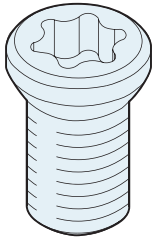


Spare Parts



P1~P28

P

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Clamp Sets	P13~P14
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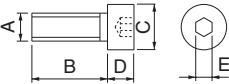
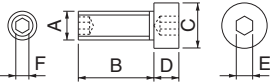
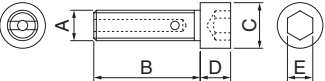
Screws

Shape	Description	Std.	Dimension (mm)							Angle		Torque (N·m)	Remarks
			A	B	C	D	E	F	α	θ			
	AJ -6X38	●	M6X1.0	38.0	6.0	10.0	3.0	3.0	-	-	-		
	-8X44-9.5	●	M8X1.25	44.0	9.5	6.0	4.0	4.0	-	-			
	-10X46	●	M10X1.5	46.0	11.5	8.0	5.0	5.0	-	-			
	AJ -519TR	●	M5X0.8	19.0	10.0	-	T15	-	-	40°	-		
	BH 3X6	●	M3X0.5	6.0	-	1.7	2.0	-	-	-	-		
	3X12	●	M3X0.5	12.0	-	1.7	2.0	-	-	-			
	6X25	●	M6X1.0	25.0	-	3.3	4.0	-	-	-			
	8X30	□	M8X1.25	30.0	-	4.4	5.0	-	-	-			
	BH 6X10TR	●	M6X1.0	10.0	12.0	5.0	T25	-	-	-	6.5		
	CP 8X15TL	●	M8X1.25	15.0	15.0	-	T25	-	-	-	6.0	L...shows Left-hand Thread	
	8X23TL	●		23.0									
	CS -2D	●	M4X0.7	21.5	6.4	3.5	2.5	2.0	-	-	1.7		
	-3D	●	M5X0.8	22.0	8.0	4.0	3.0	2.5	-	-	3.9		
	-5D	●	M5X0.8	28.0	8.0	4.0	3.0	2.5	-	-	3.0		
	GS -50	●	M5X0.8	13.0	7.5	-	3.0	-	-	82°	-		
	-50S	□	M5X0.8	9.0	7.5	-	3.0	-	-	82°			
	GS -4090T⁹⁰/LW	□	M4X0.7	9.0	5.8	-	2.0	2.0	-	82°	-	R...shows Right-hand Thread L...shows Left-hand Thread	
	HF 20X53H	●	M20X2.5	35.0	43.0	18.0	14.0	14.0	-	-	-	-	With Coolant Hole
	20X53HA	●		33.0	50.0	20.0							
	24X60H	●	M24X3.0	40.5	65.0	19.5	17.0						
	24X60HA	●		36.0		24.0							
	HH 3X6	●	M3X0.5	6.0	5.5	3.0	2.5	-	-	-	-		
	3X12	●		12.0									
	HH 4X16	●	M4X0.7	16.0	7.0	4.0	3.0	-	-	-			
	HH 5X15	●	M5X0.8	15.0	8.5	5.0	4.0	-	-	-			
		●		16.0									
		●		20.0									
		●		25.0									
		●		30.0									
	HH 6X12	●	M6X1.0	12.0	10.0	6.0	5.0	-	-	-			
		●		16.0									
		●		16.0									
		●		18.0									
		●		20.0									
		●		25.0									
●		30.0											

P

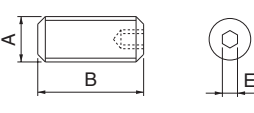
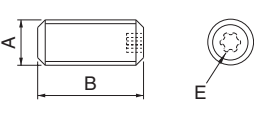
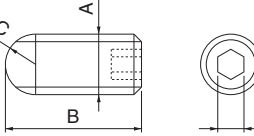
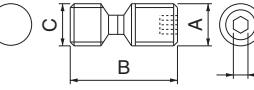
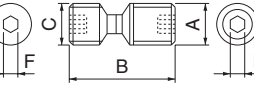
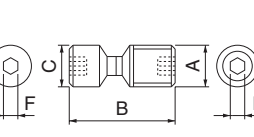
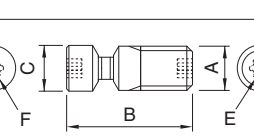
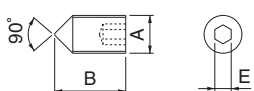
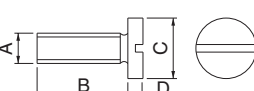
Spare Parts

● : Std. Item
□ : Deleted from the next catalogue

Shape	Description	Std.	Dimension (mm)							Angle		Torque (N·m)	Remarks
			A	B	C	D	E	F	α	θ			
	HH 8X25	●	M8X1.25	25.0	13.0	8.0	6.0	-	-	-	-		
	8X35	□		35.0									
	8X40	□		40.0									
	8X50	□		50.0									
	8X55	□		55.0									
	8X65	□		65.0									
	8X70	□		70.0									
	8X80	□		80.0									
	8X85	□		85.0									
	8X100	□		100.0									
	8X110	□		110.0									
	HH 10X25	●	M10X1.5	25.0	16.0	10.0	8.0	-	-	-			
	10X30	●		30.0									
	10X30M	□		30.0									
	10X30S	●		30.0		6.0	7.0						
	10X35	●		35.0		10.0	8.0						
	10X40	●		40.0									
	HH 12X25	□	M12X1.75	25.0	18.0	12.0	10.0	-	-	-			
	12X35	●		35.0									
	12X35M	□		35.0									
	12X40	●		40.0									
	12X55	□		55.0									
	12X65	□		65.0									
	12X80	□		80.0									
	12X85	□		85.0									
	12X100	□		100.0									
	12X110	□		110.0									
	12X120	□		120.0									
	12X130	□		130.0									
	12X140	□		140.0									
	12X150	□		150.0									
	HH 16X35	●	M16X2.0	35.0	24.0	16.0	14.0	-	-	-			
	16X40	●		40.0									
	16X45	●		45.0									
	16X65	□		65.0									
	16X90	□		90.0									
	16X110	□		110.0									
	16X130	□		130.0									
	HH 20X40	●	M20X2.5	40.0	30.0	20.0	17.0	-	-	-			
	20X55	●		55.0									
	20X75	□		75.0									
	20X90	□		90.0									
20X110	□	110.0											
20X120	□	120.0											
20X140	□	140.0											
20X150	□	150.0											
20X170	□	170.0											
HH 24X40	□	M24X3.0	40.0	36.0	24.0	19.0	-	-	-				
24X60	□		60.0										
24X75	□		75.0										
24X90	□		90.0										
24X110	□		110.0										
24X120	□		120.0										
24X140	□		140.0										
24X150	□		150.0										
24X170	□		170.0										
	HH 4X12	●	M4X0.7	10.0	7.0	4.0	3.0	2.0	-	-	-		
	HH 8X25H	●	M8X1.25	25.0	13.0	8.0	5.0	-	-	-	-	With Coolant Hole	
10X30H	●	M10X1.5	30.0	16.0	10.0	6.0							
12X35H	●	M12X1.75	35.0	18.0	12.0	8.0							
16X52H	●	M16X2.0	36.0	24.0	16.0	12.0							

