

Works with

- * ATI
- * Barber coleman
- * Honeywell
- * Johnson
- * Landis&Gyr
- * Satchwell
- * Sauter
- * Staefa
- * T/A
- * TEG
- * Others

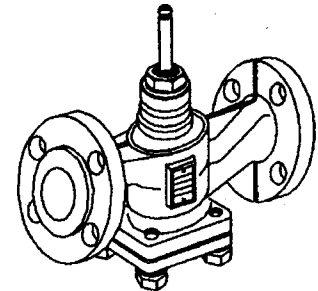
Two port seat valves

Cast iron, GG20, Flange connections PN16
for Liquids, Steam & Gas

VTF43..

VTF43.125L Standard type

- Type of fluid : 0 or L = Liquid S= Steam O = Oil G= Gas R= Refrigerant
- Options are also available
- Flow characteristics; L=Linear, E=Equal percentage, S=Special
- Size of Ports (mm)
05,06,07,08,09,10,11,12,13,14,15, 20,25,32,40,50,65,80,90=100,91=125
92=150, 93=200, 94=250, 95=300 Options are also available
- Type of neck for actuator
1= ATI,TEG/ L/G 2= H/W 6= Flow 7= Mech.sensor 8= Press.sensor 9= Optns
- Version No. of valve body.
1= Self seat+Bz plug, 2= Stls seat + Bz plug, 3=Stls.seat+Stls.plug,
5= Press.control, 7= for Press.regulator, 8= for Self operated 9= Options
- Nominal Pressure/Bar : 2= 6 3= 10 4=16 5= 25 6= 40
- Type of connection : G=Thread type ,F= Flange type connection
- Type of port : T=Through way, T= Divert,S= Special
- Product group :V=Valve


Description

Flange valves made from cast iron, size DN20...300.
Nominal stroke 20mm for DN25...50mm
40mm for DN65mm ...200mm
50mm for DN250mm...300mm

For use with Electric, Pneumatic or Hydraulic actuators.

Permissible fluids

- Hot water :max.160° C
- Chilled water :-15° C max. in closed circuit only
- Water with following additives;
 - Hydrazine, Phosphate, for water treatment
 - Glycol,max.50%, for frost protection
 - Saturated steam,super heated steam abs press. 2bar
 - Hot oil:max 160° C
 - Refrigerant R12,R22,R502(spindle heating element required for this application)

Application

Suitable for use a proportional control or shutoff in heating ventilating air conditioning, District heating system and other industrial applications.

Operating pressure

16Bar(1600kPa)

Leakage rate

0%

Connection port

ISO2084, flange
BS4505

Summary of Types

Valves			Actuators													
DN size mm	Type reference	Kvs Value m ³ /h	Rangeability K _{vs} /K _{vr}	max.ΔP _{V100} in kPa		Nominal stroke mm	Force (N) at max.ΔP _{V100} in kPa (close-off ratings)									
				Dir.	Rev.		400N	600N	900N	1200N	2400N	4800N	9600N	15000N		
15	VTF43.113	0.9	> 50	2400	3000	20	1000	1600	2400							
15	VTF43.114	1.9	> 50	2400	3000	20	1000	1600	2400							
15	VTF43.115	3	> 50	2400	3000	20	1000	1600	2400							
20	VTF43.120	5	>100	2400	3000	20	900	1400	2100							
25	VTF43.125	7.5	>100	2400	3000	20	600	1000	1500	2000						
32	VTF43.132	12	>100	2400	3000	20	400	600	900	1200	2400					
40	VTF43.140	19	>100	2400	3000	20	250	400	600	800	1600					
50	VTF43.150	31	>100	2000	2500	20	150	250	375	500	1000	2000				
65	VTF43.165	49	>100	1000	1250	40			90	125	250	500	1000			
80	VTF43.180	78	>100	800	1000	40				100	200	400	800			
100	VTF43.190	124	>100	500	625	40				60	125	250	500			
125	VTF43.191	200	>100	450	560	40					80	150	300	450		
150	VTF43.192	300	>100	300	375	40						100	200	300		
*200	VTF43.193	500	>100	180	225	40						60	120	180		
*250	VTF43.194	780	>100	120	150	50							80	120		
*300	VTF43.195	1250	>100	90	110	50							60	90		

**Notes; 100 kPa = 1Bar = 10mWG

max.ΔP_{V100} =Max.permissible differential pressure across open valve
ΔP_{V100} =differential pressure across fully open valve in installation in full load.

