

VarioVal RHS (800,1000)

Stratified combination storage tank

- For single family homes with approx. 4-6 persons
- Heating with solar and high-temperature heat generators
- Annual solar coverage rate depends on heat demand, collector field size, collector field storage ratio and location
- Stratified combination storage tank made of steel, primed on the outside, for heating support and water heating with a built-in corrugated pipe heat exchanger
- With built-in plain tube heat exchanger for connection to solar collectors (800) up to 10 m² collector surface (1000) up to 15 m² collector surface
- Layer installations:
 - Horizontal baffle plates
 - Vertical baffle plates
 - Heating flow/return guide tubes (also with return in layer channel)
- Sensor terminal blocks
- Thermometer (with capillary)
- Thermal insulation
 - Polyester fibre fleece thermal insulation 100 mm
 - Outer plastic jacket with patented aluminium sealing bracket, colour red
 - Insulated cover flap (can be knocked out) for heat exchanger connections

Domestic hot water calorifier

- Stainless-steel corrugated tube heat exchanger installed

Delivery

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

Design on request

- Heating module HMV20-3BM/SPS-S 8 with thermal insulation box
- Can be expanded with
 - Heating armature group HAV20-3BM-R/SPS-S 8
 - Solar armature group SAV20/SPS-S 7
- Circulation
- Screw-in electric heating element

VarioVal RL (600)

Stratified combination storage tank

- For single family homes with approx. 4-6 persons
- Heating with low-temperature heat generator (heat pumps) or for high-temperature heat generators
- Stratified combination storage tank made of steel, primed on the outside, for heating support and water heating with a built-in corrugated pipe heat exchanger
- Layer installations:
 - Horizontal baffle plates
 - Vertical baffle plates
 - Heating flow/return guide tubes (also with return in layer channel)
 - Separating plate in the central area for separation of the temperature zone
- Sensor terminal blocks
- Thermometer (with capillary)



Notice

SPF certificate stratification efficiency SPF-18-009-SE

- Thermal insulation
 - Polyester fibre fleece thermal insulation 140 mm
 - Outer plastic jacket with patented aluminium sealing bracket, colour red
 - Insulated cover flap (can be knocked out) for heat exchanger connections

Domestic hot water calorifier

- Stainless-steel corrugated tube heat exchanger installed

Delivery

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

Design on request

- Heating module HMV20-3BM/SPS-S 8 with thermal insulation box
- Can be expanded with heating armature group HAV20-3BM-R/SPS-S 8
- Circulation
- Screw-in electric heating element

VarioVal RLS (800-1000)

Stratified combination storage tank

- For single family homes with approx. 4-6 persons
- Heating with solar, low-temperature heat generator (heat pumps) or for high-temperature heat generators
- Annual solar coverage rate depends on heat demand, collector field size, collector field storage ratio and location
- Stratified combination storage tank made of steel, primed on the outside, for heating support and water heating with a built-in corrugated pipe heat exchanger

- With built-in plain tube heat exchanger for connection to solar collectors (800) up to 10 m² collector surface (1000) up to 15 m² collector surface
- Layer installations:
 - Horizontal baffle plates
 - Vertical baffle plates
 - Heating flow/return guide tubes (also with return in layer channel)
 - Separating plate in the central area for separation of the temperature zone
- Sensor terminal blocks
- Thermometer (with capillary)
- Thermal insulation
 - Made of polyester fibre fleece 140 mm
 - Outer plastic jacket with patented aluminium sealing bracket, colour red
 - Insulated cover flap (can be knocked out) for heat exchanger connections

Domestic hot water calorifier

- Stainless-steel corrugated tube heat exchanger installed

Delivery

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

Design on request

- Heating module HMV20-3BM/SPS-S 8 with thermal insulation box
- Can be expanded with
 - Heating armature group HAV20-3BM-R/SPS-S 8
 - Solar armature group SAV20/SPS-S 7
- Circulation
- Screw-in electric heating element

VarioVal RL (600) - selection table

| | Hydraulic components + necessary TopTronic® E modules | | | | | | Additional accessories | | | |
|---------------------------------|---|------------------------------|---|---------------------------------|---------------------------|--------------------------------------|-----------------------------------|----------------|--------------------|------|
| | 1st mixer circuit | 2nd mixer circuit | Solar armature group | | Return switching | Buffer management | Screw-in electric heating element | Electrical box | Circulation set | |
| | • | opt. | | | • | • | • | • | opt. | |
| Consisting of: | | | | | | | | | | |
| | Heating module HMV20-3BM SPS-S 8 | HA group HAV20-3BM-R SPS-S 8 | TopTronic® E module e-expansion heating circuit | Solar group SAV20FR SPS-S 7 PM2 | TopTronic® E solar module | Stratified charging set SLS32-3-H RL | TopTronic® E buffer module | | | |
| Heat generator | | | | | | | | | | |
| Air/water heat pumps: | | | | | | | | | | |
| UltraSource® B comfort C (8,11) | • | • | • | | | • | | • | | opt. |
| Belaria® pro comfort (8-15) | • | • | • | | | • | | opt. | | opt. |
| Belaria® comfort ICM (8,13) | • | • | • | | | • | | • | | opt. |
| Brine heat pumps: | | | | | | | | | | |
| UltraSource® T comfort (8,13) | • | • | • | | | • | | opt. | | opt. |
| Thermalia® comfort (8-13) | • | • | • | | | • | | opt. | | opt. |
| Thermalia® comfort H (7,10) | • | • | • | | | • | | opt. | | opt. |
| TopGas® classic (12-30) | • | • | • | | | 3) | • | opt. | opt. ²⁾ | opt. |
| UltraGas® (15-35) | • | • | • | | | | • | opt. | | opt. |
| UltraOil® (16-35) | • | • | • | | | | • | opt. | | opt. |
| BioLyt (13-23) | • | • | • | | | | • | opt. | opt. ¹⁾ | opt. |

¹⁾ A module expansion or a controller module can be installed in the heat generator.

²⁾ Two TopTronic® E controller modules can be mounted in the heat generator or in the wall casing. If the storage tank is fully equipped, a separate electrical box must be ordered for an additional module.

³⁾ Return switching to be installed by the client

VarioVal RLS (800,1000) - selection table

| | Hydraulic components + necessary TopTronic® E modules | | | | | | Additional accessories | | | |
|---------------------------------|---|------------------------------|---|---------------------------------|---------------------------|--------------------------------------|-----------------------------------|----------------|--------------------|------|
| | 1st mixer circuit | 2nd mixer circuit | Solar armature group | | Return switching | Buffer management | Screw-in Electric heating element | Electrical box | Circulation set | |
| | • | opt. | opt. | | • | • | • | • | opt. | |
| Consisting of: | | | | | | | | | | |
| | Heating module HMV20-3BM SPS-S 8 | HA group HAV20-3BM-R SPS-S 8 | TopTronic® E module e-expansion heating circuit | Solar group SAV20FR SPS-S 7 PM2 | TopTronic® E solar module | Stratified charging set SLS32-3-H RL | TopTronic® E buffer module | | | |
| Heat generator | | | | | | | | | | |
| Air/water heat pumps: | | | | | | | | | | |
| UltraSource® B comfort C (8,11) | • | • | • | • | • | • | | • | opt. ²⁾ | opt. |
| Belaria® pro comfort (8-15) | • | • | • | • | • | • | | opt. | opt. ²⁾ | opt. |
| Belaria® comfort ICM (8,13) | • | • | • | • | • | • | | • | opt. ²⁾ | opt. |
| Brine heat pumps: | | | | | | | | | | |
| UltraSource® T comfort (8,13) | • | • | • | • | • | • | | opt. | opt. ²⁾ | opt. |
| Thermalia® comfort (8-13) | • | • | • | • | • | • | | opt. | opt. ²⁾ | opt. |
| Thermalia® comfort H (7,10) | • | • | • | • | • | • | | opt. | opt. ²⁾ | opt. |
| TopGas® classic (12-30) | • | • | • | • | • | 3) | • | opt. | opt. ²⁾ | opt. |
| UltraGas® (15-35) | • | • | • | • | • | | • | opt. | opt. ²⁾ | opt. |
| UltraOil® (16-35) | • | • | • | • | • | | • | opt. | opt. ²⁾ | opt. |
| BioLyt (13-25) | • | • | • | • | • | | • | opt. | opt. ¹⁾ | opt. |

¹⁾ A module expansion or a controller module can be installed in the heat generator.

