

Indirect SmartHexa DHW

1. General Description



SmartHexa DHW has electronic controller in order to maintain maximum efficiency and has the priority of generating hot water.

SmartHexa measures temperatures, pressures and flow values from many different points throughout the unit.

Material of heat exchanger and pipes are stainless steel and HIU can work efficiently in conjunction with aluminum radiators.

The SmartHexa DHW use of the latest electronic stepper motor technology that allow the unit to get stable DHW for end users.

The electronic controls also enable to carry intelligent functions, such as PC connectivity for set-up and commissioning, district return temperature control, improved anti-legionella cycle, keep warm modes for continuous pre-heat for minimal return temperatures.

The Smart can be send all data to BLES system and can be monitored by end users.

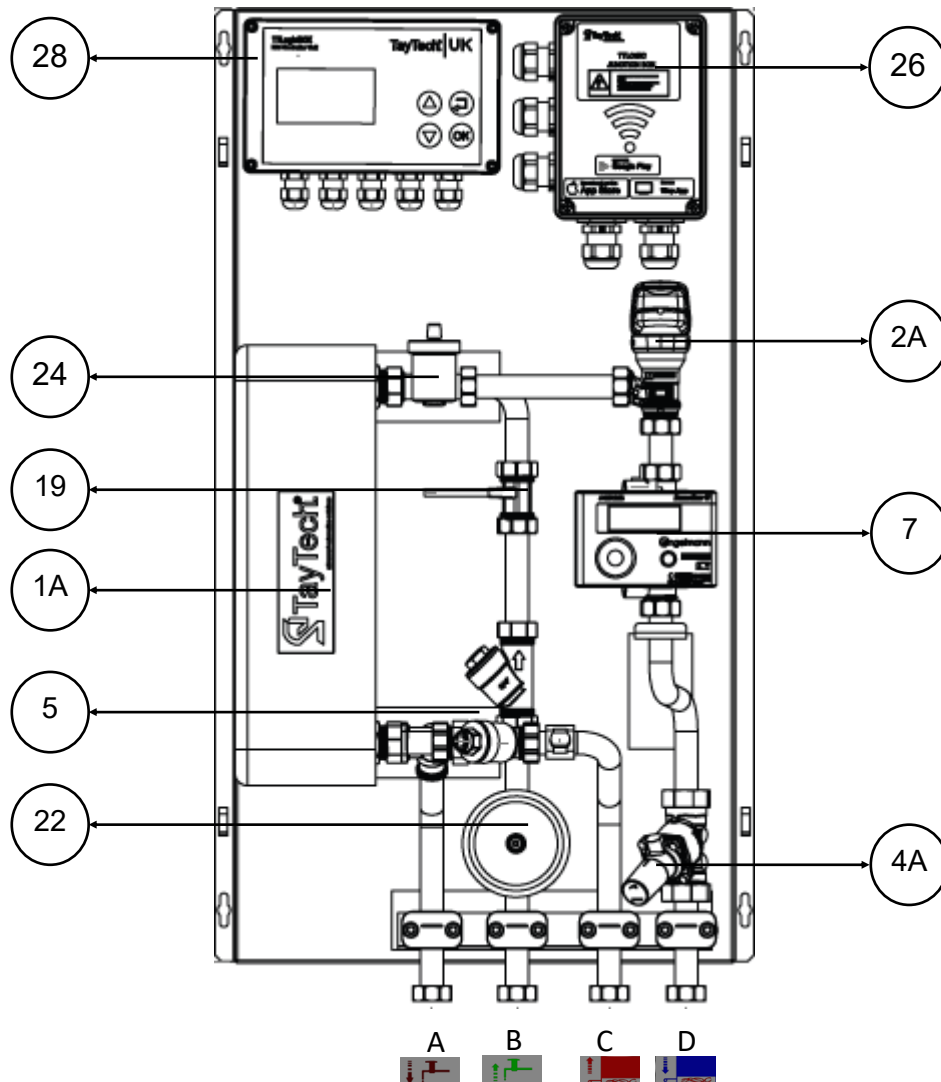
Features

- Fully electronic controlled with PC connectivity via GSM or Ethernet for set-up and commissioning
- Fast DHW Controls with calibrated sensors
- Return temperature control for district heating with high efficiency heat exchanger
- Smart anti-legionella function
- Pump and Valve Exercise mode for anti-jamming

