

HPY Series Hydraulic Actuator
HPY系列液动执行器



无锡福斯拓科科技有限公司
WUXI FORCE & TORQUE TECHNOLOGY CO., LTD.



无锡福斯拓科科技有限公司是一家深受国内外客户及用户认可的气动阀门执行器专业生产厂家。凭借20年的行业经验，福斯拓科致力于为客户提供世界一流的产品和服务。

福斯拓科产品主要包括气动阀门执行器、气动阀门附件（手轮机构、限位开关，电磁阀，过滤减压阀，电气定位器等控制附件）及气动球阀、气动蝶阀等成套阀门产品。

气动执行器产品主要包括不锈钢系列气动执行器；RT系列齿轮齿条气动执行器；HPY系列拨叉式气动执行器、拨叉式液动执行器；HPL系列直行程气

动执行器、直行程液动执行器。执行器缸径从 $\phi 32 \sim \phi 1000\text{mm}$ 近百个规格，扭矩范围覆盖 $5\text{Nm} \sim 300000\text{Nm}$ 。

福斯拓科秉承“专注、专业、卓越”的经营理念，将竭诚为新老客户提供更好的技术，完善的产品和优质的服务。

Wuxi Force & Torque Technology Co., Ltd. is a well recognized world leader and reliable manufacturer for pneumatic actuator and pneumatic valve in China. With over 20 years innovation and extensive industry experience, Force & Torque provides first class products and services for customers worldwide.

Force & Torque supplies pneumatic actuators and valve control accessories such as manual override, limit switch box, solenoid valve, filter regulator, valve position feedback device etc.. Additionally, Force & Torque provides professional valve automation solutions like pneumatic ball valve, pneumatic butterfly valve etc. for diverse applications.

The wide variety of actuators include stainless steel pneumatic actuator, RT series rack and pinion actuator, HPY series scotch yoke pneumatic actuator and scotch yoke hydraulic actuator, HPL series linear pneumatic actuator and linear hydraulic actuator. Actuator ranges from $\phi 32$ to $\phi 1000$, torque covers from 5Nm to 300000Nm .

Focusing on the mindset 'Absorbed, Professional, Excellent', Wuxi Force & Torque devotes to serve customers with more excellent technology, innovative products and best service.

打造执行器及阀门附件专业供应商

The Professional Provider of Actuators



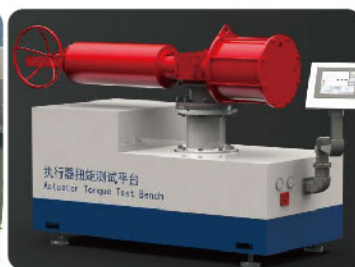
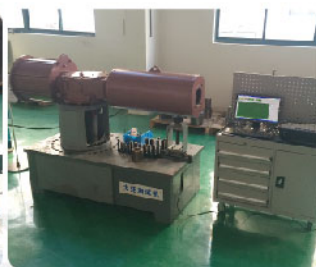
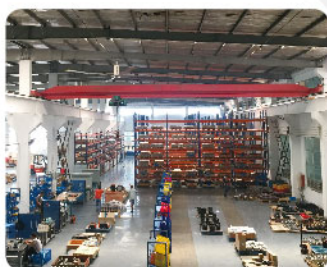
互赢 互利 共存

Mutually Beneficial Relationships



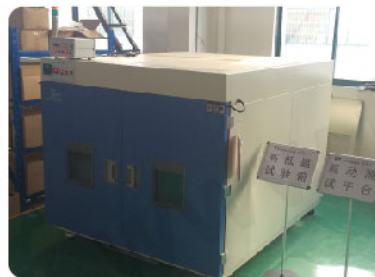
专注 专业 卓越
Focus On Professionalism

成为您的最佳合作伙伴
To Be Your Best Partner



二十年的行业经验 一站式的产品和服务

Twenty years experience "one-stop" goods and services



Structural Features

结构特点

Design and Construction

设计和结构

HPY series pneumatic and hydraulic actuators provide global customers the latest in valve actuation design. It is a highly unique and reliable means of operating ball, butterfly or plug valves along with 90 degree rotating mechanisms.

