



Laboratory Centrifuges

Medium Precision Centrifuges Series AC66



- Direct driven centrifuges
- Up to 4 tested payloads
- Large payload size
- Large payload mass
- Large centripetal acceleration range
- Large access to payload platforms
- Large mechanical safety factor
- Safety shroud
- Sliprings
- Controller: Industrial type or ACUTROL[®]3000e
- Safety interlocks
- Data acquisition option
- Data transmission option
- Temperature chamber option
- Fluids access option
- In-flight video option
- Unbalance detection option
- Unbalance measurement option
- Energy regeneration option



	AC1120	SIMEX [®] ONE
Table top / Boom arm	Table top	Table top
Dimensional Data		
Horizontal platform nominal radius	0.25 m	0.25 m
Vertical platform radius	N/A	N/A
Centripetal Acceleration		
Maximum acceleration range	0 g to 65 g	0 g to 50 g
Load capacity	130 g x kg	250 g x kg
Acceleration accuracy	≤ ± 100 ppm*	≤ ± 100 ppm*
Time to reach full acceleration	≤ 5 sec	≤ 15 sec
Rate		
Rate accuracy (over 360°)	≤ ± 10 ppm	≤ ± 10 ppm
Rate stability (over 360°)	≤ ± 10 ppm	≤ ± 10 ppm
Payload		
Maximum tested payloads	2	4
Maximum mass	2 kg / payload	5 kg / payload
Maximum length	100 mm	150 mm
Maximum width	100 mm	150 mm
Maximum height	100 mm	150 mm
Payload Platform(s)		
Positions	Horizontal	Horizontal
Static flatness	≤ 0.5 TIR mm	≤ 0.5 TIR mm
Vibration magnitude	≤ 0.1 RMS g	≤ 0.1 RMS g
Drive System		
Rate controller	Industrial	Industrial
Power at maximum acceleration	0.05 kVA	0.10 kVA
Installed power	0.60 kVA	0.20 kVA
Mains supply	240 V – 50 or 60 Hz	240 V – 50 or 60 Hz
Customer slippings		
	Other configurations upon request	
Quantity	30	25
Current rating	1.7 A	2 A
Operating voltage	110 VAC / 200 VDC	150 VDC
Noise	50 RMS mΩ	50 RMS mΩ
Options		
Data acquisition	No	No
Data transmission	No	No
Temperature chamber	Yes	Yes
Fluids access	No	No
In-flight video	No	No
Unbalance detection	Yes	Yes
Unbalance measurement	No	No
Energy regeneration	Yes	Yes

*Without earth gravity and Coriolis acceleration



AC1135	AC66-120	AC66-200
Boom arm	Boom arm	Boom arm
0.35 m N/A	1.20 m 1.50 m	2.00 m 2.30 m
0 g to 200 g 1'000 g x kg ≤ ± 50 ppm* ≤ 100 sec	0 g to 200 g 3'000 g x kg ≤ ± 100 ppm* ≤ 120 sec	0 g to 200g 6'000 g x kg ≤ ± 100 ppm* ≤ 120 sec
≤ ± 1 ppm ≤ ± 1 ppm	≤ ± 2 ppm ≤ ± 2 ppm	≤ ± 2 ppm ≤ ± 2 ppm
2 5 kg / payload 150 mm 150 mm 150 mm	2 15 kg / payload 600 mm 600 mm 600 mm	2 30 kg / payload 600 mm 600 mm 600 mm
Horizontal ≤ 0.5 TIR mm ≤ 0.1 RMS g	Horizontal and, or vertical ≤ 0.5 TIR mm ≤ ± 0.1 % of actual acceleration	Horizontal and, or vertical ≤ 0.5 TIR mm ≤ ± 0.1 % of actual acceleration
ACUTROL®3000e 0.30 kVA 0.50 kVA 400 V – 50 or 60 Hz	ACUTROL®3000e 25 kVA 40 kVA 400 V – 50 or 60 Hz	ACUTROL®3000e 71 kVA 94 kVA 400 V – 50 or 60 Hz
Other configurations upon request		
25 2 A 150 VDC 50 RMS mΩ	25 2 A 150 VDC 10 RMS mΩ	25 2 A 150 VDC 10 RMS mΩ
No No Yes Yes Yes Yes Yes No Yes	Yes Yes Yes Yes Yes Yes Yes Yes Yes	Yes Yes Yes Yes Yes Yes Yes Yes Yes



Data acquisition option

Acquisition channels	Up to 48
Acquisition hardware	National Instruments PXI-SCXI
Acquisition software	Labview

Data transmission option

Fiber optic rotary joint	2 channels
Full duplex transmission rate	1 Gbit / sec
Transmission Interface	Ethernet

Temperature chamber option

Cooling system	CO ₂ or LN ₂ gas expansion or R23 mechanical refrigeration
Heating system	Electrical
Maximum temperature range	-55 to +120 °C
Temperature stability	≤ ± 1 °C
Controller	MINCON/32
RS 232 interface	Available
Payload table flatness	≤ 0.5 TIR mm
Maximum payload dimensions	Adapted to the centrifuge model
Maximum payload mass	Adapted to the centrifuge model load capacity

Fluids access option

Fluids	Hydraulics or water or air
Maximum channels	4
Maximum pressure	20 MPa
Maximum flow	10 l/min

The specifications identified in this data sheet are representative of standard systems. To satisfy customer specific requirements ACUTRONIC is able to design systems with specifications that are increased or decreased relative to standard systems.