

Hoval calorifier
CombiVal ESSR (500)

- Calorifier made of steel enamelled inside
- Plain-tube coil, with very large heating surface, 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
- Sensor channel
- Including thermometer

On request

- Flange-mounted electric heating element
- Screw-in electric heating element 1½"

Delivery

- Calorifier with foil casing installed

Hoval calorifier
CombiVal ESSR (800,1000)

- Calorifier made of steel, enamelled inside
- Plain-tube coil, with very large heating surface, enamelled, permanently installed
- Correx® potentiostat included
- 2 impressed current anodes incl. connecting cable integrated
- Flange below as cleaning flange or for the installation of a flange-mounted electric heating element or blank flange with immersion sleeve
- Flange above as additional cleaning flange or for the installation of a flange-mounted electric heating element
- Thermal insulation made of polyester fleece with foil jacket, red coloured
- Two terminal bars for contact sensor
- Including thermometer

On request

- Flange-mounted electric heating element

Delivery

- Calorifier and thermal insulation completely installed (can be removed for installation)



Range

CombiVal
 type

| | | |
|------|--------|------------|
| ESSR | (500) | B ▶ |
| ESSR | (800) | |
| ESSR | (1000) | |

Calorifier



CombiVal ESSR (500-1000)

Calorifier made of steel enamelled inside.
With built-in, enamelled plain-tube coil.

| CombiVal ESSR type | | Volume dm ³ | Heating surface m ² |
|--------------------|------------|------------------------|--------------------------------|
| (500) | B → | 465 | 5.90 |
| (800) | | 733 | 7.00 |
| (1000) | | 961 | 9.15 |

Electric heating elements
see chapter "Electric heating elements"

Part No.

7015 970
7018 051
7018 052

Accessories



Flange cover 180 - 3/4"
for the installation of the Correx[®] 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[®] 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[®] impressed current anode

684 760

Included in the scope of delivery for ESSR (800,1000).

In every case, **either** a Correx[®] 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 ESSR (500-1000)

| Type | | (500) | (800) | (1000) |
|--|--------------------|-------------------------|-------|--------|
| • Volume | l | 465 | 733 | 961 |
| • 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 | - | - |
| • Thermal insulation polyester fleece | mm | - | 100 | 100 |
| • Thermal insulation λ | W/mK | 0.027 | 0.027 | 0.027 |
| • Fire protection class | | B2 | B2 | B2 |
| • Heat loss at 65 °C | W | 78 | 126 | 144 |
| • Transport weight | kg | 232 | 304 | 387 |
| • U value | W/m ² K | 0.316 | 0.374 | 0.375 |
| Heating battery (built in) | | | | |
| • Heating surface | m ² | 5.9 | 7 | 9.15 |
| • Heating water | l | 41 | 49.4 | 64.6 |
| • Flow resistance ¹⁾ | z value | 10 | 11 | 14 |
| • 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 | | |

¹⁾ Flow resistance heating battery in mbar = flow rate (m³/h)² 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 ¹⁾ | | | Standard ²⁾ | | |
|------|-----------------------|-------|-------|------------------------|-------|-------|
| | 60 °C | 70 °C | 80 °C | 60 °C | 70 °C | 80 °C |
| NL v | | | | | | |
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| 10 | | | | | | |
| 11 | | | | | | |
| 12 | 500 | | | | | |
| 13 | | | | | | |
| 14 | | | | 500 | | |
| 15 | | | | | | |
| 16 | | | | | | |
| 17 | | | | | | |
| 18 | 800 | | | | | |
| 19 | | | | | | |
| 20 | | | | | | |
| 21 | | 500 | | | | |
| 22 | | | | 800 | | |
| 23 | | | | | | |
| 24 | 1000 | | | | | |
| 25 | | | | | | |
| 26 | | | | | 500 | |
| 27 | | | | | | |
| 28 | | | 500 | | | |
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| 35 | | | | | | |
| 36 | | | | 1000 | 500 | |
| 37 | | | | | | |
| 38 | | 800 | | | | |
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| 42 | | | | | | |
| 43 | | | | | | |
| 44 | | | 800 | | | |
| 45 | | | | | | |
| 46 | | | | | | |
| 47 | | | | | | |
| 48 | | 1000 | | | | |
| 49 | | | | | 800 | |
| 50 | | | | | | |

