

**Technical description**

# Mega



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# Technical description

## Mega

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## 1 Heat pump dimensions and connections (mm)

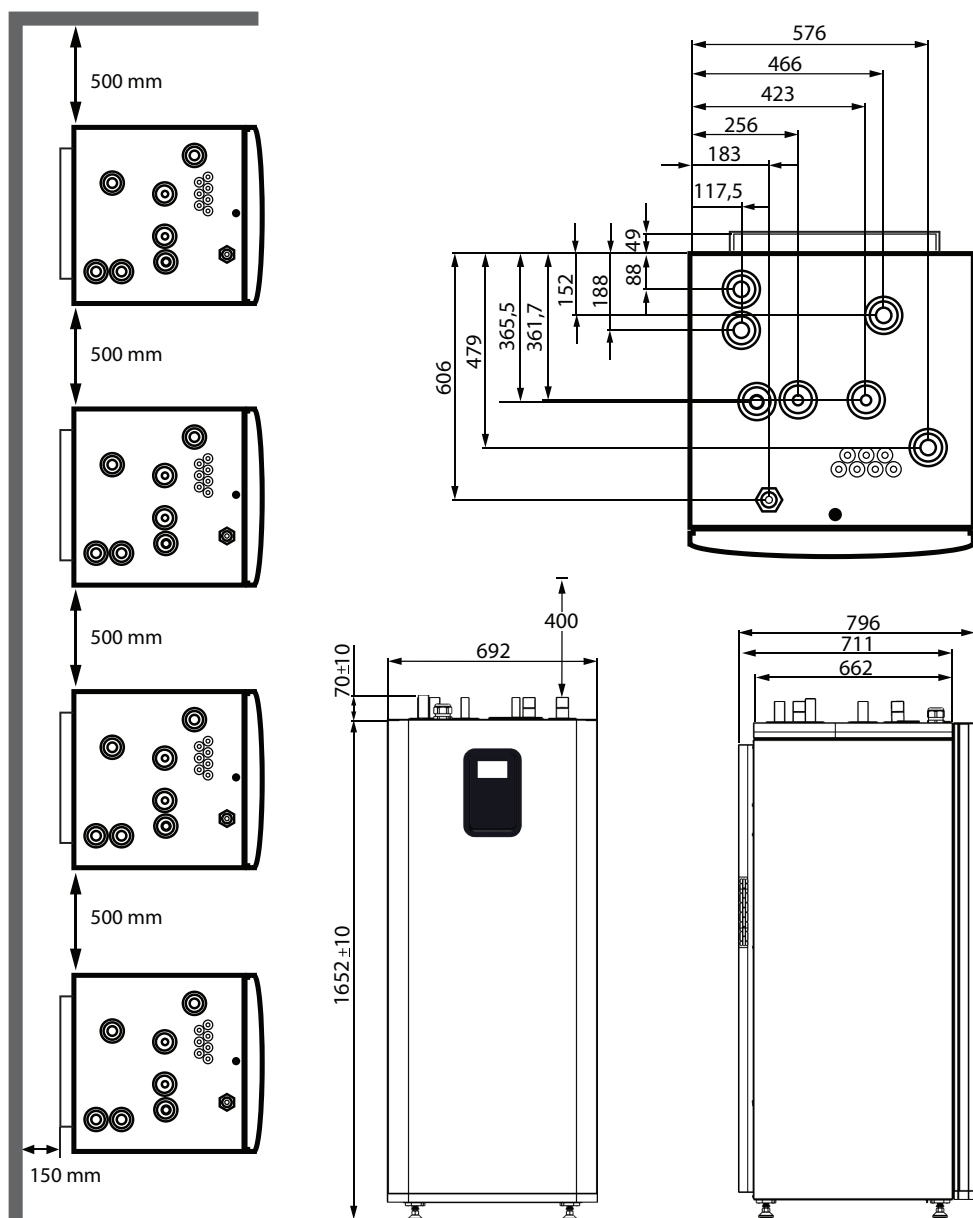
### 1.1 Minimum free space around the heat pump

To facilitate the installation and subsequent testing and maintenance, there must be sufficient free space around the heat pump.

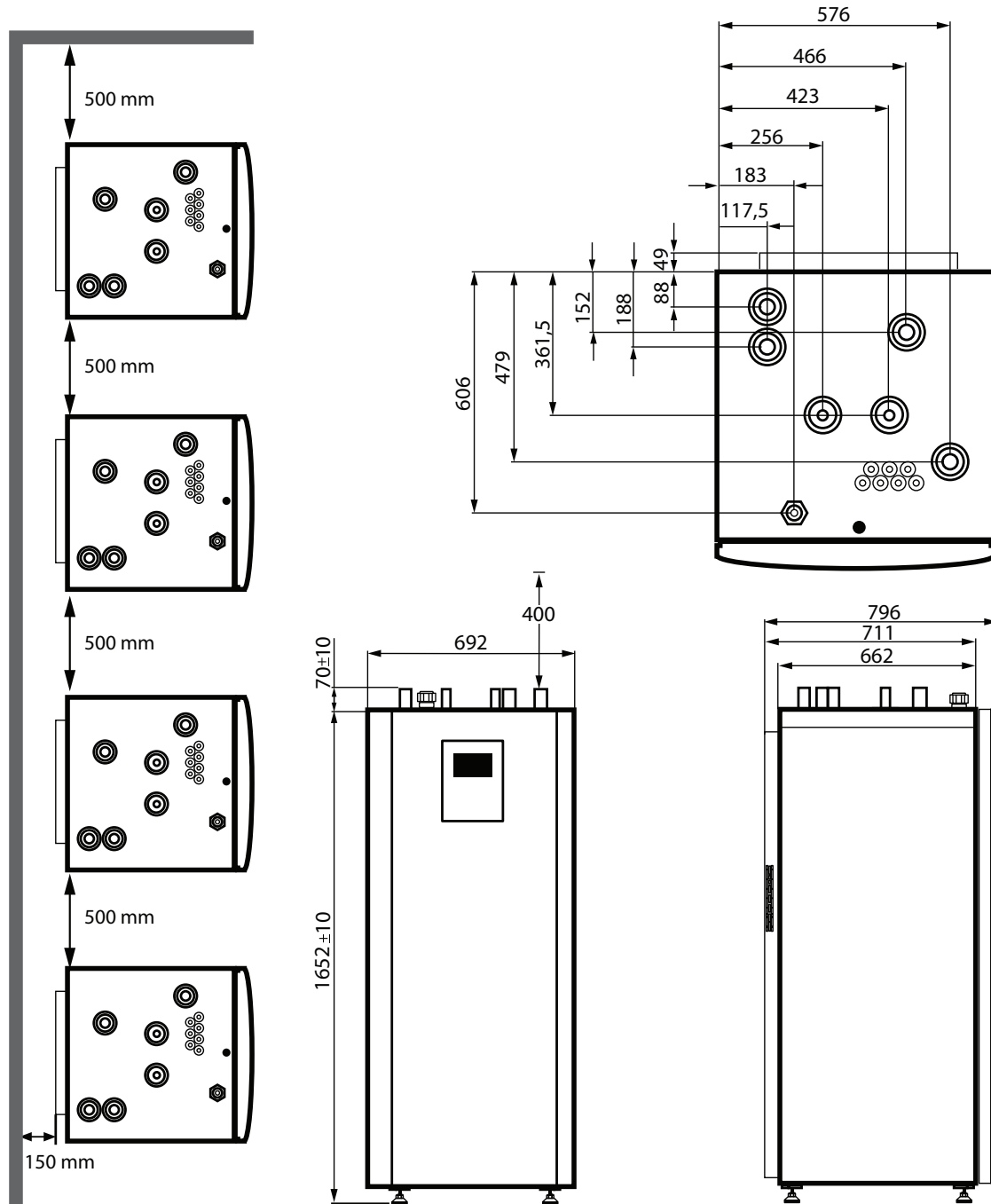
- Models S, M: Minimum free space on the back 150 mm.
- Models L, XL: Minimum free space on the back 300 mm.

Minimum free space on the right side is 300mm, for the fan to work as intended. Recommended free space for all models is 500mm on both the left and the right side, to facilitate any maintenance.

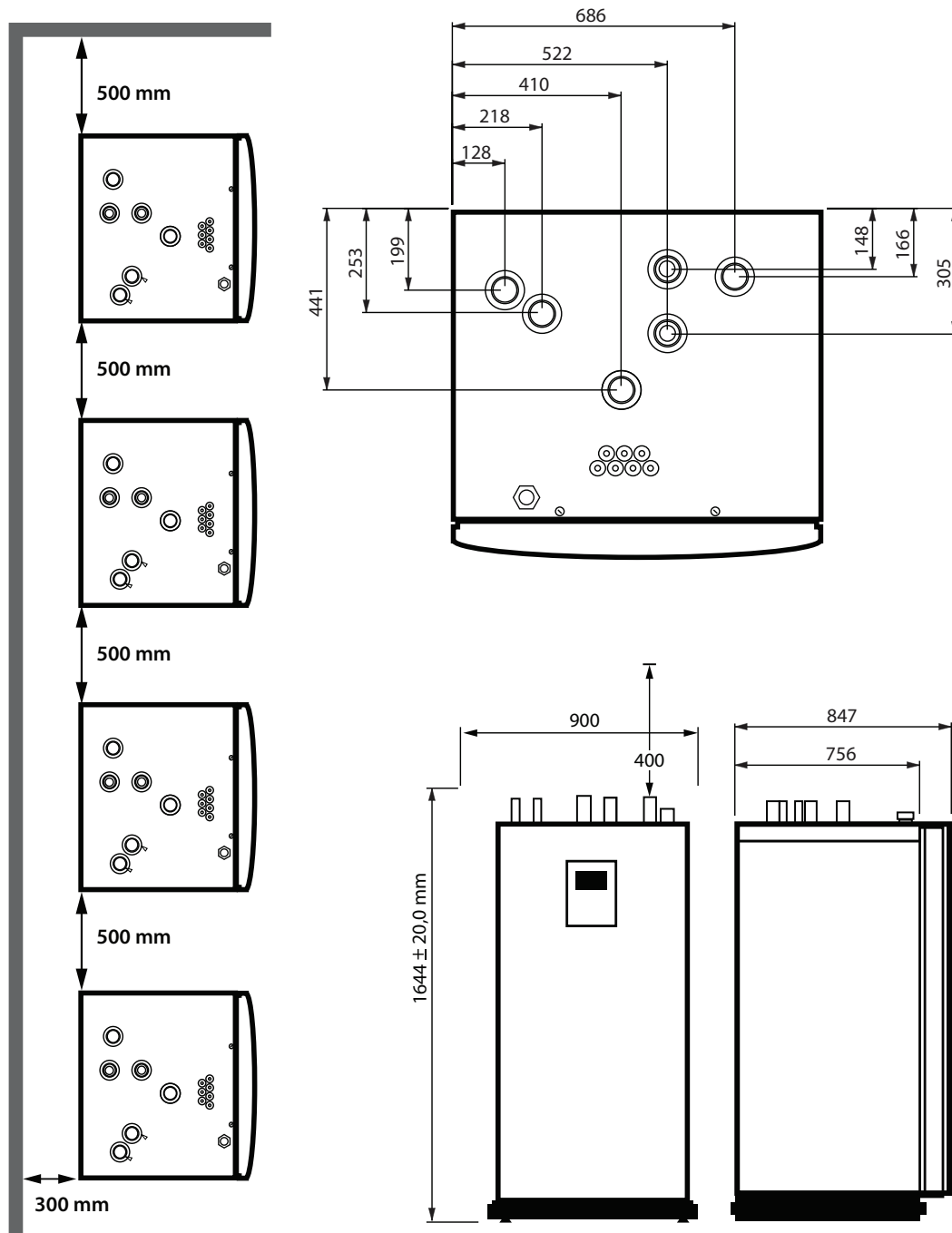
### 1.2 Mega S-E



### 1.3 Mega S and M



### 1.4 Mega L and XL

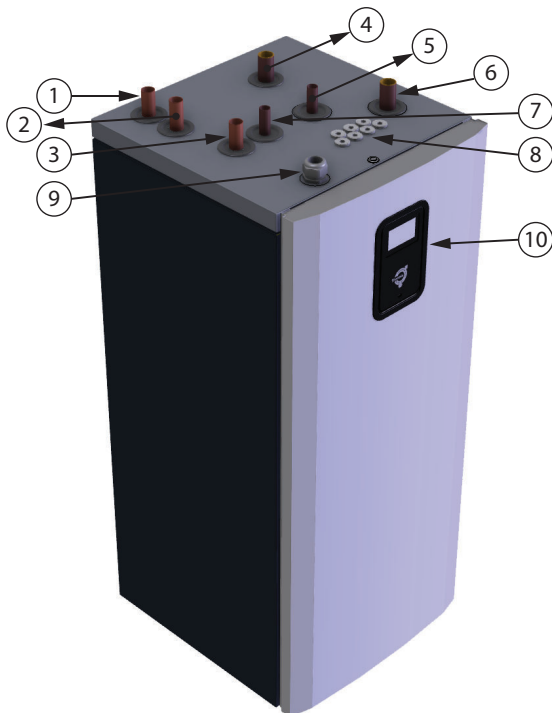


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## 2 Components

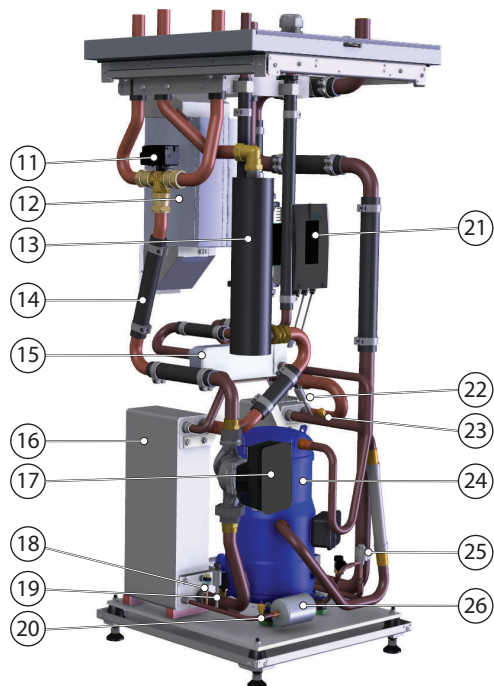
### 2.1 Mega S-E

Image shows the position of the components (brand of components can vary).



The arrows show input to and output from the heat pump.

