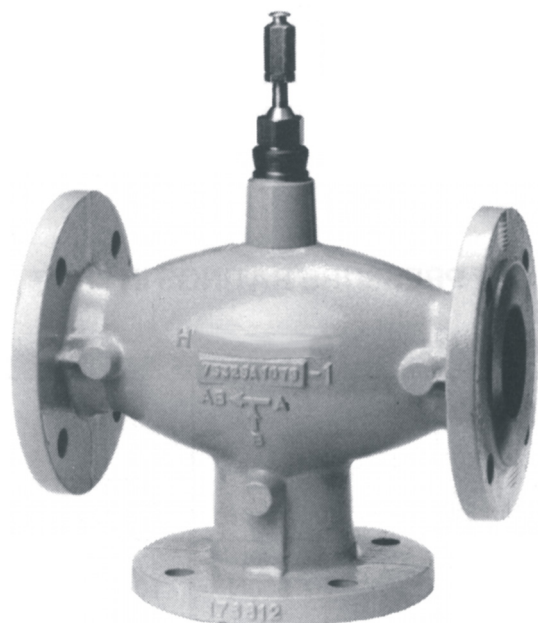


# CLVF3W (PN6/16)

## PRODUCT DATA



## GENERAL

These three-port mixing valves are used for modulating control of hot/chilled water or steam in heating, ventilation, and air conditioning systems and can be operated by electric linear actuators CLLA20.

## FEATURES

- Cast iron body with flanged end connections.
- Low seat leakage rate.
- Metal-to-metal seating for long life span.
- Self-adjusting packing.
- Accurate positioning to ensure state-of-the-art temperature control.
- Easy mounting of electric linear actuators.
- Constant total flow throughout entire plug travel.

## SPECIFICATIONS

|                                             |                                                                                            |
|---------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Action</b>                               | Stem up to close port A-AB                                                                 |
| <b>Nominal pressure rating</b>              |                                                                                            |
| CLVF3WxxxP16                                | PN16                                                                                       |
| CLVF3WxxxP6                                 | PN6                                                                                        |
| <b>Flow characteristic</b>                  | linear for ports A-AB and B-AB                                                             |
| <b>Rangeability</b>                         | 50:1                                                                                       |
| <b>Leakage rate</b>                         | ≤ 0.5% of $k_{VS}$ port A-AB<br>≤ 1% of $k_{VS}$ port B-AB                                 |
| <b>Stroke</b>                               | 20 mm                                                                                      |
| <b>Valve body</b>                           |                                                                                            |
| End connections                             | Flanged per ISO 7005-2                                                                     |
| Material                                    | Cast iron (GG25)                                                                           |
| <b>Dimensions</b>                           | See Fig. 1.                                                                                |
| <b>Trim</b>                                 |                                                                                            |
| Seat                                        | Body-integrated                                                                            |
| Plug                                        | Stainless steel, skirt-guided                                                              |
| Stem                                        | Stainless steel                                                                            |
| <b>Packing</b>                              | Spring-loaded PTFE cone rings                                                              |
| <b>Medium temperature and max. pressure</b> |                                                                                            |
| PN16                                        | 2 ... 120 °C; max. 1600 Pa<br>120 ... 150 °C; max. 1440 Pa<br>150 ... 170 °C; max. 1370 Pa |
| PN6                                         | 2 ... 120 °C; max. 600 Pa<br>120 ... 150 °C; max. 540 Pa<br>150 ... 170 °C; max. 510 Pa    |
| <b>Medium temperature and max. pressure</b> | 60 K                                                                                       |

