

# HSBC 300 Integral Tank/System

## Engineering specifications sheet

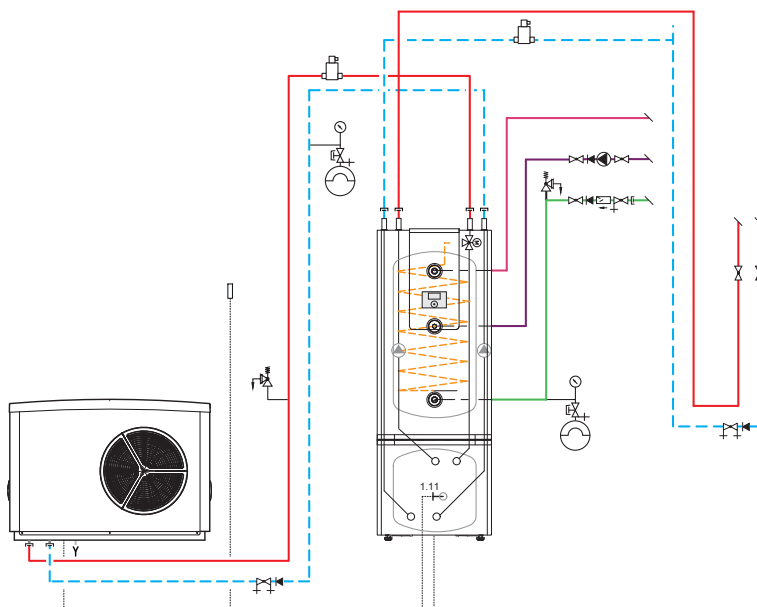
### HSBC 300 Integral

72 gal. (270 l) DHW tank

26 gal. (100 l) buffer tank

WPM heat pump & system controller

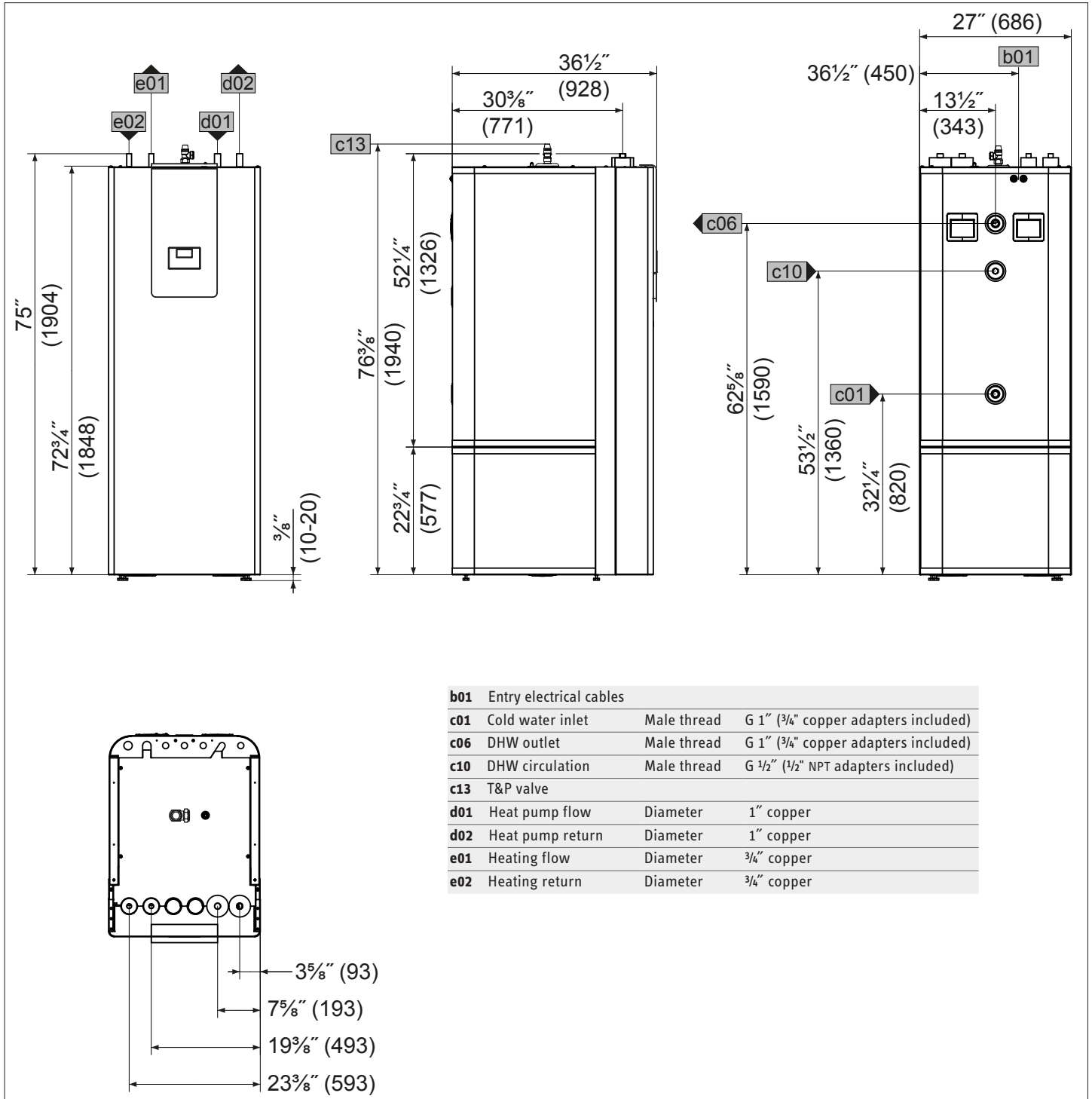
- Highly integrated, all-in-one, single appliance for WPL installation
- Includes DHW tank, buffer tank, all piping & pumps necessary for WPL operation, and WPM main system controller
- Simplifies installation by reducing on-site piping and electrical work
- Saves floor space compared to systems with separate tanks