²⁾ Two TopTronic® E controller modules can be mounted in the heat generator or in the wall casing. If the storage tank is fully equipped, a separate electrical box must be ordered for an additional module.

³⁾ Return switching to be installed by the client

VarioVal RHS (800,1000) - selection table

| | Hydraulic components + necessary TopTronic® E modules | | | | | | Additional accessories | | | |
|-------------------------|---|------------------------------|---|---------------------------------|---------------------------|--------------------------------------|----------------------------|-----------------|--------------------|------|
| | 1st mixer circuit | 2nd mixer circuit | Solar armature group | Return switching | Buffer management | Screw-in electric heating element | Electrical box | Circulation set | | |
| | • | opt. | opt. | | • | opt. | • | opt. | | |
| | Consisting of: | | | | | | | | | |
| | Heating module HMV20-3BM SPS-S 8 | HA group HAV20-3BM-R SPS-S 8 | TopTronic® E module expansion heating circuit | Solar group SAV20FR SPS-S 7 PM2 | TopTronic® E solar module | Stratified charging set SLS32-3-H RL | TopTronic® E buffer module | | | |
| Heat generator | | | | | | | | | | |
| TopGas® classic (12-30) | • | • | • | • | • | ³⁾ | • | opt. | opt. ²⁾ | opt. |
| UltraGas® (15-35) | • | • | • | • | • | | • | opt. | opt. ²⁾ | opt. |
| UltraOil® (16-35) | • | • | • | • | • | | • | opt. | opt. ²⁾ | opt. |
| BioLyt (13-25) | • | • | • | • | • | | • | opt. | opt. ¹⁾ | opt. |

¹⁾ A module expansion or a controller module can be installed in the heat generator.

²⁾ Two TopTronic® E controller modules can be mounted in the heat generator or in the wall casing. If the storage tank is fully equipped, a separate electrical box must be ordered for an additional module.

³⁾ Return switching to be installed by the client

Stratified combination storage tank



Hoval VarioVal RHS (800,1000)

Stratified combination storage tank made of steel, primed on the outside, for heating support and water heating with a built-in corrugated pipe heat exchanger.
 With built-in plain tube heat exchanger for connection to solar collectors. Thermal insulation made of polyester fibre 100 mm and external plastic coating, colour red.

| VarioVal RHS type | Total volume dm ³ | Solar heat exchanger | | Calorifier | |
|-------------------|------------------------------|----------------------|-----------------|----------------|-----------------|
| | dm ³ | m ² | dm ³ | m ² | dm ³ |
| (800) | 796 | 2 | 18.6 | 5.5 | 30.0 |
| (1000) | 892 | 3 | 20.4 | 6.7 | 36.3 |

Part No.

6046 236
 6046 237

Hoval VarioVal RLS (800,1000)

Stratified combination storage tank made of steel, primed on the outside, for heating support and water heating with a built-in corrugated pipe heat exchanger.
 With built-in plain tube heat exchanger for connection to solar collectors. Thermal insulation made of polyester fibre 100 mm and external plastic coating, colour red.
 Suitable for heat pumps up to 20 kW (up to 2500 l/h).

| VarioVal RLS type | Total volume dm ³ | Solar heat exchanger | | Calorifier | |
|-------------------|------------------------------|----------------------|-----------------|----------------|-----------------|
| | dm ³ | m ² | dm ³ | m ² | dm ³ |
| (800) | 796 | 2 | 18.6 | 6.7 | 36.3 |
| (1000) | 892 | 3 | 20.4 | 8.2 | 44.6 |

6046 234
 6046 235

Hoval VarioVal RL (600)

Stratified combination storage tank made of steel, primed on the outside, for heating support and water heating with a built-in corrugated pipe heat exchanger.
 Thermal insulation made of polyester fibre 140 mm and external plastic coating, colour red.
 Suitable for heat pumps up to 20 kW (up to 2500 l/h).

| VarioVal RL/RLS type | Total volume dm ³ | Solar heat exchanger | | Calorifier | |
|----------------------|------------------------------|----------------------|-----------------|----------------|-----------------|
| | dm ³ | m ² | dm ³ | m ² | dm ³ |
| (600) | 647 | - | - | 6.7 | 36.3 |

6046 233

Electric heating elements
 see chapter "Electric heating elements"

Accessories



Heating module HMV20-3BM
with pressure distributor for 2 mixer
circuits, incl. 1 heating armature group
with 3-way motor mixer and pump
SPS-S 8 and thermal insulation box

Notice

In combination with heat pumps, always use
the stratified charging set SLS32-3-H RL.



Heating armature group HAV20-3BM-R
to extend the HMV20-3BM for a
second mixer circuit
Pump SPS-S 8



Solar armature group SAV20FR
with PWM interface (TopTronic® E)
inc. safety group 6 bar with
manometer, FlowRotor and air vent
Pump SPS-S 7 PM2



Layer charge set SLS32-3-H RT
connection set for
return switching
for direct mounting on VarioVal
for heat pumps up to 17 kW
Connection set between tank and
pressure distributor on heating module,
layer charge set with 3-way valve
incl. motor drive.

Thermal water mixer

see "Various system components"

Part No.

6046 091

6046 092

6046 093

6048 003

Accessories



Circulation set with reducer

for VarioVal RL, RLS and RHS
 polyethylene hose (cross-linked)
 fitting for securing the PE hose
 Y connection piece made of
 brass Rp 1" - Rp 1" - R 3/4"
 Reducer made of brass 1" (ext. thread) -
 1 1/4" (int. thread)

Part No.

2055 685



**TopTronic® E control module black
 with 4.3" colour touchscreen**

For operation of all controller modules
 connected to the bus system
 (basic, solar, buffer modules etc.)
 Connection to the Hoval bus system
 via RJ45 plug connection or via
 plug terminals (max. 0.75 mm²),
 flat design with flexible
 installation option

6043 844

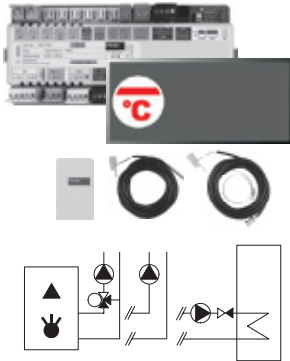
Installation:

- in control panel of the heat generator
- in the Hoval wall casing
- in the control panel front,
 black high-gloss cover,
 customer-specific configurable
 start screen,
 Display of current weather or
 weather forecast (only possible in
 combination with HovalConnect)

Consisting of:

- TopTronic® E control module black
- Clamping device set control module
- RJ45-RAST 5 CAN cable, L = 500

TopTronic® E controller modules



TopTronic® E basic module heat generator TTE-WEZ

Controller module for control of heat generators and the corresponding consumers with integrated control functions for:

- Heat generator management
- Additional heat generator management
- Cascade management
- 1 heating/cooling circuit without mixer
- 1 heating/cooling circuit with mixer
- 1 hot water charging circuit
- var. additional functions

Consisting of:

- Fitting accessories
- 1 outdoor sensor AF/2P/K
- 1 immersion sensor TF/2P/5/6T/S1
L = 5.0 with plug,
- 1 contact sensor ALF/2P/4/T/S1
L = 4.0 m with plug,
- Basic plug set for basic module

Notice

If the basic module is used without Hoval heat generator then a TopTronic® E control module must be ordered separately!

