

COBALT & HSS TWIST DRILL














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HIGH SPEED
STEEL

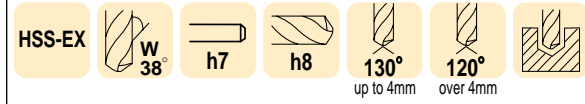


Europa Tool 7TH EDITION

COBALT & HSS TWIST DRILLS

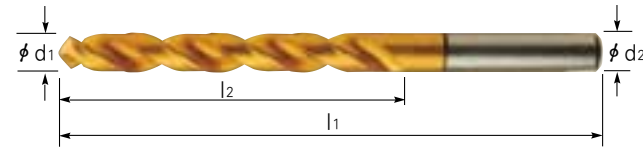
PRODUCTS	SERIES	DESCRIPTION	PAGE
<i>HPD-SUS TWIST DRILL FOR STAINLESS STEELS</i>			
	810434	JOBBER HSS-EX SUPERIOR TIN COATED	234 ~ 236
<i>HPD TWIST DRILL</i>			
	810205	JOBBER HSS-Co SUPERIOR TIN COATED	237 ~ 241
<i>WORM PATTERN COBALT DRILLS</i>			
	820016	JOBBER 5% COBALT HSS DIN338	242/243
	820116	LONG SERIES 5% COBALT HSS DIN340	244
<i>JOBBER DIN338 DRILLS</i>			
	820702	JOBBER 8% COBALT HSS	245/246
	820801	JOBBER HSS	247 ~ 249
	821116	JOBBER 5% COBALT HSS HEAVY DUTY	250
	821201	JOBBER SLOW SPIRAL (BRASS)	251
	821301	JOBBER QUICK SPIRAL (ALUMINIUM)	252
<i>LONG / EXTRA LONG STRAIGHT SHANK DRILLS</i>			
	820902	LONG SERIES 8% COBALT HSS DIN340	253
	821001	EXTRA LONG HSS DIN1869/1	254
<i>8% COBALT HSS NC SPOTTING DRILLS</i>			
	821402	8% COBALT HSS NC SPOTTING DRILLS 90°	255
	822402	8% COBALT HSS NC SPOTTING DRILLS 120°	255

HPD-SUS TWIST DRILLS JOBBER

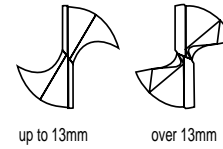


Series No. 810434

for Stainless Steels



$d_1 = d_2$



up to 13mm over 13mm

Application

Designed for 4D ~ 5D drilling in stainless steels, mild steels, aluminium, aluminium alloy, aluminium die cast, copper, copper alloy, etc.

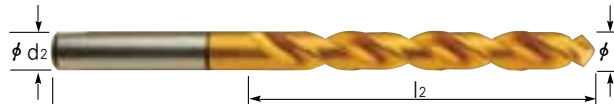
Advantage

High helix-sharp cutting edges to avoid built-up and to be suitable for high performance drilling.
Reinforced web and jobbers length-increasing rigidity and suitable for 4D ~ 5D drilling.
High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer service life.
High quality-good surface finishes, high productivity and weeding second operation.

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8104340200	2.0	24	56
8104340210	2.1	24	56
8104340220	2.2	27	59
8104340230	2.3	27	59
8104340240	2.4	30	62
8104340250	2.5	30	62
8104340260	2.6	30	62
8104340270	2.7	33	65
8104340280	2.8	33	65
8104340290	2.9	33	65
8104340300	3.0	33	65
8104340310	3.1	36	68
8104340320	3.2	36	68
8104340330	3.3	36	68
8104340340	3.4	39	71
8104340350	3.5	39	71
8104340360	3.6	39	71
8104340370	3.7	39	71
8104340380	3.8	43	75
8104340390	3.9	43	75
8104340400	4.0	43	75
8104340410	4.1	43	87
8104340420	4.2	43	87
8104340430	4.3	47	91

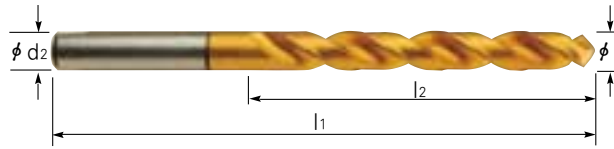
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8104340440	4.4	47	91
8104340450	4.5	47	91
8104340460	4.6	47	91
8104340470	4.7	47	91
8104340480	4.8	52	96
8104340490	4.9	52	96
8104340500	5.0	52	96
8104340510	5.1	52	96
8104340520	5.2	52	96
8104340530	5.3	52	96
8104340540	5.4	57	101
8104340550	5.5	57	101
8104340560	5.6	57	101
8104340570	5.7	57	101
8104340580	5.8	57	101
8104340590	5.9	57	101
8104340600	6.0	57	101
8104340610	6.1	63	107
8104340620	6.2	63	107
8104340630	6.3	63	107
8104340640	6.4	63	107
8104340650	6.5	63	107
8104340660	6.6	63	107
8104340670	6.7	63	107

HPD-SUS TWIST DRILLS JOBBER

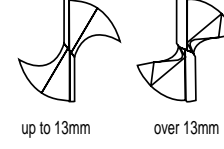


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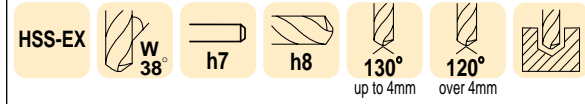
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High vanadium HSS-EX material with superior TiN coating - higher speed and feed, longer service life.
High quality-good surface finishes, high productivity and weeding second operation.

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8104340680	6.8	69	113
8104340690	6.9	69	113
8104340700	7.0	69	113
8104340710	7.1	69	113
8104340720	7.2	69	113
8104340730	7.3	69	113
8104340740	7.4	69	113
8104340750	7.5	69	113
8104340760	7.6	75	119
8104340770	7.7	75	119
8104340780	7.8	75	119
8104340790	7.9	75	119
8104340800	8.0	75	119
8104340810	8.1	75	125
8104340820	8.2	75	125
8104340830	8.3	75	125
8104340840	8.4	75	125
8104340850	8.5	75	125
8104340860	8.6	81	131
8104340870	8.7	81	131
8104340880	8.8	81	131
8104340890	8.9	81	131
8104340900	9.0	81	131
8104340910	9.1	81	131
8104340920	9.2	81	131

