

TOOLS FOR THREADS



2018

BEST CHOICE

MACHINE TAPS



Tool Factory FANAR Joint Stock Company is a leading manufacturer of cutting tools for threading. Near 50 years we focus on innovation, quality and continuous development. In the last two years FANAR made several investments in modern machinery for the production of taps and measuring devices. We definitely improved the quality management achieving strong increase in quality stability of taps.

We are producer with global reach

Our tools are distributed to more than 40 countries. More and more recognizable brand of producer of the highest quality allows for further international expansion. Looking for tools of the highest quality thread take advantage of our global distribution network. The current list of official distributors available on the www.fanar.eu

Dear Clients

we give you to use compacted version of the catalogue of our products The **BEST CHOICE** for 2018.

We wish you a successful and reliable cooperation with our company.



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Execution		Execution-flutes		Material	
IK	Internal cooling	B	Straight flutes	HSS	High speed molibden steel
IKR	Radial internal cooling		Straight flutes with spiral point	HSSE	High speed cobalt steel
SR	Oil flutes	R	Right spiral flutes	HSSE PM	High speed powder steel. <i>Applied up to 16mm diameter, over for request</i>
SPN	Spiral point			VHM	Micrograin solid carbide



Detailed information about materials on the website on www.fanar.eu the bookmark "Technical information"

Annealed	A			
Tempered	QT			
Hardened and tempered	HT			
Precipitation hardened	PH			

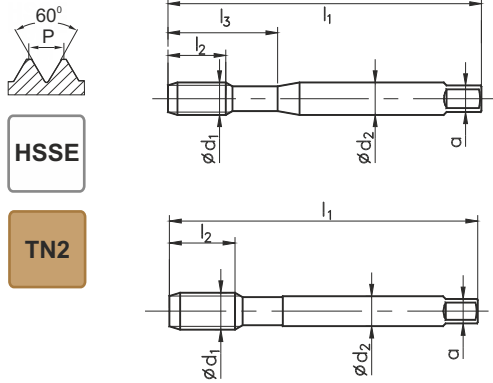
Group				Rm	HB		
Steel							
P	P1	Non-alloyed steel	Free cutting steel	A	750	220	P1
	P2		C ≤ 0,55 %	A	650	190	P2
	P3		C > 0,55 %	A	650	190	P3
	P4		C ≤ 0,55 %	QT	700	210	P4
	P5		C > 0,55 %	QT	1000	300	P5
	P6	Low-alloyed steel		A	600	175	P6
	P7			QT	1000	300	P7
	P8			QT	1200	380	P8
	P9			QT	1400	420	P9
	P10			A	700	210	P10
	P11	High-alloyed steel and high-alloyed tool steel		A	1000	300	P11
	P12			HT	1400	420	P12
	P13	Stainless steel	Ferritic/martensitic	A	700	210	P13
	P14		Martensitic	QT	1100	330	P14
Stainless steel							
M	M1	Stainless steel	Austenitic		700	210	M1
	M2		Austenitic	PH	1000	300	M2
	M3		Duplex		800	240	M3
Cast iron							
K	K1	Grey cast iron	Ferritic		600	180	K1
	K2		Pearlitic		820	240	K2
	K3	Malleable cast iron	Ferritic		675	200	K3
	K4		Pearlitic		870	260	K4
	K5	Cast iron with spheroidal graphite	Ferritic		520	155	K5
	K6		Pearlitic		900	270	K6
Non-ferrous metals							
N	N1	Aluminium wrought alloys			-	30	N1
	N2			PH	345	10	N2
	N3	Cast aluminium alloys	Si ≤ 12%		260	75	N3
	N4		Si ≤ 12%	PH	300	90	N4
	N5		Si > 12%		450	130	N5
	N6	Magnesium alloys			250	70	N6
	N7	Copper and copper alloys	Non-alloyed Brass		350	100	N7
	N8		bronze Cu-alloys		300	90	N8
	N9		short-chipping		400	110	N9
	N10		High-strength		1000	300	N10
Superalloys and titanium							
S	S1	Heat-resistant alloys	Fe-based	A	675	200	S1
	S2			PH	950	280	S2
	S3		Ni / Co base	A	850	250	S3
	S4			PH	1200	350	S4
	S5		C	1100	320	S5	
	S6	Titanium alloys	Pure titanium		675	200	S6
	S7		α and β alloys		1250	375	S7
	S8		β alloys		1400	410	S8
Hard materials							
H	H1	Hardened steel		HT		50 HRC	H1
	H2		HT		55 HRC	H2	
	H3		HT		60 HRC	H3	
	H4		HT		55 HRC	H4	

