

NEW PRODUCT NEWS

DRILL-RUSH

expansion

Deeper Hole Drilling Solution: 12xD Expansion

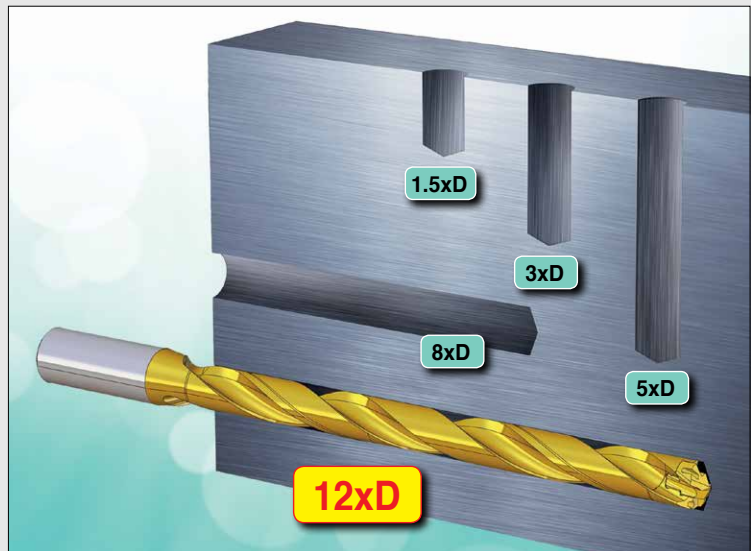


DRILL•RUSH

Deeper hole drilling solution: 12xD expansion

FEATURES

- **12xD holder**
 - Range : 12.0mm – 22.9mm
- **Smooth chip evacuation**
 - Twisted through coolant channel enables a widened gullet design
 - Drill body's polished flute
- **High accuracy**
 - : Cylindrical shank for good run-out
- **High productivity**
 - : Deep hole drilling without pecking cycles



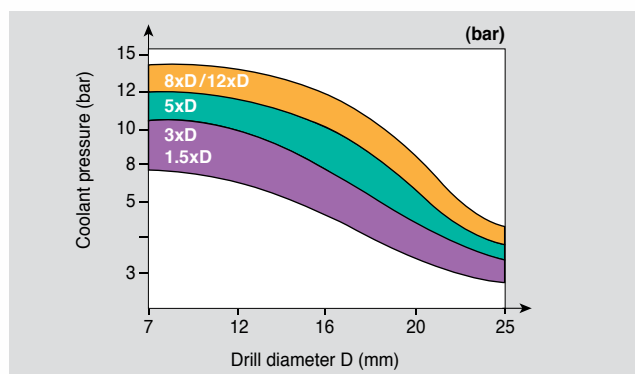
*Note: Prior to using the 12xD drill, it is recommended to drill a pilot hole using a TCD 1.5xD drill or a centering drill for stable machining.

TaeguTec's remarkable high performance head changeable DRILLRUSH line is now expanded with a 12xD drill range for deeper hole drilling from a diameter of 12.0 mm-22.9 mm.

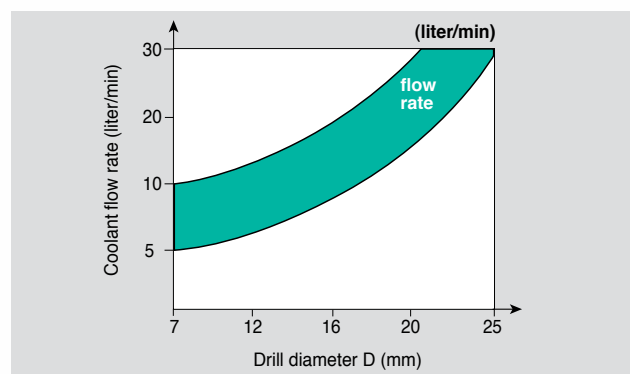
The polished flutes and twisted coolant channel enables smooth chip evacuation and improved chip control due to the widened chip gullet design. The 12xD holder characterized by high stiffness guarantees stable performance without deviation or chattering during machining.

Furthermore, the 12xD expansion offers higher productivity for deep hole drilling applications without the need for pecking cycles.

Recommended coolant pressure



Recommended coolant flow rate



Recommended procedure for using 8xD, 12xD holder

1

- Pre-hole drilling
 - diameter(D) X 0.5 ~ diameter(D) X 1.5 depth
 - using standard 1.5xD holder

2

- Approach the pre-hole at reduced speed and feed

3

- Activate the cooling system
 - for 2~3 seconds

4

- After drilling, exit from hole at reduced speed and feed

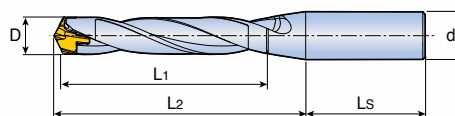
Plug for stationary machines

TaeguTec supplies special plugs with an internal thread for coolant connections used on lathes that can be pressed into the cavity on the back end of the shank.

