

## **MAHATMA GANDHI MISSION TRUST**

## MGM INSTITUTE OF HEALTH SCIENCES, CENTRAL PURCHASE DEPARTMENT (CPD)

Plot 1 & 2, Sector -1 Kamothe, Navi Mumbai 410209

eTender of Chiller Plant Relocation from 7th Floor Terrace to Ground Floor at MGM Hospital & Reasarch Centre, CBD Belapur

Tenders invited from reputed Manufactures or their authorised distributors / dealers of Chiller Plant Relocation from 7th Floor Terrace to Ground Floor at MGM Hospital & Research Centre, CBD Belapur, in the format given below:

Name & Address of Vendor:

## SCHEDULE OF QUANTITIES (BOQ) FOR CHILLER PLANT RELOCATION WORKS

SR. NO.	DESCRIPTION OF WORKS	Make & Model Quoted	Total Qty	UNIT	Unit Supply (Rs.)	Total Amount Supply (Rs.)	Unit Rate Labour ( Rs.)	Total Amount Labour (Rs.)	Total Amount Supply + Labour (Rs.)	GST %
	Following are to be included on overall basis:									
10	For Chillers relocation, the cranes movement operation insurance									
1.0	for any damages to be included to be included.									
2.0	Adequate manpower deployment at site with Experienced Staff &									
2.0	Management and a safety manager / officer									
3.0	Insurances till handover / Performance Bonds									
	· ·									
4.0	Preparation and Submission Shop Drawings									
	Site Management and Temporary Protection									
	Site Co-ordination with other Contractors & Project Manager									
	Preparing As-Built Drawings & Operating Manuals									
8.0	Training of Employer's Representatives									
9.0	Onsite service for the specified period after handover									
10	All Post-Covid19 compliances, mandates and regulations to be									
	strictly adhered and provided.									
11	list of makes provided to be adhered.									
12	Refer general terms and conditions, special terms and conditions									
	and Technical Specifications - attached seperately for the said									
	works									
13	All rights reserved by MGM									

SR. NO.	DESCRIPTION OF WORKS	Make & Model Quoted	Total Qty	UNIT	Unit Supply (Rs.)	Total Amount Supply (Rs.)	Unit Rate Labour ( Rs.)	Total Amount Labour (Rs.)	Total Amount Supply + Labour (Rs.)	GST %
Α	AIR CONDITIONING EQUIPMENTS:									
1.0	Chillers Disconnection, Removal from Terrace and relocation to ground floor in same premises, re-installation, testing and commissioning of Air Cooled Screw Chillers as per the Technical Specifications and shown and scheduled in the plans. (Re-Installation of chillers shall mean Unloading, lifting-shifting, positioning, levelling & installation.) Testing & Commissioning of above Air-cooled Screw Chillers.The costs shall also include the necessary oil and gas topping up as required till the handover. The commissioning activites and testing shall be carried out to meet the project requirements and readings noted shall also be submitted in accordance with Commisioning requirements and in a required format. The costs shall also include pressure testing & refrigerant gas R134a upto commissioning & handover.		1	lot						
	The contractor / supplier shall make his own site survey / study of plan for placement of chiller at Ground Level by relocating the existing Chillers on the Terrace floor above 7th floor. Necessary crane / other specialised equipement / manpower etc. to be included in this scope. A detailed movement plan to be submitted a week before.									
	Installation of chillers shall mean Unloading, lifting-shifting, positioning, levelling & installation in place. These works shall be carried out by qualified & authorised personnel from the suppliers side.									
	Necessary foundation / platform for mounting of chillers shall be provided by other agency appointed by Client. Each chiller shall be mounted on set of cushy foot / spring isolator type vibration isolators provided by Chiller vendor.									
	Existing Chillers Actual Capacity : 170 TR (Working - 2nos. + Standby - 1 no.)									

