

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer



KATALOG
2016

1. Měkké konstrukční oceli s pevností do 500 N/mm²

Soft structural steels up to 500 N/mm² / Weiche Baustähle bis 500 N/mm²
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
3. Zušlechtěné 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
4. Vysoce legované a zušlechtěné oceli s pevností do 1400 N/mm²

High-alloyed steels and heat-treated steels up to 1400 N/mm²
Hochlegierte und vergütete Stähle bis 1400N/mm²
5. Nerezavějící a žáruvzdorné oceli

Stainless steels and heat resisting steels / Rostfreie und hitzebeständige Stähle
6. Litiny

Cast iron / Gusswerkstoffe
7. Hliník měkký

Unalloyed aluminium / Reinaluminium
8. Hliník legovaný

Aluminium alloys / Aluminiumlegierungen
9. Měď čistá

Unalloyed copper / Reinkupfer
10. Slitiny mědi

Copper alloys / Kupferlegierungen
11. Zinek

Zinc / Zink

- 1.1. Konstrukční oceli / Structural steels / Baustähle

1.2. Nelegované lité oceli / Plain cast steels / Unlegierte Gussstähle
- 2.1. Automatové oceli / Free cutting steels / Automatenstähle

2.2. Konstrukční a zušlechtěné oceli / Structural steels and heat-treated steels
Baustähle und Vergütungsstähle

2.3. Nelegované lité oceli / Plain cast steels / Unlegierte Gussstähle
- 3.1. Cementační a nitridační oceli / Case hardened steels and nitriding steels
Einsatzstähle und Nitrierstähle

3.2. Zušlechtěné oceli / Heat-treated steels / Vergütungsstähle

3.3. Nástrojové oceli / Tool steels / Werkzeugstähle
- 4.1. Vysoce legované oceli / High-alloyed steels / Hochlegierte Stähle

4.2. Zušlechtěné oceli / Heat-treated steels / Vergütete Stähle
- 5.1. S pevností 450 - 800 N/mm² / With strength 450 - 800 N/mm²
Mit Festigkeit bis 450 - 800 N/mm²

5.2. S pevností 600 -1000 N/mm² / With strength 600 - 1000 N/mm²
Mit Festigkeit bis 600 - 1000 N/mm²
- 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
- 7.1. Čistý hliník / Unalloyed aluminium / Reinaluminium
- 8.1. S obsahem Si < 10% / Si content < 10% / Si-Gehalt < 10%

8.2. S obsahem Si > 10 % / Si content > 10 % / Si-Gehalt > 10%
- 9.1. Měď čistá bez přísad / Unalloyed copper / Reinkupfer
- 10.1. Krátká drobná tříška / Short chipping / Kurzspanend

10.2. Dlouhá vinutá tříška / Long chipping / Langspanend
- 11.1. Zinek a slitiny zinku / Zinc and zinc alloys / Zink und Zinklegierungen

SYMBOLY
Symbols / Symbole

typ
N

TYP N - závitník pro oceli s pevností do 800 N/mm²
tap for steels up to 800 N/mm² / Gewindebohrer für Stähle bis 800 N/mm²

typ
VA

TYP VA - závitník pro nerezavějící oceli
tap for stainless steels / Gewindebohrer für rostfreie Stähle

typ
H

TYP H - závitník pro oceli s pevností do 1200N/mm²
tap for alloyed steels up to 1200N/mm² / Gewindebohrer für Legiertestähle bis 1200 N/mm²

typ
Ti

TYP Ti - závitník pro titan a slitiny titanu
tap for titanium and titanium alloys / Gewindebohrer für Titan

typ
Ni

TYP Ni - závitník pro niklové slitiny
tap for nickel alloys / Gewindebohrer für Nickel

typ
UNI

TYP UNI - závitník pro univerzální použití
tap for universal applications / Gewindebohrer für den universalen Einsatz

OX

oxidace / oxidation / Oxidieren

TiAlN

povlak aluminiumnitridu titanu
titanium aluminiumnitride coating / Titanaluminiumnitrid-Beschichtung

TiCN

povlak karbonitridu titanu
titanium carbonitride coating / Titancarbonitrid-Beschichtung

HL

povlak Balinit® Hardlube
Balinit® Hardlube coating / Balinit® Hardlube-Beschichtung

HSSE

vysoce výkonná rychlořezná ocel legovaná kobaltem 5%
super high speed steel 5% cobalt alloyed
höher legierter Schnellstahl Co 5%

**HSSE
Co8**

vysoce legovaná výkonná rychlořezná ocel
legovaná kobaltem 8%
super high speed steel 8% cobalt alloyed
höher legierter Schnellstahl Co 8%

**HSSE
V3**

vysoce výkonná rychlořezná ocel legovaná vanadem
super high speed steel 3% vanadium alloyed
höher legierter Schnellstahl V 3%

**HSSE
PM**

vysoce výkonná prášková rychlořezná ocel
powder super high speed steel / Pulverstahl

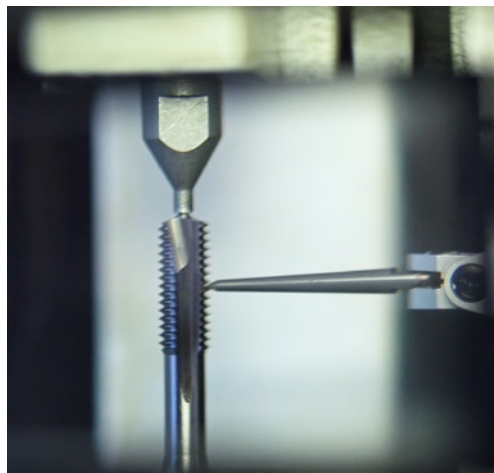
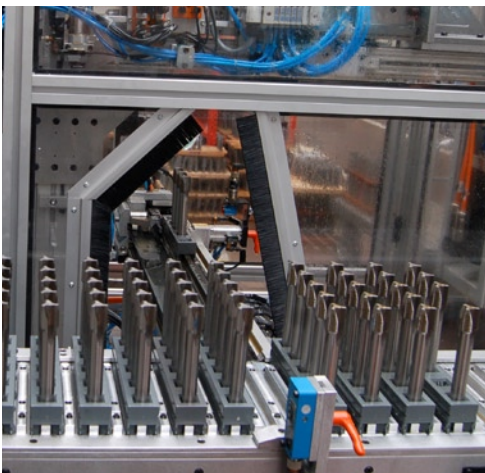
IKZ

