TaeguTec Hole Making Line

April 2023
www.taegutec.com
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NPN

New Product News

new

WinDrill ADVANCED MACHINING

TaeguTec WinSFeed ADVANCED MACHINING

Head Changeable Modular Drills with T-FLEXTEC Connection

ADVANCE CUTTING TaeguTec

TaeguTec Member IMC Group

KEY POINT

T-FLEXTEC connections now available for the modular WIN-DRILL line.

With the advantages of implementing complex shapes with high productivity, Multi-spindle and Swiss type machines are being applied across the industry landscape. Machining the various and complex shapes requires the capability of placing multiple tools in confined spaces. Additionally, the tools must be easy to mount and set.

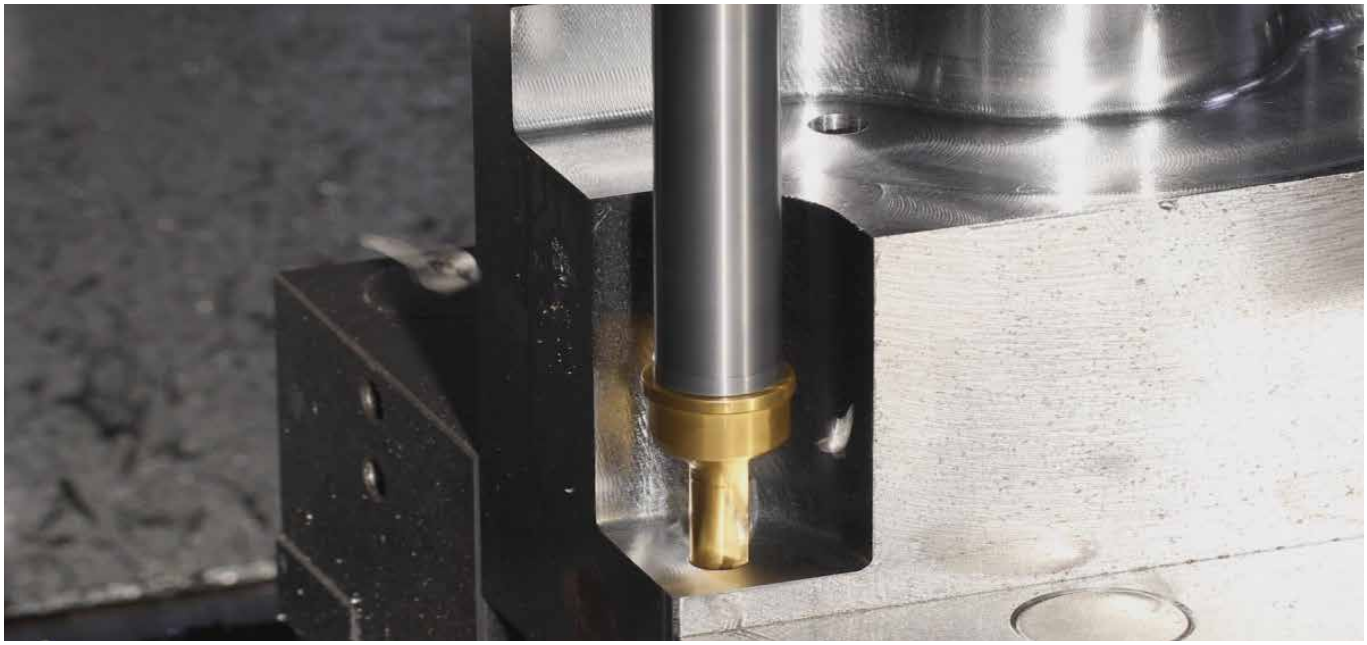
Responding to these market demands comes TaeguTec's modular WIN-DRILL line, which use the head changeable DRILL-RUSH heads. Available in a wide variety of T-FLEXTEC shanks, the modular WIN-DRILL line enables simplified set-up and the adaptability required for Multi-spindle and Swiss type machines.