ISO Metric thread DIN-13										MASTER TAP					
<p>HSSE PM</p> <p>HL</p>										B-HL	B-IKR-HL	C-R45-HL	C-R45-IK-HL	E-R45-HL	E-R45-IK-HL
Material groups															
Hole type															
Coating										HL	HL	HL	HL	HL	HL
Chamfer										HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM	HSSE-PM
Tolerance										B / 4-5P	B / 4-5P	C / 2-3P	C / 2-3P	E / 1,5-2P	E / 1,5-2P
M d ₁	P	l ₁	l ₂	l ₃	d ₂	a		DIN-371							
								Norm	6HX	6HX	6HX	6HX	6HX	6HX	
								INDEX	C4-118M01	C4-118M61	C4-528M01	C4-528M51	C4-718M01	C4-718M51	
M3	0,50	56	5	18	3,5	2,7	2,50	0030	●	-	●	-	●	-	
M3,5	0,60	56	6	20	4,0	3,0	2,90	0035	●	-	●	-	●	-	
M4	0,70	63	7	21	4,5	3,4	3,30	0040	●	-	●	-	●	-	
M4,5	0,75	70	7,5	25	6,0	4,9	3,80	0045	●	-	●	-	●	-	
M5	0,80	70	8	25	6,0	4,9	4,20	0050	●	●	●	●	●	○	
M6	1,00	80	10	30	6,0	4,9	5,00	0060	●	●	●	●	●	○	
M7	1,00	80	10	30	7,0	5,5	6,00	0070	●	○	○	○	○	○	
M8	1,25	90	13	35	8,0	6,2	6,80	0080	●	●	●	●	●	○	
M9	1,25	90	13	35	9,0	7,0	7,80	0090	○	○	○	○	○	○	
M10	1,50	100	15	39	10,0	8,0	8,50	0100	●	●	●	●	●	○	
M d ₁	P	l ₁	l ₂	l ₃	d ₂	a		DIN-376							
								Norm	D4-118M01	D4-118M61	D4-528M01	D4-528M51	D4-718M01	D4-718M51	
								INDEX	D4-118M01	D4-118M61	D4-528M01	D4-528M51	D4-718M01	D4-718M51	
M 12	1,75	110	18		9	7	10,2	0120	●	●	●	●	●	●	
M 14	2	110	20		11	9	12	0140	●	●	●	●	●	●	
M 16	2	110	20		12	9	14	0160	●	●	●	●	●	●	
M d ₁	P	l ₁	l ₂	d ₂	a		DIN-374								
							Norm	D4-118M01	D4-118M61	D4-528M01	D4-528M51	D4-718M01	D4-718M51		
								INDEX	D4-118M01	D4-118M61	D4-528M01	D4-528M51	D4-718M01	D4-718M51	
M 8 x 1	1	90	10	6	4,9	7,0		0083	●	○	●	○	●	○	
M 10 x 1	1	90	10	7	5,5	9,0		0103	●	○	●	○	●	○	
M 10 x 1,25	1,25	100	15	7	5,5	8,8		0104	●	○	●	○	●	○	
M 12 x 1,5	1,5	100	15	9	7	10,5		0125	●	○	●	○	●	○	
M 14 x 1,5	1,5	100	15	11	9	12,5		0145	●	○	●	○	●	○	
M 16 x 1,5	1,5	100	15	12	9	14,5		0165	●	○	●	○	●	○	
ISO										Vc (m/min)					
P										5-40	5-50	5-40	5-50	5-40	5-50
M										5-15	5-25	5-15	5-25	5-15	5-25
K										10-30	10-50	10-30	10-50	10-30	10-50
N										10-30	10-50	10-30	10-50	10-30	10-50
S										1-8	1-8	1-8	1-8	1-8	1-8

M

MF

ISO Metric thread DIN-13



HSSE

TN2

800X

800

C-TN2

B-TN2

C-R40-TN2

B

C



Material groups



Hole type



Coating

HSSE

HSSE

HSSE

HSSE

HSSE

Chamfer

TN2

TN2

TN2

-

-

Tolerance

C / 2-3P

B / 4-5P

C / 2-3P

B / 4-5P

C / 2-3P

M

M d ₁	P	l ₁	l ₂	R40	l ₃	d ₂	a		DIN-371					
									Norm	DIN-371				
									Tol.	6H	6H	6H	6HX	6HX
INDEX	C2-123X01	C2-113X01	C2-513X01	C2-111101	C2-511101									
M3	0,50	56	10	5	18	3,5	2,7	2,50	0030	●	●	●	●	●
M3,5	0,60	56	12	6	20	4,0	3,0	2,90	0035	●	●	●	●	●
M4	0,70	63	12	7	21	4,5	3,4	3,30	0040	●	●	●	●	●
M4,5	0,75	70	14	7,5	25	6,0	4,9	3,80	0045	●	●	●	●	●
M5	0,80	70	14	8	25	6,0	4,9	4,20	0050	●	●	●	●	●
M6	1,00	80	18	10	30	6,0	4,9	5,00	0060	●	●	●	●	●
M7	1,00	80	18	10	30	7,0	5,5	6,00	0070	●	●	●	●	●
M8	1,25	90	20	13	35	8,0	6,2	6,80	0080	●	●	●	●	●
M9	1,25	90	20	13	35	9,0	7,0	7,80	0090	●	●	●	●	●
M10	1,50	100	20	15	39	10,0	8,0	8,50	0100	●	●	●	●	●

M d ₁	P	l ₁	l ₂	R40	l ₃	d ₂	a		DIN-376					
									Norm	DIN-376				
									INDEX	D2-123X01	D2-113X01	D2-513X01	D2-111101	D2-511101
M 12	1,75	110	24	18	-	9	7	10,2	0120	●	●	●	●	●
M 14	2	110	25	20	-	11	9	12	0140	●	●	●	●	●
M 16	2	110	32	20	-	12	9	14	0160	●	●	●	●	●

