

## SELECTION GUIDE SPIS TREŚCI

**Forming Taps Wygniataki**

<b>M</b>	ISO metric coarse thread DIN 13 Gwint metryczny wg DIN 13
<b>MF</b>	ISO metric fine thread DIN 13 Gwint metryczny drobnoswojny wg DIN 13
<b>UNF</b>	Unified coarse thread ANSI B1.1 Gwint calowy zwykły wg ANSI B1.1

## TECHNICAL INFO INFORMACJA TECHNICZNA

INFO

Taps

Forming Taps

Hand Taps

Thread mill UFT

Tech-INFO

**Working Material** Material roboczy

- W** Steels with good machinability.  
Stale dobrej obrabialności  
Rm<850 N/mm<sup>2</sup>
- N** Heat treated and heat-resistant steels  
Stale żaroodporne  
Rm<850N/mm2 ≤Rm≤1,200N/mm2
- H** High alloyed steels  
Stale wysokostopowe  
Rm> 1,200N/mm2
- WN** Carbon steels with low contents of alloys  
Stale węglowe o niskiej zawartosci stopow  
Rm<700N/mm2
- VA** Stainless steels Carbon steels with low contents of alloys  
Stale nierdzewne oraz węglowe o niskiej zawartosci stopow  
Rm<700N/mm2
- Ti** Titanium alloys  
Stopy tytanu
- Ni** Nickel alloys  
Stopy niklu
- Cu** Brass  
Mosiądz
- GG** Grey Cast Iron  
Żeliwo szare
- Al** Aluminum & Aluminum alloys  
Aluminium i stopy aluminium
- UNI** Multi-Purpose  
Przeznaczenie rozne

**Coatings** Powłoki

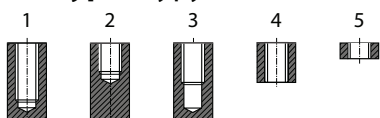
- BrT** Bright  
Bright
- Ni** Plasma Nitride  
Azotowanie plazmowe
- TiCN** Titanium Carbon Nitride  
Powłoka TiCN (cyjanek tytanu)
- Hardslck** TiAlN+WC/C-Coating  
Kombinacja powłok TiAlN+WC/C
- Ox** Steam Oxide  
Pasywacja
- TiN** Coating (Titanium Nitride)  
TiN - Powłoka TiN (azotek tytanu)
- TiAlN** Coating (Titanium Aluminium Nitride)  
Powłoka TiAlN/AlTiN (azotek glinowo – tytanowy)
- BE** Blue coating  
Niebieska powłoka
- VAP** VAP  
VAP

**Class of Thread** Klasa tolerancji gwintownika

- |      |        |       |         |        |         |        |   |
|------|--------|-------|---------|--------|---------|--------|---|
| 6HX  | 2B     | 6GX   | 6H      | 2BX    | 6H Mod. | 2/6H   | H |
| 2/6X | JIS 1b | JISII | JIS III | 3X/6GX | 2X/6HX  | 2X/6GX | G |

**Thread type** Rodzaj gwintu

- |             |            |            |            |           |           |            |
|-------------|------------|------------|------------|-----------|-----------|------------|
| <b>M</b>    | <b>MF</b>  | <b>UNC</b> | <b>UNF</b> | <b>W</b>  | <b>G</b>  | <b>NPT</b> |
| DIN13       | DIN13      | ASME B1.1  | ASME B1.1  | BS-84     |           |            |
| <b>NPTF</b> | <b>NPS</b> | <b>BSW</b> | <b>PF</b>  | <b>PS</b> | <b>PT</b> | <b>W</b>   |

**Hole types** Typy otworów


- 1 - Blind Hole up to 3 x D1 Otwór ślepy do 3xD1
- 2 - Blind Hole up to 1,5-2 x D1 Otwór ślepy do 1,5-2xD1
- 3 - Blind Hole up to 3 x D1 with oversized depth hole  
Otwór ślepy do 3xD1 z powiększoną głębokością
- 4 - Trough Hole up to 3 x D1 Otwór przelotowy do 3xD1
- 5 - Trough Hole up to 1,5-2 x D1 Otwór przelotowy do 1,5-2xD1

**Tool Material** Materiał narzędzia

- HSS PM** Powder Metallurgy HSS  
Stal szybkoobrotowa proszkowa
- HSS V3** High Vanadium HSS  
Wysokostopowa HH-V3, supertwarda
- HSS** High Speed Steel  
Stal szybkoobrotowa
- HSS-E** HSS-E  
HSS-E
- CRBD** Carbide  
Węglik
- SKS21** SKS21  
SKS21