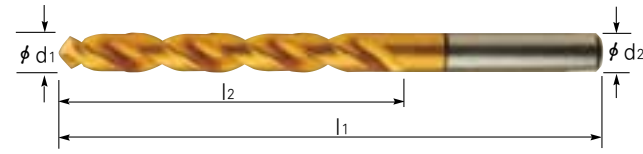
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8104340930	9.3	81	131
8104340940	9.4	81	131
8104340950	9.5	81	131
8104340960	9.6	87	137
8104340970	9.7	87	137
8104340980	9.8	87	137
8104340990	9.9	87	137
8104341000	10.0	87	137
8104341010	10.1	87	144
8104341020	10.2	87	144
8104341030	10.3	87	144
8104341040	10.4	87	144
8104341050	10.5	87	144
8104341060	10.6	87	144
8104341070	10.7	94	151
8104341080	10.8	94	151
8104341090	10.9	94	151
8104341100	11.0	94	151
8104341110	11.1	94	151
8104341120	11.2	94	151
8104341130	11.3	94	151
8104341140	11.4	94	151
8104341150	11.5	94	151
8104341160	11.6	94	151
8104341170	11.7	94	151

HPD-SUS TWIST DRILLS JOBBER

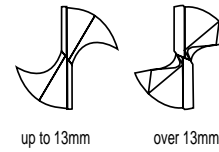


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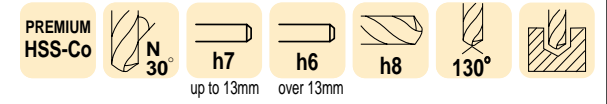
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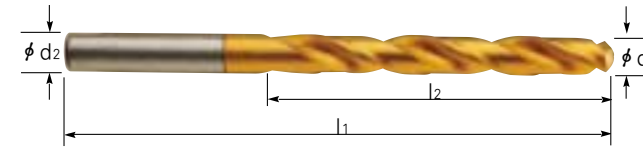
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8104341180	11.8	94	151
8104341190	11.9	101	158
8104341200	12.0	101	158
8104341210	12.1	101	158
8104341220	12.2	101	158
8104341230	12.3	101	158
8104341240	12.4	101	158
8104341250	12.5	101	158
8104341260	12.6	101	158
8104341270	12.7	101	158
8104341280	12.8	101	158
8104341290	12.9	101	158
8104341300	13.0	101	158
8104341350	13.5	106	166
8104341400	14.0	106	166
8104341410	14.1	109	169

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8104341450	14.5	109	169
8104341500	15.0	109	169
8104341550	15.5	112	172
8104341560	15.6	112	172
8104341600	16.0	112	172
8104341650	16.5	115	181
8104341700	17.0	115	181
8104341750	17.5	118	184
8104341760	17.6	118	184
8104341800	18.0	118	184
8104341850	18.5	122	188
8104341900	19.0	122	188
8104341950	19.5	125	191
8104341960	19.6	125	191
8104342000	20.0	125	191

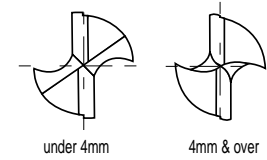
HPD TWIST DRILLS JOBBER



Series No. 810205



$d_1 = d_2$



Application

Designed for high speed non-step 4D ~ 5D drilling.
 Drilling in mild steel, cast iron, aluminum, alloyed, tool steel, etc.

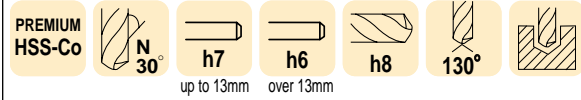
Advantage

Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy.
 Reinforced web and jobbers length - increasing rigidity and suitable for 4D~5D drilling
 Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer service life
 High quality-good surface finishes, high productivity and weeding second operation.

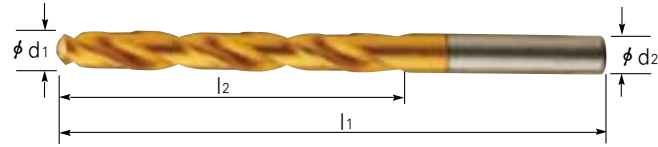
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8102050200	2.0	24	56
8102050205	2.05	24	56
8102050210	2.1	24	56
8102050215	2.15	27	59
8102050220	2.2	27	59
8102050225	2.25	27	59
8102050230	2.3	27	59
8102050235	2.35	27	59
8102050240	2.4	30	62
8102050245	2.45	30	62
8102050250	2.5	30	62
8102050255	2.55	30	62
8102050260	2.6	30	62
8102050265	2.65	30	62
8102050270	2.7	33	65
8102050275	2.75	33	65
8102050280	2.8	33	65
8102050285	2.85	33	65
8102050290	2.9	33	65
8102050295	2.95	33	65
8102050300	3.0	33	65
8102050305	3.05	36	68
8102050310	3.1	36	68
8102050315	3.15	36	68
8102050320	3.2	36	68

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8102050325	3.25	36	68
8102050330	3.3	36	68
8102050335	3.35	36	68
8102050340	3.4	39	71
8102050345	3.45	39	71
8102050350	3.5	39	71
8102050355	3.55	39	71
8102050360	3.6	39	71
8102050365	3.65	39	71
8102050370	3.7	39	71
8102050375	3.75	39	71
8102050380	3.8	43	75
8102050385	3.85	43	75
8102050390	3.9	43	75
8102050395	3.95	43	75
8102050400	4.0	43	75
8102050405	4.05	43	87
8102050410	4.1	43	87
8102050415	4.15	43	87
8102050420	4.2	43	87
8102050425	4.25	43	87
8102050430	4.3	47	91
8102050435	4.35	47	91
8102050440	4.4	47	91
8102050445	4.45	47	91

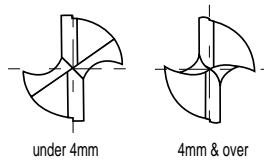
HPD TWIST DRILLS JOBBER



Series No. 810205



$d_1 = d_2$



Application

Designed for high speed non-step 4D ~ 5D drilling.
Drilling in mild steel, cast iron, aluminum, alloyed, tool steel, etc.

