 423220 | 2.0360 | CuZn40 | C 28000 | CuZn 40 | |
| 423222 | 2.0380 | CuZn39Pb1 | C 28000 | CuZn 40 | |
| 423223 | 2.0410 | CuZn40Pb2 | | | |
| 10.2 Dlouhá vinutá tříška / Long chipping / Langspanend | | | | | |
| 423203 | 2.0250 | CuZn40 | C 24000 | CuZn 20 | |
| 423210 | 2.0265 | CuZn30 | C 26000 | CuZn 30 | |
| 423213 | 2.0321 | CuZn37 | C 27400 | CuZn 37 | |
| 11 - Zinek / Zinc / Zink | | | | | 29 |
| 11.1 Zinek a slitiny zinku / Zinc and zinc alloys / Zink und Zinklegierungen | | | | | |
| 423560 | 2.2143 | ZnAl4Cu1 | | | |
| 423562 | 2.2144 | ZnAlCu3 | | | |

ZKRATKY A SYMBOLY

Used symbols / Symbole

| | |
|---|---|
| d_1 | - rozměr závitu / thread size / Gewindeabmessung |
| P | - stoupání závitu / pitch of the thread / Steigung |
| N | - stoupání závitu v počtu závitů na 1" / pitch of the thread in threads per inch / Steigung in Gangzahl / 1" |
| LH | - levý závit / left-hand thread / Linksgewinde |
| HSS | - výkonná rychlořezná ocel / high speed steel / Schnellarbeitsstahl |
| HSSE | - vysoce výkonná rychlořezná ocel / super high speed steel / höher legierter Schnellstahl |
| HSSE PM | - prášková rychlořezná ocel / powder high speed steel / Pulverstahl |
| HSSE V3 | - vysoce výkonná rychlořezná ocel legovaná vanadem / super high speed steel 3% vanadium alloyed / höher legierter Schnellstahl V 3% |
| TiN | - povlak nitrid titanu / titanium nitride coating / Titanitrid-Beschichtung |
| TiCN | - povlak karbonitrid titanu / titanium carbonitride coating / Titancarbonitrid-Beschichtung |
| TiAlN | - povlak aluminiumnitrid titanu / titanium aluminiumnitride coating / Titanaluminiumnitrid-Beschichtung |
| FNT | - povlak Balinit® Futura Nano Top / Balinit® Futura Nano Top coating / Balinit® Futura Nano Top- Beschichtung |
| HL | - povlak Balinit® Hardlube / Balinit® Hardlube coating / Balinit® Hardlube-Beschichtung |
| ALS | - povlak TiB2 / TiB2 coating / TiB2 - Beschichtung |
| OX | - oxidace / oxidation / Oxidieren |
| V_c | - řezná rychlost / cutting speed / Schnittgeschwindigkeit |
|  | - řezná kapalina / cutting lubricant / Schneidflüssigkeit |
| E | - emulze / emulsion / Emulsion |
| O | - řezný olej / cutting oil / Schneidöl |
| IKZ | - vnitřní přívod chladicí kapaliny / internal axial coolant supply / innere Kühlmittelzufuhr axial |
| IKZN | - vnitřní přívod chladicí kapaliny s otvory v drážkách / internal axial coolant supply with hole outlets in the flutes / innere Kühlmittelzuführung axial mit Ölaustritt in den Nuten |

| | |
|---|--|
|  | typ N - závitník pro oceli s pevností do 800 N/mm ² / tap for steels up to 800 N/mm ² / Gewindebohrer für Stähle bis 800 N/mm ² |
|  | typ VA - závitník pro nerezavějící oceli / tap for stainless steels / Gewindebohrer für Rostfreistähle |
|  | typ H - závitník pro zušlechtěné a legované oceli s pevností do 1100 N/mm ² / tap for alloyed steels up to 1100 N/mm ² / Gewindebohrer für Legiertestähle bis 1100 N/mm ² |
|  | typ H - závitník pro zušlechtěné a legované oceli s pevností do 1400 N/mm ² / tap for alloyed steels up to 1400 N/mm ² / Gewindebohrer für Legiertestähle bis 1400 N/mm ² |
|  | typ GG - závitník pro šedou litinu / tap for cast iron / Gewindebohrer für Grauguss |
|  | typ AL - závitník pro hliník / tap for aluminium / Gewindebohrer für Aluminium |
|  | typ UNI - závitník pro univerzální použití / tap for universal applications / Gewindebohrer für den universallen Einsatz |

- Obráběný materiál zařadte do správné skupiny 1.1 ÷ 11.1 (str. 5 – 6).
Range the material to be threaded with the corresponding group 1.1 ÷ 11.1 (page no. 5 – 6).
Das zu bearbeitende Material in die richtige Gruppe 1.1 ÷ 11.1 (Seite 5 – 6).

| 4.2 Zusiecthene ocelli po tepejnem zpracovani | | | | | |
|---|--------|---------------|---------------|------------|--|
| 15142 | 1.7225 | 42CrMo4 | 4140, 4142 | 42 CD 4 | |
| 15260 | 1.8159 | 50CrV4 | A 646 Gr.14 | 50 CD 4 | |
| 16523 | 1.5860 | 4NiCr18 | | | |
| 19452 | 1.2101 | 62SiMnCr4 | | | |
| 19552 | 1.2343 | X38CrMoV5-1 | H 11 | Z 38 CDV 5 | |
| 19573 | 1.2379 | X155CrVMo12-1 | A 681 Type D2 | | |

| 5 - Nerezavějící a žáruvzdorné oceli / Stainless steels and heat resisting steels / Rostfreistähle und Hitzebeständigstähle | | | | | |
|---|--------|-------------------|------------------|------------------|--|
| 5.1 S pevností 450 - 800 N/mm ² / With strength 450 - 800 N/mm ² / Mit Festigkeit bis 450 - 800 N/mm ² | | | | | |
| 17022 | 1.4021 | X2Cr13 | 420 | Z 20 C 13 | |
| 17040 | 1.4016 | X6Cr17 | 430 | Z 8 C 17 | |
| 17240 | 1.4301 | X5CrNi18-10 | 304 | Z 6 CN 18.09 | |
| 17241 | 1.4310 | X10CrNi18-8 | 304 LN | Z 3 C 18.07Az | |
| 17246 | 1.4878 | X10CrNiTi18-10 | A 479 Type 312 H | Z 6 CNT 18-12 B | |
| 17350 | 1.4435 | X2CrNiMo18-14-3 | 316 L | Z 3 CND 17.12.03 | |
| 17347 | 1.4571 | X6CrNiMoTi17-12-2 | A368 Type 316 Ti | Z6 CNDT 17-12 | |
| 422905 | 1.4006 | X12Cr13 | 410 | Z 10 C 13 | |

- V sekci "Volba závitníku dle obráběného materiálu" vyhledejte podle charakteru otvoru a druhu závitu odpovídající závitník, popř. jeho katalogové číslo – strana 9 ÷ 29.
Select the ring tap and its catalogue No. According to the hole type and the type of thread chosen in the section "Tap selection according to material groups" – page 9 ÷ 29.
In der Sektion "Gewindebohrerwahl gemäß den zu bearbeitenden Materialien" den entsprechenden Gewindebohrer (evtl. Katalognummer) gemäß der Bohrung und Gewinde entnehmen – Seite 9 ÷ 29.

| SKUPINA OBRÁBĚNÉHO MATERIÁLU 5 / MATERIAL GROUP 5 / WERKSTOFFGRUPPE 5 | | | | | | | | | |
|---|------------------|--------------|----------------|----------------------|---------------------|----------------------|---|-------------|--|
| Nerezavějící a žáruvzdorné oceli Stainless steels and heat resisting steels Rostfreistähle und Hitzebeständigstähle | | | | | | | | | |
| Norma Standard | Kat. č. Cat. No. | Závit Thread | Rozsah Ø-Range | Typ otvoru Hole type | Použití Application | V _c m/min | | Strana Page | |
| DIN 371 | TiN | M | M3 ÷ M10 | 1; 2 | 5.1 5.2 | 8 ÷ 12 5 ÷ 8 | 0 | 38 | |
| DIN 371 | OX | M | M3 ÷ M10 | 1; 2 | 5.1 5.2 | 4 ÷ 7 3 ÷ 5 | 0 | 38 | |
| DIN 371 | HL | M | M3 ÷ M10 | 1; 2 | 5.1 5.2 | 8 ÷ 14 6 ÷ 10 | 0 | 38 | |
| DIN 371 | HL | M | M6 ÷ M10 | 1; 2 | 5.1 5.2 | 8 ÷ 14 6 ÷ 10 | 0 | 38 | |
| DIN 376 | TiN | M | M3 ÷ M36 | 1; 2 | 5.1 5.2 | 8 ÷ 12 5 ÷ 8 | 0 | 39 | |

- Úplnou specifikaci závitníku vyhledejte na příslušné straně katalogu.
See the full specification of the selected tap in the catalogue page.
Volle Gewindebohrerspezifikation im Katalog aussuchen.

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 1660 | 1690 | 1870 | 1870 IKZ |
|---|------|----------------|----------------|----------------|-----|---|------|---|------|------|---------|-------------|
| | | | | | | | | | TiN | OX | HL | HL |
| z = počet drážek / z = number of flutes / z = Nutenzahl | | | | | | | | | HSSE | HSSE | HSSE PM | HSSE PM IKZ |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | | |
| M 3 | 0,5 | 56 | 9 | 3,5 | 2,7 | 3 | 2,5 | ■ | | | | |
| M 3,5 | 0,6 | 56 | 11 | 4 | 3 | 3 | 2,9 | ■ | | | | |
| M 4 | 0,7 | 63 | 12 | 4,5 | 3,4 | 3 | 3,3 | ■ | | | | |
| M 4,5 | 0,75 | 70 | 13 | 6 | 4,9 | 3 | 3,7 | ■ | | | | |
| M 5 | 0,8 | 70 | 13 | 6 | 4,9 | 3 | 4,2 | ■ | | | | |
| M 6 | 1 | 80 | 15 | 6 | 4,9 | 3 | 5 | ■ | | | | |
| M 7 | 1 | 80 | 15 | 7 | 5,5 | 3 | 6 | ■ | | | | |
| M 8 | 1,25 | 90 | 18 | 8 | 6,2 | 3 | 6,8 | ■ | | | | |
| M 9 | 1,25 | 90 | 18 | 9 | 7 | 3 | 7,8 | ■ | | | | |
| M 10 | 1,5 | 100 | 20 | 10 | 8 | 3 | 8,5 | ■ | | | | |

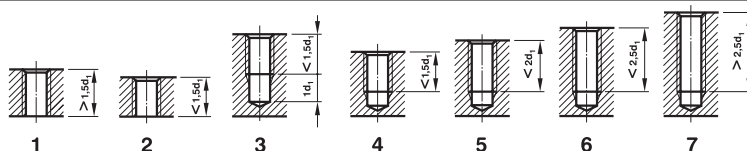
VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 1 / MATERIAL GROUP 1 / WERKSTOFFGRUPPE 1

Měkké konstrukční oceli s pevností do 500 N/mm²
Soft structural steels up to 500 N/mm²
Weiche Baustähle bis 500 N/mm²



| Norma Standard Norm | | Kat. č. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V _c m/min | | Strana Page Seite |
|---------------------------|-----|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|-------------------------|-----|-------------------------|
| DIN 371 | | 1000 | M | M3 ÷ M10 | 2; 3 | 1.1 ● | 4 ÷ 6 | 0/E | 30 |
| DIN 371 | TiN | 1010 | M | M3 ÷ M10 | 2; 3 | 1.1 ● | 5 ÷ 8 | 0/E | 30 |
| DIN 376 | | 3000 | M | M3 ÷ M52 | 2; 3 | 1.1 ● | 4 ÷ 6 | 0/E | 31 |
| DIN 376 | TiN | 3010 | M | M3 ÷ M52 | 2; 3 | 1.1 ● | 5 ÷ 8 | 0/E | 31 |
| DIN 371 | | 1500 | M | M2 ÷ M10 | 1; 2 | 1.1 ● 1.2 ● | 5 ÷ 8 6 ÷ 10 | 0/E | 32 |
| DIN 371 | TiN | 1510 | M | M2 ÷ M10 | 1; 2 | 1.1 ● 1.2 ● | 6 ÷ 10 8 ÷ 12 | 0/E | 32 |
| DIN 371 | OX | 1540 | M | M2 ÷ M10 | 1; 2 | 1.2 ● | 6 ÷ 10 | 0/E | 32 |
| DIN 371 | | 1750 | M | M3 ÷ M10 | 1; 2 | 1.1; 1.2 ● | 5 ÷ 8 | 0/E | 32 |
| DIN 376 | | 3500 | M | M3 ÷ M36 | 1; 2 | 1.1 ● 1.2 ● | 5 ÷ 8 6 ÷ 10 | 0/E | 33 |
| DIN 376 | TiN | 3510 | M | M3 ÷ M36 | 1; 2 | 1.1 ● 1.2 ● | 6 ÷ 10 8 ÷ 12 | 0/E | 33 |
| DIN 376 | OX | 3540 | M | M3 ÷ M36 | 1; 2 | 1.2 ● | 6 ÷ 10 | 0/E | 33 |
| DIN 371 | TiN | 2360 | M | M3 ÷ M10 | 3; 4; 5 | 1.1 ● 1.2 ● | 8 ÷ 12 10 ÷ 15 | 0/E | 36 |
| DIN 371 | OX | 2390 | M | M3 ÷ M10 | 3; 4; 5 | 1.1 ● 1.2 ● | 5 ÷ 8 6 ÷ 10 | 0/E | 36 |
| DIN 376 | TiN | 4360 | M | M3 ÷ M36 | 3; 4; 5 | 1.1 ● 1.2 ● | 8 ÷ 12 10 ÷ 15 | 0/E | 37 |
| DIN 376 | OX | 4390 | M | M3 ÷ M36 | 3; 4; 5 | 1.1 ● 1.2 ● | 5 ÷ 8 6 ÷ 10 | 0/E | 37 |
| DIN 352 | | 0550 | M | M3 ÷ M12 | 1; 2 | 1.1 ● 1.2 ● | 5 ÷ 8 6 ÷ 10 | 0/E | 67 |
| DIN 2174 | TiN | 2910 | M | M3 ÷ M12 | 1 ÷ 7 | 1.1 ● | 12 ÷ 20 | 0/E | 68 |
| DIN 2174 | TiN | 2960 | M | M3 ÷ M12 | 1 ÷ 7 | 1.1 ● 1.2 ● | 15 ÷ 25 12 ÷ 20 | 0/E | 68 |
| DIN 374 | | 3000 | MF | M3 ÷ M52 | 2; 3 | 1.1 ● | 4 ÷ 6 | 0/E | 49 |
| DIN 374 | TiN | 3010 | MF | M3 ÷ M52 | 2; 3 | 1.1 ● | 5 ÷ 8 | 0/E | 49 |
| DIN 374 | | 3500 | MF | M3 ÷ M36 | 1; 2 | 1.1 ● 1.2 ● | 5 ÷ 8 6 ÷ 10 | 0/E | 49 |
| DIN 374 | TiN | 3510 | MF | M3 ÷ M36 | 1; 2 | 1.1 ● 1.2 ● | 6 ÷ 10 8 ÷ 12 | 0/E | 49 |
| DIN 374 | OX | 3540 | MF | M3 ÷ M36 | 1; 2 | 1.2 ● | 6 ÷ 10 | 0/E | 49 |
| DIN 5156 | | 3002 | G | G1/16" ÷ G2" | 2; 3 | 1.1 ● | 4 ÷ 6 | 0/E | 59 |
| DIN 5156 | TiN | 3012 | G | G1/16" ÷ G2" | 2; 3 | 1.1 ● | 5 ÷ 8 | 0/E | 59 |
| DIN 5156 | | 3502 | G | G1/16" ÷ G2" | 1; 2 | 1.1 ● 1.2 ● | 5 ÷ 8 6 ÷ 10 | 0/E | 59 |
| DIN 5156 | TiN | 3512 | G | G1/16" ÷ G2" | 1; 2 | 1.1 ● 1.2 ● | 6 ÷ 10 8 ÷ 12 | 0/E | 59 |
| ~ DIN 371 | | 1004 | UNC | 5-40 ÷ 3/8-16 | 2; 3 | 1.1 ● | 4 ÷ 6 | 0/E | 62 |

● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

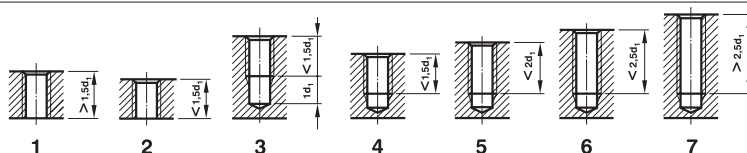
VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 2 / MATERIAL GROUP 2 / WERKSTOFFGRUPPE 2

Automatové a konstrukční oceli s pevností do 800 N/mm²
Free cutting steels and structural steels up to 800 N/mm²
Automatenstähle und Baustähle bis 800 N/mm²



| Norma Standard Norm | | Kat. č. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V _c m/min | | Strana Page Seite |
|---------------------------|-----|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|-------------------------|-----|-------------------------|
| DIN 371 | | 1000 | M | M3 ÷ M10 | 2; 3 | 2.1 ● | 8 ÷ 10 | 0/E | 30 |
| DIN 371 | TiN | 1010 | M | M3 ÷ M10 | 2; 3 | 2.1 ● | 10 ÷ 14 | 0/E | 30 |
| DIN 376 | | 3000 | M | M3 ÷ M52 | 2; 3 | 2.1 ● | 8 ÷ 10 | 0/E | 31 |
| DIN 376 | TiN | 3010 | M | M3 ÷ M52 | 2; 3 | 2.1 ● | 10 ÷ 14 | 0/E | 31 |
| DIN 371 | | 1500 | M | M2 ÷ M10 | 1; 2 | 2.1; 2.3 2.2 ● | 10 ÷ 14 | 0/E | 32 |
| DIN 371 | TiN | 1510 | M | M2 ÷ M10 | 1; 2 | 2.1 2.2; 2.3 ● | 10 ÷ 14 12 ÷ 15 | 0/E | 32 |
| DIN 371 | OX | 1540 | M | M2 ÷ M10 | 1; 2 | 2.2 2.3 ● | 10 ÷ 12 12 ÷ 15 | 0/E | 32 |
| DIN 371 | | 1750 | M | M3 ÷ M10 | 1; 2 | 2.1 2.2; 2.3 ● | 8 ÷ 10 8 ÷ 12 | 0/E | 32 |
| DIN 376 | | 3500 | M | M3 ÷ M36 | 1; 2 | 2.1; 2.3 2.2 ● | 10 ÷ 14 | 0/E | 33 |
| DIN 376 | TiN | 3510 | M | M3 ÷ M36 | 1; 2 | 2.1 2.2; 2.3 ● | 10 ÷ 14 12 ÷ 15 | 0/E | 33 |
| DIN 376 | OX | 3540 | M | M3 ÷ M36 | 1; 2 | 2.2 2.3 ● | 10 ÷ 12 12 ÷ 15 | 0/E | 33 |
| DIN 371 | | 2050 | M | M2 ÷ M10 | 3; 4; 5 | 2.2; 2.3 ● | 10 ÷ 14 | 0/E | 34 |
| DIN 371 | TiN | 2060 | M | M2 ÷ M10 | 3; 4; 5 | 2.2; 2.3 ● | 12 ÷ 15 | 0/E | 34 |
| DIN 371 | OX | 2090 | M | M2 ÷ M10 | 3; 4; 5 | 2.2; 2.3 ● | 10 ÷ 12 | 0/E | 34 |
| DIN 376 | | 4050 | M | M3 ÷ M36 | 3; 4; 5 | 2.2; 2.3 ● | 10 ÷ 14 | 0/E | 35 |
| DIN 376 | TiN | 4060 | M | M3 ÷ M36 | 3; 4; 5 | 2.2; 2.3 ● | 12 ÷ 15 | 0/E | 35 |
| DIN 376 | OX | 4090 | M | M3 ÷ M36 | 3; 4; 5 | 2.2; 2.3 ● | 10 ÷ 12 | 0/E | 35 |
| DIN 371 | | 2400 | M | M3 ÷ M10 | 3; 4 | 2.2 ● | 8 ÷ 10 | 0/E | 36 |
| DIN 371 | TiN | 2410 | M | M3 ÷ M10 | 3; 4 | 2.2 ● | 8 ÷ 12 | 0/E | 36 |
| DIN 376 | | 4400 | M | M3 ÷ M36 | 3; 4 | 2.2 ● | 8 ÷ 10 | 0/E | 37 |
| DIN 376 | TiN | 4410 | M | M3 ÷ M36 | 3; 4 | 2.2 ● | 8 ÷ 12 | 0/E | 37 |
| DIN 371 | TiN | 2360 | M | M3 ÷ M10 | 3; 4; 5 | 2.1 2.2 ● | 12 ÷ 15 10 ÷ 14 | 0/E | 36 |
| DIN 371 | OX | 2390 | M | M3 ÷ M10 | 3; 4; 5 | 2.1 2.2 ● | 12 ÷ 15 10 ÷ 12 | 0/E | 36 |
| DIN 376 | TiN | 4360 | M | M3 ÷ M36 | 3; 4; 5 | 2.1 2.2 ● | 12 ÷ 15 10 ÷ 14 | 0/E | 37 |
| DIN 376 | OX | 4390 | M | M3 ÷ M36 | 3; 4; 5 | 2.1 2.2 ● | 12 ÷ 15 10 ÷ 12 | 0/E | 37 |
| DIN 371 | TiN | 1710 | M | M3 ÷ M10 | 1; 2 | 2.1 2.2 ● | 10 ÷ 12 | 0/E | 48 |
| DIN 376 | TiN | 3710 | M | M12 ÷ M20 | 1; 2 | 2.1 2.2 ● | 10 ÷ 12 | 0/E | 48 |
| DIN 371 | TiN | 2210 | M | M3 ÷ M10 | 3; 4; 5 | 2.1 2.2 ● | 8 ÷ 10 | 0/E | 48 |

● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

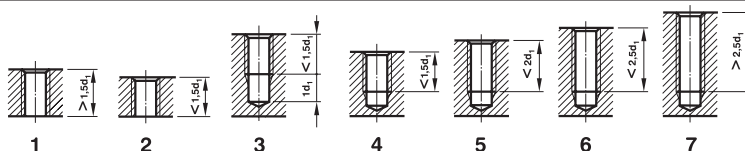
VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 2 / MATERIAL GROUP 2 / WERKSTOFFGRUPPE 2

Automatové a konstrukční oceli s pevností do 800 N/mm²
 Free cutting steels and structural steels up to 800 N/mm²
 Automatenstähle und Baustähle bis 800 N/mm²



| Norma Standard Norm | | Kat. Č. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V _c m/min | | Strana Page Seite | | |
|---------------------|-----|---------------------------|----------------------|----------------------------------|-------------------------------|-------------------------------|----------------------|--------|--------------------|-----|----|
| DIN 376 | TiN | | 4210 | M | M12 ÷ M20 | 3; 4; 5 | 2.1 2.2 | ● ● | 8 ÷ 10 | O/E | 48 |
| DIN 352 | | | 0550 | M | M3 ÷ M12 | 1; 2 | 2.1; 2.3 2.2 | ● ● | 10 ÷ 14 | O/E | 67 |
| DIN 352 | | | 0600 | M | M3 ÷ M12 | 3; 4 | 2.2; 2.3 | ● | 10 ÷ 14 | O/E | 67 |
| DIN 352 | | | 0650 | M | M3 ÷ M12 | 3; 4 | 2.2 | ● | 8 ÷ 10 | O/E | 67 |
| DIN 2174 | TiN | | 2910 | M | M3 ÷ M12 | 1 ÷ 7 | 2.1; 2.2 | ● | 15 ÷ 20 | O/E | 68 |
| DIN 2174 | TiN | | 2960 | M | M3 ÷ M12 | 1 ÷ 7 | 2.1 2.2 | ● ● | 20 ÷ 25 | O/E | 68 |
| DIN 374 | | | 3000 | MF | M3 ÷ M52 | 2; 3 | 2.1 | ● | 8 ÷ 10 | O/E | 49 |
| DIN 374 | TiN | | 3010 | MF | M3 ÷ M52 | 2; 3 | 2.1 | ● | 10 ÷ 14 | O/E | 49 |
| DIN 374 | | | 3500 | MF | M3 ÷ M36 | 1; 2 | 2.1; 2.3 2.2 | ● ● | 10 ÷ 14 | O/E | 49 |
| DIN 374 | TiN | | 3510 | MF | M3 ÷ M36 | 1; 2 | 2.1 2.2; 2.3 | ● ● | 10 ÷ 14 12 ÷ 15 | O/E | 49 |
| DIN 374 | OX | | 3540 | MF | M3 ÷ M36 | 1; 2 | 2.2 2.3 | ● ● | 10 ÷ 12 12 ÷ 15 | O/E | 49 |
| DIN 374 | | | 4050 | MF | M3 ÷ M36 | 3; 4; 5 | 2.2; 2.3 | ● | 10 ÷ 14 | O/E | 51 |
| DIN 374 | TiN | | 4060 | MF | M3 ÷ M36 | 3; 4; 5 | 2.2; 2.3 | ● | 12 ÷ 15 | O/E | 51 |
| DIN 374 | OX | | 4090 | MF | M3 ÷ M36 | 3; 4; 5 | 2.2; 2.3 | ● | 10 ÷ 12 | O/E | 51 |
| DIN 5156 | | | 3002 | G | G1/16" ÷ G2" | 2; 3 | 2.1 | ● | 8 ÷ 10 | O/E | 59 |
| DIN 5156 | TiN | | 3012 | G | G1/16" ÷ G2" | 2; 3 | 2.1 | ● | 10 ÷ 14 | O/E | 59 |
| DIN 5156 | | | 3502 | G | G1/16" ÷ G2" | 1; 2 | 2.1; 2.3 2.2 | ● ● | 10 ÷ 14 | O/E | 59 |
| DIN 5156 | TiN | | 3512 | G | G1/16" ÷ G2" | 1; 2 | 2.1 2.2; 2.3 | ● ● | 10 ÷ 14 12 ÷ 15 | O/E | 59 |
| DIN 5156 | | | 4052 | G | G1/16" ÷ G11/2" | 3; 4; 5 | 2.2; 2.3 | ● | 10 ÷ 14 | O/E | 60 |
| DIN 5156 | TiN | | 4062 | G | G1/16" ÷ G11/2" | 3; 4; 5 | 2.2; 2.3 | ● | 12 ÷ 15 | O/E | 60 |
| ~ DIN 371 | | | 1004 | UNC | 5-40 ÷ 3/8-16 | 2; 3 | 2.1 | ● | 8 ÷ 10 | O/E | 62 |
| ~ DIN 371 | TiN | | 1014 | UNC | 5-40 ÷ 3/8-16 | 2; 3 | 2.1 | ● | 10 ÷ 14 | O/E | 62 |
| ~ DIN 376 | | | 3004 | UNC | 7/16-14 ÷ 11/8-7 | 2; 3 | 2.1 | ● | 8 ÷ 10 | O/E | 63 |
| ~ DIN 376 | TiN | | 3014 | UNC | 7/16-14 ÷ 11/8-7 | 2; 3 | 2.1 | ● | 10 ÷ 14 | O/E | 63 |
| ~ DIN 371 | | | 1504 | UNC | 5-40 ÷ 3/8-16 | 1; 2 | 2.1; 2.3 2.2 | ● ● | 10 ÷ 14 | O/E | 62 |
| ~ DIN 371 | TiN | | 1514 | UNC | 5-40 ÷ 3/8-16 | 1; 2 | 2.1 2.2; 2.3 | ● ● | 10 ÷ 14 12 ÷ 15 | O/E | 62 |
| ~ DIN 376 | | | 3504 | UNC | 7/16-14 ÷ 11/8-7 | 1; 2 | 2.1; 2.3 2.2 | ● ● | 10 ÷ 14 | O/E | 63 |
| ~ DIN 376 | TiN | | 3514 | UNC | 7/16-14 ÷ 11/8-7 | 1; 2 | 2.1 2.2; 2.3 | ● ● | 10 ÷ 14 12 ÷ 15 | O/E | 63 |

● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

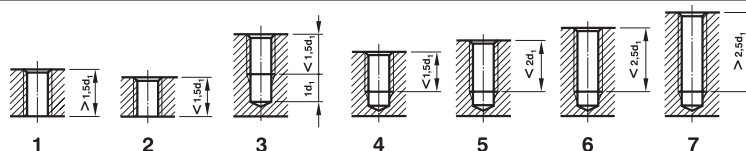
VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 3 / MATERIAL GROUP 3 / WERKSTOFFGRUPPE 3

ZuŕlechtĚnĚ a nĚstrojovĚ oceli s pevnostĚ do 1100 N/mm²
Heat-treated steels and tool steels up to 1100 N/mm²
VergütungsstĚhle und WerkzeugstĚhle bis 1100 N/mm²



| Norma Standard Norm | | | Kat. Ā. Cat. No. Kat. Nr. | ZĚvit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | PoužitĚ Application Anwendung | V _c m/min | | Strana Page Seite |
|---------------------------|------|--|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|-------------------------|-----|-------------------------|
| DIN 371 | TiN | | 1660 | M | M3 ÷ M10 | 1;2 | 3.1 ● | 4 ÷ 8 | O/E | 38 |
| DIN 371 | OX | | 1690 | M | M3 ÷ M10 | 1;2 | 3.1 ● | 3 ÷ 5 | 0 | 38 |
| DIN 371 | HL | | 1870 | M | M3 ÷ M10 | 1;2 | 3.1 ● 3.3 ● | 6 ÷ 8 4 ÷ 6 | O/E | 38 |
| DIN 371 | HL | | 1870 IKZN | M | M6 ÷ M10 | 1;2 | 3.1 ● 3.3 ● | 6 ÷ 8 4 ÷ 6 | O/E | 38 |
| DIN 376 | TiN | | 3660 | M | M3 ÷ M36 | 1;2 | 3.1 ● | 4 ÷ 8 | O/E | 39 |
| DIN 376 | OX | | 3690 | M | M3 ÷ M36 | 1;2 | 3.1 ● | 3 ÷ 5 | 0 | 39 |
| DIN 376 | HL | | 3870 | M | M12 | 1;2 | 3.1 ● 3.3 ● | 6 ÷ 8 4 ÷ 6 | O/E | 39 |
| DIN 376 | HL | | 3870 IKZN | M | M12 | 1;2 | 3.1 ● 3.3 ● | 6 ÷ 8 4 ÷ 6 | O/E | 39 |
| DIN 371 | TiN | | 2260 | M | M3 ÷ M10 | 3;4;5 | 3.1;3.3 ● | 6 ÷ 8 | O/E | 40 |
| DIN 371 | OX | | 2290 | M | M3 ÷ M10 | 3;4;5 | 3.1 ● | 3 ÷ 5 | 0 | 40 |
| DIN 371 | HL | | 2320 | M | M3 ÷ M10 | 3;4;5 | 3.1;3.3 ● 3.2 ● | 6 ÷ 8 4 ÷ 6 | O/E | 40 |
| DIN 371 | HL | | 2320 IKZ | M | M5 ÷ M10 | 3;4;5 | 3.1;3.3 ● 3.2 ● | 6 ÷ 8 4 ÷ 6 | O/E | 40 |
| DIN 376 | TiN | | 4260 | M | M3 ÷ M36 | 3;4;5 | 3.1;3.3 ● | 6 ÷ 8 | O/E | 41 |
| DIN 376 | OX | | 4290 | M | M3 ÷ M36 | 3;4;5 | 3.1 ● | 3 ÷ 5 | 0 | 41 |
| DIN 376 | HL | | 4320 | M | M12 | 3;4;5 | 3.1;3.3 ● 3.2 ● | 6 ÷ 8 4 ÷ 6 | O/E | 41 |
| DIN 376 | HL | | 4320 IKZ | M | M12 | 3;4;5 | 3.1;3.3 ● 3.2 ● | 6 ÷ 8 4 ÷ 6 | O/E | 41 |
| DIN 371 | TiCN | | 1580 | M | M3 ÷ M10 | 1;2 | 3.1;3.2;3.3 ● | 4 ÷ 8 | O/E | 42 |
| DIN 371 | OX | | 1590 | M | M3 ÷ M10 | 1;2 | 3.2 ● | 4 ÷ 8 | 0 | 42 |
| DIN 376 | TiCN | | 3580 | M | M3 ÷ M36 | 1;2 | 3.1;3.2;3.3 ● | 4 ÷ 8 | O/E | 43 |
| DIN 376 | OX | | 3590 | M | M3 ÷ M36 | 1;2 | 3.2 ● | 4 ÷ 8 | 0 | 43 |
| DIN 371 | TiCN | | 2680 | M | M3 ÷ M10 | 3;4;5 | 3.1;3.3 ● 3.2 ● | 3 ÷ 5 6 ÷ 8 | O/E | 42 |
| DIN 371 | OX | | 2690 | M | M3 ÷ M10 | 3;4;5 | 3.2 ● | 3 ÷ 5 | 0 | 42 |
| DIN 376 | TiCN | | 4680 | M | M3 ÷ M36 | 3;4;5 | 3.1;3.3 ● 3.2 ● | 3 ÷ 5 6 ÷ 8 | O/E | 43 |
| DIN 376 | OX | | 4690 | M | M3 ÷ M36 | 3;4;5 | 3.2 ● | 3 ÷ 5 | 0 | 43 |
| DIN 371 | TiN | | 1710 | M | M3 ÷ M10 | 1;2 | 3.1;3.2;3.3 ● | 4 ÷ 6 | O/E | 48 |
| DIN 376 | TiN | | 3710 | M | M12 ÷ M20 | 1;2 | 3.1;3.2;3.3 ● | 4 ÷ 6 | O/E | 48 |
| DIN 371 | TiN | | 2210 | M | M3 ÷ M10 | 3;4;5 | 3.1;3.2;3.3 ● | 4 ÷ 6 | O/E | 48 |
| DIN 376 | TiN | | 4210 | M | M12 ÷ M20 | 3;4;5 | 3.1;3.2;3.3 ● | 4 ÷ 6 | O/E | 48 |

● doporuĚenĚ užitĚ / recommended use / optimal

● moĝno pouĝitĚ / possible use / geeignet

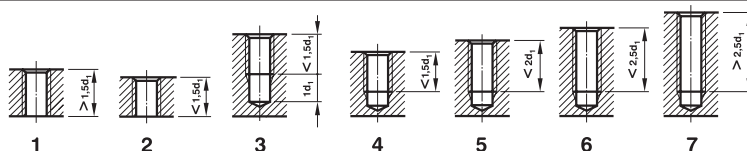
VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 5 / MATERIAL GROUP 5 / WERKSTOFFGRUPPE 5

Nerezavějící a žáruvzdorné oceli
Stainless steels and heat resisting steels
Rostfreistähle und Hitzebeständigstähle



| Norma Standard Norm | | | Kat. č. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V_c m/min | | Strana Page Seite |
|---------------------------|-----|--|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|------------------|---|-------------------------|
| DIN 371 | TiN | | 1660 | M | M3 ÷ M10 | 1; 2 | 5.1 5.2 ● | 8 ÷ 12 5 ÷ 8 | 0 | 38 |
| DIN 371 | OX | | 1690 | M | M3 ÷ M10 | 1; 2 | 5.1 5.2 ● | 4 ÷ 7 3 ÷ 5 | 0 | 38 |
| DIN 371 | HL | | 1870 | M | M3 ÷ M10 | 1; 2 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 38 |
| DIN 371 | HL | | 1870 IKZN | M | M6 ÷ M10 | 1; 2 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 38 |
| DIN 376 | TiN | | 3660 | M | M3 ÷ M36 | 1; 2 | 5.1 5.2 ● | 8 ÷ 12 5 ÷ 8 | 0 | 39 |
| DIN 376 | OX | | 3690 | M | M3 ÷ M36 | 1; 2 | 5.1 5.2 ● | 4 ÷ 7 3 ÷ 5 | 0 | 39 |
| DIN 376 | HL | | 3870 | M | M12 | 1; 2 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 39 |
| DIN 376 | HL | | 3870 IKZN | M | M12 | 1; 2 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 39 |
| DIN 371 | TiN | | 2260 | M | M3 ÷ M10 | 3; 4; 5 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 40 |
| DIN 371 | OX | | 2290 | M | M3 ÷ M10 | 3; 4; 5 | 5.1 5.2 ● | 4 ÷ 7 3 ÷ 5 | 0 | 40 |
| DIN 371 | HL | | 2320 | M | M3 ÷ M10 | 3; 4; 5 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 40 |
| DIN 371 | HL | | 2320 IKZ | M | M5 ÷ M10 | 3; 4; 5 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 40 |
| DIN 376 | TiN | | 4260 | M | M3 ÷ M36 | 3; 4; 5 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 41 |
| DIN 376 | OX | | 4290 | M | M3 ÷ M36 | 3; 4; 5 | 5.1 5.2 ● | 4 ÷ 7 3 ÷ 5 | 0 | 41 |
| DIN 376 | HL | | 4320 | M | M12 | 3; 4; 5 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 41 |
| DIN 376 | HL | | 4320 IKZ | M | M12 | 3; 4; 5 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 41 |
| DIN 371 | TiN | | 1710 | M | M3 ÷ M10 | 1; 2 | 5.1 5.2 ● | 6 ÷ 10 4 ÷ 7 | 0 | 48 |
| DIN 376 | TiN | | 3710 | M | M12 ÷ M20 | 1; 2 | 5.1 5.2 ● | 6 ÷ 10 4 ÷ 7 | 0 | 48 |
| DIN 371 | TiN | | 2210 | M | M3 ÷ M10 | 3; 4; 5 | 5.1 5.2 ● | 6 ÷ 10 4 ÷ 7 | 0 | 48 |
| DIN 376 | TiN | | 4210 | M | M12 ÷ M20 | 3; 4; 5 | 5.1 5.2 ● | 6 ÷ 10 4 ÷ 7 | 0 | 48 |
| DIN 374 | TiN | | 3660 | MF | M3 ÷ M36 | 1; 2 | 5.1 5.2 ● | 8 ÷ 12 5 ÷ 8 | 0 | 53 |
| DIN 374 | OX | | 3690 | MF | M3 ÷ M36 | 1; 2 | 5.1 5.2 ● | 4 ÷ 7 3 ÷ 5 | 0 | 53 |
| DIN 374 | TiN | | 4260 | MF | M3 ÷ M36 | 3; 4; 5 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 53 |
| DIN 374 | OX | | 4290 | MF | M3 ÷ M36 | 3; 4; 5 | 5.1 5.2 ● | 4 ÷ 7 3 ÷ 5 | 0 | 53 |
| DIN 5156 | TiN | | 3662 | G | G1/16" ÷ G11/2" | 1; 2 | 5.1 5.2 ● | 8 ÷ 12 5 ÷ 8 | 0 | 61 |
| DIN 5156 | OX | | 3692 | G | G1/16" ÷ G11/2" | 1; 2 | 5.1 5.2 ● | 4 ÷ 7 3 ÷ 5 | 0 | 61 |
| DIN 5156 | TiN | | 4262 | G | G1/16" ÷ G11/2" | 3; 4; 5 | 5.1 5.2 ● | 8 ÷ 14 6 ÷ 10 | 0 | 61 |
| DIN 5156 | OX | | 4292 | G | G1/16" ÷ G11/2" | 3; 4; 5 | 5.1 5.2 ● | 4 ÷ 7 3 ÷ 5 | 0 | 61 |

● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 6 / MATERIAL GROUP 6 / WERKSTOFFGRUPPE 6

| | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|---|
| Litiny Cast iron Gusswerkstoffe | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| Norma Standard Norm | | Kat. č. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V_c m/min | | Strana Page Seite |
|---------------------------|------|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|----------------|---|-------------------------|
| DIN 371 | | 1000 | M | M3 ÷ M10 | 1 ÷ 6 | 6.1 ● | 7 ÷ 10 | E | 30 |
| DIN 371 | TiN | 1010 | M | M3 ÷ M10 | 1 ÷ 6 | 6.1 ● | 8 ÷ 12 | E | 30 |
| DIN 376 | | 3000 | M | M3 ÷ M52 | 1 ÷ 6 | 6.1 ● | 7 ÷ 10 | E | 31 |
| DIN 376 | TiN | 3010 | M | M3 ÷ M52 | 1 ÷ 6 | 6.1 ● | 8 ÷ 12 | E | 31 |
| DIN 371 | | 1500 | M | M3 ÷ M10 | 1; 2; 3 | 6.2 ● | 4 ÷ 7 | E | 32 |
| DIN 371 | TiN | 1510 | M | M3 ÷ M10 | 1; 2; 3 | 6.2 ● | 6 ÷ 8 | E | 32 |
| DIN 376 | | 3500 | M | M3 ÷ M36 | 1; 2; 3 | 6.2 ● | 4 ÷ 7 | E | 33 |
| DIN 376 | TiN | 3510 | M | M3 ÷ M36 | 1; 2; 3 | 6.2 ● | 6 ÷ 8 | E | 33 |
| DIN 371 | | 2050 | M | M3 ÷ M10 | 3; 4; 5; 6 | 6.2 ● | 4 ÷ 7 | E | 34 |
| DIN 371 | TiN | 2060 | M | M3 ÷ M10 | 3; 4; 5; 6 | 6.2 ● | 6 ÷ 8 | E | 34 |
| DIN 376 | | 4050 | M | M3 ÷ M36 | 3; 4; 5; 6 | 6.2 ● | 4 ÷ 7 | E | 35 |
| DIN 376 | TiN | 4060 | M | M3 ÷ M36 | 3; 4; 5; 6 | 6.2 ● | 6 ÷ 8 | E | 35 |
| DIN 371 | TiN | 2410 | M | M3 ÷ M10 | 1 ÷ 6 | 6.2 ● | 4 ÷ 7 | E | 36 |
| DIN 376 | TiN | 4410 | M | M3 ÷ M36 | 1 ÷ 6 | 6.2 ● | 4 ÷ 7 | E | 37 |
| DIN 371 | TiN | 2260 | M | M3 ÷ M10 | 3; 4; 5; 6 | 6.2 ● | 7 ÷ 10 | E | 40 |
| DIN 376 | TiN | 4260 | M | M3 ÷ M36 | 3; 4; 5; 6 | 6.2 ● | 7 ÷ 10 | E | 41 |
| DIN 371 | TiCN | 1580 | M | M3 ÷ M10 | 1; 2; 3 | 6.2 ● | 7 ÷ 10 | E | 42 |
| DIN 376 | TiCN | 3580 | M | M3 ÷ M36 | 1; 2; 3 | 6.2 ● | 7 ÷ 10 | E | 43 |
| DIN 371 | TiCN | 2680 | M | M3 ÷ M10 | 3; 4; 5; 6 | 6.2 ● | 7 ÷ 10 | E | 42 |
| DIN 376 | TiCN | 4680 | M | M3 ÷ M36 | 3; 4; 5; 6 | 6.2 ● | 7 ÷ 10 | E | 43 |
| DIN 371 | TiCN | 1080 | M | M3 ÷ M10 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 46 |
| DIN 371 | TiCN | 1080 IKZ | M | M5 ÷ M10 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 46 |
| DIN 371 | TiCN | 1130 | M | M3 ÷ M10 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 46 |
| DIN 371 | TiCN | 1130 IKZ | M | M5 ÷ M10 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 46 |
| DIN 376 | TiCN | 3080 | M | M3 ÷ M52 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 47 |
| DIN 376 | TiCN | 3080 IKZ | M | M5 ÷ M52 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 47 |
| DIN 376 | TiCN | 3130 | M | M3 ÷ M52 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 47 |
| DIN 376 | TiCN | 3130 IKZ | M | M5 ÷ M52 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 47 |

● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 6 / MATERIAL GROUP 6 / WERKSTOFFGRUPPE 6

| | | | | | | | |
|---------------------------------------|---|---|---|---|---|---|---|
| Litiny Cast iron Gusswerkstoffe | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| Norma Standard Norm | | | Kat. Ā. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V _c m/min | | Strana Page Seite |
|---------------------------|------|--|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|-------------------------|---|-------------------------|
| DIN 371 | TiN | | 1710 | M | M3 ÷ M10 | 1; 2; 3 | 6.1 6.2 ● | 8 ÷ 12 7 ÷ 10 | E | 48 |
| DIN 376 | TiN | | 3710 | M | M12 ÷ M20 | 1; 2; 3 | 6.1 6.2 ● | 8 ÷ 12 7 ÷ 10 | E | 48 |
| DIN 371 | TiN | | 2210 | M | M3 ÷ M10 | 3; 4; 5; 6 | 6.1 6.2 ● | 8 ÷ 12 7 ÷ 10 | E | 48 |
| DIN 376 | TiN | | 4210 | M | M12 ÷ M20 | 3; 4; 5; 6 | 6.1 6.2 ● | 8 ÷ 12 7 ÷ 10 | E | 48 |
| DIN 352 | | | 0550 | M | M3 ÷ M12 | 1; 2; 3 | 6.2 ● | 4 ÷ 7 | E | 67 |
| DIN 352 | | | 0600 | M | M3 ÷ M12 | 3; 4; 5; 6 | 6.2 ● | 4 ÷ 7 | E | 67 |
| DIN 374 | | | 3000 | MF | M3 ÷ M52 | 1 ÷ 6 | 6.1 ● | 7 ÷ 10 | E | 49 |
| DIN 374 | TiN | | 3010 | MF | M3 ÷ M52 | 1 ÷ 6 | 6.1 ● | 8 ÷ 12 | E | 49 |
| DIN 374 | | | 3500 | MF | M3 ÷ M36 | 1; 2; 3 | 6.2 ● | 4 ÷ 7 | E | 49 |
| DIN 374 | TiN | | 3510 | MF | M3 ÷ M36 | 1; 2; 3 | 6.2 ● | 6 ÷ 8 | E | 49 |
| DIN 374 | | | 4050 | MF | M3 ÷ M36 | 3; 4; 5; 6 | 6.2 ● | 4 ÷ 7 | E | 51 |
| DIN 374 | TiN | | 4060 | MF | M3 ÷ M36 | 3; 4; 5; 6 | 6.2 ● | 6 ÷ 8 | E | 51 |
| DIN 374 | TiN | | 4260 | MF | M3 ÷ M36 | 3; 4; 5; 6 | 6.2 ● | 7 ÷ 10 | E | 53 |
| DIN 374 | TiCN | | 3580 | MF | M3 ÷ M36 | 1; 2; 3 | 6.2 ● | 7 ÷ 10 | E | 55 |
| DIN 374 | TiCN | | 4680 | MF | M3 ÷ M36 | 3; 4; 5; 6 | 6.2 ● | 7 ÷ 10 | E | 55 |
| DIN 374 | TiCN | | 3080 | MF | M3 ÷ M52 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 57 |
| DIN 374 | TiCN | | 3080 IKZ | MF | M5 ÷ M52 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 57 |
| DIN 374 | TiCN | | 3130 | MF | M3 ÷ M52 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 57 |
| DIN 374 | TiCN | | 3130 IKZ | MF | M5 ÷ M52 | 1 ÷ 6 | 6.1 ● | 15 ÷ 20 | E | 57 |
| DIN 5156 | | | 3002 | G | G1/16" ÷ G2" | 1 ÷ 6 | 6.1 ● | 7 ÷ 10 | E | 59 |
| DIN 5156 | TiN | | 3012 | G | G1/16" ÷ G2" | 1 ÷ 6 | 6.1 ● | 8 ÷ 12 | E | 59 |
| DIN 5156 | | | 3502 | G | G1/16" ÷ G2" | 1; 2; 3 | 6.2 ● | 4 ÷ 7 | E | 59 |
| DIN 5156 | TiN | | 3512 | G | G1/16" ÷ G2" | 1; 2; 3 | 6.2 ● | 6 ÷ 8 | E | 59 |
| DIN 5156 | | | 4052 | G | G1/16" ÷ G11/2" | 3; 4; 5; 6 | 6.2 ● | 4 ÷ 7 | E | 60 |
| DIN 5156 | TiN | | 4062 | G | G1/16" ÷ G11/2" | 3; 4; 5; 6 | 6.2 ● | 6 ÷ 8 | E | 60 |
| ~ DIN 371 | | | 1004 | UNC | 5-40 ÷ 3/8-16 | 1 ÷ 6 | 6.1 ● | 7 ÷ 10 | E | 62 |
| ~ DIN 371 | TiN | | 1014 | UNC | 5-40 ÷ 3/8-16 | 1 ÷ 6 | 6.1 ● | 8 ÷ 12 | E | 62 |
| ~ DIN 376 | | | 3004 | UNC | 7/16-14 ÷ 11/8-7 | 1 ÷ 6 | 6.1 ● | 7 ÷ 10 | E | 63 |