● : Std. Item
□ : Deleted from the next catalogue

Screws

Shape	Description	Std.	Dimension (mm)						Angle		Torque (N·m)	Remarks								
			A	B	C	D	E	F	α	θ										
	HS 3X4P	●	M3X0.5	3.9	-	-	1.5	-	-	-	1.0	HS4X4P and HS6X4P have a flat edge								
	3X4	●		4.0																
	3X8	□		8.0																
	3X12	□		12.0																
	3X16	□		16.0																
	HS 4X4P	●	M4X0.7	3.9	-	-	2.0	-	-	-	2.0									
	4X4	●		4.0																
	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	-	-	-	-		Clamp screw equivalent to JIS B-1177							
	8X12	●		12.0																
	HS 10X10	●	M10X1.5	10.0										-	-	5.0	-	-	-	-
	10X16	●		16.0																
	HS 12X12	●	M12X1.75	12.0																
	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 -2524TRP	●	M2.5X0.35	2.4	-	-	5IP	-	-	-	0.4	○IP shows Torx Plus								
	-2534TRP	●		3.4																
	-3048TRP	●	M3X0.5	4.8									6IP	0.5						
	-4067TRP	●	M4X0.7	6.7									7IP	0.8						
	HSB 4X8^{PH}	●	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						
W 10X31	●	M10X1.0	31.0	M10X1.5	-	5.0	-	-	-	-	-									
	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								
	-1SN	●		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	●		29.0																
LS -10X1.0	●	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	●		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																
	M 4X10	●	M4X0.7	10.0	7.0	2.6														

Reference

Torx and Torx Plus have different cross-sections.



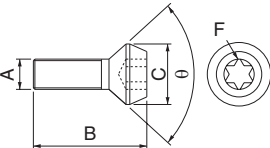
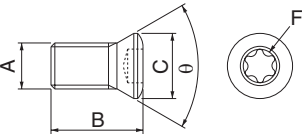
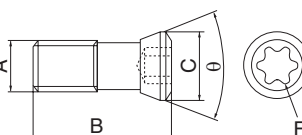
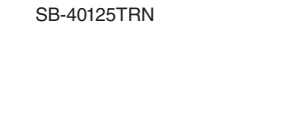
Torx



Torx Plus

● : Std. Item

□ : Deleted from the next catalogue

Shape	Description	Std.	Dimension (mm)						Angle		Torque (N·m)	Remarks			
			A	B	C	D	E	F	α	θ					
	SB -1TR	●	M2X0.4	5.3	3.8				T6		82°	0.5	R...shows Right-hand Thread		
	SB -2TR	●	M2.5X0.45	6.2	4.5				T8			1.2			
	SB -3TR	●	M3X0.5	7.2	4.8				T10			2.0			
	SB -3STR	●		6.4	5.2										
	SB -3.5TR	●	M3.5X0.6	9.3	5.6				T15			3.5			
	SB -4TR	●	M4X0.7	7.7	5.8										
	SB -5TR	●	M5X0.8	20.0	8.7	-	-		T20		90°	4.5			
	SB -2290TR	●	M2.2X0.45	9.2	2.8				T6			0.5			
	SB -25100TR	●	M2.5X0.45	10.0	3.5				T7			0.8			
	SB -40115TR	●	M4X0.7	11.5	5.5				T15		60°	3.5			
	SB -5070TR	●	M5X0.8	7.0					T20			4.5			
	SB -5090TR	●		9.0	6.8										
	SB -50120TR	●		12.0											
	   SB-40125TRN	SB -1635TR	●	M1.6X0.35	3.3	2.6				T6		60°		R...shows Right-hand Thread	
		SB -1STR	●	M2X0.4	5.0	3.1									
SB -1840TRP		●	M1.8X0.35	4.0	2.5				6IP		55°	0.5			
SB -2035TR		●	M2X0.4	3.7	3.0				T6		60°				
SB -2035TRG		●		3.5	2.7										
SB -2037TRP		●		3.7					6IP		55°				
SB -2040TR		●		3.8	3.0				T6		60°				
SB -2040TRG		●		4.0											
SB -2041TRP		●		4.1	2.7				6IP		60°				
SB -2042TRG		●		4.3					T6		37°				
SB -2045TR		●			2.8										
SB -2045TRN		●		4.8	3.0						60°		1.2		
SB -2050TR		●		5.8	3.5				T8			0.5			
SB -2060TR		●	8.3	2.8				T6							
SB -2250TR		●	M2.2X0.45	5.1	3.1				T7		60°	0.8			
SB -2255TR		●		5.5	3.5										
SB -2260TR		●		5.8	3.1										
SB -2545TR		●	M2.5X0.45	4.6					T8		60°	1.2			
SB -2555TRG		●		5.4											
SB -2555TRP		●		5.5	3.5					8IP					
SB -2560TR		●		5.7											
SB -2570TR		●		6.8						T8					
SB -3060TR		●	M3X0.5	5.3					T10		60°	2.0			
SB -3060TRG		□		5.9	4.2										
SB -3060TRP		●		6.0						10IP					
SB -3065TRP		●		6.5	4.0					8IP					
SB -3070TRG		●		7.0	4.2					T10					
SB -3070TRP		●		8.0						10IP					2.0
SB -3080TR		●	8.0					T10							
SB -3573TRP		●	M3.5X0.6	7.3	5.0				10IP		60°	2.0			
SB -3580TR		●		8.0					T15		3.5				
SB -3590TRP		●		9.0	5.3				15IP		4.0				
SB -3592TR		●		9.2	5.1				T10		2.0				
SB -4050TRN		●	M4X0.5	4.6	5.1				T10		57°	2.0			
SB -4060TR		●	M4X0.7	5.9					T15		60°	3.5			
SB -4065TR		●		6.7	5.5										
SB -4070TRG		●		7.0											
SB -4070TRN		●		7.7	5.4										
SB -4070TRS		●		6.7						T10					2.0
SB -4075TRP		●		7.5											
SB -4082TPR	●	8.2		5.5				15IP							
SB -4085TR	●	8.5						T15					60°	3.5	
SB -4085TRP	●														
SB -4090TRP	●	9.0		5.7				15IP							
SB -4090TRPN	●		5.5												
SB -40120TR	●	12.0	5.1												
SB -40125TRN	●	12.5	5.2				T15		50°						
SB -40140TR	●	14.0	5.5						60°						
SB -40140TRN	●		6.7						75°						
SB -45130TR	●	M4.5X0.75	13.0	6.6					20IP		55°	4.5			
SB -5085TR	●	M5X0.8	8.5	6.8				T20		50°	4.5				
SB -50120TRP	●		12.0					20IP		60°	3.5				
SB -50120TRS	●		7.2					15IP		70°	4.5				
SB -50137K	●		13.7	9.7				T20		50°	3.5				
SB -50140TR	●		14.0	7.3				T15			4.5				
SB -50140TRP	●							20IP		60°	6.0				
SB -60120TR	●	M6X1.0	12.0	8.5				T25							

