T-A® Drilling system

Replaceable Insert Drilling system | GEN2 T-A® | T-A® Original
Diameter range: 9.50 mm - 160.00 mm (0.374 ”- 6.299”)

This is Not Yesterday´s Spade drill

The T-A® drilling system is an innovation inspired by the Universal replaceable spade insert drilling system. However, with the development of the GEN2 T-A® insert, along with the countless geometry options for the Original T-A® , this drilling system provides benefits and performance that spade blade inserts of the past never could.

With constant innovations in holder designs, insert geometries and coatings, and coolant dispersion, the T-A drilling system continues to evolve and become much more productive and powerful than ever before. All holders, with either cylindrical or conical shank, are internally cooled (IK). Drilling with the T-A® system is always conditioned by drilling into solid material. If the customer uses a VBD (replaceable insert) with FB-Flat Bottom or hole geometry or SP-Spot & Chamfer, the drilling operation takes place in an already pre-drilled hole.

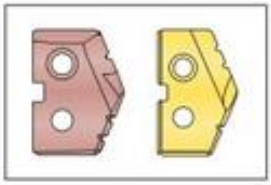
Excellent hole size and finish	Optimizes chip evacuation	Wide range of geometry options available

Applicable Industries

series	range of diameters	
	metric (mm)	inch
Y	9,50-11,07	0.374-0.436
Z	11,10-12,95	0.437-0.510
0	12,98-17,65	0.511-0.695
1	17,53-24,38	0.690-0.960
2	24,41-35,05	0.961-1.380
3	34,36-47,80	1.353-1.882
4	46,99-65,28	1.850-2.570
5	62,38-76,20	2.456-3.000
6	76,22-89,08	3.001-3.507
7	89,10-101,60	3.508-4.000
8	101,63-160,00	4.001-6.299

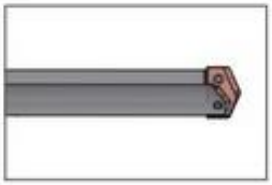
Reference Icons

The following icons will appear throughout the catalog to help you navigate between products.

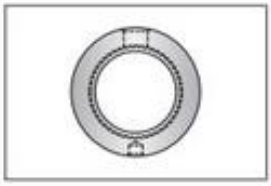


T-A Inserts
Refers to the range of inserts that connect with the corresponding holders

Available Insert Geometries
Details for the different geometry options available for each T-A insert style



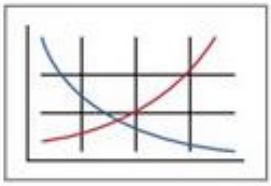
T-A Holders
Refers to the range of holders that connect with the corresponding inserts



Rotary Coolant Adapter (RCA) Information
Detailed instructions and information regarding the corresponding part(s)

T-ACR Chamfer Rings
Refers to the range of T-ACR chamfer rings available for the corresponding holders

Technical Information
Detailed instructions and information regarding the corresponding part(s)



Recommended Cutting Data
Speed and feed recommendations for optimum and safe drilling

T-A Drilling System Overview | Drill Inserts

Series	Y Series	Z Series	0 Series	1 Series	2 Series	3 Series	4 Series
GEN2 T-A							
D_1 inch	0.374 - 0.436	0.437 - 0.510	0.511 - 0.695	0.690 - 0.960	0.961 - 1.380	1.353 - 1.882	1.850 - 2.570
D_1 mm	9.5 - 11.07	11.10 - 12.95	12.98 - 17.65	17.53 - 24.38	24.41 - 35.05	34.36 - 47.80	46.99 - 65.28
Half Series Option*	✗	✗	✓	✓	✓	✗	✗
HSS Substrates	Super Cobalt	Super Cobalt	Super Cobalt	Super Cobalt	Super Cobalt	HSS Super Cobalt Premium Cobalt	HSS Super Cobalt
Carbide Substrates	C1 (K35) C2 (K20)	C1 (K35) C2 (K20)	C1 (K35) C2 (K20)	C1 (K35) C2 (K20)	C1 (K35) C2 (K20)	–	–
Coatings	AM200® AM300®	AM200® AM300®	AM200® AM300®	AM200® AM300®	AM200® AM300®	AM200® TiN	AM200® TiN

