

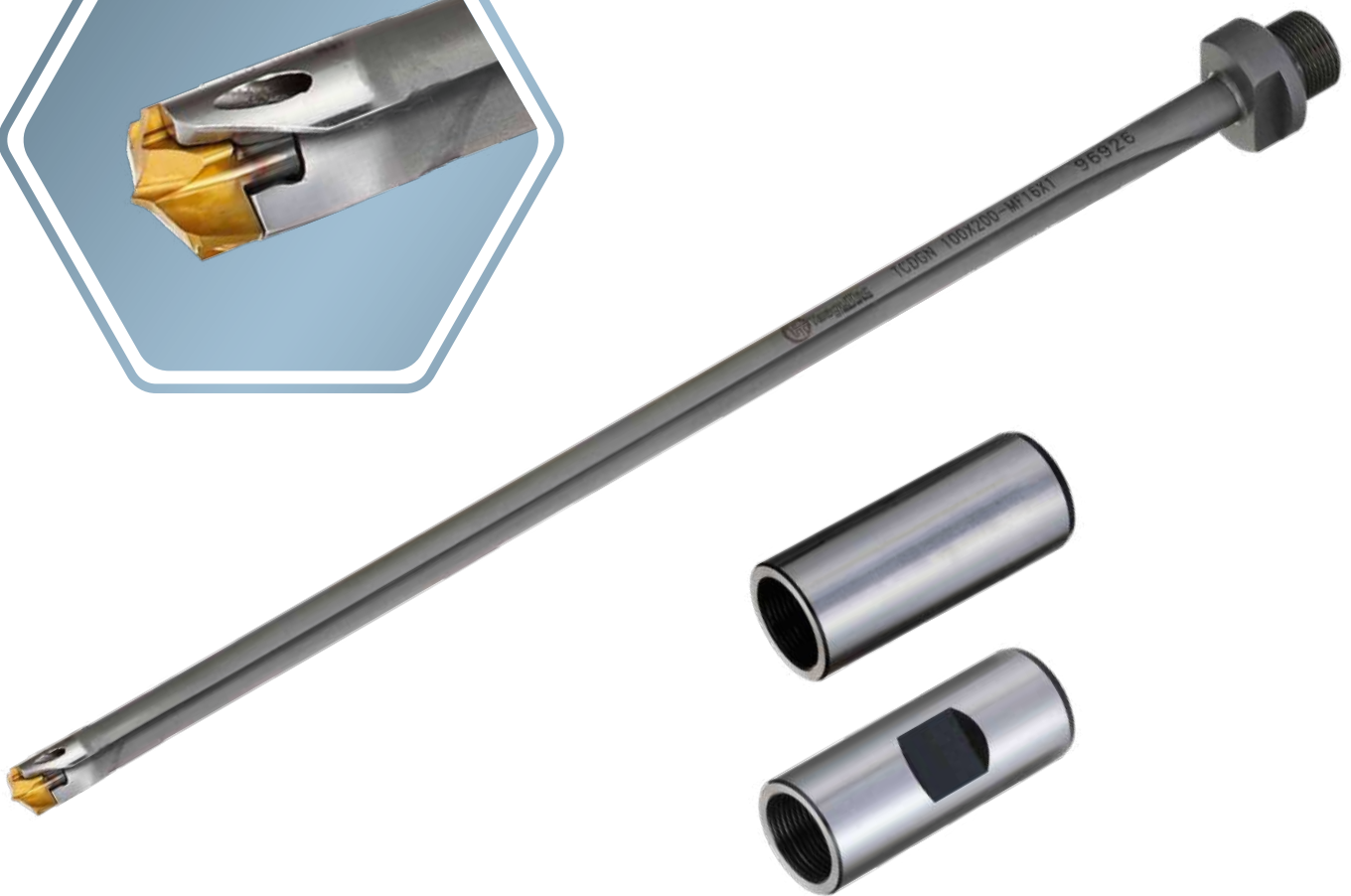
NPN

New Product News



WINGUN

New Head-Changeable Gundrill for Deep Hole Drilling



KEY POINT

Introducing TaeguTec's new high productivity WIN-GUN range with exchangeable drill heads and shank drivers.