● doporuĀené užití / recommended use / optimal

● moĀno pouĀit / possible use / geeignet

VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 8 / MATERIAL GROUP 8 / WERKSTOFFGRUPPE 8

| Hliník legovaný Aluminium alloys Aluminiumlegierungen | | | | | | | | | |
|---|------|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|--------------------|---|-------------------------|
| Norma Standard Norm | | Kat. č. Cat. No. Kat. Nr. | Závít Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V_c m/min | | Strana Page Seite |
| DIN 371 | | 1000 | M | M3 ÷ M10 | 2 | 8.2 ● | 12 ÷ 15 | E | 30 |
| DIN 371 | TiN | 1010 | M | M3 ÷ M10 | 2 | 8.2 ● | 14 ÷ 20 | E | 30 |
| DIN 376 | | 3000 | M | M3 ÷ M52 | 2 | 8.2 ● | 12 ÷ 15 | E | 31 |
| DIN 376 | TiN | 3010 | M | M3 ÷ M52 | 2 | 8.2 ● | 14 ÷ 20 | E | 31 |
| DIN 371 | | 1500 | M | M3 ÷ M10 | 1;2 | 8.1 ● 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 32 |
| DIN 371 | TiN | 1510 | M | M3 ÷ M10 | 1;2 | 8.1 ● 8.2 ● | 15 ÷ 30 14 ÷ 20 | E | 32 |
| DIN 371 | OX | 1540 | M | M3 ÷ M10 | 1;2 | 8.1 ● 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 32 |
| DIN 371 | | 1750 | M | M3 ÷ M10 | 2 | 8.1 ● 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 32 |
| DIN 376 | | 3500 | M | M3 ÷ M36 | 1;2 | 8.1 ● 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 33 |
| DIN 376 | TiN | 3510 | M | M3 ÷ M36 | 1;2 | 8.1 ● 8.2 ● | 15 ÷ 30 14 ÷ 20 | E | 33 |
| DIN 376 | OX | 3540 | M | M3 ÷ M36 | 1;2 | 8.1 ● 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 33 |
| DIN 371 | | 2050 | M | M3 ÷ M10 | 3;4;5 | 8.1 ● | 14 ÷ 20 | E | 34 |
| DIN 371 | TiN | 2060 | M | M3 ÷ M10 | 3;4;5 | 8.1 ● 8.2 ● | 15 ÷ 30 14 ÷ 20 | E | 34 |
| DIN 371 | OX | 2090 | M | M3 ÷ M10 | 3;4;5 | 8.1 ● 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 34 |
| DIN 376 | | 4050 | M | M3 ÷ M36 | 3;4;5 | 8.1 ● | 14 ÷ 20 | E | 35 |
| DIN 376 | TiN | 4060 | M | M3 ÷ M36 | 3;4;5 | 8.1 ● 8.2 ● | 15 ÷ 30 14 ÷ 20 | E | 35 |
| DIN 376 | OX | 4090 | M | M3 ÷ M36 | 3;4;5 | 8.1 ● 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 35 |
| DIN 371 | TiN | 2360 | M | M3 ÷ M10 | 3;4;5 | 8.1 ● | 14 ÷ 20 | E | 36 |
| DIN 371 | OX | 2390 | M | M3 ÷ M10 | 3;4;5 | 8.1 ● | 14 ÷ 20 | E | 36 |
| DIN 376 | TiN | 4360 | M | M3 ÷ M36 | 3;4;5 | 8.1 ● | 14 ÷ 20 | E | 37 |
| DIN 376 | OX | 4390 | M | M3 ÷ M36 | 3;4;5 | 8.1 ● | 14 ÷ 20 | E | 37 |
| DIN 371 | ALS | 1570 | M | M3 ÷ M10 | 1;2 | 8.2 ● | 15 ÷ 30 | E | 45 |
| DIN 371 | OX | 1590 | M | M3 ÷ M10 | 1;2 | 8.2 ● | 12 ÷ 15 | E | 42 |
| DIN 376 | ALS | 3570 | M | M3 ÷ M36 | 1;2 | 8.2 ● | 15 ÷ 30 | E | 45 |
| DIN 376 | OX | 3590 | M | M3 ÷ M36 | 1;2 | 8.2 ● | 12 ÷ 15 | E | 43 |
| DIN 371 | ALS | 2670 | M | M3 ÷ M10 | 3;4;5;6 | 8.2 ● | 12 ÷ 20 | E | 45 |
| DIN 376 | ALS | 4670 | M | M3 ÷ M36 | 3;4;5;6 | 8.2 ● | 12 ÷ 20 | E | 45 |
| DIN 371 | TiCN | 1080 | M | M3 ÷ M10 | 2;3 | 8.2 ● | 12 ÷ 20 | E | 46 |

● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

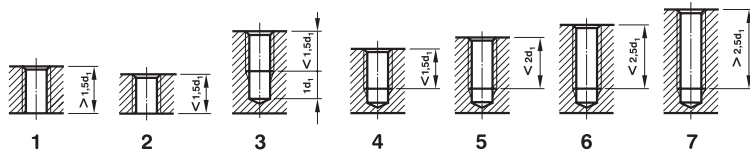
VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 8 / MATERIAL GROUP 8 / WERKSTOFFGRUPPE 8

Hliník legovaný
Aluminium alloys
Aluminiumlegierungen



| Norma Standard Norm | | Kat. Č. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V _c m/min | | Strana Page Seite |
|---------------------------|------|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|-------------------------|-----|-------------------------|
| DIN 371 | TiCN | 1080 IKZ | M | M5 ÷ M10 | 2; 3 | 8.2 ● | 12 ÷ 20 | E | 46 |
| DIN 371 | TiCN | 1130 | M | M3 ÷ M10 | 2; 3 | 8.2 ● | 12 ÷ 20 | E | 46 |
| DIN 371 | TiCN | 1130 IKZ | M | M5 ÷ M10 | 2; 3 | 8.2 ● | 12 ÷ 20 | E | 46 |
| DIN 376 | TiCN | 3080 | M | M3 ÷ M52 | 2; 3 | 8.2 ● | 12 ÷ 20 | E | 47 |
| DIN 376 | TiCN | 3080 IKZ | M | M5 ÷ M52 | 2; 3 | 8.2 ● | 12 ÷ 20 | E | 47 |
| DIN 376 | TiCN | 3130 | M | M3 ÷ M52 | 2; 3 | 8.2 ● | 12 ÷ 20 | E | 47 |
| DIN 376 | TiCN | 3130 IKZ | M | M5 ÷ M52 | 2; 3 | 8.2 ● | 12 ÷ 20 | E | 47 |
| DIN 371 | TiN | 1710 | M | M3 ÷ M10 | 1; 2 | 8.1 ● 8.2 ● | 12 ÷ 20 | E | 48 |
| DIN 376 | TiN | 3710 | M | M12 ÷ M20 | 1; 2 | 8.1 ● 8.2 ● | 12 ÷ 20 | E | 48 |
| DIN 371 | TiN | 2210 | M | M3 ÷ M10 | 3; 4; 5 | 8.1 ● 8.2 ● | 12 ÷ 20 | E | 48 |
| DIN 376 | TiN | 4210 | M | M12 ÷ M20 | 3; 4; 5 | 8.1 ● 8.2 ● | 12 ÷ 20 | E | 48 |
| DIN 352 | | 0550 | M | M3 ÷ M12 | 1; 2 | 8.1 ● 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 67 |
| DIN 352 | | 0600 | M | M3 ÷ M12 | 3; 4; 5 | 8.1 ● | 14 ÷ 20 | E | 67 |
| DIN 2174 | TiN | 2910 | M | M3 ÷ M12 | 1 ÷ 7 | 8.1 ● | 15 ÷ 30 | E/O | 68 |
| DIN 2174 | TiN | 2960 | M | M3 ÷ M12 | 1 ÷ 7 | 8.1 ● | 15 ÷ 30 | E/O | 68 |
| DIN 374 | | 3000 | MF | M3 ÷ M52 | 2 | 8.2 ● | 12 ÷ 15 | E | 49 |
| DIN 374 | TiN | 3010 | MF | M3 ÷ M52 | 2 | 8.2 ● | 14 ÷ 20 | E | 49 |
| DIN 374 | | 3500 | MF | M3 ÷ M36 | 1; 2 | 8.1 ● 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 49 |
| DIN 374 | TiN | 3510 | MF | M3 ÷ M36 | 1; 2 | 8.1 ● 8.2 ● | 15 ÷ 30 14 ÷ 20 | E | 49 |
| DIN 374 | OX | 3540 | MF | M3 ÷ M36 | 1; 2 | 8.1 ● 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 49 |
| DIN 374 | | 4050 | MF | M3 ÷ M36 | 3; 4; 5 | 8.1 ● | 14 ÷ 20 | E | 51 |
| DIN 374 | TiN | 4060 | MF | M3 ÷ M36 | 3; 4; 5 | 8.1 ● 8.2 ● | 15 ÷ 30 14 ÷ 20 | E | 51 |
| DIN 374 | OX | 4090 | MF | M3 ÷ M36 | 3; 4; 5 | 8.1; 8.2 ● | 14 ÷ 20 12 ÷ 15 | E | 51 |
| DIN 374 | TiCN | 3580 | MF | M3 ÷ M36 | 1; 2 | 8.2 ● | 15 ÷ 30 | E | 55 |
| DIN 374 | OX | 3590 | MF | M3 ÷ M36 | 1; 2 | 8.2 ● | 12 ÷ 15 | E | 55 |
| DIN 374 | TiCN | 4680 | MF | M3 ÷ M36 | 3; 4; 5; 6 | 8.2 ● | 12 ÷ 20 | E | 55 |
| DIN 374 | TiCN | 3080 | MF | M3 ÷ M52 | 1; 2 | 8.2 ● | 12 ÷ 20 | E | 57 |
| DIN 374 | TiCN | 3080 IKZ | MF | M5 ÷ M52 | 1; 2 | 8.2 ● | 12 ÷ 20 | E | 57 |

● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 8 / MATERIAL GROUP 8 / WERKSTOFFGRUPPE 8

| | |
|---|--|
| Hliník legovaný Aluminium alloys Aluminiumlegierungen | |
|---|--|

| Norma Standard Norm | | Kat. č. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V_c m/min | | Strana Page Seite | | |
|---------------------------|------|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|----------------|--------|-------------------------|---|----|
| DIN 374 | TiCN | | 3130 | MF | M3 ÷ M52 | 1;2 | 8.2 | ● | 12 ÷ 20 | E | 57 |
| DIN 374 | TiCN | | 3130 IKZ | MF | M5 ÷ M52 | 1;2 | 8.2 | ● | 12 ÷ 20 | E | 57 |
| DIN 5156 | | | 3002 | G | G1/16" ÷ G2" | 2 | 8.2 | ● | 12 ÷ 15 | E | 59 |
| DIN 5156 | TiN | | 3012 | G | G1/16" ÷ G2" | 2 | 8.2 | ● | 14 ÷ 20 | E | 59 |
| DIN 5156 | | | 3502 | G | G1/16" ÷ G2" | 1;2 | 8.1 8.2 | ● ● | 14 ÷ 20 12 ÷ 15 | E | 59 |
| DIN 5156 | TiN | | 3512 | G | G1/16" ÷ G2" | 1;2 | 8.1 8.2 | ● ● | 15 ÷ 30 14 ÷ 20 | E | 59 |
| DIN 5156 | | | 4052 | G | G1/16" ÷ G11/2" | 3;4;5 | 8.1 | ● | 14 ÷ 20 | E | 60 |
| DIN 5156 | TiN | | 4062 | G | G1/16" ÷ G11/2" | 3;4;5 | 8.1 8.2 | ● ● | 15 ÷ 30 14 ÷ 20 | E | 60 |
| ~ DIN 371 | | | 1004 | UNC | 5-40 ÷ 3/8-16 | 2 | 8.2 | ● | 12 ÷ 15 | E | 62 |
| ~ DIN 371 | TiN | | 1014 | UNC | 5-40 ÷ 3/8-16 | 2 | 8.2 | ● | 14 ÷ 20 | E | 62 |
| ~ DIN 376 | | | 3004 | UNC | 7/16-14 ÷ 11/8-7 | 2 | 8.2 | ● | 12 ÷ 15 | E | 63 |
| ~ DIN 376 | TiN | | 3014 | UNC | 7/16-14 ÷ 11/8-7 | 2 | 8.2 | ● | 14 ÷ 20 | E | 63 |
| ~ DIN 371 | | | 1504 | UNC | 5-40 ÷ 3/8-16 | 1;2 | 8.1 8.2 | ● ● | 14 ÷ 20 12 ÷ 15 | E | 62 |
| ~ DIN 371 | TiN | | 1514 | UNC | 5-40 ÷ 3/8-16 | 1;2 | 8.1 8.2 | ● ● | 15 ÷ 30 14 ÷ 20 | E | 62 |
| ~ DIN 376 | | | 3504 | UNC | 7/16-14 ÷ 11/8-7 | 1;2 | 8.1 8.2 | ● ● | 14 ÷ 20 12 ÷ 15 | E | 63 |
| ~ DIN 376 | TiN | | 3514 | UNC | 7/16-14 ÷ 11/8-7 | 1;2 | 8.1 8.2 | ● ● | 15 ÷ 30 14 ÷ 20 | E | 63 |
| ~ DIN 371 | | | 2054 | UNC | 5-40 ÷ 3/8-16 | 3;4;5 | 8.1 | ● | 14 ÷ 20 | E | 64 |
| ~ DIN 371 | TiN | | 2064 | UNC | 5-40 ÷ 3/8-16 | 3;4;5 | 8.1 8.2 | ● ● | 15 ÷ 30 14 ÷ 20 | E | 64 |
| ~ DIN 376 | | | 4054 | UNC | 7/16-14 ÷ 1-7 | 3;4;5 | 8.1 | ● | 14 ÷ 20 | E | 64 |
| ~ DIN 376 | TiN | | 4064 | UNC | 7/16-14 ÷ 1-7 | 3;4;5 | 8.1 8.2 | ● ● | 15 ÷ 30 14 ÷ 20 | E | 64 |
| ~ DIN 374 | | | 3005 | UNF | 5-44 ÷ 11/8-12 | 2 | 8.2 | ● | 12 ÷ 15 | E | 65 |
| ~ DIN 374 | TiN | | 3015 | UNF | 5-44 ÷ 11/8-12 | 2 | 8.2 | ● | 14 ÷ 20 | E | 65 |
| ~ DIN 374 | | | 3505 | UNF | 5-44 ÷ 11/8-12 | 1;2 | 8.1 8.2 | ● ● | 14 ÷ 20 12 ÷ 15 | E | 65 |
| ~ DIN 374 | TiN | | 3515 | UNF | 5-44 ÷ 11/8-12 | 1;2 | 8.1 8.2 | ● ● | 15 ÷ 30 14 ÷ 20 | E | 65 |
| ~ DIN 374 | | | 4055 | UNF | 5-44 ÷ 1-12 | 3;4;5 | 8.1 | ● | 14 ÷ 20 | E | 66 |
| ~ DIN 374 | TiN | | 4065 | UNF | 5-44 ÷ 1-12 | 3;4;5 | 8.1 8.2 | ● ● | 15 ÷ 30 14 ÷ 20 | E | 66 |

● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

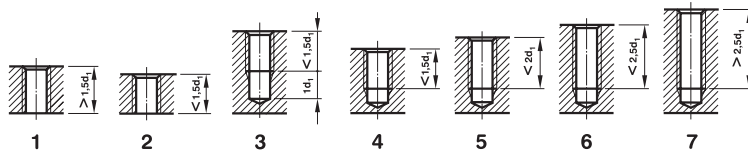
VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 9 / MATERIAL GROUP 9 / WERKSTOFFGRUPPE 9

Měď čistá
Unalloyed copper
Reinkupfer



| Norma Standard Norm | | | Kat. č. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V _c m/min | | Strana Page Seite |
|---------------------------|-----|--|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|-------------------------|---|-------------------------|
| DIN 371 | TiN | | 2360 | M | M3 ÷ M10 | 3; 4; 5 | 9.1 ● | 5 ÷ 8 | 0 | 36 |
| DIN 376 | TiN | | 4360 | M | M3 ÷ M36 | 3; 4; 5 | 9.1 ● | 5 ÷ 8 | 0 | 37 |
| DIN 371 | TiN | | 1660 | M | M3 ÷ M10 | 1; 2 | 9.1 ● | 8 ÷ 12 | 0 | 38 |
| DIN 371 | HL | | 1870 | M | M3 ÷ M10 | 1; 2 | 9.1 ● | 10 ÷ 15 | 0 | 38 |
| DIN 371 | HL | | 1870 IKZN | M | M6 ÷ M10 | 1; 2 | 9.1 ● | 10 ÷ 15 | 0 | 38 |
| DIN 376 | TiN | | 3660 | M | M3 ÷ M10 | 1; 2 | 9.1 ● | 8 ÷ 12 | 0 | 39 |
| DIN 376 | HL | | 3870 | M | M12 | 1; 2 | 9.1 ● | 10 ÷ 15 | 0 | 39 |
| DIN 376 | HL | | 3870 IKZN | M | M12 | 1; 2 | 9.1 ● | 10 ÷ 15 | 0 | 39 |
| DIN 371 | TiN | | 2260 | M | M3 ÷ M10 | 3; 4; 5 | 9.1 ● | 8 ÷ 12 | 0 | 40 |
| DIN 371 | HL | | 2320 | M | M3 ÷ M10 | 3; 4; 5 | 9.1 ● | 10 ÷ 15 | 0 | 40 |
| DIN 371 | HL | | 2320 IKZ | M | M5 ÷ M10 | 3; 4; 5 | 9.1 ● | 10 ÷ 15 | 0 | 40 |
| DIN 376 | TiN | | 4260 | M | M3 ÷ M36 | 3; 4; 5 | 9.1 ● | 8 ÷ 12 | 0 | 41 |
| DIN 376 | HL | | 4320 | M | M12 | 3; 4; 5 | 9.1 ● | 10 ÷ 15 | 0 | 41 |
| DIN 376 | HL | | 4320 IKZ | M | M12 | 3; 4; 5 | 9.1 ● | 10 ÷ 15 | 0 | 41 |
| DIN 2174 | TiN | | 2960 | M | M3 ÷ M12 | 1 ÷ 7 | 9.1 ● | 15 ÷ 30 | 0 | 68 |
| DIN 374 | TiN | | 3660 | MF | M3 ÷ M36 | 1; 2 | 9.1 ● | 8 ÷ 12 | 0 | 53 |
| DIN 374 | TiN | | 4260 | MF | M3 ÷ M36 | 3; 4; 5 | 9.1 ● | 8 ÷ 12 | 0 | 53 |
| DIN 5156 | TiN | | 3662 | G | G1/16" ÷ G1/2" | 1; 2 | 9.1 ● | 8 ÷ 12 | 0 | 61 |
| DIN 5156 | TiN | | 4262 | G | G1/16" ÷ G1/2" | 3; 4; 5 | 9.1 ● | 8 ÷ 12 | 0 | 61 |
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● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 10 / MATERIAL GROUP 10 / WERKSTOFFGRUPPE 10

| | |
|--|--|
| Slitiny mědi Copper alloys Kupferlegierungen | |
|--|--|

| Norma Standard Norm | | Kat. č. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V_c m/min | | Strana Page Seite |
|---------------------------|-----|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|----------------|-----|-------------------------|
| DIN 371 | | 1000 | M | M3 ÷ M10 | 2; 3 | 10.1 ● | 10 ÷ 15 | 0/E | 30 |
| DIN 371 | TiN | 1010 | M | M3 ÷ M10 | 2; 3 | 10.1 ● | 15 ÷ 25 | 0/E | 30 |
| DIN 376 | | 3000 | M | M3 ÷ M52 | 2; 3 | 10.1 ● | 10 ÷ 15 | 0/E | 31 |
| DIN 376 | TiN | 3010 | M | M3 ÷ M52 | 2; 3 | 10.1 ● | 15 ÷ 25 | 0/E | 31 |
| DIN 371 | | 1500 | M | M3 ÷ M10 | 1; 2 | 10.1 ● | 12 ÷ 20 | 0/E | 32 |
| DIN 371 | TiN | 1510 | M | M3 ÷ M10 | 1; 2 | 10.1 ● | 15 ÷ 25 | 0/E | 32 |
| DIN 376 | | 3500 | M | M3 ÷ M36 | 1; 2 | 10.1 ● | 12 ÷ 20 | 0/E | 33 |
| DIN 376 | TiN | 3510 | M | M3 ÷ M36 | 1; 2 | 10.1 ● | 15 ÷ 25 | 0/E | 33 |
| DIN 371 | | 2050 | M | M3 ÷ M10 | 3; 4; 5 | 10.2 ● | 6 ÷ 10 | 0 | 34 |
| DIN 371 | TiN | 2060 | M | M3 ÷ M10 | 3; 4; 5 | 10.2 ● | 10 ÷ 15 | 0 | 34 |
| DIN 376 | | 4050 | M | M3 ÷ M36 | 3; 4; 5 | 10.2 ● | 6 ÷ 10 | 0 | 35 |
| DIN 376 | TiN | 4060 | M | M3 ÷ M36 | 3; 4; 5 | 10.2 ● | 10 ÷ 15 | 0 | 35 |
| DIN 371 | | 2400 | M | M3 ÷ M10 | 3; 4; 5; 6 | 10.1 ● | 10 ÷ 15 | 0/E | 36 |
| DIN 371 | TiN | 2410 | M | M3 ÷ M10 | 3; 4; 5; 6 | 10.1 ● | 12 ÷ 20 | 0/E | 36 |
| DIN 376 | | 4400 | M | M3 ÷ M36 | 3; 4; 5; 6 | 10.1 ● | 10 ÷ 15 | 0/E | 37 |
| DIN 376 | TiN | 4410 | M | M3 ÷ M36 | 3; 4; 5; 6 | 10.1 ● | 12 ÷ 20 | 0/E | 37 |
| DIN 371 | TiN | 1660 | M | M3 ÷ M10 | 1; 2 | 10.2 ● | 10 ÷ 15 | 0 | 38 |
| DIN 371 | HL | 1870 | M | M6 ÷ M10 | 1; 2 | 10.2 ● | 12 ÷ 20 | 0 | 38 |
| DIN 371 | HL | 1870 IKZN | M | M6 ÷ M10 | 1; 2 | 10.2 ● | 12 ÷ 20 | 0 | 38 |
| DIN 376 | TiN | 3660 | M | M3 ÷ M36 | 1; 2 | 10.2 ● | 10 ÷ 15 | 0 | 39 |
| DIN 376 | HL | 3870 | M | M12 | 1; 2 | 10.2 ● | 12 ÷ 20 | 0 | 39 |
| DIN 376 | HL | 3870 IKZN | M | M12 | 1; 2 | 10.2 ● | 12 ÷ 20 | 0 | 39 |
| DIN 371 | TiN | 2260 | M | M3 ÷ M10 | 3; 4; 5 | 10.2 ● | 10 ÷ 15 | 0 | 40 |
| DIN 371 | HL | 2320 | M | M3 ÷ M10 | 3; 4; 5 | 10.2 ● | 12 ÷ 20 | 0 | 40 |
| DIN 371 | HL | 2320 IKZ | M | M5 ÷ M10 | 3; 4; 5 | 10.2 ● | 12 ÷ 20 | 0 | 40 |
| DIN 376 | TiN | 4260 | M | M3 ÷ M36 | 3; 4; 5 | 10.2 ● | 10 ÷ 15 | 0 | 41 |
| DIN 376 | HL | 4320 | M | M12 | 3; 4; 5 | 10.2 ● | 12 ÷ 20 | 0 | 41 |
| DIN 376 | HL | 4320 IKZ | M | M12 | 3; 4; 5 | 10.2 ● | 12 ÷ 20 | 0 | 41 |

● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

VOLBA ZÁVITNÍKU DLE OBRÁBĚNÉHO MATERIÁLU

TAP SELECTION ACCORDING TO MATERIAL GROUPS

GEWINDEBOHRERWAHL NACH WERKSTOFFGRUPPE

SKUPINA OBRÁBĚNÉHO MATERIÁLU 10 / MATERIAL GROUP 10 / WERKSTOFFGRUPPE 10

| | |
|--|--|
| Slitiny mědi Copper alloys Kupferlegierungen | |
|--|--|

| Norma Standard Norm | | Kat. č. Cat. No. Kat. Nr. | Závit Thread Gewinde | Rozsah Ø-Range Abmessungsbereich | Typ otvoru Hole type Lochform | Použití Application Anwendung | V_c m/min | | Strana Page Seite | |
|---------------------------|-----|---------------------------------|----------------------------|--|-------------------------------------|-------------------------------------|----------------|---------|-------------------------|----|
| DIN 371 | TiN | 1710 | M | M3 ÷ M10 | 1; 2 | 10.2 | ● | 12 ÷ 20 | 0 | 48 |
| DIN 376 | TiN | 3710 | M | M12 ÷ M20 | 1; 2 | 10.2 | ● | 12 ÷ 20 | 0 | 48 |
| DIN 371 | TiN | 2210 | M | M3 ÷ M10 | 3; 4; 5 | 10.2 | ● | 12 ÷ 20 | 0 | 48 |
| DIN 376 | TiN | 4210 | M | M12 ÷ M20 | 3; 4; 5 | 10.2 | ● | 12 ÷ 20 | 0 | 48 |
| DIN 352 | | 0550 | M | M3 ÷ M12 | 1; 2 | 10.1 | ● | 12 ÷ 20 | 0/E | 67 |
| DIN 352 | | 0600 | M | M3 ÷ M12 | 3; 4; 5 | 10.2 | ● | 6 ÷ 10 | 0 | 67 |
| DIN 352 | | 0650 | M | M3 ÷ M12 | 3; 4; 5; 6 | 10.1 | ● | 10 ÷ 15 | 0/E | 67 |
| DIN 374 | | 3000 | MF | M3 ÷ M52 | 2; 3 | 10.1 | ● | 10 ÷ 15 | 0/E | 49 |
| DIN 374 | TiN | 3010 | MF | M3 ÷ M52 | 2; 3 | 10.1 | ● | 15 ÷ 25 | 0/E | 49 |
| DIN 374 | | 3500 | MF | M3 ÷ M36 | 1; 2 | 10.1 | ● | 12 ÷ 20 | 0/E | 49 |
| DIN 374 | TiN | 3510 | MF | M3 ÷ M36 | 1; 2 | 10.1 | ● | 15 ÷ 25 | 0/E | 49 |
| DIN 374 | | 4050 | MF | M3 ÷ M36 | 3; 4; 5 | 10.2 | ● | 6 ÷ 10 | 0 | 51 |
| DIN 374 | TiN | 4060 | MF | M3 ÷ M36 | 3; 4; 5 | 10.2 | ● | 10 ÷ 15 | 0 | 51 |
| DIN 374 | TiN | 3660 | MF | M3 ÷ M36 | 1; 2 | 10.2 | ● | 10 ÷ 15 | 0 | 53 |
| DIN 374 | TiN | 4260 | MF | M3 ÷ M36 | 3; 4; 5 | 10.2 | ● | 10 ÷ 15 | 0 | 53 |
| DIN 5156 | | 3002 | G | G1/16" ÷ G2" | 2; 3 | 10.1 | ● | 10 ÷ 15 | 0/E | 59 |
| DIN 5156 | TiN | 3012 | G | G1/16" ÷ G2" | 2; 3 | 10.1 | ● | 15 ÷ 25 | 0/E | 59 |
| DIN 5156 | | 3502 | G | G1/16" ÷ G2" | 1; 2 | 10.1 | ● | 12 ÷ 20 | 0/E | 59 |
| DIN 5156 | TiN | 3512 | G | G1/16" ÷ G2" | 1; 2 | 10.1 | ● | 15 ÷ 25 | 0/E | 59 |
| DIN 5156 | | 4052 | G | G1/16" ÷ G11/2" | 3; 4; 5 | 10.2 | ● | 6 ÷ 10 | 0 | 60 |
| DIN 5156 | TiN | 4062 | G | G1/16" ÷ G11/2" | 3; 4; 5 | 10.2 | ● | 10 ÷ 15 | 0 | 60 |
| DIN 5156 | TiN | 3662 | G | G1/16" ÷ G11/2" | 1; 2 | 10.2 | ● | 10 ÷ 15 | 0 | 61 |
| DIN 5156 | TiN | 4262 | G | G1/16" ÷ G11/2" | 3; 4; 5 | 10.2 | ● | 10 ÷ 15 | 0 | 61 |
| ~ DIN 371 | | 1004 | UNC | 5-40 ÷ 3/8-16 | 2; 3 | 10.1 | ● | 10 ÷ 15 | 0/E | 62 |
| ~ DIN 371 | TiN | 1014 | UNC | 5-40 ÷ 3/8-16 | 2; 3 | 10.1 | ● | 15 ÷ 25 | 0/E | 62 |
| ~ DIN 376 | | 3004 | UNC | 7/16-14 ÷ 11/8-7 | 2; 3 | 10.1 | ● | 10 ÷ 15 | 0/E | 63 |
| ~ DIN 376 | TiN | 3014 | UNC | 7/16-14 ÷ 11/8-7 | 2; 3 | 10.1 | ● | 15 ÷ 25 | 0/E | 63 |
| ~ DIN 371 | | 1504 | UNC | 5-40 ÷ 3/8-16 | 1; 2 | 10.1 | ● | 12 ÷ 20 | 0/E | 62 |

● doporučené užití / recommended use / optimal

● možno použít / possible use / geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2



3000

8.2; 10.1; 1.1; 2.1; 6.1



3010

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3000 | 3010 |
|--|------|----------------|----------------|----------------|------|---|------|------------|------|
| | | | | | | | | TiN | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | |
| M 3 | 0,5 | 56 | 9 | 2,2 | - | 3 | 2,5 | ■ | ■ |
| M 3,5 | 0,6 | 56 | 11 | 2,5 | 2,1 | 3 | 2,9 | | |
| M 4 | 0,7 | 63 | 12 | 2,8 | 2,1 | 3 | 3,3 | ■ | ■ |
| M 4,5 | 0,75 | 70 | 13 | 3,5 | 2,7 | 3 | 3,7 | | |
| M 5 | 0,8 | 70 | 13 | 3,5 | 2,7 | 3 | 4,2 | ■ | ■ |
| M 6 | 1 | 80 | 15 | 4,5 | 3,4 | 3 | 5 | ■ | ■ |
| M 7 | 1 | 80 | 15 | 5,5 | 4,3 | 3 | 6 | ■ | ■ |
| M 8 | 1,25 | 90 | 18 | 6 | 4,9 | 3 | 6,8 | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 7 | 5,5 | 3 | 7,8 | | |
| M 10 | 1,5 | 100 | 20 | 7 | 5,5 | 3 | 8,5 | ■ | ■ |
| M 11 | 1,5 | 100 | 20 | 8 | 6,2 | 3 | 9,5 | | |
| M 12 | 1,75 | 110 | 23 | 9 | 7 | 3 | 10,2 | ■ | ■ |
| M 14 | 2 | 110 | 25 | 11 | 9 | 3 | 12 | ■ | ■ |
| M 16 | 2 | 110 | 25 | 12 | 9 | 3 | 14 | ■ | ■ |
| M 18 | 2,5 | 125 | 30 | 14 | 11 | 3 | 15,5 | ■ | ■ |
| M 20 | 2,5 | 140 | 30 | 16 | 12 | 3 | 17,5 | ■ | ■ |
| M 22 | 2,5 | 140 | 30 | 18 | 14,5 | 3 | 19,5 | ■ | ■ |
| M 24 | 3 | 160 | 36 | 18 | 14,5 | 4 | 21 | ■ | ■ |
| M 27 | 3 | 160 | 36 | 20 | 16 | 4 | 24 | ■ | ■ |
| M 30 | 3,5 | 180 | 40 | 22 | 18 | 4 | 26,5 | ■ | ■ |
| M 33 | 3,5 | 180 | 42 | 25 | 20 | 4 | 29,5 | ■ | ■ |
| M 36 | 4 | 200 | 50 | 28 | 22 | 4 | 32 | ■ | ■ |
| M 39 | 4 | 200 | 50 | 32 | 24 | 4 | 35 | ■ | ■ |
| M 42 | 4,5 | 200 | 56 | 32 | 24 | 4 | 37,5 | ■ | ■ |
| M 45 | 4,5 | 200 | 56 | 36 | 29 | 4 | 40,5 | ■ | ■ |
| M 48 | 5 | 250 | 63 | 36 | 29 | 4 | 43 | ■ | ■ |
| M 52 | 5 | 250 | 63 | 40 | 32 | 4 | 47 | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1



1500

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



1510

1.2; 2.2; 8.1; 11.1; 2.3; 8.2



1540

1.1; 1.2; 2.1; 2.2; 2.3; 8.1; 8.2



1750

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 1500 | 1500 | 1510 | 1540 | 1750 |
|--|------|----------------|----------------|----------------|-----|---|------|---|------|------|------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 2px;">TiN</div> <div style="border: 1px solid black; padding: 2px;">OX</div> </div> | | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | ISO 3 6G | | | | |
| M 2 | 0,4 | 45 | 8 | 2,8 | 2,1 | 3 | 1,6 | ■ | ■ | ■ | ■ | ■ |
| M 2,5 | 0,45 | 50 | 9 | 2,8 | 2,1 | 3 | 2,05 | ■ | ■ | ■ | ■ | ■ |
| M 3 | 0,5 | 56 | 9 | 3,5 | 2,7 | 3 | 2,5 | ■ | ■ | ■ | ■ | ■ |
| M 3,5 | 0,6 | 56 | 11 | 4 | 3 | 3 | 2,9 | ■ | ■ | ■ | ■ | ■ |
| M 4 | 0,7 | 63 | 12 | 4,5 | 3,4 | 3 | 3,3 | ■ | ■ | ■ | ■ | ■ |
| M 4,5 | 0,75 | 70 | 13 | 6 | 4,9 | 3 | 3,7 | ■ | ■ | ■ | ■ | ■ |
| M 5 | 0,8 | 70 | 13 | 6 | 4,9 | 3 | 4,2 | ■ | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 15 | 6 | 4,9 | 3 | 5 | ■ | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 15 | 7 | 5,5 | 3 | 6 | ■ | ■ | ■ | ■ | ■ |
| M 8 | 1,25 | 90 | 18 | 8 | 6,2 | 3 | 6,8 | ■ | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 9 | 7 | 3 | 7,8 | ■ | ■ | ■ | ■ | ■ |
| M 10 | 1,5 | 100 | 20 | 10 | 8 | 3 | 8,5 | ■ | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1



3500

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



3510

1.2; 2.2; 8.1; 11.1; 2.3; 8.2



3540

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3500 | 3500 | 3510 | 3540 |
|--|------|----------------|----------------|----------------|------|---|------|-------------|------|------------|-----------|
| | | | | | | | | | | TiN | OX |
| | | | | | | | | ISO 3 6G | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| M 3 | 0,5 | 56 | 9 | 2,2 | - | 3 | 2,5 | ■ | | ■ | ■ |
| M 3,5 | 0,6 | 56 | 11 | 2,5 | 2,1 | 3 | 2,9 | | | | |
| M 4 | 0,7 | 63 | 12 | 2,8 | 2,1 | 3 | 3,3 | ■ | | ■ | ■ |
| M 4,5 | 0,75 | 70 | 13 | 3,5 | 2,7 | 3 | 3,7 | | | | |
| M 5 | 0,8 | 70 | 13 | 3,5 | 2,7 | 3 | 4,2 | ■ | | ■ | ■ |
| M 6 | 1 | 80 | 15 | 4,5 | 3,4 | 3 | 5 | ■ | | ■ | ■ |
| M 7 | 1 | 80 | 15 | 5,5 | 4,3 | 3 | 6 | ■ | | ■ | ■ |
| M 8 | 1,25 | 90 | 18 | 6 | 4,9 | 3 | 6,8 | ■ | | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 7 | 5,5 | 3 | 7,8 | | | | |
| M 10 | 1,5 | 100 | 20 | 7 | 5,5 | 3 | 8,5 | ■ | | ■ | ■ |
| M 11 | 1,5 | 100 | 20 | 8 | 6,2 | 3 | 9,5 | | | | |
| M 12 | 1,75 | 110 | 23 | 9 | 7 | 3 | 10,2 | ■ | ■ | ■ | ■ |
| M 14 | 2 | 110 | 25 | 11 | 9 | 3 | 12 | ■ | ■ | ■ | ■ |
| M 16 | 2 | 110 | 25 | 12 | 9 | 3 | 14 | ■ | ■ | ■ | ■ |
| M 18 | 2,5 | 125 | 30 | 14 | 11 | 3 | 15,5 | ■ | ■ | ■ | ■ |
| M 20 | 2,5 | 140 | 30 | 16 | 12 | 3 | 17,5 | ■ | | ■ | ■ |
| M 22 | 2,5 | 140 | 30 | 18 | 14,5 | 3 | 19,5 | ■ | | ■ | ■ |
| M 24 | 3 | 160 | 36 | 18 | 14,5 | 4 | 21 | ■ | | ■ | ■ |
| M 27 | 3 | 160 | 36 | 20 | 16 | 4 | 24 | ■ | | ■ | ■ |
| M 30 | 3,5 | 180 | 40 | 22 | 18 | 4 | 26,5 | ■ | | ■ | ■ |
| M 33 | 3,5 | 180 | 42 | 25 | 20 | 4 | 29,5 | ■ | | ■ | ■ |
| M 36 | 4 | 200 | 50 | 28 | 22 | 4 | 32 | ■ | | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



2050

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



2060

11.1; 2.2; 2.3; 8.1; 8.2



2090

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 2050 | 2050 | 2060 | 2090 |
|--|------|----------------|----------------|----------------|-----|---|------|----------|------|------|------|
| | | | | | | | | | | TiN | OX |
| | | | | | | | | ISO 3 6G | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| M 2 | 0,4 | 45 | 6 | 2,8 | 2,1 | 3 | 1,6 | ■ | | ■ | ■ |
| M 2,5 | 0,45 | 50 | 7,5 | 2,8 | 2,1 | 3 | 2,05 | ■ | | ■ | ■ |
| M 3 | 0,5 | 56 | 5 | 3,5 | 2,7 | 3 | 2,5 | ■ | ■ | ■ | ■ |
| M 3,5 | 0,6 | 56 | 6 | 4 | 3 | 3 | 2,9 | ■ | | ■ | ■ |
| M 4 | 0,7 | 63 | 7 | 4,5 | 3,4 | 3 | 3,3 | ■ | ■ | ■ | ■ |
| M 4,5 | 0,75 | 70 | 8 | 6 | 4,9 | 3 | 3,7 | ■ | | ■ | ■ |
| M 5 | 0,8 | 70 | 8 | 6 | 4,9 | 3 | 4,2 | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 10 | 6 | 4,9 | 3 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 10 | 7 | 5,5 | 3 | 6 | ■ | | ■ | ■ |
| M 8 | 1,25 | 90 | 13 | 8 | 6,2 | 3 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 13 | 9 | 7 | 3 | 7,8 | ■ | | ■ | ■ |
| M 10 | 1,5 | 100 | 15 | 10 | 8 | 3 | 8,5 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



4050

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



4060

11.1; 2.2; 2.3; 8.1; 8.2



4090

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 4050 | 4050 | 4060 | 4090 |
|--|------|----------------|----------------|----------------|------|---|------|------|-------------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | | TiN | OX |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | ISO 3 6G | | |
| M 3 | 0,5 | 56 | 5 | 2,2 | - | 3 | 2,5 | ■ | | ■ | ■ |
| M 3,5 | 0,6 | 56 | 6 | 2,5 | 2,1 | 3 | 2,9 | ■ | | ■ | ■ |
| M 4 | 0,7 | 63 | 7 | 2,8 | 2,1 | 3 | 3,3 | ■ | | ■ | ■ |
| M 4,5 | 0,75 | 70 | 8 | 3,5 | 2,7 | 3 | 3,7 | ■ | | ■ | ■ |
| M 5 | 0,8 | 70 | 8 | 3,5 | 2,7 | 3 | 4,2 | ■ | | ■ | ■ |
| M 6 | 1 | 80 | 10 | 4,5 | 3,4 | 3 | 5 | ■ | | ■ | ■ |
| M 7 | 1 | 80 | 10 | 5,5 | 4,3 | 3 | 6 | ■ | | ■ | ■ |
| M 8 | 1,25 | 90 | 13 | 6 | 4,9 | 3 | 6,8 | ■ | | ■ | ■ |
| M 9 | 1,25 | 90 | 13 | 7 | 5,5 | 3 | 7,8 | ■ | | ■ | ■ |
| M 10 | 1,5 | 100 | 15 | 7 | 5,5 | 3 | 8,5 | ■ | | ■ | ■ |
| M 11 | 1,5 | 100 | 15 | 8 | 6,2 | 3 | 9,5 | ■ | | ■ | ■ |
| M 12 | 1,75 | 110 | 18 | 9 | 7 | 3 | 10,2 | ■ | ■ | ■ | ■ |
| M 14 | 2 | 110 | 20 | 11 | 9 | 3 | 12 | ■ | ■ | ■ | ■ |
| M 16 | 2 | 110 | 20 | 12 | 9 | 4 | 14 | ■ | ■ | ■ | ■ |
| M 18 | 2,5 | 125 | 25 | 14 | 11 | 4 | 15,5 | ■ | ■ | ■ | ■ |
| M 20 | 2,5 | 140 | 25 | 16 | 12 | 4 | 17,5 | ■ | ■ | ■ | ■ |
| M 22 | 2,5 | 140 | 25 | 18 | 14,5 | 4 | 19,5 | ■ | ■ | ■ | ■ |
| M 24 | 3 | 160 | 30 | 18 | 14,5 | 4 | 21 | ■ | ■ | ■ | ■ |
| M 27 | 3 | 160 | 30 | 20 | 16 | 4 | 24 | ■ | ■ | ■ | ■ |
| M 30 | 3,5 | 180 | 35 | 22 | 18 | 4 | 26,5 | ■ | ■ | ■ | ■ |
| M 33 | 3,5 | 180 | 35 | 25 | 20 | 4 | 29,5 | ■ | ■ | ■ | ■ |
| M 36 | 4 | 200 | 40 | 28 | 22 | 4 | 32 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

| | | |
|------------------------------|--|-------------|
| 10.1; 2.2 | | 2400 |
| 2.2; 10.1; 6.2 | | 2410 |
| 1.1; 1.2; 2.1; 2.2; 8.1; 9.1 | | 2360 |
| 1.2; 1.1; 2.1; 2.2; 8.1 | | 2390 |

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 2400 | 2410 | 2360 | 2390 |
|--|------|----------------|----------------|----------------|-----|---|------|------|------------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiN | TiN | OX |
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| M 3 | 0,5 | 56 | 5 | 3,5 | 2,7 | 3 | 2,5 | ■ | ■ | ■ | ■ |
| M 3,5 | 0,6 | 56 | 6 | 4 | 3 | 3 | 2,9 | ■ | ■ | ■ | ■ |
| M 4 | 0,7 | 63 | 7 | 4,5 | 3,4 | 3 | 3,3 | ■ | ■ | ■ | ■ |
| M 4,5 | 0,75 | 70 | 8 | 6 | 4,9 | 3 | 3,7 | ■ | ■ | ■ | ■ |
| M 5 | 0,8 | 70 | 8 | 6 | 4,9 | 3 | 4,2 | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 10 | 6 | 4,9 | 3 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 10 | 7 | 5,5 | 3 | 6 | ■ | ■ | ■ | ■ |
| M 8 | 1,25 | 90 | 13 | 8 | 6,2 | 3 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 13 | 9 | 7 | 3 | 7,8 | ■ | ■ | ■ | ■ |
| M 10 | 1,5 | 100 | 15 | 10 | 8 | 3 | 8,5 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

10.1; 2.2



4400

2.2; 10.1; 6.2



4410

1.1; 1.2; 2.1; 2.2; 8.1; 9.1



4360

1.2; 1.1; 2.1; 8.1



4390

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 4400 | 4410 | 4360 | 4390 |
|--|------|----------------|----------------|----------------|------|---|------|------|------------|------------|-----------|
| | | | | | | | | | TiN | TiN | OX |
| | | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| M 3 | 0,5 | 56 | 5 | 2,2 | - | 3 | 2,5 | ■ | ■ | ■ | ■ |
| M 3,5 | 0,6 | 56 | 6 | 2,5 | 2,1 | 3 | 2,9 | | | | |
| M 4 | 0,7 | 63 | 7 | 2,8 | 2,1 | 3 | 3,3 | ■ | ■ | ■ | ■ |
| M 4,5 | 0,75 | 70 | 8 | 3,5 | 2,7 | 3 | 3,7 | | | | |
| M 5 | 0,8 | 70 | 8 | 3,5 | 2,7 | 3 | 4,2 | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 10 | 4,5 | 3,4 | 3 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 10 | 5,5 | 4,3 | 3 | 6 | | | | |
| M 8 | 1,25 | 90 | 13 | 6 | 4,9 | 3 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 13 | 7 | 5,5 | 3 | 7,8 | | | | |
| M 10 | 1,5 | 100 | 15 | 7 | 5,5 | 3 | 8,5 | ■ | ■ | ■ | ■ |
| M 11 | 1,5 | 100 | 15 | 8 | 6,2 | 3 | 9,5 | | | | |
| M 12 | 1,75 | 110 | 18 | 9 | 7 | 3 | 10,2 | ■ | ■ | ■ | ■ |
| M 14 | 2 | 110 | 20 | 11 | 9 | 3 | 12 | ■ | ■ | ■ | ■ |
| M 16 | 2 | 110 | 20 | 12 | 9 | 4 | 14 | ■ | ■ | ■ | ■ |
| M 18 | 2,5 | 125 | 25 | 14 | 11 | 4 | 15,5 | ■ | ■ | ■ | ■ |
| M 20 | 2,5 | 140 | 25 | 16 | 12 | 4 | 17,5 | ■ | ■ | ■ | ■ |
| M 22 | 2,5 | 140 | 25 | 18 | 14,5 | 4 | 19,5 | ■ | ■ | ■ | ■ |
| M 24 | 3 | 160 | 30 | 18 | 14,5 | 4 | 21 | ■ | ■ | | |
| M 27 | 3 | 160 | 30 | 20 | 16 | 4 | 24 | | | | |
| M 30 | 3,5 | 180 | 35 | 22 | 18 | 4 | 26,5 | | | | |
| M 33 | 3,5 | 180 | 35 | 25 | 20 | 4 | 29,5 | | | | |
| M 36 | 4 | 200 | 40 | 28 | 22 | 4 | 32 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



