

KEYPOS

KEYPOS Technology (ZhongShan) Co., Ltd.



**KPS Linear Actuator
(Pneumatic & Electric)**

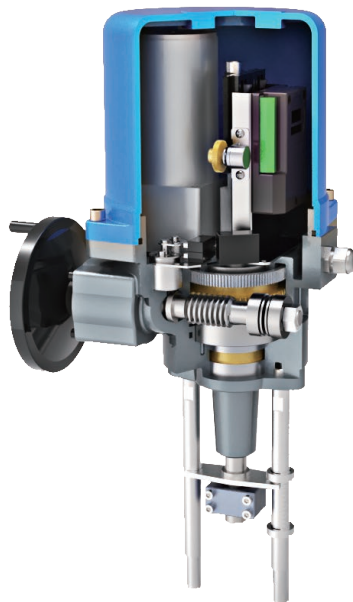
KPS-TA / KPS-TL Series Linear Electric Actuator

■ Product Description

The linear electric actuator is composed of a motor, gear box and T-threaded transmission, also includes a handwheel and a self-lock function. AC motor can be a single phase or three-phases motor. Actuator generates linear motion which is connected to the valve including control valve such as globe valve, gate valve and etc. The control unit receives command signal to drive the actuator and valve to open or close position. Modulating mode is an option. It includes a device for analogue signal to achieve precise control.



KPS-TA



KPS-TL

■ Control Mode

Open & Close Type :

Receive open and close signal. Actuator drives valve from full open to full close, or from full close to full open.

Modulating Type :

Receive analogue signal. Actuator obtains signal. It drives the valve to the desired position.

■ Main Feature

01 Housing

It is made of aluminum alloy with powder-coating. The surface is corrosion resistant which is suitable for outdoor and harsh environment.

02 Motor

KPS-TA uses a synchronous motor which is precise and constant speed with long service life.

KPS-TL uses an asynchronous self-braking motor. It is compact, light weight, short stop time and precise braking. Built-in overheat protected switch with grade H insulation prevents motor overheat and damage.

03 Reduction Gearing

The gear box includes a transmission and planetary gears. The gear force distributes evenly and torque transmits efficiently with benefits of high efficiency, low noise, long service life and maintenance free.

04 Manual Mode

It is planetary gears and worm gears design, non-stop switches automatic or manual mode. The quick changes from automatic mode to manual mode at the anytime. It is fast and safely.

05 Position Switch

The double switches detect the cam position and measure the travel range. It provides precise adjustment and feedback.

06 Thrust Switch

It prevents over-loading, protects the actuator and ensures precise thrust output. Actuator will cut-off the power if loading is over-limit. (Pre-set limit is set by manufacture, and cannot to change)

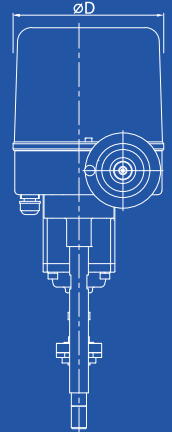
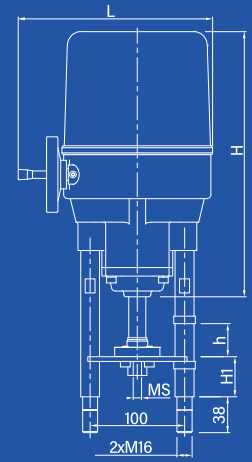
07 Modulating Mode

The logic board processes a 4-20mA setpoint signal for travel range from 0 - 100%. A 4-20mA feedback signal is provided to indicate the valve position. On signal failure, the actuator will stop travelling at the set position, ensure valve and user safely.

