شركة مصفاة البترول الأردنية المساهمة المحدودة

JORDAN PETROLEUM REFINERY CO. LTD.

مناقصة رقم: 2025/116

BID NO.116/2025

توريد أغشية مرشحات وحدة الانتشار الغشائي العكسي

Supply Of Reverse Osmosis Membranes

الفهرس

دعوة المناقصة/ الشروط العامة

TENDER AND CONTRACT INVITATION

I. BID& Contract Invitation

1. The following Instructions and General Conditions are integral part of the invitation, and have the power of the purchase contract.

   The listed conditions hereunder are binding for the tenderers, unless otherwise is stated in the documents.

   Offers (technical & commercial) shall be submitted in triplicate, in **English language**, including the following details, before the **CLOSING DATE on Thursday 15th April of 2025**, at 12.30 PM (Jordan Local Time).

2. **Identifications:**

   The Company: Jordan Petroleum Refinery Company Ltd., (JPRC).

   The Manager: Chief Executive Officer.

   The Contractor: The successful Tenderer/Supplier/ Manufacturer.

   The Tenderer: The participant in BID (Company Owner).

3. **Offers shall** include the following:

   A. Printed price and clearly written in figures and capital letters. (**Currency** shall be stated in words not in abbreviations).

   B. Clearly stated price for **unit and total** price.

   C. **Freight Terms:** On the basis of FOB, CFR. Aqaba Sea Port, CPT Amman (QAIA) Air Port, Zarqa Free Zone**, DDP at our stores / JPRC.**

   D. **Valid** for (120) days, at least, from closing date, unless otherwise stated, and also fixed during the completion period.

   E. **Delivery time:** the shortest delivery period is to be stated in your offer.

   F. **Country of origin / shipment**: origin of goods, delivery place and port of shipment.

   G. **Any extra optional and / or additional services** to the required specifications must be clearly detailed & priced.

   H. **Manufacturer's name and full address.**

   I. **Packing:** Proper and secure seaworthy packing and / or according to BID requirement. Details of packing shall also be stated.

4. ☒ **Catalogues:** Operation, maintenance and spare parts manuals, as well as any necessary leaflets and information shall be submitted **in English language**, all shall comply with BID documents requirements, if any.

5. ☒ **Spare Parts:** Tenderer shall provide separate, detailed, itemized priced spare parts list recommended for (two) years operation under normal circumstances in addition to other requirements of BID documents, if any.

   The tenderer shall guarantee and shall secure to the COMPANY the guarantees of the manufacturers for the supply of spare parts for 15 years after commissioning of equipment.

6. ☒ **Samples:** Tenderer shall submit, with his offer, samples for offered materials if necessary or requested.

7. **Required Certificates**: Test Reports Laboratory certificate, API, Baseeffa, UL listing, FM approvals, Mill Test Certificate, Third Party Inspection Certificates and/or as required by BID documents, codes, etc.

8. The Tenderer guarantees that materials are to be supplied **brand new, updated in design, free from any failure, fault, damage, or defects in material, design, or manufacturing, and of latest model,** unless the offer states otherwise.

9. Offers shall not include charges for **Insurance.**

10. **Partial award** shall be acceptable by the Tenderer; otherwise, the COMPANY has the right to disregard the offer. Separate price is required for each item.

11. Any items or accessories necessary to have the offered system/ equipment complete in every respect shall be quoted even if they are not mentioned in this standard specification, noting that failure of the Contractor to do so shall be at his full responsibility, and the said equipment / system shall be rectified as necessary at the **Contractor's own expense.**

12. The COMPANY is not obliged to award on any offer or the **lowest offered prices.**

13. The COMPANY has the right to **cancel** any part or the whole BID without justifications.

14. The COMPANY has the right to **increase or decreases** the required quantities by **(±25 %)** depending on the COMPANY's requirements.

15. The COMPANY is **not bound** to consider any offer which does not follow closely BID requirements.

16. The COMPANY shall be exempted from serving **notarial notice/s** on the tender.

17. The Tenderer is required to provide **qualification documents** with his offers.

    These documents shall include details of his production and general catalogues, and explain, in detail, his experience in same required equipment and projects, and provide **reference lists including customers/refineries** to which he delivered similar equipment and projects, dates, and contract values. The COMPANY has the right to disregard any offer, which may be received from unqualified Tenderers and / or Manufacturer. The COMPANY shall not accept any responsibility or liability of any type or any kind in any way whatsoever.

18. The Tenderer shall submit all documents, which show financial statement of the supplier for the latest three years including balance sheet and profit and loss accounts with the offer.

    If Qualification Form is attached to the BID documents it shall be completely filled by the Tenderer and submit with the offer

19. It is the full responsibility of the Tenderer to provide all required information during the offering stage, where any lack or misguidance of the required information provided by the Tenderer shall be considered a cause of rejection of his offer.

20. **Payment method:**

    A- Payment shall be made either by **Letter of Credit, CAD. NET 30 DAYS or COD.** (All Bank commissions or fees outside JORDAN shall be borne by the **Successful Tenderer(s)**.

    B- **Payment in advance is not acceptable.**

    C- All external bank charges including confirmation commissions or fees of L/C shall be borne by the **Successful Tenderers** exception of the initial internal banking charges for opening L/C, which shall be borne by the JPRC.

    D- The following paragraphs shall be part of **L/ C when shipping by sea** :

    1. Certificate issued by the owners, carriers, master, charterers or agent of the vessel, certifying that the carrying vessel is classified 100 A1 or equivalent and is a (P&I Club) member.

2. Certificate issued by the owners, carriers, master, charterers or agent of the vessel, certifying that the carrying vessel is subject to International Safety Management Code (ISM) and International Shipping and Port Security Safety Code (ISPS) and carries valid Safety Certificate.
3. Upon delivery, a signed commercial invoice in 3 original & 3 copies indicating delivery terms shall be provided.
4. Full set of at least (2/2) long form original clean (on board) bill(s) of lading on the printed forms of carrier issued or endorsed to the order of issuing bank, showing full name and address of the shipping company agent or his representative in the country of destination .

21. **Instructions of the Central Bank**: All parties to this transaction are advised that where the **U.S., EU, UN** impose specific sanctions against certain countries, entities and individuals banks may be unable to process a transaction that involves a breach of such sanctions , and authorities may require disclosure of information.

II. Successful Tenderer/ Supplier shall be responsible for the following:

1. All the documents pertaining to the General Conditions, Specifications, Drawings and any Annexes shall form an integral part of the **agreement/ contract / purchase order**.
2. **After awarding, any change in the offered specifications shall not be acceptable.**
3. **Performance guarantee (bank guarantee) equal (10%)** of the total amount through a local Jordanian bank. shall be submit within (10) days of award of tender, to guarantee that materials will be supplied according to BID specifications and conditions, submitted offer on this tender, and related correspondences as well as to guarantee that the whole consignment will be delivered within the specified period.

   This guarantee must be valid for period of **(3) months after receipt the materials and matching at our stores** unless otherwise is stated, subject to extension when required and payable partially or totally to COMPANY at first demand.

   Copy of bank guarantee text is herewith attached.

