



GOLD TWIST

DRILL LINE



PRODUCT EXPANSION!

NEW N GEOMETRY IN GRADE IN05S



Bodies:
1.5xD, 3xD, 5xD and 8xD
Weldon & Cylindrical Shanks
12xD bodies also available.
Refer to NPA NEW-203

Tips:
6.0-25.9 mm

Geometries:
TPA - Steel
TMA - Stainless Steel
TKA - Cast Iron
TNA - Non-Ferrous **NEW!**

Grades:
IN2505
IN05S **NEW!**

Applications:
Die & Mold
General Purpose
Aero Space
Automotive
Shipbuilding
Heat Exchangers
Agriculture

Ingersoll's new Gold Twist series of quick change drill tips & bodies have been gaining popularity throughout North America with proven performance and productivity gains. In light of this, we are pleased to announce several areas of expansion:

Body Expansion:

We now offer 1.5xD bodies to complement our existing 3xD, 5xD, 8xD and 12xD bodies. These new, stubbier drills allow the end user to make short, accurate holes with minimum overhang. This promotes maximum stability, performance and tool life. In addition, the 1.5xD bodies are recommended for drilling a perfectly matched pilot hole for deeper, 8xD applications.

Introduction of a full line-up of cylindrical shank bodies in 1.5xD, 3xD, 5xD and 8xD. These bodies provide improved performance and accuracy when mated with a hydraulic or shrink fit tool holder, particularly in applications over 5xD.

Expanded range of body diameters from 6mm - 25mm (Please note 6.0 and 6.5mm bodies available in 1.5, 3 and 5xD.)

New Tip Sizes:

Ingersoll can better meet the end-users requirements with expanded tip diameters. Available now: 6.0mm - 25.9mm in P, M & K geometries. See page 13 for the N geometry sizes.

Geometries:

*M Geometry (TMA) - For Stainless Steel & High Temp Alloys.
K Geometry (TKA) - For Cast Iron.
P Geometry (TPA) - For Steel & General Purpose Use.
N Geometry (TNA) - For Non-Ferrous*



P Geometry

M Geometry

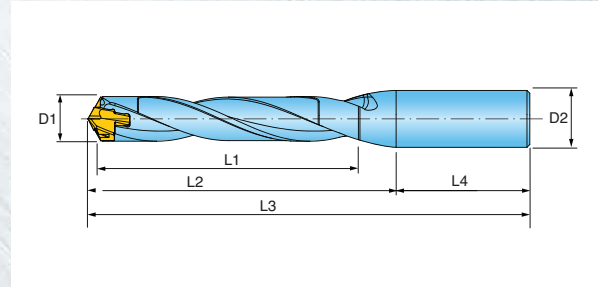
K Geometry

N Geometry



GOLD TWIST CYLINDRICAL SHANKS

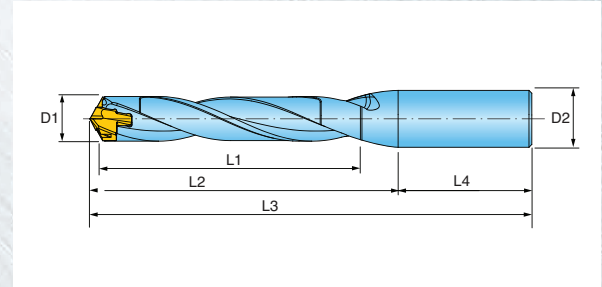
1.5XD CYLINDRICAL SHANKS



1.5xD	D1 Tip Diameter Range	L1 DOC	D2 Shank Dia.	L2 Ext.	L4 Shank Length	L3 OAL	Pocket Size	Key
TD0600009S4R01	0.2362 0.2520	0.35	0.500	0.91	1.77	2.68	6	KTD6.0-D9.9
TD0650010S4R01	0.2560 0.2716	0.39	0.500	0.95	1.77	2.72	6.5	KTD6.0-D9.9
TD0700010S4R01	0.2756 0.2913	0.43	0.500	0.99	1.77	2.760	7	KTD6.0-D9.9
TD0750011S4R01	0.2953 0.3110	0.44	0.500	1.02	1.77	2.790	7.5	KTD6.0-D9.9
TD0800012S4R01	0.3150 0.3504	0.47	0.500	1.10	1.77	2.870	8	KTD6.0-D9.9
TD0900013S4R01	0.3543 0.3898	0.55	0.500	1.15	1.77	2.920	9	KTD6.0-D9.9
TD1000015S6R01	0.3937 0.4291	0.59	0.625	1.23	1.89	3.120	10	KTD10.0-19.9
TD1100016S6R01	0.4331 0.4685	0.67	0.625	1.30	1.89	3.190	11	KTD10.0-19.9
TD1200018S6R01	0.4724 0.5079	0.71	0.625	1.38	1.89	3.270	12	KTD10.0-19.9
TD1300019S6R01	0.5118 0.5472	0.79	0.625	1.46	1.89	3.350	13	KTD10.0-19.9
TD1400021S6R01	0.5512 0.5866	0.83	0.625	1.62	1.89	3.510	14	KTD10.0-19.9
TD1500022S7R01	0.5906 0.6260	0.91	0.750	1.82	1.97	3.790	15	KTD10.0-19.9
TD1600024S7R01	0.6299 0.6654	0.94	0.750	1.94	1.97	3.910	16	KTD10.0-19.9
TD1700025S7R01	0.6693 0.7047	1.02	0.750	2.06	1.97	4.030	17	KTD10.0-19.9
TD1800027S1R01	0.7087 0.7441	1.06	1.000	2.19	2.20	4.390	18	KTD10.0-19.9
TD1900028S1R01	0.7480 0.7835	1.14	1.000	2.30	2.20	4.500	19	KTD10.0-19.9
TD2000030S1R01	0.7874 0.8228	1.18	1.000	2.43	2.20	4.630	20	KTD20.0-D26.9
TD2100031S1R01	0.8268 0.8622	1.26	1.000	2.55	2.20	4.750	21	KTD20.0-D26.9
TD2200033S1R01	0.8661 0.9016	1.30	1.000	2.67	2.20	4.870	22	KTD20.0-D26.9
TD2300034S9R01	0.9055 0.9409	1.38	1.250	2.79	2.36	5.150	23	KTD20.0-D26.9
TD2400036S9R01	0.9449 0.9803	1.42	1.250	2.91	2.36	5.270	24	KTD20.0-D26.9
TD2500037S9R01	0.9843 1.0197	1.50	1.250	3.03	2.36	5.390	25	KTD20.0-D26.9

GOLD TWIST CYLINDRICAL SHANKS

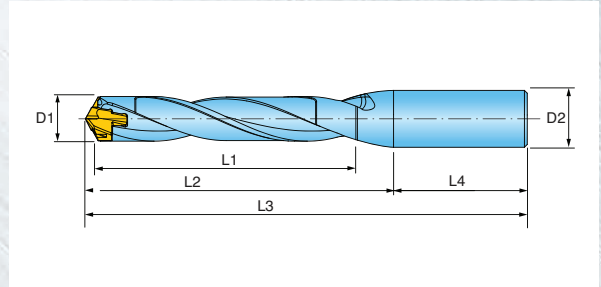
3XD CYLINDRICAL SHANKS



3xD	D1 Tip Diameter Range	L1 DOC	D2 Shank Dia.	L2 Ext.	L4 Shank Length	L3 OAL	Pocket Size	Key
TD0600018S4R01	0.2362 0.2520	0.71	0.500	1.26	1.77	3.03	6	KTD6.0-D9.9
TD0650020S4R01	0.2560 0.2716	0.79	0.500	1.33	1.77	3.10	6.5	KTD6.0-D9.9
TD0700021S4R01	0.2756 0.2913	0.83	0.500	1.40	1.77	3.170	7	KTD6.0-D9.9
TD0750022S4R01	0.2953 0.3110	0.89	0.500	1.46	1.77	3.230	7.5	KTD6.0-D9.9
TD0800024S4R01	0.3150 0.3307	0.94	0.500	1.55	1.77	3.320	8	KTD6.0-D9.9
TD0850025S4R01	0.3346 0.3504	1.00	0.500	1.61	1.77	3.380	8.5	KTD6.0-D9.9
TD0900027S4R01	0.3543 0.3701	1.06	0.500	1.69	1.77	3.460	9	KTD6.0-D9.9
TD0950028S4R01	0.3740 0.3898	1.12	0.500	1.74	1.77	3.510	9.5	KTD6.0-D9.9
TD1000030S6R01	0.3937 0.4094	1.18	0.625	1.82	1.89	3.710	10	KTD10.0-19.9
TD1050031S6R01	0.4134 0.4291	1.26	0.625	1.88	1.89	3.770	10.5	KTD10.0-19.9
TD1100033S6R01	0.4331 0.4488	1.30	0.625	1.95	1.89	3.840	11	KTD10.0-19.9
TD1150034S6R01	0.4528 0.4685	1.38	0.625	2.01	1.89	3.900	11.5	KTD10.0-19.9
TD1200036S6R01	0.4724 0.4882	1.42	0.625	2.09	1.89	3.980	12	KTD10.0-19.9
TD1250037S6R01	0.4921 0.5079	1.46	0.625	2.15	1.89	4.040	12.5	KTD10.0-19.9
TD1300039S6R01	0.5118 0.5276	1.54	0.625	2.23	1.89	4.120	13	KTD10.0-19.9
TD1350040S6R01	0.5315 0.5472	1.61	0.625	2.29	1.89	4.180	13.5	KTD10.0-19.9
TD1400042S6R01	0.5512 0.5669	1.65	0.625	2.44	1.89	4.330	14	KTD10.0-19.9
TD1450043S6R01	0.5709 0.5866	1.73	0.625	2.50	1.89	4.390	14.5	KTD10.0-19.9
TD1500045S7R01	0.5906 0.6260	1.77	0.750	2.70	1.97	4.670	15	KTD10.0-19.9
TD1600048S7R01	0.6299 0.6654	1.89	0.750	2.89	1.97	4.860	16	KTD10.0-19.9
TD1700051S7R01	0.6693 0.7047	2.01	0.750	3.07	1.97	5.040	17	KTD10.0-19.9
TD1800054S1R01	0.7087 0.7441	2.13	1.000	3.25	2.20	5.450	18	KTD10.0-19.9
TD1900057S1R01	0.7480 0.7835	2.24	1.000	3.43	2.20	5.630	19	KTD10.0-19.9
TD2000060S1R01	0.7874 0.8228	2.36	1.000	3.61	2.20	5.810	20	KTD20.0-D26.9
TD2100063S1R01	0.8268 0.8622	2.48	1.000	3.79	2.20	5.990	21	KTD20.0-D26.9
TD2200066S1R01	0.8661 0.9016	2.60	1.000	3.97	2.20	6.170	22	KTD20.0-D26.9
TD2300069S9R01	0.9055 0.9409	2.72	1.250	4.15	2.36	6.510	23	KTD20.0-D26.9
TD2400072S9R01	0.9449 0.9803	2.83	1.250	4.33	2.36	6.690	24	KTD20.0-D26.9
TD2500075S9R01	0.9843 1.0197	2.95	1.250	4.51	2.36	6.870	25	KTD20.0-D26.9