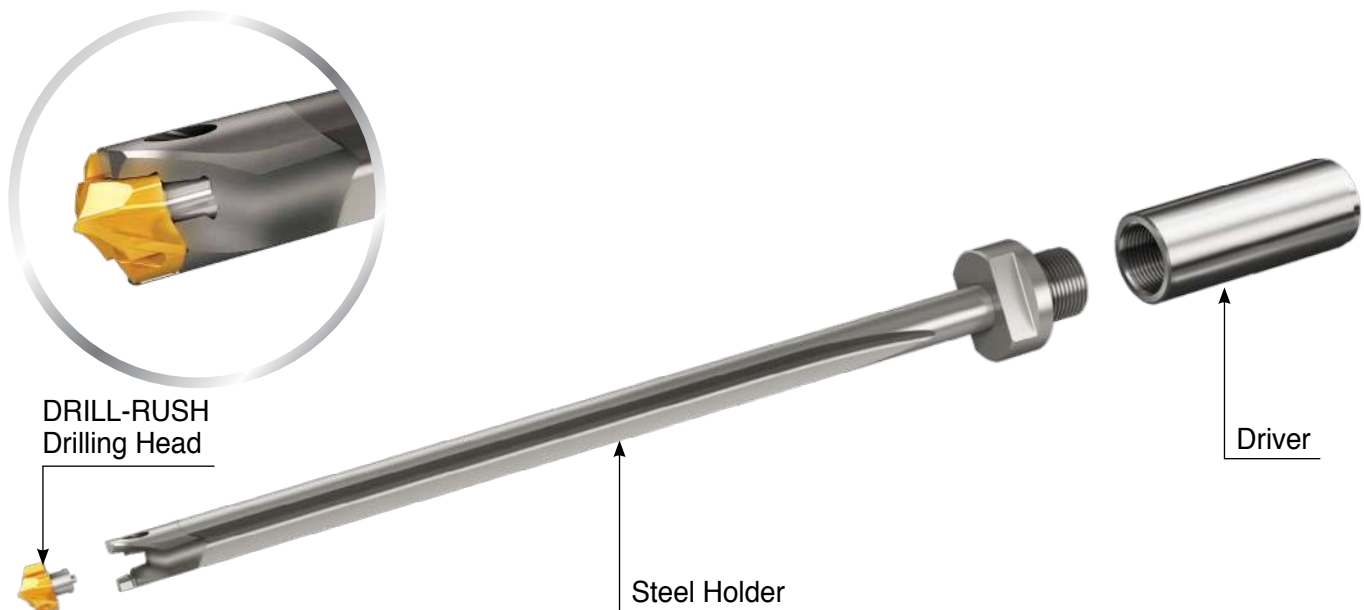
The gundrill has been the standard for deep hole drilling used across a wide variety of industries such as aerospace, automotive, mold and die, power generation and defense.

TaeguTec's new **WIN-GUN** drill, using standard DRILL-RUSH heads, replaces traditional brazed gundrills by enabling quick and easy replacement of the drilling heads. Thus, minimizing set-up time by eliminating the need to remove the drill from the machine for head indexing.

Furthermore, the drill head's unique 2-effective cutting-edge design and effective flutes for smooth chip evacuation ensure premium hole quality as well as machining stability in high feed and high-speed cutting conditions.

It is especially effective in deep hole drilling, 12xD and higher, within a diameter range of Ø10.0-25.0 mm. The new gundrill line is compatible with standard horizontal milling centers, lathes, multitask machines and gundrill machines.

For further information, please contact the product manager.

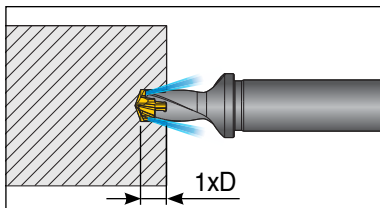


Features

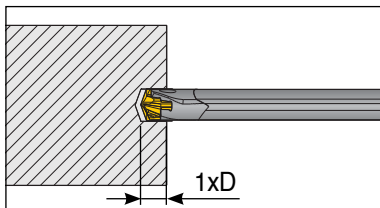
- Head-exchangeable WIN-GUN gundrills reduce both tooling downtime and set-up time
- Unique 2-effective cutting edges drill head design
- 2-5 times higher table feed than standard brazed gundrills
- Mandatory use of emulsion or oil when drilling
- Available in two higher economy exchangeable shank driver types: weldon and cylindrical
- Compatible with standard horizontal milling centers, lathes, multitask machines and gundrill machines
- Diameter range: Ø10.0-25.0 mm

Horizontal Milling and Lathe Machines Drilling Instructions

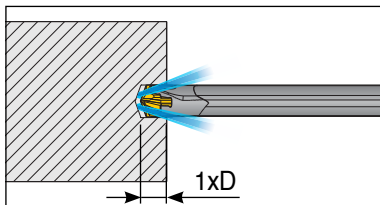
1. Drill a 1xD pilot hole with a short drill using the same diameter intended for the WIN-GUN drill.
2. Enter the pre-hole at a slower speed, feed, and 50 RPM until it is 1-2 mm from the bottom.
3. Activate the coolant while increasing the rotation speed to the recommended drilling speed, maintain for 2-3 seconds, then continue at the recommended drilling feed.
 - No pecking required
 - Apply the maximum possible coolant flow rate
4. After reaching the required depth, reduce speed to 50-100 RPMs while exiting the hole.



