

Twist drills



- GCH001 HSS-R Twist Drills Roll Forged DIN338**
roll-forged, black finish, with normal point angle 118°



- GCH002 HSS-G Twist Drills Fully Ground DIN338**
fully ground, bright finish, with split point



- GCH003 HSS-G Twist Drills with Reduced Shank DIN338**
milled flute, bright finish, with split point



- GCH004 HSS-G Fully Ground Drills TiN-coated DIN338**
fully ground, TiN coating, with split point



- GCH005 HSS-E Cobalt Drills M35 (Cobalt 5%),**
amber finish, split point 135°



- GCH006 HSS-E Cobalt Drills M42 (Cobalt 8%)**
amber finish, split point 135°
split point 135°

Applicatio All ordinary and deep-hole drilling work for steel,
cast iron, non-ferrous metal, plastic materials etc



Special Gold and Black coating
GCH007

Size	Total Length	Flute Length
mm	mm	mm
0.20	19	2.5
0.30	19	3
0.40	20	5
0.50	22	6
0.60	24	7
0.70	28	9
0.80	30	10
0.90	32	11
1.00	34	12
1.10	36	14
1.20	38	16
1.30	38	16
1.40	40	18
1.50	40	18
1.60	43	20
1.70	43	20
1.80	46	22
1.90	46	22
2.00	49	24
2.10	49	24
2.20	53	27
2.25	53	27
2.30	53	27
2.40	57	30
2.50	57	30
2.60	57	30
2.70	61	33
2.75	61	33
2.80	61	33
2.90	61	33
3.00	61	33
3.10	65	36
3.20	65	36
3.30	65	36
3.40	70	39
3.50	70	39
3.60	70	39
3.70	40	39
3.75	70	39
3.80	75	43
3.90	75	43
4.00	75	43
4.10	75	43
4.20	75	43
4.25	75	43

Size	Total Length	Flute Length
mm	mm	mm
4.30	80	47
4.40	80	47
4.50	80	47
4.60	80	47
4.70	80	47
4.75	80	47
4.80	86	52
4.90	86	52
5.00	86	52
5.10	86	52
5.20	86	52
5.25	86	52
5.30	86	52
5.40	93	57
5.50	93	57
5.60	93	57
5.70	93	57
5.75	93	57
5.80	93	57
5.90	93	57
6.00	93	57
6.10	101	63
6.20	101	63
6.25	101	63
6.30	101	63
6.40	101	63
6.50	101	63
6.60	101	63
6.70	101	63
6.75	109	69
6.80	109	69
6.90	109	69
7.00	109	69
7.10	109	69
7.20	109	69
7.25	109	69
7.30	109	69
7.40	109	69
7.50	109	69
7.60	117	75
7.70	117	75
7.75	117	75
7.80	117	75
7.90	117	75
8.00	117	75

Size	Total Length	Flute Length
mm	mm	mm
8.10	117	75
8.20	117	75
8.25	117	75
8.30	117	75
8.40	117	75
8.50	117	75
8.60	125	81
8.70	125	81
8.75	125	81
8.80	125	81
8.90	125	81
9.00	125	81
9.10	125	81
9.20	125	81
9.25	125	81
9.30	125	81
9.40	125	81
9.50	125	81
9.60	125	81
9.70	133	87
9.75	133	87
9.80	133	87
9.90	133	87
10.00	133	87
10.10	133	87
10.20	133	87
10.25	133	87
10.30	133	87
10.40	133	87
10.50	133	87
10.60	142	94
10.70	142	94
10.75	142	94
10.80	142	94
10.90	142	94
11.00	142	94
11.10	142	94
11.20	142	94
11.25	142	94
11.30	142	94
11.40	142	94
11.50	142	94
11.60	142	94
11.70	142	94
11.75	142	94

