

COMPRESSOR DATA SHEET

PROJECT DETAILS

CUSTOMER: Hynion		MODEL: PDC-13-1250/3000(100)
MODEL: 9337-001	CUST ITEM NO: 1250-3000	QTY: 2
INSTALL LOCATION: EUROPE, Sweden	Quoted System: Complete System	REV: 05

SPECIFICATIONS

SERVICE

GAS	MW (G/MOL)	P _c (PSIA)	T _c (°R)	Cp/Cv
Hydrogen	2.016	190.43	60	1.407

PROCESS

	CAPACITY (KG/H)	SUC PRESS (BARG)	SUC TEMP (°C)	DIS PRESS (BARG)	FREQUENCY
NORMAL (guaranteed)	66.0	30	40	200	Continuous
MAX (for reference only)	68.7	33	40	200	
MIN (for reference only)	44.6	20	0		

Note- Standard Conditions are 15°C, 1 atm.

Normal Conditions are 0°C, 1 atm.

SITE CONDITIONS

AMBIENT TEMP	-20C to +40C	EQUIP LOCATION	Outdoor/ Protected
MAIN POWER	400V/3ph/50 hz	INSTR POWER	24V DC

	FLOW (LPM)	TEMP/ MAX RISE	PRESSURE DROP	REQ PRESS
COOLANT	100	30°C/ 5°C	<10 PSIG/ 0.7 BARG across system	3.34 barg

	PRESSURE	FLOW
INSTRUMENT AIR	85 PSIG	1-2 SCFM (est)

COMPRESSOR DATA

PERFORMANCE

COMPRESSOR SPEED:	353.4RPM	ROD LOAD(LBS)	15980/ 17105	RATED ROD LOAD (LBS)	20000
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	DIS PRESS (BARG)	DIS TEMP (°C)	DESIGN PRESS (BARG)	VOL EFF (%)	CR
1ST STAGE	78.38	153.48	86.18	83	2.6
2ND STAGE	200	145.64	206.84	83	2.5
3RD STAGE					
4TH STAGE					

MOTOR DETAILS

	RATING (kW)	BkW/STAGE (kW)	TOTAL BkW	MOTOR SPEED (RPM)	INSLTN CLASS
MOTOR 1	90	34.2/33.9	68.06	1450	F
MOTOR 2					

SERVICE FACTOR	AUX MOTOR	ENCLOSURE RATING	AREA CLASSIFICATION
1.15	NONE	Exd IIC T4	Ex e IIC T3

HEAD ASSEMBLY

	HEAD 1	HEAD 2	HEAD 3	HEAD 4
HEAD CLOSURE TYPE	Bolted	Bolted		
BORE (IN)	4.2306	2.7401		
PROCESS HEAD MATL	316 SS	316 SS		
OIL HEAD MATL	CARBON STEEL	CARBON STEEL		
DIAPHRAGM MATL	Inconel	Inconel		
PROCESS ORING MATL	Disogrin	Disogrin		
VALVE SEATS MATL	SS	SS		

COMPRESSOR FRAME

NO. CRANKCASES 1

DRIVE METHOD V-BELT

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59	NO. OF STAGES/ HEADS	<u>2/2</u>	NOISE LEVEL	<u><85 dBA Sound Pressure</u>
60	CONFIGURATION	<u>Horizontally Opposed</u>	CON ROD MATL	<u>HIGH TENSILE DUCTILE IRON</u>
61	STROKE (IN)	<u>7</u>	PIST SURF SPD (IN/ SEC)	<u>82.5</u>
62	MAX SPEED (RPM)	<u>425</u>	CROSS HEAD MATL	<u>HIGH TENSILE DUCTILE IRON</u>
63	CON ROD BEAR TYPE	<u>BIG END: BABBIT</u>	CRANK SHAFT MATL	<u>HIGH TENSILE DUCTILE IRON</u>
64	<u>SMALL END: HIGH LOAD NEEDLE BEARING</u>			

66 **PAINT AND SURF PREP** PDC STANDARD WHITE

68 PIPING

69 PROCESS	INLET	INTERSTAGE 1	INTERSTAGE 2	INTERSTAGE 3	DISCHARGE
70 SIZE (IN)	1	1	N/A	N/A	0.75
71 FITTING SYSTEM	Flange- Socket Weld	Swagelok			Swagelok
72 CONNECTION	RF ANSI	Compression			Compression
73 TYPE	Pipe- Schedule40	Tube			Tube

75 MATERIAL 316 SS SUCTION FILTER Tee/ 10 µm

77 COOLING	INTERSTAGE 1	INTERSTAGE 2	INTERSTAGE 3	AFTERCOOLER	TEMP (C)
78 HXR TYPE	Double Pipe	N/A	N/A	Double Pipe	36

80 HEADER PIPE SIZE: 1.5 FITTING: RF ANSI #150

82 MATERIAL: 304SS Header, Hose Components

84 **LUBE OIL SYSTEM** Oil Cooler Shell and Tube Type

86 FILTER TYPE/ RATING Tee/ Pleated Paper/ 25 Micron LUBE TYPE Forced

87 OIL BRAND/ GRADE/ WT Mobil 16M DTE Series, 68AW (Standard) MAIN PUMP TYPE Crank Driven, Gear Pump

89 ELECTRICAL SYSTEM

90	CONTROL PHILOSOPHY	PLC: AB Micrologix 1400		WIRING LEVEL	Complete wired system	
91	CLASSIFICATION	ATEX Ex II 3G Exe Pz IIC T3			MOUNTING	Panel
92	CONTR PANEL INTERF	☒ JOG BTN	☒ START BTN	☒ HOUR METER	☒	DRY CONT RMT STR/STP, General Alarm
93		☒ ESTOP BTN	☒ STOP BTN	☒ PLC-HMI	☐	SLCT SWITCH RMT/LOC
94						
95	CONTROL PANEL ENCLSR	UL-698A Type 4 STD HAZ				
96		Purge	☒ Motor Starter	☐	Junction Box	☐

