



# PACKAGE DATASHEET



**Purchaser:** Zanzan Petrochemical Co.  
**Owner:** Zanzan Petrochemical Co.  
**Project:** UREA & AMMONIA  
**Plant:** Zanzan City  
**Location:** IRAN

As per MYCOM STD Compressor Skid Option

Purchaser		Zanzan Petrochemical Co.
Owner		Zanzan Petrochemical Co.
Plant Name/Project		UREA
No.of Required units:		1 Refrigeration Package( 2 Compressor Skids and Common Condensing Unit)
Item No. /Name		



## Design Operating Condition

### Design Case

Refrigerant	<b>Ammonia</b>		
Capacity	kg/hr	<b>500.0</b>	<b>For Each Compressor</b>
Evaporating temp	°C	<b>-37.5</b>	
Condensing temp	°C	<b>50</b>	

### Basic Specification

Package Type	Refrigeration				Q'ty:1 Unit
Ref. Compressor Type/Model	Screw Compressor		N2016		
No.of Compressors: Two compressor Per Unit					
Operating Condition (1 unit)		Max capacity		Note	
Comp. Capacity		<b>207.0</b>		<b>Given capacities are ±5% per each compressor</b>	
Break kW		<b>150.0</b>		<b>Given capacities are ±5% per each compressor</b>	
Speed		<b>2950</b>			
Driver	<input checked="" type="checkbox"/> Electric motor		<input type="checkbox"/> Soft starter		
Starting Method	<input checked="" type="checkbox"/> Direct on line		<input type="checkbox"/> VFD		
Capacity Control	Control Source		<input type="checkbox"/> Inlet Pressure		
	Range of Control		<input checked="" type="checkbox"/> 30 to 100 %		
	Control Method		<input checked="" type="checkbox"/> Slide valve		
Oil Separation	1 stage ( Direction Change, Gravity and Coalescer element )				
Location	<input checked="" type="checkbox"/> Outdoor/underroof		<input checked="" type="checkbox"/> Hazardous Zone 2,IIB,T3		
	<input checked="" type="checkbox"/> Ambient (-30 /+48)°				
Noise Limitation	<input checked="" type="checkbox"/> Specification (85 dBa @ 1 Meter from Skid Edge)				
Code & Standard	<input checked="" type="checkbox"/> JIS		<input checked="" type="checkbox"/> ASME VIII div 1		<input checked="" type="checkbox"/> IEC, IECEX (No mechanical ATEX)

### Utility (Design capacity)

Electricity	Service	Drive Power (kW)	Voltage (V)	Frequency (Hz)	Note
	Main Electric Moto	<b>150</b>	6000	50	
	Oil Pump Motors	5	400	50	
	Heater/ Heat tracing	2 (approx.)	400	50	
	Control Panel	2	230	50	IP55
	Air Cooler	N/A			
Cooling water	Temperature (°C.)	in 26C	return 36C	Flow Rate kg/hr 50,000	
	Pressure (bar G)	in	return		
Steam	Pressure (kg:cm <sup>2</sup> G)		Temp. (deg.°C.)		
Instrument Air	Pressure (bar G) 4 - 6		Temp. (deg.°C.)		



## Screw Compressor Unit Components(per Compressor Unit)

<input checked="" type="checkbox"/>	<b>Compressor</b> Make Mayekawa Mfr.	Q'TY: 1
Type:	Oil Injected Screw Compressor	Model N2016
Material :	Casing: Cast Iron FC300	Rotor: Nodular Cast Iron
Shaft Seal:	Singel Mechanical Seal as per MYCOM STD	
		Code: JIS
<input checked="" type="checkbox"/>	<b>Electric motor for compressor</b>	Q'TY: 1
Type:	Squirrel Cage Induction motor	Type of Explosion proof: Exec
Enclosure	TEFC	Ingress protection: IP56
Rated Power:	<b>150</b>	Voltage: 400 V
Poles:	2	Drive Speed: 2950 rpm
Frequency :	50	
<input checked="" type="checkbox"/>	<b>Oil pump</b> Make MYCOM/ Mayekawa Mfr.	Q'TY: 1
Type:	Screw type Gear Pump	
Material :	Casing CI	Rotor: CI
<input checked="" type="checkbox"/>	<b>Electric motor for oil pump</b>	Q'TY: 1
Type:	Squirrel Cage Induction motor	Type of Explosion proof: Exec
Enclosure:	TEFC	Ingress protection: IP56
Rated Power:	5	Voltage: 400 V
Poles:	4	Drive Speed: 1495 rpm
Frequency :	50	
<input checked="" type="checkbox"/>	<b>Oil Separator</b>	Q'TY: 1
Type:	Horizontal drum type ( Mycom design )	Code: MYCOM STD
Material:	CS	Element coalescers
<input checked="" type="checkbox"/>	<b>Oil cooler</b>	Q'TY: 1
Type:	MYCOM STD	
	Water Cooled	
<input checked="" type="checkbox"/>	<b>Oil Filter</b>	Q'TY: 1
		Code: MYCOM STD
<input checked="" type="checkbox"/>	<b>Suction gas strainer</b>	Q'TY: 1
Type:	Cone type	
<input type="checkbox"/>	<b>Noise Enclosure(If required)</b>	Q'TY: 0



