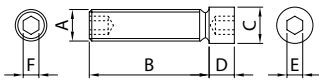
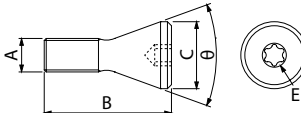
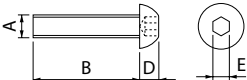
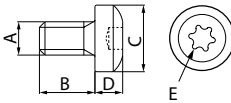
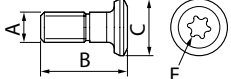
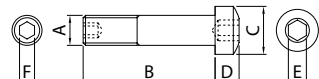
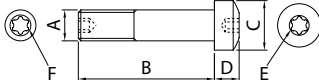
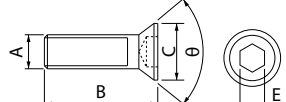
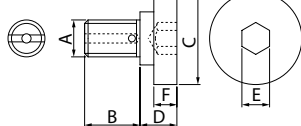
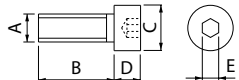


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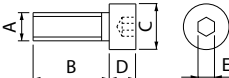
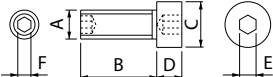
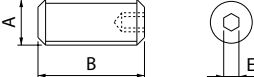
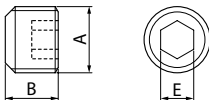
Screws	P2~P6
Pins	P7
Shims	P8~P12
Cartridges	P12
Clamp sets	P13~P14
Clamps	P15~P16
Chipbreakers	P16
Wrenches	P17~P18
Springs / Nuts / Punches / Others	P18~P19
Former parts list	P20~P37

Shape	Description	Availability	Dimension (mm)						Angle		Torque (N-m)	Remarks
			A	B	C	D	E	F	α	θ		
	AJ -6X38 -8X44-9.5 -10X46	● ● ●	M6X1.0 M8X1.25 M10X1.5	38.0 44.0 46.0	6.0 9.5 11.5	10.0 6.0 8.0	3.0 4.0 5.0	3.0 4.0 5.0	- - -	- - -	-	
	AJ -519TR	●	M5X0.8	19.0	10.0	-	T15	-	-	40°	-	
	BH 3X6 3X12 6X25	● ● ●	M3X0.5 M3X0.5 M6X1.0	6.0 12.0 25.0	- - -	2.0 2.0 4.0	2.0 2.0 4.0	- - -	- - -	- - -	-	
	BH 6X10TR	●	M6X1.0	10.0	12.0	5.0	T25	-	-	-	6.5	
	CP 8X15TL 8X23TL	● ●	M8X1.25	15.0 23.0	-	-	T25	-	-	-	6.0	L... shows Left-hand thread
	CS -2D -3D -5D	● ● ●	M4X0.7 M5X0.8 M5X0.8	21.5 22.0 28.0	6.4 8.0 8.0	3.5 4.0 4.0	2.5 3.0 3.0	2.0 2.5 2.5	- - -	- - -	1.7 3.9 3.0	
	CS -3D-TR	●	M5X0.8	22.0	8.0	4.0	T15	T15	-	-	3.9	
	GS -50	●	M5X0.8	13.0	7.5	-	3.0	-	-	82°	-	
	HF 20X53H 20X53HA 24X60H 24X60HA	● ● ● ●	M20X2.5 M24X3.0	35.0 33.0 40.5 36.0	43.0 50.0 65.0	18.0 20.0 19.5 24.0	14.0 14.0 17.0	- - -	- - -	-	-	With Coolant Hole
	HH 3X6 3X10S 3X12 HH 3.5X10S HH 4X12S 4X16 HH 5X12 5X15 5X15L 5X16 5X20 5X25 5X30	● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	M3X0.5 M3.5X0.6 M4X0.7 M5X0.8	6.0 10.0 12.0 10.0 12.0 16.0 12.0 15.0 16.0 20.0 25.0 30.0	5.5 5.0 5.5 7.0 8.5	3.0 3.0 4.0 5.0	2.5 2.5 3.0 4.0	- - - -	- - - -	-	-	L... shows Left-hand thread

● : Available

P

Spare parts

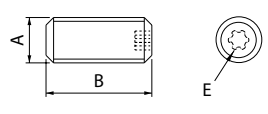
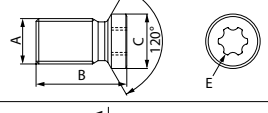
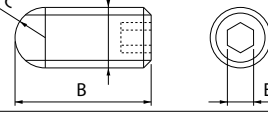
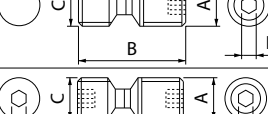
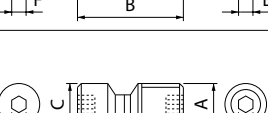
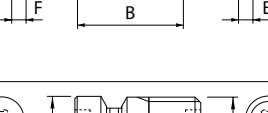
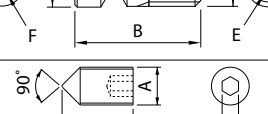
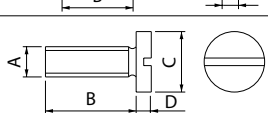
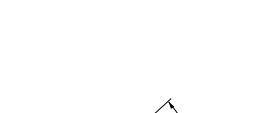
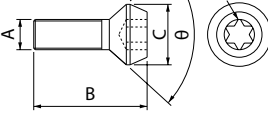
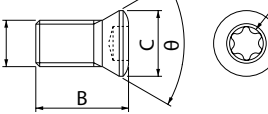
Shape	Description	Availability	Dimension (mm)						Angle		Torque (N-m)	Remarks						
			A	B	C	D	E	F	α	θ								
	HH 6X12	⊙	M6X1.0	12.0	10.0	6.0	5.0	-	-	-	-							
	6X16	⊙		16.0														
	6X16A	⊙																
	6X18	⊙		18.0														
	6X18A	⊙																
	6X20	⊙		20.0														
	6X25	⊙		25.0														
	6X30	⊙		30.0														
	HH 8X20	⊙	M8X1.25	20.0	13.0	8.0	6.0	-	-	-								
	8X25	⊙		25.0														
	HH 10X25	⊙	M10X1.5	25.0	16.0	10.0	8.0	-	-	-								
	10X30	⊙		30.0														
	10X35	⊙		35.0														
	10X40	⊙		40.0														
	HH 12X35	⊙		M12X1.75											35.0	18.0	12.0	10.0
	12X40	⊙	40.0															
	HH 16X35	⊙	M16X2.0	35.0	24.0	16.0	14.0	-	-	-								
	16X40	⊙		40.0														
	16X45	⊙		45.0														
	HH 20X40	⊙	M20X2.5	40.0	30.0	20.0	17.0	-	-	-								
	20X55	⊙		55.0														
	HH 4X12	⊙	M4X0.7	10.0	7.0	4.0	3.0	2.0	-	-	-							
	HH 8X25H 10X30H 10X35HK 12X35H 12X35HK 16X52H	⊙ ⊙ ⊙ ⊙ ⊙ ⊙	M8X1.25 M10X1.5 M12X1.75 M16X2.0	25.0 30.0 35.0 36.0	13.0 16.0 18.0 24.0	8.0 10.0 12.0 16.0	5.0 6.0 8.0 12.0	-	-	-	-	With coolant hole						
	HS 3X3P	⊙	M3X0.5	2.9	-	-	1.5	-	-	-	1.0	HS4X4P and HS6X4P have a flat edge Clamp screw equivalent to JIS B-1177						
	3X4P	⊙		3.9														
	3X4	⊙		4.0														
	HS 4X4P	⊙	M4X0.7	3.9	-	-	2.0	-	-	-	2.0							
	4X4	⊙		4.0														
	HS 5X5	⊙	M5X0.8	5.0	-	-	2.5	-	-	-	3.0							
	HS 6X4P	⊙	M6X0.75	3.9	-	-	3.0	-	-	-	4.0							
	6X6	⊙		6.0														
	6X8T	⊙		8.0														
	6X14	⊙		14.0														
	6X22	⊙		22.0														
	HS 8X10	⊙	M8X1.25	10.0	-	-	4.0	-	-	-								
	8X12	⊙		12.0														
	HS 10X10	⊙	M10X1.5	10.0	-	-	5.0	-	-	-								
	10X16	⊙		16.0														
	HS 12X12	⊙	M12X1.75	12.0	-	-	6.0	-	-	-								
	12X16	⊙		16.0														
	12X18	⊙		18.0														
	12X20	⊙		20.0														
	12X25	⊙		25.0														
	12X30	⊙		30.0														
	12X35	⊙		35.0														
	HS 16X12	⊙	M16X2.0	12.0	-	-	8.0	-	-	-								
	16X18	⊙		18.0														
	16X20	⊙		20.0														
	HS 5X4LP	⊙	M5X0.8	4.0	-	-	2.5	-	-	-	-							

⊙ : Available

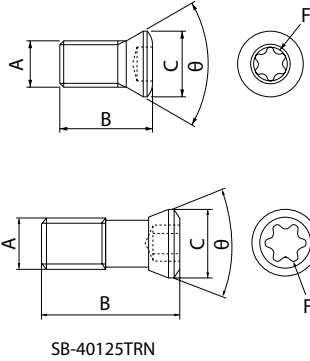
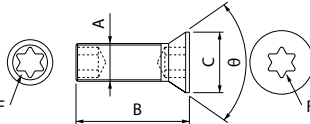
P



Spare parts

Shape	Description	Availability	Dimension (mm)						Angle		Torque (N-m)	Remarks					
			A	B	C	D	E	F	α	θ							
	HS -2524TRP	⊙	M2.5X0.35	2.4	-	-	5IP	-	-	-	0.5	IP shows Torx Plus					
	-2534TRP	⊙		3.4							0.8						
	-3048TRP	⊙	M3X0.5	4.8			6IP				1.2						
	-4067TRP	⊙	M4X0.7	6.7							7IP						
	HS -50100TRP	⊙	M5X0.8	10	6.0	-	15IP	-	-	-	3.5	IP shows Torx Plus					
	HSB 4X8%L	⊙	M4X0.7	8.0	R2.0	-	2.0	-	-	-	2.0	R... shows Right-hand thread L... shows Left-hand thread					
	LS -03N	⊙	M5X0.8	9.7	M5X0.8	-	2.0	-	-	-	2.0	N: Silver coated					
	-03SN	⊙		12.0			2.5				3.0						
	LS -05	⊙	M5X0.8	15.5	M5X0.8	-	2.0	2.0	-	-	2.0						
	LS -1N	⊙	M6X1.0	17.0	6.0	-	2.5	2.5	-	-	3.0	N: Silver coated					
	-15N	⊙		14.2													
	-1T	⊙		21.0													
	LS -2N	⊙	M8X1.0	20.0	8.0	-	3.0	3.0	-	-	4.0						
	-3	⊙		22.0													
	-4N	⊙		24.0													
	-5	⊙	M10X1.0	29.0	10.0	-	4.0	4.0	-	-	-						
	LS -1P	⊙	M6X1.0	16.5	6.0	-	10IP	10IP	-	-	2.0	IP shows Torx Plus					
	-2P	⊙	M8X1.0	18.2	8.0		15IP	15IP			3.5						
	-3P	⊙		21.8													
	LS -11	⊙	M6X1.0	9.5	-	-	3.0	-	-	-	-						
	-15	⊙		12.5								-					
	M 3X8	⊙	M3X0.5	8.0	5.5	2.0	-	-	-	-	-	Flat fillister head screw equivalent to JIS B-1101					
	3X12	⊙		12.0													
	4X10	⊙	M4X0.7	10.0	7.0	2.6											
	SB -1TR	⊙	M2X0.4	5.3	3.8	-	-	T6	-	82°	0.5	R... shows right-hand thread					
	-2TR	⊙	M2.5X0.45	6.2	4.5			T8			1.2						
	-3TR	⊙	M3X0.5	7.2	4.8			T10			2.0						
	-35TR	⊙		6.4	5.2			T15			3.5						
	-3.5TR	⊙	M3.5X0.6	9.3	5.6			T20		90°	4.5						
	-4TR	⊙	M4X0.7	7.7	5.8						0.5						
	-5TR	⊙	M5X0.8	20.0	8.7			T6		60°	0.5						
	-2290TR	⊙	M2.2X0.45	9.2	2.8			T7			0.8						
	-25100TR	⊙	M2.5X0.45	10.0	3.5			T15			3.5						
	-40115TR	⊙	M4X0.7	11.5	5.5			T20			4.5						
	-5070TR	⊙	M5X0.8	7.0	6.8												
	-5090TR	⊙		9.0													
	-50120TR	⊙		12.0													
  SB-40125TRN	SB -1STR	⊙	M2X0.4	5.0	3.1	-	-	T6	-	60°	0.5	R... shows right-hand thread L... shows left-hand thread					
	-1635TR	⊙	M1.6X0.35	3.3	2.6			6IP		55°	0.5						
	-1840TRP	⊙	M1.8X0.35	4.0	2.5			T6		60°			55°				
	-2035TR	⊙		3.7	3.0												
	-2035TRG	⊙		3.5	2.7												
	-2037TRP	⊙	3.7	3.0	6IP			60°									
	-2040TR	⊙	3.8	3.0													
	-2040TRG	⊙	4.0	2.7													
	-2041TRP	⊙	M2X0.4	4.1	2.7			T6		60°							
	-2042TRG	⊙		4.3	2.8												
	-2045TR	⊙		4.8	3.0												
	-2045TRN	⊙	M2X0.4	5.8	3.5			T8		60°			1.2				
	-2050TR	⊙		8.3	2.8								T6	0.5			
	-2060TR	⊙		8.3	2.8												
	-2080TR	⊙	M2X0.4	8.3	2.8			T6		60°			0.5				
	-2080TR	⊙		8.3	2.8												