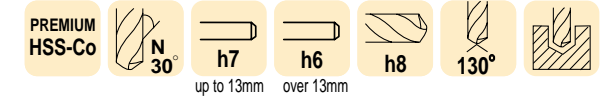
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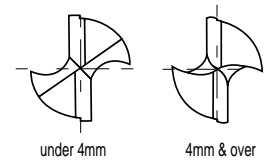
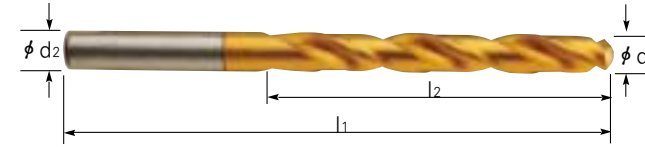
EDP No.	O.D = S.D d ₁ = d ₂	FL l ₂	OAL l ₁
8102050450	4.5	47	91
8102050455	4.55	47	91
8102050460	4.6	47	91
8102050465	4.65	47	91
8102050470	4.7	47	91
8102050475	4.75	47	91
8102050480	4.8	52	96
8102050485	4.85	52	96
8102050490	4.9	52	96
8102050495	4.95	52	96
8102050500	5.0	52	96
8102050505	5.05	52	96
8102050510	5.1	52	96
8102050515	5.15	52	96
8102050520	5.2	52	96
8102050525	5.25	52	96
8102050530	5.3	52	96
8102050535	5.35	57	101
8102050540	5.4	57	101
8102050545	5.45	57	101
8102050550	5.5	57	101
8102050555	5.55	57	101
8102050560	5.6	57	101
8102050565	5.65	57	101
8102050570	5.7	57	101

EDP No.	O.D = S.D d ₁ = d ₂	FL l ₂	OAL l ₁
8102050575	5.75	57	101
8102050580	5.8	57	101
8102050585	5.85	57	101
8102050590	5.9	57	101
8102050595	5.95	57	101
8102050600	6.0	57	101
8102050605	6.05	63	107
8102050610	6.1	63	107
8102050615	6.15	63	107
8102050620	6.2	63	107
8102050625	6.25	63	107
8102050630	6.3	63	107
8102050635	6.35	63	107
8102050640	6.4	63	107
8102050645	6.45	63	107
8102050650	6.5	63	107
8102050655	6.55	63	107
8102050660	6.6	63	107
8102050665	6.65	63	107
8102050670	6.7	63	107
8102050675	6.75	69	113
8102050680	6.8	69	113
8102050685	6.85	69	113
8102050690	6.9	69	113
8102050695	6.95	69	113

HPD TWIST DRILLS JOBBER



Series No. 810205



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Drilling in mild steel, cast iron, aluminum, alloyed, tool steel, etc.

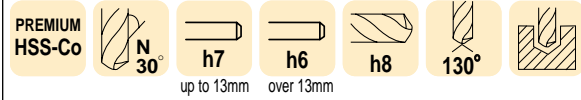
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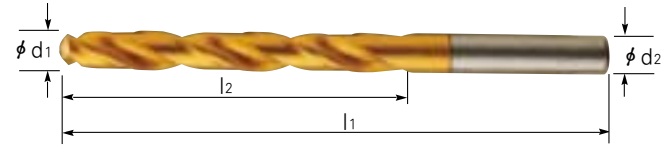
EDP No.	O.D = S.D d ₁ = d ₂	FL l ₂	OAL l ₁
8102050700	7.0	69	113
8102050705	7.05	69	113
8102050710	7.1	69	113
8102050715	7.15	69	113
8102050720	7.2	69	113
8102050725	7.25	69	113
8102050730	7.3	69	113
8102050735	7.35	69	113
8102050740	7.4	69	113
8102050745	7.45	69	113
8102050750	7.5	69	113
8102050755	7.55	75	119
8102050760	7.6	75	119
8102050765	7.65	75	119
8102050770	7.7	75	119
8102050775	7.75	75	119
8102050780	7.8	75	119
8102050785	7.85	75	119
8102050790	7.9	75	119
8102050795	7.95	75	119
8102050800	8.0	75	119
8102050805	8.05	75	125
8102050810	8.1	75	125
8102050815	8.15	75	125
8102050820	8.2	75	125

EDP No.	O.D = S.D d ₁ = d ₂	FL l ₂	OAL l ₁
8102050825	8.25	75	125
8102050830	8.3	75	125
8102050835	8.35	75	125
8102050840	8.4	75	125
8102050845	8.45	75	125
8102050850	8.5	75	125
8102050855	8.55	81	131
8102050860	8.6	81	131
8102050865	8.65	81	131
8102050870	8.7	81	131
8102050875	8.75	81	131
8102050880	8.8	81	131
8102050885	8.85	81	131
8102050890	8.9	81	131
8102050895	8.95	81	131
8102050900	9.0	81	131
8102050905	9.05	81	131
8102050910	9.1	81	131
8102050915	9.15	81	131
8102050920	9.2	81	131
8102050925	9.25	81	131
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8102050940	9.4	81	131
8102050945	9.45	81	131

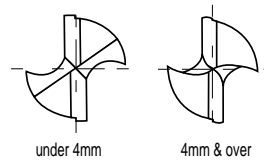
HPD TWIST DRILLS JOBBER



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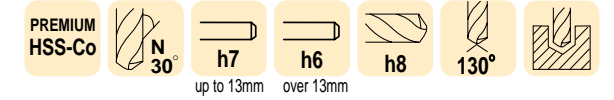
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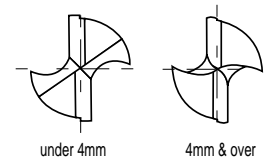
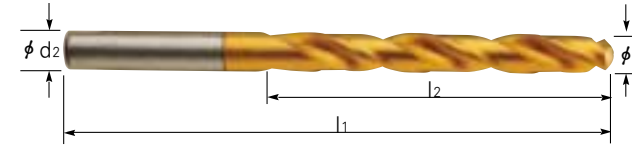
EDP No.	O.D = S.D d ₁ = d ₂	FL l ₂	OAL l ₁
8102050950	9.5	81	131
8102050955	9.55	87	137
8102050960	9.6	87	137
8102050965	9.65	87	137
8102050970	9.7	87	137
8102050975	9.75	87	137
8102050980	9.8	87	137
8102050985	9.85	87	137
8102050990	9.9	87	137
8102050995	9.95	87	137
8102051000	10.0	87	137
8102051005	10.05	87	144
8102051010	10.1	87	144
8102051015	10.15	87	144
8102051020	10.2	87	144
8102051025	10.25	87	144
8102051030	10.3	87	144
8102051035	10.35	87	144
8102051040	10.4	87	144
8102051045	10.45	87	144
8102051050	10.5	87	144
8102051055	10.55	87	144
8102051060	10.6	87	144
8102051065	10.65	94	151
8102051070	10.7	94	151

EDP No.	O.D = S.D d ₁ = d ₂	FL l ₂	OAL l ₁
8102051075	10.75	94	151
8102051080	10.8	94	151
8102051085	10.85	94	151
8102051090	10.9	94	151
8102051095	10.95	94	151
8102051100	11.0	94	151
8102051105	11.05	94	151
8102051110	11.1	94	151
8102051115	11.15	94	151
8102051120	11.2	94	151
8102051125	11.25	94	151
8102051130	11.3	94	151
8102051135	11.35	94	151
8102051140	11.4	94	151
8102051145	11.45	94	151
8102051150	11.5	94	151
8102051155	11.55	94	151
8102051160	11.6	94	151
8102051165	11.65	94	151
8102051170	11.7	94	151
8102051175	11.75	94	151
8102051180	11.8	94	151
8102051185	11.85	101	158
8102051190	11.9	101	158
8102051195	11.95	101	158

HPD TWIST DRILLS JOBBER



Series No. 810205



Application

Designed for high speed non-step 4D ~ 5D drilling.
Drilling in mild steel, cast iron, aluminum, alloyed, tool steel, etc.