| T > | Comfort ¹⁾ | | | Standard ²⁾ | | |
|------|-----------------------|-------|-------|------------------------|-------|-------|
| | 60 °C | 70 °C | 80 °C | 60 °C | 70 °C | 80 °C |
| NL v | | | | | | |
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| 56 | | | | | | |
| 57 | | | | | | 800 |
| 58 | | | 1000 | | | |
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T = heating flow

NL = performance figure

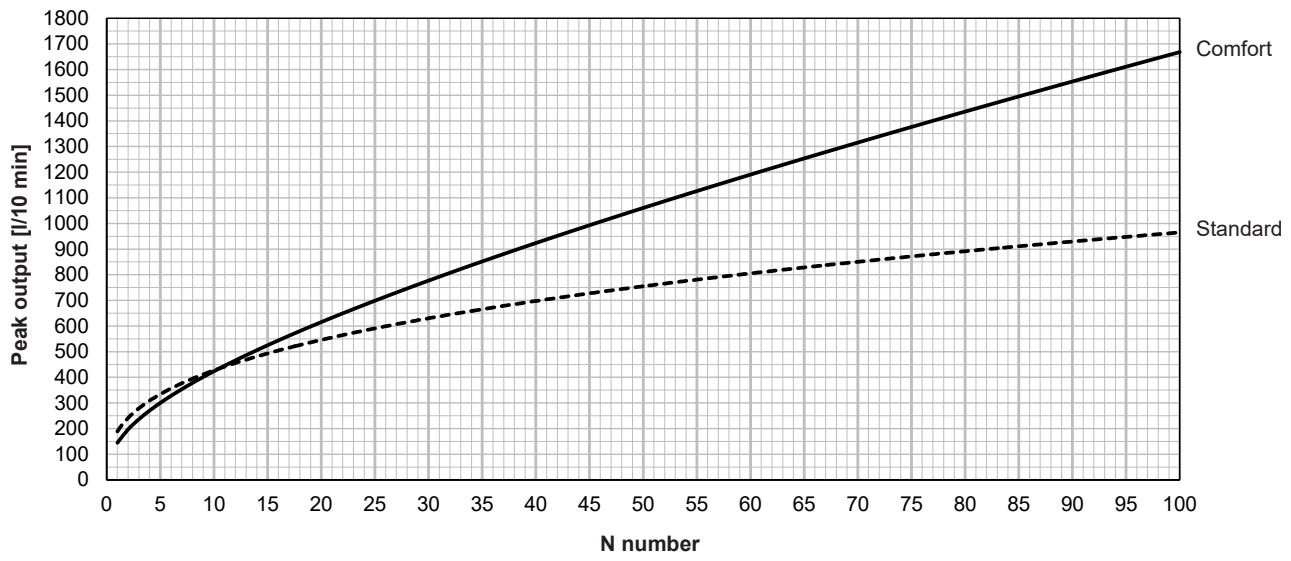
Performance figure NL acc. to DIN 4708 = number of flats which can be supplied with domestic hot water when the calorifier is heated and permanently reheated with the heat generator (standard flat: 1 bathroom - 4 rooms - 3.5 persons)

¹⁾ Calculation with simultaneity factor according to DIN 4708 (preferred for Switzerland)

²⁾ 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)

