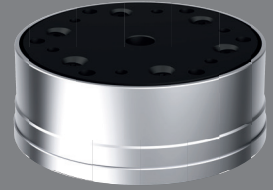


Compliance Device for press fitting without flange - BS SERIES

Center Master® compensates for errors (position and/or torsional) occurred during an assembly that various precision parts are press or loose fitted into the holes. Thereby, it reduces assembly failure, enhances product quality, and shortens the cycle time in production line.

Advantages

- Significant reduction of assembly failure due to center position errors
- Uniform press-fitting quality
- Wide range of applications
- Increased binding force between parts
- Saves assembly line construction time, reduces equipment investment cost
- Enhanced operation rate
- Longer life cycle of the assembler
- Simple maintenance



SPECIFICATIONS

Model (1)	Allowable maximum force	Compliance center length P	Payload (2)	Compensation range		Elasticity coefficient (3)		Horizontal direction	Torsional direction	Weight
				Position error	Torsional angle	Compressional	Tensile			
CCR-BS6-040-048	6.0 kN	40 mm	14.7 N	± 2 mm	± 7.7°	625.2 N/mm	143.1 N/mm	9.5 N/mm	2.4 Nm/rad	0.50 kg
	610 kgf	1.57 in	1.5 kgf	± 0.08 in		63.8 kgf/mm	14.6 kgf/mm	1.0 kgf/mm	24.5 kgf.cm/rad	1.10 lb
CCR-BS6-050-054	7.5 kN	50 mm	19.6 N	± 2 mm	± 7.3°	625.2 N/mm	143.1 N/mm	11.8 N/mm	3.0 Nm/rad	0.70 kg
	770 kgf	1.97 in	2.0 kgf	± 0.08 in		63.8 kgf/mm	14.6 kgf/mm	1.2 kgf/mm	30.6 kgf.cm/rad	1.54 lb
CCR-BS6-060-060	8.5 kN	60 mm	19.6 N	± 2 mm	± 6.0°	1180.9 N/mm	143.1 N/mm	11.8 N/mm	3.0 Nm/rad	0.80 kg
	870 kgf	2.36 in	2.0 kgf	± 0.08 in		120.5 kgf/mm	14.6 kgf/mm	1.2 kgf/mm	30.6 kgf.cm/rad	1.76 lb
CCR-BS6-070-065	15.0 kN	70 mm	26.5 N	± 2 mm	± 6.6°	1180.9 N/mm	191.1 N/mm	11.8 N/mm	4.2 Nm/rad	0.90 kg
	1530 kgf	2.76 in	2.7 kgf	± 0.08 in		120.5 kgf/mm	19.5 kgf/mm	1.2 kgf/mm	42.9 kgf.cm/rad	1.98 lb
CCR-BS6-080-070	25.0 kN	80 mm	26.5 N	± 2 mm	± 6.2°	1573.9 N/mm	191.1 N/mm	11.8 N/mm	4.2 Nm/rad	1.00 kg
	2550 kgf	3.15 in	2.7 kgf	± 0.08 in		160.6 kgf/mm	19.5 kgf/mm	1.2 kgf/mm	42.9 kgf.cm/rad	2.20 lb
CCR-BS6-090-078	25.0 kN	90 mm	37.3 N	± 2 mm	± 5.5°	1573.9 N/mm	225.4 N/mm	12.4 N/mm	6.1 Nm/rad	1.50 kg
	2550 kgf	3.54 in	3.8 kgf	± 0.08 in		160.6 kgf/mm	23.0 kgf/mm	1.3 kgf/mm	62.2 kgf.cm/rad	3.30 lb
CCR-BS6-100-084	40.0 kN	100 mm	37.3 N	± 2 mm	± 5.0°	1217.2 N/mm	225.4 N/mm	12.4 N/mm	6.1 Nm/rad	1.60 kg
	4080 kgf	3.94 in	3.8 kgf	± 0.08 in		124.2 kgf/mm	23.0 kgf/mm	1.3 kgf/mm	62.2 kgf.cm/rad	3.52 lb
CCR-BS6-110-088	40.0 kN	110 mm	37.8 N	± 2 mm	± 4.6°	1217.2 N/mm	225.4 N/mm	12.4 N/mm	7.0 Nm/rad	1.80 kg
	4080 kgf	4.33 in	3.9 kgf	± 0.08 in		124.2 kgf/mm	23.0 kgf/mm	1.3 kgf/mm	71.4 kgf.cm/rad	3.97 lb
CCR-BS6-120-095	45.0 kN	120 mm	37.8 N	± 2 mm	± 5.1°	1217.2 N/mm	225.4 N/mm	12.4 N/mm	7.0 Nm/rad	2.00 kg
	4590 kgf	4.72 in	3.9 kgf	± 0.08 in		124.2 kgf/mm	23.0 kgf/mm	1.3 kgf/mm	71.4 kgf.cm/rad	4.41 lb
CCR-BS6-130-099	50.0 kN	130 mm	37.8 N	± 2 mm	± 5.1°	1217.2 N/mm	225.4 N/mm	12.4 N/mm	7.0 Nm/rad	2.10 kg
	5100 kgf	5.12 in	3.9 kgf	± 0.08 in		124.2 kgf/mm	23.0 kgf/mm	1.3 kgf/mm	71.4 kgf.cm/rad	4.63 lb
CCR-BS6-140-108	55.0 kN	140 mm	78.0 N	± 2 mm	± 4.8°	1217.2 N/mm	407.7 N/mm	15.1 N/mm	7.7 Nm/rad	2.70 kg
	5610 kgf	5.51 in	8.0 kgf	± 0.08 in		124.2 kgf/mm	41.6 kgf/mm	1.5 kgf/mm	78.6 kgf.cm/rad	5.95 lb
CCR-BS6-150-130	60.0 kN	150 mm	78.0 N	± 2 mm	± 4.2°	1840.4 N/mm	407.7 N/mm	15.1 N/mm	7.7 Nm/rad	4.20 kg
	6120 kgf	5.91 in	8.0 kgf	± 0.08 in		187.8 kgf/mm	41.6 kgf/mm	1.5 kgf/mm	78.6 kgf.cm/rad	9.26 lb

