HH_Form_M_01 - Mechanical Services Equipment Schedules

Project Name	Horniman Museum - Plant Room 3 Water Works
HH Job Ref.	304433
Status	TENDER
Revision	P01

HARLEY HADDOW

	CONTENTS	ISSUE DATE	REVISION
*	Pipework Schedule	24/05/19	P01
*	Insulation Schedule	24/05/19	P01
*	Valve Schedule	24/05/19	P01
*	Water Booster Pump Schedule	24/05/19	P01
*	Water Conditioner Schedule	24/05/19	P01

General Notes; (Applies to all schedules)

1 The manufacturer and model noted on these schedules has been used in the detailed design process. Refer to Mechanical Specification for requirements relating to alternative manufacturers.

2 Manufacturers model references used within the contents of these equipment schedules are for guidance only. The contractor is responsible for checking that the model references are correct at the time of pricing and the equipment being priced or supplied meets the performance and material requirements detailed in the specification, drawings and equipment schedules.

Horniman Museum - Plant Room 3 Water Works Revision P01

System	Part System	Max. Working Pressure (Bar)	Material Description	BS Ref.	Flanges	Notes
Domestic Water Services	DHWS flow and return	5	Copper	BS2871 Table X	BD4505 PN10	
	Cold water service (tank)	5	Copper	BS2871 Table X	BS4505 PN10	
	Cold water mains within building	10	Copper	BS2871 Table X	BS4504 PN15	
	Hot & Cold & mains water Flow & Return Pipework (Alternative)	10	Stainless Steel grade 316 Mappress System or Equivalent	Refer to Specification	Refer to Specification	
	Cold water mains underground	10	MDPE (Blue)	BS6752		For non-contaminated ground conditions
	Cold water mains underground	10	Rehau Rauthermex	Refer to Specification		pre-insulated
	Cold water mains (entry to building from underground)	10	Copper	BS2871 Table Y	BS4505 PN15	

Notes

1 Refer to notes 1 & 2 on Equipment Schedule Front Cover and Contents Sheet

Revisions

P01 Tender Issue
- -
- -

Horniman Museum - Plant Room 3 Water Works

Revision P01

System	Part System	Thickness (mm)	Insulation Material Description	Vapour Barrier	Protection	Electric Trace Heating Required	Notes
Domestic Hot & Cold Water Services	Pipework in Plant Rooms	Refer to Specification	Rigid mineral fibre sections	Aluminium foil	Aluminium clad	-	Insulation carried over support brackets and through sleeves.
	Pipework within the building, hidden from view (ceiling voids, below sanitary appliences etc)	Refer to Specification	Rigid mineral fibre sections	Aluminium foil	None	-	Insulation carried over support brackets and through sleeves.
	Pipework exposed to view in non occupied & 'Back of house' rooms (stores, workshops etc)	Refer to Specification	Rigid mineral fibre sections	Aluminium foil	None	-	Insulation carried over support brackets and through sleeves.
	Distribution Pipework Buried in screed	9mm	Armaflex or similar	Denso wrapped	Denso wrapped	-	Insulation carried over support brackets and through sleeves.
	Pipework exposed to view in occupied rooms (toilets etc)	None	None	None	None	-	Unless stated on the drawings or specification
	External Pipework	Refer to Specification	Rigid mineral fibre sections	Aluminium foil	Ventureclad Plus cover with sealed joints	-	Insulation carried over support brackets and through sleeves.
	Cold water mains (entry to building from underground)	Refer to Specification	Mineral fibre	Denso wrapped	Denso wrapped	-	Insulated pipe within pipe sleeve

