DRAWING NUMBER	REVISION
MEU–UK/FTC6/WMXXX/PP/ZZ	1

Configuration Settings (from default)

DIP SWITCH	SETTING	FUNCTION
SW3–5 (FTC6)	ON	2–ZONE VALVE ON/OFF CONTROL
SW8–3 (OUTDOOR)	ON	INDEPENDENT POWER SUPPLIES

Wiring Changes

EQUIPMENT	TERMINAL
ZONE 1 PUMP	OUT1.3 TB0.4 3–4

TABLE 1

EQUIPMENT	RECOMMENDED PRIMARY PIPE WORK (mm)	FLOW RATE RANGE (L/MIN)	MIN. SPACE HEATING CIRCUIT VOL. (L)	STARTING CURRENT (A)	MAX CURRENT (A)	MCB (A)	MIN. CABLE (mm²)
PUZ–WM50VHA	22	6.5–14.3	7	2	13	16	1.5
PUZ–WM60VAA	22	8.6–17.2	9	2	13	16	2.5
PUZ–WM85VAA	28	10.8–24.4	12	2	22	25	2.5
PUZ–WM112VAA	35	14.4–32.1	16	2	28	32	4
PUZ–HWM140VHA	35	17.9–40.1	20	2	35	40	6
PUZ–HWM140YHA	35	17.9–40.1	20	2	13	16	1.5
FTC6 BOARD					10	16	1.5
IMMERSION H.					13	16	1.5 HOSV–F Sheathed

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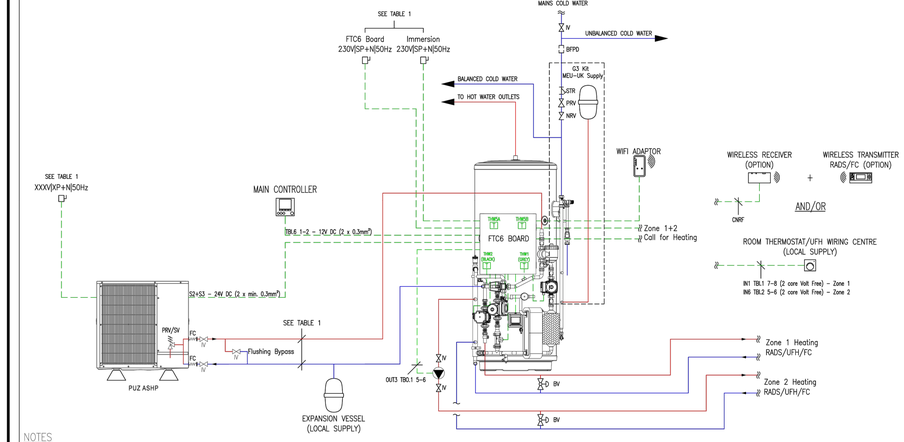
All dimensions are in mm unless otherwise stated

For information only. DO NOT SCALE drawing

All works shall be carried out in accordance with the Specification

Contractor must verify all dimensions on site before commencing any work or shop drawings



NOTES

- After removing the air, automatic air vent(s) must be closed.
- The Ecodan outdoor unit must be installed on anti-vibration mounts. Rubber mounting blocks are recommended.
- Adequate provision should be made to prevent condensate from collecting around the outdoor units. A soak away, drip tray or drain socket set can be used.
- Flexible connections shall be used to connect the Ecodan unit to the primary pipe work.
- It is the responsibility of the installing contractor to provide adequate protection against freezing of pipe work. MEUK recommend 25% glycol dosage of the primary circuit. If the water circuit freezes and damages the equipment the warranty will become void.
- All water systems should be designed, installed and commissioned in accordance with industry good practice guidelines; such as, but not limited to: BSRIA Guide BG2/2010 - Water System Commissioning, BSRIA Guide BG29/2011 - Pre-Commissioning of Pipework Systems, BSRIA Guide BG50/2013 - Water Treatment for Closed Heating & Cooling Systems, CIBSE Commissioning Code W - Water distribution systems.
- Isolation valves and flushing bypass circuit are recommended for the outdoor unit. This is best practice and not required for warranty purposes.
- The contractor should make the necessary arrangements to ensure the design of the system meets the requirement of the application and comply with all current building regulations.
- All electrical work must be carried out in accordance with the current version of BS7671.
- A back flow prevention device may include check valves, a water meter or an additional PRV.
- If a device that prevents backflow is installed on the cold water supply to the PRV then a means of accommodating expansion due to local warming of the pipe is recommended to be fitted between the device and PRV.