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2.0	For above Chillers including coordination with Chiller supplier, removal from terrace & reinstalling piping connections with mating victaulic couplings (supply of victaulic couplings are part of chiller supply), special fittings etc. for chilled water connections, relocation of existing Adaptor box on new location of Air-cooled Chillers.		3	Set						
3.0	Plant Manager for above Chillers									
	The existing Plant Manager located in the Maintenance room shall be retained and cabling from new Chillers and Pumps location to be done. Cabling considered in separate item below.		-	-	-	-	-	-	-	-
4.0	Making necessary provisions for Installation of sensors, accessories, flow switches in CHW piping for functioning of the Plant manager needs to be made available by HVAC vendor in coordination with Chiller manufacturer requirements. Cabling for the sensors / flow switches and accessories as required for Plant manager operations are included in Chiller supplier (vendor) scope. HVAC contractor to make provisions to mount these only.		1	Lot						
5.0	Pumps Supply, Installation, Testing and Commissioning (as applicable) of electrically driven pumpset having Horizontal Split Casing type Pump with bronze impeller and mechanical seal. Motor shall be TEFC Sq.cage, 1460 RPM, foot mount, IP55, Class F insulation, high efficiency IE3 rated, suitable for electrical supply of 3ph-4 wire / 415V/ 50hz. Pumps shall be of high efficiency (efficiency 75% and above) as specified.									
	The pumpset shall be complete as per technical specifications and complete with coupling, coupling guard, MS Pre-fabricated base frame with slide rail, foundation bolts etc. as required. Installation of Pumps shall mean Unloading, lifting-shifting,									
	positioning, levelling, erection & installation in place. The pumps shall be installed free of vibration. Since the pumps are being placed as outdoor duty, a sheet metal fabricated cap shall be placed on the motor top.									

SR. NO.	DESCRIPTION OF WORKS	Make & Model Quoted	Total Qty	UNIT	Unit Supply (Rs.)	Total Amount Supply (Rs.)	Unit Rate Labour ( Rs.)	Total Amount Labour (Rs.)	Total Amount Supply + Labour (Rs.)	GST %
	(Necessary foundation / structural fabrication to be included by									
	other agency)									
5.1	Disconnection, Removal & Relocation, Re-installation, testing and commissioning of Primary Chilled Water Pumps									
	Existing Chilled Water Primary Pumps on Terrace 2 nos.working + 1no.standby to be relocated at GF, as indicated		3	Sets						
	Water Flow Rate: 454 USGPM (103.115 m3/hr)									
	Head: 14 mtrs									
5.2	New Insulated Chilled Water Secondary Pumps									
	Pumps should be suitable for operating on variable speed pumping system: 2 nos. Working + 1no. Standby - Pumps to be installed at GF as indicated		3	Nos.						
	Water Flow Rate: 454 USGPM (103.115 m3/hr)									
	Head: 55 mtrs									
	Suggested Motor KW: - to be confirmed by vendor									
6.0	Variable Speed Drive For Secondary Pumps									
	Supply, Installation, Testing and Commissioning of variable speed drives for Secondary Pump motors (3 nos) with dedicated microprocessor based pump controller with pumping software duly downloaded, Adjustable frequency drives, and differential pressure sensor(s) / transmitter(s) as necessary and as described in the specifications and complete with :		3	Set						
	<ul> <li>a) Differential pressure sensor / transducer and its cabling upto controller</li> </ul>									
	b) DDC controller for system /multiple unit									
	c) Integration with bypass mode for Normal starter operation.									
	d) The VSD shall be compatible with central BMS with an open protocol preferably BACnet / BACnet IP & all necessary software, hardware, convertor, licences etc. as may be required to establish connectivity with central BMS to be included as part of this scope.									
	e) VSD alongwith the controller shall be provided as one item & same shall be supplied by the Pump Manufacturer. Items procured separately & their integration at site by HVAC vendor shall not be allowed)									
	TOTAL FOR 'A' - EQUIPMENTS									

