GOLD TWIST
DRILL LINE

Drill Body:
Weldon Flat
Inch and Metric Shanks
Twisted Flute
2-Effective Design

Tap Sizes:
3/8 to 7/8 UNC & UNF
ISO M10 to M24

Geometries:
TPA - Steel
TMA - Stainless Steel
TKA - Cast Iron
All tips in Grade IN2505

Chamfer Insert Geometry:
KOMT - General Purpose
Generates 45° Chamfer
Capable of chamfering & boring
(Max bore depth .23")
Grades IN2005 & IN 2505

AN ECONOMICAL DRILL/CHAMFER COMBO SOLUTION FOR INCH AND METRIC TAP SIZES

Ingersoll's GOLD TWIST -the versatile new indexable drill-has been expanded as an optimal solution for tap drill hole drilling including chamfering and/or countersinking of blind and through-hole applications.

Pre-thread drilling is a complex operation across a wide range of applications. GOLD TWIST enables end-users to perform pre-thread holes reliably and economically for Unified thread form tap drill size holes (3/8" to 7/8", UNC & UNF) and ISO M standard tap drill size holes (M10 to M24). The line's versatility now eliminates the need for step drills, reducing excess inventory and down-time.

Already known for outstanding performance in the industry, this additional drill/chamfer capability within the GOLD TWIST product line makes it the ideal solution meeting the machining market's growing demand for simplified, cost-effective solutions.

Member IMC Group
Ingersoll Cutting Tools

DRILL BODY FEATURES

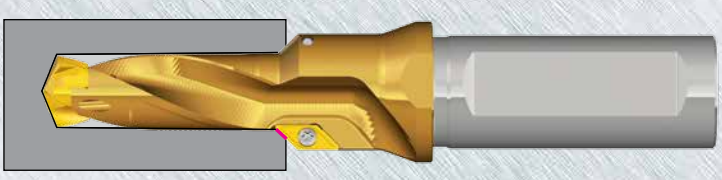
- Cost effective solution that replaces the high cost of special solid carbide step drills
- A twisted through coolant channel for smooth chip evacuation & high penetration rates
- Two symmetrically designed standard chamfering inserts firmly seated for optimal performance via balanced cutting
- 2 Effective design allows high feed rate to be maintained when entering chamfer cut
- Eliminates the need for solid carbide drill regrinding

INSERT FEATURES

- Widely capable KOMT insert is designed for both chamfering and countersinking
- Indexable inserts include two cutting edges for optimum chip control
- Capable of machining a wide range of workpiece materials
- Inserts specifically designed for both blind and through-hole applications
- Indexable inserts mean economy and flexibility over a wide range of applications
- Now available in Grade IN2505

Drilling with Chamfer (45°)