MF

M d ₁	P	l ₁	R40	l ₂	d ₂	a		DIN-374					
								Norm	DIN-374				
								INDEX	D2-123X01	D2-113X01	D2-513X01	D2-111101	D2-511101
M 8 x 1	1	90	10	20	6	4,9	7,0	0083	●	●	●	●	●
M 10 x 1	1	90	10	20	7	5,5	9,0	0103	●	●	●	●	●
M 10 x 1,25	1,25	100	15	20	7	5,5	8,8	0104	●	●	●	●	●
M 12 x 1,5	1,5	100	15	20	9	7	10,5	0125	●	●	●	●	●
M 14 x 1,5	1,5	100	15	20	11	9	12,5	0145	●	●	●	●	●
M 16 x 1,5	1,5	100	15	20	12	9	14,5	0165	●	●	●	●	●

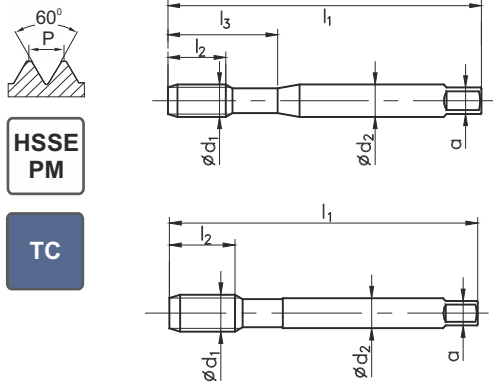
ISO	Vc (m/min)				
P	5-35	5-35	5-35	5-20	5-20
M	5-15	5-15	5-15	-	-
K	5-25	5-25	10-25	5-15	5-15
N	10-30	10-30	10-30	5-25	5-25
S	-	-	-	-	-

ISO Metric thread DIN-13										INOX																					
 										B-HL	C-R40-HL	B	C-R40																		
Material groups																															
Hole type																															
Coating										HSSE					HSSE					HSSE					HSSE						
Chamfer										HL					HL					-					-						
Tolerance										B / 4-5P					C / 2-3P					B / 4-5P					C / 2-3P						
										Norm										DIN-371											
M	d ₁	P	l ₁	l ₂	R40	l ₃	d ₂	a		INDEX	C2-118801	C2-518801	C2-111801	C2-511801	6H	6H	6H	6H	0030	●	●	●	●								
M3	0,50	56	10	5	18	3,5	2,7	2,50		0030	●	●	●	●	6H	6H	6H	6H	0030	●	●	●	●								
M4	0,70	63	12	7	21	4,5	3,4	3,30		0040	●	●	●	●	6H	6H	6H	6H	0040	●	●	●	●								
M5	0,80	70	14	8	25	6,0	4,9	4,20		0050	●	●	●	●	6H	6H	6H	6H	0050	●	●	●	●								
M6	1,00	80	18	10	30	6,0	4,9	5,00		0060	●	●	●	●	6H	6H	6H	6H	0060	●	●	●	●								
M8	1,25	90	20	13	35	8,0	6,2	6,80		0080	●	●	●	●	6H	6H	6H	6H	0080	●	●	●	●								
M10	1,50	100	20	15	39	10,0	8,0	8,50		0100	●	●	●	●	6H	6H	6H	6H	0100	●	●	●	●								
										Norm										DIN-376											
M	d ₁	P	l ₁	l ₂	R40	l ₃	d ₂	a		INDEX	D2-118801	D2-518801	D2-111801	D2-511801	0120	0140	0160	0120	0140	0160	●	●	●	●							
M 12	1,75	110	24	18	-	9	7	10,2		0120	●	●	●	●	0120	0140	0160	0120	0140	0160	●	●	●	●							
M 14	2	110	25	20	-	11	9	12		0140	●	●	●	●	0140	0160	0120	0140	0160	0120	●	●	●	●							
M 16	2	110	32	20	-	12	9	14		0160	●	●	●	●	0160	0120	0140	0160	0120	0140	●	●	●	●							
										Norm										DIN-374											
M	d ₁	P	l ₁	l ₂	R40	l ₂	d ₂	a		INDEX	D2-118801	D2-511801	D2-111801	D2-518801	0083	0103	0104	0125	0145	0165	●	●	●	●							
M 8 x 1	1	90	10	20	6	4,9	7,0		0083	0083	0103	0104	0125	0145	0165	0103	0104	0125	0145	0165	●	●	●	●							
M 10 x 1	1	90	10	20	7	5,5	9,0		0103	0103	0104	0125	0145	0165	0104	0125	0145	0165	0103	0104	●	●	●	●							
M 10 x 1,25	1,25	100	15	20	7	5,5	8,8		0104	0104	0125	0145	0165	0125	0145	0165	0104	0125	0145	0165	●	●	●	●							
M 12 x 1,5	1,5	100	15	20	9	7	10,5		0125	0125	0145	0165	0103	0104	0125	0145	0165	0125	0145	0165	●	●	●	●							
M 14 x 1,5	1,5	100	15	20	11	9	12,5		0145	0145	0165	0103	0104	0125	0145	0165	0145	0165	0103	0104	●	●	●	●							
M 16 x 1,5	1,5	100	15	20	12	9	14,5		0165	0165	0103	0104	0125	0145	0165	0145	0165	0103	0104	0125	●	●	●	●							
										Vc (m/min)																					
										P	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
										M	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15	5-15		
										K	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
										N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
										S	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

