# Indirect SmartHexa

## 1. General Description


Indirect SmartHexa is equipped with an advanced electronic control system designed to maximize efficiency while prioritizing domestic hot water (DHW) production.

The unit continuously monitors temperature, pressure, and flow at multiple points to maintain optimum operating conditions. With stainless steel heat exchangers and piping, the system provides high durability, long service life, and reliable performance for both domestic hot water and space heating applications.

Proportional motorized control valves and advanced control algorithms ensure precise temperature management and stable comfort levels under varying demand conditions. Optional weather compensation control enables rapid adaptation to changing ambient conditions, further improving overall energy efficiency.

The electronic control system also offers smart features such as easy PC setup and commissioning, district return temperature control, advanced anti-legionella function, and keep-warm mode for reduced waiting time and enhanced comfort.

SmartHexa Indirect transmits all operating data to the BLES system, enabling remote monitoring, control, and system optimization.

## Features

- Advanced electronic control system with DHW priority function
- Dual stainless steel heat exchangers for hygienic and efficient operation
- Instantaneous domestic hot water production
- Precise temperature control with proportional motorized valves
- Continuous monitoring of temperature, pressure, and flow values
- High energy efficiency with intelligent control algorithms



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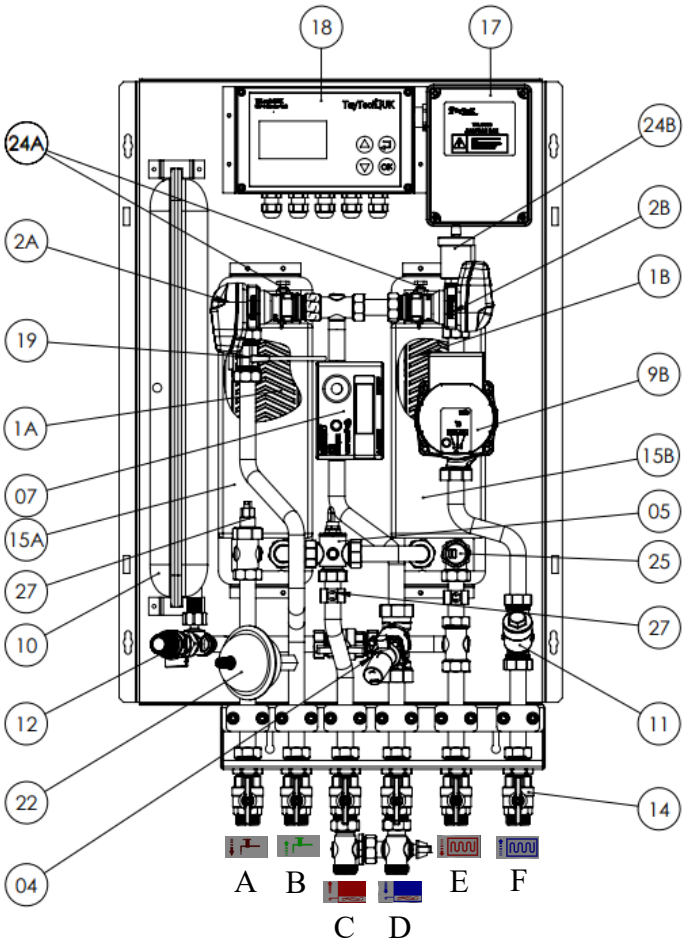
# Indirect SmartHexa

## 2. Hydraulic Review

### 2.1 Component List




1A DHW Heat Exchanger
1B Heat Exchanger SH
2A Motorized Valve DHW
2B Motorized Valve SH
5 District Heating Strainer
7 Heat Meter
4A Differantial Pressure Valve
9B Space Heating Circulation Pump
10 Expansion Tank
11 SH Strainer
12 Safety Valve
14 Butterfly Valve
15A EPP Isolation DHW
15B EPP Isolation SH
17 Junction Box
18 Control Box
19 Flow Sensor
22 Water Hammer Arrester
24A Manual Air Vent
24B Automatic Air Vent
25 Pressure Sensor
27.1 DHW Temperature Sensor
27.2 DHW Return Temperature Sensor
27.3 District Heating Temperature Sensor
27.4 SH Return Temperature Sensor
27.5 SH Temperature Sensor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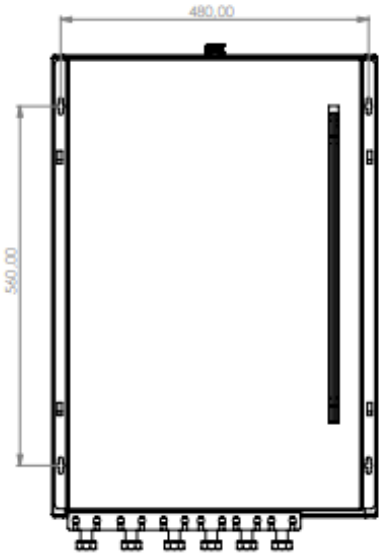
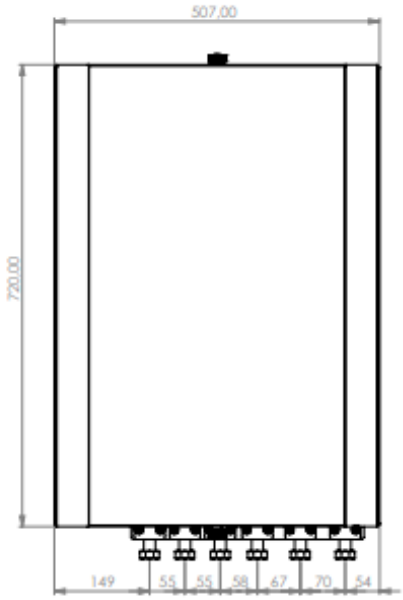
# Indirect SmartHexa

