TECHNICAL DATA SHEET

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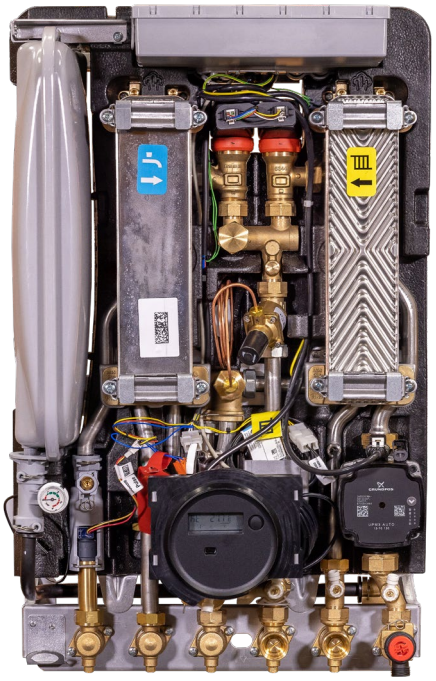
PRODUCT: Flow 8500 40 Heat interface unit

The Flow 8500 heat interface unit features a twin-plate heat exchanger design, enabling indirect heat transfer. Flow 8500 40 offers DHW flowrates up to 15 l/min. All models offer 15 kW of central heating output and come with the option of a pre-fitted heat meter. The Flow 8500's versatility is further enhanced by the availability of various optional accessories, making it suitable for multiple situations.



- **The Flow 8500 HIU product line includes models 40, 50, and 60**
- **BESA 2023 registered products**
- **Meets multiple VWART best practices***
- **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 ¾" flat face primary connections**
- **Built in, easy to access strainer**
- **Fully insulated separate EPC inner case enclosing all major components**
- **Top and bottom connections available via vertical plumb accessory**
- **Optional internal keyless filling loop**
- **Optional flushing bypass**
- **230VAC auxiliary power for metering & billing equipment**
- **Easy internal pre-payment cut-off connection**
- **Optional internal over temp shut off valve for systems where primary flow is 70°C or more**
- **Electronic summer bypass as standard**

* Use QR code to see all VWART best practice results.

Please use QR code for Full BESA 2023 results

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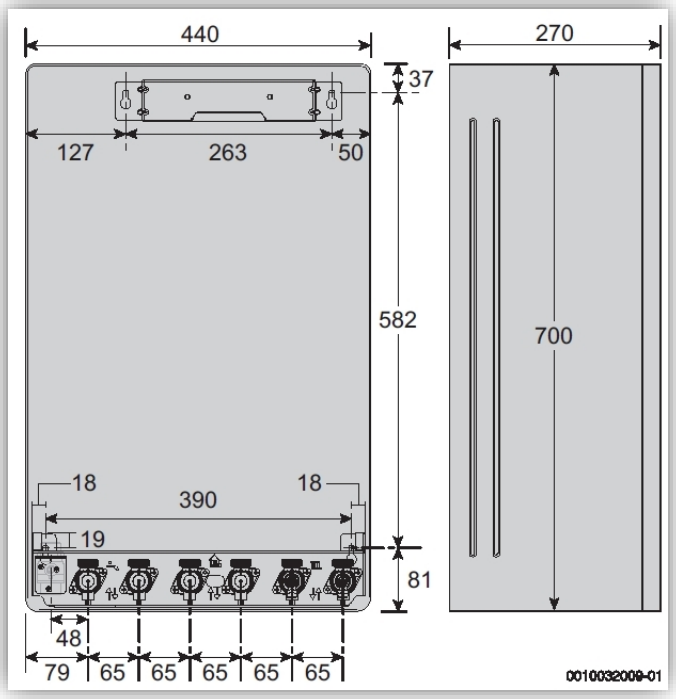
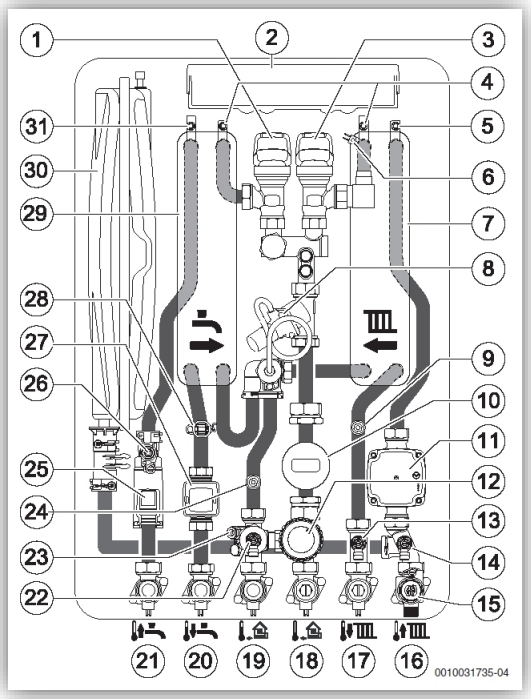
Flow 8500 40 Product dimensions and descriptions:



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) Heating circuit air vent valve
6) Return temperature sensor NTC for heating circuit (Primary)
7) Heating circuit plate heat exchanger (brazed stainless steel)
8) Differential pressure control valve (DPCV)
9) Flow temperature sensor NTC for heating circuit
10) Heat meter (optional)
11) Heating circulation pump
12) Thermal Bypass (accessory)
13) Heating circuit drain valve, Flow
14) Heating circuit drain valve, Return
15) Heating circuit pressure release valve
16) Heating circuit return connection (22mm compression)
17) Heating circuit flow connection (22mm compression)
18) Primary circuit return connection (22mm compression) *
19) Primary circuit flow connection (22mm compression) *
20) Domestic hot water connection (22mm compression)
21) Cold water connection (22mm compression)
22) Primary circuit drain valve and strainer
23) Heat meter flow sensor connection (M10x1)
24) Flow temperature sensor NTC primary circuit
25) Flow turbine and limiter with strainer
26) DHW pressure-relief valve
27) Over temp shut off valve (Option) **
28) NTC temperature sensor DHW
29) DHW plate heat exchanger (brazed stainless steel)
30) Expansion vessel
31) DHW air vent valve

*** ¾" Flat face option available**

**** Required if primary flow temperature is 70ºC or greater**

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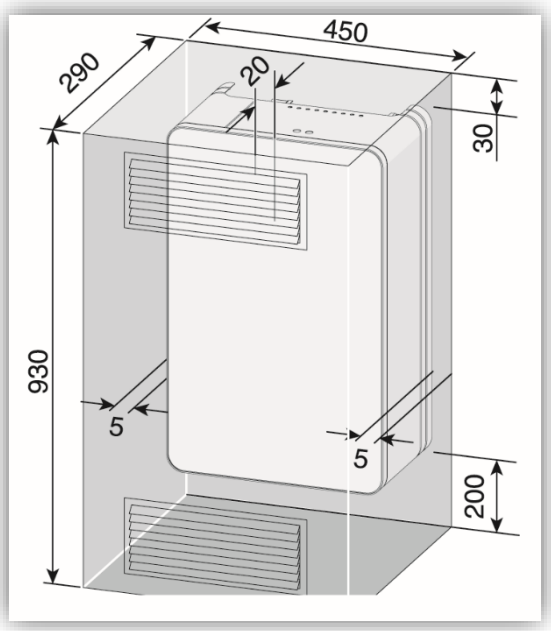
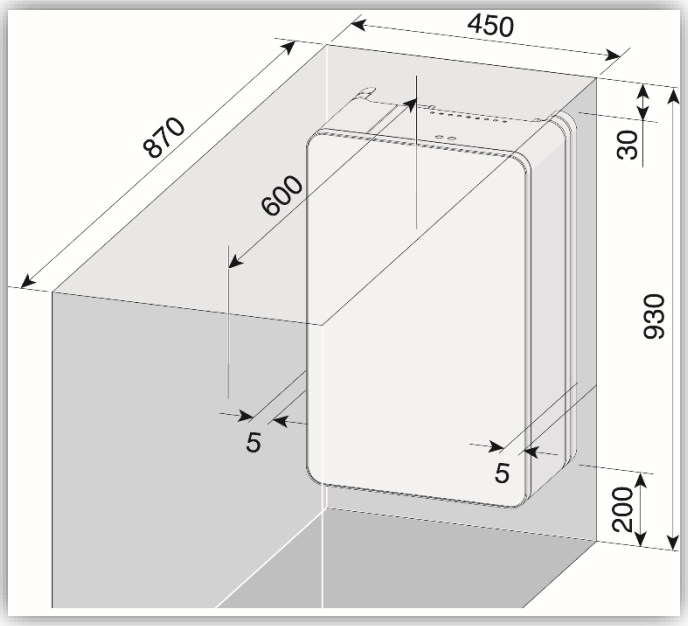
Flow 8500 40 clearances & ventilation:



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 240cm$^{2.}$
- Minimum maintenance clearance must be 600mm in front of the heat interface unit to allow for any maintenance that may be required.