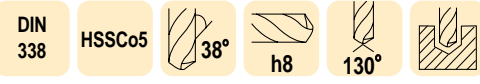
Advantage

Helical thinning - good chip removal, self-centering, reducing thrust and improving accuracy.
Reinforced web and jobbers length - increasing rigidity and suitable for 4D~5D drilling
Premium Cobalt HSS with superior TiN coating - higher speed and feed, longer service life
High quality-good surface finishes, high productivity and weeding second operation.

EDP No.	O.D = S.D d ₁ = d ₂	FL l ₂	OAL l ₁
8102051200	12.0	101	158
8102051210	12.1	101	158
8102051220	12.2	101	158
8102051230	12.3	101	158
8102051240	12.4	101	158
8102051250	12.5	101	158
8102051260	12.6	101	158
8102051270	12.7	101	158
8102051280	12.8	101	158
8102051290	12.9	101	158
8102051300	13.0	101	158
8102051350	13.5	90	150
8102051400	14.0	90	150
8102051410	14.1	95	155
8102051450	14.5	95	155
8102051500	15.0	95	161
8102051550	15.5	100	166
8102051560	15.6	100	166
8102051600	16.0	100	166
8102051650	16.5	106	172
8102051700	17.0	106	172
8102051750	17.5	112	178
8102051760	17.6	112	178
8102051800	18.0	112	178
8102051850	18.5	118	184

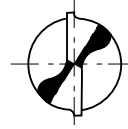
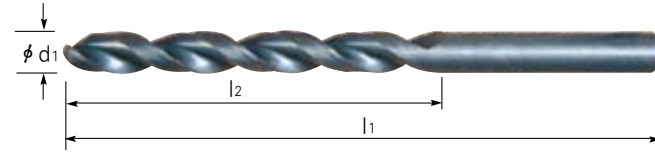
EDP No.	O.D = S.D d ₁ = d ₂	FL l ₂	OAL l ₁
8102051900	19.0	118	194
8102051950	19.5	125	201
8102051960	19.6	125	201
8102052000	20.0	125	201
8102052050	20.5	128	204
8102052100	21.0	128	204
8102052110	21.1	128	204
8102052150	21.5	132	208
8102052200	22.0	132	208
8102052250	22.5	136	212
8102052300	23.0	136	212
8102052350	23.5	136	212
8102052400	24.0	140	220
8102052450	24.5	140	220
8102052500	25.0	140	220
8102052550	25.5	145	225
8102052600	26.0	145	225
8102052650	26.5	145	225
8102052700	27.0	150	230
8102052800	28.0	150	230
8102052900	29.0	155	235
8102053000	30.0	155	235
8102053100	31.0	160	240
8102053200	32.0	165	245

STRAIGHT SHANK TWIST DRILLS FOR DEEP HOLE JOBBER



Series No. 820016

► worm pattern drills



Application

Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, Special aluminum or magnesium alloys.

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8200160200	2.0	24	49
8200160210	2.1	24	49
8200160220	2.2	27	53
8200160230	2.3	27	53
8200160240	2.4	30	57
8200160250	2.5	30	57
8200160260	2.6	30	57
8200160270	2.7	33	61
8200160280	2.8	33	61
8200160290	2.9	33	61
8200160300	3.0	33	61
8200160310	3.1	36	65
8200160320	3.2	36	65
8200160330	3.3	36	65
8200160340	3.4	39	70
8200160350	3.5	39	70
8200160360	3.6	39	70
8200160370	3.7	39	70
8200160380	3.8	43	75
8200160390	3.9	43	75
8200160400	4.0	43	75
8200160410	4.1	43	75
8200160420	4.2	43	75
8200160430	4.3	47	80
8200160440	4.4	47	80
8200160450	4.5	47	80
8200160460	4.6	47	80
8200160470	4.7	47	80
8200160480	4.8	52	86
8200160490	4.9	52	86
8200160500	5.0	52	86

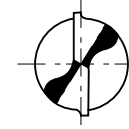
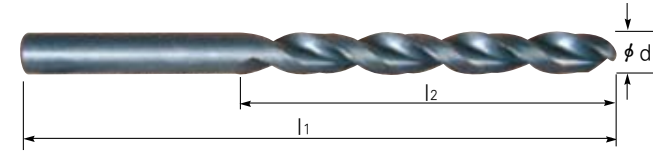
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8200160510	5.1	52	86
8200160520	5.2	52	86
8200160530	5.3	52	86
8200160540	5.4	57	93
8200160550	5.5	57	93
8200160560	5.6	57	93
8200160570	5.7	57	93
8200160580	5.8	57	93
8200160590	5.9	57	93
8200160600	6.0	57	93
8200160610	6.1	63	101
8200160620	6.2	63	101
8200160630	6.3	63	101
8200160640	6.4	63	101
8200160650	6.5	63	101
8200160660	6.6	63	101
8200160670	6.7	63	101
8200160680	6.8	69	109
8200160690	6.9	69	109
8200160700	7.0	69	109
8200160710	7.1	69	109
8200160720	7.2	69	109
8200160730	7.3	69	109
8200160740	7.4	69	109
8200160750	7.5	69	109
8200160760	7.6	75	117
8200160770	7.7	75	117
8200160780	7.8	75	117
8200160790	7.9	75	117
8200160800	8.0	75	117
8200160810	8.1	75	117

STRAIGHT SHANK TWIST DRILLS FOR DEEP HOLE JOBBER



Series No. 820016

► worm pattern drills



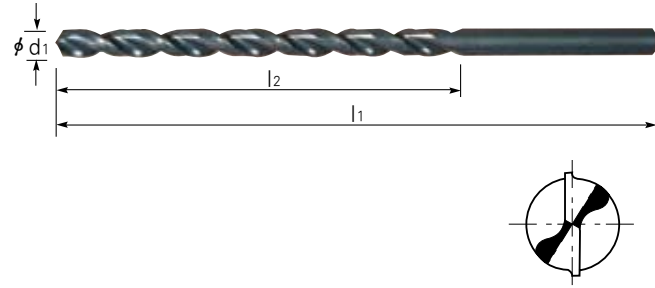
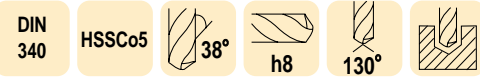
Application

Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, Special aluminum or magnesium alloys.