## SIZES AND FLOW CAPACITIES

Table 1. Sizes and flow capacities

| order number | valve size | k <sub>vs</sub> |
|--------------|------------|-----------------|
| CLVF3W2.5P16 | DN15       | 2.5             |
| CLVF3W4.0P16 | DN15       | 4.0             |
| CLVF3W6.3P16 | DN20       | 6.3             |
| CLVF3W10P16  | DN25       | 10.0            |
| CLVF3W16P16  | DN32       | 16.0            |
| CLVF3W25P16  | DN40       | 25.0            |
| CLVF3W40P16  | DN50       | 40.0            |
| CLVF3W63P16  | DN65       | 63.0            |
| CLVF3W100P16 | DN80       | 100.0           |
| CLVF3W2.5P6  | DN15       | 2.5             |
| CLVF3W4.0P6  | DN15       | 4.0             |
| CLVF3W6.3P6  | DN20       | 6.3             |
| CLVF3W10P6   | DN25       | 10.0            |
| CLVF3W16P6   | DN32       | 16.0            |
| CLVF3W25P6   | DN40       | 25.0            |
| CLVF3W40P6   | DN50       | 40.0            |
| CLVF3W63P6   | DN65       | 63.0            |
| CLVF3W100P6  | DN80       | 100.0           |

## INSTALLATION

- Water should meet VDI 2035 requirements.
- Do not install valve with stem below the horizontal.
- Fluid flow must correspond with the arrow direction on the valve body.
- The installation of a strainer is strongly recommended.

## ACTUATORS

Table 2. Electric actuators

| force  | 600 N          |                   | 1800 N          |
|--------|----------------|-------------------|-----------------|
|        | non-s.r.       | spring ret.       |                 |
| model  | CLLA20-xxxNSR6 | CLLA20-xxxSD6/SU6 | CLLA20-xxxNSR18 |
| stroke | 20 mm          |                   |                 |
| size   | DN15...80      |                   |                 |

## DIMENSIONS

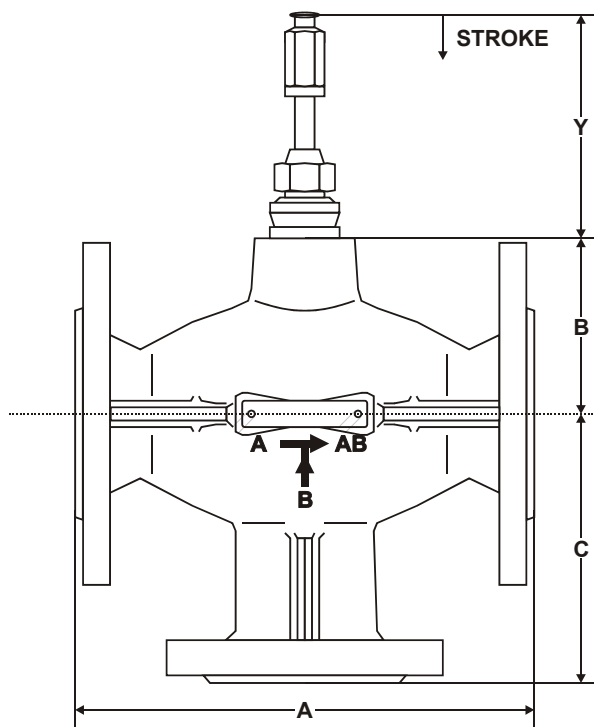


Fig. 1. CLVF3W, dimensions (in mm)

Table 3. CLVF3W, dimensions (in mm)

| valve size | A   | B   | C   | Y   |
|------------|-----|-----|-----|-----|
| DN15       | 130 | 63  | 90  | 107 |
| DN20       | 150 |     | 95  |     |
| DN25       | 160 |     | 100 |     |
| DN32       | 180 | 80  | 105 |     |
| DN40       | 200 |     | 115 |     |
| DN50       | 230 |     | 125 |     |
| DN65       | 290 | 105 | 145 |     |
| DN80       | 310 | 112 | 155 |     |

## REPAIR PACKAGE KIT

Part no.: R 43 176 755 – 001 (DN15...32)

Part no.: R 43 176 755 – 002 (DN40...80)

Table 4. Close-off pressure ratings of actuators (in kPa)

| actuator       |        | valve size |       |       |       |       |       |      |      |
|----------------|--------|------------|-------|-------|-------|-------|-------|------|------|
| model          | force  | DN15       | DN20  | DN25  | DN32  | DN40  | DN50  | DN65 | DN80 |
| CLLA20-xxxxx6  | 600 N  | 1000*      | 1000* | 1000* | 790*  | 480   | 260   | 160  | 100  |
| CLLA20-xxxxx18 | 1800 N | --         | --    | --    | 1000* | 1000* | 1000* | 650* | 400  |