**Chamfer** Nakrój

Set of Hand Taps Zestaw gwintowników ręcznych


**B** From C ( Chamfer Lead 2-3 Thread)

**C** From B ( With Gun-nose and Chamfer Lead 4-5 Thread)

TECHNICAL INFO INFORMACJA TECHNICZNA

Group Nr Nr grupy	Workable material Materiał obrabiany	HB	Rm N/mm <sup>2</sup>	HRC	Chip Wiór	Coolant Chłodzenie	
<b>10. Steels</b> Stale	1.1 Magnetic soft steels Stale miękkie magnetyczne	< 120	< 400		Extra long Bardzo długi	S	
	1.2 Structural steels, case carburizing steels Stale konstrukcyjne, stal do nawęglania	< 200	< 700		Medium Long Średni długi	S	
	1.3 Plain carbon steels Stale zwykłe węglowe	< 250	< 850	< 25	Long Długi	S	
	1.4 Alloy steels Stale stopowe	Hardened steels Stal hartowana	< 250	< 850	30-38	Long Długi	W
			< 350	< 1200	38-42	Long Długi	W
	1.6		> 350	> 1200	45-55	Long Długi	O
<b>20. Stainless Steels</b> Stale nierdzewne	2.1 Free machining Stale automatowe	< 250	< 850	< 22	Medium Średni	O	
	2.2 Austenitic Austenityczne	< 250	< 850	< 25	Long Długi	O	
	2.3 Ferritic, Ferritic-Austenitic, Martensitic Ferrytyczne, Ferrytyczno-austenityczne, martenzytyczne	< 300	< 1000	< 30	Long Długi	O	
<b>30. Cast Iron</b> Żeliwo szare	3.1 Grey Cast Iron Żeliwo szare	< 150	< 500		Extra short Bardzo krótki	O / S	
		< 300	< 1000	< 30	Extra short Bardzo krótki	S	
	3.3 Nodular graphite, Malleable cast irons Żeliwo ciągliwe, sferoidalne	< 200	< 700		Shortt Krótki	S	
		< 300	< 1000	< 30	Shortt Krótki	S	
<b>40. Titaniums</b> Tytany	4.1 Titanium, unalloyed Tytan niestopowy	< 200	< 900	< 27	Extra short Bardzo krótki	O / S	
	4.2 Titanium, alloyed Tytan stopowy	< 270	< 900	< 27	Medium Shortt Średni Krótki	O	
		< 350	< 1250	< 40	Medium Shortt Średni Krótki	O	
<b>50. Nickels</b> Nikle	5.1 Nickel, unalloyed Nikiel niestopowy	< 150	< 500		Extra long Bardzo długi	O	
	5.2 Nickel, alloyed Nikiel stopowy	< 270	< 900	< 27	Long Długi	O	
		< 350	< 1250	< 40	Long Długi	O	
<b>60. Copper, Brass, Bronze</b> Miedź, Mosiądz, Brąz	6.1 Copper, unalloyed Miedź, niestopowa	< 100	< 350		Extra short Bardzo krótki	S	
	6.2 Shortt chipping Brass, Bronze, Copper Miedź, Mosiądz krótki wiór, Brąz	< 200	< 700		Medium Shortt Średni Krótki	S	
	6.3 Long chipping Brass, Bronze, Copper Miedź, Mosiądz, Brąz długi wiór	< 200	< 700		Long Długi	O / S	
	6.4 AMPCO (Cu-Al-Fe alloys) (stopy Cu-Al.-Fe)	< 470	< 1500	< 47	Shortt Krótki	O	
<b>70. Aluminiums</b> Aluminium	7.1 Aluminium, Megnesium, unalloyed Aluminium, Magnez, bezstopowe	< 100	< 350		Extra long Bardzo długi	S	
	7.2 Aluminium, alloyed Stopy aluminium Si<0,5%	< 150	< 500		Medium Średni	S	
	7.3 Aluminium, alloyed Stopy aluminium Si<10%	< 120	< 400		Medium Shortt Średni Krótki	S	
	7.4 Aluminium, alloyed Stopy aluminium Si>10%	< 120	< 400		Shortt Krótki	S	
<b>80. Synthetic materials</b> Tworzywa sztuczne	8.1 Thermoplastics Tworzywa termoplastyczne	< 340	< 50		Extra long Bardzo długi	S	
	8.2 Thermosetting Plastics Plastiki termoutwardzalne		< 110		Shortt Krótki	D / S	
	8.3 Reinforced plastic materials Wzmocnione materiały plastikowe		< 1500	< 47	Extra short Bardzo krótki	D / S	

Coolant Chłodzenie

- S** - Oil Emulsion Emulsja olejowa
- O** - Cutting Oil Olej obróbczy
- D** - Dry Na sucho

- W** - Oil Emulsion / Cutting Oil Emulsja olejowa / Olej obróbczy
- D** - Dry Na sucho

