

New air handling unit design overview

A new AHU installed comprising 4 sections with independent supply and return air fan sections, filter chamber, heating coil and air to plate heat exchanger. The unit is sized ready for future expansion and the inclusion of an air source heat pump heating section to further reduce carbon emissions further down the line.

A new run of return air ventilation ductwork has been installed to recover heat from the pool hall and utilise this energy via an air to plate heat exchanger within the new AHU to capture and transfer back to the supply section of the AHU thereby reducing the heat energy expenditure. All ductwork running at low level external to the pool hall being manufactured from galvanised sheet steel in flanged lengths, internally painted with two coats chlorinated rubber paint to reduce corrosion attack from the chlorine and moisture laded air. External to the ductwork 50mm thick insulating phenolic foam slab has been applied and this is held in place with water proof 'venture clad' sheet material.

Heating is in the form of LPHW taken directly from the two spare connections on the low loss header located adjacent to and at the rear of the gas boilers in the plantroom. A new constant temperature (CT) pumped circuit has been provided out to the AHU, all pipework being installed in stainless steel crimped 'Yorkshire XPRESS' tube 7 fittings. All pipework being insulated with 40mm thick class O, foil faced mineral wool, externally PIB sheeted to provide a weatherproof finish.

PERFORMANCE AND DATA CHART														
INFORMATION ON THIS DRAWING SUPERSEDES ALL INFORMATION GIVEN BEFORE. THE USER OF INFORMATION MUST BE AWARE OF QUOTATIONAL PHASE.														
UNIT RUNNING CURRENT 132 Amps	GENERAL		TITLE: ROSSENDALE MARL PITS LEISUTR CENTRE											
CHECK WIRING DIAGRAM IF CONTROLS INCLUDED			No. OFF:	ONE(1)	MODEL:	AHPHX2550	DRG. No.:	N9214-1						
SPECIFIC FAN POWER 1.85 W/L/S			DUTY (SUP.):	11 M ³ /s	EXT. RES.:	250 Pa	TOTAL RES.:	786 Pa						
	DUTY (EXT.):	11 M ³ /s	EXT. RES.:	250 Pa	TOTAL RES.:	608 Pa								
SUPPLY FAN 4 OFF NEEDED FANS SHARING DUTY			FAN REF.	GKHM 450-CIL147.61F IE				SPEED		2301	RPM	MOTOR SLIDE RAIL		
			FREQ. (Hz)		63	125	250	500	1K	2K	4K	8K	DIRECT DRIVEN	
			LwA(A,in) dB(A)		55	60	82	82	82	81	81	78	A/V MOUNT	
			LwA(A,out) dB(A)		64	66	89	89	89	86	85	79	WALL MOUNTED	