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8200160820	8.2	75	117
8200160830	8.3	75	117
8200160840	8.4	75	117
8200160850	8.5	75	117
8200160860	8.6	81	125
8200160870	8.7	81	125
8200160880	8.8	81	125
8200160890	8.9	81	125
8200160900	9.0	81	125
8200160910	9.1	81	125
8200160920	9.2	81	125
8200160930	9.3	81	125
8200160940	9.4	81	125
8200160950	9.5	81	125
8200160960	9.6	87	133
8200160970	9.7	87	133

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8200160980	9.8	87	133
8200160990	9.9	87	133
8200161000	10.0	87	133
8200161010	10.1	87	133
8200161020	10.2	87	133
8200161050	10.5	87	133
8200161080	10.8	94	142
8200161100	11.0	94	142
8200161120	11.2	94	142
8200161150	11.5	94	142
8200161180	11.8	94	142
8200161200	12.0	101	151
8200161220	12.2	101	151
8200161250	12.5	101	151
8200161280	12.8	101	151
8200161300	13.0	101	151

STRAIGHT SHANK TWIST DRILLS FOR DEEP HOLE LONG



Series No. 820116

► worm pattern drills

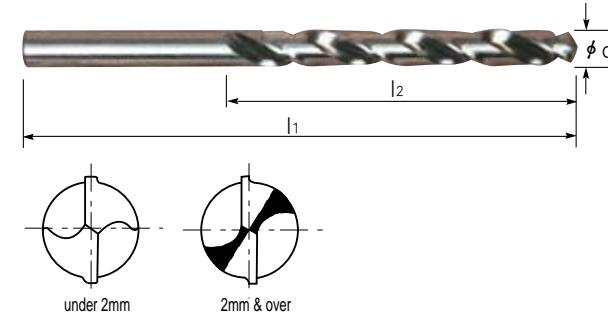
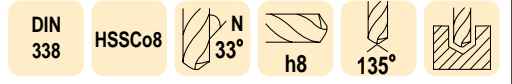
Application

Drilling deep holes in non alloy steels, alloy steels, grey cast iron, malleable cast iron, Special aluminum or magnesium alloys.

EDP No.	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	4.2	78	119
8201160420	4.5	82	126
8201160430	4.8	87	132
8201160440	5.0	87	132

EDP No.	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

STRAIGHT SHANK TWIST DRILLS JOBBER



Series No. 820702

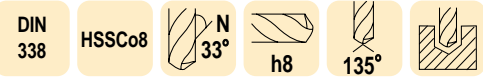
Application

Drilling in stainless steels, materials of difficult machinability such as titanium and inconel.

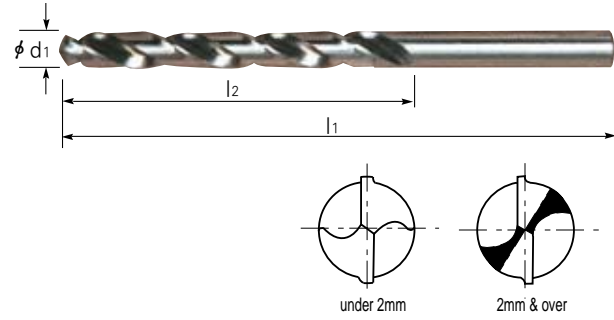
EDP No.	O.D = S.D d ₁ = d ₂	FL l ₂	OAL l ₁
8207020100	1.0	12	34
8207020110	1.1	14	36
8207020120	1.2	16	38
8207020125	1.25	16	38
8207020130	1.3	16	38
8207020140	1.4	18	40
8207020150	1.5	18	40
8207020160	1.6	20	43
8207020170	1.7	20	43
8207020175	1.75	22	46
8207020180	1.8	22	46
8207020190	1.9	22	46
8207020200	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
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

EDP No.	O.D = S.D d ₁ = d ₂	FL l ₂	OAL l ₁
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
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

STRAIGHT SHANK TWIST DRILLS JOBBER



Series No. 820702

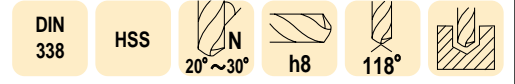
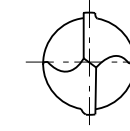
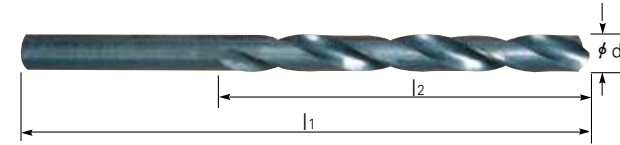


Application

Drilling in stainless steels, materials of difficult machinability such as titanium and inconel.

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1	EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8207020770	7.7	75	117	8207020975	9.75	87	133
8207020775	7.75	75	117	8207020980	9.8	87	133
8207020780	7.8	75	117	8207020990	9.9	87	133
8207020790	7.9	75	117	8207021000	10.0	87	133
8207020800	8.0	75	117	8207021020	10.2	87	133
8207020810	8.1	75	117	8207021050	10.5	87	133
8207020820	8.2	75	117	8207021100	11.0	94	142
8207020825	8.25	75	117	8207021150	11.5	94	142
8207020830	8.3	75	117	8207021200	12.0	101	151
8207020840	8.4	75	117	8207021250	12.5	101	151
8207020850	8.5	75	117	8207021300	13.0	101	151
8207020860	8.6	81	125	8207021350	13.5	108	160
8207020870	8.7	81	125	8207021400	14.0	108	160
8207020875	8.75	81	125	8207021450	14.5	114	169
8207020880	8.8	81	125	8207021500	15.0	114	169
8207020890	8.9	81	125	8207021550	15.5	120	178
8207020900	9.0	81	125	8207021600	16.0	120	178
8207020910	9.1	81	125	8207021650	16.5	125	184
8207020920	9.2	81	125	8207021700	17.0	125	184
8207020925	9.25	81	125	8207021750	17.5	130	191
8207020930	9.3	81	125	8207021800	18.0	130	191
8207020940	9.4	81	125	8207021850	18.5	135	198
8207020950	9.5	81	125	8207021900	19.0	135	198
8207020960	9.6	87	133	8207021950	19.5	140	205
8207020970	9.7	87	133	8207022000	20.0	140	205

STRAIGHT SHANK TWIST DRILLS JOBBER



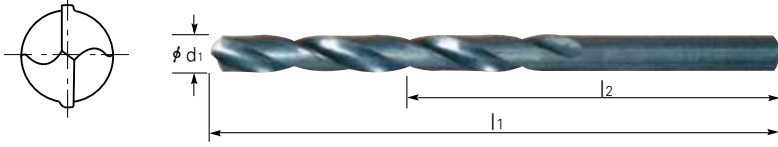
Series No. 820801

Application

Drilling in steel, cast steel alloyed and non-alloyed, grey castiron, malleable castiron, graphite.