GOLD TWIST CYLINDRICAL SHANKS

5xD CYLINDRICAL SHANKS



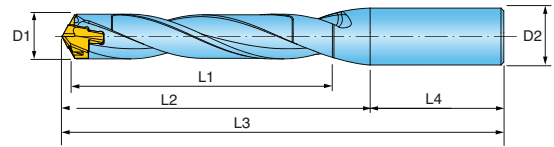
5xD	D1 Tip Diameter Range	L1 DOC	D2 Shank Dia.	L2 Ext.	L4 Shank Length	L3 OAL	Pocket Size	Key
TD0600030S4R01	0.2362 0.2520	1.18	0.500	1.73	1.77	3.50	6	KTD6.0-D9.9
TD0650033S4R01	0.2560 0.2716	1.30	0.500	1.84	1.77	3.61	6.5	KTD6.0-D9.9
TD0700035S4R01	0.2756 0.2913	1.38	0.500	1.95	1.77	3.720	7	KTD6.0-D9.9
TD0750060S4R01	0.2953 0.3110	1.48	0.500	2.05	1.77	3.820	7.5	KTD6.0-D9.9
TD0800040S4R01	0.3150 0.3307	1.57	0.500	2.18	1.77	3.950	8	KTD6.0-D9.9
TD0850042S4R01	0.3346 0.3504	1.67	0.500	2.28	1.77	4.050	8.5	KTD6.0-D9.9
TD0900045S4R01	0.3543 0.3701	1.77	0.500	2.39	1.77	4.160	9	KTD6.0-D9.9
TD0950047S4R01	0.3740 0.3898	1.87	0.500	2.49	1.77	4.260	9.5	KTD6.0-D9.9
TD1000050S6R01	0.3937 0.4094	1.97	0.625	2.61	1.89	4.500	10	KTD10.0-19.9
TD1050052S6R01	0.4134 0.4291	2.09	0.625	2.70	1.89	4.590	10.5	KTD10.0-19.9
TD1100055S6R01	0.4331 0.4488	2.17	0.625	2.82	1.89	4.710	11	KTD10.0-19.9
TD1150057S6R01	0.4528 0.4685	2.28	0.625	2.92	1.89	4.810	11.5	KTD10.0-19.9
TD1200060S6R01	0.4724 0.4882	2.36	0.625	3.03	1.89	4.920	12	KTD10.0-19.9
TD1250062S6R01	0.4921 0.5079	2.44	0.625	3.13	1.89	5.020	12.5	KTD10.0-19.9
TD1300065S6R01	0.5118 0.5276	2.56	0.625	3.25	1.89	5.140	13	KTD10.0-19.9
TD1350067S6R01	0.5315 0.5472	2.68	0.625	3.35	1.89	5.240	13.5	KTD10.0-19.9
TD1400070S6R01	0.5512 0.5669	2.76	0.625	3.55	1.89	5.440	14	KTD10.0-19.9
TD1450072S6R01	0.5709 0.5866	2.87	0.625	3.65	1.89	5.540	14.5	KTD10.0-19.9
TD1500075S7R01	0.5906 0.6260	2.95	0.750	3.89	1.97	5.860	15	KTD10.0-19.9
TD1600080S7R01	0.6299 0.6654	3.15	0.750	4.15	1.97	6.120	16	KTD10.0-19.9
TD1700085S7R01	0.6693 0.7047	3.35	0.750	4.41	1.97	6.380	17	KTD10.0-19.9
TD1800090S1R01	0.7087 0.7441	3.54	1.000	4.67	2.20	6.870	18	KTD10.0-19.9
TD1900095S1R01	0.7480 0.7835	3.74	1.000	4.92	2.20	7.120	19	KTD10.0-19.9
TD2000100S1R01	0.7874 0.8228	3.94	1.000	5.18	2.20	7.380	20	KTD20.0-D26.9
TD2100105S1R01	0.8268 0.8622	4.13	1.000	5.44	2.20	7.640	21	KTD20.0-D26.9
TD2200110S1R01	0.8661 0.9016	4.33	1.000	5.70	2.20	7.900	22	KTD20.0-D26.9
TD2300115S9R01	0.9055 0.9409	4.53	1.250	5.96	2.36	8.320	23	KTD20.0-D26.9
TD2400120S9R01	0.9449 0.9803	4.72	1.250	6.22	2.36	8.580	24	KTD20.0-D26.9
TD2500125S9R01	0.9843 1.0197	4.92	1.250	6.48	2.36	8.840	25	KTD20.0-D26.9

GOLD•TWIST CYLINDRICAL SHANKS

8XD CYLINDRICAL SHANKS



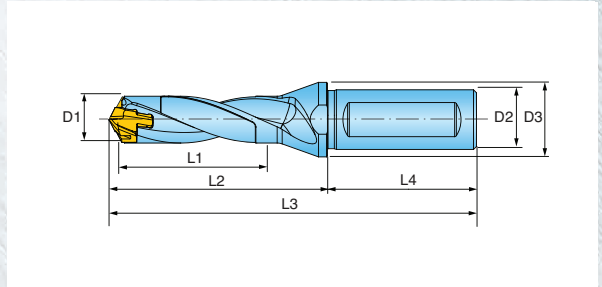
NOTE: We strongly recommend the use of a 1.5:1 or 3:1 Gold•Twist drill of the same diameter to drill a centering starter hole. The use of a centering starter hole improves hole location, accuracy, roundness, straightness and surface finish.



8xD	D1 Tip Diameter Range		L1 DOC	D2 Shank Dia.	L2 Ext.	L4 Shank Length	L3 OAL	Pocket Size	Key
TD0700056S4R01	0.2756	0.2913	2.20	0.500	2.78	1.77	4.550	7	KTD6.0-D9.9
TD0750060S4R01	0.2953	0.3110	2.28	0.500	2.94	1.77	4.710	7.5	KTD6.0-D9.9
TD0800064S4R01	0.3150	0.3307	2.52	0.500	3.13	1.77	4.900	8	KTD6.0-D9.9
TD0850068S4R01	0.3346	0.3504	2.68	0.500	3.32	1.77	5.090	8.5	KTD6.0-D9.9
TD0900072S4R01	0.3543	0.3701	2.83	0.500	3.46	1.77	5.230	9	KTD6.0-D9.9
TD0950076S4R01	0.3740	0.3898	2.99	0.500	3.65	1.77	5.420	9.5	KTD6.0-D9.9
TD1000080S6R01	0.3937	0.4094	3.15	0.625	3.79	1.89	5.680	10	KTD10.0-19.9
TD1050084S6R01	0.4134	0.4291	3.31	0.625	3.94	1.89	5.830	10.5	KTD10.0-19.9
TD1100088S6R01	0.4331	0.4488	3.46	0.625	4.12	1.89	6.010	11	KTD10.0-19.9
TD1150092S6R01	0.4528	0.4685	3.62	0.625	4.28	1.89	6.170	11.5	KTD10.0-19.9
TD1200096S6R01	0.4724	0.4882	3.78	0.625	4.45	1.89	6.340	12	KTD10.0-19.9
TD1250100S6R01	0.4921	0.5079	3.94	0.625	4.61	1.89	6.500	12.5	KTD10.0-19.9
TD1300104S6R01	0.5118	0.5276	4.09	0.625	4.79	1.89	6.680	13	KTD10.0-19.9
TD1350108S6R01	0.5315	0.5472	4.25	0.625	4.94	1.89	6.830	13.5	KTD10.0-19.9
TD1400112S6R01	0.5512	0.5669	4.41	0.625	5.20	1.89	7.090	14	KTD10.0-19.9
TD1450116S6R01	0.5709	0.5866	4.57	0.625	5.36	1.89	7.250	14.5	KTD10.0-19.9
TD1500120S7R01	0.5906	0.6260	4.72	0.750	5.66	1.97	7.630	15	KTD10.0-19.9
TD1600128S7R01	0.6299	0.6654	5.04	0.750	6.04	1.97	8.010	16	KTD10.0-19.9
TD1700136S7R01	0.6693	0.7047	5.35	0.750	6.41	1.97	8.380	17	KTD10.0-19.9
TD1800144S1R01	0.7087	0.7441	5.67	1.000	6.79	2.20	8.990	18	KTD10.0-19.9
TD1900152S1R01	0.7480	0.7835	5.98	1.000	7.17	2.20	9.370	19	KTD10.0-19.9
TD2000160S1R01	0.7874	0.8228	6.30	1.000	7.54	2.20	9.740	20	KTD20.0-D26.9
TD2100168S1R01	0.8268	0.8622	6.61	1.000	7.92	2.20	10.120	21	KTD20.0-D26.9
TD2200176S1R01	0.8661	0.9016	6.93	1.000	8.30	2.20	10.500	22	KTD20.0-D26.9
TD2300184S9R01	0.9055	0.9409	7.24	1.250	8.68	2.36	11.040	23	KTD20.0-D26.9
TD2400192S9R01	0.9449	0.9803	7.56	1.250	9.06	2.36	11.420	24	KTD20.0-D26.9
TD2500200S9R01	0.9843	1.0197	7.87	1.250	9.43	2.36	11.790	25	KTD20.0-D26.9

