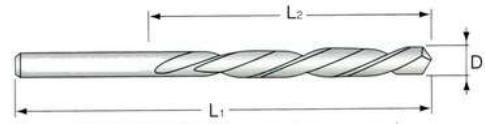




### H.S.S. Fully Ground Twist Drills

Point angle : 118°, Tolerance of Dia. : H8  
 Tolerance of Shank : f11, Black Finish  
 Manufactured to DIN338 / BS328  
 Model No. SL900



d mm	L2 mm	L1 mm
1.0	12	34
1.1	14	36
1.2	16	38
1.3	16	38
1.4	18	40
1.5	18	40
1.6	20	43
1.7	20	43
1.8	22	46
1.9	22	46
2.0	24	49
2.1	24	49
2.2	27	53
2.3	27	53
2.4	30	57
2.5	30	57
2.6	30	57
2.7	33	61
2.8	33	61
2.9	33	61
3.0	33	61
3.1	36	65
3.2	36	65
3.3	36	65
3.4	39	70
3.5	39	70
3.6	39	70
3.7	39	70
3.8	43	75
3.9	43	75
4.0	43	75
4.1	43	75
4.2	43	75
4.3	47	80
4.4	47	80
4.5	47	80
4.6	47	80
4.7	47	80
4.8	52	86
4.9	52	86

d mm	L2 mm	L1 mm
5.0	52	86
5.1	52	86
5.2	52	86
5.3	52	86
5.4	57	93
5.5	57	93
5.6	57	93
5.7	57	93
5.8	57	93
5.9	57	93
6.0	57	93
6.1	63	101
6.2	63	101
6.3	63	101
6.4	63	101
6.5	63	101
6.6	63	101
6.7	63	101
6.8	69	109
6.9	69	109
7.0	69	109
7.1	69	109
7.2	69	109
7.3	69	109
7.4	69	109
7.5	69	109
7.6	75	117
7.7	75	117
7.8	75	117
7.9	75	117
8.0	75	117
8.1	75	117
8.2	75	117
8.3	75	117
8.4	75	117
8.5	75	117
8.6	81	125
8.7	81	125
8.8	81	125
8.9	81	125

d mm	L2 mm	L1 mm
9.0	81	125
9.1	81	125
9.2	81	125
9.3	81	125
9.4	81	125
9.5	81	125
9.6	87	133
9.7	87	133
9.8	87	133
9.9	87	133
10.0	87	133
10.1	87	133
10.2	87	133
10.3	87	133
10.4	87	133
10.5	87	133
10.6	87	133
10.7	94	142
10.8	94	142
10.9	94	142
11.0	94	142
11.1	94	142
11.2	94	142
11.3	94	142
11.4	94	142
11.5	94	142
11.6	94	142
11.7	94	142
11.8	94	142
11.9	101	151
12.0	101	151
12.1	101	151
12.2	101	151
12.3	101	151
12.4	101	151
12.5	101	151
12.6	101	151
12.7	101	151
12.8	101	151
12.9	101	151
13.0	101	151

### H.S.S. Straight Shank Twist Drills Sets

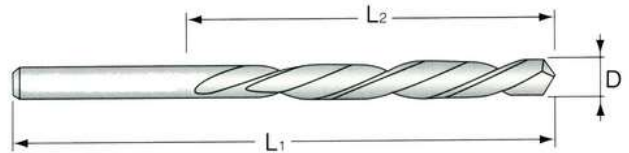
Manufactured to DIN338 / BS328  
 Model No. SL900 SET



Pcs / Set	Specification
	mm
21	1.0, 1.5, 2.0, 2.5, 3.0, 3.2, 3.5,
	4.0, 4.2, 4.5, 5.0, 5.5, 6.0, 6.5,
	7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0
29	1.0, 1.5, 2.0, 2.5, 3.0, 3.2, 3.5, 4.0,
	4.2, 4.5, 5.0, 5.5, 6.0, 6.5, 6.8, 7.0,
	7.5, 8.0, 8.5, 9.0, 9.5, 10.0, 10.2,
	10.5, 11.0, 11.5, 12.0, 12.5, 13.0

### H.S.S. Long Series Fully Ground Twist Drills

Black finish  
 Manufactured to DIN340 / BS328  
 Model No. SL910



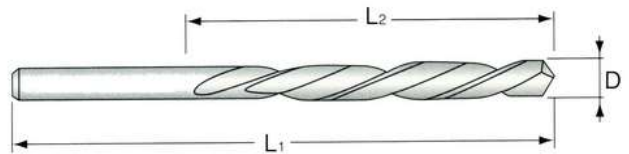
d	L2	L1
mm	mm	mm
1.0	33	56
1.5	45	70
2.0	56	85
2.5	62	95
3.0	66	100
3.5	73	112
4.0	78	119

d	L2	L1
mm	mm	mm
4.5	82	126
5.0	87	132
5.5	91	139
6.0	91	139
6.5	97	148
7.0	120	156
7.5	120	156

d	L2	L1
mm	mm	mm
8.0	109	165
8.5	109	165
9.0	115	175
10.0	121	184
10.5	121	184
11.0	128	195
12.0	134	205

### H.S.S. Extra Long Series Fully Ground Twist Drills

Manufactured to DIN340 / BS328  
 Model No. SL912



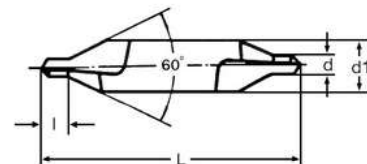
d	L2	L1
mm	mm	mm
1.0	60	96
1.5	75	115
2.0	90	135
2.5	95	140
3.0	100	150
3.0	130	190
3.5	115	165
3.5	145	210
3.5	180	265
4.0	120	175
4.0	150	220
4.0	190	280
4.5	125	185
4.5	160	235
4.5	200	295
5.0	135	195
5.0	170	245
5.0	210	315
5.5	135	195
5.5	170	245

d	L2	L1
mm	mm	mm
5.5	210	315
6.0	140	205
6.0	180	260
6.0	225	330
6.5	150	215
6.5	195	275
6.5	235	350
7.0	155	225
7.0	200	295
7.0	250	370
7.5	155	225
7.5	200	295
7.5	250	370
8.0	165	240
8.0	210	305
8.0	265	390
8.5	165	240
8.5	210	305
8.5	265	390
9.0	175	250

d	L2	L1
mm	mm	mm
9.0	220	320
9.0	280	410
9.5	175	250
9.5	220	320
9.5	280	410
10.0	185	265
10.0	235	340
10.0	295	430
10.5	185	265
10.5	235	340
10.5	295	430
11.0	195	280
11.0	250	360
11.0	310	450
11.5	195	280
11.5	250	360
11.5	310	450
12.0	200	295
12.0	265	380
12.0	325	470