The T-FLEXTEC connections are compatible in a wide range of holders, including HSK holders, C-Adapters, ER collets and Weldon shanks with 3 flat faces for multidirectional clamping. An additional benefit is the short overhang which greatly contributes to improved machining performance and productivity.

For more information, please contact the product manager.

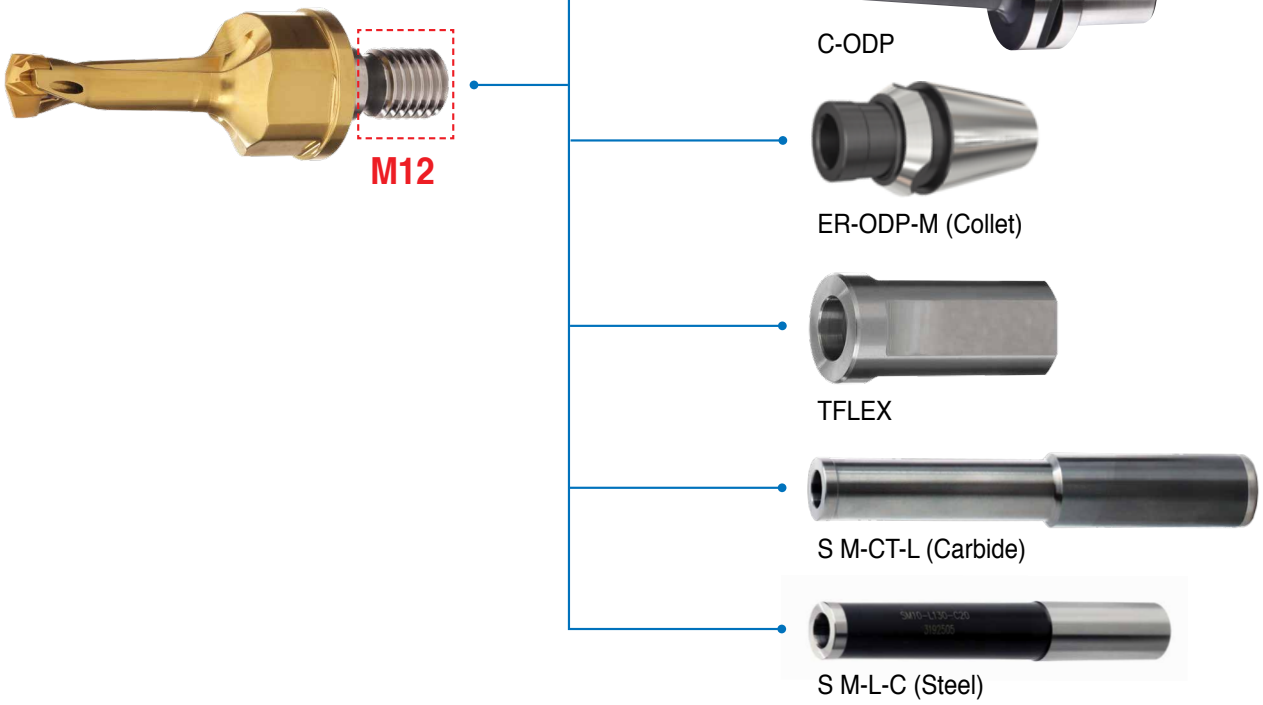
Features

- Wide range of applications due to the T-FLEXTEC holders and adaptors' compatibility and flexibility
  - Line responds to equipment specifications and workpiece shapes without restriction
- Available in TFLEX holders for side clamping
- Modular design with interchangeable heads means reduced tool change and set-up time
- Shorter tool lengths allow for easy use on Multi-spindle and Swiss type machines
- Compatibility with the existing DRILL-RUSH heads (TCD-P/P+/M/K/F/N) means applicability depending on the operation and material type
- Available in internal coolant type