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В	NEW WATER DISTRIBUTION:									
	New WATER DISTRIBUTION.									
1.0	Chilled Water Piping									
	Supply, fabrication, assembling, laying, testing and balancing of									
	chilled water piping using Mild Steel Heavy Duty "C" Class Pipes as									
	per IS 1239 Part A & B & IS 3589 with all heavy duty fittings such as									
	bends, elbows, tees etc. and complete with vibration isolators,									
	hangers, full round PU supports as per specifications. The chilled	Zindal / Tata /								
	water piping on terrace and outside of the HVAC Plant room shall	Sail								
	be suitably supported for proper head room clearance. This	Sun								
	supporting arrangement shall be included in the respective pipe									
	sizes and no additonal measurements / costs shall be considered.									
1.1	200 NB[ 6 mm thk. as per IS 3589]		270	RMT						
	150 NB[ thk. as per IS 1239 - heavy duty]		120	RMT						
	125 NB[ thk. as per IS 1239 - heavy duty]		108	RMT						
	100 NB[ thk. as per IS 1239 - heavy duty]		48	RMT						
	80 NB[ thk. as per IS 1239 - heavy duty]		0	RMT						
	65 NB[ thk. as per IS 1239 - heavy duty]		0	RMT						
	50 NB[ thk. as per IS 1239 - heavy duty]		0	RMT						
	40 NB[ thk. as per IS 1239 - heavy duty]		0	RMT						
1.9	32 NB[ thk. as per IS 1239 - heavy duty]		0	RMT						
1.10	25 NB[ thk. as per IS 1239 - medium duty]		0	RMT						
1.11	19 NB[ thk. as per IS 1239 - medium duty]		0	RMT						
1.12	15 NB[ thk. as per IS 1239 - medium duty]		0	RMT						
1.13	12.5 NB[ thk. as per IS 1239- medium duty]		0	RMT						
	Valves									
	Supply, installation, testing & commissioning of heavy duty valves									
	PN-16 rated for all valves, as specified and shown on the drawing									
	complete with:									
	a) Flanges for valves above 50 mm dia and screwed ends with									
	flanges for valves below 50-mm dia.									
	b) Additional supports									
	c) Nuts, bolts, gaskets etc.									
	d) with ports for balancing valves only									
	Butterfly Valves									
	200 mm butterfly valves -with gear control		2	No.						
	150 mm butterfly valves		4	Nos.						
	125 mm butterfly valves		22	Nos.						
	100 mm butterfly valves		0	Nos.						
	80 mm butterfly valves		0	Nos.						
2.1.6	65 mm butterfly valves		0	Nos.						

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2.1.7	50 mm butterfly valves		0	Nos.						
	Ball Valves									
	40 mm ball valves		4	No.						
	32 mm ball valves		0	No.						
2.2.3	25 mm ball valves		2	No.						
2.3	Non Return Valves [NRV] / Check Valve									
	150 mm NRV		0	Nos.						
2.3.2	125 mm NRV		6	Nos.						
2.3.3	100 mm NRV		0	No.						
2.4	Y Strainer									
2.4.1	150 mm YS		0	Nos.						
2.4.2	125 mm YS		6	Nos.						
2.4.3	100 mm YS		0	No.						
2.5	Balancing Valves									
	150 mm Balancing Valve		2	No.						
2.5.2	125 mm Balancing Valve		0	No.						
	100 mm Balancing Valve		0	Nos.						
	80 mm Balancing Valve		0	No.						
	65 mm Balancing Valve		0	No.						
2.5.6	50 mm Balancing Valve		0	No.						
	2 way Motorised Valve - ON/OFF type									
	Supply, installation, testing & commissioning of heavy duty valves									
	as specified and shown on the drawing complete with:									
	a) Flanges for valves above 50 mm dia and screwed ends with									
	flanges for valves below 50-mm dia									
	b) Additional supports									
	c) Thermostat, 100VA -transformer, mounting plate etc.									
	<ul> <li>d) Union, nut bolts, gaskets or any other special fittings as required.</li> </ul>									
	e) With Controller, Sensor, Thermostat, Mounting Brackets etc.									