Notes

1 Refer to notes 1 & 2 on Equipment Schedule Front Cover and Contents Sheet

Revisions

P01 Tender Issue

- -

- -

System	Valve Type	Max. Working Pressure (Bar)	Size Range (mm N.B.)	Material Description	Manufacturer & Reference	Pipe Connections	Notes
Domestic Water Services Valves	Isolating Gate Valves		15 - 50	Bronze body gate valve (104 30's) - Hand wheel control	Oventrop	Scewed BSP	WRC approved for potable water applications
			65 - 150	Bronze body gate valve - Hand wheel control	N/A		WRC approved for potable water applications
	Isolating Ball Valves		15 - 50	DZR Brass body with Chrome plated DZR ball and EPDM Rubber seals - Lever action (107 90's Screwed & 107 95 Compression) max temp 120ºC @ PN16	Oventrop	Screwed BSP or compression	WRC approved for potable water applications
	Isolating Butterfly Valves		65 - 150	Nodular Cast Iron body with stainless steel Disc. EPDM Liner. (104 84's)	Oventrop	Flanged BS5155 PN16	WRC approved for potable water applications
	Isolating Stopcock for Mains Water		15 - 50	Bronze body valve - Hand wheel control	N/A	Compression	WRC approved for potable water applications
			65 - 150	Bronze body valve - Hand wheel control	N/A	Flanged BS4505 PN10	WRC approved for potable water applications
	Non Return Valves (Standard)			DZR Brass Body with NBR seals. Acetyl copolymer check cartridge. (440 11's Screwed & 440 10's compression)	Oventrop	Screwed BSP or compression	WRC approved for potable water applications
	Non Return Valves (Wafer Pattern)				N/A	Compression	WRC approved for potable water applications
	Double Check Valves for Mains Water Installations		15 - 50	DZR Brass Body with NBR seals. Acetyl copolymer check cartridge. (440 01's Screwed & 440 00's compression)	Oventrop	Screwed BSP or compression	WRC approved for potable water applications
			65 - 150		N/A	Flanged BS4505 PN10	WRC approved for potable water applications
	Strainer		15 - 50	"Y" type. (112 00's) Bronze body with Stainlees Steel backet. mesh 600 micron. Max temp 150ºC @ PN16	Oventrop	Screwed BSP	WRC approved for potable water applications
			65 - 150		N/A	Flanged BS4505 PN10	WRC approved for potable water applications
	Hot Water Return Commissioning Valve		15 - 50	"Aquastrom T Plus" Valve. Thermal regulation valve with built in automatic disinfection mode. (420 55's)	Oventrop	Screwed BSP	WRC approved for potable water applications

Notes

1 Refer to notes 1 & 2 on Equipment Schedule Front Cover and Contents Sheet

Revisions

P01 Tender Issue
- -
- -

Horniman Museum - Plant Room 3 Water Works Revision P01

HH Reference	BP-01	**Location:**	Plant Room 3 Level 03

Manufacturer:	Duty Point
Model	VR2 -1503-LHT
Type:	Packaged cold water booster set complete with pumps, controls, support frame and accumulator

Number of Pumps	2	**Operation Mode**	Duty & standby pumps
Pump Control Type	Inverter speed control		

Required Duty

System Flow Rate	3.5	**kg/s**
No. of pumps running at system flow	1	
Static pressure at pump inlet	1	**m**
Minimum boost pressure		**m**
Maximum boost pressure	35	**m**
Accumulator Capacity	Manufacturer to advise	
Electrical Supply	400/3/50	**(V/ph/Hz)**
Electrical Load		**kW**

Ancillary Items

Anti-vibration matting flexible pipe connections and non-return valve.
Low water level sensor for installing within the feed tank
Fault indication contacts for wiring to the BMS system

Notes:

1 Refer to notes 1 & 2 on Equipment Schedule Front Cover and Contents Sheet
2 The unit shall be WRC approved for use with potable domestic water systems.

Revisions

P01 Tender Issue
- -
- -

Horniman Museum - Plant Room 3 Water Works Revision P01

Ref. No.	Location	Flow Rate kg/s	Pressure Drop (kPa)	Pipe Size	Electrical Supply	Model/Manufacturer	Notes
EWC-01	Plant Room 3	3.2	10	63	230/1/50-	Hydrotec HydroMAG DN50	Electromagnetic water conditioner

Notes

1 Refer to notes 1 & 2 on Equipment Schedule Front Cover and Contents Sheet

Revisions

P01 Tender Issue
- -
- -