   If the Successful Tenderer/ Supplier refuse the letter of award or not submitting the performance bond for any reason, The COMPANY has the right to confiscate the bid bond amount and the supplier will not be allowed to participate in future tenders.
4. **(6) per one thousands** of Contract value shall be paid to cover **revenue stamps** to **be paid to the Ministry of Finance** according to prevailing Jordanian law. The total sum shall be paid within (10) ten days after the date of award letter to avoid delay penalty, or deduct it from the purchase order.
5. Accept the **purchase order** based on the submitted offer, in addition to all other conditions, which will be agreed upon by the COMPANY and Successful Tenderer, as an obligatory contract for both parties.
6. No assigning of the awarded BID (partially or totally) to any other supplier without the prior written consent from the COMPANY.
7. All original shipping documents **(commercial invoice, AWB, B/.L, LWB), detailed packing list , EURO 1 Certificate if applicable)** in the name of JPRC, and shall be delivered to our BANK/ JPRC immediately from dispatching of the goods to avoid delay in Jordanian Customs Department.

8. Upon delivery packing list (1) original and (5) copies showing number of packages / cartons / rolls/pallets / gross weight and the contents of each package /carton/roll/pallet/ net weight separately.

9. All materials to be supplied from European countries shall be included with EURO 1 Certificate with shipping documents.

10. All materials to be supplied from USA shall be shipped directly from USA to Jordan according to Jordanian Customs Department rules; so any customs duty will be exempt due to implementation of customs agreement between USA and JORDAN.

11. Successful Tenderer shall be responsible for all applicable additional charges as **Taxes, VAT** in any country outside Jordan.

12. Delivery delay **liquidated damages**: in the event that the Supplier failed to supply the required materials, equipment and necessary documents within the specified delivery period, which prevents putting in service of the equipment, the sum of **JOD (20)** per day or any part thereof shall be paid by the supplier to COMPANY. **(Not exceeding 5 % of contract value)**.

13. **In case delay or missing of submitting any of the shipping documents to the bank, which leads to storage fees or any custom fees on the goods from JORDAN CUSTOMS DEPARTMENT, all these charges shall be paid by the supplier.**

14. As the contract is a Jordanian one, any dispute arising between COMPANY and the Contractor on the interpretation or execution of the contract, which can't be solved amicably, shall be governed by and construed in accordance with **Jordanian laws**, and shall be referred to arbitration. Arbitration shall be conducted in Arabic, or English translated into Arabic. The venue of arbitration shall be in Amman – Jordan.

15. The COMPANY , through **cashing the guarantees** shall not be deemed to have waived any of its rights under the Contract. For BID performance purpose, the local agent and the Contractor are jointly and severally liable . The COMPANY has the right to claim its rights legally against either party , or both of them, in case they do not comply with any of the BID conditions.

16. The COMPANY has the right to reject of any supplied materials which not in conformity with the required specification, and shall hold the supplier liable for any damage resulting there from including taxes , custom fees , clearance fees …etc.)

17. **Transshipment** is not acceptable.

18. **If the defect or function failure can't be corrected**, the Contractor / Supplier shall promptly replace said equipment (free of charge) or remove the equipment with refund the full purchase price

19. Return copy of purchase order, which considered as **a formal contract signed & stamped by an authorized person (beneficiary) within (48 hours).**

III. Important Notes For Tenderers:

1. Offers shall be submitted in three separated, closed and sealed envelopes (**One original and two copies**) indicating clearly contents of each envelope as follows:
   - The 1st envelope shall include the **technical offer and qualification documents**.
   - The 2nd envelope shall include the **commercial offer**.
2. **Name and address of Tenderer** is to be printed on closed and sealed envelope in addition to BID number and closing date. Noting that **different offers** shall be treated separately.
3. Offers by e-mail are only acceptable on:
   E-mail (JPRC.SubTenders@jopetrol.com.jo),
   Offers by telephone are strictly prohibited.
4. **Any questions regarding the BID** shall be addressed in writing to:
   EMAIL: FOREIGN.PURCHASING@JOPETROL.COM.JO
5. Tenderer is not permitted to contact and or meet and or visit any one of the technical team during BID study stage without prior post coordination and written approval by **Chief Executive Officer or Executive Director of Refinery or Purchasing Manager**.
6. Any offer after the closing date shall not **be accepted.**
7. **The offers must be signed and stamped by the Tenderer**; otherwise, it shall be disregarded. In addition, shall be submitted to the COMPANY as prepared and arranged by the manufacturer.
8. Tenderers shall provide the COMPANY with the name and full address of the **Agent or Representative / Regional office in Jordan** and his registration number, if available.
9. **Local Agent** shall submit a valid Career License and Registration Certificate with the offer.

☒ ***NOT REQUIRED***

ANNEX

- **Offers must be submitted in sealed envelopes on or before the closing date on Tuesday 15/04/2025 not later than 12.30 PM (Jordan Local Time). Offers were received after that time will be disregarded.**
- **Local agents must submit with their offer a valid copy of their registration certificate in the Ministry of Industrial & Commerce as well as their registration certificate in Great Amman Municipality.**
- **Enclosed herewith a form (Supplier & Local Agent Information) to be filled accurately and accordingly, as it is an integral part of BID conditions.**
- **JPRC is entitled to cancel the BID or to postpone the opening of bids, to whichever date it deems adequate.**
- **Please abide strictly with the required conditions and specifications**

- يجب تسليم العروض بالظرف المختوم قبل الساعة الثانية عشرة والنصف من ظهر يوم الثلاثاء الموافق 2025/04/15 ولن يقبل أي عرض بعد الموعد المذكور.
- على الوكلاء والوسطاء التجاريين أن يرفقوا مع العرض نسخة صالحة من سجلهم التجاري ورخص المهن صادرة من وزارة الصناعة والتجارة وأمانة عمان الكبرى.
- مرفق نموذج (معلومات عن المورّد والوكيل) لتعبئته وإرفاقه مع العرض وبغير ذلك سوف يتم تجاهل العرض.
- يحق لشركة JPRC إلغاء المناقصة أو تأجيل فتح صندوق المناقصات إلى أي وقت تراه مناسباً.

- راجين الالتزام بالشروط والمواصفات العامة المطلوبة.

نموذج معلومات المورّد والوكيل

مناقصة رقم 2025/116

SUPPLIER & LOCAL AGENT INFORMATION

BID no. 116/2025

الوكيل المحلي Local Agent	المـــورد Supplier	المعلومات المطلوبة
		الاسم التجاري Commercial Name
		أسماء مالكي الشركة Owner name
		اسم مدير الشركة Director /Manager Name
		هاتـــف Tel. No:
		فاكـــس Fax no:
		هاتف خلـــوي Mobile:
		رخص مهـن Profession License Certificate
		سجـل تجاري Trading Registration Certificate
		راس مال الشركة Company Capital
		البنـــك Reference Bank
		مجموع الإيرادات السنوية Turnover
		مجموع حقوق المالكين Owners Equity

COMMERCIAL OFFER

BID NO: 116/2025

				Prices To Be Filled By The Contractor	
Item No.	Description	Unit	Quantity	Currency :- ☐ $ ☐ £ ☐ €.....	
				Unit Cost	Total Cost
1	Reverse Osmosis	EA	61		

TOTAL IN WRITTEN	TOTAL :	

SIGNATURE :-

COMPANY'S STAMP-

المواصفة القياسية

STANDARD SPECIFICATIONS

R5543500QS

Jordan Petroleum Refinery Company
Quote Order

Date 17/02/2025
Page - 1

Order Number 25010054 OQ 00001

Delivery Instructions

Branch/Plant 2002
Order Date 17/02/2025
Request Date 21/08/2025
Freight Handling

General Description 1 290248 SPECIFICATIONS:-

REVERSE OSMOSIS MEMBRANES
STANDARD SPECIFICATION NO. (1138/1/2020) REV.3

SUPPLY OF NINETY - SIX OF MEMBRANES FOR REVERSE OSMOSIS
UNIT AT JORDAN PETROLEUM REFINERY COMPANY LTD. SITE
ZARKA , JORDAN

General Description 2

Line No.	VOCAB Number	Description	Part Number	Drawing Number	Ordered Quantity	Unit	Supplier Offer Unit Price	Supplier Offer Currency Code	Original Order No	Type	Orig LineNo
1	2900119005	** REVERSE OSMOSIS MEMBRANES			61.000	EA			25010050	OR	1

Purchasing Manager : .....