Notice

Depending on the complexity, module expansions are required for using the listed functions (max. 1 module expansion can be connected)!

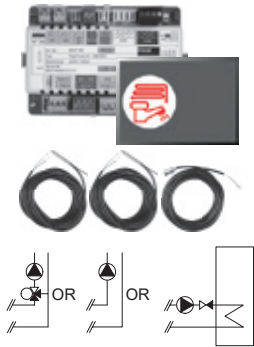
Notice

The supplementary plug set may have to be ordered to implement functions differing from the standard!

Part No.

6037 053

TopTronic® E controller modules



TopTronic® E heating circuit/hot water module TTE-HK/WW

Controller module for controlling consumers with integrated control functions for:

- 1 heating/cooling circuit w/o mixer or
- 1 heating/cooling circuit with mixer or
- 1 hot water charging circuit
- various additional functions

Consisting of:

- Fitting accessories
- 2 x immersion sensor TF/2P/5/6T, L = 5 m
- 1 contact sensor ALF/2P/4/T, L = 4 m
- Basic plug set for controller module



TopTronic® E solar module TTE-SOL

The controller module is suitable for use as temperature differential control, control of thermal solar plants, for heating process water and/or heating support.

Controller module with integrated control functions for

- solar circuit
- collector cascade
- storage tank cascade with up to 4 consumers
- consumer loading, with type selection
- temperature differential control
- loading and unloading function for additional/reserve buffer tank
- Integrated solar yield calculation

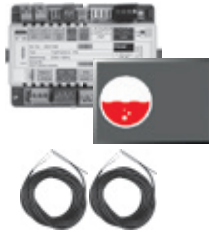
Consisting of:

- Fitting accessories
- 1 immersion sensor TF/2P/5/6T, L = 5 m
- 1 collector sensor TF/1.1P/2.5S/5.5T L = 2.5 m
- Basic plug set for controller module

Part No.

6034 571

6037 058



TopTronic® E buffer module TTE-PS

Controller module with integrated control functions for:

- heating buffer management or
- cooling buffer management
- var. additional functions

Consisting of:

- Fitting accessories
- 2 immersion sensors TF/2P/5/6T L = 5 m
- Basic plug set for controller module

Notice

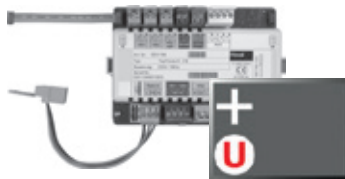
If the controller module is used without Hoval heat generator then a TopTronic® E control module must be ordered separately!

Notice

Depending on the complexity, module expansions are required for using the listed functions (max. 2 module expansion can be connected)!

Notice

The supplementary plug set may have to be ordered to implement functions differing from the standard!



**TopTronic® E module expansion
Universal TTE-FE UNI**

Expansion to the inputs and outputs of a controller module (basic module heat generator, heating circuit/domestic hot water module, solar module, buffer module) for implementing various functions

Consisting of:

- Fitting accessories
- Plug set FE module

Notice

Refer to the Hoval System Technology to find which functions and hydraulic arrangements can be implemented.

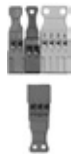
Part No.

6037 057

6034 575

Accessories for TopTronic® E

Part No.



Supplementary plug set
 for controller modules and module expansion
 TTE-FE HK

6034 503



TopTronic® E room control modules
 TTE-RBM TopTronic® E room control modules
 easy white
 comfort white
 comfort black

6037 071
 6037 069
 6037 070



Enhanced language package TopTronic® E
 one SD card required per control module
 Consisting of the following languages:
 HU, CS, SL, RO, PL, TR, ES, HR,
 SR, JA, DA

6039 253



HovalConnect
 HovalConnect LAN
 HovalConnect WLAN
 HovalConnect Modbus
 HovalConnect KNX

6049 496
 6049 498
 6049 501
 6049 593

TopTronic® E interface modules
 GLT module 0-10 V

6034 578



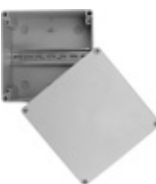
TopTronic® E sensors
 AF/2P/K Outdoor sensor
 H x W x D = 80 x 50 x 28 mm
 TF/2P/5/6T Immersion sensor, L = 5.0 m
 ALF/2P/4/T Contact sensor, L = 4.0 m
 TF/1.1P/2.5S/6T Collector sensor, L = 2.5 m

2055 889
 2055 888
 2056 775
 2056 776



Bivalent switch
 for various release or switching functions
 Bivalent switch 1-piece
 Bivalent switch 2-piece

2056 858
 2061 826



System housing
 System housing 182 mm
 System housing 254 mm

6038 551
 6038 552



TopTronic® E wall casing
 WG-190 Wall casing small 6052 983
 WG-360 Wall casing medium 6052 984
 WG-360 BM Wall casing medium with control module cut-out 6052 985
 WG-360-3 BM Wall casing compact with control module cut-out 6052 988
 WG-510 Wall casing large 6052 986
 WG-510 BM Wall casing large with control module cut-out 6052 987

Further information
 see "Controls"

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.

Part No.

VarioVal RHS (800,1000)
VarioVal RL (600), VarioVal RLS (800,1000)

| Type | | RHS (800) | RHS (1000) | RL (600) | RLS (800) | RLS (1000) |
|--|-----------------|-----------------|------------|----------|-----------|------------|
| Storage tank | | | | | | |
| • Total volume | dm ³ | 796 | 892 | 647 | 796 | 892 |
| • Usable volume | dm ³ | 747 | 835 | 611 | 741 | 827 |
| • Operating pressure/test pressure | bar | 3/4.5 | 3/4.5 | 3/4.5 | 3/4.5 | 3/4.5 |
| • Max. operating temperature | °C | 95 | 95 | 95 | 95 | 95 |
| • Transport weight | kg | 213 | 234 | 179 | 226 | 255 |
| • Dimensions | | See Dimensions | | | | |
| Domestic/hot water (corrugated pipe firmly installed) | | | | | | |
| • Heating surface | m ² | 5.5 | 6.7 | 6.7 | 6.7 | 8.2 |
| • Contents | dm ³ | 30.0 | 36.3 | 36.3 | 36.3 | 44.6 |
| • Operating pressure/test pressure | bar | 6/10 | 6/10 | 6/10 | 6/10 | 6/10 |
| • Max. operating temperature | °C | 95 | 95 | 95 | 95 | 95 |
| • Flow resistance ¹⁾ water (z-value) | | 46 | 56 | 56 | 56 | 69 |
| • Performance figure NL ²⁾ | NL | 1.6 | 2.1 | 1.4 | 1.7 | 2.4 |
| Solar/coil (permanently installed) | | | | | | |
| • Heating surface | m ² | 2 | 3 | - | 2 | 3 |
| • Contents | dm ³ | 13.4 | 18.9 | - | 13.4 | 18.9 |
| • Operating pressure/test pressure | bar | 10/15 | 10/15 | - | 10/15 | 10/15 |
| • Max. operating temperature | °C | 110 | 110 | - | 110 | 110 |
| • Flow resistance ¹⁾ water/glycol 50 % (z-value) | | 19 | 25 | - | 19 | 25 |
| • Number of collectors (max. - gross at 2.5 m ²) | pieces | 4 | 6 | - | 4 | 6 |
| • For flat plate collector ³⁾ up to approx. | m ² | 10 | 15 | - | 10 | 15 |
| Thermal insulation | | | | | | |
| • Insulation type | | PE fibre fleece | | | | |
| • Insulation thickness | mm | 100 | 100 | 140 | 140 | 140 |
| • Fire protection class | | B2 | B2 | B2 | B2 | B2 |
| • Thermal conductance λ | W/mK | 0.038 | 0.038 | 0.038 | 0.038 | 0.038 |
| • U value | | 0.4 | 0.4 | 0.27 | 0.27 | 0.27 |
| • Heat loss at 65 °C | W | 120 | 128 | 80 | 91 | 100 |
| • Energy efficiency class | | C | C | B | B | B |

