

# Spare parts

# P



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# Screws

Shape	Description	Availability	Dimension (mm)						Angle		Torque (N-m)	Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$		
	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	-	2.0	2.0	-	-	-	-	
	3X12	☉	M3X0.5	12.0	-	2.0	2.0	-	-	-		
	6X25	☉	M6X1.0	25.0	-	4.0	4.0	-	-	-		
	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	
	CS -3D-TR	☉	M5X0.8	22.0	8.0	4.0	T15	T15	-	-	3.9	
	GS -50	☉	M5X0.8	13.0	7.5	-	3.0	-	-	82°	-	
	HF 20X53H	☉	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	-	-	-		
	5X15L	☉		16.0								
	5X16	☉		20.0								
	5X20	☉		25.0								
	5X25	☉		30.0								
	HH 6X12	☉		M6X1.0								
	6X16	☉	16.0									
	6X16A	☉	18.0									
	6X18	☉	20.0									
	6X18A	☉	25.0									
	6X20	☉	30.0									
	HH 8X20	☉	M8X1.25		20.0	13.0	8.0	6.0	-	-		
	8X25	☉		25.0								

☉: Available

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Spare parts

P2

# Screws

Shape	Description	Availability	Dimension (mm)						Angle		Torque (N-m)	Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$		
	HH 10X25	⊙	M10X1.5	25.0	16.0	10.0	8.0	-	-	-	-	
	10X30	⊙		30.0								
	10X30S	⊙		30.0								
	10X35	⊙		35.0								
	10X40	⊙		40.0								
	HH 12X35	⊙	M12X1.75	35.0	18.0	12.0	10.0	-	-	-		
	12X40	⊙		40.0								
	HH 16X35	⊙	M16X2.0	35.0	24.0	16.0	14.0	-	-	-		
	16X40	⊙		40.0								
	16X45	⊙		45.0								
HH 20X40	⊙	M20X2.5	40.0	30.0	20.0	17.0	-	-	-			
20X55	⊙		55.0									
	HH 4X12	⊙	M4X0.7	10.0	7.0	4.0	3.0	2.0	-	-	-	
	HH 8X25H	⊙	M8X1.25	25.0	13.0	8.0	5.0	-	-	-	-	
	10X30H	⊙	M10X1.5	30.0	16.0	10.0	6.0					
	10X35HK	⊙		35.0								
	12X35H	⊙	M12X1.75	35.0	18.0	12.0	8.0					
	12X35HK	⊙		35.0								
	16X52H	⊙	M16X2.0	36.0	24.0	16.0	12.0					
	HS 3X3P	⊙	M3X0.5	2.9	-	-	1.5	-	-	-	1.0	
	3X4P	⊙		3.9								
	3X4	⊙		4.0								
	HS 4X4P	⊙	M4X0.7	3.9	-	-	2.0	-	-	-	2.0	
	4X4	⊙		4.0								
	HS 5X5	⊙	M5X0.8	5.0	-	-	2.5	-	-	-	3.0	
	HS 6X4P	⊙	M6X0.75	3.9	-	-	3.0	-	-	-	4.0	
	6X6	⊙		6.0								
	6X8T	⊙		8.0								
	6X14	⊙		14.0								
	6X22	⊙		22.0								
	HS 8X10	⊙	M8X1.25	10.0	-	-	4.0	-	-	-	-	
	8X12	⊙		12.0								
	HS 10X10	⊙	M10X1.5	10.0	-	-	5.0	-	-	-	-	
	10X16	⊙		16.0								
	HS 12X12	⊙	M12X1.75	12.0	-	-	6.0	-	-	-	-	
12X16	⊙	16.0										
12X18	⊙	18.0										
12X20	⊙	20.0										
12X25	⊙	25.0										
12X30	⊙	30.0										
12X35	⊙	35.0										
HS 16X12	⊙	M16X2.0	12.0	-	-	8.0	-	-	-	-		
16X18	⊙		18.0									
16X20	⊙		20.0									
	HS 5X4LP	⊙	M5X0.8	4.0	-	-	2.5	-	-	-	HS4X4P and HS6X4P have a flat edge	
	HS -2524TRP	⊙	M2.5X0.35	2.4	-	-	5IP	-	-	-	0.5	
	-2534TRP	⊙		3.4								
	-3048TRP	⊙	M3X0.5	4.8			6IP				0.8	
	-4067TRP	⊙	M4X0.7	6.7			7IP				1.2	
	HS -50100TRP	⊙	M5X0.8	10	6.0	-	15IP	-	-	-	3.5	IP shows Torx Plus