1. Return pipe, heating system
2. Supply pipe, heating system
3. Return pipe, tap water system
4. Brine out
5. Hot gas to water heater
6. Brine in
7. Returning hot gas from water heater
8. Lead-ins for communication cable and sensor
9. Lead-in for incoming power supply
10. Control panel



11. Mixing valve, heating and tap water
12. Inverter
13. Internal immersion heater
14. Flexible hose
15. Hot gas exchanger
16. Condenser
17. Condenser pump
18. High pressure switch
19. High pressure transmitter
20. Service output, high pressure
21. Brine pump
22. Low pressure transmitter
23. Service outlet, low pressure
24. Compressor
25. Electronic expansion valve
26. Drying filter

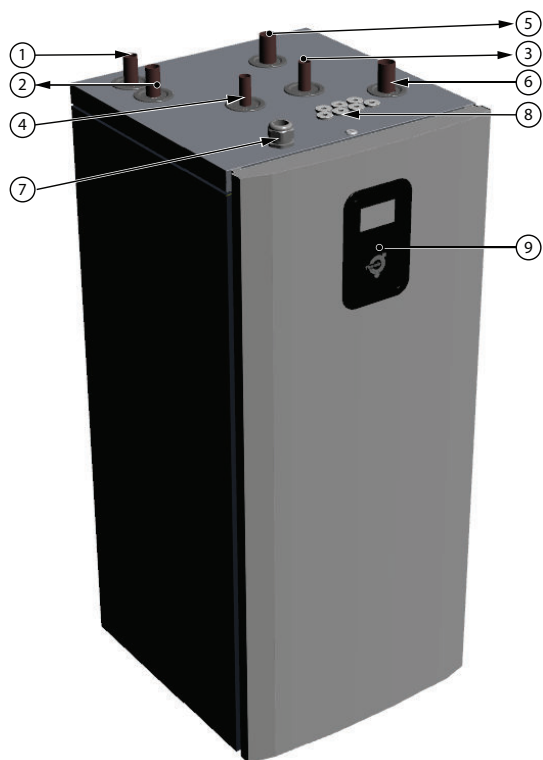
Mega S-E Connections, pipe diameter in mm

| Brine | Heating system | Hot gas exchanger | Tap water |
|-------|----------------|-------------------|-----------|
| 42    | 35             | 28                | 35        |

## Technical description Mega

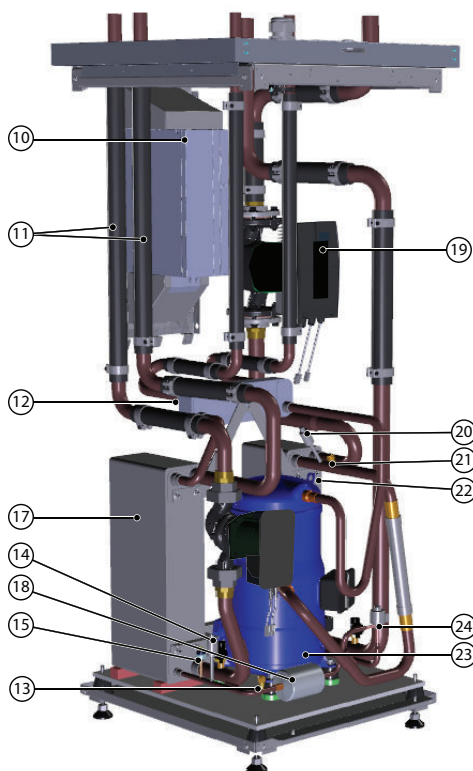
### 2.2 Mega S and M

Image shows the position of the components (brand of components can vary).



The arrows show input to and output from the heat pump.

1. Return pipe, heating system
2. Supply pipe, heating system
3. Hot gas to water heater
4. Returning hot gas from water heater
5. Brine out
6. Brine in
7. Lead-in for incoming supply
8. Lead-ins for communication cable and sensor
9. Control panel
10. Inverter
11. Flexible hose
12. Hot gas exchanger



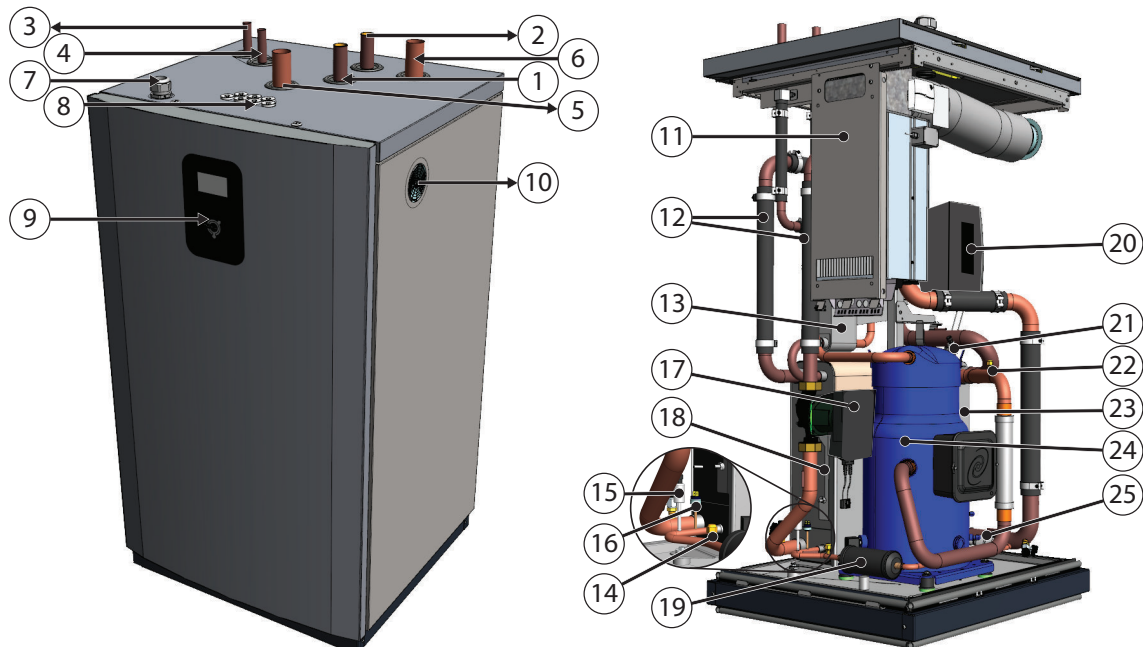
13. Service output, high pressure
14. High pressure transmitter
15. High pressure switch
16. Condenser pump
17. Condenser
18. Drying filter
19. Brine pump
20. Low pressure transmitter
21. Service outlet, low pressure
22. Evaporator
23. Compressor
24. Electronic expansion valve

| Mega S and M Connections, pipe diameter in mm |                |                   |
|-----------------------------------------------|----------------|-------------------|
| Brine                                         | Heating system | Hot gas exchanger |
| 42                                            | 35             | 28                |

## Technical description Mega

### 2.3 Mega L and XL

Image shows the position of the components (brand of components can vary).



The arrows show input to and output from the heat pump.

1. Return pipe, heating system
2. Supply pipe, heating system
3. Hot gas to water heater
4. Returning hot gas from water heater
5. Brine out
6. Brine in
7. Lead-in for incoming supply
8. Lead-ins for communication cable and sensor
9. Control panel
10. Fan
11. Inverter
12. Flexible hose
13. Hot gas exchanger

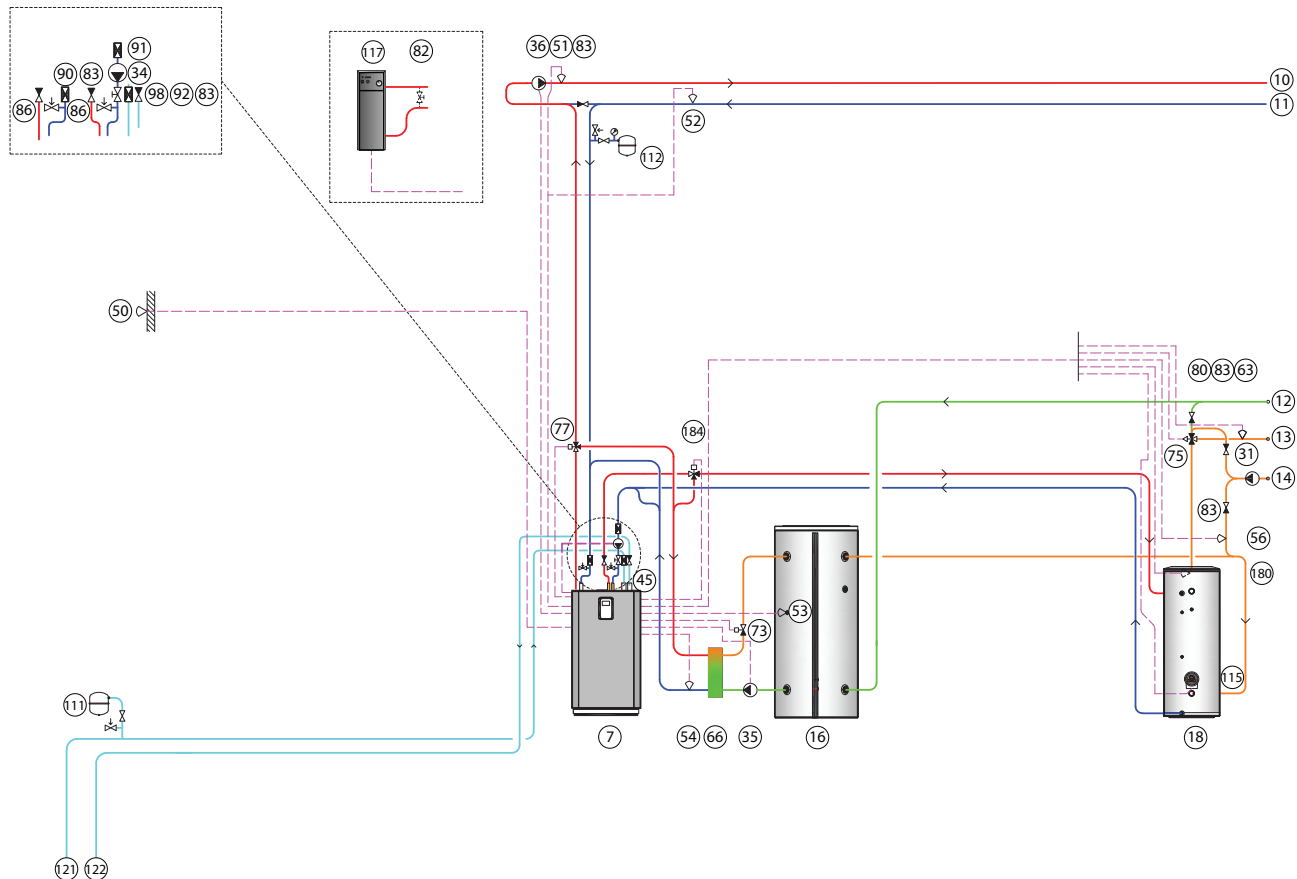
14. Service output, high pressure
15. High pressure transmitter
16. High pressure switch
17. Condenser pump
18. Condenser
19. Drying filter
20. Brine pump
21. Low pressure transmitter
22. Service outlet, low pressure
23. Evaporator
24. Compressor
25. Electronic expansion valve

Mega L and XL Connections, pipe diameter in mm

| Brine | Heating system | Hot gas exchanger |
|-------|----------------|-------------------|
| 54    | 42             | 28                |

