



A Breath Of Fresh Air

PROJECT TITLE:	KINGSPPOINT
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CLIENT:	HENRY CONSTRUCTION PROJECTS LTD
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DOCUMENT TITLE:	MECHANICAL EQUIPMENT SCHEDULE
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TABLE OF CONTENTS

BOILER SPECIFICATION	1
COMBINED HEAT POWER (CHP)	3
CHP THERMAL STORAGE BUFFER VESSEL	5
HEAT INTERFACE UNIT (HIU)	6
MECHANICAL EXTRACT VENTILATION UNIT	9
COMBINED COLD WATER & SPRINKLER STORAGE TANK	10
WET RISER STORAGE TANK	12
BOOSTER SET COLD WATER& SPRINKLER PUMP SPECIFICATION	14
LTHW PRIMARY PUMP	16
LTHW SECONDARY PUMP	17
LTHW – CHP SHUNT/CIRCULATION PUMP	18
LTHW –CIRCULATION PUMP (LOW LOSS HEADER TO PHX)	19
WET RISER BOOSTER SET	20
CAT-5 PUMP SPECIFICATION	21
LTHW PLATE HEAT EXCHANGER (PHX) - PLANT ROOM	22
LTHW PLATE HEAT EXCHANGER (PHX) – SMALL COMMERCIAL UNIT	23
LTHW PLATE HEAT EXCHANGER (PHX) – LARGE COMMERCIAL UNIT	24
CORRIDOR SUMMER COOLING AHU	25
AIR VALVE SPECIFICATION	26
UNDERFLOOR HEATING SPECIFICATION	27
LTHW PRIMARY SIDE PRESSURISATION & EXPANSION UNIT	29
LTHW SECONDARY SIDE PRESSURISATION & EXPANSION UNIT	30
ELECTROMAGNETIC WATER CONDITIONER	31
REFUSE STORE EXHAUST FAN	32
PLANT ROOM EXHAUST FAN	33
PLANT ROOM SUPPLY FAN	34
CAR PARK EXHAUST FAN	35
CAR PARK IMPULSE / INDUCTION FAN	36

ELECTRIC TOWEL RAIL	37
ELECTRIC WATER HEATER (UNVENTED)	38
INDIRECT STORAGE CYLINDER –DHW FOR 3 BATH UNITS	39
COMFORT COOLING VRF INDOOR / OUT DOOR UNITS	40
BIN STORE GRILLES	45
PLANT ROOM GRILLES	46
CORRIDOR SUMMER COOLING GRILLES	48
APARTMENT COMFORT COOLING GRILLES	50
DEAERATOR	51
DIRT SEPARATOR	52
DOSING POT	53

BOILER SPECIFICATION



MAKE / MODEL	IMAX XTRA EL / 395kW
REFERENCE	B-G-01 & B-G-02
QUANTITY	2
LOCATION	GROUND FLOOR PLANT ROOM
BOILER OUTPUT (mean 70°C), KW	72.6 - 368.3
NATURAL GAS CONSUMPTION, (m3/hr)	40.8
NOx Rating/emissions at 0% O2	31.1
NOx LEVELS (mg/kWh)	Class 6 (<40)
MAXIMUM WORKING PRESSURE (bar)	6
MINIMUM & MAXIMUM FLOW TEMPERATURE , °C	30-90
FLUE GAS VOLUME ,m3/hr	583.3
SEASONAL EFFICIENCY, GROSS %	96.8
ELECTRICAL SUPPLY	230/240V 50Hz 1 Ph
CURRENT, (Max No Pump), Amp	2.57
POWER CONSUMPTION, Watts	592
FUSE RATING, Amp	7

Notes:

1. Boiler to be manufactured by Ideal Boilers or equal and approved.
2. The mechanical contractor is to allow for supply and installation of the Gas fired boilers as per the schedule and the layout drawings.
3. Contractor to include for a horizontal flue kit including all accessories.
4. CHP to operate to building's baseload with the boilers taking the remaining peak demand.
5. Flue size and design to be confirmed by supplier/specialist (Refer specification for indicative flue duct size).

COMBINED HEAT POWER (CHP)



MAKE / MODEL	ENER-G / E90 (Low NOx) NATURAL GAS CHP UNIT / EGE-06L
LOCATION	GROUND FLOOR PLANTROOM
REFERENCE	CHP-GF-01
ELECTRICAL OUTPUT (KW)	90
HEAT OUTPUT (KW)	162
FUEL TYPE / MASS FLOW RATE (kg/hr) , ($\rho = 0.75\text{kg/Nm}^3$)	NATURAL GAS / 21
FUEL EXHAUST MASS FLOW RATE (kg/hr)	377
MAXIMUM OUTLET TEMPERATURE (°C)	80 / 90
MAXIMUM WATER FLOW RATE, (L/S)	4.01
VENTILATION RATE, (m3/s)	1.27
TOTAL EFFICIENCY (NET)	90.4 %
NOISE, ENCLOSURE SPL @1 m SN/LN dB(A)	70/65
DIMENSIONS mm (L x W x H)	3600 x 930 x 1940

Notes

1. CHP to be manufactured by ENER-G or equal and approved.
2. CHP to be linked to MCC panel.
3. CHP to operate to building's baseload with the boilers taking the remaining peak demand.
4. Flue size and design to be confirmed by supplier / specialist. (Refer specification for indicative flue duct size).
5. Installation and commissioning as per manufacturer details or refer to building regulation.

CHP THERMAL STORAGE BUFFER VESSEL

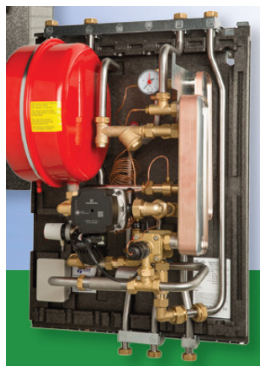


MAKE / MODEL	RYCROFT BUFFER VESSEL
REFERENCE	BV-01 & BV-02
PROPOSED LOCATION	GROUND FLOOR PLANTROOM
CAPACITY (L)	1200
QUANTITY, NO's	2
STORAGE TEMP (°C)	80-90
DIMENSIONS (H x D) (mm)	2100 x 900Ø
DRY WEIGHT (KG)	280

Notes:

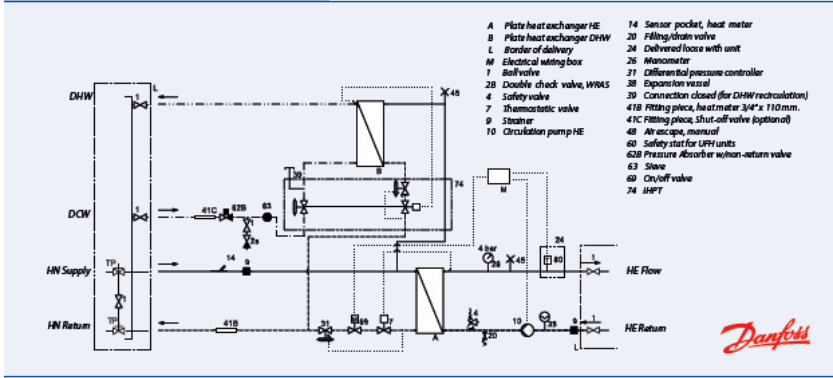
1. Buffer vessels to be manufactured by Rycroft or equal and approved

HEAT INTERFACE UNIT (HIU)



Circuit diagram - example

Danfoss FlatStation - 7 Series DS (R-FI)



Legend:

- A Plate heat exchanger HE
- B Plate heat exchanger DHW
- L Border of delivery
- M Electrical wiring box
- 1 Ball valve
- 28 Double check valve, WRAS
- 4 Safety valve
- 7 Thermostatic valve
- 9 Strainer
- 10 Circulation pump HE
- 14 Sensor pocket, heat meter
- 20 Filling/drain valve
- 24 Delivered loose with unit
- 26 Manometer
- 31 Differential pressure controller
- 38 Expansion vessel
- 39 Connection closed (for DHW/recirculation)
- 41B Fitting piece, heat meter 3/4" x 110mm
- 41C Fitting piece, shut-off valve (optional)
- 48 Air escape, manual
- 60 Safety start for UPV units
- 62B Pressure Absorber when return valve
- 63 Silve
- 69 On/off valve
- 74 HPT