■ Mounting line-up

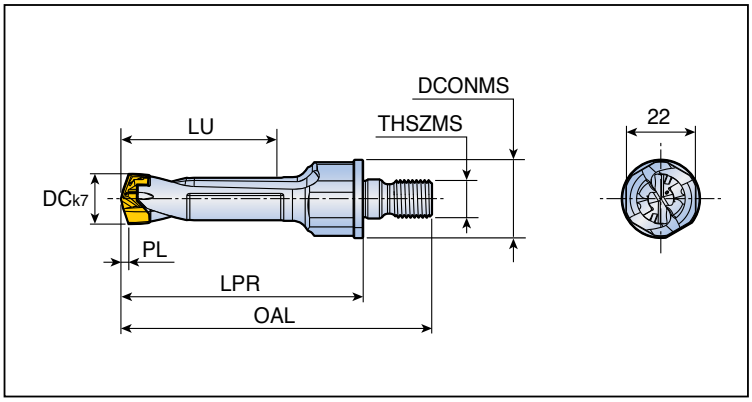
(Thread type: **M12**)



TCDM...-M12-3D new

WINDRILL ADVANCED MACHINING

DRILL-RUSH head exchangeable & modular type drill holders



• Drilling depth: 3xdiameter

Designation	Dimension (mm)								Clamp key
	DC	DCONMS	LU	LPR	PL	OAL	THSZMS	SSC	
TCDM 060-064-M12-3D	6.0-6.4	25	19.0	42.0	1.0	64.0	M12	6	
065-069-M12-3D	6.5-6.9	25	20.7	44.3	1.2	66.3	M12	6.5	
070-074-M12-3D	7.0-7.4	25	22.0	45.6	1.0	67.6	M12	7	
075-079-M12-3D	7.5-7.9	25	23.6	47.6	1.1	69.6	M12	7	
080-084-M12-3D	8.0-8.4	25	25.2	49.4	1.2	71.4	M12	8	K TCD D060-D099
085-089-M12-3D	8.5-8.9	25	26.8	50.4	1.3	72.4	M12	8	
090-094-M12-3D	9.0-9.4	25	28.4	52.8	1.4	74.8	M12	9	
095-099-M12-3D	9.5-9.9	25	29.9	54.8	1.4	76.8	M12	9	
100-104-M12-3D	10.0-10.4	25	31.5	56.2	1.5	78.2	M12	10	
105-109-M12-3D	10.5-10.9	25	33.1	58.2	1.6	80.2	M12	10	
110-114-M12-3D	11.0-11.4	25	34.7	59.6	1.7	81.6	M12	11	
115-119-M12-3D	11.5-11.9	25	36.3	61.6	1.8	83.6	M12	11	
120-124-M12-3D	12.0-12.4	25	37.8	63.0	1.8	85.0	M12	12	
125-129-M12-3D	12.5-12.9	25	39.4	64.0	1.9	86.0	M12	12.	
130-134-M12-3D	13.0-13.4	25	41.0	66.6	2.0	88.6	M12	13	
135-139-M12-3D	13.5-13.9	25	42.6	68.6	2.1	90.6	M12	13	K TCD D100-D199
140-144-M12-3D	14.0-14.4	25	44.1	70.2	2.1	92.2	M12	14	
145-149-M12-3D	14.5-14.9	25	45.7	72.2	2.2	94.2	M12	14	
150-159-M12-3D	15.0-15.9	25	47.3	73.7	2.3	95.7	M12	15	
160-169-M12-3D	16.0-16.9	25	50.4	77.3	2.4	99.3	M12	16	
170-179-M12-3D	17.0-17.9	25	53.6	80.9	2.6	102.9	M12	17	
180-189-M12-3D	18.0-18.9	25	56.7	84.5	2.7	106.5	M12	18	
190-199-M12-3D	19.0-19.9	25	59.9	88.0	2.9	110.0	M12	19	
200-209-M12-3D	20.0-20.9	25	63.0	91.6	3.0	113.6	M12	20	K TCD D200-D269