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

narex[®] **žďánice**



1500NX

DIN
371HSSE
V3ISO 2
6H800
N/mm²

M3-M10

6

1540NX

DIN
371HSSE
V3ISO 2
6H800
N/mm²

OX

M3-M10

6

1520NX

DIN
371HSSE
V3ISO 2
6H800
N/mm²

TiAlN

M3-M10

6

3500NX

DIN
376HSSE
V3ISO 2
6H800
N/mm²

M12-M20

7

3540NX

DIN
376HSSE
V3ISO 2
6H800
N/mm²

OX

M12-M20

7

3520NX

DIN
376HSSE
V3ISO 2
6H800
N/mm²

TiAlN

M12-M20

7

2050NX

DIN
371HSSE
V3ISO 2
6H800
N/mm²

M3-M10

8

2090NX

DIN
371HSSE
V3ISO 2
6H800
N/mm²

OX

M3-M10

8

2070NX

DIN
371HSSE
V3ISO 2
6H800
N/mm²

TiAlN

M3-M10

8

4050NX

DIN
376HSSE
V3ISO 2
6H800
N/mm²

M12-M20

9

4090NX

DIN
376HSSE
V3ISO 2
6H800
N/mm²

OX

M12-M20

9

4070NX

DIN
376HSSE
V3ISO 2
6H800
N/mm²

TiAlN

M12-M20

9

1690NX		DIN 371	HSSE V3	ISO 2 6H		1100 N/mm²		OX	M2-M10	10	
1680NX		DIN 371	HSSE V3	ISO 2 6H		1100 N/mm²		TiCN	M3-M10	10	
3690NX		DIN 376	HSSE V3	ISO 2 6H		1100 N/mm²		OX	M3-M36	11	
3680NX		DIN 376	HSSE V3	ISO 2 6H		1100 N/mm²		TiCN	M12-M36	11	
2290NX		DIN 371	HSSE V3	ISO 2 6H			1100 N/mm²		OX	M2-M10	10
2280NX		DIN 371	HSSE V3	ISO 2 6H			1100 N/mm²		TiCN	M3-M10	10
4290NX		DIN 376	HSSE V3	ISO 2 6H			1100 N/mm²		OX	M3-M36	11
4280NX		DIN 376	HSSE V3	ISO 2 6H			1100 N/mm²		TiCN	M12-M36	11

4960NX		DIN 2174	HSSE	ISO 2 6HX	C 2-3	1100 N/mm ²		TiN	M2-M10	12
4960NX		DIN 2174	HSSE	ISO 3 6GX	C 2-3	1100 N/mm ²		TiN	M2-M10	12
4960NXIKZN		DIN 2174	HSSE	ISO 2 6HX	C 2-3	1100 N/mm ²		TiN IKZN	M6-M10	12
4960NX		DIN 2174	HSSE	ISO 2 6HX	C 2-3	1100 N/mm ²		TiN	M12-M16	12
4960NX		DIN 2174	HSSE	ISO 3 6GX	C 2-3	1100 N/mm ²		TiN	M12-M16	12
4960NXIKZN		DIN 2174	HSSE	ISO 2 6HX	C 2-3	1100 N/mm ²		TiN IKZN	M12-M16	12
4960NX		DIN 2174	HSSE	ISO 2 6HX	C 2-3	1100 N/mm ²		MF TiN	M3-M10	13
4960NX		DIN 2174	HSSE	ISO 2 6HX	C 2-3	1100 N/mm ²		MF TiN	M12-M16	13

2980NX

DIN
2174HSSE
Co8ISO 1
4HX1200
N/mm²

TiCN

M1-M1,4

14

2980NX

DIN
2174HSSE
Co8ISO 2
6HX1200
N/mm²

TiCN

M1,6-M10

14

2980NXIKZN

DIN
2174HSSE
Co8ISO 2
6HX1200
N/mm²

TiCN

IKZN

M6-M10

14

2980NX

DIN
2174HSSE
Co8ISO 2
6HX1200
N/mm²

TiCN

M12-M30

15

2980NXIKZN

DIN
2174HSSE
Co8ISO 2
6HX1200
N/mm²

TiCN

IKZN

M12-M30

15

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer

1440NX

DIN
371HSSE
PMISO 2
6H

OX

M3-M10

16

3440NX

DIN
376HSSE
PMISO 2
6H

OX

M12

16

2190NX

DIN
371HSSE
PMISO 2
6H

OX

M3-M10

16

4190NX

DIN
376HSSE
PMISO 2
6H

OX

M12

16

STROJNÍ ZÁVITNÍKY

Machine taps / Maschinengewindebohrer

1350NX

DIN
371HSSE
PMISO 2
6H

M3-M10

17

3350NX

DIN
376HSSE
PMISO 2
6H

M12

17

2100NX

DIN
371HSSE
PMISO 2
6H

M3-M10

17

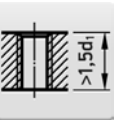
4100NX

DIN
376HSSE
PMISO 2
6H

M12

17

1720NX		DIN 371	HSSE PM	ISO 2 6HX	B 3,5-6	1300 N/mm ²		HL	M2-M10	18
1720NX		DIN 371	HSSE PM	ISO 3 6GX	B 3,5-6	1300 N/mm ²		HL	M3-M10	18
1720NXIKZN		DIN 371	HSSE PM	ISO 2 6HX	B 3,5-6	1300 N/mm ²		HL IKZN	M6-M10	18
3720NX		DIN 376	HSSE PM	ISO 2 6HX	B 3,5-6	1300 N/mm ²		HL	M12-M30	19
3720NX		DIN 376	HSSE PM	ISO 3 6GX	B 3,5-6	1300 N/mm ²		HL	M12-M20	19
3720NXIKZN		DIN 376	HSSE PM	ISO 2 6HX	B 3,5-6	1300 N/mm ²		HL IKZN	M12-M20	19
2220NX		DIN 371	HSSE PM	ISO 2 6HX	C 2-3	1300 N/mm ²		HL	M2-M10	20
2220NX		DIN 371	HSSE PM	ISO 3 6GX	C 2-3	1300 N/mm ²		HL	M3-M10	20
2220NXIKZ		DIN 371	HSSE PM	ISO 2 6HX	C 2-3	1300 N/mm ²		HL IKZ	M6-M10	20
4220NX		DIN 376	HSSE PM	ISO 2 6HX	C 2-3	1300 N/mm ²		HL	M12-M30	21
4220NX		DIN 376	HSSE PM	ISO 3 6GX	C 2-3	1300 N/mm ²		HL	M12-M20	21
4220NXIKZ		DIN 376	HSSE PM	ISO 2 6HX	C 2-3	1300 N/mm ²		HL IKZ	M12-M20	21
3720NX		DIN 374	HSSE PM	ISO 2 6HX	B 3,5-6	1300 N/mm ²		HL	M8 x 1 - M20 x 1,5	22
4220NX		DIN 374	HSSE PM	ISO 2 6HX	C 2-3	1300 N/mm ²		HL	M8 x 1 - M20 x 1,5	22
3722NX		DIN 5156	HSSE PM		B 3,5-6	1300 N/mm ²		HL	G1/8" -G1"	23
4222NX		DIN 5156	HSSE PM		C 2-3	1300 N/mm ²		HL	G1/8" -G1"	23



SKUPINA OBRÁBĚNÉHO MATERIÁLU

Material group / Werkstoffgruppe

1.1 1.2 2.1 2.2 2.3 7.1 8.1 8.2



3500NX

1.1 1.2 2.1 2.2 2.3 7.1 8.1 8.2



3540NX

1.1 1.2 2.1 2.2 2.3



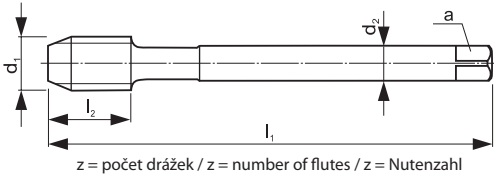
3520NX

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.