⊙: Available



Spare parts

# Screws

Shape	Description	Availability	Dimension (mm)								Angle		Torque (N-m)	Remarks	
			A	B	C	D	E	F	α	θ					
	HSB 4X8%	☉	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			
	LS -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			
	LS -1SN	☉		14.2											
	LS -1T	☉		21.0											
	LS -2N	☉	M8X1.0	20.0	8.0	-	3.0	3.0	-	-	4.0				
	LS -3	☉		22.0											
	LS -4N	☉		24.0											
LS -5	☉	M10X1.0	29.0	10.0	-	4.0	4.0	-	-	-					
	LS -1P	☉	M6X1.0	16.5	6.0	-	10IP	10IP	-	-	2.0	IP shows Torx Plus			
	LS -2P	☉	M8X1.0	18.2	8.0	-	15IP	15IP	-	-	3.5				
	LS -3P	☉		21.8											
	LS -11	☉	M6X1.0	9.5	-	-	3.0	-	-	-	-				
	LS -15	☉		12.5											
	M 3X8	☉	M3X0.5	8.0	5.5	2.0	-	-	-	-	-	Flat fillister head screw equivalent to JIS B-1101			
	M 3X12	☉		12.0											
	M 4X10	☉		M4X0.7									10.0	7.0	2.6
	SB -1TR	☉	M2X0.4	5.3	3.8	-	-	-	-	-	T6	82°	0.5	R... shows right-hand thread	
	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							T15	3.5		
	SB -3.5TR	☉	M3.5X0.6	9.3	5.6						T20		90°		4.5
	SB -4TR	☉	M4X0.7	7.7	5.8										60°
	SB -5TR	☉	M5X0.8	20.0	8.7						T6	0.8			
	SB -2290TR	☉	M2.2X0.45	9.2	2.8						T7	3.5			
	SB -25100TR	☉	M2.5X0.45	10.0	3.5						T15	4.5			
	SB -40115TR	☉	M4X0.7	11.5	5.5						T20	4.5			
	SB -5070TR	☉	M5X0.8	7.0	6.8										
	SB -5090TR	☉		9.0											
	SB -50120TR	☉		12.0											

☉: Available

P



Spare parts

## Reference

Torx and Torx Plus have different cross-sections.



Torx



Torx Plus

# Screws

Shape	Description	Availability	Dimension (mm)						Angle		Torque (N-m)	Remarks	
			A	B	C	D	E	F	α	θ			
<p>SB-40125TRN</p>	SB -1635TR	⊙	M1.6X0.35	3.3	2.6				T6	60°	0.5	R... shows right-hand thread L... shows left-hand thread IP shows Torx Plus	
	SB -15TR	⊙	M2X0.4	5.0	3.1				6IP	55°			
	SB -1840TRP	⊙	M1.8X0.35	4.0	2.5				6IP	55°			
	SB -2035TR	⊙	M2X0.4	3.7	3.0				T6	60°			
	SB -2035TRG	⊙		3.5	2.7				6IP	55°			
	SB -2037TRP	⊙		3.7									
	SB -2040TR	⊙		3.8	3.0				T6	60°			
	SB -2040TRG	⊙		4.0					6IP	60°			
	SB -2041TRP	⊙		4.1	2.7								
	SB -2042TRG	⊙		4.3	2.8				T6	37°			
	SB -2045TR	⊙		4.8	3.0								
	SB -2045TRN	⊙		5.8	3.5				T8	60°			
	SB -2050TR	⊙		8.3	2.8				T6	60°			
	SB -2060TR	⊙								1.2			
	SB -2080TR	⊙								0.5			
	SB -2250TR	⊙	M2.2X0.45	5.1	3.1								0.8
	SB -2255TR	⊙		5.5	3.5				T7	60°			
	SB -2260TR	⊙		5.8	3.1								
	SB -2270T*%L	⊙		6.8	3.2								
	SB -2545TR	⊙	M2.5X0.45	4.6						T8	1.2		
	SB -2555TRG	⊙		5.4						8IP			
	SB -2555TRP	⊙		5.5	3.5								
	SB -2560TR	⊙		5.7									
	SB -2570TR	⊙		6.8					T8				
	SB -3060TR	⊙	M3X0.5	5.3	4.2					T10	2.0		
	SB -3060TRP	⊙		6.0						10IP			
	SB -3065TRP	⊙		6.5	4.0					8IP			
	SB -3070TRG	⊙		7.0	4.2					T10			
	SB -3070T*%L	⊙		7.0	4.0					T8			
	SB -3070TRP	⊙		7.0	4.2								
	SB -3076TRP	⊙		7.6	3.9					10IP			
	SB -3080TR	⊙		8.0	4.2					T10			
	SB -3573TRP	⊙	M3.5X0.6	7.3	5.0					10IP	2.0		
	SB -3575TRP	⊙		7.5	4.9								
	SB -3580TR	⊙		8.0	5.3					T15			
	SB -3590TRP	⊙		9.0						15IP			
	SB -3592TR	⊙		9.2	5.1					T10			
	SB -35120TRP	⊙		12.0	5.2					15IP			
	SB -4050TRN	⊙		M4X0.5	4.6	5.1							T10
	SB -4060TR	⊙	5.9										
	SB -4065TR	⊙	6.7		5.5					T15	60°		
	SB -4070TRG	⊙	7.0										
	SB -4070TRN	⊙	7.7		5.4								
	SB -4070TRS	⊙	6.7							T10	60°		
	SB -4075TRP	⊙	7.5							15IP	60°		
SB -4082TRP	⊙	8.2	5.5						T15	60°			
SB -4085TR	⊙	8.5											
SB -4085TRP	⊙	8.6							15IP	60°			
SB -4086TRP	⊙	9.0	5.7										
SB -4090TRP	⊙	9.0	5.5										
SB -4090TRPN	⊙	12.0	5.1										
SB -40120TR	⊙	12.5	5.2										
SB -40140TR	⊙	14.0	5.5						T15	50°			
SB -40140TRN	⊙	14.0	6.7							60°			
SB -4570TRN	⊙	M4.5X0.5	6.8		6.0					T10	57°	2.0	
SB -45130TR	⊙	M4.5X0.75	13.0		6.6					20IP	55°		
SB -5085TR	⊙	M5X0.8	8.5						T20	50°	4.5		
SB -50120TRP	⊙		12.0	6.8					20IP	60°			
SB -50120TRPH	⊙		12.0	7.2					15IP	60°			
SB -50120TRS	⊙		13.7	9.7					T20	70°			
SB -50137K	⊙		14.0	7.3					T15	50°			
SB -50140TR	⊙								20IP	60°			
SB -50140TRP	⊙								T25	60°			
SB -60120TR	⊙	M6X1.0	12.0	8.5					20IP	60°	6.0		
SB -60130TRP	⊙		13.0							4.5			
SB -60200TRP	⊙		20.0							6.0			
SB -4070TRW	⊙	M4X0.7	6.7	5.5					T8	60°	1.2		
SB -4590TRWN	⊙	M4.5X0.75	9.3	5.6					T10	57°		2.0	

