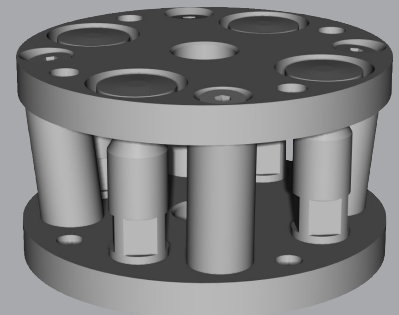


Compliance Device for assembly insertion with flange - A SERIES

Center Master® compensates for errors (position and/or angular 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	Product weight
				Position error	Angle	Torsional angle	Compressional	Tensile			
CCR-A6-030-040	186 N	30 mm	14.7 N	± 2 mm	± 2°	-	625.2 N/mm	100.0 N/mm	9.5 N/mm	2.2 Nm/rad	0.10 kg
	19 kgf	3 in	1.5 kgf	± 0.08 in			63.8 kgf/mm	10.2 kgf/mm	1.0 kgf/mm	22.4 kgf.cm/rad	0.22 lb
CCR-A6-040-048	255 N	40 mm	14.7 N	± 2 mm	± 2°	± 7.7°	625.2 N/mm	143.1 N/mm	9.5 N/mm	2.4 Nm/rad	0.10 kg
	26 kgf	4.1 in	1.5 kgf	± 0.08 in			63.8 kgf/mm	14.6 kgf/mm	1.0 kgf/mm	24.5 kgf.cm/rad	0.22 lb
CCR-A6-050-054	353 N	50 mm	19.6 N	± 2 mm	± 2°	± 7.3°	1180.9 N/mm	143.1 N/mm	11.8 N/mm	3.0 Nm/rad	0.20 kg
	36 kgf	1.97 in	2.0 kgf	± 0.08 in			120.5 kgf/mm	14.6 kgf/mm	1.2 kgf/mm	30.6 kgf.cm/rad	0.44 lb
CCR-A6-060-060	353 N	60 mm	19.6 N	± 2 mm	± 2°	± 6.0°	1180.9 N/mm	143.1 N/mm	11.8 N/mm	3.0 Nm/rad	0.20 kg
	36 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	0.44 lb
CCR-A6-070-065	471 N	70 mm	26.5 N	± 2 mm	± 2°	± 6.6°	1573.9 N/mm	191.1 N/mm	11.8 N/mm	4.2 Nm/rad	0.20 kg
	48 kgf	2.76 in	2.7 kgf	± 0.08 in			160.6 kgf/mm	19.5 kgf/mm	1.2 kgf/mm	42.9 kgf.cm/rad	0.44 lb
CCR-A6-080-070	471 N	80 mm	26.5 N	± 2 mm	± 2°	± 6.2°	1573.9 N/mm	191.1 N/mm	11.8 N/mm	4.2 Nm/rad	0.30 kg
	48 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	0.66 lb
CCR-A6-090-078	363 N	90 mm	37.3 N	± 2 mm	± 2°	± 5.5°	1217.2 N/mm	225.4 N/mm	12.4 N/mm	6.1 Nm/rad	0.40 kg
	37 kgf	3.54 in	3.8 kgf	± 0.08 in			124.2 kgf/mm	23.0 kgf/mm	1.3 kgf/mm	62.2 kgf.cm/rad	0.88 lb
CCR-A6-100-084	363 N	100 mm	37.3 N	± 2 mm	± 2°	± 5.0°	1217.2 N/mm	225.4 N/mm	12.4 N/mm	6.1 Nm/rad	0.40 kg
	37 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	0.88 lb
CCR-A6-110-088	363 N	110 mm	37.8 N	± 2 mm	± 2°	± 4.6°	1217.2 N/mm	225.4 N/mm	12.4 N/mm	7.0 Nm/rad	0.40 kg
	37 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	0.88 lb
CCR-A6-120-095	363 N	120 mm	37.8 N	± 2 mm	± 2°	± 5.1°	1217.2 N/mm	225.4 N/mm	12.4 N/mm	7.0 Nm/rad	0.50 kg
	37 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	1.10 lb
CCR-A6-130-099	363 N	130 mm	37.8 N	± 2 mm	± 2°	± 5.1°	1217.2 N/mm	225.4 N/mm	12.4 N/mm	7.0 Nm/rad	0.50 kg
	37 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	1.10 lb
CCR-A6-140-108	549 N	140 mm	78.0 N	± 2 mm	± 2°	± 4.8°	1840.4 N/mm	407.7 N/mm	15.1 N/mm	7.7 Nm/rad	0.70 kg
	56 kgf	5.51 in	8.0 kgf	± 0.08 in			187.8 kgf/mm	41.6 kgf/mm	1.5 kgf/mm	78.6 kgf.cm/rad	1.50 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/ANGLE ERROR