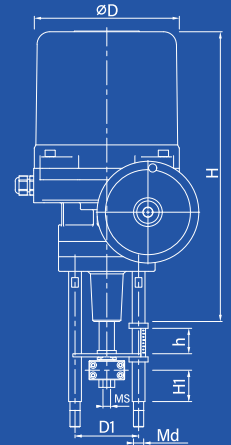
Highlight & Technical Data

Main Feature

Type	Series	KPS-TA	KPS-TL
Standard	Working Mode	Continuous	S2-15min/30min, S4-25%/50%
	Degree of Protection	IP65	IP67
	Power Supply	220V AC 1Phase	110/220V AC 1Phase 380V AC 3 Phase
	Motor	Synchronous Motor	Asynchronous Self-Braking Motor
	Thrust Switch	2x CHERRY 250v AC 10A	2x CHERRY 250v AC 10A
	Position Switch	2x CHERRY 250v AC 10A	2x CHERRY 250v AC 10A
	Indicator	continuous position indicator	continuous position indicator
	Manual Operation	Non-stop switches for automatic or manual mode changing	Non-stop switches for automatic or manual mode changing
	Self-lock Device	Worm gear, T-type Transmission worm gear	Worm gear, T-type Transmission worm gear, brake for motor
	Wiring	2xM12*1.5	2xM20*1.5
	Ambient Temperature	-20 °C--+60 °C	-20 °C--+60 °C
	Lubrication	Aluminum base grease (EP type)	Aluminum base grease (EP type)
	Material	Steel, Aluminum Alloy, Aluminum Bronze	Steel, Aluminum Alloy, Aluminum Bronze
	Ambient Humidity	Max 90% RH	Max 90% RH
Coating	Powder Coating, Environmentally Friendly	Powder Coating, Environmentally Friendly	
Modulating	Control Signal	Input/Output 4-20mA	Input/Output 4-20mA
	Potentiometer	SENTOP WDH22L 2405 W360	SENTOP WDH22L 2405 W360
	Modulating Type	Built-in 4-bit LED Display	Built-in 4-bit LED Display
Options	Explosion Proof	None	Exd II BT5, Exd II CT5

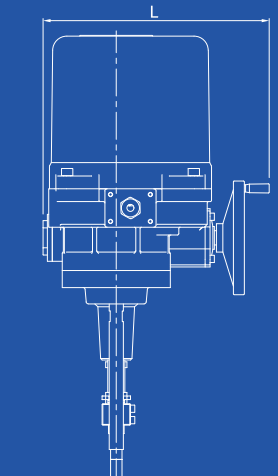


KPS-TA



Technical Data

Series	Model	Thrust N	Speed mm/S	Stroke mm	Power Consumption W	Type of Current (A) 50HZ			Weight kg	ΦD mm	L mm	H mm	Installation Dimensions
						1 Phase 110V 220V	3 Phases 380V						
KPS-TA Series	KPS-TA002	2000	0.3	40	22	N/A	0.1	N/A	8	160	206	282	Installation Dimensions
	KPS-TA003	3000	0.3	40	22	N/A	0.1	N/A	8	160	206	282	
	KPS-TA004	4000	0.3	40	22	N/A	0.1	N/A	8	160	206	282	
KPS-TL Series	KPS-TL002	2000	0.6	60	6	0.25	0.13	N/A	16	198	294	370	D1 H1 MS Md As per Customer's Requests
	KPS-TL006	6000	0.6	60	15	0.35	0.18	N/A	18	198	294	370	
	KPS-TL010	10000	0.6	60	15	0.35	0.18	N/A	18	198	294	370	
	KPS-TL012	12000	0.6	60	25	0.6	0.3	0.16	19	198	294	370	
	KPS-TL016	16000	0.55	80	25	0.6	0.3	0.16	32	228	320	458	
	KPS-TL020	20000	0.55	80	40	0.8	0.4	0.2	34	228	320	458	
	KPS-TL025	25000	0.55	80	40	0.8	0.4	0.2	35	228	320	458	
	KPS-TL030	30000	0.55	80	60	1.4	0.7	0.4	36	228	320	458	
	KPS-TL035	35000	0.5	100	90	2.0	1.0	0.6	41	258	362	520	
	KPS-TL040	40000	0.5	100	120	3.0	1.5	0.42	43	258	362	520	
	KPS-TL050	50000	0.5	100	120	3.0	1.5	0.42	45	258	362	520	