GOLD TWIST WELDON & ISO9766 SHANKS

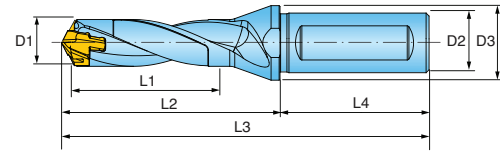
1.5XD WELDON SHANKS



1.5XD	D1 Tip Diameter Range	L1 DOC	D2 Shank Dia.	D3 Fig Dia.	L2 Ext.	L4 Shank Length	L3 OAL	Pocket Size	Key
TD0600009B9R01	0.2362 0.2520	0.35	0.500	0.63	0.91	1.77	2.68	6	KTD6.0-D9.9
TD0650010B9R01	0.2560 0.2716	0.39	0.500	0.63	0.95	1.77	2.72	6.5	KTD6.0-D9.9
TD0700010B9R01	0.2756 0.2913	0.43	0.500	0.63	0.99	1.77	2.760	7	KTD6.0-D9.9
TD0750011B9R01	0.2953 0.3110	0.44	0.500	0.63	1.02	1.77	2.790	7.5	KTD6.0-D9.9
TD0800012B9R01	0.3150 0.3504	0.47	0.500	0.63	1.10	1.77	2.870	8	KTD6.0-D9.9
TD0900013B9R01	0.3543 0.3898	0.55	0.500	0.63	1.15	1.77	2.920	9	KTD6.0-D9.9
TD1000015COR01	0.3937 0.4291	0.59	0.625	0.79	1.23	1.89	3.120	10	KTD10.0-19.9
TD1100016COR01	0.4331 0.4685	0.67	0.625	0.79	1.30	1.89	3.190	11	KTD10.0-19.9
TD1200018COR01	0.4724 0.5079	0.71	0.625	0.79	1.38	1.89	3.270	12	KTD10.0-19.9
TD1300019COR01	0.5118 0.5472	0.79	0.625	0.79	1.46	1.89	3.350	13	KTD10.0-19.9
TD1400021COR01	0.5512 0.5866	0.83	0.625	0.79	1.62	1.89	3.510	14	KTD10.0-19.9
TD150002218R01	0.5906 0.6260	0.91	0.750	0.98	1.82	1.97	3.790	15	KTD10.0-19.9
TD160002418R01	0.6299 0.6654	0.94	0.750	0.98	1.94	1.97	3.910	16	KTD10.0-19.9
TD170002518R01	0.6693 0.7047	1.02	0.750	0.98	2.06	1.97	4.030	17	KTD10.0-19.9
TD1800027C8R01	0.7087 0.7441	1.06	1.000	1.26	2.19	2.20	4.390	18	KTD10.0-19.9
TD1900028C8R01	0.7480 0.7835	1.14	1.000	1.26	2.30	2.20	4.500	19	KTD10.0-19.9
TD2000030C8R01	0.7874 0.8228	1.18	1.000	1.26	2.43	2.20	4.630	20	KTD20.0-D26.9
TD2100031C8R01	0.8268 0.8622	1.26	1.000	1.26	2.55	2.20	4.750	21	KTD20.0-D26.9
TD2200033C8R01	0.8661 0.9016	1.30	1.000	1.26	2.67	2.20	4.870	22	KTD20.0-D26.9
TD2300034B7R01	0.9055 0.9409	1.38	1.250	1.65	2.79	2.36	5.150	23	KTD20.0-D26.9
TD2400036B7R01	0.9449 0.9803	1.42	1.250	1.65	2.91	2.36	5.270	24	KTD20.0-D26.9
TD2500037B7R01	0.9843 1.0197	1.50	1.250	1.65	3.03	2.36	5.390	25	KTD20.0-D26.9

GOLD TWIST WELDON & ISO9766 SHANKS

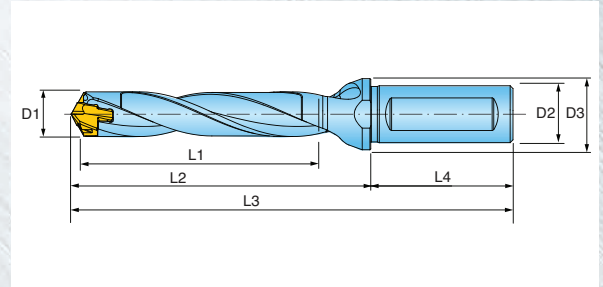
3XD WELDON SHANKS



3xD	D1 Tip Diameter Range	L1 DOC	D2 Shank Dia.	D3 Fig Dia.	L2 Ext.	L4 Shank Length	L3 OAL	Pocket Size	Key	
TD0600018B9R01	0.2362	0.2520	0.71	0.500	0.63	1.26	1.77	3.03	6	KTD6.0-D9.9
TD0650020B9R01	0.2560	0.2716	0.79	0.500	0.63	1.33	1.77	3.10	6.5	KTD6.0-D9.9
TD0700021B9R01	0.2756	0.2913	0.83	0.500	0.63	1.40	1.77	3.170	7	KTD6.0-D9.9
TD0750022B9R01	0.2953	0.3110	0.89	0.500	0.63	1.46	1.77	3.230	7.5	KTD6.0-D9.9
TD0800024B9R01	0.3150	0.3307	0.94	0.500	0.63	1.55	1.77	3.320	8	KTD6.0-D9.9
TD0850025B9R01	0.3346	0.3504	1.00	0.500	0.63	1.61	1.77	3.380	8.5	KTD6.0-D9.9
TD0900027B9R01	0.3543	0.3701	1.06	0.500	0.63	1.69	1.77	3.460	9	KTD6.0-D9.9
TD0950028B9R01	0.3740	0.3898	1.12	0.500	0.63	1.74	1.77	3.510	9.5	KTD6.0-D9.9
TD1000030C0R01	0.3937	0.4094	1.18	0.625	0.79	1.82	1.89	3.710	10	KTD10.0-19.9
TD1050031C0R01	0.4134	0.4291	1.26	0.625	0.79	1.88	1.89	3.770	10.5	KTD10.0-19.9
TD1100033C0R01	0.4331	0.4488	1.30	0.625	0.79	1.95	1.89	3.840	11	KTD10.0-19.9
TD1150034C0R01	0.4528	0.4685	1.38	0.625	0.79	2.01	1.89	3.900	11.5	KTD10.0-19.9
TD1200036C0R01	0.4724	0.4882	1.42	0.625	0.79	2.09	1.89	3.980	12	KTD10.0-19.9
TD1250037C0R01	0.4921	0.5079	1.46	0.625	0.79	2.15	1.89	4.040	12.5	KTD10.0-19.9
TD1300039C0R01	0.5118	0.5276	1.54	0.625	0.79	2.23	1.89	4.120	13	KTD10.0-19.9
TD1350040C0R01	0.5315	0.5472	1.61	0.625	0.79	2.29	1.89	4.180	13.5	KTD10.0-19.9
TD1400042C0R01	0.5512	0.5669	1.65	0.625	0.79	2.44	1.89	4.330	14	KTD10.0-19.9
TD1450043C0R01	0.5709	0.5866	1.73	0.625	0.79	2.50	1.89	4.390	14.5	KTD10.0-19.9
TD150004518R01	0.5906	0.6260	1.77	0.750	0.98	2.70	1.97	4.670	15	KTD10.0-19.9
TD160004818R01	0.6299	0.6654	1.89	0.750	0.98	2.89	1.97	4.860	16	KTD10.0-19.9
TD170005118R01	0.6693	0.7047	2.01	0.750	0.98	3.07	1.97	5.040	17	KTD10.0-19.9
TD1800054C8R01	0.7087	0.7441	2.13	1.000	1.26	3.25	2.20	5.450	18	KTD10.0-19.9
TD1900057C8R01	0.7480	0.7835	2.24	1.000	1.26	3.43	2.20	5.630	19	KTD10.0-19.9
TD2000060C8R01	0.7874	0.8228	2.36	1.000	1.26	3.61	2.20	5.810	20	KTD20.0-D26.9
TD2100063C8R01	0.8268	0.8622	2.48	1.000	1.26	3.79	2.20	5.990	21	KTD20.0-D26.9
TD2200066C8R01	0.8661	0.9016	2.60	1.000	1.26	3.97	2.20	6.170	22	KTD20.0-D26.9
TD2300069B7R01	0.9055	0.9409	2.72	1.250	1.65	4.15	2.36	6.510	23	KTD20.0-D26.9
TD2400072B7R01	0.9449	0.9803	2.83	1.250	1.65	4.33	2.36	6.690	24	KTD20.0-D26.9
TD2500075B7R01	0.9843	1.0197	2.95	1.250	1.65	4.51	2.36	6.870	25	KTD20.0-D26.9

GOLD TWIST WELDON & ISO9766 SHANKS

5XD WELDON SHANKS



5xD	D1 Tip Diameter Range	L1 DOC	D2 Shank Dia.	D3 Fig Dia.	L2 Ext.	L4 Shank Length	L3 OAL	Pocket Size	Key
TD0600030B9R01	0.2362 0.2520	1.18	0.500	0.63	1.73	1.77	3.50	6	KTD6.0-D9.9
TD0650033B9R01	0.2560 0.2716	1.30	0.500	0.63	1.84	1.77	3.61	6.5	KTD6.0-D9.9
TD0700035B9R01	0.2756 0.2913	1.38	0.500	0.63	1.95	1.77	3.720	7	KTD6.0-D9.9
TD0750037B9R01	0.2953 0.3110	1.48	0.500	0.63	2.05	1.77	3.820	7.5	KTD6.0-D9.9
TD0800040B9R01	0.3150 0.3307	1.57	0.500	0.63	2.18	1.77	3.950	8	KTD6.0-D9.9
TD0850042B9R01	0.3346 0.3504	1.67	0.500	0.63	2.28	1.77	4.050	8.5	KTD6.0-D9.9
TD0900045B9R01	0.3543 0.3701	1.77	0.500	0.63	2.39	1.77	4.160	9	KTD6.0-D9.9
TD0950047B9R01	0.3740 0.3898	1.87	0.500	0.63	2.49	1.77	4.260	9.5	KTD6.0-D9.9
TD1000050C0R01	0.3937 0.4094	1.97	0.625	0.79	2.61	1.89	4.500	10	KTD10.0-19.9
TD1050052C0R01	0.4134 0.4291	2.09	0.625	0.79	2.70	1.89	4.590	10.5	KTD10.0-19.9
TD1100055C0R01	0.4331 0.4488	2.17	0.625	0.79	2.82	1.89	4.710	11	KTD10.0-19.9
TD1150057C0R01	0.4528 0.4685	2.28	0.625	0.79	2.92	1.89	4.810	11.5	KTD10.0-19.9
TD1200060C0R01	0.4724 0.4882	2.36	0.625	0.79	3.03	1.89	4.920	12	KTD10.0-19.9
TD1250062C0R01	0.4921 0.5079	2.44	0.625	0.79	3.13	1.89	5.020	12.5	KTD10.0-19.9
TD1300065C0R01	0.5118 0.5276	2.56	0.625	0.79	3.25	1.89	5.140	13	KTD10.0-19.9
TD1350067C0R01	0.5315 0.5472	2.68	0.625	0.79	3.35	1.89	5.240	13.5	KTD10.0-19.9
TD1400070C0R01	0.5512 0.5669	2.76	0.625	0.79	3.55	1.89	5.440	14	KTD10.0-19.9
TD1450072C0R01	0.5709 0.5866	2.87	0.625	0.79	3.65	1.89	5.540	14.5	KTD10.0-19.9
TD150007518R01	0.5906 0.6260	2.95	0.750	0.98	3.89	1.97	5.860	15	KTD10.0-19.9
TD160008018R01	0.6299 0.6654	3.15	0.750	0.98	4.15	1.97	6.120	16	KTD10.0-19.9
TD170008518R01	0.6693 0.7047	3.35	0.750	0.98	4.41	1.97	6.380	17	KTD10.0-19.9
TD1800090C8R01	0.7087 0.7441	3.54	1.000	1.26	4.67	2.20	6.870	18	KTD10.0-19.9
TD1900095C8R01	0.7480 0.7835	3.74	1.000	1.26	4.92	2.20	7.120	19	KTD10.0-19.9
TD2000100C8R01	0.7874 0.8228	3.94	1.000	1.26	5.18	2.20	7.380	20	KTD20.0-D26.9
TD2100105C8R01	0.8268 0.8622	4.13	1.000	1.26	5.44	2.20	7.640	21	KTD20.0-D26.9
TD2200110C8R01	0.8661 0.9016	4.33	1.000	1.26	5.70	2.20	7.900	22	KTD20.0-D26.9
TD2300115B7R01	0.9055 0.9409	4.53	1.250	1.65	5.96	2.36	8.320	23	KTD20.0-D26.9
TD2400120B7R01	0.9449 0.9803	4.72	1.250	1.65	6.22	2.36	8.580	24	KTD20.0-D26.9
TD2500125B7R01	0.9843 1.0197	4.92	1.250	1.65	6.48	2.36	8.840	25	KTD20.0-D26.9

GOLD•TWIST WELDON & ISO9766 SHANKS

8XD WELDON SHANKS



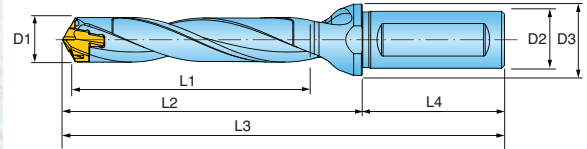
Drilling



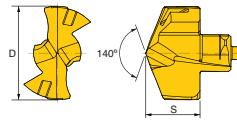
Coolant



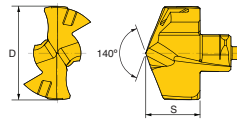
NOTE: We strongly recommend the use of a 1.5:1 or 3:1 Gold•Twist drill of the same diameter to drill a centering starter hole. The use of a centering starter hole improves hole location, accuracy, roundness, straightness and surface finish.



