

Direct HydroHexa-UFH

1. General Description



HydroHexa 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. HydroHexa has proportional hydraulic controller 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.

HydroHexa have differential pressure valve, hydraulic controller and 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. It circulates the heat in to a closed loop by using a secondary heating exchanger right next to the domestic hot water exchanger.

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

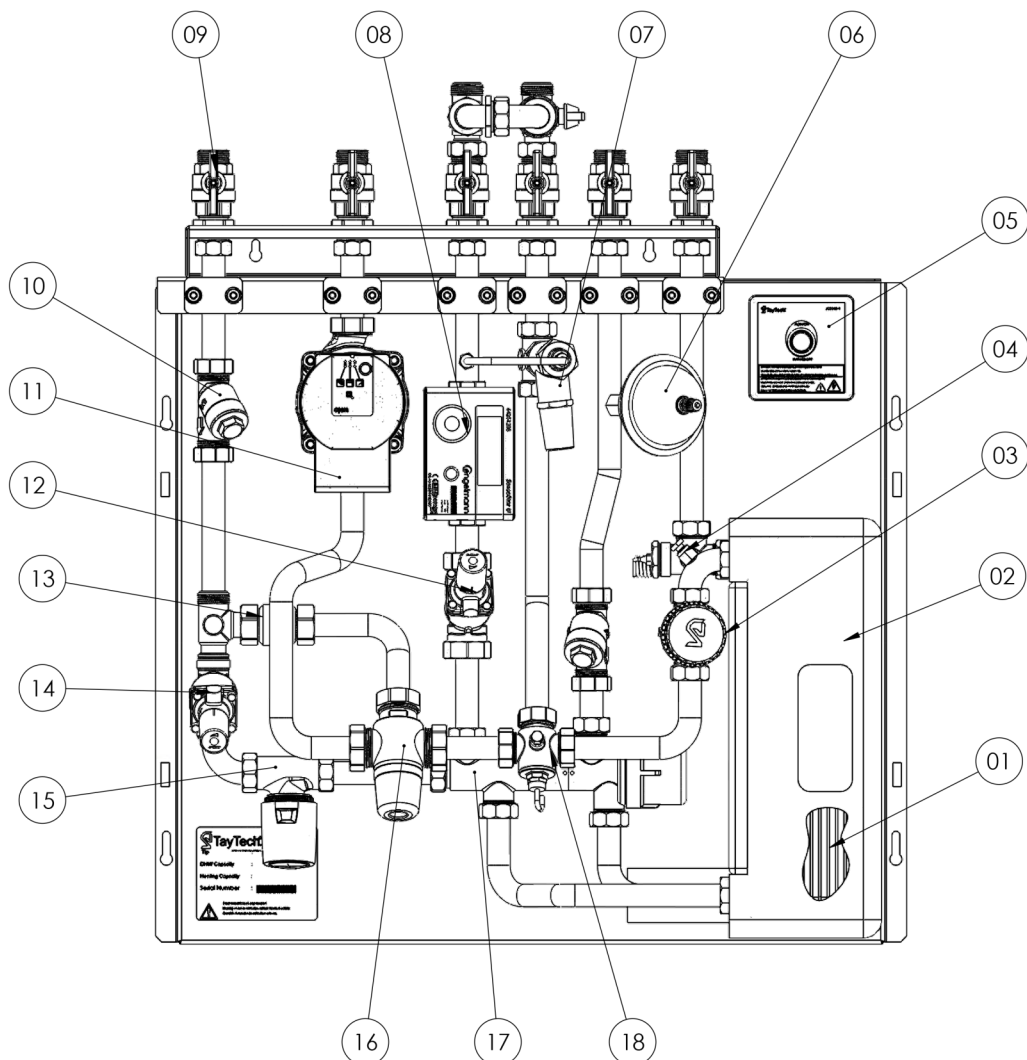
Features

- 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
- Temperature controlled Keep-Warm Function
- Mixing Loop for underfloor heating
- Junction Box for electrical connections (Optional)
- Temperature control valve for underfloor heating loop

