

244 型液压作动器

Model 244 Hydraulic Actuators

MTS 244 型液压作动器是伺服液压控制应用中最畅销的线性高性能作动器。该作动器具有耐疲劳且多年无故障运行的优点。MTS 工程师采用了专利材料和工艺，最大限度地减少摩擦力同时，最大程度地提高了可靠性和耐磨性。

Series 244 Hydraulic Actuators are our most popular linear, high performance actuator for servohydraulic control applications. This actuator is fatigue rated and designed for years of trouble free operation. MTS engineers use proprietary materials and processes to minimize friction while maximizing reliability and wear resistance.



典型应用

Typical Applications

- 零件的高动态耐疲劳测试。
- Highly dynamic fatigue testing of components.
- 结构耐疲劳测试
- Structural fatigue tests.
- 车辆耐久性测试
- Vehicle durability tests.

标准特点

Standard Features

- 额定疲劳极限值可确保在所需应用条件下多年可靠地运行。
- Fatigue rated design for years of reliable service in demanding applications.
- 双端一体式活塞杆的设计兼顾了动态平衡性能和较高的侧载性能。
- Double ended, one piece piston-rod design combines balanced dynamic performance with higher side-loading capacity.
- 采用了 PTFE 高压密封件，从而确保在高频小位移应用中的低摩擦和预期寿命。低压密封提供了二次密封并通过活塞杆的擦刮尽量减少了轴承和密封件的污染。
- PTFE high pressure seals are used for low friction and exceptional life in high frequency, small displacement applications. A low pressure wiper provides a secondary seal and minimizes contamination of the bearing and seals by scraping the rod.
- 在高速运行中，高聚合物轴承防止了活塞杆和轴承的磨损。
- Bonded polymer bearings resist rod and bearing wear during high velocity operation.
- 内部 LVDT 为在闭环伺服控制应用中提供了位置反馈的位移信号。
- Internal LVDT provides the displacement signal for position feedback in a closed loop servocontrol application.

- 液压缓冲垫可起到在全行程高速运行中起到对端盖的保护作用。
- Hydraulic cushions protect the end caps during full stroke, high velocity operation.

244型作动器选项

244 Actuator Options

行程长度 - 244 型作动器的标准行程为 150mm (6 英寸) 和 250mm (10 英寸)，也可选择其他非标行程。

Stroke Lengths - The 244 Actuator is available in standard stroke lengths of 150mm (6 in.) and 250mm (10 in.). Other non-standard strokes are also available.

安装 - 244 型作动器通常配有可选 249 型旋转底座 (见作动器附件部分)。

Mounting - The 244 Actuator is most commonly configured with the optional 249 Swivel Base (see actuator accessory section).

当需要刚性安装到框架或反力支架上时，244 型也可配置一个托架底座。当使用此安装选项时，应确定作动器的侧向加载所造成的可能影响，这是非常重要的。

The 244 can also be configured with a pedestal base for rigid mounting to a frame or reaction floor. It is important to determine the possible effects of side loading of the actuator when using this mounting option.

其他非标选项包括：

Other non-standard options include:

- 确保在高侧载条件下连续高速运行的静压轴承。
- Hydrostatic bearings for continuous high speed operation with high side load conditions.
- 耳轴和万向节安装装置，适用于运动范围受限的应用。
- Trunnion and gimbal mounting fixtures for applications requiring a restricted range of motion.

