Spare Parts

P

P1~P28

Screws	P2~P6
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Shims	P8~P12
Cartridges	P12
Clamp Sets	P13~P14
Clamps	P15~P16
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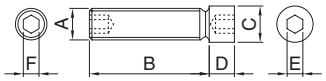
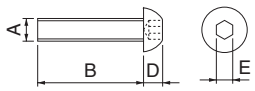
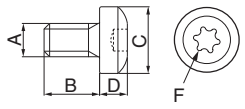
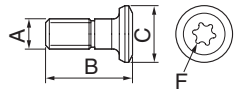
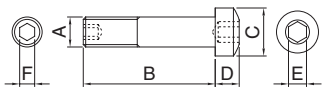
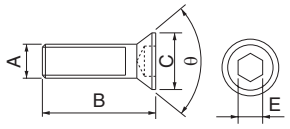
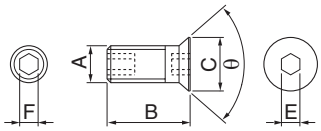
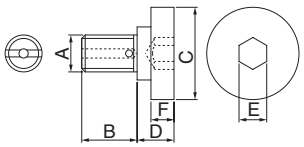
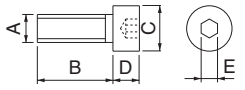
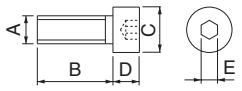
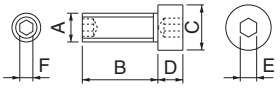
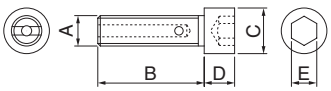
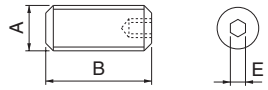
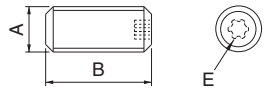
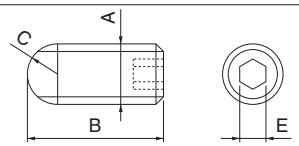
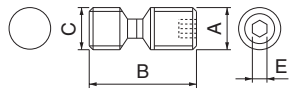
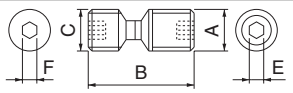
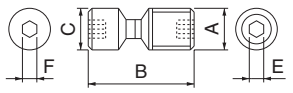
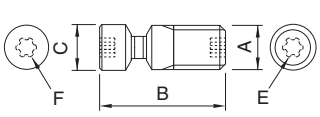
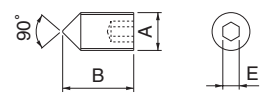
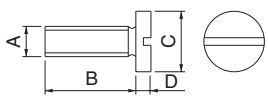
Screws

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	-	-		
	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	-4090T[R/L]W	●	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
		24X60H	●	M24X3.0	40.5	65.0	19.5	17.0					
	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	-	-	-		
		5X16	●		16.0								
		5X20	●		20.0								
		5X25	●		25.0								
		5X30	●		30.0								
	HH	6X12	●	M6X1.0	12.0	10.0	6.0	5.0	-	-	-		
		6X16	●		16.0								
		6X20	●		20.0								
		6X25	●		25.0								
		6X30	●		30.0								
	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								

●:Std. Item

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

●:Std. Item

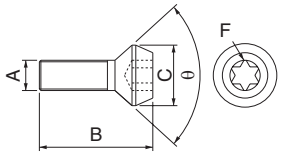
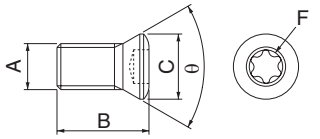
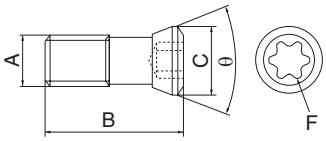
Shape	Description		Std.	Dimension (mm) A	B	C	D	E	F	Angle α	θ	Torque (N·m)	Remarks
	HS	3X4P	●	M3X0.5	3.9	-	-	1.5	-	-	-	1.0	HS4X4P and HS6X4P have a flat edge Clamp screw equivalent to JIS B-1177
		3X4	●		4.0								
		3X8	●		8.0								
		3X12	●		12.0								
		3X16	●		16.0								
	HS	4X4P	●	M4X0.7	3.9	-	-	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	●	M6X1.0	6.0								
		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	-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	4X8R/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
		-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								
	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						

Reference

Torx and Torx Plus have different cross-sections.