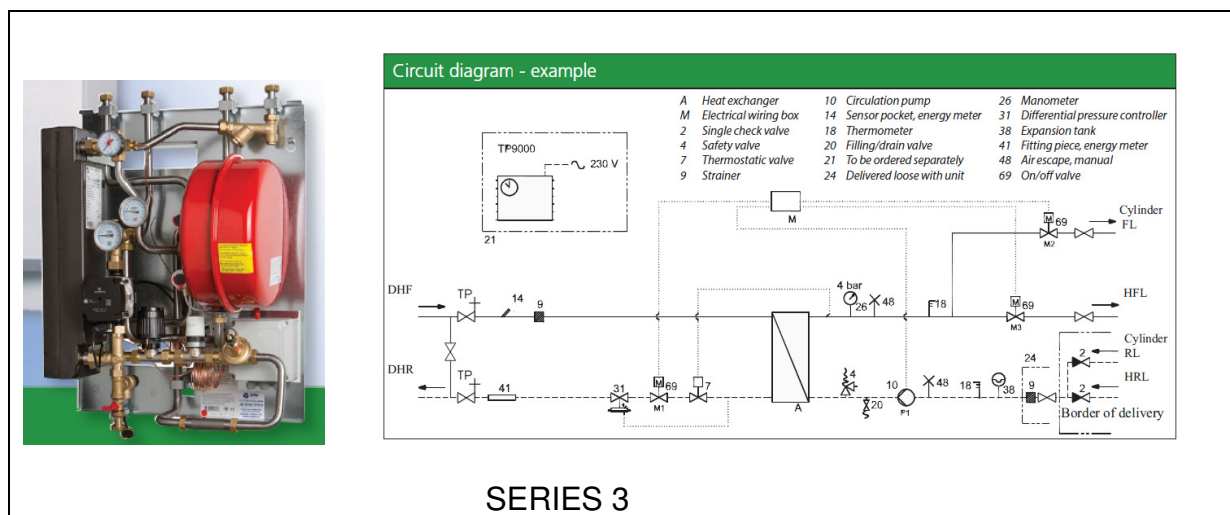
Danfoss

SERIES 7

MAKE / MODEL	DANFOSS – FLATSTATION 7 SERIES DS (Series 7 DS VVX I R FI 1-3)
REFERENCE	REFER TO TYPICAL APARTMENT DRAWINGS
LOCATION	WITHIN THE SERVICE CUPBOARD OF EACH APARTMENT
DIMENSIONS (mm)	H 690 x W 528 x D 235
OUTPUT (Kw)	40 KW (1 BATH APARTMENTS)
HIU TYPE	TWIN PLATE
NO.OF HIU's	53

MAKE / MODEL	DANFOSS – FLATSTATION 7 SERIES DS (Series 7 DS VVX I R FI 2-3)
REFERENCE	REFER TO TYPICAL APARTMENT DRAWINGS
LOCATION	WITHIN THE SERVICE CUPBOARD OF EACH APARTMENT
DIMENSIONS (mm)	H 690 x W 528 x D 235

OUTPUT (Kw)	60 KW (2 BATH APARTMENTS)
HIU TYPE	TWIN PLATE
NO.OF HIU's	46



MAKE / MODEL	DANFOSS – Series 3 BS VX-Z 3
REFERENCE	REFER TO TYPICAL APARTMENT DRAWINGS
LOCATION	WITHIN THE SERVICE CUPBOARD OF EACH APARTMENT
DIMENSIONS (mm)	H 800 x W 540 x D 430
OUTPUT (Kw)	20 KW (3 BATH APARTMENTS)
HIU TYPE	SINGLE PLATE
LTHW STORAGE CYLINDER, Litres	250 Litres (Provided by different manufacturer)
NO.OF HIU's	4

Notes:

1. All heat interface units to be manufactured by SAV / Danfoss systems or equal and approved.
2. All heat interface units to have a prioritising valve to switch completely from central heating mode to DHW mode in periods of high demand for hot water.
3. All heat meters to be linked to central data logger located in the ground floor Concierge / plantroom. Data logger to have ADSL link to provide facility to read meters remotely.
4. All HIU's to C/W Differential Pressure Control Valves.

5. All HIU's to be installed c/w secondary filters on the primary LTHW F&R to remove any particles/debris in the system.
6. Nominal pressure of 10 bar.
7. Storage type HIUs will be provided to 3 bed apartments, non storage type with two heat exchangers will be provided to 1 and 2 bed apartments.
8. The single pipe hot water service pipework shall be provided with self-regulating heater tapes to maintain the design temperature or the contractor to allow for HWS re circulation (may be with pump system) or electric trace heating in flats where pipe exceeds 15m.

MECHANICAL EXTRACT VENTILATION UNIT

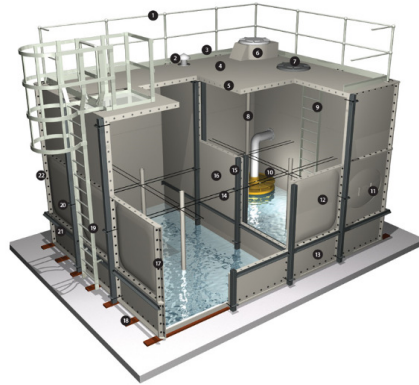


MAKE / MODEL	VECTAIRE / MBOX125/2DC
LOCATION	UTILITY CUPBOARD
REFERENCE	MEV-XX-XX
MAX BOOST / MAX TRICKLE Duty (l/s)	21-45
Static Pressure (Pa)	150-200
SOUND PRESSURE (dBA @3m)	17-39
MAXIMUM POWER CONSUMPTION	59 W @ airflow 404 m3/hr
DIMENSIONS mm (L x W x H)	510 x 307 x 183

Notes

1. Attenuator shall be provided for MEV at room side/atmospheric side. Habitable room provide with attenuator to balance the noise level during boost mode.
2. Installation and commissioning as per manufacturer details or refer to building regulation.
3. MEV to be manufactured by Vectaire or equal and approved.

COMBINED COLD WATER & SPRINKLER STORAGE TANK



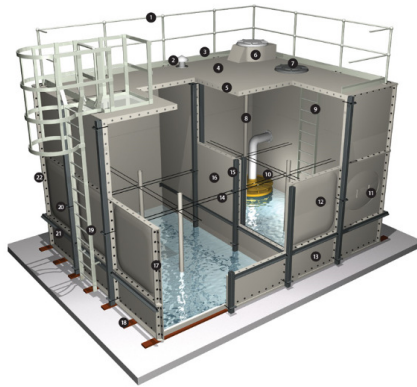
MAKE / MODEL	BALMORAL SECTIONAL WATER TANK
LOCATION	GROUND FLOOR PLANTROOM
QUANTITY	1
CAPACITY (L)	20000
INTERNAL DIMENSIONS (L x W x H) (mm)	2500mm x 2000mm x 4000mm
EXTERNAL DIMENSIONS (L x W x H) (mm)	2880mm x 2380mm x 4040mm
TANK TYPE	INTERNALLY FLANGED BASE
TANK DESCRIPTION	GRP hot press moulded sectional tank. Manufactured to BS EN 13280:2001
INLET	2" BSP Equilibrium Ballvalve - Mark 2 - Suitable upto 10 Bar
FLOAT VALVE CHAMBER	1mx1mx400mm high clipped float valve chamber
VENT	2" Screened Air Vent Tank Connector - Type ZWLFBR
LADDERS	4050mm IFB Caged 17 Rung Ladder c/w Brackets - Alu
OUTLET	80mm PN16 Flange c/s Spool Piece & GMS Backing Ring
DRAIN	2" FSB 146mm OD 110PCD 6x15mm Holes - Z005477
OVERFLOW	80mm PN16 Flange c/w Screened Overflow & Dip Pipe
WARNING PIPE	1" Pushfit Screened Fitting - Type R30E

LEVEL SWITCH	S/S level switch, c/w mini Din plug and boss (2 No's)
CONTENTS GAUGE	Variable depth, pump up, contents gauge for tanks up to 5m
MANWAYS	LL side entry access manway (bottom tier)
TEMPERATURE GAUGE	100mm HVAC bimental thermometer c/w screwed boss
HAND RAIL	1000mmx1100mm high Handrail – Aluminium (5 No's)

Notes

1. Potable cold water tank to be manufactured by Balmoral or equal and approved.
2. Potable cold water tank to be pre-insulated and WRAS approved.
3. Cold water storage tank to be installed c/w high & low level audible alarm linked to management Company IP link.

