



Vadodara Gas Limited
Replies to Bidder's Queries - Additional

Subject: Purchase of 01 No. 1700 SCMH Motor Driven Compressor Package with 05 Year AMC for Upgradation of VGL CNG Mother Stations

Tender No.: VGL/CO/C&P-CNG/BD202312P094 Dated 19/12/2023 & Tender ID: 615895.

Sr. No.	Clause No.	Page No.	Tender Specification	Deviation Taken	VGL'S REPLY
1	3	108.0	<p align="center">CODES AND STANDARDS</p> <p>The following National & International Codes & Standards of Latest editions shall be applicable. OISD 179, NFPA-52: 1995 or equivalent NFPA – 37: STANDARD FOR THE INSTALLATION AND USE OF STATIONARY COMBUSTION ENGINES AND GAS TURBINES NFPA – 12: STANDARD ON CO2 EXTINGUISHING SYSTEM IS: 325/ IEC or International standards. : THREE PHASE INDUCTION MOTORS - SPECIFICATION IS: 6382: CODE OF PRACTICE FOR DESIGN AND INSTALLATION OF FIXED CO2 FIRE EXTINGUISHING SYSTEM Applicable ANSI, ASTM, NEC, NEMA code. API – 618: RECIPROCATING COMPRESSORS FOR PETROLEUM, CHEMICAL AND GAS INDUSTRY SERVICES API – 11P 2nd edition: SPECIFICATION FOR PACKAGED RECIPROCATING COMPRESSORS FOR OIL AND GAS PRODUCTION SERVICES API – 661: SPECIFICATIONS FOR AIR COOLED EXCHANGERS ASME Section – VIII Div – 1/2: DESIGN CODES FOR PRESSURE VESSELS. Gas Cylinder Rules 2016. Standard Specifications of Bureau of Indian Standards (BIS). Specifications/ Recommendations of IEC. Indian Electricity Rules. Indian Explosives Act. TEMA – C - Water cooled heat exchangers ASME / ANSI – B-31.3 Code for Process Piping</p>	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. Heat exchangers shall be air cooled as per OEM standard	Ok Noted.
2	3	108.0	<p align="center">2. Technical Specification 3. International standards/codes as applicable 4. Indian Standards / codes as applicable</p>		Ok Noted.
3	4 ii	110	<p>3 nos. mass flow meters to measure the Natural Gas consumption at packages inlet, package discharge (both Coriolis type) and package loss / venting (thermal type) with spool piece for online test arrangement. All 3 no. of mass flow meters should be of same make and should have local display and should be weather proof.</p>	Venting of gas to atmosphere is not applicable due to Pressurised crankcase design, hence mass flow meter at vent line not considered	You are advised to provide drain vent MFM.