Direct HydroHexa-UFH

2. Hydraulic Review

2.1 Component List



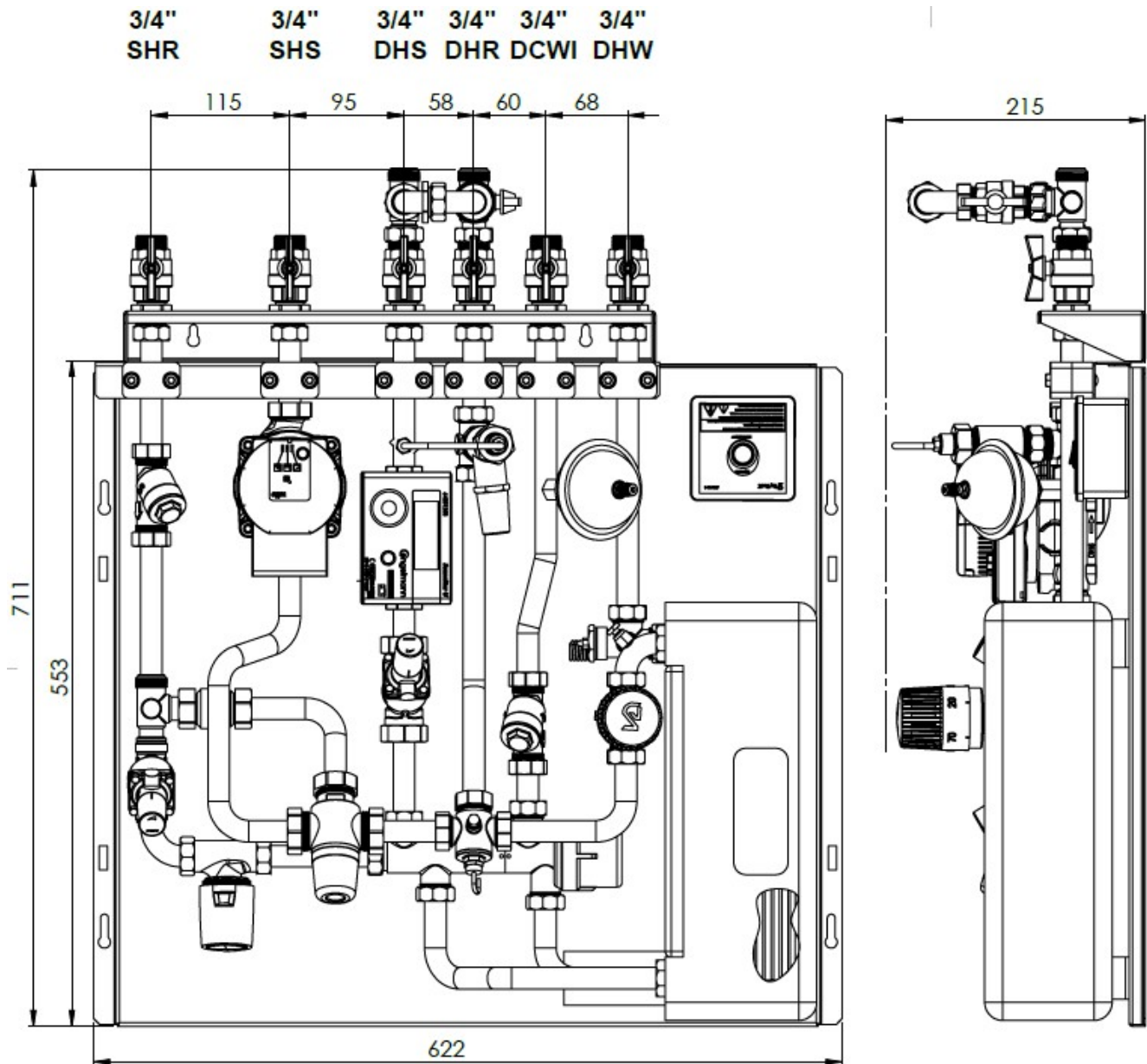
- | | |
|---|---------------------------------------|
| 01 — DHW Heat Exchanger | 09 — Insulation Shut-Off Valve |
| 02 — EPP Insulation of DHW Heat Exchanger | 10 — Heating Return Strainer |
| 03 — DHW Control Valve | 11 — Circulation Pump |
| 04 — Air Ventile | 12 — DP Balancing Valve |
| 05 — Junction Box | 13 — Check Valve |
| 06 — Water Hammer Arrester | 14 — DP Balancing Valve (Heating) |
| 07 — Thermal By-Pass Valve | 16 — Zone Valve with Thermal Actuator |
| 08 — Heat Meter | 17 — Hydraulic Proportional Regulator |
| | 18 — Strainer |