Size	Total Length	Flute Length
mm	mm	mm
11.80	142	94
11.90	151	101
12.00	151	101
12.10	151	101
12.20	151	101
12.25	151	101
12.30	151	101
12.40	151	101
12.50	151	101
12.60	151	101
12.70	151	101
12.75	151	101
12.80	151	101
12.90	151	101
13.00	151	101
13.50	160	108
14.00	160	108
14.50	169	114
15.00	169	114
15.50	178	120
16.00	178	120
16.50	184	125
17.00	184	125
17.50	191	130
18.00	191	130
18.50	198	135
19.00	198	135
19.50	205	140
20.00	205	140



**GCH011 HSS Slow Spiral Twist Drills DIN 338
Type H, with split point**

Applications: only for Brass cutting



**GCH012 HSS Left Hand Cutting Drills DIN 338,
fully ground, bright finish, with split point**



**GCH013 HSS Turbo drills DIN 338, fully ground,
quick cutting, for Alu cutting**

**Application All ordinary and deep-hole drilling work for steel,
cast iron, non-ferrous metal, plastic materials etc.**

Size	Total Length	Flute Length
mm	mm	mm
1.00	34	12
1.50	40	18
2.00	49	24
2.50	57	30
3.00	61	33
3.50	70	39
4.00	75	43
4.50	80	47
5.00	86	52
5.50	93	57
6.00	93	57
6.50	101	63
7.00	109	69

Size	Total Length	Flute Length
mm	mm	mm
7.50	109	69
8.00	117	75
8.50	117	75
9.00	125	81
9.50	125	81
10.00	133	87
10.50	133	87
11.00	142	94
11.50	142	94
12.00	151	101
12.50	151	101
13.00	151	101



GCH021 HSS-R Twist Drills DIN1897
roll-forged, black finish, with normal point angle 118⁰



GCH022 HSS-G Twist Drills DIN1897
fully ground, bright finish, with split point



GCH023 HSS-E Cobalt Drills M35 (Cobalt 5%) DIN1897
fully ground, amber finish, with split point 135⁰

Applicatio For drilling sheet metal, cast iron, rivet holes etc.

Size	Total Length	Flute Length
mm	mm	mm
1.00	26	6
1.50	32	9
2.00	38	12
2.50	43	14
3.00	46	16
3.50	52	20
4.00	55	22
4.50	58	24
5.00	62	26
5.50	66	28
6.00	66	28
6.50	70	31
7.00	74	34
7.50	74	34
8.00	79	37
8.50	79	37
9.00	84	40
9.50	84	40
9.60	89	43

Size	Total Length	Flute Length
mm	mm	mm
10.00	89	43
10.50	89	43
11.00	95	47
11.50	95	47
12.00	102	51
12.50	102	51
13.00	102	51



GCH031 HSS-E NC Spotting Drills

point angle 90° and 120° , 5% cobalt, bright finish

Applicatio Special drills for accurate and fast spotting on NC-machines, Jig drills etc, suitable for centering and chamfering of tapping holes in one operation.

Size	Total Length	Flute Length
mm	mm	mm
3.00	46	12
4.00	55	12
5.00	62	14
6.00	66	16
8.00	79	21
10.00	89	25
12.00	102	30
14.00	107	34
16.00	115	38



GCH041 HSS-R Twist Drills DIN340

roll-forged, black finish, extra long, with normal point angle 118°



GCH042 HSS-G Twist Drills DIN340,

fully ground, bright finish, extra long, with split point



GCH043 HSS-E Cobalt Drills M35 (Cobalt 5%) DIN340

fully ground, with split point 135°

Applicatio All ordinary and deep-hole drilling work for steel, cast iron, non-ferrous metal, plastic materials etc

Size	Total Length	Flute Length
mm	mm	mm
0.50	32	12
1.00	56	33
1.10	60	37
1.50	70	45
2.00	85	56
2.50	95	62
3.00	100	66
3.50	112	73
4.00	119	78
4.50	126	82
5.00	132	87
5.50	139	91
6.00	139	91
6.50	148	97
7.00	156	102
7.50	156	102
8.00	165	109
8.50	165	109
9.00	175	115
9.50	175	115
10.00	184	121
10.20	184	121
10.50	184	121
11.00	195	128
11.50	195	128
12.00	205	134
12.50	205	134
13.00	205	134



GCH051 HSS Milled Flute Drills DIN1869
 black finish, extreme long, with point angle 118°



GCH052 HSS-G Fully Ground Drills DIN1869
 bright finish, with split point

Applicatio For drilling deep holes on steel, cast iron, non-ferrous metal etc.

