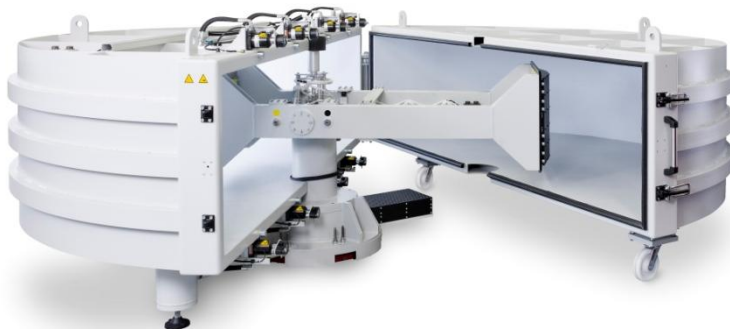


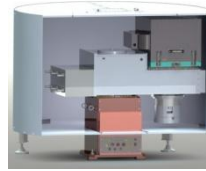


## Laboratory Centrifuges

# High Precision Centrifuges Series AC66-HP

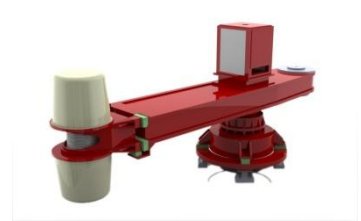
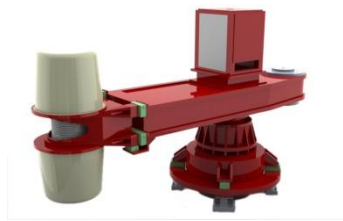


- Direct driven centrifuges
- Up to 2 tested payloads
- Large payload size
- Large payload mass
- Large centripetal acceleration range
- Large access to payload platforms
- Large mechanical safety factor
- Safety shroud
- Sliprings
- Controller: ACUTROL<sup>®</sup> 3000e
- Safety interlocks
- Data acquisition option
- Data transmission option
- Temperature chamber option
- Fluids access option
- Servoed satellite table option
- In-flight video option
- Unbalance detection option
- Unbalance measurement option
- Automatic balancing option
- Energy regeneration option
- Centrifuge chamber video survey option



	AC665	AC66-100-HP
Table top / Boom arm	Boom arm	Boom arm
<b>Dimensional Data</b>		
Horizontal platform nominal radius	0.50 m	
Vertical platform radius		1.00 m
<b>Centripetal Acceleration</b>		
Maximum acceleration range	0 g to 20g	0 g to 100 g
Load capacity	200 g x kg	2'000 g x kg
Acceleration accuracy	$\leq \pm 50$ ppm*	$\leq \pm 50$ ppm*
Time to reach full acceleration	$\leq 20$ sec	$\leq 10$ sec
<b>Rate</b>		
Rate accuracy (over 360°)	$\leq \pm 2$ ppm	$\leq \pm 2$ ppm
Rate stability (over 360°)	$\leq \pm 5$ ppm	$\leq \pm 5$ ppm
<b>Payload</b>		
Maximum tested payloads	1	2
Maximum mass	10 kg / payload	20 kg / payload
Maximum length	160 mm	400 mm
Maximum width	160 mm	400 mm
Maximum height	170 mm	400 mm
<b>Payload Platform(s)</b>		
Positions	Horizontal	Vertical
Static flatness	$\leq 0.05$ TIR mm	$\leq 0.2$ TIR mm
Vibration magnitude	$\leq 0.1$ RMS g	$\leq \pm 0.1\%$ of actual acceleration
<b>Drive System</b>		
Power at maximum acceleration	1.00 kVA	10 kVA
Installed power	2.00 kVA	40 kVA
Mains supply	400 V – 50 or 60 Hz	400 V – 50 or 60 Hz
<b>Customer sliprings</b>		
	Other configurations upon request	
Quantity	25	25
Current rating	2 A	2 A
Operating voltage	150 VDC	150 VDC
Noise	10 RMS mΩ	10 RMS mΩ
<b>Options</b>		
Data acquisition	Yes	Yes
Data transmission	Yes	Yes
Temperature chamber	Yes	No
Fluids access	Yes	Yes
Servoed satellite table	Yes	No
In-flight video	Yes	Yes
Unbalance detection	Yes	Yes
Unbalance measurement	No	No
Automatic balancing	No	No
Energy regeneration	Yes	Yes

\*Without earth gravity and Coriolis acceleration



AC66-200-HP	AC66-300-HP	AC66-400-HP
Boom arm	Boom arm	Boom arm
2.00 m	3.00 m	4.00 m
0 g to 50 g 3'000 g x kg ≤ ± 50 ppm* ≤ 50 sec	0 g to 75 g 4'500 g x kg ≤ ± 50 ppm* ≤ 75 sec	0 g to 100g 6'000 g x kg ≤ ± 50 ppm* ≤ 100 sec
≤ ± 1 ppm ≤ ± 2 ppm	≤ ± 1 ppm ≤ ± 2 ppm	≤ ± 1 ppm ≤ ± 2 ppm
1 60 kg 460 mm 460 mm 600 mm	1 60 kg 500 mm 500 mm 600 mm	1 60 kg 500 mm 500 mm 600 mm
Horizontal ≤ 0.2 TIR mm ≤ ± 0.1% of actual acceleration	Horizontal ≤ 0.2 TIR mm ≤ ± 0.1% of actual acceleration	Horizontal ≤ 0.2 TIR mm ≤ ± 0.1% of actual acceleration
20 kVA 35 kVA 400 V – 50 or 60 Hz	65 kVA 95 kVA 400 V – 50 or 60 Hz	175 kVA 220 kVA 400 V – 50 or 60 Hz
<b>Other configurations upon request</b>		
25 2 A 150 V DC 10 RMS mΩ	25 2 A 150 V DC 10 RMS mΩ	25 2 A 150 V DC 10 RMS mΩ
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
No	No	No
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes
Yes	Yes	Yes



### Data acquisition option

Acquisition channels	Up to 96
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 <sub>2</sub> or LN <sub>2</sub> 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

### Servoed satellite table option

Maximum satellite tables	1
Satellite table axis position	Vertical
Axis verticality accuracy	≤ ± 2 arc sec
Composite acceleration accuracy	≤ ± 20 but earth Coriolis acceleration
Rotation directions	CW and CCW
Satellite table rate	Independent or synchronous to the centrifuge rate
Rate accuracy (over 360°)	≤ ± 2 ppm
Rate stability (over 360°)	≤ ± 5 ppm
Position read out accuracy	≤ ± 1 arc sec
Payload table flatness	≤ 0.2 TIR mm
Maximum payload dimensions	Adapted to the centrifuge model
Maximum payload mass	Adapted to the centrifuge model load capacity
Drive system	AC brushless direct drive motor
Position / rate controller	ACUTROL <sup>®</sup> 3000e
Sliprings	Adapted to the centrifuge axis sliprings

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.