Chip Wiór

- XL** - Long Długi
- M** - Medium Średni
- Sh** - Shortt Krótki

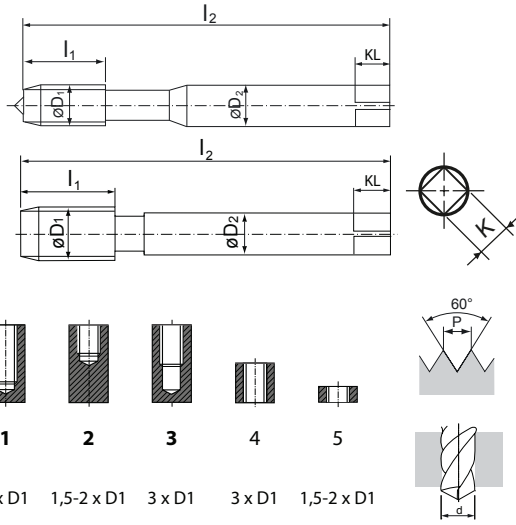
- XS** - Extra short Bardzo krótki

FORMING TAPS WYGNIAKAKI

# UNF

Unified coarse thread ANSI B1.1

Gwint calowy zwykly ANSI B1.1



HSS-E

Brt

2B

B

DIN

4-5

O

D1		P	L1	L2	D2	K	KL	d1	EDP	SCJ54				
<b>DIN 371</b>														
#4	x	48	12	56	4	3		2.40	182	•				
#6	x	40	14	70	6	4.9		2.90	262	•				
#8	x	36	13	70	6	4.9		3.50	302	•				
#10	x	32	13	80	6	4.9		4.10	342	•				
1/4"	x	28	17	90	8	6.2		5.50	422	•				
5/16"	x	24	18	100	10	8		6.90	462	•				
3/8"	x	24	18	110	12	9		8.50	502	•				
<b>DIN 374</b>														
7/16"	x	20	22	100	9	7		9.90	542	•				
1/2"	x	20	22	100	11	9		11.50	582	•				
9/16"	x	18	22	100	12	9		12.90	622	•				
5/8"	x	18	25	110	14	11		14.50	662	•				
3/4"	x	16	25	125	16	12		17.50	722	•				

	Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
N/mm²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Vc m/min	25-20	15-20	12-18	10-15	6-10	3-5	7-10	5-8	4-6	10-15	5-8	10-15	5-8	10-15	8-12
	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
N/mm²	Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
Vc m/min	4-6	8-12	10-15	2-4	8-12	25-35	15-20	3-5	10-15	25-35	15-20	10-15	20-30	8-12	5-7

INFO

Taps

Forming Taps

Hand Taps

Thread mill UFT

Tech-INFO

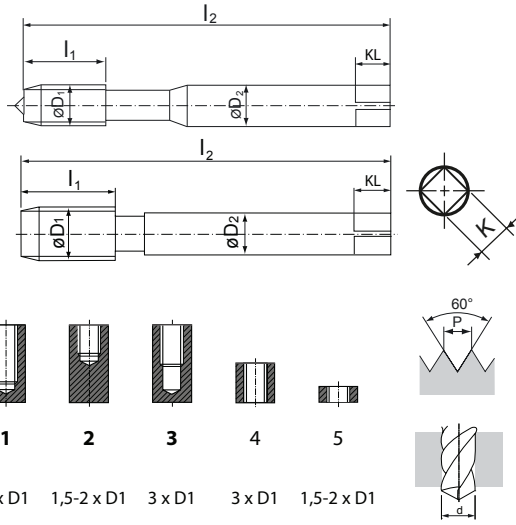
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# FORMING TAPS WYGNIATAKI

## M

### ISO Metric coarse threads DIN 13

Gwint metryczny zwykły ISO DIN 13



HSS-E	HSS-E	HSS-E	HSS-E	HSS-E
TiAlN	TiN	TiN	TiN	Ni
2X/6HX	2X/6HX	3X/6GX	2X/6HX	2X/6HX
C	C	C	B	B
DIN	DIN	DIN	DIN	DIN
1-2-3-4-5	1-2-3-4-5	1-2-3-4-5	1-2-3-4-5	1-2-3-4-5
O	O	O	O	O

