

**S.I.T.C OF 300 TR CHILLER PALNT AT SYNERGY LHO MUMBAI**

Sr. No.	Description	QTY	UNIT
<b>SECTION -A</b>			
<b>1</b>	<b>Water Cooled Screw Chiller</b>		
1.1	Supply, of 300 TR capacity Water-cooled twin screw Compressor technology , microprocessor based control panel,cooler, water-cooled condenser coil, refrigerant piping, with factory fitted coupling, factory charged R134A refrigerant, factory wired power and control cabling. It should have BMS connectivity & Remote monitoring feature		
	300 TR Water Cooled Screw Chiller with Twin Screw Compressor Technology Chiller designed at 12/7 Deg C Evaporator Temperature and 36 Deg C Ambient conditions	1	Nos
	total for equipment		
1.2	Installtion testing and commissioning of 300 TR capacity Water-cooled twin screw Compressor technology , microprocessor based control panel,cooler, water-cooled condenser coil, refrigerant piping, with factory fitted coupling, factory charged R134A refrigerant, factory wired power and control cabling. It should have BMS connectivity & Remote monitoring feature	1	
<b>SECTION -B</b>			
<b>2</b>	<b>Pumps</b>		
<b>2.1</b>	<b>Chilled Water Pumps-</b>		
2.1.1	S.I.T.C OF End Suction Back pullout Centrifugal pump for chilled water line with coupling with following tech specifications (1#Working + 1# Stand by)	1	Nos
a	Water Qty : 125 CMH		
b	Static Head : 30 Mtrs		
c	Impeller : Bronze		
d	Speed : 2930 Rpm		
e	Seal : Mechanical		
<b>2.2</b>	<b>Condenser Water Pumps -</b>		
2.2.1	S.I.T.C End Suction Back pullout Centrifugal pump for condenser water with drive motor and coupling with following tech specifications (1#Working + 1# Stand by)	1	Nos
a	Water Qty : 160 CMH		
b	Static Head : 32 Mtrs		
c	Impeller : Bronze		
d	Speed : 2950 Rpm		
e	Seal : Mechanical		
<b>3</b>	<b>Cooling Tower</b>		
3.1	Supply of Induced draft type (Single cell type) cooling tower of FRP having capacity 300 TR complete with all acc. basin, fitting, fan, motor etc with following specification	R.O	Nos
a	Wet bulb temp : 29deg C		
b	Entering water temp : 36.5 deg C		
c	Leaving water temp : 32 deg C		
d	Total flow rate : 160 CMH		

<b>4</b>	<b>Expansion Tank &amp; Air separator</b>		
	Supply, installation, testing and commissioning of Closed pressurised Expansion tank of capacity 500 Litre, centrifugal air separator and automatic pressure maintaining unit	0	Nos
<b>5</b>	<b>MS Piping</b>		
5.1	Supply, Installation, Testing & Commissioning of the following MS class 'C' pipes cut to required lengths with 32mm Thick Nitrile Rubber insulation with Glass Cloth and installed with all welded joints, providing and fixing in position the necessary fittings like Elbows, Tees and Reducers for Chilled Water Line to be connected with existing piping		
a	200 mm dia	25	RMT
b	150 mm dia	R.O	RMT
c	100 mm dia	15	RMT
d	80 mm dia	R.O	RMT
<b>6</b>	<b>Valve Station</b>		
6.1	SITC of Valves comprising Butterfly, Balancing, NRV's, Check, Bleed, Ball, Flow Switches, Temperature & pressure Guages for <b>Chilled Water Line</b>		
a	Butterfly Valve - 200 mm dia PN16	6	Nos
b	Butterfly Valve - 150 mm dia PN16	R.O	Nos
c	Butterfly Valve - 100 mm dia PN16	6	Nos
d	Butterfly Valve - 80 mm dia PN16	R.O	Nos
6.2	Non return valve		
b	Non return Valve - 200 mm dia PN 16	1	Nos
	Non return Valve - 150 mm dia PN 16	R.O	Nos
	Non return Valve - 100 mm dia PN 16	1	Nos
	Non return Valve - 80 mm dia PN 16	R.O	Nos
c	Manual Balancing Valve - 200 mm dia PN 16	1	Nos
	Manual Balancing Valve - 150 mm dia PN 16	R.O	Nos
	Manual Balancing Valve - 100 mm dia PN 16	1	Nos
	Manual Balancing Valve - 80 mm dia PN 16	R.O	Nos
d	Ball Vave for drain - 50 mm dia	2	Nos
	Ball Vave for drain - 32 mm dia	1	Nos
	Ball Vave for drain - 25 mm dia	1	Nos
e	Pressure Gauge 0 to 10kgs /cm2	4	Nos
f	Temperature Gauge 0 to 50 Degree C	2	Nos
g	Rubber bellow -200 mm dia	4	Nos
	Rubber bellow -150 mm dia	R.O	Nos
	Rubber bellow -100 mm dia	2	Nos
	Rubber bellow -80 mm dia	R.O	Nos
h	Y strainer - 200 mm dia	2	Nos
	Y strainer - 150 mm dia	R.O	Nos

