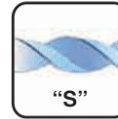
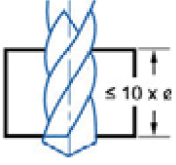



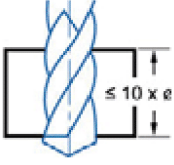
HSSE
Co5
DIN
340TS

TIALN


Ø mm h8	L (mm)	l (mm)	
2,00	85	56	1
2,50	95	62	1
3,00	100	66	1
3,50	112	73	1
4,00	119	78	1
4,50	126	82	1
5,00	132	87	1
5,50	139	91	1
6,00	139	91	1
6,50	148	97	1
7,00	156	102	1
7,50	156	102	1
8,00	165	109	1
8,50	165	109	1
9,00	175	115	1
9,50	175	115	1
10,00	184	121	1
10,50	184	121	1
11,00	195	128	1
11,50	195	128	1
12,00	205	134	1
13,00	205	134	1

TAŞLANMIŞ EXTRA UZUN MATKAP UCU (BUHAR MENEVİŞLİ)

HSS

DIN
1869N



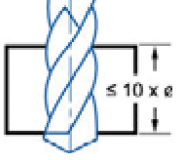
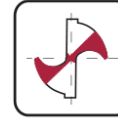
Ø mm h8	L (mm)	l (mm)	
2,00	125	85	1
2,50	140	95	1
3,00	150	100	1
3,00	190	130	1
3,50	165	115	1
3,50	210	145	1
3,50	265	180	1
4,00	175	120	1
4,00	220	150	1
4,00	280	190	1
4,50	185	125	1
4,50	235	160	1
4,50	295	220	1
5,00	195	135	1
5,00	245	170	1
5,00	295	195	1
5,00	315	210	1
5,50	205	140	1
5,50	260	180	1
5,50	330	225	1
6,00	205	140	1
6,00	260	180	1
6,00	330	225	1
6,50	215	150	1
6,50	275	190	1
6,50	350	235	1
7,00	225	155	1
7,00	290	200	1
7,00	370	250	1
7,50	225	155	1
7,50	290	200	1
7,50	370	250	1
8,00	240	165	1
8,00	305	210	1
8,00	390	265	1
8,50	240	165	1
8,50	305	210	1
8,50	390	265	1
9,00	250	175	1

Ø mm h8	L (mm)	l (mm)	
9,00	320	220	1
9,00	410	280	1
9,50	250	175	1
9,50	320	220	1
9,50	410	280	1
10,00	265	185	1
10,00	340	235	1
10,00	430	295	1
10,50	265	185	1
10,50	340	235	1
10,50	430	295	1
11,00	280	195	1
11,00	365	250	1
11,00	455	310	1
11,50	280	195	1
11,50	365	250	1
11,50	455	310	1
12,00	295	205	1
12,00	375	260	1
12,00	480	330	1
12,50	295	205	1
12,50	375	260	1
12,50	480	330	1
13,00	295	205	1
13,00	375	260	1
13,00	480	330	1
14,00	375	260	1
14,00	480	330	1
15,00	650	550	1
16,00	650	550	1
16,50	650	550	1
17,00	650	550	1
17,50	650	550	1
18,00	650	550	1
18,50	650	550	1
19,00	650	550	1
19,50	650	550	1
20,00	650	550	1

TAŞLANMIŞ EXTRA UZUN MATKAP UCU ("S" FORMU)

**HSSE
Co5**

**DIN
1869**



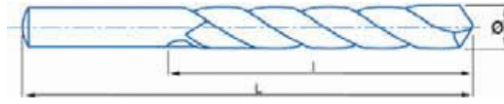
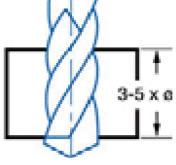
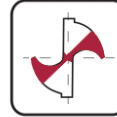
Ø mm h8	L (mm)	l (mm)	
2,00	125	85	1
2,50	140	95	1
3,00	150	100	1
3,00	190	130	1
3,50	165	115	1
3,50	210	145	1
3,50	265	180	1
4,00	175	120	1
4,00	220	150	1
4,00	280	190	1
4,50	185	125	1
4,50	235	160	1
4,50	295	220	1
5,00	195	135	1
5,00	245	170	1
5,00	315	210	1
5,50	205	140	1
5,50	260	180	1
5,50	330	225	1
6,00	205	140	1
6,00	260	180	1
6,00	330	225	1
6,50	215	150	1
6,50	275	190	1
6,50	350	235	1
7,00	225	155	1
7,00	290	200	1
7,00	370	250	1
7,50	225	155	1
7,50	290	200	1
7,50	370	250	1
8,00	240	165	1

Ø mm h8	L (mm)	l (mm)	
8,00	305	210	1
8,00	390	265	1
8,50	240	165	1
8,50	305	210	1
8,50	390	265	1
9,00	250	175	1
9,00	320	220	1
9,00	410	280	1
9,50	250	175	1
9,50	320	220	1
9,50	410	280	1
10,00	265	185	1
10,00	340	235	1
10,00	430	295	1
10,50	265	185	1
10,50	340	235	1
10,50	430	295	1
11,00	280	195	1
11,00	365	250	1
11,00	455	310	1
11,50	280	195	1
11,50	365	250	1
11,50	455	310	1
12,00	295	205	1
12,00	375	260	1
12,00	480	330	1
12,50	295	205	1
12,50	375	260	1
12,50	480	330	1
13,00	295	205	1
13,00	375	260	1
13,00	480	330	1

SİLİNDİRİK SAPLI MATKAP UCU (HARDOX İÇİN)

Cobalt
"S"
(X-AlCr)

DIN
1897 N



Ø mm h8	L (mm)	I (mm)	
2,00	38	12	1
2,50	43	14	1
3,00	46	16	1
3,30	49	18	1
3,50	52	20	1
4,00	55	22	1
4,20	55	22	1
4,50	58	24	1
5,00	62	26	1
5,50	66	28	1
6,00	66	28	1
6,50	70	31	1
6,80	74	34	1
7,00	74	34	1
7,50	74	34	1
8,00	79	37	1

Ø mm h8	L (mm)	I (mm)	
8,50	79	37	1
9,00	84	40	1
9,50	84	40	1
10,00	89	43	1
10,20	89	43	1
10,50	89	43	1
11,00	95	47	1
11,50	95	47	1
12,00	102	51	1
12,50	102	51	1
13,00	102	51	1
14,00	107	54	1
15,00	111	56	1
16,00	115	58	1
18,00	123	62	1

MORS KONİK SAPLI MATKAP UCU (HARDOX İÇİN)

Cobalt
"S"

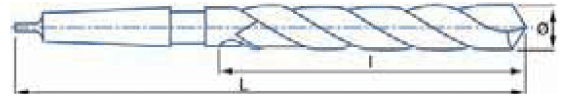
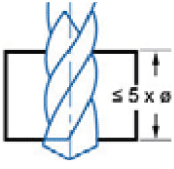
DIN
1412 C
≥ 2 mm



Ø mm h8	L (mm)	I (mm)	MK	
18,00	175	77	2	1
19,00	201	80	2	1
20,00	204	83	2	1
21,00	208	87	2	1
22,00	211	90	2	1
23,00	215	94	2	1
24,00	219	98	3	1
25,00	219	98	3	1
26,00	224	103	3	1
27,00	256	107	3	1
28,00	256	107	3	1
30,00	261	112	3	1

HSS

DIN
345

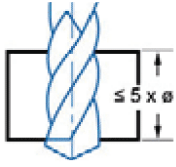
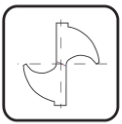


Ø mm h8	L (mm)	I (mm)	MK
5,00	133	52	1
5,25	133	52	1
5,50	138	57	1
5,75	138	57	1
6,00	138	57	1
6,25	144	63	1
6,50	144	63	1
6,75	150	69	1
7,00	150	69	1
7,25	150	69	1
7,50	150	69	1
7,75	156	75	1
8,00	156	75	1
8,25	156	75	1
8,50	156	75	1
8,75	162	81	1
9,00	162	81	1
9,25	162	81	1
9,50	162	81	1
9,75	168	87	1
10,00	168	87	1
10,25	168	87	1
10,50	168	87	1
10,75	175	94	1
11,00	175	94	1
11,25	175	94	1
11,50	175	94	1
11,75	175	94	1
12,00	182	101	1
12,25	182	101	1
12,50	182	101	1
12,75	182	101	1
13,00	182	101	1
13,25	189	108	1
13,50	189	108	1
13,75	189	108	1
14,00	189	108	1
14,25	212	114	2
14,50	212	114	2
14,75	212	114	2
15,00	212	114	2
15,25	218	120	2
15,50	218	120	2
15,75	218	120	2
16,00	218	120	2
16,25	223	125	2
16,50	223	125	2
16,75	223	125	2
17,00	223	125	2

Ø mm h8	L (mm)	I (mm)	MK
17,25	228	130	2
17,50	228	130	2
17,75	228	130	2
18,00	228	130	2
18,25	233	135	2
18,50	233	135	2
18,75	233	135	2
19,00	233	135	2
19,25	238	140	2
19,50	238	140	2
19,75	238	140	2
20,00	238	140	2
20,25	243	145	2
20,50	243	145	2
20,75	243	145	2
21,00	243	145	2
21,25	248	150	2
21,50	248	150	2
21,75	248	150	2
22,00	248	150	2
22,25	248	150	2
22,50	253	155	2
22,75	253	155	2
23,00	253	155	2
23,25	276	155	3
23,50	276	155	3
23,75	281	160	3
24,00	281	160	3
24,25	281	160	3
24,50	281	160	3
24,75	281	160	3
25,00	281	160	3
25,25	286	165	3
25,50	286	165	3
25,75	286	165	3
26,00	286	165	3
26,25	286	165	3
26,50	286	165	3
26,75	291	170	3
27,00	291	170	3
27,25	291	170	3
27,50	291	170	3
27,75	291	170	3
28,00	291	170	3
28,25	296	175	3
28,50	296	175	3
28,75	296	175	3
29,00	296	175	3
29,25	296	175	3

HSS

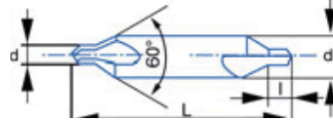
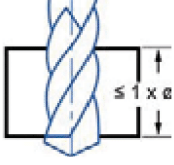
DIN
345



Ø mm h8	L (mm)	I (mm)	MK
29,50	296	175	3
29,75	296	175	3
30,00	296	175	3
30,25	301	180	3
30,50	301	180	3
30,75	301	180	3
31,00	301	180	3
31,25	301	180	3
31,50	301	180	3
31,75	306	185	3
32,00	334	185	4
32,50	334	185	4
33,00	334	185	4
33,50	334	185	4
34,00	339	190	4
34,50	339	190	4
35,00	339	190	4
35,50	339	190	4
36,00	344	195	4
36,50	344	195	4
37,00	344	195	4
37,50	344	195	4
38,00	349	200	4
38,50	349	200	4
39,00	349	200	4
39,50	349	200	4
40,00	349	200	4
40,50	354	205	4
41,00	354	205	4
41,50	354	205	4
42,00	354	205	4
42,50	354	205	4
43,00	359	210	4
43,50	359	210	4
44,00	359	210	4
44,50	359	210	4
45,00	359	210	4
45,50	364	215	4
46,00	364	215	4
46,50	364	215	4
47,00	364	215	4
47,50	364	215	4
48,00	369	220	4
48,50	369	220	4
49,00	369	220	4
49,50	369	220	4
50,00	369	220	4
51,00	412	225	5
52,00	412	225	5

Ø mm h8	L (mm)	I (mm)	MK
53,00	412	225	5
54,00	417	230	5
55,00	417	230	5
56,00	417	230	5
57,00	422	235	5
58,00	422	235	5
59,00	422	235	5
60,00	422	235	5
61,00	427	240	5
62,00	427	240	5
63,00	427	240	5
64,00	432	245	5
65,00	432	245	5
66,00	432	245	5
67,00	432	245	5
68,00	437	250	5
69,00	437	250	5
70,00	437	250	5
71,00	437	250	5
72,00	442	255	5
73,00	442	255	5
74,00	442	255	5
75,00	442	255	5
76,00	447	260	5
77,00	514	260	6
78,00	514	260	6
79,00	514	260	6
80,00	514	260	6
81,00	519	265	6
82,00	519	265	6
83,00	519	265	6
84,00	519	265	6
85,00	519	265	6
86,00	524	270	6
87,00	524	270	6
88,00	524	270	6
89,00	524	270	6
90,00	524	270	6
91,00	529	275	6
92,00	529	275	6
93,00	529	275	6
94,00	529	275	6
95,00	529	275	6
96,00	534	280	6
97,00	534	280	6
98,00	534	280	6
99,00	534	280	6
100,00	534	280	6

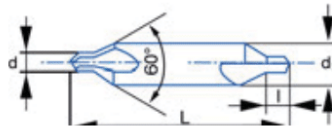
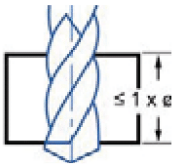
KISA PUNTA MATKABI



Ø d (mm)	Ø d1 (mm)	L (mm)	l (mm)
1,00	3,15	31,50	1,30
1,25	3,15	31,50	1,60
1,25	4,00	35,50	1,60
1,60	4,00	35,50	2,00
1,60	5,00	40,00	2,00
2,00	5,00	40,00	2,50
2,00	6,30	45,00	2,50
2,50	6,30	45,00	3,10
2,50	8,00	50,00	3,10
3,15	8,00	50,00	3,90

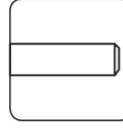
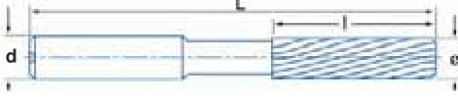
Ø d (mm)	Ø d1 (mm)	L (mm)	l (mm)
3,15	10,00	56,00	3,90
4,00	10,00	56,00	5,00
4,00	12,50	63,00	5,00
5,00	12,50	63,00	6,30
5,00	16,00	71,00	6,30
6,30	16,00	71,00	8,00
6,30	20,00	80,00	8,00
10,00	25,00	100,00	12,80
12,50	31,50	125,00	16,50

UZUN PUNTA MATKABI



Ø d (mm)	Ø d1 (mm)	L (mm)	l (mm)
1,00	4	60	1,30
1,00	4	120	1,30
1,50	5	60	2,00
1,50	5	120	2,00
2,00	6	80	2,50
2,00	6	120	2,50
2,50	8	80	3,10
2,50	8	120	3,10
3,00	8	80	3,90

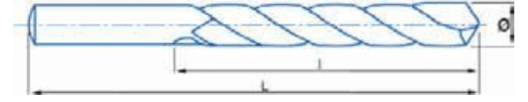
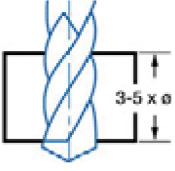
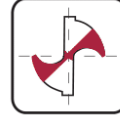
Ø d (mm)	Ø d1 (mm)	L (mm)	l (mm)
3,00	8	120	3,90
3,00	10	100	3,90
3,00	10	120	3,90
4,00	10	100	5,00
4,00	10	120	5,00
4,00	12	100	5,00
4,00	12	120	5,00
5,00	14	120	6,30

