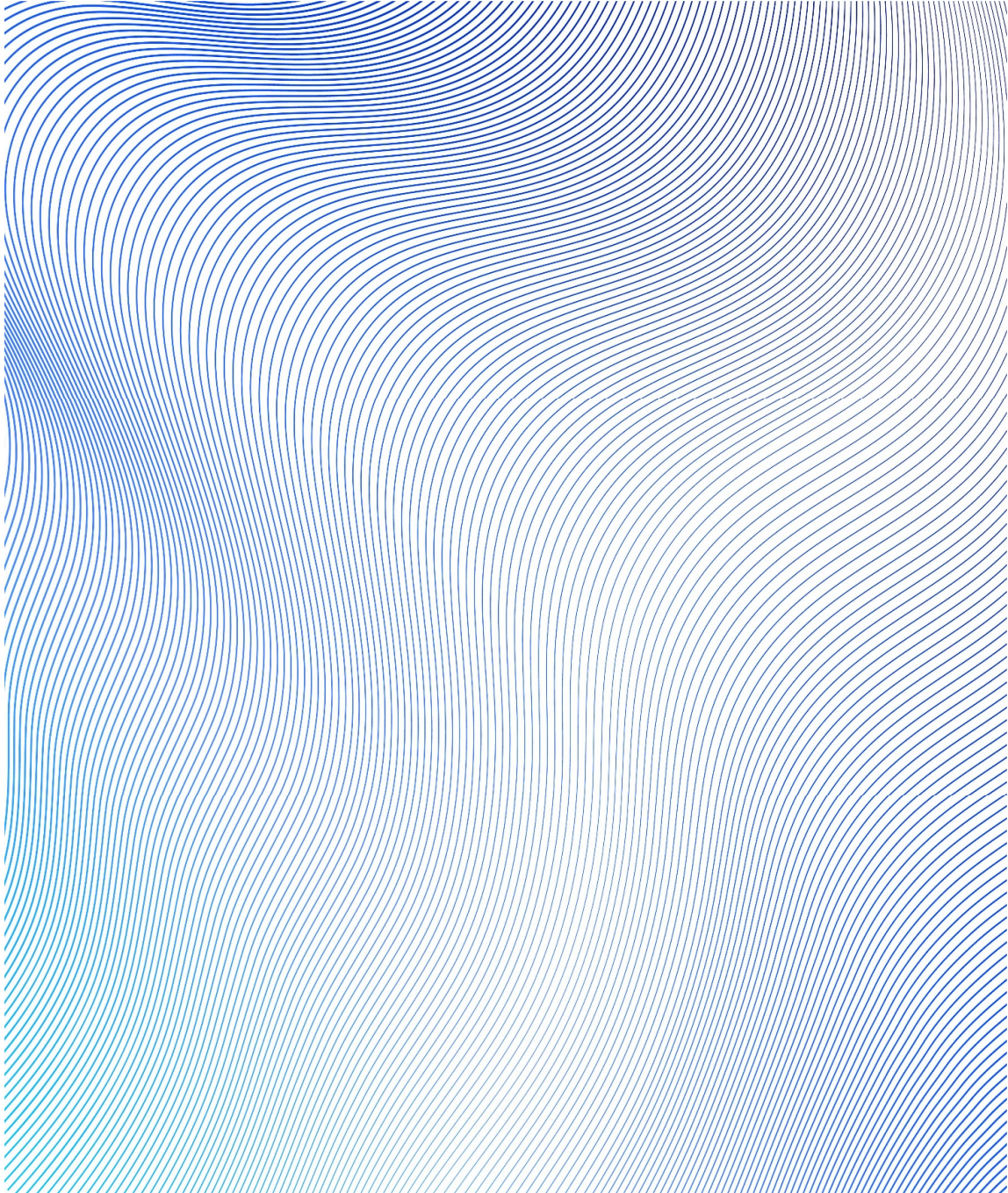


LMETB – RSTC Dundalk

MECHANICAL SCHEDULES



August 2026

Issue	Description	Date (DD.MM.YY)	Prepared By	Signed Off
Issue for Final review	For review	04/08/26	AM	JM
Issue for Tender	Tender	28/08/26	AM	JM