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			The flow meters should be enabled with MODBUS/RS 485 communications.		
4	4 iv.	110	Common structural steel skid for the compressor- Motor combination and for all auxiliary systems	As per our standard package offering all auxiliaries like CO2 system, PRS skid will be supplied loose & to mounted apart from package.	Ok Noted.
5	4 vii.	110	All interconnecting oil, gas, water, air piping within the compressor package.	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 requirement & standard design. Piping between PRV Skid to Inlet of Compressor Package shall be done by VGL as site to site location is not fixed, hence request to considered same.	Ok Noted.
6	4 ix.	110	Separate junction boxes for different type of signals like intrinsically safe signals, alarm, shutdowns, thermocouples, RTDs etc. for interfacing to local panel.	LCP (With PLC) is mounted on package itself hence separate JB's are not required.LCP (With PLC) is mounted on package itself Separate JB for solenoid valve used. For transmitters being intrinsically safe these are routed thru barriers for additional safety	Ok Noted.
7	4 xii.	110	One no. relief valve at each stage discharge, first (1st) stage suction and Blow Down Vessel.	Relief valve at first stage suction is not required in addition to one on blow down vessel as suction line and blow down vessel are connected. Also note that as 3rd discharge is connected with priority panel common SRV is provided. This is our standard design & running in all our packages.	Ok Noted.
8	4 xxii.	111	An oil drain pot outside of the package shall be provided to collect all drains from packing, distance pieces, processes etc. The capacity of the drain pot should not be more than 2.5 Litres.	All the drain is collected in the Oil Recovery Vessel. ORV will be provided mounted inside the package, with a capacity of 20lts for uninterrupted operation of machine.	Ok Noted.
9	4 xxiii.	111	Only air cooled and lubricated compressor with suction/discharge volume bottles (dampers) for each stage (separators) with manual drains and automatic drain system, lube oil system, closed circuit cooling water system (console type)/Air cooled as required.	Suction and discharge volume bottles will be as per manufacturer standard. Considering safety hazards manual drains for suction and discharge volume bottles not considered, manual drains considered only for Oil Removal Vessel. Automatic drain valves are provided in each stages, however providing Manual drain valve in pressurised gas system is safety hazard & can cause operational issues. Manual drain valve is provided for draining oil in depressurised circuit for draining oil when compressor is in stop condition.	Ok Noted.
10	4 xxix.	111	Wires mesh type guard for heat exchanger fan.	Cooling fan chamber is isolated from working area and is not exposed to working person.	Ok Noted.
11	4 xxx..	112	Secondary lubrication system with check valve protector, HP (High Pressure) Filter (for all lubricating points) & DNFT (Digital No Flow Timer) flow switches with standby pump. Secondary lubrication system with divider block shall be provided.	As per our standard & proven design primary lubrication system which is sufficient. Divider block type Lubrication system as per manufacturer's standard design with Brass check valves of Parker make will provided. Kindly accept.	Ok Noted.
12	4 xxxiv.	112	Supply and laying of all required cable (Main cable, UPS cable, PLC cable, Panel cable, ESD cable, Air compressor cable, instrument cable) in bidder scope.	All field piping & cabling will not be considered in bidder scope as site to site location condition change, kindly accept. All type of cabling, piping, tubing for the accessories (i.e. CO2 system, PRS skid, Air Compressor, UPS, ETC) beyond Compressor package skid limits shall be excluded from scope of Supplier. This also includes piping between PRS skid up to Compressor Suction flange. Supplier is	1. Compressor package to control/electrical room - Approx. 55 Mtr. 2. UPS DB to package distance for UPS supply to PLC panel - Approx. 55 Mtr 3. ESD Locations and its distance from Package - Approx. 40 Mtr. 4. Air compressor to electrical room - Approx. 25 Mtr.



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				not aware about the site location / distances hence the request.	5. CO2 Flooding system to compressor package - Approx. 8 Mtr.
13	4 ii.	112	Exclusions All piping beyond battery limits except from air compressor & air piping for air and piping from CO2 cylinders up to the enclosure.	All field piping & cabling will not be considered in bidder scope as site to site location condition change, kindly accept. All type of cabling, piping, tubing for the accessories (i.e. CO2 system, PRS skid, Air Compressor, UPS, ETC) beyond Compressor package skid limits shall be excluded from scope of Supplier. This also includes piping between PRS skid up to Compressor Suction flange. Supplier is not aware about the site location / distances hence the request.	
14	5.3	111	All drains from different process equipment, distance piece and packing shall be manifolded and terminated as single point for customer interface duly flanged with isolation valve. Drains should be through a common header and discharge to be allowed in a pit to avoid spillage around compressor package.	All the drain is collected in the Oil Recovery Vessel. ORV will be provided mounted inside the package, with a capacity of 20lts for uninterrupted operation of machine. For all drains single point threaded connection with isolation valve will be provided.	Ok Noted.
15	6.0	111	UTILITIES Bidder shall make his own provision for Instrument air if required with an electric motor driven air compressor with a suitably sized receiver & Refrigerant type air drier system. Air Compressor motor should be 415 V squirrel cage motor L&T make DOL / star delta starter having overload protection, single phase preventer.	Request to accept Bharat Bijlee make motor for air compressor.	Ok Noted.
16	7.0	114	Performance curves and tables i.e. Flow versus suction pressure and temperature and power curves i.e. absorbed power versus suction pressure and temperature at specified discharge conditions shall be furnished. In addition to above, flow capacity and absorbed power values for suction conditions from 34 Kg/Cm2 g to 40 Kg/Cm2 g in steps of 0.5 Kg/Cm2 shall also be given in tabular form. The graph shall be plotted at various suction pressures ranging from 34 Kg/Cm2g to 40 Kg/Cm2g and at various suction temperatures ranging from 20o to 40o C. Similarly the graphs shall be plotted at various discharge pressures ranging from 200 Kg/Cm2g to 255 Kg/Cm2g, however at 52 0 C (max) discharge conditions.	Not feasible to submit performance curves	Tender Condition Shall Prevail.
17	8.0		Bidder needs to submit the copy of valid type approval for compressor packages from PESO. The PESO certificate should be valid as on due date of Tender. It will be the responsibility of the successful bidder to keep the PESO approval valid throughout the contract execution period.	As per PESO circular dated 9th Nov 2023 type approval of compressor package is not required hoever individual electrical part/instruments used in package will be PESO approved, document will be provide along with fibal dossier.	Ok Noted. You are advised to submit PESO Circular along with tender documents.
18	8.0	115	Carbon Dioxide (CO2) Flooding System	The CO2 system panel is integral with main control panel.	Ok Noted.
19	9.8	116	The inter stage and final stage cooler tube material shall be carbon steel. Bidder to submit cooler sizing calculation for review.	The Gas cooler design shall be such that suitable to the application as per manufacturer's design. Cooler sizing calculation is proprietary, so not feasible to submit.	Ok Noted.
20	9.17	119	All package flow meters should have isolation valve in upstream and NRV/Valve at downstream of flow meter. Flow meters which are on piping should be connected with flexible hoses and should have proper clamping support to avoid vibration so that correct	Isolation valve and NRV shall be as per manufacturer's standards. Installation and supports for Mass flow meter shall be as per recommendation from flowmeter OEM.	Ok Noted.



