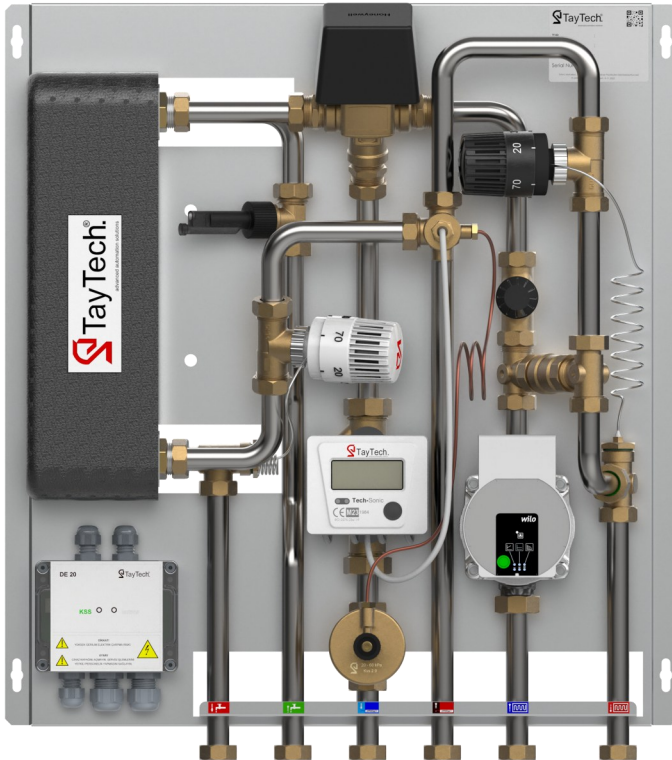


Direct Hydro-EM UFH

1. General Description



Direct Hydro-EM UFH is used to prepare the domestic hot water and balancing at the primary side. It can work for extended period of time without accumulation of calcification because the heat exchanger is able to remain cold by itself. Hydro-EM has flow switch and 3 way diverter valve to get the maximum efficiency and has the priority of generating hot water. It provides low return temperatures at the primary side. It is suitable for usage with condensing boilers. Material of heat exchanger and pipes are stainless steel and HIU can work efficiently in conjunction with aluminum radiators.

Hydro-EM have differential pressure valve, flow switch, 3 way diverter valve zone valve that are working together towards obtaining perfect balance in the system. It is used in buildings with central heating system to prepare domestic hot water and individualizing the heating feature for each user.

Hydro-EM UFH is designed specially for underfloor heating system. It includes mixing loop with temperature control valve and circulation pump.