● : Std. Item
 □ : Deleted from the next catalogue

Screws

Shape	Description	Std.	Dimension (mm)						Angle		Torque (N·m)	Remarks
			A	B	C	D	E	F	α	θ		
	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	
	SC -30067	●	M3X0.35	6.7	4.4	-	-	T8	-	60°	1.2	
	-35085	●	M3.5X0.35	8.5	5.7	-	-	T10	-	60°	2.0	
	-40100	●	M4X0.5	10.0	6.0	-	-	T15	-	60°	3.5	
	-50130	●	M5X0.5	13.0	6.6	-	-	T20	-	40°	4.5	
	-60160	●	M6X0.75	16.0	8.0	-	-	T25	-	40°	6.0	
	-60210	●	M6X0.75	21.0	9.6	-	-	T30	-	40°	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	●	M4X0.7	5.5	5.0	-	-	T15	-	44°	3.5	
	-40068TR	●	M4X0.7	6.8	5.0	-	-	T15	-	44°	3.5	
	-40080TR	●	M4X0.7	8.0	5.0	-	-	T15	-	44°	3.5	
	-40090TR	●	M4X0.7	9.0	5.0	-	-	T15	-	44°	3.5	
	-40100TR	●	M4X0.7	10.0	5.0	-	-	T15	-	44°	3.5	
	SE -40120TR	●	M4X0.7	12.0	5.6	-	-	T15	-	60°	3.5	
	-50125TR	●	M5X0.8	12.5	6.8	-	-	T20	-	60°	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 Cross recessed flat head screw equivalent to JIS...B-1111
	3X6	●	M3X0.5	6.0	6.0	-	-	-	-	90°	-	
	3X8	●	M3X0.5	8.0	6.0	-	-	-	-	90°	-	
	3X10	●	M3X0.5	10.0	6.0	-	-	-	-	90°	-	
	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 -6045	●	M6X0.75	9.0	7.5	M4.5X0.75	4.5	-	-	-	-	A shows External, D shows Internal. External and Internal threads are both Right-hand threads.
	-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	-	4.0	-	-	6°	-	Hexagon socket
	-60136TR	●	M6X1.0	13.6	6.3	-	-	T20	-	6°	4.5	Torx
	TH 8X15	●	M8X1.25	20.0	8.5	-	4.0	-	-	-	-	
	W 6X17	●	M6X1.0	17.0	-	-	-	T20	-	-	4.5	
	6X18N	●	M6X1.0	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	-	-	3.0	-	-	-	-	
	8X18	●	M8X1.25	18.0	-	-	4.0	-	-	-	-	
	*8X21	●	M8X1.0	21.0	-	-	4.0	-	-	-	-	

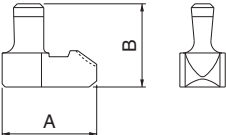
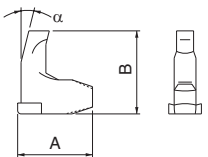
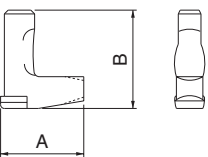
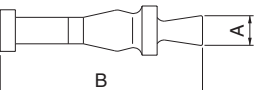
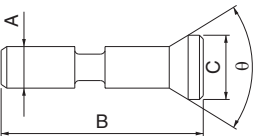
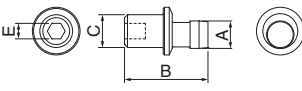
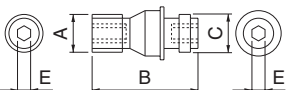
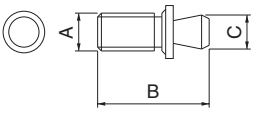
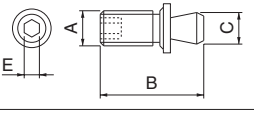
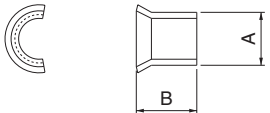
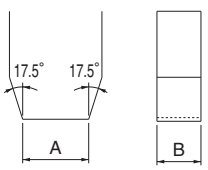
* No socket on right-hand thread side