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			reading are observed.		
21	9.21	119	Direction of flow should be marked on the pipe line and nomenclature of all vessel (e.g. 1st stage discharge dampener etc.) should be written on them. Cross head inspection windows should be transparent for easy of inspection during running. Set values should be prominently marked on the gauges.	Arrow mark will be provided for flow directions. Nameplate & tagging will be provided for vessels. Transparent cross head inspection window will not considered.	Ok Noted.
22	9.22 u)	119	Thermal Mass flow meter for vent loss	Not applicable since zero packing losses due to pressurized crankcase. Hence not considered for supply.	You are advised to provide drain vent MFM.
23	9.27	121	Framework shall be mounted on a suitable skid type base, external-lifting lugs shall be provided at each corner. For 1700 scmh, bidder should quote their most optimized footprint area package. PLC can be placed separately (outside of the canopy) for optimization of the foot print area. Maximum footprint of compressor Package shall be as under, a) For 1700 SCMH, the foot print of the package shall be limited to 10m2.	Foot print will be 3.5m Length x 2.5m. Width	Ok Noted.
24	9.29	122	The compressor shall be vented into BDV before restarting in order to avoid overload to the main drive. In any case venting of gas to atmosphere is not allowed. There is need to have a blow down vessel so that gas is vented to vessel. The size of the BDV should be the sufficient to allow main drive to start. BDV volume to be designed in such a way that gas accumulated in the process should not be vented out in any case of stopping/ emergency push of package. Calculation for BDV volume shall be considering 20% higher than calculated volume and it should be calculated on higher range (40 bar) of the operating pressure (35 bar to 40 bar). Bidder shall submit calculation for same at the time of designing/drawing approval to client. BDV should be preferably placed on top of package and if placed inside package, it should be in vertical position.	Being proprioretory design, submitting calculations is not possible. As per standard design BDV shall be placed inside the canopy in horizontal position, this is as per our past supplied package design, with proven functionality. Kindly accept	OK Noted but Bidder should ensure that, the compressor shall be vented into BDV before restarting in order to avoid overload to the main drive. In any case venting of gas to atmosphere is not allowed. There is need to have a blow down vessel so that gas is vented to vessel. The size of the BDV should be the sufficient to allow main drive to start. BDV volume to be designed in such a way that gas accumulated in the process should not be vented out in any case of stopping/ emergency push of package.
25	9.30	122	Prime mover (Electric Motor) The motor shall be flame proof/ explosion proof and confirm to IS: 2148 suitable for zone 1 group II area as per IS/IEC. The Motor shall be of standard frame size as per IS/IEC and rated for continuous duty with high efficiency and shall be designed for VFD/ Soft Starter starting. The Motor shall be provided with class 'F' insulation, however, temperature rise shall be limited to the temperature specified for class 'B' insulation as per IS and shall be suitable for voltage variation of 415V+ 10%. The bidder shall indicate the guaranteed total power requirement in KW. The motor rating shall be 110% of the greatest BKW required by the compressor. Motor shall be three phase, AC, asynchronous, flameproof, high efficiency (IE# or better, as per IEC60034-30), Ex'd' rated, continuous duty, service factor 1.1, on IEC standard type. Designing shall be done on basis of 50 degrees package ambient temperature. Motor shall be suitable for VFD starter. Service factor shall not play any role in finalizing the rating of motor. Main Motor Starter: Variable Frequency Drive (Heavy Duty) with input line and DC choke, along with other safety measures.	We will provide motor driven package with soft starter starting	Ok Noted.
26	9.32	123	The ingress of oil into CNG adversely effects vehicle emission and storage system. Only lubricated cylinder compressors are allowed	Suction and discharge volume bottles will be as per manufacturer standard.	Ok Noted.



