

### Twist drills DIN 338 type N HSS Co 5 ground, with split point

Special drills consisting of cobalt alloyed heavy duty high-speed steel with higher heat-resistance. Ideally suitable for drilling of materials that are difficult to drill and for highest loading. Applications: for steel and alloyed cast steel over 900 N/mm<sup>2</sup> strength, grey cast, malleable cast, high-alloyed chromium steel such as stainless and acid resistant steel

Point cut: helical point                      Helix angle: 20-30°                      Packing unit:  
 from Ø 3.0mm                      Ø tolerance: h8                      Ø 1.0mm up to 10.2mm in plastic box of 10  
 with split point                      Surface: golden brown                      Ø 10.5mm up to 16.0mm in plastic box of 5  
 DIN 1412 C                      Right hand cutting

Point angle: 130°



Ø mm	Total length mm	Flute length mm	Part no.
1.0	34	12	R215010
1.1	36	14	R215011
1.2	38	16	R215012
1.3	38	16	R215013
1.4	40	18	R215014
1.5	40	18	R215015
1.6	43	20	R215016
1.7	43	20	R215017
1.8	46	22	R215018
1.9	46	22	R215019
2.0	49	24	R215020
2.1	49	24	R215021
2.2	53	27	R215022
2.3	53	27	R215023
2.4	57	30	R215024
2.5	57	30	R215025
2.6	57	30	R215026
2.7	61	33	R215027
2.8	61	33	R215028
2.9	61	33	R215029
3.0	61	33	R215030
3.1	65	33	R215031
3.2	65	36	R215032
3.3	65	36	R215033
3.4	70	39	R215034
3.5	70	39	R215035
3.6	70	39	R215036
3.7	70	39	R215037
3.8	75	43	R215038
3.9	75	43	R215039
4.0	75	43	R215040
4.1	75	43	R215041
4.2	75	43	R215042
4.3	80	47	R215043
4.4	80	47	R215044
4.5	80	47	R215045
4.6	80	47	R215046
4.7	80	47	R215047
4.8	86	52	R215048
4.9	86	52	R215049
5.0	86	52	R215050
5.1	86	52	R215051
5.2	86	52	R215052
5.3	86	52	R215053
5.4	93	57	R215054
5.5	93	57	R215055
5.6	93	57	R215056
5.7	93	57	R215057
5.8	93	57	R215058
5.9	93	57	R215059
6.0	93	57	R215060
6.1	101	63	R215061

Ø mm	Total length mm	Flute length mm	Part no.
6.2	101	63	R215062
6.3	101	63	R215063
6.4	101	63	R215064
6.5	101	63	R215065
6.6	101	63	R215066
6.7	101	63	R215067
6.8	109	69	R215068
6.9	109	69	R215069
7.0	109	69	R215070
7.1	109	69	R215071
7.2	109	69	R215072
7.3	109	69	R215073
7.4	109	69	R215074
7.5	109	69	R215075
7.6	117	75	R215076
7.7	117	75	R215077
7.8	117	75	R215078
7.9	117	75	R215079
8.0	117	75	R215080
8.1	117	75	R215081
8.2	117	75	R215082
8.3	117	75	R215083
8.4	117	75	R215084
8.5	117	75	R215085
8.6	125	81	R215086
8.7	125	81	R215087
8.8	125	81	R215088
8.9	125	81	R215089
9.0	125	81	R215090
9.1	125	81	R215091
9.2	125	81	R215092
9.3	125	81	R215093
9.4	125	81	R215094
9.5	125	81	R215095
9.6	133	87	R215096
9.7	133	87	R215097
9.8	133	87	R215098
9.9	133	87	R215099
10.0	133	87	R215100
10.2	133	87	R215102
10.5	133	87	R215105
11.0	142	94	R215110
11.5	142	94	R215115
12.0	151	101	R215120
12.5	151	101	R215125
13.0	151	101	R215130
13.5	160	108	R215135
14.0	160	108	R215140
14.5	169	114	R215145
15.0	169	114	R215150
15.5	178	120	R215155
16.0	178	120	R215160

### Twist drills DIN 338 type N HSS ground, with split point

Highly efficient standard drill suitable for all usual drilling work in all normal materials. High rotational precision.

Applications: for steel and cast-steel alloyed and unalloyed up to 900 N/mm<sup>2</sup> strength, grey cast, malleable cast iron, die-cast metal, iron sinter, nickel-silver, graphite cast iron, short-chipping aluminium alloys, bronze and brass.