D1	P	L1	L2	D2	K	KL	d1	EDP	SYH03	SDH03	SDH13	SDH23	SEH03
<b>DIN 371</b>													
M2	x	0.4	8	45	2.8	2.1	1.60	136	•	•	•	•	•
M2.2	x	0.45	8	45	2.8	2.1	1.75	156	•	•	•	•	•
M2.3	x	0.4	8	45	2.8	2.1	1.90	196	•	•	•	•	•
M2.5	x	0.45	9	50	2.8	2.1	2.10	176	•	•	•	•	•
M2.6	x	0.45	9	50	2.8	2.1	2.20	496	•	•	•	•	•
M3	x	0.5	11	56	3.5	2.7	2.50	206	•	•	•	•	•
M3.5	x	0.6	12	56	4	3	2.90	226	•	•	•	•	•
M4	x	0.7	13	63	4.5	3.4	3.30	246	•	•	•	•	•
M4.5	x	0.75	14	70	6	4.9	3.80	266	•	•	•	•	•
M5	x	0.8	15	70	6	4.9	4.20	286	•	•	•	•	•
M6	x	1	17	80	6	4.9	5.00	316	•	•	•	•	•
M7	x	1	17	80	7	5.5	6.00	346	•	•	•	•	•
M8	x	1.25	20	90	8	6.2	6.80	366	•	•	•	•	•
M9	x	1.25	20	90	9	7	7.80	396	•	•	•	•	•
<b>DIN 376</b>													
M10	x	1.5	22	100	10	8	8.50	426	•	•	•	•	•
M11	x	1.5	22	100	8	6.2	9.50	466	•	•	•	•	•
M12	x	1.75	24	110	9	7	10.30	506	•	•	•	•	•
M14	x	2	26	110	11	9	12.00	546	•	•	•	•	•
M16	x	2	27	110	12	9	14.00	606	•	•	•	•	•
M18	x	2.5	30	125	14	11	15.50	656	•	•	•	•	•
M20	x	2.5	32	140	16	12	17.50	706	•	•	•	•	•

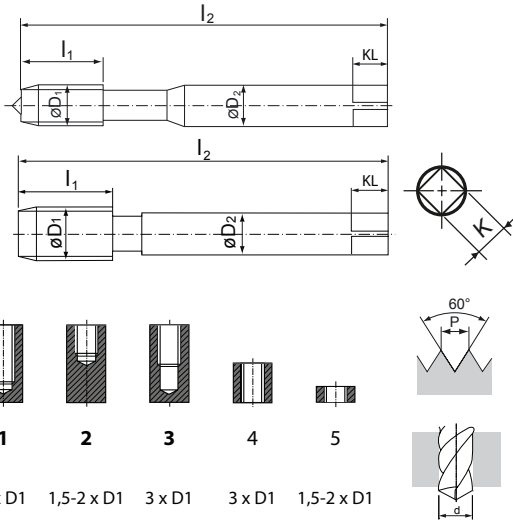
	Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
N/mm²	25-20	15-20	12-18	10-15	6-10	3-5	7-10	5-8	4-6	10-15	5-8	10-15	5-8	10-15	8-12
Vc m/min	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
N/mm²	4-6	8-12	10-15	2-4	8-12	25-35	15-20	3-5	10-15	25-35	15-20	10-15	20-30	8-12	5-7
Vc m/min	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

**FORMING TAPS WYGNIATAKI**

**M**

**ISO Metric coarse threads DIN 13**

Gwint metryczny zwykły ISO DIN 13



HSS-E	HSS-E	HSS PM	HSS PM
Ni	Ni	VAP	VAP
3X/6GX	2X/6HX	2X/6HX	2X/6HX
C	C	C	B
DIN	DIN	DIN	DIN
1-2-3-4-5	1-2-3-4-5	1-2-3-4-5	1-2-3-4-5

O O O O

D1	P	L1	L2	D2	K	KL	d1	EDP	SEH13	SEH23	SQA23	SQH03
<b>DIN 371</b>												
M2	x	0.4	8	45	2.8	2.1	1.60	136	.	.	.	.
M2.2	x	0.45	8	45	2.8	2.1	1.75	156	.	.	.	.
M2.3	x	0.4	8	45	2.8	2.1	1.90	196	.	.	.	.
M2.5	x	0.45	9	50	2.8	2.1	2.10	176	.	.	.	.
M2.6	x	0.45	9	50	2.8	2.1	2.20	496	.	.	.	.
M3	x	0.5	11	56	3.5	2.7	2.50	206	.	.	.	.
M3.5	x	0.6	12	56	4	3	2.90	226	.	.	.	.
M4	x	0.7	13	63	4.5	3.4	3.30	246	.	.	.	.
M4.5	x	0.75	14	70	6	4.9	3.80	266	.	.	.	.
M5	x	0.8	15	70	6	4.9	4.20	286	.	.	.	.
M6	x	1	17	80	6	4.9	5.00	316	.	.	.	.
M7	x	1	17	80	7	5.5	6.00	346	.	.	.	.
M8	x	1.25	20	90	8	6.2	6.80	366	.	.	.	.
M9	x	1.25	20	90	9	7	7.80	396	.	.	.	.
<b>DIN 376</b>												
M10	x	1.5	22	100	10	8	8.50	426	.	.	.	.
M11	x	1.5	22	100	8	6.2	9.50	466	.	.	.	.
M12	x	1.75	24	110	9	7	10.30	506	.	.	.	.
M14	x	2	26	110	11	9	12.00	546	.	.	.	.
M16	x	2	27	110	12	9	14.00	606	.	.	.	.
M18	x	2.5	30	125	14	11	15.50	656	.	.	.	.
M20	x	2.5	32	140	16	12	17.50	706	.	.	.	.