HEATING SERVICES SCHEMATIC (nts)

LEGEND

AAV	AUTOMATIC AIR VENT (After removing the air, automatic air vent(s) must be closed)	
IV	ISOLATING VALVE	
DOC	DOC DRAIN OFF COCK	
NRV	NRV NON RETURN VALVE	
DRV	DRV DOUBLE REGULATING VALVE	
PRV/SV	PRV/SV PRESSURE RELIEF VALVE/SAFETY VALVE	
STR	STR STRAINER	
BV	BV BYPASS VALVE	
FC	FC FLEXIBLE CONNECTION	
PRV	PRV PRESSURE REDUCING VALVE	
PG	PG PRESSURE GAUGE	
P	P PUMP	
TF1	TEMPERATURE SENSOR	
FS	FS FLOW SENSOR	
	SCALE TRAP	
BFPD	BACK FLOW PREVENTION DEVICE (if fitted)	

REV	DESCRIPTION	DESN'D/CHK'D	DATE

MITSUBISHI ELECTRIC

CLIENT

PROJECT
FTC6 Pre–Plumbed 2 x Heating

TITLE
MECHANICAL SERVICES
MITSUBISHI ECODAN FTC6
WITH PRE–PLUMBED CYLINDER
2 HEATING ZONES

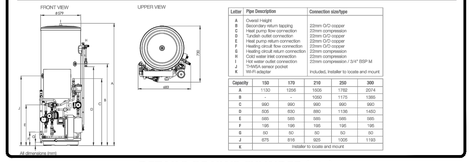
SCALE	ORIGINAL SIZE	DATE	
NTS	A0	JULY 2020	
DRAWN	DESIGNED	CHECKED	INT
C. CASADO	D. CASADO	R. TAYLOR	

