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SI. No.	Ref. Clause no/	Tender Doc/Page No.	Details	Query	VGL/ MECON's Reply	
1	Bid Document, VOLUME – II OF II Clause 1.6	Page 12 of 119	The pressure in each bank should be monitored downstream of priority panel.	Please note that pressure monitoring on the downstream of priority panel in each bank shall not be in our scope of supply.	Tender Condition Prevails.	
2	Bid Document, VOLUME – II OF II Clause 1.6	Page 12 of 119	valves, manual drain/ traps etc. as required for	Y-type strainer, valves & sight flow indicator are not provided in the Frame Lube Oil Circuit. We have provided paper filter for frame oil & check valve in that circuit. This is the standard system we have provided in all our Packages. Please let us know your acceptance.	Acceptable.	
3	Bid Document, VOLUME – II OF II Clause 4.9.1	Page 23 of 119	Carbon Steel separators / KOD at auto and manual drain system shall be provided for the capacity as required.	The proposed CNG package has suction volume bottle at each stage. The volume bottles at suction are connected to condensate drain system through auto-drain valves. These volume bottles shall act as scrubbers/ condensate removal system. No separate KODs shall be supplied. Please let us know your acceptance.	Acceptable.	
4	Bid Document, VOLUME – II OF II Clause 4.9.3	Page 23 of 119	Scrubber service class - B shall be used for Inter- stage / discharge scrubbers. Service Class - C shall be used for suction scrubber. (Refer API -11P)	The proposed CNG package has volume bottle at each stage suction and at final stage discharge. The volume bottles at suction are connected to condensate drain system through auto-drain valves. These volume bottles shall act as scrubbers/ condensate removal system. No separate KODs shall be supplied. Therefore this requirement is not applicable.	Ok. Noted.	
5	Bid Document, VOLUME – II OF II Clause 4.9.9	Page 24 of 119	Coalescent super fine filters (preferably two stages) for removal of liquid e.g. water & oil)200% of the maximum flow at 250 kg/cm2g. However mechanical design shall be based on safety set pressure.	The filter shall be sized for 120% of flow corresponding to flow at suction pressure of 19 kg/cm2 g.	Tender Condition Prevails.	
6	Bid Document, VOLUME – II OF II Clause 5.8.1	Page 38 of 119		This clause states that laying and supplying of cables outside compressor package is in purchasers scope. However, clause 1.6 pg 13/119 states that laying and supplying of cables outside compressor package is in bidders scope. Please clarify.	Tender condition Prevails. Scope of supply & laying of cables shall be as per Clause no. 1.6 (page 13/119)	
7	Bid Document, VOLUME – II OF II Clause 5.9.14	Page 41 of 119	Offered mass flow-meter shall be necessary for Custody Transfer application and accuracy should be in the range of 0.5% of span. Certificate from W& M India is required.	Please note that we shall not be providing W & M certificate. This certificate is generally taken for flowmeters provided in dispensing units.	Tender condition Prevails.	
8	Bid Document, VOLUME – II OF II	Page 113 of 119	Gas Engine	Please let us know preferred make of gas engine.	Refer note 2 of clause no. 24 of Volume II of II. Tender condition prevails.	