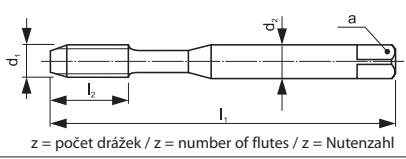
Skupina obráběného materiálu
Material group / Werkstoffgruppe

3.1; 5.1; 5.2; 9.1; 10.2  **1660**

3.1; 5.1; 5.2  **1690**

3.1; 5.1; 5.2; 9.1; 10.2; 3.3  **1870**

3.1; 5.1; 5.2; 9.1; 10.2; 3.3  **1870 IKZN**

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 1660 | 1690 | 1870 | 1870 IKZN |
|--|------|----------------|----------------|----------------|-----|---|------|-------------|-------------|----------------|----------------------------|
|  | | | | | | | | TiN | OX | HL | HL |
| | | | | | | | | HSSE | HSSE | HSSE PM | HSSE PM IKZN |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| M 3 | 0,5 | 56 | 9 | 3,5 | 2,7 | 3 | 2,5 | ■ | ■ | ■ | |
| M 3,5 | 0,6 | 56 | 11 | 4 | 3 | 3 | 2,9 | | | | |
| M 4 | 0,7 | 63 | 12 | 4,5 | 3,4 | 3 | 3,3 | ■ | ■ | ■ | |
| M 4,5 | 0,75 | 70 | 13 | 6 | 4,9 | 3 | 3,7 | | | | |
| M 5 | 0,8 | 70 | 13 | 6 | 4,9 | 3 | 4,2 | ■ | ■ | ■ | |
| M 6 | 1 | 80 | 15 | 6 | 4,9 | 3 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 15 | 7 | 5,5 | 3 | 6 | | | | |
| M 8 | 1,25 | 90 | 18 | 8 | 6,2 | 3 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 9 | 7 | 3 | 7,8 | | | | |
| M 10 | 1,5 | 100 | 20 | 10 | 8 | 3 | 8,5 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer




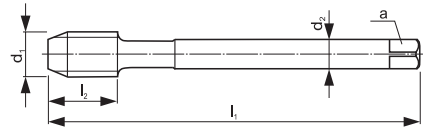

Skupina obráběného materiálu
Material group / Werkstoffgruppe

3.1; 5.1; 5.2; 9.1; 10.2  **3660**

3.1; 5.1; 5.2  **3690**

3.1; 5.1; 5.2; 9.1; 10.2; 3.3  **3870**

3.1; 5.1; 5.2; 9.1; 10.2; 3.3  **3870 IKZN**

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3660 | 3690 | 3870 | 3870 IKZN |
|--|------|----------------|----------------|----------------|------|---|------|-------------|-------------|----------------|----------------------------|
|  <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | TiN | OX | HL | HL |
|  | | | | | | | | HSSE | HSSE | HSSE PM | HSSE PM IKZN |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| M 3 | 0,5 | 56 | 9 | 2,2 | - | 3 | 2,5 | ■ | ■ | | |
| M 3,5 | 0,6 | 56 | 11 | 2,5 | 2,1 | 3 | 2,9 | ■ | ■ | | |
| M 4 | 0,7 | 63 | 12 | 2,8 | 2,1 | 3 | 3,3 | ■ | ■ | | |
| M 4,5 | 0,75 | 70 | 13 | 3,5 | 2,7 | 3 | 3,7 | ■ | ■ | | |
| M 5 | 0,8 | 70 | 13 | 3,5 | 2,7 | 3 | 4,2 | ■ | ■ | | |
| M 6 | 1 | 80 | 15 | 4,5 | 3,4 | 3 | 5 | ■ | ■ | | |
| M 7 | 1 | 80 | 15 | 5,5 | 4,3 | 3 | 6 | ■ | ■ | | |
| M 8 | 1,25 | 90 | 18 | 6 | 4,9 | 3 | 6,8 | ■ | ■ | | |
| M 9 | 1,25 | 90 | 18 | 7 | 5,5 | 3 | 7,8 | ■ | ■ | | |
| M 10 | 1,5 | 100 | 20 | 7 | 5,5 | 3 | 8,5 | ■ | ■ | | |
| M 11 | 1,5 | 100 | 20 | 8 | 6,2 | 3 | 9,5 | ■ | ■ | | |
| M 12 | 1,75 | 110 | 23 | 9 | 7 | 3 | 10,2 | ■ | ■ | ■ | ■ |
| M 14 | 2 | 110 | 25 | 11 | 9 | 3 | 12 | ■ | ■ | | |
| M 16 | 2 | 110 | 25 | 12 | 9 | 3 | 14 | ■ | ■ | | |
| M 18 | 2,5 | 125 | 30 | 14 | 11 | 3 | 15,5 | ■ | ■ | | |
| M 20 | 2,5 | 140 | 30 | 16 | 12 | 3 | 17,5 | ■ | ■ | | |
| M 22 | 2,5 | 140 | 30 | 18 | 14,5 | 3 | 19,5 | ■ | ■ | | |
| M 24 | 3 | 160 | 36 | 18 | 14,5 | 4 | 21 | ■ | ■ | | |
| M 27 | 3 | 160 | 36 | 20 | 16 | 4 | 24 | ■ | ■ | | |
| M 30 | 3,5 | 180 | 40 | 22 | 18 | 4 | 26,5 | ■ | ■ | | |
| M 33 | 3,5 | 180 | 42 | 25 | 20 | 4 | 29,5 | | | | |
| M 36 | 4 | 200 | 50 | 28 | 22 | 4 | 32 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

- 3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1 **2260**
- 3.1; 5.1; 5.2 **2290**
- 3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1 **2320**
- 3.1; 5.1; 5.2 **2320 IKZ**

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 2260 | 2290 | 2320 | 2320 IKZ |
|--|------|----------------|----------------|----------------|-----|---|------|-------------|-------------|----------------|---------------------------|
| | | | | | | | | TiN | OX | HL | HL |
| | | | | | | | | HSSE | HSSE | HSSE PM | HSSE PM IKZ |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | ■ | ■ | ■ | ■ |
| M 3 | 0,5 | 56 | 5 | 3,5 | 2,7 | 3 | 2,5 | ■ | ■ | ■ | |
| M 3,5 | 0,6 | 56 | 6 | 4 | 3 | 3 | 2,9 | ■ | ■ | ■ | |
| M 4 | 0,7 | 63 | 7 | 4,5 | 3,4 | 3 | 3,3 | ■ | ■ | ■ | |
| M 4,5 | 0,75 | 70 | 8 | 6 | 4,9 | 3 | 3,7 | ■ | ■ | ■ | |
| M 5 | 0,8 | 70 | 8 | 6 | 4,9 | 3 | 4,2 | ■ | ■ | ■ | |
| M 6 | 1 | 80 | 10 | 6 | 4,9 | 3 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 10 | 7 | 5,5 | 3 | 6 | ■ | ■ | ■ | |
| M 8 | 1,25 | 90 | 13 | 8 | 6,2 | 3 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 13 | 9 | 7 | 3 | 7,8 | ■ | ■ | ■ | |
| M 10 | 1,5 | 100 | 15 | 10 | 8 | 3 | 8,5 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1



4260

3.1; 5.1; 5.2



4290

3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1



4320

3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1



4320 IKZ

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 4260 | 4290 | 4320 | 4320 IKZ |
|--|------|----------------|----------------|----------------|------|---|------|-------------|-------------|----------------|---------------------------|
| | | | | | | | | TiN | OX | HL | HL |
| | | | | | | | | HSSE | HSSE | HSSE PM | HSSE PM IKZ |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| M 3 | 0,5 | 56 | 5 | 2,2 | - | 3 | 2,5 | ■ | ■ | | |
| M 3,5 | 0,6 | 56 | 6 | 2,5 | 2,1 | 3 | 2,9 | | | | |
| M 4 | 0,7 | 63 | 7 | 2,8 | 2,1 | 3 | 3,3 | ■ | ■ | | |
| M 4,5 | 0,75 | 70 | 8 | 3,5 | 2,7 | 3 | 3,7 | | | | |
| M 5 | 0,8 | 70 | 8 | 3,5 | 2,7 | 3 | 4,2 | ■ | ■ | | |
| M 6 | 1 | 80 | 10 | 4,5 | 3,4 | 3 | 5 | ■ | ■ | | |
| M 7 | 1 | 80 | 10 | 5,5 | 4,3 | 3 | 6 | | | | |
| M 8 | 1,25 | 90 | 13 | 6 | 4,9 | 3 | 6,8 | ■ | ■ | | |
| M 9 | 1,25 | 90 | 13 | 7 | 5,5 | 3 | 7,8 | | | | |
| M 10 | 1,5 | 100 | 15 | 7 | 5,5 | 3 | 8,5 | ■ | ■ | | |
| M 11 | 1,5 | 100 | 15 | 8 | 6,2 | 3 | 9,5 | | | | |
| M 12 | 1,75 | 110 | 18 | 9 | 7 | 3 | 10,2 | ■ | ■ | ■ | ■ |
| M 14 | 2 | 110 | 20 | 11 | 9 | 3 | 12 | ■ | ■ | | |
| M 16 | 2 | 110 | 20 | 12 | 9 | 4 | 14 | ■ | ■ | | |
| M 18 | 2,5 | 125 | 25 | 14 | 11 | 4 | 15,5 | ■ | ■ | | |
| M 20 | 2,5 | 140 | 25 | 16 | 12 | 4 | 17,5 | ■ | ■ | | |
| M 22 | 2,5 | 140 | 25 | 18 | 14,5 | 4 | 19,5 | ■ | ■ | | |
| M 24 | 3 | 160 | 30 | 18 | 14,5 | 4 | 21 | ■ | ■ | | |
| M 27 | 3 | 160 | 30 | 20 | 16 | 4 | 24 | ■ | ■ | | |
| M 30 | 3,5 | 180 | 35 | 22 | 18 | 4 | 26,5 | ■ | ■ | | |
| M 33 | 3,5 | 180 | 35 | 25 | 20 | 4 | 29,5 | | | | |
| M 36 | 4 | 200 | 40 | 28 | 22 | 4 | 32 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

| | | |
|--------------------|--|-------------|
| 3.1; 3.2; 3.3; 6.2 | | 1580 |
| 3.2; 8.2 | | 1590 |
| 3.2; 3.1; 3.3; 6.2 | | 2680 |
| 3.2 | | 2690 |

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 1580 | 1590 | 2680 | 2690 |
|--|------|----------------|----------------|--------------------|----------------|-----|---|------|-------------|-----------|-------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiCN | OX | TiCN | OX |
| | | | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | l _{2R40°} | d ₂ | a | z | Ø mm | | | | |
| M 3 | 0,5 | 56 | 9 | 5 | 3,5 | 2,7 | 3 | 2,5 | ■ | ■ | ■ | ■ |
| M 3,5 | 0,6 | 56 | 11 | 6 | 4 | 3 | 3 | 2,9 | ■ | ■ | ■ | ■ |
| M 4 | 0,7 | 63 | 12 | 7 | 4,5 | 3,4 | 3 | 3,3 | ■ | ■ | ■ | ■ |
| M 4,5 | 0,75 | 70 | 13 | 8 | 6 | 4,9 | 3 | 3,7 | ■ | ■ | ■ | ■ |
| M 5 | 0,8 | 70 | 13 | 8 | 6 | 4,9 | 3 | 4,2 | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 15 | 10 | 6 | 4,9 | 3 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 15 | 10 | 7 | 5,5 | 3 | 6 | ■ | ■ | ■ | ■ |
| M 8 | 1,25 | 90 | 18 | 13 | 8 | 6,2 | 3 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 13 | 9 | 7 | 3 | 7,8 | ■ | ■ | ■ | ■ |
| M 10 | 1,5 | 100 | 20 | 15 | 10 | 8 | 3 | 8,5 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

3.1; 3.2; 3.3; 6.2



3580

3.2; 8.2



3590

3.2; 3.1; 3.3; 6.2



4680

3.2



4690

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 3580 | 3590 | 4680 | 4690 |
|--|------|----------------|----------------|--------------------|----------------|------|-----------|------|-------------|-----------|-------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiCN | OX | TiCN | OX |
| | | | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | l _{2R40°} | d ₂ | a | z / ZR40° | Ø mm | | | | |
| M 3 | 0,5 | 56 | 9 | 5 | 2,2 | - | 3/3 | 2,5 | ■ | ■ | ■ | ■ |
| M 3,5 | 0,6 | 56 | 11 | 6 | 2,5 | 2,1 | 3/3 | 2,9 | ■ | ■ | ■ | ■ |
| M 4 | 0,7 | 63 | 12 | 7 | 2,8 | 2,1 | 3/3 | 3,3 | ■ | ■ | ■ | ■ |
| M 4,5 | 0,75 | 70 | 13 | 8 | 3,5 | 2,7 | 3/3 | 3,7 | ■ | ■ | ■ | ■ |
| M 5 | 0,8 | 70 | 13 | 8 | 3,5 | 2,7 | 3/3 | 4,2 | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 15 | 10 | 4,5 | 3,4 | 3/3 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 15 | 10 | 5,5 | 4,3 | 3/3 | 6 | ■ | ■ | ■ | ■ |
| M 8 | 1,25 | 90 | 18 | 13 | 6 | 4,9 | 3/3 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 13 | 7 | 5,5 | 3/3 | 7,8 | ■ | ■ | ■ | ■ |
| M 10 | 1,5 | 100 | 20 | 15 | 7 | 5,5 | 3/3 | 8,5 | ■ | ■ | ■ | ■ |
| M 11 | 1,5 | 100 | 20 | 15 | 8 | 6,2 | 3/3 | 9,5 | ■ | ■ | ■ | ■ |
| M 12 | 1,75 | 110 | 23 | 18 | 9 | 7 | 3/4 | 10,2 | ■ | ■ | ■ | ■ |
| M 14 | 2 | 110 | 25 | 20 | 11 | 9 | 3/4 | 12 | ■ | ■ | ■ | ■ |
| M 16 | 2 | 110 | 25 | 20 | 12 | 9 | 3/4 | 14 | ■ | ■ | ■ | ■ |
| M 18 | 2,5 | 125 | 30 | 25 | 14 | 11 | 3/4 | 15,5 | ■ | ■ | ■ | ■ |
| M 20 | 2,5 | 140 | 30 | 25 | 16 | 12 | 3/4 | 17,5 | ■ | ■ | ■ | ■ |
| M 22 | 2,5 | 140 | 30 | 25 | 18 | 14,5 | 3/4 | 19,5 | ■ | ■ | ■ | ■ |
| M 24 | 3 | 160 | 36 | 30 | 18 | 14,5 | 4/4 | 21 | ■ | ■ | ■ | ■ |
| M 27 | 3 | 160 | 36 | 30 | 20 | 16 | 4/4 | 24 | ■ | ■ | ■ | ■ |
| M 30 | 3,5 | 180 | 40 | 35 | 22 | 18 | 4/5 | 26,5 | ■ | ■ | ■ | ■ |
| M 33 | 3,5 | 180 | 42 | 35 | 25 | 20 | 4/5 | 29,5 | ■ | ■ | ■ | ■ |
| M 36 | 4 | 200 | 50 | 40 | 28 | 22 | 4/5 | 32 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

| | | |
|----------|--|-------------|
| 4.2; 4.1 | | 1920 |
| 4.2; 4.1 | | 3920 |
| 4.2; 4.1 | | 2820 |
| 4.2; 4.1 | | 4820 |
| 4.1; 4.2 | | 2870 |
| 4.1; 4.2 | | 4870 |

| Katalogové číslo / Cat. No. / Kat. Nr. | | 1920 | | 2820 | | 2870 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|------|----------------|----------------|--------------------|----------------|--------------------|----------------|------|---|------|-----|-----|----|---|---|-----|-----|---|-----|-------|-----|----|----|---|---|---|---|-----|-----|-----|----|----|---|-----|-----|---|-----|-------|------|----|----|---|---|-----|---|-----|-----|-----|----|----|---|---|-----|---|-----|-----|---|----|----|----|---|-----|---|---|-----|---|----|----|----|---|-----|---|---|-----|------|----|----|----|---|-----|---|-----|-----|------|----|----|----|---|---|---|-----|------|-----|-----|----|----|----|---|---|-----|--|--|--|--|--|--|
| <p>DIN 371</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | FNT | | FNT | | FNT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>d₁</th> <th>P</th> <th>l₁</th> <th>l₂</th> <th>l_{2R40°}</th> <th>d₂</th> <th>a</th> <th>z</th> <th>Ø mm</th> </tr> </thead> <tbody> <tr><td>M 3</td><td>0,5</td><td>56</td><td>9</td><td>5</td><td>3,5</td><td>2,7</td><td>3</td><td>2,5</td></tr> <tr><td>M 3,5</td><td>0,6</td><td>56</td><td>11</td><td>6</td><td>4</td><td>3</td><td>3</td><td>2,9</td></tr> <tr><td>M 4</td><td>0,7</td><td>63</td><td>12</td><td>7</td><td>4,5</td><td>3,4</td><td>3</td><td>3,3</td></tr> <tr><td>M 4,5</td><td>0,75</td><td>70</td><td>13</td><td>8</td><td>6</td><td>4,9</td><td>3</td><td>3,7</td></tr> <tr><td>M 5</td><td>0,8</td><td>70</td><td>13</td><td>8</td><td>6</td><td>4,9</td><td>3</td><td>4,2</td></tr> <tr><td>M 6</td><td>1</td><td>80</td><td>15</td><td>10</td><td>6</td><td>4,9</td><td>3</td><td>5</td></tr> <tr><td>M 7</td><td>1</td><td>80</td><td>15</td><td>10</td><td>7</td><td>5,5</td><td>3</td><td>6</td></tr> <tr><td>M 8</td><td>1,25</td><td>90</td><td>18</td><td>13</td><td>8</td><td>6,2</td><td>3</td><td>6,8</td></tr> <tr><td>M 9</td><td>1,25</td><td>90</td><td>18</td><td>13</td><td>9</td><td>7</td><td>3</td><td>7,8</td></tr> <tr><td>M 10</td><td>1,5</td><td>100</td><td>20</td><td>15</td><td>10</td><td>8</td><td>3</td><td>8,5</td></tr> </tbody> </table> | | d ₁ | P | l ₁ | l ₂ | l _{2R40°} | d ₂ | a | z | Ø mm | M 3 | 0,5 | 56 | 9 | 5 | 3,5 | 2,7 | 3 | 2,5 | M 3,5 | 0,6 | 56 | 11 | 6 | 4 | 3 | 3 | 2,9 | M 4 | 0,7 | 63 | 12 | 7 | 4,5 | 3,4 | 3 | 3,3 | M 4,5 | 0,75 | 70 | 13 | 8 | 6 | 4,9 | 3 | 3,7 | M 5 | 0,8 | 70 | 13 | 8 | 6 | 4,9 | 3 | 4,2 | M 6 | 1 | 80 | 15 | 10 | 6 | 4,9 | 3 | 5 | M 7 | 1 | 80 | 15 | 10 | 7 | 5,5 | 3 | 6 | M 8 | 1,25 | 90 | 18 | 13 | 8 | 6,2 | 3 | 6,8 | M 9 | 1,25 | 90 | 18 | 13 | 9 | 7 | 3 | 7,8 | M 10 | 1,5 | 100 | 20 | 15 | 10 | 8 | 3 | 8,5 | | | | | | |
| d ₁ | P | l ₁ | l ₂ | l _{2R40°} | d ₂ | a | z | Ø mm | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M 3 | 0,5 | 56 | 9 | 5 | 3,5 | 2,7 | 3 | 2,5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M 3,5 | 0,6 | 56 | 11 | 6 | 4 | 3 | 3 | 2,9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M 4 | 0,7 | 63 | 12 | 7 | 4,5 | 3,4 | 3 | 3,3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M 4,5 | 0,75 | 70 | 13 | 8 | 6 | 4,9 | 3 | 3,7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M 5 | 0,8 | 70 | 13 | 8 | 6 | 4,9 | 3 | 4,2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M 6 | 1 | 80 | 15 | 10 | 6 | 4,9 | 3 | 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M 7 | 1 | 80 | 15 | 10 | 7 | 5,5 | 3 | 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M 8 | 1,25 | 90 | 18 | 13 | 8 | 6,2 | 3 | 6,8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M 9 | 1,25 | 90 | 18 | 13 | 9 | 7 | 3 | 7,8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M 10 | 1,5 | 100 | 20 | 15 | 10 | 8 | 3 | 8,5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | ■ | | ■ | | ■ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Katalogové číslo / Cat. No. / Kat. Nr. | | 3920 | | 4820 | | 4870 | | | | | | | | | | | | | | | | | | | |
|---|------|----------------|----------------|--------------------|----------------|--------------------|----------------|------|---|------|------|------|-----|----|----|---|---|---|------|--|--|--|--|--|--|
| <p>DIN 376</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | FNT | | FNT | | FNT | | | | | | | | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>d₁</th> <th>P</th> <th>l₁</th> <th>l₂</th> <th>l_{2R40°}</th> <th>d₂</th> <th>a</th> <th>z</th> <th>Ø mm</th> </tr> </thead> <tbody> <tr><td>M 12</td><td>1,75</td><td>110</td><td>23</td><td>18</td><td>9</td><td>7</td><td>3</td><td>10,2</td></tr> </tbody> </table> | | d ₁ | P | l ₁ | l ₂ | l _{2R40°} | d ₂ | a | z | Ø mm | M 12 | 1,75 | 110 | 23 | 18 | 9 | 7 | 3 | 10,2 | | | | | | |
| d ₁ | P | l ₁ | l ₂ | l _{2R40°} | d ₂ | a | z | Ø mm | | | | | | | | | | | | | | | | | |
| M 12 | 1,75 | 110 | 23 | 18 | 9 | 7 | 3 | 10,2 | | | | | | | | | | | | | | | | | |
| | | ■ | | ■ | | ■ | | | | | | | | | | | | | | | | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe



| | | | |
|-----|-------------|-----|-------------|
| 8.2 | 1570 | 7.1 | 1620 |
| 8.2 | 3570 | 7.1 | 3620 |
| 8.2 | 2670 | 7.1 | 2720 |
| 8.2 | 4670 | 7.1 | 4720 |

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 1570 | 1620 | 2670 | 2720 |
|---|------|----------------|----------------|-------------------|----------------|-----|-----------|------|------|------|------|------|
| <p>DIN 371</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | ALS | | ALS | |
| d ₁ | P | l ₁ | l ₂ | l _{2R45} | d ₂ | a | z / ZR45° | Ø mm | | | | |
| M 3 | 0,5 | 56 | 9 | 5 | 3,5 | 2,7 | 3/2 | 2,5 | ■ | ■ | ■ | ■ |
| M 3,5 | 0,6 | 56 | 11 | 6 | 4 | 3 | 3/2 | 2,9 | ■ | ■ | ■ | ■ |
| M 4 | 0,7 | 63 | 12 | 7 | 4,5 | 3,4 | 3/2 | 3,3 | ■ | ■ | ■ | ■ |
| M 4,5 | 0,75 | 70 | 13 | 8 | 6 | 4,9 | 3/2 | 3,7 | ■ | ■ | ■ | ■ |
| M 5 | 0,8 | 70 | 13 | 8 | 6 | 4,9 | 3/2 | 4,2 | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 15 | 10 | 6 | 4,9 | 3/2 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 15 | 10 | 7 | 5,5 | 3/2 | 6 | ■ | ■ | ■ | ■ |
| M 8 | 1,25 | 90 | 18 | 13 | 8 | 6,2 | 3/2 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 13 | 9 | 7 | 3/2 | 7,8 | ■ | ■ | ■ | ■ |
| M 10 | 1,5 | 100 | 20 | 15 | 10 | 8 | 3/2 | 8,5 | ■ | ■ | ■ | ■ |

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 3570 | 3620 | 4670 | 4720 |
|---|------|----------------|----------------|-------------------|----------------|------|-----------|------|------|------|------|------|
| <p>DIN 376</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | ALS | | ALS | |
| d ₁ | P | l ₁ | l ₂ | l _{2R45} | d ₂ | a | z / ZR45° | Ø mm | | | | |
| M 3 | 0,5 | 56 | 9 | 5 | 2,2 | - | 3/2 | 2,5 | ■ | ■ | ■ | ■ |
| M 3,5 | 0,6 | 56 | 11 | 6 | 2,5 | 2,1 | 3/2 | 2,9 | ■ | ■ | ■ | ■ |
| M 4 | 0,7 | 63 | 12 | 7 | 2,8 | 2,1 | 3/2 | 3,3 | ■ | ■ | ■ | ■ |
| M 4,5 | 0,75 | 70 | 13 | 8 | 3,5 | 2,7 | 3/2 | 3,7 | ■ | ■ | ■ | ■ |
| M 5 | 0,8 | 70 | 13 | 8 | 3,5 | 2,7 | 3/2 | 4,2 | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 15 | 10 | 4,5 | 3,4 | 3/2 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 15 | 10 | 5,5 | 4,3 | 3/2 | 6 | ■ | ■ | ■ | ■ |
| M 8 | 1,25 | 90 | 18 | 13 | 6 | 4,9 | 3/2 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 13 | 7 | 5,5 | 3/2 | 7,8 | ■ | ■ | ■ | ■ |
| M 10 | 1,5 | 100 | 20 | 15 | 7 | 5,5 | 3/2 | 8,5 | ■ | ■ | ■ | ■ |
| M 11 | 1,5 | 100 | 20 | 15 | 8 | 6,2 | 3/2 | 9,5 | ■ | ■ | ■ | ■ |
| M 12 | 1,75 | 110 | 23 | 18 | 9 | 7 | 3/2 | 10,2 | ■ | ■ | ■ | ■ |
| M 14 | 2 | 110 | 25 | 20 | 11 | 9 | 3/2 | 12 | ■ | ■ | ■ | ■ |
| M 16 | 2 | 110 | 25 | 20 | 12 | 9 | 3/2 | 14 | ■ | ■ | ■ | ■ |
| M 18 | 2,5 | 125 | 30 | 25 | 14 | 11 | 3/3 | 15,5 | ■ | ■ | ■ | ■ |
| M 20 | 2,5 | 140 | 30 | 25 | 16 | 12 | 3/3 | 17,5 | ■ | ■ | ■ | ■ |
| M 22 | 2,5 | 140 | 30 | 25 | 18 | 14,5 | 3/3 | 19,5 | ■ | ■ | ■ | ■ |
| M 24 | 3 | 160 | 36 | 30 | 18 | 14,5 | 4/3 | 21 | ■ | ■ | ■ | ■ |
| M 27 | 3 | 160 | 36 | 30 | 20 | 16 | 4/3 | 24 | ■ | ■ | ■ | ■ |
| M 30 | 3,5 | 180 | 40 | 35 | 22 | 18 | 4/3 | 26,5 | ■ | ■ | ■ | ■ |
| M 33 | 3,5 | 180 | 42 | 35 | 25 | 20 | 4/3 | 29,5 | ■ | ■ | ■ | ■ |
| M 36 | 4 | 200 | 50 | 40 | 28 | 22 | 4/3 | 32 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe



| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 1080 | 1080 IKZ | 1130 | 1130 IKZ |
|--|------|----------------|----------------|----------------|-----|---|------|----------|-----------------|----------|-----------------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | TiCN | TiCN | TiCN | TiCN |
| | | | | | | | | C 2-3 | C 2-3 IKZ | E 1,5 | E 1,5 IKZ |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| M 3 | 0,5 | 56 | 9 | 3,5 | 2,7 | 3 | 2,5 | ■ | | ■ | |
| M 3,5 | 0,6 | 56 | 11 | 4 | 3 | 3 | 2,9 | | | | |
| M 4 | 0,7 | 63 | 12 | 4,5 | 3,4 | 3 | 3,3 | ■ | | ■ | |
| M 4,5 | 0,75 | 70 | 13 | 6 | 4,9 | 3 | 3,7 | | | | |
| M 5 | 0,8 | 70 | 13 | 6 | 4,9 | 3 | 4,2 | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 15 | 6 | 4,9 | 3 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 15 | 7 | 5,5 | 3 | 6 | | | | |
| M 8 | 1,25 | 90 | 18 | 8 | 6,2 | 4 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 9 | 7 | 4 | 7,8 | | | | |
| M 10 | 1,5 | 100 | 20 | 10 | 8 | 4 | 8,5 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe



| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3080 | 3080 IKZ | 3130 | 3130 IKZ |
|--|------|----------------|----------------|----------------|------|---|------|-----------------|-------------------------------|-----------------|-------------------------------|
| | | | | | | | | TiCN | TiCN | TiCN | TiCN |
| | | | | | | | | C 2-3 | C 2-3 IKZ | E 1,5 | E 1,5 IKZ |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| M 3 | 0,5 | 56 | 9 | 2,2 | - | 3 | 2,5 | ■ | | ■ | |
| M 3,5 | 0,6 | 56 | 11 | 2,5 | 2,1 | 3 | 2,9 | | | | |
| M 4 | 0,7 | 63 | 12 | 2,8 | 2,1 | 3 | 3,3 | ■ | | ■ | |
| M 4,5 | 0,75 | 70 | 13 | 3,5 | 2,7 | 3 | 3,7 | | | | |
| M 5 | 0,8 | 70 | 13 | 3,5 | 2,7 | 3 | 4,2 | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 15 | 4,5 | 3,4 | 3 | 5 | ■ | ■ | ■ | ■ |
| M 7 | 1 | 80 | 15 | 5,5 | 4,3 | 3 | 6 | | | | |
| M 8 | 1,25 | 90 | 18 | 6 | 4,9 | 4 | 6,8 | ■ | ■ | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 7 | 5,5 | 4 | 7,8 | | | | |
| M 10 | 1,5 | 100 | 20 | 7 | 5,5 | 4 | 8,5 | ■ | ■ | ■ | ■ |
| M 11 | 1,5 | 100 | 20 | 8 | 6,2 | 4 | 9,5 | | | | |
| M 12 | 1,75 | 110 | 23 | 9 | 7 | 4 | 10,2 | ■ | ■ | ■ | ■ |
| M 14 | 2 | 110 | 25 | 11 | 9 | 4 | 12 | ■ | ■ | ■ | ■ |
| M 16 | 2 | 110 | 25 | 12 | 9 | 4 | 14 | ■ | | ■ | |
| M 18 | 2,5 | 125 | 30 | 14 | 11 | 4 | 15,5 | ■ | | ■ | |
| M 20 | 2,5 | 140 | 30 | 16 | 12 | 4 | 17,5 | ■ | | ■ | |
| M 22 | 2,5 | 140 | 30 | 18 | 14,5 | 4 | 19,5 | ■ | | ■ | |
| M 24 | 3 | 160 | 36 | 18 | 14,5 | 4 | 21 | ■ | | ■ | |
| M 27 | 3 | 160 | 36 | 20 | 16 | 4 | 24 | ■ | | ■ | |
| M 30 | 3,5 | 180 | 40 | 22 | 18 | 4 | 26,5 | ■ | | ■ | |
| M 33 | 3,5 | 180 | 42 | 25 | 20 | 5 | 29,5 | | | | |
| M 36 | 4 | 200 | 50 | 28 | 22 | 5 | 32 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

2.2; 3.1; 3.2; 8.1; 10.2; 2.1; 3.3; 5.1; 5.2; 6.1;
6.2; 8.2



1710

2.2; 3.1; 3.2; 8.1; 10.2; 2.1; 3.3; 5.1; 5.2; 6.1;
6.2; 8.2



3710

2.2; 3.1; 3.2; 8.1; 10.2; 2.1; 3.3; 5.1; 5.2; 6.1;
6.2; 8.2



2210

2.2; 3.1; 3.2; 8.1; 10.2; 2.1; 3.3; 5.1; 5.2; 6.1;
6.2; 8.2



4210

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 1710 | 2210 |
|---|------|----------------|----------------|---------------------|----------------|-----|-----------|------|------|------|
| <p>DIN 371</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiN | TiN |
| <p>DIN 371</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | l ₂ R35° | d ₂ | a | z / ZR35° | Ø mm | | |
| M 3 | 0,5 | 56 | 9 | 5 | 3,5 | 2,7 | 3 | 2,5 | ■ | ■ |
| M 3,5 | 0,6 | 56 | 11 | 6 | 4 | 3 | 3 | 2,9 | ■ | ■ |
| M 4 | 0,7 | 63 | 12 | 7 | 4,5 | 3,4 | 3 | 3,3 | ■ | ■ |
| M 4,5 | 0,75 | 70 | 13 | 8 | 6 | 4,9 | 3 | 3,7 | ■ | ■ |
| M 5 | 0,8 | 70 | 13 | 8 | 6 | 4,9 | 3 | 4,2 | ■ | ■ |
| M 6 | 1 | 80 | 15 | 10 | 6 | 4,9 | 3 | 5 | ■ | ■ |
| M 7 | 1 | 80 | 15 | 10 | 7 | 5,5 | 3 | 6 | ■ | ■ |
| M 8 | 1,25 | 90 | 18 | 13 | 8 | 6,2 | 3 | 6,8 | ■ | ■ |
| M 9 | 1,25 | 90 | 18 | 13 | 9 | 7 | 3 | 7,8 | ■ | ■ |
| M 10 | 1,5 | 100 | 20 | 15 | 10 | 8 | 3 | 8,5 | ■ | ■ |

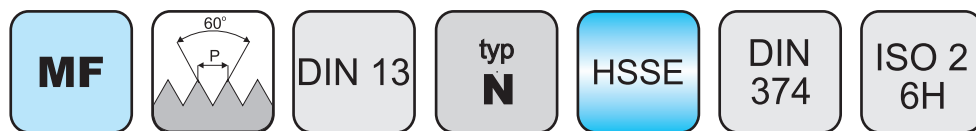
| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 3710 | 4210 |
|---|------|----------------|----------------|---------------------|----------------|-----|-----------|------|------|------|
| <p>DIN 376</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiN | TiN |
| <p>DIN 376</p> <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | l ₂ R35° | d ₂ | a | z / ZR35° | Ø mm | | |
| M 3 | 0,5 | 56 | 9 | 5 | 2,2 | - | 3/3 | 2,5 | | |
| M 3,5 | 0,6 | 56 | 11 | 6 | 2,5 | 2,1 | 3/3 | 2,9 | | |
| M 4 | 0,7 | 63 | 12 | 7 | 2,8 | 2,1 | 3/3 | 3,3 | | |
| M 4,5 | 0,75 | 70 | 13 | 8 | 3,5 | 2,7 | 3/3 | 3,7 | | |
| M 5 | 0,8 | 70 | 13 | 8 | 3,5 | 2,7 | 3/3 | 4,2 | | |
| M 6 | 1 | 80 | 15 | 10 | 4,5 | 3,4 | 3/3 | 5 | | |
| M 7 | 1 | 80 | 15 | 10 | 5,5 | 4,3 | 3/3 | 6 | | |
| M 8 | 1,25 | 90 | 18 | 13 | 6 | 4,9 | 3/3 | 6,8 | | |
| M 9 | 1,25 | 90 | 18 | 13 | 7 | 5,5 | 3/3 | 7,8 | | |
| M 10 | 1,5 | 100 | 20 | 15 | 7 | 5,5 | 3/3 | 8,5 | | |
| M 11 | 1,5 | 100 | 20 | 15 | 8 | 6,2 | 3/3 | 9,5 | | |
| M 12 | 1,75 | 110 | 23 | 18 | 9 | 7 | 3/3 | 10,2 | ■ | ■ |
| M 14 | 2 | 110 | 25 | 20 | 11 | 9 | 3/3 | 12 | ■ | ■ |
| M 16 | 2 | 110 | 25 | 20 | 12 | 9 | 3/4 | 14 | ■ | ■ |
| M 18 | 2,5 | 125 | 30 | 25 | 14 | 11 | 3/4 | 15,5 | ■ | ■ |
| M 20 | 2,5 | 140 | 30 | 25 | 16 | 12 | 3/4 | 17,5 | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

| | | |
|--|--|-------------|
| 10.1; 1.1; 2.1; 6.1; 8.2 | | 3000 |
| 8.2; 10.1; 1.1; 2.1; 6.1 | | 3010 |
| 1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1 | | 3500 |
| 1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1 | | 3510 |
| 1.2; 2.2; 8.1; 11.1; 2.3; 8.2 | | 3540 |

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3000 | 3010 | 3500 | 3510 | 3540 |
|--|------|----------------|----------------|----------------|------|---|------|------------|------|------------|-----------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | TiN | | TiN | OX | |
| | | | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | | |
| M 3 | 0,35 | 56 | 8 | 2,2 | - | 3 | 2,65 | | | | | |
| M 3,5 | 0,35 | 56 | 8 | 2,5 | 2,1 | 3 | 3,15 | | | | | |
| M 4 | 0,5 | 63 | 12 | 2,8 | 2,1 | 3 | 3,5 | ■ | ■ | ■ | ■ | ■ |
| M 4 | 0,35 | 63 | 12 | 2,8 | 2,1 | 3 | 3,65 | | | | | |
| M 4,5 | 0,5 | 70 | 13 | 3,5 | 2,7 | 3 | 4 | | | | | |
| M 5 | 0,5 | 70 | 13 | 3,5 | 2,7 | 3 | 4,5 | ■ | ■ | ■ | ■ | ■ |
| M 5,5 | 0,5 | 80 | 15 | 4 | 3 | 3 | 5 | | | | | |
| M 6 | 0,75 | 80 | 15 | 4,5 | 3,4 | 3 | 5,2 | ■ | ■ | ■ | ■ | ■ |
| M 6 | 0,5 | 80 | 15 | 4,5 | 3,4 | 3 | 5,5 | ■ | ■ | ■ | ■ | ■ |
| M 7 | 0,75 | 80 | 15 | 5,5 | 4,3 | 3 | 6,2 | ■ | ■ | ■ | ■ | ■ |
| M 8 | 1 | 90 | 18 | 6 | 4,9 | 3 | 7 | ■ | ■ | ■ | ■ | ■ |
| M 8 | 0,75 | 80 | 15 | 6 | 4,9 | 3 | 7,2 | ■ | ■ | ■ | ■ | ■ |
| M 8 | 0,5 | 80 | 15 | 6 | 4,9 | 3 | 7,5 | | | | | |
| M 9 | 1 | 90 | 18 | 7 | 5,5 | 3 | 8 | ■ | ■ | | | |
| M 9 | 0,75 | 80 | 18 | 7 | 5,5 | 3 | 8,2 | | | | | |
| M 10 | 1,25 | 100 | 20 | 7 | 5,5 | 3 | 8,8 | ■ | ■ | ■ | ■ | ■ |
| M 10 | 1 | 90 | 20 | 7 | 5,5 | 3 | 9 | ■ | ■ | ■ | ■ | ■ |
| M 10 | 0,75 | 90 | 20 | 7 | 5,5 | 3 | 9,2 | ■ | ■ | ■ | ■ | ■ |
| M 11 | 1 | 90 | 20 | 8 | 6,2 | 3 | 10 | ■ | ■ | | | |
| M 11 | 0,75 | 90 | 20 | 8 | 6,2 | 3 | 10,2 | | | | | |
| M 12 | 1,5 | 100 | 21 | 9 | 7 | 3 | 10,5 | ■ | ■ | ■ | ■ | ■ |
| M 12 | 1,25 | 100 | 21 | 9 | 7 | 3 | 10,8 | ■ | ■ | ■ | ■ | ■ |
| M 12 | 1 | 100 | 21 | 9 | 7 | 3 | 11 | ■ | ■ | ■ | ■ | ■ |
| M 13 | 1 | 100 | 21 | 11 | 9 | 3 | 12 | | | | | |
| M 14 | 1,5 | 100 | 21 | 11 | 9 | 3 | 12,5 | ■ | ■ | ■ | ■ | ■ |
| M 14 | 1,25 | 100 | 21 | 11 | 9 | 3 | 12,8 | ■ | ■ | ■ | ■ | ■ |
| M 14 | 1 | 100 | 21 | 11 | 9 | 3 | 13 | ■ | ■ | ■ | ■ | ■ |
| M 15 | 1,5 | 100 | 21 | 12 | 9 | 3 | 13,5 | ■ | ■ | ■ | ■ | ■ |
| M 15 | 1 | 100 | 21 | 12 | 9 | 3 | 14 | ■ | ■ | ■ | ■ | ■ |
| M 16 | 1,5 | 100 | 21 | 12 | 9 | 3 | 14,5 | ■ | ■ | ■ | ■ | ■ |
| M 16 | 1 | 100 | 21 | 12 | 9 | 3 | 15 | ■ | ■ | ■ | ■ | ■ |
| M 17 | 1,5 | 100 | 21 | 12 | 9 | 3 | 15,5 | | | | | |
| M 17 | 1 | 100 | 21 | 12 | 9 | 3 | 16 | ■ | ■ | | | |
| M 18 | 2 | 125 | 24 | 14 | 11 | 3 | 16 | ■ | ■ | ■ | ■ | ■ |
| M 18 | 1,5 | 110 | 24 | 14 | 11 | 3 | 16,5 | ■ | ■ | ■ | ■ | ■ |
| M 18 | 1 | 110 | 24 | 14 | 11 | 3 | 17 | ■ | ■ | ■ | ■ | ■ |
| M 20 | 2 | 140 | 30 | 16 | 12 | 3 | 18 | ■ | ■ | ■ | ■ | ■ |
| M 20 | 1,5 | 125 | 24 | 16 | 12 | 3 | 18,5 | ■ | ■ | ■ | ■ | ■ |
| M 20 | 1 | 125 | 24 | 16 | 12 | 3 | 19 | ■ | ■ | ■ | ■ | ■ |
| M 22 | 2 | 140 | 30 | 18 | 14,5 | 3 | 20 | ■ | ■ | ■ | ■ | ■ |
| M 22 | 1,5 | 125 | 24 | 18 | 14,5 | 3 | 20,5 | ■ | ■ | ■ | ■ | ■ |
| M 22 | 1 | 125 | 24 | 18 | 14,5 | 3 | 21 | ■ | ■ | ■ | ■ | ■ |
| M 24 | 2 | 140 | 26 | 18 | 14,5 | 4 | 22 | ■ | ■ | ■ | ■ | ■ |
| M 24 | 1,5 | 140 | 26 | 18 | 14,5 | 4 | 22,5 | ■ | ■ | ■ | ■ | ■ |
| M 24 | 1 | 140 | 26 | 18 | 14,5 | 4 | 23 | ■ | ■ | ■ | ■ | ■ |
| M 25 | 2 | 140 | 26 | 18 | 14,5 | 4 | 23 | | | | | |

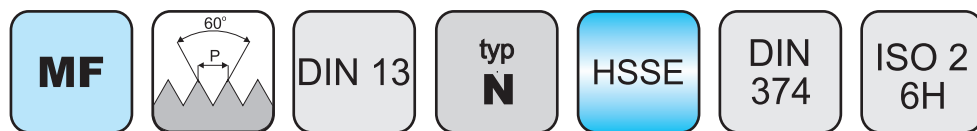
■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možné použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2

8.2; 10.1; 1.1; 2.1; 6.1

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1

1.2; 2.2; 8.1; 11.1; 2.3; 8.2



| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3000 | 3010 | 3500 | 3510 | 3540 |
|--|-----|----------------|----------------|----------------|------|---|------|------|------|------|------|------|
| | | | | | | | | TiN | | TiN | OX | |
| | | | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | | |
| M 25 | 1,5 | 140 | 26 | 18 | 14,5 | 4 | 23,5 | ■ | ■ | ■ | ■ | ■ |
| M 26 | 1,5 | 140 | 26 | 18 | 14,5 | 4 | 24,5 | ■ | ■ | ■ | ■ | ■ |
| M 27 | 2 | 140 | 26 | 20 | 16 | 4 | 25 | ■ | ■ | ■ | ■ | ■ |
| M 27 | 1,5 | 140 | 26 | 20 | 16 | 4 | 25,5 | ■ | ■ | ■ | ■ | ■ |
| M 27 | 1 | 140 | 26 | 20 | 16 | 4 | 26 | ■ | ■ | ■ | ■ | ■ |
| M 28 | 2 | 140 | 26 | 20 | 16 | 4 | 26 | ■ | ■ | ■ | ■ | ■ |
| M 28 | 1,5 | 140 | 26 | 20 | 16 | 4 | 26,5 | ■ | ■ | ■ | ■ | ■ |
| M 30 | 2 | 150 | 28 | 22 | 18 | 4 | 28 | ■ | ■ | ■ | ■ | ■ |
| M 30 | 1,5 | 150 | 28 | 22 | 18 | 4 | 28,5 | ■ | ■ | ■ | ■ | ■ |
| M 30 | 1 | 150 | 28 | 22 | 18 | 4 | 29 | ■ | ■ | ■ | ■ | ■ |
| M 32 | 1,5 | 150 | 28 | 22 | 18 | 4 | 30,5 | ■ | ■ | ■ | ■ | ■ |
| M 33 | 2 | 160 | 30 | 25 | 20 | 4 | 31 | ■ | ■ | ■ | ■ | ■ |
| M 33 | 1,5 | 160 | 30 | 25 | 20 | 4 | 31,5 | ■ | ■ | ■ | ■ | ■ |
| M 34 | 1,5 | 170 | 30 | 28 | 22 | 4 | 32,5 | ■ | ■ | ■ | ■ | ■ |
| M 35 | 1,5 | 170 | 30 | 28 | 22 | 4 | 33,5 | ■ | ■ | ■ | ■ | ■ |
| M 36 | 3 | 200 | 42 | 28 | 22 | 4 | 33 | ■ | ■ | ■ | ■ | ■ |
| M 36 | 2 | 170 | 30 | 28 | 22 | 4 | 34 | ■ | ■ | ■ | ■ | ■ |
| M 36 | 1,5 | 170 | 30 | 28 | 22 | 4 | 34,5 | ■ | ■ | ■ | ■ | ■ |
| M 38 | 1,5 | 170 | 30 | 28 | 22 | 4 | 36,5 | ■ | ■ | ■ | ■ | ■ |
| M 39 | 3 | 200 | 42 | 32 | 24 | 4 | 36 | ■ | ■ | ■ | ■ | ■ |
| M 39 | 2 | 170 | 30 | 32 | 24 | 4 | 37 | ■ | ■ | ■ | ■ | ■ |
| M 39 | 1,5 | 170 | 30 | 32 | 24 | 4 | 37,5 | ■ | ■ | ■ | ■ | ■ |
| M 40 | 3 | 200 | 42 | 32 | 24 | 4 | 37 | ■ | ■ | ■ | ■ | ■ |
| M 40 | 2 | 170 | 30 | 32 | 24 | 4 | 38 | ■ | ■ | ■ | ■ | ■ |
| M 40 | 1,5 | 170 | 30 | 32 | 24 | 4 | 38,5 | ■ | ■ | ■ | ■ | ■ |
| M 42 | 3 | 200 | 50 | 32 | 24 | 4 | 39 | ■ | ■ | ■ | ■ | ■ |
| M 42 | 2 | 170 | 30 | 32 | 24 | 4 | 40 | ■ | ■ | ■ | ■ | ■ |
| M 42 | 1,5 | 170 | 30 | 32 | 24 | 4 | 40,5 | ■ | ■ | ■ | ■ | ■ |
| M 45 | 3 | 200 | 50 | 36 | 29 | 4 | 42 | ■ | ■ | ■ | ■ | ■ |
| M 45 | 2 | 180 | 32 | 36 | 29 | 4 | 43 | ■ | ■ | ■ | ■ | ■ |
| M 45 | 1,5 | 180 | 32 | 36 | 29 | 4 | 43,5 | ■ | ■ | ■ | ■ | ■ |
| M 48 | 3 | 225 | 50 | 36 | 29 | 4 | 45 | ■ | ■ | ■ | ■ | ■ |
| M 48 | 2 | 190 | 32 | 36 | 29 | 4 | 46 | ■ | ■ | ■ | ■ | ■ |
| M 48 | 1,5 | 190 | 32 | 36 | 29 | 4 | 46,5 | ■ | ■ | ■ | ■ | ■ |
| M 50 | 3 | 225 | 50 | 36 | 29 | 4 | 47 | ■ | ■ | ■ | ■ | ■ |
| M 50 | 2 | 190 | 32 | 36 | 29 | 4 | 48 | ■ | ■ | ■ | ■ | ■ |
| M 50 | 1,5 | 190 | 32 | 36 | 29 | 4 | 48,5 | ■ | ■ | ■ | ■ | ■ |
| M 52 | 3 | 225 | 50 | 40 | 32 | 4 | 49 | ■ | ■ | ■ | ■ | ■ |
| M 52 | 2 | 190 | 32 | 40 | 32 | 4 | 50 | ■ | ■ | ■ | ■ | ■ |
| M 52 | 1,5 | 190 | 32 | 40 | 32 | 4 | 50,5 | ■ | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



