

PROJECT: CONSTRUCTION OF CGHS WELLNESS CENTRE AND ADMIN.BLDG. AT SECTOR-13, R.K.PURAM, NEW DELHI.								
BOQ FOR PUMPS & SOFTNER								
					RATE (In Rs.)	RATE (In Rs.)	AMOUNT (In Rs.)	AMOUNT (In Rs.)
SL. NO.	(DSR-2012) / NDSR	DESCRIPTION	UNIT	QTY.	In Figures	In Words	In Figures	In Words
SUBHEAD-I (A): PUMPS								
1.1	NDSR	Domestic Water Transfer Pump set (FROM U.G. SUMP TO OHT TANK)	Set	1				
		Supply, Installatiom, Testing & Commissioning of vertical domestic water pumps, comprising of Electrical Driven inline pumping with all accessories, Pumps shall be with C.I. Base, S.S 304, impeller, shaft, mechanical seal, S.S. Shaft directly coupled to motor suitable for operation on 400/440 volts, 3 phase 2900 RPM. TEFC electronic motor mounted on a common channel baseplate 150mm dia pressure gauge, GM isolation cock and cement concrete foundation with plaster with dunlop cushy foot mountings with all accessories such as NRVs, valves, pressure guage bourden type, common suction and delivery header, bellows on sucton and delivery side. It should be complete as per manufacturer's technical specifications & as directed by Engineer-in-charge.						
		Pumps shall be suitable for 415 ± 10% volts 3 phase 50 Hz A.C supply & shall be having the following requirement complete with foundation and associated civil works.						
		Suction & Delivery Header - SS 304						
		Control Valve On suction and Delivery - Ball Valve						
		Flow Prevention - Check Valve						
		Suction & delivery header including all pipes, suction & delivery sides valves, NRV, Pressure gauges & accessories complete.						
		Flow Rate : 2.0 LPS (1 working + 1 stand by)						
		Head : 40 M						
		Min. Motor HP : 2.5 H.P. (Each)						

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1.2	NDSR	Treatment plant Feed Pump set (Roof Level)	Set	1				
		Supply, Installation, Testing & Commissioning of vertical treatment plant feed pumps, comprising of Electrical Driven inline pumping with all accessories, Pumps shall be with C.I. Base, S.S 304, impeller, shaft, mechanical seal, S.S. Shaft directly coupled to motor suitable for operation on 400/440 volts, 3 phase 2900 RPM. TEFC electronic motor mounted on a common channel baseplate 150mm dia pressure gauge, GM isolation cock and cement concrete foundation with plaster with dunlop cushy foot mountings with all accessories such as NRVs, valves, pressure guage bourden type, common suction and delivery header, bellows on suction and delivery side. It should be complete as per manufacturer's technical specifications & as directed by Engineer-in-charge.						
		Pumps shall be suitable for 415 ± 10% volts 3 phase 50 Hz A.C supply & shall be having the following requirement complete with foundation and associated civil works.						
		Suction & Delivery Header - SS 304						
		Control Valve On suction and Delivery - Ball Valve						
		Flow Prevention - Check Valve						
		Suction & delivery header including all pipes, suction & delivery sides valves, NRV, Pressure gauges & accessories complete.						
		Flow Rate : 1.0 LPS (1 working + 1 stand by)						
		Head : 35 M						
		Min. Motor HP : 1.0 H.P. (Each)						
1.3	NDSR	Sump Pumps						

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		Supply & Installation, testing and commissioning of centrifugal non clogging submersible sump pumps for plant room drainage. Pump capable capable of handling 25 mm dia soft solids. Motor suitable for 415 + 10% volts, 3 phase, 50 Hz AC Power supply. Pumps shall be suitable for automatic/manual operation (Overall depth of sump – 1.5 M). Submersible sump pump shall be provided with dry running protection inclusive of supporting arrangement for stationary type. It should be complete as per manufacturer's technical specifications & as directed by Engineer-in-charge.						
		Two nos. of pump installed in one sump pit 1 working & 1 standby with automatic/manual operation as required.						
		Waste Water Drainage Sump Pump (PLANT ROOM & Basement)	Set	1				
		Flow rate : 2 LPS (1 working+ 1 Standby)						
		Head : 10 Mtrs.						
		Min. Motor HP : 1.5 (Each)						
		Pump & Softner Plant						
1.4	NDSR	Supply & installation, testing & commissioning of sand filter having FRP pressure vessel suitable for test pressure of 7 Kg. / cm ² including valves for back-wash arrangement complete with initial charge of media to remove the total suspended particles from the water. It should be complete as per manufacturer's technical specifications & as directed by Engineer-in-charge.						
		Capacity : 2.0 LPS						
		Working Pressure : (5 ± 2.5)MWC	No.	1				

