



## 10-1

### 2-way control valve GVS 21 Series



밸브

#### Summary

GVS21 Series improve durability and controllability for wide range of applications, which developed for the improvement of economically cost-effective productivity. It is compatible with GEA Series and for heating, ventilation, HVAC or Temp. controlling.

It is not available with the facilities of continuous gas control.

#### Application

- Allowable pressure : 16Kgf/cm<sup>2</sup>
- Applicable fluid : hot and cold water, steam
- Additives in water : 1) oxygen-absorbed mixtures  
2) Anti-freeze ethylene glycol up to 50%  
3) saturation vapor / high-Temp. vapor  
(Max. steam 3bar, abs / 120°C)

#### Technical Data

- Allowable pressure : 10Kgf/cm<sup>2</sup>(10bar)
- Applicable fluid and temp. : DIN4747 / DIN3158 at -25°C ~ 130°C
- Linear type
- Leakage :  $\leq 0.01\%$  of Kvs value Class IV (ANSI B 16.104)
- End connection : PT Screwed type (BSP 16K)
- flow conditions : Water - 120°C / 16bar / steam - 120°C / 3bar)

\* Close-off pressure

Model	DN		Flow coefficient		Stroke mm	Sv	Actuator $\Delta P_{max}$ (kgf/cm <sup>2</sup> )	
	mm	Inch	Kv	Cv			GEA-10A(P)	GEA-20A(P)
GVS 21 · 15	15	1/2"	4	4.7	20	30	16	16
GVS 21 · 20	20	3/4"	6.3	7.4	20	30	16	16
GVS 21 · 25	25	1"	12	14	20	30	15	16
GVS 21 · 32	32	1 1/4"	16	18.7	20	30	9	16
GVS 21 · 40	40	1 1/2"	25	29	20	30	—	12
GVS 21 · 50	50	2"	37	43.2	20	30	—	7.8

Sv : Rangeability (VDI 2173)

$\Delta P_{100}$  : Maximum allowable pressure difference of valve faces in full opening position with installation highly loaded

\*Kv = Cv/1.167.

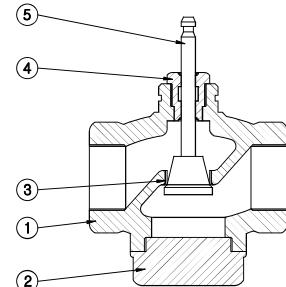
$\Delta P_{max}$  : Maximum allowable pressure difference of actuator not to leak fluid in closing position(close-off pressure)

\* Note : leakage caused by using 3bar of max. steam pressure

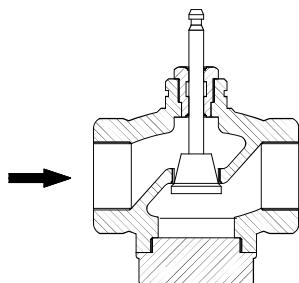
\* GEA-10 Series is only available with below 32A valve for water(low pressure required)

### Materials

No	1	2	3	4	5
Part Name	Body	Cover	Plug	Packing Box	Stem
Meterial	Bronze BC6	Bronze BC6	SCS13	Viton Teflon	SUS304
	(B 505)	(B 505)	(A351CF8)		(AISI304)



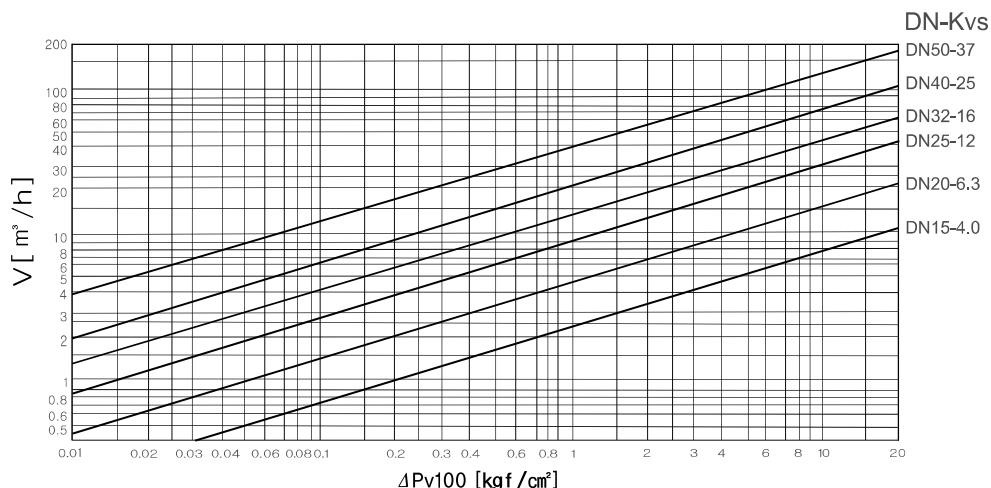
### Mechanical Design



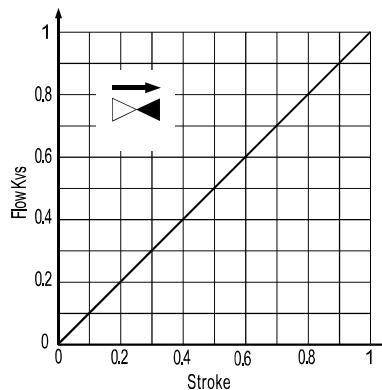
- For the use under 0°C, ASZ(electrical heating units) is required not to make stem parts frozen
- Plug direct-coupled with valve stem

