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ACCkee

2025版



Higher! Productivity Faster! Cutting Speed Longer! Tool Life



ABOUT US

ACCkee is a high-tech engineering group specialized in drilling and hard material technologies. Was established in 1983, covers an area of 80,000 square meters in Wenling, Zhejiang, China. And since then we fully dedicated to develop and produce boring tools, rapid drilling tools.

After 40 years of struggle, we are continuously improving and enlarging our product range for customers. we finally do the market through a distribution network covering Europe, Japan, Korea, Mid-East, Russia, India and more than 30 countries and areas.

In 2020, **ACCkee** invested 25 million USD to build the first phase of the project—a digital smart U drill production base, to start the project with an annual output of **5 million U drills and 400,000 sets of boring head**. It has more than 300 machining centers.

For product development we set up a lab for inspection according to the world standard. Such as German HAIMER Balancing Machine, Universal Tooling Microscope, CMM, direct-reading spectrometer, Metallographic analyzer and so on. Till now, all of equipment's and testing means reached the international advanced level.

Your vision, our innovation

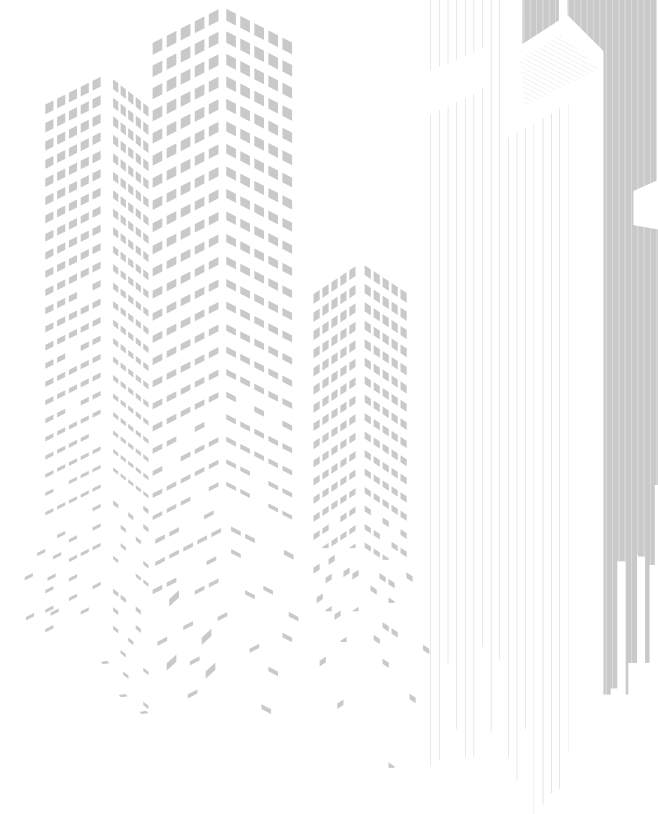
Boring head series: $\phi 14$ – $\phi 750$ high-precision finish boring head, rough boring head, combined boring head;

Shallow hole drill series: $\phi 8.5$ – $\phi 100$ SP/SO/SC, WC/WD/PDL

Deep hole drill series: 6D 7D 8D 9D 10D with centering adjustable drill

To fully adapt to the needs of your market, we will find the optimal solution for the demands. If our presentation of the standard tools in this catalogue does not fit your needs, please contact us to design and making special tools for your customized solution.

Our mission: To be the high-tech engineering group specialised in Drilling and Boring.

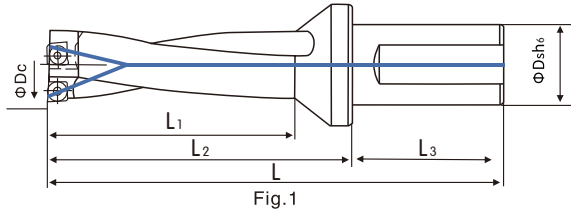




TDR-2 X D (Φ 10-60) Indexable drills with SP inserts

Holder diameter 2D: Φ10.0 ~ 60.0mm

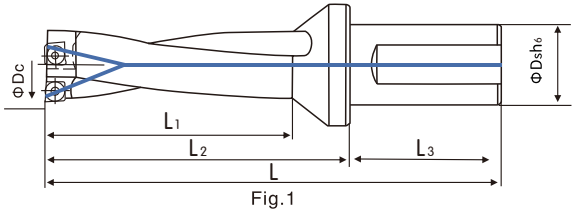
Range of machining tolerance: -0.25~+0.25 Drilling depth: 2xdiameter



TDR-3 X D (Φ 10-60) Indexable drills with SP inserts

Holder diameter 3D: Φ10.0 ~ 60.0mm

Range of machining tolerance: -0.25~+0.25 Drilling depth: 3xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
10	20	2D10-22SP04	●	85.5	22	35.5	44	SP..04T102	0.2
10.5		2D10.5-23SP04	●	86.5	22	35.5			0.2
11		2D11-24SP04	●	87.5	24	36.5			0.2
11.5		2D11.5-24SP04	●	88	24	38			0.2
12		2D12-26SP04	●	90	25	40			0.2
12.5	20	2D12.5-27SP04	●	93	27	43	44	SP..050204	0.2
13		2D13-29SP05	●	88	29	44			0.2
13.5		2D13.5-30SP05	●	89	30	45			0.2
14		2D14-31SP05	●	90	31	46			0.2
14.5		2D14.5-32SP05	●	91	32	47			0.2
15	25	2D15-33SP05	●	92	33	48	56	SP..060204	0.2
15.5		2D15.5-34SP05	●	93	34	49			0.2
16		2D16-35SP06	●	94	35	50			0.2
16.5		2D16.5-36SP06	●	95	36	51			0.2
17		2D17-37SP06	●	96	37	52			0.2
17.5	25	2D17.5-38SP06	●	109	38	53	56	SP..07T308	0.2
18		2D18-39SP06	●	110	39	54			0.3
18.5		2D18.5-40SP06	●	111	40	55			0.3
19		2D19-41SP06	●	112	41	56			0.3
19.5		2D19.5-42SP06	●	113	42	57			0.3
20	25	2D20-43SP06	●	114	43	58	56	SP..07T308	0.3
20.5		2D20.5-44SP06	●	115	44	59			0.3
21		2D21-45SP06	●	116	45	60			0.3
21.5		2D21.5-46SP06	●	117	46	61			0.3
22		2D22-47SP07	●	118	47	62			0.4
22.5	25	2D22.5-48SP07	●	119	48	63	56	SP..07T308	0.4
23		2D23-49SP07	●	123	49	67			0.4
23.5		2D23.5-50SP07	●	124	50	68			0.4
24		2D24-51SP07	●	125	51	69			0.4
24.5		2D24.5-52SP07	●	126	52	70			0.4
25	25	2D25-53SP07	●	127	53	71	56	SP..07T308	0.4
25.5		2D25.5-54SP07	●	134	54	74			0.6
26		2D26-55SP07	●	135	55	75			0.6
26.5		2D26.5-56SP07	●	136	56	76			0.6
27		2D27-57SP07	●	137	57	77			0.6
27.5	25	2D27.5-58SP07	●	138	58	78	56	SP..07T308	0.6
28		2D28-59SP07/09	●	139	59	79			0.6
28.5		2D28.5-60SP07/09	●	140	60	80			0.6
29		2D29-62SP09	●	143	62	83			0.7
29.5		2D29.5-63SP09	●	144	63	84			0.7
30	32	2D30-64SP09	●	148	64	88	60	SP..090408	0.7
30.5		2D30.5-65SP09	●	149	65	89			0.7
31		2D31-66SP09	●	150	66	90			0.7
31.5		2D31.5-67SP09	●	151	67	91			0.7
32		2D32-68SP09	●	152	68	92			0.8
32.5	32	2D32.5-69SP09	●	153	69	93	60	SP..090408	0.8
33		2D33-70SP09	●	154	70	94			0.8
33.5		2D33.5-71SP09	●	155	71	95			0.8

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
34	32	2D34-72SP09/11	●	156	72	96	60	SP..090408	0.8
34.5		2D34.5-73SP09/11	●	157	73	97			0.8
35		2D35-74SP11	●	158	74	98			0.8
35.5		2D35.5-75SP11	●	159	75	99			0.8
36		2D36-76SP11	●	160	76	100			0.9
36.5	32	2D36.5-77SP11	●	161	77	101	60	SP..110408	0.9
37		2D37-79SP11	●	169	79	109			0.9
37.5		2D37.5-80SP11	●	170	80	110			0.9
38		2D38-81SP11	●	171	81	111			0.9
38.5		2D38.5-82SP11	●	172	82	112			0.9
39	32	2D39-83SP11	●	173	83	113	60	SP..110408	1.0
39.5		2D39.5-84SP11	●	174	84	114			1.1
40		2D40-85SP11	●	185	85	115			1.1
40.5		2D40.5-86SP11	○	186	86	116			1.1
41		2D41-87SP11	○	187	87	117			1.1
41.5	32	2D41.5-88SP11	○	188	88	118	60	SP..140512	1.1
42		2D42-89SP14	○	189	89	119			1.1
42.5		2D42.5-90SP14	○	190	90	120			1.3
43		2D43-91SP14	○	191	91	121			1.5
43.5		2D43.5-92SP14	○	192	92	122			1.5
44	32	2D44-93SP14	○	193	93	123	60	SP..140512	1.6
44.5		2D44.5-94SP14	○	194	94	124			1.6
45		2D45-95SP14	○	195	95	125			1.7
45.5		2D45.5-96SP14	○	196	96	126			1.7
46		2D46-97SP14	○	197	97	127			1.7
46.5	32	2D46.5-98SP14	○	198	98	128	60	SP..140512	1.8
47		2D47-99SP14	○	199	99	129			1.8
47.5		2D47.5-100SP14	○	200	100	130			1.8
48		2D48-101SP14	○	201	101	131			1.8
48.5		2D48.5-102SP14	○	202	102	132			1.8
49	32	2D49-103SP14	○	203	103	133	60	SP..090408	1.9
49.5		2D49.5-105SP14	○	204	104	134			1.9
50		2D50-105SP14	○	205	105	135			1.9
51		2D51-107SP09	○	207	107	137			2.0
52		2D52-109SP09	○	209	109	139			2.0
53	32	2D53-111SP09	○	211	111	141	60	SP..090408	2.1
54		2D54-113SP09	○	213	113	143			2.2
55		2D55-115SP09	○	215	115	145			2.3
56		2D56-120SP09	○	222	120	152			2.4
57		2D57-122SP09	○	224	122	154			2.5
58	32	2D58-124SP09	○	226	124	156	60	SP..090408	2.6
59		2D59-126SP09	○	228	126	158			2.7
60		2D60-128SP09	○	230	128	160			2.8

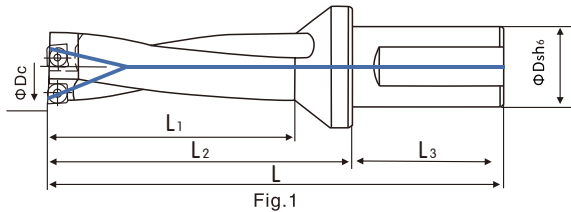
● Mark:Standard stock item,
No mark:Made to order item.

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
10	20	3D10-32SP04	●	97	32	47	44	SP..04T102	0.2
10.5		3D10.5-34SP04	●	97.5	34	47.5			0.2
11		3D11-34SP04	●	98.5	34	48.5			0.2
11.5		3D11.5-37SP04	●	100	37	50			0.2
12		3D12-38SP04	●	102	38	52			0.2
12.5	20	3D12.5-41SP04	●	105	41	55	44	SP..050204	0.2
13		3D13-42SP05	●	101	42	57			0.2
13.5		3D13.5-44SP05	●	103	44	59			0.2
14		3D14-45SP05	●	104	45	60			0.2
14.5		3D14.5-47SP05	●	106	47	62			0.2
15	25	3D15-48SP05	●	107	48	63	56	SP..060204	0.2
15.5		3D15.5-50SP05	●	109	50	65			0.2
16		3D16-51SP06	●	110	51	66			0.2
16.5		3D16.5-53SP06	●	112	53	68			0.2
17		3D17-54SP06	●	113	54	69			0.2
17.5	25	3D17.5-56SP06	●	127	56	71	56	SP..060204	0.2
18		3D18-57SP06	●	128	57	72			0.3
18.5		3D18.5-59SP06	●	130	59	74			0.3
19		3D19-60SP06	●	131	60	75			0.3
19.5		3D19.5-62SP06	●	133	62	77			0.3
20	25	3D20-63SP06	●	134	63	78	56	SP..07T308	0.3
20.5		3D20.5-65SP06	●	136	65	80			0.3
21		3D21-66SP06	●	137	66	81			0.3
21.5		3D21.5-68SP06	●	139	68	83			0.3
22		3D22-69SP07	●	140	69	84			0.4
22.5	25	3D22.5-71SP07	●	142	71	86	56	SP..07T308	0.4
23		3D23-72SP07	●	146	72	90			0.4
23.5		3D23.5-74SP07	●	148	74	92			0.4
24		3D24-75SP07	●	149	75	93			

TDR-4 X D (Φ 11.5-60) Indexable drills with SP inserts

Holder diameter 4D:Φ11.5 ~ 60.0mm

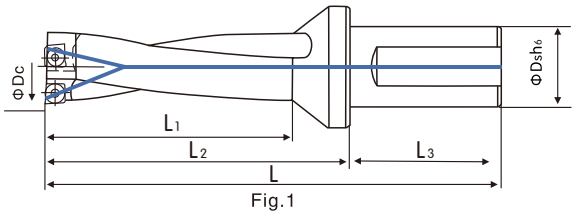
Range of machining tolerance: -0.30~+0.30 Drilling depth: 4xdiameter



TDR-5 X D (Φ 13-60) Indexable drills with SP inserts

Holder diameter 5D:Φ13.0 ~ 60.0mm

Range of machining tolerance: -0.30~+0.30 Drilling depth: 5xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
11.5		4D11.5-47SP04	●	111	47	61		SP..04T102	0.2
12	20	4D12-50SP04	●	115	50	65	44		0.2
12.5		4D12.5-52SP04	●	117	52	67			0.2
13		4D13-55SP05	●	114	55	70		SP..050204	0.2
13.5		4D13.5-57SP05	●	116	57	72			0.2
14		4D14-59SP05	●	118	59	74			0.2
14.5	20	4D14.5-61SP05	●	120	61	76	44		0.2
15	/	4D15-63SP05	●	122	63	78	/		0.2
15.5	25	4D15.5-65SP05	●	124	65	80	56	SP..060204	0.2
16		4D16-67SP06	●	126	67	82			0.2
16.5		4D16.5-69SP06	●	128	69	84			0.2
17		4D17-71SP06	●	130	71	86			0.2
17.5		4D17.5-73SP06	●	144	73	88			0.2
18		4D18-75SP06	●	146	75	90			0.3
18.5		4D18.5-77SP06	●	148	77	92			0.3
19		4D19-79SP06	●	150	79	94			0.3
19.5		4D19.5-81SP06	●	152	81	96			0.3
20		4D20-83SP06	●	154	83	98			0.3
20.5		4D20.5-85SP06	●	156	85	100		SP..07T308	0.3
21	25	4D21-87SP06	●	158	87	102	56		0.3
21.5		4D21.5-89SP06	●	160	89	104			0.3
22		4D22-91SP07	●	162	91	106			0.4
22.5		4D22.5-93SP07	●	164	93	108			0.4
23		4D23-95SP07	●	169	95	113			0.4
23.5		4D23.5-97SP07	●	171	97	115			0.4
24		4D24-99SP07	●	173	99	117			0.4
24.5		4D24.5-101SP07	●	175	101	119			0.4
25		4D25-103SP07	●	177	103	121			0.4
25.5		4D25.5-105SP07	●	185	105	125		SP..07T308 SP..090408	0.6
26		4D26-107SP07	●	187	107	127			0.6
26.5		4D26.5-109SP07	●	189	109	129			0.6
27		4D27-111SP07	●	191	111	131			0.6
27.5		4D27.5-113SP07	●	193	113	133			0.6
28		4D28-115SP07/09	●	195	115	135			0.6
28.5		4D28.5-117SP07/09	●	197	117	137			0.6
29		4D29-120SP09	●	201	120	141			0.7
29.5		4D29.5-122SP09	●	203	122	143			0.7
30		4D30-124SP09	●	208	124	148			0.7
30.5	32	4D30.5-126SP09	●	210	126	150	60	SP..090408 SP..090408 SP..110408 SP..110408	0.7
31		4D31-128SP09	●	212	128	152			0.7
31.5		4D31.5-130SP09	●	214	130	154			0.7
32		4D32-132SP09	●	216	132	156			0.8
32.5		4D32.5-134SP09	●	218	134	158			0.8
33		4D33-136SP09	●	220	136	160			0.8
33.5		4D33.5-138SP09	●	222	138	162			0.8
34		4D34-140SP09/11	●	224	140	164			0.8
34.5		4D34.5-142SP09/11	●	226	142	166			0.8
35		4D35-144SP11	●	228	144	168			0.8

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
35.5		4D35.5-146SP11	●	230	146	170		SP..110408	0.8
36		4D36-148SP11	●	232	148	172			0.9
36.5		4D36.5-150SP11	●	236	150	174			0.9
37		4D37-153SP11	●	243	153	183			0.9
37.5	32	4D37.5-155SP11	●	245	155	185	60		0.9
38		4D38-157SP11	●	247	157	187		SP..140512	0.9
38.5		4D38.5-159SP11	●	249	159	189			0.9
39		4D39-161SP11	●	251	161	191			1.0
39.5		4D39.5-163SP11	●	253	163	193			1.1
40		4D40-165SP11	●	265	165	195			1.1
40.5		4D40.5-167SP11	○	267	167	197			1.1
41		4D41-169SP11	○	269	169	199			1.1
41.5		4D41.5-171SP11	○	271	171	201			1.1
42		4D42-173SP14	○	273	173	203			1.1
42.5		4D42.5-175SP14	○	275	175	205			1.3
43		4D43-177SP14	○	277	177	207		SP..090408	1.5
43.5		4D43.5-179SP14	○	279	179	209			1.5
44		4D44-181SP14	○	281	181	211			1.6
44.5		4D44.5-183SP14	○	283	183	213			1.6
45		4D45-185SP14	○	285	185	215			1.7
45.5		4D45.5-187SP14	○	287	187	217			1.7
46		4D46-189SP14	○	289	189	219			1.7
46.5		4D46.5-191SP14	○	291	191	221			1.7
47		4D47-193SP14	○	293	193	223			1.8
47.5	40	4D47.5-193SP14	○	295	195	225	70		1.8
48		4D48-197SP14	○	297	197	227		SP..090408	1.8
48.5		4D48.5-199SP14	○	299	199	229			1.8
49		4D49-201SP14	○	301	201	231			1.9
49.5		4D49.5-204SP14	○	303	203	233			1.9
50		4D50-205SP14	○	305	205	235			2.9
51		4D51-209SP09	○	309	209	239			3.0
52		4D52-213SP09	○	313	213	243			3.1
53		4D53-217SP09	○	317	217	247			3.2
54		4D54-221SP09	○	321	221	251			3.3
55		4D55-225SP09	○	325	225	255			3.5
56		4D56-232SP09	○	334	232	264		SP	3.7
57		4D57-236SP09	○	338	236	268			3.8
58		4D58-240SP09	○	342	240	272			4.0
59		4D59-244SP09	○	346	244	276			4.1
60		4D60-248SP09	○	350	248	280			4.1

◎Spare Parts

type	diameter	Blade model	Screw			Wrench
SP	15-15.5	SP05	M2	X	5	T7
	16-21.5	SP06	M2.2	X	5	T7
	22-28.5	SP07	M2.5	X	6	T8

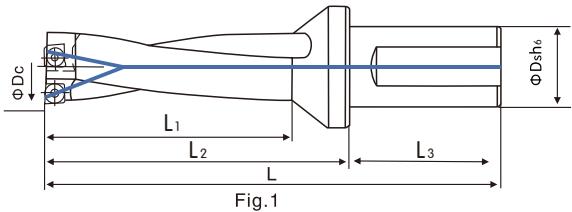
ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	
13		5D13-68SP05	●	129	68	85		SP..050204	0.3
13.5		5D13.5-71SP05	●	131	71	87			0.3
14		5D14-73SP05	●	133	73	89			0.3
14.5	20	5D14.5-76SP05	●	135	76	91	44		0.3
15	/	5D15-78SP05	●	137	78	93	/		0.3
15.5	25	5D15.5-80SP05	●	140	80	95	56		0.3
16		5D16-83SP06	●	142	83	98			0.4
16.5		5D16.5-86SP06	●	145	86	101			0.4
17		5D17-88SP06	●	147	88	103		0.4	
17.5		5D17.5-91SP06	●	162	91	106		SP..060204	0.4
18		5D18-93SP06	●	164	93	108			0.5
18.5		5D18.5-96SP06	●	167	96	111			0.5
19		5D19-98SP06	●	169	98	113			0.5
19.5		5D19.5-101SP06	●	172	101	116			0.5
20		5D20-106SP06	●	174	103	118			0.5
20.5		5D20.5-106SP06	●	177	106	121			0.5
21	25	5D21-108SP06	●	179	108	123	56		0.5
21.5		5D21.5-111SP06	●	182	111	126		0.5	
22		5D22-113SP07	●	184	113	128		SP..07T308	0.5
22.5		5D22.5-116SP07	●	187	116	131			0.5
23		5D23-118SP07	●	192	118	136			0.6
23.5		5D23.5-121SP07	●	195	121	139			0.6
24		5D24-123SP07	●	197	123	141			0.6
24.5		5D24.5-126SP07	●	200	126	144			0.8
25		5D25-128SP07	●	202	128	146			0.8
25.5		5D25.5-131SP07	●	213	131	153			0.8
26		5D26-133SP07	●	216	133	156		0.8	
26.5		5D26.5-136SP07	●	217	136	157		0.8	
27		5D27-138SP07	●	218	138	158		0.8	
27.5		5D27.5-141SP07	●	221	141	161		0.8	
28		5D28-143SP07/09	●	223	143	163		SP..07T308 SP..090408	0.9
28.5		5D28.5-146SP07/09	●	226	146	166			0.9
29		5D29-149SP09	●	230	149	170		SP..090408	0.9
29.5		5D29.5-151SP05	●	233	151	173			0.9
30		5D30-154SP09	●	238	154	178			1.0
30.5	32	5D30.5-157SP09	●	241	157	181	60		1.0
31		5D31-159SP09	●	243	159	183			1.0
31.5		5D31.5-162SP09	●	245	162	185			1.0
32		5D32-164SP09	●	248	164	188			1.1
32.5		5D32.5-167SP09	●	251	167	191			1.1
33		5D33-169SP09	●	253	169	193			1.1
33.5		5D33.5-172SP09	●	255	172	195			1.1
34		5D34-174SP11	●	258	174	198		SP..090408	1.2
34.5		5D34.5-177SP11	●	261	177	201		SP..110408	1.2
35		5D35-179SP11	●	263	179	203		SP..110408	1.2
35.5		5D35.5-182SP11	●	265	182	205			1.2



TOP-2 X D (Φ 13-40) Indexable drills with **SOMT** inserts

Holder diameter 2D: φ 13.0 ~ 40.0mm

Range of machining tolerance: -0.25~+0.25 Drilling depth: 2xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	
13		2D13-29SOMT05	●	88	29	44		SOMT050204	0.2
13.5		2D13.5-30SOMT05	●	89	30	45			0.2
14		2D14-31SOMT05	●	90	31	46			0.2
14.5	20	2D14.5-32SOMT05	●	91	32	47	44		0.2
15	/	2D15-33SOMT05	●	92	33	48	/		0.2
15.5	25	2D15.5-34SOMT05	●	93	34	49	56		0.2
16		2D16-35SOMT05	●	94	35	50			0.2
16.5		2D16.5-36SOMT06	●	95	36	51			0.2
17		2D17-37SOMT06	●	96	37	52			0.2
17.5		2D17.5-38SOMT06	●	109	38	53		SOMT060204	0.2
18		2D18-39SOMT06	●	110	39	54			0.3
18.5		2D18.5-40SOMT06	●	111	40	55			0.3
19		2D19-41SOMT06	●	112	41	56		SOMT070306	0.3
19.5		2D19.5-42SOMT07	●	113	42	57			0.3
20		2D20-43SOMT07	●	114	43	58			0.3
20.5		2D20.5-44SOMT07	●	115	44	59			0.3
21		2D21-45SOMT07	●	116	45	60			0.3
21.5	25	2D21.5-46SOMT07	●	117	46	61	56		0.3
22		2D22-47SOMT07	●	118	47	62		SOMT08T306	0.4
22.5		2D22.5-48SOMT08	●	119	48	63			0.4
23		2D23-49SOMT08	●	123	49	67			0.4
23.5		2D23.5-50SOMT08	●	124	50	68			0.4
24		2D24-51SOMT08	●	125	51	69			0.4
24.5		2D24.5-52SOMT08	●	126	52	70			0.4
25		2D25-53SOMT08	●	127	53	71			0.4
25.5		2D25.5-54SOMT08	●	134	54	74		SOMT09T308	0.6
26		2D26-55SOMT08	●	135	55	75			0.6
26.5		2D26.5-56SOMT09	●	136	56	76			0.6
27		2D27-57SOMT09	●	137	57	77			0.6
27.5		2D27.5-58SOMT09	●	138	58	78			0.6
28		2D28-59SOMT09	●	139	59	79			0.6
28.5		2D28.5-60SOMT09	●	140	60	80			0.6
29		2D29-62SOMT09	●	143	62	83			0.7
29.5		2D29.5-63SOMT09	●	144	63	84			0.7
30		2D30-64SOMT09	●	148	64	88			0.7
30.5	32	2D30.5-65SOMT09	●	149	65	89	60	SOMT11T308	0.7
31		2D31-66SOMT09	●	150	66	90			0.7
31.5		2D31.5-67SOMT09	●	151	67	91			0.7
32		2D32-68SOMT11	●	152	68	92			0.8
32.5		2D32.5-69SOMT11	●	153	69	93			0.8
33		2D33-70SOMT11	●	154	70	94			0.8
33.5		2D33.5-71SOMT11	●	155	71	95			0.8
34		2D34-72SOMT11	●	156	72	96			0.8
34.5		2D34.5-73SOMT11	●	157	73	97			0.8
35		2D35-74SOMT11	●	158	74	98			0.8
35.5		2D35.5-75SOMT11	●	159	75	99			0.8

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	
36		2D36-76SOMT11	●	160	76	100		SOMT11T308	0.9
36.5		2D36.5-77SOMT11	○	161	77	101			0.9
37		2D37-79SOMT13	○	169	79	109		SOMT130408	0.9
37.5	32	2D37.5-80SOMT13	○	170	80	110	60		0.9
38		2D38-81SOMT13	○	171	81	111			0.9
38.5		2D38.5-82SOMT13	○	172	82	112			0.9
39		2D39-83SOMT13	○	173	83	113			1.0
39.5		2D39.5-84SOMT13	○	174	84	114			1.1
40	40	2D40-85SOMT13	○	185	85	115	70		1.1

Part number structure of SO type holder

C20 - 2D 14 - 45 SOMT05

Shank Diameter Drill Length Diameter Length Inserts type

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type	diameter	Blade model	Screw			Wrench
SO	13-16	SO05	M2	X	5	T6
	16.5-19	SO06	M2.2	X	5	T7
	19.5-22	SO07	M2.2	X	5	T7
	22.5-26	SO08	M2.5	X	6	T8
	26.5-31.5	SO09	M3.5	X	8.5	T15
	32-36.5	SO11	M3.5	X	8.5	T15
	37-43	SO13	M4	X	10	T20
	44-50	SO15	M5	X	11	T20

● Mark:Standard stock item,
No mark:Made to order item.

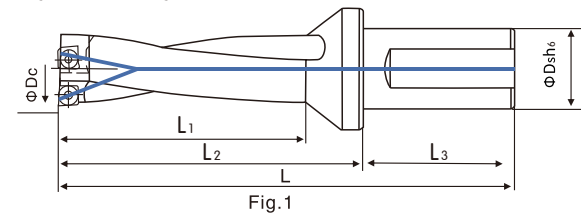
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C
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6D
&
8D
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8
0
SEM Drill Insert
YUMD MAX Drill
Carbide Inserts
Rough Boring Head
Finish Boring Head
Chuck
Accessories
Chamfering Tools
Gun Drill Technology

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6D
&
8D
8
8
0
SEM Drill Insert
YLMD MAX Drill
Carbide Inserts
Rough Boring Head
Finish Boring Head
Chuck
Accessories
Chamfering Tools
Gun Drill Technology

TOP-3 X D (Φ 13-40) Indexable drills with **SOMT** inserts

Holder diameter 3D: φ 13.0 ~ 40.0mm

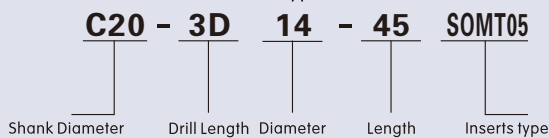
Range of machining tolerance: -0.25~+0.25 Drilling depth: 3x diameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
13		3D13-42SOMT05	●	101	42	57		SOMT050204	0.2
13.5		3D13.5-44SOMT05	●	103	44	59			0.2
14		3D14-45SOMT05	●	104	45	60			0.2
14.5	20	3D14.5-47SOMT05	●	106	47	62	44		0.2
15	/	3D15-48SOMT05	●	107	48	63	/		0.2
15.5	25	3D15.5-50SOMT05	●	109	50	65	56		0.2
16		3D16-51SOMT05	●	110	51	66			0.2
16.5		3D16.5-53SOMT06	●	112	53	68			0.2
17		3D17-54SOMT06	●	113	54	69			0.2
17.5		3D17.5-56SOMT06	●	127	56	71		SOMT060204	0.2
18		3D18-57SOMT06	●	128	57	72			0.3
18.5		3D18.5-59SOMT06	●	130	59	74			0.3
19		3D19-60SOMT06	●	131	60	75			0.3
19.5		3D19.5-62SOMT07	●	133	62	77		SOMT070306	0.3
20		3D20-63SOMT07	●	134	63	78			0.3
20.5		3D20.5-65SOMT07	●	136	65	80			0.3
21		3D21-66SOMT07	●	137	66	81			0.3
21.5	25	3D21.5-68SOMT07	●	139	68	83	56	SOMT08T306	0.3
22		3D22-69SOMT07	●	140	69	84			0.4
22.5		3D22.5-71SOMT08	●	142	71	86			0.4
23		3D23-72SOMT08	●	146	72	90			0.4
23.5		3D23.5-74SOMT08	●	148	74	92		SOMT09T308	0.4
24		3D24-75SOMT08	●	149	75	93			0.4
24.5		3D24.5-77SOMT08	●	151	77	95			0.4
25		3D25-78SOMT08	●	152	78	96			0.4
25.5		3D25.5-80SOMT08	●	160	80	100		SOMT11T308	0.6
26		3D26-81SOMT08	●	161	81	101			0.6
26.5		3D26.5-83SOMT09	●	163	83	103			0.6
27		3D27-84SOMT09	●	164	84	104			0.6
27.5		3D27.5-86SOMT09	●	166	86	106			0.6
28		3D28-87SOMT09	●	167	87	107			0.6
28.5		3D28.5-89SOMT09	●	169	89	109			0.6
29		3D29-91SOMT09	●	172	91	112			0.7
29.5		3D29.5-93SOMT09	●	174	93	114			0.7
30		3D30-94SOMT09	●	178	94	118			0.7
30.5	32	3D30.5-96SOMT09	●	180	96	120	60	SOMT11T308	0.7
31		3D31-97SOMT09	●	181	97	121			0.7
31.5		3D31.5-99SOMT09	●	183	99	123			0.7
32		3D32-100SOMT11	●	184	100	124			0.8
32.5		3D32.5-102SOMT11	●	186	102	126			0.8
33		3D33-103SOMT11	●	187	103	127			0.8
33.5		3D33.5-105SOMT11	●	189	105	129			0.8
34		3D34-106SOMT11	●	190	106	130			0.8
34.5		3D34.5-108SOMT11	●	192	108	132			0.8
35		3D35-111SOMT11	●	193	109	133			0.8
35.5		3D35.5-111SOMT11	●	195	111	135			0.8

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
36		3D36-112SOMT11	●	196	112	136		SOMT11T308	0.9
36.5		3D36.5-114SOMT11	○	198	114	138			0.9
37		3D37-136SOMT13	○	206	116	146		SOMT130408	0.9
37.5	32	3D37.5-181SOMT13	○	208	118	148	60		0.9
38		3D38-139SOMT13	○	209	119	149			0.9
38.5		3D38.5-121SOMT13	○	211	121	151			0.9
39		3D39-122SOMT13	○	212	122	152			1.0
39.5		3D39.5-124SOMT13	○	214	124	154			1.1
40	40	3D40-125SOMT13	○	225	125	155	70		1.1

Part number structure of SO type holder



◎ Spare Parts

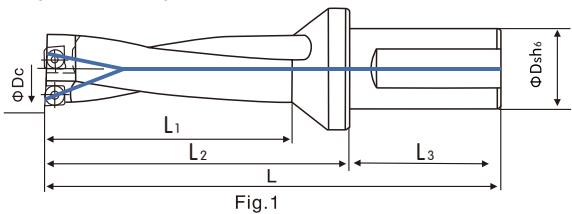
type	diameter	Blade model	Screw			Wrench
SO	13-16	SO05	M2	X	5	T6
	16.5-19	SO06	M2.2	X	5	T7
	19.5-22	SO07	M2.2	X	5	T7
	22.5-26	SO08	M2.5	X	6	T8
	26.5-31.5	SO09	M3.5	X	8.5	T15
	32-36.5	SO11	M3.5	X	8.5	T15
	37-43	SO13	M4	X	10	T20
	44-50	SO15	M5	X	11	T20

● Mark: Standard stock item,
No mark: Made to order item.

TOP-4 X D (Φ 13-40) Indexable drills with **SOMT** inserts

Holder diameter 4D: φ 13.0 ~ 40.0mm

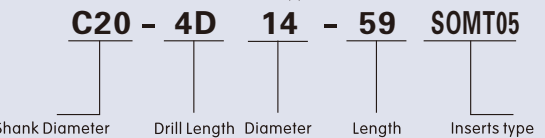
Range of machining tolerance: -0.30~+0.30 Drilling depth: 4x diameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
13		4D13-55SOMT05	●	114	55	70		SOMT050204	0.2
13.5		4D13.5-57SOMT05	●	116	57	72			0.2
14		4D14-59SOMT05	●	118	59	74			0.2
14.5	20	4D14.5-61SOMT05	●	120	61	76	44		0.2
15	/	4D15-63SOMT05	●	122	63	78	/		0.2
15.5	25	4D15.5-65SOMT05	●	124	65	80	56		0.2
16		4D16-67SOMT05	●	126	67	82			0.2
16.5		4D16.5-69SOMT06	●	128	69	84		SOMT060204	0.2
17		4D17-71SOMT06	●	130	71	86			0.2
17.5		4D17.5-73SOMT06	●	144	73	88			0.2
18		4D18-75SOMT06	●	146	75	90			0.3
18.5		4D18.5-77SOMT06	●	148	77	92		SOMT070306	0.3
19		4D19-79SOMT06	●	150	79	94			0.3
19.5		4D19.5-81SOMT07	●	152	81	96			0.3
20		4D20-83SOMT07	●	154	83	98			0.3
20.5		4D20.5-85SOMT07	●	156	85	100		SOMT08T306	0.3
21		4D21-87SOMT07	●	158	87	102			0.3
21.5	25	4D21.5-89SOMT07	●	160	89	104	56		0.3
22		4D22-91SOMT07	●	162	91	106			0.4
22.5		4D22.5-93SOMT08	●	164	93	108		SOMT09T308	0.4
23		4D23-95SOMT08	●	169	95	113			0.4
23.5		4D23.5-97SOMT08	●	171	97	115			0.4
24		4D24-99SOMT08	●	173	99	117			0.4
24.5		4D24.5-101SOMT08	●	175	101	119		SOMT11T308	0.4
25		4D25-103SOMT08	●	177	103	121			0.4
25.5		4D25.5-105SOMT08	●	185	105	125			0.6
26		4D26-107SOMT08	●	187	107	127			0.6
26.5		4D26.5-109SOMT09	●	189	109	129			0.6
27		4D27-111SOMT09	●	191	111	131			0.6
27.5		4D27.5-113SOMT09	●	193	113	133			0.6
28		4D28-115SOMT09	●	195	115	135			0.6
28.5		4D28.5-117SOMT09	●	197	117	137			0.6
29		4D29-120SOMT09	●	201	120	141		SOMT11T308	0.7
29.5		4D29.5-122SOMT09	●	203	122	143			0.7
30		4D30-124SOMT09	●	208	124	148			0.7
30.5	32	4D30.5-126SOMT09	●	210	126	150	60		0.7
31		4D31-128SOMT09	●	212	128	152			0.7
31.5		4D31.5-130SOMT09	●	214	130	154			0.7
32		4D32-132SOMT11	●	216	132	156			0.8
32.5		4D32.5-134SOMT11	●	218	134	158			0.8
33		4D33-136SOMT11	●	220	136	160			0.8
33.5		4D33.5-138SOMT11	●	222	138	162			0.8
34		4D34-140SOMT11	●	224	140	164		SOMT11T308	0.8
34.5		4D34.5-142SOMT11	●	226	142	166			0.8
35		4D35-144SOMT11	●	228	144	168			0.8
35.5		4D35.5-146SOMT11	●	230	146	170			0.8

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
36		4D36-148SOMT11	●	232	148	172		SOMT11T308	0.9
36.5		4D36.5-150SOMT11	○	236	150	174			0.9
37		4D37-153SOMT13	○	243	153	183		SOMT130408	0.9
37.5	32	4D37.5-155SOMT13	○	245	155	185	60		0.9
38		4D38-157SOMT13	○	247	157	187			0.9
38.5		4D38.5-159SOMT13	○	249	159	189			0.9
39		4D39-161SOMT13	○	251	161	191			1.0
39.5		4D39.5-163SOMT13	○	253	163	193			1.1
40	40	4D40-165SOMT13	○	265	165	195	70		1.1

Part number structure of SO type holder



◎ Spare Parts

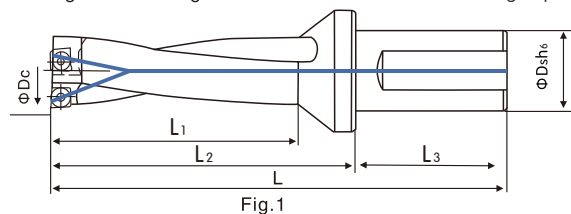
type	diameter	Blade model	Screw			Wrench
SO	13–16	SO05	M2	X	5	T6
	16.5–19	SO06	M2.2	X	5	T7
	19.5–22	SO07	M2.2	X	5	T7
	22.5–26	SO08	M2.5	X	6	T8
	26.5–31.5	SO09	M3.5	X	8.5	T15
	32–36.5	SO11	M3.5	X	8.5	T15
	37–43	SO13	M4	X	10	T20
	44–50	SO15	M5	X	11	T20

TOP-5 X D (Φ 16-40) Indexable drills with **SOMT** inserts

Holder diameter 5D: Φ 16.0 ~ 40.0mm

Customised Solution-0.2/0.3/0.4/0.7/0.8/0.9 (bottom hole of the thread)

Range of machining tolerance: -0.30 ~ +0.30 Drilling depth: 5xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
16	20	5D16-83SOMT05	●	142	83	98	44	SOMT050204	0.4
16.5	/	5D16.5-86SOMT06	●	145	86	101	/		0.4
17	25	5D17-88SOMT06	●	147	88	103	56		0.4
17.5		5D17.5-91SOMT06	●	162	91	106		SOMT060204	0.4
18		5D18-93SOMT06	●	164	93	108			0.5
18.5		5D18.5-96SOMT06	●	167	96	111			0.5
19		5D19-98SOMT06	●	169	98	113			0.5
19.5		5D19.5-101SOMT07	●	172	101	116			0.5
20		5D20-107SOMT07	●	174	103	118			0.5
20.5		5D20.5-107SOMT07	●	177	106	121		SOMT070306	0.5
21	25	5D21-108SOMT07	●	179	108	123	56		0.5
21.5		5D21.5-111SOMT07	●	182	111	126			0.5
22		5D22-113SOMT07	●	184	113	128			0.5
22.5		5D22.5-116SOMT08	●	187	116	131			0.5
23		5D23-118SOMT08	●	192	118	136			0.6
23.5		5D23.5-121SOMT08	●	195	121	139			0.6
24		5D24-123SOMT08	●	197	123	141		SOMT08T306	0.6
24.5		5D24.5-126SOMT08	●	200	126	144			0.8
25		5D25-128SOMT08	●	202	128	146			0.8
25.5		5D25.5-131SOMT08	●	213	131	153			0.8
26		5D26-133SOMT08	●	216	133	156			0.8
26.5		5D26.5-136SOMT09	●	217	136	159			0.8
27		5D27-138SOMT09	●	218	138	160			0.8
27.5		5D27.5-141SOMT09	●	221	141	161			0.8
28		5D28-143SOMT09	●	223	143	163			0.9
28.5		5D28.5-146SOMT09	●	226	146	166			0.9
29		5D29-149SOMT09	●	230	149	170		SOMT09T308	0.9
29.5		5D29.5-151SOMT05	●	233	151	173			0.9
30		5D30-154SOMT09	●	238	154	178			1.0
30.5		5D30.5-157SOMT09	●	241	157	181			1.0
31		5D31-159SOMT09	●	243	159	183			1.0
31.5		5D31.5-162SOMT09	●	245	162	185			1.0
32	32	5D32-164SOMT11	●	248	164	188	60		1.1
32.5		5D32.5-167SOMT11	●	251	167	191			1.1
33		5D33-169SOMT11	●	253	169	193			1.1
33.5		5D33.5-172SOMT11	●	255	172	195			1.1
34		5D34-174SOMT11	●	258	174	198		SOMT11T308	1.2
34.5		5D34.5-177SOMT11	●	261	177	201			1.2
35		5D35-179SOMT11	●	263	179	203			1.2
35.5		5D35.5-182SOMT11	●	265	182	205			1.2
36		5D36-184SOMT11	○	268	184	208			1.3
36.5		5D36.5-187SOMT11	○	271	187	211			1.3
37		5D37-190SOMT13	○	280	190	220			1.3
37.5		5D37.5-193SOMT13	○	283	193	223		SOMT130408	1.3
38		5D38-195SOMT13	○	285	195	225			1.4
38.5		5D38.5-198SOMT13	○	288	198	228			1.4

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ¹	ℓ ²	ℓ ³	Applicable Insert	kg
39		5D39-200SOMT13	○	290	200	230			1.9
39.5	32	5D39.5-203SOMT13	○	293	203	233	60	SOMT130408	1.9
40	40	5D40-205SOMT13	○	305	205	235	70		1.9

Part number structure of type holder

C20 - 5D 16 - 88 SOMT05

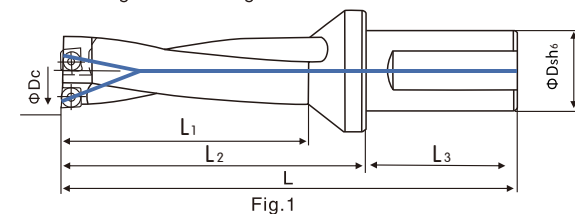
Shank Diameter Drill Length Diameter Length Inserts type

◎ Spare Parts

type	diameter	Blade model	Screw			Wrench
SO	13-16	SO05	M2	X	5	T6
	16.5-19	SO06	M2.2	X	5	T7
	19.5-22	SO07	M2.2	X	5	T7
	22.5-26	SO08	M2.5	X	6	T8
	26.5-31.5	SO09	M3.5	X	8.5	T15
	32-36.5	SO11	M3.5	X	8.5	T15
	37-43	SO13	M4	X	10	T20
	44-50	SO15	M5	X	11	T20

● Mark: Standard stock item,
No mark: Made to order item.

Range of machining tolerance: -0.05 ~ +0.15



▲ H13/SKD61

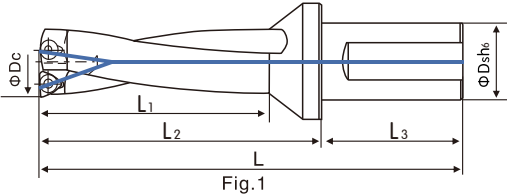


ΦDc	ΦDs	Specification/Item	ΦDc	ΦDs	Specification/Item	ΦDc	ΦDs	Specification/Item	ΦDc	ΦDs	Specification/Item
8.8		KSD088-2D-S20-SP03	13.3		C20-3D13.3-42SP05	30.2		C32-3D30.2-94SP09	38.7		C32-3D38.7-121SP11
9		KSD090-2D-S20-SP03	14.8		C20-3D14.8-48SP05	30.3		C32-3D30.3-94SP09	38.8		C32-3D38.8-122SP11
9.3		KSD093-2D-S20-SP03	15.8	20	C20-3D15.8-50SP05	30.7		C32-3D30.7-96SP09	39.2	32	C32-3D39.2-122SP11
9.5		KSD095-2D-S20-SP03	16.3		C20-3D16.3-54SP06	30.8		C32-3D30.8-97SP09	39.3		C32-3D39.3-124SP11
10.5		KSD105-2D-S20-SP04	16.8		C20-3D16.8-53SP06	31.2		C32-3D31.2-97SP09	39.7		C32-3D39.7-124SP11
10.8		KSD108-2D-S20-SP04	17.3		C25-3D17.3-56SP06	31.2		C32-3D31.2-96SP09	39.8		C40-3D39.8-125SP11
11		KSD110-2D-S20-SP04	19.8		C25-3D19.8-62SP06	31.3		C32-3D31.3-99SP09	40.2		C40-3D40.2-125SP11
11.5		KSD115-2D-S20-SP04	20.8		C25-3D20.8-66SP06	31.7		C32-3D31.7-100SP09	40.7		C40-3D40.7-127SP11
12.5		KSD125-2D-S20-SP04	21.7		C25-3D21.7-68SP06	31.8		C32-3D31.8-100SP09	40.8		C40-3D40.8-128SP11
13		C20-2D13-29SP05	21.8		C25-3D21.8-69SP07	32.2		C32-3D32.2-100SP09	41.2		C40-3D41.2-128SP11
14.5		C20-2D14.5-32SP05	22.7	25	C25-3D22.7-71SP07	32.7		C32-3D32.7-103SP09	41.3		C40-3D41.3-128SP11
15		C20-2D15-33SP05	22.8		C25-3D22.8-71SP07	32.8		C32-3D32.8-103SP09	41.7		C40-3D41.7-129SP11
16	20	C20-2D16-35SP06	23.2		C25-3D23.2-72SP07	33.2		C32-3D33.2-103SP09	41.8		C40-3D41.8-131SP14
16.5		C20-2D16.5-36SP06	23.3		C25-3D23.3-72SP07	33.3		C32-3D33.3-105SP09	42.2		C40-3D42.2-131SP14
17		C20-2D17-37SP06	23.8		C25-3D23.8-75SP07	33.7		C32-3D33.7-105SP09	42.8	40	C40-3D42.8-134SP14
18		C20-2D18-39SP06	24.3		C25-3D24.3-77SP07	33.8	32	C32-3D33.8-106SP11	42.7		C40-3D42.7-134SP14
18.5		C20-2D18.5-40SP06	24.8		C25-3D24.8-77SP07	34.2		C32-3D34.2-106SP11	43.7		C40-3D43.7-137SP14
19		C20-2D19-41SP06	23.3		C32-3D23.3-74SP07	34.3		C32-3D34.3-106SP11	43.8		C40-3D43.8-137SP14
20		C20-2D20-43SP06	26.7		C32-3D26.7-83SP07	34.8		C32-3D34.8-109SP11	44.7		C40-3D44.7-137SP14
20.5		C20-2D20.5-44SP06	26.8		C32-3D26.8-84SP07	35.2		C32-3D35.2-109SP11	44.8		C40-3D44.8-140SP14
21		C20-2D21-45SP06	27.2		C32-3D27.2-84SP07	35.3		C32-3D35.3-108SP11	45.2		C40-3D45.2-140SP14
22		C20-2D22-47SP07	27.3		C32-3D27.3-83SP07	35.7		C32-3D35.7-111SP11	46.2		C40-3D46.2-143SP14
22.5		C20-2D22.5-48SP07	27.7		C32-3D27.7-86SP07	35.8		C32-3D35.8-112SP11	48.2		C40-3D48.2-149SP14
23		C20-2D23-49SP07	27.8		C32-3D27.8-87SP09	36.2		C32-3D36.2-112SP11	49.2		C40-3D49.2-152SP14
25		C20-2D25-53SP07	27.9		C32-3D27.9-87SP09	36.3		C32-3D36.3-114SP11	50.2		C40-3D50.2-155SP14
25.5		C32-2D25.5-54SP07	28.3	32	C32-3D28.3-89SP09	36.7		C32-3D36.7-116SP11			
26		C32-2D26-55SP07	28.7		C32-3D28.7-91SP09	36.8		C32-3D36.8-116SP11			
26.5		C32-2D26.5-56SP07	28.8		C32-3D28.8-91SP09	37.2		C32-3D37.2-116SP11			
27	32	C32-2D27-57SP07	28.9		C32-3D28.9-91SP09	37.3		C32-3D37.3-118SP11			
28		C32-2D28-59SP07	29.2		C32-3D29.2-93SP09	37.7		C32-3D37.7-118SP11			
28.5		C32-2D28.5-60SP07	29.3		C32-3D29.3-93SP09	38.2		C32-3D38.2-119SP11			
29		C32-2D29-62SP09	29.8		C32-3D29.8-94SP09	38.3		C32-3D38.3-119SP11			



WC-2XD (Φ 10-80) Indexable drills with WC inserts

Holder diameter 2D:Φ10.0 ~ 80.0mm



Range of machining tolerance: -0.25~+0.25 Drilling depth: 2xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert		kg
10	20	2D10-22WC02	●	85.5	22	35.5	44	WC..020104	0.2	
10.5		2D10.5-23WC02	●	86.5	22	35.5			0.2	
11		2D11-24WC02	●	87.5	24	36.5			0.2	
11.5		2D11.5-24WC02	●	88	24	38			0.2	
12		2D12-26WC02	●	90	25	40			0.2	
12.5		2D12.5-27WC02	●	93	27	43			0.2	
13	20	2D13-29WC02	●	88	29	44	44	WC..020104	0.2	
13.5		2D13.5-30WC02	●	89	30	45			0.2	
14		2D14-31WC02/03	●	90	31	46			0.2	
14.5		2D14.5-32WC02/03	●	91	32	47			0.2	
15		2D15-33WC03	●	92	33	48			0.2	
15.5		2D15.5-34WC03	●	93	34	49			0.2	
16	25	2D16-35WC03	●	94	35	50	56	WC..030208	0.2	
16.5		2D16.5-36WC03	●	95	36	51			0.2	
17		2D17-37WC03	●	96	37	52			0.2	
17.5		2D17.5-38WC03	●	109	38	53			0.2	
18		2D18-39WC03	●	110	39	54			0.3	
18.5		2D18.5-40WC03	●	111	40	55			0.3	
19	25	2D19-41WC03	●	112	41	56	56	WC..040208	0.3	
19.5		2D19.5-42WC03	●	113	42	57			0.3	
20		2D20-43WC03	●	114	43	58			0.3	
20.5		2D20.5-44WC03	●	115	44	59			0.3	
21		2D21-45WC04	●	116	45	60			0.3	
21.5		2D21.5-46WC04	●	117	46	61			0.3	
22	25	2D22-47WC04	●	118	47	62	56	WC..040208	0.4	
22.5		2D22.5-48WC04	●	119	48	63			0.4	
23		2D23-49WC04	●	123	49	67			0.4	
23.5		2D23.5-50WC04	●	124	50	68			0.4	
24		2D24-51WC04	●	125	51	69			0.4	
24.5		2D24.5-52WC04	●	126	52	70			0.4	
25	25	2D25-53WC05	●	127	53	71	56	WC..050308	0.4	
25.5		2D25.5-54WC05	●	134	54	74			0.6	
26		2D26-55WC05	●	135	55	75			0.6	
26.5		2D26.5-56WC05	●	136	56	76			0.6	
27		2D27-57WC05	●	137	57	77			0.6	
27.5		2D27.5-58WC05	●	138	58	78			0.6	
28	32	2D28-59WC05	●	139	59	79	60	WC..06T308	0.6	
28.5		2D28.5-60WC05	●	140	60	80			0.6	
29		2D29-62WC05	●	143	62	83			0.7	
29.5		2D29.5-63WC05	●	144	63	84			0.7	
30		2D30-64WC05	●	148	64	88			0.7	
30.5		2D30.5-65WC05	●	149	65	89			0.7	
31	32	2D31-66WC06	●	150	66	90	60	WC..06T308	0.7	
31.5		2D31.5-67WC06	●	151	67	91			0.7	
32		2D32-68WC06	●	152	68	92			0.8	
32.5		2D32.5-69WC06	●	153	69	93			0.8	
33		2D33-70WC06	●	154	70	94			0.8	
33.5		2D33.5-71WC06	●	155	71	95			0.8	
34	32	2D34-72WC06	●	156	72	96	60	WC..06T308	0.8	
34.5		2D34.5-73WC06	●	157	73	97			0.8	
35		2D35-74WC06	●	158	74	98			0.8	
35.5	32	2D35.5-75WC06	●	159	75	99	60	WC..06T308	0.8	
36		2D36-76WC06	●	160	76	100			0.9	
36.5		2D36.5-77WC06	●	161	77	101			0.9	
37		2D37-79WC06	●	169	79	109			0.9	
37.5		2D37.5-80WC06	●	170	80	110			0.9	
38		2D38-81WC06	●	171	81	111			0.9	
38.5	32	2D38.5-82WC06	●	172	82	112	60	WC..06T308	0.9	
39		2D39-83WC06	●	173	83	113			1.0	
39.5		2D39.5-84WC06	●	174	84	114			1.1	
40		2D40-85WC06	●	185	85	115			1.1	
41		2D41-87WC06	●	187	87	117			1.1	
42		2D42-89WC08	●	189	89	119			1.1	
43	32	2D43-91WC08	●	191	91	121	70	WC..080412	1.5	
44		2D44-93WC08	●	193	93	123			1.6	
45		2D45-95WC08	●	195	95	125			1.7	
46		2D46-97WC08	●	197	97	127			1.7	
47		2D47-99WC08	●	199	99	129			1.8	
48		2D48-101WC08	●	201	101	131			1.8	
49	32	2D49-103WC08	●	203	103	133	70	WC..080412	1.9	
50		2D50-105WC08	●	205	105	135			1.9	
51		2D51-107WC08	●	207	107	137			2.0	
52		2D52-109WC08	●	209	109	139			2.0	
53		2D53-111WC08	●	211	111	141			2.1	
54		2D54-113WC08	●	213	113	143			2.2	
55	32	2D55-115WC08	●	215	115	145	70	WC..06T308	2.3	
56		2D56-120WC08	●	222	120	152			2.4	
57		2D57-122WC08	●	224	122	154			2.5	
58		2D58-124WC08	●	226	124	156			2.6	
59		2D59-126WC08	●	228	126	158			2.7	
60		2D60-128WC08	●	230	128	160			2.8	
61	32	2D61-130WC06	●	232	130	162	70	WC..06T308		
62		2D62-132WC06	●	234	132	164				
63		2D63-134WC06	●	236	134	166				
64		2D64-136WC06	●	238	136	168				
65		2D65-138WC06	●	240	138	170				
66		2D66-140WC06	●	242	140	172				
67	32	2D67-142WC06	●	244	142	174	70	WC..06T308		
68		2D68-144WC06	●	246	144	176				
69		2D69-146WC06	●	248	146	178				
70		2D70-148WC06	●	250	148	180				
71		2D71-150WC06	●	252	150	182				
72		2D72-152WC06	●	254	152	184				
73	32	2D73-154WC06	●	256	154	186	70	WC..06T308		
74		2D74-156WC06	●	258	156	188				
75		2D75-158WC06	●	260	158	190				
76		2D76-160WC06	●	262	160	192				
77		2D77-162WC06	●	264	162	194				
78		2D78-164WC06	●	266	164	196				
79	32	2D79-166WC06	●	268	166	198	70	WC..06T308		
80		2D80-168WC06	●	270	168	200				

WC-3XD (Φ10-80) Indexable drills with WC inserts

Holder diameter 3D:Φ10.0~80.0mm

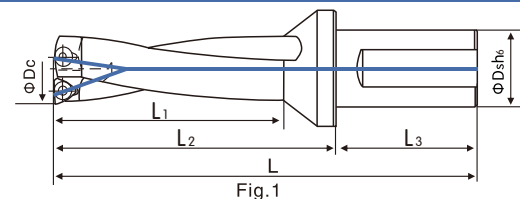


Fig.1

Range of machining tolerance: -0.25~+0.25 Drilling depth: 3xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
10	20	3D10-32WC02	●	97	32	47	44	WC..020104	0.2
10.5		3D10.5-34WC02	●	97.5	34	47.5			0.2
11		3D11-34WC02	●	98.5	34	48.5			0.2
11.5		3D11.5-37WC02	●	100	37	50			0.2
12		3D12-38WC02	●	102	38	52			0.2
12.5	20	3D12.5-41WC02	●	105	41	55	44	WC..020104	0.2
13		3D13-42WC02	●	101	42	57			0.2
13.5		3D13.5-44WC02	●	103	44	59			0.2
14		3D14-45WC02/03	●	104	45	60			0.2
14.5		3D14.5-47WC02/03	●	106	47	62			0.2
15	25	3D15-48WC03	●	107	48	63	56	WC..030208	0.2
15.5		3D15.5-50WC03	●	109	50	65			0.2
16		3D16-51WC03	●	110	51	66			0.2
16.5		3D16.5-53WC03	●	112	53	68			0.2
17		3D17-54WC03	●	113	54	69			0.2
17.5	25	3D17.5-56WC03	●	127	56	71	56	WC..030208	0.3
18		3D18-57WC03	●	128	57	72			0.3
18.5		3D18.5-59WC03	●	130	59	74			0.3
19		3D19-60WC03	●	131	60	75			0.3
19.5		3D19.5-62WC03	●	133	62	77			0.3
20	25	3D20-63WC03	●	134	63	78	56	WC..040208	0.4
20.5		3D20.5-65WC03	●	136	65	80			0.4
21		3D21-66WC04	●	137	66	81			0.4
21.5		3D21.5-68WC04	●	139	68	83			0.4
22		3D22-69WC04	●	140	69	84			0.4
22.5	25	3D22.5-71WC04	●	142	71	86	56	WC..040208	0.4
23		3D23-72WC04	●	146	72	90			0.4
23.5		3D23.5-74WC04	●	148	74	92			0.4
24		3D24-75WC04	●	149	75	93			0.4
24.5		3D24.5-77WC04	●	151	77	95			0.4
25	25	3D25-78WC05	●	152	78	96	56	WC..050308	0.4
25.5		3D25.5-80WC05	●	160	80	100			0.6
26		3D26-81WC05	●	161	81	101			0.6
26.5		3D26.5-83WC05	●	163	83	103			0.7
27		3D27-84WC05	●	164	84	104			0.7
27.5	32	3D27.5-86WC05	●	166	86	106	60	WC..06T308	0.7
28		3D28-87WC05	●	167	87	107			0.7
28.5		3D28.5-89WC05	●	169	89	109			0.7
29		3D29-91WC05	●	172	91	112			0.7
29.5		3D29.5-93WC05	●	174	93	114			0.7
30	32	3D30-94WC05	●	178	94	118	60	WC..06T308	0.7
30.5		3D30.5-96WC05	●	180	96	120			0.8
31		3D31-97WC06	●	181	97	121			0.8
31.5		3D31.5-99W06	●	183	99	123			0.9
32		3D32-100WC06	●	184	100	124			0.9
32.5	32	3D32.5-102WC06	●	186	102	126	60	WC..06T308	0.9
33		3D33-103WC06	●	187	103	127			0.9
33.5		3D33.5-105WC06	●	189	105	129			0.9
34		3D34-106WC06	●	190	106	130			0.9
34.5		3D34.5-108WC06	●	192	108	132			1.0
35	32	3D35-109WC06	●	193	109	133	60	WC..06T308	1.0
35.5		3D35.5-111WC06	●	195	111	135			1.0
36		3D36-112WC06	●	196	112	136			1.0
36.5		3D36.5-114WC06	●	198	114	138			1.1
37		3D37-116WC06	●	206	116	146			1.1
37.5	32	3D37.5-118WC06	●	208	118	148	60	WC..06T308	1.1
38		3D38-119WC06	●	209	119	149			1.1
38.5		3D38.5-121WC06	●	211	121	151			1.1
39		3D39-122WC06	●	212	122	152			1.2
39.5		3D39.5-124WC06	●	214	124	154			1.3
40	40	3D40-125WC06	●	225	125	155	70	WC..080412	1.6
41		3D41-128WC06	●	228	128	158			1.7
42		3D42-131WC08	●	231	131	161			1.7
43		3D43-134WC08	●	234	134	164			1.8
44		3D44-137WC08	●	237	137	167			1.8
45	40	3D45-140WC08	●	240	140	170	70	WC..080412	1.9
46		3D46-143WC08	●	243	143	173			2.0
47		3D47-146WC08	●	246	146	176			2.1
48		3D48-149WC08	●	249	149	179			2.2
49		3D49-152WC08	●	252	152	182			2.2
50	40	3D50-155WC08	●	255	155	185	70	WC..080412	2.3
51		3D51-158WC08	●	258	158	188			2.4
52		3D52-161WC08	●	261	161	191			2.5
53		3D53-164WC08	●	264	164	194			2.6
54		3D54-167WC08	●	267	167	197			2.7
55	40	3D55-170WC08	●	270	170	200	70	WC..080412	2.8
56		3D56-176WC08	●	278	176	208			2.8
57		3D57-179WC08	●	281	179	211			3.0
58		3D58-182WC08	●	284	182	214			3.2
59		3D59-185WC08	●	287	185	217			3.3
60	40	3D60-188WC08	●	290	188	220	70	WC..080412	3.3
61		3D61-191WC06	●	291	191	221			0.4
62		3D62-194WC06	●	296	194	226			0.6
63		3D63-197WC06	●	299	197	229			0.6
64		3D64-200WC06	●	302	200	232			0.7
65	40	3D65-203WC06	●	305	203	235	70	WC..06T308	0.7
66		3D66-206WC06	●	308	206	238			0.7
67		3D67-209WC06	●	311	209	241			0.7
68		3D68-212WC06	●	314	212	244			0.7
69		3D69-215WC06	●	317	215	247			0.7
70	40	3D70-218WC06	●	320	218	250	70	WC..06T308	0.7
71		3D71-221WC06	●	323	221	253			0.7
72		3D72-224WC06	●	326	224	256			0.8
73		3D73-227WC06	●	329	227	259			0.8
74		3D74-230WC06	●	332	230	262			0.9
75	40	3D75-233WC06	●	335	233	265	70	WC..06T308	0.9
76		3D76-236WC06	●	338	236	268			0.9
77		3D77-239WC06	●	341	239	271			0.9
78		3D78-242WC06	●	344	242	274			0.9
79		3D79-245WC06	●	347	245	277			0.9
80	40	3D80-248WC06	●	350	248	280	70	WC..06T308	1.0
80.5		3D80.5-251WC06	●	353	251	283			1.0
81		3D81-254WC06	●	356	254	286			1.0
81.5		3D81.5-257WC06	●	359	257	289			1.0
82		3D82-260WC06	●	362	260	292			1.0

