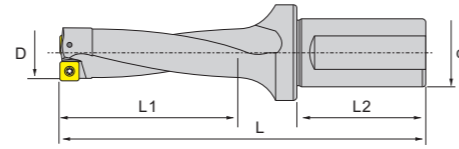




# SP Type Fast Drilling Bit

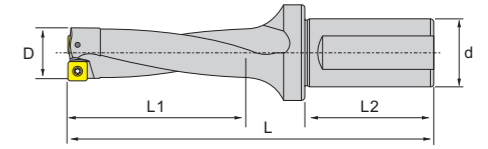
## SPMG



Cutting Environment ● Stable Cutting ● General Cutting ✖ Unstable Cutting

Application	Product Image	Dimensioning	Specification	Dimension (mm)					Matching Toolholder	PGD1 CBN1 CBN2 PM30 N021 PMK32 PMS35 PMS40 PMS30 PMS15
				rε	A	B	T	L		
Drilling Metals			SPMG 050204-M41	0.4	5.0	5.0	2.38	2.2		
			060204-M41	0.4	6.0	6.0	2.38	2.6		
			07T308-M41	0.8	7.94	7.94	3.97	2.8		
			090408-M41	0.8	9.8	9.8	4.30	4.2		
			110408-M41	0.8	11.5	11.5	4.8	4.4		
			140512-M41	1.2	14.3	14.3	5.0	5.75		

## SPMG



Cutting Environment ● Stable Cutting ● General Cutting ✖ Unstable Cutting

Application	Product Image	Dimensioning	Specification	Dimension (mm)					Matching Toolholder	PGD1 CBN1 CBN2 PM30 N021 PMK32 PMS35 PMS40 PMS30 PMS15
				rε	A	B	T	L		
Drilling Metals			SPMG 050204-T18	0.4	5.0	5.0	2.38	2.2		
			060204-T18	0.4	6.0	6.0	2.38	2.6		
			07T308-T18	0.8	7.94	7.94	3.97	2.8		
			090408-T18	0.8	9.8	9.8	4.30	4.2		
			110408-T18	0.8	11.5	11.5	4.8	4.4		
			140512-T18	1.2	14.3	14.3	5.0	5.75		

## SP Type Fast Drilling Bit



L1=2xD Fast Drill - SP Type

Model	L1	L2	L	D	d	Applicable Inserts	Screw	Wrench
SP13-2D C25.05.2	31	56	104	13	25	SPMG050204	230201	230052
SP14-2D C25.05.2	33	56	106	14				
SP15-2D C25.05.2	35	56	108	15				
SP16-2D C25.05.2	37	56	110	16				
SP17-2D C25.05.2	39	56	112	17				
SP18-2D C25.05.2	41	56	114	18				
SP19-2D C25.05.2	43	56	116	19				
SP20-2D C25.05.2	45	56	118	20				
SP21-2D C25.05.2	47	56	120	21				
SP22-2D C25.05.2	49	56	122	22				
SP23-2D C25.05.2	51	56	124	23				
SP24-2D C25.05.2	53	56	126	24				
SP25-2D C25.05.2	55	56	128	25				
SP26-2D C25.05.2	57	56	130	26				
SP27-2D C25.05.2	59	56	132	27				
SP28-2D C25.05.2	61	56	134	28				
SP29-2D C25.05.2	63	56	136	29				
SP30-2D C25.05.2	65	56	138	30				
SP31-2D C25.05.2	67	56	140	31				
SP32-2D C25.05.2	69	56	142	32				
SP33-2D C25.05.2	71	56	144	33				
SP34-2D C25.05.2	73	56	146	34				
SP35-2D C25.05.2	75	56	148	35				
SP36-2D C25.05.2	77	56	150	36				
SP37-2D C25.05.2	79	56	152	37				
SP38-2D C25.05.2	81	56	154	38				
SP39-2D C25.05.2	83	56	156	39				
SP40-2D C25.05.2	85	56	158	40				
SP41-2D C25.05.2	87	56	160	41				
SP42-2D C25.05.2	89	56	162	42				
SP43-2D C25.05.2	91	56	164	43				
SP44-2D C25.05.2	93	56	166	44				
SP45-2D C25.05.2	95	56	168	45				
SP46-2D C25.05.2	97	56	170	46				
SP47-2D C25.05.2	99	56	172	47				
SP48-2D C25.05.2	101	56	174	48				
SP49-2D C25.05.2	103	56	176	49				
SP50-2D C25.05.2	105	56	178	50				
SP51-2D C25.05.2	107	56	180	51				
SP52-2D C25.05.2	109	56	182	52				
SP53-2D C25.05.2	111	56	184	53				
SP54-2D C25.05.2	113	56	186	54				
SP55-2D C25.05.2	115	56	188	55				
SP56-2D C25.05.2	117	56	190	56				
SP57-2D C25.05.2	119	56	192	57				
SP58-2D C25.05.2	121	56	194	58				
SP59-2D C25.05.2	123	56	196	59				
SP60-2D C25.05.2	125	56	198	60				

L1=3xD Fast Drill - SP Type

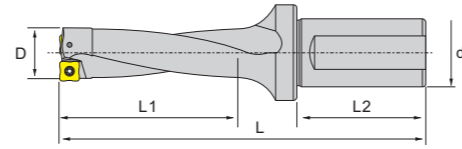
Model	L1	L2	L	D	d	Applicable Inserts	Screw	Wrench
SP13-3D C25.05.2	44	56	117	13	25	SPMG050204	230201	230052
SP13-5D C25.05.2	45.5	56	118	13.5				
SP14-3D C25.05.2	47	56	120	14				
SP14-5D C25.05.2	48.5	56	122	14.5				
SP15-3D C25.05.2	50	56	123	15				
SP15-5D C25.05.2	51.5	56	124	15.5				
SP16-3D C25.05.2	53	56	126	16				
SP16-5D C25.05.2	54.5	56	127	16.5				
SP17-3D C25.05.2	56	56	129	17				
SP17-5D C25.05.2	57.5	56	130	17.5				
SP18-3D C25.05.2	59	56	132	18				
SP18-5D C25.05.2	60.5	56	133	18.5				
SP19-3D C25.05.2	62	56	135	19				
SP19-5D C25.05.2	63.5	56	136	19.5				
SP20-3D C25.05.2	65	56	139	20				
SP20-5D C25.05.2	66.5	56	140	20.5				
SP21-3D C25.05.2	68	56	142	21				
SP21-5D C25.05.2	69.5	56	143	21.5				
SP22-3D C25.05.2	71	56	145	22				
SP22-5D C25.05.2	72.5	56	148	22.5				
SP23-3D C25.05.2	74	56	148	23				
SP23-5D C25.05.2	75.5	56	149	23.5				
SP24-3D C25.05.2	77	56	151	24				
SP24-5D C25.05.2	78.5	56	152	24.5				
SP25-3D C25.05.2	80	56	156	25				
SP25-5D C25.05.2	81.5	56	167	25.5				
SP26-3D C25.05.2	83	56	169	26				
SP26-5D C25.05.2	84.5	56	170	26.5				
SP27-3D C25.05.2	86	56	172	27				
SP27-5D C25.05.2	87.5	56	173	27.5				
SP28-3D C25.05.2	89	56	175	28				
SP28-5D C25.05.2	90.5	56	176	28.5				
SP29-3D C25.05.2	92	56	178	29				
SP29-5D C25.05.2	93.5	56	179	29.5				
SP30-3D C25.05.2	95	56	181	30				
SP30-5D C25.05.2	96.5	56	182	30.5				
SP31-3D C25.05.2	98	56	184	31				
SP31-5D C25.05.2	99.5	56	185	31.5				
SP32-3D C25.05.2	101	56	187	32				
SP32-5D C25.05.2	102.5	56	188	32.5				
SP33-3D C25.05.2	104	56	190	33				
SP33-5D C25.05.2	105.5	56	191	33.5				
SP34-3D C25.05.2	107	56	193	34				
SP34-5D C25.05.2	108.5	56	194	34.5				
SP35-3D C25.05.2	110	56	196	35				
SP35-5D C25.05.2	111.5	56	197	35.5				
SP36-3D C25.05.2	113	56	199	36				
SP36-5D C25.05.2	114.5	56	200	36.5				
SP37-3D C25.05.2	116	56	202	37				
SP37-5D C25.05.2	117.5	56	203	37.5				
SP38-3D C25.05.2	119	56	205	38				
SP38-5D C25.05.2	120.5	56	206	38.5				
SP39-3D C25.05.2	122	56	208	39				
SP39-5D C25.05.2	123.5	56	209	39.5				
SP40-3D C25.05.2	125	56	211	40				
SP40-5D C25.05.2	126	56	214	41				
SP41-3D C25.05.2	128	56	217	42				
SP41-5D C25.05.2	129	56	219	43				
SP42-3D C25.05.2	131	56	217	42				
SP42-5D C25.05.2	132	56	220	43				
SP43-3D C25.05.2	134	56	229	43				
SP43-5D C25.05.2	135	56	230	44				
SP44-3D C25.05.2	137	56	232	44				
SP44-5D C25.05.2	138	56	235	45				
SP45-3D C25.05.2	140	56	235	45				
SP45-5D C25.05.2	141	56	238	46				
SP46-3D C25.05.2	143	56	238	46				
SP46-5D C25.05.2	144	56	241	47				
SP47-3D C25.05.2	146	56	244	48				
SP47-5D C25.05.2	147	56	247	49				
SP48-3D C25.05.2	149	56	244	48				
SP48-5D C25.05.2	150	56	247	49				
SP49-3D C25.05.2	152	56	247	49				
SP49-5D C25.05.2	153	56	250	50				
SP50-3D C25.05.2	155	56	250	50				
SP50-5D C25.05.2	156	56	253	51				
SP51-3D C25.05.2	158	56	258	52				
SP51-5D C25.05.2	159	56	259	53				
SP52-3D C25.05.2	161	56	258	52				
SP52-5D C25.05.2	162	56	262	54				
SP53-3D C25.05.2	164	56	259	53				
SP53-5D C25.05.2	165	56	262	54				
SP54-3D C25.05.2	167	56	262	54				
SP54-5D C25.05.2	168	56	265	55				
SP55-3D C25.05.2	170	56	265	55				
SP55-5D C25.05.2	171	56	268	56				
SP56-3D C25.05.2	173	56	271	57				
SP56-5D C25.05.2	174	56	274	58				
SP57-3D C25.05.2	176	56	271	57				
SP57-5D C25.05.2	177	56	274	58				
SP58-3D C25.05.2	179	56	274	58				
SP58-5D C25.05.2	180	56	277	59				
SP59-3D C25.05.2	182	56	277	59				
SP59-5D C25.05.2	183	56	280	60				

L1=4xD Fast Drill - SP Type

Model	L1	L2	L	D	d	Applicable Inserts	Screw	Wrench
SP13-4D C25.05.2	57	56	130	13	25	SPMG050204	230201	230052
SP13-5D C25.05.2	59	56	132	13.5				
SP14-4D C25.05.2	61	56	134	14				
SP14-5D C25.05.2	63	56	136	14.5				
SP15-4D C25.05.2	65	56	138	15				
SP15-5D C25.05.2	67	56	140	15.5				
SP16-4D C25.05.2	69	56	142	16				
SP16-5D C25.05.2	71	56	144	16.5				
SP17-4D C25.05.2	73	56	146	17				
SP17-5D C25.05.2	75	56	148	17.5				
SP18-4D C25.05.2	77	56	150	18				
SP18-5D C25.05.2	79	56	152	18.5				
SP19-4D C25.05.2	81	56	154	19				
SP19-5D C25.05.2	83	56	155	19.5				
SP20-4D C25.05.2	85	56	159	20				
SP20-5D C25.05.2	87	56	161	20.5				
SP21-4D C25.05.2	89	56	163	21				
SP21-5D C25.05.2	91	56	165	21.5				
SP22-4D C25.05.2	93	56	167	22				
SP22-5D C25.05.2	95	56	169	22.5				
SP23-4D C25.05.2	97	56	171	23				
SP23-5D C25.05.2	99	56	173	23.5				
SP24-4D C25.05.2	101	56	175	24				
SP24-5D C25.05.2	103	56	177	24.5				
SP25-4D C25.05.2	105	56	181	25				
SP25-5D C25.05.2	107	56	193	25.5				
SP26-4D C25.05.2	109	56	195	26				
SP26-5D C25.05.2	111	56	197	26.5				
SP27-4D C25.05.2	113	56	199	27				
SP27-5D C25.05.2	115	56	201	27.5				
SP28-4D C25.05.2	117	56	203	28				
SP28-5D C25.05.2	119	56	205	28.5				
SP29-4D C25.05.2	121	56	207	29				
SP29-5D C25.05.2	123	56	209	29.5				
SP30-4D C25.05.2	125	56	211	30				
SP30-5D C25.05.2	127	56	213	30.5				
SP31-4D C25.05.2	129	56	215	31				
SP31-5D C25.05.2	131	56	217	31.5				
SP32-4D C25.05.2								

# SO Type Fast Drilling Bit

SOMT



Cutting Environment ● Stable Cutting ● General Cutting ✖ Unstable Cutting

Application	Product Image	Dimensioning	Specification	Dimension (mm)					Matching Toolholder	Material
				rC	A	B	T	L		
P			SOMT 040202-M59	0.2	4.0	4.0	1.8	2.0	PS01	Steel
M			050204-M59	0.4	4.9	4.9	2.38	2.25	PS01	Stainless Steel
K			060204-M59	0.4	5.7	5.7	2.38	2.6	PS01	Iron
N			070306-M59	0.6	6.8	6.8	2.8	2.6	PS01	Aluminum/Copper/Magnesium/Zinc/Plastic/Wood
S			08T306-M59	0.6	7.9	7.9	3.97	2.85	PS01	Carbide/Powder Metallurgy
H			09T308-M59	0.8	9.2	9.2	3.97	3.8	PS01	Titanium/Superalloy/Carbon Fiber
			11T308-M59	0.8	11.0	11.0	3.97	3.8	PS01	
			130408-M59	0.8	12.8	12.8	4.4	4.4	PS01	
			150510-M59	1.0	15.0	15.0	4.8	5.4	PS01	

SO

SO Type Fast Drilling Bit

L1=2xD Fast Drill - SO Type

L1=3xD Fast Drill - SO Type

Model	L1	L2	L	D	d	Inserts	Screw	Wrench	Weight
SO10-2D C20.04.2	23	44	82	10	20	SOMT040204	230200	230052	0.2
10.3-2D C20.04.02	24	44	83	10.3	20	SOMT040204	230200	230052	0.2
10.5-2D C20.04.02	24	44	83	10.5	20	SOMT040204	230200	230052	0.2
11-2D C20.04.02	25	44	84	11.0	20	SOMT040204	230200	230052	0.2
11.5-2D C20.04.02	26	44	85	11.5	20	SOMT040204	230200	230052	0.2
12-2D C20.04.02	27	44	86	12.0	20	SOMT040204	230200	230052	0.2
12.5-2D C20.04.02	28	44	87	12.5	20	SOMT040204	230200	230052	0.2
SO13-2D C20.05.2	29	44	88	13.0	20	SOMT050204	230201	230052	0.2
13.5-2D C20.05.2	30	44	89	13.5	20	SOMT050204	230201	230052	0.2
14-2D C20.05.2	31	44	90	14.0	20	SOMT050204	230201	230052	0.2
14.5-2D C20.05.2	32	44	91	14.5	20	SOMT050204	230201	230052	0.2
15-2D C20.05.2	33	44	92	15.0	20	SOMT050204	230201	230052	0.2
15.5-2D C20.05.2	34	44	93	15.5	20	SOMT050204	230201	230052	0.2
16-2D C20.05.2	35	44	94	16.0	20	SOMT050204	230201	230052	0.2
SO16.5-2D C20.06.2	36	44	95	16.5	20	SOMT060204	230070	230053	0.2
17-2D C20.06.2	37	44	96	17.0	20	SOMT060204	230070	230053	0.2
SO17.5-2D C25.06.2	38	56	109	17.5	25	SOMT070306	230070	230053	0.3
18-2D C25.06.2	39	56	110	18.0	25	SOMT070306	230070	230053	0.3
18.5-2D C25.06.2	40	56	111	18.5	25	SOMT070306	230070	230053	0.3
19-2D C25.06.2	41	56	112	19.0	25	SOMT070306	230070	230053	0.3
SO19.5-2D C25.07.2	42	56	113	19.5	25	SOMT070306	230070	230053	0.3
20-2D C25.07.2	43	56	114	20.0	25	SOMT070306	230070	230053	0.3
20.5-2D C25.07.2	44	56	115	20.5	25	SOMT070306	230070	230053	0.3
21-2D C25.07.2	45	56	116	21.0	25	SOMT070306	230070	230053	0.3
21.5-2D C25.07.2	46	56	117	21.5	25	SOMT070306	230070	230053	0.3
22-2D C25.07.2	47	56	118	22.0	25	SOMT070306	230070	230053	0.3
SO22.5-2D C25.08.2	48	56	119	22.5	25	SOMT08T306	230074	230054	0.4
23-2D C25.08.2	49	56	123	23.0	25	SOMT08T306	230074	230054	0.4
23.5-2D C25.08.2	50	56	124	23.5	25	SOMT08T306	230074	230054	0.4
24-2D C25.08.2	51	56	125	24.0	25	SOMT08T306	230074	230054	0.4
24.5-2D C25.08.2	52	56	126	24.5	25	SOMT08T306	230074	230054	0.4
25-2D C25.08.2	53	56	127	25.0	25	SOMT08T306	230074	230054	0.4
SO25.5-2D C32.08.2	54	60	134	25.5	32	SOMT08T306	230074	230054	0.6
26-2D C32.08.2	55	60	135	26.0	32	SOMT08T306	230074	230054	0.6
SO26.5-2D C32.09.2	56	60	136	26.5	32	SOMT09T308	230084	230057	0.6
27-2D C32.09.2	57	60	137	27.0	32	SOMT09T308	230084	230057	0.6
27.5-2D C32.09.2	58	60	138	27.5	32	SOMT09T308	230084	230057	0.6
28-2D C32.09.2	59	60	139	28.0	32	SOMT09T308	230084	230057	0.6
28.5-2D C32.09.2	60	60	140	28.5	32	SOMT09T308	230084	230057	0.6
29-2D C32.09.2	62	60	143	29.0	32	SOMT09T308	230084	230057	0.7
29.5-2D C32.09.2	63	60	144	29.5	32	SOMT09T308	230084	230057	0.7
30-2D C32.09.2	64	60	148	30.0	32	SOMT09T308	230084	230057	0.7
30.5-2D C32.09.2	65	60	149	30.5	32	SOMT09T308	230084	230057	0.7
31-2D C32.09.2	66	60	150	31.0	32	SOMT09T308	230084	230057	0.7
31.5-2D C32.09.2	67	60	151	31.5	32	SOMT09T308	230084	230057	0.7
SO32-2D C32.11.2	68	60	152	32.0	32	SOMT11T308	230084	230057	0.8
32.5-2D C32.11.2	69	60	153	32.5	32	SOMT11T308	230084	230057	0.8
33-2D C32.11.2	70	60	154	33.0	32	SOMT11T308	230084	230057	0.8
33.5-2D C32.11.2	71	60	155	33.5	32	SOMT11T308	230084	230057	0.8
34-2D C32.11.2	72	60	159	34.0	32	SOMT11T308	230084	230057	0.8
34.5-2D C32.11.2	73	60	157	34.5	32	SOMT11T308	230084	230057	0.8
35-2D C32.11.2	74	60	158	35.0	32	SOMT11T308	230084	230057	0.8
35.5-2D C32.11.2	75	60	159	35.5	32	SOMT11T308	230084	230057	0.8
36-2D C32.11.2	76	60	160	36.0	32	SOMT11T308	230084	230057	0.9
36.5-2D C32.11.2	77	60	161	36.5	32	SOMT11T308	230084	230057	0.9
SO37-2D C32.13.2	79	60	169	37.0	32	SOMT130408	230092	230057	0.9
37.5-2D C32.13.2	80	60	170	37.5	32	SOMT130408	230092	230057	0.9
38-2D C32.13.2	81	60	171	38.0	32	SOMT130408	230092	230057	0.9
38.5-2D C32.13.2	82	60	172	38.5	32	SOMT130408	230092	230057	0.9
39-2D C32.13.2	83	60	173	39.0	32	SOMT130408	230092	230057	1.0
39.5-2D C32.13.2	84	60	174	39.5	32	SOMT130408	230092	230057	1.0
SO40-2D C40.13.2	85	70	185	40.0	40	SOMT130408	230092	230057	1.3
41-2D C40.13.2	87	70	187	41.0	40	SOMT130408	230092	230057	1.3
42-2D C40.13.2	89	70	189	42.0	40	SOMT130408	230092	230057	1.4
43-2D C40.13.2	91	70	191	43.0	40	SOMT130408	230092	230057	1.5
SO44-2D C40.15.2	93	70	193	44.0	40	SOMT150510	230210	230058	1.6
45-2D C40.15.2	95	70	195	45.0	40	SOMT150510	230210	230058	1.7
46-2D C40.15.2	97	70	197	46.0	40	SOMT150510	230210	230058	1.7
47-2D C40.15.2	99	70	199	47.0	40	SOMT150510	230210	230058	1.8
48-2D C40.15.2	101	70	201	48.0	40	SOMT150510	230210	230058	1.8
49-2D C40.15.2	103	70	203	49.0	40	SOMT150510	230210	230058	1.9
50-2D C40.15.2	105	70	205	50.0	40	SOMT150510	230210	230058	1.9

Model	L1	L2	L	D	d	Inserts	Screw	Wrench	Weight
SO10-3D C20.04.2	33	44	92	10	20	SOMT040204	230200	230052	0.2
10.3-3D C20.04.2	34	44	93	10.3	20	SOMT040204	230200	230052	0.2
10.5-3D C20.04.2	35	44	94	10.5	20	SOMT040204	230200	230052	0.2
11-3D C20.04.2	36	44	95	11.0	20	SOMT040204	230200	230052	0.2
11.5-3D C20.04.2	38	44	97	11.5	20	SOMT040204	230200	230052	0.2
12-3D C20.04.2	39	44	98	12.0	20	SOMT040204	230200	230052	0.2
12.5-3D C20.04.2	41	44	100	12.5	20	SOMT040204	230200	230052	0.2
SO13-3D C20.05.2	42	44	101	13.0	20	SOMT050204	230201	230052	0.2
13.5-3D C20.05.2	44	44	103	13.5	20	SOMT050204	230201	230052	0.2
14-3D C20.05.2	45	44	104	14.0	20	SOMT050204	230201	230052	0.2
14.5-3D C20.05.2	47	44	106	14.5	20	SOMT050204	230201	230052	0.2
15-3D C20.05.2	48	44	107	15.0	20	SOMT050204	230201	230052	0.2
15.5-3D C20.05.2	50	44	109	15.5	20	SOMT050204	230201	230052	0.2
16-3D C20.05.2	51	44	110	16.0	20	SOMT050204	230201	230052	0.2
SO16.5-3D C20.06.2	53	44	112	16.5	20	SOMT060204	230070	230053	0.2
17-3D C20.06.2	54	44	113	17.0	20	SOMT060204	230070	230053	0.2
SO17.5-3D C25.06.2	56	56	127	17.5	25	SOMT070306	230070	230053	0.3
18-3D C25.06.2	57	56	128	18.0	25	SOMT070306	230070	230053	0.3
18.5-3D C25.06.2	59	56	130	18.5	25	SOMT070306	230070	230053	0.3
19-3D C25.06.2	60	56	131	19.0	25	SOMT070306	230070	230053	0.3
SO19.5-3D C25.07.2	62	56	133	19.5	25	SOMT070306	230070	230053	0.3
20-3D C25.07.2	63	56	134	20.0	25	SOMT070306	230070	230053	0.3
20.5-3D C25.07.2	65	56	136	20.5	25	SOMT070306	230070	230053	0.3
21-3D C25.07.2	66	56	137	21.0	25	SOMT070306	230070	230053	0.4
21.5-3D C25.07.2	68	56	139	21.5	25	SOMT070306	230070	230053	0.4
22-3D C25.07.2	69	56	140	22.0	25	SOMT070306	230070	230053	0.4
SO22.5-3D C25.08.2	71	56	142	22.5	25	SOMT08T306	230074	230054	0.4
23-3D C25.08.2	72	56	146	23.0	25	SOMT08T306	230074	2300	





GCMT  
GPMT

Cutting Environment ● Stable Cutting ● General Cutting ✖ Unstable Cutting

Application	Product Image	Dimensioning	Specification	Dimension (mm)				Matching Toolholder	PCD1 CBN1 CBN2 PM30 NO21 PMK32 PMS35 PMS40 PMS30 PMS15
				rE	A	B	T		
Drilling Process		GCMT 95°  GPMT 60° 	GCMT 040204-M55	0.4	5.0	4.7	2.38		●●●●●●●●
			GPMT 060204-M55	0.4	5.56	-	2.38		●●●●●●●●
			070204-M55	0.4	6.35	-	2.38		●●●●●●●●
			090304-M55	0.4	7.94	-	3.18		●●●●●●●●
			11T308-M55	0.8	9.525	-	3.97		●●●●●●●●
			140408-M55	0.8	12.7	-	4.76		●●●●●●●●

880

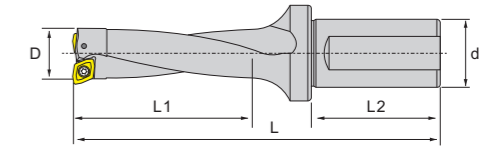
Cutting Environment ● Stable Cutting ● General Cutting ✖ Unstable Cutting

Application	Product Image	Dimensioning	Specification	Dimension (mm)							Matching Toolholder	PCD1 CBN1 CBN2 PM30 NO21 PMK32 PMS35 PMS40 PMS30 PMS15			
				rE	A	B	T	L	a						
Drilling Process			880. 010203H-C-M56	0.3	4.80	-	2.2	-	-	-		●●●●●●●●			
			020204H-C-M56	0.4	4.90	-	2.4	-	-	-		●●●●●●●●			
			030305H-C-M56	0.5	5.70	-	2.6	-	-	-		●●●●●●●●			
			040305H-C-M56	0.5	6.80	-	2.8	-	-	-		●●●●●●●●			
			050305H-C-M56	0.5	8.40	-	3.0	-	-	-		●●●●●●●●			
			060406H-C-M56	0.6	10.20	-	3.5	-	-	-		●●●●●●●●			
			070406H-C-M56	0.6	12.35	-	4.0	-	-	-		●●●●●●●●			
			080508H-C-M56	0.8	14.85	-	4.5	-	-	-		●●●●●●●●			
			090608H-C-M56	0.8	17.90	-	5.5	-	-	-		●●●●●●●●			
			Drilling Process			880. 020204H-C-T24	0.4	4.90	-	2.4	-	-	-		●●●●●●●●
030305H-C-T24	0.5	5.70				-	2.6	-	-	-		●●●●●●●●			
040305H-C-T24	0.5	6.80				-	2.8	-	-	-		●●●●●●●●			
050305H-C-T24	0.5	8.40				-	3.0	-	-	-		●●●●●●●●			
060406H-C-T24	0.6	10.20				-	3.5	-	-	-		●●●●●●●●			
070406H-C-T24	0.6	12.35				-	4.0	-	-	-		●●●●●●●●			
080508H-C-T24	0.8	14.85				-	4.5	-	-	-		●●●●●●●●			
090608H-C-T24	0.8	17.90				-	5.5	-	-	-		●●●●●●●●			
Drilling Process						880. 010203H-C-M57	0.3	4.80	-	2.2	-	-	-		●●●●●●●●
						020204H-C-M57	0.4	4.90	-	2.4	-	-	-		●●●●●●●●
			030305H-C-M57	0.5	5.70	-	2.6	-	-	-		●●●●●●●●			
			040305H-C-M57	0.5	6.80	-	2.8	-	-	-		●●●●●●●●			
			050305H-C-M57	0.5	8.40	-	3.0	-	-	-		●●●●●●●●			
			060406H-C-M57	0.6	10.20	-	3.5	-	-	-		●●●●●●●●			
			070406H-C-M57	0.6	12.35	-	4.0	-	-	-		●●●●●●●●			
			080508H-C-M57	0.8	14.85	-	4.5	-	-	-		●●●●●●●●			
			090608H-C-M57	0.8	17.90	-	5.5	-	-	-		●●●●●●●●			

880 series quick drill stock please contact customer service!