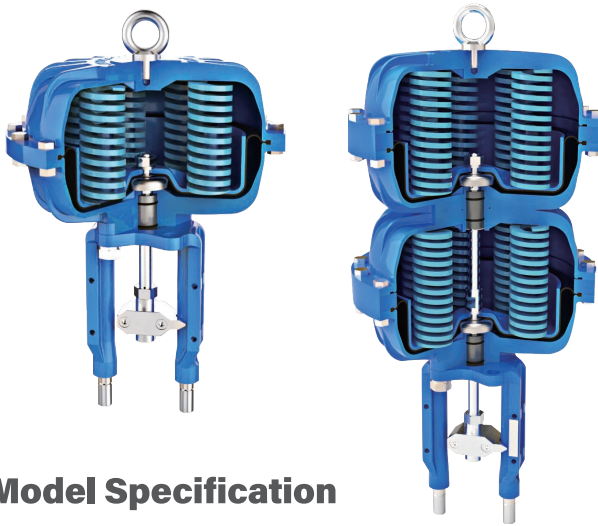


KPS-TL

KPS-PA Series Linear Pneumatic Actuator

Product Description

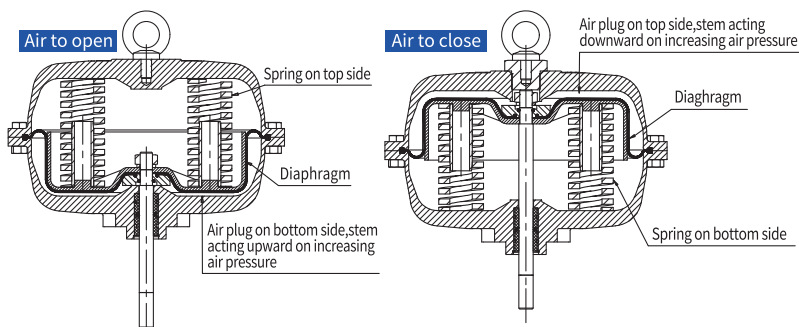
The linear pneumatic actuator is composed of a rolling diaphragm, springs and a piston. The compressed air going into the chamber pushes the rolling diaphragm and piston which generates linear movement. The piston moves when air pressure is exerted on the actuator diaphragm and as the air is expelled it returns to the original position by the force of the spring. A valve positioner modules the air pressure by converting a electric input signal to a pneumatic signal pressure. Linear actuator is widely used on control valves such as globe valve, gate valve and etc.



Model Specification

Model	Effective Area cm ²	Stroke mm	Actuating Force, air max N	Air Consumption L (max)	Weight kg (max)
KPS-PA190S	280	20	1500-5500	0.6	11
KPS-PA190S	280	30	2500-5500	0.8	14
KPS-PA260S	530	30,40	4000-8500	2.2	30
KPS-PA260D	1060	30,40	8000-17000	4.3	58
KPS-PA350S	960	40,50,60	4000-21000	5.8	62
KPS-PA350D	1920	40,50,60	8000-42000	11.5	112

Model No : PA260 is actuator diameter 260mm, PA260S, "S" is single piston, PA260D, "D" is double pistons



KPS Series Linear Pneumatic Actuator

Main Feature

01

Housing

It is made of aluminum alloy with powder-coating. The surface is corrosion resistant which is suitable for outdoor and harsh environment.

02

Diaphragm

The material is special formulated rubber with high strength fibers, it is heat and corrosion resistant. Special diaphragm design minimizes the loading force at the motions, it benefits long life. The diaphragm has been fatigue tested over 1,20 million cycle-times, it is long lasting and stable.

03

Spring

It is made in Japan or Korea. It has been compression tested over 1,20 million times and the compression rate is less than 5%. Guaranteed reliability to provide rigid closing pressure and long service life.

04

Stem

The stem is bar material SS431 with nitriding and grinding treatment, good mechanical properties with high strength, harden surface, wear resistant, corrosion resistant and long service life.

05

Stem Seal

It is PTFE with combined graphite. It is self-lubricated, with stable properties and maintenance-free.

06

Installation and connection

The connection is a clamp design. It is easy for installation and reliable. Dimensions can be customized to customer's requests.