Torx　　Torx Plus

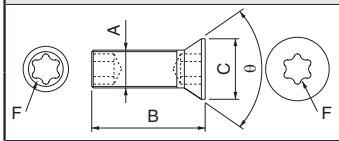
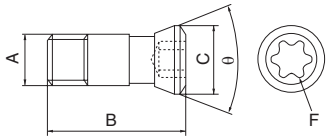
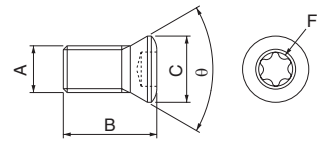
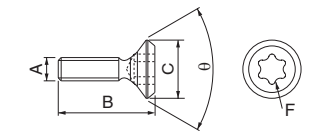
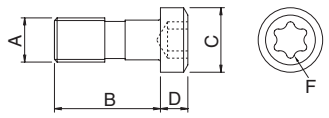
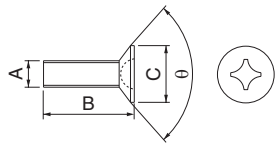
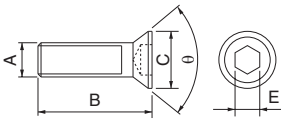
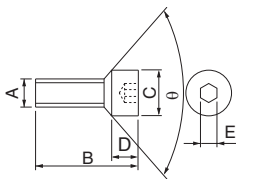
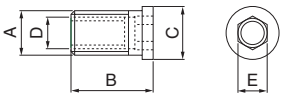
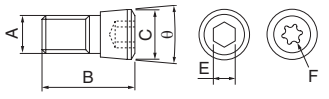
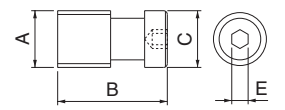
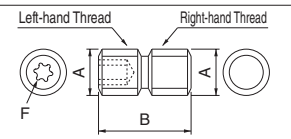
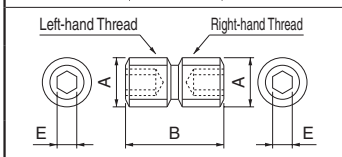
●:Std. Item

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			0.5	
	-2TR	●	M2.5X0.45	6.2	4.5			T8			1.2	
	-3TR	●	M3X0.5	7.2	4.8			T10		82°	2.0	
	-3STR	●		6.4	5.2							
	-3.5TR	●	M3.5X0.6	9.3	5.6			T15			3.5	
	-4TR	●	M4X0.7	7.7	5.8							
	-5TR	●	M5X0.8	20.0	8.7	-	-	T20	-	90°	4.5	R...shows Right-hand Thread
	-2290TR	●	M2.2X0.45	9.2	2.8			T6		60°	0.5	
	-25100TR	●	M2.5X0.45	10.0	3.5			T7			0.8	
	-40115TR	●	M4X0.7	11.5	5.5			T15			3.5	
	-5070TR	●	M5X0.8	7.0	6.8			T20			4.5	
	-5090TR	●		9.0								
	-50120TR	●		12.0								
	SB -1635TR	●	M1.6X0.35	3.3	2.6			T6		60°	0.5	
	SB -1STR	●	M2X0.4	5.0	3.1							
	-1840TRP	●	M1.8X0.35	4.0	2.5			6IP		55°		
	-2035TR	●	M2X0.4	3.7	3.0			T6		60°		
	-2035TRG	●		3.5	2.7							
	-2040TR	●		3.8	3.0							
	-2040TRG	●		4.0		-	-		-			
	-2042TRG	●		4.1	2.7							
	-2045TR	●		4.3								
	-2045TRN	●			2.8					37°		
	-2050TR	●		4.8	3.0					60°		
	-2060TR	●		5.8	3.5			T8			1.2	
	-2080TR	●		8.3	2.8			T6			0.5	
	SB -2250TR	●	M2.2X0.45	5.1	3.1			T7		60°	0.8	
	-2255TR	●		5.5	3.5	-	-		-			
	-2260TR	●		5.8	3.1							
	SB -2545TR	●	M2.5X0.45	4.6	3.5			T8		60°	1.2	
	-2555TRG	●		5.4								
	-2555TRP	●		5.5		-	-	8IP	-			
	-2560TR	●		5.7				T8				
	-2570TR	●		6.8								
	**SB -3060TR**	●	M3X0.5	5.3	4.2			T10		60°	2.0	R...shows Right-hand Thread
	-3060TRG	●		5.9								
	-3065TRP	●		6.5	4.0	-	-	8IP	-		1.2	
	-3070TRG	●		7.0	4.2			T10			2.0	
	-3070TRP	●						10IP				
	-3080TR	●		8.0				T10				
	**SB -3580TR**	●	M3.5X0.6	8.0	5.3			T15		60°	3.5	○○IP shows Torx Plus
	-3590TRP	●		9.0		-	-	15IP	-		4.0	
	-3592TR	●		9.2	5.1			T10			2.0	
	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							
	-4070TRS	●		6.7	5.5			T10			2.0	
	-4075TRP	●		7.5				15IP			3.5	
	-4082TPR	●		8.2		-	-		-			
	-4085TR	●		8.5				T15				
	-4085TRP	●						15IP				
	-4090TRP	●		9.0	5.7							
	-4090TRPN	●			5.5							
	-40120TR	●		12.0	5.1			T15				
	-40125TRN	●		12.5	5.2					50°		
	-40140TR	●		14.0	5.5					60°		
	-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	
	-50120TRP	●		12.0				20IP		60°		
	-50120TRS	●			7.2	-	-	15IP	-		3.5	
	-50140TR	●		14.0	7.3			T15		50°	3.5	
	-50140TRP	●						20IP		60°	4.5	
	SB -60120TR	●	M6X1.0	12.0	8.5			T25			6.0	