\*For CLVF3WxxxP6, maximum 600 kPa

## ACTUATOR DIMENSIONS

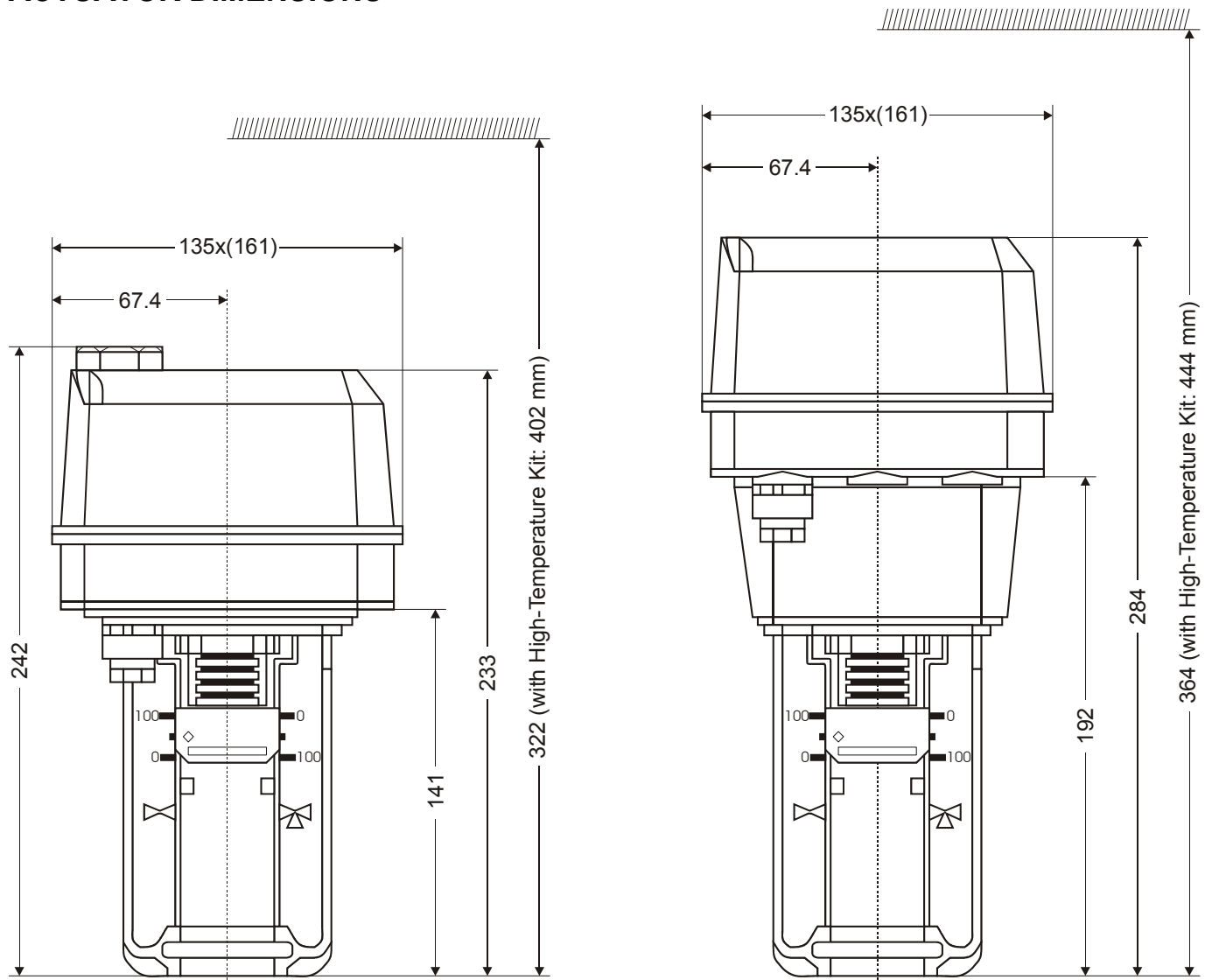


Fig. 2. CLA20-xxxNSR6 (left) and CLLA20-xxxSD6 / CLLA20-xxxSU6 (right), dimensions (in mm)

