



Hayes Higgins Partnership
Integrated construction solutions

Project Managers, Chartered Civil, Structural and Building Services Engineers

TIPPERARY COUNTY COUNCIL

Cahir Market House Business Centre, Cahir, Co. Tipperary

DATA SHEETS for the

Mechanical HEATING SERVICES Installation

at

Cahir Market House

Issue

Revision	T01
Remarks	Tender Issue
Date	06/03/2026

Prepared By

Name	PP
Signature	

Checked By

Name	JvdM
Signature	

Document Information

Project Number	21ME006
File Reference	

Mechanical HEATING SERVICES Data Sheets						
Table of Contents for the DATA SHEETS for the Mechanical HEATING SERVICES Installation For Cahir Market House				 Hayes Higgins Partnership Integrated construction solutions		
Issue Date and Revision Number						
	Day Month Year	6 3 26	1 4 26			
Data Sheet Number	Data Sheet Title	Rev	Rev	Rev	Rev	Rev
Data Sheet No.1	Air Source Heat Pump (ASHP) - Space Heating (SH)	T1				
Data Sheet No.2	Buffer Vessel	T1				
Data Sheet No.3	Pumps	T1				
Data Sheet No.4	Pressurization Unit	T1				
Data Sheet No.5	Heat Emitters	T1	T1			
Data Sheet No.6	Pressure Independent Control Valves	T1				
Data Sheet No.7	Room Temperature Sensors	T1				
Data Sheet No.8	Expansion Joints	T1				

General Requirements			
Project:	Cahir Market House	Data Sheet:	General Requirements
Project No.	21ME006	Revision:	T01
Client:	Tipperary County Council	Date:	06/03/2026

Equipment must be supplied from companies that meet the following Minimum Requirements:

The supplier must have had an office in Ireland for the last five years

The supplier must be able to provide on request ten positive references from previous installations of the proposed equipment.

The supplier must have a minimum of 5 No. support staff in Ireland.

All equipment must be fit for the intended purpose and suitable for the weather conditions found at the site.

All equipment must comply with all statutory regulations and requirements.

All suppliers proposed must be able to provide a technically competent representative who is capable of fully understanding the equipment provided and advising on commissioning and operational information.

All equipment must be EEE registered where such a product exists and is fully compliant with the specification.

Warranties:

Equipment Type	10 Years	7 Years	5 Years	2 Years
Heat Emitters incl Radiators, Radiant Panels, Underfloor Heating	X			
Air Source Heat Pumps (Space Heating)		X		
Air Source Heat Pumps (Domestic Hot Water)		X		
Hot Water Storage Vessels incl Buffer Vessels & Calorifiers		X		
Boilers			X	
All motorized valves			X	
Room Temperature Controllers			X	
Magnetic Filters			X	
Pumps				X
Heat Energy Meters				X

Maintenance:

System/Equipment	6-months	12-months
Heating System Controls	Check all heating system time schedules/set-points/control logic/data logging and ensure these are correct and locked to avoid tampering. Confirm that all Heat Energy meters are functional.	Check all heating system time schedules/set-points/control logic/data logging and ensure these are correct and locked to avoid tampering. Confirm that all Heat Energy meters are functional.
Air Source Heat Pumps - (Space Heating and Domestic Hot Water Heating)	Filter - Check and clean if necessary Refrigerant - Check pressure and recharge if necessary Check and Correct - any faults logged needs to be investigated and fixed by Contractor/Manufacturer. Seasonal recommissioning - to be performed	Filter - Check and clean if necessary Refrigerant - Check pressure and recharge if necessary Check and Correct - any faults logged needs to be investigated and fixed by Contractor/Manufacturer.
Boilers	Check that boilers are performing as per commissioning data and correct any faults/errors Seasonal recommissioning - to be performed	Cleaning and inspecting internal components like the heat exchanger and burner. Check safety devices like the low water cut-off and relief valve, Verify flue and ventilation systems