SB-40125TRN

●:Std. Item

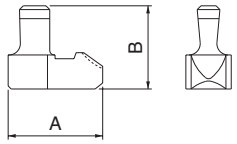
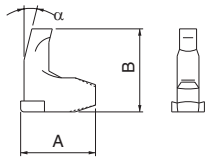
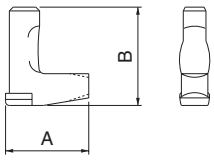
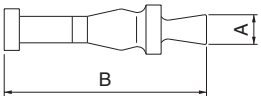
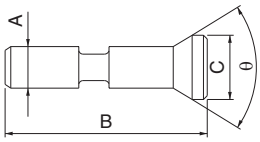
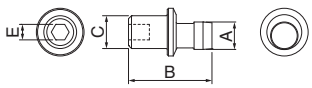
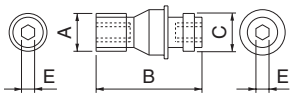
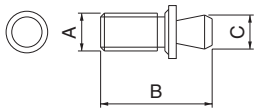
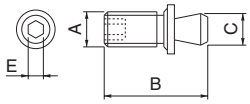
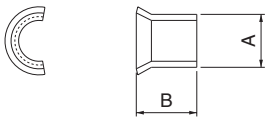
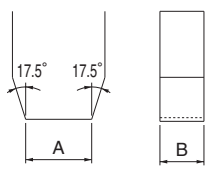
Screws

Shape	Description		Std.	Dimension (mm) A	B	C	D	E	F	Angle α	θ	Torque (N·m)	Remarks
	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			2.0	
		-40100	●	M4X0.5	10.0	6.0			T15			3.5	
		-50130	●	M5X0.5	13.0	6.6			T20		40°	4.5	
		-60160	●	M6X0.75	16.0	8.0			T25			6.0	
		-60210	●		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			3.5	
		-40055TR	●		5.5						44°		
		-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							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	-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	●					-	T20	-		4.5	Torx
	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								

* No socket on right-hand thread side

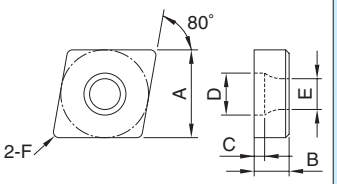
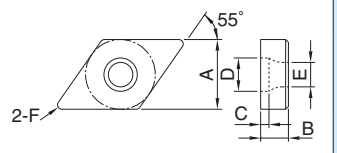
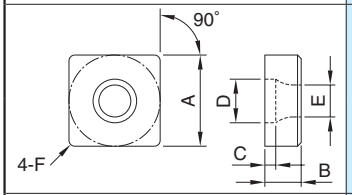
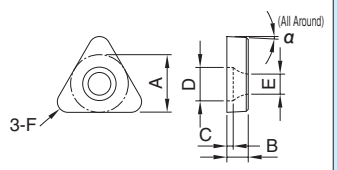
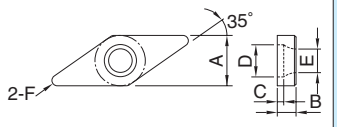
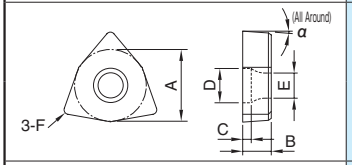
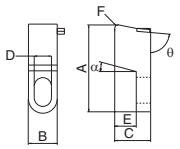
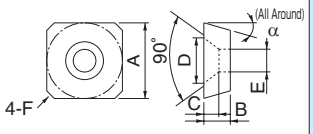
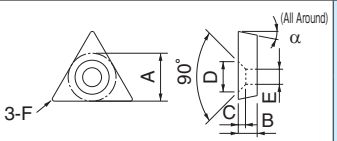
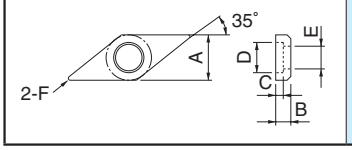
●:Std. Item

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							
	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	3.6	-	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							
	LSP	-2K	●	5.1	5.2							
		-3K	●	6.7	5.7							
	P	-03	●	2.8	1.95	-	-	-	-	-	-	
		-03S	●	3.5	1.95	-	-	-	-	-	-	