⊙: Available

Shape	Description	Availability	Dimension (mm)						Angle		Torque (N-m)	Remarks							
			A	B	C	D	E	F	α	θ									
 SB-40125TRN	SB -2250TR	⊙	M2.2X0.45	5.1	3.1	-	-	T7	-	60°	0.8	R... shows right-hand thread L... shows left-hand thread IP shows Torx Plus							
	-2255TR	⊙		5.5	3.5														
	-2260TR	⊙		5.8	3.1														
	-2270T ⁹ / _L	⊙		6.8	3.2														
	SB -2545TR	⊙	M2.5X0.45	4.6	3.5	-	-	T8	-	60°	1.2								
	-2555TRG	⊙		5.4				8IP											
	-2555TRP	⊙		5.5															
	-2560TR	⊙		5.7				T8											
	-2570TR	⊙		6.8															
	SB -3060TR	⊙	M3X0.5	5.3	4.2	-	-	T10	-	60°	2.0								
	-3060TRP	⊙		6.0				10IP			1.2								
	-3065TRP	⊙		6.5	4.0			8IP											
	-3070TRG	⊙		7.0	4.2			T10			2.0								
	-3070T ⁹ / _L	⊙			4.0			T8		55°	2.0								
	-3070TRP	⊙			4.2			10IP											
	-3076TRP	⊙		7.6	3.9			T10											
	-3080TR	⊙		8.0	4.2			60°											
	SB -3573TRP	⊙	M3.5X0.6	7.3	5.0	-	-	10IP	-	60°	2.0								
	-3575TRP	⊙		7.5	4.9						3.5								
	-3580TR	⊙		8.0	5.3			T15											
	-3590TRP	⊙		9.0	15IP			4.0											
	-3592TR	⊙		9.2	5.1			T10			2.0								
	-35120TRP	⊙		12.0	5.2			15IP			4.0								
	SB -4050TRN	⊙	M4X0.5	4.6	5.1	-	-	T10	-	57°	2.0								
	-4060TR	⊙	M4X0.7	5.9	5.5			T15		60°	3.5								
	-4065TR	⊙		6.7															
	-4070TRG	⊙		7.0															
	-4070TRN	⊙		7.7	5.4			T10			2.0								
	-4070TRS	⊙		6.7	5.5						3.5								
	-4075TRP	⊙		7.5	15IP														
	-4082TPR	⊙		8.2	T15														
	-4085TR	⊙		8.5															
	-4085TRP	⊙		15IP															
	-4086TRP	⊙											8.6						
	-4090TRP	⊙											9.0	5.7					
	-4090TRPN	⊙												5.5					
	-40104TRP	⊙		10.4	5.7			T15											
	-40120TR	⊙		12.0	5.1														
	-40125TRN	⊙		12.5	5.2			50°											
	-40140TR	⊙		14.0	5.5			60°											
	-40140TRN	⊙			6.7			75°											
	SB -44865UTRP	⊙	UNF No.4-48	6.5	3.8	-	-	8IP	-	60°	1.2								
	-44880UTRP	⊙		8.0															
	SB -4570TRN	⊙	M4.5X0.5	6.8	6.0	-	-	T10	-	57°	2.0								
	-45130TR	⊙	M4.5X0.75	13.0	6.6			20IP		55°	4.5								
	SB -5085TR	⊙	M5X0.8	8.5	6.8	-	-	T20	-	50°	4.5								
	-50110TRP	⊙		11.0	7.0			20IP		60°									
	-50120TRP	⊙		12.0	6.8														
	-50120TRPH	⊙			7.2														
	-50120TRS	⊙		13.7	9.7			15IP		70°	4.5								
	-50137K	⊙			7.3			T20		50°	4.2								
	-50140TR	⊙						T15		60°	4.5								
	-50140TRP	⊙						20IP											
	SB -60120TR	⊙	M6X1.0	12.0	8.5	-	-	T25	-	60°	6.0								
	-60130TRP	⊙		13.0				20IP			4.5								
	-60200TRP	⊙		20.0							6.0								
 SB-40125TRN	SB -4070TRW	⊙	M4X0.7	6.7	5.5	-	-	T8	-	60°	1.2	R... shows right-hand thread							
	-4590TRWN	⊙	M4.5X0.75	9.3	5.6			T10		57°	2.0								

⊙ : Available

Reference

Torx and Torx Plus have different cross-sections.



Torx



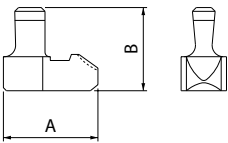
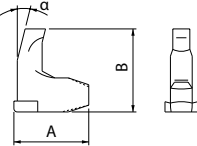
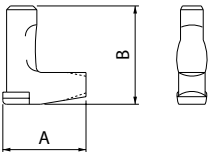
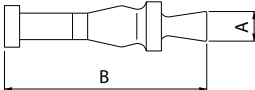
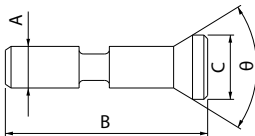
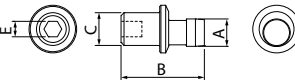
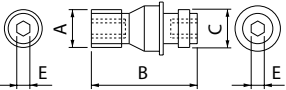
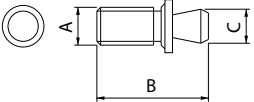
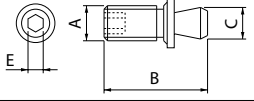
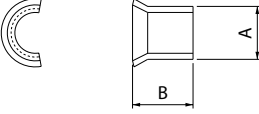
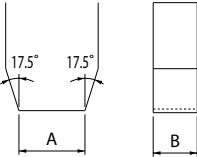
Torx Plus



Shape	Description	Availability	Dimension (mm)						Angle		Torque (N-m)	Remarks					
			A	B	C	D	E	F	α	θ							
	SC	-30067	●	M3X0.35	6.7	4.4	-	-	T8	-	60°	1.2					
		-35085	●	M3.5X0.35	8.5	5.7			T10			2.0					
		-40100	●	M4X0.5	10.0	6.0			T15			3.5					
		-50130	●	M5X0.5	13.0	6.6			T20	4.5							
		-60160	●	M6X0.75	16.0	8.0			T25	6.0							
		-60210	●	M6X0.75	21.0	9.6			T30	8.0							
	SE	-3070TRP	●	M3X0.5	7.0	4.3	-	-	9IP	-	43°	1.7	IP shows Torx Plus				
		-40050TRN	●	M4X0.7	5.0	5.0			T15			-		44°	3.5		
		-40055TR	●		5.5												
		-40068TR	●		6.8												
		-40080TR	●		8.0												
		-40090TR	●		9.0												
		-40100TR	●		10.0												
	SE	-40120TR	●	M4X0.7	12.0	5.6	-	-	T15	-	60°	3.5					
		-50125TR	●	M5X0.8	12.5	6.8			T20			4.5					
	SH	-50150TR	●	M5X0.8	15.1	7.3	3.1	-	T20	-	-	4.5					
	SP	3X4	●	M3X0.5	4.0	4.0	-	-	-	-	90°	-	With additional machining below the flat head screw				
		3X6	●		6.0	6.0						-	-	-	90°	-	Cross recessed flat head screw equivalent to JIS...B-1111
		3X8	●		8.0												
		3X10	●		10.0												
	SP	4X9	●	M4X0.7	9.0	5.6	-	2.0	-	-	90°	-					
	SP	8X35	●	M8X1.25	35.0	11.0	4.4	5.0	-	-	90°	-					
	SPW	-5035	●	M5X0.5	7.0	6.3	M3.5X0.6	3.5	-	-	-	-	A shows External, D shows Internal. External and Internal threads are both Right-hand threads.				
		-6045	●	M6X0.75	9.0	7.5	M4.5X0.75	4.5									
		-7050	●	M7X0.75	9.0	8.8	M5X0.8	5.0									
	SS	-4N	●	M5.5X0.5	8.5	6.6	M4X0.7	4.0									
	SV	-60136R	●	M6X1.0	13.6	6.3	-	-	T25	-	6°	-	Torx				
		-60136TR	●						T20			4.5					
	TH	8X15	●	M8X1.25	20.0	8.5	-	4.0	-	-	-	-					
	W	6X17	●	M6X1.0	17.0	-	-	-	T20	-	-	4.5					
		6X18N	●		18.0				T15			3.5					
		8X16	●	M8X1.0	16.0				T25			6.0					
	W	6X18	●	M6X1.0	17.5	-	-	3.0	-	-	-	-					
		6X20	●	M6X1.0	20.5												
		8X18	●	M8X1.25	18.0			4.0									
		*8X21	●	M8X1.0	21.0												
	W	10X31	●	M10X1.0	31.0	M10X1.5	-	5.0	-	-	-	-					

* No socket on right-hand thread side

⊙: Available

Shape	Description	Availability	Dimension (mm)						Angle		Remarks						
			A	B	C	D	E	F	α	θ							
	LL -03N	☉	7.8	6.3	-	-	-	-	-	-							
	-03SN	☉	11.1	8.9													
	-03TN	☉	8.3	8.9													
	LL -05C	☉	10.7	11.7	-	-	-	-	12°	-							
	-1CN	☉	13.0	13.3					14°								
	-2C	☉	18.8	17.6					14°								
	LL -1K	☉	10.0	12.0	-	-	-	-	-	-							
	-1N	☉	10.3	12.0													
	-1DN	☉	12.3	12.0													
	-2K	☉	13.3	13.2													
	-2N	☉	13.5	13.0													
	-3K	☉	16.0	14.8													
	-3N	☉	16.4	13.0													
	-4N	☉	16.4	14.7													
	-5N	☉	17.1	16.7													
	-6	☉	20.7	21.0													
	LP -2S	☉	3.65	20.0	-	-	-	-	-	-							
	-6S	☉	3.65	25.0	-	-	-	-	-	-							
	LPA -11	☉	2.8	11.0	4.2	-	-	-	-	60°							
	-13	☉		13.0													
	-17	☉		17.0													
	LPF -11	☉	2.5	11.0	3.5	-	-	-	-	60°							
	-1113	☉		13.0													
	-1117	☉		17.0													
	-13	☉	3.8	13.0	5.5												
	-17	☉		17.0													
	PP -4	☉	4.6	14.0	5.5	-	3.0	-	-	-							
	TS -3S	☉	M5X0.8	15.0	3.60	-	2.0	-	-	-							
	WP -1S	☉	M5X0.8	18.0	3.65	-	-	-	-	-							
	5X15	☉		15.0	5.0												
	WP 5X11	☉	M5X0.8	10.5	5.0	-	2.0	-	-	-							
	LSP -1	☉	5.0	5.3	-	-	-	-	-	-							
	-2	☉	6.5	5.6													
	-3	☉	8.25	7.9													
	-4	☉	9.5	10.0													
	LSP -2K	☉	5.1	5.2													
	-3K	☉	6.7	5.7													
	P -03	☉	2.8	1.95	-	-	-	-	-	-							
	-03S	☉	3.5	1.95	-	-	-	-	-	-							