DRAWING NUMBER: MEU–UK/FTC6/WMXXX/PP/ZZ — REVISION: 1

CYLINDER		EHPT15X-UKHDW	EHPT17X-UKHDW	EHPT21X-UKHDW	EHPT25X-UKHDW	EHPT30X-UKHDW
NOMINAL HOT WATER VOLUME (LITRES)		150	170	210	250	300
ErP RATING		B	B	C	C	C
HEAT LOSS (kWh/24hrs)		1.10	1.23	1.53	1.80	2.09
HEAT LOSS (W)		46	51	64	75	87
WATER	Flow Rate (Inner) – MM 50 / 60 / 85 / 112 / 140	14 / 17 / 24 / N/A / N/A	14 / 17 / 24 / 30 / 40	N/A / N/A / 24 / 32 / 42	N/A / N/A / 24 / 32 / 40	
	Primary Circuit Pump	Grundfos UPM3(2) 25-65	Grundfos UPM3(2) 25-65	Grundfos UPM3(2) 25-65	Grundfos UPM3, UP(2) 25-125	Grundfos UPM3, UP(2) 25-125
	Heating Circuit Pump	Grundfos UPM3 25-70				
	Sanitary Hot Water Pump	Grundfos UPS(2) 15-60 CIL2				
	Connection Size (mm) Heating / DHW	22 / 22	22 / 22	22 / 22	22 / 22	22 / 22
	Charge Pressure (MPa (Bar))	0.3 (3.0)	0.3 (3.0)	0.3 (3.0)	0.3 (3.0)	0.3 (3.0)
WATER SAFETY	Water Circuit Control Thermostat (°C)	80	80	80	80	80
	DHW Cylinder Immersion Heater (Litres)	12	14	18	24	24
	Control Thermostat (°C)	75	75	75	75	75
	Over Temperature Cut-Out (°C)	85 ± 5	85 ± 5	85 ± 5	85 ± 5	85 ± 5
	Temp and Pressure Relief Valve (°C) / (MPa (Bar))	90 / 1.0 (10)	90 / 1.0 (10)	90 / 1.0 (10)	90 / 1.0 (10)	90 / 1.0 (10)
	Expansion Relief Valve (Cold) (MPa (Bar))	0.6 (6)	0.6 (6)	0.6 (6)	0.6 (6)	0.6 (6)
DIMENSIONS (mm)	Width	683	683	683	683	683
	Depth	730	730	730	730	730
	Height	1135	1258	1508	1760	2074
WEIGHT EMPTY / FULL (kg)		56 / 206	62 / 232	69 / 279	77 / 327	87 / 397
CYLINDER MATERIAL	Cylinder	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Insulation	CFC / HCFC-free flame-retardant expanded Polyurethane				
	Insulation Thickness (mm)	60	60	60	60	60
	SAP of Insulation	3.1	3.1	3.1	3.1	3.1
	ODP of Insulation	0	0	0	0	0
ELECTRICAL DATA	Control Board – Electrical Supply	220–240v, 50Hz	220–240v, 50Hz	220–240v, 50Hz	220–240v, 50Hz	220–240v, 50Hz
	optionally powered by outdoor unit Phase	Single	Single	Single	Single	Single
	Immersion Heater Fuse Rating – MCB Sizes (A)*1	16	16	16	16	16
	Electrical Supply	220–240v, 50Hz	220–240v, 50Hz	220–240v, 50Hz	220–240v, 50Hz	220–240v, 50Hz
	Phase	Single	Single	Single	Single	Single
	Capacity (kW)	3	3	3	3	3
	Max Running Current (A)	13	13	13	13	13
	Fuse Rating - MCB Sizes (A)*1	16	16	16	16	16
MECHANICAL ZONES		2HM and 1 Heating Zone*2				
OPTIONAL SIMPLIFIED WIRELESS ROOM THERMOSTAT AND WIRELESS RECEIVER		PAR-WTU1-A Controller and PAR-WR51-E Receiver				

*1 MCB Sizes BS EN60898 C & BS EN60947-2 *2 Optional 2 zone accessory pack available
Notes: Cylinder includes: Flow Temperature Controller with Main Controller and Temperature Sensors, Magnetic & Clockwise Filter, Pumps & Valves for Zone 1 and 2HM Use, Flow Sensor, Plate Heat Exchanger, Scale Tray, 3kW Immersion Heater and Expansion Vessel.

EHPT15-30X-UKHDW DIMENSIONS



Letter	Pipe Description	Connection size/type
A	Overall Height	
B	Hot water outlet/air bleeding	22mm O/O copper
C	Heating circuit flow connection	22mm O/O copper
D	Turbiter outlet connection	22mm O/O copper
E	Heat pump return connection	22mm O/O copper
F	Heating circuit flow connection	22mm O/O copper
G	Heat pump flow connection	22mm O/O copper
H	Cold water inlet connection	22mm compression
I	Hot water outlet connection	22mm compression / 3/4" BSP M
J	Temperature pocket	Included, installer to locate and mount
K	3/4"M adaptor	

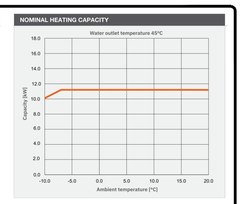
Capacity	150	170	210	250	300
A	1130	1256	1505	1782	2074
B	–	–	1050	1175	1380
C	990	990	990	990	990
D	605	630	880	1136	1450
E	585	585	585	585	585
F	195	195	195	195	195
G	50	50	50	50	50
J	675	818	920	1005	1180
K	–	–	Installer to locate and mount		

DETAILS OF HWS CYLINDER (nts)