⊙: Available

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Spare parts

# Screws

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

\* No socket on right-hand thread side

⊙: Available

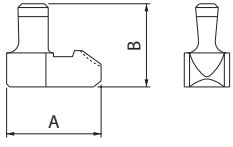
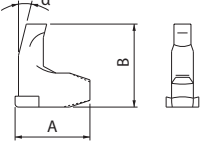
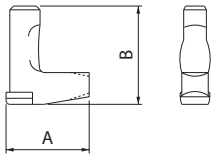
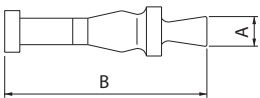
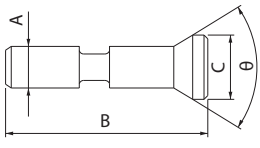
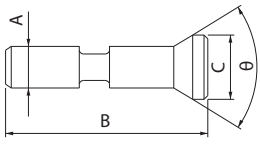
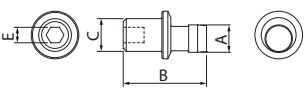
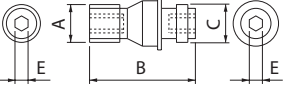
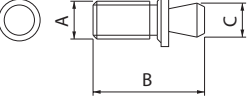
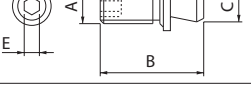
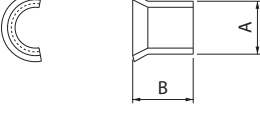
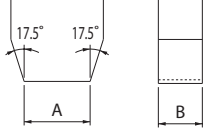
**P6**

**P**

Spare parts



# Pins

Shape	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$	
	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							
	-17	☉		17.0	5.5						
	PP -4	☉	4.6	14.0	5.5	-	3.0	-	-	-	
	TS -3S	☉	M5X0.8	15.0	3.60	-	2.0	-	-	-	
	WP -1S	☉	M5X0.8	18.0	3.65	-	-	-	-	-	
	5X15	☉		15.0	5.0						
	WP 5X11	☉	M5X0.8	10.5	5.0	-	2.0	-	-	-	
	LSP -1	☉	5.0	5.3							
	-2	☉	6.5	5.6							
	-3	☉	8.25	7.9							
	-4	☉	9.5	10.0							
	LSP -2K	☉	5.1	5.2							
-3K	☉	6.7	5.7								
	P -03	☉	2.8	1.95	-	-	-	-	-	-	
	-03S	☉	3.5	1.95	-	-	-	-	-	-	

☉: Available

P



Spare parts

# Shims

Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$	
	DC -42	☉	12.0	3.2	1.2	6.0	4.4	R1.2	-	-	Shim screw: SB-4085TR
	-44	☉	12.55	5.0	1.5			R0.8	-	-	
	DC -44-C	☉	12.55	5.0	1.5	6.0	4.4	-	-	-	Shim screw: SB-4085TR
	DD -42	☉	12.55	3.2	1.2	6.0	4.4	R1.2	-	-	Shim screw: SB-4085TR
-42-16	☉	R1.6									
-43	☉	3.4		1.3	R0.8						
-44	☉	5.0		1.5	R0.8						
	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 <sup>90</sup>	☉	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-25 LP-65
	LC -32N	☉	9.47	2.4	1.3	6.18	4.68	R0.8	-	-	Shim pin: LSP-1
	-4K	☉	11.7	3.2	1.4	8.1	6.73	R0.8	-	-	Shim pin: LSP-3K
	-42N	☉	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim pin: LSP-2
	-42N-20	☉						R2.0			
	-53N	☉	15.9	4.8	1.7	10.0	8.0	R1.2	-	-	Shim pin: LSP-3
	-63	☉	19.0	4.8	2.0	11.61	9.3	R1.6	-	-	Shim pin: LSP-4

☉: Available

## P8



Spare parts



# Shims

Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)							Angle		Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$		
	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 <sup>90°</sup>	☉	12.65	3.2	1.5	8.01	6.28	R0.8	10°	-	R... shows right-hand L... shows left-hand Shim pin: LSP-2	
	LD -32N	☉	9.47	2.4	1.3	6.18	4.68	R0.8	-	-	Shim pin: LSP-1	
	-4K	☉	11.7	3.2	1.4	8.1	6.73	R0.8	-	-	Shim pin: LSP-3K	
	-4K43	☉		4.8	3.0	8.3	6.60	R1.2				
	-42	☉	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim pin: LSP-2	
	-42-20	☉	12.65	4.8	3.1	8.5	6.28	R2.0				
	-43	☉						R0.8				
-43-20	☉					R2.0						
	LR -80	☉	9.47	3.2	1.3	6.25	4.75	-	-	-	Shim pin: LSP-1	
	-81	☉	12.65	3.2	1.5	8.01	6.28	-	-	-	Shim pin: LSP-2	
	LR -10C	☉	8.5	3.2	6.3	6.3	4.7	-	-	-	Shim pin: LSP-1	
	-12C	☉	10.0	3.2	6.3	6.3	4.7	-	-	-		
	-16C	☉	13.6	3.2	7.9	8.01	6.28	-	-	-	Shim pin: LSP-2	
	LS -32	☉	9.47	3.2	1.3	6.18	4.68	R0.8	-	-	Shim pin: LSP-1	
	-42	☉	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim pin: LSP-2	
	LT -3K	☉	8.53	2.7	1.0	6.1	5.13	R0.8	-	-	Shim pin: LSP-2K	
	-32N	☉	9.47	2.7	1.3	6.18	4.68	R0.8	-	-	Shim pin: LSP-1	
	-32N-20	☉						R2.0				
	-42N	☉	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim pin: LSP-2	
	-42N-20	☉					R2.0					
	LW -32N	☉	9.47	2.4	1.3	6.18	4.68	R0.8	-	-	Shim pin: LSP-1	
	-42N	☉	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim pin: LSP-2	
	LW -42N <sup>90°</sup>	☉	12.65	3.2	1.5	8.01	6.28	R0.8	10°	-	R... shows right-hand L... shows left-hand shim pin: LSP-2	
	MFPN -45	☉	17.07	3.5	1.95	9.8	7.18	R3.5	-	-	Shim screw: SPW-7050	
	MFSE -105	☉	10.5	3.0	1.4	7.0	5.3	-	7°	45°		
	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	

