

i-ONE DRILLS



P H M S K N

Next Generation High Performance & High Accuracy Exchangeable Carbide Insert Drill For Steel & Cast Iron Ø10.00 - 31.75

The YG-1 i-ONE drill is designed for the highest performance drilling of steels and cast iron above Ø10mm. The exchangeable carbide head reduced tool cost compared to solid carbide drills, whilst offering a greater range of diameters and the same level of performance.

The special pin-key clamping system and self centring geometry ensures highly secure clamping and high accuracy drilling.

Features

- ▶ Multi layer H coating provides exceptional heat and wear resistance.
- ▶ Inserts available from Ø10.0mm-33.73mm in 0.1mm increments and inch sizes.
- ▶ Quick and rigid pin-key clamping mechanism.
- ▶ Through coolant.
- ▶ Self centring and advanced drill point technology.
- ▶ Available lengths 3xD, 5xD, 8xD.

Benefits

- ▶ Each holder can take a range of insert diameters.
- ▶ Exceptional tool life and performance for production drilling of steel and cast iron.
- ▶ Thru coolant allows improved chip flow eliminating premature tool failure.
- ▶ Self centring insert eliminates the need for spot drilling.
- ▶ High accuracy.



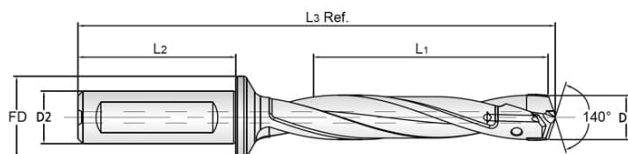
i-ONE DRILL Ø10.00 - 13.90mm

High Performance Exchangeable Insert Drilling Tools



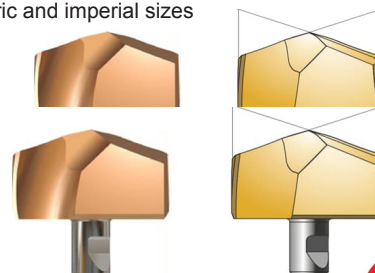
I-ONE DRILL HOLDERS

- ▶ Secure and quick clamping system
- ▶ Through coolant



I-ONE DRILL INSERTS

- ▶ Multi layered coating for long tool life
- ▶ Ideal for carbon steel, alloy steel and cast iron
- ▶ 140° Point
- ▶ Available in metric and imperial sizes



HOLDERS							
D1 Ø Range	D2	Drill Depth	L1	L2	L3	ORDER CODE	PRICE
10.0-11.40	16	3xD	31.5	48	103	ZD10003016	£94.84
		5xD	52.5	48	123	ZD10005016	£124.74
		8xD	84	48	153	ZD10008016	£131.34
10.50-10.90	16	3xD	33	48	104	ZD10503016	£94.84
		5xD	55	48	125	ZD10505016	£124.74
		8xD	88	48	156.5	ZD10508016	£131.34
11.00-11.40	16	3xD	34.5	48	1.5	ZD11003016	£94.84
		5xD	57.5	48	127	ZD11005016	£124.74
		8xD	92	48	160	ZD11008016	£131.34
11.50-11.91	16	3xD	36	48	106	ZD11503016	£94.84
		5xD	60	48	129	ZD11505016	£124.74
		8xD	96	48	163.5	ZD11508016	£131.34
12.00-12.50	16	3xD	37.5	48	109.8	ZD12003016	£94.84
		5xD	62.5	48	133.8	ZD12005016	£124.74
		8xD	100	48	169.8	ZD12008016	£131.34
12.60-13.10	16	3xD	39	48	110.8	ZD12503016	£94.84
		5xD	65	48	135.8	ZD12505016	£124.74
		8xD	104	48	173.3	ZD12508016	£131.34
13.20-13.60	16	3xD	40.5	48	112.8	ZD13005016	£130.89
		5xD	67.5	48	138.8	ZD13003016	£99.48
		8xD	108	48	177.8	ZD13008016	£137.79
13.70-13.90	16	3xD	42	48	113.8	ZD13503016	£99.48
		5xD	70	48	140.8	ZD13505016	£130.89
		8xD	112	48	181.3	ZD13508016	£137.79