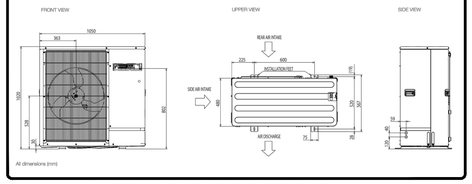
OUTDOOR UNIT		PUZ-WM112VAA(-BS)
HEAT PUMP SPACE HEATER - 55°C	ErP Rating	A++
	η_s	134%
	SCOP (kW/O)	3.34
HEAT PUMP SPACE HEATER - 35°C	ErP Rating	A+++
	η_s	191%
	SCOP (kW/O)	4.79
HEAT PUMP COMBINATION HEATER - Large Profile*4	ErP Rating	A+
	η_s	134%
HEATING (A–7/W35)	Capacity (kW)	11.2
	Power Input (kW)	3.73
	COP	3.00
OPERATING AMBIENT TEMPERATURE (°C DB)		-25 ~ +35
SOUND DATA*5	Pressure Level at 1m (dBA)	45
	Power Level (dBA)*6	60
WATER DATA	Flowrate Size (mm)	28
	Flow Rate (l/min)	37
	Water Pressure Drop (kPa)	50
DIMENSIONS (mm)	Depth	330
	Width	950
	Height	1050
WEIGHT (kg)		119
ELECTRICAL DATA	Electrical Supply	220-240v, 50Hz
	Phase	Single
	Nominal Running Current (kW/O) (A)*3	15.8 (28)
	Fuse Rating - MCB Sizes (A)*4	32
REFRIGERANT CHARGE (kg) / CO_2 EQUIVALENT (t)	R32 (GWP 675)	3.0 / 2.03

Notes:
*1 Combination with EYP12X Cylinder
*2 Under normal heating conditions at outdoor temp: -7°C/DB / -8°C/WB, outlet water temp 35°C, inlet water temp 30°C.
*3 Under normal heating conditions at outdoor temp: 7°C/DB / 6°C/WB, outlet water temp 55°C, inlet water temp 47°C as tested to BS EN14511.
*4 Under normal heating conditions at outdoor temp: -7°C, outlet water temp 35°C.
*5 Under normal heating conditions at outdoor temp: 7°C, outlet water temp 55°C.
*6 MCB Sizes BS EN60898 C & BS EN60947-2.
η_s is the seasonal space heating energy efficiency (ErP/ETD). η_{wh} is the water heating energy efficiency

NOMINAL HEATING CAPACITY



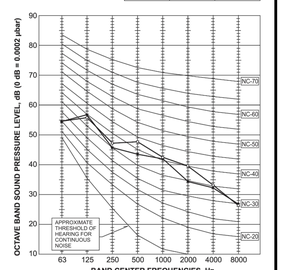
PUZ-WM112VAA-BS) DIMENSIONS



DETAILS OF AIR SOURCE HEAT PUMP (nts)

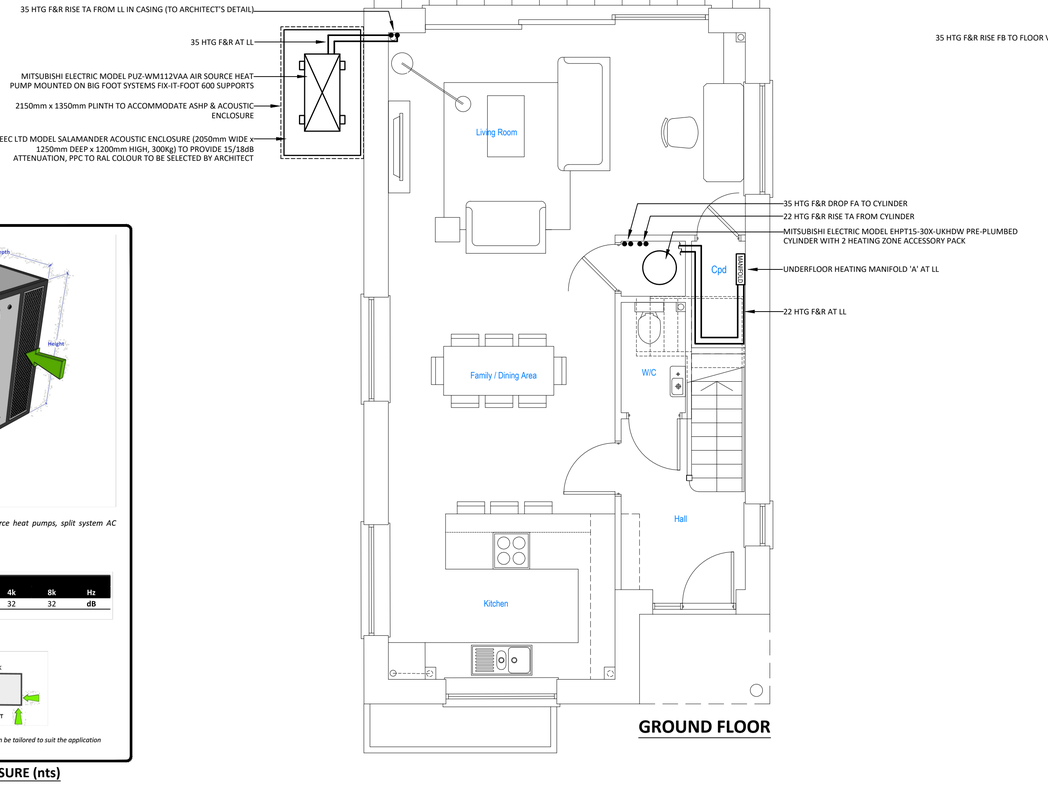
■ PUZ-WM112VAA(-BS)
PUZ-WM112YAA(-BS)