Standard Feature

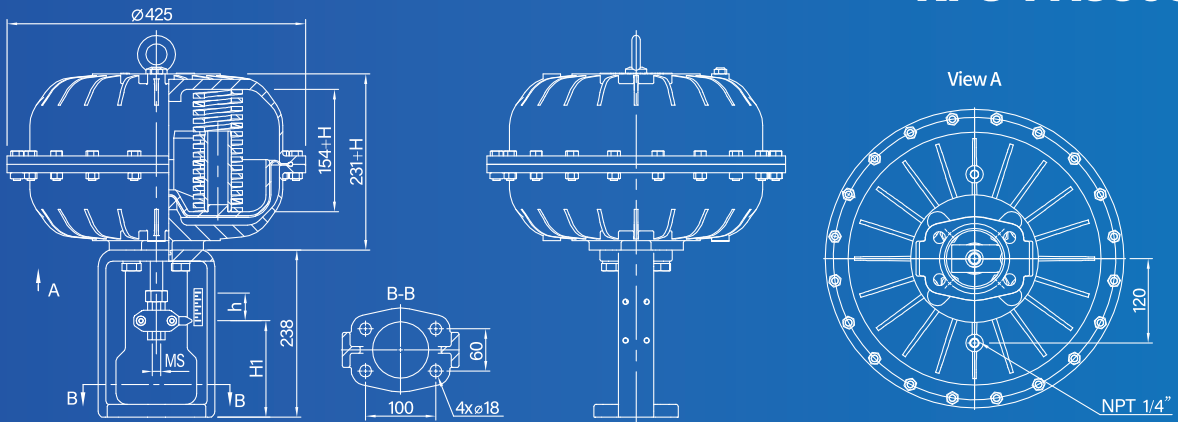
Housing	Aluminum Alloy / Carbon Steel (Option)
Grade of Protection	IP67
Air Supply	Max 6 Bar
Diaphragm	Special formulated rubber with high strength fibers
Spring	Japan / Korea
Position Indicator	Indicator and scale, continuous indicate the position
Ambient Temperature	-20 C ~ +60 C
Main material	Aluminium, Copper, Steel, PTFE
Humidity	Max 90% RH
Surface Finish	Powder Coating, Environmentally Friendly

Actuating Mode

Signal-Acting (spring releases on air failure)

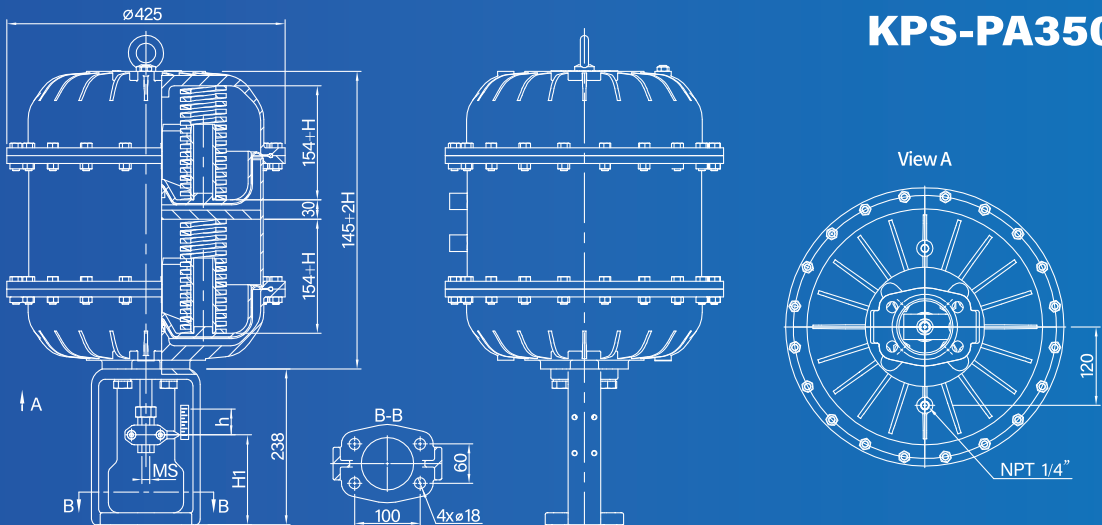
- ① Air to Open (spring on the top side, stem acting upward on increasing air pressure, stem acting downward on air failure)
- ② Air to Close (spring on the bottom side, stem acting downward on increasing air pressure, stem acting upward on air failure)