3500NX

3540NX

3520NX



z = počet drážek / z = number of flutes / z = Nutenzahl



d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm	
M3	0,5	56	11	2,2	-	3	2,5	
M4	0,7	63	13	2,8	2,1	3	3,3	
M5	0,8	70	16	3,5	2,7	3	4,2	
M6	1	80	19	4,5	3,4	3	5	
M8	1,25	90	22	6	4,9	3	6,8	
M10	1,5	100	24	7	5,5	3	8,5	
M12	1,75	110	28	9	7	3	10,2	●
M14	2	110	30	11	9	3	12	●
M16	2	110	32	12	9	3	14	●
M18	2,5	125	34	14	11	3	15,5	●
M20	2,5	140	34	16	12	3	17,5	●
M22	2,5	140	34	18	14,5	3	19,5	
M24	3	160	38	18	14,5	3	21	
M27	3	160	38	20	16	4	24	
M30	3,5	180	45	22	18	4	26,5	
M33	3,5	180	50	25	20	4	29,5	
M36	4	200	56	28	22	4	32	

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
3500NX	10-15	12-15	10-15	10-15	10-15										10-15	10-15	10-15				
3540NX	10-15	12-15	10-15	10-15	10-15										12-15	12-15	12-15				
3520NX	15-22	15-22	12-20	12-20	12-20																

M



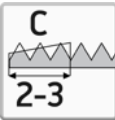
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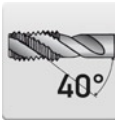
typ N

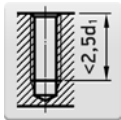
HSSE V3

DIN 371

ISO 2 6H



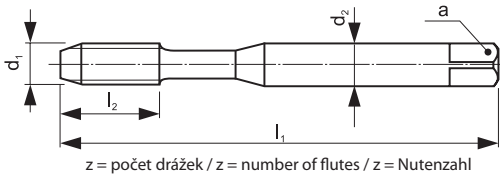




SKUPINA OBRÁBĚNÉHO MATERIÁLU
Material group / Werkstoffgruppe

1.1 1.2 2.1 2.2 2.3 7.1 8.1 8.2		2050NX
1.1 1.2 2.1 2.2 2.3 7.1 8.1 8.2		2090NX
1.1 1.2 2.1 2.2 2.3		2070NX

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.	2050NX	2090NX	2070NX
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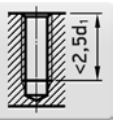
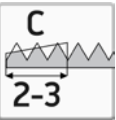
OX

TiAlN

d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm			
M3	0,5	56	5	3,5	2,7	3	2,5	●	●	●
M4	0,7	63	7	4,5	3,4	3	3,3	●	●	●
M5	0,8	70	8	6	4,9	3	4,2	●	●	●
M6	1	80	10	6	4,9	3	5	●	●	●
M8	1,25	90	13	8	6,2	3	6,8	●	●	●
M10	1,5	100	15	10	8	3	8,5	●	●	●

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten																	
V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.
2050NX	8-10	8-10	8-10	8-10	8-10										8-10	8-10	8-10
2090NX	10-12	10-12	10-12	10-12	10-12										10-15	10-15	10-15
2070NX	10-12	10-12	12-15	12-15	12-15												

● 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 7.1 8.1 8.2



4050NX

1.1 1.2 2.1 2.2 2.3 7.1 8.1 8.2



4090NX

1.1 1.2 2.1 2.2 2.3



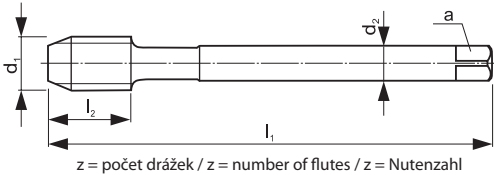
4070NX

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.

4050NX

4090NX

4070NX



z = počet drážek / z = number of flutes / z = Nutenzahl



d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm	
M3	0,5	56	5	2,2	-	3	2,5	
M4	0,7	63	7	2,8	2,1	3	3,3	
M5	0,8	70	8	3,5	2,7	3	4,2	
M6	1	80	10	4,5	3,4	3	5	
M8	1,25	90	13	6	4,9	3	6,8	
M10	1,5	100	15	7	5,5	3	8,5	
M12	1,75	110	18	9	7	3	10,2	●
M14	2	110	20	11	9	3	12	●
M16	2	110	20	12	9	3	14	●
M18	2,5	125	25	14	11	4	15,5	●
M20	2,5	140	25	16	12	4	17,5	●
M22	2,5	140	25	18	14,5	4	19,5	
M24	3	160	30	18	14,5	4	21	
M27	3	160	30	20	16	4	24	
M30	3,5	180	35	22	18	4	26,5	
M33	3,5	180	35	25	20	4	29,5	
M36	4	200	40	28	22	4	32	

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
4050NX	8-10	8-10	8-10	8-10	8-10										8-10	8-10	8-10				
4090NX	10-12	10-12	10-12	10-12	10-12										10-15	10-15	10-15				
4070NX	10-12	10-12	12-15	12-15	12-15																

M



DIN
13

typ
VA

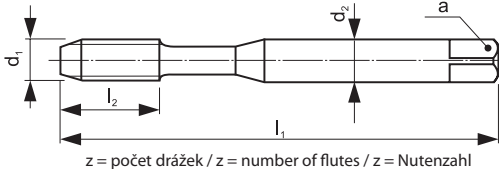
HSSE
V3

DIN
371

ISO 2
6H

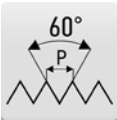
SKUPINA OBRÁBĚNÉHO MATERIÁLU
Material group / Werkstoffgruppe

2	3	5	8	9	10	11	6.2	7.1		1690NX
2	3	5	8	9	10	11	6.2	7.1		1680NX
2	3	5	8	9	10	11	6.2	7.1		2290NX
2	3	5	8	9	10	11	6.2	7.1		2280NX

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.									1690NX	1680NX	2290NX	2280NX
												
z = počet drážek / z = number of flutes / z = Nutenzahl												
d ₁	P	l ₁	l ₂	l ₂ R40°	d ₂	a	z	Ø mm	OX	TiCN	OX	TiCN
M2	0,4	45	8	8	2,8	2,1	2	1,6	●		●	
M2,5	0,45	50	9	9	2,8	2,1	2	2,05	●		●	
M3	0,5	56	11	5	3,5	2,7	3	2,5	●	●	●	●
M3,5	0,6	56	12	6	4	3	3	2,9	●		●	
M4	0,7	63	13	7	4,5	3,4	3	3,3	●	●	●	●
M5	0,8	70	16	8	6	4,9	3	4,2	●	●	●	●
M6	1	80	19	10	6	4,9	3	5	●	●	●	●
M8	1,25	90	22	13	8	6,2	3	6,8	●	●	●	●
M10	1,5	100	24	15	10	8	3	8,5	●	●	●	●

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
1690NX			15-18	15-18	15-18	8-10	8-10	8-10			10-12	10-12		10-12	20-25	10-12	10-12	10-12	10-12	10-12	10-12
1680NX			15-22	15-22	15-22	15-18	15-18	15-18			15-18	15-18		15-18	32-40	18-22	15-18	22-25	10-12	10-12	10-12
2290NX			10-15	10-15	10-15	8-10	8-10	8-10			10-12	10-12		10-12	15-20	10-12	10-12	10-12	10-12	10-12	10-12
2280NX			10-12	10-12	10-12	10-12	10-12	10-12			10-12	10-12		12-16	26-32	15-18	12-16	18-22	10-12	10-12	10-12

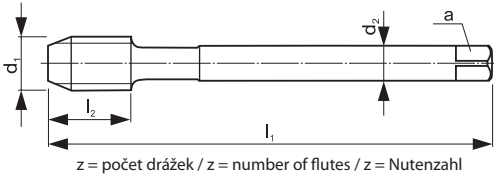


SKUPINA OBRÁBĚNÉHO MATERIÁLU
Material group / Werkstoffgruppe

2	3	5	8	9	10	11	6.2	7.1		3690NX
2	3	5	8	9	10	11	6.2	7.1		3680NX
2	3	5	8	9	10	11	6.2	7.1		4290NX
2	3	5	8	9	10	11	6.2	7.1		4280NX

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.