# 880/GP Type Fast Drilling Bit

TAF Discard Quick Drill



Model No	Insert	parts	(d) interface	D1	D × 2times		D × 3times		D × 4times						
					Model	L1	Model	L1	Model	L1					
TAF12-	GCMT 040204-U..	230066 230052	(20) PT 1/8	12.0	2D.C20	29		3D.C20	41		4D.C20	55			
TAF12.5-				12.5	2D.C20	29		3D.C20	41		4D.C20	55			
TAF13-				13.0	2D.C20	31		3D.C20	44		4D.C20	60			
TAF13.5-				13.5	2D.C20	31		3D.C20	44		4D.C20	60			
TAF14-				14.0	2D.C20	33		3D.C20	47		4D.C20	60			
TAF14.5-				14.5	2D.C20	33		3D.C20	47		4D.C20	60			
TAF15-				15.0	2D.C20	35		3D.C20	50		4D.C20	70			
TAF15.5-				15.5	2D.C20	35		3D.C20	50		4D.C20	70			
TAF16-				GPMT 060204-U..			16.0	2D.C25	38		3D.C25	54		4D.C25	75
TAF16.5-							16.5	2D.C25	38		3D.C25	54		4D.C25	75
TAF17-	17.0	2D.C25	41					3D.C25	58		4D.C25	75			
TAF17.5-	17.5	2D.C25	41					3D.C25	58		4D.C25	75			
TAF18-	18.0	2D.C25	43					3D.C25	61		4D.C25	79			
TAF18.5-	18.5	2D.C25	43					3D.C25	61		4D.C25	79			
TAF19-	19.0	2D.C25	46					3D.C25	65		4D.C25	84			
TAF19.5-	19.5	2D.C25	46					3D.C25	65		4D.C25	84			
TAF20-	GPMT 070204-U..	230074 230054	(25) PT 1/8				20.0	2D.C25	48		3D.C25	68		4D.C25	88
TAF20.5-							20.5	2D.C25	48		3D.C25	68		4D.C25	88
TAF21-				21.0	2D.C25	50		3D.C25	71		4D.C25	92			
TAF21.5-				21.5	2D.C25	50		3D.C25	71		4D.C25	92			
TAF22-				22.0	2D.C25	53		3D.C25	75		4D.C25	97			
TAF22.5-				22.5	2D.C25	53		3D.C25	75		4D.C25	97			
TAF23-				23.0	2D.C25	55		3D.C25	78		4D.C25	101			
TAF23.5-				23.5	2D.C25	55		3D.C25	78		4D.C25	101			
TAF24-				24.0	2D.C25	58		3D.C25	82		4D.C25	106			
TAF24.5-				24.5	2D.C25	58		3D.C25	82		4D.C25	106			
TAF25-	GPMT 090304-U..	230078 230054		25.0	2D.C32	60		3D.C32	85		4D.C32	110			
TAF25.5-				25.5	2D.C32	60		3D.C32	85		4D.C32	110			
TAF26-				26.0	2D.C32	62		3D.C32	88		4D.C32	114			
TAF26.5-				26.5	2D.C32	62		3D.C32	88		4D.C32	114			
TAF27-				GPMT 11T308-U..	230091 230057	(32) PT 1/8	27.0	2D.C32	65		3D.C32	92		4D.C32	119
TAF27.5-							27.5	2D.C32	65		3D.C32	92		4D.C32	119
TAF28-							28.0	2D.C32	67		3D.C32	95		4D.C32	123
TAF28.5-							28.5	2D.C32	67		3D.C32	95		4D.C32	123
TAF29-							29.0	2D.C32	70		3D.C32	99		4D.C32	128
TAF29.5-							29.5	2D.C32	70		3D.C32	99		4D.C32	128
TAF30-	30.0	2D.C40	82					3D.C40	102		4D.C40	132			
TAF31-	31.0	2D.C40	74					3D.C40	105		4D.C40	136			
TAF32-	32.0	2D.C40	77					3D.C40	109		4D.C40	141			
TAF33-	33.0	2D.C40	79					3D.C40	112		4D.C40	145			
TAF34-	34.0	2D.C40	82		3D.C40	116		4D.C40	150						
TAF35-	GPMT 140408-U..	230244 230058	(40) PT 1/4	35.0	2D.C40	84		3D.C40	119		4D.C40	150			
TAF36-				36.0	2D.C40	86		3D.C40	122		4D.C40	154			
TAF37-				37.0	2D.C40	89		3D.C40	126		4D.C40	158			
TAF38-				38.0	2D.C40	91		3D.C40	129		4D.C40	162			
TAF39-				39.0	2D.C40	94		3D.C40	133		4D.C40	166			
TAF40-				40.0	2D.C40	96		3D.C40	136		4D.C40	170			
TAF41-				41.0	2D.C40	98		3D.C40	139		4D.C40	174			
TAF42-				42.0	2D.C40	101		3D.C40	143		4D.C40	178			
TAF43-				43.0	2D.C40	103		3D.C40	146		4D.C40	182			
TAF44-				44.0	2D.C40	106		3D.C40	150		4D.C40	186			
TAF45-	45.0	2D.C40	108		3D.C40	153		4D.C40	190						
TAF46-	46.0	2D.C40	110		3D.C40	156		4D.C40	194						
TAF47-	47.0	2D.C40	113		3D.C40	160		4D.C40	198						
TAF48-	48.0	2D.C40	115		3D.C40	163		4D.C40	202						
TAF49-	49.0	2D.C40	118		3D.C40	167		4D.C40	206						
TAF50-	50.0	2D.C40	120		3D.C40	170		4D.C40	210						
TAF51-	51.0	2D.C40	122		3D.C40	173		4D.C40	214						
TAF52-	52.0	2D.C40	125		3D.C40	177		4D.C40	218						
TAF53-	53.0	2D.C40	127		3D.C40	180		4D.C40	222						
TAF54-	54.0	2D.C40	128		3D.C40	182		4D.C40	226						
TAF55-	55.0	2D.C40	130		3D.C40	185		4D.C40	230						
TAF56-	56.0	2D.C40	132		3D.C40	188		4D.C40	234						

Shovel drilling Deep hole processing

3D Straight Groove Side Fixing Carbide Toolholder



Model	L	L1	L2	D	D1	screw	Wrench
SDT11-11.9-3D.C20	112	36	48	11.0-11.9	20	230245	230052
SDT12-12.9-3D.C20	116	39	48	12.0-12.9	20	230201	230052
SDT13-13.9-3D.C20	118	42	48	13.0-13.9	20	230201	230052
SDT14-14.9-3D.C20	122	45	48	14.0-14.9	20	230201	230052
SDT15-15.9-3D.C20	126	48	48	15.0-15.9	20	230201	230052
SDT16-16.9-3D.C20	130	51	48	16.0-16.9	20	230074	230054
SDT17-17.9-3D.C20	134	54	48	17.0-17.9	20	230075	230054
SDT18-19.9-3D.C25	150	57	56	18.0-19.9	25	230246	230056
SDT20-21.9-3D.C25	156	66	56	20.0-21.9	25	230246	230056
SDT22-23.9-3D.C25	162	72	56	22.0-23.9	25	230247	230056
SDT24-25.9-3D.C25	168	78	56	24.0-25.9	25	230247	230056
SDT26-28.9-3D.C32	186	87	60	26.0-28.9	32	230092	230057
SDT29-31.9-3D.C32	195	96	60	29.0-31.9	32	230092	230057
SDT32-35.3D.C32	205	105	60	32.0-35.0	32	230092	230057

5D Straight Groove Side Fixing Carbide Toolholder



Model	L	L1	L2	D	D1	screw	Wrench
SDT11-11.9-5D.C20	136	60	48	11.0-11.9	20	230245	230052
SDT12-12.9-5D.C20	142	65	48	12.0-12.9	20	230201	230052
SDT13-13.9-5D.C20	146	70	48	13.0-13.9	20	230201	230052
SDT14-14.9-5D.C20	152	75	48	14.0-14.9	20	230201	230052
SDT15-15.9-5D.C20	158	80	48	15.0-15.9	20	230201	230052
SDT16-16.9-5D.C20	164	85	48	16.0-16.9	20	230074	230054
SDT17-17.9-5D.C20	170	90	48	17.0-17.9	20	230075	230054
SDT19-19.9-5D.C25	190	100	56	18.0-19.9	25	230246	230056
SDT20-21.9-5D.C25	200	110	56	20.0-21.9	25	230246	230056
SDT22-23.9-5D.C25	210	120	56	22.0-23.9	25	230247	230056
SDT24-25.9-5D.C25	220	130	56	24.0-25.9	25	230247	230056
SDT26-28.9-5D.C32	245	145	60	26.0-28.9	32	230092	230057
SDT29-31.9-5D.C32	259	160	60	29.0-31.9	32	230092	230057
SDT32-35.5D.C32	275	175	60	32.0-35.0	32	230092	230057

7D Straight Groove Side Fixing Carbide Toolholder



Model	L	L1	L2	D	D1	screw	Wrench
SDT11-11.9-7D.C20	160	84	48	11.0-11.9	20	230245	230052
SDT12-12.9-7D.C20	168	91	48	12.0-12.9	20	230201	230052
SDT13-13.9-7D.C20	174	98	48	13.0-13.9	20	230201	230052
SDT14-14.9-7D.C20	182	105	48	14.0-14.9	20	230201	230052
SDT15-15.9-7D.C20	190	112	48	15.0-15.9	20	230201	230052
SDT16-16.9-7D.C20	198	119	48	16.0-16.9	20	230074	230054
SDT17-17.9-7D.C20	206	126	48	17.0-17.9	20	230075	230054
SDT18-19.9-7D.C25	230	140	56	18.0-19.9	25	230246	230056
SDT20-21.9-7D.C25	244	154	56	20.0-21.9	25	230246	230056
SDT22-23.9-7D.C25	258	168	56	22.0-23.9	25	230247	230056
SDT24-25.9-7D.C25	272	182	56	24.0-25.9	25	230247	230056
SDT26-28.9-7D.C32	303	203	60	26.0-28.9	32	230092	230057
SDT29-31.9-7D.C32	323	224	60	29.0-31.9	32	230092	230057
SDT32-35.7D.C32	345	245	60	32.0-35.0	32	230092	230057

3D Steel Morse Toolholder



Model	L	L1	L2	D	D1	screw	Wrench
SDS9.5-11-3D.MT2	181	36	80	9.5-11.0	MT2	230201	230052
SDS11.1-12.9-3D.MT2	187	42	80	11.1-12.9	MT2	230201	230052
SDS13-15-3D.MT2	193	48	80	13.0-15.0	MT2	230074	230054
SDS15.1-17.5-3D.MT2	200	55	80	15.1-17.5	MT2	230074	230054
SDS17.6-19.5-3D.MT3	226	61	99	17.6-19.5	MT3	230078	230056
SDS19.6-21.5-3D.MT3	232	67	99	19.6-21.5	MT3	230078	230056
SDS21.6-24.4-3D.MT3	241	76	99	21.6-24.4	MT3	230078	230056
SDS24.5-26.5-3D.MT4	284	82	124	24.5-26.5	MT4	230086	230057
SDS26.6-28.5-3D.MT4	290	88	124	26.6-28.5	MT4	230086	230057
SDS28.6-30.5-3D.MT4	296	94	124	28.6-30.5	MT4	230086	230057
SDS30.6-32.5-3D.MT4	302	100	124	30.6-32.5	MT4	230086	230057
SDS32.6-34.9-3D.MT4	309	107	124	32.6-34.9	MT4	230086	230057
SDS35-37.9-3D.MT5	360	111	156	35.0-37.9	MT5	230086	230057
SDS38-40.9-3D.MT5	369	125	156	38.0-40.9	MT5	230086	230057
SDS41-43.9-3D.MT5	378	134	156	41.0-43.9	MT5	230086	230057
SDS44-47.9-3D.MT5	390	146	156	44.0-47.9	MT5	230086	230057
SDS48-51.9-3D.MT5	402	158	156	48.0-51.9	MT5	230248	230058
SDS52-55.9-3D.MT5	414	170	156	52.0-55.9	MT5	230248	230058
SDS56-59.9-3D.MT5	426	182	156	56.0-59.9	MT5	230248	230058
SDS60-65-3D.MT5	442	198	156	60.0-65.0	MT5	230248	230058

5D Steel Morse Toolholder



Model	L	L1	L2	D	D1	screw	Wrench
SDS9.5-11-5D.MT2	203	58	80	9.5-11.0	MT2	230201	230052
SDS11-12.9-5D.MT2	213	68	80	11.1-12.9	MT2	230201	230052
SDS13-15-5D.MT2	223	78	80	13.0-15.0	MT2	230074	230054
SDS15.1-17.5-5D.MT2	235	90	80	15.1-17.5	MT2	230074	230054
SDS17.6-19.5-5D.MT3	265	100	99	17.6-19.5	MT3	230078	230056
SDS19.6-21.5-5D.MT3	275	110	99	19.6-21.5	MT3	230078	230056
SDS21.6-24.4-5D.MT3	290	125	99	21.6-24.4	MT3	230078	230056
SDS24.5-26.5-5D.MT4	337	135	124	24.5-26.5	MT4	230086	230057
SDS26.6-28.5-5D.MT4	347	145	124	26.6-28.5	MT4	230086	230057
SDS28.6-30.5-5D.MT4	357	155	124	28.6-30.5	MT4	230086	230057
SDS30.6-32.5-5D.MT4	367	165	124	30.6-32.5	MT4	230086	230057
SDS32.6-34.9-5D.MT4	380	178	124	32.6-34.9	MT4	230086	230057
SDS35-37.9-5D.MT5	436	192	156	35.0-37.9	MT5	230086	230057
SDS38-40.9-5D.MT5	452	208	156	38.0-40.9	MT5	230086	230057
SDS41-43.9-5D.MT5	566	222	156	41.0-43.9	MT5	230086	230057
SDS44-47.9-5D.MT5	486	242	156	44.0-47.9	MT5	230086	230057
SDS48-51.9-5D.MT5	506	262	156	48.0-51.9	MT5	230248	230058
SDS52-55.9-5D.MT5	526	282	156	52.0-55.9	MT5	230248	230058
SDS56-59.9-5D.MT5	546	302	156	56.0-59.9	MT5	230248	230058
SDS60-65-5D.MT5	572	328	156	60.0-65.0	MT5	230248	230058

7D Steel Morse Toolholder



Model	L	L1	L2	D	D1	screw	Wrench
SDS9.5-11-7D.MT2	225	80	80	9.5-11.0	MT2	230201	230052
SDS11-12.9-7D.MT2	238	93	80	11.1-12.9	MT2	230201	230052
SDS13-15-7D.MT2	253	108	80	13.0-15.0	MT2	230074	230054
SDS15.1-17.5-7D.MT2	270	125	80	15.1-17.5	MT2	230074	230054
SDS17.6-19.5-7D.MT3	304	139	99	17.6-19.5	MT3	230078	230056
SDS19.6-21.5-7D.MT3	318	153	99	19.6-21.5	MT3	230078	230056
SDS21.6-24.4-7D.MT3	338	173	99	21.6-24.4	MT3	230078	230056
SDS24.5-26.5-7D.MT4	390	188	124	24.5-26.5	MT4	230086	230057
SDS26.6-28.5-7D.MT4	404	202	124	26.6-28.5	MT4	230086	230057
SDS28.6-30.5-7D.MT4	418	216	124	28.6-30.5	MT4	230086	230057
SDS30.6-32.5-7D.MT4	432	230	124	30.6-32.5	MT4	230086	230057
SDS32.6-34.9-7D.MT4	449	247	124	32.6-34.9	MT4	230086	230057
SDS35-37.9-7D.MT5	512	268	156	35.0-37.9	MT5	230086	230057
SDS38-40.9-7D.MT5	533	289	156	38.0-40.9	MT5	230086	230057
SDS41-43.9-7D.MT5	554	310	156	41.0-43.9	MT5	230086	230057
SDS44-47.9-7D.MT5	582	338	156	44.0-47.9	MT5	230086	230057
SDS48-51.9-7D.MT5	610	366	156	48.0-51.9	MT5	230248	230058
SDS52-55.9-7D.MT5	638	394	156	52.0-55.9	MT5	230248	230058
SDS56-59.9-7D.MT5	666	422	156	56.0-59.9	MT5	230248	230058
SDS60-65-7D.MT5	702	458	156	60.0-65.0	MT5	230248	230058

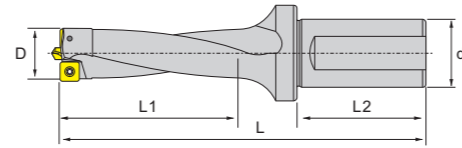
3D Steel Side Fixing Toolholder



Model	L	L1	L2	D	D1	screw	Wrench
SDS9.5-11-3D.C20	106	36	48	9.5-11.0	20	230201	230052
SDS11-12.9-3D.C20	112	42	48	11.1-12.9	20	230201	230052
SDS13-15-3D.C20	118	48	48	13.0-15.0	20	230074	230054
SDS15.1-17.5-3D.C20	125	55	48	15.1-17.5	20	230074	230054
SDS17.6-19.5-3D.C25	140	61	56	17.6-19.5	25	230078	230056
SDS19.6-21.5-3D.C25	146	67	56	19.6-21.5	25	230078	230056
SDS21.6-24.4-3D.C25	155	76	56	21.6-24.4	25	230078	230056
SDS24.5-26.5-3D.C32	170	82	60	24.5-26.5	32	230086	230057
SDS26.6-28.5-3D.C32	176	88	60	26.6-28.5	32	230086	230057
SDS28.6-30.5-3D.C32	182	94	60	28.6-30.5	32	230086	230057
SDS30.6-32.5-3D.C32	188	100	60	30.6-32.5	32	230086	230057
SDS32.6-34.9-3D.C32	195	107	60	32.6-34.9	32	230086	230057
SDS35-37.9-3D.C32	206	116	60	35.0-37.9	32	230086	230057
SDS38-40.9-3D.C32	215	125	60	38.0-40.9	32	230086	230057
SDS41-43.9-3D.C40	232	134	65	41.0-43.9	40	230086	230057
SDS44-47.9-3D.C40	244	146	65	44.0-47.			

# Centering Drilling bit VMD Big Drilling bit

## SP Type Centering Fast Drilling Bit



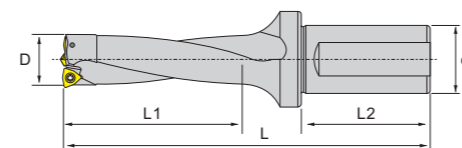
L1=6xD Centering Fast Drill - SP Type

L1=8xD Centering Fast Drill - SP Type

Model	L1	L2	L	D	d	Inserts	Screw	Wrench	Drill Bit
SP 18-6D.C25.05.6	112	56	198	18.0		SPMG 0502..	230066	230052	PLD-0620TIN
18.5-6D.C25.05.6	115	56	201	18.5					
19-6D.C25.05.6	118	56	204	19.0					
19.5-6D.C25.05.6	121	56	207	19.5					
20-6D.C25.05.6	124	56	210	20.0					
20.5-6D.C25.05.6	127	56	213	20.5					
21-6D.C25.05.6	130	56	216	21.0					
21.5-6D.C25.05.6	133	56	219	21.5					
22-6D.C25.05.6	136	56	222	22.0					
22.5-6D.C25.05.6	139	56	225	22.5					
SP 25-6D.C32.07.8	154	60	240	25.0		SPMG 0602..	230070	230052	PLD-0620TIN
25.5-6D.C32.07.8	157	60	243	25.5					
26-6D.C32.07.8	160	60	246	26.0					
26.5-6D.C32.07.8	163	60	249	26.5					
27-6D.C32.07.8	166	60	252	27.0					
27.5-6D.C32.07.8	169	60	255	27.5					
28-6D.C32.07.8	172	60	258	28.0					
28.5-6D.C32.07.8	175	60	261	28.5					
29-6D.C32.07.8	178	60	264	29.0					
29.5-6D.C32.07.8	181	60	267	29.5					
SP 30-6D.C32.07.8	184	60	270	30.0		SPMG 07T3..	230074	230054	PLD-0825TIN
30.5-6D.C32.07.8	187	60	273	30.5					
31-6D.C32.07.8	190	60	276	31.0					
31.5-6D.C32.07.8	193	60	279	31.5					
32-6D.C32.07.8	196	60	282	32.0					
32.5-6D.C32.07.8	199	60	285	32.5					
33-6D.C32.07.8	202	60	288	33.0					
33.5-6D.C32.07.8	205	60	291	33.5					
34-6D.C32.07.8	208	60	294	34.0					
34.5-6D.C32.07.8	211	60	297	34.5					

Model	L1	L2	L	D	d	Inserts	Screw	Wrench	Drill Bit
SP 18-8D.C25.05.6	149	56	235	18.0		SPMG 0502..	230066	230052	PLD-0620TIN
18.5-8D.C25.05.6	153	56	239	18.5					
19-8D.C25.05.6	157	56	243	19.0					
19.5-8D.C25.05.6	161	56	247	19.5					
20-8D.C25.05.6	165	56	251	20.0					
20.5-8D.C25.05.6	169	56	255	20.5					
21-8D.C25.05.6	173	56	259	21.0					
21.5-8D.C25.05.6	177	56	263	21.5					
22-8D.C25.05.6	181	56	267	22.0					
22.5-8D.C25.05.6	185	56	271	22.5					
SP 25-8D.C32.07.8	209	60	304	25.0		SPMG 0602..	230070	230052	PLD-0620TIN
25.5-8D.C32.07.8	213	60	308	25.5					
26-8D.C32.07.8	217	60	312	26.0					
26.5-8D.C32.07.8	221	60	316	26.5					
27-8D.C32.07.8	225	60	320	27.0					
28-8D.C32.07.8	229	60	324	28.0					
28.5-8D.C32.07.8	233	60	328	28.5					
29-8D.C32.07.8	237	60	332	29.0					
29.5-8D.C32.07.8	241	60	336	29.5					
SP 30-8D.C32.07.8	245	60	340	30.0					
30.5-8D.C32.07.8	249	60	344	30.5					
31-8D.C32.07.8	253	60	348	31.0					
31.5-8D.C32.07.8	257	60	352	31.5					
32-8D.C32.07.8	261	60	356	32.0					
32.5-8D.C32.07.8	265	60	360	32.5					
33-8D.C32.07.8	269	60	364	33.0					
33.5-8D.C32.07.8	273	60	368	33.5					
34-8D.C32.07.8	277	60	372	34.0					
34.5-8D.C32.07.8	281	60	376	34.5					

