Servo Hydraulic Actuators AC–02–XXXX

BISS AC-02-XXXX Series, fatigue rated servo-hydraulic actuators are designed for static, quasi-static and dynamic testing. Controlled displacements, loads and velocities are achieved with the use of appropriate servo-valves, digital servo controls, gauges, transducers and a high pressure hydraulic power supply system. BISS actuators feature monolithic piston design, heat-treated and hard chrome plated piston rods.

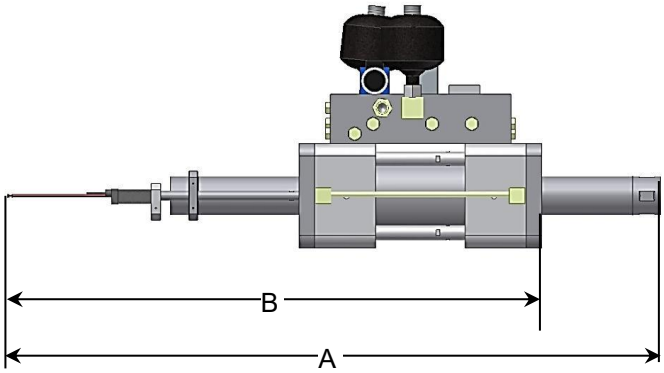
They facilitate industry standard internal metric threading for easy mounting and demounting of fixtures. Use of high quality imported seals, robust side load tolerances, low stick-slip effect and high side load bearing capacity make these actuators, a perfect solution to achieve balanced dynamic performance. Additionally hydraulic cushions on both sides of the actuators prevent from accidental damages.

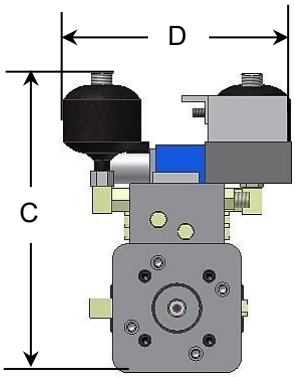
Standard features

- Static rated/Fatigue rated/Inertial reaction
- Actuators mounted in top / bottom cross head
- Single ended, double acting
- Double ended, double acting
- Monolithic piston design with equal area
- Hydraulic cushions at either end to prevent end caps
- Hydrostatic bearings
- Integrated single / dual manifold design
- Anti-rotation assembly
- Operating pressure: 210 – 28 0 bar
- Dynamic force rating from 1kN to 5000kN
- Stroke range 50-1000mm
- Low friction and wear resistant design
- Co-axial High Resolution LVDT / Digital Magnetostrictive Encoder
- Displacement accuracy ± 0.5% of readout
- Displacement resolution 0.001mm (optional resolutions available down to 0.00001mm)
- Operating frequency from 0.001 to 250Hz
- Peak velocity up to 7m/s (depends on the power pack and servo valve combination)
- Velocity limiting option on manifold
- Pressure and return line filters down to 2 microns
- Accumulators directly mounted on Actuator
- Contamination insensitive servo-valves
- Selection of single / dual stage servo valves from 4 to 500LPM to achieve required velocity and frequency
- Suitable to conduct monotonic,fatigue & fracture mechanics

Specifications and Dimensions

Model No.	Capacity (kN)		Stroke (mm)	Max Stroke (mm)	Dimension (mm)				Rod		Actuator Mounting
	Dynamic	Static			A	B	C	D	dia mm	Thread	PCD X No. TAP
AC-02-0105	10	15	50	+/-50	700	530	430	360	40	M27x2	85 x 4
AC-02-0110			100	+/-75	860	690	430	360		M27x2	85 x 4
AC-02-0115	25	35	50	+/-75	700	530	430	360		M16 x2	85 x 4
AC-02-0125			100	+/-75	860	690	430	360			85 x 4
AC-02-0150	50	65	100	+/-150	975	800	380	200	63	M27x2	120 x 4
AC-02-0210	100	130	160	+/-150	1250	1050	400	200			120 x 4
AC-02-0215	300	350	160	+/-150	1280	980	550	430	110	M50X2	230 x 8
AC-02-0225	500	650	100	+/-150	1190	960	550	430	125		230 x 8
AC-02-0250	1000	1250	160	+/-150	1310	1140	550	450	150		350 x 8
AC-02-0310	2000	2500	200	+/-150	1450	1120	580	580	180		510x 16
AC-02-0330	3000	3500	250	+/-150	1570	1180	580	580	210	M75X2	520x16





Applications

Universal Testing Machines
- Tensile compression & 3-point bend
- Low cycle fatigue
- High cycle fatigue
- Fracture Toughness
- Fatigue Crack Growth
- Rebar & Concrete Testing

Components Testing
- Damper Testing
- Spring Testing
- Elastomer Component Testing
- Engine Mounts Testing
- Suspension Testing

Shake tables & Structural
- Single & Dual Axis Shake Tables
- Multi Axes Shake Tables
- Single & Multi Axes Structural

Special Purpose and Customized
- Friction Stir welding
- Bi-Axial Testing
- Hot Press / Spark Plasma Sintering

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