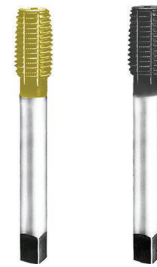
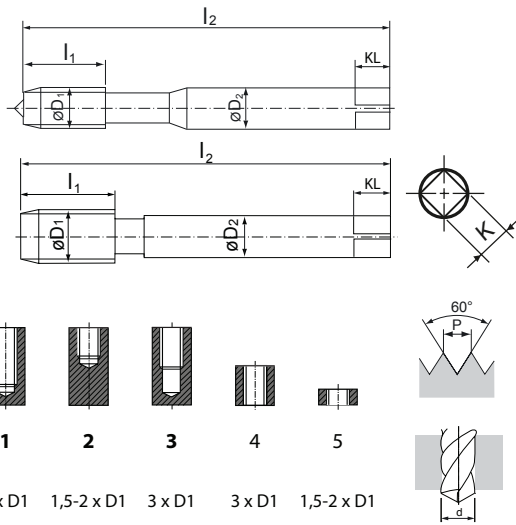
	Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
N/mm²	25-20	15-20	12-18	10-15	6-10	3-5	7-10	5-8	4-6	10-15	5-8	10-15	5-8	10-15	8-12
Vc m/min	4-6	8-12	10-15	2-4	8-12	25-35	15-20	3-5	10-15	25-35	15-20	10-15	20-30	8-12	5-7

**FORMING TAPS WYGNIATAKI**

**MF**

**ISO Metric coarse threads DIN 13**

Gwint metryczny zwykły ISO DIN 13



HSS-E	HSS-E
TiN	Ni
2X/6HX	2X/6HX
C	C
DIN	DIN

**1-2-3-4-5 1-2-3-4-5**

O O

D1		P	L1	L2	D2	K	KL	d1	EDP	SDH33	SEH33		
<b>DIN 374</b>													
M4	x	0.5	10	63	2.8	2.1		3.50	<b>256</b>	•	•		
M5	x	0.5	11	70	3.5	2.7		4.50	<b>296</b>	•	•		
M6	x	0.75	13	80	4.5	3.4		5.30	<b>326</b>	•	•		
M6	x	0.5	13	80	4.5	3.4		5.50	<b>336</b>	•	•		
M7	x	0.75	14	80	5.5	4.3		6.30	<b>356</b>	•	•		
M8	x	1	17	90	6	4.9		7.00	<b>376</b>	•	•		
M8	x	0.75	14	80	6	4.9		7.30	<b>386</b>	•	•		
M10	x	1.25	22	100	7	5.5		8.80	<b>436</b>	•	•		
M10		1	18	90	7	5.5		9.00	<b>446</b>	•	•		
M10		0.75	18	90	7	5.5		9.30	<b>456</b>	•	•		
M12		1.5	22	100	9	7		10.50	<b>516</b>	•	•		
M12		1.25	22	100	9	7		10.80	<b>526</b>	•	•		
M12		1	18	100	9	7		11.00	<b>536</b>	•	•		
M14		1.5	22	100	11	9		12.50	<b>556</b>	•	•		
M14		1.25	22	100	11	9		12.90	<b>566</b>				
M16		1.5	22	100	12	9		14.50	<b>616</b>				
M18		1.5	25	110	14	11		16.50	<b>676</b>				
M20		1.5	25	125	16	12		18.50	<b>726</b>				

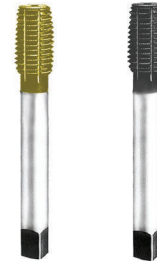
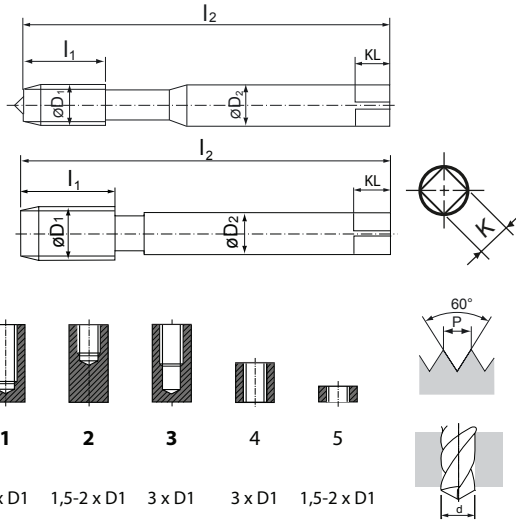
	Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
N/mm²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Vc m/min	25-20	15-20	12-18	10-15	6-10	3-5	7-10	5-8	4-6	10-15	5-8	10-15	5-8	10-15	8-12
N/mm²	Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
Vc m/min	4-6	8-12	10-15	2-4	8-12	25-35	15-20	3-5	10-15	25-35	15-20	10-15	20-30	8-12	5-7

