

## Hoval CombiVal ESR (200-400)

Calorifier with large coil  
for combined heating

Description

Hoval

### Hoval calorifier CombiVal ESR (200-400)

- Calorifier made of steel enamelled inside
- Large plain-tube coil enamelled, permanently installed
- Magnesium protection anode built in
- Flange for electric heating element
- Thermal insulation made of polyurethane hard foam foamed on the calorifier
- Dismantable foil casing, red coloured
- Including thermometer
- Sensor channel

#### *On request*

- Flange-mounted electric heating element

#### *Delivery*

- Calorifier with foil casing installed



#### Range

CombiVal  
type

|     |       |            |
|-----|-------|------------|
| ESR | (200) | <b>B</b> ▶ |
| ESR | (300) | <b>B</b> ▶ |
| ESR | (400) | <b>B</b> ▶ |

Calorifier



**CombiVal ESR (200-400)**

Calorifier made of steel, enamelled on the inside, with permanently installed plain-tube coil.

| CombiVal ESR type |  | Volume dm <sup>3</sup> | Heating surface m <sup>2</sup> |
|-------------------|--|------------------------|--------------------------------|
| (200)             |  | 193                    | 1.8                            |
| (300)             |  | 298                    | 2.6                            |
| (400)             |  | 379                    | 3.8                            |

**Electric heating elements**  
see chapter "Electric heating elements"

Part No.

7015 965  
7015 966  
7015 967

Accessories



**Flange cover 180 - 3/4"**  
for the installation of the Correx<sup>®</sup> impressed current anode in flange Ø 180/110 mm, enamelled on the inside with Rp 3/4" sleeve  
Seal included

2077 035



**Flange with immersion sleeve**  
for temperature sensor made of steel. On domestic water side, enamelled inside.  
Flange dimensions:  
- Outer Ø 180 mm,  
- Pitch circle Ø 150 mm, 8 x M10  
Immersion sleeve dimensions:  
- Installation length = 120 mm,  
- Outer Ø: 24 mm, inner Ø: 20 mm

6028 468



**Kit Correx<sup>®</sup> impressed current anode UP2.3-919-L395/1**  
for long-term corrosion protection for installation in the enamelled calorifier with reduction R 1 1/4" (ET) – Rp 1" (IT) and R 1" (ET) – Rp 3/4" (IT)  
Installation length: 395 mm  
Connection cable length: 1 x 2000 mm  
1 Correx<sup>®</sup> impressed current anode

684 760

In every case, **either** a Correx<sup>®</sup> impressed current anode **or** one/two magnesium anodes are allowed to be used.

Part No.



**Immersion sensor TF/2P/5/6T, L = 5.0 m with plug**  
 for TopTronic® E controller modules/  
 module expansions with exception of  
 basic module district heating/fresh  
 water or basic module district heating com,  
 cable length: 5 m with plug  
 sensor sleeve diameter: 6 x 50 mm,  
 dewpoint-proof,  
 operating temperature: -20...105 °C,  
 protection class: IP67

2056 788



**Immersion sensor TF/2P/5/6T, L = 5.0 m**  
 for TopTronic® E controller modules/  
 module expansions with exception of  
 basic module district heating/fresh  
 water or basic module district  
 heating com,  
 cable length: 5 m without plug  
 sensor sleeve diameter: 6 x 50 mm,  
 dewpoint-proof,  
 operating temperature: -20...105 °C,  
 protection class: IP67

2055 888



**Immersion sensor TF/12N/2.5/6T, L = 2.5 m**  
 for gas boiler with RS-OT  
 Cable length: 2.5 m  
 Sensor sleeve diameter: 6 x 50 mm,  
 dewpoint-proof,  
 operating temperature: -20...105 °C,  
 protection class: IP67

2056 791

**At TopTronic® E, immersion sensor is included in the boiler controller or in the heating controller set.**



**Calorifier thermostat control TW 12**  
 Universal thermostat controller  
 for thermostatic pump charge  
 demand, setting in  
 casing, visible from outside.  
 15-95 °C, switching difference 6 K,  
 capillar length 700 mm  
 incl. fastening material for  
 Hoval calorifier, can be used with  
 integrated immersion sleeve

6010 080

**Thermal water mixer**  
 see "Various system components"

Services



**Commissioning**  
 Commissioning by works service or Hoval  
 trained authorised serviceman/company is  
 condition for warranty.

For commissioning and other services  
 please contact your Hoval sales office.