### H.S.S. Center Drills

Manufactured to DIN333 / BS328  
 Model No. SL915



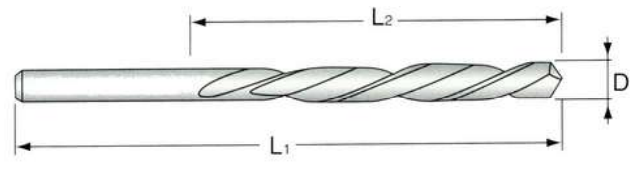
d	d1	l	L
mm	mm	mm	mm
0.5	3.15	1.9	32
0.8	3.15	1.9	32
1.0	3.15	1.9	36
1.6	4.00	2.8	36
2.0	5.00	3.3	40

d	d1	l	L
mm	mm	mm	mm
2.5	6.30	4.1	45
3.15	8.00	4.9	50
4.0	10.00	6.2	56
5.0	12.50	7.5	63
6.3	16.00	9.2	71



### H.S.S. Tin Coated Fully Ground Twist Drills

Point angle : 118°, Tolerance of Dia. : H8  
 Tolerance of Shank : f11, Relief angle : 10-20°  
 Manufactured to DIN338 / BS328  
**Model No. SL905**



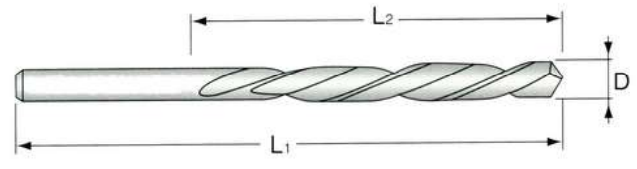
d	L2	L1
mm	mm	mm
1.0	12	34
1.5	18	40
1.6	20	43
2.0	24	49
2.5	30	57
3.0	33	61
3.2	36	65
3.3	36	65
3.5	39	70
4.0	43	75
4.2	43	75

d	L2	L1
mm	mm	mm
4.5	47	80
5.0	52	86
5.5	57	93
6.0	57	93
6.4	63	101
6.5	63	101
6.8	69	109
7.0	69	109
7.5	69	109
8.0	75	117
8.5	75	117

d	L2	L1
mm	mm	mm
9.0	81	125
9.5	81	125
10.0	87	133
10.2	87	133
10.5	87	133
11.0	94	142
11.5	94	142
12.0	101	151
12.5	101	151
12.7	101	151
13.0	101	151

### H.S.S. GT Twist Drills ( Special Design for Stainless Steel )

Point angle : 130°, Tolerance of Dia. : H8, Helix angle : 40°  
 Point cut : Helical point from Dia. 3.0 mm ,with split point DIN 1412 C  
 Manufactured to DIN338  
**Model No. SL908** ( ดอกสว่านสำหรับเจาะ สแตนเลส สตีล )



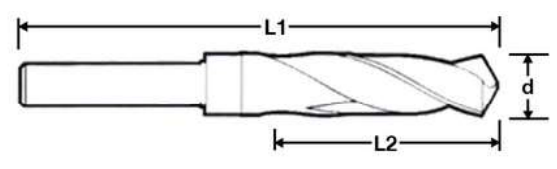
d	L2	L1
mm	mm	mm
1.0	12	34
1.5	18	40
1.6	20	43
2.0	24	49
2.5	30	57
3.0	33	61
3.3	36	65
3.5	39	70
4.0	43	75

d	L2	L1
mm	mm	mm
4.2	43	75
4.5	47	80
5.0	52	86
5.5	57	93
6.0	57	93
6.5	63	101
6.8	69	109
7.0	69	109
7.5	69	109

d	L2	L1
mm	mm	mm
8.0	75	117
8.5	75	117
9.0	81	125
9.5	81	125
10.0	87	133
10.2	87	133
10.5	87	133
11.0	94	142
12.0	101	151

### 1/2" Straight Shank Twist Drills

Point angle : 118°, Tolerance of Dia. : H8  
 Tolerance of Shank : 0.01 - 0.08  
 Manufactured to DIN338 / BS328  
**Model No. SL925**



d	L2	L1
mm	mm	mm
13.0	76	149
13.5	76	149
14.0	76	149
14.5	76	149
15.0	76	149
15.5	76	149
16.0	76	149
16.5	76	149
17.0	76	149

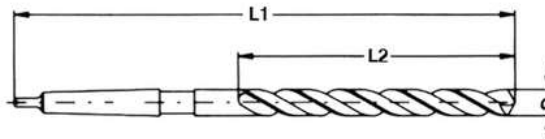
d	L2	L1
mm	mm	mm
17.5	76	149
18.0	76	149
18.5	76	149
19.0	76	149
19.5	76	149
20.0	76	149
21.0	76	149
22.0	76	149
23.0	76	149

d	L2	L1
mm	mm	mm
24.0	76	149
25.0	76	149
26.0	76	149
27.0	76	149
28.0	76	149
29.0	76	149
30.0	76	149
32.0	76	149

## H.S.S. Taper Shank Twist Drills

Manufactured to DIN345 / BS328

Model No. SL920



d	L2	L1	Morse
mm	mm	mm	Taper
12.0	101	182	1
12.5	101	182	1
13.0	101	182	1
13.5	108	189	1
14.0	108	189	1
14.5	114	212	2
15.0	114	212	2
15.5	120	218	2
16.0	120	218	2
16.5	125	223	2
17.0	125	223	2
17.5	130	228	2
18.0	130	228	2
18.5	135	233	2
19.0	135	233	2
19.5	140	238	2
20.0	140	238	2
20.5	145	243	2
21.0	145	243	2
21.5	150	248	2
22.0	150	248	2
22.5	150	248	2
23.0	150	248	2
23.5	150	248	3
24.0	160	281	3
24.5	160	281	3
25.0	160	281	3
25.5	165	286	3

d	L2	L1	Morse
mm	mm	mm	Taper
26.0	165	286	3
26.5	165	286	3
27.0	170	291	3
27.5	170	291	3
28.0	170	291	3
28.5	175	296	3
29.0	175	296	3
29.5	175	296	3
30.0	175	296	3
31.0	180	301	3
32.0	185	334	4
33.0	185	334	4
34.0	190	339	4
35.0	190	339	4
36.0	195	344	4
37.0	195	344	4
38.0	200	349	4
39.0	200	349	4
40.0	200	349	4
42.0	205	354	4
44.0	210	359	4
45.0	210	359	4
46.0	215	364	4
48.0	220	369	4
50.0	220	369	4
55.0	230	417	5
60.0	235	422	5
65.0	240	427	5

## H.S.S. Spiral Flutes Reamer

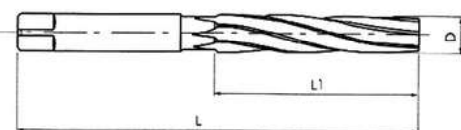
Used to produce a close tolerance surface surface finish by enlarging pre-drilled holes to a finished size

Manufactured to DIN206B / BS328

Model No. SL928

Metric Limited of Tolerance

Diameter	High+	Low+
0 - 3 mm	0.008	0.004
3 - 6 mm	0.01	0.005
6 - 10 mm	0.012	0.006
10 - 18 mm	0.015	0.008



