

- Replace with _____
- * Gate valves
 - * Globe valves
 - * Ball valves
 - * Utility valves

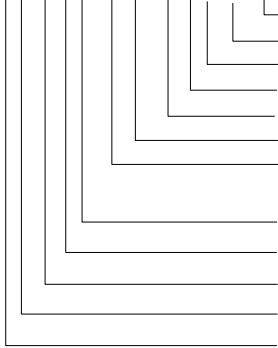
2-port seat Valves

Seamless pipe, formed, Flange type, PN16 Bar
For liquids, steam, Air, Gas, LPG/LNG

VTF46.XXX

Type designation

VTF46.125EODG01



Type of ext. tube
Finishing: G=Galvanized, N= Nickel coating, P=Painted
Flange type: D=DIN ,K=KS, J=JIS, B=BS, I=ISO, X=Option
Test point: 0= none, 1= 2 plugs, 2=Test cocks,
흐름특성: E=Equal %, L=Linear, F=Floating(On-Off)
DIN:15=15, 25,32,40,50,65,80, 90=100, 91=125, 92=150
For actuator. 1:ATI/Siemens 2:Honeywell 3:Johnson 4:Sauter
5: Satchwell 6: Samson,7: Siebe 8: Saginomiya 9:Trend
Version: Type or Structure
PN:Bar: 2: 6 Bar, 3=10, 4: 16, 5::20/25, 6: 40
Type conn.: G: Thread, F: Flange, W: Weld
Structure : T : Through(2) way D: Divert(3) way..
Product group: V: Valves



General description

The valves are made of made with steel or stainless steel plate to meet the wide range of applications. Thanks to the Plate form technologies and the 3-Dimensional robot welding equipment specially developed by ATI control engineers the valves are leak free fail safe functioning. For rust protection purpose the whole unit are sunken into the non-electro nickel solution. Production sizes are of following;

Ordering method

See the summary of types. and type designation.
*Optional type can be made upon contract.

Application

Suitable for a proportional control or shut-off in heating

Type summary

Valve bodies- DIN 3202				Actuators														
DIN port	Type(Model)	Kvs Vale	Range-ability	max. ΔP _{v100} in kPa		stroke	Force(N) max ΔP _{v100} in kPa at valves are closed off											
mm	Type(Model)	m ³ /h	K _v /K _{vr}	직진	회전	mm	400N	600N	900N	1200N	1800N	2400N	4800N	6000N	9600N	15000N		
15	VTF46.113	0.9	>50	600	780	20	200	300	450									
15	VTF46.114	1.9	>50	600	780	20	200	300	450									
15	VTF46.115	3	>50	600	780	20	200	300	450									
20	VTF46.120	5	>100	600	780	20	200	300	450									
25	VTF46.125	7.5	>100	600	780	20	150	200	340	400	600	1000						
32	VTF46.132	12	>100	600	780	20	150	200	340	400	600	800						
40	VTF46.140	19	>100	600	780	20	150	200	340	400	600	800						
50	VTF46.150	31	>100	600	780	20	150	200	340	400	600	800	1600					
65	VTF46.165	49	>100	350	450	40	125	190	280	380	500	760	1500	1600				
80	VTF46.180	78	>100	250	325	40	100	125	225	250	400	500	1000	1200	2000	3000		
100	VTF46.190	124	>100	150	195	40		100	150	200	300	400	800	1000	1600	1800		
125	VTF46.191	200	>100	125	130	40			100	130	200	260	500	800	1000	1500		
150	VTF46.192	300	>100	100	125	40				100	100	200	400	600	800	1000		
200	VTF46.193	630	>100	80	100	60						100	200	400	600	800		
250	VTF46.194	1000	>100	60	80	120							100	200	400	600		
300	VTF46.195	1500	>100	50	60	120								100	200	400		
350	VTF46.196	1800	>100	50	60	120									150	300		

*Notes:100kPa=1Bar=10mWG | max.ΔP_{v100}= Maximum differential pressure across the open valve

ΔP_{v100} =Differential pressure across fully open valve in full load

ΔP_{max} = Max.permmissible differential pressure across closed valve.

