



# GVK(EP/PP) VALVE POSITIONERS

Total Engineering Solution Service

# Mission

기초에 근거하여 원천 기술을 살리고 원천 기술을  
극대화하여 세계 중심에 서는 것

To stand at the centre of the world by  
utilizing original technology based on the  
foundation and maximizing original technology

# Vision

우리는 옳은 일과 가치 있는 일에 주저함이 없이  
최선을 다하고 실천하여 세계의 중심에 서자

Let us put ourselves at the center of the world by  
doing our best and not hesitating to stand up for  
what is right and worthy



**GLOBAL VISION KOREA**

**VMV<sup>®</sup>**  
**Value MFG Valve**

 **ACEFLOW**  
Valve Engineering



## Valve Product Service



GVK Limited, founded in June 2020 by a leader with 38 years of experience, focuses on R&D while ensuring quality, price, and functionality through domestic production. The company offers Process Valves, Valve Equipment, and Total Engineering services for industries such as Gas, Refining, Petroleum, Power generation, Environment, and Water treatment.

With a management team possessing 30-40 years of experience, GVK has developed numerous patents and adheres to quality standards like ISO 9001, 14001, 45001, and CE. Recognized for its advanced automatic control valves, GVK also supplies a range of Control Valves globally through OEM and ODM partnerships.

Although still in the early design and manufacturing stages, GVK has emerged as a leading company in Korea, equipped with skilled personnel and testing capabilities. The company aims to lower production costs, enhance efficiency, and improve quality while accumulating Hyper-Intelligence Valve Engineering (HIVE) technology. GVK Limited is committed to meeting customer needs with competitive pricing and high value-added services.

## The Professional Provider of Automatic valve Actuators





## Mutually Beneficial Relationships



## To Be Your Best Partner



## Twenty years experience "one stop" goods and services





**EP/PP SERIES**  
**EP/PP Valve Positioners**  
Total Engineering Solution Service





GVK / EP/PP Series EP/PP Valve Positioners

# Contents

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## Valve Instrumentation Product Service

### Description

TS600 Electro-Pneumatic Positioner controls the valve stroke in response to an input signal of 4-20mA from the control panel, DCS, or calibrator.

### Certified



### Features

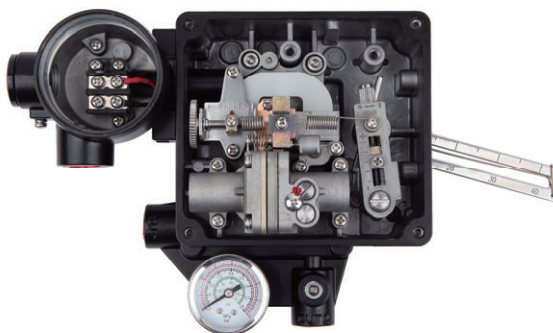


- + Fast response time and excellent stability
- + Simple zero and span adjustment
- + IP 66 enclosure
- + Strong anti vibration performance
- + By-pass valve (A/M switch) installed
- + Air connection part is designed for detachability and it can be changed PT/NPT tapping threads in the field easily
- + Integrated Flameproof and Intrinsically safe protection (ATEX&IECEx version)

### Installation example

### Internal structure

### Position transmitter PCB





# MECHANICAL VALVE POSITIONER

## Specifications

Model	TS600L(Single)	TS600L(Double)
Input signal	4~20mA DC	
Impedance	250 ±15Ω	
Supply pressure	0.14~0.7MPa	
Stroke	10~150mm	
Air connection	PT1/4, NPT1/4, G1/4	
Gauge connection	PT1/8, NPT1/8	
Conduit	G(PF)1/2, NPT1/2, M20	
Explosion proof type	Ex db mb IIB/IIC T6/T5 Gb Ex ia IIC T6/T5 Gb Ex tb IIC T85°C/T100°C Db	
Intrinsically safe parameters	Ui=28V, li=101mA, Pi=707mV	
Enclosure	IP66 (EN60529)	
Ambient Temp.	-20°C~70°C (Standard type)	
Explosion proof	-40°C~60°C(T5) / -40°C~40°C(T6)	
Linearity	±1.0% F.S.	±2.0% F.S.
Sensitivity	±0.2% F.S.	±0.5% F.S.
Hysteresis	±1.0% F.S.	
Repeatability	±0.5% F.S.	
Air consumption	Below 2.5LPM (Sup=0.14MPa)	
Flow capacity	Over 80LPM (Sup=0.14MPa)	
Material	Aluminum die cast	
Weight	2.8kg	

