

**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 PN10  
for Liquids, hot water

# VTF31.1

## VTF31.125L

**Standard type**

Type of fluid : This type is only for liquid, Options are also available

Flow characteristics; L=Linear, E=Equal percentage, S=Special

Size of Ports (mm)

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 seated 2= Stl seat 3= Stl. seat+Stl. plug 6= for press control

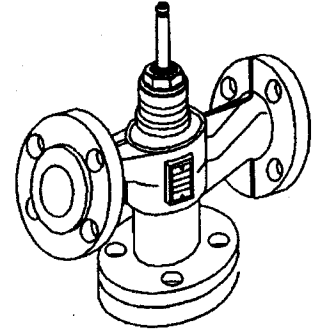
7= for Press. control 8= for Self operated 9= Options

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, D= Divert, S= Special

Product group : V= Valve



### Description

Flange valves made from cast iron, size DN20...300.

- Nominal stroke 20mm for DN25...80mm
- 40mm for DN100mm ...200mm
- 50mm for DN250mm...300mm

For use with Electric, Pneumatic or Hydraulic actuators.  
AQX..., AUX..., AQH..., AUH..., AK..., AP...

### Permissible fluids

- Hot water : max. 120° 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

### Application

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

**Operating pressure**

10Bar(1000kPa)

**Leakage rate**

0.0%

**Connection port**

flange ISO 2084  
BS 4504

### Summary of Types

Valves			Actuators												
DN size mm	Type reference	Kvs Value m <sup>3</sup> /h	Rangeability K <sub>Vs</sub> /K <sub>Vr</sub>	max. ΔP <sub>V100</sub> in kPa		Nominal stroke mm	Force (N) at max. ΔP <sub>V100</sub> in kPa (close-off ratings)								
				Dir.	Rev.		600N	900N	1200N	2400N	4800N	9600N	15000N		
15	VTF31.113	0.9	> 50	100	100	20	200	400	800	1600					
15	VTF31.114	1.9	> 50	100	100	20	200	400	800	1600					
15	VTF31.115	3	> 50	100	100	20	100	200	400	800					
20	VTF31.120	5	> 50	100	100	20	100	200	400	800					
25	VTF31.125	7.5	> 50	100	100	20	100	200	400	800					
32	VTF31.132	12	> 50	100	100	20	100	200	400	800					
40	VTF31.140	19	> 50	100	100	20	100	200	400	800					
50	VTF31.150	31	>100	100	100	20	100	200	400	800					
65	VTF31.165	49	>100	100	100	20	60	120	240	480	960	1920			
80	VTF31.180	78	>100	80	80	20	40	80	160	320	640	1280			
100	VTF31.190	124	>100	70	70	40		60	120	240	480	960			
125	VTF31.191	200	>100	60	60	40		40	80	160	320	640	1000		
150	VTF31.192	300	>100	50	50	40			40	80	160	320	500		
200	VTF31.193	500	>100	40	40	40			30	60	120	240	312		
250	VTF31.194	780	>100	30	30	50					80	160	250		
300	VTF31.195	1250	>100	20	20	50					40	80	125		

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

- max. ΔP<sub>V100</sub> =Max. permissible differential pressure across open valve
- ΔP<sub>V100</sub> =differential pressure across fully open valve in installation in full load.
- ΔP<sub>max</sub> =max. permissible differential pressure across closed valve

- K<sub>Vs</sub> =nominal flow value of valve in m<sup>3</sup>/h at nominal stroke and a pressure drop of 1 Bar
- K<sub>Vr</sub> =smallest flow value in m<sup>3</sup>/h for pressure drop of 1 bar at which the flow characteristic tolerance are still maintained

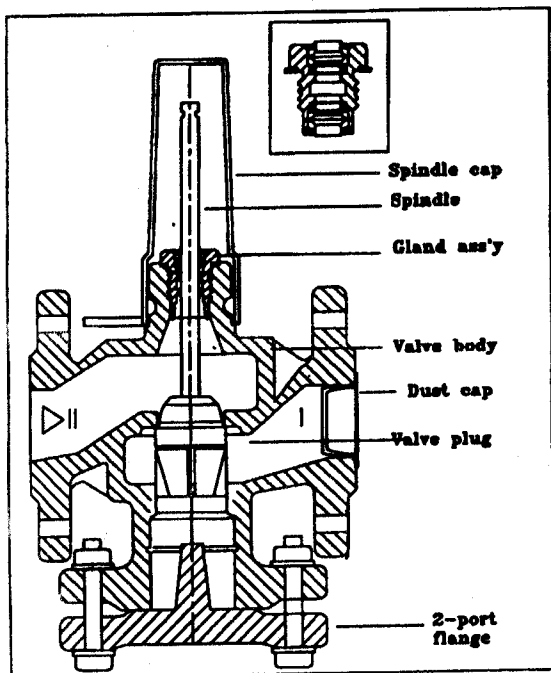
### Accessories

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
- Internally threaded connection make easy mounting
- Protective Plastic cover for spindle
- Quick actuator mounting



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



Parabolic  
General  
purpose



Perforated  
balanced  
control



Profiled  
Linear or  
Acurate

Spare part order Nr.

PN:VDF31.03XXAR : Parabolic

PN:VDF31.03XXAF : Perforated

PN:VTF31.03XXAP : Profiled

Size of valve

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



Standard  
version



Spare part order Nr.

PN:VTF30.02A : Hot water

PN:VTF30.02B : Chilled water

Optional versions  
are also available  
upon request.

## Application Advice

For basic information and further details on valve selection and sizing refer to data sheets V40001..V40019 .

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, A43000... 44999.

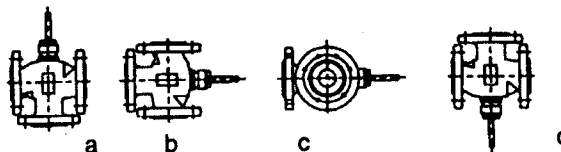
Observe the permissible temperatures. For more details refer to <Application > and <Technical Data>

Data Sheet P34001 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



Direct

Inlet from II to I for normal



Reversing

Inlet from I to II for high  $\Delta P$

The actuator's 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  
Pulling valve spindle : valve closes

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. Read mounting instruction of actuator before installation of actuator. Wrong installation may cause malfunctioning