MODE	SPL(dB)	LINE
COOLING	49	
HEATING	47	

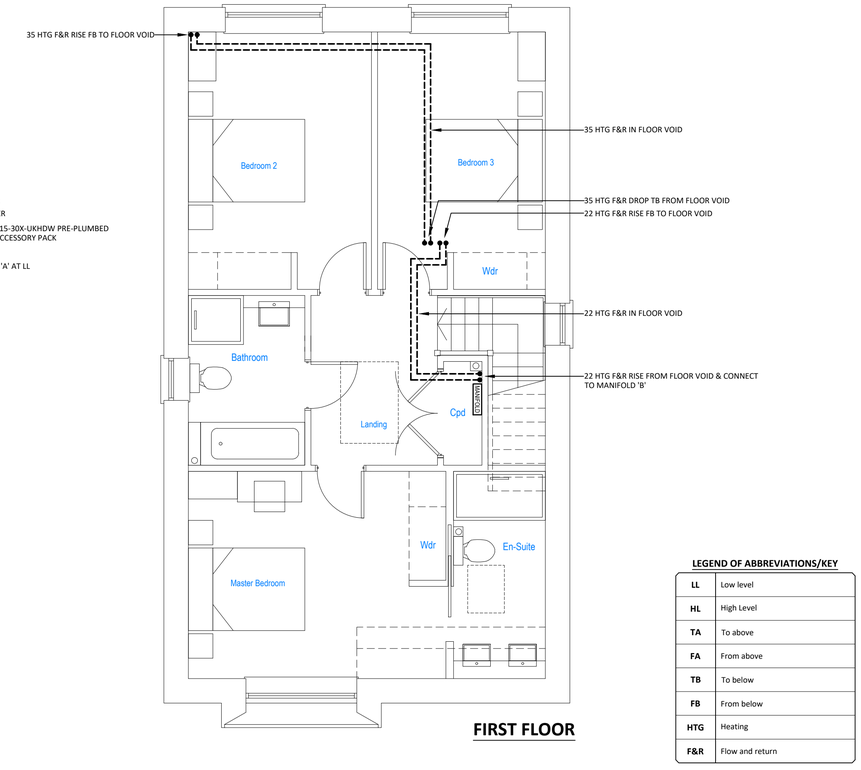


AIR SOURCE HEAT PUMP NOISE CRITERION CURVES

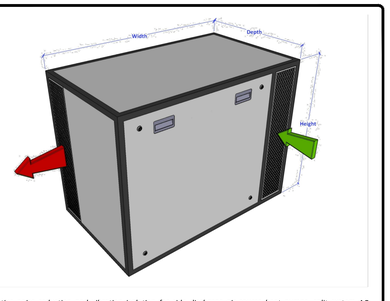
NOTE:
INSTALLER TO ADVISE ON LOCATION & SIZE OF PENETRATIONS THROUGH STEEL BEAMS IN FIRST FLOOR FOR SERVICES DISTRIBUTION IN FLOOR VOID TO ENABLE THESE TO BE FORMED OFF SITE BY STEELWORK SUPPLIER.