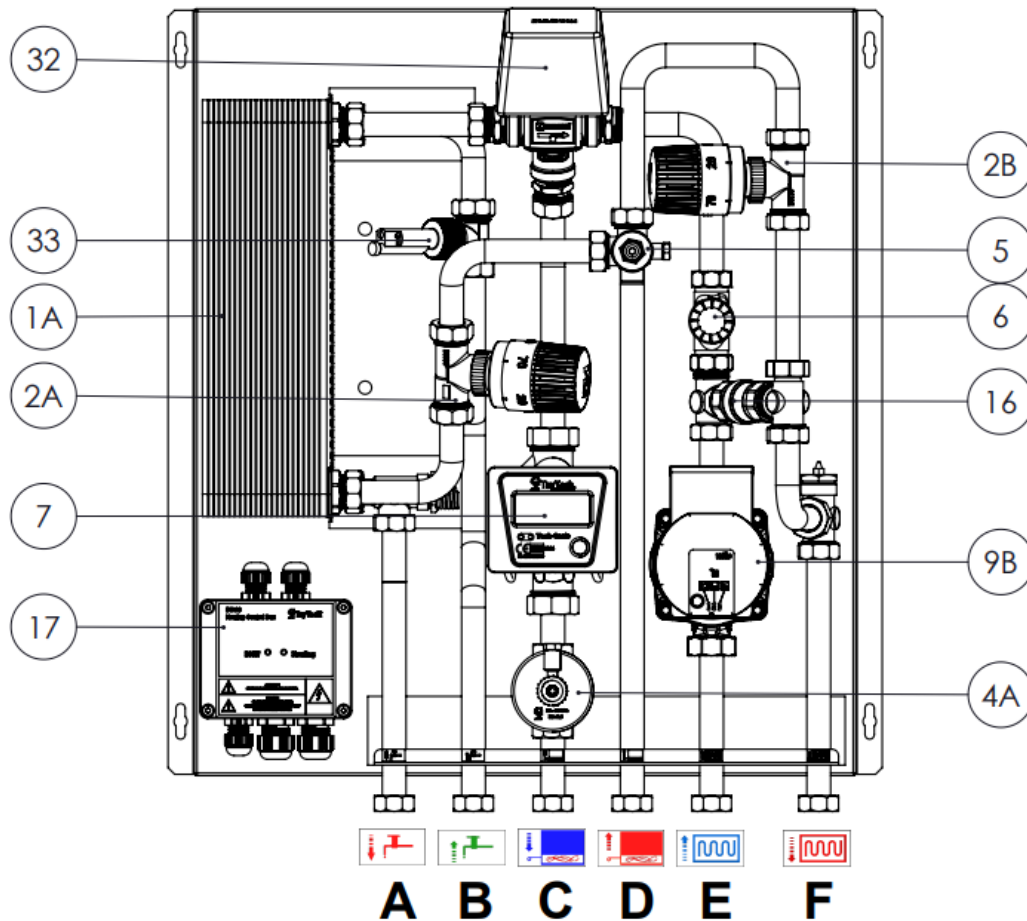
Features

- Self-acting hydraulic and thermostatic controls
- Stainless steel Hex and pipes
- Instantaneous response to DHW demand
- Suitable for low supply temperatures
- Integrated differential pressure valve
- Mixing Loop for underfloor heating
- Junction Box for electrical connections
- Temperature control valve for underfloor heating loop

★ Direct Hydro-EM UFH

2. Hydraulic Review

2.1 Component List



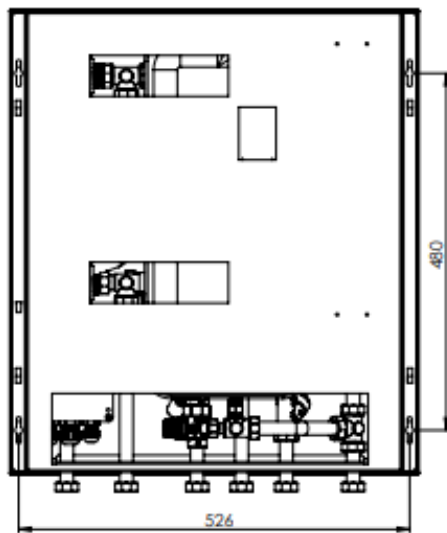
1A DHW Heat Exchanger
 2A DHW Temperature Control Valve
 2B SH Water Temperature Control Valve
 4A Differential Pressure Valve
 5 District Heating Strainer
 6 Zone Valve
 16 Check Valve