WET RISER STORAGE TANK



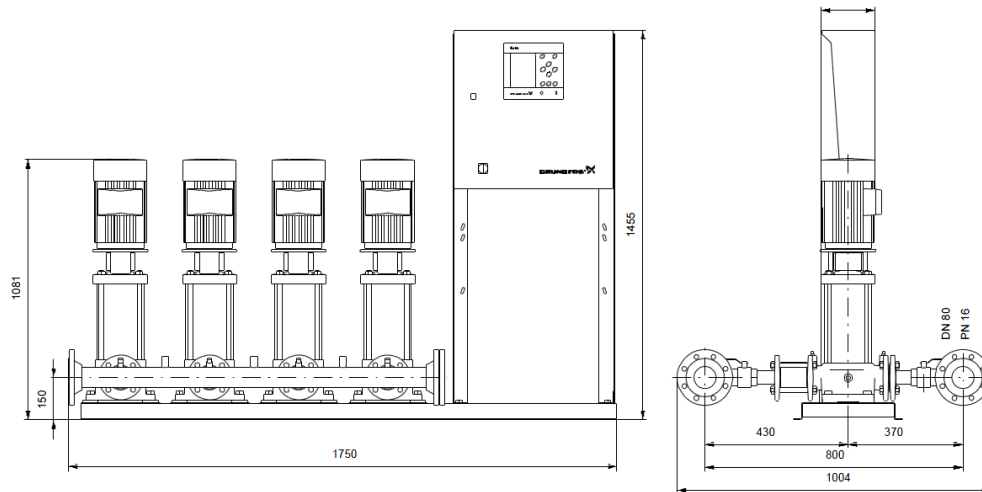
MAKE / MODEL	BALMORAL SECTIONAL WATER TANK
LOCATION	GROUND FLOOR PLANTROOM
QUANTITY	1
CAPACITY (L)	60000
INTERNAL DIMENSIONS (L x W x H) (mm)	5160mm x 3660mm x 3160mm
EXTERNAL DIMENSIONS (L x W x H) (mm)	5170mm x 3660mm x 3160mm
TANK TYPE	INTERNALLY FLANGED BASE
TANK DESCRIPTION	GRP hot press moulded sectional tank. Manufactured to BS EN 13280:2001
COMPARTMENT 1	2500mm x 3500mm x 3000mm (LxWxH). Nominal capacity: 26250
COMPARTMENT 2	2500mm x 3500mm x 3000mm (LxWxH). Nominal capacity: 26250
INLET	100mm PN10 Flange c/w Spool Piece & GMS Backing RingBar (2 No's)
FLOAT VALVE CHAMBER	1mx1mx400mm high clipped float valve chamber (2 No's)
LADDERS	3050mm IFB Caged 13 Rung Ladder c/w Brackets - Alu
DRAIN	2" FSB 146mm OD 110PCD 6x15mm Holes - Z005477 (2 No's)
OVERFLOW	80mm PN16 Flange c/w Screened Overflow & Dip Pipe (2 No's)
WARNING PIPE	1" Pushfit Screened Fitting - Type R30E (2 No's)

CONTENTS GAUGE	Variable depth, pump up, contents gauge for tanks up to 3m (2 No's)
MANWAYS	Clipped lid 1x1m cover access panel (2 No's)
TEMPERATURE GAUGE	100mm HVAC bimental thermometer c/w screwed boss
HAND RAIL	1000mmx1100mm high Handrail – Aluminium (10 No's)
VORTEX INHIBITOR	6" Fireflow LPCB Vortex Inhibitor c/w elbow and flange (2 No's)
FLAT ROOF PANEL	1.0x1.0mtr. Un-insu' Flat Cover Level Panel, Grey (2 No's)
AIR GAPS	Small AB air gap in un-insulated TIF panel (indoor use)(2 No's)
MANWAYS	LL side entry access manway (IBT tank)
LADDERS	2765mm Int' 11 Rung Ladder - GRP needs 4 x BKT-867 (2 No's)

Notes

1. Potable cold water tank to be manufactured by Balmoral or equal and approved.
2. Potable cold water tank to be pre-insulated and WRAS approved.
3. Cold water storage tank to be installed c/w high & low level audible alarm linked to management Company IP link.

BOOSTER SET COLD WATER& SPRINKLER PUMP SPECIFICATION



MAKE / MODEL	GRUNDFOS / Hydro MPC-E 4 CRIE10-9
LOCATION	GROUND FLOOR PLANTROOM
MAX FLOW RATE	17.5 L/S
QUANTITY	4
HEAD (kPa)	1000 KPa
CONFIGURATION	DUTY/ASSIST/ASSIST/STANDBY
MAX. OPERATING PRESSURE	16 bar
ELECTRICAL POWER	5.5 KW
ELECTRICAL SUPPLY	3 Ph / 380-415 V / 50 Hz
RATED CURRENT	44 A
ENCLOSURE CLASS	IP54
NET WEIGHT	650 Kg

Notes

1. Booster Set Cold Water Pump to be manufactured by Grundfos or equal and approved.
2. Booster set to be installed c/w control panel, base-frame & pressure vessel.
3. Booster pump base frame to be installed c/w anti-vibration mounts.
4. Booster set to be variable speed drive.
5. Booster set to be installed c/w dry run protection c/w audible alarm linked to Management Company via IP link.

LTHW PRIMARY PUMP



MAKE / MODEL	GRUNDFOS / MAGNA3 80-120 F
LOCATION	GROUND FLOOR PLANTROOM
MAX FLOW RATE	10.69 l/s
QUANTITY	2
HEAD (kPa)	70 KPa
CONFIGURATION	DUTY/STANDBY
MAX. OPERATING PRESSURE	6 bar
ELECTRICAL POWER	1.3 KW
ELECTRICAL SUPPLY	1 Ph / 230 V / 50 Hz
RATED CURRENT	5.72 A
NET WEIGHT	30.5 Kg

Notes

1. LTHW Pump to be manufactured by Grundfos or equal and approved.
2. Pump set to be installed c/w control panel, base-frame & pressure vessel.
3. Pump base frame to be installed c/w anti-vibration mounts.

LTHW SECONDARY PUMP



MAKE / MODEL	GRUNDFOS / TPE 65-340/2 A-F-A-BQQE
LOCATION	GROUND FLOOR PLANTROOM
MAX FLOW RATE	10.69 l/s
QUANTITY	2
HEAD (kPa)	250 KPa
CONFIGURATION	DUTY/STANDBY
MAX. OPERATING PRESSURE	16 bar
ELECTRICAL POWER	5.5 KW
ELECTRICAL SUPPLY	3 Ph / 380-500 V/ 50 Hz
RATED CURRENT	20 A
ENCLOSURE CLASS (IEC 34-5)	IP55
NET WEIGHT	85 Kg
EFFICIENCY	92.7%

Notes

1. LTHW Pump to be manufactured by Grundfos or equal and approved.
2. Pump set to be installed c/w control panel, base-frame & pressure vessel.
3. Pump base frame to be installed c/w anti-vibration mounts.
4. LTHW secondary pumps are VFD type.

LTHW – CHP SHUNT/CIRCULATION PUMP



MAKE / MODEL	GRUNDFOS / MAGNA3 50-80 F
LOCATION	GROUND FLOOR PLANTROOM
MAX FLOW RATE	4 l/s
QUANTITY	2
HEAD (kPa)	50 KPa (Max 75 kPa)
CONFIGURATION	DUTY/STANDBY
MAX. OPERATING PRESSURE	10 bar
ELECTRICAL POWER	0.4 KW
ELECTRICAL SUPPLY	1 Ph / 230 V / 50 Hz
RATED CURRENT	1.5 A
Enclosure class (IEC 34-5)	X4D
NET WEIGHT	20 Kg

Notes

1. LTHW Pump to be manufactured by Grundfos or equal and approved.
2. Pump set to be installed c/w control panel, base-frame & pressure vessel.
3. Pump base frame to be installed c/w anti-vibration mounts.
4. LTHW secondary pumps are VFD type.

LTHW –CIRCULATION PUMP (LOW LOSS HEADER TO PHX)



MAKE / MODEL	GRUNDFOS / MAGNA3 80-120 F
LOCATION	GROUND FLOOR PLANTROOM
MAX FLOW RATE	10.69 l/s
QUANTITY	2
HEAD (kPa)	70 KPa
CONFIGURATION	DUTY/STANDBY
MAX. OPERATING PRESSURE	6 bar
ELECTRICAL POWER	1.3 KW
ELECTRICAL SUPPLY	1 Ph / 230 V / 50 Hz
RATED CURRENT	5.72 A
NET WEIGHT	30.5 Kg

Notes

1. LTHW Pump to be manufactured by Grundfos or equal and approved.
2. Pump set to be installed c/w control panel, base-frame & pressure vessel.
3. Pump base frame to be installed c/w anti-vibration mounts.
4. LTHW secondary pumps are VFD type.