HPY系列执行器采用最新的设计方案，是球阀，蝶阀，旋塞阀和其他90度旋转机械装置安全的驱动方法。

Robust yet Lightweight Design

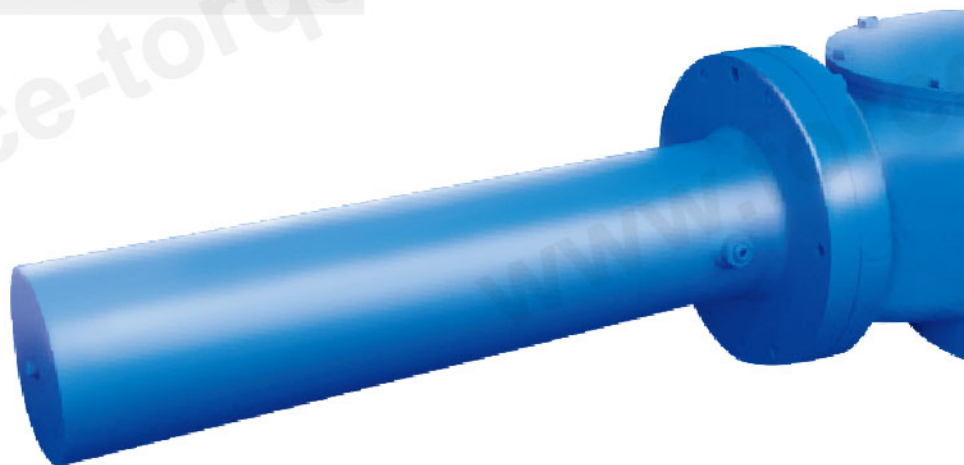
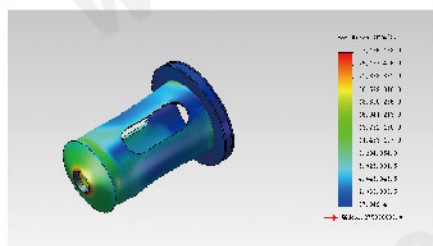
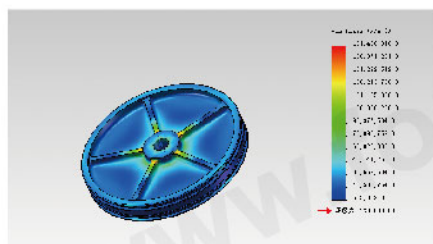
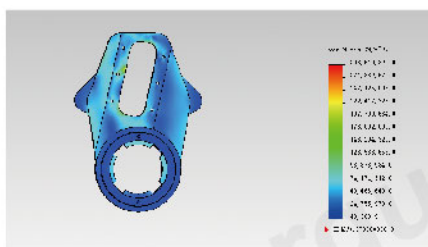
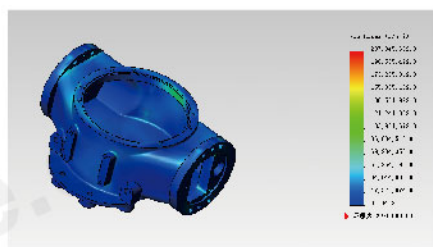
高强度，精小型设计

Totally enclosed weatherproof centrebody fabricated in carbon steel or ductile iron provides an excellent strength to weight ratio.

The mechanism of piston and yoke has an advantage torque output.

全天候防护性中心箱体模块采用碳钢或者球铁材质，确保了足够的强度。

活塞式及传动拨叉式提供了最佳的扭矩输出特性。



Modular Design

模块化设计

HPY series actuators share a modular construction design. The centre body is available in six sizes. A pneumatic or hydraulic cylinder can be attached to either or both sides. A spring cartridge can also be fitted to either side for ESD (emergency shut down) applications. Modular construction and stocking of components facilitates quick delivery times.

HPY系列执行器采用了模块化设计。中间箱体有6个规格，气缸或者液压缸可以单面安装也可以双面安装。需要紧急切断的工况，可以在箱体一侧安装一个弹簧复位模块。模块化设计的部件具有可替换，可仓储等特性，可以满足较短的供货周期。

Manual Override Options

手动功能

独立的侧向手动装置是阀门或者执行器非常重要的一个部件。福斯拓科有各种手动方式满足不同的需求。手动方式有丝杠、齿轮、离合式齿轮，液压手动等方案。

A dependable manual override facility is an important part in many valve/actuator applications. Force & Torque has a variety of override options available to meet virtually any requirement.

Available options include open or enclosed screws in both gear reducer and declutch override gear box, as well as a number of hydraulic override solutions.