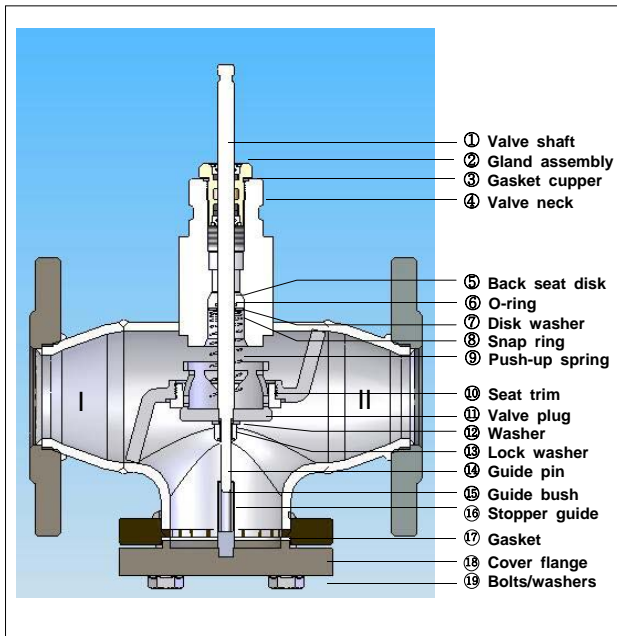
K_v =Nominal flow value of valves in m³/h at nominal stroke and a pressure drop of 1 Bar.

K_{vr} =Smallest flow value in m³/h for pressure drop of 1 Bar at which the flow characteristic tolerance are still maintained

Design feature

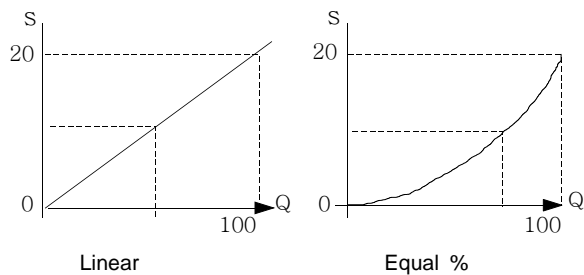
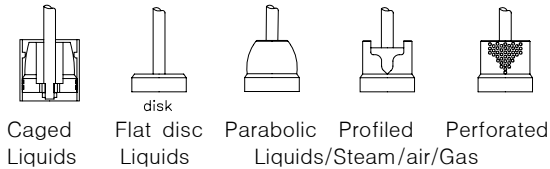
Valves are supplied as a separate unit. Assembly is quite straightforward. Minimize noise level at a minimum flow. And it's easy to handle. So called " EASY VALVE " [E-Z

- Gland seal stuffing box can be replaced without draining nor shut down the flow line system thanks to the **back-seat** mechanism.
- Spindle are made of STS for rust-free operation.
- Various materials are ready for plugs.



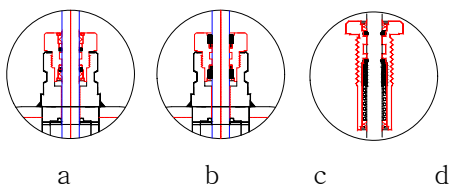
Various plugs available

Valve plugs are ready to meet the specific requirement of control and application.



Various gland seal(Stuffing box) unit

Sealing gland assemblies are ready for specific medium and pressure requirement. Options are also available.



a=Standard b=Gases c=High press./Temp d= Options

Application advice

For basic information and further details refer to the data sheet of valve selection and engineering- TI4001...