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2. Hydraulic Review

2.1 Component List



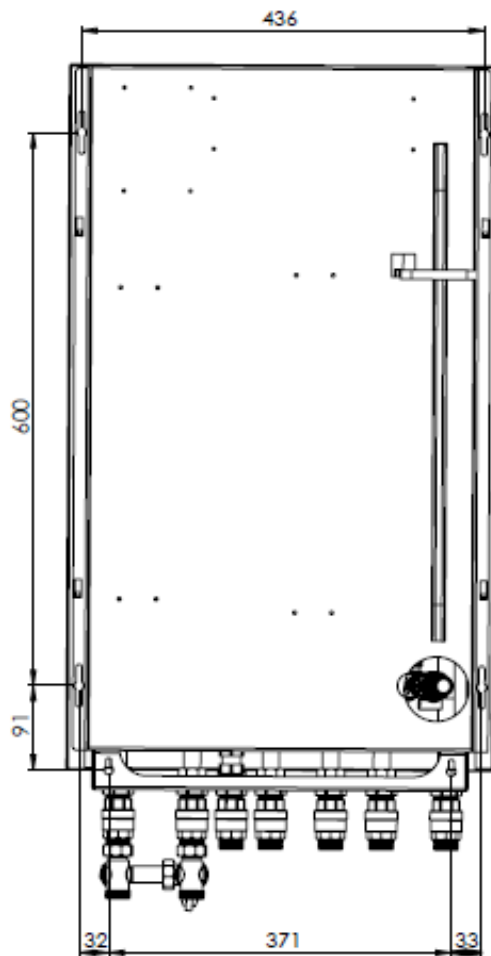
1A DHW Heat Exchanger
 2A DHW Temperature Control Valve
 5 District Heating Strainer
 7 Heat Meter
 19 Flow Sensor
 22 Water Hammer Arrestor
 24 Bleed Point (Automatic)
 26 Junction Box
 28 TT LogicBOX Controller

A - Domestic Hot Water
 B - Cold Water Inlet
 C - District Heating Supply
 D - District Heating Return

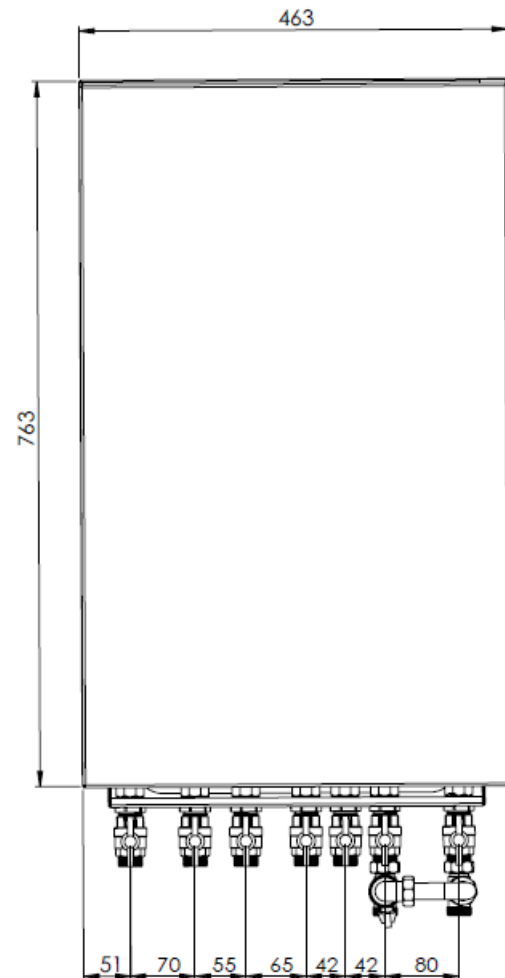
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2. Dimensions