KPS-PA350S



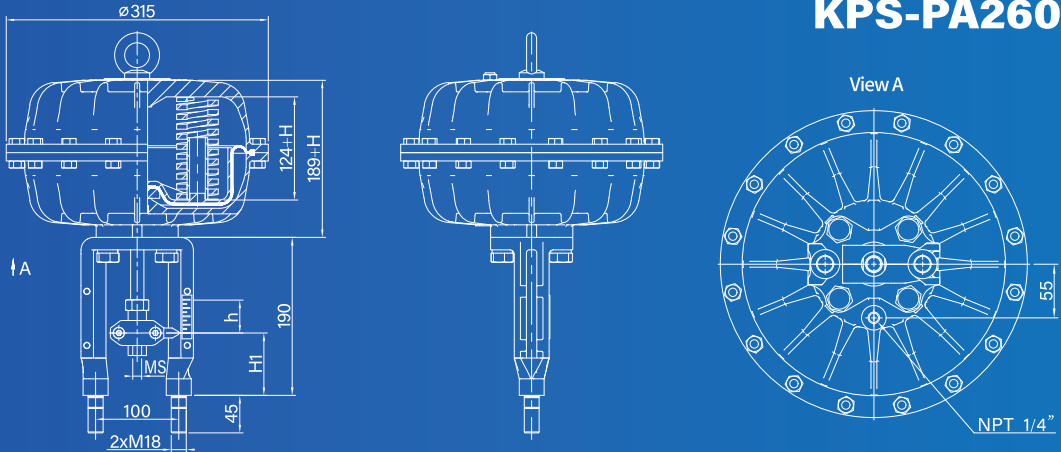
Stroke /mm	40									50								
Spring Size	60*30*175			60*30*200			70*38.5*200			60*30*200			70*38.5*200			70*38.5*250		
Stiffness kgf/mm	6.94			6.07			7.62			6.07			7.62			6.10		
Number Of Springs	3	4	6	3	4	6	3	4	6	3	4	6	3	4	6	3	4	6
Effective Area / cm ²	960			960			960			960			960			960		
Increase Height / mm	0			20			20			20			20			50		
Preload Force / N	4372	5829	8744	4735	6313	9470	5944	7925	11887	4735	6313	9470	4372	7925	11887	8418	11224	16836
Opening Air Pressure/ bar	0.5	0.6	0.9	0.5	0.7	1.0	0.6	0.8	1.2	0.5	0.7	1.0	0.6	0.8	1.2	0.9	1.2	1.8
Full Open Air Pressure / bar	1.3	1.8	2.6	1.3	1.7	2.5	1.6	2.1	3.1	1.4	1.9	2.9	1.8	2.4	3.6	1.8	2.4	3.7
Installation Dimensions	1. Installation dimensions H1 as per customer's requests. 2. Thread sizes MS M16*2, M18*2.5, M20*2.5, M22*2.5.																	