WET RISER BOOSTER SET

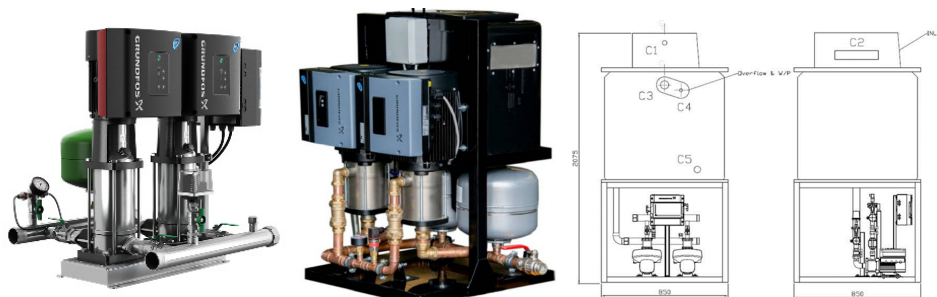


Pump type	Pump model	Flow (L/ MIN)	Pressure (BAR) CV = Closed Valve	Electrical data				Outline dimensions in metres (L x W x H)
				Power (kW)	Full load current (amps)	Starting current (amps)	Locked rotor current (amps)	
HyRise 16	ME100K80-90/4-SP ø 183	1500	16.8 (20.09 CV)	75	128.2	317.3	961.5	3.7 x 1.9 x 2.1

Notes

1. Wet riser booster set to be manufactured by Grundfos or equal and approved.
2. Pump set to be installed c/w control panel, base-frame & pressure vessel.
3. Pump base frame to be installed c/w anti-vibration mounts.
4. Pump is located in the ground floor mechanical plant room. Reference WBS-GF-01
4. Wet riser booster set is subject to confirm by specialist, above details are shown indicative purpose only.

CAT-5 PUMP SPECIFICATION



MAKE / MODEL	GRUNDFOS / HYDRO MULTI-E 2 CRIE3-04
LOCATION	GROUND FLOOR PLANTROOM
MAX FLOW RATE	1.01 L/S @ 2.5 bar
QUANTITY	2
HEAD (kPa)	252 KPa
CONFIGURATION	DUTY/STANDNDBY
MAX. OPERATING PRESSURE	10 bar
ELECTRICAL POWER	0.55 KW
ELECTRICAL SUPPLY	3 Ph / 380-415 V / 50 Hz
RATED CURRENT	4.3 A
ENCLOSURE CLASS	IP54
TANK CAPACITY	300 L
NET WEIGHT	200 Kg

Notes

1. Booster Set Cold Water Pump to be manufactured by Grundfos or equal and approved
2. 2 Cat V tank to be manufactured by Grundfos or equal approved.
3. Cat V tank to be pre-insulated and WRAS approved.
4. Cat V tank High & low sensors to be linked to the MCC panel.
5. Cat V tank to c/w category 5 backflow protection.

LTHW PLATE HEAT EXCHANGER (PHX) - PLANT ROOM



MAKE / MODEL	KELVION / NT50X CDH-10
LOCATION	GROUND FLOOR PLANTROOM
VOLUME FLOW,(L/S) HOT SIDE / COLD SIDE	7.34 L/S / 10.69 L/S
HEAT EXCHANGER LOAD, KW	900
QUANTITY	1
TYPE OF UNIT	NT50X HV
PRESSURE (BAR)	>=10
PRIMARY SIDE F&R TEMPS (°C)	80/60
SECONDARY SIDE F&R TEMPS (°C)	75/55
NET WEIGHT	181 Kg
PRESSURE DROP,(KPa) HOT SIDE / COLD SIDE	21 / 46

Notes

1. All Heat exchangers are to be manufactured by kelvion or equal and approved.

LTHW PLATE HEAT EXCHANGER (PHX) – SMALL COMMERCIAL UNIT



MAKE / MODEL	KELVION / GBS240H-14 (E1,E2) /31bar
LOCATION	GROUND FLOOR PLANTROOM
VOLUME FLOW,(L/S)	0.15 L/S
HEAT EXCHANGER LOAD, KW	12
QUANTITY	1
TYPE OF UNIT	Kelvion Brazed PHE GmbH GBS240H-14 (E1,E2) /31bar
PRESSURE (BAR)	31
PRIMARY SIDE F&R TEMPS (°C)	75 / 55
SECONDARY SIDE F&R TEMPS (°C)	70/50
NET WEIGHT	5 Kg
PRESSURE DROP,(KPa) HOT SIDE / COLD SIDE	2.8 / 2.04

Notes

1. All Heat exchangers are to be manufactured by kelvion or equal and approved.

LTHW PLATE HEAT EXCHANGER (PHX) – LARGE COMMERCIAL UNIT



MAKE / MODEL	KELVION / GBS500H-20 (E1,E2) /31bar
LOCATION	GROUND FLOOR PLANTROOM
VOLUME FLOW,(L/S)	0.43 L/S
HEAT EXCHANGER LOAD, KW	35
QUANTITY	1
TYPE OF UNIT	Kelvion Brazed PHE GmbH GBS500H-20 (E1,E2) /31bar
PRESSURE (BAR)	31
PRIMARY SIDE F&R TEMPS (°C)	75 / 55
SECONDARY SIDE F&R TEMPS (°C)	70/50
NET WEIGHT	7 Kg
PRESSURE DROP,(KPa) HOT SIDE / COLD SIDE	9.5 / 7.2

Notes

1. All Heat exchangers are to be manufactured by kelvion or equal and approved.

CORRIDOR SUMMER COOLING AHU



MAKE / MODEL	SYSTEMAIR / Danvent DV25 Roof unit
LOCATION	ROOF PLANTROOM
VOLUME FLOW,(L/S)	2000 L/S
AHU COOLING LOAD CAPACITY, KW	34 (DX COOLING COIL)
QUANTITY	1
TYPE OF UNIT	SUPPLY / FRESH AIR HANDLING UNIT
EXTERNAL STATIC PRESSURE, Pa	250
ATTENUATOR INBUILT IN AHU	900 mm LONG x 2 NO'S (INTAKE & SUPPLY)
SFPV, CLEAN FILTERS INCLUDING SPEED CONTROL	0.74 kW/(m³/s) (Average 0.74 kW/(m³/s))
NET WEIGHT	514 Kg
SOUND BREAKOUT NOISE dB(A)	54
ELECTRICAL POWER	3.6 KW
ELECTRICAL SUPPLY	3 Ph / 400 V / 50 Hz
OUTDOOR UNIT DESCRIPTION	
OUTDOOR UNIT TYPE	SYSVRF 335 AIR EVO HP R
COOLING CAPACITY, KW	33.5
POWER INPUT, KW (COOLING / HEATING)	7.79 / 7.65
ESEER/ EER, W / W	7.54 / 4.3
MAXIMUM CURRENT	20.6 A
ELECTRICAL SUPPLY	3 Ph / 400 V / 50 Hz
WEIGHT, KG	237 KG
DIMENSIONS (LXHXD)	990x1635x790 mm

Notes

1. All AHU's are to be manufactured by systemair or equal and approved.

AIR VALVE SPECIFICATION



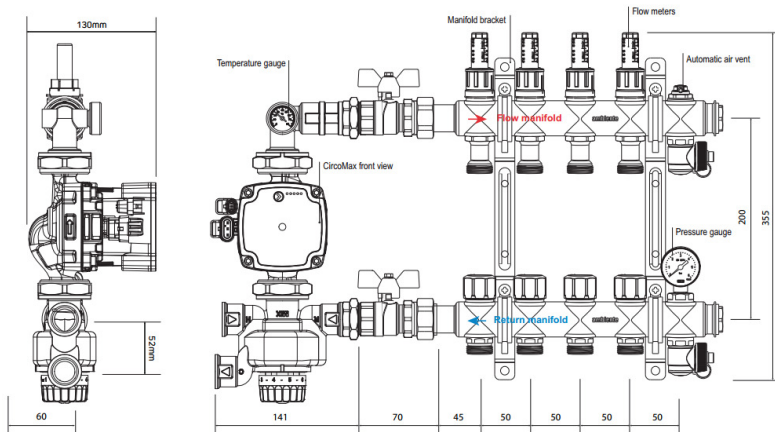
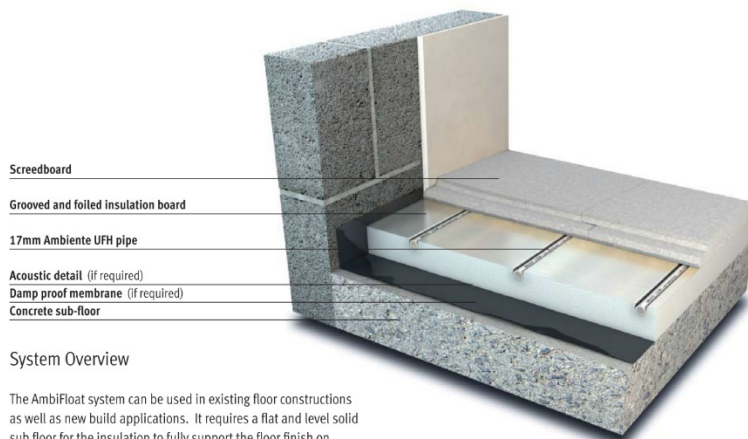
Model EPV-1 Exhaust Air Valve