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2.6.1	150 mm 2 way motorised valves		0	Nos.						
	125 mm 2 way motorised valves		3	Nos.						
2.6.3	100 mm 2 way motorised valves		0	Nos.						
3.0	Miscellaneous Control									
3.1	25 mm Air release valve		6	Nos.						
3.2	25 mm Auto Purge valve		6	Nos.						
4.0	Instruments and Indicators									
	Supply and installation of instruments and Indicators as specified									
	a) Pressure gauges with gauge cocks-1/2"									
	b) Thermometers with thermowells									
	Pressure gauge 6" dial (range 0-10kg/cm2g)		18	Nos.						
4.2	Thermometers Dial type - 6" dial (range 0-50deg.C)		14	Nos.						
4.3	Wall mounted digital room temperature Indicators		0	Nos.						
4.4	Immersion type temperature sensors (range 0-20deg.C)		12	Nos.						
5.0	Expansion Bellow / Flexible Connectors									
	Supply and installation of rubber flexible connection at the pump									
	inlet and outlet complete with flanged joints, nuts, bolts and									
	gasket. The flexible connectors shall be with AISI 321 SS corrugated tubing with AISI 304 SS single overbraid & SS fittings.									
5.1	150 mm connection		0	Set						
5.2	125 mm connection		6	Set						
5.3	100 mm connection		0	Set						
6.0	Test Points for Chilled Water Line									
	Supply & Installation of Test points with needle valves & plug at various locations in chilled water line for taking pressures and temperature measurements using portable instruments complete with thermowell etc.		6	Nos.						
7.0	Closed Pressurised Expansion Tank									
	Disconnection, Removal, Relocation, Re-installation of Existing precharged Pressurised expansion tank as per Specifications complete with Heavy duty butyl rubber bladder (removable for inspection). The Tank shall be a full acceptance vessel & shall be of fabricated steel designed and constructed per ASME Section VIII. Div. 1 complete with all accessories, connections, matching flanges, autovents, valves, stariner & suitably sized pump. The bladder shall be field replaceable.									

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	The system shall be suitable for operating pressure upto 16 kg/cm2g. Capacity calculation based on shop drawing & manufacturer recommendation to be submitted for approval. (Pressurisation unit shall include with complete double pump, PN16, 2CMH, 25mWC), 16 bar, 230V, 50Hz, single phase), pressure regulating valve in make up line with its control cabling, pressure transmitter, IP55 Control Panel Pressure transmitter, Interconnecting Piping Wiring & Canopy suitable for outdoor installation.									
7.1	500 litres Closed Expansion Tank		1	Set						
8.0	Centrifugal Air Seperator Disconnection, Removal, Relocation, Re-installation of Existing of Centrifugal Air Seperator as per specifications & shall be		1	Set						
	constructed to meet ASME code and is stamped for design pressure and temperature ratings complete with all accessories flange connections with companion flanges, strainer with low pressure drop etc. The air seperator shall be suitable for operating pressure of 16kg/cm2g.									
9.0	Magnetic Particle Collector									
	Disconnection, Removal, Relocation, Re-installation of Existing Magnetic Particle Collector for suitable pipe size in chilled water header line with all accessories as per Specifications.		1	Set						
10.0	Combination Suction Deareator & Dirt Seperator									
10.0	Disconnection, Removal, Relocation, Re-installation of Existing Combination Suction Deareator & Dirt Seperator Comprising of Fabricated Vessel consisting of unique tubes for dirt seperation, auto air vent, air chamber, collection chamber, drain valve etc. & suitable for pipe size upto 1 x 150 mm with flanged connections & mating flanges.		1	Lot						

