

# SPARE PARTS

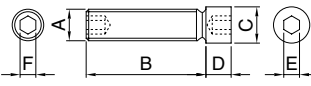
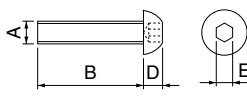
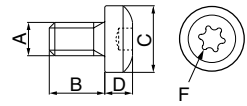
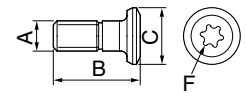
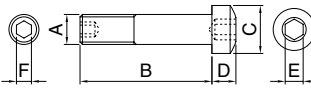
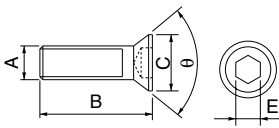
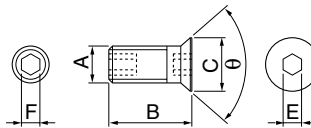
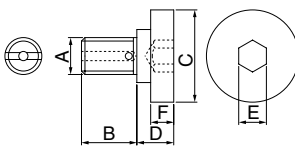
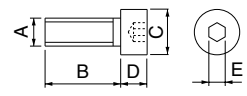


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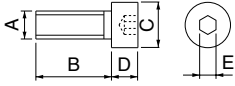
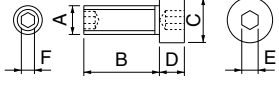
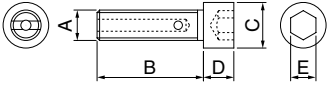
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**Screws**

Drawing	Part Number	Dimension (mm)						Angle (°)		Torque (N • m)	Notes
		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%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								
	6X16	16.0									
	6X16AA	16.0									
	6X18AA	18.0									
	6X20	20.0									
6X25	25.0										
6X30	30.0										

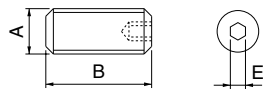
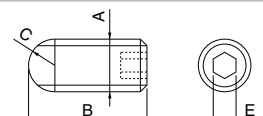
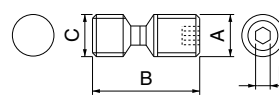
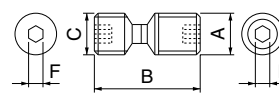
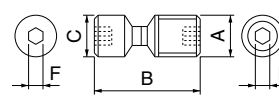
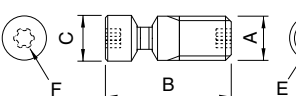
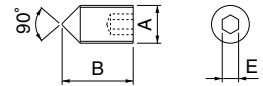
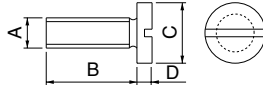
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SPARE PARTS

**Screws**

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

GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & PCD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
CUT-OFF	<b>H</b>
THREADING	<b>J</b>
HSK TOOLING	<b>N</b>
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**Screws**

Drawing	Part Number	Dimension (mm)						Angle (°)		Torque (N • m)	Notes
		A	B	C	D	E	F	α	θ		
	HS 3X4P	M3X0.5	3.9	-	-	1.5	-	-	-	1.0	HS4X4P and HS6X4P Have a Flat Edge  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		5.0								
	HS 6X4P	M6X0.75	3.9	-	-	3.0	-	-	-	4.0	
	6X6	6.0									
	6X14	14.0									
	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									
	HSB 4X8%	M4X0.7	8.0	R2.0	-	2.0	-	-	-	2.0	R Shows Right-hand Thread L Shows Left-hand Thread
	LS -03	M5X0.8	10.0	M5X0.8	-	2.0	-	-	-	2.0	N : Silver Coated
	-03S		12.2			2.5				3.0	
	LS -03N	M5X0.8	9.7	M5X0.8	-	2.0	-	-	-	2.0	
	-03SN		12.0			2.5				3.0	
	LS -05	M5X0.8	15.5	M5X0.8	-	2.0	2.0	-	-	2.0	
	LS -1	M6X1.0	17.0	6.0	-	2.5	2.5	-	-	3.0	N : Silver Coated
	-1N		14.2								
	-1S		14.2								
	-1SN		21.0								
	LS -2	M8X1.0	20.0	8.0	-	3.0	3.0	-	-	4.0	
	-2N		22.0								
	-3		22.0								
	-4		24.0								
LS -4N											
	LS -1P	M6X1.0	16.5	6.0	-	10IP	10IP	-	-	2.0	OOIP 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 Filler 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