3690NX 3680NX 4290NX 4280NX



z = počet drážek / z = number of flutes / z = Nutenzahl



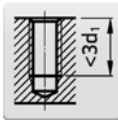
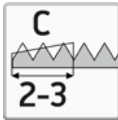
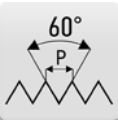
d ₁	P	l ₁	l ₂	l ₂ R40°	d ₂	a	z/zR40°	Ø mm
M3	0,5	56	11	5	2,2	-	3/3	2,5
M4	0,7	63	13	7	2,8	2,1	3/3	3,3
M5	0,8	70	16	8	3,5	2,7	3/3	4,2
M6	1	80	19	10	4,5	3,4	3/3	5
M8	1,25	90	22	13	6	4,9	3/3	6,8
M10	1,5	100	24	15	7	5,5	3/3	8,5
M12	1,75	110	28	18	9	7	3/4	10,2
M14	2	110	30	20	11	9	3/4	12
M16	2	110	32	20	12	9	3/4	14
M18	2,5	125	34	25	14	11	3/4	15,5
M20	2,5	140	34	25	16	12	3/4	17,5
M22	2,5	140	34	25	18	14,5	3/4	19,5
M24	3	160	38	30	18	14,5	3/4	21
M27	3	160	38	30	20	16	4/4	24
M30	3,5	180	45	35	22	18	4/5	26,5
M33	3,5	180	50	35	25	20	4/5	29,5
M36	4	200	56	40	28	22	4/5	32

OX	TiCN	OX	TiCN
●		●	
●		●	
●		●	
●		●	
●		●	
●		●	
●	●	●	●
●	●	●	●
●		●	
●	●	●	●
●		●	
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●
●	●	●	●

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
3690NX			15-18	15-18	15-18	8-10	8-10	8-10			10-12	10-12		10-12	20-25	10-12	10-12	10-12	10-12	10-12	10-12
3680NX			15-22	15-22	15-22	15-18	15-18	15-18			15-18	15-18		15-18	32-40	18-22	15-18	22-25	10-12	10-12	10-12
4290NX			10-15	10-15	10-15	8-10	8-10	8-10			10-12	10-12		10-12	15-20	10-12	10-12	10-12	10-12	10-12	10-12
4280NX			10-12	10-12	10-12	10-12	10-12	10-12			10-12	10-12		12-16	26-32	15-18	12-16	18-22	10-12	10-12	10-12

● 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 5 7 8 9 10



4960NX

1 2 5 7 8 9 10



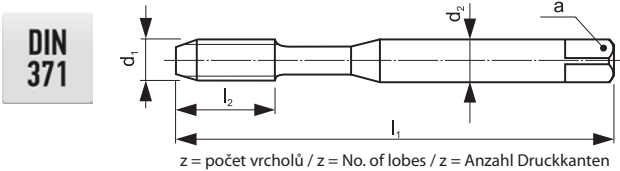
4960NXIKZN

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.

4960NX

4960NX

4960NXIKZN



ISO 2
6HX

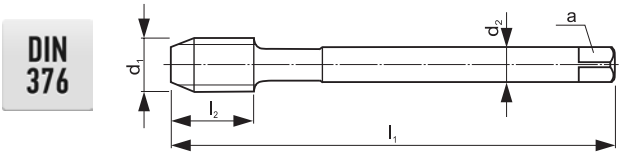
ISO 3
6GX

ISO 2
6HX

IKZN

d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm	
M2	0,4	45	8	2,8	2,1	3	1,83	
M2,5	0,45	50	9	2,8	2,1	3	2,33	
M3	0,5	56	11	3,5	2,7	4	2,8	
M3,5	0,6	56	11	4	3	4	3,25	
M4	0,7	63	13	4,5	3,4	4	3,7	
M5	0,8	70	16	6	4,9	5	4,65	
M6	1	80	19	6	4,9	5	5,55	
M8	1,25	90	22	8	6,2	6	7,4	
M10	1,5	100	24	10	8	6	9,3	

●	●	
●	●	
●	●	
●	●	
●	●	
●	●	●
●	●	●
●	●	●

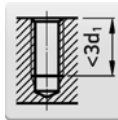
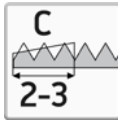
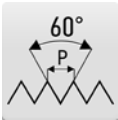


M12	1,75	110	28	9	7	6	11,2	
M14	2	110	30	11	9	5	13	
M16	2	110	32	12	9	7	15	

●	●	●
●	●	●
●	●	●

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
4960NX	18-28	18-28	18-28	18-28	18-28						12-20	12-20			20-50	20-50	20-50	20-40	20-40	20-40	
4960NXIKZ	18-28	18-28	18-28	18-28	18-28						12-20	12-20			20-50	20-50	20-50	20-40	20-40	20-40	



SKUPINA OBRÁBĚNÉHO MATERIÁLU
Material group / Werkstoffgruppe

1 2 5 7 8 9 10

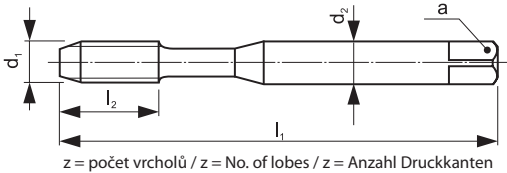


4960NX

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.

4960NX

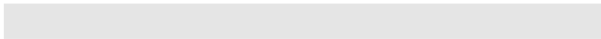
DIN
371



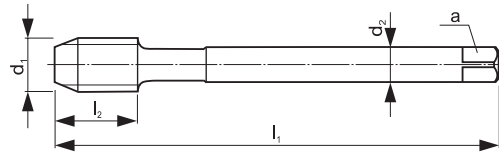
z = počet vrcholů / z = No. of lobes / z = Anzahl Druckkanten

ISO 2
6HX

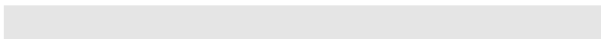
d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm	
M3	0,35	56	8	3,5	2,7	3	2,85	●
M4	0,5	63	10	4,5	3,4	4	3,9	●
M5	0,5	70	12	6	4,9	4	4,78	●
M6	0,75	80	14	6	4,9	5	5,7	●
M8	1	90	22	8	6,2	5	7,55	●
M10	1	90	20	10	8	5	9,55	●



DIN
376



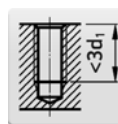
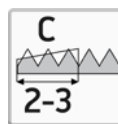
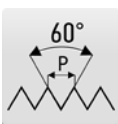
M12	1,5	100	22	9	7	6	11,3	●
M16	1,5	100	22	12	9	6	15,3	●



Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

V_c m/min 1.1. 1.2. 2.1. 2.2. 2.3. 3.1. 3.2. 3.3. 4.1. 4.2. 5.1. 5.2. 6.1. 6.2. 7.1. 8.1. 8.2. 9.1. 10.1. 10.2. 11.1.

