NPA

EXPANSION

New Product Announcement

Member IMC Group Ingersoll Cutting Tools

HOLEMAKING

GOLDTWIST™

Diameter Range

0.1575-0.2323"
4.00-5.90 mm NEW

Bodies

3xD
5xD
Cylindrical Shanks

Geometries

TPA - Steel

Grade

IN2505

Materials

- Steel
- Stainless Steel
- Cast Iron

TPA

Quick Change Drilling for Small Diameter Applications

- Improved productivity and reduced cost for small hole applications
- No setup due to quick change clamping
- No tool length offsets required compared to reground solid carbide drills

5xD

3xD

See it in action! »

WINSFEED™ ADVANCED MACHINING

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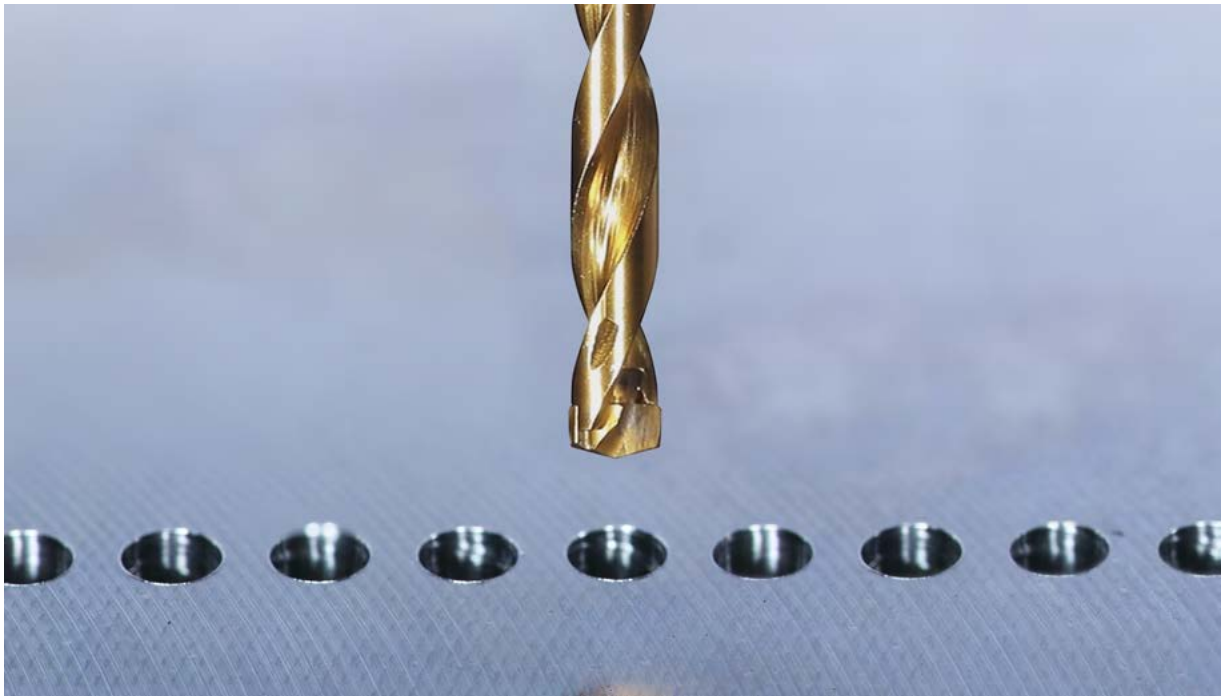
Quick Change Drilling for Small Diameter Applications

Ingersoll is proud to introduce an expansion to our **GoldTwist** family of replaceable tipped drills which is uniquely designed to improve productivity as well and overall reduction of cost for small diameter applications.

The replaceable tip design of **GoldTwist** eliminates the need for extra setup time and increases productivity when compared to current solid carbide drill options.