Remarks of Purchasing Department :

.....

.....

Jordan Petroleum Refinery Company ltd.
P. O. Box 1079
Amman - Jordan

STANDARD NO. 1138/1/2020

Supply of Ninety-Six of Membranes for Reverse Osmosis Unit at Jordan Petroleum Refinery Company Ltd. Site, Zarka, Jordan.

Issued : Jan-2025
Revision : Rev. 3
Supersedes : 1138/1/2020 Rev. 0

CONTENT PAGE NO.

Item No.	I.	GENERAL SPECIFICATION / REQUIREMENTS	DEVIATION
		The purpose of this specification is to set forth the standard specification for the supply of **Sixty-One of Membranes for Reverse Osmosis Unit**, to be installed in Reverse Osmosis Unit at Jordan Petroleum Refinery Company Ltd. site at Zarqa, Jordan, hereinafter called "the Company" or "JPRC". The Reverse Osmosis Unit design capacity is 225 m^3/hr and feed from the Refinery underground water. It is composed by pretreatment, desalination and degassifier tower. The pretreatment sections are listed as follow: - Hypochlorite Dosing Unit. - Coagulant Dosing Unit. - Iron removal media "Birm filters". - 5 Microns Cartridge Filters. - Sodium Bisulfate Dosing Unit. - Antiscalant Dosing Unit. The desalination system is split in four reverse osmosis skids, each one consists of eight vessels with 5:3 array configuration. A brief description of the Reverse Osmosis unit is attached (in the attachment No.1).	
1.	**General Terms:**		
	1.	This specification is part of and complements the inquiry or order to which it is attached and referred.	
	2.	Bidders tendering against this specification shall adhere wherever possible to the Company's requirements.	
	3.	Wherever a Bidder's standard departs from the Company's requirements; the Bidders shall clearly indicate in their offer where these differences occur; otherwise, the offer shall be considered as complying with the Company requirements. Deviations after awarding shall not be accepted.	
	4.	This specification covers the minimum mandatory requirements for supplying of Reverse Osmosis Membranes.	
	5.	The Company is not bound to consider any offer which does not follow closely the requirements of this specification.	
	6.	Bidders **shall submit a copy of this specification** with reference to each clause of the specification and mention if they are substituting it with other idea or not complying in their offer. Deviations from our requirements, if any, shall be clearly explained and specified.	
	7.	All information, documents and correspondence shall be in English.	
	8.	Shortest delivery period is highly preferable.	
	9.	**Only manufacturers or their exclusive representatives** are eligible to submit tenders. Agents are not permitted to submit tenders on their own behalf. An endorsement letter from the manufacturer is required for exclusive representatives.	
2.	**Commercial Conditions:**		
	1.	The payment terms shall be Cash Against Documents (CAD) or Letter of Credit (LC).	

Item No.	I.	GENERAL SPECIFICATION / REQUIREMENTS	DEVIATION
	2.	For Local Supplies, the offered prices shall be inclusive of all taxes, duties, and other applicable charges. Any extra optional and/or additional services should be clearly detailed and priced.	
	3.	The exclusive representatives and / or the manufacturer shall be jointly and severally responsible for all the technical, financial and contractual conditions.	
3.	**Contractual Violations:**		
	1.	Any of the following discrepancies shall be considered as a cause of rejection and have a right to claim:	
		a. Any change of the source of membranes or specifications (manufacturer, origin, model, etc).	
		b. Any defect in–membranes and noncompliance of membranes with test certificates.	
		c. Changing of the manufacturer of requested membranes or offered model before or after awarding.	
	2.	Not submitting the required documents in the offer shall be consider as a cause for rejecting the offer and disqualifying the Tenderer.	
4.	**Qualifications:**		
	1.	List of references using the same offered membranes in the Reverse Osmosis unit. Fax numbers and/or e-mails for references and the names of the persons to contact in these companies shall be provided.	
5.	**Guarantee and Warranty:**		
	1.	The manufacturer shall guarantee that the offered membranes, along with all of its accessories free from fault in design. Should any defect in the membranes, workmanship or operating characteristics develop during the first year of operation, the supplier shall make all necessary or desirable alterations repairs and replacements of defected materials, free of charge, and shall pay for any transportation involved in this regard.	
	2.	The warranty period of the offered membranes shall be 36 months from date of successful commissioning or 48 months from date of delivery to JPRC site whichever comes first. The vendor shall guarantee that the membrane, when operated in accordance with the instruction manual, will produce the specified product water flow rate at the specified water quality for a minimum of two years from the date of commissioning or where the vendor proposed guarantee, we will provide all necessary technical information about the plant during startup and operation.	
	3.	In case of charging new feed specification, the vendor shall give assistant and verification for the predicted membrane performance.	

Item No.	II.		TECHNICAL SPECIFICATION / REQUIREMENTS	DEVIATION
1.	**Site Conditions:**			
		a.	The atmosphere is saliferous tropical climate.	
		b.	The elevation of site is 535 m above sea level.	
		c.	Minimum ambient temperature is (– 5°C).	
		d.	Maximum shade temperature is (+ 45°C).	
		e.	Maximum ambient temperature is (+ 55°C.)	
		f.	The average relative humidity varies between 50% in Summer at 35°C to 75% in Winter at 15°C , maximum value = 96%.	
2.	**Standards:**			
			Any Deviations between this specification, industry standards, codes, and the offered membrane shall be mentioned and highlighted in the offer. In case of conflict or deviation between this specification and drawings, design, data sheet or order not specifically covered the Buyer shall be consulted and a ruling in writing obtained by the Vendor before any supply is done.	
3.	**Specification / Requirements:**			
	1.		The membrane type shall be Low Fouling Polyamide Spiral Wound.	
	2.		The membrane type shall be specified wet or dry.	
	3.		**Main Parameters shall be provided:**	
		A.	**Performance:**	
		1.	Permeate Flow Rate.	
		2.	Stabilized Salt Rejection.	
		B.	**Type:**	
		1.	Configuration.	
		2.	Nominal Active Surface Area.	
		3.	Feed Spacer Thickness. (34 mil is required).	
		C.	**Operating Limits:**	
		1.	Maximum Operating Pressure	
		2.	Maximum Operating Temperature.	
		3.	Maximum Feed Flow Rate.	
		4.	Maximum Element pressure drop.	
		5.	pH Range, Continuous Operation.	
		6.	pH Range, Short Term Cleaning.	
		7.	Maximum Feed Silt Density Index SDI_{15}.	
		8.	Free Chlorine Tolerance.	
		9.	Maximum Feed Water Turbidity.	
		10.	Minimum Ratio of Concentrate to Permeate Flow for any Element.	
		D.	**Element Dimensions:**	
		1.	Length: preferred 40 inch (1016 mm).	
		2.	Feed Diameter: shall be 7.89 inch (200 mm).	
		3.	Permeate Outlet Diameter: shall be 1.125 inch (28.6 mm).	
		E.	**Test Conditions:**	
		1.	NaCl Solution.	
		2.	Applied Pressure.	
		3.	Operating Temperature.	
		4.	Permeate Recovery.	

