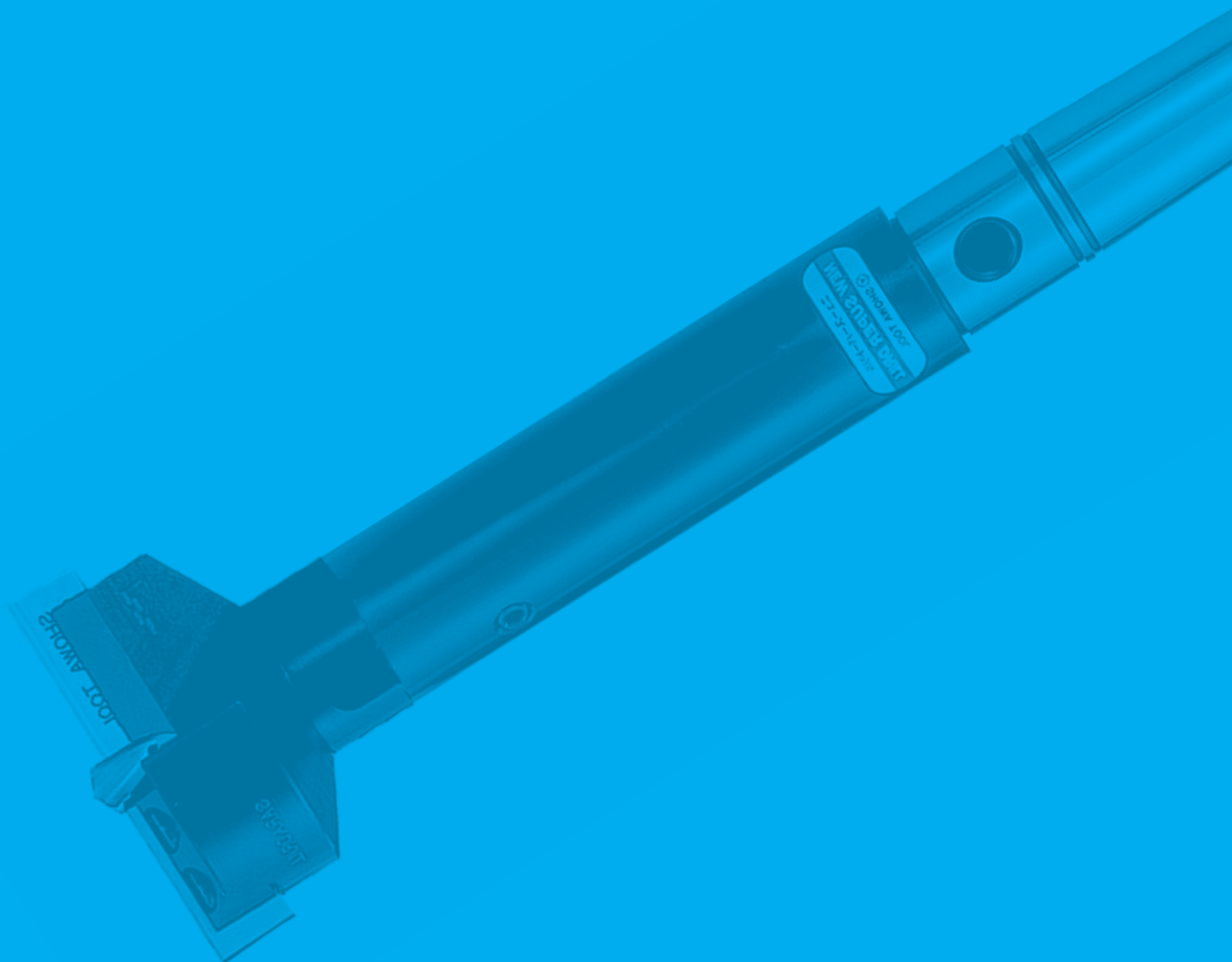


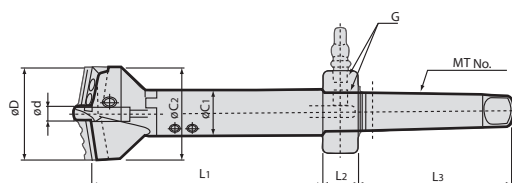
Cutting Tool

165,166	NEW SUPER DRILL (Standard Head Type)
167	BLADE (For Standard Head)
168,169	NEW SUPER DRILL SET (Flat Head Type)
170	BLADE (For Flat Head)
170	EXTENTION ARBOR (For Standard Head)
173	OIL RING
173	OIL PLUG
174	T/C GUIDE (For Through Hole with Standard Head)
174	SPARE BLADE CLAMP
174	RE-GRINDING FIXTURE



MORSE TAPER SHANK SET (Standard)

- A to D set consist of
1. Standard head 1pc
 2. MT drill arbor 1pc
 3. Center drill 2pcs
 4. Drill blade 2pcs
 5. Oil plug 1pc
 6. Wrench 1set

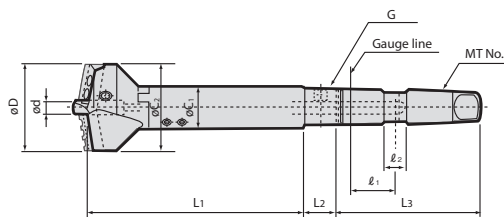


(※the set contents more than E are not included in center drills and blades)
 E.F.G.H.I set does not include center drills and drill blades.

MODEL	CODE	Hole dia.	Set blade	ød	L1	L2	L3	øC1	øC2	MT No.	G	N/W (kg)	
MT4	-A _{1S} 55-200S	54000	50~55	BK50 BK53	12	200	30	130	29	48	MT4	PT1/4	2.1
	-A ₂ 65-200S	54001	55~65	BK55 BK60					53	53			2.2
	-B 80-200S	54002	65~80	BK65 BK73					35	63			2.7
	-C 100-200S	54003	80~100	BK80 BK90					38	78			3.2