## 2. Dimensions

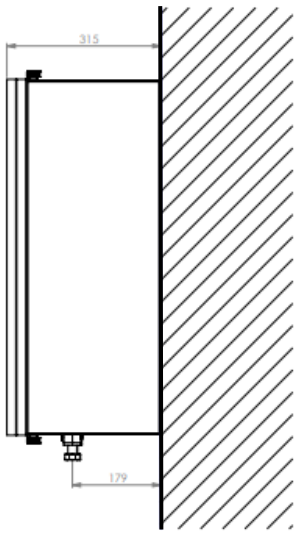
### Back View



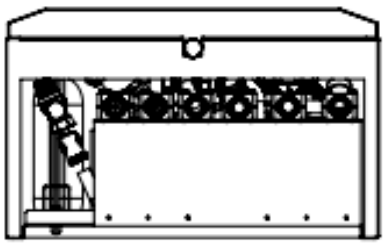

### Front View




### Wall Mounted View




### Bottom View





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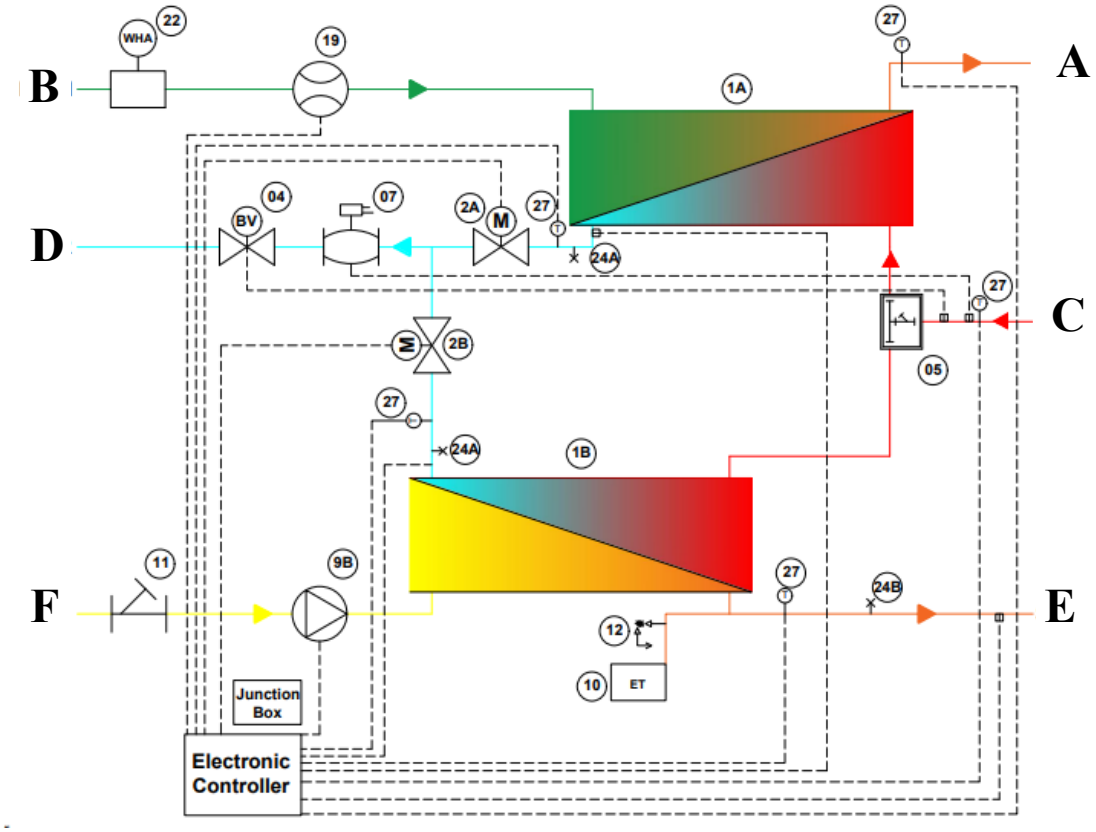
## 2. Hydraulic Review

### 2.2 Flow Diagram




A — DHW – Domestic Hot Water
B — DCWI – Domestic Cold Water Inlet
C — DHS – District Heating Supply
D — DHR – District Heating Return
E — SHS – Space Heating Supply
F — SHR – Space Heating Return



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# Indirect SmartHexa

## 3. Technical Specifications

| Description | Data |
|---|---|
| Nominal primary supply temperature | 70°C |
| Maximum primary supply temperature | 90°C |
| Minimum primary supply temperature | 50°C * |
| Nominal DHW supply temperature | 50°C |
| DHW Set Range | 45°C to 85°C |
| Return Temp Limit Range | 35°C to 65°C |
| CH Limit Range | 30°C to 80°C |
| Primary connections | Female / 18mm |
| Mains & DHW connections | Female / 18mm |
| Central heating connections | Female / 18mm |
| Pressure relief | 15mm |
| Maximal primary differential pressure (without dP regulator) | 450kPa |
| Pressure class DH circuit | PN16 |
| Pressure class CH circuit (3 bar safety valve) | PN3 |
| Pressure class DHW circuit | PN10 |
| SH Maximum working pressure | 2.5 Bar |
| Casing width | 507mm |
| Casing height | 720mm |
| Casing depth | 315mm |
| Casing Material | Metal case with Insulation |
| Weight | 35 |
| Electrical supply info | 230V 50Hz |
| Fuse ratings | 3 Amp |
| Sensor DHW | NTC 10k ohm @ 25°C |
| Functions | Keep Warm<br>Legionella<br>Pump Exercise<br>Valve Exercise<br>Pre-pay Shut Off<br>Hot Water Priority<br>Primary Return Temperature |

* Minimum required DH supply temperature is DHW setpoint + 5°C with a minimum of 55°C.