4050

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



4060

11.1; 2.2; 2.3; 8.1; 8.2



4090

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 4050 | 4060 | 4090 |
|--|------|----------------|----------------|----------------|------|---|------|------|------------|-----------|
| | | | | | | | | | TiN | OX |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | |
| M 3 | 0,35 | 56 | 5 | 2,2 | - | 3 | 2,65 | | | |
| M 3,5 | 0,35 | 56 | 6 | 2,5 | 2,1 | 3 | 3,15 | | | |
| M 4 | 0,5 | 63 | 7 | 2,8 | 2,1 | 3 | 3,5 | ■ | ■ | ■ |
| M 4 | 0,35 | 63 | 7 | 2,8 | 2,1 | 3 | 3,65 | | | |
| M 4,5 | 0,5 | 70 | 8 | 3,5 | 2,7 | 3 | 4 | | | |
| M 5 | 0,5 | 70 | 8 | 3,5 | 2,7 | 3 | 4,5 | ■ | ■ | ■ |
| M 5,5 | 0,5 | 80 | 7 | 4 | 3 | 3 | 5 | | | |
| M 6 | 0,75 | 80 | 10 | 4,5 | 3,4 | 3 | 5,2 | ■ | ■ | ■ |
| M 6 | 0,5 | 80 | 10 | 4,5 | 3,4 | 3 | 5,5 | ■ | ■ | ■ |
| M 7 | 0,75 | 80 | 10 | 5,5 | 4,3 | 3 | 6,2 | ■ | ■ | ■ |
| M 8 | 1 | 90 | 13 | 6 | 4,9 | 3 | 7 | ■ | ■ | ■ |
| M 8 | 0,75 | 80 | 10 | 6 | 4,9 | 3 | 7,2 | ■ | ■ | ■ |
| M 8 | 0,5 | 80 | 10 | 6 | 4,9 | 3 | 7,5 | | | |
| M 9 | 1 | 90 | 13 | 7 | 5,5 | 3 | 8 | ■ | ■ | ■ |
| M 9 | 0,75 | 80 | 10 | 7 | 5,5 | 3 | 8,2 | | | |
| M 10 | 1,25 | 100 | 15 | 7 | 5,5 | 3 | 8,8 | ■ | ■ | ■ |
| M 10 | 1 | 90 | 12 | 7 | 5,5 | 3 | 9 | ■ | ■ | ■ |
| M 10 | 0,75 | 90 | 12 | 7 | 5,5 | 3 | 9,2 | | | |
| M 11 | 1 | 90 | 12 | 8 | 6,2 | 3 | 10 | ■ | ■ | ■ |
| M 11 | 0,75 | 90 | 12 | 8 | 6,2 | 3 | 10,2 | | | |
| M 12 | 1,5 | 100 | 14 | 9 | 7 | 3 | 10,5 | ■ | ■ | ■ |
| M 12 | 1,25 | 100 | 14 | 9 | 7 | 3 | 10,8 | ■ | ■ | ■ |
| M 12 | 1 | 100 | 14 | 9 | 7 | 3 | 11 | ■ | ■ | ■ |
| M 13 | 1 | 100 | 15 | 11 | 9 | 3 | 12 | | | |
| M 14 | 1,5 | 100 | 16 | 11 | 9 | 3 | 12,5 | ■ | ■ | ■ |
| M 14 | 1,25 | 100 | 16 | 11 | 9 | 3 | 12,8 | ■ | ■ | ■ |
| M 14 | 1 | 100 | 16 | 11 | 9 | 3 | 13 | ■ | ■ | ■ |
| M 15 | 1,5 | 100 | 17 | 12 | 9 | 3 | 13,5 | | | |
| M 15 | 1 | 100 | 16 | 12 | 9 | 3 | 14 | ■ | ■ | ■ |
| M 16 | 1,5 | 100 | 16 | 12 | 9 | 4 | 14,5 | ■ | ■ | ■ |
| M 16 | 1 | 100 | 16 | 12 | 9 | 4 | 15 | ■ | ■ | ■ |
| M 17 | 1,5 | 100 | 17 | 12 | 9 | 4 | 15,5 | | | |
| M 17 | 1 | 100 | 16 | 12 | 9 | 4 | 16 | | | |
| M 18 | 2 | 125 | 20 | 14 | 11 | 4 | 16 | ■ | ■ | ■ |
| M 18 | 1,5 | 110 | 20 | 14 | 11 | 4 | 16,5 | ■ | ■ | ■ |
| M 18 | 1 | 110 | 20 | 14 | 11 | 4 | 17 | ■ | ■ | ■ |
| M 20 | 2 | 140 | 20 | 16 | 12 | 4 | 18 | ■ | ■ | ■ |
| M 20 | 1,5 | 125 | 20 | 16 | 12 | 4 | 18,5 | ■ | ■ | ■ |
| M 20 | 1 | 125 | 20 | 16 | 12 | 4 | 19 | ■ | ■ | ■ |
| M 22 | 2 | 140 | 20 | 18 | 14,5 | 4 | 20 | ■ | ■ | ■ |
| M 22 | 1,5 | 125 | 20 | 18 | 14,5 | 4 | 20,5 | ■ | ■ | ■ |
| M 22 | 1 | 125 | 20 | 18 | 14,5 | 4 | 21 | ■ | ■ | ■ |
| M 24 | 2 | 140 | 22 | 18 | 14,5 | 4 | 22 | ■ | ■ | ■ |
| M 24 | 1,5 | 140 | 22 | 18 | 14,5 | 4 | 22,5 | ■ | ■ | ■ |
| M 24 | 1 | 140 | 22 | 18 | 14,5 | 4 | 23 | ■ | ■ | ■ |
| M 25 | 2 | 140 | 22 | 18 | 14,5 | 4 | 23 | | | |
| M 25 | 1,5 | 140 | 22 | 18 | 14,5 | 4 | 23,5 | ■ | ■ | ■ |
| M 26 | 1,5 | 140 | 22 | 18 | 14,5 | 4 | 24,5 | ■ | ■ | ■ |
| M 27 | 2 | 140 | 22 | 20 | 16 | 4 | 25 | ■ | ■ | ■ |
| M 27 | 1,5 | 140 | 22 | 20 | 16 | 4 | 25,5 | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



4050

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



4060

11.1; 2.2; 2.3; 8.1; 8.2



4090

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 4050 | 4060 | 4090 |
|--|-----|----------------|----------------|----------------|----|---|------|------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiN | OX |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | | | | |
| M 27 | 1 | 140 | 22 | 20 | 16 | 4 | 26 | ■ | ■ | ■ |
| M 28 | 2 | 140 | 22 | 20 | 16 | 4 | 26 | ■ | ■ | ■ |
| M 28 | 1,5 | 140 | 22 | 20 | 16 | 4 | 26,5 | ■ | ■ | ■ |
| M 30 | 2 | 150 | 26 | 22 | 18 | 4 | 28 | ■ | ■ | ■ |
| M 30 | 1,5 | 150 | 26 | 22 | 18 | 4 | 28,5 | ■ | ■ | ■ |
| M 30 | 1 | 150 | 26 | 22 | 18 | 4 | 29 | ■ | ■ | ■ |
| M 32 | 1,5 | 150 | 26 | 22 | 18 | 4 | 30,5 | ■ | ■ | ■ |
| M 33 | 2 | 160 | 28 | 25 | 20 | 4 | 31 | ■ | ■ | ■ |
| M 33 | 1,5 | 160 | 28 | 25 | 20 | 4 | 31,5 | ■ | ■ | ■ |
| M 34 | 1,5 | 170 | 28 | 28 | 22 | 4 | 32,5 | ■ | ■ | ■ |
| M 35 | 1,5 | 170 | 30 | 28 | 22 | 4 | 33,5 | ■ | ■ | ■ |
| M 36 | 3 | 200 | 36 | 28 | 22 | 4 | 33 | ■ | ■ | ■ |
| M 36 | 2 | 170 | 28 | 28 | 22 | 4 | 34 | ■ | ■ | ■ |
| M 36 | 1,5 | 170 | 28 | 28 | 22 | 4 | 34,5 | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

3.1; 5.1; 5.2; 9.1; 10.2

3.1; 5.1; 5.2

3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1

3.1; 5.1; 5.2



3660



3690



4260



4290

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 3660 | 3690 | 4260 | 4290 |
|--|------|----------------|----------------|-------------------|----------------|------|-----------|------|------------|-----------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiN | OX | TiN | OX |
| | | | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | l _{2R35} | d ₂ | a | z / ZR35* | Ø mm | | | | |
| M 3 | 0,35 | 56 | 8 | 5 | 2,2 | - | 3/3 | 2,65 | | | | |
| M 3,5 | 0,35 | 56 | 8 | 6 | 2,5 | 2,1 | 3/3 | 3,15 | | | | |
| M 4 | 0,5 | 63 | 12 | 7 | 2,8 | 2,1 | 3/3 | 3,5 | | | | |
| M 4 | 0,35 | 63 | 12 | 7 | 2,8 | 2,1 | 3/3 | 3,65 | | | | |
| M 4,5 | 0,5 | 70 | 13 | 8 | 3,5 | 2,7 | 3/3 | 4 | | | | |
| M 5 | 0,5 | 70 | 13 | 8 | 3,5 | 2,7 | 3/3 | 4,5 | | | | |
| M 5,5 | 0,5 | 80 | 15 | 7 | 4 | 3 | 3/3 | 5 | | | | |
| M 6 | 0,75 | 80 | 15 | 10 | 4,5 | 3,4 | 3/3 | 5,2 | ■ | ■ | ■ | ■ |
| M 6 | 0,5 | 80 | 15 | 10 | 4,5 | 3,4 | 3/3 | 5,5 | | | | |
| M 7 | 0,75 | 80 | 15 | 10 | 5,5 | 4,3 | 3/3 | 6,2 | | | | |
| M 8 | 1 | 90 | 18 | 13 | 6 | 4,9 | 3/3 | 7 | ■ | ■ | ■ | ■ |
| M 8 | 0,75 | 80 | 15 | 10 | 6 | 4,9 | 3/3 | 7,2 | ■ | ■ | ■ | ■ |
| M 8 | 0,5 | 80 | 15 | 10 | 6 | 4,9 | 3/3 | 7,5 | | | | |
| M 9 | 1 | 90 | 18 | 13 | 7 | 5,5 | 3/3 | 8 | | | | |
| M 9 | 0,75 | 80 | 18 | 10 | 7 | 5,5 | 3/3 | 8,2 | | | | |
| M 10 | 1,25 | 100 | 20 | 15 | 7 | 5,5 | 3/3 | 8,8 | | | | |
| M 10 | 1 | 90 | 20 | 12 | 7 | 5,5 | 3/3 | 9 | ■ | ■ | ■ | ■ |
| M 10 | 0,75 | 90 | 20 | 12 | 7 | 5,5 | 3/3 | 9,2 | | | | |
| M 11 | 1 | 90 | 20 | 12 | 8 | 6,2 | 3/3 | 10 | | | | |
| M 11 | 0,75 | 90 | 20 | 12 | 8 | 6,2 | 3/3 | 10,2 | | | | |
| M 12 | 1,5 | 100 | 21 | 14 | 9 | 7 | 3/3 | 10,5 | ■ | ■ | ■ | ■ |
| M 12 | 1,25 | 100 | 21 | 14 | 9 | 7 | 3/3 | 10,8 | | | | |
| M 12 | 1 | 100 | 21 | 14 | 9 | 7 | 3/3 | 11 | ■ | ■ | ■ | ■ |
| M 13 | 1 | 100 | 21 | 15 | 11 | 9 | 3/3 | 12 | | | | |
| M 14 | 1,5 | 100 | 21 | 16 | 11 | 9 | 3/3 | 12,5 | ■ | ■ | ■ | ■ |
| M 14 | 1,25 | 100 | 21 | 16 | 11 | 9 | 3/3 | 12,8 | | | | |
| M 14 | 1 | 100 | 21 | 16 | 11 | 9 | 3/3 | 13 | | | | |
| M 15 | 1,5 | 100 | 21 | 17 | 12 | 9 | 3/3 | 13,5 | | | | |
| M 15 | 1 | 100 | 21 | 16 | 12 | 9 | 3/3 | 14 | | | | |
| M 16 | 1,5 | 100 | 21 | 16 | 12 | 9 | 3/4 | 14,5 | ■ | ■ | ■ | ■ |
| M 16 | 1 | 100 | 21 | 16 | 12 | 9 | 3/4 | 15 | | | | |
| M 17 | 1,5 | 100 | 21 | 17 | 12 | 9 | 3/4 | 15,5 | | | | |
| M 17 | 1 | 100 | 21 | 16 | 12 | 9 | 3/4 | 16 | | | | |
| M 18 | 2 | 125 | 24 | 20 | 14 | 11 | 3/4 | 16 | | | | |
| M 18 | 1,5 | 110 | 24 | 20 | 14 | 11 | 3/4 | 16,5 | ■ | ■ | ■ | ■ |
| M 18 | 1 | 110 | 24 | 20 | 14 | 11 | 3/4 | 17 | | | | |
| M 20 | 2 | 140 | 30 | 20 | 16 | 12 | 3/4 | 18 | | | | |
| M 20 | 1,5 | 125 | 24 | 20 | 16 | 12 | 3/4 | 18,5 | ■ | ■ | ■ | ■ |
| M 20 | 1 | 125 | 24 | 20 | 16 | 12 | 3/4 | 19 | | | | |
| M 22 | 2 | 140 | 30 | 20 | 18 | 14,5 | 3/4 | 20 | | | | |
| M 22 | 1,5 | 125 | 24 | 20 | 18 | 14,5 | 3/4 | 20,5 | | | | |
| M 22 | 1 | 125 | 24 | 20 | 18 | 14,5 | 3/4 | 21 | | | | |
| M 24 | 2 | 140 | 26 | 22 | 18 | 14,5 | 4/4 | 22 | | | | |
| M 24 | 1,5 | 140 | 26 | 22 | 18 | 14,5 | 4/4 | 22,5 | | | | |
| M 24 | 1 | 140 | 26 | 22 | 18 | 14,5 | 4/4 | 23 | | | | |
| M 25 | 2 | 140 | 26 | 22 | 18 | 14,5 | 4/4 | 23 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možné použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

3.1; 5.1; 5.2; 9.1; 10.2



3660

3.1; 5.1; 5.2



3690

3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1



4260

3.1; 5.1; 5.2



4290

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 3660 | 3690 | 4260 | 4290 |
|--|-----|----------------|----------------|-------------------|----------------|------|----------------------|------|------------|-----------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiN | OX | TiN | OX |
| | | | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | l _{3R35} | d ₂ | a | z / Z _{R35} | Ø mm | | | | |
| M 25 | 1,5 | 140 | 26 | 22 | 18 | 14,5 | 4/4 | 23,5 | | | | |
| M 26 | 1,5 | 140 | 26 | 22 | 18 | 14,5 | 4/4 | 24,5 | | | | |
| M 27 | 2 | 140 | 26 | 22 | 20 | 16 | 4/4 | 25 | | | | |
| M 27 | 1,5 | 140 | 26 | 22 | 20 | 16 | 4/4 | 25,5 | | | | |
| M 27 | 1 | 140 | 26 | 22 | 20 | 16 | 4/4 | 26 | | | | |
| M 28 | 2 | 140 | 26 | 22 | 20 | 16 | 4/4 | 26 | | | | |
| M 28 | 1,5 | 140 | 26 | 22 | 20 | 16 | 4/4 | 26,5 | | | | |
| M 30 | 2 | 150 | 28 | 26 | 22 | 18 | 4/4 | 28 | | | | |
| M 30 | 1,5 | 150 | 28 | 26 | 22 | 18 | 4/4 | 28,5 | | | | |
| M 30 | 1 | 150 | 28 | 26 | 22 | 18 | 4/4 | 29 | | | | |
| M 32 | 1,5 | 150 | 28 | 26 | 22 | 18 | 4/4 | 30,5 | | | | |
| M 33 | 2 | 160 | 30 | 28 | 25 | 20 | 4/4 | 31 | | | | |
| M 33 | 1,5 | 160 | 30 | 28 | 25 | 20 | 4/4 | 31,5 | | | | |
| M 34 | 1,5 | 170 | 30 | 28 | 28 | 22 | 4/4 | 32,5 | | | | |
| M 35 | 1,5 | 170 | 30 | 30 | 28 | 22 | 4/4 | 33,5 | | | | |
| M 36 | 3 | 200 | 42 | 36 | 28 | 22 | 4/4 | 33 | | | | |
| M 36 | 2 | 170 | 30 | 28 | 28 | 22 | 4/4 | 34 | | | | |
| M 36 | 1,5 | 170 | 30 | 28 | 28 | 22 | 4/4 | 34,5 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

3.1; 3.2; 3.3; 8.2; 6.2



3580

3.2; 8.2



3590

3.2; 8.2; 3.1; 3.3; 6.2



4680

3.2



4690

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 3580 | 3590 | 4680 | 4690 |
|--|------|----------------|----------------|--------------------|----------------|------|-----------------------|------|-------------|-----------|-------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiCN | OX | TiCN | OX |
| | | | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | l _{2R40°} | d ₂ | a | z / Z _{R40°} | Ø mm | | | | |
| M 3 | 0,35 | 56 | 8 | 5 | 2,2 | - | 3/3 | 2,65 | | | | |
| M 3,5 | 0,35 | 56 | 8 | 6 | 2,5 | 2,1 | 3/3 | 3,15 | | | | |
| M 4 | 0,5 | 63 | 12 | 7 | 2,8 | 2,1 | 3/3 | 3,5 | | | | |
| M 4 | 0,35 | 63 | 12 | 7 | 2,8 | 2,1 | 3/3 | 3,65 | | | | |
| M 4,5 | 0,5 | 70 | 13 | 8 | 3,5 | 2,7 | 3/3 | 4 | | | | |
| M 5 | 0,5 | 70 | 13 | 8 | 3,5 | 2,7 | 3/3 | 4,5 | | | | |
| M 5,5 | 0,5 | 80 | 15 | 7 | 4 | 3 | 3/3 | 5 | | | | |
| M 6 | 0,75 | 80 | 15 | 10 | 4,5 | 3,4 | 3/3 | 5,2 | ■ | ■ | ■ | ■ |
| M 6 | 0,5 | 80 | 15 | 10 | 4,5 | 3,4 | 3/3 | 5,5 | | | | |
| M 7 | 0,75 | 80 | 15 | 10 | 5,5 | 4,3 | 3/3 | 6,2 | | | | |
| M 8 | 1 | 90 | 18 | 13 | 6 | 4,9 | 3/3 | 7 | ■ | ■ | ■ | ■ |
| M 8 | 0,75 | 80 | 15 | 10 | 6 | 4,9 | 3/3 | 7,2 | ■ | ■ | ■ | ■ |
| M 8 | 0,5 | 80 | 15 | 10 | 6 | 4,9 | 3/3 | 7,5 | | | | |
| M 9 | 1 | 90 | 18 | 13 | 7 | 5,5 | 3/3 | 8 | | | | |
| M 9 | 0,75 | 80 | 18 | 10 | 7 | 5,5 | 3/3 | 8,2 | | | | |
| M 10 | 1,25 | 100 | 20 | 15 | 7 | 5,5 | 3/4 | 8,8 | | | | |
| M 10 | 1 | 90 | 20 | 12 | 7 | 5,5 | 3/4 | 9 | ■ | ■ | ■ | ■ |
| M 10 | 0,75 | 90 | 20 | 12 | 7 | 5,5 | 3/4 | 9,2 | | | | |
| M 11 | 1 | 90 | 20 | 12 | 8 | 6,2 | 3/4 | 10 | | | | |
| M 11 | 0,75 | 90 | 20 | 12 | 8 | 6,2 | 3/4 | 10,2 | | | | |
| M 12 | 1,5 | 100 | 21 | 14 | 9 | 7 | 3/4 | 10,5 | ■ | ■ | ■ | ■ |
| M 12 | 1,25 | 100 | 21 | 14 | 9 | 7 | 3/4 | 10,8 | | | | |
| M 12 | 1 | 100 | 21 | 14 | 9 | 7 | 3/4 | 11 | ■ | ■ | ■ | ■ |
| M 13 | 1 | 100 | 21 | 15 | 11 | 9 | 3/4 | 12 | | | | |
| M 14 | 1,5 | 100 | 21 | 16 | 11 | 9 | 3/4 | 12,5 | ■ | ■ | ■ | ■ |
| M 14 | 1,25 | 100 | 21 | 16 | 11 | 9 | 3/4 | 12,8 | | | | |
| M 14 | 1 | 100 | 21 | 16 | 11 | 9 | 3/4 | 13 | | | | |
| M 15 | 1,5 | 100 | 21 | 17 | 12 | 9 | 3/4 | 13,5 | | | | |
| M 15 | 1 | 100 | 21 | 16 | 12 | 9 | 3/4 | 14 | | | | |
| M 16 | 1,5 | 100 | 21 | 16 | 12 | 9 | 3/5 | 14,5 | ■ | ■ | ■ | ■ |
| M 16 | 1 | 100 | 21 | 16 | 12 | 9 | 3/5 | 15 | | | | |
| M 17 | 1,5 | 100 | 21 | 17 | 12 | 9 | 3/5 | 15,5 | | | | |
| M 17 | 1 | 100 | 21 | 16 | 12 | 9 | 3/5 | 16 | | | | |
| M 18 | 2 | 125 | 24 | 20 | 14 | 11 | 3/5 | 16 | | | | |
| M 18 | 1,5 | 110 | 24 | 20 | 14 | 11 | 3/5 | 16,5 | ■ | ■ | ■ | ■ |
| M 18 | 1 | 110 | 24 | 20 | 14 | 11 | 3/5 | 17 | | | | |
| M 20 | 2 | 140 | 30 | 20 | 16 | 12 | 3/5 | 18 | | | | |
| M 20 | 1,5 | 125 | 24 | 20 | 16 | 12 | 3/5 | 18,5 | ■ | ■ | ■ | ■ |
| M 20 | 1 | 125 | 24 | 20 | 16 | 12 | 3/5 | 19 | | | | |
| M 22 | 2 | 140 | 30 | 20 | 18 | 14,5 | 3/5 | 20 | | | | |
| M 22 | 1,5 | 125 | 24 | 20 | 18 | 14,5 | 3/5 | 20,5 | | | | |
| M 22 | 1 | 125 | 24 | 20 | 18 | 14,5 | 3/5 | 21 | | | | |
| M 24 | 2 | 140 | 26 | 22 | 18 | 14,5 | 4/5 | 22 | | | | |
| M 24 | 1,5 | 140 | 26 | 22 | 18 | 14,5 | 4/5 | 22,5 | | | | |
| M 24 | 1 | 140 | 26 | 22 | 18 | 14,5 | 4/5 | 23 | | | | |
| M 25 | 2 | 140 | 26 | 22 | 18 | 14,5 | 4/5 | 23 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možné použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

3.1; 3.2; 3.3; 8.2; 6.2



3580

3.2; 8.2



3590

3.2; 8.2; 3.1; 3.3; 6.2



4680

3.2



4690

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 3580 | 3590 | 4680 | 4690 |
|--|-----|----------------|----------------|---------------------|----------------|------|-----------|------|--------------|------|------------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiCN | OX | TiCN | OX |
| | | | | | | | | | B 3,5 - 6 | | C 2 - 3 | |
| d ₁ | P | l ₁ | l ₂ | l ₃ R40° | d ₂ | a | z / Zr40° | Ø mm | | | | |
| M 25 | 1,5 | 140 | 26 | 22 | 18 | 14,5 | 4/5 | 23,5 | | | | |
| M 26 | 1,5 | 140 | 26 | 22 | 18 | 14,5 | 4/5 | 24,5 | | | | |
| M 27 | 2 | 140 | 26 | 22 | 20 | 16 | 4/5 | 25 | | | | |
| M 27 | 1,5 | 140 | 26 | 22 | 20 | 16 | 4/5 | 25,5 | | | | |
| M 27 | 1 | 140 | 26 | 22 | 20 | 16 | 4/5 | 26 | | | | |
| M 28 | 2 | 140 | 26 | 22 | 20 | 16 | 4/5 | 26 | | | | |
| M 28 | 1,5 | 140 | 26 | 22 | 20 | 16 | 4/5 | 26,5 | | | | |
| M 30 | 2 | 150 | 28 | 26 | 22 | 18 | 4/5 | 28 | | | | |
| M 30 | 1,5 | 150 | 28 | 26 | 22 | 18 | 4/5 | 28,5 | | | | |
| M 30 | 1 | 150 | 28 | 26 | 22 | 18 | 4/5 | 29 | | | | |
| M 32 | 1,5 | 150 | 28 | 26 | 22 | 18 | 4/5 | 30,5 | | | | |
| M 33 | 2 | 160 | 30 | 28 | 25 | 20 | 4/5 | 31 | | | | |
| M 33 | 1,5 | 160 | 30 | 28 | 25 | 20 | 4/5 | 31,5 | | | | |
| M 34 | 1,5 | 170 | 30 | 28 | 28 | 22 | 4/5 | 32,5 | | | | |
| M 35 | 1,5 | 170 | 30 | 30 | 28 | 22 | 4/5 | 33,5 | | | | |
| M 36 | 3 | 200 | 42 | 36 | 28 | 22 | 4/5 | 33 | | | | |
| M 36 | 2 | 170 | 30 | 28 | 28 | 22 | 4/5 | 34 | | | | |
| M 36 | 1,5 | 170 | 30 | 28 | 28 | 22 | 4/5 | 34,5 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe



| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3080 | 3080 IKZ | 3130 | 3130 IKZ |
|--|------|-------|-------|-------|------|---|----------------|----------|-----------------|----------|-----------------|
| | | | | | | | | TiCN | TiCN | TiCN | TiCN |
| | | | | | | | | C 2-3 | C 2-3 IKZ | E 1,5 | E 1,5 IKZ |
| d_1 | P | l_1 | l_2 | d_2 | a | z | \emptyset mm | | | | |
| M 3 | 0,35 | 56 | 8 | 2,2 | - | 3 | 2,65 | | | | |
| M 3,5 | 0,35 | 56 | 8 | 2,5 | 2,1 | 3 | 3,15 | | | | |
| M 4 | 0,5 | 63 | 12 | 2,8 | 2,1 | 3 | 3,5 | | | | |
| M 4 | 0,35 | 63 | 12 | 2,8 | 2,1 | 3 | 3,65 | | | | |
| M 4,5 | 0,5 | 70 | 13 | 3,5 | 2,7 | 3 | 4 | | | | |
| M 5 | 0,5 | 70 | 13 | 3,5 | 2,7 | 3 | 4,5 | | | | |
| M 5,5 | 0,5 | 80 | 15 | 4 | 3 | 3 | 5 | | | | |
| M 6 | 0,75 | 80 | 15 | 4,5 | 3,4 | 3 | 5,2 | ■ | ■ | ■ | ■ |
| M 6 | 0,5 | 80 | 15 | 4,5 | 3,4 | 3 | 5,5 | | | | |
| M 7 | 0,75 | 80 | 15 | 5,5 | 4,3 | 3 | 6,2 | | | | |
| M 8 | 1 | 90 | 18 | 6 | 4,9 | 4 | 7 | ■ | ■ | ■ | ■ |
| M 8 | 0,75 | 80 | 15 | 6 | 4,9 | 4 | 7,2 | | | | |
| M 8 | 0,5 | 80 | 15 | 6 | 4,9 | 4 | 7,5 | | | | |
| M 9 | 1 | 90 | 18 | 7 | 5,5 | 4 | 8 | | | | |
| M 9 | 0,75 | 80 | 18 | 7 | 5,5 | 4 | 8,2 | | | | |
| M 10 | 1,25 | 100 | 20 | 7 | 5,5 | 4 | 8,8 | ■ | ■ | ■ | ■ |
| M 10 | 1 | 90 | 20 | 7 | 5,5 | 4 | 9 | ■ | ■ | ■ | ■ |
| M 10 | 0,75 | 90 | 20 | 7 | 5,5 | 4 | 9,2 | | | | |
| M 11 | 1 | 90 | 20 | 8 | 6,2 | 4 | 10 | | | | |
| M 11 | 0,75 | 90 | 20 | 8 | 6,2 | 4 | 10,2 | | | | |
| M 12 | 1,5 | 100 | 21 | 9 | 7 | 4 | 10,5 | ■ | ■ | ■ | ■ |
| M 12 | 1,25 | 100 | 21 | 9 | 7 | 4 | 10,8 | ■ | ■ | ■ | ■ |
| M 12 | 1 | 100 | 21 | 9 | 7 | 4 | 11 | ■ | ■ | ■ | ■ |
| M 13 | 1 | 100 | 21 | 11 | 9 | 4 | 12 | | | | |
| M 14 | 1,5 | 100 | 21 | 11 | 9 | 4 | 12,5 | ■ | ■ | ■ | ■ |
| M 14 | 1,25 | 100 | 21 | 11 | 9 | 4 | 12,8 | | | | |
| M 14 | 1 | 100 | 21 | 11 | 9 | 4 | 13 | | | | |
| M 15 | 1,5 | 100 | 21 | 12 | 9 | 4 | 13,5 | | | | |
| M 15 | 1 | 100 | 21 | 12 | 9 | 4 | 14 | | | | |
| M 16 | 1,5 | 100 | 21 | 12 | 9 | 4 | 14,5 | ■ | | ■ | |
| M 16 | 1 | 100 | 21 | 12 | 9 | 4 | 15 | | | | |
| M 17 | 1,5 | 100 | 21 | 12 | 9 | 4 | 15,5 | | | | |
| M 17 | 1 | 100 | 21 | 12 | 9 | 4 | 16 | | | | |
| M 18 | 2 | 125 | 24 | 14 | 11 | 4 | 16 | | | | |
| M 18 | 1,5 | 110 | 24 | 14 | 11 | 4 | 16,5 | ■ | | ■ | |
| M 18 | 1 | 110 | 24 | 14 | 11 | 4 | 17 | | | | |
| M 20 | 2 | 140 | 30 | 16 | 12 | 4 | 18 | | | | |
| M 20 | 1,5 | 125 | 24 | 16 | 12 | 4 | 18,5 | ■ | | ■ | |
| M 20 | 1 | 125 | 24 | 16 | 12 | 4 | 19 | | | | |
| M 22 | 2 | 140 | 30 | 18 | 14,5 | 4 | 20 | | | | |
| M 22 | 1,5 | 125 | 24 | 18 | 14,5 | 4 | 20,5 | | | | |
| M 22 | 1 | 125 | 24 | 18 | 14,5 | 4 | 21 | | | | |
| M 24 | 2 | 140 | 26 | 18 | 14,5 | 4 | 22 | | | | |
| M 24 | 1,5 | 140 | 26 | 18 | 14,5 | 4 | 22,5 | | | | |
| M 24 | 1 | 140 | 26 | 18 | 14,5 | 4 | 23 | | | | |
| M 25 | 2 | 140 | 26 | 18 | 14,5 | 4 | 23 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe



| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3080 | 3080 IKZ | 3130 | 3130 IKZ |
|--|-----|----------------|----------------|----------------|------|---|------|----------|-----------------|----------|-----------------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | TiCN | TiCN | TiCN | TiCN |
| | | | | | | | | C 2-3 | C 2-3 IKZ | E 1,5 | E 1,5 IKZ |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| M 25 | 1,5 | 140 | 26 | 18 | 14,5 | 4 | 23,5 | | | | |
| M 26 | 1,5 | 140 | 26 | 18 | 14,5 | 4 | 24,5 | | | | |
| M 27 | 2 | 140 | 26 | 20 | 16 | 4 | 25 | | | | |
| M 27 | 1,5 | 140 | 26 | 20 | 16 | 4 | 25,5 | | | | |
| M 27 | 1 | 140 | 26 | 20 | 16 | 4 | 26 | | | | |
| M 28 | 2 | 140 | 26 | 20 | 16 | 4 | 26 | | | | |
| M 28 | 1,5 | 140 | 26 | 20 | 16 | 4 | 26,5 | | | | |
| M 30 | 2 | 150 | 28 | 22 | 18 | 4 | 28 | | | | |
| M 30 | 1,5 | 150 | 28 | 22 | 18 | 4 | 28,5 | | | | |
| M 30 | 1 | 150 | 28 | 22 | 18 | 4 | 29 | | | | |
| M 32 | 1,5 | 150 | 28 | 22 | 18 | 5 | 30,5 | | | | |
| M 33 | 2 | 160 | 30 | 25 | 20 | 5 | 31 | | | | |
| M 33 | 1,5 | 160 | 30 | 25 | 20 | 5 | 31,5 | | | | |
| M 34 | 1,5 | 170 | 30 | 28 | 22 | 5 | 32,5 | | | | |
| M 35 | 1,5 | 170 | 30 | 28 | 22 | 5 | 33,5 | | | | |
| M 36 | 3 | 200 | 42 | 28 | 22 | 5 | 33 | | | | |
| M 36 | 2 | 170 | 30 | 28 | 22 | 5 | 34 | | | | |
| M 36 | 1,5 | 170 | 30 | 28 | 22 | 5 | 34,5 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2

8.2; 10.1; 1.1; 2.1; 6.1

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



3002



3012



3502



3512

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3002 | 3012 | 3502 | 3512 |
|--|----|----------------|----------------|----------------|------|--------------------|-------|------------|------|------------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | TiN | | TiN | |
| | | | | | | | | | | | |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z / z _B | Ø mm | | | | |
| G 1/16" | 28 | 90 | 18 | 6 | 4,9 | 3/3 | 6,8 | | | | |
| G 1/8" | 28 | 90 | 20 | 7 | 5,5 | 3/3 | 8,8 | ■ | ■ | ■ | ■ |
| G 1/4" | 19 | 100 | 21 | 11 | 9 | 3/3 | 11,8 | ■ | ■ | ■ | ■ |
| G 3/8" | 19 | 100 | 21 | 12 | 9 | 3/3 | 15,25 | ■ | ■ | ■ | ■ |
| G 1/2" | 14 | 125 | 24 | 16 | 12 | 3/3 | 19 | ■ | ■ | ■ | ■ |
| G 5/8" | 14 | 125 | 24 | 18 | 14,5 | 4/4 | 21 | ■ | ■ | ■ | ■ |
| G 3/4" | 14 | 140 | 26 | 20 | 16 | 4/4 | 24,5 | ■ | ■ | ■ | ■ |
| G 7/8" | 14 | 150 | 28 | 22 | 18 | 4/4 | 28,25 | ■ | ■ | ■ | ■ |
| G 1" | 11 | 160 | 30 | 25 | 20 | 4/4 | 30,75 | ■ | ■ | ■ | ■ |
| G 1 1/8" | 11 | 170 | 30 | 28 | 22 | 4/4 | 35,5 | ■ | ■ | ■ | ■ |
| G 1 1/4" | 11 | 170 | 30 | 32 | 24 | 4/4 | 39,5 | ■ | ■ | ■ | ■ |
| G 1 3/8" | 11 | 180 | 32 | 36 | 29 | 6/4 | 41,8 | ■ | ■ | ■ | ■ |
| G 1 1/2" | 11 | 190 | 32 | 36 | 29 | 6/6 | 45,25 | ■ | ■ | ■ | ■ |
| G 1 3/4" | 11 | 190 | 32 | 40 | 32 | 6/6 | 51,3 | ■ | ■ | ■ | ■ |
| G 2" | 11 | 220 | 40 | 45 | 35 | 6/6 | 57,2 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



4052

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



4062

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 4052 | 4062 |
|--|----|----------------|----------------|----------------|------|---|-------|------|------------|
| | | | | | | | | | TiN |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | |
| G 1/16" | 28 | 90 | 13 | 6 | 4,9 | 3 | 6,8 | | |
| G 1/8" | 28 | 90 | 12 | 7 | 5,5 | 3 | 8,8 | ■ | ■ |
| G 1/4" | 19 | 100 | 16 | 11 | 9 | 3 | 11,8 | ■ | ■ |
| G 3/8" | 19 | 100 | 16 | 12 | 9 | 3 | 15,25 | ■ | ■ |
| G 1/2" | 14 | 125 | 20 | 16 | 12 | 4 | 19 | ■ | ■ |
| G 5/8" | 14 | 125 | 20 | 18 | 14,5 | 4 | 21 | ■ | ■ |
| G 3/4" | 14 | 140 | 22 | 20 | 16 | 4 | 24,5 | ■ | ■ |
| G 7/8" | 14 | 150 | 26 | 22 | 18 | 4 | 28,25 | ■ | ■ |
| G 1" | 11 | 160 | 30 | 25 | 20 | 4 | 30,75 | ■ | ■ |
| G 1 1/8" | 11 | 170 | 30 | 28 | 22 | 5 | 35,5 | ■ | ■ |
| G 1 1/4" | 11 | 170 | 30 | 32 | 24 | 5 | 39,5 | ■ | ■ |
| G 1 3/8" | 11 | 180 | 32 | 36 | 29 | 5 | 41,8 | ■ | ■ |
| G 1 1/2" | 11 | 190 | 32 | 36 | 29 | 5 | 45,25 | ■ | ■ |
| G 1 3/4" | 11 | 190 | 32 | 40 | 32 | 5 | 51,3 | | |
| G 2" | 11 | 220 | 40 | 45 | 35 | 5 | 57,2 | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

3.1; 5.1; 5.2; 9.1; 10.2



3662

3.1; 5.1; 5.2



3692

3.1; 3.3; 5.1; 5.2; 6.2; 9.1; 10.1; 3.2



4262

3.1; 5.1; 5.2



4292

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 3662 | 3692 | 4262 | 4292 |
|--|----|----------------|----------------|-------------------|----------------|------|----------------------|-------|------------|-----------|------------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | TiN | OX | TiN | OX |
| | | | | | | | | | | | | |
| d ₁ | N | l ₁ | l ₂ | l _{2R35} | d ₂ | a | z / Z _{R35} | Ø mm | | | | |
| G 1/16" | 28 | 90 | 18 | 13 | 6 | 4,9 | 3/3 | 6,8 | | | | |
| G 1/8" | 28 | 90 | 20 | 12 | 7 | 5,5 | 3/3 | 8,8 | | | | |
| G 1/4" | 19 | 100 | 21 | 16 | 11 | 9 | 3/3 | 11,8 | | | | |
| G 3/8" | 19 | 100 | 21 | 16 | 12 | 9 | 3/3 | 15,25 | | | | |
| G 1/2" | 14 | 125 | 24 | 20 | 16 | 12 | 3/4 | 19 | | | | |
| G 5/8" | 14 | 125 | 24 | 20 | 18 | 14,5 | 4/4 | 21 | | | | |
| G 3/4" | 14 | 140 | 26 | 22 | 20 | 16 | 4/4 | 24,5 | | | | |
| G 7/8" | 14 | 150 | 28 | 26 | 22 | 18 | 4/4 | 28,25 | | | | |
| G 1" | 11 | 160 | 30 | 30 | 25 | 20 | 4/4 | 30,75 | | | | |
| G 1 1/8" | 11 | 170 | 30 | 30 | 28 | 22 | 4/5 | 35,5 | | | | |
| G 1 1/4" | 11 | 170 | 30 | 30 | 32 | 24 | 4/5 | 39,5 | | | | |
| G 1 3/8" | 11 | 180 | 32 | 32 | 36 | 29 | 4/5 | 41,8 | | | | |
| G 1 1/2" | 11 | 190 | 32 | 32 | 36 | 29 | 6/5 | 45,25 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2



1004

8.2; 10.1; 1.1; 2.1; 6.1



1014

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1



1504

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



1514

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 1004 | 1014 | 1504 | 1514 |
|--|----|----------------|----------------|----------------|-----|---|------|------------|------|------------|------|
| | | | | | | | | TiN | | TiN | |
| | | | | | | | | | | | |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| No. 5 | 40 | 56 | 9 | 3,5 | 2,7 | 3 | 2,6 | ■ | ■ | ■ | ■ |
| No. 6 | 32 | 56 | 11 | 4 | 3 | 3 | 2,85 | ■ | ■ | ■ | ■ |
| No. 8 | 32 | 63 | 12 | 4,5 | 3,4 | 3 | 3,5 | ■ | ■ | ■ | ■ |
| No. 10 | 24 | 70 | 13 | 6 | 4,9 | 3 | 3,9 | ■ | ■ | ■ | ■ |
| No. 12 | 24 | 80 | 15 | 6 | 4,9 | 3 | 4,5 | ■ | ■ | ■ | ■ |
| 1/4 | 20 | 80 | 15 | 7 | 5,5 | 3 | 5,2 | ■ | ■ | ■ | ■ |
| 5/16 | 18 | 90 | 18 | 8 | 6,2 | 3 | 6,6 | ■ | ■ | ■ | ■ |
| 3/8 | 16 | 90 | 20 | 9 | 7 | 3 | 8 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2

8.2; 10.1; 1.1; 2.1; 6.1

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



3004



3014



3504



3514

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3004 | 3014 | 3504 | 3514 |
|--|----|----------------|----------------|----------------|------|---|-------|------------|------|------------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | TiN | | TiN | |
| | | | | | | | | | | | |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| 7/16 | 14 | 100 | 20 | 8 | 6,2 | 3 | 9,4 | ■ | ■ | ■ | ■ |
| 1/2 | 13 | 110 | 23 | 9 | 7 | 3 | 10,75 | ■ | ■ | ■ | ■ |
| 9/16 | 12 | 110 | 25 | 11 | 9 | 3 | 12,25 | ■ | ■ | ■ | ■ |
| 5/8 | 11 | 110 | 25 | 12 | 9 | 3 | 13,5 | ■ | ■ | ■ | ■ |
| 3/4 | 10 | 125 | 30 | 14 | 11 | 3 | 16,5 | ■ | ■ | ■ | ■ |
| 7/8 | 9 | 140 | 30 | 18 | 14,5 | 3 | 19,5 | ■ | ■ | ■ | ■ |
| 1 | 8 | 160 | 36 | 18 | 14,5 | 3 | 22,25 | ■ | ■ | ■ | ■ |
| 1 1/8 | 7 | 180 | 40 | 22 | 18 | 4 | 25 | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



2054

2.2; 2.3; 8.1; 6.2; 10.2



4054

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



2064

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



4064

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 2054 | 2064 | |
|--|----|----------------|----------------|----------------|-----|---|--|------|------------|---|
| | | | | | | | | | TiN | |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z | | Ø mm | | |
| No. 5 | 40 | 56 | 5 | 3,5 | 2,7 | 3 | | 2,6 | ■ | ■ |
| No. 6 | 32 | 56 | 7 | 4 | 3 | 3 | | 2,85 | ■ | ■ |
| No. 8 | 32 | 63 | 7 | 4,5 | 3,4 | 3 | | 3,5 | ■ | ■ |
| No. 10 | 24 | 70 | 8 | 6 | 4,9 | 3 | | 3,9 | ■ | ■ |
| No. 12 | 24 | 80 | 10 | 6 | 4,9 | 3 | | 4,5 | ■ | ■ |
| 1/4 | 20 | 80 | 10 | 7 | 5,5 | 3 | | 5,2 | ■ | ■ |
| 5/16 | 18 | 90 | 13 | 8 | 6,2 | 3 | | 6,6 | ■ | ■ |
| 3/8 | 16 | 90 | 15 | 9 | 7 | 3 | | 8 | ■ | ■ |

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 4054 | 4064 | |
|--|----|----------------|----------------|----------------|------|---|--|-------|------------|---|
| | | | | | | | | | TiN | |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z | | Ø mm | | |
| 7/16 | 14 | 100 | 18 | 8 | 6,2 | 3 | | 9,4 | ■ | ■ |
| 1/2 | 13 | 110 | 20 | 9 | 7 | 3 | | 10,75 | ■ | ■ |
| 9/16 | 12 | 110 | 20 | 11 | 9 | 3 | | 12,25 | ■ | ■ |
| 5/8 | 11 | 110 | 20 | 12 | 9 | 3 | | 13,5 | ■ | ■ |
| 3/4 | 10 | 125 | 25 | 14 | 11 | 4 | | 16,5 | ■ | ■ |
| 7/8 | 9 | 140 | 25 | 18 | 14,5 | 4 | | 19,5 | ■ | ■ |
| 1 | 8 | 160 | 30 | 18 | 14,5 | 4 | | 22,25 | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2

8.2; 10.1; 1.1; 2.1; 6.1

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

1.1; 1.2; 2.1; 2.2; 2.3; 6.2; 8.1; 8.2; 10.1



3005



3015



3505



3515

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 3005 | 3015 | 3505 | 3515 |
|--|----|----------------|----------------|----------------|------|---|-------|------------|------|------------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | TiN | | TiN | |
| | | | | | | | | | | | |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | | | |
| No. 5 | 44 | 56 | 9 | 2,2 | - | 3 | 2,7 | ■ | ■ | ■ | ■ |
| No. 6 | 40 | 56 | 11 | 2,5 | 2,1 | 3 | 3 | ■ | ■ | ■ | ■ |
| No. 8 | 36 | 63 | 12 | 2,8 | 2,1 | 3 | 3,5 | ■ | ■ | ■ | ■ |
| No. 10 | 32 | 70 | 13 | 3,5 | 2,7 | 3 | 4,1 | ■ | ■ | ■ | ■ |
| No. 12 | 28 | 80 | 15 | 4 | 3 | 3 | 4,65 | ■ | ■ | ■ | ■ |
| 1/4 | 28 | 80 | 15 | 4,5 | 3,4 | 3 | 5,5 | ■ | ■ | ■ | ■ |
| 5/16 | 24 | 90 | 18 | 6 | 4,9 | 3 | 6,9 | ■ | ■ | ■ | ■ |
| 3/8 | 24 | 90 | 20 | 7 | 5,5 | 3 | 8,5 | ■ | ■ | ■ | ■ |
| 7/16 | 20 | 100 | 20 | 8 | 6,2 | 3 | 9,9 | ■ | ■ | ■ | ■ |
| 1/2 | 20 | 100 | 21 | 9 | 7 | 3 | 11,5 | ■ | ■ | ■ | ■ |
| 9/16 | 18 | 100 | 21 | 11 | 9 | 3 | 12,9 | ■ | ■ | ■ | ■ |
| 5/8 | 18 | 100 | 21 | 12 | 9 | 3 | 14,5 | ■ | ■ | ■ | ■ |
| 3/4 | 16 | 110 | 24 | 14 | 11 | 3 | 17,5 | ■ | ■ | ■ | ■ |
| 7/8 | 14 | 125 | 24 | 18 | 14,5 | 3 | 20,5 | ■ | ■ | ■ | ■ |
| 1 | 12 | 140 | 26 | 18 | 14,5 | 3 | 23,25 | ■ | ■ | ■ | ■ |
| 1 1/8 | 12 | 150 | 28 | 22 | 18 | 4 | 26,5 | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