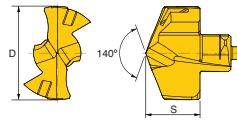
8xD	D1 Tip Diameter Range	L1 DOC	D2 Shank Dia.	D3 Fig Dia.	L2 Ext.	L4 Shank Length	L3 OAL	Pocket Size	Key
TD0700056B9R01	0.2756 0.2913	0.43	0.500	0.63	0.99	1.77	2.760	7	KTD6.0-D9.9
TD0750060B9R01	0.2953 0.3110	2.28	0.500	0.63	2.94	1.77	4.710	7.5	KTD6.0-D9.9
TD0800064B9R01	0.3150 0.3307	2.52	0.500	0.63	3.13	1.77	4.900	8	KTD6.0-D9.9
TD0850068B9R01	0.3346 0.3504	2.68	0.500	0.63	3.32	1.77	5.090	8.5	KTD6.0-D9.9
TD0900072B9R01	0.3543 0.3701	2.83	0.500	0.63	3.46	1.77	5.230	9	KTD6.0-D9.9
TD0950076B9R01	0.3740 0.3898	2.99	0.500	0.63	3.65	1.77	5.420	9.5	KTD6.0-D9.9
TD1000080COR01	0.3937 0.4094	3.15	0.625	0.79	3.79	1.89	5.680	10	KTD10.0-19.9
TD1050084COR01	0.4134 0.4291	3.31	0.625	0.79	3.94	1.89	5.830	10.5	KTD10.0-19.9
TD1100088COR01	0.4331 0.4488	3.46	0.625	0.79	4.12	1.89	6.010	11	KTD10.0-19.9
TD1150092COR01	0.4528 0.4685	3.62	0.625	0.79	4.28	1.89	6.170	11.5	KTD10.0-19.9
TD1200096COR01	0.4724 0.4882	3.78	0.625	0.79	4.45	1.89	6.340	12	KTD10.0-19.9
TD1250100COR01	0.4921 0.5079	3.94	0.625	0.79	4.61	1.89	6.500	12.5	KTD10.0-19.9
TD1300104COR01	0.5118 0.5276	4.09	0.625	0.79	4.79	1.89	6.680	13	KTD10.0-19.9
TD1350108COR01	0.5315 0.5472	4.25	0.625	0.79	4.94	1.89	6.830	13.5	KTD10.0-19.9
TD1400112COR01	0.5512 0.5669	4.41	0.625	0.79	5.20	1.89	7.090	14	KTD10.0-19.9
TD1450116COR01	0.5709 0.5866	4.57	0.625	0.79	5.36	1.89	7.250	14.5	KTD10.0-19.9
TD150012018R01	0.5906 0.6260	4.72	0.750	0.98	5.66	1.97	7.630	15	KTD10.0-19.9
TD160012818R01	0.6299 0.6654	5.04	0.750	0.98	6.04	1.97	8.010	16	KTD10.0-19.9
TD170013618R01	0.6693 0.7047	5.35	0.750	0.98	6.41	1.97	8.380	17	KTD10.0-19.9
TD1800144C8R01	0.7087 0.7441	5.67	1.000	1.26	6.79	2.20	8.990	18	KTD10.0-19.9
TD1900152C8R01	0.7480 0.7835	5.98	1.000	1.26	7.17	2.20	9.370	19	KTD10.0-19.9
TD2000160C8R01	0.7874 0.8228	6.30	1.000	1.26	7.54	2.20	9.740	20	KTD20.0-D26.9
TD2100168C8R01	0.8268 0.8622	6.61	1.000	1.26	7.92	2.20	10.120	21	KTD20.0-D26.9
TD2200176C8R01	0.8661 0.9016	6.93	1.000	1.26	8.30	2.20	10.500	22	KTD20.0-D26.9
TD2300184B7R01	0.9055 0.9409	7.24	1.250	1.65	8.68	2.36	11.040	23	KTD20.0-D26.9
TD2400192B7R01	0.9449 0.9803	7.56	1.250	1.65	9.06	2.36	11.420	24	KTD20.0-D26.9
TD2500200B7R01	0.9843 1.0197	7.87	1.250	1.65	9.43	2.36	11.790	25	KTD20.0-D26.9



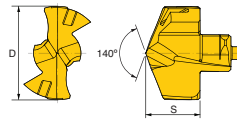
"P" Geometry Steel	"M" Geometry Stainless Steel	"K" Geometry Cast Iron	"N" Geometry Non-Ferrous	(D) Diameter		S Dim (inch)	Pocket Size	Grades
				(mm)	(inch)			
TPA0600R01	TMA0600R01	TKA0600R01		6.00	0.2362	0.157	6	IN2505
TPA0610R01	TMA0610R01	TKA0610R01		6.10	0.2402	0.157	6	IN2505
TPA0620R01	TMA0620R01	TKA0620R01		6.20	0.2441	0.157	6	IN2505
TPA0630R01	TMA0630R01	TKA0630R01		6.30	0.2480	0.157	6	IN2505
			TNA0635R01	6.35	0.2500	0.157	6	IN05S
TPA0640R01	TMA0640R01	TKA0640R01		6.40	0.2520	0.157	6	IN2505
TPA0650R01	TMA0650R01	TKA0650R01		6.50	0.2559	0.169	6.5	IN2505
TPA0660R01	TMA0660R01	TKA0660R01		6.60	0.2598	0.169	6.5	IN2505
TPA0670R01	TMA0670R01	TKA0670R01		6.70	0.2638	0.169	6.5	IN2505
TPA0680R01	TMA0680R01	TKA0680R01		6.80	0.2677	0.169	6.5	IN2505
TPA0690R01	TMA0690R01	TKA0690R01		6.90	0.2717	0.169	6.5	IN2505
TPA0700R01	TMA0700R01	TKA0700R01		7.00	0.2756	0.181	7	IN2505
TPA0710R01	TMA0710R01	TKA0710R01		7.10	0.2795	0.181	7	IN2505
			TNA0714R01	7.14	0.2812	0.181	7	IN05S
TPA0720R01	TMA0720R01	TKA0720R01		7.20	0.2835	0.181	7	IN2505
TPA0730R01	TMA0730R01	TKA0730R01		7.30	0.2874	0.181	7	IN2505
TPA0740R01	TMA0740R01	TKA0740R01		7.40	0.2913	0.181	7	IN2505
TPA0750R01	TMA0750R01	TKA0750R01		7.50	0.2953	0.181	7.5	IN2505
TPA0760R01	TMA0760R01	TKA0760R01		7.60	0.2992	0.181	7.5	IN2505
TPA0770R01	TMA0770R01	TKA0770R01		7.70	0.3031	0.181	7.5	IN2505
TPA0780R01	TMA0780R01	TKA0780R01		7.80	0.3071	0.181	7.5	IN2505
TPA0790R01	TMA0790R01	TKA0790R01		7.90	0.3110	0.181	7.5	IN2505
			TNA0794R01	7.94	0.3125	0.181	7.5	IN05S
TPA0800R01	TMA0800R01	TKA0800R01	TNA0800R01	8.00	0.3150	0.213	8	IN2505 IN05S
TPA0810R01	TMA0810R01	TKA0810R01		8.10	0.3189	0.213	8	IN2505
TPA0820R01	TMA0820R01	TKA0820R01		8.20	0.3228	0.213	8	IN2505
TPA0830R01	TMA0830R01	TKA0830R01		8.30	0.3268	0.213	8	IN2505
TPA0840R01	TMA0840R01	TKA0840R01		8.40	0.3307	0.213	8	IN2505
TPA0850R01	TMA0850R01	TKA0850R01	TNA0850R01	8.50	0.3346	0.213	8.5	IN2505 IN05S
TPA0860R01	TMA0860R01	TKA0860R01		8.60	0.3386	0.213	8.5	IN2505
TPA0870R01	TMA0870R01	TKA0870R01	TNA0870R01	8.70	0.3425	0.213	8.5	IN2505 IN05S
			TNA0873R01	8.73	0.3437	0.213	8.5	IN05S
TPA0880R01	TMA0880R01	TKA0880R01		8.80	0.3465	0.213	8.5	IN2505
TPA0890R01	TMA0890R01	TKA0890R01		8.90	0.3504	0.213	8.5	IN2505
TPA0900R01	TMA0900R01	TKA0900R01	TNA0900R01	9.00	0.3543	0.228	9	IN2505 IN05S
TPA0910R01	TMA0910R01	TKA0910R01		9.10	0.3583	0.228	9	IN2505
TPA0920R01	TMA0920R01	TKA0920R01		9.20	0.3622	0.228	9	IN2505
TPA0930R01	TMA0930R01	TKA0930R01		9.30	0.3661	0.228	9	IN2505
TPA0940R01	TMA0940R01	TKA0940R01	TNA0940R01	9.40	0.3701	0.228	9	IN2505 IN05S
TPA0950R01	TMA0950R01	TKA0950R01	TNA0950R01	9.50	0.3740	0.228	9.5	IN2505 IN05S
			TNA0953R01	9.53	0.3750	0.228	9.5	IN05S
TPA0960R01	TMA0960R01	TKA0960R01		9.60	0.3780	0.228	9.5	IN2505
TPA0970R01	TMA0970R01	TKA0970R01		9.70	0.3819	0.228	9.5	IN2505
TPA0980R01	TMA0980R01	TKA0980R01		9.80	0.3858	0.228	9.5	IN2505
TPA0990R01	TMA0990R01	TKA0990R01	TNA0990R01	9.90	0.3898	0.228	9.5	IN2505 IN05S
TPA1000R01	TMA1000R01	TKA1000R01	TNA1000R01	10.00	0.3937	0.244	10	IN2505 IN05S
TPA1010R01	TMA1010R01	TKA1010R01		10.10	0.3976	0.244	10	IN2505
TPA1020R01	TMA1020R01	TKA1020R01	TNA1020R01	10.20	0.4016	0.244	10	IN2505 IN05S
TPA1030R01	TMA1030R01	TKA1030R01		10.30	0.4055	0.244	10	IN2505
			TNA1032R01	10.32	0.4062	0.244	10	IN05S
TPA1040R01	TMA1040R01	TKA1040R01		10.40	0.4094	0.244	10	IN2505
TPA1050R01	TMA1050R01	TKA1050R01	TNA1050R01	10.50	0.4134	0.244	10.5	IN2505 IN05S
TPA1060R01	TMA1060R01	TKA1060R01		10.60	0.4173	0.244	10.5	IN2505



