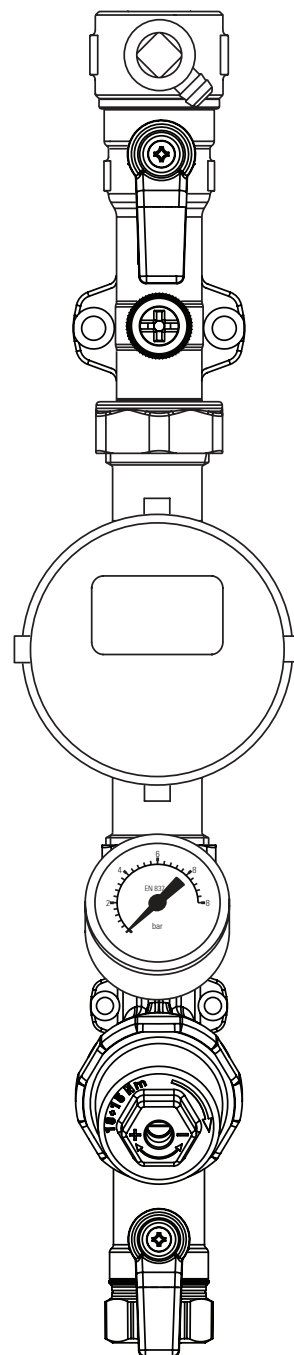


# 133-504

Apartment control assembly plus  
pressure reduction, metering &  
backflow prevention



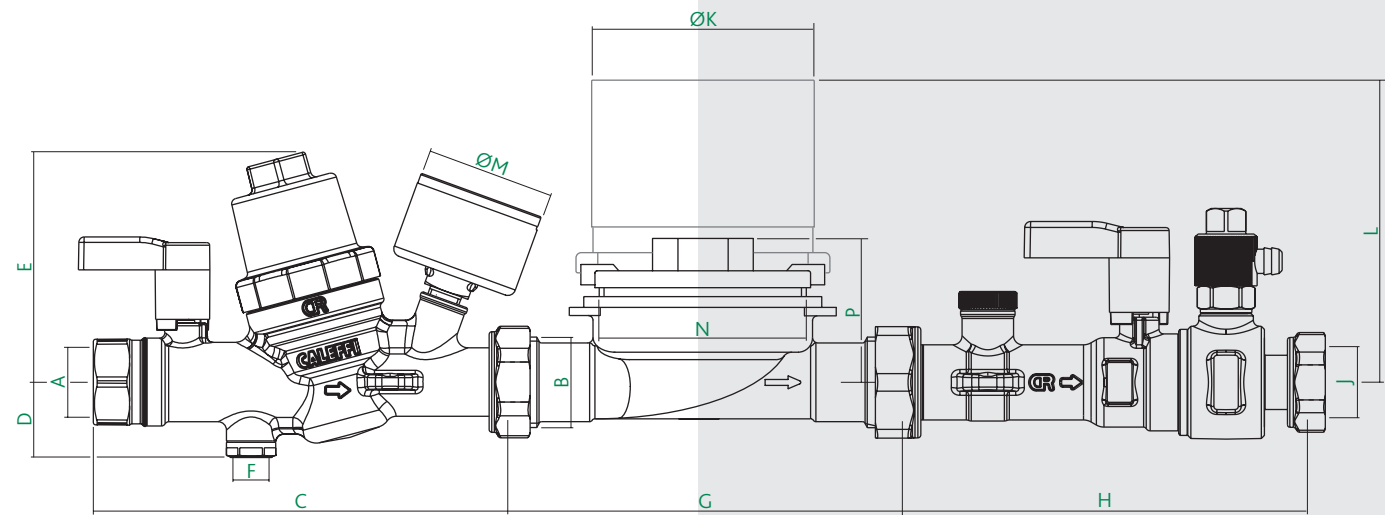
**altecnic**  
CALEFFI group

# 133-504 Apartment control assembly plus

### Introduction

The Altecnic 133-504 apartment control assembly plus combines several functions into two monobloc bodies with a carrier for an optional water meter for use in multi-occupancy buildings.