Point cut:	helical point	Helix angle:	20-30°	Packing unit:	
	from Ø 3.0mm	Ø tolerance:	h8		Ø 0.30mm up to 10.40mm in plastic box of 10
	with split point	Surface:	bright		Ø 10.5mm up to 16.0mm in plastic box of 5
	DIN 1412 C	Right hand cutting			
Point angle:	118°				



Ø mm	Total length mm	Flute length mm	Part no.
0.30	19	3	R214003
0.40	20	5	R214004
0.50	22	6	R214005
0.60	24	7	R214006
0.70	28	9	R214007
0.80	30	10	R214008
0.90	32	11	R214009
1.00	34	12	R214010
1.10	36	14	R214011
1.20	38	16	R214012
1.25	38	16	R2140125
1.30	38	16	R214013
1.40	40	18	R214014
1.50	40	18	R214015
1.60	43	20	R214016
1.70	43	20	R214017
1.75	43	20	R2140175
1.80	46	22	R214018
1.90	46	22	R214019
2.00	49	24	R214020
2.10	49	24	R214021
2.20	53	27	R214022
2.25	53	27	R2140225
2.30	53	27	R214023
2.40	57	30	R214024
2.50	57	30	R214025
2.60	57	30	R214026
2.70	61	33	R214027
2.75	61	33	R2140275
2.80	61	33	R214028
2.90	61	33	R214029
3.00	61	33	R214030
3.10	65	36	R214031
3.20	65	36	R214032
3.25	65	36	R2140325
3.30	65	36	R214033
3.40	70	39	R214034
3.50	70	39	R214035
3.60	70	39	R214036
3.70	70	39	R214037
3.75	70	39	R2140375
3.80	75	43	R214038
3.90	75	43	R214039
4.00	75	43	R214040
4.10	75	43	R214041
4.20	75	43	R214042
4.25	75	43	R2140425
4.30	80	47	R214043
4.40	80	47	R214044
4.50	80	47	R214045
4.60	80	47	R214046
4.70	80	47	R214047

Ø mm	Total length mm	Flute length mm	Part no.
4.75	80	47	R2140475
4.80	86	52	R214048
4.90	86	52	R214049
5.00	86	52	R214050
5.10	86	52	R214051
5.20	86	52	R214052
5.25	86	52	R2140525
5.30	86	52	R214053
5.40	93	57	R214054
5.50	93	57	R214055
5.60	93	57	R214056
5.70	93	57	R214057
5.75	93	57	R2140575
5.80	93	57	R214058
5.90	93	57	R214059
6.00	93	57	R214060
6.10	101	63	R214061
6.20	101	63	R214062
6.25	101	63	R2140625
6.30	101	63	R214063
6.40	101	63	R214064
6.50	101	63	R214065
6.60	101	63	R214066
6.70	101	63	R214067
6.75	101	63	R2140675
6.80	109	69	R214068
6.90	109	69	R214069
7.00	109	69	R214070
7.10	109	69	R214071
7.20	109	69	R214072
7.25	109	69	R2140725
7.30	109	69	R214073
7.40	109	69	R214074
7.50	109	69	R214075
7.60	117	75	R214076
7.70	117	75	R214077
7.75	117	75	R2140775
7.80	117	75	R214078
7.90	117	75	R214079
8.00	117	75	R214080
8.10	117	75	R214081
8.20	117	75	R214082
8.25	117	75	R2140825
8.30	117	75	R214083
8.40	117	75	R214084
8.50	117	75	R214085
8.60	125	81	R214086
8.70	125	81	R214087
8.75	125	81	R2140875
8.80	125	81	R214088
8.90	125	81	R214089
9.00	125	81	R214090

### Twist drills DIN 338 type N HSS ground, with split point

Highly efficient standard drill suitable for all usual drilling work in all normal materials. High rotational precision.

Applications: for steel and cast-steel alloyed and unalloyed up to 900 N/mm<sup>2</sup> strength, grey cast, malleable cast iron, die-cast metal, iron sinter, nickel-silver, graphite cast iron, short-chipping aluminium alloys, bronze and brass.