HSSE
Co5
H7
DIN
212D

ISO
521


Ø (mm)	L (mm)	l (mm)	d (mm)
2,00	49	11	2,00
2,50	57	14	2,50
3,00	61	15	3,00
3,50	70	18	3,50
4,00	75	19	4,00
4,50	80	21	4,50
5,00	86	23	5,00
5,50	93	26	5,60
6,00	93	26	5,60
6,50	101	28	6,30
7,00	109	31	7,10
8,00	117	33	8,00
9,00	125	36	9,00
10,00	133	38	10,00
11,00	142	41	10,00
12,00	151	41	10,00
13,00	151	44	10,00
14,00	160	47	12,50
15,00	162	50	12,50
16,00	170	52	12,50
17,00	175	54	14,00
18,00	182	56	14,00
19,00	189	58	16,00
20,00	195	60	16,00

HSS

DIN
338N

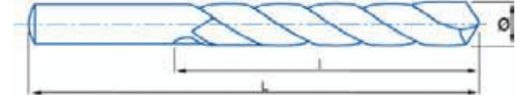
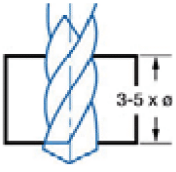
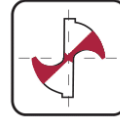


Ø mm h8	L (mm)	l (mm)	
0,30	19	3	10
0,40	20	5	10
0,50	22	6	10
0,60	24	7	10
0,70	28	9	10
0,80	30	10	10
0,90	32	11	10
1,00	34	12	10
1,10	36	14	10
1,20	38	16	10
1,30	38	16	10
1,40	40	18	10
1,50	40	18	10
1,60	43	20	10
1,70	43	20	10
1,80	46	22	10
1,90	46	22	10
2,00	49	24	10
2,10	49	24	10
2,20	53	27	10
2,30	53	27	10
2,40	57	30	10
2,50	57	30	10
2,60	57	30	10
2,70	61	33	10
2,80	61	33	10
2,90	61	33	10
3,00	61	33	10
3,10	65	36	10
3,20	65	36	10
3,30	65	36	10
3,40	70	39	10
3,50	70	39	10
3,60	70	39	10
3,70	70	39	10
3,80	75	43	10
3,90	75	43	10
4,00	75	43	10
4,10	75	43	10
4,20	75	43	10
4,30	80	47	10
4,40	80	47	10
4,50	80	47	10
4,60	80	47	10
4,70	80	47	10

Ø mm h8	L (mm)	l (mm)	
4,80	86	52	10
4,90	86	52	10
5,00	86	52	10
5,10	86	52	10
5,20	86	52	10
5,30	86	52	10
5,40	93	57	10
5,50	93	57	10
5,60	93	57	10
5,70	93	57	10
5,80	93	57	10
5,90	93	57	10
6,00	93	57	10
6,10	101	63	10
6,20	101	63	10
6,30	101	63	10
6,40	101	63	10
6,50	101	63	10
6,60	101	63	10
6,70	101	63	10
6,80	109	69	10
6,90	109	69	10
7,00	109	69	10
7,10	109	69	10
7,20	109	69	10
7,30	109	69	10
7,40	109	69	10
7,50	109	69	10
7,60	117	75	10
7,70	117	75	10
7,80	117	75	10
7,90	117	75	10
8,00	117	75	10
8,10	117	75	10
8,20	117	75	10
8,30	117	75	10
8,40	117	75	10
8,50	117	75	10
8,60	125	81	10
8,70	125	81	10
8,80	125	81	10
8,90	125	81	10
9,00	125	81	10
9,10	125	81	10
9,20	125	81	10

HSS

DIN
338N

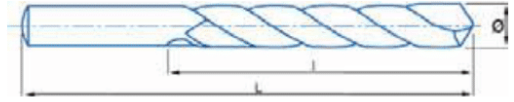
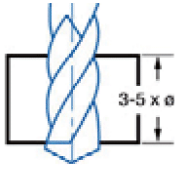
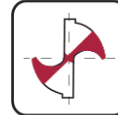


Ø mm h8	L (mm)	l (mm)	
9,30	125	81	10
9,40	125	81	10
9,50	125	81	10
9,60	133	87	10
9,70	133	87	10
9,80	133	87	10
9,90	133	87	10
10,00	133	87	10
10,10	133	87	5
10,20	133	87	5
10,30	133	87	5
10,40	133	87	5
10,50	133	87	5
10,60	133	87	5
10,70	142	94	5
10,80	142	94	5
10,90	142	94	5
11,00	142	94	5
11,10	142	94	5
11,20	142	94	5
11,30	142	94	5
11,40	142	94	5
11,50	142	94	5
11,60	142	94	5
11,70	142	94	5
11,80	142	94	5
11,90	151	101	5
12,00	151	101	5
12,10	151	101	5
12,20	151	101	5
12,30	151	101	5
12,40	151	101	5
12,50	151	101	5
12,60	151	101	5
12,70	151	101	5
12,80	151	101	5
12,90	151	101	5
13,00	151	101	5
13,10	151	101	1
13,20	151	101	1
13,30	160	108	1
13,40	160	108	1
13,50	160	108	1

Ø mm h8	L (mm)	l (mm)	
13,60	160	108	1
13,70	160	108	1
13,80	160	108	1
13,90	160	108	1
14,00	160	108	1
14,10	169	114	1
14,20	169	114	1
14,30	169	114	1
14,40	169	114	1
14,50	169	114	1
14,60	169	114	1
14,70	169	114	1
14,80	169	114	1
14,90	169	114	1
15,00	169	114	1
15,20	178	120	1
15,25	178	120	1
15,50	178	120	1
15,60	178	120	1
15,70	178	120	1
15,75	178	120	1
15,80	178	120	1
15,90	178	120	1
16,00	178	120	1
16,20	184	125	1
16,25	184	125	1
16,50	184	125	1
16,75	184	125	1
16,80	184	125	1
17,00	184	125	1
17,25	191	130	1
17,50	191	130	1
17,75	191	130	1
18,00	191	130	1
18,25	198	135	1
18,50	198	135	1
18,75	198	135	1
19,00	198	135	1
19,25	205	140	1
19,50	205	140	1
19,75	205	140	1
20,00	205	140	1

**HSSE
Co5**

**DIN
338N**

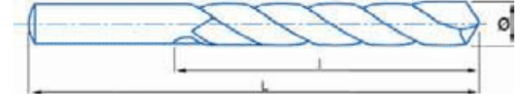
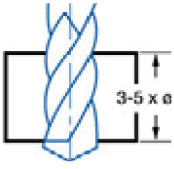
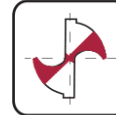


Ø mm h8	L (mm)	l (mm)	
0,50	22	6	10
0,60	27	7	10
0,70	28	9	10
0,80	30	10	10
0,90	32	11	10
1,00	34	12	10
1,10	36	14	10
1,20	38	16	10
1,30	38	16	10
1,40	40	18	10
1,50	40	18	10
1,60	43	20	10
1,70	43	20	10
1,80	46	22	10
1,90	46	22	10
2,00	49	24	10
2,10	49	24	10
2,20	53	27	10
2,30	53	27	10
2,40	57	30	10
2,50	57	30	10
2,60	57	30	10
2,70	61	33	10
2,80	61	33	10
2,90	61	33	10
3,00	61	33	10
3,10	65	36	10
3,20	65	36	10
3,30	65	36	10
3,40	70	39	10
3,50	70	39	10
3,60	70	39	10
3,70	70	39	10
3,80	75	43	10
3,90	75	43	10
4,00	75	43	10
4,10	75	43	10

Ø mm h8	L (mm)	l (mm)	
4,20	75	43	10
4,30	80	47	10
4,40	80	47	10
4,50	80	47	10
4,60	80	47	10
4,70	80	47	10
4,80	86	52	10
4,90	86	52	10
5,00	86	52	10
5,10	86	52	10
5,20	86	52	10
5,30	86	52	10
5,40	93	57	10
5,50	93	57	10
5,60	93	57	10
5,70	93	57	10
5,80	93	57	10
5,90	93	57	10
6,00	93	57	10
6,10	101	63	10
6,20	101	63	10
6,30	101	63	10
6,40	101	63	10
6,50	101	63	10
6,60	101	63	10
6,70	101	63	10
6,80	109	69	10
6,90	109	69	10
7,00	109	69	10
7,10	109	69	10
7,20	109	69	10
7,30	109	69	10
7,40	109	69	10
7,50	109	69	10
7,60	117	75	10
7,70	117	75	10
7,80	117	75	10

**HSSE
Co5**

**DIN
338N**



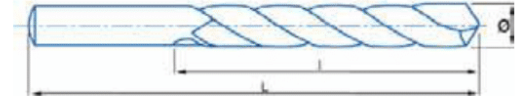
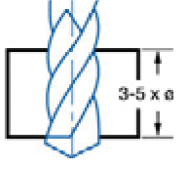
Ø mm h8	L (mm)	l (mm)	
7,90	117	75	10
8,00	117	75	10
8,10	117	75	10
8,20	117	75	10
8,30	117	75	10
8,40	117	75	10
8,50	117	75	10
8,60	125	81	10
8,70	125	81	10
8,80	125	81	10
8,90	125	81	10
9,00	125	81	10
9,10	125	81	10
9,20	125	81	10
9,30	125	81	10
9,40	125	81	10
9,50	125	81	10
9,60	133	87	10
9,70	133	87	10
9,80	133	87	10
9,90	133	87	10
10,00	133	87	10
10,10	133	87	5
10,20	133	87	5
10,30	133	87	5
10,40	133	87	5
10,50	133	87	5
10,60	133	87	5
10,70	142	94	5
10,80	142	94	5
10,90	142	94	5
11,00	142	94	5
11,10	142	94	5
11,20	142	94	5
11,30	142	94	5
11,40	142	94	5

Ø mm h8	L (mm)	l (mm)	
11,50	142	94	5
11,60	142	94	5
11,70	142	94	5
11,80	142	94	5
11,90	151	101	5
12,00	151	101	5
12,10	151	101	5
12,20	151	101	5
12,30	151	101	5
12,40	151	101	5
12,50	151	101	5
12,60	151	101	5
12,70	151	101	5
12,80	151	101	5
12,90	151	101	5
13,00	151	101	5
13,25	160	108	1
13,50	160	108	1
13,75	160	108	1
14,00	160	108	1
14,25	169	114	1
14,50	169	114	1
14,75	169	114	1
15,00	169	114	1
15,25	178	120	1
15,50	178	120	1
15,75	178	120	1
16,00	178	120	1
16,50	184	125	1
17,00	184	125	1
17,50	191	130	1
18,00	191	130	1
18,50	198	135	1
19,00	198	135	1
19,50	205	140	1
20,00	205	140	1

**HSSE
Co5**

**DIN
338**

**Type
W**

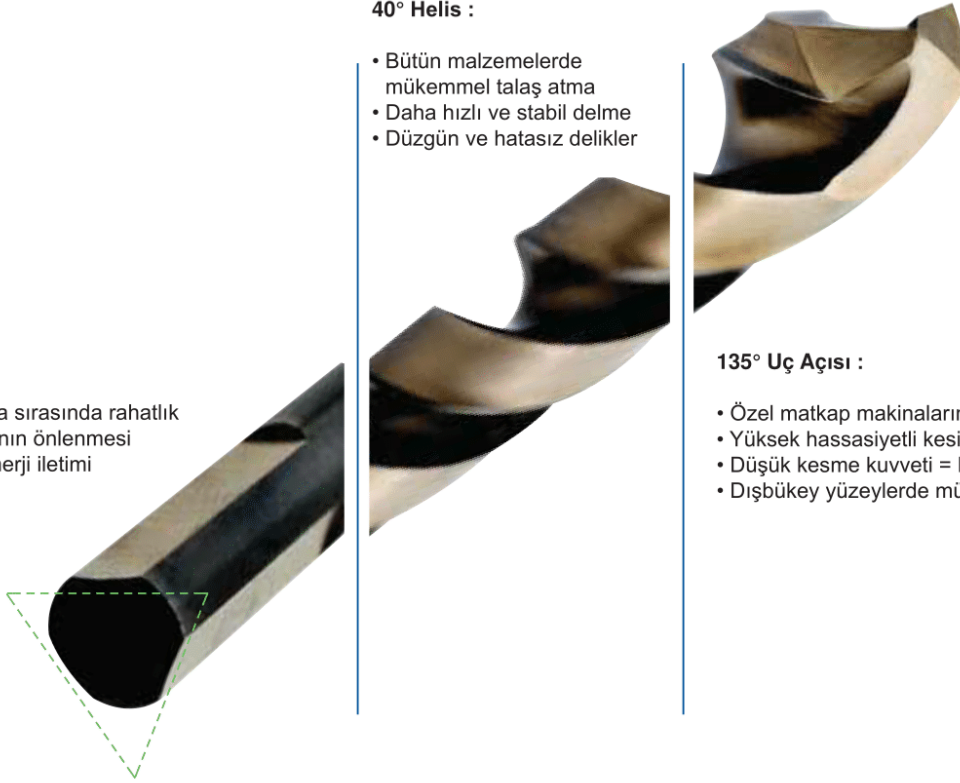


40° Helis :

- Bütün malzemelerde mükemmel talaş atma
- Daha hızlı ve stabil delme
- Düzgün ve hatasız delikler

3-Köşe Saplı :

- Optimum sıkma
- Bağlantı sökme-takma sırasında rahatlık
- Mandrende kaydırmanın önlenmesi
- Delme ucuna ideal enerji iletimi

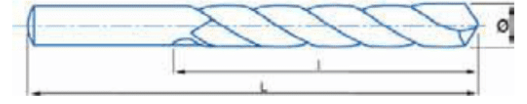
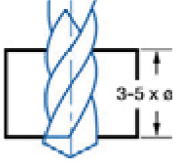
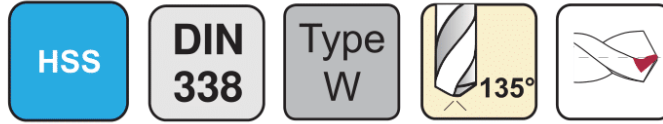


135° Uç Açısı :

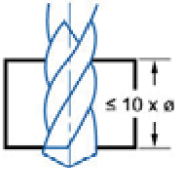
- Özel matkap makinalarına da uygunluk
- Yüksek hassasiyetli kesici uç
- Düşük kesme kuvveti = Enerji tasarrufu
- Dışbükey yüzeylerde mükemmel merkezleme


Ø mm h8	L (mm)	l (mm)	
2,00	49	24	10
2,50	57	30	10
3,00	61	33	10
3,20	65	36	10
3,30	65	36	10
3,50	70	39	10
4,00	75	43	10
4,20	75	43	10
4,50	80	47	10
5,00	86	52	10
5,20	86	52	10
5,50	93	57	10
6,00	93	57	10
6,50	101	63	5
6,80	109	69	5


Ø mm h8	L (mm)	l (mm)	
7,00	109	69	5
7,50	109	69	5
8,00	117	75	5
8,50	117	75	5
9,00	125	81	5
9,50	125	81	5
10,00	133	87	5
10,20	133	87	1
10,50	133	87	1
11,00	142	94	1
11,50	142	94	1
12,00	151	101	1
12,50	151	101	1
13,00	151	101	1



Ø mm h8	L (mm)	l (mm)	
1,00	34	12	10
1,50	40	18	10
2,00	49	24	10
2,50	57	30	10
2,80	61	33	10
3,00	61	33	10
3,10	65	36	10
3,20	65	36	10
3,30	65	36	10
3,50	70	39	10
3,60	70	39	10
3,70	70	39	10
3,80	75	43	10
4,00	75	43	10
4,10	75	43	10
4,20	75	43	10
4,30	80	47	10
4,50	80	47	10
4,60	80	47	10
4,80	86	52	10
5,00	86	52	10
5,10	86	52	10
5,20	86	52	10
5,50	93	57	10
5,70	93	57	10
5,90	93	57	10
6,00	93	57	10
6,50	101	63	10
6,80	109	69	10
7,00	109	69	10
7,40	109	69	10
7,50	109	69	10
8,00	117	75	10
8,50	117	75	10
9,00	125	81	10
9,10	125	81	10
9,50	125	81	10
10,00	133	87	10
10,50	133	87	5
11,00	142	94	5
11,10	142	94	5
11,50	142	94	5
12,00	151	101	5
12,50	151	101	5
13,00	151	101	5