●:Std. Item

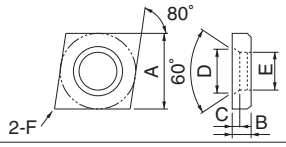
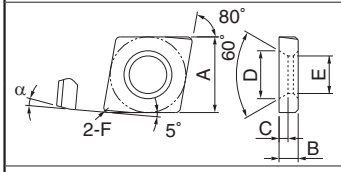
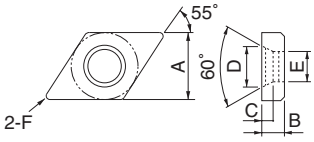
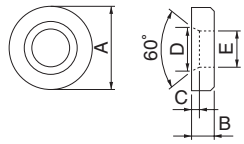
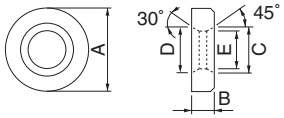
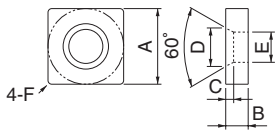
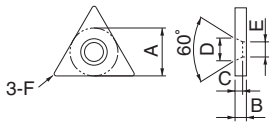
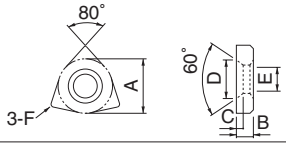
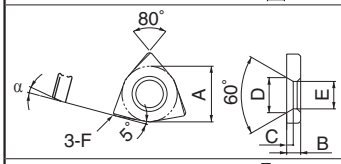
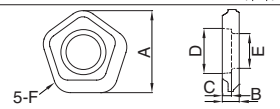
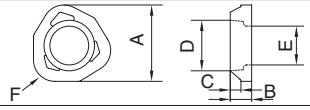
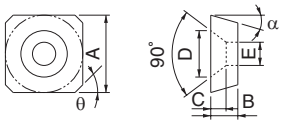
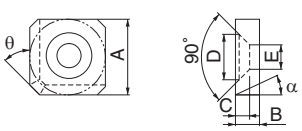
Shims

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
		-44	●	12.55	5.0	1.5			R0.8			
	**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	●		5.0	1.5						
	**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**	**C**R/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
		-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

●:Std. Item

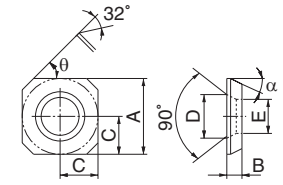
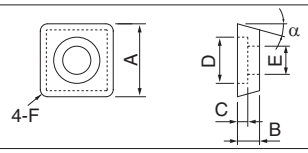
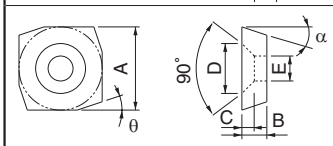
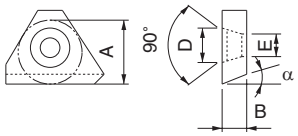
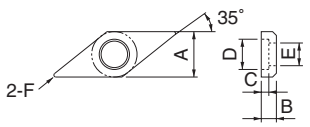
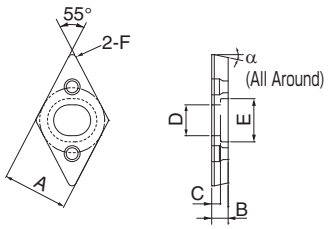
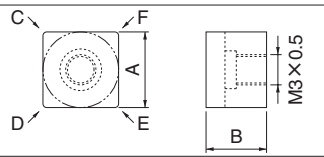
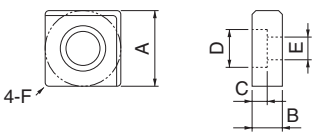
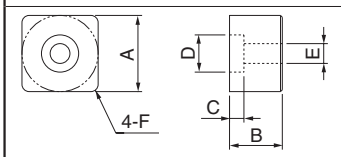
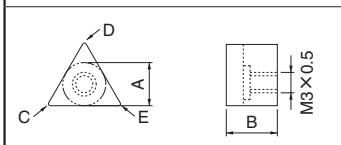
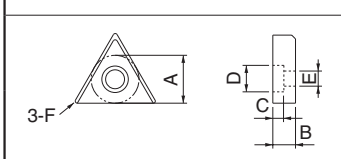
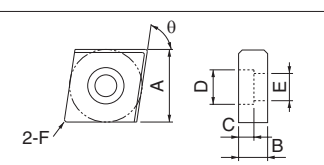
P