M

MF

ISO Metric thread DIN-13



HSSE
PM

TC

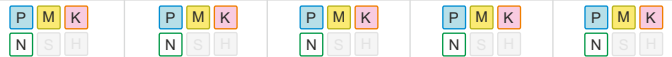
FAN-I200

I400

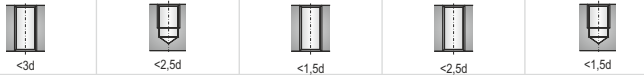
B-TC C-R40-TC C-TC B-TC C-R15-TC



Material groups



Hole type



Coating

PM/HSSE PM/HSSE PM/HSSE PM/HSSE PM/HSSE

Chamfer

TC TC TC TC TC

Tolerance

B / 4-5P C / 2-3P C / 2-3P B / 4-5P C / 2-3P

M d ₁	P	l ₁	l ₂	R40	l ₃	d ₂	a		DIN-371					
									Norm	6HX				
									Tol.	INDEX	INDEX	INDEX	INDEX	INDEX
M 3	0,50	56	10	5	18	3,5	2,7	2,50	0030	●	●	●	●	●
M 4	0,70	63	12	7	21	4,5	3,4	3,30	0040	●	●	●	●	●
M 5	0,80	70	14	8	25	6,0	4,9	4,20	0050	●	●	●	●	●
M 6	1,00	80	18	10	30	6,0	4,9	5,00	0060	●	●	●	●	●
M 8	1,25	90	20	13	35	8,0	6,2	6,80	0080	●	●	●	●	●
M 10	1,50	100	20	15	39	10,0	8,0	8,50	0100	●	●	●	●	●

M d ₁	P	l ₁	l ₂	R40	l ₃	d ₂	a		DIN-376					
									Norm	INDEX				
									INDEX	INDEX	INDEX	INDEX	INDEX	
M 12	1,75	110	24	18	-	9	7	10,2	0120	●	●	●	●	●
M 14	2	110	25	20	-	11	9	12	0140	●	●	●	●	●
M 16	2	110	32	20	-	12	9	14	0160	●	●	●	●	●

M d ₁	P	l ₁	l ₂	R40	l ₂	d ₂	a		DIN-374					
									Norm	INDEX				
									INDEX	INDEX	INDEX	INDEX	INDEX	
M 8 x 1	1	90	10	20	6	4,9	7,0	0083	●	●	●	●	●	
M 10 x 1	1	90	10	20	7	5,5	9,0	0103	●	●	●	●	●	
M 10 x 1,25	1,25	100	15	20	7	5,5	8,8	0104	○	○	○	○	○	
M 12 x 1,5	1,5	100	15	20	9	7	10,5	0125	●	●	●	●	●	
M 14 x 1,5	1,5	100	15	20	11	9	12,5	0145	●	●	●	●	●	
M 16 x 1,5	1,5	100	15	20	12	9	14,5	0165	●	●	●	●	●	

ISO	V _c (m/min)				
P	5-35	5-35	1-20	1-20	1-20
M	5-15	5-10	1-10	1-10	1-10
K	5-25	5-25	1-20	1-20	1-20
N	10-30	10-30	10-20	10-20	10-20
S	-	-	-	-	-

