

TECHNICAL DATA SHEET

TECHNICAL DATA SHEET COM 124 (07/2024)



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PRODUCT: Flow 8000 50 D Heat interface unit

The Flow 8000 D heat interface unit features a Single-plate heat exchanger design for direct district heating, it delivers domestic hot water (DHW) at flow rates of 21 liters per minute. All models offer up to 15 kW of central heating output and come with the option of a heat meter. The Flow 8000's versatility is further enhanced by the availability of various optional accessories, making it suitable for multiple situations.



- The Flow 8000 D HIU product line includes models 40, 50, and 60
- Single PHE design for direct district heating
- Model variants available with or without heat meter
- DPCV included with all models
- Central heating capacity up to 15 kW
- Fast acting electronic control including return temperature limiter function
- Adapts for optimal performance in varying primary flow conditions
- Maximum differential pressure of 4.5bar
- Diehl Sharky-775 Ultrasonic, compact heat meter
- Available with 22mm compression or 3/4" flat face primary connections
- Built in strainers on primary and tertiary sides
- Fully insulated separate EPC inner case enclosing all major components
- Top and bottom connections available via vertical plumb accessory
- Optional flushing bypass
- 230VAC auxiliary power for metering & billing equipment
- Easy internal pre-payment cut-off connection
- Optional internal DHW over temp shut off valve for systems where primary flow is 70°C or more

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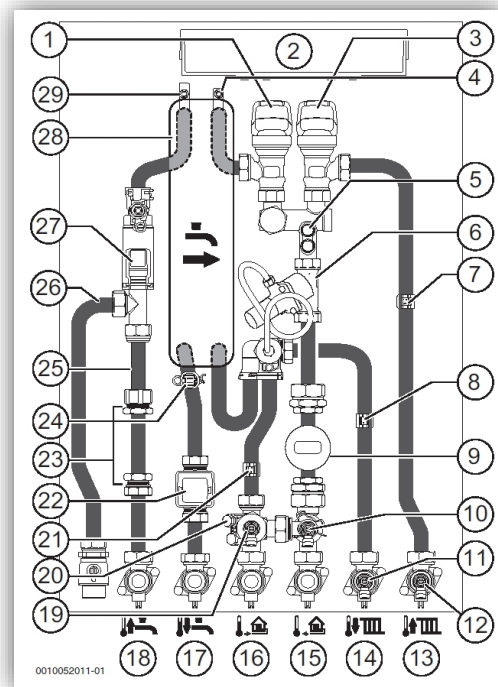
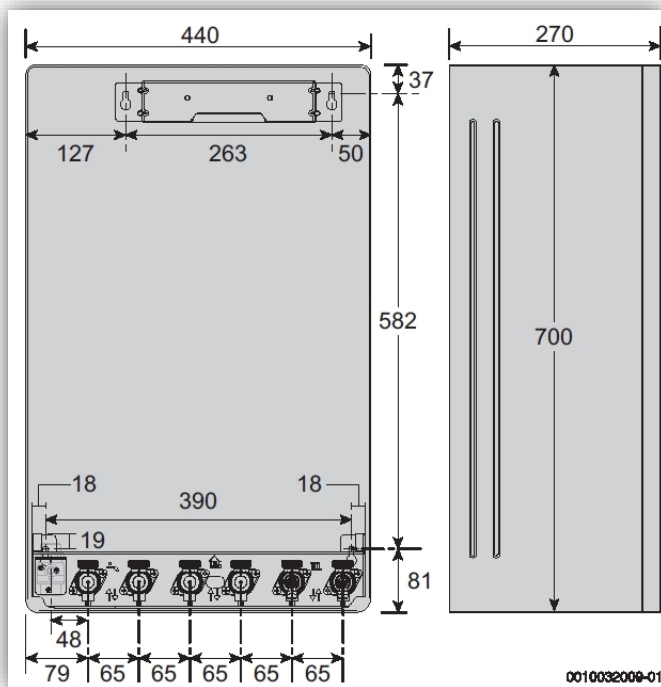
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Flow 8000 50 D Product dimensions and descriptions:



Example 1 Pre-fix and unit dimensions

Example 2 Component layout

- 1) DHW Control valve
- 2) Control unit
- 3) Heating control valve
- 4) Primary circuit air vent valve
- 5) Connection heat meter return (Optional)
- 6) Differential pressure control valve (DPCV)
- 7) Return temperature sensor NTC for heating circuit (Tertiary)
- 8) Flow temperature sensor NTC for heating circuit
- 9) Heat meter, 130mm x G1" / 110mm x G3/4" (Optional)
- 10) Drain valve, or accessory thermal bypass (Optional)
- 11) Heating circuit drain valve, Flow
- 12) Heating circuit drain valve, Return
- 13) Heating circuit return connection (22mm compression)
- 14) Heating circuit flow connection (22mm compression)
- 15) Primary circuit return connection (22mm compression) *
- 16) Primary circuit flow connection (22mm compression) *
- 17) Domestic hot water connection (22mm compression)

- 18) Cold water connection (22mm compression)
- 19) Primary circuit drain valve and strainer
- 20) Heat meter flow sensor connection (M10x1)
- 21) Flow temperature sensor NTC primary circuit
- 22) Over temp shut off valve (Option) **
- 23) Adapter for cold water meter (Optional)
- 24) NTC temperature sensor DHW
- 25) Water hammer arrestor (Optional)
- 26) Cold water outlet (Optional)
- 27) Flow turbine and limiter with strainer
- 28) DHW plate heat exchanger (brazed stainless steel)
- 29) DHW air vent valve

* 3/4" Flat face option available

** Required if primary flow temperature is 70°C or greater

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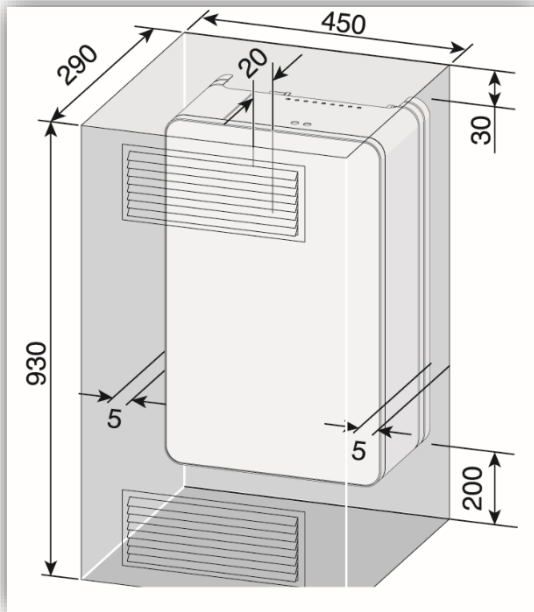
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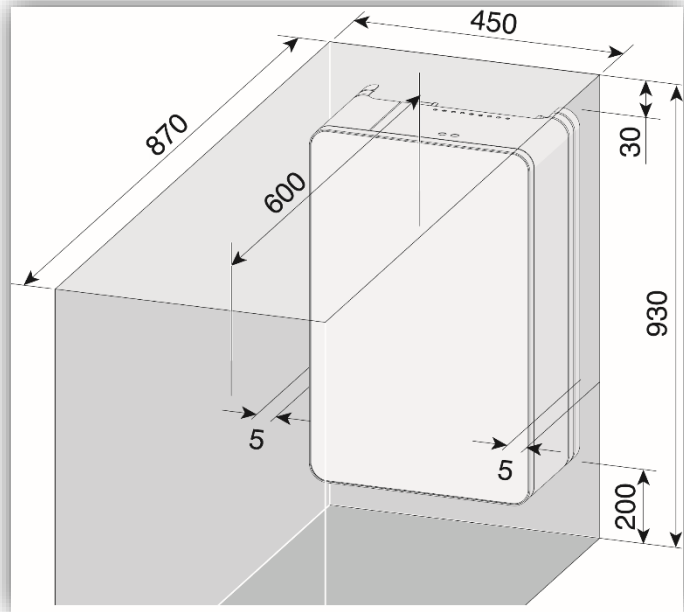