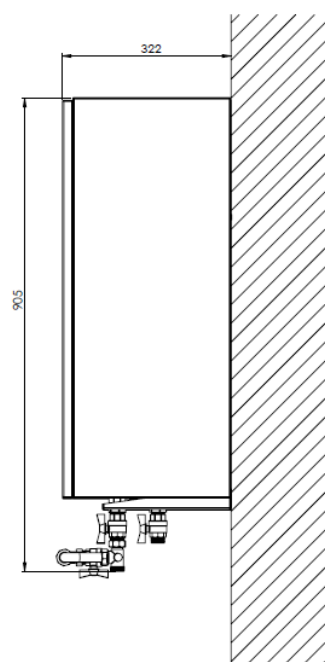
Back View



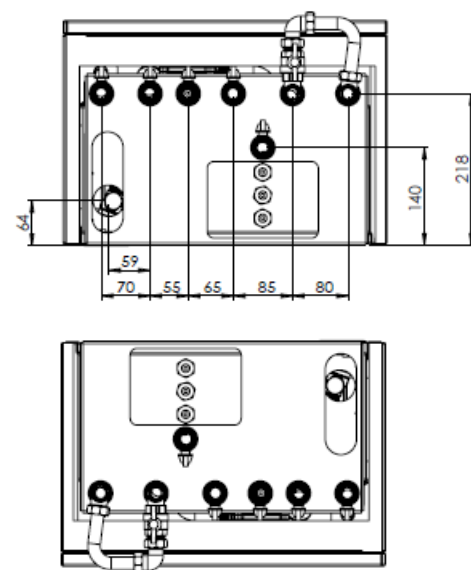
Front View



Wall Mounted View



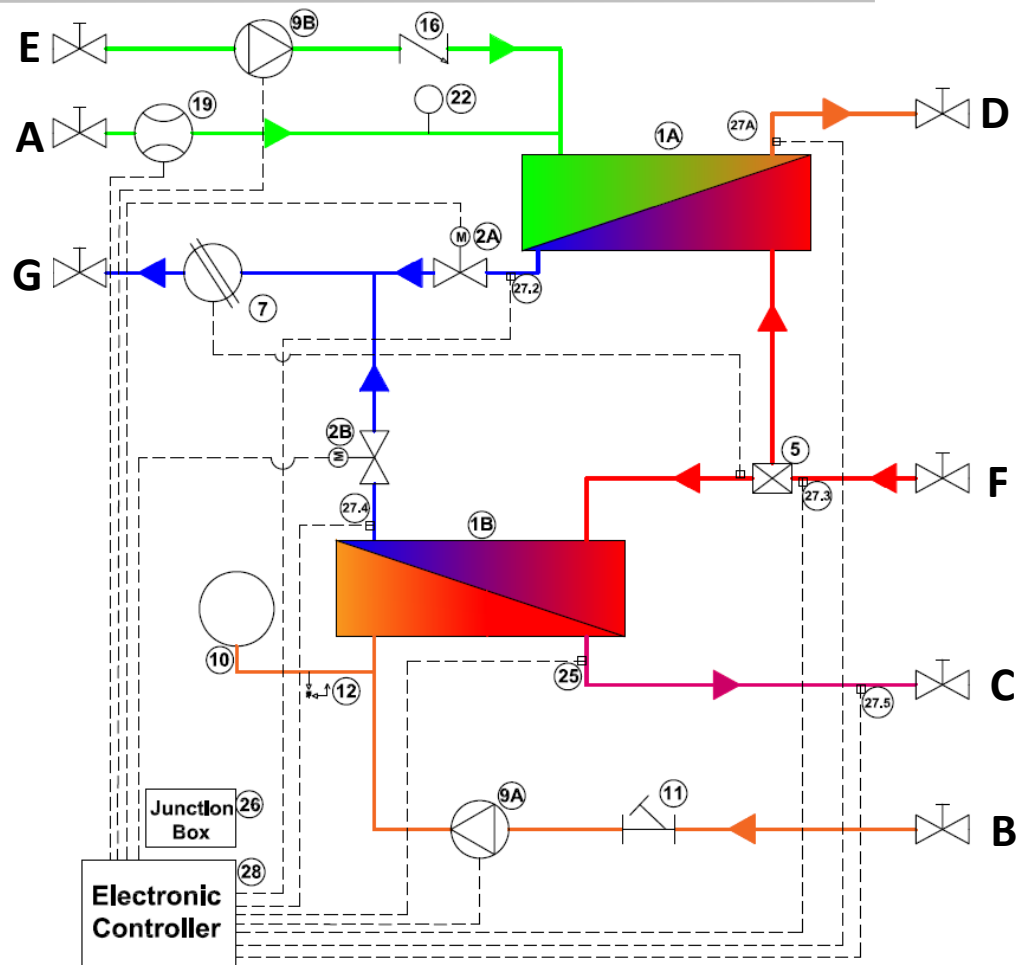
Bottom View



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2. Hydraulic Review

2.2 Flow Diagram



A —	DCWI	—	Domestic Cold Water Inlet
B —	SHR	—	Space Heating Return
C —	SHS	—	Space Heating Supply
D —	DHW	—	Domestic Hot Water
E —	Re-Circ	—	Re-Circulation
F —	DHS	—	District Heating Supply
G —	DHR	—	District Heating Return

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3. Technical Specifications

Description	Data
Nominal primary supply temperature	80°C
Maximum primary supply temperature	85°C
Minimum primary supply temperature	55°C *
Nominal DHW supply temperature	55°C
DHW Set Range	45°C to 60°C
Primary connections	Female / 18mm
Mains & DHW connections	Female / 18mm
Central heating connections	Female / 18mm
Maximal primary differential pressure (without dP regulator)	450kPa
Pressure class DH circuit	PN16
Pressure class DHW circuit	PN10
Casing width	463mm
Casing height	763mm
Casing depth	322mm
Casing Material	Metal case with Insulation
Weight	20kg **
Electrical supply info	230V 50Hz
Fuse ratings	3 Amp
Sensor DHW	NTC 10k ohm @ 25°C
Functions	Keep Warm Legionella Pump Exercise Valve Exercise Pre-pay Shut Off Hot Water Priority