Flow 8500 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 8500 40 Technical Data:

Technical data	Unit	
Minimum inlet pressure to achieve nominal DHW flow rate (with over temp shut off valve)	bar	1.2
Minimum inlet pressure to achieve nominal DHW flow rate (without over temp shut off valve)	bar	0.9
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	0.5 - 15
Maximum flow temperature of primary circuit	°C	90
Maximum flow temperature of heating circuit	°C	70
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	15
Maximum volumetric flow rate of primary circuit (primary side head <50 kPa)	l/s	0.20
Maximum volumetric flow rate of primary circuit (primary side head <70 kPa)	l/s	0.23
Maximum ambient temperature	°C	35
Expansion vessel size	l	5
Expansion vessel charge	bar	0.75
Electrical	**Unit**	
Electrical Supply	V / Hz	230 / 50
Appliance protection rating	IP	X4D
Maximum power consumption	W	50
Standby power consumption	W	3.1
Dimensions & Connections	**Unit**	
Height x width x depth	mm	700 x 440 x 270
Weight (Excluding packaging)	kg	26
Weight (Including packaging)	kg	29
Cold inlet & DHW outlet (Compression)	mm	22
District heating flow & return (Compression) *	mm	22
Secondary heating flow & return (Compression)	mm	22
Pressure release valve	mm	15

*** ¾" Flat face option available**

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Flow 8500 40 Performance Data:

Primary Temperature	DHW Flow rate	Primary flow rate	Primary return temp	Primary pressure drop	Output (kW)
Flow 8500 40 - DHW Temperature 50ºC *					
55 °C	9 l/min	12.9 l/min	27 °C	61 kPa	25
55 °C	9.6 l/min	13.3 l/min	27 °C	70 kPa	27
60 °C	9 l/min	9.1 l/min	20 °C	26 kPa	25
60 °C	12 l/min	13.2 l/min	24 °C	67 kPa	33
60 °C	12.1 l/min	13.3 l/min	24 °C	70 kPa	34
70 °C	9 l/min	6.7 l/min	16 °C	15 kPa	25
70 °C	12 l/min	9.0 l/min	17 °C	26 kPa	33
70 °C	15 l/min	11.4 l/min	18 °C	42 kPa	42
80 °C	9 l/min	5.7 l/min	15 °C	12 kPa	25
80 °C	12 l/min	7.6 l/min	16 °C	20 kPa	33
80 °C	15 l/min	9.6 l/min	17 °C	32 kPa	42
Flow 8500 40 - DHW Temperature 55ºC *					
60 °C	9 l/min	11.3 l/min	24 °C	42 kPa	28
60 °C	10.6 l/min	13.3 l/min	26 °C	70 kPa	32
70 °C	9 l/min	7.9 l/min	19 °C	20 kPa	28
70 °C	12 l/min	10.8 l/min	21 °C	37 kPa	37
70 °C	15 l/min	13.9 l/min	22 °C	69 kPa	47
80 °C	9 l/min	6.5 l/min	17 °C	15 kPa	28
80 °C	12 l/min	8.9 l/min	19 °C	27 kPa	37
80 °C	15 l/min	11.4 l/min	20 °C	43 kPa	47
80 °C	15.9 l/min	12.0 l/min	21 °C	49 kPa	56
Flow 8500 40 - DHW Temperature 60ºC *					
70 °C	9 l/min	10.3 l/min	26 °C	35 kPa	31
70 °C	12 l/min	13.3 l/min	27 °C	70 kPa	42
80 °C	9 l/min	7.7 l/min	20 °C	20 kPa	31
80 °C	12 l/min	10.4 l/min	22 °C	36 kPa	42
80 °C	15 l/min	13.4 l/min	24 °C	70 kPa	52

*** DHW setpoints adjustable in 5ºC increments between 30ºC and 60ºC. For further network information on temperatures not mentioned in this table, please contact commercial.Industrial@uk.bosch.com**

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Flow 8500 Optional accessories:

Rear vertical piping

Flushing valve

Summer by-pass

Over temp shut off valve

Keyless filling link

Sense II controller

Product description	Part number	Product description	Part number
Flow 8500 40	7-735-600-739	Security Fixings	7-733-600-281
Flow 8500 40 H [1]	7-735-600-740	Rear vertical piping kit	7-733-600-127
Flow 8500 50	7-735-600-741	Flushing valve (Compression)	7-733-600-133
Flow 8500 50 H [1]	7-735-600-742	Flushing valve (Flat face)	7-733-601-142
Flow 8500 60	7-735-600-743	Summer by-pass (Mechanical)	7-733-600-132
Flow 8500 60 H [1]	7-735-600-744	Keyless filling link	7-716-192-610
Flow 8500 Pre-fix kit (Compression) [2]	7-735-600-836	Sense II controller	7-738-111-064
Flow 8500 Pre-fix kit (Flat face) [2]	7-735-600-837	Greenstar System Filter Mini	7-733-600-266
Over temp shut off valve [3]	7-735-600-808	Greenstar System Filter 22mm	7-733-600-236

[1] **With heat meter wired and wireless M-Bus as standard**

[2] **Either compression or flat face pre-fix kit is required per Flow 8500 HIU**

[3] **Required if primary flow temperature is 70ºC or greater**

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