●: Available

Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)						Angle		Remarks					
			A	B	C	D	E	F	α	θ						
	DC -42	☉	12.0	3.2	1.2	6.0	4.4	R1.2	-	-	Shim screw: SB-4085TR					
	-44	☉	12.55	5.0	1.5			R0.8								
	DC -44-C	☉	12.55	5.0	1.5	6.0	4.4	-	-	-	Shim screw: SB-4085TR					
	DD -42	☉	12.55	3.2	1.2	6.0	4.4	R1.2	-	-	Shim screw: SB-4085TR					
	-42-16	☉						R1.6								
	-43	☉		3.4	1.3			R0.8								
	-44	☉														
	DS -42	☉	12.0	3.2	1.2	6.0	4.4	R1.2	-	-	Shim screw: SB-4085TR					
	-44	☉	12.55	5.0	1.5			R0.8								
	DT -32	☉	8.63	3.2	0.95	5.0	3.4	R1.6	3°	-	Shim screw: SB-3080TR					
	-42	☉	12.46		1.2	6.0	4.4	R1.2	-		Shim screw: SB-4085TR					
	DV -33	☉	9.40	3.5	1.2	6.0	4.4	R1.0	-	-	Shim screw: SB-4085TR					
	DW -42	☉	11.5	3.2	1.2	6.0	4.4	R1.2	4°	-	Shim screw: SB-4085TR					
	-44	☉	12.65	5.0	1.5			R0.8	-							
	556 C7%	☉	34.0	10.0	12.7	5.6	5.0	R1.6	0°	55°	R...shows Right-hand L...shows Left-hand Shim screw: HH5X16					
	KPS -42	☉	11.5	3.2	2.0	7.2	3.2	C1.0	7°	-	Shim screw: SP3X8					
	KPT -32	☉	8.0	3.2	1.9	7.0	3.2	R0.4	11°	-	Shim screw: SP3X8 SP3X10					
	-42	☉	10.5	3.2	1.9	7.0	3.2	R0.8	11°	-						
	KVN -32	☉	9.52	3.2	2.1	7.6	5.5	R0.8	-	-	Lock pin: LP-2S LP-6S					
	LC -32N	☉	9.47	2.4	1.3	6.18	4.68	R0.8	-	-	Shim pin: LSP-1					
	-4K	☉	11.7	3.2	1.4	8.1	6.73	R0.8	-	-	Shim pin: LSP-3K					
	-42N	☉	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim pin: LSP-2					
	-42N-20	☉						R2.0								
	-53N	☉	15.9	4.8	1.7	10.0	8.0	R1.2	-	-	Shim pin: LSP-3					
	-63	☉	19.0	4.8	2.0	11.61	9.3	R1.6	-	-	Shim pin: LSP-4					

☉: Available

P

Spare parts

Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)							Angle		Remarks
			A	B	C	D	E	F	α	θ		
	LC -42N-C	●	12.65	3.2	1.5	8.01	6.28	-	-	-	Shim pin: LSP-2	
	-53N-C	●	15.9	4.8	1.7	10.0	8.0	-	-	-	Shim pin: LSP-3	
	-63-C	●	19.0	4.8	2.0	11.61	9.3	-	-	-	Shim pin: LSP-4	
	LC -42N ⁹⁰ /L	●	12.65	3.2	1.5	8.01	6.28	R0.8	10°	-	R... shows right-hand L... shows left-hand Shim pin: LSP-2	
	LD -32N	●	9.47	2.4	1.3	6.18	4.68	R0.8	-	-	Shim pin: LSP-1	
	-4K	●	11.7	3.2	1.4	8.1	6.73	R0.8	-	-	Shim pin: LSP-3K	
	-4K43	●		4.8	3.0	8.3	6.60	R1.2				
	-42	●	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim pin: LSP-2	
	-42-20	●	12.65	4.8	3.1	8.5	6.28	R2.0				
	-43	●						R0.8				
	-43-20	●	R2.0									
	LR -80	●	9.47	3.2	1.3	6.25	4.75	-	-	-	Shim pin: LSP-1	
	-81	●	12.65	3.2	1.5	8.01	6.28	-	-	-	Shim pin: LSP-2	
	LR -10C	●	8.5	3.2	6.3	6.3	4.7	-	-	-	Shim pin: LSP-1	
	-12C	●	10.0	3.2	6.3	6.3	4.7	-	-	-		
	-16C	●	13.6	3.2	7.9	8.01	6.28	-	-	-	Shim pin: LSP-2	
	LS -32	●	9.47	3.2	1.3	6.18	4.68	R0.8	-	-	Shim pin: LSP-1	
	-42	●	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim pin: LSP-2	
	LT -3K	●	8.53	2.7	1.0	6.1	5.13	R0.8	-	-	Shim pin: LSP-2K	
	-32N	●	9.47	2.7	1.3	6.18	4.68	R0.8	-	-	Shim pin: LSP-1	
	-32N-20	●						R2.0				
	-42N	●	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim pin: LSP-2	
	-42N-20	●						R2.0				
	LW -32N	●	9.47	2.4	1.3	6.18	4.68	R0.8	-	-	Shim pin: LSP-1	
	-42N	●	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim pin: LSP-2	
	LW -42N ⁹⁰ /L	●	12.65	3.2	1.5	8.01	6.28	R0.8	10°	-	R... shows right-hand L... shows left-hand shim pin: LSP-2	
	MFPN -45	●	17.07	3.5	1.95	9.8	7.18	R3.5	-	-	Shim screw: SPW-7050	
	MFSE -105	●	10.5	3.0	1.4	7.0	5.3	-	7°	45°	Shim screw: SPW-5035	
	MFWN -90	●	15.25	4.0	2.5	9.44	7.25	R3.0	-	-	Shim screw: SPW-7050	
								R4.0				
	MSD -42	●	10.7	3.2	1.85	7.0	3.3	-	20°	45°	Shim screw: SP3X8	
	MSE -4245S	●	10.3	3.2	2.0	6.0	5.0	-	20°	45°	Shim screw: SP4X9	
	MSE -4215	●	10.53	3.2	1.5	6.4	3.4	-	25°	15°	Shim screw: SP3X8	
	-4245	●	10.53	3.2	1.5	6.4	3.4	-	25°	45°	Shim screw: SP3X8	

●: Available

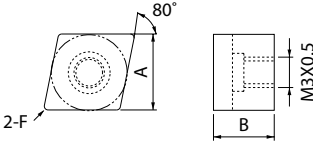
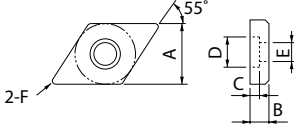
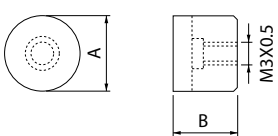
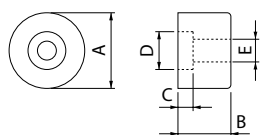
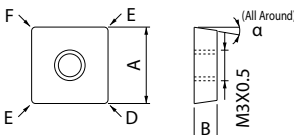
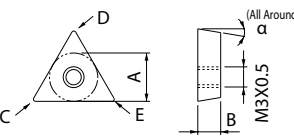
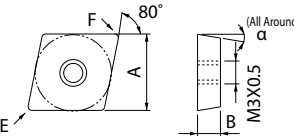
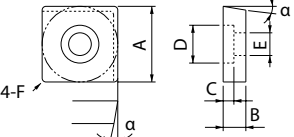
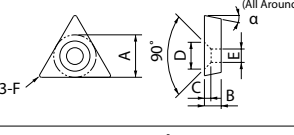
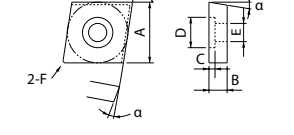
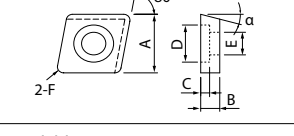
P



Spare parts

Shape	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	MS0 -4T245	●	10.0	2.0	4.7	6.4	4.8	-	27°	45°	Shim screw: SP3X6
	MS0 -5200	●	12.6	3.18	1.8	8.27	6.66	R0.8	15°	-	Shim screw: SPW-6045
	MSP -42	●	11.3	3.2	1.85	7.0	3.3	-	15°	15°	Shim screw: SP3X8
	MTE -42	●	9.8	3.2	-	6.4	3.4	-	25°	-	Shim screw: SP3X8
	MVN -32	●	9.52	3.2	2.1	7.4	6.5	R0.8	-	-	Lock pin: TS-35
	PD -42	●	12.7	3.2	1.7	6.0	8.4	0.8	12°	-	Shim screw: SB-2050TR
	SP -129	●	9.52	9.52	R0.8	R1.6	R1.2	R1.6	-	-	Shim screw: HH3X12
	SP -141	●	12.7	4.0	2.4	6.2	3.3	R1.2	-	-	Shim screw: M3X8
	-143	●	12.7	7.2	2.4	6.2	3.3	R1.2	-	-	Shim screw: M3X12
	-162	●	15.8	6.0	3.4	8.0	4.4	R1.5	-	-	Shim screw: M4X10
	SP -148	●	12.7	8.8	2.4	6.2	3.3	R1.2	-	-	Shim screw: BH3X12
	SP -219	●	6.35	9.52	R0.8	R1.2	R1.6	-	-	-	Shim screw: HH3X12
	SP -221	●	9.52	4.0	2.5	6.5	3.5	R1.2	-	-	Shim screw: M3X8
	-223	●	9.52	7.2	2.5	6.5	3.5	R1.2	-	-	Shim screw: M3X12
	SP -342	●	12.7	6.0	2.5	6.5	3.5	R1.2	-	75°	Shim screw: M3X8
	-441	●	12.7	4.0	2.5	6.2	3.3	R0.8	-	80°	Shim screw: M3X8
	-443	●	12.7	7.2	2.5	6.2	3.3	R0.8	-	80°	Shim screw: M3X12
	-454	●	15.7	8.0	3.4	8.0	4.5	R1.6	-	80°	Shim screw: M4X10

● : Available

Shape	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	SP -429	●	9.52	9.52	-	-	-	R1.2	-	-	Shim Screw : HH3X12
	SP -541	●	12.7	4.0	2.5	6.2	3.3	R1.2	-	-	Shim Screw : M3X8
	-543	●		7.2							Shim Screw : M3X12
	SP -826	●	9.52	7.9	-	-	-	-	-	-	Shim Screw : HH3X12
	-829	●	9.52	9.52	-	-	-	-	-	-	
	SP -841	●	12.7	4.0	2.4	6.2	3.3	-	-	-	Shim Screw : M3X8
	-843	●	12.7	7.2	2.4	6.2	3.3	-	-	-	Shim Screw : M3X12
	-849	●	12.7	8.8	2.4	6.2	3.3	-	-	-	Shim Screw : BH3X12
	-861	●	15.8	6.0	3.4	8.0	4.4	-	-	-	Shim Screw : M4X10
	SP -130A	●	9.52	3.2	-	R0.4	R0.8	R1.2	8°	-	Shim Screw : BH3X12
	SP -210A	●	6.35	3.2	R0.4	R0.8	R1.2	-	8°	-	Shim Screw : BH3X6
	SP -420A	●	9.52	3.2	-	-	R0.8	R1.2	8°	-	Shim Screw : BH3X6
	SP -141P	●	12.7	4.0	2.4	6.2	3.3	R1.2	7°	-	Shim Screw : M3X8
	-143P	●	12.7	7.2	2.4	6.2	3.3	R1.2	7°	-	Shim Screw : M3X12
	SP -230P	●	8.3	3.2	2.0	7.2	3.2	R0.5	7°	-	Shim Screw : SP3X10
	SP -341P	●	12.6	4.0	2.5	6.5	3.5	R1.2	7°	-	Shim Screw : M3X8
	SP -441P	●	12.7	4.0	2.5	6.2	3.3	R1.2	11°	-	Shim Screw : M3X8
	-443P	●		7.2							Shim Screw : M3X12

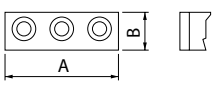
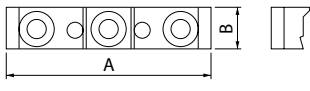
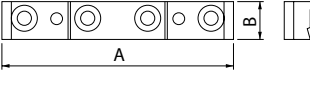
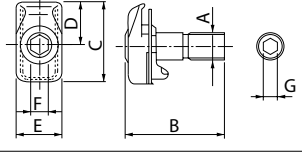
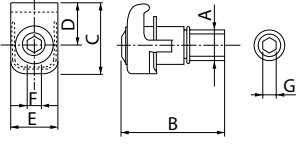
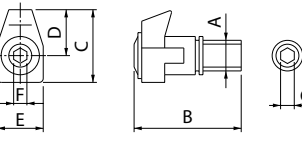
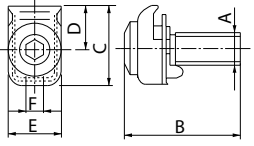
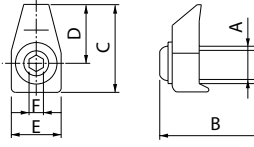
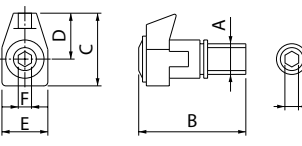
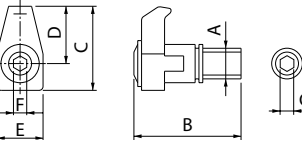
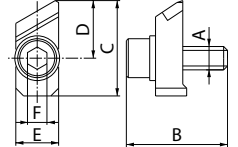
● : Available

Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	SP -RC	●	12.6	3.0	-	7.35	3.35	-	-	-	Shim screw: SP3X8
	SVN -32	●	8.0	3.2	1.5	3.1	2.3	R0.4	-	-	Shim screw: SB-2050TR
	SVN -32N	●	8.2	3.2	1.5	7.0	5.9	R0.6	-	-	Shim screw: SS-4N
	SVN -32S	●	8.2	3.2	1.5	7.0	5.9	R0.2	-	-	Shim screw: SS-4N 1-edge
	TN -32	●	9.52	3.2	6.5	7.0	4.2	R0.4	-	-	Shim screw: SP3X8
	-43	●	12.70	3.2	8.1	7.0	4.2	R0.5	-	-	
	TNW -32	●	9.52	3.2	4.8	7.0	4.2	-	-	-	Shim screw: SP3X8
	WTN -33	●	9.52	4.76	2.5	7.0	5.3	R0.8	-	-	Shim pin: WP-1S
	-33-20	●						R2.0			
	WWN -42	●	12.7	3.0	1.4	7.0	5.3	R1.2	-	-	Shim pin: WPSX15
	WWP -42	●	12.7	3.0	1.5	8.3	5.3	R1.2	11°	-	Shim pin: WPSX11
	-42-16	●						R1.6			
	MAP -2216	●	-	9.0	11.0	19.8	-	-	20°	-	Clamp screw SB-40140TR
	MAP -2506	●	-	9.5	14.9	20	-	-	5°	-	Clamp screw SB-40140TR
	LSE -445R	●	12.7	13.0	19.5	26.0	-	-	20°	45°	Dimension A shows insert I.C.
	LSO -445R	●	13.494	12.0	21.3	23.5	-	-	27°	45°	

● : Available

P

Spare parts

Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)							Remarks
			A	B	C	D	E	F	G	
	BCS -1	☉	64.0	13.0	-	-	-	-	-	
	-5	☉	48.0	16.5	-	-	-	-	-	
	BCS -2	☉	74.0	15.0	-	-	-	-	-	
	-3	☉	88.0	16.0	-	-	-	-	-	
	BCS -4	☉	98.0	16.0	-	-	-	-	-	
	CE -010	☉	M8X1.25	28.0	24.0	12.8	13.0	4.0	4.0	G: Indicates hexagon hole two side widths of back side of bolts
	-220	☉			27.0	15.8	15.0			
	CE -020	☉	M8X1.25	30.0	17.0	10.5	12.7	4.0	4.0	G: Indicates hexagon hole two side widths of back side of bolts
	CE -030	☉	M8X1.25	30.0	19.0	12.5	12.7	4.0	4.0	G: Indicates hexagon hole two side widths of back side of bolts
	-040	☉			22.5	16.0				
	CE -320	☉	M6X1.0	24.5	18.2	9.7	12.7	4.0	-	
	CE -360S	☉	M6X1.0	16.0	18.0	10.55	12.4	4.0	-	
	CE -030A	☉	M8X1.25	30.0	20.0	13.7	12.7	4.0	-	G: Indicates hexagon hole two side widths of back side of bolts
	CE -410	☉	M8X1.25	30.0	26.0	19.5	12.7	4.0	4.0	G: Indicates hexagon hole two side widths of back side of bolts
	-430	☉			29.0	22.5				
	CP -RC%	☉	M6X1.0	20.0	24.5	14.8	11.0	5.0	-	R...shows right-hand L...shows left-hand

☉: Available

P



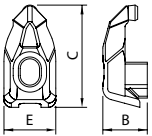
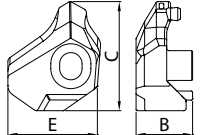
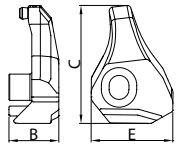
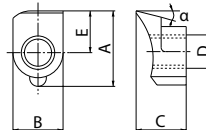
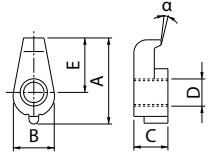
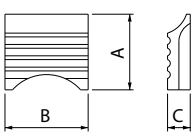
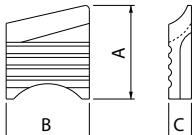
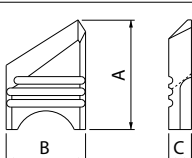
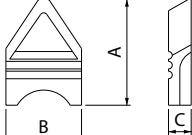
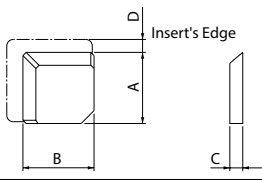
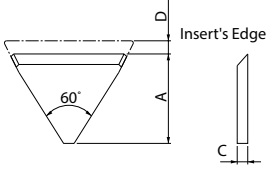
Spare parts

Shape Handed Spare Parts show Right-hand	Description	Availability	Dimension (mm)							Remarks
			A	B	C	D	E	F	G	
	CPS -1	☉	M3X0.5	9.0	10.0	5.2	5.5	2.0	-	
	CPS -2	☉	M5X0.8	14.5	14.0	8.5	6.8	2.5	2.5	G: Indicates hexagon hole two side widths of back side of bolts
	-2P	☉		18.0						
	-3	☉	M6X1.0	19.0	16.5	10.0	8.8	3.0	3.0	
	CPS -2S	☉	M5X0.8	13.5	14.0	8.5	6.8	T15	2.0	G: Indicates hexagon hole two side widths of back side of bolts
	-2TR	☉		15.0						
	CPS -4V	☉	M4X0.7	8.9	11.3	7.3	8.0	T10	-	G: Indicates hexagon hole two side widths of back side of bolts
	-5F	☉	M5X0.8	11.3	12.7	7.5	10.3	T15	2.5	
	-5S	☉		18.0	15.0	9.5	11.0		2.0	
	-5V	☉		13.5	12.7	7.5	10.3		2.5	
	CPS -6F	☉	M6X1.0	16.5	15.6	9.5	12.2	3.0	-	G: Indicates hexagon hole two side widths of back side of bolts
	-6M	☉		18.5	17.5	11.0	13.0		3.0	
	-6S	☉			18.0	12.0	12.0			
	-6V	☉			15.6	9.5	12.2			
	-8V	☉	M8X1.25	24.0	20.8	13.0	15.5	4.0	4.0	
	CPS -5E	☉	M5X0.8	13.5	17.5	12.0	9.0	T15	2.5	G: Indicates hexagon hole two side widths of back side of bolts
	CPS -5%L	☉	M5X0.8	18.0	17.5	12.0	9.0	2.5	2.5	G: Indicates hexagon hole two side widths of back side of bolts R...shows Right-hand Thread L...shows Left-hand Thread
	LGBA -16%L	☉	M5X0.8	15.0	16.1	11.2	9.85	T15	2.0	G: Indicates hexagon hole two side widths of back side of bolts R...shows right-hand L...shows left-hand
	-22%L	☉			17.6	12.7				
	WCS -1N	☉	M6X1.0	21.0	15.7	-	15.0	3.0	-	
	WCS -8	☉	M6X1.0	21.0	19.4	-	15.0	3.0	-	

● : Available

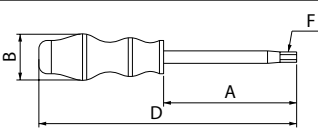
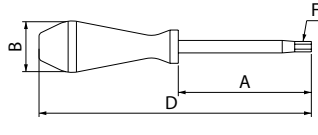
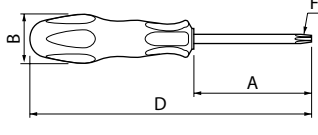
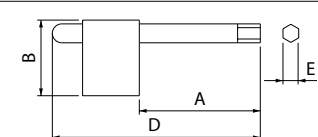
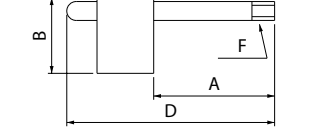
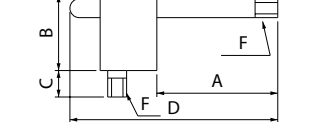
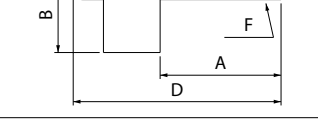
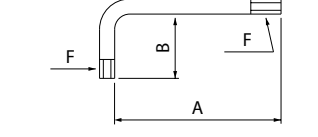
Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	C 08R	●	7.6	8.7	8.9	3.6	M5X0.8 (Left-hand Thread)	-	10°	-	
	C 09N	●	6.0	9.0	9.8	5.3	M6X1.0 (Left-hand Thread)	-	10°	-	Clamp screw: W6X18N
	CH -20R	●	13.1	15.5	14.8	7.5	5.3	-	10°	-	Clamp screw: TH8X15
	CGA -3°/L	●	24.0	17.66	12.0	6.2	1.9	11.0	-	-	R...shows right-hand L...shows left-hand
	-4°/L	●	24.0	17.66	12.0	6.2	2.9	11.0	-	-	
	-5°/L	●	27.5	18.66	12.0	6.2	3.9	14.5	-	-	
	CGB R/L	●	19.0	14.0	8.2	6.35	9.5	-	-	-	R...shows right-hand L...shows left-hand
	CGH -1°/L	●	25.0	22.0	8.0	6.05	3.0	5.5	-	-	R...shows right-hand L...shows left-hand
	-2°/L	●					5.0				
	-3°/L	●	30.0	23.0	8.5		6.0	7.0			
	CGIA -3R	●	10.7	17.0	10.5	5.2	1.8	2.0	-	-	
	-4R	●			11.5		2.5				
	-5R	●	15.7		10.5		3.5	7.0			

●: Available

Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	CP -2D	●	-	10.0	21.6	-	10.4	-	-	-	
	-3D	●		12.0	27.6		14.0				
	-5D	●		13.0	32.0						
	CP -2D-90/-JCT	●	-	13.5	25.3	-	21.5	-	-	-	
	CP -3D-90/-JCT	●	-	13.1	26.4	-	17.9	-	-	-	
	-4D-90/-JCT	●			28.4		18.2				
	-5D-JCT	●			31.9		21.5				
	CP -8TE	●	17.9	12.0	12.0	M8X1.25 (Left-hand Thread)	10.0	-	15°	-	
	CP -8W	●	20.9	12.0	8.0	M8X1.25 (Left-hand Thread)	13.0	-	3°	-	
	CB -11	●	11.5	12.7	3.5	-	-	-	-	-	
	-51	●	16.0	15.6	3.5	-	-	-	-	-	
	CB -12	●	14.0	12.7	3.5	-	-	-	-	-	Right-hand
	-13	●	14.0	12.7	3.5	-	-	-	-	-	Left-hand
	CB -14	●	18.51	12.7	3.5	-	-	-	-	-	Right-hand
	-15	●	18.51	12.7	3.5	-	-	-	-	-	Left-hand
	CB -16	●	18.0	12.7	3.5	-	-	-	-	-	
	-17	●	21.0	15.6	3.5	-	-	-	-	-	
	CB -S3220	●	7.94	7.94	1.0	2.0	-	-	-	-	
	-S4220	●	11.12	11.12	2.0	2.0	-	-	-	-	
	CB -T2212	●	7.48	-	1.5	1.2	-	-	-	-	
	-T3220	●	10.87	-	2.0	2.0	-	-	-	-	

●: Available



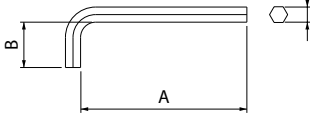
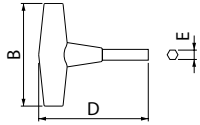
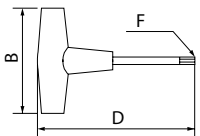
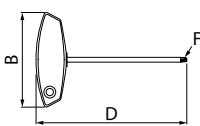
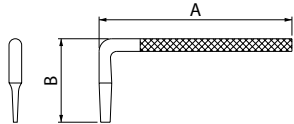
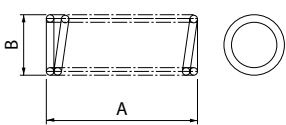
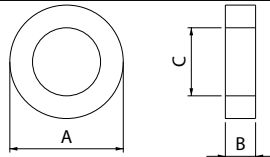
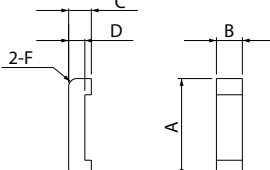
Shape	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	DT -7	☉	44	16	-	114	-	T7	-	-	Torx
	DT -8	☉	70	26	-	150	-	T8	-	-	
	DT -10	☉	70	29	-	160	-	T10	-	-	Torx
	DT -15	☉	70	32	-	170	-	T15	-	-	
	DT -20	☉	90	32	-	190	-	T20	-	-	
	DT -25	☉	82	36	-	190	-	T25	-	-	
	DTM -6	☉	40	17	-	115	-	T6	-	-	Torx Top of wrench is magnetized
	DTM -7	☉	44	17	-	119	-	T7	-	-	
	DTM -8	☉	70	24	-	150	-	T8	-	-	
	DTM -10	☉	70	28	-	167	-	T10	-	-	
	DTM -15	☉	70	31	-	174	-	T15	-	-	
	DTP -6	☉	73	23	-	150	-	6IP	-	-	IP shows Torx Plus
	DTP -7	☉			-		-	7IP	-	-	
	DTP -9	☉	61	30	-	174	-	9IP	-	-	
	DTP -15	☉	81	33	-	186	-	15IP	-	-	
	DTP -20	☉	100		-	206	-	20IP	-	-	
	DTPM -8	☉	70	24	-	150	-	8IP	-	-	IP shows Torx Plus Top of wrench is magnetized
	DTPM -10	☉	70	28	-	165	-	10IP	-	-	
	DTPM -15	☉	70	31	-	174	-	15IP	-	-	
	FH -2	☉	40	20	-	71	2.0	-	-	-	Hexagon
	FH -2.5	☉	45	20	-	76	2.5	-	-	-	
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	FT -7	☉	34	15	-	62	-	T7	-	-	
	FT -8	☉	40	20	-	74	-	T8	-	-	
	FT -10	☉	40	20	-	74	-	T10	-	-	
	FT -15	☉	45	25	10	80	-	T15	-	-	Torx
	FTP -5	☉	35	15	-	65	-	5IP	-	-	IP shows Torx Plus
	FTP -6	☉	34		-	62	-	6IP	-	-	
	LTW -8SS	☉	43	6	-	-	-	T8	-	-	Torx
	LTW -10S	☉	62	10	-	-	-	T10	-	-	
	LTW -10SS	☉	47	7	-	-	-	T10	-	-	
	LTW -15S	☉	62	10	-	-	-	T15	-	-	
	LTW -20	☉	58	19	-	-	-	T20	-	-	
	LTW -25	☉	65	20	-	-	-	T25	-	-	