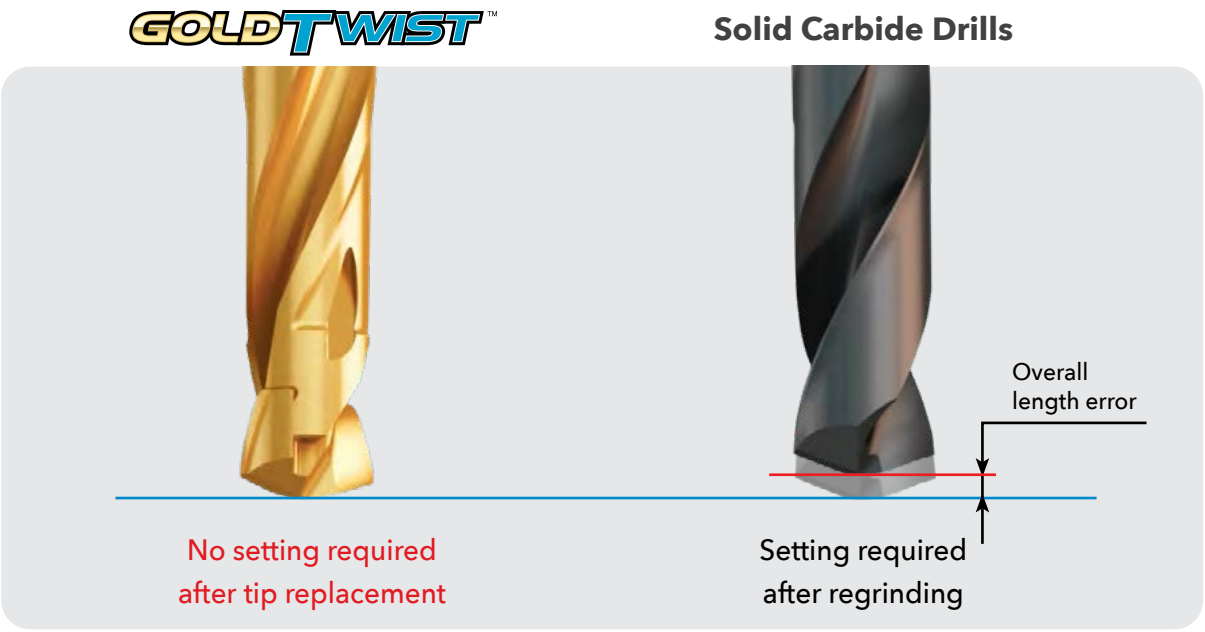
Features & Benefits

- Small diameter replaceable tips 0.1575–0.2323" (4.0–5.9 mm)
- Available in 3xD and 5xD bodies
- Excellent performance-improving productivity
- No offsets compared to reground solid carbide drills
- No extended setup times



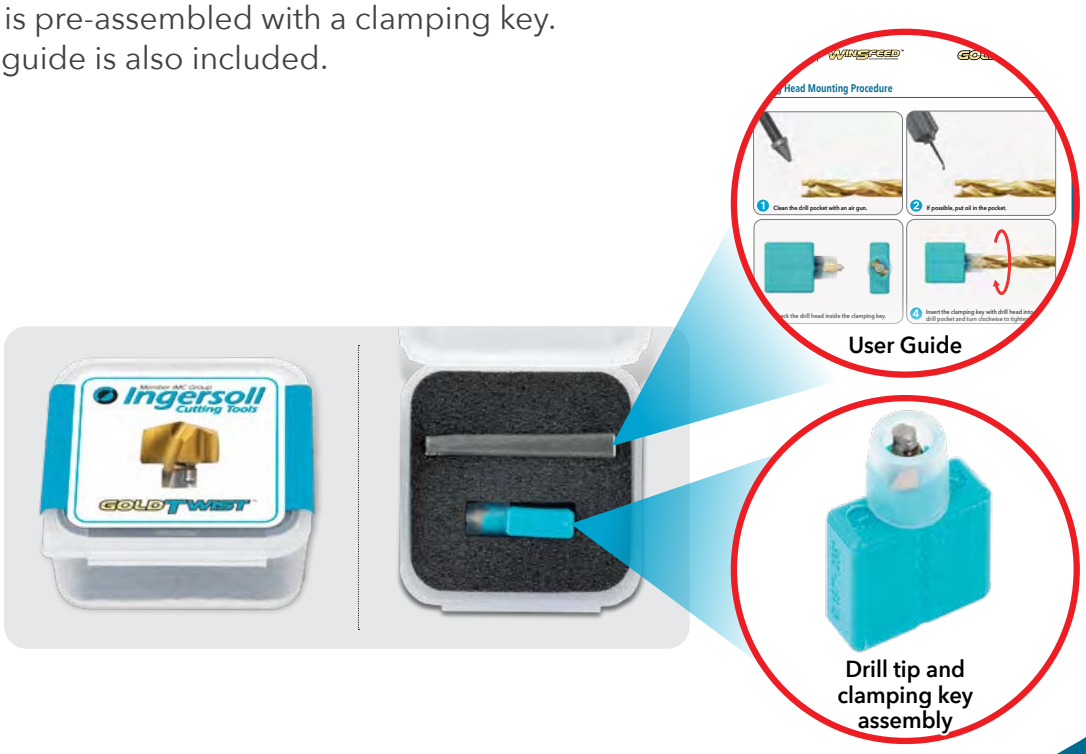
Assembly

Replaceable tips eliminate tool setting after regrinds
(which can cause length offset errors), minimizing machine downtime.



