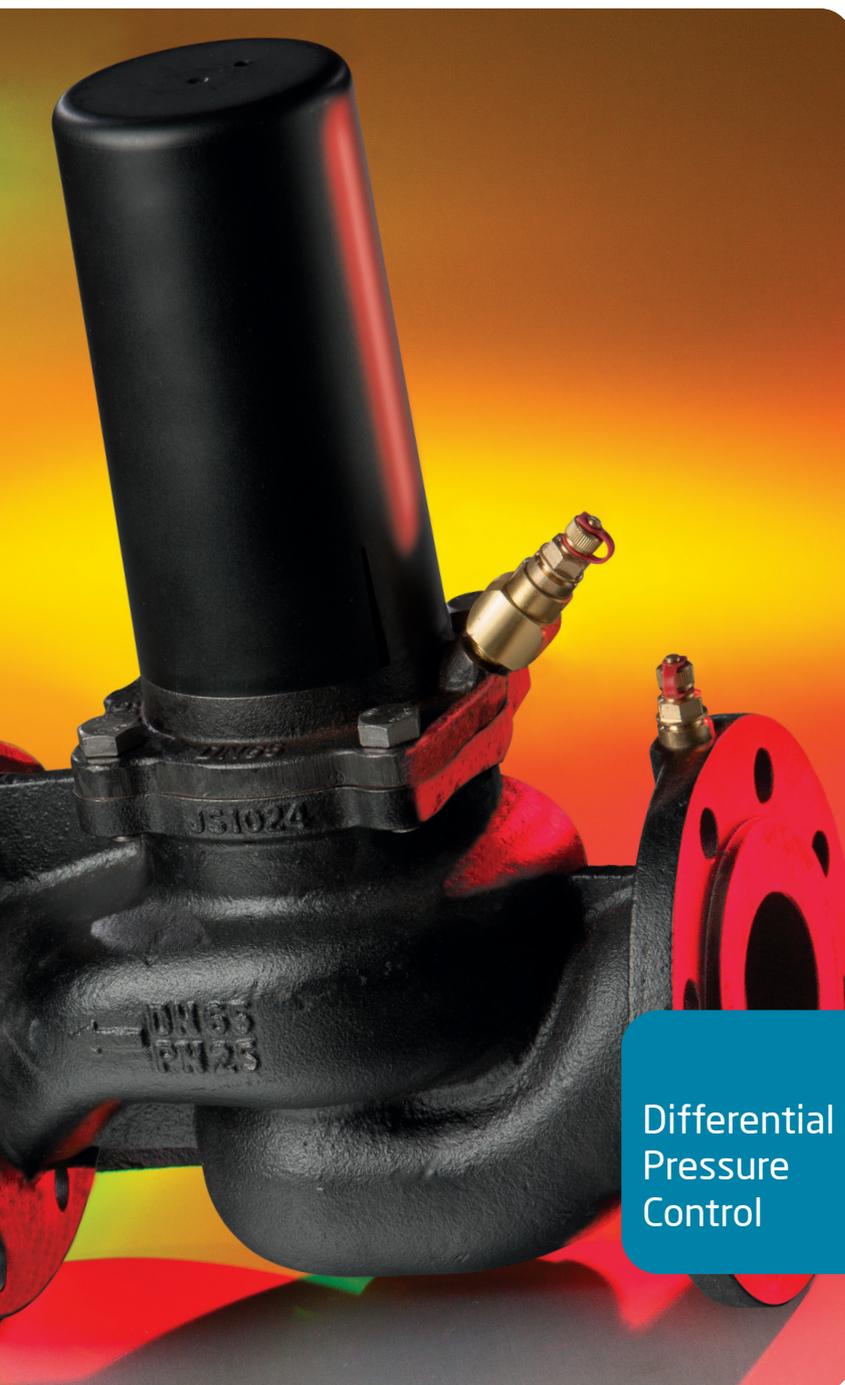




PV Compact · DN15-DN200

Differential Pressure Control Valve



Differential Pressure Control

PV Compact

Save pump energy and ensure trouble free commissioning of the system with the PV Compact Valve

The PV Compact is a dynamic, adjustable differential pressure control valve designed using the common Frese COMPACT design platform seen in the popular OPTIMA Compact and SIGMA Compact valves.

By design, the PV Compact has a high Kv value which means it achieves the lowest pressure loss of any comparable differential pressure control valve contributing towards lower pump energy consumption and ultimately saving energy.

The compact design of the PV Compact makes installation easy, especially in systems with limited space availability and the external, tamper-proof pre-setting device on the valve allows the differential pressure to be set and adjusted on site with minimal disruption to the operation of the system.

The partner system valve for the supply side can be provided as part of the solution.

Setting the PV Compact is quick and easy using the simple and clear pre-setting device on the top of the valve.

The required set point can be determined using the official Frese flow graphs or the Frese APP.

Differential Pressure Control

Differential pressure control valves can be used in both domestic and commercial heating and cooling systems.