Spare Parts

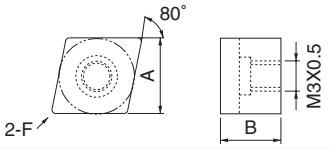
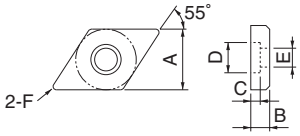
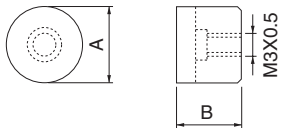
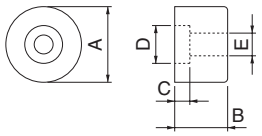
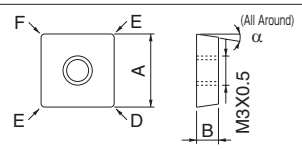
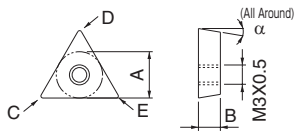
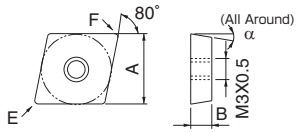
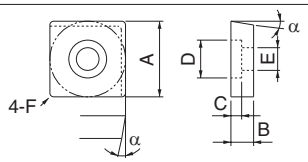
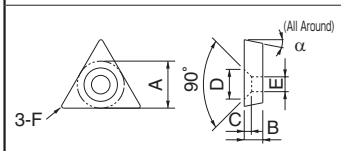
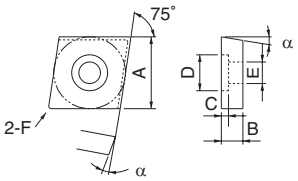
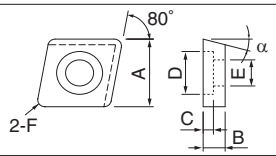
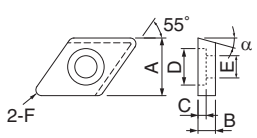
Shape Handed Spare Parts show Right-hand	Description		Std.	Dimension (mm)						Angle		Remarks
				A	B	C	D	E	F	α	θ	
	LC	-32N	●	9.47	2.4	1.3	6.18	4.68	R0.8	-	-	Shim Pin:LSP-1
		-4K	●	11.7	3.2	1.4	8.1	6.73	R0.8	-	-	Shim Pin:LSP-3K
		-42N	●	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim Pin:LSP-2
		-42N-20	●						R2.0			
		-53N	●	15.9	4.8	1.7	10.0	8.0	R1.2	-	-	Shim Pin:LSP-3
	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
		-42N$^{R}_{L}$-20	●						R2.0			
	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

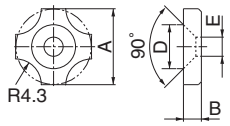
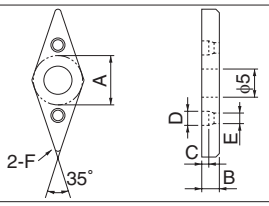
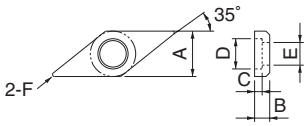
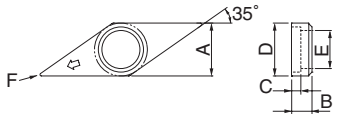
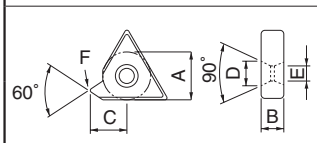
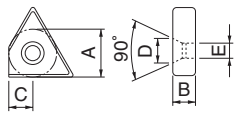
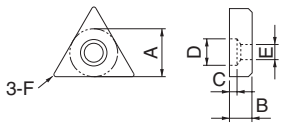
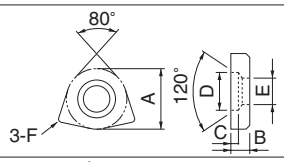
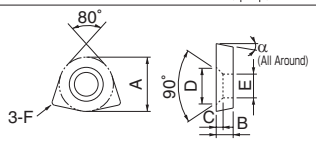
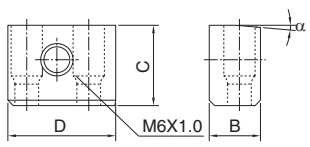
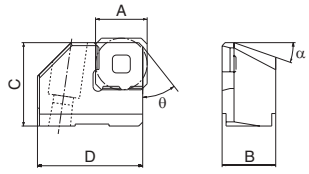
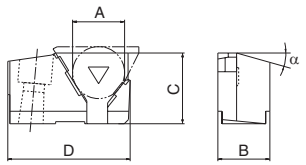
Shape	Description	Std.	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	α	θ	
	**MSO -4T245**	●	10.0	2.0	4.7	6.4	4.8	-	27°	45°	Shim Screw:SP3X6
	**MSO -5200**	●	12.6	3.18	1.8	8.27	6.66	R0.8	15°	-	Shim Screw:SPW-6045
	**MSP -42**	●	11.3	3.2	1.85	7.0	3.3	-	15°	15°	Shim Screw:SP3X8
	**MTE -42**	●	9.8	3.2	-	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