KPS-PA350D



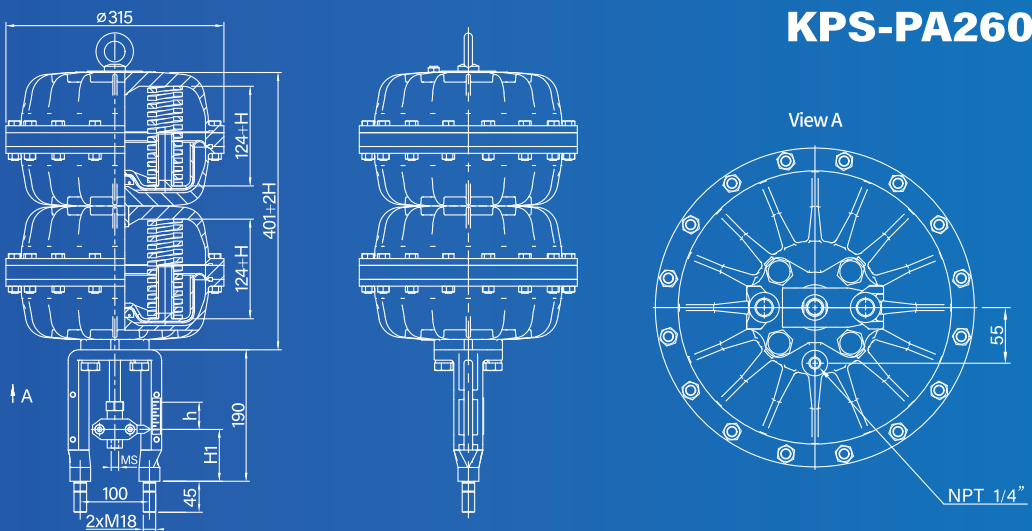
Stroke /mm	40												50											
Spring Size	60*30*175				60*30*200				70*38.5*200				70*38*250											
Stiffness kgf/mm	6.94				6.07				7.62				6.10											
Number Of Springs	6	8	10	12	6	8	10	12	6	8	10	12	6	8	10	12								
Effective Area / cm ²	1920				1920				1920				1920											
Increase Height / mm	0				20				20				50											
Preload Force / N	8744	11659	14573	17488	9470	12627	15783	18940	11887	15849	19812	23774	16836	22448	28060	33672								
Opening Air Pressure/ bar	0.5	0.6	0.8	0.9	0.5	0.7	0.8	1.0	0.6	0.8	1.0	1.2	0.9	1.2	1.5	1.8								
Full Open Air Pressure / bar	1.3	1.8	2.2	2.6	1.3	1.7	2.1	2.5	1.8	2.4	3.0	3.6	1.8	2.4	3.1	3.7								
Installation Dimensions	1. Installation dimensions H1 as per customer's requests. 2. Thread sizes MS M16*2, M18*2.5, M20*2.5, M22*2.5.																							

KPS-PA260S



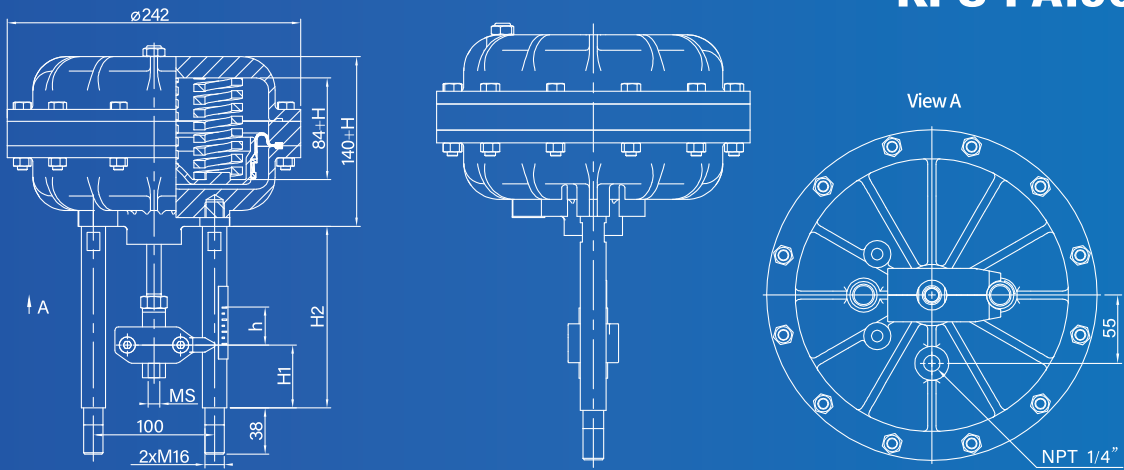
Stroke / mm	30						40					
Spring Size	50*25*150			50*25*175			50*25*150			50*25*175		
Stiffness kgf/mm	5.63			4.82			5.63			4.82		
Number Of Springs	3	4	6	3	4	6	3	4	6	3	4	6
Effective Area / cm ²	530			530			530			530		
Increase Height / mm	0			20			0			20		
Preload Force / N	4391	5855	8782	4483	5977	8965	4391	5855	8782	4483	5977	8965
Opening Air Pressure / bar	0.8	1.1	1.7	0.8	1.1	1.7	0.8	1.1	1.7	0.8	1.1	1.7
Full Open Air Pressure / bar	1.8	2.4	3.6	1.7	2.2	3.3	2.1	2.8	4.2	1.9	2.6	3.9
Installation Dimensions	1、Installation dimensions H1 as per customer's requests. 2、Thread sizes MS M14*2, M16*2, M18*2.5, M20*2.5.											