** Unit weight may vary depending on the optional components built into the unit.



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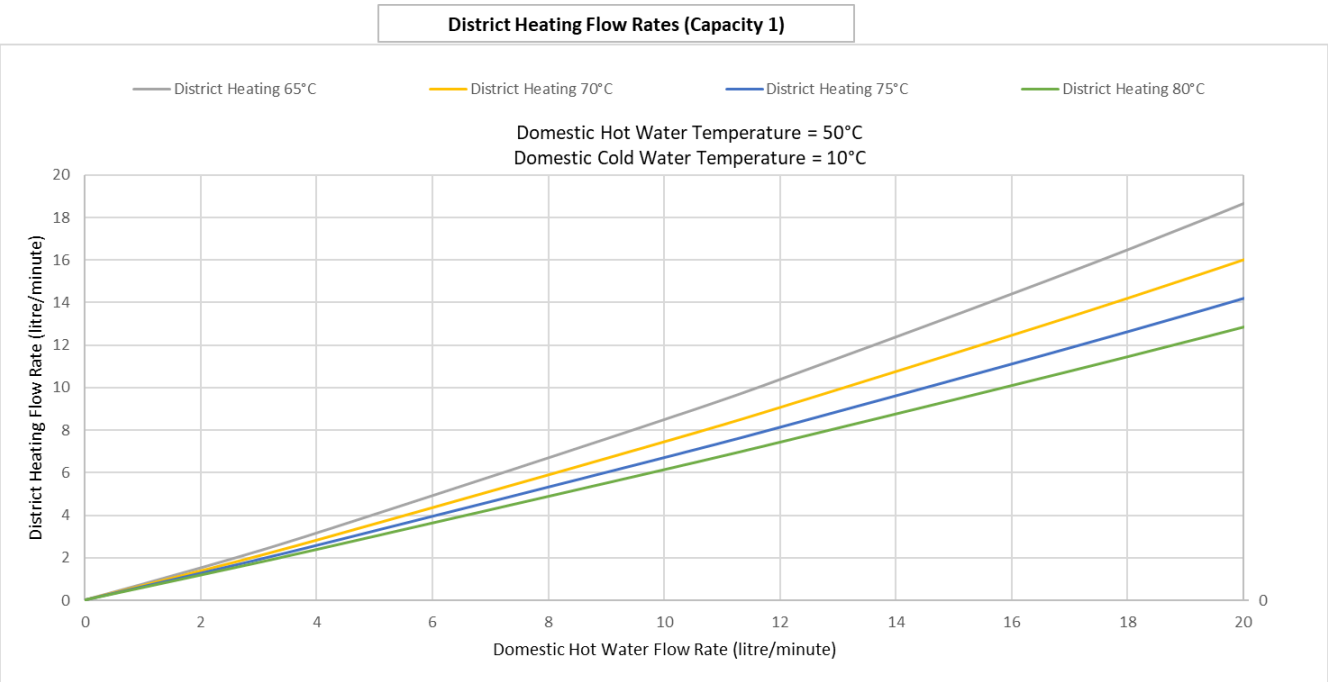
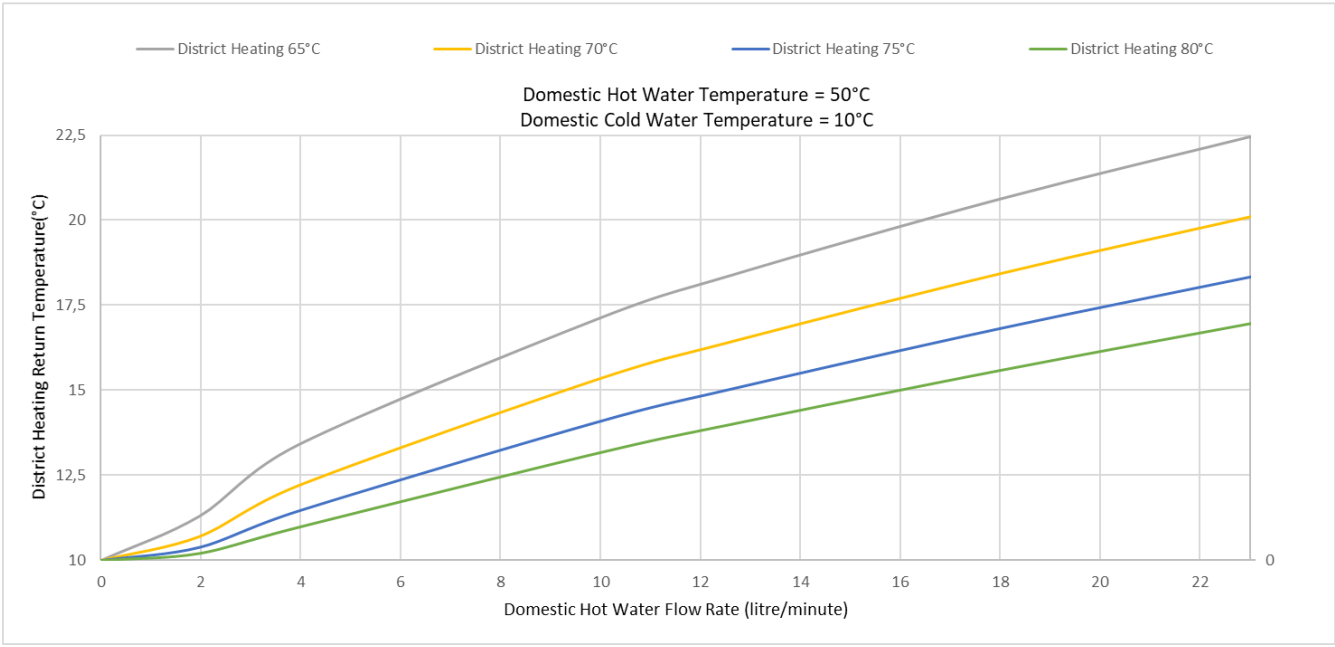
# Indirect SmartHexa

