SUPERIOR PERFORMANCE

sborn

GOLDEX DRILL
HSSCo & HSS

Available in metric or imperial size ranges.

Bright finish body for maximum chip clearance.

TiN coated on working area for longer tool life.

Self-centering split point above 1.6mm for metric drills.

IDEAL FOR MATERIAL GROUPS

P M K S N

HSSCo & HSS TWIST DRILLS

sborn

www.europatool.co.uk

●: Excellent O: Good

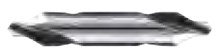
GOLDEX DRILLS

P				H		M			K				S						N								O							
11	12	13	14	15	16	21	22	23	31	32	33	34	41	42	43	51	52	53	61	62	63	64	71	72	73	74	81	82	83	84	Code	Item	Description	Page No.
o	o	o	o			•	•						•	•									o	o	o						810505		HSS-E Jobber ø1.0mm - 13.0mm	P.184-185
•	•	•	•			o	o		•	•	•		o	o									•	•	•						811505		HSS-E Jobber Worm Pattern ø2.0mm - 13.0mm	P.186-187
•	•	•	•			o	o						o	o									o	o	o						810504		HSS Jobber ø1.0mm - 13.0mm	P.188-189
•	•	•	•			o	o						o	o									o	o	o						820504		HSS Jobber ø3/64" - 1/2"	P.190

HSSCo DRILLS

P				H		M			K				S						N								O							
11	12	13	14	15	16	21	22	23	31	32	33	34	41	42	43	51	52	53	61	62	63	64	71	72	73	74	81	82	83	84	Code	Item	Description	Page No.
•	•	o	o			•	•		o	o	o		o	o									o	o	o		o	o			820502		Stub ø1.0mm - 31.0mm	P.192-195
•	•	o	o			•	•		o	o	o		o	o									o	o	o		o	o			820702		Jobber ø1.0mm - 20.0mm	P.196-197
•	•	o	o			•	•		o	o	o		o	o									o	o	o		o	o			820902		Long Series ø2.0mm - 12.0mm	P.198-199
•	•	•	•	o	o				•	•	•	•																			820116		Long Series Worm Pattern ø2.0mm - 13.0mm	P.200
•	•	o	o			o	o		o	o	o		o	o					o	o	o	o	o	o	o		o	o			821402 822402		Spotting Drill 90° & 120°, ø3.0mm - 20.0mm	P.191

HSS DRILLS

P				H		M			K				S						N								O							
11	12	13	14	15	16	21	22	23	31	32	33	34	41	42	43	51	52	53	61	62	63	64	71	72	73	74	81	82	83	84	Code	Item	Description	Page No.
•	•	o	o						o	o	o												o	o	o		o	o			820601		Stub ø1.0mm - 13.0mm	P.202-203
•	•	o	o						o	o	o												o	o	o		o	o			0000 0001		Two Tone Jobber ø2.5mm - 17.5mm, ø3/32" - 9/16"	P.204-207
•	•	o	o						o	o	o												o	o	o		o	o			820801		Jobber ø1.0mm - 20.0mm	P.208-211
•	•	o	o			o	o		o	o	o		o	o									o	o	o		o	o			821901		Blacksmith ø13.0mm - 25.0mm	P.201
•	•	o	o			o	o		o	o	o		o	o									o	o	o		o	o			820901		Long Series ø1.0mm - 20.0mm	P.212-213
•	•	o	o			o	o		o	o	o		o	o									o	o	o		o	o			821001		Extra Long Series ø2.0mm - 13.0mm	P.216
•	•	o	o			o	o		o	o	o		o	o									o	o	o		o	o			0162		Extra Long Series Bright Finish, ø1.4mm - 14.0mm	P.214-215
•	•	o	o			o	o		o	o	o		o	o									o	o	o		o	o			821601		Morse Taper Shank ø13.0mm - 60.0mm	P.218-219
•	•	o	o			o	o		o	o	o		o	o									o	o	o		o	o			810334		Centre Drill Form A, ø0.5mm - 6.3mm	P.220
•	•	o	o			o	o		o	o	o		o	o									o	o	o		o	o			888301		Centre Drill BS1 - BS7, ø1/8" - 3/4"	P.221

DRILL SETS

Code	Item	Description	Page No.
810504SET 810505SET 820702SET 820801SET 10220025		DRILL SETS	P.217
		Cutting Data	P.223

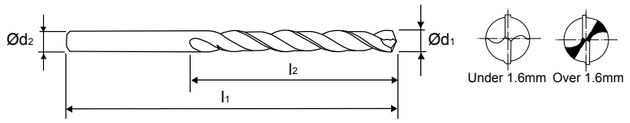
For material group tables, refer to pages 298-303

GOLDEX HSS-E JOBBER DRILL

DIN 338 | HSS-E | N 33° | h8 | 135°

Series No. 810505

▶ cutting conditions : p.224



Application
Particularly suited to stainless steel and titanium.
Drilling in steel, cast steel - alloyed and non-alloyed, stainless steel, titanium and aluminium.

Advantage
Bright finish body for maximum chip clearance.
Self-centering split point above 1.6mm
TiN coated on working area for longer tool life.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8105050100	1.0	12	34
8105050110	1.1	14	36
8105050120	1.2	16	38
8105050130	1.3	16	38
8105050140	1.4	18	40
8105050150	1.5	18	40
8105050160	1.6	20	43
8105050170	1.7	20	43
8105050180	1.8	22	46
8105050190	1.9	22	46
8105050200	2.0	24	49
8105050210	2.1	24	49
8105050220	2.2	27	53
8105050230	2.3	27	53
8105050240	2.4	30	57
8105050250	2.5	30	57
8105050260	2.6	30	57
8105050270	2.7	33	61
8105050280	2.8	33	61
8105050290	2.9	33	61
8105050300	3.0	33	61
8105050310	3.1	36	65
8105050320	3.2	36	65
8105050330	3.3	36	65
8105050340	3.4	39	70
8105050350	3.5	39	70
8105050360	3.6	39	70
8105050370	3.7	39	70
8105050380	3.8	43	75
8105050390	3.9	43	75
8105050400	4.0	43	75

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8105050410	4.1	43	75
8105050420	4.2	43	75
8105050430	4.3	47	80
8105050440	4.4	47	80
8105050450	4.5	47	80
8105050460	4.6	47	80
8105050470	4.7	47	80
8105050480	4.8	52	86
8105050490	4.9	52	86
8105050500	5.0	52	86
8105050510	5.1	52	86
8105050520	5.2	52	86
8105050530	5.3	52	86
8105050540	5.4	57	93
8105050550	5.5	57	93
8105050560	5.6	57	93
8105050570	5.7	57	93
8105050580	5.8	57	93
8105050590	5.9	57	93
8105050600	6.0	57	93
8105050610	6.1	63	101
8105050620	6.2	63	101
8105050630	6.3	63	101
8105050640	6.4	63	101
8105050650	6.5	63	101
8105050660	6.6	63	101
8105050670	6.7	63	101
8105050680	6.8	69	109
8105050690	6.9	69	109
8105050700	7.0	69	109
8105050710	7.1	69	109

●: Excellent **O**: Good

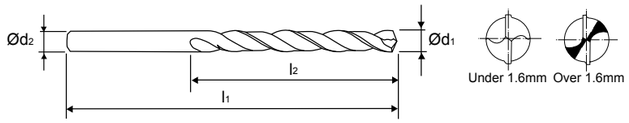
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
O	O		●	●			●	●							
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O									O	O	O			

GOLDEX HSS-E JOBBER DRILL

DIN 338 | HSS-E | N 33° | h8 | 135°

Series No. 810505

▶ cutting conditions : p.224



Application
Particularly suited to stainless steel and titanium.
Drilling in steel, cast steel - alloyed and non-alloyed, stainless steel, titanium and aluminium.

Advantage
Bright finish body for maximum chip clearance.
Self-centering split point above 1.6mm
TiN coated on working area for longer tool life.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8105050720	7.2	69	109
8105050730	7.3	69	109
8105050740	7.4	69	109
8105050750	7.5	69	109
8105050760	7.6	75	117
8105050770	7.7	75	117
8105050780	7.8	75	117
8105050790	7.9	75	117
8105050800	8.0	75	117
8105050810	8.1	75	117
8105050820	8.2	75	117
8105050830	8.3	75	117
8105050840	8.4	75	117
8105050850	8.5	75	117
8105050860	8.6	81	125
8105050870	8.7	81	125
8105050880	8.8	81	125
8105050890	8.9	81	125
8105050900	9.0	81	125
8105050910	9.1	81	125
8105050920	9.2	81	125
8105050930	9.3	81	125
8105050940	9.4	81	125
8105050950	9.5	81	125
8105050960	9.6	87	133
8105050970	9.7	87	133
8105050980	9.8	87	133
8105050990	9.9	87	133
8105051000	10.0	87	133
8105051010	10.1	87	133

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8105051020	10.2	87	133
8105051030	10.3	87	133
8105051040	10.4	87	133
8105051050	10.5	87	133
8105051060	10.6	87	133
8105051070	10.7	94	142
8105051080	10.8	94	142
8105051090	10.9	94	142
8105051100	11.0	94	142
8105051110	11.1	94	142
8105051120	11.2	94	142
8105051130	11.3	94	142
8105051140	11.4	94	142
8105051150	11.5	94	142
8105051160	11.6	94	142
8105051170	11.7	94	142
8105051180	11.8	94	142
8105051190	11.9	101	151
8105051200	12.0	101	151
8105051210	12.1	101	151
8105051220	12.2	101	151
8105051230	12.3	101	151
8105051240	12.4	101	151
8105051250	12.5	101	151
8105051260	12.6	101	151
8105051270	12.7	101	151
8105051280	12.8	101	151
8105051290	12.9	101	151
8105051300	13.0	101	151

●: Excellent **O**: Good

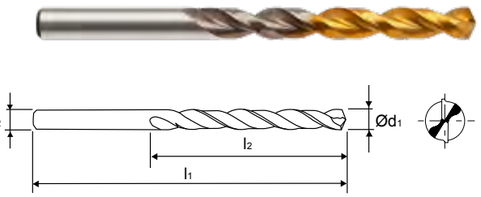
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
O	O		●	●			●	●							
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O									O	O	O			

GOLDEX HSS-E JOBBER DRILL WORM PATTERN

DIN 338 | HSS-E | N 38° | h8 | 135°

Series No. 811505

▶cutting conditions : p.224



Application
Drilling deep holes in steel, cast iron, stainless steel, titanium and aluminium.

Advantage
Bright finish body and worm pattern for maximum chip clearance.
Self-centering split point.
TiN coated on working area for longer tool life.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8115050200	2.0	24	49
8115050210	2.1	24	49
8115050220	2.2	27	53
8115050230	2.3	27	53
8115050240	2.4	30	57
8115050250	2.5	30	57
8115050260	2.6	30	57
8115050270	2.7	33	61
8115050280	2.8	33	61
8115050290	2.9	33	61
8115050300	3.0	33	61
8115050310	3.1	36	65
8115050320	3.2	36	65
8115050330	3.3	36	65
8115050340	3.4	39	70
8115050350	3.5	39	70
8115050360	3.6	39	70
8115050370	3.7	39	70
8115050380	3.8	43	75
8115050390	3.9	43	75
8115050400	4.0	43	75
8115050410	4.1	43	75
8115050420	4.2	43	75
8115050430	4.3	47	80
8115050440	4.4	47	80
8115050450	4.5	47	80
8115050460	4.6	47	80
8115050470	4.7	47	80
8115050480	4.8	52	86

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8115050490	4.9	52	86
8115050500	5.0	52	86
8115050510	5.1	52	86
8115050520	5.2	52	86
8115050530	5.3	52	86
8115050540	5.4	57	93
8115050550	5.5	57	93
8115050560	5.6	57	93
8115050570	5.7	57	93
8115050580	5.8	57	93
8115050590	5.9	57	93
8115050600	6.0	57	93
8115050610	6.1	63	101
8115050620	6.2	63	101
8115050630	6.3	63	101
8115050640	6.4	63	101
8115050650	6.5	63	101
8115050660	6.6	63	101
8115050670	6.7	63	101
8115050680	6.8	69	109
8115050690	6.9	69	109
8115050700	7.0	69	109
8115050710	7.1	69	109
8115050720	7.2	69	109
8115050730	7.3	69	109
8115050740	7.4	69	109
8115050750	7.5	69	109
8115050760	7.6	75	117
8115050770	7.7	75	117

●: Excellent **O**: Good

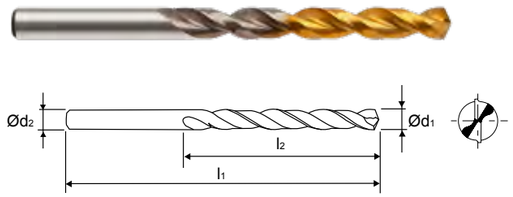
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O	●	●	O	O							
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
●	●				●					●	●	●			

GOLDEX HSS-E JOBBER DRILL WORM PATTERN

DIN 338 | HSS-E | N 38° | h8 | 135°

Series No. 811505

▶cutting conditions : p.224



Application
Drilling deep holes in steel, cast iron, stainless steel, titanium and aluminium.