	Y strainer - 100 mm dia	2	Nos
	Y strainer - 80 mm dia	R.O	Nos
i	Air Vent	4	Nos
6.2	SITC of Valves comprising Butterfly, Balancing, NRV's, Check, Bleed, Ball, Flow Switches, Temperature & pressure Guages for <b>Condenser Water Line</b>		
a	Butterfly Valve - 200 mm dia PN16	1	Nos
	Butterfly Valve - 150 mm dia PN16	R.O	Nos
	Butterfly Valve - 100 mm dia PN16	1	Nos
	Butterfly Valve - 80 mm dia PN16	R.O	Nos
b	Non return Valve - 200 mm dia PN 16	1	Nos
	Non return Valve - 150 mm dia PN 16	R.O	Nos
	Non return Valve - 100 mm dia PN 16	1	Nos
	Non return Valve - 80 mm dia PN 16	R.O	Nos
c	Manual Balancing Valve - 200 mm dia PN 16	1	Nos
	Manual Balancing Valve - 150 mm dia PN 16	R.O	Nos
	Manual Balancing Valve - 100 mm dia PN 16	1	Nos
	Manual Balancing Valve - 80 mm dia PN 16	R.O	Nos
d	Ball Vave for drain - 75 mm dia	1	Nos
	Ball Vave for drain - 50 mm dia	1	Nos
	Ball Vave for drain - 32 mm dia	1	Nos
	Ball Vave for drain - 25 mm dia	1	Nos
e	Pressure Gauge 0 to 10kgs /cm2	1	Nos
f	Temperature Gauge 0 to 50 Degree C	1	Nos
g	Rubber bellow -200 mm dia	1	Nos
	Rubber bellow -150 mm dia	R.O	Nos
	Rubber bellow -100 mm dia	1	Nos
	Rubber bellow -80 mm dia	R.O	Nos
h	Y strainer - 200 mm dia	1	Nos
	Y strainer - 150 mm dia	R.O	Nos
	Y strainer - 100 mm dia	1	Nos
	Y strainer - 80 mm dia	R.O	Nos
7	Chilled water piping insulation for existing chilled water pipes of 250 mm to 50 mm Dia wherever require as per site condition. Vendor shall remove existing damaged insulation and replace the same as per following specification.		

	Supply & Installation Insulation with 25 mm thick Physically crosslinked polyolefin foam with factory laminated heavy duty and ultra tough multi-layered composite aluminum foil facing with puncture resistance of >400N as per ASTM D4833 and Class 0 fire properties as per BS 476 Part 6 & 7 sheet cladding.	200	Rmt
<b>8</b>	<b>Electrical</b>		
8.1	Supply, Installation, Testing and Commissioning of following Electrical Panels for control of HVAC system		
a	Power Panel for HVAC systems - 3 no chiller, 3nos Chilled Water Pumps, 2nos Condenser Water Pump and 1 no Cooling Tower located in basement Plant Room including Indication Lamp, Ammeter, voltmeter	0	Nos
8.2	Power Cabling		
a	3 1/2 C x 120 Sq.mm Aluminium Armoured cable with 1 runs of 8 SWG GI bare wire	50	Rmt
b	4 core 16 Sqmm Cu Armoured cable with 1 runs of 8 SWG GI bare wire for Chilled Water Pump	50	Rmt
c	4 core 10 Sqmm Cu Armoured cable with 1 runs of 8 SWG GI bare wire for Condenser Water Pump	100	Rmt
d	4 core 6 Sqmm Cu Armoured for Cooling Tower	100	Rmt
9	Structural steel for Chiller	1000	kg
10	Scaffolding Charges for Dismantling and Fixing MS Piping	1	Lot
11	Supply and installation of spring Isolators for Chiller	1	Lot
12	Lifting of Condenser Pipe and Cooling Tower, Shifting of Chiller, Pumps	1	Lot
13	Additional charge of Refrigerant for		
	300Tr chiller	1	lot
14	Civil Modification work for Foundation of Pumps	1	Lot
A	<b>Total of low side</b>		
D	Less buy back of existing chiller (1No 300 TR)with accessorie (dismantling of items will be in vendor scope of work )	-1	lot
	<b>Total low side after Buyback</b>		
	<b>Total high and low side</b>		
	<a href="#">GST@ 28% on Section A</a>		
	<a href="#">GST@ 18% on Section B</a>		
E	Total after Buyback		