Extensive Product Range

产品拓展

Force & Torque offers the most extensive line of fluid power valve actuators. Products include low and high pressure pneumatic, hydraulic and pneumatic-hydraulic actuators.

福斯拓科可以提供多种驱动方式的阀门执行器，包括低气压，高气压气动、液动和气液联动等。

Minimum Maintenance

免维护工作

Every HPY actuator is built to provide long and efficient service with minimum maintenance. The design, engineering and materials used in their construction ensure optimum performance even in the harshest environments.

每一个HYP执行器都可以在免维护情况下提供长期高效的工作。

Complete Control Solutions

各种控制方案

Air Control component packages are a part of any actuator/valve installation.

Force & Torque has extensive experience in the design and assembly of all types of air control systems to satisfy any customer requirement for on/off, control or ESD service. Packages can be mounted on a panel or in a cabinet and mounted either on the actuator or at a remote location.

气动控制系统是任何阀门和执行器的一个重要组成部分。福斯拓科在气路控制方面具有丰富的经验，满足客户有关开关、调节和紧急切断等各方面的要求。气路系统可以安装在一个面板或者控制箱内，可以安装在执行器上或者单独放置。

Performance Characteristics

性能特点

☞ The pinion full conform to the latest standards of ISO5211, NAMUR. The dimensions can be customized and the stainless steel is available.

A Position indicator acc. to NAMUR is convenient for mounting accessories such as Limit Switch box, Positioner and so on.

输出轴同时符合NAMUR、ISO5211标准。也可按客户要求尺寸定制。

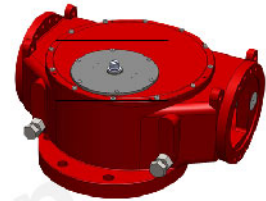
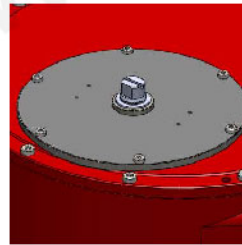
NAMUR 标准指示器便于安装位置开关、定位器等附件。



The different materials rubber and PFA encapsulated O-rings can be used in a wider range of temperature and condition.

The double O-ring and bearing design ensures the stability and dependability of the cylinder modular.

各种材质橡胶密封圈及PFA包覆密封圈满足各种工况使用。双O形密封圈及导向环设计，确保气缸模块的稳定性及可靠性。

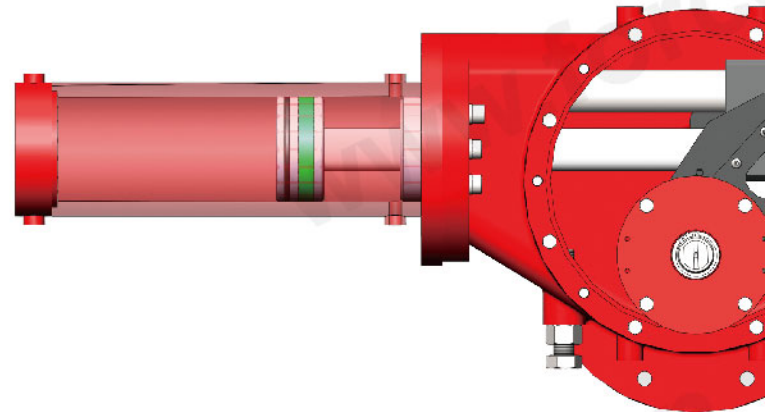


☞ Operating Ranges HPY actuators have torque outputs for spring-return models in excess of 110,000 Nm and double-acting models in excess of 240,000 Nm.

Operating pressures are: 3~10Bar

HPY单作用执行器可以提供超过110,000Nm，双作用可以提供超过300,000Nm的力矩输出。

工作压力: 3~10巴



☞ Operating temperatures:

Standard -20°C to +80°C.

Optional trims include:

High Temperature -15°C to +150°C

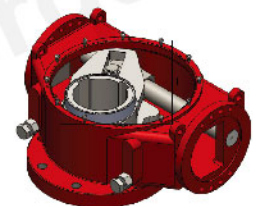
Low Temperature -40°C to +80°C

工作温度:

标准 -20°C ~ +80°C

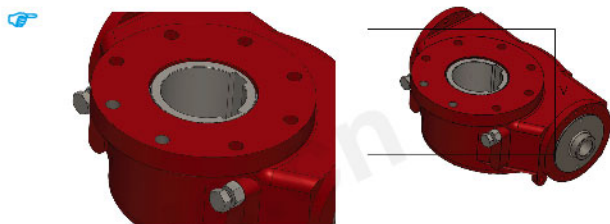
高温 -15°C to +150°C

低温 -40°C to +80°C



- ☛ Made from low friction, long-life compound material, to avoid the direct contact between metals. The maintenance and replacement are easy and convenient.