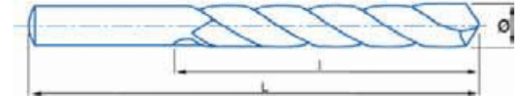
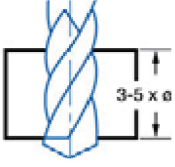
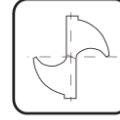


Ø mm h8	L (mm)	l (mm)	
2,00	49	24	10
2,10	49	24	10
2,30	53	27	10
2,50	57	30	10
2,70	61	33	10
3,00	61	33	10
3,10	65	36	10
3,20	65	36	10
3,30	65	36	10
3,50	70	39	10
3,60	70	39	10
3,70	70	39	10
3,90	75	43	10
4,00	75	43	10
4,10	75	43	10
4,20	75	43	10
4,30	80	47	10
4,40	80	47	10
4,50	80	47	10
4,70	80	47	10
4,80	86	52	10
5,00	86	52	10
5,10	86	52	10
5,20	86	52	10
5,30	86	52	10

Ø mm h8	L (mm)	l (mm)	
5,50	93	57	10
5,60	93	57	10
5,80	93	57	10
5,90	93	57	10
6,00	93	57	10
6,20	101	63	5
6,50	101	63	5
6,80	109	69	5
7,00	109	69	5
7,20	109	69	5
7,50	109	69	5
8,00	117	75	5
8,20	117	75	5
8,50	117	75	5
8,80	125	81	5
9,00	125	81	5
9,50	125	81	5
9,80	133	87	5
10,00	133	87	5
10,50	133	87	1
11,00	142	94	1
11,50	142	94	1
12,00	151	101	1
13,00	151	101	1

HSS

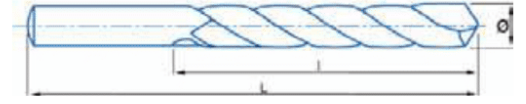
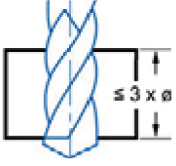
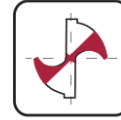
DIN
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Ø mm h8	L (mm)	l (mm)	
1,00	34	12	10
1,50	40	18	10
2,00	49	24	10
2,50	57	30	10
3,00	61	33	10
3,50	70	39	10
4,00	75	43	10
4,50	80	47	10
5,00	86	52	10
5,50	93	57	10
6,00	93	57	10
6,50	101	63	10
7,00	109	69	10
7,50	109	69	10
8,00	117	75	10
8,50	117	75	10
9,00	125	81	10
9,50	125	81	10
10,00	133	87	10
10,50	133	87	5
11,00	142	94	5
11,50	142	94	5
12,00	151	101	5
12,50	151	101	5
13,00	151	101	5

**HSSE
Co5**

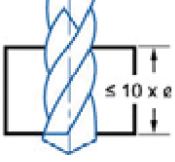
**DIN
1897**



Ø mm h8	L (mm)	l (mm)	
1,00	26	6	10
1,50	32	9	10
1,60	34	10	10
1,80	36	11	10
2,00	38	12	10
2,10	38	12	10
2,20	40	13	10
2,30	40	13	10
2,40	43	14	10
2,50	43	14	10
2,60	43	14	10
2,70	46	16	10
2,80	46	16	10
2,90	46	16	10
3,00	46	16	10
3,10	49	18	10
3,20	49	18	10
3,30	49	18	10
3,40	52	20	10
3,50	52	20	10
3,60	52	20	10
3,70	52	20	10
3,80	55	22	10
3,90	55	22	10
4,00	55	22	10
4,10	55	22	10
4,20	55	22	10
4,30	58	24	10
4,40	58	24	10
4,50	58	24	10
4,60	58	24	10
4,70	58	24	10
4,80	62	26	10
4,90	62	26	10
5,00	62	26	10
5,10	62	26	10
5,20	62	26	10
5,30	62	26	10
5,40	66	28	10
5,50	66	28	10
5,60	66	28	10
5,70	66	28	10

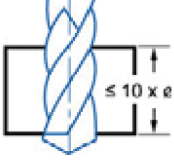
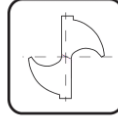
Ø mm h8	L (mm)	l (mm)	
5,80	66	28	10
5,90	66	28	10
6,00	66	28	10
6,10	70	31	10
6,20	70	31	10
6,30	70	31	10
6,40	70	31	10
6,50	70	31	10
6,60	70	31	10
6,70	70	31	10
6,80	74	34	10
7,00	74	34	10
7,50	74	34	10
7,80	79	37	10
8,00	79	37	10
8,50	79	37	10
9,00	84	40	10
9,50	84	40	10
10,00	89	43	10
10,20	89	43	1
10,50	89	43	1
11,00	95	47	1
11,50	95	47	1
12,00	102	51	1
12,50	102	51	1
12,70	102	51	1
13,00	102	51	1
13,50	107	54	1
14,00	107	54	1
14,50	111	56	1
15,00	111	56	1
15,50	115	58	1
16,00	115	58	1
16,50	119	60	1
17,00	119	60	1
17,50	123	62	1
18,00	123	62	1
18,50	127	64	1
19,00	127	64	1
19,50	131	66	1
20,00	131	66	1

TAŞLANMIŞ UZUN MATKAP UCU (BUHAR MENEVİŞLİ)



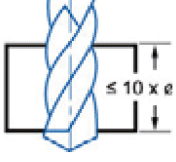
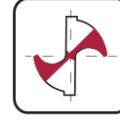
Ø mm h8	L (mm)	l (mm)	
0,50	32	12	10
0,60	35	15	10
0,70	42	21	10
0,80	46	25	10
0,90	51	29	10
1,00	56	33	10
1,10	60	37	10
1,20	65	41	10
1,30	65	41	10
1,40	70	45	10
1,50	70	45	10
1,60	76	50	10
1,70	76	50	10
1,80	80	53	10
1,90	80	53	10
2,00	85	56	10
2,10	85	56	10
2,20	90	59	10
2,30	90	59	10
2,40	95	62	10
2,50	95	62	10
2,60	95	62	10
2,70	100	66	10
2,80	100	66	10
2,90	100	66	10
3,00	100	66	10
3,10	106	69	10
3,20	106	69	10
3,30	106	69	10
3,40	112	73	10
3,50	112	73	10
3,60	112	73	10
3,70	112	73	10
3,80	119	78	10
3,90	119	78	10
4,00	119	78	10
4,10	119	78	10
4,20	119	78	10


Ø mm h8	L (mm)	l (mm)	
4,30	126	82	10
4,40	126	82	10
4,50	126	82	10
4,60	126	82	10
4,70	126	82	10
4,80	132	87	10
4,90	132	87	10
5,00	132	87	10
5,10	132	87	10
5,20	132	87	10
5,30	132	87	10
5,40	139	91	10
5,50	139	91	10
5,60	139	91	10
5,70	139	91	10
5,80	139	91	10
5,90	139	91	10
6,00	139	91	10
6,10	148	97	10
6,20	148	97	10
6,30	148	97	10
6,40	148	97	10
6,50	148	97	10
6,60	148	97	10
6,70	148	97	10
6,80	156	102	10
6,90	156	102	10
7,00	156	102	10
7,10	156	102	10
7,20	156	102	10
7,30	156	102	10
7,40	156	102	10
7,50	156	102	10
7,60	165	109	10
7,70	165	109	10
7,80	165	109	10
7,90	165	109	10
8,00	165	109	10

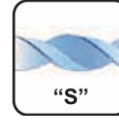


Ø mm h8	L (mm)	l (mm)	
8,10	165	109	5
8,20	165	109	5
8,30	165	109	5
8,40	165	109	5
8,50	165	109	5
8,60	175	115	5
8,70	175	115	5
8,80	175	115	5
8,90	175	115	5
9,00	175	115	5
9,10	175	115	5
9,20	175	115	5
9,30	175	115	5
9,40	175	115	5
9,50	175	115	5
9,60	184	121	5
9,70	184	121	5
9,80	184	121	5
9,90	184	121	5
10,00	184	121	5
10,20	184	121	1
10,50	184	121	1
10,80	195	128	1
11,00	195	128	1
11,10	195	128	1
11,50	195	128	1
11,80	195	128	1
11,90	205	134	1
12,00	205	134	1
12,20	205	134	1

Ø mm h8	L (mm)	l (mm)	
12,30	205	134	1
12,50	205	134	1
12,75	205	134	1
13,00	205	134	1
13,25	214	140	1
13,50	214	140	1
13,75	214	140	1
14,00	214	140	1
14,25	220	144	1
14,50	220	144	1
14,75	220	144	1
15,00	220	144	1
15,25	227	149	1
15,50	227	149	1
15,75	227	149	1
16,00	227	149	1
16,25	235	154	1
16,50	235	154	1
16,75	235	154	1
17,00	235	154	1
17,25	241	158	1
17,50	241	158	1
17,75	241	158	1
18,00	241	158	1
18,25	241	158	1
18,50	247	162	1
19,00	247	162	1
19,50	254	166	1
19,75	254	166	1
20,00	254	166	1

HSSE
Co5
DIN
340


Ø mm h8	L (mm)	l (mm)	
2,00	85	56	10
2,50	95	62	10
3,00	100	66	10
3,10	106	69	10
3,20	106	69	10
3,30	106	69	10
3,50	112	73	10
3,70	112	73	10
4,00	119	78	10
4,20	119	78	10
4,50	126	82	10
5,00	132	87	10
5,50	139	91	10
6,00	139	91	10
6,50	148	97	5
6,80	156	102	5
7,00	156	102	5
7,50	156	102	5
8,00	165	109	5
8,50	165	109	5
8,60	175	115	5
9,00	175	115	5
9,50	175	115	5
10,00	184	121	5
10,20	184	121	1
10,50	184	121	1
11,00	195	128	1
11,50	195	128	1
12,00	205	134	1
12,50	205	134	1
13,00	205	134	1



TAŞLANMIŞ EXTRA UZUN MATKAP UCU ("S" FORMU)				SAG ^{RH}
				STP
				IAT1869S
				HSS
Ø (mm)	L (mm)	I (mm)		TAPLANMIŞ
2,00	125	85	1	03767
2,50	140	95	1	03768
3,00	150	100	1	03769
3,00	190	130	1	03770
3,50	165	115	1	03771
3,50	210	145	1	03772
3,50	265	180	1	03773
4,00	175	120	1	03774
4,00	220	150	1	03775
4,00	280	150	1	03776
4,50	185	125	1	03777
4,50	235	160	1	03778
4,50	295	220	1	03779
5,00	195	135	1	03780
5,00	245	170	1	03781
5,00	315	210	1	03782
5,50	205	140	1	03783
5,50	260	180	1	03784
5,50	330	225	1	03785
6,00	205	140	1	03786
6,00	260	180	1	03787
6,00	330	225	1	03788
6,50	215	150	1	03789
6,50	275	190	1	03790
6,50	350	235	1	03791
7,00	225	155	1	03792
7,00	290	200	1	03793
7,00	370	250	1	03794
7,50	225	155	1	03795
7,50	290	200	1	03796
7,50	370	250	1	03797
8,00	240	165	1	03798

TAŞLANMIŞ EXTRA UZUN MATKAP UCU ("S" FORMU)				SAG ^{RH}
				STP
				IAT1869S
				HSS
Ø (mm)	L (mm)	I (mm)		TAPLANMIŞ
8,00	305	210	1	03799
8,00	390	265	1	03800
8,50	240	165	1	03801
8,50	305	210	1	03802
8,50	390	265	1	03803
9,00	250	175	1	03804
9,00	320	220	1	03805
9,00	410	280	1	03806
9,00	250	175	1	03807
9,50	320	220	1	03808
9,50	410	280	1	03809
10,00	265	185	1	03810
10,00	340	235	1	03811
10,00	430	295	1	03812
10,50	265	185	1	03813
10,50	340	235	1	03814
10,50	430	295	1	03815
11,00	280	195	1	03816
11,00	365	250	1	03817
11,00	455	310	1	03818
11,50	280	195	1	03819
11,50	365	250	1	03820
11,50	455	310	1	03821
12,00	295	205	1	03822
12,00	375	260	1	03823
12,00	480	330	1	03824
12,50	295	205	1	03825
12,50	375	260	1	03826
12,50	480	330	1	03827
13,00	295	205	1	03828
13,00	375	260	1	03829
13,00	480	330	1	03830

IAT HADDELİ KONİK MATKAP UCU

DIN
345

HSS



h8

Type
N

SICAK HADDELEMEYLE ÜRETİLDİĞİ İÇİN BURULMA DAYANIMI VE ELASTİKİYETİ YÜKSEKTİR. DÜŞÜK ALAŞIMLI ÇELİKLER, DÖKÜM, METAL VE METAL OLMAYAN MALZEMELERİ KONVANSİYONEL TEZGAHLARDA İŞLEMENE UYGUNDUR.

ZTM HADDELİ KONİK MATKAP UCU

DIN
345

HSS



h8

Type
N

SICAK HADDELEMEYLE ÜRETİLDİĞİ İÇİN BURULMA DAYANIMI VE ELASTİKİYETİ YÜKSEKTİR. DÜŞÜK ALAŞIMLI ÇELİKLER, DÖKÜM, METAL VE METAL OLMAYAN MALZEMELERİ KONVANSİYONEL TEZGAHLARDA İŞLEMENE UYGUNDUR.

IAT FREZELİ (KOBALTLI) KONİK MATKAP UCU

DIN
345HSS
Co5

h8

Type
N

SICAK HADDELEMEYLE ÜRETİLDİĞİ İÇİN BURULMA DAYANIMI VE ELASTİKİYETİ YÜKSEKTİR. ZOR TALAP KALDIRILAN MALZEMELERİ PASLANMAZ ÇELİK VE ISIYA DAYANIKLI ÇELİKLERİ KONVANSİYONEL TEZGAHLARDA İŞLEMENE UYGUNDUR..

IAT HADDELİ UZUN KONİK MATKAP UCU

DIN
341

HSS



h8

Type
N

SICAK HADDEYLE ÜRETİLDİĞİ İÇİN BURULMA DAYANIMI VE ELASTİKİYETİ YÜKSEKTİR. DÜŞÜK ÇELİKLER, DÖKÜM, ALAŞIMLI METAL VE METAL OLMAYAN MALZEMELERİ KONVANSİYONEL TEZGAHLARDA İŞLEMENE UYGUNDUR.

ZTM FREZELİ UZUN KONİK MATKAP UCU

DIN
341

HSS



h8

Type
N

SICAK HADDEYLE ÜRETİLDİĞİ İÇİN BURULMA DAYANIMI VE ELASTİKİYETİ YÜKSEKTİR. DÜŞÜK ÇELİKLER, DÖKÜM, ALAŞIMLI METAL VE METAL OLMAYAN MALZEMELERİ KONVANSİYONEL TEZGAHLARDA İŞLEMENE UYGUNDUR.