Advantage
Bright finish body and worm pattern for maximum chip clearance.
Self-centering split point.
TiN coated on working area for longer tool life.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8115050780	7.8	75	117
8115050790	7.9	75	117
8115050800	8.0	75	117
8115050810	8.1	75	117
8115050820	8.2	75	117
8115050830	8.3	75	117
8115050840	8.4	75	117
8115050850	8.5	75	117
8115050860	8.6	81	125
8115050870	8.7	81	125
8115050880	8.8	81	125
8115050890	8.9	81	125
8115050900	9.0	81	125
8115050910	9.1	81	125
8115050920	9.2	81	125
8115050930	9.3	81	125
8115050940	9.4	81	125
8115050950	9.5	81	125
8115050960	9.6	87	133
8115050970	9.7	87	133
8115050980	9.8	87	133
8115050990	9.9	87	133
8115051000	10.0	87	133
8115051010	10.1	87	133
8115051020	10.2	87	133
8115051030	10.3	87	133
8115051040	10.4	87	133

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8115051050	10.5	87	133
8115051060	10.6	87	133
8115051070	10.7	94	142
8115051080	10.8	94	142
8115051090	10.9	94	142
8115051100	11.0	94	142
8115051110	11.1	94	142
8115051120	11.2	94	142
8115051130	11.3	94	142
8115051140	11.4	94	142
8115051150	11.5	94	142
8115051160	11.6	94	142
8115051170	11.7	94	142
8115051180	11.8	94	142
8115051190	11.9	101	151
8115051200	12.0	101	151
8115051210	12.1	101	151
8115051220	12.2	101	151
8115051230	12.3	101	151
8115051240	12.4	101	151
8115051250	12.5	101	151
8115051260	12.6	101	151
8115051270	12.7	101	151
8115051280	12.8	101	151
8115051290	12.9	101	151
8115051300	13.0	101	151

●: Excellent **O**: Good

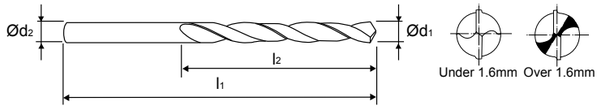
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O	●	●	O	O							
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
●	●				●					●	●	●			

GOLDEX HSS JOBBER DRILL

DIN 338 | HSS | N 30° | h8 | 118°

Series No. 810504

▶cutting conditions : p.224



Application
Drilling in steel, cast steel - alloyed and non-alloyed, stainless steel, titanium and aluminium.

Advantage
Bright finish body for maximum chip clearance.
Self-centering split point above 1.6mm
TiN coated on working area for longer tool life.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8105040100	1.0	12	34
8105040110	1.1	14	36
8105040120	1.2	16	38
8105040130	1.3	16	38
8105040140	1.4	18	40
8105040150	1.5	18	40
8105040160	1.6	20	43
8105040170	1.7	20	43
8105040180	1.8	22	46
8105040190	1.9	22	46
8105040200	2.0	24	49
8105040210	2.1	24	49
8105040220	2.2	27	53
8105040230	2.3	27	53
8105040240	2.4	30	57
8105040250	2.5	30	57
8105040260	2.6	30	57
8105040270	2.7	33	61
8105040280	2.8	33	61
8105040290	2.9	33	61
8105040300	3.0	33	61
8105040310	3.1	36	65
8105040320	3.2	36	65
8105040330	3.3	36	65
8105040340	3.4	39	70
8105040350	3.5	39	70
8105040360	3.6	39	70
8105040370	3.7	39	70
8105040380	3.8	43	75
8105040390	3.9	43	75
8105040400	4.0	43	75

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8105040410	4.1	43	75
8105040420	4.2	43	75
8105040430	4.3	47	80
8105040440	4.4	47	80
8105040450	4.5	47	80
8105040460	4.6	47	80
8105040470	4.7	47	80
8105040480	4.8	52	86
8105040490	4.9	52	86
8105040500	5.0	52	86
8105040510	5.1	52	86
8105040520	5.2	52	86
8105040530	5.3	52	86
8105040540	5.4	57	93
8105040550	5.5	57	93
8105040560	5.6	57	93
8105040570	5.7	57	93
8105040580	5.8	57	93
8105040590	5.9	57	93
8105040600	6.0	57	93
8105040610	6.1	63	101
8105040620	6.2	63	101
8105040630	6.3	63	101
8105040640	6.4	63	101
8105040650	6.5	63	101
8105040660	6.6	63	101
8105040670	6.7	63	101
8105040680	6.8	69	109
8105040690	6.9	69	109
8105040700	7.0	69	109
8105040710	7.1	69	109

●: Excellent **O**: Good

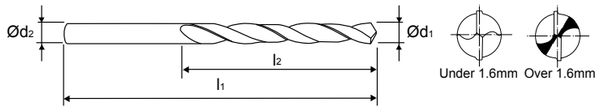
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O			O	O							
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
●	●									O	O	O			

GOLDEX HSS JOBBER DRILL

DIN 338 | HSS | N 30° | h8 | 118°

Series No. 810504

▶cutting conditions : p.224



Application
Drilling in steel, cast steel - alloyed and non-alloyed, stainless steel, titanium and aluminium.

Advantage
Bright finish body for maximum chip clearance.
Self-centering split point above 1.6mm
TiN coated on working area for longer tool life.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8105040720	7.2	69	109
8105040730	7.3	69	109
8105040740	7.4	69	109
8105040750	7.5	69	109
8105040760	7.6	75	117
8105040770	7.7	75	117
8105040780	7.8	75	117
8105040790	7.9	75	117
8105040800	8.0	75	117
8105040810	8.1	75	117
8105040820	8.2	75	117
8105040830	8.3	75	117
8105040840	8.4	75	117
8105040850	8.5	75	117
8105040860	8.6	81	125
8105040870	8.7	81	125
8105040880	8.8	81	125
8105040890	8.9	81	125
8105040900	9.0	81	125
8105040910	9.1	81	125
8105040920	9.2	81	125
8105040930	9.3	81	125
8105040940	9.4	81	125
8105040950	9.5	81	125
8105040960	9.6	87	133
8105040970	9.7	87	133
8105040980	9.8	87	133
8105040990	9.9	87	133
8105041000	10.0	87	133
8105041010	10.1	87	133

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8105041020	10.2	87	133
8105041030	10.3	87	133
8105041040	10.4	87	133
8105041050	10.5	87	133
8105041060	10.6	87	133
8105041070	10.7	94	142
8105041080	10.8	94	142
8105041090	10.9	94	142
8105041100	11.0	94	142
8105041110	11.1	94	142
8105041120	11.2	94	142
8105041130	11.3	94	142
8105041140	11.4	94	142
8105041150	11.5	94	142
8105041160	11.6	94	142
8105041170	11.7	94	142
8105041180	11.8	94	142
8105041190	11.9	101	151
8105041200	12.0	101	151
8105041210	12.1	101	151
8105041220	12.2	101	151
8105041230	12.3	101	151
8105041240	12.4	101	151
8105041250	12.5	101	151
8105041260	12.6	101	151
8105041270	12.7	101	151
8105041280	12.8	101	151
8105041290	12.9	101	151
8105041300	13.0	101	151

●: Excellent **O**: Good

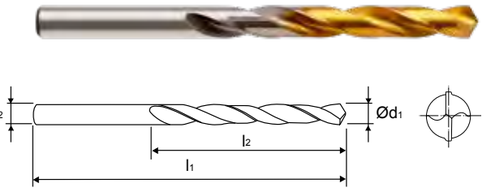
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O			O	O							
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
●	●									O	O	O			

GOLDEX HSS JOBBER DRILL

BS 328 | HSS | N 30° | h8 | 118°

Series No. 820504

▶ cutting conditions : p.224



Application
Drilling in steel, cast steel - alloyed and non-alloyed, stainless steel, titanium and aluminium.

Advantage
Bright finish body for maximum chip clearance.
TiN coated on working area for longer tool life.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8205040030	3/64	3/4	1.3/4
8205040040	1/16	7/8	1.7/8
8205040050	5/64	1"	2"
8205040060	3/32	1.1/4	2.1/4
8205040070	7/64	1.1/2	2.5/8
8205040080	1/8	1.5/8	2.3/4
8205040090	9/64	1.3/4	2.7/8
8205040100	5/32	2"	3.1/8
8205040110	11/64	2.1/8	3.1/4
8205040120	3/16	2.5/16	3.1/2
8205040130	13/64	2.7/16	3.5/8
8205040140	7/32	2.1/2	3.3/4
8205040150	15/64	2.5/8	3.7/8
8205040160	1/4	2.3/4	4"
8205040170	17/64	2.7/8	4.1/8

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8205040180	9/32	2.15/16	4.1/4
8205040190	19/64	3.1/16	4.3/8
8205040200	5/16	3.3/16	4.1/2
8205040210	21/64	3.5/16	4.5/8
8205040220	11/32	3.7/16	4.3/4
8205040230	23/64	3.1/2	4.7/8
8205040240	3/8	3.5/8	5"
8205040250	25/64	3.3/4	5.1/8
8205040260	13/32	3.7/8	5.1/4
8205040270	27/64	3.15/16	5.3/8
8205040280	7/16	4.1/16	5.1/2
8205040290	29/64	4.3/16	5.5/8
8205040300	15/32	4.5/16	5.3/4
8205040310	31/64	4.3/8	5.7/8
8205040320	1/2	4.1/2	6"

●: Excellent **O**: Good

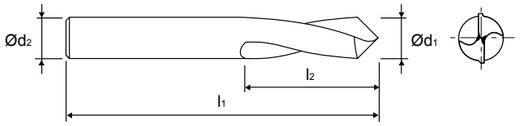
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O			O	O							
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
●	●									O	O	O			

HSSCo SPOTTING DRILL 90°

NC | HSS Co8 | h6 | h6 | 90°

Series No. 821402

▶ cutting conditions : p.227



Application :
For more precise centering work on NC/CNC Machines.
The large diameter of the tool permits chamfering work after centering continuously.

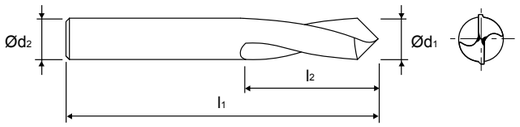
EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8214020300	3	12	46
8214020400	4	12	55
8214020500	5	15	60
8214020600	6	20	66
8214020800	8	25	79
8214021000	10	25	89
8214021200	12	30	102
8214021600	16	35	115
8214022000	20	40	131

HSSCo SPOTTING DRILL 120°

NC | HSS Co8 | h6 | h6 | 120°

Series No. 822402

▶ cutting conditions : p.227



Application :
For more precise centering work on NC/CNC Machines.
The large diameter of the tool permits chamfering work after centering continuously.