¹⁾ Flow resistance in mbar = flow rate (m³/h)² x z (1 mbar = 0.1 kPa)

²⁾ Performance figure NL with hot water 10/45 °C, stocking 50 % with 60 °C / 50 % with 30 °C, without supplemental heating

³⁾ Collector surface area, with regard to heat exchanger area only

Hot water outputs 45 °C

Heating function with heat generator, heating flow 50 °C

Domestic water: 10 °C/45 °C



Output capacity/tapping capacity/fitting flow rate 10 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | | | 110 | 140 | 180 |
| 5 | | | 140 | 170 | 230 |
| 10 | | | 190 | 230 | 300 |
| 15 | | | 290 | 360 | 470 |
| 20 | | | 540 | 600 | 600 |
| 25 | | | 600 | 600 | 600 |
| 30 | | | 600 | 600 | 600 |
| 35 | | | 600 | 600 | 600 |

Output capacity/tapping capacity/fitting flow rate 15 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | | | 60 | 70 | 110 |
| 5 | | | 70 | 90 | 130 |
| 10 | | | 90 | 100 | 150 |
| 15 | | | 110 | 130 | 190 |
| 20 | | | 140 | 170 | 240 |
| 25 | | | 200 | 240 | 340 |
| 30 | | | 320 | 380 | 540 |
| 35 | | | 590 | 690 | 900 |

Heating function with heat generator, heating flow 55 °C

Domestic water: 10 °C/45 °C



Output capacity/tapping capacity/fitting flow rate 10 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 220 | 270 | 180 | 230 | 280 |
| 5 | 280 | 340 | 230 | 290 | 360 |
| 10 | 370 | 460 | 310 | 400 | 480 |
| 15 | 570 | 600 | 480 | 540 | 600 |
| 20 | 600 | 600 | 600 | 600 | 600 |
| 25 | 600 | 600 | 600 | 600 | 600 |
| 30 | 600 | 600 | 600 | 600 | 600 |
| 35 | 600 | 600 | 600 | 600 | 600 |

Output capacity/tapping capacity/fitting flow rate 15 l/min

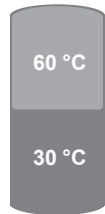
| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 150 | 190 | 130 | 170 | 210 |
| 5 | 170 | 220 | 150 | 190 | 250 |
| 10 | 200 | 260 | 180 | 230 | 300 |
| 15 | 250 | 320 | 220 | 280 | 370 |
| 20 | 330 | 420 | 280 | 360 | 480 |
| 25 | 470 | 590 | 400 | 520 | 670 |
| 30 | 700 | 900 | 600 | 800 | 900 |
| 35 | 900 | 900 | 900 | 900 | 900 |

Output capacity/tapping capacity/fitting flow rate 20 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 80 | 110 | 70 | 100 | 150 |
| 5 | 90 | 120 | 80 | 110 | 160 |
| 10 | 100 | 140 | 90 | 120 | 190 |
| 15 | 110 | 160 | 110 | 140 | 210 |
| 20 | 130 | 190 | 130 | 170 | 250 |
| 25 | 160 | 230 | 150 | 200 | 300 |
| 30 | 200 | 300 | 190 | 260 | 380 |
| 35 | 270 | 400 | 260 | 340 | 520 |

Heating function with heat generator, heating flow 60 °C

Domestic water: 10 °C/45 °C



Output capacity/tapping capacity/fitting flow rate 10 l/min

Output capacity/tapping capacity/fitting flow rate 15 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 290 | 350 | 240 | 310 | 370 |
| 5 | 360 | 440 | 310 | 390 | 470 |
| 10 | 490 | 600 | 420 | 520 | 570 |
| 15 | 600 | 600 | 600 | 600 | 600 |
| 20 | 600 | 600 | 600 | 600 | 600 |
| 25 | 600 | 600 | 600 | 600 | 600 |
| 30 | 600 | 600 | 600 | 600 | 600 |
| 35 | 600 | 600 | 600 | 600 | 600 |

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 220 | 280 | 190 | 240 | 300 |
| 5 | 250 | 320 | 220 | 280 | 350 |
| 10 | 300 | 380 | 260 | 330 | 410 |
| 15 | 370 | 480 | 320 | 410 | 510 |
| 20 | 480 | 620 | 420 | 530 | 660 |
| 25 | 690 | 880 | 580 | 740 | 800 |
| 30 | 900 | 900 | 900 | 900 | 900 |
| 35 | 900 | 900 | 900 | 900 | 900 |

Output capacity/tapping capacity/fitting flow rate 20 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 160 | 220 | 130 | 170 | 230 |
| 5 | 180 | 240 | 150 | 190 | 260 |
| 10 | 200 | 270 | 170 | 220 | 290 |
| 15 | 230 | 310 | 190 | 250 | 340 |
| 20 | 270 | 370 | 230 | 290 | 400 |
| 25 | 320 | 440 | 280 | 350 | 480 |
| 30 | 400 | 560 | 350 | 440 | 600 |
| 35 | 540 | 740 | 460 | 590 | 800 |

Heating function with heat generator, heating flow 65 °C

Domestic water: 10 °C/45 °C



Output capacity/tapping capacity/fitting flow rate 10 l/min

Output capacity/tapping capacity/fitting flow rate 15 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 360 | 430 | 300 | 380 | 450 |
| 5 | 450 | 550 | 380 | 480 | 570 |
| 10 | 550 | 600 | 510 | 580 | 600 |
| 15 | 600 | 600 | 600 | 600 | 600 |
| 20 | 600 | 600 | 600 | 600 | 600 |
| 25 | 600 | 600 | 600 | 600 | 600 |
| 30 | 600 | 600 | 600 | 600 | 600 |
| 35 | 600 | 600 | 600 | 600 | 600 |

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 290 | 360 | 250 | 310 | 380 |
| 5 | 330 | 420 | 290 | 360 | 440 |
| 10 | 400 | 500 | 340 | 430 | 520 |
| 15 | 490 | 610 | 420 | 530 | 650 |
| 20 | 640 | 800 | 540 | 690 | 840 |
| 25 | 900 | 900 | 770 | 820 | 900 |
| 30 | 900 | 900 | 900 | 900 | 900 |
| 35 | 900 | 900 | 900 | 900 | 900 |

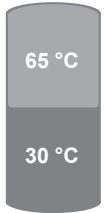
Output capacity/tapping capacity/fitting flow rate 20 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 220 | 290 | 190 | 250 | 320 |
| 5 | 250 | 330 | 210 | 280 | 350 |
| 10 | 280 | 370 | 240 | 320 | 400 |
| 15 | 320 | 430 | 280 | 360 | 460 |
| 20 | 380 | 500 | 330 | 430 | 540 |
| 25 | 460 | 600 | 400 | 520 | 650 |
| 30 | 580 | 750 | 500 | 650 | 820 |
| 35 | 780 | 1000 | 650 | 850 | 1000 |

Hot water outputs 60 °C

Heating function with heat generator, heating flow 65 °C

Domestic water: 10 °C/60 °C



Output capacity/tapping capacity/fitting flow rate 10 l/min

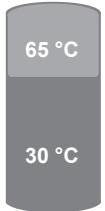
| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 70 | 110 | 70 | 90 | 130 |
| 5 | 90 | 140 | 90 | 120 | 160 |
| 10 | 130 | 180 | 120 | 160 | 210 |
| 15 | 200 | 280 | 190 | 240 | 330 |
| 20 | 380 | 540 | 370 | 470 | 570 |
| 25 | 600 | 600 | 600 | 600 | 600 |
| 30 | 600 | 600 | 600 | 600 | 600 |
| 35 | 600 | 600 | 600 | 600 | 600 |

