



10-5

3-way control valve GXS 21 Series



Summary

GXS21 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.

Applications

- Allowable pressure : 16Kgf/cm²(16bar)
- Applicable fluid and Temp. : 1) hot water : up to 130°C
2) cold water : up to -25°C
- Additives in water : 1) oxygen-absorbed mixtures
2) Anti-freeze ethylene glycol up to 50%

Technical Data

- Allowable pressure : 16Kgf/cm²(16bar)
- Applicable fluid and temp. : DIN4747 / DIN3158 at -25°C ~ 130°C
- Linear type
- Leakage : 1) Through port : ≤ 0.01% of Kvs value Class IV (ANSI B 16.104-1976)
2) By-pass : ≤ 0.1% of Kvs value
- End connection : PT Screwed type (BSP 16K)

※ Close-off pressure

Model	DN		Flow coefficient		Stroke mm	Sv	Actuator ΔPmax (kgf/cm²)			
	mm	Inch	Kv	Cv			GEA-10A(P)		GEA-20A(P)	
							Mixing	Diverting	Mixing	Diverting
GXS 21 · 15	15	1/2"	4	4.7	20	30	8	4	8	4
GXS 21 · 20	20	3/4"	6.3	7.4	20	30	8	4	8	4
GXS 21 · 25	25	1"	12	14	20	30	7	3.5	8	4
GXS 21 · 32	32	1 1/4"	16	18.7	20	30	4.5	2	8	4
GXS 21 · 40	40	1 1/2"	25	29	20	30	—	—	6	3
GXS 21 · 50	50	2"	37	43.2	20	30	—	—	4	2

Sv : Rangeability (VDI 2173)

ΔPV100 : Maximum allowable pressure difference of valve faces in full opening position with installation highly loaded

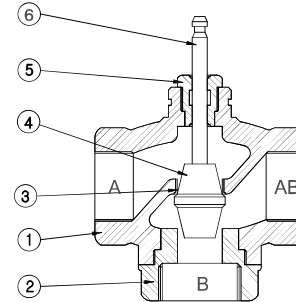
ΔPmax : Maximum allowable pressure difference of actuator not to leak fluid in closing position(close-off pressure)

Make sure to indicate valve Model in case of assembling valve of stroke 20mm and GEA-35A(P) in order-sheet

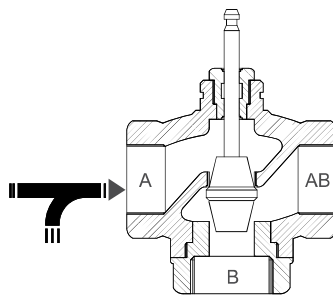
*Kv=Cv/1.167.

Materials

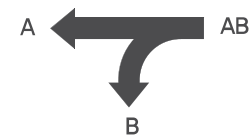
No	1	2	3	4	5
Part Name	Body	Cover	Plug	Packing Box	Stem
Material	Bronze BC6	Bronze BC6	SCS13	Viton O-Ring	SUS304
	(B505)	(B505)	(A351CF8)		(AISI304)



Mechanical design



(Mixing type)