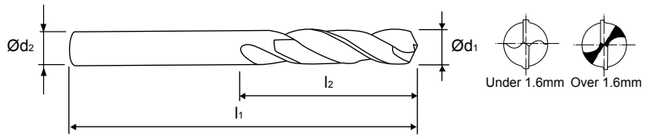
EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8224020300	3	12	46
8224020400	4	12	55
8224020500	5	15	60
8224020600	6	20	66
8224020800	8	25	79
8224021000	10	25	89
8224021200	12	30	102
8224021600	16	35	115
8224022000	20	40	131

HSSCo STUB DRILL DIN1897

DIN 1897 | HSS Co8 | N 33° | h8 | 135°

Series No. 820502

▶cutting conditions : p.225



Application
Suitable for drilling thin materials with portable electric drills.
Special twist drills for automatic and turret lathes

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8205020100	1.0	6	26
8205020110	1.1	7	28
8205020120	1.2	8	30
8205020125	1.25	8	30
8205020130	1.3	8	30
8205020140	1.4	9	32
8205020150	1.5	9	32
8205020160	1.6	10	34
8205020170	1.7	10	34
8205020175	1.75	11	36
8205020180	1.8	11	36
8205020190	1.9	11	36
8205020200	2.0	12	38
8205020210	2.1	12	38
8205020220	2.2	13	40
8205020225	2.25	13	40
8205020230	2.3	13	40
8205020240	2.4	14	43
8205020250	2.5	14	43
8205020260	2.6	14	43
8205020270	2.7	16	46
8205020275	2.75	16	46

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8205020280	2.8	16	46
8205020290	2.9	16	46
8205020300	3.0	16	46
8205020310	3.1	18	49
8205020320	3.2	18	49
8205020325	3.25	18	49
8205020330	3.3	18	49
8205020340	3.4	20	52
8205020350	3.5	20	52
8205020360	3.6	20	52
8205020370	3.7	20	52
8205020375	3.75	20	52
8205020380	3.8	22	55
8205020390	3.9	22	55
8205020400	4.0	22	55
8205020410	4.1	22	55
8205020420	4.2	22	55
8205020425	4.25	22	55
8205020430	4.3	24	58
8205020440	4.4	24	58
8205020450	4.5	24	58
8205020460	4.6	24	58

●: Excellent **O**: Good

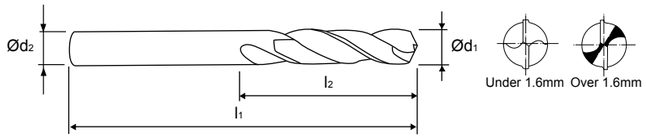
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		●	●	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSSCo STUB DRILL DIN1897

DIN 1897 | HSS Co8 | N 33° | h8 | 135°

Series No. 820502

▶cutting conditions : p.225



Application
Suitable for drilling thin materials with portable electric drills.
Special twist drills for automatic and turret lathes

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8205020465	4.65	24	58
8205020470	4.7	24	58
8205020475	4.75	24	58
8205020480	4.8	26	62
8205020490	4.9	26	62
8205020500	5.0	26	62
8205020510	5.1	26	62
8205020520	5.2	26	62
8205020525	5.25	26	62
8205020530	5.3	26	62
8205020540	5.4	28	66
8205020550	5.5	28	66
8205020555	5.55	28	66
8205020560	5.6	28	66
8205020570	5.7	28	66
8205020575	5.75	28	66
8205020580	5.8	28	66
8205020590	5.9	28	66
8205020600	6.0	28	66
8205020610	6.1	31	70
8205020620	6.2	31	70
8205020625	6.25	31	70

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8205020630	6.3	31	70
8205020640	6.4	31	70
8205020650	6.5	31	70
8205020660	6.6	31	70
8205020670	6.7	31	70
8205020675	6.75	34	74
8205020680	6.8	34	74
8205020690	6.9	34	74
8205020700	7.0	34	74
8205020710	7.1	34	74
8205020720	7.2	34	74
8205020725	7.25	34	74
8205020730	7.3	34	74
8205020740	7.4	34	74
8205020745	7.45	34	74
8205020750	7.5	34	74
8205020760	7.6	37	79
8205020770	7.7	37	79
8205020775	7.75	37	79
8205020780	7.8	37	79
8205020790	7.9	37	79
8205020800	8.0	37	79

●: Excellent **O**: Good

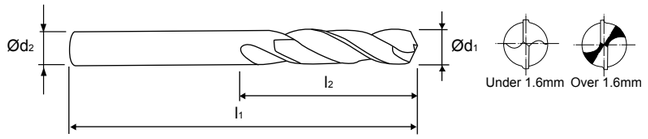
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		●	●	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSSCo STUB DRILL DIN1897

DIN 1897 | HSS Co8 | N 33° | h8 | 135°

Series No. 820502

▶ cutting conditions : p.225



Application
Suitable for drilling thin materials with portable electric drills.
Special twist drills for automatic and turret lathes

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8205020810	8.1	37	79
8205020820	8.2	37	79
8205020825	8.25	37	79
8205020830	8.3	37	79
8205020840	8.4	37	79
8205020850	8.5	37	79
8205020860	8.6	40	84
8205020870	8.7	40	84
8205020875	8.75	40	84
8205020880	8.8	40	84
8205020890	8.9	40	84
8205020900	9.0	40	84
8205020910	9.1	40	84
8205020920	9.2	40	84
8205020925	9.25	40	84
8205020930	9.3	40	84
8205020935	9.35	40	84
8205020940	9.4	40	84
8205020950	9.5	40	84
8205020960	9.6	43	89
8205020970	9.7	43	89

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8205020975	9.75	43	89
8205020980	9.8	43	89
8205020990	9.9	43	89
8205021000	10.0	43	89
8205021020	10.2	43	89
8205021025	10.25	43	89
8205021050	10.5	43	89
8205021075	10.75	47	95
8205021100	11.0	47	95
8205021125	11.25	47	95
8205021150	11.5	47	95
8205021175	11.75	47	95
8205021180	11.8	47	95
8205021200	12.0	51	102
8205021225	12.25	51	102
8205021250	12.5	51	102
8205021275	12.75	51	102
8205021300	13.0	51	102
8205021325	13.25	54	107
8205021350	13.5	54	107
8205021375	13.75	54	107

●: Excellent **O**: Good

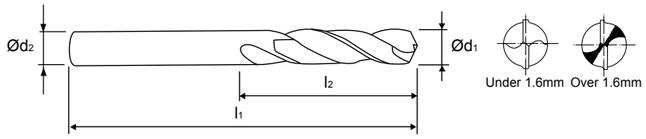
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		●	●	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSSCo STUB DRILL DIN1897

DIN 1897 | HSS Co8 | N 33° | h8 | 135°

Series No. 820502

▶ cutting conditions : p.225



Application
Suitable for drilling thin materials with portable electric drills.
Special twist drills for automatic and turret lathes

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8205021380	13.8	54	107
8205021400	14.0	54	107
8205021425	14.25	56	111
8205021450	14.5	56	111
8205021475	14.75	56	111
8205021500	15.0	56	111
8205021525	15.25	58	115
8205021550	15.5	58	115
8205021575	15.75	58	115
8205021600	16.0	58	115
8205021625	16.25	60	119
8205021650	16.5	60	119
8205021675	16.75	60	119
8205021700	17.0	60	119
8205021725	17.25	62	123
8205021750	17.5	62	123
8205021775	17.75	62	123
8205021800	18.0	62	123
8205021825	18.25	64	127
8205021850	18.5	64	127
8205021875	18.75	64	127

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8205021900	19.0	64	127
8205021925	19.25	66	131
8205021950	19.5	66	131
8205021975	19.75	66	131
8205022000	20.0	66	131
8205022050	20.5	68	136
8205022100	21.0	68	136
8205022150	21.5	70	141
8205022200	22.0	70	141
8205022250	22.5	72	146
8205022300	23.0	72	146
8205022350	23.5	72	146
8205022400	24.0	75	151
8205022450	24.5	75	151
8205022500	25.0	75	151
8205022600	26.0	78	156
8205022700	27.0	81	162
8205022800	28.0	81	162
8205022900	29.0	84	168
8205023000	30.0	84	168
8205023100	31.0	87	174

●: Excellent **O**: Good

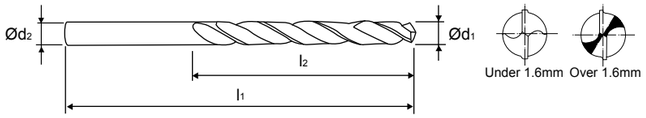
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		●	●	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSSCo JOBBER DRILL DIN338

DIN 338 | HSS Co8 | N 33° | h8 | 135°

Series No. 820702

▶ cutting conditions : p.225



Application
Drilling stainless steels and difficult to cut materials such as titanium.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8207020100	1.0	12	34
8207020110	1.1	14	36
8207020120	1.2	16	38
8207020125	1.25	16	36
8207020130	1.3	16	38
8207020140	1.4	18	40
8207020150	1.5	18	40
8207020160	1.6	20	43
8207020170	1.7	20	43
8207020175	1.75	22	46
8207020180	1.8	22	46
8207020190	1.9	22	46
8207020200	2.0	24	49
8207020210	2.1	24	49
8207020220	2.2	27	53
8207020225	2.25	27	53
8207020230	2.3	27	53
8207020240	2.4	30	57
8207020250	2.5	30	57
8207020260	2.6	30	57
8207020270	2.7	33	61
8207020275	2.75	33	61
8207020280	2.8	33	61
8207020290	2.9	33	61
8207020300	3.0	33	61
8207020310	3.1	36	65
8207020320	3.2	36	65
8207020325	3.25	36	65
8207020330	3.3	36	65
8207020340	3.4	39	70
8207020350	3.5	39	70
8207020360	3.6	39	70
8207020370	3.7	39	70

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8207020375	3.75	39	70
8207020380	3.8	43	75
8207020390	3.9	43	75
8207020400	4.0	43	75
8207020410	4.1	43	75
8207020420	4.2	43	75
8207020425	4.25	43	75
8207020430	4.3	47	80
8207020440	4.4	47	80
8207020450	4.5	47	80
8207020460	4.6	47	80
8207020470	4.7	47	80
8207020475	4.75	47	80
8207020480	4.8	52	86
8207020490	4.9	52	86
8207020500	5.0	52	86
8207020510	5.1	52	86
8207020520	5.2	52	86
8207020525	5.25	52	86
8207020530	5.3	52	86
8207020540	5.4	57	93
8207020550	5.5	57	93
8207020560	5.6	57	93
8207020570	5.7	57	93
8207020575	5.75	57	93
8207020580	5.8	57	93
8207020590	5.9	57	93
8207020600	6.0	57	93
8207020610	6.1	63	101
8207020620	6.2	63	101
8207020625	6.25	63	101
8207020630	6.3	63	101
8207020640	6.4	63	101

●: Excellent **O**: Good

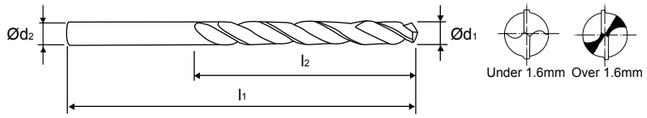
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		●	●	o	o	o	o						o	o
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
o	o				o					o	o	o			

HSSCo JOBBER DRILL DIN338

DIN 338 | HSS Co8 | N 33° | h8 | 135°

Series No. 820702

▶ cutting conditions : p.225



Application
Drilling stainless steels and difficult to cut materials such as titanium.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8207020650	6.5	63	101
8207020660	6.6	63	101
8207020670	6.7	63	101
8207020675	6.75	69	109
8207020680	6.8	69	109
8207020690	6.9	69	109
8207020700	7.0	69	109
8207020710	7.1	69	109
8207020720	7.2	69	109
8207020725	7.25	69	109
8207020730	7.3	69	109
8207020740	7.4	69	109
8207020750	7.5	69	109
8207020760	7.6	75	117
8207020770	7.7	75	117
8207020775	7.75	75	117
8207020780	7.8	75	117
8207020790	7.9	75	117
8207020800	8.0	75	117
8207020810	8.1	75	117
8207020820	8.2	75	117
8207020825	8.25	75	117
8207020830	8.3	75	117
8207020840	8.4	75	117
8207020850	8.5	75	117
8207020860	8.6	81	125
8207020870	8.7	81	125
8207020875	8.75	81	125
8207020880	8.8	81	125
8207020890	8.9	81	125
8207020900	9.0	81	125
8207020910	9.1	81	125

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8207020920	9.2	81	125
8207020925	9.25	81	125
8207020930	9.3	81	125
8207020940	9.4	81	125
8207020950	9.5	81	125
8207020960	9.6	87	133
8207020970	9.7	87	133
8207020975	9.75	87	133
8207020980	9.8	87	133
8207020990	9.9	87	133
8207021000	10.0	87	133
8207021020	10.2	87	133
8207021050	10.5	87	133
8207021100	11.0	94	142
8207021150	11.5	94	142
8207021200	12.0	101	151
8207021250	12.5	101	151
8207021300	13.0	101	151
8207021350	13.5	108	160
8207021400	14.0	108	160
8207021450	14.5	114	169
8207021500	15.0	114	169
8207021550	15.5	120	178
8207021600	16.0	120	178
8207021650	16.5	125	184
8207021700	17.0	125	184
8207021750	17.5	130	191
8207021800	18.0	130	191
8207021850	18.5	135	198
8207021900	19.0	135	198
8207021950	19.5	140	205
8207022000	20.0	140	205

●: Excellent **O**: Good

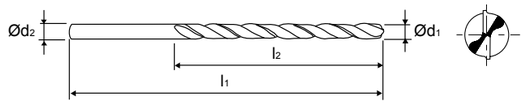
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		●	●	o	o	o	o						o	o
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
o	o				o					o	o	o			