IAT HADDELİ EXTRA UZUN KONİK MATKAP UCU

DIN
1870

HSS



h8

Type
N

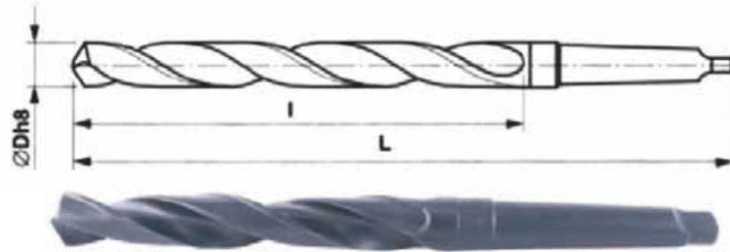
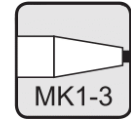
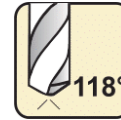
DERİN DELİK UYGULAMALARINDA KONVANSİYONEL TEZGAHLARDA DÜŞÜK ÇELİKLER, DÖKÜM, METAL VE METAL OLMAYAN MALZEMELERİ İŞLEMENE UYGUNDUR.

HSS

HSS Co5

DIN 345

Type N



KONÍK SAPLI MATKAP UCU				SAĞ ^{RH}		
						ZTM
				IAT345	IAT345Co5	ZTM345
				HSS	HSSCo5	HSS
D (mm)	L (mm)	I (mm)	MK	HADDELÝ	FREZELÝ	HADDELÝ
7,50	150	69	1	03831	03875	03919
8,00	156	75	1	03832	03876	03920
8,50	156	75	1	03833	03877	03921
9,00	162	81	1	03834	03878	03922
9,50	162	81	1	03835	03879	03923
10,00	168	87	1	03836	03880	03924
10,20	168	87	1	03837	03881	03925
10,25	168	87	1	03838	03882	03926
10,50	168	87	1	03839	03883	03927
10,75	175	94	1	03840	03884	03928
11,00	175	94	1	03841	03885	03929
11,25	175	94	1	03842	03886	03930
11,50	175	94	1	03843	03887	03931
11,75	175	94	1	03844	03888	03932
12,00	182	101	1	03845	03889	03933
12,25	182	101	1	03846	03890	03934
12,50	182	101	1	03847	03891	03935
12,75	182	101	1	03848	03892	03936
13,00	182	101	1	03849	03893	03937
13,25	189	108	1	03850	03894	03938
13,50	189	108	1	03851	03895	03939
13,75	189	108	1	03852	03896	03940
14,00	189	108	1	03853	03897	03941
14,25	212	114	2	03854	03898	03942
14,50	212	114	2	03855	03899	03943
14,75	212	114	2	03856	03900	03944
15,00	212	114	2	03857	03901	03945
15,25	218	120	2	03858	03902	03946
15,50	218	120	2	03859	03903	03947
15,75	218	120	2	03860	03904	03948
16,00	218	120	2	03861	03905	03949
16,25	223	125	2	03862	03906	03950
16,50	223	125	2	03863	03907	03951
16,75	223	125	2	03864	03908	03952
17,00	223	125	2	03865	03909	03953
17,25	228	130	2	03866	03910	03954
17,50	228	130	2	03867	03911	03955
17,75	228	130	2	03868	03912	03956
18,00	228	130	2	03869	03913	03957
18,25	233	135	2	03870	03914	03958
18,50	233	135	2	03871	03915	03959
18,75	233	135	2	03872	03916	03960
19,00	233	135	2	03873	03917	03961
19,25	238	140	2	03874	03918	03962

KONÍK SAPLI MATKAP UCU				SAĞ ^{RH}		
						ZTM
				IAT345	IAT345Co5	ZTM345
				HSS	HSSCo5	HSS
D (mm)	L (mm)	I (mm)	MK	HADDELÝ	FREZELÝ	HADDELÝ
19,50	238	140	2	03963	04006	04049
19,75	238	140	2	03964	04007	04050
20,00	238	140	2	03965	04008	04051
20,25	243	145	2	03966	04009	04052
20,50	243	145	2	03967	04010	04053
20,75	243	145	2	03968	04011	04054
21,00	243	150	2	03969	04012	04055
21,25	248	150	2	03970	04013	04056
21,50	248	150	2	03971	04014	04057
21,75	248	150	2	03972	04015	04058
22,00	248	150	2	03973	04016	04059
22,25	253	150	2	03974	04017	04060
22,50	253	155	2	03975	04018	04061
22,75	253	155	2	03976	04019	04062
23,00	253	155	2	03977	04020	04063
23,25	276	155	3	03978	04021	04064
23,50	276	155	3	03979	04022	04065
23,75	281	160	3	03980	04023	04066
24,00	281	160	3	03981	04024	04067
24,25	281	160	3	03982	04025	04068
24,50	281	160	3	03983	04026	04069
24,75	281	160	3	03984	04027	04070
25,00	281	160	3	03985	04028	04071
25,25	286	165	3	03986	04029	04072
25,50	286	165	3	03987	04030	04073
25,75	286	165	3	03988	04031	04074
26,00	286	165	3	03989	04032	04075
26,25	286	165	3	03990	04033	04076
26,50	286	165	3	03991	04034	04077
26,75	291	170	3	03992	04035	04078
27,00	291	170	3	03993	04036	04079
27,25	291	170	3	03994	04037	04080
27,50	291	170	3	03995	04038	04081
27,75	291	170	3	03996	04039	04082
28,00	291	175	3	03997	04040	04083
28,25	296	175	3	03998	04041	04084
28,50	296	175	3	03999	04042	04085
28,75	296	175	3	04000	04043	04086
29,00	296	175	3	04001	04044	04087
29,25	296	175	3	04002	04045	04088
29,50	296	175	3	04003	04046	04089
29,75	296	175	3	04004	04047	04090
30,00	296	175	3	04005	04048	04091

HSSE
Co5
H7
DIN
208B

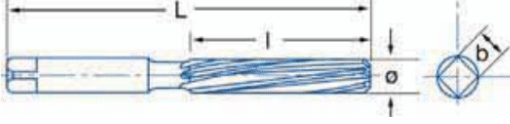
 MK1-3


ISO
521


Ø (mm)	L (mm)	l (mm)	Z	MK
6,00	138	26	6	1
7,00	150	31	6	1
8,00	156	33	6	1
9,00	162	36	6	1
10,00	168	38	6	1
11,00	175	41	6	1
12,00	182	44	6	1
13,00	182	44	8	1
14,00	189	47	8	1
15,00	204	50	8	2
16,00	210	52	8	2
17,00	214	54	8	2
18,00	219	56	8	2
19,00	223	58	8	2
20,00	228	60	8	2
21,00	232	62	8	2
22,00	237	64	8	2
23,00	241	66	8	2
24,00	268	68	10	3
25,00	268	68	10	3
26,00	273	70	10	3
27,00	277	71	10	3
28,00	277	71	10	3
30,00	281	73	10	3

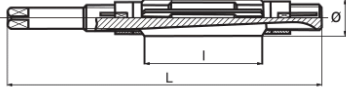
HSS

H7

DIN
206BISO
236

Ø (mm)	L (mm)	l (mm)	 b
2,00	50	25	1,60
2,50	58	29	2,10
3,00	62	31	2,10
3,50	71	35	2,70
4,00	76	38	3,00
4,50	81	41	3,40
5,00	87	44	3,80
5,50	93	47	4,30
6,00	93	47	4,30
6,50	100	50	4,90
7,00	107	54	5,50
7,50	107	54	5,50
8,00	115	58	6,20
8,50	115	58	6,20
9,00	124	62	7,00
10,00	133	66	8,00
11,00	142	71	9,00
12,00	152	76	10,00
13,00	152	76	10,00
14,00	163	81	11,00
15,00	163	81	11,00
16,00	175	87	12,00
17,00	175	87	12,00
18,00	188	93	14,50
19,00	188	93	14,50
20,00	201	100	16,00
21,00	201	100	16,00
22,00	215	107	18,00
23,00	215	107	18,00
24,00	231	115	20,00
25,00	231	115	20,00
26,00	231	115	20,00
27,00	247	124	22,40
28,00	247	124	22,40
30,00	247	124	22,40

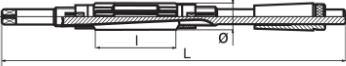
AYARLI KOVANSIZ EL RAYBASI HSS



Ø (mm)	I (mm)	L (mm)	Z
6,40 - 7,20	34	85	4
7,20 - 8,00	35	90	4
8,00 - 9,00	39	100	5
9,00 - 10,00	45	120	5
10,00 - 11,00	45	125	5
11,00 - 12,00	46	130	5
12,00 - 13,50	48	135	5
13,50 - 15,50	58	140	5
15,50 - 18,00	69	165	5
18,00 - 21,00	75	185	5
21,00 - 24,00	80	195	5
24,00 - 27,50	90	215	6
27,50 - 31,50	100	240	6
31,50 - 37,00	110	265	6
37,00 - 45,00	130	310	6
45,00 - 55,00	145	380	6

55,00 - 65,00 _ 65,00 - 80,00 _ 80,00 - 95,00 _ 95,00 - 110,00 AYARLI EL RAYBALARI İÇİN LÜTFEN FİYAT VE TESLİM TARİHİ SORUNUZ.

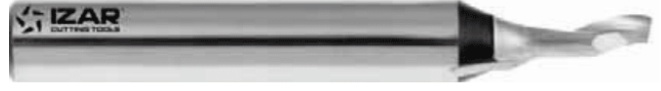
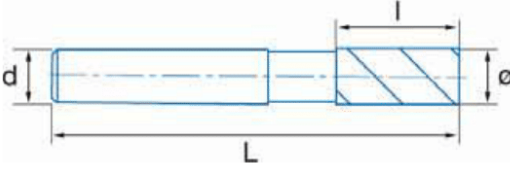
AYARLI KOVANLI EL RAYBASI HSS



Ø (mm)	I (mm)	L (mm)	Z
8,00 - 9,00	39	175	5
9,00 - 10,00	39	185	5
10,00 - 11,00	45	195	5
11,00 - 12,00	45	200	5
12,00 - 13,50	48	220	5
13,50 - 15,50	58	243	5
15,50 - 18,00	69	274	5
18,00 - 21,00	75	300	5
21,00 - 24,00	80	320	5
24,00 - 27,50	90	350	6
27,50 - 31,50	100	385	6
31,50 - 37,00	110	424	6
37,00 - 45,00	130	490	6
45,00 - 55,00	145	600	6

55,00 - 65,00 _ 65,00 - 80,00 _ 80,00 - 95,00 _ 95,00 - 110,00 AYARLI EL RAYBALARI İÇİN LÜTFEN FİYAT VE TESLİM TARİHİ SORUNUZ.

HSS

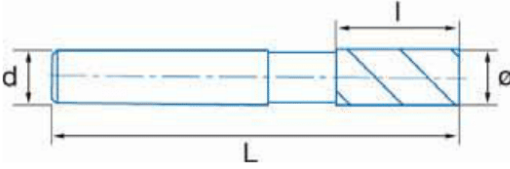
Type
WREF
4412

Ø (mm)	d (mm)	L (mm)	l (mm)
3,00	8	60	12
4,00	8	60	12
5,00	8	60	12
6,00	8	60	14
8,00	8	80	15
10,00	10	80	15

HSS

Type
W

Y

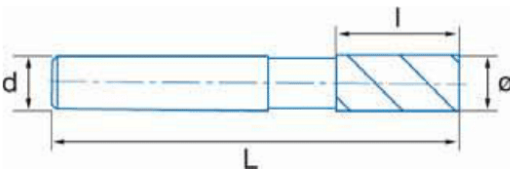
REF
4414

Ø (mm)	d (mm)	L (mm)	l (mm)	Y (mm)
4,00	8	80	16	29
5,00	8	80	16	29
6,00	8	90	16	29
8,00	8	100	28	40

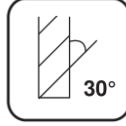
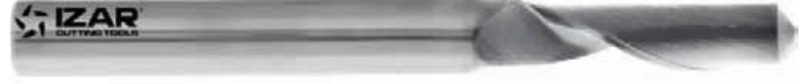
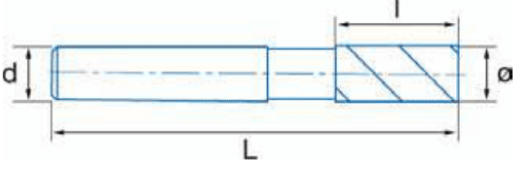
HSS

Type
W

Y

REF
4417

Ø (mm)	d (mm)	L (mm)	l (mm)	Y (mm)
5,00	8	100	35	20

Type
WTol.
D (h10)
d (h6)

Ø (mm)	d (mm)	L (mm)	l (mm)
3,00	3	38	12
4,00	4	40	15
5,00	5	50	16
6,00	6	50	18
8,00	8	63	22
10,00	10	72	30

IAT HADDELY ALTIN SERİ MATKAP UCU

DIN
338

HSS



h8

Type
N

HADDELEMEYLE ÜRETİLDİĞİ İÇİN BURULMA DAYANIM VE ELASTİKİYETİ YÜKSEKTİR.
DÜŞÜK ALAŞIMLI ÇELİKLER, DÖKÜM, METAL VE METAL OLMAYAN MALZEMELERİ EL BREYZİ VE KONVANSİYONEL
TEZGAHLARDA İŞLEMEYE UYGUNDUR.

ZTM HADDELY MATKAP UCU

DIN
338

HSS



h8

Type
N

HADDELEMEYLE ÜRETİLDİĞİ İÇİN BURULMA DAYANIM VE ELASTİKİYETİ YÜKSEKTİR.
DÜŞÜK ALAŞIMLI ÇELİKLER, DÖKÜM, METAL VE METAL OLMAYAN MALZEMELERİ EL BREYZİ VE KONVANSİYONEL
TEZGAHLARDA İŞLEMEYE UYGUNDUR.

ZTM TİN KAPLI MATKAP UCU

DIN
338

HSS



h8

Type
N

TİN KAPLAMASI SAYESİNDE ALAŞIMLI VE ALAŞIMSIZ ÇELİK, DÖKME DEMİR GİBİ MALZEMELERİN
YÜKSEK DEVİRLERDE İŞLENMESİNİ SAĞLAR. TAKİM ÖMRÜ VE ABINMA DİRENCİ YÜKSEKTİR.