2.2; 2.3; 8.1; 6.2; 10.2



4055

2.2; 2.3; 8.1; 6.2; 8.2; 10.2



4065

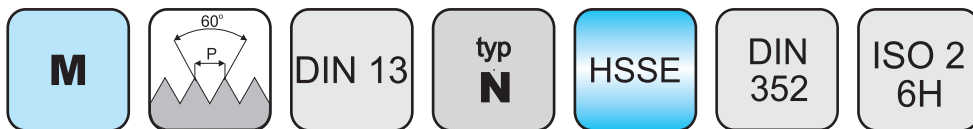
| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 4055 | 4065 |
|--|----|----------------|----------------|----------------|------|---|-------|------------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | TiN | |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | |
| No. 5 | 44 | 56 | 5 | 2,2 | - | 3 | 2,7 | ■ | ■ |
| No. 6 | 40 | 56 | 7 | 2,5 | 2,1 | 3 | 3 | ■ | ■ |
| No. 8 | 36 | 63 | 7 | 2,8 | 2,1 | 3 | 3,5 | ■ | ■ |
| No. 10 | 32 | 70 | 8 | 3,5 | 2,7 | 3 | 4,1 | ■ | ■ |
| No. 12 | 28 | 80 | 10 | 4 | 3 | 3 | 4,65 | ■ | ■ |
| 1/4 | 28 | 80 | 10 | 4,5 | 3,4 | 3 | 5,5 | ■ | ■ |
| 5/16 | 24 | 90 | 13 | 6 | 4,9 | 3 | 6,9 | ■ | ■ |
| 3/8 | 24 | 90 | 15 | 7 | 5,5 | 3 | 8,5 | ■ | ■ |
| 7/16 | 20 | 100 | 15 | 8 | 6,2 | 3 | 9,9 | ■ | ■ |
| 1/2 | 20 | 100 | 14 | 9 | 7 | 3 | 11,5 | ■ | ■ |
| 9/16 | 18 | 100 | 16 | 11 | 9 | 3 | 12,9 | ■ | ■ |
| 5/8 | 18 | 100 | 16 | 12 | 9 | 3 | 14,5 | ■ | ■ |
| 3/4 | 16 | 110 | 20 | 14 | 11 | 4 | 17,5 | ■ | ■ |
| 7/8 | 14 | 125 | 20 | 18 | 14,5 | 4 | 20,5 | ■ | ■ |
| 1 | 12 | 140 | 22 | 18 | 14,5 | 4 | 23,25 | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

STROJNÍ KRÁTKÉ ZÁVITNÍKY

Short machine taps / Kurze Maschinengewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1

2.2; 2.3; 8.1; 6.2; 10.2

10.1; 2.2



0550



0600



0650

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | | 0550 | 0600 | 0650 |
|--|------|----------------|----------------|-------------------|----------------|-----|---|------|------|------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | l _{2RSP} | d ₂ | a | z | Ø mm | | | |
| M 3 | 0,5 | 40 | 9 | 5 | 3,5 | 2,7 | 3 | 2,5 | ■ | | ■ |
| M 4 | 0,7 | 45 | 12 | 7 | 4,5 | 3,4 | 3 | 3,3 | ■ | | ■ |
| M 5 | 0,8 | 50 | 13 | 8 | 6 | 4,9 | 3 | 4,2 | ■ | | ■ |
| M 6 | 1 | 56 | 15 | 10 | 6 | 4,9 | 3 | 5 | ■ | | ■ |
| M 8 | 1,25 | 63 | 18 | 13 | 6 | 4,9 | 3 | 6,8 | ■ | | ■ |
| M 10 | 1,5 | 70 | 20 | 15 | 7 | 5,5 | 3 | 8,5 | ■ | | ■ |
| M 12 | 1,75 | 75 | 23 | 18 | 9 | 7 | 3 | 10,2 | ■ | | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

11.1; 1.1; 2.1; 2.2; 7.1; 8.1



2910

1.1; 2.2; 7.1; 8.1; 9.1; 1.2; 2.1



2960

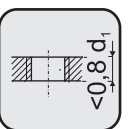
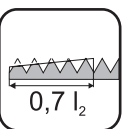
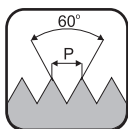
| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | 2910 | 2910 | 2960 | 2960 | |
|--|------|-------|-------|-------|-----|--|--------------|--------------|--------------|---|
| | | | | | | TiN | TiN | TiN | TiN | |
| | | | | | | ISO 2 6HX | ISO 3 6GX | ISO 2 6HX | ISO 3 6GX | |
| d_1 | P | l_1 | l_2 | d_2 | a | Viz str. 99 See page No. 99 Siehe Seite Nr. 99 | ■ | ■ | ■ | ■ |
| M 3 | 0,5 | 56 | 11 | 3,5 | 2,7 | | ■ | ■ | ■ | ■ |
| M 3,5 | 0,6 | 56 | 12 | 4 | 3 | | ■ | ■ | ■ | ■ |
| M 4 | 0,7 | 63 | 13 | 4,5 | 3,4 | | ■ | ■ | ■ | ■ |
| M 5 | 0,8 | 70 | 16 | 6 | 4,9 | | ■ | ■ | ■ | ■ |
| M 6 | 1 | 80 | 19 | 6 | 4,9 | | ■ | ■ | ■ | ■ |
| M 8 | 1,25 | 90 | 22 | 8 | 6,2 | | ■ | ■ | ■ | ■ |
| M 10 | 1,5 | 100 | 24 | 10 | 8 | | ■ | ■ | ■ | ■ |
| M 12 | 1,75 | 110 | 28 | 9 | 7 | | ■ | ■ | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

MATICOVÉ ZÁVITNÍKY

Nut taps / Muttergewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 8.1; 8.2; 10.1; 10.2



5000

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 5000 | |
|--|------|----------------|----------------|----------------|-----|---|------|------|--|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | |
| M 3 | 0,5 | 70 | 22 | 2,2 | - | 3 | 2,5 | ■ | |
| M 4 | 0,7 | 90 | 25 | 2,8 | 2,1 | 3 | 3,3 | ■ | |
| M 5 | 0,8 | 100 | 28 | 3,5 | 2,7 | 3 | 4,2 | ■ | |
| M 6 | 1 | 110 | 32 | 4,5 | 3,5 | 3 | 5 | ■ | |
| M 7 | 1 | 110 | 36 | 5,5 | 4,3 | 3 | 6 | ■ | |
| M 8 | 1,25 | 125 | 40 | 6 | 4,9 | 3 | 6,8 | ■ | |
| M 10 | 1,5 | 140 | 45 | 7 | 5,5 | 3 | 8,5 | ■ | |
| M 11 | 1,5 | 160 | 45 | 8 | 6,2 | 3 | 9,5 | | |
| M 12 | 1,75 | 180 | 50 | 9 | 7 | 3 | 10,2 | ■ | |
| M 14 | 2 | 200 | 56 | 11 | 9 | 3 | 12 | ■ | |
| M 16 | 2 | 200 | 63 | 12 | 9 | 3 | 14 | ■ | |
| M 18 | 2,5 | 220 | 63 | 14 | 11 | 3 | 15,5 | ■ | |
| M 20 | 2,5 | 250 | 70 | 16 | 12 | 3 | 17,5 | ■ | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.1; 6.2; 8.1; 10.1; 8.2



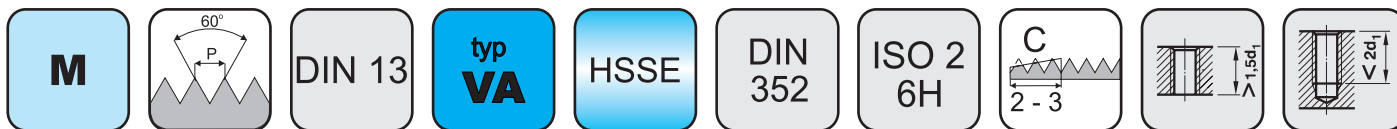
0200

3 ks v sadě
3 pcs in set
3 Stück im Satz

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 0200 | 0200 |
|--|------|----------------|----------------|----------------|------|---|------|------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | Ø mm | | |
| M 3 | 0,5 | 40 | 9 | 3,5 | 2,7 | 3 | 2,5 | ■ | ■ |
| M 3,5 | 0,6 | 45 | 11 | 4 | 3 | 3 | 2,9 | ■ | ■ |
| M 4 | 0,7 | 45 | 12 | 4,5 | 3,4 | 3 | 3,3 | ■ | ■ |
| M 4,5 | 0,75 | 50 | 13 | 6 | 4,9 | 3 | 3,7 | ■ | ■ |
| M 5 | 0,8 | 50 | 13 | 6 | 4,9 | 3 | 4,2 | ■ | ■ |
| M 6 | 1 | 56 | 15 | 6 | 4,9 | 3 | 5 | ■ | ■ |
| M 7 | 1 | 56 | 15 | 6 | 4,9 | 3 | 6 | ■ | ■ |
| M 8 | 1,25 | 63 | 18 | 6 | 4,9 | 3 | 6,8 | ■ | ■ |
| M 9 | 1,25 | 63 | 18 | 7 | 5,5 | 3 | 7,8 | ■ | ■ |
| M 10 | 1,5 | 70 | 20 | 7 | 5,5 | 3 | 8,5 | ■ | ■ |
| M 11 | 1,5 | 70 | 20 | 8 | 6,2 | 3 | 9,5 | ■ | ■ |
| M 12 | 1,75 | 75 | 23 | 9 | 7 | 3 | 10,2 | ■ | ■ |
| M 14 | 2 | 80 | 25 | 11 | 9 | 4 | 12 | ■ | ■ |
| M 16 | 2 | 80 | 25 | 12 | 9 | 4 | 14 | ■ | ■ |
| M 18 | 2,5 | 95 | 30 | 14 | 11 | 4 | 15,5 | ■ | ■ |
| M 20 | 2,5 | 95 | 30 | 16 | 12 | 4 | 17,5 | ■ | ■ |
| M 22 | 2,5 | 100 | 30 | 18 | 14,5 | 4 | 19,5 | ■ | ■ |
| M 24 | 3 | 110 | 34 | 18 | 14,5 | 4 | 21 | ■ | ■ |
| M 27 | 3 | 110 | 34 | 20 | 16 | 4 | 24 | ■ | ■ |
| M 30 | 3,5 | 125 | 40 | 22 | 18 | 4 | 26,5 | ■ | ■ |
| M 33 | 3,5 | 125 | 40 | 25 | 20 | 4 | 29,5 | ■ | ■ |
| M 36 | 4 | 150 | 50 | 28 | 22 | 4 | 32 | ■ | ■ |
| M 39 | 4 | 150 | 50 | 32 | 24 | 4 | 35 | ■ | ■ |
| M 42 | 4,5 | 150 | 56 | 32 | 24 | 4 | 37,5 | ■ | ■ |
| M 45 | 4,5 | 160 | 58 | 36 | 29 | 6 | 40,5 | ■ | ■ |
| M 48 | 5 | 180 | 65 | 36 | 29 | 6 | 43 | ■ | ■ |
| M 52 | 5 | 180 | 65 | 40 | 32 | 6 | 47 | ■ | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

5.1; 5.2; 6.1; 6.2



0290

3 ks v sadě
3 pcs in set
3 Stück im Satz

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 0290 | |
|--|------|----------------|----------------|----------------|-----|---|------|-----------|--|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | OX | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | | | |
| | | | | | | | Ø mm | | |
| M 3 | 0,5 | 40 | 11 | 3,5 | 2,7 | 3 | 2,5 | ■ | |
| M 3,5 | 0,6 | 45 | 12 | 4 | 3 | 3 | 2,9 | | |
| M 4 | 0,7 | 45 | 13 | 4,5 | 3,4 | 3 | 3,3 | ■ | |
| M 4,5 | 0,75 | 50 | 16 | 6 | 4,9 | 3 | 3,7 | | |
| M 5 | 0,8 | 50 | 16 | 6 | 4,9 | 3 | 4,2 | ■ | |
| M 6 | 1 | 56 | 19 | 6 | 4,9 | 3 | 5 | ■ | |
| M 7 | 1 | 56 | 19 | 6 | 4,9 | 3 | 6 | | |
| M 8 | 1,25 | 63 | 22 | 6 | 4,9 | 3 | 6,8 | ■ | |
| M 9 | 1,25 | 63 | 22 | 7 | 5,5 | 3 | 7,8 | | |
| M 10 | 1,5 | 70 | 24 | 7 | 5,5 | 3 | 8,5 | ■ | |
| M 11 | 1,5 | 70 | 24 | 8 | 6,2 | 3 | 9,5 | | |
| M 12 | 1,75 | 75 | 29 | 9 | 7 | 3 | 10,2 | ■ | |
| M 14 | 2 | 80 | 30 | 11 | 9 | 4 | 12 | ■ | |
| M 16 | 2 | 80 | 32 | 12 | 9 | 4 | 14 | ■ | |
| M 18 | 2,5 | 95 | 40 | 14 | 11 | 4 | 15,5 | ■ | |
| M 20 | 2,5 | 95 | 40 | 16 | 12 | 4 | 17,5 | ■ | |

■ dodáváme standardně / standard supplies / Standardlieferbar

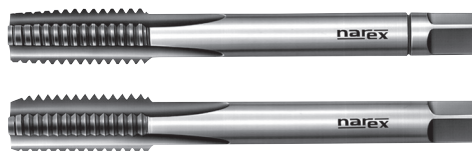
X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.1; 6.2; 8.1; 10.1; 8.2



0300

2 ks v sadě
2 pcs in set
2 Stück im Satz

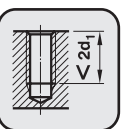
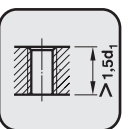
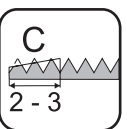
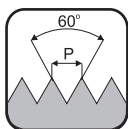
| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 0300 | |
|--|------|----------------|----------------|----------------|------|---|--|------|------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | | Ø mm | |
| M 3 | 0,35 | 40 | 8 | 3,5 | 2,7 | 3 | | | 2,65 |
| M 3,5 | 0,35 | 45 | 8 | 4 | 3 | 3 | | | 3,15 |
| M 4 | 0,5 | 45 | 9 | 4,5 | 3,4 | 3 | | | 3,5 |
| M 4 | 0,35 | 45 | 9 | 4,5 | 3,4 | 3 | | | 3,65 |
| M 4,5 | 0,5 | 50 | 10 | 6 | 4,9 | 3 | | | 4 |
| M 5 | 0,5 | 50 | 10 | 6 | 4,9 | 3 | | | 4,5 |
| M 5,5 | 0,5 | 56 | 11 | 6 | 4,9 | 3 | | | 5 |
| M 6 | 0,75 | 56 | 11 | 6 | 4,9 | 3 | | | 5,2 |
| M 6 | 0,5 | 56 | 11 | 6 | 4,9 | 3 | | | 5,5 |
| M 7 | 0,75 | 56 | 11 | 6 | 4,9 | 3 | | | 6,2 |
| M 8 | 1 | 63 | 18 | 6 | 4,9 | 3 | | | 7 |
| M 8 | 0,75 | 56 | 14 | 6 | 4,9 | 3 | | | 7,2 |
| M 8 | 0,5 | 56 | 14 | 6 | 4,9 | 3 | | | 7,5 |
| M 9 | 1 | 63 | 18 | 7 | 5,5 | 3 | | | 8 |
| M 9 | 0,75 | 56 | 14 | 7 | 5,5 | 3 | | | 8,2 |
| M 10 | 1,25 | 70 | 20 | 7 | 5,5 | 3 | | | 8,8 |
| M 10 | 1 | 63 | 18 | 7 | 5,5 | 3 | | | 9 |
| M 10 | 0,75 | 63 | 18 | 7 | 5,5 | 3 | | | 9,2 |
| M 11 | 1 | 63 | 18 | 8 | 6,2 | 3 | | | 10 |
| M 11 | 0,75 | 63 | 18 | 8 | 6,2 | 3 | | | 10,2 |
| M 12 | 1,5 | 70 | 20 | 9 | 7 | 3 | | | 10,5 |
| M 12 | 1,25 | 70 | 20 | 9 | 7 | 3 | | | 10,8 |
| M 12 | 1 | 70 | 18 | 9 | 7 | 3 | | | 11 |
| M 13 | 1 | 70 | 18 | 11 | 9 | 3 | | | 12 |
| M 14 | 1,5 | 70 | 20 | 11 | 9 | 4 | | | 12,5 |
| M 14 | 1,25 | 70 | 20 | 11 | 9 | 4 | | | 12,8 |
| M 14 | 1 | 70 | 18 | 11 | 9 | 4 | | | 13 |
| M 15 | 1,5 | 70 | 20 | 12 | 9 | 4 | | | 13,5 |
| M 15 | 1 | 70 | 18 | 12 | 9 | 4 | | | 14 |
| M 16 | 1,5 | 70 | 20 | 12 | 9 | 4 | | | 14,5 |
| M 16 | 1 | 70 | 18 | 12 | 9 | 4 | | | 15 |
| M 17 | 1,5 | 70 | 20 | 12 | 9 | 4 | | | 15,5 |
| M 17 | 1 | 70 | 18 | 12 | 9 | 4 | | | 16 |
| M 18 | 2 | 80 | 22 | 14 | 11 | 4 | | | 16 |
| M 18 | 1,5 | 80 | 22 | 14 | 11 | 4 | | | 16,5 |
| M 18 | 1 | 80 | 18 | 14 | 11 | 4 | | | 17 |
| M 20 | 2 | 80 | 22 | 16 | 12 | 4 | | | 18 |
| M 20 | 1,5 | 80 | 22 | 16 | 12 | 4 | | | 18,5 |
| M 20 | 1 | 80 | 18 | 16 | 12 | 4 | | | 19 |
| M 22 | 2 | 80 | 22 | 18 | 14,5 | 4 | | | 20 |
| M 22 | 1,5 | 80 | 22 | 18 | 14,5 | 4 | | | 20,5 |
| M 22 | 1 | 80 | 18 | 18 | 14,5 | 4 | | | 21 |
| M 24 | 2 | 90 | 22 | 18 | 14,5 | 4 | | | 22 |
| M 24 | 1,5 | 90 | 22 | 18 | 14,5 | 4 | | | 22,5 |
| M 24 | 1 | 90 | 18 | 18 | 14,5 | 4 | | | 23 |
| M 25 | 2 | 90 | 22 | 18 | 14,5 | 4 | | | 23 |
| M 25 | 1,5 | 90 | 22 | 18 | 14,5 | 4 | | | 23,5 |
| M 26 | 1,5 | 90 | 22 | 18 | 14,5 | 4 | | | 24,5 |
| M 27 | 2 | 90 | 22 | 20 | 16 | 4 | | | 25 |
| M 27 | 1,5 | 90 | 22 | 20 | 16 | 4 | | | 25,5 |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

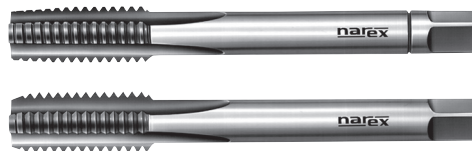
RUČNÍ SADOVÉ ZÁVITNÍKY

Hand taps / Handgewindebohrer



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.1; 6.2; 8.1; 10.1; 8.2



0300
2 ks v sadě
2 pcs in set
2 Stück im Satz

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 0300 | |
|--|-----|----------------|----------------|----------------|----|---|------|------|--|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z | | | |
| | | | | | | | Ø mm | | |
| M 27 | 1 | 90 | 18 | 20 | 16 | 4 | 26 | ■ | |
| M 28 | 2 | 90 | 22 | 20 | 16 | 4 | 26 | ■ | |
| M 28 | 1,5 | 90 | 22 | 20 | 16 | 4 | 26,5 | ■ | |
| M 30 | 2 | 90 | 22 | 22 | 18 | 4 | 28 | ■ | |
| M 30 | 1,5 | 90 | 22 | 22 | 18 | 4 | 28,5 | ■ | |
| M 30 | 1 | 90 | 18 | 22 | 18 | 4 | 29 | ■ | |
| M 32 | 1,5 | 90 | 22 | 22 | 18 | 4 | 30,5 | ■ | |
| M 33 | 2 | 100 | 25 | 25 | 20 | 4 | 31 | ■ | |
| M 33 | 1,5 | 100 | 25 | 25 | 20 | 4 | 31,5 | ■ | |
| M 34 | 1,5 | 100 | 25 | 28 | 22 | 4 | 32,5 | ■ | |
| M 35 | 1,5 | 100 | 25 | 28 | 22 | 4 | 33,5 | ■ | |
| M 36 | 3 | 125 | 36 | 28 | 22 | 4 | 33 | ■ | |
| M 36 | 2 | 125 | 30 | 28 | 22 | 4 | 34 | ■ | |
| M 36 | 1,5 | 100 | 25 | 28 | 22 | 4 | 34,5 | ■ | |
| M 38 | 1,5 | 100 | 25 | 28 | 22 | 4 | 36,5 | ■ | |
| M 39 | 3 | 125 | 36 | 32 | 24 | 4 | 36 | ■ | |
| M 39 | 2 | 125 | 30 | 32 | 24 | 4 | 37 | ■ | |
| M 39 | 1,5 | 110 | 25 | 32 | 24 | 4 | 37,5 | ■ | |
| M 40 | 3 | 125 | 36 | 32 | 24 | 4 | 37 | ■ | |
| M 40 | 2 | 125 | 30 | 32 | 24 | 4 | 38 | ■ | |
| M 40 | 1,5 | 110 | 25 | 32 | 24 | 4 | 38,5 | ■ | |
| M 42 | 3 | 125 | 36 | 32 | 24 | 4 | 39 | ■ | |
| M 42 | 2 | 125 | 30 | 32 | 24 | 4 | 40 | ■ | |
| M 42 | 1,5 | 110 | 25 | 32 | 24 | 4 | 40,5 | ■ | |
| M 45 | 3 | 125 | 36 | 36 | 29 | 6 | 42 | ■ | |
| M 45 | 2 | 125 | 30 | 36 | 29 | 6 | 43 | ■ | |
| M 45 | 1,5 | 110 | 25 | 36 | 29 | 6 | 43,5 | ■ | |
| M 48 | 3 | 140 | 36 | 36 | 29 | 6 | 45 | ■ | |
| M 48 | 2 | 140 | 30 | 36 | 29 | 6 | 46 | ■ | |
| M 48 | 1,5 | 140 | 25 | 36 | 29 | 6 | 46,5 | ■ | |
| M 50 | 3 | 140 | 36 | 36 | 29 | 6 | 47 | ■ | |
| M 50 | 2 | 140 | 30 | 36 | 29 | 6 | 48 | ■ | |
| M 50 | 1,5 | 140 | 25 | 36 | 29 | 6 | 48,5 | ■ | |
| M 52 | 3 | 140 | 40 | 40 | 32 | 6 | 49 | ■ | |
| M 52 | 2 | 140 | 32 | 40 | 32 | 6 | 50 | ■ | |
| M 52 | 1,5 | 140 | 25 | 40 | 32 | 6 | 50,5 | ■ | |

■ dodáváme standardně / standard supplies / Standardlieferbar

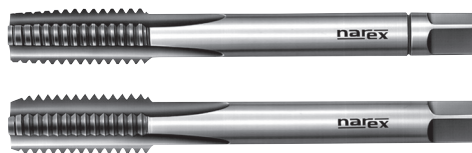
X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.1; 6.2; 8.1; 10.1; 8.2



0302

2 ks v sadě
2 pcs in set
2 Stück im Satz

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | 0302 | | |
|--|----|----------------|----------------|----------------|------|---|------|-------|--|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z | | Ø mm | |
| G 1/16" | 28 | 63 | 17 | 6 | 4,9 | 3 | | 6,8 | |
| G 1/8" | 28 | 63 | 18 | 7 | 5,5 | 4 | | 8,8 | |
| G 1/4" | 19 | 70 | 20 | 11 | 9 | 4 | | 11,8 | |
| G 3/8" | 19 | 70 | 20 | 12 | 9 | 4 | | 15,25 | |
| G 1/2" | 14 | 80 | 22 | 16 | 12 | 4 | | 19 | |
| G 5/8" | 14 | 80 | 22 | 18 | 14,5 | 4 | | 21 | |
| G 3/4" | 14 | 90 | 22 | 20 | 16 | 4 | | 24,5 | |
| G 7/8" | 14 | 90 | 22 | 22 | 18 | 4 | | 28,25 | |
| G 1" | 11 | 100 | 25 | 25 | 20 | 4 | | 30,75 | |
| G 1 1/8" | 11 | 125 | 30 | 28 | 22 | 4 | | 35,5 | |
| G 1 1/4" | 11 | 125 | 30 | 32 | 24 | 4 | | 39,5 | |
| G 1 3/8" | 11 | 125 | 30 | 36 | 29 | 6 | | 41,8 | |
| G 1 1/2" | 11 | 140 | 30 | 36 | 29 | 6 | | 45,25 | |
| G 1 3/4" | 11 | 140 | 32 | 40 | 32 | 6 | | 51,3 | |
| G 2" | 11 | 160 | 36 | 45 | 35 | 6 | | 57,2 | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.1; 6.2; 8.1; 10.1; 8.2



0204

3 ks v sadě
3 pcs in set
3 Stück im Satz

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 0204 | |
|--|----|----------------|----------------|----------------|------|---|-------|------|--|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z | | | |
| No. 5 | 40 | 40 | 10 | 3,5 | 2,7 | 3 | 2,6 | ■ | |
| No. 6 | 32 | 45 | 11 | 4 | 3 | 3 | 2,85 | ■ | |
| No. 8 | 32 | 45 | 12 | 4,5 | 3,4 | 3 | 3,5 | ■ | |
| No. 10 | 24 | 50 | 14 | 6 | 4,9 | 3 | 3,9 | ■ | |
| No. 12 | 24 | 56 | 16 | 6 | 4,9 | 3 | 4,5 | ■ | |
| 1/4 | 20 | 56 | 16 | 6 | 4,9 | 3 | 5,2 | ■ | |
| 5/16 | 18 | 63 | 20 | 6 | 4,9 | 3 | 6,6 | ■ | |
| 3/8 | 16 | 70 | 22 | 7 | 5,5 | 3 | 8 | ■ | |
| 7/16 | 14 | 70 | 22 | 8 | 6,2 | 3 | 9,4 | ■ | |
| 1/2 | 13 | 75 | 25 | 9 | 7 | 3 | 10,75 | ■ | |
| 9/16 | 12 | 80 | 26 | 11 | 9 | 3 | 12,25 | ■ | |
| 5/8 | 11 | 80 | 27 | 12 | 9 | 3 | 13,5 | ■ | |
| 3/4 | 10 | 95 | 32 | 14 | 11 | 4 | 16,5 | ■ | |
| 7/8 | 9 | 100 | 32 | 18 | 14,5 | 4 | 19,5 | ■ | |
| 1 | 8 | 110 | 36 | 18 | 14,5 | 4 | 22,25 | ■ | |

■ dodáváme standardně / standard supplies / Standardlieferbar

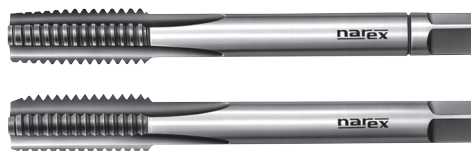
X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.1; 6.2; 8.1; 10.1; 8.2



0305
2 ks v sadě
2 pcs in set
2 Stück im Satz

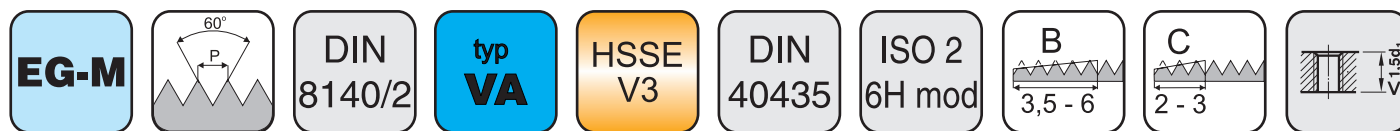
| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 0305 | |
|--|----|----------------|----------------|----------------|------|---|--|-------|---|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | |
| d ₁ | N | l ₁ | l ₂ | d ₂ | a | z | | Ø mm | |
| No. 5 | 44 | 40 | 10 | 3,5 | 2,7 | 3 | | 2,7 | ■ |
| No. 6 | 40 | 45 | 11 | 4 | 3 | 3 | | 3 | ■ |
| No. 8 | 36 | 45 | 12 | 4,5 | 3,4 | 3 | | 3,5 | ■ |
| No. 10 | 32 | 50 | 14 | 6 | 4,9 | 3 | | 4,1 | ■ |
| No. 12 | 28 | 56 | 16 | 6 | 4,9 | 3 | | 4,65 | ■ |
| 1/4 | 28 | 56 | 16 | 6 | 4,9 | 3 | | 5,5 | ■ |
| 5/16 | 24 | 63 | 18 | 6 | 4,9 | 3 | | 6,9 | ■ |
| 3/8 | 24 | 63 | 18 | 7 | 5,5 | 3 | | 8,5 | ■ |
| 7/16 | 20 | 70 | 20 | 8 | 6,2 | 3 | | 9,9 | ■ |
| 1/2 | 20 | 70 | 20 | 9 | 7 | 3 | | 11,5 | ■ |
| 9/16 | 18 | 70 | 20 | 11 | 9 | 3 | | 12,9 | ■ |
| 5/8 | 18 | 70 | 20 | 12 | 9 | 3 | | 14,5 | ■ |
| 3/4 | 16 | 80 | 22 | 14 | 11 | 4 | | 17,5 | ■ |
| 7/8 | 14 | 80 | 22 | 18 | 14,5 | 4 | | 20,5 | ■ |
| 1 | 12 | 80 | 22 | 18 | 14,5 | 4 | | 23,25 | ■ |

■ dodáváme standardně / standard supplies / Standardlieferbar

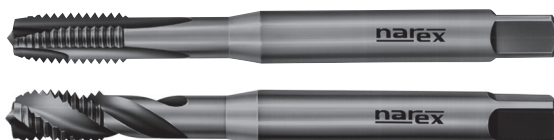
X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

OSTATNÍ ZÁVITNÍKY

Other taps / Sonstige Gewindebohrer



Závrtvníky pro závitové drátové vložky
Taps for wire thread inserts
Gewindebohrer für Gewindeeinsätze

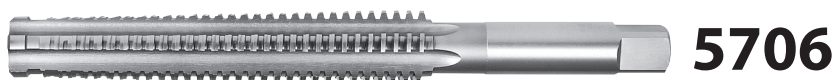


1690 EG, 3690 EG
2290 EG, 4290 EG

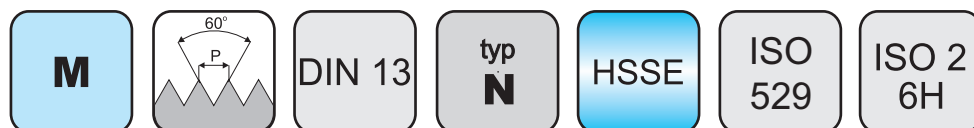
| Katalogové číslo / Cat. No. / Kat. Nr. | 1690 EG | Katalogové číslo / Cat. No. / Kat. Nr. | 3690 EG |
|---|--|---|--|
| | 2290 EG | | 4290 EG |
| $z = \text{počet drážek} / z = \text{number of flutes} / z = \text{Nutenzahl}$ | OX | $z = \text{počet drážek} / z = \text{number of flutes} / z = \text{Nutenzahl}$ | OX |
| rozměr P d ₁ (mm) l ₁ l ₂ l _{2R35} d ₂ a z / Z RSP | | rozměr P d ₁ (mm) l ₁ l ₂ l _{2R35} d ₂ a z / Z RSP | |
| EG M3 0,5 3,65 63 12 7 4,5 3,4 3/3 3,15 | Na požtávku Upon request Auf Anfrage | EG M10 1,5 11,948 100 21 13 9 7 3/3 10,4 | Na požtávku Upon request Auf Anfrage |
| EG M3,5 0,6 4,28 70 13 8 6 4,9 3/3 3,7 | | EG M12 1,75 14,274 110 25 20 11 9 3/3 12,5 | |
| EG M4 0,7 4,91 70 13 8 6 4,9 3/3 4,2 | | EG M14 2 16,598 110 25 20 12 9 3/4 14,5 | |
| EG M5 0,8 6,04 80 15 10 6 4,9 3/3 5,25 | | EG M16 2 18,598 125 30 25 14 11 3/4 13 | |
| EG M6 1 7,3 90 18 13 8 6,2 3/3 6,3 | | | |
| EG M8 1,25 9,624 100 20 15 10 8 3/3 8,4 | | | |
| | | | |
| | | | |



Trapézové maticové závitníky
Single - finishing trapezoidal taps
Trapez - Einschnitt - Gewindebohrer



| Katalogové číslo / Cat. No. / Kat. Nr. | 5706 |
|--|--|
| | |
| $z = \text{počet drážek} / z = \text{number of flutes} / z = \text{Nutenzahl}$ | |
| d ₁ P l ₁ l ₂ d ₂ a z | |
| Tr 10 x 3 140 84 6,3 5 3 7,5 | Na požtávku Upon request Auf Anfrage |
| Tr 12 x 3 140 84 8 6,3 3 9,25 | |
| Tr 14 x 3 140 84 10 8 3 11,25 | |
| Tr 16 x 4 220 142 11,2 9 3 12,25 | |
| Tr 18 x 4 220 142 12,5 10 3 14,25 | |
| Tr 20 x 4 220 142 14 11,2 3 16,25 | |
| Tr 22 x 5 260 163 16 12,5 3 17,25 | |
| Tr 25 x 5 260 163 18 14 3 20,25 | |
| Tr 28 x 5 260 163 22,4 18 3 23,25 | |
| Tr 32 x 6 310 195 25 20 3 26,25 | |
| Tr 36 x 6 310 195 28 22,4 5 30,25 | |
| Tr 40 x 6 360 227 31,5 25 5 34,5 | |
| Tr 45 x 8 440 275 35,5 28 5 37,5 | |
| Tr 50 x 8 440 275 40 31,5 5 42,5 | |
| Tr 56 x 8 460 282 45 35,5 5 44,5 | |



Skupina obráběného materiálu
Material group / Werkstoffgruppe

10.1; 1.1; 2.1; 6.1; 8.2 **6000/7700**

1.2; 2.2; 8.1; 1.1; 2.1; 2.3; 6.2; 8.2; 10.1 **6350/8000**

2.2; 2.3; 8.1; 6.2; 10.2 **6750/8350**

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | | | | 6000/7700 | 6350/8000 | 6750/8350 |
|--|------|----------------|----------------|----------------|------|---------|------|--|-----------|-----------|
| <p>z = počet drážek / z = number of flutes / z = Nutenzahl</p> | | | | | | | | | | |
| d ₁ | P | l ₁ | l ₂ | d ₂ | a | z/z RSP | Ø mm | Na poptávku Upon request Auf Anfrage | | |
| M3 | 0,5 | 48 | 11 | 3,15 | 2,5 | 3 | 2,5 | | | |
| M4 | 0,7 | 53 | 13 | 4 | 3,15 | 3 | 3,3 | | | |
| M5 | 0,8 | 58 | 16 | 5 | 4 | 3 | 4,2 | | | |
| M6 | 1 | 66 | 19 | 6,3 | 5 | 3 | 5 | | | |
| M8 | 1,25 | 72 | 22 | 8 | 6,3 | 3 | 6,8 | | | |
| M10 | 1,5 | 80 | 24 | 10 | 8 | 3 | 8,5 | | | |
| M12 | 1,75 | 89 | 29 | 9 | 7,1 | 3 | 10,2 | | | |
| M14 | 2 | 95 | 30 | 11,2 | 9 | 3 | 12 | | | |
| M16 | 2 | 102 | 32 | 12,5 | 10 | 3/4 | 14 | | | |
| M18 | 2,5 | 112 | 37 | 14 | 11,2 | 3/4 | 15,5 | | | |
| M20 | 2,5 | 112 | 37 | 14 | 11,2 | 3/4 | 17,5 | | | |
| M22 | 2,5 | 118 | 38 | 16 | 12,5 | 3/4 | 19,5 | | | |
| M24 | 3 | 130 | 45 | 18 | 14 | 4 | 21 | | | |
| M27 | 3 | 135 | 45 | 20 | 16 | 4 | 24 | | | |
| M30 | 3,5 | 138 | 48 | 20 | 16 | 4 | 26,5 | | | |



Souprava strojních závitníků a vrtáků v kazetě
Set of machine taps and twist drills
Satz Maschinengewindebohrer und Spiralbohrer in Kasette

C-N-B

Katalogové číslo / Cat. No. / Kat. Nr. **9900**

Souprava obsahuje:
strojní závitníky M3; M4; M5; M6; M8; M10 k.č. 1540 a M12 k.č. 3540
spirálové vrtáky s válcovou stopkou Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Set containing:
machine taps M3; M4; M5; M6; M8; M10 cat. No. 1540 and M12 cat. No. 3540
twist drills with straight shank Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Satz bestückt mit:
Maschinengewindebohrer M3; M4; M5; M6; M8; M10 Kat. Nr. 1540 und M12 Kat. Nr. 3540
Spiralbohrer mit Zylinderschaft Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2



Souprava strojních závitníků a vrtáků v kazetě
Set of machine taps and twist drills
Satz Maschinengewindebohrer und Spiralbohrer in Kasette

C-N-RSP

Katalogové číslo / Cat. No. / Kat. Nr. **9910**

Souprava obsahuje:
strojní závitníky M3; M4; M5; M6; M8; M10 k.č. 2090 a M12 k.č. 4090
spirálové vrtáky s válcovou stopkou Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Set containing:
machine taps M3; M4; M5; M6; M8; M10 cat. No. 2090 and M12 cat. No. 4090
twist drills with straight shank Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Satz bestückt mit:
Maschinengewindebohrer M3; M4; M5; M6; M8; M10 Kat. Nr. 2090 und M12 Kat. Nr. 4090
Spiralbohrer mit Zylinderschaft Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2



Souprava strojních závitníků a vrtáků v kazetě
Set of machine taps and twist drills
Satz Maschinengewindebohrer und Spiralbohrer in Kasette

C-VA-B

Katalogové číslo / Cat. No. / Kat. Nr. **9920**

Souprava obsahuje:
strojní závitníky M3; M4; M5; M6; M8; M10 k.č. 1690 a M12 k.č. 3690
spirálové vrtáky s válcovou stopkou Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Set containing:
machine taps M3; M4; M5; M6; M8; M10 cat. No. 1690 and M12 cat. No. 3690
twist drills with straight shank Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Satz bestückt mit:
Maschinengewindebohrer M3; M4; M5; M6; M8; M10 Kat. Nr. 1690 und M12 Kat. Nr. 3690
Spiralbohrer mit Zylinderschaft Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2





Souprava strojních závitníků a vrtáků v kazetě
 Set of machine taps and twist drills
 Satz Maschinengewindebohrer und Spiralbohrer in Kasette

C-VA-RSP

Katalogové číslo / Cat. No. / Kat. Nr. **9930**

Souprava obsahuje:
 strojní závitníky M3; M4; M5; M6; M8; M10 k.č. 2290 a M12 k.č. 4290
 spirálové vrtáky s válcovou stopkou Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Set containing:
 machine taps M3; M4; M5; M6; M8; M10 cat. No. 2290 and M12 cat. No. 4290
 twist drills with straight shank Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Satz bestückt mit:
 Maschinengewindebohrer M3; M4; M5; M6; M8; M10 Kat. Nr. 2290 und M12 Kat. Nr. 4290
 Spiralbohrer mit Zylinderschaft Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2



Souprava strojních závitníků a vrtáků v kazetě
 Set of machine taps and twist drills
 Satz Maschinengewindebohrer und Spiralbohrer in Kasette

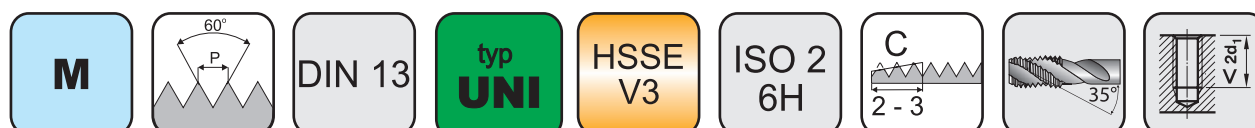
C-UNI-B

Katalogové číslo / Cat. No. / Kat. Nr. **9940**

Souprava obsahuje:
 strojní závitníky M3; M4; M5; M6; M8; M10 k.č. 1710 a M12 k.č. 3710
 spirálové vrtáky s válcovou stopkou Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Set containing:
 machine taps M3; M4; M5; M6; M8; M10 cat. No. 1710 and M12 cat. No. 3710
 twist drills with straight shank Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Satz bestückt mit:
 Maschinengewindebohrer M3; M4; M5; M6; M8; M10 Kat. Nr. 1710 und M12 Kat. Nr. 3710
 Spiralbohrer mit Zylinderschaft Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2



Souprava strojních závitníků a vrtáků v kazetě
 Set of machine taps and twist drills
 Satz Maschinengewindebohrer und Spiralbohrer in Kasette

C-UNI-RSP

Katalogové číslo / Cat. No. / Kat. Nr. **9950**

Souprava obsahuje:
 strojní závitníky M3; M4; M5; M6; M8; M10 k.č. 2210 a M12 k.č. 4210
 spirálové vrtáky s válcovou stopkou Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Set containing:
 machine taps M3; M4; M5; M6; M8; M10 cat. No. 2210 and M12 cat. No. 4210
 twist drills with straight shank Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Satz bestückt mit:
 Maschinengewindebohrer M3; M4; M5; M6; M8; M10 Kat. Nr. 2210 und M12 Kat. Nr. 4210
 Spiralbohrer mit Zylinderschaft Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2





Souprava ručních sadových závitníků a vrtáků v kazetě
Set of hand taps and twist drills
Satz Handgewindebohrer und Spiralbohrer in Kasette

C-N-S

Katalogové číslo / Cat. No. / Kat. Nr. **9960**

Souprava obsahuje:

ruční sadové závitníky M3; M4; M5; M6; M8; M10 a M12 k.č. 0200
spirálové vrtáky s válcovou stopkou Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Set containing:

hand taps M3; M4; M5; M6; M8; M10 and M12 cat. No. 0200
twist drills with straight shank Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2

Satz bestückt mit:

Handgewindebohrer M3; M4; M5; M6; M8; M10 und M12 Kat. Nr. 0200
Spiralbohrer mit Zylinderschaft Ø 2,5; 3,3; 4,2; 5; 6,8; 8,5; 10,2



ZÁVITOVÉ KRUHOVÉ ČELISTI

Circular screwing dies / Schneideisen



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.2
6.1; 7.1; 8.1; 8.2; 9.1; 10.1; 10.2



9500

9550

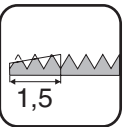
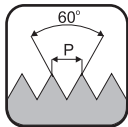
| Katalogové číslo / Cat. No. / Kat. Nr. | | | | | 9500 | 9550 |
|--|------|----|----|---|---|---|
| | | | | | Závit lapovaný do M26 Lapped thread up to M26 Geläpftes Gewinde bis M26 | S lamačem, závit lapovaný do M26 With spiral point, lapped thread up to M26 Mit Schälanschnitt, geläpftes Gewinde bis M26 |
| d ₁ | P | D | E | | | |
| M 2 | 0,4 | 16 | 5 | ■ | ■ | |
| M 2,2 | 0,45 | 16 | 5 | | | |
| M 2,5 | 0,45 | 16 | 5 | ■ | ■ | |
| M 3 | 0,5 | 20 | 5 | ■ | ■ | |
| M 3,5 | 0,6 | 20 | 5 | ■ | | |
| M 4 | 0,7 | 20 | 5 | ■ | ■ | |
| M 4,5 | 0,75 | 20 | 5 | | | |
| M 5 | 0,8 | 20 | 7 | ■ | ■ | |
| M 6 | 1 | 20 | 7 | ■ | ■ | |
| M 7 | 1 | 25 | 9 | ■ | ■ | |
| M 8 | 1,25 | 25 | 9 | ■ | ■ | |
| M 9 | 1,25 | 25 | 9 | ■ | ■ | |
| M 10 | 1,5 | 30 | 11 | ■ | ■ | |
| M 11 | 1,5 | 30 | 11 | ■ | ■ | |
| M 12 | 1,75 | 38 | 14 | ■ | ■ | |
| M 14 | 2 | 38 | 14 | ■ | ■ | |
| M 16 | 2 | 45 | 18 | ■ | ■ | |
| M 18 | 2,5 | 45 | 18 | ■ | ■ | |
| M 20 | 2,5 | 45 | 18 | ■ | ■ | |
| M 22 | 2,5 | 55 | 22 | ■ | ■ | |
| M 24 | 3 | 55 | 22 | ■ | ■ | |
| M 27 | 3 | 65 | 25 | ■ | ■ | |
| M 30 | 3,5 | 65 | 25 | ■ | ■ | |
| M 33 | 3,5 | 65 | 25 | ■ | ■ | |
| M 36 | 4 | 65 | 25 | ■ | ■ | |
| M 39 | 4 | 75 | 30 | | | |
| M 42 | 4,5 | 75 | 30 | | | |
| M 45 | 4,5 | 90 | 36 | | | |
| M 48 | 5 | 90 | 36 | | | |
| M 52 | 5 | 90 | 36 | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

ZÁVITOVÉ KRUHOVÉ ČELISTI

Circular screwing dies / Schneideisen



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.2
6.1; 7.1; 8.1; 8.2; 9.1; 10.1; 10.2