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11.0	Make up Tank									
	Disconnection, Removal, Relocation, Re-installation of Existing									
	Make up tank as specified and shown on the drawing complete with:									
	a) Inlet, Make up, overflow & drain nozzle									
	b) Level indicator									
	c) Manhole with cover									
	d) 20 mm ball float valve									
	e) Air release valve									
	1500 litres tank		1	No.						
12.0	Chemical Dosing of Water									
	Chemical Dosing arrangement with approved chemicals, (Pre &		1	Lot						
	Post Treatment) to control water quality as per Specifications.									
	Chemical Dosing kit to be arranged on rental basis as per									
	requirement & to be included in this item.									
13.0	Make up Piping									
	Supply, installation & testing of Mild Steel Medium Duty "B" Class									
	drain piping with elbows, bends, tees, cleanouts etc. without									
	insulation complete as per Technical Specifications.									
13.1	Upto 50 mm dia		54	RMT						
14.0	Insulated Drain Piping									
	GI 'B' class make up / drain piping with U traps, elbows, bends,									
	tees, cleanouts etc. from pipe sizes 19mm upto 40mm dia (without									
	insulation) complete as per Technical Specifications. The piping									
	shall be suitably insulated with 19 mm thk Closed Cell foam									
	insulation Class 'O' (Nitrile Rubber) / 60kg/m3 density stuck with									
	approved adhesive compound. The insulation shall be covered									
	with glass cloth and painted with rubberised paint.									
14.1	50 mm dia		0	RMT						
14.2	40 mm dia		0	RMT						
14.2	32 mm dia		0	RMT						
15.0	Hard PVC Piping									

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	Supply, installation & testing of Hard PVC drain piping with U traps, elbows, bends, tees, cleanouts etc. without insulation complete as per Technical Specifications. The piping shall be suitably insulated with 19 mm thk Closed Cell foam insulation Class 'O' (Nitrile Rubber) / 60kg/m3 density stuck with approved adhesive compound. The insulation shall be covered with glass cloth and painted with rubberised paint.									
15.1	50 mm dia		0	RMT						
15.2	40 mm dia		0	RMT						
15.2	32 mm dia		0	RMT						
15.3	25 mm dia		0	RMT						
16.0	Supply, fabrication and installation of MS structural supporting work for chilled water piping duly painted with 2 coats of anti- oxidise primer and 2 coats of enamel paint		3000	Kg						
17.0	Shutdown Charges		1	Lot						
			-							
	TOTAL FOR 'B' - WATER DISTRIBUTION									
С	INSULATION									
1.0	Thermal Insulation of Piping, Valves etc.									
	TF-EPS insulation (Thermocole) + lag coating to be used for Piping at Terrace Area & for Vertical Piping in shafts. Horizontal piping of each floor & AHU rooms valve junction etc. to be insulated with Closed Cell (Nitrile Rubber) Insulation.									
1.1	Chilled Water Piping Insulation -TF EPS + Lag coating									
	Supply, installation and testing of insulation for chilled water piping, complete with bends, elbows, tees, valves duly insulated with <b>50 mm thick (&amp; 75 mm thick whereever specified), TF EPS</b> <b>insulation pipe sections</b> finished with vapour barrier with Glass cloth, FOSTER 30-36 coat & final finished with the AF 5590 Lag Coating for protection against Mechanical damage, Fungal growth, Flame spread, Water permeance and Ultra Violet radiation. Necessary Certificates to the effect to be produced by the vendor from the Coating Manufacturer. complete as per specifications. Burried Chilled Water piping shall be covered with additional layer of tarfelt 2mm thk.									

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1.1.1	200 NB with 75 mm thk		270	RMT						
1.1.2	150 NB with 75 mm thk		120	RMT						
1.1.3	125 NB with 75 mm thk		108	RMT						
1.1.4	100 NB with 50 mm thk		48	RMT						
1.1.5	80 NB with 50 mm thk		0	RMT						
1.1.6	65 NB with 50 mm thk		0	RMT						
1.1.7	50 NB with 50 mm thk		0	RMT						
12	Chilled Water Piping Insulation - Closed Cell Foam									
	Supply, installation and testing of insulation for chilled water									
	piping insulation, complete with bends, elbows, tees, duly									
	insulated with 40/ 32/ 25/19mm thk, Closed Cell Foam with									
	min.density 60kg/m3 and thermal conductivity -0.035 w/m.k									
	Insulation pipe sections stuck with special adhesive and finished									
	with vapour barrier and covered with glass cloth & final finished									
	with the AF 5590 Lag Coating for protection against Mechanical									
	damage, Fungal growth, Flame spread, Water permeance and Ultra									
	Violet radiation. Necessary Certificates to the effect to be									
	produced by the vendor from the Coating Manufacturer. complete									
	as per specifications.									
1.2.1	200 NB with 50 mm thk		0	RMT						
1.2.2	150 NB with 50 mm thk		0	RMT						
1.2.3	125 NB with 50 mm thk		18	RMT						
1.2.4	100 NB with 40 mm thk		12	RMT						
	80 NB with 40 mm thk		0	RMT						
1.2.6	65 NB with 40 mm thk		0	RMT						
1.2.7	50 NB with 32 mm thk		0	RMT						
	40 NB with 32 mm thk		0	RMT						
	32 NB with 25 mm thk		0	RMT						
1.2.10	25 NB with 25 mm thk		0	RMT						
1.2.11	19 NB with 19mm thk		0	RMT						
1.2.12	15 NB with 19mm thk		0	RMT						
1.2.13	12.5 NB with 19mm thk		0	RMT						
	TOTAL FOR 'C' - INSULATION									