● : Std. Item

P

Spare Parts

Pins

Shape	Description	Std.	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							
	-4	●	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	●		11.0							
	-13	●	2.8	13.0	4.2	-	-	-	-	60°	
	-17	●		17.0							
	LPF -11	●		11.0							
	-1113	●	2.5	13.0	3.5	-	-	-	-	60°	
	-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	-	-	-	-	-	-	

● : Std. Item

P



Spare Parts

Shims

Shape Handed Spare Parts show Right-hand	Description	Std.	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
	DC -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	-	-
DD -42-16		●	3.2		1.2	R1.6					
DD -43		●	3.4		1.3	R0.8					
DD -44		●	5.0		1.5	R0.8					
	DS -42	●	12.0	3.2	1.2	6.0	4.4	R1.2	-	-	Shim Screw:SB-4085TR
	DS -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
	DT -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
	DW -44	●	12.65	5.0	1.5			R0.8	-		
	556 C%L	●	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
	KPT -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
	LC -4K	●	11.7	3.2	1.4	8.1	6.73	R0.8	-	-	Shim Pin:LSP-3K
	LC -42N	●	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim Pin:LSP-2
	LC -42N-20	●						R2.0			
	LC -53N	●	15.9	4.8	1.7	10.0	8.0	R1.2	-	-	Shim Pin:LSP-3
	LC -63	●	19.0	4.8	2.0	11.61	9.3	R1.6	-	-	Shim Pin:LSP-4

P



Spare Parts

Shape Handed Spare Parts show Right-hand	Description	Std.	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^{R/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	●					R2.0				
	-43	●	12.65	4.8	3.1	8.5	6.28	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^{R/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
	MFWN -90	●	15.25	4.0	2.5	9.44	7.25	R3.0 R4.0	-	-	Shim Screw: SPW-7050
	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

● : Std. Item

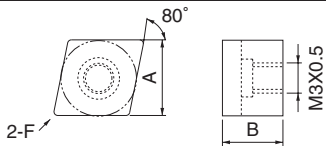
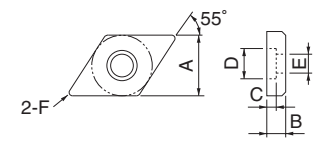
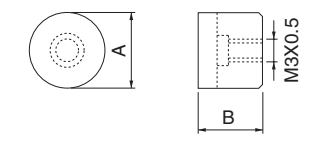
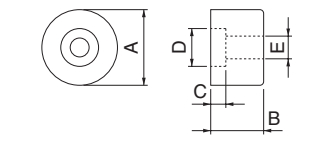
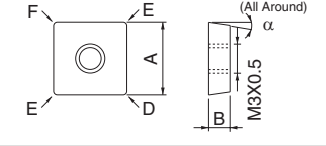
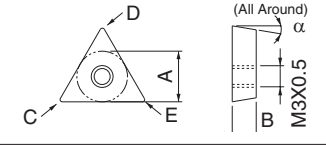
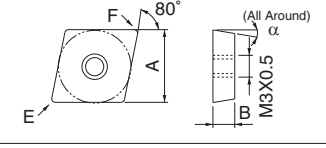
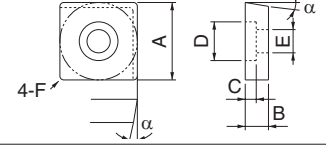
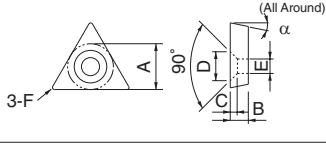
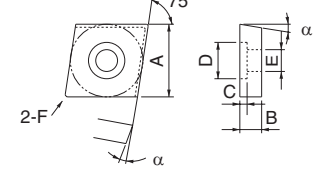
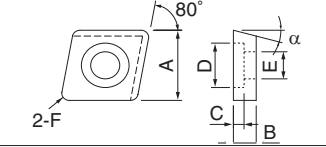
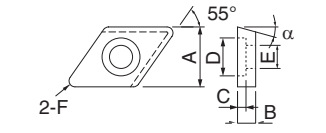
Shims

Shape	Description	Std.	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	MSO -4T245	●	10.0	2.0	4.7	6.4	4.8	-	27°	45°	Shim Screw:SP3X6
	MSO -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-3S
	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
			●								

● : Std. Item

P

Spare Parts

Shape	Description	Std.	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	SP -429	●	9.52	9.52	-	-	-	R1.2	-	-	Shim Screw:HH3X12
	SP -521	●	10.0	4.0	2.5	6.2	3.3	R1.0	-	-	Shim Screw:M3X8
	-523	●		7.2							Shim Screw:M3X12
	-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
	SP -521P	●	10.0	4.0	2.5	6.2	3.3	R1.2	11°	-	Shim Screw:M3X8
	-523P	●		7.2							Shim Screw:M3X12

● : Std. Item

Shims / Cartridges

Shape Handed Spare Parts show Right-hand	Description	Std.	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-corner use only	
	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:WP5X15	
	WWP -42	●	12.7	3.0	1.5	8.3	5.3	R1.2	11°	-	Shim Pin:WP5X11	
	-42-16	●						R1.6				
	MAP -2506	●	-	9.5	14.9	20	-	-	5°	-	Clamp Screw:SB-40140TR	
	LSD -445R	●	12.7	13.0	20.0	26.5	-	-	20°	45°	Dimension A shows Insert I.D.	
	LSE -445R	●	12.7	13.0	19.5	26.0	-	-	20°	45°		
	LSO -445R	●	13.494	12.0	21.3	23.5	-	-	27°	45°		
	LSP -415R	●	12.7	13.0	18.0	26.0	-	-	15°	15°		
	LTE -490R	●	12.7	12.0	17.0	30.0	-	-	15°	-	Dimension A shows Insert I.D.	