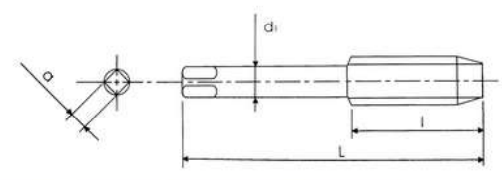
D	L1	L
mm	mm	mm
2.00	25	50
2.50	29	58
3.00	31	62
3.50	35	71
4.00	38	76
4.50	41	81
5.00	44	87
5.50	47	93

D	L1	L
mm	mm	mm
6.00	47	93
7.00	50	107
8.00	54	115
9.00	62	124
10.00	66	133
12.00	76	152
14.00	81	163
16.00	87	175

### H.S.S. Machine Taps



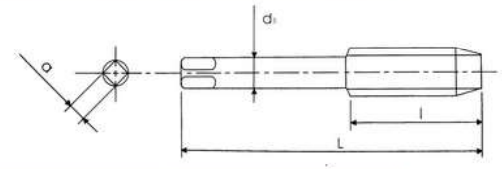
JIS Standard  
Metric Coarse, Ground Thread  
Model No. SL930



Size-Pitch	l	L	d1	a
	mm	mm	mm	mm
M2-0.40	15	40	3.0	2.5
M3-0.50	18	46	4.0	3.2
M4-0.70	20	52	5.0	4.0
M5-0.80	22	60	5.5	4.5
M6-1.00	24	62	6.0	4.5
M8-1.25	30	70	6.2	5.0
M10-1.50	32	75	7.0	5.5
M12-1.75	38	82	8.5	6.5
M14-2.00	42	88	10.5	8.0
M16-2.00	45	95	12.5	10.0
M18-2.50	48	100	14.0	11.0
M20-2.50	50	105	15.0	12.0
M22-2.50	55	115	17.0	13.0
M24-3.00	58	120	19.0	15.0
M27-3.00	62	130	20.0	15.0
M30-3.50	65	135	23.0	17.0

### H.S.S. BSW Ground Thread Machine Taps

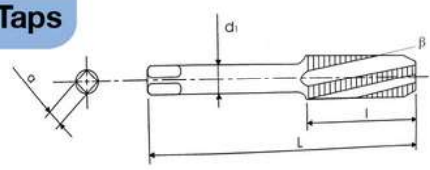
ISO529  
Model No. SL932



Size-Pitch	l	L	d1	a
	mm	mm	mm	mm
1/8"-40	11	48	3.15	2.5
3/16"-24	16	58	3.55	2.8
1/4"-20	19	66	6.3	5.0
5/16"-18	22	72	6.3	5.0
3/8"-16	24	80	7.1	5.6
7/16"-14	25	85	8.0	6.3
1/2"-12	29	89	9.0	7.1
9/16"-12	30	95	11.2	9.0
5/8"-11	32	102	12.5	10.0
3/4"-10	37	112	14.0	11.2

### H.S.S. Spiral Flute Machine Taps

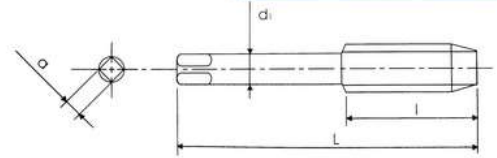
For Machine use Suitable for Blind Holes,  
Swarf is Evacuated Behind the Tap  
JIS Standard  
Model No. SL940, SL940L



Size-Pitch	l	L	d1	a
	mm	mm	mm	mm
M2-0.40	15	40	3.0	2.5
M3-0.50	18	46	4.0	3.2
M4-0.70	20	52	5.0	4.0
M5-0.80	22	60	5.5	4.5
M6-1.00	24	62	6.0	4.5
M8-1.25	30	70	6.2	5.0
M10-1.50	32	75	7.0	5.5
M12-1.75	38	82	8.5	6.5
M14-2.00	42	88	10.5	8.0
M16-2.00	45	95	12.5	10.0
M18-2.50	51	101	14.0	11.0
M20-2.50	50	105	14.5	12.0

## H.S.S. Hand Taps

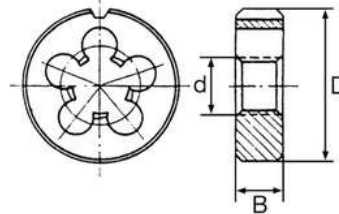
JIS Standard, 3 pcs / Set  
Metric Coarse, Ground Thread  
Model No. SL935



Size-Pitch	I	L	d1	a
	mm	mm	mm	mm
M2-0.40	15	40	3.0	2.5
M3-0.50	18	46	4.0	3.2
M4-0.70	20	52	5.0	4.0
M5-0.80	22	60	5.5	4.5
M6-1.00	24	62	6.0	4.5
M8-1.25	30	70	6.2	5.0
M10-1.50	32	75	7.0	5.5
M12-1.75	38	82	8.5	6.5
M14-2.00	42	88	10.5	8.0
M16-2.00	45	95	12.5	10.0
M18-2.50	48	100	14.0	11.0
M20-2.50	50	105	15.0	12.0
M22-2.50	55	115	17.0	13.0
M24-3.00	58	120	19.0	15.0

## H.S.S. Round Dies

JIS Standard  
Model No. SL945



d	D	B
Size-Pitch	mm	mm
M2-0.40	20	5
M3-0.50	20	5
M4-0.70	20	5
M5-0.80	20	7
M6-1.00	20	7
M8-1.25	25	8
M10-1.50	30	11
M12-1.75	38	14

d	D	B
Size-Pitch	mm	mm
M14-2.00	38	13
M16-2.00	38	13
M18-2.50	50	16
M20-2.50	50	16
M22-2.50	50	16
M24-3.00	50	16
M27-3.00	63	20

## Standard Gear Hob Cutter

Single Head, Right Hand  
Model No. SL9100

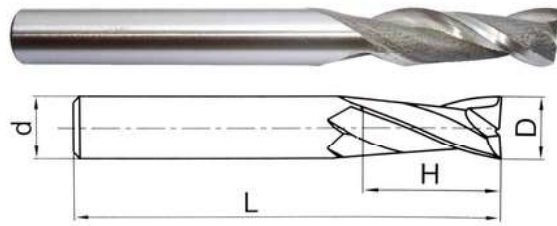


Module : m  
Pressure angle : PA = 20°  
Total tooth height : h = 2.5m  
Addendum : S+F = 1.25m  
Working depth : D+F = 2.25m  
Clearance of tooth bottom : CK = 0.25m  
Tip radius : r = 0.3m  
Pitch : Pn = T.m  
Tooth thickness : Sn = Pn/2