SR. NO.	DESCRIPTION OF WORKS	Make & Model Quoted	Total Qty	UNIT	Unit Supply (Rs.)	Total Amount Supply (Rs.)	Unit Rate Labour ( Rs.)	Total Amount Labour (Rs.)	Total Amount Supply + Labour (Rs.)	GST %
	DISCONNECTION & REMOVAL OF EXISTING CH.W.PIPING & ANCILLARIES AT TERRACE & REUSING THEM FOR RE- INSTALLATION, TESTING & COMMISSIONING AT GROUND LEVEL INSTALLATION									

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1	Chilled Water Piping									
	Disconnecting, Dismantling, Removal, Shifting of existing Insulated									
	Chilled Water Piping from Terrace to GF, re-fabrication,									
	assembling, laying, testing and balancing of chilled water piping									
	using Mild Steel Heavy Duty "C" Class Pipes as per IS 1239 Part A &									
	B & IS 3589 with all heavy duty fittings such as bends, elbows, tees									
	etc. and complete with vibration isolators, hangers, full round PU									
	supports as per specifications. The chilled water piping GF shall be suitably supported for proper head room clearance. This									
	supporting arrangement shall be included in the respective pipe									
	sizes and no additional measurements / costs shall be considered.									
1.1	200 NB[ 6 mm thk. as per IS 3589]		0	RMT						
1.2	150 NB[ thk. as per IS 1239 - heavy duty]		50	RMT						
	125 NB[ thk. as per IS 1239 - heavy duty]		60	RMT						
	100 NB[ thk. as per IS 1239 - heavy duty]		12	RMT						
1.5	80 NB[ thk. as per IS 1239 - heavy duty]		0	RMT						
	Valves									
	Disconnecting, Dismantling, Removal, Shifting & Re-installation,									
	testing & commissioning of heavy duty valves PN-16 rated for all valves, as specified and shown on the drawing complete with:									
	valves, as specified and shown on the drawing complete with.									
	a) Flanges for valves above 50 mm dia and screwed ends with									
	flanges for valves below 50-mm dia.									
	b) Additional supports									
	c) Nuts, bolts, gaskets etc.									
	d) with ports for balancing valves only									
	Butterfly Valves									
	200 mm butterfly valves -with gear control		0	No.						
	150 mm butterfly valves		2	Nos.						
	125 mm butterfly valves		12	Nos.						
	100 mm butterfly valves		0	No.						
	80 mm butterfly valves		0	No.						
	65 mm butterfly valves		0	No.						
2.1./	50 mm butterfly valves		0	No.						
2.2	Ball Valves									
	40 mm ball valves		0	No.						
	32 mm ball valves		0	No.						
	25 mm ball valves		0	No.						
				-						