"P" Geometry Steel	"M" Geometry Stainless Steel	"K" Geometry Cast Iron	"N" Geometry Non-Ferrous	(D) Diameter		S Dim (inch)	Pocket Size	Grades
				(mm)	(inch)			
TPA1070R01	TMA1070R01	TKA1070R01		10.70	0.4213	0.244	10.5	IN2505
TPA1080R01	TMA1080R01	TKA1080R01	TNA1080R01	10.80	0.4252	0.244	10.5	IN2505
TPA1090R01	TMA1090R01	TKA1090R01		10.90	0.4291	0.244	10.5	IN2505
TPA1100R01	TMA1100R01	TKA1100R01	TNA1100R01	11.00	0.4331	0.260	11	IN2505
TPA1110R01	TMA1110R01	TKA1110R01	TNA1110R01	11.10	0.4370	0.260	11	IN2505
			TNA1111R01	11.11	0.4375	0.260	11	IN2505
TPA1120R01	TMA1120R01	TKA1120R01		11.20	0.4409	0.260	11	IN2505
TPA1130R01	TMA1130R01	TKA1130R01		11.30	0.4449	0.260	11	IN2505
TPA1140R01	TMA1140R01	TKA1140R01		11.40	0.4488	0.260	11	IN2505
TPA1150R01	TMA1150R01	TKA1150R01	TNA1150R01	11.50	0.4528	0.260	11.5	IN2505
TPA1160R01	TMA1160R01	TKA1160R01		11.60	0.4567	0.260	11.5	IN2505
TPA1170R01	TMA1170R01	TKA1170R01		11.70	0.4606	0.260	11.5	IN2505
TPA1180R01	TMA1180R01	TKA1180R01		11.80	0.4646	0.260	11.5	IN2505
TPA1190R01	TMA1190R01	TKA1190R01	TNA1190R01	11.90	0.4685	0.260	11.5	IN2505
TPA1200R01	TMA1200R01	TKA1200R01	TNA1200R01	12.00	0.4724	0.275	12	IN2505
TPA1210R01	TMA1210R01	TKA1210R01		12.10	0.4764	0.275	12	IN2505
TPA1220R01	TMA1220R01	TKA1220R01		12.20	0.4803	0.275	12	IN2505
TPA1230R01	TMA1230R01	TKA1230R01	TNA1230R01	12.30	0.4843	0.275	12	IN2505
TPA1240R01	TMA1240R01	TKA1240R01		12.40	0.4882	0.275	12	IN2505
TPA1250R01	TMA1250R01	TKA1250R01	TNA1250R01	12.50	0.4921	0.275	12.5	IN2505
TPA1260R01	TMA1260R01	TKA1260R01		12.60	0.4961	0.275	12.5	IN2505
TPA1270R01	TMA1270R01	TKA1270R01	TNA1270R01	12.70	0.5000	0.275	12.5	IN2505
TPA1280R01	TMA1280R01	TKA1280R01		12.80	0.5039	0.275	12.5	IN2505
TPA1290R01	TMA1290R01	TKA1290R01		12.90	0.5079	0.275	12.5	IN2505
TPA1300R01	TMA1300R01	TKA1300R01	TNA1300R01	13.00	0.5118	0.299	13	IN2505
TPA1310R01	TMA1310R01	TKA1310R01		13.10	0.5157	0.299	13	IN2505
TPA1320R01	TMA1320R01	TKA1320R01		13.20	0.5197	0.299	13	IN2505
TPA1330R01	TMA1330R01	TKA1330R01		13.30	0.5236	0.299	13	IN2505
TPA1340R01	TMA1340R01	TKA1340R01		13.40	0.5276	0.299	13	IN2505
TPA1350R01	TMA1350R01	TKA1350R01	TNA1350R01	13.50	0.5315	0.299	13.5	IN2505
TPA1360R01	TMA1360R01	TKA1360R01		13.60	0.5354	0.299	13.5	IN2505
TPA1370R01	TMA1370R01	TKA1370R01	TNA1370R01	13.70	0.5394	0.299	13.5	IN2505
TPA1380R01	TMA1380R01	TKA1380R01		13.80	0.5433	0.299	13.5	IN2505
TPA1390R01	TMA1390R01	TKA1390R01		13.90	0.5472	0.299	13.5	IN2505
TPA1400R01	TMA1400R01	TKA1400R01	TNA1400R01	14.00	0.5512	0.321	14	IN2505
TPA1410R01	TMA1410R01	TKA1410R01		14.10	0.5551	0.321	14	IN2505
TPA1420R01	TMA1420R01	TKA1420R01		14.20	0.5591	0.321	14	IN2505
			TNA1429R01	14.29	0.5625	0.321	14	IN2505
TPA1430R01	TMA1430R01	TKA1430R01		14.30	0.5630	0.321	14	IN2505
TPA1440R01	TMA1440R01	TKA1440R01		14.40	0.5669	0.321	14	IN2505
TPA1450R01	TMA1450R01	TKA1450R01	TNA1450R01	14.50	0.5709	0.321	14.5	IN2505
TPA1460R01	TMA1460R01	TKA1460R01		14.60	0.5748	0.321	14.5	IN2505
TPA1470R01	TMA1470R01	TKA1470R01		14.70	0.5787	0.321	14.5	IN2505
TPA1480R01	TMA1480R01	TKA1480R01		14.80	0.5827	0.321	14.5	IN2505
TPA1490R01	TMA1490R01	TKA1490R01		14.90	0.5866	0.321	14.5	IN2505
TPA1500R01	TMA1500R01	TKA1500R01	TNA1500R01	15.00	0.5906	0.344	15	IN2505
			TNA1508R01	15.08	0.5937	0.344	15	IN2505
TPA1510R01	TMA1510R01	TKA1510R01		15.10	0.5945	0.344	15	IN2505
TPA1520R01	TMA1520R01	TKA1520R01		15.20	0.5984	0.344	15	IN2505
TPA1530R01	TMA1530R01	TKA1530R01		15.30	0.6024	0.344	15	IN2505
TPA1540R01	TMA1540R01	TKA1540R01		15.40	0.6063	0.344	15	IN2505
TPA1550R01	TMA1550R01	TKA1550R01		15.50	0.6102	0.344	15	IN2505
TPA1560R01	TMA1560R01	TKA1560R01		15.60	0.6142	0.344	15	IN2505

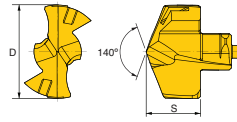


"P" Geometry Steel	"M" Geometry Stainless Steel	"K" Geometry Cast Iron	"N" Geometry Non-Ferrous	(D) Diameter		S Dim (inch)	Pocket Size	Grades	
				(mm)	(inch)				
TPA1570R01	TMA1570R01	TKA1570R01	TNA1570R01	15.70	0.6181	0.344	15	IN2505	IN05S
TPA1580R01	TMA1580R01	TKA1580R01	TNA1580R01	15.80	0.6220	0.344	15	IN2505	IN05S
			TNA1588R01	15.88	0.6250	0.344	15		IN05S
TPA1590R01	TMA1590R01	TKA1590R01		15.90	0.6260	0.344	15	IN2505	
TPA1600R01	TMA1600R01	TKA1600R01	TNA1600R01	16.00	0.6299	0.366	16	IN2505	IN05S
TPA1610R01	TMA1610R01	TKA1610R01		16.10	0.6339	0.366	16	IN2505	
TPA1620R01	TMA1620R01	TKA1620R01		16.20	0.6378	0.366	16	IN2505	
TPA1630R01	TMA1630R01	TKA1630R01		16.30	0.6417	0.366	16	IN2505	
TPA1640R01	TMA1640R01	TKA1640R01		16.40	0.6457	0.366	16	IN2505	
TPA1650R01	TMA1650R01	TKA1650R01	TNA1650R01	16.50	0.6496	0.366	16	IN2505	IN05S
TPA1660R01	TMA1660R01	TKA1660R01		16.60	0.6535	0.366	16	IN2505	
			TNA1667R01	16.67	0.6562	0.366	16		IN05S
TPA1670R01	TMA1670R01	TKA1670R01	TNA1670R01	16.70	0.6575	0.366	16	IN2505	IN05S
TPA1680R01	TMA1680R01	TKA1680R01		16.80	0.6614	0.366	16	IN2505	
TPA1690R01	TMA1690R01	TKA1690R01		16.90	0.6654	0.366	16	IN2505	
TPA1700R01	TMA1700R01	TKA1700R01	TNA1700R01	17.00	0.6693	0.390	17	IN2505	IN05S
TPA1710R01	TMA1710R01	TKA1710R01		17.10	0.6732	0.390	17	IN2505	
TPA1720R01	TMA1720R01	TKA1720R01		17.20	0.6772	0.390	17	IN2505	
TPA1730R01	TMA1730R01	TKA1730R01		17.30	0.6811	0.390	17	IN2505	
TPA1740R01	TMA1740R01	TKA1740R01		17.40	0.6850	0.390	17	IN2505	
			TNA1746R01	17.46	0.6875	0.390	17		IN05S
TPA1750R01	TMA1750R01	TKA1750R01	TNA1750R01	17.50	0.6890	0.390	17	IN2505	IN05S
TPA1760R01	TMA1760R01	TKA1760R01		17.60	0.6929	0.390	17	IN2505	
TPA1770R01	TMA1770R01	TKA1770R01		17.70	0.6968	0.390	17	IN2505	
TPA1780R01	TMA1780R01	TKA1780R01		17.80	0.7008	0.390	17	IN2505	
TPA1790R01	TMA1790R01	TKA1790R01		17.90	0.7047	0.390	17	IN2505	
TPA1800R01	TMA1800R01	TKA1800R01	TKA1800R01	18.00	0.7087	0.413	18	IN2505	IN05S
TPA1810R01	TMA1810R01	TKA1810R01		18.10	0.7126	0.413	18	IN2505	
TPA1820R01	TMA1820R01	TKA1820R01		18.20	0.7165	0.413	18	IN2505	
			TNA1826R01	18.26	0.7188	0.413	18		IN05S
TPA1830R01	TMA1830R01	TKA1830R01		18.30	0.7205	0.413	18	IN2505	
TPA1840R01	TMA1840R01	TKA1840R01		18.40	0.7244	0.413	18	IN2505	
TPA1850R01	TMA1850R01	TKA1850R01	TNA1850R01	18.50	0.7283	0.413	18	IN2505	IN05S
TPA1860R01	TMA1860R01	TKA1860R01		18.60	0.7323	0.413	18	IN2505	
TPA1870R01	TMA1870R01	TKA1870R01		18.70	0.7362	0.413	18	IN2505	
TPA1880R01	TMA1880R01	TKA1880R01		18.80	0.7402	0.413	18	IN2505	
TPA1890R01	TMA1890R01	TKA1890R01		18.90	0.7441	0.413	18	IN2505	
TPA1900R01	TMA1900R01	TKA1900R01	TNA1900R01	19.00	0.7480	0.433	19	IN2505	IN05S
TPA1905R01	TMA1905R01	TKA1905R01	TNA1905R01	19.05	0.7500	0.433	19	IN2505	IN05S
TPA1910R01	TMA1910R01	TKA1910R01		19.10	0.7520	0.433	19	IN2505	
TPA1920R01	TMA1920R01	TKA1920R01		19.20	0.7559	0.433	19	IN2505	
TPA1930R01	TMA1930R01	TKA1930R01		19.30	0.7598	0.433	19	IN2505	
TPA1940R01	TMA1940R01	TKA1940R01		19.40	0.7638	0.433	19	IN2505	
TPA1950R01	TMA1950R01	TKA1950R01	TNA1950R01	19.50	0.7677	0.433	19	IN2505	IN05S
TPA1960R01	TMA1960R01	TKA1960R01		19.60	0.7717	0.433	19	IN2505	
TPA1970R01	TMA1970R01	TKA1970R01		19.70	0.7756	0.433	19	IN2505	
TPA1980R01	TMA1980R01	TKA1980R01		19.80	0.7795	0.433	19	IN2505	
			TNA1984R01	19.84	0.7795	0.433	19		IN05S
TPA1990R01	TMA1990R01	TKA1990R01		19.90	0.7835	0.433	19	IN2505	
TPA2000R01	TMA2000R01	TKA2000R01	TNA2000R01	20.00	0.7874	0.344	20	IN2505	IN05S
TPA2010R01	TMA2010R01	TKA2010R01		20.10	0.7913	0.344	20	IN2505	
TPA2020R01	TMA2020R01	TKA2020R01		20.20	0.7953	0.344	20	IN2505	
TPA2030R01	TMA2030R01	TKA2030R01		20.30	0.7992	0.344	20	IN2505	