**Screws**

Drawing	Part Number	Dimension (mm)						Angle (°)		Torque (N•m)	Notes					
		A	B	C	D	E	F	α	θ							
	<b>SB -1TR</b>	M2X0.4	5.3	3.8			T6			0.5	R Shows Right-hand Thread					
	<b>-2TR</b>	M2.5X0.45	6.2	4.5			T8			1.2						
	<b>-3TR</b>	M3X0.5	7.2	4.8			T10	82°		2.0						
	<b>-3STR</b>		6.4	5.2												
	<b>-3.5TR</b>	M3.5X0.6	9.3	5.6			T15			3.5						
	<b>-4TR</b>	M4X0.7	7.7	5.8												
	<b>-5TR</b>	M5X0.8	20.0	8.7	-	-	T20		90°	4.5						
	<b>-2290TR</b>	M2.2X0.45	9.2	2.8			T6		60°	0.5						
	<b>-25100TR</b>	M2.5X0.45	10.0	3.5			T7			0.8						
	<b>-40115TR</b>	M4X0.7	11.5	5.5			T15			3.5						
	<b>-5070TR</b>	M5X0.8	7.0				T20					4.5				
	<b>-5090TR</b>		9.0	6.8												
	<b>-50120TR</b>		12.0													
	<p>SB-40125TRN</p>	<b>SB -1635TR</b>	M1.6X0.35	3.3	2.6								R Shows Right-hand Thread			
		<b>SB -1STR</b>	M2X0.4	5.0	3.1			T6	-	60°		0.5				
<b>-2035TR</b>		3.7		3.0												
<b>-2035TRG</b>		3.5		2.7												
<b>-2040TR</b>		3.8		3.0												
<b>-2040TRG</b>		4.0														
<b>-2042TRG</b>		4.1		2.7												
<b>-2045TR</b>		4.3														
<b>-2045TRN</b>				2.8	37°											
<b>-2050TR</b>		4.8		3.0												
<b>-2060TR</b>		5.8		3.5		T8	60°				1.2					
<b>-2080TR</b>		8.3		2.8		T6					0.5					
<b>SB -2250TR</b>		M2.2X0.45		5.1	3.1						T7			-	60°	0.8
<b>-2255TR</b>				5.5	3.5											
<b>-2260TR</b>				5.8	3.1											
<b>SB -2545TR</b>		M2.5X0.45		4.6							T8				60°	1.2
<b>-2555TRG</b>			5.4													
<b>-2555TRP</b>			5.5	3.5			8IP									
<b>-2560TR</b>			5.7													
<b>-2570TR</b>			6.8													
<b>SB -3060TR</b>		M3X0.5	5.3	4.2			T10		60°	2.0						
<b>-3060TRG</b>			5.9													
<b>-3065TRP</b>			6.5	4.0			8IP	1.2								
<b>-3070TRG</b>			7.0	4.2			T10									
<b>-3070TRP</b>								T10		2.0						
<b>-3080TR</b>			8.0													
<b>SB -3580TR</b>		M3.5X0.6	8.0	5.3			T15		60°	3.5						
<b>-3590TRP</b>			9.0				15IP	4.0								
<b>-3592TR</b>			9.2	5.1			T10									
<b>SB -4050TRN</b>			M4X0.5	4.6	5.1			T10			57°	2.0				
<b>-4060TR</b>		5.9					T15	-	60°	3.5						
<b>-4065TR</b>		6.7		5.5												
<b>-4070TRG</b>		7.0														
<b>-4070TRN</b>		7.7		5.4												
<b>-4070TRS</b>		6.7				T10					2.0					
<b>-4075TRP</b>		7.5														
<b>-4082TPR</b>		8.2		5.5		15IP										
<b>-4085TR</b>		8.5									T15					
<b>-4085TRP</b>											15IP					
<b>-4090TRP</b>				9.0	5.7											
<b>-4090TRPN</b>				5.5												
<b>-40120TR</b>				12.0	5.1											
<b>-40125TRN</b>				12.5	5.2							T15			50°	
<b>-40140TR</b>				14.0	5.5										60°	
<b>-40140TRN</b>			6.7									75°				
<b>SB -45130TR</b>	M4.5X0.75	13.0	6.6			20IP		55°	4.5							
<b>SB -5085TR</b>	M5X0.8	8.5	6.8			T20		50°	4.5							
<b>-50120TRP</b>		12.0	6.8	7.2			20IP	-	60°	4.5						
<b>-50120TRS</b>										3.5						
<b>-50140TR</b>		14.0	7.3				T15	-	50°	3.5						
<b>-50140TRP</b>										4.5						
<b>SB -60120TR</b>		M6X1.0	12.0	8.5			T25		60°	6.0						

GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & POD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
CUT-OFF	<b>H</b>
THREADING	<b>J</b>
HSK TOOLING	<b>N</b>
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Screws

Drawing	Part Number	Dimension (mm)						Angle (°)		Torque (N • m)	Notes
		A	B	C	D	E	F	α	θ		
	<b>SB -4070TRW</b>	M4X0.7	6.7	5.5	-	-	T8	-	60°	1.2	R Shows Right-hand Thread
	<b>-4590TRWN</b>	M4.5X0.75	9.3	5.6	-	-	T10	-	57°	2.0	
	<b>SC -30067</b>	M3X0.35	6.7	4.4	-	-	T8	-	60°	1.2	
	<b>-35085</b>	M3.5X0.35	8.5	5.7	-	-	T10	-		2.0	
	<b>-40100</b>	M4X0.5	10.0	6.0	-	-	T15	-		3.5	
	<b>-50130</b>	M5X0.5	13.0	6.6	-	-	T20	-	4.5		
	<b>-60160</b>	M6X0.75	16.0	8.0	-	-	T25	-	40°	6.0	
	<b>-60210</b>		21.0	9.6	-	-	T30	-		8.0	
	<b>SE -3070TRP</b>	M3X0.5	7.0	4.3	-	-	9IP	-	43°	1.7	OOIP Shows Torx Plus
	<b>-40050TRN</b>		5.0	-	-	-		-			
	<b>-40055TR</b>	5.5	-	-	-	-	-				
	<b>-40068TR</b>	M4X0.7	6.8	5.0	-	-	T15	-	44°	3.5	
	<b>-40080TR</b>		8.0								
	<b>-40090TR</b>		9.0								
	<b>-40100TR</b>		10.0								
	<b>SE -40120TR</b>	M4X0.7	12.0	5.6	-	-	T15	-	60°	3.5	
	<b>-50125TR</b>	M5X0.8	12.5	6.8	-	-	T20	-		4.5	
	<b>SH -50150TR</b>	M5X0.8	15.1	7.3	3.1	-	T20	-	-	4.5	
	<b>SP 3X4</b>	M3X0.5	4.0	4.0	-	-	-	-	90°	-	With Additional Machining Below the Fillister Head
	<b>3X6</b>		6.0	-	-	-	-	-			
	<b>3X8</b>		8.0	6.0	-	-	-	-			
	<b>3X10</b>		10.0	-	-	-	-	-			
	<b>SP 4X9</b>	M4X0.7	9.0	5.6	-	2.0	-	-	90°	-	Cross Recessed Flat Head Screw equivalent to JIS...B-1111
	<b>8X35</b>	M8X1.25	35.0	11.0	4.4	5.0	-	-	90°	-	
	<b>SPW -6045</b>	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
	<b>-7050</b>	M7X0.75	9.0	8.8	M5X0.8	5.0	-	-	-	-	
	<b>SS -4N</b>	M5.5X0.5	8.5	6.6	M4X0.7	4.0	-	-	-	-	
	<b>SV -60136R</b>	M6X1.0	13.6	6.3	-	4.0	-	-	6°	-	Hexagon Socket
	<b>-60136TR</b>					-	T20	-		4.5	Torx
	<b>TH 8X15</b>	M8X1.25	20.0	8.5	-	4.0	-	-	-	-	
	<b>W 6X17</b>	M6X1.0	17.0	-	-	-	T20	-	-	4.5	
	<b>6X18N</b>		18.0	-	-	-	T15	-	-	3.5	
	<b>8X16</b>		M8X1.0	16.0	-	-	-	T25	-	6.0	
	<b>W 6X18</b>	M6X1.0	17.5	-	-	-	-	-	-	-	
	<b>6X20</b>	M6X1.0	20.5	-	-	3.0	-	-	-	-	
	<b>8X18</b>	M8X1.25	18.0	-	-	-	-	-	-	-	
	<b>*8X21</b>	M8X1.0	21.0	-	-	4.0	-	-	-	-	