FORMING TAPS WYGNIATAKI

MF

ISO Metric coarse threads DIN 13

Gwint metryczny zwykły ISO DIN 13



HSS-E	HSS-E
TiN	Ni
2BX	2BX
C	C
1-2-3-4-5	1-2-3-4-5
DIN	DIN

O O

D1		P	L1	L2	D2	K	KL	d1	EDP	SDH04	SEH04		
<b>DIN 371</b>													
#5	x	40UNC	11	56	3.5	2.7		2.60	<b>202</b>	•	•		
#6	x	32UNC	12	56	4	3		2.80	<b>242</b>	•	•		
#8	x	32UNC	13	63	4.5	3.4		3.40	<b>282</b>	•	•		
#10	x	24UNC	15	70	6	4.9		3.90	<b>322</b>	•	•		
#12	x	24UNC	16	80	6	4.9		4.50	<b>362</b>	•	•		
1/4"	x	20UNC	17	80	7	5.5		5.20	<b>402</b>	•	•		
3/8"	x	16UNC	22	100	9	7		8.00	<b>482</b>	•	•		
<b>DIN 376</b>													
5/16"	x	18UNC	20	90	8	6.2		6.60	<b>442</b>	•	•		
7/16"	x	14UNC	22	100	8	6.2		9.40	<b>522</b>	•	•		
1/2"	x	13UNC	25	110	9	7		10.75	<b>562</b>	•	•		
9/16"	x	12UNC	26	110	11	9		12.25	<b>602</b>	•	•		
5/8"	x	11UNC	27	110	12	9		13.50	<b>642</b>	•	•		
3/4"	x	10UNC	30	125	14	11		16.50	<b>702</b>	•	•		

	Steel < 400	Steel < 700	Steel < 850	St. Alloy < 850	St. Alloy ≤ 1200	St. Alloy > 1200	INOX Free < 850	INOX Aust. < 850	INOX < 1000	GG Cast < 500	GG Cast < 1000	GGG Cast < 700	GGG Cast < 1000	Ti < 700	Ti Alloy < 900
N/mm²	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Vc m/min	25-20	15-20	12-18	10-15	6-10	3-5	7-10	5-8	4-6	10-15	5-8	10-15	5-8	10-15	8-12
	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
N/mm²	Ti Alloy ≤ 1300	Ni < 500	Ni Alloy < 900	Ni Alloy ≤ 1400	Cu < 350	Cu Alloy Short	Cu Alloy Long	Cu-Al-Fe < 1500	Al / Mg < 350	Al Wrought	Al Si ≤ 10%	Al Si > 10%	Plastic Thermosoft	Plastic Thermoset	Plastic FRP
Vc m/min	4-6	8-12	10-15	2-4	8-12	25-35	15-20	3-5	10-15	25-35	15-20	10-15	20-30	8-12	5-7

INFO

Taps

Forming Taps

Hand Taps

Thread mill UFT

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## TECHNICAL INFORMATION INFORMACJA TECHNICZNA

## HARDNESS CONVERSION TABLE TABELA PRZELICZANIA TWARDOŚCI

Rm [N/mm2]	HV 10	HB	HRC
240	75	71	
255	80	76	
270	85	81	
285	90	86	
305	95	90	
320	100	95	
335	105	100	
350	110	105	
370	115	109	
385	120	114	
400	125	119	
415	130	124	
430	135	128	
450	140	133	
465	145	138	
480	150	143	
495	155	147	
510	160	152	
530	165	157	
545	170	162	
560	175	166	
575	180	171	
595	185	176	
610	190	181	
625	195	185	
640	200	190	
660	205	195	
675	210	199	
690	215	204	
705	220	209	
720	225	214	
740	230	219	
755	235	223	
770	240	228	
785	245	233	
800	250	238	22
820	255	242	23
835	260	247	24
860	268	255	25
870	272	258	26
900	280	266	27
920	287	273	28
940	293	278	29
970	302	287	30
995	310	295	31
1020	317	301	32
1050	327	311	33
1080	336	319	34
1110	345	328	35

Rm [N/mm2]	HV 10	HB	HRC
1140	355	337	36
1170	364	346	37
1200	373	354	38
1230	382	363	39
1260	392	372	40
1300	403	383	41
1330	413	393	42
1360	423	402	43
1400	434	413	44
1440	446	424	45
1480	458	435	46
1530	473	449	47
1570	484	460	48
1620	497	472	49
1680	514	488	50
1730	527	501	51
1790	544	517	52
1845	560	532	53
1910	578	549	54
1980	596	567	55
2050	615	584	56
2140	639	607	57
	655	622	58
	675		59
	698		60
	720		61
	745		62
	773		63
	800		64
	829		65
	864		66
	900		67
	940		68



