

## বিজ্ঞপ্তি

বাংলাদেশ বিমান বাহিনীর জন্য **Ground Power Unit (Veh Mounted) including prime mover and two types of power output: (115/200 V AC, 3 phase, 400 Hz, 28 V DC and 28/56 V DC) and (115/200 V AC, 3 phase, 400 Hz and 28 V DC)** এর Brand, Country of Origin and Latest Production Model প্রমিতকরণের লক্ষ্যে প্রদত্ত Technical Specification অনুযায়ী সংশ্লিষ্ট সরবরাহকারীগনের (অত্র মহাপরিদপ্তরের তালিকাভুক্ত সংস্থা সমূহ) নিকট হতে আবেদন পত্র আহবান করা যাচ্ছে। উক্ত প্রমিতকরণের জন্য আগ্রহী সরবরাহকারীগন নিম্ন স্বাক্ষরকারীর নিকট হতে Technical Specifications সংগ্রহ করে তা পূরণ করতঃ প্রমিতকরণতব্য যানবাহনের Brochure (containing all Technical Information including latest production model, brand country of origin & photograph) সহ ০২ কপি আগামী ২২ আগস্ট ২০২৩ তারিখের মধ্যে জমা দেওয়ার জন্য অনুরোধ করা হলো।


মাফরুহা বেগম  
স্কোয়াড্রন লীডার  
মহাপরিচালকের পক্ষে

তারিখ : ০৭ আগস্ট ২০২৩।

**TECHNICAL SPECIFICATION FOR GROUND POWER UNIT (VEH MOUNTED) CAPACITY:  
MINIMUM 100 KVA, OUTPUT: 115/200VAC, 3 PHASE, 400HZ, 28VDC AND 28/56VDC**

Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
1.	Name of the local agent with full address	To be mentioned by the bidder.	
2.	Name of the Principal with full address	To be mentioned by the bidder.	
3.	Name of the Manufacturer with full address	To be mentioned by the bidder.	
4.	Nomenclature	Ground Power Unit (Vehicle Mounted).	
5.	Utility/Purpose	The purpose of Ground Power Unit (Vehicle Mounted) is to supply power to start the aircrafts/helicopters of BAF (like Yak-130, MiG-29, F-7MB/FT-7B, F-7/FT-7BG/F-7BGI, K-8W, C-130, AN-32, L-410, GROB-120 aircraft and MI-17, MI-171, MI-171Sh, AW139, AW119, Bell-206 & Bell-212 helicopter etc) on ground.	
6.	Brand	To be mentioned by the bidder.	
7.	Model	Latest production during tender.	
8.	Country of Origin	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
9.	Country of Manufacturer	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
10.	Country of Assembly	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
11.	<b>Engine for Power Output of Ground Power Unit:</b>		
	a. Brand	To be mentioned by the bidder.	
	b. Model	Latest production during tender.	
	c. Country of Origin	To be mentioned by the bidder.	
	d. Horse Power	Minimum 260 HP at rated RPM (or to be mentioned by the bidder).	
	e. Number of Cylinder	06 Cylinders.	
	f. Engine displacement	5800 cc (minimum).	
	g. Rated RPM	2000-2200 RPM (or to be mentioned).	
	h. Types of fuel	Diesel.	
	j. Fuel consumption/ hour	To be mentioned by the bidder.	
	k. Cooling system	Water Cooled.	
	l. Electric system	12/24 V DC (to be mentioned by the bidder).	
	m. Battery Capacity	2 x 150 Ampere Hour (or to be mentioned by the bidder).	
12.	<b>Alternator:</b>		
	a. Brand	To be mentioned by the bidder.	
	b. Model	Latest production during tender.	

Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
	c. Country of Origin	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
	d. Type	Brushless.	
	e. Output Power	100 KVA (minimum).	
	f. Output Voltage	115/200 V AC, 3 Phase, 400 Hz.	
	g. Power Factor	0.8	
	h. Cooling System	Fan Cooling/Water Cooling (to be mentioned by the bidder).	
13.	<b>DC Output of Ground Power Unit</b>	28 V DC & 28/56 V DC.	
14.	<b>Transformer Rectifier Unit (TRU) system:</b>		
	a. Transformer with Rectifier Unit	Two air-cooled step down transformer with Rectifier Unit are to be incorporated with the GPU and transformer is to be visible with separate entity. Moreover, the information of transformer for maintenance must be available in the manual/brochure of the GPU.	
	b. Output Filtering	DC output must be incorporated with the filtering circuit so as to reduce the Radio Interference during operation.	
	c. DC Output Voltage Selector by Switch/ Trimmer/ AVR (Automatic Voltage Regulator)	3 to 5 steps selector switch /trimmer must be incorporated to adjust the DC output voltage between 26-30 VDC or by AVR (Automatic Voltage Regulator) system.	
	d. Output delay timer	Power output delivery <b>delay time</b> should be less than 10 seconds (if delay timer is fitted in the Ground Power Unit).	
	e. Control Box	A control box must be fitted for changing the 28 VDC output of two TRU's into single 56 VDC output for starting the aircrafts.	
	f. Voltage Regulator	Automatic Voltage Regulator for maintaining the nominal output voltage $28 \pm 2$ VDC.	
	g. Voltage Stabilizer	Auto Voltage Stabilizer must be fitted for obtaining stable power at variable load.	
	h. Control System and Instruments for the TRU	Input contractor for transformer, Power ON Pushbutton, Power OFF Pushbutton, DC output indicator light, Over voltage protection trip, DC Voltmeter & DC Ammeter must be available with the Ground Power Unit.	
	j. Output Power System	(1) Rated Current: <b>Minimum 800 Amps</b> continuously. (2) Inrush/Surge Current for supplying 1 (one) minute: <b>2500 Amps</b> .	
15.	<b>Instrument for 400 Hz AC Electrical system:</b>		
	a. Voltage Regulator	Solid state voltage regulator to maintain variation of output voltage within $\pm 1\%$ of the nominal value in changing loads.	

Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
	b. Control instrument	<p><b>For Analogue System.</b> Micro controller based digital Graphical User Interface (GUI) Touch screen sys all the engine and alternator parameters will be displayed in the GUI screen.</p> <p><b>For Digital System.</b> The bidder is to mention details about operation, standby system, maintenance of equipment's and safety system with the GPU.</p> <p><b>Control Instrument Panel.</b> Type of control instrument panel is to be mentioned by the bidder.</p>	
16.	Canopy of the Power	The generating and control equipment should be fully protected from rain/sun by sliding zinc coated Canopy which allows unrestricted access to major equipment. It should be able to operate in hot humid monsoon prone region.	
17.	Metallurgical Treatment	Anti-corrosive treatment must be given on all parts of the Ground Power Unit prone to corrosion.	
18.	Noise Control System	Noise reduction system should be fitted to reduce the noise level while operating the GPU.	
19.	Fault Protection Devices:	Following system must be incorporated with the Ground Power Unit. Moreover, the detail information about following Protection Devices must be available in the manual/brochure of the GPU:	
	a. Electrical Power system	<p>(1) Under and over frequency protection system and cut off provision.</p> <p>(2) Under and over voltage protection system and cut off provision.</p> <p>(3) Overload protection system.</p> <p>(4) Short circuit protection system.</p>	
	b. Engine Section	<p>Automatic shut down system is to be available of engine for:</p> <p>(1) Low oil pressure.</p> <p>(2) High oil pressure.</p> <p>(3) High coolant temperature.</p> <p>(4) Engine over speed.</p> <p>(5) Engine over heat.</p> <p>(6) Any other items, if necessary.</p>	
20.	Warning System and Fault Memorize Display	Different warning system like over/under voltage, over/under frequency, over load, over temperature, low oil pressure etc should have audio visual warning system in digital display board (LED/LCD display).	