HSSCo LONG SERIES DRILL DIN340

DIN 340 | HSS Co8 | N 33° | h8 | 135°

Series No. 820902

▶ cutting conditions : p.225



Application
Drilling stainless steels and difficult to cut materials such as titanium.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8209020200	2.0	56	85
8209020210	2.1	56	85
8209020220	2.2	59	90
8209020230	2.3	59	90
8209020240	2.4	62	95
8209020250	2.5	62	95
8209020260	2.6	62	95
8209020270	2.7	66	100
8209020280	2.8	66	100
8209020290	2.9	66	100
8209020300	3.0	66	100
8209020310	3.1	69	106
8209020320	3.2	69	106
8209020330	3.3	69	106
8209020340	3.4	73	112
8209020350	3.5	73	112
8209020360	3.6	73	112
8209020370	3.7	73	112
8209020380	3.8	78	119
8209020390	3.9	78	119
8209020400	4.0	78	119
8209020410	4.1	78	119
8209020420	4.2	78	119
8209020430	4.3	82	126
8209020440	4.4	82	126
8209020450	4.5	82	126

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8209020460	4.6	82	126
8209020470	4.7	82	126
8209020480	4.8	87	132
8209020490	4.9	87	132
8209020500	5.0	87	132
8209020510	5.1	87	132
8209020520	5.2	87	132
8209020530	5.3	87	139
8209020540	5.4	91	139
8209020550	5.5	91	139
8209020560	5.6	91	139
8209020570	5.7	91	139
8209020580	5.8	91	139
8209020590	5.9	91	139
8209020600	6.0	91	139
8209020610	6.1	97	148
8209020620	6.2	97	148
8209020630	6.3	97	148
8209020640	6.4	97	148
8209020650	6.5	97	148
8209020660	6.6	97	148
8209020670	6.7	97	148
8209020680	6.8	102	156
8209020690	6.9	102	156
8209020700	7.0	102	156
8209020710	7.1	102	156

●: Excellent **O**: Good

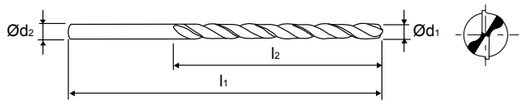
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		●	●	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSSCo LONG SERIES DRILL DIN340

DIN 340 | HSS Co8 | N 33° | h8 | 135°

Series No. 820902

▶ cutting conditions : p.225



Application
Drilling stainless steels and difficult to cut materials such as titanium.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8209020720	7.2	102	156
8209020730	7.3	102	156
8209020740	7.4	102	156
8209020750	7.5	102	156
8209020760	7.6	109	165
8209020770	7.7	109	165
8209020780	7.8	109	165
8209020790	7.9	109	165
8209020800	8.0	109	165
8209020810	8.1	109	165
8209020820	8.2	109	165
8209020830	8.3	109	165
8209020840	8.4	109	165
8209020850	8.5	109	165
8209020860	8.6	115	175
8209020870	8.7	115	175
8209020880	8.8	115	175
8209020890	8.9	115	175
8209020900	9.0	115	175

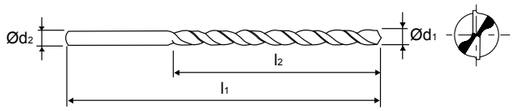
EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8209020910	9.1	115	175
8209020920	9.2	115	175
8209020930	9.3	115	175
8209020940	9.4	115	175
8209020950	9.5	115	175
8209020960	9.6	121	184
8209020970	9.7	121	184
8209020980	9.8	121	184
8209020990	9.9	121	184
8209021000	10.0	121	184
8209021020	10.2	121	184
8209021050	10.5	121	184
8209021080	10.8	128	195
8209021100	11.0	128	195
8209021120	11.2	128	195
8209021150	11.5	128	195
8209021180	11.8	128	195
8209021200	12.0	134	205

●: Excellent **O**: Good

P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		●	●	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSSCo LONG SERIES DRILL DIN340 WORM PATTERN

DIN 340 | HSS Co8 | N 38° | h8 | 130°



Series No. 820116

▶ cutting conditions : p.226

Application
Drilling deep holes in steels, alloy steels, tool steels, grey cast iron, malleable cast iron.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8201160200	2.0	56	85
8201160210	2.1	56	85
8201160220	2.2	59	90
8201160230	2.3	59	90
8201160240	2.4	62	95
8201160250	2.5	62	95
8201160260	2.6	62	95
8201160270	2.7	66	100
8201160280	2.8	66	100
8201160290	2.9	66	100
8201160300	3.0	66	100
8201160310	3.1	69	106
8201160320	3.2	69	106
8201160330	3.3	69	106
8201160340	3.4	73	112
8201160350	3.5	73	112
8201160360	3.6	73	112
8201160370	3.7	73	112
8201160380	3.8	78	119
8201160390	3.9	78	119
8201160400	4.0	78	119
8201160410	4.1	78	119
8201160420	4.2	78	119
8201160450	4.5	82	126
8201160480	4.8	87	132
8201160500	5.0	87	132

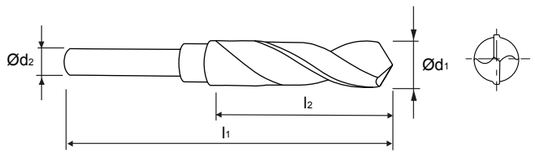
EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8201160520	5.2	87	132
8201160550	5.5	91	139
8201160580	5.8	91	139
8201160600	6.0	91	139
8201160620	6.2	97	148
8201160650	6.5	97	148
8201160680	6.8	102	156
8201160700	7.0	102	156
8201160720	7.2	102	156
8201160750	7.5	102	156
8201160780	7.8	109	165
8201160800	8.0	109	165
8201160820	8.2	109	165
8201160850	8.5	109	165
8201160900	9.0	115	175
8201160950	9.5	115	175
8201160980	9.8	121	184
8201161000	10.0	121	184
8201161050	10.5	121	184
8201161100	11.0	128	195
8201161150	11.5	128	195
8201161200	12.0	134	205
8201161250	12.5	134	205
8201161300	13.0	134	205

●: Excellent **O**: Good

P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●	O			●	●									
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
●	●				●	●									

BLACKSMITH DRILL

HSS | h6 | h6 | 118° | BLUE STEAM TEMPERED



Series No. 821901

▶ cutting conditions : p.227

Surface treatment
Steam Tempered (Black Oxide Finish)

Application
With reduced 1/2" shank for use when chuck capacity is limited.

EUROPA CODE	Diameter d_1	Flute Length l_2	O/All Length l_1	Shank Dia. d_2
8219011300	13.0	75	150	1/2"
8219011350	13.5	75	150	1/2"
8219011400	14.0	75	150	1/2"
8219011450	14.5	75	150	1/2"
8219011500	15.0	75	150	1/2"
8219011550	15.5	75	150	1/2"
8219011600	16.0	75	150	1/2"
8219011650	16.5	75	150	1/2"
8219011700	17.0	75	150	1/2"
8219011750	17.5	75	150	1/2"
8219011800	18.0	75	150	1/2"
8219011850	18.5	75	150	1/2"
8219011900	19.0	75	150	1/2"
8219011950	19.5	75	150	1/2"
8219012000	20.0	75	150	1/2"
8219012100	21.0	75	150	1/2"
8219012200	22.0	75	150	1/2"
8219012300	23.0	75	150	1/2"
8219012400	24.0	75	150	1/2"
8219012500	25.0	75	150	1/2"

●: Excellent **O**: Good

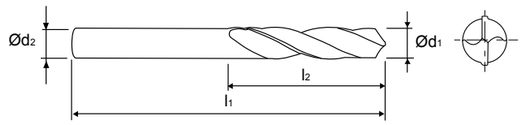
P		H	M			K		S			N				O	
11	12	15	21	22		31	32	41	42	43	61	62	63	64	81	82
●	●		O	O		O	O	O	O						O	O
13	14	16	23			33	34	51	52	53	71	72	73	74	83	84
O	O					O					O	O	O			

HSS STUB DRILL DIN1897

DIN 1897 | HSS | N 20~30° | h8 | 118°

Series No. 820601

▶ cutting conditions : p.226



Surface treatment
Steam Tempered (Black Oxide Finish)
Bright Finish under 2mm

Application
Suitable for drilling thin materials with portable electric drills.
Special twist drills for automatic and turret lathes.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8206010100	1.0	6	26
8206010110	1.1	7	28
8206010120	1.2	8	30
8206010125	1.25	8	30
8206010130	1.3	8	30
8206010140	1.4	9	32
8206010150	1.5	9	32
8206010160	1.6	9	34
8206010170	1.7	10	34
8206010175	1.75	11	36
8206010180	1.8	11	36
8206010190	1.9	11	36
8206010200	2.0	12	38
8206010210	2.1	12	38
8206010220	2.2	13	40
8206010225	2.25	13	40
8206010230	2.3	13	40
8206010240	2.4	14	43
8206010250	2.5	14	43
8206010260	2.6	14	43
8206010270	2.7	16	46
8206010275	2.75	16	46
8206010280	2.8	16	46
8206010290	2.9	16	46
8206010300	3.0	16	46
8206010310	3.1	18	49
8206010320	3.2	18	49
8206010325	3.25	18	49
8206010330	3.3	18	49
8206010340	3.4	20	52
8206010350	3.5	20	52

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8206010360	3.6	20	52
8206010370	3.7	20	52
8206010375	3.75	20	52
8206010380	3.8	22	55
8206010390	3.9	22	55
8206010400	4.0	22	55
8206010410	4.1	22	55
8206010420	4.2	22	55
8206010425	4.25	22	55
8206010430	4.3	24	58
8206010440	4.4	24	58
8206010450	4.5	24	58
8206010460	4.6	24	58
8206010470	4.7	24	58
8206010475	4.75	24	58
8206010480	4.8	26	62
8206010490	4.9	26	62
8206010500	5.0	26	62
8206010510	5.1	26	62
8206010520	5.2	26	62
8206010525	5.25	26	62
8206010530	5.3	26	62
8206010540	5.4	28	66
8206010550	5.5	28	66
8206010560	5.6	28	66
8206010570	5.7	28	66
8206010575	5.75	28	66
8206010580	5.8	28	66
8206010590	5.9	28	66
8206010600	6.0	28	66
8206010610	6.1	31	70

●: Excellent O: Good

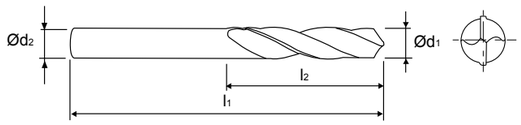
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS STUB DRILL DIN1897

DIN 1897 | HSS | N 20~30° | h8 | 118°

Series No. 820601

▶ cutting conditions : p.226



Surface treatment
Steam Tempered (Black Oxide Finish)

Application
Suitable for drilling thin materials with portable electric drills.
Special twist drills for automatic and turret lathes.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8206010620	6.2	31	70
8206010625	6.25	31	70
8206010630	6.3	31	70
8206010640	6.4	31	70
8206010650	6.5	31	70
8206010660	6.6	31	70
8206010670	6.7	31	70
8206010675	6.75	34	74
8206010680	6.8	34	74
8206010690	6.9	34	74
8206010700	7.0	34	74
8206010710	7.1	34	74
8206010720	7.2	34	74
8206010725	7.25	34	74
8206010730	7.3	34	74
8206010740	7.4	34	74
8206010750	7.5	34	74
8206010760	7.6	37	79
8206010770	7.7	37	79
8206010775	7.75	37	79
8206010780	7.8	37	79
8206010790	7.9	37	79
8206010800	8.0	37	79
8206010810	8.1	37	79
8206010820	8.2	37	79
8206010825	8.25	37	79
8206010830	8.3	37	79
8206010840	8.4	37	79
8206010850	8.5	37	79
8206010860	8.6	40	84

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8206010870	8.7	40	84
8206010875	8.75	40	84
8206010880	8.8	40	84
8206010890	8.9	40	84
8206010900	9.0	40	84
8206010910	9.1	40	84
8206010920	9.2	40	84
8206010925	9.25	40	84
8206010930	9.3	40	84
8206010935	9.35	40	84
8206010940	9.4	40	84
8206010950	9.5	40	84
8206010960	9.6	43	89
8206010970	9.7	43	89
8206010975	9.75	43	89
8206010980	9.8	43	89
8206010990	9.9	43	89
8206011000	10.0	43	89
8206011025	10.25	43	89
8206011050	10.5	43	89
8206011075	10.75	47	95
8206011100	11.0	47	95
8206011125	11.25	47	95
8206011150	11.5	47	95
8206011175	11.75	47	95
8206011200	12.0	51	102
8206011225	12.25	51	102
8206011250	12.5	51	102
8206011275	12.75	51	102
8206011300	13.0	51	102

●: Excellent O: Good

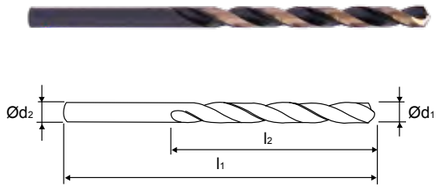
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS JOBBER DRILL DIN338 TWO TONE

DIN 338 | HSS | N - 33° | h8 | 135°

Series No. 0001

▶ cutting conditions : p.226



Point Geometry
2.5mm to 13.0mm - Split point.
Above 13.0mm - Notched thinned point.