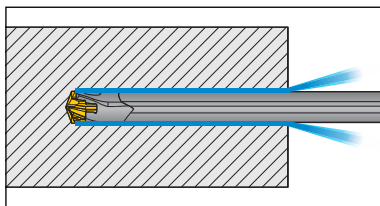
❶ 1xD deep pre-hole for centering



❷ Slow rotation and feed while entering the pre-hole



❸ Maintain for 2-3 seconds and activate the coolant system



❹ Continue drilling at the recommended cutting conditions

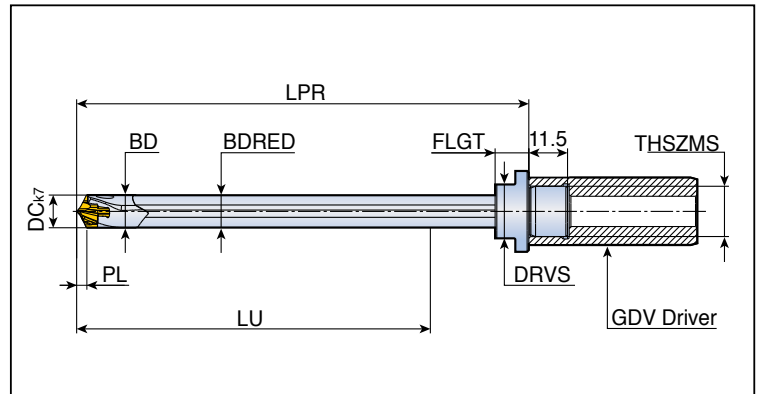
TCDGN



DRILL-RUSH head-changeable and modular shank gundrill holders



- Drilling depth: 16-20xdiameter



Designation	Dimension (mm)											Clamping Key
	DC	LU	LPR	PL	THSZMS	BD	BDRED	FLGT	DRVS	SSC		
TCDGN 100X200-MF16X1	10.0-10.4	200	274	2.33	MF16X1	9.7	9.6	10	16	10	K TCD D100-D199	
100X400-MF16X1	10.0-10.4	400	474	2.33	MF16X1	9.7	9.6	10	16	10		
110X200-MF16X1	11.0-11.4	200	275	2.50	MF16X1	10.7	10.6	10	16	11		
110X400-MF16X1	11.0-11.4	400	474	2.50	MF16X1	10.7	10.6	10	16	11		
120X200-MF16X1	12.0-12.4	200	275	2.67	MF16X1	11.7	11.6	10	16	12		
120X400-MF16X1	12.0-12.4	400	475	2.67	MF16X1	11.7	11.6	10	16	12		
130X200-MF16X1	13.0-13.4	200	276	2.85	MF16X1	12.7	12.6	12	16	13		
130X400-MF16X1	13.0-13.4	400	476	2.85	MF16X1	12.7	12.6	12	16	13		
140X250-MF16X1	14.0-14.4	250	326	3.02	MF16X1	13.7	13.6	12	16	14		
140X400-MF16X1	14.0-14.4	400	476	3.02	MF16X1	13.7	13.6	12	16	14		
145X250-MF16X1	14.5-14.9	250	326	3.02	MF16X1	14.2	14.1	12	18	14		
145X400-MF16X1	14.5-14.9	400	476	3.02	MF16X1	14.2	14.1	12	18	14		
150X400-MF16X1	15.0-15.9	400	484	3.19	MF16X1	14.7	14.6	12	18	15		
160X400-MF20X1	16.0-16.9	400	484	3.46	MF20X1	15.5	15.4	12	18	16		
170X400-MF20X1	17.0-17.9	400	485	3.63	MF20X1	16.5	16.4	12	22	17		
180X400-MF20X1	18.0-18.9	400	486	3.81	MF20X1	17.5	17.4	12	22	18		
190X400-MF20X1	19.0-19.9	400	486	3.98	MF20X1	18.5	18.4	12	22	19		
200X400-MF20X1	20.0-20.9	400	487	4.15	MF20X1	19.5	19.4	12	22	20	K TCD D200-D269	
210X400-MF20X1	21.0-21.9	400	503	4.32	MF20X1	20.5	20.4	21	28	21		
220X400-MF20X1	22.0-22.9	400	504	4.50	MF20X1	21.5	21.4	21	28	22		
230X400-MF20X1	23.0-23.9	400	504	4.67	MF20X1	22.5	22.4	21	28	23		
240X400-MF20X1	24.0-24.9	400	505	4.84	MF20X1	23.5	23.4	21	28	24		
250X400-MF20X1	25.0-25.9	400	506	5.01	MF20X1	24.5	24.4	21	28	25		