(1) Model: customized order is available

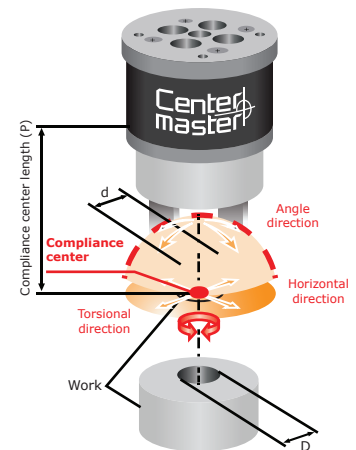
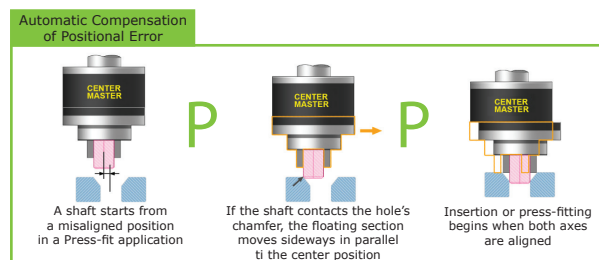
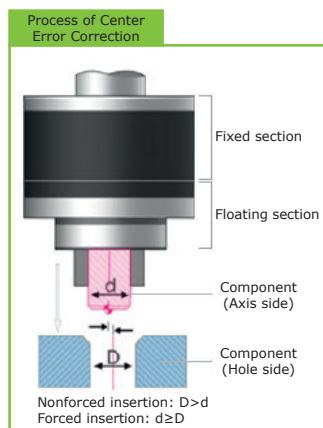
(2) This value can be doubled when Center Master is installed in the vertical direction upside down (reverse vertical).

(3) Elasticity coefficient indicates the elasticity at the compliance center (P) - the average value calculated until the plate runs into the stopper.

* Center Master® compensates up to +/-2 mm of positional error, but this value can vary depending on the chamfer size.

Ambient temperature: 0-55 °C (32-131 °F)

AUTOMATIC CORRECTION OF A POSITION ERROR



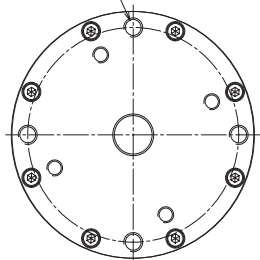
- **Compliance center length (P)**
The allowable tolerance of the P value is within ±5mm. If the P value exceeds the tolerable limit, the compensation function to correct misalignment may not work properly.
- **Payload**
Payload means the total weight of an assembly tool and a workpiece. Improper payload may affect to the device performance or life time.