### Dimensions



| Ref No   | A                | B  | C     | D    | E    | F               | G   | H     | J               | K  | L  | ØM | N  | P  | kg    |
|----------|------------------|----|-------|------|------|-----------------|-----|-------|-----------------|----|----|----|----|----|-------|
| 133-5041 | Rp $\frac{3}{4}$ | G1 | 151.2 | 24.5 | 83.7 | G $\frac{1}{4}$ | 130 | 130.2 | G $\frac{3}{4}$ | 64 | 90 | 40 | G2 | 42 | 2.320 |
| 133-5042 | Rp1              | G1 | 151.2 | 24.5 | 83.7 | G $\frac{1}{4}$ | 130 | 131.2 | G1              | 64 | 90 | 40 | G2 | 42 | 2.410 |
| 133-5043 | Rp $\frac{3}{4}$ | G1 | 151.2 | 24.5 | 83.7 | G $\frac{1}{4}$ | 130 | 130.2 | G $\frac{3}{4}$ | 64 | 90 | 40 | G2 | 42 | 2.705 |
| 133-5044 | Rp1              | G1 | 151.2 | 24.5 | 83.7 | G $\frac{1}{4}$ | 130 | 131.2 | G1              | 64 | 90 | 40 | G2 | 42 | 2.800 |
| 133-5045 | Rp $\frac{3}{4}$ | G1 | 151.2 | 24.5 | 83.7 | G $\frac{1}{4}$ | 130 | 130.2 | G $\frac{3}{4}$ | 64 | 90 | 40 | G2 | 42 | 2.705 |
| 133-5046 | Rp1              | G1 | 151.2 | 24.5 | 83.7 | G $\frac{1}{4}$ | 130 | 131.2 | G1              | 64 | 90 | 40 | G2 | 42 | 2.800 |

### Design

The Altecnic apartment control assembly plus consists of;

A monobloc pressure reducing valve assembly consisting of a ball isolating valve, pressure reducing valve, port for a pressure gauge, test port, threaded inlet connection, swivel outlet connection and pressure gauge (this is supplied with the assembly).

The pressure reducing valve has a self-contained cartridge which is factory set at 3 bar but is adjustable between 1 to 5.5 bar.

The test port is suitable for use with a pressure gauge, temperature probe or for monitoring purposes.

A water meter carrier with blanking cap. Along with optional cold or hot MBUS meters cartridges.

A monobloc assembly consisting of a double check valve with test port, a ball isolating valve, a drain/air vent and two swivel connections. The the drain cock is rotatable 360° on 2 axes, around the operating stem and the monobloc body.

The pressure reducing valve and double check valve assemblies are made from a dezincification resistant low lead brass alloy to BS EN 12165 CW724R, which is 4MS compliant.

\* Both monobloc's (PRV and double check valve) are WRAS and Kiwa Reg4 approved.

### Product Range

| Ref Nos  | Description                                                        |
|----------|--------------------------------------------------------------------|
| 133-5041 | $\frac{3}{4}$ " Apartment Control Assembly Plus Blanked            |
| 133-5042 | 1" Apartment Control Assembly Plus Blanked                         |
| 133-5043 | $\frac{3}{4}$ " Apartment Control Assembly Plus c/w Cold Cartridge |
| 133-5044 | 1" Apartment Control Assembly Plus c/w Cold Cartridge              |
| 133-5045 | $\frac{3}{4}$ " Apartment Control Assembly Plus c/w Hot Cartridge  |
| 133-5046 | 1" Apartment Control Assembly Plus c/w Hot Cartridge               |