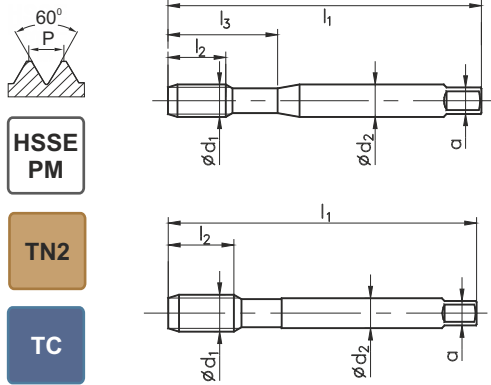
M

MF

ISO Metric thread DIN-13									GG					GAL		
									C-TC	C-IK-TC	E-TC	E-IK-TC	E-IKR-TC	C-R15-TC	E-R15-IK-TC	
<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; padding: 2px; margin-right: 10px;">HSSE PM</div> <div style="border: 1px solid black; padding: 2px; margin-right: 10px;">TC</div> </div>									<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> </div>							
Material groups									<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> <div style="text-align: center;">P M K N S H</div> </div>							
Hole type									<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <1,5d</div> <div style="text-align: center;"> <2,5d</div> <div style="text-align: center;"> <2d</div> <div style="text-align: center;"> <2,5d</div> <div style="text-align: center;"> <2,5d</div> <div style="text-align: center;"> <2,5d</div> <div style="text-align: center;"> <2,5d</div> </div>							
Coating									HSSE-PM HSSE-PM HSSE-PM HSSE-PM HSSE-PM HSSE-PM HSSE-PM							
Chamfer									TC TC TC TC TC TC TC							
Tolerance									C / 2-3P C / 2-3P E / 1,5-2P E / 1,5-2P E / 1,5-2P C / 2-3P E / 1,5-2P							
M d ₁	P	l ₁	l ₂	l ₃	d ₂	a		Norm	DIN-371							
									Tol.	6HX	6HX	6HX	6HX	6HX	6HX	6HX
									INDEX	C2-125501	C4-125551	C2-145501	C4-145551	C4-145561	C2-505601	C4655651
M 3	0,50	56	10	18	3,5	2,7	2,50	0030	●	-	○	-	-	●	-	
M 4	0,70	63	12	21	4,5	3,4	3,30	0040	●	-	●	-	-	●	-	
M 5	0,80	70	14	25	6,0	4,9	4,20	0050	●	●	●	●	●	●	○	
M 6	1,00	80	18	30	6,0	4,9	5,00	0060	●	●	●	●	●	●	○	
M 7	1,00	80	18	30	7,0	5,5	6,00	0070	○	○	○	○	○	○	○	
M 8	1,25	90	20	35	8,0	6,2	6,80	0080	●	●	●	●	●	●	○	
M 9	1,25	90	20	35	9,0	7,0	7,80	0090	○	○	○	○	○	○	○	
M 10	1,50	100	20	39	10,0	8,0	8,50	0100	●	●	●	●	●	●	○	
M d ₁	P	l ₁	l ₂	l ₃	d ₂	a		Norm	DIN-376							
									INDEX	C2-125501	C4-125551	C2-145501	C4-145551	C4-145561	C2-505601	C4655651
M 12	1,75	110	24	-	9	7	10,2	0120	●	●	●	●	●	●	●	
M 14	2	110	25	-	11	9	12	0140	●	○	○	○	○	●	○	
M 16	2	110	32	-	12	9	14	0160	●	●	○	●	●	●	●	
M d ₁	P	l ₁	l ₂	l ₃	d ₂	a		Norm	DIN-374							
									INDEX	D2-125501	D4-125551	D2-145501	D4-145551	D4-145561	D2-505601	D4655651
M 8 x 1	1	90	20	-	6,0	4,9	7,00	0083	●	○	●	○	○	●	○	
M 10 x 1	1	90	20	-	7,0	5,5	9,00	0103	●	●	●	○	○	●	●	
M 10 x 1,25	1,25	100	20	-	7,0	5,5	8,80	0104	○	○	○	○	○	○	○	
M 12 x 1,5	1,50	100	20	-	9,0	7,0	10,50	0125	●	●	●	○	○	●	●	
M 14 x 1,5	1,50	100	20	-	11,0	9,0	12,50	0145	●	●	●	○	○	●	●	
M 16 x 1,5	1,50	100	20	-	12,0	9,0	14,50	0165	●	●	●	○	○	●	●	
ISO	V _c (m/min)															
P	-	-	-	-	-	-	-									
M	-	-	-	-	-	-	-									
K	1-60	5-60	1-60	5-60	5-60	-	-									
N	-	-	-	-	-	10-30	10-30									
S	-	-	-	-	-	-	-									

M

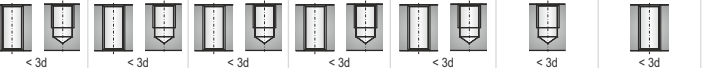
MF

ISO Metric thread DIN-13
WGN

**HSSE
PM**
TN2
TC
C-TN2 C-SR-TN2 C-SR-TN2 C-SR-TC E-SR-TC E-SR-IK-TC E-SR-IKR-TC


Material groups



Hole type



Coating

HSSE-PM HSSE-PM HSSE-PM HSSE-PM HSSE-PM HSSE-PM HSSE-PM

Chamfer

TN2 TN2 TN2 TC TC TC TC

Tolerance

C / 2-3P C / 2-3P C / 2-3P C / 2-3P E / 1,5-2P E / 1,5-2P E / 1,5-2P

M d ₁	P	l ₁	l ₂	l ₃	d ₂	a		Norm	DIN-371 (~DIN-2174)							
									Tol.	6HX	6HX	6GX	6HX	6HX	6HX	6HX
									INDEX	C4-903005	C4-923005	C4-923006	C4-925005	C4-945005	C4-945055	C4-945065
M 1,6	0,35	40	8	8	2,5	2,1	1,47	0016	●	●	-	-	-	-	-	
M 2	0,40	45	8	8	2,8	2,1	1,85	0020	●	●	-	-	-	-	-	
M 2,5	0,45	50	9	9	2,8	2,1	2,33	0025	●	●	-	-	-	-	-	
M 3	0,50	56	10	18	3,5	2,7	2,80	0030	●	●	●	●	●	-	-	
M 3,5	0,60	56	12	20	4	3	3,25	0035	○	○	○	○	○	-	-	
M 4	0,70	63	7	21	4,5	3,4	3,70	0040	●	●	●	●	●	-	-	
M 5	0,80	70	8	25	6	4,9	4,65	0050	●	●	●	●	●	●	●	
M 6	1,00	80	10	30	6	4,9	5,60	0060	●	●	●	●	●	●	●	
M 7	1,00	80	10	30	7	5,5	6,60	0070	○	○	○	○	○	○	○	
M 8	1,25	90	13	35	8	6,2	7,45	0080	●	●	●	●	●	●	●	
M 9	1,25	90	13	35	9	7	8,45	0090	○	○	○	○	○	○	○	
M 10	1,50	100	15	39	10	8	9,35	0100	●	●	●	●	●	●	●	