▸ SSC: Seat size code
▸ Matched with T-FLEXTEC holder

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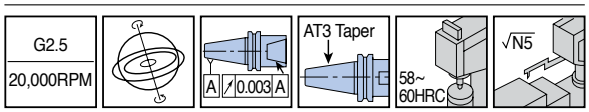
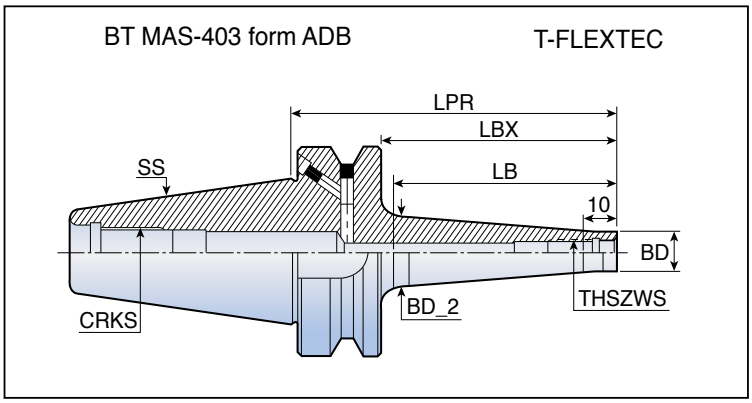
BT-ODP

T-FLEXTEC holder



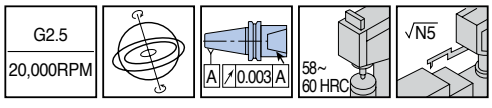


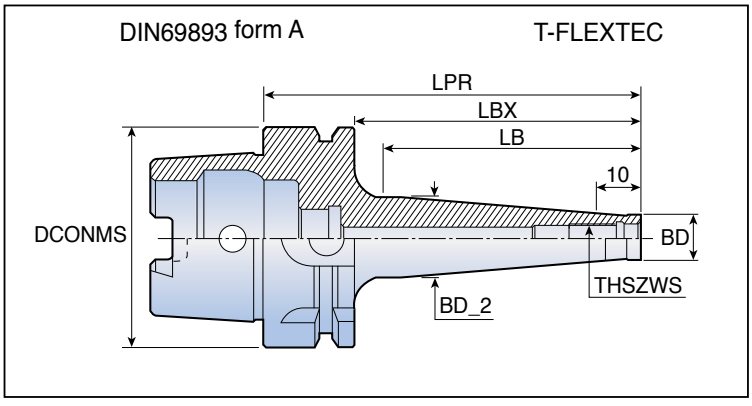
Designation	Dimension (mm)							
	SS	THSZWS	BD	BD_2	LPR	LBX	LB	CRKS
BT40 ODP 12x66	40	M12	21.0	24.0	66	39	30	M16
BT40 ODP 12x106	40	M12	21.0	31.0	106	79	70	M16
BT50 ODP 12x94(1)	50	M12	23.0	30.0	94	56	50	M24

▸ (1) Balance to G6.3 at 12,000RPM

HSK A-ODP

T-FLEXTEC holder

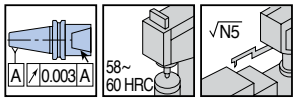


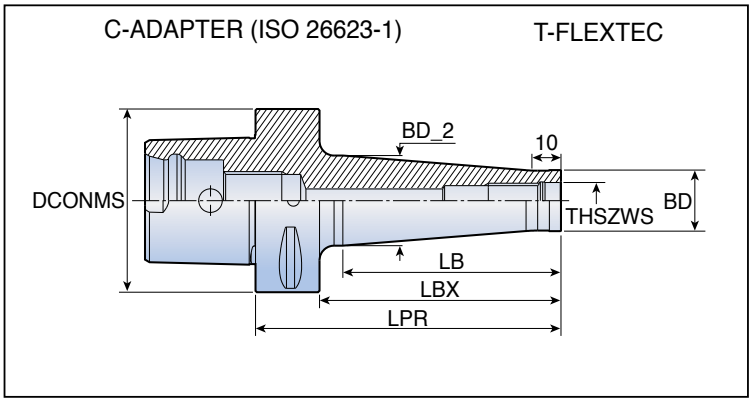


Designation		Dimension (mm)						
		DCONMS	THSZWS	BD	BD_2	LPR	LBX	LB
HSK A 63	**ODP 12x59**	63	M12	21.0	24.0	59	33	25
	ODP 12x109	63	M12	21.0	31.0	109	83	75