## WC Type Centering Fast Drilling Bit



L1=5xD Centering Fast Drill - WC Type

L1=6.5xD Centering Fast Drill - WC Type

Model	L1	L2	L	D	d	Inserts	Screw	Wrench	Drill Bit
WC 25-5D.C32.03.6	150	60	240	25.0		WCMX03..	230073	230054	PLD-0620TIN
WC 26-5D.C32.04.6	150	60	240	26.0					
WC 27-5D.C32.04.6	150	60	240	27.0					
WC 28-5D.C32.04.6	150	60	240	28.0					
WC 29-5D.C32.04.6	150	60	240	29.0					
WC 30-5D.C32.04.6	150	60	240	30.0					
WC 31-5D.C32.04.6	175	60	265	31.0					
WC 32-5D.C32.05.8	175	60	265	32.0					
WC 33-5D.C32.05.8	175	60	265	33.0					
WC 34-5D.C32.05.8	175	60	265	34.0					
WC 35-5D.C32.05.8	175	60	265	35.0		WCMX05..	230077	230056	PLD-0825TIN
WC 36-5D.C32.05.8	200	60	290	36.0					
WC 37-5D.C32.05.8	200	60	290	37.0					
WC 38-5D.C32.05.8	200	60	290	38.0					
WC 39-5D.C32.05.8	200	60	290	39.0					
WC 40-5D.C32.05.8	200	60	290	40.0					

Model	L1	L2	L	D	d	Inserts	Screw	Wrench	Drill Bit
WC 25-6.5D.C32.03.6	185	60	275	25.0		WCMX03..	230073	230054	PLD-0620TIN
WC 26-6.5D.C32.04.6	185	60	275	26.0					
WC 27-6.5D.C32.04.6	185	60	275	27.0					
WC 28-6.5D.C32.04.6	185	60	275	28.0					
WC 29-6.5D.C32.04.6	185	60	275	29.0					
WC 30-6.5D.C32.04.6	185	60	275	30.0					
WC 31-6.5D.C32.04.6	218	60	308	31.0					
WC 32-6.5D.C32.05.8	218	60	308	32.0					
WC 33-6.5D.C32.05.8	218	60	308	33.0					
WC 34-6.5D.C32.05.8	218	60	308	34.0					
WC 35-6.5D.C32.05.8	218	60	308	35.0		WCMX05..	230077	230056	PLD-0825TIN
WC 36-6.5D.C32.05.8	250	60	340	36.0					
WC 37-6.5D.C32.05.8	250	60	340	37.0					
WC 38-6.5D.C32.05.8	250	60	340	38.0					
WC 39-6.5D.C32.05.8	250	60	340	39.0					
WC 40-6.5D.C32.05.8	250	60	340	40.0					

L1=8xD Centering Fast Drill - WC Type

Model	L1	L2	L	D	d	Inserts	Screw	Wrench	Drill Bit
WC 25-8D.C32.03.6	220	60	310	25.0		WCMX03..	230073	230054	PLD-0620TIN
WC 26-8D.C32.04.6	220	60	310	26.0					
WC 27-8D.C32.04.6	220	60	310	27.0					
WC 28-8D.C32.04.6	220	60	310	28.0					
WC 29-8D.C32.04.6	220	60	310	29.0					
WC 30-8D.C32.04.6	220	60	310	30.0					
WC 31-8D.C32.04.6	260	60	350	31.0					
WC 32-8D.C32.05.8	260	60	350	32.0					
WC 33-8D.C32.05.8	260	60	350	33.0					
WC 34-8D.C32.05.8	260	60	350	34.0					
WC 35-8D.C32.05.8	260	60	350	35.0		WCMX05..	230077	230056	PLD-0825TIN
WC 36-8D.C32.05.8	300	60	390	36.0					
WC 37-8D.C32.05.8	300	60	390	37.0					
WC 38-8D.C32.05.8	300	60	390	38.0					
WC 39-8D.C32.05.8	300	60	390	39.0					
WC 40-8D.C32.05.8	300	60	390	40.0					

Model	L1	L2	L	D	d	Inserts	Screw	Wrench	Drill Bit
WC 25-8.5D.C32.03.6	255	60	345	25.0		WCMX03..	230073	230054	PLD-0620TIN
WC 26-8.5D.C32.04.6	255	60	345	26.0					
WC 27-8.5D.C32.04.6	255	60	345	27.0					
WC 28-8.5D.C32.04.6	255	60	345	28.0					
WC 29-8.5D.C32.04.6	255	60	345	29.0					
WC 30-8.5D.C32.04.6	255	60	345	30.0					
WC 31-8.5D.C32.04.6	290	60	380	31.0					
WC 32-8.5D.C32.05.8	290	60	380	32.0					
WC 33-8.5D.C32.05.8	290	60	380	33.0					
WC 34-8.5D.C32.05.8	290	60	380	34.0					
WC 35-8.5D.C32.05.8	290	60	380	35.0		WCMX05..	230077	230056	PLD-0825TIN
WC 36-8.5D.C32.05.8	330	60	420	36.0					
WC 37-8.5D.C32.05.8	330	60	420	37.0					
WC 38-8.5D.C32.05.8	330	60	420	38.0					
WC 39-8.5D.C32.05.8	330	60	420	39.0					
WC 40-8.5D.C32.05.8	330	60	420	40.0					

## VMD Knife clip



Model	Inner knife	Outer knife	Insert	Number of blades	Screw	Wrench
45-50	VNC-045050N	VMC-045050T	WC.030204	2	230073	230054
50-55	VNC-050055N	VMC-050055T	WC.040204	2	230074	
55-60	VNC-055060N	VMC-055060T	WC.050308	2	230077	230056
60-65	VNC-060065N	VMC-060065T	WC.060308	2	230084	230057
65-70	VNC-065070N	VMC-065070T	WC.070308	2	230084	
70-75	VNC-070075N	VMC-070075T	WC.080408	2	230092	230057
75-80	VNC-075080N	VMC-075080T	WC.090408	2	230092	
80-85	VNC-080085N	VMC-080085T	WC.100408	2	230092	
85-90	VNC-085090N	VMC-085090T	WC.110408	2	230092	
90-95	VNC-090095N	VMC-090095T	WC.120408	2	230092	
95-100	VNC-095100N	VMC-095100T	WC.130408	2	230092	
100-105	VNC-100105N	VMC-100105T	WC.140408	2	230092	
105-110	VNC-105110N	VMC-105110T	WC.150408	2	230092	
110-115	VNC-110115N	VMC-110115T	WC.160408	2	230092	
115-120	VNC-115120N	VMC-115120T	WC.170408	2	230	



# High Efficiency Hole Processing of Drill Point and Drill Pipe

## New self-locking clamping method

Centering by cylindrical faces

The cutting head can be self-locked with toolholder while inserted due to its

Axial Drill force is transferred to toolholder by end faces

Drill torque is transferred to toolholder by stop faces

## No set-up time for changing cutting head

The cutting head can be changed in the machine tool, NO need to take the toolholder out from the spindle

## Toolholders with coolant

Coolant makes cutting head life much longer and also high pressure cooling liquid pushes chips to evacuate quickly

### Resharpener Service

Supply resharpener cutting head service for customer to cut cast

### Perfect Polished Toolholders

Toolholder Flutes Polished Let Chips Evacuate Easily

### Three Different Cutting Heads are Available

Standard, flat and self-centering cutting heads are available

### Interchangeability and Flexibility

Different cutting diameter heads can be fixed into one toolholder so as to reduce the number of toolholder, and cutting heads and toolholders are interchangeable totally

### How To Attach Cutting Heads

- Fix Drill holder on arbor for cutting, fix arbor on the machine of Se on tool presetter
- Remove dust using air blast
- Put a cutting head into Drill holder. (Use gloves to protect your hand from any danger)
- Remove dust using air blast
- Set the wrench properly
- Make sure the wrench fits with cutting head's slot for the wrench
- Turn the wrench in a clockwise direction slowly, then turn strongly while passing self-locked face until 111 cutting head won't move
- Complete

### How To Detach Cutting Heads

- Remove dust from cutting head using air blast
- Set the wrench properly
- Fit the wrench to cutting head slot
- Turn the wrench counter clockwise
- Once the self lock is lost, carefully turn the blade by hand
- Remove cutting head (use gloves to protect your hand from any danger)

### Indication of Cutting Head Wear

- Wear Limit: 0.2-0.3mm
- Power Restriction: P11 PX1.25 m, Increase 25% for worn-out cutting head
- Diameter Change:  $\phi > D + 0.15mm$ ,  $\phi < D - 0.3mm$
- Surface Finish Deterioration
- Vibration Noise Drastically Increases

### Application

Application Recommendation	Work Environment	Application Not Recommendation	Work Environment
Flat Face Recommended		Hole Expansion Not Recommended	
Overlapping reinforcement of laminated holes is available		Slanted Surface Not Recommended	
Surface hole reduces feed by half available		Half Cylindrical Not Recommended	
Pipe Material Recommended		Cored Hole Not Recommended	

### Usage Precautions

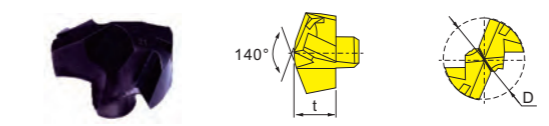
1) For Turning: Set Deviation Amount Under 0.02mm between the workpiece and the Drill

2) For Drilling: Do not use any arbor with a deformed attachment surface. Center of arbor deviation must be within 0.02mm

### Coolant

- It is recommended to use a machine tool with internal cooling
- In the case of internal cooling, it is recommended to drill holes not larger than 3D
- It is strictly prohibited to be used for dry cutting

## QD...S Standard Cutting Head



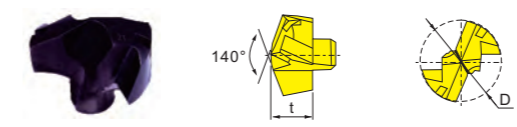
Order number	Dimensions(mm)		tool holders
	D	t	
QD080S	8.0		
QD081S	8.1		
QD082S	8.2		
QD083S	8.3		
QD084S	8.4		
QD085S	8.5		
QD086S	8.6		
QD087S	8.7		
QD088S	8.8		
QD089S	8.9		
QD090S	9.0		
QD091S	9.1		
QD092S	9.2		
QD093S	9.3		
QD094S	9.4		
QD095S	9.5		
QD096S	9.6		
QD097S	9.7		
QD098S	9.8		
QD099S	9.9		
QD100S	10.0		
QD101S	10.1		
QD102S	10.2		
QD103S	10.3		
QD104S	10.4		
QD105S	10.5		
QD106S	10.6		
QD107S	10.7		
QD108S	10.8		
QD109S	10.9		

Order number	Dimensions(mm)		tool holders
	D	t	
QD110S	11.0		
QD111S	11.1		
QD112S	11.2		
QD113S	11.3		
QD114S	11.4		
QD115S	11.5		
QD116S	11.6		
QD117S	11.7		
QD118S	11.8		
QD119S	11.9		
QD120S	12.0		
QD121S	12.1		
QD122S	12.2		
QD123S	12.3		
QD124S	12.4		
QD125S	12.5		
QD126S	12.6		
QD127S	12.7		
QD128S	12.8		
QD129S	12.9		
QD130S	13.0		
QD131S	13.1		
QD132S	13.2		
QD133S	13.3		
QD134S	13.4		
QD135S	13.5		
QD136S	13.6		
QD137S	13.7		
QD138S	13.8		
QD139S	13.9		

Order number	Dimensions(mm)		tool holders
	D	t	
QD140S	14.0		
QD141S	14.1		
QD142S	14.2		
QD143S	14.3		
QD144S	14.4		
QD145S	14.5		
QD146S	14.6		
QD147S	14.7		
QD148S	14.8		
QD149S	14.9		
QD150S	15.0		
QD151S	15.1		
QD152S	15.2		
QD153S	15.3		
QD154S	15.4		
QD155S	15.5		
QD156S	15.6		
QD157S	15.7		
QD158S	15.8		
QD159S	15.9		
QD160S	16.0		
QD161S	16.1		
QD162S	16.2		
QD163S	16.3		
QD164S	16.4		
QD165S	16.5		
QD166S	16.6		
QD167S	16.7		
QD168S	16.8		
QD169S	16.9		

Order number	Dimensions(mm)		tool holders
	D	t	
QD170S	17.0		
QD171S	17.1		
QD172S	17.2		
QD173S	17.3		
QD174S	17.4		
QD175S	17.5		
QD176S	17.6		
QD177S	17.7		
QD178S	17.8		
QD179S	17.9		
QD180S	18.0		
QD181S	18.1		
QD182S	18.2		
QD183S	18.3		
QD184S	18.4		
QD185S	18.5		
QD186S	18.6		
QD187S	18.7		
QD188S	18.8		
QD189S	18.9		
QD190S	19.0		
QD191S	19.1		
QD192S	19.2		
QD193S	19.3		
QD194S	19.4		
QD195S	19.5		
QD196S	19.6		
QD197S	19.7		
QD198S	19.8		
QD199S	19.9		

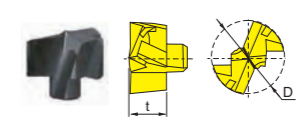
## QD...S Standard Cutting Head



Order number	Dimensions(mm)		tool holders
	D	t	
QD200S	20.0		
QD201S	20.1		
QD202S	20.2		
QD203S	20.3		
QD204S	20.4		
QD205S	20.5		
QD206S	20.6		
QD207S	20.7		
QD208S	20.8		
QD209S	20.9		
QD210S	21.0		
QD211S	21.1		
QD212S	21.2		
QD213S	21.3		
QD214S	21.4		
QD215S	21.5		
QD216S	21.6		
QD217S	21.7		
QD218S	21.8		
QD219S	21.9		
QD220S	22.0		
QD221S	22.1		
QD222S	22.2		
QD223S	22.3		
QD224S	22.4		
QD225S	22.5		
QD226S	22.6		
QD227S	22.7		
QD228S	22.8		
QD229S	22.9		

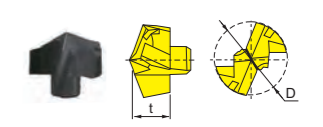
Order number	Dimensions(mm)		tool holders
	D	t	
QD230S	23.0		
QD231S	23.1		
QD232S	23.2		
QD233S	23.3		
QD234S	23.4		
QD235S	23.5		
QD236S	23.6		
QD237S	23.7		
QD238S	23.8		
QD239S	23.9		
QD240S	24.0		
QD241S	24.1		
QD242S	24.2		
QD243S	24.3		
QD244S	24.4		
QD245S	24.5		
QD246S	24.6		
QD247S	24.7		
QD248S	24.8		
QD249S	24.9		
QD250S	25.0		
QD251S	25.1		
QD252S	25.2		
QD253S	25.3		
QD254S	25.4		
QD255S	25.5		
QD256S	25.6		
QD257S	25.7		
QD258S	25.8		
QD259S	25.9		

## QD...F Flat Cutting Head



Order number	Dimensions(mm)		tool holders
	D	t	
QD080F	8.0	4.0	QD080-
QD085F	8.5	4.0	089-12-...
QD090F	9.0	4.2	QD090-
QD095F	9.5	4.2	099-12-...
QD100F	10.0	4.4	QD100-
QD105F	10.5	4.4	109-16-...
QD110F	11.0	4.5	QD110-
QD115F	11.5	4.5	119-16-...
QD120F	12.0	4.8	QD120-
QD125F	12.5	4.8	129-16-...
QD130F	13.0	5.1	QD130-
QD135F	13.5	5.1	139-16-...
QD140F	14.0	5.5	QD140-
QD145F	14.5	5.5	149-16-...
QD150F	15.0	5.9	QD150-
QD155F	15.5	5.9	159-20-...
QD160F	16.0	6.3	QD160-
QD165F	16.5	6.3	169-20-...
QD170F	17.0	6.6	QD170-
QD175F	17.5	6.6	179-20-...
QD180F	18.0	6.9	QD180-
QD185F	18.5	6.9	189-25-...
QD190F	19.0	7.2	QD190-
QD195F	19.5	7.2	199-25-...
QD200F	20.0	8.2	QD200-
QD205F	20.5	8.2	209-25-...
QD210F	21.0	8.6	QD210-
QD215F	21.5	8.6	219-25-...
QD220F	22.0	8.9	QD220-
QD225F	22.5	8.9	229-25-...
QD230F	23.0	9.3	QD230-
QD235F	23.5	9.3	239-32-...
QD240F	24.0	9.7	QD240-
QD245F	24.5	9.7	249-32-...
QD250F	25.0	10.1	QD250-
QD255F	25.5	10.1	259-32-...
QD260F	26.0	10.1	..D-...

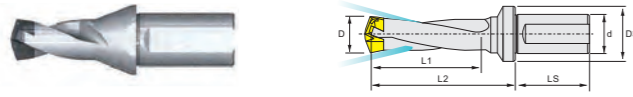
## QD...C Centering Cutting Head



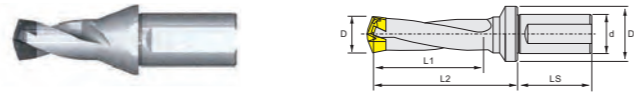
Order number	Dimensions(mm)		tool holders
	D	t	
QD080C	8.0	5.4	QD080-
QD085C	8.5	5.4	089-12-...
QD090C	9.0	5.8	QD090-
QD095C	9.5	5.8	099-12-...
QD100C	10.0	6.2	QD100-
QD105C	10.5	6.2	109-16-...
QD110C	11.0	6.6	QD110-
QD115C	11.5	6.6	119-16-...
QD120C	12.0	7.0	QD120-
QD125C	12.5	7.0	129-16-...
QD130C	13.0	7.6	QD130-
QD135C	13.5	7.6	139-16-...
QD140C	14.0	8.2	QD140-
QD145C	14.5	8.2	149-16-...
QD150C	15.0	8.7	QD150-
QD155C	15.5	8.7	159-20-...
QD160C	16.0	9.3	QD160-
QD165C	16.5	9.3	169-20-...
QD170C	17.0	9.9	QD170-
QD175C	17.5	9.9	179-20-...
QD180C	18.0	10.5	QD180-
QD185C	18.5	10.5	189-25-...
QD190C	19.0	11.0	QD190-
QD195C	19.5	11.0	199-25-...
QD200C	20.0	11.6	QD200-
QD205C	20.5	11.6	209-25-...
QD210C	21.0	12.2	QD210-
QD215C	21.5	12.2	219-25-...
QD220C	22.0	12.8	QD220-
QD225C	22.5	12.8	229-25-...
QD230C	23.0	13.3	QD230-
QD235C	23.5	13.3	239-32-...
QD240C	24.0	13.9	QD240-
QD245C	24.5	13.9	249-32-...
QD250C	25.0	14.5	QD250-
QD255C	25.5	14.5	259-32-...
QD260C	26.0	14.5	..D-...

# High Efficiency Hole Processing of Drill Point and Drill Pipe

QD...-1.5D-C  
"QuickDrill" Toolholders with Coolant



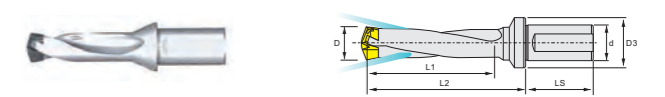
QD...-1.5D-N  
"QuickDrill" Toolholders without Coolant



QD...-5D-C  
"QuickDrill" Toolholders with Coolant



QD...-8D-C  
"QuickDrill" Toolholders with Coolant



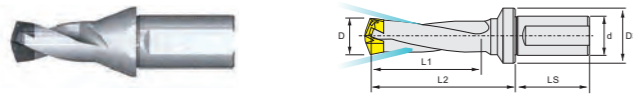
Model	D		Dimensions(mm)					Puller
	d	D3	L1	L2	LS	D		
QD080.089-16-1.5D-C	8.0-8.9	12	16	12	27.9	45	8	8-12
QD090.099-16-1.5D-C	9.0-9.9	12	16	14	29.3	45	9	
QD100.109-20-1.5D-C	10.0-10.9	16	20	15	31.2	48	10	
QD110.119-20-1.5D-C	11.0-11.9	16	20	17	33.1	48	11	12-17
QD120.129-20-1.5D-C	12.0-12.9	16	20	18	35.0	48	12	
QD130.139-20-1.5D-C	13.0-13.9	16	20	20	37.1	48	13	
QD140.149-20-1.5D-C	14.0-14.9	16	20	21	41.1	48	14	17-21
QD150.159-25-1.5D-C	15.0-15.9	20	25	23	46.2	50	15	
QD160.169-25-1.5D-C	16.0-16.9	20	25	24	49.3	50	16	
QD170.179-25-1.5D-C	17.0-17.9	20	25	26	52.4	50	17	21-26
QD180.189-32-1.5D-C	18.0-18.9	25	32	27	55.5	56	18	
QD190.199-32-1.5D-C	19.0-19.9	25	32	29	58.5	56	19	
QD200.209-32-1.5D-C	20.0-20.9	25	32	30	61.6	56	20	21-26
QD210.219-32-1.5D-C	21.0-21.9	25	32	32	64.7	56	21	
QD220.229-32-1.5D-C	22.0-22.9	25	32	33	67.8	56	22	
QD230.239-42-1.5D-C	23.0-23.9	32	42	35	70.9	60	23	21-26
QD240.249-42-1.5D-C	24.0-24.9	32	42	36	74.0	60	24	
QD250.259-42-1.5D-C	25.0-26.0	32	42	38	77.0	60	25	

Model	D		Dimensions(mm)					Puller
	d	D3	L1	L2	LS	D		
QD080.089-16-1.5D-N	8.0-8.9	12	16	12	27.9	45	8	8-12
QD090.099-16-1.5D-N	9.0-9.9	12	16	14	29.3	45	9	
QD100.109-20-1.5D-N	10.0-10.9	16	20	15	31.2	48	10	
QD110.119-20-1.5D-N	11.0-11.9	16	20	17	33.1	48	11	12-17
QD120.129-20-1.5D-N	12.0-12.9	16	20	18	35.0	48	12	
QD130.139-20-1.5D-N	13.0-13.9	16	20	20	37.1	48	13	
QD140.149-20-1.5D-N	14.0-14.9	16	20	21	41.1	48	14	17-21
QD150.159-25-1.5D-N	15.0-15.9	20	25	23	46.2	50	15	
QD160.169-25-1.5D-N	16.0-16.9	20	25	24	49.3	50	16	
QD170.179-25-1.5D-N	17.0-17.9	20	25	26	52.4	50	17	17-21
QD180.189-32-1.5D-N	18.0-18.9	25	32	27	55.5	56	18	
QD190.199-32-1.5D-N	19.0-19.9	25	32	29	58.5	56	19	
QD200.209-32-1.5D-N	20.0-20.9	25	32	30	61.6	56	20	21-26
QD210.219-32-1.5D-N	21.0-21.9	25	32	32	64.7	56	21	
QD220.229-32-1.5D-N	22.0-22.9	25	32	33	67.8	56	22	
QD230.239-42-1.5D-N	23.0-23.9	32	42	35	70.9	60	23	21-26
QD240.249-42-1.5D-N	24.0-24.9	32	42	36	74.0	60	24	
QD250.259-42-1.5D-N	25.0-26.0	32	42	38	77.0	60	25	

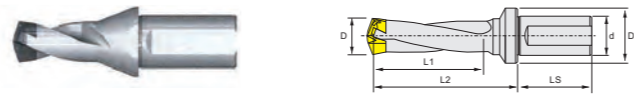
Model	D		Dimensions(mm)					Puller
	d	D3	L1	L2	LS	D		
QD080.084-16-5D-C	8.0-8.4	12	16	40	55.4	45	8	8-12
QD085.089-16-5D-C	8.5-8.9	12	16	43	57.9	45	8	
QD090.094-16-5D-C	9.0-9.4	12	16	45	60.8	45	9	
QD095.099-16-5D-C	9.5-9.9	12	16	48	63.3	45	9	12-17
QD100.104-20-5D-C	10.0-10.4	16	20	50	66.2	48	10	
QD105.109-20-5D-C	10.5-10.9	16	20	53	68.7	48	10	
QD110.114-20-5D-C	11.0-11.4	16	20	55	71.6	48	11	12-17
QD115.119-20-5D-C	11.5-11.9	16	20	58	74.1	48	11	
QD120.124-20-5D-C	12.0-12.4	16	20	60	77.0	48	12	
QD125.129-20-5D-C	12.5-12.9	16	20	62	79.5	48	12	17-21
QD130.134-20-5D-C	13.0-13.4	16	20	65	82.6	48	13	
QD135.139-20-5D-C	13.5-13.9	16	20	68	85.1	48	13	
QD140.144-20-5D-C	14.0-14.4	16	20	70	90.2	48	14	17-21
QD145.149-20-5D-C	14.5-14.9	16	20	73	92.7	48	14	
QD150.159-25-5D-C	15.0-15.9	20	25	75	98.7	50	15	
QD160.169-25-5D-C	16.0-16.9	20	25	80	105.3	50	16	21-26
QD170.179-25-5D-C	17.0-17.9	20	25	85	111.9	50	17	
QD180.189-32-5D-C	18.0-18.9	25	32	90	118.5	56	18	
QD190.199-32-5D-C	19.0-19.9	25	32	95	125.0	56	19	21-26
QD200.209-32-5D-C	20.0-20.9	25	32	100	131.6	56	20	
QD210.219-32-5D-C	21.0-21.9	25	32	105	138.2	56	21	
QD220.229-32-5D-C	22.0-22.9	25	32	110	144.8	56	22	21-26
QD230.239-42-5D-C	23.0-23.9	32	42	115	151.4	60	23	
QD240.249-42-5D-C	24.0-24.9	32	42	120	158.0	60	24	
QD250.259-42-5D-C	25.0-26.0	32	42	125	164.5	60	25	