- Suitable for new construction or system modernization
- WPM controller manages heat pump operation as well as the heating, cooling, & DHW system
- Integrated variable speed heat pump circulator and up to two heating zone circulators
- Includes diverter valve and sensors
- Automatically adjusts loading from DHW to heating/cooling, with priority on DHW operation
- Hydronic glycol connection to WPL heat pump, not refrigerant
- Warranty: 7 years against leakage / 2 years against defects in workmanship & materials



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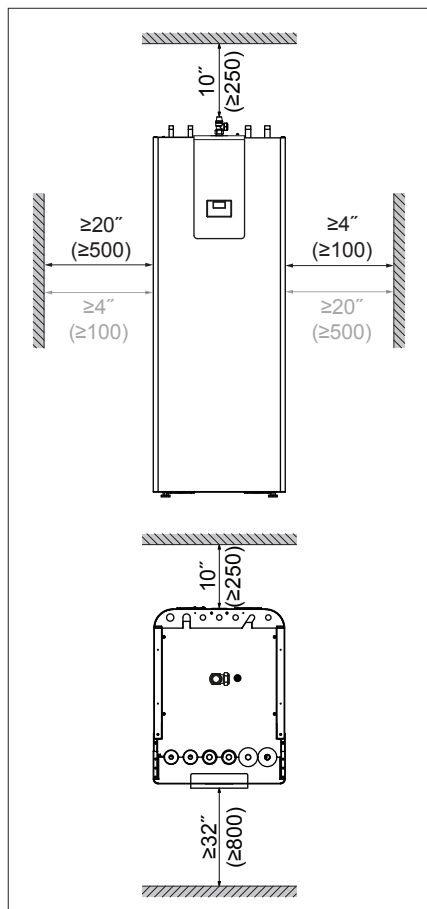
### Dimensions



