

Company contact details:

BOQ of RO Plant 500 Ltr/Hr						
Total cost		PKR (inclusive of: Supply, Installation, Operationalization, Transportation, training of O&M committiee operators and Taxes)				Total Cost to be filled by bidder
		3 Months operation and maintainance (excluding electricity charges)				
		One year warranty of Plant items				
Required size of the plant		Height	4-5 ft			
		Length	5-7 ft			
		Width	2-3 ft			
Sr No	Items	Description	Model/Make	Qty.	Unit Rate	Total Amount (PKR)
1	Frame	The RO Plant shall be mounted on Stainless Steel 304 frame, 50mmx 50mmx 3mm, 8.0 g/cm3		1		
3	Feed Pump	1 m ³ /hr. Vertical Multistage Centrifugal Pump, Single Phase motor.	CNP Brand. Imported and Brand New. Made in China Model: CDLF Series	1		
4	Multimedia Rapid Sand Filter (Automatic Backwash with Auto Resetting)	Vessel Size: 10"×54", Flow capacity 1 m ³ /hr, Rated Test Pressure: 10 Bar, Material: FRP Vessel Media: Silica Sand & Gravel. Gravel Size: 10-12mm, Quartz Sand Bed Height: 32", Quartz sand Size: 6-8mm, 4-6mm, 2-4mm, 0.5-2mm	Pentair/Pall	1		
5	Activated Carbon Filter (Automatic Backwash with Auto Resetting)	Vessel Size: 10"×54", Flow capacity 1 m ³ /hr, Rated Test Pressure: 10 Bar, Material: FRP Vessel Media per tank: 1.6 cft Activated carbon media. Total weight upto: 30kg	Pentair/Pall	1		
6	Cartridge filter 5M (Jumbo)	5 Microns: 20" x 1 core filter. PE Housing. Flow Capacity 4.1 m ³ /hr. Rating: 5 micron	Taiwan/USA	1		
7	Cartridge filter 1M (Jumbo)	1 Microns: 20" x 1 core filter. PE Housing. Flow Capacity 2.1 m ³ /hr. Rating: 1 micron	Taiwan/USA	1		
8	Chemical Dosing Pump	Dosing Pump, one for Anti-Scalant dosing. Pump type: Positive Displacement, Capacity: 2.5 ltr/hr, Liquid end material: PP/PE, Power: 220V, 50Hz, Mode of Adjustment: Manual and Automatic, Material: Polyethylene	Elatron	1		
9	High Pressure Pump	2.1 m ³ /hr, 12 bar Vertical Multistage Centrifugal Pump - 01 Phase motor 50Hz, Max revolving speed: 2900 rpm	CNP Brand. Imported and Brand New. Made in China Model: CDLF Series	1		
10	Reverse Osmosis membranes (Automatic Backwash with Auto Resetting)	Reverse Osmosis Anti-fouling membranes, Membrane type: Thin film Polyamide-urea composite, No. of vessels: 1, Design output: 500 ltr/hr, Operating temperature: 25-45 degree celcius, Maximum	Hydranautics, Filmtec/ Toray	1		
11	RO membrane casing	R/O Fiber Glass FRP pressure vessel for 1 element, Seal type: O-ring, Maximum operating pressure: 30 bar, Test pressure: 40 bar	Eurotec/Pall/Hitec	1		
12	Pressure Gauges	Low pressure Stainless steel gauges; glycerine filled. Stainless Steel	Wika China / Equivalent	3		
13	Pressure Gauges	High pressure Stainless steel gauges; glycerine filled. Stainless Steel	Wika China / Equivalent	2		
14	Online Flow meter	Digital Flowmeter for product water	Taiwan	1		
15	Online Flow meter	Digital Flowmeter for reject water	Taiwan	1		
16	UV Light Filter with control box	Capacity: 0.6 m ³ /hr, Material of construction: SS, Length: 24"-36", Dia: 3", Inlet/outlet Dia: 1", Average useful life: 8000hr, UV Energy: 30000 micro watt second/sq.cm, Operating temperature: 25-40 degree celcius	Lamp & Quartz sleeve: Atlantic US / First Life / Equilent	1		
17	Fittings	UPVC 80 schedule	Approved brand			
1	Blending: Anti scalant dosing pump System	Anti scalant dosing pump with blending system including tank of capacity 15-20 Liters and complete in all specification - Capacity: 0.25 m ³ /hr	Italy/USA	1		
Instrumentation and Controls						
2	Control box	Control box with contactor and overload safety circuits	Approved brand	1		
3	Control switches	Single Phase power safety cut-off control circuit	Approved brand	2		
4	Switches	On / Off switches; On and Trip indicator lights	Approved brand	1		
5	Low level switch	Trip on low level of product water tank	Approved brand	1		
6	TDS meter	TDS probe for TDS monitoring of Product Water	Approved brand	1		
7	Solenoid Valve	Inlet & Flush solenoid valve	Approved brand	2		
8	Safety control switch	To protect high pressure pump and membranes from over pressurization	Approved brand	1		