\* No Socket on Right-hand Thread Side

**Pins**

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

GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & POD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
CUT-OFF	<b>H</b>
THREADING	<b>J</b>
HSK TOOLING	<b>N</b>
<b>SPARE PARTS</b>	<b>P</b>
TECHNICAL	<b>R</b>
INDEX	<b>T</b>

Shims

Drawing	Part Number	Dimension (mm)						Angle (°)		Notes
		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			
	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°	-
-44		12.65	5.0	1.5	R0.8			-		
	556 C%	34.0	10.0	12.7	5.6	5.0	R1.6	0°	55°	R Shows Right-hand Thread L Shows Left-hand Thread 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°	-
-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-6S LP-2S

P  
SPARE PARTS



Shims

Drawing	Part Number	Dimension (mm)						Angle (°)		Notes
		A	B	C	D	E	F	$\alpha$	$\theta$	
	<b>LC -32</b>	9.47	2.4	1.3	6.18	4.68	R0.8	-	-	Shim Pin : LSP-1
	-32N									
	-4K	11.7	3.2	1.4	8.1	6.73	R0.8	-	-	Shim Pin : LSP-3K
	-42						R0.8			
	-42N	12.65	3.2	1.5	8.01	6.28	R2.0	-	-	Shim Pin : LSP-2
	-42N-20									
-53	15.9	4.8	1.7	10.0	8.0	R1.2	-	-	Shim Pin : LSP-3	
-53N										
	<b>LC -42<sup>N</sup></b>						R0.8	10°	-	R Shows Right-hand Thread L Shows Left-hand Thread Shim Pin : LSP-2
	-42N <sup>N</sup>	12.65	3.2	1.5	8.01	6.28				
	-42N <sup>N</sup> -20						R2.0			
	<b>LD -32</b>	9.47	2.4	1.3	6.18	4.68	R0.8	-	-	Shim Pin : LSP-1
	-32N									
	-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				
	<b>LR -80</b>	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
	<b>LR -10C</b>	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
	<b>LS -32</b>	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
	<b>LT -3K</b>	8.53	2.7	1.0	6.1	5.13	R0.8	-	-	Shim Pin : LSP-2K
	-32									
	-32N	9.47	2.7	1.3	6.18	4.68	R0.8	-	-	Shim Pin : LSP-1
	-32N-20						R2.0			
	-42	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim Pin : LSP-2
	-42N						R2.0			
-42N-20										
	<b>LW -32</b>	9.47	2.4	1.3	6.18	4.68	R0.8	-	-	Shim Pin : LSP-1
	-32N									
	-42	12.65	3.2	1.5	8.01	6.28	R0.8	-	-	Shim Pin : LSP-2
	-42N									
	<b>LW -42<sup>N</sup></b>	12.65	3.2	1.5	8.01	6.28	R0.8	10°	-	R Shows Right-hand Thread L Shows Left-hand Thread Shim Pin : LSP-2
	-42N <sup>N</sup>									
	<b>MSD -42</b>	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
	<b>MSE -4215</b>	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

GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & POD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
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HSK TOOLING	<b>N</b>
<b>SPARE PARTS</b>	<b>P</b>
TECHNICAL	<b>R</b>
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**Shims**

