电动缸模组规格索引

Electric cylinder linear actuator specification index

电动缸轻载模组
Electric cylinder light load linear actuator

使用环境 Environment	传动方式 Drive method	规格 Specifications	电机额定功率 Rated power of motor	电缸内径 Inside dia	重复定位精度 Repeated positioning accuracy	螺杆规格(C7级) Ball screw specification		最高速度*1 Maximum speed (mm/s)	行程 Stroke(mm)
						外径 Outer diameter(mm)	导程 Lead(mm)		
无尘环境 Clean room	滚珠螺杆 Ball screw	TPA-ESR-25	100W	25	±0.02	10	2	100	10~400
		TPA-ESR-40	400W	40	±0.02	12	5	250	10~600
							10	500	
		TPA-ESR-50	400W	50	±0.02	16	5	250	10~800
							10	500	
		TPA-ESR-63	750W	63	±0.02	20	5	250	10~1000
							10	500	
		TPA-ESR-80	750W	80	±0.02	25	5	250	10~1500
							10	500	
		TPA-ESR-100	750W	100	±0.02	32	5	250	10~2000
							10	500	

电动缸中载模组
Medium-load electric cylinder linear actuator

使用环境 Environment	传动方式 Drive method	规格 Specifications	电机额定功率 Rated power of motor	电缸内径 Inside dia	重复定位精度 Repeated positioning accuracy	螺杆规格(C7级) Ball screw specification		最高速度*1 Maximum speed (mm/s)	行程 Stroke(mm)
						外径 Outer diameter(mm)	导程 Lead(mm)		
无尘环境 Clean room	滚珠螺杆 Ball screw	TPA-EMR-80	750W	80	±0.02	32	5	250	100~1400
			1000W				10	500	
			1500W						
		TPA-EMR-100	750W	100	±0.02	40	5	250	100~1500
			1000W				10	500	
			1500W						
		TPA-EMR-125	750W	125	±0.02	50	5	250	100~1600
			1500W				10	500	
			2000W						

电动缸重载模组
Heavy-duty electric cylinder linear actuator

使用环境 Environment	传动方式 Drive method	规格 Specifications	电机额定功率 Rated power of motor	电缸内径 Inside dia	重复定位精度 Repeated positioning accuracy	螺杆规格(C7级) Ball screw specification		最高速度*1 Maximum speed (mm/s)	行程 Stroke(mm)
						外径 Outer diameter(mm)	导程 Lead(mm)		
无尘环境 Clean room	滚珠螺杆 Ball screw	TPA-EHR-140	2000W	140	±0.02	63	16	800	100~2000
			3000W				20	1000	
			4000W						
		TPA-EHR-160	3000W	160	±0.02	80	16	800	100~2000
			4000W				20	1000	
			5000W						
		TPA-EHR-180	2900W(1500)	180	±0.02	100	16	250	100~2000
			4400W(1500)				20	500	
			5500W(1500)						

*1：最高速度是以伺服马达最高转速3000RPM为基准。
The highest speed is based on the maximum servo motor's rpm(3000).

知识小课堂 Knowledge classroom

电动缸创新特点：Innovative features of electric cylinder:

1、电缸的主要竞品是气缸和液压缸 The main competing products of electric cylinders are cylinders and hydraulic cylinders
气缸使用在精密的自动化工业中，产品负荷小，多为几公斤或者几百公斤不等。气缸采用气泵充气在放气，实现位移。
这个过程中会产生工业噪音，后期气管老化，会造成气体泄漏，影响工作效率。
液压缸应用在大推力的使用环境，几顿或者几十吨的使用环境中。其中液压缸使用到后期会造成液压油的外泄，造成工件或者工作环境的污染。造成不必要的经济损失，和后期维护的麻烦。
电缸可以使用在精密的自动化工业中，又可以使用在大推力的使用环境。其中电缸使用的是伺服电机和滚珠丝杆，精度和稳定性相当于气缸和液压缸有着明显提升。除去一些易损件之外。几乎不影响电缸使用。

Cylinder is used in precision automation industry, and the product load is small, ranging from several kilograms to hundreds of kilograms. The cylinder is inflated and deflated by air pump to realize displacement. In this process, industrial noise will be produced, and the trachea will age later, which will cause gas leakage and affect work efficiency.
The hydraulic cylinder is used in the use environment with large thrust and several tons or dozens of tons. Among them, the use of hydraulic cylinder in the later stage will cause the leakage of hydraulic oil and the pollution of workpiece or working environment. Causing unnecessary economic losses and trouble in later maintenance.
Electric cylinders can be used in precision automation industry and in high thrust environment. Among them, the electric cylinder uses servo motor and ball screw, and the accuracy and stability are equivalent to those of the cylinder and hydraulic cylinder, which has been obviously improved. Except for some wearing parts. Hardly affect that use of the electric cylinder.