Process of Center Error Correction

Automatic Compensation of Positional Error

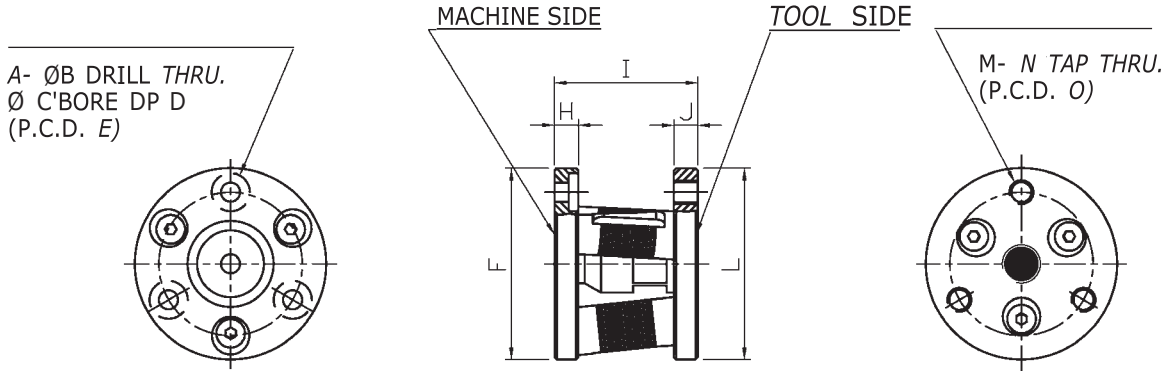
Automatic Compensation of Angular Error

• **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

with flange - A SERIES



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
CCR-A6-030-040	3 (0.118)	4 (0.157)	8 (0.315)	2 (0.078)	30 (1.181)	40 (1.575)	-	5 (0.197)	30 (1.181)	5 (0.197)	-	40 (1.575)	3 (0.118)	M5	30 (1.181)
CCR-A6-040-048	3 (0.118)	5.5 (0.216)	9.5 (0.374)	2 (0.078)	36 (1.417)	48 (1.890)	12 (0.472)	5 (0.197)	30 (1.181)	5 (0.197)	12 (0.472)	48 (1.890)	3 (0.118)	M6	36 (1.417)
CCR-A6-050-054	3 (0.118)	5.5 (0.216)	9.5 (0.374)	3 (0.118)	43 (1.693)	54 (2.126)	12 (0.472)	7 (0.276)	38 (1.496)	7 (0.276)	12 (0.472)	54 (2.126)	3 (0.118)	M6	43 (1.693)
CCR-A6-060-060	3 (0.118)	5.5 (0.216)	9.5 (0.374)	3 (0.118)	48 (1.890)	60 (2.362)	12 (0.472)	7 (0.276)	39 (1.535)	7 (0.276)	12 (0.472)	60 (2.362)	3 (0.118)	M6	48 (1.890)
CCR-A6-070-065	4 (0.157)	5.5 (0.216)	9.5 (0.374)	3 (0.118)	54 (2.126)	65 (2.560)	12 (0.472)	7 (0.276)	39 (1.535)	7 (0.276)	12 (0.472)	65 (2.560)	4 (0.157)	M6	54 (2.126)
CCR-A6-080-070	4 (0.157)	5.5 (0.216)	9.5 (0.374)	4 (0.157)	58 (2.283)	70 (2.756)	12 (0.472)	7 (0.276)	39 (1.535)	7 (0.276)	12 (0.472)	70 (2.756)	4 (0.157)	M6	58 (2.283)
CCR-A6-090-078	4 (0.157)	6.6 (0.259)	11 (0.433)	4 (0.157)	65 (2.560)	78 (3.071)	16 (0.629)	8 (0.315)	43 (1.693)	8 (0.315)	16 (0.629)	78 (3.071)	4 (0.157)	M8	65 (2.560)
CCR-A6-100-084	4 (0.157)	6.6 (0.259)	11 (0.433)	4 (0.157)	70 (2.756)	84 (3.307)	16 (0.629)	8 (0.315)	43 (1.693)	8 (0.315)	16 (0.629)	84 (3.307)	4 (0.157)	M8	70 (2.756)
CCR-A6-110-088	4 (0.157)	6.6 (0.259)	11 (0.433)	4 (0.157)	75 (2.953)	88 (3.464)	16 (0.629)	8 (0.315)	43 (1.693)	8 (0.315)	16 (0.629)	88 (3.464)	4 (0.157)	M8	75 (2.953)
CCR-A6-120-095	4 (0.157)	6.6 (0.259)	11 (0.433)	4 (0.157)	80 (3.150)	95 (3.740)	16 (0.629)	8 (0.315)	43 (1.693)	8 (0.315)	16 (0.629)	95 (3.740)	4 (0.157)	M8	80 (3.150)
CCR-A6-130-099	4 (0.157)	6.6 (0.259)	11 (0.433)	4 (0.157)	85 (3.346)	99 (3.897)	16 (0.629)	8 (0.315)	43 (1.693)	8 (0.315)	16 (0.629)	99 (3.897)	4 (0.157)	M8	85 (3.346)
CCR-A6-140-108	4 (0.157)	9 (0.354)	14 (0.551)	5 (0.196)	88 (3.464)	108 (4.252)	16 (0.629)	10 (0.394)	47 (1.851)	10 (0.394)	16 (0.629)	108 (4.252)	4 (0.157)	M10	88 (3.464)

* 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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