☉: Available



Spare parts

# Shims

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

●: Available

## P10

P



Spare parts

# Shims

Shape	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$	
	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

●: Available



Spare parts

# Shims / Cartridges

Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$	
	SP -RC	☉	12.6	3.0	-	7.35	3.35	-	-	-	Shim screw: SP3X8
	SVN -32	☉	8.0	3.2	1.5	3.1	2.3	R0.4	-	-	Shim screw: SB-2050TR
	SVN -32N	☉	8.2	3.2	1.5	7.0	5.9	R0.6	-	-	Shim screw: SS-4N
	SVN -32S	☉	8.2	3.2	1.5	7.0	5.9	R0.2	-	-	Shim screw: SS-4N 1-edge
	TN -32	☉	9.52	3.2	6.5	7.0	4.2	R0.4	-	-	Shim screw: SP3X8
	-43	☉	12.70	3.2	8.1	7.0	4.2	R0.5	-	-	
	TNW -32	☉	9.52	3.2	4.8	7.0	4.2	-	-	-	Shim screw: SP3X8
	WTN -33	☉	9.52	4.76	2.5	7.0	5.3	R0.8	-	-	Shim pin: WP-15
	-33-20	☉						R2.0			
	WWN -42	☉	12.7	3.0	1.4	7.0	5.3	R1.2	-	-	Shim pin: WPSX15
	WWP -42	☉	12.7	3.0	1.5	8.3	5.3	R1.2	11°	-	Shim pin: WPSX11
	-42-16	☉						R1.6			
	MAP -2216	☉	-	9.0	11.0	19.8	-	-	20°	-	Clamp screw SB-40140TR
	MAP -2506	☉	-	9.5	14.9	20	-	-	5°	-	Clamp screw SB-40140TR
	LSE -445R	☉	12.7	13.0	19.5	26.0	-	-	20°	45°	Dimension A shows insert I.C.
	LSO -445R	☉	13.494	12.0	21.3	23.5	-	-	27°	45°	

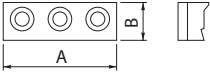
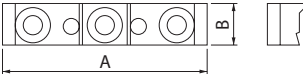
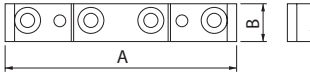
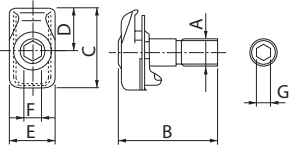
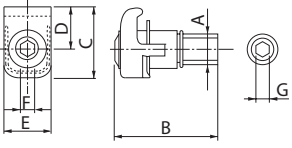
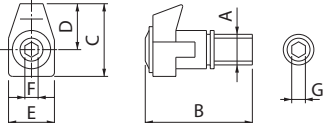
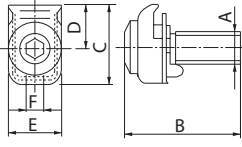
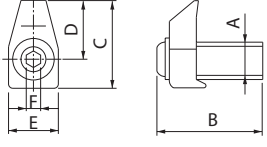
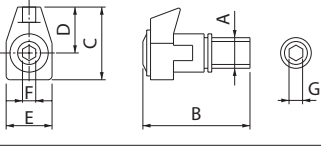
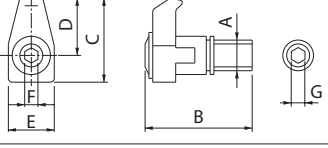
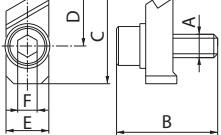
☉: Available

P



Spare parts

# Clamp sets

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

☉ : Available



Spare parts

# Clamp sets

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

☉: Available

P



Spare parts

P14

# Clamps

Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$	
	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
	CGA -3%	●	24.0	17.66	12.0	6.2	1.9	11.0	-	-	R...shows right-hand L...shows left-hand
	-4%	●	24.0	17.66	12.0	6.2	2.9	11.0	-	-	
	-5%	●	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%/	●	25.0	22.0	8.0	6.05	3.0	5.5	-	-	R...shows right-hand L...shows left-hand
	-2%/	●					5.0				
	-3%/	●	30.0	23.0	8.5		6.0	7.0			
	CGIA -3R	●	10.7	17.0	10.5	5.2	1.8	2.0	-	-	
	-4R	●			11.5		2.5				
	-5R	●	15.7		10.5		3.5	7.0			

