

Model 243 Hydraulic Actuators

The Model 243 Hydraulic Actuator is suitable for applications that do not require a fatigue rated cylinder. This double acting, single ended actuator provides an economical solution for quasi-static applications requiring servo-control.



Typical Applications

- Static or low frequency (3 to 4 Hz) testing of aero or civil engineering structures.
- Low velocity, ultimate strength tests on components.

Standard Features

- Single ended piston and rod provides long strokes in a compact actuator.
- High quality, non-metallic bearings provide long life and resist rod/bearing galling.
- Internal Temposonic™ displacement transducer provides the signal for position feedback in a closed loop servo-control application.

- The standard 243 Actuators include a swivel base for easy mounting and to reduce the possibility of excessive side loads. Models 243.17 through 243.70 use the 249 Series Swivels while the 243.80 and 243.90 use 243 Pivots

- Lifting shackles and rubber rest pads are included for easy installation and storage.

243 Actuator Options

- Stroke Lengths – The 243 Actuator is available in standard stroke lengths of 250 mm (10 in) and 500mm (20 in). Other lengths are available as special order.

243 Actuator Specifications

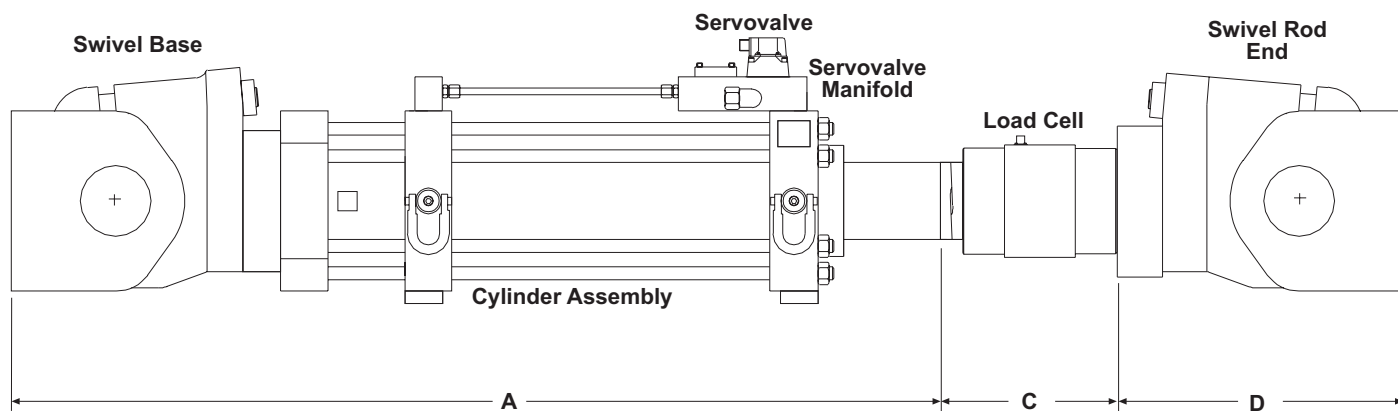
Model	Tension Force		Compression Force		Rod Thread		Hydraulic Connection
	KN	lbs	KN	lbs	Metric	English	
243.17T	29	6,600	63	14,200	M27 x 2	1" - 14	Pressure & Return – Pressure and return line connections depend on the servovalve. Configurations with Series 252 Servovalve Manifolds have JIC –16 fittings. Drain – All 243 Actuators have a JIC –6 drain connection.
243.20T	67	15,000	107	24,000	M27 x 2	1" - 14	
243.25T	99	22,000	162	37,000	M27 x 2	1" - 14	
243.30T	162	36,000	254	57,000	M36 x 2	1 1/2" - 12	
243.35T	240	54,000	365	82,000	M36 x 2	1 1/2" - 12	
243.40T	291	66,000	496	112,000	M52 x 2	2" - 12	
243.45T	445	100,000	649	146,000	M52 x 2	2" - 12	
243.60T	648	146,000	1013	228,000	M76 x 2	3" - 12	
243.70T	961	216,000	1459	328,000	M76 x 2	3" - 12	
243.80T	1334	300,000	1984	446,000	M125 x 4	4 1/2" - 8	
243.90T	2002	450,000	2669	600,000	M150 x 4	6" - 12	

All Specifications are subject to change. Please contact MTS for specifications critical to your application.