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2. Dimensions

Front View

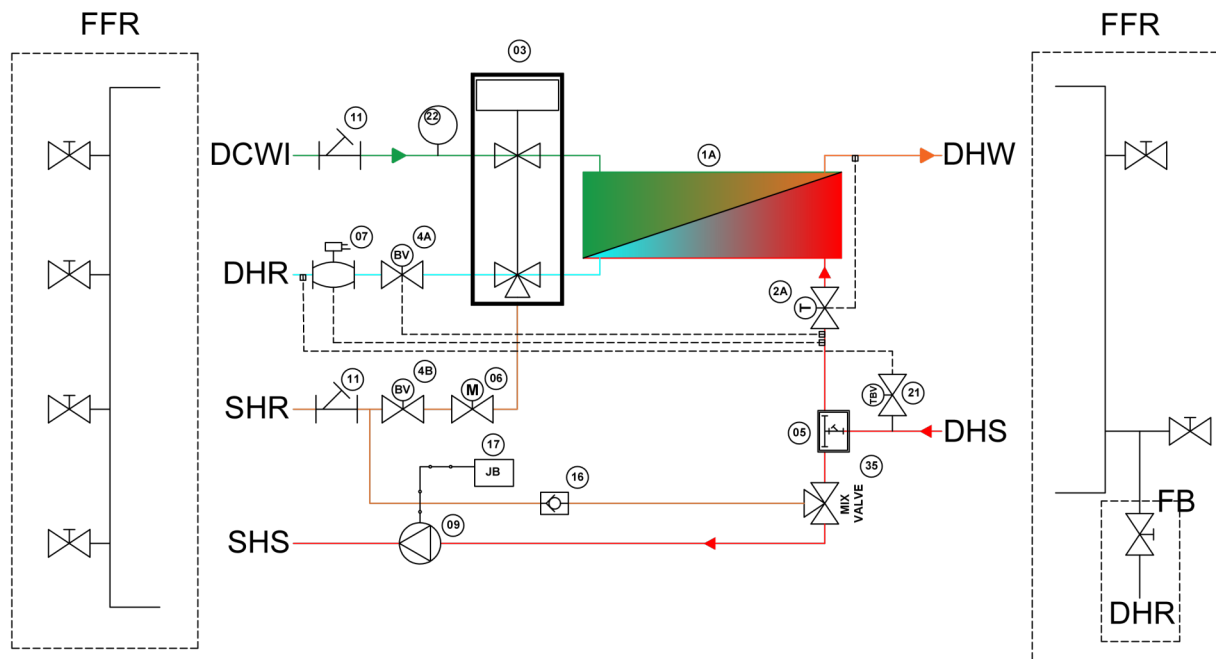
Wall Mounted View



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2. Hydraulic Review

2.2 Flow Diagram



DCWI	–	Domestic Cold Water Inlet
SHR	–	Space Heating Return
SHS	–	Space Heating Supply
DHW	–	Domestic Hot Water
DHS	–	District Heating Supply
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
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
Maximal primary differential pressure	600 kPa
Pressure class DH circuit	PN10
Pressure class DHW circuit	PN10
Casing width***	622 mm
Casing height***	533 mm
Casing depth***	215 mm
Casing Material	Metal case with Insulation
Weight	32kg **
Electrical supply info	230V 50Hz
Fuse ratings	3 Amp

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

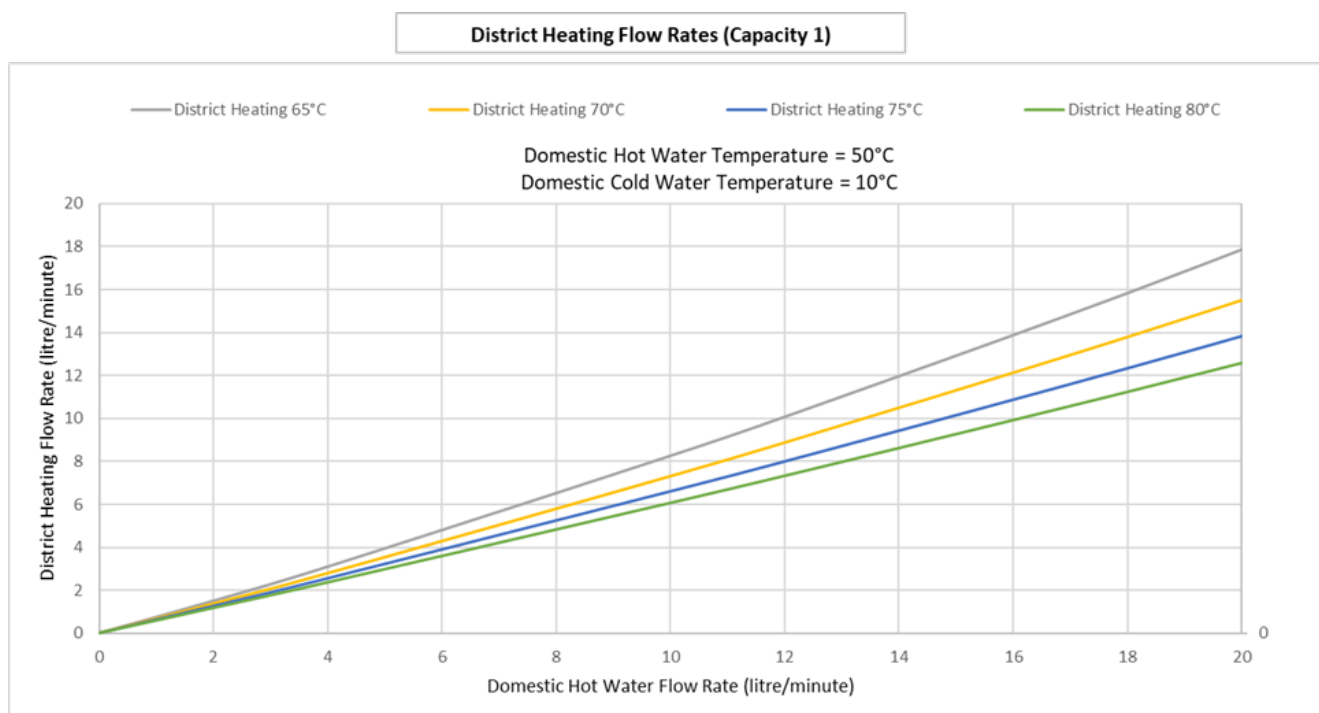
** Unit weight may vary depending on the optional components built into the unit.