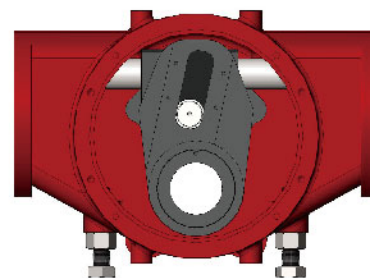
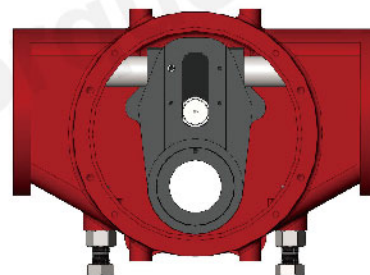
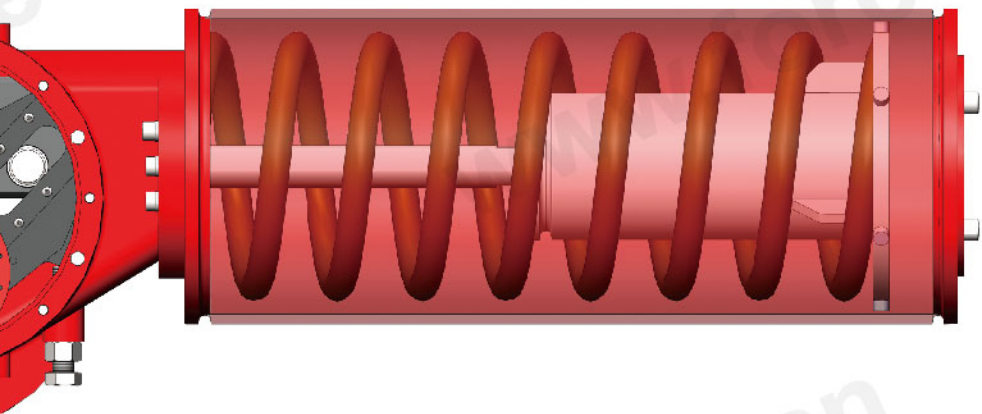
采用低摩擦、长寿命复合材料，避免了金属与金属的直接接触，维修更换简单方便。



The Mounting Flange is up to the ISO 5211.
底部与阀门连接法兰的尺寸符合ISO 5211标准。

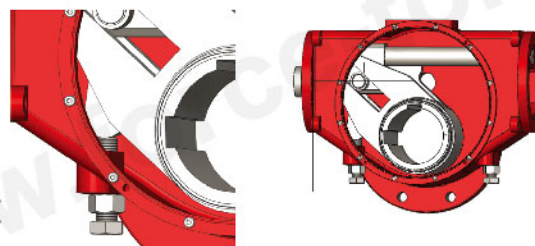
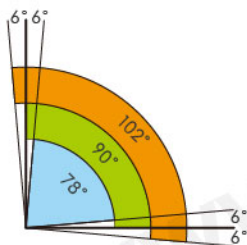
- ☛ HPY actuators are available with either B or C body modules. The B body modules provide efficient operation at both the break and end positions. The C body modules have a torque advantage in applications where higher break torque is needed to unseat the valve, with less critical needs at the run or full open positions.

HPY执行器可以提供B和C两种传动箱模块。B传动箱能够提供起点和终点相同的输出力矩，更符合类似球阀的力矩需求。C传动箱能够提供更大的起始输出扭矩，更符合类似蝶阀的力矩需求。