● : Std. Item

Clamp Sets

Shape Handed Spare Parts show Right-hand	Description	Std.	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^{R/L}	●	M6X1.0	20.0	24.5	14.8	11.0	5.0	-	R...shows Right-hand L...shows Left-hand

● : Std. Item

Clamp Sets

Shape Handed Spare Parts show Right-hand	Description	Std.	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	●		17.5	11.0	13.0				
	-6S	●		18.5	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	-	

P

Spare Parts

● : Std. Item

Clamps

Shape Handed Spare Parts show Right-hand	Description	Std.	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
	C 17R	●	12.2	20.0	14.3	8.5	M8X1.25 (Left-hand Thread)	-	12°	-	Clamp Screw:W8X18
	C 20R	●	15.1	15.5	15.0	7.5	5.3	-	10°	-	Clamp Screw:TH8X15
	CH -20R	●	13.1	15.5	14.8	7.5	5.3	-	10°	-	Clamp Screw:TH8X15
	C 25R	●	13.2	15.5	15.0	7.5	5.3	-	10°	-	Clamp Screw:TH8X15
	CE -111	□	35.0	25.0	10.0	8.0	10.0	3.0	-	-	Right-hand
	-121	□						4.5			Left-hand
	-131	□									Right-hand
	-141	□									Left-hand
	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 %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				
	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				

● : Std. Item
□ : Deleted from the next catalogue

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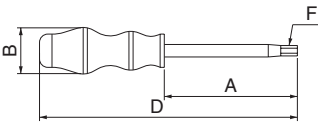
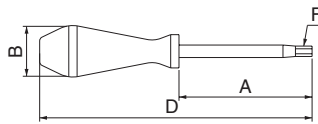
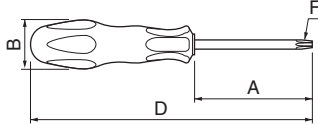
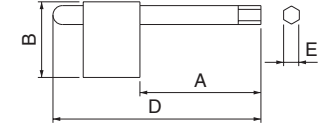
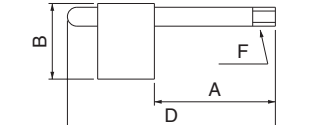
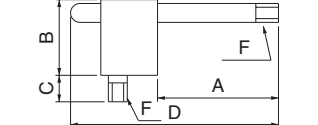
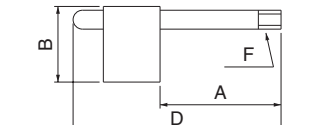
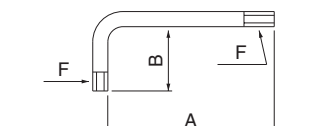
Spare Parts

Clamps / Chipbreakers

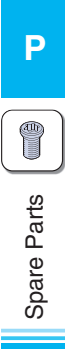
Shape Handed Spare Parts show Right-hand	Description	Std.	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	CP -2D	●		10.0	21.6		10.4				
	CP -3D	●	-	12.0	27.6	-	14.0	-	-	-	
	CP -5D	●		13.0	32.0						
	CP -8TE	●	17.9	12.0	12.0	M8X1.25 (Left-hand Thread)	10.0	-	15°	-	
	CP -8W	●	20.9	12.0	8.0	M8X1.25 (Left-hand Thread)	13.0	-	3°	-	
	CB -11	●	11.5	12.7	3.5	-	-	-	-	-	
	CB -51	●	16.0	15.6	3.5	-	-	-	-	-	
	CB -12	●	14.0	12.7	3.5	-	-	-	-	-	Right-hand
	CB -13	●	14.0	12.7	3.5	-	-	-	-	-	Left-hand
	CB -14	●	18.51	12.7	3.5	-	-	-	-	-	Right-hand
	CB -15	●	18.51	12.7	3.5	-	-	-	-	-	Left-hand
	CB -16	●	18.0	12.7	3.5	-	-	-	-	-	
	CB -17	●	21.0	15.6	3.5	-	-	-	-	-	
	CB -S3220	●	7.94	7.94	1.0	2.0	-	-	-	-	
	CB -S4220	●	11.12	11.12	2.0	2.0	-	-	-	-	
	CB -T2212	●	7.48	-	1.5	1.2	-	-	-	-	
	CB -T3220	●	10.87	-	2.0	2.0	-	-	-	-	

● : Std. Item

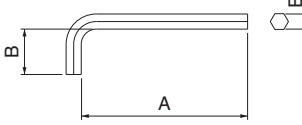
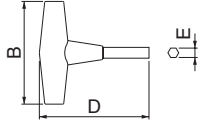
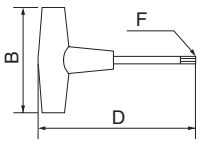
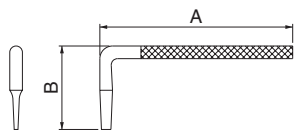
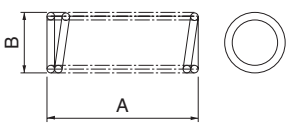
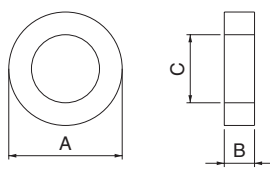
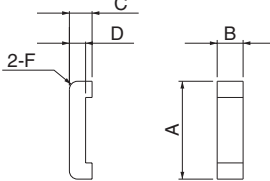
Wrenches

