



Pressure Independent Radiator, Trench Heater
and Radiant Panel Valve System

Gampper VARIO-DP

DATA SHEET

Vario-DP Pressure Independent Valve System

Valve Description

Material: Nickel Plated Brass
 Flow rate range: 20 – 340 l/h
 Maximum Temperature 90°C
 Maximum pressure: 10 Bar
 Size range: ½" & ¾"

Variants:

- Angle
- Double Angle Right & Left
- Straight
- Angle Reverse

TRV Head connection: M30 x 1.5mm



Valve Features

- Easy to select, install, commission and operate
- Automatic system balancing achieved at the terminal unit
- Easy, tamper proof flow rate setting
- Linear flow rate adjustment up to 340 l/h
- No need for Commissioning or Differential Pressure Control Valves
- Accurate temperature control, irrespective of system pressure fluctuations
- Suitable for terminal unit flushing
- Full open adjustment to clear potential debris blockage



Pressure Independent Capsule Control Concept



The patented dynamic valve insert with capsule control diaphragm automatically limits and maintains the flow rate of water, independent of system pressure fluctuations.

Consequently, irrespective of how many other valves are exercised within the system, the Vario-DP will always provide the pre-set flow rate to the terminal unit.

The capsule diaphragm is subjected to and responds to the valve's differential pressure.

The valve's control spindle axial length adjusts in accordance to the differential pressure, automatically varying the valve's control area, regulating water flow rate without any further control elements with 100% authority.



Vario-DP Pressure Independent Valve System

Valve Flowrate Settings [Control Range 20 – 50 kPa]

| | | | | | | | | | | | | | | |
|----------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Setting | 1 | 1.5 | 2 | 2.25 | 2.5 | 2.75 | 3 | 3.25 | 3.5 | 3.75 | 4 | 4.25 | 4.5 | 4.75 |
| Flow l/h | 20 | 25 | 35 | 40 | 45 | 55 | 65 | 80 | 90 | 100 | 115 | 135 | 145 | 160 |
| Flow l/s | 0.006 | 0.007 | 0.01 | 0.011 | 0.013 | 0.015 | 0.018 | 0.022 | 0.025 | 0.028 | 0.032 | 0.038 | 0.04 | 0.044 |

| | | | | | | | | | | | | | |
|----------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Setting | 5 | 5.25 | 5.5 | 5.75 | 6 | 6.25 | 6.5 | 6.75 | 7 | 7.25 | 7.5 | 7.75 | 8 |
| Flow l/h | 170 | 185 | 200 | 215 | 230 | 245 | 260 | 275 | 290 | 300 | 315 | 330 | 340 |
| Flow l/s | 0.047 | 0.051 | 0.056 | 0.06 | 0.064 | 0.068 | 0.072 | 0.076 | 0.081 | 0.083 | 0.088 | 0.092 | 0.094 |

Valve Dimensions

Angle

Straight

Straight Euroconus

Angle Reverse

| Valve Ø | b | L0 | L1 | L2 | L3 | L4 | L5 |
|---------|------|----|----|-----|----|----|----|
| ½" | 13.2 | 23 | 66 | 95 | 29 | 58 | 26 |
| ¾" | 14.5 | 23 | 74 | 106 | 34 | 66 | 29 |

Angle right or left

Valve Identification & Part Numbers

| Valve Configuration | Size | Part Number | Valve Profile |
|------------------------------|------|-------------|---------------|
| Angle | ½" | 161 020.110 | |
| | ¾" | 161 030.110 | |
| In-Line (Straight) | ½" | 161 070.110 | |
| | ¾" | 161 080.110 | |
| In-Line (Straight/Euroconus) | ½" | 161 076.110 | |
| Angle Reverse | ½" | 163 020.110 | |
| Double Angle Right | ½" | 165 020.110 | |
| Double Angle Left | ½" | 167 020.110 | |



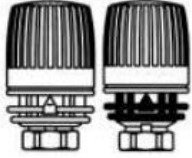
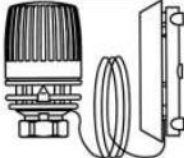
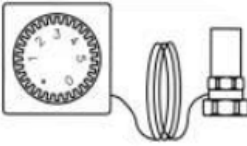

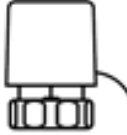

Vario-DP Pressure Independent Valve System

Thermostatic Control Head Details & Features

- Liquid filled sensor
- Connection: M30 x 1.5mm
- CEN & DIN EN 215-1 certified
- Lockable temperature range setting
- Limiting Ring as standard
- Anti-freeze protection feature as standard
- Wide range of options available



Valve Identification & Part Numbers

| TRV Head Description | Part Number | TRV Head Profile |
|---|---|--|
| 320 KH Thermostatic Control Head with fixed Liquid Sensor | 360 012.110 (white) 360 002.110 (black) |  |
| 320 KH Thermostatic Control Head with remote Sensor. | 362 102.110 [1.2m] 362 202.110 [2.0m] 362 502.110 [5.0m] 362 902.110 [10.0m] |  |
| 320 KH FV Control Head with remote Dial & Sensor. | 347 200.110 [2.0m] 347 500.110 [5.0m] 347 900.110 [10.0m] |  |
| 320 KH B Thermostatic Control Head with fixed Liquid Sensor & Anti-Theft Protection | 364 000.110 |  |
| Electrothermal actuator with position indicator, 1m cable, 24V or 230V | 805 364 (24V) 805 164 (230V) |  |
| Electrothermal, self-calibrating actuator 24V, 0-10V modulating, manual override, 1 m cable | 806 624 |  |

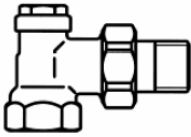

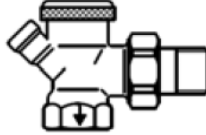
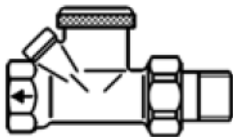


Lock Shield Valve


Thermostatic Control Head Features

- Chrome plated brass to match Vario-DP
- Size range 1/2" & 3/4"
- Isolation and drain feature
- Angle or In-line versions available
- Supplied with closing cap
- Angle or Inline flow measurement at the radiator options available
- Wide range of options available



| LSV Description | Size | Part Number | LSV Profile |
|---|------|-------------|---|
| 454 M Angle Lock Shield Valve | 1/2" | 453 020.110 |  |
| | 3/4" | 453 030.110 | |
| 454 M In-line Lock Shield Valve | 1/2" | 453 070.110 |  |
| | 3/4" | 453 080.110 | |
| 454Q M Angle Lock Shield Valve with integral Flow Measurement | 1/2" | 479 022.110 |  |
| 454Q M In-line Lock Shield Valve with integral Flow Measurement | 1/2" | 479 072.110 |  |

Threaded Valve Compression Connection Adaptors

| Description | Size | Part Number | Profile |
|-------------|-------------------------|-------------|---|
| Adaptor | 1/2" x 15mm Compression | 032 125 |  |