## TECHNICAL INFORMATION INFORMACJA TECHNICZNA

## RECOMMENDED TAP DRILL SIZE TABELA DOBORU ŚREDNICY GWINTOWNIKA

Metric-ISO threads coarse pitch Gwint metryczny zwykły ISO			
UNC	T.P.I	Max. core dia Maks. śred	Drill size Średnica wierćła
#1	64	1.585	1.50
#2	56	1.872	1.80
#3	48	2.146	2.10
#4	40	2.385	2.30
#5	40	2.697	2.60
#6	32	2.896	2.85
#8	32	3.528	3.50
#10	24	3.950	3.90
#12	24	4.590	4.50
1/4"	20	5.250	5.20
5/16"	18	6.680	6.60
3/8"	16	8.082	8.00
7/16"	14	9.441	9.40
1/2"	13	10.881	10.75
9/16"	12	12.301	12.25
5/8"	11	13.693	13.50
3/4"	10	16.624	16.50
7/8"	9	19.520	19.50
1"	8	22.344	22.25
1*1/8"	7	25.082	25.00
1*1/4"	7	28.258	28.25
1*3/8"	6	30.851	30.75
1*1/2"	6	34.026	34.00
1*3/4"	5	39.560	39.50
2"	4.5	45.367	45.25

Metric-ISO threads coarse pitch Gwint metryczny zwykły ISO			
UNF	T.P.I	Max. core dia Maks. śred	Drill size Średnica wierćła
#0	80	1.306	1.30
#1	72	1.613	1.60
#2	64	1.913	1.90
#3	56	2.197	2.10
#4	48	2.459	2.40
#5	44	2.741	2.70
#6	40	3.012	3.00
#8	36	3.597	3.50
#10	32	4.168	4.10
#12	28	4.717	4.70
1/4"	28	5.563	5.50
5/16"	24	6.995	6.90
3/8"	24	8.565	8.50
7/16"	20	9.947	9.90
1/2"	20	11.524	11.50
9/16"	18	12.969	12.90
5/8"	18	14.554	14.50
3/4"	16	17.546	17.50
7/8"	14	20.493	20.50
1"	12	23.363	23.25
1*1/8"	12	26.538	26.50
1*1/4"	12	29.713	29.50
1*3/8"	12	32.888	32.70
1*1/2"	12	36.063	36.00

**TECHNICAL INFORMATION INFORMACJA TECHNICZNA**

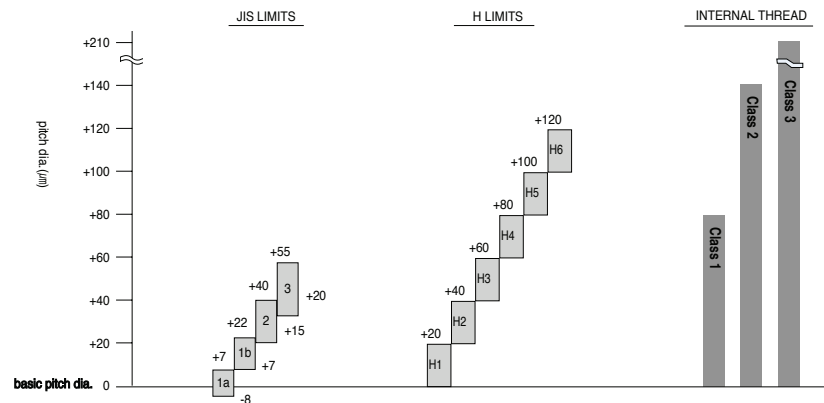
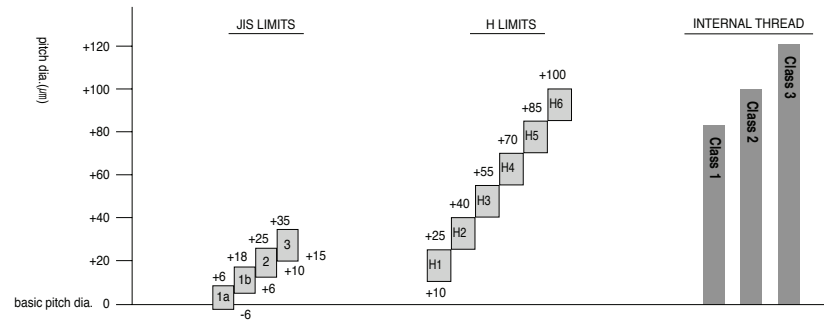
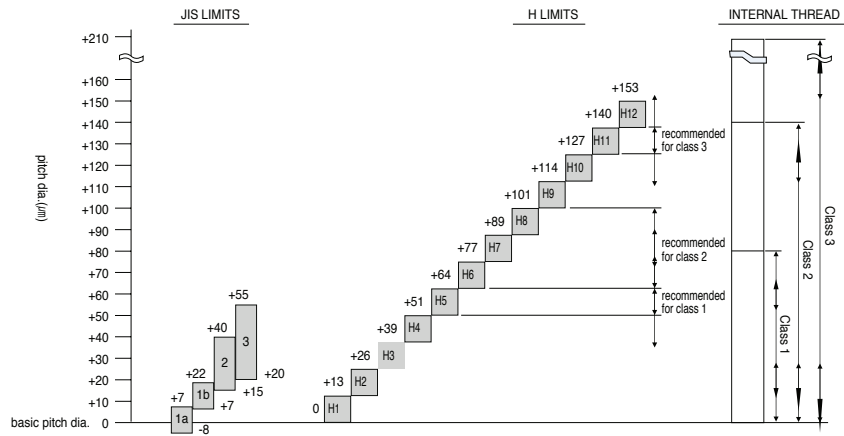
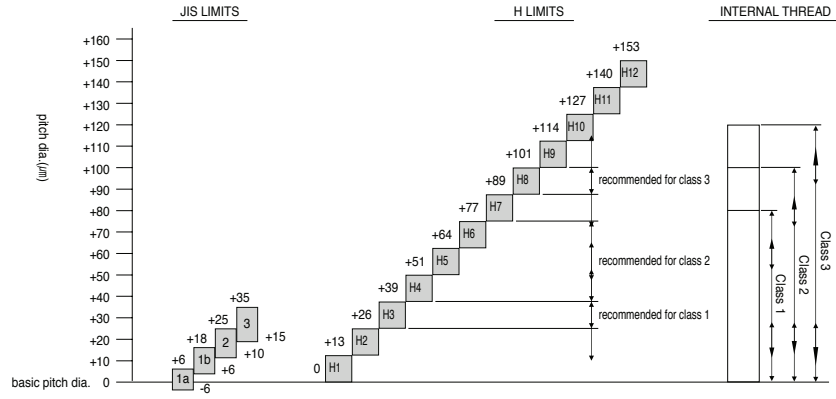
RECOMMENDED TAP DRILL SIZE TABELA DOBORU ŚREDNICY GWINTOWNIKA