*** Dimensions are given without Cabinet

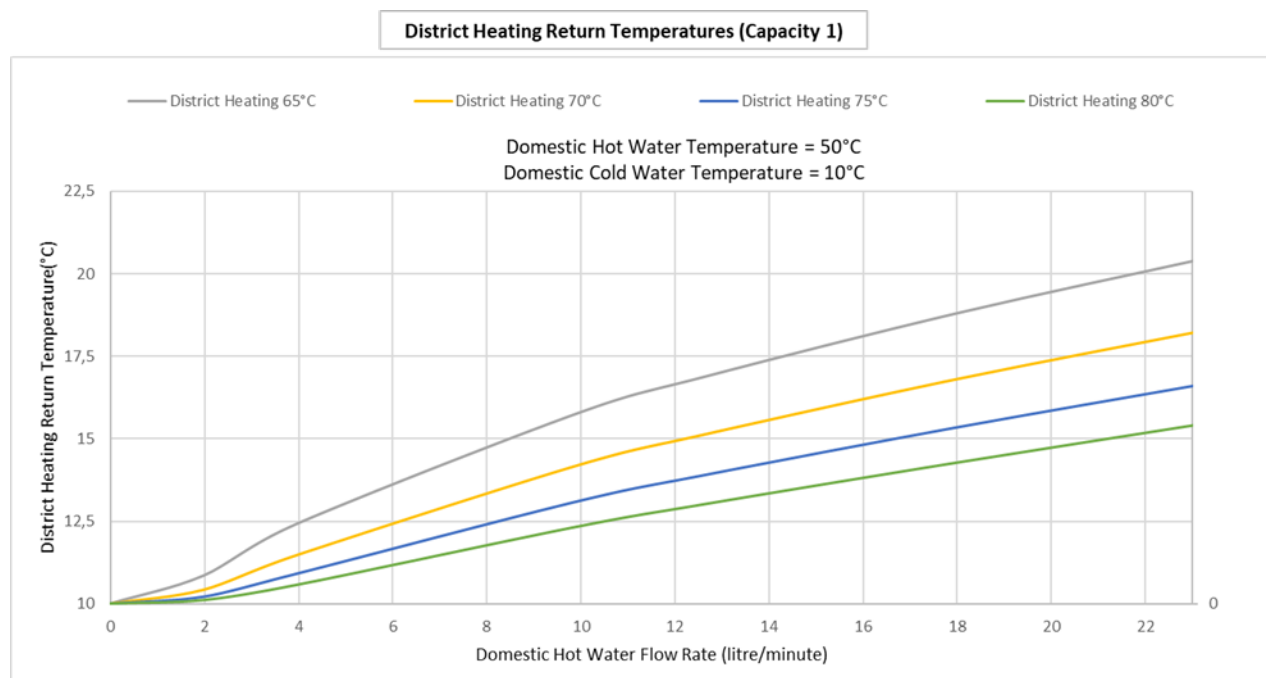
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4. Performance Curves