Drawing	Part Number	Dimension (mm)						Angle (°)		Notes
		A	B	C	D	E	F	$\alpha$	$\theta$	
	<b>MSO -4T245</b>	10.0	2.0	4.7	6.4	4.8	-	27°	45°	Shim Screw : SP3X6
	<b>MSO -5200</b>	12.6	3.18	1.8	8.27	6.66	R0.8	15°	-	Shim Screw : SPW-6045
	<b>MSP -42</b>	11.3	3.2	1.85	7.0	3.3	-	15°	15°	Shim Screw : SP3X8
	<b>MTE -42</b>	9.8	3.2	-	6.4	3.4	-	25°	-	Shim Screw : SP3X8
	<b>MVN -32</b>	9.52	3.2	2.1	7.4	6.5	R0.8	-	-	Lock Pin : TS-3S
	<b>PD -42</b>	12.7	3.2	1.7	6.0	8.4	0.8	12°	-	Shim Screw : SB-2050TR
	<b>SP -129</b>	9.52	9.52	R0.8	R1.6	R1.2	R1.6	-	-	Shim Screw : HH3X12
	<b>SP -141</b>	12.7	4.0	2.4	6.2	3.3	R1.2	-	-	Shim Screw : M3X8
	<b>-143</b>	12.7	7.2	2.4	6.2	3.3	R1.2	-	-	Shim Screw : M3X12
	<b>-162</b>	15.8	6.0	3.4	8.0	4.4	R1.5	-	-	Shim Screw : M4X10
	<b>SP -148</b>	12.7	8.8	2.4	6.2	3.3	R1.2	-	-	Shim Screw : BH3X12
	<b>SP -219</b>	6.35	9.52	R0.8	R1.2	R1.6	-	-	-	Shim Screw : HH3X12
	<b>SP -221</b>	9.52	4.0	2.5	6.5	3.5	R1.2	-	-	Shim Screw : M3X8
	<b>-223</b>	9.52	7.2	2.5	6.5	3.5	R1.2	-	-	Shim Screw : M3X12
	<b>SP -342</b>	12.7	6.0	2.5	6.5	3.5	R1.2	-	75°	Shim Screw : M3X8
	<b>-441</b>	12.7	4.0	2.5	6.2	3.3	R0.8	-	80°	Shim Screw : M3X8
	<b>-443</b>	12.7	7.2	2.5	6.2	3.3	R0.8	-	80°	Shim Screw : M3X12
	<b>-454</b>	15.7	8.0	3.4	8.0	4.5	R1.6	-	80°	Shim Screw : M4X10

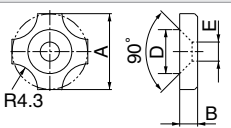
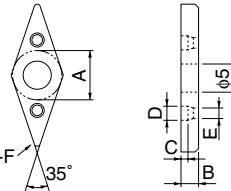
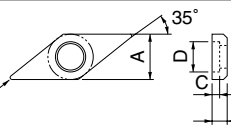
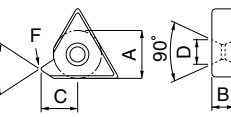
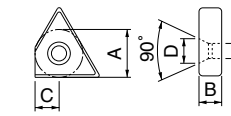
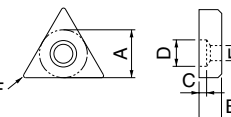
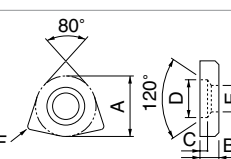
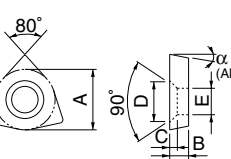
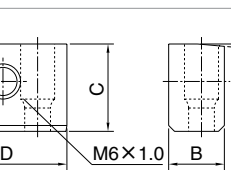
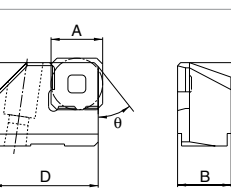
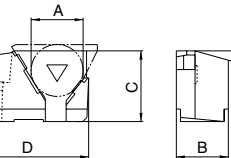
P  
SPARE PARTS

**Shims**

Drawing	Part Number	Dimension (mm)						Angle (°)		Notes
		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

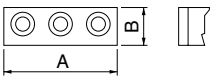
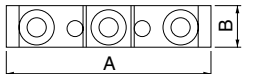
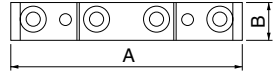
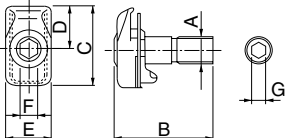
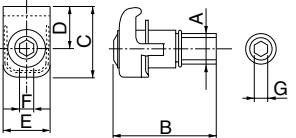
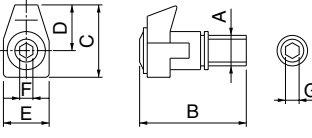
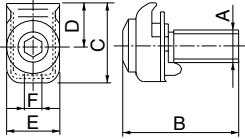
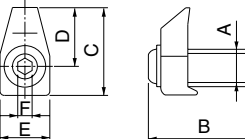
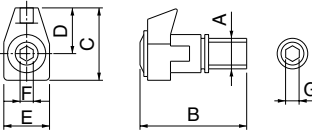
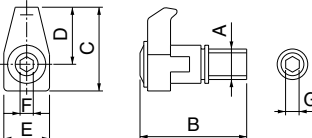
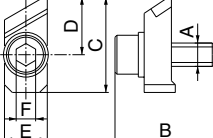
GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & POD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
CUT-OFF	<b>H</b>
THREADING	<b>J</b>
HSK TOOLING	<b>N</b>
<b>SPARE PARTS</b>	<b>P</b>
TECHNICAL	<b>R</b>
INDEX	<b>T</b>

**Shims / Cartridges**

Drawing	Part Number	Dimension (mm)						Angle (°)		Notes
		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
	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.