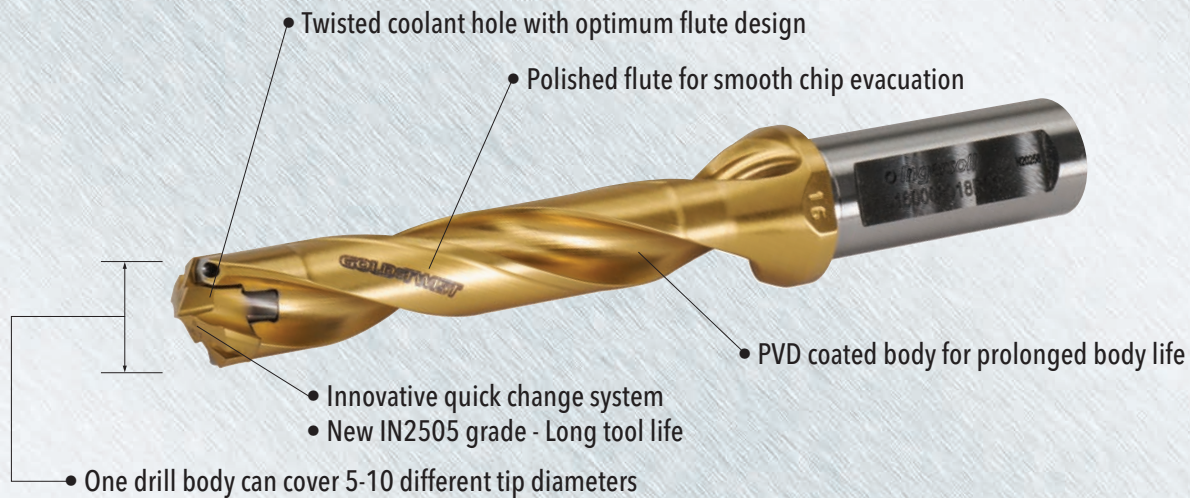
"P" Geometry Steel	"M" Geometry Stainless Steel	"K" Geometry Cast Iron	"N" Geometry Non-Ferrous	(D) Diameter		S Dim (inch)	Pocket Size	Grades
				(mm)	(inch)			
TPA2040R01	TMA2040R01	TKA2040R01		20.40	0.8031	0.344	20	IN2505
TPA2050R01	TMA2050R01	TKA2050R01	TNA2050R01	20.50	0.8071	0.344	20	IN2505
TPA2060R01	TMA2060R01	TKA2060R01		20.60	0.8110	0.344	20	IN2505
			TNA2064R01	20.64	0.8125	0.344	20	IN05S
TPA2070R01	TMA2070R01	TKA2070R01		20.70	0.8150	0.344	20	IN2505
TPA2080R01	TMA2080R01	TKA2080R01		20.80	0.8189	0.344	20	IN2505
TPA2090R01	TMA2090R01	TKA2090R01		20.90	0.8228	0.344	20	IN2505
TPA2100R01	TMA2100R01	TKA2100R01	TNA2100R01	21.00	0.8268	0.366	21	IN2505
TPA2110R01	TMA2110R01	TKA2110R01		21.10	0.8307	0.366	21	IN2505
TPA2120R01	TMA2120R01	TKA2120R01		21.20	0.8346	0.366	21	IN2505
TPA2130R01	TMA2130R01	TKA2130R01		21.30	0.8386	0.366	21	IN2505
TPA2140R01	TMA2140R01	TKA2140R01		21.40	0.8425	0.366	21	IN2505
			TNA2143R01	21.43	0.8437	0.366	21	IN05S
TPA2150R01	TMA2150R01	TKA2150R01		21.50	0.8465	0.366	21	IN2505
TPA2160R01	TMA2160R01	TKA2160R01		21.60	0.8504	0.366	21	IN2505
TPA2170R01	TMA2170R01	TKA2170R01		21.70	0.8543	0.366	21	IN2505
TPA2180R01	TMA2180R01	TKA2180R01		21.80	0.8583	0.366	21	IN2505
TPA2190R01	TMA2190R01	TKA2190R01		21.90	0.8622	0.366	21	IN2505
TPA2200R01	TMA2200R01	TKA2200R01	TNA2200R01	22.00	0.8661	0.390	22	IN2505
TPA2210R01	TMA2210R01	TKA2210R01		22.10	0.8701	0.390	22	IN2505
TPA2220R01	TMA2220R01	TKA2220R01		22.20	0.8740	0.390	22	IN2505
TPA2222R01	TMA2222R01	TKA2222R01	TNA2222R01	22.22	0.8750	0.390	22	IN2505
TPA2230R01	TMA2230R01	TKA2230R01		22.30	0.8780	0.390	22	IN2505
TPA2240R01	TMA2240R01	TKA2240R01		22.40	0.8819	0.390	22	IN2505
TPA2250R01	TMA2250R01	TKA2250R01		22.50	0.8858	0.390	22	IN2505
TPA2260R01	TMA2260R01	TKA2260R01		22.60	0.8898	0.390	22	IN2505
TPA2270R01	TMA2270R01	TKA2270R01		22.70	0.8937	0.390	22	IN2505
TPA2280R01	TMA2280R01	TKA2280R01		22.80	0.8976	0.390	22	IN2505
TPA2290R01	TMA2290R01	TKA2290R01		22.90	0.9016	0.390	22	IN2505
TPA2300R01	TMA2300R01	TKA2300R01	TNA2300R01	23.00	0.9055	0.413	23	IN2505
TPA2310R01	TMA2310R01	TKA2310R01		23.10	0.9094	0.413	23	IN2505
TPA2320R01	TMA2320R01	TKA2320R01		23.20	0.9134	0.413	23	IN2505
TPA2330R01	TMA2330R01	TKA2330R01		23.30	0.9173	0.413	23	IN2505
TPA2340R01	TMA2340R01	TKA2340R01		23.40	0.9213	0.413	23	IN2505
TPA2350R01	TMA2350R01	TKA2350R01		23.50	0.9252	0.413	23	IN2505
TPA2360R01	TMA2360R01	TKA2360R01		23.60	0.9291	0.413	23	IN2505
TPA2370R01	TMA2370R01	TKA2370R01		23.70	0.9331	0.413	23	IN2505
TPA2380R01	TMA2380R01	TKA2380R01	TNA2380R01	23.80	0.9370	0.413	23	IN2505
TPA2390R01	TMA2390R01	TKA2390R01		23.90	0.9409	0.413	23	IN2505
TPA2400R01	TMA2400R01	TKA2400R01	TNA2400R01	24.00	0.9449	0.433	24	IN2505
TPA2410R01	TMA2410R01	TKA2410R01		24.10	0.9488	0.433	24	IN2505
TPA2420R01	TMA2420R01	TKA2420R01		24.20	0.9528	0.433	24	IN2505
TPA2430R01	TMA2430R01	TKA2430R01		24.30	0.9567	0.433	24	IN2505
TPA2440R01	TMA2440R01	TKA2440R01		24.40	0.9606	0.433	24	IN2505
TPA2450R01	TMA2450R01	TKA2450R01	TNA2450R01	24.50	0.9646	0.433	24	IN2505
TPA2460R01	TMA2460R01	TKA2460R01	TNA2460R01	24.60	0.9685	0.433	24	IN2505
TPA2470R01	TMA2470R01	TKA2470R01		24.70	0.9724	0.433	24	IN2505
TPA2480R01	TMA2480R01	TKA2480R01		24.80	0.9764	0.433	24	IN2505
TPA2490R01	TMA2490R01	TKA2490R01		24.90	0.9803	0.433	24	IN2505
TPA2500R01	TMA2500R01	TKA2500R01	TNA2500R01	25.00	0.9843	0.433	25	IN2505
TPA2510R01	TMA2510R01	TKA2510R01		25.10	0.9882	0.433	25	IN2505
TPA2520R01	TMA2520R01	TKA2520R01		25.20	0.9921	0.433	25	IN2505
TPA2530R01	TMA2530R01	TKA2530R01		25.30	0.9961	0.433	25	IN2505