Module	Outside	Length	Hole
	Dia (mm)	mm	Dia (mm)
M 1	50	40	22
M 1.25	50	40	22
M 1.5	55	45	22
M 1.75	55	45	22
M 2	55	50	22
M 2.25	60	50	22
M 2.5	65	55	22
M 2.75	65	55	22
M 3	70	60	27
M 3.25	75	65	27
M 3.5	75	70	27
M 3.75	80	70	27
M 4	80	75	27
M 4.5	85	85	27
M 5	90	90	27
M 5.5	100	95	32
M 6	105	100	32

### H.S.S. End Mills 2 Flutes

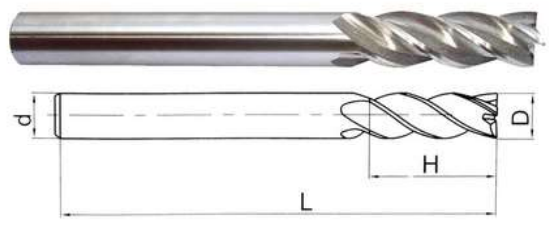
Normal "P" Series, for Cutting Material HRC<25°  
Model No. SL2P1000



D	d	H	L
mm	mm	mm	mm
2	6	10	60
3	6	12	60
4	6	15	60
5	6	15	60
6	6	20	65
8	8	25	75
10	10	30	85
12	12	40	95
14	12	45	100
16	16	45	100
18	16	50	105
20	20	55	125
25	25	65	130
30	25	65	130

### H.S.S. End Mills 4 Flutes

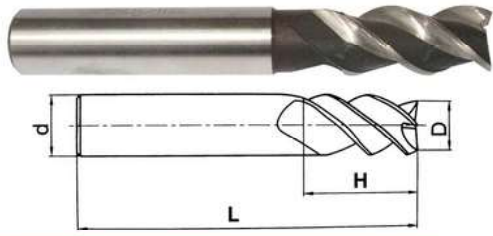
Normal "P" Series, for Cutting Material HRC<25°  
Model No. SL4P1000



D	d	H	L
mm	mm	mm	mm
2	6	10	60
3	6	12	60
4	6	15	60
5	6	15	60
6	6	20	65
8	8	25	75
10	10	30	85
12	12	40	95
14	12	45	100
16	16	45	100
18	16	50	105
20	20	55	125
25	25	65	130
30	25	65	130

### H.S.S. End Mills 3 Flutes

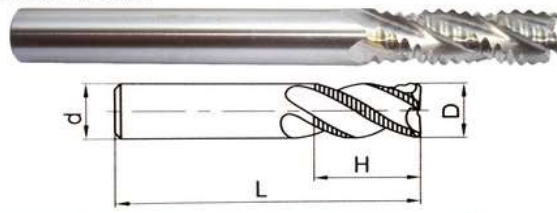
Normal "P" Series, for Cutting Material HRC<25°  
Model No. SL3P1000



D	d	H	L
mm	mm	mm	mm
10	10	23	72
12	12	26	82
14	12	26	82
16	16	32	92
18	16	32	92

### H.S.S. Roughing End Mills 4 Flutes

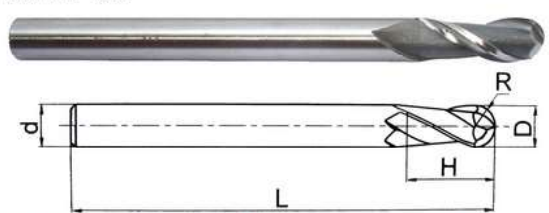
Normal "P" Series, for Cutting Material HRC<25°  
Model No. SLP1100



D	d	H	L
mm	mm	mm	mm
6	6	13	57
8	8	25	75
10	10	30	85
12	12	40	95
14	12	45	100
16	16	45	100
18	16	50	105
20	20	55	125
25	25	65	130
30	25	65	130

### H.S.S. Ball Nose End Mills 2 Flutes

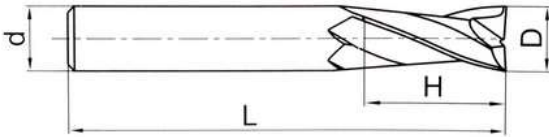
Normal "P" Series, for Cutting Material HRC<25°  
Model No. SLP1200



D	R	d	H	L
mm	mm	mm	mm	mm
2	1.0	6	6	70
3	1.5	6	9	75
4	2.0	6	9	75
5	2.5	6	12	80
6	3.0	6	12	80
8	4.0	8	19	95
10	5.0	10	22	100
12	6.0	12	26	100
16	8.0	16	32	140
20	10.0	20	40	150

### Carbide End Mills 2 Flutes

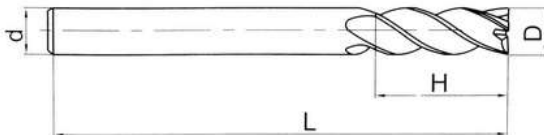
Normal "P" Series, Carbide Grain Size 0.6 Micron  
for Cutting Material HRC <50°, TiAlN Coated  
Model No. SL2P1350



D	d	H	L
mm	mm	mm	mm
1.0	4	3	50
1.5	4	4	50
2.0	4	6	50
3.0	4	8	50
4.0	4	11	50
5.0	6	13	50
6.0	6	16	50
8.0	8	20	60
10.0	10	25	75
12.0	12	30	75
14.0	14	32	75
16.0	16	45	100
20.0	20	45	100

### Carbide End Mills 4 Flutes

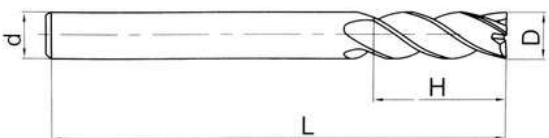
Normal "P" Series, Carbide Grain Size 0.6 Micron  
for Cutting Material HRC <50°, TiAlN Coated  
Model No. SL4P1350



D	d	H	L
mm	mm	mm	mm
1.0	4	3	50
1.5	4	4	50
2.0	4	6	50
3.0	4	8	50
4.0	6	11	50
5.0	6	13	50
6.0	6	16	50
8.0	8	20	60
10.0	10	25	75
12.0	12	30	75
14.0	14	32	75
16.0	16	45	100
20.0	20	45	100

### Carbide End Mills 4 Flutes

Super Hard "H" Series, Carbide Grain Size 0.4 Micron  
for Cutting Material HRC 50° - 68°, AlTiN Coated  
Model No. SL4H1300



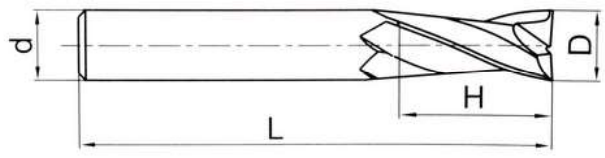
D	d	H	L
mm	mm	mm	mm
1.0	4	3	50
2.0	4	6	50
3.0	4	8	50
4.0	4	11	50
5.0	6	13	50
6.0	6	16	50
8.0	8	20	60
10.0	10	25	75
12.0	12	30	75
14.0	14	32	75
16.0	16	45	100
20.0	20	45	100