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

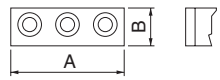
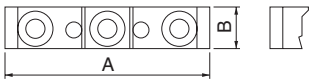
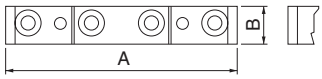
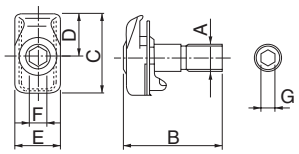
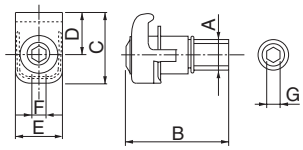
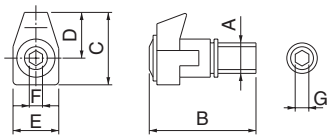
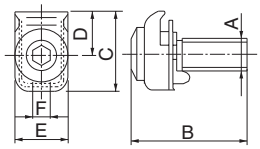
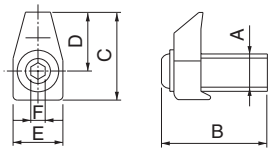
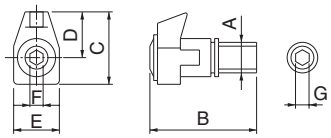
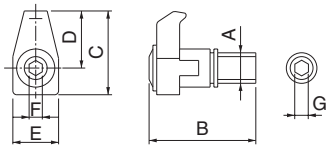
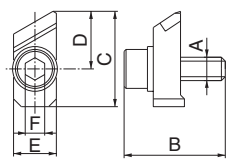
●:Std. Item

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.

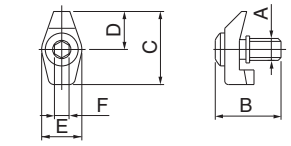
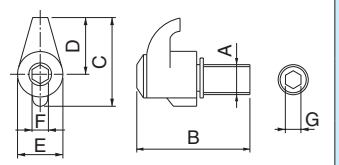
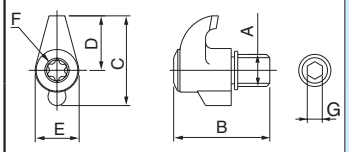
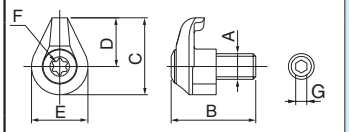
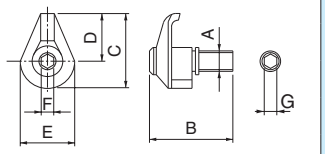
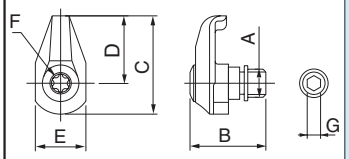
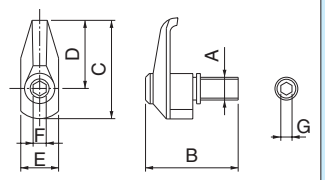
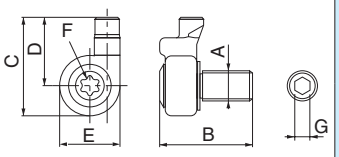
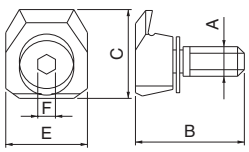
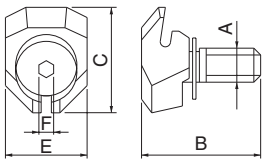
●:Std. Item

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

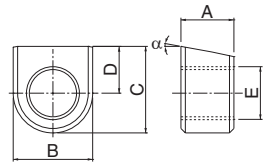
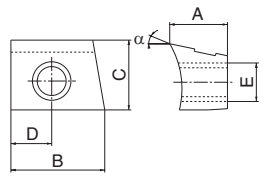
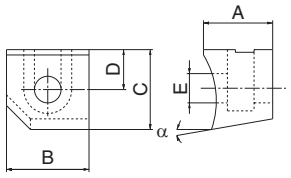
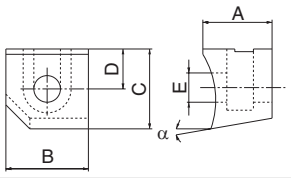
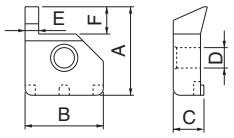
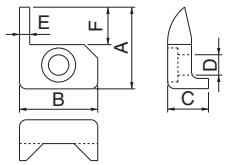
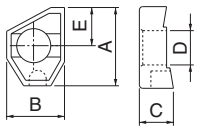
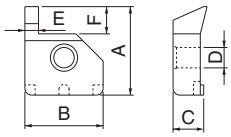
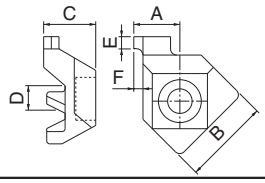
Shape Handed Spare Parts show Right-hand	Description	Std.	Dimension (mm)							Remarks
			A	B	C	D	E	F	G	
	**CPS -1**	●	M3X0.5	9.0	10.0	5.2	5.5	2.0	-	
	**CPS -2**	●	M5X0.8	14.5	14.0	8.5	6.8	2.5	2.5	G:Indicates hexagon hole two side widths of back side of bolts
	-2P	●		18.0						
	-3	●	M6X1.0	19.0	16.5	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	●		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 -5R/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 -16R/LS**	●	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
	-22R/LS	●			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	-	