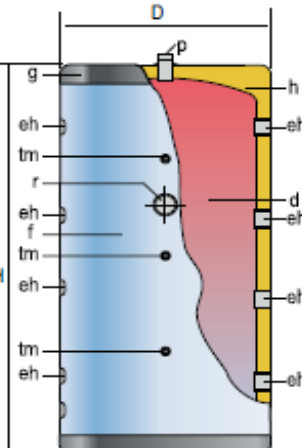
Pumps and Piping	Check that pumps are performing as per commissioning data and correct any faults/errors	Performance Testing: Measure and record flow rate, suction, discharge pressure, and power consumption to ensure the pump is operating within specified parameters. Clean all filters and strainers. Connections: Check that all mechanical and electrical connections are secure and tight.
Gas Detection System	Check that Gas Detection System is performing as per commissioning data and correct any faults/errors	Check for physical damage to the housing, conduits, and cables, and ensure the sensor inlet is not blocked. Power supply: Verify that the power supply is stable and that batteries are functioning correctly. Alarm tests: Functionally test audible, visual, and other alarm signals to confirm they work as expected
It shall be the duty of the contractor to check that equipment proposed fully meets the specification Any items installed that do not meet the specification shall be removed and replaced At no cost to the contract All plant shall contain the CE mark References above to equipment shall also refer to plant and components.		

Heating Services Data Sheet No.01			
Project:	Cahir Market House	Data Sheet:	Heat Pump Space Heating
Project No.	21ME006	Revision:	T01
Client:	Tipperary County Council	Date:	06/03/2026
Heat Pump Space Heating			
Manufacturer		Product	
HITACHI (or similar approved)		Air H2O 800M - RASM-6(V)TW2E (or similar approved)	
General		Refrigerant	
No. of Heat Pumps:	2	Type:	R290
DHW Included?	No	Amount(kg):	1.2
Water Flow/Return Temperatures (°C)	70/60	Electrical	
Dimensions WxHxD (mm)	1220x1140x430	Rated Voltage	3N~400V; 50Hz
Nett mass (kg)	130	Starting Current/Fuse Rating (Amp)	16.7
Operating Ambient Air Temperature	-10°C to 35°C	Max Running Current (Amp)	14
Sound Power Level (dBA)	63	Input Power (kW)	8
Duty		Onboard Water Pump	
A-7/W55		Water Flow Rate (m³/hr):	4
Heating Capacity (kW)	13	Water Pressure Drop (kPa)	20
Power Input (kW):	6.81	Water Pipework Size (mm)	28
COP:	1.91	Controls	
Energy Class		Heat Pump Set Point Temperature	Yes
Space Heater @ 55°C		Enable	Yes
ErP Rating	A++	High Limit Cut-out	Yes
ηs	133%	Lock Out	Yes
SCOP	3.35	Hours Run	Yes
		Cascade Control required	Yes
Photo			
			
Notes			
1	Controller: Include for controller as recommended by Supplier incl cascade controller if more than 1 unit		
2	BMS Connection: Connection to BMS for fault alarms.		
3	BMS Connection: Connection to BMS for high temperature/ high humidity alarms		
4	Heat Pump complete with the main components for the hydronic system: water pump, electronic flow switch, filter, pressure transducers, water temperature sensor, pressure tap (2), safety valve, drain valve, air vent, water purge, expansion tank.		
5	Weather-protected, steel mesh guards for protection of externally located air source heat pumps against vandalism and accidental damage. All components receive an 8 phase epoxy-polyester powder coating, with scratch-resistant, texture finish in a colour to match most brands condensing units.		
6	Unit to comply with all standards including EN 14825 (Space Heating Standard)		
7	All panels can be removed for maintenance by unscrewing four bolts. Additional Back panel to be provided for stand alone option.		
8	Contractor to include for Big-Foot type mounting system		

Heating Services Data Sheet No.02

Project:	Cahir Market House	Data Sheet:	Buffer Vessel
Project No:	21ME006	Revision:	T01
Client:	Tipperary County Council	Date:	06/03/2026