WC-4XD (Φ11.5-80) Indexable drills with WC inserts

Holder diameter 4D:Φ11.5~80.0mm

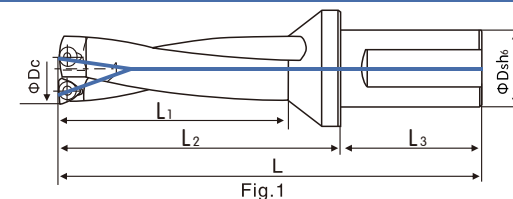


Fig.1

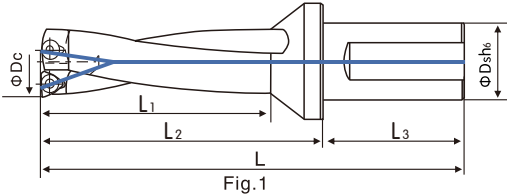
Range of machining tolerance: -0.30~+0.30 Drilling depth: 4xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert		ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert		
11.5	20	4D11.5-47WC02	●	111	47	61	44	WC..020104	0.2	37	32	4D37-153WC06	●	243	153	183	60	WC..06T308	1.2	
12		4D12-50WC02	●	115	50	65			0.2	37.5		4D37.5-155WC06	●	245	155	185			1.2	
12.5		4D12.5-52WC02	●	117	52	67			0.2	38		4D38-157WC06	●	247	157	187			1.3	
13	20	4D13-55WC02	●	114	55	70	44	WC..020104	0.2	38.5	32	4D38.5-159WC06	●	249	159	189	60	WC..06T308	1.3	
13.5		4D13.5-57WC02	●	116	57	72			0.2	39		4D39-161WC06	●	251	161	191			1.8	
14		4D14-59WC02/03	●	118	59	74			0.2	39.5		4D39.5-163WC06	●	253	163	193			1.8	
14.5	20	4D14.5-61WC02/03	●	120	61	76	44	WC..030208	0.2	40	40	4D40-165WC06	●	265	165	195	70	WC..080412	1.8	
15	/	4D15-63WC03	●	122	63	78	/	0.2	41	4D41-169WC06		●	269	169	199	1.9				
15.5	25	4D15.5-65WC03	●	124	65	80	56	0.2	42	4D42-173WC08		●	273	173	203	2.0				
16	25	4D16-67WC03	●	126	67	82	56	WC..030208	0.3	43	40	4D43-177WC08	●	277	177	207	70	WC..080412	2.1	
16.5		4D16.5-69WC03	●	128	69	84			0.3	44		4D44-181WC08	●	281	181	211			2.2	
17		4D17-71WC03	●	130	71	86			0.3	45		4D45-185WC08	●	285	185	215			2.3	
17.5	25	4D17.5-73WC03	●	144	73	88	56	WC..030208	0.3	46	40	4D46-189WC08	●	289	189	219	70	WC..080412	2.4	
18		4D18-75WC03	●	146	75	90			0.4	47		4D47-193WC08	●	293	193	223			2.5	
18.5		4D18.5-77WC03	●	148	77	92			0.4	48		4D48-197WC08	●	297	197	227			2.6	
19	25	4D19-79WC03	●	150	79	94	56	WC..030208	0.4	49	40	4D49-201WC08	●	301	201	231	70	WC..080412	2.7	
19.5		4D19.5-81WC03	●	152	81	96			0.4	50		4D50-205WC08	●	305	205	235			2.8	
20		4D20-83WC03	●	154	83	98			0.4	51		4D51-209WC08	●	309	209	239			2.9	
20.5	25	4D20.5-85WC03	●	156	85	100	56	WC..030208	0.4	52	40	4D52-213WC08	●	313	213	243	70	WC..080412	3.0	
21		4D21-87WC04	●	158	87	102			0.4	53		4D53-217WC08	●	317	217	247			3.1	
21.5		4D21.5-89WC04	●	160	89	104			0.4	54		4D54-221WC08	●	321	221	251			3.2	
22	25	4D22-91WC04	●	162	91	106	56	WC..040208	0.4	55	40	4D55-225WC08	●	325	225	255	70	WC..06T308	3.3	
22.5		4D22.5-93WC04	●	164	93	108			0.4	56		4D56-232WC08	●	334	232	264			3.5	
23		4D23-95WC04	●	169	95	113			0.5	57		4D57-236WC08	●	338	236	268			3.7	
23.5	25	4D23.5-97WC04	●	171	97	115	56	WC..040208	0.5	58	40	4D58-240WC08	●	342	240	272	70	WC..06T308	3.8	
24		4D24-99WC04	●	173	99	117			0.5	59		4D59-244WC08	●	346	244	276			4.0	
24.5		4D24.5-101WC04	●	175	101	119			0.7	60		4D60-248WC08	●	350	248	280			4.1	
25	25	4D25-103WC05	●	177	103	121	56	WC..040208	0.7	61	40	4D61-252WC06	●	354	252	284	70	WC..06T308	4.1	
25.5		4D25.5-105WC05	●	185	105	125			0.7	62		4D62-256WC06	●	358	256	288				
26		4D26-107WC05	●	187	107	127			0.7	63		4D63-260WC06	●	362	260	292				
26.5	32	4D26.5-109WC05	●	189	109	129	60	WC..050308	0.7	64	40	4D64-264WC06	●	366	264	296	70	WC..06T308		
27		4D27-111WC05	●	191	111	131			0.7	65		4D65-268WC06	●	370	268	300				
27.5		4D27.5-113WC05	●	193	113	133			0.7	66		4D66-272WC06	●	374	272	304				
28	32	4D28-115WC05	●	195	115	135	60	WC..050308	0.8	67	40	4D67-276WC06	●	378	276	308	70	WC..06T308		
28.5		4D28.5-117WC05	●	197	117	137			0.8	68		4D68-280WC06	●	382	280	312				
29		4D29-120WC05	●	201	120	141			0.8	69		4D69-284WC06	●	386	284	316				
29.5	32	4D29.5-122WC05	●	203	122	143	60	WC..050308	0.8	70	40	4D70-288WC06	●	390	288	320	70	WC..06T308		
30		4D30-124WC05	●	208	124	148			0.9	71		4D71-292WC06	●	394	292	324				
30.5		4D30.5-126WC05	●	210	126	150			0.9	72		4D72-296WC06	●	398	296	328				
31	32	4D31-128WC06	●	212	128	152	60	WC..06T308	0.9	73	40	4D73-300WC06	●	402	300	332	70	WC..06T308		
31.5		4D31.5-130W06	●	214	130	154			0.9	74		4D74-304WC06	●	406	304	336				
32		4D32-132WC06	●	216	132	156			1.0	75		4D75-308WC06	●	410	308	340				
32.5	32	4D32.5-134WC06	●	218	134	158	60	WC..06T308	1.0	76	40	4D76-312WC06	●	414	312	344	70	WC..06T308		
33		4D33-136WC06	●	220	136	160			1.0	77		4D77-316WC06	●	418	316	348				
33.5		4D33.5-138WC06	●	222	138	162			1.0	78		4D78-320WC06	●	422	320	352				
34	32	4D34-140WC06	●	224	140	164	60	WC..06T308	1.1	79	40	4D79-324WC06	●	426	324	356	70	WC..06T308		
34.5		4D34.5-142WC06	●	226	142	166			1.1	80		4D80-328WC06	●	430	328	360				
35		4D35-144WC06	●	228	144	168			1.1											
35.5	32	4D35.5-146WC06	●	230	146	170	60	WC..06T308	1.1	● Mark:Standard stock item, No mark:Made to order item.										
36		4D36-148WC06	●	232	148	172			1.2											
36.5		4D36.5-150WC06	●	236	150	174			1.2											

WC-5XD (Φ13-70) Indexable drills with WC inserts

Holder diameter 5D:Φ13.0~70.0mm



Range of machining tolerance: -0.30~+0.30 Drilling depth: 5xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
13		5D13-68WC02	●	129	68	85		WC..020104	
13.5		5D13.5-71WC02	●	131	71	87			
14		5D14-73WC03	●	133	73	89			
14.5	20	5D14.5-76WC03	●	135	76	91	44		
15	/	5D15-78WC03	●	137	78	93	/		
15.5	25	5D15.5-81WC03	●	140	81	95	56	WC..030208	
16		5D16-83WC03	●	142	83	98			0.4
16.5		5D16.5-86WC03	●	145	86	101			0.4
17		5D17-88WC03	●	147	88	103			0.4
17.5		5D17.5-91WC03	●	162	91	106			0.4
18		5D18-93WC03	●	164	93	108			0.5
18.5		5D18.5-96WC03	●	167	96	111			0.5
19		5D19-98WC03	●	169	98	113			0.5
19.5		5D19.5-101WC03	●	172	101	116			0.5
20		5D20-103WC03	●	174	103	118			0.5
20.5		5D20.5-106WC03	●	177	106	121		WC..040208	0.5
21	25	5D21-108WC04	●	179	108	123	56		0.5
21.5		5D21.5-111WC04	●	182	111	126			0.5
22		5D22-113WC04	●	184	113	128			0.5
22.5		5D22.5-116WC04	●	187	116	131			0.5
23		5D23-118WC04	●	192	118	136			0.6
23.5		5D23.5-121WC04	●	195	121	139			0.6
24		5D24-123WC04	●	197	123	141			0.6
24.5		5D24.5-126WC04	●	200	126	144			0.8
25		5D25-128WC05	●	202	128	146			0.8
25.5		5D25.5-131WC05	●	213	131	153		WC..050308	0.8
26		5D26-133WC05	●	216	133	156			0.8
26.5		5D26.5-136WC05	●	217	136	157			0.8
27		5D27-138WC05	●	218	138	158			0.8
27.5		5D27.5-141WC05	●	221	141	161			0.8
28		5D28-143WC05	●	223	143	163			0.9
28.5		5D28.5-146WC05	●	226	146	166			0.9
29		5D29-149WC05	●	230	149	170			0.9
29.5		5D29.5-151WC05	●	233	151	173			0.9
30		5D30-154WC05	●	238	154	178			1.0
30.5		5D30.5-157WC05	●	241	157	181		WC..06T308	1.0
31		5D31-159WC06	●	243	159	183			1.0
31.5	32	5D31.5-162W06	●	245	162	185	60		1.0
32		5D32-164WC06	●	248	164	188			1.1
32.5		5D32.5-167WC06	●	251	167	191			1.1
33		5D33-169WC06	●	253	169	193			1.1
33.5		5D33.5-172WC06	●	255	172	195			1.1
34		5D34-174WC06	●	258	174	198			1.2
34.5		5D34.5-177WC06	●	261	177	201			1.2
35		5D35-179WC06	●	263	179	203			1.2
35.5		5D35.5-182WC06	●	265	182	205		WC..06T308	1.2
36		5D36-184WC06	●	268	184	208			1.3
36.5		5D36.5-187WC06	●	271	187	211			1.3
37		5D37-190WC06	●	280	190	220			1.3
37.5		5D37.5-193WC06	●	283	193	223			1.3
38		5D38-195WC06	●	285	195	225			1.4

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
38.5		5D38.5-198WC06	●	288	198	228		WC..06T308	1.4
39	32	5D39-200WC06	●	290	200	230	60		1.9
39.5		5D39.5-203WC06	●	293	203	233			1.9
40		5D40-205WC06	●	305	205	235			1.9
41		5D41-210WC06	○	310	210	240			2.0
42		5D42-215WC08	○	315	215	245		WC..080412	2.1
43		5D43-220WC08	○	320	220	250			2.2
44		5D44-225WC08	○	325	225	255			2.3
45		5D45-230WC08	○	330	230	260			2.4
46		5D46-235WC08	○	335	235	265			2.5
47		5D47-240WC08	○	340	240	270			2.6
48		5D48-245WC08	○	345	245	275			2.7
49		5D49-250WC08	○	350	250	280			2.8
50		5D50-255WC08	○	355	255	285			2.9
51		5D51-260WC08	○	360	260	290			3.0
52		5D52-265WC08	○	365	265	295		WC..080412	3.1
53		5D53-270WC08	○	370	270	300			3.2
54		5D54-275WC08	○	375	275	305			3.3
55	40	5D55-280WC08	○	380	280	310	70		3.4
56		5D56-285WC08	○	385	285	315			3.6
57		5D57-295WC08	○	390	295	320			3.8
58		5D58-300WC08	○	395	300	325			3.9
59		5D59-305WC08	○	400	305	330			4.1
60		5D60-310WC08	○	405	310	335			4.2
61		5D61-315WC08	○	410	315	340			4.3
62		5D62-320WC08	○	415	320	345		WC..080412	4.4
63		5D63-325WC08	○	420	325	350			4.5
64		5D64-330WC08	○	425	330	355			4.6
65		5D65-335WC08	○	430	335	360			4.7
66		5D66-340WC08	○	435	340	365			4.8
67		5D67-345WC08	○	440	345	370			4.9
68		5D68-350WC08	○	445	350	375			5.0
69		5D69-355WC08	○	450	355	380			5.1
70		5D70-360WC08	○	455	360	385			5.2

◎ Spare Parts

type	diameter	Blade model	Screw			Wrench
WC	13-14.5	WC02	M1.8	X	5	T6
	14-14.5	WC03	M2.5	X	5.5	T8
	15-20.5	WC03	M2.5	X	6	T8
	21-24.5	WC04	M2.5	X	6	T8
	25-30.5	WC05	M3	X	7	T8
	31-41.5	WC06	M3.5	X	8.5	T15
	42-62	WC08	M4	X	10	T15
	63-80	WC06	M3.5	X	8.5	T8

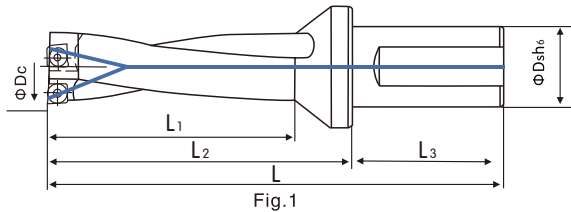
● Mark:Standard stock item,
No mark:Made to order item.



TDR-2 X D (Φ 8.5-40) Indexable drills with SP inserts

Holder diameter 2D:Φ8.5 ~ 40.0mm

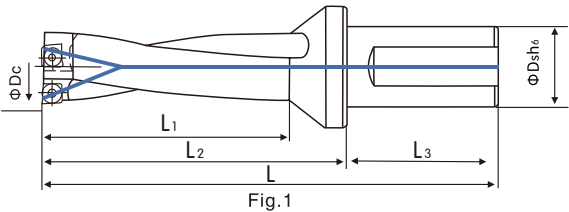
Range of machining tolerance: -0.2 ~ +0.2 Drilling depth: 2xdiameter



TDR-3 X D (Φ 8.5-40) Indexable drills with SP inserts

Holder diameter 3D:Φ8.5 ~ 40.0mm

Range of machining tolerance: -0.2 ~ +0.2 Drilling depth: 3xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
8.5		KSD085-2D-S20-SP03	●	83.5	18	33.5		SP..030202	0.2
9		KSD090-2D-S20-SP03	●	84.5	19	34.5			0.2
9.5		KSD095-2D-S20-SP03	●	85.5	20	35.5			0.2
10		KSD100-2D-S20-SP04	●	85.5	22	35.5		SP..04T102	0.2
10.5	20	KSD105-2D-S20-SP04	●	86.5	22	36.5	44		0.2
11		KSD110-2D-S20-SP04	●	87.5	23	37.5			0.2
11.5		KSD115-2D-S20-SP04	●	88	24	38			0.2
12		KSD120-2D-S20-SP04	●	90	25	40			0.2
12.5		KSD125-2D-S20-SP04	●	93	27	43		SP..050204	0.2
13		KSD130-2D-S20-SP05	●	88	29	44			0.2
13.5		KSD135-2D-S20-SP05	●	89	30	45			0.2
14		KSD140-2D-S20-SP05	●	90	31	46			0.2
14.5	20	KSD145-2D-S20-SP05	●	91	32	47	44		0.2
15	/	KSD150-2D-S20-SP05	●	92	33	48	/		0.2
15.5	25	KSD155-2D-S20-SP05	●	93	34	49	56		0.2
16		KSD160-2D-S20-SP06	●	94	35	50		SP..060204	0.2
16.5		KSD165-2D-S25-SP06	●	95	36	51			0.2
17		KSD170-2D-S25-SP06	●	96	37	52			0.2
17.5		KSD175-2D-S25-SP06	●	109	38	53			0.2
18		KSD180-2D-S25-SP06	●	110	39	54			0.3
18.5		KSD185-2D-S25-SP06	●	111	40	55			0.3
19		KSD190-2D-S25-SP06	●	112	41	56			0.3
19.5		KSD195-2D-S25-SP06	●	113	42	57			0.3
20		KSD200-2D-S25-SP06	●	114	43	58			0.3
20.5		KSD205-2D-S25-SP06	●	115	44	59			0.3
21	25	KSD210-2D-S25-SP06	●	116	45	60	56	SP..07T308	0.3
21.5		KSD215-2D-S25-SP06	●	117	46	61			0.3
22		KSD220-2D-S25-SP07	●	118	47	62			0.4
22.5		KSD225-2D-S25-SP07	●	119	48	63			0.4
23		KSD230-2D-S25-SP07	●	123	49	67			0.4
23.5		KSD235-2D-S25-SP07	●	124	50	68			0.4
24		KSD240-2D-S25-SP07	●	125	51	69			0.4
24.5		KSD245-2D-S25-SP07	●	126	52	70			0.4
25		KSD250-2D-S25-SP07	●	127	53	71			0.4
25.5		KSD255-2D-S32-SP07	●	134	54	74		SP..07T308	0.6
26		KSD260-2D-S32-SP07	●	135	55	75			0.6
26.5		KSD265-2D-S32-SP07	●	136	56	76		SP..090408	0.6
27		KSD270-2D-S32-SP07	●	137	57	77			0.6
27.5		KSD275-2D-S32-SP07	●	138	58	78		SP..07T308	0.6
28	32	KSD280-2D-S32-SP07/09	●	139	59	79	60		0.6
28.5		KSD285-2D-S32-SP07/09	●	140	60	80		SP..090408	0.6
29		KSD290-2D-S32-SP09	●	143	62	83			0.7
29.5		KSD295-2D-S32-SP09	●	144	63	84		SP..090408	0.7
30		KSD300-2D-S32-SP09	●	148	64	88			0.7
30.5		KSD305-2D-S32-SP09	●	149	65	89			0.7
31		KSD310-2D-S32-SP09	●	150	66	90			0.7

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
31.5		KSD315-2D-S32-SP09	●	151	67	91		SP..090408	0.7
32		KSD320-2D-S32-SP09	●	152	68	92			0.8
32.5		KSD325-2D-S32-SP09	●	153	69	93			0.8
33		KSD330-2D-S32-SP09	●	154	70	94		SP..090408	0.8
33.5		KSD335-2D-S32-SP09	●	155	71	95			0.8
34		KSD340-2D-S32-SP09/11	●	156	72	96		SP..110408	0.8
34.5		KSD345-2D-S32-SP09/11	●	157	73	97			0.8
35		KSD350-2D-S32-SP11	●	158	74	98		SP..110408	0.8
35.5	32	KSD355-2D-S32-SP11	●	159	75	99	60		0.8
36		KSD360-2D-S32-SP11	●	160	76	100			0.9
36.5		KSD365-2D-S32-SP11	●	161	77	101			0.9
37		KSD370-2D-S32-SP11	●	169	79	109			0.9
37.5		KSD375-2D-S32-SP11	●	170	80	110			0.9
38		KSD380-2D-S32-SP11	●	171	81	111			0.9
38.5		KSD385-2D-S32-SP11	●	172	82	112			0.9
39		KSD390-2D-S32-SP11	●	173	83	113			1
39.5		KSD395-2D-S32-SP11	●	174	84	114			1.1
40	40	KSD400-2D-S40-SP11	●	185	85	115	70		1.1

◎ Spare Parts

Screw	Wrench	Applicable Drill
M1.8*3.6	T6	KSD085-2D-S20-SP03-KSD095-2D-S20-SP03
M1.8*4	T6	KSD100-2D-S20-SP04-KSD125-2D-S20-SP04
M2*4	T6	KSD130-2D-S20-SP05-KSD145-2D-S20-SP05
M2*5	T7	KSD150-2D-S20-SP05-KSD155-2D-S20-SP05
M2.2*5	T7	KSD160-2D-S20-SP06-KSD215-2D-S25-SP06
M2.5*6	T8	KSD220-2D-S25-SP07-KSD285-2D-S32-SP07
M3.5*8.5	T15	KSD280-2D-S32-SP07-KSD345-2D-S32-SP09
M4*10	T20	KSD340-2D-S32-SP11-KSD400-2D-S40-SP11

● Mark:Standard stock item,
No mark:Made to order item.

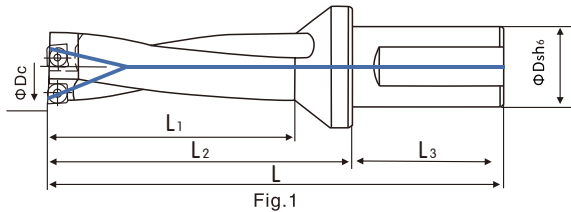
ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
8.5		KSD085-3D-S20-SP03	●	92.5	27	42.5		SP..030202	0.2
9		KSD090-3D-S20-SP03	●	93.5	28	43.5			0.2
9.5		KSD095-3D-S20-SP03	●	94.5	29	44.5			0.2
10		KSD100-3D-S20-SP04	●	97	31	47		SP..04T102	0.2
10.5	20	KSD105-3D-S20-SP04	●	97.5	33	47.5	44		0.2
11		KSD110-3D-S20-SP04	●	98.5	34	48.5			0.2
11.5		KSD115-3D-S20-SP04	●	100	36	50			0.2
12		KSD120-3D-S20-SP04	●	102	37	52			0.2
12.5		KSD125-3D-S20-SP04	●	105	39	55		SP..050204	0.2
13		KSD130-3D-S20-SP05	●	101	42	57			0.2
13.5		KSD135-3D-S20-SP05	●	103	44	59			0.2
14		KSD140-3D-S20-SP05	●	104	45	60			0.2
14.5	20	KSD145-3D-S20-SP05	●	106	47	62	44		0.2
15	/	KSD150-3D-S20-SP05	●	107	48	63	/		0.2
15.5	25	KSD155-3D-S20-SP05	●	109	50	65	56		0.2
16		KSD160-3D-S20-SP06	●	110	51	66		SP..060204	0.2
16.5		KSD165-3D-S25-SP06	●	112	53	68			0.2
17		KSD170-3D-S25-SP06	●	113	54	69			0.2
17.5		KSD175-3D-S25-SP06	●	127	56	71			0.2
18		KSD180-3D-S25-SP06	●	128	57	72			0.3
18.5		KSD185-3D-S25-SP06	●	130	59	74			0.3
19		KSD190-3D-S25-SP06	●	131	60	75			0.3
19.5		KSD195-3D-S25-SP06	●	133	62	77			0.3
20		KSD200-3D-S25-SP06	●	134	63	78			0.3
20.5		KSD205-3D-S25-SP06	●	136	65	80			0.3
21	25	KSD210-3D-S25-SP06	●	137	66	81	56	SP..07T308	0.3
21.5		KSD215-3D-S25-SP06	●	139	68	83			0.3
22		KSD220-3D-S25-SP07	●	140	69	84			0.4
22.5		KSD225-3D-S25-SP07	●	142	71	86			0.4
23		KSD230-3D-S25-SP07	●	146	72	90			0.4
23.5		KSD235-3D-S25-SP07	●	148	74	92			0.4
24		KSD240-3D-S25-SP07	●	149	75	93			0.4
24.5		KSD245-3D-S25-SP07	●	151	77	95			0.4
25		KSD250-3D-S25-SP07	●	152	78	96			0.4
25.5		KSD255-3D-S32-SP07	●	160	80	100		SP..07T308	0.6
26		KSD260-3D-S32-SP07	●	161	81	101			0.6
26.5		KSD265-3D-S32-SP07	●	163	83	103		SP..090408	0.6
27		KSD270-3D-S32-SP07	●	164	84	104			0.6
27.5		KSD275-3D-S32-SP07	●	166	86	106		SP..07T308	0.6
28	32	KSD280-3D-S32-SP07/09	●	167	87	107	60		0.6
28.5		KSD285-3D-S32-SP07/09	●	169	89	109		SP..090408	0.6
29		KSD290-3D-S32-SP09	●	172	91	112			0.7
29.5		KSD295-3D-S32-SP09	●	174	93	114		SP..090408	0.7
30		KSD300-3D-S32-SP09	●	178	94	118			0.7
30.5		KSD305-3D-S32-SP09	●	180	96	120			0.7
31		KSD310-3D-S32-SP09	●	181	97	121			0.7

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	
31.5		KSD315-3D-S32-SP09	●	183	99	123		SP..090408	0.7
32		KSD320-3D-S32-SP09	●	184	100	124			0.8
32.5		KSD325-3D-S32-SP09	●	186	102	126			0.8
33		KSD330-3D-S32-SP09	●	187	103	127			0.8
33.5		KSD335-3D-S32-SP09	●	189	105	129			0.8
34		KSD340-3D-S32-SP09/11	●	190	106	130		SP..090408	0.8
34.5		KSD345-3D-S32-SP09/11	●	192	108	132		SP..110408	0.8
35		KSD350-3D-S32-SP11	●	193	109	133		SP..110408	0.8
35.5	32	KSD355-3D-S32-SP11	●	195	111	135	60		0.8
36		KSD360-3D-S32-SP11	●	196	112	136			0.9
36.5		KSD365-3D-S32-SP11	●	198	114	138			0.9
37		KSD370-3D-S32-SP11	●	206	116	146			0.9
37.5		KSD375-3D-S32-SP11	●	208	118	148			0.9
38		KSD380-3D-S32-SP11	●	209	119	149			0.9
38.5		KSD385-3D-S32-SP11	●	211	121	151			0.9
39		KSD390-3D-S32-SP11	●	212	122	152			1.0
39.5		KSD395-3D-S32-SP11	●	214	124	154			1.1
40	40	KSD400-3D-S40-SP11	●	225	125	155	70	1.1	

TDR-4 X D (Φ 11.5-40) Indexable drills with SP inserts

Holder diameter 4D:Φ11.5 ~ 40.0mm

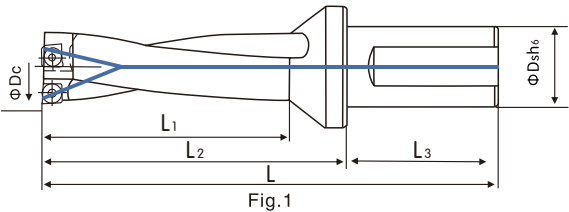
Range of machining tolerance: -0.2~+0.2 Drilling depth: 4xdiameter



TDR-5 X D (Φ 15.5-40) Indexable drills with SP inserts

Holder diameter 5D:Φ15.5 ~ 40.0mm

Range of machining tolerance: -0.2~+0.2 Drilling depth: 5xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
11.5		KSD115-4D-S20-SP04	●	111	47	61		SP..04T102	0.2
12	20	KSD120-4D-S20-SP04	●	115	50	65	44		0.2
12.5		KSD125-4D-S20-SP04	●	117	52	67			0.2
13		KSD130-4D-S20-SP05	●	114	55	70		SP..050204	0.2
13.5		KSD135-4D-S20-SP05	●	116	57	72			0.2
14		KSD140-4D-S20-SP05	●	118	59	74			0.2
14.5	20	KSD145-4D-S20-SP05	●	120	61	76	44		0.2
15	/	KSD150-4D-S20-SP05	●	122	63	78	/		0.2
15.5	25	KSD155-4D-S20-SP05	●	124	65	80	56	SP..060204	0.2
16		KSD160-4D-S20-SP06	●	126	67	82			0.2
16.5		KSD165-4D-S25-SP06	●	128	69	84			0.2
17		KSD170-4D-S25-SP06	●	130	71	86			0.2
17.5		KSD175-4D-S25-SP06	●	144	73	88			0.2
18		KSD180-4D-S25-SP06	●	146	75	90			0.3
18.5		KSD185-4D-S25-SP06	●	148	77	92			0.3
19		KSD190-4D-S25-SP06	●	150	79	94			0.3
19.5		KSD195-4D-S25-SP06	●	152	81	96			0.3
20		KSD200-4D-S25-SP06	●	154	83	98			0.3
20.5		KSD205-4D-S25-SP06	●	156	85	100		SP..07T308	0.3
21		KSD210-4D-S25-SP06	●	158	87	102			0.3
21.5	25	KSD215-4D-S25-SP06	●	160	89	104	56		0.3
22		KSD220-4D-S25-SP07	●	162	91	106			0.4
22.5		KSD225-4D-S25-SP07	●	164	93	108			0.4
23		KSD230-4D-S25-SP07	●	169	95	113			0.4
23.5		KSD235-4D-S25-SP07	●	171	97	115			0.4
24		KSD240-4D-S25-SP07	●	173	99	117			0.4
24.5		KSD245-4D-S25-SP07	●	175	101	119			0.4
25		KSD250-4D-S25-SP07	●	177	103	121			0.4
25.5		KSD255-4D-S32-SP07	●	185	105	125		SP..07T308 SP..090408	0.6
26		KSD260-4D-S32-SP07	●	187	107	127			0.6
26.5		KSD265-4D-S32-SP07	●	189	109	129			0.6
27		KSD270-4D-S32-SP07	●	191	111	131			0.6
27.5		KSD275-4D-S32-SP07	●	193	113	133			0.6
28		KSD280-4D-S32-SP07/09	●	195	115	135			0.6
28.5		KSD285-4D-S32-SP07/09	●	197	117	137			0.6
29		KSD290-4D-S32-SP09	●	201	120	141			0.7
29.5		KSD295-4D-S32-SP09	●	203	122	143			0.7
30	32	KSD300-4D-S32-SP09	●	208	124	148	60		0.7
30.5		KSD305-4D-S32-SP09	●	210	126	150		SP..090408	0.7
31		KSD310-4D-S32-SP09	●	212	128	152			0.7
31.5		KSD315-4D-S32-SP09	●	214	130	154			0.7
32		KSD320-4D-S32-SP09	●	216	132	156			0.8
32.5		KSD325-4D-S32-SP09	●	218	134	158			0.8
33		KSD330-4D-S32-SP09	●	220	136	160			0.8
33.5		KSD335-4D-S32-SP09	●	222	138	162			0.8

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
34		KSD340-4D-S32-SP09/11	●	224	140	164		SP..090408	0.8
34.5		KSD345-4D-S32-SP09/11	●	226	142	166		SP..110408	0.8
35		KSD350-4D-S32-SP11	●	228	144	168		SP..110408	0.8
35.5		KSD355-4D-S32-SP11	●	230	146	170			0.8
36		KSD360-4D-S32-SP11	●	232	148	172			0.9
36.5	32	KSD365-4D-S32-SP11	●	236	150	174	60		0.9
37		KSD370-4D-S32-SP11	●	243	153	183			0.9
37.5		KSD375-4D-S32-SP11	●	245	155	185			0.9
38		KSD380-4D-S32-SP11	●	247	157	187			0.9
38.5		KSD385-4D-S32-SP11	●	249	159	189			0.9
39		KSD390-4D-S32-SP11	●	251	161	191			1.0
39.5		KSD395-4D-S32-SP11	●	253	163	193			1.1
40	40	KSD400-4D-S40-SP11	●	265	165	195	70		1.1

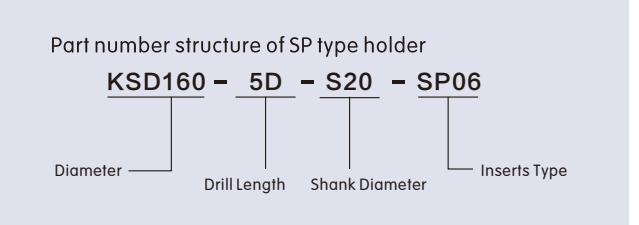
◎ Spare Parts

Screw	Wrench	Applicable Drill
M1.8*4	T6	
M2*4	T6	
M2*5	T7	
M2.2*5	T7	
M2.5*6	T8	KSD115-4D-S20-SP04-KSD125-4D-S20-SP04
M3.5*8.5	T15	
M4*10	T20	

● Mark:Standard stock item,
No mark:Made to order item.

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
15.5		KSD155-5D-S20-SP05	●	140	80	95		SP..04T102	0.3
16	20	KSD160-5D-S20-SP06	●	142	83	98	44	SP..060204	0.4
16.5	/	KSD165-5D-S25-SP06	●	145	86	101	/		0.4
17	25	KSD170-5D-S25-SP06	●	147	88	103	56		0.4
17.5		KSD175-5D-S25-SP06	●	162	91	106			0.4
18		KSD180-5D-S25-SP06	●	164	93	108			0.5
18.5		KSD185-5D-S25-SP06	●	167	96	111		SP..060204	0.5
19		KSD190-5D-S25-SP06	●	169	98	113			0.5
19.5		KSD195-5D-S25-SP06	●	172	101	116			0.5
20		KSD200-5D-S25-SP06	●	174	103	118			0.5
20.5		KSD205-5D-S25-SP06	●	177	106	121			0.5
21		KSD210-5D-S25-SP06	●	179	108	123			0.5
21.5	25	KSD215-5D-S25-SP06	●	182	111	126	56		0.5
22		KSD220-5D-S25-SP07	●	184	113	128			0.5
22.5		KSD225-5D-S25-SP07	●	187	116	131			0.5
23		KSD230-5D-S25-SP07	●	192	118	136			0.6
23.5		KSD235-5D-S25-SP07	●	195	121	139		SP..07T308	0.6
24		KSD240-5D-S25-SP07	●	197	123	141			0.6
24.5		KSD245-5D-S25-SP07	●	200	126	144			0.8
25		KSD250-5D-S25-SP07	●	202	128	146			0.8
25.5		KSD255-5D-S32-SP07	●	213	131	153			0.8
26		KSD260-5D-S32-SP07	●	216	133	156		SP..07T308 SP..090408	0.8
26.5		KSD265-5D-S32-SP07	●	217	136	157			0.8
27		KSD270-5D-S32-SP07	●	218	138	158		SP..090408	0.8
27.5		KSD275-5D-S32-SP07	●	221	141	161			0.8
28		KSD280-5D-S32-SP07/09	●	223	143	163			0.9
28.5		KSD285-5D-S32-SP07/09	●	226	146	166			0.9
29		KSD290-5D-S32-SP09	●	230	149	170			0.9
29.5		KSD295-5D-S32-SP09	●	233	151	173			0.9
30		KSD300-5D-S32-SP09	●	238	154	178			1
30.5		KSD305-5D-S32-SP09	●	241	157	181			1
31		KSD310-5D-S32-SP09	●	243	159	183			1
31.5	32	KSD315-5D-S32-SP09	●	245	162	185	60		1.1
32		KSD320-5D-S32-SP09	●	248	164	188		SP..090408 SP..110408	1.1
32.5		KSD325-5D-S32-SP09	●	251	167	191			1.1
33		KSD330-5D-S32-SP09	●	253	169	193			1.1
33.5		KSD335-5D-S32-SP09	●	255	172	195			1.1
34		KSD340-5D-S32-SP09/11	●	258	174	198			1.2
34.5		KSD345-5D-S32-SP09/11	●	261	177	201			1.2
35		KSD350-5D-S32-SP11	●	263	179	203			1.2
35.5		KSD355-5D-S32-SP11	●	265	182	205			1.2
36		KSD360-5D-S32-SP11	●	268	184	208			1.3
36.5		KSD365-5D-S32-SP11	●	271	187	211			1.3
37		KSD370-5D-S32-SP11	●	280	190	220		SP..110408	1.3
37.5		KSD375-5D-S32-SP11	●	283	193	223			1.3

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
38		KSD380-5D-S32-SP11	●	285	195	225		SP..110408	1.4
38.5	32	KSD385-5D-S32-SP11	●	288	198	228	60		1.4
39		KSD390-5D-S32-SP11	●	290	200	230			1.9
39.5		KSD395-5D-S32-SP11	●	293	203	233			1.9
40	40	KSD400-5D-S40-SP11	●	305	205	235	70		1.9



◎ Spare Parts

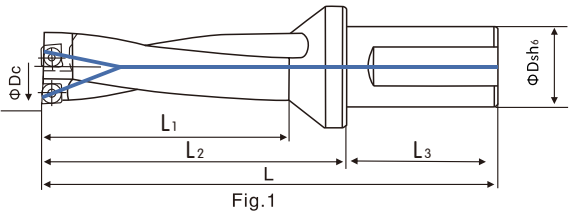
Screw	Wrench	Applicable Drill
M2*5	T7	
M2.2*5	T7	
M2.5*6	T8	
M3.5*8.5	T15	
M4*10	T20	KSD155-4D-S20-SP05-KSD155-4D-S20-SP05
		KSD160-4D-S20-SP06-KSD215-4D-S25-SP06
		KSD220-4D-S25-SP07-KSD285-4D-S32-SP07
		KSD280-4D-S32-SP07-KSD345-4D-S32-SP09
		KSD340-4D-S32-SP11-KSD400-4D-S40-SP11

● Mark:Standard stock item,
No mark:Made to order item.

TOP-2 X D (Φ 13-40) Indexable drills with **SOMT** inserts

Holder diameter 2D: φ 13.0 ~ 40.0mm

Range of machining tolerance: -0.2~+0.2 Drilling depth: 2xdiameter



▲ H13/SKD61

ΦDc	ΦDs	Specification/Item	Store	L	φ ₁	φ ₂	φ ₃	Applicable Insert	kg
13		KOD130-2D-S20/25-S005	●	88	29	44		SOMT050204	0.2
13.5		KOD135-2D-S20/25-S005	●	89	30	45			0.2
14		KOD140-2D-S20/25-S005	●	90	31	46			0.2
14.5	20	KOD145-2D-S20/25-S005	●	91	32	47	44		0.2
15	/	KOD150-2D-S20/25-S005	●	92	33	48	/		0.2
15.5	25	KOD155-2D-S20/25-S005	●	93	34	49	56		0.2
16		KOD160-2D-S20/25-S005	●	94	35	50			0.2
16.5		KOD165-2D-S20/25-S006	●	95	36	51			0.2
17		KOD170-2D-S20/25-S006	●	96	37	52			0.2
17.5		KOD175-2D-S25-S006	●	109	38	53		SOMT060204	0.2
18		KOD180-2D-S25-S006	●	110	39	54			0.3
18.5		KOD185-2D-S25-S006	●	111	40	55			0.3
19		KOD190-2D-S25-S006	●	112	41	56			0.3
19.5		KOD195-2D-S25-S007	●	113	42	57		SOMT070306	0.3
20		KOD200-2D-S25-S007	●	114	43	58			0.3
20.5		KOD205-2D-S25-S007	●	115	44	59			0.3
21		KOD210-2D-S25-S007	●	116	45	60			0.3
21.5	25	KOD215-2D-S25-S007	●	117	46	61	56		0.3
22		KOD220-2D-S25-S007	●	118	47	62			0.4
22.5		KOD225-2D-S25-S008	●	119	48	63		SOMT08T306	0.4
23		KOD230-2D-S25-S008	●	123	49	67			0.4
23.5		KOD235-2D-S25-S008	●	124	50	68			0.4
24		KOD240-2D-S25-S008	●	125	51	69			0.4
24.5		KOD245-2D-S25-S008	●	126	52	70			0.4
25		KOD250-2D-S25-S008	●	127	53	71			0.4
25.5		KOD255-2D-S32-S008	●	134	54	74		SOMT09T308	0.6
26		KOD260-2D-S32-S008	●	135	55	75			0.6
26.5		KOD265-2D-S32-S009	●	136	56	76			0.6
27		KOD270-2D-S32-S009	●	137	57	77			0.6
27.5		KOD275-2D-S32-S009	●	138	58	78			0.6
28		KOD280-2D-S32-S009	●	139	59	79			0.6
28.5		KOD285-2D-S32-S009	●	140	60	80			0.6
29		KOD290-2D-S32-S009	●	143	62	83			0.7
29.5		KOD295-2D-S32-S009	●	144	63	84			0.7
30		KOD300-2D-S32-S009	●	148	64	88			0.7
30.5	32	KOD305-2D-S32-S009	●	149	65	89	60	SOMT11T308	0.7
31		KOD310-2D-S32-S009	●	150	66	90			0.7
31.5		KOD315-2D-S32-S009	●	151	67	91			0.7
32		KOD320-2D-S32-S011	●	152	68	92			0.7
32.5		KOD325-2D-S32-S011	●	153	69	93			0.8
33		KOD330-2D-S32-S011	●	154	70	94			0.8
33.5		KOD335-2D-S32-S011	●	155	71	95			0.8
34		KOD340-2D-S32-S011	●	156	72	96			0.8
34.5		KOD345-2D-S32-S011	●	157	73	97			0.8
35		KOD350-2D-S32-S011	●	158	74	98			0.8
35.5		KOD355-2D-S32-S011	●	159	75	99			0.8

ΦDc	ΦDs	Specification/Item	Store	L	φ ₁	φ ₂	φ ₃	Applicable Insert	kg
36		KOD360-2D-S32-S011	●	160	76	100		SOMT11T308	0.9
36.5		KOD365-2D-S32-S011	○	161	77	101			0.9
37		KOD370-2D-S32-S013	○	169	79	109		SOMT130408	0.9
37.5	32	KOD375-2D-S32-S013	○	170	80	110	60		0.9
38		KOD380-2D-S32-S013	○	171	81	111			0.9
38.5		KOD385-2D-S32-S013	○	172	82	112			0.9
39		KOD390-2D-S32-S013	○	173	83	113			1.0
39.5		KOD395-2D-S32-S013	○	174	84	114			1.1
40	40	KOD400-2D-S40-S013	○	185	85	115	70		1.1

Part number structure of SO type holder

KOD160 - 2D - S20 - SOMT05

Diameter

Drill Length

Shank Diameter

Inserts Type

◎ Spare Parts

Screw	Wrench	Applicable Drill
M2*5	T6	KOD130-2D-S20-S005-KOD160-2D-S20-S005
M2.2*5	T7	KOD165-2D-S20-S006-KOD190-2D-S25-S006
M2.2*5	T7	KOD195-2D-S25-S007-KOD220-2D-S25-S007
M2.5*6	T7	KOD225-2D-S25-S008-KOD260-2D-S32-S008
M3.5*8.5	T7	KOD265-2D-S32-S009-KOD315-2D-S32-S009
M3.5*8.5	T8	KOD320-2D-S32-S011-KOD365-2D-S32-S011
M4*10	T15	KOD370-2D-S32-S013-KOD400-2D-S40-S013

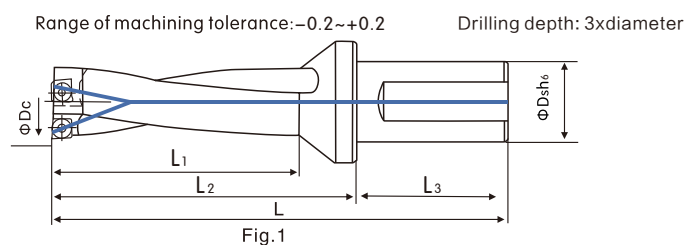
● Mark:Standard stock item,
No mark:Made to order item.

TOP-3 X D (Φ 13-40) Indexable drills with **SOMT** inserts

Holder diameter 3D: φ 13.0 ~ 40.0mm

TOP-4 X D (Φ 13-40) Indexable drills with **SOMT** inserts

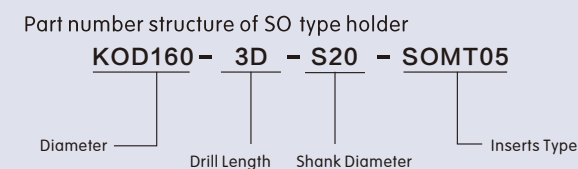
Holder diameter 4D: φ 13.0 ~ 40.0mm



▲ H13/SKD61

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
13		KOD130-3D-S20/25-SO05	●	101	42	57		SOMT050204	0.2
13.5		KOD135-3D-S20/25-SO05	●	103	44	59			0.2
14		KOD140-3D-S20/25-SO05	●	104	45	60			0.2
14.5	20	KOD145-3D-S20/25-SO05	●	106	47	62	44		0.2
15	/	KOD150-3D-S20/25-SO05	●	107	48	63	/		0.2
15.5	25	KOD155-3D-S20/25-SO05	●	109	50	65	56		0.2
16		KOD160-3D-S20/25-SO05	●	110	51	66			0.2
16.5		KOD165-3D-S20/25-SO06	●	112	53	68			0.2
17		KOD170-3D-S20/25-SO06	●	113	54	69			0.2
17.5		KOD175-3D-S25-SO06	●	127	56	71		SOMT060204	0.2
18		KOD180-3D-S25-SO06	●	128	57	72			0.3
18.5		KOD185-3D-S25-SO06	●	130	59	74			0.3
19		KOD190-3D-S25-SO06	●	131	60	75			0.3
19.5		KOD195-3D-S25-SO07	●	133	62	77		SOMT070306	0.3
20		KOD200-3D-S25-SO07	●	134	63	78			0.3
20.5		KOD205-3D-S25-SO07	●	136	65	80			0.3
21		KOD210-3D-S25-SO07	●	137	66	81			0.3
21.5	25	KOD215-3D-S25-SO07	●	139	68	83	56	SOMT08T306	0.3
22		KOD220-3D-S25-SO07	●	140	69	84			0.4
22.5		KOD225-3D-S25-SO08	●	142	71	86			0.4
23		KOD230-3D-S25-SO08	●	146	72	90			0.4
23.5		KOD235-3D-S25-SO08	●	148	74	92		SOMT09T308	0.4
24		KOD240-3D-S25-SO08	●	149	75	93			0.4
24.5		KOD245-3D-S25-SO08	●	151	77	95			0.4
25		KOD250-3D-S25-SO08	●	152	78	96			0.4
25.5		KOD255-3D-S32-SO08	●	160	80	100		SOMT11T308	0.6
26		KOD260-3D-S32-SO08	●	161	81	101			0.6
26.5		KOD265-3D-S32-SO09	●	163	83	103			0.6
27		KOD270-3D-S32-SO09	●	164	84	104			0.6
27.5		KOD275-3D-S32-SO09	●	166	86	106			0.6
28		KOD280-3D-S32-SO09	●	167	87	107			0.6
28.5		KOD285-3D-S32-SO09	●	169	89	109			0.6
29		KOD290-3D-S32-SO09	●	172	91	112			0.7
29.5		KOD295-3D-S32-SO09	●	174	93	114			0.7
30		KOD300-3D-S32-SO09	●	178	94	118			0.7
30.5	32	KOD305-3D-S32-SO09	●	180	96	120	60	SOMT11T308	0.7
31		KOD310-3D-S32-SO09	●	181	97	121			0.7
31.5		KOD315-3D-S32-SO09	●	183	99	123			0.7
32		KOD320-3D-S32-SO11	●	184	100	124			0.8
32.5		KOD325-3D-S32-SO11	●	186	102	126			0.8
33		KOD330-3D-S32-SO11	●	187	103	127			0.8
33.5		KOD335-3D-S32-SO11	●	189	105	129			0.8
34		KOD340-3D-S32-SO11	●	190	106	130			0.8
34.5		KOD345-3D-S32-SO11	●	192	108	132			0.8
35		KOD350-3D-S32-SO11	●	193	109	133			0.8
35.5		KOD355-3D-S32-SO11	●	195	111	135			0.8

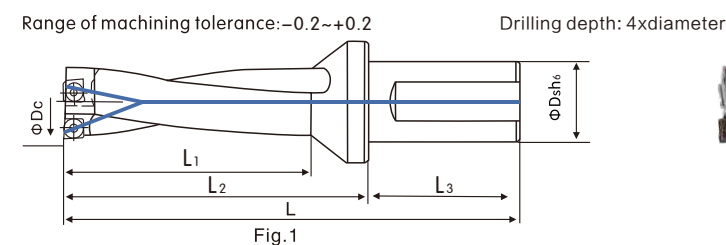
ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
36		3D36-112SOMT11	●	196	112	136		SOMT11T308	0.9
36.5		3D36.5-114SOMT11	○	198	114	138			0.9
37		3D37-136SOMT13	○	206	116	146		SOMT130408	0.9
37.5	32	3D37.5-181SOMT13	○	208	118	148	60		0.9
38		3D38-139SOMT13	○	209	119	149			0.9
38.5		3D38.5-121SOMT13	○	211	121	151			0.9
39		3D39-122SOMT13	○	212	122	152			1.0
39.5		3D39.5-124SOMT13	○	214	124	154			1.1
40	40	3D40-125SOMT13	○	225	125	155	70		1.1



Spare Parts

Screw	Wrench	Applicable Drill
M2*5	T6	KOD130-3D-S20-SO05-KOD160-3D-S20-SO05
M2.2*5	T7	KOD165-3D-S20-SO06-KOD190-3D-S25-SO06
M2.2*5	T7	KOD195-3D-S25-SO07-KOD220-3D-S25-SO07
M2.5*6	T7	KOD225-3D-S25-SO08-KOD260-3D-S32-SO08
M3.5*8.5	T7	KOD265-3D-S32-SO09-KOD315-3D-S32-SO09
M3.5*8.5	T8	KOD320-3D-S32-SO11-KOD365-3D-S32-SO11
M4*10	T15	KOD370-3D-S32-SO13-KOD400-3D-S40-SO13

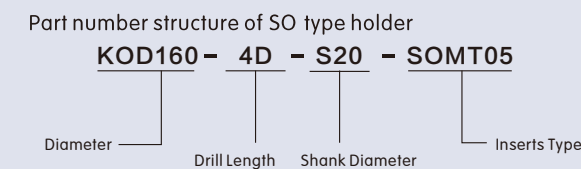
● Mark: Standard stock item,
No mark: Made to order item.



▲ H13/SKD61

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
13		KOD130-4D-S20/25-SO05	●	114	55	70		SOMT050204	0.2
13.5		KOD135-4D-S20/25-SO05	●	116	57	72			0.2
14		KOD140-4D-S20/25-SO05	●	118	59	74			0.2
14.5	20	KOD145-4D-S20/25-SO05	●	120	61	76	44		0.2
15	/	KOD150-4D-S20/25-SO05	●	122	63	78	/		0.2
15.5	25	KOD155-4D-S20/25-SO05	●	124	65	80	56		0.2
16		KOD160-4D-S20/25-SO05	●	126	67	82			0.2
16.5		KOD165-4D-S20/25-SO06	●	128	69	84			0.2
17		KOD170-4D-S20/25-SO06	●	130	71	86			0.2
17.5		KOD175-4D-S25-SO06	●	144	73	88		SOMT060204	0.2
18		KOD180-4D-S25-SO06	●	146	75	90			0.3
18.5		KOD185-4D-S25-SO06	●	148	77	92			0.3
19		KOD190-4D-S25-SO06	●	150	79	94			0.3
19.5		KOD195-4D-S25-SO07	●	152	81	96		SOMT070306	0.3
20		KOD200-4D-S25-SO07	●	154	83	98			0.3
20.5		KOD205-4D-S25-SO07	●	156	85	100			0.3
21		KOD210-4D-S25-SO07	●	158	87	102			0.3
21.5	25	KOD215-4D-S25-SO07	●	160	89	104	56	SOMT08T306	0.3
22		KOD220-4D-S25-SO07	●	162	91	106			0.4
22.5		KOD225-4D-S25-SO08	●	164	93	108			0.4
23		KOD230-4D-S25-SO08	●	169	95	113			0.4
23.5		KOD235-4D-S25-SO08	●	171	97	115		SOMT09T308	0.4
24		KOD240-4D-S25-SO08	●	173	99	117			0.4
24.5		KOD245-4D-S25-SO08	●	175	101	119			0.4
25		KOD250-4D-S25-SO08	●	177	103	121			0.4
25.5		KOD255-4D-S32-SO08	●	185	105	125		SOMT11T308	0.6
26		KOD260-4D-S32-SO08	●	187	107	127			0.6
26.5		KOD265-4D-S32-SO09	●	189	109	129			0.6
27		KOD270-4D-S32-SO09	●	191	111	131			0.6
27.5		KOD275-4D-S32-SO09	●	193	113	133			0.6
28		KOD280-4D-S32-SO09	●	195	115	135			0.6
28.5		KOD285-4D-S32-SO09	●	197	117	137			0.6
29		KOD290-4D-S32-SO09	●	201	120	141			0.7
29.5		KOD295-4D-S32-SO09	●	203	122	143			0.7
30		KOD300-4D-S32-SO09	●	208	124	148			0.7
30.5	32	KOD305-4D-S32-SO09	●	210	126	150	60	SOMT11T308	0.7
31		KOD310-4D-S32-SO09	●	212	128	152			0.7
31.5		KOD315-4D-S32-SO09	●	214	130	154			0.7
32		KOD320-4D-S32-SO11	●	216	132	156			0.8
32.5		KOD325-4D-S32-SO11	●	218	134	158			0.8
33		KOD330-4D-S32-SO11	●	220	136	160			0.8
33.5		KOD335-4D-S32-SO11	●	222	138	162			0.8
34		KOD340-4D-S32-SO11	●	224	140	164			0.8
34.5		KOD345-4D-S32-SO11	●	226	142	166			0.8
35		KOD350-4D-S32-SO11	●	228	144	168			0.8
35.5		KOD355-4D-S32-SO11	●	230	146	170			0.8

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
36		KOD360-4D-S32-SO11	●	232	148	172		SOMT11T308	0.9
36.5		KOD365-4D-S32-SO11	○	234	150	174			0.9
37		KOD370-4D-S32-SO13	○	243	153	183		SOMT130408	0.9
37.5	32	KOD375-4D-S32-SO13	○	245	155	185	60		0.9
38		KOD380-4D-S32-SO13	○	247	157	187			0.9
38.5		KOD385-4D-S32-SO13	○	249	159	189			0.9
39		KOD390-4D-S32-SO13	○	251	161	191			1.0
39.5		KOD395-4D-S32-SO13	○	253	163	193			1.1
40	40	KOD400-4D-S40-SO13	○	265	165	195	70		1.1



Spare Parts

Screw	Wrench	Applicable Drill
M2*5	T6	KOD130-4D-S20-SO05-KOD160-4D-S20-SO05
M2.2*5	T7	KOD165-4D-S20-SO06-KOD190-4D-S25-SO06
M2.2*5	T7	KOD195-4D-S25-SO07-KOD220-4D-S25-SO07
M2.5*6	T7	KOD225-4D-S25-SO08-KOD260-4D-S32-SO08
M3.5*8.5	T7	KOD265-4D-S32-SO09-KOD315-4D-S32-SO09
M3.5*8.5	T8	KOD320-4D-S32-SO11-KOD365-4D-S32-SO11
M4*10	T15	KOD370-4D-S32-SO13-KOD400-4D-S40-SO13

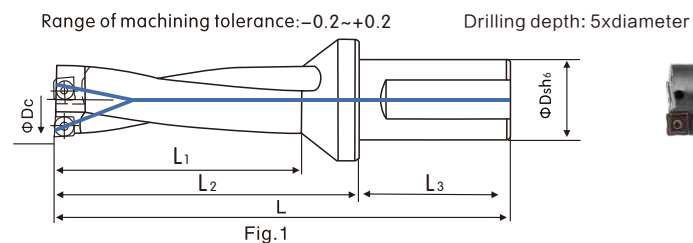
● Mark: Standard stock item,
No mark: Made to order item.

TOP-5 X D (Φ 16-40) Indexable drills with **SOMT** inserts

Holder diameter 5D: φ 16.0 ~ 40.0mm

WC-2 X D (Φ 13-40) Indexable drills with **WC** inserts

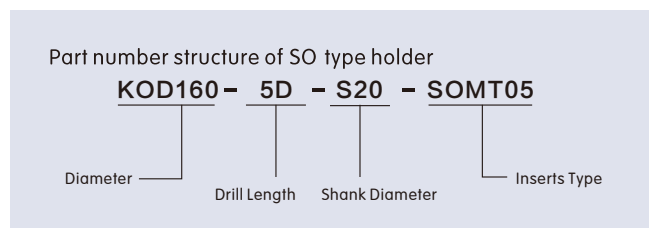
Holder diameter 2D: Φ 13.0 ~ 40.0mm



▲ H13/SKD61

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
16	20	KOD160-5D-S20-25-SO05	●	142	83	98	44	SOMT050204	0.4
16.5	/	KOD165-5D-S20/25-SO06	●	145	86	101	/		0.4
17	25	KOD170-5D-S20/25-SO06	●	147	88	103	56		0.4
17.5	25	KOD175-5D-S25-SO06	●	162	91	106	56	SOMT060204	0.4
18		KOD180-5D-S25-SO06	●	164	93	108			0.5
18.5		KOD185-5D-S25-SO06	●	167	96	111			0.5
19		KOD190-5D-S25-SO06	●	169	98	113			0.5
19.5		KOD195-5D-S25-SO07	●	172	101	116			0.5
20		KOD200-5D-S25-SO07	●	174	103	118		SOMT070306	0.5
20.5		KOD205-5D-S25-SO07	●	177	106	121			0.5
21		KOD210-5D-S25-SO07	●	179	108	123			0.5
21.5		KOD215-5D-S25-SO07	●	182	111	126			0.5
22		KOD220-5D-S25-SO07	●	184	113	128			0.5
22.5	25	KOD225-5D-S25-SO08	●	187	116	131	56	SOMT08T306	0.5
23		KOD230-5D-S25-SO08	●	192	118	136			0.6
23.5		KOD235-5D-S25-SO08	●	195	121	139			0.6
24		KOD240-5D-S25-SO08	●	197	123	141			0.6
24.5		KOD245-5D-S25-SO08	●	200	126	144			0.8
25		KOD250-5D-S25-SO08	●	202	128	146		SOMT09T308	0.8
25.5		KOD255-5D-S32-SO08	●	213	131	153			0.8
26		KOD260-5D-S32-SO08	●	216	133	156			0.8
26.5		KOD265-5D-S32-SO09	●	217	136	157			0.8
27		KOD270-5D-S32-SO09	●	218	138	158			0.8
27.5		KOD275-5D-S32-SO09	●	221	141	161			0.8
28		KOD280-5D-S32-SO09	●	223	143	163			0.9
28.5		KOD285-5D-S32-SO09	●	226	146	166			0.9
29		KOD290-5D-S32-SO09	●	230	149	170			0.9
29.5		KOD295-5D-S32-SO09	●	233	151	173			0.9
30	32	KOD300-5D-S32-SO09	●	238	154	178	60	SOMT11T308	1.0
30.5		KOD305-5D-S32-SO09	●	241	157	181			1.0
31		KOD310-5D-S32-SO09	●	243	159	183			1.0
31.5		KOD315-5D-S32-SO09	●	245	162	185			1.0
32		KOD320-5D-S32-SO11	●	248	164	188		SOMT130408	1.1
32.5		KOD325-5D-S32-SO11	●	251	167	191			1.1
33		KOD330-5D-S32-SO11	●	253	169	193			1.1
33.5		KOD335-5D-S32-SO11	●	255	172	195			1.1
34		KOD340-5D-S32-SO11	●	258	174	198			1.2
34.5		KOD345-5D-S32-SO11	●	261	177	201			1.2
35	32	KOD350-5D-S32-SO11	●	263	179	203	60	SOMT11T308	1.2
35.5		KOD355-5D-S32-SO11	●	265	182	205			1.2
36		KOD360-5D-S32-SO11	○	268	184	208			1.3
36.5		KOD365-5D-S32-SO11	○	271	187	211			1.3
37		KOD370-5D-S32-SO13	○	280	190	220		SOMT130408	1.3
37.5		KOD375-5D-S32-SO13	○	283	193	223			1.3
38		KOD380-5D-S32-SO13	○	285	195	225			1.4
38.5		KOD385-5D-S32-SO13	○	288	198	228			1.4

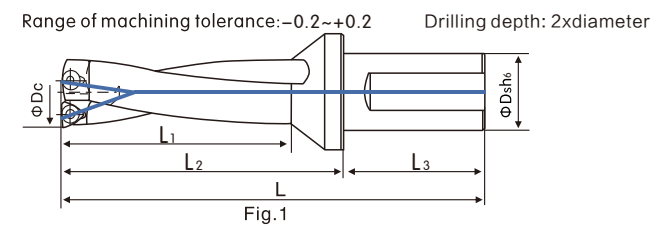
ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
39	32	KOD390-5D-S32-SO13	○	290	200	230	60	SOMT130408	1.9
39.5		KOD395-5D-S32-SO13	○	293	203	233			1.9
40	40	KOD400-5D-S40-SO13	○	305	205	235	70		1.9



Spare Parts

Screw	Wrench	Applicable Drill
		
M2*5	T6	KOD160-5D-S20-SO05
M2.2*5	T7	KOD165-5D-S20-SO06-KOD190-5D-S25-SO06
M2.2*5	T7	KOD195-5D-S25-SO07-KOD220-5D-S25-SO07
M2.5*6	T7	KOD225-5D-S25-SO08-KOD260-5D-S32-SO08
M3.5*8.5	T7	KOD265-5D-S32-SO09-KOD315-5D-S32-SO09
M3.5*8.5	T8	KOD320-5D-S32-SO11-KOD365-5D-S32-SO11
M4*10	T15	KOD370-5D-S32-SO13-KOD400-5D-S40-SO13

● Mark: Standard stock item,
No mark: Made to order item.



▲ H13/SKD61

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert		
13	20	KCD130-2D-S20/S25-WC02	●	88	29	44	44	WC..020104	0.2	
13.5		KCD135-2D-S20/S25-WC02	●	89	30	45			0.2	
14		KCD140-2D-S20/S25-WC03	●	90	31	46		WC..030208	0.2	
14.5		KCD145-2D-S20/S25-WC03	●	91	32	47			0.2	
15		/	KCD150-2D-S20/S25-WC03	●	92	33		48	56	0.2
15.5		25	KCD155-2D-S20/S25-WC03	●	93	34		49		0.2
16		KCD160-2D-S20/S25-WC03	●	94	35	50		0.2		
16.5		KCD165-2D-S20/S25-WC03	●	95	36	51		0.2		
17		KCD170-2D-S20/S25-WC03	●	96	37	52		0.2		
17.5		KCD175-2D-S25-WC03	●	109	38	53		56		WC..030208
18	KCD180-2D-S25-WC03	●	110	39	54	0.3				
18.5	KCD185-2D-S25-WC03	●	111	40	55	0.3				
19	KCD190-2D-S25-WC03	●	112	41	56	0.3				
19.5	KCD195-2D-S25-WC03	●	113	42	57	0.3				
20	KCD200-2D-S25-WC03	●	114	43	58	0.3				
20.5	KCD205-2D-S25-WC03	●	115	44	59	WC..040208	0.3			
21	25	KCD210-2D-S25-WC04	●	116	45		60		0.3	
21.5		KCD215-2D-S25-WC04	●	117	46		61		0.3	
22		KCD220-2D-S25-WC04	●	118	47		62		0.4	
22.5		KCD225-2D-S25-WC04	●	119	48		63		0.4	
23		KCD230-2D-S25-WC04	●	123	49		67		0.4	
23.5		KCD235-2D-S25-WC04	●	124	50		68		0.4	
24		KCD240-2D-S25-WC04	●	125	51		69		0.4	
24.5		KCD245-2D-S25-WC04	●	126	52	70	0.4			
25		KCD250-2D-S25-WC05	●	127	53	71	0.4			
25.5		32	KCD255-2D-S32-WC05	●	134	54	74	60	WC..050308	0.6
26	KCD260-2D-S32-WC05		●	135	55	75	0.6			
26.5	KCD265-2D-S32-WC05		●	136	56	76	0.6			
27	KCD270-2D-S32-WC05		●	137	57	77	0.6			
27.5	KCD275-2D-S32-WC05		●	138	58	78	0.6			
28	KCD280-2D-S32-WC05		●	139	59	79	0.6			
28.5	KCD285-2D-S32-WC05		●	140	60	80	0.6			
29	KCD290-2D-S32-WC05		●	143	62	83	0.7			
29.5	KCD295-2D-S32-WC05		●	144	63	84	0.7			
30	KCD300-2D-S32-WC05		●	148	64	88	0.7			
30.5	KCD305-2D-S32-WC05	●	149	65	89	WC..06T308	0.7			
31	32	KCD310-2D-S32-WC06	●	150	66		90	0.7		
31.5		KCD315-2D-S32-WC06	●	151	67		91	0.7		
32		KCD320-2D-S32-WC06	●	152	68		92	0.8		
32.5		KCD325-2D-S32-WC06	●	153	69		93	0.8		
33		KCD330-2D-S32-WC06	●	154	70		94	0.8		
33.5		KCD335-2D-S32-WC06	●	155	71		95	0.8		
34		KCD340-2D-S32-WC06	●	156	72		96	0.8		
34.5		KCD345-2D-S32-WC06	●	157	73		97	0.8		
35		KCD350-2D-S32-WC06	●	158	74		98	0.8		
35.5		KCD355-2D-S32-WC06	●	159	75	99	0.8			
36	KCD360-2D-S32-WC06	●	160	76	100	60	0.9			
36.5	KCD365-2D-S32-WC06	●	161	77	101		0.9			

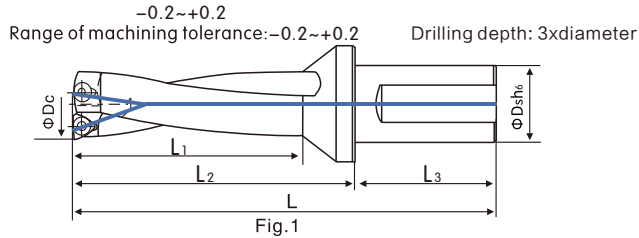
ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
37	32	KCD370-3D-S32-WC06	●	206	116	146	60	WC..06T308	1.1
37.5		KCD375-3D-S32-WC06	●	208	118	148			1.1
38		KCD380-3D-S32-WC06	●	209	119	149			1.1
38.5		KCD385-3D-S32-WC06	●	211	121	151			1.1
39		KCD390-3D-S32-WC06	●	212	122	152			1.2
39.5		KCD395-3D-S32-WC06	●	214	124	154			1.3
40		KCD400-3D-S40-WC06	○	225	125	155	70		1.6

Spare Parts

Screw	Wrench	Applicable Drill
		
M1.8*5	T6	KCD130-3D-S20-WC02-KCD145-3D-S25-WC02
M2.5*5.5	T8	KCD140-3D-S20-WC03-KCD145-3D-S25-WC03
M2.5*6	T8	KCD150-3D-S20-WC03-KCD205-3D-S25-WC03
M2.5*6	T8	KCD210-3D-S25-WC04-KCD245-3D-S25-WC04
M3*7	T8	KCD250-3D-S25-WC05-KCD305-3D-S32-WC05
M3.5*8.5	T15	KCD310-3D-S32-WC06-KCD400-3D-S40-WC06

WC-3XD (Φ13-40) Indexable drills with WC inserts

Holder diameter 3D:Φ13.0~40.0mm



▲ H13/SKD61

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	 kg
13		KCD130-3D-S20-S25-WC02	●	101	42	57		WC..020104	0.2
13.5		KCD135-3D-S20-S25-WC02	●	103	44	59			0.2
14		KCD140-3D-S20-S25-WC03	●	104	45	60		WC..030208	0.2
14.5	20	KCD145-3D-S20-S25-WC03	●	106	47	62	44		0.2
15	/	KCD150-3D-S20-S25-WC03	●	107	48	63	/	WC..030208	0.2
15.5	25	KCD155-3D-S20-S25-WC03	●	109	50	65	56		0.2
16		KCD160-3D-S20-S25-WC03	●	110	51	66			0.2
16.5		KCD165-3D-S20-S25-WC03	●	112	53	68			0.2
17		KCD170-3D-S20-S25-WC03	●	113	54	69			0.2
17.5		KCD175-3D-S25-WC03	●	127	56	71			0.3
18		KCD180-3D-S25-WC03	●	128	57	72			0.3
18.5		KCD185-3D-S25-WC03	●	130	59	74			0.3
19		KCD190-3D-S25-WC03	●	131	60	75			0.3
19.5		KCD195-3D-S25-WC03	●	133	62	77			0.3
20		KCD200-3D-S25-WC03	●	134	63	78		WC..040208	0.4
20.5		KCD205-3D-S25-WC03	●	136	65	80			0.4
21	25	KCD210-3D-S25-WC04	●	137	66	81	56		0.4
21.5		KCD215-3D-S25-WC04	●	139	68	83			0.4
22		KCD220-3D-S25-WC04	●	140	69	84			0.4
22.5		KCD225-3D-S25-WC04	●	142	71	86			0.4
23		KCD230-3D-S25-WC04	●	146	72	90			0.4
23.5		KCD235-3D-S25-WC04	●	148	74	92			0.4
24		KCD240-3D-S25-WC04	●	149	75	93			0.4
24.5		KCD245-3D-S25-WC04	●	151	77	95			0.4
25		KCD250-3D-S25-WC05	●	152	78	96		WC..050308	0.4
25.5		KCD255-3D-S32-WC05	●	160	80	100			0.6
26		KCD260-3D-S32-WC05	●	161	81	101			0.6
26.5		KCD265-3D-S32-WC05	●	163	83	103			0.7
27		KCD270-3D-S32-WC05	●	164	84	104			0.7
27.5		KCD275-3D-S32-WC05	●	166	86	106			0.7
28		KCD280-3D-S32-WC05	●	167	87	107			0.7
28.5		KCD285-3D-S32-WC05	●	169	89	109			0.7
29		KCD290-3D-S32-WC05	●	172	91	112			0.7
29.5		KCD295-3D-S32-WC05	●	174	93	114			0.7
30		KCD300-3D-S32-WC05	●	178	94	118		WC..06T308	0.7
30.5		KCD305-3D-S32-WC05	●	180	96	120			0.8
31	32	KCD310-3D-S32-WC06	●	181	97	121	60		0.8
31.5		KCD315-3D-S32-WC06	●	183	99	123			0.9
32		KCD320-3D-S32-WC06	●	184	100	124			0.9
32.5		KCD325-3D-S32-WC06	●	186	102	126			0.9
33		KCD330-3D-S32-WC06	●	187	103	127			0.9
33.5		KCD335-3D-S32-WC06	●	189	105	129			0.9
34		KCD340-3D-S32-WC06	●	190	106	130			0.9
34.5		KCD345-3D-S32-WC06	●	192	108	132			1.0
35		KCD350-3D-S32-WC06	●	193	109	133		WC..06T308	1.0
35.5		KCD355-3D-S32-WC06	●	195	111	135			1.0
36		KCD360-3D-S32-WC06	●	196	112	136			1.0
36.5		KCD365-3D-S32-WC06	●	198	114	138			1.1

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	 kg
37		KCD370-3D-S32-WC06	●	206	116	146		WC..06T308	1.1
37.5		KCD375-3D-S32-WC06	●	208	118	148			1.1
38	32	KCD380-3D-S32-WC06	●	209	119	149	60		1.1
38.5		KCD385-3D-S32-WC06	●	211	121	151			1.1
39		KCD390-3D-S32-WC06	●	212	122	152			1.2
39.5		KCD395-3D-S32-WC06	●	214	124	154			1.3
40	40	KCD400-3D-S40-WC06	○	225	125	155	70		1.6

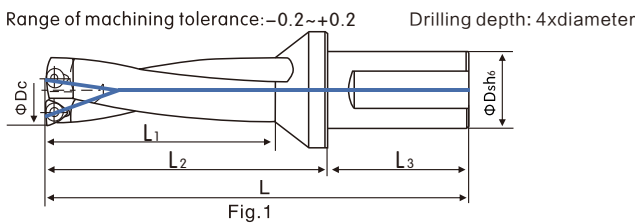
◎ Spare Parts

Screw	Wrench	Applicable Drill
		
M1.8*5	T6	KCD130-3D-S20-WC02-KCD145-3D-S25-WC02
M2.5*5.5	T8	KCD140-3D-S20-WC03-KCD145-3D-S25-WC03
M2.5*6	T8	KCD150-3D-S20-WC03-KCD205-3D-S25-WC03
M2.5*6	T8	KCD210-3D-S25-WC04-KCD245-3D-S25-WC04
M3*7	T8	KCD250-3D-S25-WC05-KCD305-3D-S32-WC05
M3.5*8.5	T15	KCD310-3D-S32-WC06-KCD400-3D-S40-WC06

● Mark:Standard stock item,
No mark:Made to order item.