ΔPmax =max. permissible differential pressure across closed valve

k_{vs} =nominal flow value of valve 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

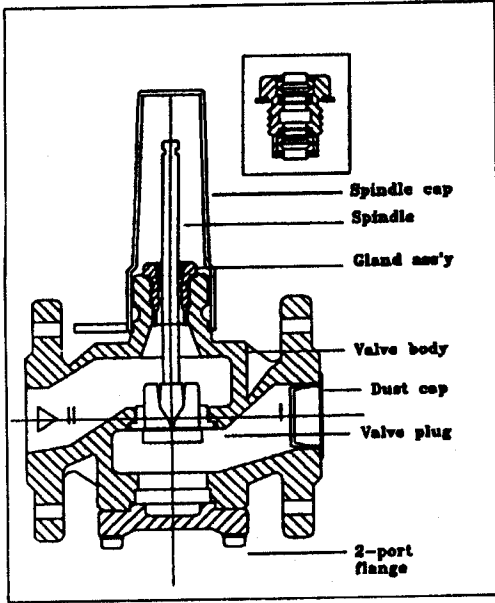
Accessories

Electric heating element for sub zero temp. applications

Design Features

Valves are supplied as a separate unit. The assembly is straightforward. Neither special tools nor adjustments are required.

- Sealing gland assembly is easily interchangeable on site
- Spindle is made of stainless steel
- Plug materials can be of any for various applications to meet accurate performances.
- Size from 15mm to 150mm, from 200 to 300 on request
- Protective Plastic cover for spindle
- Quick actuator mounting



Various type of plugs for the functional control in wide range of applications



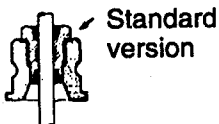
Parabolic Perforated Profiled

Water only Gas, oil Water, steam, gas

Spare part order Nr.

PN:VTF43.03XXAR : Parabolic
 PN:VTF43.03XXAF : Perforated
 PN:VTF43.03XXAP : Profiled
 _____ Size of valve

Various type of sealing gland assemblies for different media and wide range of temperature and pressure.



Spare part order Nr.

PN:VTF40.02A : Hot water
 PN:VTF40.02B : Chilled water
 PN:VTF40.02C : Steam
 PN:VTF40.02D : Oil
 PN:VTF40.02E : GAS
 PN:VTF40.02R : Refrigerants



Special version
for refrigerants

Application Advice

For basic information and further details on valve selection and sizing refer to data sheets 4001..4019.

The valve can be installed either in the supply or the return pipe work. The latter is given preference since return side temperature is lower. Strainer is recommended for correct control and long life.

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.

Selecting actuator is also very important since it is not properly matched control valve does not work correctly. For correct selection of actuators also refer to the Data Sheet of various actuators, 4300... 4499.

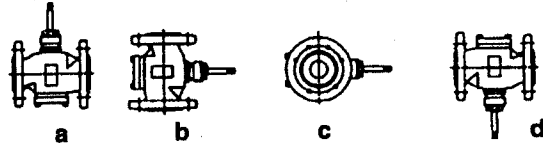
Observe the permissible temperatures. For more details refer to <Application > and <Technical Data>

Data Sheet 3401 contains basic system data on POLYTEK. All hints and explanations given in this sheet must be observed.

Mounting and Installation Advice

Do not remove the protection cap of the valves by tearing off the finger tap before mounting actuators.

Mounting positions



a. b. c. = permitted d = not recommended

Application & Flow direction



The valve mounting instructions are supplied in the protection cap of the valves.