Buffer Vessel

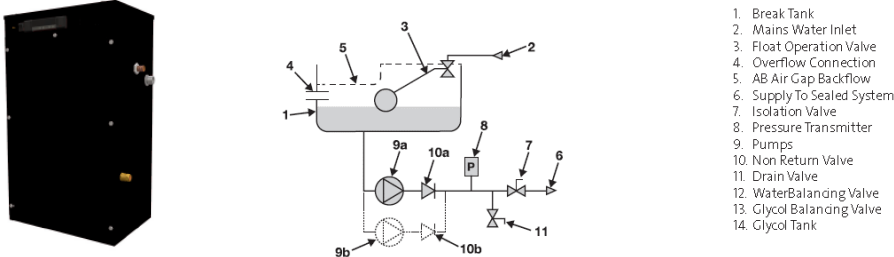
Manufacturer		Product	
LAPESA (or similar approved)		Geyser Inertia G-370-I (or similar approved)	
General		Duty	
Reference:	BT.01	Total Capacity (L):	370
Type:	Buffer Tank for Heat Pump	Storage Temp (°C):	55
Quantity	1	CWS Inlet Temp (°C):	10
Mounting:	Floor Mounted	Construction	
Diameter(mm)	620	Casing:	Stainless Steel
Height (mm)	1725	Insulation:	High thermal insulation with polyurethane hard foam
Weight Empty (kg):	68	Pressure	
		Storage P max (Bar):	6
		Heat Exch.P max (Bar):	12
		Connections	
		Side Connections	4
		Top Connections	1
		Probe Tube Connections for sensors	3
		Mountings	
		Temp Sensor:	Yes
		Temp Gauge:	Yes
		Drain Cock:	Yes
		Pressure Sensor:	Yes
		Controls	
		Contained	BMS
		Yes	Yes
		Control Items	
		Temperature Control	

Notes

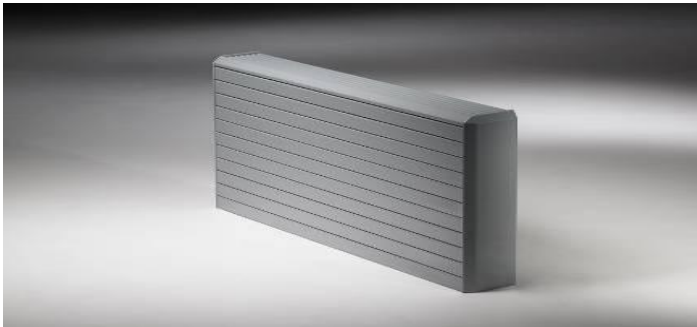
1	Test Certs to be provided
2	Include electrolytic protection in the form of magnesium anode.
3	Nameplates to show test and working pressures
4	Cylinder construction shall comply with BS 1566 Part 2
5	Provide insulating jacket to BS 5615
6	Expansion vessel and associated components to be sized and detailed by the calorifier supplier.
7	Back-up immersion heater not required.

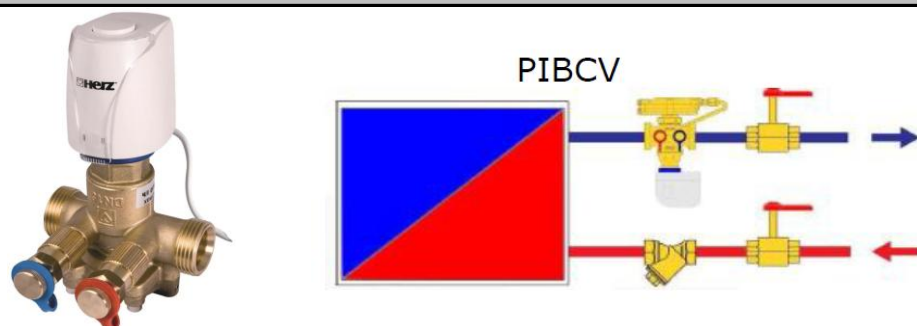
Heating Services Data Sheet No.03			
Project:	Cahir Market House	Data Sheet:	Pumps
Project No:	21ME006	Revision:	T01
Client:	Tipperary County Council	Date:	06/03/2026
Pumps			
	P.01	P.02	P.03
General			
Function	Space Heating Circulation Pump	Space Heating Circulation Pump	Space Heating Circulation Pump
Circuit	Radiator Circuit	Underfloor Heating Manifold 1	Underfloor Heating Manifold 2
Location	Plantroom	Plantroom	Plantroom
Number/Type	Twin Head	Twin Head	Twin Head
Duty			
Flow Rate (kg/s)	0.5	0.5	0.5
Pres. Drop (Ext kPa)	80	80	80
Fluid Temp (°C)	80	80	80
Accessories			
Flexible Connections	Yes	Yes	Yes
Test Points	Yes	Yes	Yes
Electrical			
Voltage	230V 50Hz 1Ph	230V 50Hz 1Ph	230V 50Hz 1Ph
Speeds	Variable	Variable	Variable
Photo			
			