Due to fluctuating differential pressures, heating and cooling systems can often create noise as a result of the thermostatic control valves being unable to close fully.

Despite the more regular use of variable speed pumps in larger systems, the differential pressure is likely to increase when the system is in a partial load condition potentially resulting in an increase in system noise and the inefficient regulation of control valves.

A differential pressure control valve ensures that the differential pressure across a circuit or load remains constant under all conditions, protecting the thermostatic radiator valves and control valves from any increase in differential pressure thus ensuring good modulating control and a reduced risk of noise.

Applications

Typical applications for the PV Compact differential pressure control valve include:

- Heating and Cooling Systems with modulating control valves
- Heating systems with thermostatic radiator valves
- Heat Interface Units



PV Compact & PV Compact, Spectrum-series for HVAC Applications

For over 30 years, Frese has specialised in the design and manufacture of dynamic, pressure independent flow solutions for heating and cooling applications in a wide variety of market sectors including commercial office developments, hotels, educational establishments, sports complexes and residential buildings.

The PV Compact and PV Compact, Spectrum-series can be used in both domestic and commercial heating and cooling systems for the effective management of differential pressure in various sections of the system. The differential pressure control valve is installed to protect the modulating control valves which could be either thermostatic radiator valves or two port control valves. Typical applications include systems with fan coil units, chilled beams, radiators and heat interface units.

The PV Compact and PV Compact, Spectrum-series can also be installed with the SIGMA Compact dynamic balancing valve for

both differential pressure control and flow limitation (PV-SIGMA DN15-DN50) or the Frese STBV balancing valves for both differential pressure control and flow balancing and verification (PV-STBV).

Manufactured from DZR and Ductile Iron, the PV Compact is available in sizes DN15 to DN200, with a variety of control ranges. The flow range capacity is from 0.014 l/s (50 l/h) to 72.5 l/s (261,000 l/h).



Technical Data



PV Compact DN15 - DN50

Max. Differential Pressure:	450 kPa
Temperature Range:	-10°C to 120°C
Pressure Class:	PN25
Size Range:	DN10 – DN32
Valve Housing:	DZR Brass CW602N
Control range:	5-30 kPa / 20-60 kPa / 20-80 kPa
Flow Range:	50 l/h to 5,000 l/h
Size Range:	DN40 – DN50
Valve Housing:	GJS-400
Control range:	20-80 kPa
Flow Range:	3,000 l/h to 11,500 l/h

Technical Data



PV Compact Spectrum-series, DN15 - DN50

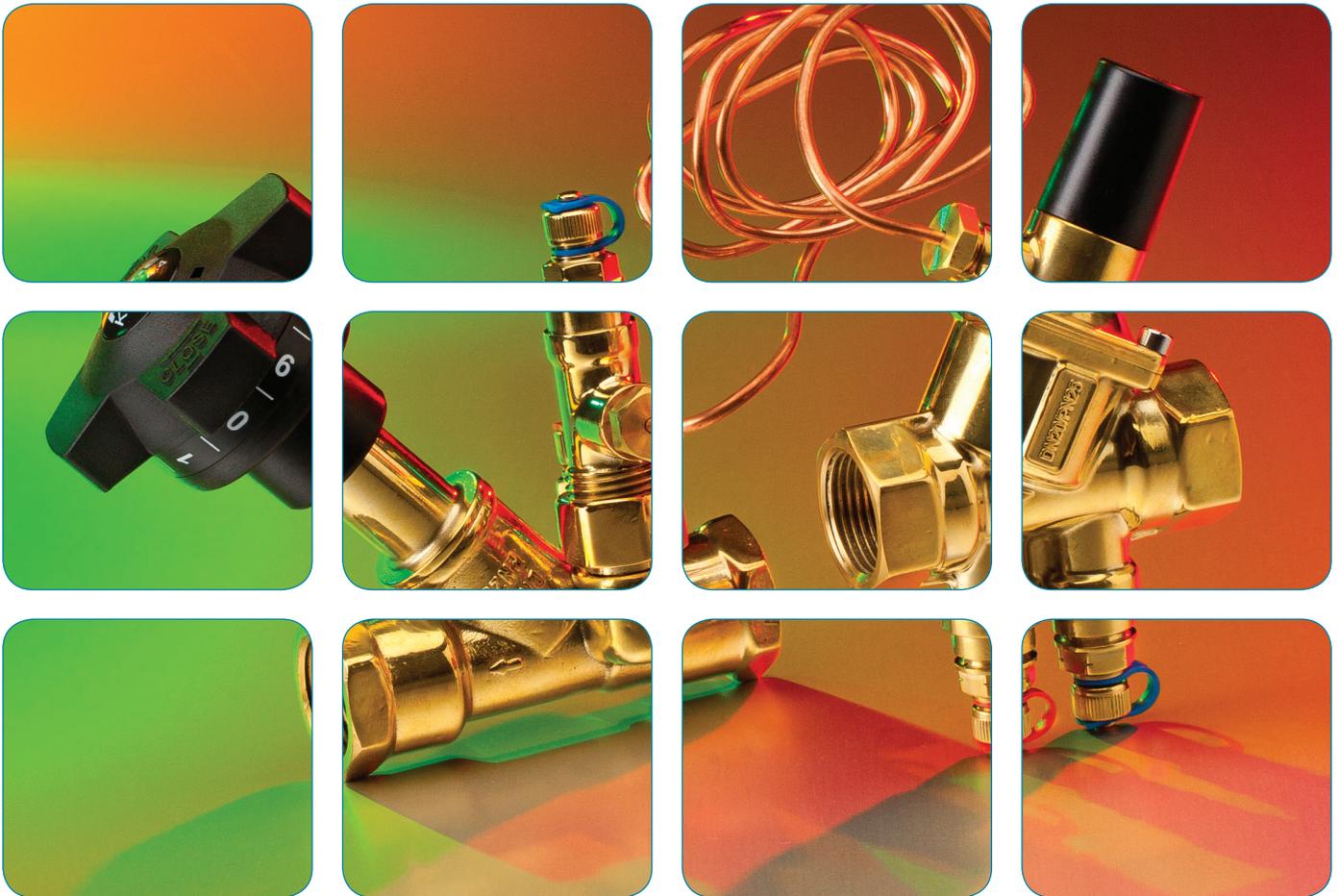
Max. Differential Pressure:	450 kPa
Temperature Range:	-10 °C to 120 °C
Pressure Class:	PN25
Size Range:	DN10 – DN32
Valve Housing:	DZR Brass CW602N
Control range:	5-30 kPa / 20-60 kPa / 20-80 kPa
Flow Range:	50 l/h to 5,000 l/h
Size Range:	DN40 – DN50
Valve Housing:	GJS-400
Control range:	20-80 kPa
Flow Range:	3,000 l/h to 11,500 l/h
Size Range:	DN50 Ultra, flanged
Valve Housing:	GJS-400
Control range:	20-80 kPa
Flow Range:	3,200 l/h to 13,000 l/h