C-ODP

T-FLEXTEC holder

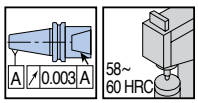




Designation	Dimension (mm)						
	DCONMS	THSZWS	BD	BD_2	LPR	LBX	LB
C4 ODP 12x53	40	M12	21.0	26.0	53	33	23
C5 ODP 12x53	50	M12	21.0	23.5	53	33	25
C6 ODP 12x55	63	M12	21.0	23.5	55	33	25

ER-ODP

T-FLEXTEC holder



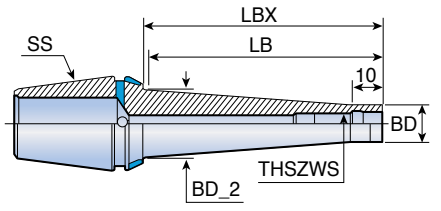


Fig.1

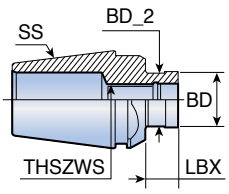
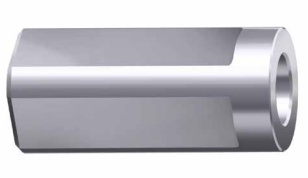


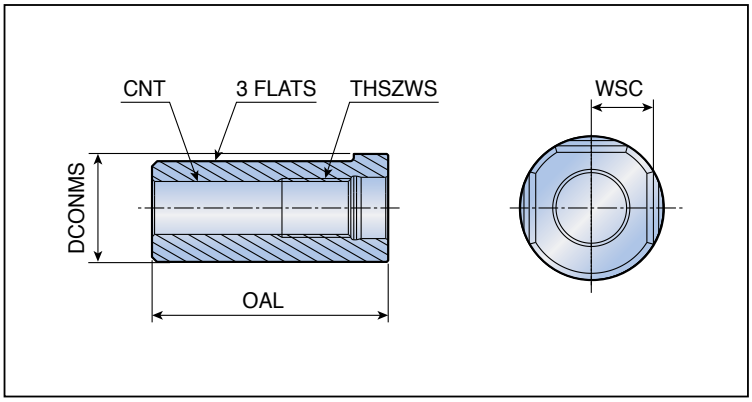
Fig.2

Designation	Dimension (mm)						
	SS	THSZWS	BD	BD_2	LB	LBX	Fig
ER 25 ODP M12x10	ER25	M12	20.0	20.0	10	10.0	2
32 ODP M12x10	ER32	M12	10.0	10.0	21	20.6	2
32 ODP M12x25	ER32	M12	24.0	25.0	21	24.0	1