Point cut:	helical point	Helix angle:	20-30°	Packing unit:	
	from Ø 3.0mm	Ø tolerance:	h8		Ø 0.30mm up to 10.40mm in plastic box of 10
	with split point	Surface:	bright		Ø 10.5mm up to 16.0mm in plastic box of 5
	DIN 1412 C	Right hand cutting			
Point angle:	118°				



Ø mm	Total length mm	Flute length mm	Part no.
9.10	125	81	R214091
9.20	125	81	R214092
9.25	125	81	R2140925
9.30	125	81	R214093
9.40	125	81	R214094
9.50	125	81	R214095
9.60	133	87	R214096
9.70	133	87	R214097
9.75	133	87	R2140975
9.80	133	87	R214098
9.90	133	87	R214099
10.00	133	87	R214100
10.10	133	87	R214101
10.20	133	87	R214102
10.30	133	87	R214103
10.40	133	94	R214104
10.50	133	94	R214105
10.60	142	94	R214106
10.70	142	94	R214107
10.80	142	94	R214108
10.90	142	94	R214109
11.00	142	94	R214110
11.10	142	94	R214111
11.20	142	94	R214112

Ø mm	Total length mm	Flute length mm	Part no.
11.30	142	94	R214113
11.40	142	94	R214114
11.50	142	94	R214115
11.60	142	94	R214116
11.70	142	94	R214117
11.80	142	94	R214118
11.90	151	101	R214119
12.00	151	101	R214120
12.10	151	101	R214121
12.20	151	101	R214122
12.30	151	101	R214123
12.40	151	101	R214124
12.50	151	101	R214125
12.60	151	101	R214126
12.70	151	101	R214127
12.80	151	101	R214128
12.90	151	101	R214129
13.00	151	101	R214130
13.50	160	108	R214131
14.00	160	108	R214132
14.50	169	114	R214133
15.00	169	114	R214134
15.50	178	120	R214135
16.00	178	120	R214136

### Jobber length type N HSS ground, with split point in fractional sizes

Point cut:	helical point		
	from Ø 1/8 inch	Highly efficient standard drill suitable for	Applications: for steel and cast-steel alloyed
	with split point DIN 1412 C	all usual drilling work in all normal	and unalloyed up to 800 N/mm <sup>2</sup> strength,
Point angle:	118°	materials. High rotational precision.	grey cast, malleable cast iron, die-cast metal,
Helix angle:	20-30°		iron sinter, nickel-silver, graphite cast iron,
Ø tolerance:	h8		short-chipping aluminium alloys, bronze and
Surface:	bright		brass.
Right hand cutting			



Ø in inch	Total length mm	Flute length mm	Part no.
3/32	2 1/4	1 1/4	R214803
7/64	2 5/8	1 1/2	R214804
1/8	2 3/4	1 5/8	R214805
9/64	3 1/8	2	R214807
11/64	3 1/4	2 1/8	R214808
3/16	3 1/2	2 5/16	R214809

Ø mm	Total length mm	Flute length mm	Part no.
15/64	3 7/8	2 5/8	R214812
1/4	4	2 3/4	R214813
5/16	4 1/2	3 3/16	R214817
11/32	4 3/4	3 7/16	R214819
3/8	5	3 5/8	R214821
13/32	5 1/4	3 7/8	R214823

### Twist drills DIN 338 type N HSS rolled

Highly efficient standard drill suitable for all usual drilling work in all normal materials. High security against fracture.

Applications: for steel and cast-steel alloyed and unalloyed up to 900 N/mm<sup>2</sup> strength, grey cast, malleable cast iron, die-cast metal, iron sinter, nickel-silver, graphite cast iron, short-chipping aluminium alloys, bronze and brass.

Point cut: helical point

Packing unit: Ø 0.30mm up to 10.40mm in plastic box of 10

Point angle: 118°

Ø 10.5mm up to 16.0mm in plastic box of 5

Helix angle: 20-30°

Ø 16.5mm up to 16.0mm in plastic box of 1

Ø tolerance: h8

Surface: black, vacuum, metalized



Right hand cutting

Ø mm	Total length mm	Flute length mm	Part no.
0.30	19	3	R201003
0.40	20	5	R201004
0.50	22	6	R201005
0.60	24	7	R201006
0.70	28	9	R201007
0.80	30	10	R201008
0.90	32	11	R201009
1.00	34	12	R201010
1.10	36	14	R201011
1.20	38	16	R201012
1.25	38	16	R2010125
1.30	38	16	R201013
1.40	40	18	R201014
1.50	40	18	R201015
1.60	43	20	R201016
1.70	43	20	R201017
1.75	43	20	R2010175
1.80	46	22	R201018
1.90	46	22	R201019
2.00	49	24	R201020
2.10	49	24	R201021
2.20	53	27	R201022
2.25	53	27	R2010225
2.30	53	27	R201023
2.40	57	30	R201024
2.50	57	30	R201025
2.60	57	30	R201026
2.70	61	33	R201027
2.75	61	33	R2010275
2.80	61	33	R201028
2.90	61	33	R201029
3.00	61	33	R201030
3.10	65	36	R201031
3.20	65	36	R201032
3.25	65	36	R2010325
3.30	65	36	R201033
3.40	70	39	R201034
3.50	70	39	R201035
3.60	70	39	R201036
3.70	70	39	R201037
3.75	70	39	R2010375
3.80	75	43	R201038
3.90	75	43	R201039
4.00	75	43	R201040
4.10	75	43	R201041
4.20	75	43	R201042
4.25	75	43	R2010425
4.30	80	47	R201043
4.40	80	47	R201044
4.50	80	47	R201045
4.60	80	47	R201046
4.70	80	47	R201047