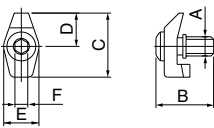
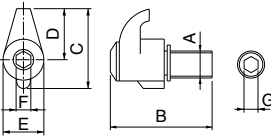
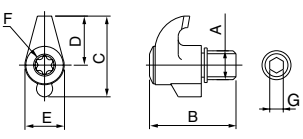
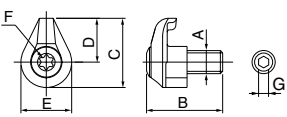
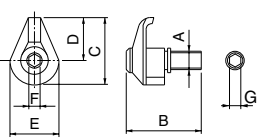
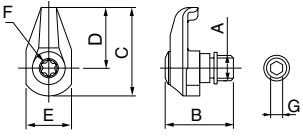
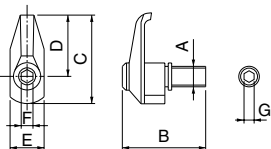
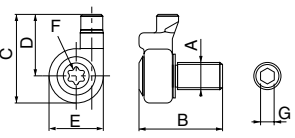
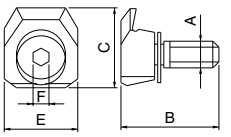
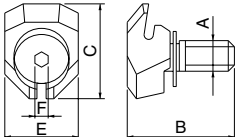
P  
SPARE PARTS

■ Clamp Sets

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

GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & PCD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
CUT-OFF	<b>H</b>
THREADING	<b>J</b>
HSK TOOLING	<b>N</b>
<b>SPARE PARTS</b>	<b>P</b>
TECHNICAL	<b>R</b>
INDEX	<b>T</b>

**Clamp Sets**

Drawing	Part Number	Dimension (mm)							Notes
		A	B	C	D	E	F	G	
	CPS -1	M3X0.5	9.0	10.0	5.2	5.5	2.0	-	
	CPS -2	M5X0.8	14.5	14.0	8.5	6.8	2.5	2.5	G : Indicates hexagon hole two side widths of back side of bolts
	-2P		18.0						
	-3	M6X1.0	19.0	16.5	10.0	8.8	3.0	3.0	
	CPS -2S	M5X0.8	13.5	14.0	8.5	6.8	T15	2.0	G : Indicates hexagon hole two side widths of back side of bolts
	-2TR		15.0						
	CPS -4V	M4X0.7	8.9	11.3	7.3	8.0	T10	-	G : Indicates hexagon hole two side widths of back side of bolts
	-5F	M5X0.8	11.3	12.7	7.5	10.3	T15	2.5	
	-5S		18.0	15.0	9.5	11.0		2.0	
	-5V		13.5	12.7	7.5	10.3	2.5		
	CPS -6F	M6X1.0	16.5	15.6	9.5	12.2	3.0	-	G : Indicates hexagon hole two side widths of back side of bolts
	-6M			17.5	11.0	13.0			
	-6S			18.5	18.0	12.0		12.0	
	-6V			15.6	9.5	12.2	3.0		
	-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%	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 Thread L Shows Left-hand Thread
	-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	-	

P  
SPARE PARTS

■ Clamps

Drawing	Part Number	Dimension (mm)						Angle (°)		Notes
		A	B	C	D	E	F	$\alpha$	$\theta$	
	C 09N	6.0	9.0	9.8	5.3	M6X1.0 (L-hand Thread)	-	10°	-	Clamp Screw : W6X18N
	C 17R	12.2	20.0	14.3	8.5	M8X1.25 (L-hand Thread)	-	12°	-	Clamp Screw : W6X18N
	C 20R	15.1	15.5	15.0	7.5	5.3	-	10°	-	Clamp Screw : TX8X15
	CH -20R	13.1	15.5	14.8	7.5	5.3	-	10°	-	Clamp Screw : TX8X15
	C 25R	13.2	15.5	15.0	7.5	5.3	-	10°	-	Clamp Screw : TX8X15
	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 -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 %	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%	30.0	23.0	8.5		5.0				
	-3%	30.0	23.0	8.5		6.0				
	CGIA -3R	10.7	17.0	10.5	5.2	1.8	2.0	-	-	
	-4R	10.7		11.5		2.5				
	-5R	15.7		10.5		3.5				

GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & PCD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
CUT-OFF	<b>H</b>
THREADING	<b>J</b>
HSK TOOLING	<b>N</b>
<b>SPARE PARTS</b>	<b>P</b>
TECHNICAL	<b>R</b>
INDEX	<b>T</b>

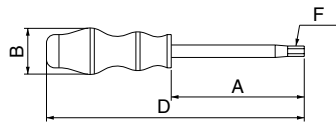
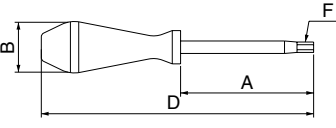
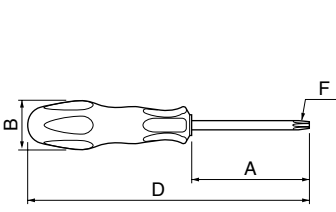
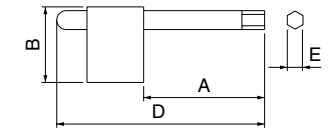
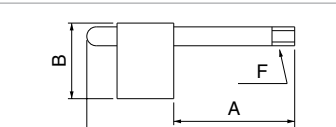
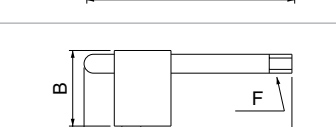
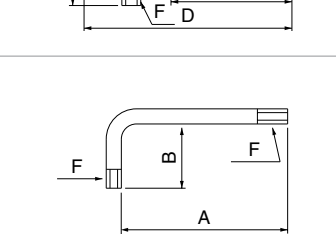
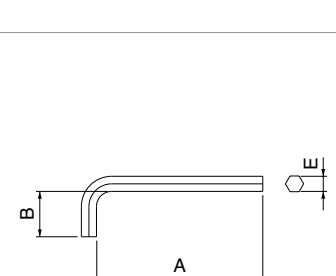
**Clamps / Chipbreakers**