Shape	Description	Std.	Dimension (mm)						Angle		Remarks	
			A	B	C	D	E	F	α	θ		
	DT -7	●	44	16	-	114	-	T7	-	-	Torx	
	-8	●	70	26	-	150	-	T8	-	-		
	DT -10	●	70	29	-	160	-	T10	-	-	Torx	
	-15	●	70	32	-	170	-	T15	-	-		
	-20	●	90	32	-	190	-	T20	-	-		
	-25	●	82	36	-	190	-	T25	-	-		
	DTM -6	●	40	17	-	115	-	T6	-	-	Torx Top of wrench is magnetized	
	-7	●	44	17	-	119	-	T7	-	-		
	-8	●	70	24	-	150	-	T8	-	-		
	-10	●	70	28	-	167	-	T10	-	-		
	-15	●	70	31	-	174	-	T15	-	-		
	DTP	-6	●	73	23	-	150	-	6IP	-	-	○IP shows Torx Plus
		-7	●						7IP			
		-9	●	61	30				9IP			
		-15	●	81	33				15IP			
		-20	●	100					20IP			
	DTPM	-8	●	70	24	-	150	-	8IP	-	-	○IP shows Torx Plus Top of wrench is magnetized
		-10	●	70	28	-	165	-	10IP	-	-	
		-15	●	70	31	-	174	-	15IP	-	-	
		FH -2	●	40	20	-	71	2.0	-	-	-	Hexagon
		-2.5	●	45	20	-	76	2.5	-	-	-	
	FT -6	●	35	15	-	65	-	T6	-	-	Torx	
	-7	●	34	15	-	62	-	T7	-	-		
	-8	●	40	20	-	74	-	T8	-	-		
	-10	●	40	20	-	74	-	T10	-	-		
	FT -15	●	45	25	10	80	-	T15	-	-	Torx	
	FTP -5	●	34	15	-	62	-	5IP	-	-	○IP shows Torx Plus	
	-6	●						6IP				
	-7	●						7IP				
	LTP -10	●	51	17	-	-	-	10IP	-	-	○IP shows Torx Plus	
	-15	●	54	18	-	-	-	15IP	-	-		
	LTW	-8SS	●	43	6	-	-	-	T8	-	-	Torx
		-10S	●	62	10	-	-	-	T10	-	-	
		-10SS	●	47	7	-	-	-	T10	-	-	
		-15S	●	62	10	-	-	-	T15	-	-	
		-20	●	58	19	-	-	-	T20	-	-	
-25	●	65	20	-	-	-	T25	-	-			

● : Std. Item

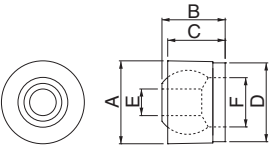
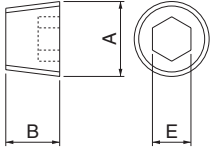
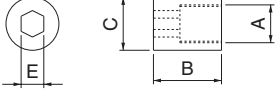
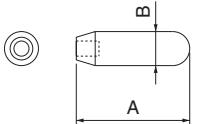
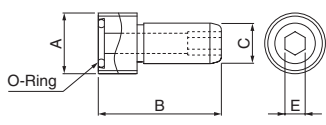


Spare Parts

Shape	Description	Std.	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	-	
		-25	●	-	98	-	130	-	T25	-	
TTP	-20	●	-	70	-	138	-	20IP	-	○IP shows Torx Plus	
	LTK	-5	●	70	30	-	-	-	-	-	
	SP	-2D	●	8.5	5.6	-	-	-	-	-	Spring
		-3D	●	12.0	7.0	-	-	-	-	-	
		-5	●	12.0	6.7	-	-	-	-	-	
		-5D	●	12.0	7.2	-	-	-	-	-	
		-6	●	12.0	7.7	-	-	-	-	-	
		-8	□	11.0	9.7	-	-	-	-	-	
	W	-6	●	11.5	1.6	6.4	-	-	-	-	Washer
		6-14	●	11.5	1.4	6.4	-	-	-	-	
		-8	□	15.5	1.6	8.4	-	-	-	-	
	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

P

Spare Parts

Shape	Description	Std.	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	-	-	-	

● : Std. Item

Former Parts List

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^{FL} -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 Solid CBN Tools

Description	Spare Parts			
	Clamp Set	Wrench	Shim	Shim Screw
CCLN^{FL} -09A	CE-030A	LW-4	SP-429	HH3X12
CTUN^{FL} -11A	CE-030A	LW-4	SP-219	HH3X12

Toolholders for Bearing Machining

Description	Spare Parts					
	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PRGC^{FL} -12BE	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
..... -16BE	LL-2C	LS-1T	LR-16C	LSP-2	PC-2	FH-2.5
PRGC^{FL} -12BF	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
..... -16BF	LL-2C	LS-1T	LR-16C	LSP-2	PC-2	FH-2.5

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				
1616.. -40F				
SABSR -40F	-	-	SB-3080TR	FT-10
AABWR 0810K -40F	LPA-11	HSB4X8R	-	FH-2
1010.. -40F				
1212.. -40F				
1616.. -40F				
SABWR -40F	-	-	SB-3080TR	FT-10
AABWR 0810K -50F	LPA-11	HSB4X8R	-	FH-2
1010.. -50F				
1212.. -50F				
1616.. -50F				
SABWR -50F	-	-	SB-3080TR	FT-10

KTKF

Description	Spare Parts	
	Clamp Screw	Wrench
KTKF^{FL} -12	SB-4590TRWN	LTW-10S
..... -16		

P

Spare Parts

External Toolholders (Back Clamp)