4.1 District Heating Flow Rates (Capacity 1)



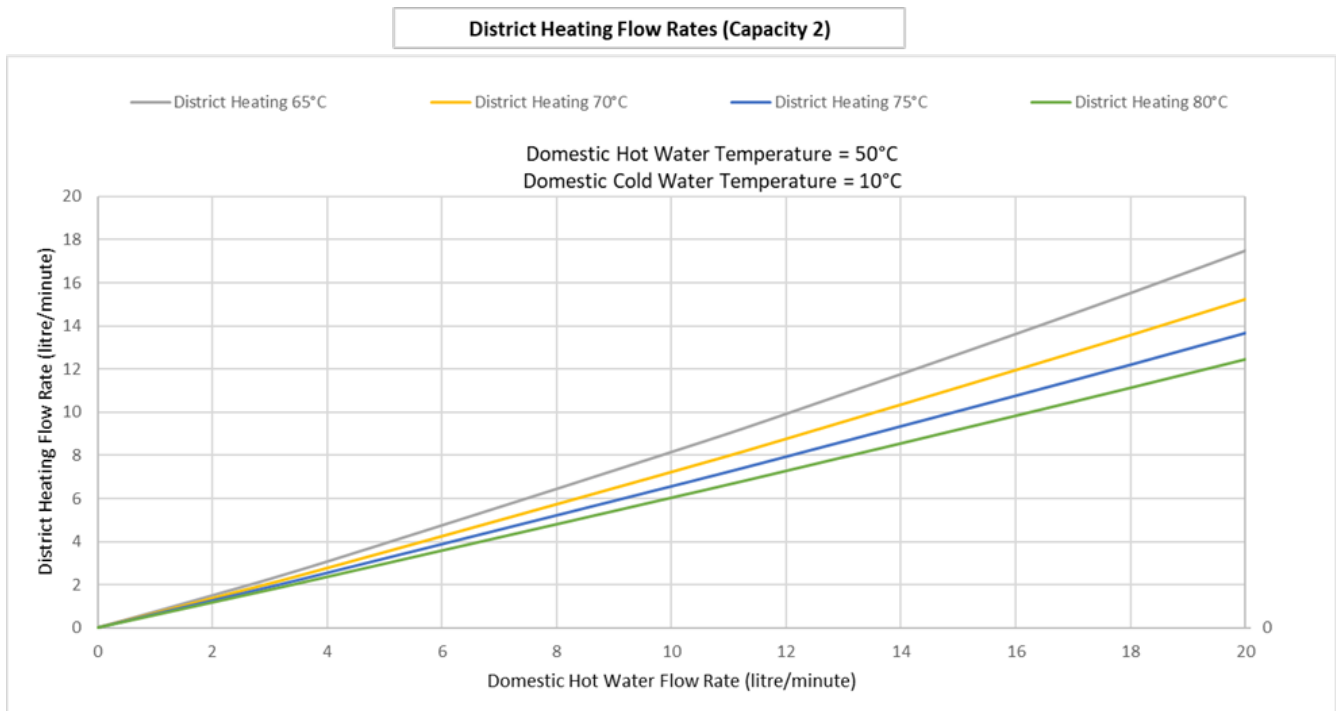
4.2 District Heating Return Temperatures (Capacity 1)



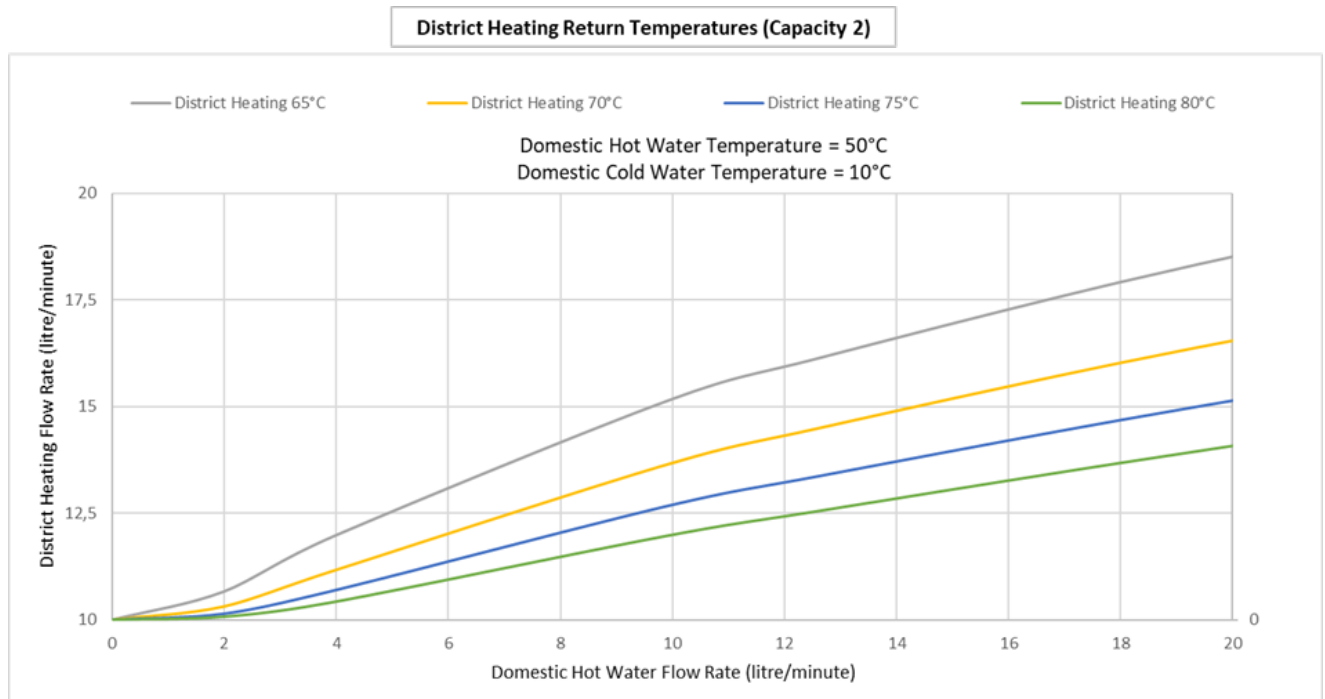
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4. Performance Curves