Surface treatment
Below 5.0mm - Bright or straw colour.
5.0mm to 13.0mm - Steam tempered/straw colour (two tone).
Above 13.0mm - Straw colour

Application
Drilling steels, cast irons, soft aluminiums and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
00010098	2.5	30	57
00010102	2.6	30	57
00010106	2.7	33	61
00010110	2.8	33	61
00010113	2.85	33	61
00010114	2.9	33	61
00010117	3.0	33	61
00010120	3.05	36	65
00010122	3.1	36	65
00010127	3.2	36	65
00010130	3.3	36	65
00010134	3.4	39	70
00010137	3.5	39	70
00010142	3.6	39	70
00010143	3.65	39	70
00010146	3.7	39	70
00010147	3.75	39	70
00010150	3.8	43	75
00010153	3.9	43	75
00010158	4.0	43	75
00010161	4.1	43	75

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
00010165	4.2	43	75
00010167	4.25	43	75
00010169	4.3	47	80
00010174	4.4	47	80
00010177	4.5	47	80
00010181	4.6	47	80
00010185	4.7	47	80
00010190	4.8	52	86
00010193	4.9	52	86
00010197	5.0	52	86
00010201	5.1	52	86
00010205	5.2	52	86
00010209	5.3	52	86
00010213	5.4	57	93
00010217	5.5	57	93
00010221	5.6	57	93
00010224	5.7	57	93
00010228	5.8	57	93
00010232	5.9	57	93
00010236	6.0	57	93
00010240	6.1	63	101

●: Excellent **O**: Good

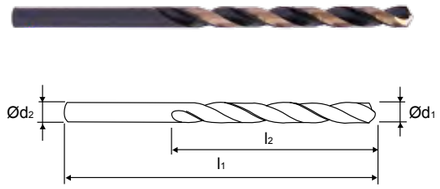
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				O	O								O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS JOBBER DRILL DIN338 TWO TONE

DIN 338 | HSS | N -30° | h8 | 135°

Series No. 0001

▶ cutting conditions : p.226



Point Geometry
2.5mm to 13.0mm - Split point.
Above 13.0mm - Notched thinned point.

Surface treatment
Below 5.0mm - Bright or straw colour.
5.0mm to 13.0mm - Steam tempered/straw colour (two tone).
Above 13.0mm - Straw colour

Application
Drilling steels, cast irons, soft aluminiums and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
00010244	6.2	63	101
00010246	6.25	63	101
00010248	6.3	63	101
00010252	6.4	63	101
00010256	6.5	63	101
00010260	6.6	63	101
00010263	6.7	63	101
00010268	6.8	69	109
00010275	6.9	69	109
00010276	7.0	69	109
00010279	7.1	69	109
00010284	7.2	69	109
00010287	7.3	69	109
00010291	7.4	69	109
00010295	7.5	69	109
00010299	7.6	75	117
00010303	7.7	75	117
00010307	7.8	75	117
00010311	7.9	75	117
00010315	8.0	75	117
00010319	8.1	75	117

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
00010322	8.2	75	117
00010327	8.3	75	117
00010331	8.4	75	117
00010335	8.5	75	117
00010338	8.6	75	117
00010342	8.7	81	125
00010346	8.8	81	125
00010350	8.9	81	125
00010354	9.0	81	125
00010358	9.1	81	125
00010362	9.2	81	125
00010366	9.3	81	125
00010370	9.4	81	125
00010373	9.5	81	125
00010378	9.6	87	133
00010382	9.7	87	133
00010386	9.8	87	133
00010389	9.9	87	133
00010394	10.0	87	133
00010398	10.1	87	133
00010402	10.2	87	133

●: Excellent **O**: Good

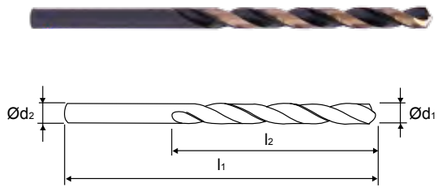
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				O	O								O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS JOBBER DRILL DIN338 TWO TONE

DIN 338 | HSS | N - 33° | h8 | 135°

Series No. 0001

▶ cutting conditions : p.226



Point Geometry
2.5mm to 13.0mm - Split point.
Above 13.0mm - Notched thinned point.

Surface treatment
Below 5.0mm - Bright or straw colour.
5.0mm to 13.0mm - Steam tempered/straw colour (two tone).
Above 13.0mm - Straw colour

Application
Drilling steels, cast irons, soft aluminiums and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
00010405	10.3	87	133
00010409	10.4	87	133
00010414	10.5	87	133
00010417	10.6	87	133
00010421	10.7	94	142
00010425	10.8	94	142
00010429	10.9	94	142
00010433	11.0	94	142
00010437	11.1	94	142
00010441	11.2	94	142
00010445	11.3	94	142
00010449	11.4	94	142
00010452	11.5	94	142
00010457	11.6	94	142
00010461	11.7	94	142
00010465	11.8	94	142
00010468	11.9	101	151
00010472	12.0	101	151
00010476	12.1	101	151
00010480	12.2	101	151
00010483	12.3	101	151

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
00010488	12.4	101	151
00010492	12.5	101	151
00010496	12.6	101	151
00010499	12.7	101	151
00010504	12.8	101	151
00010508	12.9	101	151
00010512	13.0	101	151
00010516	13.1	101	151
00010524	13.3	108	160
00010528	13.4	108	160
00010532	13.5	108	160
00010535	13.6	108	160
00010539	13.7	108	160
00010543	13.8	108	160
00010551	14.0	108	160
00010571	14.5	114	169
00010630	16.0	120	178
00010650	16.5	125	184
00010669	17.0	125	184
00010689	17.5	130	191

●: Excellent **O**: Good

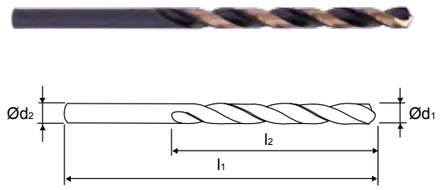
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				O	O								O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS JOBBER DRILL BS328 TWO TONE

BS328 | HSS | N -30° | h8 | 135°

Series No. 0000

▶ cutting conditions : p.226



Point Geometry
3/32” to 1/2” - Split point.
Above 1/2” - Notched thinned point.

Surface treatment
Below 3/16” - Bright or straw colour.
3/16” to 1/2” - Steam tempered/straw colour (two tone).
Above1/2” - Straw colour.

Application
Drilling steels, cast irons, soft aluminiums and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
00000094	3/32	1.1/4	2.1/4
00000109	7/64	1.1/2	2.5/8
00000125	1/8	1.5/8	2.3/4
00000140	9/64	1.3/4	2.7/8
00000156	5/32	2”	3.1/8
00000172	11/64	2.1/8	3.1/4
00000188	3/16	2.5/16	3.1/2
00000203	13/64	2.7/16	3.5/8
00000219	7/32	2.1/2	3.3/4
00000234	15/64	2.5/8	3.7/8
00000250	1/4	2.3/4	4”
00000265	17/64	2.7/8	4.1/8
00000281	9/32	2.15/16	4.1/4
00000297	19/64	3.1/16	4.3/8
00000312	5/16	3.3/16	4.1/2
00000328	21/64	3.5/16	4.5/8
00000343	11/32	3.7/16	4.3/4
00000359	23/64	3.1/2	4.7/8
00000375	3/8	3.5/8	5”
00000390	25/64	3.3/4	5.1/8

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
00000406	13/32	3.7/8	5.1/4
00000422	27/64	3.15/16	5.3/8
00000438	7/16	4.1/16	5.1/2
00000453	29/64	4.3/16	5.5/8
00000469	15/32	4.5/16	5.3/4
00000484	31/64	4.3/8	5.7/8
00000500	1/2	4.1/2	6”
00000562	9/16	4.9/16	6.3/4

●: Excellent **O**: Good

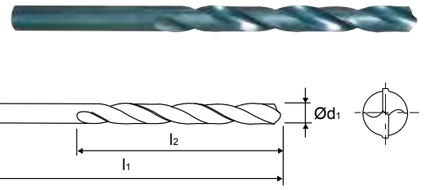
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				O	O								O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS JOBBER DRILL DIN338

DIN 338 | HSS | N 20~30° | h8 | 118°

Series No. 820801

▶ cutting conditions : p.226



Surface treatment
Steam Tempered (Black Oxide Finish)
Bright Finish under 2.0mm

Application
Drilling steels, cast irons, soft aluminiums and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208010100	1.0	12	34
8208010105	1.05	12	34
8208010110	1.1	14	36
8208010115	1.15	14	36
8208010120	1.2	16	38
8208010125	1.25	16	36
8208010130	1.3	16	38
8208010135	1.35	18	40
8208010140	1.4	18	40
8208010145	1.45	18	40
8208010150	1.5	18	40
8208010155	1.55	20	43
8208010160	1.6	20	43
8208010165	1.65	20	43
8208010170	1.7	20	43
8208010175	1.75	22	46
8208010180	1.8	22	46
8208010185	1.85	22	46
8208010190	1.9	22	46
8208010195	1.95	24	49
8208010200	2.0	24	49
8208010205	2.05	24	49
8208010210	2.1	24	49
8208010215	2.15	27	53
8208010220	2.2	27	53
8208010225	2.25	27	53
8208010230	2.3	27	53
8208010235	2.35	27	53
8208010240	2.4	30	57
8208010245	2.45	30	57
8208010250	2.5	30	57
8208010255	2.55	30	57

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208010260	2.6	30	57
8208010265	2.65	30	57
8208010270	2.7	33	61
8208010275	2.75	33	61
8208010280	2.8	33	61
8208010285	2.85	33	61
8208010290	2.9	33	61
8208010295	2.95	33	61
8208010300	3.0	33	61
8208010305	3.05	36	65
8208010310	3.1	36	65
8208010315	3.15	36	65
8208010320	3.2	36	65
8208010325	3.25	36	65
8208010330	3.3	36	65
8208010335	3.35	36	65
8208010340	3.4	39	70
8208010345	3.45	39	70
8208010350	3.5	39	70
8208010355	3.55	39	70
8208010360	3.6	39	70
8208010365	3.65	39	70
8208010370	3.7	39	70
8208010375	3.75	39	70
8208010380	3.8	43	75
8208010385	3.85	43	75
8208010390	3.9	43	75
8208010395	3.95	43	75
8208010400	4.0	43	75
8208010405	4.05	43	75
8208010410	4.1	43	75
8208010415	4.15	43	75

●: Excellent **O**: Good

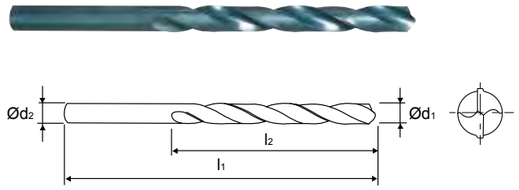
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				o	o								o	o
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
o	o				o					o	o	o			

HSS JOBBER DRILL DIN338

DIN 338 | HSS | N 20~30° | h8 | 118°

Series No. 820801

▶ cutting conditions : p.226



Surface treatment
Steam Tempered (Black Oxide Finish)
Bright Finish under 2.0mm

Application
Drilling steels, cast irons, soft aluminiums and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208010420	4.2	43	75
8208010425	4.25	43	75
8208010430	4.3	47	80
8208010435	4.35	47	80
8208010440	4.4	47	80
8208010445	4.45	47	80
8208010450	4.5	47	80
8208010455	4.55	47	80
8208010460	4.6	47	80
8208010465	4.65	47	80
8208010470	4.7	47	80
8208010475	4.75	47	80
8208010480	4.8	52	86
8208010485	4.85	52	86
8208010490	4.9	52	86
8208010495	4.95	52	86
8208010500	5.0	52	86
8208010505	5.05	52	86
8208010510	5.1	52	86
8208010515	5.15	52	86
8208010520	5.2	52	86
8208010525	5.25	52	86
8208010530	5.3	52	86
8208010535	5.35	57	93
8208010540	5.4	57	93
8208010545	5.45	57	93
8208010550	5.5	57	93
8208010555	5.55	57	93
8208010560	5.6	57	93
8208010565	5.65	57	93
8208010570	5.7	57	93
8208010575	5.75	57	93