Notes			
1	Test cert to be provided showing that pump is working correctly, and confirming vsd is commissioned correctly		
2	Nameplates to show test and working pressures		
3	Wiring shall comply BS 4641		
4	Pump wiring requirements to match control panel requirements		
5	Pump to be suitable for pumping fluid listed, with appropriate materials used for hygienic and safe operation.		
6	Provide all brackets required to support pump from structure provided		
7	VSD's are to be of automatic pressure control type and are to be commissioned to reduce flow as pressure builds		
8	All pumps shall have an efficiency index (EEI) of not more than 0.23.		
9	Pump to be selected at center of pump curve		
10	affixed to the pump and a declaration of conformity shall be issued to the Employer's Representative to declare compliance with energy efficiency requirements as stated above.		

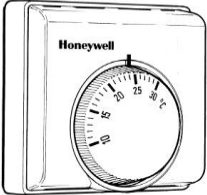
Heating Services Data Sheet No.04			
Project:	Cahir Market House		Data Sheet: Pressurisation Units
Project No:	21ME006		Revision: T01
Client:	Tipperary County Council		Date: 06/03/2026
Pressurisation Units			
Manufacturer		Product	
Grundfos (or equal and approved)		PHT- F Series (or equal and approved)	
General		Construction	
Purpose:	Pressurisation of LPHW	Pump Casing:	Bronze
Units Reference:	PU.01	Pump impellers:	Gun Metal
Pump Type:	Centrifugal	Pump Shaft:	Stainless Steel
Pump Arrangement:	Twin Head	Pump Connections:	Union
Fluid:	Water		
Duty			
Fill Pressure (bar):	0.75 - 5	Height above Set:	14m
Max Work Pressure (bar):	3	Operating Temp F&R (°C):	80/60
Energy Input (kW):	2,250	Min. Pres. Vessel Size (L):	425L
Unit Rating	PN10	Break Tank Capacity	18 Litres
Noise output	<75 dBA	Fluid Category	5 AB Weir Overflow
Accessories			
Isolating valves on pump inlet and outlet			Yes
Strainers on Pumps			Yes
Control Panel with Hinged Door			Yes
Pressure Gauges			Yes
Safety Valve Sized and Set to Required Pressure			Yes
Air Separator			Yes
Lockshield Valve on Connection to System			Yes
Pump Test Buttons			Yes
Controls			
Control Items	Contained	MCC	BMS
Autochangeover	Yes	N/A	Common Fault
High Pressure Cut Out	Yes	N/A	Yes
Low Pressure Cut Out	Yes	N/A	Yes
Feed Tank Low Level	Yes	N/A	Common Fault
Electrical Supply			
230V / 50Hz / 1Ph			

Heating Services Data Sheet No.04			
Project:	Cahir Market House	Data Sheet:	Pressurisation Units
Project No:	21ME006	Revision:	T01
Client:	Tipperary County Council	Date:	06/03/2026
Pressurisation Units			
Photo			
 1. Break Tank 2. Mains Water Inlet 3. Float Operation Valve 4. Overflow Connection 5. AB Air Gap Backflow 6. Supply To Sealed System 7. Isolation Valve 8. Pressure Transmitter 9. Pumps 10. Non Return Valve 11. Drain Valve 12. Water Balancing Valve 13. Glycol Balancing Valve 14. Glycol Tank			
Notes			
1	Pressure vessel sizes given are estimates only and actual sizes must be confirmed by manufacturer prior to supply.		
2	Test Certs to be provided.		
3	Nameplates to show test and working pressures.		
4	Set to comply with HSE PM5 and pressure systems regulations.		
5	Provide Drawings prior to ordering.		
6	Wiring to comply with BS7671 and ET101(2008).		
7	Where pressurisation units with integral tanks are used, tanks shall be fitted with type A air gaps.		