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			and vendor shall supply oil separators after cooler at each stage with automatic and manual drain. The maximum permissible oil content in CNG is 5 PPM.	Considering safety hazards manual drains for suction and discharge volume bottles not considered, manual drains considered only for Oil Removal Vessel. Automatic drain valves are provided in each stages, however providing Manual drain valve in pressurised gas system is safety hazard & can cause operational issues. Manual drain valve is provided for draining oil in depressurised circuit for draining oil when compressor is in stop condition.	
27	9.34	124	Piping & Appurtenances	Gas piping/ tubing at 3rd stage discharge after duplex filter 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 requirement & standard design. This is as per manufacturing standard design.	Ok Noted.
28	9.35	125	The power factor (PF) of the whole electrical system should not be below 0.95. Motor feeder shall be provided with energy meter, heavy duty switch, HRC link type with single phase presenter fuses, contactor (AC-3 Duty), bi-metal relay switch fuse unit, voltmeter, push buttons, earth leakage relays, indication lamps for start/stop/trip/ etc.	Customer to maintain power factor as per requirement.	Ok Noted.
29	10.4	126	The temperature gauge shall be generally mercury in steel field type. Capillary tubing shall be min. SS304 with SS flexible armouring. The gauge shall have an accuracy of +/-1% FSD and 100mm dial size.	Due to smaller size packages being demanded by CGD companies it is feasible only to provide 63 mm dial size gauges. The constraints are highlighted to concerned dept during detail engg stages. Practically the gauges should be at normal height for ease of monitoring and keeping in view the no of gauges, only 63 mm gauges can be accomodated in one gauge panel, Our packages have a single gauge panel wherein all gauges are installed.	Ok Noted.
30	10.9	126	Separate junction boxes shall be provided for each type of signal i.e. analog, digital, solenoids RTD, thermocouple, intrinsic safe and for power supply. No cable shall share power & signal.	LCP (With PLC) is mounted on package itself hence separate JB's are not required.LCP (With PLC) is mounted on package itself & also separate guage box will be used for intrinsically safe signals.	Ok Noted.
31	10.11	126	Compressor package shall be provided with the following indicators: ii. Oil pressure indicator on each pressure lubrication system iv. Hour meter vi. Compressor jacket water coolant temperature indicator on local gauge panel e. Coolant flow low devices xiv. The Compressor package shall be provided with the following trip devices: e. On coolant flow low	As our standard offering compressor package shall not be provided with the following indicators considering space constraint on display panel: ii. Oil switch and no flow switch on lubrication system shall be provided. iv. Hour meter shall be available at HMI. Separate hardware not considered vi. Not applicable as compressor is air cooled type. e. Coolant flow not applicable as heat exchanger is air cooled type. xiv. e. Coolant flow not applicable as heat exchanger is air cooled type.	Ok Noted.
32	10.18	1248	Redundancy in PLC is required. PLC shall incorporate all process parameters (specified elsewhere) and status of compressor, engine & priority panels and shall be modular in construction with 100% redundancy with respect to CPU, Power supply, Interface. PLC components/ system shall be tropicalized, MIL standard adopted with complete wiring and necessary terminals. Wiring to be color coded with cross ferruling in position. PLC shall be capable of	SCADA is not considered in bidder's scope. Ethernet port is provided for customer SCADA comminication. SCADA compatibility is provided for remote monitoring. GPRS & SCADA system not considered. 100% redundancy shall be provided only for CPU. Kindly accept.	Ok Noted.