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	Bid Document, VOLUME – II OF II Clause 6.4.1	Page 45 of 119	The PT shall be conducted only after 30 days' running of the machine after successful non-availability of CNG vehicles for conducting PT).	Warranty and defect liability period must start from date of commercial use and not from date of completion of PT.	Tender condition prevails
	Bid Document, VOLUME – II OF II Clause 13	Page 56 of 119	(which shall be conducted within 90 days from the date of successful commissioning of the machine)	One year maintenance period during defect liability period must start from date of commercial use of package and not from date of successful completion of performance test of package. Package should be treated as commissioned from date of commercial use of package for all commercial purpose.	Tender condition prevails
	Bid Document, VOLUME – II OF II Clause 13	Page 56 of 119	Operation and Maintenance charges of compressor packages for 1 year warranty period.	Please note that O&M charges will be applicable as per the commencement of the activity.	Tender condition prevails
	Bid Document, VOLUME – I OF II Clause 31	Page 158 of 263	Defect Liability Period	Defect liability period does not have any backstop. Please modify the clause to: "Defect Liability period shall be for a period of 12 months from date of commissioning or 18 months from date of supply, whichever is earlier."	Tender condition prevails
	Bid Document, VOLUME – I OF II Clause 40.1	Page 159 of 263	Insurance for free issue material Contractor shall at his own expense arrange, secure and maintain insurance cover of value not less than the supply value (including custom duty, CVD, Special Duty, Cess etc. as applicable) upto 15 days beyond commercial operation by purchaser. Contractor's quoted price	Insurance of items at site is not in our scope .	Tender condition prevails.
	Bid Document, VOLUME – I OF II Clause 49.1	Page 162 of 263	custody, storage and preservation for all the	Please note that we will be responsible for handing over the compressor packages at site however necessary storage and preservation of packages shall be in your scope.	Tender condition prevails.





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	Bid Document, VOLUME – I OF II Clause 49.1	Page 162 of 263	This enquiry envisages total responsibility for complete work from goods at all stages, loading and unloading facilities at designated storage of client, retransportation of the package from the store to the actual site/ station including transit insurance, other associated works including materials, tools/ tackles etc., and civil works (limited to grouting of package) prior to start of work at sites till the time of installation, testing	Compressor packages will be despatched at specified location. Further loading, transportation, unloading from the storage to site is excluded from our scope of supply.	Tender condition prevails.
16	Bid Document, VOLUME – I OF II Payment Terms	Page 171 of 263	5% payment milestone.	Please note that If packages are unloaded at store then we will not issue EAR policy. We will be submitting only EAR policy before erection of packages with the validity period till commissioning of packages.	Tender condition prevails.
17		1.3	Precedence 3) International standards/codes as applicable 4) Indian Standards / codes applicable	The compressor design is derived from API618/11P/equivalent industry standards. However, the design is enhanced to meet specific CNG application such as pressurized crankcase to avoid gas vent loss etc.	Compressor shall be designed as per API 618, however stringent design modifications are acceptable.
18		1.8	-Drive belt if used shall be of fire retardant and anti static type.	Not Applicable	Noted.
19		4.1.1	3. Code and specification as indicated in clause no.1.2. 4. Compressor and its auxiliary's design shall be in conformity with API 11P, second edition, API 618.	The compressor design is derived from API618/11P/equivalent industry standards. However, the design is enhanced to meet specific CNG application such as pressurized crankcase to avoid gas vent loss etc.	Compressor shall be designed as per API 618, however stringent design modifications are acceptable.
20		4.2.3	Compressor maximum vibrations at cylinders and at frame shall not exceed 10 mm /sec. And 5 mm/s respectively unfiltered peak velocity. The Bidder shall provide for all structural support within the package so that these levels can be achieved.	Vibration levels shall be as per manufacturer's design standards and shall be	Tender Condition Prevails.





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21		4.4.1	All oil wiper, intermediate seal and gas cylinder pressure packing shall be segmental rings with corrosion resistant garter springs.	All oil wiper rings etc shall be as per manufacturer's standrad design.	Tender Condition Prevails.
22		4.4.2	ERW/ seamless steel tubing conforming to ASTM A- 192 or series 300 SS tubing conforming to ASTM A- 269 with minimum thickness as specified in Cl. 7.11 of API-11P shall be used for vent piping.	Pressureised crankcase design and hence not applicable	Acceptable
23		4.4.3	Packing vent piping inside of the distance piece shall be designed for the maximum allowable working pressure of the cylinder.		Acceptable
24		4.5.3 4.13.11 4.13.8	discharge shall be of SS 316.	After oil filter inbuilt oil galleries are provided, & Brass NRV provided at forced lubrication point. After oil filter inbuilt oil galleries are provided, & Brass NRV provided at forced lubrication point.	Tender Condition prevails
25		4.5.4	Heating shall be provided for reservoir if applicable for the bidder's design of compressor when the minimum ambient temperature is less than the Bidder's required minimum start up temperature.	Not applicable	Noted. Tender Condition Prevails.
26		4.5.5	Heater besides meeting the area classification requirements specified in the Tender shall be star connected if designed for operation on 3-phase (4 wire), 440V, 50 Hz supply.	Notonalicable	Noted. Tender Condition Prevails.