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Typical configurations for component or structural testing applications

Model	Servo valve	Force Transducer	Swivels	Spiral Washers
243.17T	252.2X (qty 1)	661.20E/F-02	249.20	N/R
243.20T	252.2X (qty 1)	661.20E/F-03	249.23	601.11-11
243.25T	252.2X (qty 1)	661.20E/F-03	249.23	601.11-11
243.30T	252.2X (qty 1 or 2), 252.3X (qty 1)	661.22C/D-01	249.23	601.11-19
243.35T	252.2X (qty 1 or 2), 252.3X (qty 1)	661.22C/D-01	234.32	601.11-19
243.40T	252.2X (qty 1 or 2), 252.3X (qty 1)	661.23E/F-01	249.32	601.11-13
243.45T	252.2X (qty 1 or 2), 252.3X (qty 1)	661.23E/F-01	249.41	601.11-13
243.60T	252.2X (qty 1 or 2), 252.3X (qty 1)	661.31E/F-01	249.42	601.11-15
243.70T	252.2X (qty 1 or 2), 252.3X (qty 1)	661.31E/F-01	249.51	601.11-15
243.80T	252.2X (qty 1 or 2), 252.3X (qty 1)	661.36E/F-01	243.80	
243.90T	252.2X (qty 1 or 2), 252.3X (qty 1)	661.36E/F-01	243.90	



Actuator Assembly Dimensions

Model	Stroke		Cylinder w/ Swivel Base *(A)		Load Cell & Mounting Hardware Length **(C)		Swivel Head Length **(D)		
	mm	in	mm	in	mm	in	mm	in	
243.17T	250	10	930	36.6	145	5.7	181	7.12	
	500	20	1311	51.6					
243.20T	250	10	996	39.2	145	5.7	264	10.4	
	500	20	1377	54.2					
243.25T	250	10	1001	39.4	145	5.7	264	10.4	
	500	20	1382	54.4					
243.30T	250	10	1008	39.7	267	10.5	264	10.4	
	500	20	1388	54.7					
243.35T	250	10	1115	43.9	267	10.5	356	14	
	500	20	1496	58.9					
243.40T	250	10	1118	44.0	267	10.5	356	14	
	500	20	1499	59.0					
243.45T	250	10	1232	48.5	301	11.9	406	16	
	500	20	1613	63.5					
243.60T	250	10	1422	56.0	489	19.25	457	18	
	500	20	1803	71.0					
243.70T	250	10	1562	61.5	457	18.0	546	21.5	
	500	20	1943	76.5					
243.80T	Contact MTS for specific dimensional information								
243.90T	Contact MTS for specific dimensional information								

* Dimensions are lengths with the actuator positioned at mid-stroke.

** Dimensions include spiral washers or other mounting hardware for attachment of the load cell and swivel head assembly.

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243 Actuator Order Information

A complete servo-actuator assembly typically includes the actuator, servovalve, load cell, and swivels. Servovalves, load cells, rod end swivels, and attachment kits for an actuator assembly are selected separately from other sections of the catalog.

See [MTS Model 243 Product Specification number 100-016-952](#) for additional information.

243 Actuator

Capacity

- 243.17 (29kN/6,600 lbs x 63kN/14,200 lbs)
- 243.20 (67kN/15,000 lbs x 107kN/24,000 lbs)
- 243.25 (99kN/22,000 lbs x 162kN/37,000 lbs)
- 243.30 (162kN/36,000 lbs x 254kN/57,000 lbs)
- 243.35 (240kN/54,000 lbs x 365kN/82,000 lbs)
- 243.40 (291kN/66,000 lbs x 496kN/112,000 lbs)
- 243.45 (445kN/100,000 lbs x 649kN/146,000 lbs)
- 243.60 (648kN/146,000 lbs x 1013kN/228,000 lbs)
- 243.70 (961kN/216,000 lbs x 1459kN/328,000 lbs)
- 243.80 (1334kN/300,000 lbs x 1984kN/446,000 lbs)
- 243.90 (2002kN/450,000 lbs x 2669kN/600,000 lbs)

Displacement

- 250 mm (10 in) Displacement
- 500 mm (20 in) Displacement

Rod Thread

- English
- Metric

Base

- 249 or 243 Swivel Base (Does not include the 249 Rod End Swivel)

Servovalve Manifold

- 252.2X Dual Servovalve Manifold (Does not include the valve)
- 252.3X Servovalve Manifold (Does not include the valve)