	-D 120-200S	54004	100~120	BK100 BK110				45	98			4.3	
MT5	-E 150-200S	54005	120~150	Blade sold separately	20	200	30	163	55	118	MT5	PT1/4	7.0
	-F 180-200S	54006	150~180						65	148			9.4
	-G 210-200S	54007	180~210						75	178			12.5
MT6	-H 240-300S	54008	210~240		20	300	40	228	85	207	MT6	PT3/8	23.9
	-I 270-300S	54009	240~270						95	237			28.6

MORSE TAPER SHANK SET (For Oil-Hole Adapter) MT^{No.}-D^{MAX}-L¹-OH

- A to D set consist of
1. Standard head 1pc
 2. MT drill arbor 1pc
 3. Center drill 2pcs
 4. Drill blade 2pcs
 5. Oil plug 1pc
 6. Wrench 1set



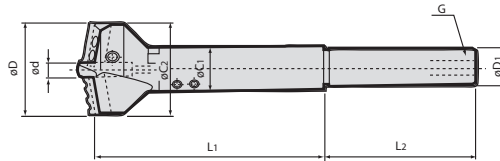
MODEL	CODE	Hole dia.	Set blade	ød	L1	L2	L3	l1	l2	C1	C2	MT No.	G	N/W (kg)	
MT4	-A _{1S} 55-200-OHS	54530	50~55	BK50 BK53	12	200	30	130	41	20	29	48	MT4	PT1/4	2.1
	-A ₂ 65-200-OHS	54531	55~65	BK55 BK60							53	53			2.2
	-B 80-200-OHS	54532	65~80	BK65 BK73							35	63			2.7
	-C 100-200-OHS	54533	80~100	BK80 BK90							38	78			3.2
	-D 120-200-OHS	54534	100~120	BK100 BK110				45	98			4.3			

STRAIGHT SHANK SET (Standard)