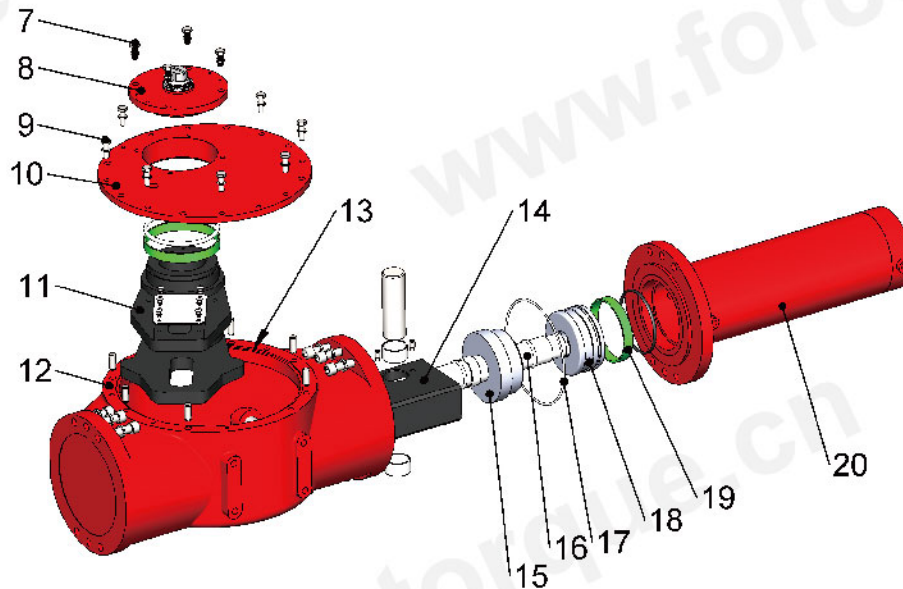


- ☛ Integral bi-directional travel stops, adjustable from -6° to 96° of total valve travel, assist the HPY Series in prolonging valve seat integrity.