### Valve selection

► Diagram of flow



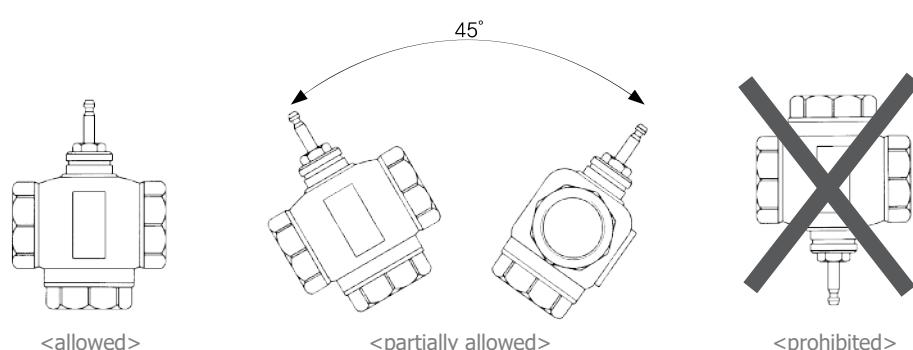
## Valve flows



- Flow control of valve
- Linear
- Proportion of flow control - 30:1

## Mounting notes

- Recommend to install circulating line to protect valve stem normally  
(To prolong the life-span of Packing)
- Strainer installation recommended for higher safety rate of valve function



- Match the flow direction with marked direction(→) on valve body

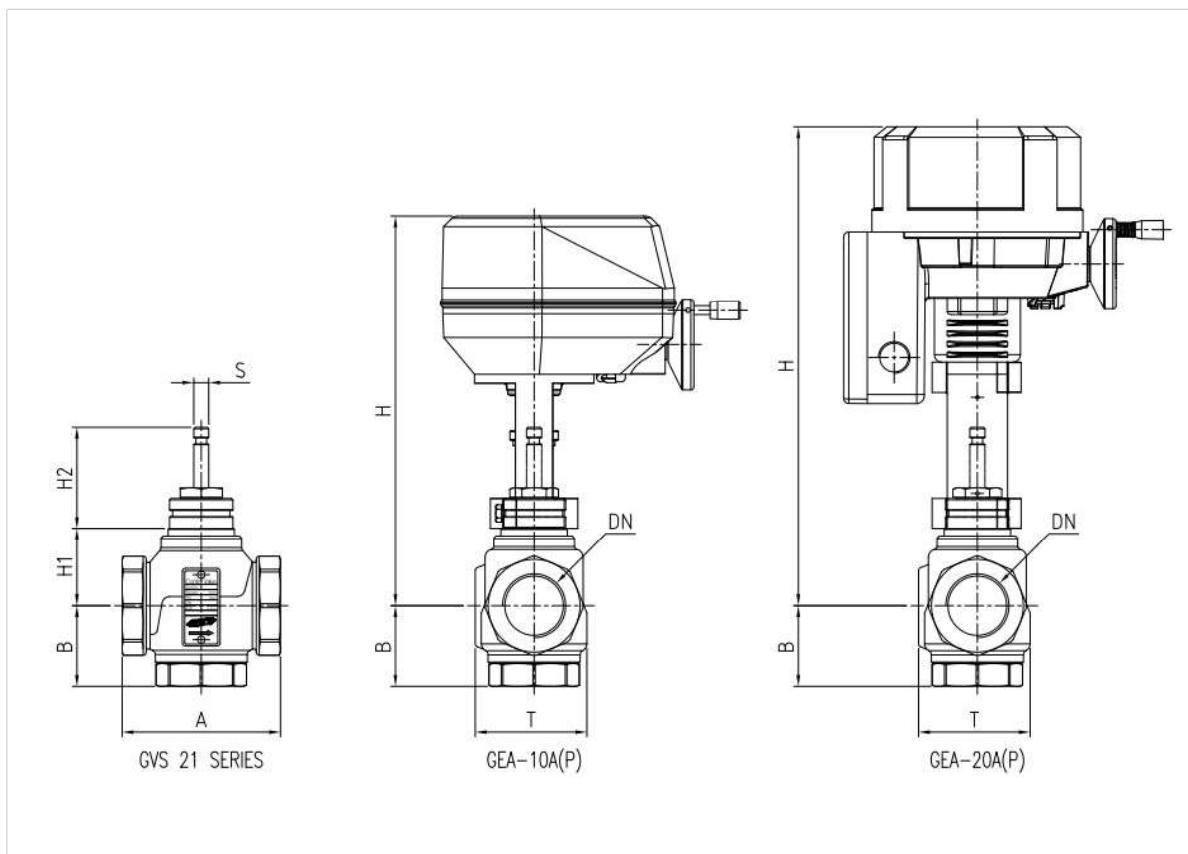
## Guide for inspection

Inspect the valve in the status of right mounting of actuator

1. Close position with valve shaft upward
2. Open position with valve shaft downward

## Tips

- Valve packing replacement without disassembling in case of damage
- Packing box applicable for -25 ~ 130°C(hot and cold water)

 Shape Dimension


MODEL	DN		A	B	S	T	H1	H2	H		Weight Valve(Kg)
	mm	Inch							GEA-10A(P)	GEA-20A(P)	
GVS 21.15	15	PT 1/2 "	100	50	Φ10	62	43	67.5	251	310	1.7
GVS 21.20	20	PT 3/4 "	100	50	Φ10	63	43	67.5	251	310	1.9
GVS 21.25	25	PT 1 "	105	55	Φ10	67	51	67.5	282	318	2.4
GVS 21.32	32	PT 1 1/4 "	105	55	Φ10	74	51	67.5	282	318	2.9
GVS 21.40	40	PT 1 1/2 "	130	65	Φ10	85	64	67.5	-	331	4.3
GVS 21.50	50	PT 2 "	150	78	Φ10	98	63	67.5	-	330	4.6

Units : mm  
Specifications to be changed upon the production environment