Description	Spare Parts		
	Anchor Pin	Lock Screw	Wrench
ACLC^{R/L} 0810K -06F 1010K -06F 1010K -09F 1212M -09F 1616M -09F	LPF-11	HSB4X8 ^{R/L}	FH-2
	LPF-13		
	LPF-17		
	LPF-11		
	LPF-13		
ADJC^{R/L} 0810K -07F 1010K -07F 1010K -11F 1212M -11F 1616M -11F	LPF-11	HSB4X8 ^{R/L}	FH-2
	LPF-13		
	LPF-17		
	LPF-11		
	LPF-13		
ADNCR 0810K -07F 1010K -07F 1010K -11F 1212M -11F 1616M -11F	LPF-11	HSB4X8R	FH-2
	LPF-13		
	LPF-17		
	LPF-11		
	LPF-1113		
AVJB^{R/L} 1010K -11F 1212M -11F 1616M -11F	LPF-11	HSB4X8 ^{R/L}	FH-2
	LPF-1113		
	LPF-1117		
AVVBR 1010K -11F 1212M -11F 1616M -11F	LPF-11	HSB4X8R	FH-2
	LPF-1113		
	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^{R/L} -06 -09 -12	SB-2570TR	FT-8
	SB-4085TR	FT-15
	SB-5090TR	LTW-20
SCAC^{R/L} -06 -09 1212F -09FF	SB-2570TR	FT-8
	SB-4085TR	FT-15
	SB-4085TR	FT-15
SDJC^{R/L} -07F -11F	SB-2570TR	FT-8
	SB-4085TR	FT-15
SDLC^{R/L} -07FF -11FF	SB-2570TR	FT-8
	SB-4085TR	FT-15
SDXC^{R/L} -07 -11	SB-2570TR	FT-8
	SB-4085TR	FT-15
SDNC^{R/L} -07F -11F	SB-2570TR	FT-8
	SB-4085TR	FT-15
SDNCN -07 -11	SB-2570TR	FT-8
	SB-4085TR	FT-15
SDLP^{R/L} -07F -11F	SB-2570TR	FT-8
	SB-4085TR	FT-15
STGC^{R/L} -08 -11	SB-2050TR	FT-6
	SB-3080TR	FT-10
SVJB^{R/L} -11F SVLP^{R/L} -08FF -11FF -11F	SB-2570TR	FT-8
	SB-2050TR	FT-6
	SB-2570TR	FT-8
SVPP^{R/L} -08FF -11FF -11	SB-2050TR	FT-6
	SB-2570TR	FT-8
	SB-2050TR	FT-6
SYXP^{R/L} -06F	SB-2050TR	FT-6

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Spare Parts

Former Parts List

External Toolholders (Screw Clamp)

Description	Spare Parts				
	Clamp Screw	Wrench	Shim	Shim Screw	Wrench
SVPB ^{R/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 ^{R/L} 1212F -09N	CPS-2P	LW-2.5	-	-	CB-S3220
CTTP ^{R/L} -11N	CPS-2P	LW-2.5	-	-	CB-T2212
..... -16N	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220

Twin-Bars

Description	Spare Parts	
	Clamp Screw	Wrench
STW ^{R/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				
S19H- SVNR 12				
S19N- SVNR 12				
S20H- SVNR 12				
S25H- SVNR 12				
S25Q- SVNR 12				
S... SVNR 12S			SB-3080TR	

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.. ...		
PSH 04.. ...	HS4X4P	LW-2
05.. ...		
06.. ...		
07.. ...		

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Spare Parts

Boring Bars (Screw Clamp)

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

P



Spare Parts

Former Parts List

Boring Bars (Screw Clamp)

Description	Spare Parts	
	Clamp Screw	Wrench
S... SWUB ^{R/L} 08...E	SB-2050TR	FT-6
S12M- SWUP ^{R/L} 11-14E	SB-2545TR	FT-8
S... SWUP ^{R/L} 11...E	SB-2560TR	
S... SWUP ^{R/L} 16...E	SB-4065TR	FT-15
S... SWUB ^{R/L} 06...	SB-2040TR	FT-6
S10J- SWUB ^{R/L} 08...	SB-2035TR	
C... SWUB ^{R/L} 06...	SB-2035TR	FT-6
C07K- SWUB ^{R/L} 08...		
C08L- SWUB ^{R/L} 08...		
C10N- SWUB ^{R/L} 08...	SB-2050TR	
C12Q- SWUP ^{R/L} 11-14(-/-)	SB-2545TR	FT-8
C12Q- SWUP ^{R/L} 11-16(-/-)	SB-2560TR	
C16X- SWUP ^{R/L} 11-18(-/-)		
C... SWUP ^{R/L} 16...	SB-4065TR	FT-15
E... SWUB ^{R/L} 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 ^{R/L} 06-12E	SB-2040TR	FT-6
S16Q- SYXP ^{R/L} 06-16E	SB-2045TR	

Boring Bars (Screw Clamp)

Description	Spare Parts				
	Clamp Screw	Wrench	Shim	Shim Screw	Wrench (for Shim Screw)
S12M- SVJP ^{R/L} 08-16E	SB-2050TR	FT-6	-	-	-
S... SVJC ^{R/L} 08...E		FT-8			
S... SVJB ^{R/L} 11...E	SB-2570TR	FT-8	SVN-32N	SS-4N	LW-4
S... SVJB ^{R/L} 16...EN	SB-40125TRN	FT-15			
S32S- SVJB ^{R/L} 16-40E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S40T- SVJB ^{R/L} 16-50E					
S10M- SVPC ^{R/L} 08-16E	SB-2050TR	FT-6	-	-	-
S... SVPB ^{R/L} 11...E	SB-2570TR	FT-8			
S... SVPB ^{R/L} 16...EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
S25X- SVPB ^{R/L} 16-34E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S32S- SVPB ^{R/L} 16-40E					
S12M- SVUC ^{R/L} 08-16E	SB-2050TR	FT-6	-	-	-
S... SVUB ^{R/L} 11...E	SB-2570TR	FT-8			
S... SVUB ^{R/L} 16...EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
S25X- SVUB ^{R/L} 16-34E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S32S- SVUB ^{R/L} 16-40E					
S12M- SVZC ^{R/L} 08-16E	SB-2050TR	FT-6	-	-	-
S... SVZB ^{R/L} 11...E	SB-2570TR	FT-8			
S... SVZB ^{R/L} 16...EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
S25X- SVZB ^{R/L} 16-34E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S32S- SVZB ^{R/L} 16-40E					

Boring Bars (Top Clamp)

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

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

P

Spare Parts

KTGF-F

Description	Spare Parts	
	Clamp Screw	Wrench
KTGF ^{R/L} -16F	SB-4070TRW	FT-8

KN91

Description	Spare Parts				
	Clamp	Clamp Bolt	Washer	Spring	Wrench
KN91 ^{R/L} 44 -4	*CE-111/121	BH8X30	W-8	SP-8	LW-5
44 -5					
44 -7					

*KN91^{R/L}44-4/5... CE-111 for Right-hand Toolholder, and CE-121 for Left-hand Toolholder.
KN91^{R/L}44-7... CE-131 for Right-hand Toolholder, and CE-141 for Left-hand Toolholder.