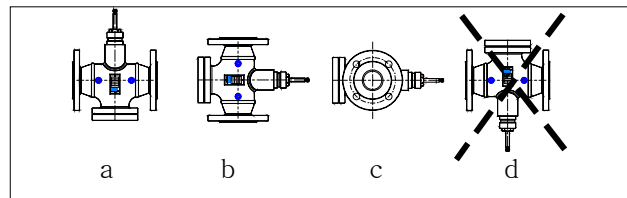
Valves can be installed on supply pipe or return pipe of load equipment such as, heat exchanger, fan coil unit, AHU batteries, pumps and etc..

- For steam applications: The valves are only suitable for saturated or superheated steam; the steam pipes must be properly drained or blow off the dirt inside the pipe.
- For selecting actuator is also very important since it is not properly matched control valve will not work correctly. Refer to selection of actuators...
- When use with chilled water system the drain and cocks should be faced to the downward for draining or condensate drips.
- Before installation you should check the pressure rating and permissible temperature.
- For more information on selecting valve sizes refer to the valve selections and and sizing..

Mounting and installation advices

Do not remove the protection cap from the valve before installation to the system

Following position are recommended for installation.



Flow direction

I II Direct flow

For liquid: Direct flow is recommended

I II Reverse flow

For higher differential pressure (1.5Bar ≥ ΔP)

Mounting instructions are supplied in the delivery box of the products

Commissioning advice

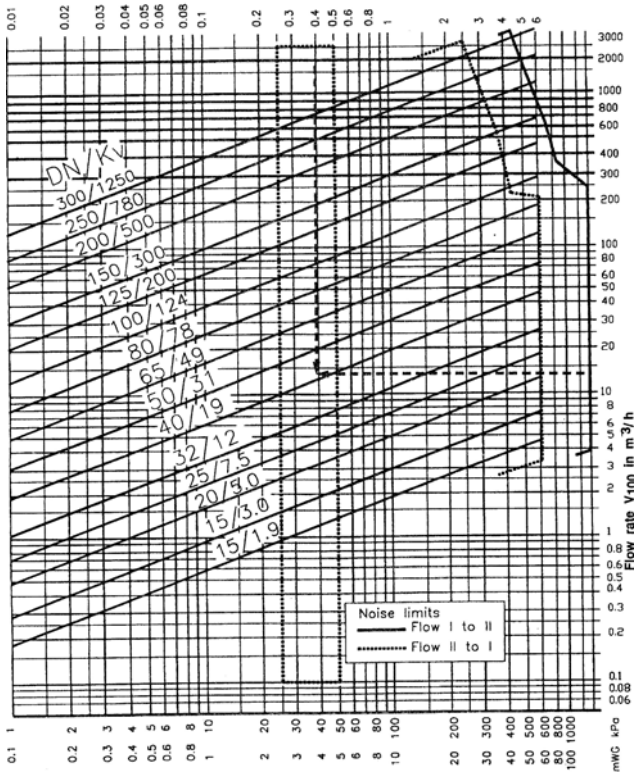
- Do not remove valve handle except for replacing gland seal assembly.
- Be care for not to scratch the valve spindle or any intend to bend.
- Be sure the operating pressure and temperature are within the nominal values.
- Check the differential pressure expected in the process to avoid noise.

Hint for correct sizing of valve

Example : Given data : $\Delta P=0.35$ Bar $K_v=13$

- a. Trace down to the vertical line 0.35 Bar of ΔP to an intersecting point with horizontal line of K_v flow rate of 13 m³/h

Valve type:VTF46.. Pressure drop ΔP_{v100} in Bar

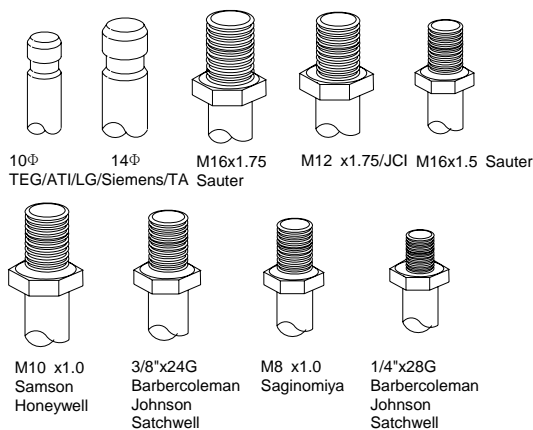


Recommended selection in $\Delta P_{v100} = 0.3$ Bar
1m³/h=0.278kg/s water at 20°C

Various shaft valve shaft

Various valve shafts are made for actuators of each brand in the HVAC market.