Drawing	Part Number	Dimension (mm)						Angle (°)		Notes
		A	B	C	D	E	F	$\alpha$	$\theta$	
	CP -2D		10.0	21.6		10.4				
	-3D	-	12.0	27.6	-					
	-5D		13.0	32.0		14.0				
	CP -8TE	17.9	12.0	12.0	M8X1.25 (L-hand Thread)	10.0	-	15°	-	
	CP -8W	20.9	12.0	8.0	M8X1.25 (L-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	-	-	-	-	

P  
SPARE PARTS

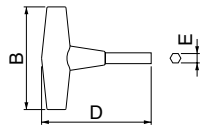
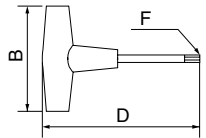
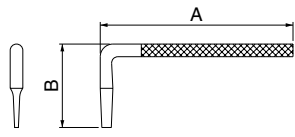
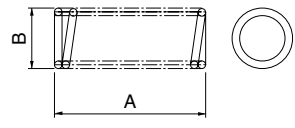
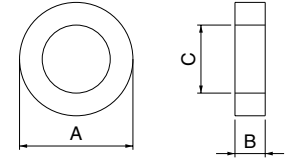
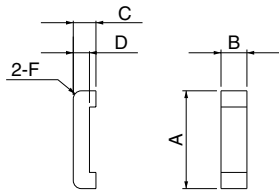


Wrenches

Drawing	Part Number	Dimension (mm)						Angle (°)		Notes
		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			OOIP Shows Torx Plus
	-15	81	33		186		15IP			
	-20	100			206		20IP			
	DTPM -8	70	24		150		8IP			OOIP 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
	LTP -10	51	17				10IP			OOIP 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			
	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				

GRADES	A
INSERTS	B
CBN & POD	C
TOOLHOLDERS	D
SMALL TOOLS	E
BORING	F
GROOVING	G
CUT-OFF	H
THREADING	J
HSK TOOLING	N
SPARE PARTS	P
TECHNICAL	R
INDEX	T

■ Wrenches / Springs / Nuts / Punches / Other

Drawing	Part Number	Dimension (mm)						Angle (°)		Notes
		A	B	C	D	E	F	α	θ	
	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	-	-	OOIP Shows Torx Plus
	-25	-	98	-	130	-	T25	-	-	
TTP -20	-	70	-	138	-	20IP	-	-		
	LTK -5	70	30	-	-	-	-	-	-	
	SP -2D	8.5	5.6	-	-	-	-	-	-	Spring
	-3D	12.0	7.0	-	-	-	-	-	-	
	-5	12.0	6.7	-	-	-	-	-	-	
	-5D	12.0	7.2	-	-	-	-	-	-	
	-6	12.0	7.7	-	-	-	-	-	-	
	-8	11.0	9.7	-	-	-	-	-	-	
	W -6	11.5	1.6	6.4	-	-	-	-	-	Washer
	6-14	11.5	1.4	6.4	-	-	-	-	-	
	-8	15.5	1.6	8.4	-	-	-	-	-	
	WB -5	10.0	1.0	5.3	-	-	-	-	-	Washer (Brass)
-6	11.5	1.6	6.4	-	-	-	-	-		
-8	15.5	1.6	8.4	-	-	-	-	-		
	WSP -1	15.1	4.0	3.5	2.5	-	R1.25	-	-	Spacer

P  
SPARE PARTS

■ Wrenches / Springs / Nuts / Punches / Other

Drawing	Part Number	Dimension (mm)						Angle (°)		Notes
		A	B	C	D	E	F	α	θ	
	<b>DN 10</b>	6.2	5.1	4.5	5.7	2.6	4.0	-	-	Nozzle
	<b>20</b>	10.1	7.7	7.0	9.6	M4X0.7	6.0	-	-	
	<b>GP -1</b>	PT1/8	7.0	-	-	5.0	-	-	-	Plug
	<b>-2</b>	PT1/4	9.0	-	-	6.0	-	-	-	
	<b>WN -1</b>	M5X8	10.0	7.0	-	3.0	-	-	-	Nut
	<b>PC -1</b>	60.0	8.5	-	-	-	-	-	-	Punch
	<b>-2</b>	62.2	10.0	-	-	-	-	-	-	
	<b>CL 63-1</b>	M18X1.0	36.5	12	-	6.0	-	-	-	Coolant Pipe
	<b>100-1</b>	M24X1.5	44.0	16.0	-	8.0	-	-	-	

GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & PCD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
CUT-OFF	<b>H</b>
THREADING	<b>J</b>
HSK TOOLING	<b>N</b>
<b>SPARE PARTS</b>	<b>P</b>
TECHNICAL	<b>R</b>
INDEX	<b>T</b>

## ■ Toolholders for Ceramic Tools

Part Number	Spare Parts				
	Chipbreaker	Clamp Set	Wrench	Shim	Shim Screw
<b>CCLNR</b> 2525M -16	CB-17	CE-220	LW-4	SP-454	M4X10
<b>CS-N%</b> ..... -12	CB-11	CE-020	LW-4	SP-141 *(SP143)	M3X8 *(M3X12)

\* Shim & Shim Screw : When using SN□□415 insert, purchase spare parts in ( ) separately.