●: Available



Spare parts

# Clamps / Chipbreakers

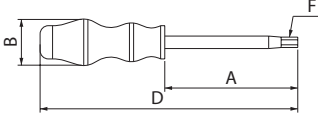
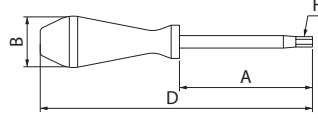
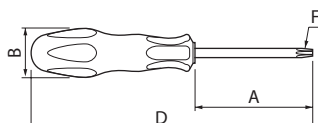
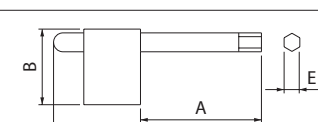
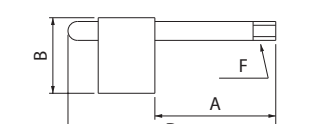
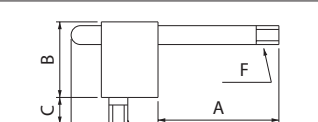
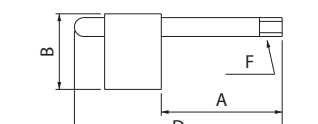
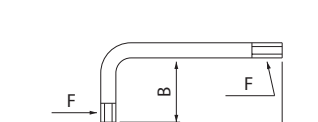
Shape Handed spare parts show right-hand	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$	
	CP -2D	☉		10.0	21.6		10.4				
	-3D	☉	-	12.0	27.6	-	14.0	-	-	-	
	-5D	☉		13.0	32.0						
	CP -2D-90°-JCT	☉	-	13.5	25.3	-	21.5	-	-	-	
	CP -3D-90°-JCT	☉			26.4		17.9			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

☉: Available

## P16



# Wrenches

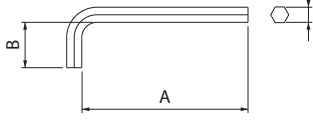
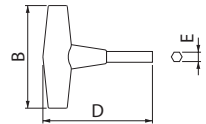
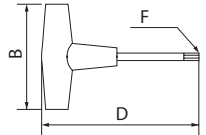
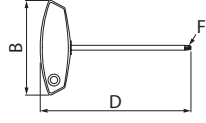
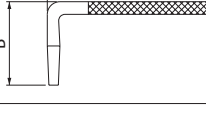
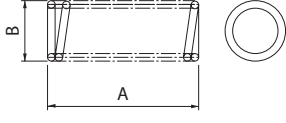
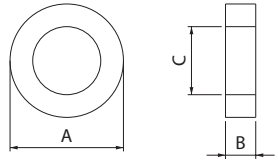
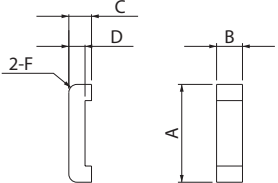
Shape	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$	
	DT -7	☉	44	16	-	114	-	T7	-	-	Torx
	-8	☉	70	26	-	150	-	T8	-	-	
	DT -10	☉	70	29	-	160	-	T10	-	-	Torx
	-15	☉	70	32	-	170	-	T15	-	-	
	-20	☉	90	32	-	190	-	T20	-	-	
	-25	☉	82	36	-	190	-	T25	-	-	
	DTM -6	☉	40	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	-	174	-	9IP	-	-	
	-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	☉	35	15	-	65	-	5IP	-	-	IP shows Torx Plus
	-6	☉	34		62	-	6IP	-	-		
	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	-	-	

☉: Available



Spare parts

# Wrenches / Springs / Others

Shape	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$	
	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	
	TTW	-15	⊙		80		125		T15		Torx
	LTK	-5	⊙	70	30						
	SP	-20	⊙	8.5	5.6						Spring
		-30	⊙	12.0	7.2						
		-5	⊙	12.0	6.7						
		-5D	⊙	12.0	7.2						
		-6	⊙	12.0	7.7						
	W	-6	⊙	11.5	1.6	6.4					Washer
		6-14	⊙	11.5	1.4	6.4					
	WB	-5	⊙	10.0	1.0	5.3					Washer (Brass)
		-6	⊙	11.5	1.6	6.4					
	-8	⊙	15.5	1.6	8.4						
	WSP	-1	⊙	15.1	4.0	3.5	2.5		R1.25		Spacer

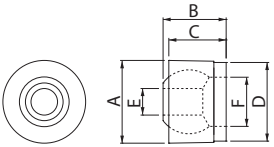
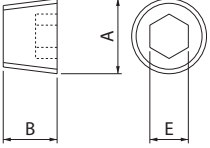
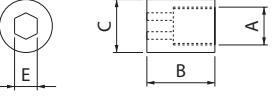
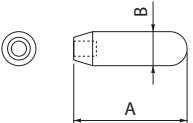
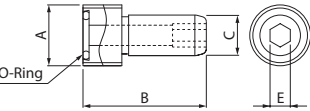
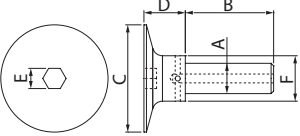
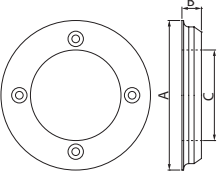
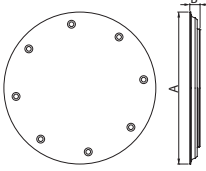
⊙: Available