Ø mm	Total length mm	Flute length mm	Part no.
4.75	80	47	R2010475
4.80	86	52	R201048
4.90	86	52	R201049
5.00	86	52	R201050
5.10	86	52	R201051
5.20	86	52	R201052
5.25	86	52	R2010525
5.30	86	52	R201053
5.40	93	57	R201054
5.50	93	57	R201055
5.60	93	57	R201056
5.70	93	57	R201057
5.75	93	57	R2010575
5.80	93	57	R201058
5.90	93	57	R201059
6.00	93	57	R201060
6.10	101	63	R201061
6.20	101	63	R201062
6.25	101	63	R2010625
6.30	101	63	R201063
6.40	101	63	R201064
6.50	101	63	R201065
6.60	101	63	R201066
6.70	101	63	R201067
6.75	101	63	R2010675
6.80	109	69	R201068
6.90	109	69	R201069
7.00	109	69	R201070
7.10	109	69	R201071
7.20	109	69	R201072
7.25	109	69	R2010725
7.30	109	69	R201073
7.40	109	69	R201074
7.50	109	69	R201075
7.60	117	75	R201076
7.70	117	75	R201077
7.75	117	75	R2010775
7.80	117	75	R201078
7.90	117	75	R201079
8.00	117	75	R201080
8.10	117	75	R201081
8.20	117	75	R201082
8.25	117	75	R2010825
8.30	117	75	R201083
8.40	117	75	R201084
8.50	117	75	R201085
8.60	125	81	R201086
8.70	125	81	R201087
8.75	125	81	R2010875
8.80	125	81	R201088
8.90	125	81	R201089
9.00	125	81	R201090

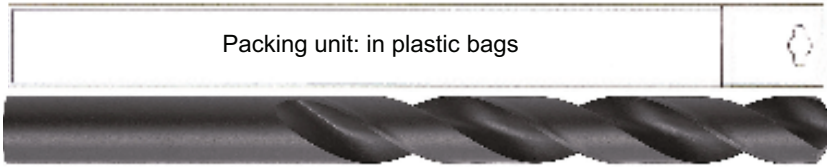


### Twist drills DIN 338 type N HSS rolled

Highly efficient standard drill suitable for all usual drilling work in all normal materials. High security against fracture.

Applications: for steel and cast-steel alloyed and unalloyed up to 900 N/mm<sup>2</sup> strength, grey cast, malleable cast iron, die-cast metal, iron sinter, nickel-silver, graphite cast iron, short-chipping aluminium alloys, bronze and brass.

Point cut: helical point  
 Point angle: 118°  
 Helix angle: 20-30°  
 Ø tolerance: h8  
 Surface: black, vacuum metalized



Right hand cutting

Ø mm	Total length mm	Flute length mm	Cont. pcs	Part no.
1.0	34	12	3	R206010
1.5	40	18	3	R206015
2.0	49	24	3	R206020
2.5	57	30	2	R206025
2.9	61	33	2	R206029
3.0	61	33	2	R206030
3.2	65	36	2	R206032
3.3	65	36	2	R206033
3.5	70	39	2	R206035
3.7	70	39	2	R206037
4.0	75	43	2	R206040
4.2	75	43	2	R206042
4.5	80	47	2	R206045
4.8	86	52	2	R206048
5.0	86	52	2	R206050
5.5	93	57	2	R206055
6.0	93	57	2	R206060
6.5	101	63	1	R206065
6.8	109	69	1	R206068
7.0	109	69	1	R206070

Ø mm	Total length mm	Flute length mm	Cont. pcs	Part no.
7.5	109	69	1	R206075
8.0	117	75	1	R206080
8.5	117	75	1	R206085
9.0	125	81	1	R206090
9.5	125	81	1	R206095
10.0	133	87	1	R206100
10.2	133	87	1	R206102
10.5	133	87	1	R206105
11.0	142	94	1	R206110
11.5	142	94	1	R206115
12.0	151	101	1	R206120
12.5	151	101	1	R206125
13.0	151	101	1	R206130
13.5	160	108	1	R206135
14.0	160	108	1	R206140
14.5	169	114	1	R206145
15.0	169	114	1	R206150
15.5	178	120	1	R206155
16.0	178	120	1	R206160

### Twist drills DIN 338 type N HSS rolled with reduced shank

Highly efficient standard drill suitable for all usual drilling work in all normal materials. High security against fracture. Ideally suitable for drilling largish drilling diameters on all commonly used drilling machines with a clamping chuck up to 13mm.