**CombiVal ESR (200-400)**

| Type   |                    | (200)                   | (300) | (400) |
|--|--------------------|-------------------------|-------|-------|
| • Volume   | l                  | 193                     | 298   | 379   |
| • Max. operating/test pressure SVGW                  | bar                | 6/12                    | 6/12  | 6/12  |
| • Max. operating/test pressure DVGW                  | bar                | 10/13                   | 10/13 | 10/13 |
| • Max. operating temperature                         | °C                 | 95                      | 95    | 95    |
| • Thermal insulation PU-foam, foamed onto calorifier | mm                 | 75                      | 50    | 75    |
| • Thermal insulation λ                               | W/mK               | 0.027                   | 0.027 | 0.027 |
| • Fire protection class                              |                    | B2                      | B2    | B2    |
| • Heat loss at 65 °C                                 | W                  | 48                      | 68    | 68    |
| • Transport weight                                   | kg                 | 91                      | 118   | 156   |
| • U value  | W/m <sup>2</sup> K | 0.32                    | 0.41  | 0.32  |
| <b>Heating battery (built in)</b>                    |                    |                         |       |       |
| • Heating surface                                    | m <sup>2</sup>     | 1.8                     | 2.6   | 3.8   |
| • Heating water content                              | l                  | 12.2                    | 16    | 34    |
| • Flow resistance <sup>1)</sup>                      | z value            | 13                      | 17    | 6     |
| • Max. operating/test pressure SVGW                  | bar                | 8/13                    | 8/13  | 8/13  |
| • Max. operating/test pressure DVGW                  | bar                | 10/13                   | 10/13 | 10/13 |
| • Max. operating temperature                         | °C                 | 110                     | 110   | 110   |
| • Dimensions   |                    | see table of dimensions |       |       |

<sup>1)</sup> Flow resistance heating battery in mbar = flow rate (m<sup>3</sup>/h)<sup>2</sup> x z (1 mbar = 0.1 kPa)

**Performance figure**

Selection of the calorifier type  
at a hot water temperature of 45 °C

**Reading example**  
see engineering

| T >  | Comfort <sup>1)</sup> |       |       | Standard <sup>2)</sup> |       |       |
|------|-----------------------|-------|-------|------------------------|-------|-------|
|      | 60 °C                 | 70 °C | 80 °C | 60 °C                  | 70 °C | 80 °C |
| NL v |                       |       |       |                        |       |       |
| 1    |                       |       |       | 200                    |       |       |
| 2    | 200                   |       |       |                        |       |       |
| 3    |                       |       |       |                        |       |       |
| 4    | 300                   |       |       | 300                    |       |       |
| 5    |                       | 200   |       |                        | 200   |       |
| 6    | 400                   |       | 200   | 400                    |       | 200   |
| 7    |                       |       |       |                        |       |       |
| 8    |                       |       |       |                        |       |       |
| 9    |                       | 300   |       |                        |       |       |
| 10   |                       |       | 300   |                        | 300   |       |
| 11   |                       |       |       |                        |       | 300   |
| 12   |                       |       |       |                        |       |       |
| 13   |                       |       |       |                        |       |       |
| 14   |                       | 400   |       |                        |       |       |
| 15   |                       |       |       |                        |       |       |
| 16   |                       |       |       |                        |       |       |
| 17   |                       |       |       |                        | 400   |       |
| 18   |                       |       | 400   |                        |       |       |
| 19   |                       |       |       |                        |       |       |
| 20   |                       |       |       |                        |       |       |
| 21   |                       |       |       |                        |       |       |
| 22   |                       |       |       |                        |       | 400   |
| 23   |                       |       |       |                        |       |       |
| 24   |                       |       |       |                        |       |       |
| 25   |                       |       |       |                        |       |       |
| 26   |                       |       |       |                        |       |       |
| 27   |                       |       |       |                        |       |       |
| 28   |                       |       |       |                        |       |       |
| 29   |                       |       |       |                        |       |       |
| 30   |                       |       |       |                        |       |       |
| 31   |                       |       |       |                        |       |       |
| 32   |                       |       |       |                        |       |       |
| 33   |                       |       |       |                        |       |       |
| 34   |                       |       |       |                        |       |       |
| 35   |                       |       |       |                        |       |       |
| 36   |                       |       |       |                        |       |       |
| 37   |                       |       |       |                        |       |       |
| 38   |                       |       |       |                        |       |       |
| 39   |                       |       |       |                        |       |       |
| 40   |                       |       |       |                        |       |       |
| 41   |                       |       |       |                        |       |       |
| 42   |                       |       |       |                        |       |       |
| 43   |                       |       |       |                        |       |       |
| 44   |                       |       |       |                        |       |       |
| 45   |                       |       |       |                        |       |       |
| 46   |                       |       |       |                        |       |       |
| 47   |                       |       |       |                        |       |       |
| 48   |                       |       |       |                        |       |       |
| 49   |                       |       |       |                        |       |       |
| 50   |                       |       |       |                        |       |       |