### Carbide Extra Long End Mills 2 Flutes

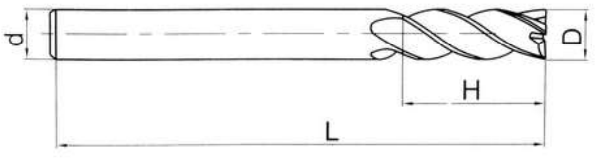
Extra Long Series, Carbide Grain Size 0.4 Micron  
for Cutting Material HRC <50°, TiAlN Coated  
Model No. SLLP1200



D	d	H	L
mm	mm	mm	mm
3.0	6	12	75
4.0	6	15	75
5.0	6	20	75
6.0	6	20	75
8.0	8	25	100
10.0	10	30	100
12.0	12	35	100
14.0	14	40	100
16.0	16	50	150
20.0	20	55	150

### Carbide Extra Long End Mills 4 Flutes

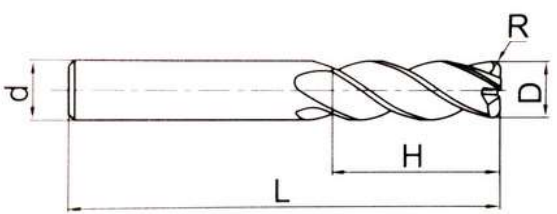
Extra Long Series, Carbide Grain Size 0.4 Micron  
for Cutting Material HRC <50°, TiAlN Coated  
Model No. SLLP1300



D	d	H	L
mm	mm	mm	mm
3.0	6	12	75
4.0	6	15	75
5.0	6	20	75
6.0	6	20	75
8.0	8	25	100
10.0	10	30	100
12.0	12	35	100
14.0	14	40	100
16.0	16	50	150
20.0	20	55	150

### Carbide Radius Corner End Mills 4 Flutes

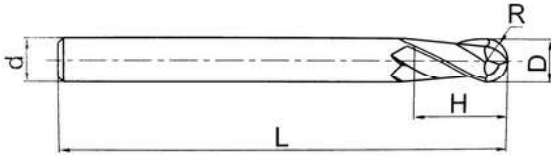
Radius Series, Carbide Grain Size 0.4 Micron  
for Cutting Material HRC <50°, TiAlN Coated  
Model No. SL2100



D	R	d	H	L
mm	mm	mm	mm	mm
3	0.2	4	8	50
4	0.3	4	10	50
4	0.5	4	10	50
5	0.5	6	13	50
5	1.0	6	13	50
6	0.5	6	16	50
6	1.0	6	16	50
8	0.5	8	20	60
8	1.0	8	20	60
10	0.5	10	25	75
10	1.0	10	25	75
12	0.5	12	30	75
12	1.0	12	30	75

### Carbide Ball Nose End Mills 2 Flutes

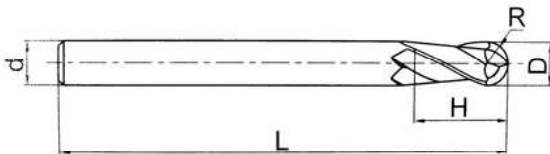
Normal "P" Series, Carbide Grain Size 0.6 Micron  
for Cutting Material HRC <50°, TiAlN Coated  
Model No. SLP1400



D	R	d	H	L
mm	mm	mm	mm	mm
1.0	0.5	4	2	50
2.0	1.0	4	4	50
3.0	1.5	4	6	50
4.0	2.0	4	8	50
5.0	2.5	6	10	50
6.0	3.0	6	12	50
8.0	4.0	8	16	60
10.0	5.0	10	20	75
12.0	6.0	12	24	75
16.0	8.0	16	32	100
20.0	10.0	20	40	100

### Carbide Extra Long Ball Nose End Mills 2 Flutes

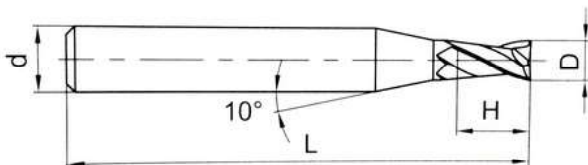
Normal "P" Series, Carbide Grain Size 0.6 Micron  
for Cutting Material HRC <50°, TiAlN Coated  
Model No. SLLP1400



D	R	d	H	L
mm	mm	mm	mm	mm
2.0	1.0	6	4	75
3.0	1.5	6	6	75
4.0	2.0	6	8	75
5.0	2.5	6	10	75
6.0	3.0	6	12	75
8.0	4.0	8	16	100
10.0	5.0	10	20	100
12.0	6.0	12	24	100
16.0	8.0	16	32	150

### Micro Carbide End Mills 2 Flutes

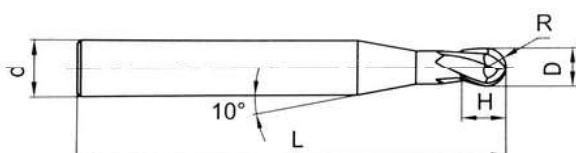
Micro Grade Carbide, Partical 0.2 - 0.4 Micron With TiAlN Coated  
Excellent Performance in high Speed Machining  
Model No. SL2200



D	d	H	L
mm	mm	mm	mm
0.3	4	0.6	50
0.4	4	0.8	50
0.5	4	1.0	50
0.6	4	1.2	50
0.8	4	1.6	50
1.0	4	2.0	50

### Micro Carbide Ball Nose End Mills 2 Flutes

Micro Grade Carbide, Partical 0.2 - 0.4 Micron With TiAlN Coated  
Excellent Performance in high Speed Machining  
Model No. SL2300

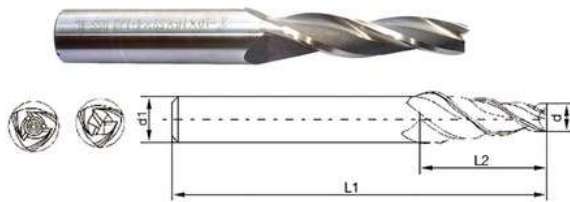


D	R	d	H	L
mm	mm	mm	mm	mm
0.3	0.15	4	0.5	50
0.4	0.20	4	0.6	50
0.5	0.25	4	0.8	50
0.6	0.30	4	0.9	50
0.8	0.40	4	1.2	50
1.0	0.50	4	1.5	50