4.3 District Heating Flow Rates (Capacity 2)



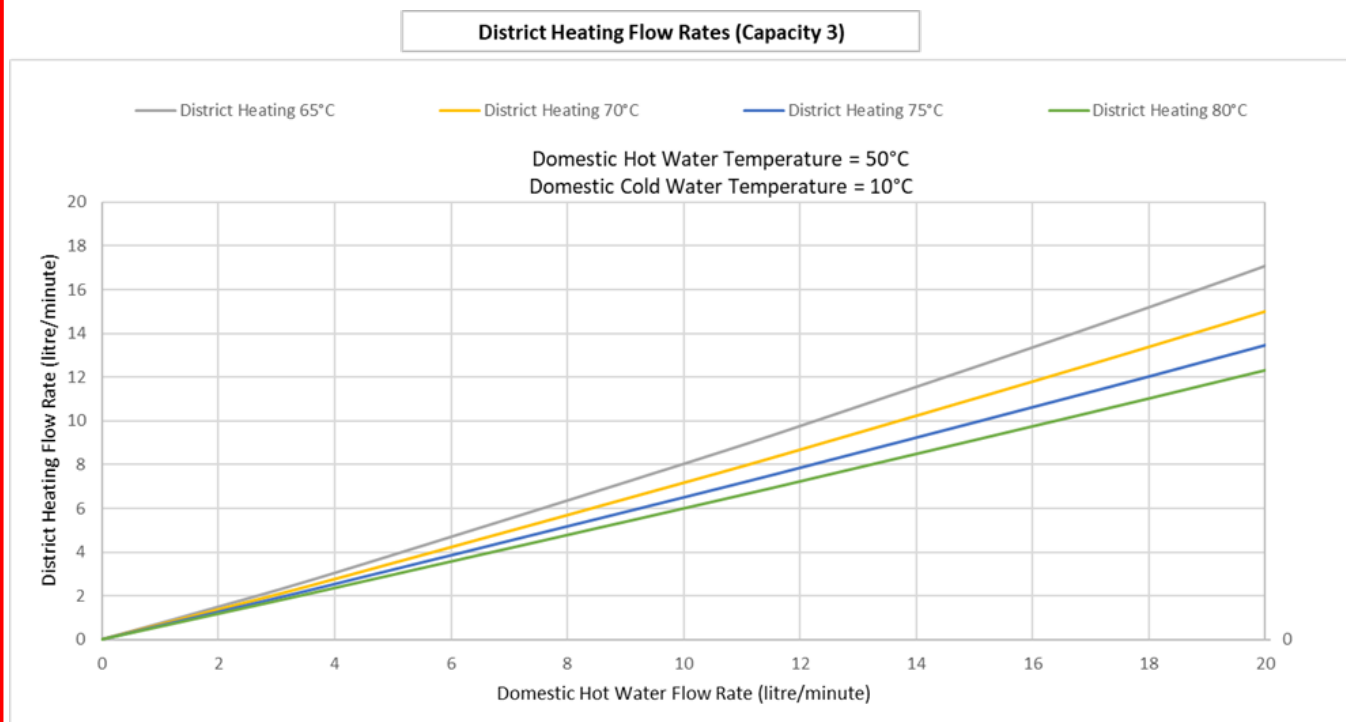
4.4 District Heating Return Temperatures (Capacity 2)



