



**TECHNICAL PROPOSAL
FOR
Refrigeration PACKAGE**

No.:	9906315
Rev.:	01
Client:	NARGAN
Project:	Dehdasht Petrochemical PROJECT
Pages:	1 of 9

**TECHNICAL PROPOSAL
UNPRICED**

For

**Refrigeration PACKAGE
PK-6101**

Dehdasht Petrochemical Project

CLIENT MR Ref. No.

DPIC98-12-001-000-ME-MR-4150-0001-D1

KASRAVAND Ref.:

9906315

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**TECHNICAL PROPOSAL
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No.:	9906315
Rev.:	01
Client:	NARGAN
Project:	Dehdasht Petrochemical PROJECT
Pages:	3 of 9

Index

1. PROPOSAL DESCRIPTION	4
2. APPLICABLE CODES AND STANDARD	4
3. DOCUMENT PRECEDENCY	4
4. SCOPE OF SUPPLY	5
5. SCOPE OF WORK	5
6. BATTERY LIMIT	6
7. TECHNICAL SPECIFICATION	6
8. UTILITY CONSUMPTION LIST	6
9. SPARE PART LIST	6
10. SPECIAL TOOLS	6
11. SURFACE PREPARATION AND PAINTING	6
12. INSPECTION & TEST	7
13. EXECUTION	7
14. SITE CONDITIONS	8
15. UTILITY INFORMATION	8
16. EXCLUSION AND DEVIATION	8
17. INSPECTION AND TEST	8
18. PACKING AND PRESERVATION	9
19. PERFORMANCE GUARANTEE	9
20. DELIVERY	9



**TECHNICAL PROPOSAL
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No.:	9906315
Rev.:	01
Client:	NARGAN
Project:	Dehdasht Petrochemical PROJECT
Pages:	4 of 9

1. PROPOSAL DESCRIPTION

This proposal covers the requirements of Refrigeration package with 2 Compressor Units. These packages will be made as per scope of work specified in Material Requisition DPIC98-12-001-000-ME-MR-4150-0001-D1 and agreed technical clarification in the bid stage as an attachment of this proposal.

2. APPLICABLE CODES AND STANDARD

- API 619 With Provided Deviations For Compressor
- MYCOM/MAYEKAWA Standards
- JIS
- IEC
- DIN
- ASME
- TEMA R for Condenser and Chiller.

3. DOCUMENT PRECEDENCY

In case of any conflict between order documents, the order of precedence will be as below;

- Technical and Commercial Clarification and Purchase Order
- International Applicable Code and Standards
- Purchaser Data Sheet and Specification and Vendor Technical and Commercial Offer
- Local Regulation



**TECHNICAL PROPOSAL
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No.:	9906315
Rev.:	01
Client:	NARGAN
Project:	Dehdasht Petrochemical PROJECT
Pages:	5 of 9

4. SCOPE OF SUPPLY

Referring to Material Requisition section 3.1 and considering agreed technical clarification during Bid stage.

5. SCOPE OF WORK

Referring to Material Requisition and the applicable document as per Part-7 of this proposal, the proposed scope will cover the following items:

- Local Regulations to follow during contract execution
- Obtaining governmental Approval (If any)
- Engineering Design & Documentation
- Supply of Raw Materials
- Supply of Consumables (like fasteners and accessories)
- Calibration of equipment/material and tools
- Non-destructive tests and other quality control (test and inspection) measures
- Assembly
- Painting
- Marking & Packing for each station
- Delivery (time, location, etc.)
- Supervision for Pre-commissioning and Commissioning calibration, commissioning and testing at the site
- Guarantee
- Final documentation (vendor data pack)
- Spare parts required for commissioning & start up
- Spare parts required for 2 years operation
- Special tools (if applicable)
- Internal connection and wiring within the package
- After sale service



**TECHNICAL PROPOSAL
FOR
Refrigeration PACKAGE**

No.:	9906315
Rev.:	01
Client:	NARGAN
Project:	Dehdasht Petrochemical PROJECT
Pages:	6 of 9

6. BATTERY LIMIT

Proposed package battery limit will be as per proposed technical specification and agreements in TCL.