INSERTS				SPARES
mm	inch	ORDER CODE	PRICE	Screw
10.00	-	Y101H1000	£39.65	TX1011P5
10.10	-	Y101H1010	£39.65	
10.20	-	Y101H1020	£39.65	
10.30	-	Y101H1030	£39.65	
10.32	13/32	Y101H1032	£39.65	
10.40	-	Y101H1040	£39.65	
10.50	-	Y101H1050	£39.65	
10.60	-	Y101H1060	£39.65	
10.70	-	Y101H1070	£39.65	
10.72	27/64	Y101H1072	£39.65	
10.80	-	Y101H1080	£39.65	
10.90	-	Y101H1090	£39.65	
11.00	-	Y101H1100	£39.65	
11.11	7/16	Y101H1111	£39.65	
11.20	-	Y101H1120	£39.65	
11.30	-	Y101H1130	£39.65	
11.40	-	Y101H1140	£39.65	
11.50	-	Y101H1150	£39.65	
11.51	29/64	Y101H1151	£39.65	
11.60	-	Y101H1160	£39.65	
11.70	-	Y101H1170	£39.65	
11.80	-	Y101H1180	£39.65	
11.90	-	Y101H1190	£39.65	
11.91	15/32	Y101H1191	£39.65	
12	-	Y121H1200	£42.53	TX1213P5
12.10	-	Y121H1210	£42.53	
12.20	-	Y121H1220	£42.53	
12.30	31/64	Y121H1230	£42.53	
12.40	-	Y121H1240	£42.53	
12.50	-	Y121H1250	£42.53	
12.60	-	Y121H1260	£42.53	
12.70	1/2	Y121H1270	£42.53	
12.80	-	Y121H1280	£42.53	
12.90	-	Y121H1290	£42.53	
13.00	-	Y121H1300	£42.53	
13.10	33/64	Y121H1310	£42.53	
13.20	-	Y121H1320	£42.53	
13.30	-	Y121H1330	£42.53	
13.40	-	Y121H1340	£42.53	
13.49	17/32	Y121H1349	£42.53	
13.50	-	Y121H1350	£42.53	
13.60	-	Y121H1360	£42.53	
13.70	-	Y121H1370	£42.53	
13.80	-	Y121H1380	£42.53	
13.89	35/64	Y121H1389	£42.53	
13.90	-	Y121H1390	£42.53	

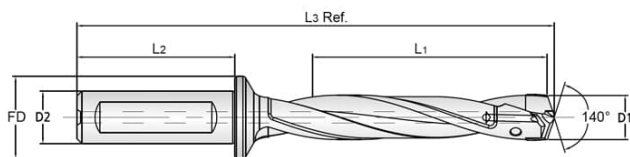
i-ONE DRILL Ø14.00 - 17.90mm

High Performance Exchangeable Insert Drilling Tools



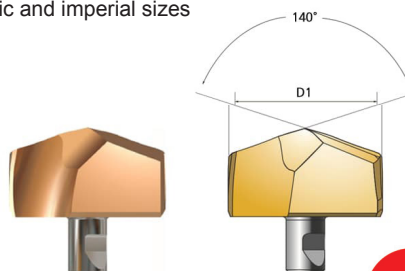
I-ONE DRILL HOLDERS

- ▶ Secure and quick clamping system
- ▶ Through coolant



I-ONE DRILL INSERTS

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HOLDERS							
D1 Ø Range	D2	Drill Depth	L1	L2	L3	ORDER CODE	PRICE
14.00-14.40	16	3xD	43.5	48	116.3	ZD14003016	£99.48
		5xD	72.5	48	144.3	ZD14005016	£130.89
		8xD	116	48	186.3	ZD14008016	£137.79
14.50-14.90	16	3xD	45	48	118.3	ZD14503016	£104.37
		5xD	75	48	147.3	ZD14505016	£137.33
		8xD	120	48	190.8	ZD14508016	£144.58
15.00-15.40	16	3xD	46.5	48	120.3	ZD15003016	£104.37
		5xD	77.5	48	150.3	ZD15005016	£137.33
		8xD	124	48	195.3	ZD15008016	£144.58
15.48-15.90	16	3xD	48	4	121.3	ZD15503016	£104.37
		5xD	80	48	152.3	ZD15505016	£137.33
		8xD	128	48	198.8	ZD15508016	£144.58
16.00-19.90	20	3xD	51	50	127	ZD16003020	£105.95
		5xD	85	50	160	ZD16005020	£139.40
		8xD	736	50	209.5	ZD16008020	£146.76
17.00-17.90	20	3xD	54	50	130	ZD17003020	£105.95
		5xD	90	50	165	ZD17005020	£139.40
		8xD	144	50	217.5	ZD17008020	£146.76