两个独立的行程调节螺钉可以进行方便、精确 $\pm 6^{\circ}$ 的调节开、关位置。



Parts and Materials
零件与材料



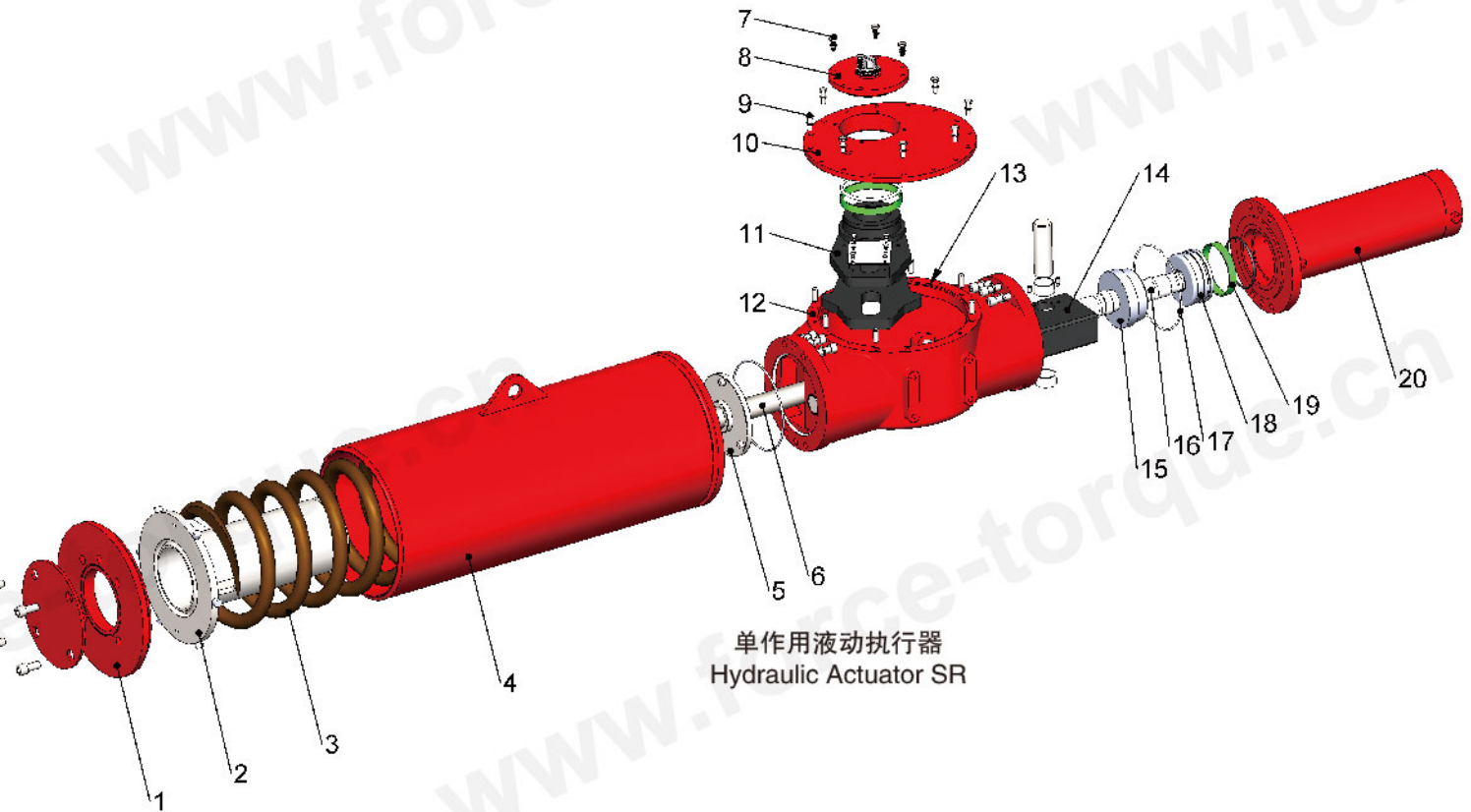
双作用液动执行器
Hydraulic Actuator DA

弹簧筒模块 Spring Modular

项目号	零件号 Name	数量 Qty.	材料 Materials
1	弹簧筒盖 Flange Cap	1	碳钢 Carbon Steel
2	弹簧座 Spring Seat	1	碳钢 Carbon Steel
3	弹簧 Spring	1	弹簧钢 Spring Steel
4	弹簧筒 Spring Body	1	碳钢 Carbon Steel
5	衬套座 Bear Seat	1	碳钢 Carbon Steel
6	弹簧拉杆 Spring Stem	1	合金钢 Alloy Steel

箱体模块 Centre Body Modular

项目号	零件号 Name	数量 Qty.	材料 Materials
7	螺钉 Screw	n	碳钢 Carbon Steel
8	顶盖组件 Indicator	1	碳钢 Carbon Steel
9	螺钉 Screw	n	碳钢 Carbon Steel
10	箱盖 Centre Body Cap	1	球墨铸铁 Ductile Iron
11	拨叉 Yoke	1	球墨铸铁 Ductile Iron
12	箱体 Centre Body	1	球墨铸铁 Ductile Iron
13	箱盖密封圈 Cap O-ring	1	耐油橡胶 Rubber
14	导向传动组件 Drive Mechanism	1	合金钢 Alloy Steel