Output capacity/tapping capacity/fitting flow rate 15 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 30 | 60 | 35 | 50 | 70 |
| 5 | 35 | 70 | 40 | 60 | 85 |
| 10 | 40 | 80 | 50 | 70 | 100 |
| 15 | 50 | 100 | 60 | 90 | 130 |
| 20 | 60 | 130 | 70 | 110 | 170 |
| 25 | 90 | 180 | 110 | 160 | 240 |
| 30 | 140 | 290 | 170 | 260 | 380 |
| 35 | 250 | 530 | 310 | 470 | 650 |

Heating function with heat generator, heating flow 65 °C

Domestic water: 10 °C/60 °C



Output capacity/tapping capacity/fitting flow rate 10 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 40 | 70 | 40 | 60 | 80 |
| 5 | 50 | 90 | 50 | 70 | 100 |
| 10 | 60 | 120 | 70 | 100 | 140 |
| 15 | 100 | 180 | 100 | 150 | 220 |
| 20 | 190 | 340 | 200 | 300 | 420 |
| 25 | 490 | 600 | 500 | 600 | 600 |
| 30 | 600 | 600 | 600 | 600 | 600 |
| 35 | 600 | 600 | 600 | 600 | 600 |

Output capacity/tapping capacity/fitting flow rate 15 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 30 | 35 | 35 | 35 | 40 |
| 5 | 30 | 35 | 35 | 35 | 50 |
| 10 | 30 | 40 | 35 | 40 | 60 |
| 15 | 30 | 50 | 35 | 50 | 80 |
| 20 | 30 | 70 | 40 | 70 | 100 |
| 25 | 30 | 100 | 50 | 100 | 150 |
| 30 | 40 | 160 | 60 | 150 | 240 |
| 35 | 80 | 300 | 100 | 280 | 430 |

Heating function with heat generator, heating flow 70 °C

Domestic water: 10 °C/60 °C



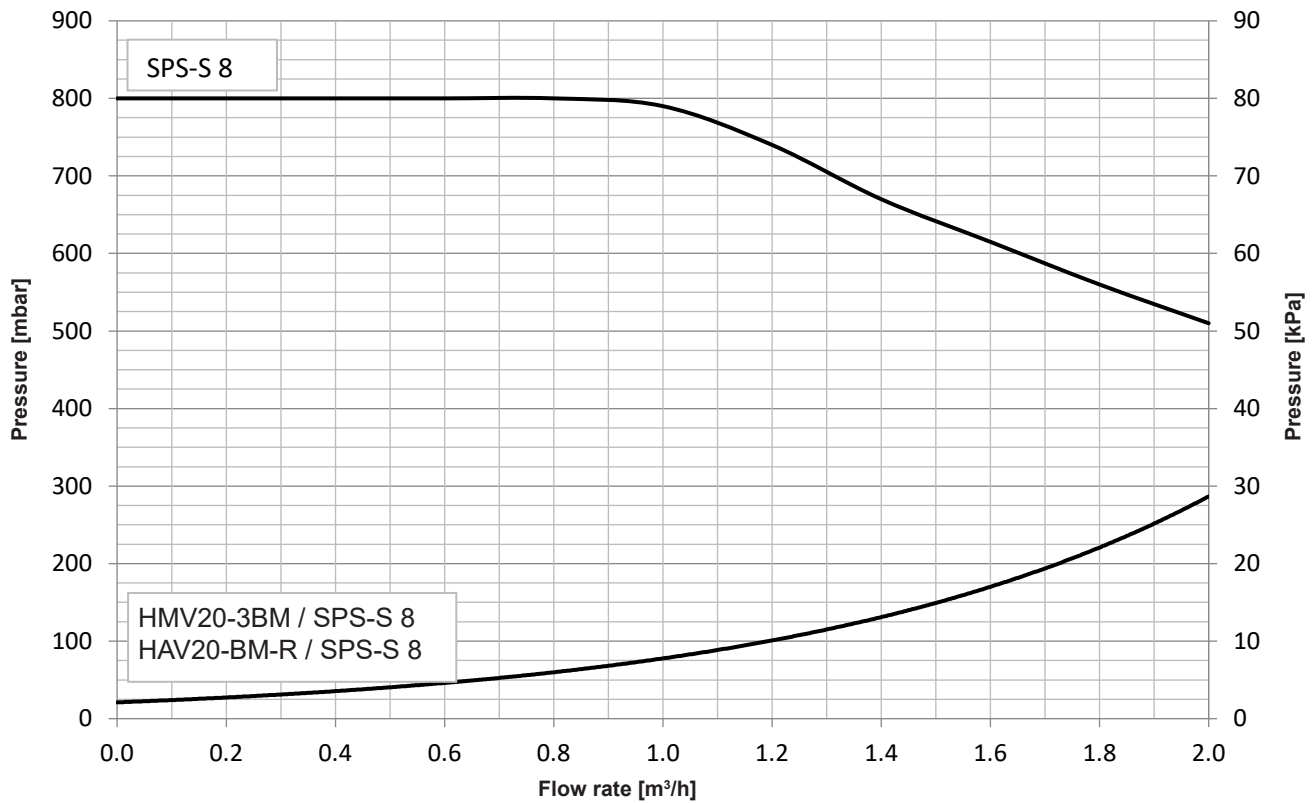
Output capacity/tapping capacity/fitting flow rate 10 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 80 | 120 | 70 | 90 | 130 |
| 5 | 100 | 150 | 90 | 120 | 160 |
| 10 | 140 | 200 | 130 | 160 | 220 |
| 15 | 210 | 310 | 190 | 240 | 340 |
| 20 | 410 | 590 | 370 | 470 | 600 |
| 25 | 600 | 600 | 600 | 600 | 600 |
| 30 | 600 | 600 | 600 | 600 | 600 |
| 35 | 600 | 600 | 600 | 600 | 600 |

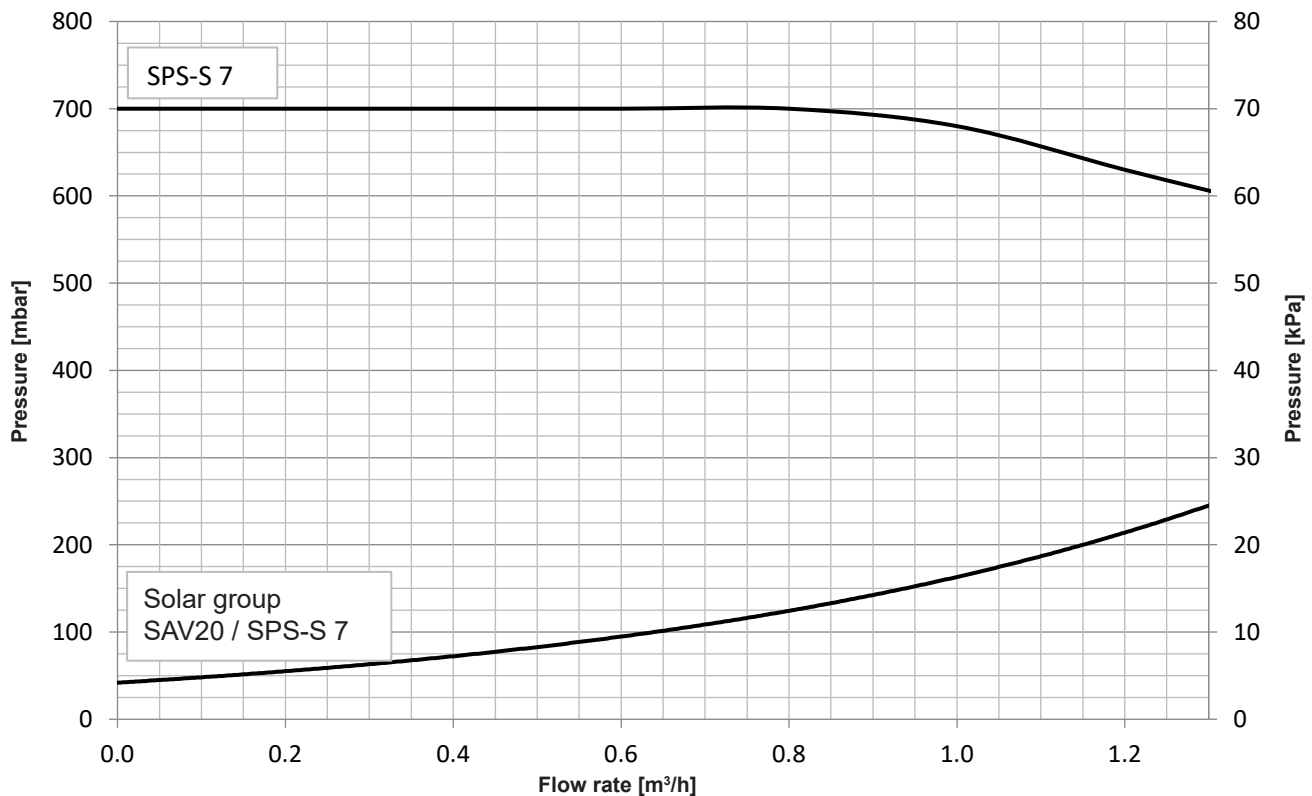
Output capacity/tapping capacity/fitting flow rate 15 l/min