INSERTS				SPARES
mm	inch	ORDER CODE	PRICE	Screw
14.00	-	Y141H1400	£42.86	TX1415P7
14.10	-	Y141H1410	£42.86	
14.20	-	Y141H1420	£42.86	
14.29	9/16	Y141H1429	£42.86	
14.30	-	Y141H1430	£42.86	
14.40	-	Y141H1440	£42.86	
14.50	-	Y141H1450	£42.86	
14.60	-	Y141H1460	£42.86	
14.68	37/64	Y141H1468	£42.86	
14.70	-	Y141H1470	£42.86	
14.80	-	Y141H1480	£42.86	
14.90	-	Y141H1490	£42.86	
15.00	-	Y141H1500	£42.86	
15.08	19/32	Y141H1508	£42.86	
15.10	-	Y141H1510	£42.86	
15.20	-	Y141H1520	£42.86	
15.30	-	Y141H1530	£42.86	
15.40	-	Y141H1540	£42.86	
15.48	39/64	Y141H1548	£42.86	
15.50	-	Y141H1550	£42.86	
15.60	-	Y141H1560	£42.86	
15.70	-	Y141H1570	£42.86	
15.80	-	Y141H1580	£42.86	
15.88	5/8	Y141H1588	£42.86	
15.90	-	Y141H1590	£42.86	
16.00	-	Y161H1600	£47.78	TX1617P7
16.09	-	Y161H1609	£47.78	
16.10	-	Y161H1610	£47.78	
16.20	-	Y161H1620	£47.78	
16.27	41/64	Y161H1627	£47.78	
16.30	-	Y161H1630	£47.78	
16.40	-	Y161H1640	£47.78	
16.50	-	Y161H1650	£47.78	
16.60	-	Y161H1660	£47.78	
16.67	21/32	Y161H1667	£47.78	
16.70	-	Y161H1670	£47.78	
16.80	-	Y161H1680	£47.78	
16.90	-	Y161H1690	£47.78	
17.00	-	Y161H1700	£47.78	TX1718P7
17.07	43/64	Y161H1707	£47.78	
17.10	-	Y161H1710	£47.78	
17.20	-	Y161H1720	£47.78	
17.30	-	Y161H1730	£47.78	
17.40	-	Y161H1740	£47.78	
17.46	11/16	Y161H1746	£47.78	
17.50	-	Y161H1750	£47.78	
17.60	-	Y161H1760	£47.78	
17.70	-	Y161H1770	£47.78	
17.80	-	Y161H1780	£47.78	
17.86	45/65	Y161H1786	£47.78	
17.90	-	Y161H1790	£47.78	

