

VENDOR DATA REQUIREMENTS FOR GAS TURBINE DRIVEN CENTRIFUGAL COMPRESSOR PACKAGE

A		Issued with MR	AS	NK	NK
Rev. No.	Date	Purpose	Prepared by	Checked by	Approved by

VENDOR DATA REQUIREMENTS

The following drawings/documents marked "✓" shall be furnished by the bidder.

CENTRIFUGAL COMPRESSOR (GT DRIVEN)

S. N. O.	DESCRIPTION	WITH BID	POST ORDER			REMARKS
			FOR REVIEW	FOR RECORD	WITH DATA BOOK (FINAL)	
1.	Cross Sectional Drawings (with Bill of Materials & Part No's) for Centrifugal Compressor & its rotor assembly			✓	✓	
2.	General Arrangement Drawings (certified dimensional outline drawing) for Coupling for compressor train and auxiliary pumps			✓	✓	
3.	Cross Sectional Drawings (with Bill of Materials & Part No's) for Journal and thrust bearing assembly for compressor and gear box (as applicable)			✓	✓	
4.	Cross Sectional Drawings (with Bill of Materials & Part No's) for LOP, EOP & CEP along with their seal assembly & Gas turbines (as applicable)			✓	✓	
5.	Gas turbine datasheet, its performance curves and deration curves (for altitude, ambient conditions, RH, inlet/exhaust losses etc.) Following min. GT curves shall be provided. Turbine efficiency Vs rate Speed & rated power MAP. Rated Power Vs. % rated speed curve. Rated Power Vs Ambient temperature curve. Rated Heat rate Vs Ambient temperature curve. Power Vs Humidity. Power Vs. Altitude. Rated Heat Rate, rated power, rated temperature	✓	✓		✓	
6.	Data Sheets alongwith performance curves for Auxiliary Pumps like LOP, EOP and their respective drivers		✓		✓	
7.	Data Sheets alongwith performance curves for Fuel gas booster compressor (as applicable)		✓		✓	
8.	Piping & Instrumentation diagrams (P&IDs) for Gas turbine and its associated on-skid auxiliary system		✓		✓	
9.	Piping & Instrumentation diagrams (P&IDs) for Off-skid fuel gas system including fuel treatment and fuel control system	✓	✓		✓	
10.	Piping & Instrumentation diagrams (P&IDs) for Fire detection and suppression system	✓	✓		✓	
11.	Piping & Instrumentation diagrams (P&IDs) for Gas turbine enclosure ventilation system	✓		✓	✓	
12.	Piping & Instrumentation diagrams (P&IDs) for Gas Turbine exhaust system	✓	✓		✓	

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13.	Piping & Instrumentation diagrams (P&IDs) for Utility Distribution System within package battery-limit (N2, instrument air, buffer gas etc.)	✓	✓		✓	
14.	Piping & Instrumentation diagrams (P&IDs) for Bearing Temp. & Vibration monitoring System	✓	✓		✓	
15.	Piping & Instrumentation diagrams (P&IDs) for Compressor wash water/ wash oil injection system (as applicable)	✓	✓		✓	
16.	General Arrangement Drawings (certified dimensional outline drawing) for Gas Turbine			✓	✓	
17.	General Arrangement Drawings (certified dimensional outline drawing) for Compressor Sealing System/Dry Gas Seal module and Wash water/ wash oil injection system			✓	✓	
18.	General Arrangement Drawings (certified dimensional outline drawing) for Fuel gas conditioning skid, fuel gas booster skid (as applicable), fire suppression system skid, GT air inlet filter system, GT exhaust system, LCP etc.			✓	✓	
19.	General Arrangement Drawings (certified dimensional outline drawing) for LO System (if off-skid of GT)			✓	✓	
20.	General Arrangement Drawings (certified dimensional outline drawing) for Loose supply piping items (like strainer, flow element, ASV, QCNRV, PSVs etc.) in vendor's scope, to be installed in purchaser's piping			✓	✓	
21.	Cross Sectional Drawings (with Bill of Materials & Part No's) for Gas Turbine & its rotor assembly			✓	✓	
22.	Cross Sectional Drawings (with Bill of Materials & Part No's) for Compressor end seals/ Dry Gas Seal (as applicable)			✓	✓	
23.	Mechanical Run Test procedure for Centrifugal Compressor, Gear Box (as applicable) and Gas Turbine		✓		✓	@
24.	Performance Test procedure for Centrifugal Compressor and Gas turbine		✓		✓	@
25.	General Arrangement showing compressor, drive transmission system (as applicable) & Gas Turbine driver including all associated auxiliary systems [like sealing system, lube oil system, local control panel, injection panels (as applicable) and rundown tank etc.] along with interface connections/ terminal point details including their location coordinates, maintenance space, erection & maintenance weights, capacity & hook height of maintenance crane etc.		✓		✓	