SERIE 1

SIZE	Total length	Flute length
mm	mm	mm
2.00	125	85
2.50	140	95
3.00	150	100
3.10	155	105
3.20	155	105
3.30	155	105
3.50	165	115
4.00	175	120
4.20	175	120
4.50	185	125
5.00	195	135
5.50	205	140
6.00	205	140
6.50	215	150
6.80	225	155
7.00	225	155
7.50	225	155
8.00	240	165
8.50	240	165
9.00	250	175
9.50	250	175
10.00	265	185
10.20	265	185
10.50	265	185
11.00	280	195
11.50	280	195
12.00	295	205
12.50	295	205
13.00	295	205

SERIE 2

SIZE	Total length	Flute length
mm	mm	mm
3.00	190	130
3.20	200	135
3.50	210	145
4.00	220	150
4.20	220	150
4.50	235	160
5.00	245	170
5.50	260	180
6.00	260	180
6.50	275	190
6.80	290	200
7.00	290	200
7.50	290	200
8.00	305	210
8.50	305	210
9.00	320	220
9.50	320	220
10.00	340	235
10.20	340	235
10.50	340	235
11.00	365	250
11.50	365	250
12.00	375	260
12.50	375	260
13.00	375	260

SERIE 3

SIZE	Total length	Flute length
mm	mm	mm
3.00	240	160
3.20	250	170
3.50	265	180
4.00	280	190
4.20	280	190
4.50	295	200
5.00	315	210
5.50	330	225
6.00	330	225
6.50	350	235
6.80	370	250
7.00	370	250
7.50	370	250

SIZE	Total length	Flute length
mm	mm	mm
8.00	390	265
8.50	390	265
9.00	410	280
9.50	410	280
10.00	430	295
10.20	430	295
10.50	430	295
11.00	455	310
11.50	455	310
12.00	480	330
12.50	480	330
13.00	480	330



GCH053 HSS-G Twist Drills for Hollow Section Profiles
 bright finish, with split point

Applicatio Ideal used for drilling on hollow section profiles

Size	Total Length	Flute Length
mm	mm	mm
4.90	100	30
4.90	150	30
5.00	70	30
5.00	100	30
5.00	150	30
5.00	210	30
5.10	100	30
5.10	150	30
5.10	210	30
5.30	100	30
5.30	150	30
5.30	210	30
5.50	100	30

Size	Total Length	Flute Length
mm	mm	mm
5.50	150	30
5.50	210	30
5.70	70	30
5.70	100	30
5.70	150	30
5.70	210	30
5.80	100	30
5.80	150	30
5.80	210	30



GCH054 Solid Carbide Drills DIN338

made of K10 or K20, hardness up to HRC 90 degree,
fully ground

Application Ideal used for drilling very hard materials, stainless steel,
tempered steel, alloyed steel etc.

Size	Total Length	Flute Length
mm	mm	mm
1.00	34	12
1.50	40	18
2.00	49	24
2.50	57	30
3.00	61	33
3.50	70	39
4.00	75	43
4.50	80	47
5.00	86	52
5.50	93	57
6.00	93	57
6.50	101	63
7.00	109	69
7.50	109	69
8.00	117	75
8.50	117	75
9.00	125	81
9.50	125	81
10.00	133	87
10.50	133	87
11.00	142	94
11.50	142	94
12.00	151	101
12.50	151	101
13.00	151	101