| Supplemental heating output [kW] | Tapping volume [l/h] | | | | |
|----------------------------------|----------------------|------|-------------|--------------|------|
| | VarioVal RHS | | VarioVal RL | VarioVal RLS | |
| | 800 | 1000 | 600 | 800 | 1000 |
| 0 | 30 | 70 | 35 | 40 | 80 |
| 5 | 30 | 80 | 40 | 50 | 90 |
| 10 | 40 | 100 | 50 | 60 | 110 |
| 15 | 50 | 120 | 60 | 70 | 140 |
| 20 | 70 | 160 | 80 | 100 | 180 |
| 25 | 100 | 220 | 110 | 140 | 260 |
| 30 | 170 | 350 | 180 | 220 | 420 |
| 35 | 300 | 600 | 330 | 400 | 750 |

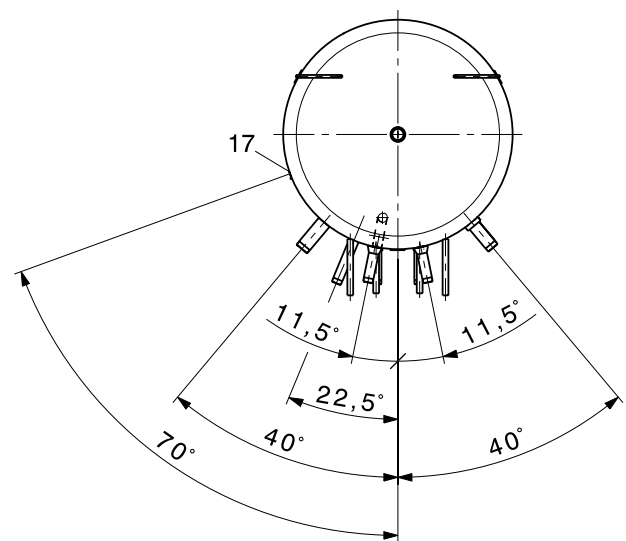
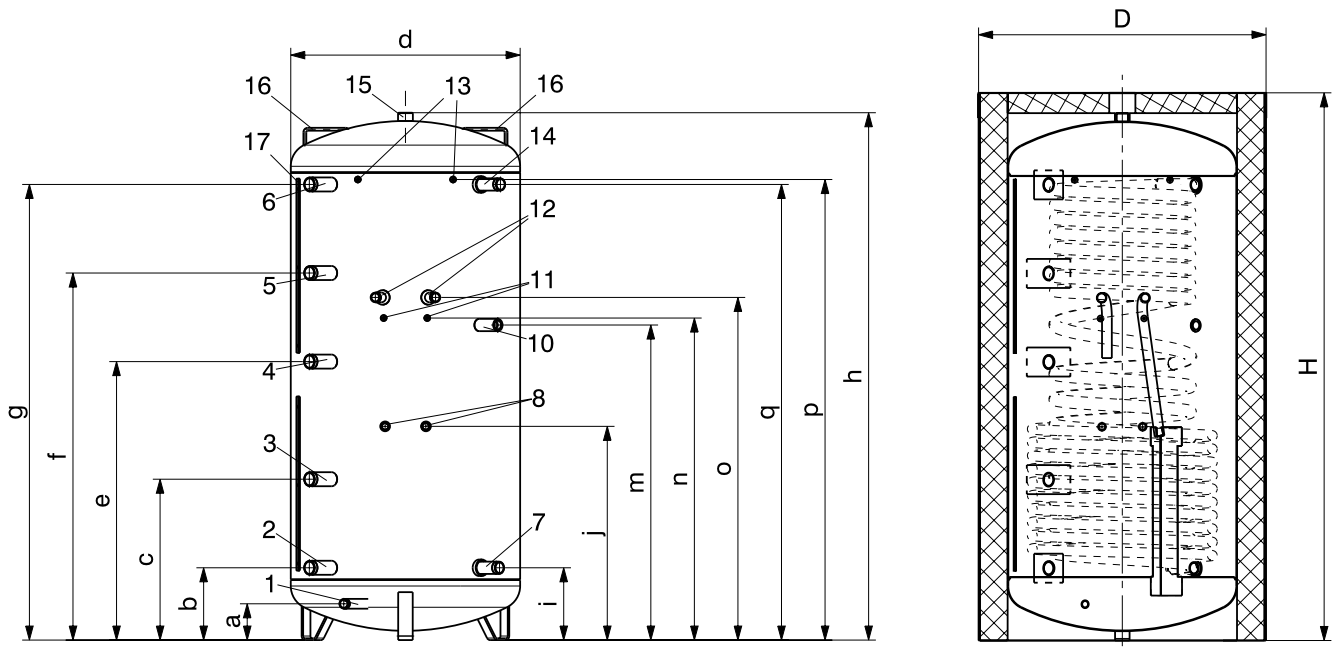
Residual overpressure heating module HMV20-3BM



Residual overpressures solar group SAV20



VarioVal RHS (800,1000)
 (Dimensions in mm)