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27		4.6	Distance Pieces 4.6.1 Distance piece as per ISO 13631-2002 with cylinder side compartment vented to safe location is specified. Distance piece as per manufacturer's standard design which is used in the earlier supplied successfully running packages is also accepted. 4.6.2 Distance pieces shall be provided with gasketted, solid covers and shall be suitable for a minimum differential compartment pressure of 1.75 kg/cm²g. 4.6.3 Distance piece as per API-11P with cylinder side compartment vented to safe location is specified	Distance piece will be as per manufacturer's standard. Venting is not applicable due to pressurised crankcase design.	Tender Condition Prevails.
28		4.7.1	Divider block or single point type lubrication system/Single plunger per point force feed mechanical lubricator shall be provided for lubrication to compressor cylinders. Block distribution lubrication systems shall be complete with no-flow shutdown, rupture relief discs, check valves, filter, common sight glass and carbon steel or austenitic stainless steel tubing. For pump-to-point lubrication systems, a sight indicator for each point, check valves and carbon steel or austenitic stainless steel tubing shall be furnished.	Common indicator is provided & Brass NRV provided.	Acceptable
29		4.7.3	Lubricators shall have a sight flow indicator for each lubricator point and a stainless steel double ball check valve shall be provided at each lubrication point. Common sight flow indicator for Divider Block is also acceptable. Brass NRV shall also be acceptable	Common indicator is provided & Brass NRV provided.	Acceptable
30	_	4.7.4		Common Digital No Flow Switch (time based) will be provided When there is no – pulse (from cylinder lubrication - divider block) for certain time interval, the switch toggles & the compressor is tripped on lubrication fault.	Noted.





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31		4.8.2	manufacturer standard deviations.The Gas and	- The approach above ambient would be 10°C. (max. discharge temp. 42°C + 10°C = 52°C) The required inputs would be given in the Heat Exchanger datasheet.	Tender Condition Prevails.





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SI. No.	Ref. Clause no/	Tender Doc/Page No.	Details	Query	VGL/ MECON's Reply
32		4.8.3	Inter / After Gas Coolers Air-cooled inter-stage and final stage discharge coolers shall be provided which shall limit the gas temperature after the after cooler to 52 degree C. For calculating the surface area of the air cooler the ambient air temperature of 42 oC and 80% RH shall be considered. Cooler design shall be on the basis of 10% excess capacity than required corresponding to suction pressure of 19 kg/cm2.Gas sections of coolers shall be generally compliant to API-661 with manufacturer standard deviations.The Gas and water sections shall not be "U" code stamped but TPI inspected. Vibration switch shall be provided on their heatexchanger to trip the compressor on high vibration limit. Bidder shall indicate vibration level in the offer. For cooling of the Heat Exchangers a cooling fan to be provided inside the enclosure(s). Cooling system shall be preferably installed on the same skid as the compressor due to space constraints. Bidder shall submit cooler sizing calculation for review.	- The approach above ambient would be 10°C. (max. discharge temp. 42°C + 10°C = 52°C) The required inputs would be given in the Heat Exchanger datasheet.	Tender Condition Prevails.
33		4.13.8	All lube oil piping down stream of filter shall be series 300 Stainless Steel.Pressurized lubricating oil lines downstream of the filter (with the exception of cast-in-frame lines or passages) shall be made of austenitic stainless steel.	After oil filter inbuilt oil galleries are provided, & Brass NRV provided at forced lubrication point.	Noted. Tender Condition Prevails.
34		6.2.1	Mechanical running test (MRT) b. Bearing temperature	MRT will be carried out as per manufacturer's standrad procedure.	Tender condititon prevails.
35		1.6	Laptop	Pl advise whether Laptop is common for two Compressors.	Common laptop to be provided.