## Product code

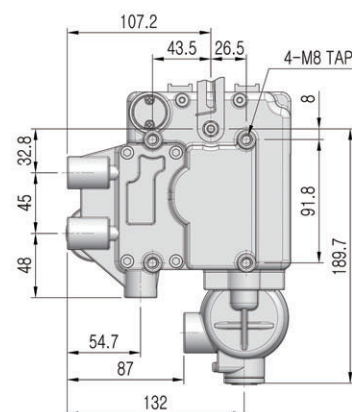
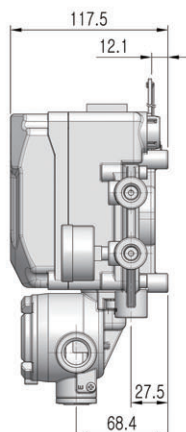
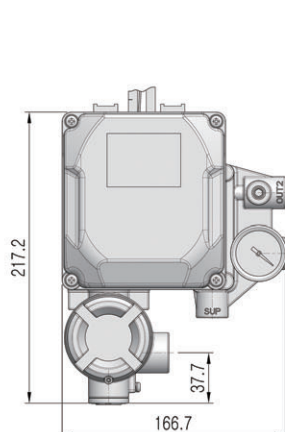
Model	TS600	L					
Acting type	Linear type	L					
Explosion proof type	Non-explosion proof	N					
	Ex dmb IIB T5/T6	B					
	Ex dmb IIC T5/T6	C					
	Ex ia IIC T5/T6	A					
	ATEX&IECEX version	X					
	Ex db mb IIB/IIC T5/T6 Gb						
	Ex ia IIC T5/T6 Gb						
Connection type	Conduit entry	Air connection					
	G1/2	PT1/4	1				
	G1/2	NPT1/4	2				
	NPT1/2	NPT1/4	3				
	M20	NPT1/4	4				
	M20	G1/4	5				
Lever type	10 ~ 40mm		1				
	40 ~ 70mm		2				
	70 ~ 100mm		3				
	100 ~ 150mm		4				
Ambient Temp.	-20°C~70°C					S	
	-20°C~120°C *					H	
	-40°C~70°C					L	
	-60°C~70°C(For EAC)					U	
Option	None (Standard type)						0
	With Position transmitter(4~20mA) (Positioner is RA type) *						1
	With Position transmitter(4~20mA) (Positioner is DA type) *						2

Notes:

1. \* Must be Non-explosion proof type.

2. Conduit entry for ATEX/IECEX/CCC/NEPSI/KCS should be "NPT1/2" or "M20".

## Dimension [Unit:mm]



## Valve Instrumentation Product Service

### Description

TS600 Electro-Pneumatic Positioner controls the valve stroke in response to an input signal of 4-20mA from the control panel, DCS, or calibrator.

### Certified



### Features



- + Fast response time and excellent stability
- + Simple zero and span adjustment
- + IP 66 enclosure
- + Strong anti vibration performance
- + By-pass valve (A/M switch) installed
- + Air connection part is designed for detachability and it can be changed PT/NPT tapping threads in the field easily
- + Integrated Flameproof and Intrinsically safe protection (ATEX&IECEX version)

### Options



Option code No.1  
TS600R with Position transmitter  
(Non-explosion proof type)



Option code No.2 or No.4  
TS600R with Limit switch  
(Non-explosion proof type)



Option code No.3  
TS600R with Limit switch  
(Explosion proof type)



Option code No.5  
TS600R with Position transmitter and  
Limit switch (Explosion proof type)