### H.S.S. Taper End Mills

Tapered : 1/2°, 1°, 2°, 3°, 4°, 5°

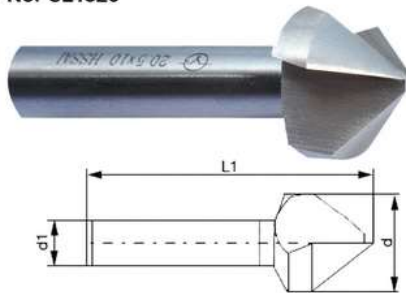
Model No. SL1510



d	d1	L2	L1
mm	mm	mm	mm
6	10	25	73
8	12	40	92
10	16	52	114

### Countersinks With Parallel Shank 90°

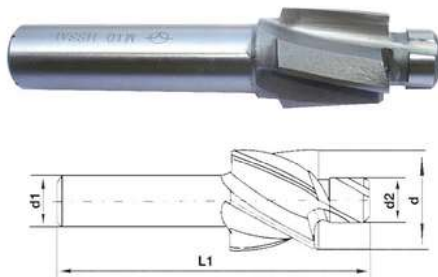
Model No. SL1520



d	d1	L1	Flutes
mm	mm	mm	Pcs.
4.3	4	40	3
6.3	5	45	3
8	6	50	3
10	6	50	3
12.4	8	56	3
16.5	10	60	3
20.5	10	63	3
25	10	67	3
31	12	71	3

### Counterbores With Parallel Shank

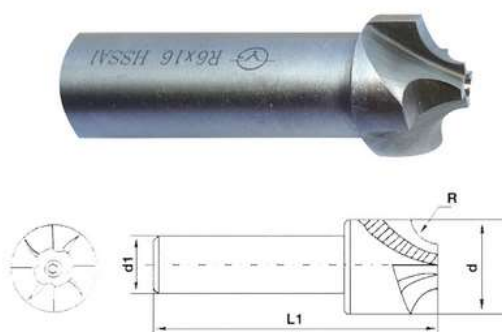
Model No. SL1530



Module	d	d2	d1	L1
	mm	mm	mm	mm
M3	6.5	3.2	6	40
M4	8	4.2	6	44
M5	9.5	5.2	8	51
M6	11	6.2	10	58
M8	14	8.2	12	67
M10	17.5	10.3	12	74
M12	20	12.4	12	83
M14	24	14.4	12	90
M16	26	16.5	12	93

### Radius Cutter With Parallel Shank

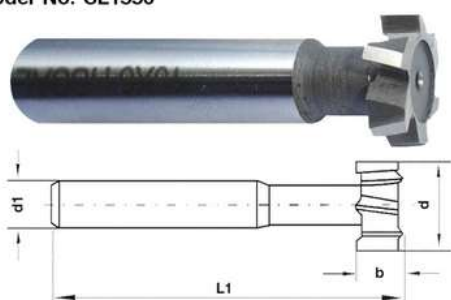
Model No. SL1540



R	d	d1	L1	Flutes
mm	mm	mm	mm	Pcs.
1	8	8	60	2
1.5	9	8	60	2
2	10	10	60	2
2.5	11	10	60	2
3	12	12	60	2
4	14	12	60	2
5	16	16	60	2
6	21	16	65	4
8	24	20	75	4
10	28	25	82	4
12.5	36	25	85	4
15	48	32	110	4

### T-Slot Cutter With Parallel Shank

Model No. SL1550

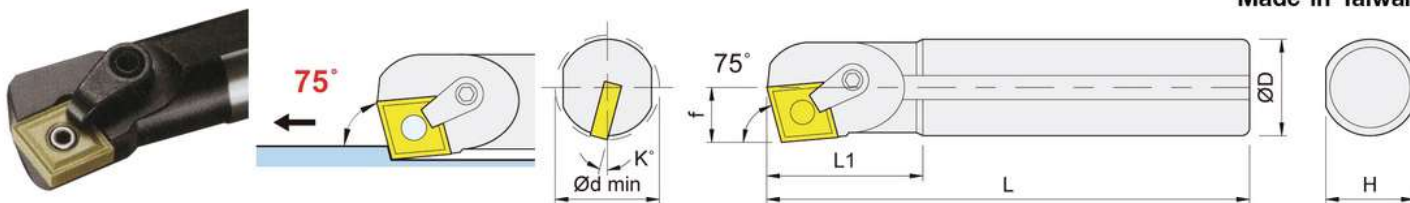


d	d1	b	L1	Flutes
mm	mm	mm	mm	Pcs.
16	10	3, 4	60	6
		5, 6	65	
20	12	3, 6	75	8
		4, 5	90	
25	16	4, 6, 8, 10	90	8
32	16	6, 8, 10	90	8



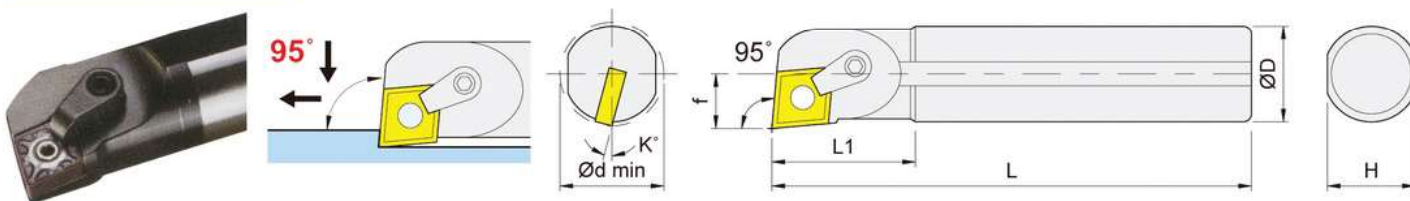
Made in Taiwan

### Boring Bars MCKN



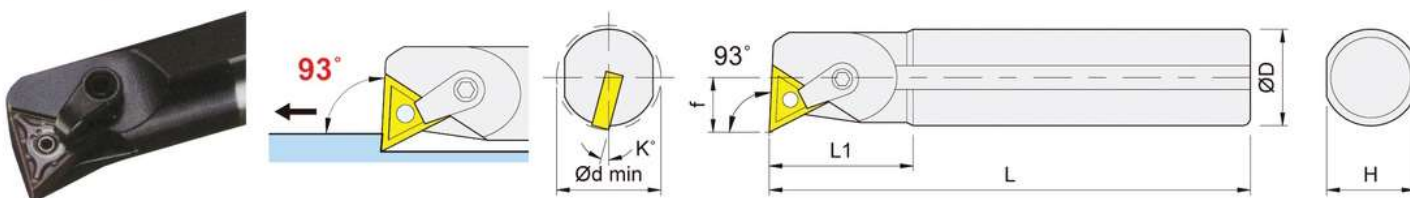
Model No.	Dimensions ( mm )							Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	D	L	L1	f	H	K	d							
S20R-MCKNR/L-12	20	200	36	13	18	15	25	CNMG120408	--	MLP44	PL25	MC620	MS620	PL30
S25R-MCKNR/L-12	25	200	40	15	23	13	30		CMS423	MLP46	PL25	MC620	MS625	PL30
S32S-MCKNR/L-12	32	250	48	20	30	13	40			MLP46	PL25	MC620	MS625	PL30
S40T-MCKNR/L-12	40	300	55	25	37	12	50				PL25	MC620	MS625	PL30
S50U-MCKNR/L-12	50	350	60	30	47	10	60					MC620	MS625	PL30