●:Std. Item

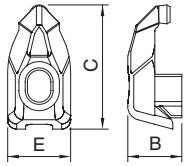
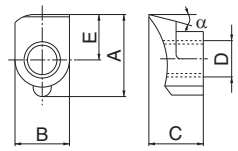
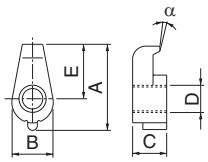
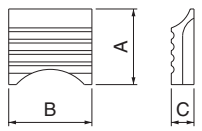
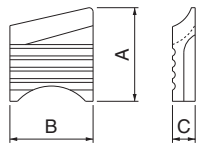
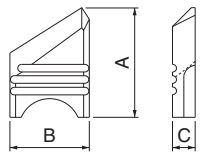
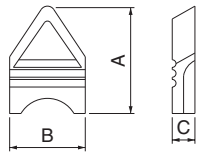
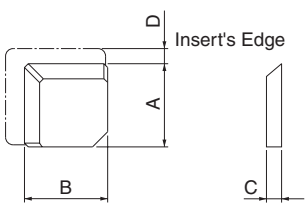
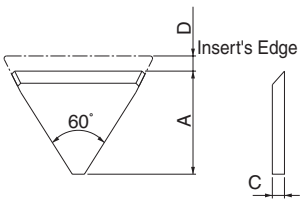
P

Spare Parts

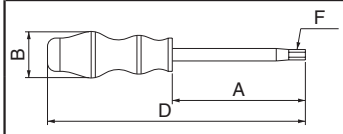
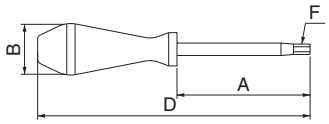
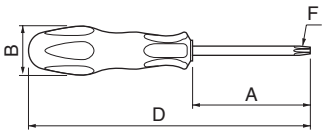
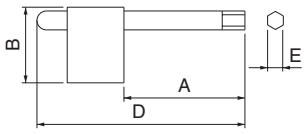
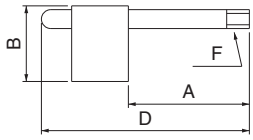
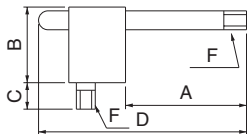
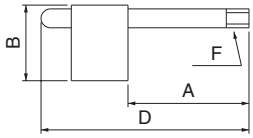
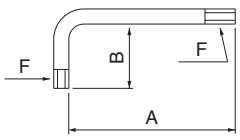
Clamps

Shape Handed Spare Parts show Right-hand	Description		Std.	Dimension (mm)						Angle		Remarks
				A	B	C	D	E	F	α	θ	
	**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	3.0	10.0	-	-	Right-hand
		-121	●									Left-hand
		-131	●					4.5		-	-	Right-hand
		-141	●									Left-hand
	**CGA**	**-3R/L**	●	24.0	17.66	12.0	6.2	1.9	11.0	-	-	R...shows Right-hand L...shows Left-hand
		-4R/L	●	24.0	17.66	12.0	6.2	2.9	11.0	-	-	
		-5R/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**	**-1R/L**	●	25.0	22.0	8.0	6.05	3.0	5.5	-	-	R...shows Right-hand L...shows Left-hand
		-2R/L	●					5.0				
		-3R/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			

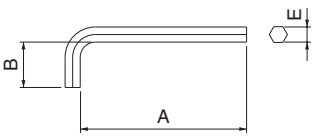
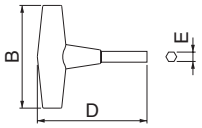
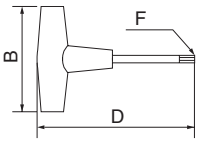
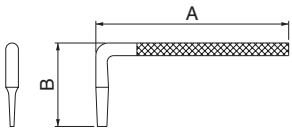
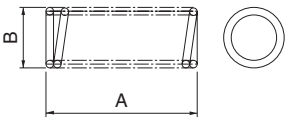
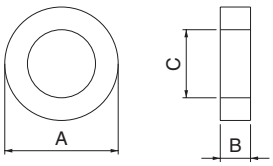
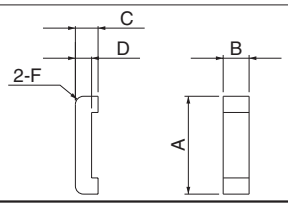
●:Std. Item

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	-	-	-	
		-3D	●		12.0	27.6		14.0				
		-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	-	-	-	-	-	
		-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	-	-	-	-	

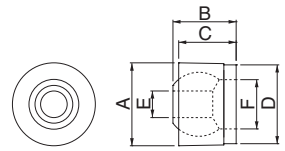
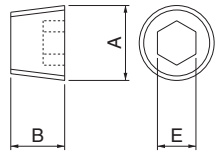
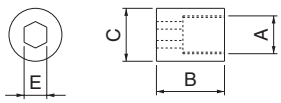
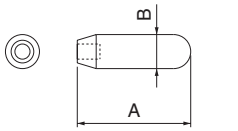
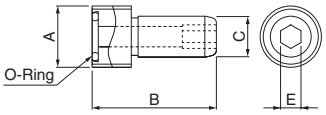
●:Std. Item