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

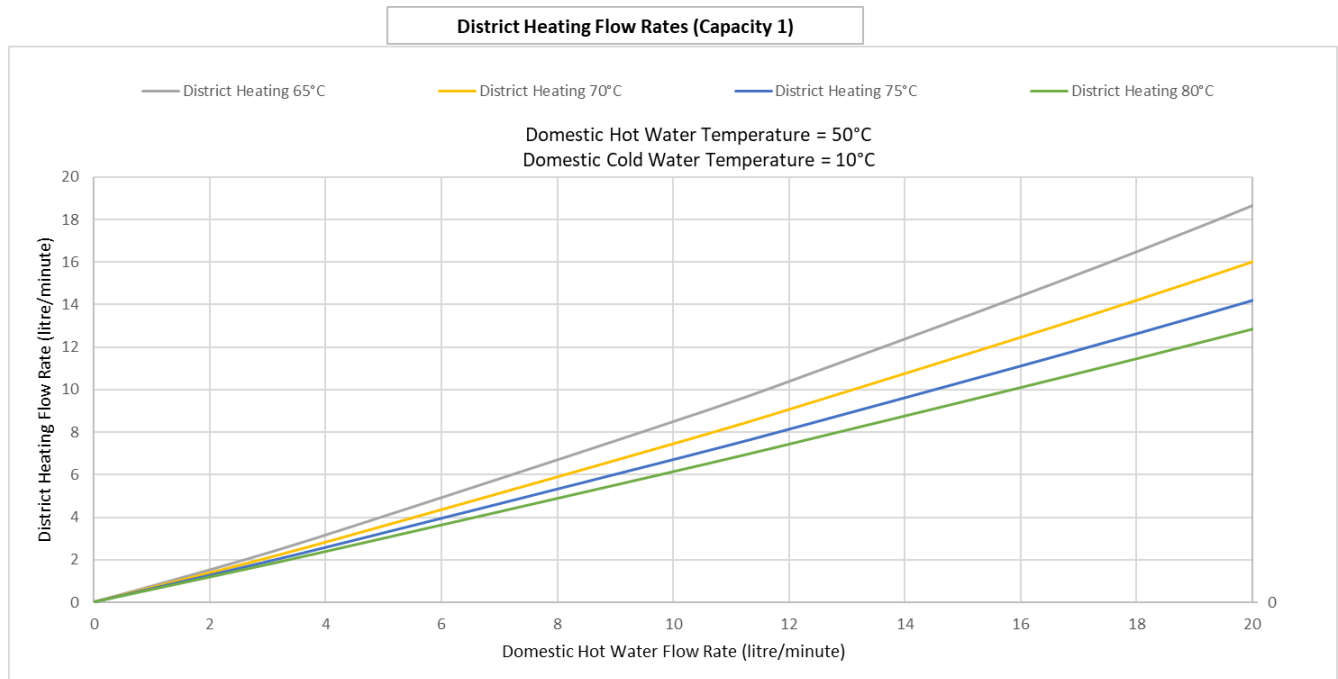
** Unit weight may vary depending on the optional components built into the unit.



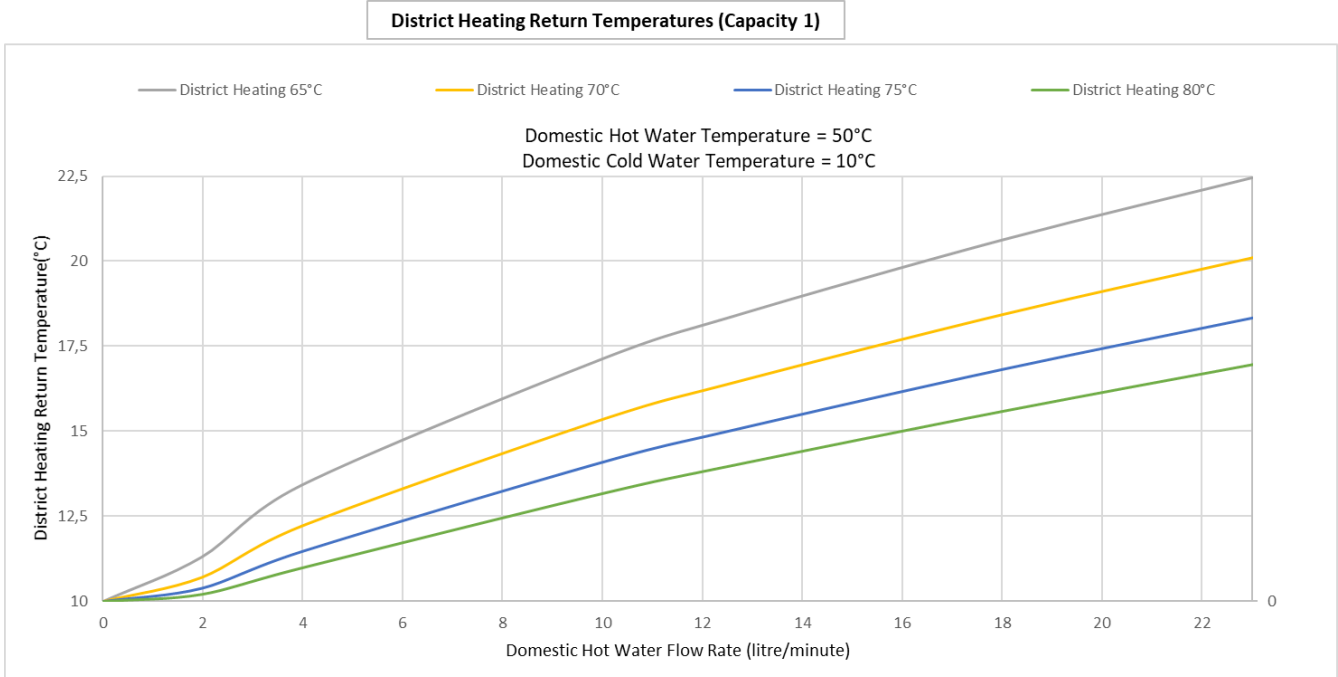
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4. Performance Curves