Technical Data



PV Compact DN50 - DN200

Max. Differential Pressure:	1,000 kPa
Temperature Range:	-10 °C to 120 °C (110 °C) Please refer to datasheet
Pressure Class:	PN16 / PN25
Valve Housing:	GJL-250 / GJS-400
Control range:	20-80, 20-100, 50-200, 90-350, 150-500 Please refer to datasheet
Flow Range:	3,240 l/h to 261,000 l/h



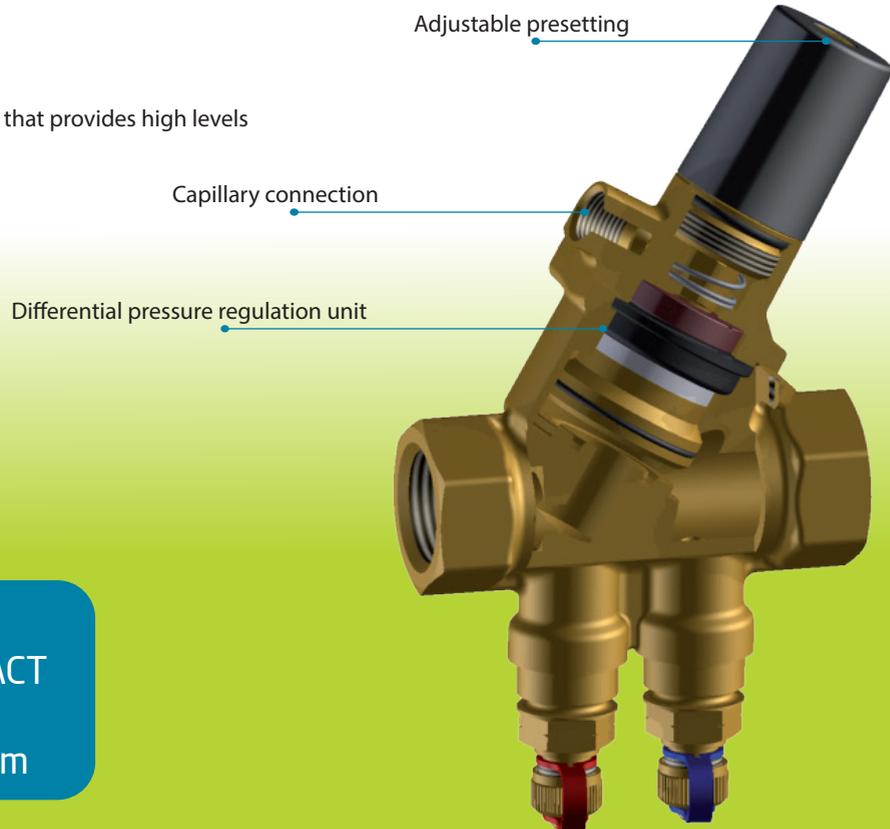
Valve Design

The PV Compact has a compact design that provides high levels of performance

The main components of the valve are:



**Frese
COMPACT
design
platform**



*Threaded version in DZR



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