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Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
21.	<b>Output Power Cable</b>	Following Output Power Cable must be fitted with each Ground Power Unit: <ul style="list-style-type: none"> <li>a. One output cable 115/200 VAC, 400 Hz, 3 Phase, 04 wire (at least 15 meters long) with a standard 06 pin aircraft adapter.</li> <li>b. Two output cable for 28.5 VDC, 800-1500 amperes (at least 15 meter long) with a standard 03 pin flat adapter.</li> <li>c. Two output cable 28/56 VDC, 800-1800 amperes, (at least 15 meter long) must be fitted with 6 pin adapter to start F-7MB/FT-7B, F-7/ FT-7BG/F-7BGI aircrafts.</li> <li>d. Output cable of 01 x 115/200 VAC, 01 x 28.5 VDC and 01 x 28/56 VDC must be fitted at one side of the Ground Power Unit and 01 x 28.5 VDC and 01 x 28/56 VDC output cable must be fitted another side of the Ground Power Unit.</li> <li>e. All the output power cable must be covered with insulated rubber material.</li> </ul>	
22.	<b>Cable box</b>	Cable boxes having steel cover are to accommodate all the power cables to protect the power cables from rain. The location of the boxes must be easily accessible.	
23.	<b>28 VDC Power Socket</b>	One standard two pin, 15 amps, 28 VDC socket with a "ON-OFF" switch should be fitted in the power control board and it must be easily accessible to use.	
24.	<b>Operation Cycle</b>	The GPU should be able to operate for min 04 hours continuously. The bidder is to specify about the operation cycle of the offered GPU.	
25.	<b>Electrical Equipment/Aggregate</b>	The country of origin of all the electrical equipment/aggregate, control instrument and other accessories should be as same as the country of manufacturer.	
26.	<b>Prime Mover:</b>	A brochure of chassis to be submitted with the offer	
	a. Brand	To be mentioned by the bidder.	
	b. Model	Latest production during tender.	
	c. Country of Origin	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
27.	<b>Drive</b>	Right Hand Drive (4 x 2 WD)	
28.	<b>Steering</b>	Power Steering.	
29.	<b>Dimension, Volume and Weight of GPU</b>	To be mentioned by the bidder.	
30.	<b>Engine for Prime Mover:</b>		
	a. Brand	To be mentioned by the bidder.	
	b. Model	To be mentioned by the bidder.	
	c. Country of Origin	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	

Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
	d. Country of Manufacturer	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
	e. Country of Assembly	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
	f. Horse Power	140 HP (minimum).	
	g. No of Cylinder	04 Cylinder (minimum).	
	h. Engine displacement	5100 cc (or to be mentioned by the bidder).	
	j. Rated RPM	2000 RPM (or to be mentioned by the bidder).	
	k. Types of fuel	Diesel.	
	l. Fuel consumption/hour	To be mentioned by the bidder.	
	m. Cooling system	Water Cooled.	
	n. Electric system	12/24 V DC (to be mentioned by the bidder).	
	p. Battery Capacity	2 x 150 Ampere Hour (or to be mentioned by the bidder).	
31.	<b>Towing Hooks</b>	Locking facilities should be fitted in the front and rear of the Ground Power Unit for towing.	
32.	<b>Lighting System</b>	<p>The following lighting system must be available:</p> <ul style="list-style-type: none"> <li>a. Head lights</li> <li>b. Side/Parking Lights.</li> <li>c. Turning indication.</li> <li>d. Dash Board/Instrument panel lights (if required).</li> <li>e. Number plate lights (rear and front).</li> <li>f. Brakes lights</li> <li>g. Clearly visible flashing beacon light on top of the Cabin and 'NAV' light qty-04 (blue &amp; red) on roof (front &amp; rear corner).</li> <li>h. Flashing indication lights for driving.</li> <li>j. Manually/auto rotatable, approx 1 to 2 feet height adjustable flood light (90 to 100 watt DC) at rear side top for night operation.</li> </ul>	
33.	<b>Tyre and Wheels</b>	<ul style="list-style-type: none"> <li>a. The prime mover has to be incorporated with 02 x wheels in front and 04 x wheels in rear.</li> <li>c. Standard tyre size to be quoted by the bidder.</li> <li>d. Manual wheel brake provision must be available.</li> </ul>	
34.	<b>Fuel Tanks</b>	A fuel tank capacity of not less than 250 liters should be fitted with the Ground Power Unit.	
35.	<b>Body and Chassis</b>	<ul style="list-style-type: none"> <li>a. Body must be of steel and fabricated with steel trolley.</li> <li>b. The Ground Power Unit must have rear mudguard for each wheel.</li> <li>c. Ground clearance of trolley should not be less than 300 mm.</li> </ul>	
36.	<b>Driving Speed</b>	Maximum driving speed should be up to 90 KPH.	

Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
37.	<b>Color</b>	<p>a. Canopies and cabin should be painted with <b>golden yellow gloss</b> colour.</p> <p>b. Cable boxes, Noise boxes, chassis, wheels, bumpers, mudguards, fuel tanks, etc should be painted with standard black colors.</p>	
38.	<b>Standard Fittings</b>	<p>a. All safety devices are to be incorporated as per the international standard.</p> <p>b. All types of fittings are to be done by the manufacturer as per the requirement of the user.</p> <p>c. Any other things required to operate the Ground Power Unit (vehicle mounted) smoothly to be provided by the bidder within the quoted price.</p>	
39.	<b>For standard tools, and accessories are to be supplied with each GPU by the suppliers:</b>	<p>a. One Dry chemical fire extinguisher of capacity 5-10 Kg for each GPU.</p> <p>b. One spare wheel assemble (loose) complete with tyre and tube for each GPU.</p> <p>c. One set (qty-02) lifting jack for each GPU.</p> <p>d. Wheel removing tools for each GPU.</p> <p>e. 01 x Tools box with sufficient special tools. But bidder is to submit a list of tools to be supplied with GPU mentioning type and quantity with the offer.</p>	
40.	<b>Publications</b>	<p>Following Publications are to be supplied along with the each Ground Power Unit:</p> <p><b>Manuals:</b> Maintenance manuals, Operation manuals, Illustrate Parts Catalogue &amp; Illustrate Parts Breakdown (with detail description and part number of items at component level and detailed drawing, circuit diagram etc), Repair &amp; Workshop manual and trouble-shooting manual each 02 copies are to be provide for power unit and Prime Mover separately with each GPU. Supplier is to provide 02 x soft copy (CD) of the manuals/ publications and related software (if available) required for maintenance/ rectification of the power unit and Prime Mover separately.</p>	
41.	The supplied vehicle mounted GPU must be equipped with all standard fittings and accessories.		

**TECHNICAL SPECIFICATION FOR GROUND POWER UNIT (VEH MOUNTED) CAPACITY:  
MINIMUM 100 KVA, OUTPUT: 115/200VAC, 3 PHASE, 400HZ AND 28VDC**

Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
1.	Name of the local agent with full address	To be mentioned by the bidder.	
2.	Name of the Principal with full address	To be mentioned by the bidder.	
3.	Name of the Manufacturer with full address	To be mentioned by the bidder.	
4.	Nomenclature	Ground Power Unit (Vehicle Mounted).	
5.	Utility/Purpose	The purpose of Ground Power Unit (Vehicle Mounted) is to supply power to start the aircrafts/helicopters of BAF (like Yak-130, MiG-29, K-8W, C-130, AN-32, L-410, GROB-120 aircraft and MI-17, MI-171, MI-171Sh, AW139, AW119, Bell-206 & Bell-212 helicopter etc) on ground.	
6.	Brand	To be mentioned by the bidder.	
7.	Model	Latest production during tender.	
8.	Country of Origin	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
9.	Country of Manufacturer	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
10.	Country of Assembly	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
11.	<b>Engine for Power Output of Ground Power Unit:</b>		
	a. Brand	To be mentioned by the bidder.	
	b. Model	Latest production during tender.	
	c. Country of Origin	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
	d. Horse Power	Minimum 260 HP at rated RPM (or to be mentioned by the bidder).	
	e. Number of Cylinder	06 Cylinders.	
	f. Engine displacement	5800 cc (minimum).	
	g. Rated RPM	2000-2200 RPM (or to be mentioned).	
	h. Types of fuel	Diesel.	
	j. Fuel consumption/ hour	To be mentioned by the bidder.	
	k. Cooling system	Water Cooled.	
	l. Electric system	12/24 V DC (to be mentioned by the bidder).	
	m. Battery Capacity	2 x 150 Ampere Hour (or to be mentioned by the bidder).	
12.	<b>Alternator:</b>		
	a. Brand	To be mentioned by the bidder.	
	b. Model	Latest production during tender.	



Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
	c. Country of Origin	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
	d. Type	Brushless.	
	e. Output Power	100 KVA (minimum).	
	f. Output Voltage	115/200 V AC, 3 Phase, 400 Hz.	
	g. Power Factor	0.8	
	h. Cooling System	Fan Cooling/Water Cooling (to be mentioned by the bidder).	
13.	<b>DC Output of Ground Power Unit</b>	28 V DC & 28/56 V DC.	
14.	<b>Transformer Rectifier Unit (TRU) system:</b>		
	a. Transformer with Rectifier Unit	Two air-cooled step down transformer with Rectifier Unit are to be incorporated with the GPU and transformer is to be visible with separate entity. Moreover, the information of transformer for maintenance must be available in the manual/brochure of the GPU.	
	b. Output Filtering	DC output must be incorporated with the filtering circuit so as to reduce the Radio Interference during operation.	
	c. DC Output Voltage Selector by Switch/ Trimmer/ AVR (Automatic Voltage Regulator)	3 to 5 steps selector switch /trimmer must be incorporated to adjust the DC output voltage between 26-30 VDC or by AVR (Automatic Voltage Regulator) system.	
	d. Output delay timer	Power output delivery <b>delay time</b> should be less than 10 seconds (if delay timer is fitted in the Ground Power Unit).	
	e. Voltage Regulator	Automatic Voltage Regulator for maintaining the nominal output voltage $28 \pm 2$ VDC.	
	f. Voltage Stabilizer	Auto Voltage Stabilizer must be fitted for obtaining stable power at variable load.	
	g. Control System and Instruments for the TRU	Input contractor for transformer, Power ON Pushbutton, Power OFF Pushbutton, DC output indicator light, Over voltage protection trip, DC Voltmeter & DC Ammeter must be available with the Ground Power Unit.	
	h. Output Power System	(1) Rated Current: <b>Minimum 800 Amps</b> continuously.  (2) Inrush/Surge Current for supplying 1 (one) minute: <b>2500 Amps</b> .	
15.	<b>Instrument for 400 Hz AC Electrical system:</b>		
	a. Voltage Regulator	Solid state voltage regulator to maintain variation of output voltage within $\pm 1\%$ of the nominal value in changing loads.	
	b. Control instrument	<b>For Analogue System.</b> Micro controller based digital Graphical User Interface (GUI) Touch screen sys all the engine and alternator parameters will be displayed in the GUI screen. <b>For Digital System.</b> The bidder is to mention details about operation, standby system,	

Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
		<p>maintenance of equipment's and safety system with the GPU.</p> <p><b>Control Instrument Panel.</b> Type of control instrument panel is to be mentioned by the bidder.</p>	
16.	<b>Canopy of the Power</b>	The generating and control equipment should be fully protected from rain/sun by sliding zinc coated Canopy which allows unrestricted access to major equipment. It should be able to operate in hot humid monsoon prone region.	
17.	<b>Metallurgical Treatment</b>	Anti-corrosive treatment must be given on all parts of the Ground Power Unit prone to corrosion.	
18.	<b>Noise Control System</b>	Noise reduction system should be fitted to reduce the noise level while operating the GPU.	
19.	<b>Fault Protection Devices:</b>	Following system must be incorporated with the Ground Power Unit. Moreover, the detail information about following Protection Devices must be available in the manual/brochure of the GPU:	
	<b>a. Electrical Power system</b>	<p>(1) Under and over frequency protection system and cut off provision.</p> <p>(2) Under and over voltage protection system and cut off provision.</p> <p>(3) Overload protection system.</p> <p>(4) Short circuit protection system.</p>	
	<b>b. Engine Section</b>	<p>Automatic shut down system is to be available of engine for:</p> <p>(1) Low oil pressure.</p> <p>(2) High oil pressure.</p> <p>(3) High coolant temperature.</p> <p>(4) Engine over speed.</p> <p>(5) Engine over heat.</p> <p>(6) Any other items, if necessary.</p>	
20.	<b>Warning System and Fault Memorize Display</b>	Different warning system like over/under voltage, over/under frequency, over load, over temperature, low oil pressure etc should have audio visual warning system in digital display board (LED/LCD display).	



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Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
21.	<b>Output Power Cable</b>	Following Output Power Cable must be fitted with each Ground Power Unit: a. One output cable 115/200 VAC, 400 Hz, 3 Phase, 04 wire (at least 15 meters long) with a standard 06 pin aircraft adapter. b. Two output cable for 28.5 VDC, 800-1500 amperes (at least 15 meter long) with a standard 03 pin flat adapter. c. Output cable of 01 x 115/200 VAC and 01 x 28.5 VDC must be fitted at one side of the Ground Power Unit and 01 x 28.5 VDC output cable must be fitted another side of the Ground Power Unit. d. All the output power cable must be covered with insulated rubber material.	
22.	<b>Cable box</b>	Cable boxes having steel cover are to accommodate all the power cables to protect the power cables from rain. The location of the boxes must be easily accessible.	
23.	<b>28 VDC Power Socket</b>	One standard two pin, 15 amps, 28 VDC socket with a "ON-OFF" switch should be fitted in the power control board and it must be easily accessible to use.	
24.	<b>Operation Cycle</b>	The GPU should be able to operate for min 04 hours continuously. The bidder is to specify about the operation cycle of the offered GPU.	
25.	<b>Electrical Equipment/Aggregate</b>	The country of origin of all the electrical equipment/aggregate, control instrument and other accessories should be as same as the country of manufacturer.	
26.	<b>Prime Mover:</b>	A brochure of chassis to be submitted with the offer	
	a. Brand	To be mentioned by the bidder.	
	b. Model	Latest production during tender.	
	c. Country of Origin	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
27.	<b>Drive</b>	Right Hand Drive (4 x 2 WD)	
28.	<b>Steering</b>	Power Steering.	
29.	<b>Dimension, Volume and Weight of GPU</b>	To be mentioned by the bidder.	
30.	<b>Engine for Prime Mover:</b>		
	a. Brand	To be mentioned by the bidder.	
	b. Model	Latest production during tender.	
	c. Country of Origin	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
	d. Country of Manufacturer	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	
	e. Country of Assembly	USA, UK, Canada, Switzerland, Australia, Norway, New Zealand, Japan, Russia and EU Countries.	

Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
	f. Horse Power	140 HP (minimum).	
	g. No of Cylinder	04 Cylinder (minimum).	
	h. Engine displacement	5100 cc (or to be mentioned by the bidder).	
	j. Rated RPM	2000 RPM (or to be mentioned by the bidder).	
	k. Types of fuel	Diesel.	
	l. Fuel consumption/hour	To be mentioned by the bidder.	
	m. Cooling system	Water Cooled.	
	n. Electric system	12/24 V DC (to be mentioned by the bidder).	
	p. Battery Capacity	2 x 150 Ampere Hour (or to be mentioned by the bidder).	
31.	<b>Towing Hooks</b>	Locking facilities should be fitted in the front and rear of the Ground Power Unit for towing.	
32.	<b>Lighting System</b>	The following lighting system must be available: a. Head lights b. Side/Parking Lights. c. Turning indication. d. Dash Board/Instrument panel lights (if required). e. Number plate lights (rear and front). f. Brakes lights g. Clearly visible flashing beacon light on top of the Cabin and 'NAV' light qty-04 (blue & red) on roof (front & rear corner). h. Flashing indication lights for driving. j. Manually/auto rotatable, approx 1 to 2 feet height adjustable flood light (90 to 100 watt DC) at rear side top for night operation.	
33.	<b>Tyre and Wheels</b>	a. The prime mover has to be incorporated with 02 x wheels in front and 04 x wheels in rear. c. Standard tyre size to be quoted by the bidder. d. Manual wheel brake provision must be available.	
34.	<b>Fuel Tanks</b>	A fuel tank capacity of not less than 250 liters should be fitted with the Ground Power Unit.	
35.	<b>Body and Chassis</b>	a. Body must be of steel and fabricated with steel trolley. b. The Ground Power Unit must have rear mudguard for each wheel. c. Ground clearance of trolley should not be less than 300 mm.	
36.	<b>Driving Speed</b>	Maximum driving speed should be up to 90 KPH.	
37.	<b>Color</b>	a. Canopies and cabin should be painted with <b>golden yellow gloss</b> colour. b. Cable boxes, Noise boxes, chassis, wheels, bumpers, mudguards, fuel tanks, etc should be painted with standard black colors.	

Ser No	Description	Specification Specified	To be filled up by the Manufacturer /Principal
38.	<b>Standard Fittings</b>	<p>a. All safety devices are to be incorporated as per the international standard.</p> <p>b. All types of fittings are to be done by the manufacturer as per the requirement of the user.</p> <p>c. Any other things required to operate the Ground Power Unit (vehicle mounted) smoothly to be provided by the bidder within the quoted price.</p>	
39.	<b>For standard tools, and accessories are to be supplied with each GPU by the suppliers:</b>	<p>a. One Dry chemical fire extinguisher of capacity 5-10 Kg for each GPU.</p> <p>b. One spare wheel assemble (loose) complete with tyre and tube for each GPU.</p> <p>c. One set (qty-02) lifting jack for each GPU.</p> <p>d. Wheel removing tools for each GPU.</p> <p>e. 01 x Tools box with sufficient special tools. But bidder is to submit a list of tools to be supplied with GPU mentioning type and quantity with the offer.</p>	
40.	<b>Publications</b>	<p>Following Publications are to be supplied along with the each Ground Power Unit:</p> <p><b>Manuals:</b> Maintenance manuals, Operation manuals, Illustrate Parts Catalogue &amp; Illustrate Parts Breakdown (with detail description and part number of items at component level and detailed drawing, circuit diagram etc), Repair &amp; Workshop manual and trouble-shooting manual each 02 copies are to be provide for power unit and Prime Mover separately with each GPU. Supplier is to provide 02 x soft copy (CD) of the manuals/publications and related software (if available) required for maintenance/ rectification of the power unit and Prime Mover separately.</p>	
41.		The supplied vehicle mounted GPU must be equipped with all standard fittings and accessories.	