4.1 District Heating Flow Rates (Capacity 1)



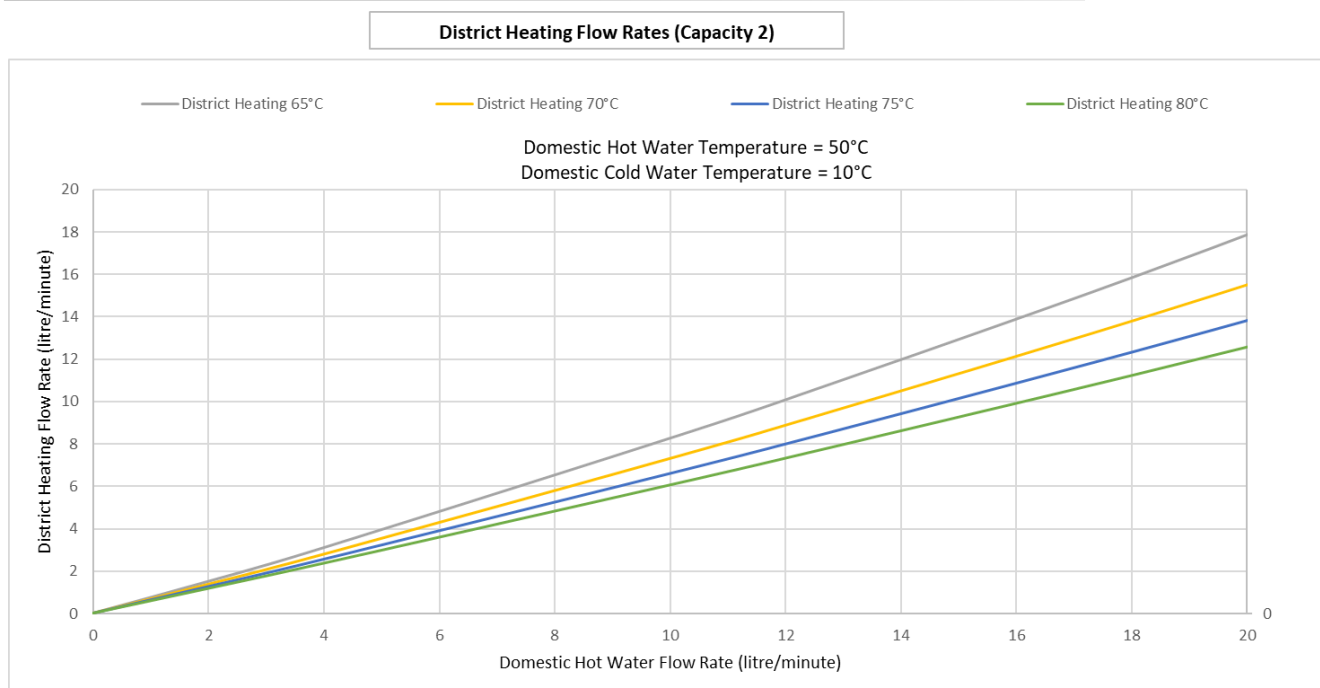
4.2 District Heating Return Temperatures (Capacity 1)



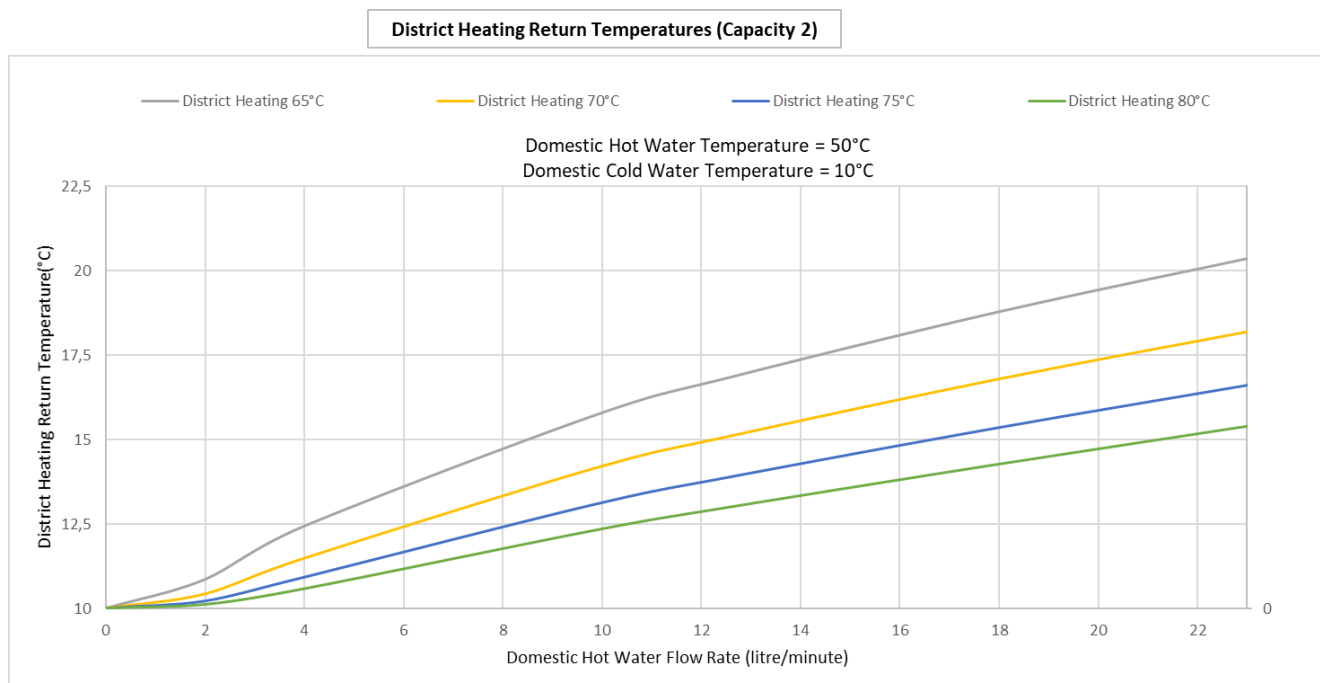
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4. Performance Curves