GROUND FLOOR



FIRST FLOOR

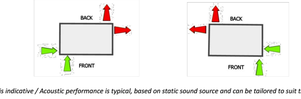


Effective noise reduction and vibration isolation for side discharge air source heat pumps, split system AC condensers, mini VRV and refrigeration condensers.

Product Acoustic Performance

Insertion loss at Octave Band Centre Frequency								
63	125	250	500	1k	2k	4k	8k	Hz
15	15	16	22	27	32	32	32	dB

Orientation options:



Drawing is indicative / Acoustic performance is typical, based on static sound source and can be tailored to suit the application

DETAILS OF ASHP ACOUSTIC ENCLOSURE (nts)

LEGEND OF ABBREVIATIONS/KEY

LL	Low level
HL	High Level
TA	To above
FA	From above
TB	To below
FB	From below
HTG	Heating
F&R	Flow and return

GENERAL CONSTRUCTION NOTES:

1. All plant & equipment shall be installed in accordance with the manufacturers recommendations.
2. All works shall be generally in accordance with employers requirements.
3. The entire works shall comply in all respects with all relevant statutory instruments & regulations including the following:
   - Health & Safety at Work, etc Act.
   - Health & Safety Executive publications.
   - British Standards, relevant European & International Standards.
   - The Requirments for Electrical Installations, BS 7671:2018.
   - Requirements under the Electricity Acts.
   - The Clean Air Act.
   - Control of Pollution Act.
   - Energy Conservation Act.
   - Regulations under The Factories Act.
   - The Building Regulations.
   - The Gas Safety Requirments.
   - Corgi publications.
   - Requirments of local electricity, gas & water undertakings & Fire Fighting Authorities.
   - The CIBSE Guide to Current Practice.
   - The IOP Plumbing Services Design Guide.
4. All plant & equipment shall be approved by the Engineer/Architect prior to installation.
5. Read this drawing in conjunction with the specifications and other employer's requirements documents.
6. All contractor installation shall be in accordance with British Standards and British European (EN) Standards & Building Regulations.
7. Contractor shall be responsible for monitoring and reporting the compliance of installations with all relevant national and local standards, codes of practice and regulations, including identifying any non-compliances.
8. Refer to architect package for fire compartmentation.
9. For detailed requirements for firestopping formed around meph services, including material specifications, approval of installers, materials and installation, identification and drawings, refer to the architect package.
10. Building outline derived from architects drawing.

HAZARD NOTES:

Refer to designer hazard identification schedule.

Falls through openings
Riser openings between levels will necessarily be open for installation. Risk of falls and falling objects. Contractor to cover over openings when not in use.

Work at height
Installation work involves work at height.

Riser access
Risks associated with difficult access. Architectural design and planning to provide risers of sufficient width and good frontal access. Including edges and at high level. To avoid over-reaching into risers. Especially at high level and in corners ideally provide full-height doors.

Think safety
Is there safe, adequate and correct means of access? Adequate lighting? Is the task safe in today's environment and weather conditions? Correct PPE and correct tools? Work area free from conflicting activities? Could your task affect the safety of anyone else?

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Client: BRIGHTON & HOVE ALBION

Project: BARFIELD PARK
LANCING
WEST SUSSEX

Title: HEATING SERVICES LAYOUT

Drawn: MJN

Checked: JSF

Date: OCTOBER 2021

Scale: 1:50 @ A1

Drawing Number: B44/01/105

Rev: C

Amendments:
'A' 04.11.21 ASHP ACOUSTIC ENCLOSURE DETAILS ADDED.
'B' 19.11.21 HEATING PIPEWORK ADJACENT ASHP RELOCATED.
'C' 06.01.22 ASHP NOISE CRITERION CURVES ADDED.

Notes:
1. Under no circumstances should scaled dimensions be used for setting out.
2. All dimensions to be checked on site.
3. This drawing to be read in conjunction with architects drawings.
4. This drawing is copyright and shall not be reproduced without permission.