7 Heat Meter
 9B Space Heating Pump
 32 3 Way Diverter Valve
 33 Flow Switch
 17 Electrical Junction Box

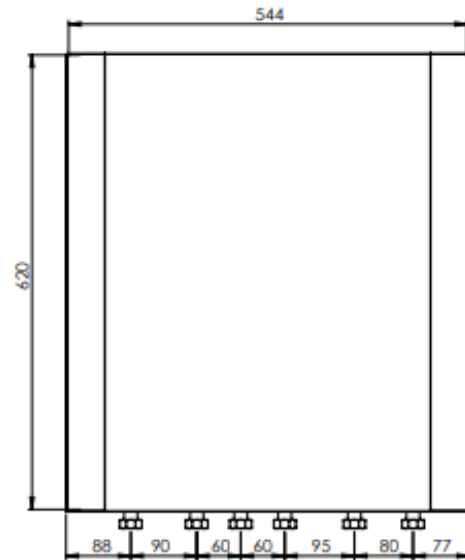
Direct Hydro-EM UFH

2. Dimensions

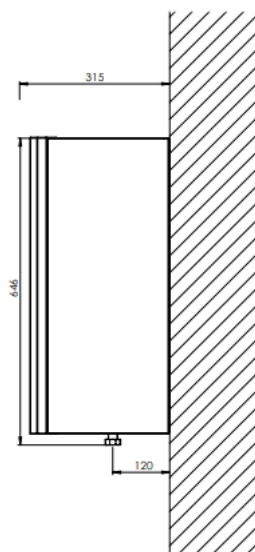
Back View



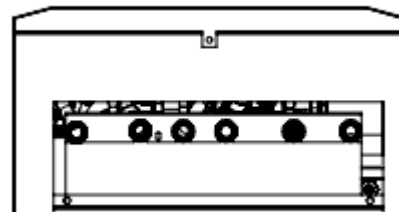
Front View



Wall Mounted View



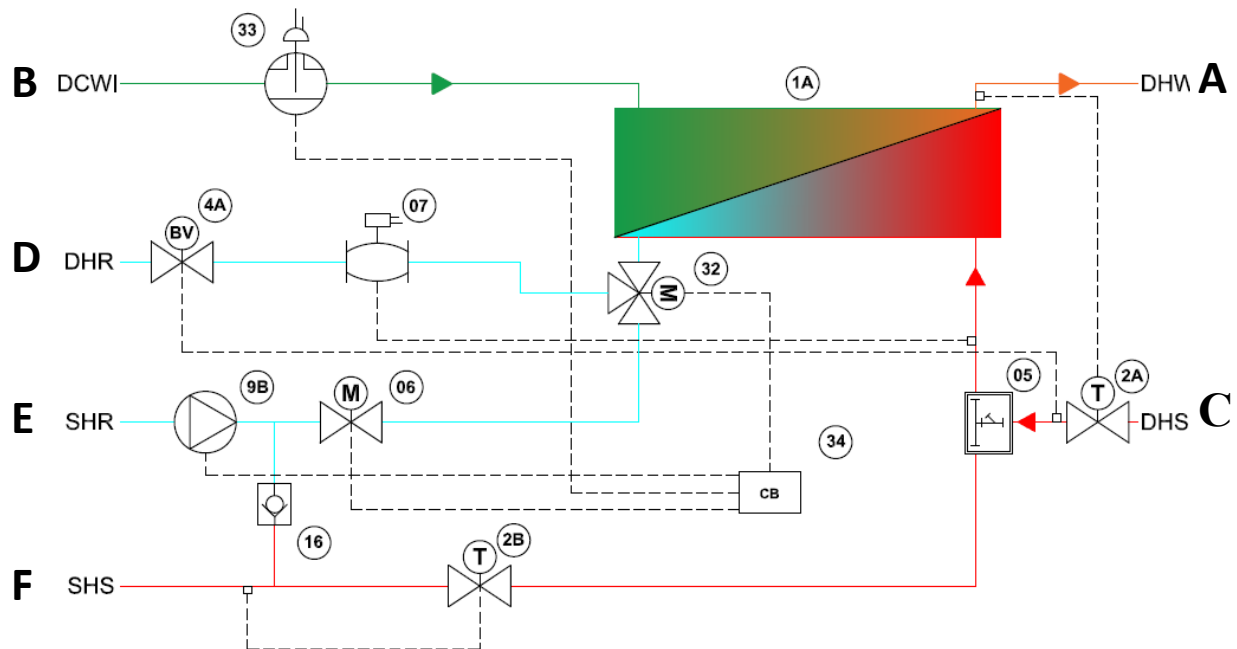
Bottom View



Direct Hydro-EM UFH

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 — SHR | — | Space Heating Return |
| F — SHS | — | Space Heating Supply |

★ Direct Hydro-EM UFH

3. Technical Specifications

Description	Data
Nominal primary supply temperature	80°C
Maximum primary supply temperature	85°C
Minimum primary supply temperature	65°C *
Nominal DHW supply temperature	50°C
DHW Set Range	45°C to 60°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)	450 kPa
Pressure class DH circuit	PN10
Pressure class DHW circuit	PN10
SH Maximum working pressure	2.5 Bar
Casing width	540mm
Casing height	580mm
Casing depth	200mm
Casing Material	Metal case with Insulation
Weight	25kg
Electrical supply info	230V 50Hz
Fuse ratings	3 Amp

* Minimum required DH supply temperature is DHW setpoint + 5°C with a minimum of 65°C.

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

Direct Hydro-EM UFH

4. Performance Table

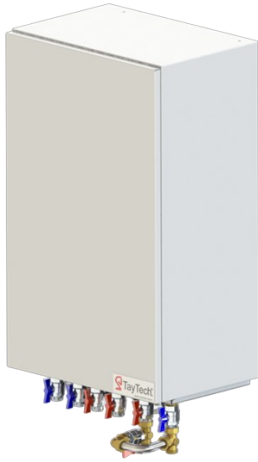
TYPE	Domestic Hot Water			Space Heating	Supply Temperatures		Supply Flow Rate	
	Heat Transfer Capacity (kW)	Flow (l/min)	Temperature	Capacity (kW)	65°C Primary Inlet	80°C Primary Inlet	65°C Primary Inlet	80°C Primary Inlet
			(°C)		Inlet/Outlet (°C)	Inlet/Outlet (°C)	l/min	l/min
Indirect Hydro-EM (TCDHI3)	33	13,5	45	10	65/21,7	80/17,72	11,2	7,8
		12	50		65/25,45	80/19,86	12,4	8,2
	50	20,6	45	20	65/22,8	80/18,64	17,5	12,1
		18	50		65/26,56	80/20,79	19,2	12,5
	65	26,6	45	25	65/22,11	80/18,05	22,2	15,5
		23,3	50		65/25,79	80/20,13	19	13,4
	80	33	45	25	65/21,47	80/17,52	27,1	19,1
		28,7	50		65/24,99	80/19,46	29,3	19,5

**For different capacities, please contact with our sales team.

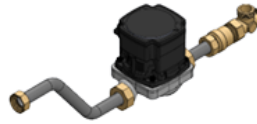
★ Direct Hydro-EM UFH

5. Options

Decorative Steel Cover



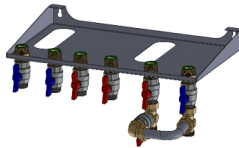
DHW Re-Circulation Kit



Water Hammer Arrester



Pre-Plumbing Brackets
for Easy Assembly



Flushing By-Pass Kit



Heat Meter