Commissioning Advice

a. Remove the protection cap of the valves by tearing off the finger tap.

b. Check the valve spindle whether it is bent or safe by

Pushing valve spindle : valve opens (Inlet from II to I)
 Pulling valve spindle : valve closes (Inlet from II to I)

c. Care must be taken not to make any damage on the surface of valve spindle. Any scratch or touching tool directly on spindle surface may cause valve leaking.

d. Check the system differential pressure (ΔP) before commissioning the valves with actuators since too big Diff. press. cause noise or improper operation.

Hints for correct valve sizing

Example: Given data: $\Delta P = 0.35 \text{ Bar}$ and $K_v = 13$

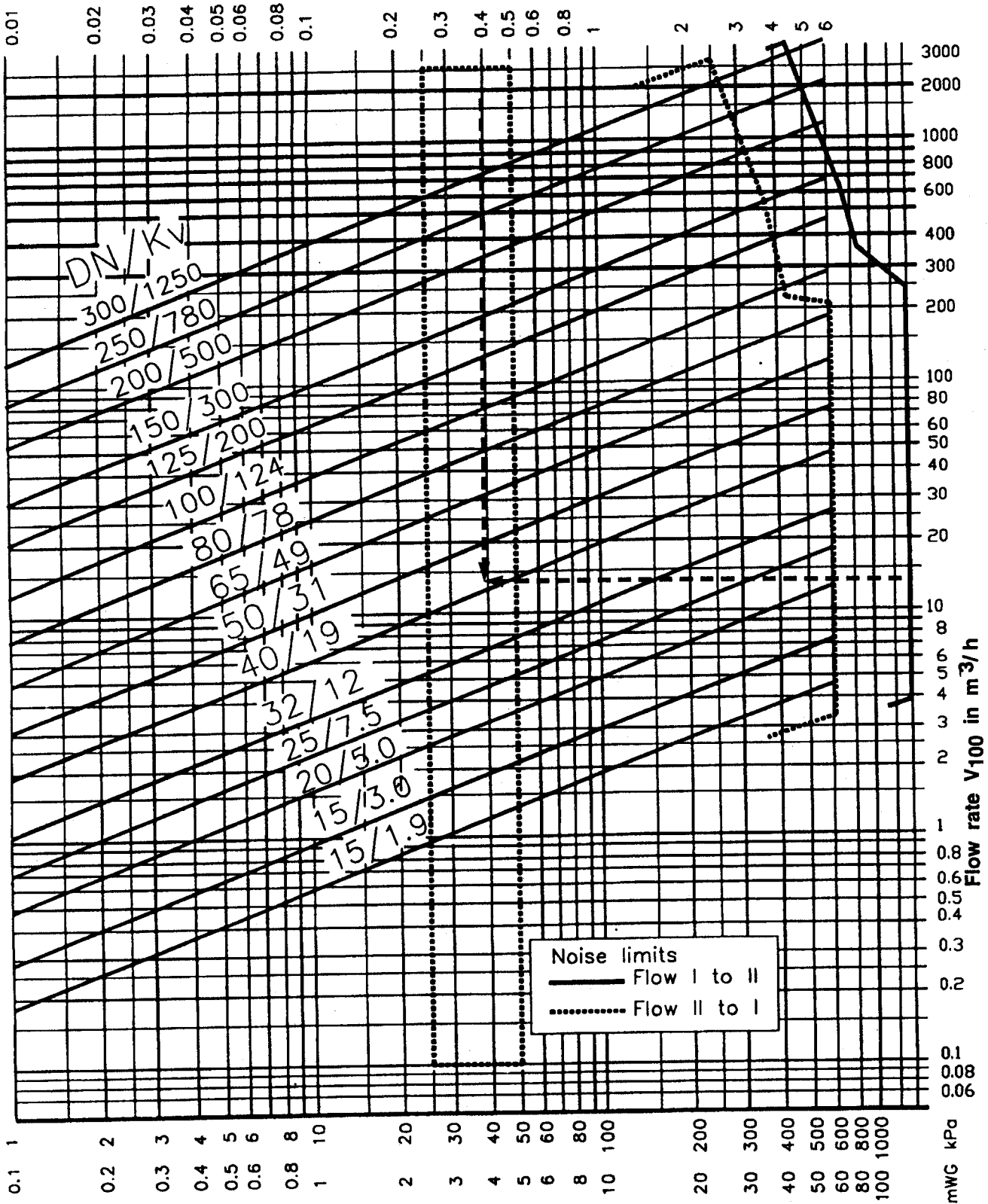
a. Trace down the vertical line of 0.35 Bar of ΔP to an intersecting point with horizontal line of K_v flow rate of $13 \text{ m}^3/\text{h}$.