## 4. Performance Curves

### 4.1 District Heating Flow Rates (Capacity 1)




### 4.2 District Heating Return Temperatures (Capacity 1)



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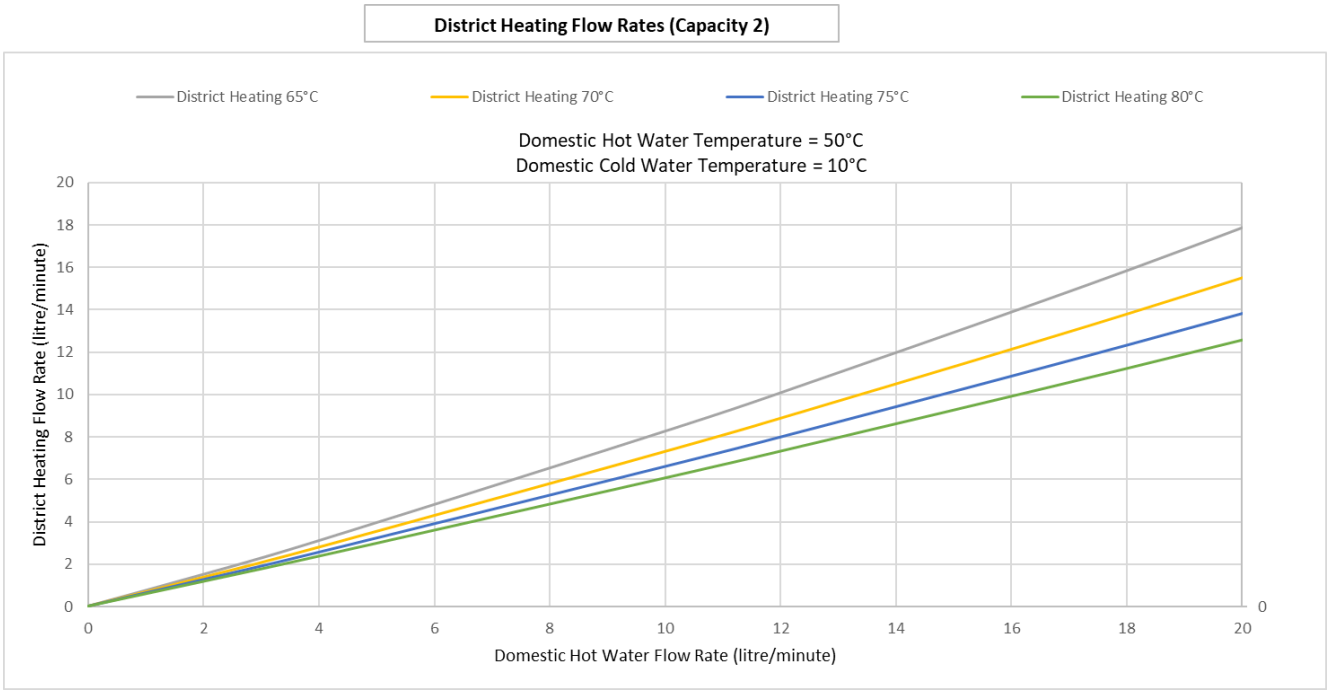
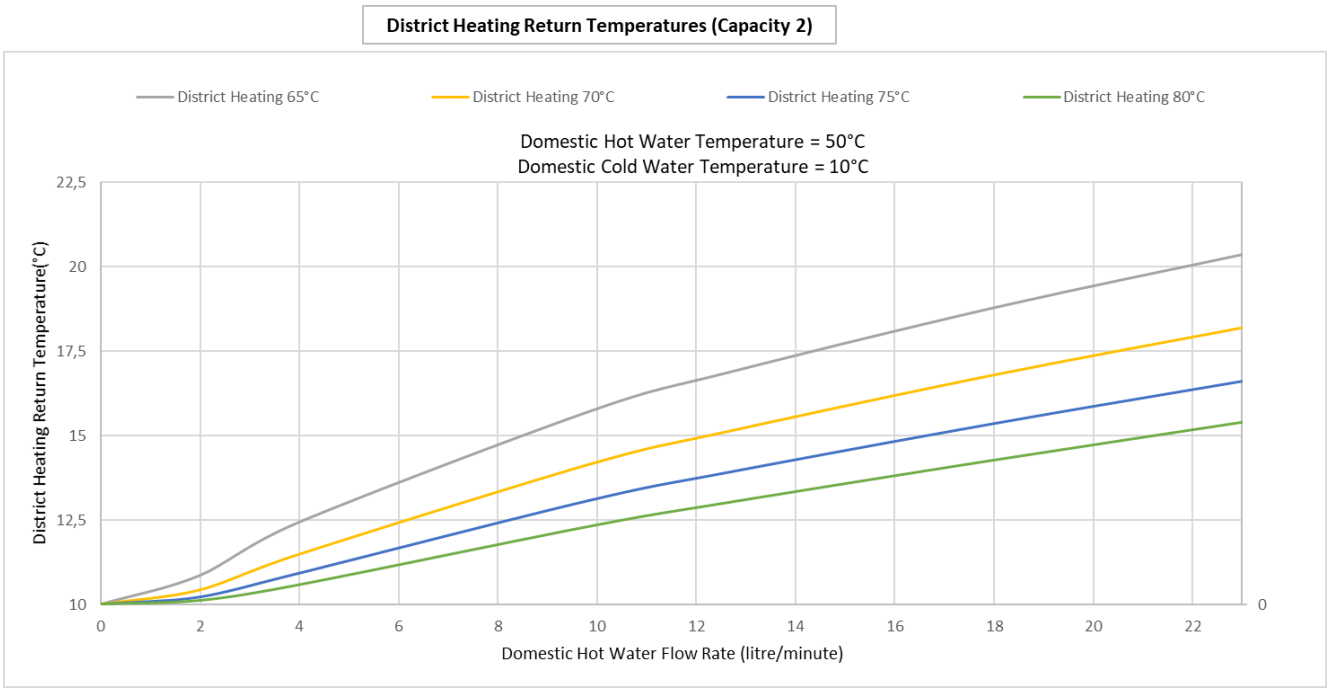
## 4. Performance Curves