KGHS

Description	Spare Parts				
	Clamp	Clamp Bolt	Washer	Spring	Wrench
KGHS ^{R/L} -4	CGH-1 ^{L/R}	HH6X25	W-6	SP-6	LW-5
..... -5					
..... -7					

Clamp: KGHS^{R/L} ... CGH-OL for Right-hand Toolholder, and CGH-OR for Left-hand Toolholder.

KGM (For automatic lathe)

Description	Spare Parts	
	Clamp Screw	Wrench
KGM ^{R/L} 0810K - ...	SE-40120TR	LTW-15S
1010.. - ...		
1212.. - 1.5....		
1212.. - 2....		
1212.. - 2.5....		
1616.. - 2....	SE-50125TR	LTW-20
1616.. - 2.5....		
1616.. - 3....		

GFVS-AA / GFVT-AA

Description	Spare Parts	
	Clamp Set	Wrench
GFVS ^{R/L} -08AA	CPS-5V	FT-15
GFVT ^{R/L} -08AA	CPS-5V	FT-15

KTKH-S

Description	Spare Parts
	Releasing Wrench
KTKH ^{R/L} - ...S	LTK-5

KTKH-B

Description	Spare Parts	
	Clamp Screw	Wrench
KTKH ^{R/L} 0808K - ...B	SE-40120TR	FT-15
1010K - ...B		
1212M - ...B		
1414M - ...B		
1616M - ...B	SE-50125TR	LTW-20






KTTX

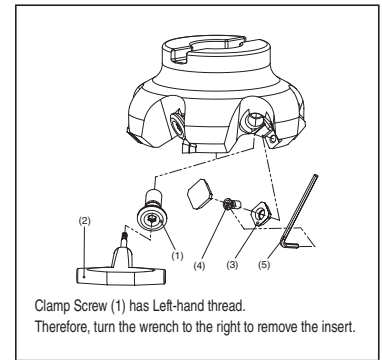
Description	Spare Parts	
	Clamp Screw	Wrench
KTTXR -16F	SB-4070TRW	FT-8



Former Parts List






MSE45 (Face Mill)

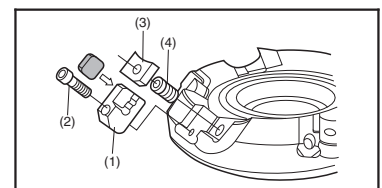
Description	(1) Clamp Screw	(2) Wrench	(3) Shim	(4) Shim Screw	(5) Wrench
					
MSE 45040R--T-M 45050R--T-M	CP8X15TL (Left-hand Thread)	TTC-25	MSE-4245S	SP4X9	LW-2 (Shim Screw)
MSE 45080R--T 45200R...T	CP8X23TL (Left-hand Thread)				
MSE 45063R--T-M 45200R...T-M					



- Mounting bolt (SP8X35) is included for MSE45040R--OT-M.
- Mounting bolt (HH10X30S) is included for MSE45050R--OT-M and MSE45063R--OT-M.
- Mounting bolt (HH12X35) is included for MSE45080R--OT-M and MSE45080R--OT.

MSD45 (Face Mill)

Description	(1) Cartridge	(2) Clamp Bolt	(3) Clamp	(4) Clamp Screw	Wrench
					
MSD 45...R	LSD-445R	HH4X16	C20R	TH8X15	TH-4







- Mounting bolt (HH12X35) is included for MSD4580R.

MSO45-09 (Face Mill)






Description	Spare Parts	
	Clamp Screw	Wrench
MSO 45...R-09	SB-3060TR	DT-10

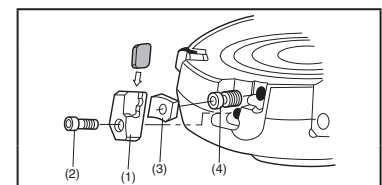
MSP15 / MSE15 (End Mill)

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

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

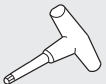

MSP15 (Face Mill)

Description	(1) Cartridge	(2) Clamp Bolt	(3) Clamp	(4) Clamp Screw	Wrench
					
MSP 15...R	LSP-415R	HH4X16	C25R	TH8X15	TH-4






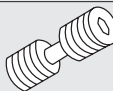

- Mounting bolt (HH12X35) is included in MSP1580R.

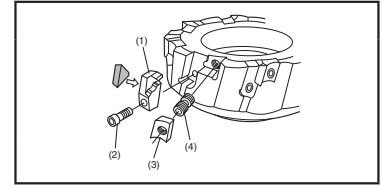
MTE90-SF

Description	Cartridge	Clamp	Clamp	Clamp Screw	Adjustment Screw	Wrench	Wrench
							
MTE 90...-SF	LTE-490SR	C91R (for Insert)	C92R (for Cartridge)	W8X16	SV-60136R	TTC-25	LW-4 (for Adjustment Screw)

Spare Parts

MTE90 (Face Mill)

Description	(1) Cartridge	(2) Clamp Bolt	(3) Clamp	(4) Clamp Screw	Wrench
					
MTE 90...R	LTE-490R	HH4X16	C17R	W8X18	TH-4



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 ... -S..	SB-2545TR	FT-8

MTES

Description	Clamp Set	Wrench
		
MTES ...	CPS-5E	FT-15

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		
080R -12-7T	SB-4085TR	
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	
MHD 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						
50-S42 -C	SB-3080TR	DT-10				
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						

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Spare Parts

Former Parts List

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			-	-

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					HH12X55		LW-10
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					

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MVG

Description	Spare Parts	
	Clamp Set	Wrench
MVG	CPS-6V	LW-3

Blank Tool

Description	Spare Parts
	Coolant Pipe
T63H- BL....	CL63-1

Spare Parts