Option code No.6  
With external Limit switch  
mounting device



Option code No.7  
With Position transmitter and  
external Limit switch mounting device



For KCS certificate type



Option code No.9  
TS600R with Position transmitter  
With LCD(Special type)

# MECHANICAL VALVE POSITIONER

## Specifications

Model	TS600R(Single)	TS600R(Double)
Input signal	4~20mA DC	
Impedance	250 $\pm$ 15 $\Omega$	
Supply pressure	0.14~0.7MPa	
Stroke	0~90°	
Air connection	PT1/4, NPT1/4, G1/4	
Gauge connection	PT1/8, NPT1/8	
Conduit	G(PF)1/2, NPT1/2, M20	
Explosion proof type	Ex db mb IIC T6/T5 Gb Ex ia IIC T6/T5 Gb	
Intrinsically safe parameters	Ui=28V, Ii=101mA, Pi=707mV	
Enclosure	IP66 (EN60529)	
Ambient Temp.	Operating Temp.	-20°C~70°C (Standard type)
	Explosion proof	-40°C~60°C(T5) / -40°C~40°C(T6)
Linearity	$\pm$ 1.0% F.S.	$\pm$ 2.0% F.S.
Sensitivity	$\pm$ 0.2% F.S.	$\pm$ 0.5% F.S.
Hysteresis	$\pm$ 1.0% F.S.	
Repeatability	$\pm$ 0.5% F.S.	
Air consumption	Below 2.5LPM (Sup=0.14MPa)	
Flow capacity	Over 80LPM (Sup=0.14MPa)	
Material	Aluminum die cast	
Weight	2.8kg	

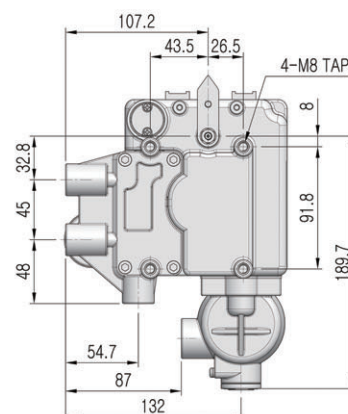
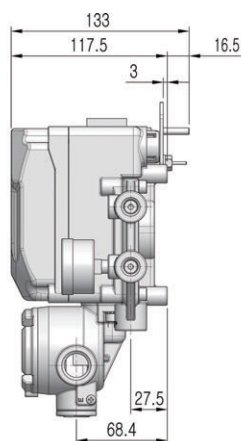
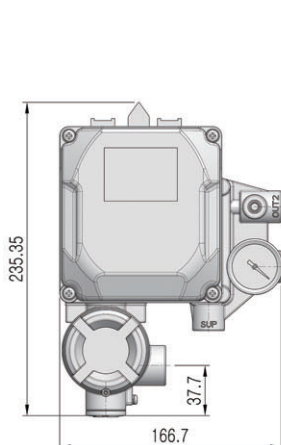
## Product code

Model	TS600	R					
Acting type	Rotary type	R					
Explosion proof type	Non-explosion proof	N					
	Ex dmb IIB T5/T6	B					
	Ex dmb IIC T5/T6	C					
	Ex ia IIC T5/T6	A					
	ATEX&IECEX version Ex db mb IIC T6/T5 Gb Ex ia IIC T6/T5 Gb	X					
Connection type	Conduit entry	Air connection					
	G1/2	PT1/4	1				
	G1/2	NPT1/4	2				
	NPT1/2	NPT1/4	3				
	M20	NPT1/4	4				
Lever type	M6 x 39L					1	
	NAMUR					5	
Ambient Temp.	-20°C~70°C						S
	-20°C~120°C *						H
	-40°C~70°C						L
	-60°C~70°C (For EAC)						U
Option	None						0
	Internal PTM*						1
	Internal L/S*						2
	External L/S (TS410)						3
	Internal PTM + L/S*						4
	External PTM+L/S (TS510)						5
	With external L/S mounting device						6
	With PTM + L/S mounting device*						7
	With Dome cover*						8

Notes:

- \* Must be Non-explosion proof type.
- Conduit entry for ATEX/IECEX/CCC/NEPSI/KCS should be "NPT1/2" or "M20".
- PTM is Position transmitter, L/S is Limit switch.