☉: Available

P



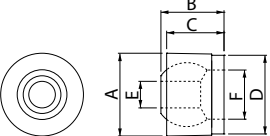
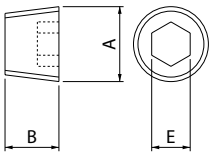
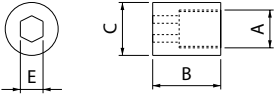
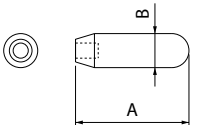
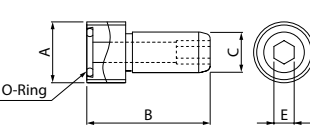
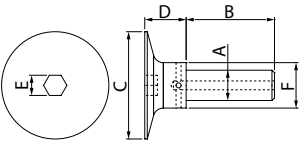
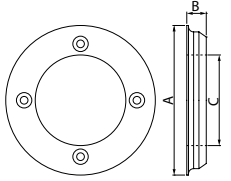
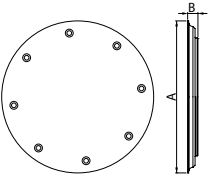
Spare parts

Shape	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	LW	-1.5	45	14	-	-	1.5	-	-	-	Hexagon
		-2	50	16			2.0				
		-2.5	56	18			2.5				
		-3	63	20			3.0				
		-4	70	25			4.0				
		-4.5	78	26			4.5				
		-5	80	28			5.0				
		-6	90	32			6.0				
		-8	109	36			8.0				
		-10	112	40			10.0				
		-14	140	56			14.0				
		-17	160	63			17.0				
		-19	180	70			19.0				
	TH	-4	-	80	-	83	4.0	-	-	-	Hexagon
	TT	-15	-	70	-	118	-	T15	-	-	Torx
		-25		70		69		T25			
		-25L		80		145		T25			
		-30		80		110		T30			
	TTC	-20	-	98	-	130	-	T20	-	-	Torx
		-25						T25			
	TTP	-20	-	70	-	138	-	20IP	-	-	IP shows Torx Plus
	TTW	-15	-	80	-	125	-	T15	-	-	Torx
	LTK	-5	70	30	-	-	-	-	-	-	
	SP	-20	8.5	5.6	-	-	-	-	-	-	Spring
		-30	12.0	7.2							
		-5	12.0	6.7							
		-50	12.0	7.2							
		-6	12.0	7.7							
	W	-6	11.5	1.6	6.4	-	-	-	-	-	Washer
		6-14	11.5	1.4	6.4						
	WB	-5	10.0	1.0	5.3	-	-	-	-	-	Washer (Brass)
		-6	11.5	1.6	6.4						
		-8	15.5	1.6	8.4						
	WSP	-1	15.1	4.0	3.5	2.5	-	R1.25	-	-	Spacer

⊙: Available

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Spare parts

Shape	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	DN 10	☉	6.2	5.1	4.5	5.7	2.6	4.0	-	-	Nozzle
	20	☉	10.1	7.7	7.0	9.6	M4X0.7	6.0	-	-	
	GP -1	☉	PT1/8	7.0	-	-	5.0	-	-	-	Plug
	-2	☉	PT1/4	9.0	-	-	6.0	-	-	-	
	WN -1	☉	M5X8	10.0	7.0	-	3.0	-	-	-	Nut
	PC -1	☉	60.0	8.5	-	-	-	-	-	-	Punch
	-2	☉	62.2	10.0	-	-	-	-	-	-	
	CL 63-1	☉	M18X1.0	36.5	12	-	6.0	-	-	-	Coolant pipe
	100-1	☉	M24X1.5	44.0	16.0	-	8.0	-	-	-	
	HH 12X35HC	☉	M12X1.75	35.0	42.5	16.4	8.0	18.0	-	-	Arbor bolt
	HF 16X48HC	☉	M16X2.0	30.0	62.5	18.4	12.0	40.0	-	-	
	CC -125-MFAH	☉	87.5	11.4	53.0	-	-	-	-	-	Coolant cover
	-160-MFAH	☉	122.5	12.4	70.0	-	-	-	-	-	
	CC -200-MFAH	☉	162.5	14.4	-	-	-	-	-	-	Coolant cover
	-250-MFAH	☉	212.5								
	-315-MFAH	☉	277.5								

☉: Available

P



Spare parts

External toolholders

Description			Spare Parts				
			Lever	Lock screw	Shim	Shim Pin	Wrench
PSBN%	1616H	-09	LL-1N	LS-1N	LS-32	LSP-1	PC-1
PSKN%	1616H	-09	LL-1N	LS-1N	LS-32	LSP-1	PC-1

External toolholders

Description			Spare Parts			
			Lever	Lock screw	Shim Pin	Wrench
PTGN%	1212F	-11	LL-03N	LS-03N	P-03	FH-2
	.....	-11	LL-03TN	LS-03SN	P-03S	FH-2.5
PTFN%	1212F	-11	LL-03N	LS-03N	P-03	FH-2
	.....	-11	LL-03TN	LS-03SN	P-03S	FH-2.5

Toolholders for ceramic tools

Description			Spare parts				
			Chipbreaker	Clamp set	Wrench	Shim	Shim screw
CCLNR	2525M	-16	CB-17	CE-220	LW-4	SP-454	M4X10
CS-N%	.....	-12	CB-11	CE-020	LW-4	SP-141 *(SP-143)	M3X8 *(M3X12)
CSKN%	.....	-12	CB-11	CE-020	LW-4	SP-141 *(SP-143)	M3X8 *(M3X12)
CSYN%	.....	-12	CB-11	CE-020	LW-4	SP-141 *(SP-143)	M3X8 *(M3X12)
CSSN%	.....	-12	CB-11	CE-020	LW-4	SP-141 *(SP-143)	M3X8 *(M3X12)

* Shim & shim screw: When using SN□□1204 Insert, purchase spare parts in () separately.

Toolholders for ceramic tools

Description			Spare parts			
			Clamp set	Wrench	Shim	Shim screw
CCLN%	.....	-12GX	CE-410	LW-4	SP-441	M3X8
CDHN%	.....	-12GX	CE-410	LW-4	SP-521	M3X8
	.....	-15GX	CE-430		SP-541	
CDJN%	.....	-12GX	CE-410	LW-4	SP-521	M3X8
	.....	-15GX	CE-430		SP-541	
CSRN%	.....	-12GX	CE-410	LW-4	SP-141	M3X8
	.....	-15GX			SP-162	M4X10
CSDNN	.....	-12GX	CE-410	LW-4	SP-141	M3X8
	.....	-15GX			SP-162	M4X10
CSSN%	.....	-12GX	CE-410	LW-4	SP-141	M3X8
	.....	-15GX			SP-162	M4X10
CS-N%	.....	-12GX	CE-410	LW-4	SP-141	M3X8
	.....	-15GX			SP-162	M4X10
CSKN%		-12GX	CE-410	LW-4	SP-141	M3X8
		-15GX			SP-162	M4X10
CSYN%		-12GX	CE-410	LW-4	SP-141	M3X8
		-15GX			SP-162	M4X10

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Spare parts

Toolholders for solid CBN tools

Description			Spare parts			
			Clamp set	Wrench	Shim	Shim screw
CCLN%	.....	-09A	CE-030A	LW-4	SP-429	HH3X12
CSRN%	2525M	-09A	CE-030A	LW-4	SP-129	HH3X12
	2525M	-12A			SP-148 *(SP-143)	BH3X12
CSKN%	2525M	-09A	CE-030A	LW-4	SP-129	HH3X12
	2525M	-12A			SP-148 *(SP-143)	BH3X12
CSYN%	2525M	-09A	CE-030A	LW-4	SP-129	HH3X12
	2525M	-12A			SP-148 *(SP-143)	BH3X12
CSDNN	.....	-09A	CE-040	LW-4	SP-129	HH3X12
	2525M	-12A			SP-148 *(SP-143)	BH3X12
CTUN%	.....	-11A	CE-030A	LW-4	SP-219	HH3X12

* Shim for -12A type toolholder : When using SN□□1204 insert, purchase spare parts in () separately.

Toolholders for bearing machining

Description			Spare parts				
			Lever	Lock screw	Shim	Shim pin	Punch
PRGC%	.....	-12BE	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1
	.....	-16BE	LL-2C	LS-1T	LR-16C	LSP-2	PC-2
PRGC%	.....	-12BF	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1
	.....	-16BF	LL-2C	LS-1T	LR-16C	LSP-2	PC-2

Toolholders for back turning

Description			Spare parts			
			Anchor pin	Lock screw	Clamp screw	Wrench
AABSR	0810K	-40F	LPA-11	HSB4X8R	-	FH-2
	1010..	-40F				
	1212..	-40F	LPA-13			
	1616..	-40F	LPA-17			
SABSR	.....	-40F	-	-	SB-3080TR	FT-10
AABWR	0810K	-40F	LPA-11	HSB4X8R	-	FH-2
	1010..	-40F				
	1212..	-40F	LPA-13			
	1616..	-40F	LPA-17			
SABWR	.....	-40F	-	-	SB-3080TR	FT-10
AABWR	0810K	-50F	LPA-11	HSB4X8R	-	FH-2
	1010..	-50F				
	1212..	-50F	LPA-13			
	1616..	-50F	LPA-17			
SABWR	.....	-50F	-	-	SB-3080TR	FT-10

KTKF

Description			Spare parts	
			Clamp screw	Wrench
KTKF%	.....	-12	SB-4590TRWN	LTW-10S
	.....	-16		



External toolholders (back clamp)

Description			Spare Parts		
			Anchor Pin	Lock Screw	Wrench
ACLC%	0810K	-06F	LPF-11	HSB4X8%	FH-2
	1010K	-06F			
	1010K	-09F	LPF-13		
	1212M	-09F			
	1616M	-09F	LPF-17		
ADJC%	0810K	-07F	LPF-11	HSB4X8%	FH-2
	1010K	-07F			
	1010K	-11F	LPF-13		
	1212M	-11F			
	1616M	-11F	LPF-17		
ADNCR	0810K	-07F	LPF-11	HSB4X8R	FH-2
	1010K	-07F			
	1010K	-11F	LPF-13		
	1212M	-11F			
	1616M	-11F	LPF-17		
AVJB%	1010K	-11F	LPF-11	HSB4X8%	FH-2
	1212M	-11F	LPF-1113		
	1616M	-11F	LPF-1117		
AVVBR	1010K	-11F	LPF-11	HSB4X8R	FH-2
	1212M	-11F	LPF-1113		
	1616M	-11F	LPF-1117		

* Lock screw: HSB4X8R for R-hand toolholder, HSB4X8L for L-hand toolholder.