9	Safety switches	Feed Water / Product Water / Water Tanks Low / High Level Switch Safeties to avoid dry pump run	Approved brand	1		
Total						
BOQ of UF+Arsenic+UV Plant 500 Ltr/Hr						
Total cost		PKR (inclusive of: Supply, Installation, Operationalization, Transportation, training of O&M committiee operators and Taxes)				Total Cost to be filled by bidder
		3 Months operation and maintainance (excluding electricity charges)				
		One year warranty of Plant items				
Required size of the plant		Height	4-5 ft			
		Length	5-7 ft			
		Width	2-3 ft			
Sr No	Items	Description	Model/Make	Qty.	Unit Rate	Total Amount (PKR)
1	Frame	The UF Plant shall be mounted on Stainless Steel 304 frame, 50mmx 50mmx 3mm, 8.0 g/cm3		1		
2	Feed Pump	1.1 m ³ /hr. Vertical Multistage Centrifugal Pump	CNP Brand. Imported and Brand New. Made in China Model: CDLF Series	1		
3	Multimedia Rapid Sand Filter (Automatic Backwash with Auto Resetting)	Vessel Size: 10" × 54", Flow Capacity 2.1 m ³ /hr, Rated test pressure: 10 bar, Material FRP vessel Gravel bed height=7-8"; Gravel size= 10-12mm Quartz sand bed height=recommended; Quartz sand size= 6-8mm, 4-6mm, 2-4mm, 0.5-2mm	Pentair/Pall	1		
4	Activated Carbon Filter (Automatic Backwash with Auto Resetting)	Vessel Size: 10" × 54". Flow capacity: 1.1m ³ /hr. Rated test pressure: 10 bar Media per tank: 1.6 cft Activated carbon media	Pentair/Pall	1		
5	Arsenic Removal Filter (Automatic Backwash with Auto Resetting)	Vessel Size: 13" × 54". Flow capacity: 1.1m ³ /hr, Operating pressure: 4 bar, Rated test pressure: 10 bar, Material: FRP Vessel Arsenic media= 80-120kg; Gravel bed height= 10"; Gravel size= 10-12mm; Arsenic media size= 0.5-2.5mm; Quartz sand size= 6-8mm, 4-6mm, 2-4mm, 0.5-2mm	Pentair/Pall Media: Axens Canada/ Hego Germany/ EU/ USA	1		
6	Cartridge filter 5M (Jumbo)	5 Microns: 20" x 1 core filter. PE Housing. Flow Capacity 4.1 m ³ /hr. Rating: 5 micron	Taiwan/USA	1		
7	Cartridge filter 1M	1 Microns: 20" x 1 core filter. PE Housing. Flow Capacity 2.1 m ³ /hr. Rating: 1 micron	Taiwan/USA	1		
8	UltraFiltration System (Automatic Backwash with Auto Resetting)	Ultrafiltration membranes with casing, capacity: 500 Ltr/hr, Total recovery: 95%, Suspended Impurity & Bacterial contamination rejection: 99%	Pall/Equivalent UF Membrane: Filmtch/ Hydronotic	1		
9	Pressure Gauges	Low pressure Stainless steel gauges; glycerine filled. Stainless Steel	Wika China / Equivalent	4		
10	Online Flow meter	Digital Flowmeter for product water	Taiwan	1		
11	UV Light Filter or UV Sterilizer with control box	Capacity: 1.2 m ³ /hr, Material construction: SS, Length: 36", Dia: 3", Inlet/Outlet Dia: 1", Avg useful life: 8000hr, UV energy: 30,000 micro watt second/sq.cm, Operating temperature: 25-40 degree celcius	Atlantic US / First Life / Equivalent	1		
12	Fitting	UPVC schedule 80	Approved			
Instrumentation and Controls						
1	Control box	Control box with contactor and overload safety circuits	Approved	1		
2	Control switches	Single Phase power safety cut-off control circuit	Approved	2		
3	Switches	On / Off switches; On and Trip indicator lights	Approved	1		
4	Low level switch	Trip on low level of product water tank	Approved	1		
6	Solenoid Valve	Inlet & Flush solenoid valve	Approved	2		
7	Safety switches.	Feed Water / Product Water / Water Tanks Low / High Level Switch Safeties to avoid dry pump run	Approved	1		
Total						

* Alternative Packaging / Packaging Details / Technical specifications

Reductions		YES	NO		
<i>If so, specify the conditions and the reduction percentage</i>					
Product warranty		YES	NO		<i>If yes, length (in months):</i>
Availability		Immediate (from stock)			On order
Average delivery time <i>(only for items not available from stock)</i>					
Guarantee of price stability <i>(In months)</i>					
Preferred payment terms		Cheque			Wire transfer
Payment terms.	In advance <i>(specify the %)</i>	Credit <i>(specify maximum time)</i>			Other <i>(specify)</i>
Delivery capacity <i>(Delivery place: DG Khan Road, Muzaffargarh)</i>		YES	NO		
Delivery charges		YES	NO		
<i>If yes, specify the amount of the delivery costs (in PKR per delivery)</i>					

Signature and stamp