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208010580	5.8	57	93
8208010585	5.85	57	93
8208010590	5.9	57	93
8208010595	5.95	57	93
8208010600	6.0	57	93
8208010605	6.05	63	101
8208010610	6.1	63	101
8208010615	6.15	63	101
8208010620	6.2	63	101
8208010625	6.25	63	101
8208010630	6.3	63	101
8208010635	6.35	63	101
8208010640	6.4	63	101
8208010645	6.45	63	101
8208010650	6.5	63	101
8208010655	6.55	63	101
8208010660	6.6	63	101
8208010665	6.65	63	101
8208010670	6.7	63	101
8208010675	6.75	69	109
8208010680	6.8	69	109
8208010685	6.85	69	109
8208010690	6.9	69	109
8208010695	6.95	69	109
8208010700	7.0	69	109
8208010705	7.05	69	109
8208010710	7.1	69	109
8208010715	7.15	69	109
8208010720	7.2	69	109
8208010725	7.25	69	109
8208010730	7.3	69	109
8208010735	7.35	69	109

●: Excellent **O**: Good

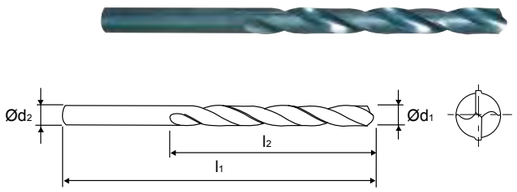
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				o	o								o	o
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
o	o				o					o	o	o			

HSS JOBBER DRILL DIN338

DIN 338 | HSS | N 20~30° | h8 | 118°

Series No. 820801

▶ cutting conditions : p.226



Surface treatment
Steam Tempered (Black Oxide Finish)
Bright Finish under 2.0mm

Application
Drilling steels, cast irons, soft aluminiums and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208010740	7.4	69	109
8208010745	7.45	69	109
8208010750	7.5	69	109
8208010755	7.55	75	117
8208010760	7.6	75	117
8208010765	7.65	75	117
8208010770	7.7	75	117
8208010775	7.75	75	117
8208010780	7.8	75	117
8208010785	7.85	75	117
8208010790	7.9	75	117
8208010795	7.95	75	117
8208010800	8.0	75	117
8208010810	8.1	75	117
8208010820	8.2	75	117
8208010825	8.25	75	117
8208010830	8.3	75	117
8208010840	8.4	75	117
8208010850	8.5	75	117
8208010860	8.6	81	125
8208010870	8.7	81	125
8208010875	8.75	81	125
8208010880	8.8	81	125
8208010890	8.9	81	125
8208010900	9.0	81	125
8208010910	9.1	81	125
8208010920	9.2	81	125
8208010925	9.25	81	125
8208010930	9.3	81	125
8208010940	9.4	81	125
8208010950	9.5	81	125
8208010960	9.6	87	133

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208010970	9.7	87	133
8208010975	9.75	87	133
8208010980	9.8	87	133
8208010990	9.9	87	133
8208011000	10.0	87	133
8208011010	10.1	87	133
8208011020	10.2	87	133
8208011025	10.25	87	133
8208011030	10.3	87	133
8208011040	10.4	87	133
8208011050	10.5	87	133
8208011060	10.6	87	133
8208011070	10.7	94	142
8208011075	10.75	94	142
8208011080	10.8	94	142
8208011090	10.9	94	142
8208011100	11.0	94	142
8208011110	11.1	94	142
8208011120	11.2	94	142
8208011125	11.25	94	142
8208011130	11.3	94	142
8208011140	11.4	94	142
8208011150	11.5	94	142
8208011160	11.6	94	142
8208011170	11.7	94	142
8208011175	11.75	94	142
8208011180	11.8	94	142
8208011190	11.9	101	151
8208011200	12.0	101	151
8208011210	12.1	101	151
8208011220	12.2	101	151
8208011225	12.25	101	151

●: Excellent **O**: Good

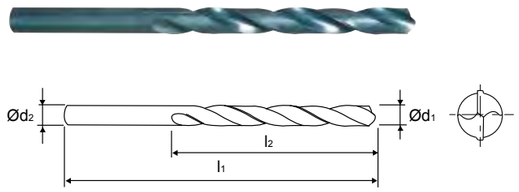
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				O	O								O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS JOBBER DRILL DIN338

DIN 338 | HSS | N 20~30° | h8 | 118°

Series No. 820801

▶ cutting conditions : p.226



Surface treatment
Steam Tempered (Black Oxide Finish)
Bright Finish under 2.0mm

Application
Drilling steels, cast irons, soft aluminiums and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208011230	12.3	101	151
8208011240	12.4	101	151
8208011250	12.5	101	151
8208011260	12.6	101	151
8208011270	12.7	101	151
8208011275	12.75	101	151
8208011280	12.8	101	151
8208011290	12.9	101	151
8208011300	13.0	101	151
8208011325	13.25	108	160
8208011350	13.5	108	160
8208011375	13.75	108	160
8208011400	14.0	108	160
8208011425	14.25	114	169
8208011450	14.5	114	169
8208011475	14.75	114	169
8208011500	15.0	114	169
8208011525	15.25	120	178
8208011550	15.5	120	178

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208011575	15.75	120	178
8208011600	16.0	120	178
8208011625	16.25	125	184
8208011650	16.5	125	184
8208011675	16.75	125	184
8208011700	17.0	125	184
8208011725	17.25	130	191
8208011750	17.5	130	191
8208011775	17.75	130	191
8208011800	18.0	130	191
8208011825	18.25	135	198
8208011850	18.5	135	198
8208011875	18.75	135	198
8208011900	19.0	135	198
8208011925	19.25	140	205
8208011950	19.5	140	205
8208011975	19.75	140	205
8208012000	20.0	140	205

●: Excellent **O**: Good

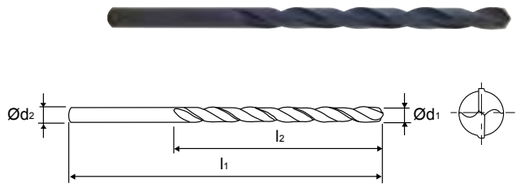
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				O	O								O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS LONG SERIES DRILLS

HSS | DIN 340 | 118° | STEAM TEMP

Series No. 820901

▶ cutting conditions : p.226



Surface treatment
Steam Tempered (Black Oxide Finish)
Bright Finish under 2.0mm

Application
Drilling steels, stainless steels, cast irons, titanium, aluminium and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8209010100	1.0	33	56
8209010120	1.2	41	65
8209010130	1.3	41	65
8209010140	1.4	45	70
8209010150	1.5	45	70
8209010160	1.6	50	76
8209010170	1.7	50	76
8209010180	1.8	53	80
8209010190	1.9	53	80
8209010200	2.0	56	85
8209010210	2.1	56	85
8209010220	2.2	59	90
8209010230	2.3	59	90
8209010240	2.4	62	95
8209010250	2.5	62	95
8209010260	2.6	62	95
8209010270	2.7	66	100
8209010280	2.8	66	100
8209010290	2.9	66	100
8209010300	3.0	66	100
8209010310	3.1	69	106
8209010320	3.2	69	106
8209010330	3.3	69	106
8209010340	3.4	73	112
8209010350	3.5	73	112
8209010360	3.6	73	112
8209010370	3.7	73	112
8209010380	3.8	78	119
8209010390	3.9	78	119
8209010400	4.0	78	119
8209010410	4.1	78	119
8209010420	4.2	78	119

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8209010430	4.3	82	126
8209010440	4.4	82	126
8209010450	4.5	82	126
8209010460	4.6	82	126
8209010470	4.7	82	126
8209010480	4.8	87	132
8209010490	4.9	87	132
8209010500	5.0	87	132
8209010510	5.1	87	132
8209010520	5.2	87	132
8209010530	5.3	87	132
8209010540	5.4	91	139
8209010550	5.5	91	139
8209010560	5.6	91	139
8209010570	5.7	91	139
8209010580	5.8	91	139
8209010590	5.9	91	139
8209010600	6.0	91	139
8209010610	6.1	97	148
8209010620	6.2	97	148
8209010630	6.3	97	148
8209010640	6.4	97	148
8209010650	6.5	97	148
8209010660	6.6	97	148
8209010670	6.7	97	148
8209010680	6.8	102	156
8209010690	6.9	102	156
8209010700	7.0	102	156
8209010710	7.1	102	156
8209010720	7.2	102	156
8209010730	7.3	102	156
8209010740	7.4	102	156

●: Excellent **O**: Good

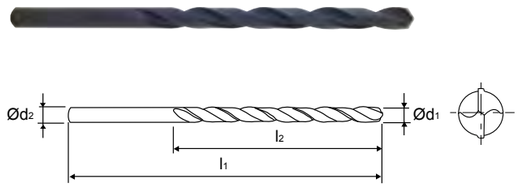
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				O	O								O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS LONG SERIES DRILLS

HSS | DIN 340 | 118° | STEAM TEMP

Series No. 820901

▶ cutting conditions : p.226



Surface treatment
Steam Tempered (Black Oxide Finish)
Bright Finish under 2.0mm

Application
Drilling steels, stainless steels, cast irons, titanium, aluminium and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8209010750	7.5	102	156
8209010760	7.6	109	165
8209010770	7.7	109	165
8209010780	7.8	109	165
8209010790	7.9	109	165
8209010800	8.0	109	165
8209010810	8.1	109	165
8209010820	8.2	109	165
8209010830	8.3	109	165
8209010840	8.4	109	165
8209010850	8.5	109	165
8209010860	8.6	115	175
8209010870	8.7	115	175
8209010880	8.8	115	175
8209010890	8.9	115	175
8209010900	9.0	115	175
8209010910	9.1	115	175
8209010920	9.2	115	175
8209010930	9.3	115	175
8209010940	9.4	115	175
8209010950	9.5	115	175
8209010960	9.6	121	184
8209010970	9.7	121	184
8209010980	9.8	121	184
8209010990	9.9	121	184
8209011000	10.0	121	184
8209011010	10.1	121	184
8209011020	10.2	121	184
8209011030	10.3	121	184
8209011040	10.4	121	184
8209011050	10.5	121	184
8209011060	10.6	121	184

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8209011070	10.7	128	195
8209011080	10.8	128	195
8209011090	10.9	128	195
8209011100	11.0	128	195
8209011110	11.1	128	195
8209011120	11.2	128	195
8209011130	11.3	128	195
8209011140	11.4	128	195
8209011150	11.5	128	195
8209011160	11.6	128	195
8209011170	11.7	128	195
8209011180	11.8	128	195
8209011190	11.9	134	205
8209011200	12.0	134	205
8209011210	12.1	134	205
8209011202	12.2	134	205
8209011203	12.3	134	205
8209011204	12.4	134	205
8209011250	12.5	134	205
8209011260	12.6	134	205
8209011270	12.7	134	205
8209011280	12.8	134	205
8209011290	12.9	134	205
8209011300	13.0	134	205
8209011400	14.0	140	214
8209011500	15.0	144	205
8209011600	16.0	149	227
8209011700	17.0	154	235
8209011800	18.0	158	241
8209011900	19.0	162	247
8209012000	20.0	166	254

●: Excellent **O**: Good

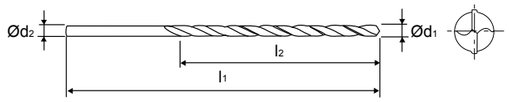
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				O	O								O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS EXTRA LONG SERIES DRILLS

ISO 3292 | HSS | N~33° | h8 | 118°

Series No. 0162

▶ cutting conditions : p.226



Surface treatment
Bright finish.

