



10-8

3-way diverting valve GXF-D Series



Summary

GXF-D is 3-way diverting valve in flange connection type and is for heating&cooling and HVAC, Ice thermal storage system with GEA Series assembled.

Nominal stroke : DN 80 - 20mm
 DN 100 ~ 150 : 40mm
 DN 200 : 50mm
 DN 250 : 60mm

Applications

- Applicable fluid and temp. : -25 ~ 130°C for hot and cold water
- Additives in water : 1) oxygen-absorbed mixtures
 2) Anti-freeze ethylene glycol up to 50%

Technical data

- Allowable pressure : 10Kgf/cm²(10bar)
- 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

※ Close-off pressure

Model	DN mm	Flow coefficient		Stroke mm	Sv	Actuator ΔPmax (kgf/cm ²)				
		Kv	Cv			GEA-20A(P)	GEA-35A(P)	GEA-55A(P)	GEA-100A(P)	GEA-250A(P)
GXF-D 80	80	91	106	20	50	3.5	—	—	—	—
GXF-D 100	100	130	152	40	50	—	4.0	—	—	—
GXF-D 125	125	188	219	40	50	—	2.5	4.0	—	—
GXF-D 150	150	283	330	40	50	—	—	3.0	—	—
GXF-D 200	200	594	696	50	50	—	—	—	3.0	—
GXF-D 250	250	906	1057	60	50	—	—	—	—	4.0
GXF-D 300	300	1608	1875	75	50	—	—	—	—	3.0

Sv : Rangeability (VDI 2173)

* Kv=Cv/1.167

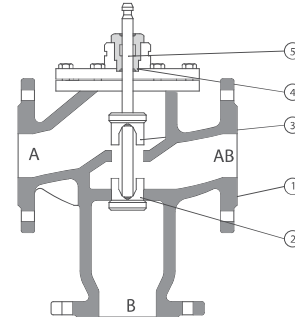
ΔPV100 : Maximum allowable pressure difference of valve faces in full opening position with installation highly loaded

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

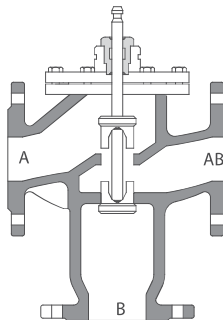
Make sure to indicate valve Model in case of assembling with GEA-55A(P) in order-sheet

Materials

No	1	2	3	4	5	6
Part Name	Body	Seat Ring	Plug	Packing	Bonnet	Stem
Material	FCD45	FCD45	SCS13	Viton O-Ring	FC20	SUS304
	(A536)	(A536)	(A351CF8)		(A126)	(AISI304)



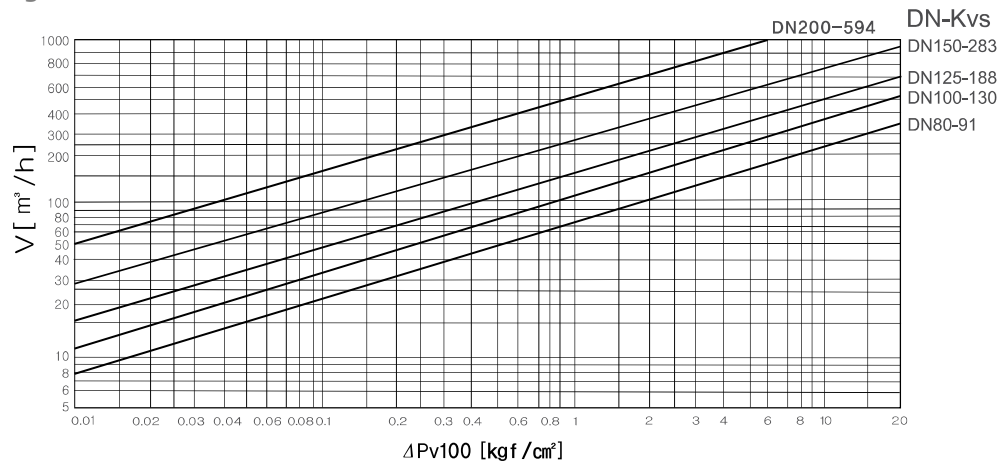
Mechanical design



- ▶ For 80A ~ 150A, 1 → 2, 3 on the front name plate
- ▶ For 200A ~ 300A, 2 → 1, 3 from the left to the right for fluid direction of arrow

Valve selection

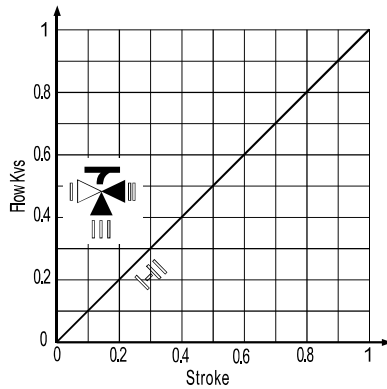
Diagram of flow



V : flow(m^3/h)