### 4.3 District Heating Flow Rates (Capacity 2)




### 4.4 District Heating Return Temperatures (Capacity 2)



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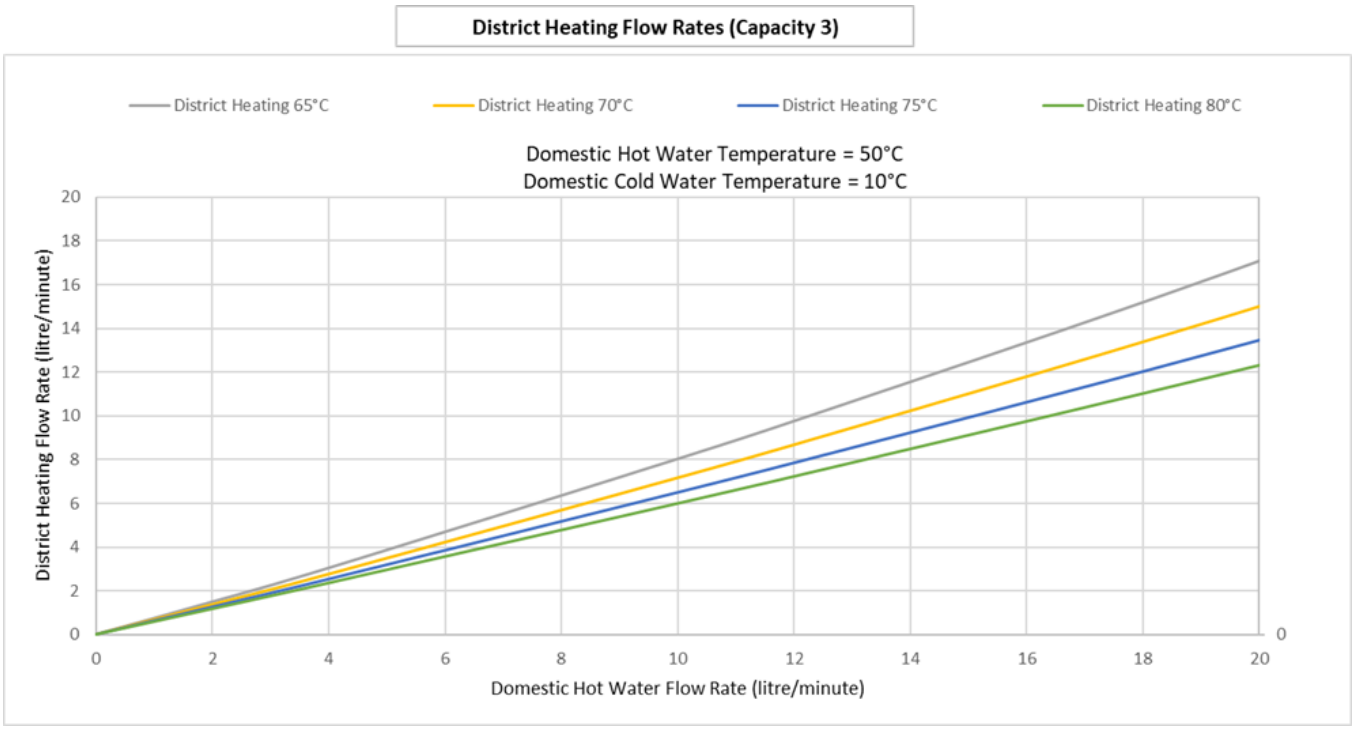
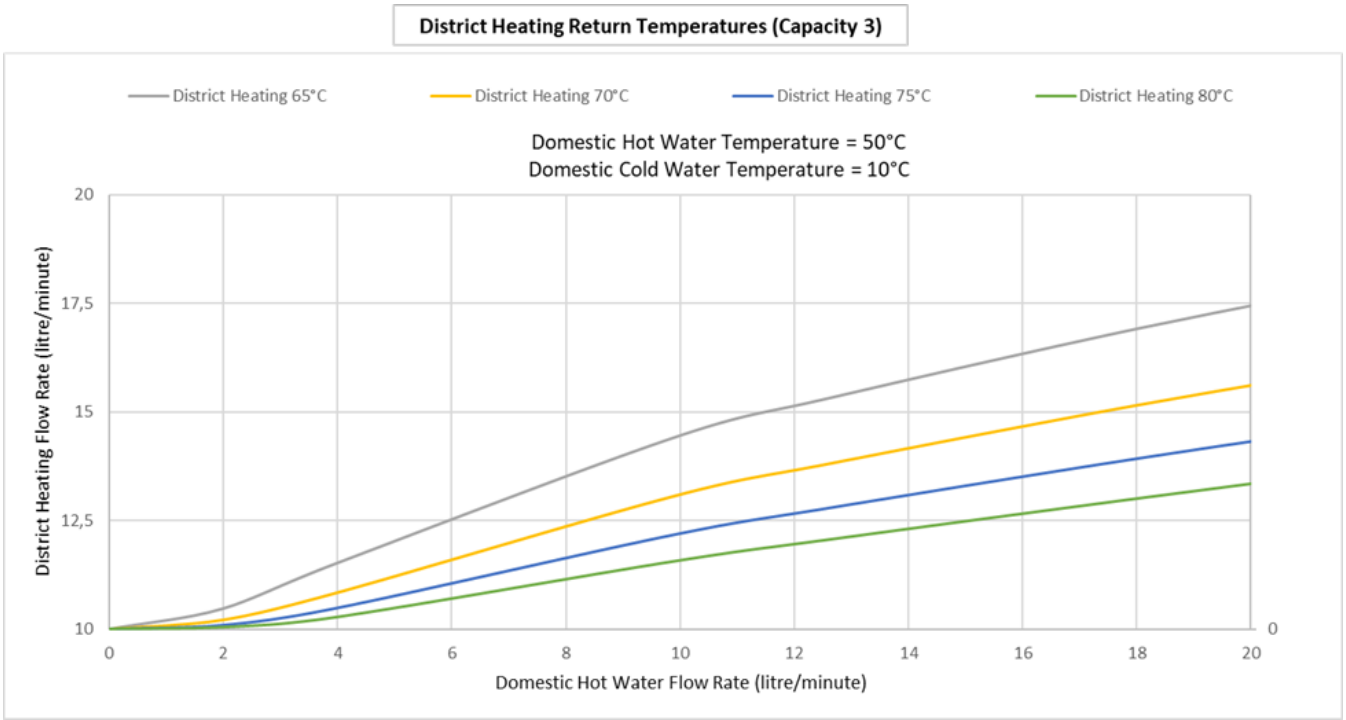
## 4. Performance Curves