WC-4XD (Φ13-40) Indexable drills with WC inserts

Holder diameter 4D:Φ13.0~40.0mm



▲ H13/SKD61

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	 kg
13		KCD130-4D-S20-S25-WC02	●	114	55	70		WC..020104	0.2
13.5		KCD135-4D-S20-S25-WC02	●	116	57	72			0.2
14		KCD140-4D-S20-S25-WC03	●	118	59	74		WC..030208	0.2
14.5	20	KCD145-4D-S20-S25-WC03	●	120	61	76	44		0.2
15	/	KCD150-4D-S20-S25-WC03	●	122	63	78	/	WC..030208	0.2
15.5	25	KCD155-4D-S20-S25-WC03	●	124	65	80	56		0.2
16		KCD160-4D-S20-S25-WC03	●	126	67	82			0.3
16.5		KCD165-4D-S20-S25-WC03	●	128	69	84			0.3
17		KCD170-4D-S20-S25-WC03	●	130	71	86			0.3
17.5		KCD175-4D-S25-WC03	●	144	73	88			0.3
18		KCD180-4D-S25-WC03	●	146	75	90			0.4
18.5		KCD185-4D-S25-WC03	●	148	77	92			0.4
19		KCD190-4D-S25-WC03	●	150	79	94			0.4
19.5		KCD195-4D-S25-WC03	●	152	81	96			0.4
20		KCD200-4D-S25-WC03	●	154	83	98		WC..040208	0.4
20.5		KCD205-4D-S25-WC03	●	156	85	100			0.4
21	25	KCD210-4D-S25-WC04	●	158	87	102	56		0.4
21.5		KCD215-4D-S25-WC04	●	160	89	104			0.4
22		KCD220-4D-S25-WC04	●	162	91	106			0.4
22.5		KCD225-4D-S25-WC04	●	164	93	108			0.4
23		KCD230-4D-S25-WC04	●	169	95	113			0.5
23.5		KCD235-4D-S25-WC04	●	171	97	115			0.5
24		KCD240-4D-S25-WC04	●	173	99	117			0.5
24.5		KCD245-4D-S25-WC04	●	175	101	119			0.7
25		KCD250-4D-S25-WC05	●	177	103	121		WC..050308	0.7
25.5		KCD255-4D-S32-WC05	●	185	105	125			0.7
26		KCD260-4D-S32-WC05	●	187	107	127			0.7
26.5		KCD265-4D-S32-WC05	●	189	109	129			0.7
27		KCD270-4D-S32-WC05	●	191	111	131			0.7
27.5		KCD275-4D-S32-WC05	●	193	113	133			0.7
28		KCD280-4D-S32-WC05	●	195	115	135			0.8
28.5		KCD285-4D-S32-WC05	●	197	117	137			0.8
29		KCD290-4D-S32-WC05	●	201	120	141			0.8
29.5		KCD295-4D-S32-WC05	●	203	122	143			0.8
30		KCD300-4D-S32-WC05	●	208	124	148		WC..06T308	0.9
30.5		KCD305-4D-S32-WC05	●	210	126	150			0.9
31	32	KCD310-4D-S32-WC06	●	212	128	152	60		0.9
31.5		KCD315-4D-S32-WC06	●	214	130	154			0.9
32		KCD320-4D-S32-WC06	●	216	132	156			1.0
32.5		KCD325-4D-S32-WC06	●	218	134	158			1.0
33		KCD330-4D-S32-WC06	●	220	136	160			1.0
33.5		KCD335-4D-S32-WC06	●	222	138	162			1.0
34		KCD340-4D-S32-WC06	●	224	140	164			1.1
34.5		KCD345-4D-S32-WC06	●	226	142	166			1.1
35		KCD350-4D-S32-WC06	●	228	144	168		WC..06T308	1.1
35.5		KCD355-4D-S32-WC06	●	230	146	170			1.1
36		KCD360-4D-S32-WC06	●	232	148	172			1.2
36.5		KCD365-4D-S32-WC06	●	236	150	174			1.2

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	 kg
37		KCD370-3D-S32-WC06	●	243	153	183		WC..06T308	1.2
37.5		KCD375-3D-S32-WC06	●	245	155	185			1.2
38	32	KCD380-3D-S32-WC06	●	247	157	187	60		1.3
38.5		KCD385-3D-S32-WC06	●	249	159	189			1.3
39		KCD390-3D-S32-WC06	●	251	161	191			1.8
39.5		KCD395-3D-S32-WC06	●	253	163	193			1.8
40	40	KCD400-3D-S40-WC06	○	265	165	195	70		1.8

◎ Spare Parts

Screw	Wrench	Applicable Drill
		
M1.8*5	T6	KCD130-3D-S20-WC02-KCD145-3D-S25-WC02
M2.5*5.5	T8	KCD140-3D-S20-WC03-KCD145-3D-S25-WC03
M2.5*6	T8	KCD150-3D-S20-WC03-KCD205-3D-S25-WC03
M2.5*6	T8	KCD210-3D-S25-WC04-KCD245-3D-S25-WC04
M3*7	T8	KCD250-3D-S25-WC05-KCD305-3D-S32-WC05
M3.5*8.5	T15	KCD310-3D-S32-WC06-KCD400-3D-S40-WC06

● Mark:Standard stock item,
No mark:Made to order item.

WC –5 X D (Φ 16–40) Indexable drills with WC inserts

Holder diameter 5D: Φ 16.0 ~ 40.0mm

Range of machining tolerance: -0.2 ~ +0.2 Drilling depth: 5x diameter

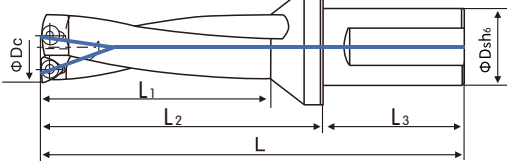


Fig.1



▲ H13/SKD61

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	
16	20	KCD160-5D-S20/S25-WC03	●	142	83	98	44	WC..030208	0.4
16.5	/	KCD165-5D-S20/S25-WC03	●	145	86	101	/		0.4
17	25	KCD170-5D-S20/S25-WC03	●	147	88	103	56		0.4
17.5	25	KCD175-5D-S25-WC03	●	162	91	106	56		0.4
18		KCD180-5D-S25-WC03	●	164	93	108			0.5
18.5		KCD185-5D-S25-WC03	●	167	96	111			0.5
19		KCD190-5D-S25-WC03	●	169	98	113			0.5
19.5		KCD195-5D-S25-WC03	●	172	101	116			0.5
20		KCD200-5D-S25-WC03	●	174	103	118			0.5
20.5		KCD205-5D-S25-WC03	●	177	106	121			0.5
21		KCD210-5D-S25-WC04	●	179	108	123		WC..040208	0.5
21.5		KCD215-5D-S25-WC04	●	182	111	126			0.5
22		KCD220-5D-S25-WC04	●	184	113	128			0.5
22.5		KCD225-5D-S25-WC04	●	187	116	131	0.5		
23		KCD230-5D-S25-WC04	●	192	118	136	0.6		
23.5		KCD235-5D-S25-WC04	●	195	121	139	0.6		
24		KCD240-5D-S25-WC04	●	197	123	141	WC..050308	0.6	
24.5		KCD245-5D-S25-WC04	●	200	126	144		0.8	
25		KCD250-5D-S25-WC05	●	202	128	146		0.8	
25.5	KCD255-5D-S32-WC05	●	213	131	153	WC..06T308		0.8	
26	KCD260-5D-S32-WC05	●	216	133	156			0.8	
26.5	KCD265-5D-S32-WC05	●	217	136	157			0.8	
27	KCD270-5D-S32-WC05	●	218	138	158		0.8		
27.5	KCD275-5D-S32-WC05	●	221	141	161		0.8		
28	KCD280-5D-S32-WC05	●	223	143	163		0.9		
28.5	KCD285-5D-S32-WC05	●	226	146	166		0.9		
29	KCD290-5D-S32-WC05	●	230	149	170		0.9		
29.5	KCD295-5D-S32-WC05	●	233	151	173		0.9		
30	KCD300-5D-S32-WC05	●	238	154	178		1.0		
30.5	KCD305-5D-S32-WC05	●	241	157	181	WC..06T308	1.0		
31	32	KCD310-5D-S32-WC06	●	243	159		183	60	1.0
31.5		KCD315-5D-S32-WC06	●	245	162		185	1.0	
32		KCD320-5D-S32-WC06	●	248	164		188	1.1	
32.5		KCD325-5D-S32-WC06	●	251	167		191	1.1	
33		KCD330-5D-S32-WC06	●	253	169		193	1.1	
33.5		KCD335-5D-S32-WC06	●	255	172		195	1.1	
34		KCD340-5D-S32-WC06	●	258	174		198	1.2	
34.5		KCD345-5D-S32-WC06	●	261	177		201	1.2	
35		KCD350-5D-S32-WC06	●	263	179		203	1.2	
35.5		KCD355-5D-S32-WC06	●	265	182	205	1.2		
36	KCD360-5D-S32-WC06	●	268	184	208	1.3		1.3	
36.5	KCD365-5D-S32-WC06	●	271	187	211	1.3			

ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
37	32	KCD370-5D-S32-WC06	●	206	116	146	60	WC..06T308	1.1
37.5		KCD375-5D-S32-WC06	●	208	118	148			1.1
38		KCD380-5D-S32-WC06	●	209	119	149			1.1
38.5		KCD385-5D-S32-WC06	●	211	121	151			1.1
39		KCD390-5D-S32-WC06	●	212	122	152			1.2
39.5		KCD395-5D-S32-WC06	●	214	124	154			1.3
40	40	KCD400-5D-S40-WC06	○	225	125	155	70		1.6

◎ Spare Parts

Screw	Wrench	Applicable Drill
M2.5*6	T8	
M2.5*6	T8	
M3*7	T8	
M3.5*8.5	T15	KCD310-4D-S32-WC06-KCD400-4D-S40-WC06

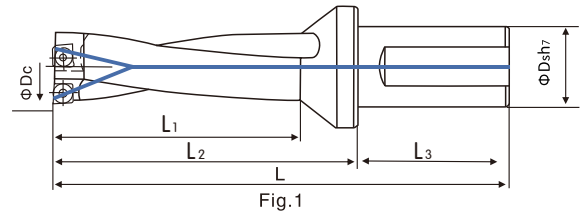
● Mark:Standard stock item,
No mark:Made to order item.



WDX (Φ 15–35) flat–bottom drills with WDX inserts

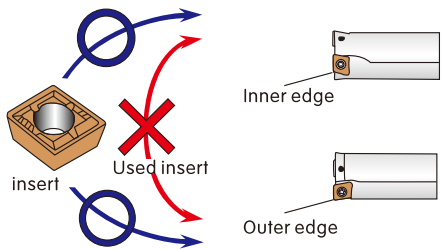
Holder diameter: Φ 15.0 ~ 35.0mm

Range of machining tolerance: -0.05 ~ +0.15 Drilling depth: 2xdiameter



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	kg
15	25	PDL150D2S25	●	92	33	48	56	WDXT042004	0.2
16		PDL160D2S25	●	94	35	50		WDXT052504	0.2
17		PDL170D2S25	●	96	37	52			0.2
18		PDL180D2S25	●	112	39	56			0.3
19		PDL190D2S25	●	114	41	58		WDXT063006	0.3
20		PDL200D2S25	●	116	43	60			0.3
21		PDL210D2S25	●	118	45	62			0.3
22		PDL220D2S25	●	120	47	64			0.4
23		PDL230D2S25	●	122	49	66		WDXT073506	0.4
24		PDL240D2S25	●	124	51	68			0.4
25		PDL250D2S25	●	126	53	70			0.4
26	32	PDL260D2S32	●	135	55	75	60	WDXT094008	0.6
27		PDL270D2S32	●	137	57	77			0.6
28		PDL280D2S32	●	139	59	79			0.7
29		PDL290D2S32	●	143	62	83			0.7
30		PDL300D2S32	●	148	64	88		WDXT094008	0.7
31		PDL310D2S32	○	150	66	90			0.8
32		PDL320D2S32	○	152	68	92			0.8
33		PDL330D2S32	○	154	70	94			0.8
34		PDL340D2S32	○	156	72	96			0.8
35		PDL350D2S32	○	158	74	98			0.8

Notes About Mounting Inserts(PDL Type)



Part number structure of PCT, PDL type holder

PCT **250** **D3** **S25**
Diameter (Φ 25.0) Drill Length (3D) Shank Diameter (Φ 25.0)

Part number structure of WDXT inserts

WDXT **07** **35** **06** **-** **G**
Width Across Flats (7.5) Thickness x 10 (3.5) Corner RadiusR x 10 (R0.6) Breaker Type

PDL type: The outer edge and center edge of the inserts can be used.
A insert used as a peripheral edge cannot be used as a central edge. Similarly, a insert used as a center edge cannot be used as a peripheral edge.

PCT type: Limited to peripheral edge, using 2 tips

	Angled Surface	Half Cylindrical	Pre-cast Hole	Intersecting Holes	Boring	External Turning	Laminated Plates	Back Boring
Application								
Feed Rate(f) mm/rev	0.05	0.05	0.08	0.05	0.1	0.1	Not applicable	Not applicable

K2D-2 X D (Φ 13-35) Indexable drills with XO/SP inserts

Holder diameter 2D: Φ13.0 ~ 35.0mm

Range of machining tolerance: -0.05 ~ +0.15 Drilling depth: 2xdiameter

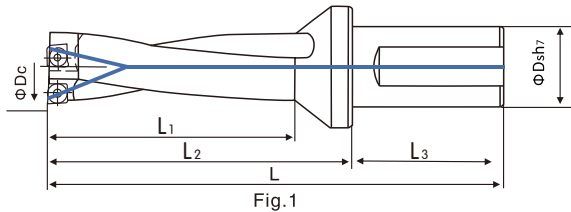


Fig.1

Φ Dc	Φ Ds	Specification/Item	Store	L	ℓ1	ℓ2	ℓ3	Applicable Insert
12		K2D12020-04	●	90	25	40		SPMT040204 XOMT040204
13		K2D13020-04	●	88	29	44		
14	20	K2D14020-05	●	90	31	46	44	SPMT050204 XOMT050204
15		K2D15020-05	●	92	33	48		
16		K2D16020-05	●	94	35	50		SPMT060205 XOMT060205
17		K2D17025-06	●	96	37	52		
18		K2D18025-06	●	110	39	54		SPMT07T208 XOMT07T208
19		K2D19025-06	●	112	41	56		
20	25	K2D20025-07	●	114	43	58	56	SPMT07T208 XOMT07T208
21		K2D21025-07	●	116	45	60		
22		K2D22025-07	●	118	47	62		
23		K2D23025-07	●	123	49	67		

◎ Threaded Fittings /Connection: PT



Φ Dc	Φ Ds	Specification/Item	Store	L	ℓ1	ℓ2	ℓ3	Applicable Insert
24	25	K2D24025-09	●	125	51	69		SPMT090308 XOMT090308
25		K2D25025-09	●	127	53	71		
26		K2D26032-09	●	135	55	75		
27		K2D27032-09	●	137	57	77		
28		K2D28032-09	○	139	59	79		60 SPMT11T308 XOMT11T308
29		K2D29032-09	○	143	62	83		
30	32	K2D30032-11	○	148	64	88		
31		K2D31032-11	○	150	66	90		
32		K2D32032-11	○	152	68	92		SPMT11T308 XOMT11T308
33		K2D33032-11	○	154	70	94		
34		K2D34032-11	○	156	72	96		
35		K2D35032-11	○	158	74	98		

K4D-4 X D (Φ 13-35) Indexable drills with XO/SP inserts

Holder diameter 4D: Φ13.0 ~ 35.0mm

Range of machining tolerance: -0.05 ~ +0.15 Drilling depth: 4xdiameter

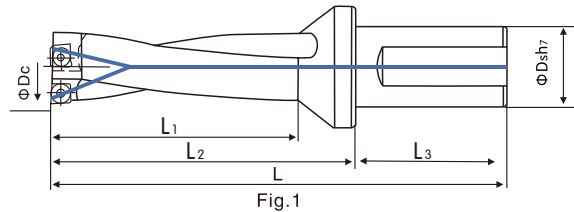


Fig.1

Φ Dc	Φ Ds	Specification/Item	Store	L	ℓ1	ℓ2	ℓ3	Applicable Insert
12		K4D12020-04	●	115	50	65		SPMT040204 XOMT040204
13		K4D13020-04	●	114	55	70		
14	20	K4D14020-05	●	118	59	74	44	SPMT050204 XOMT050204
15		K4D15020-05	●	122	63	78		
16		K4D16020-05	●	126	67	82		SPMT060205 XOMT060205
17		K4D17025-06	●	130	71	86		
18		K4D18025-06	●	146	75	90		SPMT07T208 XOMT07T208
19		K4D19025-06	●	150	79	94		
20	25	K4D20025-07	●	154	83	98	56	SPMT07T208 XOMT07T208
21		K4D21025-07	●	158	87	102		
22		K4D22025-07	●	162	91	106		
23		K4D23025-07	●	169	95	113		

◎ Threaded Fittings /Connection: PT



Φ Dc	Φ Ds	Specification/Item	Store	L	ℓ1	ℓ2	ℓ3	Applicable Insert
24	25	K4D24025-09	●	173	99	117		SPMT090308 XOMT090308
25		K4D25025-09	●	177	103	121		
26		K4D26032-09	●	187	107	127		
27		K4D27032-09	●	191	111	131		
28		K4D28032-09	○	195	115	135		60 SPMT11T308 XOMT11T308
29		K4D29032-09	○	201	120	141		
30	32	K4D30032-11	○	208	124	148		
31		K4D31032-11	○	212	128	152		
32		K4D32032-11	○	216	132	156		SPMT11T308 XOMT11T308
33		K4D33032-11	○	220	136	160		
34		K4D34032-11	○	224	140	164		
35		K4D35032-11	○	228	146	168		

K3D-3 X D (Φ 13-35) Indexable drills with XO/SP inserts

Holder diameter 3D: Φ13.0 ~ 35.0mm

Range of machining tolerance: -0.05 ~ +0.15 Drilling depth: 3xdiameter

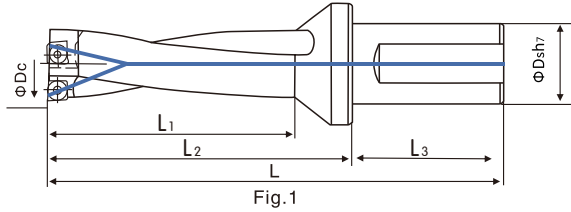


Fig.1

Φ Dc	Φ Ds	Specification/Item	Store	L	ℓ1	ℓ2	ℓ3	Applicable Insert
12		K3D12020-04	●	102	37	52		SPMT040204 XOMT040204
13		K3D13020-04	●	101	42	57		
14	20	K3D14020-05	●	104	45	60	50	SPMT050204 XOMT050204
15		K3D15020-05	●	107	48	63		
16		K3D16020-05	●	110	51	66		SPMT060205 XOMT060205
17		K3D17025-06	●	113	54	69		
18		K3D18025-06	●	128	57	72		SPMT07T208 XOMT07T208
19		K3D19025-06	●	131	60	75		
20	25	K3D20025-07	●	134	63	78	56	SPMT07T208 XOMT07T208
21		K3D21025-07	●	137	66	81		
22		K3D22025-07	●	140	69	84		
23		K3D23025-07	●	146	72	90		

◎ Threaded Fittings /Connection: PT



Φ Dc	Φ Ds	Specification/Item	Store	L	ℓ1	ℓ2	ℓ3	Applicable Insert
24	25	K3D24025-09	●	149	75	93		SPMT090308 XOMT090308
25		K3D25025-09	●	152	78	96		
26		K3D26032-09	●	161	81	101		
27		K3D27032-09	●	164	84	104		
28		K3D28032-09	○	167	87	107		60 SPMT11T308 XOMT11T308
29		K3D29032-09	○	172	91	112		
30	32	K3D30032-11	○	178	94	118		
31		K3D31032-11	○	181	97	121		
32		K3D32032-11	○	184	100	124		SPMT11T308 XOMT11T308
33		K3D33032-11	○	187	103	127		
34		K3D34032-11	○	190	106	130		
35		K3D35032-11	○	193	109	133		

K5D-5 X D (Φ 13-35) Indexable drills with XO/SP inserts

Holder diameter 5D: Φ13.0 ~ 35.0mm

Range of machining tolerance: -0.05 ~ +0.15 Drilling depth: 5xdiameter

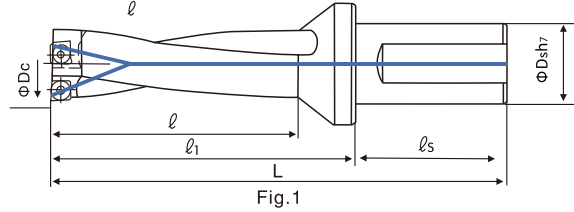


Fig.1

Φ Dc	Φ Ds	Specification/Item	Store	L	ℓ1	ℓ2	ℓ3	Applicable Insert
12		K5D12020-04	●	124	63	80		SPMT040204 XOMT040204
13		K5D13020-04	●	129	68	85		
14	20	K5D14020-05	●	133	73	89	44	SPMT050204 XOMT050204
15		K5D15020-05	●	137	78	93		
16		K5D16020-05	●	142	83	98		SPMT060205 XOMT060205
17		K5D17025-06	●	147	88	103		
18		K5D18025-06	●	164	93	108		SPMT07T208 XOMT07T208
19		K5D19025-06	●	169	98	113		
20	25	K5D20025-07	●	174	103	118	56	SPMT07T208 XOMT07T208
21		K5D21025-07	●	179	108	123		
22		K5D22025-07	●	184	113	128		
23		K5D23025-07	●	192	118	136		

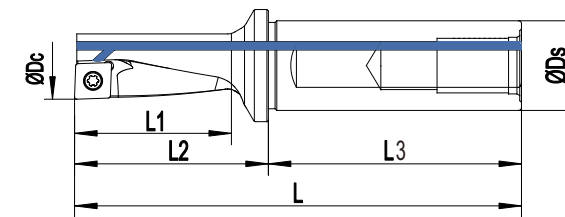
◎ Threaded Fittings /Connection: PT



Φ Dc	Φ Ds	Specification/Item	Store	L	ℓ1	ℓ2	ℓ3	Applicable Insert
24	25	K5D24025-09	●	197	123	141		SPMT090308 XOMT090308
25		K5D25025-09	●	202	128	146		
26		K5D26032-09	●	216	133	156		
27		K5D27032-09	●	218	138	158		
28		K5D28032-09	○	223	143	163		60 SPMT11T308 XOMT11T308
29		K5D29032-09	○	230	149	170		
30	32	K5D30032-11	○	238	154	178		
31		K5D31032-11	○	243	159	183		
32		K5D32032-11	○	248	164	188		SPMT11T308 XOMT11T308
33		K5D33032-11	○	253	169	193		
34		K5D34032-11	○	258	174	198		
35		K5D35032-11	○	263	179	203		



TCAP-2.25DN (8-32) Multifunction tools for drilling, boring, facing & external turning



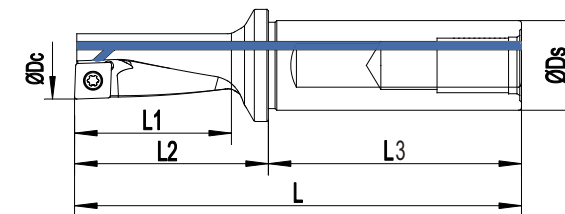
© Threaded Fittings /Connection: "G"



ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	Screw	Wrench	kg
8	12	TCAP 08R 2.25D	●	64.5	17.5	22.5	42	XCMT040104-R	M2*4	T6	0.2
8	12	TCAP 08L 2.25D	○	64.5	17.5	22.5	42	XCMT040104-L	M2*4	T6	0.2
10	12	TCAP 10R 2.25D	●	70.5	22.5	28.5	42	XCMT050204	M2*4	T6	0.2
10	12	TCAP 10L 2.25D	○	70.5	22.5	28.5	42	XCMT050204	M2*4	T6	0.2
12	16	TCAP 12R 2.25D	●	79	27	34	45	XCMT060204	M2.2*5	T7	0.2
12	16	TCAP 12L 2.25D	○	79	27	34	45	XCMT060204	M2.2*5	T7	0.2
14	16	TCAP 14R 2.25D	●	85	32	40	45	XCMT070304	M2.5*6	T8	0.2
14	16	TCAP 14L 2.25D	○	85	32	40	45	XCMT070304	M2.5*6	T8	0.2
16	20	TCAP 16R 2.25D	●	96	36	46	50	XCMT080304	M3*7	T8	0.2
16	20	TCAP 16L 2.25D	○	96	36	46	50	XCMT080304	M3*7	T8	0.2
20	25	TCAP 20R 2.25D	●	113	45	57	56	XCMT10T304	M3.5*8.5	T15	0.3
20	25	TCAP 20L 2.25D	○	113	45	57	56	XCMT10T304	M3.5*8.5	T15	0.3
25	32	TCAP 25R 2.25D	●	130	57	70	60	XCMT130404	M5*11	T20	0.6
25	32	TCAP 25L 2.25D	○	130	57	70	60	XCMT130404	M5*11	T20	0.6
32	32	TCAP 32R 2.25D	●	145	72	85	60	XCMT170508	M5*11	T20	0.9
32	32	TCAP 32L 2.25D	○	145	72	85	60	XCMT170508	M5*11	T20	0.9

● Mark:Standard stock item ○ No mark:Made to order item.

TCAP-3DN (8-32) Multifunction tools for drilling, boring, facing & external turning



© Threaded Fittings /Connection: "G"

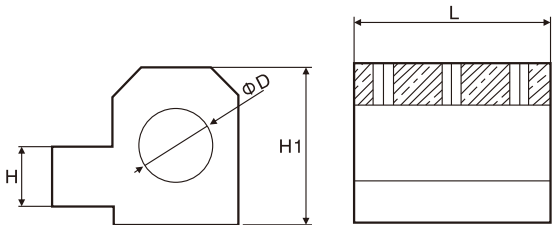


ΦDc	ΦDs	Specification/Item	Store	L	ℓ ₁	ℓ ₂	ℓ ₃	Applicable Insert	Screw	Wrench	kg
8	12	TCAP 08R 3D	●	72.5	24	30.5	42	XCMT040104-R	M2*4	T6	0.2
8	12	TCAP 08L 3D	○	72.5	24	30.5	42	XCMT040104-L	M2*4	T6	0.2
10	12	TCAP 10R 3D	●	79	30	37	42	XCMT050204	M2*4	T6	0.2
10	12	TCAP 10L 3D	○	79	30	37	42	XCMT050204	M2*4	T6	0.2
12	16	TCAP 12R 3D	●	89	37	44	45	XCMT060204	M2.2*5	T7	0.2
12	16	TCAP 12L 3D	○	89	37	44	45	XCMT060204	M2.2*5	T7	0.2
14	16	TCAP 14R 3D	●	95	42	50	45	XCMT070304	M2.5*6	T8	0.2
14	16	TCAP 14L 3D	○	95	42	50	45	XCMT070304	M2.5*6	T8	0.2
16	20	TCAP 16R 3D	●	108	48	58	50	XCMT080304	M3*7	T8	0.2
16	20	TCAP 16L 3D	○	108	48	58	50	XCMT080304	M3*7	T8	0.2
20	25	TCAP 20R 3D	●	128	60	72	56	XCMT10T304	M3.5*8.5	T15	0.3
20	25	TCAP 20L 3D	○	128	60	72	56	XCMT10T304	M3.5*8.5	T15	0.3
25	32	TCAP 25R 3D	●	148	75	88	60	XCMT130404	M5*11	T20	0.6
25	32	TCAP 25L 3D	○	148	75	88	60	XCMT130404	M5*11	T20	0.6
32	32	TCAP 32R 3D	●	169	96	109	60	XCMT170508	M5*11	T20	0.9
32	32	TCAP 32L 3D	○	169	96	109	60	XCMT170508	M5*11	T20	0.9

● Mark:Standard stock item ○ No mark:Made to order item.



Boring Block for U Drills



Specification/Item	H	H1	L	D
DK20-16	20	37	60	16
DK20-20		47	65	20
DK20-25		47	65	25
DK20-32		55	85	32
DK25-16	25	42	65	16
DK25-25		53	70	25
DK25-32		60	85	32
DK25-40		65	90	40
DK32-40	32	83	100	40
DK32-50		83	100	50

Set up example



Threaded Fittings/Connection

PT & G for your selection

Specification	Holder	Air Pipe External diameter (mm)	Threads External diameter	Screw pitch (mm)
PC10-M10*1.5	C20	10	M10	1.5
PC10-M12*1.75	C25	10	M12	1.75
PC12-M16*2	C32	12	M16	2
PC12-M20-2.5	C40	12	M20	2.5



Connect

Specification	Holder	Threads External diameter	Weight(g)
M10*1.5-PT1/8	C20	M10	17.4
M12*1.75-PT1/8	C25	M12	34
M16*2-PT1/4	C32	M16	48
M20*2.5-PT1/4	C40	M20	56

S
P
S
O
W
C
W
D
X
T
C
A
P
6D & 8D
8
8
0
SEM Drill Insert
YLMD MAX Drill
Carbide Inserts
Rough Boring Head
Finish Boring Head
Chuck
Accessories
Chamfering Tools
Gun Drill Technology

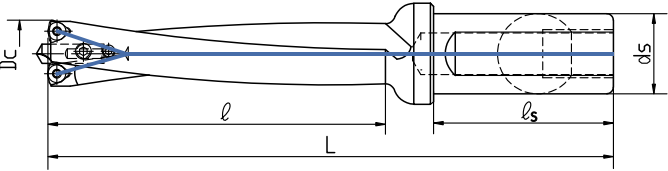




WC Turbo Drill 6D&8D

Holder diameter 6D:Φ25.0 ~ 40.0mm

Range of machining tolerance: -0.09~+0.1 Drilling depth: 6x diameter



ΦDc	ΦDs	Specification/Item	L	l	l _s	Pilot Drill	Applicable Insert	Screw	WRENCH
18	25	C25-6D18-115WC02	196	115	56	0620	WC..020104	M1.8*4	T6
19		C25-6D19-121WC02	202	121	56				
20		C25-6D20-127WC03	208	127	56		WC..030208	M2.5*6	T8
21		C25-6D21-133WC03	214	133	56				
22		C25-6D22-139WC03	220	139	56				
23		C25-6D23-145WC03	226	145	56				
24		C25-6D24-151WC03	232	151	56				
25		C25-6D25-157WC03	238	157	56				
26	32	C32-6D26-163WC04	251	163	60		WC..040208	M2.5*6	T8
27		C32-6D27-169WC04	257	169	60				
28		C32-6D28-175WC04	263	175	60				
29		C32-6D29-181WC04	269	181	60				
30		C32-6D30-187WC04	275	187	60				
31		C32-6D31-193WC04	281	193	60				
32		C32-6D32-199WC05	287	199	60	0825	WC..050308	M3*7	T15
33		C32-6D33-205WC05	293	205	60				
34		C32-6D34-211WC05	299	211	60				
35		C32-6D35-217WC05	305	217	60				
36		C32-6D36-223WC05	311	223	60				
37		C32-6D37-229WC05	317	229	60				
38		C32-6D38-235WC05	323	235	60				
39		C32-6D39-241WC05	329	241	60				

ΦDc	ΦDs	Specification/Item	L	l	l _s	Pilot Drill	Applicable Insert	Screw	WRENCH
18	25	C25-8D18-151WC02	232	151	56	0620	WC..020104	M1.8*4	T6
19		C25-8D19-159WC02	240	159	56				
20		C25-8D20-167WC03	248	167	56		WC..030208	M2.5*6	T8
21		C25-8D21-175WC03	256	175	56				
22		C25-8D22-183WC03	264	183	56				
23		C25-8D23-191WC03	272	191	56				
24		C25-8D24-199WC03	280	199	56				
25		C25-8D25-207WC03	288	207	56				
26	32	C32-8D26-215WC04	303	215	60		WC..040208	M2.5*6	T8
27		C32-8D27-223WC04	311	223	60				
28		C32-8D28-231WC04	319	231	60				
29		C32-8D29-239WC04	327	239	60				
30		C32-8D30-247WC04	335	247	60				
31		C32-8D31-255WC04	343	255	60				
32		C32-8D32-263WC05	351	263	60	0825	WC..050308	M3*7	T15
33		C32-8D33-271WC05	359	271	60				
34		C32-8D34-279WC05	367	279	60				
35		C32-8D35-287WC05	375	287	60				
36		C32-8D36-295WC05	383	295	60				
37		C32-8D37-303WC05	391	303	60				
38		C32-8D38-311WC05	399	311	60				
39		C32-8D39-319WC05	407	319	60				

Hole tolerance

The 880 u drill enables optimal cutting force balance and drilling positive tolerance (larger size) holes. Because most holes are H tolerance.

◇ Drill depth: 2–3xDC	Hole Diameter mm	12.00–43.99	44.00–52.99	53.00–63
	Hole tolerance mm	0/+0.25	0/+0.28	0/+0.30
◇ Drill depth: 4–5xDC	Hole Diameter mm	12.00–43.99	44.00–52.99	53.00–63
	Hole tolerance mm	0/+0.28	0/+0.33	0/+0.35

Surface quality

Feed	Ra, μ m	Rz, μ m
Low	0.6–1	4–6
Middle	1–2	6–15
High	2–4	15–30

Mark:

The direct light tolerance of the 880 drill is a combination of the blade seat tolerance and the inserts tolerance in the drill body. Drill and blade manufacturing tolerances are included in hole tolerances.

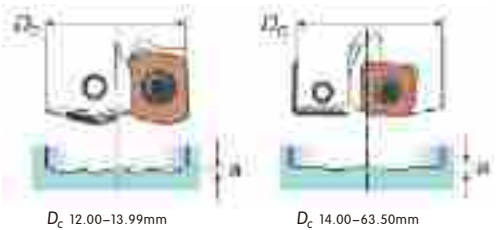


Bottom contour

The bottom profile is not completely flat and varies according to drill and insert size.

◇ The maximum size of each Inserts

Inserts Size	01	02	03	04	05	06	07	08	09
a(max) (mm)	0.4	0.6	0.7	0.9	1.1	1.1	1.4	1.6	2.0
Dc (mm)	12.00–13.99	14.00–16.49	15.50–19.99	20.00–23.99	24.00–29.99	30.00–35.99	36.00–43.99	44.00–52.99	53.00–63.50



Groove type and material

◇ Suggestions for groove type applications

LM

PMS

Long Chip Material Medium

- Low to medium feed
 - Good chip control when processing long chip materials
 - Light chip
- Large tip radius
 - LM–Preferred for long chip materials

GM

PMKNSH

Normal Materials Medium

- Low to medium feed
 - Light chip
- The short,shallow chute provides excellent chip control in the feed area
 - The small tip radius ensures low bit deflection

GR

PK

Normal Materials Rough Processing

- Low to high feed
 - Strong,enhanced cutting edge
- The big tip raduis
 - Good chip control in high feed area

		First choice	Other
P	Mild steel	LM	GM
	Alloy steel	GR	GM
M		LM	GM
K		GR	GM
N		LM	GM
S		LM	GM
H		GM	

◇ Material

MP2130	PVD coated inserts materials for processing ISO,P,K and H materials
	The high strength fine grain matrix and the use of coating (Altin) give the inserts extremely high wear resistance and excellent chip resistance.
MP3150	PVD coated inserts materials for processing ISO,P,M,K,S and N materials
	With a high chromium content, fine grain high strength matrix, and using PVD coating (Altin).High reliability combined with increased edge line safety ensures anti–chip and anti–chipping properties
MM4325	PVD coated inserts materials for processing ISO,P,K materials
	Advanced chemical vapor deposition TiCN+Al2O3+TiN coating, while using high cobalt carbide matrix material. It has excellent resistance balance of deformation and edge toughness. Therefore, it has excellent wear resistance and anti–crescent wear properties, and can be used in high–speed steel and cast iron materials process. Extremely high cutting speeds are available, as well as low and medium feeds.

880 Indexable Drill Coding Rules

880	3	260	—	FC	20	—	SP	05
1	2	3		4	5		6	7

880 Indexable Drill Coding Rules

1	System	2	Length-diameter ratio	3	Dia.
	880		3=3 × DC		260=26mm
4	Installation type	6	Inserts Type	7	Adaptor Inserets
	FC=側固式 FC=Weldon		SP=Not ISO Inserts		05=SC05 SP05
5	Interface type				
	20=20mm				

D	—	S	C	G	X	05	03	05	—	GR	Mp2150
1		2	3	4	5	6	7	8		9	10

880 Indexable Inserts Coding Rules

1	InsertsType	2	Inserts Shape	3	Installation position
	D=Drilling Inserts		S=Square		C=Center Inserts P=Peripheral Inserts
4	Accuracy levels	5	Screw hole type	6	Inserts Specifications
	G=G tolerance		X=non-standard		05=05 inserts
7	Thickness S(mm)	8	Inserts point Angle Re	9	Inserts groove
	02=2 04=3.5 02=2.4 04=4 05=2.6 05=4.5 03=2.8 06=5.5 05=3		4=0.4 10=1.0 05=0.5 12=1.2 06=0.6 07=0.7 08=0.8		LM=LightMachining GM=Medium/generalpurposeprocessing GR=Heavydutymachining
				10	Inserts material

ACCkee

A drill that makes your manufacturing cost lower and product quality more stable.



880 Inserts U Drill

Interface type : Trim straight handle ISO 9766

Cooling method : internal cooling

Standard product range : 2XDC



Specification	Applicable Insert		DC	LC	L4	L5	D1	D4	BAR	KG	Stock
	Center Insert	Peripheral Insert									
MGU2120_FC20_SP01	SC01	SP01	12	24	45	50	20	25	10	0.149	★
MGU2125_FC20_SP01	SC01	SP01	12.5	25	46	50	20	25	10	0.152	★
MGU2130_FC20_SP01	SC01	SP01	13	26	47	50	20	25	10	0.155	★
MGU2135_FC20_SP01	SC01	SP01	13.5	27	47	50	20	25	10	0.158	★
MGU2140_FC20_SP02	SC02	SP02	14	31	44	50	20	25	10	0.159	★
MGU2145_FC20_SP02	SC02	SP02	14.5	33	46	50	20	25	10	0.16	★
MGU2150_FC20_SP02	SC02	SP02	15	34	47	50	20	25	10	0.163	★
MGU2155_FC20_SP02	SC02	SP02	15.5	36.26	49	50	20	25	10	0.167	★
MGU2160_FC20_SP02	SC02	SP02	16	36.33	51	50	20	25	10	0.175	★
MGU2165_FC20_SP03	SC02	SP02	16.5	37.51	52	50	20	25	10	0.173	★
MGU2170_FC25_SP03	SC03	SP03	17	38.45	53	56	25	32	10	0.283	★
MGU2175_FC25_SP03	SC03	SP03	17.5	40.52	55	56	25	32	10	0.288	★
MGU2180_FC25_SP03	SC03	SP03	18	40.27	56	56	25	32	10	0.293	★
MGU2185_FC25_SP03	SC03	SP03	18.5	41.39	57	56	25	32	10	0.297	★
MGU2188_FC25_SP03	SC03	SP03	18.8	40.4	56	56	25	32	10	0.297	★
MGU2190_FC25_SP03	SC03	SP03	19	42.52	58	56	25	32	10	0.302	★
MGU2195_FC25_SP03	SC03	SP03	19.5	44.66	60	56	25	32	10	0.307	★
MGU2200_FC25_SP04	SC04	SP04	20	44.2	61	56	25	32	10	0.316	★
MGU2205_FC25_SP04	SC04	SP04	20.5	46.39	64	56	25	32	10	0.327	★
MGU2210_FC25_SP04	SC04	SP04	21	46.59	64	56	25	32	10	0.323	★
MGU2215_FC25_SP04	SC04	SP04	21.5	47.8	65	56	25	32	10	0.323	★
MGU2220_FC25_SP04	SC04	SP04	22	48	66	56	25	32	10	0.339	★
MGU2230_FC25_SP04	SC04	SP04	23	51.48	69	56	25	32	10	0.351	★
MGU2240_FC25_SP05	SC05	SP05	24	53.21	71	56	25	32	10	0.35	★
MGU2250_FC25_SP05	SC05	SP05	25	56.13	74	56	25	32	10	0.369	★
MGU2260_FC32_SP05	SC05	SP05	26	56.6	77	60	32	39.6	10	0.587	★
MGU2270_FC32_SP05	SC05	SP05	27	59.49	79	60	32	39.6	10	0.604	★
MGU2280_FC32_SP05	SC05	SP05	28	60.79	82	60	32	39.6	10	0.63	★
MGU2290_FC32_SP05	SC05	SP05	29	62.54	84	60	32	39.6	10	0.653	★
MGU2300_FC32_SP06	SC05	SP05	30	65.1	87	60	32	39.6	10	0.653	★

880 Inserts U Drill

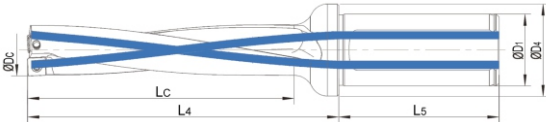
Specification	Applicable Insert		DC	LC	L4	L5	D1	D4	BAR	KG	Stock
	Center Insert	Peripheral Insert									
MGU2310_FC40_SP06	SC06	SP06	31	66.75	90	70	40	48	10	1.02	★
MGU2320_FC40_SP06	SC06	SP06	32	68.18	92	70	40	48	10	1.04	★
MGU2330_FC40_SP06	SC06	SP06	33	70.74	95	70	40	48	10	1.07	★
MGU2340_FC40_SP06	SC06	SP06	34	73.43	98	70	40	48	10	1.1	★
MGU2350_FC40_SP06	SC06	SP06	35	76.24	101	70	40	48	10	1.14	★
MGU2360_FC40_SP07	SC07	SP07	36	77.35	104	70	40	48	10	1.16	★
MGU2370_FC40_SP07	SC07	SP07	37	79	105	70	40	48	10	1.193	★
MGU2380_FC40_SP07	SC07	SP07	38	80.37	108	70	40	48	10	1.244	★
MGU2390_FC40_SP07	SC07	SP07	39	82.53	110	70	40	48	10	1.29	★
MGU2400_FC40_SP07	SC07	SP07	40	85.83	113	70	40	48	10	1.32	★
MGU2410_FC40_SP07	SC07	SP07	41	90.75	117	70	40	48	10	1.38	★
MGU2420_FC40_SP07	SC07	SP07	42	93.74	119	70	40	48	10	1.42	★
MGU2430_FC40_SP07	SC07	SP07	43	91.12	122	70	40	49.5	10	1.47	★
MGU2440_FC40_SP08	SC08	SP08	44	93.23	124	70	40	62.5	10	1.65	★
MGU2450_FC40_SP08	SC08	SP08	45	95.33	127	70	40	62.5	10	1.71	★
MGU2460_FC40_SP08	SC08	SP08	46	98.82	130	70	40	62.5	10	1.75	★
MGU2470_FC40_SP08	SC08	SP08	47	101.34	132	70	40	62.5	10	1.8	★
MGU2480_FC40_SP08	SC08	SP08	48	104.88	135	70	40	62.5	10	1.86	★
MGU2490_FC40_SP08	SC08	SP08	49	107.44	137	70	40	62.5	10	1.92	★
MGU2500_FC40_SP08	SC08	SP08	50	105.46	140	70	40	62.5	10	1.99	★
MGU2510_FC40_SP08	SC08	SP08	51	108.78	144	70	40	62.5	10	2.11	★
MGU2520_FC40_SP08	SC08	SP08	52	110.37	146	70	40	62.5	10	2.17	★
MGU2530_FC40_SP09	SC09	SP09	53	113.41	149	70	40	62.5	10	2.15	☆
MGU2540_FC40_SP09	SC09	SP09	54	114.73	151	70	40	62.5	10	2.22	☆
MGU2550_FC40_SP09	SC09	SP09	55	116.67	154	70	40	62.5	10	2.31	☆
MGU2560_FC40_SP09	SC09	SP09	56	118.52	157	70	40	62.5	10	2.4	☆
MGU2570_FC40_SP09	SC09	SP09	57	120.68	159	70	40	62.5	10	2.48	☆
MGU2580_FC40_SP09	SC09	SP09	58	122.93	162	70	40	62.5	10	2.57	☆
MGU2590_FC40_SP09	SC09	SP09	59	124.85	164	70	40	62.5	10	2.61	☆
MGU2600_FC40_SP09	SC09	SP09	60	126.60	167	70	40	62.5	10	2.77	☆
MGU2610_FC40_SP09	SC09	SP09	61	129.80	171	70	40	62.5	10	2.89	☆
MGU2620_FC40_SP09	SC09	SP09	62	131.55	173	70	40	62.5	10	2.95	☆
MGU2630_FC40_SP09	SC09	SP09	63	133.60	176	70	40	62.5	10	3.06	☆

880 Inserts U Drill

Interface type : Trim straight handle ISO 9766

Cooling method : internal cooling

Standard product range: 3XDC



Specification	Applicable Insert		DC	LC	L4	L5	D1	D4	BAR	KG	Stock
	Center Insert	Peripheral Insert									
MGU3120_FC20_SP01	SC01	SP01	12	36	57	50	20	25	10	0.156	★
MGU3125_FC20_SP01	SC01	SP01	12.5	37.5	58.5	50	20	25	10	0.159	★
MGU3130_FC20_SP01	SC01	SP01	13	39	60	50	20	25	10	0.162	★
MGU3135_FC20_SP01	SC01	SP01	13.5	40.5	60.5	50	20	25	10	0.165	★
MGU3140_FC20_SP02	SC02	SP02	14	44.88	58	50	20	25	10	0.165	★
MGU3145_FC20_SP02	SC02	SP02	14.5	47	60	50	20	25	10	0.165	★
MGU3150_FC20_SP02	SC02	SP02	15	49.12	62	50	20	25	10	0.17	★
MGU3155_FC20_SP02	SC02	SP02	15.5	51.25	64	50	20	25	10	0.174	★
MGU3160_FC20_SP02	SC02	SP02	16	51.33	66	50	20	25	10	0.185	★
MGU3165_FC20_SP03	SC03	SP03	16.5	53.51	68	50	20	25	10	0.183	★
MGU3170_FC25_SP03	SC03	SP03	17	54.45	69	56	25	32	10	0.292	★
MGU3175_FC25_SP03	SC03	SP03	17.5	57.52	72	56	25	32	10	0.297	★
MGU3180_FC25_SP03	SC03	SP03	18	57.27	73	56	25	32	10	0.306	★
MGU3185_FC25_SP03	SC03	SP03	18.5	59.39	75	56	25	32	10	0.311	★
MGU3190_FC25_SP03	SC03	SP03	19	60.52	76	56	25	32	10	0.318	★
MGU3193_FC25_SP03	SC03	SP03	19.25	63.57	79	56	25	32	10	0.322	★
MGU3195_FC25_SP03	SC03	SP03	19.5	63.66	79	56	25	32	10	0.324	★
MGU3200_FC25_SP04	SC04	SP04	20	63.2	81	56	25	32	10	0.339	★
MGU3205_FC25_SP04	SC04	SP04	20.5	64.39	82	56	25	32	10	0.346	★
MGU3210_FC25_SP04	SC04	SP04	21	66.59	84	56	25	32	10	0.344	★
MGU3215_FC25_SP04	SC04	SP04	21.5	68.8	86	56	25	32	10	0.352	★
MGU3220_FC25_SP04	SC04	SP04	22	69.02	87	56	25	32	10	0.365	★
MGU3225_FC25_SP04	SC04	SP04	22.5	72.24	90	56	25	32	10	0.375	★
MGU3230_FC25_SP04	SC04	SP04	23	73.48	91	56	25	32	10	0.382	★
MGU3235_FC25_SP04	SC04	SP04	23.5	75.72	93	56	25	32	10	0.392	★
MGU3240_FC25_SP05	SC05	SP05	24	77.21	95	56	25	32	10	0.386	★
MGU3245_FC25_SP05	SC05	SP05	24.5	79.5	97	56	25	32	10	0.396	★
MGU3250_FC25_SP05	SC05	SP05	25	81.81	99	56	25	32	10	0.41	★
MGU3253_FC40_SP05	SC05	SP05	25	81.81	99	56	25	32	10	0.41	★
MGU3255_FC25_SP05	SC05	SP05	25.5	83.13	100	56	25	32	10	0.419	★
MGU3260_FC32_SP05	SC05	SP05	26	81.6	102	60	32	39.6	10	0.631	★
MGU3265_FC32_SP05	SC05	SP05	26.5	83.79	104	60	32	39.6	10	0.643	★
MGU3270_FC32_SP05	SC05	SP05	27	85.49	105	60	32	39.6	10	0.657	★
MGU3275_FC32_SP05	SC05	SP05	27.5	88.69	108	60	32	39.6	10	0.672	★
MGU3280_FC32_SP05	SC05	SP05	28	86.65	109	60	32	39.6	10	0.682	★
MGU3285_FC32_SP05	SC05	SP05	28.5	88.95	111	60	32	39.6	10	0.695	★
MGU3290_FC32_SP05	SC05	SP05	29	90.25	112	60	32	39.6	10	0.708	★
MGU3295_FC32_SP05	SC05	SP05	29.5	93.57	115	60	32	39.6	10	0.724	★

880 Inserts U Drill

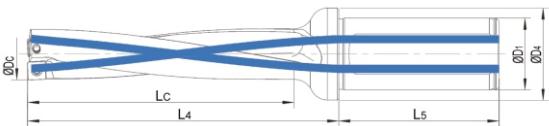
Specification	Applicable Insert		DC	LC	L4	L5	D1	D4	BAR	KG	Stock
	Center Insert	Peripheral Insert									
MGU3300_FC32_SP06	SC06	SP06	30	95.11	117	60	32	39.6	10	0.717	★
MGU3305_FC32_SP06	SC06	SP06	30.5	96.11	118	60	32	39.6	10	0.729	★
MGU3310_FC40_SP06	SC06	SP06	31	97.75	121	70	40	48	10	1.09	★
MGU3315_FC40_SP06	SC06	SP06	31.5	98.94	122	70	40	48	10	1.101	★
MGU3320_FC40_SP06	SC06	SP06	32	100.18	124	70	40	48	10	1.123	★
MGU3325_FC40_SP06	SC06	SP06	32.5	102.39	126	70	40	48	10	1.14	★
MGU3330_FC40_SP06	SC06	SP06	33	103.74	128	70	40	48	10	1.159	★
MGU3335_FC40_SP06	SC06	SP06	33.5	105.98	130	70	40	48	10	1.178	★
MGU3340_FC40_SP06	SC06	SP06	34	106.43	131	70	40	48	10	1.196	★
MGU3345_FC40_SP06	SC06	SP06	34.5	109.7	134	70	40	48	10	1.219	★
MGU3350_FC40_SP06	SC06	SP06	35	110.24	135	70	40	48	10	1.24	★
MGU3355_FC40_SP06	SC06	SP06	35.5	112.54	137	70	40	48	10	1.261	★
MGU3360_FC40_SP07	SC07	SP07	36	112.35	139	70	40	48	10	1.282	★
MGU3370_FC40_SP07	SC07	SP07	37	115.9	142	70	40	48	10	1.329	★
MGU3380_FC40_SP07	SC07	SP07	38	118.37	146	70	40	48	10	1.391	★
MGU3383_FC40_SP07	SC07	SP07	38.35	119.75	147.5	70	40	48	10	1.41	★
MGU3385_FC40_SP07	SC07	SP07	38.5	119.94	147.5	70	40	48	10	1.418	★
MGU3390_FC40_SP07	SC07	SP07	39	121.54	149	70	40	48	10	1.445	★
MGU3395_FC40_SP07	SC07	SP07	39.5	123.39	151	70	40	48	10	1.449	★
MGU3400_FC40_SP07	SC07	SP07	40	125.83	153	70	40	48	10	1.475	★
MGU3405_FC40_SP07	SC07	SP07	40.5	127.89	153	70	40	48	10	1.57	★
MGU3410_FC40_SP07	SC07	SP07	41	127.82	157	70	40	48	10	1.623	★
MGU3420_FC40_SP07	SC07	SP07	42	130.88	160	70	40	48	10	1.689	★
MGU3430_FC40_SP07	SC07	SP07	43	133.12	164	70	40	49.5	10	1.771	★
MGU3440_FC40_SP08	SC08	SP08	44	136.54	167	70	40	49.5	10	1.815	★
MGU3450_FC40_SP08	SC08	SP08	45	140.57	172	70	40	49.5	10	1.902	★
MGU3460_FC40_SP08	SC08	SP08	46	144	176	70	40	49.5	10	1.98	★
MGU3470_FC40_SP08	SC08	SP08	47	146.07	179	70	40	62.5	10	2.12	★
MGU3480_FC40_SP08	SC08	SP08	48	149.33	183	70	40	62.5	10	2.3	★
MGU3490_FC40_SP08	SC08	SP08	49	152.41	186	70	40	62.5	10	2.39	★
MGU3495_FC40_SP08	SC08	SP08	49.5	153.7	188	70	40	59	10	2.31	★
MGU3500_FC40_SP08	SC08	SP08	50	155.46	190	70	40	62.5	10	2.37	★
MGU3510_FC40_SP08	SC08	SP08	51	158.29	194	70	40	62.5	10	2.58	★
MGU3520_FC40_SP08	SC08	SP08	52	161.37	197	70	40	62.5	10	2.69	★
MGU3530_FC40_SP09	SC09	SP09	53	164.4	201	70	40	62.5	10	2.71	☆
MGU3540_FC40_SP09	SC09	SP09	54	167.73	204	70	40	62.5	10	2.81	☆
MGU3550_FC40_SP09	SC09	SP09	55	171.67	209	70	40	62.5	10	2.94	☆
MGU3560_FC40_SP09	SC09	SP09	56	174.52	213	70	40	62.5	10	3.07	☆
MGU3570_FC40_SP09	SC09	SP09	57	177.68	216	70	40	62.5	10	3.19	☆
MGU3580_FC40_SP09	SC09	SP09	58	180.93	220	70	40	62.5	10	3.32	☆
MGU3590_FC40_SP09	SC09	SP09	59	183.85	223	70	40	62.5	10	3.41	☆
MGU3600_FC40_SP09	SC09	SP09	60	186.89	227	70	40	62.5	10	3.55	☆
MGU3610_FC40_SP09	SC09	SP09	61	190.8	232	70	40	62.5	10	3.71	☆
MGU3620_FC40_SP09	SC09	SP09	62	193.78	235	70	40	62.5	10	3.94	☆
MGU3630_FC40_SP09	SC09	SP09	63	196.6	239	70	40	62.5	10	4.1	☆

880 Inserts U Drill

Interface type : Trim straight handle ISO 9766

Cooling method : internal cooling

Standard product range : 4XDC



Specification	Applicable Insert		DC	LC	L4	L5	D1	D4	BAR	KG	Stock
	Center Insert	Peripheral Insert									
MGU4120_FC20_SP01	SC01	SP01	12	48	69	50	20	25	10	0.163	★
MGU4125_FC20_SP01	SC01	SP01	12.5	50	71	50	20	25	10	0.166	★
MGU4130_FC20_SP01	SC01	SP01	13	52	73	50	20	25	10	0.169	★
MGU4135_FC20_SP01	SC01	SP01	13.5	54	74	50	20	25	10	0.172	★
MGU4140_FC20_SP02	SC02	SP02	14	59.01	72	50	20	25	10	0.174	★
MGU4145_FC20_SP02	SC02	SP02	14.5	62.13	75	50	20	25	10	0.175	★
MGU4150_FC20_SP02	SC02	SP02	15	64.87	77	50	20	25	10	0.178	★
MGU4155_FC20_SP02	SC02	SP02	15.5	66.4	79	50	20	25	10	0.184	★
MGU4160_FC20_SP02	SC02	SP02	16	67.51	82	50	20	25	10	0.194	★
MGU4165_FC20_SP03	SC03	SP03	16.5	69.7	84	50	20	25	10	0.195	★
MGU4170_FC25_SP03	SC03	SP03	17	71.54	86	56	25	32	10	0.305	★
MGU4175_FC25_SP03	SC03	SP03	17.5	73.79	89	56	25	32	10	0.317	★
MGU4180_FC25_SP03	SC03	SP03	18	75.4	91	56	25	32	10	0.323	★
MGU4185_FC25_SP03	SC03	SP03	18.5	77.53	93	56	25	32	10	0.330	★
MGU4190_FC25_SP03	SC03	SP03	19	79.66	95	56	25	32	10	0.34	★
MGU4193_FC25_SP03	SC03	SP03	19.25	83.7	99	56	25	32	10	0.343	★
MGU4195_FC25_SP03	SC03	SP03	19.5	83.8	99	56	25	32	10	0.347	★
MGU4200_FC25_SP04	SC04	SP04	20	83.38	101	56	25	32	10	0.365	★
MGU4205_FC25_SP04	SC04	SP04	20.5	86.58	104	56	25	32	10	0.375	★
MGU4210_FC25_SP04	SC04	SP04	21	89.78	105	56	25	32	10	0.374	★
MGU4215_FC25_SP04	SC04	SP04	21.5	89.56	107.5	56	25	32	10	0.387	★
MGU4220_FC25_SP04	SC04	SP04	22	91.22	109	56	25	32	10	0.397	★
MGU4225_FC25_SP04	SC04	SP04	22.5	93.63	112	56	25	32	10	0.406	★
MGU4230_FC25_SP04	SC04	SP04	23	95.9	114	56	25	32	10	0.417	★
MGU4240_FC25_SP05	SC05	SP05	24	101.48	119	56	25	32	10	0.426	★
MGU4245_FC25_SP05	SC05	SP05	24.5	102.36	121.5	56	25	32	10	0.443	★
MGU4250_FC25_SP05	SC05	SP05	25	107.1	124	56	25	32	10	0.456	★
MGU4253_FC25_SP05	SC05	SP05	25.25	107.24	124	56	25	32	10	0.46	★
MGU4260_FC32_SP05	SC05	SP05	26	107.79	128	60	32	39.6	10	0.686	★
MGU4265_FC32_SP05	SC05	SP05	26.5	109.98	130	60	32	39.6	10	0.702	★

880 Inserts U Drill

Specification	Applicable Insert		DC	LC	L4	L5	D1	D4	BAR	KG	Stock
	Center Insert	Peripheral Insert									
MGU4270_FC32_SP05	SC05	SP05	27	112.19	132	60	32	39.6	10	0.717	★
MGU4280_FC32_SP05	SC05	SP05	28	115.66	137	60	32	39.6	10	0.748	★
MGU4290_FC32_SP05	SC05	SP05	29	120.24	141	60	32	39.6	10	0.781	★
MGU4295_FC32_SP05	SC05	SP05	29.5	123.2	144	60	32	39.6	10	0.801	★
MGU4300_FC32_SP06	SC06	SP06	30	125.5	147	60	32	39.6	10	0.801	★
MGU4310_FC40_SP06	SC06	SP06	31	128	152	70	40	48	10	1.18	★
MGU4320_FC40_SP06	SC06	SP06	32	131.98	156	70	40	48	10	1.218	★
MGU4330_FC40_SP06	SC06	SP06	33	136.61	161	70	40	48	10	1.264	★
MGU4340_FC40_SP06	SC06	SP06	34	140.74	165	70	40	48	10	1.312	★
MGU4350_FC40_SP06	SC06	SP06	35	145.58	170	70	40	48	10	1.369	★
MGU4360_FC40_SP07	SC07	SP07	36	148.89	175	70	40	48	10	1.431	★
MGU4370_FC40_SP07	SC07	SP07	37	151.71	179	70	40	48	10	1.484	★
MGU4380_FC40_SP07	SC07	SP07	38	157.09	184	70	40	48	10	1.546	★
MGU4390_FC40_SP07	SC07	SP07	39	161.85	188	70	40	48	10	1.62	★
MGU4400_FC40_SP07	SC07	SP07	40	167.65	193	70	40	48	10	1.771	★
MGU4410_FC40_SP07	SC07	SP07	41	168.69	198	70	40	48	10	1.86	★
MGU4420_FC40_SP07	SC07	SP07	42	172.18	202	80	50	62.5	10	2.64	★
MGU4430_FC40_SP07	SC07	SP07	43	176	207	80	50	62.5	10	2.74	★
MGU4440_FC40_SP08	SC08	SP08	44	180.04	211	80	50	62.5	10	2.833	★
MGU4450_FC40_SP08	SC08	SP08	45	185.224	217	80	50	62.5	10	2.953	★
MGU4460_FC40_SP08	SC08	SP08	46	188.97	222	80	50	62.5	10	3.056	★
MGU4470_FC40_SP08	SC08	SP08	47	193.1	226	80	50	62.5	10	3.124	★
MGU4480_FC40_SP08	SC08	SP08	48	197	231	80	50	62.5	10	3.25	★
MGU4490_FC40_SP08	SC08	SP08	49	201.18	235	80	50	62.5	10	3.365	★
MGU4500_FC40_SP08	SC08	SP08	50	204.98	240	80	50	62.5	10	3.51	★
MGU4505_FC40_SP08	SC08	SP08	50.5	208.229	242	80	50	62.5	10	3.56	★
MGU4510_FC40_SP08	SC08	SP08	51	209.17	245	80	50	62.5	10	3.61	★
MGU4520_FC40_SP08	SC08	SP08	52	213.03	249	80	50	62.5	10	3.75	★
MGU4530_FC40_SP09	SC09	SP09	53	218	253	80	50	62.5	10	3.83	☆
MGU4540_FC40_SP09	SC09	SP09	54	221.98	258	80	50	62.5	10	3.92	☆
MGU4550_FC40_SP09	SC09	SP09	55	226	263	80	50	62.5	10	4.12	☆
MGU4560_FC40_SP09	SC09	SP09	56	230.68	269	80	50	62.5	10	4.32	☆
MGU4570_FC40_SP09	SC09	SP09	57	234	273	80	50	62.5	10	4.45	☆
MGU4580_FC40_SP09	SC09	SP09	58	238.95	277	80	50	62.5	10	4.63	☆
MGU4590_FC40_SP09	SC09	SP09	59	242	282	80	50	62.5	10	4.92	☆
MGU4600_FC40_SP09	SC09	SP09	60	246	287	80	50	62.5	10	5.23	☆
MGU4610_FC40_SP09	SC09	SP09	61	250	292	80	50	62.5	10	5.55	☆
MGU4620_FC40_SP09	SC09	SP09	62	254	296	80	50	62.5	10	5.87	☆
MGU4630_FC40_SP09	SC09	SP09	63	258	301	80	50	62.5	10	6.18	☆