MAKE / MODEL	RUSKIN EPV-1 EXHAUST AIR VALVE
REFERENCE	EG-XX-XX
LOCATION	ALL WET ROOMS KITCHEN/ LIVING ROOM UTILITY STORE
DIMENSIONS (D) (Ø) mm	125

Notes:

1. Air Valve to be manufactured by Ruskin or equal approved.
2. Air valve shall be provided with volume control damper.

UNDERFLOOR HEATING SPECIFICATION



MANUFACTURER	WMS Underfloor Heating Ltd Lewis Edwards – 01707 649 922, lewis.e@wms-uk.com
UFH TYPE	30mm AmbiFloat 10
FLOW & RETURN TEMPERATURE	TBC - Blended on manifold. Detail design by WMS Underfloor Heating Ltd
MANIFOLD TYPE	Stainless steel with Circomax pump-set and blending valve

Notes:

1. The underfloor heating shall be designed, supplied, installed and commissioned by WMS Underfloor Heating Ltd.
2. The design shall be completed to ensure the heat loss of each individual room is met.
3. All pipe loops shall be continuous. No joints are to be installed in the floor.

4. The 30mm Ambifloat 10 insulation panel shall be supplied by WMS Underfloor Heating Ltd. It shall be 150Kpa and laminated with a reflective foil. Aluminum reflective plates are not to be used.
5. Pipe centers are to be calculated and determined by the underfloor heating specialist.
6. Bathrooms and ensuites shall have independent control to adjacent rooms.
7. Room thermostats shall be Heatmiser Neostats. Thermostats are not to be positioned next to appliances such as ovens, hobs and large external glazed areas to ensure the thermostats obtain accurate room temperature readings.
8. Rooms with timber floors shall have a high limit floor probe installed to prevent the timber from exceeding a floor surface temperature of 27 degrees.
9. Control components shall be supplied by the underfloor heating supplier for the electrician to fit.
10. All UFH pipework and manifolds shall be tested to 4 bar at installation stage. Each underfloor heating system must be signed off using a pressure certificate and issued to the contractor. The system shall remain under pressure until the system is filled and flushed by the mechanical subcontractor.
11. Each underfloor system shall be balanced in accordance with the design by a commissioning engineer and system certificates shall be issued to the contractor along with O&Ms and warranty documents.

LTHW PRIMARY SIDE PRESSURISATION & EXPANSION UNIT



MAKE / MODEL	GRUNDFOS / <u>PHT F225</u>
REFERENCE	PU-GF-01
SYSTEM MAXIMUM STATIC HEAD (m)	5
SYSTEM FLUID CONTENT (litres)	2000
PUMP QUANTITY	2 NO's
MAXIMUM FILL PRESSURE (bar)	2.5
POWER CONSUMPTION (KW)	0.43
FULL LOAD CURRENT (amps)	1.9
EXPANSION VESSEL NOMINAL CAPACITY (litres)	200 (@ 6 bar)
EXPANSION TANK REFERENCE	EXT-GF-01

Notes:

1. Pressurization & expansion tank to be manufactured by Grundfos or equal approved.
2. Maximum flow temperatures are 80 deg.C
3. Pump set to be manufactured by Grundfos or equal and approved
4. Unit shall be compliant with current guidelines and CIBSE energy recommendations.
5. Refer to layouts for pressurisation unit locations.
6. Pressurisation unit to be linked to the MCC Panel.
7. Unit should be installed on the return header of the system on the suction side of the circulating pump.

LTHW SECONDARY SIDE PRESSURISATION & EXPANSION UNIT



MAKE / MODEL	Grundfos / <u>PHT F280</u>
REFERENCE	PU-GF-02
SYSTEM MAXIMUM STATIC HEAD (m)	60
SYSTEM FLUID CONTENT (litres)	10000
PUMP QUANTITY	2 NO's
MAXIMUM FILL PRESSURE (bar)	8
POWER CONSUMPTION (KW)	0.75
FULL LOAD CURRENT (amps)	15.6
EXPANSION VESSEL NOMINAL CAPACITY (litres)	1200 (@ 10 bar)
EXPANSION TANK REFERENCE	EXT-GF-02

Notes:

1. Pressurization & expansion tank to be manufactured by Grundfos or equal approved.
2. Maximum flow temperatures are 75 deg.C
3. Pump set to be manufactured by Grundfos or equal and approved
4. Unit shall be compliant with current guidelines and CIBSE energy recommendations.
5. Refer to layouts for pressurisation unit locations.
6. Pressurisation unit to be linked to the MCC Panel.
7. Unit should be installed on the return header of the system on the suction side of the circulating pump.

ELECTROMAGNETIC WATER CONDITIONER

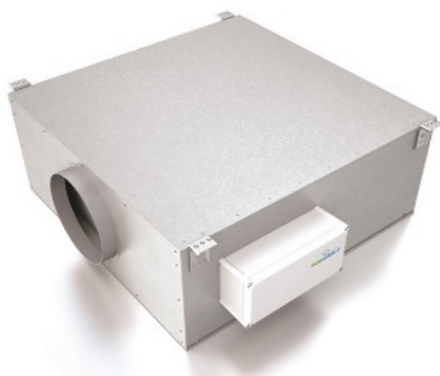


MAKE / MODEL	HYDROTEC / HYDROMAG DN 100
REFERENCE	WATER CONDITIONER
FLOW RATE	30.5 L/S
LOCATION	GROUND FLOOR PLANTROOM
ELECTROMAGNETIC COIL	110V DC
MAXIMUM POWER CONSUMPTION	450 W
QUANTITY	1
MAXIMUM INLET PRESSURE	16 bar
DIMENSIONS (mm)	HYDROMAG DN 100 - 550Ømm (W) x 254 (D)
WEIGHT (KG)	140

Notes:

1. Electromagnetic Water Conditioner to be manufactured by Hydrotec or equal approved.

REFUSE STORE EXHAUST FAN



MAKE / MODEL	NUAIRE / DE6A-ES
REFERENCE	REFUSE STORE (EX-RS-GF-01)
FLOW RATE	450 L/S @ 200 kPa
LOCATION	REFUSE STORE @ GROUND FLOOR
SILENCER	2 NO's x CA40S-S2S- Standard silencer
MOTOR INPUT POWER	0.522 KW (For Required duty :0.2 kw)
SPECIFIC FAN POWER	0.8 W/(l/s) (For Required duty :0.4 W/(l/s))
QUANTITY	1
ELECTRICAL SUPPLY	230 V 1 Phase 50 Hz
MOTOR RATING	0.45 kW
DIMENSIONS mm (L x W x H)	1004 x 1092 x 459

Notes:

1. Exhaust fan to be manufactured by Nuaire or equal approved.
2. Silencers are to be provided at the room side and atmospheric side for reduction of noise level.
3. Extract Unit to be manufactured by Nuaire or equal and approved.
4. Extract unit is to be powered down in the event of a fire occurring.
5. All extract fans to be installed c/w back-draught shutters

PLANT ROOM EXHAUST FAN



MAKE / MODEL	NUAIRE / AX45A-23A3+07
REFERENCE	EX-PL-GF-01
FLOW RATE	1900 L/S @ 150 kPa
LOCATION	GROUND FLOOR PLANTROOM
SILENCER	2 NO's x CA45S - Standard silencer
MOTOR INPUT POWER	1.43 kW (For Required duty : 0.847 kW)
SPECIFIC FAN POWER	0.6 W/(l/s) (For Required duty : 0.4 W/(l/s))
QUANTITY	1
ELECTRICAL SUPPLY	400 V 3 Phase 50 Hz
MOTOR RATING	1.1 kW
DIMENSIONS mm	450 Ø x 450 (L)

Notes:

1. Exhaust fan to be manufactured by Nuaire or equal approved.
2. Silencers are to be provided at the room side and atmospheric side for reduction of noise level.
3. Extract Unit to be manufactured by Nuaire or equal and approved.
4. Extract unit is to be powered down in the event of a fire occurring.
5. Extract unit to be interlinked with boiler & CHP.
6. All extract fans to be installed c/w back-draught shutters

PLANT ROOM SUPPLY FAN



MAKE / MODEL	NUAIRE / AX45C-23A3+09
REFERENCE	SA-PL-GF-01
FLOW RATE	2400 L/S @ 150 kPa
LOCATION	GROUND FLOOR PLANTROOM
SILENCER	2 NO's x CA45S - Standard silencer
MOTOR INPUT POWER	1.904 kW (For Required duty : 1.254 kW)
SPECIFIC FAN POWER	0.7 W/(l/s) (For Required duty : 0.5 W/(l/s))
QUANTITY	1
ELECTRICAL SUPPLY	400 V 3 Phase 50 Hz
MOTOR RATING	1.5 kW
DIMENSIONS mm	450 Ø x 450 (L)

Notes:

1. Exhaust fan to be manufactured by Nuaire or equal approved.
2. Silencers are to be provided at the room side and atmospheric side for reduction of noise level.

