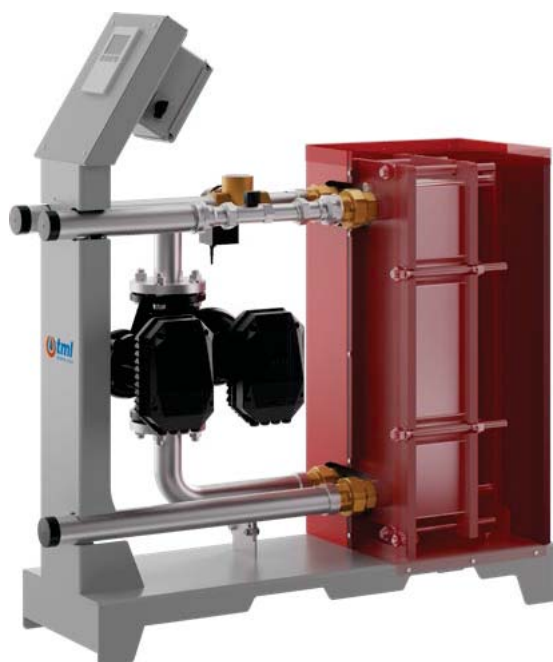




HWP D - "Direct" DHW station

HWP I - "Indirect" DHW station

HWP units are plug and play modules for the production of Domestic Hot water (DHW) on medium/big size systems.

These modules are completely factory assembled, configured, wired and ready to use. They can cleverly satisfy different applications with a high level of reliance and comfort.

The basic configuration has a circulation pump and a 3-way mixing valve on the primary side whilst on the secondary side, a heat flow meter along with an electronic control unit grant the production of DHW with further options for recirculation and protection against legionella and limescale.

The 3-way mixing valve is motorized and completely managed by the control unit, which keeps the inlet temperature on the primary side of the heat exchanger at the minimum level required (for limescale purposes), and at the same time improving the temperature

steadiness of the DHW supplied.

HWP units come with two options:

- HWP D (direct): to be used on systems for instantaneous production of DHW without storage (only for this model, the electronic control unit provides also energy measurement features).

- HWP I (indirect): to be used on systems for the production of DHW to be stored in buffer vessels.

The unit comes with factory-fitted insulation on the heat exchanger. Both versions are offered with a single or twin circulation pump to provide high system reliability in case of a failure. The frame design allows for adjusting the position of the electronic control unit and circulation pump, thus facilitating installation even against a wall, regardless of its orientation. To meet high demand or ensure component redundancy, the modules can be installed in a cascade configuration up to a maximum of five units

TECHNICAL FEATURES AND COMPONENTS

Plate heat exchanger

Primary side equipment

Secondary side equipment

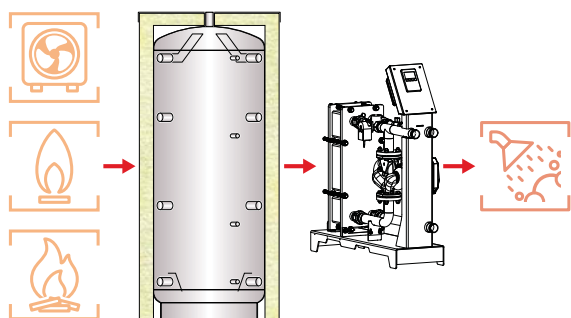
Electronic control unit

	HWP D	HWP I
Material	AISI 316 stainless steel	AISI 316 stainless steel
Internal protective treatment	Pickling and passivation	Pickling and passivation
External protective treatment	Pickling and passivation	Pickling and passivation
Type	Gasketed PHE	Gasketed PHE
Rating (P max. / T max.)	10 bar / 130 °C	10 bar / 130 °C
Circulation pump	High efficiency with wet rotor and variable speed	
3-way mixing valve	Moving brass body with electric actuator	
Fittings and pipes	Brass & stainless steel	
Temperature sensors	PT1000 for inlet & outlet	
Circulation pump	-	On demand, high efficiency
Flow meter	Vortex type with temperature detection	
Fittings and pipes	Brass & stainless steel	Brass & stainless steel
Temperature sensors	PT1000 for inlet & outlet	PT1000 for inlet & outlet
	It controls the circulation pump, reads flow rate & temperature. It manages the antilegionella and provides energy measurement	It controls circulation pumps (primary and DHW), reads flow rate & temperature. It manages the antilegionella cycle.
	LCD graphic display for all the managed values. System check and monitoring; wide range of configurations available	

ACCESSORIES



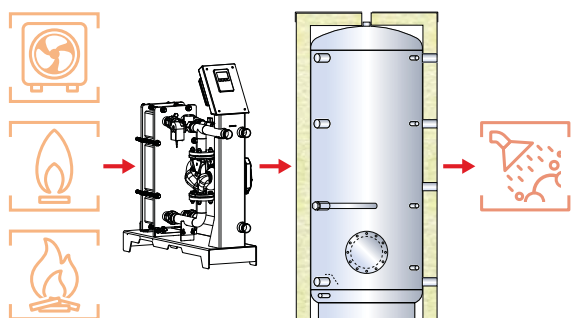
Multigateway: CAN-bus to Modbus signal conversion, app-based interconnection, and optional remote support.



HWP D - Direct DHW station

	CODE	POWER * (kW)	FLOW RATE* (L/min)	MINIMUM STARTING FLOW RATE (L/min)
Single circulation pump	HWP D T04B12	120	45	5
	HWP D T04B24	244	100	5
	HWP D T04B36	368	150	5
	HWP D T04B48	470	192	10
	HWP D T04B60	600	240	10
	HWP D T14B24	721	295	20
	HWP D T14B36	900	365	20
	HWP D T14B48	1170	475	20
Twin circulation pump	HWP DGT04B12	120	45	5
	HWP DGT04B24	244	100	5
	HWP DGT04B36	368	150	5
	HWP DGT04B48	470	192	10
	HWP DGT04B60	600	240	10
	HWP DGT14B24	721	295	20
	HWP DGT14B36	900	365	20
	HWP DGT14B48	1170	475	20

*Primary side temperature max 80 °C - Secondary side temperature from 10 to 45 °C



HWP I - Indirect DHW station

	CODE	POWER * (kW)	FLOW RATE* (L/min)	CODE FOR BUFFER LOADING CIRCULATION PUMP
Single circulation pump	HWP I T04B12	120	45	HWP SC 04
	HWP I T04B24	244	100	HWP SC 04
	HWP I T04B36	368	150	HWP SC 04
	HWP I T04B48	470	192	HWP SC 04
	HWP I T04B60	600	240	HWP SC 04
	HWP I T14B24	721	295	HWP SC 14
	HWP I T14B36	900	365	HWP SC 14
	HWP I T14B48	1170	475	HWP SC 14
Twin circulation pump	HWP IGT04B12	120	45	HWP SC 04
	HWP IGT04B24	244	100	HWP SC 04
	HWP IGT04B36	368	150	HWP SC 04
	HWP IGT04B60	470	192	HWP SC 04
	HWP IGT04B48	600	240	HWP SC 04
	HWP IGT14B24	721	295	HWP SC 14
	HWP IGT14B36	900	365	HWP SC 14
	HWP IGT14B48	1170	475	HWP SC 14