880 Inserts U Drill

Interface type : Trim straight handle ISO 9766

Cooling method : internal cooling

Standard product range : 5XDC

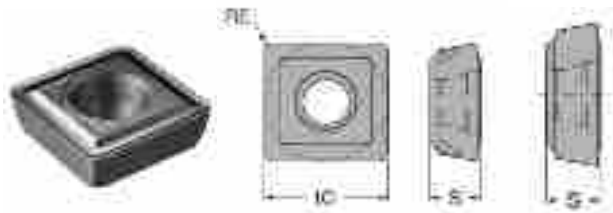


Specification	Applicable Insert		DC	LC	L4	L5	D1	D4	BAR	KG	Stock
	Center Insert	Peripheral Insert									
MGU5120_FC20_SP01	SC01	SP01	12	60.0	81	50	20	25	10	0.167	★
MGU5125_FC20_SP01	SC01	SP01	12.5	62.5	84	50	20	25	10	0.170	★
MGU5130_FC20_SP01	SC01	SP01	13	65.0	86	50	20	25	10	0.173	★
MGU5135_FC20_SP01	SC01	SP01	13.5	67.5	88	50	20	25	10	0.176	★
MGU5140_FC20_SP02	SC02	SP02	14	73.65	86	50	20	25	10	0.180	★
MGU5145_FC20_SP02	SC02	SP02	14.5	76.76	89	50	20	25	10	0.181	★
MGU5150_FC20_SP02	SC02	SP02	15	79.26	92	50	20	25	10	0.187	★
MGU5155_FC20_SP02	SC02	SP02	15.5	82.4	95	50	20	25	10	0.194	★
MGU5160_FC20_SP02	SC02	SP02	16	83.5	98	50	20	25	10	0.208	★
MGU5165_FC20_SP03	SC03	SP03	16.5	86.7	101	50	20	25	10	0.207	★
MGU5170_FC25_SP03	SC03	SP03	17	88.0	103	56	25	32	10	0.317	★
MGU5175_FC25_SP03	SC03	SP03	17.5	91.27	107	56	25	32	10	0.331	★
MGU5180_FC25_SP03	SC03	SP03	18	93.4	109	56	25	32	10	0.339	★
MGU5185_FC25_SP03	SC03	SP03	18.5	96.52	112	56	25	32	10	0.348	★
MGU5190_FC25_SP03	SC03	SP03	19	98.66	114	56	25	32	10	0.356	★
MGU5193_FC25_SP03	SC03	SP03	19.25	102.73	118	56	25	32	10	0.363	★
MGU5195_FC25_SP03	SC03	SP03	19.5	102.8	118	56	25	32	10	0.367	★
MGU5200_FC25_SP04	SC04	SP04	20	103.38	121	56	25	32	10	0.388	★
MGU5205_FC25_SP04	SC04	SP04	20.5	105.57	123	56	25	32	10	0.398	★
MGU5210_FC25_SP04	SC04	SP04	21	108.78	126	56	25	32	10	0.401	★
MGU5215_FC25_SP04	SC04	SP04	21.5	111.0	129	56	25	32	10	0.411	★
MGU5220_FC25_SP04	SC04	SP04	22	113.22	131	56	25	32	10	0.425	★
MGU5230_FC25_SP04	SC04	SP04	23	119.89	138	56	25	32	10	0.459	★
MGU5240_FC25_SP05	SC05	SP05	24	125.47	143	56	25	32	10	0.470	★
MGU5250_FC25_SP05	SC05	SP05	25	132.09	149	56	25	32	10	0.502	★
MGU5253_FC25_SP05	SC05	SP05	25.25	132.22	149	56	25	32	10	0.507	★
MGU5260_FC32_SP05	SC05	SP05	26	133.78	154	60	32	39.6	10	0.739	★
MGU5265_FC32_SP05	SC05	SP05	26.5	136.49	157	60	32	39.6	10	0.755	★
MGU5270_FC32_SP05	SC05	SP05	27	139.18	159	60	32	39.6	10	0.775	★
MGU5280_FC32_SP05	SC05	SP05	28	143.28	165	60	32	39.6	10	0.814	★

880 Inserts U Drill

Specification	Applicable Insert		DC	LC	L4	L5	D1	D4	BAR	KG	Stock
	Center Insert	Peripheral Insert									
MGU5290_FC32_SP05	SC05	SP05	29	149.53	171	60	32	39.6	10	0.855	★
MGU5300_FC32_SP06	SC06	SP06	30	155.49	177	60	32	39.6	10	0.880	★
MGU5310_FC40_SP06	SC06	SP06	31	159.0	183	70	40	48	10	1.260	★
MGU5320_FC40_SP06	SC06	SP06	32	164.42	188	70	40	48	10	1.310	★
MGU5330_FC40_SP06	SC06	SP06	33	169.2	194	70	40	48	10	1.364	★
MGU5340_FC40_SP06	SC06	SP06	34	175.73	200	70	40	48	10	1.426	★
MGU5350_FC40_SP06	SC06	SP06	35	181.57	206	70	40	48	10	1.495	★
MGU5360_FC40_SP07	SC07	SP07	36	186.0	212	70	40	48	10	1.574	★
MGU5370_FC40_SP07	SC07	SP07	37	189.0	216	70	40	48	10	1.643	★
MGU5380_FC40_SP07	SC07	SP07	38	195.08	222	70	40	48	10	1.720	★
MGU5390_FC40_SP07	SC07	SP07	39	201.84	228	70	40	48	10	1.793	★
MGU5400_FC40_SP07	SC07	SP07	40	208.64	234	70	40	48	10	1.841	★
MGU5410_FC40_SP07	SC07	SP07	41	215.51	240	70	40	48	10	2.110	★
MGU5420_FC40_SP07	SC07	SP07	42	219.85	245	80	50	62.5	10	2.854	★
MGU5430_FC40_SP07	SC07	SP07	43	236.16	251	80	50	62.5	10	2.969	★
MGU5440_FC40_SP08	SC08	SP08	44	223.99	255	80	50	62.5	10	3.153	☆
MGU5450_FC40_SP08	SC08	SP08	45	230.14	262	80	50	62.5	10	3.281	☆
MGU5460_FC40_SP08	SC08	SP08	46	234.97	268	80	50	62.5	10	3.410	☆
MGU5470_FC40_SP08	SC08	SP08	47	240.1	273	80	50	62.5	10	3.520	☆
MGU5480_FC40_SP08	SC08	SP08	48	245.0	279	80	50	62.5	10	3.675	☆
MGU5490_FC40_SP08	SC08	SP08	49	250.18	284	80	50	62.5	10	3.827	☆
MGU5500_FC40_SP08	SC08	SP08	50	254.92	290	80	50	62.5	10	3.990	☆
MGU5510_FC40_SP08	SC08	SP08	51	259.47	296	80	50	62.5	10	4.131	☆
MGU5520_FC40_SP08	SC08	SP08	52	265.0	301	80	50	62.5	10	4.305	☆

© Peripheral Insert

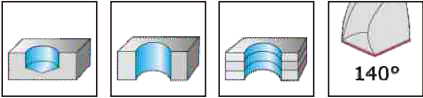
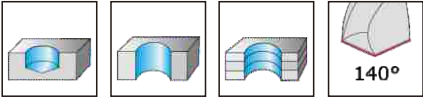
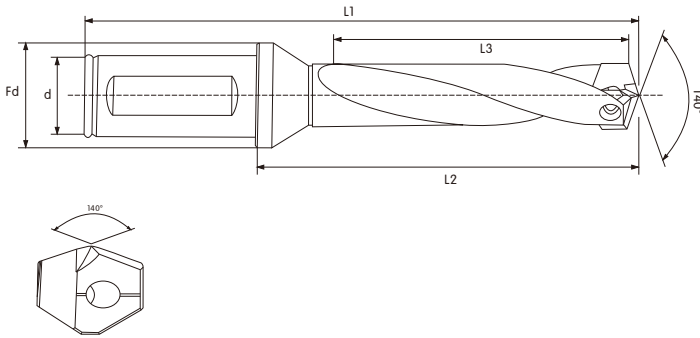
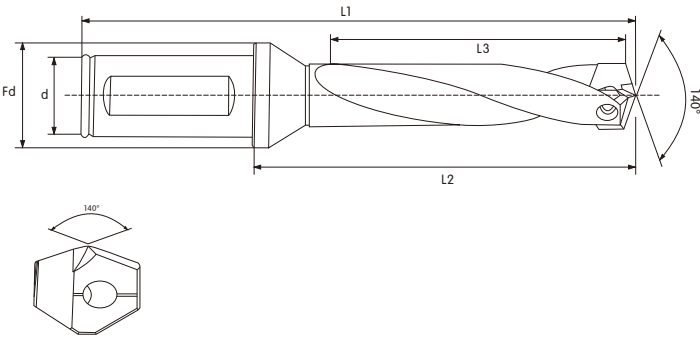
										
					P		●	●	○	●
					M		○	○	●	
					K		●	●		●
					N			○	○	
					S			○	●	
					H		●	○		
	Specification	Size (mm)			Efficiency	Material				
		IC	S	RE		Mp2150	Mp3150	Mm4235		
01	D-SPGX010204-LM	4.6	2	0.4	Medium feed			●		
	D-SPGX010204-GR	4.6	2	0.4	High feed		●			
02	D-SPGX020204-GM	5.1	2.4	0.4	Medium feed	●	●			
	D-SPGX020205-LM	5.1	2.4	0.5			●			
	D-SPGX020205-MS	5.1	2.4	0.5				●		
	D-SPGX020205-GR	5.1	2.4	0.5			●			
03	D-SPGX030305-GM	6.0	2.6	0.5	Medium feed	●	●			
	D-SPGX030306-LM	6.0	2.6	0.6			●			
	D-SPGX030305-MS	6.0	2.6	0.6				●		
	D-SPGX030306-GR	6.0	2.6	0.6			●			
04	D-SPGX040305-GM	7.4	2.8	0.5	Medium feed	●	●			
	D-SPGX040307-LM	7.4	2.8	0.7			●			
	D-SPGX040307-MS	7.4	2.8	0.7				●		
	D-SPGX040307-GR	7.4	2.8	0.7			●			
05	D-SPGX050305-GM	8.9	3.0	0.5	Medium feed	●	●			
	D-SPGX050308-LM	8.9	3.0	0.8			●			
	D-SPGX050308-MS	8.9	3.0	0.8				●		
	D-SPGX050308-GR	8.9	3.0	0.8			●			
06	D-SPGX060406-GM	10.7	3.5	0.6	Medium feed	●	●			
	D-SPGX060408-LM	10.7	3.5	0.8			●			
	D-SPGX060408-MS	10.7	3.5	0.8				●		
	D-SPGX060410-GR	10.7	3.5	1.0			●			
07	D-SPGX070406-GM	12.7	4.0	0.6	Medium feed	●	●			
	D-SPGX070410-LM	12.7	4.0	1.0			●			
	D-SPGX070410-MS	12.7	4.0	1.0				●		
	D-SPGX070412-GR	12.7	4.0	1.2			●			
08	D-SPGX080508-GM	15.5	4.5	0.8	Medium feed	●	●			
	D-SPGX080510-LM	15.5	4.5	1.0			●			
	D-SPGX080510-MS	15.5	4.5	1.0				●		
	D-SPGX080512-GR	15.5	4.5	1.2			●			
09	D-SPGX090608-GM	18.6	5.5	0.8	Medium feed	●	●			
	D-SPGX090610-LM	18.6	5.5	1.0			●			
	D-SPGX090610-MS	18.6	5.5	1.0				●		
	D-SPGX090612-GR	18.6	5.5	1.2			●			

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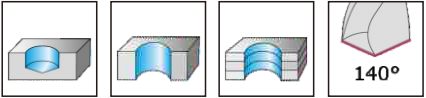
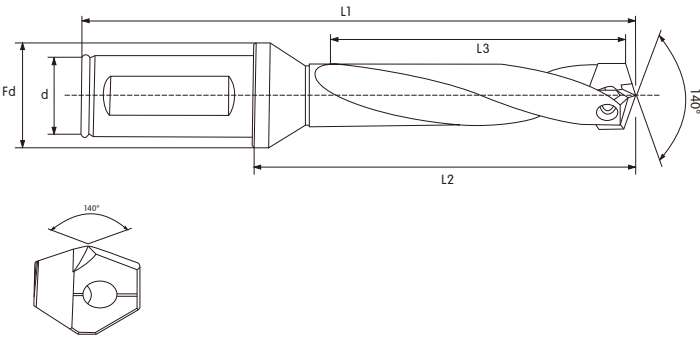
 3 x D	Dc/mm	Lc/mm	Ls/mm	d/mm	Seat size
HCD-03-12.00F16	12	36	48	16	A
HCD-03-13.00F16	13	41	48	16	A
HCD-03-14.00F16	14	45	48	16	B
HCD-03-15.00F16	15	48	48	16	B
HCD-03-16.00F20	16	51	50	20	C
HCD-03-17.00F20	17	54	50	20	C
HCD-03-18.00F20	18	57	50	20	D
HCD-03-19.00F20	19	61	50	20	D
HCD-03-20.00F20	20	64	50	20	E
HCD-03-21.00F20	21	67	50	20	E
HCD-03-22.00F25	22	70	56	25	F
HCD-03-23.00F25	23	73	56	25	F
HCD-03-24.00F25	24	76	56	25	G
HCD-03-25.00F25	25	80	56	25	G
HCD-03-26.00F25	26	83	56	25	H
HCD-03-27.00F25	27	86	56	25	H
HCD-03-28.00F32	28	89	60	32	J
HCD-03-29.00F32	29	92	60	32	J
HCD-03-30.00F32	30	95	60	32	K
HCD-03-31.00F32	31	99	60	32	K
HCD-03-32.00F40	32	102	70	40	M
HCD-03-33.00F40	33	105	70	40	M
HCD-03-34.00F40	34	108	70	40	N
HCD-03-35.00F40	35	111	70	40	N
HCD-03-36.00F40	36	115	70	40	P
HCD-03-37.00F40	37	118	70	40	P

 5 x D	Dc/mm	Lc/mm	Ls/mm	d/mm	Seat size
HCD-05-12.00F16	12	62	48	16	A
HCD-05-13.00F16	13	67	48	16	A
HCD-05-14.00F16	14	73	48	16	B
HCD-05-15.00F16	15	78	48	16	B
HCD-05-16.00F20	16	83	50	20	C
HCD-05-17.00F20	17	88	50	20	C
HCD-05-18.00F20	18	93	50	20	D
HCD-05-19.00F20	19	98	50	20	D
HCD-05-20.00F20	20	104	50	20	E
HCD-05-21.00F20	21	109	50	20	E
HCD-05-22.00F25	22	114	56	25	F
HCD-05-23.00F25	23	119	56	25	F
HCD-05-24.00F25	24	124	56	25	G
HCD-05-25.00F25	25	130	56	25	G
HCD-05-26.00F25	26	135	56	25	H
HCD-05-27.00F25	27	140	56	25	H
HCD-05-28.00F32	28	145	60	32	J
HCD-05-29.00F32	29	150	60	32	J
HCD-05-30.00F32	30	155	60	32	K
HCD-05-31.00F32	31	161	60	32	K
HCD-05-32.00F40	32	166	70	40	M
HCD-05-33.00F40	33	171	70	40	M
HCD-05-34.00F40	34	176	70	40	N
HCD-05-35.00F40	35	181	70	40	N
HCD-05-36.00F40	36	187	70	40	P
HCD-05-37.00F40	37	192	70	40	P

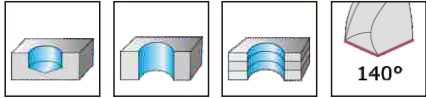
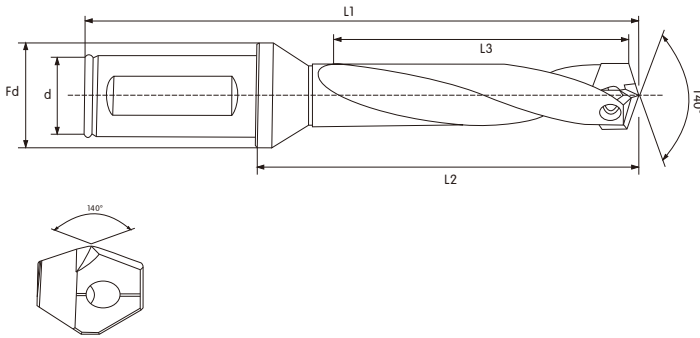
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 7 x D	Dc/mm	Lc/mm	Ls/mm	d/mm	Seat size
HCD-07-12.00F16	12	86	48	16	A
HCD-07-13.00F16	13	93	48	16	A
HCD-07-14.00F16	14	101	48	16	B
HCD-07-15.00F16	15	108	48	16	B
HCD-07-16.00F20	16	115	50	20	C
HCD-07-17.00F20	17	122	50	20	C
HCD-07-18.00F20	18	133	50	20	D
HCD-07-19.00F20	19	136	50	20	D
HCD-07-20.00F20	20	144	50	20	E
HCD-07-21.00F20	21	151	50	20	E
HCD-07-22.00F25	22	158	56	25	F
HCD-07-23.00F25	23	165	56	25	F
HCD-07-24.00F25	24	172	56	25	G
HCD-07-25.00F25	25	180	56	25	G
HCD-07-26.00F25	26	187	56	25	H
HCD-07-27.00F25	27	194	56	25	H
HCD-07-28.00F32	28	201	60	32	J
HCD-07-29.00F32	29	208	60	32	J
HCD-07-30.00F32	30	215	60	32	K
HCD-07-31.00F32	31	223	60	32	K
HCD-07-32.00F40	32	230	70	40	M
HCD-07-33.00F40	33	237	70	40	M
HCD-07-34.00F40	34	244	70	40	N
HCD-07-35.00F40	35	251	70	40	N
HCD-07-36.00F40	36	259	70	40	P
HCD-07-37.00F40	37	266	70	40	P

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 10 x D	Dc/mm	Lc/mm	Ls/mm	d/mm	Seat size
HCD-10-12.00F16	12	120	48	16	A
HCD-10-13.00F16	13	130	48	16	A
HCD-10-14.00F16	14	140	48	16	B
HCD-10-15.00F16	15	150	48	16	B
HCD-10-16.00F20	16	160	50	20	C
HCD-10-17.00F20	17	170	50	20	C
HCD-10-18.00F20	18	180	50	20	D
HCD-10-19.00F20	19	190	50	20	D
HCD-10-20.00F20	20	200	50	20	E
HCD-10-21.00F20	21	210	50	20	E
HCD-10-22.00F25	22	220	56	25	F
HCD-10-23.00F25	23	230	56	25	F
HCD-10-24.00F25	24	240	56	25	G
HCD-10-25.00F25	25	250	56	25	G



Ac7315 grade TiAlN-based PVD multilayer coating for high cutting speeds, primarily in steel applications.



Ac7320 grade AlTiN-based PVD coating for the demands of drilling stainless steels.



ACPM45 grade multilayer TiAlN coated, very tough carbide substrate. Improved chipping resistance in demanding machining conditions.



Rapid chip removal
A large area of high-precision chute ensures smooth mesh, thereby extending tool life and improving tool performance.

Internal cooling water method
The internal coolant reaches the cutting zone directly. Extended tool life and effective chip removal.

SEM series modular interchangeable drill bit
A robust blade slot design increases accuracy, safety and stability.

Unique drill point groove type
Three special materials and self-centering tip design ensure excellent hole machining accuracy and optimized tool performance.



Feature and advantage

◎ HZ Drill-Point styles

- Low thrust prevents workpiece flexing.
- Excellent centring capabilities.
- Application specific selection of geometries for unmatched performance

◎ Strong Pocket, Easy Insert Change

- Robust pocket design for increased insert and holder life.
- Four-wall pocket provides insert stability.
- Requires only a simple wrench for insert removal.

◎ Re grindable Inserts

- All geometries except SPL can be reconditioned to improve tool economy.
- Quick and reliable regrinding services offered by Acckee and our partners.

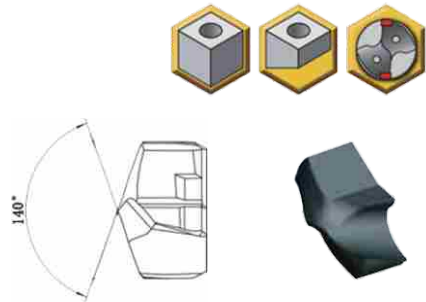
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SEM Drill Insert
YLMD MAX Drill
Carbide Inserts
Rough Boring Head
Finish Boring Head
Chuck
Accessories
Chamfering Tools
Gun Drill Technology

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SEM Drill Insert
YLMD MAX Drill
Carbide Inserts
Rough Boring Head
Finish Boring Head
Chuck
Accessories
Chamfering Tools
Gun Drill Technology

SEM INSERTS

SEM INSERTS

- SEM KC7315 HZ cutting edges enable high metal removal rates and superior tool life for steel applications.
- HZ geometry offers a wide and strong HP–style chiseled edge that prevents material quenching in the centre, enablinghigh feed rates. Sickel shaped, honed cutting edges provide excellent chip forming and tool life, even in long chipping materials.
- AC7315 is a fine–grain carbide with a TiAlN–based PVD multilayer coating. Its high wear resistance enables very high cutting speeds in stable conditions.
- AC7315 HP cutting edges are perfectly suited to drill alloyed and high–alloy steels.



SEM INSERTS • HZ • AC7315



ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM2010	20.1	3
SEM INSERTS	SEM2020	20.2	3
SEM INSERTS	SEM2030	20.3	3
SEM INSERTS	SEM2040	20.4	3
SEM INSERTS	SEM2050	20.5	3
SEM INSERTS	SEM2060	20.6	3
SEM INSERTS	SEM2070	20.7	3
SEM INSERTS	SEM2080	20.8	3
SEM INSERTS	SEM2090	20.9	3
SEM INSERTS	SEM2100	21.0	3
SEM INSERTS	SEM2110	21.1	3
SEM INSERTS	SEM2120	21.2	3
SEM INSERTS	SEM2130	21.3	3
SEM INSERTS	SEM2140	21.4	3
SEM INSERTS	SEM2150	21.5	3
SEM INSERTS	SEM2160	21.6	3
SEM INSERTS	SEM2170	21.7	3
SEM INSERTS	SEM2180	21.8	3
SEM INSERTS	SEM2190	21.9	3
SEM INSERTS	SEM2200	22.0	3
SEM INSERTS	SEM2210	22.1	4
SEM INSERTS	SEM2220	22.2	4
SEM INSERTS	SEM2230	22.3	4
SEM INSERTS	SEM2240	22.4	4
SEM INSERTS	SEM2250	22.5	4
SEM INSERTS	SEM2260	22.6	4
SEM INSERTS	SEM2270	22.7	4
SEM INSERTS	SEM2280	22.8	4
SEM INSERTS	SEM2290	22.9	4
SEM INSERTS	SEM2300	23.0	4
SEM INSERTS	SEM2310	23.1	4
SEM INSERTS	SEM2320	23.2	4
SEM INSERTS	SEM2330	23.3	4
SEM INSERTS	SEM2340	23.4	4
SEM INSERTS	SEM2350	23.5	4
SEM INSERTS	SEM2360	23.6	4
SEM INSERTS	SEM2370	23.7	4
SEM INSERTS	SEM2380	23.8	4
SEM INSERTS	SEM2390	23.9	4
SEM INSERTS	SEM2400	24.0	4
SEM INSERTS	SEM2410	24.1	5
SEM INSERTS	SEM2420	24.2	5
SEM INSERTS	SEM2430	24.3	5
SEM INSERTS	SEM2440	24.4	5
SEM INSERTS	SEM2450	24.5	5
SEM INSERTS	SEM2460	24.6	5
SEM INSERTS	SEM2470	24.7	5
SEM INSERTS	SEM2480	24.8	5

ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM2490	24.9	5
SEM INSERTS	SEM2500	25.0	5
SEM INSERTS	SEM2510	25.1	5
SEM INSERTS	SEM2520	25.2	5
SEM INSERTS	SEM2530	25.3	5
SEM INSERTS	SEM2540	25.4	5
SEM INSERTS	SEM2550	25.5	5
SEM INSERTS	SEM2560	25.6	5
SEM INSERTS	SEM2570	25.7	5
SEM INSERTS	SEM2580	25.8	5
SEM INSERTS	SEM2590	25.9	5
SEM INSERTS	SEM2600	26.0	5
SEM INSERTS	SEM2610	26.1	6
SEM INSERTS	SEM2620	26.2	6
SEM INSERTS	SEM2630	26.3	6
SEM INSERTS	SEM2640	26.4	6
SEM INSERTS	SEM2650	26.5	6
SEM INSERTS	SEM2660	26.6	6
SEM INSERTS	SEM2670	26.7	6
SEM INSERTS	SEM2680	26.8	6
SEM INSERTS	SEM2690	26.9	6
SEM INSERTS	SEM2700	27.0	6
SEM INSERTS	SEM2710	27.1	6
SEM INSERTS	SEM2720	27.2	6
SEM INSERTS	SEM2730	27.3	6
SEM INSERTS	SEM2740	27.4	6
SEM INSERTS	SEM2750	27.5	6
SEM INSERTS	SEM2760	27.6	6
SEM INSERTS	SEM2770	27.7	6
SEM INSERTS	SEM2780	27.8	6
SEM INSERTS	SEM2790	27.9	6
SEM INSERTS	SEM2800	28.0	6
SEM INSERTS	SEM2810	28.1	7
SEM INSERTS	SEM2820	28.2	7
SEM INSERTS	SEM2830	28.3	7
SEM INSERTS	SEM2840	28.4	7
SEM INSERTS	SEM2850	28.5	7
SEM INSERTS	SEM2860	28.6	7
SEM INSERTS	SEM2870	28.7	7
SEM INSERTS	SEM2880	28.8	7
SEM INSERTS	SEM2890	28.9	7
SEM INSERTS	SEM2900	29.0	7
SEM INSERTS	SEM2910	29.1	7
SEM INSERTS	SEM2920	29.2	7
SEM INSERTS	SEM2930	29.3	7
SEM INSERTS	SEM2940	29.4	7
SEM INSERTS	SEM2950	29.5	7
SEM INSERTS	SEM2960	29.6	7

SEM INSERTS • HZ • AC7315



ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM1250	12.5	C
SEM INSERTS	SEM1260	12.6	C
SEM INSERTS	SEM1270	12.7	C
SEM INSERTS	SEM1280	12.8	C
SEM INSERTS	SEM1290	12.9	C
SEM INSERTS	SEM1300	13.0	C
SEM INSERTS	SEM1310	13.1	C
SEM INSERTS	SEM1320	13.2	C
SEM INSERTS	SEM1330	13.3	C
SEM INSERTS	SEM1340	13.4	C
SEM INSERTS	SEM1350	13.5	C
SEM INSERTS	SEM1360	13.6	B
SEM INSERTS	SEM1370	13.7	B
SEM INSERTS	SEM1380	13.8	B
SEM INSERTS	SEM1390	13.9	B
SEM INSERTS	SEM1400	14.0	B
SEM INSERTS	SEM1410	14.1	B
SEM INSERTS	SEM1420	14.2	B
SEM INSERTS	SEM1430	14.3	B
SEM INSERTS	SEM1440	14.4	B
SEM INSERTS	SEM1450	14.5	B
SEM INSERTS	SEM1460	14.6	A
SEM INSERTS	SEM1470	14.7	A
SEM INSERTS	SEM1480	14.8	A
SEM INSERTS	SEM1490	14.9	A
SEM INSERTS	SEM1500	15.0	A
SEM INSERTS	SEM1510	15.1	A
SEM INSERTS	SEM1520	15.2	A
SEM INSERTS	SEM1530	15.3	A
SEM INSERTS	SEM1540	15.4	A
SEM INSERTS	SEM1550	15.5	A
SEM INSERTS	SEM1560	15.6	A
SEM INSERTS	SEM1570	15.7	A
SEM INSERTS	SEM1580	15.8	A
SEM INSERTS	SEM1590	15.9	1
SEM INSERTS	SEM1600	16.0	1
SEM INSERTS	SEM1610	16.1	1
SEM INSERTS	SEM1620	16.2	1

ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM1630	16.3	1
SEM INSERTS	SEM1640	16.4	1
SEM INSERTS	SEM1650	16.5	1
SEM INSERTS	SEM1660	16.6	1
SEM INSERTS	SEM1670	16.7	1
SEM INSERTS	SEM1680	16.8	1
SEM INSERTS	SEM1690	16.9	1
SEM INSERTS	SEM1700	17.0	1
SEM INSERTS	SEM1710	17.1	1
SEM INSERTS	SEM1720	17.2	1
SEM INSERTS	SEM1730	17.3	1
SEM INSERTS	SEM1740	17.4	1
SEM INSERTS	SEM1750	17.5	1
SEM INSERTS	SEM1760	17.6	1
SEM INSERTS	SEM1770	17.7	1
SEM INSERTS	SEM1780	17.8	1
SEM INSERTS	SEM1790	17.9	1
SEM INSERTS	SEM1800	18.0	1
SEM INSERTS	SEM1810	18.1	2
SEM INSERTS	SEM1820	18.2	2
SEM INSERTS	SEM1830	18.3	2
SEM INSERTS	SEM1840	18.4	2
SEM INSERTS	SEM1850	18.5	2
SEM INSERTS	SEM1860	18.6	2
SEM INSERTS	SEM1870	18.7	2
SEM INSERTS	SEM1880	18.8	2
SEM INSERTS	SEM1890	18.9	2
SEM INSERTS	SEM1900	19.0	2
SEM INSERTS	SEM1910	19.1	2
SEM INSERTS	SEM1920	19.2	2
SEM INSERTS	SEM1930	19.3	2
SEM INSERTS	SEM1940	19.4	2
SEM INSERTS	SEM1950	19.5	2
SEM INSERTS	SEM1960	19.6	2
SEM INSERTS	SEM1970	19.7	2
SEM INSERTS	SEM1980	19.8	2
SEM INSERTS	SEM1990	19.9	2
SEM INSERTS	SEM2000	20.0	3

SEM INSERTS

SEM INSERTS

◎ SEM INSERTS · HZ · AC7315



ITEM	insert blade	mm	Seat size	ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM2970	29.7	7	SEM INSERTS	SEM3090	30.9	8
SEM INSERTS	SEM2980	29.8	7	SEM INSERTS	SEM3100	31.0	8
SEM INSERTS	SEM2990	29.9	7	SEM INSERTS	SEM3110	31.1	8
SEM INSERTS	SEM3000	30.0	7	SEM INSERTS	SEM3120	31.2	8
SEM INSERTS	SEM3010	30.1	8	SEM INSERTS	SEM3130	31.3	8
SEM INSERTS	SEM3020	30.2	8	SEM INSERTS	SEM3140	31.4	8
SEM INSERTS	SEM3030	30.3	8	SEM INSERTS	SEM3150	31.5	8
SEM INSERTS	SEM3040	30.4	8	SEM INSERTS	SEM3160	31.6	8
SEM INSERTS	SEM3050	30.5	8	SEM INSERTS	SEM3170	31.7	8
SEM INSERTS	SEM3060	30.6	8	SEM INSERTS	SEM3180	31.8	8
SEM INSERTS	SEM3070	30.7	8	SEM INSERTS	SEM3190	31.9	8
SEM INSERTS	SEM3080	30.8	8	SEM INSERTS	SEM3200	32.0	8

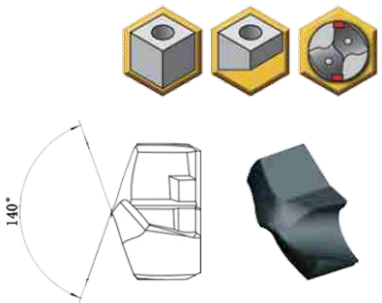
◎ Tolerance HZ · Metric

D1 metric	tolerance h8
12.5–1	+0.000/–0.027
> 18–30	+0.000/–0.033
> 30–32	+0.000/–0.039

◎ Modular Drill Carbide Insert Blades · SEM · HZ Geometry · Grade Ac7315 Through Coolant · Metric

D1 metric		Cutting Speed — vc Range — m/min			Metric					
					Recommended Feed Rate (f) by Diameter					
		min	Starting Value	max		12.5	16.0	20.0	25.4	32.0
P	Mild steel	100	100	120	mm/r	0.15–0.31	0.17–0.36	0.19–0.41	0.25–0.53	0.29–0.60
	Medium carbon steel/high carbon steel	80	95	110	mm/r	0.15–0.31	0.17–0.36	0.19–0.41	0.25–0.53	0.29–0.60
	Alloy steel/tool steel	65	70	80	mm/r	0.15–0.31	0.17–0.36	0.19–0.41	0.25–0.53	0.29–0.60
M	austenitic stainless steel	30	60	90	mm/r	0.09–0.14	0.11–0.17	0.13–0.20	0.16–0.25	0.18–0.28
	Austenitic/Cast Stainless Steel	30	50	90	mm/r	0.09–0.14	0.11–0.17	0.13–0.20	0.16–0.25	0.18–0.28
	Duplex stainless steel	20	40	60	mm/r	0.09–0.14	0.11–0.17	0.13–0.20	0.16–0.25	0.18–0.28
K	Grey cast iron	90	135	175	mm/r	0.17–0.35	0.21–0.42	0.25–0.48	0.31–0.59	0.37–0.70
	Nodular cast iron/vermicular cast iron	90	110	125	mm/r	0.17–0.33	0.21–0.41	0.25–0.48	0.31–0.59	0.37–0.70
	High strength ductile iron	40	95	125	mm/r	0.18–0.36	0.20–0.41	0.21–0.44	0.23–0.48	0.25–0.53

- SEM HM AC7320 cutting edges provide perfect results and very high productivity in stainless steel.
- HM geometry forms two chips per cutting edge for an uninterrupted, smooth chip flow. Very high metal removal rates and a reliable drilling process up to 10 x D makes HPL the superior solution for drilling in stainless steels.
- Grade KC7320 features a high Al content TiAlN coating on a universal fine–grain carbide. Its excellent oxidation stability and carbide toughness enables a high level of wear resistance in austenitic and other stainless steels.



◎ SEM INSERTS · HM · AC7320



ITEM	insert blade	mm	Seat size	ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM1250	12.5	C	SEM INSERTS	SEM1630	16.3	1
SEM INSERTS	SEM1260	12.6	C	SEM INSERTS	SEM1640	16.4	1
SEM INSERTS	SEM1270	12.7	C	SEM INSERTS	SEM1650	16.5	1
SEM INSERTS	SEM1280	12.8	C	SEM INSERTS	SEM1660	16.6	1
SEM INSERTS	SEM1290	12.9	C	SEM INSERTS	SEM1670	16.7	1
SEM INSERTS	SEM1300	13.0	C	SEM INSERTS	SEM1680	16.8	1
SEM INSERTS	SEM1310	13.1	C	SEM INSERTS	SEM1690	16.9	1
SEM INSERTS	SEM1320	13.2	C	SEM INSERTS	SEM1700	17.0	1
SEM INSERTS	SEM1330	13.3	C	SEM INSERTS	SEM1710	17.1	1
SEM INSERTS	SEM1340	13.4	C	SEM INSERTS	SEM1720	17.2	1
SEM INSERTS	SEM1350	13.5	C	SEM INSERTS	SEM1730	17.3	1
SEM INSERTS	SEM1360	13.6	B	SEM INSERTS	SEM1740	17.4	1
SEM INSERTS	SEM1370	13.7	B	SEM INSERTS	SEM1750	17.5	1
SEM INSERTS	SEM1380	13.8	B	SEM INSERTS	SEM1760	17.6	1
SEM INSERTS	SEM1390	13.9	B	SEM INSERTS	SEM1770	17.7	1
SEM INSERTS	SEM1400	14.0	B	SEM INSERTS	SEM1780	17.8	1
SEM INSERTS	SEM1410	14.1	B	SEM INSERTS	SEM1790	17.9	1
SEM INSERTS	SEM1420	14.2	B	SEM INSERTS	SEM1800	18.0	1
SEM INSERTS	SEM1430	14.3	B	SEM INSERTS	SEM1810	18.1	2
SEM INSERTS	SEM1440	14.4	B	SEM INSERTS	SEM1820	18.2	2
SEM INSERTS	SEM1450	14.5	B	SEM INSERTS	SEM1830	18.3	2
SEM INSERTS	SEM1460	14.6	A	SEM INSERTS	SEM1840	18.4	2
SEM INSERTS	SEM1470	14.7	A	SEM INSERTS	SEM1850	18.5	2
SEM INSERTS	SEM1480	14.8	A	SEM INSERTS	SEM1860	18.6	2
SEM INSERTS	SEM1490	14.9	A	SEM INSERTS	SEM1870	18.7	2
SEM INSERTS	SEM1500	15.0	A	SEM INSERTS	SEM1880	18.8	2
SEM INSERTS	SEM1510	15.1	A	SEM INSERTS	SEM1890	18.9	2
SEM INSERTS	SEM1520	15.2	A	SEM INSERTS	SEM1900	19.0	2
SEM INSERTS	SEM1530	15.3	A	SEM INSERTS	SEM1910	19.1	2
SEM INSERTS	SEM1540	15.4	A	SEM INSERTS	SEM1920	19.2	2
SEM INSERTS	SEM1550	15.5	A	SEM INSERTS	SEM1930	19.3	2
SEM INSERTS	SEM1560	15.6	A	SEM INSERTS	SEM1940	19.4	2
SEM INSERTS	SEM1570	15.7	A	SEM INSERTS	SEM1950	19.5	2
SEM INSERTS	SEM1580	15.8	A	SEM INSERTS	SEM1960	19.6	2
SEM INSERTS	SEM1590	15.9	1	SEM INSERTS	SEM1970	19.7	2
SEM INSERTS	SEM1600	16.0	1	SEM INSERTS	SEM1980	19.8	2
SEM INSERTS	SEM1610	16.1	1	SEM INSERTS	SEM1990	19.9	2
SEM INSERTS	SEM1620	16.2	1	SEM INSERTS	SEM2000	20.0	3

SEM INSERTS

SEM INSERTS

◎ SEM INSERTS • HM • AC7320



ITEM	insert blade	mm	Seat size	ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM2010	20.1	3	SEM INSERTS	SEM2490	24.9	5
SEM INSERTS	SEM2020	20.2	3	SEM INSERTS	SEM2500	25.0	5
SEM INSERTS	SEM2030	20.3	3	SEM INSERTS	SEM2510	25.1	5
SEM INSERTS	SEM2040	20.4	3	SEM INSERTS	SEM2520	25.2	5
SEM INSERTS	SEM2050	20.5	3	SEM INSERTS	SEM2530	25.3	5
SEM INSERTS	SEM2060	20.6	3	SEM INSERTS	SEM2540	25.4	5
SEM INSERTS	SEM2070	20.7	3	SEM INSERTS	SEM2550	25.5	5
SEM INSERTS	SEM2080	20.8	3	SEM INSERTS	SEM2560	25.6	5
SEM INSERTS	SEM2090	20.9	3	SEM INSERTS	SEM2570	25.7	5
SEM INSERTS	SEM2100	21.0	3	SEM INSERTS	SEM2580	25.8	5
SEM INSERTS	SEM2110	21.1	3	SEM INSERTS	SEM2590	25.9	5
SEM INSERTS	SEM2120	21.2	3	SEM INSERTS	SEM2600	26.0	5
SEM INSERTS	SEM2130	21.3	3	SEM INSERTS	SEM2610	26.1	6
SEM INSERTS	SEM2140	21.4	3	SEM INSERTS	SEM2620	26.2	6
SEM INSERTS	SEM2150	21.5	3	SEM INSERTS	SEM2630	26.3	6
SEM INSERTS	SEM2160	21.6	3	SEM INSERTS	SEM2640	26.4	6
SEM INSERTS	SEM2170	21.7	3	SEM INSERTS	SEM2650	26.5	6
SEM INSERTS	SEM2180	21.8	3	SEM INSERTS	SEM2660	26.6	6
SEM INSERTS	SEM2190	21.9	3	SEM INSERTS	SEM2670	26.7	6
SEM INSERTS	SEM2200	22.0	3	SEM INSERTS	SEM2680	26.8	6
SEM INSERTS	SEM2210	22.1	4	SEM INSERTS	SEM2690	26.9	6
SEM INSERTS	SEM2220	22.2	4	SEM INSERTS	SEM2700	27.0	6
SEM INSERTS	SEM2230	22.3	4	SEM INSERTS	SEM2710	27.1	6
SEM INSERTS	SEM2240	22.4	4	SEM INSERTS	SEM2720	27.2	6
SEM INSERTS	SEM2250	22.5	4	SEM INSERTS	SEM2730	27.3	6
SEM INSERTS	SEM2260	22.6	4	SEM INSERTS	SEM2740	27.4	6
SEM INSERTS	SEM2270	22.7	4	SEM INSERTS	SEM2750	27.5	6
SEM INSERTS	SEM2280	22.8	4	SEM INSERTS	SEM2760	27.6	6
SEM INSERTS	SEM2290	22.9	4	SEM INSERTS	SEM2770	27.7	6
SEM INSERTS	SEM2300	23.0	4	SEM INSERTS	SEM2780	27.8	6
SEM INSERTS	SEM2310	23.1	4	SEM INSERTS	SEM2790	27.9	6
SEM INSERTS	SEM2320	23.2	4	SEM INSERTS	SEM2800	28.0	6
SEM INSERTS	SEM2330	23.3	4	SEM INSERTS	SEM2810	28.1	7
SEM INSERTS	SEM2340	23.4	4	SEM INSERTS	SEM2820	28.2	7
SEM INSERTS	SEM2350	23.5	4	SEM INSERTS	SEM2830	28.3	7
SEM INSERTS	SEM2360	23.6	4	SEM INSERTS	SEM2840	28.4	7
SEM INSERTS	SEM2370	23.7	4	SEM INSERTS	SEM2850	28.5	7
SEM INSERTS	SEM2380	23.8	4	SEM INSERTS	SEM2860	28.6	7
SEM INSERTS	SEM2390	23.9	4	SEM INSERTS	SEM2870	28.7	7
SEM INSERTS	SEM2400	24.0	4	SEM INSERTS	SEM2880	28.8	7
SEM INSERTS	SEM2410	24.1	5	SEM INSERTS	SEM2890	28.9	7
SEM INSERTS	SEM2420	24.2	5	SEM INSERTS	SEM2900	29.0	7
SEM INSERTS	SEM2430	24.3	5	SEM INSERTS	SEM2910	29.1	7
SEM INSERTS	SEM2440	24.4	5	SEM INSERTS	SEM2920	29.2	7
SEM INSERTS	SEM2450	24.5	5	SEM INSERTS	SEM2930	29.3	7
SEM INSERTS	SEM2460	24.6	5	SEM INSERTS	SEM2940	29.4	7
SEM INSERTS	SEM2470	24.7	5	SEM INSERTS	SEM2950	29.5	7
SEM INSERTS	SEM2480	24.8	5	SEM INSERTS	SEM2960	29.6	7

◎ SEM INSERTS • HM • AC7320



ITEM	insert blade	mm	Seat size	ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM2970	29.7	7	SEM INSERTS	SEM3090	30.9	8
SEM INSERTS	SEM2980	29.8	7	SEM INSERTS	SEM3100	31.0	8
SEM INSERTS	SEM2990	29.9	7	SEM INSERTS	SEM3110	31.1	8
SEM INSERTS	SEM3000	30.0	7	SEM INSERTS	SEM3120	31.2	8
SEM INSERTS	SEM3010	30.1	8	SEM INSERTS	SEM3130	31.3	8
SEM INSERTS	SEM3020	30.2	8	SEM INSERTS	SEM3140	31.4	8
SEM INSERTS	SEM3030	30.3	8	SEM INSERTS	SEM3150	31.5	8
SEM INSERTS	SEM3040	30.4	8	SEM INSERTS	SEM3160	31.6	8
SEM INSERTS	SEM3050	30.5	8	SEM INSERTS	SEM3170	31.7	8
SEM INSERTS	SEM3060	30.6	8	SEM INSERTS	SEM3180	31.8	8
SEM INSERTS	SEM3070	30.7	8	SEM INSERTS	SEM3190	31.9	8
SEM INSERTS	SEM3080	30.8	8	SEM INSERTS	SEM3200	32.0	8

◎ Tolerance HZ • Metric

D1 metric	tolerance h8
12.5–1	+0.000/–0.027
> 18–30	+0.000/–0.033
> 30–32	+0.000/–0.039

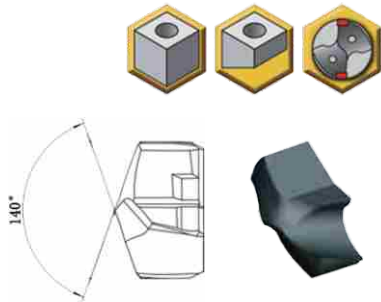
◎ Modular Drill Carbide Insert Blades • SEM • HM Geometry • Grade Ac7320 Through Coolant • Metric

D1 metric		Cutting Speed —vc Range —m/min			Metric					
					Recommended Feed Rate (f) by Diameter					
		min	Starting Value	max		12.5	16.0	20.0	25.4	32.0
M	austenitic stainless steel	30	60	90	mm/r	0.09–0.14	0.11–0.17	0.13–0.20	0.16–0.25	0.18–0.28
	Austenitic/Cast Stainless Steel	30	50	90	mm/r	0.09–0.14	0.11–0.17	0.13–0.20	0.16–0.25	0.18–0.28
	Duplex stainless steel	20	40	60	mm/r	0.09–0.14	0.11–0.17	0.13–0.20	0.16–0.25	0.18–0.28

SEM INSERTS

SEM INSERTS

ACPM45 grade multilayer TiAlN coated, very tough carbide substrate.
Improved chipping resistance in demanding machining conditions.



SEM INSERTS • HQ • ACPM45



SEM INSERTS • HQ • ACPM45



ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM1250	12.5	C
SEM INSERTS	SEM1260	12.6	C
SEM INSERTS	SEM1270	12.7	C
SEM INSERTS	SEM1280	12.8	C
SEM INSERTS	SEM1290	12.9	C
SEM INSERTS	SEM1300	13.0	C
SEM INSERTS	SEM1310	13.1	C
SEM INSERTS	SEM1320	13.2	C
SEM INSERTS	SEM1330	13.3	C
SEM INSERTS	SEM1340	13.4	C
SEM INSERTS	SEM1350	13.5	C
SEM INSERTS	SEM1360	13.6	B
SEM INSERTS	SEM1370	13.7	B
SEM INSERTS	SEM1380	13.8	B
SEM INSERTS	SEM1390	13.9	B
SEM INSERTS	SEM1400	14.0	B
SEM INSERTS	SEM1410	14.1	B
SEM INSERTS	SEM1420	14.2	B
SEM INSERTS	SEM1430	14.3	B
SEM INSERTS	SEM1440	14.4	B
SEM INSERTS	SEM1450	14.5	B
SEM INSERTS	SEM1460	14.6	A
SEM INSERTS	SEM1470	14.7	A
SEM INSERTS	SEM1480	14.8	A
SEM INSERTS	SEM1490	14.9	A
SEM INSERTS	SEM1500	15.0	A
SEM INSERTS	SEM1510	15.1	A
SEM INSERTS	SEM1520	15.2	A
SEM INSERTS	SEM1530	15.3	A
SEM INSERTS	SEM1540	15.4	A
SEM INSERTS	SEM1550	15.5	A
SEM INSERTS	SEM1560	15.6	A
SEM INSERTS	SEM1570	15.7	A
SEM INSERTS	SEM1580	15.8	A
SEM INSERTS	SEM1590	15.9	1
SEM INSERTS	SEM1600	16.0	1
SEM INSERTS	SEM1610	16.1	1
SEM INSERTS	SEM1620	16.2	1

ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM1630	16.3	1
SEM INSERTS	SEM1640	16.4	1
SEM INSERTS	SEM1650	16.5	1
SEM INSERTS	SEM1660	16.6	1
SEM INSERTS	SEM1670	16.7	1
SEM INSERTS	SEM1680	16.8	1
SEM INSERTS	SEM1690	16.9	1
SEM INSERTS	SEM1700	17.0	1
SEM INSERTS	SEM1710	17.1	1
SEM INSERTS	SEM1720	17.2	1
SEM INSERTS	SEM1730	17.3	1
SEM INSERTS	SEM1740	17.4	1
SEM INSERTS	SEM1750	17.5	1
SEM INSERTS	SEM1760	17.6	1
SEM INSERTS	SEM1770	17.7	1
SEM INSERTS	SEM1780	17.8	1
SEM INSERTS	SEM1790	17.9	1
SEM INSERTS	SEM1800	18.0	1
SEM INSERTS	SEM1810	18.1	2
SEM INSERTS	SEM1820	18.2	2
SEM INSERTS	SEM1830	18.3	2
SEM INSERTS	SEM1840	18.4	2
SEM INSERTS	SEM1850	18.5	2
SEM INSERTS	SEM1860	18.6	2
SEM INSERTS	SEM1870	18.7	2
SEM INSERTS	SEM1880	18.8	2
SEM INSERTS	SEM1890	18.9	2
SEM INSERTS	SEM1900	19.0	2
SEM INSERTS	SEM1910	19.1	2
SEM INSERTS	SEM1920	19.2	2
SEM INSERTS	SEM1930	19.3	2
SEM INSERTS	SEM1940	19.4	2
SEM INSERTS	SEM1950	19.5	2
SEM INSERTS	SEM1960	19.6	2
SEM INSERTS	SEM1970	19.7	2
SEM INSERTS	SEM1980	19.8	2
SEM INSERTS	SEM1990	19.9	2
SEM INSERTS	SEM2000	20.0	3

ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM2010	20.1	3
SEM INSERTS	SEM2020	20.2	3
SEM INSERTS	SEM2030	20.3	3
SEM INSERTS	SEM2040	20.4	3
SEM INSERTS	SEM2050	20.5	3
SEM INSERTS	SEM2060	20.6	3
SEM INSERTS	SEM2070	20.7	3
SEM INSERTS	SEM2080	20.8	3
SEM INSERTS	SEM2090	20.9	3
SEM INSERTS	SEM2100	21.0	3
SEM INSERTS	SEM2110	21.1	3
SEM INSERTS	SEM2120	21.2	3
SEM INSERTS	SEM2130	21.3	3
SEM INSERTS	SEM2140	21.4	3
SEM INSERTS	SEM2150	21.5	3
SEM INSERTS	SEM2160	21.6	3
SEM INSERTS	SEM2170	21.7	3
SEM INSERTS	SEM2180	21.8	3
SEM INSERTS	SEM2190	21.9	3
SEM INSERTS	SEM2200	22.0	3
SEM INSERTS	SEM2210	22.1	4
SEM INSERTS	SEM2220	22.2	4
SEM INSERTS	SEM2230	22.3	4
SEM INSERTS	SEM2240	22.4	4
SEM INSERTS	SEM2250	22.5	4
SEM INSERTS	SEM2260	22.6	4
SEM INSERTS	SEM2270	22.7	4
SEM INSERTS	SEM2280	22.8	4
SEM INSERTS	SEM2290	22.9	4
SEM INSERTS	SEM2300	23.0	4
SEM INSERTS	SEM2310	23.1	4
SEM INSERTS	SEM2320	23.2	4
SEM INSERTS	SEM2330	23.3	4
SEM INSERTS	SEM2340	23.4	4
SEM INSERTS	SEM2350	23.5	4
SEM INSERTS	SEM2360	23.6	4
SEM INSERTS	SEM2370	23.7	4
SEM INSERTS	SEM2380	23.8	4
SEM INSERTS	SEM2390	23.9	4
SEM INSERTS	SEM2400	24.0	4
SEM INSERTS	SEM2410	24.1	5
SEM INSERTS	SEM2420	24.2	5
SEM INSERTS	SEM2430	24.3	5
SEM INSERTS	SEM2440	24.4	5
SEM INSERTS	SEM2450	24.5	5
SEM INSERTS	SEM2460	24.6	5
SEM INSERTS	SEM2470	24.7	5
SEM INSERTS	SEM2480	24.8	5

ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM2490	24.9	5
SEM INSERTS	SEM2500	25.0	5
SEM INSERTS	SEM2510	25.1	5
SEM INSERTS	SEM2520	25.2	5
SEM INSERTS	SEM2530	25.3	5
SEM INSERTS	SEM2540	25.4	5
SEM INSERTS	SEM2550	25.5	5
SEM INSERTS	SEM2560	25.6	5
SEM INSERTS	SEM2570	25.7	5
SEM INSERTS	SEM2580	25.8	5
SEM INSERTS	SEM2590	25.9	5
SEM INSERTS	SEM2600	26.0	5
SEM INSERTS	SEM2610	26.1	6
SEM INSERTS	SEM2620	26.2	6
SEM INSERTS	SEM2630	26.3	6
SEM INSERTS	SEM2640	26.4	6
SEM INSERTS	SEM2650	26.5	6
SEM INSERTS	SEM2660	26.6	6
SEM INSERTS	SEM2670	26.7	6
SEM INSERTS	SEM2680	26.8	6
SEM INSERTS	SEM2690	26.9	6
SEM INSERTS	SEM2700	27.0	6
SEM INSERTS	SEM2710	27.1	6
SEM INSERTS	SEM2720	27.2	6
SEM INSERTS	SEM2730	27.3	6
SEM INSERTS	SEM2740	27.4	6
SEM INSERTS	SEM2750	27.5	6
SEM INSERTS	SEM2760	27.6	6
SEM INSERTS	SEM2770	27.7	6
SEM INSERTS	SEM2780	27.8	6
SEM INSERTS	SEM2790	27.9	6
SEM INSERTS	SEM2800	28.0	6
SEM INSERTS	SEM2810	28.1	7
SEM INSERTS	SEM2820	28.2	7
SEM INSERTS	SEM2830	28.3	7
SEM INSERTS	SEM2840	28.4	7
SEM INSERTS	SEM2850	28.5	7
SEM INSERTS	SEM2860	28.6	7
SEM INSERTS	SEM2870	28.7	7
SEM INSERTS	SEM2880	28.8	7
SEM INSERTS	SEM2890	28.9	7
SEM INSERTS	SEM2900	29.0	7
SEM INSERTS	SEM2910	29.1	7
SEM INSERTS	SEM2920	29.2	7
SEM INSERTS	SEM2930	29.3	7
SEM INSERTS	SEM2940	29.4	7
SEM INSERTS	SEM2950	29.5	7
SEM INSERTS	SEM2960	29.6	7

SEM INSERTS

◎ SEM INSERTS • HQ • ACPM45



ITEM	insert blade	mm	Seat size	ITEM	insert blade	mm	Seat size
SEM INSERTS	SEM2970	29.7	7	SEM INSERTS	SEM3090	30.9	8
SEM INSERTS	SEM2980	29.8	7	SEM INSERTS	SEM3100	31.0	8
SEM INSERTS	SEM2990	29.9	7	SEM INSERTS	SEM3110	31.1	8
SEM INSERTS	SEM3000	30.0	7	SEM INSERTS	SEM3120	31.2	8
SEM INSERTS	SEM3010	30.1	8	SEM INSERTS	SEM3130	31.3	8
SEM INSERTS	SEM3020	30.2	8	SEM INSERTS	SEM3140	31.4	8
SEM INSERTS	SEM3030	30.3	8	SEM INSERTS	SEM3150	31.5	8
SEM INSERTS	SEM3040	30.4	8	SEM INSERTS	SEM3160	31.6	8
SEM INSERTS	SEM3050	30.5	8	SEM INSERTS	SEM3170	31.7	8
SEM INSERTS	SEM3060	30.6	8	SEM INSERTS	SEM3180	31.8	8
SEM INSERTS	SEM3070	30.7	8	SEM INSERTS	SEM3190	31.9	8
SEM INSERTS	SEM3080	30.8	8	SEM INSERTS	SEM3200	32.0	8

◎ Tolerance HZ • Metric

D1 metric	tolerance h8
12.5–1	+0.000/–0.027
> 18–30	+0.000/–0.033
> 30–32	+0.000/–0.039

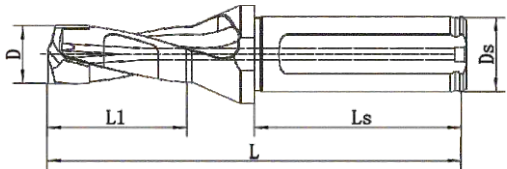
◎ Modular Drill Carbide Insert Blades • SEM • HM Geometry • Grade ACPM45 Through Coolant • Metric

D1 metric		Cutting Speed —vc Range —m/min			Metric					
					Recommended Feed Rate (f) by Diameter					
		min	Starting Value	max		12.5	16.0	20.0	25.4	32.0
P	Mild steel	90	100	110	mm/r	0.14–0.23	0.17–0.25	0.19–0.29	0.23–0.38	0.26–0.43
	Medium carbon steel/high carbon steel	80	90	100	mm/r	0.17–0.23	0.19–0.25	0.22–0.29	0.29–0.38	0.32–0.43
	Alloy steel/tool steel	55	65	75	mm/r	0.14–0.20	0.15–0.23	0.17–0.25	0.23–0.34	0.26–0.38
	Alloy steel/tool steel	50	65	70	mm/r	0.11–0.20	0.13–0.23	0.14–0.25	0.18–0.34	0.21–0.38
	Austenitic/Cast Stainless Steel	45	50	60	mm/r	0.08–0.11	0.10–0.13	0.11–0.14	0.14–0.18	0.15–0.20
	High strength ferrite Martensitic stainless steel	45	55	65	mm/r	0.11–0.17	0.13–0.18	0.14–0.20	0.18–0.28	0.21–0.31



SEM DRILL 1.5D

All drill shall use the specified type of inserts
For options, see the inserts list.
Send screw and wrenches together with sem drill

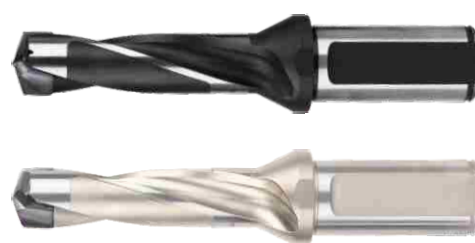
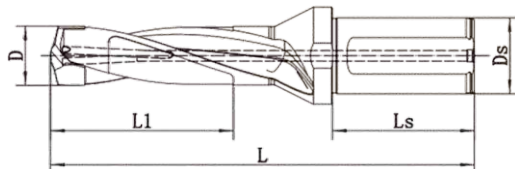


◎ SEM · WD柄 · 1.5xD · 公制

 1.5 x D	D/mm		L/mm	L1/mm	Ls/mm	Ds/mm	刀座尺寸	 wrench	 screw
	MIN	MAX							
SEM125R1.5WD16M	12.5	13.6	89	23.5	45	16	C	T5x160	M2.5/M2.5x13
SEM136R1.5WD16M	13.51	14.6	90	24.8	45	16	B	T6x160	M3/M2.5x14
SEM146R1.5WD20M	14.51	16	103.5	30.5	50	20	A	T6x160	M3/M2.5x14
SEM160R1.5WD20M	16	18.1	103.5	30.5	50	20	1	T7x185	M3.5/M2.5x16
SEM181R1.5WD25M	18.01	20	119	36	56	25	2	H2x210	M4/M3x19
SEM200R1.5WD25M	20	22.1	122	39	56	25	3	H2x210	M4/M3x19
SEM221R1.5WD25M	22.01	24.1	126	41	56	25	4	H2x210	M4/M3x19
SEM241R1.5WD32M	24.01	26.1	138.5	45	60	32	5	H2.5x240	M5/M4x23
SEM261R1.5WD32M	26.01	28.1	141.5	48	60	32	6	H2.5x240	M5/M4x23
SEM281R1.5WD32M	28.01	30.1	147	53.5	60	32	7	H3x265	M6/M5x28
SEM301R1.5WD32M	30.01	32.1	149.5	56	60	32	8	H3x265	M6/M5x28

SEM DRILL 3D

All drill shall use the specified type of inserts
For options, see the inserts list.
Send screw and wrenches together with sem drill

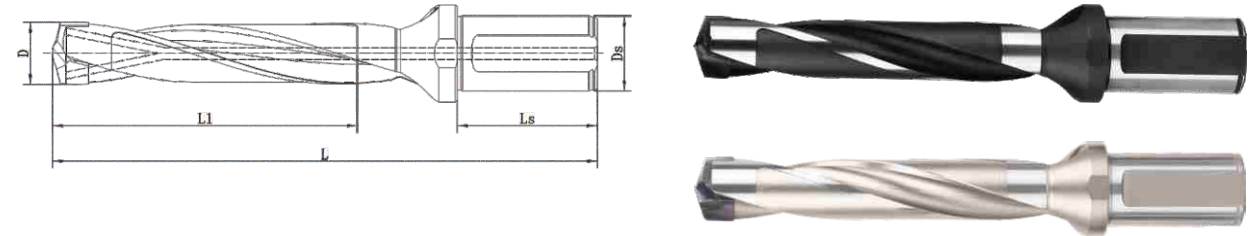


◎ SEM · WD · 3xD · Meric

 3 x D	D/mm		L/mm	L1/mm	Ls/mm	Ds/mm	SEM DRILL TYPE	 wrench	 screw
	MIN	MAX							
SEM125R3WD16M	12.5	13	109	39	45	16	C	T5x160	M2.5/M2.5x13
SEM130R3WD16M	13	13.5	109	39	45	16	C	T5x160	M2.5/M2.5x13
SEM136R3WD16M	13.51	14	111	42	45	16	B	T6x160	M3/M2.5x14
SEM140R3WD16M	14	14.5	111	42	45	16	B	T6x160	M3/M2.5x14
SEM146R3WD16M	14.51	15	126	46	50	20	A	T6x160	M3/M2.5x14
SEM150R3WD20M	15	15.87	126	46	50	20	A	T6x160	M3/M2.5x14
SEM160R3WD20M	15.88	17	129	49	50	20	1	T7x185	M3.5/M2.5x16
SEM170R3WD20M	17	18	132	52	50	20	1	T7x185	M3.5/M2.5x16
SEM181R3WD25M	18.01	19	147	55	56	25	2	H2x210	M4/M3x19
SEM190R3WD25M	19	20	151	58	56	25	2	H2x210	M4/M3x19
SEM200R3WD25M	20	21	154	61	56	25	3	H2x210	M4/M3x19
SEM210R3WD25M	21	22	157	64	56	25	3	H2x210	M4/M3x19
SEM221R3WD25M	22.01	23	161	68	56	25	4	H2x210	M4/M3x19
SEM230R3WD25M	23	24	163	70	56	25	4	H2x210	M4/M3x19
SEM241R3WD32M	24.01	25	176	73	60	32	5	H2.5x240	M5/M4x23
SEM250R3WD32M	25	26	179	76	60	32	5	H2.5x240	M5/M4x23
SEM261R3WD32M	26.01	27	182	79	60	32	6	H2.5x240	M5/M4x23
SEM270R3WD32M	27	28	184	81	60	32	6	H2.5x240	M5/M4x23
SEM281R3WD32M	28.01	29	189	86	60	32	7	H3x265	M6/M5x28
SEM290R3WD32M	29	30	192	89	60	32	7	H3x265	M6/M5x28
SEM301R3WD32M	30.01	31	195	92	60	32	8	H3x265	M6/M5x28
SEM310R3WD32M	31	32	198	95	60	32	8	H3x265	M6/M5x28

SEM DRILL 5D

All drill shall use the specified type of inserts
For options, see the inserts list.
Send screw and wrenches together with sem drill

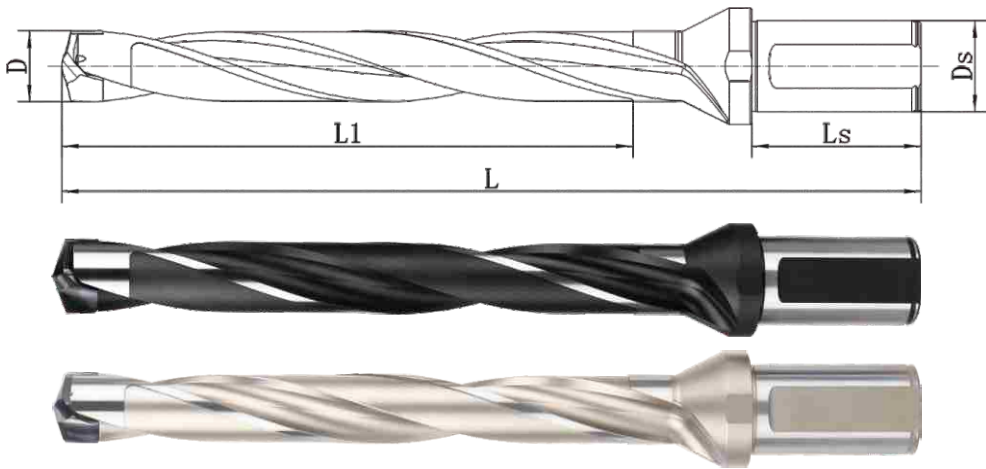


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 5 x D	D/mm		L/mm	L1/mm	Ls/mm	Ds/mm	SEM DRILL TYPE	 wrench	 screw
	MIN	MAX							
SEM125R5WD16M	12.5	13	133	65	45	16	C	T5x160	M2.5/M2.5x13
SEM130R5WD16M	13	13.5	133	65	45	16	C	T5x160	M2.5/M2.5x13
SEM136R5WD16M	13.51	14	138	70	45	16	B	T6x160	M3/M2.5x14
SEM140R5WD16M	14	14.5	138	70	45	16	B	T6x160	M3/M2.5x14
SEM146R5WD16M	14.51	15	156	76	50	20	A	T6x160	M3/M2.5x14
SEM150R5WD20M	15	15.87	156	76	50	20	A	T6x160	M3/M2.5x14
SEM160R5WD20M	15.88	17	161	81	50	20	1	T7x185	M3.5/M2.5x16
SEM170R5WD20M	17	18	166	86	50	20	1	T7x185	M3.5/M2.5x16
SEM181R5WD25M	18.01	19	183	91	56	25	2	H2x210	M4/M3x19
SEM190R5WD25M	19	20	189	96	56	25	2	H2x210	M4/M3x19
SEM200R5WD25M	20	21	194	101	56	25	3	H2x210	M4/M3x19
SEM210R5WD25M	21	22	199	106	56	25	3	H2x210	M4/M3x19
SEM221R5WD25M	22.01	23	205	112	56	25	4	H2x210	M4/M3x19
SEM230R5WD25M	23	24	209	116	56	25	4	H2x210	M4/M3x19
SEM241R5WD32M	24.01	25	224	121	60	32	5	H2.5x240	M5/M4x23
SEM250R5WD32M	25	26	229	126	60	32	5	H2.5x240	M5/M4x23
SEM261R5WD32M	26.01	27	234	131	60	32	6	H2.5x240	M5/M4x23
SEM270R5WD32M	27	28	238	135	60	32	6	H2.5x240	M5/M4x23
SEM281R5WD32M	28.01	29	245	142	60	32	7	H3x265	M6/M5x28
SEM290R5WD32M	29	30	250	147	60	32	7	H3x265	M6/M5x28
SEM301R5WD32M	30.01	31	256	153	60	32	8	H3x265	M6/M5x28
SEM310R5WD32M	31	32	260	157	60	32	8	H3x265	M6/M5x28

SEM DRILL 8D

All drill shall use the specified type of inserts
For options, see the inserts list.
Send screw and wrenches together with sem drill

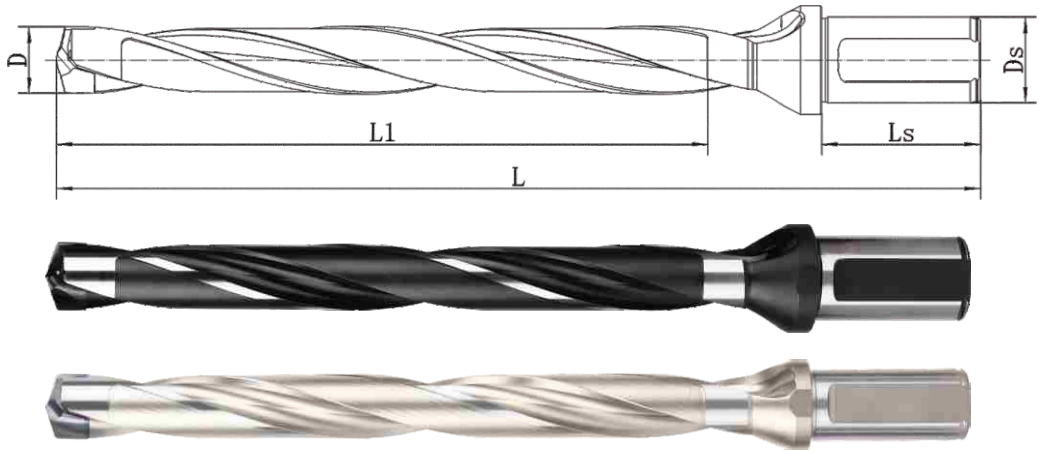


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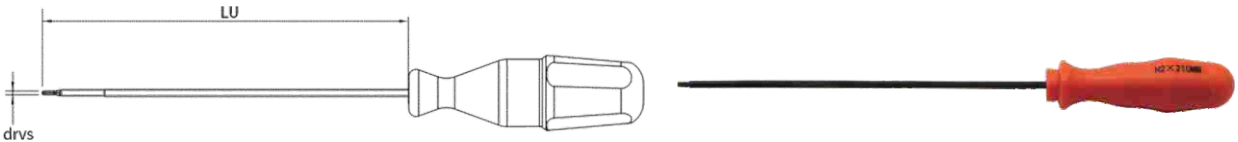
 8 x D	D/mm		L/mm	L1/mm	Ls/mm	Ds/mm	SEM DRILL TYPE	 wrench	 screw
	MIN	MAX							
SEM125R8WD16M	12.5	13	172	104	45	16	C	T5x190	M2.5/M2.5x13
SEM130R8WD16M	13	13.5	172	104	45	16	C	T5x190	M2.5/M2.5x13
SEM136R8WD16M	13.51	14	180	112	45	16	B	T6x190	M3/M2.5x14
SEM140R8WD16M	14	14.5	180	112	45	16	B	T6x190	M3/M2.5x14
SEM146R8WD16M	14.51	15	201	121	50	20	A	T6x190	M3/M2.5x14
SEM150R8WD20M	15	15.87	201	121	50	20	A	T6x190	M3/M2.5x14
SEM160R8WD20M	15.88	17	209	129	50	20	1	T7x225	M3.5/M2.5x16
SEM170R8WD20M	17	18	217	137	50	20	1	T7x225	M3.5/M2.5x16
SEM181R8WD25M	18.01	19	237	145	56	25	2	H2x260	M4/M3x19
SEM190R8WD25M	19	20	246	153	56	25	2	H2x260	M4/M3x19
SEM200R8WD25M	20	21	254	161	56	25	3	H2x260	M4/M3x19
SEM210R8WD25M	21	22	262	169	56	25	3	H2x260	M4/M3x19
SEM221R8WD25M	22.01	23	270	177	56	25	4	H2x260	M4/M3x19
SEM230R8WD25M	23	24	278	185	56	25	4	H2x260	M4/M3x19
SEM241R8WD32M	24.01	25	296	193	60	32	5	H2.5x295	M5/M4x23
SEM250R8WD32M	25	26	304	201	60	32	5	H2.5x295	M5/M4x23
SEM261R8WD32M	26.01	27	312	209	60	32	6	H2.5x295	M5/M4x23
SEM270R8WD32M	27	28	319	216	60	32	6	H2.5x295	M5/M4x23
SEM281R8WD32M	28.01	29	329	226	60	32	7	H3x330	M6/M5x28
SEM290R8WD32M	29	30	337	234	60	32	7	H3x330	M6/M5x28
SEM301R8WD32M	30.01	31	345	242	60	32	8	H3x330	M6/M5x28
SEM310R8WD32M	31	32	353	250	60	32	8	H3x330	M6/M5x28

SEM DRILL 10D

All drill shall use the specified type of inserts
For options, see the inserts list.
Send screw and wrenches together with sem drill



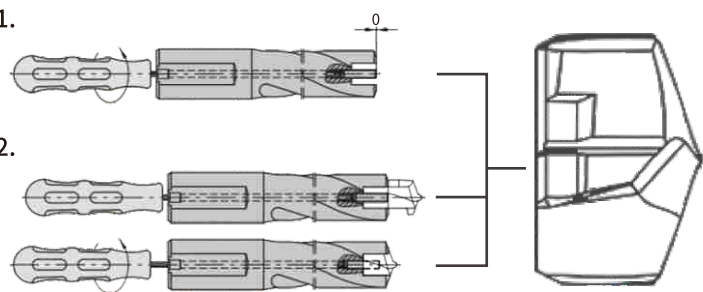
SEM DRILL ACCESSORIES



SEM • WRENCH

 wrench	 screw	drvs	Lu
T5x160	M2.5/M2.5x13	T5	160.00
T5x190	M2.5/M2.5x13	T5	190.00
T5x290	M2.5/M2.5x13	T5	290.00
T6x160	M3/M2.5x14	T6	160.00
T6x190	M3/M2.5x14	T6	190.00
T6x290	M3/M2.5x14	T6	290.00
T7x185	M3.5/M2.5x16	T7	185.00
T7x225	M3.5/M2.5x16	T7	225.00
T7x300	M3.5/M2.5x16	T7	300.00
H2x210	M4/M3x19	2mm	210.00
H2x260	M4/M3x19	2mm	260.00
H2x345	M4/M3x19	2mm	345.00
H2.5x240	M5/M4x23	2.5mm	240.00
H2.5x295	M5/M4x23	2.5mm	295.00
H2.5x395	M5/M4x23	2.5mm	395.00
H3x265	M6/M5x28	3mm	265.00
H3x330	M6/M5x28	3mm	330.00
H3x440	M6/M5x28	3mm	440.00

Inserts

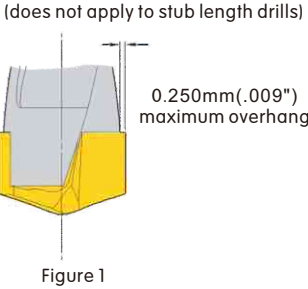


- 1) Use a screwdriver to set the screw pin: the blade should be aligned with the height of the drill face.
- 2) Use a screwdriver to tighten the inserts and position it firmly in the inserts seat.
- When replacing the inserts, turn the clamping screw counterclockwise until the insert is loosened.