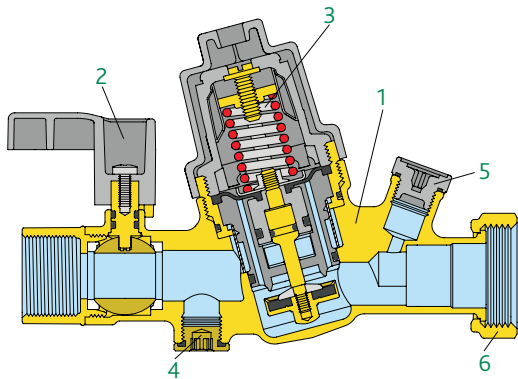
### Technical Specification

|                                       |                 |
|---------------------------------------|-----------------|
| Max. pressure:                        | 16 bar          |
| Max. temperature:                     | 80°C            |
| Test ports:                           | G $\frac{1}{4}$ |
| Pressure reducing valve               |                 |
| Pressure adjustment range:            | 1 to 5.5 bar    |
| Factory set pressure:                 | 3 bar           |
| Strainer mesh:                        | 0.51 mm         |
| Designed to:                          | BS EN 1567      |
| Pressure gauge                        |                 |
| Range:                                | 0 to 10 bar     |
| Water meter cartridges                |                 |
| Max. temperature with cold meter:     | 30°C            |
| Max. temperatute with hot meter:      | 80°C            |
| Double Check Valve                    |                 |
| Designation: family E,                | type A          |
| Designed to:                          | BS EN 13959     |
| Minimum opening pressure $\Delta p$ : | 0.5 kPa         |

# 133-504 Apartment control assembly plus

## Pressure Reducing Valve

Components - PRV



- 1 Monobloc body
- 2 Ball isolating valve
- 3 Pressure reducing valve cartridge with filter (BS E1567)
- 4 Upstream test port
- 5 Downstream test port
- 6 Swivel nut

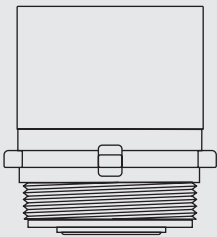
### Materials and Construction

| Component         | Material | Grade              |
|-------------------|----------|--------------------|
| Body              | DZR      | BS EN 12165 CW724R |
| <b>Ball Valve</b> |          |                    |
| Ball              | DZR      | BS EN 12165 CW724R |
| Ball seat         | PTFE     |                    |
| Stem              | DZR      | BS EN 12164 CW724R |
| Stem seals        | EPDM     |                    |
| Lever             | Nylon    | PA6G30             |

### Pressure Reducing Valve

|                     |                 |               |
|---------------------|-----------------|---------------|
| Inner cover         | Nylon           | PA66GF30      |
| Outer cover         | Nylon           | PA66GF30      |
| Control stem        | Stainless Steel | BS EN 10088-3 |
| Cartridge           | Polymer         | PPSG40        |
| Spring              | Steel           | BS EN 10270-1 |
| Internal components | Polymer         | PSU           |
| Diaphragm           | EPDM            |               |
| Seals               | EPDM            |               |
| Strainer screen     | Stainless steel | BS EN 10088-3 |

## Water Meter Cartridges



### Design

The Altecnic water meter cartridges for hot and cold water applications offer a dependable and accurate reading of water consumption and is ideally suited for use in domestic premises and small commercial buildings.

The Altecnic water meter has a dry multi-jet register with shielded magnetic coupling.

The water meter cartridges have a rotating dial and should be installed in vertical pipe with the flow from below.

No parts of the register are in contact with the water flow.

The meter is not sensitive to magnetic fields reducing the risk of tampering.

The white dials with black numerals and red indicators makes reading easier, even when light conditions are poor.