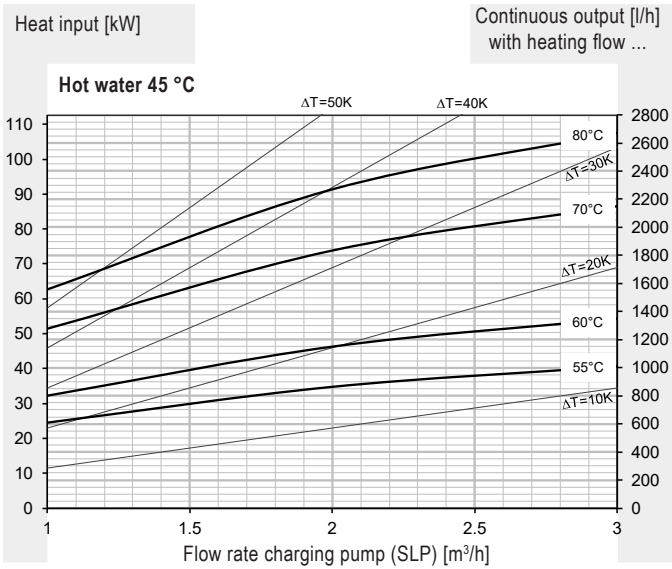
Reading example
 see Engineering



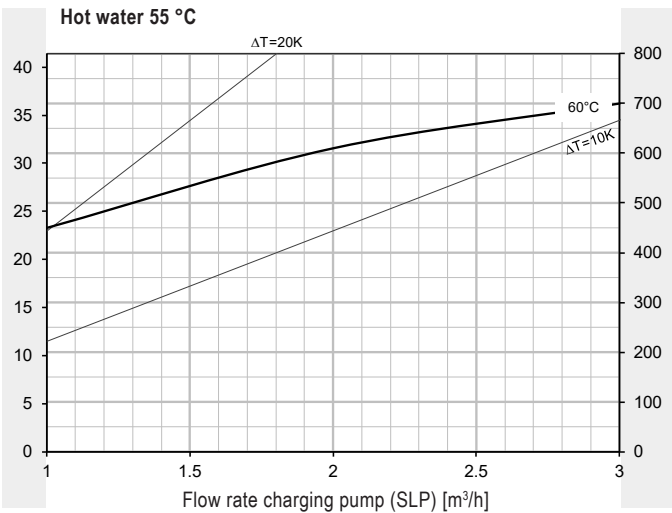
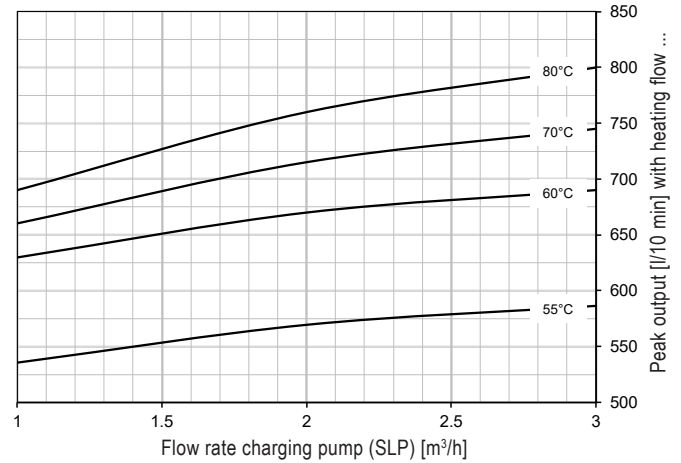
CombiVal ESSR (500)