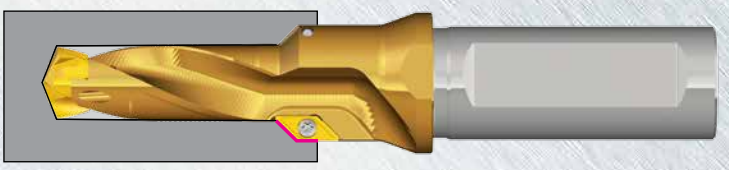
- Blind Hole



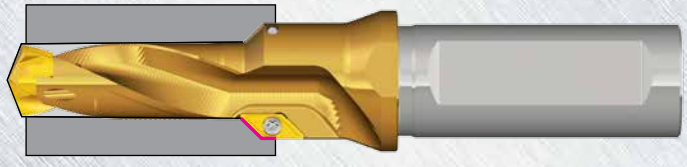
- Through Hole

Drilling with Countersinking

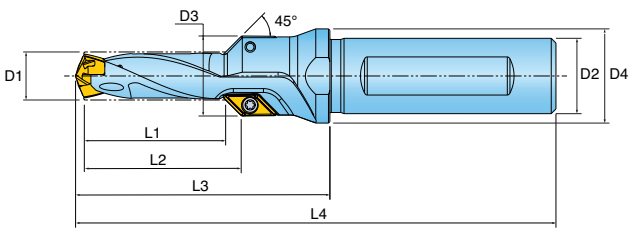
- Blind Hole



- Through Hole

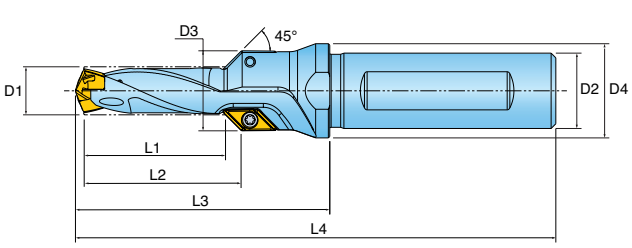


METRIC BODIES



BODY	Thread	Dimensions (inch) D1	D3	L1	L2	L3	D2	D4	L4	Pocket Size
TC0850026JCR01	M10	.335 (8.5mm)	.610	1.024	1.20	1.96	.472 (12.0mm)	.630	3.73	8.5
TC1020030JDR01	M12	.402 (10.2mm)	.669	1.181	1.36	2.13	.630 (16.0mm)	.787	4.02	10
TC1200035JDR01	M14	.472 (12.0mm)	.748	1.378	1.56	2.40	.630 (16.0mm)	.787	4.29	12
TC1400039JER01	M16	.551 (14.0mm)	.827	1.535	1.71	2.72	.787 (20.0mm)	.984	4.69	14
TC1750042JER01	M20	.689 (17.5mm)	.965	1.653	1.83	2.83	.787 (20.0mm)	.984	4.80	17
TC2100048JFR01	M24	.827 (21.0mm)	1.102	1.890	2.07	3.15	.984 (25.0mm)	1.259	5.35	21

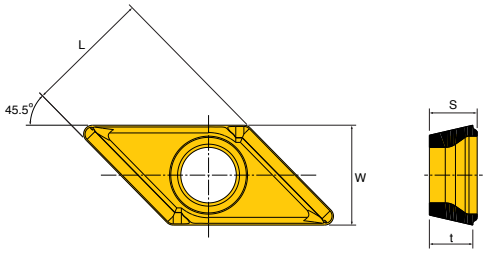
INCH BODIES



BODY	Thread	Dimensions (inch) D1	D3	L1	L2	L3	D2	D4	L4	Pocket Size
TC0790025B9R01	3/8 UNC	.311 (7.9mm)	.590	1.000	1.18	1.97	.500 (12.7mm)	.630	3.74	7.5
TC0850025B9R01	3/8 UNF	.335 (8.5mm)	.610	1.000	1.18	2.01	.500 (12.7mm)	.630	3.78	8.5
TC0940026B9R01	7/16 UNC	.370 (9.4mm)	.650	1.059	1.24	2.13	.500 (12.7mm)	.709	3.90	9
TC0990026B9R01	7/16 UNF	.390 (9.9mm)	.669	1.059	1.24	2.13	.500 (12.7mm)	.709	3.90	9.5
TC1080026C0R01	1/2 UNC	.425 (10.8mm)	.709	1.059	1.24	2.17	.625 (15.88mm)	.787	4.06	10.5
TC1150026C0R01	1/2 UNF	.453 (11.5mm)	.728	1.059	1.24	2.20	.625 (15.88mm)	.787	4.09	11.5
TC1230026C0R01	9/16 UNC	.484 (12.3mm)	.768	1.059	1.24	2.24	.625 (15.88mm)	.866	4.13	12
TC1300026C0R01	9/16 UNF	.512 (13.0mm)	.787	1.059	1.24	2.28	.625 (15.88mm)	.866	4.17	13
TC137003018R01	5/8 UNC	.539 (13.7mm)	.807	1.201	1.38	2.40	.750 (19.05mm)	.984	4.37	13.5
TC146003018R01	5/8 UNF	.575 (14.6mm)	.827	1.201	1.38	2.44	.750 (19.05mm)	.984	4.41	14.5
TC167003518R01	3/4 UNC	.658 (16.7mm)	.925	1.402	1.58	2.76	.750 (19.05mm)	.984	4.73	16
TC175003518R01	3/4 UNF	.689 (17.5mm)	.965	1.402	1.58	2.83	.750 (19.05mm)	.984	4.80	17
TC1950041C8R01	7/8 UNC	.768 (19.5mm)	1.043	1.650	1.83	3.15	1.000 (25.4mm)	1.260	5.35	19
TC2050041C8R01	7/8 UNF	.807 (20.5mm)	1.083	1.650	1.83	3.23	1.000 (25.4mm)	1.260	5.43	20

INSERT

IN2005, IN2505



DESIGNATION	Dimensions (inch) W	L	S	t	 Screw	 Wrench
KOMT050104R	.177	.223	.085	.077	SM22-046-00	T7