Model	D		Dimensions(mm)					Puller
	d	D3	L1	L2	LS	D		
QD080.084-16-5D-C	8.0-8.4	12	16	64	79.4	45	8	8-12
QD085.089-16-5D-C	8.5-8.9	12	16	68	84.4	45	8	
QD090.094-16-5D-C	9.0-9.4	12	16	72	87.8	45	9	
QD095.099-16-5D-C	9.5-9.9	12	16	76	92.7	45	9	12-17
QD100.104-20-5D-C	10.0-10.4	16	20	80	96.2	48	10	
QD105.109-20-5D-C	10.5-10.9	16	20	84	100.2	48	10	
QD110.114-20-5D-C	11.0-11.4	16	20	88	104.6	48	11	12-17
QD115.119-20-5D-C	11.5-11.9	16	20	92	108.6	48	11	
QD120.124-20-5D-C	12.0-12.4	16	20	96	113.0	48	12	
QD125.129-20-5D-C	12.5-12.9	16	20	100	117.0	48	12	17-21
QD130.134-20-5D-C	13.0-13.4	16	20	104	121.6	48	13	
QD135.139-20-5D-C	13.5-13.9	16	20	108	125.5	48	13	
QD140.144-20-5D-C	14.0-14.4	16	20	112	132.1	48	14	17-21
QD145.149-20-5D-C	14.5-14.9	16	20	116	136.2	48	14	
QD150.159-25-5D-C	15.0-15.9	20	25	120	143.7	50	15	
QD160.169-25-5D-C	16.0-16.9	20	25	128	153.3	50	16	21-26
QD170.179-25-5D-C	17.0-17.9	20	25	136	162.9	50	17	
QD180.189-32-5D-C	18.0-18.9	25	32	144	172.5	56	18	
QD190.199-32-5D-C	19.0-19.9	25	32	152	182.0	56	19	21-26
QD200.209-32-5D-C	20.0-20.9	25	32	160	191.6	56	20	
QD210.219-32-5D-C	21.0-21.9	25	32	168	201.2	56	21	
QD220.229-32-5D-C	22.0-22.9	25	32	176	210.8	56	22	21-26
QD230.239-42-5D-C	23.0-23.9	32	42	184	220.4	60	23	
QD240.249-42-5D-C	24.0-24.9	32	42	192	230.0	60	24	
QD250.259-42-5D-C	25.0-26.0	32	42	200	239.5	60	25	

QD...-3D-C  
"QuickDrill" Toolholders with Coolant



QD...-3D-N  
"QuickDrill" Toolholders without Coolant



QD...-12D-C  
"QuickDrill" Toolholders with Coolant



Model	D		Dimensions(mm)					Puller
	d	D3	L1	L2	LS	D		
QD080.084-16-3D-C	8.0-8.4	12	16	24	39.4	45	8	8-12
QD085.089-16-3D-C	8.5-8.9	12	16	26	40.9	45	8	
QD090.094-16-3D-C	9.0-9.4	12	16	27	42.8	45	9	
QD095.099-16-3D-C	9.5-9.9	12	16	29	44.3	45	9	12-17
QD100.104-20-3D-C	10.0-10.4	16	20	30	46.2	48	10	
QD105.109-20-3D-C	10.5-10.9	16	20	32	47.7	48	10	
QD110.114-20-3D-C	11.0-11.4	16	20	33	49.6	48	11	12-17
QD115.119-20-3D-C	11.5-11.9	16	20	35	51.1	48	11	
QD120.124-20-3D-C	12.0-12.4	16	20	36	53.0	48	12	
QD125.129-20-3D-C	12.5-12.9	16	20	37	54.5	48	12	17-21
QD130.134-20-3D-C	13.0-13.4	16	20	39	56.6	48	13	
QD135.139-20-3D-C	13.5-13.9	16	20	41	58.1	48	13	
QD140.144-20-3D-C	14.0-14.4	16	20	42	62.1	48	14	17-21
QD145.149-20-3D-C	14.5-14.9	16	20	44	63.6	48	14	
QD150.159-25-3D-C	15.0-15.9	20	25	45	68.7	50	15	
QD160.169-25-3D-C	16.0-16.9	20	25	48	73.3	50	16	21-26
QD170.179-25-3D-C	17.0-17.9	20	25	51	77.9	50	17	
QD180.189-32-3D-C	18.0-18.9	25	32	54	82.5	56	18	
QD190.199-32-3D-C	19.0-19.9	25	32	57	87.0	56	19	21-26
QD200.209-32-3D-C	20.0-20.9	25	32	60	91.6	56	20	
QD210.219-32-3D-C	21.0-21.9	25	32	63	96.2	56	21	
QD220.229-32-3D-C	22.0-22.9	25	32	66	100.8	56	22	21-26
QD230.239-42-3D-C	23.0-23.9	32	42	69	105.4	60	23	
QD240.249-42-3D-C	24.0-24.9	32	42	72	109.9	60	24	
QD250.259-42-3D-C	25.0-26.0	32	42	75	114.5	60	25	

Model	D		Dimensions(mm)					Puller
	d	D3	L1	L2	LS	D		
QD080.084-16-3D-N	8.0-8.4	12	16	24	39.4	45	8	8-12
QD085.089-16-3D-N	8.5-8.9	12	16	26	40.9	45	8	
QD090.094-16-3D-N	9.0-9.4	12	16	27	42.8	45	9	
QD095.099-16-3D-N	9.5-9.9	12	16	29	44.3	45	9	12-17
QD100.104-20-3D-N	10.0-10.4	16	20	30	46.2	48	10	
QD105.109-20-3D-N	10.5-10.9	16	20	32	47.7	48	10	
QD110.114-20-3D-N	11.0-11.4	16	20	33	49.6	48	11	12-17
QD115.119-20-3D-N								

# Hollow drill / Oil Way Tool Holder Accessories

## Side solid fast hollow bit



## Hollow drill with handle diameter of 40mm WC Insert

Model length L=50mm	Order	Model length L=100mm	Order	Model length L=150mm	D	d	Parts
C40. 50WC05-50L	505735	C40. 50WC05-100L	505756	C40. 50WC05-150L	50		
53WC05-50L	505736	53WC05-100L	505757	53WC05-150L	53		
55WC05-50L	505737	55WC05-100L	505758	55WC05-150L	55		
60WC05-50L	505738	60WC05-100L	505759	60WC05-150L	60		
62WC05-50L	505739	62WC05-100L	505760	62WC05-150L	62		
64WC05-50L	505740	64WC05-100L	505761	64WC05-150L	64		
66WC05-50L	505741	66WC05-100L	505762	66WC05-150L	66		
68WC05-50L	505742	68WC05-100L	505763	68WC05-150L	68		
70WC05-50L	505743	70WC05-100L	505764	70WC05-150L	70		
73WC05-50L	505744	73WC05-100L	505765	73WC05-150L	73		
75WC05-50L	505745	75WC05-100L	505766	75WC05-150L	75		
78WC05-50L	505746	78WC05-100L	505767	78WC05-150L	78		
80WC05-50L	505747	80WC05-100L	505768	80WC05-150L	80		
82WC05-50L	505748	82WC05-100L	505769	82WC05-150L	82		
85WC05-50L	505749	85WC05-100L	505770	85WC05-150L	85		
87WC05-50L	505750	87WC05-100L	505771	87WC05-150L	87		
90WC05-50L	505751	90WC05-100L	505772	90WC05-150L	90		
92WC05-50L	505752	92WC05-100L	505773	92WC05-150L	92		
95WC05-50L	505753	95WC05-100L	505774	95WC05-150L	95		
97WC05-50L	505754	97WC05-100L	505775	97WC05-150L	97		
100WC05-50L	505755	100WC05-100L	505776	100WC05-150L	100		

## Hollow drill with handle diameter of 50mm WC Insert

Model length L=50mm	Order	Model length L=100mm	Order	Model length L=150mm	D	d	Parts
C50. 50WC05-50L	505798	C50. 50WC05-100L	505819	C50. 50WC05-150L	50		
53WC05-50L	505799	53WC05-100L	505820	53WC05-150L	53		
55WC05-50L	505800	55WC05-100L	505821	55WC05-150L	55		
60WC05-50L	505801	60WC05-100L	505822	60WC05-150L	60		
62WC05-50L	505802	62WC05-100L	505823	62WC05-150L	62		
64WC05-50L	505803	64WC05-100L	505824	64WC05-150L	64		
66WC05-50L	505804	66WC05-100L	505825	66WC05-150L	66		
68WC05-50L	505805	68WC05-100L	505826	68WC05-150L	68		
70WC05-50L	505806	70WC05-100L	505827	70WC05-150L	70		
73WC05-50L	505807	73WC05-100L	505828	73WC05-150L	73		
75WC05-50L	505808	75WC05-100L	505829	75WC05-150L	75		
78WC05-50L	505809	78WC05-100L	505830	78WC05-150L	78		
80WC05-50L	505810	80WC05-100L	505831	80WC05-150L	80		
82WC05-50L	505811	82WC05-100L	505832	82WC05-150L	82		
85WC05-50L	505812	85WC05-100L	505833	85WC05-150L	85		
87WC05-50L	505813	87WC05-100L	505834	87WC05-150L	87		
90WC05-50L	505814	90WC05-100L	505835	90WC05-150L	90		
92WC05-50L	505815	92WC05-100L	505836	92WC05-150L	92		
95WC05-50L	505816	95WC05-100L	505837	95WC05-150L	95		
97WC05-50L	505817	97WC05-100L	505838	97WC05-150L	97		
100WC05-50L	505818	100WC05-100L	505839	100WC05-150L	100		

## Hollow drill with BT50- WC Insert

Model length L=200mm	Order	Model length L=250mm	D	Inserts	Screw	Wrench
BT50. 55WC05-200L	505881	BT50. 55WC05-250L	55			
58WC05-200L	505882	58WC05-250L	58			
60WC05-200L	505883	60WC05-250L	60			
62WC05-200L	505884	62WC05-250L	62			
65WC05-200L	505885	65WC05-250L	65			
68WC05-200L	505886	68WC05-250L	68			
70WC05-200L	505887	70WC05-250L	70			
75WC05-200L	505888	75WC05-250L	75			
78WC05-200L	505889	78WC05-250L	78			
80WC05-200L	505890	80WC05-250L	80			
85WC05-200L	505891	85WC05-250L	85			
88WC05-200L	505892	88WC05-250L	88			
90WC05-200L	505893	90WC05-250L	90			
93WC05-200L	505894	93WC05-250L	93			
96WC05-200L	505895	96WC05-250L	96			
98WC05-200L	505896	98WC05-250L	98			
100WC05-200L	505897	100WC05-250L	100			
103WC05-200L	505898	103WC05-250L	103			
105WC05-200L	505899	105WC05-250L	105			
108WC05-200L	505900	108WC05-250L	108			
110WC05-200L	505901	110WC05-250L	110			
115WC05-200L	505902	115WC05-250L	115			
BT50. 120WC06-200L	505903	BT50. 120WC06-250L	120			
125WC06-200L	505904	125WC06-250L	125			
130WC06-200L	505905	130WC06-250L	130			
135WC06-200L	505906	135WC06-250L	135			
140WC06-200L	505907	140WC06-250L	140			
145WC06-200L	505908	145WC06-250L	145			
150WC06-200L	505909	150WC06-250L	150			
155WC06-200L	505910	155WC06-250L	155			
160WC06-200L	505911	160WC06-250L	160			
165WC06-200L	505912	165WC06-250L	165			
170WC06-200L	505913	170WC06-250L	170			
175WC06-200L	505914	175WC06-250L	175			
180WC06-200L	505915	180WC06-250L	180			
185WC06-200L	505916	185WC06-250L	185			
190WC06-200L	505917	190WC06-250L	190			
195WC06-200L	505918	195WC06-250L	195			
200WC06-200L	505919	200WC06-250L	200			
210WC06-200L	505920	210WC06-250L	210			
220WC06-200L	505921	220WC06-250L	220			

## Central water supply type



## Automatic tool change for central water supply



## Toolholder type of oil way



## Multi function drill pipe

1. Turning, boring and drilling functions, using a kind of tool bar processing  
 2. Save installation time and shorten beat  
 3. Reduce the tool use effect and save the tool cost

Traditional way

Application: Drilling, End face / External turning, Boring

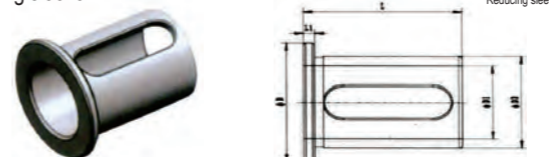
TCAP: Solid material drilling

New application: Grooving

Characteristic: Internal cooling type, Large spiral groove is easy to arrange, Large row, fluted row, Two blades are designed for drilling and turning, Cutting edge with large spiral angle reduces cutting force, When the feed is small and the cutting depth is small, the row is smooth.

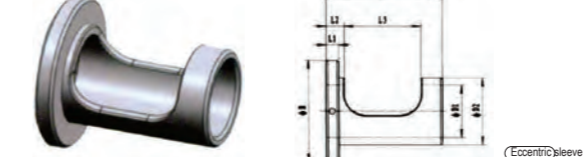
Model	D	d	L1	L	Applicable t0 insert	screw	Wrench
TCAP-08R/L-3.0DN	8	12	24	75	XCMT 04 01 04	230249	230052
TCAP-09R/L-3.0DN	9	12	27	83	XCMT 05 02 04	230201	230052
TCAP-10R/L-3.0DN	10	12	30	85	XCMT 05 02 04	230201	230052
TCAP-11R/L-3.0DN	11	16	33	92	XCMT 06 02 04	230070	230052
TCAP-12R/L-3.0DN	12	16	36	95	XCMT 06 02 04	230070	230052
TCAP-13R/L-3.0DN	13	16	39	100	XCMT 07 03 04	230202	230054
TCAP-14R/L-3.0DN	14	16	42	101	XCMT 07 03 04	230202	230054
TCAP-08R/L-2.25DN	8	12	18	69	XCMT 04 01 04	230249	230052
TCAP-09R/L-2.25DN	9	12	20.5	76	XCMT 05 02 04	230201	230052
TCAP-10R/L-2.25DN	10	12	22.5	78	XCMT 05 02 04	230201	230052
TCAP-11R/L-2.25DN	11	16	25	84	XCMT 06 02 04	230070	230052
TCAP-12R/L-2.25DN	12	16	27	86	XCMT 06 02 04	230070	230052
TCAP-13R/L-2.25DN	13	16	29.5	91	XCMT 07 03 04	230202	230054
TCAP-14R/L-2.25DN	14	16	31.5	91	XCMT 07 03 04	230202	230054

## Reducing sleeve



Model	Size(mm)					
	D	D1	D2	L	L1	L2
BJT-322062	20	49	32	62	5	
BJT-322562	25	49	32	62	5	
BJT-402065	20	58	40	65	6	
BJT-402565	25	58	40	65	6	
BJT-403265	32	58	40	65	6	
BJT-502572	25	65	50	70	6	
BJT-503272	32	65	50	70	6	
BJT-504072	40	65	50	70	6	

## Eccentric sleeve

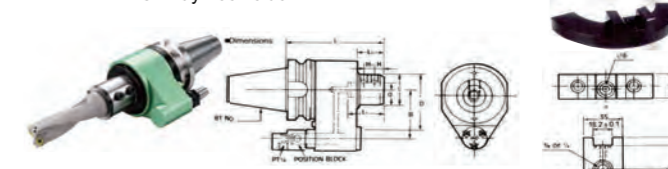


Model	Size (mm)							range of machining diameter	Center height adjustment range
	øD1	øD2	øD	L	L1	L2	L3		
2025-43	20	25	41	47	6	11	33	+0.4-0.2	+0.2-0.15
2532-48	25	32	49	60	6	11	45	+0.4-0.2	+0.2-0.15
3240-53	32	40	58	65	6	11	50	+0.4-0.2	+0.2-0.15
4050-63	40	50	68	76	6	11	61	+0.6-0.2	+0.2-0.2

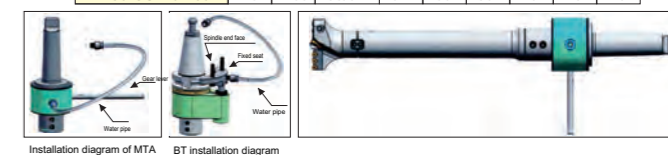
## Quick bit chamfering ring

Model	Range	Inserts	Screw	Wrench
ACH 31	32-60			
42	44-80	TCMT 16T3..	230083	230057
58	63-90			
72	83-200			

## Oil way Toolholder



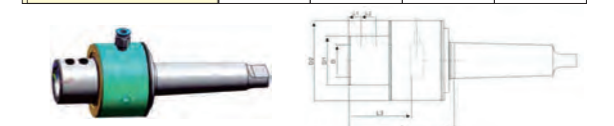
Model	d	L	B	c	D	LO	L1	H	L3
BT40-OSL32-155	32	155	60/65	53	90	50	60	15	15
BT40-OSL40-155	40	155	60/65	70	90	50	70	19	18
BT50-OSL32-160	32	160	80/82	54	100	50	60	15	15
BT50-OSL40-160	40	160	80/82	64	100	50	70	19	18



## Morse transfer Toolholder



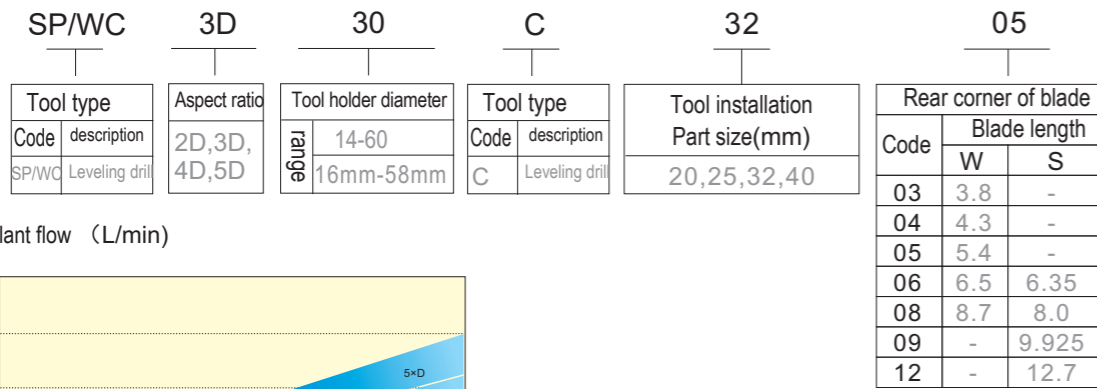
Model	D	D1	L	L1
DIN228-B-32-MTA4	32	64	204	124
DIN228-B-40-MTA4	40	64	204	124
DIN228-B-32-MTA5	32	64	204	156
DIN228-B-40-MTA5	40	64	204	156
DIN228-B-32-MTA6	32	64	303	218
DIN228-B-40-MTA6	40	64	303	218
DIN228-B-50-MTA6	50	74	303	218



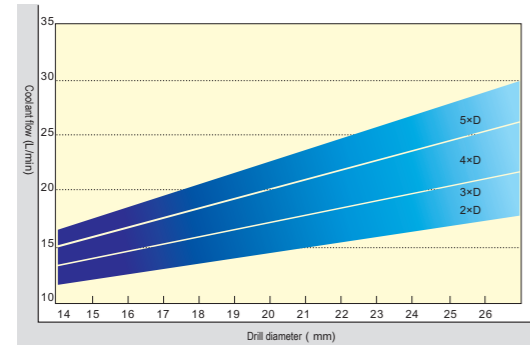
Model	D	D1	D2	L	L1	L2	L3
MT5-YLDB-32	32	55	92	127	15	18	60
MT5-YLDB-40	40	60	98	127	15	18	65
MT6-YLDB-32	32	55	92	127	15	18	60
MT6-YLDB-40	40	60	98	127	15	18	65
MT6-YLDB-50	50	70	108	127	15	18	70

# Cutting Parameters of Fast Drilling Bit

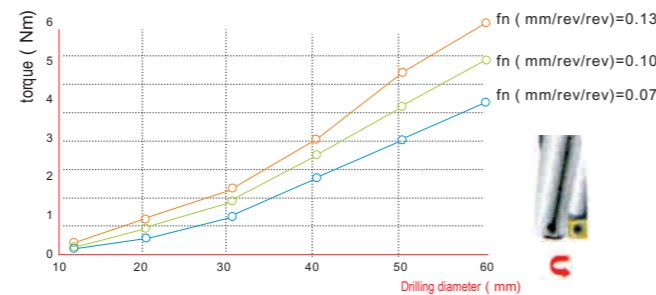
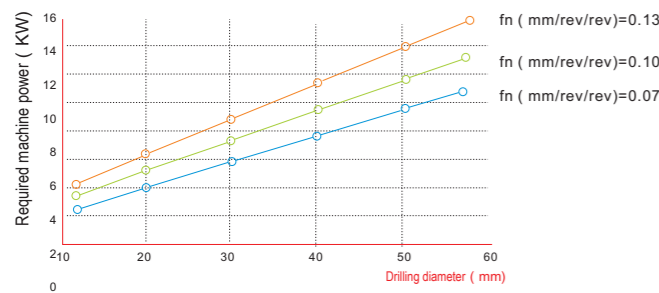
## Quick drill bit specification model naming rules



## Coolant flow (L/min)



## Drill diameter

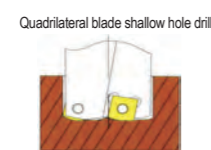


## Quick drill bit cutting data reference table

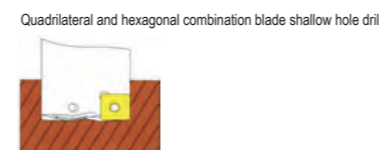
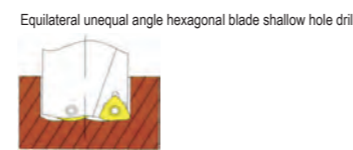
Diameter	Material	RPM	2XD Feeding	3XD Feeding	4XD Feeding	5XD Feeding	Material
14-17	Steel	2500-2300	Lathe F0.06-0.07 Machine F150-180	Lathe F0.06-0.07 Machine F150-180	Lathe F0.05-0.06 Machine F130-150	Lathe F0.05-0.06 Machine F130-150	20%~30% Special Material from Reducer 20%~30%
18-20		2300-2100	Lathe F0.085-0.10 Machine F180-200	Lathe F0.085-0.10 Machine F180-200	Lathe F0.06-0.07 Machine F150-170	Lathe F0.06-0.07 Machine F150-170	
21-23		2100-1900	Lathe F0.085-0.10 Machine F180-200	Lathe F0.085-0.10 Machine F180-200	Lathe F0.06-0.07 Machine F150-170	Lathe F0.06-0.07 Machine F150-170	
24-26		1800-1700	Lathe F0.10-0.12 Machine F170-200	Lathe F0.10-0.12 Machine F170-200	Lathe F0.09-0.11 Machine F160-190	Lathe F0.09-0.11 Machine F160-190	
27-29		1600-1500	Lathe F0.10-0.13 Machine F160-200	Lathe F0.10-0.13 Machine F160-200	Lathe F0.10-0.12 Machine F160-180	Lathe F0.10-0.12 Machine F160-180	
30-32		1500-1400	Lathe F0.10-0.13 Machine F150-180	Lathe F0.10-0.13 Machine F150-180	Lathe F0.10-0.12 Machine F140-170	Lathe F0.10-0.12 Machine F140-170	
33-35		1400-1300	Lathe F0.10-0.13 Machine F130-160	Lathe F0.10-0.13 Machine F140-170	Lathe F0.10-0.12 Machine F130-160	Lathe F0.10-0.12 Machine F130-160	
36-38		1300-1200	Lathe F0.10-0.13 Machine F120-150	Lathe F0.10-0.13 Machine F130-150	Lathe F0.10-0.12 Machine F120-150	Lathe F0.09-0.11 Machine F110-130	
39-41		1200-1100	Lathe F0.10-0.13 Machine F110-140	Lathe F0.10-0.13 Machine F110-140	Lathe F0.10-0.12 Machine F110-130	Lathe F0.10-0.12 Machine F110-130	
42-44		1100-1000	Lathe F0.11-0.14 Machine F105-135	Lathe F0.11-0.13 Machine F105-135	Lathe F0.10-0.12 Machine F95-120	Lathe F0.09-0.11 Machine F90-110	
45-47		1000-950	Lathe F0.11-0.14 Machine F100-130	Lathe F0.10-0.13 Machine F100-120	Lathe F0.10-0.12 Machine F90-110	Lathe F0.09-0.11 Machine F80-100	
48-50		950-900	Lathe F0.11-0.14 Machine F95-120	Lathe F0.10-0.13 Machine F90-110	Lathe F0.10-0.12 Machine F85-105	Lathe F0.09-0.11 Machine F75-95	
51-53		900-850	Lathe F0.11-0.14 Machine F95-110	Lathe F0.10-0.13 Machine F80-100	Lathe F0.10-0.12 Machine F80-100	Lathe F0.09-0.11 Machine F70-85	
54-56		850-800	Lathe F0.11-0.14 Machine F85-105	Lathe F0.10-0.13 Machine F75-95	Lathe F0.10-0.12 Machine F75-95	Lathe F0.09-0.11 Machine F65-80	
57-60		800-750	Lathe F0.11-0.14 Machine F80-100	Lathe F0.10-0.13 Machine F70-90	Lathe F0.10-0.12 Machine F70-90	Lathe F0.09-0.11 Machine F60-75	

## blind substrate dimension instruction

Insert	Wave height a
SPMG050204	0.30mm
SPMG060204	0.40mm
SPMG07T308	0.50mm
SPMG090408	0.70mm
SPMG0110408	0.80mm
SPMG140512	0.90mm