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36		1.6	Common structural steel skid for the compressor- electric motor and for all auxiliary systems.	All aulilaries like CO2, Air compressor, etc will be supplied loose & to mounted apart from package.	Noted. Assembly of all loose items is in bidders scope. Tender Condition Prevails.	
37		1.6	Each stage outlet Temp. before cooler & after cooler to be displayed on PLC.	Each stane temp before cooler will be displayed on PLC. After cooler temperature for 1st and 2nd not considered. Final after cooler temperature shall be available on PLC.	Tender Condition Prevails.	
38		1.6	Gas flow directions to be marked "Gas In/ Gas out "with cylinder stage No. on all the inlet outlet tubes inside compressor package	Arrow mark will be provided for flow directions.	Tender Condition Prevails.	
39		1.6	Loose cables	Request to specify scope for cables in length (metres) if in bidders scope of supply.	Tender Condition Prevails. Refer page 13 of Volume II	
40		1.6	Following documents shall be submitted by the successful bidder: 1. Pressure vessel thickness calculations to be submitted. 2. Fan motor flameproof certificate to be submitted.	1. Pressure vessel thickness calcualtion not considered, however relevant TC's for the same shall be provided. 2. We will be using hydraulic motor for fan , hence flame proof certificate not appllicable.	Tender Condition Prevails.	
41		1.8.1-5	CO2 flooding system-Selector Switch One switch shall be provided in LCP to bypass desired limit switch,	Considering safety reasons , limit switch bypass not considered.	Tender Condition Prevails.	





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42		2.1.2 & MR 1.1	Air compressor of capacity approx 7.5 kW preferably of IR/KPCL/Elgi/CP make ofapprox 16 kg/cm2(g) discharge pressure with PRV, and 1000 water litre capacity air receiver shall be supplied for each CNG compressor package for gas engine starting purpose. Air dryer suitable for automatic\ operation shall also be supplied along with all accessories. The air compressor motor& air dryer shall be flameproof and will be kept in CNG area. Piping, electrical and instrumentation cabling shall be in bidder's scope as per clause no. 1.6. Tapping in the 1000WL air receiver vessel shall be provided with NRV, PRV (set at 7 kg/cm2 (g)) and isolation valve for CNG dispenser instrumentation line. Air receiver shall be provided with SRV (safety relief valve), pressure gauge and drains. Manual drains and automatic moisture traps/moisture separator cum regulator shall be provided in the system.	Request to consider air compressor for non flame proof area installation.	Tender Condition Prevails.
43		4.1.5 & 7.1	Note that the pressures given on the data sheet are at the compressor package battery limits, Bidder shall consider all pressure losses at suction, interstage and discharge at the specified capacity (with no -ve tolerance) for compressor and indicate the same on the data sheets	Pressure for sizing shall be considered at compressor suction flange.	Tender Condition Prevails.
44		4.9.1	Carbon Steel separators / KOD at auto and manual drain system shall be provided for the capacity as required.	Manual drain for seperator not provided for safety reasons. This is as per properitery design of machine	To be discussed during Detailed Engineering.
45		4.9.3	Scrubber service class - B shall be used for Interstage / discharge scrubbers.	Interstage sperator shallbe as per Manufacturer standard design. Inherent design point	To be discussed during Detailed Engineering.
46		4.9.3	All vessels including pulsation dampers shall be fully (100%) radio-graphed as per ASME VIII UW (a) or equivalent.	All vessels will be fully (100%) radio-graphed as per ASME VIII, however U stamping not considered.	Acceptable.