单作用液动执行器
Hydraulic Actuator SR

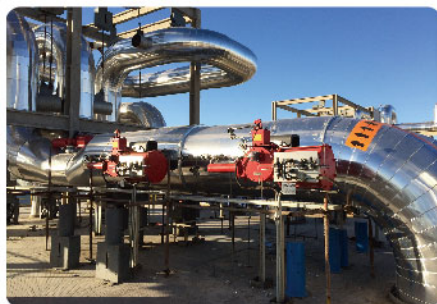
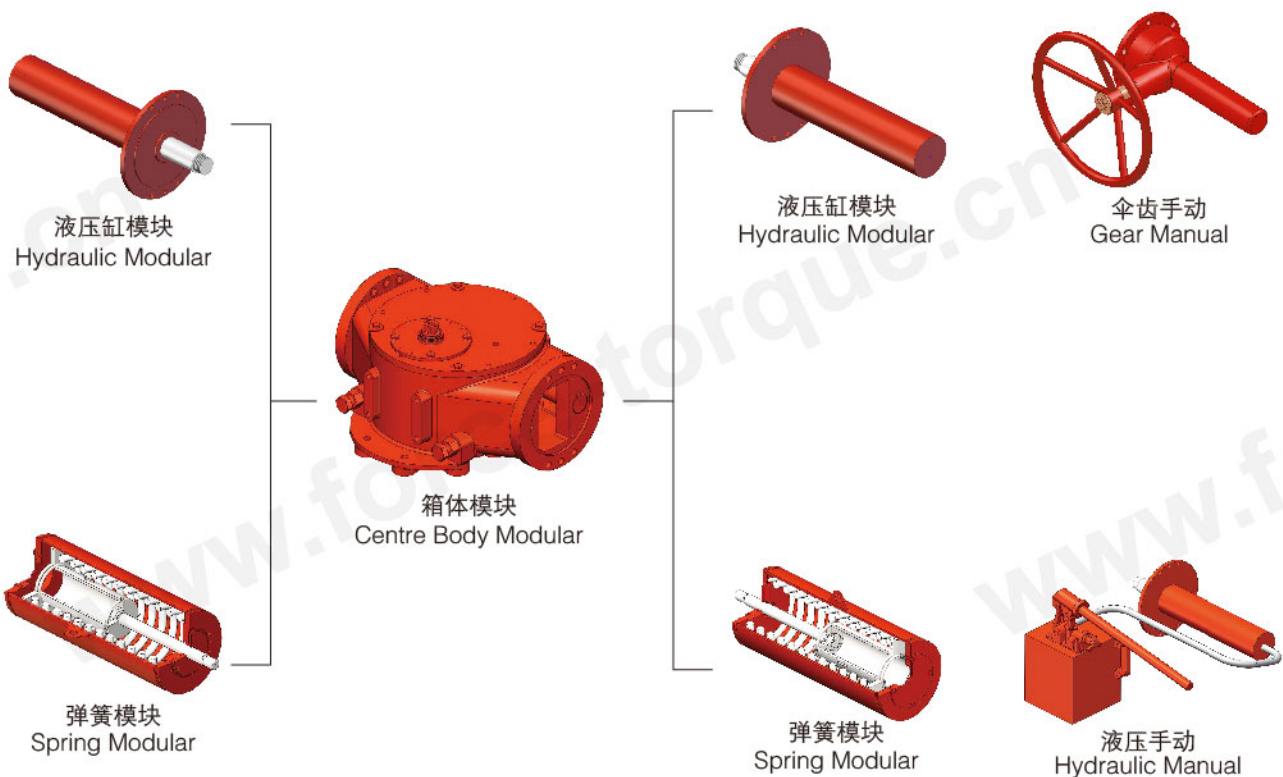
液压缸组件 Hydraulic Cylinder Components

项目号	零件号 Name	数量 Qty.	材料 Materials
15	导向 Guide	1	45# Ductile Iron
16	活塞杆 Piston Stem	1	45# Rubber
17	O型圈 O-ring	n	丁腈橡胶 NBR
18	活塞 Piston	1	45# Resin
19	支撑圈 Cylinder Body	n	聚四氟乙烯+青钢粉 PTFE+Lapis Powder
20	缸体组件 Body Components	1	