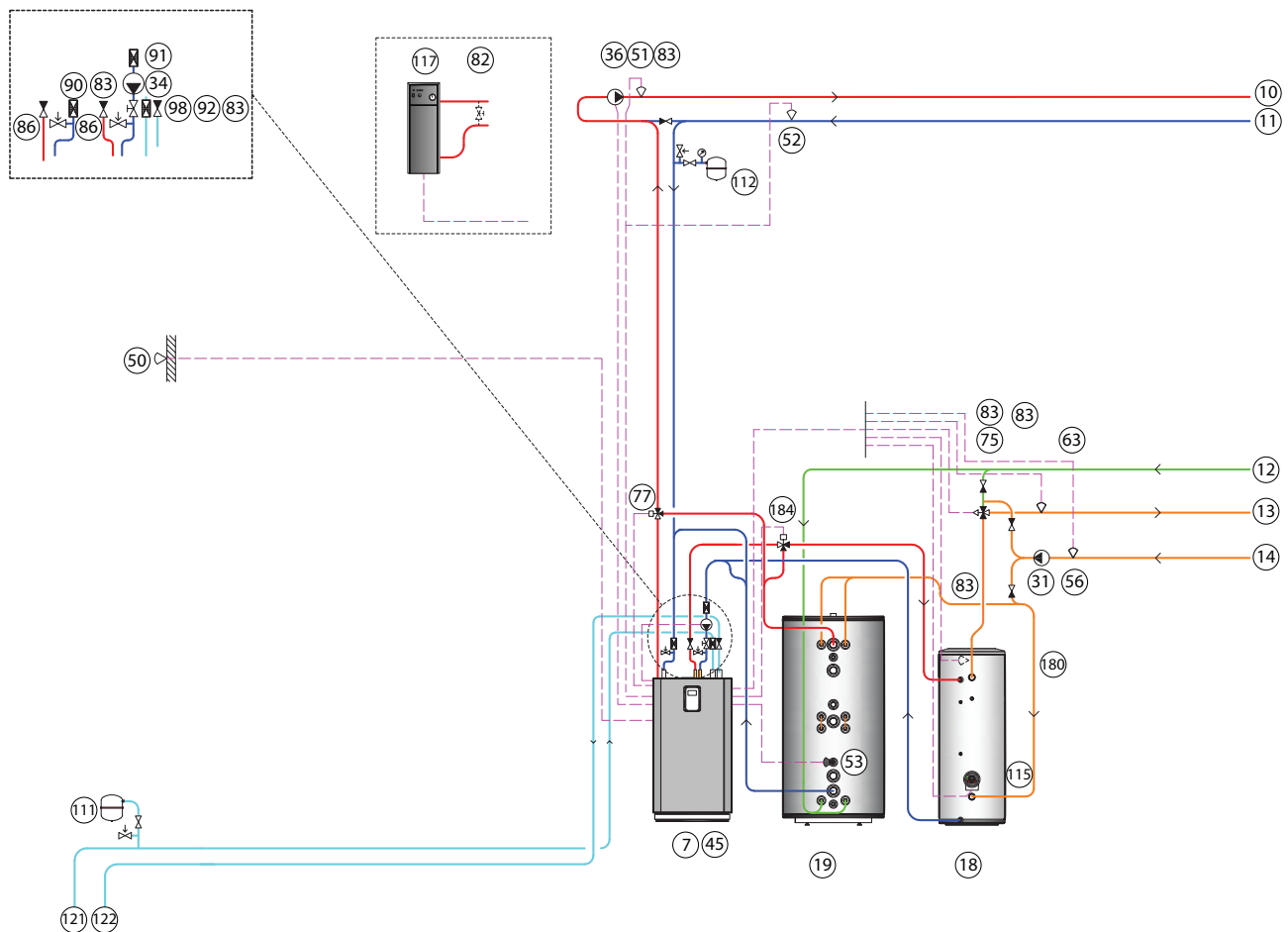
## 3 System overview

### 3.1 Mega with WT-S and final heater for hot gas



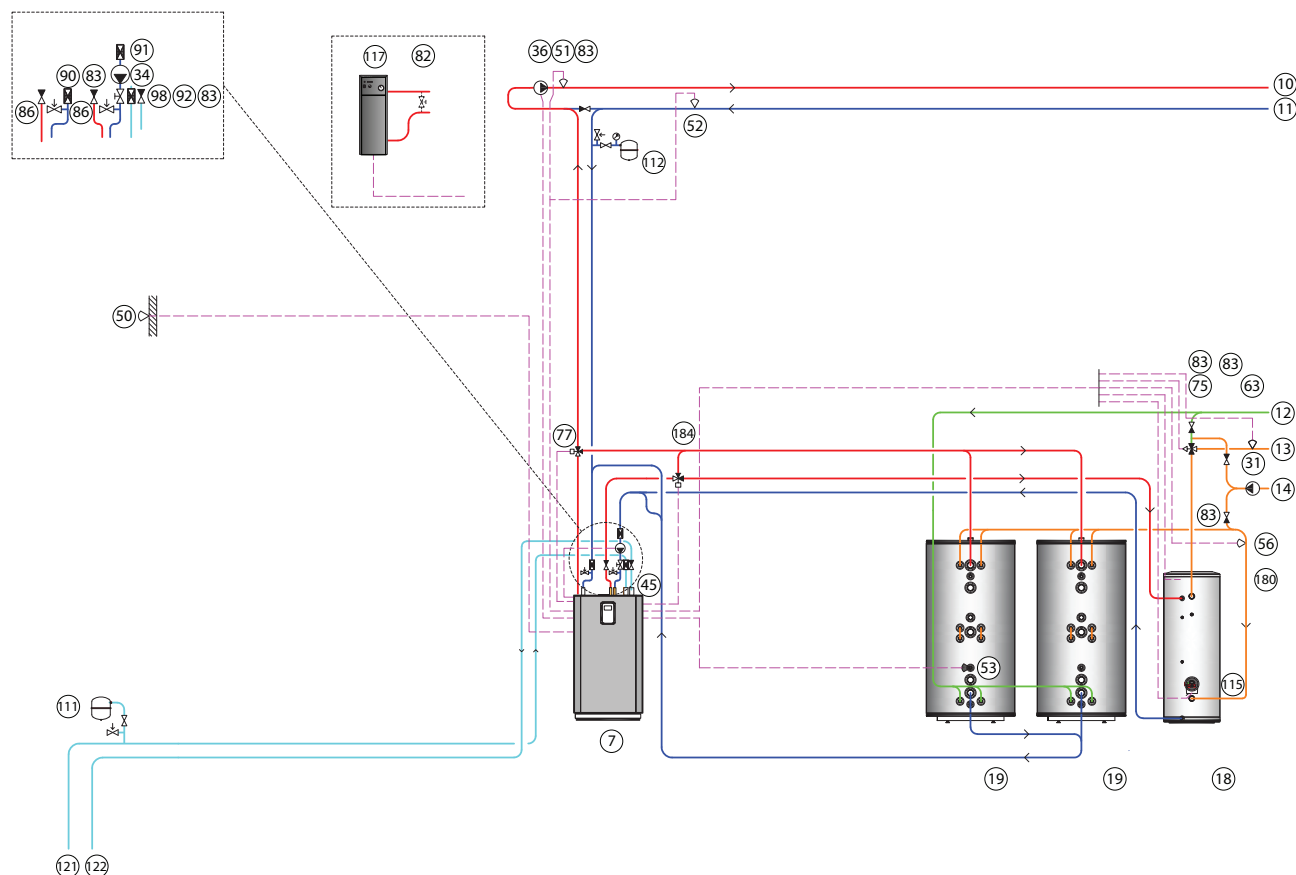
- 7. Heat pump
- 10. Heating supply line
- 11. Heating return line
- 12. Cold tap water line
- 13. Hot tap water line
- 14. Hot water circulation
- 16. Hot water storage tank
- 18. Water heater
- 31. Circulation pump (HWC)
- 34. Circulation pump (hot gas)
- 35. Circulation pump (charging circuit)
- 36. Circulation pump (system)
- 45. Expansion module
- 50. Outdoor sensor
- 51. Supply line sensor, heating system
- 52. System return line sensor
- 53. Hot water sensor, bottom
- 54. Sensor load circuit (return HEX)
- 56. TWC sensor
- 63. Mixing valve additional heater
- 66. Charging exchanger WCS
- 73. Control valve WCS
- 75. Mixing valve
- 77. Hot water exchange valve
- 80. Shut off valve
- 82. Adjustment valve
- 83. Non-return valve
- 86. Safety valve
- 90. Dirt strainer (condenser)
- 91. Dirt strainer (hot gas)
- 92. Dirt strainer (brine)
- 98. Flexible hose
- 111. Venting and expansion tank (brine)
- 112. Expansion tank
- 115. Immersion heater
- 117. Auxiliary heating
- 121. Brine in
- 122. Brine out
- 180. Tank sensor TWC (hot gas tank)
- 184. Reversing valve, hot gas tank.

### 3.2 Mega with coil tank WT-C and final heater for hot gas



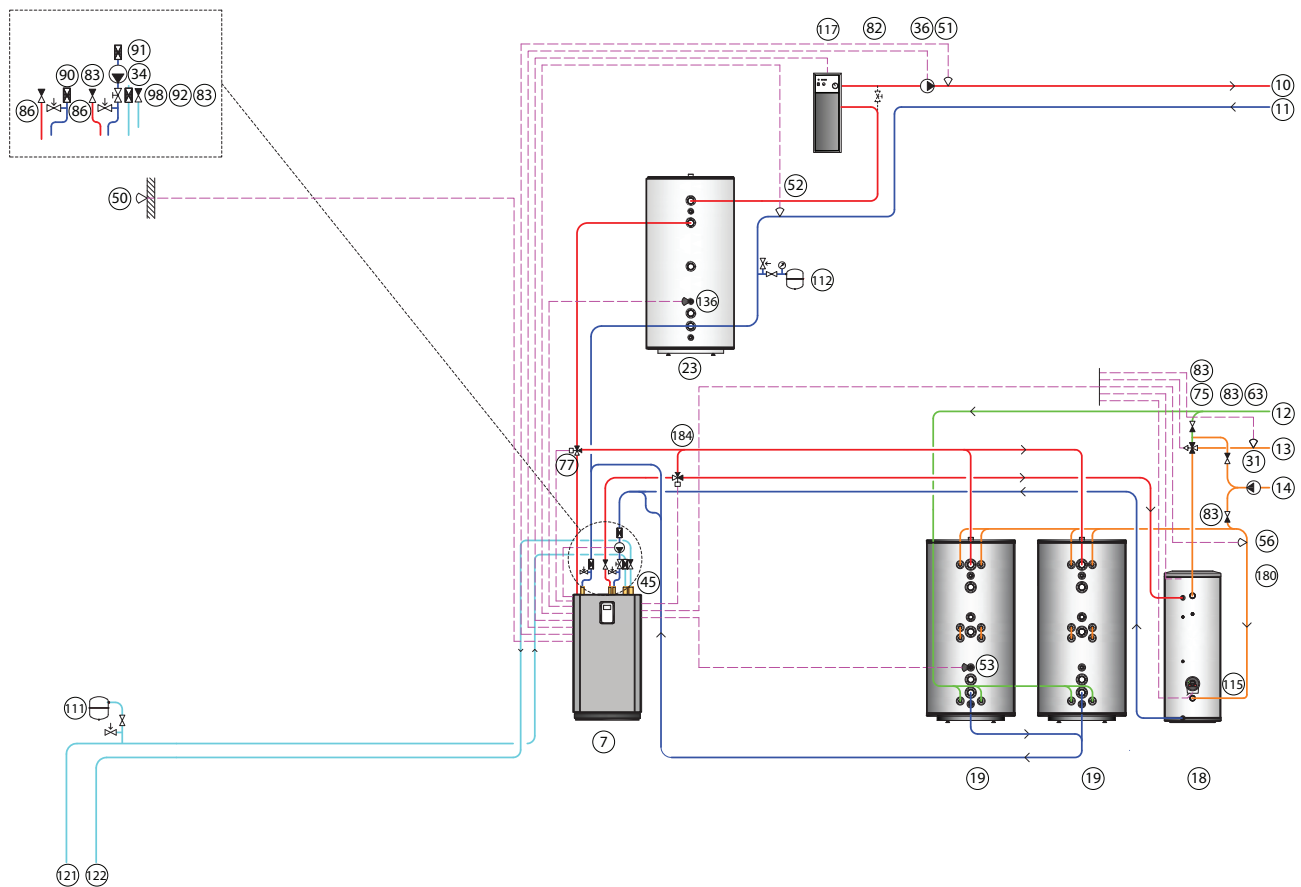
- 7. Heat pump
- 10. Heating supply line
- 11. Heating return line
- 12. Cold tap water line
- 13. Hot tap water line
- 14. Hot water circulation
- 18. Water heater
- 19. Water heater
- 31. Circulation pump (HWC)
- 34. Circulation pump (hot gas)
- 36. Circulation pump (system)
- 45. Expansion module
- 50. Outdoor sensor
- 51. Supply line sensor, heating system
- 52. System return line sensor
- 53. Hot water sensor, bottom
- 56. TWC sensor
- 63. Mixing valve additional heater
- 75. Mixing valve
- 77. Hot water exchange valve
- 82. Adjustment valve
- 83. Non-return valve
- 86. Safety valve
- 90. Dirt strainer (condenser)
- 91. Dirt strainer (hot gas)
- 92. Dirt strainer (brine)
- 98. Flexible hose
- 111. Venting and expansion tank (brine)
- 112. Expansion tank
- 115. Immersion heater
- 117. Auxiliary heating
- 121. Brine in
- 122. Brine out
- 180. Tank sensor TWC (hot gas tank)
- 184. Reversing valve, hot gas tank.

### 3.3 Mega with two WT-C and final heater for hot gas



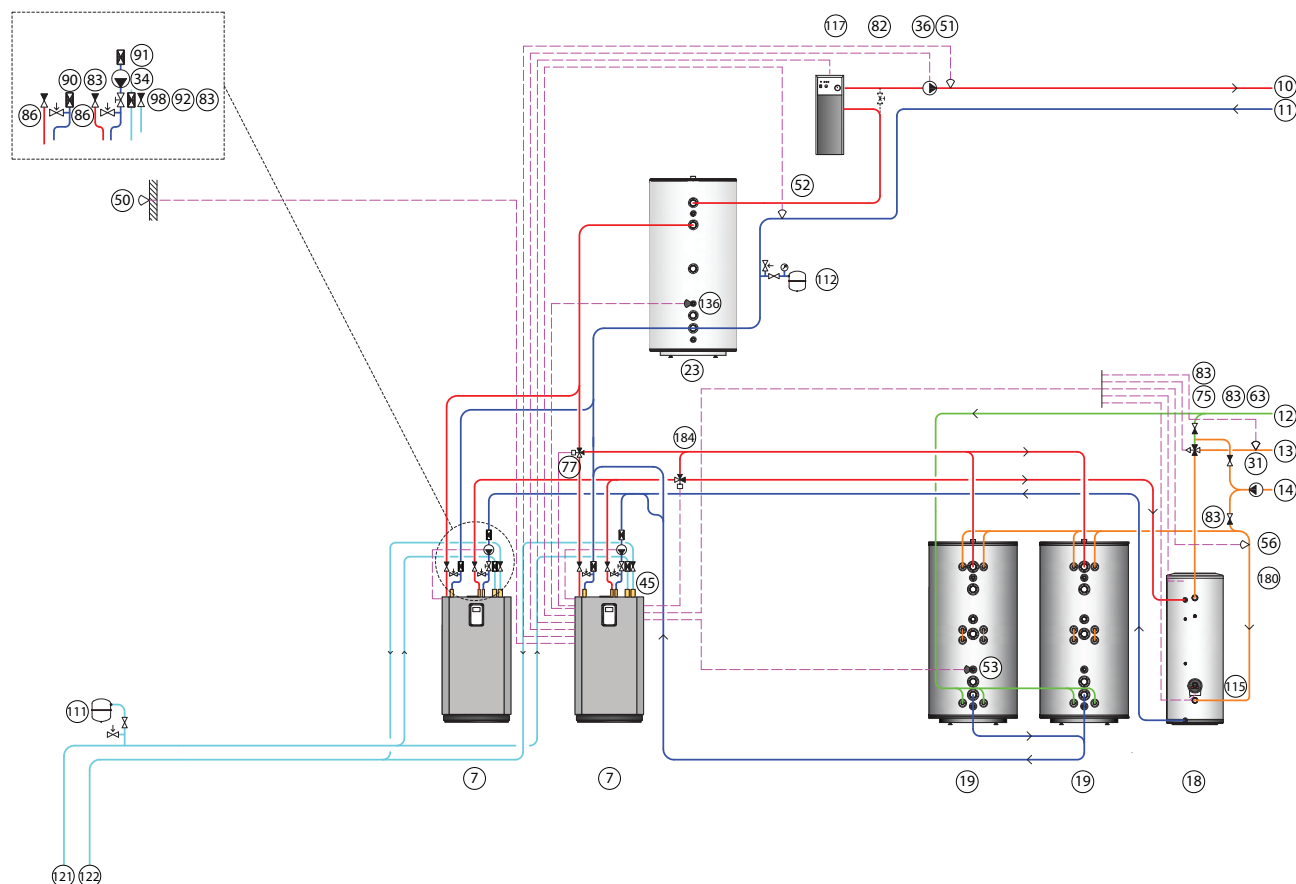
- 7. Heat pump
- 10. Heating supply line
- 11. Heating return line
- 12. Cold tap water line
- 13. Hot tap water line
- 14. Hot water circulation
- 18. Water heater
- 19. Water heater
- 31. Circulation pump (HWC)
- 34. Circulation pump (hot gas)
- 36. Circulation pump (system)
- 45. Expansion module
- 50. Outdoor sensor
- 51. Supply line sensor, heating system
- 52. System return line sensor
- 53. Hot water sensor, bottom
- 56. TWC sensor
- 63. Mixing valve additional heater
- 75. Mixing valve
- 77. Hot water exchange valve
- 82. Adjustment valve
- 83. Non-return valve
- 86. Safety valve
- 90. Dirt strainer (condenser)
- 91. Dirt strainer (hot gas)
- 92. Dirt strainer (brine)
- 98. Flexible hose
- 111. Venting and expansion tank (brine)
- 112. Expansion tank
- 115. Immersion heater
- 117. Auxiliary heating
- 121. Brine in
- 122. Brine out
- 180. Tank sensor TWC (hot gas tank)
- 184. Reversing valve, hot gas tank.

### 3.4 Mega with two WT-C, volume tank and final heater for hot gas



- 7. Heat pump
- 10. Heating supply line
- 11. Heating return line
- 12. Cold tap water line
- 13. Hot tap water line
- 14. Hot water circulation
- 18. Water heater
- 19. Water heater
- 23. Volume tank
- 31. Circulation pump (HWC)
- 34. Circulation pump (hot gas)
- 36. Circulation pump (system)
- 45. Expansion module
- 50. Outdoor sensor
- 51. Supply line sensor, heating system
- 52. System return line sensor
- 53. Hot water sensor, bottom
- 56. TWC sensor
- 63. Mixing valve additional heater
- 75. Mixing valve
- 77. Hot water exchange valve
- 82. Adjustment valve
- 83. Non-return valve
- 86. Safety valve
- 90. Dirt strainer (condenser)
- 91. Dirt strainer (hot gas)
- 92. Dirt strainer (brine)
- 98. Flexible hose
- 111. Venting and expansion tank (brine)
- 112. Expansion tank
- 115. Immersion heater
- 117. Auxiliary heating
- 121. Brine in
- 122. Brine out
- 136. Temperature sensor buffer tank
- 180. Tank sensor TWC (hot gas tank)
- 184. Reversing valve, hot gas tank.