| T >  | Comfort <sup>1)</sup> |       |       | Standard <sup>2)</sup> |       |       |
|------|-----------------------|-------|-------|------------------------|-------|-------|
|      | 60 °C                 | 70 °C | 80 °C | 60 °C                  | 70 °C | 80 °C |
| NL v |                       |       |       |                        |       |       |
| 51   |                       |       |       |                        |       |       |
| 52   |                       |       |       |                        |       |       |
| 53   |                       |       |       |                        |       |       |
| 54   |                       |       |       |                        |       |       |
| 55   |                       |       |       |                        |       |       |
| 56   |                       |       |       |                        |       |       |
| 57   |                       |       |       |                        |       |       |
| 58   |                       |       |       |                        |       |       |
| 59   |                       |       |       |                        |       |       |
| 60   |                       |       |       |                        |       |       |
| 61   |                       |       |       |                        |       |       |
| 62   |                       |       |       |                        |       |       |
| 63   |                       |       |       |                        |       |       |
| 64   |                       |       |       |                        |       |       |
| 65   |                       |       |       |                        |       |       |
| 66   |                       |       |       |                        |       |       |
| 67   |                       |       |       |                        |       |       |
| 68   |                       |       |       |                        |       |       |
| 69   |                       |       |       |                        |       |       |
| 70   |                       |       |       |                        |       |       |
| 71   |                       |       |       |                        |       |       |
| 72   |                       |       |       |                        |       |       |
| 73   |                       |       |       |                        |       |       |
| 74   |                       |       |       |                        |       |       |
| 75   |                       |       |       |                        |       |       |
| 76   |                       |       |       |                        |       |       |
| 77   |                       |       |       |                        |       |       |
| 78   |                       |       |       |                        |       |       |
| 79   |                       |       |       |                        |       |       |
| 80   |                       |       |       |                        |       |       |
| 81   |                       |       |       |                        |       |       |
| 82   |                       |       |       |                        |       |       |
| 83   |                       |       |       |                        |       |       |
| 84   |                       |       |       |                        |       |       |
| 85   |                       |       |       |                        |       |       |
| 86   |                       |       |       |                        |       |       |
| 87   |                       |       |       |                        |       |       |
| 88   |                       |       |       |                        |       |       |
| 89   |                       |       |       |                        |       |       |
| 90   |                       |       |       |                        |       |       |
| 91   |                       |       |       |                        |       |       |
| 92   |                       |       |       |                        |       |       |
| 93   |                       |       |       |                        |       |       |
| 94   |                       |       |       |                        |       |       |
| 95   |                       |       |       |                        |       |       |
| 96   |                       |       |       |                        |       |       |
| 97   |                       |       |       |                        |       |       |
| 98   |                       |       |       |                        |       |       |
| 99   |                       |       |       |                        |       |       |
| 100  |                       |       |       |                        |       |       |

T = heating flow

NL = performance figure

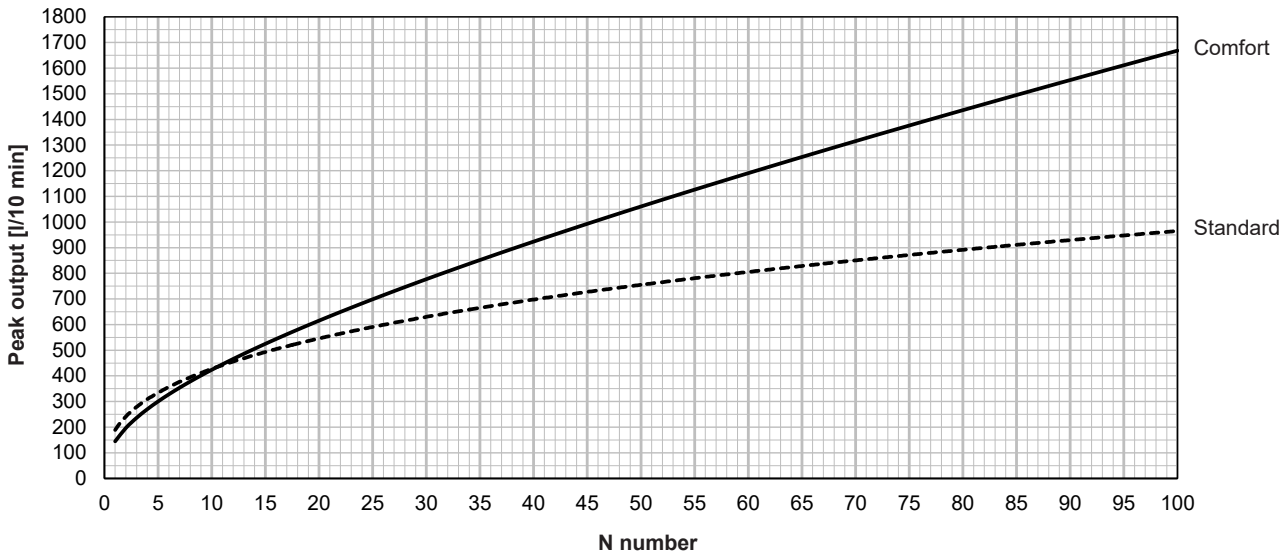
Performance figure NL acc. to DIN 4708 = number of flats which can be supplied with domestic hot water when the calorifier is heated and permanently reheated with the heat generator (standard flat: 1 bathroom - 4 rooms - 3.5 persons)