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47		4.9.6	Gas recovery system	Gas recovery system & vessels are as per properitery design of manufacturer. PRV in 1st stage suction line is not required as per Manufacturer's standard proven design & hence not provided. Inherent Design point.	To be discussed during Detailed Engineering.
48		4.10	Pulsation, Vibration Control and Analog Study	Not Considered due to proprietory design standards.	The bidder has to give compliance report that they have already conducted such type of Pulsation, Vibration Control and Analog Study and offered compressor is safe. Tender Condition Prevails
49		4.12.1	The maximum allowed temperature within the enclosure shall be 5°C above ambient temperature	Tempreture inside canopy = Ambient + 8 Deg	Tender Condition Prevails
50		4.12.5	All the pressure, temperature, gas flow meter, oil level, lube oil pressure, coolant temperature, coolant level indicators shall be visible from outside of enclosures.	Oil level & gas flow meter will not visible from outside but proper accessibility provided.	Acceptable.
51		4.13	Specification for tubing & Piping	Gas piping/ tubing at 3rd stage diacharge will only be in SS-316, with SS fittings, Rest all piping /tubing will be Combination of Flanged & screwed connections with CS material (pipes, Fittings & Flanges) as per application application requirement & standard design. This is as per manufacturing standard design.	For piping specification refer clause no. 4.13 of Volume II of II. Tender condition prevails.
52		4.13.5	The instrument air tubing material shall be SS316 as per ASTM A269.	Beign low pressure application SS 304 tubing is considered.	Tender condition prevails.
53		4.13.7	Bidder shall furnish a temporary start up conical strainer fitted with adequate size mesh	We shall offer Y type strainer at suction of inlet filter.	Acceptable.
54		4.13.14	B-Proposed Welding procedure specification with impact test	Impact test not envisaged hence not considered.	Tender condition prevails.





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55		5.9.6	Separate junction boxes shall be provided for each type of signal i.e., analog, digital, solenoids, RTD thermocouple and power supply	LCP (With PLC) is mounted on package itself hence separate JB's are not required	Tender condition prevails.
56		5.9.13	Two nos. Of RS 485/RS232 Serial Communication Ports shall be provided for Hooking Up the PLC to SCADA & Laptop PC at PLC end in Future. Necessary adopter if required shall be under scope of vendor. Also, Vendor shall include one set of all licensed relevant Software (Windows XP/Windows 2000 based system configuration software and application program) for accessing the PLC, HMI and mass flow meter through owner supplied Laptop PC or laptop supplied by the bidder. All the parameters available on the PLC through SCADA system are required. The detail requirement of SCADA will be communicated to successful vendor during detailed engineering. For selection of equipment, compatibility of SCADA system vendor shall consider the Modbus RTU protocol, FCC-68 RJ 45 connection type RS 232 communication standard, Baud rate upto 19.2 K with configurable software	One number RS 485 port shall be provided for modbus communication. SCADA system is not considered.	Tender condition prevails.
57		5.9.14		Suction MFM: Pipes and adaptors shall be provided loose for mounting master MFM. Disharge MFM: Calibration can be done on already avialable provision near priority panel. Extra arrangement not required	Tender condition prevails.





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58		5.9.15	Ichall nrovide necessary	CCOE or its equivallent certificate (FM, CSA , ATEX, UL, CMRI) whichever applicable & avaliable will be provided.	Tender Condition Prevails.
59		6.0	INSPECTION AND TESTING	Inspection & Testing will be as per Approved QAP by Mecon	Tender Condition Prevails.
60		6.2.1		As it is not possible to dissassemble any part of the compressor Package after assembly & Testing, same is not feasible.	Tender Condition Prevails. Inspection & Testing will be as per Approved QAP.
61		6.3	Mechanical String Test	Test will be limited to witness of Performance Parameters as per Factory Accptance Test (FAT) at full load on CNG fuel, However The test will not comprise of disassembly of any of component of Package for witness.	Tender Condition Prevails. Inspection & Testing will be as per Approved QAP.
62		8.5	Packing shall be sufficiently robust to withstand rough handling during ocean shipment & in-land journey. Sling points shall be clearly indicated on crates.	Canopy provided shall be weather proof , hence additional packing not considered.	Tender Condition Prevails.