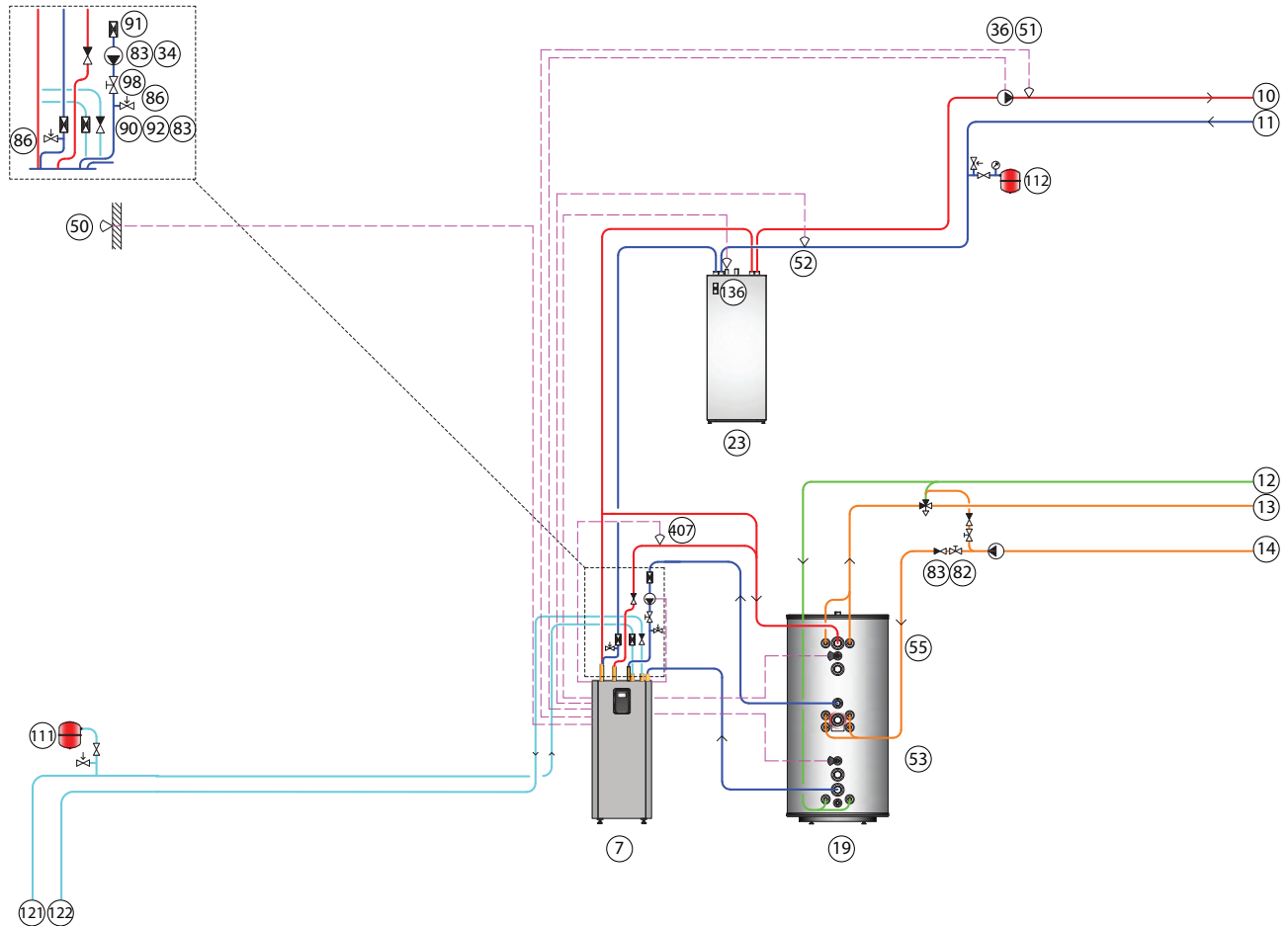
### 3.5 Two Mega with two WT-C, volume tank and final heater for hot gas



- 7. Heat pump
- 10. Heating supply line
- 11. Heating return line
- 12. Cold tap water line
- 13. Hot tap water line
- 14. Hot water circulation
- 18. Water heater
- 19. Water heater
- 23. Volume tank
- 31. Circulation pump (HWC)
- 34. Circulation pump (hot gas)
- 36. Circulation pump (system)
- 45. Expansion module
- 50. Outdoor sensor
- 51. Supply line sensor, heating system
- 52. System return line sensor
- 53. Hot water sensor, bottom
- 56. TWC sensor
- 63. Mixing valve additional heater
- 75. Mixing valve
- 77. Hot water exchange valve
- 82. Adjustment valve
- 83. Non-return valve
- 86. Safety valve
- 90. Dirt strainer (condenser)
- 91. Dirt strainer (hot gas)
- 92. Dirt strainer (brine)
- 98. Flexible hose
- 111. Venting and expansion tank (brine)
- 112. Expansion tank
- 115. Immersion heater
- 117. Auxiliary heating
- 121. Brine in
- 122. Brine out
- 136. Temperature sensor buffer tank
- 180. Tank sensor TWC (hot gas tank)
- 184. Reversing valve, hot gas tank.

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## 3.6 Mega S-E with water heater and volume tank



- 7. Heat pump
- 10. Heating supply line
- 11. Heating return line
- 12. Cold tap water line
- 13. Hot tap water line
- 14. Hot water circulation
- 19. Water heater
- 23. Volume tank
- 36. Circulation pump (system)
- 50. Outdoor sensor
- 51. Supply line sensor, heating system
- 52. System return line sensor
- 53. Hot water sensor, bottom
- 55. Hot water sensor, top
- 82. Adjustment valve
- 83. Non-return valve
- 111. Venting and expansion tank (brine)
- 112. Expansion tank
- 121. Brine in
- 122. Brine out
- 407. Hot gas sensor

# Technical description Mega

## 4 Technical data

### 4.1 Technical data S, S-E and M

| Mega                             |                                                                                             |        | S                                            | S-E                  | M                    |
|----------------------------------|---------------------------------------------------------------------------------------------|--------|----------------------------------------------|----------------------|----------------------|
| Refrigerant                      | Type                                                                                        |        | R410A                                        | R410A                | R410A                |
|                                  | Amount <sup>1</sup>                                                                         | kg     | 3,9                                          | 3,9                  | 4,4                  |
|                                  | Design pressure (low/high)                                                                  | MPa    | 3,0/4.5                                      | 3,0/4.5              | 3,0/4.5              |
| Compressor                       | Type                                                                                        |        | Scroll                                       | Scroll               | Scroll               |
|                                  | Oil                                                                                         |        | POE                                          | POE                  | POE                  |
| Electrical data 400V~3N          | Mains power supply                                                                          | Volt   | 400                                          | 400                  | 400                  |
|                                  | Type output, compressor                                                                     | kW     | 14,00                                        | 14,00                | 17,50                |
|                                  | Type output, circulation pump                                                               | kW     | 0,70                                         | 0,70                 | 0,70                 |
|                                  | Fuse <sup>13</sup>                                                                          | A      | 32                                           | 32                   | 40                   |
|                                  | Short-circuit power (Ssc) <sup>14</sup>                                                     | MVA    | 2,1                                          | 2,1                  | 2,1                  |
|                                  | Immersion heater, 3 steps                                                                   | kW     | N/A                                          | 5/10/15              | N/A                  |
|                                  | Fuses, immersion heater, 5/10/15kW (including compressor and circulation pumps)             | A      | N/A                                          | 32/40/50             | N/A                  |
| Electrical data 230V~3           | Mains power supply                                                                          | Volt   | 230                                          | 230                  | 230                  |
|                                  | Type output, compressor                                                                     | kW     | 14,00                                        | 14,00                | 17,50                |
|                                  | Type output, circulation pump                                                               | kW     | 0,70                                         | 0,70                 | 0,70                 |
|                                  | Fuse <sup>13</sup>                                                                          | A      | 50                                           | 50                   | 63                   |
|                                  | Short-circuit power (Ssc) <sup>14</sup>                                                     | MVA    | N/A                                          | N/A                  | N/A                  |
| Performance                      | COP <sup>2</sup>                                                                            |        | 4,73                                         | 4,73                 | 4,60                 |
|                                  | Heating capacity <sup>2</sup>                                                               | kW     | 20,18                                        | 20,18                | 26,71                |
|                                  | Input power <sup>2</sup>                                                                    | kW     | 4,26                                         | 4,26                 | 5,81                 |
|                                  | SCOP, Floor heating (35°C)                                                                  |        | 5,72 <sup>3</sup>                            | 5,72 <sup>3</sup>    | 5,86 <sup>5</sup>    |
|                                  | SCOP, Radiator (55°C)                                                                       |        | 4,33 <sup>4</sup>                            | 4,33 <sup>4</sup>    | 4,55 <sup>6</sup>    |
|                                  | Energy efficiency class                                                                     |        | A+++                                         | A+++                 | A+++                 |
|                                  | Energy efficiency class built in temperature control package                                |        | A+++                                         | A+++                 | A+++                 |
|                                  | Energy efficiency class (low temperature applications)                                      |        | A+++                                         | A+++                 | A+++                 |
|                                  | Energy efficiency class built in temperature control package (low temperature applications) |        | A+++                                         | A+++                 | A+++                 |
|                                  | Declared load profile                                                                       |        | N/A                                          | N/A                  | N/A                  |
|                                  | Energy label water heater                                                                   |        | N/A                                          | N/A                  | N/A                  |
|                                  | Power range @B0/W35                                                                         | kW     | 10-33 <sup>7</sup>                           | 10-33 <sup>7</sup>   | 11-44 <sup>8</sup>   |
| Max system pressure              | Brine                                                                                       | bar    | 6,0                                          | 6,0                  | 6,0                  |
|                                  | Heat transfer fluid                                                                         | bar    | 6,0                                          | 6,0                  | 6,0                  |
| Max/min temperature <sup>9</sup> | Cooling circuit                                                                             | °C     | 20/-10                                       | 20/-10               | 20/-10               |
|                                  | Heating circuit                                                                             | °C     | 65 <sup>10</sup> /20                         | 65 <sup>10</sup> /20 | 65 <sup>10</sup> /20 |
| Max/min refrigerant circuit      | Low pressure                                                                                | MPa    | 0,23                                         | 0,23                 | 0,23                 |
|                                  | High pressure                                                                               | MPa    | 4,5                                          | 4,5                  | 4,5                  |
| Sound power level                | Min/max <sup>11a</sup>                                                                      | dB (A) | 41-56 <sup>7</sup>                           | 41-56 <sup>7</sup>   | 41-56 <sup>8</sup>   |
|                                  | Sound power level <sup>11b</sup>                                                            | dB (A) | 47                                           | 47                   | 50                   |
| Antifreeze <sup>12</sup>         | Antifreeze with anti-corrosive properties must be used in the brine collector circuit       |        | Brine anti freeze mixture 30% ethanol +water |                      |                      |
| Net weight 400V~3N               |                                                                                             | kg     | 300                                          | 309                  | 310                  |
| Net weight 230V~3                |                                                                                             | kg     | 315                                          | N/A                  | 325                  |

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\*NB Remember to dimension the collector in accordance with the building's P design. The data given above only apply to nominal flow and speed.

- 1) The refrigerant circuit is hermetically sealed and contains refrigerants covered by the F-Gas Regulation. GWP for R410A according to EC 517/2014 is 2088, giving a CO<sub>2</sub> equivalent, equivalent to S-E & S: 8,143 tons, M: 9,187 tons.
- 2) B0/W35 according to EN14511 incl. Circulation pump at 2700 rpm on S-E, S and 3600 rpm on M.
- 3) B0/W35, according to EN14825, Cold Climate Pdesign 33 kW.
- 4) B0/W55, according to EN14825, Cold Climate Pdesign 31 kW.
- 5) B0/W35, according to EN14825, Cold Climate Pdesign 38 kW.
- 6) B0/W55, according to EN14825, Cold Climate Pdesign 36 kW.
- 7) Compressor speed 1500-4500 rpm.
- 8) Compressor speed 1500-6000 rpm.
- 9) Note that it is not possible to combine all of the temperature of the brine with heat carrier temperatures.
- 10) Minimum incoming coolant temperature 0 °C.
- 11a) Sound power level measured according to EN 12102:2017 and EN 3741:2010 (B0/W35).
- 11b) Sound power level according to Energy label, measured according to EN 12102:2017 and EN 3741:2010 (B0/W55).
- 12) Always check local rules and regulations before using antifreeze.
- 13) The fuse size can be adjusted according to the heat pumps power output. See chapter "Estimated current".
- 14) This equipment complies with IEC 61000-3-12 provided that the short-circuit power  $S_{sc}$  is greater than or equal to xx (see table for S-E, S and M value) at the interface point between the user's supply and the public system. It is the responsibility of the installer or user for the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected only to a supply with a short-circuit power  $S_{sc}$  greater than or equal to xx (see table for S-E, S and M value).

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### 4.2 Technical data L and XL

| Mega                             |                                                                                             |        | L                                           | XL                 |
|----------------------------------|---------------------------------------------------------------------------------------------|--------|---------------------------------------------|--------------------|
| Refrigerant                      | Type                                                                                        |        | R410A                                       |                    |
|                                  | Amount <sup>1</sup>                                                                         | kg     | 6,3                                         | 9,0                |
|                                  | Design pressure (low/high)                                                                  | MPa    | 3,0/4,5                                     | 3,0/4,5            |
| Compressor                       | Type                                                                                        |        | Scroll                                      |                    |
|                                  | Oil                                                                                         |        | POE                                         |                    |
| Electrical data 3~N              | Mains power supply                                                                          | Volt   | 400                                         | 400                |
|                                  | Type output, compressor                                                                     | kW     | 22,20                                       | 32,50              |
|                                  | Type output, circulation pump                                                               | kW     | 1                                           | 1                  |
|                                  | Fuse <sup>12</sup>                                                                          | A      | 50                                          | 63                 |
|                                  | Short-circuit power (Ssc) <sup>13</sup>                                                     | MVA    | 2,4                                         | 3,2                |
| Performance                      | COP <sup>2</sup>                                                                            |        | 4,50                                        | 4,71               |
|                                  | Heating capacity <sup>2</sup>                                                               | kW     | 35,6                                        | 52,0               |
|                                  | Input power <sup>2</sup>                                                                    | kW     | 7,91                                        | 11,0               |
|                                  | SCOP, floor heating (35°C)                                                                  |        | 5,29 <sup>3</sup>                           | 5,30 <sup>5</sup>  |
|                                  | SCOP, Radiator (55°C)                                                                       |        | 4,20 <sup>4</sup>                           | 4,32 <sup>6</sup>  |
|                                  | Energy efficiency class                                                                     |        | A+++                                        | N/A                |
|                                  | Energy efficiency class built in temperature control package                                |        | A+++                                        | N/A                |
|                                  | Energy efficiency class (low temperature applications)                                      |        | A+++                                        | N/A                |
|                                  | Energy efficiency class built in temperature control package (low temperature applications) |        | A+++                                        | N/A                |
|                                  | Declared load profile                                                                       |        | N/A                                         | N/A                |
|                                  | Energy label water heater                                                                   |        | N/A                                         | N/A                |
| Max system pressure              | Brine                                                                                       | bar    | 6,0                                         |                    |
|                                  | Heat transfer fluid                                                                         | bar    | 6,0                                         |                    |
|                                  |                                                                                             |        |                                             |                    |
| Max/min temperature <sup>8</sup> | Cooling circuit                                                                             | °C     | 20/-10                                      |                    |
|                                  | Heating circuit                                                                             | °C     | 65 <sup>9</sup> /20                         |                    |
| Max/min refrigerant circuit      | Low pressure                                                                                | MPa    | 0,23                                        |                    |
|                                  | High pressure                                                                               | MPa    | 4,5                                         |                    |
| Sound power level                | Min/max <sup>10a</sup>                                                                      | dB (A) | 40-59 <sup>7</sup>                          | 45-63 <sup>7</sup> |
|                                  | Sound power level <sup>10b</sup>                                                            | dB (A) | 43                                          | 50                 |
| Antifreeze <sup>11</sup>         | Antifreeze with anti-corrosive properties must be used in the brine collector circuit       |        | Brine anti freeze mixture 30% ethanol+water |                    |
| Net weight                       |                                                                                             | kg     | 407                                         | 487                |

\*NB Remember to dimension the collector in accordance with the building's P design. The data given above only apply to nominal flow and speed.

1) The refrigerant circuit is hermetically sealed and contains refrigerants covered by the F-Gas Regulation. GWP for R410A according to EC 517/2014 is 2088, giving a CO2 equivalent, equivalent to L: 13,154 tons, XL 18,792 tons.

2) B0/W35 according to EN14511 incl. Circular pump at 3600 rpm on L and XL.

3) B0/W35, according EN14825, Cold Climate Pdesign 60 kW.

4) B0/W55, according EN14825, Cold climate Pdesign 55 kW.

5) B0/W35, according EN14825, Cold Climate Pdesign 85 kW.

6) B0/W55, according EN14825, Cold Climate Pdesign 79 kW.

7) Compressor speed rpm 1500-6000 rpm.

8) Note that it is not possible to combine all of the temperature of the brine with heat carrier temperatures.

9) Minimum incoming coolant temperature 0 °C.

10a) Sound power level measured according to EN 12102:2017 and EN 3741:2010 (B0/W35).

10b) Sound power level according to Energy label, measured according to EN 12102:2017 and EN 3741:2010 (B0/W55).

## Technical description

### Mega

- 
- 11) Always check local rules and regulations before using antifreeze.
  - 12) The fuse size can be adjusted according to the heat pumps power output. See chapter "Estimated current".
  - 13) This equipment complies with IEC 61000-3-12 provided that the short-circuit power  $S_{sc}$  is greater than or equal to xx (see table for L, and XL value) at the interface point between the user's supply and the public system. It is the responsibility of the installer or user for the equipment to ensure, by consultation with the distribution network operator if necessary, that the equipment is connected only to a supply with a short-circuit power  $S_{sc}$  greater than or equal to xx (see table for L and XL value).