## Dimension [Unit:mm]



## Valve Instrumentation Product Service

### Description

TS610 series Pneumatic-Pneumatic Positioner controls the valve stroke in response to an input signal pressure of 0.02~0.1MPa from the controller.

### Features



TS610L(Linear type)



TS610R(Rotary type)

- + Fast response time and excellent stability
- + Simple zero and span adjustment
- + IP 66 enclosure
- + Low air consumption
- + By-pass valve (A/M switch) installed
- + Position transmitter and Limit switch (Options)

### Options



Option code No.1  
TS610R with Dome cap



Option code No.2  
TS610R with Position transmitter  
(External TS500)



Option code No.3 and No.6  
TS610R with Position transmitter  
(External TS510)



Option code No.4  
TS610R with Limit switch box  
(External TS400)



Option code No.5  
TS610R with Limit switch box  
(External TS410)



Option code No.7  
TS610R With external Limit switch  
mounting device



# MECHANICAL VALVE POSITIONER

## Specifications

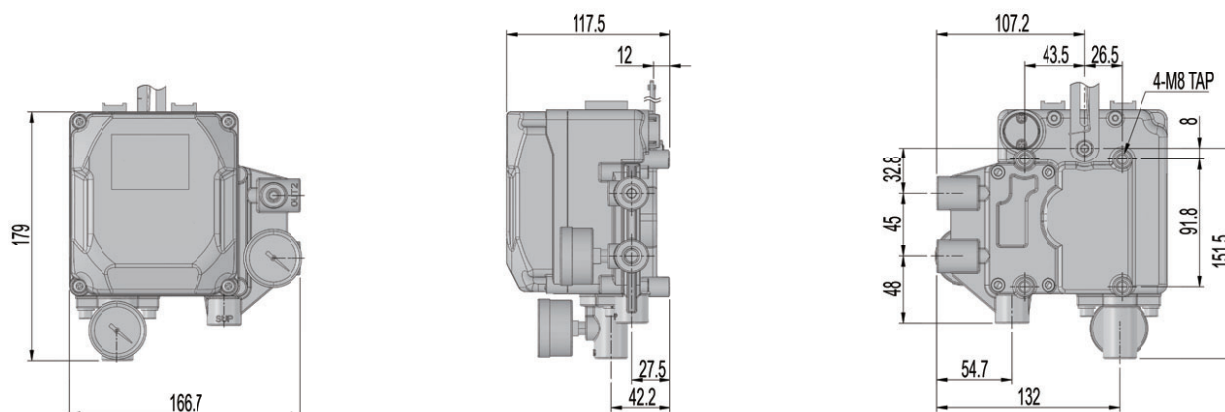
Model	TS610(Single)	TS610(Double)
Input signal	0.02~0.1MPa	
Supply pressure	0.14~0.7MPa	
Stroke	10~150mm (Linear), 0~90°(Rotary)	
Air connection	PT1/4, NPT1/4, G1/4	
Gauge connection	NPT1/8	
Enclosure	IP66 (EN60529)	
Ambient Temp.	-20°C~70°C (Standard type)	
Linearity	±1.0% F.S.	±2.0% F.S.
Sensitivity	±0.2% F.S.	±0.5% F.S.
Hysteresis	±1.0% F.S.	
Repeatability	±0.5% F.S.	
Air consumption	Below 2.5LPM (Sup=0.14MPa)	
Flow capacity	Over 80LPM (Sup=0.14MPa)	
Material	Aluminum die cast	
Painting	Polyester powder coating	
Weight	2.8kg	

