

# NPN

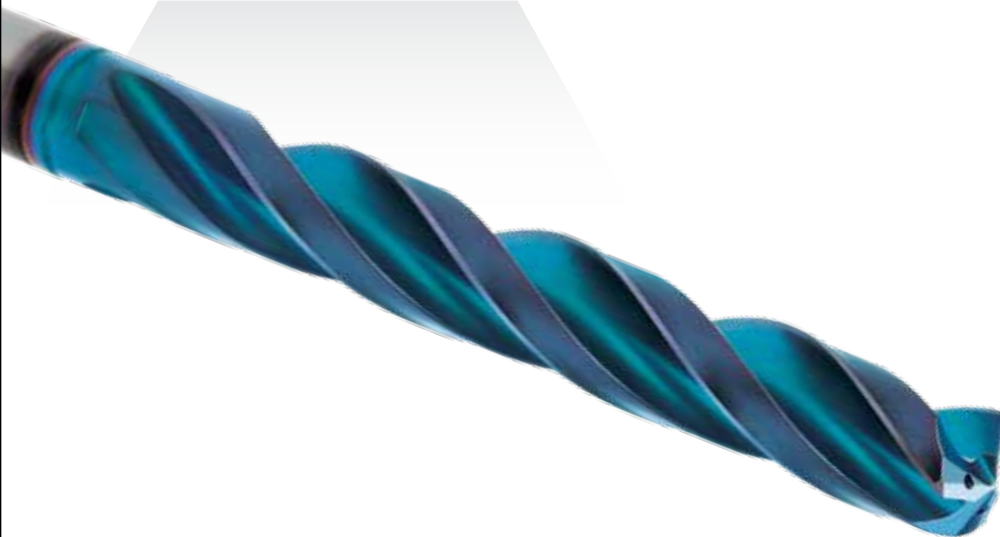
New Product News



## SOLID<sup>3</sup>DRILL

3 FLUTE

**New 3 Flutes Solid Carbide Drill for Increased Productivity**

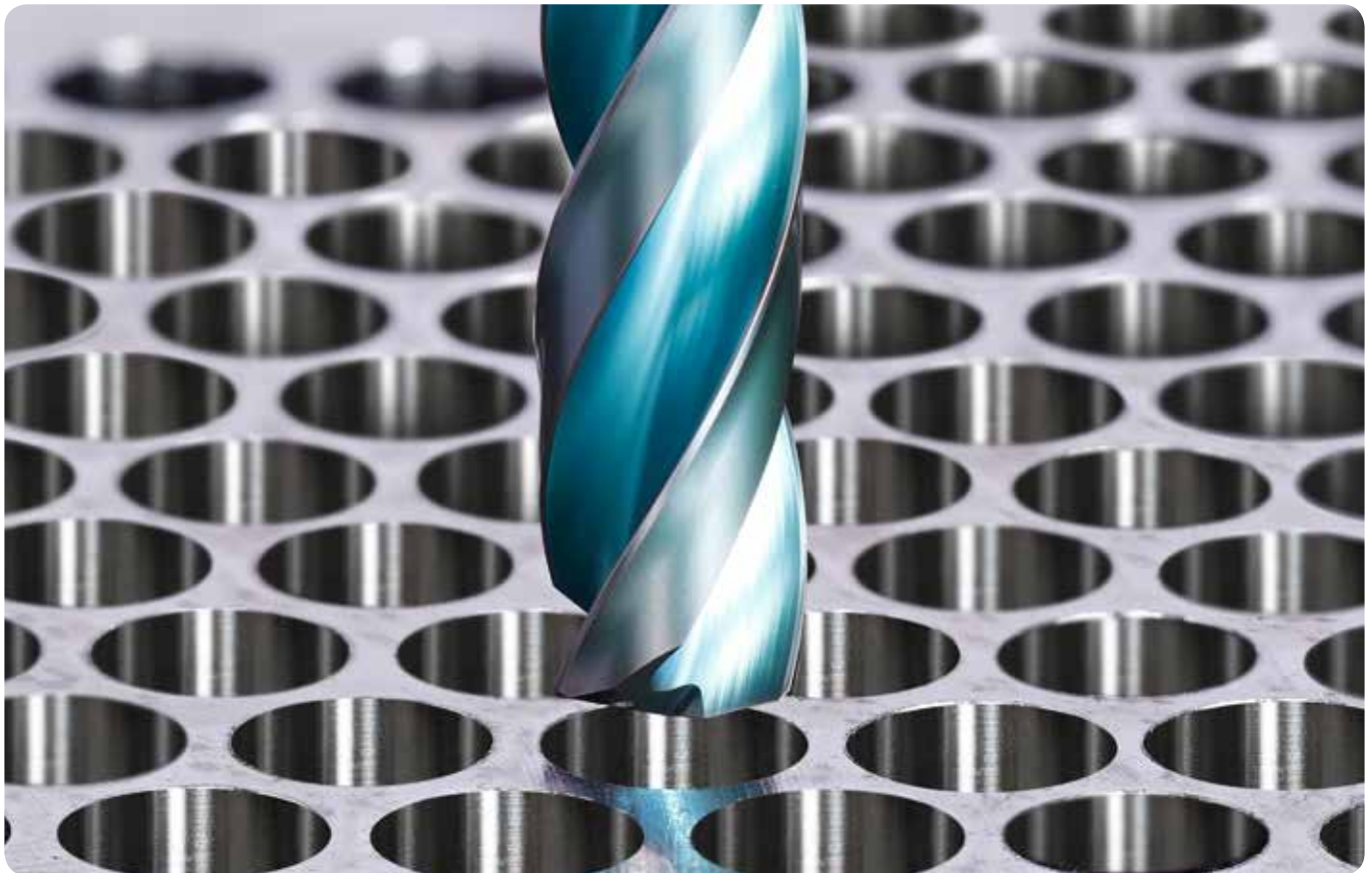


## KEY POINT

**TaeguTec has launched the SOLID-3-DRILL, a new 3 flutes solid carbide drill.**

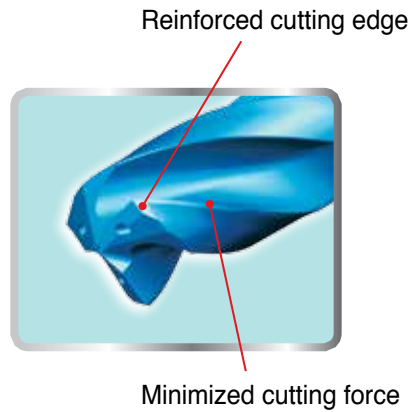
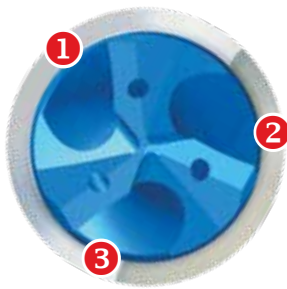
In order to maximize customer profitability by improving productivity as well as superior machining, TaeguTec has introduced a new 3 flutes carbide drill with a unique geometry. Not only does the line improve productivity due to the increased number of teeth compared to conventional drills, it also improves machining stability in high cutting conditions with its excellent edge design. It is the best solution for customers who demand excellent performance, especially in steel and cast iron machining.