TFLEX-TCD-M12 new

T-FLEXTEC shank

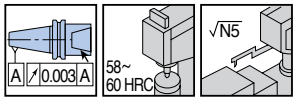


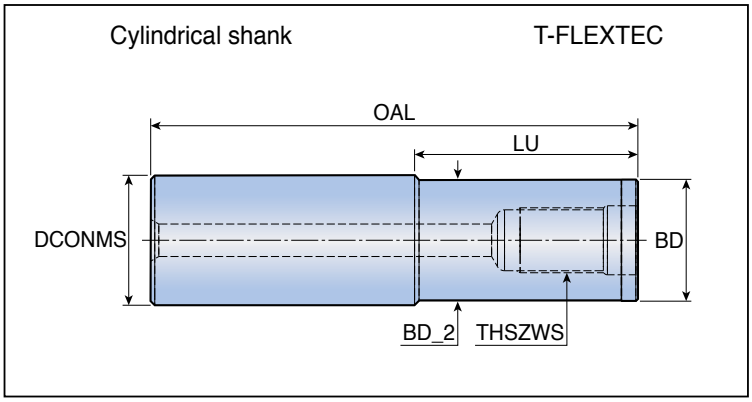


Designation	Dimension (mm)				CNT
	THSZWS	DCONMS	OAL	WSC	
TFLEX 160X36-TCD-M12	M12	16	36	7.5	UNF 5/16
1905X36-TCD-M12	M12	19.05	36	8.5	UNF 5/16
200X36-TCD-M12	M12	20	36	8.5	G 1/8
220X48-TCD-M12	M12	22	48	9.5	G 1/8
250X54-TCD-M12	M12	25	54	11	G 1/8
254X54-TCD-M12	M12	25.4	54	11	G 1/8

S M12-CT-L

T-FLEXTEC carbide shank



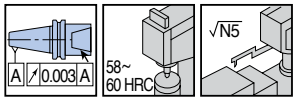


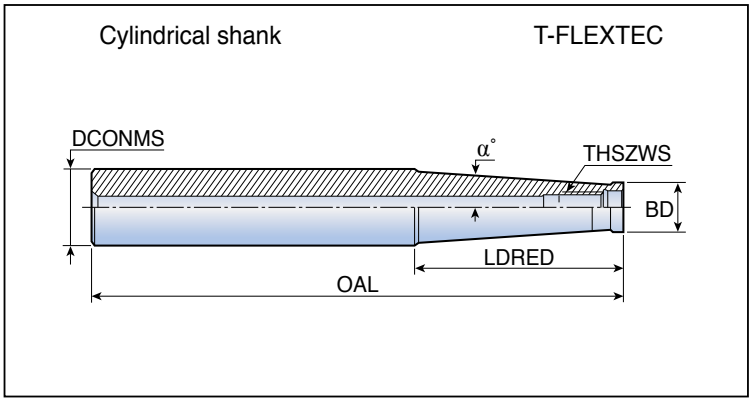
Designation	Dimension (mm)					
	THSZWS	DCONMS	BD	BD_2	OAL	LU
S M12-CT25 - 40-L100	M12	25	24.0	24.0	100	40
80-L150	M12	25	21.0	20.5	150	80
80-L150-N	M12	25	24.0	24.0	150	80
100-L200	M12	25	21.0	20.5	200	100
100-L200-N	M12	25	24.0	24.0	200	100
130-L250	M12	25	21.0	20.5	250	130
140-L200	M12	25	21.0	20.5	200	140
180-L250	M12	25	24.0	24.0	250	180
180-L250-B	M12	25	21.0	20.5	250	180
180-L300	M12	25	21.0	20.5	300	180
180-L300-N	M12	25	24.0	24.0	300	180
230-L300	M12	25	21.0	20.5	300	230
230-L300-N	M12	25	24.0	24.0	300	230

▸ All shanks are internal coolant type

S M-L-C

T-FLEXTEC shank





Designation	Dimension (mm)						Shank type
	THSZWS	DCONMS	BD	OAL	LDRED	α°	
S M12 - L86-C25	M12	25	21.0	86	30.0	5.1	C
L200-C32	M12	32	21.0	200	78.0	4.4	C

