

PROJECT : CLARKS JAWAI , PALI, RAJASTHAN					
SUBHEAD : Supplying, Testing and Commissioning of Pumping Machinery					
BILL OF QUANTITIES					
S.NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	NOTES :				
	1) The pump shall be capable of developing the required total head at rated capacity for continuous operation. The pumps shall operate satisfactorily at any point on the Head-Discharge (H-Q) characteristic curve over a range of 50% to 130% capacity				
	2) The total head capacity curve shall be continuously rising towards the shut off. The shut off head shall be at least 110% of the total head. The pump should deliver at least 125% of its rated capacity at 75% of the specified total head				
	3) All associated piping, valves & other appurtenances shall be paid seperately as per relevant items				
	4) Wherever mechanical seal has been asked for, it must be ` factory fitted ` at pump manufacturer`s works.				
	5) The Tenderer must submit along with his offer, the make and the model of the pump unit proposed by him. The tenderer must mention clearly wherever he is offering alternative material of construction for various types of pumps.				
	6) The Tenderer must fill all the blank fields				
2.0	HYDROPNEUMATIC SYSTEMS				
	FOR GENERAL WATER SUPPLY				
2.1	Supply, testing and commissioning of clear water packaged hydropneumatic pumping system for general water supply (with fixed speed pump) as per following details:				
	The packaged unit shall be complete with :				

S.NO.	DESCRIPTION	QTY	UNIT	RATE	AMOUNT
	a) Pumps: Vertical In-line booster pumpset with mechanical seal 2 nos. (1 working+1 standby)				
	Material of Construction (M.O.C): Corrosion Resistant in general				
	: Casing — Stainless Steel -AISI 304				
	: Impeller — Stainless Steel -AISI 304				
	: Shaft — Stainless Steel - AISI 316				
	: Pump Head — Cast Iron				
	: Base — Cast Iron				
	: Motor Stool — Cast Iron				
	Motor: 2900 RPM; 3Ph 415V 50Hz				
	Insulation Class - F				
	Protection - IP54 Min.				
	Duty:				
	Discharge (each pump) : 2.0 M ³ /hr.				
	Working Head : 20 M.				
	b) Pressure Tank: FRP vessel with replacable polyetheruethane (PEU) bladder certified for drinking water. Minimum 8 Bar pressure rating — 1 Nos. each of 100 to 150 Lts. Capacity.				
	c) Interconnecting Pipe work, Valves and Vibration Eliminators : Common suction & delivery headers in CPVC pipes, SDR-11, Isolating valves, non return valves and vibration eliminators on suction & delivery side of pumps.				
	d) Common fabricated base frame, duly painted.				
	e) Power and control cabling between panel and pumps.				
	f) Accessories like presure guages, pressure switches etc.				
	g) Electric control panel mounted on the skid for automatic operation of pumps comprising incoming switch fuse unit/MCBB, digital voltmeter & ammeter with selector switches, over load and under voltage protection devices, single phase preventors, MCB and DOL starter for each pump, indicating lights etc. all complete.				
	h) Programmable Control System				
	Programmable Control System shall be PLC based, duly authenticated by the Pump Manufacturer.	1	Set		
	TOTAL for "Hydropnuematic Systems" carried over to SUMMARY			Rs.	