MF d ₁	P	l ₁	l ₂	l ₃	d ₂	a		Norm	DIN-371							
									Tol.	6HX	6HX					
									INDEX	C4-923005	C4-925005					
M 4 x 0,5	0,5	63	7	21	4,5	3,4	3,80	0041	●	●						
M 5 x 0,5	0,5	70	8	25	6	4,9	4,80	0051	●	●						
M 6 x 0,5	0,5	80	10	30	6	4,9	5,80	0061	●	●						
M 6 x 0,75	0,75	80	10	30	7	5,5	5,70	0062	●	●						
M 8 x 1	1	90	13	35	8	6,2	7,60	0083	●	●						
M 10 x 1	1	90	13	35	9	7	9,60	0103	●	●						
M 10 x 1,25	1,25	100	15	39	10	8	9,45	0104	●	●						

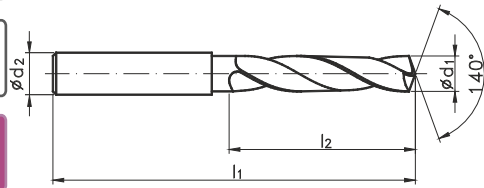
ISO	Vc (m/min)					
P	10-30	10-30	10-30			
M	10-25	10-25	10-25			
K	-	-	-			
N	20-40	20-40	20-40			
S	-	-	-			

Example of order
C4-923005-0060
 Forming tap WGN M6-6HX DIN-371 C HSSE-PM TN

- Available from stock
- On request

3xD Maximal hole depth
MASTERDRILL

VHM
DIN 6537
AT



Material groups



Quality of material

VHM

Internal cooling

IK

Coating

AT

d ₁	M MF	M "WGN"	l ₁	l ₂	d ₂ h6	Norm	DIN-6537						
						Tol.	m7						
						INDEX	W9-604M33						
3,25		M3,5	62	20	6	0325	○						
3,3	M4		62	20	6	0330	●						
3,7	M4,5	M4	62	20	6	0370	●						
4,2	M5	M4,5	66	24	6	0420	●						
4,65		M5	66	24	6	0465	○						
5,6		M6	66	28	6	0560	○						
6	M7		66	28	6	0600	●						
6,6		M7	79	34	8	0660	○						
6,8	M8		79	34	8	0680	●						
7	M8x1		79	34	8	0700	●						
7,45		M8	79	41	8	0745	●						
7,6		M8x1	79	41	8	0760	●						
7,8	M9		79	41	8	0780	●						
8,45		M9	89	47	10	0845	○						
8,5	M10		89	47	10	0850	●						
8,8	M10x1,25		89	47	10	0880	○						
9	M10x1		89	47	10	0900	●						
9,35		M10	89	47	10	0935	●						
9,45		M10x1,25	89	47	10	0945	○						
9,6		M10x1	89	47	10	0960	○						
10,2	M12		102	55	12	1020	●						
10,5	M12x1,5		102	55	12	1050	●						
11,25		M12	102	55	12	1125	○						
11,35		M12x1,5	102	55	12	1135	○						
12	M14		102	55	12	1200	●						
12,5	M14x1,5		107	60	14	1250	●						
13	M14x1	M14	107	60	14	1300	●						
14	M16;M15x1		107	60	14	1400	●						
14,5	M16x1,5		115	65	16	1450	●						

Example of order

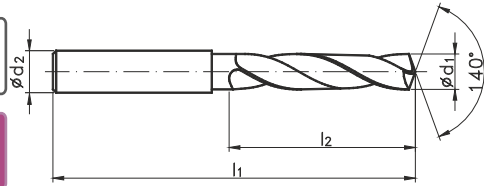
 W9-614013-0300
 WK 1300 3,00 DIN-6537 5xD VHM AT

- Available from stock
- On request

5xD Maximal hole depth

MASTERDRILL

VHM
DIN 6537
AT



Material groups

Quality of material

VHM

Internal cooling

IK

Coating

AT

d ₁	M MF	M "WGN"	l ₁	l ₂	d ₂ h6	Norm	DIN-6537						
						Tol.	m7						
						INDEX	W9-614M33						
3,25		M3,5	66	28	6	0325	○						
3,3	M4		66	28	6	0330	●						
3,7	M4,5	M4	66	28	6	0370	●						
4,2	M5	M4,5	74	36	6	0420	●						
4,65		M5	74	36	6	0465	○						
5	M6		82	44	6	0500	●						
5,6		M6	82	44	6	0560	●						
6	M7		82	44	6	0600	●						
6,6		M7	91	53	8	0660	○						
6,8	M8		91	53	8	0680	●						
7	M8x1		91	53	8	0700	●						
7,45		M8	91	53	8	0745	●						
7,6		M8x1	91	53	8	0760	●						
7,8	M9		91	53	8	0780	●						
8,45		M9	103	61	10	0845	○						
8,5	M10		103	61	10	0850	●						
8,8	M10x1,25		103	61	10	0880	○						
9	M10x1		103	61	10	0900	●						
9,35		M10	103	61	10	0935	●						
9,45		M10x1,25	103	61	10	0945	○						
9,6		M10x1	103	61	10	0960	○						
10,2	M12		118	71	12	1020	●						
10,5	M12x1,5		118	71	12	1050	●						
11	M12x1		118	71	12	1100	●						
12	M14		118	71	12	1200	●						
12,5	M14x1,5		124	77	14	1250	●						
14	M16;M15x1		124	77	14	1400	●						
14,5	M16x1,5		133	83	16	1450	●						