4960NX 18-28 18-28 18-28 18-28 18-28 12-20 12-20 20-50 20-50 20-50 20-40 20-40 20-40



Material group / Werkstoffgruppe

Material group / Werkstoffgruppe

2980NXIKZN



2980NX

2980NX

2980NXIKZN



ISO 2
6HX

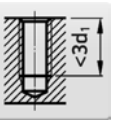
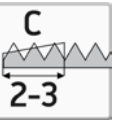
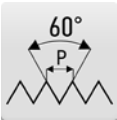
ISO 2
6HX

z = počet vrcholů / z = No. of lobes / z = Anzahl Druckkanten

IKZN

V_c m/min 1.1. 1.2. 2.1. 2.2. 2.3. 3.1. 3.2. 3.3. 4.1. 4.2. 5.1. 5.2. 6.1. 6.2. 7.1. 8.1. 8.2. 9.1. 10.1. 10.2. 11.1.

2980NX	20-30	20-30	20-30	20-30	20-30	8-15	8-15	8-15	8-15	8-15		20-40	20-40	15-22	15-22
2980NXIKZN	20-30	20-30	20-30	20-30	20-30	8-15	8-15	8-15	8-15	8-15		20-40	20-40	15-22	15-22



SKUPINA OBRÁBĚNÉHO MATERIÁLU

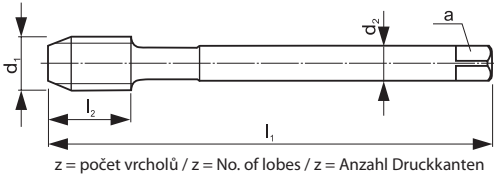
Material group / Werkstoffgruppe

1	2	3 (1200 N/mm ²)	4 (1200 N/mm ²)	8	10		2980NX
1	2	3 (1200 N/mm ²)	4 (1200 N/mm ²)	8	10		2980NXIKZN

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.

2980NX

2980NXIKZN



z = počet vrcholů / z = No. of lobes / z = Anzahl Druckkanten

ISO 2
6HX

ISO 2
6HX

IKZN

d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm		
M12	1,75	110	17	9	7	8	11,2	●	●
M14	2	110	20	11	9	8	13	●	●
M16	2	110	20	12	9	8	15	●	●
M20	2,5	140	20	16	12	8	18,8	●	●
M24	3	160	24	18	14,5	8	22,5	●	●
M27	3	160	18	20	16	8	25,5	●	●
M30	3,5	180	21	22	18	8	28,2	●	●

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
2980NX	20-30	20-30	20-30	20-30	20-30	8-15	8-15	8-15	8-15	8-15						20-40	20-40		15-22	15-22	
2980NXIKZN	20-30	20-30	20-30	20-30	20-30	8-15	8-15	8-15	8-15	8-15						20-40	20-40		15-22	15-22	

M

DIN
13

typ
Ti

HSSE
PM

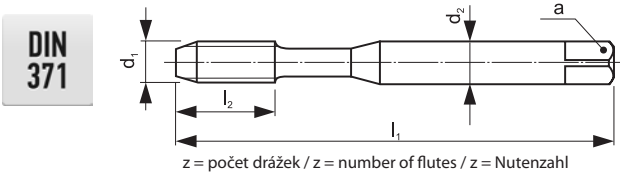
OX

ISO 2
6H

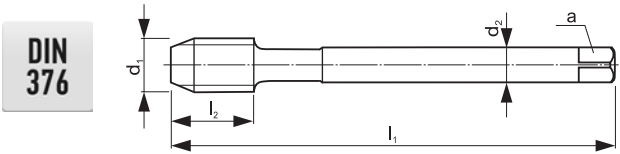
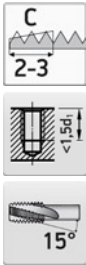
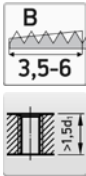
SKUPINA OBRÁBĚNÉHO MATERIÁLU
Material group / Werkstoffgruppe

Pro titan / For titanium / Für Titan		1440NX
Pro titan / For titanium / Für Titan		3440NX
Pro titan / For titanium / Für Titan		2190NX
Pro titan / For titanium / Für Titan		4190NX

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.	1440NX	2190NX
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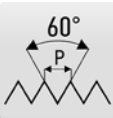
d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm
M3	0,5	56	11	3,5	2,7	3	2,5
M4	0,7	63	13	4,5	3,4	3	3,3
M5	0,8	70	16	6	4,9	3	4,2
M6	1	80	19	6	4,9	3	5
M8	1,25	90	22	8	6,3	3	6,8
M10	1,5	100	24	10	8	3	8,5



M12	1,75	110	28	9	7	3	10,2
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3440NX	4190NX
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Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten	
V _c m/min	
Pro titan / For titanium / Für Titan	
1440NX	5 - 8
3440NX	5 - 8
2190NX	3 - 6
4190NX	3 - 6



SKUPINA OBRÁBĚNÉHO MATERIÁLU
Material group / Werkstoffgruppe

Pro nikel / For nickel / Für Nickel



1350NX

Pro nikel / For nickel / Für Nickel



3350NX

Pro nikel / For nickel / Für Nickel



2100NX

Pro nikel / For nickel / Für Nickel



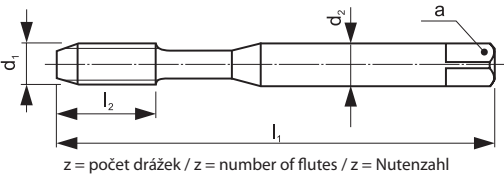
4100NX

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.

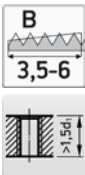
1350NX

2100NX

DIN
371

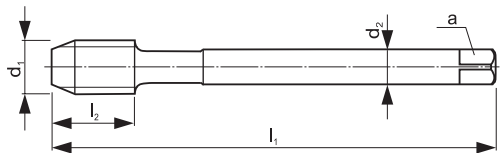


z = počet drážek / z = number of flutes / z = Nutenzahl



d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm
M3	0,5	56	11	3,5	2,7	3	2,5
M4	0,7	63	13	4,5	3,4	3	3,3
M5	0,8	70	16	6	4,9	3	4,2
M6	1	80	19	6	4,9	3	5
M8	1,25	90	22	8	6,3	3	6,8
M10	1,5	100	24	10	8	3	8,5

DIN
376



M12	1,75	110	28	9	7	3	10,2

3350NX

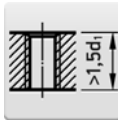
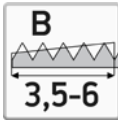
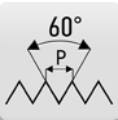
4100NX

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

V_c m/min

Pro nikel / For nickel / Für Nickel

1350NX	5 - 8
3350NX	5 - 8
2100NX	3 - 6
4100NX	3 - 6



SKUPINA OBRÁBĚNÉHO MATERIÁLU

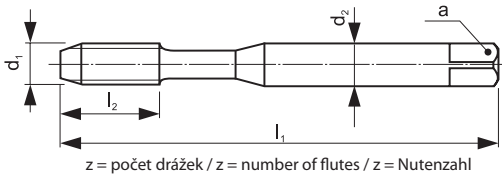
Material group / Werkstoffgruppe

1	2	3	4	5	6	7	8	9	10	11
1	2	3	4	5	6	7	8	9	10	11



1720NX
1720NXIKZN

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr. 1720NX 1720NX 1720NXIKZN



ISO 2
6HX

ISO 3
6GX

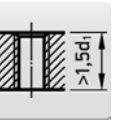
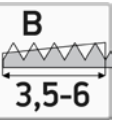
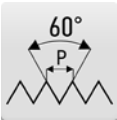
ISO 2
6HX