KPS-PA260D



Stroke / mm	30								40			
Spring Size	50*25*150				50*25*175				50*25*175			
Stiffness kgf/mm	5.63				4.82				4.82			
Number Of Springs	6	8	10	12	6	8	10	12	6	8	10	12
Effective Area / cm ²	1060				1060				1060			
Increase Height / mm	0				20				20			
Preload Force / N	8782	11709	14637	17564	8965	11953	14942	17930	8965	11953	14942	17930
Opening Air Pressure / bar	0.8	1.1	1.4	1.7	0.8	1.1	1.4	1.7	0.8	1.1	1.4	1.7
Full Open Air Pressure / bar	1.8	2.4	3.0	3.6	1.7	2.2	2.8	3.3	1.9	2.6	3.2	3.9
Installation Dimensions	1、Installation dimensions H1 as per customer's requests. 2、Thread sizes MS M14*2, M16*2, M18*2.5, M20*2.5.											

KPS-PA190S



Stroke / mm	20									30								
Spring Size	40*22*80			40*20*80			40*20*100			40*20*125			40*20*100			40*20*125		
Stiffness kgf/mm	3.20			6.75			5.40			4.32			5.40			4.32		
Number Of Springs	3	4	6	3	4	6	3	4	6	3	4	6	3	4	6	3	4	6
Effective Area / cm ²	280			280			280			280			280			280		
Increase Height / mm	0			0			20			40			20			40		
Preload Force / N	1536	2048	3072	3240	4320	6480	2592	3456	5184	2722	3629	5443	2592	3456	5184	2722	3629	5443
Opening Air Pressure / bar	0.5	0.7	1.1	1.2	1.5	2.3	0.9	1.2	1.9	1.0	1.3	1.9	0.9	1.2	1.9	1.0	1.3	1.9
Full Open Air Pressure / bar	1.2	1.6	2.5	2.6	3.5	5.2	2.1	2.8	4.2	1.9	2.5	3.8	2.7	3.5	5.3	2.4	3.1	4.7
Installation Dimensions	1. Installation dimensions H1 as per customer's requests. 2. Thread sizes MS M10*1.5, M12*1.75, M14*2, M16*2.																	

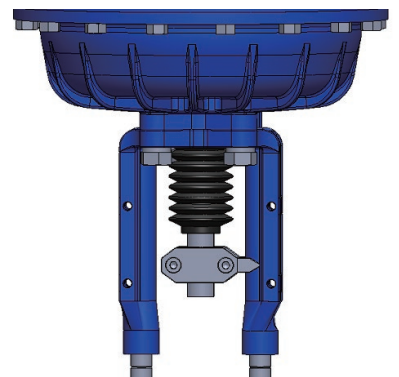
Note: Special installation requirement needs to be requested when ordering.

Additional Options

NO	Option Items
1	Handwheel
2	Dust Cover for Stem
3	Positioner
4	Solenoid Valve
5	Air Regulator
6	Limit Switch
7	Stainless Steel External Air Pipe
8	Copper Free for Actuator & Accessories
9	Special Requirement for Connection