Hot water output
Continuous output

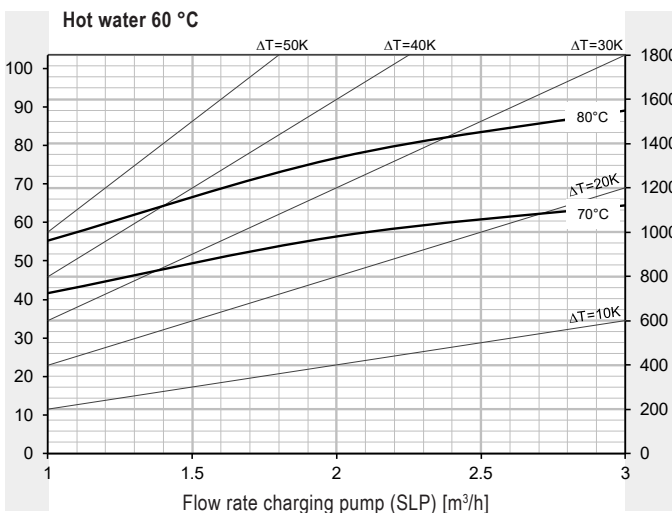
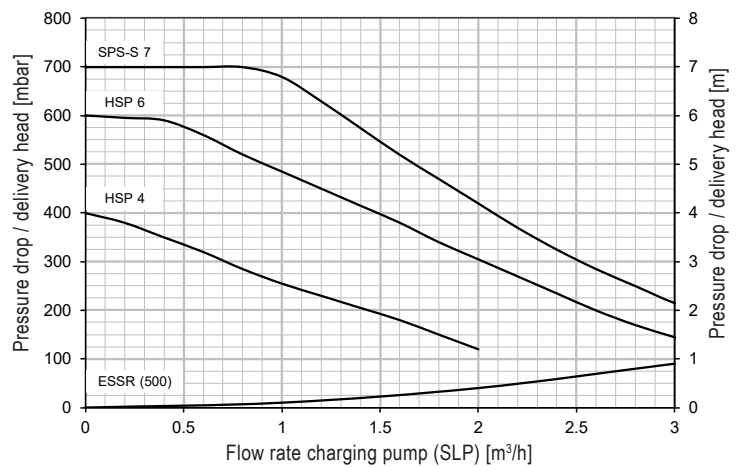
Reading example
see engineering



10 min peak output - hot water 45 °C *



Pressure drop heating coil - delivery head charging pump

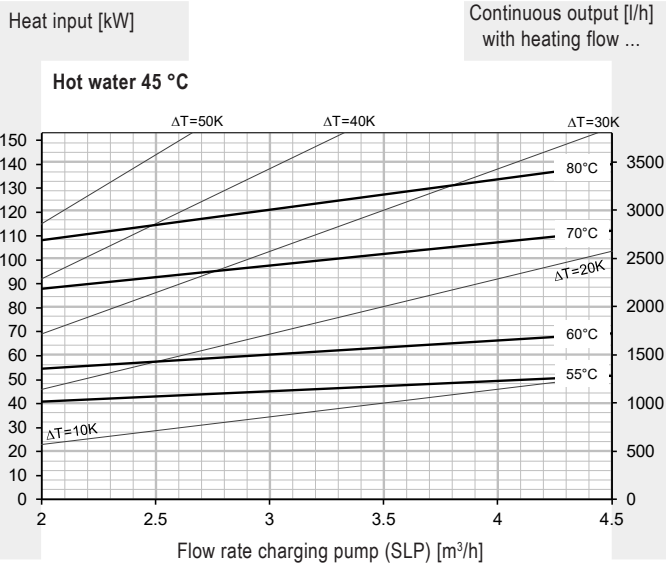


* Calorifier heated to 60 °C

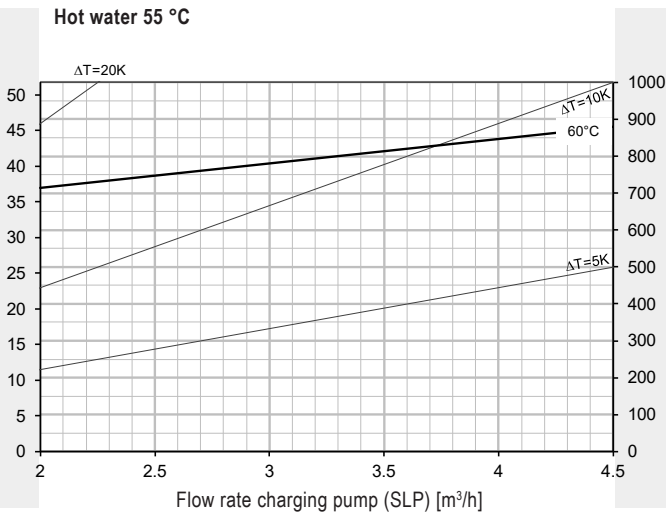
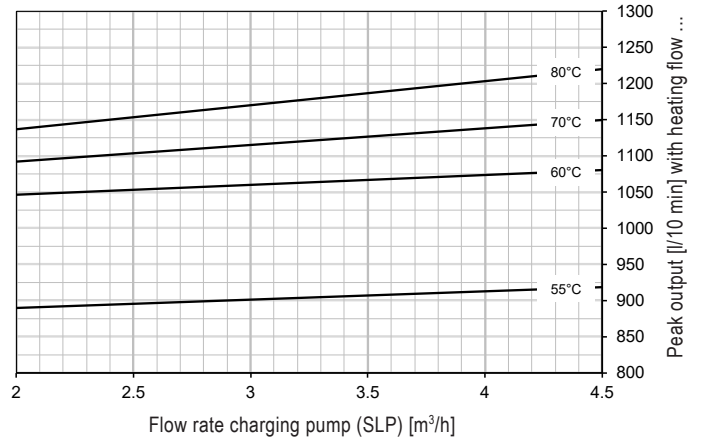
CombiVal ESSR (800)