ST[Ⓛ]-[Ⓧ]MAX-200

A to D set consist of

1. Standard head 1pc
2. MT drill arbor 1pc
3. Center drill 2pcs
4. Drill blade 2pcs
5. Oil plug 1pc
6. Wrench 1set



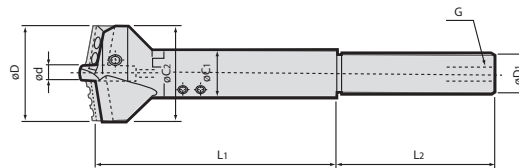
MODEL	CODE	Hole dia.	Set blade	ød	L1	L2	øC1	øC2	øD1	G	N/W (kg)	
ST32	-A _{1S} 55-200S	54500	50~55 BK50 BK53	12	200	130	29	48	32	PT1/4		
	-A ₂ 65-200S	54501	55~65 BK55 BK60					53				
	-B 80-200S	54502	65~80 BK65 BK73					35				63
	-C 100-200S	54503	80~100 BK80 BK90					38				78
-D 120-200S	54504	100~120 BK100 BK110	45	98								
ST42	-A _{1S} 55-200S	54510	50~55 BK50 BK53	12	200	130	29	48	42	PT1/4		
	-A ₂ 65-200S	54511	55~65 BK55 BK60					53				
	-B 80-200S	54512	65~80 BK65 BK73					35				63
	-C 100-200S	54513	80~100 BK80 BK90					38				78
-D 120-200S	54514	100~120 BK100 BK110	45	98								

STRAIGHT SHANK SET (For Turret Lathe)

ST[Ⓛ]-[Ⓧ]MAX-200

A to D set consist of

1. Standard head 1pc
2. MT drill arbor 1pc
3. Center drill 2pcs
4. Drill blade 2pcs
5. Oil plug 1pc
6. Wrench 1set



MODEL	CODE	Hole dia.	Set blade	ød	L1	L2	C1	C2	ød1	H	G	N/W (kg)	
ST45	-A _{1S} 55-200S	54550	50~55 BK50 BK53	12	200	140	29	48	45	42	PT1/4		
	-A ₂ 65-200S	54551	55~65 BK55 BK60					53					
	-B 80-200S	54552	65~80 BK65 BK73					35					63
	-C 100-200S	54553	80~100 BK80 BK90					38					78
-D 120-200S	54554	100~120 BK100 BK110	45	98									

ORDERING EXAMPLE

① **ST45** ② **A1s55** - ③ **200**

- ① Shank Size
- ② Max. øD
- ③ L1

BT series

HSK series

ST series

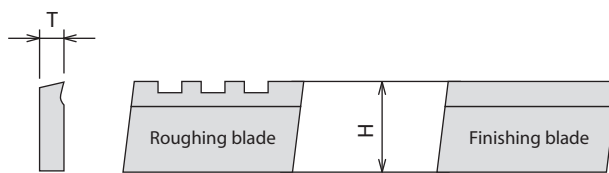
Versatile Tool

Cutting Tool

Accessories

BLADE (For Standard Head)

Each set consists of a roughing blade (R) and a finishing blade (S).