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			carrying out on line routines for at least ten separate loops without affecting the scan, cycle & updating time etc. PLC shall be configured as a remote terminal unit of supervisory computer and data acquisition system complete with GPRS and Ethernet connectivity. One card for transferring and accessing data from minimum twenty devices with RS485 port shall be provided. In case of failure of master/ active controller/ CPU, standby controller/ CPU should take over the control in bump less manner. All values & data should be available through both the controllers immediately, i.e. there should be no data loss.		
33	10.20	130	Documents e. Bill of Material with Tag No & Technical Specifications	e) Providing BOM will not be possible, instead ASL shall be provided which is our standard offering. Kindly accept.	Ok Noted.
34	11.0	130	SKID AND ENCLOSURE Each compressor module shall be housed within a purpose built SS 304 acoustic enclosure or in case of mild steel the surface shall be treated with anti-rust coatings followed by UV resistant epoxy paint for durability and rust protection. The units shall incorporate a rigid framework with a combination of fixed and removable panels. Filling of Class A melamine self-extinguishing polyurethane (PU) foam specifying the maximum burn extent, with UL certification or better shall be used in acoustic enclosure.	The structural members of enclosure shall be provided with two coats of primer and two coats of epoxy paints duly applied after mentioned surface treatment. The package unit shall be provided with doors for easy access during maintenance and similar activities. As per standard design we shall use Rockwool instead of PU which is provided for our large fleet of compressors supplied previously.	Ok Noted.
35	11.4	130	The maximum temperature within the enclosure shall be limited to ambient + 8 deg C. Adequate ventilation fans shall be provided to meet the above and also to account heat dissipation of the coolers/ all other components.	The approach above ambient would be 10°C. (max. discharge temp. 42°C + 10°C = 52°C).	Ok Noted.
36	11.11	131	Adequate fixed flameproof lighting (minimum at 2 locations) shall be provided inside the enclosure.	Adequate fixed flameproof lighting shall be provided inside the enclosure.	Ok Noted.
37	11.14	131	For handling of all heavy parts for maintenance purpose suitable lifting arrangement shall be provided i.e. beam fitted with chain hoist arrangement. The chain hoist arrangement i.e. chain pulley block shall be removable type, which can be disassembled and shifted onto the other machines. 1no. each shall be provided for tendered quantity of compressors. Eye bolt arrangement shall be provided on heavier components like electric motor, cylinder crankcase, and wherever felt necessary for lifting during maintenance.	Beam fitted with chain hoist not considered due to space constraints, instead suitable lifting arrangement provision shall be offered. Kindly accept.	Ok Noted.
38	11.18	131	The bidder shall be providing a degree of protection equivalent to IP44 as defined in AS 1939.	Degree of protection equivalent to IP54 shall be provided as per our standard offering, kindly accept.	Ok Noted.
39	12	132	Painting and protection: Packing shall be sufficiently robust to withstand rough handling during ocean shipment & inland journey. Sling points shall be clearly indicated on crates. Painting of Internal process piping should be as per international color coding standard, e.g.- Gas line-Yellow, Water line- green, Airline-Blue, Fire suppressing system – Red etc. The paint shall be chosen, primed and applied to have a service life of ten years the exterior of equipment and enclosure is required to be corrosion free for ten years.	Painting shall be as per manufacturer's standard procedures. Package enclosure shall be Powder Coated ensuring longer durability in all weather out door installation conditions. Piping color code for package shall be as per manufacturer standard i.e Red color-Discharge/hot gas line. Blue color-Suction gas line This also helps in identification for hot gas line from safety point of view The canopy is weather proof so no separate packing considered.	Ok Noted.
40	13.1	133	Mechanical Running Test (MRT) The MRT for the 25% compressors block of the lot shall be carried	MRT will be carried out as per manufacturer's std. Following not feasible during FAT:	Ok Noted. Factory Acceptance test certified by approved TPIA .