PRODUCT INFORMATION

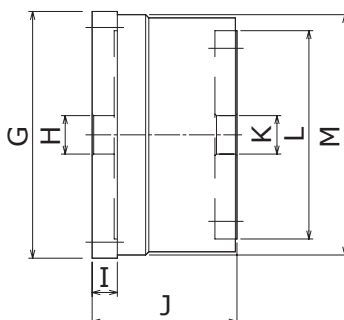


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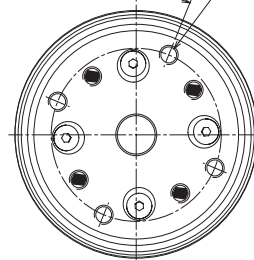
4-A (through)
P.C.D.B



MACHINE SIDE



N-O (through)
P.C.D.P



TOOL SIDE

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
CCR-BS6-040-048	M6	50 (1.969)	-	-	-	-	60 (2.362)	12 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.472)	8 (0.315)	37 (1.457)	12 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.472)	48 (1.890)	58 (2.283)	3 (0.118)	M6	36 (1.417)	0°
CCR-BS6-050-054	M6	58 (2.283)	-	-	-	-	66 (2.598)	12 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.472)	8 (0.315)	46 (1.811)	12 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.472)	54 (2.126)	64 (2.520)	3 (0.118)	M6	43 (1.693)	22.5°
CCR-BS6-060-060	M6	62 (2.441)	-	-	-	-	72 (2.835)	12 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.472)	8 (0.315)	46 (1.811)	12 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.472)	60 (2.362)	70 (2.756)	3 (0.118)	M6	48 (1.890)	22.5°
CCR-BS6-070-065	M6	67 (2.638)	-	-	-	-	77 (3.031)	12 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.472)	8 (0.315)	46 (1.811)	12 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.472)	65 (2.560)	75 (2.953)	4 (0.157)	M6	54 (2.126)	22.5°
CCR-BS6-080-070	M6	72 (2.835)	-	-	-	-	82 (3.228)	12 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.472)	8 (0.315)	46 (1.811)	12 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.472)	70 (2.756)	80 (3.150)	4 (0.157)	M6	58 (2.283)	22.5°
CCR-BS6-090-078	M8	78 (3.071)	-	-	-	-	90 (3.543)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	10 (0.394)	52 (2.047)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	78 (3.071)	88 (3.465)	4 (0.157)	M8	65 (2.560)	22.5°
CCR-BS6-100-084	M8	84 (3.307)	-	-	-	-	96 (3.779)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	10 (0.394)	52 (2.047)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	84 (3.307)	94 (3.701)	4 (0.157)	M8	70 (2.756)	22.5°
CCR-BS6-110-088	M8	88 (3.465)	-	-	-	-	100 (3.937)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	10 (0.394)	52 (2.047)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	88 (3.465)	98 (3.858)	4 (0.157)	M8	75 (2.953)	22.5°
CCR-BS6-120-095	M8	95 (3.740)	-	-	-	-	107 (4.213)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	10 (0.394)	52 (2.047)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	95 (3.740)	105 (4.134)	4 (0.157)	M8	80 (3.150)	22.5°
CCR-BS6-130-099	M8	99 (3.898)	-	-	-	-	111 (4.370)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	10 (0.394)	52 (2.047)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	99 (3.898)	109 (4.291)	4 (0.157)	M8	86 (3.386)	22.5°
CCR-BS6-140-108	M8	108 (4.252)	-	-	-	-	120 (4.724)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	10 (0.394)	56 (2.205)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	108 (4.252)	118 (4.646)	4 (0.157)	M10	88 (3.465)	22.5°
CCR-BS6-150-130	M8	130 (5.118)	-	-	-	-	143 (5.630)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	10 (0.394)	56 (2.205)	16 ^{+0.02} ₋₀ ^{+0.001} ₋₀ (0.629)	130 (5.118)	141 (5.551)	6 (0.236)	M10	114 (4.488)	-7.5°

* Dimensions are in millimeters (inches).

** All dimensions are descriptive and subject to variation for technical upgrading. We reserve the right to make variations without prior notification



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