GOLD TWIST TIPS



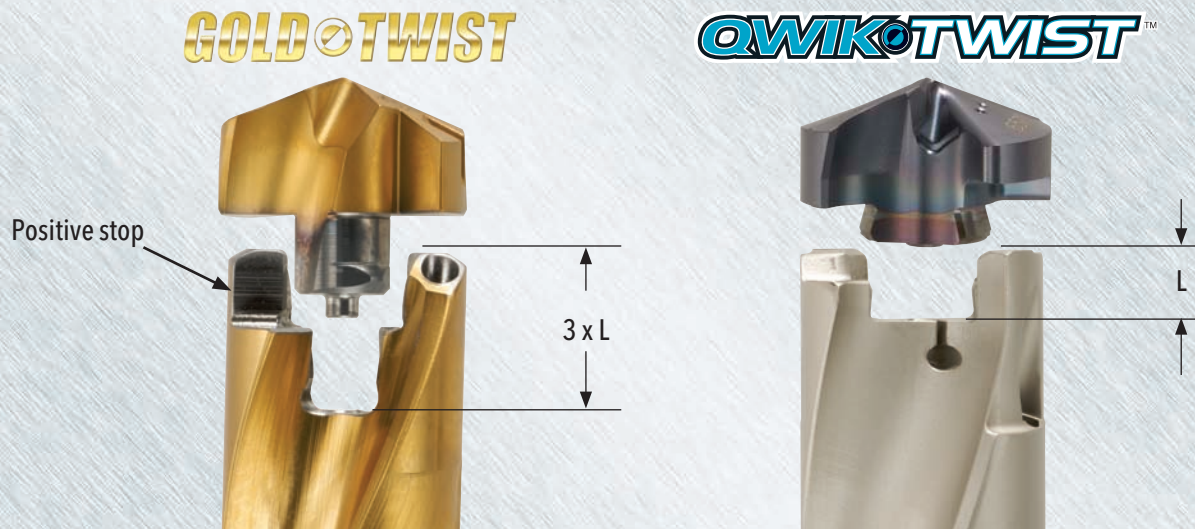
"P" Geometry Steel	"M" Geometry Stainless Steel	"K" Geometry Cast Iron	"N" Geometry Non-Ferrous	(D) Diameter		S Dim (inch)	Pocket Size	Grades	
				(mm)	(inch)				
TPA2540R01	TMA2540R01	TKA2540R01	IN2540R01	25.40	1.0000	0.433	25	IN2505	IN05S
TPA2550R01	TMA2550R01	TKA2550R01		25.50	1.0039	0.433	25	IN2505	
TPA2560R01	TMA2560R01	TKA2560R01		25.60	1.0079	0.433	25	IN2505	
TPA2570R01	TMA2570R01	TKA2570R01		25.70	1.0118	0.433	25	IN2505	
TPA2580R01	TMA2580R01	TKA2580R01		25.80	1.0157	0.433	25	IN2505	
TPA2590R01	TMA2590R01	TKA2590R01		25.90	1.0197	0.433	25	IN2505	

GOLD TWIST FEATURES

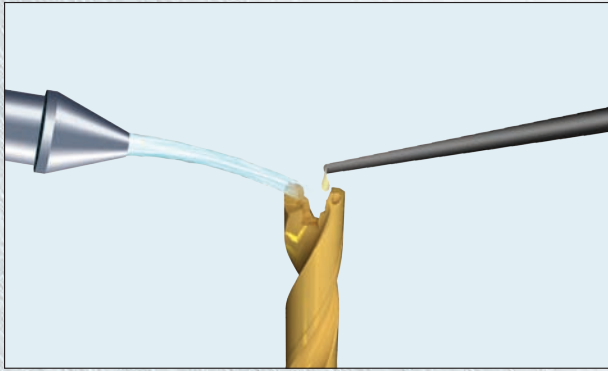


GOLD TWIST DRILL BODY COMPARISON: GOLD TWIST VS. QWIK TWIST

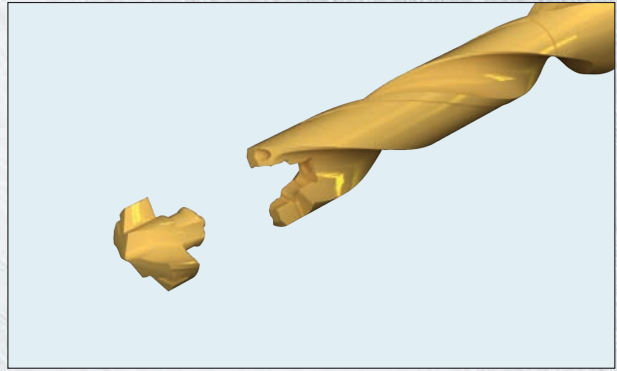
The new Gold Twist pocket design's contact/clamping area is three times deeper than our current Qwik Twist drill. The accuracy of the added cylinder to the clamping area improves rigidity and helps reduce internal stresses. The two precision ground positive stop locations improve the drilling tips' position and support.



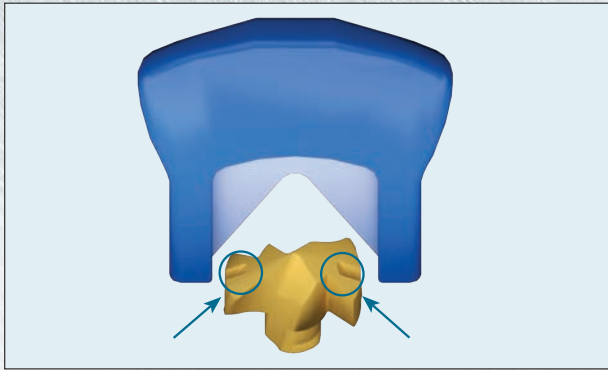
GOLD TWIST SET UP (DRILLING TIP MOUNTING PROCEDURE)



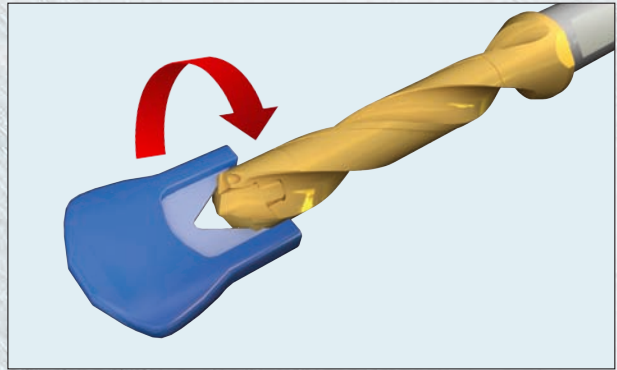
1. Clean the pocket and put oil



2. Mount the drill tip on the pocket



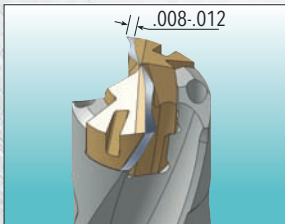
3. Insert key into the slots on tip



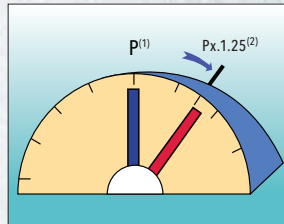
4. Tighten the tip by rotating the key CW

GOLD TWIST INDICATION OF HEAD WEAR

Wear Limit

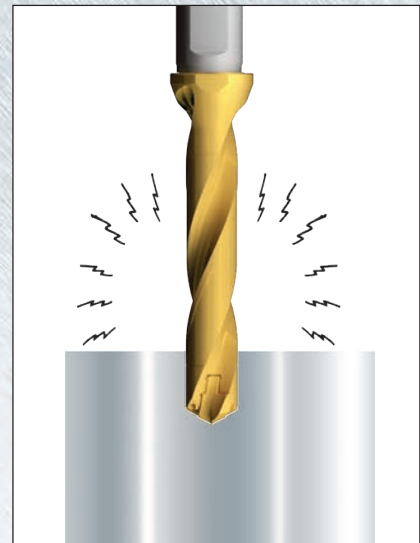


Power Restriction

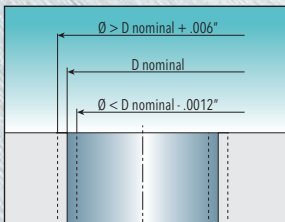


(1) New drilling head
(2) Worn-out drilling head

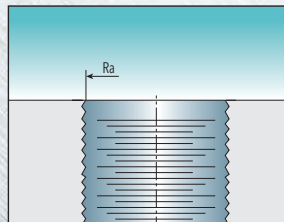
Vibration Noise Drastically Increases



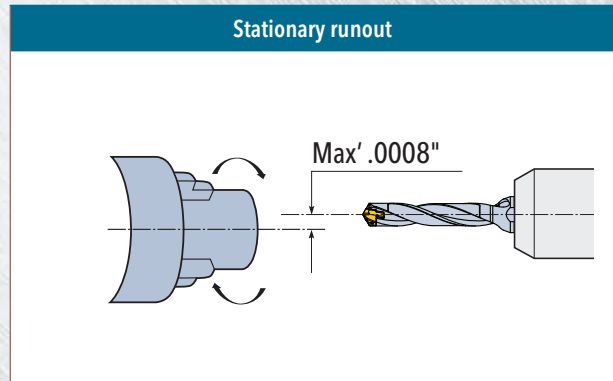
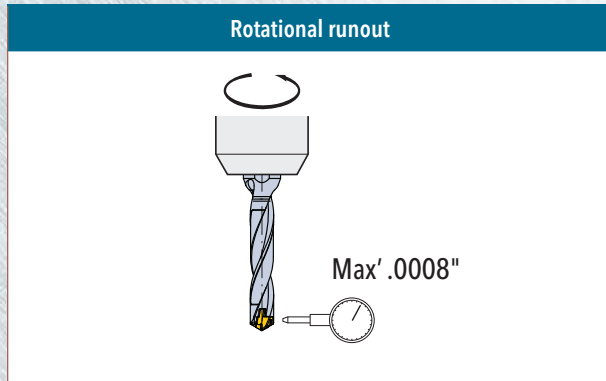
Diameter Change



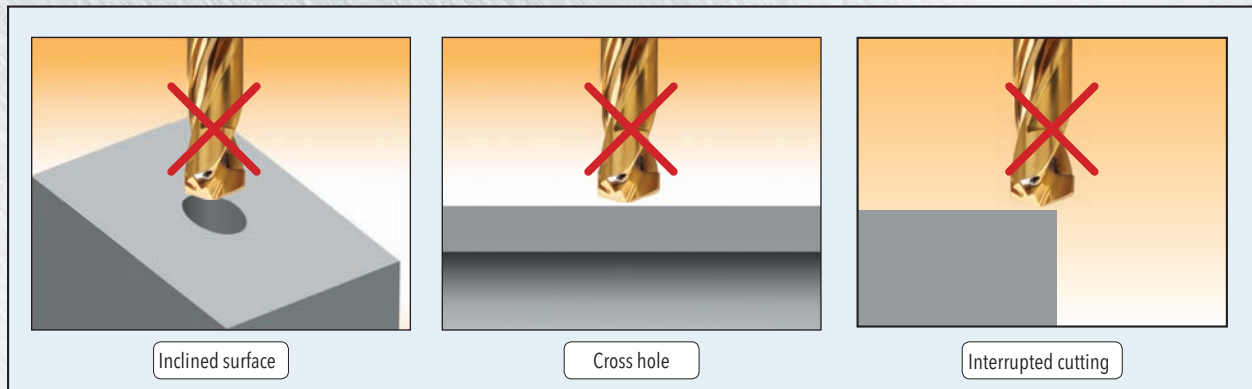
Surface Finish Declines



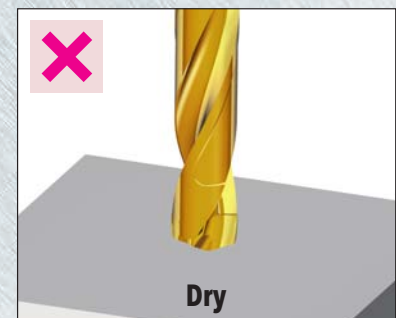
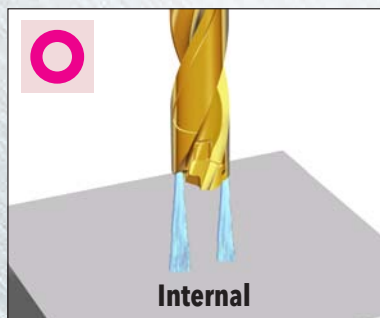
GOLD TWIST MAXIMUM RUNOUT