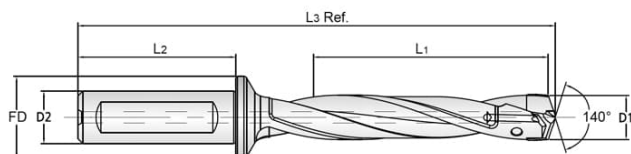
i-ONE DRILL Ø18.00 - 21.90mm

High Performance Exchangeable Insert Drilling Tools



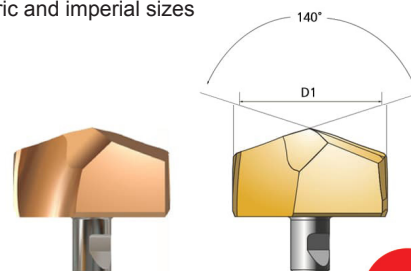
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HOLDERS							INSERTS				SPARES					
D1 Ø Range	D2	Drill Depth	L1	L2	L3	ORDER CODE	PRICE	mm	inch	ORDER CODE	PRICE	Screw				
18.00-18.90	25	3xD	57	56	141.3	ZD18003025	£112.10	18.00	-	Y181H1800	£48.22	TX1819P9				
		5xD	95	56	178.3	ZD18005025	£147.49	18.10	-	Y181H1810	£48.22					
		8xD	152	56	233.8	ZD18008025	£157.10	18.20	-	Y181H1820	£48.22					
	19.00-19.90	25	3xD	60	56	145.3	ZD19003025	£112.10	18.26	23/32	Y181H1826		£48.22	TX1920P9		
			5xD	100	56	184.3	ZD19005025	£147.49	18.30	-	Y181H1830		£48.22			
			8xD	160	56	242.8	ZD19008025	£157.10	18.40	-	Y181H1840		£48.22			
		20.00-20.90	25	3xD	63	56	147.5	ZD20003025	£112.74	18.50	-		Y181H1850		£48.22	TX2021P9
				5xD	105	56	188.5	ZD20005025	£148.30	18.60	-		Y181H1860		£48.22	
				8xD	168	56	250	ZD20008025	£167.02	18.65	47/64		Y181H1865		£48.22	
21.00-21.90			25	3xD	66	56	150.5	ZD21003025	£112.74	18.70	-	Y181H1870	£48.22		TX2122P9	
				5xD	110	56	193.5	ZD21005025	£148.30	18.80	-	Y181H1880	£48.22			
				8xD	176	56	258	ZD21008025	£167.02	18.90	-	Y181H1890	£48.22			
										19.00	-	Y181H1900	£48.22	TX1920P9		
										19.05	3/4	Y181H1905	£48.22			
										19.10	-	Y181H1910	£48.22			
		19.20								-	Y181H1920	£48.22				
		19.27								-	Y181H1927	£48.22				
		19.30								-	Y181H1930	£48.22				
19.40		-								Y181H1940	£48.22					
19.45		49/64								Y181H1945	£48.22					
19.50		-								Y181H1950	£48.22					
19.60		-								Y181H1960	£48.22					
19.70		-								Y181H1970	£48.22					
19.80		-								Y181H1980	£48.22					
19.84	25/32	Y181H1984	£48.22													
19.90	-	Y181H1990	£48.22													
								20.00	-	Y201H2000	£48.78	TX2021P9				
								20.10	-	Y201H2010	£48.78					
								20.20	-	Y201H2020	£48.78					
								20.24	51/64	Y201H2024	£48.78					
								20.30	-	Y201H2030	£48.78					
								20.40	-	Y201H2040	£48.78					
								20.50	-	Y201H2050	£48.78					
								20.60	-	Y201H2060	£48.78					
								20.64	13/16	Y201H2064	£48.78					
								20.70	-	Y201H2070	£48.78					
								20.80	-	Y201H2080	£48.78					
								20.90	-	Y201H2090	£48.78					
								21.00	-	Y201H2100	£48.78	TX2122P9				
								21.03	53/64	Y201H2103	£48.78					
								21.10	-	Y201H2110	£48.78					
								21.20	-	Y201H2120	£48.78					
								21.30	-	Y201H2130	£48.78					
								21.40	-	Y201H2140	£48.78					
								21.43	27/32	Y201H2143	£48.78					
								21.50	-	Y201H2150	£48.78					
								21.60	-	Y201H2160	£48.78					
								21.70	-	Y201H2170	£48.78					
								21.80	-	Y201H2180	£48.78					
								21.83	55/64	Y201H2183	£48.78					
21.90	-	Y201H2190	£48.78													