MODEL	CODE	Hole dia 加工径Dmm	T	H	Blade	Head 適用ヘッドNo.
BK50	52002	50 (50~53)	5	19	A19 R&S	A1-55
BK51	52032	51			A19.5 R&S	
BK52	52034	52			A20 R&S	
BK53	52004	53 (53~55)			A20.5 R&S	
BK54	52036	54			A21 R&S	
BK55	52006	55			A21.5 R&S	
BK55	52006	55 (55~60)			A21.5 R&S	
BK56	52038	56			A22 R&S	
BK57	52040	57			A22.5 R&S	
BK58	52042	58			A23 R&S	
BK59	52044	59			A23.5 R&S	
BK60	52008	60 (60~65)			A24 R&S	
BK61	52046	61			A24.5 R&S	
BK62	52048	62			A25 R&S	
BK63	52050	63			A25.5 R&S	
BK64	52052	64			A26 R&S	
BK65	52010	65			B26.5 R&S	
BK65	52010	65 (65~73)			B26.5 R&S	
BK66	52054	66			B27 R&S	
BK67	52056	67			B27.5 R&S	
BK68	52058	68			B28 R&S	
BK69	52060	69			B28.5 R&S	
BK70	52062	70			B29 R&S	
BK71	52064	71			B29.5 R&S	
BK72	52066	72			B30 R&S	
BK73	52012	73 (73~80)			B30.5 R&S	
BK74	52068	74			B31 R&S	
BK75	52070	75			B31.5 R&S	
BK76	52072	76			B32 R&S	
BK77	52074	77			B32.5 R&S	
BK78	52076	78			B33 R&S	
BK79	52078	79			B33.5 R&S	
BK80	52014	80			C34 R&S	
BK80	52014	80 (80~90)			C34 R&S	
BK81	52080	81			C34.5 R&S	
BK82	52082	82			C35 R&S	
BK83	52084	83			C35.5 R&S	
BK84	52086	84			C36 R&S	
BK85	52088	85			C36.5 R&S	
BK86	52090	86			C37 R&S	
BK87	52092	87			C37.5 R&S	
BK88	52094	88			C38 R&S	
BK89	52096	89			C38.5 R&S	
BK90	52016	90 (90~100)			C39 R&S	
BK91	52098	91	C39.5 R&S			
BK92	52100	92	C40 R&S			
BK93	52102	93	C40.5 R&S			
BK94	52104	94	C41 R&S			
BK95	52106	95	C41.5 R&S			
BK96	52108	96	C42 R&S			
BK97	52110	97	C42.5 R&S			
BK98	52112	98	C43 R&S			
BK99	52114	99	C43.5 R&S			
BK100	52018	100	D44 R&S			

MODEL	CODE	Hole dia 加工径Dmm	T	H	Blade	Head 適用ヘッドNo.
BK100	52018	100 (100~110)	5	19	D44 R&S	D-120
BK101	52116	101			D44.5 R&S	
BK102	52118	102			D45 R&S	
BK103	52120	103			D45.5 R&S	
BK104	52122	104			D46 R&S	
BK105	52124	105			D46.5 R&S	
BK106	52126	106			D47 R&S	
BK107	52128	107			D47.5 R&S	
BK108	52130	108			D48 R&S	
BK109	52132	109			D48.5 R&S	
BK110	52020	110 (110~120)			D49 R&S	
BK111	52134	111			D49.5 R&S	
BK112	52136	112			D50 R&S	
BK113	52138	113			D50.5 R&S	
BK114	52140	114			D51 R&S	
BK115	52142	115			D51.5 R&S	
BK116	52144	116			D52 R&S	
BK117	52146	117			D52.5 R&S	
BK118	52148	118			D53 R&S	
BK119	52150	119			D53.5 R&S	
BK120D	52152	120	D54 R&S			
BK120E	52154	120			E-150	
BK125	52156	125				
BK130	52158	130	8	25		
BK135	52160	135				
BK140	52162	140				
BK145	52164	145				
BK150E	52166	150				
BK150F	52168	150				
BK155	52170	155				
BK160	52172	160				
BK165	52174	165				
BK170	52176	170				F-180
BK175	52178	175				
BK180	52180	180				
BK180	52180	180				
BK190	52182	190				
BK200	52184	200	12	25	G-210	
BK210	52186	210				
BK210	52186	210				
BK220	52188	220				
BK230	52190	230				
BK240	52192	240				
BK240	52192	240				
BK250	52194	250				
BK260	52196	260				
BK270	52198	270				
					H-240	
					I-270	

CENTER DRILL

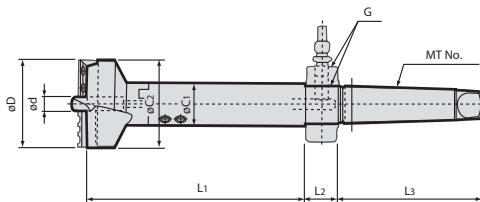
CODE	径 DIA.	Head 適用ヘッドNo.
CD-12	51062	12mm A1-55, A2-65, B80, C100, D120
CD-12C	51061	12mm A1-55, A2-65, B80, C100, D120
CD-20	51066	20mm E150, F180, G210, H240, I270

MORSE TAPER SHANK SET (Flat Head Type)