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1	EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1	EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208010100	1.0	12	34	8208010305	3.05	36	65	8208010400	4.0	43	75
8208010105	1.05	12	34	8208010310	3.1	36	65	8208010405	4.05	43	75
8208010110	1.1	14	36	8208010315	3.15	36	65	8208010410	4.1	43	75
8208010115	1.15	14	36	8208010320	3.2	36	65	8208010415	4.15	43	75
8208010120	1.2	16	38	8208010325	3.25	36	65	8208010420	4.2	43	75
8208010125	1.25	16	38	8208010330	3.3	36	65	8208010425	4.25	43	75
8208010130	1.3	16	38	8208010335	3.35	36	65	8208010430	4.3	47	80
8208010135	1.35	18	40	8208010340	3.4	39	70	8208010435	4.35	47	80
8208010140	1.4	18	40	8208010345	3.45	39	70	8208010440	4.4	47	80
8208010145	1.45	18	40	8208010350	3.5	39	70	8208010445	4.45	47	80
8208010150	1.5	18	40	8208010355	3.55	39	70	8208010450	4.5	47	80
8208010155	1.55	20	43	8208010360	3.6	39	70	8208010455	4.55	47	80
8208010160	1.6	20	43	8208010365	3.65	39	70	8208010460	4.6	47	80
8208010165	1.65	20	43	8208010370	3.7	39	70	8208010465	4.65	47	80
8208010170	1.7	20	43	8208010375	3.75	39	70	8208010470	4.7	47	80
8208010175	1.75	22	46	8208010380	3.8	43	75	8208010475	4.75	47	80
8208010180	1.8	22	46	8208010385	3.85	43	75	8208010480	4.8	52	86
8208010185	1.85	22	46	8208010390	3.9	43	75	8208010485	4.85	52	86
8208010190	1.9	22	46	8208010395	3.95	43	75	8208010490	4.9	52	86
8208010195	1.95	24	49	8208010400	4.0	43	75	8208010495	4.95	52	86
8208010200	2.0	24	49	8208010405	4.05	43	75	8208010500	5.0	52	86
8208010205	2.05	24	49	8208010410	4.1	43	75	8208010505	5.05	52	86
8208010210	2.1	24	49	8208010415	4.15	43	75				
8208010215	2.15	27	53	8208010420	4.2	43	75				
8208010220	2.2	27	53	8208010425	4.25	43	75				
8208010225	2.25	27	53	8208010430	4.3	47	80				
8208010230	2.3	27	53	8208010435	4.35	47	80				
8208010235	2.35	27	53	8208010440	4.4	47	80				
8208010240	2.4	30	57	8208010445	4.45	47	80				
8208010245	2.45	30	57	8208010450	4.5	47	80				
8208010250	2.5	30	57	8208010455	4.55	47	80				
8208010255	2.55	30	57	8208010460	4.6	47	80				
8208010260	2.6	30	57	8208010465	4.65	47	80				
8208010265	2.65	30	57	8208010470	4.7	47	80				
8208010270	2.7	33	61	8208010475	4.75	47	80				
8208010275	2.75	33	61	8208010480	4.8	52	86				
8208010280	2.8	33	61	8208010485	4.85	52	86				
8208010285	2.85	33	61	8208010490	4.9	52	86				
8208010290	2.9	33	61	8208010495	4.95	52	86				
8208010295	2.95	33	61	8208010500	5.0	52	86				
8208010300	3.0	33	61	8208010505	5.05	52	86				

STRAIGHT SHANK TWIST DRILLS JOBBER



Series No. 820801

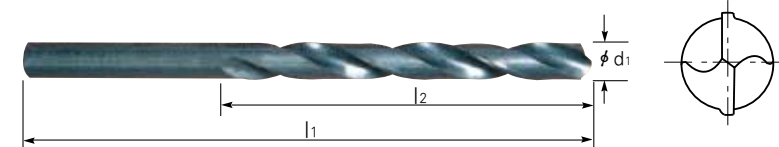
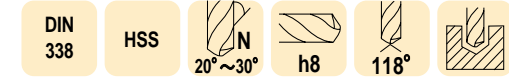
Application

Drilling in steel, cast steel alloyed and non-alloyed, grey castiron, malleable castiron, graphite.

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
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
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

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208010720	7.2	69	109
8208010725	7.25	69	109
8208010730	7.3	69	109
8208010735	7.35	69	109
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
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
82080101010	10.1	87	133

STRAIGHT SHANK TWIST DRILLS JOBBER



Series No. 820801

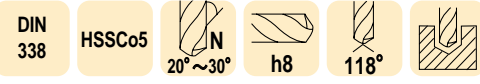
Application

Drilling in steel, cast steel alloyed and non-alloyed, grey castiron, malleable castiron, graphite.

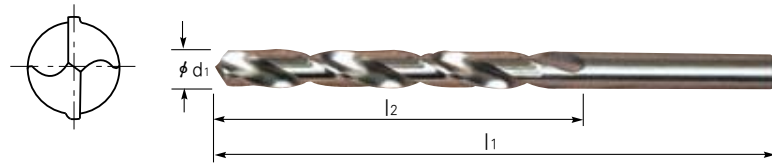
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8208011020	10.2	87	133
8208011025	10.25	87	133
8208011030	10.3	87	133
8208011040	10.4	87	133
8208011050	10.5	87	133
8208011060	10.6	87	133
8208011070	10.7	94	142
8208011075	10.75	94	142
8208011080	10.8	94	142
8208011090	10.9	94	142
8208011100	11.0	94	142
8208011110	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
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

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
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
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

STRAIGHT SHANK TWIST DRILLS FOR HEAVY DUTY JOBBER



Series No. 821116



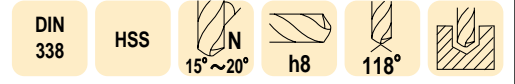
Application

Drilling in stainless steels, materials of difficult machinability such as titanium and inconel.