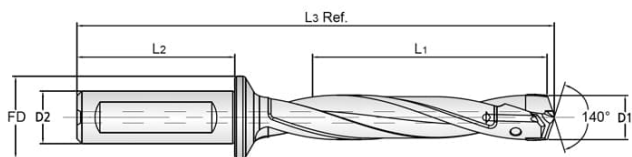
i-ONE DRILL Ø22.00 - 25.90mm

High Performance Exchangeable Insert Drilling Tools



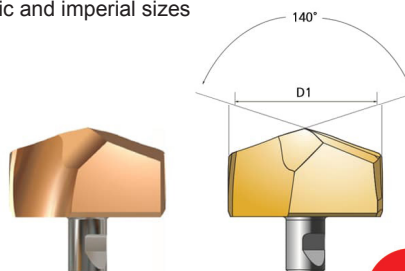
I-ONE DRILL HOLDERS

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I-ONE DRILL INSERTS

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HOLDERS								INSERTS				SPARES				
D1 Ø Range	D2	Drill Depth	L1	L2	L3	ORDER CODE	PRICE	mm	inch	ORDER CODE	PRICE	Screw				
22.00-22.90	25	3xD	69	56	153.4	ZD22003025	£120.12	22.00	-	Y221H2200	£53.61	TX2223P9				
		5xD	115	56	198.4	ZD22005025	£158.02	22.10	-	Y221H2210	£53.61					
		8xD	184	56	265.9	ZD22008025	£189.22	22.20	-	Y221H2220	£53.61					
	23.00-23.90	25	3xD	72	56	157.4	ZD23003025	£120.12	22.23	7/8	Y221H2223		£53.61	TX2324P9		
			5xD	120	56	204.4	ZD23005025	£158.02	22.30	-	Y221H2230		£53.61			
			8xD	192	56	274.9	ZD23008025	£189.22	22.40	-	Y221H2240		£53.61			
		24.00-24.90	32	3xD	75	60	165.8	ZD24003032	£137.25	22.50	-		Y221H2250		£53.61	TX2425P10
				5xD	130	60	211.8	ZD24005032	£167.72	22.60	-		Y221H2260		£53.61	
				8xD	200	60	288.3	ZD24008032	£192.67	22.62	57/64		Y221H2262		£53.61	
25.00-25.90			32	3xD	78	60	170.8	ZD25003032	£137.25	22.70	-	Y221H2270	£53.61		TX2526P10	
				5xD	130	60	211.8	ZD25005032	£167.72	22.80	-	Y221H2280	£53.61			
				8xD	208	60	298.3	ZD25008032	£192.67	22.90	-	Y221H2290	£53.61			
	23.00		-	Y221H2300	£53.61	TX2526P10										
	23.02		29/32	Y221H2302	£53.61											
	23.10		-	Y221H2310	£53.61											
	23.20	-	Y221H2320	£53.61												
	23.30	-	Y221H2330	£53.61												
	23.40	-	Y221H2340	£53.61												
23.42	59/64	Y221H2342	£53.61													
23.50	-	Y221H2350	£53.61													
23.60	-	Y221H2360	£53.61													
23.42	-	Y221H2342	£53.61	TX2425P10												
23.50	-	Y221H2350	£53.61													
23.60	-	Y221H2360	£53.61													
23.70	-	Y221H2370	£53.61													
23.80	-	Y221H2380	£53.61													
23.81	15/16	Y221H2381	£53.61													
23.90	-	Y221H2390	£53.61													
24.00	-	Y241H2400	£63.80		TX2425P10											
24.10	-	Y241H2410	£63.80													
24.20	-	Y241H2420	£63.80													
24.21	61/64	Y241H2421	£63.80													
24.30	-	Y241H2430	£63.80													
24.40	-	Y241H2440	£63.80													
24.50	-	Y241H2450	£63.80													
24.60	-	Y241H2460	£63.80													
24.61	31/32	Y241H2461	£63.80													
24.70	-	Y241H2470	£63.80	TX2526P10												
24.80	-	Y241H2480	£63.80													
24.90	-	Y241H2490	£63.80													
25.00	63/64	Y241H2500	£63.80													
25.20	-	Y241H2520	£63.80													
25.30	-	Y241H2530	£63.80													
25.40	1	Y241H2540	£63.80													
25.50	-	Y241H2550	£63.80													
25.60	-	Y241H2560	£63.80													
25.67	-	Y241H2567	£63.80													
25.70	-	Y241H2570	£63.80	TX2526P10												
25.80	1-1/64	Y241H2580	£63.80													
25.90	-	Y241H2590	£63.80													