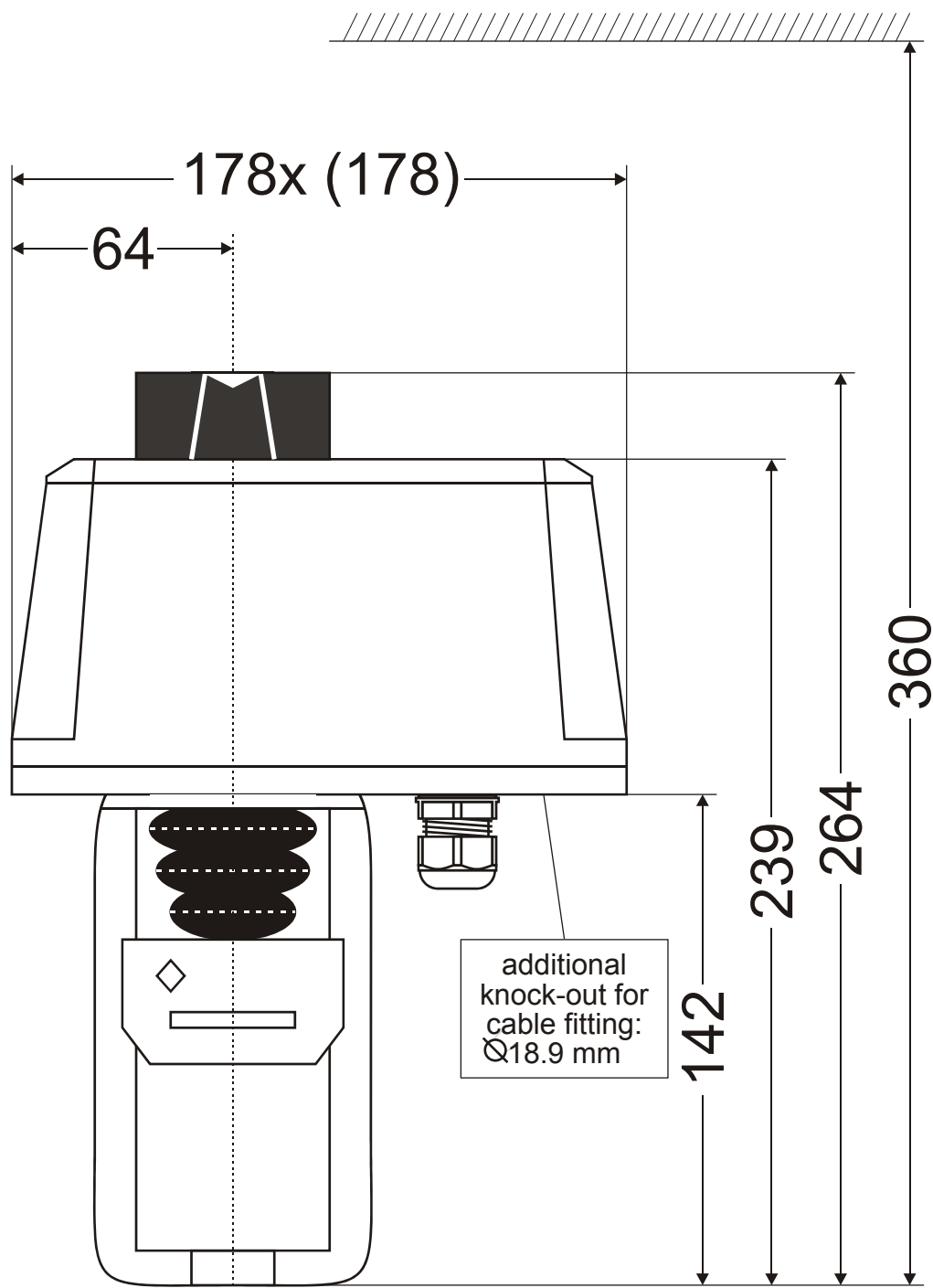


Fig. 3. CLLA20-xxxxx18

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