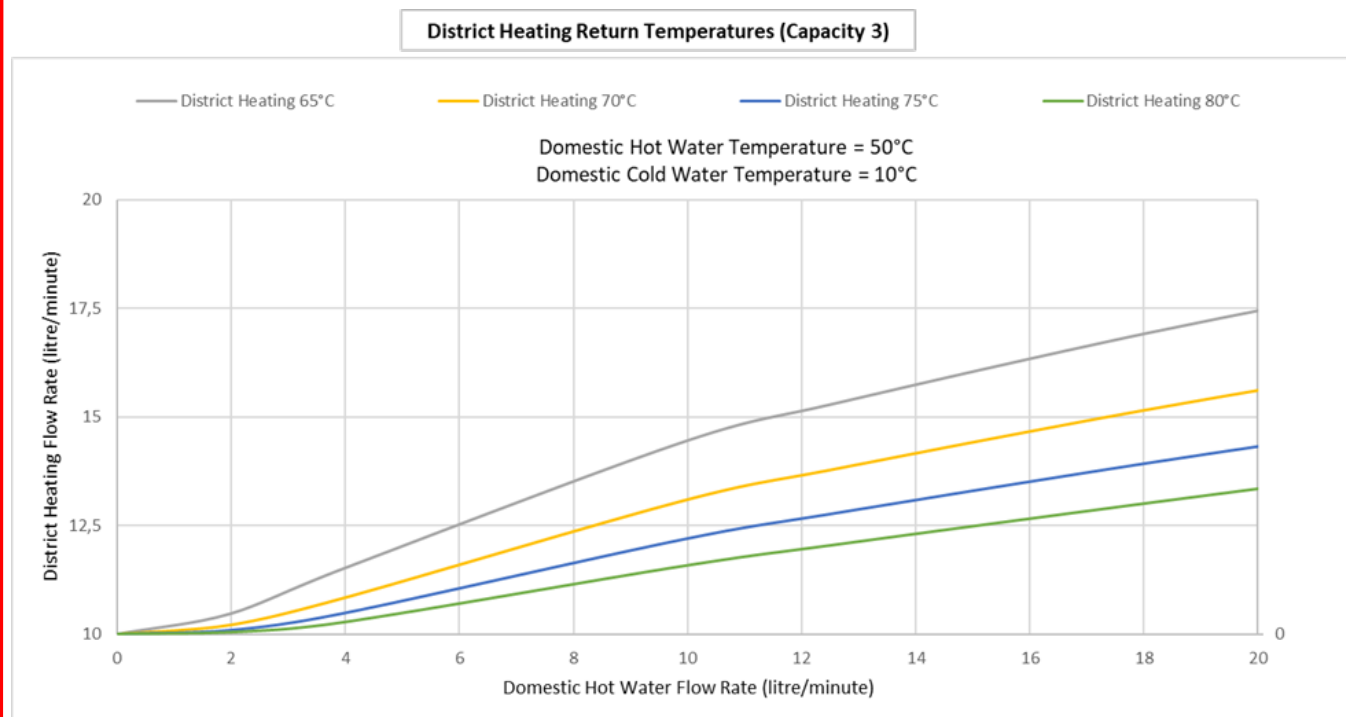
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4. Performance Curves

4.5 District Heating Flow Rates (Capacity 3)



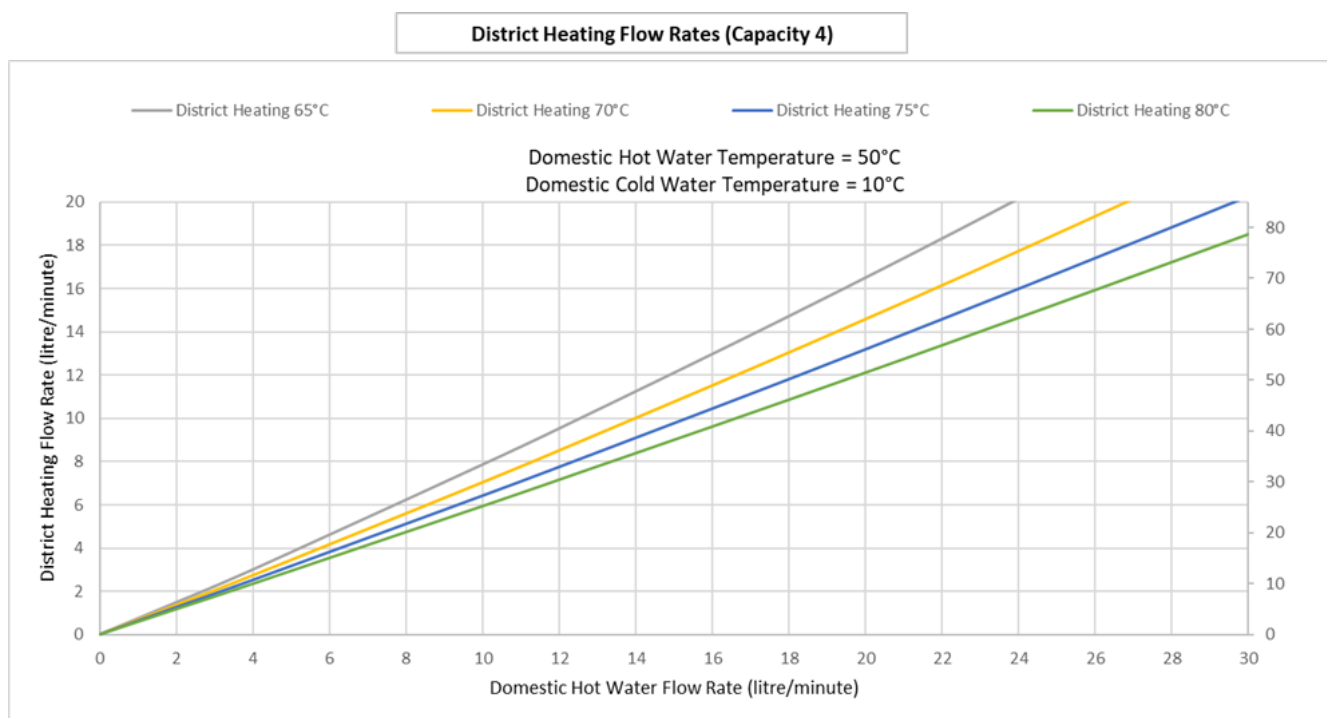
4.6 District Heating Return Temperatures (Capacity 3)