FEATURES p.31-34

MT[Ⓝ]-[Ⓧ]MAX-[Ⓛ]1-FT

- A to D set consist of
1. Standard head 1pc
 2. MT drill arbor 1pc
 3. Center drill 2pcs
 4. Drill blade 2pcs
 5. Oil plug 1pc
 6. Wrench 1set

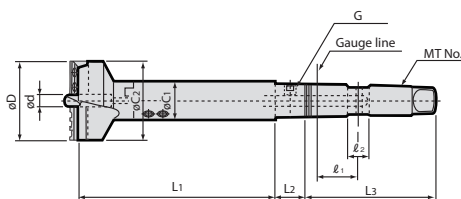


	MODEL	CODE	Hole dia.	Set blade		ød	L1	L2	L3	C1	C2	MT No.	G	N/W (kg)
MT4	-A1s 55-200-FT-S	54540	50~55	BK50F	BK53F	12	200	30	130	29	48	MT4	PT1/4	
	-A2 65-200-FT-S	54541	55~65	BK55F	BK60F					35	53			
	-B 80-200-FT-S	54542	65~80	BK65F	BK73F					38	63			
	-C 100-200-FT-S	54543	80~100	BK80F	BK90F					45	78			
	-D 120-200-FT-S	54544	100~120	BK100F	BK110F									

MORSE TAPER SHANK SET (Flat Head Type For Oil-Hole Adapter)

MT[Ⓝ]-[Ⓧ]MAX-200-FOH

- A to D set consist of
1. Standard head 1pc
 2. MT drill arbor 1pc
 3. Center drill 2pcs
 4. Drill blade 2pcs
 5. Oil plug 1pc
 6. Wrench 1set



	MODEL	CODE	Hole dia.	Set blade		ød	L1	L2	L3	l1	l2	C1	C2	MT No.	G	N/W (kg)
MT4	-A1s 55-200-FOH-S		50~55	BK50F	BK53F	12	200	30	130	41	20	29	48	MT4	PT1/4	
	-A2 65-200-FOH-S		55~65	BK55F	BK60F							35	53			
	-B 80-200-FOH-S		65~80	BK65F	BK73F							38	63			
	-C 100-200-FOH-S		80~100	BK80F	BK90F							45	78			
	-D 120-200-FOH-S		100~120	BK100F	BK110F											

BT series

HSK series

ST series

Versatile Tool

Cutting Tool

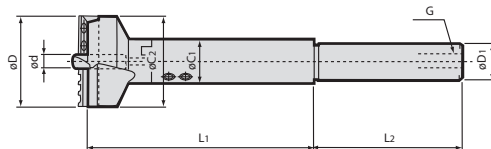
Accessories

NEW SUPER DRILL (Flat Head Type)

For counter sink and metal plate

STRAIGHT SHANK SET (Flat Head Type) ST[Ⓛ]-[Ⓜ]MAX-200-FT

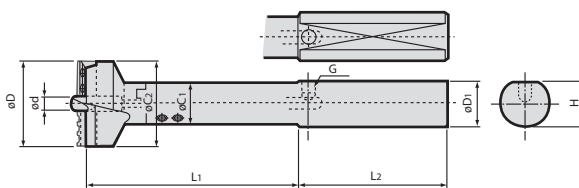
- A to D set consist of
1. Standard head 1pc
 2. MT drill arbor 1pc
 3. Center drill 2pcs
 4. Drill blade 2pcs
 5. Oil plug 1pc
 6. Wrench 1set



MODEL	CODE	Hole dia.	Set blade	ød	L1	L2	C1	C2	ød1	G	N/W (kg)	
ST32	-A1s 55-200-FT-S	50~55	BK50F BK53F	12	200	130	29	48	32	PT1/4		
	-A2 65-200-FT-S	55~65	BK55F BK60F					53				
	-B 80-200-FT-S	65~80	BK65F BK73F					35			63	
	-C 100-200-FT-S	80~100	BK80F BK90F					38			78	
	-D 120-200-FT-S	100~120	BK100F BK110F					45			98	
ST42	-A1s 55-200-FT-S	50~55	BK50F BK53F	12	200	130	29	48	42	PT1/4		
	-A2 65-200-FT-S	55~65	BK55F BK60F					53				
	-B 80-200-FT-S	65~80	BK65F BK73F					35			63	
	-C 100-200-FT-S	80~100	BK80F BK90F					38			78	
	-D 120-200-FT-S	100~120	BK100F BK110F					45			98	