Item No.	II.		TECHNICAL SPECIFICATION / REQUIREMENTS	DEVIATION
		5.	pH.	
	2.	**General Requirements:**		
		1.	The Bidder shall offer their membrane based on existing facilities available.	
		2.	The membrane performance is characterized by membrane capital and running cost, the permeate flow and permeate quality.	
		3.	Projection report for the unit shall be based on the attached water analysis (in the Attachment No.4), at unit recovery 80% with 180 m^3/h as a permeate flow rate. The unit includes four skids with two stages configuration. Each skid is composed of 8 vessels, in a 5:3 array configuration with six elements per each vessel. Pressure tube (vessel) assembly is attached (in the Attachment No.2). The high pressure (HP) pump type is fixed speed with design head 17 bar and design capacity 60 m^3/hr. Pump technical data and curve are attached (in the Attachment No.3). **Any deviation from our water analysis and unit configuration shall be clearly specified in the submitted report.**	
		4.	Operating, maintenance and troubleshooting manuals.	
		5.	Minimum acceptable shelf life shall be 3 years.	
		6.	Expected operating life.	
		7.	Guaranteed operating life.	
		8.	NSF/ANSI/CAN 61 Certificate for Drinking Water System Components – Health Effects.	
		9.	Technical description of membrane cleaning procedure, required system and components	
		10.	Maximum SDI requirements	
		11.	Cleaning guidelines and the recommended cleaners, Antiscalant and any other chemicals may be used with the offered membranes.	
		12.	Usage guidelines.	
		13.	System operation and initial start-up guidelines.	
		14.	Maintenance guidelines.	
		15.	Preservation procedure of Membranes	
		16.	Storage requirements & conditions and handling instructions.	
		17.	Technical service visit once a year is required.	
		18.	All membranes shall be supplied with brine seal, interconnector and O-rings.	
		19.	Required spare parts O-rings, element interconnectors as recommended by manufacturer	
		20.	The water quality produced shall comply with the minimum required quality of water TDS shall be less than 55 ppm.	
			The selection of the offered membranes type shall be suitable with our water analysis are shown in the Attachment No.4	

Item No.	II.	TECHNICAL SPECIFICATION / REQUIREMENTS	DEVIATION
4.	**Shipment.**		
	1.	The shipped membranes shall be new manufactured once received at the refinery site at Zarqa, no more than 6 months of shipping date.	
	2.	Shipment shall be packed in proper packaging for membranes.	
5.	**Vendor Responsibilities:**		
	1.	Compliance by the Bidder with the provisions of this specification does not relieve him of the responsibilities for furnishing membranes of proper design to meet the specified operating service conditions.	
6.	**Manuals and Technical Data:**		
	1.	The Bidder shall provide at the time of offering his tender All data, catalogues, manuals, drawings, data sheet of membranes and all information necessary to permit comparison and evaluation to be made by the Company.	
	2.	All dimensions listed in the drawings shall be in millimeters except for circular diameters which shall be in inches.	
7.	**Attachments:**		
	1.	Brief description of the Reverse Osmosis unit	
	2.	Pressure vessel assembly.	
	3.	High pressure pump data sheet and curve.	
	4.	Reverse Osmosis Feed Water Analysis.	

A - INTRODUCTION

A.1 PREMISE

The water treatment plant installed in your site has been built for the desalination of well water at the Jordan Petroleum Refinery Company.

The plant is split in four reverse osmosis lines, each one is independent having a capacity of 45 m³/h with a total capacity of 180 m³/h of desalinated water.

A.2 COMPOSITION OF PLANT

The plant is composed by a pre-treatment unit, desalination unit and a ph adjustment unit, the configuration of the plant is as below listed:

- Storage tank of raw water;
- Pumping station;
- Coagulant dosing system;
- Hypo-chlorite dosing system;
- Iron removal and filtration;
- Safety filtration;
- Reverse osmosis; **
- Carbon dioxide stripping tower;
- Neutralization with caustic soda;
- Lifting of final tank;

** - each skid is composed of 8 vessels, with 48 membranes in a 5:3 array conflagration(5 vessels in the first stage and 3 vessels in the second stage).

** Dechlorination by SMBS and RO. Antiscalant are injected at the feed inlet to each Skid

A.3 PROJECT DATA

The study of this project has been made according to the below data:

Hourly flow-rate of permeate	: 45 m³/h
Concentration	: 80 %
Rejection	: 98 %
Temperature	: 25°C
SDI	: < 3

A.4 QUALITY OF WATER

The quality of the water has been studied according to your technical specification. In relation to the analysis, we have noticed that the quality of the raw water is better than what you indicated.

However, it is important to pay attention to the quality of the feed water. During our supervision visit we noticed that several wells have similar water characteristics, but not always compatible with the pre-treatment plant.

Therefore, if water is withdrawn from different wells, it is important to always make the following control of:

- SDI;
- Iron;
- Conductivity;

If the value of the SDI is higher than 3 after the filtration system, then it is important to start to dose the coagulant product to reach the value of 3.

Also the parameter of iron is to be checked, and at the outgoing of the filter it must not exceed 0.1 ppm.

Characteristics of feed water for this project are as follows:

TABLE N°1 ""CHARACTERISTICS OF THE WATER TO TREAT"

CHARACTERISTICS OF FEEDING WATER		
Parameters	u.m.	mln
Ca	mg /l CaCO3	750
Mg	mg /l CaCO3	550
Na	mg /l CaCO3	1103
K	mg /l CaCO3	12
Fe	mg /l	0,04 ÷ 0,25
SiO_2	mg /l	26
HCO_3	mg /l CaCO3	360
Cl	mg /l CaCO3	1510
SO_4	mg /l CaCO3	475
NO_3	mg /l CaCO3	70
TDS	mg /l	3030,71
Conductivity	µS	5000
Temperature	°C	20
pH		7

Note:
For the updated Feed Water analysis, please refer to the Attachment No.4

The above mentioned rates are those informed by you when agreed for the project study, and, following recent controls important variations were not found.

However, we suggest executing complete analysis every six months, evaluating the results with those mentioned in the above table; should there be important differences, (over 10%), we invite you to contact us to correct the variations on the functioning parameters.

G - IRON AND MANGANESE REMOVAL FILTERS

G.1 PREMISE

For the mechanical filtration and the removal of iron and manganese four filters have been installed, each one dedicated and connected to its reverse osmosis line.

The filters are made of electro-welded steel, the installed pneumatic valves are all of butterfly type, made in cast iron, double effect, complete with actuators and pilot solenoid-valves.

G.2 REGENERATION CRITERIA

The regeneration procedures of iron-removal filters are managed by the automation system, according to the following criteria:

In the position "O" the system will not make the regeneration;

In the position "AUT" the start of the regeneration begins according to the setting of the automation system;

In the position "MAN" the regeneration phases begin.

G.2.1 MANUAL RE-GENERATION

It is possible to start the re-generation through the local panel placed on the front of the filter with the selector positioned on "MAN", once released, the filter shall start the re-generation according to the necessary time.