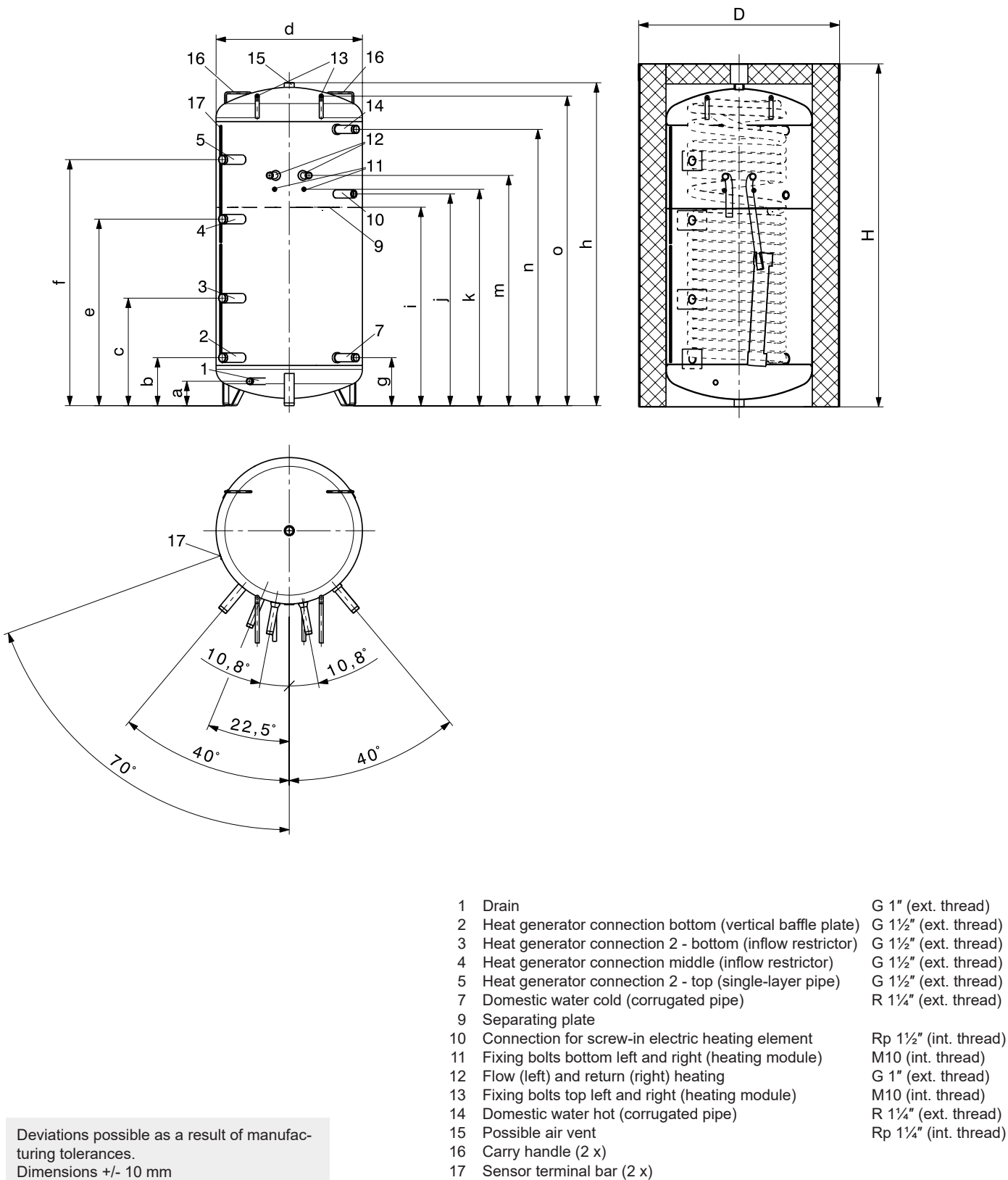


- | | | |
|----|--|----------------------|
| 1 | Drain | G 1" (ext. thread) |
| 2 | Heat generator connection bottom (vertical baffle plate) | G 1½" (ext. thread) |
| 3 | Heat generator connection 2 - bottom (inflow restrictor) | G 1½" (ext. thread) |
| 4 | Heat generator connection middle (inflow restrictor) | G 1½" (ext. thread) |
| 5 | Heat generator connection 2 - top (single-layer pipe) | G 1½" (ext. thread) |
| 6 | Heat generator connection top (vertical baffle plate) | G 1½" (ext. thread) |
| 7 | Domestic water cold (corrugated pipe) | R 1¼" (ext. thread) |
| 8 | Flow (left) and return (right) solar circuit | G ¾" (ext. thread) |
| 10 | Connection for screw-in electric heating element | Rp 1½" (int. thread) |
| 11 | Fixing bolts bottom left and right (heating module) | M10 (int. thread) |
| 12 | Flow (left) and return (right) heating | G 1" (ext. thread) |
| 13 | Fixing bolts top left and right (heating module) | M10 (int. thread) |
| 14 | Domestic water hot (corrugated pipe) | R 1¼" (ext. thread) |
| 15 | Possible air vent | Rp 1¼" (int. thread) |
| 16 | Carry handle (2 x) | |
| 17 | Sensor terminal strip (type (800) 2 x, type (1000) 3 x) | |

Deviations possible as a result of manufacturing tolerances.
 Dimensions +/- 10 mm

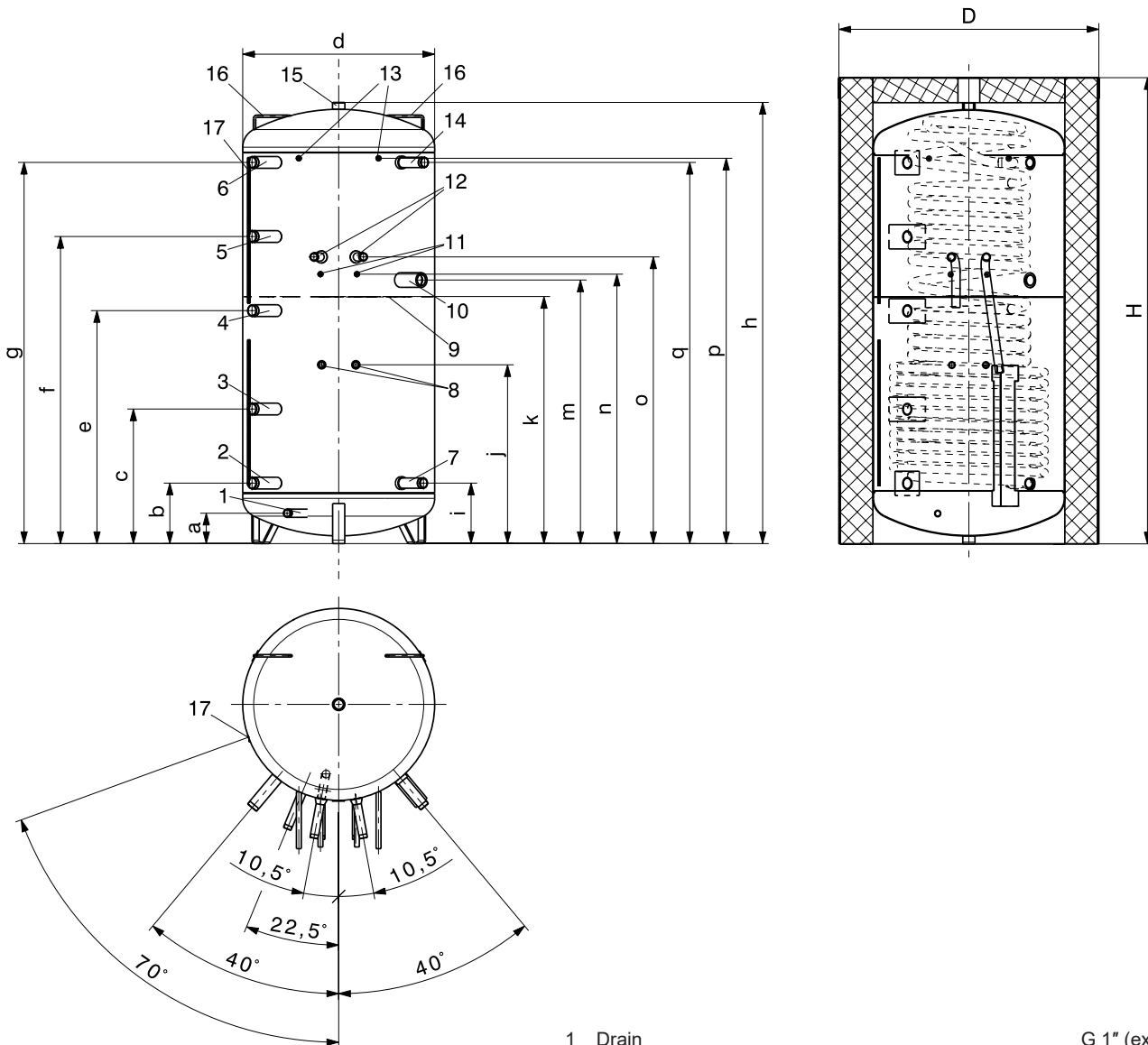
| VarioVal RHS type | D | d | H | h | a | b | c | e | f | g | i | j | m | n | o | p | q | Tilting dimension |
|-------------------|-----|-----|------|------|-----|-----|-----|-----|------|------|-----|-----|------|------|------|------|------|-------------------|
| (800) | 990 | 790 | 1886 | 1816 | 125 | 249 | 554 | 959 | 1264 | 1569 | 249 | 736 | 1085 | 1109 | 1180 | 1586 | 1569 | 1828 |
| (1000) | 990 | 790 | 2086 | 2016 | 125 | 249 | 554 | 959 | 1264 | 1569 | 249 | 870 | 1085 | 1243 | 1314 | 1720 | 1769 | 2030 |