- ▶ SSC: Seat size code
- ▶ Driver is sold separately from drill holder

Recommended Cutting Conditions

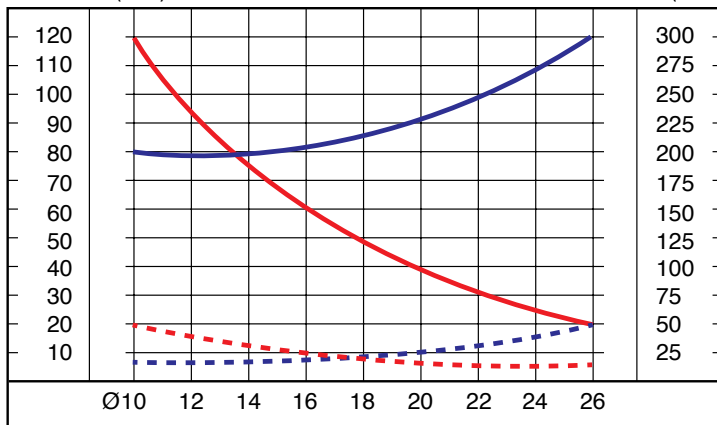
ISO	Material	Condition	Tensile Strength (N/mm ²)	Hardness HB	Material No.	Cutting speed Vc(m/min)	Feed (mm/rev) vs. drill diameter				
							Ø10-Ø11.9	Ø12-Ø13.9	Ø14-Ø15.9	Ø16-Ø19.9	Ø20-Ø25.9
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C Annealed	420	125	1	80-110-140					
		≥0.25%C Annealed	650	190	2	80-105-130	0.15	0.18	0.20	0.25	0.25
		<0.55%C Quenched and tempered	850	250	3	80-100-120	0.18	0.21	0.23	0.30	0.30
		≥0.55%C Annealed	750	220	4	70-90-110	0.21	0.24	0.27	0.35	0.35
		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	80-100-120	0.14	0.16	0.18	0.23	0.25
		Quenched and tempered	930	275	7	70-90-110	0.17	0.20	0.22	0.27	0.30
			1000	300	8	50-70-90	0.21	0.24	0.26	0.31	0.35
			1200	350	9	40-55-70					
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	50-70-90	0.12	0.15	0.18	0.20	0.22
Quenched and tempered		1100	325	11	40-60-80	0.14	0.17	0.20	0.22	0.24	
M	Stainless steel and cast steel	Ferritic / martensitic	680	200	12	40-55-70	0.12	0.14	0.16	0.16	0.18
		Martensitic	820	240	13		0.13	0.15	0.18	0.19	0.21
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	0.20	0.25	0.30	0.35	0.35
		Pearlitic		260	18	80-110-140	0.23	0.28	0.33	0.40	0.42
	Malleable cast iron	Ferritic		130	19	90-125-160	0.27	0.32	0.37	0.45	0.47
		Pearlitic		230	20	80-110-140					
N	Aluminum - wrought alloy	Not cureable		60	21	90-155-220					
		Cured		100	22		0.25	0.30	0.35	0.40	0.45
	Aluminum- cast, alloyed	≤12% Si Not cureable		75	23		0.28	0.33	0.38	0.45	0.50
		>12% Si Cured		90	24		0.32	0.37	0.42	0.50	0.57
		High temp.		130	25	80-120-160					

■ Steel
 ■ Stainless steel
 ■ Cast iron
 ■ Nonferrous

- ▶ **Red text:** Recommended cutting data
- ▶ Mandatory use of emulsion or oil when drilling
- ▶ For the 400 mm long tools, please reduce the cutting speed by 20%

Pressure and Coolant Flow Rate for WIN-GUN

Pressure (Bar) Coolant Flow Rate (l/min)



Q (l/min) P (bar)
— — GUN-DRILL Machines
- - - - - - Milling and Turning Machines

Drilling Diameter (mm)