Applications: for steel and cast-steel alloyed and unalloyed up to 900 N/mm<sup>2</sup> strength, grey cast, malleable cast iron, die-cast metal, iron sinter, nickel-silver, graphite cast iron, short-chipping aluminium alloys, bronze and brass.

Point cut: helical point  
 Point angle: 118°  
 Helix angle: 20-30°  
 Ø tolerance: h8  
 Surface: black, vacuum metalized

Packing Unit: in plastic bags  
 Further sizes available on request



Right hand cutting

Ø mm	Total length mm	Shank Ø mm	Shank length mm	Cont. pcs	Part no.
10.5	133	10	30	1	R200105
11.0	142	10	30	1	R200110
11.5	142	10	30	1	R200115
12.0	151	10	30	1	R200120
12.5	151	10	30	1	R200125
13.0	151	10	30	1	R200130
13.5	160	10	30	1	R200135
14.0	160	10	30	1	R200140
14.5	169	10	30	1	R200145
15.0	169	10	30	1	R200150
15.5	178	10	30	1	R200155
16.0	178	10	30	1	R200160

Ø mm	Total length mm	Shank Ø mm	Shank length mm	Cont. pcs	Part no.
16.5	184	13	35	1	R200165
17.0	184	13	35	1	R200170
17.5	191	13	35	1	R200175
18.0	191	13	35	1	R200180
18.5	198	13	35	1	R200185
19.0	198	13	35	1	R200190
19.5	205	13	35	1	R200195
20.0	205	13	35	1	R200200
22.0	205	13	35	1	R200220
24.0	205	13	35	1	R200240
25.0	205	13	35	1	R200250

### Twist drills DIN 1897 type N HSS rolled - short

Short and stable standard drill, ideally suitable for assembly work in thin-walled materials such as sheet steels, flat steels and profile steels. High security against fracture. For use in all hand held drilling machines.

Applications: for steel and cast-steel alloyed and unalloyed up to approx. 900 N/mm<sup>2</sup> strength, grey cast, malleable cast iron, die-cast metal, iron sinter, nickel-silver, graphite cast iron, short chipping aluminium alloys, bronze and brass.

Point cut: helical point

Packing unit:

Point angle: 118°

Ø 0.20mm up to 10.0mm in plastic box of 10

Helix angle: 20-30°

Ø tolerance: h8

Surface: black, vacuum metalized

Right hand cutting



Ø mm	Total length mm	Flute length mm	Part no.
2.0	38	12	R202020
2.1	38	12	R202021
2.2	40	13	R202022
2.3	40	13	R202023
2.4	43	14	R202024
2.5	43	14	R202025
2.6	43	14	R202026
2.7	46	16	R202027
2.8	46	16	R202028
2.9	46	16	R202029
3.0	46	16	R202030
3.1	49	18	R202031
3.2	49	18	R202032
3.3	49	18	R202033
3.4	52	20	R202034
3.5	52	20	R202035
3.6	52	20	R202036
3.7	52	20	R202037
3.8	55	22	R202038
3.9	55	22	R202039
4.0	55	22	R202040
4.1	55	22	R202041
4.2	55	22	R202042
4.3	58	24	R202043
4.4	58	24	R202044
4.5	58	24	R202045
4.6	58	24	R202046
4.7	58	24	R202047
4.8	62	26	R202048
4.9	62	26	R202049
5.0	62	26	R202050
5.1	62	26	R202051
5.2	62	26	R202052

Ø mm	Total length mm	Flute length mm	Part no.
5.3	62	26	R202053
5.4	66	28	R202054
5.5	66	28	R202055
5.6	66	28	R202056
5.7	66	28	R202057
5.8	66	28	R202058
5.9	66	28	R202059
6.0	66	28	R202060
6.1	70	31	R202061
6.2	70	31	R202062
6.3	70	31	R202063
6.4	70	31	R202064
6.5	70	31	R202065
6.6	70	31	R202066
6.7	70	31	R202067
6.8	74	34	R202068
6.9	74	34	R202069
7.0	74	34	R202070
7.1	74	34	R202071
7.2	74	34	R202072
7.3	74	34	R202073
7.4	74	34	R202074
7.5	74	34	R202075
7.6	79	36	R202076
7.7	79	36	R202077
7.8	79	36	R202078
7.9	79	36	R202079
8.0	79	36	R202080
8.5	79	36	R202085
9.0	84	40	R202090
9.5	84	40	R202095
10.0	89	43	R202100