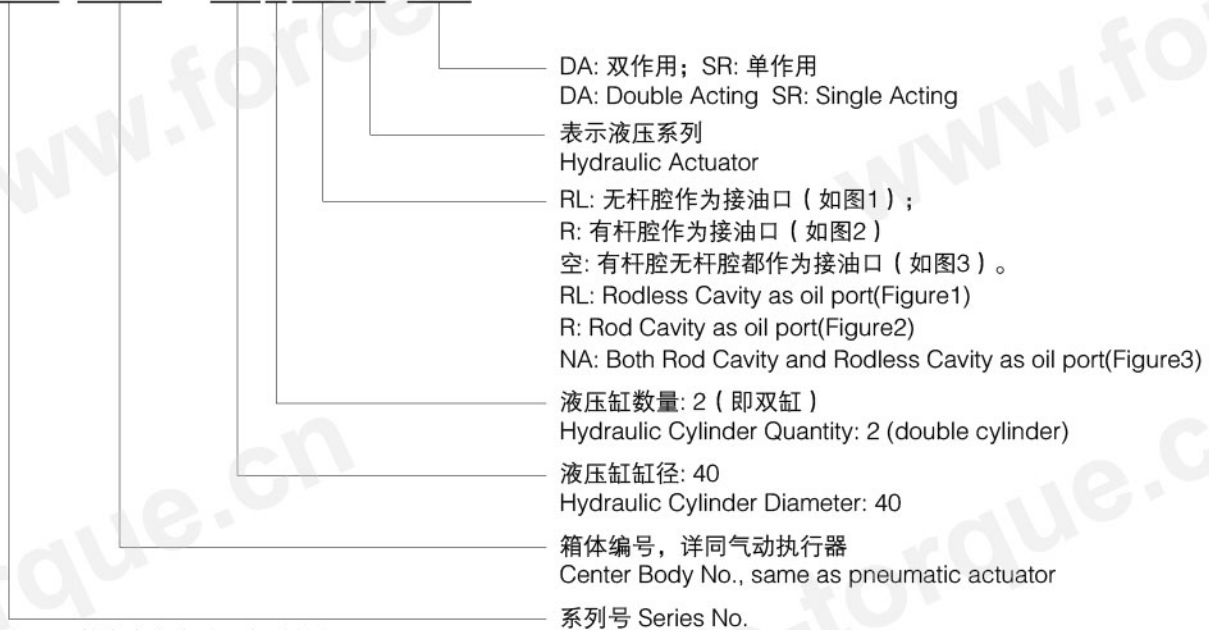
Modular Design 模块化设计

HPY执行器采用最新模块化的设计。可以在不需要专用工具的情况下轻松实现单作用，双作用，手动操作等模块的组合和更换。

The HPY Series adds an extra measure of versatility with its field serviceable modular configuration. It can be altered from a single acting to a double-acting and add a hydraulic manual override after installation. Both the module and spring modules are removable without the need for special tools or disassembly of any modules.



HPY-B08-0402RLH-DA



备注: 其余命名方法同气动执行器
Remark: Other naming method is the same as pneumatic actuator.

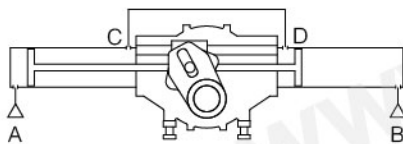


图1, RL: 无杆腔油口A,B作为接油口, 有杆腔油口C, D连通
例如: HPY-B08-0402RLH-DA
Figure1, RL: Rodless Cavity A, B as oil port, Rod Cavity C, D connected
Example: HPY-B08-0402RLH-D A

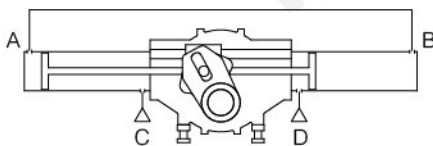


图2, R: 有杆腔油口C, D作为接油口, 无杆腔油口A, B连通
例如: HPY-B08-0402RH-DA
Figure2, R: Rod Cavity C, D as oil port, Rodless Cavity A, B connected
Example: HPY-B08-0402RH-DA

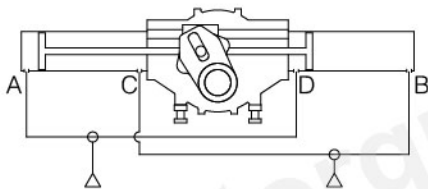
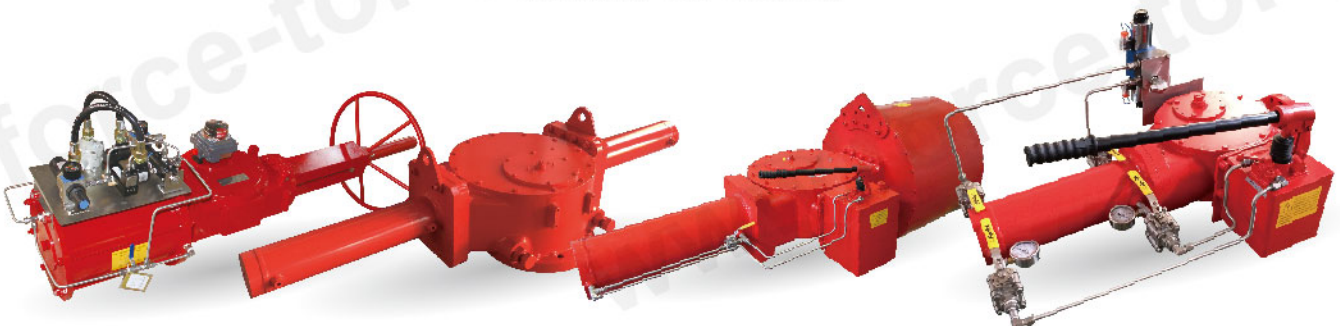


图3, 空: 接口A, D连通, 共同作为一个油口; 接口C, B连通作为一个油口。
两个液压缸的有杆腔和无杆腔共同配合完成执行器动作要求。
例如: HPY-B08-0402H-DA
Figure3, NA: A, D connected as one oil port; C, B connected as one oil port.
The rod cavity and rodless cavity of two hydraulic cylinders coordinates to perform actuator action requests.
Example: HPY-B08-0402RH-DA





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