*Primary side temperature max 80 °C - Secondary side temperature from 10 to 45 °C

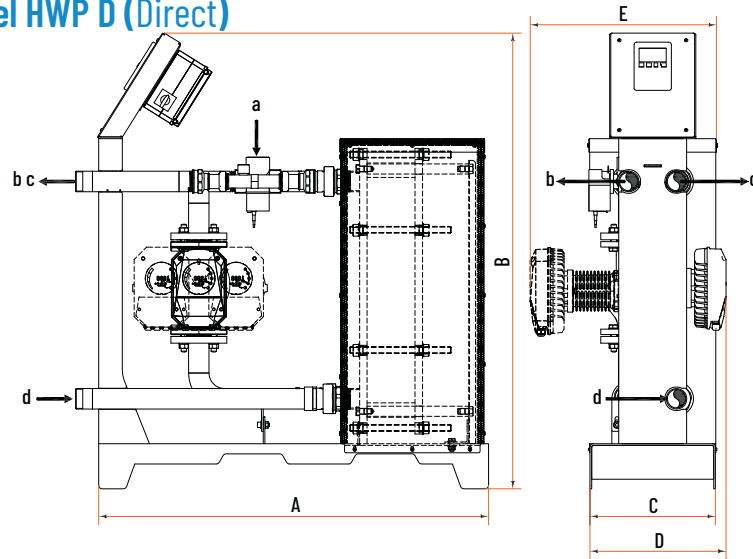
The **HWP I** (indirect) units, must always be equipped with a domestic water circulation pump for loading the serviced buffer vessel. Circulation pumps can be separately purchased by using the codes shown on the below table, or they can be freely retrieved on the local market. It is important to comply with the features below specified.

CODE	STATION MODEL	CIRCULATION PUMP FEATURES	MAX. FLOW RATE. (m³/h)	MAX. HEAD (mH2O)
HWP SC 04	HWP I.T04B12	High efficiency circulation pump for DHW with variable speed managed by PWM signal	12	12,0
	HWP I.T04B24		12	12,0
	HWP I.T04B36		12	12,0
	HWP I.T04B48		12	12,0
	HWP I.T04B60		12	12,0
HWP SC 14	HWP I.T14B24	High efficiency circulation pump for DHW with variable speed managed by PWM signal	24	12,0
	HWP I.T14B36		24	12,0
	HWP I.T14B48		24	12,0

LEGEND

- a . Primary inlet
- b . Primary outlet
- c . Secondary outlet
- d . Secondary inlet

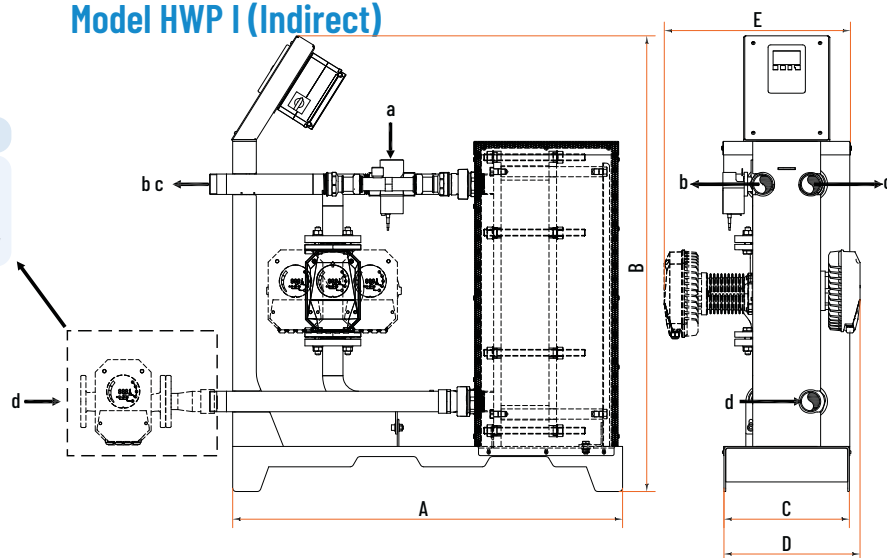
Model HWP D (Direct)



Model HWP I (Indirect)

VERY IMPORTANT!

The buffer loading circulation pump kit is not included as standard supply



HWP D I - DWH fresh water station with single circulation pump

MODEL	HEIGHTS (mm)					CONNECTIONS (Gas)				WEIGHT (Kg)
	A	B	C	D	E	a	b	c	d	
HWP_T04B12	950	1345	270	396	466	1"¼ F	1"¼ M	1" M	1"¼ M	101
HWP_T04B24	950	1345	270	396	466	1"¼ F	1"¼ M	1" M	1"¼ M	104
HWP_T04B36	950	1345	270	396	466	1"¼ F	1"¼ M	1" M	1"¼ M	107
HWP_T04B48	950	1345	270	396	466	1"¼ F	1"¼ M	1"¼ M	1"¼ M	111
HWP_T04B60	814	1345	270	396	466	1"¼ F	1"¼ M	1"¼ M	1"¼ M	115
HWP_T14B24	1150	1345	370	402	543	2" F	2" M	1"½ M	2" M	226
HWP_T14B36	1150	1345	370	402	543	2" F	2" M	1"½ M	2" M	235
HWP_T14B48	1150	1345	370	402	543	2" F	2" M	1"½ M	2" M	246

HWP D I - DWH fresh water station with twin circulation pump

MODEL	HEIGHTS (mm)					CONNECTIONS (Gas)				WEIGHT (Kg)
	A	B	C	D	E	a	b	c	d	
HWP_GT04B12	950	1345	270	396	466	1"¼ F	1"¼ M	1" M	1"¼ M	110
HWP_GT04B24	950	1345	270	396	466	1"¼ F	1"¼ M	1" M	1"¼ M	114
HWP_GT04B36	950	1345	270	396	466	1"¼ F	1"¼ M	1" M	1"¼ M	118
HWP_GT04B48	950	1345	270	396	466	1"¼ F	1"¼ M	1"¼ M	1"¼ M	121
HWP_GT04B60	814	1345	270	396	466	1"¼ F	1"¼ M	1"¼ M	1"¼ M	124
HWP_GT14B24	1150	1345	370	402	543	2" F	2" M	1"½ M	2" M	239
HWP_GT14B36	1150	1345	370	402	543	2" F	2" M	1"½ M	2" M	248
HWP_GT14B48	1150	1345	370	402	543	2" F	2" M	1"½ M	2" M	259

How to select the right HWP unit

Sizing a domestic hot water (DHW) system follows standardized procedures based primarily on industry standards (EN 806; UNI 9182; UNI 12831/3). The choice between instantaneous production (without DHW storage) and production via a DHW storage tank is left to the designer's discretion.