### Boring Bars MCLN



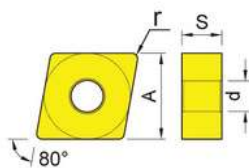
Model No.	Dimensions ( mm )							Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	D	L	L1	f	H	K	d							
S20R-MCLNR/L-12	20	200	36	13	18	15	25	CNMG120408	--	MLP44	PL25	MC620	MS620	PL30
S25R-MCLNR/L-12	25	200	40	15	23	13	30		CMS423	MLP46	PL25	MC620	MS625	PL30
S32S-MCLNR/L-12	32	250	48	20	30	13	40			MLP46	PL25	MC620	MS625	PL30
S40T-MCLNR/L-12	40	300	55	25	37	12	50				PL25	MC620	MS625	PL30
S50U-MCLNR/L-12	50	350	60	30	47	10	60					MC620	MS625	PL30

### Boring Bars MTUN



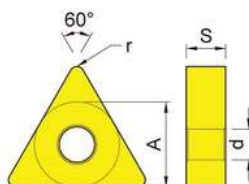
Model No.	Dimensions ( mm )							Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	D	L	L1	f	H	K	d							
S20R-MTUNR/L-16	20	200	36	13	18	15	25	TNMG160408MA	--	MLP33L	PL20	MC515	MS520	PL25
S25R-MTUNR/L-16	25	200	40	15	23	13	30		TMS322	MLP34L	PL20	MC620	MS625	PL30
S32S-MTUNR/L-16	32	250	48	20	30	13	40			MLP34L	PL20	MC620	MS625	PL30
S40T-MTUNR/L-16	40	300	55	26	37	10	50				PL20	MC620	MS625	PL30
S50U-MTUNR/L-16	50	350	60	31	47	9	60					MC620	MS625	PL30

### Indexable Insert CNMG



Type	A	s	d	r
	mm	mm	mm	mm
CNMG120408	12.7	4.76	5.16	0.8

### Indexable Insert TNMG

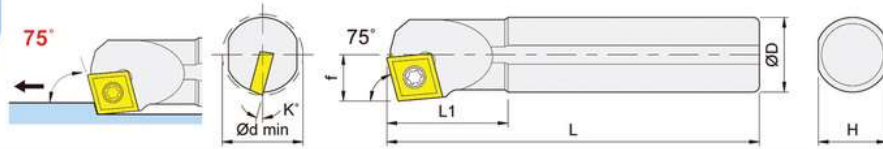


Type	A	s	d	r
	mm	mm	mm	mm
TNMG160408MA	9.525	4.76	3.81	0.8



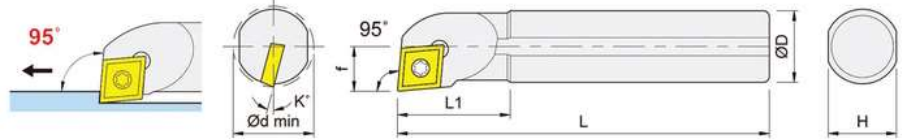
SHAN GIN  
Made in Taiwan

### Boring Bars SCKC/P



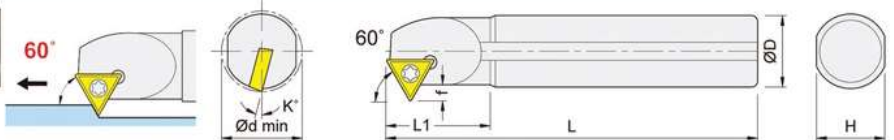
Model No.	Dimensions (mm)							Insert	Screw	Wrench
	D	L	L1	f	H	K	d			
S08K-SCKCR/L-06	8	125	18	5	7	15	10	CCMT060204	MS2506A	TF9
S10K-SCKCR/L-06	10	125	22	6	9	13	12			
S12M-SCKCR/L-06	12	150	26	8	11	10	16			
S16Q-SCKCR/L-06	16	180	32	10	15	7	20			
S12M-SCKCR/L-09	12	150	26	8	11	11	16	CCMT09T304	MS4009A	TF15
S16Q-SCKCR/L-09	16	180	32	10	15	7	20			
S20R-SCKCR/L-09	20	200	36	13	18	5	25			

### Boring Bars SCLC



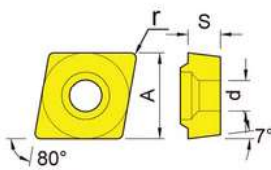
Model No.	Dimensions (mm)							Insert	Screw	Wrench
	D	L	L1	f	H	K	d			
S08K-SCLCR/L-06	8	125	18	5	7	15	10	CCMT060204	MS2506A	TF9
S12M-SCLCR/L-06	12	150	26	8	11	10	16			
S14Q-SCLCR/L-06	14	180	26	8	13	10	16			
S16Q-SCLCR/L-06	16	180	32	10	15	7	20			
S12M-SCLCR/L-09	12	150	26	8	11	10	16	CCMT09T304	MS4009A	TF15
S14Q-SCLCR/L-09	14	180	26	8	13	10	16			
S15Q-SCLCR/L-09	15	180	32	8.5	14	10	17			
S16Q-SCLCR/L-09-D18	16	180	32	9	15	7	18			
S18Q-SCLCR/L-09	18	180	32	10	17	7	20	CCMT09T304	MS4011A	TF15
S20R-SCLCR/L-09	20	200	36	13	18	5	25			
S22R-SCLCR/L-09	22	200	40	12.5	20	5	25			
S25R-SCLCR/L-09	25	200	40	15	23	5	30			
S32S-SCLCR/L-12	32	250	48	20	30	5	38	CCMT120408	MS5011A	TF20
S40T-SCLCR/L-12	40	300	55	26	37	3	50			

### Boring Bars STWC/P



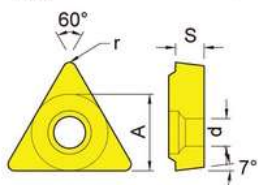
Model No.	Dimensions (mm)							Insert	Screw	Wrench
	D	L	L1	f	H	K	d			
S08K-STWCR/L-09	8	125	23	2	7	15	11	TCMT090204	MS2205A	TF7
S10K-STWCR/L-11	10	125	23	2.5	9	15	13	TCMT110204	MS2506A	TF9
S12M-STWCR/L-11	12	150	30	2.5	11	13	16			
S16Q-STWCR/L-11	16	180	30	2.5	15	10	20	TCMT16T304	MS4011A	TF15
S20R-STWCR/L-16	20	200	40	4.5	18	8	26			
S25R-STWCR/L-16	25	200	45	4.5	23	6	30			
S32S-STWCR/L-16	32	250	45	4.5	30	4	40			

### Indexable Insert CCMT



Type	A	s	d	r
	mm	mm	mm	mm
CCMT060204	6.35	2.38	2.8	0.4
CCMT09T304	9.525	3.97	4.4	0.4
CCMT120408	12.7	4.76	5.5	0.8