The shaft end is exactly same as the original ones shown as following figures.



Accessories

Standard accessories are ready for each brands.

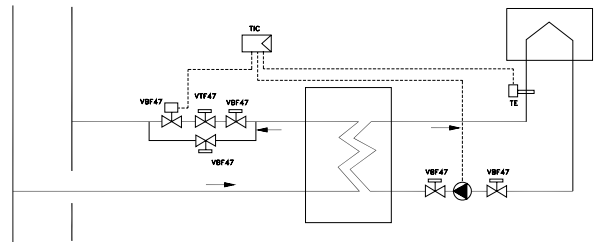
- Shaft heater for cooling applications
- Spindle adapters for ATI actuators
- Test cocks
- Drain and test cocks
- Drain cock
- Gauge cocks

- b. Select $K_v=19$ of DIN40 between the line of $K_v=31$ and the line of $K_v=19$

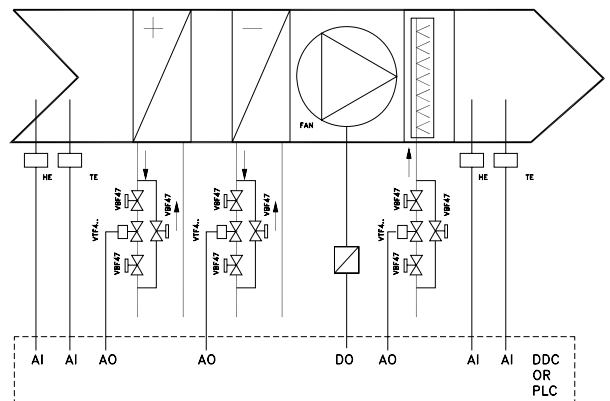
The answer is type :VTF46.140 ;40mm(1-1/4")

Application examples

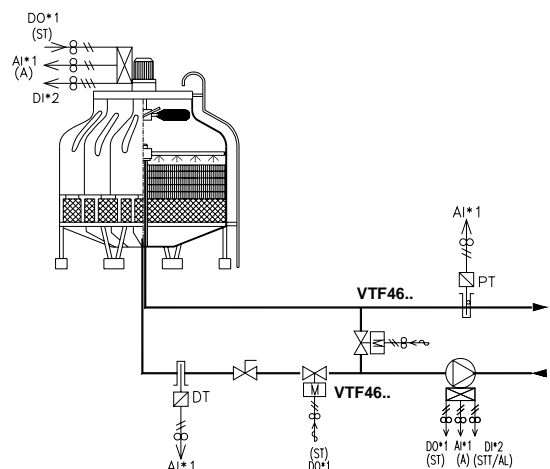
- a. Supply temperature control of a Heat exchanger of a district heating system



- b. Supply temperature and humidity control of a AHU Batteries in building air conditioning installation