GCH061 HSS Morse Taper Shank Drills DIN345
roll-forged, black finish, with normal point angle



GCH062 HSS Morse Taper Shank Drills DIN345,
milled flute, black and bright finish, with normal point angle or web point



GCH063 HSS Morse Taper Shank Drills DIN345
fully ground, bright finish, with normal point angle or web point

Applicatio High heat resistant and ideal used for drilling steel,
cast iron and heat-treated steel etc

Size	Total Length	Flute Length
mm	mm	mm
5.00	133	52
5.50	138	57
6.00	138	57
6.50	144	63
7.00	150	69
7.50	150	69
8.00	156	75
8.50	156	75
9.00	162	81
9.50	162	81
10.00	168	87
10.20	168	87
10.25	168	87
10.50	168	87
10.75	175	94
11.00	175	94
11.25	175	94
11.50	175	94
11.75	175	94

Size	Total Length	Flute Length
mm	mm	mm
12.00	182	101
12.25	182	101
12.50	182	101
12.75	182	101
13.00	182	101
13.25	189	108
13.50	189	108
13.75	189	108
14.00	189	108
14.25	212	114
14.50	212	114
14.75	212	114
15.00	212	114
15.25	218	120
15.50	218	120
15.75	218	120
16.00	218	120
16.25	223	125
16.50	223	125

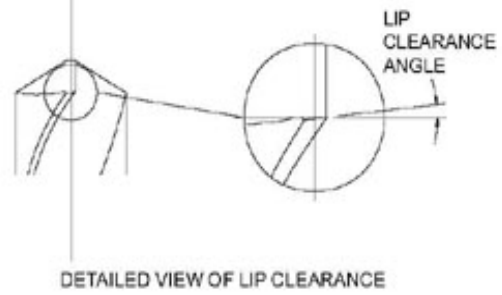
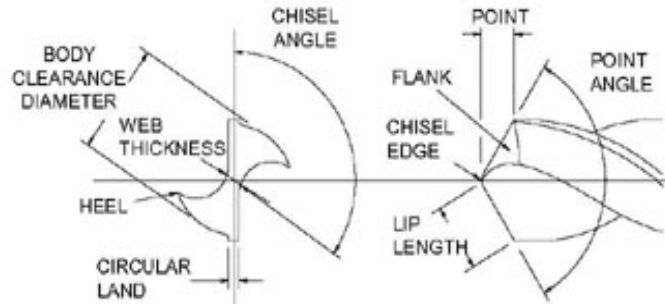
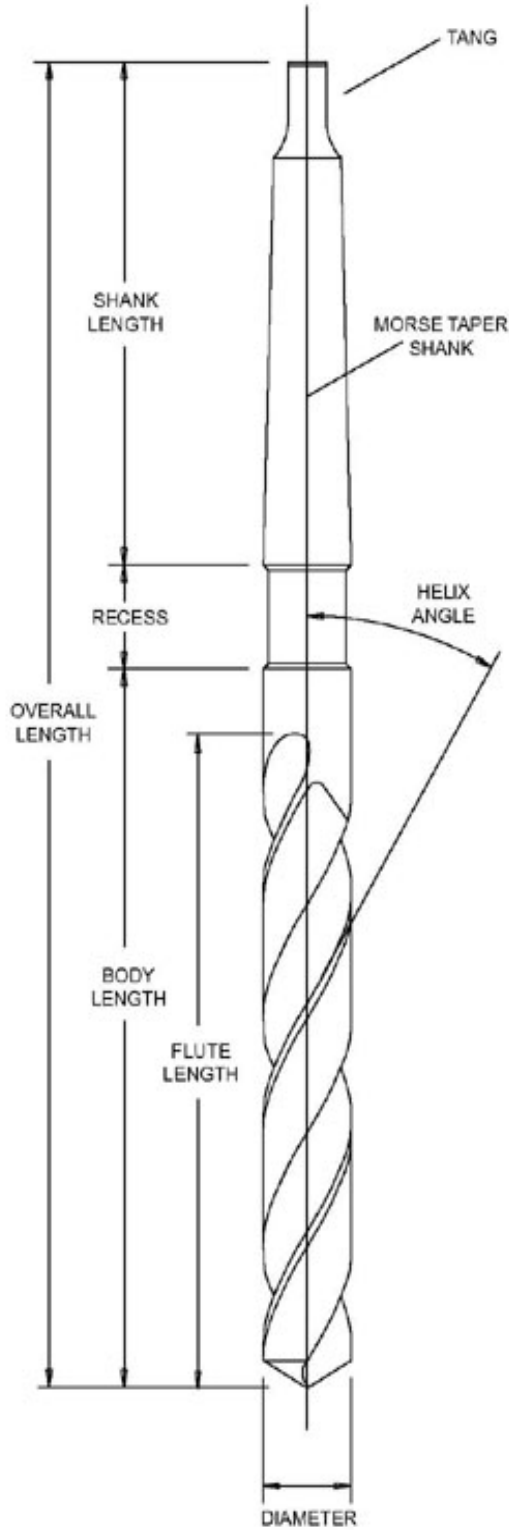
Size	Total Length	Flute Length
mm	mm	mm
16.25	223	125
16.50	223	125
16.75	223	125
17.00	223	125
17.25	228	130
17.50	228	130
17.75	228	130
18.00	228	130
18.25	233	135
18.50	233	135
18.75	233	135
19.00	233	135
19.25	238	140
19.50	238	140
19.75	238	140
20.00	238	140
20.25	243	145
20.50	243	145
20.75	243	145
21.00	243	145
21.25	248	150
21.50	248	150
21.75	248	150
22.00	248	150
22.25	248	150
22.50	253	155
22.75	253	155
23.00	253	155
23.25	276	155
23.50	276	155
23.75	281	160
24.00	281	160
24.25	281	160
24.50	281	160
24.75	281	160
25.00	281	160
25.25	281	160
25.50	286	165
25.75	286	165
26.00	286	165
26.25	286	165
26.50	286	165
26.75	291	170
27.00	291	170
27.25	291	170