### Indexable Insert TCMT

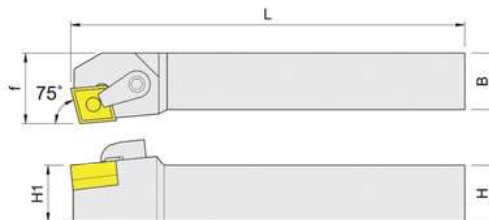
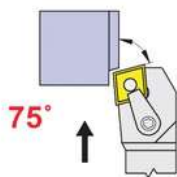


Type	A	s	d	r
	mm	mm	mm	mm
TCMT090204	5.56	2.38	2.5	0.4
TCMT110204	6.35	2.38	2.8	0.4
TCMT16T304	9.525	3.97	4.4	0.4

## Toolholders MCKN

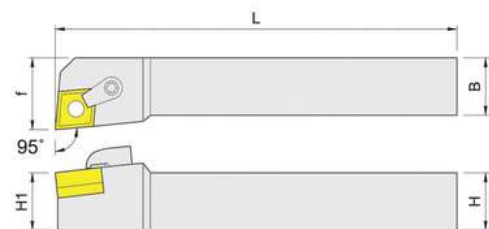
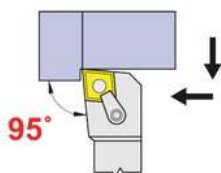


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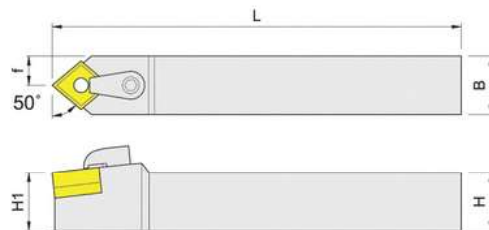
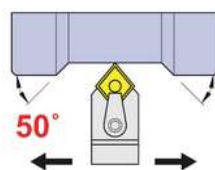
Model No.	Dimensions ( mm )					Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	H	B	L	H1	f							
MCKNR/L-1616K-12	16	16	125	16	20	CNMG120408	CMS432	MLP46	PL25	MC620	MS625	PL30
MCKNR/L-2020K-12	20	20	125	20	25							
MCKNR/L-2525M-12	25	25	150	25	32							
MCKNR/L-3232P-12	32	32	170	32	40						MS630	

## Toolholders MCLN



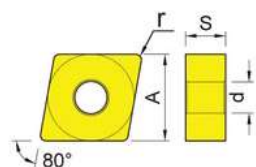
Model No.	Dimensions ( mm )					Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	H	B	L	H1	f							
MCLNR/L-1616K-12	16	16	125	16	20	CNMG120408	CMS432	MLP46	PL25	MC620	MS625	PL30
MCLNR/L-2020K-12	20	20	125	20	25							
MCLNR/L-2525M-12	25	25	150	25	32							
MCLNR/L-3232P-12	32	32	170	32	40						MS630	

## Toolholders MCNN



Model No.	Dimensions ( mm )					Insert	Shim	Pin	Wrench	Clamp	Screw	Wrench
	H	B	L	H1	f							
MCNNN-1616K-12	16	16	125	16	8	CNMG120408	CMS432	MLP46	PL25	MC620	MS625	PL30
MCNNN-2020K-12	20	20	125	20	10							
MCNNN-2525M-12	25	25	150	25	12.5							
MCNNN-3232P-12	32	32	170	32	16						MS630	

## Indexable Insert CNMG



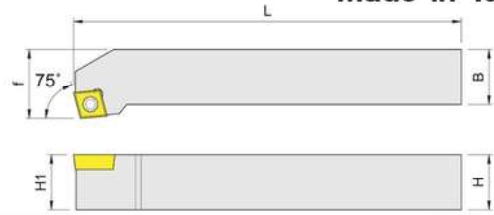
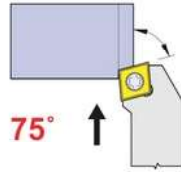
Type	A	s	d	r
	mm	mm	mm	mm
CNMG120408	12.7	4.76	5.16	0.8



SHAN GIN

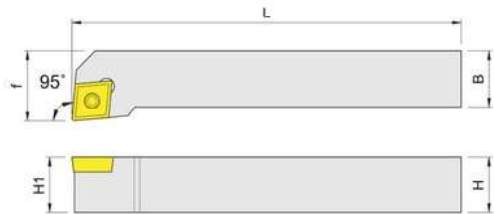
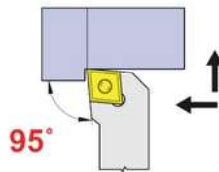
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**Toolholders SCKC**



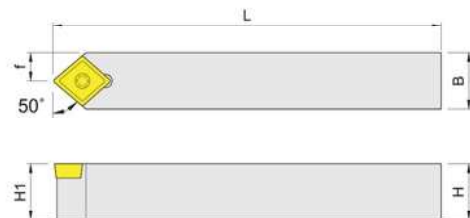
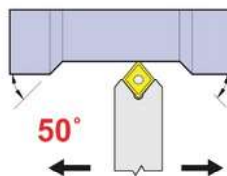
Model No.	Dimensions ( mm )					Insert	Screw	Wrench
	H	B	L	H1	f			
SCKCR/L-1212K-09	12	12	125	12	16	CCMT09T304	MS4011A	TF15
SCKCR/L-1616K-09	16	16	125	16	20			
SCKCR/L-2020K-09	20	20	125	20	25			
SCKCR/L-2525M-09	25	25	150	25	32			

**Toolholders SCLC**



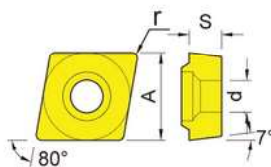
Model No.	Dimensions ( mm )					Insert	Screw	Wrench
	H	B	L	H1	f			
SCLCR/L-1212H-09	12	12	100	12	16	CCMT09T304	MS4011A	TF15
SCLCR/L-1616K-09	16	16	125	16	20			
SCLCR/L-2020K-09	20	20	125	20	25			
SCLCR/L-2525M-09	25	25	150	25	32			
SCLCR/L-2020K-12	20	20	125	20	25	CCMT120408	MS5011A	TF20
SCLCR/L-2525M-12	25	25	150	25	32			

**Toolholders SCNC**



Model No.	Dimensions ( mm )					Insert	Screw	Wrench
	H	B	L	H1	f			
SCNCN-1212K-09	12	12	125	12	6	CCMT09T304	MS4011A	TF15
SCNCN-1616K-09	16	16	125	16	8			
SCNCN-2020K-09	20	20	125	20	10			
SCNCN-2525M-09	25	25	150	25	12.5			
SCNCN-2020K-12	20	20	125	20	10	CCMT120408	MS5011A	TF20
SCNCN-2525M-12	25	25	150	25	12.5			

**Indexable Insert CCMT**



Type	A	s	d	r
	mm	mm	mm	mm
CCMT09T304	9.525	3.97	4.4	0.4
CCMT120408	12.7	4.76	5.5	0.8