VarioVal RL (600)
(Dimensions in mm)



| VarioVal RL type | D | d | H | h | a | b | c | e | f | g | i | j | k | m | n | o | Tilting dimension |
|------------------|------|-----|------|------|-----|-----|-----|-----|------|-----|------|------|------|------|------|------|-------------------|
| (600) | 1030 | 750 | 1758 | 1655 | 125 | 246 | 551 | 956 | 1261 | 246 | 1017 | 1085 | 1109 | 1180 | 1416 | 1586 | 1670 |

VarioVal RLS (800,1000)
 (Dimensions in mm)



- | | | |
|----|--|----------------------|
| 1 | Drain | G 1" (ext. thread) |
| 2 | Heat generator connection bottom (vertical baffle plate) | G 1½" (ext. thread) |
| 3 | Heat generator connection 2 - bottom (inflow restrictor) | G 1½" (ext. thread) |
| 4 | Heat generator connection middle (inflow restrictor) | G 1½" (ext. thread) |
| 5 | Heat generator connection 2 - top (single-layer pipe) | G 1½" (ext. thread) |
| 6 | Heat generator connection top (vertical baffle plate) | G 1½" (ext. thread) |
| 7 | Domestic water cold (corrugated pipe) | R 1¼" (ext. thread) |
| 8 | Flow left and return right solar circuit | G ¾" (ext. thread) |
| 9 | Separating plate | |
| 10 | Connection for screw-in electric heating element | Rp 1½" (int. thread) |
| 11 | Fixing bolts bottom left and right (heating module) | M10 (int. thread) |
| 12 | Flow (left) and return (right) heating | G 1" (ext. thread) |
| 13 | Fixing bolts top left and right (heating module) | M10 (int. thread) |
| 14 | Domestic water hot (corrugated pipe) | Rp 1¼" (int. thread) |
| 15 | Possible air vent | Rp 1¼" (int. thread) |
| 16 | Carry handle (2 x) | |
| 17 | Sensor terminal strip (type (800) 2 x, type (1000) 3 x) | |

Deviations possible as a result of manufacturing tolerances.
 Dimensions +/- 10 mm

| VarioVal RLS type | D | d | H | h | a | b | c | e | f | g | i | j | k | m | n | o | p | q | Tilting dimension |
|-------------------|------|-----|------|------|-----|-----|-----|-----|------|------|-----|-----|------|------|------|------|------|------|-------------------|
| (800) | 1070 | 790 | 1919 | 1816 | 125 | 249 | 554 | 959 | 1264 | 1569 | 249 | 736 | 1017 | 1085 | 1109 | 1180 | 1586 | 1569 | 1828 |
| (1000) | 1070 | 790 | 2119 | 2016 | 125 | 249 | 554 | 959 | 1264 | 1569 | 249 | 870 | 1009 | 1085 | 1243 | 1314 | 1720 | 1769 | 2030 |

Space requirements

Installation example - VarioVal RLS (800):

- Heating module HMV20-3B
- HA group HAV20-3BM-R
- Solar group SAV20

Notices on operation and accessibility

The operating side must be easily accessible. Preferably place heat generator to the left of the storage tank.

Accessibility, left according to heat generator (a):

- Thermal insulation can be opened to position the sensors in the terminal strips

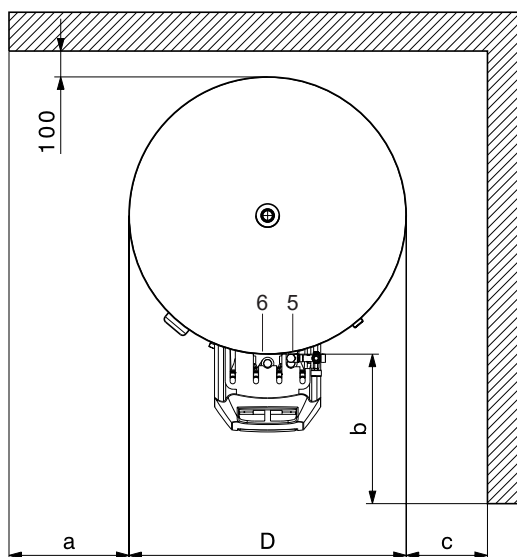
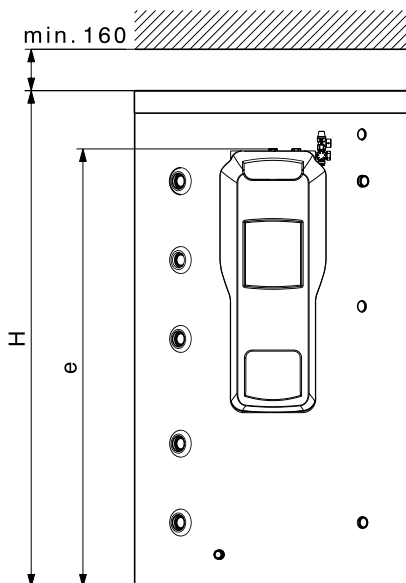
Wall clearance, right (c):

- Installation and removal of the screw-in electric heating element
- Installation of the diaphragm pressure expansion tank

- Hot water (domestic water) flow and return

Distance from the ceiling, top:

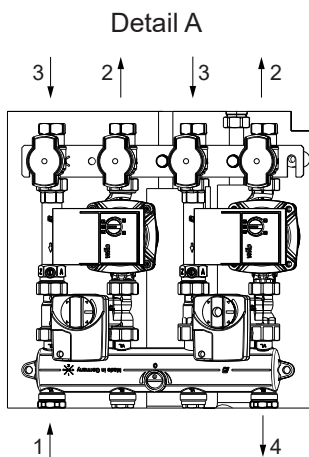
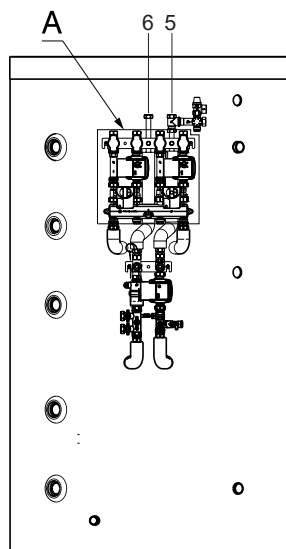
- Possibly for safety set



VarioVal type

| VarioVal type | a | b | c | D | e | H |
|---------------|-------|--------|-------|------|------|------|
| RL (600) | ≥ 300 | ≥ 1000 | ≥ 650 | 1030 | 1694 | 1758 |
| RLS (800) | ≥ 300 | ≥ 1000 | ≥ 650 | 1070 | 1694 | 1919 |
| RLS (1000) | ≥ 300 | ≥ 1000 | ≥ 650 | 1070 | 1828 | 2119 |
| RHS (800) | ≥ 300 | ≥ 1000 | ≥ 650 | 990 | 1694 | 1886 |
| RHS (1000) | ≥ 300 | ≥ 1000 | ≥ 650 | 990 | 1828 | 2086 |

Representation without thermal insulating hood and DH module hood



- | | |
|--------------------------|--------------|
| 1 Heating flow | G 1" (ET) |
| 2 Flow heating circuit | Rp 3/4" (IT) |
| 3 Return heating circuit | Rp 3/4" (IT) |
| 4 Heating return | G 1" (ET) |
| 5 Solar circuit return | G 3/4" (IT) |
| 6 Solar circuit flow | G 3/4" (IT) |