## 5 Operation Temperatures

### 5.1 Min/Max operation temperature R410A

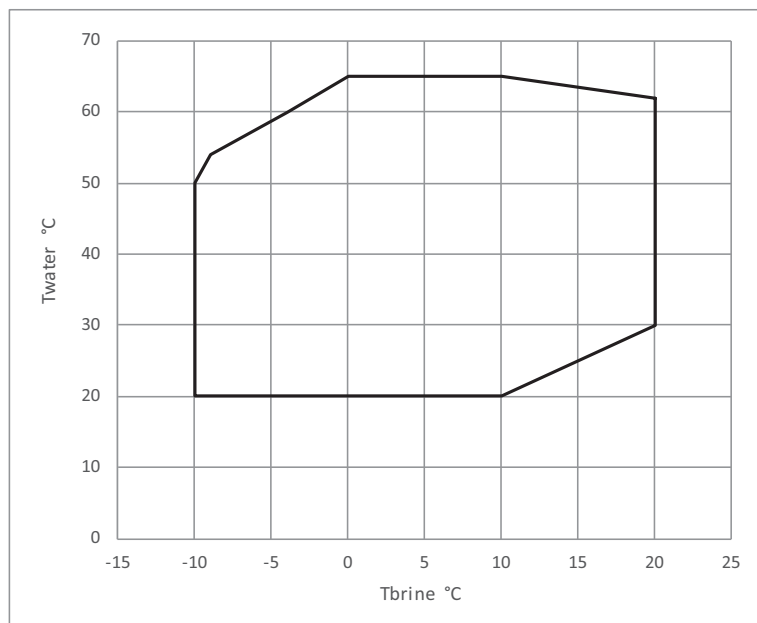


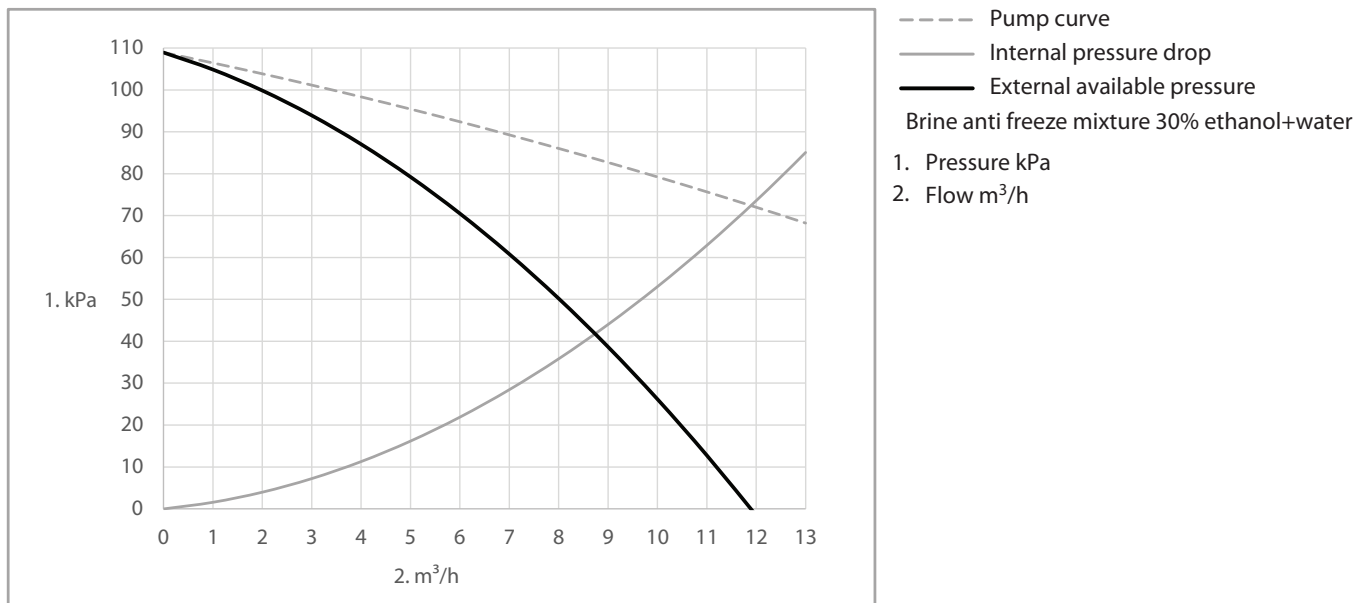
Diagram shows the maximum working envelope for the heat pump. Effective working envelope in different operating conditions and compressor speeds may be more restrictive.

# Technical description Mega

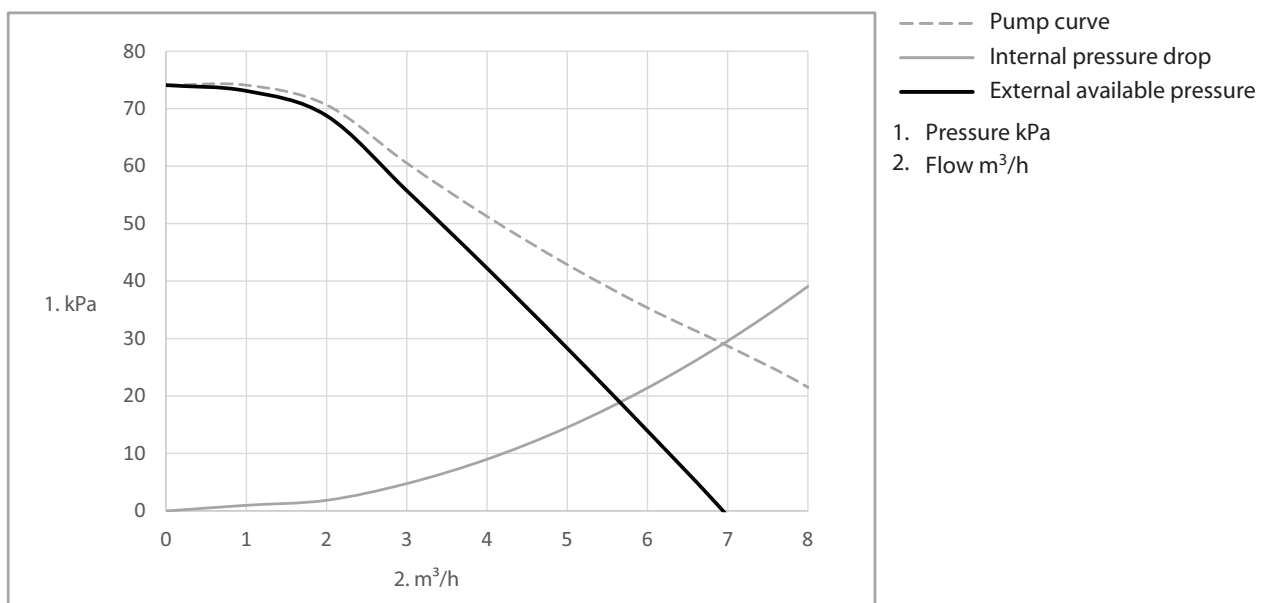
## 6 Calculated flow/pressure diagrams

### 6.1 Mega S and S-E

#### 6.1.1 Evaporator diagram

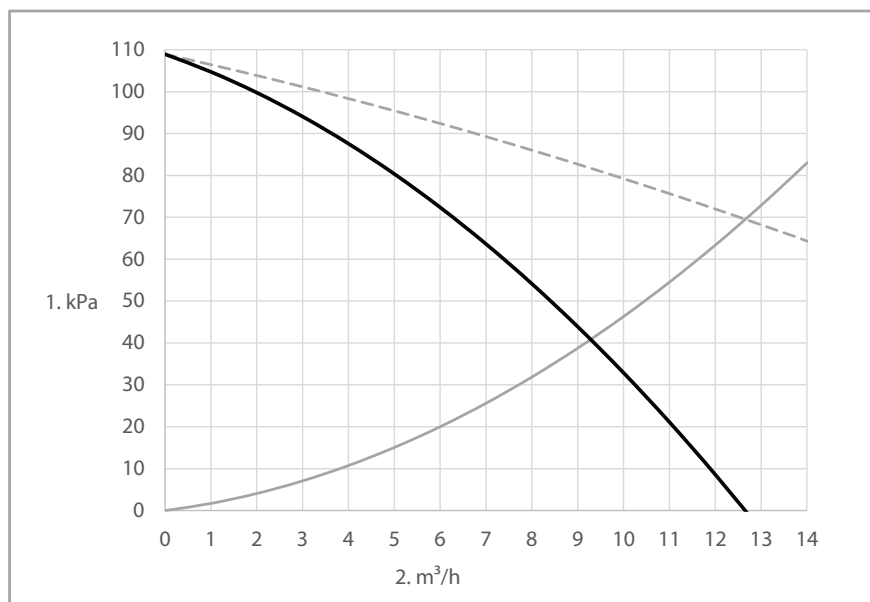


#### 6.1.2 Condenser diagram



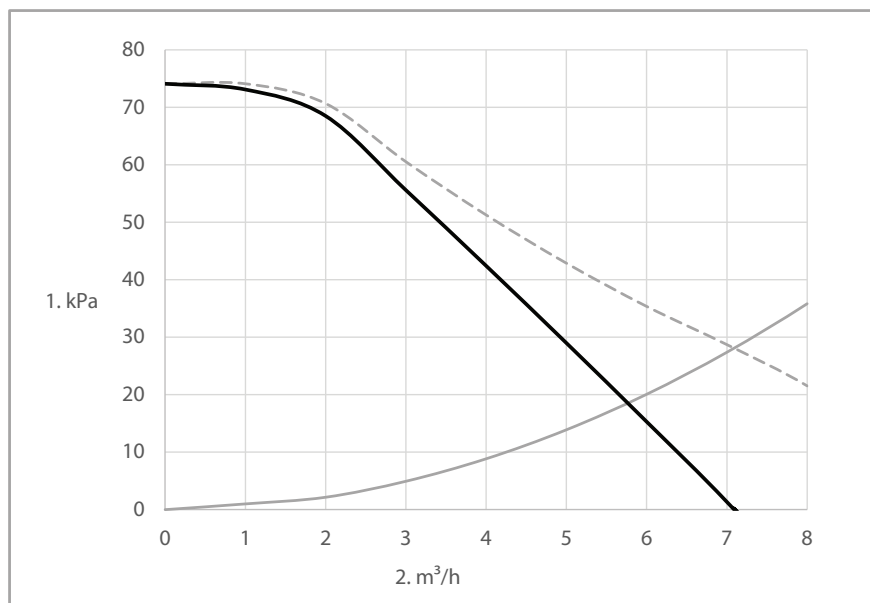
## 6.2 Mega M

### 6.2.1 Evaporator diagram



- Pump curve
  - Internal pressure drop
  - External available pressure
- Brine anti freeze mixture 30% ethanol+water
1. Pressure kPa
  2. Flow m³/h

### 6.2.2 Condenser diagram

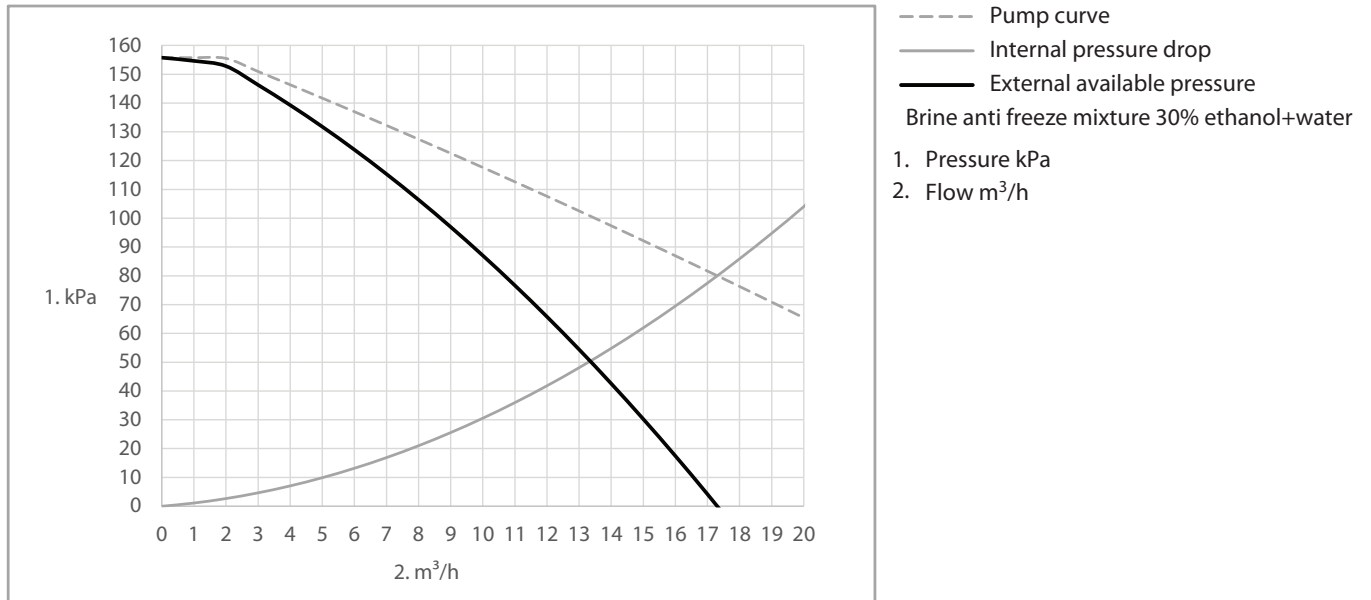


- Pump curve
  - Internal pressure drop
  - External available pressure
1. Pressure kPa
  2. Flow m³/h