Hot water output
Continuous output

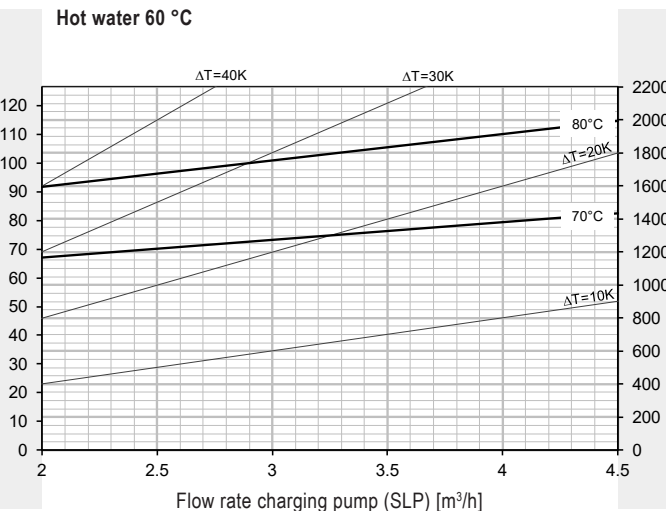
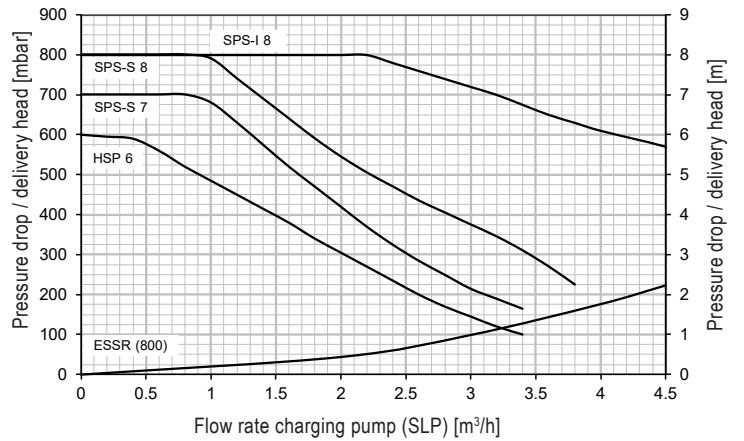
Reading example
see engineering