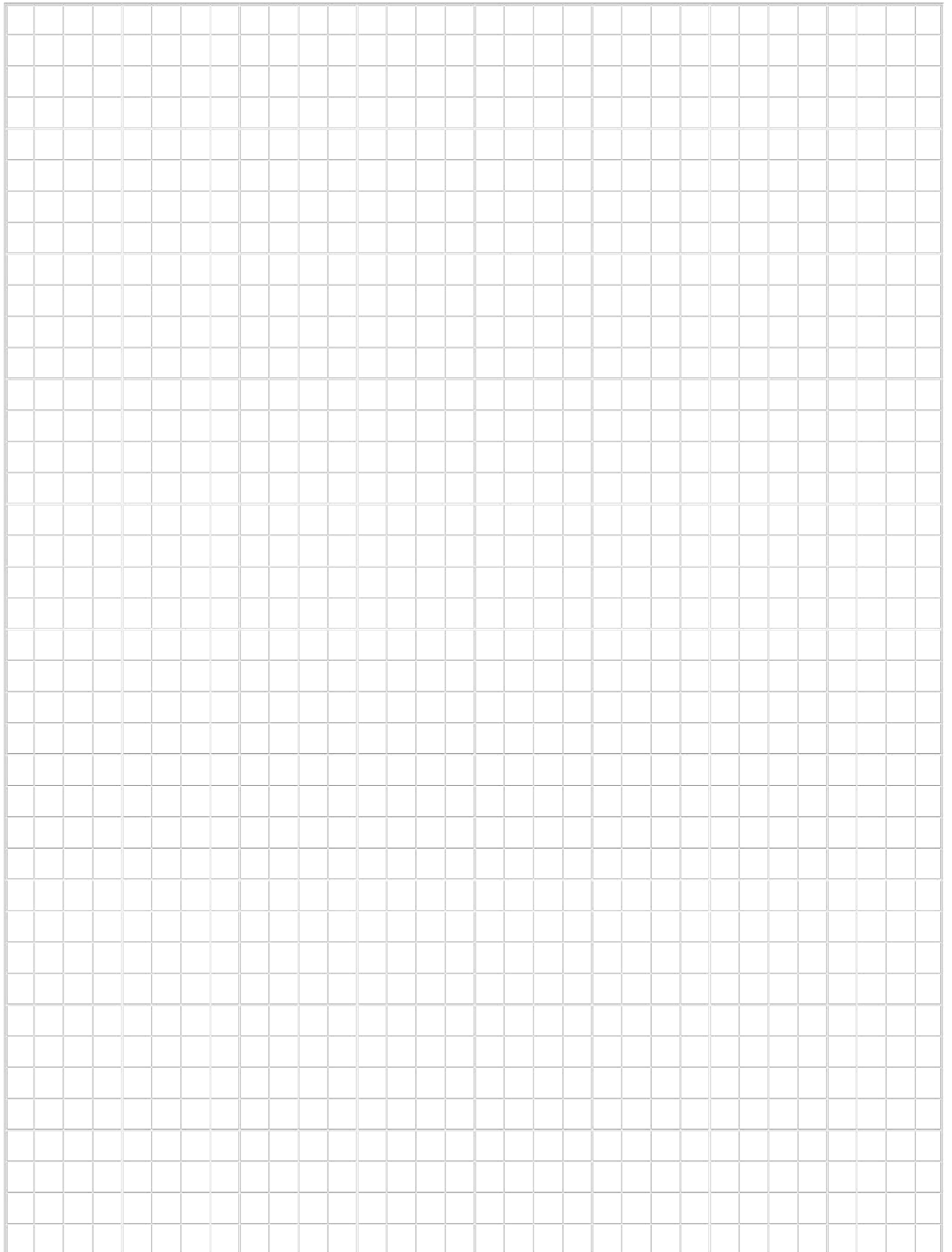
## Product code

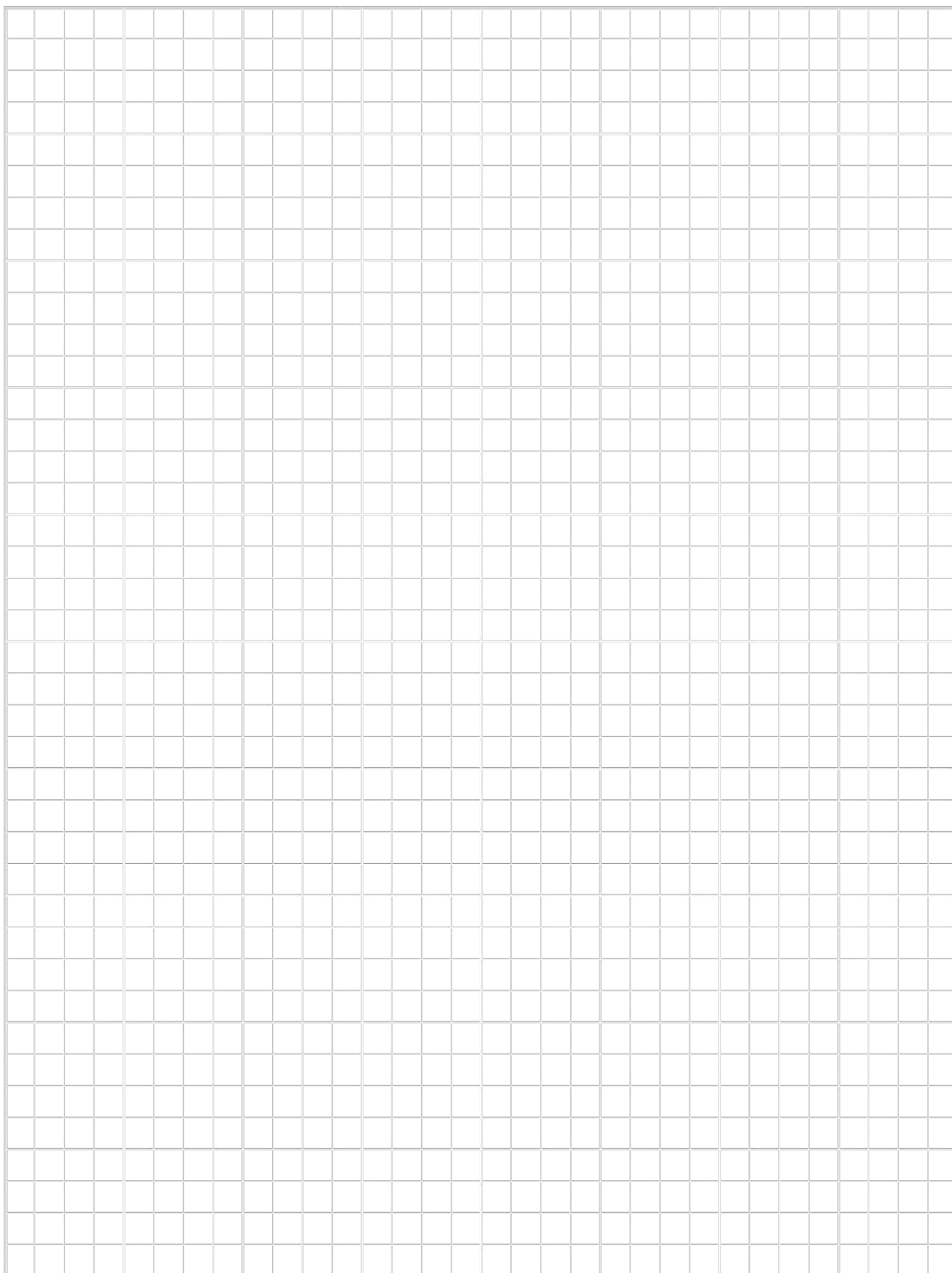
Model	TS610					
Acting type	Linear type Rotary type	L R				
Connection	PT1/4 NPT1/4 G1/4	1 2 3				
Lever (Linear type)	10 ~ 40mm 40 ~ 70mm 70~100mm 100~150mm	1 2 3 4				
Lever (Rotary type)	M6 x 39L NAMUR	1 5				
Ambient Temp.	-20°C~70°C -20°C~120°C -40°C~70°C -60°C~70°C				S H L U	
Option	None With Dome cover External position transmitter (TS500) External Position transmitter (TS510) External Limit switch (TS400) External Limit switch (TS410) External Position transmitter and Limit switch (TS510) With Limit switch mounting device	0 1 2 3 4 5 6 7				

\*Option No.1~7 are only available with TS610R(Rotary type).