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 10 x D	D/mm		L/mm	L1/mm	Ls/mm	Ds/mm	SEM DRILL TYPE		
	MIN	MAX						wrench	screw
SEM125R5WD16M	12.5	13	266	130	45	16	C	T5x290	M2.5/M2.5x13
SEM130R5WD16M	13	13.5	266	130	45	16	C	T5x290	M2.5/M2.5x13
SEM136R5WD16M	13.51	14	276	140	45	16	B	T6x290	M3/M2.5x14
SEM140R5WD16M	14	14.5	276	140	45	16	B	T6x290	M3/M2.5x14
SEM146R5WD16M	14.51	15	312	152	50	20	A	T6x290	M3/M2.5x14
SEM150R5WD20M	15	15.87	312	152	50	20	A	T6x290	M3/M2.5x14
SEM160R5WD20M	15.88	17	322	162	50	20	1	T7x300	M3.5/M2.5x16
SEM170R5WD20M	17	18	332	172	50	20	1	T7x300	M3.5/M2.5x16
SEM181R5WD25M	18.01	19	366	182	56	25	2	H2x345	M4/M3x19
SEM190R5WD25M	19	20	378	192	56	25	2	H2x345	M4/M3x19
SEM200R5WD25M	20	21	388	202	56	25	3	H2x345	M4/M3x19
SEM210R5WD25M	21	22	398	212	56	25	3	H2x345	M4/M3x19
SEM221R5WD25M	22.01	23	410	224	56	25	4	H2x345	M4/M3x19
SEM230R5WD25M	23	24	418	232	56	25	4	H2x345	M4/M3x19
SEM241R5WD32M	24.01	25	448	242	60	32	5	H2.5x395	M5/M4x23
SEM250R5WD32M	25	26	458	252	60	32	5	H2.5x395	M5/M4x23
SEM261R5WD32M	26.01	27	468	262	60	32	6	H2.5x395	M5/M4x23
SEM270R5WD32M	27	28	476	270	60	32	6	H2.5x395	M5/M4x23
SEM281R5WD32M	28.01	29	490	284	60	32	7	H3x440	M6/M5x28
SEM290R5WD32M	29	30	500	294	60	32	7	H3x440	M6/M5x28
SEM301R5WD32M	30.01	31	512	306	60	32	8	H3x440	M6/M5x28
SEM310R5WD32M	31	32	520	314	60	32	8	H3x440	M6/M5x28

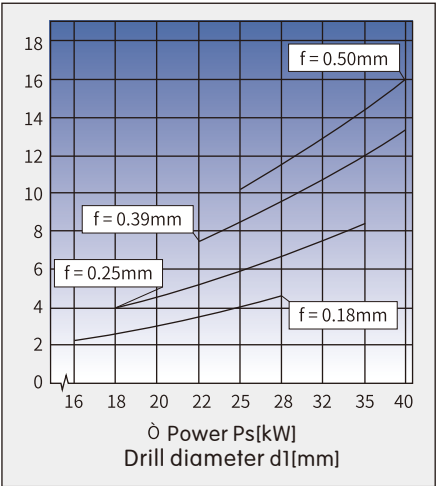
Insert blades may be used, within limits, on different drill bodies. The insert blade must be of the same seat size.
Overhang (see Figure 1) must be kept under 0,250mm (.0098") per side. For best drilling performance, rigidity, and efficient chip evacuation, always use the first-choice steel body. Performance may be compromised by using alternatives. In some applications, chips may bind between the drill body and the hole wall — especially when machining long-chipping materials like austenitic stainless steel and low-carbon steel.



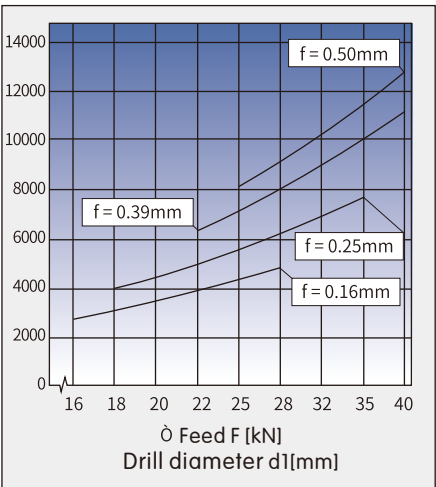
inch	Sizes	insert blade	seat size
.492	12,50	SEM1250	C
.500	12.70	SEM0500	C
.509	12.93	SEM0509	C
.512	13,00	SEM1300	C
.516	13,10	SEM0516	C
.531	13,50	SEM1350	C
.547	13.89	SEM0547	B
.551	14,00	SEM1400	B
.563	14,29	SEM0563	B
.571	14.50	SEM1450	B
.578	14,68	SEM0578	A
.591	15,00	SEM1500	A
.594	15,08	SEM0594	A
.609	15,48	SEM0609	A
.610	15,50	SEM1550	A
.625	15,88	SEM0625	1
.630	16,00	SEM1600	1
.634	16,09	SEM0634	1
.641	16,27	SEM0641	1
.650	16,50	SEM1650	1
.656	16,67	SEM0656	1
.669	17,00	SEM1700	1
.672	17,07	SEM0672	1
.688	17,46	SEM0688	1
.689	17,50	SEM1750	1
.700	17,78	SEM0700	1
.703	17,86	SEM0703	1
.709	18,00	SEM1800	1
.719	18,26	SEM0719	2
.728	18,50	SEM1850	2
.734	18,65	SEM0734	2
.748	19,00	SEM1900	2
.750	19,05	SEM0750	2
.759	19,27	SEM0759	2
.766	19,45	SEM0766	2
.768	19,50	SEM1950	2
.781	19,84	SEM0781	2
.787	20,00	SEM2000	3
.797	20,24	SEM0797	3
.800	20,32	SEM0800	3
.807	20,50	SEM2050	3
.813	20,64	SEM0813	3
.827	21,00	SEM2100	3

inch	Sizes	insert blade	seat size
.844	21,43	SEM0844	3
.847	21.50	SEM2150	3
.859	21,83	SEM0859	3
.866	22,00	SEM2200	3
.875	22,23	SEM0875	4
.884	22,44	SEM0884	4
.886	22,50	SEM2250	4
.906	23,00	SEM2300	4
.922	23,42	SEM0922	4
.925	23,50	SEM2350	4
.938	23,81	SEM0938	4
.945	24,00	SEM2400	4
.965	24,50	SEM2450	5
.969	24,61	SEM0969	5
.984	25,00	SEM2500	5
1.000	25,40	SEM1000	5
1.004	25,50	SEM2550	5
1.011	25,67	SEM1011	5
1.024	26,00	SEM2600	5
1.031	26,19	SEM1031	6
1.043	26,50	SEM2650	6
1.047	26,59	SEM1047	6
1.063	27,00	SEM2700	6
1.083	27,50	SEM2750	6
1.094	27,78	SEM1094	6
1.102	28,00	SEM2800	6
1.109	28,18	SEM1109	7
1.122	28,50	SEM2850	7
1.125	28,58	SEM1125	7
1.142	29,00	SEM2900	7
1.156	29,37	SEM1156	7
1.161	29,50	SEM2950	7
1.172	29,77	SEM1172	7
1.181	30,00	SEM3000	7
1.188	30,16	SEM1188	8
1.201	30,50	SEM3050	8
1.203	30,56	SEM1203	8
1.219	30,96	SEM1219	8
1.220	31,00	SEM3100	8
1.240	31,50	SEM3150	8
1.250	31,75	SEM1250	8
1.260	32,00	SEM3200	8

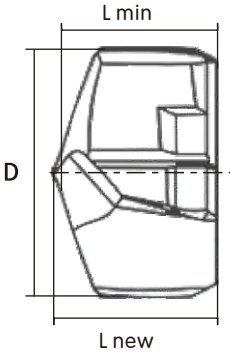
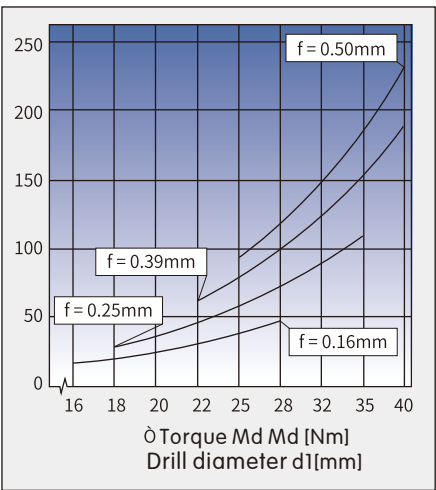
☉ Power (KW)



☉ Feed (KN)



☉ Torque (Nm)



☉ The following coolant pressure is recommended:

relative drilling depth	coolant pressure
3 x D	8 bars
5 x D	12 bars
8 x D	20 bars
10 x D	30 bars

insert seat size	diameter range D (mm)	L min (mm)	L new (mm)
C	12.50–13.50	8.5	9.6
B	13.51–14.50	8.9	10.1
A	14.51–15.89	9.4	10.6
1	15.90–18.00	10.3	11.6
2	18.01–19.99	11.2	12.6
3	20.00–22.00	12.1	13.6
4	22.01–24.00	13.0	14.6
5	24.01–26.00	13.9	15.6
6	26.01–28.00	14.8	16.6
7	28.01–30.00	15.7	17.6
8	30.01–32.00	16.6	18.6

◀ NOTE: The diagrams above are used to determine the drive power, feed force, and torque. They are based on cutting force measurement in tempered steels in Cgr. 6. Tensile strength: Rm = 600 N/mm2. The base cutting speed used is: vc = 80 m/min.

SEM PLUS Modular Drill System

Our SEM PLUS drill concept is simple but effective. It combines the benefits of the SEM modular drill (high feeds and length-to-diameter [L/D] ratios) with the benefits of an indexable drill (high speeds and low consumable costs). The SEM PLUS system is a modular drilling platform, offering a pre-mountable HSS head with pocket seats for carbide inserts. The SEM PLUS modular drill system features two head styles that are interchangeable on fitting tool bodies with our flexible FDS interface

Primary Application

The SEM PLUS system performs in steel, cast iron, stainless steel, and advanced materials. It is perfectly suited to exchange older HSS tools or low performance indexable drills for a very high performance drilling solution. The SEM PLUS range comprises 28–101mm (1.102–4") from 1.5–10 x D. There is a wide range of applications in the energy market, and in general engineering (e.g., bearing rings for windmills, hydraulic manifolds, large engine parts, generator housings, etc.). This tool will deliver vast improvements in productivity, and greatly attribute to increasing your machining capacity



SEM PLUS™ A1 Heads
Economic,
highperformance drilling



DS geometry for long
chipping materials.



Features and Benefits

Replaceable Heads with FDS–Interface Coupling

- Quickly and easily replace inserts or drill heads without removing tool bodies from the machine.
- Save money and reduce tool stock by replacing just the worn drill head.
- Use one tool body for different sizes and styles of drill head (a head fits any drill body of the same FDS size)

SEM PLUS A1 Heads

- High metal removal rates.
- Very stable in normal cutting conditions.
- Cost-effective indexable Drill Fix DFT inserts.

DFR/DFT/DFC Outboard Inserts

- Very high cutting speeds for high metal removal rates.
- Improved stability in all cutting conditions.
- Indexable inserts provide good surface finish and hole diameter accuracy.

Two Effective Cutting Edges

- The KSEM PLUS system has two full cutting edges in action when operating.
- Achieve up to 100% increased productivity versus an indexable drill of the same diameter.
- High L/D ratios possible from 1.5 x D up to 10 x D as stocked standards. Longer drills are possible as custom solutions

SEM PLUS Pilot Insert

- Very high feed rates, comparable to modular drills.
- Very long tool life of KSEM PLUS centre inserts and modular heads due to better chip flow.
- No precentring necessary for drill depths up to 5 x D

Tailored Grades – Centre Inserts

- Ac7315 grade TiAlN–based PVD multilayer coating for high cutting speeds, primarily in steel applications.
- Ac7320 grade AlTiN–based PVD coating for the demands of drilling stainless steels.
- ACPM45 grade multilayer TiAlN coated, very tough carbide substrate. Improved chipping resistance in demanding machining conditions.

Drill Fix Lateral Inserts

- KCU25 grade–high metal removal rates, advanced TiCN–Al–CVD coating, and superior tool life in stable working conditions.
- KCU40 grade–multilayered TiAlN–PVD coating with high wear resistance and reliability in most materials at medium cutting speeds.
- KC7140–grade–TiCN–based, PVD–coated alloyed carbide for machining alloyed steel and stainless steel on SEM PLUS systems.
- KC7225 grade–TiAlN PVD–coated fine–grain carbide offers extreme process safety for non–ferrous materials, super alloys, and titanium.

DFT and DFC Lateral Inserts with DS Geometry

- Excellent performance and process stability in applications with long–chipping materials.
- Use for low carbon steel, difficult stainless steel, and non–ferrous materials where long chips can be an issue.
- Available in the KCU40 grade.

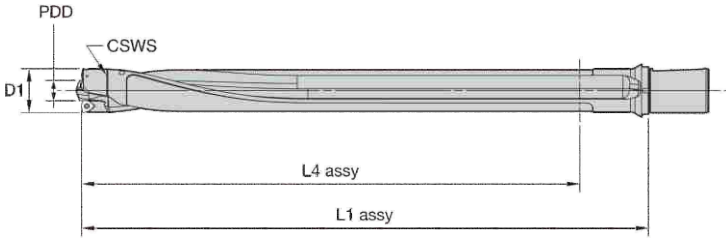
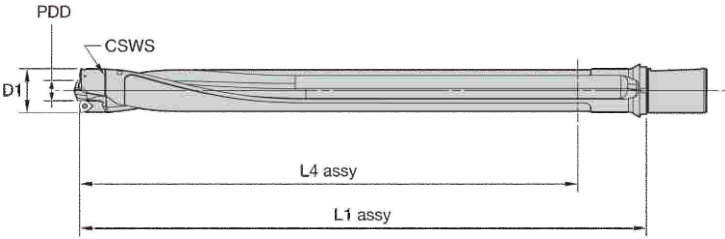
Customisation

- Heads are available in intermediate diameters, and up to ϕ 127mm as semi–standards.
- Tool bodies available in all popular shank styles up to shank length of 1200mm. Some restrictions with L/D ratios over 20 x D apply.
- Toolholders can be designed with helical chip flutes for better chip evacuation (e.g. drilling in cast iron).
- Heads for use with reground center inserts are available as semi–standards.
- The KSE PLUS system features a high level of available customisation. Please contact us about for your individual metalcutting applications.

SEM Plus DRILL

SEM Plus DRILL

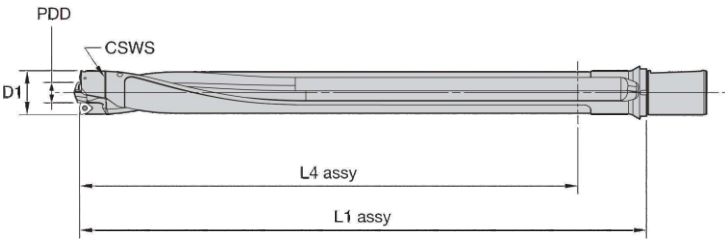
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available SEM PLUS heads			requested insert size reference per head		CSWS	available tool bodies per CSWS connecting size 3 x D, 5 x D, 8 x D, 10 x D (metric and inch bodies)			
D1		SEM PLUS head	centre insert size	outboard insert Drill Fix DFR/DFT		SEM PLUS body ANSI catalogue number	L/D ratio	L4 assembly (mm)	L1 assembly (mm)
mm	in								
28.000	1.1024	SEMP2800FDS28A1M	14.000	DFR040304D28	28	WD32FDS28076M	1.5xD	57	101
28.575	1.1250	SEMP1125FDS28A1	15.000	DFR040304D28	28	WD32FDS28128M	3xD	96	153
29.000	1.1417	SEMP2900FDS28A1M	15.000	DFR040304D28	28	WD32FDS28190M	5xD	158	215
29.362	1.1563	SEMP1156FDS28A1	16.000	DFR040304D28	28	WD32FDS28283M	8xD	251	308
30.000	1.1811	SEMP3000FDS28A1M	16.000	DFR040304D28	28	WD32FDS28345M	10xD	313	370
30.175	1.1875	SEMP1188FDS28A1	17.000	DFR040304D28	28	SSF150FDS280299	1.5xD	57	101
30.963	1.2188	SEMP1219FDS28A1	17.000	DFR040304D28	28	SSF150FDS280502	3xD	96	153
31.000	1.2205	SEMP3100FDS28A1M	17.000	DFR040304D28	28	SSF150FDS280746	5xD	158	215
						SSF150FDS281112	8xD	251	308
						SSF150FDS281356	10xD	313	370
31.750	1.2500	SEMP1250FDS32A1	15.000	DFT05T308D32	32	WD32FDS32082M	1.5xD	59	107
32.000	1.2598	SEMP3200FDS32A1M	15.000	DFT05T308D32	32	WD32FDS32146M	3xD	110	171
33.000	1.2992	SEMP3300FDS32A1M	16.000	DFT05T308D33	32	WD32FDS32216M	5xD	180	241
33.200	1.3071	SEMP3320FDS32A1M	16.000	DFT05T308D33	32	WD32FDS32321M	8xD	285	346
33.350	1.3130	SEMP1313FDS32A1	17.000	DFT05T308D33	32	WD32FDS32391M	10xD	355	416
34.000	1.3386	SEMP3400FDS32A1M	17.000	DFT05T308D33	32	SSF150FDS320323	1.5xD	59	107
34.925	1.3750	SEMP1375FDS32A1	18.000	DFT05T308D33	32	SSF150FDS320573	3xD	110	171
35.000	1.3780	SEMP3500FDS32A1M	18.000	DFT05T308D33	32	SSF150FDS320850	5xD	180	241
						SSF150FDS321263	8xD	285	346
						SSF150FDS321539	10xD	355	416
36.000	1.4173	SEMP3600FDS36A1M	13.000	DFT06T308D36	36	WD32FDS36092M	1.5xD	65	117
36.525	1.4380	SEMP1438FDS36A1	14.000	DFT06T308D36	36	WD32FDS36166M	3xD	122	191
37.000	1.4567	SEMP3700FDS36A1M	14.000	DFT06T308D36	36	WD32FDS36244M	5xD	200	269
37.500	1.4764	SEMP3750FDS36A1M	15.000	DFT06T308D36	36	WD32FDS36361M	8xD	317	386
38.000	1.4961	SEMP3800FDS36A1M	15.000	DFT06T308D36	36	WD32FDS36439M	10xD	395	464
38.100	1.5000	SEMP1500FDS36A1	15.000	DFTU6T308D36	36	SSF150FDS360362	1.5xD	65	117
39.000	1.5354	SEMP3900FDS36A1M	16.000	DFT06T308D39	36	SSF150FDS360652	3xD	122	191
39.200	1.5433	SEMP3920FDS36A1M	16.000	DFT06T308D39	36	SSF150FDS360960	5xD	200	269
39.700	1.5630	SEMP1563FDS36A1	17.000	DFT06T308D39	36	SSF150FDS361421	8xD	317	386
						SSF150FDS361728	10xD	395	464
40.000	1.5748	SEMP4000FDS40A1M	17.000	DFT06T308D39	40	WD50FDS40100M	1.5xD	73	125
41.000	1.6142	SEMP4100FDS40A1M	18.000	DFT06T308D39	40	WD50FDS40183M	3xD	137	213
41.275	1.6250	SEMP1625FDS40A1	18.000	DFT06T308D39	40	WD50FDS40271M	5xD	225	301
42.000	1.6535	SEMP4200FDS40A1M	19.000	DFT06T308D39	40	WD50FDS40403M	8xD	357	433
43.000	1.6929	SEMP4300FDS40A1M	20.000	DFT06T308D39	40	WD50FDS40491M	10xD	445	521
44.000	1.7323	SEMP4400FDS40A1M	21.000	DFT06T308D44	40	SSF200FDS400394	1.5xD	73	125
44.450	1.7500	SEMP1750FDS40A1	22.000	DFT06T308D44	40	SSF200FDS400721	3xD	137	213
						SSF200FDS401066	5xD	225	301
						SSF200FDS401586	8xD	357	433
						SSF200FDS401933	10xD	445	521

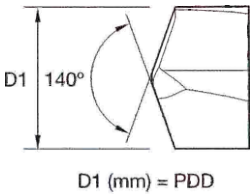
available SEM PLUS heads			requested insert size reference per head		CSWS	available tool bodies per CSWS connecting size 3 x D, 5 x D, 8 x D, 10 x D (metric and inch bodies)			
D1		SEM PLUS head	centre insert size	outboard insert Drill Fix DFR/DFT		SEM PLUS body ANSI catalogue number	L/D ratio	L4 assembly (mm)	L1 assembly (mm)
mm	in								
45.000	1.7717	SEMP4500FDS45A1M	18.000	DFR070408D45	45	WD50FDS45112M	1.5xD	85	147
46.000	1.8110	SEMP4600FDS45A1M	19.000	DFR070408D45	45	WD50FDS45206M	3xD	152	236
47.000	1.8504	SEMP4700FDS45A1M	20.000	DFR070408D45	45	WD50FDS45304M	5xD	250	334
47.625	1.8750	SEMP1875FDS45A1	21.000	DFR070408D45	45	WD50FDS45451M	8xD	397	481
48.000	1.8898	SEMP4800FDS45A1M	21.000	DFR070408D45	45	WD50FDS45549M	10xD	495	579
49.000	1.9291	SEMP4900FDS45A1M	22.000	DFR070408D45	45	SSF200FDS450441	1.5xD	85	147
						SSF200FDS450809	3xD	152	236
						SSF200FDS451196	5xD	250	334
						SSF200FDS451775	8xD	397	481
						SSF200FDS452161	10xD	4995	579
50.000	1.9685	SEMP5000FDS50A1M	23.000	DFR070408D50	50	WD50FDS50122M	1.5xD	89	157
50.800	2.0000	SEMP2000FDS50A1	24.000	DFR070408D50	50	WD50FDS50228M	3xD	170	263
51.000	2.0079	SEMP5100FDS50A1M	24.000	DFR070408D50	50	WD50FDS50338M	5xD	280	373
52.000	2.0472	SEMP5200FDS50A1M	25.000	DFR070408D50	50	WD50FDS50503M	8xD	445	538
53.000	2.0866	SEMP5300FDS50A1M	26.000	DFR070408D50	50	WD50FDS50613M	10xD	555	648
53.975	2.1250	SEMP2125FDS50A1	27.000	DFR070408D50	50	SSF200FDS500480	1.5xD	89	157
54.000	2.1260	SEMP5400FDS50A1M	27.000	DFR070408D50	50	SSF200FDS500896	3xD	170	263
55.000	2.1654	SEMP5500FDS50A1M	28.000	DFR070408D50	50	SSF200FDS501330	5xD	280	373
						SSF200FDS501980	8xD	445	538
						SSF200FDS502413	10xD	555	648
56.000	2.2047	SEMP5600FDS56A1M	20.000	DFR090508D56	56	WD50FDS56140M	1.5xD	130	175
57.000	2.2441	SEMP5700FDS56A1M	21.000	DFR090508D56	56	WD50FDS56259M	3xD	191	294
57.150	2.2500	EMP2250FDS56A1	21.000	DFR090508D56	56	WD50FDS56383M	5xD	315	418
58.000	2.2835	SEMP5800FDS56A1M	22.000	DFR090508D56	56	WD50FDS56569M	8xD	501	604
59.000	2.3228	SEMP5900FDS56A1M	23.000	DFR090508D56	56	WD50FDS56693M	10xD	625	728
60.000	2.3622	SEMP6000FDS56A1M	24.000	DFR090508D56	56	SSF200FDS560551	1.5xD	130	175
60.330	2.3750	SEMP2375FDS56A1	24.000	DFR090508D56	56	SSF200FDS561020	3xD	191	294
61.000	2.4016	SEMP6100FDS56A1M	25.000	DFR090508D56	56	SF200FDS561507	5xD	315	418
62.000	2.4409	SEMP6200FDS56A1M	26.000	DFR090508D56	56	SSF200FDS562240	8xD	501	604
						SSF200FDS562783	10xD	625	728
63.000	2.4803	SEMP6300FDS63A1M	27.000	DFR090508D63	63	WD50FDS63154M	1.5xD	111	194
63.500	2.5000	SEMP2500FDS63A1	28.000	DFR090508D63	63	WD50FDS63289M	3xD	214	329
64.000	2.5197	SEMP6400FDS63A1M	28.000	DFR090508D63	63	WD50FDS63429M	5xD	354	469
65.000	2.5591	SEMP6500FDS63A1M	29.000	DFR090508D63	63	WD50FDS63639M	8xD	564	679
66.000	2.5984	SEMP6600FDS63A1M	30.000	DFR090508D63	63	WD50FDS63779M	10xD	704	819
66.680	2.6250	SEMP2625FDS63A1	31.000	DFR090508D63	63	SSF200FDS630606	1.5xD	111	194
67.000	2.6378	SEMP6700FDS63A1M	31.000	DFR090508D63	63	SSF200FDS631138	3xD	214	329
68.000	2.6772	SEMP6800FDS63A1M	32.000	DFR090508D63	63	SSF200FDS631688	5xD	354	469
69.000	2.7165	SEMP6900FDS63A1M	33.000	DFR090508D63	63	SSF200FDS632515	8xD	564	679
69.850	2.7500	SEMP2750FDS63A1	34.000	DFR090508D63	63	SSF200FDS633066	10xD	704	819
70.000	2.7559	SEMP7000FDS63A1M	34.000	DFR090508D63	63				

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available SEM PLUS heads		requested insert size reference per head		CSWS	available tool bodies per CSWS connecting size 3 x D, 5 x D, 8 x D, 10 x D (metric and inch bodies)			
D1		SEM PLUS head	centre insert size	outboard insert Drill Fix DFR/DFT	SEM PLUS body ANSI catalogue number	L/D ratio	L4 assembly (mm)	L1 assembly (mm)
mm	in							
71.000	2.7950	SEMP7100FDS71A1M	26.000	4xDFT06T308D44	71 WD50FDS71172M	1.5xD	128	217
72.000	2.8350	SEMP7200FDS71A1M	27.000		71 WD50FDS71292M	3xD	241	333
73.000	2.8740	SEMP7300FDS71A1M	28.000		71 WD50FDS71452M	5xD	401	493
73.025	2.8750	SEMP2875FD71A1	28.000		71 SSF200FDS710677	1.5xD	128	217
74.000	2.9130	SEMP7400FDS71A1M	29.000		71 SSF200FDS711150	3xD	241	333
75.000	2.9530	SEMP7500FDS71A1M	30.000		71 SSF200FDS711780	5xD	401	493
76.000	2.9920	SEMP7600FDS71A1M	31.000		71			
76.200	3.0000	SEMP3000FDS71A1	31.000		71			
77.000	3.0310	SEMP7700FDS71A1M	32.000		71			
78.000	3.0710	SEMP7800FDS71A1M	33.000	2xDFT06T308D44 & 2xDFT070408D50	71			
79.000	3.1100	SEMP7900FDS71A1M	34.000		71			
79.375	3.1250	SEMP3125FDS80A1	31.000		80 WD50FDS80192M	1.5xD	145	247
80.000	3.1500	SEMP8000FDS80A1M	31.000		80 WD50FDS80327M	3xD	271	373
81.000	3.1890	SEMP8100FDS80A1M	32.000		80 WD50FDS80507M	5xD	451	553
82.000	3.2280	SEMP8200FDS80A1M	33.000		80 SSF200FDS800756	1.5xD	145	247
83.000	3.2680	SEMP8300FDS80A1M	34.000		80 SSF200FDS801287	3xD	271	373
82.550	3.2500	SEMP3250FDS80A1	34.000		80 SSF200FDS801996	5xD	451	553
84.000	3.3070	SEMP8400FDS80A1M	35.000		80			
85.000	3.3070	SEMP8500FDS80A1M	36.000	4xDFT070408D50	80			
85.725	3.3750	SEMP3375FDS80A1	37.000		80			
86.000	3.3860	SEMP8600FDS80A1M	37.000		80			
87.000	3.4250	SEMP8700FDS80A1M	38.000		80			
88.000	3.4650	SEMP8800FDS80A1M	39.000		80			
88.900	3.5000	EMP3500FDS80A1	40.000		80			
89.000	3.5040	SEMP8900FDS80A1M	40.000		80			
90.000	3.5430	SEMP9000FDS90A1M	37.000	6xDFT06T308D44	90 WD50FDS90212M	1.5xD	160	272
91.000	3.5830	SEMP9100FDS90A1M	38.000		90 WD50FDS90362M	3xD	302	414
92.000	3.6220	SEMP9200FD906A1M	39.000		90 WD50FDS90562M	5xD	502	614
92.075	3.6250	SEMP3625FDS90A1	39.000		90 SSF200FDS900835	1.5xD	160	272
93.000	3.6610	SEMP9300FDS90A1M	40.000		90 SSF200FDS901425	3xD	302	414
					90 SSF200FDS902213	5xD	502	614
94.000	3.7010	SEMP9400FDS90A1M	26.000		90			
95.000	3.7400	SEMP9500FDS90A1M	27.000		90			
95.250	3.7500	SEMP3750FDS90A1	27.000		90			
96.000	3.7800	SEMP9600FDS90A1M	28.000		90			
97.000	3.8190	SEMP9700FDS90A1M	29.000		90			
98.000	3.8580	SEMP9800FDS90A1M	30.000		90			
98.425	3.8750	SEMP3875FDS90A1	31.000		90			
99.000	3.8980	SEMP9900FDS90A1M	31.000		90			
100.000	3.9370	SEMP10000FDS90A1M	32.000		90			
101.600	4.0000	SEMP4000FDS90A1	34.000		90			

© To ensure 100% system stability, SEM inserts used for SEM PLUS should not be reground.



P M K N S H ○	P M K N S H ●	● frst choice ○ alternate choic		
HZ · AC7315	HM · AC7320	D1	in	seat size
SEMP1300HZ	SEMP1300HM	13.00	0.5118	C
SEMP1400HZ	SEMP1400HM	14.00	0.5512	B
SEMP1500HZ	SEMP1500HM	15.00	0.5906	A
SEMP1600HZ	SEMP1600HM	16.00	0.6299	1
SEMP1700HZ	SEMP1700HM	17.00	0.6693	1
SEMP1800HZ	SEMP1800HM	18.00	0.7087	1
SEMP1900HZ	SEMP1900HM	19.00	0.7480	2
SEMP2000HZ	SEMP2000HM	20.00	0.7874	3
SEMP2100HZ	SEMP2100HM	21.00	0.8268	3
SEMP2200HZ	SEMP2200HM	22.00	0.8661	3
SEMP2300HZ	SEMP2300HM	23.00	0.9055	4
SEMP2400HZ	SEMP2400HM	24.00	0.9449	4
SEMP2500HZ	SEMP2500HM	25.00	0.9843	5
SEMP2600HZ	SEMP2600HM	26.00	1.0236	5
SEMP2700HZ	SEMP2700HM	27.00	1.0630	6
SEMP2800HZ	SEMP2800HM	28.00	1.1024	6
SEMP2900HZ	SEMP2900HM	29.00	1.1417	7
SEMP3000HZ	SEMP3000HM	30.00	1.1811	7
SEMP3100HZ	SEMP3100HM	31.00	1.2205	8
SEMP3200HZ	SEMP3200HM	32.00	1.2598	8

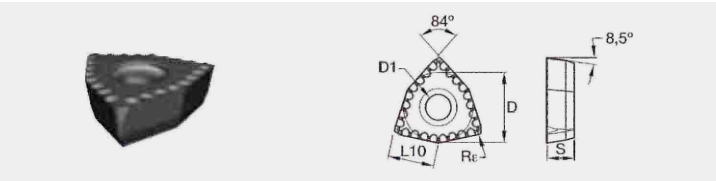
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D1 metric	tolerance h8
12.5–1	+0.000/–0.027
> 18–30	+0.000/–0.033
> 30–32	+0.000/–0.039

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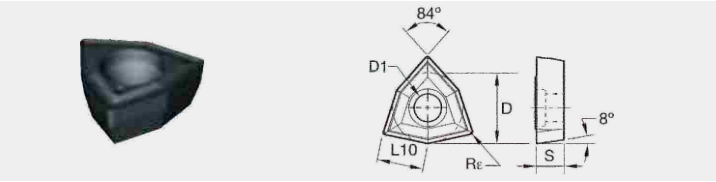
D1 metric	tolerance h8
12.5–1	+0.000/–0.027
> 18–30	+0.000/–0.033
> 30–32	+0.000/–0.039

◎ DFT-HP



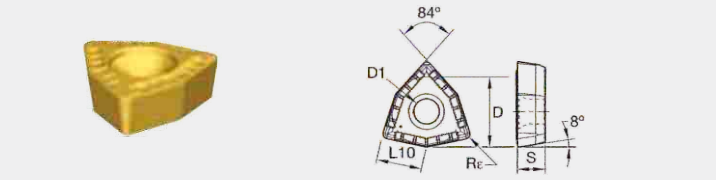
Specification/Item	Sizes (mm)				
	L10	D	D1	S	R
DFT05T308D32HP	5.29	8.00	3.40	3.75	0.8
DFT05T308D33HP	5.29	8.00	3.40	3.75	0.8
DFT06T308D36HP	6.62	10.00	4.40	3.75	0.8
DFT06T308D39HP	6.62	10.00	4.40	3.75	0.8
DFT06T308D44HP	6.62	10.00	4.40	3.75	0.8
DFT070408D45HP	7.94	12.00	4.40	4.75	0.8
DFT070408D50HP	7.94	12.00	4.40	4.75	0.8
DFT090508D56HP	9.92	15.00	5.50	5.25	0.8
DFT090508D63HP	9.92	15.00	5.50	5.25	0.8

◎ DFT-DS



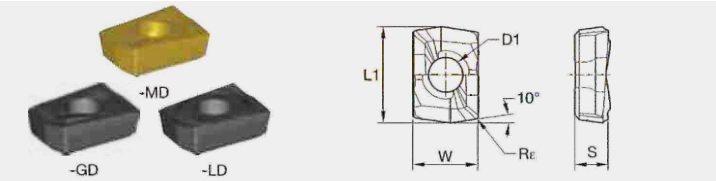
Specification/Item	Sizes (mm)				
	L10	D	D1	S	R
DFT05T308D32DS	5.29	8.00	3.40	3.75	0.8
DFT05T308D33DS	5.29	8.00	3.40	3.75	0.8
DFT06T308D36DS	6.62	10.00	4.40	3.75	0.8
DFT06T308D39DS	6.62	10.00	4.40	3.75	0.8
DFT06T308D44DS	6.62	10.00	4.40	3.75	0.8
DFT070408D45DS	7.94	12.00	4.40	4.75	0.8
DFT070408D50DS	7.94	12.00	4.40	4.75	0.8
DFT090508D56DS	9.92	15.00	5.50	5.25	0.8
DFT090508D63DS	9.92	15.00	5.50	5.25	0.8

◎ DFT-MD



Specification/Item	Sizes (mm)				
	L10	D	D1	S	R
DFT05T308D32MD	5.29	8.00	3.40	3.75	0.8
DFT05T308D33MD	5.29	8.00	3.40	3.75	0.8
DFT06T308D36MD	6.62	10.00	4.40	3.75	0.8
DFT06T308D39MD	6.62	10.00	4.40	3.75	0.8
DFT06T308D44MD	6.62	10.00	4.40	3.75	0.8
DFT070408D45MD	7.94	12.00	4.40	4.75	0.8
DFT070408D50MD	7.94	12.00	4.40	4.75	0.8
DFT090508D56MD	9.92	15.00	5.50	5.25	0.8
DFT090508D63MD	9.92	15.00	5.50	5.25	0.8

◎ DFR-GD, -MD, -LD



Specification/Item	Sizes (mm)				
	L10	D	D1	S	R
DFT040304D28GD	10.76	7.26	2.85	3.79	0.4
DFT040304D28LD	10.76	7.26	2.85	3.78	0.4
DFT040304D28MD	10.76	7.26	2.85	3.79	0.4

- ◎ To ensure 100% system stability, SEM inserts used for SEM PLUS should not be reground.
- ◎ SEM PLUS heads are shipped with all insert screws.
- ◎ SEM PLUS heads are shipped with two wrenches, one for the SEM insert and one to be used for the DFT/DFR inserts as well as for the assembly of the body to the head.
- ◎ Order SEM PLUS shanks using connection coupling size (CSMS) to determine which heads go with each shank.
- ◎ PDD in the callout drawing refers to the D1 of the SEM HPG and HPCCL inserts for use with SEM PLUS.
- ◎ Order inserts (SEM, DFT, and DFR) for SEM PLUS separately.

2 x DFR
diameter: 28- < 31.75mm

2 x DFT
diameter: 31.75-70.34mm

4 x DFT
diameter: 70.35-93.34mm

6 x DFT
diameter: 93.35-127mm

◎ SEM PLUS A1 Heads · Drill Fix DFR

Specification/Item	D1		PDD		LPR		L1		CSMS
	mm	in	mm	in	mm	in	mm	in	
SEMP2800FDS28A1M	28.00	1.102	14.00	0.5512	24.9	0.980	22.0	0.866	FDS28
SEMP2858FDS28A1M	28.58	1.125	15.00	0.5906	25.0	0.984	22.0	0.866	FDS28
SEMP2900FDS28A1M	29.00	1.142	15.00	0.5906	25.0	0.984	22.0	0.866	FDS28
SEMP2937FDS28A1M	29.36	1.156	16.00	0.6299	25.2	0.992	22.0	0.866	FDS28
SEMP3000FDS28A1M	30.00	1.181	16.00	0.6299	25.2	0.992	22.0	0.866	FDS28
SEMP3017FDS28A1M	30.18	1.188	17.00	0.6693	25.4	1.000	22.0	0.866	FDS28
SEMP3096FDS28A1M	30.96	1.219	17.00	0.6693	25.4	1.000	22.0	0.866	FDS28
SEMP3100FDS28A1M	31.00	1.221	17.00	0.6693	25.4	1.000	22.0	0.866	FDS28
SEMP3175FDS32A1M	31.75	1.250	15.00	0.5906	23.0	0.907	20.0	0.787	FDS32
SEMP3200FDS32A1M	32.00	1.260	15.00	0.5906	23.0	0.907	20.0	0.787	FDS32
SEMP3300FDS32A1M	33.00	1.299	16.00	0.6299	23.2	0.913	20.0	0.787	FDS32
SEMP3320FDS32A1M	33.20	1.307	16.00	0.6299	23.2	0.913	20.0	0.787	FDS32
SEMP3334FDS32A1M	33.35	1.313	17.00	0.6693	23.4	0.920	20.0	0.787	FDS32
SEMP3400FDS32A1M	34.00	1.339	17.00	0.6693	23.4	0.920	20.0	0.787	FDS32
SEMP3493FDS32A1M	34.93	1.375	18.00	0.7087	23.6	0.928	20.0	0.787	FDS32
SEMP3500FDS32A1M	35.00	1.378	18.00	0.7087	23.6	0.928	20.0	0.787	FDS32

SEM PLUS A1 Heads

SEM PLUS A1 Heads

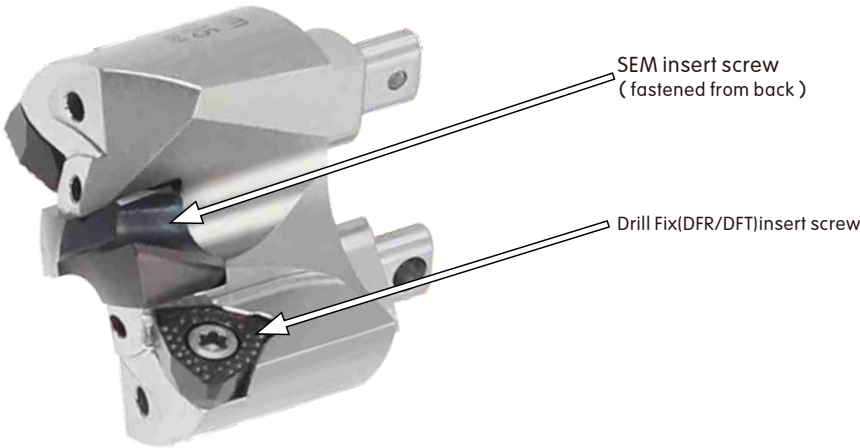
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Specification/Item	D1		PDD		LPR		L1		CSMS
	mm	in	mm	in	mm	in	mm	in	
SEMP3600FDS36A1M	36.00	1.417	13.00	0.5118	22.7	0.893	20.0	0.787	FDS36
SEMP3651FDS36A1	36.53	1.438	14.00	0.5512	22.9	0.900	20.0	0.787	FDS36
SEMP3700FDS36A1M	37.00	1.457	14.00	0.5512	22.9	0.900	20.0	0.787	FDS36
SEMP3750FDS36A1M	37.50	1.476	15.00	0.5906	23.0	0.907	20.0	0.787	FDS36
SEMP3800FDS36A1M	38.00	1.496	15.00	0.5906	23.0	0.907	20.0	0.787	FDS36
SEMP3810FDS36A1	38.10	1.500	15.00	0.5906	23.0	0.907	20.0	0.787	FDS36
SEMP3900FDS36A1M	39.00	1.535	16.00	0.6299	23.2	0.913	20.0	0.787	FDS36
SEMP3920FDS36A1M	39.20	1.543	16.00	0.6299	23.2	0.913	20.0	0.787	FDS36
SEMP3970FDS36A1	39.70	1.563	17.00	0.6693	23.4	0.920	20.0	0.787	FDS36
SEMP4000FDS40A1M	40.00	1.575	17.00	0.6693	28.6	1.125	25.0	0.984	FDS40
SEMP4100FDS40A1M	41.00	1.614	18.00	0.7087	28.8	1.132	25.0	0.984	FDS40
SEMP4128FDS40A1	41.28	1.625	18.00	0.7087	28.8	1.132	25.0	0.984	FDS40
SEMP4200FDS40A1M	42.00	1.654	19.00	0.7480	28.9	1.139	25.0	0.984	FDS40
SEMP4300FDS40A1M	43.00	1.693	20.00	0.7874	29.1	1.146	25.0	0.984	FDS40
SEMP4400FDS40A1M	44.00	1.732	21.00	0.8268	29.3	1.153	25.0	0.984	FDS40
SEMP4445FDS40A1	44.45	1.750	22.00	0.8661	29.5	1.160	25.0	0.984	FDS40
SEMP4500FDS45A1M	45.00	1.772	18.00	0.7087	28.8	1.132	25.0	0.984	FDS45
SEMP4600FDS45A1M	46.00	1.811	19.00	0.7480	28.9	1.139	25.0	0.984	FDS45
SEMP4700FDS45A1M	47.00	1.850	20.00	0.7874	29.1	1.146	25.0	0.984	FDS45
SEMP4763FDS45A1	47.63	1.875	21.00	0.8268	29.3	1.153	25.0	0.984	FDS45
SEMP4800FDS45A1M	48.00	1.890	21.00	0.8268	29.3	1.153	25.0	0.984	FDS45
SEMP4900FDS45A1M	49.00	1.929	22.00	0.8661	29.5	1.160	25.0	0.984	FDS45
SEMP5000EDS50A1M	50.00	1.969	23.00	0.9055	34.8	1.372	30.0	1.181	FDS50
SEMP5080FDS50A1	50.80	2.000	24.00	0.9449	35.0	1.379	30.0	1.181	FDS50
SEMP5100FDS50A1M	51.00	2.008	24.00	0.9449	35.0	1.379	30.0	1.181	FDS50
SEMP5200FDS50A1M	52.00	2.047	25.00	0.9843	35.2	1.386	30.0	1.181	FDS50
SEMP5300FDS50A1M	53.00	2.087	26.00	1.0236	35.4	1.392	30.0	1.181	FDS50
SEMP5398FDS50A1	53.98	2.125	27.00	1.0630	35.6	1.399	30.0	1.181	FDS50
SEMP5400FDS50A1M	54.00	2.126	27.00	1.0630	35.6	1.399	30.0	1.181	FDS50
SEMP5500FDS50A1M	55.00	2.165	28.00	1.1024	35.7	1.406	30.0	1.181	FDS50
SEMP5600FDS56A1M	56.00	2.205	20.00	0.7874	34.3	1.151	30.0	1.181	FDS56
SEMP5700FDS56A1M	57.00	2.244	21.00	0.8268	34.5	1.358	30.0	1.181	FDS56
SEMP5715FDS56A1	57.15	2.250	21.00	0.8268	34.5	1.358	30.0	1.181	FDS56
SEMP5800FDS56A1M	58.00	2.284	22.00	0.8661	34.7	1.365	30.0	1.181	FDS56
SEMP5900FDS56A1M	59.00	2.323	23.00	0.9055	34.8	1.372	30.0	1.181	FDS56
SEMP6000FDS56A1M	60.00	2.362	24.00	0.9449	35.0	1.379	30.0	1.181	FDS56
SEMP6033FDS56A1	60.33	2.375	24.00	0.9449	35.0	1.379	30.0	1.181	FDS56
SEMP6100FDS56A1M	61.00	2.402	25.00	0.9843	35.2	1.386	30.0	1.181	FDS56
SEMP6200FDS56A1M	62.00	2.441	26.00	1.0236	35.4	1.392	30.0	1.181	FDS56
SEMP6300FDS63A1M	63.00	2.480	27.00	1.0630	41.8	1.643	36.0	1.417	FDS63
SEMP6350FDS63A1	63.50	2.500	28.00	1.1024	41.9	1.650	36.0	1.417	FDS63
SEMP6400FDS63A1M	64.00	2.520	28.00	1.1024	41.9	1.650	36.0	1.417	FDS63
SEMP6500FDS63A1M	65.00	2.559	29.00	1.1417	42.1	1.657	36.0	1.417	FDS63
SEMP6600FDS63A1M	66.00	2.598	30.00	1.1811	42.3	1.664	36.0	1.417	FDS63
SEMP6668FDS63A1M	66.68	2.625	31.00	1.2205	42.5	1.671	36.0	1.417	FDS63
SEMP6700FDS63A1M	67.00	2.638	31.00	1.2205	42.5	1.671	36.0	1.417	FDS63
SEMP6800FDS63A1M	68.00	2.677	32.00	1.2598	42.6	1.678	36.0	1.417	FDS63
SEMP6900FDS63A1M	69.00	2.717	33.00	1.2992	42.8	1.685	36.0	1.417	FDS63
SEMP6985FDS63A1	69.85	2.750	34.00	1.3386	43.0	1.692	36.0	1.417	FDS63
SEMP7000FDS63A1M	70.00	2.756	34.00	1.3386	43.0	1.692	36.0	1.417	FDS63
SEMP7100FDS71A1M	71.00	2.795	26.00	1.0240	46.8	1.842	46.8	1.842	FDS71
SEMP7200EDS71A1M	72.00	2.835	27.00	1.0630	47.0	1.849	47.0	1.849	FDS71
SEMP7300FDS71A1M	73.00	2.874	28.00	1.1020	47.1	1.855	47.1	1.855	FDS71
SEMP7303FDS71A1	73.03	2.875	28.00	1.1020	47.1	1.855	47.1	1.855	FDS71
SEMP7400FDS71A1M	74.00	2.913	29.00	1.1420	47.3	1.863	47.3	1.863	FDS71
SEMP7500FDS71A1M	75.00	2.953	30.00	1.1810	47.5	1.869	47.5	1.869	FDS71

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Specification/Item	D1		PDD		LPR		L1		CSMS
	mm	in	mm	in	mm	in	mm	in	
SEMP7600FDS71A1M	76.00	2.992	31.00	1.2200	47.7	1.876	47.7	1.876	FDS71
SEMP7620FDS71A1M	76.20	3.000	31.00	1.2200	47.7	1.876	47.7	1.876	FDS71
SEMP7700FDS71A1M	77.00	3.031	32.00	1.2600	47.8	1.883	47.8	1.883	FDS71
SEMP7800FDS71A1M	78.00	3.071	33.00	1.2990	48.0	1.890	48.0	1.890	FDS71
SEMP7900FDS71A1M	79.00	3.110	34.00	1.3390	48.2	1.897	48.2	1.897	FDS71
SEMP7938FDS80A1M	79.38	3.125	31.00	1.2200	52.8	2.077	52.8	2.077	FDS80
SEMP8000FDS80A1M	80.00	3.150	31.00	1.2200	52.8	2.077	52.8	2.077	FDS80
SEMP8100FDS80A1M	81.00	3.189	32.00	1.2600	52.9	2.085	52.9	2.085	FDS80
SEMP8200FDS80A1M	82.00	3.228	33.00	1.2990	53.1	2.091	53.1	2.091	FDS80
SEMP8255FDS80A1M	82.55	3.250	34.00	1.3390	53.3	2.098	53.3	2.098	FDS80
SEMP8300FDS80A1M	83.00	3.268	34.00	1.3390	53.3	2.098	53.3	2.098	FDS80
SEMP8400FDS80A1M	84.00	3.307	35.00	1.3780	53.5	2.105	53.5	2.105	FDS80
SEMP8500FDS80A1M	85.00	3.346	36.00	1.4170	53.6	2.112	53.6	2.112	FDS80
SEMP8573FDS80A1M	85.73	3.375	37.00	1.4570	53.8	2.119	53.8	2.119	FDS80
SEMP8600FDS80A1M	86.00	3.386	37.00	1.4567	53.8	2.119	53.8	2.119	FDS80
SEMP8700FDS80A1M	87.00	3.425	38.00	1.4960	54.0	2.126	54.0	2.126	FDS80
SEMP8800FDS80A1M	88.00	3.465	39.00	1.5354	54.2	2.133	54.2	2.133	FDS80
SEMP8890FDS80A1M	88.90	3.500	40.00	1.5748	54.3	2.140	45.0	1.172	FDS80
SEMP8900FDS80A1M	89.00	3.504	40.00	1.5750	54.3	2.140	54.3	2.140	FDS80
SEMP9000FDS90A1M	90.00	3.543	37.00	1.4567	59.2	2.332	59.2	2.332	FDS90
SEMP9100FDS90A1M	91.00	3.583	38.00	1.4960	59.4	2.339	59.4	2.339	FDS90
SEMP9200FDS90A1M	92.00	3.622	39.00	1.5354	59.6	2.346	59.6	2.346	FDS90
SEMP9208FDS90A1M	92.08	3.625	39.00	1.5350	59.6	2.346	59.6	2.346	FDS90
SEMP9300FDS90A1N	93.00	3.661	40.00	1.5750	59.7	2.352	59.7	2.352	FDS90
SEMP9400FDS90A1M	94.00	3.701	26.00	1.0236	58.0	2.283	58.0	2.283	FDS90
SEMP9500FDS90A1M	95.00	3.740	27.00	1.0630	58.2	2.290	58.2	2.290	FDS90
SEMP9525FDS90A1M	95.25	3.750	27.00	1.0630	58.2	2.289	58.2	1.969	FDS90
SEMP9600FDS90A1M	96.00	3.780	28.00	1.1024	58.3	2.297	58.3	2.297	FDS90
SEMP9700FDS90A1M	97.00	3.819	29.00	1.1420	58.5	2.304	58.5	2.304	FDS90
SEMP9800FDS90A1M	98.00	3.858	30.00	1.1811	58.7	2.311	58.7	2.311	FDS90
SEMP9843FDS90A1M	98.43	3.875	31.00	1.2200	58.9	2.317	58.9	2.317	FDS90
SEMP9900FDS90A1M	99.00	3.898	31.00	1.2200	58.9	2.317	58.9	2.317	FDS90
SEMP10000FDS90A1M	100.00	3.937	32.00	1.2600	59.0	2.324	59.0	2.324	FDS90
SEMP10160FDS90A1M	101.60	4.000	34.00	1.3390	59.4	2.338	59.4	2.338	FDS90

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D1		PDD						
mm	in	mm	in	csms	screw	wrench	Drill Fix screw	Drill Fix wrench
28.00	1.102	14.00	0.551	FDS28	364.016	170.350	192.432	170.352
28.58	1.125	15.00	0.591	FDS28	364.016	170.350	192.432	170.352
29.00	1.142	15.00	0.591	FDS28	364.016	170.350	192.432	170.352
29.36	1.156	16.00	0.630	FDS28	364.010	170.345	192.432	170.352
30.00	1.181	16.00	0.630	FDS28	364.010	170.345	192.432	170.352
30.18	1.188	17.00	0.669	FDS28	364.010	170.345	192.432	170.352
30.96	1.219	17.00	0.669	FDS28	364.010	170.345	192.432	170.352
31.00	1.221	17.00	0.669	FDS28	364.010	170.345	192.432	170.352
31.75	1.250	15.00	0.591	FDS32	364.016	170.350	191.924	170.353
32.00	1.260	15.00	0.591	FDS32	364.016	170.350	191.924	170.353
33.00	1.299	16.00	0.630	FDS32	364.010	170.345	191.924	170.353
33.20	1.307	16.00	0.630	FDS32	364.010	170.345	191.924	170.353
33.35	1.313	17.00	0.669	FDS32	364.010	170.345	191.924	170.353
34.00	1.339	17.00	0.669	FDS32	364.010	170.345	191.924	170.353
34.93	1.375	18.00	0.709	FDS32	364.010	170.345	191.924	170.353
35.00	1.378	18.00	0.709	FDS32	364.010	170.345	191.924	170.353
36.00	1.417	13.00	0.512	FDS36	364.016	170.350	191.916	170.355
36.53	1.438	14.00	0.551	FDS36	364.016	170.350	191.916	170.355
37.00	1.457	14.00	0.551	FDS36	364.016	170.350	191.916	170.355
37.50	1.476	15.00	0.591	FDS36	364.016	170.350	191.916	170.355
38.00	1.496	15.00	0.591	FDS36	364.016	170.350	191.916	170.355
38.10	1.500	15.00	0.591	FDS36	364.016	170.350	191.916	170.355
39.00	1.535	16.00	0.630	FDS36	364.010	170.345	191.916	170.355
39.20	1.543	16.00	0.630	FDS36	364.010	170.345	191.916	170.355
39.70	1.563	17.00	0.669	FDS36	364.010	170.345	191.916	170.355
40.00	1.575	17.00	0.669	FDS40	364.010	170.345	191.916	170.355
41.00	1.614	18.00	0.709	FDS40	364.010	170.345	191.916	170.355
41.28	1.625	18.00	0.709	FDS40	364.010	170.345	191.916	170.355
42.00	1.654	19.00	0.748	FDS40	364.010	170.345	191.916	170.355
43.00	1.693	20.00	0.787	FDS40	364.011	170.346	191.916	170.355
44.00	1.732	21.00	0.827	FDS40	364.011	170.346	191.916	170.355
44.45	1.750	22.00	0.866	FDS40	364.011	170.346	191.916	170.355
45.00	1.772	18.00	0.709	FDS45	364.010	170.345	191.698	170.355
46.00	1.811	19.00	0.748	FDS45	364.010	170.345	191.698	170.355
47.00	1.850	20.00	0.787	FDS45	364.011	170.346	191.698	170.355
47.63	1.875	21.00	0.827	FDS45	364.011	170.346	191.698	170.355
48.00	1.890	21.00	0.827	FDS45	364.011	170.346	191.698	170.355
49.00	1.929	22.00	0.866	FDS45	364.011	170.346	191.698	170.355
50.00	1.969	23.00	0.906	FDS50	364.011	170.346	191.698	170.355
50.80	2.000	24.00	0.945	FDS50	364.011	170.346	191.698	170.355
51.00	2.008	24.00	0.945	FDS50	364.011	170.346	191.698	170.355
52.00	2.047	25.00	0.984	FDS50	364.012	170.347	191.698	170.355
53.00	2.087	26.00	1.024	FDS50	364.012	170.347	191.698	170.355
53.98	2.125	27.00	1.063	FDS50	364.012	170.347	191.698	170.355
54.00	2.216	27.00	1.063	FDS50	364.012	170.347	191.698	170.355
55.00	2.165	28.00	1.102	FDS50	364.012	170.347	191.698	170.355
56.00	2.205	20.00	0.787	FDS56	364.011	170.346	191.726	170.356
57.00	2.244	21.00	0.827	FDS56	364.011	170.346	191.726	170.356
57.15	2.250	21.00	0.827	FDS56	364.011	170.346	191.726	170.356
58.00	2.284	22.00	0.866	FDS56	364.011	170.346	191.726	170.356
59.00	2.323	23.00	0.906	FDS56	364.011	170.346	191.726	170.356
60.00	2.362	24.00	0.945	FDS56	364.011	170.346	191.726	170.356
60.33	2.375	24.00	0.945	FDS56	364.011	170.346	191.726	170.356
61.00	2.402	25.00	0.984	FDS56	364.012	170.347	191.726	170.356
62.00	2.441	26.00	1.024	FDS56	364.012	170.347	191.726	170.356
63.00	2.480	27.00	1.063	FDS63	364.012	170.347	191.726	170.356