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			<p>out with job or shop driver including complete job driving system i.e., job driven V-belt, job pulleys etc., for 2 hours continuously at the premises of compressor block OEM. The compressor need not be pressure loaded for MRT test. During this test following shall be recorded at agreed intervals (as applicable).- Vibration levels measured on cylinders and frame</p> <p>i. Vibration levels measured on cylinders and frame ii. Bearing temperature iii. Oil cooler inlet and outlet temp iv. Subsequent to satisfactory run the compressor shall be examined as per standard procedure & following shall be examined as minimum: v. Bore & other parts by opening a valve vi. Piston & cylinder clearance vii. Visual examination of position rod, cylinder guide bore without dismantling.</p> <p>If any of part found damaged, all similar components shall be stripped for inspection. The MRT test shall be repeated after replacement of such parts.</p>	<p>-Bearing temperature -Sound level • -Not feasible to unavailability of free field. To be demonstrated at site.</p> <p>As it is not possible to disassemble any part of the compressor package after assembly & testing strip test is not feasible.</p>	
41	13.2	133	<p>Mechanical String Test Mechanical String Test for 4 hrs is a mandatory requirement to be performed at packager's shop before dispatch in presence of Owner's representatives (or a third party as arranged by Bidder and approved by Owner). This test can be clubbed up with the Mechanical Run Test of compressor as specified above, provided the job driver & lube Oil system is used for the test. At least 25% of the package lot ordered shall be string tested. String test on N2 or air is not acceptable. It shall be on natural gas.</p>	<p>Mechanical string test will be carried out on CNG as per manufacturer's standards.</p>	Ok Noted.
42	-	168	<p>SPECIFICATIONS FOR DISCHARGE FILTER Filter Designed : Paint Compatible CE mark in accordance with European Directive for Pressure Equipment, PED (97 / 23 / EC) Are Designed to meet the ATEX European Directive for Explosion Protection , (94 / 9 / EC) All natural gas filters in accordance to CE Eex 2GD IIB T6.</p>	<p>Kindy approve manufacturer's standard filter with parker make filter cartridge (Borosilicate Microfibre Fabric). Our standard filter is proven is CNG application.</p>	Ok Noted.
43			<p align="center">UPS</p>	<p>We understand UPS will supply by VGL</p>	Ok Noted.
44	ANNEXURE-VI	169	<p align="center">ANNEXURE-III RECOMMENDED VENDOR LIST</p>	<p>Kindly approve the following make. SUCTION FILTER- R S Instrumentation DISCHARGE FILTER- manufacturer's (Atlas Copco) make with Parker element. Actuator- El-O-Matic Two way valve- PHBB CO2 FLOODING SYSTEM- CP approved make (It consists of parts from VTI) Fittings (Instrument Manifold) : Baumer</p>	Ok Noted.
45	ANNEXURE-XII	192	<p align="center">QUALITY ASSURANCE PLAN</p>	<p>Inspection & Testing will be as per Approved QAP by VGL</p>	Ok Noted.
			<p align="center">HYDROTEST OF - CYLINDER, PRESS. VESSELS, HEAT EXCHANGERS</p>	<p>Inspection by owner/Owner's representative not considered</p>	Ok Noted.
			<p align="center">HYDROTEST OF - CYLINDER HEADS</p>	<p>Hydrotest for cylinder head not considered.</p>	Ok Noted.



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			LEAK PROOF TEST OF CRANK CASE (4 Hours . with Kerosene)	Hydrotest TC for crankcase shall be submitted Inspection by TPI, owner/Owner's representative not considered	Ok Noted.
			BARRING OVER TO CHECK CYLINDER END CLEARANCE AND PISTON ROD RUNOUT	Not feasible to check piston rod runout As it is not possible to disassemble any part of the compressor Package after assembly & Testing same is not feasible.	Ok Noted.
			No load mechanical run test of the comp. with rated (or more) speed and shop driver. (4 hrs. min.)	Shall be combined with Factory Acceptance Test (FAT) at full load on CNG fuel. Inspection by TPI, owner/Owner's representative not considered	Ok Noted. Same inspected by approved TPI and owner.
			STRIP CHECK AND INTERNAL INSPECTION AFTER "NLMRT" OF ALL Refer COMPRESSORS	As it is not possible to disassemble any part of the compressor Package after assembly & Testing same is not feasible. Inspection by TPI, owner/Owner's representative not considered	Ok Noted.
			Canopy structure painting inspection at work. Surface preparation to be inspected after cleaning and before application of first coat of primer.	Canopy will be powder coated. Inspection by TPI, owner/Owner's representative not considered	Ok Noted.
			FUNCTIONAL / HV / CONTINUTY TEST FOR CONTROL PANEL(AT SUB VENDOR'S WORKS.)	Functional / hv / continuity check for control panel shall be done during Factory Acceptance Test (FAT) at full load on CNG fuel. HV test will not considered.	Ok Noted.
			PERFORMANCE ACCEPTANCE TEST (AT SITE) AT GUARANTEED PARAMETERS.	TPI inspection is not considered at site test	Ok Noted.
			FIELD TRIAL RUN AT SITE FOR EACH PACKAGE AFTER COMMISSIONING	TPI inspection is not considered at site test	Ok Noted.
46	Page-13	26.1.1	26.1.1 Deductions shall apply as per following formula: In case of delay in delivery of equipment/ materials or delay in completion, total contract price shall be reduced by ½% (half percent) of the total contract price per complete week of delay or part thereof subject to a maximum of 5% (five percent) of the total contract price.	LD Should be on Individual Equipment basic price, not on Total contract price	Ok Noted.
50	Page-71	20	C. PENALTY TOWARDS PACKAGE EFFICIENCY LOSS This penalty shall be imposed on compressor blocks not capable of delivering rated capacity of 1700 shall SCMH Following calculations be used for penalty towards package efficiency loss: $F = 2 \times \{(1700 \times H \times RD \times AD) - M\}$ Where, F = Penalty Amount in Rupees H = Hours clocked in a month RD = Average Relative Density for the month using GC Data AD = Air Density = 1.22541 M = Discharge mass flow during the month in Kgs	Request to please remove this penalty.	Tender Condition Shall Prevail.
51	Page-72		D. Penalty for Non-Performance during Period of Operation & Maintenance Details of Penalty for non-performance of equipments a. On normal day (i.e. the day other than the schedule maintenance day): i. The party has to ensure that the equipment is available for	As the CNG compressor is specific machine hence we requested to VGL for not keeping stringent penalty clause and requested to replace these clause as per below. i. The party has to ensure that the equipments are available for operation for minimum 16 hours per day and on an average the equipment availability has to be 97% in	Tender Condition Shall Prevail.