ZTM ALTIN SERİ MATKAP UCU

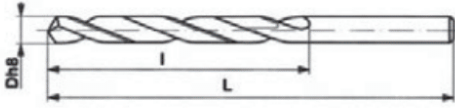
DIN
338HSS
Co5






h8

Type
N

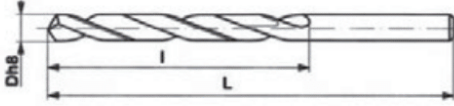
ZOR TALAP KALDIRILAN MALZEMELERİ PASLANMAZ ÇELİK VE ISIYA DAYANIKLI ÇELİKLE İŞLEMEYE UYGUNDUR



HSS

HSS
Co5DIN
338Type
N

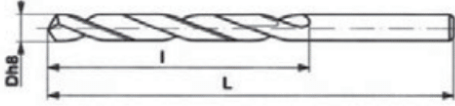
KISA MATKAP UCU			SAĞ ^{RH}				SOL ^{LH}
							
			IAT338	ZTM338	ZTM338Co5	ZTM338T	IAT
			HSS	HSS	HSSCo5	HSS	HSS
D (mm)	L (mm)	I (mm)	HADDELY ALTIN SERI	HADDELY	TAPLANMIP ALTIN SERI	TIN KAPLI	HADDELY
0,30	19	4	02259	02297	02335	02373	02411
0,40	20	5	02260	02298	02336	02374	02412
0,50	22	6	02261	02299	02337	02375	02413
0,60	24	7	02262	02300	02338	02376	02414
0,70	28	9	02263	02301	02339	02377	02415
0,80	30	10	02264	02302	02340	02378	02416
0,90	32	11	02265	02303	02341	02379	02417
1,00	34	12	02266	02304	02342	02380	02418
1,10	36	14	02267	02305	02343	02381	02419
1,20	38	16	02268	02306	02344	02382	02420
1,30	38	16	02269	02307	02345	02383	02421
1,40	40	18	02270	02308	02346	02384	02422
1,50	40	18	02271	02309	02347	02385	02423
1,60	43	20	02272	02310	02348	02386	02424
1,70	43	20	02273	02311	02349	02387	02425
1,80	46	22	02274	02312	02350	02388	02426
1,90	46	22	02275	02313	02351	02389	02427
2,00	49	24	02276	02314	02352	02390	02428
2,10	49	24	02277	02315	02353	02391	02429
2,20	53	27	02278	02316	02354	02392	02430
2,30	53	27	02279	02317	02355	02393	02431
2,40	57	30	02280	02318	02356	02394	02432
2,50	57	30	02281	02319	02357	02395	02433
2,60	57	30	02282	02320	02358	02396	02434
2,70	61	33	02283	02321	02359	02397	02435
2,80	61	33	02284	02322	02360	02398	02436
2,90	61	33	02285	02323	02361	02399	02437
3,00	61	33	02286	02324	02362	02400	02438
3,10	65	36	02287	02325	02363	02401	02439
3,20	65	36	02288	02326	02364	02402	02440
3,30	65	36	02289	02327	02365	02403	02441
3,40	70	39	02290	02328	02366	02404	02442
3,50	70	39	02291	02329	02367	02405	02443
3,60	70	39	02292	02330	02368	02406	02444
3,70	70	39	02293	02331	02369	02407	02445
3,80	75	43	02294	02332	02370	02408	02446
3,90	75	43	02295	02333	02371	02409	02447
4,00	75	43	02296	02334	02372	02410	02448



HSS

HSS
Co5DIN
338Type
N

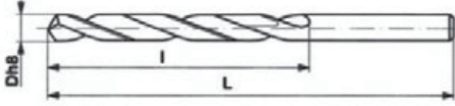
KISA MATKAP UCU			SAĞ ^{RH}				SOL ^{LH}
				ZTM	ZTM	ZTM	
			IAT338	ZTM338	ZTM338Co5	ZTM338T	IAT
			HSS	HSS	HSSCo5	HSS	HSS
D (mm)	L (mm)	I (mm)	HADDELY ALTIN SERI	HADDELY	TAPLANMIP ALTIN SERI	TIN KAPLI	HADDELY
4,10	75	43	02449	02487	02525	02563	02601
4,20	75	43	02450	02488	02526	02564	02602
4,30	80	47	02451	02489	02527	02565	02603
4,40	80	47	02452	02490	02528	02566	02604
4,50	80	47	02453	02491	02529	02567	02605
4,60	80	47	02454	02492	02530	02568	02606
4,70	80	47	02455	02493	02531	02569	02607
4,80	86	52	02456	02494	02532	02570	02608
4,90	86	52	02457	02495	02533	02571	02609
5,00	86	52	02458	02496	02534	02572	02610
5,10	86	52	02459	02497	02535	02573	02611
5,20	86	52	02460	02498	02536	02574	02612
5,30	86	52	02461	02499	02537	02575	02613
5,40	93	57	02462	02500	02538	02576	02614
5,50	93	57	02463	02501	02539	02577	02615
5,60	93	57	02464	02502	02540	02578	02616
5,70	93	57	02465	02503	02541	02579	02617
5,80	93	57	02466	02504	02542	02580	02618
5,90	93	57	02467	02505	02543	02581	02619
6,00	93	57	02468	02506	02544	02582	02620
6,10	101	63	02469	02507	02545	02583	02621
6,20	101	63	02470	02508	02546	02584	02622
6,30	101	63	02471	02509	02547	02585	02623
6,40	101	63	02472	02510	02548	02586	02624
6,50	101	63	02473	02511	02549	02587	02625
6,60	101	63	02474	02512	02550	02588	02626
6,70	101	63	02475	02513	02551	02589	02627
6,80	109	69	02476	02514	02552	02590	02628
6,90	109	69	02477	02515	02553	02591	02629
7,00	109	69	02478	02516	02554	02592	02630
7,10	109	69	02479	02517	02555	02593	02631
7,20	109	69	02480	02518	02556	02594	02632
7,30	109	69	02481	02519	02557	02595	02633
7,40	109	69	02482	02520	02558	02596	02634
7,50	109	69	02483	02521	02559	02597	02635
7,60	117	75	02484	02522	02560	02598	02636
7,70	117	75	02485	02523	02561	02599	02637
7,80	117	75	02486	02524	02562	02600	02638



HSS

HSS
Co5DIN
338Type
NSAĞ SOL KISA
MATKAP UCU

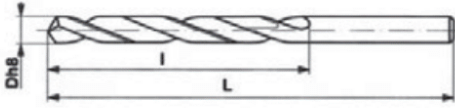
D (mm)	L (mm)	I (mm)	SAĞ 				SOL 
				ZTM	ZTM	ZTM	
			IAT338	ZTM338	ZTM338Co5	ZTM338T	IAT
			HSS	HSS	HSSCo5	HSS	HSS
			HADDELY ALTIN SERI	HADDELY	TAPLANMIP ALTIN SERI	TIN KAPLI	HADDELY
7,90	117	75	02639	02677	02715	02753	02791
8,00	117	75	02640	02678	02716	02754	02792
8,10	117	75	02641	02679	02717	02755	02793
8,20	117	75	02642	02680	02718	02756	02794
8,30	117	75	02643	02681	02719	02757	02795
8,40	117	75	02644	02682	02720	02758	02796
8,50	117	75	02645	02683	02721	02759	02797
8,60	125	81	02646	02684	02722	02760	02798
8,70	125	81	02647	02685	02723	02761	02799
8,80	125	81	02648	02686	02724	02762	02800
8,90	125	81	02649	02687	02725	02763	02801
9,00	125	81	02650	02688	02726	02764	02802
9,10	125	81	02651	02689	02727	02765	02803
9,20	125	81	02652	02690	02728	02766	02804
9,30	125	81	02653	02691	02729	02767	02805
9,40	125	81	02654	02692	02730	02768	02806
9,50	125	81	02655	02693	02731	02769	02807
9,60	133	87	02656	02694	02732	02770	02808
9,70	133	87	02657	02695	02733	02771	02809
9,80	133	87	02658	02696	02734	02772	02810
9,90	133	87	02659	02697	02735	02773	02811
10,00	133	87	02660	02698	02736	02774	02812
10,10	133	87	02661	02699	02737	02775	02813
10,20	133	87	02662	02700	02738	02776	02814
10,30	133	87	02663	02701	02739	02777	02815
10,40	133	87	02664	02702	02740	02778	02816
10,50	133	94	02665	02703	02741	02779	02817
10,60	133	94	02666	02704	02742	02780	02818
10,70	142	94	02667	02705	02743	02781	02819
10,80	142	94	02668	02706	02744	02782	02820
10,90	142	94	02669	02707	02745	02783	02821
11,00	142	94	02670	02708	02746	02784	02822
11,10	142	94	02671	02709	02747	02785	02823
11,20	142	94	02672	02710	02748	02786	02824
11,30	142	94	02673	02711	02749	02787	02825
11,40	142	94	02674	02712	02750	02788	02826
11,50	142	94	02675	02713	02751	02789	02827
11,60	142	94	02676	02714	02752	02790	02828





HSS

HSS
Co5DIN
338Type
N

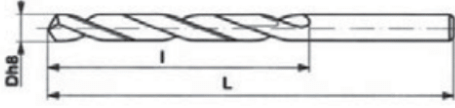
KISA MATKAP UCU			SAĞ ^{RH}				SOL ^{LH}
				ZTM	ZTM	ZTM	
			IAT338	ZTM338	ZTM338Co5	ZTM338T	IAT
			HSS	HSS	HSSCo5	HSS	HSS
D (mm)	L (mm)	I (mm)	HADDELY ALTIN SERI	HADDELY	TAPLANMIP ALTIN SERI	TIN KAPLI	HADDELY
11,70	142	94	02829	02868	02907	02946	02985
11,80	142	94	02830	02869	02908	02947	02986
11,90	151	101	02831	02870	02909	02948	02987
12,00	151	101	02832	02871	02910	02949	02988
12,10	151	101	02833	02872	02911	02950	02989
12,20	151	101	02834	02873	02912	02951	02990
12,30	151	101	02835	02874	02913	02952	02991
12,40	151	101	02836	02875	02914	02953	02992
12,50	151	101	02837	02876	02915	02954	02993
12,60	151	101	02838	02877	02916	02955	02994
12,70	151	101	02839	02878	02917	02956	02995
12,80	151	101	02840	02879	02918	02957	02996
12,90	151	101	02841	02880	02919	02958	02997
13,00	151	101	02842	02881	02920	02959	02998
13,10	151	101	02843	02882	02921	02960	02999
13,20	151	101	02844	02883	02922	02961	03000
13,30	160	108	02845	02884	02923	02962	03001
13,40	160	108	02846	02885	02924	02963	03002
13,50	160	108	02847	02886	02925	02964	03003
13,60	160	108	02848	02887	02926	02965	03004
13,70	160	108	02849	02888	02927	02966	03005
13,80	160	108	02850	02889	02928	02967	03006
13,90	160	108	02851	02890	02929	02968	03007
14,00	160	108	02852	02891	02930	02969	03008
14,10	169	114	02853	02892	02931	02970	03009
14,20	169	114	02854	02893	02932	02971	03010
14,30	169	114	02855	02894	02933	02972	03011
14,40	169	114	02856	02895	02934	02973	03012
14,50	169	114	02857	02896	02935	02974	03013
14,60	169	114	02858	02897	02936	02975	03014
14,70	169	114	02859	02898	02937	02976	03015
14,80	169	114	02860	02899	02938	02977	03016
14,90	169	114	02861	02900	02939	02978	03017
15,00	169	114	02862	02901	02940	02979	03018
15,10	169	120	02863	02902	02941	02980	03019
15,20	178	120	02864	02903	02942	02981	03020
15,25	178	120	02865	02904	02943	02982	03021
15,30	178	120	02866	02905	02944	02983	03022
15,40	178	120	02867	02906	02945	02984	03023



HSS

HSS
Co5DIN
338Type
NSAĞ SOL KISA
MATKAP UCU

D (mm)	L (mm)	I (mm)	SAĞ 				SOL 
				ZTM	ZTM	ZTM	
			IAT338	ZTM338	ZTM338Co5	ZTM338T	IAT
			HSS	HSS	HSSCo5	HSS	HSS
			HADDELY ALTIN SERI	HADDELY	TAPLANMIP ALTIN SERI	TIN KAPLI	HADDELY
15,50	178	120	03024	03063	03102	03141	03180
15,60	178	120	03025	03064	03103	03142	03181
15,70	178	120	03026	03065	03104	03143	03182
15,75	178	120	03027	03066	03105	03144	03183
15,80	178	120	03028	03067	03106	03145	03184
15,90	178	120	03029	03068	03107	03146	03185
16,00	178	120	03030	03069	03108	03147	03186
16,10	184	125	03031	03070	03109	03148	03187
16,20	184	125	03032	03071	03110	03149	03188
16,25	184	125	03033	03072	03111	03150	03189
16,30	184	125	03034	03073	03112	03151	03190
16,40	184	125	03035	03074	03113	03152	03191
16,50	184	125	03036	03075	03114	03153	03192
16,60	184	125	03037	03076	03115	03154	03193
16,70	184	125	03038	03077	03116	03155	03194
16,75	184	125	03039	03078	03117	03156	03195
16,80	184	125	03040	03079	03118	03157	03196
16,90	184	125	03041	03080	03119	03158	03197
17,00	184	125	03042	03081	03120	03159	03198
17,10	191	130	03043	03082	03121	03160	03199
17,20	191	130	03044	03083	03122	03161	03200
17,25	191	130	03045	03084	03123	03162	03201
17,30	191	130	03046	03085	03124	03163	03202
17,40	191	130	03047	03086	03125	03164	03203
17,50	191	130	03048	03087	03126	03165	03204
17,60	191	130	03049	03088	03127	03166	03205
17,70	191	130	03050	03089	03128	03167	03206
17,75	191	130	03051	03090	03129	03168	03207
17,80	191	130	03052	03091	03130	03169	03208
17,90	191	130	03053	03092	03131	03170	03209
18,00	191	130	03054	03093	03132	03171	03210
18,10	198	135	03055	03094	03133	03172	03211
18,20	198	135	03056	03095	03134	03173	03212
18,25	198	135	03057	03096	03135	03174	03213
18,30	198	135	03058	03097	03136	03175	03214
18,40	198	135	03059	03098	03137	03176	03215
18,50	198	135	03060	03099	03138	03177	03216
18,60	198	135	03061	03100	03139	03178	03217
18,70	198	135	03062	03101	03140	03179	03218

HSS

HSS
Co5DIN
338Type
N

KISA MATKAP UCU			SAĞ RH				SOL LH
				ZTM	ZTM	ZTM	
			IAT338	ZTM338	ZTM338Co5	ZTM338T	IAT
			HSS	HSS	HSSCo5	HSS	HSS
D (mm)	L (mm)	I (mm)	HADDELY ALTIN SERI	HADDELY	TAŞLANMIŞ ALTIN SERI	TIN KAPLI	HADDELY
18,75	198	135	03219	03235	03251	03267	03283
18,80	198	135	03220	03236	03252	03268	03284
18,90	198	135	03221	03237	03253	03269	03285
19,00	198	135	03222	03238	03254	03270	03286
19,10	205	140	03223	03239	03255	03271	03287
19,20	205	140	03224	03240	03256	03272	03288
19,25	205	140	03225	03241	03257	03273	03289
19,30	205	140	03226	03242	03258	03274	03290
19,40	205	140	03227	03243	03259	03275	03291
19,50	205	140	03228	03244	03260	03276	03292
19,60	205	140	03229	03245	03261	03277	03293
19,70	205	140	03230	03246	03262	03278	03294
19,75	205	140	03231	03247	03263	03279	03295
19,80	205	140	03232	03248	03264	03280	03296
19,90	205	140	03233	03249	03265	03281	03297
20,00	205	140	03234	03250	03266	03282	03298



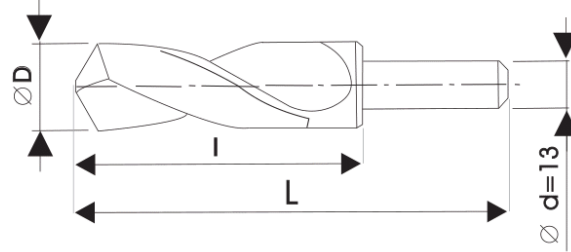
19 PARÇA MATKAP UCU SETİ HSS

KOD	ÖLÇÜ
ZTM338S	1-10 mmx0,5 mmHSSG TAŞLANMIŞ



19 PARÇA MATKAP UCU SETİ HSS Co5

KOD	ÖLÇÜ
ZTM3385Co5	1-10 mmx0,5 mmHSSCo5 TAŞLANMIŞ ALTIN SERİ



KOD	D (mm)	L (mm)	I (mm)
IAT338-2050X13	20,50	205	145
IAT338-2100X13	21,00	205	145
IAT338-2150X13	21,50	210	150
IAT338-2200X13	22,00	210	150
IAT338-2250X13	22,50	215	155
IAT338-2300X13	23,00	215	155
IAT338-2350X13	23,50	220	160
IAT338-2400X13	24,00	220	160
IAT338-2450X13	24,50	220	160
IAT338-2500X13	25,00	220	160
IAT338-2550X13	25,50	235	165
IAT338-2600X13	26,00	235	165
IAT338-2650X13	26,50	235	170
IAT338-2700X13	27,00	235	170
IAT338-2750X13	27,50	235	170
IAT338-2800X13	28,00	235	170
IAT338-2850X13	28,50	240	175
IAT338-2900X13	29,00	240	175
IAT338-2950X13	29,50	240	175
IAT338-3000X13	30,00	240	175

ZTM TAPLANMIŞ MATKAP UCU

DIN
340

HSS



h8

Type
N

TAPLANARAK İMAL EDİLDİĞİ İÇİN DAHA HASSAS ÖLÇÜLERDE DELİK ÇIKARTIR.
 RÛJÛT TEZGAHLARDA ALAŞIMLI VE ALAŞIMSIZ ÇELİK, DÖKME DEMİR, GRAFİT, ALUMİNYUM ALAŞIMI, PİRİNÇ VE BRONZ
 MALZEMELERİ İŞLEMENE UYGUNDUR.