For instantaneous production systems, **Direct HWP** modules should be considered, selected based on the "peak flow rate" required by the specific application.

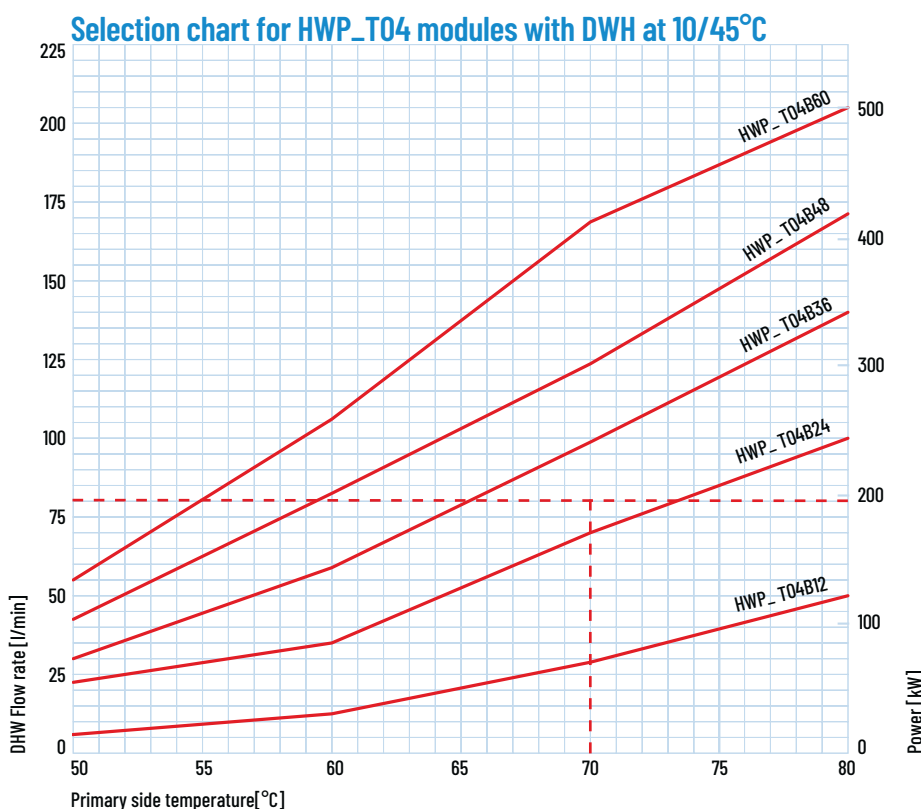
If a system with DHW storage is selected, the calculation methods determine the required generator output and storage volume for the specific application. In this instance, attention must be focused on **Indirect DHW** modules, which should be selected based on the generator output and design temperature conditions.

Given this, it is possible to leverage the advantages of both methods while eliminating their respective drawbacks. Since a storage-based system allows for a significant reduction in the installed generator's capacity, and the instantaneous production method is inherently safer regarding the risk of Legionella, a viable compromise can be found by shifting the energy storage function to the primary side, using one or more buffer storages to supply one or more **Direct HWP** modules.

In any case, selecting the HWP model is made easier by using the quick-selection charts shown below.

The diagrams show the performance—in terms of producible domestic hot water (DHW) flow rate and corresponding power of all HWP models as a function of the primary side temperature, considering two different thermal conditions on the domestic side: the first for DHW in the 10–45°C range, and the second for the 10–60°C range.

Once the domestic hot water (DHW) demand (in L/min) and the available primary side temperature (in °C) are known, refer to the diagram to find the unit that meets the required flow rate at the available primary temperature. After plotting the horizontal line corresponding to the required flow rate and the vertical line corresponding to the primary temperature on the diagram, the HWP module size suitable for the application is the one corresponding to the performance curve located immediately above the intersection point of the two lines.



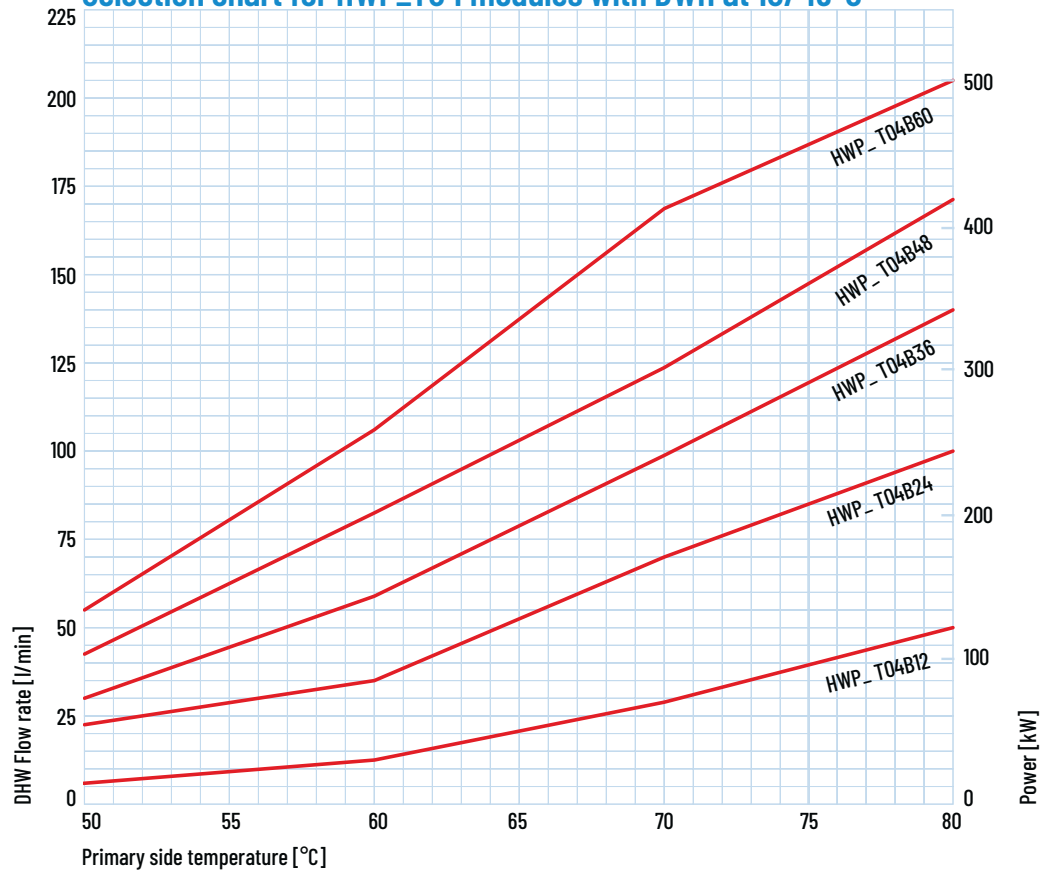
Example: DHW temperature 10/45°C; DHW flow rate 80 l/min; Primary side temperature 70°C.