IKZN

d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm	
M2	0,4	45	8	2,8	2,1	3	1,6	
M2,5	0,45	50	9	2,8	2,1	3	2,05	
M3	0,5	56	11	3,5	2,7	3	2,5	
M4	0,7	63	13	4,5	3,4	3	3,3	
M5	0,8	70	16	6	4,9	3	4,2	
M6	1	80	19	6	4,9	3	5	
M8	1,25	90	22	8	6,2	3	6,8	
M10	1,5	100	24	10	8	3	8,5	

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●		●						
●		●						
●		●					●	
●		●					●	
●		●					●	

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten																					
V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
1720NX	22-26	22-26	18-22	18-22	18-22	15-18	15-18	15-18	8-14	8-14	12-15	12-15	18-22	15-18	32-40	18-22	15-18	22-25	10-12	10-12	10-12
1720NXIKZN	25-30	25-30	20-25	20-25	20-25	10-12	10-12	10-12	10-16	10-16	12-15	12-15	18-22	15-18	40-50	18-22	15-18	25-30	10-15	12-15	12-15



SKUPINA OBRÁBĚNÉHO MATERIÁLU

Material group / Werkstoffgruppe

1 2 3 4 5 6 7 8 9 10 11



3720NX

1 2 3 4 5 6 7 8 9 10 11



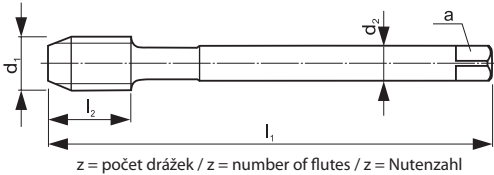
3720NXIKZN

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.

3720NX

3720NX

3720NXIKZN



z = počet drážek / z = number of flutes / z = Nutenzahl

ISO 2
6HX

ISO 3
6GX

ISO 2
6HX

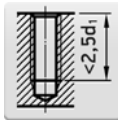
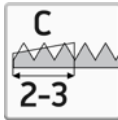
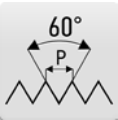
IKZN

d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm	
M12	1,75	110	28	9	7	3	10,2	
M14	2	110	30	11	9	4	12	
M16	2	110	32	12	9	4	14	
M20	2,5	140	34	16	12	4	17,5	
M24	3	160	38	18	14,5	3	21	
M27	3	160	38	20	16	4	24	
M30	3,5	180	45	22	18	4	26,5	

●	●	●
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●	●	●
●	●	●
●		
●		
●		

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

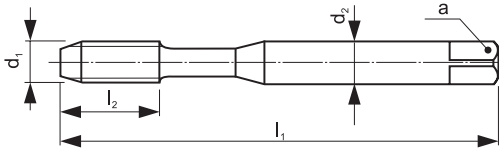
V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
3720NX	22-26	22-26	18-22	18-22	18-22	15-18	15-18	15-18	8-14	8-14	12-15	12-15	18-22	15-18	32-40	18-22	15-18	22-25	10-12	10-12	10-12
3720NXIKZN	25-30	25-30	20-25	20-25	20-25	10-12	10-12	10-12	10-16	10-16	12-15	12-15	18-22	15-18	40-50	18-22	15-18	25-30	10-15	12-15	12-15



SKUPINA OBRÁBĚNÉHO MATERIÁLU

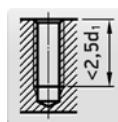
Material group / Werkstoffgruppe

1	2	3	4	5	6	7	8	9	10	11		2220NX
1	2	3	4	5	6	7	8	9	10	11		2220NXIKZ

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.								2220NX	2220NX	2220NXIKZ
 z = počet drážek / z = number of flutes / z = Nutenzahl								ISO 2 6HX	ISO 3 6GX	ISO 2 6HX IKZ
d ₁	P	l ₁	l ₂	d ₂	a	z	Ø mm			
M2	0,4	45	8	2,8	2,1	3	1,6	●		
M2,5	0,45	50	9	2,8	2,1	3	2,05	●		
M3	0,5	56	11	3,5	2,7	3	2,5	●	●	
M4	0,7	63	13	4,5	3,4	3	3,3	●	●	
M5	0,8	70	16	6	4,9	3	4,2	●	●	
M6	1	80	19	6	4,9	3	5	●	●	●
M8	1,25	90	22	8	6,2	3	6,8	●	●	●
M10	1,5	100	24	10	8	3	8,5	●	●	●

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
2220NX	18-22	18-22	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	15-18	12-16	26-32	15-18	12-16	18-22	10-12	10-12	10-12
2220NXIKZ	18-22	18-22	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	15-18	12-16	26-32	15-18	12-16	18-22	10-12	10-12	10-12



Material group / Werkstoffgruppe

4220NX

4220NXIKZ

4220NXIKZ



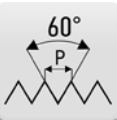
z = počet drážek / z = number of flutes / z = Nutenzahl

IKZ

V_c m/min 1.1. 1.2. 2.1. 2.2. 2.3. 3.1. 3.2. 3.3. 4.1. 4.2. 5.1. 5.2. 6.1. 6.2. 7.1. 8.1. 8.2. 9.1. 10.1. 10.2. 11.1.

4220NX	18-22	18-22	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	15-18	12-16	26-32	15-18	12-16	18-22	10-12	10-12	10-12
4220NXIKZ	18-22	18-22	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	15-18	12-16	26-32	15-18	12-16	18-22	10-12	10-12	10-12

MF



DIN 13

typ UNI

HSSE PM

HL

DIN 374

ISO 2 6HX

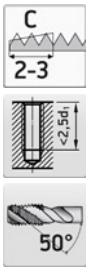
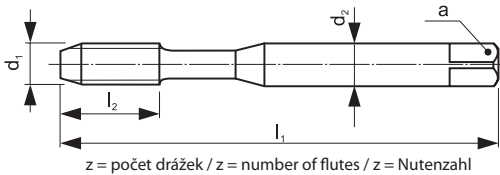
SKUPINA OBRÁBĚNÉHO MATERIÁLU
Material group / Werkstoffgruppe

1	2	3	4	5	6	7	8	9	10	11		3720NX
1	2	3	4	5	6	7	8	9	10	11		4220NX

KATALOGOVÉ ČÍSLO / Cat. No. / Kat. Nr.