For machining construction steel, stainless steel, tool steel, steel alloys, cast iron, titanium, inconel and hardened materials up to 45 HRC

SUPERFAN



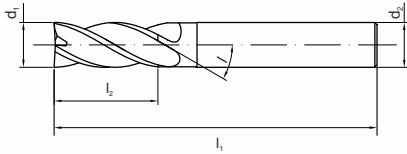
Z=4



λ
35°-39°



AT



440

440

R440

R440



Material groups



Design



Quality of material

VHM

VHM

VHM

VHM

Coating

AT

AT

AT

AT

Corner



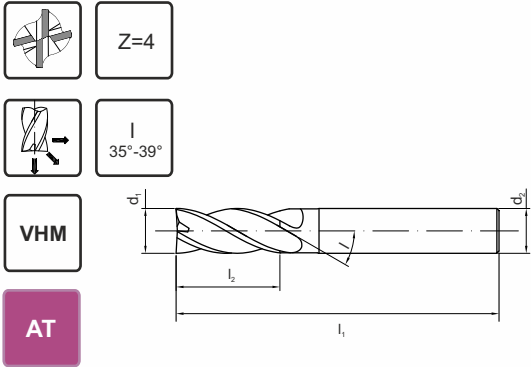
d ₁	d ₂ h6	l ₁	l ₂	l ₃	Z	R	INDEX			
3	6	57	8	-	4	0,3	M9-444000-0030	M9-444000-0030-B	M9-44400D-0030	M9-44400D-0030-B
4	6	57	11	-	4	0,3	M9-444000-0040	M9-444000-0040-B	M9-44400D-0040	M9-44400D-0040-B
5	6	57	13	-	4	0,3	M9-444000-0050	M9-444000-0050-B	M9-44400D-0050	M9-44400D-0050-B
6	6	57	13	21	4	0,5	M9-444000-0060	M9-444000-0060-B	M9-444001-0060	M9-444001-0060-B
6	6	57	13	21	4	1,0	-	-	M9-444003-0060	M9-444003-0060-B
8	8	63	19	27	4	0,5	M9-444000-0080	M9-444000-0080-B	M9-444001-0080	M9-444001-0080-B
8	8	63	19	27	4	1,0	-	-	M9-444003-0080	M9-444003-0080-B
8	8	63	19	27	4	1,5	-	-	M9-444004-0080	M9-444004-0080-B
8	8	63	19	27	4	2,0	-	-	M9-444005-0080	M9-444005-0080-B
10	10	72	22	32	4	0,5	M9-444000-0100	M9-444000-0100-B	M9-444001-0100	M9-444001-0100-B
10	10	72	22	32	4	1,0	-	-	M9-444003-0100	M9-444003-0100-B
10	10	72	22	32	4	1,5	-	-	M9-444004-0100	M9-444004-0100-B
10	10	72	22	32	4	2,0	-	-	M9-444005-0100	M9-444005-0100-B
10	10	72	22	32	4	2,5	-	-	M9-444006-0100	M9-444006-0100-B
12	12	83	26	38	4	0,5	M9-444000-0120	M9-444000-0120-B	M9-444001-0120	M9-444001-0120-B
12	12	83	26	38	4	0,7	-	-	M9-444002-0120	M9-444002-0120-B
12	12	83	26	38	4	1,0	-	-	M9-444003-0120	M9-444003-0120-B
12	12	83	26	38	4	1,5	-	-	M9-444004-0120	M9-444004-0120-B
12	12	83	26	38	4	2,0	-	-	M9-444005-0120	M9-444005-0120-B
12	12	83	26	38	4	2,5	-	-	M9-444006-0120	M9-444006-0120-B
12	12	83	26	38	4	3,0	-	-	M9-444007-0120	M9-444007-0120-B

ISO	V _c [m/min]	3	4	5	6	8	10	12	14	16	18	20	25	
		fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	
P	P1-P7	145	0,006	0,01	0,013	0,019	0,032	0,047	0,056	0,059	0,064	0,071	0,078	0,095
	P8-P13	3	0,005	0,008	0,011	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,08
	P14	135	0,004	0,004	0,009	0,013	0,022	0,034	0,04	0,043	0,045	0,05	0,055	0,067
M	M1	110	0,004	0,004	0,009	0,013	0,022	0,034	0,04	0,043	0,045	0,05	0,055	0,067
	M2	125	0,005	0,008	0,011	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,08
	M3	95	0,004	0,004	0,009	0,013	0,022	0,034	0,04	0,043	0,045	0,05	0,055	0,067
K	K1-K6	125	0,005	0,008	0,02	0,023	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,08
	N1-N5	280	0,036	0,04	0,048	0,052	0,056	0,065	0,074	0,078	0,083	0,088	0,093	0,105
N	N7-N10	300	0,03	0,054	0,069	0,085	0,1	0,115	0,135	0,155	0,175	0,195	0,215	0,265
	S1-S5	25	0,005	0,007	0,012	0,018	0,031	0,048	0,056	0,06	0,064	0,069	0,077	0,095
S	S6-S8	95	0,005	0,008	0,013	0,018	0,035	0,048	0,056	0,06	0,064	0,069	0,077	0,095
	H1	60	0,007	0,01	0,013	0,017	0,02	0,025	0,028	0,033	0,038	0,042	0,047	0,059

