



BINA EPC Contractor Co.
 (Incorporated in UAE for Petrochemical & Power Industries)

package data sheet



Document Title: Package / Compressor Data Sheet

Document No.: EI027-HSE-VD-ME-DSH-001- R0

Rev.R0

Date:09.09.2023

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Customer: **PETRO ELECTRIC**

Plant Name/Project Name: **RU-0001 A/B**

Item No./Styrene: **CHILLER UNIT** No.of Required: **1 Unit(s)**

NOTED BY DELTA
MOM 1402-10-19

CONDITION (PROCESS) - BASED ON CUSTOMER DS / PER EACH COMP. UNIT

Fluid	(degC)	Design	IN	OUT	Main & side flow Composition
Styrene		15.2			
Capacity	(kW)	165			
Evaporating Temp.	(degC)	1			
Condensing Temp.	(degC)	55			
Side Temp.	(degC)				

The correctness of these items is the manufacturer's responsibility : NOTED BY DELTA MOM 1402-10-19

COMPRESSOR DESIGN CONDITION (BASED ON MAYEKAWA CALCULATIONS) / PER EACH COMP. UNIT

Design	Design	Note
Compressor Model		
Motor Speed (rpm)	2950	※Motor Speed = Compressor Speed
Comp Load ()	100	
Quantity	1 Per unit	
Capacity/unit (kW)	165	
Power/unit (kW)		According to represented Duty Spec. : "Outdoor without shelter and in hazardous area classified as IEC class 1 Zone 2" shall be considered.
Driver		Vendor Reply:
Stating Method		Electrical items are suitable for zone 2 MOM 1402-10-19
Capacity Control		
Control Source	***	
Range of Control	30-100	
Control Method	Slide Valve	

Represented humidity shall be considered : NOTED BY DELTA MOM 1402-10-19

SITE CONDITION

Location: Indoor (heated) Outdoor under Shelter (Provided by Client) Hazardous Area : Zone 2 IIB T3
 Normal weather condition (Temp. +5°C TO +48°C)

Noise: Noise Level 85dB(A) at 1m from Unit

Oil Separation: 1st Separat 52 °C

According to represented Duty Spec. : "The Equipment shall be suitable for outdoor installation on offshore saline"
Vendor Reply:
Shelter to be considered by client, maintenance area and height sketch to be provided by vendor. Fields instruments to have sun shade or to be able to handle sun temperature(75C). MOM 1402-10-19

TERIAL DESIGN

Code & Standard	Item	Design
Unit System	DELETED vendor will give us the requested LAYOUT for SUNSHADE	■ MYK
Compressor	■ JIS	■ MYK Standard
Press Vessel	■ AD/MYCOM STD □ ISO □ PED	■ MYK Standard
Heat Exchanger	■ AD/MYCOM STD □ ISO □ PED	■ MYK Standard
Valve	■ DIN ■ ASME □ ISO □ PED	■ Manufacture's Std. □ ISO
Safety Valve	□ DIN □ ASME □ ISO	■ Manufacture's Std. □ ASRAE
Piping	■ DIN ■ ASME □ ISO	■ Manufacture's Std.
Flange	■ DIN ■ ASME □ ISO	■ Manufacture's Std. □ JIS
Thread Connection	□ DIN □ ASME □ ISO	□ PT □ NPT
MOTOR	□ DIN □ ASME □ ISO □ JIS	■ IEC ■ Manufacture's Std. □ ISO
Instrumentation	□ DIN □ ASME □ ISO □ JIS	■ IEC ■ Manufacture's Std. □ ISO
Control Panel	□ DIN □ ASME □ ISO □ JIS □ IEC	□ Manufacture's Std. □ ISO
Cable & wiring	□ DIN □ ASME □ ISO □ JIS	■ IEC ■ Manufacture's Std. □ ISO

DIN = Germany Industrial Standards
Single Type
Piping inside the Compressor Skid is as per MYCOM STD, Tie in as per Project specification
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UTILITY

Electricity	Rated Power (kW)		Volte (V)	Frequency (Hz)	Phase	Note
	Value	Q'ty				
Compressor Power	85	1	LV	50	3	Compressor shaft power Rpm, 2950
Oil Pump Motor for CP	1.5	1	LV	50	3	CP = Compressor Pump
SB Oil Pump Motor for CP	n/a				3	SB = Stand-by
Control Panel			DC24V		1	
Oil Heater	1.5kW				3	

Cooling Water	Temp. (degC)	in NA	return NA
Press. (barG)	in		
Flow Rate (m3/hr)		× 1	Fouling Factor TBA
Instrument Press. (barG)	***	Temp. (degC)	***