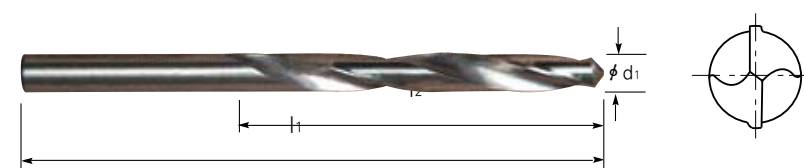
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8211160150	1.5	18	40
8211160175	1.75	22	46
8211160200	2.0	24	49
8211160225	2.25	27	53
8211160250	2.5	30	57
8211160275	2.75	33	61
8211160300	3.0	33	61
8211160325	3.25	36	65
8211160350	3.5	39	70
8211160375	3.75	39	70
8211160400	4.0	43	75
8211160425	4.25	43	75
8211160450	4.5	47	80
8211160475	4.75	47	80
8211160500	5.0	52	86
8211160525	5.25	52	86
8211160550	5.5	57	93
8211160575	5.75	57	93
8211160600	6.0	57	93
8211160625	6.25	63	101
8211160650	6.5	63	101

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8211160675	6.75	69	109
8211160700	7.0	69	109
8211160725	7.25	69	109
8211160750	7.5	69	109
8211160775	7.75	75	117
8211160800	8.0	75	117
8211160825	8.25	75	117
8211160850	8.5	75	117
8211160875	8.75	81	125
8211160900	9.0	81	125
8211160925	9.25	81	125
8211160950	9.5	81	125
8211160975	9.75	87	133
8211161000	10.0	87	133
8211161050	10.5	87	133
8211161100	11.0	94	142
8211161150	11.5	94	142
8211161200	12.0	101	151
8211161250	12.5	101	151
8211161300	13.0	101	151

STRAIGHT SHANK TWIST DRILLS FOR BRASS JOBBER



Series No. 821201



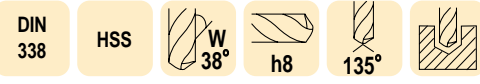
Application

Drilling into hard, brittle, short-chip materials. i.e., brass, bronze, phosphor bronze, magnesium alloys.

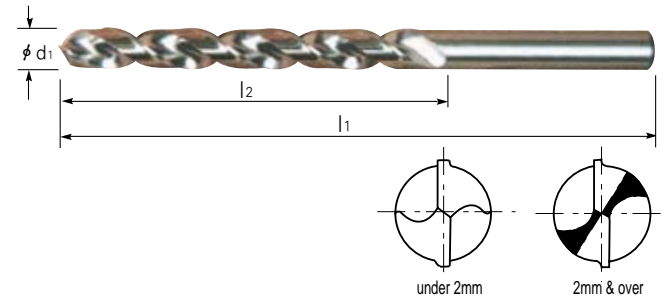
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8212010150	1.5	18	40
8212010160	1.6	20	43
8212010170	1.7	20	43
8212010180	1.8	22	46
8212010190	1.9	22	46
8212010200	2.0	24	49
8212010210	2.1	24	49
8212010220	2.2	27	53
8212010230	2.3	27	53
8212010240	2.4	30	57
8212010250	2.5	30	57
8212010260	2.6	30	57
8212010270	2.7	33	61
8212010280	2.8	33	61
8212010290	2.9	33	61
8212010300	3.0	33	61
8212010310	3.1	36	65
8212010320	3.2	36	65
8212010330	3.3	36	65
8212010340	3.4	39	70
8212010350	3.5	39	70
8212010360	3.6	39	70
8212010370	3.7	39	70
8212010380	3.8	43	75
8212010390	3.9	43	75
8212010400	4.0	43	75
8212010410	4.1	43	75
8212010420	4.2	43	75
8212010430	4.3	47	80
8212010440	4.4	47	80
8212010450	4.5	47	80
8212010460	4.6	47	80
8212010470	4.7	47	80
8212010480	4.8	52	86
8212010490	4.9	52	86
8212010500	5.0	52	86
8212010510	5.1	52	86
8212010520	5.2	52	86
8212010530	5.3	52	86
8212010540	5.4	57	93
8212010550	5.5	57	93
8212010560	5.6	57	93
8212010570	5.7	57	93
8212010580	5.8	57	93
8212010590	5.9	57	93
8212010600	6.0	57	93

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8212010610	6.1	63	101
8212010620	6.2	63	101
8212010630	6.3	63	101
8212010640	6.4	63	101
8212010650	6.5	63	101
8212010660	6.6	63	101
8212010670	6.7	63	101
8212010680	6.8	69	109
8212010690	6.9	69	109
8212010700	7.0	69	109
8212010710	7.1	69	109
8212010720	7.2	69	109
8212010730	7.3	69	109
8212010740	7.4	69	109
8212010750	7.5	69	109
8212010760	7.6	75	117
8212010770	7.7	75	117
8212010780	7.8	75	117
8212010790	7.9	75	117
8212010800	8.0	75	117
8212010810	8.1	75	117
8212010820	8.2	75	117
8212010830	8.3	75	117
8212010840	8.4	75	117
8212010850	8.5	75	117
8212010860	8.6	81	125
8212010870	8.7	81	125
8212010880	8.8	81	125
8212010890	8.9	81	125
8212010900	9.0	81	125
8212010910	9.1	81	125
8212010920	9.2	81	125
8212010930	9.3	81	125
8212010940	9.4	81	125
8212010950	9.5	81	125
8212010960	9.6	87	133
8212010970	9.7	87	133
8212010980	9.8	87	133
8212010990	9.9	87	133
8212011000	10.0	87	133
8212011050	10.5	87	133
8212011100	11.0	94	142
8212011150	11.5	94	142
8212011200	12.0	101	151
8212011250	12.5	101	151
8212011300	13.0	101	151

STRAIGHT SHANK TWIST DRILLS FOR ALUMINUM JOBBER



Series No. 821301



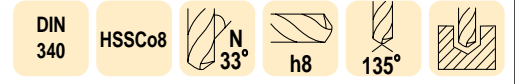
Application

Drilling into aluminum and its alloys, silumin, zinc, refined copper, wood and other soft synthetic materials.

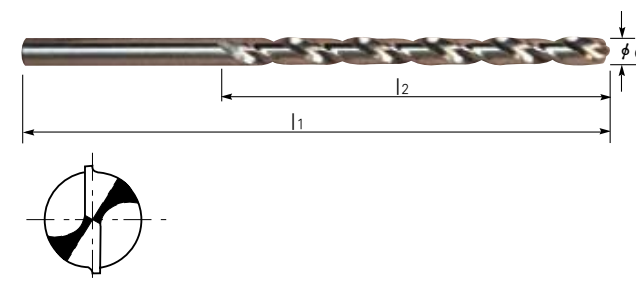
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8213010150	1.5	18	40
8213010160	1.6	20	43
8213010170	1.7	20	43
8213010180	1.8	22	46
8213010190	1.9	22	46
8213010200	2.0	24	49
8213010210	2.1	24	49
8213010220	2.2	27	53
8213010230	2.3	27	53
8213010240	2.4	30	57
8213010250	2.5	30	57
8213010260	2.6	30	57
8213010270	2.7	33	61
8213010280	2.8	33	61
8213010290	2.9	33	61
8213010300	3.0	33	61
8213010310	3.1	36	65
8213010320	3.2	36	65
8213010330	3.3	36	65
8213010340	3.4	39	70
8213010350	3.5	39	70
8213010360	3.6	39	70
8213010370	3.7	39	70
8213010380	3.8	43	75
8213010390	3.9	43	75
8213010400	4.0	43	75
8213010410	4.1	43	75
8213010420	4.2	43	75
8213010430	4.3	47	80
8213010440	4.4	47	80
8213010450	4.5	47	80
8213010460	4.6	47	80
8213010470	4.7	47	80
8213010480	4.8	52	86
8213010490	4.9	52	86
8213010500	5.0	52	86
8213010510	5.1	52	86
8213010520	5.2	52	86
8213010530	5.3	52	86
8213010540	5.4	57	93
8213010550	5.5	57	93
8213010560	5.6	57	93
8213010570	5.7	57	93
8213010580	5.8	57	93
8213010590	5.9	57	93
8213010600	6.0	57	93