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1.5	NDSR	Supplying, storing, handling, installation, testing & commissioning of water softening system having FRP pressure vessel suitable for test pressure of 7 Kg/cm ² including dished end, ion- exchange resin, Frontal piping, C.I. diaphragm type valve, brine injection assembly for regeneration of softener, brine measuring cum salt water tank, inter connected flexible polypropylene MS Rubber lined (MSRL) piping, valves including provision of bye-pass arrangement complete with inside and outside painting etc. as required. It should be complete as per manufacturer's technical specifications & as directed by Engineer-in-charge.						
		Receiving, storing, handling and fixing of PVC/HDPE/FRP tank for Brine solution along with Hydraulic Injector with control valve and piping for brine injection.						
		Capacity : 1.0 LPS						
		Working Pressure : (5 ± 2.5)MWC	No.	1				
1.6	NDSR	Supplying & fixing of float based visual flow meter (Rotameter) suitable for water flow rate of 3600 litres per hour in the input line of water softener including matching flanges, nuts, bolts and 3 mm thick rubber insertions/gaskets complete. to assess the water flow rate in water softener.	No.	1				
		TOTAL C/F TO SUMMARY						-
SUBHEAD-II (A): ELECTRICAL WORKS								
2.1	NDSR	CUBICAL PANEL BOARD - PLUMBING	Set	1				

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		Supply, installation, testing and commissioning of Cubical type sectionalised floor standing switch board of 31 MVA fault capacity at 415 V complete with 3.5 strip, 32 A capacity Aluminium Bus - Bar Electrolytic grade, cable alley, switchgears of following capacity & as per specifications.						
A)		INCOMER						
		32 A TP MCCB with heavy duty solid neutral link with (0-32A) ammeter with 3 CT and selector switch, (0 - 500 V) voltmeter with selector switch, phase indication light with protection fuse. - 01 Set						
B)		OUTGOINGS						
i)		For 2 x 1.0HP Filter Feed Pumps (1W + 1 S) - Roof level						
		16 A TP MCB with 10 A DOL starter, overload relay, 96 mm (0-25A) ammeter with single CT, start / stop push buttons, on / off / trip indication lights with protection fuse, single phase preventer. - 01 set.						
2.2	NDSR	CUBICAL PANEL BOARD - PLUMBING	Set	1				
		i) For 2 x 2.5 HP Treated Water Transfer Pumps Set (1 Duty + 1 Stand by) - (only isolator).						
		ii) For 2 x 1.5 HP Basement Waste Sump Pumps pump room (1 Duty + 1 Stand by) - (only isolator).						
		iii) For 2 x 1.5 HP pump room Waste Sump Pumps pump room (1 Duty + 1 Stand by) - (only isolator).						

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		Supply, installation, testing and commissioning of Cubical type sectionalised floor standing switch board of 31 MVA fault capacity at 415 V complete with 3.5 strip, 160 A capacity Aluminium Bus - Bar Electrolytic grade, cable alley, switchgears of following capacity & as per specifications.						
A)		INCOMER						
		80 A TP MCCB with heavy duty solid neutral link with (0-100A) ammeter with 3 CT and selector switch, (0 - 500 V) voltmeter with selector switch, phase indication light with protection fuse. - 01 Set						
B)		OUTGOINGS						
i)		For 2 x 2.5 HP Water Transfer Pumps						
		16 A TP MCB with 10 A DOL starter, overload relay, 96 mm (0-25A) ammeter with single CT, start / stop push buttons, on / off / trip indication lights with protection fuse, single phase preventer. - 01 set.						
ii)		For 2 x 1.5 HP Waste Water Transfer Pumps - only feeder to sub panels.						
		16 A TP MCB with 10 A DOL starter, overload relay, 96 mm (0-25A) ammeter with single CT, start / stop push buttons, on / off / trip indication lights with protection fuse, single phase preventer. - 02 set.						
		NOTE :						
		i) All the drainage pumps shall be work cyclic process i.e. in first operation duty pump work on duty and stand by pump duty pump work on stand by and stand by pump work as duty pump.						

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		ii) The drainage Stand by pumps automatically work as drainage assist pump for Duty pump when level of water rises in drainage sump pumps i.e. Both pumps can work at a time & operation shall be controlled with the help of level controllers and float switches.						
2.3	NDSR	POWER, CONTROL CABLING & EARTHING						
		Supply, laying, testing and commissioning of power and control cabling, as per Standard specification including end termination as required.						
2.3.1	NDSR	Power Cabling (XLPE) insulated and PVC sheathed, armoured, Aluminium Conductor of 1.1 KV grade on existing cable trays).						
2.3.1.1	NDSR	3C x 10 Sq. mm	Rmt	50				
2.3.1.2	NDSR	3C x 6 Sq. mm	Rmt	100				
2.3.2	NDSR	Control Cabling (PVC insulated and PVC sheathed, armoured, Copper Conductor of 1.1 KV grade on existing cable trays).						
2.3.2.1	NDSR	5C x 1.5 Sq. mm	Rmt	60				
		Earthing Strip / Wires.						
2.3.3	NDSR	Supply and fixing of vertical down conductor 32 x 6 mm copper strip etc. on approved surface for earthing complete in all respects	Rmt	10				
		TOTAL C/F TO SUMMARY						