10-2 2-way control valve
GVF 21 Series

(15A-40A)

(50A-150A)

Summary

GVF21 is compatible with GEA Series and for heating, ventilation, HVAC or Temp. controlling. It is 2-way control valve made by ductile iron in flange type connection.
- Norminal stroke : DN 15 ~ DN 80 : 20mm
  DN 100 ~ DN 150 : 40mm

Applications

- Allowable pressure : 10Kgf/㎠
- Applicable fluid and temp. : 1) up to 130°C for hot water
  2) up to -25°C for cold water
- Additives in water : 1) oxygen-absorbed mixtures
  2) Anti-freeze ethylene glycol up to 50%

Technical Data

- Allowable pressure : 10Kgf/㎠(10bar)
- Applicable fluid and temp. : DIN4747 / DIN3158 at -25°C ~ 130°C
- Linear type
- Leakage : ≤ 0.01% of Kvs value Class IV (ANSI B 16.104)
- End connection : JIS 10K RF Type

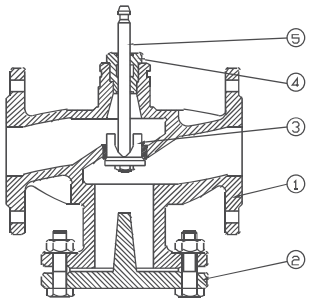
※ Close-off pressure

Model	DN		Flow coefficient		Stroke	Sv	Actuator ⊿Pmax (kgf/㎠)		
	mm	Inch	Kv	Cv	mm		GEA-20A(P)	GEA-35A(P)	GEA-55A(P)
GVF 21 · 15	15	1/2″	3	3.5	20	50	10	–	–
GVF 21 · 20	20	3/4″	5	5.8	20	50	10	–	–
GVF 21 · 25	25	1″	10	11.7	20	50	10	–	–
GVF 21 · 32	32	1 1/4″	16	18.7	20	50	10	–	–
GVF 21 · 40	40	1 1/2″	25	29	20	50	10	–	–
GVF 21 · 50	50	2″	39	45	20	50	7.8	–	–
GVF 21 · 65	65	2 1/2″	65	75.8	20	50	4.5	–	–
GVF 21 · 80	80	3″	91	106	20	50	3	–	–
GVF 21 · 100	100	4″	130	152	40	50	–	3.4	–
GVF 21 · 125	125	5″	188	219	40	50	–	2.0	3.4
GVF 21 · 150	150	6″	283	330	40	50	–	1.7	2.3

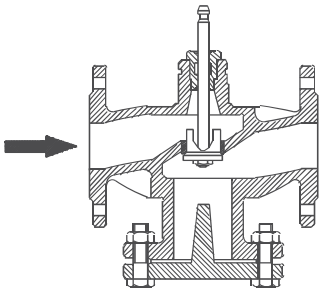
Sv : Rangeability (VDI 2173)
Kv = Cv / 1.167
ΔPV100 : Maximum allowable pressure difference of valve faces in full opening position with installation highly loaded
ΔPmax : Maximum allowable pressure difference of actuator not to leak fluid in closing position(close-off pressure)
Make sure to indicate valve Model in case of assembling valve of stroke 20mm and GEA035A(P) in order-sheet
※ Note : Cylinder balancing valve to be applied for over 4bar of valve pressure difference

Materials

No	1	2	3	4	5
Part Name	Body	Cover	Plug/ seat	Packing Box	Stem
Meterial	FCD45	FCD45	SCS13	Viton O-Ring	SUS304
	(A536)	(A536)	(A351CF8)		(AISI304)



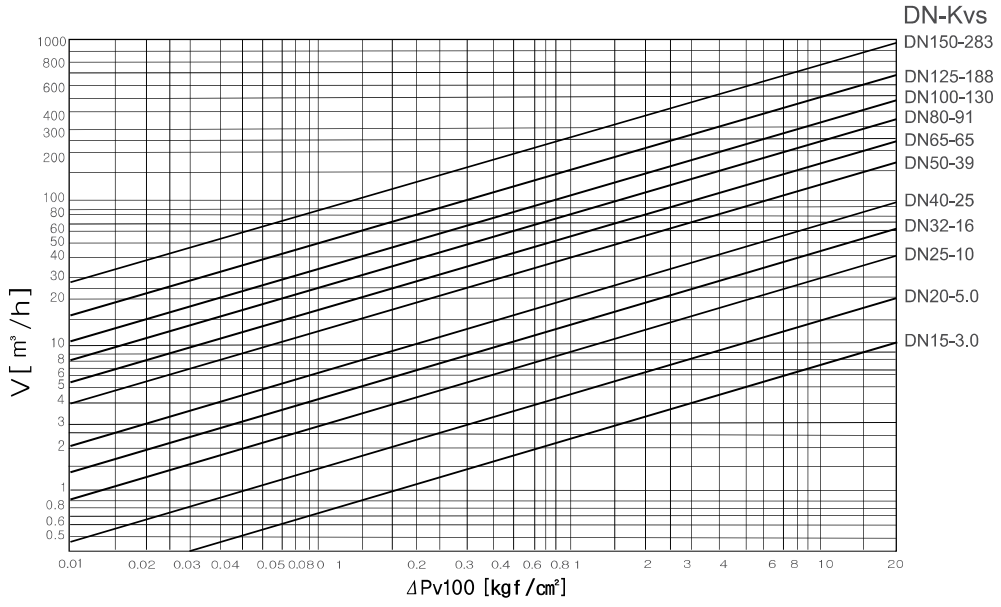
Mechanical design



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

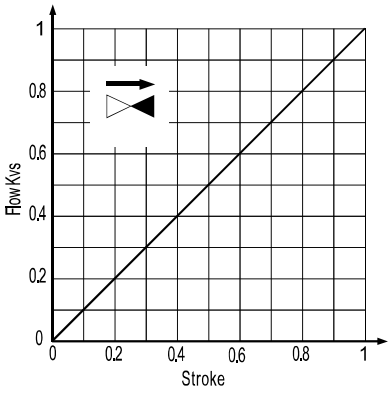
Valve to select

▶ Diagram of flow



V : flow(㎥/h) ΔPv100 : valve pressure drop(kgf/㎠)