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S. N. O.	DESCRIPTION	WITH BID	POST ORDER			REMARKS
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26.	Foundation drawing of compressor train [i.e. for compressor, drive transmission system (as applicable) & Gas Turbine driver] including details of load points location and their details, foundation load data (static & dynamic), foundation bolts, their location, foundation bolt pocket dimensions and recommended type of grout, grout thickness, make, grade and quantity.		✓		✓	
27.	Drawing for underground points indicating the required underground drain points in the compressor house			✓	✓	
28.	Allowable forces and moments at compressor suction and discharge nozzles.			✓	✓	
29.	Allowable thermal movements compressor suction and discharge nozzles.			✓	✓	
30.	Utility consumption data including electric load data.		✓		✓	
31.	Schedule of lubricants, chemicals & consumables with their specifications.			✓	✓	
32.	List of Purchaser's interface points with their connection details			✓	✓	
33.	Centrifugal Compressor datasheet alongwith performance curves. Following min. Compressor Curves shall be provided Discharge Pressure Vs Inlet Capacity. BKW Vs Inlet Capacity. Polytropic Head Vs Inlet capacity. Polytropic efficiency Vs Inlet capacity with performance. Curves for various speeds viz. Minimum speed in steps of 10% till 90% of speed & thereafter in steps of 5% till 105% of speed. Pressure ratio Vs Inlet capacity. Discharge Temperature Vs. Inlet capacity. Minimum and Maximum Speed for Compressor.	✓	✓		✓	
34.	Data Sheets for Gear box (as applicable).		✓		✓	
35.	Data Sheets for Coupling for compressor train		✓		✓	
36.	Data Sheets for Lube oil system and LO Cooler			✓	✓	
37.	Data Sheets for Dry Gas Seal (as applicable)		✓		✓	
38.	P&ID for Process Gas System including Anti Surge Control & Process controls	✓	✓		✓	
39.	P&ID for Compressor shaft Sealing System/Dry gas sealing system	✓	✓		✓	
40.	Compressor shaft seal performance test procedure		✓		✓	
41.	Complete Unit test Procedure (as applicable)		✓		✓	@
42.	Lateral Analysis Reports of Compressor, Gear Box (as applicable) and Electric motor drive			✓	✓	
43.	Train Torsional & Lateral Analysis Report (as applicable)			✓	✓	

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44.	Cause & effect diagram			✓	✓	
45.	Control Narrative			✓	✓	
46.	Installation, Operation & Maintenance manuals for complete compressor package			✓	✓	
47.	Precommissioning & commissioning procedure for complete compressor package			✓	✓	
48.	List of Mandatory Spares (indicating exact name of the part, part no. and material of construction)	✓	✓		✓	
49.	Quotation for recommended spare parts for two years of normal operation (indicating exact name of the part, part no. and material of construction)	✓		✓		
50.	List of recommended commissioning spares (indicating exact name of the part, part no. and material of construction)	✓		✓	✓	
51.	List of recommended Special Tools & Tackles (indicating exact name of the part and part no.)	✓		✓	✓	
52.	List of Deviations to specifications/datasheets/standards of MR	✓				
53.	Filled in experience record proforma for main equipment and its driver	✓		✓		
54.	Signed and stamped check list scope of supply (as applicable)	✓		✓		
55.	List of loose supply items in vendor's scope, to be installed in purchaser's piping			✓	✓	
56.	P&ID for Lube Oil System		✓		✓	
57.	Test Procedure(s) : Witness tests as specified in data sheets / other specs enclosed in the inquiry / MR or as required by approved ITP/QAP			✓	✓	@
58.	Foundation drawing of auxiliaries to be installed at grade or at mezzanine floor such as lube oil console, dry gas sealing system, governing console (as applicable), Local control panel, injection panels (as applicable), run down tank, lube oil and control oil accumulators etc.		✓		✓	
59.	General Arrangement Drawings (certified dimensional outline drawing) for Centrifugal Compressor			✓	✓	
60.	Cross Sectional Drawings (with Bill of Materials & Part No's) for Gear box (as applicable)			✓	✓	
61.	P&ID for Gas Turbine Combustion air intake system	✓	✓			
62.	P&ID for Gas Turbine starting system	✓	✓			
63.	P&ID for skid drain/vent system (Compressor and Gas Turbine)	✓	✓			
64.	General Arrangement drawing of Lube-Oil system/skid and overhead LO tank			✓		
65.	General arrangement drawing of auxilliary pumps i.e. Lube-Oil Pumps, Emergency pumps etc.			✓		

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66.	Equipment layout showing main as well as all associated equipment/skids (compressor, gear box, driver, L.O. console, Dry gas module, GT exhaust, L.O. Cooler, Maintenance platform, Maintenance space, walkways, local guage board, overhead tanks etc.) with interface piping connection, maintenance space, cable trays etc.	✓	✓			
67.	Foundation layout showing foundation details of main as well as all associated equipment/skids (compressor, gear box, gas turbine driver, L.O. Cooler, Air filtration unit, GT exhaust stack, L.O. console, overhead tanks, etc.)	✓	✓			
68.	Thermal & Mechanical design calculations for Air-Coolers (LO cooler)			✓		
69.	Procedure for Performance Test Guarantee Run at site		✓			

Notes :

- "TICK" denotes applicability.
- Post order, drawing / document review shall commence only after approval of Document Control Index (DCI).
- All post order documents shall be submitted / approved through EIL eDMS portal.
- Final documentation shall be submitted in hard copy (Six prints) and soft (two CDs/DVDs) in addition to submission through EIL eDMS.
- Refer - 6-78-0001: Specification for quality management system from Bidders.
- Refer - 6-78-0003: Specification for documentation requirement from Suppliers.
- All drawings & documents shall be submitted in A4 or A3 paper sizes. Documents in higher paper size shall be submitted in exceptional circumstances or as indicated in the MR/Tender.
- Post order- The schedule of drawing / data submission shall be mutually agreed between EIL & the bidder / contractor / supplier during finalization of Document Control Index (DCI).
- "@" indicates submission of documents to Inspection Agency.
- Bill of Material shall form part of the respective drawing.
- Also refer other department's VDR :-
- Electrical
- Instrumentation
- Packaged Equipment
- Static Equipment
- Rotating Equipment
- Piping
- Structures