Insert	Wave height a
WCMX030208	0.40mm
SPMG050204	0.40mm
WCMX030208	0.40mm
SPMG060204	0.50mm
WCMX040208	0.60mm
SPMG060204	0.70mm
WCMX050308	0.70mm
SPMG070308	0.70mm
WCMX050308	0.90mm
SPMG110408	1.20mm
WCMX080412	1.20mm
SPMG140512	1.20mm



## Calculation method of related parameters of quick drill

**Drill bit drilling speed**

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

Vc(m/min): Linear speed  
Dc(mm): Drill bit  
S(rev/min): Rotation speed

**example**  
The linear speed of the blade is 120 m/min, the diameter of the drill bit is Ø20mm, and the speed of the drill bit is:  $S = \frac{120 \times 1000}{3.14 \times 20} = 1900$  rev/min

**Feed speed**

$$V_f = F_r \times S$$

Vf(mm/min): Feed speed  
Fr(mm/rev): Feed per revolution  
S(rev/min): Spindle speed

**example**  
The spindle speed is 1900 rev/min, the feed volume per revolution is 0.1mm/rev, and the feed speed is:  $V_f = F_r \times S = 1900 \times 0.1 = 190$  mm/min

**Hole processing time**

$$T_c = \frac{H \times i}{S \times f} \times 60$$

Tc(s): Processing time (seconds)  
S(rev/min): Spindle speed  
H(mm): Drilling depth  
f(mm/rev): Feed per revolution  
i: The number of holes to be processed

**example**  
Drill a 15mm hole with a depth of 30mm, a cutting line speed of 80 m/min, and a feed of 0.11mm per revolution to find the processing time  
 $S = \frac{80 \times 1000}{3.14 \times 15} = 1698.5$  rev/min  
 $T_c = \frac{30 \times 1 \times 60}{1698.5 \times 0.11} = 9.63$  s

Description of the size of the bottom surface of the blind hole blind substrate dimension instruction

Equilateral unequal angle hexagonal blade shallow hole drill

Insert	Wave height a
WCMX030208	0.50mm
WCMX040208	0.60mm
WCMX050308	0.80mm
WCMX060308	0.95mm
WCMX080412	1.25mm

## QD.. Type Technical Information

materials	Heat Treatment	(N/mm2) drawing force	(HB) hardness	Vc(m/min) cutting speed	Feed rate(mm/rev)												
					D 10	D <sub>s</sub> 10-11.9	D <sub>s</sub> 12-13.9	D <sub>s</sub> 14-15.9	D <sub>s</sub> 16-19.9	D <sub>s</sub> 20-25.9							
Unalloyed steel	<0.25%C Annealed	420	125	80~140	0.12	0.15	0.18	0.20	0.25	0.25							
	>=0.25%C Annealed	650	190	80~130													
	Cast Iron	<0.55%C Annealed And Tempering	850	250							80~20	0.17	0.21	0.24	0.27	0.35	0.35
		>=0.55%C Annealed	750	220							70~110						
Free Cutting Steel	Annealed And Tempering	1000	300	50~90	0.22	0.28	0.30	0.35	0.45	0.45							
		600	200	70~120													
	Low Carbon Steel	Annealed	930	275							70~110	0.12	0.14	0.16	0.18	0.23	0.25
			1000	300							50~90						
Cast Iron (alloy Composition<5%)	Annealed And Tempering	1200	350	40~70	0.25	0.28	0.32	0.35	0.40	0.45							
High Alloy Steel . Cast Iron	Annealed	680	200	50~90	0.12	0.12	0.15	0.18	0.20	0.22							
	Annealed And Tempering	1100	325	40~80													
Tool Steel	Annealed And Tempering	680	200	40~70	0.20	0.22	0.25	0.28	0.30	0.33							
		820	240	40~70													
		600	180	30~70													
Steelness Steel Cast Iron	Ferritic / Martensite	680	200	40~70	0.10	0.12	0.14	0.16	0.16	0.18							
	Martensite	820	240	40~70													
	Austenitic	600	180	30~70													
Gray Cast Iron	Ferritic	160	90~160	0.15	0.18	0.20	0.24	0.26	0.30	0.30							
		250	80~140														
		180	90~180														
Nodular Sg Iron	Pearlitic	260	80~140	0.22	0.27	0.32	0.37	0.45	0.37	0.37							
		130	90~160														
Malleable Cast Iron	Pearlitic	230	80~140	0.30	0.35	0.40	0.45	0.55	0.60	0.60							
		60	90~220														
CastAluminium Alloy	Unsolidification	60	90~220	0.20	0.25	0.30	0.35	0.40	0.45	0.45							
	Solidification	100	90~220														
Cast Aluminium Alloy	<=12%Si Solidification	75	90~220	0.27	0.32	0.37	0.42	0.50	0.57	0.57							
		90	90~220														
		130	80~160														
Copper Alloy	<12%Si High Temperature Treatment	110	90~220	0.35	0.40	0.45	0.50	0.60	0.70	0.70							
		90	90~220														
Copper Alloy	Copper	90	90~220	0.35	0.40	0.45	0.50	0.60	0.70	0.70							
	Cathode Copper	100	90~220														
Non-metallic Material	Plastic Fiber																
	Hard Rubber																
High Temperature Alloys	Iron-base	Annealed	30~60	0.06	0.08	0.10	0.12	0.12	0.14	0.14							
		Solidification	200								20~50						
	Inckel Base	Annealed	280	20~50	0.08	0.10	0.12	0.15	0.16	0.18							
		Solidification	250	20~50													
Titanium, titanium Alloys	Cobolt Base	Cast	350	20~50	0.09	0.11	0.14	0.16	0.18	0.20							
		320	20~50														
Titanium, titanium Alloys	α + β alloys	20~50	20~50	0.12	0.15	0.18	0.20	0.22	0.25	0.25							
		0.06	0.08								0.10	0.12	0.14	0.16			
Hard Steel	Harden	55HRC	20~50	0.09	0.11	0.14	0.16	0.18	0.20	0.20							
		60HRC	20~50														
Chiled Cast Iron	Cast	400		0.12	0.15	0.18	0.20	0.22	0.25								
Cast Iron	Harden	55HRC															

\* Lower cutting speed and feed rate should be used for tool holders of 8D or 12D and without coolant

**Drilling Boring System**

**Rough boring**

TWE Double-edged rough boring	TWE Large rough boring	RBH Double-edged rough boring	RBH Large rough boring	TBL Rough boring tool bar	TBC Rough boring cutter
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**Boring Outer Circle**

CBH-M Boring outer circle	CBR Boring outer circle
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**Reverse boring**

HBOR Anti-boring head
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**TBS..30°** **TBS..45°** **TBS..90°** **CBS..30°** **CBS..45°** **CBS..90°**

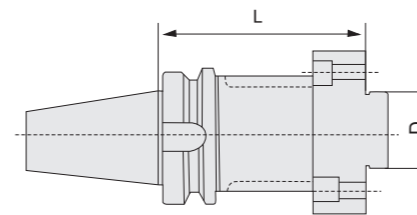
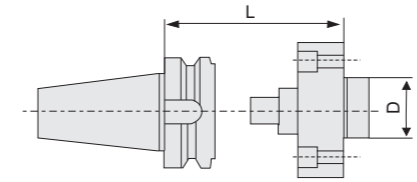
BSA Rough boring	BSA..LBK..	BSB	BSB..LBK..	SBS..300	sbs..45°	SBS..900
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**HBOR Fine boring head** **HBOR Fine boring set** **Tungsten steel small boring tool** **CBH Fine boring head** **CBH Large fine boring head** **CBH Fine boring head** **SCT Adjustable boring bar**

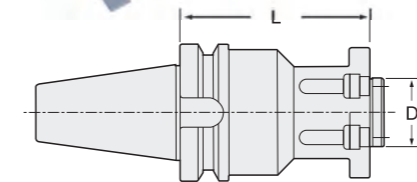
3BI Small diameter in boring	CBI small fine boring set	BE Small boring head	ST tungsten steel anti-vibration rod	Tungsten steel	Reducing sleeve small boring tool	NBJ16 set	NBH2084 set
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BSTknife handle	NBH-2084knife handle	BT-LBK Sword handle	SK-LBK Swoitl handle	HSK-LBK Sword	Straight handle	NT-LBKtool holder	MT-LBK tool holder	LBK equal diameter extension rod	LBK reducing extension rod	LBK chamfering knife	Boring tool holder
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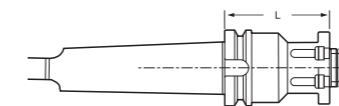
NBH2084 Boring Cutter Toolholder



BST Boring Cutter Toolholder



BST Basic Holder For Roughness And Precision Boring Bar(boring Range>Ø200)



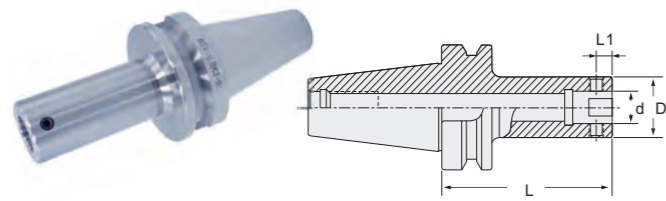
Model	Size (mm)	
	D	L
BT30-NBH2084	35	55
BT40-NBH2084	35	45
BT50-NBH2084	35	55
NT30-NBH2084	35	55
NT40-NBH2084(5/8)	35	25
NT40-NBH2084	35	25
NT50-NBH2084	35	25
SK40-NBH2084	35	55
SK50-NBH2084	35	55
BBT40-NBH2084	35	45
BBT50-NBH2084	35	55
CAT40-NBH2084	35	55
CAT50-NBH2084	35	55
HSK63A-NBH2084	35	85
HSK100A-NBH2084	35	90
ISO40-NBH2084	35	45
ISO50-NBH2084	35	55
C20-NBH2084	35	15
R8-NBH2084	35	15
BT40-NBH2084-100L	35	100
BT40-NBH2084-150L	35	150
BT40-NBH2084-200L	35	200
BT40-NBH2084-250L	35	250
BT50-NBH2084-100L	35	100
BT50-NBH2084-150L	35	150
BT50-NBH2084-200L	35	200
BT50-NBH2084-250L	35	250
BT50-NBH2084-300L	35	300
MT3-NBH2084	35	15
MT4-NBH2084	35	15
MT5-NBH2084	35	15
MT6-NBH2084	35	15
MTB3-NBH2084	35	15
MTB4-NBH2084	35	15
MTB5-NBH2084	35	15
MTB6-NBH2084	35	15

Model	Size (mm)	
	D	L
BT40-BST-70	50	70
BT40-BST-100	50	100
BT40-BST-150	50	150
BT40-BST-200	50	200
BT50-BST-100	50	100
BT50-BST-150	50	150
BT50-BST-200	50	200
BT50-BST-250	50	250
BT50-BST-300	50	300
BT50-BST-350	50	350
BT50-BST-400	50	400
BT50-BST-450	50	450
BT50-BST-500	50	500
SK40-BST-100	50	100
SK40-BST-150	50	150
SK50-BST-100	50	100
SK50-BST-150	50	150
SK50-BST-200	50	200
SK50-BST-250	50	250
SK50-BST-300	50	300
NT50-BST-100	50	100
NT50-BST-150	50	150

Model	Size (mm)	
	D	L
MT4-BST-100	50	100
MT5-BST-100	50	100
MT6-BST-100	50	100
MT6-BST-150	50	150
MT6-BST-200	50	200
MT6-BST-250	50	250

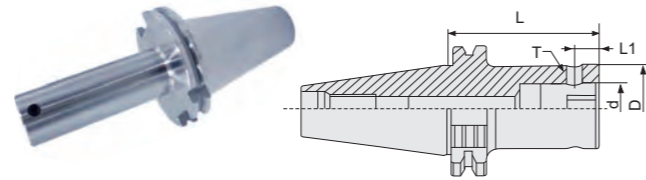
# NBH / BST Boring Tool Holder

## BT-LBK BT-LBK Boring Cutter Toolholder



Model	Size (mm)				SCREW		
	D	d	L1	L			
BT30	LBK1-70	19	11	5.05	75	230250	
	LBK1-105	19	11	5.05	105		
	LBK2-80	24	11	5.05	130		
	BT30251	LBK2-115	24	11	5.05	165	230251
		LBK3-80	31	11	5.05	195	
		LBK3-110	31	28	6.62	75	
	BT30252	LBK4-70	39	28	6.62	125	230252
		LBK4-115	39	28	6.62	175	
		LBK5-70	50	28	6.62	235	
	BT30253	LBK5-130	50	14	13	110	230254
		LBK6-60	64	14	13	140	
		LBK6-125	64	14	13	175	
BT40	LBK1-75	19	14	13	235	230250	
	LBK1-105	19	11	5.05	85		
	LBK1-130	19	11	5.05	115		
	BT40251	LBK1-165	19	14	6.62	150	230251
		LBK1-195	19	14	6.62	175	
		LBK2-85	24	18	8	220	
	BT40252	LBK2-115	24	18	8	95	230252
		LBK2-130	24	22	10	125	
		LBK2-165	24	22	10	155	
	BT40253	LBK2-200	24	28	13	210	230253
		LBK3-95	31	28	13	70	
		LBK3-125	31	36	16	105	
BT40254	LBK3-155	31	36	16	80	230254	
	LBK3-210	31	14	6.62	115		
	LBK4-85	39	14	6.62	80		
BT40255	LBK4-115	39	14	6.62	110	230255	
	LBK4-150	39	14	6.62	70		
	LBK4-175	39	14	6.62	115		
BT50	LBK4-220	39	22	10	70	230254	
	LBK5-75	50	22	10	130		
	LBK5-125	50	22	10	60		
	BT50251	LBK5-175	50	22	10	125	230255
		LBK5-235	50	22	10	85	
		LBK6-65	64	18	8	115	
	BT50252	LBK6-115	64	18	8	130	230255
		LBK6-165	64	18	8	165	
		LBK6-200	64	18	8	200	
	BT50253	LBK6-240	64	36	16	65	230255
		LBK1-115	19	36	16	115	
		LBK1-145	19	36	16	165	
BT50254	LBK1-175	19	36	16	200	230251	
	LBK1-200	19	36	16	240		
	LBK2-110	24	11	5.05	115		
BT50255	LBK2-140	24	11	5.05	145	230252	
	LBK2-175	24	11	5.05	175		
	LBK2-235	24	11	5.05	200		
BT50256	LBK3-125	31	28	13	105	230252	
	LBK3-155	31	28	13	180		
	LBK3-185	31	28	13	240		
	BT50257	LBK3-215	31	28	13	300	230252
		LBK3-255	31	28	13	350	
		LBK3-290	31	18	8	125	
	BT50258	LBK3-350	31	18	8	155	230253
		LBK4-115	39	18	8	185	
		LBK4-145	39	18	8	215	
	BT50259	LBK4-175	39	18	8	255	230253
		LBK4-205	39	18	8	290	
		LBK4-255	39	18	8	350	
BT50260	LBK4-305	39	22	10	115	230254	
	LBK4-355	39	22	10	145		
	LBK5-105	50	22	10	175		
BT50261	LBK5-180	50	22	10	205	230254	
	LBK5-240	50	22	10	255		
	LBK5-300	50	22	10	305		
BT50262	LBK5-350	50	22	10	355	230255	
	LBK6-95	64	36	16	95		
	LBK6-140	64	36	16	140		
BT50263	LBK6-170	64	36	16	170	230255	
	LBK6-230	64	36	16	230		
	LBK6-290	64	36	16	290		
BT50264	LBK6-400	64	36	16	400	230255	
	LBK6-450	64	36	16	450		
	LBK6-500	64	36	16	500		
BT50265	LBK6-550	64	36	16	550	230255	
	LBK6-600	64	36	16	600		
	LBK6-650	64	36	16	650		
BT50266	LBK6-700	64	36	16	700	230255	

## SK-LBK SK-LBK Boring Cutter Toolholder



Model	Size (mm)				SCREW	
	D	d	L1	L		
SK40	LBK1-105	19	11	5.05	105	230250
	LBK2-115	24	14	6.62	115	
	LBK3-125	31	18	8	125	
	LBK4-130	39	22	10	130	
	LBK5-125	50	28	13	125	
	LBK6-65	64	36	16	65	
SK50	LBK1-105	19	11	5.05	105	230250
	LBK2-115	24	14	6.62	115	
	LBK3-125	31	18	8	125	
	LBK4-130	39	22	10	130	
	LBK4-170	39	22	10	170	
	LBK5-125	50	28	13	125	
	LBK5-180	50	28	13	180	
	LBK5-240	50	28	13	240	
	LBK6-115	64	36	16	115	
	LBK6-170	64	36	16	170	
	LBK6-230	64	36	16	230	
	LBK6-290	64	36	16	290	

## HSK-LBK HSK-LBK Boring Cutter Toolholder



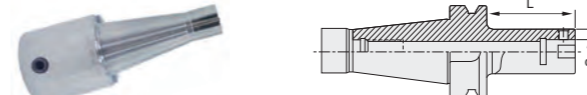
Model	Size (mm)				SCREW	
	D	d	L1	L		
HSK50A	LBK1-70	19	11	5.05	70	230250
	LBK2-80	24	14	6.62	80	
	LBK3-80	31	18	8	80	
	LBK4-70	39	22	10	70	
	LBK5-70	50	28	13	70	
	LBK6-90	64	36	16	90	
HSK63A	LBK1-75	19	11	5.05	75	230250
	LBK1-105	19	11	5.05	105	
	LBK1-135	19	11	5.05	135	
	LBK1-165	19	11	5.05	165	
	LBK2-85	24	14	6.62	85	
	LBK2-115	24	14	6.62	115	
	LBK2-130	24	14	6.62	130	
	LBK2-165	24	14	6.62	165	
	LBK3-95	31	18	8	95	
	LBK3-125	31	18	8	125	
	LBK3-155	31	18	8	155	
	LBK4-85	39	22	10	85	
HSK100A	LBK4-130	39	22	10	130	230253
	LBK4-175	39	22	10	175	
	LBK5-75	50	28	13	75	
HSK100A	LBK5-125	50	28	13	125	230254
	LBK5-175	50	28	13	175	
	LBK6-65	64	36	16	65	
HSK100A	LBK6-115	64	36	16	115	230255
	LBK6-165	64	36	16	165	
	LBK1-115	19	11	5.05	115	
HSK100A	LBK1-145	19	11	5.05	145	230250
	LBK2-110	24	14	6.62	110	
	LBK2-140	24	14	6.62	140	
HSK100A	LBK2-175	24	14	6.62	175	230251
	LBK3-125	31	18	8	125	
	LBK3-155	31	18	8	155	
HSK100A	LBK3-185	31	18	8	185	230252
	LBK3-215	31	18	8	215	
	LBK4-115	39	22	10	115	
HSK100A	LBK4-160	39	22	10	160	230253
	LBK4-205	39	22	10	205	
	LBK5-105	50	28	13	105	
HSK100A	LBK5-180	50	28	13	180	230254
	LBK5-240	50	28	13	240	
	LBK6-95	64	36	16	95	
HSK100A	LBK6-170	64	36	16	170	230255
	LBK6-230	64	36	16	230	
	LBK6-290	64	36	16	290	

## C20/25/32-LBK C20/25/32-LBK Boring Cutter Toolholder



Model	Size (mm)					SCREW	
	D1	D	d	L1	L		
C20-	LBK1-75	20	19	11	107.5	75	230250
	LBK2-70	20	24	14	105.5	70	
	LBK2-120	20	24	14	155.5	120	
	LBK3-70	20	31	18	110	70	
	LBK3-120	20	31	18	160	120	
	LBK4-60	20	39	22	117	60	
C25-	LBK4-110	20	39	22	157	110	230253
	LBK5-60	20	50	28	117	60	
	LBK5-120	20	50	28	177	120	
	LBK6-60	20	64	36	131	60	
	LBK6-120	20	64	36	191	120	
	LBK1-75	25	19	11	107.5	75	
LBK2-70	25	24	14	105.5	70		
LBK2-120	25	24	14	155.5	120		
LBK3-70	25	31	18	110	70		
LBK3-120	25	31	18	160	120		
LBK4-60	25	39	22	117	60		
C32-	LBK4-110	25	39	22	157	110	230253
	LBK5-60	25	50	28	117	60	
	LBK5-120	25	50	28	177	120	
	LBK6-60	25	64	36	131	60	
	LBK6-120	25	64	36	191	120	
	LBK1-75	32	19	11	107.5	75	
LBK2-70	32	24	14	105.5	70		
LBK2-120	32	24	14	155.5	120		
LBK3-70	32	31	18	110	70		
LBK3-120	32	31	18	160	120		
LBK4-60	32	39	22	117	60		
NT-LBK	LBK4-110	32	39	22	157	110	230253
	LBK5-60	32	50	28	117	60	
	LBK5-120	32	50	28	177	120	
	LBK6-60	32	64	36	131	60	
	LBK6-120	32	64	36	191	120	

## NT-LBK NT-LBK Boring Cutter Toolholder(Metric)

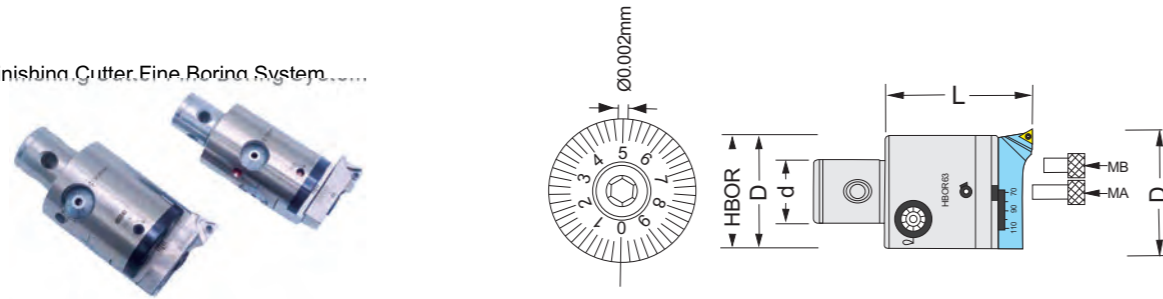


Model	Size (mm)				SCREW
	D	d	L	SCREW	
NT40-	LBK1-75	19	11	75	230250
	LBK2-85	24	14	85	
	LBK3-95	31	18	95	
	LBK4-85	39	22	85</	

# HBOR Precision Boring Cutter System

## HBOR

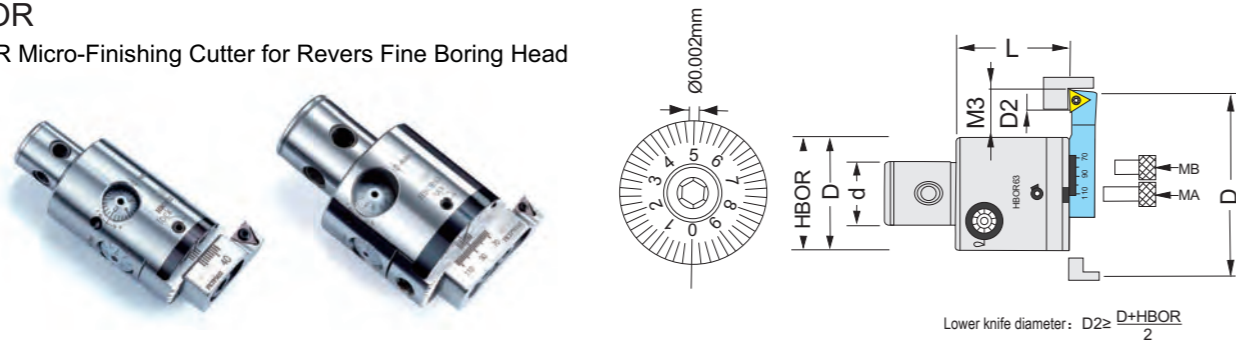
HBOR Micro-Finishing Cutter Fine Boring System



Model	Boring Range	Size (mm)			Assembly			Weight(kg)
		D	L	Body	MA	MB	Toolholder	
HBOR25M	29-38	25	50	HBOR25	M5x12		SRTP2938	0.16
HBOR32M	36-52	32	63	HBOR32	M6x12		SRTP3652	0.37
HBOR40M	44-68	40	63	HBOR40	M6x12		SRTP4468	0.53
HBOR50BM	57-90	50	80	HBOR50	BM8x20		SRTP5790	1.05
HBOR63BM1	70-110	63	80	HBOR63	BM8x20	M8x14	SRTP70110	1.65
HBOR63BM2	110-150	63	80	HBOR63	BM8x20	M8x14	SRTP110150	1.76

## HBOR

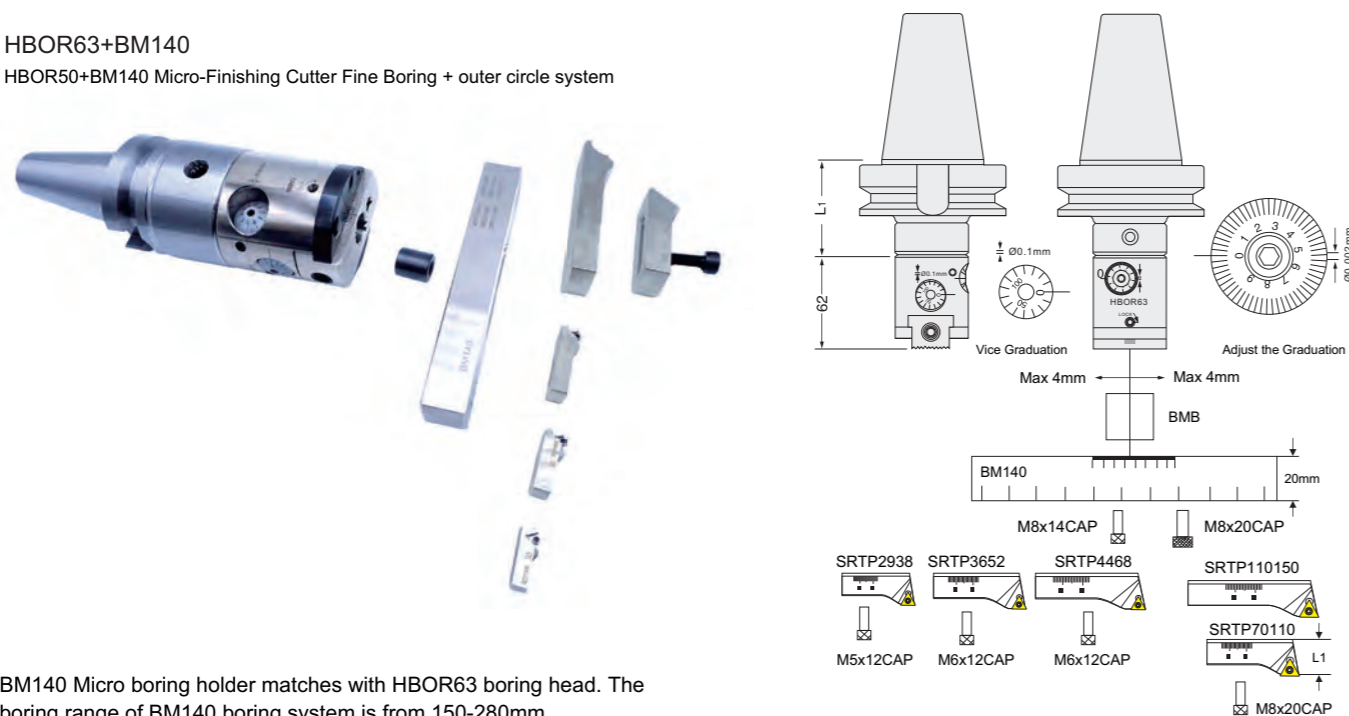
HBOR Micro-Finishing Cutter for Revers Fine Boring Head



Model	Boring Range	Size (mm)			Assembly			Weight(kg)	
		M3	M2	D	Body	MA	MB		Toolholder
HBOR25 MK	29-38	50	42	25	HBOR25	M5x12		FKTP2938	0.16
HBOR32 MK	36-52	63	52.5	32	HBOR32	M6x12		FKTP3652	0.37
HBOR40 MK	44-68	63	53	40	HBOR40	M6x12		FKTP4468	0.53
HBOR50 BMK	57-90	80	64.5	50	HBOR50	BM8x20		FKTP5790	1.05
HBOR63 BMK1	70-110	80	62.5	63	HBOR63	BM8x20	M8x14	FKTP70110	1.65
HBOR63 BMK2	110-150	80	62.5	63	HBOR63	BM8x20	M8x14	FKTP110150	1.76

## HBOR63+BM140

HBOR50+BM140 Micro-Finishing Cutter Fine Boring + outer circle system



BM140 Micro boring holder matches with HBOR63 boring head. The boring range of BM140 boring system is from 150-280mm.