Locate the diagram for the HWP_T04 modules corresponding to the 10/45°C secondary circuit, and draw the two lines (horizontal at 80 L/min and vertical at 70°C):

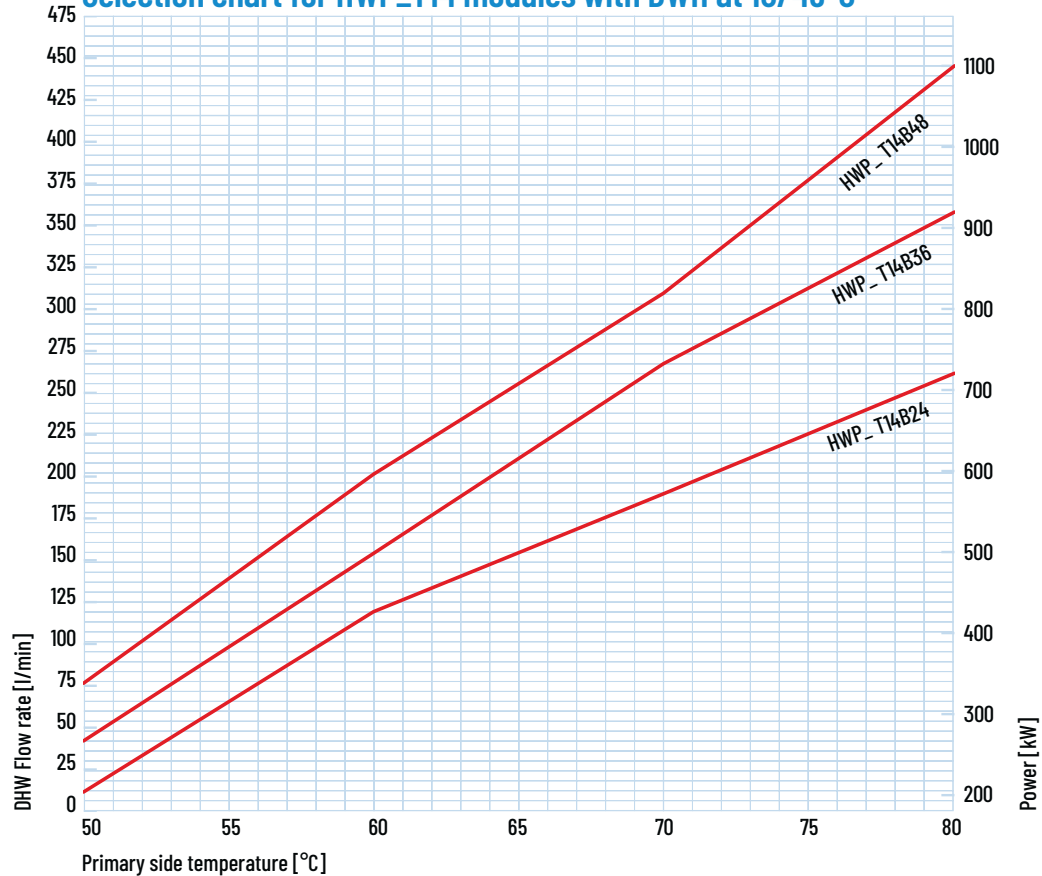
The module suitable for meeting the required specifications will be model HWP_T04B36.

Furthermore, the line corresponding to the required flow rate intersects the secondary vertical axis, indicating a power output slightly below 200 kW; this power must be supplied either by a heat source—in the event of continuous draw-off—or by a buffer storage sized according to the available heat source power, the duration of the domestic hot water (DHW) draw-off, and the required recovery time.

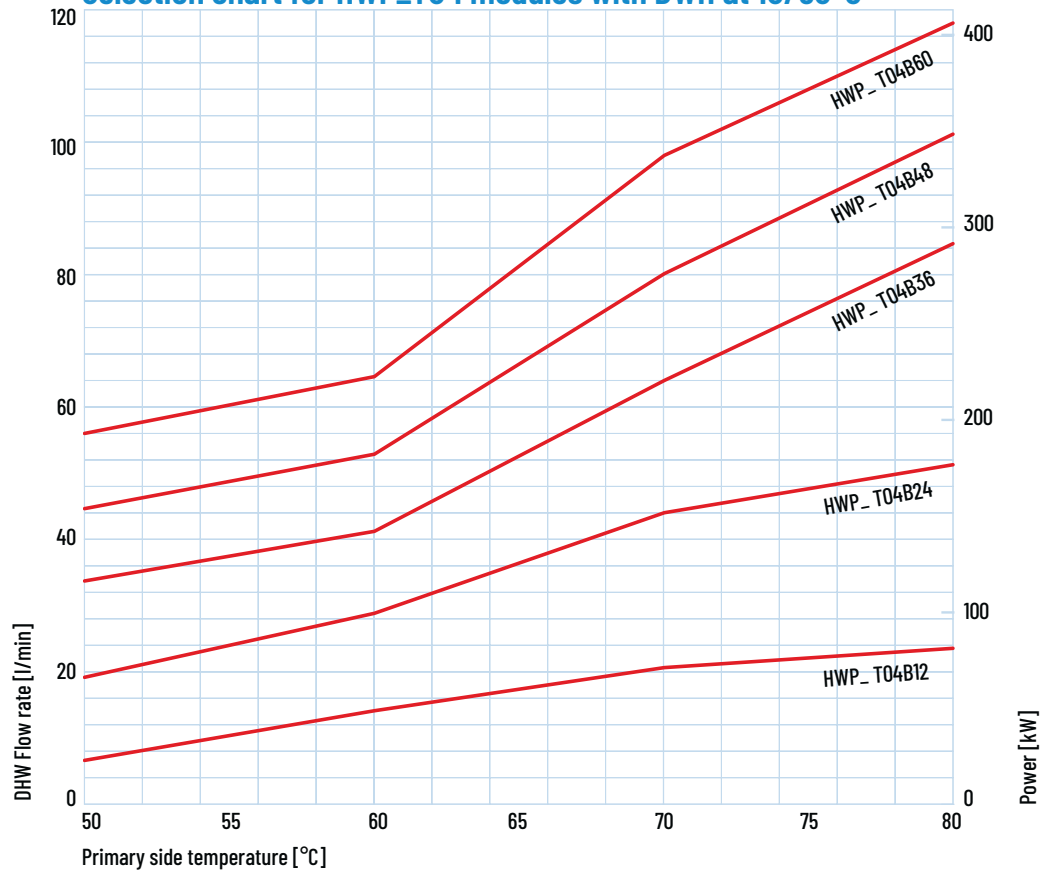
Selection chart for HWP_T04 modules with DWH at 10/45°C