Supplied with Wireless MBUS connectivity as standard

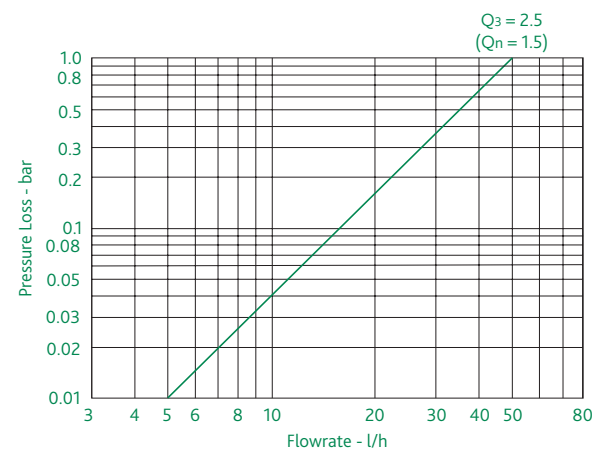
### Technical Specification

MID approved according to European Directive 2014/32EU

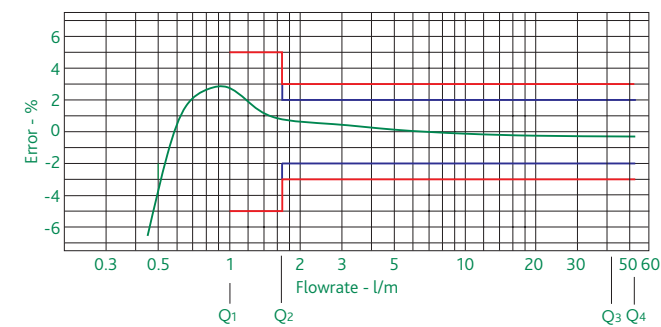
|        | Size                             |                    | 2"    |
|--------|----------------------------------|--------------------|-------|
| Q3     | Continuous flow rate             | m <sup>3</sup> /hr | 2.5   |
| Qn     | Comparable to normal flow (EWG)  | m <sup>3</sup> /hr | 1.5   |
| Q4     | Max. flow rate for short periods | m <sup>3</sup> /hr | 3.125 |
| Q2     | Transitional flow rate           | l/h                | 100   |
| Q1     | Min. flow rate                   | l/h                | 62.5  |
| Q3 /Q1 | Standard measuring range         | R                  | 40V   |
|        | Typical starting flow rate       | l/h                | 24    |
|        | Display value minimum            | l                  | 0.05  |
|        | Display value maximum            | m <sup>3</sup>     | 9.999 |
|        | Measurement accuracy class       |                    |       |
|        | Cold and hot water - Q1≤Q< Q2    |                    | ±5%   |
|        | Cold - Q2≤Q≤ Q4                  |                    | ±2%   |
|        | Hot water - Q2≤Q≤ Q4             |                    | ±3%   |
| MAP    | Operating pressure               | bar                | 10    |

# 133-504 Apartment control assembly plus

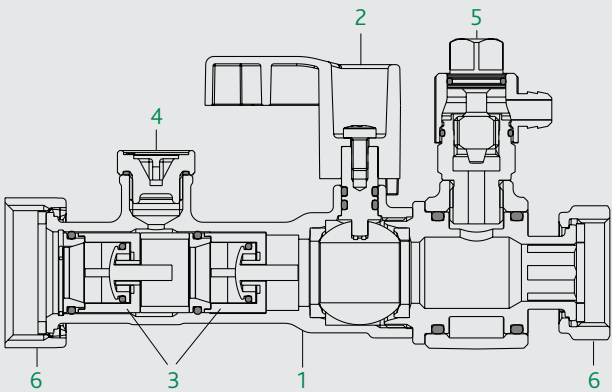
Water Meter Continued  
Pressure Loss Chart



Accuracy Curve



Components - DCV



- 1 Monobloc body
- 2 Ball isolating valve
- 3 Double check valve
- 4 Test port
- 5 Drain valve/air vent
- 6 Swivel nut

Materials and Construction

| Component    | Material     | Grade              |
|--------------|--------------|--------------------|
| Body         | DZR          | BS EN 12165 CW724R |
| Check Valve  |              |                    |
| Cartridge    |              | Polypropylene      |
| Spring       | Stainless St | BS EN 10088-3      |
| Seals        | EPDM         |                    |
| Ball Valve   |              |                    |
| Ball         | DZR          | BS EN 12165 CW724R |
| Ball seat    | PTFE         |                    |
| Stem         | DZR          | BS EN 12164 CW724R |
| Stem seals   | EPDM         |                    |
| Lever        | Nylon        | PA6G30             |
| Drain Valve  |              |                    |
| Stem         | DZR          | BS EN 12164 CW724R |
| Stem housing | DZR          | BS EN 12164 CW724R |
| Hose outlet  | Polymer      |                    |

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Altecnic Ltd Mustang Drive, Stafford, Staffordshire ST16 1GW

T: +44 (0)1785 218200 E: [sales@altecnic.co.uk](mailto:sales@altecnic.co.uk)

Registered in England No: 02095101

[altecnic.co.uk](http://altecnic.co.uk)

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