<sup>1)</sup> Calculation with simultaneity factor according to DIN 4708 (preferred for Switzerland)

<sup>2)</sup> Calculation with simultaneity factor according to Dresden Technical University

10 min peak output/N number with domestic hot water 45 °C  
according to DIN 4708 (Comfort) and Dresden Technical University (Standard)

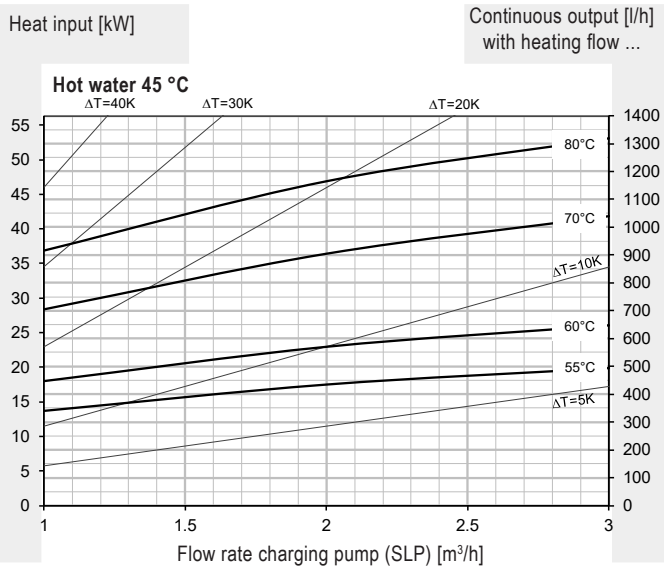
Reading example  
see Engineering



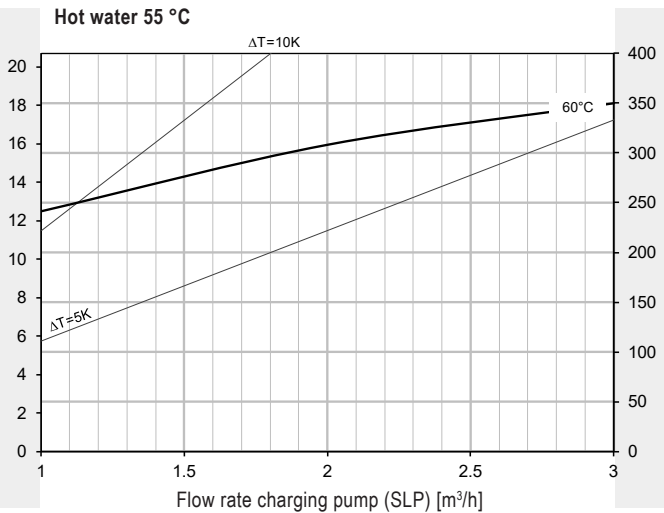
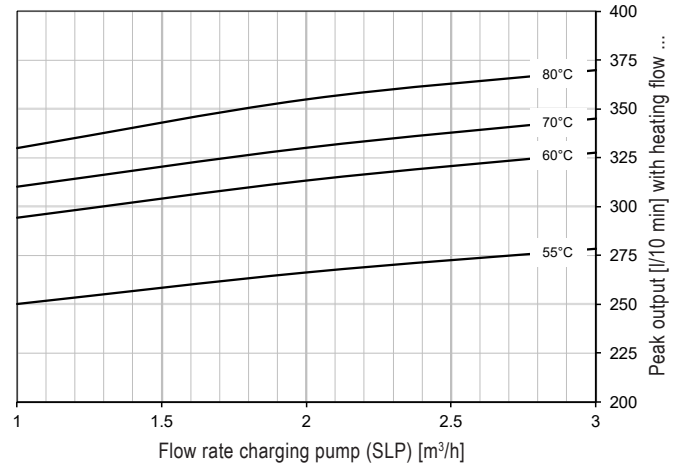
CombiVal ESR (200)