98 CODES and STANDARDS

99 ☐ OSHA (US Only)	☐ ASME 31.3	☒ ATEX	☒ CE Mark	☐ SQL	☐ UL, Cul
100 ☐ ASME SecVIII (Vessels)	☐ NFPA	☒ PED	☐ IEC	☐ KHK	☐ CRN

102 ACCESSORIES

103 ☒ PSV, Process Suc (x2)	☒ Lifting Lugs (PDC-13)	☒ Earthing
104 ☒ PSV, Process Dis	☐ Pedestal- test/ship (Bare)	☒ Winterization
105 ☒ PSV, Process Intstg	☐ Bent-Plate (PDC-3 Bare)	☒ Spare Parts
106 ☒ Unloading (AOV/ SV)	☐ Base-Plate (Basic)	☐ Dust Protection
107 ☒ Air Reg Filter, PCV	☒ Skid	☒ Inlet Manual Valve
108 ☒ Beam (PDC-4&13)	☐ Inlet HXR	☒ Outlet Manual Valve
109 ☒ CW Blncg Vlvs	☒ Buffer Tnk, Suc	☒ Enclosure
110 ☒ CW Drain	☒ Buffer Tnk, Int	☒ Bypass Loop
111 ☒ PRV Oil	☐ Buffer Tnk, Dis	☐ CW Vent
112 ☒ PRV LDS	☐ Buffer Tnk, Int	☐ Oil Aux Pump
113 ☒ Hoist (PDC-4, PDC-13)	☒ Closed Loop Cooling	☐ Press Regltr

114 INSTRUMENTATION

COMPRESSOR DATA SHEET

	SYSTEM	GAUGE	SWITCH	T/ IT/ RTD	FUNCTION	NOTES
116	Process Suc Press	☒	☐	☒ Transmitter	Low Alarm	
117	Process Suc Press	☒	☐	☒ Transmitter	Low Alarm	After AOV
118	Process Suc Temp	☐	☐	☒ RTD		
119	Process Suc Tank Level	☐	☐	☐		
120	ProcessSuc Filter Diff Press	☐	☐	☐		
121	Process Intrstg Press	☒	☐	☒ Transmitter		
123	Process Intrstg Temp	☐	☐	☒ RTD		Before Hxr
124	Process Intrstg Temp	☐	☐	☒ RTD		After Hxr
125	Process Dis Press	☐	☒	☐	High Shutdown	Inside AOV
126	Process Dis Press	☒	☐	☒ Transmitter	High Alarm	
127	Process Dis Temp	☐	☐	☒ RTD	High Alarm	Before Hxr
128	Process Dis Temp	☐	☐	☒ RTD	High Alarm	After Hxr
129	Oil Press	☒	☐	☒ Transmitter	Low Alarm	
130	Oil Temp	☐	☐	☒ RTD	High Alarm	
131	Oil Filter Diff Press	☐	☐	☐		
132	Air Press	☐	☒	☐	Low Alarm	
133	CW Inlet Press	☐	☐	☐		
134	CW Inlet Temp	☐	☐	☐		
135	CW Outlet Press	☐	☐	☐		
136	CW Outlet Temp	☐	☐	☐		
137	CW Outlet Flow	☒	☒	☐	Low Alarm	
138	CW Consumers Outlet Flow	☒	☐	☐	Indication	
139	LDS Pressure	☒	☐	☒ Transmitter	High Shutdown	Each Head

141 TESTING and INSPECTIONS

142 Standard

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|---|---|
| 143 ☒ Compressor Assembly Record | ☒ Process System Pneumatic Test as compressor system (not for Bare) |
| 144 ☒ Shop Running Test including tear down | ☒ at 1.1 times Design Pressure only when ASME B31.3 is applied |
| 145 ☒ Instrumentation Set Point & Function Verification | ☐ at 1.1 times Operating Pressure as PDC Standard |
| 146 ☒ Hydraulic Relief Valve Set Point Record | ☒ Standard Cleaning |
| 147 ☒ Compressor Shipping Inspection | |

148 Optional

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|--|---|
| 149 ☒ Certificate of Conformance | ☐ Sound Level Test |
| 150 ☐ Vibration Test | ☐ Paint Thickness |
| 151 ☐ Accumulator Hydrotest | ☐ Hydrotest Process Head |
| 152 ☐ Helium sniffer leak test | ☐ Customer Witness for Compressor Running Test |
| 153 ☐ Other () | ☐ 3rd Party Inspection |
| 154 ☐ Other () | ☐ Other () |

155 Piping NDT- STD

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|---|---|
| 156 ☒ Visual (100% of weld) | ☒ Radiography (>5% of Butt/Groove weld when ASME 31.3 is applied) |
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157 Piping NDT- Optional

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|---|---|
| 158 ☐ Liquid Penetrant (5% of Socket/ Fillet Weld) | ☐ Radiography (100% of Butt/Groove Weld) |
| 159 ☐ Liquid Penetrant (100% of Socket/ Fillet Weld) | ☐ Other () |

160	COMMENTS
161	Note 1- The materials of construction given in this quotation are for proposal purposes only and is not guaranteed to be compatible with the specific
162	media. Compatibility with specific media are the responsibility of the user.
163	Note 2- Actual operating speed may vary in order to achieve guarenteed capacity.
164	Note 3 - Additional Instrumentation will be required for recycle flow loop. Reference PID for details.
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