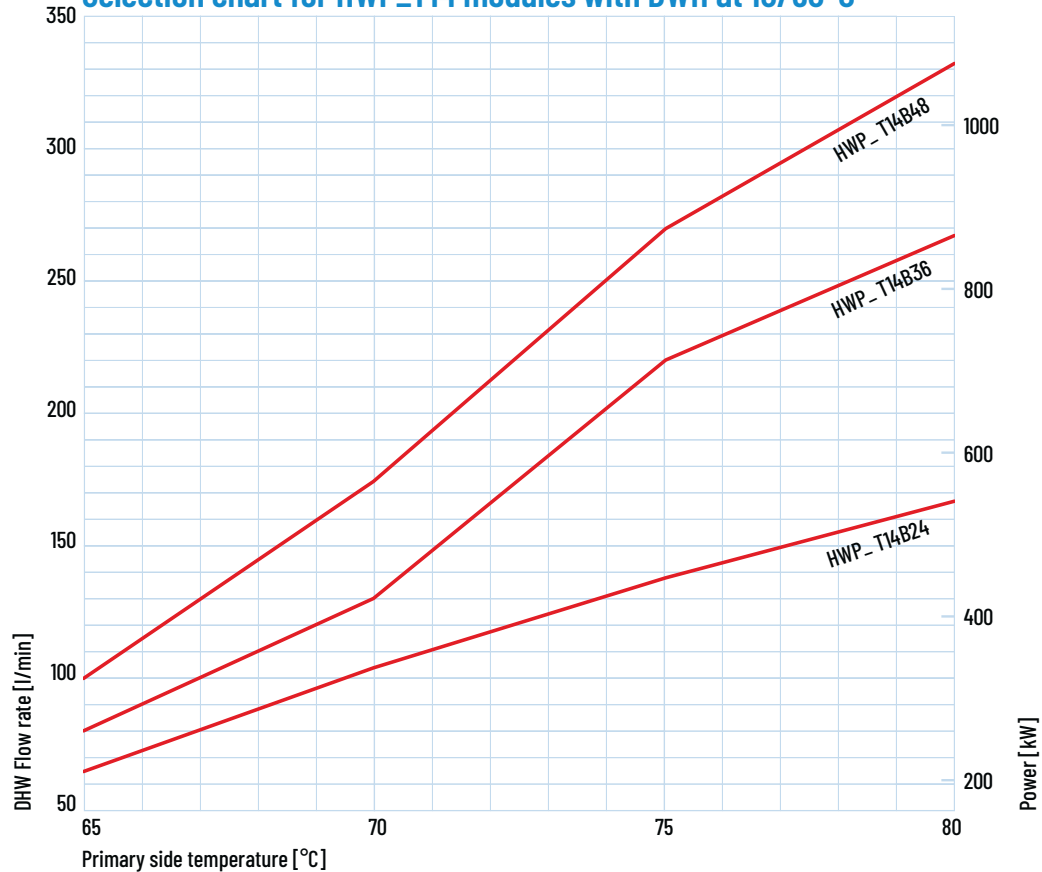
Selection chart for HWP_T14 modules with DWH at 10/45°C



Selection chart for HWP_T04 modules with DWH at 10/60°C



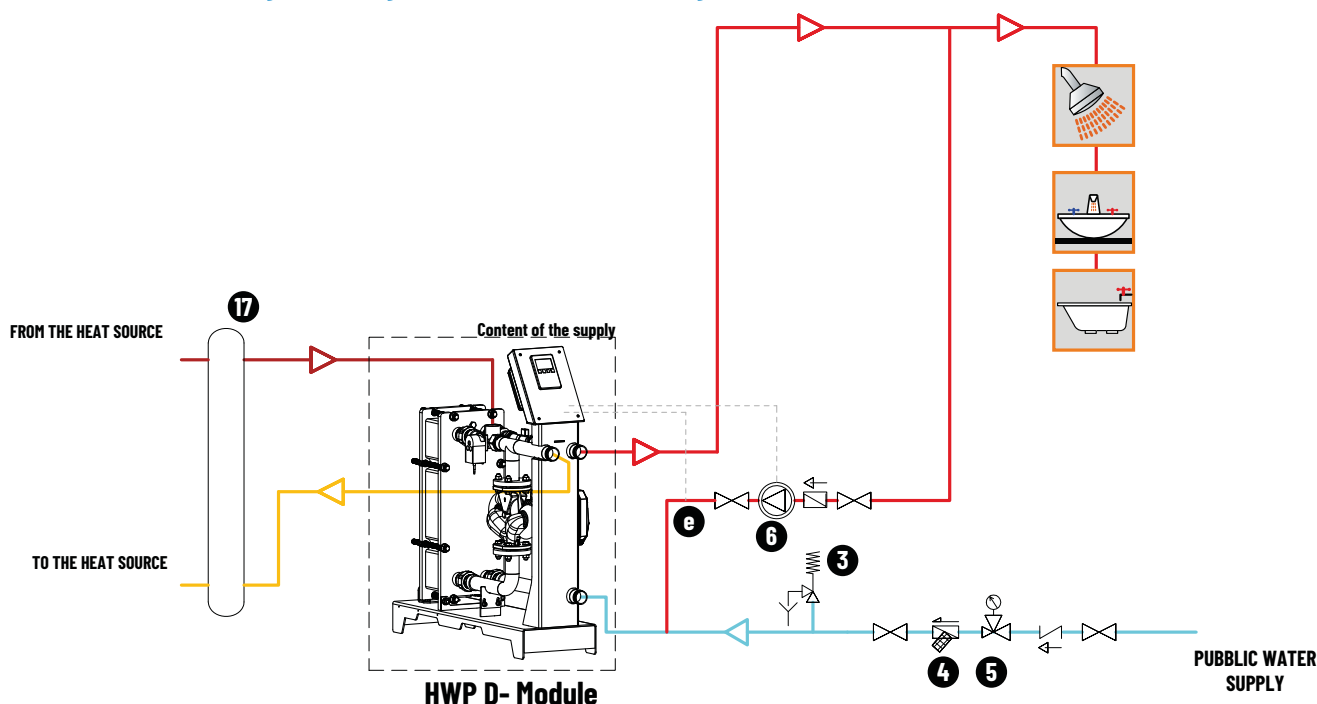
Selection chart for HWP_T14 modules with DWH at 10/60°C