Size	Total Length	Flute Length
mm	mm	mm
27.50	291	170
27.75	291	170
28.00	291	170
28.25	296	175
28.50	296	175
28.75	296	175
29.00	296	175
29.25	296	175
29.50	296	175
29.75	296	175
30.00	296	175
30.25	301	180
30.50	301	180
30.75	301	180
31.00	301	180
31.25	301	180
31.50	301	180
31.75	306	185
32.00	334	185
32.50	334	185
33.00	334	185
33.50	334	185
34.00	339	190
34.50	339	190
35.00	339	190
35.50	339	190
36.00	344	195
36.50	344	195
37.00	344	195
37.50	344	195
38.00	349	200
38.50	349	200
39.00	349	200
39.50	349	200
40.00	349	200
40.50	354	205
41.00	354	205
41.50	354	205
42.00	354	205
42.50	354	205
43.00	359	210
43.50	359	210
44.00	359	210
44.50	359	210
45.00	359	210

Size	Total Length	Flute Length
mm	mm	mm
45.50	364	215
46.00	364	215
46.50	364	215
47.00	364	215
47.50	364	215
48.00	369	220
48.50	369	220
49.00	369	220
49.50	369	220
50.00	369	220
50.50	374	225
51.00	412	225
51.50	412	225
52.00	412	225
52.50	412	225
53.00	412	225
53.50	417	230
54.00	417	230
54.50	417	230
55.00	417	230
55.50	417	230
56.00	417	230
56.50	422	235
57.00	422	235
57.50	422	235
58.00	422	235
58.50	422	235
59.00	422	235
59.50	422	235
60.00	422	235
61.00	427	240
62.00	427	240
63.00	427	240
64.00	432	245
65.00	432	245
66.00	432	245
67.00	432	245
68.00	437	250
69.00	437	250
70.00	437	250
71.00	437	250
72.00	442	255
73.00	442	255
74.00	442	255