3720NX

4220NX

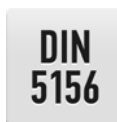
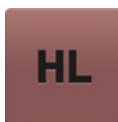
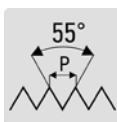


d ₁	P	l ₁	l ₂	l ₂ R50°	d ₂	a	z	Ø mm
M8 x 1	1	90	22	10	6	4,9	3	7
M10 x 1,25	1,25	100	24	12	7	5,5	3	8,8
M10 x 1	1	90	20	12	7	5,5	3	9
M12 x 1,5	1,5	100	22	14	9	7	4	10,5
M12 x 1,25	1,25	100	22	14	9	7	4	10,8
M12 x 1	1	100	22	14	9	7	4	11
M14 x 1,5	1,5	100	22	16	11	9	4	12,5
M16 x 1,5	1,5	100	22	16	12	9	4	14,5
M18 x 1,5	1,5	110	25	20	14	11	4	16,5
M20 x 1,5	1,5	125	25	20	16	12	4	18,5

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●	●
●	●
●	●

Řezné rychlosti / cutting speeds / Schnittgeschwindigkeiten

V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
3720NX	22-26	22-26	18-22	18-22	18-22	15-18	15-18	15-18	8-14	8-14	12-15	12-15	18-22	15-18	32-40	18-22	15-18	22-25	10-12	10-12	10-12
4220NX	18-22	18-22	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	15-18	12-16	26-32	15-18	12-16	18-22	10-12	10-12	10-12



Material group / Werkstoffgruppe

1 2 3 4 5 6 7 8 9 10 11



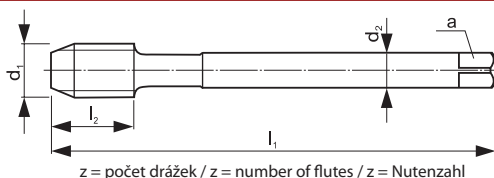
3722NX

1 2 3 4 5 6 7 8 9 10 11

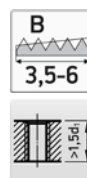


4222NX

4222NX



z = počet drážek / z = number of flutes / z = Nutenzahl



d ₁	TPI	l ₁	l ₂	l ₂ R50°	d ₂	a	z	Ø mm	
G1/8	28	90	20	12	7	5,5	3	8,8	
G1/4	19	100	21	15	11	9	4	11,8	
G3/8	19	100	21	15	12	9	4	15,25	
G1/2	14	125	24	18	16	12	4	19	
G5/8	14	125	24	18	18	14,5	4	21	
G3/4	14	140	26	20	20	16	5	24,5	
G1	11	160	28	22	25	20	5	30,75	

V _c m/min	1.1.	1.2.	2.1.	2.2.	2.3.	3.1.	3.2.	3.3.	4.1.	4.2.	5.1.	5.2.	6.1.	6.2.	7.1.	8.1.	8.2.	9.1.	10.1.	10.2.	11.1.
3722NX	22-26	22-26	18-22	18-22	18-22	15-18	15-18	15-18	8-14	8-14	12-15	12-15	18-22	15-18	32-40	18-22	15-18	22-25	10-12	10-12	10-12
4222NX	18-22	18-22	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	10-12	15-18	12-16	26-32	15-18	12-16	18-22	10-12	10-12	10-12

X.X Možno použiť / Possible use / Geeignet

1500NX	1.1.	1.2.	2.1.	2.2.	2.3.	7.1.	8.1.	8.2.	
1540NX	1.1.	1.2.	2.1.	2.2.	2.3.	7.1.	8.1.	8.2.	
1520NX	1.1.	1.2.	2.1.	2.2.	2.3.				
3500NX	1.1.	1.2.	2.1.	2.2.	2.3.	7.1.	8.1.	8.2.	
3540NX	1.1.	1.2.	2.1.	2.2.	2.3.	7.1.	8.1.	8.2.	
3520NX	1.1.	1.2.	2.1.	2.2.	2.3.				
2050NX	1.1.	1.2.	2.1.	2.2.	2.3.	7.1.	8.1.	8.2.	
2090NX	1.1.	1.2.	2.1.	2.2.	2.3.	7.1.	8.1.	8.2.	
2070NX	1.1.	1.2.	2.1.	2.2.	2.3.				
4050NX	1.1.	1.2.	2.1.	2.2.	2.3.	7.1.	8.1.	8.2.	
4090NX	1.1.	1.2.	2.1.	2.2.	2.3.	7.1.	8.1.	8.2.	
4070NX	1.1.	1.2.	2.1.	2.2.	2.3.				
1690NX	2	3	5	8	9	10	11	6.2.	7.1.
1680NX	2	3	5	8	9	10	11	6.2.	7.1.
2290NX	2	3	5	8	9	10	11	6.2.	7.1.
2280NX	2	3	5	8	9	10	11	6.2.	7.1.
3690NX	2	3	5	8	9	10	11	6.2.	7.1.
3680NX	2	3	5	8	9	10	11	6.2.	7.1.
4290NX	2	3	5	8	9	10	11	6.2.	7.1.
4280NX	2	3	5	8	9	10	11	6.2.	7.1.
4960NX	1	2	5	7	8	9	10		
4960NXIKZN	1	2	5	7	8	9	10		
4960NX (MF)	1	2	5	7	8	9	10		
2980NX	1	2	3	4	8	10			
2980NXIKZN	1	2	3	4	8	10			
1440NX	Pro titan / For titanium / Für Titan								
3440NX	Pro titan / For titanium / Für Titan								
2190NX	Pro titan / For titanium / Für Titan								
4190NX	Pro titan / For titanium / Für Titan								
1350NX	Pro nikl / For nickel / Für Nickel								
3350NX	Pro nikl / For nickel / Für Nickel								

2100NX	Pro nikel / For nickel / Für Nickel										
4100NX	Pro nikel / For nickel / Für Nickel										
1720NX	1	2	3	4	5	6	7	8	9	10	11
1720NXIKZN	1	2	3	4	5	6	7	8	9	10	11
3720NX	1	2	3	4	5	6	7	8	9	10	11
3720NXIKZN	1	2	3	4	5	6	7	8	9	10	11
2220NX	1	2	3	4	5	6	7	8	9	10	11
2220NXIKZ	1	2	3	4	5	6	7	8	9	10	11
4220NX	1	2	3	4	5	6	7	8	9	10	11
4220NXIKZ	1	2	3	4	5	6	7	8	9	10	11
3720NX (MF)	1	2	3	4	5	6	7	8	9	10	11
4220NX (MF)	1	2	3	4	5	6	7	8	9	10	11
3722NX	1	2	3	4	5	6	7	8	9	10	11
4222NX	1	2	3	4	5	6	7	8	9	10	11