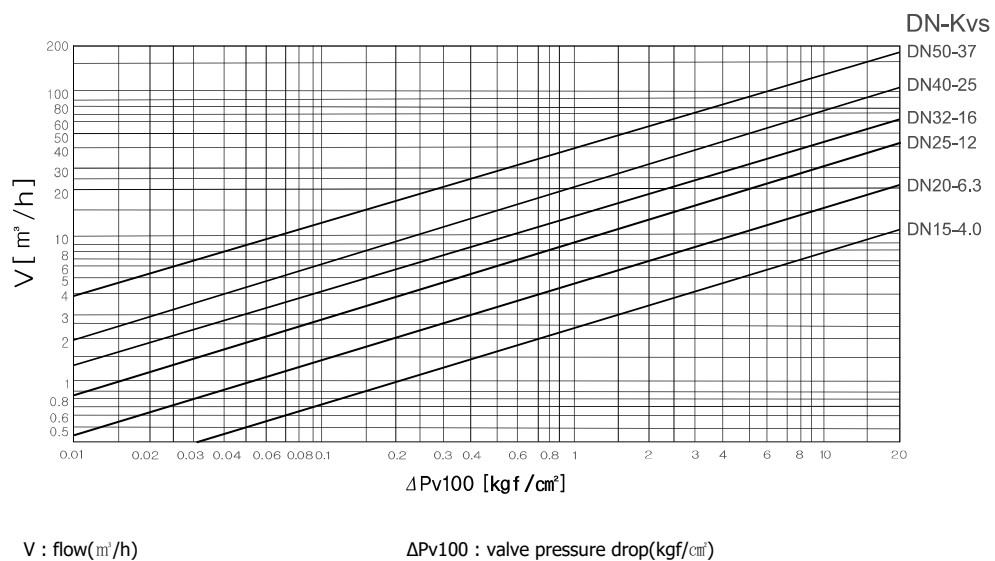


(Diverting type)

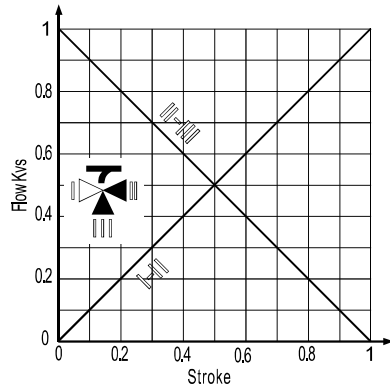
- Plug direct-coupled with valve stem
- Seat with special material attached to valve body

Valve selection

► Diagram of flow



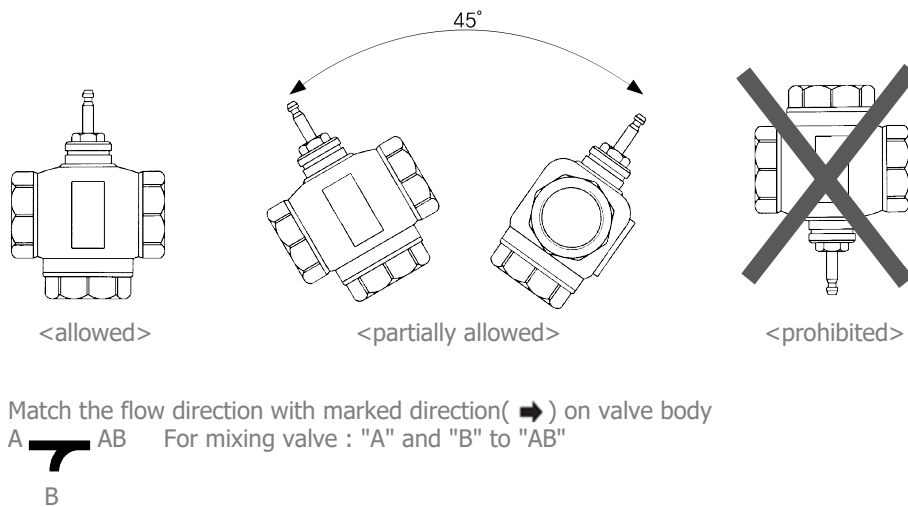
Valve flows



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

Mounting Notes

- Recommend to install circulating line in low-temperature (To prolong the life-span of Packing)
- Strainer installation into the inlet of the valve recommended