During the re-generation it is possible to manually advance the phases pressing the button "phase advance", with each press it will jump to the next regeneration phase.

G.2.2 AUTOMATIC RE-GENERATION

If the filter is set in re-generation "AUT", the system will start the re-generation according to the parameters set on the page "settings", and according to the following criteria that occurs first:

"regeneration after" = (24hrs)

"max. differential pressure" = 0.8 bar - However, the regeneration start begins according to the set parameters in the field "Delay" initially set at 5 minutes.

During the re-generation it is possible to manually advance the phases pressing the button "phase advance", with each press it will jump to the next regeneration phase.

1 + 2 1 Day

48 h.

5 + 4 end day

G.3 FILTERS CHARACTERISTICS

The installed filters have the following characteristics:

n° 4 Automatic back-wash filters, 11-ZA01, back-washed with net-work water, each one has the following technical detail:

- Type : by pressure, vertical
- Manufacturer :
- Model : PAF 30000
- Pressure : 6 bar
- Temperature : 45°C
- Flow-rate : 65 m³/h
- Material : FE 430
- Diameter : 3.000 mm
- Filtering section : 7,0 m²
- Cylinder height : 3.000 mm
- Internal paint : epossidic cycle
- External paint : epoxy-vynilic cycle
- Filling material : "Birm"
- Quantity of installed filtering material : 7.050 l

TABLE 1: BACK-WASH PHASE

PHASE	TIME	WATER		AIR	
		FLOWRATE	CONSUMPTION	FLOWRATE	CONSUMPTION
Partial emptiness	5'		4,0 m³		
Backwash with air	5'			350 Nm³/h	29,0 Nm³
Backwash with water	10'	210 m³/h	35,0 m³		
Current washing	5'	100 m³/h	8,5 m³		
Totals	25'		47,5 m³		29,0 Nm³

The valves to set in order to adapt to the flow-rate values indicated on the table are:

- Backwash with water : 11-YV03
- Current washing : 11-YV04

The filters are made of carbon steel epoxy painted, equipped with butterfly valves made in cast iron, complete with double effect pneumatic actuators and electro-pneumatic control board with solenoid valves.

The water goes through the filter downward during service and upwards during the backwash operation.

The filters are operated automatically by a PLC that controls all the phases (service & backwash).

The following table shows the position of the valves during the different phases and the operational time. It refers to the filter 11-ZA01, but it is exactly the same for all the other filters of the filtration battery.

G.4 POSITION OF VALVES DURING THE RE-GENERATION PHASE

The position of the valves for the filters and necessary instruments during the re-generation phases are described on the below table:

PHASES	YV01	YV02	YV03	YV04	YV05	YV06	YV07	YV08	Blower 38-CP01-1/2	Pumps 61-P01-1/2
Service	Open	Closed	Closed	Closed	Closed	Open	Closed	Closed		
Partial Empty	Closed	Closed	Closed	Closed	Closed	Closed	Open	Open		
Air	Closed	Open	Closed	Closed	Open	Closed	Closed	Closed	Service	
Backwash	Closed	Open	Open	Closed	Closed	Closed	Closed	Closed		Service
Final Rinse	Open	Closed	Closed	Open	Closed	Closed	Closed	Closed		

G.5 FILLING MATERIAL

Each filter is filled with:

TYPE OF SAND	QUANTITY	GRANULOMETRIA
1° Layer	Kg 2.100	Sand 3 ÷ 6 mm
2° Layer	l 7.022	2 - 0.42 mm Birm

For the first filling (for maintenance of what-ever required) carry out the following steps:

- Open the drain valve 11-V01-1;
- Dismantle the top man hole;
- Dismantle the lateral man-hole and extract the sand manually;
- Remove all the filtering matter and clean inside the filter;
- Check the integrity of the diffusers and assure that they are clean;
- Wash the filter with water;

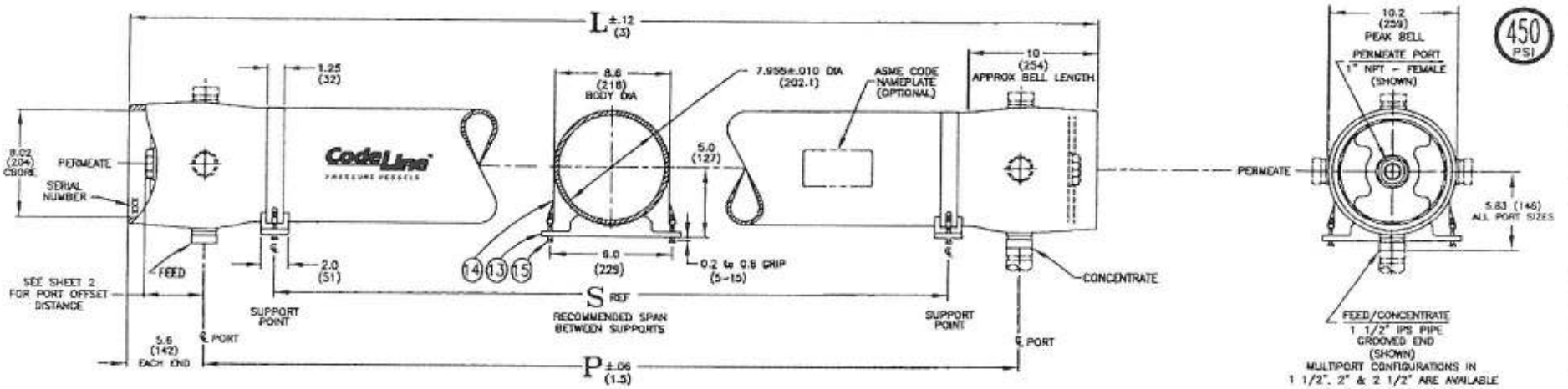
To fill the filter it is necessary to follow these steps:

- Close the drain valve 11-V01-1;
- Insert sand filtering material until the diffusers are completely submerged, approx. 7 ÷ 8 cm from the low man-hole. Level the layer;
- Close the man-hole and clean the rubber seals of the two flange surfaces, then slowly tighten the bolts cross-wards;
- Insert all the filtering material from the top man-hole;
- Close the top man-hole and clean the rubber seals of the two flange surfaces, then slowly tighten the bolts cross-wards;
- Perform two back-wash cycles manually;
- Put the filter in service;

Filtering media cannot be wasted before having done a correct analysis of the components to identify the pollutant then choose the correct way for its disposal.

During the replacement of the filtering media it is highly recommended to use protection devices.

Strictly follow the procedure described above, in particular taking care to depressurise the filter before opening the manholes and flanges. Furthermore, do not enter inside the filter before evacuating all the gasses (at least 24 hours), masks could be required.