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8213010610	6.1	63	101
8213010620	6.2	63	101
8213010630	6.3	63	101
8213010640	6.4	63	101
8213010650	6.5	63	101
8213010660	6.6	63	101
8213010670	6.7	63	101
8213010680	6.8	69	109
8213010690	6.9	69	109
8213010700	7.0	69	109
8213010710	7.1	69	109
8213010720	7.2	69	109
8213010730	7.3	69	109
8213010740	7.4	69	109
8213010750	7.5	69	109
8213010760	7.6	75	117
8213010770	7.7	75	117
8213010780	7.8	75	117
8213010790	7.9	75	117
8213010800	8.0	75	117
8213010810	8.1	75	117
8213010820	8.2	75	117
8213010830	8.3	75	117
8213010840	8.4	75	117
8213010850	8.5	75	117
8213010860	8.6	81	125
8213010870	8.7	81	125
8213010880	8.8	81	125
8213010890	8.9	81	125
8213010900	9.0	81	125
8213010910	9.1	81	125
8213010920	9.2	81	125
8213010930	9.3	81	125
8213010940	9.4	81	125
8213010950	9.5	81	125
8213010960	9.6	87	133
8213010970	9.7	87	133
8213010980	9.8	87	133
8213010990	9.9	87	133
8213011000	10.0	87	133
8213011050	10.5	87	133
8213011100	11.0	94	142
8213011150	11.5	94	142
8213011200	12.0	101	151
8213011250	12.5	101	151
8213011300	13.0	101	151

STRAIGHT SHANK TWIST DRILLS LONG



Series No. 820902



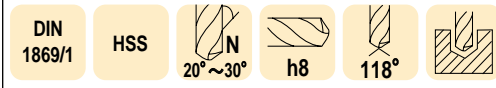
Application

Drilling deep holes in stainless steels, materials of difficult machinability such as titanium and inconel.

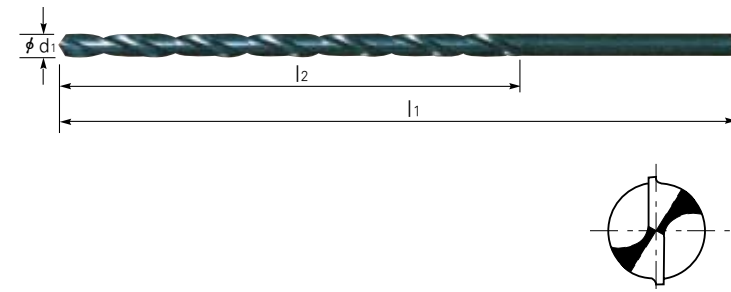
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8209020200	2.0	56	85
8209020210	2.1	56	85
8209020220	2.2	59	90
8209020230	2.3	59	90
8209020240	2.4	62	95
8209020250	2.5	62	95
8209020260	2.6	62	95
8209020270	2.7	66	100
8209020280	2.8	66	100
8209020290	2.9	66	100
8209020300	3.0	66	100
8209020310	3.1	69	106
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
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	132
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

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
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
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
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

STRAIGHT SHANK TWIST DRILLS EXTRA LONG



Series No. 821001



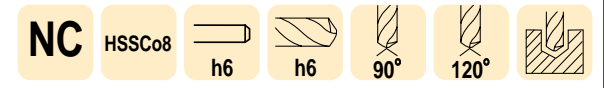
Application

Designed for drilling deep holes or deeply located holes.
Drills in steel, cast steel alloyed and non-alloyed, grey castiron, malleable castiron, graphite.

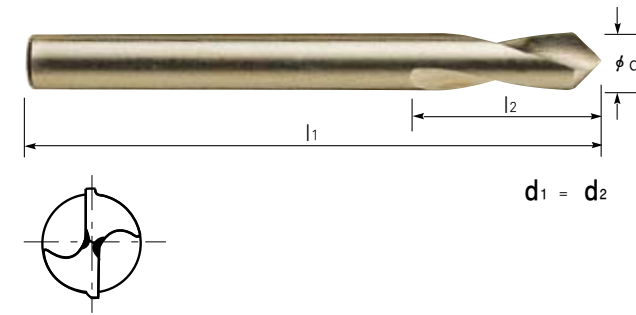
EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8210010200	2.0	85	125
8210010225	2.25	90	135
8210010250	2.5	95	140
8210010275	2.75	100	150
8210010300	3.0	100	150
8210010325	3.25	105	155
8210010350	3.5	115	165
8210010375	3.75	115	165
8210010400	4.0	120	175
8210010425	4.25	120	175
8210010450	4.5	125	185
8210010475	4.75	125	185
8210010500	5.0	135	195
8210010525	5.25	135	195
8210010550	5.5	140	205
8210010575	5.75	140	205
8210010600	6.0	140	205
8210010625	6.25	150	215
8210010650	6.5	150	215
8210010675	6.75	155	225

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8210010700	7.0	155	225
8210010725	7.25	155	225
8210010750	7.5	155	225
8210010775	7.75	165	240
8210010800	8.0	165	240
8210010825	8.25	165	240
8210010850	8.5	165	240
8210010875	8.75	175	250
8210010900	9.0	175	250
8210010925	9.25	175	250
8210010950	9.5	175	250
8210010975	9.75	185	265
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

NC SPOTTING DRILLS



Series No. 810402



Application

For more precise centering work on NC/CNC Machine.
A larger diameter in respect to the subsequent drilling tool permits to obtain the centering and chamfering simultaneously.

90° POINT

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8214020300	3.0	12	46
8214020400	4.0	12	55
8214020500	5.0	15	60
8214020600	6.0	20	66
8214020800	8.0	25	79
8214021000	10.0	25	89
8214021200	12.0	30	102
8214021600	16.0	35	115
8214022000	20.0	40	131

120° POINT

EDP No.	O.D = S.D $d_1 = d_2$	FL l_2	OAL l_1
8224020300	3.0	12	46
8224020400	4.0	12	55
8224020500	5.0	15	60
8224020600	6.0	20	66
8224020800	8.0	25	79
8224021000	10.0	25	89
8224021200	12.0	30	102
8224021600	16.0	35	115
8224022000	20.0	40	131