STRAIGHT SHANK SET (Flat Head Type for Turret Lathe) ST[Ⓛ]-[Ⓜ]MAX-200

- A to D set consist of
1. Standard head 1pc
 2. MT drill arbor 1pc
 3. Center drill 2pcs
 4. Drill blade 2pcs
 5. Oil plug 1pc
 6. Wrench 1set



MODEL	CODE	Hole dia.	Set blade	ød	L1	L2	C1	C2	ød1	H	G	N/W (kg)	
ST45	-A1s 55-200-FT-S	50~55	BK50F BK53F	12	200	140	29	48	45	42	PT1/4		
	-A2 65-200-FT-S	55~65	BK55F BK60F					53					
	-B 80-200-FT-S	65~80	BK65F BK73F					35				63	
	-C 100-200-FT-S	80~100	BK80F BK90F					38				78	
	-D 120-200-FT-S	100~120	BK100F BK110F					45				98	

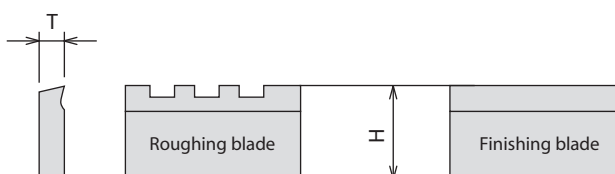
ORDERING EXAMPLE

①	ST45	②	A1s55	-	③	200	④	FT
①	Shank Size							
②	Max. øD							
③	L1							
④	Flat head type							

BLADE (For Flat Head)

ST[Ⓧ]-[Ⓧ]MAX-200-FT

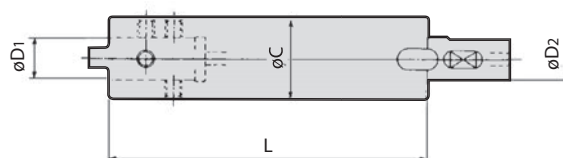
Each set consists of a roughing blade (R) and a finishing blade (S).



MODEL	CODE	Hole dia.	T	H	R & S	Head	
BK	50F	52201	50 (50~53)	5	20	A19 RF & SF	A1s-55FT
	53F	52202	53 (53~55)			A20.5RF & F	
	55F	52203	55 (55~60)			A21.5RF & SF	A2-65FT
	60F	52204	60 (60~65)			A24 RF & SF	
	65F	52205	65 (65~73)			B26.5RF & SF	B-80FT
	73F	52206	73 (73~80)			B30.5RF & SF	
	80F	52207	80 (80~90)			C34 RF & SF	C-100FT
	90F	52208	90 (90~100)			C39 RF & SF	
	100F	52210	100 (100~110)			D44 RF & SF	D-120FT
	110F	52212	110 (110~120)			D49 RF & SF	

EXTENTION ARBOR (Flat Standard Head)

EXT-[Ⓧ]-[Ⓧ]



MODEL	CODE	L	$\phi D1, D2$	ϕC	HEAD	N/W (kg)	
EXT	-A-150	54151	150	16	29	A1s55 · A265	0.8
	-300	54301	300				1.6
	-B-150	54152	150	18	35	B 80	1.2
	-300	54302	300				2.3
	-C-150	54153	150	20	38	C100	1.4
	-300	54303	300				2.7
	-D-150	54154	150	22	45	D120	1.9
	-300	54304	300				3.8
	-E-150	54155	150	30	55	E150	2.8
	-300	54305	300				5.5
	-F-150	54156	150	35	65	F180	3.9
	-300	54306	300				7.8
	-G-150	54157	150	40	75	G210	5.1
	-300	54307	300				10.2
	-H-150	54158	150	45	85	H240	6.4
	-300	54308	300				12.8
	-I-150	54159	150	50	95	I 270	7.9
	-300	54309	300				16.0