Hot water output  
Continuous output

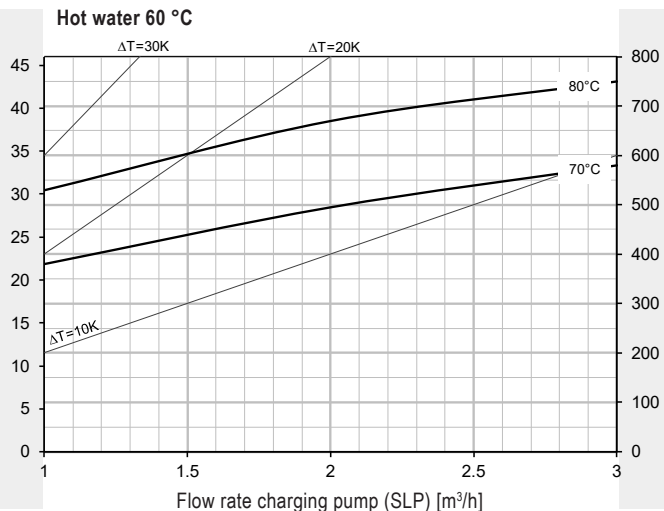
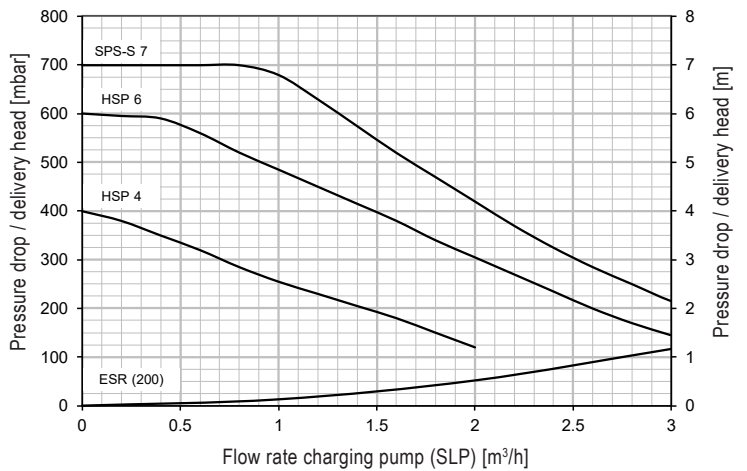
Reading example  
see engineering



10 min peak output - hot water 45 °C \*



Pressure drop heating coil - delivery head charging pump

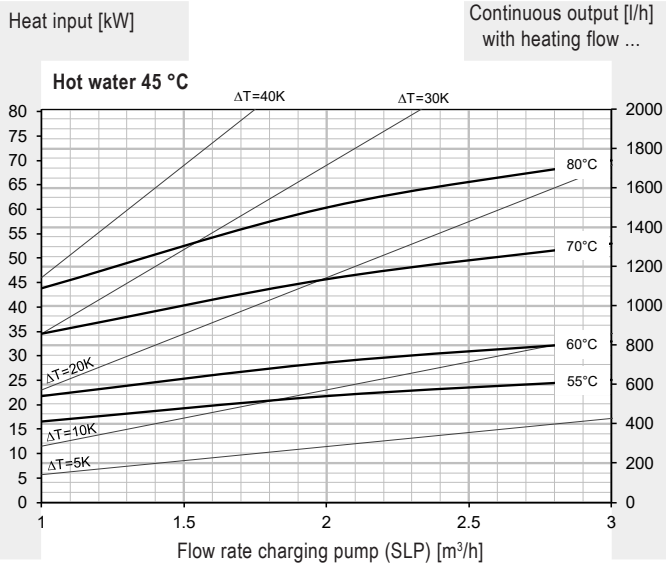


\* Calorifier heated to 60 °C

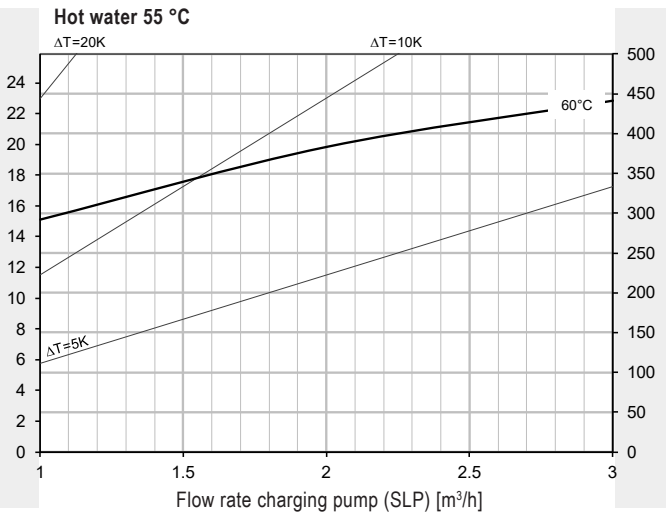
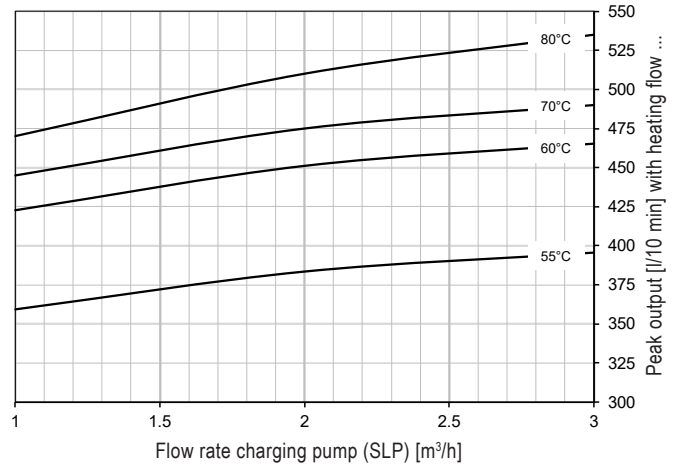
CombiVal ESR (300)