4.3 District Heating Flow Rates (Capacity 2)



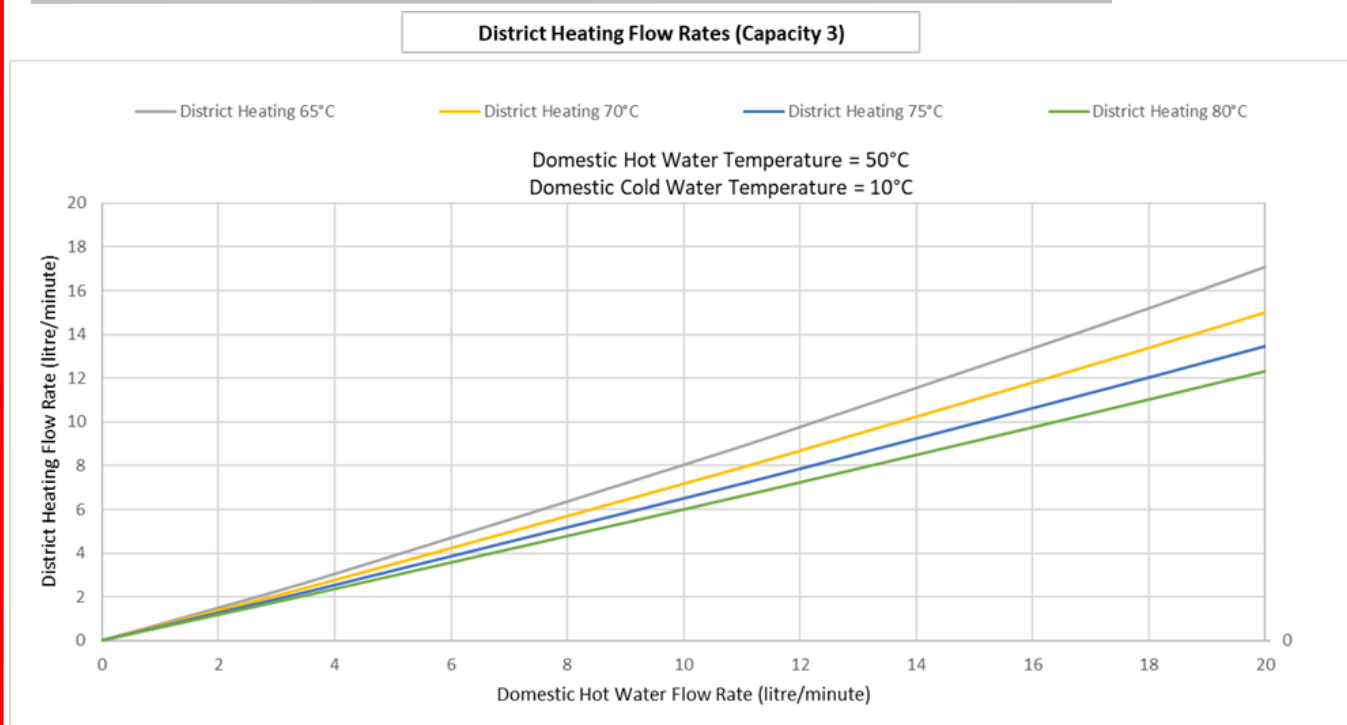
4.4 District Heating Return Temperatures (Capacity 2)