ORDERING EXAMPLE

① **EXT** - ② **A** - ③ **150**

① Name
② Head type
③ L

BT series

HSK series

ST series

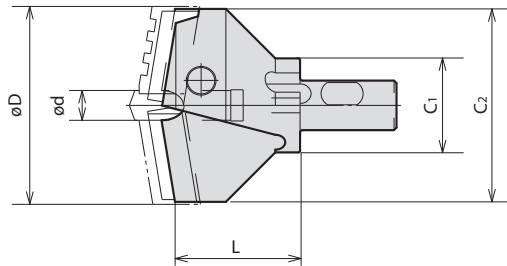
Versatile Tool

Cutting Tool

Accessories

STANDARD HEAD ASS'Y

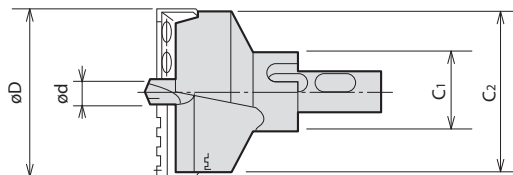
WITH BLADE CLAMPS
(Blade and center drill are sold separately.)



MODEL	CODE	Hole dia.		$\varnothing d$	$\varnothing C_1$	$\varnothing C_2$	L	N/W (kg)
		MIN.	MAX.					
HD	-A _{1S} 55	54020	50	55	12	29	40	0.4
	-A ₂ 65	54021	55	65			41.5	0.5
	-B 80	54022	65	80		35	47	0.7
	-C 100	54023	80	100		38	50.5	1.0
	-D 120	54024	100	120	45	62	1.7	
	-E 150	54025	120	150	20	55	55	2.6
	-F 180	54026	150	180		65	63.5	4.3
	-G210	54027	180	210		75	75	6.7
	-H240	54028	210	240		85	75.5	10.0
-I 270	54029	240	270	95		76	11.8	

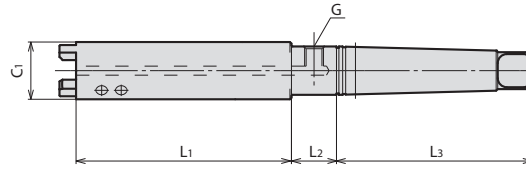
FLAT HEAD ASS'Y

WITH BLADE CLAMPS
(Blade and center drill are sold separately.)



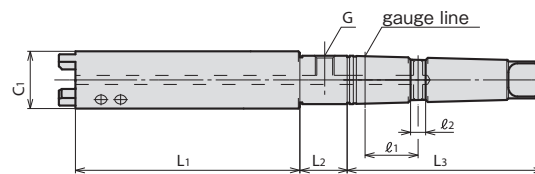
MODEL	CODE	Hole dia.		$\varnothing d$	$\varnothing C_1$	$\varnothing C_2$	L	N/W (kg)
		MIN.	MAX.					
HD	-A _{1S} 55FT	54030	50	55	12	29	43	0.4
	-A ₂ 65FT	54031	55	65			45	0.5
	-B 80FT	54032	65	80		35	51	0.7
	-C 100FT	54033	80	100		38	56	1.0
	-D 120FT	54034	100	120		45	69	1.7

MT DRILL ARBOR



MODEL	CODE	MT No.	C1	L1	L2	L3	G	DRILL HEAD	N/W (kg)
MT4-A-200	54041	MT4	29	157	30	130	PT1/4	A1-55	1.4
MT4-B-200	54042		35	150				A2-65	
MT4-C-200	54043		38	144				C100	
MT4-D-200	54044		45	131				D120	
MT5-E-200	54055	MT5	55	137	163	PT1/4	E150	3.8	
MT5-F-200	54056		65	126			F180	4.5	
MT5-G-200	54057		75	112			G210	5.2	
MT6-H-300	54068	MT6	85	300	40	PT3/8	H240	7.8	
MT6-I-300	54069		95				I270	11.0	