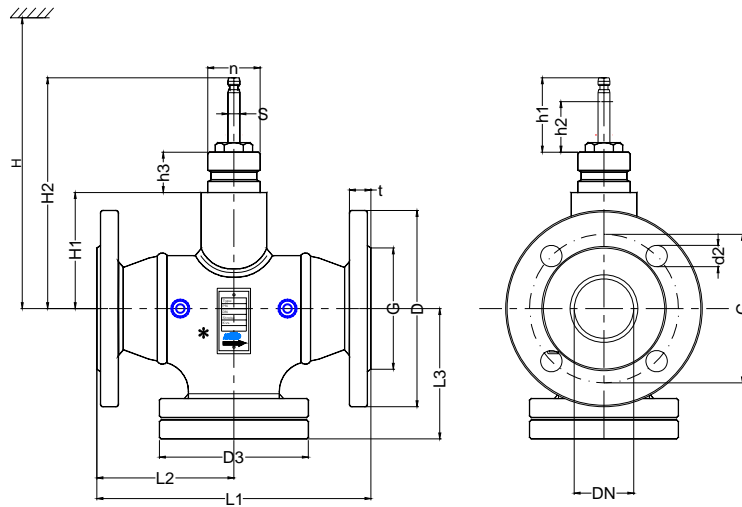


- c. Return temperature diverting control of a Cooling Tower circuit in building air conditioning installation



M= VTF46..+ AQX63.. /SKD62 /SKC62

Dimension



H Space for maintenance
 H1 : distance for actuator installation
 H2 : distance of valve closed position
 * Cock valve Optionally available upon request.

Test cocks can be welded on various points.

We reserve the right to make changes and improvements in our products which may affect the accuracy of the information contained in this leaflet.

* Dimension in mm

1000Nf = 100Kf

DIN		G										H1	H2	N					Wt	적합한 액츄에이터
mm	Inch	L1	L2	D	t	C	d2	AT/SI	HW	JCI	SA	ATI	ATI	AT/SI	HW	JCI	SA	S	Kg	Nf(Kf)
15	1/2"	130	65	100	10	65	14x4	34	30		27	64	160.5	44	35		38	10		600(60)
15	1/2"	130	65	100	10	65	14x4	34	30		27	64	160.5	44	35		38	10		600(60)
15	1/2"	130	65	100	10	65	14x4	34	30		27	64	160.5	44	35		38	10		600(60)
20	3/4"	150	75	100	12	75	14x4	34	30		27	60	200	44	35		38	10		800(80)
25	1"	160	80	115	16	85	14x4	34	30		27	80	240	44	35		38	10		1200(120)
32	1 1/4"	180	90	150	18	100	18x4	34	30	39	27	60	240	44	35	50	38	10		1500(150)
40	1 1/2"	200	100	150	18	110	18x4	34	30	39	27	57	242.5	44	35	50	38	10		1800(180)
50	2"	230	115	165	18	125	18x4	34	30	39	27	96	192.5	44	35	50	38	10		2000(200)
65	2 1/2"	290	145	185	18	145	18x4	34	30	39	41	114	230.5	44	35	50	60	14		2400(240)
80	3"	310	155	200	20	160	19x8	34	30	39	41	126	242.5	44	35	50	60	14		3000(300)
100	4"	350	175	220	20	180	18x8	34	30	39	41	146	262.5	44	35	50	60	14		3500(350)
125	5"	400	200	250	22	210	18x8	34	30	39	41	163	279.5	44	35	50	60	14		4000(400)
150	6"	480	240	285	22	240	23x12	34	30	39	41	186	302.5	44	35	50	60	14		4500(450)
200	8"	600	300	345	24	295	23x12	34	30	39	41	210	326.5	44	35	50	60	16		5000(500)
250	10"	730	360	400	26	355	27x12	34	30	39	41	230	364	44	35	50	60	16		6000(600)
300	12"	850	425	460	28	410	27x12	34	30	39	41	260	394	44	35	50	60	16		9600(960)
350	14"	*		520	30	470	27x16	34	30	39	41	260	394	44	35	50	60	16		10000(1000)
400	16"	*		580	32	525	30x16													
500	20"	*		715	36	650	33x20													
600	24"	*		840	40	770	36x20													

* Sizes are available upon order
 AT/SI=ATI/Siemens HW=Honeywell, JCI=Johnson, SA= Sauter, RTK= Regeltechnik