Packaging Details

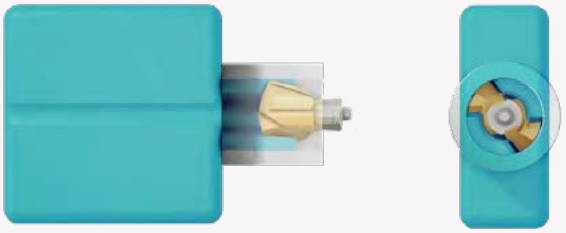
For convenient indexing of the smaller sized GoldTwist products,
the tip is pre-assembled with a clamping key.
A user guide is also included.



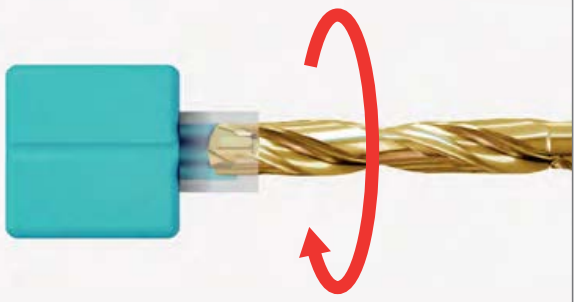
Drilling Tip Mounting Procedure

1 Clean the drill pocket with an air gun.

2 If possible, put oil in the pocket.



3 Check the drill tip inside the clamping key.

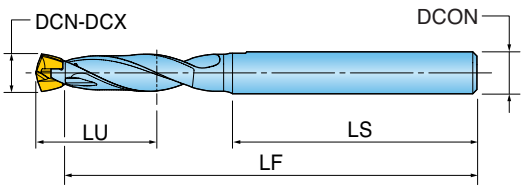


4 Insert the clamping key with drill tip into the drill pocket and turn clockwise to tighten.

Drilling Coolant

3xD • Series TD

CYLINDRICAL SHANK

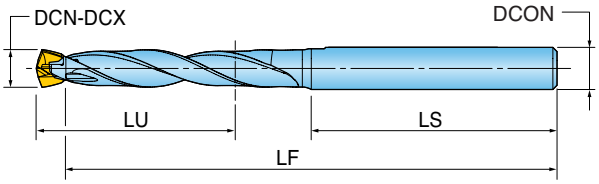


Part Number	DCN Cutting Dia. Min.	DCX Cutting Dia. Max.	SSC Seat Size Code	LU Usable Length	LF Functional Length	LS Shank Length	DCON Shank Dia.	Clamping Key
	INCH (MM)	INCH (MM)						
TD0400012R6R01	0.1575 (4.00 mm)	0.1732 (4.40 mm)	4	0.512	2.15	1.378	0.250	KTD4.0-4.9
TD0450014R6R01	0.1772 (4.50 mm)	0.1929 (4.90 mm)	4.5	0.551	2.21	1.378	0.250	KTD4.0-4.9
TD0500015R6R01	0.1969 (5.00 mm)	0.2126 (5.40 mm)	5	0.629	2.26	1.378	0.250	KTD5.0-5.9
TD0550017R6R01	0.2165 (5.50 mm)	0.2323 (5.90 mm)	5.5	0.669	2.34	1.378	0.250	KTD5.0-5.9

Drilling Coolant

5xD • Series TD

CYLINDRICAL SHANK

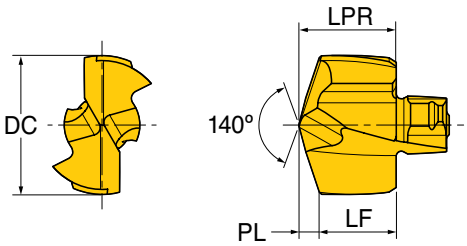


Part Number	DCN Cutting Dia. Min.	DCX Cutting Dia. Max.	SSC Seat Size Code	LU Usable Length	LF Functional Length	LS Shank Length	DCON Shank Dia.	Clamping Key
	INCH (MM)	INCH (MM)						
TD0400020R6R01	0.1575 (4.00 mm)	0.1732 (4.40 mm)	4	0.826	2.46	1.378	0.250	KTD4.0-4.9
TD0450023R6R01	0.1772 (4.50 mm)	0.1929 (4.90 mm)	4.5	0.905	2.56	1.378	0.250	KTD4.0-4.9
TD0500025R6R01	0.1969 (5.00 mm)	0.2126 (5.40 mm)	5	1.023	2.66	1.378	0.250	KTD5.0-5.9
TD0550028R6R01	0.2165 (5.50 mm)	0.2323 (5.90 mm)	5.5	1.102	2.76	1.378	0.250	KTD5.0-5.9