ΔP_{v100} : valve pressure drop(kgf/cm^2)

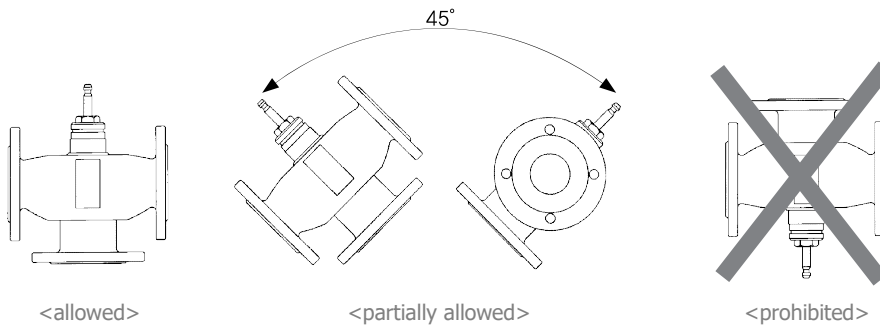
Valve flows



- Flow control of valve
Linear in Through port and By-pass
- Proportion of flow control - 50:1
(Rangeability)

Mounting Notes

- Recommend to install circulating line for heating system
(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

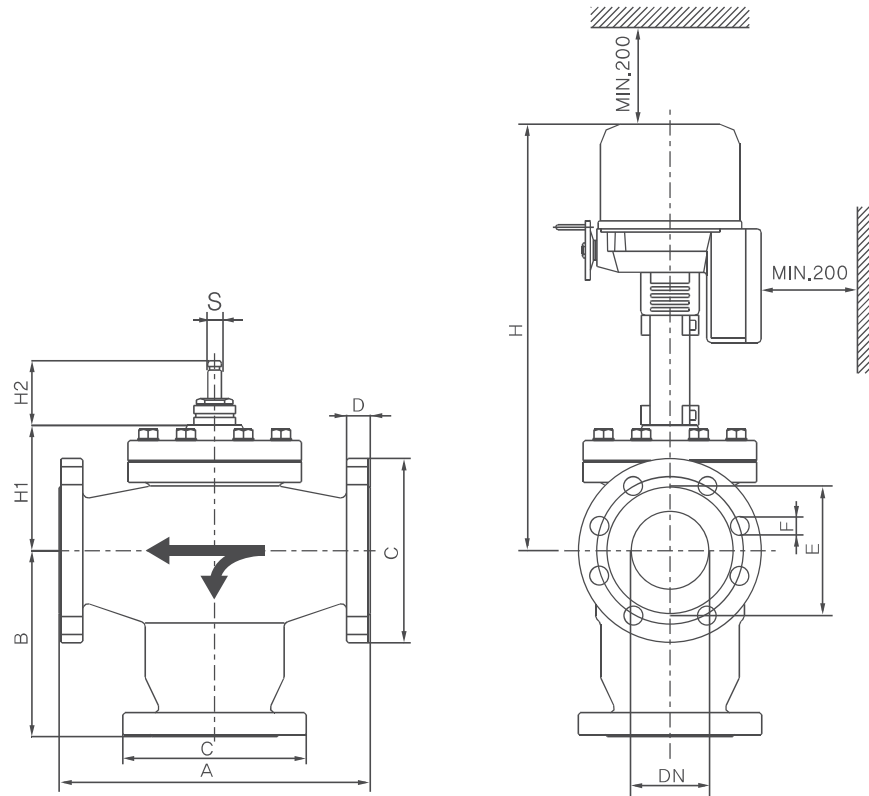
Guide for inspection

- Inspect the valve in the status of right mounting of actuator
1. valve shaft(spin) downward : open in Through-port, close in By-pass
 2. valve shaft(spin) upward : close in Through-port, open 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	C	S	D	E	F	B	H1	H2	H					Weight Valve(Kg)
											GEA-20	GEA-35	GEA-55	GEA-100	GEA-250	
GXF-D 80	80	310	ø185	ø14	22	ø150	8-ø19	185	126.5	67.5	395	420	-	-	-	32
GXF-D 100	100	350	ø210	ø14	25	ø175	8-ø19	230	158.5	95	-	451.5	753.5	-	-	45
GXF-D 125	125	400	ø250	ø14	26	ø210	8-ø23	270	176.5	95	-	469.5	771.5	-	-	62
GXF-D 150	150	480	ø280	ø14	27	ø240	8-ø23	300	186.5	95	-	479.5	781.5	-	-	74
GXF-D 200	200	595	ø330	ø20	26	ø290	12-ø23	363	259	170	-	-	-	879	-	125
GXF-D 250	250	680	ø400	ø20	35	ø355	12-ø25	425	296	180	-	-	-	-	910	230
GXF-D 300	300	806	ø445	ø20	49	ø400	16-ø25	448	298	195	-	-	-	-	912	400

Units : mm

Specifications to be changed upon the production environmen