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			<p>operation for minimum 20 hours per day and on an average the equipment availability has to be 98% in a month.</p> <p>ii. If the equipment is down for more than 4 hours on any day, Penalty would be applicable as follows:</p> <ul style="list-style-type: none"> · 4 to 12 hours: Rs. 20,000/- · Beyond 12 hours: Rs. 40,000/- per day. <p>In case of daily availability is 20 hrs. but monthly average availability is below 98%. Then penalty @ of 10,000 per % or part thereof shall be applicable.</p>	<p>a month.</p> <p>ii. If the equipment is down for more than 8 hours on any day or availability is less than 97% in a month. Penalty would be applicable as follows:</p> <ul style="list-style-type: none"> Up to 12 hours: ₹ 5,000/- Beyond 12 hours: ₹ 10,000/- per day. <p>In case of daily availability is 16 hrs but monthly average availability is below 97%. Then penalty @ of 5,000 per % or part thereof shall be applicable.</p>	
52	Page-72		<p>In any case, the maximum penalty imposed in a month for non-performance of the equipment turns out be 50% or more of the amount of O&M charges to be paid to the party per month per compressor (a complete cost break up of O&M charges need to be furnished by the bidder during bid), OWNER will take necessary actions as per terms and conditions of the contract for such non-performance.</p>	<p>We cannot understand the clause, hence VGL is requested to clarify the same and request for total penalty will be limited to 20% of monthly invoice value of concerned package.</p>	Tender Condition Shall Prevail.
53	Page-72		<p>F. In any case/ any situation, total penalty will be limited to 50% of monthly invoice value of concerned package.</p>	<p>We requested to VGL, In any case/ any situation, total penalty will be limited to 20% of monthly invoice value of concerned package.</p>	Tender Condition Shall Prevail.
54	Page-110	4.0	<p>3 nos. mass flow meters to measure the Natural Gas consumption at packages inlet, package discharge (both Coriolis type) and package loss / venting (thermal type) with spool piece for online test arrangement. All 3 no. of mass flow meters should be of same make and should have local display and should be weather proof. The flow meters should be enabled with MODBUS/RS 485 communications.</p>	<p>As our compressor crankcase being pressurized hence Vent MFM is not applicable and we will not supply.</p>	You are advised to provide drain vent MFM.
55	123		<p>The gas temperature after after-cooler shall not exceed 52 degree C.</p>	<p>The approach would be above ambient temperature 12°C. The Gas cooler design shall be such that suitable to the application as per manufacturers design. Gas coolers of the design shall be designed as per ASME-SEC-VIII, as per manufactures standard design approach same is proven for earlier supplied packages.</p>	Ok Noted. ΔT = 12°C
56	126		<p>10.11 Compressor package shall be provided with the following indicators:</p>	<p>Instruments selection / Alarm and Trip condition as per OEM Operation Philosophy and design Logic.</p>	Ok Noted.
57	128		<p>10.18 Local Control Panel</p>	<p>SCADA is not considered in our scope. Ethernet port is provided for customer SCADA communication. SCADA compatibility is provided for remote monitoring. GPRS & SCADA system not considered. 100% redundancy shall be provided only for CPU. Kindly accept.</p>	Ok Noted.
58	131		<p>11.15 The bidder shall also provide 1 nos. monkey ladder for safe climbing on the top of the canopy along with hand railing on the top for ease of maintenance and operation.</p>	<p>As per standard design we shall provide 1 nos. incline ladder, kindly accept.</p>	Ok Noted.
59	133		<p>13.2 Mechanical String Test</p>	<p>Mechanical String Test for 2 hrs, kindly accept.</p>	Ok Noted. Factory acceptance test is 4 hr.
60	137		<p>Details of Penalty for non-performance of equipments</p>	<p>If machine is not down in previous month the uptime carryover in next month by OEM. The minimum permissible downtime should be 8 Hrs and penalty shall be calculated after 8 Hrs only.</p>	Tender Condition Shall Prevail.
61	169		<p>ANNEXURE – VI: VENDOR LIST</p>	<p>As CP/Atlas Copco is OEM Hence, Please conserved OEM</p>	Ok Noted. But Fittings: Parker/Swagelok only.