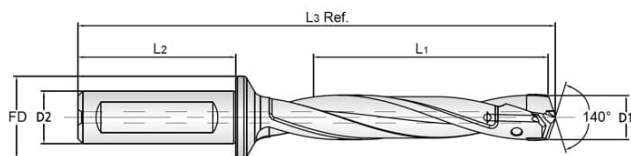
i-ONE DRILL Ø26.00 - 33.73mm

High Performance Exchangeable Insert Drilling Tools



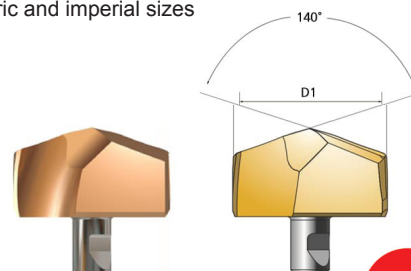
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HOLDERS							
D1 Ø Range	D2	Drill Depth	L1	L2	L3	ORDER CODE	PRICE
26.00-26.99	32	3xD	81	60	172.2	ZD26003032	£137.25
		5xD	135	60	225.2	ZD26005032	£167.72
		8xD	216	60	304	ZD26008032	£192.67
27.00-27.78	32	3xD	84	60	175.2	ZD27003032	£180.22
		5xD	140	60	230.2	ZD27005032	£190.60
		8xD	224	60	312.7	ZD27008032	£225.98
28.00-28.97	32	3xD	87	60	179.2	ZD28003032	£180.22
		5xD	145	60	236.2	ZD28005032	£190.60
		8xD	232	60	321.7	ZD28008032	£225.98
29.00-29.77	32	3xD	90	60	183.2	ZD29003032	£180.22
		5xD	150	60	242.2	ZD29005032	£190.60
		8xD	240	60	330.7	ZD29008032	£225.98
30.00-30.96	32	3xD	93	60	187	ZD30003032	£197.39
		5xD	155	60	248	ZD30005032	£208.57
		8xD	248	60	339.5	ZD30008032	£247.29
31.00-31.75	32	3xD	96	60	191	ZD31003032	£197.39
		5xD	160	60	254	ZD31005032	£208.57
		8xD	256	60	348.5	ZD31008032	£247.29
32.00-32.94	32	3xD	99	60	197.2	ZD32003032	£197.39
		5xD	165	60	262.2	ZD32005032	£208.57
		8xD	264	60	359.7	ZD32008032	£247.29
33.00-33.73	32	3xD	102	60	201.2	ZD33003032	£197.39
		5xD	170	60	268.2	ZD33005032	£208.57
		8xD	272	60	368.7	ZD33008032	£247.29

INSERTS				SPARES
mm	inch	ORDER CODE	PRICE	Screw
26.00	-	Y261H2600	£64.99	TX2627P10
26.19	1-1/32	Y261H2619	£64.99	
26.50	-	Y261H2650	£64.99	
26.59	1-3/64	Y261H2659	£64.99	
26.99	1-1/16	Y261H2699	£64.99	
27.00	-	Y261H2700	£64.99	TX2728P10
27.38	1-5/64	Y261H2738	£64.99	
27.50	-	Y261H2750	£64.99	
27.78	1-3/32	Y261H2778	£64.99	
28.00	-	Y281H2800	£65.80	
28.18	1-7/64	Y281H2818	£65.80	
28.50	-	Y281H2850	£65.80	
28.58	1-1/8	Y281H2858	£65.80	
28.97	1-9/64	Y281H2897	£65.80	
29.00	-	Y281H2900	£65.80	TX2930P10
29.37	1-5/32	Y281H2937	£65.80	
29.50	-	Y281H2950	£65.80	
29.77	1-11/64	Y281H2977	£65.80	
30.00	-	Y301H3000	£67.09	
30.16	1-3/16	Y301H3016	£67.09	
30.50	-	Y301H3050	£67.09	
30.56	1-13/64	Y301H3056	£67.09	
30.96	1-7/32	Y301H3096	£67.09	
31.00	-	Y301H3100	£67.09	TX3132P15
31.35	1-5/64	Y301H3135	£67.09	
31.50	-	Y301H3150	£67.09	
31.75	1-1/4	Y301H3175	£67.09	
32.00	-	Y321H3200	£72.29	
32.15	1-17/64	Y321H3215	£72.29	
32.50	-	Y321H3250	£72.29	
32.54	1-9/32	Y321H3254	£72.29	
32.94	1-19/64	Y321H3294	£72.29	
33.00	-	Y321H3300	£72.29	TX3334P15
33.34	1-5-16	Y321H3334	£72.29	
33.50	-	Y321H3350	£72.29	
33.73	1-21/64	Y321H3373	£72.29	

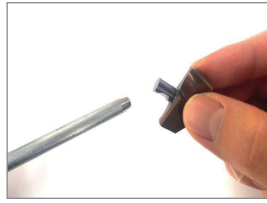
i-ONE DRILL

High Performance Exchangeable Insert Drilling Tools

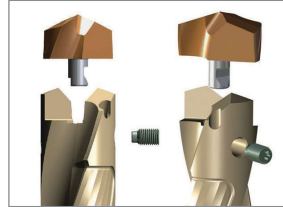
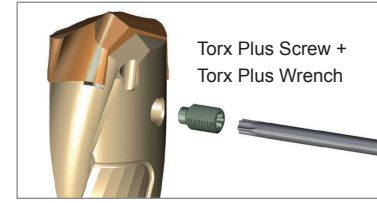
MACHINING ADVICE

Drilling

ASSEMBLY OF i-ONE DRILLS



Make sure to clean the insert and insert seat beforehand.