OH MT DRILL ARBOR



MODEL	CODE	MT No.	C1	L1	L2	L3	l1	l2	G	DRILL HEAD	N/W (kg)
MT4-A-200-OH	54141	MT4	29	157	30	130	41	20	PT1/4	A1-55	1.4
MT4-B-200-OH	54142		35	150						A2-65	
MT4-C-200-OH	54143		38	144						C100	
MT4-D-200-OH	54144		45	131						D120	

BT series

HSK series

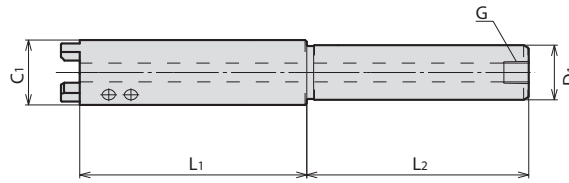
ST series

Versatile Tool

Cutting Tool

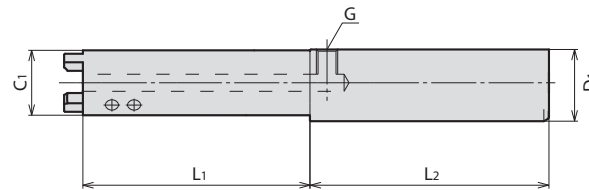
Accessories

ST DRILL ARBOR



MODEL	CODE	D1	C1	L1	L2	G	DRILL HEAD	N/W (kg)	
ST32	-A-200	54321	32	29	157	130	PT1/4	A1-55	1.6
	-B-200	54322		35	150			A2-65	
	-C-200	54323		38	144			B80	
	-D-200	54324		45	131			C100	
ST42	-A-200	54421	42	29	157	130	PT3/8	A1-55	1.8
	-B-200	54422		35	150			A2-65	
	-C-200	54423		38	144			B80	2.2
	-D-200	54424		45	131			C100	2.3
							D120	2.9	

ST DRILL ARBOR (FOR LATHE)



MODEL	CODE	D1	C1	L1	L2	G	DRILL HEAD	N/W (kg)	
ST45	-A-200	54451	45	29	157	140	PT1/4	A1-55	1.9
	-B-200	54452		35	150			A2-65	
	-C-200	54453		38	144			B80	2.3
	-D-200	54454		45	131			C100	2.4
							D120	3.0	

OIL RING

MODEL	CODE	ID(mm)	Oil Plug
CR	-MT4	51022	32
	-MT5	51024	45
	-MT6	51026	65
			PT1/4
			PT3/8

OIL PLUG only

MODEL	CODE	Coolant Ring
PT	1/4	51054
	3/8	51056
		CR-MT4,CR-MT5
		CR-MT6

Coolant ring set :
Coolant ring 1pc
Stopper 1pc

* Oil plug is sold separately.

Oil ring is used supply coolant through the drill in rotational applications.

T/C GUIDE (For Through Hole with Standard Head)

MODEL	CODE	HEAD	WRENCH	
DG	-B80-S	51031	B-80 (ø65-ø73)	No wrench
	-B80-L	51034	B-80 (ø73-ø80)	
	-C/D	51036	C-100/D-120	
	-E/F	51038	E-150/F-180	w/wrench
	-G/H/I	51040	G-210/H-240/I-270	

T/C guides will minimize vibration when drill goes through the other end.

SPARE BLADE CLAMP

FOR STANDARD HEAD

MODEL	CODE	
BC	-A _{1S} 55	51003
	-A ₂ 65	51004
	-B 80	51006
	-C 100	51008
	-D 120	51010
	-E 150	51012
	-F 180	51014
	-G210	51016
	-H240	51018
	-I 270	51020

FOR FLAT HEAD

MODEL	CODE	
BC	-A _{1S} 55FT	51045
	-A ₂ 65FT	51046
	-B 80FT	51047
	-C 100FT	51048
	-D 120FT	51049

RE-GRINDING FIXTURE

MODEL	CODE	HOLE DIA	
SBG	-100	51043	50~120
	-200	51044	120~270