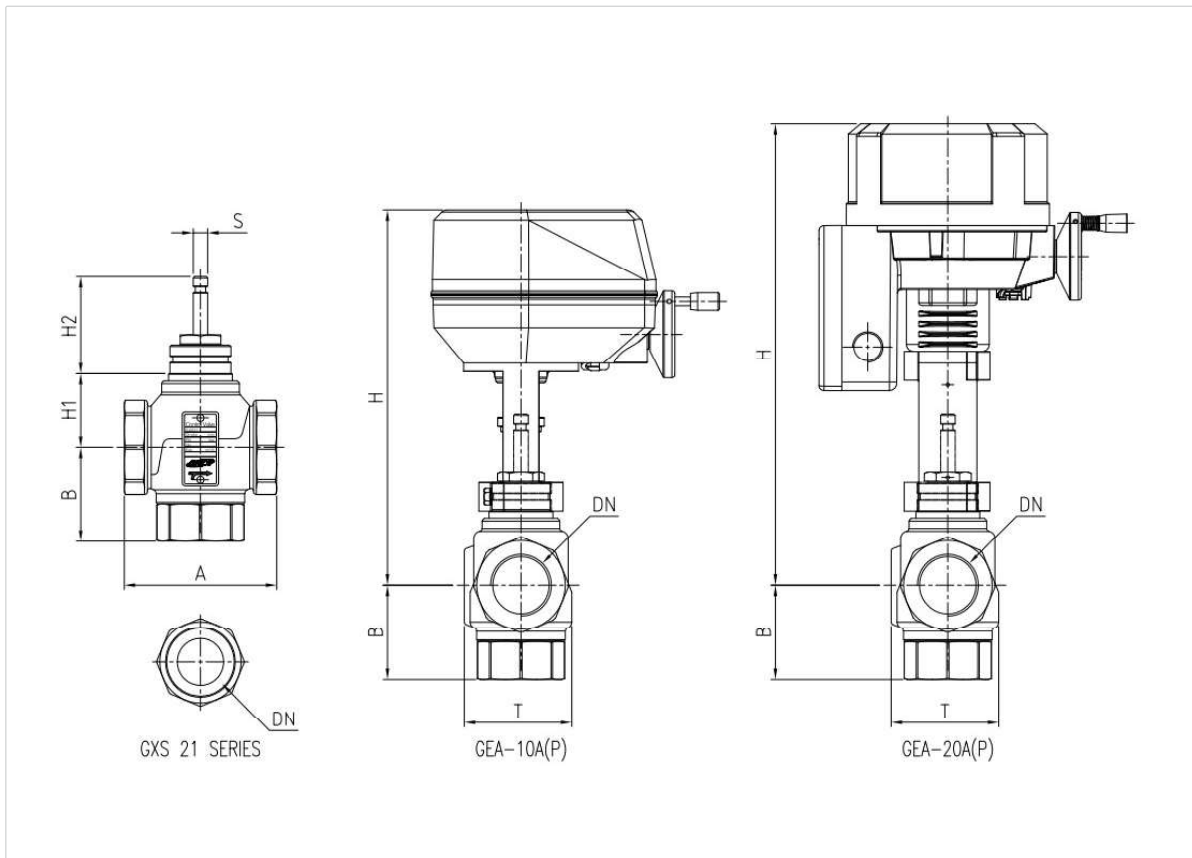
Guides for inspection

- Inspect the valve in the status of right mounting of actuator
1. Valve shaft upward : Close in Through-port, Open in By-pass
 2. Valve shaft downward : Open in Through-port, Close in By-pass

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)	
GXS 21.15	15	PT 1/2 "	100	60	Ø10	62	43	67.5	251	310	1.5
GXS 21.20	20	PT 3/4 "	100	60	Ø10	63	43	67.5	251	310	1.7
GXS 21.25	25	PT 1 "	105	65	Ø10	67	51	67.5	282	318	1.9
GXS 21.32	32	PT 1 1/4 "	105	65	Ø10	74	51	67.5	282	318	2.2
GXS 21.40	40	PT 1 1/2 "	130	85	Ø10	85	64	67.5	-	331	3.6
GXS 21.50	50	PT 2 "	150	85	Ø10	98	63	67.5	-	330	4.5

Units : mm
Specifications to be changed upon the production environment