Drilling Coolant

Series TPA

REPLACEABLE TIPS



Part Number	DC Cutting Diameter INCH (MM)	SSC Seat Size Code	PL Point Length	LPR Projection Length	LF Functional Length	Grade IN2505
TPA0400R01	0.1575 (4.00 mm)	4	0.024	0.122	0.097	•
TPA0410R01	0.1614 (4.10 mm)	4	0.025	0.122	0.096	•
TPA0420R01	0.1654 (4.20 mm)	4	0.025	0.122	0.096	•
TPA0430R01	0.1693 (4.30 mm)	4	0.026	0.122	0.095	•
TPA0440R01	0.1732 (4.40 mm)	4	0.027	0.122	0.094	•
TPA0450R01	0.1772 (4.50 mm)	4.5	0.025	0.139	0.113	•
TPA0460R01	0.1811 (4.60 mm)	4.5	0.026	0.139	0.112	•
TPA0470R01	0.1850 (4.70 mm)	4.5	0.027	0.139	0.112	•
TPA0476R01	0.1875 (4.76 mm)	4.5	0.027	0.139	0.111	•
TPA0480R01	0.1889 (4.80 mm)	4.5	0.028	0.139	0.111	•
TPA0490R01	0.1929 (4.90 mm)	4.5	0.028	0.139	0.111	•
TPA0500R01	0.1969 (5.00 mm)	5	0.028	0.145	0.116	•
TPA0510R01	0.2008 (5.10 mm)	5	0.029	0.145	0.116	•
TPA0520R01	0.2047 (5.20 mm)	5	0.030	0.145	0.115	•
TPA0530R01	0.2087 (5.30 mm)	5	0.03	0.145	0.114	•
TPA0540R01	0.2126 (5.40 mm)	5	0.031	0.145	0.114	•
TPA0550R01	0.2165 (5.50 mm)	5.5	0.031	0.151	0.120	•
TPA0556R01	0.2188 (5.56 mm)	5.5	0.032	0.151	0.119	•
TPA0560R01	0.2205 (5.60 mm)	5.5	0.032	0.151	0.119	•
TPA0570R01	0.2244 (5.70 mm)	5.5	0.033	0.151	0.118	•
TPA0580R01	0.2283 (5.80 mm)	5.5	0.033	0.151	0.118	•
TPA0590R01	0.2323 (5.90 mm)	5.5	0.034	0.151	0.117	•

Operating Guidelines

ISO	Material		Condition	Tensile Strength RM (N/mm^2)	Hardness HB	Matl. Group No.	Cutting Speed Vc (SFM)	Feed vs. Drill Diameter - IPR (inches/rev)	
								D=4.0–4.9 (.157–.193")	D=5.0–5.9 (.197–.232")
P	Non-alloy steel and cast steel, free cutting steel	<0.25%C	Annealed	420	125	1	260–460	.0015–.003	.003–.004
		≥0.25%C	Annealed	650	190	2	260–430	.0015–.003	.003–.004
		<0.55%C	Quenched/Tempered	850	250	3	260–400	.0015–.003	.003–.004
		≥0.55%C	Annealed	750	220	4	230–360	.0015–.003	.003–.004
			Quenched/Tempered	1000	300	5	165–300	.0015–.003	.003–.004
	Low alloy steel and cast steel (less than 5% alloying elements)		Annealed	600	200	6	230–400	.0015–.003	.003–.005
			Quenched/Tempered	930	275	7	230–360	.0015–.003	.003–.005
				1000	300	8	165–300	.0015–.003	.003–.005
				1200	350	9	130–230	.0015–.003	.003–.005
	High alloy steel, cast steel, and tool steel		Annealed	680	200	10	165–300	.002–.003	.003–.004
			Quenched/Tempered	1100	325	11	130–260	.002–.003	.003–.004
M	Stainless steel and cast stainless steel		Ferritic/Martensitic	680	200	12	130–230	.002–.003	.002–.003
			Martensitic	820	240	13	130–230	.002–.003	.002–.003
			Austenitic	600	180	14	100–230	.002–.003	.002–.003
K	Grey cast iron (GG)		Ferritic	–	180	15	300–530	.0015–.003	.004–.006
			Pearlitic	–	260	16	260–460	.0015–.003	.004–.006
	Cast iron nodular (GGG)		Ferritic	–	160	17	300–595	.0015–.003	.004–.006
			Pearlitic	–	250	18	260–460	.0015–.003	.004–.006
	Malleable cast iron		Ferritic	–	130	19	300–530	.0015–.003	.004–.006
			Pearlitic	–	230	20	260–460	.0015–.003	.004–.006

Steel Stainless Steel Cast Iron

Note: Feed and speed recommendations are starting operating parameters. They are only guidelines from which further optimization should take place. Operating parameters are influenced by many machining variables. These variables may cause for reductions in feeds and speed or dramatic increases.