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Flow 8000 50 D clearances & ventilation:



Example 3 Minimum product clearances & ventilation



Example 4 Maintenance clearances

- Temperature within a cabinet must not exceed 35°C.
- Provide ventilation openings at the top and bottom of the cabinet that are at least 240cm².
- Minimum maintenance clearance must be 600mm in front of the heat interface unit to allow for any maintenance that may be required.

Flow 8000 Heat meter:



Diehl Sharky 775 Compact energy meter

- Ultrasonic heat meter
- Measuring accuracy EN 1434 MID Class 2
- 3.6 VDC D-cell battery, up to 16 years lifetime
- Wired and wireless M-Bus as standard
- Additional connectivity modules available

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Flow 8000 50 D Technical Data:

Technical data	Unit	
Minimum inlet pressure to achieve nominal DHW flow rate (with over temp shut off valve)	bar	2.0
Minimum inlet pressure to achieve nominal DHW flow rate (without over temp shut off valve)	bar	1.55
Maximum primary differential pressure with mechanical keep warm bypass	bar	4
Maximum primary differential pressure without mechanical keep warm bypass	bar	4.5
Heating output	kW	1-15
Maximum flow temperature of primary circuit	°C	90
Maximum flow temperature of heating circuit	°C	90
Maximum DHW temperature	°C	60
Maximum operating pressure	bar	10
pH value range, approx. (heating)	pH	6 - 9.5
Maximum DHW volumetric flow rate	l/min	21
Maximum volumetric flow rate of primary circuit (primary side head <50 kPa)	l/s	0.28
Maximum volumetric flow rate of primary circuit (primary side head <70 kPa)	l/s	0.33
Maximum ambient temperature	°C	35
Electrical	Unit	
Electrical Supply	V / Hz	230 / 50
Appliance protection rating	IP	X4D
Maximum power consumption	W	25.3
Standby power consumption	W	3.1
Dimensions & Connections	Unit	
Height x width x depth	mm	700 x 440 x 270
Weight (Excluding packaging)	kg	23
Weight (Including packaging)	kg	25
Cold inlet & DHW outlet (Compression)	mm	22
District heating flow & return (Compression) *	mm	22
Secondary heating flow & return (Compression)	mm	22

* ¾" Flat face option available

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Flow 8000 50 D Performance Data:

Primary Temperature	DHW Flow rate	Primary flow rate	Primary return temp	Primary pressure drop	Output (kW)
Flow 8000 50 D - DHW Temperature 50°C *					
55 °C	9 l/min	12.9 l/min	27 °C	30 kPa	25
55 °C	12 l/min	18.9 l/min	29 °C	64 kPa	34
55 °C	12.3 l/min	19.6 l/min	30 °C	69 kPa	34
60 °C	9 l/min	9.4 l/min	21 °C	16 kPa	25
60 °C	12 l/min	13.5 l/min	24 °C	33 kPa	34
60 °C	15 l/min	17.7 l/min	26 °C	57 kPa	42
60 °C	16.2 l/min	19.6 l/min	27 °C	69 kPa	45
70 °C	9 l/min	6.81 l/min	16 °C	8 kPa	25
70 °C	12 l/min	9.4 l/min	18 °C	16 kPa	34
70 °C	15 l/min	12.2 l/min	20 °C	27 kPa	42
70 °C	18 l/min	15.1 l/min	21 °C	41 kPa	50
70 °C	21 l/min	18.1 l/min	23 °C	58 kPa	59
80 °C	9 l/min	5.6 l/min	14 °C	6 kPa	25
80 °C	12 l/min	7.6 l/min	15 °C	10 kPa	34
80 °C	15 l/min	9.7 l/min	17 °C	17 kPa	42
80 °C	18 l/min	11.9 l/min	18 °C	25 kPa	50
80 °C	21 l/min	14.1 l/min	19 °C	35 kPa	59
Flow 8000 50 D - DHW Temperature 55°C *					
60 °C	9 l/min	13.5 l/min	30 °C	33 kPa	28
60 °C	12 l/min	19.7 l/min	32 °C	69 kPa	38
70 °C	9 l/min	8.25 l/min	20 °C	12 kPa	28
70 °C	12 l/min	11.6 l/min	23 °C	24 kPa	38
70 °C	15 l/min	15.1 l/min	25 °C	41 kPa	47
70 °C	18 l/min	18.8 l/min	26 °C	64 kPa	57
70 °C	18.6 l/min	19.6 l/min	27 °C	69 kPa	59
80 °C	9 l/min	6.5 l/min	16 °C	8 kPa	28
80 °C	12 l/min	8.9 l/min	18 °C	14 kPa	38
80 °C	15 l/min	11.5 l/min	20 °C	24 kPa	47
80 °C	18 l/min	14.2 l/min	21 °C	36 kPa	57
80 °C	21 l/min	16.9 l/min	23 °C	51 kPa	66
Flow 8000 50 D - DHW Temperature 60°C *					
70 °C	9 l/min	10.4 l/min	26 °C	19 kPa	32
70 °C	12 l/min	14.8 l/min	29 °C	39 kPa	42
70 °C	15 l/min	19.6 l/min	31 °C	69 kPa	53
80 °C	9 l/min	7.6 l/min	19 °C	10 kPa	32
80 °C	12 l/min	10.6 l/min	22 °C	20 kPa	42
80 °C	15 l/min	13.7 l/min	24 °C	34 kPa	53
80 °C	18 l/min	16.9 l/min	26 °C	51 kPa	63

* DHW setpoints adjustable in 5°C increments between 30°C and 60°C

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Flow 8000 Optional accessories:



Rear vertical piping



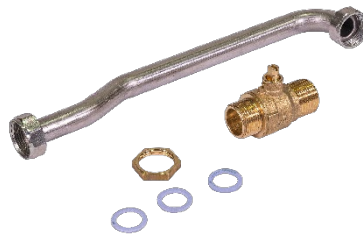
Flushing valve



Summer by-pass



Over temp shut off valve



Flow 8000 D Cold water kit



Flow 8000 D Water hammer arrestor

Product description	Part number	Product description	Part number
Flow 8000 40 D	7-735-600-733	Security Fixings	7-733-600-281
Flow 8000 40 DH ¹⁾	7-735-600-734	Rear vertical piping kit	7-733-600-127
Flow 8000 50 D	7-735-600-735	Flushing valve (Compression)	7-733-600-133
Flow 8000 50 DH ¹⁾	7-735-600-736	Flushing valve (Flat face)	7-733-601-142
Flow 8000 60 D	7-735-600-737	Summer by-pass (Mechanical)	7-733-600-132
Flow 8000 60 DH ¹⁾	7-735-600-738	Flow 8000 D Cold water kit	7-735-600-806
Flow 8000 Pre-fix kit (Compression) ²⁾	7-735-600-759	Sense II controller	7-738-111-064
Flow 8000 Pre-fix kit (Flat face) ²⁾	7-735-600-758	Greenstar System Filter Mini	7-733-600-266
Heat Meter Adaptor Kit	7-733-600-119	Greenstar System Filter 22mm	7-733-600-236
Over temp shut off valve ³⁾	7-735-600-808	Flow 8000 D Water hammer arrestor	7-735-600-804

- ¹⁾ **With heat meter wired M-Bus as standard**
- ²⁾ **Either compression or flat face pre-fix kit is required per Flow 8000 D HIU**
- ³⁾ **Required if primary flow temperature is 70°C or greater**

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