M.O.
I.A. Javed

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Scope of Supply and Work (1/3) – for Each compressor unit (Totally 2 Compressor Unit, One Common Condenser and Evaporator)

No	Item	Scope	Q'ty	Remarks
1	MYCOM Compressor		2	Compressor Skid 2 Working
	MY Compressor	■	1	model P125-M
	Compressor			Casing / Rotor : Cast iron / Ductile Iron, O-rings Viton
	Electric motor for compressor	■	1	Rated power 85k , LV, 50 Hz IP55 Exec Suitable for Zone 2
	Oil Pump	■	1	For Each Compressor
	Electric motor for Oil Pump	■	1	1.5 kW IP55 / Class F or B
	1st Oil separator	■	1	Horizontal drum type primary fine oil separator Shell : Carbon Steel / Design Cord : PED
	Oil cooler	■	1	MYCOM STD Refrigerant Cooled
	Oil filter	■	1	Shell : Carbon Steel For Each Compressor
	Oil heater	■	1	1.5 kW For Each Compressor
	Condenser Air Cooler	■		<div style="border: 1px solid black; padding: 5px;"> For any applicable item, Quantity shall be indicated. Result: Client requested as per duty specification and MR, number of equipment to be considered </div>
	Evaporator	□		
	Expansion Valve of Evaporator	■		
	Oil Recovery	■		
	Ko drum	□		
	Dryer Filter	■		
	Suction Filter	■	1	Suction strainer
	Control panel	■	1	Siemens S7-1200 PLC for safe area for complete system
	Instruments IP65, Ex execution	■	1set	1) Suction/Discharge check valves (SC) 2) Single Safety valve for compressor on oil separators (CS) 3) ATEX coupling (main coupling and oil pump) , non sparking 4) Instrumentation Exd and will be As per MYCOM STD 5) Instruments to be mounted locally
	Junction Box Exe	■		Per Mfr Std, qty: 1 pce, Exe Direct feeder for Package Electrical users to be provided by client

M-O.
 J.A. Javid

SINGLE STAGE SCREW COMPRESSOR :
 DATE :
 MODEL : **P125L-M**
 REFRIGERANT : **PROPANE**
 RECOMMENDED PORT : **M**
 BOOSTER : **N**

Design	165 kW
Normal	- kW
Min.	- kW

Vi :	[-]	3.48
COMPRESSION RATIO :	[-]	4.14
CAPACITY :	[kW]	170
CAPACITY :	[TR]	48.3
ABSORBED POWER :	[kW]	73
DRIVE SHAFT SPEED :	[min-1]	2950
COMPRESSOR SPEED :	[min-1]	2950
INDICATOR POSITION :	[%]	100
CONDENSING TEMP. :	[degC]	55
EVAPORATIVE TEMP. :	[degC]	1
SUCTION SUPERHEAT :	[degC]	0
LIQUID SUBCOOLING :	[degC]	0
SUCTION TEMP. :	[degC]	1
OIL SUPPLY TEMP. :	[degC]	50
SUCTION PRESS. :	[MPaA]	0.475
DISCHARGE PRESS. :	[MPaA]	1.97
OIL SUPPLY PRESS. :	[MPaA]	2.17
SUCTION PRES. DROP :	[MPa]	0.01
DISCHARGE PRES. DROP :	[MPa]	0.03
SWEPT VOLUME :	[m3/h]	295
LOAD(SUCTION VOL. FLOW RA [%]		100
DISCHARGE TEMP. :	[degC]	66.4
REFRIG. FLOW RATE SUC. :	[m3/h]	254
REFRIG. FLOW RATE DIS. :	[m3/h]	70.2
REFRIG. FLOW RATE SUC. :	[kg/h]	2623
REFRIG. FLOW RATE DIS. :	[kg/h]	2623
INJECT. OIL FLOW RATE :	[L/min]	21.3
LUB. OIL FLOW RATE :	[L/min]	26
TOTAL OIL FLOW RATE :	[L/min]	47.3
OIL HEAT REJECTION :	[kW]	21.9
OIL SPEC HT :	[J/kgK]	1930
OIL DENSITY :	[kg/m3]	880
COP :	[-]	2.33

The correctness of these items is the manufacturer's responsibility
 Vendor Reply:
 Closed 2 MOM 1402-10-1

--- SUPER HEAT is NOT counted in refrigeration capacity ---
 --- WITH THERMO-SIPHON OIL COOLER ---

M.O.
 S.A. Javid