GOLD TWIST DRILLING LIMITATION

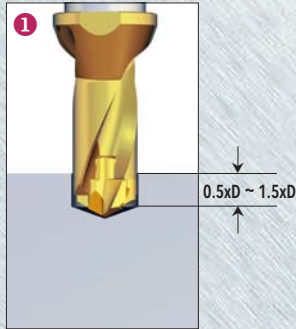


GOLD TWIST COOLANT RECOMMENDATIONS

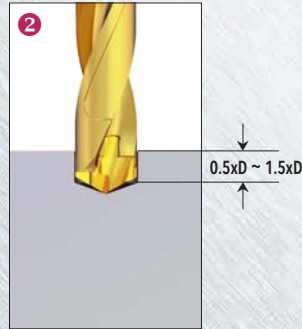


GOLD TWIST RECOMMENDED PILOTING PROCEDURE FOR 8XD OR 12XD

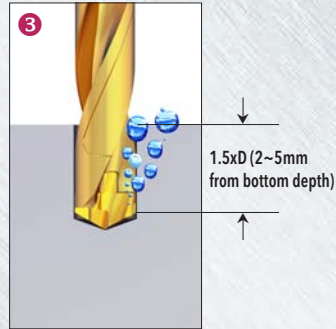
1. Pre-hole 0.5xD~1.5xD deep for centering



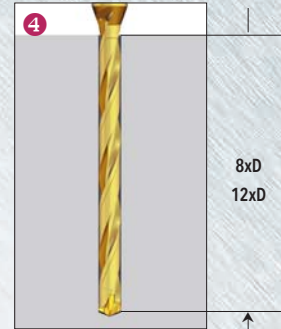
2. Slow rotation and feed during entrance to the pre-hole



3. Maintain for 2-3 seconds and activate the cooling system



4. Continue drilling at recommended cutting conditions



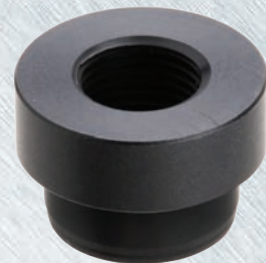
1. Prior to using 8xD or 12xD drills, it is recommended to drill pilot holes from 0.5xD~1.5xD using a short drill (**GOLD TWIST** 1.5xD holder is recommended).
2. Approach the pre-hole at reduced speed and feed until 2~5mm from it's bottom depth.
3. Increase up to recommended speed and maintain feed rate for 2~3 seconds applying coolant.
4. Start drilling at the recommended feed rate.



GOLD TWIST COOLANT PLUG FOR STATIONARY MACHINES

Ingersoll supplies special plugs with an internal thread for coolant connections used on lathes that can be pressed into the cavity on the back end of the shank. Order separately. For use in 1.5xD, 3xD, 5xD, 8xD & 12xD GoldTwist bodies.

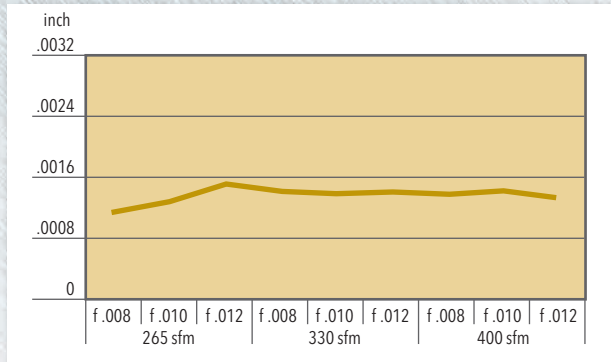
Item no.	Description	Shank diameter	Internal thread
7005198	DL-12	.500"	1/16-27
7005199	DL-16	.625"	1/16-27
7005200	DL-20	.750"	1/8-27
7005201	DL-25	1.000"	1/8-27
7005607	DL-32	1.250"	1/8-27



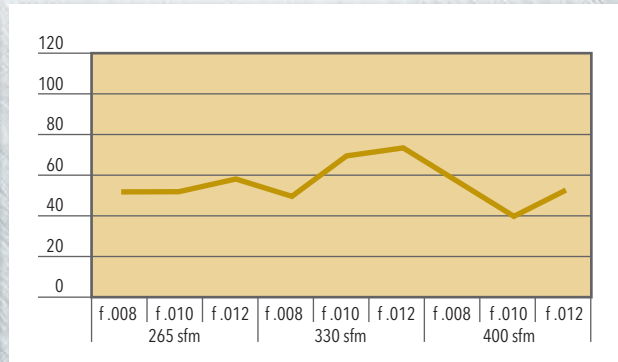
TEST RESULT 1

- Machine: Machining Center (Vertical/BT50)
- Material: Alloy Steel (AISI 4140)
- Drill head: TPA 1300R01 IN2505 (Diameter 13mm)
- Holder: TD 1300065COR01 (5xD)
- Condition: Internal coolant (145 PSI), Through hole

Drilled Hole Size

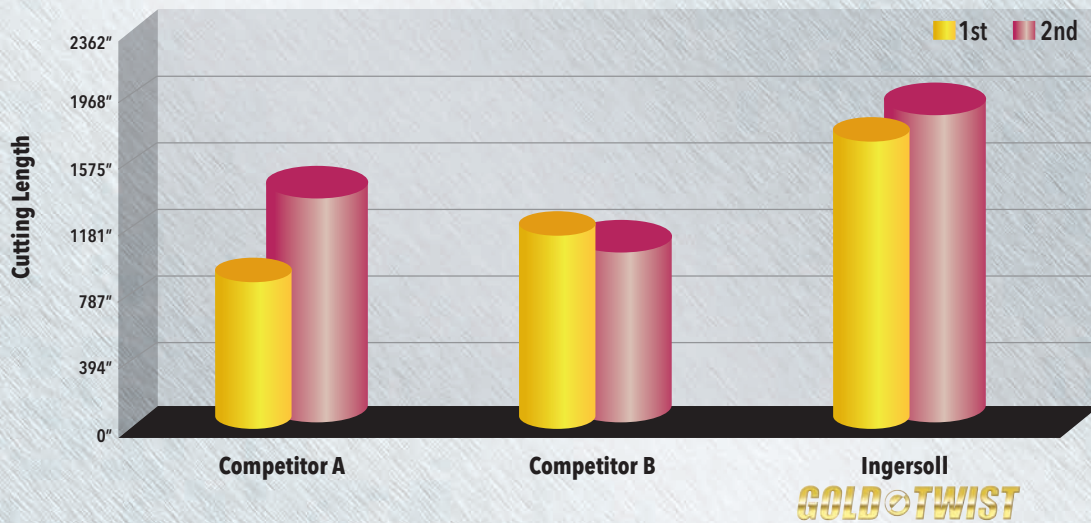


Surface finish (Ra)



TEST RESULT 2

- Machine: Machining Center (Vertical/BT50)
- Material: Alloy Steel (AISI 4140)
- Drill head: TPA 1300R01 IN2505 (Diameter 13mm)
- Holder: TD 1300065COR01 (5xD)
- Condition: Internal coolant (145 PSI), Through hole
- Speed(Vc) 330 SFM, Feed(f) .010 in/rev, Depth(Ap) 2.37"



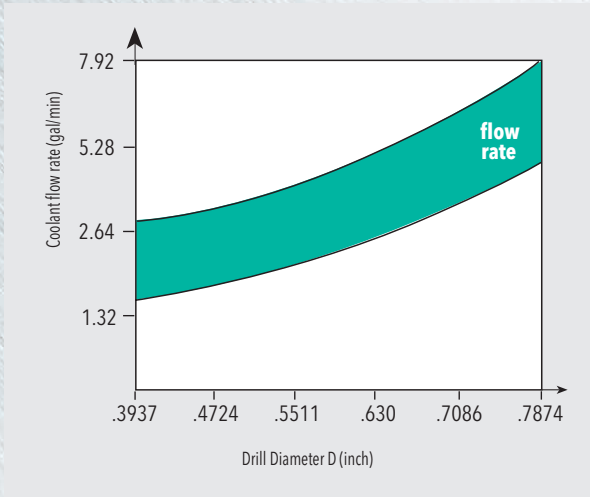
GOLD TWIST OPERATING GUIDELINES

ISO	Material	Condition	Tensile Strength Rm (N/mm ²)	Hardness (HB)	Matl No.	Cutting Speed Vc (SFM)	Feed vs Drill Diameter					
							D= 6-9.9mm (.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 steel >= 0.55% C	Annealed	420	125	1	260-360-460	.004 .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 steel (less than 5% alloying elements)	Annealed	600	200	6	230-315-400	.004 .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						
	High alloy steel, cast steel, & tool steel	Annealed	680	200	10	165-230-300	.004 .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	.003 .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	.005 .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	.007 .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	Not cureable		75	23	300-510-725						
		Cured		90	24	300-510-725						
		High temperature		130	25	265-400-525						
	Copper alloys	Free cutting		110	26	300-510-725						
		Brass		90	27	300-510-725						
		Electrolytic 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	.001 .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						
		Alpha+beta alloys cured	Rm 1050		37	70-115-165						
H	Hardened steel	Hardened		55 HRC	38	70-115-165	.001 .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	-						

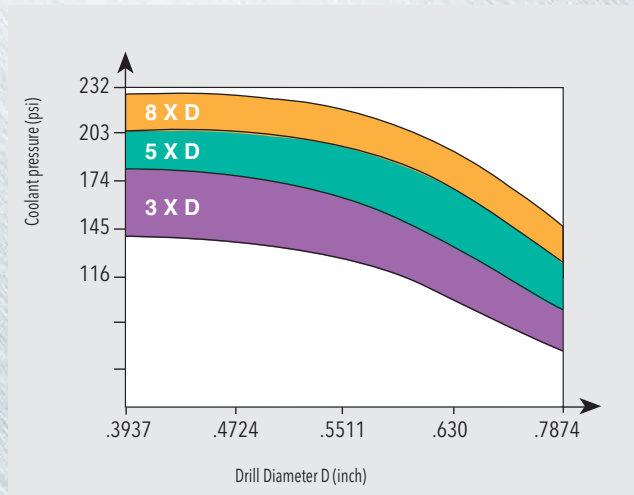
* Feed Rates are based on Two Effective - DO NOT DOUBLE.

GOLD TWIST RECOMMENDATIONS

RECOMMENDED COOLANT FLOW RATE (GALLON/MIN)



RECOMMENDED COOLANT PRESSURE (PSI)



GOLD TWIST PACKING

Clamping key for **GOLD TWIST** Tip is enclosed in each holder.

Body



Drill Tip



Availability

In stock

Price

Available in the GAL system