9500
9550

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | 9500 | 9550 | Katalogové číslo / Cat. No. / Kat. Nr. | | | | 9500 | 9550 |
|--|------|----|----|--|---|--|-----|----|----|--|------|
| | | | | Závit lapovaný Lapped thread Geläpftes Gewinde | S lamačem, závit lapovaný With spiral point, lapped thread Geläpftes Gewinde, mit Schälanschnitt | | | | | S lamačem With spiral point Mit Schälanschnitt | |
| d ₁ | P | D | E | | | d ₁ | P | D | E | | |
| M 3 | 0,35 | 20 | 5 | | | M 27 | 2 | 65 | 18 | | |
| M 3,5 | 0,35 | 20 | 5 | | | M 27 | 1,5 | 65 | 18 | | |
| M 4 | 0,5 | 20 | 5 | ■ | | M 27 | 1 | 65 | 18 | | |
| M 4 | 0,35 | 20 | 5 | | | M 28 | 2 | 65 | 18 | | |
| M 4,5 | 0,5 | 20 | 5 | | | M 28 | 1,5 | 65 | 18 | | |
| M 5 | 0,5 | 20 | 5 | ■ | | M 30 | 2 | 65 | 18 | | |
| M 5,5 | 0,5 | 20 | 5 | | | M 30 | 1,5 | 65 | 18 | | |
| M 6 | 0,75 | 20 | 7 | ■ | ■ | M 30 | 1 | 65 | 18 | | |
| M 6 | 0,5 | 20 | 5 | | | M 32 | 1,5 | 65 | 18 | | |
| M 7 | 0,75 | 25 | 9 | ■ | | M 33 | 2 | 65 | 18 | | |
| M 8 | 1 | 25 | 9 | ■ | ■ | M 33 | 1,5 | 65 | 18 | | |
| M 8 | 0,75 | 25 | 9 | ■ | ■ | M 34 | 1,5 | 65 | 18 | | |
| M 8 | 0,5 | 25 | 9 | | | M 35 | 1,5 | 65 | 18 | | |
| M 9 | 1 | 25 | 9 | ■ | | M 36 | 3 | 65 | 25 | | |
| M 9 | 0,75 | 25 | 9 | | | M 36 | 2 | 65 | 18 | | |
| M 10 | 1,25 | 30 | 11 | ■ | ■ | M 36 | 1,5 | 65 | 18 | | |
| M 10 | 1 | 30 | 11 | ■ | ■ | M 38 | 1,5 | 75 | 20 | | |
| M 10 | 0,75 | 30 | 11 | ■ | | M 39 | 3 | 75 | 30 | | |
| M 11 | 1 | 30 | 11 | | | M 39 | 2 | 75 | 20 | | |
| M 11 | 0,75 | 30 | 11 | | | M 39 | 1,5 | 75 | 20 | | |
| M 12 | 1,5 | 38 | 10 | ■ | ■ | M 40 | 3 | 75 | 30 | | |
| M 12 | 1,25 | 38 | 10 | ■ | ■ | M 40 | 2 | 75 | 20 | | |
| M 12 | 1 | 38 | 10 | ■ | ■ | M 40 | 1,5 | 75 | 20 | | |
| M 13 | 1 | 38 | 10 | | | M 42 | 3 | 75 | 30 | | |
| M 14 | 1,5 | 38 | 10 | ■ | ■ | M 42 | 2 | 75 | 20 | | |
| M 14 | 1,25 | 38 | 10 | ■ | ■ | M 42 | 1,5 | 75 | 20 | | |
| M 14 | 1 | 38 | 10 | ■ | ■ | M 45 | 3 | 90 | 36 | | |
| M 15 | 1,5 | 38 | 10 | | | M 45 | 2 | 90 | 22 | | |
| M 15 | 1 | 38 | 10 | | | M 45 | 1,5 | 90 | 22 | | |
| M 16 | 1,5 | 45 | 14 | ■ | ■ | M 48 | 3 | 90 | 36 | | |
| M 16 | 1 | 45 | 14 | ■ | ■ | M 48 | 2 | 90 | 22 | | |
| M 17 | 1,5 | 45 | 14 | | | M 48 | 1,5 | 90 | 22 | | |
| M 17 | 1 | 45 | 14 | | | M 50 | 3 | 90 | 36 | | |
| M 18 | 2 | 45 | 14 | ■ | ■ | M 50 | 2 | 90 | 22 | | |
| M 18 | 1,5 | 45 | 14 | ■ | ■ | M 50 | 1,5 | 90 | 22 | | |
| M 18 | 1 | 45 | 14 | ■ | | M 52 | 3 | 90 | 36 | | |
| M 20 | 2 | 45 | 14 | | | M 52 | 2 | 90 | 22 | | |
| M 20 | 1,5 | 45 | 14 | ■ | ■ | M 52 | 1,5 | 90 | 22 | | |
| M 20 | 1 | 45 | 14 | ■ | ■ | | | | | | |
| M 22 | 2 | 55 | 16 | ■ | ■ | | | | | | |
| M 22 | 1,5 | 55 | 16 | ■ | ■ | | | | | | |
| M 22 | 1 | 55 | 16 | ■ | ■ | | | | | | |
| M 24 | 2 | 55 | 16 | ■ | ■ | | | | | | |
| M 24 | 1,5 | 55 | 16 | ■ | ■ | | | | | | |
| M 24 | 1 | 55 | 16 | ■ | ■ | | | | | | |
| M 25 | 2 | 55 | 16 | | | | | | | | |
| M 25 | 1,5 | 55 | 16 | | | | | | | | |
| M 26 | 1,5 | 55 | 16 | | | | | | | | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.2
6.1; 7.1; 8.1; 8.2; 9.1; 10.1; 10.2



9502

9552

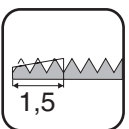
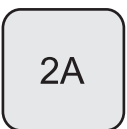
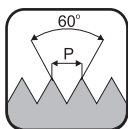
| Katalogové číslo / Cat. No. / Kat. Nr. | | | | 9502 | 9552 |
|--|----|-----|----|--|--|
| | | | | Závít lapovaný do G 3/4" Lapped thread up to G 3/4" Geläpptes Gewinde bis G 3/4" | S lamačem, závít lapovaný do G 3/4" With spiral point, lapped thread up to G 3/4" Mit Schälanschnitt, geläpptes Gewinde bis G 3/4" |
| d ₁ | N | D | E | | |
| G 1/16" | 28 | 25 | 9 | | |
| G 1/8" | 28 | 30 | 11 | ■ | ■ |
| G 1/4" | 19 | 38 | 10 | ■ | ■ |
| G 3/8" | 19 | 45 | 14 | ■ | ■ |
| G 1/2" | 14 | 45 | 14 | ■ | ■ |
| G 5/8" | 14 | 55 | 16 | ■ | ■ |
| G 3/4" | 14 | 55 | 16 | ■ | ■ |
| G 7/8" | 14 | 65 | 18 | | |
| G 1" | 11 | 65 | 18 | ■ | ■ |
| G 1 1/8" | 11 | 75 | 20 | ■ | ■ |
| G 1 1/4" | 11 | 75 | 20 | ■ | ■ |
| G 1 1/2" | 11 | 90 | 22 | ■ | ■ |
| G 1 3/4" | 11 | 105 | 22 | | |
| G 2" | 11 | 105 | 22 | | |

■ dodávame standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použiť / Possible use / Geeignet

ZÁVITOVÉ KRUHOVÉ ČELISTI

Circular screwing dies / Schneideisen



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.2
6.1; 7.1; 8.1; 8.2; 9.1; 10.1; 10.2



9504

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | 9504 | |
|--|----|----|----|--|--|
| | | | | Závit lapovaný Lapped thread Geläpptes Gewinde | |
| d ₁ | N | D | E | | |
| No. 4 | 40 | 16 | 5 | | |
| No. 5 | 40 | 20 | 5 | | |
| No. 6 | 32 | 20 | 7 | | |
| No. 8 | 32 | 20 | 7 | ■ | |
| No. 10 | 24 | 20 | 7 | ■ | |
| No. 12 | 24 | 20 | 7 | ■ | |
| 1/4 | 20 | 20 | 7 | ■ | |
| 5/16 | 18 | 25 | 9 | ■ | |
| 3/8 | 16 | 30 | 11 | ■ | |
| 7/16 | 14 | 30 | 11 | ■ | |
| 1/2 | 13 | 38 | 14 | ■ | |
| 9/16 | 12 | 38 | 14 | ■ | |
| 5/8 | 11 | 45 | 18 | ■ | |
| 3/4 | 10 | 45 | 18 | ■ | |
| 7/8 | 9 | 55 | 22 | ■ | |
| 1 | 8 | 55 | 22 | ■ | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

ZÁVITOVÉ KRUHOVÉ ČELISTI

Circular screwing dies / Schneideisen



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.2
6.1; 7.1; 8.1; 8.2; 9.1; 10.1; 10.2



9505

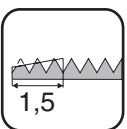
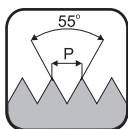
| Katalogové číslo / Cat. No. / Kat. Nr. | | | | 9505 | |
|--|----|----|----|--|--|
| | | | | Závit lapovaný Lapped thread Geläpptes Gewinde | |
| d ₁ | N | D | E | | |
| No. 4 | 48 | 16 | 5 | | |
| No. 5 | 44 | 20 | 5 | | |
| No. 6 | 40 | 20 | 7 | | |
| No. 8 | 36 | 20 | 7 | ■ | |
| No. 10 | 32 | 20 | 7 | ■ | |
| No. 12 | 28 | 20 | 7 | ■ | |
| 1/4 | 28 | 20 | 7 | ■ | |
| 5/16 | 24 | 25 | 9 | ■ | |
| 3/8 | 24 | 30 | 11 | ■ | |
| 7/16 | 20 | 30 | 11 | ■ | |
| 1/2 | 20 | 38 | 14 | ■ | |
| 9/16 | 18 | 38 | 14 | ■ | |
| 5/8 | 18 | 45 | 18 | ■ | |
| 3/4 | 16 | 45 | 18 | ■ | |
| 7/8 | 14 | 55 | 22 | ■ | |
| 1 | 12 | 55 | 22 | ■ | |

■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal
X.X Možno použít / Possible use / Geeignet

ZÁVITOVÉ KRUHOVÉ ČELISTI

Circular screwing dies / Schneideisen



Skupina obráběného materiálu
Material group / Werkstoffgruppe

1.1; 1.2; 2.1; 2.2; 2.3; 6.2
6.1; 7.1; 8.1; 8.2; 9.1; 10.1; 10.2



9501

| Katalogové číslo / Cat. No. / Kat. Nr. | | | | 9501 | |
|--|-----|----|-----|---|--|
| | | | | <p>Závit lapovaný do BSW 1" Lapped thread up to BSW 1" Geläpptes Gewinde bis BSW 1"</p> | |
| d ₁ | N | D | E | | |
| BSW 1/16" | 60 | 16 | 3,5 | | |
| BSW 3/32" | 48 | 16 | 5 | | |
| BSW 1/8" | 40 | 20 | 5 | | |
| BSW 3/16" | 24 | 20 | 7 | | |
| BSW 1/4" | 20 | 20 | 7 | ■ | |
| BSW 5/16" | 18 | 25 | 9 | ■ | |
| BSW 3/8" | 16 | 30 | 11 | ■ | |
| BSW 7/16" | 14 | 30 | 11 | ■ | |
| BSW 1/2" | 12 | 38 | 14 | ■ | |
| BSW 9/16" | 12 | 38 | 14 | ■ | |
| BSW 5/8" | 11 | 45 | 18 | ■ | |
| BSW 3/4" | 10 | 45 | 18 | ■ | |
| BSW 7/8" | 9 | 55 | 22 | ■ | |
| BSW 1" | 8 | 55 | 22 | ■ | |
| BSW 1 1/4" | 7 | 65 | 25 | | |
| BSW 1 1/2" | 6 | 75 | 30 | | |
| BSW 1 5/8" | 5 | 75 | 30 | | |
| BSW 1 3/4" | 5 | 90 | 36 | | |
| BSW 1 7/8" | 4,5 | 90 | 36 | | |
| BSW 2" | 4,5 | 90 | 36 | | |

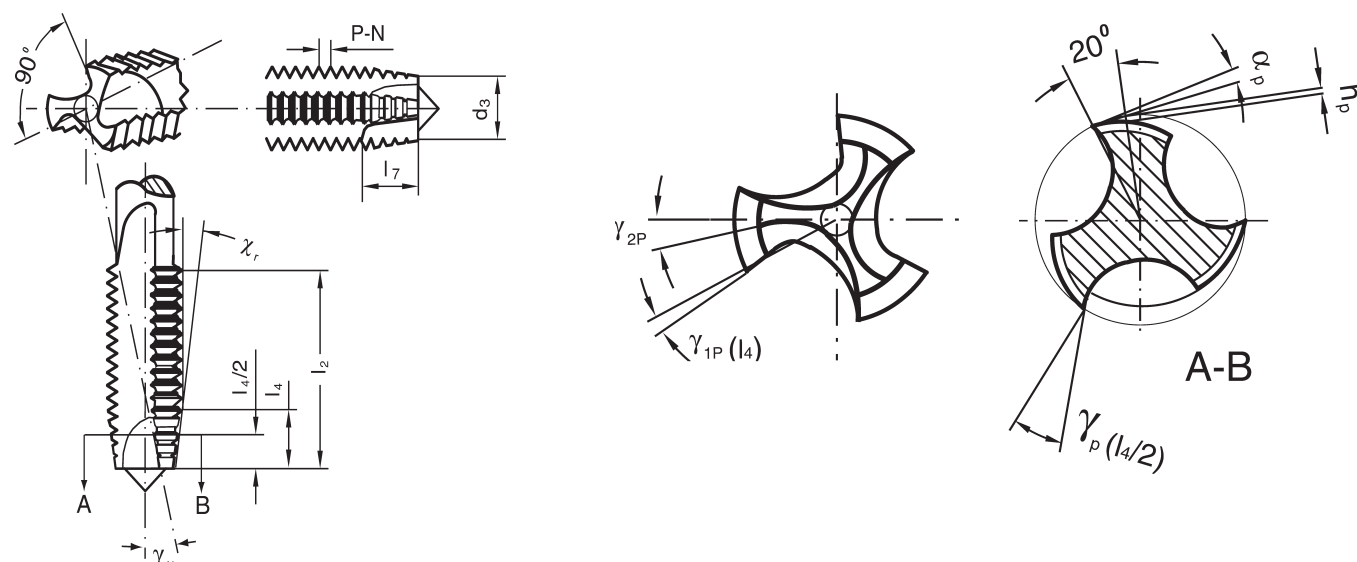
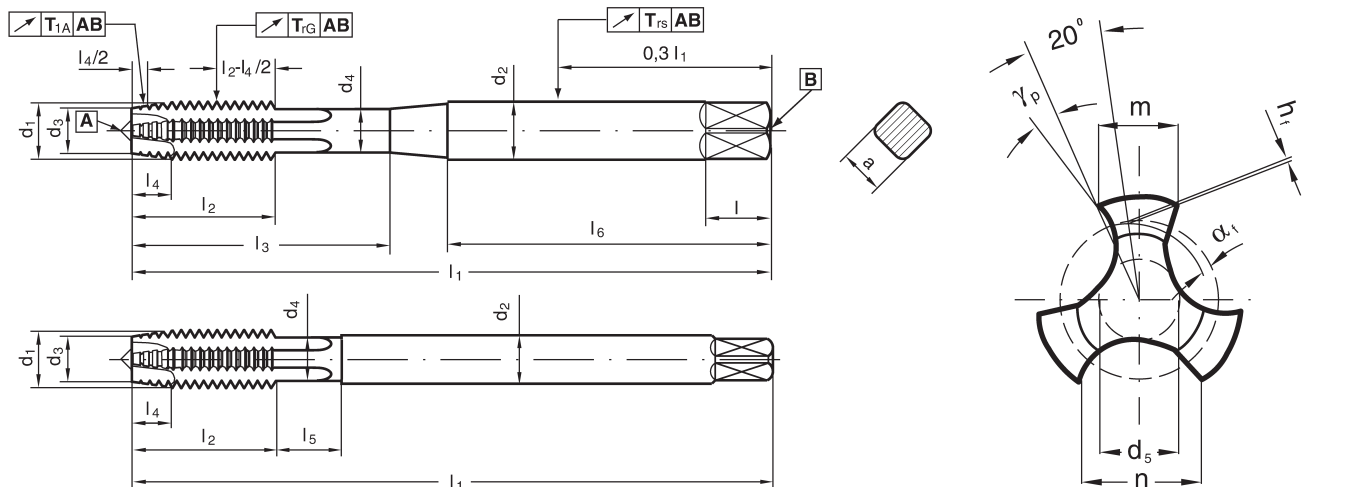
■ dodáváme standardně / standard supplies / Standardlieferbar

X.X Doporučené užití / Recommended use / Optimal

X.X Možno použít / Possible use / Geeignet

Názvosloví

Nomenclature / Nomenklatur



| | | | |
|---------------|-----------------------------------|----------------------------------|------------------------------|
| d_1 | jmenovitý průměr závitu | nominal tap thread diameter | Nenndurchmesser |
| d_2 | průměr stopky | shank diameter | Schaftdurchmesser |
| d_3 | průměr řezného kužele | lead chamfer diameter | Anschnittdurchmesser |
| d_4 | průměr krčku | neck diameter | Halsdurchmesser |
| d_5 | průměr jádra | core hole diameter | Seelendurchmesser |
| l_1 | celková délka | overall length | Gesamtlänge |
| l_2 | délka závitu | thread length | Gewindelänge |
| l_3 | řezná délka | cutting length | nutzbare Länge |
| l_4 | délka řezného kužele | lead chamfer length | Anschnittlänge |
| l_5 | délka krčku | neck length | Halslänge |
| l_6 | délka stopky | shank length | Schaftlänge |
| l_7 | délka lamače | spiral point length | Schälanschnittlänge |
| l | délka čtyřhranu | square length | Vierkantlänge |
| m | šířka žebra | land thickness | Zahnbreite |
| n | šířka drážky | flute width | Nutenbreite |
| a | rozměr čtyřhranu | square size | Vierkantmass |
| P | stoupání závitu v mm | pitch thread in mm | Steigung in mm |
| N | stoupání závitu v počtu závitů/1" | pitch thread it threads per inch | Steigung in Gangzahl/1" |
| h_p | podbroušení řezného kužele ve 20° | chamfer relief in 20° | Anschnittinterschliff in 20° |
| h_r | podbroušení závitu ve 20° | thread relief in 20° | Gewindehinterschliff in 20° |
| α_p | úhel podbroušení řezného kužele | lead chamfer relief angle | Anschnittfreiwinkel |
| α_r | úhel podbroušení závitu | thread relief angle | Flankenfreiwinkel |
| γ_f | úhel šroubové drážky | spiral flute angle | Drallwinkel |
| γ_p | úhel čela | rake angle | Spanwinkel |
| γ_{1P} | úhel lamače třísek | spiral point angle | Schälanschnittwinkel |
| χ_r | úhel řezného kužele | lead chamfer angle | Anschnittwinkel |
| T_{1A} | úchylna házivosti řezného kužele | limit for lead chamfer | Anschnittschlagabweichung |
| T_{RG} | úchylna házivosti závitu | limit for thread concentricity | Gewindeschlagabweichung |
| T_{rS} | úchylna házivosti stopky | limit for shank concentricity | Schaftschlagabweichung |

Materiál Material / Material

| Skupina Group Gruppe | Legující prvky Alloy component Legierungen | Značka / Sign / Zeichen | | | Dodavatel Supplier Lieferant |
|----------------------------|--|-------------------------|-----------|------|---|
| | | W. Nr. | DIN | AISI | |
| HSS | 5,0 % Mo | 1.3343 | S 6-5-2 | M2 | ERASTEEL Paris, France LATROBE SPECIALITY STEEL COMPANY Latrobe, U.S.A. |
| HSSE | 4,8 % Co | 1.3243 | S 6-5-2-5 | M35 | |
| HSSE V3 | 3,0 % V | 1.3344 | S 6-5-3 | M3:2 | |
| HSSE PM | 3,1 % V | 1.3344 | S 6-5-3 | M3:2 | |

Řezný kužel Chamfer / Anschnitt

| Tvar Form Form | Stoupání Thread Steigung | χ_r | Drážky Flutes Nuten | Převážné použití Recommended application Anwendungsbereich |
|----------------------|--------------------------------|----------|--|--|
| A | 6 ÷ 8 | 5° | přímé drážky straight flutes gerade Nuten | krátké průchozí otvory short through holes kurze Durchgangsbohrungen |
| B | 3,5 ÷ 6 | 8° | přímé drážky s lamačem straight flutes with spiral point gerade Nuten mit Schälanschnitt | průchozí otvory v materiálech tvořících střednědlouhou a dlouhou třísku through holes in medium or long chipping materials Durchgangsbohrungen in mittel- bzw. langspanenden Werkstoffen |
| C | 2 ÷ 3 | 15° | přímé nebo šroubové drážky straight or spiral flutes gerade oder gedrollte Nuten | neprůchozí nebo průchozí otvory v materiálech tvořících krátkou třísku blind or through holes in short chipping materials Grundlöcher sowie für Durchgangsbohrungen in kurzspanenden Werkstoffen |
| D | 3,5 ÷ 5 | 8° | přímé nebo šroubové drážky straight or spiral flutes gerade oder gedrollte Nuten | neprůchozí otvory s možností dlouhého výběhu závitu nebo průchozí otvory blind holes with thread exit or through holes Grundlöcher mit langem Gewinde-Auslauf sowie für Durchgangsbohrungen |
| E | 1,5 ÷ 2 | 23° | přímé nebo šroubové drážky straight or spiral flutes gerade oder gedrollte Nuten | neprůchozí otvory s velmi krátkým výběhem závitu blind holes with short thread exit Grundlöcher mit sehr kurzem Gewinde-Auslauf |

Velikost podbroušení řezného kužele je závislá na obráběném materiálu. Ovlivňuje stálost rozměrů řezaného závitu.

Všeobecně platí pro úhel hřbetu řezného kužele rozsah $\alpha_p = 1^\circ$ až 5° .

Úhel hřbetu řezného kužele je měřený na poloviční délce řezného kužele ($l_4/2$).

Depends on material of the workpiece and influences on size of the cut thread and it is measured at the middle of the lead chamfer.

$\alpha_p = 1^\circ$ to 5° .

Der Hinterschliff des Anschnittes ist eine werkstoffabhängige Größe, welche die Masshaltigkeit des geschnittenen Gewindes beeinflusst.

Im Allgemeinen gilt für den Anschnitt-Rückenfreiwinkel der Bereich $\alpha_p = 1^\circ$ bis 5° .

Der Anschnitt-Rückfreiwinkel wird an der halben Anschnittlänge ($l_4/2$) gemessen.

U tvaru řezného kužele B (závitníky s přímou drážkou a lamačem třísek) je úhel lamače třísek γ_{fa} v podstatě závislý na poměru stoupání závitu k průměru jakož i na řezné geometrii závitníku.

Zpravidla platí rozsah $\gamma_{fa} = 8^\circ$ až 18° .

Část závitníku za lamačem třísek má přímé drážky.

Úhel lamače třísek je měřený na poloviční délce řezného kužele ($l_4/2$)

The angle of lead chamfer form B depends mainly on the proportion of the pitch to the thread diameter, as well as the tap cutting geometry and it is measured at the middle of the lead chamfer $l_4/2$.

$\gamma_{fa} = 8^\circ$ to 18° .

Bei Anschnitt-Form B (Schälanschnitt) ist der Schälanschnittwinkel γ_{fa} im wesentlichen vom Verhältnis der Steigung zum Durchmesser sowie von der Schneidengeometrie des Gewindebohrers abhängig.

In der Regel gilt der Bereich $\gamma_{fa} = 8^\circ$ bis 18°

Der an den Schälanschnitt anschließende Teil des Gewindebohrers ist geradegenutet.

Der Schälanschnittwinkel γ_{fa} wird an der halben Anschnittlänge ($l_4/2$) gemessen.

Úhel čela

Rake angle / Spanwinkel

Úhel čela γ_p dle volby výrobce nebo dle dohody.

Kontrolní bod úhlu čela γ_p je u tvarů řezných kuželů A, C, D a E na prvním stoupání závitu.

Kontrolní bod úhlu čela γ_p je u tvarů řezného kužele B na poloviční délce řezného kužele $l_4/2$.

According to manufacturer or common agreement.

It is measured at the first full thread on all taps with lead chamfer forms A, C, D and E.

With lead chamfer form B it is measured at the middle of lead chamfer $l_4/2$

Spanwinkel γ_p nach Wahl des Herstellers oder nach Vereinbarung.

Messstelle des Spanwinkels γ_p ist bei den Anschnitt-Formen A, C, D, und E, am ersten Gewindegang.

Messstelle des Spanwinkels γ_p ist bei den Anschnitt-Formen B (Schälanschnitt) an der halben Anschnittlänge ($l_4/2$).

Šroubovice

Spiral flute / Drall

| Zkratka Sign Kurzzeichen | Úhel šroubovice γ_f Spiral flute angle γ_f Seitenspanwinkel γ_f | | Směr šroubové drážky Spiral flute sense Drallrichtung | Obrázek Drawing Bild | Tvar řezného kužele Chamfer form Anschnittform |
|--------------------------------|--|-------|--|----------------------------|--|
| | min. | max. | | | |
| L15 | - 10° | - 20° | levá šroubová drážka left hand spiral flutes links gedallte Nuten | | D |
| - | - | - | přímá drážka straight flutes gerade Nuten | | A, C, D, E |
| - | Viz úhel lamače třísek see spiral point angle siehe Schälanschnittwinkel | | přímá drážka s lamačem straight flutes with spiral point gerade Nuten mit Schälanschnitt | | B |
| R15 | + 10° | + 20° | pravá šroubová drážka right hand spiral flutes rechts gedallte Nuten | | C, E |
| R25 | + 20° | + 30° | | | |
| R35 | + 30° | + 40° | | | |
| R45 | + 40° | + 50° | | | |

Při volbě velikosti úhlu a směru šroubovice γ_f je nutno brát v úvahu druh otvoru (např. neprůchozí otvor, průchozí otvor, hloubka otvoru), průměr závitu, obráběný materiál a druh závitu (pravý nebo levý závit).

Pro tvary řezných kuželů A, C, D a E je v tabulce zkratkou uveden směr šroubovice i velikost a hodnoty úhlů šroubovice γ_f jakož i jejich použití.

Tabulka platí pro pravý závit. Pro levý závit platí opačný směr šroubovice, např. v posledním řádku levá šroubovice s označením L 45 místo pravé šroubovice s označením R 45.

Zkratku pro směr šroubovice a její velikost je nutné v označování závitníků se šroubovými drážkami uvádět.

Skutečný úhel šroubovice γ_f při jmenovitém průměru d_1 a stoupání šroubovice P_f je dán následujícím vzorcem:

$$\gamma_f = \arctg \frac{\pi d_1}{P_f}$$

At selecting the value and direction it must be considered the type of hole (blind hole, through hole etc.), thread diameter and type of thread (left or right). For lead chamfer form A, C, D and E the flute direction is indicated, its angle as well as its use, in table.

$$\gamma_f = \arctg \frac{\pi d_1}{P_f}$$

Bei der Wahl der Grösse und Richtung des Seitenspanwinkels γ_f sind Bohrungsart (z.B. Grundloch, Durchgangsbohrung, Bohrungstiefe), der Gewindedurchmesser, der zu bearbeitende Werkstoff und die Gewindeart (Rechts- oder Linksgewinde) zu berücksichtigen.

Für die Anschnitt-Formen A, C, D und E sind Drallrichtung und -grösse mit den entsprechenden Kurzzeichen und den Werten des Seitenspanwinkels γ_f sowie deren Anwendung in Tabelle aufgeführt.

Die Tabelle gilt für Rechtsgewinde. Für Linksgewinde gilt die entgegengesetzte Drallrichtung, z.B. in der letzten Zeile Linksdraht mit Kurzzeichen L 45 anstatt Rechtsdraht mit Kurzzeichen R 45.

Das Kurzzeichen für Drallrichtung und -grösse ist in der Bezeichnung der drallgenuteten Gewindebohrer anzugeben.

Der Ist-Seitenspanwinkel γ_f bei gegebenem Nenndurchmesser d_1 und Drallsteigung P_f ergibt sich aus der Gleichung:

$$\gamma_f = \arctan \frac{\pi d_1}{P_f}$$

Velikost stoupání šroubové drážky P_f musí odpovídat hodnotám normální číselné řady R20 (viz DIN 323 - 1).

Přřazení velikosti stoupání ke jmenovitému průměru s ohledem na stanovené mezní hodnoty úhlu šroubovice γ_f v tabulce je dáno na vůli výrobce.

POZNÁMKA: sjednocení velikosti stoupání šroubové drážky P_f přřpřívá ke zlepšení vyměnitelnosti a racionálnímu využití provozních prostředků .

Unification of the spiral flute lead P_f serves for better use of tooling. Its value has to be the line values of normal numbers R20 (see DIN 323 - section 1).

Die Steigung der Drallsteigung P_f muss den Werten der Normzahlreihe R20 (siehe DIN 323-1) entsprechen.

Die Zuordnung der Steigung zum Nenndurchmesser ist unter Berücksichtigung der in der Tabelle festgelegten Grenzwerte des Seitenspanwinkels γ_f dem Herstellerfreigestellt.

ANMERKUNG: Die Vereinheitlichung der Steigung P_f dient der Verbesserung der Austauschbarkeit und der rationellen Nutzung von Betriebsmitteln.

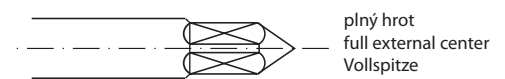
Středění

Centering points / Zentrierung

- M3 ÷ M6 DIN 371
- M3 ÷ M6 DIN 376
- M3 ÷ M6 DIN 374
- M3 ÷ M6 DIN 352
- M3 ÷ M6 DIN 2181
- M3 ÷ M6 DIN 357
- M3 ÷ M10 DIN 2174



plný hrot
full external center
Vollspitze

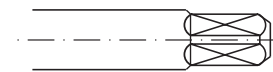


plný hrot
full external center
Vollspitze

- M8; M10 DIN 371
- M12 DIN 376



osazený hrot
reduced external center
Abgesetzte Spitze

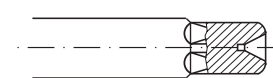


fasetové středění
chamfer centering
Fasenzentrierung

- M7; M9 DIN 371
- M7 ÷ M10 DIN 376
- ≥ M14 DIN 376
- ≥ M7 DIN 374
- ≥ M7 DIN 352
- ≥ M7 DIN 2181
- ≥ M7 DIN 357
- ≥ M12 DIN 2174



středící otvor
internal center
Zentrierbohrung



středící otvor
internal center
Zentrierbohrung

Povrchové úpravy a povlaky

Surface treatments and coatings / Oberflächenbehandlungen und Beschichtungen

TiN

Nitrid titanu / Titanium nitride / Titanitrid

Zlatožlutá barva / Gold colour / Goldgelbfarbe

V PVD procesu je při 500 °C dosahován povlak o tloušťce 2-4 μm a mikrotvrdosti 2300 HV. Tento povlak má dobré kluzné vlastnosti a účinně zvyšuje odolnost povrchu nástroje proti abrazivnímu a adheznímu opotřebení. Tento jednovrstvý povlak lze použít až do teploty 600 °C.

In a PVD process (500 °C) a coating thickness of 2-4 μm can be realised. The hardness of approx. 2300 HV, the good sliding properties and the coating adhesion yield considerable tool life increase. This mono-layer coating will remain resistant up to approx. 600 °C.

Im PVD-Verfahren (500 °C) werden Schichtdicken von 2-4 μm erreicht. Die Härte von ca. 2300 HV, gute Gleiteigenschaften und Schichthaftung bringen erhebliche Standwertverbesserungen. Diese Monolayer-Schicht bleibt bis ca. 600 °C stabil.

TiCN

Karbonitrid titanu / Titanium carbonitride / Titancarbonitrid

Modrošedá barva / Blue-grey colour / Blaugraufarbe

V PVD procesu je při 500 °C dosahován povlak o tloušťce 2-4 μm a mikrotvrdosti 3000 HV. Tento povlak je vysoce odolný proti opotřebení. Nízký součinitel tření chrání před vznikem studených svarů. Tento vícevrstvý gradovaný povlak lze použít až do teploty 400 °C.

In a PVD process (500 °C) a coating thickness of 2-4 μm can be realised. The hardness is approx. 3000 HV. The TiCN coating will resist up to approx. 400 °C.

Im PVD-Verfahren (500 °C) werden Schichtdicken von 2-4 μm erreicht. Die Härte beträgt hier ca. 3000 HV. Die TiCN-Schicht bleibt bis ca. 400 °C stabil.

FNT

Balinit® Futura Nano Top

Fialovošedá barva / Violet-grey colour / Violetgraufarbe

V PVD procesu je při 500 °C dosahován povlak o tloušťce 3-5 μm a mikrotvrdosti 3300 HV. Optimalizovaný poměr tvrdosti a vnitřního pnutí vrstvy povlaku zvyšuje stabilitu řezných hran nástrojů. Vynikající tepelná a chemická odolnost spolu s vynikajícími kluznými vlastnostmi umožňují zvyšování výkonu u vysoce zatěžovaných operací. Tento nanostrukturovaný povlak lze použít až do teploty 900 °C.

In a PVD process (500 °C) a coating thickness of 3-5 μm can be realised. Optimised hardness/residual compressive stress ratio, outstanding fidelity of edge geometry, excellent coating adhesion, uniform wear behaviour, better sliding properties due to higher surface quality, greater thermal and chemical resistance, greater wear resistance. The hardness is approx. 3300 HV. The Balinit® Futura Nano Top coating will resist up to approx. 900 °C.

Im PVD-Verfahren (500 °C) werden Schichtdicken von 3-5 μm erreicht. Die Härte beträgt hier ca. 3300 HV. Optimiertes Verhältniss Härte/Druckeigenspannung. Exzellente Schichthaftung und gleichmässiges Verschleissverhalten reduziert Werkzeugkosten und ermöglicht ein breites Anwendungsfeld für höchste Leistungsanforderung. Diese Beschichtung bleibt bis ca. 900°C stabil.

HL

Balinit® Hardlube

Tmavošedá barva / Dark grey colour / Dunkelgraufarbe

V PVD procesu je při 500 °C dosahován povlak o tloušťce 3-5 μm a mikrotvrdosti 3300 HV. Vysoká tvrdost a tepelná odolnost vrstvy TiAlN chrání řezné plochy účinně proti opotřebení, zatímco vynikající kluzné a mazací vlastnosti vrstvy WC/C zajišťují hladký odvod třísek. Výsledkem je vyšší výrobní jistota díky spolehlivému, reprodukovatelnému chování při použití. Tento vícevrstvý lamelární povlak lze použít až do teploty 800 °C.

In a PVD process (500 °C) a coating thickness of 3-5 μm can be realised. Optimised hardness/residual compressive stress ratio, outstanding fidelity of edge geometry, excellent coating adhesion, uniform wear behaviour, better sliding properties due to higher surface quality, greater thermal and chemical resistance, greater wear resistance of the TiAlN layers. Excellent low friction coefficient of the WC/C coating assure uniform chip extraction. The hardness is approx. 3300 HV. The Balinit® Hardlube coating will resist up to approx. 800 °C.

Im PVD-Verfahren (500 °C) werden Schichtdicken von 3-5 μm erreicht. Die Härte beträgt hier ca. 3000 HV. Balinit® Hardlube kombiniert einzigartig die Vorteile einer extrem harten und temperaturfesten TiAlN-Schicht mit den Gleit- und Schmiereigenschaften einer WC/C-Schicht. Sie sorgen so bei Trocken- und bei Nassbearbeitung für eine gleichmässig gute Spanbildung und reibungslosen Spanfluss. Die Balinit® Hardlube Beschichtung bleibt bis 800°C stabil.

ALS

AluSpeed

Světlešedá barva / Light grey colour / Hellgraufarbe

TiB2 - vysoce pevný jednovrstvý povlak s vysokou mikrotvrdostí - vrstva 4 μm s mikrotvrdostí 4.000HV [HV0,05]. Samolubrikační schopnosti s vysokou odolností proti studeným svárům, velmi hladký povrch pro vynikající odvod třísky v drážce nástroje při velmi nízkém tření.

Vhodný pro obrábění hliníku, mědi a titanu (a jejich slitin). Vhodný pro hliníkové slitiny s obsahem křemíku do 10%.

TiB2 - high toughness monolayer coating at very high hardness - by thickness of 4 μm hardness 4.000HV [HV0,05] . Self-lubricating properties with low affinity to cold welding, extremely smooth surface for almost frictionless chip removal in the flute. Very well suited for machining aluminium, copper and titanium (alloys). AlSi alloys with a silicone content up to 10%.

TiB2 - Bei einer Schichtdicke von 4 μm erzielt die Beschichtung eine hohe Zähigkeit bei einer sehr grossen Mikrohärtigkeit von 4.000HV [HV0,05]. Die silbergraue Beschichtung hat Selbstschmiereigenschaften und verhindert durch seine Affinität zum Aluminium in besonderem Maße die Aufbauschneidenbildung. Die extrem glatte Oberfläche verringert die Reibung an den Führungsfasen und erleichtert die Spanabfuhr. Hieraus resultiert eine hohe Oberflächengüte.

Die Beschichtung wurde speziell für die Hochleistungszerspanung von Aluminium und AlSi-Legierungen bis zu einem Si-Anteil von 10%, Kupfer, Titan und Titanlegierungen entwickelt.

OX

Oxidace / Oxidation / Oxidieren

Tmavošedá barva / Dark grey colour / Dunkelgraufarbe

Při chemicko-tepelném procesu ve speciálním zařízení je na povrchu zahřátých nástrojů působením suché páry a tlaku vytvářena vrstva oxidu železa. Tato vrstva oxidu zvyšuje otěrvzdornost ostří, zvyšuje odolnost proti korozi, zlepšuje mazání nástroje.

In a special installation, the tools are exposed to hot steam. This leads to the formation of a dark oxide layer on the tool surface. This oxide layer protects the surface, and acts as a good carrier of lubricants. Cold welding which occurs especially with low-carbon soft steels can be prevented in this way.

In einer Anlage wird den Werkzeugen Wasserdampf zugeführt. Dadurch bildet sich auf der Werkzeugoberfläche eine dunkle Oxidschicht. Diese Oxidschicht bewirkt einen Schutz der Oberfläche. Sie ist ein guter Träger von Schmierstoffen. Kaltschweissungen, wie sie besonderes bei kohlenstoffarmen weichen Stählen auftreten werden vermieden.

Závity podle normy DIN

Threads acc. to DIN Standard / Gewinde nach DIN - Normen

| Profil Profile Profil | Symbol | Popis Description Beschreibung | Označení Indication Abkürzung | Norma Standard Norm | Použití Application Anwendung |
|-----------------------------|------------|--|-------------------------------------|--|---|
| | M | Metrický ISO závit ISO Metric coarse thread Metrisches ISO - Gewinde | M 0,8 | DIN 14 Part 1 ÷ 4 | Hodinářství a jemná mechanika For watches and fine mechanic Für Uhren und Feinwerktechnik |
| | | | M 30 | DIN 13 Part 1 | Všeobecné (pro běžné závity) General (Thread normal) Allgemein (Regelgewinde) |
| | | | M 20 x 1 M 30 x 2 - LH | DIN 13 Part 2 ÷ 11 | Všeobecné (pro jemná stoupání) General (minor pitch as normal) Allgemein (wenn Steigung des Regelgewindes zu gross) |
| | | | DIN 6630 M 64 x 4 | DIN 6630 | Pro šrouby na sudech Screws on barrel units Aussengewinde für Fassverschraubungen |
| | | | LN 9163 M 30 x 2 - 4H 5H | LN 9163 | Letecká doprava a vesmírné lety For aeronautic industry Luft- und Raumfahrt |
| | | Metrický závit s velkou vůlí Metric thread with big play Metrisches Gewinde mit grossem Spiel | DIN 2510 M 36 | DIN 2510 Part 2 | Pro šroubová spojení s pružným dílkem For screws with reduced shank Für Schraubenverbindungen mit Dehnschaft |
| | EGM | Metrický závit ISO pro závitové drátové vložky ISO metric coarse thread for screw thread insert Metrisches ISO-Regelgewinde für Gewindedrahteinsätze | EGM 20 | DIN 8140 Part 2 | Pro závitové vložky Thread chamfer for inserts with wire thread Aufnahme-Regelgewinde (EG) für Gewindedrahteinsätze aus Draht, für metrisches IOS-Gewinde nach DIN 8140 |
| | M | Metrický vnější kuželový závit Metric taper external thread Metrisches kegeliges Aussengewinde | DIN 158 M 30 x 2 keg. | DIN 158 | Pro uzavírací šrouby a maznice For closing screws and greasers Für Verschlusschrauben und Schmiernippel |
| | | | DIN 158 keg. M 30 x 2 kurz | | |
| | MJ | Metrický závit MJ Metric thread MJ Metrisches MJ-Gewinde | MJ 6 x 1 - 4h6h | DIN ISO 5855 Part 1 ÷ 2 | Letecká doprava a vesmírné lety For aeronautic industry Luft- und Raumfahrt |
| | | | MJ 6 x 1 - 4H6H | | |
| | G | Trubkový závit válcový pro spojení netěsnící v závitech Whitworth pipe straight thread Rohrgewinde für nicht im Gewinde dichtende Verbindungen (zylindrisch) | G 1 1/2 A G 1 1/2 B | ČSN – EN – 180 228 DIN ISO 228 Part 1 | Vnější závit pro trubky a trubková spojení External thread for pipes and pipe connections Aussengewinde für Rohre und Rohrverbindungen |
| | | | G 1 1/2 | | Vnitřní závit pro trubky a trubková spojení Internal thread for pipes and pipe connections Innengewinde für Rohre und Rohrverbindungen |
| | Rp | Trubkové závity válcové vnitřní Whitworth pipe cylindrical internal thread Whitworth-Rohrgewinde, zylindrisches Innengewinde | Rp 1/2 | DIN EN 10 226 ISO 7-1 | Pro trubkový závit a fitinky For pipe thread and fitting Für Gewinderohre und Fittings |
| | Rc | Trubkové závity kuželové vnitřní Whitworth pipe taper internal thread Whitworth-Rohrgewinde, kegeliges Innengewinde | Rc 3/4 | DIN EN 10 226 ISO 7-1 | Pro trubky a trubková spojení For pipes and pipe connections Für Rohre und Rohrverbindungen |
| | R | Trubkové závity kuželové vnější Whitworth pipe taper external thread Whitworth-Rohrgewinde, kegeliges Aussengewinde | R 1/2 | DIN EN 10226 ISO 7-1 | Pro trubkový závit a fitinky For pipe thread and fitting Für Gewinderohre und Fittings |

PŘEHLED TYPŮ ZÁVITŮ

Threads - general index / Gewinde - Generalindex

Závity podle normy DIN

Threads acc. to DIN Standard / Gewinde nach DIN - Normen

| Profil Profile Profil | Symbol | Popis Description Beschreibung | Označení Indication Abkürzung | Norma Standard Norm | Použití Application Anwendung |
|-----------------------------|-----------|---|-------------------------------------|---------------------------|---|
| | Tr | Metrický trapézový závit (jedno nebo vícechodý) Metric trapezoidal thread (one or more thread) Metrisches ISO - Trapezgewinde (ein- und mehrgängig) | Tr 40 x 7 | DIN 103 Part 1 ÷ 8 | Všeobecné General Allgemein |
| | | | Tr 40 x 14 P7 | | |
| | S | Metrický pilový závit (jedno nebo vícechodý) Metric buttress thread (one or more thread) Metrisches Sägewinde (ein- und mehrgängig) | S 48 x 8 | DIN 513 Part 1 ÷ 3 | Všeobecné General Allgemein |
| | | | S 40 x 14 P7 | | |
| | Rd | Oblý závit (jedno nebo vícechodý) Round parallel thread (one or more threads) Rundgewinde | Rd 40 x 1/6 Rd 40 x 1/3 P1/6 | DIN 405 Part 1 ÷ 2 | Všeobecné General Allgemein |
| | | | | | |
| | E | Elektrozávit Electric thread Elektrogewinde | DIN 40400 - E27 | DIN 40400 | Pro žárovky a objímky For bulbs and lamp holders Für D-Sicherungen; E14 und E27 auch für Lampensockel und -Fassungen |
| | Pg | Pancéřový závit Steel conduit thread Stahlpanzerrohrgewinde | DIN 40430 - Pg 21 | DIN 40430 | Pro elektrotechniku In electrotechnic In der Elektrotechnik |
| | FG | Závit pro jízdní kola Thread for bicycle Fahrradgewinde | FG 9,5 | DIN 79012 | Pro jízdní kola For bicycles Für Fahrräder |
| | Vg | Ventilkový závit Thread for valve Ventilgewinde | DIN 7756 - Vg 12 | DIN 7756 | Pro ventilkovy pneumatiky For valves of pneumatic vehicles Ventile für Fahrzeugbereifungen |
| | W | Whitworthův kuželový závit Whitworth thread taper Whitworth - Gewinde (kegelig) | DIN 477 - W 28,8 x 1/14 keg | DIN 477 Part 1 | Ventily plynových lahví Threads nipple valves of gas bottles In Gasflaschenventilen |
| | | | DIN 477 - W 21,8 x 1/14 | | Kuželový trubkový závit pro plynové lahve Side threads nipple valves gas bottle In Gasflaschenventilen |
| | | | W 80 x 1/11 | DIN 4668 | Pro pojistné ventily plynových lahví Protection hood for gas bottles Gewinde für Sicherheitskappen an Gasflaschen |

Závity unifikované

Unified threads / Unified Schraubengewinde

| Profil Profile Profil | Symbol | Popis Description Beschreibung | Označení Indication Abkürzung | Norma Standard Norm | Použití Application Anwendung |
|-----------------------------|---------------|---|--------------------------------------|---------------------------|-------------------------------------|
| | UN | Unifikovaný závit Unified thread Unified Schraubengewinde | 1/4-20 UNC - 2A 0,250-20 UNC - 2A | ANSI / ASME B1.1-1989 | |
| | UNC | | | | |
| | UNF | | | | |
| | UNEF | | | | |
| | UNS | | | | |
| | UNJ | | | | |
| | UNJC | | | | |
| | UNJF | | | | |
| | UNJEF | | | | |
| | EG UNC | | | | |
| EG UNF | | | | | |

Závity americké

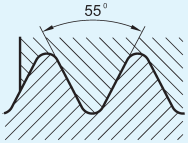
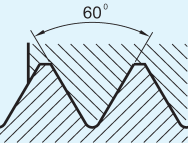
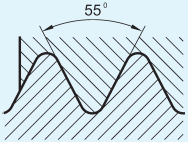
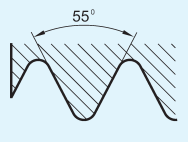
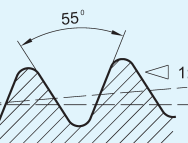
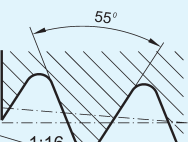
American threads / Amerikanisches Schraubengewinde

| Profil Profile Profil | Symbol | Popis Description Beschreibung | Označení Abreviation Abkürzung | Norma Standard Norm | Použití Application Applikation |
|-----------------------------|---------------------|---|--------------------------------------|---------------------------|---------------------------------------|
| | NPSM | Trubkový válcový závit Standard american pipe thread, parallel Rohrgewinde, zylindrisch | 1/8-27 NPSM | ANSI / ASME B 1.20.1-1983 | |
| | Dryseal NPSF | | 1/8-27 NPSF | ANSI B 1.20.3-1976 | |
| | NPT | Trubkový kuželový závit Standard american pipe thread, taper Rohrgewinde, kegelig | 3/8-18 NPT | ANSI / ASME B 1.20.1-1983 | |
| | Dryseal NPTF | | 1/8-27 NPTF-1 | ANSI B 1.20.3-1976 | |
| | ACME-G | Trapézový závit American trapezoidal thread Trapezgewinde | 13/4 - 4 ACME-G | ANSI B 1.5-1977 | |

PŘEHLED TYPŮ ZÁVITŮ

Threads - general index / Gewinde - Generalindex

Závity anglické
English threads / Englisches Schraubengewinde

| Profil Profile Profil | Symbol | Popis Description Beschreibung | Označení Indication Abkürzung | Norma Standard Norm | Použití Application Anwendung |
|---|----------------------|--|-------------------------------------|---------------------------|-------------------------------------|
|  | BSW | | W 1/4-20 | | |
| | BSF | Whitworthův závit Standard english thread Whitworth Whitworth-Gewinde | BSF 1/4-26 | B.S. 84-1956 | |
| | WHIT | | WHIT 1/4-32 | | |
|  | BSC | Závit pro jízdní kola Britisch standard thread for bicycles Fahrradgewinde | | B.S. 811-1950 | |
|  | G (BSP) | Trubkový válcový závit Standard english pipe thread Rohrgewinde, zylindrisch | G 1/2 - 14 | ISO 228 B.S. 2779-1973 | |
|  | Rp (BSPP) | Trubkový válcový závit vnitřní Standard english internal pipe thread Rohrgewinde, zylindrisch | Rp 1/4 - 19 | ISO 7-1 B.S. 21-1973 | |
|  | R (BSPT) | Trubkový kuželový závit vnější Standard english external pipe thread, taper Rohrgewinde, kegelig | R 1/2 - 14 | ISO 7-1 B.S. 21-1985 | |
|  | Rc (BSPT) | Trubkový kuželový závit vnitřní Standard english internal pipe thread, taper Rohrgewinde, kegelig | R3 3/8 - 19 | | |

LÍCOVÁNÍ ZÁVITŮ

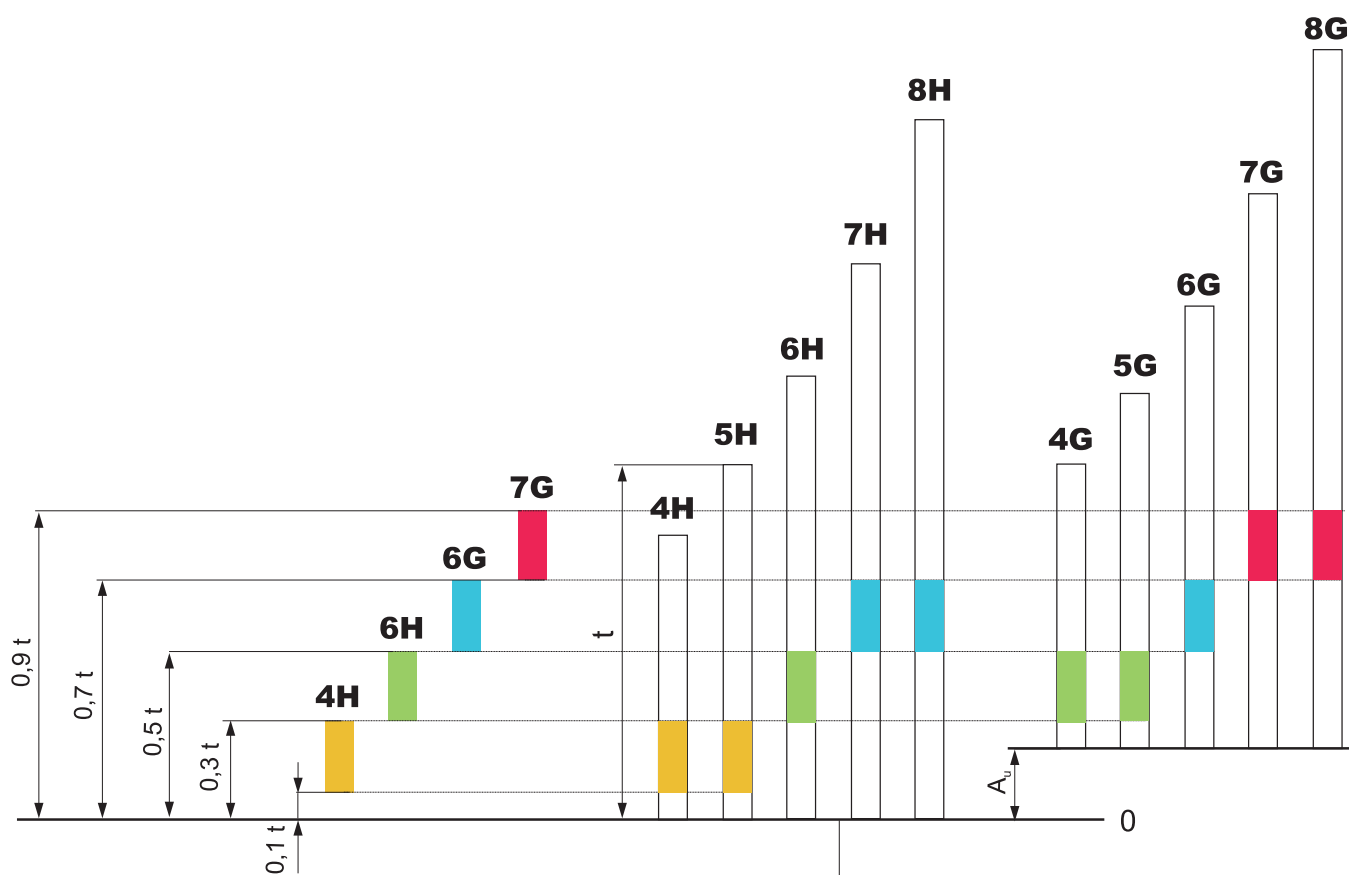
Thread tolerance / Gewindepassung

Toleranční třídy závitníků pro metrické závity

Tolerance classes of the taps of the metric threads

Toleranzklassen des Gewindebohrers beim Metrischen Gewinde

| Toleranční třída závitníku Tolerance class of the tap Toleranzklasse des Gewindebohrers | | | Použití pro toleranční pole vnitřních závitů Tolerance fields for internal threads Toleranzfeldern für Innengewinde | |
|---|----------|--------------|---|-----------------|
| Třída Class / Klasse | 1 | ISO 1 | 4H | 4H 5H |
| Třída Class / Klasse | 2 | ISO 2 | 6H | 6H 4G 5G |
| Třída Class / Klasse | 3 | ISO 3 | 6G | 7H 8H 6G |
| | | | 7G | 7G 8G |



$t = T_{d_2}$ úchylna vnitřního závitu stupně přesnosti 5
tolerance of the internal thread (qual. 5)
Toleranzeinheit des Innengewindes (Qual. 5)

A_u základní úchylna tolerančních polí G
fundamental deviation of tolerance fields G
Grundabmass für Toleranzfelder G

Jmenovitý střední průměr závitu
Nominal pitch diameter (basis)
Nennflankendurchmesser (Basis)

TVÁŘENÍ ZÁVITŮ

Thread forming / Gewindeformen

Tváření vnitřních závitů je jednou z technologií výroby závitů. Závit při ní není řezán, ale beztržkové tvářen vytlačováním materiálu. Tato technologie je vhodná pro výrobu závitů do materiálů dobře tvářitelných za studena s minimální tažností 10%.