IAT HADDELY MATKAP UCU

DIN
340

HSS



h8

Type
N

SICAK HADDELEMEYLE ÜRETİLDİĞİ İÇİN BURULMA DAYANIMI VE ELASTİKİYETİ YÜKSEKTİR.
 ALAŞIMLI, ALAŞIMSIZ ÇELİKLER, DÖKME DEMİR, PİRİNÇ VE BRONZ MALZEMELERİ İŞLEMENE UYGUNDUR.

IAT TAPLANMIŞ MATKAP UCU

DIN
1869

HSS



h8

Type
N

DERİN DELİK UYGULAMALARINDA, RÛJÛT TEZGAHLARDA, ALAŞIMLI VE ALAŞIMSIZ
 ÇELİK, DÖKME DEMİR VE DEMİR DİPİ METALLERİ İŞLEMENE UYGUNDUR.

ZTM FREZELY TAPLANMIŞ MATKAP UCU

DIN
1869

HSS

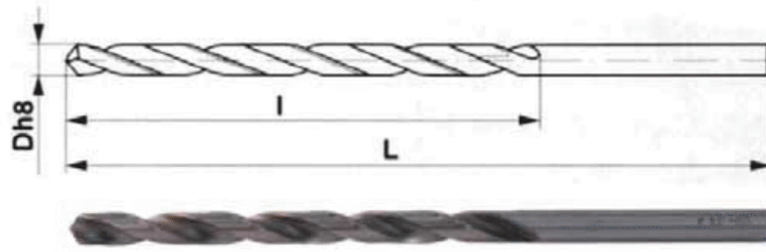



h8


Type
N

DERİN DELİK UYGULAMALARINDA, RÛJÛT TEZGAHLARDA, ALAŞIMLI VE ALAŞIMSIZ
 ÇELİK, DÖKME DEMİR VE DEMİR DİPİ METALLERİ İŞLEMENE UYGUNDUR.

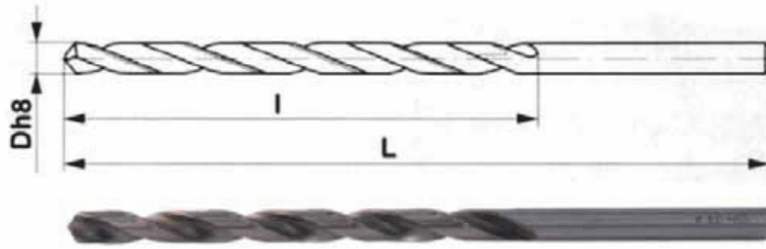
HSS


DIN
340Type
N


UZUN MATKAP UCU			SAĞ ^{RH}	
				ZTM
			IAT340	ZTM340
			HSS	HSS
D (mm)	L (mm)	I (mm)	HADDELÝ	TAPLANMIP
0,80	50	27	03321	03361
1,00	56	33	03322	03362
1,10	60	37	03323	03363
1,20	65	41	03324	03364
1,30	70	45	03325	03365
1,40	70	45	03326	03366
1,50	70	45	03327	03367
1,60	76	50	03328	03368
1,70	80	53	03329	03369
1,80	80	53	03330	03370
1,90	85	56	03331	03371
2,00	85	56	03332	03372
2,10	85	56	03333	03373
2,20	90	59	03334	03374
2,30	90	59	03335	03375
2,40	95	62	03336	03376
2,50	95	62	03337	03377
2,60	95	62	03338	03378
2,70	100	66	03339	03379
2,80	100	66	03340	03380
2,90	100	66	03341	03381
3,00	100	66	03342	03382
3,10	106	69	03343	03383
3,20	106	69	03344	03384
3,30	106	69	03345	03385
3,40	112	73	03346	03386
3,50	112	73	03347	03387
3,60	112	73	03348	03388
3,70	112	73	03349	03389
3,80	119	78	03350	03390
3,90	119	78	03351	03391
4,00	119	78	03352	03392
4,10	119	78	03353	03393
4,20	119	78	03354	03394
4,30	126	82	03355	03395
4,40	126	82	03356	03396
4,50	126	82	03357	03397
4,60	126	82	03358	03398
4,70	126	82	03359	03399
4,80	132	87	03360	03400

UZUN MATKAP UCU			SAĞ ^{RH}	
				ZTM
			IAT340	ZTM340
			HSS	HSS
D (mm)	L (mm)	I (mm)	HADDELÝ	TAPLANMIP
4,90	132	87	03401	03441
5,00	132	87	03402	03442
5,10	132	87	03403	03443
5,20	132	87	03404	03444
5,30	132	87	03405	03445
5,40	139	91	03406	03446
5,50	139	91	03407	03447
5,60	139	91	03408	03448
5,70	139	91	03409	03449
5,80	139	91	03410	03450
5,90	139	91	03411	03451
6,00	139	91	03412	03452
6,10	148	97	03413	03453
6,20	148	97	03414	03454
6,30	148	97	03415	03455
6,40	148	97	03416	03456
6,50	148	97	03417	03457
6,60	148	97	03418	03458
6,70	148	97	03419	03459
6,80	156	102	03420	03460
6,90	156	102	03421	03461
7,00	156	102	03422	03462
7,10	156	102	03423	03463
7,20	156	102	03424	03464
7,30	156	102	03425	03465
7,40	156	102	03426	03466
7,50	156	102	03427	03467
7,60	165	109	03428	03468
7,70	165	109	03429	03469
7,80	165	109	03430	03470
7,90	165	109	03431	03471
8,00	165	109	03432	03472
8,10	165	109	03433	03473
8,20	165	109	03434	03474
8,30	165	109	03435	03475
8,40	165	109	03436	03476
8,50	165	109	03437	03477
8,60	175	115	03438	03478
8,70	175	115	03439	03479
8,80	175	115	03440	03480

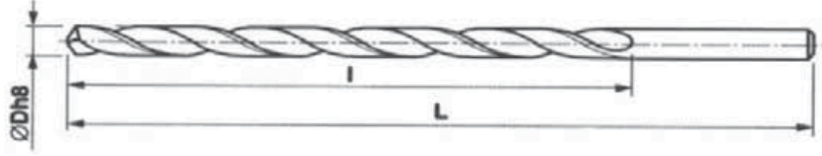
HSS



DIN
340Type
N


UZUN MATKAP UCU			SAĞ ^{RH}	
				ZTM
			IAT340	ZTM340
			HSS	HSS
D (mm)	L (mm)	I (mm)	HADDELY	TAPLANMIP
8,90	175	115	03481	03519
9,00	175	115	03482	03520
9,10	175	115	03483	03521
9,20	175	115	03484	03522
9,30	175	115	03485	03523
9,40	175	115	03486	03524
9,50	175	115	03487	03525
9,60	184	121	03488	03526
9,70	184	121	03489	03527
9,80	184	121	03490	03528
9,90	184	121	03491	03529
10,00	184	121	03492	03530
10,10	184	121	03493	03531
10,20	184	121	03494	03532
10,30	184	121	03495	03533
10,40	184	121	03496	03534
10,50	184	121	03497	03535
10,60	184	121	03498	03536
10,70	195	128	03499	03537
10,80	195	128	03500	03538
10,90	195	128	03501	03539
11,00	195	128	03502	03540
11,10	195	128	03503	03541
11,20	195	128	03504	03542
11,30	195	128	03505	03543
11,40	195	128	03506	03544
11,50	195	128	03507	03545
11,60	195	128	03508	03546
11,70	195	128	03509	03547
11,80	195	128	03510	03548
11,90	205	134	03511	03549
12,00	205	134	03512	03550
12,10	205	134	03513	03551
12,20	205	134	03514	03552
12,30	205	134	03515	03553
12,40	205	134	03516	03554
12,50	205	134	03517	03555
12,60	205	134	03518	03556

UZUN MATKAP UCU			SAĞ ^{RH}	
				ZTM
			IAT340	ZTM340
			HSS	HSS
D (mm)	L (mm)	I (mm)	HADDELY	TAPLANMIP
12,70	205	134	03557	03595
12,80	205	134	03558	03596
12,90	205	134	03559	03597
13,00	205	134	03560	03598
13,10	205	134	03561	03599
13,20	205	134	03562	03600
13,30	214	140	03563	03601
13,40	214	140	03564	03602
13,50	214	140	03565	03603
13,60	214	140	03566	03604
13,70	214	140	03567	03605
13,80	214	140	03568	03606
13,90	214	140	03569	03607
14,00	214	140	03570	03608
14,25	220	144	03571	03609
14,50	220	144	03572	03610
14,75	220	144	03573	03611
15,00	220	144	03574	03612
15,25	227	149	03575	03613
15,50	227	149	03576	03614
15,75	227	149	03577	03615
16,00	227	149	03578	03616
16,25	235	154	03579	03617
16,50	235	154	03580	03618
16,75	235	154	03581	03619
17,00	235	154	03582	03620
17,25	241	158	03583	03621
17,50	241	158	03584	03622
17,75	241	158	03585	03623
18,00	241	158	03586	03624
18,25	247	162	03587	03625
18,50	247	162	03588	03626
18,75	247	162	03589	03627
19,00	247	162	03590	03628
19,25	254	166	03591	03629
19,50	254	166	03592	03630
19,75	254	166	03593	03631
20,00	254	166	03594	03632

HSS

DIN
1869Type
N

ÇOK UZUN MATKAP SİLİNDİRİK SAPLI			SAĞ ^{RH}	
				
			IAT1869	ZTM1869
			HSS	HSS
D (mm)	L (mm)	I (mm)	TAPLANMIP	TAPLANMIP
1,50	125	85	03633	03667
2,00	125	85	03634	03668
2,50	140	95	03635	03669
3,00	150	100	03636	03670
3,00	190	130	03637	03671
3,50	165	115	03638	03672
3,50	210	145	03639	03673
3,50	265	180	03640	03674
4,00	175	120	03641	03675
4,00	220	150	03642	03676
4,00	280	190	03643	03677
4,50	185	125	03644	03678
4,50	235	160	03645	03679
4,50	295	200	03646	03680
5,00	195	135	03647	03681
5,00	245	170	03648	03682
5,00	315	210	03649	03683
5,50	205	140	03650	03684
5,50	260	180	03651	03685
5,50	330	225	03652	03686
6,00	205	140	03653	03687
6,00	260	180	03654	03688
6,00	330	225	03655	03689
6,50	215	150	03656	03690
6,50	275	190	03657	03691
6,50	350	235	03658	03692
7,00	225	155	03659	03693
7,00	290	200	03660	03694
7,00	370	250	03661	03695
7,50	225	155	03662	03696
7,50	290	200	03663	03697
7,50	370	250	03664	03698
8,00	240	165	03665	03699
8,00	305	210	03666	03700

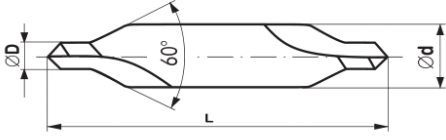
ÇOK UZUN MATKAP SİLİNDİRİK SAPLI			SAĞ ^{RH}	
				
			IAT1869	ZTM1869
			HSS	HSS
D (mm)	L (mm)	I (mm)	HADDELY	TAPLANMIP
8,00	390	265	03701	03734
8,50	240	165	03702	03735
8,50	305	210	03703	03736
8,50	390	265	03704	03737
9,00	250	175	03705	03738
9,00	320	220	03706	03739
9,00	410	280	03707	03740
9,50	250	175	03708	03741
9,50	320	220	03709	03742
9,50	410	280	03710	03743
10,00	265	185	03711	03744
10,00	340	235	03712	03745
10,00	430	295	03713	03746
10,50	265	185	03714	03747
10,50	340	235	03715	03748
10,50	430	295	03716	03749
11,00	280	195	03717	03750
11,00	365	250	03718	03751
11,00	455	310	03719	03752
11,50	280	195	03720	03753
11,50	365	250	03721	03754
11,50	455	310	03722	03755
12,00	295	205	03723	03756
12,00	375	260	03724	03757
12,00	480	330	03725	03758
12,50	295	205	03726	03759
12,50	375	260	03727	03760
12,50	480	330	03728	03761
13,00	295	205	03729	03762
13,00	375	260	03730	03763
13,00	480	330	03731	03764
14,00	375	260	03732	03765
14,00	480	330	03733	03766

HSS

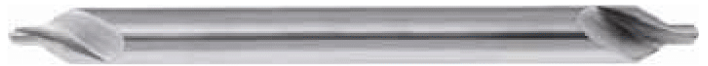
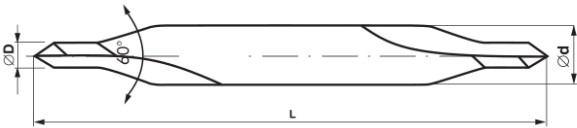
DIN
333Type
A

Standard

60°



PUNTA MATKABI DIN 333A HSS				PLD
			IAT333A	C150
D (mm)	L (mm)	d (mm)		
1,00	31,5	3,15		
1,25	31,5	3,15		
1,60	35,5	4,00		
2,00	40,0	5,00		
2,50	45,0	6,30		
3,15	50,0	8,00		
4,00	56,0	10,00		
5,00	63,0	12,50		
6,30	71,0	16,00		
8,00	80,0	20,00		
10,00	106,0	25,00		
KULLANIM ALANI			Çelik, alüminyum çelik, döküm, bronz, v.b tüm metallerde koruma havpasız punta deliði açmak için kullanılır	



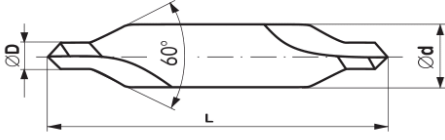
UZUN PUNTA MATKABI DIN 333A HSS			PLD
			C151
D (mm)	L (mm)	d (mm)	
2,00	76,0	5,00	
2,50	102,0	6,30	
3,15	102,0	8,00	
4,00	127,0	10,00	
5,00	127,0	12,50	
6,30	127,0	16,00	
KULLANIM ALANI			Çelik, alüminyum çelik, döküm, bronz, v.b tüm metallerde koruma havpasız punta deliði açmak için kullanılır

HSS

DIN
333Type
B

Standard

60°



PUNTA MATKABI DIN 333B HSS



IAT333B

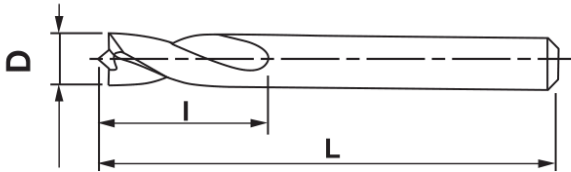
D (mm)	L (mm)	d (mm)
1,60	45,0	6,30
2,00	50,0	8,00
2,50	56,0	10,00
3,15	60,0	11,20
4,00	67,0	14,00
5,00	75,0	18,00
6,30	80,0	20,00

KULLANIM ALANI

Çelik, alaşımlı çelik, döküm, bronz, v.b tüm metallerde koruma havasız punta delişi açmak için kullanılır.