Application
Designed for drilling deep holes or deeply located holes.
Drilling steels, stainless steels, cast irons, titanium, aluminium and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
01620055	1.4	100	160
01620058	1.5	80	125
01620059	1.5	100	160
01620071	1.8	100	160
01620079	2.0	80	125
01620080	2.0	100	160
01620087	2.2	100	160
01620098	2.5	80	125
01620099	2.5	100	160
01620112	3.0	100	160
01620113	3.0	150	200
01620114	3.0	200	250
01620122	3.3	100	160
01620132	3.5	100	160
01620133	3.5	150	200
01620134	3.5	200	250
01620142	3.7	100	160
01620162	4.0	100	160
01620163	4.0	150	200
01620164	4.0	200	250
01620165	4.0	250	315

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
01620172	4.5	100	160
01620173	4.5	150	200
01620174	4.5	200	250
01620175	4.5	250	315
01620192	5.0	100	160
01620193	5.0	150	200
01620194	5.0	200	250
01620195	5.0	250	315
01620196	5.0	300	400
01620213	5.5	150	200
01620214	5.5	200	250
01620215	5.5	250	315
01620243	6.0	150	200
01620244	6.0	200	250
01620245	6.0	250	315
01620246	6.0	300	400
01620253	6.5	150	200
01620254	6.5	200	250
01620255	6.5	250	315

●: Excellent **O**: Good

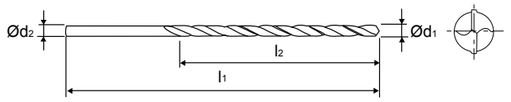
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS EXTRA LONG SERIES DRILLS

ISO 3292 | HSS | N~33° | h8 | 118°

Series No. 0162

▶ cutting conditions : p.226



Surface treatment
Bright finish

Application
Designed for drilling deep holes or deeply located holes.
Drilling steels, stainless steels, cast irons, titanium, aluminium and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
01620273	7.0	150	200
01620274	7.0	200	250
01620275	7.0	250	315
01620293	7.5	150	200
01620294	7.5	200	250
01620295	7.5	250	315
01620314	8.0	200	250
01620315	8.0	250	315
01620316	8.0	300	400
01620334	8.5	200	250
01620335	8.5	250	315
01620354	9.0	200	250
01620355	9.0	250	315
01620356	9.0	300	400
01620374	9.5	200	250
01620375	9.5	250	315

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
01620394	10.0	200	250
01620395	10.0	250	315
01620396	10.0	300	400
01620414	10.5	200	250
01620415	10.5	250	315
01620416	10.5	300	400
01620424	11.0	200	250
01620425	11.0	250	315
01620426	11.0	300	400
01620474	12.0	200	250
01620475	12.0	250	315
01620476	12.0	300	400
01620515	13.0	250	315
01620516	13.0	300	400
01620555	14.0	250	315
01620556	14.0	300	400

●: Excellent **O**: Good

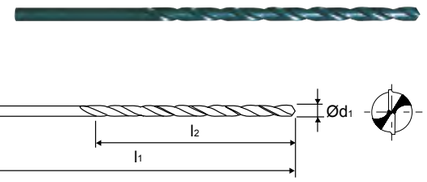
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS EXTRA LONG SERIES DRILLS

DIN 1869/1 | HSS | N 20~30° | h8 | 118°

Series No. 821001

▶ cutting conditions : p.226



Surface treatment
Steam Tempered (Black Oxide Finish)

Application
Designed for drilling deep holes or deeply located holes.
Drilling steels, stainless steels, cast irons, titanium, aluminium and plastic.

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8210010200	2.0	85	125
8210010250	2.5	95	140
8210010300	3.0	100	150
8210010350	3.5	115	165
8210010400	4.0	120	175
8210010450	4.5	125	185
8210010500	5.0	135	195
8210010550	5.5	140	205
8210010600	6.0	140	205
8210010650	6.5	150	215
8210010700	7.0	155	225
8210010750	7.5	155	225

EUROPA CODE	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8210010800	8.0	165	240
8210010850	8.5	165	240
8210010900	9.0	175	250
8210010950	9.5	175	250
8210011000	10.0	185	265
8210011050	10.5	185	265
8210011100	11.0	195	280
8210011150	11.5	195	280
8210011200	12.0	205	295
8210011250	12.5	205	295
8210011300	13.0	205	295

●: Excellent **O**: Good

P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●				O	O								O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

DRILL SETS

820801SET4 820801SET3 820801SET1 10220025 810504SET1

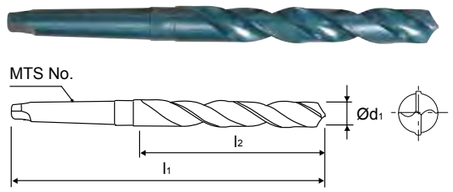
EUROPA CODE	Set No.	No. of Drills	Diameter Range	Increments	Drill Style	Drill Type
810504SET2	19M	19	1.0 - 10.0	0.5	HSS GOLDEX	JOBBER DRILLS
810504SET1	25M	25	1.0 - 13.0	0.5	HSS GOLDEX	JOBBER DRILLS
810505SET2	19M	19	1.0 - 10.0	0.5	HSS-E GOLDEX	JOBBER DRILLS
810505SET1	25M	25	1.0 - 13.0	0.5	HSS-E GOLDEX	JOBBER DRILLS
10220025	25M	25	1.0 - 13.0	0.5	TWO TONE	JOBBER DRILLS
820801SET2	19M	19	1.0 - 10.0	0.5	HSS	JOBBER DRILLS
820801SET1	25M	25	1.0 - 13.0	0.5	HSS	JOBBER DRILLS
820801SET3	M4	50	1.0 - 5.9	0.1	HSS	JOBBER DRILLS
820801SET4	M5	41	6.0 - 10.0	0.1	HSS	JOBBER DRILLS
820702SET2	19M	19	1.0 - 10.0	0.5	HSSCo	JOBBER DRILLS
820702SET1	25M	25	1.0 - 13.0	0.5	HSSCo	JOBBER DRILLS

HSS MTS DRILL DIN345

DIN 345 | HSS | N 20~30° | 1~5 | h8 | 118°

Series No. 821601

▶ cutting conditions : p.227



Surface treatment
Steam Tempered (Black Oxide Finish)

Application
Drilling steels, stainless steels, cast irons, titanium, aluminium and plastic.

EUROPA CODE	O.D d_1	FL l_2	OAL l_1	MTS No.
8216011300	13.0	101	182	1
8216011320	13.2	101	182	1
8216011325	13.25	108	189	1
8216011350	13.5	108	189	1
8216011375	13.75	108	189	1
8216011380	13.8	108	189	1
8216011400	14.0	108	189	1
8216011425	14.25	114	212	2
8216011450	14.5	114	212	2
8216011475	14.75	114	212	2
8216011500	15.0	114	212	2
8216011525	15.25	120	218	2
8216011550	15.5	120	218	2
8216011575	15.75	120	218	2
8216011600	16.0	120	218	2
8216011625	16.25	125	223	2
8216011650	16.5	125	223	2
8216011675	16.75	125	223	2
8216011700	17.0	125	223	2
8216011725	17.25	130	228	2
8216011750	17.5	130	228	2
8216011775	17.75	130	228	2
8216011800	18.0	130	228	2
8216011825	18.25	135	233	2
8216011850	18.5	135	233	2
8216011875	18.75	135	233	2
8216011900	19.0	135	233	2
8216011925	19.25	140	238	2
8216011950	19.5	140	238	2
8216011975	19.75	140	238	2
8216012000	20.0	140	238	2
8216012025	20.25	145	243	2

EUROPA CODE	O.D d_1	FL l_2	OAL l_1	MTS No.
8216012050	20.5	145	243	2
8216012075	20.75	145	243	2
8216012100	21.0	145	243	2
8216012125	21.25	150	248	2
8216012150	21.5	150	248	2
8216012175	21.75	150	248	2
8216012200	22.0	150	248	2
8216012225	22.25	150	248	2
8216012250	22.5	155	253	2
8216012275	22.75	155	253	2
8216012300	23.0	155	253	2
8216012325	23.25	155	276	3
8216012350	23.5	155	276	3
8216012375	23.75	160	281	3
8216012400	24.0	160	281	3
8216012425	24.25	160	281	3
8216012450	24.5	160	281	3
8216012475	24.75	160	281	3
8216012500	25.0	160	281	3
8216012525	25.25	165	286	3
8216012550	25.5	165	286	3
8216012575	25.75	165	286	3
8216012600	26.0	165	286	3
8216012625	26.25	165	286	3
8216012650	26.5	165	286	3
8216012675	26.75	170	291	3
8216012700	27.0	170	291	3
8216012725	27.25	170	291	3
8216012750	27.5	170	291	3
8216012775	27.75	170	291	3
8216012800	28.0	170	291	3
8216012825	28.25	175	296	3

●: Excellent **O**: Good

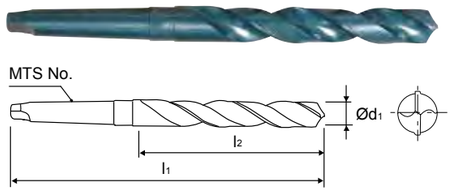
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS MTS DRILL DIN345

DIN 345 | HSS | N 20~30° | 1~5 | h8 | 118°

Series No. 821601

▶ cutting conditions : p.227



Surface treatment
Steam Tempered (Black Oxide Finish)

Application
Drilling steels, stainless steels, cast irons, titanium, aluminium and plastic.

EUROPA CODE	O.D d_1	FL l_2	OAL l_1	MTS No.
8216012850	28.5	175	296	3
8216012875	28.75	175	296	3
8216012900	29.0	175	296	3
8216012925	29.25	175	296	3
8216012950	29.5	175	296	3
8216012975	29.75	175	296	3
8216013000	30.0	175	296	3
8216013025	30.25	180	301	3
8216013050	30.5	180	301	3
8216013075	30.75	180	301	3
8216013100	31.0	180	301	3
8216013125	31.25	180	301	3
8216013150	31.5	180	301	3
8216013175	31.75	185	306	3
8216013200	32.0	185	334	4
8216013225	32.5	185	334	4
8216013300	33.0	185	334	4
8216013350	33.5	185	334	4
8216013400	34.0	190	339	4
8216013450	34.5	190	339	4
8216013500	35.0	190	339	4
8216013550	35.5	190	339	4
8216013600	36.0	195	344	4
8216013650	36.5	195	344	4
8216013700	37.0	195	344	4
8216013750	37.5	195	344	4
8216013800	38.0	200	349	4
8216013850	38.5	200	349	4
8216013900	39.0	200	349	4
8216013950	39.5	200	349	4
8216014000	40.0	200	349	4

EUROPA CODE	O.D d_1	FL l_2	OAL l_1	MTS No.
8216014050	40.5	205	354	4
8216014100	41.0	205	354	4
8216014150	41.5	205	354	4
8216014200	42.0	205	354	4
8216014250	42.5	205	354	4
8216014300	43.0	210	359	4
8216014350	43.5	210	359	4
8216014400	44.0	210	359	4
8216014450	44.5	210	359	4
8216014500	45.0	210	359	4
8216014550	45.5	215	364	4
8216014600	46.0	215	364	4
8216014650	46.5	215	364	4
8216014700	47.0	215	364	4
8216014750	47.5	215	364	4
8216014800	48.0	220	369	4
8216014850	48.5	220	369	4
8216014900	49.0	220	369	4
8216014950	49.5	220	369	4
8216015000	50.0	220	369	4
8216015050	50.5	225	374	4
8216015100	51.0	225	412	5
8216015200	52.0	225	412	5
8216015300	53.0	225	412	5
8216015400	54.0	230	417	5
8216015500	55.0	230	417	5
8216015600	56.0	230	417	5
8216015700	57.0	235	422	5
8216015800	58.0	235	422	5
8216015900	59.0	235	422	5
8216016000	60.0	235	422	5

●: Excellent **O**: Good

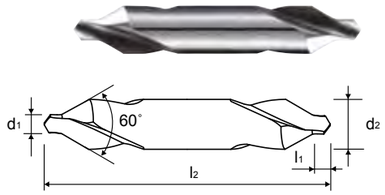
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS CENTRE DRILL

DIN 333 | HSS EX | h8 | k12 | 120°

Series No. 810334

▶ cutting conditions : p.227



FORM A (60°)

EUROPA CODE	Pilot Dia. d_1	Body Dia. d_2	Pilot Length l_1	Overall l_2
8103340050	0.5	3.15	0.8	25.0
8103340080	0.8	3.15	1.1	25.0
8103340100	1.0	3.15	1.3	31.5
8103340125	1.25	3.15	1.6	31.5
8103340160	1.6	4.0	2.0	35.5
8103340200	2.0	5.0	2.5	40.0
8103340250	2.5	6.3	3.1	45.0
8103340315	3.15	8.0	3.9	50.0
8103340400	4.0	10.0	5.0	56.0
8103340500	5.0	12.5	6.3	63.0
8103340630	6.3	16.0	8.0	71.0

▶ Under 1.0mm : Single End

●: Excellent **O**: Good

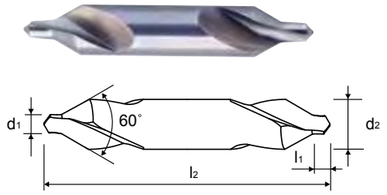
P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