Hot water output  
Continuous output

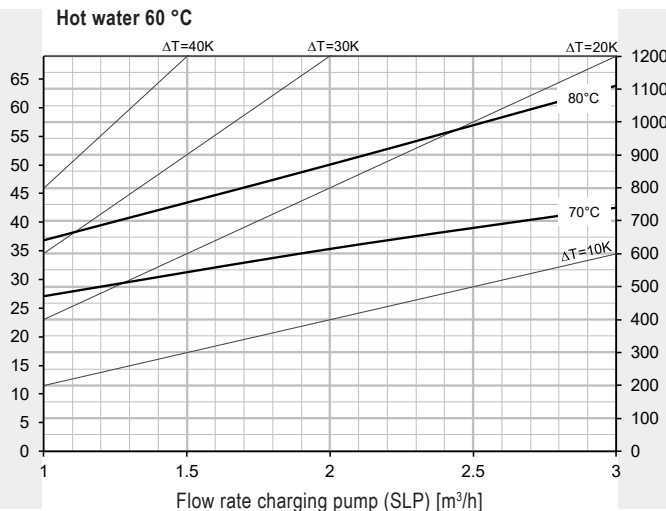
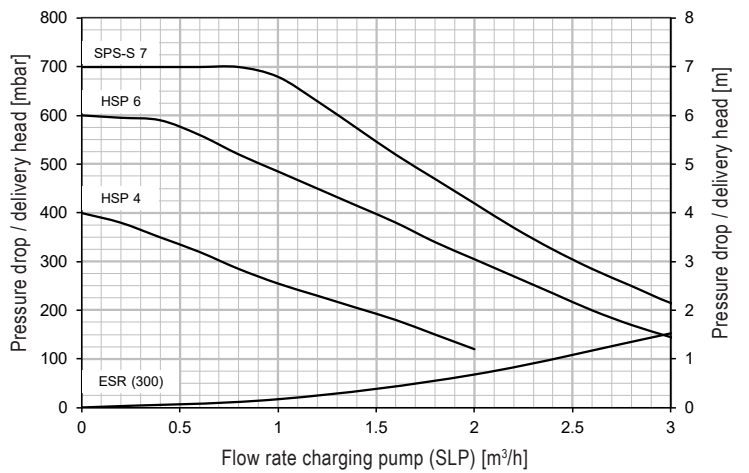
Reading example  
see engineering