CAR PARK EXHAUST FAN



MAKE / MODEL	PVE / 500Ø inverter driven; smoke rated axial fan (ECO PARK)
REFERENCE	EX-CP-GF-01 & EX-CP-GF-02
FLOW RATE / EXTERNAL PRESSURE DROP	2910 L/S @ 350 kPa
LOCATION	GROUND FLOOR PLANTROOM
MOTOR TYPE	Inverter driven, standard and emergency duty 300°C for 2 hours
MOTOR INPUT POWER	2.64 Kw
MOTOR CURRENT	5.36 amp
QUANTITY	2
ELECTRICAL SUPPLY	415v/3ph/50Hz
INSULATION / PROTECTION	Class H 1/ IP 55
DIMENSIONS mm	500 Ø
SILENCERS QUANTITY	2
INTERNAL / EXTERNAL NOISE LEVEL	NR 55 / Insulation Class

Notes:

1. Exhaust fan to be manufactured by PVE (eco park) or equal approved.
2. Car park ventilation design is specialist scope. Also the equipment selection subject to CFD analysis.
3. Silencers are to be provided at the room side and atmospheric side for reduction of noise level.

CAR PARK IMPULSE / INDUCTION FAN



MAKE / MODEL	PVE/ IDV-50 Twin Discharge (ECO PARK)
REFERENCE	EX-CP-GF-03 & EX-CP-GF-04
LOCATION	BASEMENT CAR PARK
THURST	50 Newtons
MOTOR	1.3 Kw
MAKE	Western European
QUANTITY	2
ELECTRICAL SUPPLY	400v/3ph/50Hz
INSULATION / PROTECTION	Class H 1/ IP 55
DIMENSIONS mm (LxWxH)	1322 x 834 x 265
TEMPERATURE	300°C 2 Hours
NOISE LEVEL	51-69 dBA@3m/45°

Notes:

1. Exhaust fan to be manufactured by PVE (Eco Park) or equal approved.
2. Car park ventilation design is specialist scope. Also the equipment selection subject to CFD analysis.
3. Parking Ventilation Equipment Limited contact details, Elliot Delahunty Sales Engineer, ed@pveuk.com , Tel: 0845 20 20 234

ELECTRIC TOWEL RAIL



MAKE / MODEL	KUDOX – STRAIGHT D CHROME
REFERENCE	REFER TO DRAWINGS
LOCATION	APARTMENT BATHROOMS/ EN-SUITES
DIMENSIONS (H x L x D) (mm)	1500 x 500 x 79

Notes:

1. Radiator to be manufactured by Kudox or equal approved.

ELECTRIC WATER HEATER (UNVENTED)



MAKE / MODEL	HEATRAE SADIA – MULTIPOINT 10(4.5 KW VERTICAL)
REFERENCE	REFER TO DRAWINGS
LOCATION	ALL CLEANERS STORE
QUANTITY	1 No
CAPACITY, KW	4.5 KW (EACH)
DIMENSIONS (H x W x D) (mm)	572 x 267 x 252

Notes:

1. Electric water heater to be manufactured by HEATRAE SADIA or equal approved.

INDIRECT STORAGE CYLINDER –DHW FOR 3 BATH UNITS



MAKE / MODEL	MEGA FLOW (HEATRAE SADIA) / 250i
REFERENCE	WS-X.X-XX (ONLY FOR APARTMENT TYPE 'I')
TYPE	INDIRECT HOT WATER STORAGE CYLINDER
LOCATION	UTILTIY CUPBOARD
Nominal capacity (litres)	250
QUANTITY	4 No's
INTERNAL EXPANSION WITH FLOATING BAFFLE	YES
IMMERSION HEATER RATING (kW)	1 x 3
COIL HEAT TRANSFER – PRIMARY FLOW 15 l/min (kW)*	23.9
WEIGHT EMPTY (kg)	50
WEIGHT FULL (kg)	300
ErP rating	C
Dimensions, mm	1738 (L) x 579 Ø

Notes:

1. Electric water heater to be manufactured by MEGA FLOW (HEATRAE SADIA) or equal approved.

COMFORT COOLING VRF INDOOR / OUT DOOR UNITS



NOTE:

1. Comfort cooling (VRF) system shall be provided for all apartments from Level 11 & above.
2. Indoor FCU units location to be confirmed by architect and client. The drop ceiling requested for accommodating the indoor fcu units and grilles dampers plenum as per the markup drawing issued for approval.
3. Apartment indoor units and outdoor unit capacity subject to change based on actual design and architectural / client approval.
4. **Typical apartment drawing due to be issued on 31.05.2017, so the schedule will be revised and updated based on that.**

Level	Apartment Type	Room	Indoor Unit				BC Controller Box	Type
11	F	Living / Dining Room	PEFY	P	25	VMS	One	MASTER
		Bedroom	PEFY	P	15	VMS	One	
	G	Living / Dining Room	PEFY	P	32	VMS	One	
		Bedroom 1	PEFY	P	15	VMS	One	
		Bedroom 2	PEFY	P	15	VMS	One	

Level	Apartment Type	Room	Indoor Unit				BC Controller Box	Type
	K	Living / Dining Room	PEFY	P	40	VMS	One	
		Bedroom 1	PEFY	P	25	VMS	One	
		Bedroom 2	PEFY	P	20	VMS	One	
		Bedroom 3	PEFY	P	15	VMS	One	
202 Floor Index								
12	F	Living / Dining Room	PEFY	P	25	VMS	One	MASTER
		Bedroom	PEFY	P	15	VMS	One	
	F	Living / Dining Room	PEFY	P	25	VMS	One	
		Bedroom	PEFY	P	15	VMS	One	
	G	Living / Dining Room	PEFY	P	32	VMS	One	
		Bedroom 1	PEFY	P	15	VMS	One	
		Bedroom 2	PEFY	P	15	VMS	One	
	G	Living / Dining Room	PEFY	P	32	VMS	Two	Slave
		Bedroom 1	PEFY	P	15	VMS	Two	
		Bedroom 2	PEFY	P	15	VMS	Two	
204 Floor Index								
13	F	Living / Dining Room	PEFY	P	25	VMS	Two	Slave
		Bedroom	PEFY	P	15	VMS	Two	
	F	Living / Dining Room	PEFY	P	25	VMS	Two	
		Bedroom	PEFY	P	15	VMS	Two	
	G	Living / Dining Room	PEFY	P	32	VMS	Two	
		Bedroom 1	PEFY	P	15	VMS	Two	
		Bedroom 2	PEFY	P	15	VMS	Two	
	G	Living / Dining Room	PEFY	P	32	VMS	Two	
		Bedroom 1	PEFY	P	15	VMS	Two	
		Bedroom 2	PEFY	P	15	VMS	Two	
204 Floor Index								
29	IDU's	PURY-P600YSLM		610	Total Index		102%	

BC Controller Box			
Number	Type	Index	Model
One	Master	344	KS8-CMB-P1016V-GA1
Two	Slave	266	KS8-CMB-P1016V-HB1

Level	Apartment Type	Room	Indoor Unit				BC Controller Box	Type
14	L	Living Room	PEFY	P	63	VMS	Three	Master
		Dining Room	PEFY	P	32	VMS	Three	
		Bedroom 1	PEFY	P	32	VMS	Three	
		Bedroom 2	PEFY	P	15	VMS	Three	
		Bedroom 3	PEFY	P	15	VMS	Three	