Size	Total Length	Flute Length
mm	mm	mm
75.00	442	255
80.00	514	260
85.00	519	265
90.00	524	270
95.00	529	275
100.00	534	280

DRILL TERMINOLOGY

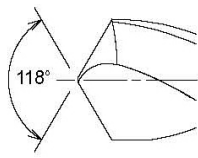


TYPES OF SPIRAL (OR HELIX) ANGLES

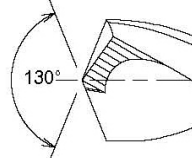
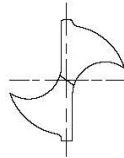


DRILL TERMINOLOGY

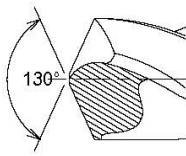
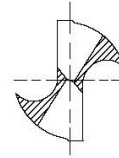
DRILL POINT STYLES



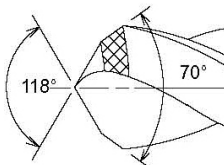
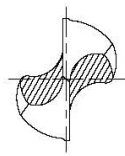
Standard Point



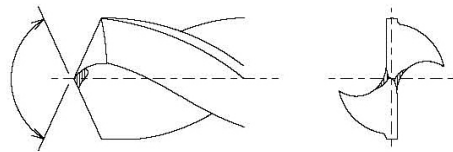
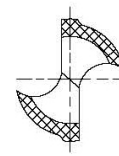
Split Point
Din 1412 Form C



"UX Point"
DIN TYPE B

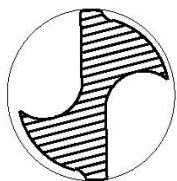


Cast Iron Point
"DX Point"
DIN 1412 TYPE D

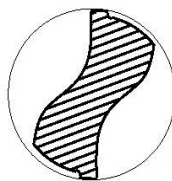


DIN 1412 TYPE A

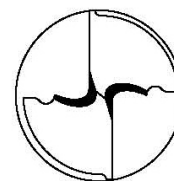
FLUTE FORMS



1 Conventional Web



1 Parabolic Flute Form
1 Thicker Web



1 Chipbreaker

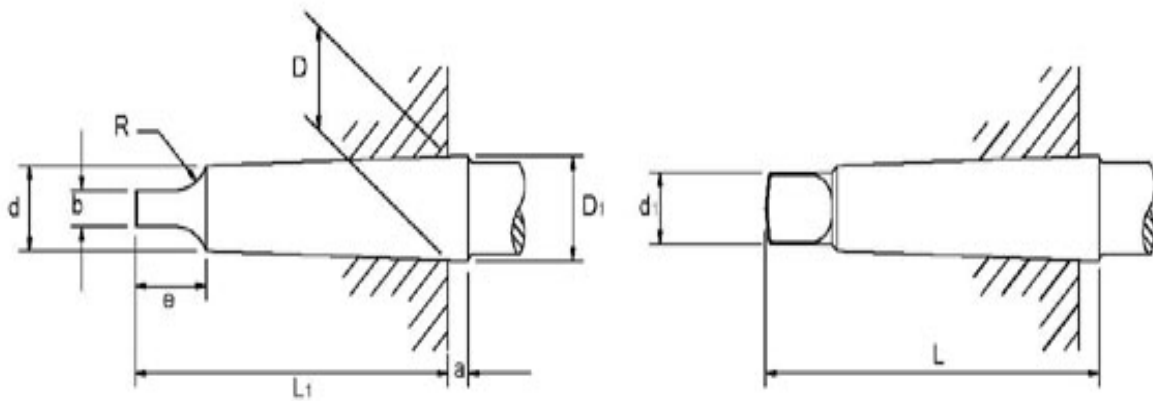
Benefits of the Parabolic Flute Form

Heavy web construction increases rigidity under torsional load thus eliminating chatter at the cutting edges which cause edge break down and early failure. The Parabolic drill web is 50-90% thicker than the standard drill, depending on drill diameter.