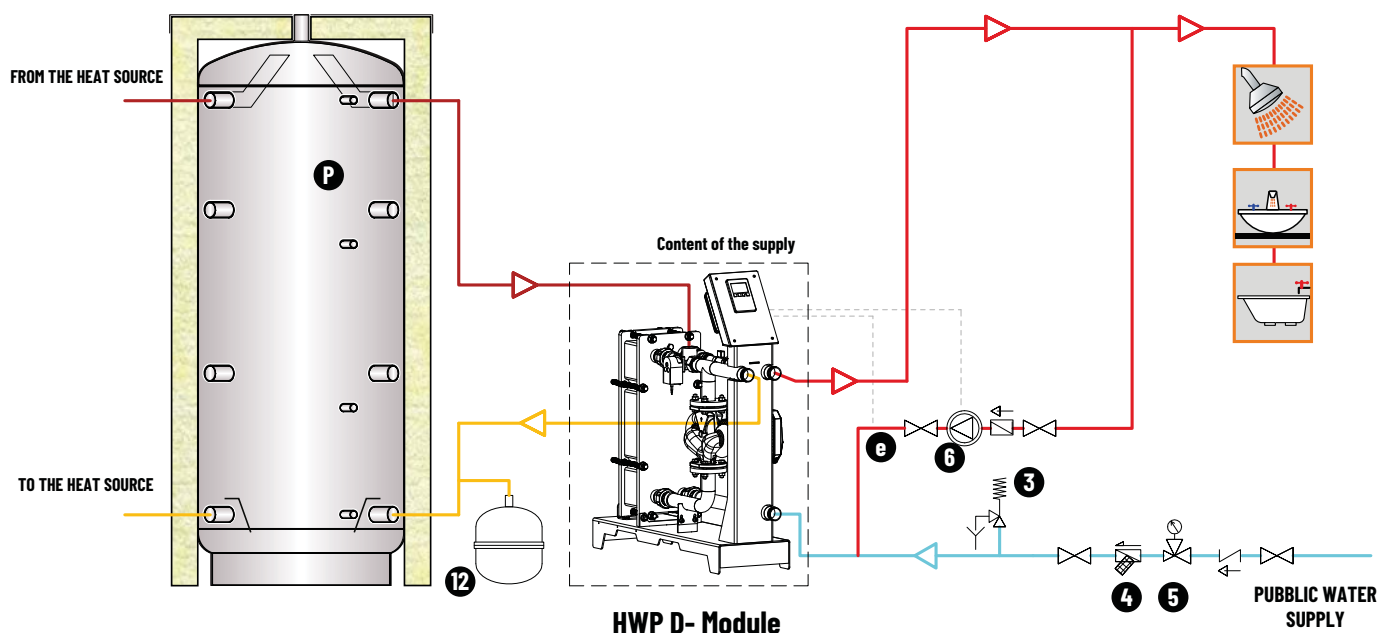
Once you have selected the right size of your unit, you can choose among the available configurations according to the system that you want to build.

The followings are some indicative examples of systems that can be used.

System layout for HWP D directly connected to a heat source



System layout for HWP D connected to a buffer storage



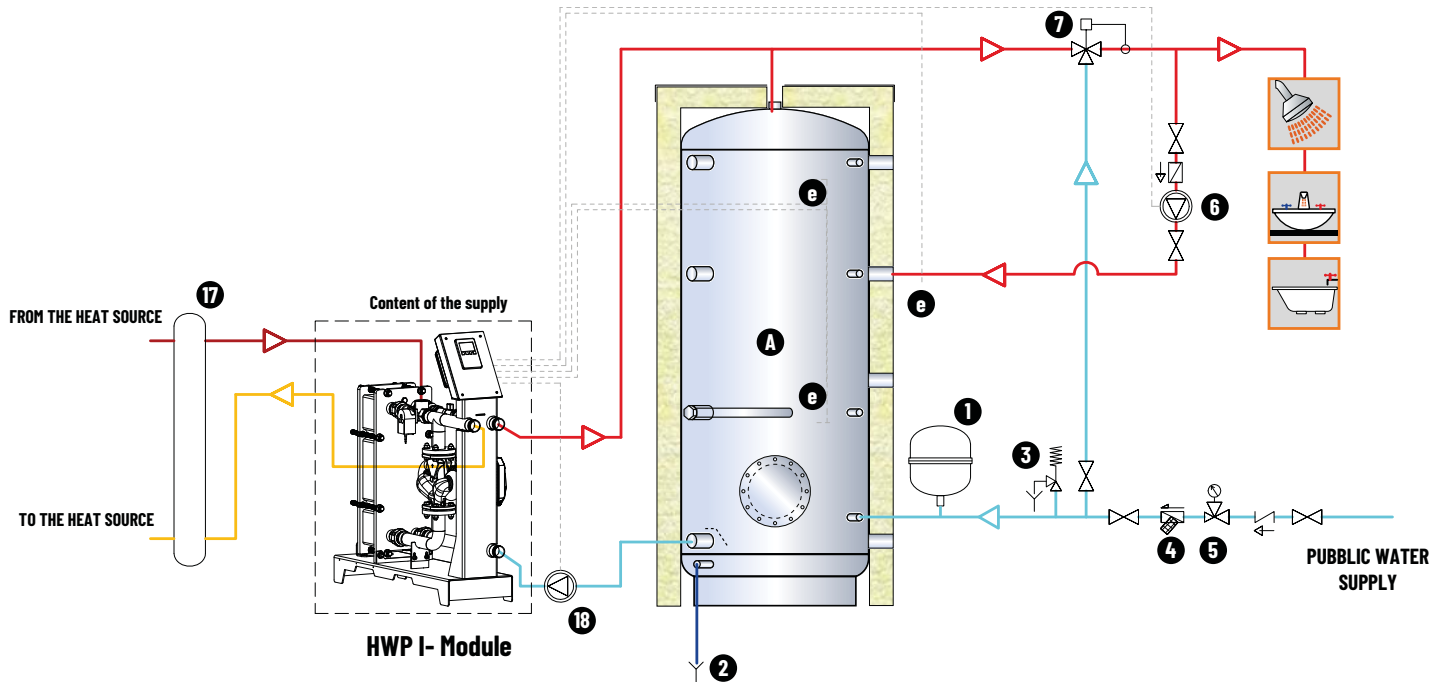
LEGEND

- | | | |
|--|--|---|
| P . Primary side buffer | 4 . Strainer | 12 . Heating system expansion vessel |
| e . Temperature sensor ⁽¹⁾ | 5 . Pressure reducing valve | 17 . System manifold |
| 3 . Domestic water safety valve ((max. 10 bar) | 6 . DWH Recirculation pump ⁽²⁾ | |