Level	Apartment Type	Room	Indoor Unit				BC Controller Box	Type
	L	Living Room	PEFY	P	63	VMS	Three	
		Dining Room	PEFY	P	32	VMS	Three	
		Bedroom 1	PEFY	P	32	VMS	Three	
		Bedroom 2	PEFY	P	15	VMS	Three	
		Bedroom 3	PEFY	P	15	VMS	Three	
314								
15	L	Living Room	PEFY	P	63	VMS	Three	Master
		Dining Room	PEFY	P	32	VMS	Three	
		Bedroom 1	PEFY	P	32	VMS	Three	
		Bedroom 2	PEFY	P	15	VMS	Three	
		Bedroom 3	PEFY	P	15	VMS	Three	
	L	Living Room	PEFY	P	63	VMS	Four	Slave 1
		Dining Room	PEFY	P	32	VMS	Four	
		Bedroom 1	PEFY	P	32	VMS	Four	
		Bedroom 2	PEFY	P	15	VMS	Four	
		Bedroom 3	PEFY	P	15	VMS	Four	
314								
16	L	Living Room	PEFY	P	63	VMS	Five	Slave 2
		Dining Room	PEFY	P	32	VMS	Five	
		Bedroom 1	PEFY	P	32	VMS	Five	
		Bedroom 2	PEFY	P	15	VMS	Five	
		Bedroom 3	PEFY	P	15	VMS	Five	
	L	Living Room	PEFY	P	63	VMS	Five	
		Dining Room	PEFY	P	32	VMS	Five	
		Bedroom 1	PEFY	P	32	VMS	Five	
		Bedroom 2	PEFY	P	15	VMS	Five	
		Bedroom 3	PEFY	P	15	VMS	Five	
314								
30	IDU's	PURY-P900YSLM			942	Total Index		105%

BC Controller Box			
Number	Type	Index	Model
Three	Master	471	KS8-CMB-P1016V-HA1
Four	Slave 1	94	KS8-CMB-P108V-GB1
Five	Slave 2	314	KS8-CMB-P1016V-HB1

Slave 1 & Slave 2 Index: 408

Ref.	Qty	Model	Description
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Kings Point Apartments - HEAT RECOVERY SOLUTION

Levels 11, 12 and 13 (12 Apartments)

R2 City Multi STANDARD Heat Recovery Outdoor Unit and BC Controller Box: 1032 Index (115% Diversity)

Heat Recovery	1	PURY-P900YSLM-A1 OUTDOOR	PURY-P900YSLM-A1 OUTDOOR
Master (11th)	1	KS8-CMB-P1016V-HA1 - 16 WAY HA MASTER BC	KS8-CMB-P1016V-HA1 - 16 WAY HA MASTER BC BOX MOD WITH VALVES, 4-6 WEEK LEAD TIME
Slave (12th)	1	KS8-CMB-P1016V-HB1 - 16 WAY SLAVE BC BOX	KS8-CMB-P1016V-HB1 - 16 WAY SLAVE BC BOX MOD WITH VALVES (4-6 WEEK LEAD TIME)
Slave (13th)	1	KS8-CMB-P1016V-HB1 - 16 WAY SLAVE BC BOX	KS8-CMB-P1016V-HB1 - 16 WAY SLAVE BC BOX MOD WITH VALVES (4-6 WEEK LEAD TIME)
Branch Pipe	1	CMY-Y102LS-G2 BRANCH PIPES R410A	CMY-Y102LS-G2 BRANCH PIPES R410A

Ceiling Concealed Ducted Indoor Units

Low Static	18	PEFY-P15VMS1-ER2.TH DUCTED INDOOR	PEFY-P15VMS1-ER2.TH DUCTED INDOOR
Low Static	3	PEFY-P20VMS1-ER2.TH DUCTED INDOOR	PEFY-P20VMS1-ER2.TH DUCTED INDOOR
Low Static	6	PEFY-P25VMS1-ER2.TH DUCTED INDOOR	PEFY-P25VMS1-ER2.TH DUCTED INDOOR
Low Static	6	PEFY-P32VMS1-ER2.TH DUCTED INDOOR	PEFY-P32VMS1-ER2.TH DUCTED INDOOR
Low Static	3	PEFY-P40VMS1-ER2.TH INDOOR UNIT	PEFY-P40VMS1-ER2.TH INDOOR UNIT
Medium Static	3	PEFY-P80VMA-ER4	PEFY-P80VMA-ER4 DUCTED INDOOR

5" Touch Screen Controller - One per Apartment

Central Ctrl	12	AT-50B-J	AT-50B-J TOUCH CONTROLLER
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Ref.	Qty	Model	Description
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Power Pk	12	PAC-SC51KUA-J	Power Supply for AG-150A, PAC-YT34STA and PAC-SF44SRA
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Levels 14, 15 and 16 (12 Apartments)

R2 City Multi STANDARD Heat Recovery Outdoor Unit and BC Controller Box: 1032 Index (115% Diversity)

Heat Recovery	1	PURY-P900YSLM-A1 OUTDOOR	PURY-P900YSLM-A1 OUTDOOR
Master (14th)	1	KS8-CMB-P1016V-HA1 - 16 WAY HA MASTER BC	KS8-CMB-P1016V-HA1 - 16 WAY HA MASTER BC BOX MOD WITH VALVES, 4-6 WEEK LEAD TIME
Slave (15th)	1	KS8-CMB-P1016V-HB1 - 16 WAY SLAVE BC BOX	KS8-CMB-P1016V-HB1 - 16 WAY SLAVE BC BOX MOD WITH VALVES (4-6 WEEK LEAD TIME)
Slave (16th)	1	KS8-CMB-P1016V-HB1 - 16 WAY SLAVE BC BOX	KS8-CMB-P1016V-HB1 - 16 WAY SLAVE BC BOX MOD WITH VALVES (4-6 WEEK LEAD TIME)
Branch Pipe	1	CMY-Y102LS-G2 BRANCH PIPES R410A	CMY-Y102LS-G2 BRANCH PIPES R410A

Ceiling Concealed Ducted Indoor Units

Low Static	18	PEFY-P15VMS1-ER2.TH DUCTED INDOOR	PEFY-P15VMS1-ER2.TH DUCTED INDOOR
Low Static	3	PEFY-P20VMS1-ER2.TH DUCTED INDOOR	PEFY-P20VMS1-ER2.TH DUCTED INDOOR
Low Static	6	PEFY-P25VMS1-ER2.TH DUCTED INDOOR	PEFY-P25VMS1-ER2.TH DUCTED INDOOR
Low Static	6	PEFY-P32VMS1-ER2.TH DUCTED INDOOR	PEFY-P32VMS1-ER2.TH DUCTED INDOOR
Low Static	3	PEFY-P40VMS1-ER2.TH INDOOR UNIT	PEFY-P40VMS1-ER2.TH INDOOR UNIT
Medium Static	3	PEFY-P80VMA-ER4	PEFY-P80VMA-ER4 DUCTED INDOOR

5" Touch Screen Controller - One per Apartment

Ref.	Qty	Model	Description
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Central Ctrl	12	AT-50B-J	AT-50B-J TOUCH CONTROLLER
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Power Pk	12	PAC-SC51KUA-J	Power Supply for AG-150A, PAC-YT34STA and PAC-SF44SRA
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Central Control with Energy Apportioning

The Mitsubishi 10.4" Touch Screen AE-200 Touch Screen Controller, version 7.31, has the capabilities to proportionally calculate the energy usage of each indoor unit. This information can be downloaded onto a memory stick and passed to a licenced energy supplier. In order to collect this information Mitsubishi require you to purchase a Pin-Code for this information to be released. Whilst the AE-200 is not an approved device to calculate the energy bill. (Not approved to generate a bill, but ok for energy monitor), as each condensing unit module must have its own pulse meter, approved by a licenced energy supplier, so long as both are calibrated with each other the information will be accurate.