External toolholders (screw clamp)

Description			Spare parts	
			Clamp screw	Wrench
SCLC%	.....	-06	SB-2570TR	FT-8
	.....	-09	SB-4085TR	FT-15
	.....	-12	SB-5090TR	LTW-20
SCAC%	.....	-06	SB-2570TR	FT-8
	.....	-09	SB-4085TR	FT-15
	1212F	-09FF		
SDJC%	.....	-07F	SB-2570TR	FT-8
	.....	-11F	SB-4085TR	FT-15
SDLC%	.....	-07FF	SB-2570TR	FT-8
	.....	-11FF	SB-4085TR	FT-15
SDXC%	.....	-07	SB-2570TR	FT-8
	.....	-11	SB-4085TR	FT-15
SDNC%	.....	-07F	SB-2570TR	FT-8
	.....	-11F	SB-4085TR	FT-15
SDNCN	.....	-07	SB-2570TR	FT-8
	.....	-11	SB-4085TR	FT-15
SDLP%	.....	-07F	SB-2570TR	FT-8
	.....	-11F	SB-4085TR	FT-15
STGC%	.....	-08	SB-2050TR	FT-6
STGP%	.....	-08	SB-2050TR	FT-6
	.....	-11	SB-3080TR	FT-10
SVJB%	.....	-11F	SB-2570TR	FT-8
SVLP%	.....	-08FF	SB-2050TR	FT-6
	.....	-11FF	SB-2570TR	FT-8
	.....	-11F		
SVPP%	.....	-08FF	SB-2050TR	FT-6
	.....	-11FF	SB-2570TR	FT-8
	.....	-11		
SYXP%	.....	-06F	SB-2050TR	FT-6

P



Spare parts

External toolholders (screw clamp)

Description	Spare parts		
	Clamp screw	Wrench	Plug
SCLCR -09FFJCT	SB-4085TR	FT-15	GP-1
SDJCR -11..JCT	SB-4085TR	FT-15	GP-1
SVJBR -11FFJCT	SB-2570TR	FT-8	GP-1
SVJPR -11FFJCT	SB-2570TR	FT-8	GP-1

External toolholders (screw clamp)

Description	Spare parts				
	Clamp screw	Wrench	Shim	Shim screw	Wrench
SVBP%L -11	SB-2570TR	FT-8	-	-	-
..... -16N	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
SVVBN -11	SB-2570TR	FT-8	-	-	-
..... -16N	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4

External toolholders (top clamp)

Description	Spare Parts				
	Clamp Set	Wrench	Shim	Shim Screw	Chipbreaker
CSBP%L -09N	CPS-2P	LW-2.5	-	-	CB-S3220
CSKP%L -09N	CPS-2P	LW-2.5	-	-	CB-S3220
..... -12N	CPS-3	LW-3	KPS-42	SP3X8	CB-S4220
CSSP%L -09N	CPS-2P	LW-2.5	-	-	CB-S3220
..... -12N	CPS-3	LW-3	KPS-42	SP3X8	CB-S4220
CSDPN -12N	CPS-3	LW-3	KPS-42	SP3X8	CB-S4220
CTGP%L -11N	CPS-2P	LW-2.5	-	-	CB-T2212
..... -16N	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220
CTFP%L -11N	CPS-2P	LW-2.5	-	-	CB-T2212
..... -16N	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220
CTTP%L -11N	CPS-2P	LW-2.5	-	-	CB-T2212
..... -16N	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220



EZ Bar PLUS

Description	Spare parts	
	Clamp screw	Wrench
S045X-SCLCR03-050EZ	SB-1635TR	FT-6
S060X-SCLCR04-070EZ	SB-2035TR	
C045X-SCLCR03-050EZ	SB-1635TR	FT-6
C060X-SCLCR04-070EZ	SB-2035TR	

Twin-bars

Description	Spare parts	
	Clamp screw	Wrench
STW%L -15	SB-3080TR	LTW-10S
STWSR -15T	SB-3080TR	LTW-10S

System tip-bars

Description			Spare parts				
			Clamp screw	Wrench	Screw (Side stopper)	Wrench	
SVNR	1010H	-12	SB-3080TR	FT-10	HS3X4	LW-1.5	
	1212K	-12			HS3X8		
	1616K	-12			HS3X12		
	2020K	-12			HS3X16		
	2525M	-12					
SVNSR	.....	-12-..	SB-3080TR	LTW-10S	HS3X4	LW-1.5	
S12F-	SVNR	12	SB-3080TR	FT-10	HS3X4	LW-1.5	
S14G-	SVNR	12					
S16H-	SVNR	12			HS3X8		
S19H-	SVNR	12					
S19N-	SVNR	12					
S20H-	SVNR	12					
S25H-	SVNR	12			HS3X12		
S25Q-	SVNR	12					
S.....	SVNR	12S	SB-3080TR	FT-10	HS3X4	LW-1.5	

System tip-bars (S-SVN-XN)

Description			Spare Parts		
			Clamp screw	Wrench	Clamp screw
S...-	SVNR	12XN	SB-3080TR	FT-10	SP3X4

PSH Sleeve

Description			Spare parts	
			Clamp screw	Wrench
PSH	02..	~..	HS3X4P	LW-1.5
	03..	~..		
	04..	~..		
	05..	~..	HS4X4P	LW-2
	06..	~..		
	07..	~..		

Spare parts

Boring bars (screw clamp)

Description		Spare parts	
		Clamp screw	Wrench
S10H-	SCLC%03-...E	SB-1635TR	FT-6
S10J-	SCLC%04-...E	SB-2035TR	
S08X-	SCLC%06-10E	SB-2545TR	FT-8
S08X-	SCLC%06-10	SB-2545TR	FT-8
C...-	SCLC%03-...	SB-1635TR	FT-6
C...-	SCLC%04-...	SB-2035TR	
C08L-	SCLC%06-10	SB-2545TR	FT-8
A08H-	SCLC%06-10E	SB-2545TR	FT-8
E...-	SCLC%06-...	SB-2545TR	FT-8
S...M-	SCLP%08-...E	SB-35TR	FT-10
S...-	SCLP%09-...E	SB-4TR	FT-15
S...M-	SCLP%08-...	SB-35TR	FT-10
S...-	SCLP%09-...	SB-4TR	FT-15
C10N-	SCLP%08-...	SB-35TR	FT-10
C...-	SCLP%09-...	SB-4TR	FT-15
A...X-	SCLP%08-...E	SB-35TR	FT-10
A...-	SCLP%09-...E	SB-4TR	FT-15
E10N-	SCLP%08-12	SB-35TR	FT-10
E10N-	SCLP%08-12A-...	SB-3060TR	
E...-	SCLP%09-...	SB-4TR	FT-15
S...-	SDUC%07-...E	SB-2560TR	FT-8
S...-	SDUC%11-...E	SB-4085TR	FT-15
S...-	SDUC%07-...	SB-2560TR	FT-8
S...-	SDUC%11-...	SB-4085TR	FT-15
C...-	SDUC%07-...	SB-2560TR	FT-8
C...-	SDUC%11-...	SB-4085TR	FT-15
S...-	SDZC%07-...E	SB-2560TR	FT-8
S...-	SDZC%11-...E	SB-4085TR	FT-15
S...-	SDZC%07-...	SB-2560TR	FT-8
S...-	SDZC%11-...	SB-4085TR	FT-15
C06J-	STLB%06-08A	SB-2035TR	FT-6
E08L-	STLP%08-10A	SB-1TR	
E08L-	STLP%09-10A	SB-2545TR	FT-8
E10N-	STLP%09-...		FT-10
E10N-	STLP%11-...	SB-3060TR	FT-10
S06H-	STUB%06-08E	SB-15TR	FT-6
S08K-	STUP%08-10E	SB-1TR	
S...M-	STUP%09-...E	SB-2TR	FT-8
S...-	STUP%11-...E	SB-3TR	FT-10
S...X-	STUP%16-...E	SB-4TR	FT-15
S06H-	STUB%06-08	SB-15TR	FT-6
S08K-	STUP%08-10	SB-1TR	
S...M-	STUP%09-...	SB-2TR	FT-8
S...-	STUP%11-...	SB-3TR	FT-10
S25X-	STUP%16-32	SB-4TR	FT-15
C10L-	STUB%06-08	SB-15TR	FT-6
C08L-	STUP%08-10	SB-1TR	
C...-	STUP%09-...	SB-2TR	FT-8
C...-	STUP%11-...	SB-3TR	FT-10
C20S-	STUP%16-...	SB-4TR	FT-15
A08H-	STUP%08-10E	SB-1TR	FT-6
A...X-	STUP%09-...E	SB-2TR	FT-8
A...-	STUP%11-...E	SB-3TR	FT-10
A...-	STUP%16-...E	SB-4TR	FT-15
E08L-	STUP%08-10	SB-1TR	FT-6
E...-	STUP%09-...	SB-2TR	FT-8
E...-	STUP%11-...	SB-3TR	FT-10
E20S-	STUP%16-25	SB-4TR	FT-15



Boring bars (screw clamp)

Description		Spare parts	
		Clamp screw	Wrench
S...-	SWUB%08-..E	SB-2050TR	FT-6
S12M-	SWUP%11-14E	SB-2545TR	FT-8
S...-	SWUP%11-..E	SB-2560TR	
S...-	SWUP%16-..E	SB-4065TR	FT-15
S...-	SWUB%06-..	SB-2040TR	FT-6
S10J-	SWUB%08-..	SB-2035TR	
C...-	SWUB%06-..	SB-2035TR	FT-6
C07K-	SWUB%08-..		
C08L-	SWUB%08-..		
C10N-	SWUB%08-..	SB-2050TR	FT-8
C12Q-	SWUP%11-14(-./.)	SB-2545TR	
C12Q-	SWUP%11-16(-./.)	SB-2560TR	
C16X-	SWUP%11-18(-./.)		
C...-	SWUP%16-..	SB-4065TR	FT-15
E...-	SWUB%08-..	SB-2050TR	FT-6
S16Q-	SSKPR09-20	SB-4TR	FT-15
S20R-	SSKPR09-25		
S25X-	SSKPR12-32	GS-50S	LW-3
S32S-	SSKPR12-40	GS-50	
S12M-	SYXP%06-12E	SB-2040TR	FT-6
S16Q-	SYXP%06-16E	SB-2045TR	

Boring bars (screw clamp)

Description		Spare parts				
		Clamp screw	Wrench	Shim	Shim screw	Wrench (For shim screw)
S12M-	SVJP%08-16E	SB-2050TR	FT-6	-	-	-
S...-	SVJC%08-..E					
S...-	SVJB%11-..E	SB-2570TR	FT-8	SVN-32N	SS-4N	LW-4
S...-	SVJB%16-..EN	SB-40125TRN	FT-15			
S32S-	SVJB%16-40E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S40T-	SVJB%16-50E					
S10M-	SVPC%08-16E	SB-2050TR	FT-6	-	-	-
S...-	SVPB%11-..E	SB-2570TR	FT-8			
S...-	SVPB%16-..EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
S25X-	SVPB%16-34E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S32S-	SVPB%16-40E					
S12M-	SVUC%08-16E	SB-2050TR	FT-6	-	-	-
S...-	SVUB%11-..E	SB-2570TR	FT-8			
S...-	SVUB%16-..EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
S25X-	SVUB%16-34E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S32S-	SVUB%16-40E					
S12M-	SVZC%08-16E	SB-2050TR	FT-6	-	-	-
S...-	SVZB%11-..E	SB-2570TR	FT-8			
S...-	SVZB%16-..EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
S25X-	SVZB%16-34E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S32S-	SVZB%16-40E					

Boring bars (top clamp)

Description		Spare Parts				
		Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
S12L-	CTUP%09-16	-	CPS-1	FH-2	-	-
S...-	CTUP%11-..	-	CPS-2	FH-2.5	-	-
S25X-	CTUP%16-34	-	CPS-3	LW-3	-	-
S32S-	CTUP%16-43				KPT-32	SP3X10
S40X-	CTUP%16-50					
S32S-	CTUC%16-40	*CB-13/12	CE-320	LW-4	SP-230P	SP3X10
S...-	CCLN%09-..A	-	CE-360S	LW-4	SP-420A	BH3X6
S...-	CSKN%09-..A	-	CE-360S	LW-4	SP-130A	BH3X12
S32S -	CSKPR12-43	CPS-3	-	LW-3	KPS-42	SP3X10

* CB-13 for Right-hand Toolholder, CB-12 for Left-hand Toolholder.

P



Spare parts

AD bars, interchangeable head (lever lock)

Description			Spare parts					
			Lever	Lock screw	Punch	Shim Pin	Shim	Wrench
HA32	PCLN [®] /L	12-40	LL-2K	LS-2P	PC-2K	LSP-3K	LC-4K	DTPM-15
HA40	PCLN [®] /L	12-50						
HA50	PCLN [®] /L	12-63						
HA32	PDUN [®] /L	15-43	LL-3K	LS-3P	PC-2K	LSP-3K	LD-4K43 (LD-4K*)	DTPM-15
HA40	PDUN [®] /L	15-50						
HA50	PDUN [®] /L	15-63						
HA32	PTFN [®] /L	16-40	LL-1K	LS-1P	PC-2K	LSP-2K	LT-3K	DTPM-10
HA40	PTFN [®] /L	16-50						
HA50	PTFN [®] /L	16-63						

Shim : LD-4K43 is attached to Toolholder. When using DN ☐ 1506 Insert, purchase LD-4K separately.