2、电缸的使用便携性 Portable use of electric cylinder
电缸采用的是伺服电机控制。只需设置PLC，连接线缆。即可完成控制。而且后期需要改变运动行程。只需要修改PLC中参数来完成。做到想到哪里，就到哪里。

The electric cylinder is controlled by servo motor. Just set up PLC and connect cables. Control can be completed. And later need to change the movement schedule. Only need to modify the parameters in PLC to complete. Go wherever you think.

3、电缸的配件多样性 Diversity of accessories for electric cylinders
电缸除去可以使用气缸一致的标准件之外（前后法兰/关节轴承/单双耳）。还可以根据客户的要求，制作非标的配件。甚至可以增加光栅尺来加强电缸的精度。

Electric cylinders can use standard parts consistent with cylinders (front and rear flanges/joint bearings/single ears). We can also make non-standard accessories according to customers' requirements. You can even increase the grating ruler to enhance the accuracy of the electric cylinder.

电动缸技术优势 Technical advantages of electric cylinder

1、电动缸的高传动效率 High transmission efficiency of electric cylinder
滚珠螺杆是滚动摩擦，传动效率大约是90~96%，而且相对于气缸的气泵，滚珠螺杆更可控。精度更精准。

The ball screw is rolling friction, the transmission efficiency is about 90~96%, and it is more controllable than the air pump of the cylinder. More accurate.

2、电动缸的后期维护成本 Late maintenance cost of electric cylinder
电动缸可以在比较复杂的环境下进行工作，操作维护也比较简单，只需要一个定期的注脂润滑就可以了。对我们的电动缸来讲不需要什么易损件进行更换的。这样，液压系统和气压系统相比，它其实减少了我们大量的售后服务的一个成本。

The electric cylinder can work in a complicated environment, and its operation and maintenance are relatively simple, and it only needs a regular grease injection lubrication. We don't need any wearing parts to replace our electric cylinder. In this way, compared with the pneumatic system, the hydraulic system actually reduces the cost of our after-sales service.

3、电动缸的使用周期更长 The service life of electric cylinders is longer
电动缸在产品的整个使用寿命内具有可重复、可复制的性能，其在额定负载下可以达到几百个周期，容易预测寿命；而液压缸的寿命取决于设计和密封磨损情况，在环境恶劣的情况下，它的使用寿命会大大减少。

The electric cylinder has repeatable and reproducible performance in the whole service life of the product, which can reach hundreds of cycles under rated load, and it is easy to predict the service life; The service life of the hydraulic cylinder depends on the design and seal wear, and its service life will be greatly reduced in the harsh environment.

4、省去了传统气缸的管路和电磁阀，没有了漏气和维护的烦恼 The pipeline and solenoid valve of the traditional cylinder are omitted, and there is no trouble of air leakage and maintenance.
气缸运行消耗的是压缩空气。在压缩空气输送过程中，经过节流阀、管道弯头等阻性元件后，会有一定的压力损失。另外设备普遍存在接头、气缸或电磁阀处的空气泄露。尽管安装时的泄漏量标准低于2%，但很多工厂的泄漏量高达3%~5%。泄露也将造成一定的压力损失。而电缸采用电机与控制器，在能量耗损上有了很大的改善。

Cylinder operation consumes compressed air. In the process of compressed air transportation, there will be a certain pressure loss after passing through resistive elements such as throttle valve and pipeline bend. In addition, air leakage at joints, cylinders or solenoid valves is common in equipment. Although the leakage standard during installation is lower than 2%, the leakage of many factories is as high as 3% ~ 5%. Leakage will also cause some pressure loss. The electric cylinder adopts motor and controller, which greatly improves the energy consumption.