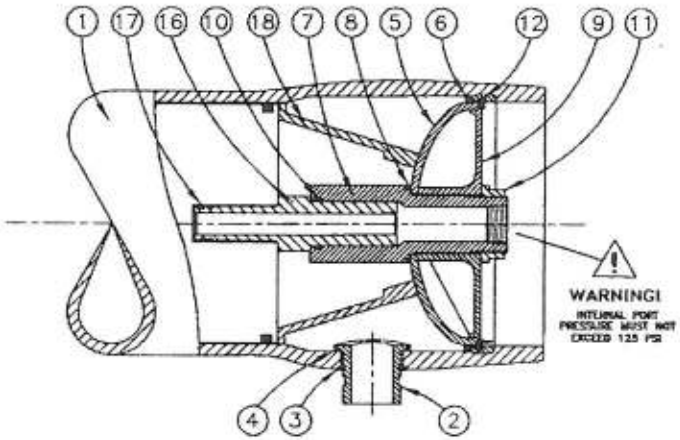


VIEW AT CENTER SUPPORT
CENTER VESSEL ON 2 OR 3 SUPPORTS AT SPAN(S) "S" : 3 SUPPORTS REQUIRED FOR LENGTHS -4 AND OVER

CAUTION—INCORRECT MANIFOLDING WILL CAUSE SEVERE LOCAL STRESS AROUND PORT AND MAY RESULT IN LEAKS AND PREMATURE FAILURE! TAKE EVERY PRECAUTION LISTED ON REVERSE, SEE INSTALLATION INSTRUCTIONS FOR FURTHER DETAILS

Dwg. Ref.	Qty. Per	Item Number	Description	Materials/Remarks
			SHELL	
(1)	1	-	Shell	Filament wound epoxy/glass composite. S.S. head locking grooves integrally wound in place. Shell exterior overlaid with white high gloss polyurethane paint.
(2)	A/R	SEE	F/C PORT	316 SST
(3)	A/R	ORDER	Retaining Ring	302 Series SST
(4)	A/R	SECTION	F/C Port Seal	Ethylene Propylene - Square Cut
			HEAD	
(5)	2	45162	Dished Metal Head	316 S.S.T.
(6)	2	46659	Head Seal	Ethylene Propylene - Square Cut (445)
(7)	2	50935	Permeate Port	Engineering Thermoplastic
(8)	2	45342	Permeate Port Seal	Ethylene Propylene - Square Cut (218)
(9)	2	45154	Securing Plate	Engineering Thermoplastic
(10)	2	45308	Adapter Seal	Ethylene Propylene - O-ring (221)
(11)	2	45066	Port Nut	Engineering Thermoplastic
			HEAD INTERLOCK	
(12)	2	45261	Retaining Ring	302 Series SST
			VESSEL SUPPORT	
(13)	* 3	52169	Universal Saddle	Engineering Thermoplastic
(14)	* 3	45642	Strap Assembly	Type 304 SST - PVC cushion
(15)	6	46265	Strap Screw	5/16-18 UNC, 18-8 Stainless Steel
			ELEMENT INTERFACE	
(16)	2	As Required	Adapter	Engineering Thermoplastic
(17)	A/R	As Required	PWT Seal	Ethylene Propylene
(18)	1	47337	Thrust Cone	Engineering Thermoplastic - white

* 2 EACH FURNISHED WITH LENGTH CODE 1, 2 & 3



SECTION THROUGH END CLOSURE
ITEM (18) DOWNSTREAM ONLY

Shell Length Code	L O.A. IN (MM)	P Span IN (MM)	S Span IN (MM)	APPROX. ASSEMBLY Weight LB (KG)
1	58.2 (1478)	47 (1194)	28 X 1 (711)	67 (30)
2	98.2 (2494)	87 (2210)	56 X 1 (1422)	89 (40)
3	138.2 (3510)	127 (3226)	80 X 1 (2032)	114 (51)
4	178.2 (4526)	167 (4242)	64 X 2 (1626)	137 (62)
5	218.2 (5542)	207 (5258)	78 X 2 (1981)	160 (73)
6	258.2 (6558)	247 (6274)	92 X 2 (2337)	184 (83)
7	298.2 (7574)	287 (7290)	106 X 2 (2692)	207 (94)

CodeLine™ PRESSURE VESSELS
PENTAIR WATER TREATMENT

NOTES
* DIMENSION IN INCHES (MM APPROX.)
* FOR REFERENCE ONLY, NOT TO BE USED FOR CONSTRUCTION UNLESS CERTIFIED

CODELINE MODEL 80A45
MEMBRANE HOUSING

ECN	SHEET	SIZE	NUMBER	REV
8807	1 OF 2	B	519002	K

RATING:

DESIGN PRESSURE.....450 PSI at 120°F (3.2 MPa at 49°C)

MIN. OPERATING TEMP.....20°F (-7°C)

FACTORY TEST PRESSURE.....675 PSI (4.7 MPa)

BURST PRESSURE.....2700 PSI (19 MPa)

INTENDED USE

The CodeLine Model 80A4S Fiberglass RO Pressure Vessel is designed for continuous, long-term use as a housing for reverse osmosis membrane elements to desalt typical brackish waters at pressures up to 450 psi. Any make of eight-inch nominal diameter spiral-wound element is easily accommodated; the appropriate interfacing hardware for the element specified is furnished with the vessel.

The CodeLine Model 80A45 is designed in accordance with the engineering standards of the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers (ASME Code). At small additional cost, vessels can be inspected during construction by an ASME Authorized Inspector and ASME Code stamped.

The CodeLine Model 80A45 must be installed, operated and maintained in accordance with the precautions listed and good industrial practice to assure safe operation over a long service life.

The high performance reinforced plastic shell must be allowed to expand under pressure; undue restraint at support points or piping connections can cause leaks to develop in the shell. This side-ported vessel requires special precautions in mounting and connection to piping so that the vessel will not be subjected to excessive stress due to bending moments acting at the side openings in the fiberglass shell.

The end closures, incorporating close-fitting, interlocking metal components, must be kept dry and free of corrosion; deterioration can lead to catastrophic mechanical failure of the heads.

Pentair Water Treatment will assist the purchaser in determining the suitability of this standard vessel for their specific operating conditions. The final determination however, including evaluation of the standard materials of construction for compatibility with the specific corrosive environment, shall be the responsibility of the purchaser. Alternate materials with enhanced corrosion resistance are available on special order.

Specifications subject to change without notice.

PRECAUTIONS

DO... read, understand and follow all instructions; failure to take every precaution will void warranty and may result in vessel failure

DO... mount shell centered on horizontal members spaced at recomended span(s) "S" using compliant mounting hardware furnished; tighten hold down straps just snug

DO... align and center side ports with the manifold header; correct causes of misalignment in a row of vessels connected to the same header

DO... use flexible type grooved-end pipe couplings, Victaulic® Style 75 or equal, at sideports; allow full .125 inch gap between port and piping, and position piping to maximize flexibility of connection

DO... provide flexibility in, and support for piping manifold so that vessel can grow in length under pressure without undue restraint; provide additional flexible joints in large pipes leading to manifold header

DO... provide overpressure protection for vessel set at not more than 105% of design pressure

DO... inspect end closures regularly; replace components that have deteriorated and correct causes of corrosion

DO NOT... work on any component until first verifying that pressure is relieved from vessel

DO NOT... make rigid piping connections to ports or clamp vessel in any way that restricts growth of fiberglass shell under pressure; ▲DIA = 0.015 in. (0.4mm) and ▲L = 0.2 in. (6mm) for a length code -8 vessel

DO NOT... hang piping manifolds from ports or use vessel in any way to support other components

DO NOT... tighten Permeate Port connection more than one turn past hand tight

DO NOT... operate vessel without connecting both Permeate Ports internally to a complete set of elements or otherwise plug ports internally so that external piping connection is not subjected to feed pressure

DO NOT... install Spacer on downstream end of vessel

DO NOT... operate vessel without Thrust Cone installed downstream

DO NOT... pressurize vessel until double checking to verify that the Retaining Ring is in place and fully seated.