HSS
Co5

Standard



PUNTA ÇÜRÜTME MATKABI HSS Co5 DIN1412E



PLD

IAT1412

IAT1412 TiN

C1412

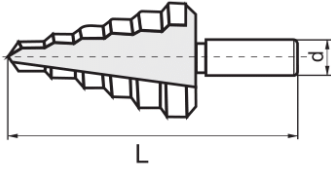
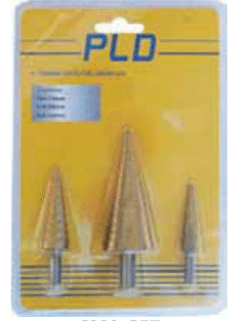
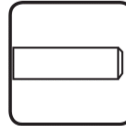
C1412 TiN

D (h8 mm)	L (mm)	I (mm)
6,00	44	23
6,00	65	28
6,00	93	57
8,00	44	23
8,00	80	38
8,00	117	75

KULLANIM ALANI

Özellikle sac delme işlemlerinde ve oto kaporta sanayinde kaynak noktalarını çürütmek için kullanılır. Özel bilenmiş merkezleme ucu ile kolay merkezleme ve muntazam yuvarlak delme imkanı sağlar. Kısa ve uzun talap veren çelikler, alüminyum - silisyum alaşımları ve sac malzemelerinde kullanıma uygundur.





C339-SET

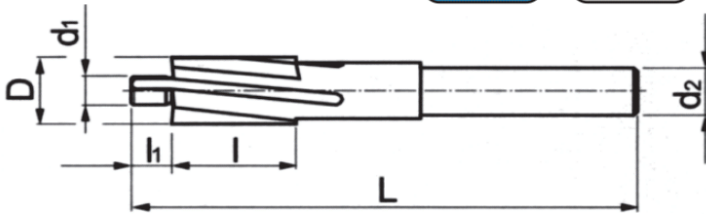
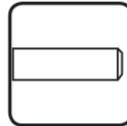
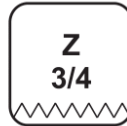
KADEMELÝ SAC DELME MATKABI HSS

C339

EBAT	L (mm)	d (mm)	KADEME ÖLÇÜLERİ
4-20mm x 2mm	76	8	4-6-8-10-12-16-18-20
5-35mm x 2-3mm	100	13	5-8-10-12-15-18-20-22-25-27-30-32-35
4-39mm x 2mm	107	13	4-6-9-12-15-18-21-24-27-30-33-36-39
6-52mm x 4mm	100	10	6-12-16-20-24-28-32-36-40-44-48-52
KOD	SET İÇERİĞİ		
C339-SET	4-12 / 4-20 / 4-32		

KULLANIM ALANI

Her kademede sabit bir çapa sahip olduđu için, kademeler arasındaki geçiş pahı ile delinen deliđin aynı anda çapađını da almak mümkündür.



SABİT PÝLOTLU HAVÞA FREZE DIN 373 HSS



PLD

IAT373

C373

ÇVATA	D (mm)	d ₁ (mm)	d ₂ (mm)	L (mm)	I (mm)	I1 (mm)
M3	6	3,2	5	71	14	4
M4	8	4,3	5	71	14	4
M5	10	5,3	8	80	18	6
M6	11	6,4	8	80	18	6
M8	15	8,4	12,5	100	22	8
M10	18	10,5	12,5	100	22	10
M12	20	13,0	12,5	100	22	12
M14	24	15,0	12,5	100	22	14
M16	26	17,0	12,5	100	22	16
M18	30	19,0	12,5	100	22	18
M20	33	20,0	12,5	100	22	20

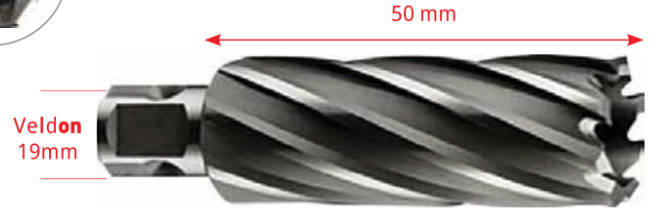
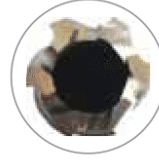
KULLANIM ALANI

Deliklere silindirik havþa yuvası oluþturmaya yarar.



HSSE

M2 Al



ÇAP (mm)	ÇAP (mm)
12	37
13	38
14	39
15	40
16	41
17	42
18	43
19	44
20	45
21	46
22	47
23	48
24	49
25	50
26	51
27	52
28	53
29	54
30	55
31	56
32	57
33	58
34	59
35	60
36	

ÇAP (mm)	ÇAP (mm)
12	37
13	38
14	39
15	40
16	41
17	42
18	43
19	44
20	45
21	46
22	47
23	48
24	49
25	50
26	51
27	52
28	53
29	54
30	55
31	56
32	57
33	58
34	59
35	60
36	

MANYETİK MATKAP SABİTLEME PİMİ (30mm)

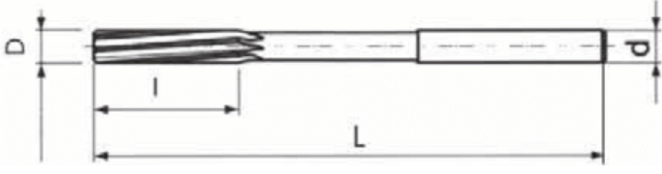
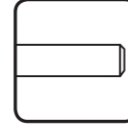


MANYETİK MATKAP SABİTLEME PİMİ (50mm)



HSS

H7

DIN
212-B

SÝLÝNDÝR SAPLI MAKÝNA RAYBASI DIN 212B,HELÝS, HSS,H7

HSS

IAT212B

D H7 (mm)	L (mm)	l (mm)	d (mm)
2	49	11	2,0
2,5	57	14	2,5
3	61	15	3,0
3,5	70	18	3,5
4	75	19	4,0
4,5	80	21	4,5
5	86	23	5,0
5,5	93	26	5,5
6	93	26	6,0
6,5	101	28	6,5
7	109	31	7,0
8	117	33	8,0
9	125	36	9,0
10	133	38	10,0
11	142	41	10,0
12	151	44	10,0
13	151	44	10,0
14	160	47	12,5
15	162	50	12,5
16	170	52	12,5
17	175	54	14,0
18	182	56	14,0
19	189	58	16,0
20	195	60	16,0
21	215	55	18,0
22	225	55	18,0
23	230	60	18,0
24	240	60	20,0
25	245	60	20,0
26	250	60	20,0
27	260	60	22,0
28	270	65	22,0
29	270	65	22,0
30	280	70	24,0
31	290	75	24,0

KULLANIM ALANI

Kısa ađızlama boyu ve eđit bđlumlü olmayan kesme ađızları ile yuvarlak ve toleranslarına uygun raybalama sađlar. Bütün çelik türlerinde, NE- metallerde, sert ve yumuşak plastiklerde, kör delikler için H7 delik toleranslarında raybalama işlemi için kullanılır.



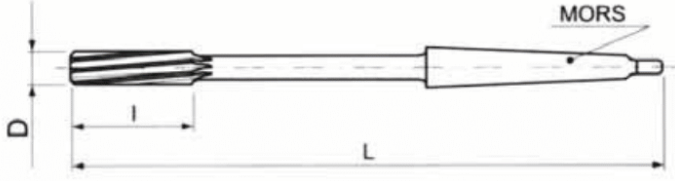
HSS

H7

DIN
208-B

7-8°

MK1-4



MORS KONİK SAPLI MAKİNA RAYBASI DIN 208B, HELİS, HSS, H7

HSS

IAT208B

D H7 (mm)	L (mm)	l (mm)	MK
6	138	26	1
7	150	31	1
8	156	33	1
9	162	36	1
10	168	38	1
11	175	41	1
12	182	44	1
13	182	44	1
14	189	47	1
15	204	50	2
16	210	52	2
17	214	54	2
18	219	56	2
19	223	58	2
20	228	60	2
21	232	62	2
22	237	64	2
23	241	66	2
24	268	68	3
25	268	68	3
26	273	70	3
27	277	71	3
28	277	71	3
29	281	73	3
30	281	73	3
31	285	75	3
32	317	77	4
33	317	77	4
34	321	78	4
35	321	78	4
36	325	79	4
38	329	81	4
39	329	81	4
40	329	81	4
41	333	82	4
42	333	82	4
44	336	83	4
45	336	83	4
46	340	84	4
47	340	84	4
48	344	86	4
50	344	86	4

KULLANIM ALANI

Kısa kesme ađızlı ve mors konik saplı rayba. Ebit bölümlü olmayan kesme ađızlarıyla, silindirik ve düzgün bir raybalama imkanı verir. Bütün çelik türlerinde, NE- metallerde, sert ve yumuşak plastiklerde, kördelikler için H7 delik toleranslarında raybalama işlemi için kullanılır.

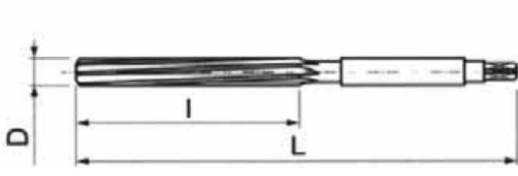
HSS

H7

DIN
206-B

7-8°

45°



SİLİNDİR SAPLI EL RAYBASI DIN 206B, HELİS, HSS, H7

HSS

D H7 (mm)	L (mm)	l (mm)	a (mm)
2	50	25	1,60
2.5	58	29	2,00
3	62	31	2,24
3.5	71	35	2,80
4	76	38	3,15
4.5	81	41	3,55
5	87	44	4,00
5.5	93	47	4,50
6	93	47	4,50
6.5	100	50	5,00
7	107	54	5,60
7.5	107	54	5,60
8	115	58	6,30
8.5	115	58	6,30
9	124	62	7,10
9.5	124	62	6,90
10	133	66	8,00
11	142	71	9,00
12	152	76	10,00
13	152	76	10,00
14	163	81	11,20
15	163	81	11,20
16	175	87	12,50
17	175	87	12,50
18	188	93	14,00
19	188	93	14,00
20	201	100	16,00
21	201	100	16,00
22	215	107	18,00
23	215	107	18,00
24	231	115	20,00
25	231	115	20,00
26	231	115	20,00
27	247	124	22,40
28	247	124	22,40
30	247	124	22,40
34	284	142	28,00
35	284	142	28,00

KULLANIM ALANI

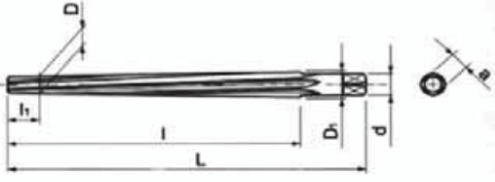
Uzun kavrama ađızlı el raybası. Eđit bölümlü olmayan kesici ađızlarıyla tam silindirik ve temiz yüzeyle raybalama işlemi sağlar. Delik toleransı H7 olan açık deliklerin raybalanması için idealdir. Kör deliklerde, uzun ađızlama boyu sebebiyle sonuna kadar raybalama yapılamaz. Bütün çelik türlerinde, NE- metallerde ve plastik malzemelerde kullanılabilir.

HSS

DIN
9

1:50

H7



PİM RAYBASI 1:50 KONİK DIN 9 HSS,H7



HSS

IAT9

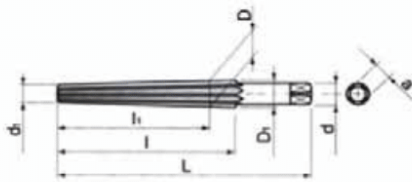
D (H7)	D ₁ (mm)	L (mm)	l (mm)	d (mm)	a (mm)
3	4.06	80	58	4.0	3.15
4	5.26	93	68	5.0	4.00
5	6.36	100	73	6.3	5.00
6	8.00	135	105	8.0	6.30
8	10.80	180	145	10.0	8.00
10	13.40	215	175	12.5	10.00
12	16.00	255	210	14.0	11.20
14	18.00	255	210	14.0	11.20
16	20.40	280	230	18.0	14.00
20	24.80	310	250	22.4	18.00
25	30.70	370	300	28.0	22.40
30	36.10	400	320	31.5	25.00

KULLANIM ALANI

1/50 konik pimlerin, pim deliklerinin raybalanması için uygundur. Bütün çelik türlerinde ve NE- metallerde kullanılabilir.

HSS

1:10



PİM RAYBASI 1:10 KONİK HSS

PLD

HSS

C.10

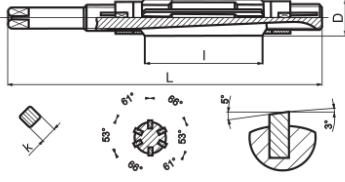
d ₁ (mm)	D (mm)	D ₁ (mm)	L (mm)	l (mm)	d (mm)	a (mm)
4	10.00	11	100	70	10.0	8
9	16.00	17	120	80	12.5	10
14	24.00	25	160	110	20.0	16
20	32.00	34	200	140	25.0	20

KULLANIM ALANI

1/10 konik pimlerin, pim deliklerinin raybalanması için uygundur. Bütün çelik türlerinde ve NE- metallerde kullanılabilir.



HSS



AYARLI KOVANSIZ EL RAYBASI-HSS

C.859

ÖLÇÜ (mm)	D (mm)	L (mm)	l (mm)	k (mm)	BIÇAK AD.
7,00-8,00	6	91	25	3	4
8,00-8,70	7	96	30	3,5	4
8,70-9,50	8	101	35	4	4
9,50-10,25	9	106	40	5	4
10,25-11,00	9,5	115	40	5	6
11,00-12,00	10	118	40	5	6
12,00-13,50	11	126	40	5	6
13,50-15,00	12	142	45	6	6
15,00-16,50	13	150	50	7	6
16,5-18,25	15	157	55	8	6
18,25-19,75	16	160	57	8	6
19,75-21,50	18	162	57	9	6
21,50-23,75	20	190	68	10	6
23,75-27,00	22	200	68	12	6
27,00-30,00	24	210	70	14	6
30,00-34,00	28	246	85	16	6
34,00-38,75	32	292	100	18	6
38,75-46,00	38	311	100	22	6
46,00-56,00	42	333	105	24	6

KULLANIM ALANI

Matkap ile oluşturalan deliklerin yüzey kalitesini artırmak, ovallik ve konikliğini gidermek ve istenilen oranda konik oluşturmak için kullanılır



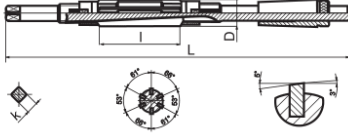
11 PARÇA AYARLI KOVANSIZ RAYBA SETİ HSS

KOD	EBAT
C.859SET	12,00-38,75 mm

KULLANIM ALANI

Matkap ile oluşturalan deliklerin yüzey kalitesini artırmak, ovallik ve konikliğini gidermek ve istenilen oranda konik oluşturmak için kullanılır

HSS



AYARLI KOVANLI EL RAYBASI-HSS

C.859K

ÖLÇÜ (mm)	D (mm)	L (mm)	l (mm)	k (mm)	BIÇAK AD.
7,00-8,00	6	140	25	3	4
8,00-8,70	7	150	30	3,5	4
8,70-9,50	8	160	35	4	4
9,50-10,25	9	165	40	5	4
10,25-11,00	9,5	170	40	5	6
11,00-12,00	10	180	40	5	6
12,00-13,50	11	185	40	5	6
13,50-15,00	12	190	45	6	6
15,00-16,50	13	220	50	7	6
16,5-18,25	15	245	55	8	6
18,25-19,75	16	247	57	8	6
19,75-21,50	18	255	57	9	6
21,50-23,75	20	295	68	10	6
23,75-27,00	22	315	68	12	6
27,00-30,00	24	335	70	14	6
30,00-34,00	28	375	85	16	6
34,00-38,75	32	405	100	18	6
38,75-46,00	38	425	100	22	6
46,00-56,00	42	425	105	24	6

KULLANIM ALANI

Matkap ile oluşturalan deliklerin yüzey kalitesini artırmak, ovallik ve konikliğini gidermek ve istenilen oranda konik oluşturmaya için kullanılır.