For further technical questions, please contact TaeguTec's product manager.



## Features

- 3 flutes geometry improves productivity by more than 50%
- Highest machining stability due to its unique edge geometry
  - Reduced cutting load
  - Minimized heat generation during machining
  - Internal coolant through type



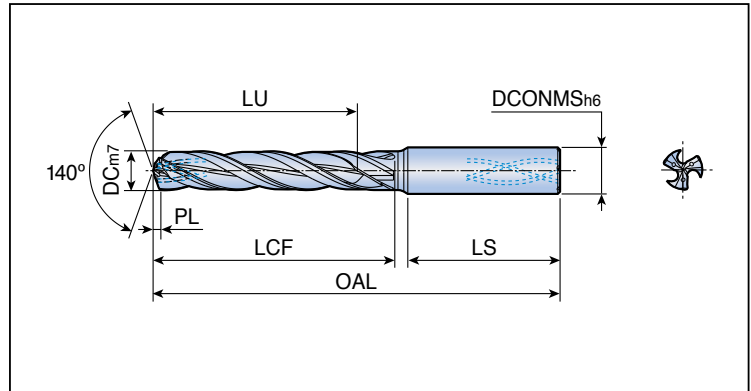
- TT5130 grade
  - Sub-micron PVD grade with a good balance between toughness and hardness
  - Newly developed multilayer coating structure to strengthen against both fracture toughness and wear resistance
- Excellent hole precision due to its superior self-centering capability
- Suitable for steel and cast iron machining
- Drill diameter range: 4.0-12.0 mm (3xD and 5xD)