Wider flute form, together with quicker spiral, promotes better chip removal while allowing easier coolant flow to the drill point.

DRILL TERMINOLOGY

STANDARD MORSE TAPER SHANK To I.S.O. 296 DIN228 BS1660



No. of Taper	Fitting line Diameter D	Diameter d	Overall Length Max L	D ₁	a	Max L ₁	Max e	H13 b	Max d ₁	Taper / mm on Dia	Max R
1	12.065	9.0	65.5	12.2	3.5	62.0	13.5	5.2	8.7	0.04998	5.0
2	17.780	14.0	80.0	18.0	5.0	75.0	16.0	6.3	13.5	0.04995	6.0
3	23.825	19.0	99.0	24.1	5.0	94.0	20.0	7.9	18.5	0.05020	7.0
4	31.267	25.0	124.0	31.6	6.5	117.5	24.0	11.9	24.5	0.05194	8.0
5	44.399	36.0	156.0	44.7	6.5	149.5	29.0	15.9	35.7	0.05263	10.0
6	63.348	52.0	218.0	63.8	8.0	210.0	40.0	19.0	51.0	0.05214	13.0



GCH071 HSS-G Double Ended Drills
bright Finish, fully ground, with split point

Applicatio Specially use for drilling thin materials like sheet metal,
car body etc

Size	Total Length	Flute Length
mm	mm	mm
2.50	43	10
2.80	46	12
3.00	46	12
3.10	46	12
3.20	49	12
3.25	49	12
3.30	49	12
3.40	52	14
3.50	52	14
4.00	55	14
4.10	55	14
4.20	55	14
4.30	55	14
4.50	58	17
4.80	58	17
4.90	62	17
5.00	62	17
5.10	62	17
5.20	62	17
5.50	66	20
6.00	66	20
6.50	70	20
8.00	81	20



GCH072 HSS-G Center Drills DIN333A
fully ground, silver finish

Applicatio**n** Standard center drills for making center holes
according to DIN 332

Size	Total Length	Flute Length
mm	mm	mm
1.00	31.50	3.15
1.25	31.50	3.15
1.60	35.50	4.00
2.00	40.00	5.00
2.50	45.00	6.30

Size	Total Length	Flute Length
mm	mm	mm
3.15	50.00	8.00
4.00	56.00	10.00
5.00	63.00	12.50
6.30	71.00	16.00

GCH073 HSS-G Center Drills DIN333B
fully ground, silver finish

Applicatio**n** drills for making center holes

Size	Total Length	Flute Length
mm	mm	mm
1.00	35.50	4.00
1.60	45.00	6.30
2.00	50.00	8.00
2.50	55.00	10.00
3.15	60.00	11.20

Size	Total Length	Flute Length
mm	mm	mm
4.00	67.00	14.00
5.00	75.00	18.00
6.30	80.00	20.00
8.00	90.00	25.00

GCH074 HSS-G Center Drills DIN333R
fully ground, silver finish

Applicatio**n** Standard center drills for making center holes

Size	Total Length	Flute Length
mm	mm	mm
1.00	31.50	3.15
1.60	35.50	4.00
2.00	40.00	5.00
2.50	45.00	6.00

Size	Total Length	Flute Length
mm	mm	mm
3.15	50.00	8.00
4.00	56.00	10.00
5.00	63.00	12.50
6.30	71.00	16.00



GCH075 HSS-Co Spot-weld Drills
 material M35(5% cobalt), bright finish, fully ground

Applications: for removing spot weld spots on car body

Size	Total Length
mm	mm
6.00	66
7.00	74
8.00	79
10.00	89



GCH076 HSS-Co Spotle and Vario Drills
 material M35, bright finish, fully ground

Applications: for removing spot weld spots on car body

Size	Total Length
mm	mm
8.00	40
8.00	44