1500NX 1540NX 1520NX 2050NX 2090NX 2070NX 1690NX 1680NX 2290NX 2280NX 4960NX 2980NX 1440NX 2190NX 1350NX 2100NX 1720NX 1720NX1K2N 2220NX 2220NX1K2 3722NX 4222NX 3500NX 3540NX 3520NX 4050NX 4090NX 4070NX 3690NX 3680NX 4290NX 4280NX 3440NX 4190NX 3350NX 4100NX 3720NX1K2N 4220NX 4220NX1K2																
1.1.	10-15	10-15	15-22	8-10	10-12	10-12	18-28	20-30	22-26	25-30	18-22	18-22	22-26	22-26	18-22	18-22
1.2.	12-15	12-15	15-22	8-10	10-12	10-12	18-28	20-30	22-26	25-30	18-22	18-22	22-26	22-26	18-22	18-22
2.1.	10-15	10-15	12-20	8-10	10-12	12-15	15-18	15-22	10-15	10-12	18-28	20-30	18-22	20-25	10-12	18-22
2.2.	10-15	10-15	12-20	8-10	10-12	12-15	15-18	15-22	10-15	10-12	18-28	20-30	18-22	20-25	10-12	18-22
2.3.	10-15	10-15	12-20	8-10	10-12	12-15	15-18	15-22	10-15	10-12	18-28	20-30	18-22	20-25	10-12	18-22
3.1.							8-10	15-18	8-10	10-12	8-15		15-18	10-12	10-12	15-18
3.2.							8-10	15-18	8-10	10-12	8-15		15-18	10-12	10-12	15-18
3.3.							8-10	15-18	8-10	10-12	8-15		15-18	10-12	10-12	15-18
4.1.											8-14	10-16	10-12	10-12	10-12	8-14
4.2.											8-14	10-16	10-12	10-12	10-12	8-14
5.1.							10-12	15-18	10-12	10-12	12-20		12-15	12-15	10-12	12-15
5.2.							10-12	15-18	10-12	10-12	12-20		12-15	12-15	10-12	12-15
6.1.							10-12	15-18	10-12	12-16			18-22	18-22	15-18	15-18
6.2.							10-12	15-18	10-12	12-16			15-18	15-18	12-16	12-16
7.1.	10-15	12-15	8-10	10-15			20-25	32-40	15-20	26-32	20-50		32-40	40-50	26-32	26-32
8.1.	10-15	12-15	8-10	10-15			10-12	18-22	10-12	15-18	20-50	20-40	18-22	18-22	15-18	18-22
8.2.	10-15	12-15	8-10	10-15			10-12	15-18	10-12	12-16	20-50	20-40	15-18	15-18	12-16	15-18
9.1.							10-12	22-25	10-12	18-22	20-40		22-25	25-30	18-22	22-25
10.1.							10-12	10-12	10-12	10-12	20-40	15-22	10-12	10-15	10-12	10-12
10.2.							10-12	10-12	10-12	10-12	20-40	15-22	10-12	12-15	10-12	10-12
11.1.							10-12	10-12	10-12	10-12			10-12	12-15	10-12	10-12
Titanium	5-8 3-6															
Nickel	5-8 3-6															

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	UN	Otáčky/min. / Revolutions per minute / Drehzahl/Min.																											
2			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	9/16		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	99	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	1 3/8"		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		

VICKERS						BRINELL						ROCKWELL						TENSILE STRNGTH R _m					
HV 30						HB 30						HRB						HRC					
N/mm ²						kp/mm ²						N/mm ²						kp/mm ²					
80	80	36,4	-	270	28	580	-	-	53,3	-	-	580	-	-	53,3	-	-	580	-	-	53,3	-	-
85	85	42,4	-	290	30	590	-	-	53,9	-	-	590	-	-	53,9	-	-	590	-	-	53,9	-	-
90	90	47,4	-	310	32	600	-	-	54,4	-	-	600	-	-	54,4	-	-	600	-	-	54,4	-	-
95	95	52,0	-	320	33	610	-	-	55,0	-	-	610	-	-	55,0	-	-	610	-	-	55,0	-	-
100	100	56,4	-	340	35	620	-	-	55,5	-	-	620	-	-	55,5	-	-	620	-	-	55,5	-	-
105	105	60,0	-	360	37	630	-	-	56,0	-	-	630	-	-	56,0	-	-	630	-	-	56,0	-	-
110	110	63,4	-	380	39	640	-	-	56,5	-	-	640	-	-	56,5	-	-	640	-	-	56,5	-	-
115	115	66,4	-	390	40	650	-	-	57,0	-	-	650	-	-	57,0	-	-	650	-	-	57,0	-	-
120	120	69,4	-	410	42	660	-	-	57,5	-	-	660	-	-	57,5	-	-	660	-	-	57,5	-	-
125	125	72,0	-	420	43	670	-	-	58,0	-	-	670	-	-	58,0	-	-	670	-	-	58,0	-	-
130	130	74,4	-	440	45	680	-	-	58,5	-	-	680	-	-	58,5	-	-	680	-	-	58,5	-	-
135	135	76,4	-	460	47	690	-	-	59,0	-	-	690	-	-	59,0	-	-	690	-	-	59,0	-	-
140	140	78,4	-	470	48	700	-	-	59,5	-	-	700	-	-	59,5	-	-	700	-	-	59,5	-	-
145	145	80,4	-	490	50	720	-	-	60,4	-	-	720	-	-	60,4	-	-	720	-	-	60,4	-	-
150	150	82,2	-	500	51	740	-	-	61,2	-	-	740	-	-	61,2	-	-	740	-	-	61,2	-	-
155	155	83,8	-	520	53	760	-	-	62,0	-	-	760	-	-	62,0	-	-	760	-	-	62,0	-	-
160	160	85,4	-	540	55	780	-	-	62,8	-	-	780	-	-	62,8	-	-	780	-	-	62,8	-	-
165	165	86,8	-	550	56	800	-	-	63,6	-	-	800	-	-	63,6	-	-	800	-	-	63,6	-	-
170	170	88,2	-	570	58	820	-	-	64,3	-	-	820	-	-	64,3	-	-	820	-	-	64,3	-	-
175	175	89,6	-	590	60	840	-	-	65,0	-	-	840	-	-	65,0	-	-	840	-	-	65,0	-	-
180	180	90,8	-	600	62	860	-	-	65,7	-	-	860	-	-	65,7	-	-	860	-	-	65,7	-	-
185	185	91,8	-	620	63	880	-	-	66,3	-	-	880	-	-	66,3	-	-	880	-	-	66,3	-	-
190	190	93,0	-	640	65	900	-	-	66,9	-	-	900	-	-	66,9	-	-	900	-	-	66,9	-	-
195	195	94,0	-	660	67	920	-	-	67,5	-	-	920	-	-	67,5	-	-	920	-	-	67,5	-	-
200	200	95,0	-	670	68	940	-	-	68,0	-	-	940	-	-	68,0	-	-	940	-	-	68,0	-	-
205	205	95,8	-	680	70																		
210	210	96,6	-	710	72																		
215	215	97,6	-	720	73																		
220	220	98,2	-	730	75																		
225	225	99,0	-	750	77																		
230	230	-	19,2	760	78																		
235	235	-	20,2	780	80																		
240	240	-	21,2	800	82																		
245	245	-	22,1	820	84																		
250	250	-	23,0	830	85																		
255	255	-	23,8	850	87																		
260	260	-	24,6	870	89																		
265	265	-	25,4	880	90																		
270	270	-	26,2	900	92																		
275	275	-	26,9	920	94																		
280	280	-	27,6	940	96																		
285	285	-	28,3	950	97																		
290	290	-	29,0	970	99																		
295	295	-	29,6	990	101																		
300	300	-	30,3	1010	103																		
310	310	-	31,5	1040	106																		
320	320	-	32,7	1080	110																		
330	330	-	33,8	1110	113																		
340	340	-	34,9	1140	117																		
350	350	-	36,0	1170	120																		
360	359	-	37,0	1200	123																		
370	368	-	38,0	1230	126																		
380	376	-	38,9	1260	129																		
390	385	-	39,8	1290	132																		
400	392	-	40,7	1320	135																		
410	400	-	41,5	1350	138																		
420	408	-	42,4	1380	144																		
440	423	-	44,0	1430	146																		
450	430	-	44,8	1460	149																		
460	-	-	45,6	-	-																		
470	-	-	46,3	-	-																		
480	-	-	47,0	-	-																		
490	-	-	47,7	-	-																		
500	-	-	48,3	-	-																		
510	-	-	49,1	-	-																		
520	-	-	49,7	-	-																		
530	-	-	50,4	-	-																		
540	-	-	51,0	-	-																		
550	-	-	51,6	-	-																		
560	-	-	52,2	-	-																		
570	-	-	52,8	-	-																		

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