*See page A30: 7 for more information regarding half series options

Series	Y Series	Z Series	0 Series	1 Series	2 Series	3 Series	4 Series
Original T-A							
D_1 inch	0.374 - 0.436	0.437 - 0.510	0.511 - 0.695	0.690 - 0.960	0.961 - 1.380	1.353 - 1.882	1.850 - 2.570
D_1 mm	9.5 - 11.07	11.10 - 12.95	12.98 - 17.65	17.53 - 24.38	24.41 - 35.05	34.36 - 47.80	46.99 - 65.28
Half Series Option*	✗	✗	✓	✓	✓	✗	✗
HSS Substrates	Super Cobalt Premium Cobalt	Super Cobalt Premium Cobalt	Super Cobalt Premium Cobalt	HSS Super Cobalt Premium Cobalt	HSS Super Cobalt Premium Cobalt	Super Cobalt	Super Cobalt
Carbide Substrates	C2 (K20) C3 (K10) C5 (P40) N2	C2 (K20) C3 (K10) C5 (P40) N2	C2 (K20) C3 (K10) C5 (P40) N2	C2 (K20) C3 (K10) C5 (P40) N2	C2 (K20) C3 (K10) C5 (P40) N2	C2 (K20) C5 (P40)	–
Coatings	TiN TiAlN TiCN	TiN TiAlN TiCN	TiN TiAlN TiCN	TiN TiAlN TiCN	TiN TiAlN TiCN	TiN	TiN

*See page A30: 7 for more information regarding half series options

Drill Insert Coatings

AM300®

- Increased heat resistance over AM200® coating
- Up to 20% increased tool life over AM200 coating
- Provides superior tool life at high penetration rates
- Color: copper/orange

AM200®

- First choice for increased heat resistance over TiN, TiCN, and TiALN with improved wear capabilities
- Allows for improved tool life and higher penetration rates
- Over 20% increase in tool life compared to TiAlN coating
- Color: copper/bronze

TiN

- General purpose coating
- Improved tool life over non-coated inserts
- Excellent choice for aluminum
- Color: gold/yellow

Drill Insert Coatings

TiAlN

- Excellent choice for wear resistance over high surface speeds
- Excellent oxidation resistance
- Maximum working temperature 800°C
- Color: violet/gray

TiCN

- Excellent choice for wear resistance over low surface speeds
- High hardness/wear resistance
- Maximum working temperature 400°C
- Color: blue/gray

Drill Insert Grades	
HSS (Original / GEN2) First choice for general purpose use. Suited for difficult machining applications with low rigidity, as well as deep hole drilling. Recommended for drilling most steels, cast irons, and aluminum alloys up to 275 BHN 96.	**HSS Super Cobalt** (Original / GEN2) Suited for good-to-rigid machining applications, used for drilling exotic and high alloy materials, or general use when surface speed needs to be increased. For use in material hardness up to 350 BHN 121.
Carbide C3 (K10) (Original only) Designed for drilling grey/white cast irons. The special geometry offers substantial increase in penetration rates and provides exceptional edge strength and tool life.	**Carbide C2 (K20)** (Original / GEN2) Excellent for drilling high temperature alloys, titanium alloys, cast aluminum, SG/Nodular cast iron, grey/white iron, aluminum bronze, brass, copper, and certain stainless steels.

Drill Insert Grades	
HSS Premium Cobalt (Original / GEN2) Suited for rigid machining applications, used for drilling exotic and high alloy materials, or general use when surface speed needs to be increased. For material hardness up to 400 BHN 139.	**Carbide C5 (P40)** (Original only) Excellent for drilling free machining steel, low/medium carbon steels, alloy steels, high strength steels, tool steels, and hardened steels.
Carbide C1 (K35) (Original / GEN2) Excellent for drilling free machining steel, low/medium carbon steels, alloy steels, high strength steels, tool steels, and hardened steels.	**Carbide N2** (Original only) Allied's N2 carbide is used with CVD diamond coating. This improves the insert's hardness, durability, and performance, which extends tool life between 30 - 50x over uncoated carbide.