Central Ctrl	1	AE-200E	10.4" TOUCH SCREEN CENTRALISED CONTROLLER (UP TO 50 INDOOR UNITS)
Blind Ctrl	2	EW-50E	EW-50E Web Interface and AE200E Expansion Adapter
Energy Pin	1	AE-200E - Energy PIN	AE-200E/EW-50E Energy Apportioning License PIN Code
BACNET Pin	1	AE-200E BACnet PIN	AE-200E/EW-50E BACnet PIN LicenseCode
Pulse Mtr	1	PAC-YG60MCA-J	Pulse Energy Meters Interface (4x)
Power Pk	1	PAC-SC51KUA-J	Power Supply for AG-150A, PAC-YT34STA and PAC-SF44SRA
DTS 541	4	Pulse Meters	
10100247	1	KS10 NG-8 port switch	

1. FCUs to be manufactured by Mitsubishi or equal and approved.
 2. The mechanical contractor is to supply an air conditioning system as detailed on the drawings.
 3. The air-conditioning wall mounted programmer is to be suitable for domestic applications in both user friendliness and appearance. The air-conditioning control panel is to provide the following control:
 - 24 hr 7 days a week individual zone control
 - Up to 4 timed sequences per day
 - Air-conditioning thermostats
 4. AC specialist to ensure that AC central controller is compatible with central control system.
 5. Fan coil speed to be selected for Low/Medium speed.
- Contact details of comfort cooling solution,
 Jonathan Brown – Regional Project Sales Manager

Phone 0161 877 6663
 Mobile 07778 931 153
 Email jonathan.brown@kooltech.co.uk

BIN STORE GRILLES



MAKE / MODEL	SWEGON / XXXXXXXXXXXXXXXX
REFERENCE	EG-XX-XX
TYPE	Eggcrate grilles (25W-ECG-F0-83)
LOCATION	REFUSE STORE
AIR VOLUME, L/S	120 L/S
QUANTITY	4
NECK SIZE, mm	300 x 300 (345 x 345 O/A)
SPIGOT SIZE, mm	250Ø
VELOCITY, m/s	2.5
PLENUM BOX TYPE	PBS-1-L-250D-350H
PRESSURE DROP (Pa)	6
NR LEVEL	25

Notes:

1. Grilles to be manufactured by SWEGON or equal approved.
2. Air grilles shall be provided with volume control damper.

PLANT ROOM GRILLES



MAKE / MODEL	SWEGON / Egg Crate 25W-ECG-F1-83 SUPPLY AIR
REFERENCE	SA-XX-XX
TYPE	Egg Crate 25W-ECG-F1-83
LOCATION	GROUND FLOOR MECHANICAL PLANT ROOM
AIR VOLUME, L/S	600 L/S
QUANTITY	4
NOMINAL SIZE, mm	500 x 500 (545 x 545 O/A)
SPIGOT SIZE, mm	NA
VELOCITY, m/s	2.5
PLENUM BOX TYPE	NA
PRESSURE DROP (Pa)	10
NR LEVEL	28

MAKE / MODEL	SWEGON / Egg Crate 25W-ECG-F1-83 EXHAUST AIR
REFERENCE	EX-XX-XX
TYPE	Egg Crate 25W-ECG-F1-83
LOCATION	GROUND FLOOR MECHANICAL PLANT ROOM

AIR VOLUME, L/S	475 L/S
QUANTITY	4
NOMINAL SIZE, mm	500 x 500 (545 x 545 O/A)
SPIGOT SIZE, mm	NA
VELOCITY, m/s	2.1
PLENUM BOX TYPE	NA
PRESSURE DROP (Pa)	6
NR LEVEL	24

MAKE / MODEL	SWEGON / Egg Crate 25W-ECG-F1-83 VENTILATION AIR
REFERENCE	REFER DRAWING
TYPE	Egg Crate 25W-ECG-F1-83
LOCATION	BASEMENT LOBBY VENTILATION
AIR VOLUME, L/S	600 L/S
QUANTITY	4
NOMINAL SIZE, mm	500 x 500 (545 x 545 O/A)
SPIGOT SIZE, mm	NA
VELOCITY, m/s	2.5
PLENUM BOX TYPE	NA
PRESSURE DROP (Pa)	10
NR LEVEL	28

Notes:

1. Grilles to be manufactured by SWEGON or equal approved.
2. Air grilles shall be provided with volume control damper.

CORRIDOR SUMMER COOLING GRILLES



MAKE / MODEL	SWEGON / 4WAY SQUARE DIFFUSER (32W-SA4-G-F0-83)
REFERENCE	EG-XX-XX
TYPE	4WAY SQUARE DIFFUSER (32W-SA4-G-F0-83)
LOCATION	COMMUNAL CORRIDOR
AIR VOLUME, L/S	80-87 L/S
QUANTITY	14 NO'S
NOMINAL SIZE, mm	300 x 300 (448 x 448 O/A)
SPIGOT SIZE, mm	200Ø
VELOCITY, m/s	1.0
PLENUM BOX TYPE	PBS-1-L-200D-300H (300 x 300)
PRESSURE DROP (Pa)	4
NR LEVEL	<10

MAKE / MODEL	SWEGON / 4WAY SQUARE DIFFUSER (32W-SA4-G-F0-83)
REFERENCE	EG-XX-XX
TYPE	4WAY SQUARE DIFFUSER (32W-SA4-G-F0-83)
LOCATION	COMMUNAL CORRIDOR

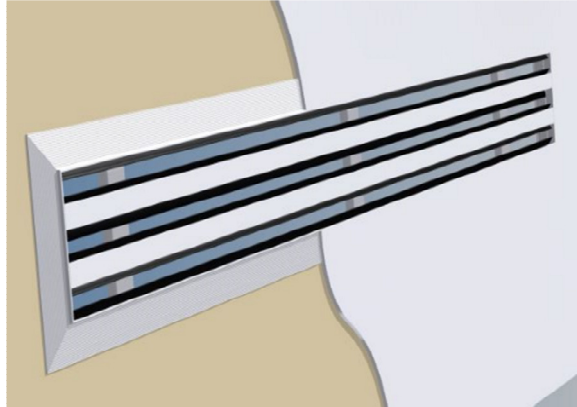
AIR VOLUME, L/S	60-65 L/S
QUANTITY	9
NOMINAL SIZE, mm	225 x 225 (373 x 373 O/A)
SPIGOT SIZE, mm	200Ø
VELOCITY, m/s	1.25
PLENUM BOX TYPE	PBS-1-L-160D-260H (225 x 225)
PRESSURE DROP (Pa)	6
NR LEVEL	<15

MAKE / MODEL	SWEGON / 4WAY SQUARE DIFFUSER (32W-SA4-G-F0-83)
REFERENCE	EG-XX-XX
TYPE	4WAY SQUARE DIFFUSER (32W-SA4-G-F0-83)
LOCATION	COMMUNAL CORRIDOR
AIR VOLUME, L/S	45 L/S
QUANTITY	1
NOMINAL SIZE, mm	225 x 225 (373 x 373 O/A)
SPIGOT SIZE, mm	150Ø
VELOCITY, m/s	1.0
PLENUM BOX TYPE	PBS-1-L-150D-250H (225 x 225)
PRESSURE DROP (Pa)	5
NR LEVEL	<10

Notes:

1. Grilles to be manufactured by SWEGON or equal approved.
2. Air grilles shall be provided with volume control damper.

APARTMENT COMFORT COOLING GRILLES



NOTE:

1. APARTMENT GRILLE TYPE TO BE CONFIRMED BY CLIENT/ ARCHITECT.
2. TYPICAL APARTMENT DRAWING DUE TO BE ISSUED ON 31.05.2017, SO THE SCHEDULE WILL BE REVISED AND UPDATED BASED ON THAT.

MAKE / MODEL	TBC
REFERENCE	TBC
TYPE	TBC

DEAERATOR



MAKE / MODEL	SPIROVENT DEAERATOR STANDARD
REFERENCE	DA-01 & DA-02
PROPOSED LOCATION	GROUND FLOOR PLANTROOM
MAX TEMP (°C)	90
QUANTITY, NO's	2
MAX PRESSURE (BAR)	10
DIMENSIONS (H x W x D) (mm)	470 x 350 x 260

Notes:

1. Deareator to be manufactured by Spirotech or equal and approved.

DIRT SEPARATOR



MAKE / MODEL	SPIROTRAP 65
REFERENCE	DS-01, / DS-02
PROPOSED LOCATION	GROUND FLOOR PLANTROOM
MAX FLOW RATE (m ³ /h)	40
MAX TEMP (°C)	90
QUANTITY, NO's	2
MAX PRESSURE (BAR)	10
DIMENSIONS (H x W) (mm)	263 x 395

Notes:

1. Dirt Separator to be manufactured by Spirotech or equal and approved.

DOSING POT



MAKE / MODEL	BOSS DOSING POT
REFERENCE	DP-01 & DP-02
PROPOSED LOCATION	GROUND FLOOR PLANTROOM
SYSTEM	LTHW
CAPACITY (L)	11
MAX PRESSURE (BAR)	8
QUANTITY, NO's	2

Notes:

1. Dosing Pot to be manufactured by Boss or equal and approved.



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