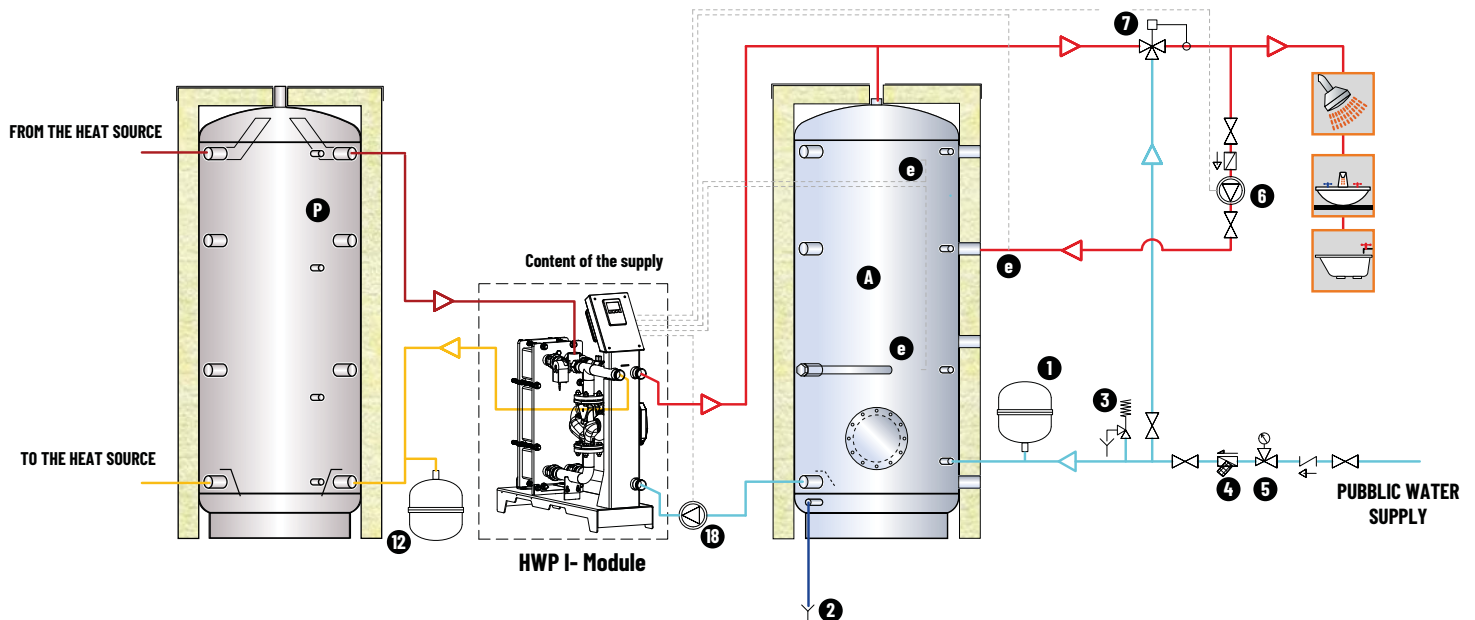
⁽¹⁾ The temperature sensor is supplied along with the HWP D module

⁽²⁾ Not supplied - It can be managed directly from the HWP D module control unit

System layout for HWP I directly connected to a heat source



System layout for HWP I connected to a buffer storage



LEGEND

- | | | |
|---------------------------------------|--|---|
| P . Primary side buffer | 2 . Drain | 6 . DHW Recirculation pump ⁽²⁾ |
| A . DHW thermal storage | 3 . Domestic water safety valve (6 bar) | 12 . Heating system expansion vessel |
| e . Temperature sensor ⁽¹⁾ | 4 . Strainer | 17 . System manifold |
| 1 . Domestic water expansion vessel | 5 . Pressure reducing valve | 18 . Buffer loading circulation pump ⁽³⁾ |

(1) The temperature sensor is supplied along with the HWP I module

(2) Not supplied - It can be managed directly from the HWP I module control unit

(3) Available on demand - for technical features please refer to the codes page

HWP D - HWP I

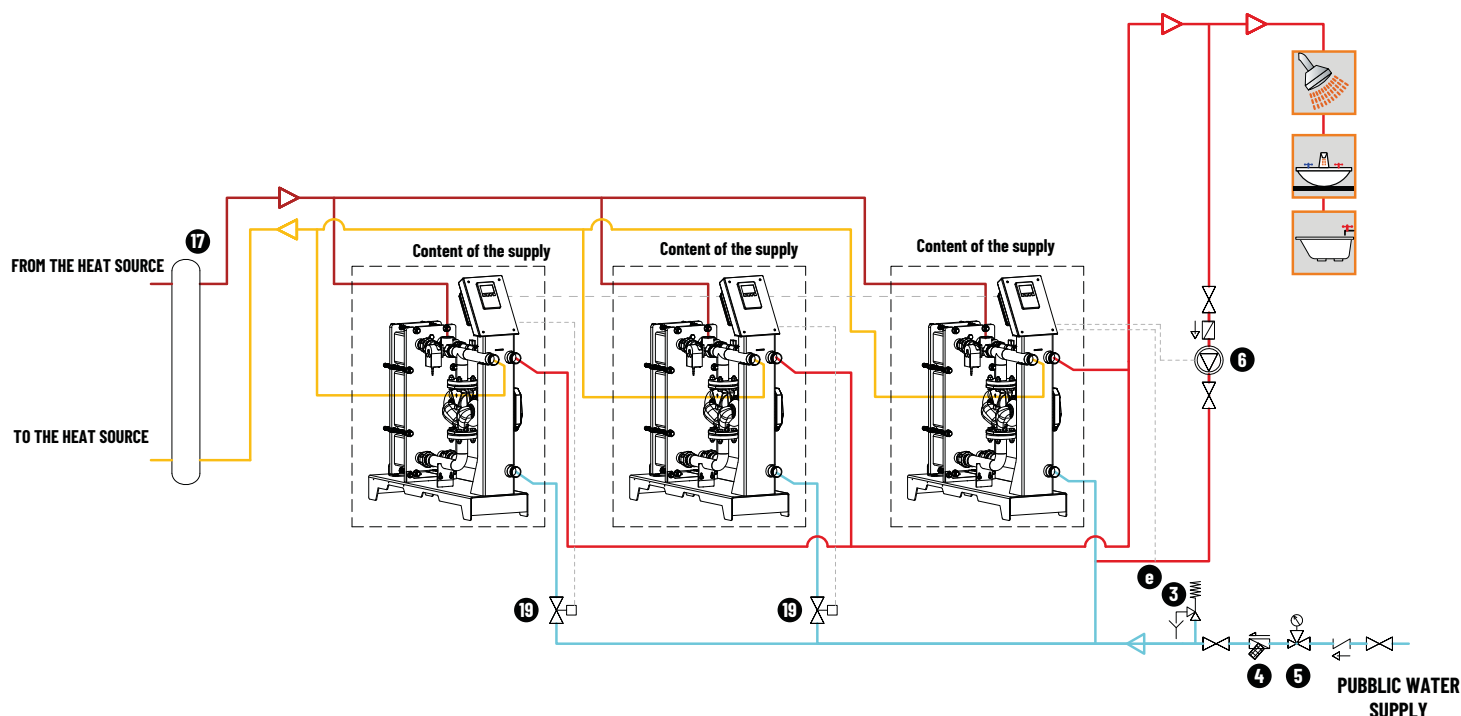
System layouts

Disclaimer: this layout is purely indicative. It does not replace consultant's design

For systems with high domestic hot water (DHW) demands, HWP D units can be installed in a cascade configuration of up to five modules. This system setup may be considered to split DHW production, thereby enhancing overall system reliability. In such cases, the HWP D modules intended for cascade installation must be ordered specifically configured for this purpose, and a surcharge will apply based on the project size.