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AIR SOURCE HEAT PUMP SCHEDULE																					
EQPT. NO.	SERVICE	REFRIGERANT TYPE / GWP	REFRIGERANT CHARGE (kg)	NOMINAL HEATING CAPACITY (kW)	HEATING PERFORMANCE DATA									COMPRESSORS	ELECTRICAL					OPER. WEIGHT (kg)	NOTES
					AMBIENT AIR (°C)	CAPACITY (kW)	EWI (°C)	LWT (°C)	FLOW (L/s)	WPD (kPa)	COP	SCOP	INTEGRAL PUMP EXT HEAD (kPa)		V	PH	Hz	MCA	EMERGENCY POWER (Y/N)		
ASHP-01 - 08	HEATING WATER	R290 / 3	3.5	50	7	42.3	55.0	65.0	1.25	39	2.8	3.3	39.22	BLDC INVERTER	400	3	50	40	N	275	1, 2, 3, 4, 5, 6, 7, 8
NOTES: 1. NEW AIR SOURCE HEAT PUMPS TO BE COMPLETE WITH DEDICATED, FULLY INTEGRATED, MANUFACTURER-SUPPLIED PLC CONTROL SYSTEM, WHICH CAN COMMUNICATE VIA BACNET TO EXISTING BMS FOR MONITORING. ASHP CONTROL PANEL TO CONTROL BIVALENT HEAT SYSTEM, EXISTING BMS ON 2. THE PLC SHALL BE FACTORY FITTED & FACTORY PROGRAMMED. ALL CASCADE LOGIC, SEQUENCING, OPTIMISATION AND PLANTROOM MANAGEMENT FUNCTIONS SHALL BE PROVIDED AS PART OF THE HEAT PUMP SYSTEM ITSELF, NOT VIA THIRD PARTY 3. UNITS TO BE INSTALLED ON BIG FOOT FRAME OR SIMILAR STRUCTURAL STEEL SUPPORTS. PROVIDE SPRING ISOLATORS FOR VIBRATION ISO 4. DRAIN PAN FROM ASHPs TO DISCHARGE TO GRADE AT SUITABLE LOCAT 5. UNITS TO INCLUDE FULL ACCESS PANELS ALLOWING SERVICING OF COMPRESSORS, FANS AND ELECTRICAL COMPONENTS WITHOUT DISMANTLING STRUCTURAL ELEMENTS. UNIT SHALL BE ALUMINIUM STRUCTURAL FRAME & POWDER-COATED EXTER 6. EVAPORATOR SHALL BE CORROSION-TREATED AND SUITABLE FOR COASTAL & AGGRESSIVE ENVIRONME 7. SOUND PRESSURE LEVELS PER UNIT SHALL NOT EXCEED 53 dB(A) AT 1m, 41 dB(A) AT 5m AND 35 dB(A) AT 10m. THE SYSTEM SHALL BE SUITABLE FOR INSTALLATION IN NOISE-SENSITIVE ENVIRONMENTS WITHOUT THE NEED FOR ADDITIONAL ACOUSTIC ATTENUATION 8. REFER TO SPECIFICATION SECTION 'Pr 70 60 37 04' FOR FURTHER SPECIFICATION REQUIREME																					

HEAT PUMP PERFORMANCE CRITERIA AT DIFFERENT AMBIENT TEMPS
ASHP-01 TO ASHP-08

AMBIENT TEMP (°C)	LWT (°C)	COP	POWER OUTPUT (kW)
-3	65	1.8	26.5
0	65	2	29.8
3	65	2.4	34.7
7	65	2.8	42.3
10	65	3.1	47.6
17	65	3.4	54.3
-3	55	2.6	30.9
0	55	2.8	33.4
3	55	3.1	37.2
7	55	3.5	43.5
10	55	3.8	49.7
17	55	4.1	56

BUFFER TANK SCHEDULE

[illegible]

NOTES:

1. COMPLETE WITH THREE (3No.) INTERNAL BAFFLES
2. COMPLETE WITH SIX (6No.) 100mm DIAMETER CONNECTION PORTS
3. TANK TO BE STEEL CONSTRUCTION WITH HARD POLYURETHANE FOAM INSULATION (75mm THICK)
4. ACCESSORIES TO INCLUDE TEMPERATURE GAUGES AND PRESSURE GAUGE

CALORIFIER SCHEDULE

EQPT. NO.	LOCATION	SERVICE	CONFIGURATION (HORIZONTAL/VERTICAL)	STORAGE CAPACITY (L)	MAX WORKING PRESSURE (kPa)	MAX WORKING TEMPERATURE (°C)	WORKING PRESSURE (kPa)	COIL PERFORMANCE @ 80/10/60 °C (kW)	COIL SURFACE AREA (m2)	TANK SIZE		WEIGHT EMPTY (KG)	NOTES
										DIA. (mm)	H (mm)		
DHWC-01	MEZZANINE ABOVE METAL FABRICATION	DHW	VERTICAL - SINGLE COIL	471	1,600	110	850	99	6	755	1,950	247	1, 2

NOTES:
1. PREINSULATED SINGLE COIL CYLINDER WITH EXTRA GLASS CERAMIC ENAMEL INTERNAL SURFACE COATING.
2. COMPLETE WITH 6kW IMMERSION HEATER. IMMERSION HEATER TO ONLY OPERATE WHEN HEAT PUMP NOT OPERATIONAL.

EXPANSION TANK SCHEDULE

EQPT. NO.	LOCATION	SERVICE	CONFIGURATION (HORIZONTAL/VERTICAL)	FLUID	MIN. TEMP. (°C)	MAX. TEMP. (°C)	MIN. PRESSURE (kPa)	MAX. PRESSURE (kPa)	SYSTEM VOLUME (ADDITIONAL) (L)	ACCEPTANCE VOLUME (L)	MAX WORKING PRESSURE (kPa)	TANK SIZE		EMPTY WEIGHT (KG)	NOTES
												DIA. (mm)	H (mm)		
ET-1	ADJACENT EXISTING BOILER ROOM	HEATING SYSTEM	VERTICAL	WATER	35	75	100	190	1,560	85	600	512	670	11	1,2,3

NOTES:
1. CARBON STEEL SHELL WITH SYNTHETIC RUBBER COMPOUND DIAPHRAGM, POWDER EPOXY COATING
2. CONTRACTOR TO VERIFY SIZING BASED ON EXISTING SYSTEM PARAMETERS, PROPOSED MANUFACTURER AND CRITERIA NOTED ABOVE. FORWARD SIZING TO CONSULTANT FOR REVIEW AS PART OF TECHNICAL SUBMITTAL
3. SYSTEM VOLUME NOTED ABOVE IS FOR THE ADDITIONAL WATER VOLUME ADDED TO THE EXISTING SYSTEM BY THE NEW HEAT PUMPS, BUFFER TANK AND ASSOCIATED PIPING. EXISTING SYSTEM EXPANSION VESSEL(S) TO REMAIN

PUMP SCHEDULE

[illegible]

NOTES:

1. TWIN PUMP HEAD TO OPERATE AS DUTY / STANDBY OPERATION. C/W INTEGRAL VFD.
2. PUMPS TO BE BASE MOUNTED WITH ANTI-VIBRATION MOUNTING