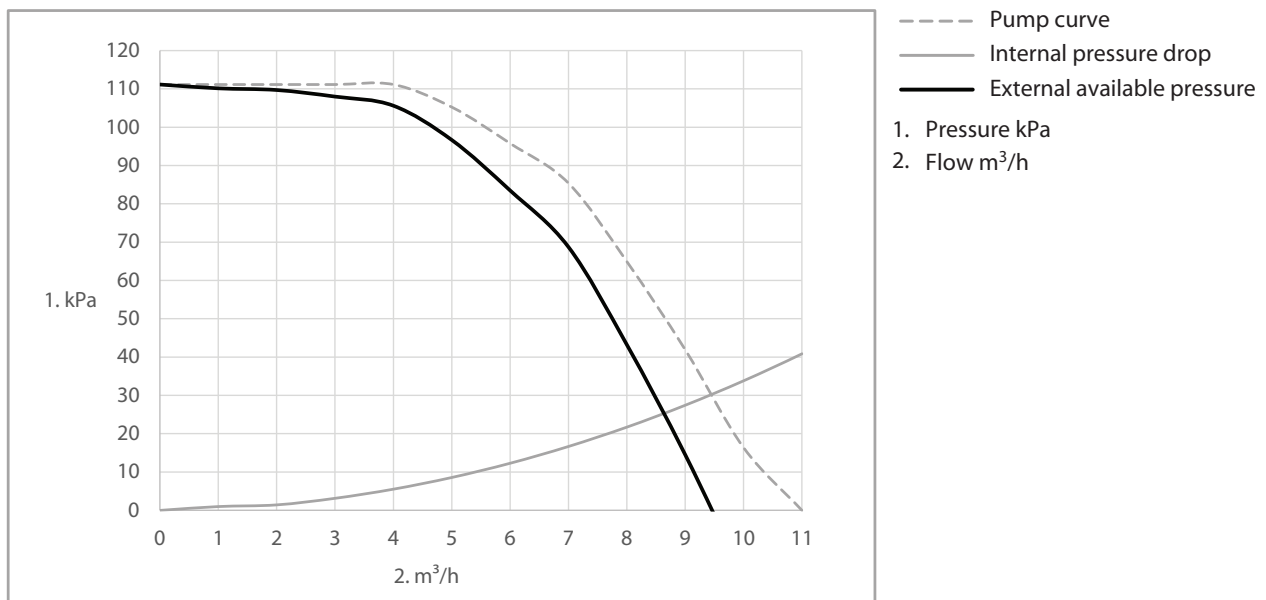
## Technical description Mega

### 6.3 Mega L

#### 6.3.1 Evaporator diagram

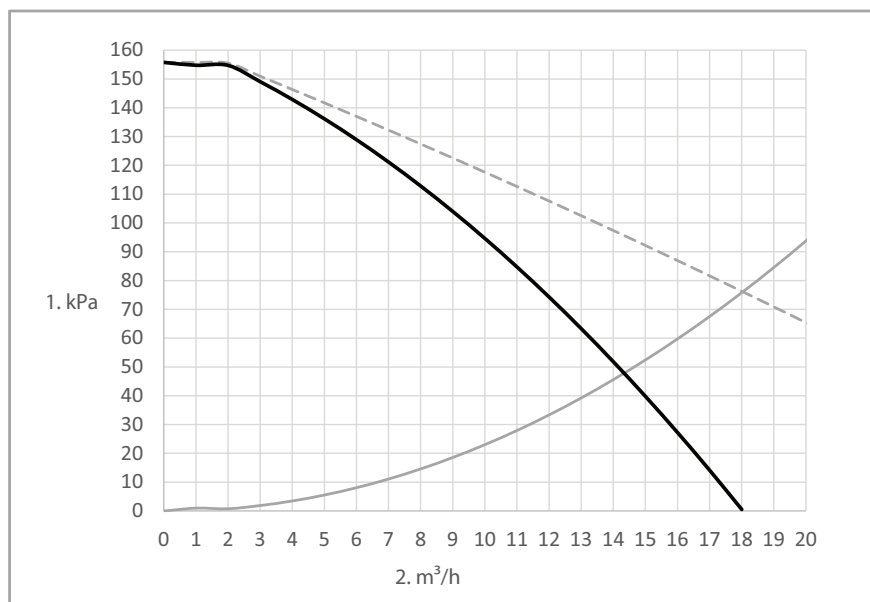


#### 6.3.2 Condenser diagram



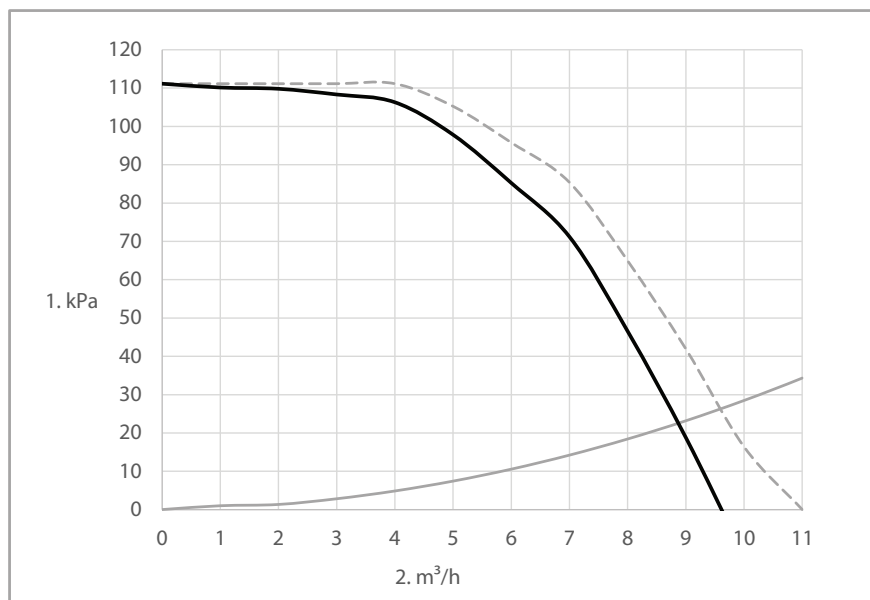
## 6.4 Mega XL

### 6.4.1 Evaporator diagram



- Pump curve
  - Internal pressure drop
  - External available pressure
- Brine anti freeze mixture 30% ethanol+water
1. Pressure kPa
2. Flow m<sup>3</sup>/h

### 6.4.2 Condenser diagram



- Pump curve
  - Internal pressure drop
  - External available pressure
1. Pressure kPa
2. Flow m<sup>3</sup>/h

# Technical description Mega

## 7 Estimated current

### 7.1 Mega S and S-E <sup>2</sup>

| Rad out °C         | Estimated current (A) for S & S-E (400V~3N) |           |          |                          |                          |           |           |
|--------------------|---------------------------------------------|-----------|----------|--------------------------|--------------------------|-----------|-----------|
| 65 °C              | -                                           | -         | 15,0     | <b>25,2 <sup>1</sup></b> | <b>25,2 <sup>1</sup></b> | 25,1      | 25,0      |
| 60 °C              | -                                           | 15,6      | 22,9     | 23,0                     | 23,1                     | 23,0      | 22,9      |
| 55 °C              | 14,1                                        | 20,8      | 21,1     | 21,2                     | 21,2                     | 21,2      | 21,0      |
| 50 °C              | 19,0                                        | 19,3      | 19,5     | 19,6                     | 19,6                     | 19,5      | 19,3      |
| 45 °C              | 17,8                                        | 18,0      | 18,2     | 18,2                     | 18,2                     | 18,0      | 17,8      |
| 40 °C              | 16,7                                        | 16,9      | 17,0     | 17,0                     | 16,9                     | 16,7      | 16,3      |
| 35 °C              | 15,8                                        | 15,9      | 15,9     | 15,8                     | 15,6                     | 15,3      | 14,9      |
| 30 °C              | 14,9                                        | 14,9      | 14,9     | 14,7                     | 14,3                     | 13,9      | 13,3      |
| <b>Brine in °C</b> | <b>-10</b>                                  | <b>-5</b> | <b>0</b> | <b>5</b>                 | <b>10</b>                | <b>15</b> | <b>20</b> |

1) Highest current

2) The table only includes estimated current in compressor-only operation. Since Mega S-E also have a built-in immersion heater, its estimated current must be added separately to the table values, with consideration on how many steps that are planned to be used. To include immersion heater estimated current,

- for Step 1 (5kW) : add 7,2 A to table value.
- for Step 2 (10kW): add 14,5 A to table value.
- for Step 3 (15kW): add 21,7 A to table value.

| Rad out °C         | Estimated current (A) for S 230 (230V~3) |           |          |                          |                          |           |           |
|--------------------|------------------------------------------|-----------|----------|--------------------------|--------------------------|-----------|-----------|
| 65 °C              | -                                        | -         | 25,8     | <b>42,2 <sup>1</sup></b> | <b>42,2 <sup>1</sup></b> | 42,1      | 41,8      |
| 60 °C              | -                                        | 24,7      | 38,1     | 38,3                     | 38,4                     | 38,3      | 38,1      |
| 55 °C              | 22,0                                     | 34,4      | 34,8     | 35,0                     | 35,1                     | 35,0      | 34,7      |
| 50 °C              | 31,2                                     | 31,7      | 32,0     | 32,2                     | 32,3                     | 32,1      | 31,8      |
| 45 °C              | 28,9                                     | 29,4      | 29,7     | 29,8                     | 29,7                     | 29,5      | 29,1      |
| 40 °C              | 27,1                                     | 27,4      | 27,6     | 27,6                     | 27,4                     | 27,0      | 26,5      |
| 35 °C              | 25,4                                     | 25,6      | 25,7     | 25,5                     | 25,2                     | 24,6      | 23,8      |
| 30 °C              | 23,9                                     | 23,9      | 23,8     | 23,4                     | 22,9                     | 22,1      | 21,1      |
| <b>Brine in °C</b> | <b>-10</b>                               | <b>-5</b> | <b>0</b> | <b>5</b>                 | <b>10</b>                | <b>15</b> | <b>20</b> |

1) Highest current

## Technical description **Mega**

### 7.2 **Mega M**

| Rad out °C         | Estimated current (A) for M (400V~3N) |           |          |          |           |           |                         |
|--------------------|---------------------------------------|-----------|----------|----------|-----------|-----------|-------------------------|
| 65 °C              | -                                     | -         | 15,0     | 29,3     | 29,4      | 29,6      | 29,6                    |
| 60 °C              | -                                     | 29,1      | 29,3     | 29,5     | 29,8      | 30,1      | <b>30,2<sup>1</sup></b> |
| 55 °C              | 26,6                                  | 26,8      | 27,0     | 27,3     | 27,6      | 27,8      | 27,9                    |
| 50 °C              | 24,6                                  | 24,9      | 25,1     | 25,4     | 25,6      | 25,8      | 25,8                    |
| 45 °C              | 22,9                                  | 23,2      | 23,4     | 23,7     | 23,8      | 23,9      | 23,8                    |
| 40 °C              | 21,5                                  | 21,7      | 21,9     | 22,1     | 22,2      | 22,1      | 21,9                    |
| 35 °C              | 20,1                                  | 20,3      | 20,5     | 20,6     | 20,6      | 20,4      | 20,0                    |
| 30 °C              | 18,9                                  | 19,0      | 19,1     | 19,1     | 19,0      | 18,6      | 18,0                    |
| <b>Brine in °C</b> | <b>-10</b>                            | <b>-5</b> | <b>0</b> | <b>5</b> | <b>10</b> | <b>15</b> | <b>20</b>               |

1) Highest current

| Rad out °C         | Estimated current (A) for M 230 (230V~3) |           |          |          |           |           |                         |
|--------------------|------------------------------------------|-----------|----------|----------|-----------|-----------|-------------------------|
| 65 °C              | -                                        | -         | 26,4     | 51,2     | 51,4      | 51,6      | 51,7                    |
| 60 °C              | -                                        | 51,6      | 52,0     | 52,5     | 53,0      | 53,4      | <b>53,8<sup>1</sup></b> |
| 55 °C              | 47,1                                     | 47,4      | 47,9     | 48,4     | 48,9      | 49,2      | 49,4                    |
| 50 °C              | 43,4                                     | 43,8      | 44,3     | 44,8     | 45,2      | 45,5      | 45,5                    |
| 45 °C              | 40,3                                     | 40,7      | 41,2     | 41,6     | 41,9      | 42,0      | 41,8                    |
| 40 °C              | 37,5                                     | 38,0      | 38,4     | 38,7     | 38,8      | 38,7      | 38,3                    |
| 35 °C              | 35,0                                     | 35,4      | 35,7     | 35,9     | 35,9      | 35,5      | 34,8                    |
| 30 °C              | 32,7                                     | 33,0      | 33,2     | 33,2     | 32,9      | 32,2      | 31,2                    |
| <b>Brine in °C</b> | <b>-10</b>                               | <b>-5</b> | <b>0</b> | <b>5</b> | <b>10</b> | <b>15</b> | <b>20</b>               |

1) Highest current

### 7.3 **Mega L**

| Rad out °C         | Estimated current (A) for L (400V~3N) |           |          |          |           |           |                         |
|--------------------|---------------------------------------|-----------|----------|----------|-----------|-----------|-------------------------|
| 65 °C              | -                                     | -         | 22,5     | 39,0     | 39,3      | 39,6      | 39,8                    |
| 60 °C              | -                                     | 38,9      | 39,3     | 39,6     | 39,9      | 40,3      | <b>40,6<sup>1</sup></b> |
| 55 °C              | 35,8                                  | 36,1      | 36,5     | 36,8     | 37,1      | 37,5      | 37,8                    |
| 50 °C              | 33,1                                  | 33,5      | 33,9     | 34,2     | 34,6      | 34,9      | 35,2                    |
| 45 °C              | 30,7                                  | 31,1      | 31,4     | 31,8     | 32,1      | 32,4      | 32,7                    |
| 40 °C              | 28,5                                  | 28,9      | 29,2     | 29,5     | 29,9      | 30,1      | 30,4                    |
| 35 °C              | 26,5                                  | 26,8      | 27,2     | 27,5     | 27,7      | 28,0      | 28,2                    |
| 30 °C              | 24,6                                  | 25,0      | 25,3     | 25,5     | 25,8      | 26,0      | 26,1                    |
| <b>Brine in °C</b> | <b>-10</b>                            | <b>-5</b> | <b>0</b> | <b>5</b> | <b>10</b> | <b>15</b> | <b>20</b>               |

1) Highest current

# Technical description

## Mega

### 7.4 Mega XL

| Rad out °C         | Estimated current (A) for XL (400V~3N) |           |          |          |           |           |                         |
|--------------------|----------------------------------------|-----------|----------|----------|-----------|-----------|-------------------------|
| 65 °C              | -                                      | -         | 50,9     | 52,4     | 52,9      | 53,6      | 54,4                    |
| 60 °C              | -                                      | 52,0      | 52,4     | 52,8     | 53,4      | 54,2      | <b>55,2<sup>1</sup></b> |
| 55 °C              | 47,4                                   | 47,9      | 48,3     | 48,8     | 49,2      | 49,8      | 50,6                    |
| 50 °C              | 44,0                                   | 44,5      | 44,9     | 45,3     | 45,7      | 46,1      | 46,7                    |
| 45 °C              | 41,1                                   | 41,7      | 42,0     | 42,3     | 42,5      | 42,8      | 43,1                    |
| 40 °C              | 38,6                                   | 39,1      | 39,4     | 39,6     | 39,7      | 39,7      | 39,8                    |
| 35 °C              | 36,3                                   | 36,8      | 37,1     | 37,1     | 37,0      | 36,8      | 36,6                    |
| 30 °C              | 34,1                                   | 34,6      | 34,7     | 34,6     | 34,3      | 33,8      | 33,3                    |
| <b>Brine in °C</b> | <b>-10</b>                             | <b>-5</b> | <b>0</b> | <b>5</b> | <b>10</b> | <b>15</b> | <b>20</b>               |

1) Highest current

# Technical description Mega

## 8 Reference output data tables

### 8.1 Mega S and S-E

| S and SE | Radiator temp out/in | °C / °C           | 35 / 30 |        |        |       |       | 35 / 25 |        |        |       |       |
|----------|----------------------|-------------------|---------|--------|--------|-------|-------|---------|--------|--------|-------|-------|
| RPM      | Brine temp in/out    | °C / °C           | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 |
| 1500     | Heating Capacity     | kW                | 10      | 11     | 11     | 12    | 13    | 10      | 11     | 12     | 13    | 13    |
|          | Cooling Capacity     | kW                | 7       | 8      | 9      | 10    | 10    | 7       | 8      | 9      | 10    | 11    |
|          | Input power          | kW                | 2,7     | 2,6    | 2,6    | 2,5   | 2,4   | 2,6     | 2,5    | 2,5    | 2,4   | 2,3   |
|          | COP                  | -                 | 3,6     | 4,0    | 4,3    | 4,9   | 5,3   | 3,8     | 4,3    | 4,6    | 5,3   | 5,8   |
|          | Radiator flow        | m <sup>3</sup> /h | 1,7     | 1,8    | 1,9    | 2,1   | 2,2   | 0,9     | 0,9    | 1,0    | 1,1   | 1,2   |
|          | Brine flow           | m <sup>3</sup> /h | 2,1     | 1,4    | 2,6    | 1,7   | 3,1   | 2,2     | 1,5    | 2,7    | 1,8   | 3,3   |
| 3000     | Heating Capacity     | kW                | 19      | 21     | 23     | 25    | 26    | 20      | 22     | 23     | 26    | 27    |
|          | Cooling Capacity     | kW                | 14      | 16     | 18     | 20    | 21    | 15      | 17     | 19     | 21    | 23    |
|          | Input power          | kW                | 5,0     | 5,0    | 5,0    | 4,9   | 4,9   | 4,9     | 4,8    | 4,8    | 4,7   | 4,7   |
|          | COP                  | -                 | 3,9     | 4,3    | 4,6    | 5,1   | 5,4   | 4,1     | 4,5    | 4,8    | 5,4   | 5,8   |
|          | Radiator flow        | m <sup>3</sup> /h | 3,4     | 3,7    | 3,9    | 4,3   | 4,5   | 1,7     | 1,9    | 2,0    | 2,2   | 2,4   |
|          | Brine flow           | m <sup>3</sup> /h | 4,3     | 2,9    | 5,2    | 3,5   | 6,3   | 4,5     | 3,0    | 5,5    | 3,7   | 6,7   |
| 4500     | Heating Capacity     | kW                | 29      | 32     | 34     | 37    | 39    | 30      | 33     | 35     | 38    | 41    |
|          | Cooling Capacity     | kW                | 21      | 24     | 26     | 29    | 31    | 22      | 25     | 27     | 30    | 33    |
|          | Input power          | kW                | 8,0     | 8,0    | 8,0    | 8,0   | 8,1   | 7,8     | 7,7    | 7,8    | 7,7   | 7,8   |
|          | COP                  | -                 | 3,6     | 4,0    | 4,2    | 4,6   | 4,9   | 3,8     | 4,2    | 4,4    | 5,0   | 5,2   |
|          | Radiator flow        | m <sup>3</sup> /h | 5,0     | 5,5    | 5,8    | 6,4   | 6,8   | 2,6     | 2,8    | 3,0    | 3,3   | 3,5   |
|          | Brine flow           | m <sup>3</sup> /h | 6,3     | 4,2    | 7,6    | 5,2   | 9,3   | 6,6     | 4,5    | 8,0    | 5,4   | 9,7   |