## HBOR25

HBOR25 Micro-Finishing Cutter Fine Boring System

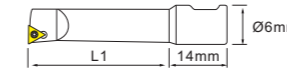
Model	Size (mm)		Weight(kg)
	L1	Ød	
BT30-HBOR25P	35		0.63
BT40-HBOR25P	40		1.22
SK30-HBOR25P	30		0.58
SK40-HBOR25P	30		0.72
HSK63-HBOR25P	40		0.92

Carbide small boring cutter



Model	Range	Size (mm)		Weight(kg)
		L1	Ød	
CA0602-09T	2-3.2	9	2	0.01
CA0603-16T	3-4.2	16	3	0.01
CA0604-22T	5-5.2	22	4	0.02
CA0605-27T	5-6.2	27	5	0.02
CA0606-32T	6-7.2	32	6	0.02

Carbide anti vibration Toolholder



Model	Range	L1	Insert	Screw	Wrench	Weight(kg)
CB06050-21	5-6	21				0.008
CB06055-26	5.5-6.5	26	CC..03..	230256	230052	0.010
CB06060-26	6-7	26				0.011
CB06065-31	6.5-7.5	31				0.015
CB06070-31	7-8	31	CC..04..	230066	230052	0.016

## HBOR32

HBOR32 Micro-Finishing Cutter Fine Boring System

Model	Size (mm)		Weight(kg)
	L1	Ød	
BT30-HBOR32P	35		0.76
BT40-HBOR32P	40		1.35
SK30-HBOR32P	35		0.71
SK40-HBOR32P	35		1.30
HSK63-HBOR32P	40		1.32

Carbide small boring cutter

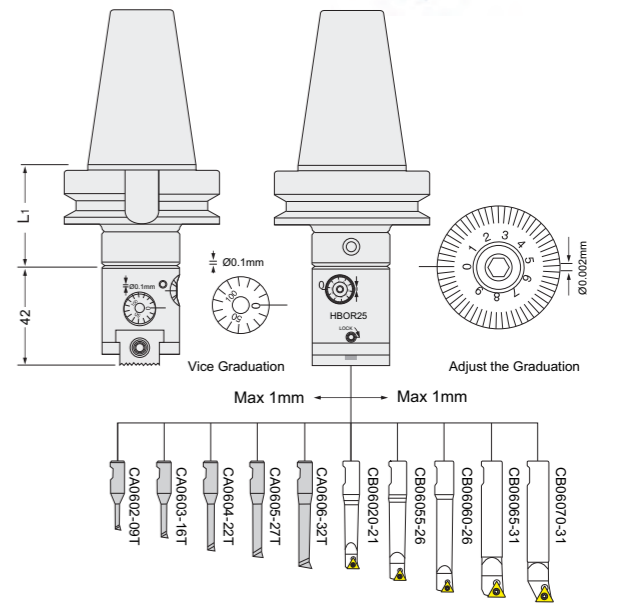


Model	Range	Size (mm)		Weight(kg)
		L1	Ød	
CA0802-09T	2-3.2	9	2	0.03
CA0803-16T	3-4.2	16	3	0.03
CA0804-22T	5-5.2	22	4	0.03
CA0805-27T	5-6.2	27	5	0.04
CA0806-32T	6-7.2	32	6	0.04
CA0807-37T	7-8.2	37	7	0.04
CA0808-42T	8-9.2	42	8	0.05

Carbide anti vibration Toolholder



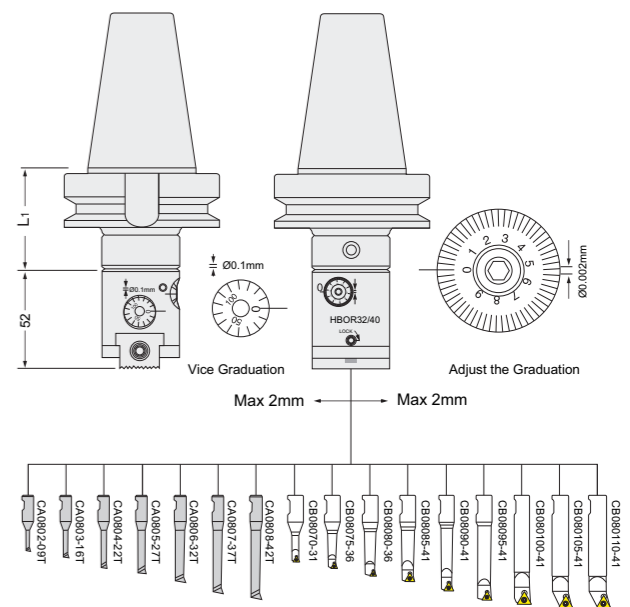
Model	Range	L1	Insert	Screw	Wrench	Weight(kg)
CB08070-31	7-8	31				0.020
CB08075-36	7.5-8.5	36				0.025
CB08080-36	8-9	36				0.030
CB08085-41	8.5-9.5	41				0.035
CB08090-41	9-10	41	CC..04..	230066	230052	0.040
CB08095-41	9.5-10.5	41				0.040
CB08100-41	10-11	41				0.040
CB08105-41	10.5-11.5	41				0.040
CB08110-41	11-12	41				0.040



## HBOR40

HBOR40 Micro-Finishing Cutter Fine Boring System

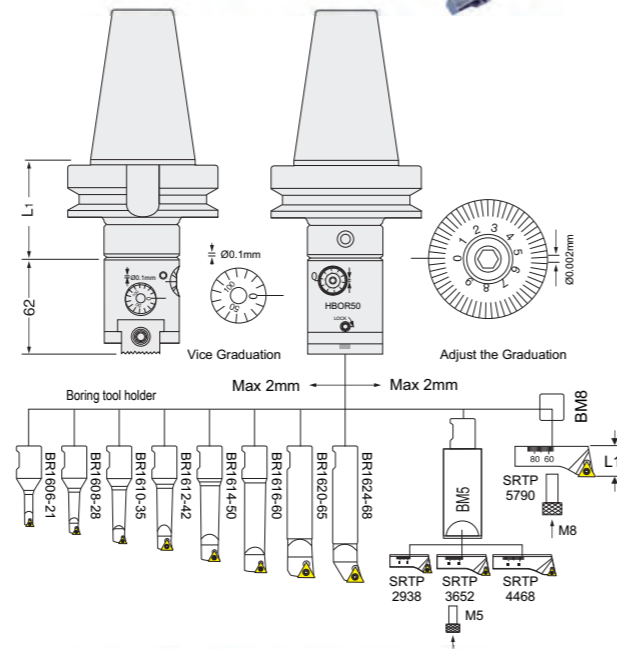
Model	Size (mm)		Weight(kg)
	L1	Ød	
BT30-HBOR40P	35		0.95
BT40-HBOR40P	40		1.34
SK30-HBOR40P	35		0.9
SK40-HBOR40P	35		1.29
HSK63-HBOR40P	45		0.92



# HBOR Precision Boring Cutter System

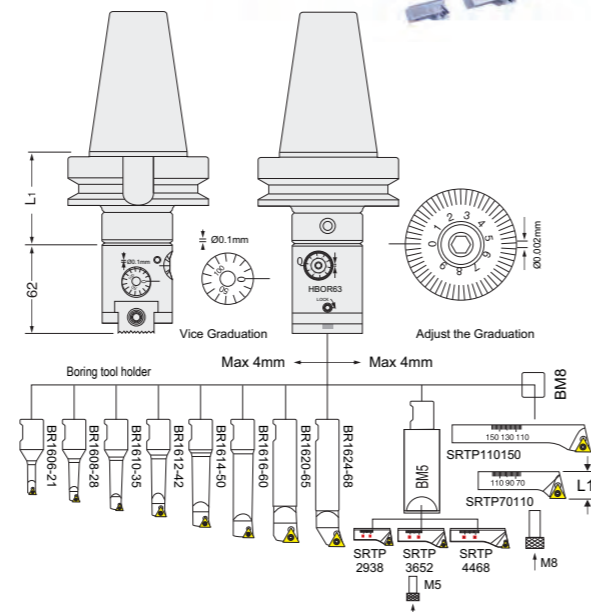
## HBOR50 HBOR50 Micro-Finishing Cutter Fine Boring System

Model	Range	L1	Weight(kg)
BT30-HBOR50-14P	06-90	70	5.84
BT40-HBOR50-14P	06-90	75	6.42
BT50-HBOR50-14P	06-90	90	9.07
SK30-HBOR50-14P	06-90	55	5.97
SK40-HBOR50-14P	06-90	50	6.39
SK50-HBOR50-14P	06-90	50	8.62
HSK63-HBOR50-14P	06-90	50	6.13



## HBOR63 HBOR63 Micro-Finishing Cutter Fine Boring System

Model	Range	L1	Weight(kg)
NT40-HBOR63-15P	06-150	65	7.2
NT50-HBOR63-15P	06-150	95	9.8
BT40-HBOR63-15P	06-150	65	7.2
BT50-HBOR63-15P	06-150	95	9.8
SK40-HBOR63-15P	06-150	65	7.2
SK50-HBOR63-15P	06-150	95	9.0
HSK63-HBOR63-15P	06-150	65	7.0



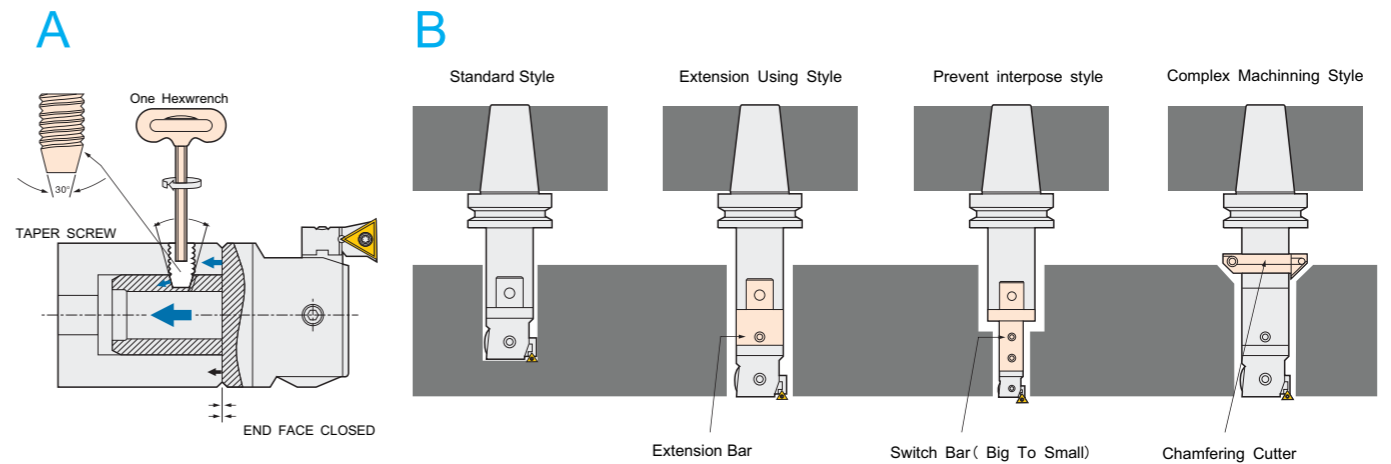
### Cutting Insert Toolholder



Model	Range	L1	Insert	Screw	Wrench	Weight (kg)
BR1606-21	6-9	21	WB..06..	230066	230052	0.04
BR1608-28	8-11	28	TB..06..	230066	230052	0.04
BR1610-35	10-13	38				0.05
BR1612-42	12-15	42				0.06
BR1614-50	14-17	50	TP..09..	230074	230054	0.07
BR1616-60	16-20	60				0.09
BR1620-65	20-24	65				0.11
BR1624-68	24-28	68	TP..11..	230078	230054	0.12
BMS	-	60+				0.25
SRTP2938	28-38	+10				0.01
SRTP3652	36-52	+12	TP..09..	230074	230054	0.02
SRTP4468	44-68	+12				0.03
BM8	-	-				0.03
SRTP5790	57-90	+20				0.10
SRTP70110	70-110	+20	TP..11..	230078	230054	0.10
SRTP110150	110-150	+20				0.21
BM140	-	20+				0.50

## CBH CBH Modular Boring Tool

HIGH PRECISION,BIG POWER AND EASY OPERATION-THE BEST CONNECTION STYLE

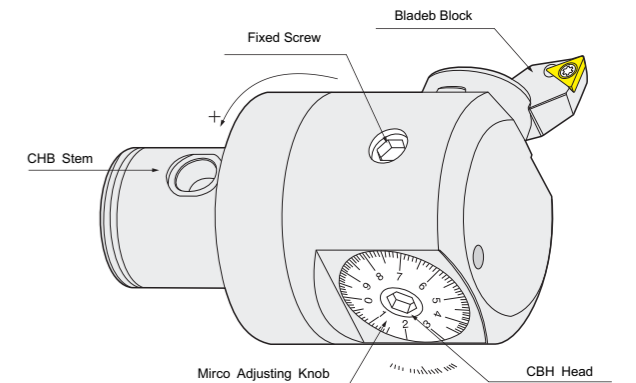


1. Depending on the 30 degree tapered screw, the tightening force is converted into axial tension, so that the end face of the boring cutter and the end face of the main body are closely connected. (as shown in figure a)
2. Modular design, free to set machining diameter and effective machining depth, matching. The change-over joint (large joint and small joint) reduces the tool diameter, which ensures the rigidity,It can also prevent interference, and can be freely combined into the most suitable boring tool (as shown in Fig. b) with the chamferer
3. Because the connection precision between boring head and body is very high, it is necessary to seal the boring head separately, which can reduce the labor intensity, improve the working efficiency and reduce the comprehensive cost.

## CBH The Name Of The Main Part Of Products With CBH

### Sequence of use

Please Operate The Following Step(1-5)according To The Diagram Figured



1. Loosen the fixing screw
2. Turn the knob clockwise to increase the machining diameter, and adjust the knob scale to  $\varnothing 0.1\text{mm}$ .
3. Turn the knob anticlockwise to reduce the machining diameter.
4. When adjusting the dimension processing, please make fine adjustment in the same direction to ensure the precision of fine adjustment.
5. When fine tuning to the required size, please lock the fixing screw with proper torque.

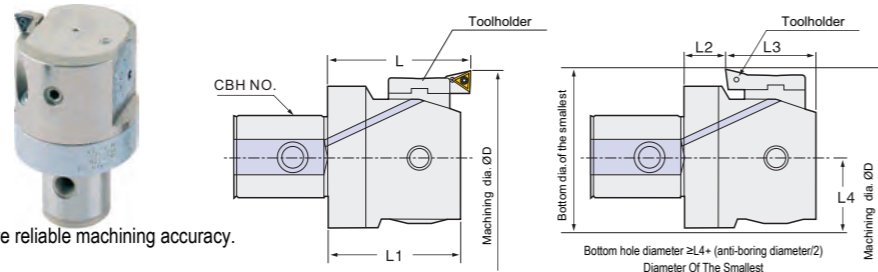
### Notices of the user

1. Please use in the processing range.
2. When the sliding seat is locked, do not rotate the adjustment knob, otherwise the adjustment mechanism will be damaged.
3. For the fixation of sliding seat, please use a special spanner to ensure that the fixing screw is locked with proper torque. Over locking will lead to displacement of seat body, and over loosening will lead to poor accuracy.
4. This product is made of precision screw and moving blade seat to rotate the adjusting knob. If the resistance is very large or it cannot be moved, please stop adjusting and ensure the following items:
  - ① Whether the fixing screw is loosened
  - ② Whether the adjustment range is exceeded
  - ③ When the adjustment knob is rotated excessively, the interior of the body will be damaged



# CBH Precision Boring Cutter System

## CBH CBH Micro Boring Head



Cold water outlet hole in the center belt.  
Dynamic balance structure, high speed can also achieve reliable machining accuracy.  
Can reverse boring processing, increase added value.

Model	Boring			Reverse Boring			Assembly							Weight (kg)
	L1	L	Range	L4	L2	L3	Range	Holder	Head	Toolholder	Insert	Screw	Wrench	
CBH20-1	29.5	32.5	20-26	10	10.5	19	-	LBK1	CBH20	CBH1-1				0.07
CBH20-2	29.5	32.5	25-31	10	10.5	19	30-31	LBK1	CBH20	CBH1-2				0.07
CBH20-3	29.5	32.5	30-36	10	10.5	19	30-36	LBK1	CBH20	CBH1-3				0.07
CBH25-1	32.5	35.5	25-33	12.5	11.5	21	-	LBK2	CBH25	CBH2-1				0.12
CBH25-2	32.5	35.5	32-40	12.5	11.5	21	36-40	LBK2	CBH25	CBH2-2	TP..0802..	230072	230052	0.12
CBH25-3	32.5	35.5	39-47	12.5	11.5	21	39-47	LBK2	CBH25	CBH2-3				0.12
CBH32-1	35	40	32-42	16	10	25	-	LBK3	CBH32	CBH3-1				0.21
CBH32-2	35	40	41-51	16	10	25		LBK3	CBH32	CBH3-2				0.21
CBH32-3	35	40	50-60	16	10	25	50-60	LBK3	CBH32	CBH3-3				0.21
CBH41-1	43	47	41-54	20	14	29		LBK4	CBH41	CBH4-1				0.40
CBH41-2	43	47	50-63	20	14	29	53-63	LBK4	CBH41	CBH4-2				0.40
CBH41-3	43	47	61-74	20	14	29		LBK4	CBH41	CBH4-3				0.40
CBH53-1	53	57	53-70	25.5	19	34	62-70	LBK5	CBH53	CBH5-1				1.10
CBH53-2	53	57	65-82	25.5	19	34		LBK5	CBH53	CBH5-2				1.10
CBH53-3	53	57	78-95	25.5	19	34	78-95	LBK5	CBH53	CBH5-3				1.10
CBH68-1	67.2	71	68-100	32.5	22	45.2		LBK6	CBH68	CBH6-1	TC..1102..	230074	230054	1.47
CBH68-2	67.2	71	94-126	32.5	22	45.2	94-126	LBK6	CBH68	CBH6-2				1.47
CBH68-3	67.2	71	118-150	32.5	22	45.2		LBK6	CBH68	CBH6-3				1.47
CBH100-1	67.2	71	100-153	45.5	22	45.2	112-153	LBK6	CBH100	CBH6-1				2.46
CBH100-2	67.2	71	126-179	45.5	22	45.2		LBK6	CBH100	CBH6-2				2.46
CBH100-3	67.2	71	150-203	45.5	22	45.2	150-203	LBK6	CBH100	CBH6-3				2.46

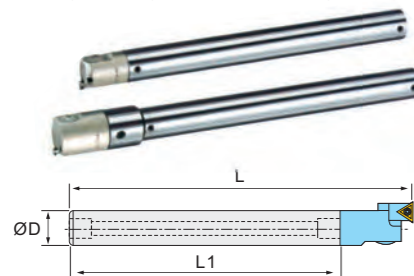
## CBH CBH Large diameter space aluminum fine tuning precision boring head (reducing heavy)



Boring Range Ø200-Ø910mm

Model	Boring			Assembly							Weight (kg)		
	C	L	Range	Flange	Extension Slide	Balance weight	Holder	Head	Toolholder	Insert		Screw	Wrench
CBH200-310	190	80	200-310	BR200	RST200								4.1
CBH300-410	290	80	300-410	BR200	RST300								4.9
CBH400-510	390	80	400-510	BR200	RST400								5.9
CBH500-610	490	80	500-610	BR200	RST500	RBN200	BST	CBH41-1	CBH4-1	TC..1102..	230074	230054	6.9
CBH600-950	590	80	600-950	BR600	RST300								7.9
CBH900-1250	690	80	900-1250	BR900	RST300								10.0

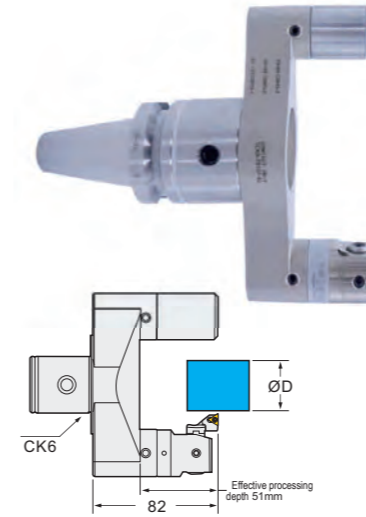
## FC FC integral tungsten steel boring bar



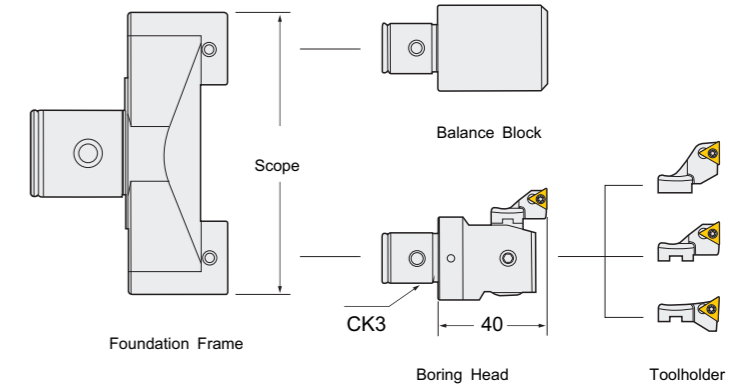
Model	Size (mm)			Combined boring head	Boring range	Weight (kg)
	ØD	L	L1			
FC19-LBK1-150	19	182.5	150			0.8
FC19-LBK1-200	19	232.5	200	CBH20	20-26	1.0
FC19-LBK1-250	19	282.5	250			1.2
FC19-LBK1-300	19	332.5	300			1.35
FC24-LBK2-200	24	235.5	200			1.35
FC24-LBK2-250	24	285.5	250	CBH25	25-33	1.9
FC24-LBK2-300	24	335.5	300			2.5
FC32-LBK3-200	32	240	200			2.2
FC32-LBK3-250	32	290	250			2.8
FC32-LBK3-300	32	340	300	CBH32	32-42	3.5
FC32-LBK3-350	32	400	350			4.2
FC32-LBK3-400	32	450	400			4.9

- The boring bar made of superhard tungsten carbide is made of high cutting edge formula. It is tough and durable. It can achieve high hardness, high rigidity and high seismic resistance. It can be used for ultra deep hole processing (10d).
- All kinds of specifications have internal water holes, and the chip removal and cooling effect are good during deep hole processing.
- The straight handle structure and processing depth can be adjusted according to the processing requirements.