AD bars, interchangeable head (screw clamp)

Description			Spare parts	
			Screw	Wrench
HA32	SCLC [®] /L	09-40	SB-3580TR	FT-15
HA32	SDUC [®] /L	11-40	SB-3580TR	FT-15

Boring adapter (AD bars)

Description		Spare parts		
		Clamp bolt		Wrench
AD	32U	HH5X20 (3 pcs)	HH5X30 (1 pcs)	LW-4
AD	40V	HH5X20 (3 pcs)	HH5X30 (1 pcs)	LW-4
AD	50W	HH6X20 (3 pcs)	HH6X30 (1 pcs)	LW-5

Combination of boring adapter and interchangeable head

Interchangeable head description			Boring adapter			
			Base description	Clamp bolt		Wrench
HA32	PCLN [®] /L	12-40	AD32U	HH5X20	HH5X30	LW-4
HA32	PDUN [®] /L	15-43				
HA32	PTFN [®] /L	16-40		HH5X20		
HA32	SCLC [®] /L	09-40				
HA32	SDUC [®] /L	11-40				
HA40	PCLN [®] /L	12-50	AD40V	HH5X20	HH5X30	LW-4
HA40	PDUN [®] /L	15-50				
HA40	PTFN [®] /L	16-50				
HA50	PCLN [®] /L	12-63	AD50W	HH6X20	HH6X30	LW-5
HA50	PDUN [®] /L	15-63				
HA50	PTFN [®] /L	16-63				



Boring bars for ceramic tools (top clamp)

Description			Spare parts			
			Chipbreaker	Clamp set	Wrench	Shim screw
S32S-	CCLN%	-12-40GX	-	CE-410	LW-4	-
S40T-	CCLN%	-12-50GX				SP-441P
S32S-	CDUN%	-12-40GX	-	CE-410	LW-4	-
S40T-	CDUN%	-12-50GX				SP-521P
S32S-	CSKN%	-12-40GX	-	CE-410	LW-4	-
S40T-	CSKN%	-12-50GX				SP-141P
S40T-	CSKN%	-12-50	*1 CB-13/12	CE-320	LW-4	SP-141P *2 (SP-143P)

*1 CB-13 for right-hand toolholder, CB-12 for left-hand toolholder.
*2 When using SN□□1204 Insert, please purchase spare parts in () separately.

Boring toolholders for bearing machining (Square shank) (Boring)

Description			Spare parts	
			Clamp screw	Wrench
SRCP%	2020B-12	-A20	SB-4TR	FT-15
	2525B-16	-A32	SB-5090TR	LTW-20

Boring toolholders for bearing machining (Square shank) (Internal round chamfering)

Description			Spare parts	
			Clamp set	Wrench
CBSN%	...B-12	-A20	CP-RC%	LW-5

Sleeves for tip-bars

Description			Spare parts	
			Screw	Wrench
PH	02	...-	HS3X4	LW-1.5
	03	...-		
	04	...-	HS4X4	LW-2
	05	...-		
	06	...-		
	07	...-		

KTGF

Description			Spare parts	
			Clamp screw	Wrench
KTGF%	.....	-16F	SB-4070TRW	FT-8
KTGF%	.....	-16	SB-4070TRS	FT-10

S-KTGF

Description			Spare parts	
			Clamp screw	Wrench
S....	-	KTGFL16	SB-4070TRS	FT-10

KTG

Description			Spare parts	
			Clamp screw	Wrench
KTG%	....	-16	SB-4TR	FT-15
	....	22-..	GS-50	LW-3

KN91

Description			Spare parts			
			Clamp	Clamp bolt	Washer	Wrench
KN91%	44	-4	*CE-111/121	BH8X30	W-8	SP-8
	44	-5				
	44	-7	*CE-131/141			

* KN91%:44-4/5 ... CE-111 for right-hand toolholder, and CE-121 for left-hand toolholder.
KN91%:44-7 ... CE-131 for right-hand toolholder, and CE-141 for left-hand toolholder.

KGHS

Description			Spare parts			
			Clamp	Clamp bolt	Washer	Wrench
KGHS%	.....	-4	CGH-1 ¹ / ₈	HH6X25	W-6	SP-6
	.....	-5				
	.....	-7	CGH-2 ¹ / ₈			

Clamp: KGHS% ... CGH-○L for right-hand toolholder, and CGH-○R for left-hand toolholder.



KGA

Description		Spare parts			
		Clamp	Clamp bolt	Spring	Wrench
KGA [®] /L	 -3	CGA-3 [®] /L	HH6X20	SP-6	LW-5
	 -4	CGA-4 [®] /L			
	 -5	CGA-5 [®] /L			

Clamp: CGA-○R for right-hand toolholder and CGA-○L for left-hand toolholder.

KGD^R/L....-S

Description		Spare parts		
		Clamp bolt (for insert clamp)	Clamp screw (for blade)	Wrench
KGD [®] /L	-S	BH6X10TR	SB-60120TR	LTW-25

KGD-JCT (for automatic lathe)

Description		Spare parts		
		Clamp screw	Wrench	Plug
KGD [®] /L	 - ... JCT	SB-40120TR	LTW-15S	GP-1

KGDF^R/L....-S

Description		Spare Parts		
		Clamp bolt (for insert clamp)	Clamp screw (for blade)	Wrench
KGDF [®] /L	-S	BH6X10TR	SB-60120TR	LTW-25

KGM

Description			Spare parts	
			Screw	Wrench
KGM%	1212H	-3	SB-5TR	LTW-20
	1616H	-3	HH5X16	LW-4
	2020K	-3		
	2525M	-3	HH5X25	
KGM%	2020K	-4	HH5X16	LW-4
	2525M	-4	HH5X25	
KGM%	2020K	-5	HH5X16	LW-4
	2525M	-5	HH5X25	
	3232P	-5		
KGM%	2525M	-8	HH6X25	LW-5
	3232P	-8		

KGM (for automatic lathe)

Description			Spare parts	
			Clamp screw	Wrench
KGM [®] /L	0810K	- ...	SE-40120TR	LTW-15S
	1010..	- ...		
	1212..	- 1.5-...		
	1212..	- 2-...		
	1212..	- 2.5-...		
	1616..	- 2-...	SE-50125TR	LTW-20
KGM [®] /L	1616..	- 2.5-...		
	1616..	- 3-...		

KGM-T

Description		Spare parts	
		Screw	Wrench
KGM [®] /L	2012K-2T17	SB-5TR	LTW-20
	2020K-2T17	HH5X16	LW-4
	2525M-2T17	HH5X25	
KGM [®] /L	1616H-3T20	HH5X16	LW-4
	2012K-3T20	SB-5TR	LTW-20
	2020K-3T20	HH5X16	LW-4
	2525M-3T20	HH5X25	
KGM [®] /L	2020K-4T20	HH5X16	LW-4
	2525M-4T20	HH5X25	
	2525M-4T25		
KGM [®] /L	2525M-5T25	HH5X25	LW-4
	3232P-5T25		
KGM [®] /L	2525M-6T30	HH5X25	LW-4

KGMM / KGMS

Description		Spare parts	
		Screw	Wrench
KGMM [®] /L	1212H-3	SB-5TR	LTW-20
	1616H-3	HH5X16	LW-4
	2020K-3		
	2525M-3	HH5X25	
KGMS [®] /L	1212H-3	SB-5TR	LTW-20
	1616H-3	GS-50	LW-3
	2020K-3	HH5X16	LW-4
	2525M-3	HH5X25	



KGMU

Description		Spare parts	
		Clamp bolt	Wrench
KGMU%/	2020K	HH5X16	LW-4
	2525M	HH5X25	

KIGH

Description		Spare parts				
		Clamp	Clamp bolt	Washer	Spring	Wrench
KIGHR	-4	CGH-1L	HH6X25	W-6	SP-6	LW-5
	-5					
	-7	CGH-2L				

KIGM-V

Description		Spare parts	
		Clamp screw	Wrench
KIGM%/	2016B-3V	GS-50	LW-3
	2520B-3V		
	3225B-3V	SB-5TR	LTW-20
	3225B-4V	SB-5TR	LTW-20
	4032B-4V		

GFVS-AA / GFVT-AA

Description		Spare parts	
		Clamp set	Wrench
GFVS%/	 -08AA	CPS-5V	FT-15
GFVT%/	 -08AA	CPS-5V	FT-15

GIFV

Description		Spare parts	
		Clamp set	Wrench
GIFV%/	5032B-502B	CPS-6V	LW-3

KTKF-JCT

Description		Spare parts		
		Clamp screw	Wrench	Plug
KTKF%/	 - ... JCT	SB-4590TRWN	FT-10	GP-1

KTKFS (for sub spindle tooling)

Description		Spare parts	
		Clamp screw	Wrench
KTKFS%/	 - ...	SB-4050TRN	LTW-10S

KTKH-S

Description		Spare parts	
		Releasing wrench	
KTKH%/	 - ...S	LTK-5	

KTKH-B

Description			Spare parts	
			Clamp screw	Wrench
KTKH%/	0808K	- ...B	SE-40120TR	FT-15
	1010K	- ...B		
	1212M	- ...B		
	1414M	- ...B		
	1616M	- ...B	SE-50125TR	LTW-20

KTTX

Description		Spare parts	
		Clamp screw	Wrench
KTTXR	 -16F	SB-4070TRW	FT-8



DRS

Description			Spare parts	
			Clamp screw	Wrench
S20	-DRS	10...	SB-2080TR	FT-6
	-DRS	11...	SB-2290TR	FT-6
	-DRS	12...	SB-25100TR	DT-7

DRX

Description			Spare parts	
			Clamp screw	Wrench
S..	-DRX	- . -03	SB-2042TRG	DTM-6
	-DRX	- . -04	SB-2042TRG	DTM-6
	-DRX	- . -05	SB-2045TR	DTM-6
	-DRX	- . -06	SB-2250TR	DTM-7
	-DRX	- . -07	SB-2570TR	DTM-8
	-DRX	- . -09	SB-3080TR	DTM-10
	-DRX	- . -11	SB-4085TR	DTM-15
	-DRX	- . -14	SB-5090TR	DT-20
	-DRX	- . -17	SB-60120TR	DT-25



MFPN45 (Face mill)

Description	Spare parts		
	Clamp screw	Wrench	Anti-seize compound
MFPN 45100R-10T-M 2 45200R-20T-M	SB-40140TRN	DTM-15	P-37

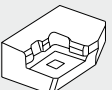
MSE45 (End mill)

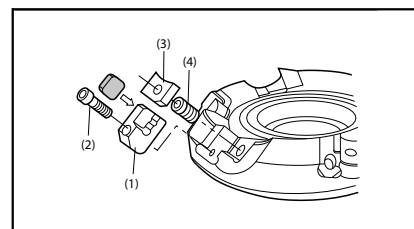
Description	Spare parts			
	Clamp set	Wrench	Shim	Shim screw
MSE 4550 4563 4580-32	 CPS-6M	 LW-3	 MSE-4245	 SP3X8

MSD45 (End mill)

Description	Spare parts			
	Clamp set	Wrench	Shim	Shim screw
MSD 4550 4563 4580-32	 CPS-6M	 LW-3	 MSD-42	 SP3X8

MSO45 (Face mill)

Description	(1) Cartridge	(2) Cartridge clamp screw	(3) Clamp	(4) Clamp screw	Wrench
					
MSO 45...R	LSO-445R	HH4X16	CH-20R	TH8X15	TH-4

**MSO45-S (End mill)**

Description	Spare parts				
	Shim	Shim screw	Clamp	Clamp screw	Wrench
MSO 45...S	MSO-4T245	SP3X6	CH-20R	TH8X15	TH-4

MSO45-09 (Face mill)

Description	Spare parts	
	Clamp screw	Wrench
MSO 45...R-09	SB-3060TR	DT-10

MSO45-S-09 (End mill)

Description	Spare parts	
	Clamp screw	Wrench
MSO 45...S32-09	SB-3060TR	DT-10

MSP15 / MSE15 (End mill)

Description	Clamp set	Wrench	Shim	Shim screw
				
MSP 15..	CPS-6M	LW-3	MSP-42	SP3X8
MSE 15..	CPS-6M	LW-3	MSE-4215	SP3X8



MEC (Face mill)

Description		Spare parts	
		Clamp screw	Wrench
MEC	...R-11-..T(-M)	SB-2555TRG	DTM-8
	...R-17-..T(-M)	SB-4070TRN	DTM-15

MEC (End mill)

Description		Spare parts	
		Clamp screw	Wrench
MEC	...W..-1103(-H)	SB-2545TR	DTM-8
	...W..-11T3(-H)	SB-2555TRG	DTM-8
	...W..-1704-H	SB-4070TRN	DTM-15

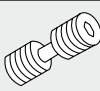
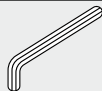
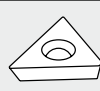
MECX (Face Mill)

Description		Spare parts	
		Clamp screw	Wrench
MECX	050R-07-12T-M	SB-2042TRG	DTM-6
	063R-07-14T-M		

MECX (End mill)

Description		Spare parts	
		Clamp screw	Wrench
MECX	32-S32-07-6T	SB-2042TRG	DTM-6
	33-S32-200-07-6T		

MTE90 (End mill)

Description		Spare parts				
		Clamp	Clamp screw	Wrench	Shim	Shim screw
MTE	9050					
	9063					
	9080-32					
		CP-8TE	W8X18	LW-4	MTE-42	SP3X8

MFVN (Face Mill)

Description		Spare parts		
		Clamp screw	Wrench	Anti-seize compound
MFVN	90100R-9T-M	SB-40140TRN	DTM-15	P-37
	90250R-18T-M			

MSO90-S (End mill)

Description		Spare parts	
		Clamp screw	Wrench
MSO	90...S32-09	SB-3080TR	DT-10
	90...S32-15	SB-5085TR	DT-20

MSO90-09 (Face mill)

Description		Spare parts	
		Clamp screw	Wrench
MSO	90...R-09	SB-3080TR	DT-10

MEA / MEB

Description		Spare parts	
		Clamp screw	Wrench
MEA	.. -S..(-...)	SB-2560TR	DT-8
MEB	.. -S..	SB-4085TR	DT-15