HSS CENTRE DRILL

BS328 | HSS | 118° | Bright

Series No. 888301

▶ cutting conditions : p.227



EUROPA CODE	BS	Pilot Dia. d_1	Body Dia. d_2	Pilot Length l_1 max	Pilot Length l_1 min	Overall l_2
8883010010	BS1	3/64"	1/8"	5/64"	1/16"	1.1/2"
8883010020	BS2	1/16"	3/16"	3/32"	5/64"	1.3/4"
8883010030	BS3	3/32"	1/4"	5/32"	1/8"	2"
8883010040	BS4	1/8"	5/16"	3/16"	5/32"	2.1/4"
8883010050	BS5	3/16"	7/16"	9/32"	1/4"	2.1/2"
8883010060	BS6	1/4"	5/8"	3/8"	5/16"	3"
8883010070	BS7	5/16"	3/4"	15/32"	13/32"	3.1/2"

●: Excellent **O**: Good

P		H	M		K		S			N				O	
11	12	15	21	22	31	32	41	42	43	61	62	63	64	81	82
●	●		O	O	O	O	O	O						O	O
13	14	16	23		33	34	51	52	53	71	72	73	74	83	84
O	O				O					O	O	O			

EUROPA TOOL

Clarkson

sborn

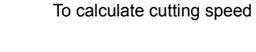
HSS DRILLS
CUTTING DATA

HSS & HSSCo CUTTING CONDITION

810504, 820504, 810505 (Goldex)

Material Group		v_c (m/min)	f_n (mm/rev)									
			ø1.0 -1.9	ø2.0 -2.9	ø3.0 -3.9	ø4.0 -4.9	ø5.0 -5.9	ø6.0 -6.9	ø7.0 -7.9	ø8.0 -9.9	ø10.0 -11.9	ø12.0 -13.5
P	11 12	**40 (35-45)**	0.02	0.06	0.08	0.11	0.11	0.13	0.15	0.18	0.22	0.22
P	13 14	**23 (20-25)**	0.02	0.06	0.08	0.10	0.10	0.12	0.14	0.15	0.18	0.20
M	21 22	**23 (20-25)**	0.02	0.06	0.08	0.10	0.10	0.12	0.14	0.15	0.18	0.20
S	41 42	**23 (20-25)**	0.02	0.06	0.08	0.09	0.10	0.12	0.14	0.15	0.18	0.20
N	71 72 73	**90 (85-95)**	0.02	0.06	0.10	0.11	0.12	0.14	0.16	0.18	0.23	0.23

811505 (Goldex Worm Pattern)



Material Group		v_c (m/min)	f_n (mm/rev)									
			ø1.0 -1.9	ø2.0 -2.9	ø3.0 -3.9	ø4.0 -4.9	ø5.0 -5.9	ø6.0 -6.9	ø7.0 -7.9	ø8.0 -9.9	ø10.0 -11.9	ø12.0 -13.5
P	11 12	**25 (23-28)**	0.02	0.06	0.08	0.09	0.10	0.12	0.14	0.15	0.18	0.20
P	13 14	**18 (15-20)**	0.02	0.06	0.08	0.10	0.10	0.12	0.14	0.15	0.18	0.20
M	21 22	**18 (15-20)**	0.02	0.06	0.08	0.10	0.10	0.12	0.14	0.15	0.18	0.20
K	31 32	**45 (40-50)**	0.02	0.07	0.11	0.14	0.14	0.18	0.20	0.22	0.28	0.28
K	33	**28 (25-30)**	0.02	0.07	0.11	0.14	0.14	0.18	0.20	0.22	0.28	0.28
S	41 42	**18 (15-20)**	0.02	0.06	0.08	0.09	0.10	0.12	0.14	0.15	0.18	0.20
N	71 72 73	**70 (65-75)**	0.02	0.06	0.10	0.11	0.12	0.14	0.16	0.18	0.23	0.23

v_c - cutting speed (m/min)
n - RPM (rev/min)
f_n - feed rate (mm/rev)
ø - drill diameter (mm)

To calculate RPM from cutting speed: $n = \frac{v_c * 1000}{\pi * ø}$

To calculate cutting speed from RPM: $v_c = \frac{n * \pi * ø}{1000}$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

HSS & HSSCo CUTTING CONDITION

820502, 820702, 820902 (HSSCo Stub, Jobber, Long Series)

Material Group		v_c (m/min)	f_n (mm/rev)									
			ø1.0 -1.9	ø2.0 -2.9	ø3.0 -3.9	ø4.0 -4.9	ø5.0 -5.9	ø6.0 -6.9	ø7.0 -7.9	ø8.0 -9.9	ø10.0 -11.9	ø12.0 -13.5
P	11 12	**25 (22-27)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160
P	13 14	**22 (20-25)**	0.009	0.020	0.045	0.050	0.060	0.075	0.095	0.125	0.140	0.150
M	21 22	**18 (15-20)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160
K	31 32 33	**18 (15-20)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160
S	41 42	**10 (8-12)**	0.08	0.020	0.025	0.031	0.038	0.045	0.060	0.075	0.090	0.100
N	71 72 73	**48 (45-50)**	0.020	0.038	0.063	0.070	0.076	0.120	0.160	0.180	0.200	0.225
O	81 82	**23 (22-25)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160

Material Group		v_c (m/min)	f_n (mm/rev)								
			ø14.0 -15.5	ø16.0 -17.5	ø18.0 -19.5	ø20.0 -21.5	ø22.0 -23.5	ø24.0 -25.5	ø26.0 -27.5	ø28.0 -29.5	ø30.0 -31.0
P	11 12	**25 (22-27)**	0.180	0.200	0.230	0.240	0.250	0.260	0.270	0.275	0.280
P	13 14	**22 (20-25)**	0.170	0.210	0.220	0.230	0.240	0.250	0.260	0.265	0.270
M	21 22	**18 (15-20)**	0.180	0.200	0.230	0.240	0.250	0.260	0.270	0.275	0.280
K	31 32 33	**18 (15-20)**	0.180	0.200	0.230	0.240	0.250	0.260	0.270	0.275	0.280
S	41 42	**10 (8-12)**	0.110	0.120	0.130	0.140	0.150	0.160	0.170	0.175	0.180
N	71 72 73	**48 (45-50)**	0.250	0.275	0.300	0.325	0.350	0.360	0.370	0.375	0.380
O	81 82	**23 (22-25)**	0.180	0.200	0.230	0.240	0.250	0.260	0.270	0.275	0.280

v_c - cutting speed (m/min)
n - RPM (rev/min)
f_n - feed rate (mm/rev)
ø - drill diameter (mm)

To calculate RPM from cutting speed: $n = \frac{v_c * 1000}{\pi * ø}$

To calculate cutting speed from RPM: $v_c = \frac{n * \pi * ø}{1000}$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

HSS & HSSCo CUTTING CONDITION

820116, (HSSCo L/S Worm Pattern)

Material Group		vc (m/min)	fn (mm/rev)								
			ø2.0 -2.9	ø3.0 -3.9	ø4.0 -4.9	ø5.0 -5.9	ø6.0 -6.9	ø7.0 -7.9	ø8.0 -9.9	ø10.0 -11.9	ø12.0 -13.5
P	11 12 13 14	**15 (13-18)**	0.03	0.05	0.06	0.06	0.08	0.09	0.10	0.12	0.13
H	15	**10 (8-13)**	0.02	0.04	0.05	0.05	0.06	0.08	0.10	0.12	0.13
K	31 32	**22 (20-25)**	0.06	0.10	0.13	0.13	0.16	0.18	0.20	0.23	0.25
	33 34	**9 (7-12)**	0.05	0.08	0.10	0.10	0.13	0.15	0.17	0.20	0.22

820601, 0000, 0001, 820801, 820901, 821001, 0162 (HSS Stub, Two Tone, Jobber, Long Series, Extra Long Series)

Material Group		vc (m/min)	fn (mm/rev)												
			ø1.0 -1.9	ø2.0 -2.9	ø3.0 -3.9	ø4.0 -4.9	ø5.0 -5.9	ø6.0 -6.9	ø7.0 -7.9	ø8.0 -9.9	ø10.0 -11.9	ø12.0 -13.5	ø14.0 -15.5	ø16.0 -17.5	ø18.0 -19.5	ø20.0
P	11 12	**25 (22-27)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160	0.180	0.200	0.230	0.240
	13 14	**22 (20-25)**	0.009	0.020	0.045	0.050	0.060	0.075	0.095	0.125	0.140	0.150	0.170	0.210	0.220	0.230
M	21 22	**18 (15-20)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160	0.180	0.200	0.230	0.240
K	31 32 33	**18 (15-20)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160	0.180	0.200	0.230	0.240
S	41 42	**10 (8-12)**	0.08	0.020	0.025	0.031	0.038	0.045	0.060	0.075	0.090	0.100	0.110	0.120	0.130	0.140
N	71 72 73	**48 (45-50)**	0.020	0.038	0.063	0.070	0.076	0.120	0.160	0.180	0.200	0.225	0.250	0.275	0.300	0.325
O	81 82	**23 (22-25)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160	0.180	0.200	0.230	0.240

v_c - cutting speed (m/min)
n - RPM (rev/min)
f_n - feed rate (mm/rev)
ø - drill diameter (mm)

To calculate RPM from cutting speed: $n = \frac{v_c * 1000}{\pi * ø}$

To calculate cutting speed from RPM: $v_c = \frac{n * \pi * ø}{1000}$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.

HSS & HSSCo CUTTING CONDITION

821901, 821601 (Blacksmith, MTS)

Material Group		vc (m/min)	fn (mm/rev)												
			ø13.0 -15.5	ø16.0 -18.5	ø19.0 -21.5	ø22.0 -24.5	ø25.0 -28.5	ø28.0 -31.5	ø32.0 -35.5	ø36.0 -39.5	ø40.0 -43.5	ø44.0 -47.5	ø48.0 -51.5	ø52.0 -55.5	ø56.0 -59.5	ø60.0
P	11 12	**20 (18-22)**	0.17	0.20	0.23	0.24	0.25	0.26	0.28	0.30	0.31	0.32	0.33	0.35	0.38	0.40
	13 14	**15 (13-18)**	0.15	0.18	0.21	0.22	0.23	0.24	0.26	0.28	0.29	0.30	0.31	0.33	0.36	0.38
M	21 22	**18 (15-20)**	0.17	0.20	0.23	0.24	0.25	0.26	0.28	0.30	0.31	0.32	0.33	0.35	0.38	0.40
K	31 32 33	**18 (15-20)**	0.17	0.20	0.23	0.24	0.25	0.26	0.28	0.30	0.31	0.32	0.33	0.35	0.38	0.40
S	41 42	**10 (8-12)**	0.09	0.11	0.13	0.14	0.15	0.16	0.18	0.18	0.19	0.19	0.20	0.21	0.22	0.23
N	71 72 73	**45 (40-50)**	0.26	0.28	0.30	0.32	0.34	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.49	0.50
O	81 82	**22 (20-25)**	0.26	0.28	0.30	0.32	0.34	0.36	0.38	0.40	0.42	0.44	0.46	0.48	0.49	0.50

810334, 888301, 821402, 8224002 (Centre Drills, Spotting Drills)

Material Group		vc (m/min)	fn (mm/rev)													
			ø1.0 -1.9	ø2.0 -2.9	ø3.0 -3.9	ø4.0 -4.9	ø5.0 -5.9	ø6.0 -6.9	ø7.0 -7.9	ø8.0 -9.9	ø10.0 -11.9	ø12.0 -13.5	ø14.0 -15.5	ø16.0 -17.5	ø18.0 -19.5	ø20.0
P	11 12	**20 (25-25)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160	0.180	0.200	0.230	0.240
	13 14	**18 (15-20)**	0.009	0.020	0.045	0.050	0.060	0.075	0.095	0.125	0.140	0.150	0.170	0.210	0.220	0.230
M	21 22	**8 (6-10)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160	0.180	0.200	0.230	0.240
K	31 32 33	**8 (6-10)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160	0.180	0.200	0.230	0.240
S	41 42	**5 (4-6)**	0.08	0.020	0.025	0.031	0.038	0.045	0.060	0.075	0.090	0.100	0.110	0.120	0.130	0.140
N	71 72 73	**40 (40-45)**	0.020	0.038	0.063	0.070	0.076	0.120	0.160	0.180	0.200	0.225	0.250	0.275	0.300	0.325
O	81 82	**18 (15-20)**	0.010	0.025	0.050	0.055	0.063	0.080	0.100	0.130	0.145	0.160	0.180	0.200	0.230	0.240

v_c - cutting speed (m/min)
n - RPM (rev/min)
f_n - feed rate (mm/rev)
ø - drill diameter (mm)

To calculate RPM from cutting speed: $n = \frac{v_c * 1000}{\pi * ø}$

To calculate cutting speed from RPM: $v_c = \frac{n * \pi * ø}{1000}$

All recommendations are based on ideal machining conditions. Adjustments may need to be made according to your set-up. The recommendations for speeds, feeds and other parameters presented in this chart are nominal recommendations and should be considered only as good starting points.