10 min peak output - hot water 45 °C *



Pressure drop heating coil - delivery head charging pump

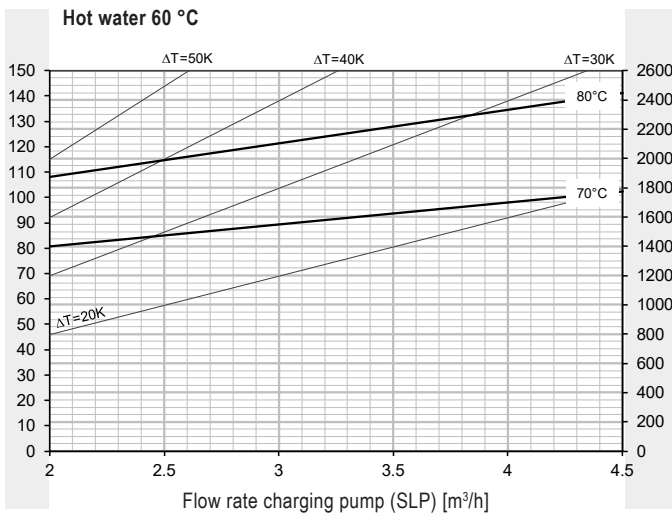
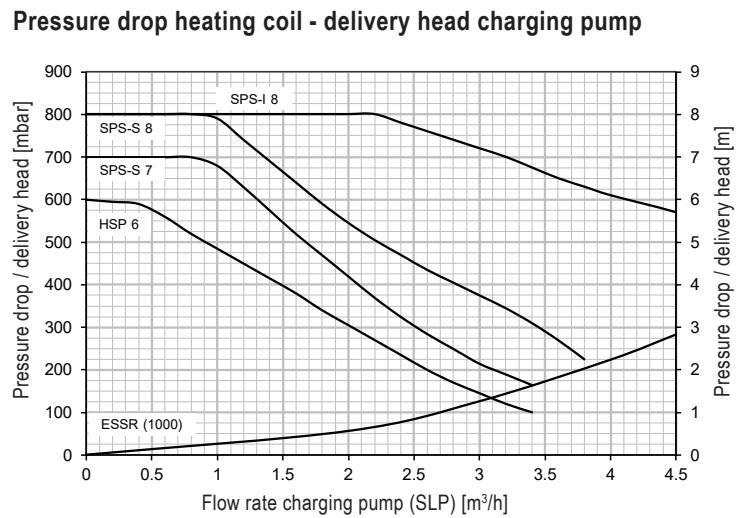
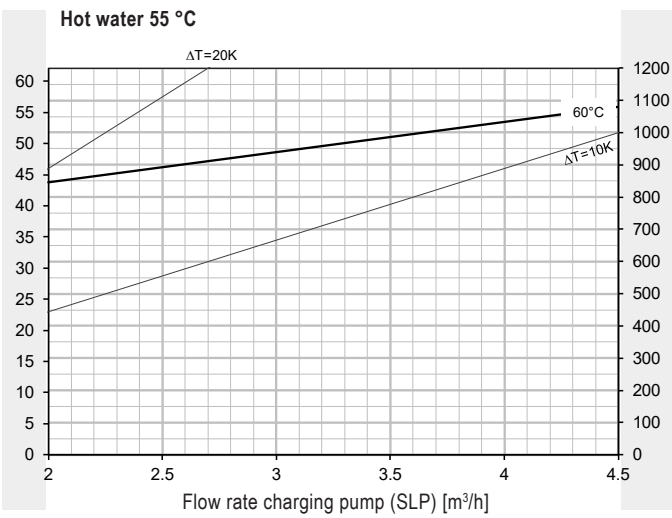
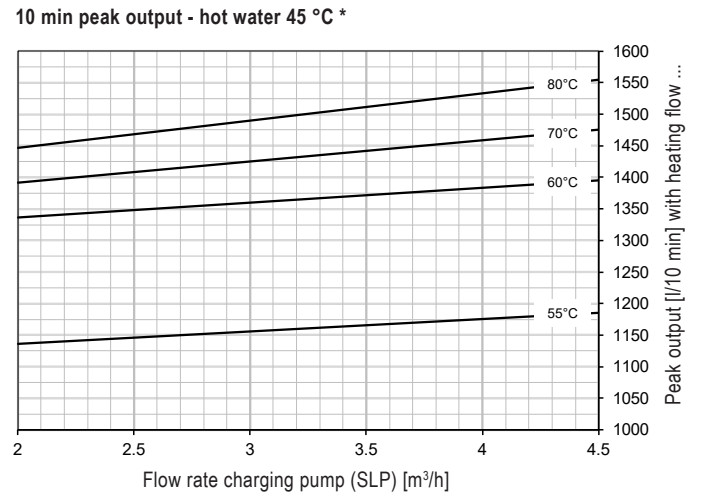
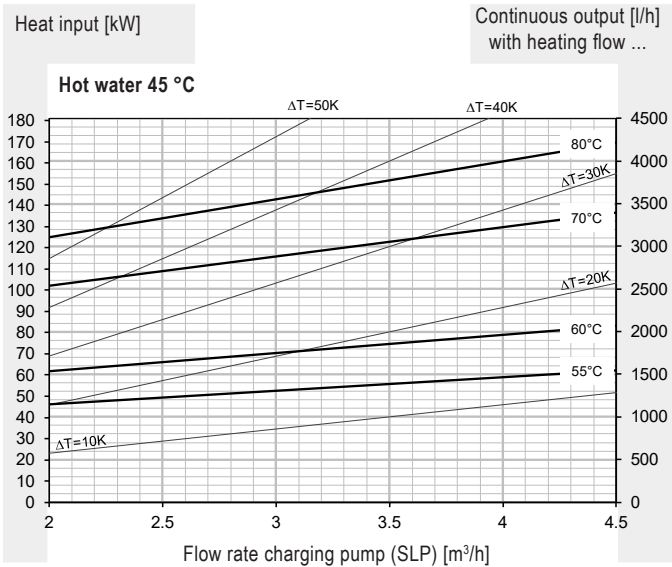