### Centre drills DIN 333 A HSS

Applications: for making centre holes according to DIN 332, Shape A

Centre angle: 60°

Packing unit:

Point angle 120°

Ø 1.0mm up to 6.5mm

Ø tolerance: h9

in individual plastic pack



Ø mm	Total length mm	Shank Ø mm	Part no.
1.00	31.5	3.15	R217010
1.60	35.5	4.0	R217016
2.00	40.0	5.0	R217020
2.50	45.0	6.3	R217025

Ø mm	Total length mm	Shank Ø mm	Part no.
3.15	50.0	8.0	R217315
4.00	56.0	10.0	R217040
5.00	63.0	12.5	R217050
6.30	71.0	16.0	R217063

### Spot drills HSS ground, extra short, with split point

Extra short and stable standard drill. Shorter than DIN 1897. Ideally suitable for assembly work in thin-walled materials such as sheet steels, flat steels and profile steels. High security against fracture. For use in all hand-held drilling machines.

Advantages DIN 1412 C: good centring, little pressure required. Chip distribution improves chip removal.

Applications: for steel and cast steel alloyed and unalloyed up to approx 900 N/mm<sup>2</sup> strength, grey cast, malleable cast iron, die-cast metal, iron sinter, nickel-silver, graphite cast iron, short-chipping aluminium alloys, bronze and brass.

Point cut: helical point  
from Ø 3.0mm  
with split point DIN 1412C

Surface: bright  
Right hand cutting

Packing unit:

Point angle: 135°

Ø 2.50mm up to 6.50mm in plastic box of 10

Ø tolerance: h8



Ø mm	Total length mm	Flute length mm	Part no.
2.50	38	14	R251025
2.80	40	16	R251028
3.00	40	16	R251030
3.10	40	16	R251031
3.20	40	16	R251032
3.25	41	16	R2510325
3.30	41	16	R251033
3.40	42	16	R251034
3.50	42	16	R251035
4.00	42	16	R251040
4.10	44	18	R251041
4.20	44	18	R251042

Ø mm	Total length mm	Flute length mm	Part no.
4.30	44	18	R251043
4.50	48	20	R251045
4.70	48	20	R251047
4.80	48	20	R251048
4.90	50	22	R251049
5.00	52	24	R251050
5.10	52	24	R251051
5.20	52	24	R251052
5.50	52	24	R251055
6.00	55	26	R251060
6.50	60	26	R251065

### Twist drills DIN 1869 TL 3000 HSS ground, extra long, with split point

Stable special drill. Ideally suitable for deep holes under difficult conditions, e.g. work for bad chipping materials. Suitable for all usual drilling work in all normal materials. High rotational precision. For drilling deep holes please use small feed and deaerate chips often.

Applications: for steel and cast-steel alloyed and unalloyed up to approx. 900 N/mm<sup>2</sup> strength, grey cast, malleable cast iron, die-cast metal, iron sinter, nickel-silver, graphite cast iron, short-chipping aluminium alloys, bronze and brass.

Point cut: helical point  
from Ø 3.0mm  
with split point DIN 1412C

Surface: bright/black  
Right hand cutting

Packing unit: in plastic bags of 1

Point angle: 130°

Helix angle: 40°

Ø tolerance: h8



Ø mm	Total length mm	Flute length mm	Part no.
3.0	190	130	R255030
3.2	200	135	R255032
3.3	200	135	R255033
3.5	210	145	R255035
4.0	220	150	R255040
4.2	220	150	R255042
4.5	235	160	R255045
5.0	245	170	R255050
5.5	260	180	R255055
6.0	260	180	R255060
6.5	275	190	R255065
7.0	290	200	R255070

Ø mm	Total length mm	Flute length mm	Part no.
7.5	290	200	R255075
8.0	305	210	R255080
8.5	305	210	R255085
9.0	320	220	R255090
9.5	320	220	R255095
10.0	340	235	R255100
10.5	340	235	R255105
11.0	365	250	R255110
11.5	365	250	R255115
12.0	375	260	R255120
12.5	375	260	R255125
13.0	375	260	R255130



### Twist drills DIN 340 type N HSS ground

Highly efficient standard drillin long version. Suitable for deep hole drillings in all normal materials. High security against fracture. For deep hole drillings small forward feeds and frequent chip removal are necessary. Applications: for steel and cast-steel alloyed and unalloyed up to approx. 900 N/mm<sup>2</sup> strength, grey cast, malleable cast iron, die-cast metal, iron sinter, nickel-silver, graphite cast iron, short-chipping aluminium alloys, bronze and brass.