DO NOT... operate vessel at pressures and temperatures in excess of its rating

DO NOT... operate vessel with permeate pressure in excess of 125 psi at 120°F (0.9 MPa at 49°C)

DO NOT... tolerate leaks or allow end closures to be routinely wetted in any way

DO NOT... operate at pH levels below 3 or above 10

NOTE

Spiral Retaining Ring Removal Tool (50303) recommended to open and close vessel.

For complete information on proper use of this vessel please refer to the 80A Series USER'S GUIDE, Bulletin 519014

ORDERING

Using the chart below, please check the features you require and fax them with your purchase order to our customer service department for expedited processing.
For optional materials and or feature not listed below, please consult the factory for pricing and availability.

Please note that we require your membrane brand and model number when ordering. If this information is not initially available, you may provide it at a later date by checking the appropriate box below

VESSEL LENGTH CODE – please check one

MODEL 80A45 ☐-1 ☐-2 ☐-3 ☐-4 ☐-5 ☐-6 ☐-7

EXTERIOR FINISH – please check one

☐ Standard – white high-gloss polyurethane coating over sanded surface.

☐ Option – optional colors are available for 50 or more vessels per order. Call factory for pricing details.

CERTIFICATION – please check one

☐ Standard – certified by CodeLine, not code stamped.

☐ Option – Certified by ASME Authorized Inspector, Code stamped and registered with National Board. Call factory for pricing details.

MEMBRANE BRAND AND MODEL – please check one and fill in information

☐ Please supply adapters for the following membrane brand and specific model.
Brand _____ Model _____

☐ Membrane brand and model information is not currently available, but will be supplied to CodeLine on or before the following date. ____/____/____

MATERIAL AND PORT CONFIGURATIONS OPTIONS – please check one

☐ Standard – all materials and port configurations per drawing 519002 on the opposite page.
NOTE: The options listed below will increase the vessel price. Call factory for pricing details.

☐ Option Ultrapure package for ultrapure / high temperature operation. Includes:
One 316 SS 1 1/2" permeate port with a type 3A sanitary connection. (6.3" Port Offset)
One PET permeate port with 1" NPT threads.
One standard PET adapter and one solid adapter (to plug the PET permeate port).

☐ Option Sanitary package for sanitary / high temperature operation.
Same as the ultrapure package but also includes
Two each feed / concentrate ports with 2" type 3A sanitary connections.

☐ Option High Temperature package for high temperature operation only.
Includes two PET permeate ports instead of the standard PVC material.

☐ Option Customer specified port configuration. Using the chart below, please indicate the custom options you require for each end of the pressure vessel (many options are required only at one end).
Please consult the factory as these options will affect pricing and vessel lead time.

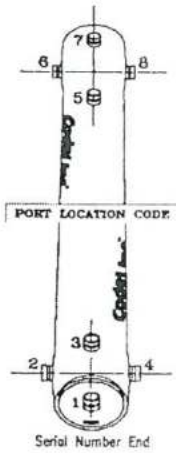
Serial number end	Opposite end	
		PERMEATE PORT MATERIAL
☐	☐	Standard – PVC Thermoplastic (for applications up to 120° F)
☐	☐	Option – PET Thermoplastic (for up to 176° and high back pressure operation)
☐	☐	Option – 316L Stainless Steel (for up to 176° and high back pressure operation)
		PERMEATE PORT CONFIGURATION
☐	☐	Standard – 1" NPT Female Threads; 4.5" Port Offset
☐	☐	Option – 3/4" NPT Female Threads; 4.5" Port Offset
☐	☐	Option – 1/2" NPT Female Threads; 4.5" Port Offset
☐	☐	Option – 1 1/2" IPS Grooved End; 6.3" Port Offset
☐	☐	Option – 1 1/4" IPS Grooved End; 6.3" Port Offset
		FEED PORT CONFIGURATION
☐	☐	Standard – 1 1/2" IPS pipe, grooved ends, with ports in-line
☐	☐	Optional – Multi-Ports™, increased port diameter or port clocking

Using the instructions in CodeLine Bulletin #507054 please fill out your feed port configuration in the space below.
List port location first followed by port size for each choice.
2 1/2" ports & 2" Sanitary ports are not allowed 90° from any other port size.

PORT SIZE CODE	
D	1 1/2" GROOVED END
E	2" GROOVED END
F	2 1/2" GROOVED END
S	2" SANITARY

Serial number end ☐☐☐☐☐☐

Opposite end ☐☐☐☐☐☐



Serial Number End

L - HIGH PRESSURE PUMP

L.1 PREMISE

The outgoing water from the cartridge filters flow directly into the suction of the osmosis feed pump 41-P01 which conveys by pressure directly to the osmotic membrane.

The electro-pump is complete with interception valve and check valve on the outgoing pipe.

The high pressure pumps are commanded by an automation system and are complete with a progressive start system to reduce the pressure during the start-up.

L.2 HIGH PRESSURE PUMPS 41-P01

The suction of the pump is manifold to the cartridge filter deliver header.

On the suction pipe a safety pressure switch is available to protect the pump function without pressure.

The calibration value of the pressure switch must be 0.5 bar.

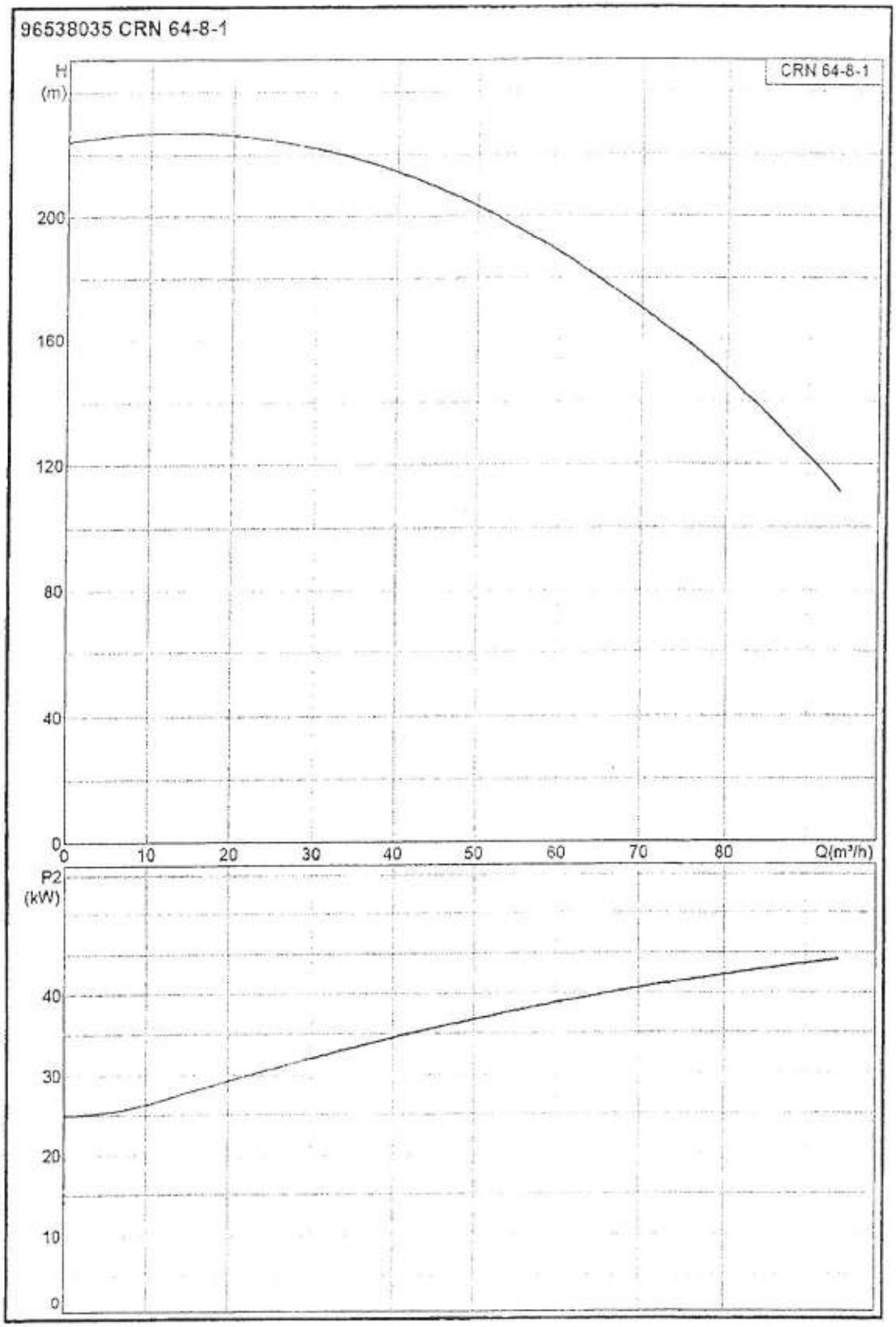
Before starting the pump 41-P01, it is necessary to follow the steps mentioned here below:

- Open the in/out valves;
- Select the local switches on "AUT";
- Position all the switches for the pumps 41-P01, positioned on the panel board "ON" and the selectors on "AUT";
- Through the tele-command select the pumps 41-P01, in automatic;

n° 1 Vertical centrifugal electro-pumps, having the following technical details:

o Model	: GRUNDFOS CRN 64.8.1
o Type	: Vertical multistage
o Material	: AISI 316
o Design capacity	: 60 m^3/h
o Design head	: 17 bar
o Rpm	: 2.900
o Power	: 45 KW
o Voltage	: 380 V 50 Hz

96538035 CRN 64-8-1



Attachment No.4 - Reverse Osmosis Feed Water Analysis

Tests	Unit	Analysis
pH	-	7 - 7.5
Conductivity	µs/cm	5600
Total Dissolved Solids	ppm	3960
Total Alkalinity	ppm as $CaCO_3$	303
Total Hardness	ppm as $CaCO_3$	1270
Ca Hardness	ppm as $CaCO_3$	690
Mg Hardness	ppm as $CaCO_3$	580
Sulfate	ppm	760
Nitrates	ppm	21
Chloride	ppm	1470
Sodium	ppm	667
Potassium	ppm	15
Silica	ppm	24
Strontium	ppm	2
Barium	ppm	0.20
Fluoride	ppm	<1
Iron	ppm	0.40
Manganese	ppm	0.45
Chemical Oxygen Demand	ppm	14
Biological Oxygen Demand	ppm	0
Fats, Oils and Grease (FOG)	ppm	11

Order No. (25010050)

Description	UOM	QTY
Reverse Osmosis Membranes	EA	61

(Each point must be confirmed/commented upon and must be submitted along with the bid)

S. No.	Requirement	Vendor's confirmation/ acceptance/ comments to be mentioned for each item
A	**TECHNICAL:**	
1	Confirm that the offer has been submitted strictly as per the enquiry.	
2	Vendor to confirm that the specifications of the Membranes have been indicated in their quotation, as per Tender Specifications	
3	Confirm that there is no technical deviation and specification of offered Membranes is same as per tender specification.	
4	In case of deviation/ reservations etc., to the tender conditions, confirm that the same has been given in separate Deviation sheet as desired & deviations/reservations/notes/ comments etc., given elsewhere in the offer shall not be considered.	
5	Quality Commitment: Membranes supplied will meet the technical specification as agreed to.	
6	Shipping: Confirm that there is no deviation as per tender specification	
7	Only manufacturers or their exclusive representatives are eligible to submit tenders. agents are not permitted to submit tenders on their own behalf. an endorsement letter from the manufacturer is required for exclusive representatives, and shall be provided along with offer.	
B.	**COMMERCIAL**	
1	Manufacturer name	
2	Full address	
3	Supplier name	
4	Full address	
5	Offer no.	
6	Offer validity (at least 90 days from closing date)	
7	Indicate the quoted currency.	
8	Indicate Country of Origin of goods offered	
9	Indicate Country of Shipping of goods offered	
10	Details of Packing of goods offered.	
11	Accordance to Jordan prevailing law, you should pay 6 per thousand of the total order to cover the REVENUE STAMPS	
12	Payment terms: (CAD, NET 30 days)	
13	Any extra optional and/or additional services should be clearly detailed and priced.	

S. No.	Requirement	Vendor's confirmation/ acceptance/ comments to be mentioned for each item
14	Confirmation that the quoted prices are valid for acceptance up to 90 days from the due date / extended due date of tender.	
15	Promised delivery date shall be provided, the Membranes shall be delivered within 10 weeks as of Purchase order.	
16	For Local Suppliers & Bidders: - the offered prices shall be inclusive of all taxes, duties, and other applicable charges. - Breakdown of taxes and charges shall be provided with commercial offer	
17	For Foreign Bidders: Confirm that all taxes, duties & levies of any kind Up to port of shipment shall be borne by supplier.	

LINE NO.	VOCUB NO.	DESCRIPTION	PART NUMBER	UNIT OF MEASUREMENT	ORDERED QUANTITY	UNIT COST	TOTAL COST	CONFORMITY	DEVIATIONS
1	2900119005	REVERSE OSMOSIS MEMBRANES	---	EA	61				

LINE NO.	Description	
1	Offer validity (at least 60 days from closing date)	
2	Total amount (EX-WORKS)	
3	Currency	
4	Freight terms	
5	Freight charges	
6	Packing charges	
7	Promised delivery date	
8	Accordance to Jordan prevailing law, you should pay 6 per thousand of the total order to cover the REVENUE STAMPS	

الملحقات

ATTACHMENTS

PERFORMANCE GUARANTEE

MESSRS : JORDAN PETROLEUM REFINERY CO. LTD
P.O.8OX 1079
AMMAN-JORDAN

DEAR SIRS,

AT THE REQUEST OF MESSRS.....
(HEREINAFTER CALLED "THE ACCOUNTEE"), WE HEREBY ISSUE IN YOUR FAVOUR OUR L/G NO. ..... AS FOLLOWS:

WE..... BANK..... ,AMMAN / JORDAN IRREVOCABLY AND UNCONDITIONALLY HEREBY UNDERTAKE TO PAY YOU WITHOUT DELAY ON YOUR FIRST WRITTEN DEMAND AND NOTWITHSTANDING ANY OPPOSITION OR OBJECTION BY THE ACCOUNTEE WITHIN THE VALIDITY OF THIS GUARANTEE, THE AMOUNT OF.....
.....
.....
IN RELATION TO TENDER NO. .....
FOR THE SUPPLY OF.....

THIS GUARANTEE SHALL REMAIN VALID UNTIL ....., AND THE VALIDITY OF THIS GUARANTEE SHALL BE RNEWED AUTOMATICLLY AND WILL NOT BE CANCALLED WITHOUT YOUR WRITTEN CONSENT (ON THE ACCOUNTEE OWIN EXPENSE)