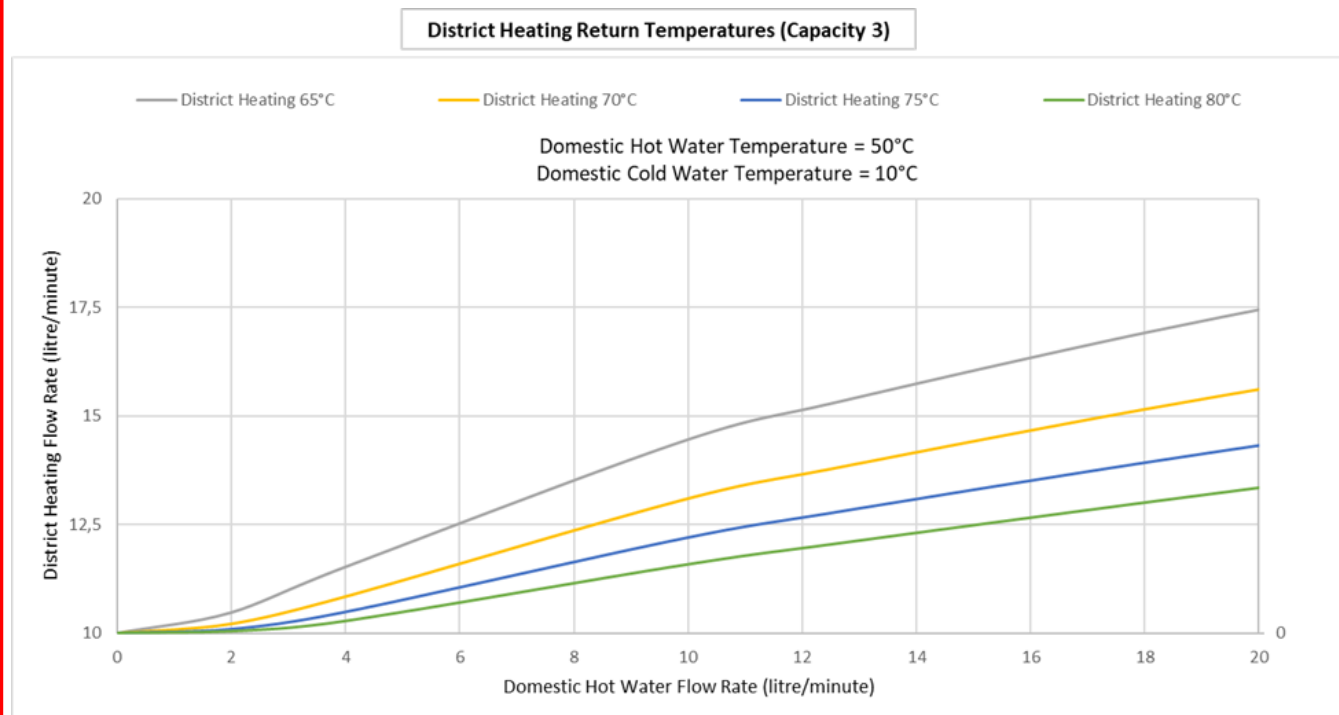
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4. Performance Curves

4.5 District Heating Flow Rates (Capacity 3)



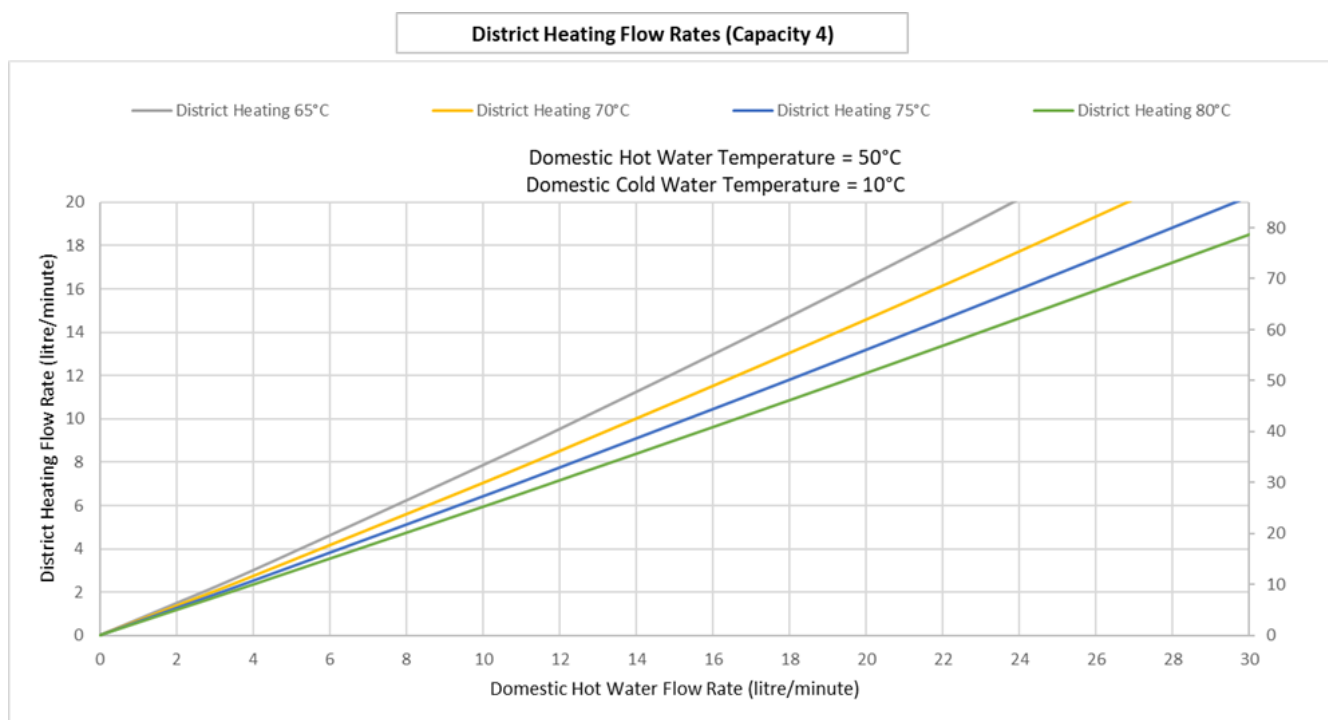
4.6 District Heating Return Temperatures (Capacity 3)