b. Select $K_v=19$ of DN40 between the line of $K_v=31$ and the line of $K_v=19$

The answer is TYPE:VTF43.114;40mm(1-1/4") of $K_v=19$

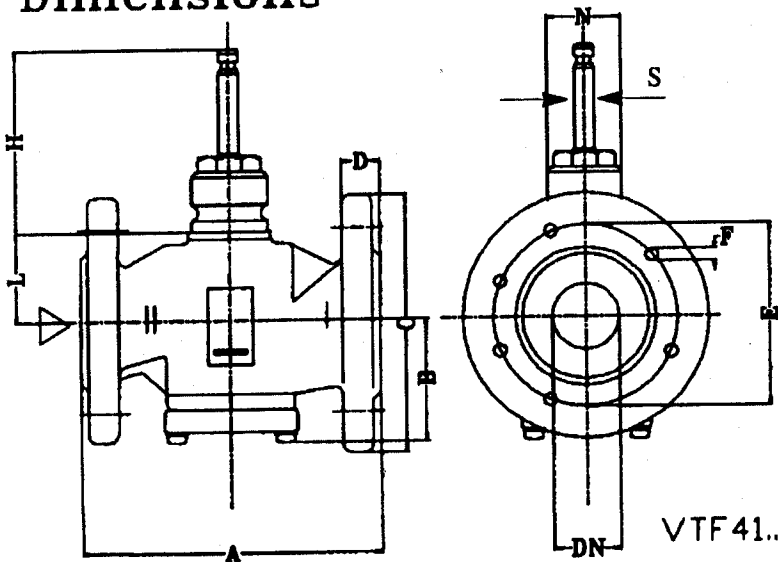
TYPE:VTF40...

Pressure drop ΔP_{V100} in Bar



Recommended selection in $\Delta P_{V100} = 0.3 \text{ Bar}$
 $1 \text{ m}^3/\text{h} = 0.278 \text{ kg/s}$ water at 20°C

Dimensions



DN mm	Inch	A	B	C	D	F	H	L	N		S	Wgt kg	Suitable actuators		
									ATI	H/W			ATI	L/G	H/W
15	1/2"	100	68.5	100	10	12x 4	96.5	26	44	35	10	3.9	AQX SQX/SKD M904+Q455		
20	3/4"	100	72.5	100	10	12x 4	96.5	26	44	35	10	3.9			
25	1"	160	72.5	115	16	14x 4	96.5	34	44	35	10	5.4			
32	1 1/4"	200	96.5	150	18	18x 4	96.5	39	44	35	10	8.8			
40	1 1/2"	200	96.5	150	18	18x 4	96.5	39	44	35	10	8.8			
50	2"	230	106	165	20	18x 4	96.5	39	44	35	10	15.5			
65	2 1/2"	290	126	185	20	18x 4	116.5	60	44	35	14	24	AQX64 SKC62 M904+Q455		
80	3"	310	148	200	22	18x 8	116.5	91	44	35	14	29			
100	4"	350	165	220	24	18x 8	116.5	102	44	35	14	41			
125	5"	400	184	250	26	18x 8	116.5	118	44	35	14	58			
150	6"	480	210	285	26	22x 8	116.5	124	44	35	14	80			
200*	8"	600	240	345	29	22x12	116.5	150	44	35	16	150	AQX65		
250*	10"	720	280	400	29	22x12	116.5	180	44	35	16	200			
300*															

Dimensions in mm

*) Available upon order in quantity only