Handwheel



Dust Cover for Stem

Option Item



E/P or P/P Positioner



Air Regulator



Limit Switch

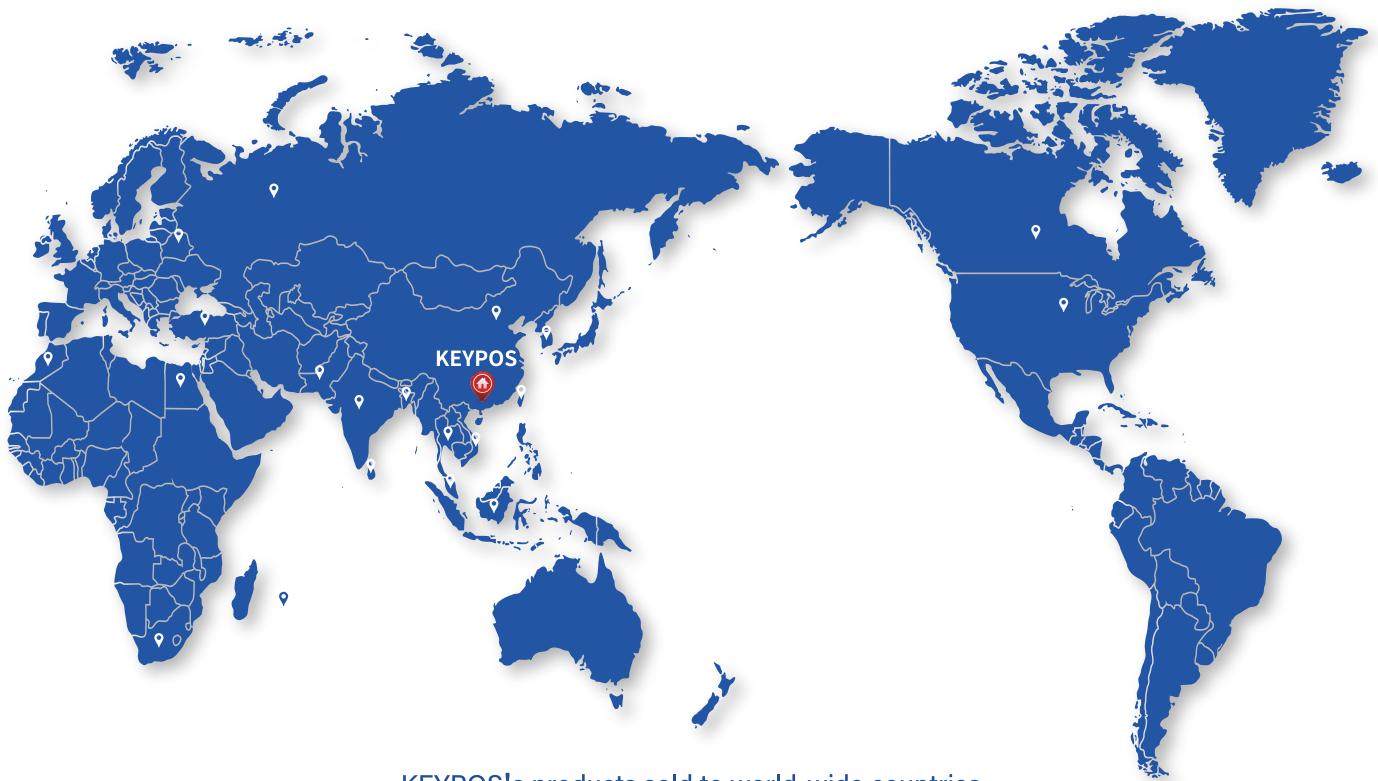


Solenoid Valve

KEYPOS is a company specializing on research and development for steam and fluid control technology. Adhering to our advance knowledge and rich experiences, we provide technical advices and solutions for stem pressure, temperature and fluid control applications.

KEYPOS technical team has more than 30 years of experience in design and manufacture of steam and fluid control products. We acquired TÜV approval for PED 2014/68/EU Module H and ISO 9001. Also, we strictly enforce quality control on each product. We guarantee all products are reliable and performance as well. Our vision is “Value added on customers” and the core value is “Quality to be First, Best Service, Customer-Oriented, and Sustainable Development”.

KEYPOS' s products have been sold to 20 countries. Customers are world-renowned companies in various industries including textile, chemical, paper, lithium battery, rubber, palm oil refining and others.



KEYPOS's products sold to world-wide countries



KEYPOS Technology (ZhongShan) Co., Ltd.

No.11, West One Street, Lefeng Middle Road, Lianfeng, Xiaolan Town, Zhongshan, Guangdong Province, China.

Tel: (86) 760 2218 9686 Fax: (86) 760 2218 9630

Email: enquiry@keyvalveltd.com

Website: www.keyvalveltd.com