Item no.	Description	Shank diameter	Internal thread
6102019	PL-TCD-12	12	G 1/16
6102020	PL-TCD-16	16	G 1/16
6102021	PL-TCD-20	20	G 1/8
6102022	PL-TCD-25	25	G 1/8
6102023	PL-TCD-32	32	G 1/8



Holder - 12xD



- Cylindrical type shank

Designation	Dimension (mm)						Clamping key
	DRange	d	L1	L2	Ls	Pocket size	
new TCD 120-124-16S0-12D	12.0-12.4	16	144	161.0	48	12	K TCD D100-D199
new TCD 125-129-16S0-12D	12.5-12.9	16	150	167.0	48	12	
new TCD 130-134-16S0-12D	13.0-13.4	16	156	173.0	48	13	
new TCD 135-139-16S0-12D	13.5-13.9	16	162	179.0	48	13	
new TCD 140-144-16S0-12D	14.0-14.4	16	168	188.0	48	14	
new TCD 145-149-16S0-12D	14.5-14.9	16	174	194.0	48	14	
new TCD 150-159-20S0-12D	15.0-15.9	20	180	210.0	50	15	
new TCD 160-169-20S0-12D	16.0-16.9	20	192	224.0	50	16	
new TCD 170-179-20S0-12D	17.0-17.9	20	204	238.0	50	17	
new TCD 180-189-25S0-12D	18.0-18.9	25	216	252.0	56	18	
new TCD 190-199-25S0-12D	19.0-19.9	25	228	266.0	56	19	K TCD D200-D269
new TCD 200-209-25S0-12D	20.0-20.9	25	240	280.0	56	20	
new TCD 210-219-25S0-12D	21.0-21.9	25	252	294.0	56	21	
new TCD 220-229-25S0-12D	22.0-22.9	25	264	308.0	56	22	

- It is first recommended to make the pilot hole with a 1.5xD holder

Recommended cutting conditions - According to DIN/ISO513 and VDI 3323

ISO	Material	Condition	Tensile strength Rm(N/mm ²)	Hardness (HB)	Mtl. No.	Cutting speed Vc(m/min)	DRILLRUSH						
							Feed vs. Drill diameter (mm/rev)						
							D<10	D=10-11.9	D=12-13.9	D=14-15.9	D=16-19.9	D=20-25.9	
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C Annealed	420	125	1	80-110-140							
		>=0.25%C Annealed	650	190	2	80-105-130	0.12	0.15	0.18	0.20	0.25	0.25	
		<0.55%C Quenched and tempered	850	250	3	80-100-120	0.17	0.21	0.24	0.27	0.35	0.35	
		>=0.55%C Annealed	750	220	4	70-90-110	0.22	0.28	0.30	0.35	0.45	0.45	
		Quenched and tempered	1000	300	5	50-70-90							
	Low alloy steel and cast steel (less than 5% of alloying elements)	Annealed	600	200	6	70-95-120	0.12	0.14	0.16	0.18	0.23	0.25	
		Quenched and tempered	930	275	7	70-90-110	0.18	0.21	0.24	0.26	0.31	0.35	
			1000	300	8	50-70-90	0.25	0.28	0.32	0.35	0.40	0.45	
			1200	350	9	40-55-70							
	High alloy steel, cast steel and tool steel.	Annealed	680	200	10	50-70-90	0.12	0.12	0.15	0.18	0.20	0.22	
Quenched and tempered		1100	325	11	40-60-80	0.16	0.17	0.20	0.23	0.25	0.27		
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12	40-55-70	0.10	0.12	0.14	0.16	0.16	0.18	
		Martensitic	820	240	13	40-55-70	0.12	0.15	0.17	0.20	0.21	0.24	
		Austenitic	600	180	14	30-50-70	0.15	0.18	0.20	0.24	0.26	0.30	
K	Gray cast iron (GG)	Ferritic		160	15	90-125-160							
		Pearlitic		250	16	80-110-140							
	Cast iron nodular (GGG)	Ferritic		180	17	90-135-180	0.15	0.20	0.25	0.30	0.35	0.35	
		Pearlitic		260	18	80-110-140	0.22	0.27	0.32	0.37	0.45	0.37	
Malleable cast iron	Ferritic		130	19	90-125-160	0.30	0.35	0.40	0.45	0.55	0.60		
	Pearlitic		230	20	80-110-140								
N	Aluminum - wrought alloy	Not cureable		60	21	90-155-220							
		Cured		100	22	90-155-220							
	Aluminum-cast, alloyed	<=12% Si Not cureable		75	23	90-155-220	0.20	0.25	0.30	0.35	0.40	0.45	
		Cured		90	24	90-155-220	0.27	0.32	0.37	0.42	0.50	0.57	
		>12% Si High temp.		130	25	80-120-160	0.35	0.40	0.45	0.50	0.60	0.70	
	Copper alloys	>1% Pb Free cutting		110	26	90-155-220							
		Brass		90	27	90-155-220							
Non-metallic	Duroplastics, fiber plastics				29								
	Hard rubber				30								
S	High temp. alloys	Fe based	Annealed		200	31	30-45-60						
			Cured		280	32	20-35-50	0.06	0.08	0.10	0.12	0.12	0.14
		Ni or Co based	Annealed		250	33	20-35-50	0.08	0.10	0.12	0.15	0.16	0.18
			Cured		350	34	20-35-50	0.11	0.13	0.15	0.18	0.20	0.22
	Titanium, Ti alloys		RM400		36	20-35-50	0.06	0.08	0.10	0.12	0.14	0.16	
	Alpha+beta alloys cured	RM1050		37	20-35-50	0.09	0.11	0.14	0.16	0.18	0.20		
H	Hardened steel	Hardened		55HRC	38	20-35-50	0.12	0.15	0.18	0.20	0.22	0.25	
		Hardened		60HRC	39	20-35-50	0.06	0.08	0.10	0.12	0.14	0.16	
	Chilled cast iron	Cast		400	40		0.09	0.11	0.14	0.16	0.18	0.20	
	Cast iron nodular	Hardened		55HRC	41		0.12	0.15	0.18	0.20	0.22	0.25	

* For more information of material groups, see the TaeguTec concise catalogue "Material conversion table" section.

■ Steel
 ■ Stainless steel
 ■ Cast Iron
 ■ Nonferrous
 ■ High temp. alloys
 ■ Hardened steel