* Calorifier heated to 60 °C

CombiVal ESSR (1000)

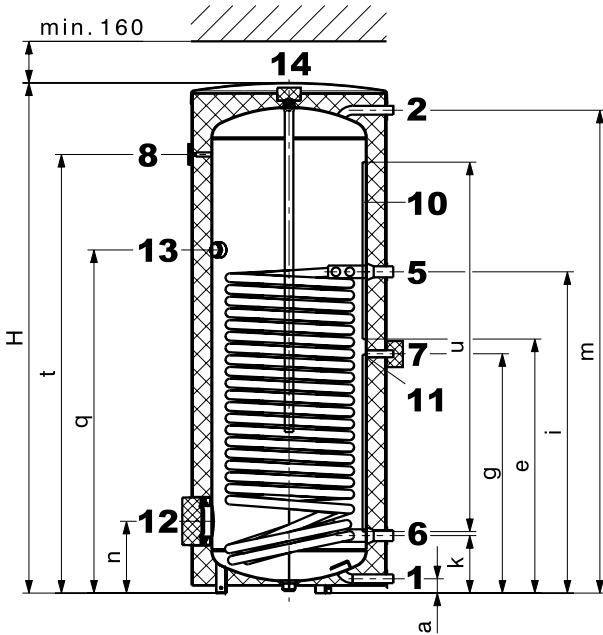
Hot water output
Continuous output

Reading example
see engineering

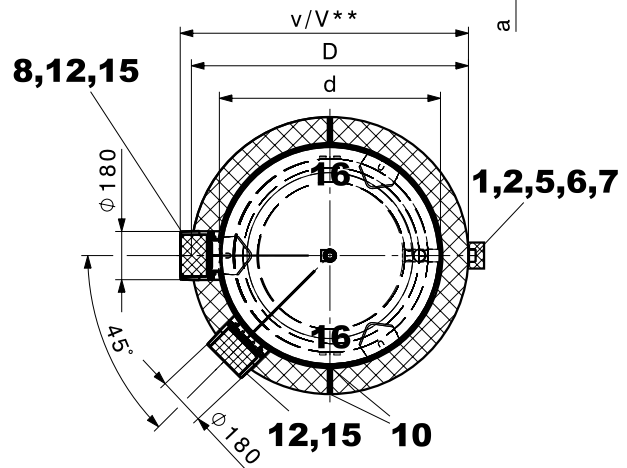
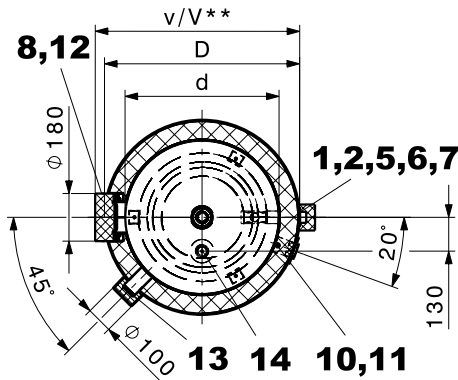
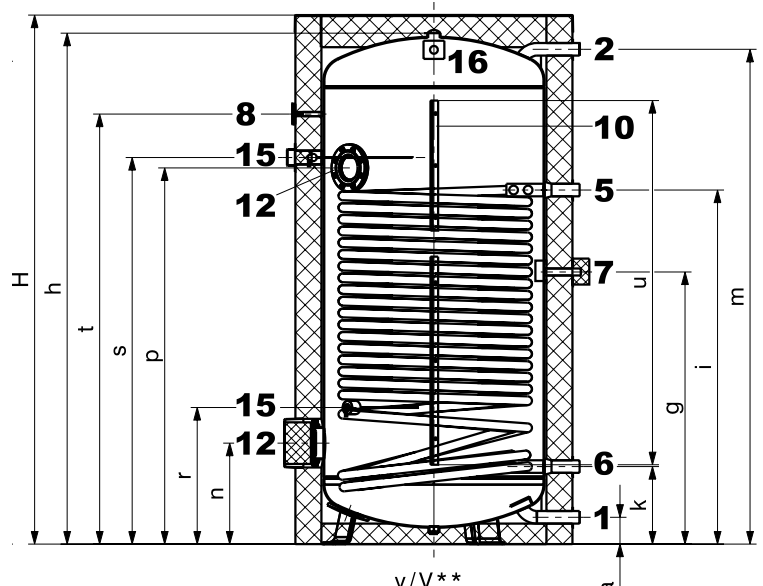


* Calorifier heated to 60 °C

CombiVal ESSR (500)
(Dimensions in mm)



CombiVal ESSR (800,1000)



- 1 Cold water type (500) G 1" (ET)
type (800,1000) G 1½" (ET)
- 2 Domestic hot water type (500) G 1" (ET)
type (800,1000) G 1½" (ET)
- 5 Heating flow type (500) G 1¼" (ET)
type (800,1000) G 1½" (ET)
- 6 Heating return type (500) G 1¼" (ET)
type (800,1000) G 1½" (ET)
- 7 Circulation (removable insulated cap Ø 100 mm) G ¾" (ET)
- 8 Thermometer

- 10 Sensor channel, inner Ø 11 mm type (500)
Sensor terminal strip (zip fastener) type (800,1000)
- 11 Removable cap (Ø 60 mm) type (500)
for positioning the sensor in the sensor channel
- 12 Hand-hole flange (flange-mounted electric heating element) Ø 180/120 mm, pitch circle 150 mm, 8 x M10