Please contact us for more info

System layout for a 3 "cascade" HWP D system directly connected to a heat source



LEGEND

- | | | |
|---|---|--|
| e . Temperature sensor ⁽¹⁾ | 5 . Pressure reducing valve | 19 . 2-way on-off valve ⁽³⁾ |
| 3 . Domestic water safety valve ((max. 10 bar) | 6 . DWH Recirculation pump ⁽²⁾ | |
| 4 . Strainer | 17 . System manifold | |

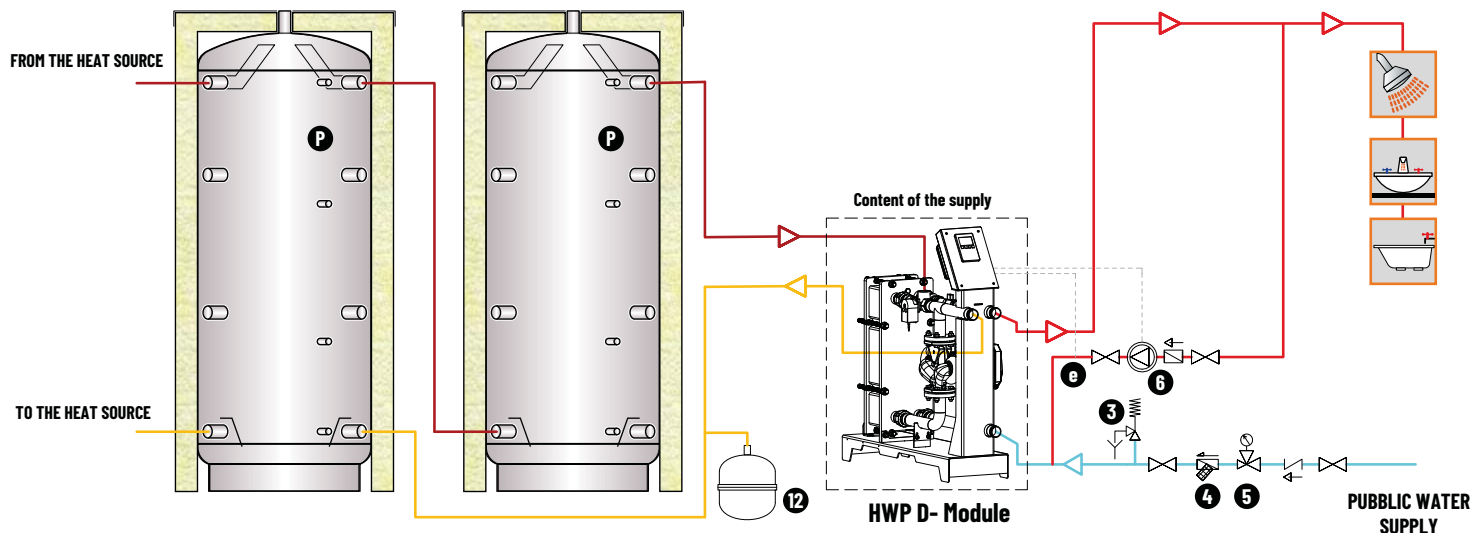
⁽¹⁾ The temperature sensor is supplied along with the HWP D module

⁽²⁾ Not supplied - It can be managed directly from the HWP D module control unit

⁽³⁾ Not included in the supply

For large-scale systems or in cases where the installation site imposes space constraints, buffer storage tanks or domestic hot water (DHW) storage tanks may be split into two or more units.

System layout for HWP D connected to 2 buffer stores



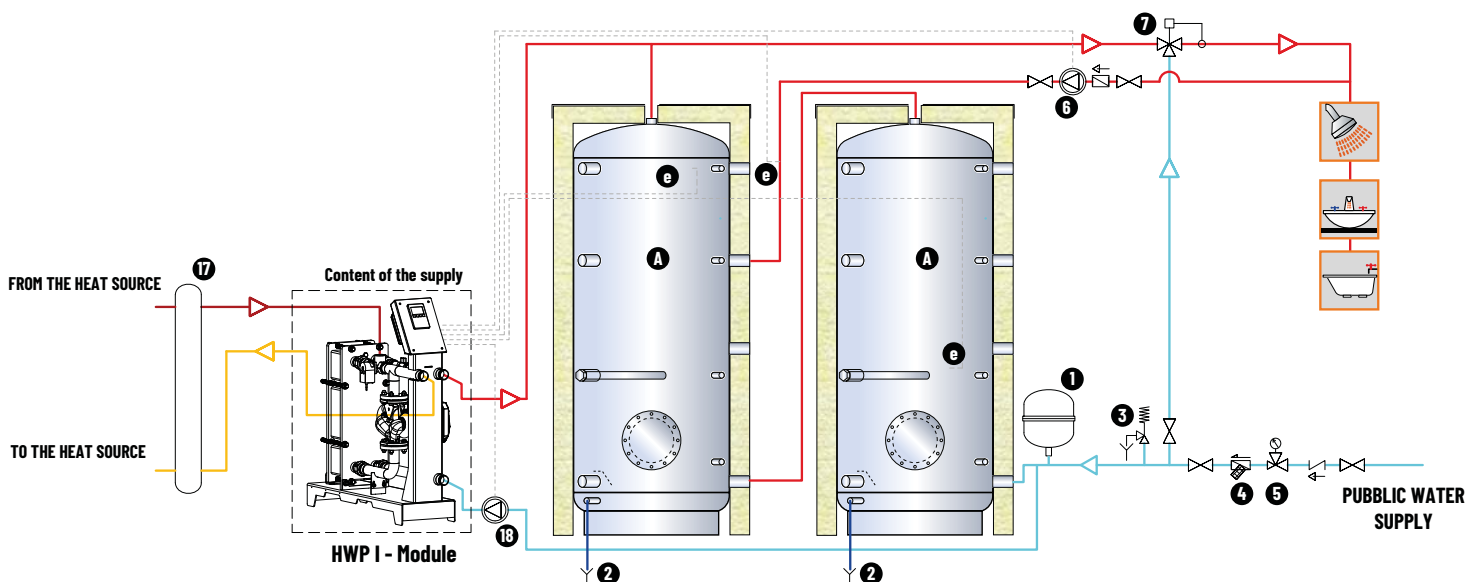
LEGENDA

- | | | |
|--|---|--------------------------------------|
| P . Primary side buffer | 4 . Strainer | 12 . Heating system expansion vessel |
| e . Temperature sensor ⁽¹⁾ | 5 . Pressure reducing valve | |
| 3 . Domestic water safety valve (max. 10 bar) | 6 . DHW Recirculation pump ⁽²⁾ | |

(1) The temperature sensor is supplied along with the HWP D module

(2) Not supplied - It can be managed directly from the HWP D module control unit

System layout for HWP I connected to 2 DHW thermal storages



LEGENDA

- | | | |
|---------------------------------------|---|---|
| A . DHW thermal storage | 3 . Domestic water safety valve (6 bar) | 7 . DHW 3-way valve |
| e . Temperature sensor ⁽¹⁾ | 4 . Strainer | 17 . System manifold |
| 1 . Domestic water expansion vessel | 5 . Pressure reducing valve | 18 . Buffer loading circulation pump ⁽³⁾ |
| 2 . Drain | 6 . DHW Recirculation pump ⁽²⁾ | |

(1) The temperature sensor is supplied along with the HWP I module

(2) Not supplied - It can be managed directly from the HWP I module control unit

(3) Available on demand - for technical features please refer to the codes page