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2.3	Non Return Valves [NRV] / Check Valve									
2.3.1	150 mm NRV		0	No.						
2.3.2	125 mm NRV		3	Nos.						
2.3.3	100 mm NRV		0	No.						
2.4	Y Strainer									
	150 mm YS		0	No.						
2.4.2	125 mm YS		3	Nos.						
	100 mm YS		0	No.						
2.5	Balancing Valves									
2.5.1	150 mm Balancing Valve		0	No.						
2.5.2	125 mm Balancing Valve		0	No.						
2.5.3	100 mm Balancing Valve		0	No.						
2.5.4	80 mm Balancing Valve		0	No.						
2.5.5	65 mm Balancing Valve		0	No.						
2.5.6	50 mm Balancing Valve		0	No.						
2.6	2 way Motorised Valve - ON/OFF type									
	Disconnecting, Dismantling, Removal, Shifting & Re-installation, testing & commissioning of heavy duty valves as specified and									
	shown on the drawing complete with: a) Flanges for valves above 50 mm dia and screwed ends with flanges for valves below 50-mm dia									
	b) Additional supports									
	c) Thermostat, 100VA -transformer, mounting plate etc.									
	<ul> <li>d) Union, nut bolts, gaskets or any other special fittings as required.</li> </ul>									
	e) With Controller, Sensor, Thermostat, Mounting Brackets etc.									
2.6.1	150 mm 2 way motorised valves		0	No.						
	125 mm 2 way motorised valves		3	Nos.						
2.6.3	100 mm 2 way motorised valves		0	No.						
	Miscellaneous Control									
	Disconnecting, Dismantling, Removal, Shifting & Re-installation of:									
2.7.1	25 mm Air release valve		4	Nos.						
	25 mm Auto Purge valve		4	Nos.						

SR. NO.	DESCRIPTION OF WORKS	Make & Model Quoted	Total Qty	UNIT	Unit Supply (Rs.)	Total Amount Supply (Rs.)	Unit Rate Labour ( Rs.)	Total Amount Labour (Rs.)	Total Amount Supply + Labour (Rs.)	GST %
3.0	Instruments and Indicators									
	Disconnecting, Dismantling, Removal, Shifting & Re-installation of									
	instruments and Indicators as specified									
	a) Pressure gauges with gauge cocks-1/2"		0	No.						
	b) Thermometers with thermowells		0	No.						
	Pressure gauge 6" dial (range 0-10kg/cm2g)		9	Nos.						
	Thermometers Dial type - 6" dial (range 0-50deg.C)		9	Nos.						
3.5	Wall mounted digital room temperature Indicators		0	No.						
3.6	Immersion type temperature sensors (range 0-20deg.C)		9	Nos.						
4	Expansion Bellow / Flexible Connectors									
	Disconnecting, Dismantling, Removal, Shifting & Re-installation of									
	rubber flexible connection at the pump inlet and outlet complete									
	with flanged joints, nuts, bolts and gasket. The flexible connectors									
	shall be with AISI 321 SS corrugated tubing with AISI 304 SS single									
	overbraid & SS fittings.									
4.1	150 mm connection		0							
4.2	125 mm connection		12							
4.3	100 mm connection		0							
	Removal of Existing Insulation with new Chilled Water Piping Insulation -TF EPS + Lag coating									
	Removal of Existing damaged insulation over existing piping									
5.1	200 NB with 75 mm thk		0	RMT						
5.2	150 NB with 75 mm thk		120	RMT						
5.3	125 NB with 75 mm thk		108	RMT						
5.4	100 NB with 50 mm thk		48	RMT						
5.5	80 NB with 50 mm thk		0	RMT						
	TOTAL FOR 'D' - DISCONNECTION & REMOVAL OF EXISTING CH.W.PIPING & ANCILLARIES AT TERRACE & REUSING THEM FOR RE- INSTALLATION, TESTING & COMMISSIONING AT GROUND LEVEL INSTALLATION									
	TOTAL of 'A' + 'B' +'C' + 'D'									
	TOTAL OF EXCISE DUTY ( %)		To be included in respective items as applicable							
	TOTAL OF GST AMOUNT ( %)									
	TOTAL OF ANY OTHER TAXES AMOUNT ( %)									
				ALL	. INCL. TOTAL					
Note:	Note: Rates quoted shall be basic rates inclusive of GST* and shall be inclusive of overheads and profit, All taxes, duties, levies etc. shall be indicated seperately as above. (Inclusive* of E Duty, CVD (as applicable), Port Clearance, Local Freight, Transit Insurance & Any other charges for all imported items), GST shall be extra as applicable.								D for local items,	Customs