▸ All shanks are internal coolant type

Recommended Cutting Conditions

ISO	Material		Condition	Tensile Strength (N/mm^2)	Hardness HB	Material No.	Cutting speed Vc(m/min)	Feed (mm/rev) vs. drill diameter			
								Ø6 - Ø7.9	Ø8 - Ø9.9	Ø10 - Ø11.9	Ø12 - Ø13.9
P	Non-alloy steel and cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	80-140	0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30
		>=0.25%C	Annealed	650	190	2	80-130	0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30
		<0.55%C	Quenched and tempered	850	250	3	80-120	0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30
		>=0.55%C	Annealed	750	220	4	70-110	0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30
			Quenched and tempered	1000	300	5	50-90	0.09-0.13	0.12-0.22	0.15-0.28	0.18-0.30
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6	70-120	0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32
			Quenched and tempered	930	275	7	70-110	0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32
				1000	300	8	50-90	0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32
				1200	350	9	40-70	0.09-0.15	0.12-0.25	0.14-0.28	0.16-0.32
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	50-90	0.09-0.12	0.12-0.20	0.12-0.22	0.15-0.25
			Quenched and tempered	1100	325	11	40-80	0.09-0.12	0.12-0.20	0.12-0.22	0.15-0.25
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	40-70	0.08-0.10	0.10-0.15	0.12-0.18	0.14-0.20
			Martensitic	820	240	13	40-70	0.08-0.10	0.10-0.15	0.12-0.18	0.14-0.20
			Austenitic	600	180	14	30-70	0.08-0.10	0.10-0.15	0.12-0.18	0.14-0.20
K	Grey cast iron (GG)		Ferritic / pearlitic		160	15	90-160	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40
			Pearlitic		250	16	80-140	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40
	Cast iron nodular (GGG)		Ferritic		180	17	90-180	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40
			Pearlitic		260	18	80-140	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40
	Malleable cast iron		Ferritic		130	19	90-160	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40
			Pearlitic		230	20	80-140	0.12-0.18	0.15-0.30	0.20-0.35	0.25-0.40
N	Aluminum-wrought alloy		Not cureable		60	21	90-220		0.20-0.35	0.25-0.40	0.30-0.45
			Cured		100	22	90-220		0.20-0.35	0.25-0.40	0.30-0.45
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	90-220		0.20-0.35	0.25-0.40	0.30-0.45
			Cured		90	24	90-220		0.20-0.35	0.25-0.40	0.30-0.45
		>12% Si	High temperature		130	25	80-160		0.20-0.35	0.25-0.40	0.30-0.45
	Copper alloys	>1% Pb	Free cutting		110	26	90-220		0.20-0.35	0.25-0.40	0.30-0.45
			Brass		90	27	90-220		0.20-0.35	0.25-0.40	0.30-0.45
			Electrolitic copper		100	28	90-220		0.20-0.35	0.25-0.40	0.30-0.45
	Non-metallic		Duroplastics, fiber plastics			29					
			Hard rubber			30					
S	High temp. alloys	Fe based	Annealed		200	31	30-60	0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15
			Cured		280	32	20-50	0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15
		Ni or Co based	Annealed		250	33	20-50	0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15
			Cured		350	34	20-50	0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15
			Cast		320	35	20-50	0.05-0.07	0.06-0.11	0.08-0.13	0.10-0.15
	Titanium and Ti alloys			Rm 400		36	20-50	0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18
			Alpa+bata alloys cured	Rm 1050		37	20-50	0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18
H	Hardened steel		Hardened		55HRC	38	20-50	0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18
			Hardened		60HRC	39	20-50	0.05-0.07	0.06-0.12	0.08-0.15	0.10-0.18
	Chilled cast iron		Cast		400	40					
	Cast iron nodular (GGG)		Hardened		55HRC	41					