Vadodara Gas Limited
Replies to Bidder's Queries - Additional

				<p>Kindly approve the following make.</p> <p>SUCTION FILTER- Filtration Technik / R S Instrumentation</p> <p>DISCHARGE FILTER- manufacturer's (Atlas Copco) make with element.</p> <p>VIBRATION TRANSMITTER-Masibus</p> <p>AIR COMPRESSOR-CP Make.</p> <p>Instruments Manifold-Baumer</p> <p>Safety Valve - LESER</p> <p>SOLENOID VALVES- Parker</p> <p>FLAME DETECTOR- ESP Safety</p> <p>GAS DETECTOR- ESP Safety</p> <p>VENT MASS FLOW METERS THERMAL- PCD</p> <p>CO2 FLOODING SYSTEM- CP approved make (It consists of parts from VTI)</p> <p>PLC : Phoenix / Rockwell</p> <p>Fittings : Parker / Swagelok / Hylok / SSP</p>	
62	11	1.4	<p>Similar Work Definition: -</p> <p>The bidder should have Designed, Engineered, Manufactured, Tested, Supplied and Commissioned to any CGD firm including Operation & Comprehensive Maintenance for Electric Motor Driven Compressors package of 1700 SCMH capacity.</p>	<p>We will provide a letter for supply of 1700 SCMH, whereas we will provide you with a Comprehensive O&M letter for any Motor/Engine driven block kindly accept.</p>	Ok Noted.
64	GCC-13	26	<p>26. Price Reduction Schedule For Delayed Delivery</p> <p>26.1 Subject to Article-29, if the SELLER fails to deliver any or all of the GOODS or performance the services within the time period (s) specified in the CONTRACT, the PURCHASER shall, without prejudice to his other remedies under the CONTRACT, deduct from the CONTRACT PRICE, a sum calculated on the basis of the CONTRACT PRICE, including subsequent modifications. 26.1.1 Deductions shall apply as per following formula:</p> <p>In case of delay in delivery of equipment/ materials or delay in completion, total contract price shall be reduced by ½% (half percent) of the total contract price per complete week of delay or part thereof subject to a maximum of 5% (five percent) of the total contract price.</p>	<p>Request to modify clause as under :::::::::::</p> <p>26.1.1 Deductions shall apply as per following formula:</p> <p>In case of delay in delivery of equipment/ materials or delay in completion, total contract price shall be reduced by ½% (half percent) of the total contract price per complete week of delay or part thereof subject to a maximum of 5% (five percent) of INDIVIDUAL INVOICE VALUE.</p>	Ok Noted.
65	2.4	64	<p>CNG Compressor package: The CNG compressor package include the CNG compressor, all other associated equipment like Air Compressor, Air Volume bottle, Co2 Flooding System, Gas filter, Interconnecting pipes, UPS etc.</p>	<p>We understand UPS will supply by Vadodara Gas Ltd.</p>	Ok Noted.
66	1)	72	<p>Gauge Pressure at Station Inlet shall be used as benchmark for imposition of penalties and not suction pressure being displayed at the PLC.</p>	<p>Gauge Pressure at Compressor after PRV of Inlet SKID shall be used as benchmark for imposition of penalties.</p>	Tender Condition Shall Prevail.

Note: This Replies to Bidder's Queries as uploaded on n-Procure & VGL's Website. Please upload the same duly Sign and Seal with Techno-Commercial Bid as this is an Integral Part of the Tender.