P



Spare parts

# Nuts / Punches / Others

Shape	Description	Availability	Dimension (mm)						Angle		Remarks
			A	B	C	D	E	F	$\alpha$	$\theta$	
	DN 10	☉	6.2	5.1	4.5	5.7	2.6	4.0	-	-	Nozzle
	20	☉	10.1	7.7	7.0	9.6	M4X0.7	6.0	-	-	
	GP -1	☉	PT1/8	7.0	-	-	5.0	-	-	-	Plug
	-2	☉	PT1/4	9.0	-	-	6.0	-	-	-	
	WN -1	☉	M5X8	10.0	7.0	-	3.0	-	-	-	Nut
	PC -1	☉	60.0	8.5	-	-	-	-	-	-	Punch
	-2	☉	62.2	10.0	-	-	-	-	-	-	
	CL 63-1	☉	M18X1.0	36.5	12	-	6.0	-	-	-	Coolant pipe
	100-1	☉	M24X1.5	44.0	16.0	-	8.0	-	-	-	
	HH 12X35HC	☉	M12X1.75	35.0	42.5	16.4	8.0	18.0	-	-	Arbor bolt
	HF 16X44HC	☉	M16X2.0	30.0	62.5	14.4	12.0	40.0	-	-	
	16X48HC	☉	M16X2.0	30.0	62.5	18.4	12.0	40.0	-	-	
	CC -125-MFAH	☉	87.5	11.4	53.0	-	-	-	-	-	Coolant cover
	-160-MFAH	☉	122.5	12.4	70.0	-	-	-	-	-	
	CC -200-MFAH	☉	162.5	14.4	-	-	-	-	-	-	Coolant cover
	-250-MFAH	☉	212.5	14.4	-	-	-	-	-	-	
	-315-MFAH	☉	277.5	14.4	-	-	-	-	-	-	

☉: Available



Spare parts

## Former parts list

### External toolholders

Description	Spare Parts					
	Lever	Lock screw	Shim	Shim Pin	Punch	Wrench
PSBN% 1616H -09	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5
PSKN% 1616H -09	LL-1N	LS-1N	LS-32	LSP-1	PC-1	FH-2.5

### External toolholders

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

### Toolholders for ceramic tools

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

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

### Toolholders for ceramic tools

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

P



Spare parts

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## Former parts list

### Toolholders for solid CBN tools

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

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

### Toolholders for bearing machining

Description	Spare parts					
	Lever	Lock screw	Shim	Shim pin	Punch	Wrench
PRGC%L ..... -12BE	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
	LL-2C	LS-1T	LR-16C	LSP-2	PC-2	FH-2.5
PRGC%L ..... -16BE	LL-1CN	LS-1N	LR-12C	LSP-1	PC-1	FH-2.5
	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%L ..... -12	SB-4590TRWN	LTW-10S
..... -16		

P



Spare parts

## Former parts list

### External toolholders (back clamp)

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

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

### External toolholders (screw clamp)

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

P



Spare parts

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## Former parts list

### External toolholders (screw clamp)

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

### External toolholders (screw clamp)

Description	Spare parts				
	Clamp screw	Wrench	Shim	Shim screw	Wrench
SVPB% ..... -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% ..... -09N	CPS-2P	LW-2.5	-	-	CB-S3220
CSKP% ..... -09N	CPS-2P	LW-2.5	-	-	CB-S3220
..... -12N	CPS-3	LW-3	KPS-42	SP3X8	CB-S4220
CSSP% ..... -09N	CPS-2P	LW-2.5	-	-	CB-S3220
..... -12N	CPS-3	LW-3	KPS-42	SP3X8	CB-S4220
CSDPN ..... -12N	CPS-3	LW-3	KPS-42	SP3X8	CB-S4220
CTGP% ..... -11N	CPS-2P	LW-2.5	-	-	CB-T2212
..... -16N	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220
CTFP% ..... -11N	CPS-2P	LW-2.5	-	-	CB-T2212
..... -16N	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220
CTTP% ..... -11N	CPS-2P	LW-2.5	-	-	CB-T2212
..... -16N	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220

P



Spare parts

## Former parts list

### EZ Bar PLUS

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

### Twin-bars

Description	Spare parts	
	Clamp screw	Wrench
STW% ..... -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 1212K -12 1616K -12 2020K -12 2525M -12	SB-3080TR	FT-10	HS3X4	LW-1.5
			HS3X8	
			HS3X12	
			HS3X16	
			SVNSR ..... -12...	
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

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### PSH Sleeve

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

Spare parts

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## Boring bars (screw clamp)

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

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Spare parts

## Former parts list

### Boring bars (screw clamp)

Description	Spare parts	
	Clamp screw	Wrench
S...- SWUB%08-..E	SB-2050TR	FT-6
S12M- SWUP%11-14E	SB-2545TR	FT-8
S...- SWUP%11-..E	SB-2560TR	
S...- SWUP%16-..E	SB-4065TR	FT-15
S...- SWUB%06-..	SB-2040TR	FT-6
S10J- SWUB%08-..	SB-2035TR	
C...- SWUB%06-..	SB-2035TR	FT-6
C07K- SWUB%08-..		
C08L- SWUB%08-..		
C10N- SWUB%08-..	SB-2050TR	
C12Q- SWUP%11-14(-./.)	SB-2545TR	FT-8
C12Q- SWUP%11-16(-./.)	SB-2560TR	
C16X- SWUP%11-18(-./.)		
C...- SWUP%16-..	SB-4065TR	FT-15
E...- SWUB%08-..	SB-2050TR	FT-6
S16Q- SSKPRO9-20	SB-4TR	FT-15
S20R- SSKPRO9-25		
S25X- SSKPR12-32	GS-50S	LW-3
S32S- SSKPR12-40	GS-50	
S12M- SYXP%06-12E	SB-2040TR	FT-6
S16Q- SYXP%06-16E	SB-2045TR	