10 min peak output - hot water 45 °C \*



Pressure drop heating coil - delivery head charging pump



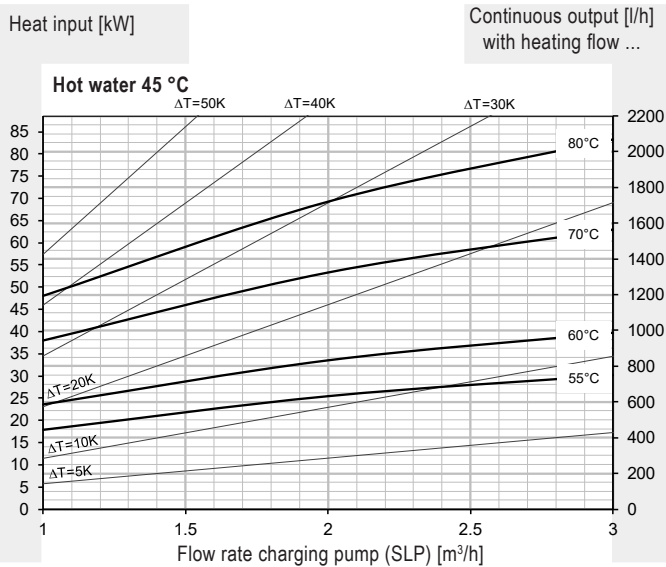
\* Calorifier heated to 60 °C



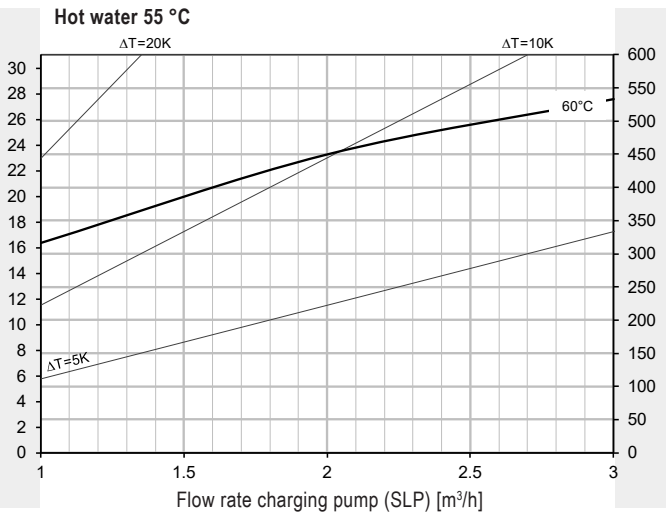
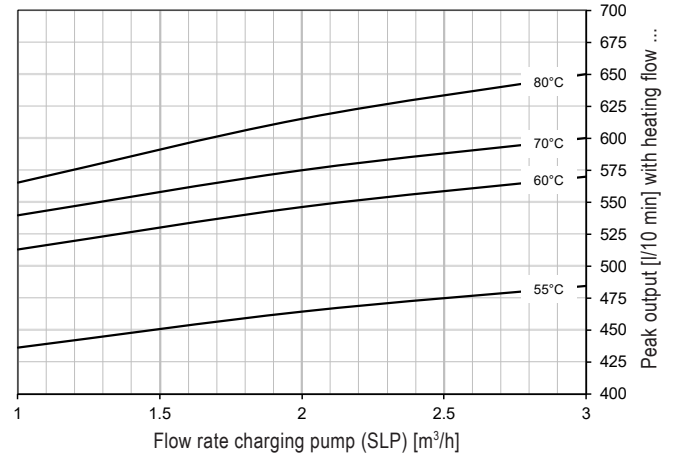
CombiVal ESR (400)

Hot water output  
Continuous output

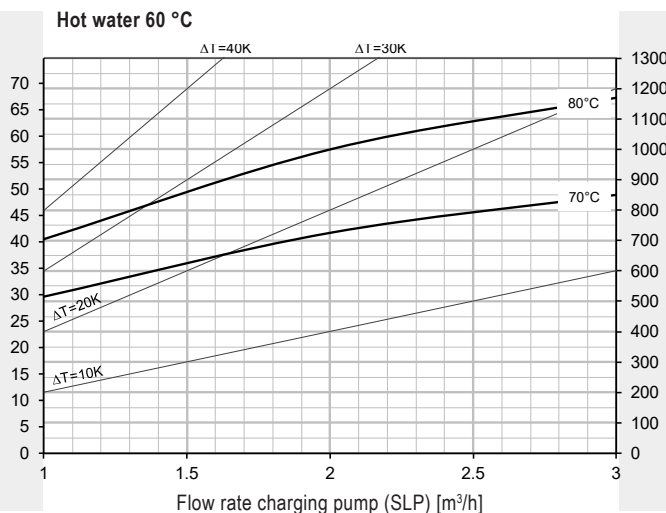
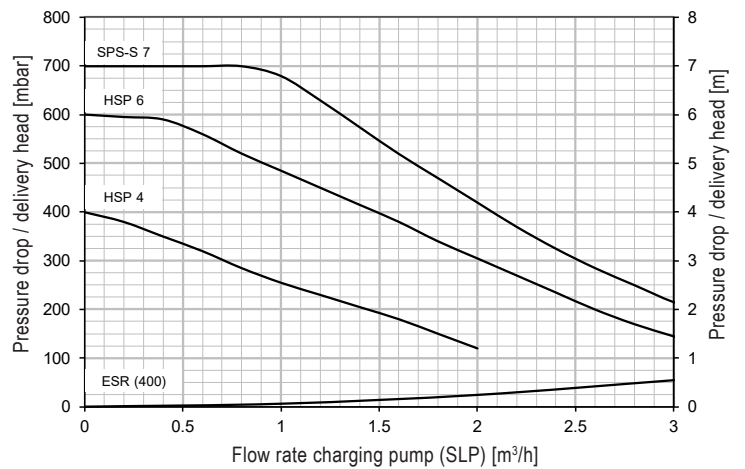
Reading example  
see engineering