Heating Services Data Sheet No.05						
Project:	Cahir Market House			Data Sheet:	Heat Emitters	
Project No:	21ME006			Revision:	T01	
Client:	Tipperary County Council			Date:	06/03/2026	
Heat Emitters						
Ref	Locations	Emitter Type & Product Code	Height (mm)	Depth (mm)	Width (mm)	Output [ΔT 30°C] (W)
Ground Floor Emitters						
MAN-01	GR 1 Entrance Hall	Underfloor Heating Manifold 1	N/A	N/A	N/A	50W/m ²
MAN-01	GR 2 Office 01	Underfloor Heating Manifold 1	N/A	N/A	N/A	50W/m ²
MAN-01	GR 2 Office 02	Underfloor Heating Manifold 1	N/A	N/A	N/A	50W/m ²
MAN-01	GR 2 Open Plan Office	Underfloor Heating Manifold 1	N/A	N/A	N/A	50W/m ²
MAN-01	GR 1 Entrance Halll	Underfloor Heating Manifold 1	N/A	N/A	N/A	50W/m ²
MAN-02	GR 9 Entrance Hall	Underfloor Heating Manifold 2	N/A	N/A	N/A	50W/m ²
MAN-02	GR 10 Dedicated Office	Underfloor Heating Manifold 2	N/A	N/A	N/A	50W/m ²
MAN-02	GR 11 WC	Underfloor Heating Manifold 2	N/A	N/A	N/A	50W/m ²
MAN-02	GR 13 Lobby	Underfloor Heating Manifold 2	N/A	N/A	N/A	50W/m ²
First Floor Emitters						
R1.01	FR3 Canteen	Radiator - Maxi LST WF	590	180	1030	646
R1.02	FR4 Office	Radiator - Maxi LST WF	590	180	1230	803
R1.03 - 1.04	FR14 Office	Radiator - Maxi LST WF	590	180	830	978
R1.05	FR 12 Male Toilet	Radiator - Maxi LST WF	590	180	830	489
R1.06	FR 11 Female Toilet	Radiator - Maxi LST WF	590	180	830	489
R1.07	FR 10 Accesable Toilet	Radiator - Maxi LST WF	590	180	830	489
R1.08	FR 7 Stairs	Radiator - Maxi LST WF	590	180	830	489
R1.09	FR9 Office	Radiator - Maxi LST WF	590	180	1230	803
R1.10 - 1.11	FR8 Office	Radiator - Maxi LST WF	590	180	1230	1605
Second Floor Emitters						
R2.01	SR4 Office	Radiator - Maxi LST WF	590	180	1230	803
R2.02		Radiator - Maxi LST WF	590	180	830	489
R2.02 - 2.04	SR3 Office	Radiator - Maxi LST WF	590	180	1230	1605
R2.05	SR2 Office	Radiator - Maxi LST WF	590	180	1230	803

Heating Services Data Sheet No.05						
Project:	Cahir Market House			Data Sheet:	Heat Emitters	
Project No:	21ME006			Revision:	T01	
Client:	Tipperary County Council			Date:	06/03/2026	
Heat Emitters						
Ref	Locations	Emitter Type & Product Code	Height (mm)	Depth (mm)	Width (mm)	Output [ΔT 30°C] (W)
Manufacturer			Product			
Versatile nZEB (or equal and approved)			Jaga Maxi LST			
Photo						
						
Notes						
1	Radiators shall be pressed steel to ISEN442 with minimum 1.5mm thick walls					
2	Profiled front plates in 1.5m thick, Folded to 3.0m steel.					
3	Soft-design: rounded angles, to avoid accidental injury.					
4	Scratch-resistant surface coating with a satin gloss finish. High UV resistance.					
5	Unit to Come with Chamfered corners					
6	Touch Temperature must not exceed 43 degrees and must be guaranteed by manufacturer at a flow of 75°C					
7	Heat Exchanger of pure copper and aluminium, totally non-corrosive as emitter – Brass Header Must be used in the emitter.					
8	Pressure tested: 20 bar					
9	Standard with extended air vent with transparent synthetic drain tube					
10	Low water content – .98 litres per metre or less					
11	Heat Exchanger must be corrugated					
12	DHSS DN4 Compliant					
13	Complies With the safety requirement of DHSS DN4					
14	Provide brackets suitable for wall mounting					
15	Connections shall be BOE type					
16	Outputs are at room temperature of 20°C and MWT of 76.5°C					
17	Allow for demounting radiators once for painting					
18	Vertical and Horizontal Radiators to be powder coated to Sandblast Grey Metallic					
19	Minimum Guarantees: Casing: 10years. Emitter 30 years					