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	**-9**	●	61	30	-	174	-	9IP	-	-	○○IP shows Torx Plus
		-15	●	81	33		186		15IP			
		-20	●	100			206		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

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	●						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

●:Std. Item

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$^{R}/_{L}$ ..... -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$^{R}/_{L}$ ..... -09A	CE-030A	LW-4	SP-429	HH3X12
CTUN$^{R}/_{L}$ ..... -11A	CE-030A	LW-4	SP-219	HH3X12

Toolholders for Bearing Machining

Description	Spare Parts					
	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
PRGC$^{R}/_{L}$ ..... -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$^{R}/_{L}$ ..... -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	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$^{R}/_{L}$ ..... -12	SB-4590TRWN	LTW-10S
..... -16		

External Toolholders (Back Clamp)

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

Former Parts List

External Toolholders (Screw Clamp)

Description	Spare Parts				
	Clamp Screw	Wrench	Shim	Shim Screw	Wrench
SVPBR/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
CSBPR/L **1212F -09N**	CPS-2P	LW-2.5	-	-	CB-S3220
CTTPR/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
STWR/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				
1616K -12			HS3X8	
2020K -12			HS3X12	
2525M -12			HS3X16	
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.. -..	HS3×4P	LW-1.5
03.. -..		
PSH 04.. -..	HS4×4P	LW-2
05.. -..		
06.. -..		
07.. -..		

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-2040TR	
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-2040TR	
C08L-	SCLC R/L 06-10	SB-2545TR	FT-8
A08H-	SCLC R/L 06-10E	SB-2545TR	FT-8
E08L-	SCLC R/L 06-10	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
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
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

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}$06-··	SB-2040TR	FT-6
C07K-	SWUB$^{R}_{L}$08-08	SB-2035TR	
C08L-	SWUB$^{R}_{L}$08-10	SB-2050TR	
C10N-	SWUB$^{R}_{L}$08-··		
C12Q-	SWUP$^{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}$16-··	SB-4065TR	FT-15
S16Q-	SSKPR09-20	SB-4TR	FT-15
S20R-	SSKPR09-25		
S25X-	SSKPR12-32	GS-50S	LW-3
S32S-	SSKPR12-40	GS-50	
S12M-	SYXP$^{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}$08-··E					
S···-	SVJB$^{R}_{L}$11-··E	SB-2570TR	FT-8			
S···-	SVJB$^{R}_{L}$16-··EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
S32S-	SVJB$^{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}$16-34	-	CPS-3	LW-3	-	-
S32S-	CTUP$^{R}_{L}$16-43				KPT-32	SP3X10
S40X-	CTUP$^{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.

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	*CE-131/141				

*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	CGH-2$^{L}_{R}$				

·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

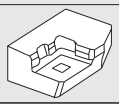
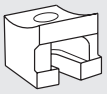
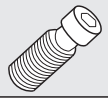
Description	Spare Parts	
	Clamp Screw	Wrench
KTKH$^{R}_{L}$ 0808K -···B	SE-40120TR	FT-15
1010K -···B		
1212M -···B		
1414M -···B		
1616M -···B	SE-50125TR	LTW-20

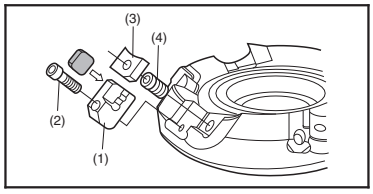
KTTX

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

Former Parts List

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

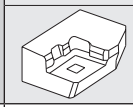
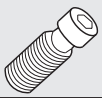


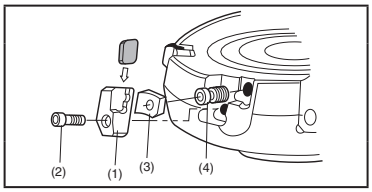
·Mounting bolt (HH12X35) is included for MSD4580R.

MSO45-09 (Face Mill)

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

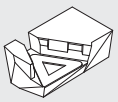
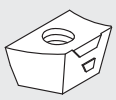
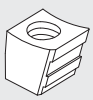
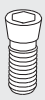
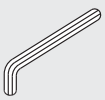
MSP15 (Face Mill)

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

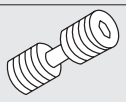


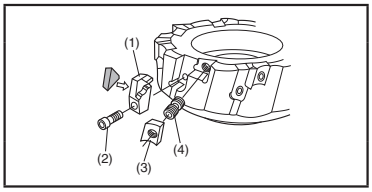
·Mounting bolt (HH12X35) is included in MSP1580R.

MTE90-SF

Description	Spare Parts						
	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 crew)

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

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					
	50-S42 -SA				HH12X65	LW-10
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					
	50-S42 -A			HH12X40	HH12X65	LW-10
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					

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							
	50-S42	-6RSA	SB-4085TR		DT-15			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							
	50-S42	-A						HH12X65	LW-10
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				

MVG

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

Blank Tool

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