

COMPRESSOR DATA SHEET

PROJECT DETAILS

CUSTOMER: Hynion	MODEL: PDC-13-7500/15000(75)
Model: 9337-003	QTY: 2
INSTALL LOCATION: EUROPE, Sweden	Quoted System: Complete System
	REV: 04

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)	51.9	200	40	1000	Continuous
MAX (for reference only)	56.6	220	40		
MIN (for reference only)	27.9	100	40		

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	380 VAC, 3 Phase, 50 Hz (To Confirm)	INSTR POWER	24V DC	
	<u>FLOW (LPM)</u>	<u>TEMP/ MAX RISE</u>	<u>PRESSURE DROP</u>	<u>REQUIRED PRESS</u>
COOLANT	100	30°C/ 5°C	<10 PSIG/ 0.7 BARG across system	3.34 barg
	<u>PRESSURE</u>	<u>FLOW</u>		
INSTRUMENT AIR	85 PSIG	1-2 SCFM (est)		

COMPRESSOR DATA

PERFORMANCE

COMPRESSOR SPEED:	395.1RPM	ROD LOAD(LBS)	12116/ 13171	RATED ROD LOAD (LBS)	20000
	<u>DIS PRESS (BARG)</u>	<u>DIS TEMP (°C)</u>	<u>DESIGN PRESS (BARG)</u>	<u>VOL EFF (%)</u>	<u>CR</u>
1ST STAGE	470.85	142.27	517.11	83	2.3
2ND STAGE	1000	123.46	1034.21	82	2.1
3RD STAGE					
4TH STAGE					

MOTOR DETAILS

	<u>RATING (kW)</u>	<u>BkW/STAGE (kW)</u>	<u>TOTAL BkW</u>	<u>MOTOR SPEED (RPM)</u>	<u>INSLTN CLASS</u>
MOTOR 1	55	24/21.1	45.07	1450	F
MOTOR 2					
	<u>SERVICE FACTOR</u>	<u>AUX MOTOR</u>	<u>ENCLOSURE RATING</u>	<u>AREA CLASSIFICATION</u>	
	1.15	NONE	Exd IIC T4	Ex e IIC T3	

HEAD ASSEMBLY

	<u>HEAD 1</u>	<u>HEAD 2</u>	<u>HEAD 3</u>	<u>HEAD 4</u>
HEAD CLOSURE TYPE	Bolted	Super Bolted		
BORE (IN)	1.503	1.0753		
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	2/2	NOISE LEVEL	<85 dBA Sound Pressure
60	CONFIGURATION	Horizontally Opposed	CON ROD MATL	HIGH TENSILE DUCTILE IRON
61	STROKE (IN)	7	PIST SURF SPD (IN/ SEC)	92.2
62	MAX SPEED (RPM)	425	CROSS HEAD MATL	HIGH TENSILE DUCTILE IRON
63	CON ROD BEAR TYPE	BIG END: BABBIT	CRANK SHAFT MATL	HIGH TENSILE DUCTILE IRON
64		SMALL END: HIGH LOAD NEEDLE BEARING		

66	PAINT AND SURF PREP	PDC STANDARD WHITE
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PIPING

69	PROCESS	INLET	INTERSTAGE 1	INTERSTAGE 2	INTERSTAGE 3	DISCHARGE
70	SIZE (IN)	0.75	0.75	N/A	N/A	.9/16
71	FITTING SYSTEM	MP Autoclave	MP Autoclave			MP Autoclave
72	CONNECTION	Coned/Threaded	Coned/Threaded			Coned/Threaded
73	TYPE	Tube	Tube			Tube

75	MATERIAL	316 SS	SUCTION FILTER	Tee/ 10 µm
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77	COOLING	INTERSTAGE 1	INTERSTAGE 2	INTERSTAGE 3	AFTERCOOLER	COOLED TEMP (°C)
78	HXR TYPE	Double Pipe	N/A	N/A	Double Pipe	36

80	HEADER PIPE SIZE:	1.5	FITTING:	RF ANSI #150
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82	MATERIAL:	304SS Header, Hose Components
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84	LUBE OIL SYSTEM	Oil Cooler	Shell and Tube Type
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86	FILTER TYPE/ RATING	Tee/ Pleated Paper/ 25 Micron	LUBE TYPE	Forced
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87	OIL BRAND/ GRADE/ WT	Mobil 16M DTE Series, 100AW (Metal Pistons)	MAIN PUMP TYPE	Crank Driven, Gear Pump
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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	☐	

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

ACCESSORIES

103	☒ PSV, Process Suc	☒ 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	☐ Dual Oil Filter
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

INSTRUMENTATION

115	SYSTEM	GAUGE	SWITCH	T/ IT/ RTD	FUNCTION	NOTES
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COMPRESSOR DATA SHEET

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	Process Suc 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	☐	☐	☒ (PT >10K)	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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|---|---|
| ☒ Compressor Assembly Record | ☒ Process System Pneumatic Test as compressor system (not for Bare) |
| ☒ Shop Running Test including tear down | ☐ at 1.1 times Design Pressure only when ASME B31.3 is applied |
| ☒ Instrumentation Set Point & Function Verification | ☒ at 1.1 times Operating Pressure as PDC Standard |
| ☒ Hydraulic Relief Valve Set Point Record | ☒ Standard Cleaning |
| ☒ Compressor Shipping Inspection | |

148 Optional

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

155 Piping NDT- STD

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