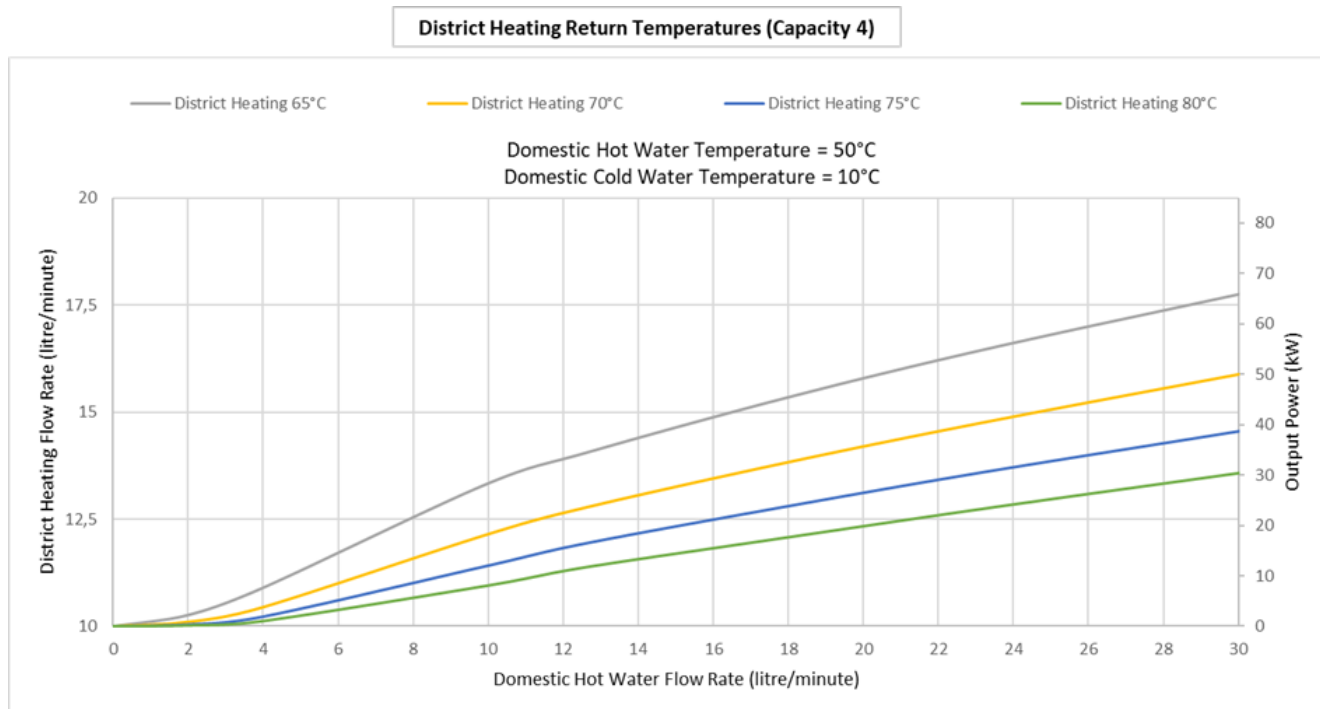
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4. Performance Curves

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

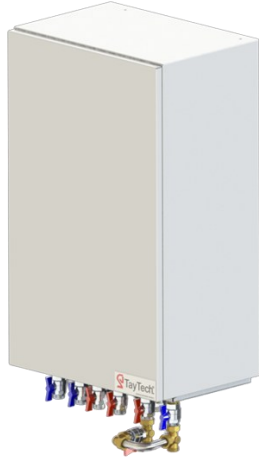
5.4 Capacity 4

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

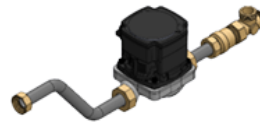
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6. Options

Decorative Steel Cover



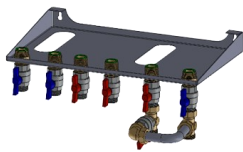
DHW Re-Circulation Kit



Junction Box



Pre-Plumbing Brackets
for Easy Assembly



Water Hammer Arrester



Heat Meter



Flushing By-Pass Kit