SEM PLUS A1 Heads

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D1		PDD						
mm	in	mm	in	csms	screw	wrench	Drill Fix screw	Drill Fix wrench
63.50	2.500	28.00	1.102	FDS63	364.012	170.347	191.726	170.356
64.00	2.520	28.00	1.102	FDS63	364.012	170.347	191.726	170.356
65.00	2.559	29.00	1.142	FDS63	364.013	170.348	191.726	170.356
66.00	2.598	30.00	1.181	FDS63	364.013	170.348	191.726	170.356
66.68	2.625	31.00	1.221	FDS63	364.013	170.348	191.726	170.356
67.00	2.638	31.00	1.221	FDS63	364.013	170.348	191.726	170.356
68.00	2.677	32.00	1.260	FDS63	364.013	170.348	191.726	170.356
69.00	2.717	33.00	1.299	FDS63	364.015	170.348	191.726	170.356
69.85	2.750	34.00	1.339	FDS63	364.015	170.348	191.726	170.356
70.00	2.756	34.00	1.339	FDS63	364.015	17.0348	191.726	170.356
71.00	2.795	26.00	1.024	FDS71	364.012	170.347	191.916	170.355
72.00	2.835	27.00	1.063	FDS71	364.012	170.347	191.916	170.355
73.00	2.874	28.00	1.102	FDS71	364.012	170.347	191.916	170.355
73.03	2.875	28.00	1.102	FDS71	364.012	170.347	191.916	170.355
74.00	2.913	29.00	1.142	FDS71	364.013	170.365	191.916	170.355
75.00	2.953	30.00	1.181	FDS71	364.013	170.365	191.916	170.355
76.00	2.992	31.00	1.220	FDS71	364.013	170.365	191.916	170.355
76.20	3.000	31.00	1.220	FDS71	364.013	170.365	191.916	170.355
77.00	3.031	32.00	1.260	FDS71	364.013	170.365	191.916	170.355
78.00	3.071	33.00	1.299	FDS71	364.015	170.365	191.916	170.355
79.00	3.110	34.00	1.339	FDS71	364.015	170.365	191.916	170.355
79.38	3.125	31.00	1.220	FDS80	364.013	170.365	191.916	170.355
80.00	3.150	31.00	1.220	FDS80	364.013	170.365	191.916	170.355
81.00	3.189	32.00	1.260	FDS80	364.013	170.365	191.916	170.355
82.00	3.228	33.00	1.299	FDS80	364.015	170.365	191.916	170.355
82.55	3.250	34.00	1.339	FDS80	364.015	170.365	191.916	170.355
83.00	3.268	34.00	1.339	FDS80	364.015	170.365	191.916	170.355
84.00	3.307	35.00	1.378	FDS80	364.015	170.365	191.916	170.355
85.00	3.346	36.00	1.417	FDS80	364.015	170.365	191.916	170.355
85.73	3.375	37.00	1.457	FDS80	364.015	170.365	191.916	170.355
86.00	3.386	37.00	1.457	FDS80	364.015	170.365	191.916	170.355
87.00	3.425	38.00	1.496	FDS80	364.015	170.365	191.916	170.355
88.00	3.465	39.00	1.535	FDS80	364.015	170.365	191.916	170.355
88.90	3.500	40.00	1.575	FDS80	364.015	170.365	191.916	170.355
89.00	3.504	40.00	1.575	FDS80	364.015	170.365	191.916	170.355
90.00	3.543	37.00	1.457	FDS90	364.015	170.365	191.916	170.355
91.00	3.583	38.00	1.496	FDS90	364.015	170.365	191.916	170.355
92.00	3.622	39.00	1.535	FDS90	364.015	170.365	191.916	170.355
92.08	3.625	39.00	1.535	FDS90	364.015	170.365	191.916	170.355
93.00	3.661	40.00	1.575	FDS90	364.015	170.365	191.916	170.355
94.00	3.701	26.00	1.024	FDS90	364.012	170.355	191.916	170.355
95.00	3.740	27.00	1.063	FDS90	364.012	170.355	191.916	170.355
95.25	3.750	27.00	1.063	FDS90	364.012	170.355	191.916	170.355
96.00	3.780	28.00	1.102	FDS90	364.012	170.355	191.916	170.355
97.00	3.819	29.00	1.142	FDS90	364.013	170.365	191.916	170.355
98.00	3.858	30.00	1.181	FDS90	364.013	170.365	191.916	170.355
98.43	3.875	31.00	1.220	FDS90	364.013	170.365	191.916	170.355
99.00	3.898	31.00	1.220	FDS90	364.013	170.365	191.916	170.355
100.00	3.937	32.00	1.260	FDS90	364.013	170.365	191.916	170.355
101.60	4.000	34.00	1.339	FDS90	364.015	170.365	191.916	170.355

YLMD MAX DRILL

YLMD HOLDER & PILOT DRILL

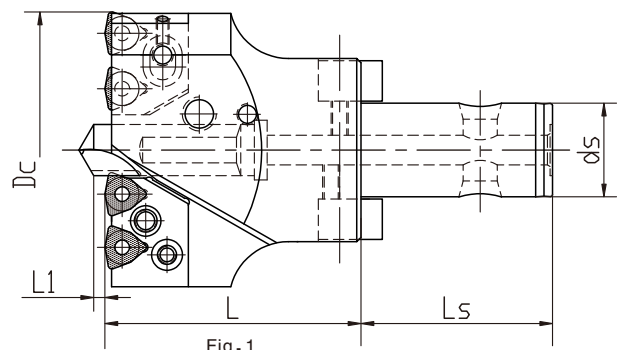
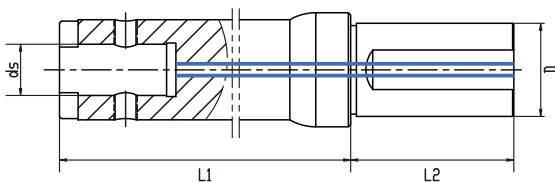
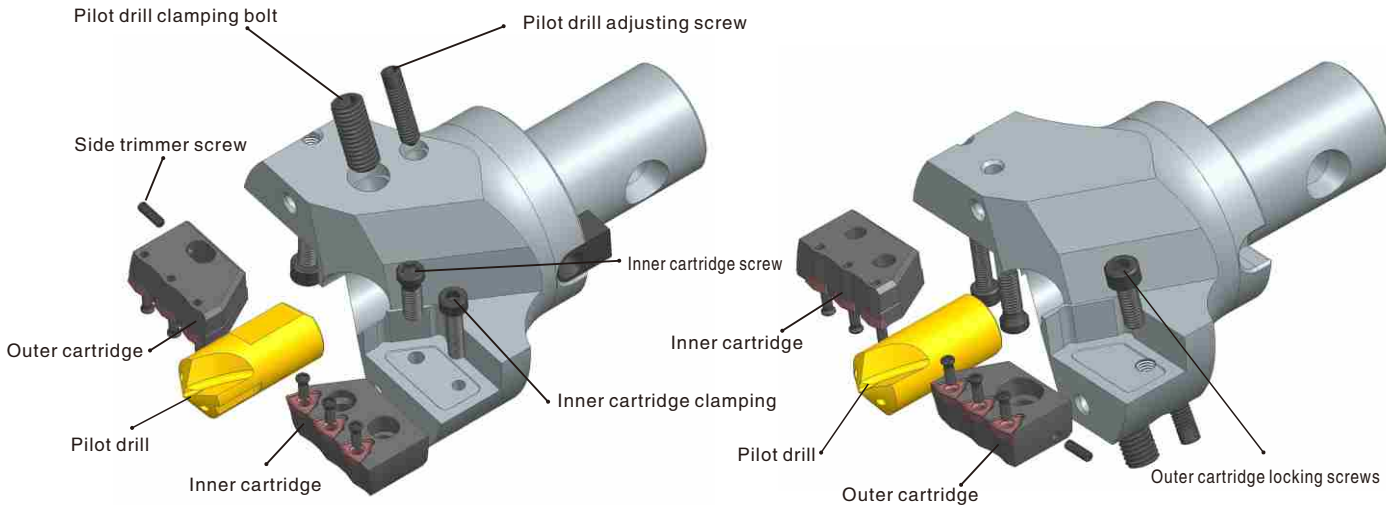


Fig. 1

Specification/Item	Size					Inner Cartridge (Screw)		Outer cartridge (Screw)		Insert	Screw	Wrench	Positioning Block (Screw)		Pilot Drill	Pilot Drill (Screw)	
	Dc	ds	Ls	L	L1	Clamping Bolt	Screw	Clamping Bolt	adjust				Size	Clamping Bolt		Clamping Bolt	adjust
YLMD-045050-C16	45-50	16	40	55	1.6	/	M5*12	M5*18	M3*6	WC..040208	M2.5*6	T8	FMB22	M4*12	PLD1035	M8*20	M5*20
YLMD-050055-C16	50-55	16	40	55	1.6	/	M5*12	M5*18	M3*6				FMB22	M4*12		M8*20	M5*20
YLMD-055060-C22	55-60	22	45	60	1.6	/	M5*12	M5*18	M3*6				FMB22	M4*12	PLD1238	M8*20	M5*20
YLMD-060065-C22	60-65	22	45	60	1.8	M4*16	M5*16	M5*18	M3*6	WC..050308	M3*7	FMB22	M4*12	M8*20		M5*20	
YLMD-065070-C22	65-70	22	45	60	1.8	M4*16	M5*16	M5*18	M3*6			FMB22	M4*12	M8*20		M5*20	
YLMD-070075-C22	70-75	22	45	60	1.8	M4*16	M5*16	M5*18	M3*6			FMB22	M4*12	M8*20	M5*20		
YLMD-075080-C28	75-80	28	50	65	2.2	M5*18	M6*16	M6*20	M3*8	WC..06T308	M3.5*8.5	T15	FMB22	M4*12	PLD1645	M10*20	M6*20
YLMD-080085-C28	80-85	28	50	65	2.2	M5*18	M6*16	M6*20	M3*8				FMB22	M4*12		M10*20	M6*20
YLMD-085090-C28	85-90	28	50	65	2.2	M5*18	M6*16	M6*20	M3*8				FMB22	M4*12		M10*20	M6*20
YLMD-090095-C28	90-95	28	50	65	2.2	M5*18	M6*16	M6*20	M3*8	WC..050308	M3*7	T8	FMB22	M4*12		M10*20	M6*20
YLMD-095100-C28	95-100	28	50	65	2.2	M5*18	M6*16	M6*20	M3*8				FMB22	M4*12		M10*20	M6*20
YLMD-100105-C36	100-105	36	55	70	2.4	M5*18	M6*16	M6*20	M3*8				WC..06T308	M3.5*8.5		T15	FMB27
YLMD-105110-C36	105-110	36	55	70	2.4	M5*18	M6*16	M6*20	M3*8	FMB27	M5*16	M12*20			M8*20		
YLMD-110115-C36	110-115	36	55	70	2.4	M5*18	M6*16	M6*20	M3*8	FMB27	M5*16	M12*20			M8*20		
YLMD-115120-C40	115-120	40	60	76	2.4	M5*18	M6*16	M6*20	M3*10	WC..06T308	M3.5*8.5	T15	FMB32	M6*16	PLD2045	M12*20	M8*20
YLMD-120125-C40	120-125	40	60	76	3.2	M5*18	M6*16	M6*20	M3*10				FMB32	M6*16		M12*20	M8*20
YLMD-125130-C40	125-130	40	60	76	3.2	M5*18	M6*16	M6*20	M3*10				FMB32	M6*16		M12*20	M8*20
YLMD-130135-C40	130-135	40	60	76	3.2	M5*18	M6*16	M6*20	M3*10	WC..080412	M4*10	T15	FMB32	M6*16	PLD2556	M12*20	M8*20
YLMD-135140-C40	135-140	40	60	76	3.2	M5*18	M6*16	M6*20	M3*10				FMB32	M6*16		M12*20	M8*20
YLMD-140150-C50	140-150	50	60	98	3.2	M5*18	M6*16	M6*20	M3*10				FMB40	M6*16		M12*20	M8*20
YLMD-150160-C50	150-160	50	60	98	3.2	M5*18	M6*16	M6*20	M3*10	WC..080412	M4*10	T15	FMB40	M6*16	PLD2556	M12*20	M8*20
YLMD-160170-C50	160-170	50	60	98	3.2	M5*18	M6*16	M6*20	M3*10				FMB40	M6*16		M12*20	M8*20
YLMD-170180-C50	170-180	50	60	98	3.2	M5*18	M6*16	M6*20	M3*10				FMB40	M6*16		M12*20	M8*20



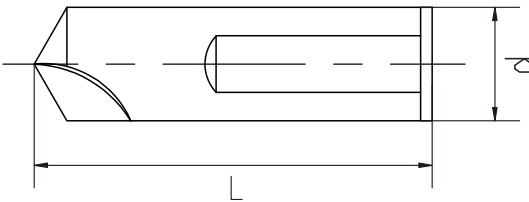
Specification/Item	Data			
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C40-D16-125	40	70	125	16
C40-D16-165	40	70	165	16
C40-D16-205	40	70	205	16
C40-D22-125	40	70	125	22
C40-D22-165	40	70	165	22
C40-D22-205	40	70	205	22
C40-D22-255	40	70	255	22
C40-D22-305	40	70	305	22
C40-D22-355	40	70	355	22
C40-D28-125	40	70	125	28
C40-D28-165	40	70	165	28
C40-D28-205	40	70	205	28
C40-D28-255	40	70	255	28
C40-D28-305	40	70	305	28
C40-D28-355	40	70	355	28
C40-D28-405	40	70	405	28
C40-D36-125	40	70	125	36
C40-D36-165	40	70	165	36
C40-D36-205	40	70	205	36

Specification/Item	Data			
	D	L2	L1	ds
C40-D36-255	40	70	255	36
C40-D36-305	40	70	305	36
C40-D36-355	40	70	355	36
C40-D36-405	40	70	405	36
C50-D40-125	50	80	125	40
C50-D40-165	50	80	165	40
C50-D40-205	50	80	205	40
C50-D40-255	50	80	255	40
C50-D40-305	50	80	305	40
C50-D40-355	50	80	355	40
C50-D40-405	50	80	405	40
C50-D50-125	50	80	125	50
C50-D50-165	50	80	165	50
C50-D50-205	50	80	205	50
C50-D50-255	50	80	255	50
C50-D50-305	50	80	305	50
C50-D50-355	50	80	355	50
C50-D50-405	50	80	405	50



▲ Plug the thread hole when using to prevent water leakage. When using internal cooling, plug the water outlet hole with a plug

PILOT DRILL

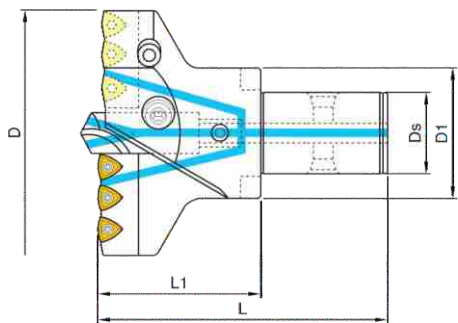


The hole tolerance of U Drill

Specification/Item	Data	
	D	L
PLD-0620	06	20
PLD-0825	08	25
PLD-1035	10	35
PLD-1238	12	38
PLD-1645	16	45
PLD-2045	20	45
PLD-2556	25	56

V- MAX DRILL

V- MAX DRILL



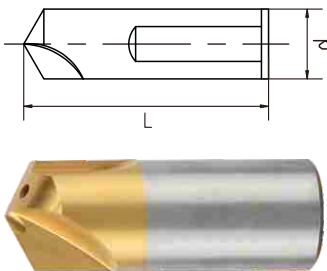
© MX Modular Shank Type

Specification/Item	Size					Pilot Drill	Cartridge	Insert	Component	
	D	Ds	D1	L1	L				Screw	Wrench
VMD-045050	45-50	13	28	50	85	PLD-V1035 TiN-H	VMC-045050N/T	WCMX030208	TSB-22045	T6
VMD-050055	50-55	13	28	50	85		VMC-050055N/T		TSB-22045	T6
VMD-055060	55-60	16	32	60	100	PLD-V1238 TiN-H	VMC-055060N/T	WCMX040208	TSB-22045	T8
VMD-060065	60-65	16	32	60	100		VMC-060065N/T		TSB-30070	T8
VMD-065070	65-70	16	32	60	100		VMC-065070N/T	WCMX050308	TSB-30070	T8
VMD-070075	70-75	22	40	70	115		VMC-070075N/T		TSB-30070	T8
VMD-075080	75-80	22	40	70	115	PLD-V1645 TiN-H	VMC-075080N/T	WCMX06T308	TSB-35090	T15
VMD-080085	80-85	22	40	70	115		VMC-080085N/T		TSB-35090	T15
VMD-085090	85-90	27	48	70	120		VMC-085090N/T		TSB-35090	T15
VMD-090095	90-95	27	48	70	120		VMC-090095N/T		TSB-35090	T15
VMD-095100	95-100	27	48	70	120		VMC-095100N/T		TSB-35090	T15
VMD-100105	100-105	32	58	80	130	PLD-V2045 TiN-H	VMC-100105N/T	WCMX050308	TSB-30070	T8
VMD-105110	105-110	32	58	80	130		VMC-105110N/T		TSB-35090	T15
VMD-110115	110-115	32	58	80	130		VMC-110115N/T	WCMX06T308	TSB-35090	T15
VMD-115120	115-120	40	70	90	145	PLD-V2556 TiN-H	VMC-115120N/T		TSB-35090	T15
VMD-120125	120-125	40	70	90	145		VMC-120125N/T		TSB-35090	T15
VMD-125130	125-130	40	70	90	145		VMC-125130N/T		TSB-35090	T15
VMD-130135	130-135	40	70	90	145		VMC-130135N/T	WCMX080408	TSB-35090	T15
VMD-135140	135-140	40	70	90	145		VMC-135140N/T		TSB-40110	T15
VMD-140150	140-150	50	80	100	160		VMC-140150N/T		TSB-40110	T15
VMD-150160	150-160	50	80	100	160		VMC-150160N/T		TSB-40110	T15
VMD-160170	160-170	50	80	100	160	PLD-V3068 TiN-H	VMC-160170N/T		TSB-40110	T15
VMD-170180	170-180	50	80	100	160		VMC-170180N/T		TSB-40110	T15

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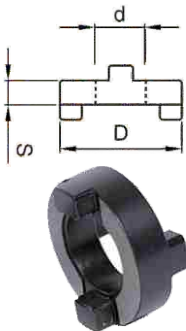
Drilling Range	inner	Outer	Insert	No.of Insert	Component	
					Screw	Wrench
45-50	VMC-045050N	VMC-045050T	WCMX030208	2	TSB-22045	T6
50-55	VMC-050055N	VMC-050055T			TSB-22045	T6
55-60	VMC-055060N	VMC-055060T	WCMX040208	2	TSB-22045	T8
60-65	VMC-060065N	VMC-060065T	WCMX050308	2	TSB-30070	T8
65-70	VMC-065070N	VMC-065070T			TSB-30070	T8
70-75	VMC-070075N	VMC-070075T			TSB-30070	T8
75-80	VMC-075080N	VMC-075080T			TSB-35090	T15
80-85	VMC-080085N	VMC-080085T	WCMX06T308	2	TSB-35090	T15
85-90	VMC-085090N	VMC-085090T			TSB-35090	T15
90-95	VMC-090095N	VMC-090095T			TSB-35090	T15
95-100	VMC-095100N	VMC-095100T			TSB-35090	T15
100-105	VMC-100105N	VMC-100105T			TSB-30070	T8
105-110	VMC-105110N	VMC-105110T	WCMX06T308	3	TSB-35090	T15
110-115	VMC-110115N	VMC-110115T			TSB-35090	T15
115-120	VMC-115120N	VMC-115120T			TSB-35090	T15
120-125	VMC-120125N	VMC-120125T			TSB-35090	T15
125-130	VMC-125130N	VMC-125130T			TSB-35090	T15
130-135	VMC-130135N	VMC-130135T			TSB-35090	T15
135-140	VMC-135140N	VMC-135140T	WCMX080408	3	TSB-40110	T15
140-150	VMC-140150N	VMC-140150T			TSB-40110	T15
150-160	VMC-150160N	VMC-150160T			TSB-40110	T15
160-170	VMC-160170N	VMC-160170T			TSB-40110	T15
170-180	VMC-170180N	VMC-170180T			TSB-40110	T15

© PILOT DRILL



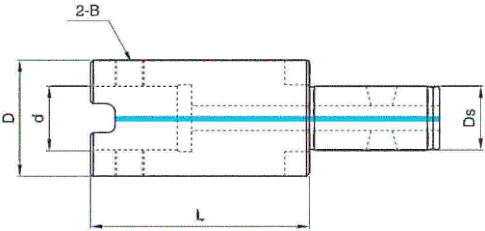
Specification/Item	Size(mm)	
	D	L
PLD-V1035 TiN-H	10	35
PLD-V1238 TiN-H	12	38
PLD-V1645 TiN-H	16	45
PLD-2045 TiN-H	20	45
PLD-2556 TiN-H	25	56
PLD-3068 TiN-H	30	68

© DRIVE RING



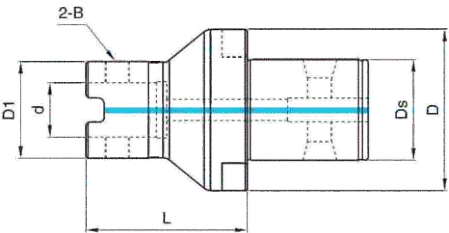
Specification/Item	Size(mm)		
	D	d	S
DVR-281310	28	13	10
DVR-321610	32	16	10
DVR-402212	40	22	12
DVR-482712	48	27	12
DVR-583214	58	32	14
DVR-704014	70	40	14
DVR-805016	80	50	16

V- MAX DRILL



© MXB/ MX Extension

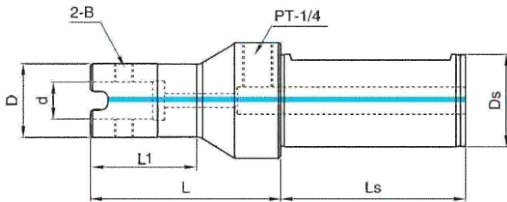
Drilling Range	Size				B	Drive Ring
	D	d	L	Ds		
MXB-2813115	28	13	115	13	MTB-08115	DVR-281310
MXB-2813150			150			
MXB-2813200			200			
MXB-2813300			300			
MXB-3216115	32	16	115	16		DVR-321610
MXB-3216200			200			
MXB-3216300			300			
MXB-4022113	40	22	113	22	MTB-10145	DVR-402212
MXB-4022200			200			
MXB-4022300			300			
MXB-4827113	48	27	113	27	MTB-12175	DVR-472712
MXB-4827200			200			
MXB-4827300			300			
MXB-5832186	58	32	186	32	MTB-12195	DVR-583214
MXB-5832300			300			
MXB-7040186	70	40	186	40	MTB-16260	DVR-704014
MXB-7040300			300			
MXB-7040500			500			
MXB-8050204	80	50	204	50		DVR-805016
MXB-8050300			300			
MXB-8050500			500			



© MXR/ MX Reducer

Specification/Item	Size					B	D1/Drive Ring	D/Drive Ring
	Ds	d	L	D	D1			
MXR-1613100	16	13	100	32	28	MXB-08115	DVR-281310	DVR-321610
MXR-2216100	22	16	100	40	32	MXB-08115	DVR-321610	DVR-402212
MXR-2722100	27	22	100	48	40	MXB-10145	DVR-402212	DVR-482712
MXR-3213100	32	13	100	58	28	MXB-08115	DVR-281310	DVR-583214
MXR-3216100	32	16	100	58	32	MXB-08115	DVR-321610	DVR-583214
MXR-3222100	32	22	100	58	40	MXB-10145	DVR-402212	DVR-583214
MXR-3227100	32	27	100	58	48	MXB-12175	DVR-482712	DVR-583214
MXR-4032100	40	32	100	70	58	MXB-12195	DVR-583214	DVR-704014
MXR-5013080	50	13	80	80	28	MXB-08115	DVR-281310	DVR-805016
MXR-5016080	50	16	80	80	32	MXB-08115	DVR-321610	DVR-805016
MXR-5022080	50	22	80	80	40	MXB-10145	DVR-402212	DVR-805016
MXR-5027080	50	27	80	80	48	MXB-12175	DVR-482712	DVR-805016
MXR-5032080	50	32	80	80	58	MXB-12195	DVR-583214	DVR-805016
MXR-5040150	50	40	150	80	70	MXB-16260	DVR-704014	DVR-805016

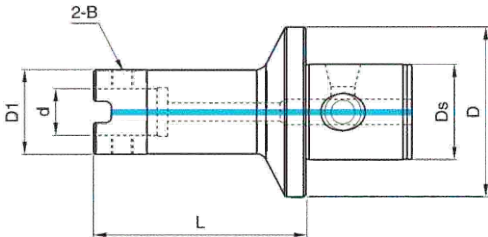
V- MAX DRILL



© MXA/ MX+Cylindrical Adaptor

Specification/Item	Size						B	Drive Ring	
	Ds	d	L	L1	D	Ls			
MXA-3213115	32	13	115	77	28	70	MTB-08115	DVR-281310	
MXA-3213200		13	200	165	28				
MXA-3213300		13	300	265	28				
MXA-4016125	40	16	125	86	32	80		MTB-10145	DVR-321610
MXA-1016200		16	200	161	32				
MXA-4016300		16	300	261	32				
MXA-4022148		22	148	109	40				
MXA-4022200		22	200	161	40		MTB-12175	DVR-402212	
MXA-4022300		22	300	261	40				
MXA-4027168		27	168	133	48				
MXA-4027300		27	300	265	48				
MXA-4032186	50	32	186	151	58	MTB-12195	DVR-472712		
MXA-4032300		32	300	265	58				
MXA-W5040186		40	186	151	70	MTB-16260	DVR-583214		
MXA-W5040300		40	300	265	70				
MXA-W5050184		50	184	149	80			DVR-704014	
MXA-W5050300		50	300	265	80				DVR-805016

※It is a Adaptor that converts the MX modular system to Side loick Type.



© MXE/ MX+EXT Adaptor

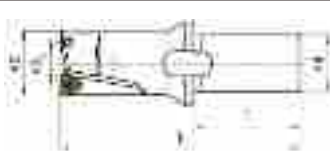
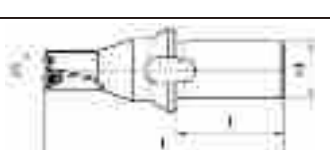
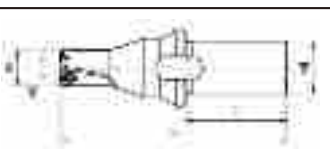
Specification/Item	Size					B	D1/Drive Ring
	Ds	d	L	D	D1		
MXE-3613100	36	13	100	63	28	MXB-08115	DVR-281310
MXE-3616100		16			32	MXB-08115	DVR-321610
MXE-3622100		22			40	MXB-10145	DVR-402212
MXE-3627100		13			28	MXB-12175	DVR-482712
MXE-3632100	45	16		80	32	MXB-12195	DVR-583214
MXE-4513100		22			40	MXB-08115	DVR-281310
MXE-4516100		27			48	MXB-08115	DVR-321610
MXE-4522100		32			58	MXB-10145	DVR-402212
MXE-4527100		13			28	MXB-12175	DVR-482712
MXE-4532100		16			32	MXB-12195	DVR-583214

※ It is a Adaptor that converts the MX modular system to EXT modular system.

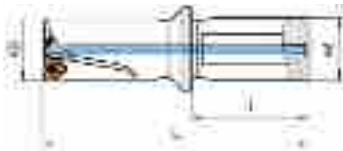
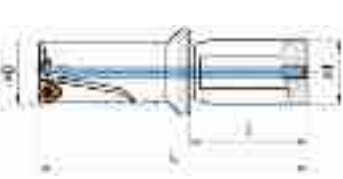


TRACK DRILL

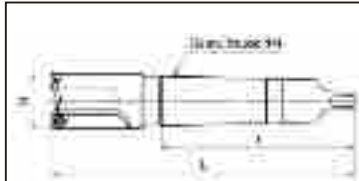
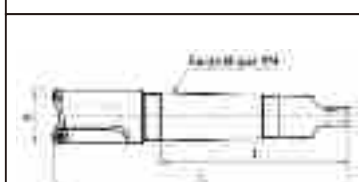


	Specification/Item	Size					Insert
		D	D1	I	L	d	
	420-28	28	13	60	137	32	WCMX06...
	420-30	30	13	60	137	32	WCMX06...
	420-32	32	13	60	137	32	WCMX06...
	420-36	36	13	60	137	32	WCMX06...
	422-22	22	-	60	137	32	WCMX05...
	459-22	22	3.2	60	137	32	WCMX05...



	Specification/Item	Size				Insert
		D	I	L	d	
	424-25	25	60	137	32	WCMX06...
	424-26	26	60	137	32	WCMX06...
	424-28	28	60	137	32	WCMX06...
	424-30	30	60	137	32	WCMX06...
	424-32	32	60	137	32	WCMX06...
	424-34	34	60	137	32	WCMX06...
	424-36	36	60	137	32	WCMX06...
	469-22	22	60	137	32	WCMX05...



	Specification/Item	Size				Insert
		D	D1	I	L	
	315-28	28	16.7	124	195	WCMX05...
	315-30	30	16.7	124	195	WCMX05...
	315-32	32	16.7	124	195	WCMX05...
	315-36	36	16.7	124	195	WCMX05...
	330-22	22	3.2	124	195	WCMX05...

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皇冠鑽系列	SFM Drill Insert
大直徑U鑽	YUMD Max Drill
刀片系列	Corbide Inserts
粗鏢刀系列	Rough Boring Head
精鏢刀系列	Finish Boring Head
鏢刀柄系列	Chuck
小刀夾系列	Accessories
鏢刀倒角環	Chamfering Tools
槍鑽工藝	Gun Drill Technology

InDexable Insert Drill Cutting Condition

InDexable Insert Drill Cutting Condition

Recommended Cutting Conditions (2D~3D) Minimum value~Recommended value~Maximum value

		Work Material	Hardness of Workpiece	Recommended Chipbreaker	Recommended Insert Grade	Cutting Speed (m/min)	Feed Rate (mm/rev)				
			HB				φ 13.0~ φ 18.0	φ 18.5~ φ 29.0	φ 29.5~ φ 36.0	φ 37.0~ φ 55.0	φ 56.0~ φ 68.0
2D	P	Carbon Steel SS400	125	G	ACP300	105~155~205	0.04~0.07~0.09	0.04~0.07~0.09	0.04~0.07~0.10	0.04~0.07~0.11	0.05~0.08~0.12
		" S15C	125	L	ACP300	115~145~190	0.03~0.07~0.11	0.03~0.07~0.11	0.03~0.07~0.12	0.05~0.10~0.14	0.06~0.11~0.16
		" S45C Hardened	190	G	ACP300	85~130~170	0.07~0.12~0.22	0.07~0.12~0.22	0.07~0.13~0.24	0.08~0.15~0.27	0.09~0.16~0.30
		" S45C	250	G	ACP300	70~105~140	0.05~0.10~0.17	0.05~0.10~0.17	0.05~0.11~0.18	0.06~0.12~0.20	0.07~0.13~0.22
		" S75C	270	G	ACP300	85~115~140	0.07~0.12~0.20	0.07~0.12~0.20	0.07~0.13~0.21	0.08~0.15~0.24	0.09~0.16~0.27
		" S75C Hardened	300	G	ACP300	60~85~120	0.05~0.10~0.16	0.05~0.10~0.16	0.05~0.11~0.17	0.06~0.12~0.19	0.07~0.13~0.20
		Low Alloy Steel 20crmo~42crmo/SCM,SNCM	180	L	ACP300	85~120~155	0.04~0.09~0.13	0.04~0.07~0.13	0.04~0.07~0.15	0.05~0.08~0.16	0.06~0.09~0.18
		" 20crmo~42crmo/SCM,SNCM Hardened	275	G	ACP300	70~105~140	0.05~0.10~0.16	0.05~0.10~0.16	0.05~0.11~0.17	0.06~0.12~0.19	0.07~0.13~0.20
		" 20crmo~42crmo/SCM,SNCM Hardened	300	G	ACP300	65~95~120	0.05~0.10~0.16	0.05~0.10~0.16	0.05~0.11~0.17	0.06~0.12~0.19	0.07~0.13~0.20
		" 20crmo~42crmo/SCM,SNCM Hardened	350	G	ACP300	55~75~95	0.05~0.10~0.16	0.05~0.10~0.16	0.05~0.11~0.17	0.06~0.12~0.19	0.07~0.13~0.20
		High Alloy Steel SKD,SKT,SKH	200	G	ACP300	85~115~140	0.07~0.12~0.22	0.07~0.12~0.22	0.07~0.13~0.24	0.08~0.15~0.27	0.09~0.16~0.30
		" SKD,SKT,SKH	325	G	ACP300	70~85~105	0.05~0.10~0.17	0.05~0.10~0.17	0.05~0.11~0.18	0.06~0.12~0.20	0.07~0.13~0.22
	M	Stainless Steel SUS403 and other's(Martensite/Ferrite)	200	G	ACP300	85~120~155	0.05~0.10~0.17	0.05~0.10~0.17	0.05~0.11~0.18	0.06~0.12~0.20	0.08~0.13~0.22
		" SUS403 and other's Martensitic (Hardened)	240	G	ACP300	80~105~130	0.05~0.10~0.17	0.05~0.10~0.17	0.05~0.11~0.18	0.06~0.12~0.20	0.08~0.13~0.22
		" SUS304, SUS316 Austenitic	180	G	ACP300	85~120~155	0.05~0.10~0.17	0.05~0.10~0.17	0.05~0.11~0.18	0.06~0.12~0.20	0.08~0.13~0.22
	K	Cast Iron		H	ACK300	105~140~170	0.08~0.19~0.30	0.09~0.20~0.34	0.10~0.22~0.37	0.11~0.24~0.41	0.12~0.27~0.45
		Ductile Cast Iron		H	ACK300	80~105~130	0.08~0.19~0.30	0.09~0.20~0.34	0.10~0.22~0.37	0.11~0.24~0.41	0.12~0.27~0.45
	S	Exotic Alloy (Heat Resistant Alloy, super Alloy, Ti Alloy, etc.)	200	G	ACP300	25~45~60	0.05~0.10~0.17	0.05~0.10~0.17	0.05~0.11~0.18	0.06~0.12~0.20	0.07~0.13~0.22
	N	Aluminium Alloy		G	DL1500	170~225~275	0.05~0.10~0.16	0.05~0.10~0.16	0.05~0.11~0.17	0.06~0.12~0.19	0.07~0.13~0.20
		Copper Alloy		G	DL1500	155~200~240	0.05~0.10~0.16	0.05~0.10~0.16	0.05~0.11~0.17	0.06~0.12~0.19	0.07~0.13~0.20

It the first recommended insert grades for P and K , In such cases, Please use a cutting speed vc of 130% in the table above and a feed rate of 75% for the recommended cutting conditions.

		Work Material	Hardness of Workpiece	Recommended Chipbreaker	Recommended Insert Grade	Cutting Speed (m/min)	Feed Rate (mm/rev)				
			HB				φ 13.0~ φ 18.0	φ 18.5~ φ 29.0	φ 29.5~ φ 36.0	φ 37.0~ φ 55.0	φ 56.0~ φ 68.0
3D	P	Carbon Steel SS400	125	G	ACP300	105~155~205	0.04~0.06~0.09	0.04~0.06~0.09	0.04~0.07~0.10	0.04~0.07~0.11	0.05~0.08~0.12
		" S15C	125	L	ACP300	115~145~190	0.03~0.06~0.09	0.03~0.06~0.09	0.03~0.07~0.10	0.04~0.08~0.11	0.05~0.09~0.12
		" S45C Hardened	190	G	ACP300	85~130~170	0.07~0.11~0.19	0.07~0.11~0.19	0.07~0.12~0.20	0.08~0.13~0.22	0.09~0.15~0.25
		" S45C	250	G	ACP300	70~105~140	0.06~0.09~0.14	0.05~0.09~0.14	0.05~0.10~0.15	0.06~0.11~0.17	0.07~0.12~0.19
		" S75C	270	G	ACP300	85~115~140	0.08~0.11~0.17	0.07~0.11~0.17	0.07~0.12~0.18	0.08~0.13~0.20	0.09~0.15~0.22
		" S75C Hardened	300	G	ACP300	60~85~120	0.06~0.09~0.13	0.05~0.09~0.13	0.05~0.10~0.14	0.06~0.11~0.16	0.07~0.12~0.18
		Low Alloy Steel 20crmo~42crmo/SCM,SNCM	180	L	ACP300	85~120~155	0.04~0.06~0.11	0.04~0.06~0.11	0.04~0.07~0.12	0.05~0.07~0.14	0.06~0.08~0.15
		" 20crmo~42crmo/SCM,SNCM Hardened	275	G	ACP300	70~105~140	0.05~0.09~0.13	0.05~0.09~0.13	0.05~0.10~0.14	0.06~0.11~0.16	0.07~0.12~0.18
		" 20crmo~42crmo/SCM,SNCM Hardened	300	G	ACP300	65~95~120	0.05~0.09~0.13	0.05~0.09~0.13	0.05~0.10~0.14	0.06~0.11~0.16	0.07~0.12~0.18
		" 20crmo~42crmo/SCM,SNCM Hardened	350	G	ACP300	55~75~95	0.05~0.09~0.13	0.05~0.09~0.13	0.05~0.10~0.14	0.06~0.11~0.16	0.07~0.12~0.18
		High Alloy Steel SKD,SKT,SKH	200	G	ACP300	85~115~140	0.07~0.11~0.19	0.07~0.11~0.19	0.07~0.12~0.20	0.08~0.13~0.22	0.09~0.15~0.25
		" SKD,SKT,SKH	325	G	ACP300	70~85~105	0.05~0.09~0.14	0.05~0.09~0.14	0.05~0.10~0.15	0.06~0.11~0.17	0.07~0.12~0.19
	M	Stainless Steel SUS403 and other's(Martensite/Ferrite)	200	G	ACP300	85~120~155	0.05~0.09~0.14	0.05~0.09~0.14	0.05~0.10~0.10	0.06~0.11~0.17	0.07~0.12~0.19
		" SUS403 and other's Martensitic (Hardened)	240	G	ACP300	80~105~130	0.05~0.09~0.14	0.05~0.09~0.14	0.05~0.10~0.15	0.06~0.11~0.17	0.07~0.12~0.19
		" SUS304, SUS316 Austenitic	180	G	ACP300	85~120~155	0.05~0.09~0.14	0.05~0.09~0.14	0.05~0.10~0.15	0.06~0.11~0.17	0.07~0.12~0.19
	K	Cast Iron		H	ACK300	105~140~170	0.08~0.17~0.25	0.09~0.19~0.28	0.10~0.20~0.30	0.11~0.22~0.34	0.12~0.24~0.38
		Ductile Cast Iron		H	ACK300	80~105~130	0.08~0.17~0.25	0.09~0.19~0.28	0.10~0.20~0.30	0.11~0.22~0.34	0.12~0.24~0.38
	S	Exotic Alloy (Heat Resistant Alloy, super Alloy, Ti Alloy, etc.)	200	G	ACP300	25~45~60	0.05~0.09~0.14	0.05~0.09~0.14	0.05~0.10~0.15	0.06~0.11~0.17	0.07~0.12~0.19
	N	Aluminium Alloy		G	DL1500	170~225~275	0.05~0.10~0.16	0.05~0.10~0.16	0.05~0.11~0.17	0.06~0.12~0.19	0.07~0.13~0.20
		Copper Alloy		G	DL1500	155~200~240	0.05~0.10~0.16	0.05~0.10~0.16	0.05~0.11~0.17	0.06~0.12~0.19	0.07~0.13~0.20

It the first recommended insert grades for P and K , In such cases, Please use a cutting speed vc of 130% in the table above and a feed rate of 75% for the recommended cutting conditions.

Recommended Cutting Conditions (4D~5D) Minimum value~Recommended value~Maximum value

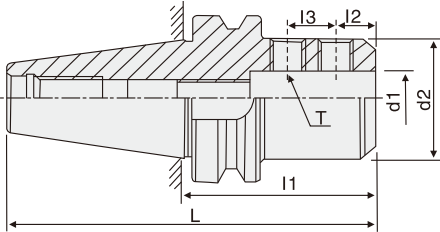
		Work Material	Hardness of Workpiece	Recommended Chipbreaker	Recommended Insert Grade	Cutting Speed (m/min)	Feed Rate (mm/rev)				
			HB				φ 13.0~ φ 18.0	φ 18.5~ φ 29.0	φ 29.5~ φ 36.0	φ 37.0~ φ 55.0	φ 56.0~ φ 68.0
4D	P	Carbon Steel SS400	125	G	ACP300	105~155~205	0.04~0.06~0.09	0.04~0.06~0.09	0.04~0.06~0.09	0.04~0.07~0.09	0.05~0.08~0.10
		" S15C	125	L	ACP300	115~145~190	0.03~0.06~0.08	0.03~0.06~0.08	0.03~0.06~0.08	0.04~0.07~0.09	0.05~0.08~0.10
		" S45C Hardened	190	G	ACP300	85~130~170	0.07~0.10~0.16	0.07~0.10~0.16	0.07~0.11~0.17	0.08~0.13~0.20	0.09~0.14~0.21
		" S45C	250	G	ACP300	70~105~140	0.05~0.09~0.12	0.05~0.09~0.12	0.05~0.09~0.13	0.06~0.10~0.14	0.07~0.11~0.16
		" S75C	270	G	ACP300	85~115~140	0.07~0.10~0.14	0.07~0.10~0.14	0.07~0.11~0.16	0.08~0.13~0.18	0.09~0.14~0.19
		" S75C Hardened	300	G	ACP300	60~85~120	0.05~0.09~0.11	0.05~0.09~0.11	0.05~0.09~0.12	0.06~0.10~0.13	0.07~0.11~0.15
		Low Alloy Steel 20crmo~42crmo/SCM,SNCM	180	L	ACP300	85~120~155	0.04~0.06~0.09	0.04~0.06~0.09	0.04~0.06~0.10	0.05~0.07~0.11	0.06~0.08~0.13
		" 20crmo~42crmo/SCM,SNCM Hardened	275	G	ACP300	70~105~140	0.05~0.09~0.11	0.05~0.09~0.11	0.05~0.09~0.12	0.06~0.10~0.13	0.07~0.11~0.15
		" 20crmo~42crmo/SCM,SNCM Hardened	300	G	ACP300	65~95~120	0.05~0.09~0.11	0.05~0.09~0.11	0.05~0.09~0.12	0.06~0.10~0.13	0.07~0.11~0.15
		" 20crmo~42crmo/SCM,SNCM Hardened	350	G	ACP300	55~75~95	0.05~0.09~0.11	0.05~0.09~0.11	0.05~0.09~0.12	0.06~0.10~0.13	0.07~0.11~0.15
		High Alloy Steel SKD,SKT,SKH	200	G	ACP300	85~115~140	0.07~0.10~0.16	0.07~0.10~0.16	0.07~0.11~0.17	0.08~0.13~0.20	0.09~0.14~0.21
		" SKD,SKT,SKH	325	G	ACP300	70~85~105	0.05~0.09~0.12	0.05~0.09~0.12	0.05~0.09~0.13	0.06~0.10~0.14	0.07~0.11~0.16
	M	Stainless Steel SUS403 and other's(Martensite/Ferrite)	200	G	ACP300	85~120~155	0.05~0.09~0.12	0.05~0.09~0.12	0.05~0.09~0.13	0.06~0.10~0.14	0.07~0.11~0.16
		" SUS403 and other's Martensitic (Hardened)	240	G	ACP300	80~105~130	0.05~0.09~0.12	0.05~0.09~0.12	0.05~0.09~0.13	0.06~0.10~0.14	0.07~0.11~0.16
		" SUS304, SUS316 Austenitic	180	G	ACP300	85~120~155	0.05~0.09~0.12	0.05~0.09~0.12	0.05~0.09~0.13	0.06~0.10~0.14	0.07~0.11~0.16
	K	Cast Iron		H	ACK300	105~140~170	0.08~0.16~0.21	0.09~0.18~0.24	0.10~0.20~0.26	0.11~0.21~0.29	0.12~0.23~0.32
		Ductile Cast Iron		H	ACK300	80~105~130	0.08~0.16~0.21	0.09~0.18~0.24	0.10~0.20~0.26	0.11~0.21~0.29	0.12~0.23~0.32
	S	Exotic Alloy (Heat Resistant Alloy, super Alloy, Ti Alloy, etc.)	200	G	ACP300	25~45~60	0.06~0.10~0.13	0.05~0.09~0.12	0.05~0.09~0.13	0.06~0.10~0.14	0.07~0.11~0.16
	N	Aluminium Alloy		G	DL1500	170~225~275	0.04~0.09~0.14	0.04~0.09~0.14	0.05~0.10~0.15	0.05~0.11~0.17	0.06~0.12~0.19
		Copper Alloy		G	DL1500	155~200~240	0.04~0.09~0.14	0.04~0.09~0.14	0.05~0.10~0.15	0.05~0.11~0.17	0.06~0.12~0.19

It the first recommended insert grades for P and K , In such cases, Please use a cutting speed vc of 130% in the table above and a feed rate of 75% for the recommended cutting conditions.

		Work Material	Hardness of Workpiece	Recommended Chipbreaker	Recommended Insert Grade	Cutting Speed (m/min)	Feed Rate (mm/rev)				
			HB				φ 13.0~ φ 18.0	φ 18.5~ φ 29.0	φ 29.5~ φ 36.0	φ 37.0~ φ 55.0	φ 56.0~ φ 68.0
5D	P	Carbon Steel SS400	125	G	ACP300	105-155-205	0.04-0.05-0.08	0.04-0.05-0.08	0.04-0.05-0.08	0.04-0.06-0.08	
		" S15C	125	L	ACP300	115-145-190	0.03-0.05-0.07	0.03-0.05-0.07	0.03-0.05-0.07	0.04-0.06-0.08	
		" S45C Hardened	190	G	ACP300	85-130-170	0.06-0.09-0.14	0.06-0.09-0.14	0.07-0.10-0.16	0.08-0.11-0.18	
		" S45C	250	G	ACP300	70-105-140	0.04-0.08-0.10	0.04-0.08-0.10	0.05-0.08-0.11	0.05-0.09-0.13	
		" S75C	270	G	ACP300	85-115-140	0.06-0.09-0.13	0.06-0.09-0.13	0.07-0.10-0.14	0.08-0.11-0.16	
		" S75C Hardened	300	G	ACP300	60-85-120	0.04-0.08-0.10	0.04-0.08-0.10	0.05-0.08-0.11	0.05-0.09-0.12	
		Low Alloy Steel 20crmo-42crmo/SCM,SNCM	180	L	ACP300	85-120-155	0.04-0.05-0.08	0.04-0.05-0.08	0.04-0.05-0.09	0.04-0.06-0.10	
		" 20crmo-42crmo/SCM,SNCM Hardened	275	G	ACP300	70-105-140	0.04-0.08-0.10	0.04-0.08-0.10	0.05-0.08-0.11	0.05-0.09-0.12	
		" 20crmo-42crmo/SCM,SNCM Hardened	300	G	ACP300	65-95-120	0.04-0.08-0.10	0.04-0.08-0.10	0.05-0.08-0.11	0.05-0.09-0.12	
		" 20crmo-42crmo/SCM,SNCM Hardened	350	G	ACP300	55-75-95	0.04-0.08-0.10	0.04-0.08-0.10	0.05-0.08-0.11	0.05-0.09-0.12	
	High Alloy Steel SKD,SKT,SKH	200	G	ACP300	85-115-140	0.06-0.09-0.14	0.06-0.09-0.14	0.07-0.10-0.16	0.08-0.11-0.18		
	" SKD,SKT,SKH	325	G	ACP300	70-85-105	0.04-0.08-0.10	0.04-0.08-0.10	0.05-0.08-0.11	0.05-0.09-0.13		
	M	Stainless Steel SUS403 and other's(Martensite/Ferrite)	200	G	ACP300	85-120-155	0.04-0.08-0.10	0.04-0.08-0.10	0.05-0.08-0.11	0.05-0.09-0.13	
		" SUS403 and other's Martensitic (Hardened)	240	G	ACP300	80-105-130	0.04-0.08-0.10	0.04-0.08-0.10	0.05-0.08-0.11	0.05-0.09-0.13	
" SUS304, SUS316 Austenitic		180	G	ACP300	85-120-155	0.04-0.08-0.10	0.04-0.08-0.10	0.05-0.08-0.11	0.05-0.09-0.13		
K	Cast Iron		H	ACK300	105-140-170	0.07-0.14-0.20	0.08-0.16-0.21	0.08-0.17-0.23	0.10-0.19-0.26		
	Ductile Cast Iron		H	ACK300	80-105-130	0.07-0.14-0.20	0.08-0.16-0.21	0.08-0.17-0.23	0.10-0.19-0.26		
S	Exotic Alloy (Heat Resistant Alloy, super Alloy, Ti Alloy, etc.)	200	G	ACP300	25-45-60	0.04-0.08-0.10	0.04-0.08-0.10	0.05-0.08-0.11	0.05-0.09-0.13		
N	Aluminum Alloy		G	DL1500	170-225-275	0.04-0.09-0.14	0.04-0.09-0.14	0.05-0.10-0.15	0.05-0.11-0.17		
	Copper Alloy		G	DL1500	155-200-240	0.04-0.09-0.14	0.04-0.09-0.14	0.05-0.10-0.15	0.05-0.11-0.17		

Weldon Tool Holder

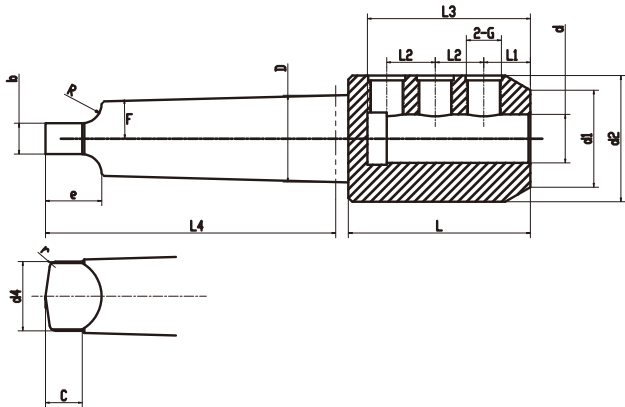
BT-SLA Weldon Tool Holder



Cat.No		d1	d2	l1	l2	l3	T
BT40	-SLA20-75	20	52	75	25	20	M16×2.0P
	-SLA25-90	25	65	90	30	22	
	-SLA32-90	32	72		30	22	
	-SLA40-100	40	90	100	35	25	
BT50	-SLA20-90	20	52	90	25	20	M16×2.0P
	-SLA25-105	25	60	105	30	22	M16×2.0P
	-SLA32-105	32	63	105	30	22	M16×2.0P
	-SLA40-105	40	78/90	105	35	25	M16×2.0P

※ Non-standard parts can be ordered

Weldon Tool Holder

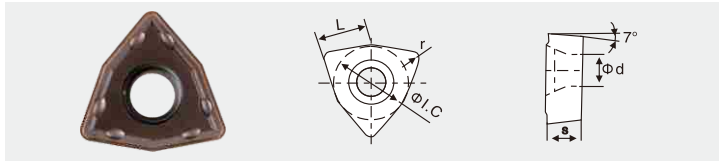


Size Specification/Item	D	d	d1	d2	d4	G	F	b	C	e	L	L1	L2	L3	L4	R	r
MTA4-SLA25-80	31.27	25	38	55	24.5	M14	1:19.25	11.9	16	24	100	24	25	82	117.5	8	2.5
MTA4-SLA32-85	31.27	32	45	65	24.5	M14	1:19.25	11.9	16	24	105	24	28	86	117.5	8	2.5
MTA4-SLA40-95	31.27	40	55	75	24.5	M14	1:19.25	11.9	16	24	115	30	32	98	117.5	8	2.5
MTA5-SLA25-80	44.40	25	38	55	35.7	M14	1:19.0	15.9	19	29	100	24	25	82	149.5	12	3
MTA5-SLA32-85	44.40	32	45	65	35.7	M14	1:19.0	15.9	19	29	105	24	28	86	149.5	12	3
MTA5-SLA40-95	44.40	40	55	75	35.7	M14	1:19.0	15.9	19	29	115	30	32	98	149.5	12	3

Indexable Insert Recommand

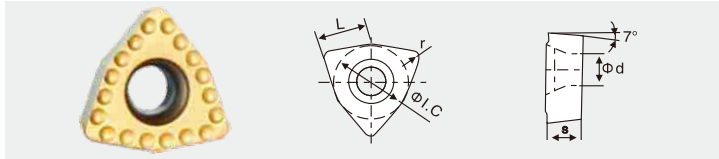
Indexable Insert Recommand

WC insert



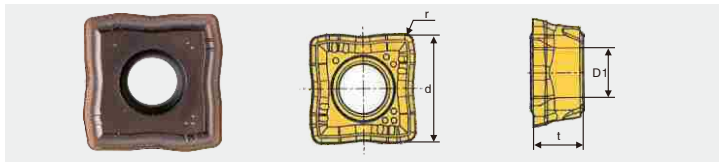
Specification/Item	Code	Size (mm)					U drill dia (mm)
		L	IC	s	d	r	
WCMT 020204 FN	AZ330	2.25	4.57	1.59	1.8	0.4	11~14.5
WCMT 030208 FN	AZ330	3.8	5.56	2.38	2.8	0.8	15~20.5
WCMT 040208 FN	AZ330	4.3	6.35	2.38	3.1	0.8	21~24.5
WCMT 050308 FN	AZ330	5.4	7.94	3.18	3.5	0.8	25~30.5
WCMT 06T308 FN	AZ330	6.5	9.525	3.97	3.7	0.8	31~41/63~80
WCMT 080412 FN	AZ330	8.7	12.7	4.76	4.3	1.2	42~62

WC type DS inserts (SS chip breaking)



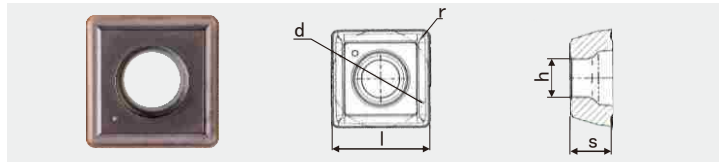
Specification/Item	Code	Size (mm)					U drill dia (mm)
		L	IC	s	d	r	
WCMT 030208 DS	BK9030	3.8	5.56	2.38	2.8	0.8	15~20.5
WCMT 040208 DS	BK9030	4.3	6.35	2.38	3.1	0.8	21~24.5
WCMT 050308 DS	BK9030	5.4	7.94	3.18	3.5	0.8	25~30.5
WCMT 06T308 DS	BK9030	6.5	9.525	3.97	3.7	0.8	31~41/63~80
WCMT 080412 DS	BK9030	8.7	12.7	4.76	4.3	1.2	42~62

SO insert



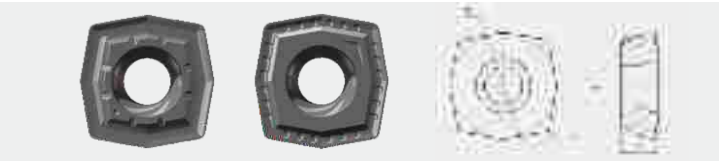
Specification/Item	Code	Size (mm)				U drill dia (mm)
		d	t	D1	r	
SOMT 050204 DP	AP9030	4.9	2.38	2.25	0.4	13~16
SOMT 060204 DP	AP9030	5.7	2.38	2.6	0.4	16.5~19
SOMT 070306 DP	AP9030	6.8	2.8	2.6	0.6	19.5~22
SOMT 08T306 DP	AP9030	7.9	3.97	2.85	0.6	22.5~26
SOMT 09T308 DP	AP9030	9.2	3.97	3.8	0.8	26.5~31.5
SOMT 11T308 DP	AP9030	11	3.97	3.8	0.8	32~36.5
SOMT 130408 DP	AP9030	12.8	4.4	4.4	0.8	37~43
SOMT 150510 DP	AP9030	15	4.8	5.4	1.0	44~50

SP insert



Specification/Item	Code	Size (mm)				U drill dia (mm)
		d	s	h	r	
SPGT 030104 DG	AT9030	3.5	1.4	1.9	0.4	8.5~9.5
SPGT 04T102 DG	AT9030	4	1.8	2.05	0.2	10~12.5
SPGT 050204 DG	AT9030	5	2.38	2.3	0.4	13~15.5
SPGT 060204 DG	AT9030	6	2.38	2.61	0.4	16~21.5
SPGT 07T308 DG	AT9030	7.94	3.97	2.85	0.8	22~28.5
SPGT 090408 DG	AT9030	9.8	4.3	4.05	0.8	29~34.5
SPGT 110408 DG	AT9030	11.5	4.8	4.45	0.8	35~41.5
SPGT 140512 DG	AT9030	14.3	5.2	5.75	1.2	42~50

SP/XO insert



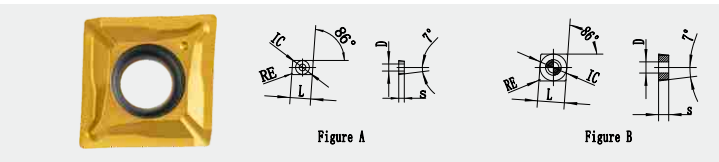
Specification/Item		Size (mm)				U drill dia (mm)
		d	r	s	di	
	SPMT 040204 DP	4.7	0.4	2.4	2.4	12~14
	SPMT 050204 DP	5.1	0.4	2.4	2.4	14~16
SPMT 060205 DL	SPMT 060205 DP	6.2	0.5	2.5	2.7	17~19
SPMT 07T208 DL	SPMT 07T208 DP	7.5	0.7	2.8	2.95	20~23
SPMT 090308 DL	SPMT 090308 DP	9.2	0.8	3.3	3.5	24~29
SPMT 11T308 DL	SPMT 11T308 DP	11	0.8	4	4.1	30~35
SPMT 130410 DL	SPMT 130410 DP	13	1	4.5	4.6	
SPMT 15M510 DL	SPMT 15M510 DP	15.2	1	4.98	5.65	

SP/XO insert



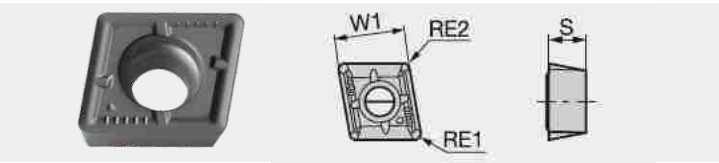
Specification/Item		Size (mm)				U drill dia (mm)
		d	r	s	di	
	XOMT 040204 DP	4.9	0.4	2.42	2.35	12~14
	XOMT 050204 DP	5.4	0.4	2.4	2.4	14~16
XOMT 060204 DL	XOMT 060204 DP	6.6	0.4	2.5	2.7	17~19
XOMT 07T205 DL	XOMT 07T205 DP	7.8	0.5	2.9	2.95	20~23
XOMT 090305 DL	XOMT 090305 DP	9.6	0.5	3.3	3.5	24~29
XOMT 11T306 DL	XOMT 11T306 DP	11.4	0.6	4	4.1	30~35
XOMT 130406 DL	XOMT 130406 DP	13.6	0.6	4.5	4.6	
XOMT 15M508 DL	XOMT 15M508 DP	15.9	0.8	5.04	5.65	

XC insert



Specification/Item	Size (mm)					Figure	TCAP DRILL SPECIFICATION
	IC	L	S	RE	D		
XCMT 040104R TC	4.40	6.40	1.70	0.40	2.10	A	TCAP 08R
XCMT 040104L TC	4.40	6.40	1.70	0.40	2.10	A	TCAP 08L
XCMT 050204 TC	5.60	5.60	2.10	0.40	2.30	B	TCAP 10R
XCMT 060204 TC	6.40	6.40	2.38	0.40	2.60	B	TCAP 12R
XCMT 070304 TC	7.50	7.50	3.18	0.40	2.80	B	TCAP 14R
XCMT 080304 TC	8.40	8.40	3.18	0.40	3.40	B	TCAP 16R
XCMT 10T304 TC	10.50	10.50	3.97	0.40	4.20	B	TCAP 20R
XCMT 10T308 TC	10.50	10.50	3.97	0.80	4.20	B	TCAP 20R
XCMT 130404 TC	13.40	13.40	4.76	0.40	5.20	B	TCAP 25R
XCMT 130408 TC	13.40	13.40	4.76	0.80	5.20	B	TCAP 25R
XCMT 170508 TC	17.40	17.40	5.56	0.80	5.20	B	TCAP 32R

G INSERT



Specification/Item	Code	Size (mm)				U drill dia (mm)
		W1	s	RE1	RE2	
WDXT042004-G	AP300	4.20	2.00	0.4	0.4	15
WDXT052504-G	AP300	5.00	2.50	0.4	0.4	16~18
WDXT063006-G	AP300	6.00	3.00	0.6	0.6	19~22
WDXT073506-G	AP300	7.50	3.50	0.6	0.6	23~28
WDXT094008-G	AP300	9.60	4.00	0.8	0.8	29~35
WDXT125012-G	AP300	12.40	5.00	1.2	1.2	/
WDXT156012-G	AP300	15.20	6.00	1.2	1.2	/

● Cutting speed(Vc)

$$V_c = \frac{D_c \times \pi \times n}{1000}$$

V_c (m/min):cutting speed
 D_c (mm):drill diameter
 n (rev/min):rotating speed

◆Example
spindle speed is 1600 rev/min. Drill diameter is 20 mm,thus cutting speed is:

$$V_c = \frac{D_c \times \pi \times n}{1000} = \frac{20 \times 3.14 \times 1600}{1000} = 100(\text{m/min})$$

●Feed speed

$$V_f = f_r \times n(\text{mm/min})$$

V_f (mm/min):feed speed
 f_r (mm/rev):feed rate per revolution
 n (rev/min):spindle speed

◆Example
Spindle speed is 1500 rev/min, feed rate per revolution is 0.1mm/rev, thus feed speed is:

$$V_f = f_r \times n = 0.1 \times 1500 = 150(\text{mm/min})$$

● Machining time

$$T_c = \frac{L_d \times i}{n \times f}$$

T_c (min):machining time
 f_r (mm/rev):feed rate per revolution
 i :number of holes L_d (mm):drilling depth
 n (rev/min):spindle speed

◆Example
Drilling a hole with a diameter of 20 mm and a depth of 40 mm,cutting speed is 100m/min and feed rate per revolution is 0.1mm/rev. Calculate the drilling time.

$$n = \frac{V_c \times 1000}{D_c \times \pi} = \frac{100 \times 1000}{20 \times 3.14} = 1600(\text{rev/min})$$

$$T_c = \frac{L_d \times i}{n \times f_r} = \frac{40 \times 1}{1600 \times 0.1} = 0.25(\text{min})$$

● Metal removal rate

$$Q = \frac{V_f \times \pi \times D_c^2}{4 \times 1000}$$

Q (cm³/min):metal removal rate
 D_c (mm):drill diameter
 V_f (mm/min):feed speed

◆Example
Drill diameter is 20mm, feed speed is 160mm/rev, thus metal removal rate is:

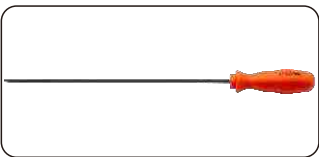
$$Q = \frac{V_f \times \pi \times D_c^2}{4 \times 1000} = \frac{160 \times 3.14 \times 20^2}{4 \times 1000} = 50.24(\text{cm}^3/\text{min})$$



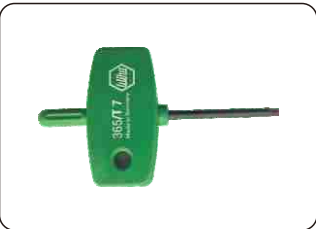
acckee yellow box



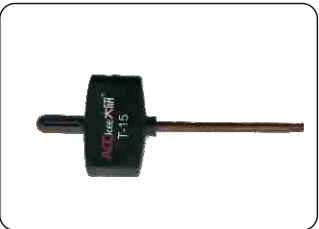
acckee white box



Sem drill wrench



T6/T7/T8/T15
WRENCH(wiha)



T6/T7/T8/T15
WRENCH(black acckee)



PLUS T6/T7/T8/T15
WRENCH(wiha)PLUS



side fastening screw for chuck(1-6#)



cutter block screw(1-6#)



end cap



roug boring head fitting-tightening,
screws for rough boring head



side fastening screw
screw for finish boring head



screw



Sem drill Screw



鏜刀世界
U钻天下

ACCkEE大研



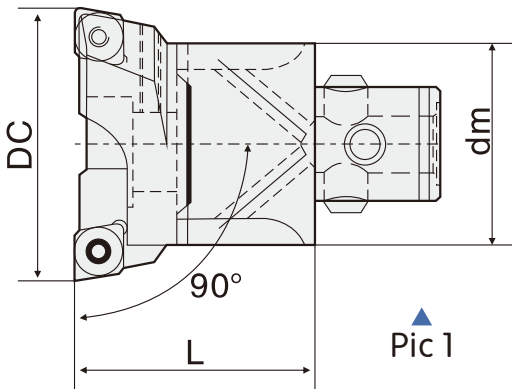
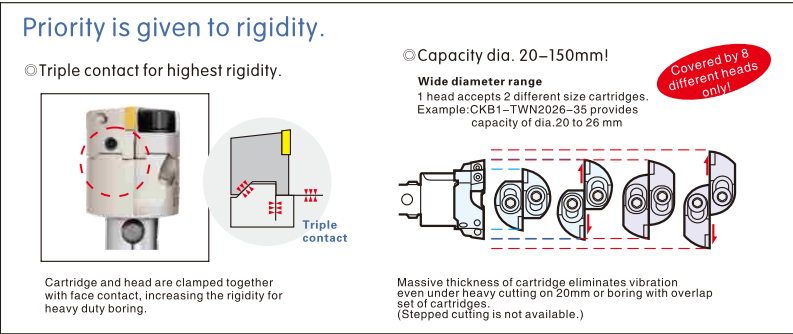
TWN Twin-Cutter Boring Head

Heavy Cutting Rough Boring Head

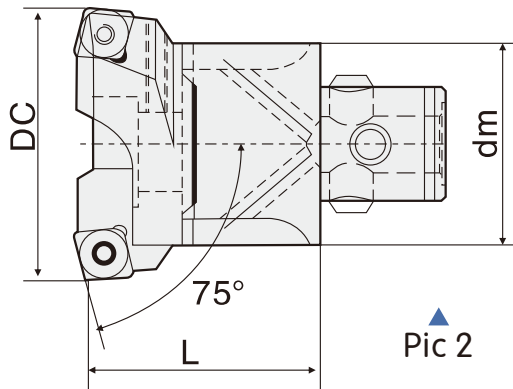
Diameter: Φ25-Φ90



- ◎Boring Range $\phi 20-\phi 150$
- ◎Pay attention to the rigidity of rough processing
- ◎The boring cutter and the boring head are tightened with three faces to enhance the rigidity
- ◎boring cutter contour error $\leq 0.02\text{mm}$



Blind hole



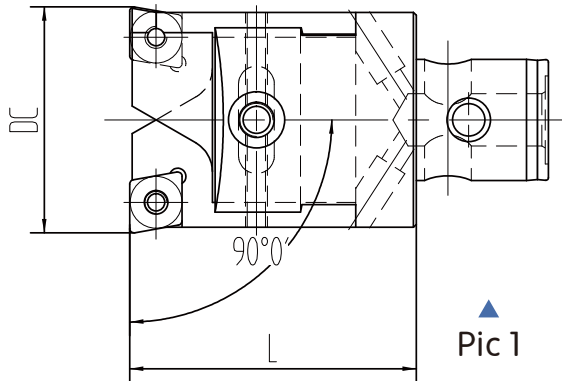
Through hole
Made to order item

◎ (Rough boring head for blind hole-90°)

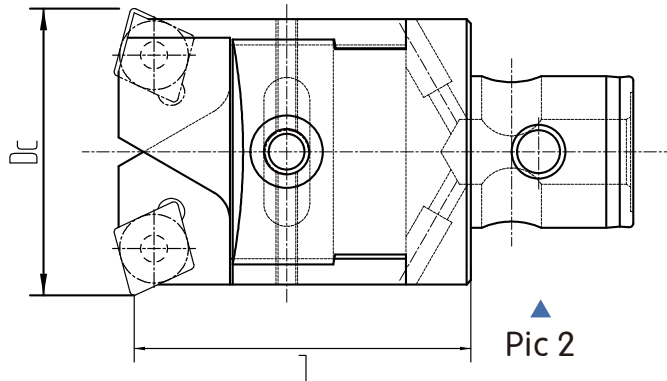
Specification	Dc	dm	L	Insert	Screw	Wrench	Cutter block	Screw	Cutter block screw	Side trimmer screw	kg	Pic
CKB1-TWN2026-35	20-26	19	35	CC..0602..	M2.5×6.5	T8	TW20-26M	M2.5*6	M4-0.7*16	M3*5	0.07	1
CKB2-TWN2533-38	25-33	24	38	CC..0602..	M2.5×6.5	T8	TW25-33M	M2.5*6	M5-0.8*18	M3*6	0.14	
CKB3-TWN3242-43	32-42	31	43	CC..09T3..	M4×10	T15	TW32-42M	M4*10	M6-1.0*20	M3*8	0.23	
CKB4-TWN4154-50	41-54	39	50	CC..09T3..	M4×10	T15	TW41-54M	M4*10	M8-1.25*25	M3*10	0.43	
CKB5-TWN5372-60	53-72	49	60	CC..1204..	M5×13	T20	TW53-72M	M5*12	M10-1.5*35	M4*12	0.82	
CKB6-TWN6890-75	68-90	63	75	CC..1204..	M5×13	T20	TW68-90M	M5*12	M10-1.5*35	M4*16	1.75	
CKB6-TWN89120-75	89-120	63	75	CC..1204..	M5×13	T20	TW89-120M	M5*12	M10-1.5*35	M4*16	2.25	
CKB6-TWN115150-75	115-150	63	75	CC..1204..	M5×13	T20	TW115-150M	M5*12	M10-1.5*35	M4*20	2.35	

◎ (Rough boring head for through holes-75°)

Specification	Dc	dm	L	Insert	Screw	Wrench	Cutter block	Screw	Cutter block screw	Side trimmer screw	kg	Pic
CKB5-TWN5372-60-T	53-7	49	60	CC..1204..	M5×13	T20	TW53-72M	M5*12	M10-1.5*35	M4*12	0.82	2
CKB6-TWN6890-75-T	68-90	63	75	CC..1204..	M5×13	T20	TW68-90M	M5*12	M10-1.5*35	M4*16	1.75	
CKB6-TWN89120-75-T	89-120	63	75	CC..1204..	M5×13	T20	TW89-120M	M5*12	M10-1.5*35	M4*16	2.25	
CKB6-TWN115150-75-T	115-150	63	75	CC..1204..	M5×13	T20	TW115-150M	M5*12	M10-1.5*35	M4*20	2.35	



Blind hole



Through hole

◎ (Rough boring head for blind hole-90°)

Specification	Dc	dm	L	Insert	Screw	Wrench	Cutter block screw	Wrench	Side trimmer screw	Wrench	kg	Pic
CKB2-TWN2533-38-A	25-33	24	38	CC..0602..	M2.5*6	T8	M5-0.8*18	L4	M3*6	L1.5	0.14	1
CKB3-TWN3242-43-A	32-42	31	45	CC..09T3..	M4*10	T15	M6-1.0*20	L5	M3*8	L1.5	0.23	
CKB4-TWN4154-50-A	41-54	39	52	CC..09T3..	M4*10	T15	M8-1.25*25	L6	M3*10	L1.5	0.43	
CKB5-TWN5372-60-A	53-72	49	66	CC..1204..	M5*12	T20	M10-1.5*35	L8	M4*12	L2	0.82	
CKB6-TWN6890-75-A	68-90	63	75	CC..1204..	M5*12	T20	M10-1.5*35	L8	M4*16	L2	1.75	

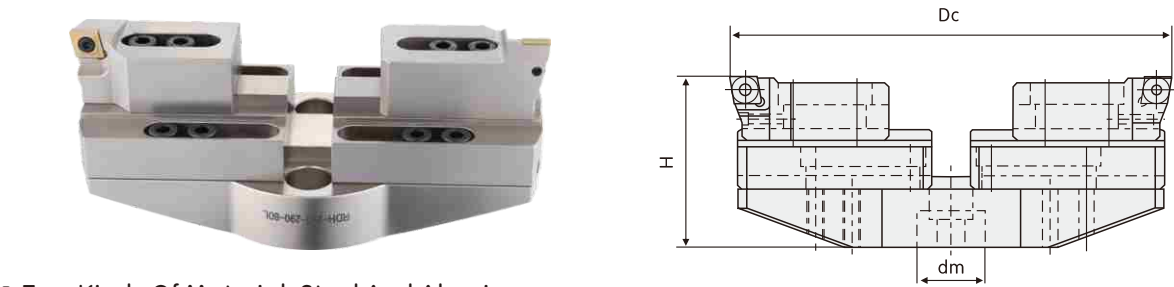
◎ (Rough boring head for through holes-75°)

Specification	Dc	dm	L	Insert	Screw	Wrench	Cutter block screw	Wrench	Side trimmer screw	Wrench	kg	Pic
CKB2-TWN2533-38-A-75°	25-33	24	35	CC..0602..	M2.5*6	T8	M5-0.8*18	L4	M3*6	L1.5	0.14	2
CKB3-TWN3242-43-A-75°	32-42	31	41	CC..09T3..	M4*10	T15	M6-1.0*20	L5	M3*8	L1.5	0.23	
CKB4-TWN4154-50-A-75°	41-54	39	48	CC..09T3..	M4*10	T15	M8-1.25*25	L6	M3*10	L1.5	0.43	
CKB5-TWN5372-60-A-75°	53-72	49	61	CC..1204..	M5*12	T20	M10-1.5*35	L8	M4*12	L2	0.82	
CKB6-TWN6890-75-A-75°	68-90	63	70	CC..1204..	M5*12	T20	M10-1.5*35	L8	M4*16	L2	1.75	

TWN Large Diameter Boring Head

Technical Informations

© Diameter:Φ151–Φ750



© Two Kinds Of Material, Steel And Aluminum.