11 PARÇA AYARLI KOVANSIZ RAYBA SETİ HSS

KOD	EBAT
C.860SET	12,00-38,75 mm

KULLANIM ALANI

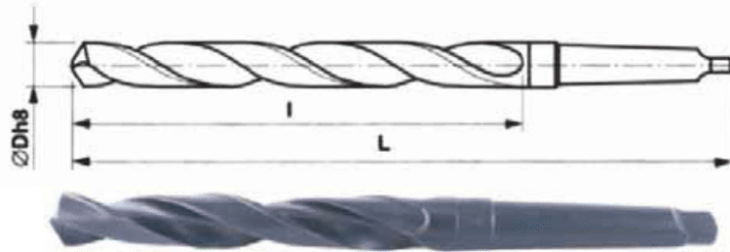
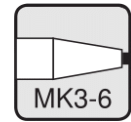
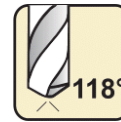
Matkap ile oluşturalan deliklerin yüzey kalitesini artırmak, ovallik ve konikliğini gidermek ve istenilen oranda konik oluşturmaya için kullanılır.

HSS

HSS Co5

DIN 345

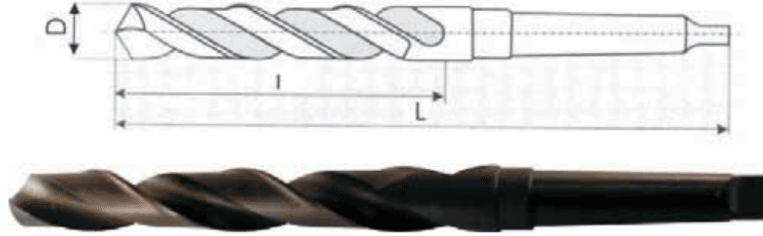
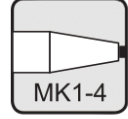
Type N





KONÍK SAPLI MATKAP UCU				SAĞ ^{RH}		
						ZTM
				IAT345	IAT345Co5	ZTM345
				HSS	HSSCo5	HSS
D (mm)	L (mm)	I (mm)	MK	HADDELÝ	FREZELÝ	HADDELÝ
30,25	301	180	3	04092	04135	04178
30,50	301	180	3	04093	04136	04179
30,75	301	180	3	04094	04137	04180
31,00	301	180	3	04095	04138	04181
31,25	301	180	3	04096	04139	04182
31,50	301	180	3	04097	04140	04183
31,75	306	180	3	04098	04141	04184
32,00	334	185	4	04099	04142	04185
32,50	334	185	4	04100	04143	04186
33,00	334	185	4	04101	04144	04187
33,50	334	190	4	04102	04145	04188
34,00	339	190	4	04103	04146	04189
34,50	339	190	4	04104	04147	04190
35,00	339	190	4	04105	04148	04191
35,50	339	195	4	04106	04149	04192
36,00	344	195	4	04107	04150	04193
36,50	344	195	4	04108	04151	04194
37,00	344	195	4	04109	04152	04195
37,50	344	200	4	04110	04153	04196
38,00	349	200	4	04111	04154	04197
38,50	349	200	4	04112	04155	04198
39,00	349	200	4	04113	04156	04199
39,50	349	200	4	04114	04157	04200
40,00	349	205	4	04115	04158	04201
40,50	354	205	4	04116	04159	04202
41,00	354	205	4	04117	04160	04203
41,50	354	205	4	04118	04161	04204
42,00	354	205	4	04119	04162	04205
42,50	354	205	4	04120	04163	04206
43,00	359	210	4	04121	04164	04207
43,50	359	210	4	04122	04165	04208
44,00	359	210	4	04123	04166	04209
44,50	359	210	4	04124	04167	04210
45,00	359	215	4	04125	04168	04211
45,50	364	215	4	04126	04169	04212
46,00	364	215	4	04127	04170	04213
46,50	364	215	4	04128	04171	04214
47,00	364	215	4	04129	04172	04215
47,50	364	220	4	04130	04173	04216
48,00	369	220	4	04131	04174	04217
48,50	369	220	4	04132	04175	04218
49,00	369	220	4	04133	04176	04219
49,50	369	220	4	04134	04177	04220

KONÍK SAPLI MATKAP UCU				SAĞ ^{RH}		
						ZTM
				IAT345	IAT345Co5	ZTM345
				HSS	HSSCo5	HSS
D (mm)	L (mm)	I (mm)	MK	HADDELÝ	FREZELÝ	HADDELÝ
50,00	354	225	4	04221	04264	04307
50,50	354	225	4	04222	04265	04308
51,00	354	225	5	04223	04266	04309
52,00	354	225	5	04224	04267	04310
53,00	359	230	5	04225	04268	04311
54,00	359	230	5	04226	04269	04312
55,00	359	230	5	04227	04270	04313
56,00	359	235	5	04228	04271	04314
57,00	359	235	5	04229	04272	04315
58,00	364	235	5	04230	04273	04316
59,00	422	235	5	04231	04274	04317
60,00	422	240	5	04232	04275	04318
61,00	427	240	5	04233	04276	04319
62,00	427	240	5	04234	04277	04320
63,00	427	245	5	04235	04278	04321
64,00	432	245	5	04236	04279	04322
65,00	432	245	5	04237	04280	04323
66,00	432	245	5	04238	04281	04324
67,00	432	245	5	04239	04282	04325
68,00	437	250	5	04240	04283	04326
69,00	437	250	5	04241	04284	04327
70,00	437	250	5	04242	04285	04328
71,00	437	250	5	04243	04286	04329
72,00	442	255	5	04244	04287	04330
73,00	442	255	5	04245	04288	04331
74,00	442	255	5	04246	04289	04332
75,00	442	255	5	04247	04290	04333
76,00	447	260	5	04248	04291	04334
77,00	514	260	6	04249	04292	04335
78,00	514	260	6	04250	04293	04336
79,00	514	260	6	04251	04294	04337
80,00	514	260	6	04252	04295	04338
81,00	519	265	6	04253	04296	04339
82,00	519	265	6	04254	04297	04340
83,00	519	265	6	04255	04298	04341
84,00	519	265	6	04256	04299	04342
85,00	519	265	6	04257	04300	04343
86,00	524	270	6	04258	04301	04344
87,00	524	270	6	04259	04302	04345
88,00	524	270	6	04260	04303	04346
89,00	524	270	6	04261	04304	04347
90,00	524	270	6	04262	04305	04348
100,00	534	280	6	04263	04306	04349

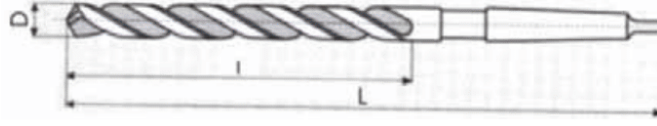
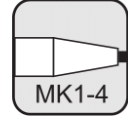
HSS


DIN
341Type
N


UZUN KONİK SAPLI MATKAP UCU				SAG ^{RH}	
					ZTM
				IAT341	ZTM341
				HSS	HSS
D (mm)	L (mm)	I (mm)	MK	HADDELİ	FREZELİ
8,00	181	100	1	04350	04381
8,50	181	100	1	04351	04382
9,00	188	107	1	04352	04383
9,50	188	107	1	04353	04384
10,00	197	116	1	04354	04385
10,50	197	116	1	04355	04386
11,00	206	125	1	04356	04387
11,50	206	125	1	04357	04388
12,00	215	134	1	04358	04389
12,25	215	134	1	04359	04390
12,50	215	134	1	04360	04391
13,00	215	134	1	04361	04392
13,50	233	142	1	04362	04393
14,00	233	142	1	04363	04394
14,50	245	147	2	04364	04395
15,00	245	147	2	04365	04396
15,50	251	153	2	04366	04397
16,00	251	153	2	04367	04398
16,50	257	159	2	04368	04399
17,00	257	159	2	04369	04400
17,50	263	165	2	04370	04401
18,00	263	165	2	04371	04402
18,50	269	171	2	04372	04403
19,00	269	171	2	04373	04404
19,50	275	177	2	04374	04405
20,00	275	177	2	04375	04406
20,50	282	184	2	04376	04407
21,00	282	184	2	04377	04408
21,50	289	191	2	04378	04409
22,00	289	191	2	04379	04410
22,50	296	198	2	04380	04411

UZUN KONİK SAPLI MATKAP UCU				SAG ^{RH}	
					ZTM
				IAT341	ZTM341
				HSS	HSS
D (mm)	L (mm)	I (mm)	MK	HADDELİ	FREZELİ
23,00	296	198	2	04412	04442
23,50	319	198	3	04413	04443
24,00	327	206	3	04414	04444
24,50	327	206	3	04415	04445
25,00	327	206	3	04416	04446
26,00	335	214	3	04417	04447
27,00	343	222	3	04418	04448
28,00	343	222	3	04419	04449
29,00	351	230	3	04420	04450
30,00	351	230	3	04421	04451
31,00	360	239	3	04422	04452
32,00	397	248	4	04423	04453
33,00	397	248	4	04424	04454
34,00	406	257	4	04425	04455
35,00	406	257	4	04426	04456
36,00	416	267	4	04427	04457
37,00	416	267	4	04428	04458
38,00	426	277	4	04429	04459
39,00	426	277	4	04430	04460
40,00	426	277	4	04431	04461
41,00	436	287	4	04432	04462
42,00	436	287	4	04433	04463
43,00	447	298	4	04434	04464
44,00	447	298	4	04435	04465
45,00	447	298	4	04436	04466
46,00	459	310	4	04437	04467
47,00	459	310	4	04438	04468
48,00	470	321	4	04439	04469
49,00	470	321	4	04440	04470
50,00	470	321	4	04441	04471

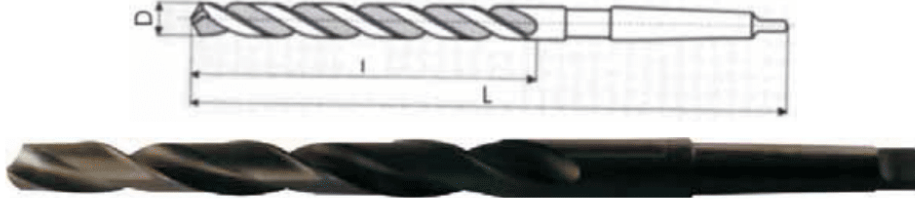
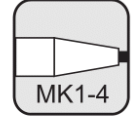
HSS


DIN
1870/1Type
N


ÇOK UZUN KONİK SAPLI MATKAP UCU				SAĞ ^{RH}
				
				IAT1870/1
				HSS
D (mm)	L (mm)	I (mm)	MK	HADDELY
8,00	265	165	1	04472
8,50	265	165	1	04473
9,00	275	175	1	04474
9,50	275	175	1	04475
10,00	285	185	1	04476
10,50	285	185	1	04477
11,00	300	195	1	04478
11,50	300	195	1	04479
12,00	310	205	1	04480
12,50	310	205	1	04481
13,00	310	205	1	04482
13,50	325	220	1	04483
14,00	325	220	1	04484
14,50	340	220	2	04485
15,00	340	220	2	04486
15,50	355	230	2	04487
16,00	355	230	2	04488
16,50	355	230	2	04489
17,00	355	230	2	04490
17,50	370	245	2	04491
18,00	370	245	2	04492
18,50	370	245	2	04493
19,00	370	245	2	04494
19,50	385	260	2	04495
20,00	385	260	2	04496
20,50	385	260	2	04497
21,00	385	260	2	04498
21,50	405	270	2	04499
22,00	405	270	2	04500
22,50	405	270	2	04501
23,00	405	270	2	04502

ÇOK UZUN KONİK SAPLI MATKAP UCU				SAĞ ^{RH}
				
				IAT1870/1
				HSS
D (mm)	L (mm)	I (mm)	MK	HADDELY
23,50	425	270	3	04503
24,00	440	290	3	04504
24,50	440	290	3	04505
25,00	440	290	3	04506
26,00	440	290	3	04507
27,00	460	305	3	04508
28,00	460	305	3	04509
29,00	460	305	3	04510
30,00	460	305	3	04511
31,00	480	320	3	04512
32,00	505	320	4	04513
33,00	505	320	4	04514
34,00	530	340	4	04515
35,00	530	340	4	04516
36,00	530	340	4	04517
37,00	530	340	4	04518
38,00	555	360	4	04519
39,00	555	360	4	04520
40,00	555	360	4	04521
41,00	555	360	4	04522
41,50	555	360	4	04523
42,00	555	360	4	04524
43,00	585	385	4	04525
44,00	585	385	4	04526
45,00	585	385	4	04527
46,00	585	385	4	04528
47,00	585	385	4	04529
48,00	605	405	4	04530
49,00	605	405	4	04531
50,00	605	405	4	04532

HSS

DIN
1870/2Type
N

ÇOK UZUN KONİK SAPLI MATKAP UCU				SAĞ ^{RH}
				
				IAT1870/2
				HSS
D (mm)	L (mm)	I (mm)	MK	HADDELİ
8,00	330	210	1	04533
8,50	330	210	1	04534
9,00	345	220	1	04535
9,50	345	220	1	04536
10,00	360	235	1	04537
10,50	360	235	1	04538
11,00	375	250	1	04539
11,50	375	250	1	04540
12,00	395	260	1	04541
12,50	395	260	1	04542
13,00	395	260	1	04543
13,50	410	275	1	04544
14,00	410	275	1	04545
14,50	425	275	2	04546
15,00	425	275	2	04547
15,50	445	295	2	04548
16,00	445	295	2	04549
16,50	445	295	2	04550
17,00	445	295	2	04551
17,50	465	310	2	04552
18,00	465	310	2	04553
18,50	465	310	2	04554
19,00	465	310	2	04555
19,50	490	325	2	04556
20,00	490	325	2	04557
20,50	490	325	2	04558
21,00	490	325	2	04559
21,50	515	345	2	04560
22,00	515	345	2	04561
22,50	515	345	2	04562

ÇOK UZUN KONİK SAPLI MATKAP UCU				SAĞ ^{RH}
				
				IAT1870/2
				HSS
D (mm)	L (mm)	I (mm)	MK	HADDELİ
23,00	515	345	2	04563
23,50	535	345	3	04564
24,00	555	365	3	04565
24,50	555	365	3	04566
25,00	555	365	3	04567
26,00	555	365	3	04568
27,00	580	385	3	04569
28,00	580	385	3	04570
29,00	580	385	3	04571
30,00	580	385	3	04572
31,00	610	410	3	04573
32,00	635	410	4	04574
33,00	635	410	4	04575
34,00	665	430	4	04576
35,00	665	430	4	04577
36,00	665	430	4	04578
37,00	665	430	4	04579
38,00	695	460	4	04580
39,00	695	460	4	04581
40,00	695	460	4	04582
41,00	695	460	4	04583
42,00	695	460	4	04584
43,00	735	490	4	04585
44,00	735	490	4	04586
45,00	735	490	4	04587
46,00	735	490	4	04588
47,00	735	490	4	04589
48,00	765	510	4	04590
49,00	765	510	4	04591
50,00	765	510	4	04592