<b>Metric-ISO threads coarse pitch</b> Gwint metryczny zwykły ISO			
<b>G(BSP)</b>	<b>T.P.I</b>	<b>Max. core dia</b> Maks. śred	<b>Dill size</b> Srednica wiertła
#0	80	1.306	1.30
#1	72	1.613	1.60
#2	64	1.913	1.90
#3	56	2.197	2.10
#4	48	2.459	2.40
#5	44	2.741	2.70
#6	40	3.012	3.00
#8	36	3.597	3.50
#10	32	4.168	4.10
#12	28	4.717	4.70
1/4"	28	5.563	5.50
5/16"	24	6.995	6.90
3/8"	24	8.565	8.50
7/16"	20	9.947	9.90
1/2"	20	11.524	11.50
9/16"	18	12.969	12.90
5/8"	18	14.554	14.50
3/4"	16	17.546	17.50
7/8"	14	20.493	20.50
1"	12	23.363	23.25
1*1/8"	12	26.538	26.50
1*1/4"	12	29.713	29.50
1*3/8"	12	32.888	32.70
1*1/2"	12	36.063	36.00

<b>Metric-ISO threads coarse pitch</b> Gwint metryczny zwykły ISO			
<b>BSW</b>	<b>T.P.I</b>	<b>Max. core dia</b> Maks. śred	<b>Dill size</b> Srednica wiertła
3/32"	48	1.910	1.80
1/8"	40	2.590	2.50
5/32"	32	3.211	3.10
3/16"	24	3.743	3.60
7/32"	24	4.538	4.40
1/4"	20	5.224	5.10
5/16"	18	6.661	6.50
3/8"	16	8.052	7.90
7/16"	14	9.379	9.30
1/2 "	12	10.610	10.50
9/16"	12	12.176	12.00
5/8"	11	13.598	13.50
3/4"	10	16.538	16.50
7/8"	9	19.411	19.25
1"	8	22.185	22.00
1*1/8"	7	24.879	24.75
1*1/4"	7	28.054	27.75
1*3/8"	6	30.555	30.50
1*1/2"	6	33.730	33.50
1*5/8"	5	35.921	35.50
1*3/4"	5	39.096	39.00
1*7/8"	4.5	41.648	41.50
2"	4.5	44.823	44.50
2*1/4"	4	50.420	50.00
2*1/2"	4	56.770	56.50
2*3/4"	3.5	62.108	62.00
3"	3.5	68.459	68.50

TECHNICAL INFORMATION INFORMACJA TECHNICZNA

INFO  
Taps  
Forming Taps  
Hand Taps  
Thread mill UFT  
Tech-INFO



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