Výhody tvářeného závitu proti řezanému závitu:

- nevznikají třísky, odpadá nebezpečí jejich vzpříčení v závitovaném otvoru
- lepší kvalita povrchu na bocích vytvářeného závitu
- čistý závit, žádné stopy na povrchu závitu
- rovnoměrná kalibrace závitu
- nepřerušovaný průběh vlákna materiálu a tím zvýšená pevnost šroubového spojení
- větší odolnost nástroje proti lomu a tím i vyšší životnost nástroje
- vyšší tvářecí rychlost zvyšuje produktivitu

Podmínky použití technologie tvářeného závitu:

- dodržení požadovaného průměru předvrtání otvoru; menší otvor může způsobit zalomení nástroje, větší otvor znamená nedotvářený malý průměr závitu
- dostatečné mazání; při tváření vzniká vysoké tření, proto je doporučeno použití kvalitního mazacího oleje

Thread forming of internal threads is one of the technologies of thread production. This technology could be used for thread production in materials with minimal ductility 10%.

Advantages of formed thread:

- no chips during threading process
- higher surface quality on thread flanks, very clean thread
- uniform calibration of thread
- higher strength of screw connection
- higher mechanical resistance of forming taps – longer tool life
- higher speed = higher productivity

Operating conditions:

- optimal diameter of drilled hole
- sufficient cooling
- sufficient spindle/tap revolutions

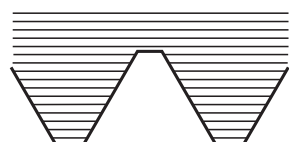
Das Formen von Innengewinden gehört zu den modernsten Technologien der Gewindeproduktion. Das Gewinde wird spanlos kaltverformt. Diese Technologie ist für Materialien mit einer Mindestdehnung von 10% geeignet.

Vorteile des Gewindeformens:

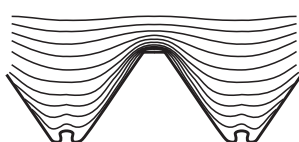
- Es entstehen keine Späne, dadurch keine Gefahr des Verklemmens der Späne im Gewinde
- Erhöhte Festigkeit des Gewindes, dadurch stabilere Schraubverbindungen
- Saubere Gewindeoberflächen
- Gleichbleibende Toleranz des Gewindes
- Höhere Standzeiten und bessere Werkzeugbruchsicherheit
- Produktivitätssteigerung durch grössere Schnittgeschwindigkeiten

Voraussetzungen für das effiziente Gewindeformen:

- Einhaltung der vorgeschriebenen Kernlochdurchmesser
- Verwendung von geeigneten Schmiermitteln. Die hohen Kräfte beim Formen des Gewindes bedingen hohe Reibungskräfte am Gewindeformer. Deshalb empfehlen wir die Verwendung von leistungsfähigen Schmierölen mit Hochdruckeigenschaften oder zumindest eine 10%-ige Emulsion.



Závit řezaný
Cut thread
Geschnittenes Gewinde



Závit tvářený
Formed thread
Spanlos geformtes Gewinde

DOPORUČENÉ PŘEDVRTÁNÍ OTVORŮ PRO TVÁŘENÍ ZÁVITŮ

Recommended hole diameters for forming of the threads

Empfohlene Vorbohr für das Gewindeformen

| Metrický závit ISO - hrubý | | | |
|--|------|----------------------|-------|
| Metric ISO - coarse thread / Metrisches ISO - Regelgewinde | | | |
| Rozměr závitu | | Předvrtaný otvor - Ø | |
| Thread size | | Hole diameter - Ø | |
| Gewinde Abmessung | | Vorbohr - Ø | |
| | P | min | max |
| | mm | mm | mm |
| M 3 | 0,5 | 2,77 | 2,82 |
| M 3,5 | 0,6 | 3,23 | 3,28 |
| M 4 | 0,7 | 3,68 | 3,73 |
| M 4,5 | 0,75 | 4,15 | 4,21 |
| M 5 | 0,8 | 4,63 | 4,68 |
| M 6 | 1 | 5,51 | 5,59 |
| M 7 | 1 | 6,51 | 6,59 |
| M 8 | 1,25 | 7,39 | 7,48 |
| M 9 | 1,25 | 8,39 | 8,48 |
| M 10 | 1,5 | 9,25 | 9,35 |
| M 11 | 1,5 | 10,25 | 10,35 |
| M 12 | 1,75 | 11,12 | 11,25 |
| M 14 | 2 | 13 | 13,15 |
| M 16 | 2 | 15 | 15,15 |
| M 18 | 2,5 | 16,72 | 16,9 |
| M 20 | 2,5 | 18,72 | 18,9 |

| Trubkový závit | | | |
|---|------|----------------------|-------|
| Whitworth pipe thread / Withworth-Rohrgewinde | | | |
| Rozměr závitu | | Předvrtaný otvor - Ø | |
| Thread size | | Hole diameter - Ø | |
| Gewinde Abmessung | | Vorbohr - Ø | |
| | P/1" | min | max |
| | | mm | mm |
| G 1/8" | 28 | 9,25 | 9,32 |
| G 1/4" | 19 | 12,43 | 12,53 |
| G 3/8" | 19 | 15,94 | 16,04 |
| G 1/2" | 14 | 19,96 | 20,1 |
| G 5/8" | 14 | 21,92 | 22,08 |
| G 3/4" | 14 | 25,45 | 25,6 |
| G 7/8" | 14 | 29,2 | 29,35 |
| G 1" | 11 | 31,97 | 32,15 |

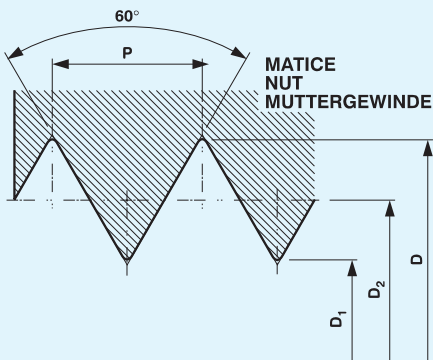
| Metrický závit ISO - jemný | | | |
|---|--|----------------------|-------|
| Metric ISO - fine thread / Metrisches ISO - Feingewinde | | | |
| Rozměr závitu | | Předvrtaný otvor - Ø | |
| Thread size | | Hole diameter - Ø | |
| Gewinde Abmessung | | Vorbohr - Ø | |
| | | min | max |
| | | mm | mm |
| M 3,5 x 0,5 | | 3,27 | 3,32 |
| M 4 x 0,5 | | 3,77 | 3,82 |
| M 4,5 x 0,5 | | 4,27 | 4,32 |
| M 5 x 0,5 | | 4,77 | 4,82 |
| M 5,5 x 0,5 | | 5,27 | 5,32 |
| M 6 x 0,5 | | 5,78 | 5,83 |
| M 6 x 0,75 | | 5,65 | 5,71 |
| M 7 x 0,75 | | 6,65 | 6,71 |
| M 8 x 0,75 | | 7,65 | 7,71 |
| M 9 x 0,75 | | 8,65 | 8,71 |
| M 10 x 0,75 | | 9,65 | 9,71 |
| M 11 x 0,75 | | 10,65 | 10,71 |
| M 8 x 1 | | 7,51 | 7,59 |
| M 9 x 1 | | 8,51 | 8,59 |
| M 10 x 1 | | 9,51 | 9,59 |
| M 11 x 1 | | 10,51 | 10,59 |
| M 12 x 1 | | 11,52 | 11,6 |
| M 14 x 1 | | 13,52 | 13,6 |
| M 15 x 1 | | 14,52 | 14,6 |
| M 16 x 1 | | 15,52 | 15,6 |
| M 18 x 1 | | 17,52 | 17,6 |
| M 20 x 1 | | 19,52 | 19,6 |
| M 10 x 1,25 | | 9,39 | 9,48 |
| M 12 x 1,25 | | 11,4 | 11,49 |
| M 14 x 1,25 | | 13,4 | 13,49 |
| M 12 x 1,5 | | 11,26 | 11,36 |
| M 14 x 1,5 | | 13,26 | 13,36 |
| M 16 x 1,5 | | 15,26 | 15,36 |
| M 18 x 1,5 | | 17,26 | 17,36 |
| M 20 x 1,5 | | 19,26 | 19,36 |
| M 22 x 1,5 | | 21,26 | 21,36 |
| M 24 x 1,5 | | 23,26 | 23,38 |
| M 25 x 1,5 | | 24,26 | 24,38 |
| M 26 x 1,5 | | 25,26 | 25,38 |
| M 28 x 1,5 | | 27,26 | 27,38 |
| M 30 x 1,5 | | 29,26 | 29,38 |
| M 18 x 2 | | 17 | 17,15 |
| M 20 x 2 | | 19 | 19,15 |
| M 22 x 2 | | 21 | 21,15 |
| M 24 x 2 | | 23,01 | 23,16 |
| M 27 x 2 | | 26,01 | 26,16 |
| M 30 x 2 | | 29,01 | 29,16 |

Uvedené hodnoty je nutné vždy ověřit s ohledem na tažnost tvářeného materiálu. Check the value in consideration of roll formed material ductility. Die Angaben mit bezug auf die Dehnfähigkeit des Materials überprüfen

ZÁVITOVÉ TABULKY

Threading charts / Gewindetabellen

M **DIN 13**



D velký průměr závitu matice
major diameter of nut thread
Aussendurchmesser des Muttergewindes
D₂ střední průměr závitu matice
pitch diameter of nut thread
Flankendurchmesser des Muttergewindes
D₁ malý průměr závitu matice
minor diameter of nut thread
Kerndurchmesser des Muttergewindes
P stoupání závitu
pitch of thread
Gewindesteigung

d = D

| Závit Thread / Gewinde | | D _{1 max} | | | D _{1 min} |
|---------------------------|------|--------------------|--------|--------|--------------------|
| d | P | 5H | 6H | 7H | 5H, 6H, 7H |
| M 2 | 0,40 | 1,657 | 1,679 | - | 1,567 |
| M 2,5 | 0,45 | 2,113 | 2,138 | - | 2,013 |
| M 3 | 0,50 | 2,571 | 2,599 | 2,639 | 2,459 |
| M 3 | 0,35 | 2,701 | 2,721 | - | 2,621 |
| M 3,5 | 0,60 | 2,975 | 3,010 | 3,050 | 2,850 |
| M 3,5 | 0,35 | 3,201 | 3,221 | - | 3,121 |
| M 4 | 0,70 | 3,382 | 3,422 | 3,466 | 3,242 |
| M 4 | 0,50 | 3,571 | 3,599 | 3,639 | 3,459 |
| M 4 | 0,35 | 3,701 | 3,722 | - | 3,622 |
| M 4,5 | 0,75 | 3,838 | 3,878 | 3,924 | 3,688 |
| M 4,5 | 0,50 | 4,071 | 4,099 | 4,139 | 3,959 |
| M 5 | 0,80 | 4,294 | 4,334 | 4,384 | 4,134 |
| M 5 | 0,50 | 4,571 | 4,599 | 4,639 | 4,459 |
| M 5,5 | 0,50 | 5,071 | 5,099 | 5,139 | 4,959 |
| M 6 | 1,00 | 5,107 | 5,153 | 5,217 | 4,917 |
| M 6 | 0,75 | 5,338 | 5,378 | 5,424 | 5,188 |
| M 6 | 0,50 | 5,570 | 5,598 | 5,638 | 5,458 |
| M 7 | 1,00 | 6,107 | 6,153 | 6,217 | 5,917 |
| M 7 | 0,75 | 6,338 | 6,378 | 6,424 | 6,188 |
| M 8 | 1,25 | 6,859 | 6,912 | 6,982 | 6,647 |
| M 8 | 1,00 | 7,107 | 7,153 | 7,217 | 6,917 |
| M 8 | 0,75 | 7,338 | 7,378 | 7,424 | 7,188 |
| M 8 | 0,50 | 7,570 | 7,598 | 7,638 | 7,458 |
| M 9 | 1,25 | 7,859 | 7,912 | 7,982 | 7,647 |
| M 9 | 1,00 | 8,107 | 8,153 | 8,217 | 7,917 |
| M 9 | 0,75 | 8,338 | 8,378 | 8,424 | 8,188 |
| M 10 | 1,50 | 8,612 | 8,676 | 8,751 | 8,376 |
| M 10 | 1,25 | 8,859 | 8,912 | 8,982 | 8,647 |
| M 10 | 1,00 | 9,107 | 9,153 | 9,217 | 8,917 |
| M 10 | 0,75 | 9,338 | 9,378 | 9,424 | 9,188 |
| M 11 | 1,50 | 9,612 | 9,676 | 9,751 | 9,376 |
| M 11 | 1,00 | 10,107 | 10,153 | 10,217 | 9,917 |
| M 11 | 0,75 | 10,338 | 10,378 | 10,424 | 10,188 |
| M 12 | 1,75 | 10,371 | 10,441 | 10,531 | 10,106 |
| M 12 | 1,50 | 10,612 | 10,676 | 10,751 | 10,376 |
| M 12 | 1,25 | 10,859 | 10,912 | 10,982 | 10,647 |
| M 12 | 1,00 | 11,107 | 11,153 | 11,217 | 10,917 |
| M 13 | 1,00 | 12,108 | 12,154 | 12,218 | 11,918 |
| M 14 | 2,00 | 12,135 | 12,210 | 12,310 | 11,835 |
| M 14 | 1,50 | 12,612 | 12,676 | 12,751 | 12,376 |
| M 14 | 1,25 | 12,859 | 12,912 | 12,982 | 12,647 |
| M 14 | 1,00 | 13,107 | 13,153 | 13,217 | 12,917 |
| M 15 | 1,50 | 13,612 | 13,676 | 13,751 | 13,376 |
| M 15 | 1,00 | 14,107 | 14,153 | 14,217 | 13,917 |
| M 16 | 2,00 | 14,135 | 14,210 | 14,310 | 13,835 |
| M 16 | 1,50 | 14,612 | 14,676 | 14,751 | 14,376 |
| M 16 | 1,00 | 15,107 | 15,153 | 15,217 | 14,917 |
| M 17 | 1,50 | 15,612 | 15,676 | 15,751 | 15,376 |
| M 17 | 1,00 | 16,107 | 16,153 | 16,217 | 15,917 |
| M 18 | 2,50 | 15,649 | 15,744 | 15,854 | 15,294 |
| M 18 | 2,00 | 16,135 | 16,210 | 16,310 | 15,835 |
| M 18 | 1,50 | 16,612 | 16,676 | 16,751 | 16,376 |
| M 18 | 1,00 | 17,107 | 17,153 | 17,217 | 16,917 |
| M 20 | 2,50 | 17,649 | 17,744 | 17,854 | 17,294 |
| M 20 | 2,00 | 18,135 | 18,210 | 18,310 | 17,835 |
| M 20 | 1,50 | 18,612 | 18,676 | 18,751 | 18,376 |
| M 20 | 1,00 | 19,107 | 19,153 | 19,217 | 18,917 |
| M 22 | 2,50 | 19,649 | 19,744 | 19,854 | 19,294 |
| M 22 | 2,00 | 20,135 | 20,210 | 20,310 | 19,835 |
| M 22 | 1,50 | 20,612 | 20,676 | 20,751 | 20,376 |
| M 22 | 1,00 | 21,107 | 21,153 | 21,217 | 20,917 |
| M 24 | 3,00 | 21,152 | 21,252 | 21,382 | 20,752 |
| M 24 | 2,00 | 22,135 | 22,210 | 22,310 | 21,835 |
| M 24 | 1,50 | 22,612 | 22,676 | 22,751 | 22,376 |

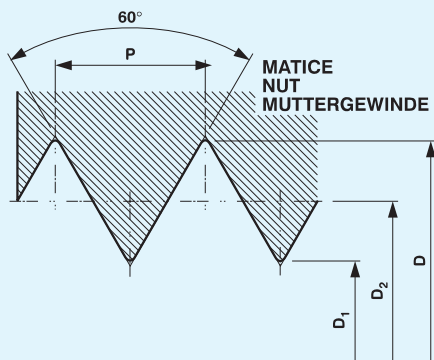
| Závit Thread / Gewinde | | D _{1 max} | | | D _{1 min} |
|---------------------------|------|--------------------|--------|--------|--------------------|
| d | P | 5H | 6H | 7H | 5H, 6H, 7H |
| M 24 | 1,00 | 23,107 | 23,153 | 23,217 | 22,917 |
| M 25 | 2,00 | 23,135 | 23,210 | 23,310 | 22,835 |
| M 25 | 1,50 | 23,612 | 23,676 | 23,751 | 23,376 |
| M 26 | 1,50 | 24,612 | 24,676 | 24,751 | 24,376 |
| M 27 | 3,00 | 24,152 | 24,252 | 24,382 | 23,752 |
| M 27 | 2,00 | 25,135 | 25,210 | 25,310 | 24,835 |
| M 27 | 1,50 | 25,612 | 25,676 | 25,751 | 25,376 |
| M 27 | 1,00 | 26,107 | 26,153 | 26,217 | 25,917 |
| M 28 | 2,00 | 26,135 | 26,210 | 26,310 | 25,835 |
| M 28 | 1,50 | 26,612 | 26,676 | 26,751 | 26,376 |
| M 30 | 3,50 | 26,661 | 26,771 | 26,921 | 26,211 |
| M 30 | 2,00 | 28,135 | 28,210 | 28,310 | 27,835 |
| M 30 | 1,50 | 28,612 | 28,676 | 28,751 | 28,376 |
| M 30 | 1,00 | 29,107 | 29,153 | 29,217 | 28,917 |
| M 32 | 1,50 | 30,612 | 30,676 | 30,751 | 30,376 |
| M 33 | 3,50 | 29,661 | 29,771 | 29,921 | 29,211 |
| M 33 | 2,00 | 31,135 | 31,210 | 31,310 | 30,835 |
| M 33 | 1,50 | 31,612 | 31,676 | 31,751 | 31,376 |
| M 34 | 1,50 | 32,612 | 32,676 | 32,751 | 32,376 |
| M 35 | 1,50 | 33,612 | 33,676 | 33,751 | 33,376 |
| M 36 | 4,00 | 32,145 | 32,270 | 32,420 | 31,670 |
| M 36 | 3,00 | 33,152 | 33,252 | 33,382 | 32,752 |
| M 36 | 2,00 | 34,135 | 34,210 | 34,310 | 33,835 |
| M 36 | 1,50 | 34,612 | 34,676 | 34,751 | 34,376 |
| M 38 | 1,50 | 36,612 | 36,676 | 36,751 | 36,376 |
| M 39 | 4,00 | 35,145 | 35,270 | 35,420 | 34,670 |
| M 39 | 3,00 | 36,152 | 36,252 | 36,382 | 35,752 |
| M 39 | 2,00 | 37,135 | 37,210 | 37,310 | 36,835 |
| M 39 | 1,50 | 37,612 | 37,676 | 37,751 | 37,376 |
| M 40 | 3,00 | 37,152 | 37,252 | 37,382 | 36,752 |
| M 40 | 2,00 | 38,135 | 38,210 | 38,310 | 37,835 |
| M 40 | 1,50 | 38,612 | 38,676 | 38,751 | 38,376 |
| M 42 | 4,50 | 37,659 | 37,799 | 37,979 | 37,129 |
| M 42 | 3,00 | 39,152 | 39,252 | 39,382 | 38,752 |
| M 42 | 2,00 | 40,135 | 40,210 | 40,310 | 39,835 |
| M 42 | 1,50 | 40,612 | 40,676 | 40,751 | 40,376 |
| M 45 | 4,50 | 40,659 | 40,799 | 40,979 | 40,129 |
| M 45 | 3,00 | 42,152 | 42,252 | 42,382 | 41,752 |
| M 45 | 2,00 | 43,135 | 43,210 | 43,310 | 42,835 |
| M 45 | 1,50 | 43,612 | 43,676 | 43,751 | 43,376 |
| M 48 | 5,00 | 43,147 | 43,297 | 43,487 | 42,587 |
| M 48 | 3,00 | 45,152 | 45,252 | 45,382 | 44,752 |
| M 48 | 2,00 | 46,135 | 46,210 | 46,310 | 45,835 |
| M 48 | 1,50 | 46,612 | 46,676 | 46,751 | 46,376 |
| M 50 | 3,00 | 47,152 | 47,252 | 47,382 | 46,752 |
| M 50 | 1,50 | 48,612 | 48,676 | 48,751 | 48,376 |
| M 52 | 5,00 | 47,147 | 47,297 | 47,487 | 46,587 |
| M 52 | 3,00 | 49,152 | 49,252 | 49,382 | 48,752 |
| M 52 | 2,00 | 50,135 | 50,210 | 50,310 | 49,835 |
| M 52 | 1,50 | 50,612 | 50,676 | 50,751 | 50,376 |
| M 55 | 2,00 | 53,135 | 53,210 | 53,310 | 53,835 |
| M 55 | 1,50 | 53,612 | 53,676 | 53,751 | 53,376 |
| M 56 | 5,50 | 50,646 | 50,796 | 50,996 | 50,046 |
| M 56 | 4,00 | 52,145 | 52,270 | 52,420 | 51,670 |
| M 56 | 3,00 | 53,152 | 53,252 | 53,382 | 52,752 |
| M 56 | 2,00 | 54,135 | 54,210 | 54,310 | 53,835 |
| M 56 | 1,50 | 54,612 | 54,676 | 54,751 | 54,376 |
| M 58 | 2,00 | 56,135 | 56,210 | 56,310 | 55,835 |
| M 58 | 1,50 | 56,612 | 56,676 | 56,751 | 56,376 |
| M 60 | 5,50 | 54,326 | 54,401 | 54,496 | 54,046 |
| M 60 | 4,00 | 56,145 | 56,270 | 56,420 | 55,670 |
| M 60 | 3,00 | 57,152 | 57,252 | 57,382 | 56,752 |
| M 60 | 2,00 | 58,135 | 58,210 | 58,310 | 57,835 |
| M 60 | 1,50 | 58,612 | 58,676 | 58,751 | 58,376 |

ZÁVITOVÉ TABULKY

Threading charts / Gewindetabellen

UNC

**ANSI
B 1.1**



- D velký průměr závitu matice
major diameter of nut thread
Aussendurchmesser des Muttergewindes
- D₂ střední průměr závitu matice
pitch diameter of nut thread
Flankendurchmesser des Muttergewindes
- D₁ malý průměr závitu matice
minor diameter of nut thread
Kerndurchmesser des Muttergewindes
- P stoupání závitu
pitch of thread
Gewindesteigung
- N stoupání závitu v počtu závitů na 1"
pitch thread in threads per inch
Gewindesteigung in Gangzahl/1"

3B Přesné / Fine / Fein
2B Střední / Medium / Mittel
1B Hrubé / Coarse / Grob

d = D

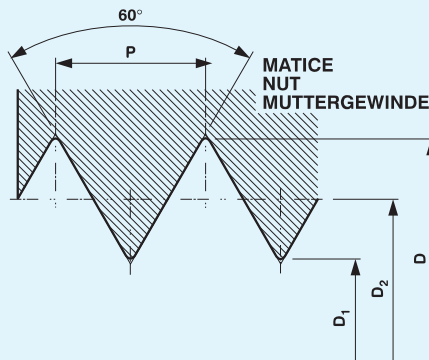
| Závit Thread / Gewinde | | | D _{min} | D _{1 min} | D _{1 max} | |
|---------------------------|-------|-------|------------------|--------------------|--------------------|--------|
| d - N | d (") | P | | 3B, 2B, 1B | 3B | 2B, 1B |
| 1 - 64 | 0,073 | 0,397 | 1,854 | 1,425 | 1,582 | 1,582 |
| 2 - 56 | 0,086 | 0,454 | 2,184 | 1,694 | 4,872 | 1,872 |
| 3 - 48 | 0,099 | 0,529 | 2,515 | 1,941 | 2,146 | 2,146 |
| 4 - 40 | 0,112 | 0,635 | 2,845 | 2,156 | 2,385 | 2,385 |
| 5 - 40 | 0,125 | 0,635 | 3,175 | 2,487 | 2,697 | 2,697 |
| 6 - 32 | 0,138 | 0,794 | 3,505 | 2,647 | 2,896 | 2,896 |
| 8 - 32 | 0,164 | 0,794 | 4,166 | 3,307 | 3,528 | 3,531 |
| 10 - 24 | 0,190 | 1,058 | 4,826 | 3,680 | 3,950 | 3,962 |
| 12 - 24 | 0,216 | 1,058 | 5,486 | 4,341 | 4,590 | 4,597 |
| 1/4 - 20 | 0,250 | 1,270 | 6,350 | 4,976 | 5,250 | 5,258 |
| 5/16 - 18 | 0,313 | 1,411 | 7,938 | 6,411 | 6,680 | 6,731 |
| 3/8 - 16 | 0,375 | 1,588 | 9,525 | 7,805 | 8,082 | 8,153 |
| 7/16 - 14 | 0,438 | 1,814 | 11,112 | 9,149 | 9,441 | 9,550 |
| 1/2 - 13 | 0,500 | 1,954 | 12,700 | 10,584 | 10,881 | 11,024 |
| 9/16 - 12 | 0,563 | 2,117 | 14,288 | 11,996 | 12,301 | 12,446 |
| 5/8 - 11 | 0,625 | 2,309 | 15,875 | 13,376 | 13,693 | 13,868 |
| 3/4 - 10 | 0,750 | 2,540 | 19,050 | 16,299 | 16,624 | 16,840 |
| 7/8 - 9 | 0,875 | 2,822 | 22,225 | 19,169 | 19,520 | 19,761 |
| 1 - 8 | 1,000 | 3,175 | 25,400 | 21,963 | 22,344 | 22,606 |
| 1 1/8 - 7 | 1,125 | 3,629 | 28,575 | 24,648 | 25,082 | 25,349 |
| 1 1/4 - 7 | 1,250 | 3,629 | 31,750 | 27,823 | 28,258 | 28,524 |
| 1 3/8 - 6 | 1,375 | 4,233 | 34,925 | 30,343 | 30,851 | 31,115 |
| 1 1/2 - 6 | 1,500 | 4,233 | 38,100 | 33,518 | 34,026 | 34,290 |
| 1 3/4 - 5 | 1,750 | 5,080 | 44,450 | 38,951 | 39,560 | 39,827 |
| 2 - 4 1/2 | 2,000 | 5,645 | 50,800 | 44,689 | 45,367 | 45,593 |
| 2 1/4 - 4 1/2 | 2,250 | 5,645 | 57,150 | 51,039 | 51,717 | 51,943 |
| 2 1/2 - 4 | 2,500 | 6,350 | 63,500 | 56,627 | 57,389 | 57,582 |
| 2 3/4 - 4 | 2,750 | 6,350 | 69,850 | 62,977 | 63,739 | 63,932 |
| 3 - 4 | 3,000 | 6,350 | 76,200 | 69,327 | 70,089 | 70,282 |
| 3 1/4 - 4 | 3,250 | 6,350 | 82,550 | 75,677 | 76,439 | 76,632 |
| 3 1/2 - 4 | 3,500 | 6,350 | 88,900 | 82,027 | 82,789 | 82,982 |
| 3 3/4 - 4 | 3,750 | 6,350 | 95,250 | 88,377 | 89,139 | 89,332 |
| 4 - 4 | 4,000 | 6,350 | 101,600 | 94,727 | 95,489 | 95,682 |

ZÁVITOVÉ TABULKY

Threading charts / Gewindetabellen

UNF

**ANSI
B 1.1**



- D velký průměr závitu matice
major diameter of nut thread
Aussendurchmesser des Muttergewindes
- D₂ střední průměr závitu matice
pitch diameter of nut thread
Flankendurchmesser des Muttergewindes
- D₁ malý průměr závitu matice
minor diameter of nut thread
Kerndurchmesser des Muttergewindes
- P stoupání závitu
pitch of thread
Gewindesteigung
- N stoupání závitu v počtu závitů na 1"
pitch thread in threads per inch
Gewindesteigung in Gangzahl/1"

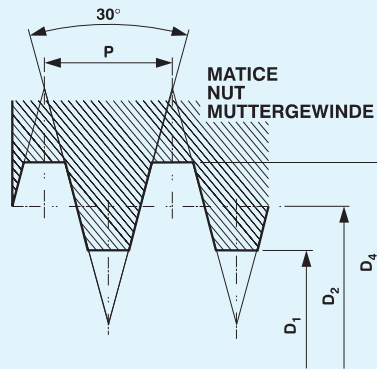
d = D

3B Přesné / Fine / Fein
2B Střední / Medium / Mittel
1B Hrubé / Coarse / Grob

| Závit Thread / Gewinde | | D _{min} | D _{1 min} | D _{1 max} | |
|---------------------------|-------|------------------|--------------------|--------------------|---------------|
| d - N | d (") | | 3B, 2B, 1B | 3B | 2B, 1B |
| 0 - 80 | 0,060 | 0,318 | 1,524 | 1,181 | 1,306 |
| 1 - 72 | 0,073 | 0,353 | 1,854 | 1,473 | 1,613 |
| 2 - 64 | 0,086 | 0,397 | 2,184 | 1,755 | 1,913 |
| 3 - 56 | 0,099 | 0,454 | 2,515 | 2,024 | 2,197 |
| 4 - 48 | 0,112 | 0,529 | 2,845 | 2,271 | 2,459 |
| 5 - 44 | 0,125 | 0,577 | 3,175 | 2,550 | 2,741 |
| 6 - 40 | 0,138 | 0,635 | 3,505 | 2,817 | 3,023 |
| 8 - 36 | 0,164 | 0,706 | 4,166 | 3,401 | 3,597 |
| 10 - 32 | 0,190 | 0,794 | 4,826 | 3,967 | 4,168 |
| 12 - 28 | 0,216 | 0,907 | 5,486 | 4,503 | 4,724 |
| 1/4 - 28 | 0,250 | 0,907 | 6,350 | 5,367 | 5,588 |
| 5/16 - 24 | 0,313 | 1,058 | 7,938 | 6,792 | 7,036 |
| 3/8 - 24 | 0,375 | 1,058 | 9,525 | 8,379 | 8,636 |
| 7/16 - 20 | 0,438 | 1,270 | 11,112 | 9,738 | 10,033 |
| 1/2 - 20 | 0,500 | 1,270 | 12,700 | 11,326 | 11,608 |
| 9/16 - 18 | 0,563 | 1,411 | 14,288 | 12,761 | 13,081 |
| 5/8 - 18 | 0,625 | 1,411 | 15,875 | 14,348 | 14,681 |
| 3/4 - 16 | 0,750 | 1,588 | 19,050 | 17,330 | 17,678 |
| 7/8 - 14 | 0,875 | 1,814 | 22,225 | 20,262 | 20,676 |
| 1 - 12 | 1,000 | 2,117 | 25,400 | 23,109 | 23,571 |
| 1 1/8 - 12 | 1,125 | 2,117 | 28,575 | 26,284 | 26,746 |
| 1 1/4 - 12 | 1,250 | 2,117 | 31,750 | 29,459 | 29,921 |
| 1 3/8 - 12 | 1,375 | 2,117 | 34,925 | 32,634 | 33,096 |
| 1 1/2 - 12 | 1,500 | 2,117 | 38,100 | 35,809 | 36,271 |

Tr

DIN
103



D_4 velký průměr závitu matice
major diameter of nut thread
Aussendurchmesser des Muttergewindes
 D_2 střední průměr závitu matice
pitch diameter of nut thread
Flankendurchmesser des Muttergewindes
 D_1 malý průměr závitu matice
minor diameter of nut thread
Kerndurchmesser des Muttergewindes
P stoupání závitu
pitch of thread
Gewindesteigung

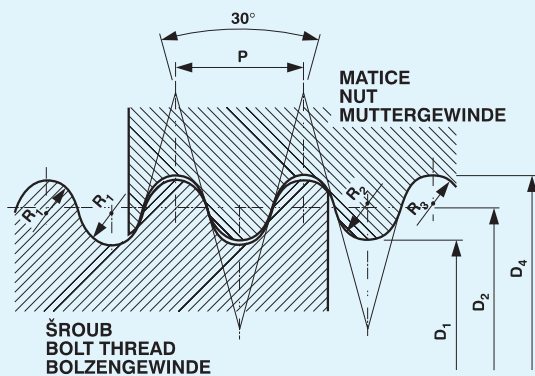
$d = D$

7H Lícování střední
7H Tolerance medium
7H Toleranz mittel

| Závít Thread / Gewinde | | | $D_{4 \min}$ | $D_{2 \min}$ | $D_{2 \max}$ | $D_{1 \min}$ | $D_{1 \max}$ |
|---------------------------|---|-----|--------------|--------------|--------------|--------------|--------------|
| \emptyset | | P | | 7H | 7H | | |
| Tr 8 | x | 1,5 | 8,300 | 7,250 | 7,474 | 6,500 | 6,690 |
| Tr 9 | x | 1,5 | 9,300 | 8,250 | 8,474 | 7,500 | 7,690 |
| Tr 9 | x | 2 | 9,500 | 8,000 | 8,250 | 7,000 | 7,236 |
| Tr 10 | x | 1,5 | 10,300 | 9,250 | 9,474 | 8,500 | 8,690 |
| Tr 10 | x | 2 | 10,500 | 9,000 | 9,250 | 8,000 | 8,236 |
| Tr 11 | x | 2 | 11,500 | 10,000 | 10,250 | 9,000 | 9,236 |
| Tr 11 | x | 3 | 11,500 | 9,500 | 9,780 | 8,000 | 8,315 |
| Tr 12 | x | 2 | 12,500 | 11,000 | 11,265 | 10,000 | 10,236 |
| Tr 12 | x | 3 | 12,500 | 10,500 | 10,800 | 9,000 | 9,315 |
| Tr 14 | x | 2 | 14,500 | 13,000 | 13,265 | 12,000 | 12,236 |
| Tr 14 | x | 3 | 14,500 | 12,500 | 12,800 | 11,000 | 11,315 |
| Tr 16 | x | 2 | 16,500 | 15,000 | 15,265 | 14,000 | 14,236 |
| Tr 16 | x | 4 | 16,500 | 14,000 | 14,355 | 12,000 | 12,375 |
| Tr 18 | x | 2 | 18,500 | 17,000 | 17,265 | 16,000 | 16,236 |
| Tr 18 | x | 4 | 18,500 | 16,000 | 16,355 | 14,000 | 14,375 |
| Tr 20 | x | 2 | 20,500 | 19,000 | 19,265 | 18,000 | 18,236 |
| Tr 20 | x | 4 | 20,500 | 18,000 | 18,355 | 16,000 | 16,375 |
| Tr 22 | x | 3 | 22,500 | 20,500 | 20,800 | 19,000 | 19,315 |
| Tr 22 | x | 5 | 22,500 | 19,500 | 19,875 | 17,000 | 17,450 |
| Tr 24 | x | 3 | 24,500 | 22,500 | 22,835 | 21,000 | 21,315 |
| Tr 24 | x | 5 | 24,500 | 21,500 | 21,900 | 19,000 | 19,450 |
| Tr 26 | x | 3 | 26,500 | 24,500 | 24,835 | 23,000 | 23,315 |
| Tr 26 | x | 5 | 26,500 | 23,500 | 23,900 | 21,000 | 21,450 |
| Tr 28 | x | 3 | 28,500 | 26,500 | 26,835 | 25,000 | 25,315 |
| Tr 28 | x | 5 | 28,500 | 25,500 | 25,900 | 23,000 | 23,450 |
| Tr 30 | x | 3 | 30,500 | 28,500 | 28,835 | 27,000 | 27,315 |
| Tr 30 | x | 6 | 31,000 | 27,000 | 27,450 | 24,000 | 24,500 |
| Tr 32 | x | 3 | 32,500 | 30,500 | 30,835 | 29,000 | 29,315 |
| Tr 32 | x | 6 | 33,000 | 29,000 | 29,450 | 26,000 | 26,500 |
| Tr 34 | x | 3 | 34,500 | 32,500 | 32,835 | 31,000 | 31,315 |
| Tr 34 | x | 6 | 35,000 | 31,000 | 31,450 | 28,000 | 28,500 |
| Tr 36 | x | 3 | 36,500 | 34,500 | 34,835 | 33,000 | 33,315 |
| Tr 36 | x | 6 | 37,000 | 33,000 | 33,450 | 30,000 | 30,500 |
| Tr 38 | x | 3 | 38,500 | 36,500 | 36,835 | 35,000 | 35,315 |
| Tr 38 | x | 7 | 39,000 | 34,500 | 34,975 | 31,000 | 31,560 |
| Tr 40 | x | 3 | 40,500 | 38,500 | 38,835 | 37,000 | 37,315 |
| Tr 40 | x | 7 | 41,000 | 36,500 | 36,975 | 33,000 | 33,560 |
| Tr 42 | x | 3 | 42,500 | 40,500 | 40,835 | 39,000 | 39,315 |
| Tr 42 | x | 7 | 43,000 | 38,500 | 38,975 | 35,000 | 35,560 |
| Tr 44 | x | 3 | 44,500 | 42,500 | 42,835 | 41,000 | 41,315 |
| Tr 44 | x | 7 | 45,000 | 40,500 | 40,975 | 37,000 | 37,560 |
| Tr 46 | x | 3 | 46,500 | 44,500 | 44,855 | 43,000 | 43,315 |
| Tr 46 | x | 8 | 47,000 | 42,000 | 42,530 | 38,000 | 38,630 |
| Tr 48 | x | 3 | 48,500 | 46,500 | 46,855 | 45,000 | 45,315 |
| Tr 48 | x | 8 | 49,000 | 44,000 | 44,530 | 40,000 | 40,630 |
| Tr 50 | x | 3 | 50,500 | 48,500 | 48,855 | 47,000 | 47,315 |
| Tr 50 | x | 8 | 51,000 | 46,000 | 46,530 | 42,000 | 42,630 |
| Tr 52 | x | 3 | 52,500 | 50,500 | 50,855 | 49,000 | 49,315 |
| Tr 52 | x | 8 | 53,000 | 48,000 | 48,530 | 44,000 | 44,630 |
| Tr 55 | x | 3 | 55,500 | 53,500 | 53,855 | 52,000 | 52,315 |
| Tr 55 | x | 9 | 56,000 | 50,500 | 51,060 | 46,000 | 46,670 |
| Tr 60 | x | 3 | 60,500 | 58,500 | 58,855 | 57,000 | 57,315 |
| Tr 60 | x | 9 | 61,000 | 55,500 | 56,060 | 51,000 | 51,670 |

Rd

DIN
405

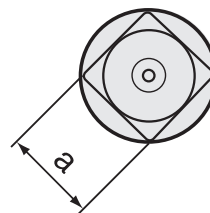
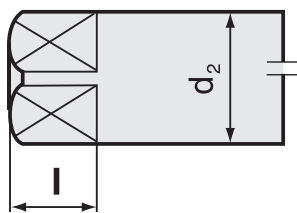