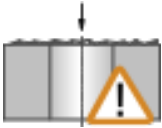
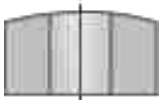
Specification	Dc	dm	L	Insert	Screw	Wrench	Slide fastening screws	boring cutter fastening screws	Slide side screws	boring cutter side screws	
RDH-D151-211-80L	151-211	32	80	CC..1204..	M5*13	T20	M8*25	M8*26	M6*20	M6*20	4.95
RDH-D210-290-80L	210-290	32	80	CC..1204..	M5*13	T20	M8*25	M8*26	M6*25	M6*25	5.85
RDH-D290-370-80L	290-370	32	80	CC..1204..	M5*13	T20	M8*25	M8*26	M6*25	M6*25	6.81
RDH-D370-450-80L	370-450	32	80	CC..1204..	M5*13	T20	M8*25	M8*26	M6*25	M6*25	7.80
RDH-D450-550-80L	450-550	32	80	CC..1204..	M5*13	T20	M8*25	M8*26	M6*25	M6*25	8.75
RDH-D550-650-80L	550-650	32	80	CC..1204..	M5*13	T20	M8*25	M8*26	M6*25	M6*25	9.85
RDH-D650-750-80L	650-750	32	80	CC..1204..	M5*13	T20	M8*25	M8*26	M6*25	M6*25	10.85

Pin Turning Boring Head–for Roughing Boring

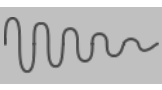
Diameter:Φ13–Φ128



Specification/Item	Range (excircle)		depth (L)	length (H)	Range (Inner)	ds	Head Model
CKB5-TW2230-56CK2	TWN2-1	22-30	56	79	80-88	28	CKB2-TWN2533-38
CKB5-TW3240-56CK2	TWN2-1	32-40	56	89	90-98	28	CKB2-TWN2533-38
CKB5-TW4555-67CK3	TWN3-1	45-55	67	118	119-129	28	CKB3-EWN3242-43
CKB6-TW5565-67CK3	TWN3-1	55-65	67	128	129-139	36	CKB3-EWN3242-43
CKB6-TW6575-67CK3	TWN3-1	65-75	67	138	139-149	36	CKB3-EWN3242-43
CKB6-TW87100-77CK4	TWN4-1	89-100	77	179	182-195	36	CKB4-EWN4154-50
CKB6-TW114127-77CK4	TWN4-1	114-127	77	206	209-222	36	CKB4-EWN4154-50

	starting on uneven surfaces (cast surfaces) • subject to the starting angle, the feed must be reduced when starting the bore. • Rule of thumb: 3° = 30%; 10° = 40%; 25° = 60% • use tough insert • use stable corner radius
	Angled bore exit • from wear cut is interrupted reduce feed rate up to 50% • use tough insert • use stable corner radius
	starting on cambered surfaces • no problems • reduce feed rate if necessary
	Roughing through a cross bore • reduce feed rate 50% if necessary • watch for chip jamming around tool • use tough insert • use stable corner radius
	starting on an edge • reduce feed rate by 50% • use tough insert • use stable corner radius
	starting on a welded seam • reduce feed rate • use max. 3 × D tools
	Roughing through stacked plates • use holder with 80° approach angle • good workpiece clamping required • max. gap = 1 mm

Problems → Possible causes → solutions

 - Long chips • not optimum geometry → select correct cutting depth → select correct cutting values	
	Bad surface finish • feed rate too high → improve cutting parameters: increase cutting speed, reduce feed • long chips
	Vibrations • feed rate too high • cutting speed too high • geometry too obtuse • check axial / radial setting • check tool assembly • if required, use a damping element adaptor 

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SEM Drill Insert

YUMD MAX Drill

Carbide Inserts

Rough Boring Head

Finish Boring Head

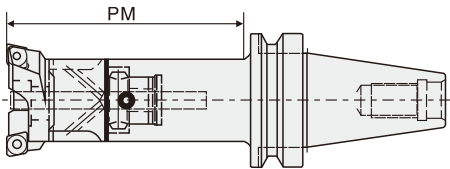
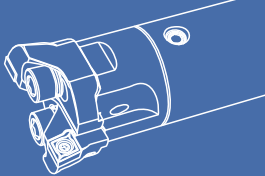
Chuck

Accessories

Chamfering Tools

Gun Drill Technology

TWN Rough Boring Cutting Conditions–BT40/BT50



◎BT40 MAS 403 BT (ISO40)

Specification	Material	PM	Nose radius	Vc(m/min)	Speed (mm/φ)		Feed (mm/rev)	
					Recommend	MAX	Recommend	MAX
CKB1–TWN2026–35	P	73	0.4	110	1.7	2.0	0.16	0.20
	M			95	1.4	2.0	0.13	0.20
	K			60	1.4	2.0	0.14	0.20
	S			80	1.7	2.0	0.13	0.20
				130	2.0	2.5	0.20	0.25
CKB2–TWN2533–38	P	89	0.4	110	2.2	3.0	0.18	0.25
	M			95	1.8	3.0	0.16	0.25
	K			60	2.0	3.0	0.18	0.25
	S			80	2.2	3.0	0.16	0.25
				130	3.0	4.0	0.25	0.30
CKB3–TWN3242–43	P	105	0.8	150	3.2	4.0	0.22	0.30
	M			130	2.7	3.5	0.18	0.28
	K			70	2.7	3.5	0.22	0.30
	S			80	3.2	4.0	0.18	0.25
				130	3.5	5.0	0.25	0.30
CKB4–TWN4154–50	P	113	0.8	150	3.5	4.5	0.22	0.32
	M			130	3.5	4.5	0.20	0.30
	K			70	3.2	4.3	0.20	0.30
	S			80	3.5	5.5	0.20	0.30
				130	4.5	6.5	0.28	0.35
CKB5–TWN5372–60	P	122	0.8	150	5.3	6.5	0.25	0.35
	M			130	5.3	6.5	0.20	0.28
	K			70	4.5	5.5	0.20	0.28
	S			80	6.3	7.5	0.25	0.32
				130	7.5	9.0	0.30	0.38
CKB6–TWN6890–75	P	138	0.8	150	7.0	9.0	0.25	0.35
CKB6–TWN89120–75	M			130	6.3	9.0	0.22	0.30
CKB6–TWN115150–75	K			70	6.3	8.0	0.22	0.30
	S			80	7.2	9.0	0.25	0.32
				130	8.0	10.0	0.30	0.38

◎BT50 MAS 403 BT (ISO50)

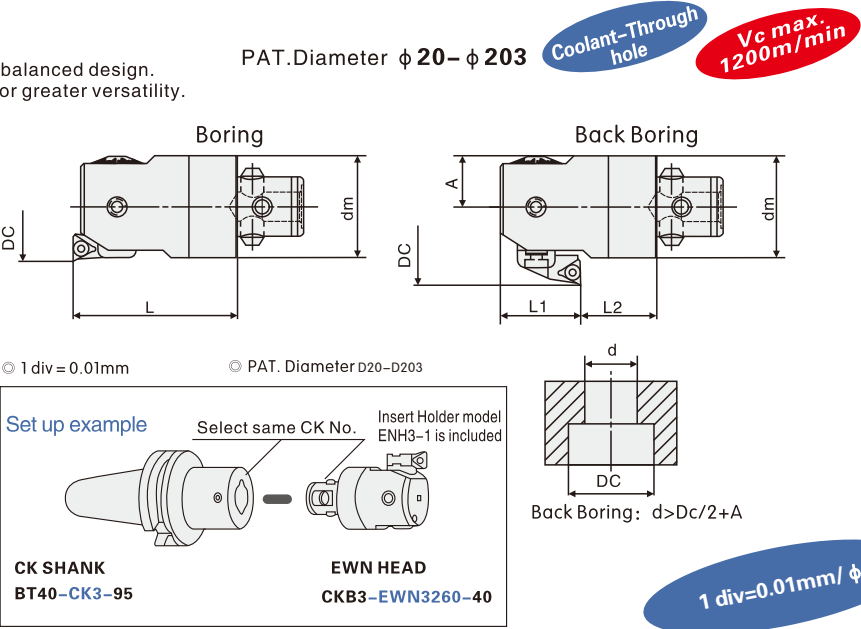
Specification	Material	PM	Nose radius	Vc(m/min)	Speed (mm/φ)		Feed (mm/rev)	
					Recommend	MAX	Recommend	MAX
CKB1–TWN2026–35	P	81	0.4	110	1.7	2.0	0.16	0.20
	M			95	1.4	2.0	0.13	0.20
	K			60	1.4	2.0	0.14	0.20
	S			80	1.7	2.0	0.13	0.20
				130	2.0	2.5	0.20	0.25
CKB2–TWN2533–38	P	98	0.4	120	2.2	3.2	0.18	0.25
	M			110	1.8	3.2	0.16	0.25
	K			70	2.0	3.2	0.18	0.25
	S			85	2.2	3.2	0.16	0.25
				130	3.0	4.5	0.25	0.30
CKB3–TWN3242–43	P	125	0.8	170	3.2	4.5	0.22	0.30
	M			150	2.7	4.0	0.18	0.28
	K			85	2.7	3.5	0.22	0.30
	S			85	3.2	4.5	0.18	0.25
				130	3.5	5.0	0.25	0.30
CKB4–TWN4154–50	P	130	0.8	170	4.0	4.5	0.22	0.32
	M			150	3.5	4.5	0.20	0.30
	K			85	3.5	4.5	0.20	0.30
	S			85	3.5	5.5	0.20	0.30
				150	4.5	6.5	0.28	0.35
CKB5–TWN5372–60	P	140	0.8	180	6.3	7.2	0.25	0.38
	M			150	6.3	7.2	0.20	0.32
	K			100	5.3	6.3	0.20	0.32
	S			85	7.2	9.0	0.25	0.35
				170	8.0	11.0	0.30	0.40
CKB6–TWN6890–75	P	150	0.8	180	8.0	10.0	0.25	0.38
CKB6–TWN89120–75	M			150	7.0	10.0	0.25	0.32
CKB6–TWN115150–75	K			100	6.5	8.0	0.25	0.32
	S			85	8.0	10.0	0.25	0.35
				170	9.0	11.0	0.30	0.40



EWN Precision Boring Head

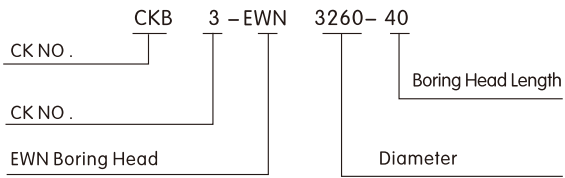
ABS-EWN Precision Boring Head

Reliable scale screw, 1 div=0.01mm on diameter and vernier scale.
Stable and higher precision achieved by pre-balanced design.
Back boring is available as standard feature for greater versatility.

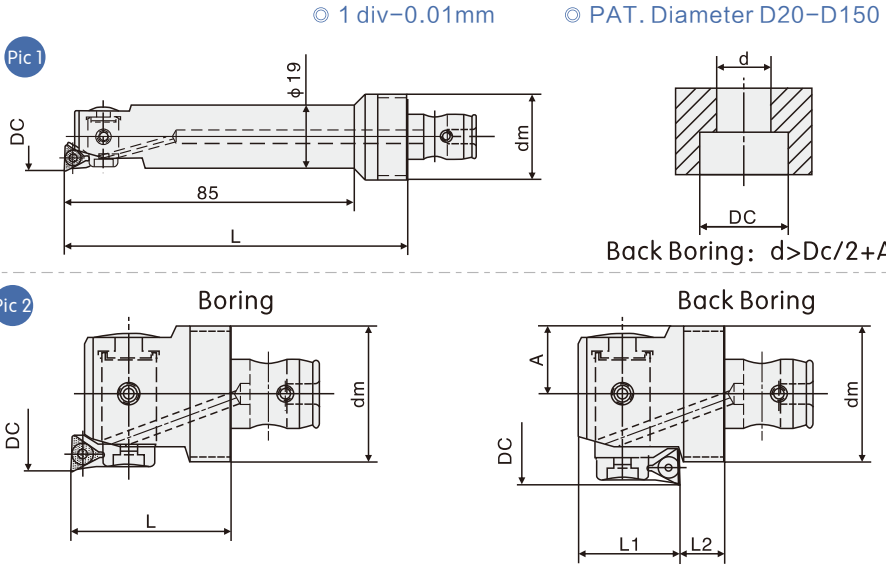
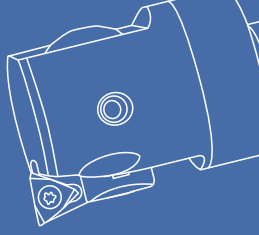


Specification	Boring				Counter boring					Insert Size	Clamp screw	wrench	kg
	Dc	dm	L	Cutter block	Dc	L1	L2	A	Cutter block				
CKB1-EWN2036-32.5	20-26	19	32.5	ENH1-1	30-31	20	10	10		TP..0802..	M2.2*5	T7	0.09
	25-31			ENH1-2					ENH1-2				
	30-36			ENH1-3					ENH1-3				
CKB2-EWN2547-35.5	25-33	24	35.5	ENH2-1	38-41	22	10	12.5					0.15
	32-40			ENH2-2					ENH2-2				
	39-47			ENH2-3					ENH2-3				
CKB3-EWN3260-40	32-42	31	40	ENH3-1	48-52	25	9	16					0.25
	41-51			ENH3-2					ENH3-2				
	50-60			ENH3-3					ENH3-3				
CKB4-EWN4174-47	41-54	39	47	ENH4-1	59-67	30	13	20		TC..1102..	M2.5*6	T8	0.43
	53-66			ENH4-2					ENH4-2				
	61-74			ENH4-3					ENH4-3				
CKB5-EWN5395-57	53-70	49	57	ENH5-1	61-73	34	19	25.5		TP..1103..	M3*7	T8	1.25
	68-85			ENH5-2					ENH5-2				
	78-95			ENH5-3					ENH5-3				
CKB6-EWN68150-71	68-100	63	71	ENH6-1	77-98	45	23	32.5		TC..1102..	M2.5*6	T8	1.78
	93-125			ENH6-2					ENH6-2				
	125-150			ENH6-3					ENH6-3				
CKB6-EWN100203-71	100-153	63	71	ENH6-1	107-155	45	23	45.5		TP..1103..	M3*7	T8	2.53
	125-178			ENH6-2					ENH6-2				
	150-203			ENH6-3					ENH6-3				

Part Number Structure of Finish Boring Head



- 1. Insert Holder model ENH-1 is included. ENH-2 and ENH-3 are optional accessories.
- 2. Rotation becomes reverse when back-boring.
- 3. Insert must be ordered separately.
- 4. Insert



Specification	Pic	Boring				Counter boring				Insert Size	Clamp screw	wrench	kg
		Dc	dm	L	Cutter block	Dc	L1	L2	A				
21CD25-EWN2036-85	1	20-26	25	101	ENH1-1	30-31	20	10	10	TP..0802..	M2 x 5	T6	0.13
		25-31			ENH1-2								
		30-36			ENH1-3								
21CD25-EWN2647-35.5		26-33	25	35.5	ENH2-1	36-40	22	10	12.5	TP..0802..	M2 x 5	T6	0.16
		32-40			ENH2-2								
		39-47			ENH2-3								
21CD32-EWN3360-40	2	33-42	32	40	ENH3-1	46-51	25	9	16	TP..0902..	M2.5 x 6	T8	0.27
		41-51			ENH3-2								
		50-60			ENH3-3								
21CD40-EWN4174-47		41-54	40	47	ENH4-1	53-63	30	13	20	TC..1102..	M2.5 x 6	T8	0.47
		50-63			ENH4-2								
		61-74			ENH4-3								
21CD50-EWN5395-57		53-70	50	57	ENH5-1	62-70	34	19	25.5	TP..1103..	M3 x 8	T10	1.32
		65-82			ENH5-2								
		78-95			ENH5-3								
21CD63-EWN68150-71	2	68-100	63	71	ENH6-1	80-100	45	23	32.5	TC..1102..	M2.5 x 6	T8	1.78
		94-126			ENH6-2								
		118-150			ENH6-3								

CAUTION The max. allowable spindle speed for the EWN Head is 1200m/min. However, since the rigidity of machine spindle and workpiece, the length of boring tool and usage of Extension and Reduction adapters influence the condition, please increase the speed gradually to determine the best cutting condition.

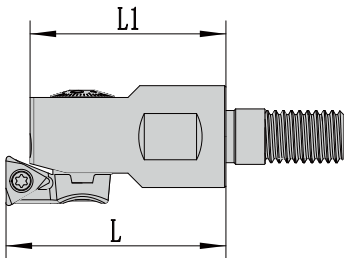
Insert Holder Pat.(Option)



Cutter block	Figure	Head Model	Diameter φ
ENH1-1		CKB1-EWN2036-32.5	20-26
ENH1-2			25-31
ENH1-3			30-36
ENH2-1		CKB2-EWN2547-35.5	25-33
ENH2-2			32-40
ENH2-3			39-47
ENH3-1		CKB3-EWN3260-40	32-42
ENH3-2			41-51
ENH3-3			50-60
ENH4-1		CKB4-EWN4174-47	41-54
ENH4-2			50-66
ENH4-3			61-74
ENH5-1		CKB5-EWN5395-57	53-70
ENH5-2			65-85
ENH5-3			78-95
ENH6-1		CKB6-EWN68150-71	68-100
ENH6-2			93-125
ENH6-3			125-150
ENH6-1		CKB6-EWN100203-71	100-153
ENH6-2			125-178
ENH6-3			150-203

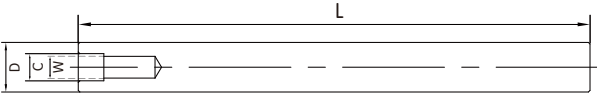


High Accuracy Precision Boring Head



Specification	L1	L	Boring Range	Applicable Insert
M8-EWN1626-32.5	36	37.5	16-21/21-26	TPGT0802
M10-EWN2036-32.5	29.5	32.5	20-26/25-31/30-36	TPGT0802
M12-EWN2547-35.5	32.5	35.5	25-33/32-40/39-47	TPGT0802
M16-EWN3260-40	35	40	32-42/41-51/50-60	TPGT0802

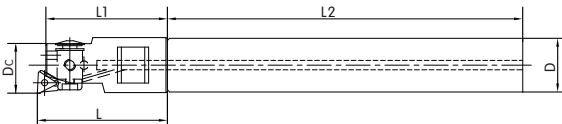
Carbide boring head holder



Holder Sizes	D	M	Total length
14-M8-100	14	M8	100
14-M8-150	14	M8	150
14-M8-200	14	M8	200
15-M8-100	15	M8	100
15-M8-150	15	M8	150
15-M8-200	15	M8	200
15.6-M8-100	15.6	M8	100
15.6-M8-150	15.6	M8	150
15.6-M8-200	15.6	M8	200
15.6-M8-250	15.6	M8	250
16-M8-100	16	M8	100
16-M8-150	16	M8	150
16-M8-200	16	M8	200
16-M8-250	16	M8	250
16-M8-300	16	M8	300
19-M10-100	19	M10	100
19-M10-150	19	M10	150
19-M10-200	19	M10	200
19-M10-250	19	M10	250

Holder Sizes	D	M	Total length
20-M10-100	20	M10	100
20-M10-150	20	M10	150
20-M10-200	20	M10	200
20-M10-250	20	M10	250
20-M10-300	20	M10	300
24-M12-150	24	M12	150
24-M12-200	24	M12	200
24-M12-250	24	M12	250
24-M12-300	24	M12	300
25-M12-150	25	M12	150
25-M12-200	25	M12	200
25-M12-250	25	M12	250
25-M12-300	25	M12	300
32-M16-150	32	M16	150
32-M16-200	32	M16	200
32-M16-250	32	M16	250
32-M16-300	32	M16	300
32-M16-350	32	M16	350

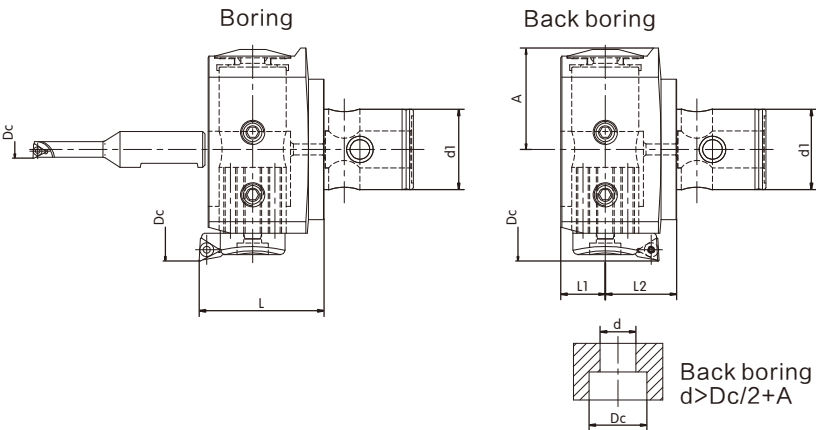
Carbide boring head holder



Specification	DC	L1	L2	L	D
ST15W-EWN1621-195TP08	16-21	36	157	38	15
ST16W-EWN1822-195TP08	18-22	36	157	38	16

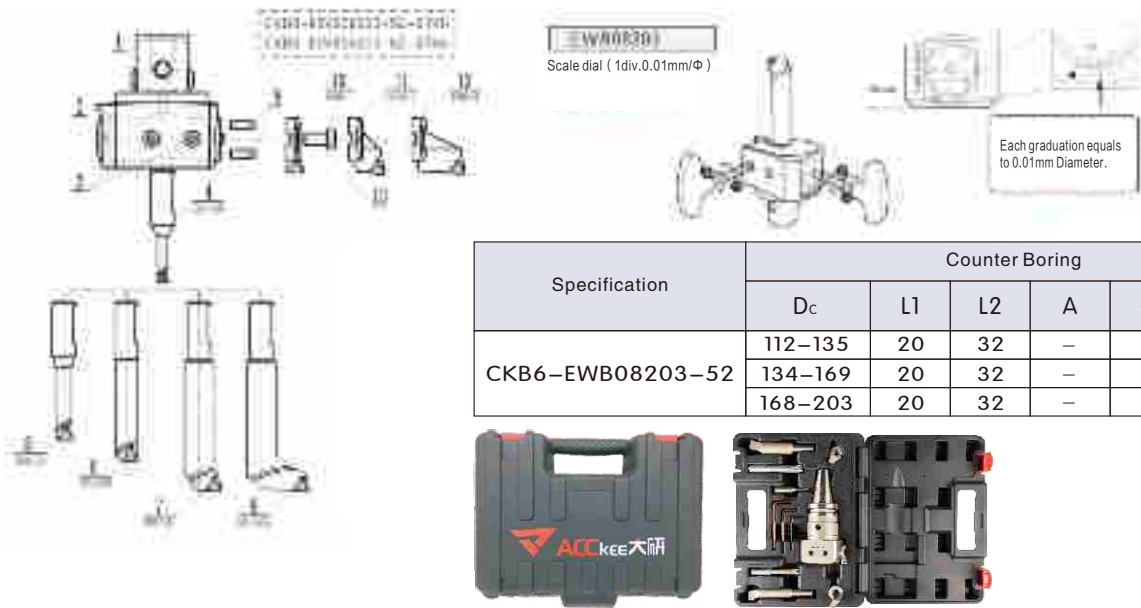
High Accuracy Precision Boring Head (2084)

- ◎ 1 div = 0.01mm
- ◎ PAT. Diameter $\phi 8-\phi 203$
- ◎ Counter Boring Functions: $\phi 112-\phi 203\text{mm}$

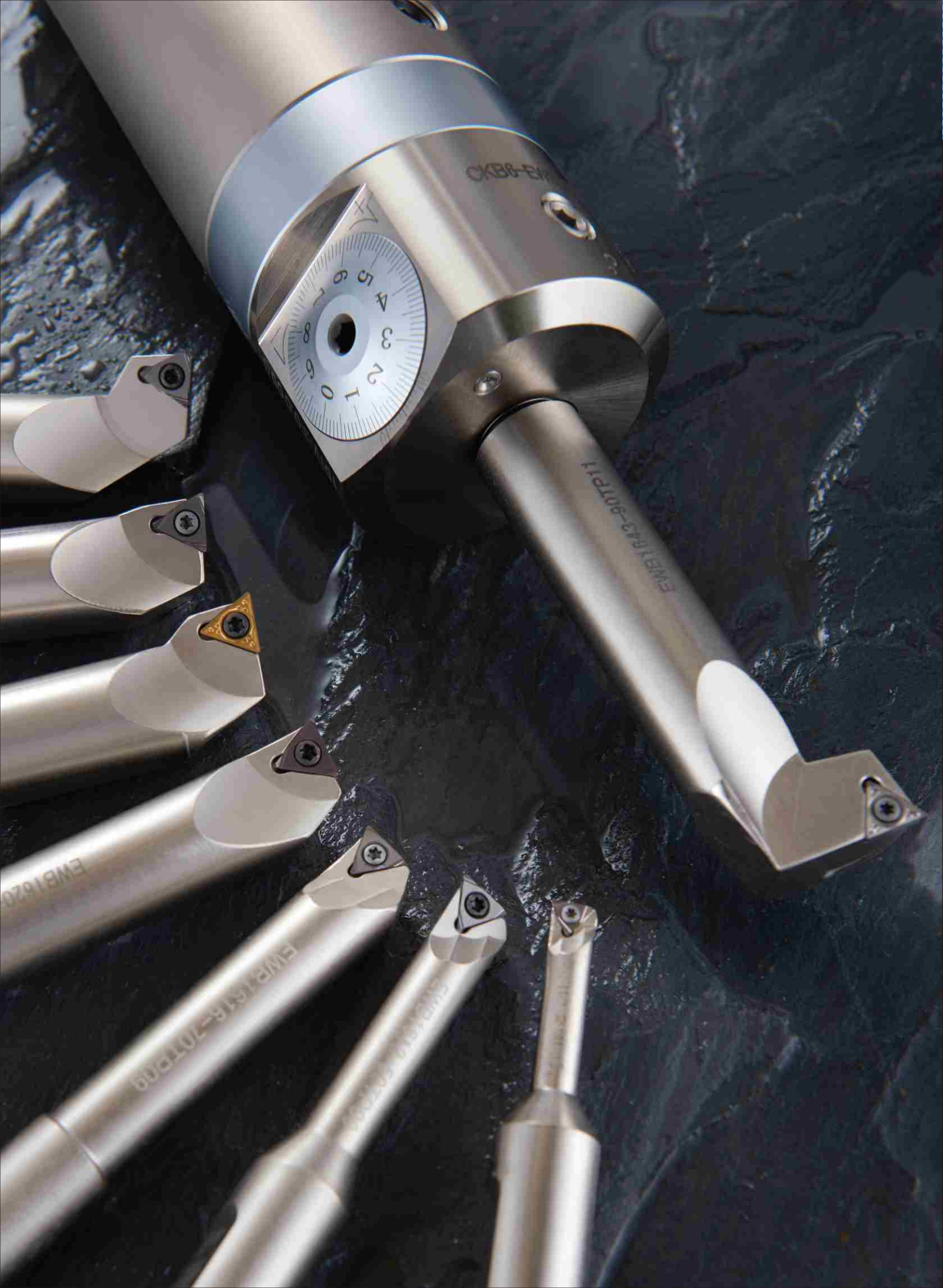


Specification	Boring				Depth	Insert	Clamp screw	wrench	 kg
	D _c	d1	L	Cutter Block					
CKB6-EWB08203-52	08-43	63	52	YBJ1608	32	TB..0601	M2.2*5	T7	0.11
	12-47			YBJ1612	50	TP..0902	M2.5*6	T8	0.12
	16-51			YBJ1616	65				0.18
	31-66			YBJ1631	90	TP..1103	M3*7		0.47
	65-100			YBJ1665	90				0.65
	100-135			ENH6-1	—				—
	134-169			ENH6-2F	—				—
	168-203			ENH6-3F	—				—

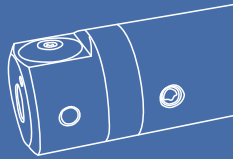
◎ Part Number Structure of Finish Boring Head



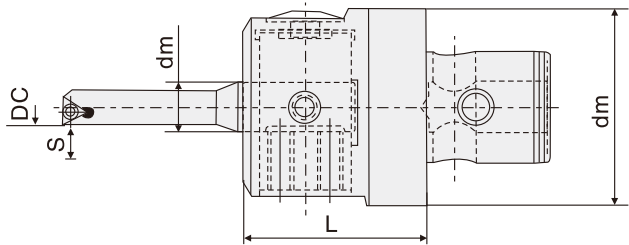
Specification	Counter Boring				
	Dc	L1	L2	A	Cutter Block
CKB6-EWB08203-52	112-135	20	32	—	ENH6-1
	134-169	20	32	—	ENH6-2F
	168-203	20	32	—	ENH6-3F



EWB Prescison Boring Heads

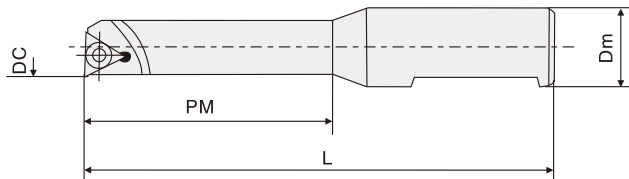


- ◎ 1 div = 0.01mm
- ◎ PAT. Diameter $\phi 8-\phi 50$



Specification	Boring range	Modular Holder	Micro distance	L	dm	 kg
CKB6-EWB0850-65	08-50	YBJ16	3.5	65	63	1.1

EWB Boring Bar System

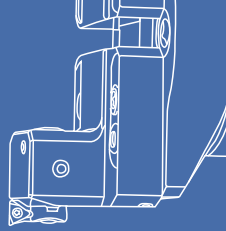


Specification	Size				Insert	Clamp screw	wrench	 kg
	Dc	dm	PM	L				
EWB1608-32	08-15	16	32	80	TB..0601	M2.2*5	T7	0.11
EWB1612-50	12-19		50	98	TP..0902	M2.5*6	T8	0.12
EWB1616-65	16-23		65	115				0.18
EWB1620-85	20-27		85	135	TP..1103	M3*7	T8	0.29
EWB1625-90	25-32		90	145				0.37
EWB1631-90	31-38		90	145				0.47
EWB1637-90	37-44		90	145				0.58
EWB1643-90	43-50		90	145				0.65

S	P
S	O
W	C
W	D
X	T
C	A
P	6D
	&D
8	8
0	0
SEM Drill Insert	
YLMD MAX Drill	
Carbide Inserts	
Rough Boring Head	
Finish Boring Head	
Chuck	
Accessories	
Chamfering Tools	
Gun Drill Technology	



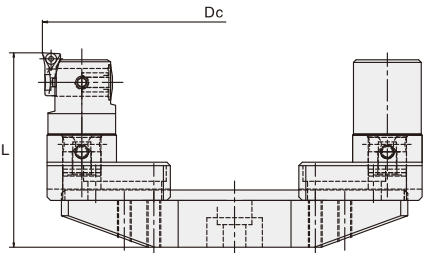
EWN Large Diameter Boring Head



◎ PAT. Diameter $\phi 151 - \phi 750$ ◎ 1 div = 0.01mm



Aluminum



Steel

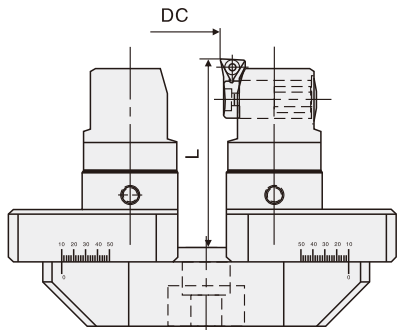


◎ Two Kinds Of Material, Steel And Aluminum.

Specification	Dc	L	Insert	Screw	Wrench	Slide fastening screws	Wrench	Slider retaining adjustment screws	Wrench	
CDH-D151-211-84L	151-211	84	TP1103..	M3*7	M3*7	M8*25	L6	M6*20	L2.5	4.75
CDH-D210-290-84L	210-290	84	TP1103..	M3*7	M3*7	M8*25	L6	M6*25	L2.5	5.15
CDH-D290-370-84L	290-370	84	TP1103..	M3*7	M3*7	M8*25	L6	M6*25	L2.5	6.12
CDH-D370-450-84L	370-450	84	TP1103..	M3*7	M3*7	M8*25	L6	M6*25	L2.5	7.05
CDH-D450-550-84L	450-550	84	TP1103..	M3*7	M3*7	M8*25	L6	M6*25	L2.5	8.00
CDH-D550-650-84L	550-650	84	TP1103..	M3*7	M3*7	M8*25	L6	M6*25	L2.5	9.05
CDH-D650-750-84L	650-750	84	TP1103..	M3*7	M3*7	M8*25	L6	M6*25	L2.5	10.05

Pin Turning Boring Head – For Finishing Boring

◎ PAT. Diameter $\phi 8 - \phi 120$ ◎ 1 div = 0.01mm



◎ Two Kinds Of Material, Steel And Aluminum.

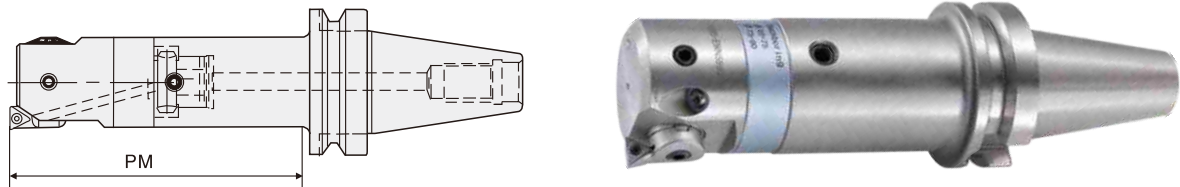
Specification	Dc	L	Insert	Clamp screw	wrench	
CDH2-D8-55-78L	8-55	78	TP1103...	M3X7	T8	2.9
CDH3-D30-120-78L	30-120	78	TP1103...	M3X7	T8	3.4



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8D
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SEM Drill Insert
YLMD MAX Drill
Carbide Inserts
Rough Boring Head
Finish Boring Head
Chuck
Accessories
Chamfering Tools
Gun Drill Technology

EWN Prescison Boring Bar Cutting Conditions–BT40/BT50

©MAS 403 BT40



©BT40 MAS 403 BT (ISO40)

Specification	Material	PM	Nose radius	(m/min)	(mm/ ϕ)	Feed (mm/rev)	
						Recommend	MAX
CKB1–EWN2036–32.5	P	78	0.2	130	0.18	0.05	0.12
	M		0.2	100	0.18	0.05	0.12
	N		0.2	65	0.15	0.04	0.08
	K		0.2	80	0.25	0.05	0.10
	S		0.4	170	0.25	0.05	0.12
CKB2–EWN2547–35.5	P	93	0.2	150	0.25	0.05	0.12
	M		0.2	120	0.25	0.05	0.12
	N		0.2	80	0.15	0.04	0.08
	K		0.2	80	0.25	0.05	0.10
	S		0.4	180	0.25	0.08	0.12
CKB3–EWN3260–40	P	105	0.2	150	0.30	0.05	0.12
	M		0.2	120	0.30	0.05	0.12
	N		0.4	80	0.15	0.06	0.10
	K		0.4	80	0.35	0.08	0.12
	S		0.4	210	0.35	0.08	0.12
CKB4–EWN4174–47	P	105	0.4	150	0.30	0.06	0.12
	M		0.4	120	0.30	0.06	0.12
	N		0.4	80	0.15	0.06	0.08
	K		0.4	80	0.35	0.08	0.12
	S		0.4	210	0.35	0.08	0.12
CKB5–EWN5395–57 CKB6–EWN68150–71 CKB6–EWN100203–71	P	105	0.4	150	0.30	0.06	0.12
	M		0.4	120	0.30	0.06	0.12
	N		0.4	80	0.15	0.06	0.08
	K		0.4	80	0.35	0.08	0.12
	S		0.4	210	0.35	0.08	0.12

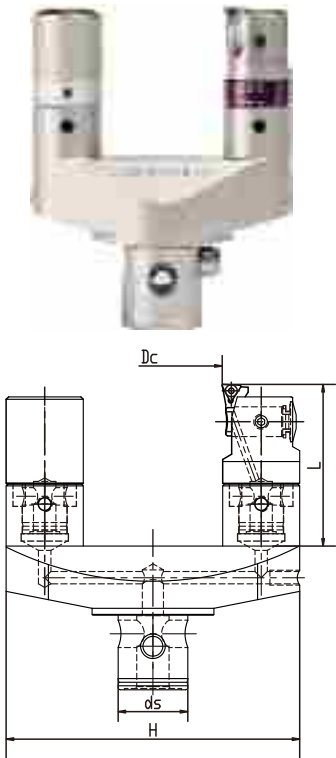
©BT50 MAS 403 BT (ISO50)

Specification	Material	PM	Nose radius	(m/min)	(mm/ ϕ)	Feed (mm/rev)	
						Recommend	MAX
CKB1–EWN2036–32.5	P	78	0.2	130	0.18	0.05	0.12
	M		0.2	100	0.18	0.05	0.12
	N		0.2	65	0.15	0.04	0.08
	K		0.2	80	0.25	0.05	0.10
	S		0.4	170	0.25	0.05	0.12
CKB2–EWN2547–35.5	P	105	0.2	150	0.25	0.05	0.12
	M		0.2	120	0.25	0.05	0.12
	N		0.2	80	0.15	0.04	0.08
	K		0.2	80	0.25	0.05	0.10
	S		0.4	180	0.25	0.08	0.12
CKB3–EWN3260–40	P	122	0.2	150	0.30	0.05	0.12
	M		0.2	120	0.30	0.05	0.12
	N		0.4	80	0.15	0.06	0.10
	K		0.4	80	0.35	0.08	0.12
	S		0.4	210	0.35	0.08	0.12
CKB4–EWN4174–47	P	122	0.4	150	0.30	0.06	0.12
	M		0.4	120	0.30	0.06	0.12
	N		0.4	80	0.15	0.06	0.08
	K		0.4	80	0.35	0.08	0.12
	S		0.4	210	0.35	0.08	0.12
CKB5–EWN5395–57 CKB6–EWN68150–71 CKB6–EWN100203–71	P	138	0.4	150	0.30	0.06	0.12
	M		0.4	120	0.30	0.06	0.12
	N		0.4	80	0.15	0.06	0.08
	K		0.4	80	0.35	0.08	0.12
	S		0.4	230	0.35	0.08	0.12

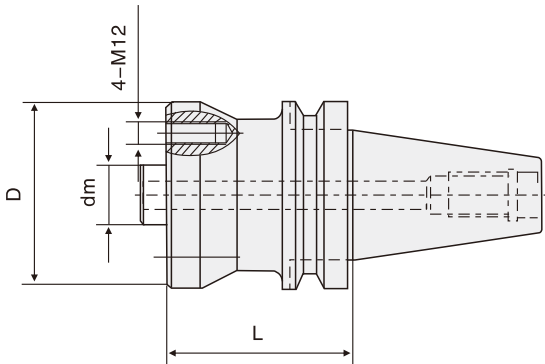
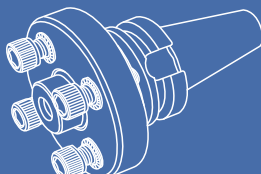


Pin Turning Boring Head–for Finishing Boring

Specification/Item	Boring range			Inner hole range	ds	depth (L)	length (H)	Head Model
CKB5-EW0830-52CK2	8-30	ENH2-1	22-30	80-88	28	52	79	CKB2-EWN2547-35.5
		ENH2-2	15-23	87-95				
		ENH2-3	8-16	94-102				
CKB5-EW1840-52CK2	18-40	ENH2-1	32-40	90-98	28	52	89	CKB2-EWN2547-35.5
		ENH2-2	25-33	97-105				
		ENH2-3	18-26	104-112				
CKB5-EW2855-63CK3	28-55	ENH3-1	46-55	119-129	28	63	118	CKB3-EWN3260-40
		ENH3-2	36-46	128-138				
		ENH3-3	28-37	137-147				
CKB6-EW3865-63CK3	38-65	ENH3-1	56-65	129-139	36	63	128	CKB3-EWN3260-40
		ENH3-2	46-56	138-148				
		ENH3-3	38-47	147-157				
CKB6-EW4875-63CK3	48-75	ENH3-1	65-75	139-149	36	63	138	CKB3-EWN3260-40
		ENH3-2	56-66	148-158				
		ENH3-3	48-57	157-167				
CKB6-EW68100-74CK4	68-100	ENH4-1	87-100	182-195	36	74	179	CKB4-EWN4174-47
		ENH4-2	75-88	194-207				
		ENH4-3	68-80	202-215				
CKB6-EW95127-74CK4	95-127	ENH4-1	114-127	209-222	36	74	206	CKB4-EWN4174-47
		ENH4-2	102-115	221-234				
		ENH4-3	95-107	229-242				



Holder for large Diameter Boring Head

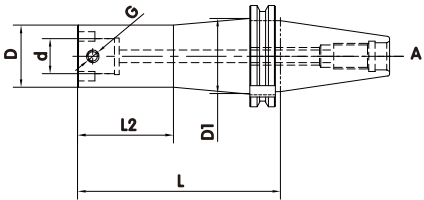
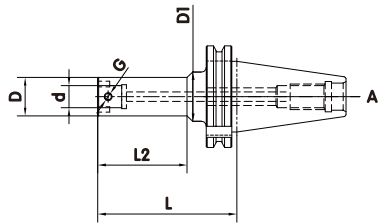
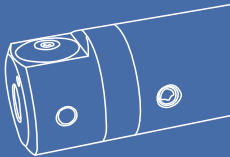


Specification	L	D	dm	G	kg
BT40-DM32-60	60	100	32	4-M12	2.42
BT50-DM32-100	100	100	32	4-M12	6.3
BT50-DM32-150	150	100	32	4-M12	9.2
BT50-DM32-200	200	100	32	4-M12	11.1
BT50-DM32-250	250	100	32	4-M12	12.9
BT50-DM32-300	300	100	32	4-M12	14.8





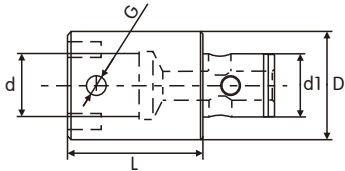
SK Holder



©DIN69871-A/AD-SK

Specification	Figure	L	L2	D	d	D1	G	 kg
SK30-CKB1-80	A	80	46	19	11	31	M4*0.5	0.75
SK30-CKB2-80		80	46	24	14	31	M5*0.5	0.83
SK30-CKB3-80		80	58	31	18	31	M6*0.75	0.91
SK30-CKB4-80		80	58	39	22	39	M8*0.75	1.02
SK40-CKB1-85		85	49	19	11	31	M4*0.5	1.18
SK40-CKB1-115		115	79	19	11	31	M4*0.5	1.21
SK40-CKB2-85		85	49	24	14	31	M5*0.5	1.21
SK40-CKB2-115		115	79	24	14	31	M5*0.5	1.27
SK40-CKB3-95		95	68	31	18	31	M6*0.75	1.32
SK40-CKB3-125		125	80	31	18	31	M6*0.75	1.46
SK40-CKB3-155	B	155	85	31	18	37	M6*0.75	1.62
SK40-CKB3-185		185	115	31	18	37	M6*0.75	1.75
SK40-CKB4-95	A	95	68	39	22	39	M8*0.75	1.54
SK40-CKB4-125		125	98	39	22	39	M8*0.75	1.86
SK40-CKB4-155	B	155	128	39	22	46	M8*0.75	2.15
SK40-CKB4-185		185	148	39	22	46	M8*0.75	2.42
SK40-CKB5-95	A	95	68	49	28	/	M10*1	1.81
SK40-CKB5-125		125	98	49	28	/	M10*1	2.35
SK40-CKB5-155		155	128	49	28	/	M10*1	2.75
SK40-CKB5-185		185	155	49	28	/	M10*1	3.05
SK40-CKB5-215		215	180	49	28	/	M10*1	3.3
SK40-CKB6-70		70	43	63	36	/	M12*1	2.2
SK40-CKB6-95		95	68	63	36	/	M12*1	2.75
SK40-CKB6-125		125	98	63	36	/	M12*1	3.2
SK40-CKB6-155		155	128	63	36	/	M12*1	3.4
SK40-CKB6-185		185	158	63	36	/	M12*1	3.6
SK40-CKB6-215		215	188	63	36	/	M12*1	3.8

Extension



Specification	D	L	d	d1	G
CKB2-2-30L	24	30	14	14	M5*0.5
CKB3-3-38L	31	38	18	18	M6*0.75
CKB4-4-45L	39	45	22	22	M8*0.75
CKB5-5-55L	49	55	28	28	M10*1
CKB5-5-90L	49	90	28	28	M10*1
CKB6-6-60L	63	60	36	36	M12*1
CKB6-6-100L	63	100	36	36	M12*1

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SEM Drill Insert
YLMD MAX Drill
Carbide Inserts
Rough Boring Head
Finish Boring Head
Chuck
Accessories
Chamfering Tools
Gun Drill Technology

SP
SO
WC
WDX
TCP
6D & 8D
880
SEM Drill Insert
YLMD MAX Drill
Carbide Inserts
Rough Boring Head
Finish Boring Head
Chuck
Accessories
Chamfering Tools
Gun Drill Technology

HSK Holder

Runout:0.005 mm
Bore Tolerance:H5
Balancing:G6.3/15000 RPM
Balancing G2.5 can be made by request.
Usage:for clamping tools with straight shank and inclined fiat DIN1835-B.



Specification	D	d	L	L1	
HSK63A-CKB1-85	19	11	85	47	1.18
HSK63A-CKB1-115	19	11	115	77	1.21
HSK63A-CKB2-85	24	14	85	47	1.21
HSK63A-CKB2-115	24	14	115	77	1.27
HSK63A-CKB2-145	24	14	145	107	1.30
HSK63A-CKB3-95	31	18	95	69	1.32
HSK63A-CKB3-125	31	18	125	99	1.46
HSK63A-CKB3-155	31	18	155	129	1.62
HSK63A-CKB4-95	39	22	95	69	1.54
HSK63A-CKB4-125	39	22	125	99	1.86
HSK63A-CKB4-155	39	22	155	129	2.15
HSK63A-CKB5-95	50	28	95	69	1.81
HSK63A-CKB5-125	50	28	125	99	2.35
HSK63A-CKB5-155	50	28	155	129	2.75
HSK63A-CKB6-95	63	36	95	69	2.75
HSK63A-CKB6-125	63	36	125	99	3.2
HSK63A-CKB6-155	63	36	155	129	3.4

Unit: mm

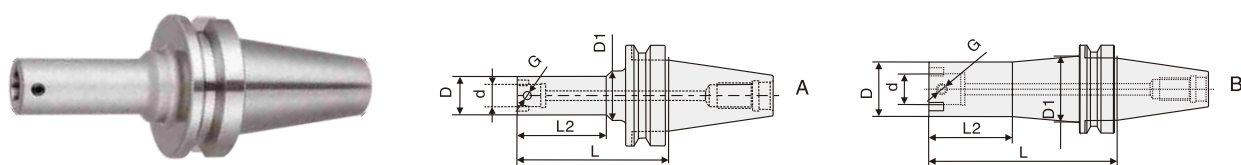
BST Boring Holder



Specification/Item	D	L	L1
BT40-BST-70	95	146.4	70
BT50-BST-100	95	212.8	100
BT50-BST-150	95	262.8	150
BT50-BST-200	95	312.8	200
BT50-BST-250	95	362.8	250
BT50-BST-300	95	412.8	300
BT50-BST-350	95	462.8	350
BT50-BST-400	95	512.8	400

Unit: mm

CKB Holder



◎BT40 MAS 403 BT (IOS40)

Specification	Figure	L	L2	D	d	D1	G	
BT30-CKB1-80	A	80	46	19	11	31	M4×0.5	0.75
BT30-CKB2-80		80	46	24	14	31	M5×0.5	0.83
BT30-CKB3-80		80	58	31	18	31	M6×0.75	0.91
BT30-CKB4-80		80	58	39	22	39	M8×0.75	1.02
BT30-CKB5-65		65	42	49	28	49	M10×1	1.45
BT40-CKB1-85								
BT40-CKB1-115		115	79	19	11	31	M4×0.5	1.21
BT40-CKB2-85		85	49	24	14	31	M5×0.5	1.21
BT40-CKB2-115		115	79	24	14	31	M5×0.5	1.27
BT40-CKB2-145		145	105	24	14	31	M5×0.5	1.3
BT40-CKB3-95	B	95	68	31	18	31	M6×0.75	1.32
BT40-CKB3-125		125	80	31	18	37	M6×0.75	1.46
BT40-CKB3-155		155	85	31	18	37	M6×0.75	1.62
BT40-CKB3-185		185	115	31	18	37	M6×0.75	1.75
BT40-CKB4-95	A	95	68	39	22	39	M8×0.75	1.54
BT40-CKB4-125		125	98	39	22	39	M8×0.75	1.86
BT40-CKB4-155		155	128	39	22	46	M8×0.75	2.15
BT40-CKB4-185		185	120	39	22	46	M8×0.75	2.42
BT40-CKB5-95	A	95	68	49	28	49	M10×1	1.81
BT40-CKB5-125		125	98	49	28	49	M10×1	2.35
BT40-CKB5-155		155	128	49	28	49	M10×1	2.75
BT40-CKB5-185		185	155	49	28	49	M10×1	3.05
BT40-CKB5-215		215	180	49	28	49	M10×1	3.30
BT40-CKB6-65		65	43	63	36	63	M12×1	2.20
BT40-CKB6-95		95	68	63	36	63	M12×1	2.75
BT40-CKB6-125		125	98	63	36	63	M12×1	3.20
BT40-CKB6-155		155	128	63	36	63	M12×1	3.40
BT40-CKB6-185		185	158	63	36	63	M12×1	3.60
BT40-CKB6-215		215	188	63	36	63	M12×1	3.80

◎BT50 MAS 403 BT (IOS50)

Specification	Figure	L	L2	D	d	D1	G	
BT50-CKB1-125	A	125	67	19	11	27	M4×0.5	3.93
BT50-CKB1-165	B	165	75	19	11	27	M4×0.5	4.05
BT50-CKB2-125	A	125	67	24	14	31	M5×0.5	4.08
BT50-CKB2-165	B	165	75	24	14	35	M5×0.5	4.20
BT50-CKB3-125	A	125	75	31	18	36	M6×0.75	4.10
BT50-CKB3-165		165	90	31	18	36	M6×0.75	4.35
BT50-CKB3-205	B	205	130	31	18	36	M6×0.75	4.70
BT50-CKB4-125		125	82	39	22	45	M8×0.75	4.35
BT50-CKB4-165	A	165	95	39	22	45	M8×0.75	4.70
BT50-CKB4-205		205	110	39	22	45	M8×0.75	5.02
BT50-CKB4-245	B	245	150	39	22	45	M8×0.75	5.30
BT50-CKB5-125		125	82	49	28	49	M10×1	4.75
BT50-CKB5-165	A	165	95	49	28	58	M10×1	5.20
BT50-CKB5-205		205	110	49	28	58	M10×1	5.53
BT50-CKB5-245	B	245	150	49	28	58	M10×1	5.95
BT50-CKB6-125		125	87	63	36	73	M12×1	5.15
BT50-CKB6-165	A	165	127	63	36	73	M12×1	6.10
BT50-CKB6-205		205	165	63	36	73	M12×1	7.40
BT50-CKB6-245	B	245	150	63	36	73	M12×1	7.75
BT50-CKB6-285		285	185	63	36	73	M12×1	8.10

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SEM Drill Insert

YUMD MAX Drill

Carbide Inserts

Rough Boring Head

Finish Boring Head

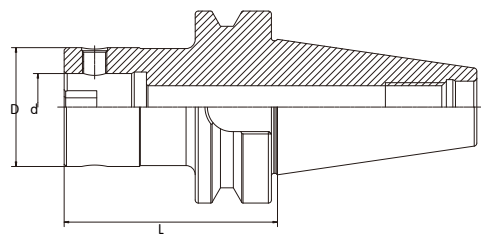
Chuck

Accessories

Chamfering Tools

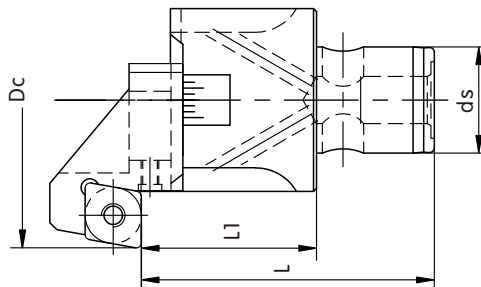
Gun Drill Technology

BBT Boring Holder



Specification/Item	CK NO	D	d	L
BBT40-CK1-115	CK1	19	11	115
BBT40-CK2-125	CK2	24	14	125
BBT40-CK3-125	CK3	31	18	125
BBT40-CK4-135	CK4	39	22	135
BBT40-CK5-165	CK5	50	28	165
BBT40-CK6-60	CK6	64	36	60
BBT40-CK6-160	CK6	64	36	160

Counter Rough Boring Modular

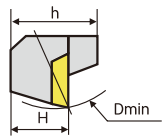
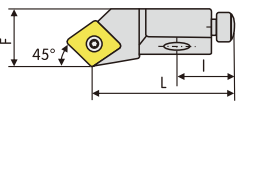
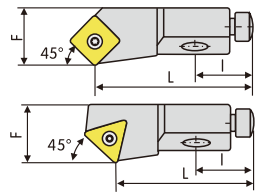
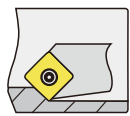


Specification/Item	Data				Applicable Insert	Screw	WRENCH	
	Dc	ds	L1	L				
CKB2-TWN3038F-29	30-38	14	29	65	CC..0602..	M2.5*6.5	T8	0.049
CKB3-TWN3747F-30	37-47	18	30	50	CC..09T3..	M4*10	T15	0.098
CKB4-TWN4660F-36	46-60	22	36	55	CC..09T3..	M4*10	T15	0.161
CKB5-TWN6081F-41	60-81	28	41	65	CC..1204..	M5*13	T20	0.301
CKB6-TWN79101F-56	79-101	36	56	70	CC..1204..	M5*13	T20	0.574
CKB6-TWN99130F-56	99-130	36	56	75	CC..1204..	M5*13	T20	1.225
CKB6-TWN129160F-56	129-160	36	56	75	CC..1204..	M5*13	T20	1.575



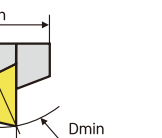
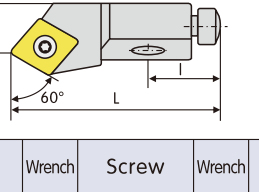
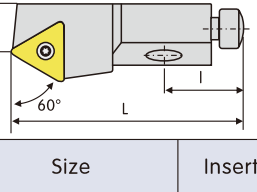
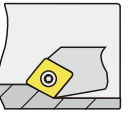
Accessories for Special Tools

S□S□R/L45° Special Tools



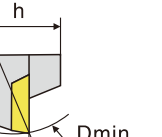
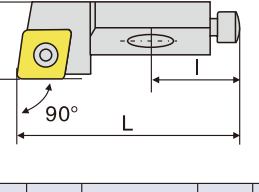
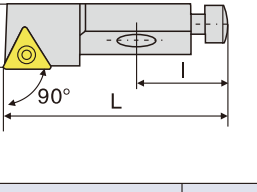
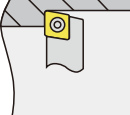
Specification		Size						Inserts	Screw	Wrench	Screw	Wrench	Screw	Screw	Wrench
Left	Right	H	F	h	I	L	Dmin								
SCSCL06CA-06	SCSCR06CA-06	6	8	8.5	12	21	20	CC..060204	SIC025065	FT07	SDC035120	S2.5	SAC030085	SSC030050	S1.5
SCSCL08CA-06	SCSCR08CA-06	8	10	11	17	28	25	CC..060204	SIC025065	FT07	SCC040160	S3	SAC040130		
STSCLO8CA-09	STSCR08CA-09	8	10	11	17	28	25	TC..090204	SIC022063						
SCSCL10CA-09	SCSCR10CA-09	10	14	15	20	44	40	CC..09T308	SIC035080	FT15	SCC060200	S4	SAC050145	SSC040080	S2
SSSCL10CA-09	SSSCR10CA-09	10	14	15	20	44	40	SC..09T308	SIC035080						
STSCLO8CA-11	STSCR10CA-11	10	14	15	20	44	40	TC..110204	SIC025065	FT07					
SSSCL12CA-09	SSSCR12CA-09	12	20	20	20	47	50	SC..09T308	SIC035080						
SSSCL12CA-12	SSSCR12CA-12	12	20	20	20	47	50	SC..120408	SID040110	FT15	SCC060250	S4	SAC060145	SSC050120	S2.5
STSCLO8CA-16	STSCR12CA-16	12	20	20	20	47	50	TC..16T308	SIC035080						
SSSCL16CA-12	SSSCR16CA-12	16	25	25	25	53	60	SC..120408	SID040110						
STSCLO8CA-16	STSCR16CA-16	16	25	25	25	53	60	TC..16T308	SIC035080	FT15	SCC080350	S5	SAC060145	SSC060160	S3

S□T□R/L60° Special Tools



Specification		Size						Inserts	Screw	Wrench	Screw	Wrench	Screw	Screw	Wrench
Left	Right	H	F	h	I	L	Dmin								
SCTCL06CA-06	SCTCR06CA-06	6	5.5	8.5	12	25	20	CC..060204	SIC025065	FT07	SDC035120	S2.5	SAC030085	SSC030050	S1.5
SCTCL08CA-06	SCTCR08CA-06	8	6	11	17	32	25	CC..060204	SIC025065		SCC040160	S3	SAC040130	SSC030050	S1.5
STTCL08CA-09	STTCR08CA-09	8	6	11	17	32	25	TC..090204	SIC022063						
STTCL10CA-11	STTCR10CA-11	10	9	15	20	50	40	TC..110204	SIC025065		SCC060200	S4	SAC050145	SSC040080	S2
STTCL12CA-16	STTCR12CA-16	12	13	20	20	55	50	TC..16T308	SIC035080		SCC060250		SAC060145	SSC050120	S2.5
STTCL16CA-16	STTCR16CA-16	16	15	25	25	63	60			FT15	SCC080350	S5		SSC060160	S3
SCTCL10CA-09	SCTCR10CA-09	10	9	15	20	50	40	CC..09T308			SCC060200	S4	SAC050145	SSC040080	S2

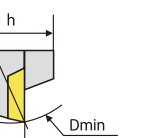
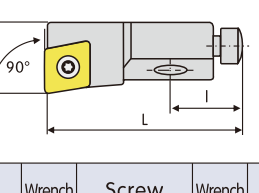
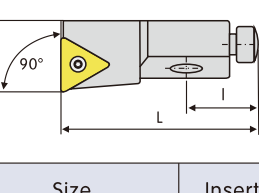
S□G□R/L90° Special Tools