244 Actuator Specifications

244型作动器规格

型号 Model	额定力 Force Rating		行程 Stroke		杆螺纹 Rod Threads		液压连接 Hydraulic Connection
	KN	lbs	mm 英寸	Inches	公制 Metric	英制 English	
244.11	15	3,300	150 250	6 10	M12x1.25	1/2"-20	压力 & 回油 - 压力和回油线的连接取决于伺服阀。带有 252 伺服阀阀块配置有 SAE - 16 接头。而 256 系列的伺服阀阀块配有 SAE-20 接头。 Pressure & Return - Pressure and return line connections depend on the servovalve. Configurations with Series 252 Servovalve Manifolds have SAE -16 fittings. Series 256 Servovalve Manifolds have SAE -20 fittings. 卸油 - 所有 244 型作动器都有一个 SAE-6 卸油接头。 Drain - All 244 Actuators have a SAE -6 drain connection.
244.12	25	5,500	150 250	6 10	M12x1.25	1/2"-20	
244.21	50	11,000	150 250	6 10	M27x2	1"-14	
244.22	100	22,000	150 250	6 10	M27x2	1"-14	
244.23	150	35,000	150 250	6 10	M27x2	1"-14	
244.31	250	55,000	150 250	6 10	M36x2	1 1/2"-12	
244.41	500	110,000	150 250	6 10	M52x2	2"-12	
244.51	1000	220,000	150 250	6 10	M76x2	3"-12	

规格若有变更，恕不另行通知。具体应用，请联系 MTS。

Specifications subject to change without notice. Please contact MTS for specifications critical to your application.

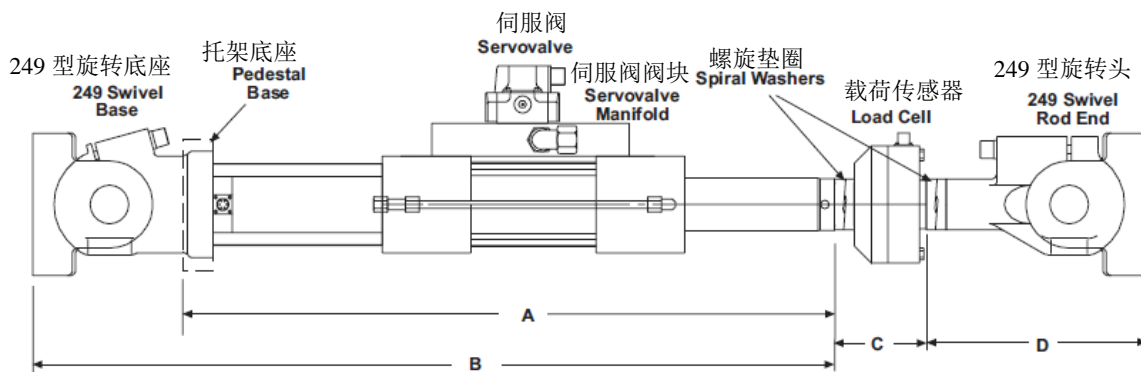
244 型液压作动器

Model 244 Hydraulic Actuators

零件或结构测试应用的典型配置

Typical Configurations for Component or Structural Testing Applications

型号 Model	伺服阀 Servovalve	载荷传感器 Load Cell	旋转架 Swivel	螺旋垫圈 Spiral Washers
244.11	252.2X (qty 1 or 2), 252.3X (qty 1)	661.19E/F-03	249.12	可选项 Optional
244.12	252.2X (qty 1 or 2), 252.3X (qty 1)	661.19E/F-04	249.12	可选项 Optional
244.21	252.2X (qty 1 or 2), 252.3X (qty 1)	661.20E/F-02	249.20	可选项 Optional
244.22	252.2X (qty 1 or 2), 252.3X (qty 1)	661.20E/F-03	249.23	601.11-11
244.23	252.2X (qty 1 or 2), 252.3X (qty 1)	661.22C/D-01	249.23	601.11-11
244.31	252.2X (qty 1 or 2), 252.3X (qty 1), 256 (qty 1)	661.22C/D-01	249.32	601.11-19
244.41	252.2X (qty 1 or 2), 252.3X (qty 1), 256 (qty 1)	661.23E/F-01	249.41	601.11-13
244.51	252.2X (qty 1 or 2), 252.3X (qty 1), 256 (qty 1)	661.31E/F-01	249.51	601.11-15