- D_4 velký průměr závitu matice
major diameter of nut thread
Aussendurchmesser des Muttergewindes
- D_2 střední průměr závitu matice
pitch diameter of nut thread
Flankendurchmesser des Muttergewindes
- D_1 malý průměr závitu matice
minor diameter of nut thread
Kerndurchmesser des Muttergewindes
- P stoupání závitu
pitch of thread
Gewindesteigung
- N stoupání závitu v počtu závitů na 1"
pitch thread in threads per inch
Gewindesteigung in Gangzahl/1"
- T_{D_1} Tolerance $\varnothing D_1$
Tolerance $\varnothing D_1$
Toleranz $\varnothing D_1$
- $d = D$

| d | Závit Thread / Gewinde | | $D_{4\min}$ | D_1 | R_1 | R_2 | R_3 | T_{D_1} | | |
|-----|---------------------------|----|-------------|---------|---------|--------|-------|-----------|-------|-------|
| | N | P | | | | | | 6H | 7H | |
| 8 | | 10 | 2,540 | 8,254 | 5,714 | 0,606 | 0,650 | 0,561 | 0,450 | 0,560 |
| 9 | | 10 | 2,540 | 9,254 | 6,714 | 0,606 | 0,650 | 0,561 | 0,450 | 0,560 |
| 10 | | 10 | 2,540 | 10,254 | 7,714 | 0,606 | 0,650 | 0,561 | 0,450 | 0,560 |
| 11 | | 10 | 2,540 | 11,254 | 8,714 | 0,606 | 0,650 | 0,561 | 0,450 | 0,560 |
| 12 | | 10 | 2,540 | 12,254 | 9,714 | 0,606 | 0,650 | 0,561 | 0,450 | 0,560 |
| 14 | | 8 | 3,175 | 14,318 | 11,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 16 | | 8 | 3,175 | 16,318 | 13,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 18 | | 8 | 3,175 | 18,318 | 15,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 20 | | 8 | 3,175 | 20,318 | 17,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 22 | | 8 | 3,175 | 22,318 | 19,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 24 | | 8 | 3,175 | 24,318 | 21,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 26 | | 8 | 3,175 | 26,318 | 23,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 28 | | 8 | 3,175 | 28,318 | 25,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 30 | | 8 | 3,175 | 30,318 | 27,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 32 | | 8 | 3,175 | 32,318 | 29,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 36 | 34 | 8 | 3,175 | 34,318 | 31,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| | | 8 | 3,175 | 36,318 | 33,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| 40 | 38 | 8 | 3,175 | 38,318 | 35,142 | 0,757 | 0,813 | 0,702 | 0,530 | 0,670 |
| | | 6 | 4,233 | 40,423 | 36,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 44 | 42 | 6 | 4,233 | 42,423 | 38,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 44,423 | 40,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 48 | 46 | 6 | 4,233 | 46,423 | 42,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 48,423 | 44,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 52 | 50 | 6 | 4,233 | 50,423 | 46,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 52,423 | 48,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 55 | | 6 | 4,233 | 55,423 | 51,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | 60 | 58 | 6 | 4,233 | 58,423 | 54,190 | 1,010 | 1,084 | 0,936 | 0,630 |
| | | 6 | 4,233 | 60,423 | 56,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 65 | 62 | 6 | 4,233 | 62,423 | 58,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 65,423 | 61,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 70 | 68 | 6 | 4,233 | 68,423 | 64,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 70,423 | 66,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 75 | 72 | 6 | 4,233 | 72,423 | 68,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 75,423 | 71,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 80 | 78 | 6 | 4,233 | 78,423 | 74,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 80,423 | 76,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 85 | 82 | 6 | 4,233 | 82,423 | 78,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 85,423 | 81,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 90 | 88 | 6 | 4,233 | 88,423 | 84,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 90,423 | 86,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 95 | 92 | 6 | 4,233 | 92,423 | 88,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 95,423 | 91,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 100 | 98 | 6 | 4,233 | 98,423 | 94,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| | | 6 | 4,233 | 100,423 | 96,190 | 1,010 | 1,084 | 0,936 | 0,630 | 0,800 |
| 110 | 105 | 4 | 6,350 | 105,635 | 99,285 | 1,515 | 1,625 | 1,404 | 0,850 | 1,060 |
| | | 4 | 6,350 | 110,635 | 104,285 | 1,515 | 1,625 | 1,404 | 0,850 | 1,060 |
| 120 | 115 | 4 | 6,350 | 115,635 | 109,285 | 1,515 | 1,625 | 1,404 | 0,850 | 1,060 |
| | | 4 | 6,350 | 120,635 | 114,285 | 1,515 | 1,625 | 1,404 | 0,850 | 1,060 |

ČTYŘHRANY PRO ZÁVITNÍKY

Squares for taps / Vierkantmass für Gewindebohrer



Podle normy DIN
Acc. DIN standard / Nach DIN Norm

| ød ₂ mm | a mm | l mm |
|-----------------------|---------|---------|
| 2,50 | 2,10 | 5 |
| 2,80 | 2,10 | 5 |
| 3,20 | 2,40 | 5 |
| 3,50 | 2,70 | 6 |
| 4,00 | 3,00 | 6 |
| 4,50 | 3,40 | 6 |
| 5,00 | 3,80 | 7 |
| 5,50 | 4,30 | 7 |
| 6,00 | 4,90 | 8 |
| 7,00 | 5,50 | 8 |
| 8,00 | 6,20 | 9 |
| 9,00 | 7,00 | 10 |
| 10,00 | 8,00 | 11 |
| 11,00 | 9,00 | 12 |
| 12,00 | 9,00 | 12 |
| 14,00 | 11,00 | 14 |
| 16,00 | 12,00 | 15 |
| 18,00 | 14,50 | 17 |
| 20,00 | 16,00 | 19 |
| 22,00 | 18,00 | 21 |
| 25,00 | 20,00 | 23 |
| 28,00 | 22,00 | 25 |
| 32,00 | 24,00 | 27 |

Podle normy ISO 529
Acc. ISO 529 standard / Nach ISO 529 Norm

| ød ₂ mm | a mm | l mm |
|-----------------------|---------|---------|
| 2,50 | 2,00 | 4 |
| 2,80 | 2,24 | 5 |
| 3,15 | 2,50 | 5 |
| 3,55 | 2,80 | 5 |
| 4,00 | 3,15 | 6 |
| 4,50 | 3,55 | 6 |
| 5,00 | 4,00 | 7 |
| 5,60 | 4,50 | 7 |
| 6,30 | 5,00 | 8 |
| 7,10 | 5,60 | 8 |
| 8,00 | 6,30 | 9 |
| 9,00 | 7,10 | 10 |
| 10,00 | 8,00 | 11 |
| 11,20 | 9,00 | 12 |
| 12,50 | 10,00 | 13 |
| 14,00 | 11,20 | 14 |
| 16,00 | 12,50 | 16 |
| 18,00 | 14,00 | 18 |
| 20,00 | 16,00 | 20 |
| 22,40 | 18,00 | 22 |
| 25,00 | 20,00 | 24 |
| 28,00 | 22,40 | 26 |
| 31,50 | 25,00 | 28 |

PŘEVOD PALCE - MILIMETRY

Conversion inches - millimetres / Umrechnung Zoll in Millimeter

| Zlomek palce Inch fraction Zollbruch | Počet palců / Inch units / Zollen | | | |
|--|---------------------------------------|--------|--------|--------|
| | 0" | 1" | 2" | |
| | Milimetry / Millimeters / Millimetern | | | |
| 0 | 0,000 | 0,000 | 25,400 | 50,800 |
| 1/64 | 0,016 | 0,397 | 25,797 | 51,197 |
| 1/32 | 0,031 | 0,794 | 26,194 | 51,594 |
| 3/64 | 0,047 | 1,191 | 26,591 | 51,991 |
| 1/16 | 0,063 | 1,588 | 26,988 | 52,388 |
| 5/32 | 0,078 | 1,984 | 27,384 | 52,784 |
| 3/32 | 0,094 | 2,381 | 27,781 | 53,181 |
| 7/64 | 0,111 | 2,778 | 28,178 | 53,578 |
| 1/8 | 0,125 | 3,175 | 28,575 | 53,975 |
| 9/64 | 0,141 | 3,572 | 28,972 | 54,372 |
| 5/32 | 0,156 | 3,969 | 29,369 | 54,769 |
| 11/64 | 0,172 | 4,366 | 29,766 | 55,166 |
| 3/16 | 0,188 | 4,763 | 30,163 | 55,563 |
| 13/64 | 0,203 | 5,159 | 30,559 | 55,959 |
| 7/32 | 0,219 | 5,556 | 30,956 | 56,356 |
| 15/64 | 0,234 | 5,953 | 31,353 | 56,753 |
| 1/4 | 0,250 | 6,350 | 31,750 | 57,150 |
| 17/64 | 0,266 | 6,747 | 32,147 | 57,547 |
| 9/32 | 0,281 | 7,144 | 32,544 | 57,944 |
| 19/64 | 0,299 | 7,541 | 32,941 | 58,341 |
| 5/16 | 0,313 | 7,938 | 33,338 | 58,738 |
| 21/64 | 0,328 | 8,334 | 33,734 | 59,134 |
| 11/32 | 0,344 | 8,731 | 34,131 | 59,531 |
| 23/64 | 0,359 | 9,128 | 34,528 | 59,928 |
| 3/8 | 0,375 | 9,525 | 34,925 | 60,325 |
| 25/64 | 0,391 | 9,922 | 35,322 | 60,722 |
| 13/32 | 0,406 | 10,319 | 35,719 | 61,119 |
| 27/64 | 0,422 | 10,716 | 36,116 | 61,516 |
| 7/16 | 0,438 | 11,113 | 36,513 | 61,913 |
| 29/64 | 0,453 | 11,509 | 36,909 | 62,309 |
| 15/32 | 0,469 | 11,906 | 37,306 | 62,706 |
| 21/64 | 0,484 | 12,303 | 37,703 | 63,103 |

| Zlomek palce Inch fraction Zollbruch | Počet palců / Inch units / Zollen | | | |
|--|---------------------------------------|--------|--------|--------|
| | 0" | 1" | 2" | |
| | Milimetry / Millimeters / Millimetern | | | |
| 1/2 | 0,500 | 12,700 | 38,100 | 63,500 |
| 33/64 | 0,516 | 13,097 | 38,497 | 63,897 |
| 17/32 | 0,531 | 13,494 | 38,894 | 64,294 |
| 35/64 | 0,547 | 13,891 | 39,291 | 64,691 |
| 9/16 | 0,563 | 14,288 | 39,688 | 65,088 |
| 37/64 | 0,578 | 14,684 | 40,084 | 65,484 |
| 19/32 | 0,594 | 15,081 | 40,481 | 65,881 |
| 39/64 | 0,609 | 15,478 | 40,878 | 66,278 |
| 5/8 | 0,625 | 15,875 | 41,275 | 66,675 |
| 41/64 | 0,641 | 16,272 | 41,672 | 67,072 |
| 21/32 | 0,656 | 16,669 | 42,069 | 67,469 |
| 43/64 | 0,672 | 17,066 | 42,466 | 67,866 |
| 11/16 | 0,688 | 17,463 | 42,863 | 68,263 |
| 45/64 | 0,703 | 17,859 | 43,259 | 68,659 |
| 23/32 | 0,719 | 18,256 | 43,656 | 69,056 |
| 47/64 | 0,734 | 18,653 | 44,053 | 69,453 |
| 3/4 | 0,750 | 19,050 | 44,450 | 69,850 |
| 49/64 | 0,766 | 19,447 | 44,847 | 70,247 |
| 25/32 | 0,781 | 19,844 | 45,244 | 70,644 |
| 51/64 | 0,797 | 20,241 | 45,641 | 71,041 |
| 13/16 | 0,813 | 20,638 | 46,038 | 71,438 |
| 53/64 | 0,828 | 21,034 | 46,434 | 71,834 |
| 27/32 | 0,844 | 21,431 | 46,831 | 72,231 |
| 55/64 | 0,859 | 21,828 | 47,228 | 72,628 |
| 7/8 | 0,875 | 22,225 | 47,625 | 73,025 |
| 57/64 | 0,891 | 22,622 | 48,022 | 73,422 |
| 29/32 | 0,906 | 23,019 | 48,419 | 73,819 |
| 59/64 | 0,922 | 23,416 | 48,816 | 74,216 |
| 15/16 | 0,938 | 23,813 | 49,213 | 74,613 |
| 61/64 | 0,953 | 24,209 | 49,609 | 75,009 |
| 31/32 | 0,969 | 24,606 | 50,006 | 75,406 |
| 63/64 | 0,984 | 25,003 | 50,403 | 75,803 |

PŘEVOD Vc - ot/min

Conversion chart / Umrechnungstabelle

| | | Řezná rychlost m/min / Cutting speed m/min. / Schnittgeschwindigkeit m/Min. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|--------|---|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 12 | 14 | 15 | 16 | 18 | 20 | 22 | 24 | 25 | 26 | 28 | 30 | 32 | 34 | 35 | 40 | | |
| M | G | Otáčky/min. / Revolutions per minute / Drehzahl/Min. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | UN | 159 | 318 | 478 | 637 | 796 | 955 | 1115 | 1274 | 1433 | 1592 | 1911 | 2229 | 2389 | 2548 | 2866 | 3185 | 3503 | 3822 | 3981 | 4140 | 4459 | 4777 | 5096 | 5414 | 5573 | 6369 | | |
| 2,5 | | 127 | 255 | 382 | 510 | 637 | 764 | 892 | 1019 | 1146 | 1274 | 1529 | 1783 | 1911 | 2038 | 2293 | 2548 | 2803 | 3057 | 3185 | 3312 | 3567 | 3822 | 4076 | 4331 | 4459 | 5096 | | |
| 3 | No.5 | 106 | 212 | 318 | 425 | 531 | 637 | 743 | 849 | 955 | 1062 | 1274 | 1466 | 1592 | 1699 | 1911 | 2123 | 2335 | 2548 | 2654 | 2760 | 2972 | 3185 | 3397 | 3609 | 3715 | 4246 | | |
| 4 | No.8 | 80 | 159 | 239 | 318 | 398 | 478 | 557 | 637 | 717 | 796 | 955 | 1115 | 1194 | 1274 | 1433 | 1592 | 1752 | 1911 | 1990 | 2070 | 2229 | 2389 | 2548 | 2707 | 2787 | 3185 | | |
| 5 | No.10 | 64 | 127 | 191 | 255 | 318 | 382 | 446 | 510 | 573 | 637 | 764 | 892 | 955 | 1019 | 1146 | 1274 | 1401 | 1529 | 1592 | 1656 | 1783 | 1911 | 2038 | 2166 | 2229 | 2546 | | |
| 6 | 1/4 | 53 | 106 | 159 | 212 | 265 | 318 | 372 | 425 | 478 | 531 | 637 | 743 | 796 | 849 | 955 | 1062 | 1168 | 1274 | 1327 | 1380 | 1486 | 1592 | 1699 | 1805 | 1858 | 2123 | | |
| 7 | | 45 | 91 | 136 | 182 | 227 | 273 | 318 | 364 | 409 | 455 | 546 | 637 | 682 | 728 | 819 | 910 | 1001 | 1092 | 1137 | 1183 | 1274 | 1365 | 1456 | 1547 | 1592 | 1820 | | |
| 8 | 1/16" | 40 | 80 | 119 | 159 | 199 | 239 | 279 | 318 | 358 | 398 | 478 | 557 | 597 | 637 | 717 | 796 | 876 | 955 | 995 | 1035 | 1115 | 1194 | 1274 | 1354 | 1393 | 1592 | | |
| 9 | 3/8 | 35 | 71 | 106 | 142 | 177 | 212 | 248 | 283 | 318 | 354 | 425 | 495 | 531 | 566 | 637 | 708 | 778 | 849 | 885 | 920 | 991 | 1062 | 1132 | 1203 | 1238 | 1415 | | |
| 10 | 1/8" | 32 | 64 | 96 | 127 | 159 | 191 | 223 | 255 | 287 | 318 | 382 | 446 | 478 | 510 | 573 | 637 | 701 | 764 | 796 | 828 | 892 | 955 | 1019 | 1083 | 1115 | 1274 | | |
| 12 | 1/4" | 27 | 53 | 80 | 106 | 133 | 159 | 186 | 212 | 239 | 265 | 318 | 372 | 398 | 425 | 478 | 531 | 584 | 637 | 663 | 690 | 743 | 796 | 849 | 902 | 929 | 1062 | | |
| 14 | | 23 | 45 | 68 | 91 | 114 | 136 | 159 | 182 | 205 | 227 | 273 | 318 | 341 | 364 | 409 | 455 | 500 | 546 | 569 | 591 | 637 | 682 | 728 | 773 | 796 | 910 | | |
| 16 | 3/8" | 20 | 40 | 60 | 80 | 100 | 119 | 139 | 159 | 179 | 199 | 239 | 279 | 299 | 316 | 358 | 398 | 438 | 478 | 498 | 518 | 557 | 597 | 637 | 677 | 697 | 796 | | |
| 18 | 3/4 | 18 | 35 | 53 | 71 | 88 | 106 | 124 | 142 | 159 | 177 | 212 | 248 | 265 | 283 | 318 | 354 | 389 | 425 | 442 | 460 | 495 | 531 | 566 | 602 | 619 | 708 | | |
| 20 | 1/2" | 16 | 32 | 48 | 64 | 80 | 96 | 111 | 127 | 143 | 159 | 191 | 223 | 239 | 255 | 287 | 318 | 350 | 382 | 398 | 414 | 446 | 478 | 510 | 541 | 557 | 637 | | |
| 22 | 5/8" | 14 | 29 | 43 | 58 | 72 | 87 | 101 | 116 | 130 | 145 | 174 | 203 | 217 | 232 | 261 | 290 | 318 | 347 | 362 | 376 | 405 | 434 | 463 | 492 | 507 | 579 | | |
| 24 | 1 | 13 | 27 | 40 | 53 | 66 | 80 | 93 | 106 | 119 | 133 | 159 | 186 | 199 | 212 | 239 | 265 | 292 | 318 | 332 | 345 | 372 | 398 | 425 | 451 | 464 | 531 | | |
| 27 | 3/4" | 12 | 24 | 35 | 47 | 59 | 71 | 83 | 94 | 106 | 118 | 142 | 165 | 177 | 189 | 212 | 236 | 259 | 283 | 295 | 307 | 330 | 354 | 377 | 401 | 413 | 472 | | |
| 30 | 7/8" | 11 | 21 | 32 | 42 | 53 | 64 | 74 | 85 | 96 | 106 | 127 | 149 | 159 | 170 | 191 | 212 | 234 | 255 | 265 | 276 | 297 | 318 | 340 | 361 | 372 | 425 | | |
| 33 | 1" | 10 | 19 | 29 | 39 | 48 | 58 | 68 | 77 | 87 | 97 | 116 | 135 | 145 | 154 | 174 | 193 | 212 | 232 | 241 | 251 | 270 | 290 | 309 | 328 | 338 | 386 | | |
| 36 | | 9 | 18 | 27 | 35 | 44 | 53 | 62 | 71 | 80 | 88 | 106 | 124 | 133 | 142 | 159 | 177 | 195 | 212 | 221 | 230 | 248 | 265 | 283 | 301 | 310 | 354 | | |
| 39 | 1 1/8" | 8 | 16 | 24 | 33 | 41 | 49 | 57 | 65 | 73 | 82 | 98 | 114 | 122 | 131 | 147 | 163 | 180 | 196 | 204 | 212 | 229 | 245 | 261 | 278 | 286 | 327 | | |
| 42 | 1 1/4" | 8 | 15 | 23 | 30 | 38 | 45 | 53 | 61 | 68 | 76 | 91 | 106 | 114 | 121 | 136 | 152 | 167 | 182 | 190 | 197 | 212 | 227 | 243 | 258 | 265 | 303 | | |
| 45 | 1 3/8" | 7 | 14 | 21 | 28 | 35 | 42 | 50 | 57 | 64 | 71 | 85 | 99 | 106 | 113 | 127 | 142 | 156 | 170 | 177 | 184 | 198 | 212 | 226 | 241 | 248 | 283 | | |
| 48 | 1 1/2" | 7 | 13 | 20 | 27 | 33 | 40 | 46 | 53 | 60 | 66 | 80 | 93 | 100 | 106 | 119 | 133 | 146 | 159 | 166 | 173 | 186 | 199 | 212 | 226 | 232 | 265 | | |
| 52 | 2 | 6 | 12 | 18 | 24 | 31 | 37 | 43 | 49 | 55 | 61 | 73 | 86 | 92 | 98 | 110 | 122 | 135 | 147 | 153 | 159 | 171 | 184 | 196 | 208 | 214 | 245 | | |

Rožměr nástroje / Diameter of tools / Werkzeugabmessung

MATERIÁLOVÉ EKVIVALENTY

Material equivalents / Materialäquivalent

| ČSN | DIN | W. Nr. |
|-------|----------------------|--------|
| 10004 | St 33 | 1.0035 |
| 11109 | 9 SMn 28 | 1.0715 |
| 11110 | 10 S 20 | 1.0721 |
| 11300 | D6-2 | 1.0314 |
| 11320 | St 22 | 1.0320 |
| 11364 | HI | 1.0345 |
| 11373 | St 37-2 | 1.0037 |
| 11378 | St 37-3 | 1.0116 |
| 11474 | H IV | 1.0445 |
| 11500 | St 50-2 | 1.0050 |
| 11523 | St 52-3 | 1.0570 |
| 11600 | St 60-2 | 1.0060 |
| 11700 | St 70-2 | 1.0070 |
| 12010 | C 10 | 1.0305 |
| 12020 | C 15 | 1.1141 |
| 12040 | C 35 | 1.0501 |
| 12050 | C 45 | 1.0503 |
| 12060 | C 55 | 1.0535 |
| 12090 | C 85 E | 1.1269 |
| 13180 | 80 Mn 4 | 1.1259 |
| 13240 | 37 MnSi 5 | 1.5122 |
| 13250 | 46 Mn 7 | 1.0912 |
| 14100 | 100 Cr 6 | 1.3505 |
| 14109 | 100 Cr 6 | 1.3505 |
| 14220 | 16 MnCr 5 | 1.7131 |
| 14260 | 54 SiCr 6 | 1.7102 |
| 15142 | 42 CrMo 4 | 1.7225 |
| 15217 | 9 CrNiCuP 3-2-4 | 1.8962 |
| 15231 | 27 MnCrV 4 | 1.8162 |
| 15260 | 50 CrV 4 | 1.8159 |
| 15330 | 30 CrMoV 9 | 1.7707 |
| 15340 | 41 CrAlMo 7 | 1.8509 |
| 16220 | 15 CrNi 6 | 1.5919 |
| 16343 | 34 CrNiMo 6 | 1.6582 |
| 16420 | 14 NiCr 14 | 1.5752 |
| 16440 | 31 NiCr 14 | 1.5755 |
| 16523 | 14 NiCr 18 | 1.5860 |
| 17022 | X 20 Cr 13 | 1.4021 |
| 17023 | X 30 Cr 13 | 1.4028 |
| 17024 | X 39 Cr 13 | 1.4031 |
| 17040 | X 6 Cr 17 | 1.4016 |
| 17102 | 12 CrMo 19-5 | 1.7362 |
| 17153 | X 8 CrTi 25 | 1.4746 |
| 17240 | X 5 CrNi 18-10 | 1.4301 |
| 17241 | X 10 CrNi 18-8 | 1.4310 |
| 17246 | X 10 CrNiTi 18-10 | 1.4878 |
| 17247 | X 6 CrNiTi 18-10 | 1.4541 |
| 17248 | X 6 CrNiTi 18-10 | 1.4541 |
| 17251 | X 15 CrNiSi 20-12 | 1.4828 |
| 17253 | X 12 NiCrSi 36-16 | 1.4864 |
| 17255 | X 8 CrNi 25-21 | 1.4845 |
| 17341 | X 6 CrNiMo 17-13 | 1.4919 |
| 17346 | X 5 CrNiMo 17-12-2 | 1.4401 |
| 17347 | X 6 CrNiMoTi 17-12-2 | 1.4571 |
| 17350 | X 2 CrNiMo 18-14-3 | 1.4435 |
| 17352 | X 5 CrNiMo 17-13-3 | 1.4436 |
| 17353 | X 10CrNiMoTi 18-12 | 1.4573 |
| 17359 | X 2 CrNiMoN 17-11-2 | 1.4406 |
| 17360 | X 2 CrNiMoN 17-13-3 | 1.4429 |
| 17381 | X 2 CrNiMoN 22-5-3 | 1.4462 |
| 17436 | X 40 MnCr 18 | 1.3817 |
| 17465 | X 53CrMnNiN 21-9 | 1.4871 |
| 17618 | X 120 Mn 12 | 1.3401 |
| 19191 | C 105 W 1 | 1.1645 |
| 19192 | C 105 W 2 | 1.1645 |
| 19255 | C 125 W | 1.1663 |
| 19312 | 90 MnCrV 8 | 1.2842 |
| 19314 | 100 MnCrW 4 | 1.2510 |
| 19356 | 100 V 1 | 1.2833 |
| 19436 | X 210 Cr 12 | 1.2080 |
| 19452 | 62 SiMnCr 4 | 1.2101 |
| 19541 | X 32 CrMoV 3-3 | 1.2365 |
| 19552 | X 38 CrMoV 5-1 | 1.2343 |
| 19554 | X 40 CrMoV 5-1 | 1.2344 |
| 19573 | X 155 CrVMo 12-1 | 1.2379 |
| 19662 | 55 NiCrMoV 6 | 1.2711 |
| 19720 | X 30 WCrV 5-3 | 1.2567 |
| 19721 | X 30 WCrV 9-3 | 1.2581 |
| 19732 | 45 WCrV 7 | 1.2542 |
| 19733 | 60 WCrV 7 | 1.2550 |
| 19751 | X 60 WCrMoV 9-4 | 1.2622 |
| 19824 | S 18-0-1 | 1.3355 |
| 19829 | S 6-5-2 | 1.3342 |

| ČSN | DIN | W. Nr. |
|-------------|--------------------|--------|
| 19830 | S 6-5-2 | 1.3343 |
| 19852 | S 6-5-2-5 | 1.3243 |
| 422304 | GGG-40 | 0.7040 |
| 422305 | GGG-50 | 0.7050 |
| 422306 | GGG-60 | 0.7060 |
| 422307 | GGG-70 | 0.7070 |
| 422308 | GGG-80 | 0.7080 |
| 422410 | GG-10 | 0.6010 |
| 422415 | GG-15 | 0.6015 |
| 422420 | GG-20 | 0.6020 |
| 422425 | GG-25 | 0.6025 |
| 422430 | GG-30 | 0.6030 |
| 422435 | GG-35 | 0.6035 |
| 422533 | GTS-35 | 0.8135 |
| 422536 | GTW-35 | 0.8035 |
| 422540 | GTW-40 | 0.8040 |
| 422545 | GTS-45 | 0.8145 |
| 422555 | GTS-55 | 0.8155 |
| 422630 | GS-38 | 1.0416 |
| 422640 | GS-45 | 1.0443 |
| 422650 | GS-52 | 1.0552 |
| 422660 | GS-60 | 1.0558 |
| 422709 | GS-30 Mn 5 | 1.1165 |
| 422714 | GS-20 Mn 5 | 1.1133 |
| 422744 | G 17 CrMo 5-5 | 1.7357 |
| 422771 | GX 15 CrMo 5 | 1.7365 |
| 422895 | AlNiCo 44-5 | |
| 422905 | X 12 Cr 13 | 1.4006 |
| 422920 | GX 120 Mn 13 | 1.3802 |
| 422930 | GX 5 CrNi 18-9 | 1.6901 |
| 422940 | GX 6 CrNiMo 18-12 | 1.4437 |
| 422952 | GX 40 CrNiSi 25-20 | 1.4848 |
| 423000 | Cu 99,95 | |
| 423003 | Cu 99,85 | |
| 423005 | Cu 99,5 | |
| 423009 | Cu 99,2 As | |
| 423042 | CuAl 5 As | 2.0918 |
| 423047 | CuAl 10 Ni 5 Fe 4 | 2.0966 |
| 423054 | CuNi 2 Si | |
| 423184 | CuPb 30 | |
| 423200 | CuZn 5 | 2.0220 |
| 423202 | CuZn 15 | 2.0240 |
| 423203 | CuZn 20 | 2.0250 |
| 423210 | CuZn 30 | 2.0265 |
| 423213 | CuZn 37 | 2.0321 |
| 423220 | CuZn 40 | 2.0360 |
| 423222 | CuZn 39 Pb 1 | 2.0380 |
| 423223 | CuZn 40 Pb 2 | 2.0410 |
| 423560 | ZnAl 4 Cu 1 | 2.2143 |
| 423562 | ZnAlCu 3 | 2.2144 |
| 424002 | Al 99,8 | 3.0285 |
| 424003 | Al 99,7 | 3.0275 |
| 424005 | Al 99,5 | 3.0255 |
| 424201 | AlCuMg 1 | 3.1325 |
| 424222 | AlZnMgCu 1,5 | 3.4365 |
| 424331 | G-AlSi 11 | 3.2211 |
| 424332 | G-AlSi 7 Mg | 3.2371 |
| 424336 | G-AlSi 12 | 3.2581 |
| 424338 | GD-AlSi 8 Cu 3 | 3.2162 |
| 424339 | G-AlSi 9 Cu 3 | 3.2163 |
| 424381 | G-AlSi 5 Cu 1 Mg | 3.2134 |
| 424384 | G-AlSi 10 Mg | 3.2381 |
| 424400 | AlMgSi 1 | 3.2315 |
| 424412 | AlMg 1 | 3.3315 |
| 424413 | AlMg 3 Mn | 3.3535 |
| 424415 | AlMg 4 Mn | 3.3545 |
| 424432 | AlMn 1 | 3.0515 |
| 444357 | G-AlSi 6 Cu 4 | 3.2151 |
| HARDOX 400 | | |
| Inconel 718 | NiCr 19 Fe 19 NbMo | 2.4668 |

KONZULTAČNÍ DOTAZNÍK

Firma / Adresa:

Kontaktní osoba:

.....

.....

.....

Tel.: Fax:

.....

E-mail:

ZÁVIT

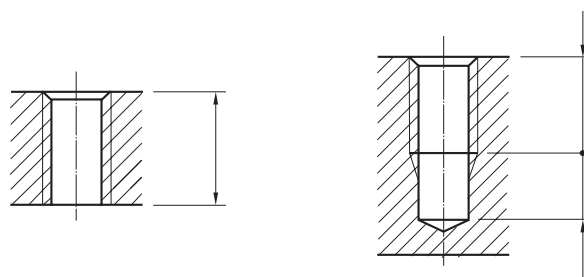
Druh závitu: M UN G W jiný.....

Rozměr:

Lícování:

Pravý závit: Levý závit:

CHARAKTER OTVORU (doplňte hodnoty)



SOUČÁST / MATERIÁL

Označení materiálu:

Číslo materiálu:

Tvrdost / Pevnost:

Tříska: Dlouhá Střední Krátká

ŘEZNÉ PODMÍNKY

Řezná rychlost / otáčky:

Chlazení, mazání: emulze řezný olej

Stroj:

Způsob upnutí nástroje: Horizontální Vertikální

CHARAKTER VÝROBY

kusová sériová hromadná

DOSUD UŽÍVANÝ NÁSTROJ

.....

DALŠÍ ÚDAJE

.....

.....

.....

.....

.....

NAREX Ždánice, spol. s r.o. telefon: 518 607 111
Městečko 250 telefax: 518 607 154
696 32 Ždánice e-mail: sales@narexzd.cz

TECHNICAL SUPPORT QUESTIONNAIRE

Company / Address:

Contacting person:

.....

.....

.....

Phone: Fax:

.....

E-mail:

THREAD

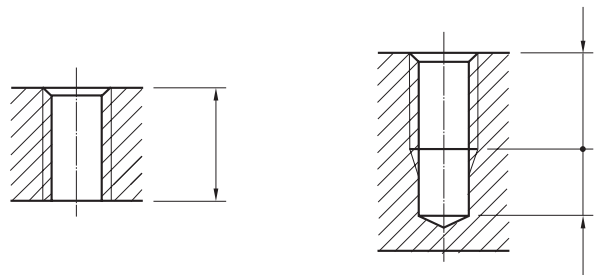
Thread type: M UN G W other

Dimension:

Tolerance:

Right thread: Left thread:

HOLE (fill in the dimensions)



WORKPIECE / MATERIAL

Type of material:

No. or classification:

Hardness / Strength:

Chip type: Long Medium Short

CUTTING CONDITIONS

Cutting speed / rpm:

Cooling, lubrication: Emulsion Cutting oil

Machine:

Tap clamping: Horizontal Vertical

PRODUCTION CHARACTERISTIC

Piece production Series production Mass production

TAP USED IN THE PAST

.....

ADDITIONAL INFORMATION

.....

.....

.....

.....

NAREX Ždánice, spol. s r.o. phone: +420 518 607 111
 Městečko 250 telefax: +420 518 607 155
 CZ - 696 32 Ždánice e-mail: sales@narexzd.cz

FRAGEBOGEN FÜR GEWINDEBOHRERANGEBOT

Firma / Adresse:

Kontaktperson:

.....

.....

.....

Tel.: Fax:

.....

E-mail:

GEWINDE

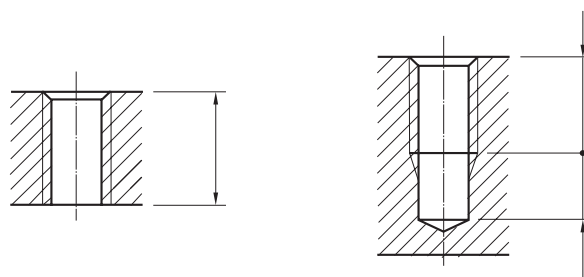
Gewindeart: M UN G W andere

Abmessung:

Toleranz:

Rechtsgewinde: Linksgewinde:

LOCHTYP (geben Sie bitte Tiefen an)



WERKSTÜCK / WERKSTOFF

Werkstoffbezeichnung:

Werkstoffnummer:

Härte / Festigkeit:

Spanform: Lang Mittel Kurze

ARBEITSBEDINGUNGEN

Schnittgeschwindigkeit / Drehzahl:

Kühlungsmittel: Emulsion Schneidöl

Maschine:

Arbeitsbedingungen Werkzeugaufnahme: Horizontal Vertikal

FERTIGUNGSART

Sonderfertigung Serienproduktion Massenproduktion

ZUR ZEIT VERWENDETES WERKZEUG

.....

SONSTIGES

.....

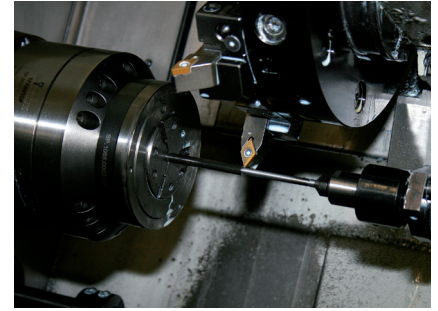
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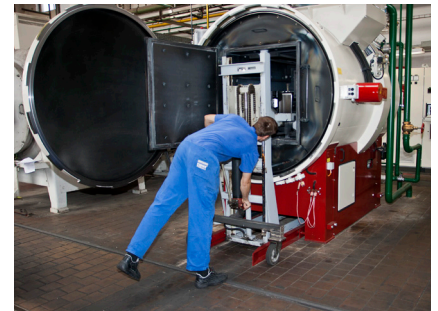
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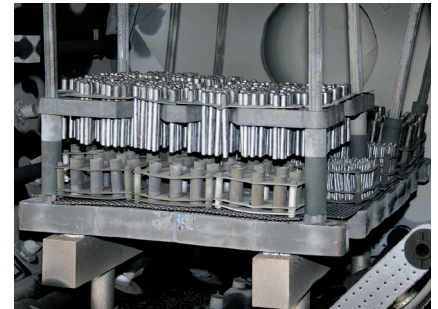
NAREX Žďanice, spol. s r.o. telefon: +420 518 607 111
Městečko 250 telefax: +420 518 607 155
CZ - 696 32 Žďanice e-mail: sales@narexzd.cz



Soustružení polotovaru
Form turning
Rohlingendrehen

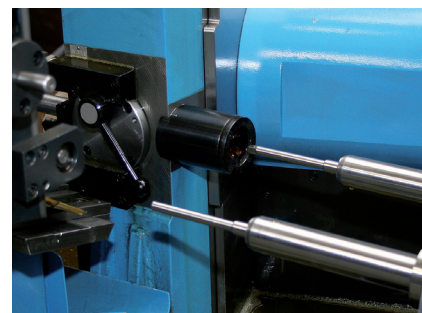
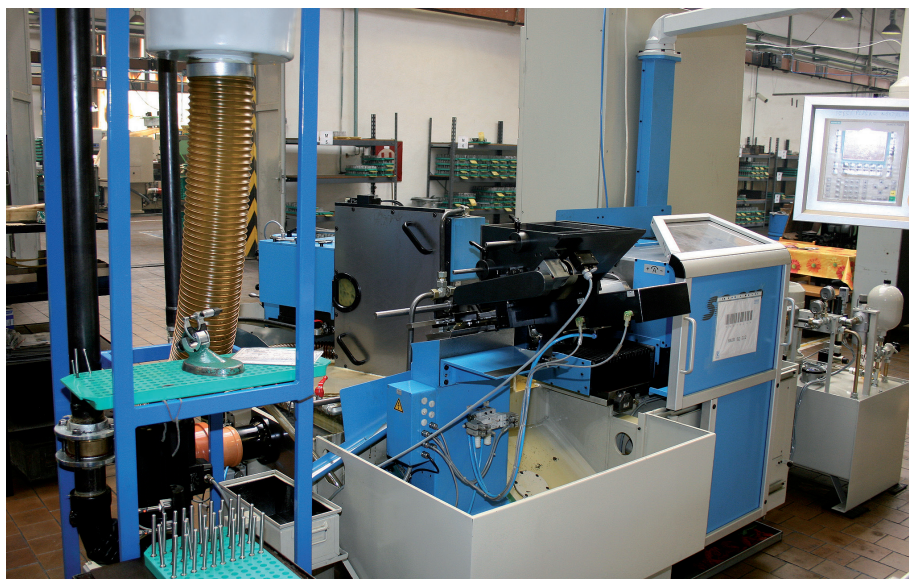


Kalení polotovaru
Heat treatment
Rohlingenhärten

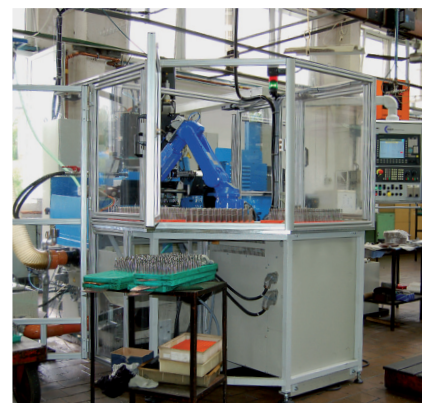
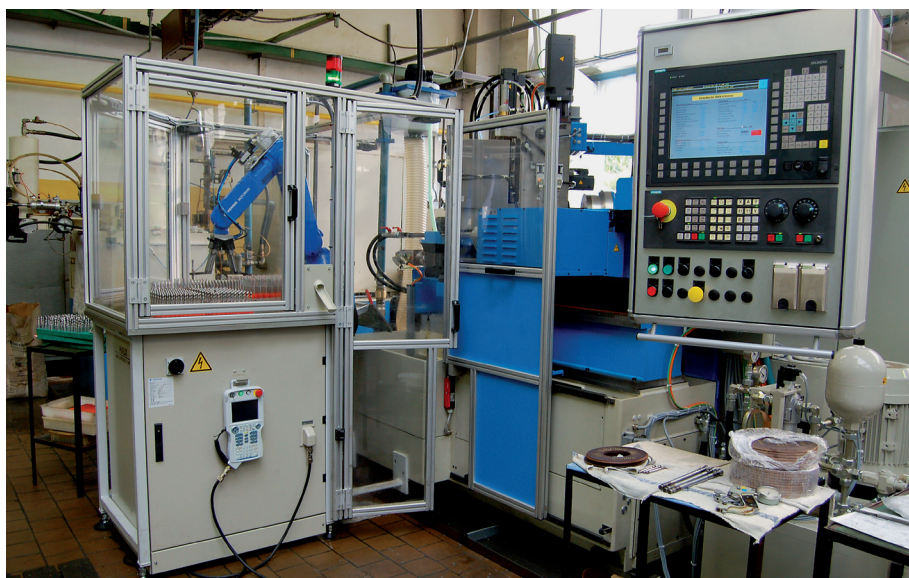


Broušení tvaru
Form grinding
Profilschleifen

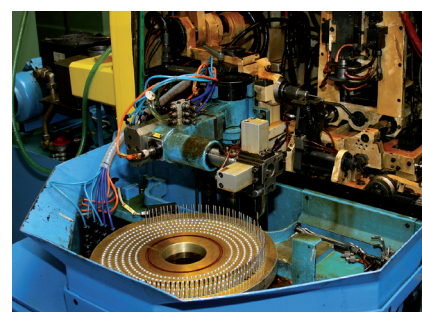




Broušení čtyřhranu
Square grinding
Vierkantschleifen

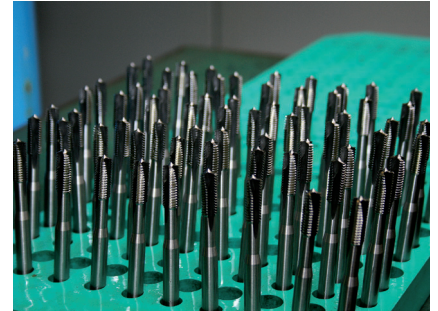
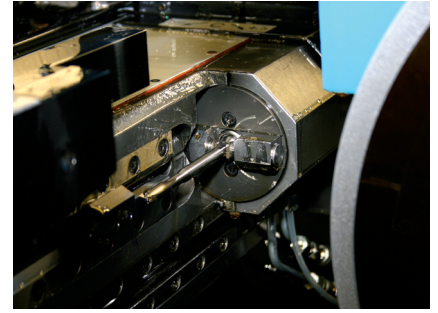


Broušení drážek
Flute grinding
Nutenschleifen

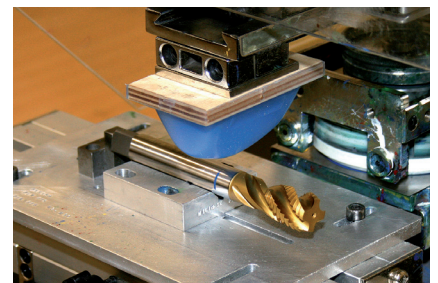
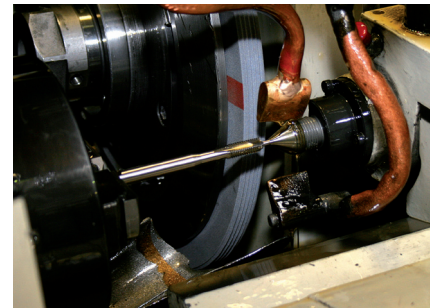


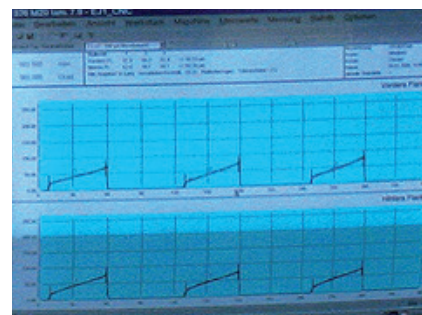


Broušení závitu
Thread grinding
Gewindeschleifen



Označování barevnými kroužky
Colour ring marking
Farbringmarkierung





Měření a zkoušení
Measurement and testing
Messung und Prüfung



| Kat. č. / Cat. No. / Kat. Nr. | Závit / Thread / Gewinde | Strana / Page |
|-------------------------------|--------------------------|---------------|
| 0200 | M | 70 |
| 0204 | UNC | 75 |
| 0290 | M | 71 |
| 0300 | MF | 72 |
| 0302 | G | 74 |
| 0305 | UNF | 76 |
| 0550 | M | 67 |
| 0600 | M | 67 |
| 0650 | M | 67 |
| 1000 | M | 30 |
| 1000 EG | EG-M | 77 |
| 1004 | UNC | 62 |
| 1010 | M | 30 |
| 1014 | UNC | 62 |
| 1080 | M | 46 |
| 1080 IKZ | M | 46 |
| 1130 | M | 46 |
| 1130 IKZ | M | 46 |
| 1500 | M | 32 |
| 1504 | UNC | 62 |
| 1510 | M | 32 |
| 1514 | UNC | 62 |
| 1540 | M | 32 |
| 1570 | M | 45 |
| 1580 | M | 42 |
| 1590 | M | 42 |
| 1620 | M | 45 |
| 1660 | M | 38 |
| 1690 | M | 38 |
| 1710 | M | 48 |
| 1750 | M | 32 |
| 1870 | M | 38 |
| 1870 | M | 38 |
| 1920 | M | 44 |
| 2050 | M | 34 |
| 2054 | UNC | 64 |
| 2060 | M | 34 |
| 2064 | UNC | 64 |
| 2090 | M | 34 |
| 2210 | M | 48 |
| 2260 | M | 40 |
| 2290 | M | 40 |
| 2320 | M | 40 |
| 2320 IKZ | M | 40 |
| 2360 | M | 36 |
| 2390 | M | 36 |
| 2400 | M | 36 |
| 2410 | M | 36 |
| 2670 | M | 45 |
| 2680 | M | 42 |
| 2690 | M | 42 |
| 2720 | M | 45 |
| 2820 | M | 44 |
| 2870 | M | 44 |
| 2910 | M | 68 |
| 2960 | M | 68 |
| 3000 | M | 31 |
| 3000 | MF | 49 |
| 3000 EG | EG-M | 77 |
| 3002 | G | 59 |
| 3004 | UNC | 63 |
| 3005 | UNF | 65 |
| 3010 | M | 31 |
| 3010 | MF | 49 |
| 3012 | G | 59 |
| 3014 | UNC | 63 |
| 3015 | UNF | 65 |
| 3080 | M | 47 |
| 3080 | MF | 57 |
| 3080 IKZ | M | 47 |
| 3080 IKZ | MF | 57 |
| 3130 | M | 47 |
| 3130 | MF | 57 |
| 3130 IKZ | M | 47 |
| 3130 IKZ | MF | 57 |
| 3500 | M | 33 |
| 3500 | MF | 49 |
| 3502 | G | 59 |
| 3504 | UNC | 63 |
| 3505 | UNF | 65 |
| 3510 | M | 33 |
| 3510 | MF | 49 |
| 3512 | G | 59 |

| Kat. č. / Cat. No. / Kat. Nr. | Závit / Thread / Gewinde | Strana / Page |
|-------------------------------|--------------------------|---------------|
| 3514 | UNC | 63 |
| 3515 | UNF | 65 |
| 3540 | M | 33 |
| 3540 | MF | 49 |
| 3570 | M | 45 |
| 3580 | M | 43 |
| 3580 | MF | 55 |
| 3590 | M | 43 |
| 3590 | MF | 55 |
| 3620 | M | 45 |
| 3660 | M | 39 |
| 3660 | MF | 53 |
| 3662 | G | 61 |
| 3690 | M | 39 |
| 3690 | MF | 53 |
| 3692 | G | 61 |
| 3710 | M | 48 |
| 3870 | M | 39 |
| 3870 IKZN | M | 39 |
| 3920 | M | 44 |
| 4050 | M | 35 |
| 4050 | MF | 51 |
| 4052 | G | 60 |
| 4054 | UNC | 64 |
| 4055 | UNF | 66 |
| 4060 | M | 35 |
| 4060 | MF | 51 |
| 4062 | G | 60 |
| 4064 | UNC | 64 |
| 4065 | UNF | 66 |
| 4090 | M | 35 |
| 4090 | MF | 51 |
| 4210 | M | 48 |
| 4260 | M | 41 |
| 4260 | MF | 53 |
| 4262 | G | 61 |
| 4290 | M | 41 |
| 4290 | MF | 53 |
| 4292 | G | 61 |
| 4320 | M | 41 |
| 4320 IKZ | M | 41 |
| 4360 | M | 37 |
| 4390 | M | 37 |
| 4400 | M | 37 |
| 4410 | M | 37 |
| 4670 | M | 45 |
| 4680 | M | 43 |
| 4680 | MF | 55 |
| 4690 | M | 43 |
| 4690 | MF | 55 |
| 4720 | M | 45 |
| 4820 | M | 44 |
| 4870 | M | 44 |
| 5000 | M | 69 |
| 5706 | Tr | 77 |
| 9500 | M | 82 |
| 9500 | MF | 83 |
| 9501 | W | 87 |
| 9502 | G | 84 |
| 9504 | UNC | 85 |
| 9505 | UNF | 86 |
| 9550 | M | 82 |
| 9550 | MF | 83 |
| 9552 | G | 84 |
| 9900 | M | 79 |
| 9910 | M | 79 |
| 9920 | M | 79 |
| 9930 | M | 80 |
| 9940 | M | 80 |
| 9950 | M | 80 |
| 9960 | M | 81 |