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel

Recommended Cutting Conditions

ISO	Material		Condition	Tensile Strength (N/mm²)	Hardness HB	Material No.	Cutting speed Vc(m/min)	Feed (mm/rev) vs. drill diameter		
								Ø14 - Ø15.9	Ø16 - Ø19.9	Ø20 - Ø25.9
P	Non-alloy steel and cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	80-140	0.20-0.35	0.25-0.45	0.25-0.45
		>=0.25%C	Annealed	650	190	2	80-130	0.20-0.35	0.25-0.45	0.25-0.45
		<0.55%C	Quenched and tempered	850	250	3	80-120	0.20-0.35	0.25-0.45	0.25-0.45
		>=0.55%C	Annealed	750	220	4	70-110	0.20-0.35	0.25-0.45	0.25-0.45
			Quenched and tempered	1000	300	5	50-90	0.20-0.35	0.25-0.45	0.25-0.45
	Low alloy steel and cast steel (less than 5% of alloying elements)		Annealed	600	200	6	70-120	0.18-0.35	0.23-0.40	0.25-0.45
			Quenched and tempered	930	275	7	70-110	0.18-0.35	0.23-0.40	0.25-0.45
				1000	300	8	50-90	0.18-0.35	0.23-0.40	0.25-0.45
				1200	350	9	40-70	0.18-0.35	0.23-0.40	0.25-0.45
	High alloy steel, cast steel and tool steel		Annealed	680	200	10	50-90	0.18-0.28	0.20-0.30	0.22-0.33
			Quenched and tempered	1100	325	11	40-80	0.18-0.28	0.20-0.30	0.22-0.33
M	Stainless steel and cast steel		Ferritic / martensitic	680	200	12	40-70	0.16-0.24	0.16-0.26	0.18-0.30
			Martensitic	820	240	13	40-70	0.16-0.24	0.16-0.26	0.18-0.30
			Austenitic	600	180	14	30-70	0.16-0.24	0.16-0.26	0.18-0.30
K	Grey cast iron (GG)		Ferritic / pearlitic		160	15	90-160	0.30-0.45	0.35-0.55	0.35-0.60
			Pearlitic		250	16	80-140	0.30-0.45	0.35-0.55	0.35-0.60
	Cast iron nodular (GGG)		Ferritic		180	17	90-180	0.30-0.45	0.35-0.55	0.35-0.60
			Pearlitic		260	18	80-140	0.30-0.45	0.35-0.55	0.35-0.60
	Malleable cast iron		Ferritic		130	19	90-160	0.30-0.45	0.35-0.55	0.35-0.60
			Pearlitic		230	20	80-140	0.30-0.45	0.35-0.55	0.35-0.60
N	Aluminum-wrought alloy		Not cureable		60	21	90-220	0.35-0.50	0.40-0.60	0.45-0.70
			Cured		100	22	90-220	0.35-0.50	0.40-0.60	0.45-0.70
	Aluminum-cast, alloyed	<=12% Si	Not cureable		75	23	90-220	0.35-0.50	0.40-0.60	0.45-0.70
			Cured		90	24	90-220	0.35-0.50	0.40-0.60	0.45-0.70
		>12% Si	High temperature		130	25	80-160	0.35-0.50	0.40-0.60	0.45-0.70
	Copper alloys	>1% Pb	Free cutting		110	26	90-220	0.35-0.50	0.40-0.60	0.45-0.70
			Brass		90	27	90-220	0.35-0.50	0.40-0.60	0.45-0.70
			Electrolitic copper		100	28	90-220	0.35-0.50	0.40-0.60	0.45-0.70
	Non-metallic		Duroplastics, fiber plastics			29				
			Hard rubber			30				
S	High temp. alloys	Fe based	Annealed		200	31	30-60	0.12-0.18	0.12-0.20	0.14-0.22
			Cured		280	32	20-50	0.12-0.18	0.12-0.20	0.14-0.22
		Ni or Co based	Annealed		250	33	20-50	0.12-0.18	0.12-0.20	0.14-0.22
			Cured		350	34	20-50	0.12-0.18	0.12-0.20	0.14-0.22
			Cast		320	35	20-50	0.12-0.18	0.12-0.20	0.14-0.22
	Titanium and Ti alloys			Rm 400		36	20-50	0.12-0.20	0.14-0.22	0.16-0.25
			Alpa+bata alloys cured	Rm 1050		37	20-50	0.12-0.20	0.14-0.22	0.16-0.25
H	Hardened steel		Hardened		55HRC	38	20-50	0.12-0.20	0.14-0.22	0.16-0.25
			Hardened		60HRC	39	20-50	0.12-0.20	0.14-0.22	0.16-0.25
	Chilled cast iron		Cast		400	40				
	Cast iron nodular (GGG)		Hardened		55HRC	41				

Steel Stainless steel Cast iron Nonferrous High temp. alloys Hardened steel