244 型执行器组件尺寸 244 Actuator Assembly Dimensions

型号 Model	行程 Stroke	带有托架底座的长度 Length with Pedestal Base **(A)		带有旋转底座的长度 Length with Swivel Base **(B)		测力传感器 Load Cell **(C)		旋转头 Rod End Swivel **(D)			
		mm 英寸	in 英寸	mm 英寸	in 英寸	mm 英寸	in 英寸	mm 英寸	in 英寸		
244.11	150	6	30.66	779	30.66	868	34.16	66.5	2.62	120.7	4.75
	250	10	40.66	1033	40.66	1122	44.16				
244.12	150	6	30.66	779	30.66	868	34.16	66.5	2.62	120.7	4.75
	250	10	40.66	1033	40.66	1122	44.16				
244.21	150	6	30.61	777	30.61	914	35.98	95.3	3.75	196.9	7.75
	250	10	40.61	1031	40.61	1168	45.98				
244.22	150	6	30.00	762	30.00	956	37.64	121.9	4.8	289.6	11.4
	250	10	40.00	1016	40.00	1210	47.64				
244.23	150	6	29.96	761	29.96	955	37.59	229.4	9.03	289.6	11.4
	250	10	39.96	1015	39.96	1209	47.59				
244.31	150	6	31.16	791	31.16	1045	41.16	235.0	9.25	387.4	15.25
	250	10	41.16	1045	41.16	1299	51.16				
244.41	150	6	32.85	834	32.85	1177	46.35	235.0	9.25	504.7	19.87
	250	10	42.85	1088	42.85	1431	56.35				
244.51	150	6	36.87	936	36.87	1406	55.37	350.5	13.8	699.8	27.55
	250	10	46.87	1190	46.87	1660	65.37				

** 表示位于中间行程处执行器的长度尺寸。 ** Dimensions are lengths with the actuator positioned at mid-stroke.

*** 表示螺旋式预加载垫圈尺寸，适用于 100kN 或更大作动器。Dimension includes spiral pre-load washers for actuators 100kN and larger. 规格若有变更，恕不另行通知。具体应用，请联系 MTS。

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Model 244 Hydraulic Actuators

244型作动器的其他信息

244 Actuator Order Information

一套完整的伺服作动器组件包括作动器、伺服阀、载荷传感器以及旋转体等。载荷传感器和旋转头需要一个连接套件，以用于将这些零件连接到作动器上。

A complete servo-actuator assembly includes the actuator, servovalve, load cell, and swivels. The load cell and rod end swivel require attachment kits for connecting these components to the actuator.

用于作动器组件的伺服阀、载荷传感器、旋转头以及连接套件都可通过目录册的其他章节来选择。

Servovalves, load cells, rod end swivels, and attachment kits for an actuator assembly are selected separately from other section of the catalog.

更多信息，请参考编号为 100-016-993 的 MTS 244 型产品规格书。

See MTS Model 244 Product Specification number 100-016-993 for more information.

244型作动器

244 Actuator

性能

Capacity

- 244.11 15kN (3,300 lbs)
- 244.12 25 kN (5,500 lbs)
- 244.21 50 kN (11,000 lbs)
- 244.22 100 kN (22,000 lbs)
- 244.23 150 kN (35,000 lbs)
- 244.31 250 kN (55,000 lbs)
- 244.41 500 kN (110,000 lbs)
- 244.51 1000 kN (220,000 lbs)

行程

Displacement

- 150 mm (6 英寸)
- 150 mm (6 in)
- 250 mm (10 英寸)
- 250 mm (10 in)
- 500 mm (20 英寸)
- 500 mm (20 in)

杆螺纹

Rod Thread

- 英制
- English
- 公制
- Metric

底座

Base

- 249 型旋转底座 (不包含 249 型旋转头)
- 249 Swivel Base (Does not include the 249 Rod End Swivel)
- 托架底座
- Pedestal Base

伺服阀阀块

Servovalve Manifold

- 252.2 x 两级伺服阀歧管 (不包括阀)
- 252.2X Two Stage Servovalve Manifold (Does not include the valve)
- 252.3 x 两级伺服阀阀块 (不包括阀)
- 252.3X Two Stage Servovalve Manifold (Does not include the valve)
- 256.0 x 两级伺服阀阀块 (不包括阀)
- 256.0X Three Stage Servovalve Manifold (Does not include the valve)