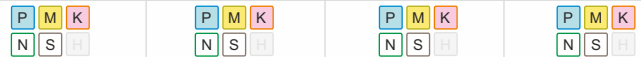
*for tools with radius

For machining construction steel, stainless steel, tool steel, steel alloys, cast iron, titanium, inconel and hardened materials up to 45 HRC

SUPERFAN



Material groups



Design



Quality of material

VHM VHM VHM VHM

Coating

AT AT AT AT

Corner



d ₁	d ₂ h6	l ₁	l ₂	l ₃	Z	R	INDEX					
14	14	83	26	38	4	0,5	M9-444000-0140	M9-444000-0140-B	M9-444001-0140	M9-444001-0140-B		
14	14	83	26	38	4	0,7	-	-	M9-444002-0140	M9-444002-0140-B		
14	14	83	26	38	4	1,0	-	-	M9-444003-0140	M9-444003-0140-B		
14	14	83	26	38	4	2,0	-	-	M9-444005-0140	M9-444005-0140-B		
14	14	83	26	38	4	2,5	-	-	M9-444006-0140	M9-444006-0140-B		
14	14	83	26	38	4	3,0	-	-	M9-444007-0140	M9-444007-0140-B		
16	16	92	32	44	4	0,5	M9-444000-0160	M9-444000-0160-B	M9-444001-0160	M9-444001-0160-B		
16	16	92	32	44	4	1,0	-	-	M9-444003-0160	M9-444003-0160-B		
16	16	92	32	44	4	2,0	-	-	M9-444005-0160	M9-444005-0160-B		
16	16	92	32	44	4	2,5	-	-	M9-444006-0160	M9-444006-0160-B		
16	16	92	32	44	4	3,0	-	-	M9-444007-0160	M9-444007-0160-B		
18	18	92	32	44	4	1,0	M9-444000-0180	M9-444000-0180-B	M9-444003-0180	M9-444003-0180-B		
20	20	104	38	55	4	1,0	M9-444000-0200	M9-444000-0200-B	M9-444003-0200	M9-444003-0200-B		
20	20	104	45	55	4	1,0	M9-444000-0200A	M9-444000-0200A-B	M9-444003-0200A	M9-444003-0200A-B		
20	20	104	45	55	4	2,0	-	-	M9-444005-0200A	M9-444005-0200A-B		
20	20	104	45	55	4	3,0	-	-	M9-444007-0200A	M9-444007-0200A-B		
20	20	104	45	55	4	4,0	-	-	M9-444008-0200A	M9-444008-0200A-B		
25	25	122	55	66	4	1,0	M9-444000-0250	M9-444000-0250-B	M9-444003-0250	M9-444003-0250-B		
25	25	122	55	66	4	2,0	-	-	M9-444005-0250	M9-444005-0250-B		
25	25	122	55	66	4	3,0	-	-	M9-444007-0250	M9-444007-0250-B		
25	25	122	55	66	4	4,0	-	-	M9-444008-0250	M9-444008-0250-B		

ISO	Vc [m/min]	3	4	5	6	8	10	12	14	16	18	20	25	
		fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	fz [mm]	
P	P1-P7	145	0,006	0,01	0,013	0,019	0,032	0,047	0,056	0,059	0,064	0,071	0,078	0,095
	P8-P13	3	0,005	0,008	0,011	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,08
	P14	135	0,004	0,004	0,009	0,013	0,022	0,034	0,04	0,043	0,045	0,05	0,055	0,067
M	M1	110	0,004	0,004	0,009	0,013	0,022	0,034	0,04	0,043	0,045	0,05	0,055	0,067
	M2	125	0,005	0,008	0,011	0,016	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,08
K	M3	95	0,004	0,004	0,009	0,013	0,022	0,034	0,04	0,043	0,045	0,05	0,055	0,067
	K1-K6	125	0,005	0,008	0,02	0,023	0,027	0,039	0,047	0,049	0,053	0,059	0,065	0,08
N	N1-N5	280	0,036	0,04	0,048	0,052	0,056	0,065	0,074	0,078	0,083	0,088	0,093	0,105
	N7-N10	300	0,03	0,054	0,069	0,085	0,1	0,115	0,135	0,155	0,175	0,195	0,215	0,265
S	S1-S5	25	0,005	0,007	0,012	0,018	0,031	0,048	0,056	0,06	0,064	0,069	0,077	0,095
	S6-S8	95	0,005	0,008	0,013	0,018	0,035	0,048	0,056	0,06	0,064	0,069	0,077	0,095
H	H1	60	0,007	0,01	0,013	0,017	0,02	0,025	0,028	0,033	0,038	0,042	0,047	0,059



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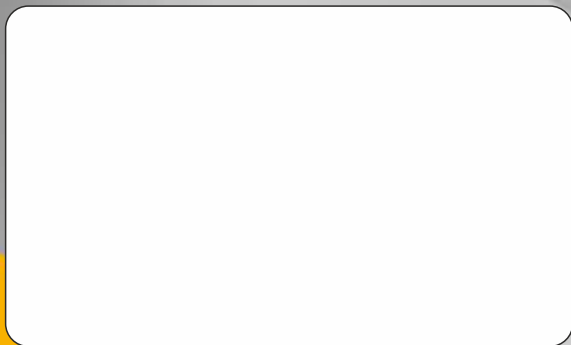
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