### 4.5 District Heating Flow Rates (Capacity 3)




### 4.6 District Heating Return Temperatures (Capacity 3)



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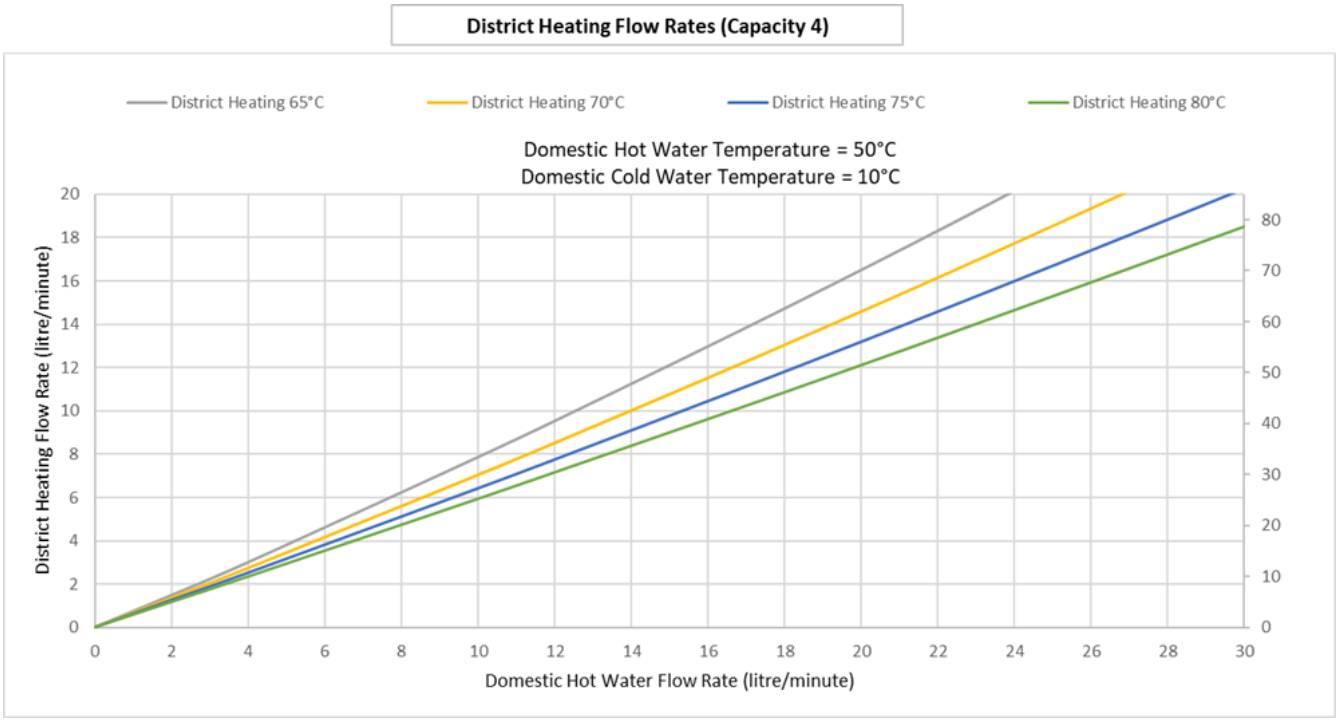
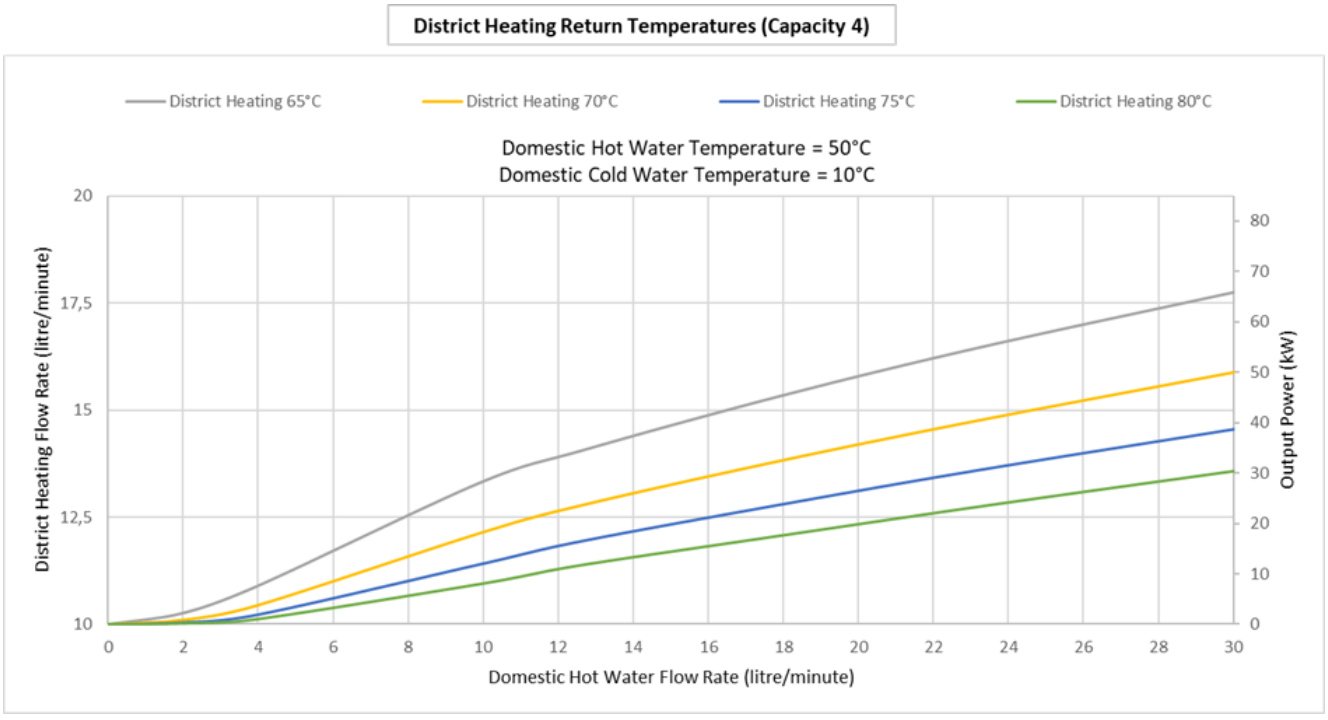
## 4. Performance Curves