### Boring bars (screw clamp)

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

Spare parts

### Boring bars (top clamp)

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

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

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## Former parts list

### Boring bars for ceramic tools (top clamp)

Description	Spare parts				
	Chipbreaker	Clamp set	Wrench	Shim	Shim screw
S32S- CCLN% -12-40GX	-	CE-410	LW-4	-	-
S40T- CCLN% -12-50GX				SP-441P	M3X8
S32S- CDUN% -12-40GX	-	CE-410	LW-4	-	-
S40T- CDUN% -12-50GX				SP-521P	M3X8
S32S- CSKN% -12-40GX	-	CE-410	LW-4	-	-
S40T- CSKN% -12-50GX				SP-141P	M3X8
S40T- CSKN% -12-50	*1 CB-13/12	CE-320	LW-4	SP-141P *2 (SP-143P)	M3X8 *2 (M3X12)

\*1 CB-13 for right-hand toolholder, CB-12 for left-hand toolholder.

\*2 When using SN□□1204 Insert, please purchase spare parts in ( ) separately.

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

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

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

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

### Sleeves for tip-bars

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

### KTGF

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

### S-KTGF

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

### KTG

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

### KN91

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

\* KN91%44-4/5 ... CE-111 for right-hand toolholder, and CE-121 for left-hand toolholder.

KN91%44-7 ... CE-131 for right-hand toolholder, and CE-141 for left-hand toolholder.

### KGHS

Description	Spare parts				
	Clamp	Clamp bolt	Washer	Spring	Wrench
KGHS% ..... -4	CGH-1 <sup>1</sup> / <sub>8</sub>	HH6X25	W-6	SP-6	LW-5
	..... -7				

Clamp: KGHS% ... CGH-OL for right-hand toolholder, and CGH-OR for left-hand toolholder.

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Spare parts

## Former parts list

### KGA

Description	Spare parts			
	Clamp	Clamp bolt	Spring	Wrench
KGA <sup>®</sup> /L ..... -3	CGA-3 <sup>®</sup> /L	HH6X20	SP-6	LW-5
..... -4	CGA-4 <sup>®</sup> /L			
..... -5	CGA-5 <sup>®</sup> /L			

Clamp: CGA-<sup>®</sup>R for right-hand toolholder and CGA-<sup>®</sup>L for left-hand toolholder.

### KGD<sup>®</sup>/L.....-S

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

### KGD-JCT (for automatic lathe)

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

### KGDF<sup>®</sup>/L.....-S

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

### KGM

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

### KGM-T

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

### KGM (for automatic lathe)

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

### KGMM / KGMS

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

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## Former parts list

### KGMU

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

### KIGH

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

### KIGM-V

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

### GFVS-AA / GFVT-AA

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

### GIFV

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

### KTKF-JCT

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

### KTKFS (for sub spindle tooling)

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

### KTKH-S

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

### KTKH-B

Description	Spare parts	
	Clamp screw	Wrench
KTKH%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

P



Spare parts

## Former parts list

### DRS

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

### DRX

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

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Spare parts

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# Former parts list

## MFPN45 (Face mill)

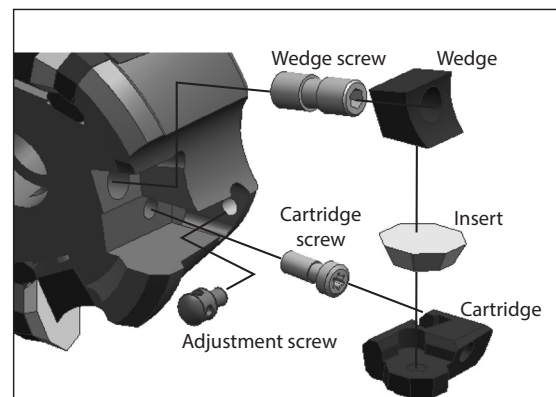
Description	Spare parts		
	Clamp screw	Wrench	Anti-seize compound
MFPN 45100R-10T-M ? 45200R-20T-M	SB-40140TRN	DTM-15	P-37

## MOF45

Description	Spare parts		
	Clamp screw	Wrench	Mounting bolt
MOF 45080R-05-6T 45100R-05-.T ? 45200R-05-.T	SB-4082TPR	DTP-15	HH12X35
MOF 45080R-07-5T 45100R-07-.T ? 45200R-07-.T	SB-50120TRS	DTP-15	HH12X35
MOF 45040R-05-3T-M 45050R-05-4T-M 45063R-05-5T-M 45080R-05-6T-M 45100R-05-.T-M ? 45200R-05-.T-M	SB-4082TPR	DTP-15	HH8X25 HH10X30 HH12X35
MOF 45063R-07-4T-M 45080R-07-5T-M 45100R-07-.T-M ? 45200R-07-.T-M	SB-50120TRS	DTP-15	HH10X30S HH12X35

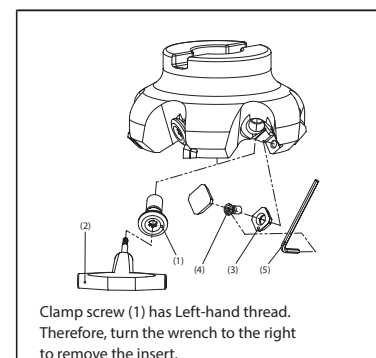
## MOFX45

Description	Cartridge	Cartridge screw	Wedge	Wedge screw
MOFX45...	LOF07R	SH-50150TR	WOF07R	W8X21
Description	Adjustment screw	Wrench (for Wedge)	Wrench (for Cartridge)	
MOFX45...	AJ-412	TH-4	TTC-20	



## 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
MSE 45080R-.T 45200R-.T	CP8X23TL (Left-hand Thread)				
MSE 45063R-.T-M 45200R-.T-M					



Mounting bolt (SP8X35) is included for MSE45040R-.T-M.