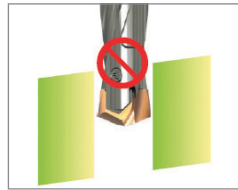
Slide the drill insert into the slot of the holder and press down on the insert to touch the bottom of the slot.

After confirming the insert is pressed down to the bottom of the slot, tighten the screw using anti-seize compound.

TROUBLESHOOTING i-ONE DRILLS

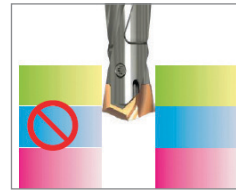


Intersecting cross hole is bigger than the drill insert's margin length.



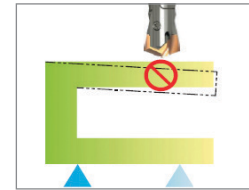
Material with slanting entrance and exit over 7 degrees.

(If drilling 7 degrees or under slanting surface, reduce the feed about 30-50%)



For drilling stacked plates, minimize the space between the plates.

The space between stacked plates can cause insert breakage or poor chip control.



The material needs to be fixtured securely before drilling.

i-ONE DRILL
High Performance Exchangeable Insert Drilling Tools

CUTTING DATA
Drilling

Workpiece	HB	HRc	Cutting Speed Vc (m/min)	Feed (mm/rev)					
				Ø10-11.99	Ø12 ~ 14.9	Ø15 ~ 17.9	Ø18 ~ 21.9	Ø22 ~ 26.9	Ø27 ~ 33.90
Non-Alloy Steel	125	-	100-126	0.14-0.24	0.18-0.31	0.23-0.39	0.30-0.44	0.37-0.57	0.41-0.61
	190	13	84-110	0.12-0.21	0.15-0.26	0.23-0.39	0.30-0.44	0.37-0.57	0.41-0.61
	250	25	63-84	0.11-0.18	0.13-0.22	0.19-0.31	0.24-0.35	0.33-0.51	0.36-0.54
	270	28	58-74	0.09-0.14	0.11-0.18	0.17-0.28	0.23-0.33	0.28-0.42	0.32-0.47
	300	32	58-74	0.09-0.14	0.11-0.18	0.17-0.28	0.23-0.33	0.28-0.42	0.32-0.47
Low Alloy Steel	180	10	74-95	0.11-0.18	0.13-0.22	0.19-0.31	0.24-0.35	0.33-0.51	0.37-0.55
	275	29	63-84	0.11-0.18	0.13-0.22	0.17-0.28	0.24-0.35	0.33-0.51	0.37-0.55
	300	32	58-74	0.09-0.14	0.11-0.18	0.14-0.23	0.23-0.33	0.28-0.42	0.32-0.47
	350	38	47-63	0.07-0.11	0.09-0.13	0.14-0.23	0.23-0.33	0.28-0.42	0.32-0.47
High Alloyed Steel and Tool Steel	200	15	53-68	0.09-0.14	0.11-0.18	0.14-0.23	0.20-0.29	0.22-0.34	0.26-0.39
	325	35	42-58	0.09-0.14	0.11-0.18	0.12-0.20	0.23-0.33	0.22-0.34	0.26-0.39
Grey Cast Iron	180	10	105-131	0.13-0.23	0.17-0.29	0.22-0.41	0.30-0.46	0.40-0.56	0.44-0.61
	260	26	79-100	0.10-0.18	0.12-0.22	0.18-0.32	0.22-0.33	0.28-0.39	0.32-0.44
Nodular Cast Iron	160	3	100-126	0.11-0.20	0.14-0.24	0.19-0.34	0.23-0.35	0.31-0.44	0.35-0.48
	250	25	79-100	0.10-0.18	0.12-0.22	0.15-0.29	0.21-0.32	0.28-0.39	0.32-0.44
Malleable Cast Iron	130	-	105-131	0.11-0.20	0.14-0.24	0.19-0.34	0.23-0.35	0.31-0.44	0.35-0.48
	230	21	79-100	0.10-0.15	0.12-0.20	0.15-0.29	0.21-0.32	0.28-0.39	0.32-0.44