### 4.7 District Heating Flow Rates (Capacity 4)




### 4.8 District Heating Return Temperatures (Capacity 4)



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## 5. Performance Table

### 5.1 Capacity 1

| HIU Performance of DHW Capacity 1 | | | | | |
|---|---|---|---|---|---|
| **Hot Water Output** | **Primary Flow °C** | **Capacity (kW)** | **DHW Flow Rate (l/m)** | **Primary Return °C** | **Primary Flow Rate (l/min)** |
| **10-50°C** | 55 | 5,5 | 1,983 | 15,36 | 2,021 |
| | | 11 | 3,966 | 19,29 | 4,487 |
| | | 27,5 | 9,915 | 24,54 | 13,15 |
| | | 35 | 12,62 | 26,25 | 17,73 |
| | 60 | 5,5 | 1,983 | 12,53 | 1,692 |
| | | 11 | 3,966 | 15,47 | 3,608 |
| | | 27,5 | 9,915 | 19,78 | 9,986 |
| | | 35 | 12,62 | 21,27 | 13,2 |
| | 65 | 5,5 | 1,983 | 11,31 | 1,5 |
| | | 11 | 3,966 | 13,41 | 3,122 |
| | | 27,5 | 9,915 | 17,08 | 8,404 |
| | | 35 | 12,62 | 18,38 | 10,99 |
| | 70 | 5,5 | 1,983 | 10,71 | 1,362 |
| | | 11 | 3,966 | 12,21 | 2,795 |
| | | 27,5 | 9,915 | 15,31 | 7,384 |
| | | 35 | 12,62 | 16,43 | 9,594 |
| | 75 | 5,5 | 1,983 | 10,39 | 1,254 |
| | | 11 | 3,966 | 11,46 | 2,55 |
| | | 27,5 | 9,915 | 14,06 | 6,646 |
| | | 35 | 12,62 | 15,04 | 8,596 |
| | 80 | 5,5 | 1,983 | 10,21 | 1,164 |
| | | 11 | 3,966 | 10,98 | 2,354 |
| | | 27,5 | 9,915 | 13,14 | 6,076 |
| | | 35 | 12,62 | 14 | 7,833 |



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## 5. Performance Table

### 5.2 Capacity 2

| HIU Performance of DHW Capacity 2 | | | | | |
|---|---|---|---|---|---|
| Hot Water Output | Primary Flow °C | Capacity (kW) | DHW Flow Rate (l/m) | Primary Return °C | Primary Flow Rate (l/min) |
| 10-50°C | 55 | 5,5 | 1,983 | 14,18 | 1,963 |
| | | 11 | 3,966 | 17,75 | 4,301 |
| | | 27,5 | 9,915 | 22,72 | 12,41 |
| | | 35 | 12,62 | 24,27 | 16,59 |
| | | 50 | 18,03 | 26,83 | 25,86 |
| | 60 | 5,5 | 1,983 | 11,8 | 1,667 |
| | | 11 | 3,966 | 14,13 | 3,503 |
| | | 27,5 | 9,915 | 18,23 | 9,616 |
| | | 35 | 12,62 | 19,54 | 12,63 |
| | | 50 | 18,03 | 21,77 | 19,1 |
| | 65 | 5,5 | 1,983 | 10,85 | 1,488 |
| | | 11 | 3,966 | 12,42 | 3,063 |
| | | 27,5 | 9,915 | 15,76 | 8,178 |
| | | 35 | 12,62 | 16,87 | 10,65 |
| | | 50 | 18,03 | 18,81 | 15,85 |
| | 70 | 5,5 | 1,983 | 10,42 | 1,356 |
| | | 11 | 3,966 | 11,47 | 2,76 |
| | | 27,5 | 9,915 | 14,18 | 7,235 |
| | | 35 | 12,62 | 15,12 | 9,365 |
| | | 50 | 18,03 | 16,81 | 13,8 |
| | 75 | 5,5 | 1,983 | 10,21 | 1,25 |
| | | 11 | 3,966 | 10,91 | 2,528 |
| | | 27,5 | 9,915 | 13,1 | 6,543 |
| | | 35 | 12,62 | 13,9 | 8,435 |
| | | 50 | 18,03 | 15,36 | 12,35 |
| | 80 | 5,5 | 1,983 | 10,11 | 1,163 |
| | | 11 | 3,966 | 10,57 | 2,34 |
| | | 27,5 | 9,915 | 12,33 | 6,003 |
| | | 35 | 12,62 | 13,01 | 7,717 |
| | | 50 | 18,03 | 14,28 | 11,24 |