### Unit Components (Common part)

**Refrigerant Condenser** Q'TY: 1  
 Type: Water Cooled Code: ASME VIII without U-stamp  
 Material: Carbon Steel

**Receiver** Q'TY: 1  
 Type: Pressure vessel Code: ASME VIII without U-stamp

**Economizer** Q'TY: 1  
 Material: Shell Carbon Steel Code: MYCOM STD

**Suction K.O Drum** Q'TY: 1

**Gas Purger** Q'TY: 1  
 Code: MFR STD

**Piping for Skid and Interconnecting piping as Loose Spools** Q'TY: 1

**Base Frame**  
 Type Carbon steel

**Local Push buttons and junction boxes**  
 Material : SS 304 or AL

### Control Panel and Instruments Q'ty: 1

- Control panel
- Scope  Vendor
- Location  Indoor  Non-hazardous
- Type  Transmitters
- PLC Siemens S7-400
- Manufacturer  Siemens or Equivalent Allen Bradley

Instrumentation as per MYCOM STD PID.Number and Type of Instruments will be as per MYCOM design

Package Design and manufacturing will be Only as per PARDIS project with following changes:

- 1) Motors will be Exec instead of Safe Area
- 2) Instruments will be Exd Inside Package
- 3) Two Compressor is selected based on MR while Pardis has one compressor Skid
- 4) Documents for Compressor Skid will be PID, Compressor Package Data sheet, Compressor Skid drawing
- 5) No Specification can be applied on this offer except agreed specified items in this quote



## Test & Inspection

Items	Compressor	Pressure Vessel		Piping*			Panel	Skid (Unit)	Remarks
		a	b	c	d	e			
Performance Test	S	-	-	-	-	-	-	-	
Mechanical Running Test	S	-	-	-	-	-	-	-	
Noise & Vibration Test	S	-	-	-	-	-	-	-	
Functional test	-	-	-	-	-	-	-	-	
Material Inspection	S	S	-	-	S	-	-	-	See note 3
Non-destructive Test (if applicable)	-	-	-	-	-	-	-	-	
Hydrostatic Test	S	S	-	S	-	-	-	-	See note 4
Pneumatic Leak Test	-	-	-	-	S	-	-	W	
Visual Inspection	-	W	-	S	S	-	W	W	
Dimensional Inspection	S	W	-	S	S	-	W	W	
Painting Inspection	-	-	-	-	-	-	-	W	
Shipping Inspection	-	-	-	-	-	-	-	-	
	-								

### Abbreviations)

- a ASME VIII Div.1 pressure vessel
- b No code pressure vessel.
- c Gas and lube oil piping
- d Coolant, CW, IA piping and tubing
- e Pre-fabricated piping

\* Pneumatic leak test for piping will be performed as whole packaged unit after assembly, but before painting.

\*\* SW is for tubing for gas and lube oil line.

W Witness Inspection by customer

S Report or certificate issue ( see note 4)

V Manufacture's test/inspection (Report and certificate is not issued)


### Notes)

- 1) Third party's inspection for local standard, regulation and code shall be provided by customer.
- 2) Compressor testrun will be done using air as compressed fluid with shop motor and lube oil system.  
Tests will be performed at our workshop in Japan.
- 3) Hydrostatic Pressure Test might be replaced by Pneumatic Testing according to the Code.
- 4) Test reports shall be provided acc. To supplier format.

## Code and Standard

General:	MYCOM Standard, IEC, JIS, ASME-Div.1
Compressor:	MYCOM Standard, JIS
Pressure Vessel / Heat Exchanger:	ASME VIII, DIV 1.
Piping:	MYCOM STD for Compressor Skid, ASME B16.5 & B31.3 for others
Valve:	MYCOM STD for Compressor Skid, Carbon steel
Flange:	MYCOM STD for Compressor Skid, ANSI, Carbon steel, JIS
Tubing :	Double ferrule compression type ( SS 316 ) / SS 1/2"
Electric:	IEC, EX-proof
Cable	Armoured cable
Cable glands	
Material:	MYCOM STD for Compressor Skid, ANSI,JIS,ASTM,ASME, DIN
Painting :	Vendor offshort painting
Note :	

## Scope of Supply

No.	Item	Scope	Remarks
1	Refrigeration Unit	Vendor	
2	Motors	Vendor	
3	PLC Control Panel for safe area	Vendor	
4	Motor starter ( MCC)	N/A	Direct Feeder for Users
5	Foundation Work	Customer	
6	Installation Work, Assembly	Customer	
7	Piping Work Piping within skid (Shop Work) 	VENDOR	(Skids to be considered together)
	All piping till Reciever	VENDOR	
	Piping to others	Customer	
8	Electric Wiring Work (for power)	Customer	
	Instrun (Shop Work)	VENDOR	
	Wiring (Field Work)	Customer	
9	Instrumentation Work (Wiring/Tubing)		
	Wiring (Shop Work)	VENDOR	
	Wiring between skids	VENDOR	Connections between skids will be unplugged for transport
	Wiring (Field Work)	Customer	
10	Insulation within skid		Insulation by customer
	Design	Customer	
	Material & Work	Customer	
11	Heat Tracing		
	Material	Vendor	
	Work	Vendor	
12	Transportation	Vendor	Till Ex-Work Local Factory
13	Supervising		
	Installation, Re-assembly	Optional	
	Pre-commissioning	Optional	
	Start-up	Optional	
14	Schrinked Packing	VENDOR	

No.	Item	Scope	Remarks
15	Lube Oil for initial charge	Optional	
16	Refrigerant	Customer	
17	Ocean Freight	Vendor	
18	Capital/two years operational spare par Commissioning spare parts	Optional Vendor	a) As per commercial offer
19	Structures(Inside Skid)	VENDOR	Within the skid
20	Anchor bolts and nuts	VENDOR	
21	Lifting Lugs for unit	VENDOR STD	
22	Special tools	VENDOR	For compressor only
23	Main motor cable gland	Customer	
24	Molecular Sleeve, Fitler dryer	N/A	

**Notes**

1 Guarantee period.  
Twelve (12) months after start-up or eighteen (18) months after notification of readiness for shipment, whichever occurs first.