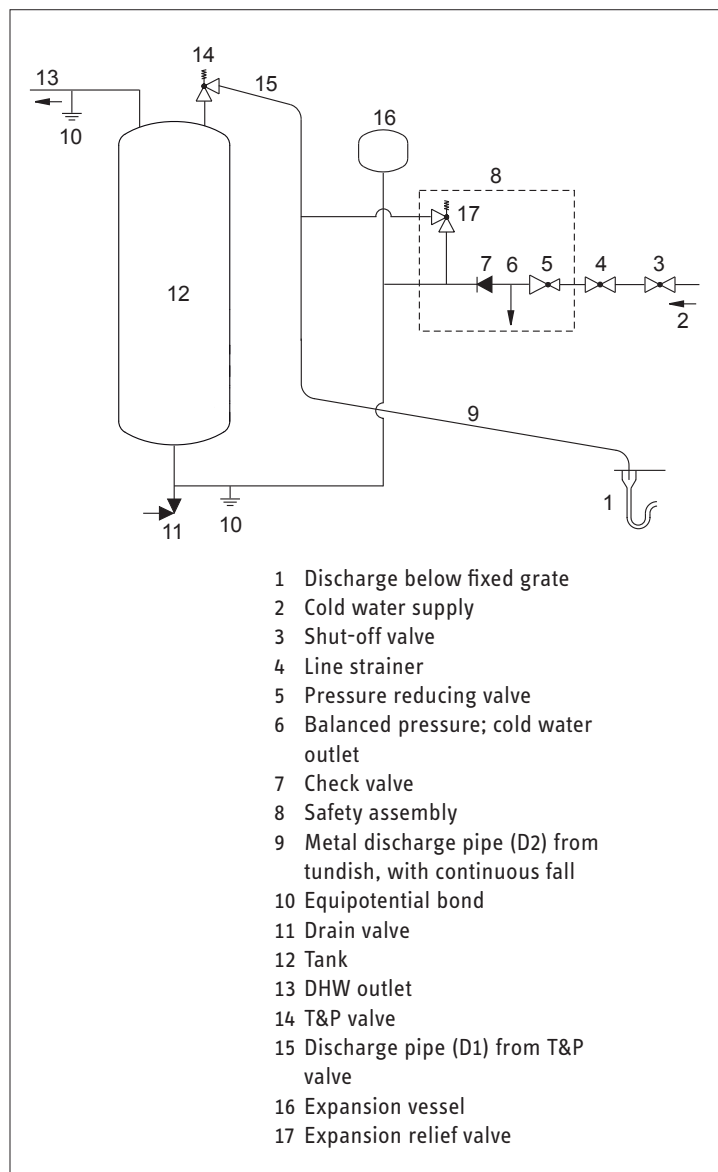
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### Clearances