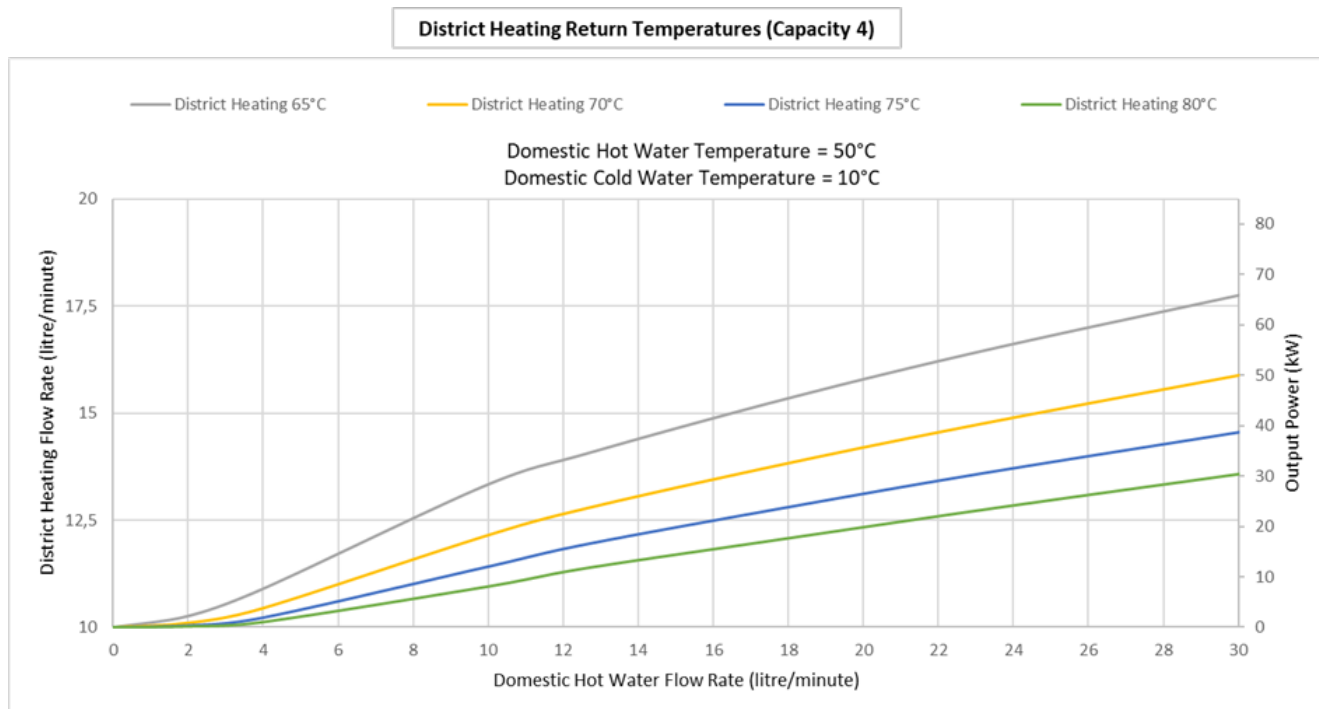
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4. Performance Curves

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

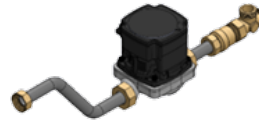
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6. Options

Decorative Steel Cover



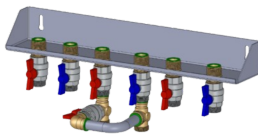
DHW Re-Circulation Kit



Junction Box



Pre-Plumbing Brackets
for Easy Assembly



Water Hammer Arrestor



Heat Meter



Flushing By-Pass Kit