RECOMMENDED CUTTING CONDITIONS

ISO	Material	Condition	Tensile Strength Rm (N/mm²)	Hardness (HB)	Matl No.	Cutting Speed Vc (SFM)	Feed vs Drill Diameter					
							D= 7-9.9mm (.275-.390")	D= 10-11.9mm (.394-.469")	D= 12-13.9mm (.472-.547")	D= 14-15.9mm (.551-.626")	D= 16-19.9mm (.630-.783")	D= 20-25.9mm (.787-1.019")
							IPR (inches/rev)					
P	Non-alloy steel <0.25% C & cast steel, > = 0.25% C free cutting <0.55% C steel > = 0.55% C	Annealed	420	125	1	260-360-460	.005 .007 .009	.006 .008 .011	.007 .009 .012	.008 .011 .014	.010 .014 .018	.010 .014 .018
		Annealed	650	190	2	260-345-430						
		Quenched & Tempered	850	250	3	260-330-400						
		Annealed	750	220	4	230-295-360						
		Quenched & Tempered	1000	300	5	165-230-300						
	Low alloy steel & cast steek (less than 5% alloying elements)	Annealed	600	200	6	230-315-400	.005 .007 .010	.006 .008 .011	.006 .009 .013	.007 .010 .014	.009 .012 .016	.010 .014 .018
		Quenched & Tempered	930	275	7	230-295-360						
			1000	300	8	165-230-300						
			1200	350	9	135-180-230						
	High alloy steel, cast steel, & tool steel	Annealed	680	200	10	165-230-300	.005 .006 .008	.005 .006 .007	.006 .008 .010	.007 .009 .011	.008 .010 .012	.009 .011 .013
		Quenched & Tempered	1100	325	11	130-200-265						
M	Stainless steel & cast stainless steel	Ferritic/martensitic	680	200	12	130-180-230	.004 .005 .006	.005 .006 .007	.006 .007 .008	.006 .008 .009	.006 .008 .010	.007 .009 .012
		Martensitic	820	240	13	130-180-230						
		Austenitic	600	180	14	100-165-230						
K	GreyCast Iron (GG)	Ferritic		160	15	300-410-525	.006 .009 012	.008 .011 .014	.010 .013 .016	.012 .015 .018	.014 .018 .022	.014 .018 .024
		Pearlitic		250	16	265-360-460						
	Cast Iron Nodular (GGG)	Ferritic		180	17	300-450-600						
		Pearlitic		260	18	265-360-460						
	Malleable Cast Iron	Ferritic		130	19	300-410-525						
		Pearlitic		230	20	265-360-460						
N	Aluminum - wrought alloy	Not cureable		60	21	300-510-725	.008 .011 .014	.010 .013 .016	.012 .015 .018	.014 .017 .020	.016 .020 .024	.018 .022 .028
		Cured		100	22	300-510-725						
	Aluminum - cast, alloyed <=12% Si / >12% Si	Not cureable		75	23	300-510-725						
		Cured		90	24	300-510-725						
		High temperature		130	25	265-400-525						
	Copper alloys > 1% Pb	Free cutting		110	26	300-510-725						
		Brass		90	27	300-510-725						
		Electrolitic copper		100	28	300-510-725						
	Non-metallic	Duro & fiber plastics			29	-	- -	- -	- -	- -	- -	
		Hard rubber			30	-						
S	High temp alloys Fe based / Ni or Co based	Annealed		200	31	100-150-200	.002 .003 .004	.003 .004 .005	.004 .005 .006	.005 .006 .007	.005 .006 .008	.006 .007 .009
		Cured		280	32	70-115-165						
		Annealed		250	33	70-115-165						
		Cured		350	34	70-115-165						
		Cast		320	35	70-115-165						
	Titanium, Ti alloys		Rm 400		36	70-115-165	.002 .004 .005	.003 .004 .006	.004 .006 .007	.005 .007 .008	.006 .007 .009	.006 .008 .010
		Alpha+beta alloys cured	Rm 1050		37	70-115-165						
H	Hardened steel	Hardened		55 HRC	38	70-115-165	.002 .004 .005	.003 .004 .006	.004 .006 .007	.005 .007 .008	.006 .007 .009	.006 .008 .010
		Hardened		60 HRC	39	70-115-165						
	Chilled cast iron	Cast		400	40	-	-	-	-	-	-	
	Cast iron nodular	Hardened		55 HRC	41	-	-	-	-	-	-	