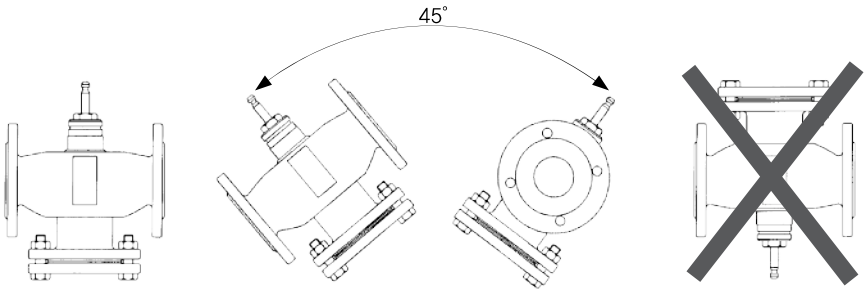
Valve flows



- Flow control of valve
- Linear
- Proportion of flow control - 50:1

Mounting notes

- Recommend to install circulating line to protect valve stem normally
- Strainer installation recommended for higher safety rate of valve function



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

Guide for inspection

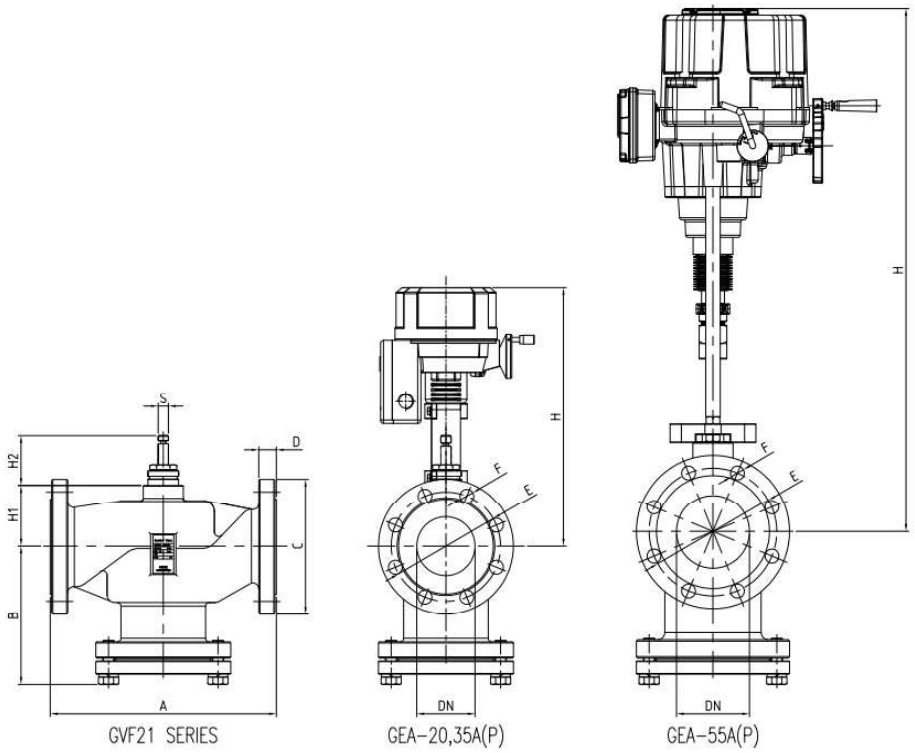
Inspect the valve in the status of right mounting of actuator

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℃(hot and cold water)

Shape dimension



MODEL	DN	A	C	S	D	E	F	B	H1	H2	H			Weight
											GEA-20	GEA-35	GEA-55	Valve(Kg)
GVF 21.15	15	130	ø95	ø10	19	ø70	4-ø15	91.5	76.5	67.5	343.5	-	-	4.7
GVF 21.20	20	150	ø100	ø10	18	ø75	4-ø15	93	76.5	67.5	343.5	-	-	5.5
GVF 21.25	25	160	ø125	ø10	19	ø90	4-ø19	106.5	78.5	67.5	345.5	-	-	7.3
GVF 21.32	32	200	ø135	ø10	21	ø100	4-ø19	89	73.5	67.5	340.5	-	-	10
GVF 21.40	40	200	ø140	ø10	22	ø105	4-ø19	89	73.5	67.5	340.5	-	-	10.3
GVF 21.50	50	230	ø155	ø14	21	ø120	4-ø19	146	75.5	67.5	342.5	-	-	15.6
GVF 21.65	65	290	ø175	ø14	24	ø140	4-ø19	186	82.5	67.5	349.5	-	-	23.5
GVF 21.80	80	310	ø185	ø14	24	ø150	8-ø19	191	80.5	67.5	347.5	-	-	27
GVF 21.100	100	350	ø210	ø14	24	ø175	8-ø19	209	122.5	95	-	415.5	717.5	43
GVF 21.125	125	400	ø250	ø14	27	ø210	8-ø23	245	139.5	95	-	432.5	734.5	61
GVF 21.150	150	480	ø280	ø14	28	ø240	8-ø23	286	154.5	95	-	447.5	749.5	87

Units : mm
Specifications to be changed upon the production environment