## ■ Toolholders for Solid CBN Tools

Part Number	Spare Parts			
	Clamp Set	Wrench	Shim	Shim Screw
<b>CCLN%</b> ..... -09A	CE-030A	LW-4	SP-429	HH3X12
<b>CTUN%</b> ..... -11A	CE-030A	LW-4	SP-219	HH3X12

## ■ Toolholders for Bearing Machining

Part Number	Spare Parts					
	Lever	Lock Screw	Shim	Shim Pin	Punch	Wrench
<b>PRGC%</b> ..... -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
<b>PRGC%</b> ..... -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

Part Number	Spare Parts			
	Anchor Pin	Lock Screw	Clamp Screw	Wrench
<b>AABSR</b> 0810K -40F	LPA-11	HSB4X8R	-	FH-2
1010.. -40F				
1212.. -40F				
1616.. -40F				
<b>SABSR</b> ..... -40F	-	-	SB-3080TR	FT-10
<b>AABWR</b> 0810K -40F	LPA-11	HSB4X8R	-	FH-2
1010.. -40F				
1212.. -40F				
1616.. -40F				
<b>SABWR</b> ..... -40F	-	-	SB-3080TR	FT-10
<b>AABWR</b> 0810K -50F	LPA-11	HSB4X8R	-	FH-2
1010.. -50F				
1212.. -50F				
1616.. -50F				
<b>SABWR</b> ..... -50F	-	-	SB-3080TR	FT-10

## ■ KTKF

Part Number	Spare Parts	
	Clamp Screw	Wrench
<b>KTKF%</b> ..... -12	SB-4590TRWN	LTW-10S
..... -16		

# PREVIOUS SPARE PART LIST

## External Toolholders (Back Clamp)

Part Number	Spare Parts		
	Anchor Pin	Lock Screw	Wrench
ACLCL%	0810K -06F	LPF-11	HSB4X8%
	1010K -06F		
	1010K -09F		
	1212M -09F		
	1616M -09F		
ADJCL%	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		
AVJBL%	1010K -11F	LPF-11	HSB4X8%
	1212M -11F		
	1616M -11F		
AVVBR	1010K -11F	LPF-11	HSB4X8R
	1212M -11F		
	1616M -11F		

\* Lock Screw: HSB4X8R for R-hand Toolholder, HSB4X8L for L-hand Toolholder.

## External Toolholders (Screw Clamp)

Part Number	Spare Parts		
	Clamp Screw	Wrench	
SCLCL%	..... -06	SB-2570TR	FT-8
	..... -09	SB-4085TR	FT-15
	..... -12	SB-5090TR	LTW-20
SCACL%	..... -06	SB-2570TR	FT-8
	..... -09	SB-4085TR	FT-15
	1212F -09FF		
SDJCL%	..... -07F	SB-2570TR	FT-8
	..... -11F	SB-4085TR	FT-15
SDLCL%	..... -07FF	SB-2570TR	FT-8
	..... -11FF	SB-4085TR	FT-15
SDXCL%	..... -07	SB-2570TR	FT-8
	..... -11	SB-4085TR	FT-15
SDNCL%	..... -07F	SB-2570TR	FT-8
	..... -11F	SB-4085TR	FT-15
SDNCN	..... -07	SB-2570TR	FT-8
	..... -11	SB-4085TR	FT-15
SDLPL%	..... -07F	SB-2570TR	FT-8
	..... -11F	SB-4085TR	FT-15
STGPL%	..... -08	SB-2050TR	FT-6
	..... -11	SB-3080TR	FT-10
SVJBL%	..... -11F	SB-2570TR	FT-8
SVLPL%	..... -08FF	SB-2050TR	FT-6
	..... -11FF	SB-2570TR	FT-8
	..... -11F		
SVPP%	..... -08FF	SB-2050TR	FT-6
	..... -11FF	SB-2570TR	FT-8
	..... -11		
SYXPL%	..... -06F	SB-2050TR	FT-6

GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & POD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
CUT-OFF	<b>H</b>
THREADING	<b>J</b>
HSK TOOLING	<b>N</b>
SPARE PARTS	<b>P</b>
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# PREVIOUS SPARE PART LIST

## External Toolholders (Screw Clamp)

Part Number	Spare Parts				
	Clamp Screw	Wrench	Shim	Shim Screw	Wrench
SVPB% ..... -11	SB-2570TR	FT-8	-	-	-
	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
SVVBN ..... -11	SB-2570TR	FT-8	-	-	-
	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4

## External Toolholders (Top Clamp)

Part Number	Spare Parts				
	Clamp Set	Wrench	Shim	Shim Screw	Chipbreaker
CSBP% 1212F -09N	CPS-2P	LW-2.5	-	-	CB-S3220
CTTP% ..... -11N	CPS-2P	LW-2.5	-	-	CB-T2212
	CPS-3	LW-3	KPT-32	SP3X8	CB-T3220

## Twin Bars

Part Number	Spare Parts	
	Clamp Screw	Wrench
STW% ..... -15	SB-3080TR	LTW-10S
STWSR ..... -15T	SB-3080TR	LTW-10S

## Swiss IQ Bars

Part Number	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	
			HS3X4	
SVNSR ..... -12---	SB-3080TR	LTW-10S	HS3X4	LW-1.5
S12F- SVNR 12	SB-3080TR	FT-10	HS3X4	LW-1.5
S14G- SVNR 12				
S16H- SVNR 12				
S19H- SVNR 12				
S19N- SVNR 12				
S20H- SVNR 12				
S25H- SVNR 12				
S25Q- SVNR 12				
S25Q- SVNR 12				
S25Q- SVNR 12				
S.... SVNR 12S	SB-3080TR	FT-10	HS3X4	LW-1.5

## Swiss IQ Bars (S...SVN-XN)

Part Number	Spare Parts		
	Clamp Screw	Wrench	Screw (Side Stopper)
S.... SVNR 12XN	SB-3080TR	FT-10	SP3X4