## CBH-M CBH-M External boring cutter

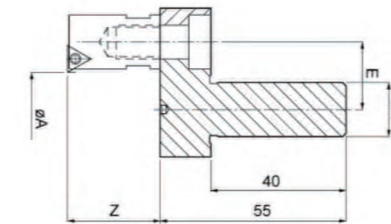


CBH-M large diameter boring cutter can be installed reversely for boring outer circle  
Processing range Ø 116 - Ø 200



Model	Range	Assembly					
		Toolholder	Foundation Frame	Head	Insert	Screw	Wrench
CBH-M23-33	23-33	CBH3-3	CK6-2351-42				
CBH-M32-42	32-42	CBH3-2	Interference range=114mm				
CBH-M41-51	41-51	CBH3-1					
CBH-M51-61	51-61	CBH3-3	CK6-5179-42				
CBH-M60-71	60-71	CBH3-2	Interference range=142mm	CBH32	TP..0802..	230072	230052
CBH-M69-79	69-79	CBH3-1					
CBH-M79-89	79-89	CBH3-3	CK6-79107-42				
CBH-M88-98	88-98	CBH3-2	Interference range=170mm				
CBH-M97-107	97-107	CBH3-1					

## CBR20, CBR30 CBR20, CBR30 combined cylindrical bore components (bore range is 5- 52mm)



Head	A Range	Flange	Size (mm)			Assembly		
			eccentric E	depth Z	Shank ØD	Insert	Screw	Wrench
BE36A	5-14							
BE34A	7-16							
BE32A	9-18							
BE30A	11-20							
BE28A	13-22	C16-CBR20	20	27	16	TP..0802..	230072	230052
BE26A	15-24							
BE24A	17-26							
BE22A	19-28							
BE20A	21-30							
BE18A	23-32							
BE36A	25-34							
BE34A	27-36							
BE32A	29-38							
BE30A	31-40							
BE28A	33-42	C16-CBR30	30	27	16	TP..0802..	230072	230052
BE26A	35-44							
BE24A	37-46							
BE22A	39-48							
BE20A	41-50							
BE18A	43-52							

Head	A Range	Flange	Size (mm)			Assembly		
			eccentric E	depth Z	Shank ØD	Insert	Screw	Wrench
BE36A	5-14							
BE34A	7-16							
BE32A	9-18							
BE30A	11-20							
BE28A	13-22	C20-CBR20	20	27	20	TP..0802..	230072	230052
BE26A	15-24							
BE24A	17-26							
BE22A	19-28							
BE20A	21-30							
BE18A	23-32							
BE36A	25-34							
BE34A	27-36							
BE32A	29-38							
BE30A	31-40							
BE28A	33-42	C20-CBR30	30	27	20	TP..0802..	230072	230052
BE26A	35-44							
BE24A	37-46							
BE22A	39-48							
BE20A	41-50							
BE18A	43-52							

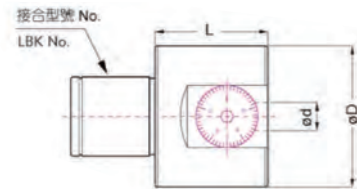
C16-CBR20, CBR30 for CBR16 lining hole to lined cylindrical component  
C20-CBR20, CBR30 CBR2084 for lining lining hole cylindrical component

# CBI Precision Boring Cutter System

## CBI

CBI diameter micro adjusting boring cutter series (bore range Ø3- Ø50mm)

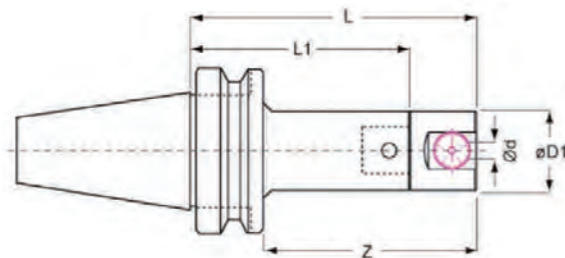
- There are three options for CBI small-diameter fine lining knife, which is generally used for the use of  $\phi 3 - \phi 50$ mm small hole. For example, if the full tungsten steel small-diameter lining knife rod is used, the  $\phi 3-14 \phi$  mm small hole can be processed.
- Adjust the scale to 50 equal parts of the circumference, adjust the size of each grid to 0.01mm diameter, and adjust the auxiliary ruler more precisely.
- The precision path screw is located in the interior, not affected by cutting, abrasion, rust, etc., with internal lubrication and durable finish.



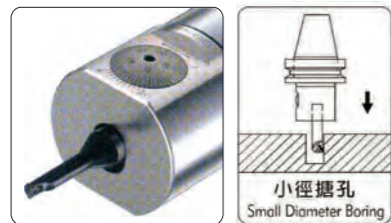
Model	LBK No	Range	Fine tuning	Size (mm)			Weight (kg)
				Ød	ØD	L	
CBI4	LBK4	8-24	0-2.0	10	39	32	0.4
CBI5	LBK5	8-27	0-3.5	12	50	40	0.8
NBJ16	LBK6	8-50	0-6.0	16	64	50	1.2

## CBI

CBI small diameter fine tuning fine boring tool + LBK Toolholder (MAS 403 BT) + small diameter boring bar BJ series



Model	Boring			Reverse Boring				Assembly			Weight (kg)
	F	Z	LBK NO	L	L1	ØD1	Range	Holder	Head	Toolholder	
BT30-CBI4-BJ10-6PCS	0-2.0	45	4	77	45	39	8-24	BT30-LBK4-45	CBI4	BJ10-5PCS	1.9
BT30-CBI5-BJ12-6PCS	0-3.5	65	5	105	65	50	8-27	BT30-LBK5-65	CBI5	BJ12-5PCS	2.3
BT40-CBI4-BJ10-6PCS	0-2.0	50	4	82	50	39	8-24	BT40-LBK4-50	CBI4	BJ10-5PCS	2.4
BT40-CBI5-BJ12-6PCS	0-3.5	75	5	90	75	50	8-27	BT40-LBK5-75	CBI5	BJ12-5PCS	2.8
BT50-CBI4-BJ10-6PCS	0-2.0	115	4	147	115	39	8-24	BT50-LBK4-115	CBI4	BJ10-5PCS	5.4
BT50-CBI5-BJ12-6PCS	0-3.5	90	5	130	90	50	8-27	BT50-LBK5-90	CBI5	BJ12-5PCS	6.0



## CBI4 BJ

CBI4 special small diameter boring bar BJ type (boring range Ø 8-Ø 24mm)

Model	Size (mm)				Insert	Screw	Wrench	Fig	Weight (kg)
	Ød	ØD	L	L2					
BJ1006-24	6-9	10	64	24	WB..06..	230066	230052	1	0.020
BJ1008-32	8-10	10	64	32	TB..06..				0.025
BJ1010-40	10-12	10	72	40					0.035
BJ1012-45	12-16	10	77	45	TP..09..	230074	230054	2	0.045
BJ1016-45	16-20	10	77	22					0.045
BJ1020-45	20-25	10	77	25					0.045

## CBI5 BJ

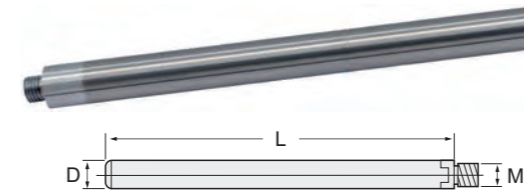
CBI5 special small diameter boring bar BJ type (boring range Ø 8-Ø 27mm)

Model	Size (mm)				Insert	Screw	Wrench	Fig	Weight (kg)
	Ød	ØD	L	L2					
BJ1206-24	6-9	12	64	24	WB..06..	230066	230052	1	0.020
BJ1208-32	8-10	12	64	32	TB..06..				0.025
BJ1210-40	10-12	12	72	40					0.035
BJ1212-45	12-16	12	77	45	TP..09..	230074	230054	2	0.045
BJ1216-45	16-20	12	77	22					0.045
BJ1220-45	20-25	12	77	25					0.045

※ When machining path of boring bar with 3 times the diameter of stickout is preferred.

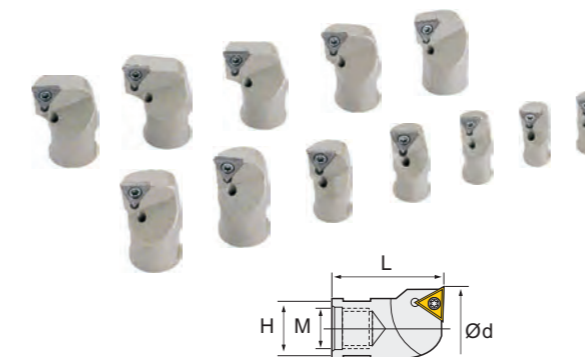
## ST

ST Shockproof tungsten steel pole



## BE

BE Combined boring head



Model	Range	Modular Boring	Size (mm)		
			M	ØD	L
ST 08-W5-100	9-13	BE09, BE10.5	M5	8	100
08-W5-145	9-13	BE09, BE10.5	M5	8	145
10-W6-120	12-15	BE12	M6	10	120
10-W6-160	12-15	BE12	M6	10	160
12-W6-120	14-17	BE14, BE16	M6	12	120
12-W6-160	14-17	BE14, BE16	M6	12	160
14-W6-160	16-20	BE16	M6	14	160
14-W6-200	16-20	BE16	M6	14	200
16-W10-160	18-42	BE18-BE40	M10	16	160
16-W10-200	18-42	BE18-BE40	M10	16	200

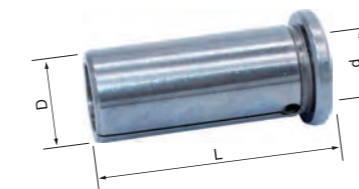
When the boring depth is less than six times of the shank diameter, the anti-seismic effect is better.

Model	Size (mm)				Insert	Screw	Wrench
	Ød	H	L	M			
BE09A	9	7	18	M5	TP..08..	230070	230053
BE10.5A	10.5	7	18	M5			
BE12A	12	8	23	M6			
BE14A	14	10	23	M6			
BE16A	16	10	23	M6			
BE18A	18	14	27	M10			
BE20A	20	14	27	M10			
BE22A	22	14	27	M10			
BE24A	24	14	27	M10			
BE26A	26	14	27	M10			
BE28A	28	14	27	M10			
BE30A	30	14	27	M10			
BE32A	32	14	27	M10			
BE34A	34	14	27	M10			
BE36A	36	14	27	M10			
BE38A	38	14	27	M10			
BE40A	40	14	27	M10			

Note: The above three accessories can be used with boring heads CBI4, CBI5, CBI6, NBJ16, and NBH2084.

## CBI/NBJ/NBH

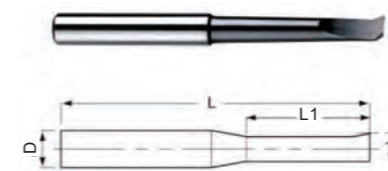
CBI / NBJ / NBH Special Conversion Collet



Model	Size (mm)			RMB	Model	Size (mm)		
	Ød	ØD	L			Ød	ØD	L
CBI 10-4	4	10	35	250	NBJ 16-4	4	16	37
	6	10	35	250	16-6	6	16	37
	8	10	35	250	16-8	8	16	37
	10	10	35	250	16-10	10	16	37
CBI 12-4	4	12	35	250	16-12	12	16	37
	6	12	35	250	16-14	14	16	37
CBI 12-6	6	12	35	250	NBH 2084-8	8	20	37
	8	12	35	250	2084-10	10	20	37
	10	12	35	250	2084-12	12	20	37
	12	12	35	250	2084-16	16	20	37

## CBI

CBI Series special small diameter carbide boring cutter

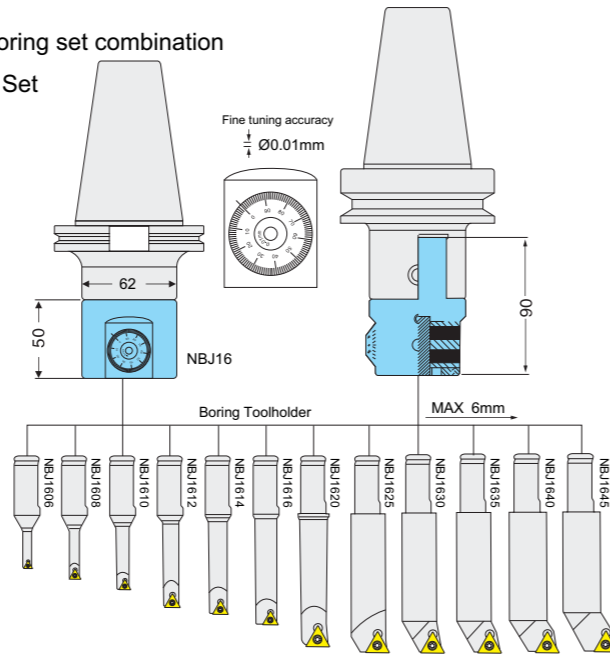


Model	Size (mm)			Boring Range				Weight (kg)
	ØD	L	L1	Ød min	CBI4 max	CBI5 max	CBI6 max	
CBI 0403-15	4	50	15	3	7	10	13	0.015
CBI 0404-20	4	50	20	4	8	11	14	0.015
CBI 0605-25	6	60	25	5	9	12	15	0.020
CBI 0606-30	6	60	30	6	10	13	16	0.020
CBI 0808-35	8	75	35	8	12	15	18	0.055
CBI 1010-40	10	75	40	10	14	17	20	0.060

# NBJ16/NBH2084 Boring Tool Set

## NBJ-16

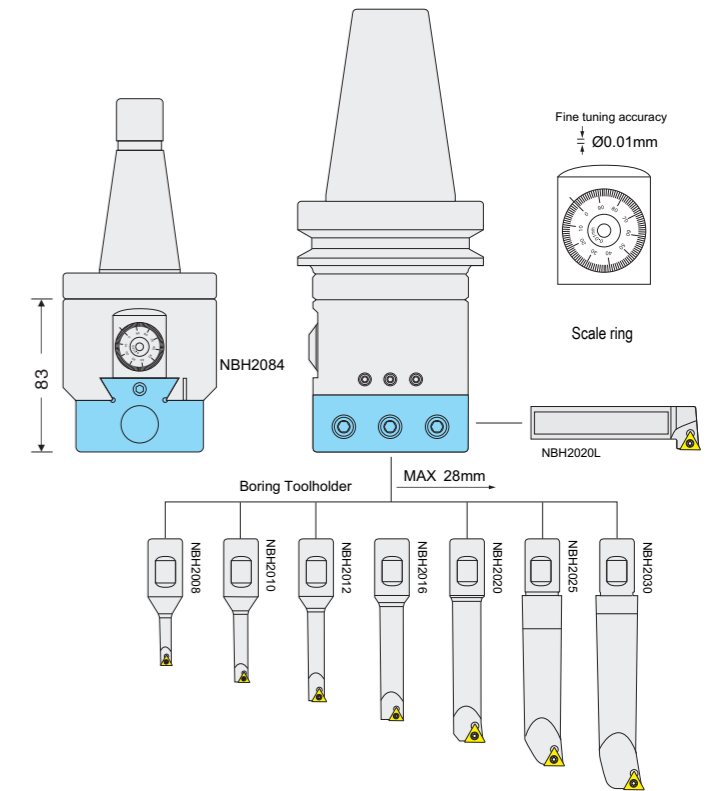
### NBJ-16 Fine tuning fine boring set combination NBJ-16 Micro Boring Set



Model	RMB	Model
NT30-NBJ16-8P	2000	HSK63A-NBJ16-8P
NT40-NBJ16-8P	2000	HSK100A-NBJ16-8P
NT50-NBJ16-8P	2200	CAT40-NBJ16-8P
BT30-NBJ16-8P	2000	CAT50-NBJ16-8P
BT40-NBJ16-8P	2000	C32-BSJ16-8P
BT50-NBJ16-8P	2200	MT4-NBJ16-8P
SK40-NBJ16-8P	2000	MT5-NBJ16-8P
SK50-NBJ16-8P	2200	MT6-NBJ16-8P
R8-NBJ16-8P	2000	C20-NBJ16-8P

## NBH2084

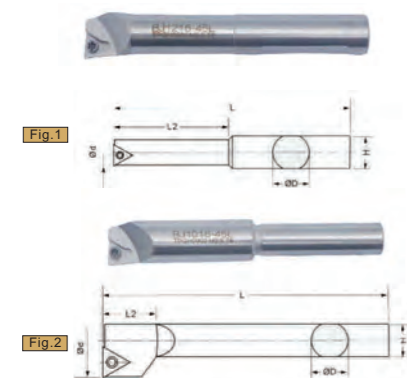
### NBH2084 Fine tuning fine boring set combination



Model	Weight (kg)
R8-NBH2084-8P	10.0
NT30-NBH2084-8P	8.4
NT40-NBH2084-8P	9.3
NT50-NBH2084-8P	10.8
BT40-NBH2084-8P	9.5
BT50-NBH2084-8P	12.0

## NBJ16 NBJ

NBJ16 special small diameter boring bar NBJ type (boring range Ø 8-Ø 50mm)

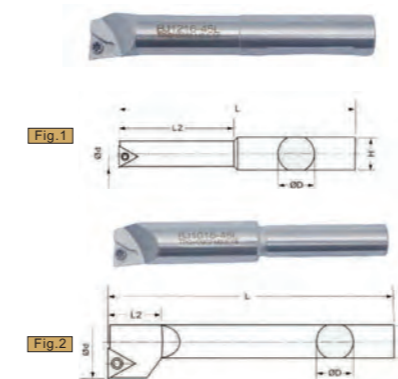


Model	Size (mm)				Insert	Screw	Wrench	Fig	Weight (kg)
	Ød	ØD	L	L2					
NBJ1606-24	6-9	16	62	24	WB..06..				0.077
<b>NBJ1608-32</b>	8-11	16	80	32	TB..06..	230066	230052	1	0.077
NBJ1608-90	8-11	16	138	90					0.100
<b>NBJ1610-40</b>	10-13	16	87	40	TP..09..	230074	230054	1	0.082
NBJ1610-90	10-13	16	138	90					0.110
<b>NBJ1612-53</b>	12-15	16	98	53	TP..11..	230078	230054	2	0.095
NBJ1612-90	12-15	16	138	90					0.130
NBJ1614-60	14-17	16	108	60	TP..09..	230074	230054	1	0.110
NBJ1614-100	14-17	16	148	100					0.155
<b>NBJ1616-68</b>	16-21	16	110	68	TP..11..	230078	230054	2	0.143
NBJ1616-100	16-21	16	148	100					0.210
NBJ1616-120	16-21	16	168	120	TP..11..	230078	230054	2	0.260
NBJ1616-150	16-21	16	198	150					0.290
<b>NBJ1620-83</b>	20-26	16	125	83	TP..11..	230078	230054	2	0.203
NBJ1620-150	20-26	16	198	150					0.300
NBJ1620-200	20-26	16	248	200	TP..11..	230078	230054	2	0.390
<b>NBJ1625-90</b>	25-31	16	128	90					0.275
NBJ1625-150	25-31	16	198	150	TP..11..	230078	230054	2	0.390
NBJ1625-200	25-31	16	248	200					0.510
<b>NBJ1630-90</b>	30-36	16	128	90	TP..11..	230078	230054	2	0.275
NBJ1630-150	30-36	16	198	150					0.415
NBJ1630-200	30-36	16	248	200	TP..11..	230078	230054	2	0.520
NBJ1635-90	35-41	16	128	90					0.283
<b>NBJ1640-90</b>	40-46	16	128	90	TP..11..	230078	230054	2	0.286
NBJ1645-90	45-51	16	128	90					0.310

※ 1. The black mark specification is the common specification of the set.  
2. When machining path of boring bar with 3 times the diameter of stickout is preferred.

## NBH20 NBH

NBH20 special small diameter boring bar NBH type (boring range Ø 8-Ø 280mm)

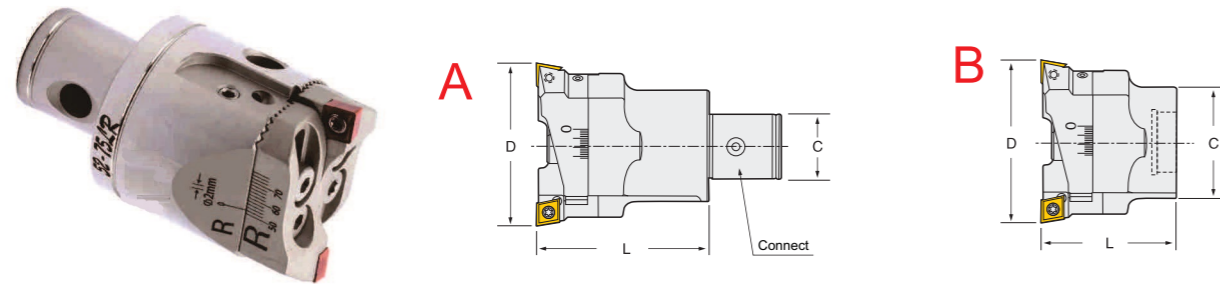


Model	Size (mm)				Insert	Screw	Wrench	Fig	Weight (kg)
	Ød	ØD	L	L2					
NBH2008-32	8-11	20	80	32	TB..06..	230066	230052	1	0.095
NBH2008-90	8-11	20	140	90					0.135
<b>NBH2010-40</b>	10-13	20	87	40	TP..09..	230074	230054	1	0.095
NBH2010-90	10-13	20	140	90					0.139
<b>NBH2012-53</b>	12-17	20	98	53	TP..09..	230074	230054	1	0.12
NBH2012-90	12-17	20	140	90					0.175
<b>NBH2016-68</b>	16-21	20	110	68	TP..11..	230078	230054	2	0.16
NBH2016-100	16-21	20	150	100					0.24
NBH2016-150	16-21	20	200	150	TP..11..	230078	230054	2	0.31
<b>NBH2020-83</b>	20-130	20	123	83					0.22
NBH2020-125	20-130	20	175	125	TP..11..	230078	230054	2	0.31
NBH2020-150	20-130	20	200	150					0.40
NBH2020-200	20-130	20	250	200	TP..11..	230078	230054	2	0.50
NBH2020-250	20-130	20	300	250					0.60
<b>NBH2025-96</b>	25-135	20	137	96	TP..11..	230078	230054	2	0.34
NBH2025-150	25-135	20	200	150					0.55
NBH2025-200	25-135	20	250	200	TP..11..	230078	230054	2	0.65
NBH2025-250	25-135	20	300	250					0.77
<b>NBH2030-115</b>	30-140	20	152	115	TP..11..	230078	230054	2	0.54
NBH2030-150	30-140	20	200	150					0.72
NBH2030-200	30-140	20	250	200	TP..11..	230078	230054	2	0.91
NBH2030-250	30-140	20	300	250					1.09
<b>NBH2020-L</b>	120-200	20	100	16	TP..11..	230078	230054	2	0.23
NBH2020L20-150	160-280	20	150	20					0.34
NBH2020L20-200	280-330	20	200	20	0.41				

※ 1. The black mark specification is the common specification of the set.  
2. When machining path of boring bar with 3 times the diameter of stickout is preferred.

# TWE / RBH Double Edge Rough Boring

**TWE**  
TWE Saw tooth type double edge rough boring head  
Boring Range 20-204mm



Model	Connect	Size (mm)			Boring Range	Insert	Screw	Wrench	Weight(kg)
		Fig	C	L					
TWE2026-C	LBK1	A	19	30	20-26	CC..0602..	230074	230054	0.1
TWE2533-C	LBK2	A	24	40	25-33				0.2
TWE3242-C	LBK3	A	31	50	32-42				0.3
TWE4054-C	LBK4	A	39	60	40-54	CC..09T3..	230090	230057	0.5
TWE5270-C	LBK5	A	50	70	52-70				0.8
TWE6895-C	LBK6	A	64	90	68-95				1.6
TWE90122-C	LBK6	A	95	100	90-122	CC..1204..	230101	230058	2.8
TWE120164-C	BST	B	95	120	120-164				3.0
TWE160204-C	BST	B	95	150	160-204				3.8

## Feature

1. It is suitable for single edge boring, double edge boring and high and low-level boring. Boring range: LBK split type 20-122, BST split type 120-910.
2. The new serrated sliding seat design, when machining, the two forces on the sliding seat offset each other, has good rigidity and cutting force, and is suitable for all kinds of boring operations.
3. The boring cutter can be adjusted easily according to different processing requirements to complete a small number of diverse processing quickly. The machining depth can be matched with the extension rod to the required length.
4. Precise side scale helps users easily adjust to the required aperture range.
5. It is suitable for use with all kinds of cutting center machines or boring machines, and can be installed with blades of the same specification from all manufacturers. It can save machining time and improve boring efficiency.
6. High and low break difference design, both flat blade and high and low blade can be used.
7. Large bore boring cutter with diameter more than 120, using direct components, simple structure and strong rigidity.