| S and SE | Radiator temp out/in | °C / °C           | 55 / 47 |        |        |       |       | 55 / 45 |        |        |       |       |
|----------|----------------------|-------------------|---------|--------|--------|-------|-------|---------|--------|--------|-------|-------|
| RPM      | Brine temp in/out    | °C / °C           | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 |
| 1500     | Heating Capacity     | kW                | 9       | 10     | 11     | 11    | 12    | 9       | 10     | 11     | 12    | 12    |
|          | Cooling Capacity     | kW                | 5       | 6      | 6      | 7     | 8     | 5       | 6      | 7      | 7     | 8     |
|          | Input power          | kW                | 4,1     | 4,2    | 4,2    | 4,2   | 4,2   | 4,1     | 4,2    | 4,2    | 4,2   | 4,2   |
|          | COP                  | -                 | 2,3     | 2,4    | 2,5    | 2,7   | 2,9   | 2,3     | 2,5    | 2,6    | 2,8   | 2,9   |
|          | Radiator flow        | m <sup>3</sup> /h | 1,0     | 1,1    | 1,2    | 1,3   | 1,3   | 0,8     | 0,9    | 0,9    | 1,0   | 1,1   |
|          | Brine flow           | m <sup>3</sup> /h | 1,6     | 1,1    | 2,0    | 1,3   | 2,4   | 1,6     | 1,1    | 2,0    | 1,4   | 2,5   |
| 3000     | Heating Capacity     | kW                | 19      | 20     | 21     | 23    | 24    | 19      | 21     | 22     | 24    | 25    |
|          | Cooling Capacity     | kW                | 11      | 13     | 14     | 16    | 17    | 12      | 13     | 14     | 16    | 17    |
|          | Input power          | kW                | 7,5     | 7,5    | 7,5    | 7,5   | 7,6   | 7,4     | 7,4    | 7,5    | 7,5   | 7,5   |
|          | COP                  | -                 | 2,5     | 2,7    | 2,8    | 3,1   | 3,2   | 2,6     | 2,8    | 2,9    | 3,2   | 3,3   |
|          | Radiator flow        | m <sup>3</sup> /h | 2,0     | 2,2    | 2,3    | 2,5   | 2,7   | 1,6     | 1,8    | 1,9    | 2,1   | 2,2   |
|          | Brine flow           | m <sup>3</sup> /h | 3,4     | 2,3    | 4,1    | 2,8   | 5,0   | 3,5     | 2,4    | 4,3    | 2,9   | 5,2   |
| 4500     | Heating Capacity     | kW                | 28      | 30     | 32     | 35    | 36    | 28      | 30     | 32     | 35    | 37    |
|          | Cooling Capacity     | kW                | 16      | 19     | 20     | 23    | 25    | 17      | 19     | 21     | 24    | 26    |
|          | Input power          | kW                | 11,2    | 11,3   | 11,4   | 11,5  | 11,6  | 11,1    | 11,2   | 11,3   | 11,3  | 11,4  |
|          | COP                  | -                 | 2,5     | 2,7    | 2,8    | 3,0   | 3,2   | 2,5     | 2,7    | 2,8    | 3,1   | 3,2   |
|          | Radiator flow        | m <sup>3</sup> /h | 3,0     | 3,3    | 3,5    | 3,8   | 4,0   | 2,4     | 2,7    | 2,8    | 3,1   | 3,2   |
|          | Brine flow           | m <sup>3</sup> /h | 5,0     | 3,4    | 6,1    | 4,1   | 7,4   | 5,1     | 3,5    | 6,3    | 4,3   | 7,6   |

# Technical description Mega

## 8.2 Mega M

| M    | Radiator temp out/in | °C / °C           | 35 / 30 |        |        |       |       | 35 / 25 |        |        |       |       |
|------|----------------------|-------------------|---------|--------|--------|-------|-------|---------|--------|--------|-------|-------|
| RPM  | Brine temp in/out    | °C / °C           | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 |
| 1500 | Heating Capacity     | kW                | 10      | 11     | 11     | 12    | 13    | 10      | 11     | 12     | 13    | 13    |
|      | Cooling Capacity     | kW                | 7       | 8      | 9      | 10    | 11    | 7       | 8      | 9      | 10    | 11    |
|      | Input power          | kW                | 2,7     | 2,6    | 2,6    | 2,5   | 2,4   | 2,6     | 2,5    | 2,5    | 2,4   | 2,3   |
|      | COP                  | -                 | 3,6     | 4,0    | 4,4    | 5,0   | 5,4   | 3,8     | 4,3    | 4,7    | 5,3   | 5,8   |
|      | Radiator flow        | m <sup>3</sup> /h | 1,7     | 1,8    | 1,9    | 2,1   | 2,3   | 0,9     | 0,9    | 1,0    | 1,1   | 1,2   |
|      | Brine flow           | m <sup>3</sup> /h | 2,1     | 1,4    | 2,6    | 1,7   | 3,1   | 2,2     | 1,5    | 2,7    | 1,8   | 3,3   |
| 3000 | Heating Capacity     | kW                | 19      | 21     | 23     | 25    | 26    | 20      | 22     | 23     | 26    | 27    |
|      | Cooling Capacity     | kW                | 14      | 16     | 18     | 20    | 21    | 15      | 17     | 18     | 21    | 23    |
|      | Input power          | kW                | 5,0     | 4,9    | 4,9    | 4,8   | 4,8   | 4,8     | 4,8    | 4,8    | 4,7   | 4,6   |
|      | COP                  | -                 | 3,9     | 4,3    | 4,6    | 5,1   | 5,5   | 4,1     | 4,6    | 4,9    | 5,5   | 5,9   |
|      | Radiator flow        | m <sup>3</sup> /h | 3,4     | 3,7    | 3,9    | 4,3   | 4,5   | 1,7     | 1,9    | 2,0    | 2,2   | 2,4   |
|      | Brine flow           | m <sup>3</sup> /h | 4,3     | 2,9    | 5,2    | 3,5   | 6,3   | 4,5     | 3,0    | 5,5    | 3,7   | 6,6   |
| 4500 | Heating Capacity     | kW                | 29      | 32     | 34     | 37    | 39    | 30      | 32     | 34     | 38    | 41    |
|      | Cooling Capacity     | kW                | 21      | 24     | 26     | 29    | 31    | 22      | 25     | 27     | 31    | 33    |
|      | Input power          | kW                | 7,9     | 7,9    | 8,0    | 7,9   | 8,0   | 7,7     | 7,7    | 7,7    | 7,6   | 7,7   |
|      | COP                  | -                 | 3,6     | 4,0    | 4,2    | 4,7   | 4,9   | 3,8     | 4,2    | 4,5    | 5,0   | 5,3   |
|      | Radiator flow        | m <sup>3</sup> /h | 5,0     | 5,5    | 5,8    | 6,4   | 6,8   | 2,6     | 2,8    | 3,0    | 3,3   | 3,5   |
|      | Brine flow           | m <sup>3</sup> /h | 6,2     | 4,2    | 7,6    | 5,2   | 9,3   | 6,5     | 4,4    | 8,0    | 5,4   | 9,8   |
| 6000 | Heating Capacity     | kW                | 38      | 41     | 44     | 48    | 49    | 39      | 43     | 45     | 48    | 50    |
|      | Cooling Capacity     | kW                | 26      | 30     | 32     | 36    | 37    | 28      | 31     | 34     | 37    | 38    |
|      | Input power          | kW                | 11,5    | 11,6   | 11,8   | 11,8  | 12,2  | 11,2    | 11,2   | 11,4   | 11,2  | 11,5  |
|      | COP                  | -                 | 3,3     | 3,6    | 3,7    | 4,0   | 4,0   | 3,5     | 3,8    | 4,0    | 4,3   | 4,3   |
|      | Radiator flow        | m <sup>3</sup> /h | 6,6     | 7,2    | 7,6    | 8,3   | 8,5   | 3,4     | 3,7    | 3,9    | 4,2   | 4,3   |
|      | Brine flow           | m <sup>3</sup> /h | 8,0     | 5,4    | 9,8    | 6,5   | 11,2  | 8,4     | 5,7    | 10,2   | 6,7   | 11,4  |

# Technical description

## Mega

| M    | Radiator temp out/in | °C / °C           | 55 / 47 |        |        |       |       | 55 / 45 |        |        |       |       |
|------|----------------------|-------------------|---------|--------|--------|-------|-------|---------|--------|--------|-------|-------|
| RPM  | Brine temp in/out    | °C / °C           | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 |
| 1500 | Heating Capacity     | kW                | 9       | 10     | 11     | 12    | 12    | 9       | 10     | 11     | 12    | 12    |
|      | Cooling Capacity     | kW                | 5       | 6      | 6      | 7     | 8     | 5       | 6      | 7      | 8     | 8     |
|      | Input power          | kW                | 4,1     | 4,2    | 4,2    | 4,2   | 4,2   | 4,1     | 4,2    | 4,2    | 4,2   | 4,2   |
|      | COP                  | -                 | 2,3     | 2,4    | 2,5    | 2,7   | 2,9   | 2,3     | 2,5    | 2,6    | 2,8   | 3,0   |
|      | Radiator flow        | m <sup>3</sup> /h | 1,0     | 1,1    | 1,2    | 1,3   | 1,3   | 0,8     | 0,9    | 0,9    | 1,0   | 1,1   |
|      | Brine flow           | m <sup>3</sup> /h | 1,6     | 1,1    | 2,0    | 1,3   | 2,4   | 1,6     | 1,1    | 2,0    | 1,4   | 2,5   |
| 3000 | Heating Capacity     | kW                | 19      | 20     | 21     | 23    | 24    | 19      | 21     | 22     | 24    | 25    |
|      | Cooling Capacity     | kW                | 11      | 13     | 14     | 16    | 17    | 12      | 13     | 14     | 16    | 17    |
|      | Input power          | kW                | 7,4     | 7,5    | 7,5    | 7,5   | 7,5   | 7,4     | 7,4    | 7,4    | 7,4   | 7,4   |
|      | COP                  | -                 | 2,5     | 2,7    | 2,8    | 3,1   | 3,3   | 2,6     | 2,8    | 2,9    | 3,2   | 3,3   |
|      | Radiator flow        | m <sup>3</sup> /h | 2,0     | 2,2    | 2,3    | 2,5   | 2,7   | 1,7     | 1,8    | 1,9    | 2,1   | 2,2   |
|      | Brine flow           | m <sup>3</sup> /h | 3,4     | 2,3    | 4,1    | 2,8   | 5,0   | 3,5     | 2,4    | 4,3    | 2,9   | 5,2   |
| 4500 | Heating Capacity     | kW                | 28      | 30     | 32     | 35    | 37    | 28      | 31     | 32     | 35    | 37    |
|      | Cooling Capacity     | kW                | 17      | 19     | 20     | 23    | 25    | 17      | 19     | 21     | 24    | 26    |
|      | Input power          | kW                | 11,2    | 11,3   | 11,3   | 11,4  | 11,5  | 11,1    | 11,2   | 11,2   | 11,2  | 11,4  |
|      | COP                  | -                 | 2,5     | 2,7    | 2,8    | 3,0   | 3,2   | 2,5     | 2,7    | 2,9    | 3,1   | 3,3   |
|      | Radiator flow        | m <sup>3</sup> /h | 3,0     | 3,3    | 3,5    | 3,8   | 4,0   | 2,5     | 2,7    | 2,8    | 3,1   | 3,2   |
|      | Brine flow           | m <sup>3</sup> /h | 5,0     | 3,4    | 6,1    | 4,2   | 7,5   | 5,1     | 3,5    | 6,3    | 4,3   | 7,7   |
| 6000 | Heating Capacity     | kW                | -       | 40     | 42     | 46    | 48    | -       | 40     | 43     | 46    | 49    |
|      | Cooling Capacity     | kW                | -       | 24     | 26     | 30    | 32    | -       | 25     | 27     | 31    | 33    |
|      | Input power          | kW                | -       | 15,5   | 15,7   | 15,7  | 16,0  | -       | 15,4   | 15,6   | 15,5  | 15,9  |
|      | COP                  | -                 | -       | 2,6    | 2,7    | 2,9   | 3,0   | -       | 2,6    | 2,7    | 3,0   | 3,1   |
|      | Radiator flow        | m <sup>3</sup> /h | -       | 4,4    | 4,6    | 5,0   | 5,3   | -       | 3,5    | 3,7    | 4,0   | 4,3   |
|      | Brine flow           | m <sup>3</sup> /h | -       | 4,4    | 8,0    | 5,4   | 9,7   | -       | 4,5    | 8,2    | 5,6   | 10,0  |

## Technical description **Mega**

### 8.3 **Mega L**

| L    | Radiator temp out/in | °C / °C           | 35 / 30 |        |        |       |       | 35 / 25 |        |        |       |       |
|------|----------------------|-------------------|---------|--------|--------|-------|-------|---------|--------|--------|-------|-------|
| RPM  | Brine temp in/out    | °C / °C           | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 |
| 1500 | Heating Capacity     | kW                | 13      | 14     | 15     | 16    | 17    | 13      | 15     | 16     | 17    | 18    |
|      | Cooling Capacity     | kW                | 10      | 11     | 12     | 13    | 14    | 10      | 12     | 12     | 14    | 15    |
|      | Input power          | kW                | 3,2     | 3,2    | 3,2    | 3,1   | 3,1   | 3,1     | 3,1    | 3,1    | 3,1   | 3,0   |
|      | COP                  | -                 | 4,1     | 4,5    | 4,8    | 5,2   | 5,6   | 4,3     | 4,7    | 5,0    | 5,5   | 5,9   |
|      | Radiator flow        | m <sup>3</sup> /h | 2,3     | 2,5    | 2,6    | 2,8   | 3,0   | 1,2     | 1,3    | 1,3    | 1,5   | 1,5   |
|      | Brine flow           | m <sup>3</sup> /h | 2,9     | 2,0    | 3,5    | 2,4   | 4,2   | 3,0     | 2,0    | 3,7    | 2,4   | 4,3   |
| 3000 | Heating Capacity     | kW                | 26      | 28     | 30     | 33    | 35    | 26      | 29     | 31     | 34    | 36    |
|      | Cooling Capacity     | kW                | 19      | 22     | 23     | 26    | 28    | 20      | 23     | 25     | 28    | 30    |
|      | Input power          | kW                | 6,6     | 6,6    | 6,6    | 6,6   | 6,6   | 6,4     | 6,4    | 6,4    | 6,4   | 6,4   |
|      | COP                  | -                 | 3,9     | 4,3    | 4,6    | 5,0   | 5,3   | 4,1     | 4,6    | 4,8    | 5,4   | 5,6   |
|      | Radiator flow        | m <sup>3</sup> /h | 4,4     | 4,9    | 5,2    | 5,7   | 6,0   | 2,3     | 2,5    | 2,7    | 2,9   | 3,1   |
|      | Brine flow           | m <sup>3</sup> /h | 5,7     | 3,9    | 7,1    | 4,7   | 8,5   | 6,0     | 4,1    | 7,4    | 5,0   | 8,9   |
| 4500 | Heating Capacity     | kW                | 38      | 41     | 44     | 49    | 52    | 39      | 42     | 45     | 50    | 53    |
|      | Cooling Capacity     | kW                | 28      | 31     | 34     | 38    | 41    | 29      | 32     | 35     | 40    | 43    |
|      | Input power          | kW                | 10,4    | 10,4   | 10,6   | 10,6  | 11,0  | 10,0    | 10,1   | 10,3   | 10,2  | 10,6  |
|      | COP                  | -                 | 3,7     | 4,0    | 4,2    | 4,6   | 4,7   | 3,9     | 4,2    | 4,4    | 4,9   | 5,1   |
|      | Radiator flow        | m <sup>3</sup> /h | 6,6     | 7,2    | 7,7    | 8,4   | 9,0   | 3,4     | 3,7    | 3,9    | 4,3   | 4,6   |
|      | Brine flow           | m <sup>3</sup> /h | 8,5     | 5,7    | 10,2   | 6,9   | 12,5  | 8,8     | 5,9    | 10,6   | 7,2   | 13,0  |
| 6000 | Heating Capacity     | kW                | 51      | 55     | 58     | 64    | 68    | 52      | 56     | 60     | 65    | 70    |
|      | Cooling Capacity     | kW                | 36      | 40     | 43     | 49    | 52    | 37      | 42     | 45     | 51    | 55    |
|      | Input power          | kW                | 14,6    | 14,7   | 15,3   | 15,3  | 16,3  | 14,1    | 14,2   | 14,7   | 14,6  | 15,5  |
|      | COP                  | -                 | 3,5     | 3,7    | 3,8    | 4,2   | 4,2   | 3,7     | 4,0    | 4,1    | 4,5   | 4,5   |
|      | Radiator flow        | m <sup>3</sup> /h | 8,8     | 9,6    | 10,1   | 11,1  | 11,8  | 4,5     | 4,9    | 5,2    | 5,7   | 6,1   |
|      | Brine flow           | m <sup>3</sup> /h | 11,1    | 7,4    | 13,3   | 8,9   | 16,1  | 11,5    | 7,7    | 13,8   | 9,3   | 16,8  |