- 13 Connection for screw-in electric heating element (cap Ø 100 mm) type (500) Rp 1½" (IT)
- 14 Anode sleeve type (500) Rp 1¼" (IT)
Screw connection uninsulated
- 15 Correx® impressed current anode sleeve type (800,1000) Rp ¾" (IT)
- 16 Transport strap type (800,1000)

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

| CombiVal ESSR type | D | d | H | h | a | e | g | i | k | m | n | p | r | q | s | t | u | v | v** | Tilting dimension |
|--------------------|------|-----|------|------|-----|-----|------|------|-----|------|-----|------|-----|------|------|------|------|------|------|-------------------|
| (500) | 750 | 597 | 1953 | - | 55 | 977 | 920 | 1235 | 221 | 1856 | 276 | - | - | 1319 | - | 1686 | 1360 | 795 | 810 | 2093 |
| (800) | 950 | 750 | 2033 | 1937 | 104 | - | 995 | 1265 | 292 | 1890 | 382 | 1413 | 520 | - | 1497 | 1647 | 1400 | 975 | 1020 | 1962 |
| (1000) | 1050 | 850 | 2063 | 1963 | 103 | - | 1046 | 1361 | 298 | 1902 | 388 | 1446 | 525 | - | 1486 | 1653 | 1400 | 1075 | 1120 | 1991 |

** when using a flange-mounted electric heating element