Heating Services Data Sheet No.6			
Project:	Cahir Market House	Data Sheet:	Pressure Independent Control Valves
Project No.	21ME006	Revision:	T01
Client:	Tipperary County Council	Date:	06/03/2026
Pressure Independent Control Valves			
General			
Purpose:	Combined differential pressure control valve, a regulating valve and 2-port control valve for heating control. The valve automatically maintains flow to the required part of the system at the set rate by measuring and immediately adjusting to any variation in pressure. No additional measurements are necessary and the correct flow rate is achieved at all operating conditions. The diaphragm responds to the pressure upstream and downstream of the regulating valve (via an internal impulse line). The valve settings directly affect the volumetric flow through the valve. It is thus possible to set the maximum flow rate based on the flow chart when the valve is fitted. This allows for the balancing of heating circuits, cooling water systems, ceiling cooling and heating panels, air heaters, etc. without any need to first assess the pressure variations in the system. The valve's principal application is as a control valve for terminal units. As it is pressure independant, it maximizes energy efficiency and negates the requirement for DP control valves.		
Number:	1No. Per Space as per M-100 Series Drawings		
Duty			
Max Operating Pressure (kPa):	1600		
Max Differential Pressure on the body (kPa):	400		
Temperature Rating (°C):	minus 20 to plus 130		
Kv -value (m3/hr):	DN 15 =0.4, DN 20=0.9, DN 25=1.9, DN32=2.5, DN40=5,		
Pressure Differential (KPaD):	10-400		
Manufacturer		Product	
Hertz		PIBCV	
(or equal and approved)		(or equal and approved)	
Photo			
			
Notes			
1	Dynamic self-balancing modulating control valve.		
2	Total authority, pressure independent.		
3	Electrical modulating control 0-10V / 3-point floating or Thermal ON/OFF / modulating.		
4	Adjustable to 41 different maximum flow rate limits.		
5	Body: dezincification-resistant brass		
6	Membranes and O-rings: EPDM		
7	Water purity in accordance with the ÖNORM H 5195 and VDI 2035 standards		
8	Ethylene and propylene glycol can be mixed to a ratio of 15 - 45 vol. [%].		
9	Accuracy: Greatest of either +/- 10% of controlled flow rate or +/- 5% of maximum flow rate		
10	The valve is fitted in the return in any orientation.		
11	The arrow on the valve body should align with the direction of flow.		
12	An isolation valve is to be fitted both upstream and downstream of the PIBCV.		
13	PIBCV (Pressure Independent Balancing and Control Valves), DN15 – DN50 shall be pressure independent and fitted with an on/off or modulating actuator with a M28 x 1.5 mounting thread and 4mm lift. The body is constructed from DZR Brass with the diaphragm and seals being EPDM. The valve maintains the flow at the desired flow rate as the diaphragm responds to the pressure upstream and downstream of the balancing valve (via an internal impulse line). The maximum volume flow is set according to the flow charts by means of a key and can be reset at any time if required. The valve has male threads to allow union connections to be fitted for any type of pipe		