Point cut: helical point  
 Point angle: 118°  
 Helix angle: 20-30°  
 Ø tolerance: h8

Surface: bright  
 Right hand cutting

Packing unit:  
 Ø 2.5mm up to 10.0mm in plastic box of 10  
 Ø 10.5mm up to 13.0mm in plastic box of 5



Ø mm	Total length mm	Flute length mm	Part no.
2.5	95	62	R203025
3.0	100	66	R203030
3.1	106	69	R203031
3.2	106	69	R203032
3.3	106	69	R203033
3.4	112	73	R203034
3.5	112	73	R203035
3.6	112	73	R203036
3.7	112	73	R203037
3.8	119	78	R203038
3.9	119	78	R203039
4.0	119	78	R203040
4.1	119	78	R203041
4.2	119	78	R203042
4.3	126	82	R203043
4.4	126	82	R203044
4.5	126	82	R203045
4.6	126	82	R203046
4.7	126	82	R203047
4.8	132	87	R203048
4.9	132	87	R203049
5.0	132	87	R203050
5.1	132	87	R203051
5.2	132	87	R203052
5.3	132	87	R203053
5.4	139	91	R203054
5.5	139	91	R203055
5.6	139	91	R203056
5.7	139	91	R203057
5.8	139	91	R203058
5.9	139	91	R203059
6.0	139	91	R203060
6.1	148	97	R203061
6.2	148	97	R203062
6.3	148	97	R203063
6.4	148	97	R203064
6.5	148	97	R203065
6.6	148	97	R203066
6.7	148	97	R203067

Ø mm	Total length mm	Flute length mm	Part no.
6.8	156	102	R203068
6.9	156	102	R203069
7.0	156	102	R203070
7.1	156	102	R203071
7.2	156	102	R203072
7.3	156	102	R203073
7.4	156	102	R203074
7.5	156	102	R203075
7.6	165	109	R203076
7.7	165	109	R203077
7.8	165	109	R203078
7.9	165	109	R203079
8.0	165	109	R203080
8.1	165	109	R203081
8.2	165	109	R203082
8.3	165	109	R203083
8.4	165	109	R203084
8.5	165	109	R203085
8.6	175	115	R203086
8.7	175	115	R203087
8.8	175	115	R203088
8.9	175	115	R203089
9.0	175	115	R203090
9.1	175	115	R203091
9.2	175	115	R203092
9.3	175	115	R203093
9.4	175	115	R203094
9.5	175	115	R203095
9.6	184	121	R203096
9.7	184	121	R203097
9.8	184	121	R203098
9.9	184	121	R203099
10.0	184	121	R203100
10.5	184	121	R203105
11.0	195	128	R203110
11.5	195	128	R203115
12.0	205	134	R203120
12.5	205	134	R203125
13.0	205	134	R203130

### Twist drills DIN 345 type N HSS

Highly efficient standard drill with morse taper usable for all drilling work in all normal materials. High security against fracture.  
Applications: for steel and cast-steel alloyed and unalloyed up to 900 N/mm<sup>2</sup> strength, grey cast, malleable cast iron, die-cast metal, iron sinter, nickel-silver, graphite cast iron, short-chipping aluminium alloys, bronze and brass.

Point cut: helical with split point

Surface: bright/ground

Point angle: 118°

Packing Unit: in plastic tubes of 1

Helix angle: 20-30°

Right hand cutting

Ø tolerance: h8



Ø mm	Total length mm	Flute length mm	Morse taper no.	Part no.
10.0	168	87	1	R204100
10.5	168	87	1	R204105
11.0	175	94	1	R204110
11.5	175	94	1	R204115
12.0	182	101	1	R204120
12.5	182	101	1	R204125
13.0	182	101	1	R204130
13.5	189	108	1	R204135
14.0	189	108	1	R204140
14.5	212	114	2	R204145
15.0	212	114	2	R204150
15.5	218	120	2	R204155
16.0	218	120	2	R204160
16.5	223	125	2	R204165
17.0	223	125	2	R204170
17.5	228	130	2	R204175
18.0	228	130	2	R204180
18.5	233	135	2	R204185
19.0	233	135	2	R204190
19.5	238	140	2	R204195
20.0	238	140	2	R204200
20.5	243	145	2	R204205
21.0	243	145	2	R204210
21.5	248	150	2	R204215
22.0	248	150	2	R204220
22.5	253	155	2	R204225
23.0	253	155	2	R204230
23.5	276	155	3	R204235
24.0	281	160	3	R204240
24.5	281	160	3	R204245
25.0	281	160	3	R204250
25.5	286	165	3	R204255
26.0	286	165	3	R204260
26.5	286	165	3	R204265
27.0	291	170	3	R204270
27.5	291	170	3	R204275
28.0	291	170	3	R204280
28.5	296	175	3	R204285
29.0	296	175	3	R204290
29.5	296	175	3	R204295
30.0	296	175	3	R204300
30.5	301	180	3	R204305
31.0	301	180	3	R204310
31.5	301	180	3	R204315
32.0	334	185	4	R204320
32.5	334	185	4	R204325