7. TECHNICAL SPECIFICATION

Proposed package technical specification of equipment will be as defined herein. The package component will be supplied according to Purchaser referenced specifications and agreements made during bid stage.

Package will be designed for 25 years' lifetime and considered to be installed and operated in Onshore application in Project Site Location" Dehdasht City, Kohgiluyeh-Buyer Ahmad region, Iran".

8. UTILITY CONSUMPTION LIST

Will be finalized during detail engineering.

9. SPARE PART LIST

9.1. COMMISSIONING & START UP SPARE PART FOR EACH PACKAGE

As Per MYCOM Standard

9.2. TWO YEARS OPERATION SPARE PART

As Per MYCOM Standard

9.3. CAPITAL SPARE PART

One Set of Complete rotor plus one set of complete sealing per each type and size Or
One Set of Compressor Block
One Set of lube oil pumps

10. SPECIAL TOOLS

Applicable For Compressor Only

11. SURFACE PREPARATION AND PAINTING

MYCOM standard Painting Specification will be applied for Compressor Units and other skids will be made as per Project Specifications.



TECHNICAL PROPOSAL FOR Refrigeration PACKAGE

No.:	9906315
Rev.:	01
Client:	NARGAN
Project:	Dehdasht Petrochemical PROJECT
Pages:	7 of 9

12. INSPECTION & TEST

Package Inspection and Test will be in accordance with proposed ITP which is agreed between parties in clarification stage during bid stage.

13. EXECUTION

13.1. PROCESS

Following activities will be done in process discipline:

- Equipment and Lines sizing and Rating
- Engineering documents preparation (PFD, P&ID, Equipment DS, EQL, Utility Consumption, ...)

13.2. PIPING

Pipes rating and wall thickness will be in accordance with agreements in clarification. It is important to divide all packages to some skid mounted sections to facilitate the construction, shipment and commissioning stages.

Following activities will be considered in piping engineering:

- Preparation the line list according to P&IDs
- Preparation of plot plan
- Preparation of project Tie-in list
- Preparation of 3D Model
- Preparation of lines isometric drawings
- Procurement of insulations everywhere is required
- Preparation Procurement documents such as pipe and fittings MR, TBE
- Pipe procurement, shipment
- Supervision during construction

13.3. MATERIAL

As per Agreed Technical Clarification.



**TECHNICAL PROPOSAL
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No.:	9906315
Rev.:	01
Client:	NARGAN
Project:	Dehdasht Petrochemical PROJECT
Pages:	8 of 9

13.4. ELECTRICAL

As per Agreed Technical Clarification.

13.5. INSTRUMENTS

As per Agreed Technical Clarification.

13.6. CIVIL WORK

As per Agreed Technical Clarification.

14. SITE CONDITIONS

For environmental data and site condition, reference is made to the plant design basis.

15. UTILITY INFORMATION

For specification of utilities, reference is made to the plant design basis.

16. EXCLUSION AND DEVIATION

Following items are excluded in this offer:

- Lighting in package area
- Foundation
- Installation
- F&G system
- Instruments signals transfer outside B. L.
- Inter connecting piping, to/from loose supply process equipment outside of Package Battery Limit

17. INSPECTION AND TEST

Package inspection and test will be in accordance proposed ITP in the bid stage and agreed



**TECHNICAL PROPOSAL
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No.:	9906315
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Client:	NARGAN
Project:	Dehdasht Petrochemical PROJECT
Pages:	9 of 9

clarifications attached to this proposal.

18. PACKING AND PRESERVATION

Package packing will be as per agreed clarification. Package preservation will be applied for 6 months storage including flange faces protection and dry conditioning of non-coated carbon steel vessel by Silica Gel.

19. PERFORMANCE GUARANTEE

Contractor guarantees the performance of the package during the plant performance test as defined hereby, provided that:

All supplied material, equipment and/or stated component parts will be guaranteed by Vendor against defective material, design and workmanship, when operated under normal conditions, for 12 months after commissioning and putting it into operation but not exceeding 18 months after the date of delivery.

The guarantee period for repaired or replaced parts will be 12 months after startup of repaired equipment/items but not more than 18 months after the delivery of repaired or replaced equipment/items parts or replaced.

20. DELIVERY

14 Months EX-Work KASRAVAND FACTORY