## 3HD...PI5



3 flute solid carbide drills with oil holes



• Drilling depth: 5xdiameter



Designation	Dimension (mm)							Grade
	DC	DCONMS	OAL	LU	LCF	LS	PL	
<b>3HD 040-029-06 PI5</b>	4.0	6.0	74	29	37	35	0.82	●
<b>045-029-06 PI5</b>	4.5	6.0	74	29	37	35	0.88	●
<b>050-035-06 PI5</b>	5.0	6.0	82	35	45	36	0.96	●
<b>051-035-06 PI5</b>	5.1	6.0	82	35	45	36	0.98	●
<b>055-035-06 PI5</b>	5.5	6.0	82	35	45	36	1.08	●
<b>060-035-06 PI5</b>	6.0	6.0	82	35	45	36	1.17	●
<b>065-043-08 PI5</b>	6.5	8.0	91	43	54	36	1.26	●
<b>068-043-08 PI5</b>	6.8	8.0	91	43	54	36	1.31	●
<b>070-043-08 PI5</b>	7.0	8.0	91	43	54	36	1.35	●
<b>075-043-08 PI5</b>	7.5	8.0	91	43	54	36	1.40	●
<b>080-043-08 PI5</b>	8.0	8.0	91	43	54	36	1.49	●
<b>085-049-10 PI5</b>	8.5	10.0	103	49	62	40	1.63	●
<b>086-049-10 PI5</b>	8.6	10.0	103	49	62	40	1.65	●
<b>090-049-10 PI5</b>	9.0	10.0	103	49	62	40	1.72	●
<b>095-049-10 PI5</b>	9.5	10.0	103	49	62	40	1.75	●
<b>100-049-10 PI5</b>	10.0	10.0	103	49	62	40	1.85	●
<b>103-056-12 PI5</b>	10.3	12.0	118	56	71	45	1.94	●
<b>105-056-12 PI5</b>	10.5	12.0	118	56	71	45	1.98	●
<b>110-056-12 PI5</b>	11.0	12.0	118	56	71	45	2.07	●
<b>115-056-12 PI5</b>	11.5	12.0	118	56	72	45	2.12	●
<b>120-056-12 PI5</b>	12.0	12.0	118	56	72	45	2.21	●

●: Standard items

## Recommended Cutting Conditions

ISO	Material	Condition	Tensile Strength (N/mm <sup>2</sup> )	Hardness HB	Material Group No	Cutting Speed Vc (m/min)	Feed vs. Drill Diameter (mm/rev)				
							Ø4-Ø5	Ø5.1-Ø6	Ø6.1-Ø8	Ø8.1-Ø10	Ø10.1-Ø12
P	Non-alloy steel, cast steel, free cutting steel	<0.25%C Annealed	420	125	1	80-140	0.15-0.25	0.20-0.35	0.25-0.45	0.30-0.55	0.35-0.60
		>=0.25%C Annealed	650	190	2	80-130	0.15-0.25	0.20-0.35	0.25-0.45	0.30-0.55	0.35-0.60
		<0.55%C Quenched and tempered	850	250	3	80-120	0.15-0.25	0.20-0.35	0.25-0.45	0.30-0.55	0.35-0.60
		>=0.55%C Annealed	750	220	4	70-110	0.15-0.25	0.20-0.35	0.25-0.45	0.30-0.55	0.35-0.60
		>=0.55%C Quenched and tempered	1000	300	5	50-90	0.15-0.25	0.20-0.35	0.25-0.45	0.30-0.55	0.35-0.60
	Low alloy steel and cast steel (Less than 5% of alloying elements)	Annealed	600	200	6	80-120	0.15-0.25	0.20-0.35	0.25-0.40	0.30-0.50	0.35-0.55
		Quenched and tempered	930	275	7	70-110	0.15-0.25	0.20-0.35	0.25-0.40	0.30-0.50	0.35-0.55
			1000	300	8	50-90	0.15-0.25	0.20-0.35	0.25-0.40	0.30-0.50	0.35-0.55
			1200	350	9	40-70	0.15-0.25	0.20-0.35	0.25-0.40	0.30-0.50	0.35-0.55
	High alloy steel, cast steel and tool steel	Annealed	680	200	10	50-90	0.15-0.20	0.20-0.30	0.25-0.35	0.30-0.45	0.35-0.50
		Quenched and tempered	1100	325	11	40-80	0.15-0.20	0.20-0.30	0.25-0.35	0.30-0.45	0.35-0.50
K	Gray cast iron (GG)	Ferritic/pearlitic		180	15	80-140	0.20-0.30	0.25-0.45	0.35-0.55	0.40-0.60	0.45-0.65
		Pearlitic		260	16	70-120	0.20-0.30	0.25-0.45	0.35-0.55	0.40-0.60	0.45-0.65
	Cast iron nodular (GGG)	Ferritic		160	17	80-120	0.20-0.30	0.20-0.40	0.30-0.50	0.35-0.55	0.40-0.60
		Pearlitic		250	18	70-110	0.20-0.30	0.20-0.40	0.30-0.50	0.35-0.55	0.40-0.60
	Malleable cast iron	Ferritic		130	19	80-120	0.20-0.30	0.20-0.40	0.30-0.50	0.35-0.55	0.40-0.60
		Pearlitic		230	20	70-110	0.20-0.30	0.20-0.40	0.30-0.50	0.35-0.55	0.40-0.60

■ Steel ■ Cast iron