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63		22.1	List of Instrumentation & Controls for Compressor 1.Frame Oil Sump/Reservoir Level 10.Lubricator Oil LevelLevel Gauge 40. Ist stage dish pressure low / high 42.Final Disch Pressure after coalescent filter. 48.Blow Down vessel Pressure. 49.Vibration Measurement on comp , heat exchanger fan	1. Gauge - Sight glass in crankcase shall be provided Switch-Switch for frame lubrication is not considered due to pressurerised crankcase. Level switch for cylinder lubrication shall be provided. 10. Sigth glass shall be provided 40. 1st stge discharge pressure: Low alaram and trip not considered and requirement not envisaged. 42. Final discharge pressure: Low alaram and trip not considered and requirement not envisaged. 48. Blow Down vessel Pressure-As Blowdown in connected to 1st stage suction, seperate pressure transmitter is not considered. 49. Vibration switch shall be considered on compressor block & heat exchanger frame.	Tender Condition Prevails.
64		22.2	List of Instrumentation & Controls for Gas Engine: 6. OIL COOLER OIL OUTLET TEMPGuage & Transmitter. 7. Differential pressure gauge for fuel and air mixture.	S. As per OEM standard , same not considered. Local mounted Diaphragm type Baumer guage shall be provided for fuel inlet pressure. Kinldy approved.	Tender Condition Prevails.
65		23	QAP: Engine	1. Manufacturers' compliance report-Ok Following points are applicable not applicalbe for engine, we shall consider below points for pressure vessels used in compressor package as per past tender. Please approve. 2. Dimension and Visual Inspection Report as per drawing-Not considered for engine, shall be provided for vessels used in compressor package 3. Material test certificates for RAW Material (Pressure Parts)-Not considered for engine, shall be provided for vessels used in compressor package 4. Radiography of pressure vessels at applicable-Not considered for engine, shall be provided for vessels used in compressor package 5. Hydro test of pressure vessels-Not considered for engine, shall be provided for vessels used in compressor package 6. Final painting and cleaning-Not considered for engine, shall be provided for vessels used in compressor package	Tender Condition Prevails.
66		23	QAP: -Heat Exchanger -Control Panel and Soft Starter	WPS / PQR – Welder Qualification-As welding is not involved same not applicable Functional test-Shall be done along with package during FAT	Tender condition prevails. Inspection and testing to be carried out as per approved QAP.



Reply to Bidder's Queries-I for PROCUREMENT OF CNG COMPRESSORS FOR CNG & CITY GAS DISTRIBUTION PROJECT AT VADODARA CITY Tender Doc. No.: 05/51/23PY/VGL/031



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67		24	PREFERRED MAKES	Kinldy approve following makes: 3. Switches-Recom Contactors-schneider 4. Push Button: Recom 15RTDs: Wika 23. Air exchanger: Chicago Pneumatic	Refer note 2 of clause no. 24 of Volume II of II. Tender condition prevails.
68		Compressor Datasheet- Pt no- 49	I omnressor cylinder liners	Liner only for 3rd Stage will be provided This is as per properitery design of machine & accepted for all earlier machine.	Acceptable.
69			Test Certificates	Certificates will be submitted as per CP standard QAP Approved by end client	Tender condition prevails. Documents are to be submitted as specified in the tender document and as per Approved QAP.
70		4.0 COMPLETION PERIOD	DELIVERY BASIS & COMPLETION SCHEDULE	Lot-1: 2 Nos. of Compressor Packages within 20 weeks from from date of code-A approval, manufacturing clearence.	Tender Condition Prevails.

Note: Any addendum/corrigendum/clarifications shall be integral part of the Bidding Documents and shall be submitted by bidders duly signed & stamped in their bid.