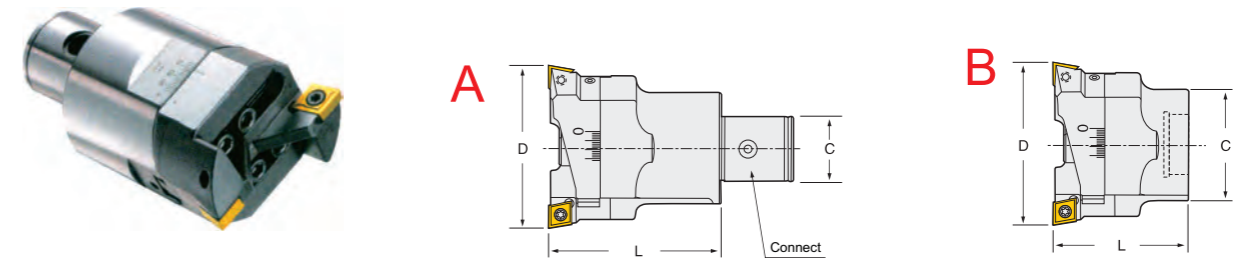
## TWE

TWE Large diameter space aluminum double edge rough boring head (reduced heavy) Boring Range 200-800mm



Model	Connect	Size (mm)		Boring Range	Insert	Screw	Wrench	Weight (kg)
		C	L					
TWE200-310	BST	190	80	200-310				3.7
TWE300-410	BST	290	80	300-410				4.7
TWE400-510	BST	390	80	400-510	CC..1204..	230101	230058	5.7
TWE500-610	BST	490	80	500-610				7.0
TWE600-710	BST	590	80	600-710				8.0
TWE700-810	BST	690	80	700-810				9.5

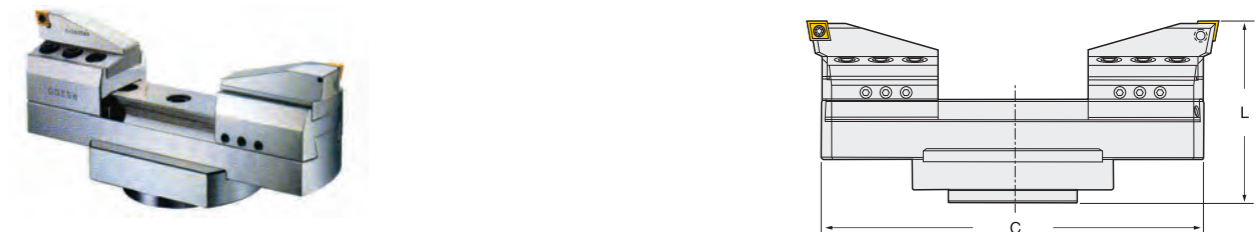
**RBH**  
RBH double edge rough boring head (Boring Range 20-204mm)



Model	Connect	Size (mm)			Boring Range	Insert	Screw	Wrench	Weight(kg)
		Fig	C	L					
RBH1926-C	LBK1	A	19	50	19-26	CC..0602..	230074	230054	0.1
RBH2533-C	LBK2	A	24	50	25-33				0.2
RBH3242-C	LBK3	A	31	55	32-42				0.3
RBH4055-C	LBK4	A	39	75	40-55	CC..09T3..	230090	230057	0.5
RBH5270-C	LBK5	A	50	75	52-70				0.8
RBH6892-C	LBK6	A	64	85	68-92				1.6
RBH90122-C	LBK6	A	95	100	90-122	CC..1204..	230101	230058	2.8
RBH120164-C	BST	B	95	95	120-164				3.0
RBH160204-C	BST	B	95	95	160-204				3.8

## RBH

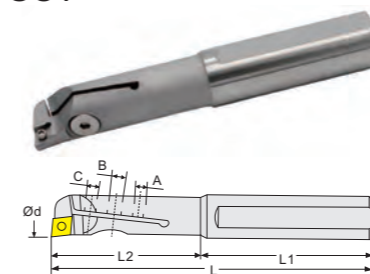
RBH Large diameter double edge rough boring head (Boring Range 200-800mm)



Model	Connect	Size (mm)		Boring Range	Insert	Screw	Wrench	Weight (kg)
		C	L					
RBH200-310	BST	180	130	200-310				9.7
RBH300-410	BST	280	130	300-410				11.7
RBH400-510	BST	380	130	400-510	CC..1204..	230101	230058	13.7
RBH500-610	BST	480	130	500-610				15.7
RBH600-950	BST	580	130	600-950				17.7
RBH900-1200	BST	680	130	900-1200				19.7

## SCT

SCT adjustable boring bar

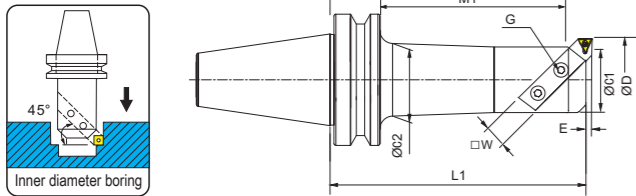


Model	Size (mm)				Boring range		Screw			Parts
	L	L1	L2	ØD	d <sub>(min)</sub>	d <sub>(max)</sub>	A	B	C	
SCT-10	100	70	30	10	10	12	230076	230090	230257	CC..06.. 230074 230054
SCT-12	105	65	40	12	12	15	230263	230092	230262	
SCT-15	110	60	50	16	15	20	230090	230101	230264	
SCT-20	120	60	60	20	20	25	230092	230266	230090	
SCT-25	140	70	70	25	25	30	230213	230107	230210	CC..09.. 230090 230057
SCT-30	160	70	90	25	30	35	230102	230110	230265	
SCT-35	170	70	100	32	35	40	230267	230113	230105	
SCT-40	190	70	120	32	40	45	230108	230269	230106	
SCT-45	220	70	150	40	45	50	230268	230270	230108	

**BS**  
BS Adjustable rough boring toolholder



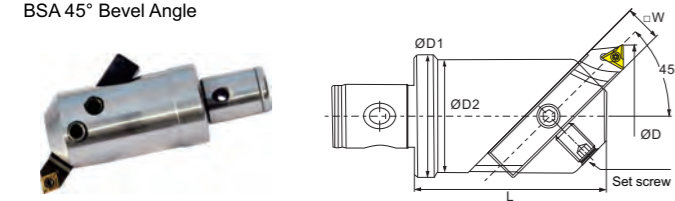
**BSA=45°**



Boring Rough boring cutter, suitable for through hole and blind hole machining  
1. The chute is parallel to the blade  
2. Boring head ordered separately  
3. Pay attention to the minimum dimension of D and L1.12

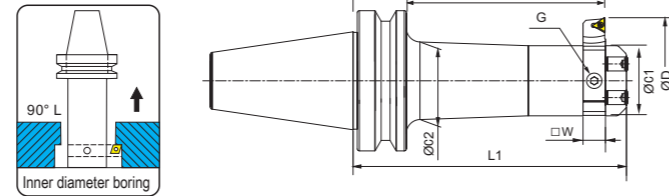
Model	Boring range		Size (mm)							
	D <sub>(min)</sub>	D <sub>(max)</sub>	L	M1	C1	C2	E	□W		
BT30-BSA	20-105	20	30	105	85	17	19	-	6	
	25-120	25	38	120	100	20	24	1	8	
	25-160	25	38	160	140	20	24	1	8	
	30-150	30	42	150	130	24	28	1.6	8	
	30-180	30	42	180	160	24	28	1.6	8	
	30-210	30	42	210	190	24	28	1.6	8	
	38-165	38	52	165	145	30	36	2.6	10	
	50-165	50	65	165	145	40	48	3	13	
	50-210	50	65	210	190	40	48	3	13	
	BT40-BSA	25-135	25	38	135	110	20	24	1	8
30-150		30	42	150	125	24	28	1.6	8	
38-165		38	52	165	140	30	36	2.6	10	
50-165		50	65	165	140	40	48	3	13	
50-210		50	65	210	185	40	48	3	13	
62-165		62	90	165	140	50	48	2	16	
62-225		62	90	225	200	50	58	2	16	
72-165		72	110	165	140	60	60	2.4	19	
72-225		72	110	225	200	60	60	2.4	19	
90-165		90	125	165	140	75	62	4	19	
90-210		90	125	210	185	75	62	4	19	
BT50-BSA		25-135	25	38	135	100	20	24	1	8
		30-165	30	42	165	130	24	28	1.6	8
		38-180	38	52	180	145	30	36	2.6	10
		38-230	38	52	230	195	30	36	2.6	10
	42-210	42	56	210	175	34	38	2	10	
	42-240	42	56	240	205	34	38	2	10	
	50-180	50	65	180	145	40	48	3	13	
	50-240	50	65	240	205	40	48	3	13	
	50-270	50	65	270	235	40	48	3	13	
	50-300	50	65	300	265	40	48	3	13	
	62-195	62	90	195	160	50	58	2	16	
	62-240	62	90	240	205	50	58	2	16	
	62-270	62	90	270	235	50	58	2	16	
	62-300	62	90	300	265	50	58	2	16	
	72-195	72	110	195	160	60	68	2.4	19	
72-240	72	110	240	205	60	68	2.4	19		
72-285	72	110	285	250	60	68	2.4	19		
72-320	72	110	320	285	60	68	2.4	19		
90-210	90	125	210	175	75	74	4	19		
90-250	90	125	250	215	75	76	4	19		
90-300	90	125	300	265	75	76	4	19		
105-195	105	160	195	160	90	76	3	25		
105-285	105	160	285	250	90	76	3	25		

**BSA 45°**  
BSA 45° Bevel Angle



Model	Boring range		Size (mm)						Set screw
	D <sub>(min)</sub>	D <sub>(max)</sub>	L	D1	D2	□W			
BSA 25-LBK2	25	38	35	24	24	8	230258		
30-LBK2	30	42	40	24	24	8	230258		
38-LBK3	38	52	60	31	60	10	230259		
50-LBK4	50	65	70	42	40	13	230260		
62-LBK5	65	90	85	55	50	16	230261		
72-LBK6	72	110	98	63	60	19	230261		
90-LBK6	90	125	100	80	75	19	230261		
105-LBK6	105	160	100	91	90	25	230261		

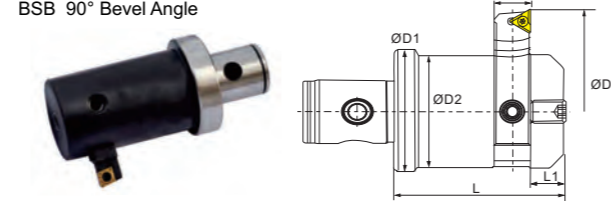
**BSB=90°**



Coarse boring cutter is suitable for through hole and reverse boring.

Model	Boring range		Size (mm)						
	D <sub>(min)</sub>	D <sub>(max)</sub>	L	M1	C1	C2	□W		
BT30-BSB	20-105	20	30	105	85	17	19	6	
	25-120	25	38	120	100	20	24	8	
	25-160	25	38	160	140	20	24	8	
	30-150	30	42	150	130	24	28	8	
	30-165	30	42	160	160	24	28	8	
	30-210	30	42	210	190	24	28	8	
	38-165	38	52	165	145	30	36	10	
	50-165	50	65	165	145	40	48	13	
	50-210	50	65	210	190	40	48	13	
	BT40-BSB	25-135	25	38	135	110	20	24	8
38-165		38	52	165	140	30	36	10	
50-165		50	65	165	140	40	48	13	
50-210		50	65	210	185	40	48	13	
62-165		62	90	165	140	50	54	16	
62-225		62	90	225	200	50	56	16	
72-165		72	110	165	140	60	60	19	
72-225		72	110	225	200	60	60	19	
90-165		90	125	165	140	75	75	19	
90-210		90	125	210	185	75	64	19	
BT50-BSB		25-135	25	38	135	100	20	24	8
		38-180	38	52	180	145	30	38	10
		38-230	38	52	230	195	30	38	10
		42-210	42	56	210	175	34	38	10
		42-240	42	56	240	205	34	38	10
	50-180	50	65	180	145	40	48	13	
	50-240	50	65	240	205	40	48	13	
	50-270	50	65	270	235	40	48	13	
	50-300	50	65	300	265	40	48	13	
	62-195	62	90	195	160	50	58	16	
	62-240	62	90	240	205	50	58	16	
	62-270	62	90	270	235	50	58	16	
	62-300	62	90	300	265	50	58	16	
	72-195	72	110	195	160	60	68	19	
	72-240	72	110	240	205	60	68	19	
72-285	72	110	285	250	60	68	19		
90-210	90	125	210	175	75	80	19		
90-250	90	125	250	215	75	80	19		
90-300	90	125	300	265	75	80	19		
105-195	105	160	195	160	90	-	25		
105-285	105	160	285	250	90	94	25		

**BSB 90°**  
BSB 90° Bevel Angle



Model	Boring range		Size (mm)						Set screw
	D <sub>(min)</sub>	D <sub>(max)</sub>	L	D1	D2	□W			
BSB 25-LBK2	26	52	45	24	20	8	230258		
38-LBK3	38	70	55	31	30	10	230259		
50-LBK4	50	90	60	42	40	13	230260		
62-LBK5	62	115	70	55	50	15	230261		
72-LBK6	72	135	85	63	60	19	230261		
90-LBK6	90	150	100	80	75	19	230261		
105-LBK6	105	190	100	90	90	25	230261		

**TBS-30°**  
TBS-30° Machine clamp boring tool bar

Model	Boring range		Size (mm)		Insert	Screw	Wrench
	D <sub>(min)</sub>	D <sub>(max)</sub>	L	D			
TBS 306-20L	20	30	20	6	TC..0902..	230072	230052
308-25L	25	42	25	8			
310-36L	38	50	36	10			
313-48L	50	70	48	13			
316-60L	70	90	60	16	TC..1102..	230074	230054
319-90L	90	135	90	19			
325-135L	140	190	135	25			

**TBS-45°**  
TBS-45° Machine clamp boring tool bar

Model	Boring range		Size (mm)		Insert	Screw	Wrench
	D <sub>(min)</sub>	D <sub>(max)</sub>	L	D			
TBS 406-20L	20	30	20	6	TC..0902..	230072	230052
408-25L	25	42	25	8			
410-45L	38	52	45	10			
410-50L	42	56	50	10			
413-60L	50	65	60	13	TC..1102..	230074	230054
416-75L	62	90	75	16			
419-90L	72	110	90	19			
419-115L	90	125	115	19	TC..16T3..	230091	230057
425-130L	105	160	130	25			

**CBS-30°**  
CBS-30° Machine clamp boring tool bar

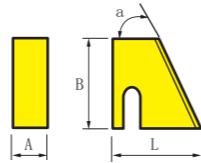
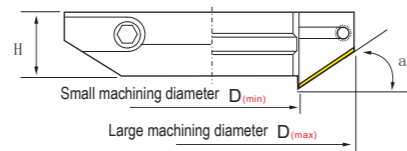
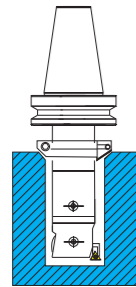
Model	Boring range		Size (mm)		Insert	Screw	Wrench
	D <sub>(min)</sub>	D <sub>(max)</sub>	L	D			
CBS 306-20L	20	30	20	6	CC..0602..	230074	230054
308-25L	25	42	25	8			
310-36L	38	50	36	10			
313-48L	50	70	48	13			
316-60L	70	90	60	16	CC..09T3..	230091	230057
319-90L	90	135	90	19			
325-135L	140	190	135	25			

**CBS-45°**  
CBS-45° Machine clamp boring tool bar

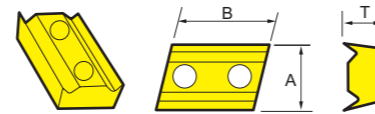
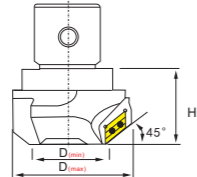
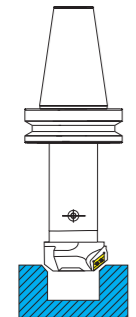
Model	Boring range		Size (mm)		Insert	Screw	Wrench
	D <sub>(min)</sub>	D <sub>(max)</sub>	L	D			
CBS 406-20L	20	30	20	6	CC..0602..	230074	230054
408-30L	25	38	30	8			
408-35L	30	42	35	8			
410-45L	38	52	45	10			
410-50L	42	56	50	10	CC..09T3..	230091	

# Fixed rough boring / Chamfering cutter

## LBK LBK Chamfering cutter



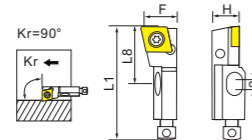
Model	Boring range		H	LBK	Insert	RMB	Size (mm)					Insert
	D <sub>(min)</sub>	D <sub>(max)</sub>					L	A	B	a		
ZC1-35	20	35	13	LBK1	ZM1-45		ZM1-45	23.5	4	9	45°	CK1-CK4
ZC2-42	25	42	15	LBK2	ZM1-30		ZM2-45	43	8	20	45°	CK5-CK6
ZC3-49	32	49	15	LBK3			ZM1-30	27.5	4	9	30°	CK1-CK4
ZC4-57	41	57	15	LBK4			ZM2-30	52	8	20	30°	CK5-CK6
ZC5-90	53	90	25	LBK5								
ZC6-104	68	104	25	LBK6	ZM2-45							
ZC7-138	98	138	25	LBK6	ZM2-30							
ZC8-160	120	160	25	LBK6								



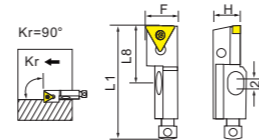
Model	Boring range		H	LBK	Insert	Parts	Size (mm)		
	D <sub>(min)</sub>	D <sub>(max)</sub>					A	B	T
LBK2-C0525	5	25	25	LBK2	CW1206A	M2/T6	6.35	12.7	2.7
LBK4-C1040	10	40	35	LBK4	CW1909A	M3/T8	9.525	4.5	4.5
LBK5-C3060	30	60	40	LBK5	CW1909A	M3/T8	15.875	7.0	7.0
LBK5-C50100	50	100	65	LBK6	CW3115A	M5/T20			

## Cutter Toolholder

### SCFCR



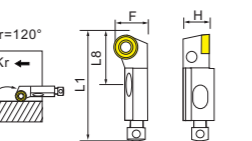
### STFPR



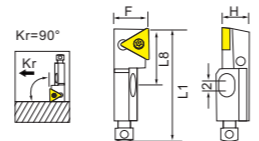
Model	Size (mm)					Insert	Screw	Wrench
	L1	L8	F	H	Dm			
STFCR- 08CA-06	32	15	10	8	25	CC..0602..	230074	230054
10CA-09	50	30	14	10	40	CC..09T3..	230091	230057

Model	Size (mm)					Insert	Screw	Wrench
	L1	L8	F	H	Dm			
STFPR- 08CA-09	32	15	10	8	25	TP..0902..	230074	230054
10CA-11	50	30	14	10	40	TP..1103..	230078	230056
12CA-16	55	35	20	12	50	TP..1603..	230091	230057

### SRSCR



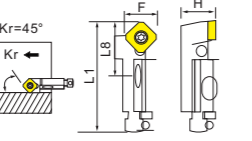
### STGCL



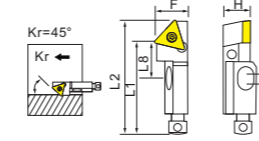
Model	Size (mm)					Insert	Screw	Wrench
	L1	L8	F	H	Dm			
SRSCR- 10CA-10	50	30	14	10	40	RC..10T3..	230084	230057

Model	Size (mm)					Insert	Screw	Wrench
	L1	L8	F	H	Dm			
STGCL 12CA-16	32	35	20	12	75	TC..16T3..	230091	230057

### SSSPR



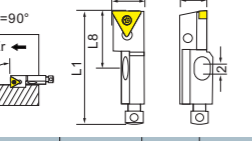
### STSPR



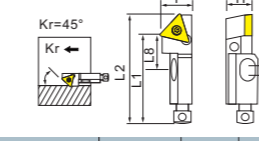
Model	Size (mm)					Insert	Screw	Wrench
	L1	L8	F	H	Dm			
SSSPR- 10CA-09	50	30	14	10	40	SP..0903..	230084	230057

Model	Size (mm)					Insert	Screw	Wrench
	L1	L8	F	H	Dm			
STSPR- 08CA-09	28	11	10	8	25	TP..0902..	230074	230054
10CA-11	44	24	14	10	40	TP..1103..	230078	230056
12CA-16	47	27	20	12	50	TP..1603..	230091	230057

### STFCR



### STSCR



Model	Size (mm)					Insert	Screw	Wrench
	L1	L8	F	H	Dm			
STFCR- 08CA-09	32	15	10	8	25	TC..0902..	230070	230052
10CA-11	50	30	14	10	40	TC..1102..	230074	230054
12CA-16	55	35	20	12	50	TC..16T3..	230091	230057

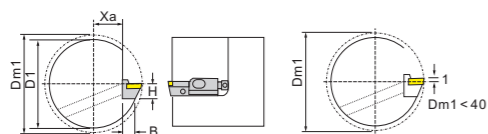
Model	Size (mm)					Insert	Screw	Wrench
	L1	L8	F	H	Dm			
STSCR- 08CA-09	28	11	10	8	25	TC..0902..	230070	230052
10CA-11	44	24	14	10	40	TC..1102..	230074	230054
12CA-16	47	27	20	12	50	TC..16T3..	230091	230057

### Axial mounting

$$D1 = 2 \sqrt{H^2 + (B \pm Xa)^2}$$

$$Xa = \frac{Dm1}{2} \cdot F$$

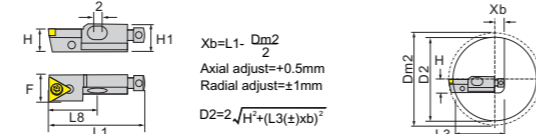
Axial adjust=±1mm  
Radial adjust=+0.5mm



### Radial mounting

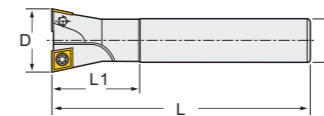
$$Xb = L1 - \frac{Dm2}{2}$$

Axial adjust=+0.5mm  
Radial adjust=±1mm  
 $D2 = 2 \sqrt{H^2 + (L3 \pm Xb)^2}$



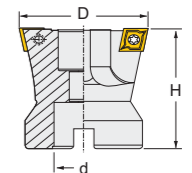
## TBL

### TBL Fixed double edge rough boring bar



## TBC

### TBC Fixed double edge rough boring head



Model	Size (mm)				Edge	Insert	Screw	Wrench
	D	d	L1	L				
TBL 8-130-C16	7.7	16	35	130	1			
9-130-C16	8.7	16	40	130	1			
10-130-C16	9.7	16	45	130	1			
11-130-C16	10.7	16	55	130	1			
12-130-C16	11.7	16	60	130	1			
13-130-C16	12.7	16	65	130	1			
14-130-C16	13.7	16	70	130	1			
15-110-C16	14.7	16	60	110	2			
15-150-C16	14.7	16	80	150	2			
16-110-C16	15.7	16	60	110	2			
16-160-C16	15.7	16	80	160	2			
16-240-C16	15.7	16	160	240	2			
17-110-C16	16.7	16	40	110	2			
17-160-C16	16.7	16	40	160	2			
17-240-C16	16.7	16	40	240	2			
18-110-C16	17.7	16	40	110	2			
18-160-C16	17.7	16	40	160	2			
18-240-C16	17.7	16	40	240	2			
19-110-C16	18.7	16	40	110	2			
19-160-C16	18.7	16	40	160	2	CC..0602..	230074	230054
19-240-C16	18.7	16	40	240	2			
20-110-C16	19.7	16	40	110	2			
20-160-C16	19.7	16	40	160	2			
20-240-C16	19.7	16	40	240	2			
21-120-C20	20.7	20	40	120	2			
21-180-C20	20.7	20	40	180	2			
21-260-C20	20.7	20	40	260	2			
22-120-C20	21.7	20	40	120	2			
22-180-C20	21.7	20	40	180	2			
22-260-C20	21.7	20	40	260	2			
23-120-C20	22.7	20	40	120	2			
23-160-C20	22.7	20	40	160	2			
23-260-C20	22.7	20	40	260	2			
24-120-C20	23.7	20	40	120	2			
24-180-C20	23.7	20	40	180	2			
24-260-C20	23.7	20	40	260	2			
25-120-C20	24.7	20	40	120	2			
25-180-C20	24.7	20	40	180	2			
25-260-C20	24.7	20	40	260	2			
26-120-C20	25.7	20	40	120	2			
26-180-C20	25.7	20	40	180	2			
26-260-C20	25.7	20	40	260	2			
27-120-C20	26.7	20	40	120	2			
27-200-C20	26.7	20	40	200	2			
27-280-C20	26.7	20	40	280	2			
28-120-C20	27.7	20	40	120	2			
28-200-C20	27.7	20	40	200	2			
28-280-C20	27.7	20	40	280	2			
29-200-C25	28.7	25	40	200	2			
29-280-C25	28.7	25	40	280	2			
30-160-C25	29.7	25	40	160	2			
30-200-C25	29.7	25	40	200	2			
30-280-C25	29.7	25	40	280	2			
31-200-C25	30.7	25	40	200	2			
31-280-C25	30.7	25	40	280	2			
32-160-C25	31.7	25	40	160	2			
32-210-C25	31.7	25	40	210	2			
32-280-C25	31.7	25	40	280	2			
33-220-C32	32.7	32	40	220	2			
34-220-C32	33.7	32	40	220	2	CC..09T3..	230091	230057
35-160-C32	34.7	32	40	160	2			
35-250-C32	34.7	32	40	250	2			
36-250-C32	35.7	32	40	250	2			
37-160-C32	36.7	32	40	160	2			
37-250-C32	36.7	32	40	250	2			
38-250-C32	37.7	32	40	250	2			
39-250-C32	38.7	32	40	250	2			
40-160-C32	39.7	32	40	160	2			
40-250-C32	39.7	32	40	250	2			
41-250-C32	40.7	32	40	250	2			
42-250-C32	41.7	32	40	250	2			
43-250-C32	42.7	32	40	250	2			
44-250-C32	43.7	32	40	250	2			
45-250-C32	44.7	32	40	250	2			
46-250-C32	45.7	32	40	250	2			
47-250-C32	46.7	32	40	250	2			
48-250-C32	47.7	32	40	250	2			
49-250-C32	48.7	32	40	250	2			
50-250-C32	49.7	32	40	250	2			