### DHW hydraulic diagram



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HSBC 300 Integral	
Item number	202493
<b>Hydraulic data</b>	
Nominal capacity, DHW tank	71.3 gal (270 l)
Nominal capacity, buffer tank	26.4 gal (100 l)
Surface area, heat exchanger	34.4 ft <sup>2</sup> (3.20 m <sup>2</sup> )
Volume, heat exchanger	5.5 gal (21 l)
External available pressure differential, circulation pump, heat pump at 4.4 gpm (1.0 m <sup>3</sup> /hr)	22.0 ft. head (656 hPa)
External available pressure differential, circulation pump, heat pump at 6.6 gpm (1.5 m <sup>3</sup> /hr)	17.6 ft. head (527 hPa)
External available pressure differential, circulation pump, heat pump at 8.8 gpm (2.0 m <sup>3</sup> /hr)	7.0 ft. head (210 hPa)
External available pressure differential, circulation pump, heating circuit 1 at 4.4 gpm (1.0 m <sup>3</sup> /hr)	24.3 ft. head (725 hPa)
External available pressure differential, circulation pump, heating circuit 1 at 6.6 gpm (1.5 m <sup>3</sup> /hr)	22.2 ft. head (663 hPa)
External available pressure differential, circulation pump, heating circuit 1 at 8.8 gpm (2.0 m <sup>3</sup> /hr)	14.9 ft. head (444 hPa)
External available pressure differential, circulation pump, heating circuit 2 (optional) at 4.4 gpm (1.0 m <sup>3</sup> /hr)	22.3 ft. head (665 hPa)
External available pressure differential, circulation pump, heating circuit 2 (optional) at 6.6 gpm (1.5 m <sup>3</sup> /hr)	17.3 ft. head (518 hPa)
External available pressure differential, circulation pump, heating circuit 2 (optional) at 8.8 gpm (2.0 m <sup>3</sup> /hr)	6.3 ft. head (189 hPa)
Pressure drop at 4.4 gpm (1.0 m <sup>3</sup> /h), heat exchanger, top	1.9 ft. head (56 hPa)
Reheating time, top heat exchanger	33 min
<b>Application limits</b>	
Max. permissible pressure (design pressure), DHW tank	101.5 psi (0.7 MPa)
Max. permissible pressure (design pressure), heat exchanger, top	43.5 psi (0.3 MPa)
Test pressure, DHW tank	217.6 psi (1.50 MPa)
Max. flow rate, DHW tank	6.6 gpm (25 l/min)
Max. permissible pressure (design pressure), buffer tank	43.5 psi (0.3 MPa)
Test pressure, buffer tank	65.3 psi (0.45 MPa)
Maximum permissible temperature	192 °F (89 °C)
Maximum altitude for installation	6562 ft. (2000 m)
<b>Heating water quality requirements</b>	
Water hardness	≤50 ppm
pH value (with aluminum fittings)	8.0–8.5
pH value (without aluminum fittings)	8.0–10.0
Conductivity (softening)	< 1000 µS/cm
Conductivity (desalination)	20–100 µS/cm
Chloride	<30 ppm (<30 mg/l)
Oxygen 8-12 weeks after filling (softening)	<0.02 ppm (<0.02 mg/l)
Oxygen 8-12 weeks after filling (desalination)	<0.1 ppm (<0.1 mg/l)
<b>Power consumption</b>	
Max. power consumption, charging pump	60 W
Max. power consumption, circulation pump, heating side	60 W

<b>Energy data</b>	
Standby energy consumption/ 24 h at 149 °F (65 °C)	1.45 kWh
<b>Electrical data</b>	
Rated voltage, control unit	220–240 V
Phase, control unit	L1/L2/GND
Control unit circuit breaker	1 x 15 A
Frequency	60 Hz
<b>Values</b>	
Nominal heating flow rate at A19F/W95F and 13F delta	6.2 gpm (23.3 l/min)
Min. flow rate, heating	3.1 gpm (11.7 l/min)
Safety assembly, max. supply pressure	145 psi (1.0 MPa)
Recommended operating pressure, heating circuit	29 psi (0.2 MPa)
Recommended operating pressure, DHW	50.8 psi (0.35 MPa)
Pressure reducer, set value	50.8 psi (0.35 MPa)
T&P valve, nominal set temperature	194 °F (90 °C)
T&P valve, nominal set pressure	101.5 psi (0.7 MPa)
T&P valve, nominal diameter	¾"
Expansion valve, nominal set pressure	87 psi (0.6 MPa)
Expansion vessel, DHW - pre-charge pressure	50.8 psi (0.35 MPa)
Expansion vessel, DHW - volume	3.2 gal (12 l)
<b>Versions</b>	
IP rating	IP20
<b>Dimensions</b>	
Height	75½" (1918 mm)
Width	26¾" (680 mm)
Depth	35⅞" (910 mm)
Height when tilted	83⅝" (2123 mm)
<b>Weights</b>	
Weight, full	1413 lb (641 kg)
Weight, empty	551 lb (250 kg)



Certified to ANSI/UL Std. 174  
Conforms to CAN/CSA Std.  
C22.2 No. 110



Tested and certified by WQA  
to NSF/ANSI 372.  
for lead free compliance.