Specification		Size						Inserts	Screw	Wrench	Screw	Wrench	Screw	Screw	Wrench
Left	Right	H	F	h	I	L	Dmin								
SCGCL08CA-06	SCGCR08CA-06	8	10	11	17	32	25	CC..060204	SIC025065	FT07	SCC040160	S3	SAC040130	SSC030050	S1.5
SCGCL10CA-09	SCGCR10CA-09	10	14	15	20	50	40	CC..09T308	SIC035080	FT15	SCC060200	S4	SAC050145	SSC040080	S2
SCGCL12CA-09	SCGCR12CA-09	12	20	20	20	55	50	CC..09T308	SIC035080	FT15	SCC060250	S4	SAC060145	SSC050120	S2.5
SCGCL12CA-12	SCGCR12CA-12	12	20	20	20	55	50	CC..120408	SID040110	FT15	SCC060250	S4	SAC060145		
SCGCL16CA-12	SCGCR16CA-12	16	25	25	25	63	60	CC..120408	SID040110	FT15	SCC080350	S5	SAC060145	SSC060160	S3
STGCL08CA-09	STGCR08CA-09	8	10	11	17	32	25	TC..090204	SIC022063	FT07	SCC040160	S3	SAC040130	SSC030050	S1.5
STGCL10CA-11	STGCR10CA-11	10	14	15	20	50	40	TC..110204	SIC025065	FT07	SCC060200	S4	SAC050145	SSC040080	S2
STGCL12CA-16	STGCR12CA-16	12	20	20	20	55	50	TC..16T308	SIC035080	FT15	SCC060250	S4	SAC060145	SSC050120	S2.5
STGCL16CA-16	STGCR16CA-16	16	25	25	25	63	60	TC..16T308	SIC035080	FT15	SCC080350	S5	SAC060145	SSC060160	S3

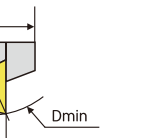
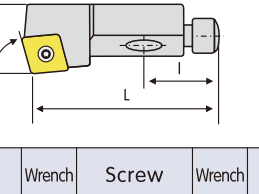
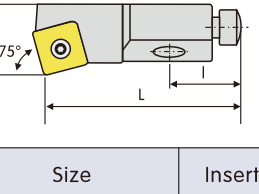
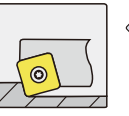
Accessories for Special Tools

S□F□R/L90°



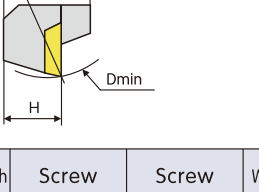
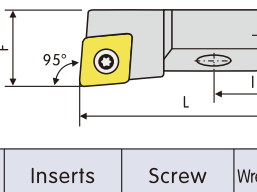
Specification		Size						Inserts	Screw	Wrench	Screw	Wrench	Screw	Screw	Wrench
Left	Right	H	F	h	I	L	Dmin								
SCFCL06CA-06	SCFCR06CA-06	6	8	8.5	12	25	20	CC..060204	SIC025065	FT07	SDC035120	S2.5	SAC030085	SSC030050	S1.5
SCFCL08CA-06	SCFCR08CA-06	8	10	11	17	32	25	CC..060204	SIC025065	FT07	SCC040160	S3	SAC040130	SSC030050	S1.5
SCFCL10CA-09	SCFCR10CA-09	10	14	15	20	50	40	CC..09T308	SIC035080	FT15	SCC060200	S4	SAC050145	SSC040080	S2
SCFCL12CA-09	SCFCR12CA-09	12	20	20	20	55	50	CC..09T308	SIC035080	FT15	SCC060250	S4	SAC060145	SSC050120	S2.5
SCFCL12CA-12	SCFCR12CA-12	12	20	20	20	55	50	CC..120408	SID040110	FT15	SCC060250	S4	SAC060145	SSC050120	S2.5
SCFCL16CA-12	SCFCR16CA-12	16	25	25	25	63	60	CC..120408	SID040110	FT15	SCC080350	S5	SAC060145	SSC060160	S3
STFCL08CA-09	STFCR08CA-09	8	10	11	17	32	25	TC..090204	SIC022063	FT07	SCC040160	S3	SAC040130	SSC030050	S1.5
STFCL10CA-11	STFCR10CA-11	10	14	15	20	50	40	TC..110204	SIC025065	FT07	SCC060200	S4	SAC050145	SSC040080	S2
STFCL12CA-16	STFCR12CA-16	12	20	20	20	55	50	TC..16T308	SIC035080	FT15	SCC060250	S4	SAC060145	SSC050120	S2.5
STFCL16CA-16	STFCR16CA-16	16	25	25	25	63	60	TC..16T308	SIC035080	FT15	SCC080350	S5	SAC060145	SSC060160	S3

S□k□R/L75°



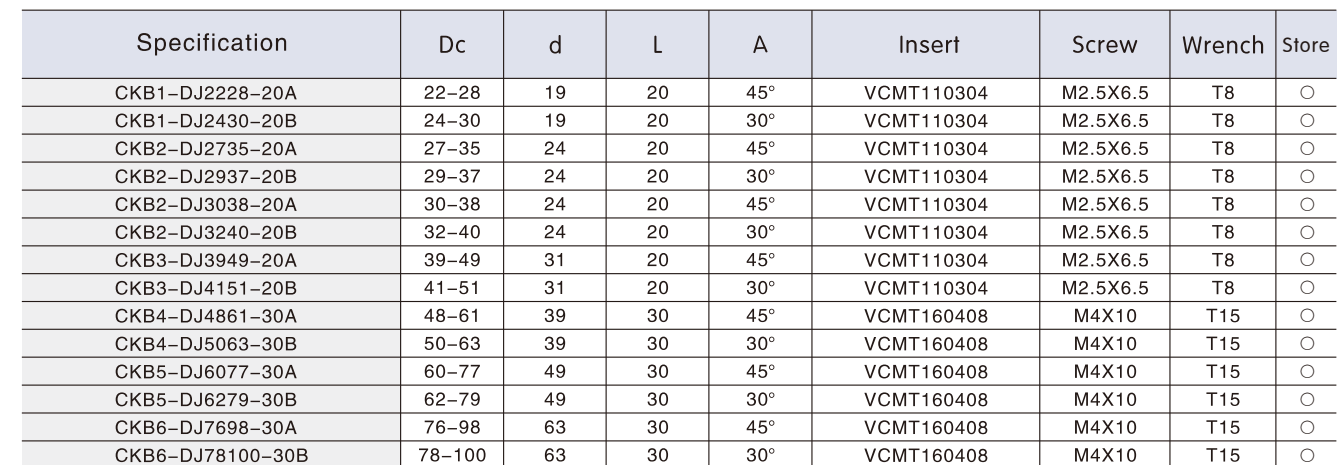
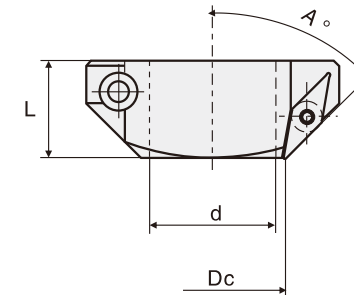
Specification		Size						Inserts	Screw	Wrench	Screw	Wrench	Screw	Screw	Wrench
Left	Right	H	F	h	I	L	Dmin								
SCKCL06CA-05	SCKCR06CA-05	6	8	8.5	12	25	20	CC..060204	SIC025063	FT07	SDC035120	S2.5	SAC030085	SSC030050	S1.5
SCKCL08CA-06	SCKCR08CA-06	8	10	11	17	32	25	CC..060204	SIC025065	FT07	SCC040160	S3	SAC040130		
SSKCL10CA-09	SSKCR10CA-09	10	14	15	20	50	40	SC..09T308	SIC035080	FT15	SCC060200	S4	SAC050145	SSC040080	S2
SSKCL12CA-09	SSKCR12CA-09	12	20	20	20	55	50	SC..09T308	SIC035080	FT15	SCC060250	S4	SAC060145	SSC050120	S2.5
SSKCL12CA-12	SSKCR12CA-12	12	20	20	20	55	50	SC..120408	SID040110	FT15	SCC060250	S4	SAC060145		
SSKCL16CA-12	SSKCR16CA-12	16	25	25	25	63	60	SC..120408	SID040110	FT15	SCC080350	S5	SAC060145	SSC060160	S3

SCL□R/L95° Special Tools

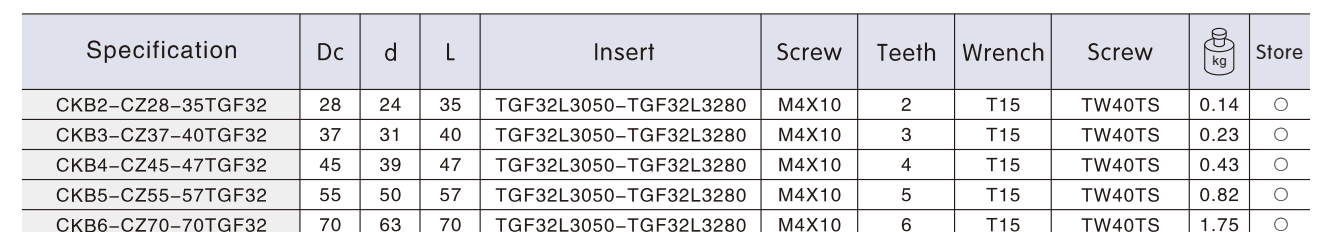
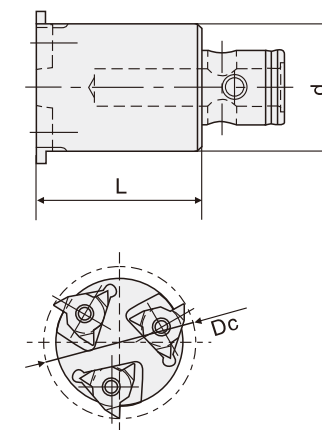


Specification		Size						Inserts	Screw	Wrench	Screw	Wrench	Screw	Screw	Wrench
Left	Right	H	F	h	I	L	Dmin								
SCLCL06CA-06	SCLCR06CA-06	6	8	8.5	12	25	20	CC..060204	SIC025065	FT07	SDC035120	S2.5	SAC030085	SSC030050	S1.5
SCLCL08CA-06	SCLCR08CA-06	8	10	11	17	32	25	CC..060204	SIC025065	FT07	SCC040160	S3	SAC040130		
SCLCL10CA-09	SCLCR10CA-09	10	14	15	20	50	40	CC..09T308	SIC035080	FT15	SCC060200	S4	SAC050145	SSC040080	S2
SCLCL12CA-12	SCLCR12CA-12	12	20	20	20	55	50	CC..120408	SID040110	FT15	SCC060250	S4	SAC060145	SSC050120	S2.5

Chamfering Tools



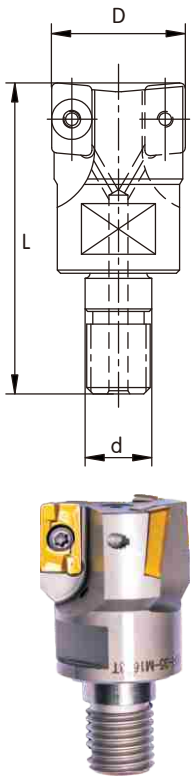
Slot Milling Cutters





Modular Type Milling Cutter

Specification	Dimensions (mm)				Teeth	Insert	
	D	d	L	M			
300R-16-M8-2T	16	8.5	25	M8	2	APMT1135	0.05
300R-17-M8-2T	17	8.5	25	M8	2		0.05
300R-20-M10-2T	20	10.5	30	M10	2		0.07
300R-20-M10-3T	20	10.5	30	M10	3		0.07
300R-21-M10-2T	21	10.5	30	M10	2		0.07
300R-21-M10-3T	21	10.5	30	M10	3		0.07
300R-22-M10-3T	22	10.5	30	M10	3		0.09
300R-25-M12-3T	25	12.5	35	M12	3		0.12
300R-25-M12-3T	25	12.5	35	M12	4		0.11
300R-26-M12-3T	26	12.5	35	M12	3		0.12
300R-26-M12-3T	26	12.5	35	M12	4		0.12
300R-32-M16-4T	32	17	43	M16	4		0.24
300R-32-M16-5T	32	17	43	M16	5		0.23
300R-33-M16-4T	33	17	43	M16	4		0.25
300R-33-M16-5T	33	17	43	M16	5		0.24
300R-35-M16-4T	35	17	43	M16	4		0.31
300R-35-M16-5T	35	17	43	M16	5		0.31
300R-36-M16-5T	36	17	43	M16	5		0.32
400R-25-M12-2T	25	12.5	38	M12	2	APMT1604	0.13
400R-26-M12-2T	26	12.5	38	M12	2		0.14
400R-32-M16-2T	32	17	43	M16	2		0.26
400R-32-M16-3T	32	17	43	M16	3	APMT1604	0.25
400R-33-M16-2T	33	17	43	M16	2		0.27
400R-33-M16-3T	33	17	43	M16	3		0.27
400R-35-M16-3T	35	17	43	M16	3	APMT1604	0.30

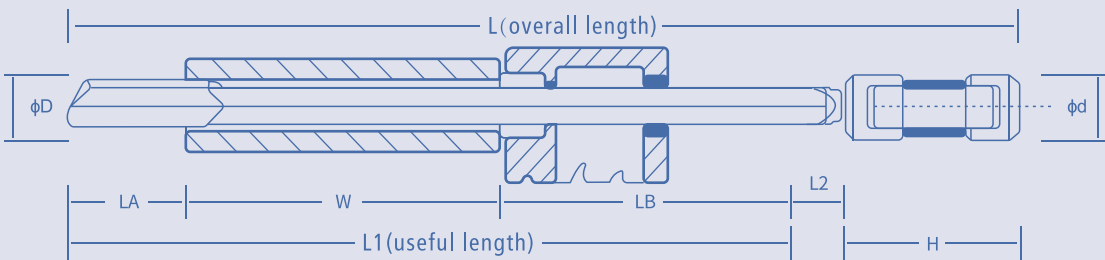




◎ Gun Drill Length Calculation And Code

- The nominal cutting blade diameter can be subdivided to 0.001mm according to customer needs
- Please mark the order according to the following standard

D(drill bit diameter) x L(overall length) – handle/driver number

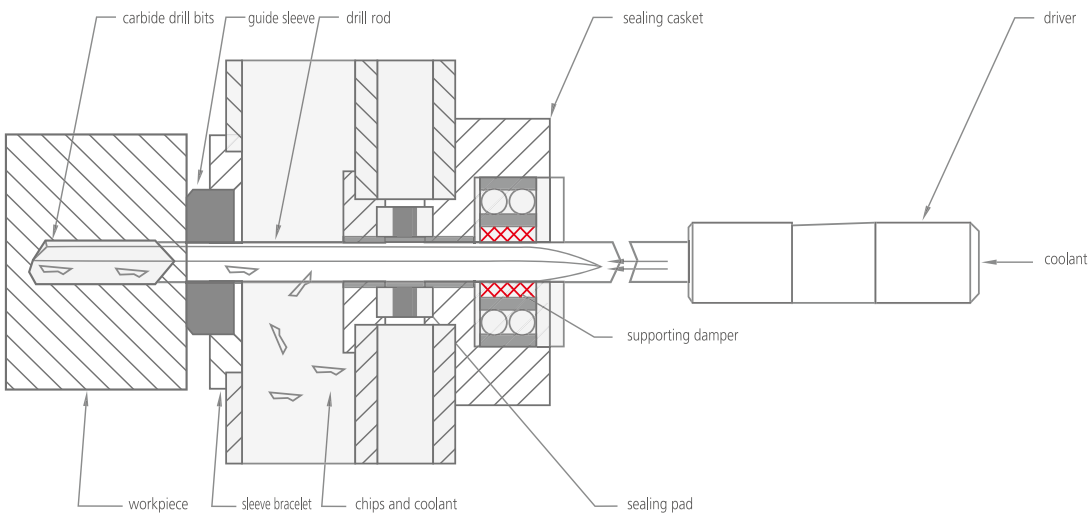


L(overall length)	D=drill bit diameter	W=drilling depth	L=overall length	LB=width of supporting guide casket
L1(useful length)	H=handle/driver number	LA=drill tip length	L1=useful length	L2=minimum for chips discharge allow

overall length calculated as follows:
overall length=LA (drill tip length) + W (drilling depth) + LB (width of supporting guide casket) + L2 (minimum for chips discharge allow) + H (handle length)

- Please highlight the workpiece material, hardness, hole tolerance, and hole brightness

Shin-IL company can produce drill tools with diameter of 1mm-50mm, the length ratio is more than 250x, and the longest length can reach 5000mm. The pattern of drill tool is divided into standard gun drills, non standard (step gun drills, spherical gun drills, etc.). Coating and PCD gun drills, overall carbide solid drills, and clip type gun drills etc.



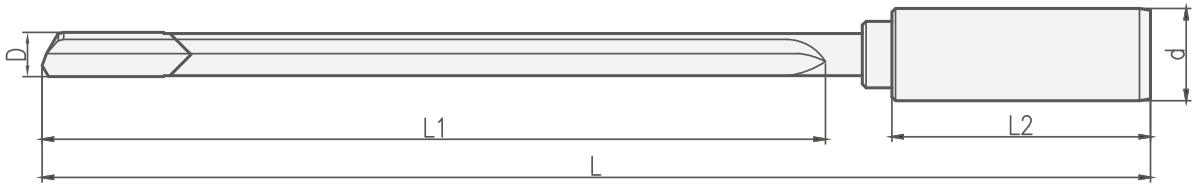
- Use vertical and horizontal equipment with a high pressure internal cooling system
- Use special cutting oil or coolant for deep hole drilling and make sure to provide sufficient pressure and flowrate.
- Because the gun drill without self-center orientation, so in the processing it must use guide sleeve or pilot hole, serves as centering for gun drill machining.
- Using the correct machining parameters for optimal drilling hole processing.

BRAZED GUNDRILLS

BRAZED GUNDRILLS

◎ Brazed Gun Drill

Brazed single flute gun drill is made up of the drilltip, drill rod and drill handle through welding into awhole,can be processed according to the differentchoice of the carbide materials by means of reasonabletool design. The bit is usually made of integral solid car-bide, with the tip portion welded to a heat treated drillrod and then linked to a finely polished steel drill handle.For special materials of the workpiece, drill bits can also be treated with different kinds of coatings.



◎ Stock Of Brazed Single Flute Gun Drills

specification	235mm (L)		270mm(L)		handle/driver	800mm (L)	1000mm (L)	1200mm (L)	1440mm (L)	1650mm (L)	1800mm (L)	handle/driver
	standrad	coating	standrad	coating								
φ 3.02	●	●			10*40	●	●					25*70
φ 3.52	●	●				●	●					
φ 4.02	●	●				●	●	●				
φ 4.52	●	●				●	●	●				
φ 5.02	●	●				●	●	●	●			
φ 5.52	●	●					●	●	●			
φ 6.02	●	●					●	●	●	●		
φ 6.52	●	●					●	●	●	●		
φ 7.02	●	●	●				●	●	●	●		
φ 7.52	●	●					●	●	●	●		
φ 8.02	●	●	●				●	●	●	●	●	
φ 8.52	●	●					●	●	●	●		
φ 9.02	●	●	●				●	●	●	●		
φ 9.52	●	●					●	●	●	●		
φ 10.02	●	●	●				●	●	●	●	●	
φ 10.52	●	●					●	●	●	●		
φ 11.02	●	●	●					●	●	●		
φ 11.52	●	●						●	●	●		
φ 12.02	●	●	●					●	●	●	●	

●= available stock

◎ Standard driver of the brazed gun drills

specification	diameter Φdia.(mm)	drawing	tool length calculation		fix position X	screw spec M
			clamping part L1	transitional part L		
SH10-00	10		40		24.0	
SH16-03	16		45	53	31.0	
SH25-00	25		70	78	34.0	
SH10-01	10		40	57	24.0	
SH16-04	16		45	72	31.0	
SH25-01	25		70	105	34.0	
SH16-02	16		50	58	47.5	
SH16-33	16		50	77	47.5	
SH10-06	10			60		M6x0.5
SH16-15	16			80		M10x1
SH25-08	25			100		M16x1.5
SH10-28	10		60	77		M6x0.5
SH16-22	16		60	105		M10x1
SH25-10	25		100	140		M16x1.5
SH12.7-00	12.7			38.1	25.3	
SH19.05-01	19.05			70	45.0	
SH25.4-00	25.4			70	57.5	
SH31.7-00	31.7			70	57.5	
SH38.1-01	38.1			70	57.5	
SH19.05-11	19.05		70	97	45.0	
SH25.4-11	25.4		70	100	57.5	
SH31.7-01	31.7		70	111	57.5	
SH38.1-01	38.1		70	110	57.5	
SH10-44	10		60	68	35	M6x0.5
SH16-31	16		80	90	37	M10x1
SH25-34	25		100	100	45	M16x1.5
SH16-66	16		80	80	37	M10x1
SH25-40	25		100	100	45	M16x1.5
SH10-30	10		40	40	28.0	
SH12-14	12		45	45	33.0	
SH16-70	16		48	48	36.0	
SH20-56	20		50	50	38.0	

BRAZED GUNDRILLS

BRAZED GUNDRILL

Standard driver of the brazed gun drills

specification	diameter Φ dia. (mm)	drawing	tool length calculation		fix position X	screw spec M
			clamping part L1	transitional part L		
SH16-00	16			112	73.0	TR16x1.5
SH20-00	20			126	82.0	TR 20x2
SH28-00	28			126	82.0	TR 28x2
SH36-00	36			162	109.0	TR 36x2
SH16-21	16			40	28.0	
SH25-16	25			50	35.0	
SH35-00	35			60	40.0	
SH16-30	16		40	67	28.0	
SH25-20	25		50	77	35.0	
SH35-01	35		60	100	40.0	
SH10-40	10		40			
SH12-18	12		45			
SH16-11	16		48			
SH20-01	20		50			
SH25-11	25		56			
SH32-24	32		60			
SH40-03	40		70			
SH10-41	10		40	57		
SH12-19	12		45	62		
SH16-20	16		48	75		
SH20-60	20		50	77		
SH25-21	25		56	86		
SH32-23	32		60	100		
SH40-04	40		70	110		
SH10-11	10			40	23.5	
SH12-07	12			45	26.5	
SH16-32	16			48	29.0	
SH20-29	20			50	30.5	
SH25-22	25			56	38.0	
SH32-10	32			60	43.0	
SH40-13	40			70	47.0	
SH10-23	10		40	57	23.5	
SH12-02	12		45	62	26.5	
SH16-53	16		48	75	29.0	
SH20-34	20		50	77	30.5	
SH25-31	25		56	86	38.0	
SH32-11	32		60	100	43.0	
SH40-14	40		70	110	47.0	
SH10-20	10			40	28.0	
SH12-08	12			45	33.0	
SH16-47	16			48	36.0	
SH20-40	20			50	38.0	
SH25-36	25			56	44.0	
SH32-12	32			60	48.0	
SH40-18	40			70	66.0	
SH10-24	10		40	57	28.0	
SH12-05	12		45	62	33.0	
SH16-51	16		48	75	36.0	
SH20-43	20		50	77	38.0	
SH25-37	25		56	86	44.0	
SH32-13	32		60	100	48.0	
SH40-17	40		70	110	66.0	
SH10-29	10			40	28.0	
SH12-13	12			45	33.0	
SH16-62	16			48	36.0	
SH20-55	20			50	38.0	

Machining parameters of the brazed single flute gun drill

workpiece material	spring steel prehardened steel cast iron chilled cast iron titanium alloy special steel (nickel base heat resistant alloy nickel alloy)	stainless steel anti-corrosive stainless steel austenitic stainless steel 18-25%Cr Ni > 8%	martensitic stainless steel ferritic steel (normal stainless steel cast stainless steel) 13-25%Cr free cutting steel (sulphurized steel)	alloy steel quenching and tempered steel case hardened steel nitriding steel tool steel (> 900N/mm2)	cast iron grey cast iron (< 300N/mm2) nodular cast iron (< 400N/mm2)	cast iron grey cast iron (< 300N/mm2) grey cast iron (< 400N/mm2) malleable cast iron white heart malleable cast iron black heart malleable cast iron	structural steel quenching tempered steel high carbon low alloy steel case hardened steel nitriding steel tool steel (> 900N/mm2) free cutting steel	brass bronze copper plastic	aluminium cast aluminium Si > 5% free cutting aluminium	aluminium cast aluminium Si > 5% non quenched aluminium
cutting speed m/min	25-60	30-60	40-70	60-80	60-90	70-100	70-100	80-150	80-160	100-300

diameter Φ	feed rate: mm/rev									
2.0-2.49	0.001-0.002	0.002-0.005	0.002-0.006	0.002-0.005	0.005-0.018	0.005-0.019	0.003-0.007	0.003-0.015	0.002-0.012	0.005-0.005
2.5-2.99	0.001-0.005	0.004-0.007	0.004-0.007	0.004-0.006	0.008-0.028	0.008-0.02	0.005-0.010	0.005-0.020	0.004-0.026	0.004-0.008
3.0-3.49	0.002-0.007	0.006-0.008	0.005-0.009	0.005-0.007	0.009-0.038	0.009-0.038	0.007-0.012	0.006-0.030	0.006-0.037	0.006-0.012
3.5-3.99	0.004-0.008	0.008-0.009	0.007-0.011	0.007-0.010	0.011-0.042	0.011-0.046	0.009-0.015	0.007-0.045	0.007-0.055	0.007-0.025
4.0-4.49	0.006-0.009	0.009-0.010	0.008-0.013	0.008-0.012	0.012-0.047	0.012-0.050	0.012-0.019	0.008-0.050	0.008-0.071	0.008-0.026
4.5-4.99	0.008-0.011	0.010-0.013	0.009-0.017	0.011-0.015	0.016-0.052	0.016-0.057	0.014-0.020	0.009-0.057	0.009-0.094	0.009-0.028
5.0-5.99	0.010-0.014	0.012-0.015	0.013-0.019	0.013-0.018	0.018-0.065	0.018-0.068	0.016-0.026	0.010-0.069	0.010-0.109	0.010-0.036
6.0-6.99	0.012-0.016	0.014-0.017	0.015-0.023	0.015-0.022	0.024-0.071	0.024-0.074	0.018-0.028	0.012-0.079	0.012-0.125	0.012-0.045
7.0-7.99	0.015-0.018	0.016-0.019	0.18-0.026	0.018-0.025	0.028-0.084	0.028-0.085	0.021-0.035	0.014-0.092	0.018-0.130	0.014-0.049
8.0-8.99	0.018-0.021	0.018-0.021	0.020-0.031	0.020-0.027	0.032-0.092	0.032-0.096	0.024-0.036	0.016-0.101	0.020-0.144	0.016-0.056
9.0-9.99	0.021-0.025	0.020-0.028	0.023-0.034	0.023-0.030	0.36-0.110	0.036-0.114	0.027-0.040	0.018-0.113	0.023-0.158	0.018-0.034
10.0-11.99	0.025-0.030	0.025-0.033	0.025-0.041	0.025-0.038	0.045-0.116	0.050-0.120	0.030-0.04	0.020-0.139	0.025-0.174	0.020-0.074
12.0-13.99	0.027-0.033	0.030-0.044	0.030-0.045	0.029-0.044	0.051-0.126	0.060-0.138	0.036-0.060	0.024-0.156	0.030-0.182	0.024-0.087
14.0-15.99	0.029-0.040	0.035-0.044	0.035-0.052	0.035-0.050	0.057-0.138	0.070-0.154	0.042-0.071	0.028-0.179	0.035-0.194	0.028-0.099
16.0-17.99	0.033-0.044	0.041-0.050	0.042-0.060	0.039-0.053	0.620-0.158	0.079-0.170	0.048-0.079	0.033-0.199	0.050-0.209	0.033-0.108
18.0-19.99	0.037-0.049	0.045-0.062	0.045-0.067	0.044-0.060	0.066-0.173	0.090-0.191	0.054-0.091	0.036-0.244	0.054-0.228	0.036-0.130
20.0-23.99	0.041-0.054	0.049-0.071	0.050-0.079	0.049-0.069	0.069-0.189	0.106-0.207	0.060-0.107	0.040-0.249	0.060-0.254	0.040-0.146
24.0-27.99	0.045-0.057	0.052-0.083	0.054-0.090	0.054-0.077	0.076-0.210	0.120-0.221	0.069-0.117	0.048-0.291	0.072-0.295	0.048-0.169
28.0-31.99	0.049-0.062	0.057-0.091	0.059-0.098	0.059-0.085	0.079-0.212	0.140-0.237	0.079-0.134	0.056-0.327	0.084-0.360	0.056-0.194
32.0-40.0	0.052-0.065	0.063-0.098	0.065-0.107	0.063-0.098	0.086-0.228	0.160-0.245	0.085-0.154	0.064-0.380	0.096-0.455	0.064-0.221

● The cutting speed and feed rate depend on : tool diameter, tool length, cutting fluid, workpiece material, characterization of machine and clamping condition. The processing parameters in the above table are the standard normal value for reference. The practical actual working conditions on site are the true value.

SOLID CARBIDE GUN DRILL

SOLID CARBIDE GUN DRILL

■ Solid carbide gun drill

The solid carbide gun drill is made of drill body(drill tip and drill rod integrated) and the drill handle from two parts by welding as a whole. It can also be made by the whole carbide.(drill tip,drill rod and handle integrated) Its stabl-ity, efficiency and useful life are better than the welding type. This design ensures higher reliability and cutting per-formance, while it compromise higher rigidity and less dis-torted vibration. It is therefore enjoy a longer tool life.

Drilling diameter range:1.00- 12.00

Made it up for maximum 550mm overall length



Solid carbide gun drill stock table

Φ1.52*160-10*55	Φ2.0*250-10*135	Φ3.8*185-4*38/50-L
Φ1.80*160-10*55	Φ2.2*170-4*38/50	Φ3.8*240-10*100-L
Φ2.02*160-10*55	Φ2.5*175-4*38/50-L	Φ3.8*275-10*135-L
Φ2.02*180-10*55	Φ2.5*230-10*100-L	Φ4.0*185-4*38/50-L
Φ2.02*180-10*55-L	Φ2.5*265-10*135-L	Φ4.0*240-10*100-L
Φ2.02*200-10*55	Φ2.6*175-4*38/50-L	Φ4.0*275-10*135-L
Φ2.02*200-10*55-L	Φ2.6*265-10*135-L	Φ4.2*185-4*38/50-L
Φ2.52*180-10*55	Φ2.8*175-4*38/50-L	Φ4.2*240-10*100-L
Φ2.52*180-10*55-L	Φ2.8*265-10*135-L	Φ4.2*275-10*135-L
Φ3.02*180-10*55	Φ3.0*175-4*38/50-L	Φ4.5*285-10*135-L
Φ3.02*200-10*55	Φ3.0*230-10*100-L	Φ4.8*250-10*100-L
Φ3.02*200-10*55-L	Φ3.0*265-10*135-L	Φ5.0*250-10*100-L
Φ2.8*170-2.9*30-L	Φ3.2*180-4*38/50-L	Φ5.0*260-10*100-L
Φ3.0*170-2.9*30-L	Φ3.2*230-10*100-L	Φ6.0*260-10*100-L
Φ3.2*170-3.1*30-L	Φ3.2*265-10*135-L	Φ6.0*295-10*135-L
Φ1.80*200-10*100	Φ3.5*180-4*38/50-L	Φ7.0*280-10*100-L
Φ2.0*170-4*38/50	Φ3.5*230-10*100-L	Φ9.0*280-10*100-L
Φ2.0*220-10*100	Φ3.5*265-10*135-L	Φ10.0*280-10*100-L

● L:TIALN

◎ Table Of Soild Carbide Gun Drill Handle

specification	diamete(mm)Φdia.	drawing	handle length calculation		fix position x	screw spec M
			clamping part D	transitional part L		
SH6-03	6		30	45	17	
SH10-15	10		55	70		M6*0.5
SH10-37	10		40	55	32.7	M6*0.5
SH10-42	10		40	55	24	
SH12.7-01	12.7		38	48	25.4	
SH12.7-09	12.7		51	65		M6*0.5
SH16-75	16		80	105	37	M10*1
SH4-08	4		34	46		
SH6-12	6		36	50		
SH10-51	10		40	55		
SH12-27	12		45	60		
SH16-86	16		48	63		
SH6-13	6		36	50	20	
SH10-47	10		40	55	23.5	
SH12-30	12		45	60	26.5	
SH16-78	16		48	63	29	
SH6-01	6		36	50	25	
SH10-49	10		40	55	28	
SH12-28	12		45	60	33	
SH16-84	16		48	63	36	

SOLID CARBIDE GUN DRILL

INDEXABLE INSERT GUN DRILL

Machining parameters of the brazed single flute gun drill

workpiece material	spring steel prehardened steel cast iron chilled cast iron titanium alloy special steel (nickel base heat resistant alloy nickel alloy)	stainless steel austenitic corrosive stainless steel stainless steel 18-25%Cr Ni > 8%	martensitic stainless steel ferritic steel (normal stainless steel cast stainless steel) 13-25%Cr free cutting steel (sulphurized steel)	alloy steel quenching and tempered steel case hardened steel nitriding steel tool steel (> 900N/mm2)	cast iron grey cast iron (< 300N/mm2) nodular cast iron (< 400N/mm2)	cast iron grey cast iron (< 300N/mm2) grey cast iron (< 400N/mm2) malleable cast iron white heart malleable cast iron black heart malleable cast iron	structural steel quenching tempered steel high carbon low alloy steel case hardened steel nitriding steel tool steel (> 900N/mm2) free cutting steel	brass bronze copper plastic	aluminium cast aluminium Si > 5% free cutting aluminium	aluminium cast aluminium Si > 5% non quenched aluminium
cutting speed m/min	25~60	30~60	40~70	60~80	60~90	70~100	70~100	80~150	80~160	100~300

diameter Φ	feed rate: mm/rev									
0.7~0.79	0.0004~0.0012	0.0005~0.0012	0.0007~0.0012	0.0005~0.0012	0.0009~0.0014	0.0007~0.0018	0.0004~0.0018	0.0005~0.0012	0.0007~0.0012	0.0005~0.0009
0.8~0.89	0.0006~0.0016	0.0070~0.0015	0.0011~0.0014	0.0006~0.0015	0.0012~0.0018	0.0010~0.0023	0.0004~0.0022	0.0008~0.0015	0.0012~0.0014	0.0008~0.0012
0.9~0.99	0.0009~0.0020	0.0011~0.0019	0.0014~0.0017	0.0009~0.0019	0.0015~0.0024	0.0014~0.0028	0.0007~0.0026	0.0011~0.0019	0.0017~0.0020	0.0011~0.0017
1.0~1.09	0.0013~0.0024	0.0014~0.0022	0.0019~0.0022	0.0010~0.0023	0.0019~0.0029	0.0018~0.0032	0.0010~0.0032	0.0015~0.0024	0.0020~0.0024	0.0015~0.0024
1.1~1.19	0.0017~0.0028	0.0017~0.0025	0.0022~0.0026	0.0013~0.0029	0.0025~0.0035	0.0022~0.0038	0.0014~0.0038	0.0019~0.0029	0.0022~0.0029	0.0019~0.0034
1.2~1.29	0.0020~0.0033	0.0020~0.0027	0.0024~0.0028	0.0015~0.0035	0.0031~0.0041	0.0030~0.0048	0.0018~0.0041	0.0024~0.0034	0.0024~0.0034	0.0024~0.0041
1.3~1.39	0.0023~0.0036	0.0022~0.0029	0.0031~0.0035	0.0020~0.0041	0.0040~0.0051	0.0039~0.0060	0.0020~0.0050	0.0028~0.0039	0.0026~0.0045	0.0026~0.0044
1.4~1.49	0.0026~0.0038	0.0023~0.0031	0.0034~0.0037	0.0021~0.0047	0.0047~0.0060	0.0049~0.0079	0.0021~0.0054	0.0031~0.0047	0.0028~0.0055	0.0032~0.0048
1.5~1.59	0.0029~0.0042	0.0024~0.0035	0.0035~0.0042	0.0021~0.0051	0.0053~0.0068	0.0056~0.0100	0.0021~0.0067	0.0032~0.0053	0.0035~0.0066	0.0038~0.0059
1.6~1.79	0.0035~0.0054	0.0036~0.0049	0.0040~0.0051	0.0024~0.0066	0.0064~0.0095	0.0064~0.0150	0.0028~0.0075	0.0035~0.0095	0.0040~0.0085	0.0040~0.0075
1.8~1.99	0.0040~0.0065	0.0040~0.0065	0.0050~0.0065	0.0030~0.0075	0.0070~0.0130	0.0070~0.0220	0.0030~0.0095	0.0040~0.0130	0.0050~0.0110	0.0050~0.0110
2.0~2.49	0.0050~0.0075	0.0050~0.0075	0.0050~0.0075	0.0030~0.0095	0.0100~0.0220	0.0090~0.0330	0.0040~0.0120	0.0040~0.0180	0.0050~0.0200	0.0070~0.0130
2.5~2.99	0.0060~0.0095	0.0060~0.0095	0.0060~0.0110	0.0040~0.0110	0.0130~0.0320	0.0110~0.0430	0.0050~0.0160	0.0050~0.0250	0.0060~0.0360	0.0080~0.0170
3.0~3.49	0.0080~0.0110	0.0080~0.0110	0.0080~0.0130	0.0050~0.0140	0.0150~0.0390	0.0140~0.0530	0.0080~0.0180	0.0060~0.0370	0.0080~0.0540	0.0100~0.0200
3.5~3.99	0.0090~0.0125	0.0100~0.0160	0.0090~0.0160	0.0070~0.0160	0.0180~0.0480	0.0180~0.0620	0.0090~0.0230	0.0070~0.0490	0.0110~0.0750	0.0100~0.0250
4.0~4.49	0.0100~0.0135	0.0110~0.0180	0.0100~0.0190	0.0080~0.0190	0.0200~0.0560	0.0200~0.0690	0.0120~0.0260	0.0080~0.0600	0.0120~0.0950	0.0130~0.0300
4.5~4.99	0.0110~0.0160	0.0140~0.0220	0.0110~0.0220	0.0110~0.0210	0.0230~0.0640	0.0230~0.0780	0.0140~0.0280	0.0090~0.0690	0.0140~0.1300	0.0160~0.0360
5.0~5.99	0.0130~0.0220	0.0150~0.0240	0.0130~0.0250	0.0120~0.0250	0.0250~0.0760	0.0250~0.0950	0.0150~0.0380	0.0100~0.0800	0.0150~0.1550	0.0200~0.0470
6.0~7.99	0.0150~0.0300	0.0180~0.0290	0.0150~0.0370	0.0150~0.0330	0.0300~0.1100	0.0300~0.1250	0.0180~0.0490	0.0120~0.0960	0.0180~0.0250	0.0260~0.0660
8.0~12.0	0.0180~0.0380	0.0210~0.0330	0.0170~0.0410	0.0180~0.0380	0.0330~0.1190	0.0350~0.1360	0.0210~0.0570	0.0140~0.1100	0.0210~0.2080	0.0290~0.0780

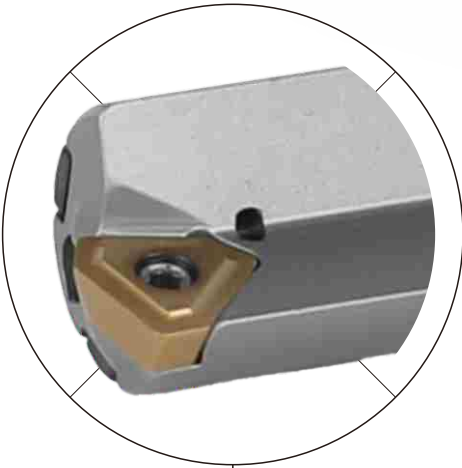
The cutting speed and feed rate depend on : tool diameter, tool lenath, cutting fluid, workpiece material, characterization of machine and clamping condition. The processing parameters in the above table are the standard normal value for reference. The practical actual working condions on site are the true value.

Brazed Gun Drill

The nominal cutting blade diameter can be subdivided to 0.001mm according to customer needs

Product Features

No more grinding, easy to replace the blades and guides.
Special blade port treatment has high cutting speed and cutting ability.



INDEXABLE INSERT GUN DRILL (TPMX)

◎ Proportion Table

Dia	Application Inserts	Screw	Wrench
14-17	TPMX0902	M2.5*6	T8
18-21	TPMX1403	M2.5*6	T8
22-25	TPMX1704	M3.5*9	T15
26-29	TPMX2204	M4*10	T15
30-35	TPMX2405	M4*10	T15
36-42	TPMX2807	M5*12	T20

◎ Proportion Table

Dia	Application Inserts	Screw	Wrench
13.5-15	05-18-060	M2.2*4.5	T7
15.5-17	05-18-075	M2.2*4.5	T7
17.5-19.8	06-20-085	M2.5*6	T8
20.3-23.8	06-20-100	M2.5*6	T8
24.2-28	06-20-120	M2.5*6	T8
30-39	07-20-120	M3*6.5	T8

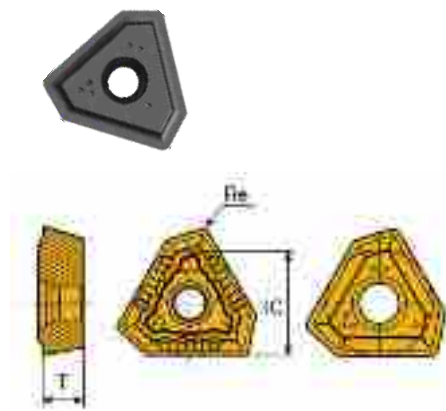
INDEXABLE INSERT GUN DRILL (TOGT)

◎ Proportion Table

Dia	Insert	Screw	Wrench	Guide	Screw	Wrench
14.00-15.99	TOGT070304	M2.5*5	T8	GPS05-18-060	M2.2*4.5	T7
16.00-18.00	TOGT080305	M2.5*5	T8	GPS05-18-075	M2.2*4.5	T7
18.01-19.99	TOGT090305	M2.5*5	T8	GPS06-20-085	M2.5*5	T8
20.00-20.99	TOGT100305	M3.0*6.5	T8	GPS06-20-085	M2.5*5	T8
21.00-21.99	TOGT100305	M3.0*6.5	T8	GPS06-20-100	M2.5*5	T8
22.00-25.00	TOGT110405	M3.5*9	T15	GPS06-20-100	M2.5*5	T8
25.01-28.99	TOGT120405	M4*10	T15	GPS06-20-120	M2.5*5	T8
29.00-29.99	TOGT130408	M5*11	T20	GPS06-20-120	M2.5*5	T8
30.00-32.02	TOGT140510	M5*11	T20	GPS07-20-120	M3.0*6.4	T8

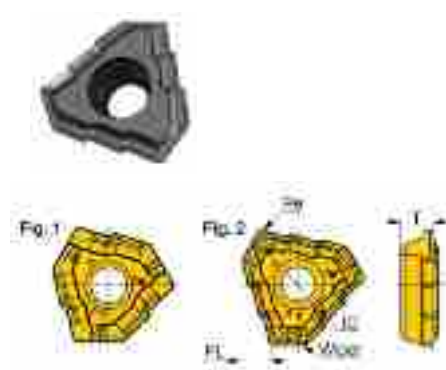
GUN DRILL COMPATIBLE INSERT

◎ TPMX insert



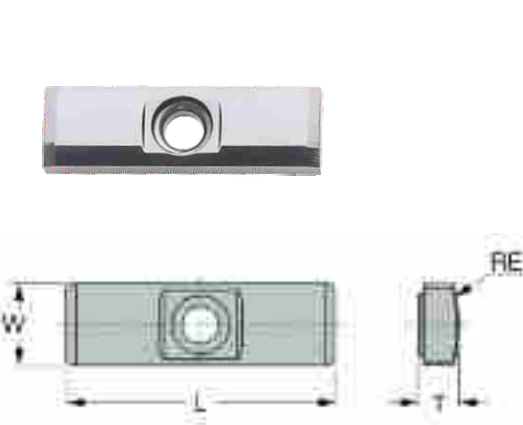
Specification/Item	Size (mm)		
	IC	T	Re
TPMX0902	7.5	2.3	0.8
TPMX1403	8.45	3.5	0.4
TPMX1403	8.45	3.5	0.8
TPMX1704	10.3	4.0	0.4
TPMX1704	10.3	4.0	0.8
TPMX2204	12.3	4.4	1.0
TPMX2405	14.2	5.5	0.4
TPMX2405	14.2	5.5	1.2
TPMX2807	17	7.5	0.8
TPMX2807	17	7.5	1.6

◎ TOGT insert



Specification/Item	Size (mm)				
	IC	Re	RL	T	Fig
TOGT070304	7.69	0.4	1.95	2.3	1
TOGT080305	8.55	0.5	2.2	2.8	1
TOGT090305	8.32	0.5	3.0	3.0	2
TOGT100305	9.23	0.5	3.2	3.3	2
TOGT110405	10.4	0.5	3.4	3.8	2
TOGT120405	11.59	0.5	3.6	4.3	2
TOGT130408	12.85	0.8	4.57	4.76	2
TOGT140510	16.85	1.0	5.43	5.26	2

◎ Gun drill Compatible guide



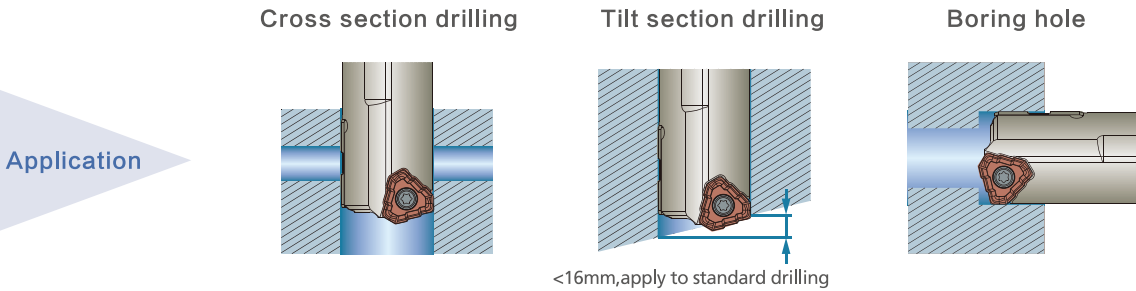
Specification/Item	Size (mm)			
	W	T	L	Re
GPS04-16-045	4.0	1.8	16.0	4.5
GPS04-16-050	4.0	1.8	16.0	5.5
GPS04-16-055	4.0	2.0	16.0	5.5
GPS05-18-060	5.0	2.5	18.0	6.0
GPS05-18-075	5.0	2.5	18.0	7.5
GPS06-20-075	6.0	3.0	20.0	7.5
GPS06-20-085	6.0	3.0	20.0	8.5
GPS06-20-100	6.0	3.0	20.0	10.0
GPS06-20-120	6.0	3.0	20.0	12.0
GPS07-20-120	7.0	3.5	20.0	12.0
GPS08-25-155	8.0	4.5	25.0	15.5
GPS10-30-200	10.0	4.5	30.0	20.0
GPS10-35-200	10.0	6.0	35.0	20.0

CUTTING CONDITION

◎ Cutting Condition

Workpiece material	Cutting speed Vc(m/min)	Feed rate:f(mm/rev)			
		Φ12-Φ13.99	Φ14-Φ18	Φ18.01-Φ28	Φ28.01-Φ50
Low carbon steel(C<0.3) SS400/St42-1,SM/St52-3, S25C/C25,etc.	50-100	-	0.03-0.1	0.03-0.1	-
	80-140	0.05-0.1	0.05-0.1	0.05-0.1	0.1-0.2
Carbon steel(C>0.3) S45C/C45,S55C/C55etc.	50-100	-	0.03-0.1	0.03-0.12	-
	80-140	0.05-0.1	0.05-0.16	0.05-0.2	0.1-0.2
Low alloy steel(C<0.3) SCM415,18CrMo4,etc.	50-100	-	0.03-0.1	0.03-0.1	-
	80-140	0.05-0.16	0.05-0.1	0.05-0.1	0.1-0.2
Alloy steel(C>0.3) SCM440/42CrMo4,etc.	50-100	-	0.03-0.1	0.03-0.2	-
	80-120	0.05-0.1	0.05-0.16	0.05-0.2	0.1-0.2
Stainless steel(Austenitic) SUS304/x5CrNi18-9,SUS316/ X5CrNiMo17-12-3,etc.	50-100	-	0.03-0.06	0.03-0.06	-
	60-100	0.05-0.1	0.05-0.1	0.05-0.1	0.1-0.15
Stainless steel(Martensitic,ferritic) SUS430/X6Cr17,SUS416/ X12CrS13,etc.	50-100	-	0.03-0.06	0.03-0.06	-
	60-100	0.05-0.1	0.05-0.1	0.05-0.1	0.1-0.15
Stainless steel(Precipitated) SUS630/X5CrNiCuNb16-4,etc.	50-100	-	0.03-0.06	0.03-0.06	-
	60-100	0.05-0.1	0.05-0.1	0.05-0.1	0.1-0.3
Grey cast iron FC250/250-2,etc.	50-100	-	0.03-0.15	0.05-0.18	-
	80-140	0.05-0.25	0.05-0.25	0.05-0.3	0.1-0.3
Nodular cast iron FCD700/700-2,etc.	50-100	-	0.03-0.15	0.05-0.18	-
	80-140	0.05-0.25	0.05-0.25	0.05-0.3	0.1-0.3
Aluminium alloy	80-160	-	0.03-0.15	0.03-0.15	-
	100-200	0.05-0.2	0.05-0.2	0.05-0.2	0.1-0.25
Heat resistant alloy Inconel 718, etc.	20-50	-	0.03-0.06	0.03-0.08	-
	20-50	0.04-0.08	0.04-0.08	0.04-0.1	0.06-0.13
Titanium alloy Ti-6AL-4V, etc.	30-160	-	0.03-0.1	0.03-0.12	-
	30-60	0.05-0.13	0.05-0.13	0.05-0.15	0.1-0.18
Quenching steel ≥40HRC	40-100	-	0.03-0.08	0.03-0.08	-
	50-100	0.04-0.08	0.04-0.08	0.04-0.1	0.06-0.13

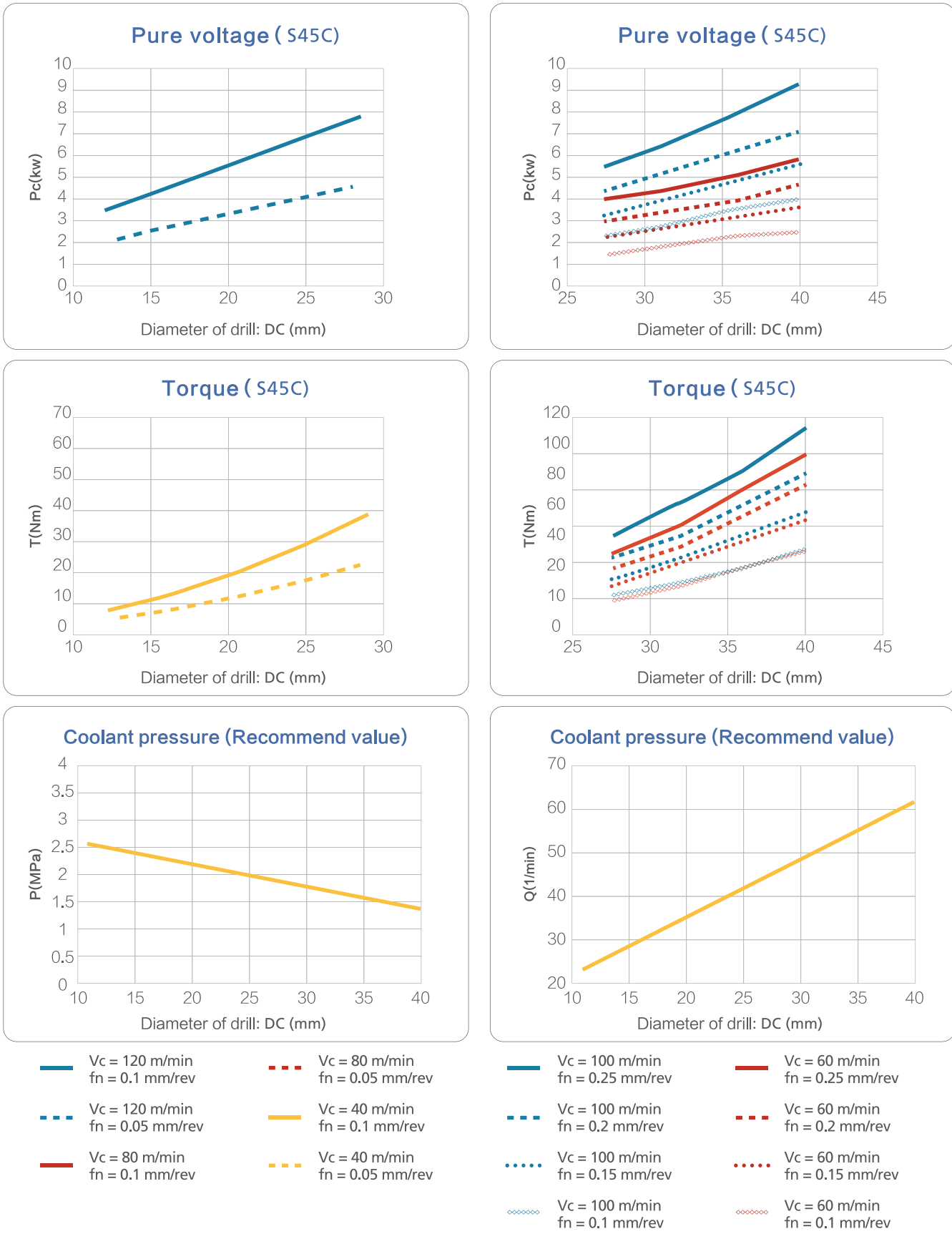
Feed Rate f (mm/rec)	0.03-0.05	0.03-0.05	0.1-0.5
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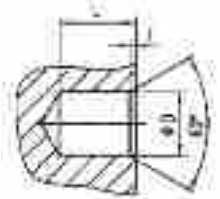
- While processing cross and tilt hole drilling, make sure guide pad attach to workpiece inner wall
- Prepare a guiding hole before processing boring a deep hole

CUTTING CONDITION

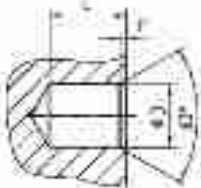
◎ Spindle Power And Coolant Pressure



◎ Guiding Hole Dimension For The Brazed Gun Drill

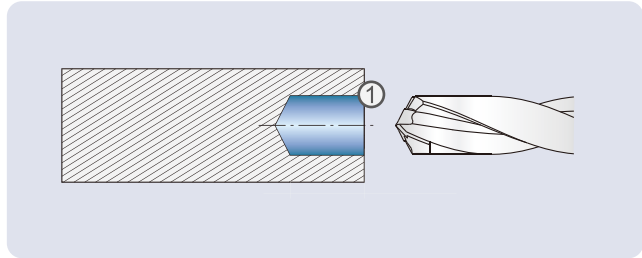
Diameter range	Diameter of drill	Diameter of guiding hole	Contrast of the guiding hole and drilling depth							
			LxD Drilling depth	Guiding hole depth						
				Φ 1.805 -4.000	Φ 4.001 -8.500	Φ 8.501 -12.000	Φ 12.001 -20.999	Φ 21.000 -30.999	Φ 31.000 -40.999	Φ 41.000 -55.000
	1.85mm - 4.00mm	+0.005 to +0.010	ap.10xD	2.0xD	1.0xD	1.0xD	1.0xD	1xD	1xD	1xD
	4.01mm - 12.00mm	+0.010 to +0.020	ap.20xD	3.0xD	1.5xD	1.5xD	1.5xD			
	12.01mm - 50.00mm	+0.015 to +0.040	ap.25xD	4.0xD	2.0xD	2.0xD	1.5xD			
			ap.30xD	6.0xD	3.0xD	3.0xD	1.5xD			
			ap.35xD	30mm	35mm	3.0xD	1.5xD			
			ap.40xD	30mm	35mm	3.0xD	1.5xD			

◎ Solid Carbide Gun Drill Guiding Hole Dimension

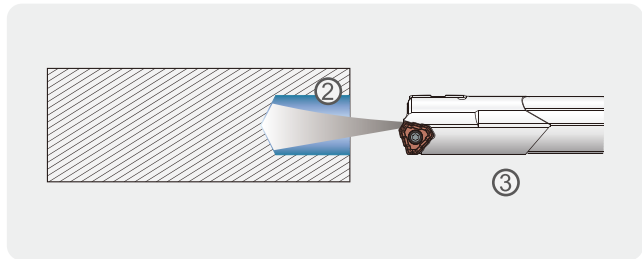
Diameter range	Diameter of drill	Diameter of guiding hole	Contrast of the guiding hole and drilling depth				
			LxD Drilling depth	Guiding hole depth			
				Φ 0.500-1.599	Φ 1.600-3.999	Φ 4.000-6.999	Φ 7.000-12.000
	0.500mm ~ 4.000mm	+0.005 to +0.010	ap.20xD	2.0xD	2.0xD	2.0xD	2.5xD
	4.001mm ~ 12.000mm	+0.010 to +0.020	ap.30xD		3.0xD	3.0xD	3.5xD
			ap.40xD		4.0xD	4.0xD	40mm
			ap.50xD	6.0xD	6.0xD	35mm	
			ap.60xD		30mm		
			> 40xD				

◎ Clip Type Gun Drill Apply On CNC Machine And Lathe

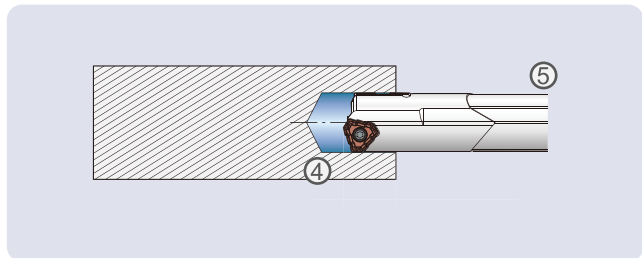
For the sake of good performance, please follow the instruction



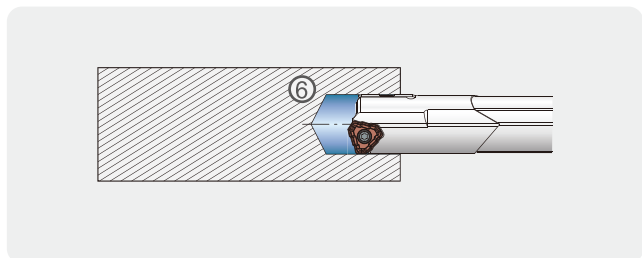
- ① Prepare a pilot hole
Hole tolerance: +0.01--+0.1mm
Depth of hole: H=15mm



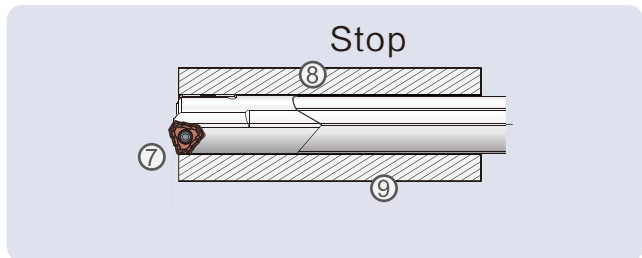
- ② Turn on coolant
③ Drill slowly into the pilot hole
Revolving speed: n=50-100min-1
Feed rate: Vf=100-300mm/min
Notice: do not enter the pilot hole at high speed



- ④ Stop at 10mm after enter the pilot hole
⑤ Start process at normal revolving speed



- ⑥ Start axial moving at 10-20mm while entering the hole at feed rate 80% of the program speed. After drilling depth more than 20mm, drilling speed trends toward to 100% of the program speed.



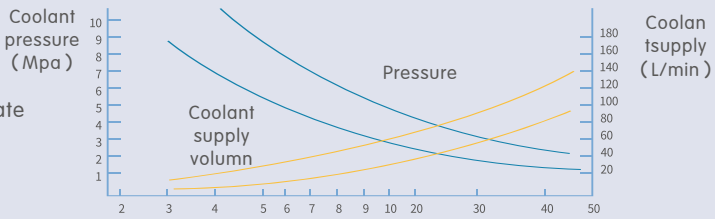
- ⑦ Drilling through hole: Continuous drilling till the drill tip thrust 5mm out of the hole.
⑧ Stop spindle revolving and turn off the coolant.
⑨ Withdraw the drill tip.

TECHNICAL PARAMETERS

PROBLEM AND SOLUTION

1

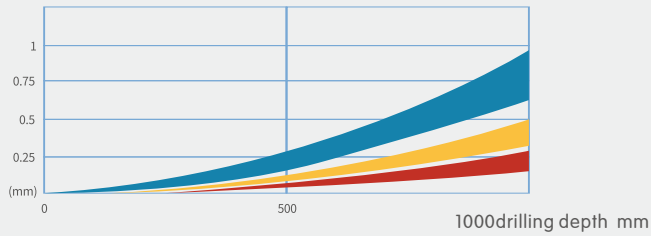
Coolant pressure, coolant flowrate varies on the diameter of the gun drill. (horizontal axis)



2

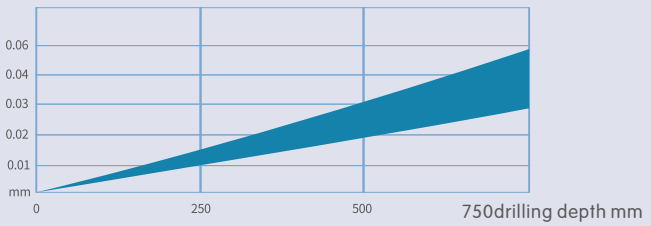
Drilling deviation (vertical axis) varies with the drilling depth (horizontal axis)

■ Tools revolving, workpiece standstill
■ Tools standstill, workpiece revolving
■ Tools revolving, workpiece anti-revolving



3

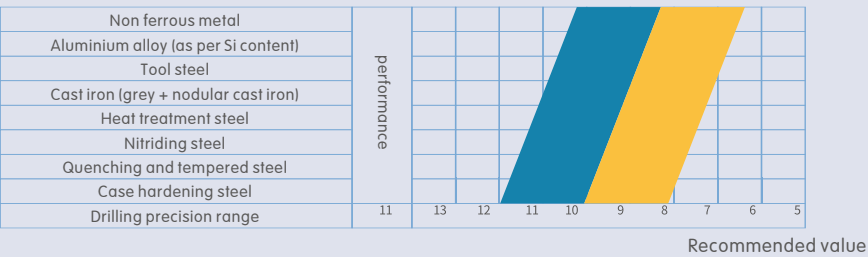
Straightness (vertical axis) varies with drilling depth (horizontal axis)



4

Single flute tolerance

■ Normal condition
■ Good condition



5

Surface quality

■ Normal condition
■ Good condition

Grade of roundness		N8	N7	N6	N5	N4	N3
Quality zone							
Surface roughness	R1μm	21	11.5	6.2	3.4	1.9	1.0
	Raμm	3.2	1.6	0.8	0.4	0.2	0.1
	Rzμm	14	7.6	4.5	2.2	1.2	0.65

Recommended value

◎ Wear And Broken Problem

At the moment of drill bit touch workpiece	Mechanical reason: Check the feeding mechanism whether the clamp contraction is tight with the material Drill tool reason: Is there a problem with the grinding Contact surface of the guide sleeve: Whether there is oil leakage, whether the cutting chips eliminated smoothly
Mid-term processing	Mechanical reason: Whether feeding rate properly Drill tip badly damaged: Refer to tool life advice
Before through hole	Feed rate: When drill bit bust out, the accelerated speed should slowly reduce down.
While withdraw	Shape of material being cut: Whether the bending hole is caused when slant out of the drill Feed rate: Reduce speed slowly

◎ Tooling Life

Improper cutting condition	Whether the cutting speed, feed rate are too fast or too slow
Mechanical reason	Whether the swing of the spindle is too much, check whether the gap between the drill and the guide sleeve, check the concentricity of spindle and the tool is too much. And set the anti-vibration sleeve appropriately
Tooling reason	Select the appropriate tip angle, whether the guide line is too long, regrinding is proper or not.
Cutting fluid	Select the proper coolant (high pressure additive, viscosity), Fully filter the cutting oil. When the oil temperature is too high, use oil cooler and increase the container capacity.
Material being cut	Homogeneous quality or not

Machining Accuracy

Machining surface poor brightness	improper cutting condition: slow down feed speed mechanical reason: Check whether the spindle wiggle or not, feed speed proper or not, check the guide sleeve tolerance, and check the clamp mechanism drill tool reason: Whether the tool is fixing or not cutting fluid reason: Select the proper coolant, completely filter the coolant
Roundness Cylindricity Enlargement	improper cutting condition: select proper feed rate mechanical reason: increase guide sleeve accuracy, take care the concentricity of spindle and guide sleeve. tool reason: select proper rake angle coolant reason: select proper coolant
Bending	Mechanical reason: Increase guide sleeve accuracy, take notice the concentricity of the spindle and guide sleeve, fix the material firmly. Tool reason: Select proper tip and rake angle select proper guide pad surface, Being cutting material: Whether the appearance is uneven, or exist gas hole, or slant surface.

Cutting Solution

Cutting chips stuffed	Cutting fluid low pressure: Select proper pressure Shortage of fluid : Select proper quantity and viscosity Poor finishing: Lower cutting speed while processing hard material. Select proper tip and rake angle. Mechanical reason: Enlarge container for the coolant and chips
Filamentous cutting occurred	Filamentous cutting: Accelerate the feed speed, whether the wear of the outer corner of the bit is too heavy, whether there is a gap in the outer corner or outer edge of the drill. Select finer grain and heavy grinding is used. To increase oil pressure in the center hole, and slow down the feed speed while filamentous cutting is occurred. Fold cutting: is there a collapse crack in the drill blade or near the tip