## PSH Sleeve

Part Number	Spare Parts	
	Clamp Screw	Wrench
PSH 02.. - 03.. -	HS3x4P	LW-1.5
	HS4x4P	LW-2
PSH 04.. -		
05.. -		
06.. -		
07.. -		

# PREVIOUS SPARE PART LIST

## ■ Boring Bars (Screw Clamp)

Part Number	Spare Parts	
	Clamp Screw	Wrench
S10H- SCLC%03--E	SB-1635TR	FT-6
S10J- SCLC%04--E	SB-2040TR	
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-2040TR	
C08L- SCLC%06-10	SB-2545TR	FT-8
A08H- SCLC%06-10E	SB-2545TR	FT-8
E08L- SCLC%06-10	SB-2545TR	FT-8
S-M- SCLP%08--E	SB-3STR	FT-10
S--- SCLP%09--E	SB-4TR	FT-15
S-M- SCLP%08--	SB-3STR	FT-10
S--- SCLP%09--	SB-4TR	FT-15
C10N- SCLP%08--	SB-3STR	FT-10
C--- SCLP%09--	SB-4TR	FT-15
A-X- SCLP%08--E	SB-3STR	FT-10
A--- SCLP%09--E	SB-4TR	FT-15
E10N- SCLP%08-12	SB-3STR	FT-10
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
S06H- STUB%06-08E	SB-1STR	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-1STR	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-1STR	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

GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & POD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
CUT-OFF	<b>H</b>
THREADING	<b>J</b>
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SPARE PARTS	<b>P</b>
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# PREVIOUS SPARE PART LIST

## Boring Bars (Screw Clamp)

Part Number	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-2040TR	FT-6
C07K- SWUB%08-08	SB-2035TR	
C08L- SWUB%08-10	SB-2050TR	
C10N- SWUB%08...		
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
S16Q- SSKPR09-20	SB-4TR	FT-15
S20R- SSKPR09-25		
S25X- SSKPR12-32	GS-50S	LW-3
S32S- SSKPR12-40	GS-50	
S12M- SYXP%06-12E	SB-2040TR	FT-6
S16Q- SYXP%06-16E	SB-2045TR	

## Boring Bars (Screw Clamp)

Part Number	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			
S40T- SVJB%16-50E					
S10M- SVPC%08-16E	SB-2050TR	FT-6	-	-	-
S... SVPB%11...E	SB-2570TR	FT-8			
S... SVPB%16...EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
S25X- SVPB%16-34E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S32S- SVPB%16-40E					
S12M- SVUC%08-16E	SB-2050TR	FT-6	-	-	-
S... SVUB%11...E	SB-2570TR	FT-8			
S... SVUB%16...EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
S25X- SVUB%16-34E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S32S- SVUB%16-40E					
S12M- SVZC%08-16E	SB-2050TR	FT-6	-	-	-
S... SVZB%11...E	SB-2570TR	FT-8			
S... SVZB%16...EN	SB-40125TRN	FT-15	SVN-32N	SS-4N	LW-4
S25X- SVZB%16-34E	SB-40115TR	FT-15	SVN-32	SB-2050TR	FT-6
S32S- SVZB%16-40E					

## Boring Bars (Top Clamp)

Part Number	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

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



# PREVIOUS SPARE PART LIST

## KTGF-F

Part Number	Spare Parts	
	Clamp Screw	Wrench
KTGF% ..... -16F	SB-4070TRW	FT-8

## KN91

Part Number	Spare Parts				
	Clamp	Clamp Bolt	Washer	Spring	Wrench
KN91% 44 -4	*CE-111/121	BH8X30	W-8	SP-8	LW-5
44 -5					
44 -7					
	*CE-131/141				

\* KN91%44-4 / 5 ... CE-111 for Right-hand Toolholder, and CE-121 for Left-hand Toolholder.  
 KN91%44-7 ... CE-131 for Right-hand Toolholder, and CE-141 for Left-hand Toolholder.

## KGHS

Part Number	Spare Parts				
	Clamp	Clamp Bolt	Washer	Spring	Wrench
KGHS% ..... -4	CGH-1	HH6X25	W-6	SP-6	LW-5
..... -5					
..... -7					
	CGH-2				

• Clamp: KGHS% ... CGH- O L for Right-hand Toolholder, and CGH- O R for Left-hand Toolholder.

## KGM (Small Parts Machining)

Part Number	Spare Parts	
	Clamp Screw	Wrench
KGM% 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

Part Number	Spare Parts	
	Clamp Set	Wrench
GFVS% ..... -08AA	CPS-5V	FT-15
GFVT% ..... -08AA	CPS-5V	FT-15

## KTKH-S

Part Number	Spare Parts
	Releasing Wrench
KTKH% ..... - ...S	LTK-5

## KTKH-B

Part Number	Spare Parts	
	Clamp Screw	Wrench
KTKH% 0808K - ...B	SE-40120TR	FT-15
1010K - ...B		
1212M - ...B		
1414M - ...B		
1616M - ...B		
	SE-50125TR	LTW-20

## KTTX

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

GRADES	<b>A</b>
INSERTS	<b>B</b>
CBN & POD	<b>C</b>
TOOLHOLDERS	<b>D</b>
SMALL TOOLS	<b>E</b>
BORING	<b>F</b>
GROOVING	<b>G</b>
CUT-OFF	<b>H</b>
THREADING	<b>J</b>
HSK TOOLING	<b>N</b>
SPARE PARTS	<b>P</b>
TECHNICAL	<b>R</b>
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