Mounting bolt (HH10X30S) is included for MSE45050R-.T-M and MSE45063R-.T-M.

Mounting bolt (HH12X35) is included for MSE45080R-.T-M and MSE45080R-.T.

Spare parts

# Former parts list

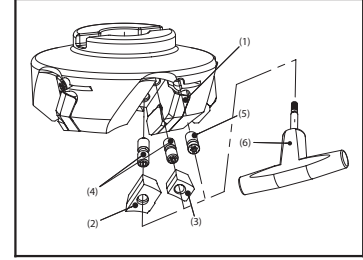
## MSE45 (End mill)

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

## MSE45-SF (Face mill)

Description	(1) Cartridge	(2) Clamp	(3) Clamp	(4) Clamp screw	(5) Adjustment screw	(6) Wrench
MSE 45...R-T-SF 45...R-T-M-SF	LSE-445SR	C43R (for Insert)	C44R (for Cartridge)	W6X17	SV-60136TR	TTC-20

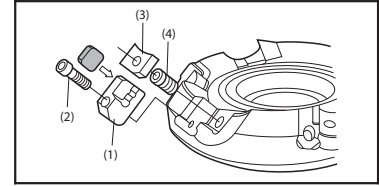
Mounting bolt (HH10X305) is included for MSE45063R-4T-M-SF.  
Mounting bolt (HH12X35) is included for MSE45080R-5T-M-SF.



## MSD45 (Face mill)

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

· Mounting bolt (HH12X35) is included for MSD4580R.

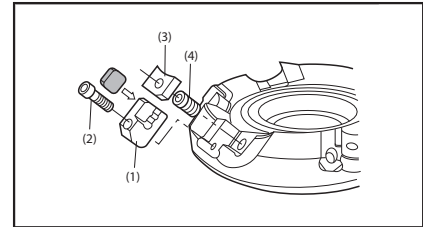


## MSD45 (End mill)

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

## MSO45 (Face mill)

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



## MSO45-S (End mill)

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

## MSO45-09 (Face mill)

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

## MSO45-S-09 (End mill)

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

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



Spare parts

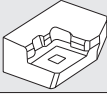

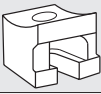




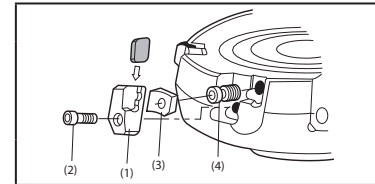
# Former parts list

## 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

## MSP15 (Face mill)

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



Mounting bolt (HH12X35) is included in MSP1580R.

## MEC (Face mill)

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

## MEC (End mill)

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


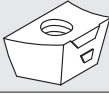



## MECX (Face Mill)

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






## MECX (End mill)

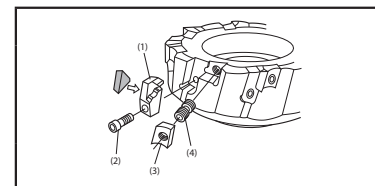
Description	Spare parts	
	Clamp screw	Wrench
MECX 32-S32-07-6T 33-S32-200-07-6T	SB-2042TRG	DTM-6

## MTE90-SF


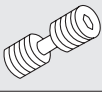
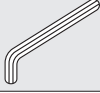
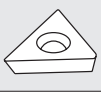
Description	Cartridge	Clamp	Clamp	Clamp screw	Adjustment screw	Wrench
	MTE 90...SF					
	LTE-490SR	C91R (for Insert)	C92R (for Cartridge)	W8X16	SV-60136R	TTC-25

## MTE90 (Face mill)

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



## MTE90 (End mill)

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

P



Spare parts





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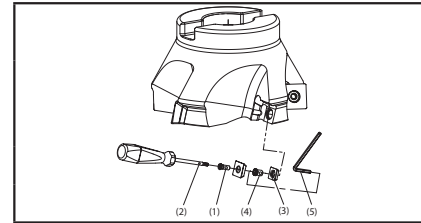
## Former parts list

### MFWN (Face Mill)

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

### MSO90 (Face mill)

Description	(1) Clamp screw	(2) Wrench	(3) Shim	(4) Shim screw	(5) Wrench
	MSO 90...R-15-.T MSO 90...R-15-.T-M	 SB-45130TR	 DTP-20	 MSO-5200	 SPW-6045



Mounting bolt (HH12X35) is included for MSO90080R-15-.T-M and MSO90080R-15-.T  
Mounting bolt (HH10X30S) is included for MSO90063R-15-.T-M

### MSO90-S (End mill)

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

### MSO90-09 (Face mill)

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

### MEA / MEB

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

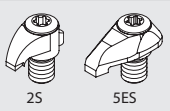
### DMC

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

### MTP

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

### MTPS / MTES

Description	Clamp Set	Wrench
	MTPS ... MTES ...	 CPS-2S CPS-5ES

### MEAL

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

### MRP-S (End mill)

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

P



Spare parts

## Former parts list

### MRP (Face mill)

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

### MHD (Helical end mill)

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

### MHD (face mill and integral arbor type)

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

P



Spare parts

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## Former parts list

### MHD (Radius)

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

### MEZ

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

### MGI

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

### MVG

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

### Blank tool

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

### Flange holder

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

### Flange holder (Sleeve type)

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

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