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## 5. Performance Table

### 5.3 Capacity 3

| HIU Performance of DHW Capacity 3 | | | | | |
|---|---|---|---|---|---|
| Hot Water Output | Primary Flow °C | Capacity (kW) | DHW Flow Rate (l/m) | Primary Return °C | Primary Flow Rate (l/min) |
| 10-50°C | 55 | 5,5 | 1,983 | 13,02 | 1,908 |
| | | 11 | 3,966 | 15,83 | 4,091 |
| | | 27,5 | 9,915 | 20,72 | 11,69 |
| | | 35 | 12,62 | 22,08 | 15,49 |
| | | 50 | 18,03 | 24,35 | 23,76 |
| | | 65 | 23,43 | 26,22 | 32,89 |
| | 60 | 5,5 | 1,983 | 11,14 | 1,644 |
| | | 11 | 3,966 | 12,83 | 3,406 |
| | | 27,5 | 9,915 | 16,6 | 9,255 |
| | | 35 | 12,62 | 17,7 | 12,08 |
| | | 50 | 18,03 | 19,59 | 18,07 |
| | | 65 | 23,43 | 21,22 | 24,48 |
| | 65 | 5,5 | 1,983 | 10,47 | 1,477 |
| | | 11 | 3,966 | 11,51 | 3,012 |
| | | 27,5 | 9,915 | 14,42 | 7,961 |
| | | 35 | 12,62 | 15,32 | 10,32 |
| | | 50 | 18,03 | 16,92 | 15,23 |
| | | 65 | 23,43 | 18,32 | 20,39 |
| | 70 | 5,5 | 1,983 | 10,21 | 1,351 |
| | | 11 | 3,966 | 10,83 | 2,73 |
| | | 27,5 | 9,915 | 13,07 | 7,093 |
| | | 35 | 12,62 | 13,81 | 9,147 |
| | | 50 | 18,03 | 15,16 | 13,39 |
| | | 65 | 23,43 | 16,37 | 17,8 |
| | 75 | 5,5 | 1,983 | 10,09 | 1,248 |
| | | 11 | 3,966 | 10,48 | 2,511 |
| | | 27,5 | 9,915 | 12,18 | 6,447 |
| | | 35 | 12,62 | 12,79 | 8,285 |
| | | 50 | 18,03 | 13,93 | 12,06 |
| | | 65 | 23,43 | 14,98 | 15,95 |
| | 80 | 5,5 | 1,983 | 10,04 | 1,161 |
| | | 11 | 3,966 | 10,27 | 2,33 |
| | | 27,5 | 9,915 | 11,57 | 5,936 |
| | | 35 | 12,62 | 12,07 | 7,61 |
| | | 50 | 18,03 | 13,02 | 11,03 |
| | | 65 | 23,43 | 13,94 | 14,53 |



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## 5. Performance Table

### 5.4 Capacity 4

| HIU Performance of DHW Capacity 4 | | | | | |
|---|---|---|---|---|---|
| Hot Water Output | Primary Flow °C | Capacity (kW) | DHW Flow Rate (l/m) | Primary Return °C | Primary Flow Rate (l/min) |
| 10-50°C | 55 | 5,5 | 1,983 | 12,12 | 1,869 |
| | | 11 | 3,966 | 14,29 | 3,936 |
| | | 27,5 | 9,915 | 18,99 | 11,12 |
| | | 35 | 12,62 | 20,17 | 14,64 |
| | | 50 | 18,03 | 22,16 | 22,18 |
| | | 65 | 23,43 | 23,8 | 30,35 |
| | | 85 | 30,65 | 25,67 | 42,21 |
| | 60 | 5,5 | 1,983 | 10,7 | 1,629 |
| | | 11 | 3,966 | 11,87 | 3,338 |
| | | 27,5 | 9,915 | 15,24 | 8,974 |
| | | 35 | 12,62 | 16,16 | 11,66 |
| | | 50 | 18,03 | 17,76 | 17,29 |
| | | 65 | 23,43 | 19,12 | 23,22 |
| | | 85 | 30,65 | 20,72 | 31,61 |
| | 65 | 5,5 | 1,983 | 10,26 | 1,471 |
| | | 11 | 3,966 | 10,89 | 2,977 |
| | | 27,5 | 9,915 | 13,31 | 7,791 |
| | | 35 | 12,62 | 14,06 | 10,06 |
| | | 50 | 18,03 | 15,36 | 14,75 |
| | | 65 | 23,43 | 16,51 | 19,63 |
| | | 85 | 30,65 | 17,88 | 26,42 |
| | 70 | 5,5 | 1,983 | 10,1 | 1,348 |
| | | 11 | 3,966 | 10,44 | 2,712 |
| | | 27,5 | 9,915 | 12,13 | 6,979 |
| | | 35 | 12,62 | 12,78 | 8,983 |
| | | 50 | 18,03 | 13,84 | 13,07 |
| | | 65 | 23,43 | 14,8 | 17,29 |
| | | 85 | 30,65 | 15,99 | 23,11 |
| | 75 | 5,5 | 1,983 | 10,04 | 1,247 |
| | | 11 | 3,966 | 10,22 | 2,501 |
| | | 27,5 | 9,915 | 11,4 | 6,369 |
| | | 35 | 12,62 | 11,94 | 8,175 |
| | | 50 | 18,03 | 12,81 | 11,84 |
| | | 65 | 23,43 | 13,63 | 15,6 |
| | | 85 | 30,65 | 14,64 | 20,74 |
| | 80 | 5,5 | 1,983 | 10,02 | 1,161 |
| | | 11 | 3,966 | 10,12 | 2,325 |
| | | 27,5 | 9,915 | 10,94 | 5,882 |
| | | 35 | 12,62 | 11,38 | 7,535 |
| | | 50 | 18,03 | 12,08 | 10,87 |
| | | 65 | 23,43 | 12,77 | 14,28 |
| | | 85 | 30,65 | 13,65 | 18,92 |



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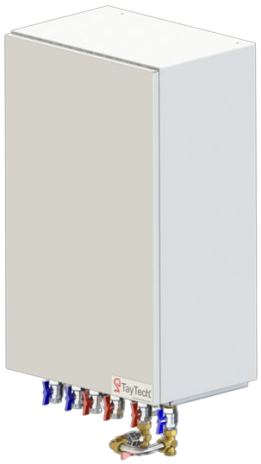
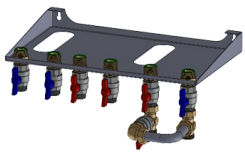
## 6. Options

Decorative Steel Cover

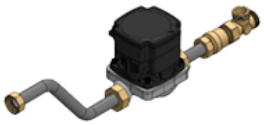


Pre-Plumbing Brackets for Easy Assembly



Heat Meter

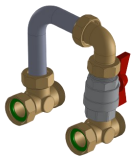
DHW Re-Circulation Kit



Junction Box

Water Hammer Arrester

Flushing By-Pass Kit





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