Heating Services Data Sheet No.7			
Project:	Cahir Market House	Data Sheet:	Room Temperature Controllers
Project No.	21ME006	Revision:	T01
Client:	Tipperary County Council	Date:	06/03/2026
Room Temperature Controllers			
General			
Purpose:	Regulation of Room Air Temperature		
Number:	As per M-100 series drawings		
Manufacturer		Photo	
Honeywell (or equal and approved)			
Product			
Model T4360/T6360, Range Stops to be provided which limit temperature range from 16-24 Degrees Celsius			
No-off:	1No. Per Space as per M-100 Series Drawings		
Notes			
1	The contractor shall be responsible for wiring the sensors once installed.		
2	Supply and install associated control valves as indicated on the drawings.		
3	The additional room stats shall be installed as per the heating drawings. Any discrepancy between the drawings and this schedule should be highlighted at tender stage or else the higher number of sensors should be allowed for.		
4	The above sensors are in addition to those shown on the controls wiring diagram.		
5	These room sensors shall provide the following functions:		
	1) Clearly display the room temperature.		
	2) Clearly display the room set point temperature		
	3) Operate on a 230V power supply		
	4) Provide a 230V power control to a two port motorized valve		
	5) Sensor to power the motorised valve from the 230V supply		
	6) The stat must be connected to and controlled by the bms system		
6	7) Range Stops to be provided which limit temperature range from 16-24 Degrees		
	The Contractor must provide a cert on completion, stating that the limiting and function of all stats has been checked prior to building handover.		
	Note that alternative stats will be accepted under the following conditions:		
	1) The stats function is the same as described above		
	2) The stat wiring is fully compatible with the controls description provided		
	3) The stats have an equivalent robustness to that specified		
	8 Associated valves are to have a pressure drop of no more than 500Pa when fully open		
9	Associated valves to be suitable for 15,000 operations		
10	For valve flow rates, refer to the heating load within each space served		

Heating Services Data Sheet No.8			
Project:	Cahir Market House	Data Sheet	Expansion Joints
Project No.	21ME006	Revision:	T01
Client:	Tipperary County Council	Date:	06/03/2026
Expansion Joints			
Heating			
Qty.	Product Description		
As Per Drawings	40mm EMFLEX Type CAB Cleated Anchor Bracket.		
	32mm EMFLEX Type CAB Cleated Anchor Bracket.		
	25mm Emflex Type SACN Saddle Anchor Clamp		
	20mm Emflex Type SACN Saddle Anchor Clamp		
	40mm EMFLEX Type BAT Axial Expansion Joint		
	32mm EMFLEX Type BAT Axial Expansion Joint		
	25mm EMFLEX Type BAT Axial Expansion Joint		
	20mm EMFLEX Type BAT Axial Expansion Joint		
	40mm EMFLEX Type SSN Sliding Set Guide for Copper Pipework		
	32mm EMFLEX Type SSN Sliding Set Guide for Copper Pipework		
	25mm EMFLEX Type SSN Sliding Set Guide for Copper Pipework		
	20mm EMFLEX Type SSN Sliding Set Guide for Copper Pipework		
HWS			
Qty.	Product Description		
As Per Drawings	42mm EMFLEX Type CABN Cleated Anchor Bracket.		
	35mm EMFLEX Type CABN Cleated Anchor Bracket.		
	28mm Emflex Type SACN Saddle Anchor Clamp		
	15mm Emflex Type SACN Saddle Anchor Clamp		
	42mm EMFLEX Type BAFN Axial Expansion Joint		
	35mm EMFLEX Type BAFN Axial Expansion Joint		
	28mm EMFLEX Type BATN Axial Expansion Joint		
	15mm EMFLEX Type BATN Axial Expansion Joint		
	42mm EMFLEX Type SSN Sliding Set Guide for Copper Pipework		
	35mm EMFLEX Type SSN Sliding Set Guide for Copper Pipework		
	28mm EMFLEX Type SSN Sliding Set Guide for Copper Pipework		
	20mm EMFLEX Type SSN Sliding Set Guide for Copper Pipework		

Heating Services Data Sheet No.8			
Project:	Cahir Market House	Data Sheet	Expansion Joints
Project No.	21ME006	Revision:	T01
Client:	Tipperary County Council	Date:	06/03/2026
Photo & Description			
Type CAB & CABN Cleated Anchor Bracket			
Type SAC & SACN Saddle Anchor Clamp			
Flanged Axial Expansion Joints Type BAF & BAFN			
Screwed Axial Expansion Joints Type BAT & BATN			
Slide Guide & Rubber Lined Clip Set Type SS & SSN			
Notes			
1	For position of expansion joints, contact ALMA Engineering.		