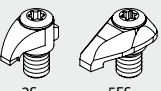
DMC

Description		Spare parts	
		Clamp screw	Wrench
DMC	8.. (-S..)	SB-2545TR	FT-8
DMC	0..	SB-3060TR	FT-10

MTP

Description		Spare parts				
		Clamp	Clamp screw	Wrench	Shim	Shim screw
MTP	90..	CP-8W	W8X18	LW-4	KPT-42	SP3X8

MTPS / MTES

Description		Clamp Set	Wrench
			
MTPS	...	CPS-2S	FT-15
MTES	...	CPS-SES	

MEAL

Description		Spare parts	
		Clamp screw	Wrench
MEAL	.. -S..	SB-5085TR	DT-20



MSTC (Slot mill)

Description			Spare parts										
			Cartridge		Wedge	Wedge screw	Cam pin	Clamp screw	Wrench			Anti-seize compound	Mounting bolt
			Right-hand	Left-hand					for wedge screw	for cam pin	for clamp screw		
													
Inch spec	MSTC	400AN551-630-10	C90SP1416-10R	C90SP1416-10L	WC-14	W6X18	AP-1416	SE-3070TRP	TH-3L	LW-2.5	DTP-9	P-37	-
		500AN551-630-10				W6X20							
		600AN551-630-10				W6X20							
	MSTC	500AN630-709-10	C90SP1618-10R	C90SP1618-10L	WC-16	W6X20	AP-1820	SB-3590TRP		LW-3	DTP-15		
		600AN630-709-10				W6X20							
	MSTC	500AN709-813-12				C90SD1820-12R								C90SD1820-12L	WC-18	W6X20
		600AN709-813-12	W6X20										
	MSTC	500AN813-917-12	C90SD2023-12R	C90SD2023-12L	WC-20				W6X20				
		600AN813-917-12				W6X20							
	Metric	MSTC	100AR1416-10-6T	C90SP1416-10R	-	WC-14	W6X18	AP-1416	SE-3070TRP	TH-3L	LW-2.5	DTP-9	P-37
		125AR1416-10-8T	W6X20										
		160AR1416-10-10T	W6X20										
MSTC		125AR1618-10-8T	C90SP1618-10R	WC-16		W6X20	AP-1820	SB-3590TRP	LW-3		DTP-15		
		160AR1618-10-10T				W6X20							
MSTC		125AR1820-12-8T				C90SD1820-12R						WC-18			W6X20
		160AR1820-12-10T	W6X20										
MSTC		125AR2123-12-8T	C90SD2023-12R	WC-20						W6X20			
		160AR2123-12-10T				W6X20							
MSTC		100AL1416-10-6T			-	C90SP1416-10L	WC-14	W6X18	AP-1416	SE-3070TRP	TH-3L	LW-2.5	DTP-9	P-37	-
		125AL1416-10-8T	W6X20										
		160AL1416-10-10T	W6X20										
MSTC		125AL1618-10-8T	C90SP1618-10L	WC-16		W6X20	AP-1820	SB-3590TRP	LW-3	DTP-15			
		160AL1618-10-10T				W6X20							
MSTC		125AL1820-12-8T				C90SD1820-12L						WC-18	W6X20
		160AL1820-12-10T	W6X20										
MSTC	125AL2123-12-8T	C90SD2023-12L	WC-20	W6X20									
	160AL2123-12-10T			W6X20									
Inch spec	MSTC			400AR551-630-10	C90SP1416-10R	-	WC-14	W6X18	AP-1416	SE-3070TRP	TH-3L	LW-2.5	DTP-9	P-37	-
		500AR551-630-10	W6X20										
		600AR551-630-10	W6X20										
	MSTC	500AR630-709-10	C90SP1618-10R	WC-16	W6X20		AP-1820	SB-3590TRP	LW-3	DTP-15			
		600AR630-709-10			W6X20								
	MSTC	500AR709-813-12			C90SD1820-12R							WC-18	W6X20
		600AR709-813-12	W6X20										
	MSTC	500AR813-917-12	C90SD2023-12R	WC-20							W6X20		
		600AR813-917-12			W6X20								
	MSTC	400AL551-630-10			-	C90SP1416-10L	WC-14	W6X18	AP-1416	SE-3070TRP	TH-3L	LW-2.5	DTP-9	P-37	-
		500AL551-630-10	W6X20										
		600AL551-630-10	W6X20										
	MSTC	500AL630-709-10	C90SP1618-10L	WC-16		W6X20	AP-1820	SB-3590TRP	LW-3	DTP-15			
		600AL630-709-10				W6X20							
	MSTC	500AL709-813-12				C90SD1820-12L						WC-18	W6X20
		600AL709-813-12	W6X20										
	MSTC	500AL813-917-12	C90SD2023-12L	WC-20							W6X20		
		600AL813-917-12				W6X20							



Spare parts

MSTC (Slot mill)

Description			Spare Parts																															
			Cartridge		Wedge	Wedge Screw	Cam Pin	Clamp Screw	Wrench			Anti-seize Compound	Mounting bolt																					
			Right-hand	Left-hand					for Wedge Screw	for Cam Pin	for Clamp Screw																							
																																		
With Boss	Metric	MSTC	100SR1416-10-6T	C90SP1416-10R	-	WC-14	W6X20	AP-1416	SE-3070TRP	TH-3L	LW-2.5	DTP-9	P-37	HH12X35																				
		125SR1416-10-8T	WC-16											HH16X35																				
		160SR1416-10-10T												-																				
		MSTC												125SR1618-10-8T	C90SP1618-10R		TH-3L		LW-2.5	DTP-9	HH16X35													
		160SR1618-10-10T												-																				
		MSTC	125SR1820-12-8T	C90SD1820-12R		W6X20	AP-1820	SB-3590TRP			LW-3	DTP-15		HH16X35																				
		160SR1820-12-10T	-																															
		MSTC	125SR2123-12-8T	C90SD2023-12R										WC-20								HH16X35												
		160SR2123-12-10T	-																															
		MSTC	100SL1416-10-6T	-		WC-14	W6X20	AP-1416	SE-3070TRP	TH-3L	LW-2.5	DTP-9	P-37									HH12X35												
		125SL1416-10-8T	WC-16											HH16X35																				
		160SL1416-10-10T												-																				
		MSTC	125SL1618-10-8T			WC-18	W6X20	AP-1820	SB-3590TRP		LW-3	DTP-15		HH16X35																				
		160SL1618-10-10T	-																															
		MSTC	125SL1820-12-8T			WC-20								HH16X35																				
		160SL1820-12-10T	-																															
		MSTC	125SL2123-12-8T											C90SD2023-12L										HH16X35										
		160SL2123-12-10T	-																															

MRP-S (End mill)

Description			Spare parts	
			Clamp screw	Wrench
MRP	...S..	-08(-...)	SB-3060TR	DT-10
	...S..	-10(-.T(-...))	SB-3080TR	DT-10
	...S..	-12(-.T)(-...)	SB-4085TR	DT-15
	050-S42	-12(-300)	SB-40115TR	
	...S..	-16(-...)	SB-50120TR	DT-20

MRP (Face mill)

Description			Spare parts	
			Clamp screw	Wrench
MRP	...R	-10- .T	SB-3080TR	DT-10
MRP	050R	-12	SB-40115TR	DT-15
	063R	-12		
	080R	-12	SB-4085TR	
	080R	-12-7T		
MRP	...R	-16(-.T)	SB-50120TR	DT-20
MRP	...R	-20	SB-60120TR	DT-25



MHD (Helical end mill)

Description			Spare parts					
			Clamp screw	Wrench	Clamp bolt		Wrench	
					1 Front piece	2 Front pieces		
MHD	32-S32	-SA	SB-2560TR	DT-8	-	HH8X50	LW-6	
	40-S32	-SA	SB-3080TR	DT-10		HH8X65		
	40-S42	-SA				HH12X65	LW-10	
	50-S42	-SA						
MHD	40-S42	-SB	SB-3080TR	DT-10	HH8X40	-	LW-6	
	50-S42	-SB			HH12X40		LW-10	
MHD	20S-S20	-C	SB-2560TR	DT-8	-	-	-	
	25-S25	-C						
	32-S32	-C						
	40-S42	-C	SB-3080TR	DT-10				
	50-S42	-C						
MHD	32-S32	-A	SB-2560TR	DT-8	HH8X35	HH8X50	LW-6	
	40-S32	-A	SB-3080TR	DT-10	HH8X40	HH8X65		
	40-S42	-A			HH12X40	HH12X65	LW-10	
	50-S42	-A						
MHD	32-S32	-A-130	SB-2560TR	DT-8	HH8X35	HH8X50	LW-6	
	40-S32	-A-150	SB-3080TR	DT-10	HH8X40	HH8X65		
	50-S42	-A-150			HH12X40	HH12X65	LW-10	
MHD	40-S42	-B	SB-3080TR	DT-10	HH8X40	-	LW-6	
	50-S42	-B			HH12X40		LW-10	
MHD	32	-F	SB-2560TR	DT-8	-	-	-	
	40	-F	SB-3080TR	DT-10				
	50	-F						

MHD (face mill and integral arbor type)

Description			Spare parts			
			Clamp screw	Wrench	Clamp bolt	Wrench
MHD	63-FMA	-SA	SB-3080TR	DT-10	HH16X90	LW-14
	80-FMA	-SA			HH20X110	LW-17
	100-FMA	-SA			HH24X110	LW-19
MHD	63-FMA	-A			HH16X90	LW-14
	80-FMA	-A			HH20X110	LW-17
	100-FMA	-A			HH24X110	LW-19
MHD	63-BT50	-SA			HH16X65	LW-14
	80-BT50	-SA			HH20X90	LW-17
	100-BT50	-SA			HH24X90	LW-19
MHD	63-BT50	-A			HH16X65	LW-14
	80-BT50	-A			HH20X90	LW-17
	100-BT50	-A			HH24X90	LW-19
MHD	63	-F			-	-
	80	-F				
	100	-F				

P



Spare parts

MHD (Radius)

Description			Spare parts						
			Clamp screw		Wrench		Clamp bolt		Wrench
			For bottom insert	For middle insert	For bottom insert	For middle insert	1 Front piece	2 Front pieces	
MHD	32-S32	-4RSA	SB-2560TR	SB-2560TR	DT-8	DT-8	-	HH8X50	LW-6
	40-S32	-5RSA	SB-3080TR	SB-3080TR	DT-10	DT-10		HH8X55	
	40-S42	-5RSA			DT-15			HH12X55	LW-10
	50-S42	-6RSA	SB-4085TR						
MHD	32-S32	-A	SB-2560TR		DT-8		-	HH8X50	LW-6
	40-S32	-A	SB-3080TR		DT-10			HH8X65	
	40-S42	-A						HH12X65	LW-10
	50-S42	-A							
MHD	32	-F	SB-2560TR		DT-8		-	-	-
	40	-F	SB-3080TR		DT-10				
	50	-F							
MHD	32	-4RF	SB-2560TR	SB-2560TR	DT-8	DT-8	-	-	-
	40	-5RF	SB-3080TR	SB-3080TR	DT-10	DT-10			
	50	-6RF	SB-4085TR		DT-15				

MEZ

Description		Spare parts	
		Clamp screw	Wrench
MEZ	16-S16....	SB-2040TRG	DTM-6
	20-S20....	SB-2555TRG	DT-8
	25-S25....	SB-3070TRG	DT-10
	32-S32....	SB-4070TRG	DT-15
	40-S32....	SB-3070TRG	DT-10
	50-S42....	SB-4070TRG	DT-15
	50-S42....	SB-4070TRG	DT-15

MGI

Description		Spare parts	
		Clamp set	Wrench
MGI	-1C	CPS-6F	LW-3

MVG

Description		Spare parts	
		Clamp set	Wrench
MVG	....	CPS-6V	LW-3

Blank tool

Description		Spare parts
		Coolant pipe
T63H	-BL...-....	CL63-1

Flange holder

Description			Spare parts					
			Screw	Wrench	Mounting bolt	Wrench	Adjustment screw	Wrench
SF22F	-SCLCL09	-40P	SB-4085TR	FT-15	HH5X30	LW-4	HS3X4	LW-1.5
	-SDUCL11	-40P	SB-4085TR	FT-15	HH5X30	LW-4	HS3X4	LW-1.5
	-SVUBL11	-40P	SB-2570TR	FT-8	HH5X30	LW-4	HS3X4	LW-1.5
	-KTGFL16	-40P	SB-4070TRS	FT-10	HH5X30	LW-4	HS3X4	LW-1.5
	-KTTXL16	-40P	SB-4070TRW	FT-8	HH5X30	LW-4	HS3X4	LW-1.5

Flange holder (Sleeve type)

Description			Spare parts					
			Mounting bolt	Wrench	Adjustment screw	Wrench	Screw (for fixing toolholder)	Wrench
SF22F	-SH..	-40P	HH5X30	LW-4	HS3X4	LW-1.5	HS6X4P	LW-3