Ø mm	Total length mm	Flute length mm	Morse taper no.	Part no.
33.0	334	185	4	R204330
33.5	334	185	4	R204335
34.0	339	190	4	R204340
34.5	339	190	4	R204345
35.0	339	190	4	R204350
35.5	339	190	4	R204355
36.0	344	195	4	R204360
36.5	344	195	4	R204365
37.0	344	195	4	R204370
37.5	344	195	4	R204375
38.0	349	200	4	R204380
38.5	349	200	4	R204385
39.0	349	200	4	R204390
39.5	349	200	4	R204395
40.0	349	200	4	R204400
40.5	354	205	4	R204405
41.0	354	205	4	R204410
41.5	354	205	4	R204415
42.0	354	205	4	R204420
42.5	354	205	4	R204425
43.0	359	210	4	R204430
43.5	359	210	4	R204435
44.0	359	210	4	R204440
44.5	359	210	4	R204445
45.0	359	210	4	R204450
45.5	364	215	4	R204455
46.0	364	215	4	R204460
46.5	364	215	4	R204465
47.0	364	215	4	R204470
47.5	364	215	4	R204475
48.0	369	220	4	R204480
48.5	369	220	4	R204485
49.0	369	220	4	R204490
49.5	369	220	4	R204495
50.0	369	220	4	R204500
51.0	412	225	5	R204510
52.0	412	225	5	R204520
53.0	412	225	5	R204530
54.0	417	230	5	R204540
55.0	417	230	5	R204550
56.0	417	230	5	R204560
57.0	422	235	5	R204570
58.0	422	235	5	R204580
59.0	422	235	5	R204590
60.0	422	235	5	R204600

### Twist drill sets in bench stand

Description	Part no.
Consisting of 91 twist drills DIN 338 type N HSS rolled $\varnothing$ 1.0mm up to 10.0mm in increments of 0.1mm	R205223
Consisting of 91 twist drills DIN338 type N HSS ground $\varnothing$ 1.0mm up to 10.0mm in increments of 0.1mm	R214223
Consisting of 91 twist drills DIN 338 type N HSS Co5 ground $\varnothing$ 1.0mm up to 10.0mm in increments of 0.1mm	R215223



### Twist drill sets in bench stand

Description	Part no.
Consisting of 170 twist drills DIN 338 type N HSS ground 10 pcs $\varnothing$ 1.0 - 8.0mm in increments of 0.5mm 5 pcs $\varnothing$ 8.5 - 10.0mm in increments of 0.5mm	R214200
Consisting of 170 twist drills DIN 338 type N HSS Co 5 ground 10 pcs $\varnothing$ 1.0 - 8.0mm in increments of 0.5mm 5 pcs $\varnothing$ 8.5 - 10.0mm in increments of 0.5mm	R215200



### Drill cabinet

Description	Part no.
Drill cabinet empty 1 - 13mm x 0.1	2052081L
Drill cabinet empty 1 - 13mm x 0.5	205208L
Drill cabinet consisting of 645 twist drills DIN 338 type N HSS rolled contents list see below	205208
Drill cabinet consisting of 645 twist drills DIN 338 type N HSS ground contents list see below	214208
Drill cabinet consisting of 645 twist drills DIN 338 type N HSS Co5 ground contents list see below	215208



### Contents List

$\varnothing$ mm x pcs	$\varnothing$ mm x pcs	$\varnothing$ mm x pcs	$\varnothing$ mm x pcs	$\varnothing$ mm x pcs
1.0 x 100	3.5 x 30	6.0 x 15	8.5 x 10	11.0 x 10
1.5 x 100	4.0 x 30	6.5 x 15	9.0 x 10	11.5 x 10
2.0 x 60	4.5 x 30	7.0 x 15	9.5 x 10	12.0 x 10
2.5 x 40	5.0 x 30	7.5 x 15	10.0 x 10	12.5 x 10
3.0 x 30	5.5 x 25	8.0 x 10	10.5 x 10	13.0 x 10