# Technical description

## Mega

| L    | Radiator temp out/in | °C / °C           | 55 / 47 |        |        |       |       | 55 / 45 |        |        |       |       |
|------|----------------------|-------------------|---------|--------|--------|-------|-------|---------|--------|--------|-------|-------|
| RPM  | Brine temp in/out    | °C / °C           | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 |
| 1500 | Heating Capacity     | kW                | 13      | 14     | 14     | 16    | 16    | 13      | 14     | 15     | 16    | 17    |
|      | Cooling Capacity     | kW                | 8       | 9      | 9      | 11    | 11    | 8       | 9      | 10     | 11    | 12    |
|      | Input power          | kW                | 5,1     | 5,1    | 5,1    | 5,1   | 5,1   | 5,0     | 5,0    | 5,0    | 5,0   | 5,0   |
|      | COP                  | -                 | 2,5     | 2,7    | 2,8    | 3,1   | 3,2   | 2,6     | 2,8    | 2,9    | 3,2   | 3,3   |
|      | Radiator flow        | m <sup>3</sup> /h | 1,4     | 1,5    | 1,6    | 1,7   | 1,8   | 1,1     | 1,2    | 1,3    | 1,4   | 1,5   |
|      | Brine flow           | m <sup>3</sup> /h | 2,3     | 1,6    | 2,8    | 1,9   | 3,4   | 2,4     | 1,6    | 2,9    | 2,0   | 3,5   |
| 3000 | Heating Capacity     | kW                | 24      | 27     | 28     | 31    | 32    | 25      | 27     | 29     | 31    | 33    |
|      | Cooling Capacity     | kW                | 15      | 17     | 18     | 21    | 22    | 15      | 17     | 19     | 21    | 23    |
|      | Input power          | kW                | 9,8     | 9,8    | 9,9    | 9,9   | 10,0  | 9,7     | 9,7    | 9,8    | 9,8   | 9,9   |
|      | COP                  | -                 | 2,5     | 2,7    | 2,9    | 3,1   | 3,2   | 2,6     | 2,8    | 2,9    | 3,2   | 3,3   |
|      | Radiator flow        | m <sup>3</sup> /h | 2,7     | 2,9    | 3,1    | 3,3   | 3,5   | 2,2     | 2,4    | 2,5    | 2,7   | 2,9   |
|      | Brine flow           | m <sup>3</sup> /h | 4,5     | 3,1    | 5,6    | 3,8   | 6,8   | 4,7     | 3,2    | 5,8    | 3,9   | 7,0   |
| 4500 | Heating Capacity     | kW                | 37      | 40     | 43     | 46    | 48    | 38      | 41     | 43     | 47    | 49    |
|      | Cooling Capacity     | kW                | 22      | 26     | 28     | 31    | 33    | 23      | 26     | 28     | 32    | 34    |
|      | Input power          | kW                | 14,8    | 14,9   | 15,0   | 15,1  | 15,3  | 14,6    | 14,7   | 14,9   | 14,9  | 15,2  |
|      | COP                  | -                 | 2,5     | 2,7    | 2,8    | 3,1   | 3,2   | 2,6     | 2,8    | 2,9    | 3,1   | 3,3   |
|      | Radiator flow        | m <sup>3</sup> /h | 4,1     | 4,4    | 4,6    | 5,0   | 5,3   | 3,3     | 3,6    | 3,8    | 4,1   | 4,3   |
|      | Brine flow           | m <sup>3</sup> /h | 7,0     | 4,7    | 8,5    | 5,7   | 10,2  | 7,2     | 4,9    | 8,7    | 5,9   | 10,5  |
| 6000 | Heating Capacity     | kW                | 50      | 54     | 57     | 61    | 64    | 51      | 55     | 58     | 62    | 65    |
|      | Cooling Capacity     | kW                | 30      | 34     | 36     | 41    | 43    | 31      | 35     | 37     | 42    | 44    |
|      | Input power          | kW                | 20,0    | 20,2   | 20,6   | 20,7  | 21,2  | 19,8    | 20,0   | 20,3   | 20,4  | 20,9  |
|      | COP                  | -                 | 2,5     | 2,7    | 2,8    | 3,0   | 3,0   | 2,6     | 2,7    | 2,8    | 3,0   | 3,1   |
|      | Radiator flow        | m <sup>3</sup> /h | 5,5     | 5,9    | 6,2    | 6,7   | 7,0   | 4,4     | 4,8    | 5,0    | 5,4   | 5,7   |
|      | Brine flow           | m <sup>3</sup> /h | 9,5     | 6,4    | 11,4   | 7,6   | 13,5  | 9,7     | 6,5    | 11,6   | 7,7   | 13,8  |

# Technical description Mega

## 8.4 Mega XL

| XL   | Radiator temp out/in | °C / °C           | 35 / 30 |        |        |       |       | 35 / 25 |        |        |       |       |
|------|----------------------|-------------------|---------|--------|--------|-------|-------|---------|--------|--------|-------|-------|
| RPM  | Brine temp in/out    | °C / °C           | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 |
| 1500 | Heating Capacity     | kW                | 19      | 21     | 22     | 24    | 26    | 19      | 21     | 23     | 25    | 26    |
|      | Cooling Capacity     | kW                | 14      | 16     | 17     | 19    | 21    | 15      | 17     | 18     | 20    | 22    |
|      | Input power          | kW                | 4,9     | 4,8    | 4,8    | 4,8   | 4,8   | 4,8     | 4,7    | 4,7    | 4,7   | 4,7   |
|      | COP                  | -                 | 3,9     | 4,3    | 4,6    | 5,1   | 5,4   | 4,1     | 4,5    | 4,8    | 5,4   | 5,7   |
|      | Radiator flow        | m <sup>3</sup> /h | 3,3     | 3,6    | 3,8    | 4,2   | 4,5   | 1,7     | 1,9    | 2,0    | 2,2   | 2,3   |
|      | Brine flow           | m <sup>3</sup> /h | 4,1     | 2,8    | 5,1    | 3,5   | 6,2   | 4,3     | 3,0    | 5,4    | 3,6   | 6,4   |
| 3000 | Heating Capacity     | kW                | 37      | 41     | 44     | 48    | 51    | 38      | 42     | 45     | 50    | 52    |
|      | Cooling Capacity     | kW                | 27      | 31     | 34     | 38    | 41    | 29      | 33     | 36     | 40    | 42    |
|      | Input power          | kW                | 9,4     | 9,4    | 9,6    | 9,6   | 9,8   | 9,1     | 9,1    | 9,3    | 9,2   | 9,4   |
|      | COP                  | -                 | 3,9     | 4,3    | 4,5    | 5,0   | 5,2   | 4,1     | 4,6    | 4,8    | 5,4   | 5,5   |
|      | Radiator flow        | m <sup>3</sup> /h | 6,4     | 7,1    | 7,5    | 8,3   | 8,9   | 3,3     | 3,6    | 3,9    | 4,3   | 4,5   |
|      | Brine flow           | m <sup>3</sup> /h | 8,3     | 5,7    | 10,3   | 7,0   | 12,6  | 8,6     | 5,9    | 10,7   | 7,3   | 12,8  |
| 4500 | Heating Capacity     | kW                | 55      | 60     | 64     | 70    | 74    | 56      | 62     | 66     | 73    | 76    |
|      | Cooling Capacity     | kW                | 40      | 46     | 48     | 55    | 58    | 42      | 48     | 52     | 58    | 60    |
|      | Input power          | kW                | 14,7    | 14,9   | 15,8   | 15,8  | 16,7  | 14,1    | 14,2   | 14,8   | 14,7  | 15,5  |
|      | COP                  | -                 | 3,7     | 4,1    | 4,1    | 4,5   | 4,4   | 4,0     | 4,4    | 4,5    | 5,0   | 4,9   |
|      | Radiator flow        | m <sup>3</sup> /h | 9,5     | 10,5   | 11,2   | 12,3  | 12,9  | 4,9     | 5,4    | 5,7    | 6,3   | 6,6   |
|      | Brine flow           | m <sup>3</sup> /h | 12,4    | 8,4    | 15,1   | 10,2  | 18,1  | 12,9    | 8,7    | 15,8   | 10,6  | 18,6  |
| 6000 | Heating Capacity     | kW                | 74      | 80     | 85     | 92    | 96    | 77      | 83     | 88     | 95    | 99    |
|      | Cooling Capacity     | kW                | 53      | 59     | 62     | 69    | 71    | 57      | 63     | 66     | 74    | 76    |
|      | Input power          | kW                | 21,4    | 21,6   | 23,0   | 22,8  | 25,0  | 20,2    | 20,1   | 21,5   | 21,0  | 23,2  |
|      | COP                  | -                 | 3,5     | 3,7    | 3,7    | 4,0   | 3,9   | 3,8     | 4,1    | 4,1    | 4,5   | 4,3   |
|      | Radiator flow        | m <sup>3</sup> /h | 12,9    | 14,0   | 14,8   | 16,0  | 16,8  | 6,7     | 7,2    | 7,6    | 8,2   | 8,6   |
|      | Brine flow           | m <sup>3</sup> /h | 16,6    | 11,0   | 19,6   | 13,0  | 23,0  | 17,5    | 11,6   | 20,6   | 13,5  | 23,8  |

# Technical description

## Mega

| XL   | Radiator temp out/in | °C / °C           | 55 / 47 |        |        |       |       | 55 / 45 |        |        |       |       |
|------|----------------------|-------------------|---------|--------|--------|-------|-------|---------|--------|--------|-------|-------|
| RPM  | Brine temp in/out    | °C / °C           | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 | -5 / -8 | 0 / -5 | 0 / -3 | 5 / 0 | 5 / 2 |
| 1500 | Heating Capacity     | kW                | 18      | 20     | 21     | 23    | 24    | 18      | 20     | 21     | 23    | 25    |
|      | Cooling Capacity     | kW                | 11      | 12     | 14     | 15    | 17    | 11      | 13     | 14     | 16    | 17    |
|      | Input power          | kW                | 7,4     | 7,4    | 7,5    | 7,5   | 7,5   | 7,3     | 7,4    | 7,4    | 7,4   | 7,5   |
|      | COP                  | -                 | 2,5     | 2,7    | 2,8    | 3,1   | 3,2   | 2,5     | 2,7    | 2,9    | 3,1   | 3,3   |
|      | Radiator flow        | m <sup>3</sup> /h | 2,0     | 2,2    | 2,3    | 2,5   | 2,6   | 1,6     | 1,8    | 1,9    | 2,0   | 2,1   |
|      | Brine flow           | m <sup>3</sup> /h | 3,3     | 2,3    | 4,1    | 2,8   | 5,0   | 3,4     | 2,3    | 4,2    | 2,9   | 5,1   |
| 3000 | Heating Capacity     | kW                | 36      | 39     | 41     | 45    | 48    | 36      | 40     | 42     | 46    | 48    |
|      | Cooling Capacity     | kW                | 22      | 25     | 28     | 31    | 33    | 23      | 26     | 28     | 32    | 34    |
|      | Input power          | kW                | 13,6    | 13,7   | 13,8   | 13,9  | 14,1  | 13,5    | 13,5   | 13,7   | 13,8  | 14,0  |
|      | COP                  | -                 | 2,6     | 2,9    | 3,0    | 3,2   | 3,4   | 2,7     | 2,9    | 3,1    | 3,3   | 3,5   |
|      | Radiator flow        | m <sup>3</sup> /h | 3,9     | 4,3    | 4,5    | 4,9   | 5,2   | 3,2     | 3,5    | 3,7    | 4,0   | 4,2   |
|      | Brine flow           | m <sup>3</sup> /h | 6,9     | 4,7    | 8,4    | 5,7   | 10,2  | 7,0     | 4,8    | 8,7    | 5,9   | 10,5  |
| 4500 | Heating Capacity     | kW                | 53      | 58     | 61     | 67    | 70    | 54      | 59     | 62     | 68    | 71    |
|      | Cooling Capacity     | kW                | 33      | 37     | 40     | 45    | 49    | 34      | 38     | 41     | 47    | 50    |
|      | Input power          | kW                | 20,5    | 20,6   | 21,0   | 21,1  | 21,6  | 20,3    | 20,4   | 20,7   | 20,8  | 21,4  |
|      | COP                  | -                 | 2,6     | 2,8    | 2,9    | 3,2   | 3,2   | 2,7     | 2,9    | 3,0    | 3,2   | 3,3   |
|      | Radiator flow        | m <sup>3</sup> /h | 5,8     | 6,3    | 6,7    | 7,3   | 7,7   | 4,7     | 5,1    | 5,4    | 5,9   | 6,2   |
|      | Brine flow           | m <sup>3</sup> /h | 10,1    | 6,9    | 12,4   | 8,4   | 15,0  | 10,4    | 7,1    | 12,7   | 8,6   | 15,4  |
| 6000 | Heating Capacity     | kW                | -       | 76     | 81     | 88    | 92    | -       | 77     | 82     | 89    | 93    |
|      | Cooling Capacity     | kW                | -       | 48     | 51     | 58    | 62    | -       | 49     | 53     | 60    | 63    |
|      | Input power          | kW                | -       | 28,4   | 29,1   | 29,2  | 30,4  | -       | 28,0   | 28,7   | 28,8  | 30,1  |
|      | COP                  | -                 | -       | 2,7    | 2,8    | 3,0   | 3,0   | -       | 2,8    | 2,8    | 3,1   | 3,1   |
|      | Radiator flow        | m <sup>3</sup> /h | -       | 8,3    | 8,8    | 9,6   | 10,1  | -       | 6,8    | 7,1    | 7,7   | 8,1   |
|      | Brine flow           | m <sup>3</sup> /h | -       | 8,9    | 16,1   | 10,9  | 19,4  | -       | 9,2    | 16,5   | 11,1  | 19,9  |



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