## Dimension [Unit:mm]









# Product Service Qualified Certificate

ISO 9001:2015

ISO 14001:2015

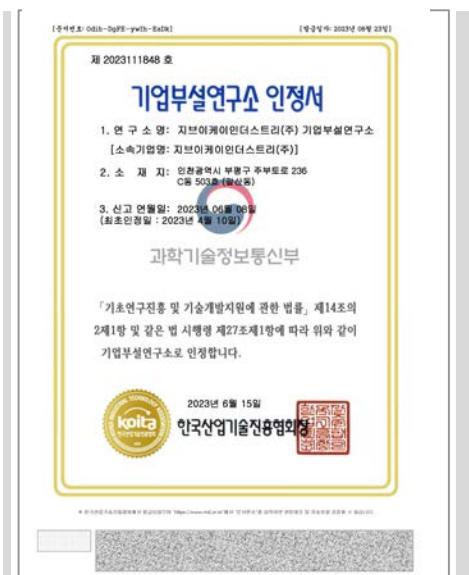
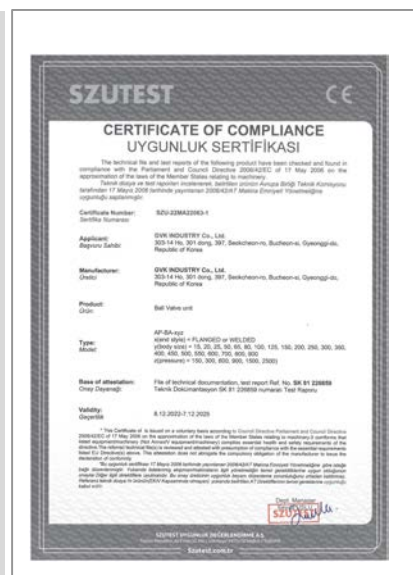
ISO 45001:2018



CE: Globe Control Valve

CE : Ball Valve

Research Institute





## ASME U, PP Stemp

## EAC : RUSSIA TRCU

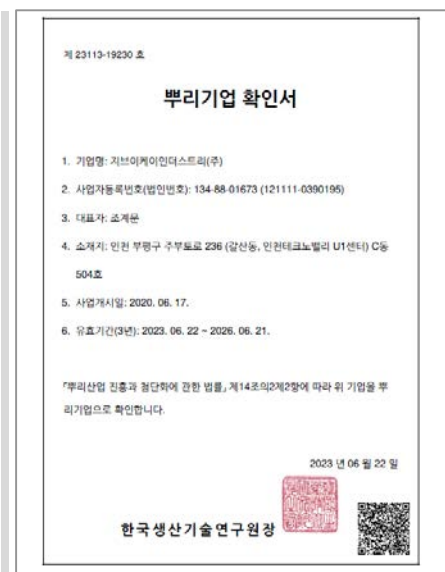
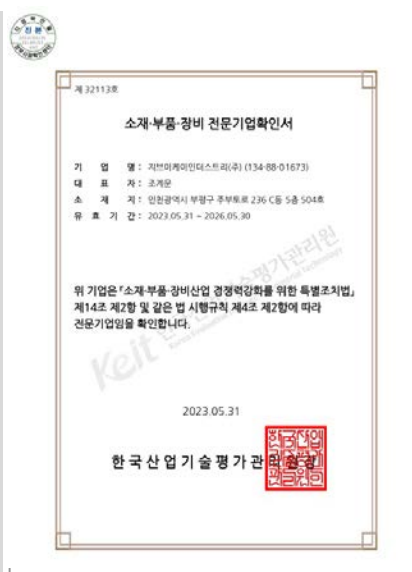
## API 6D / 600 By KSM



## Venture company

## Material · Part · Equipment

## Rooting Enterprise





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# **GVK(EP/PP) VALVE POSITIONERS**

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