10 min peak output - hot water 45 °C \*

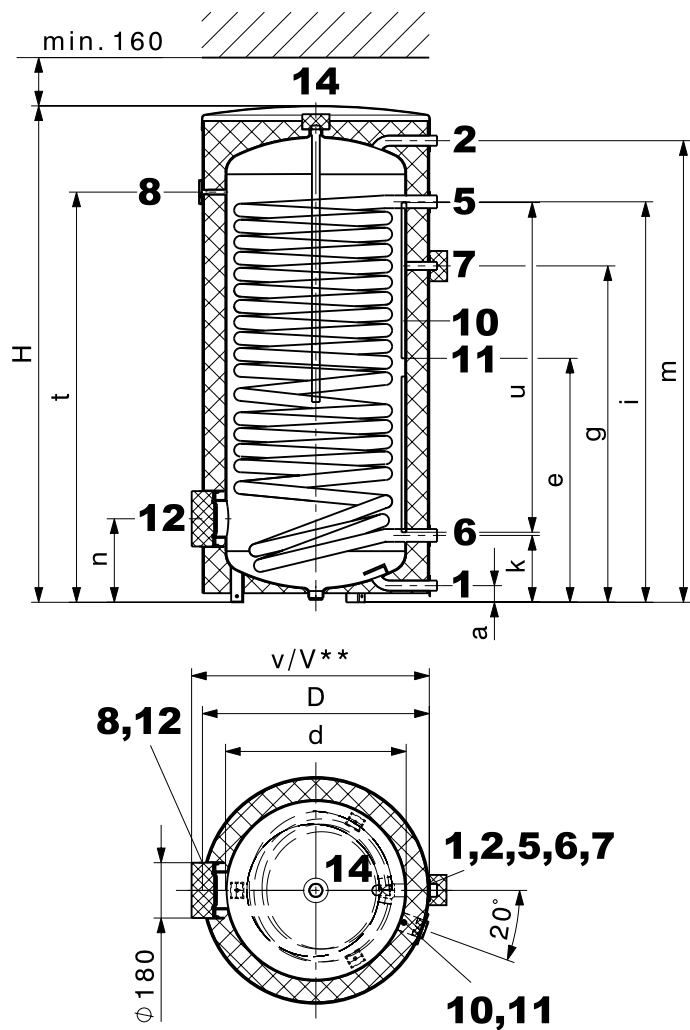


Pressure drop heating coil - delivery head charging pump



\* Calorifier heated to 60 °C

**CombiVal ESR (200-400)**  
(Dimensions in mm)



- |                      |                                    |               |   |
|----------------------|------------------------------------|---------------|---|
| 1 Cold water         | type (200)                         | G 3/4" (ET)   | 10 Sensor channel, inner Ø 11 mm                              |
|                      | type (300,400)                     | G 1" (ET)     | 11 Removable cap (Ø 60 mm)                                    |
| 2 Domestic hot water | type (200)                         | G 3/4" (ET)   | for positioning the sensor in the sensor channel              |
|                      | type (300,400)                     | G 1" (ET)     | 12 Hand-hole flange (flange-mounted electric heating element) |
| 5 Heating flow       | type (200,300)                     | G 1" (ET)     | Ø 180/120 mm, pitch circle 150 mm, 8 x M10                    |
|                      | type (400)                         | G 1 1/4" (ET) | 14 Anode sleeve Rp 1" (IT)                                    |
| 6 Heating return     | type (200,300)                     | G 1" (ET)     | Screw connection uninsulated                                  |
|                      | type (400)                         | G 1 1/4" (ET) |   |
| 7 Circulation        | (removable insulated cap Ø 100 mm) | G 3/4" (ET)   |   |
| 8 Thermometer        |                                    |               |   |

Variation because of the production tolerance possible  
Dimension +/- 10 mm

| CombiVal ESR type | D   | d   | H    | a  | e   | g    | i    | k   | m    | n   | t    | u    | v   | V** | Tilting dimension |
|-------------------|-----|-----|------|----|-----|------|------|-----|------|-----|------|------|-----|-----|-------------------|
| (200)             | 600 | 450 | 1464 | 55 | 740 | 789  | 902  | 194 | 1373 | 249 | 1229 | 1060 | 635 | 650 | 1583              |
| (300)             | 700 | 597 | 1326 | 55 | 669 | 850  | 991  | 221 | 1229 | 276 | 1069 | 860  | 745 | 760 | 1524              |
| (400)             | 750 | 597 | 1629 | 55 | 807 | 1112 | 1324 | 221 | 1526 | 276 | 1359 | 1060 | 795 | 810 | 1788              |

\*\* when using a flange-mounted electric heating element