

84

TENDER SPECIFICATION OF DUMMY LOAD 600KVA WITH ACCESSORIES
- BN DOCKYARD (L-SHOP)

1. **Name of the Equipment.** Dummy Load 600 KVA with Accessories.
2. **Purpose.** The Dummy Load 600 KVA with accessories will be used to simulate resistive and inductive electrical load for testing the output power and load capacity of diesel generators and testing the designed functionality of protective switchgears on board Bangladesh Navy (BN) ships and establishments.
3. **Quantity** : 01 (One) Complete system.
4. **Type** : Portable.
5. **Brand** : To be mentioned.
6. **Model** : To be mentioned.
7. **Manufacturing Country** : France, Canada, Denmark, Finland, Germany, Italy, Japan, Netherlands, Norway, Sweden, UK and USA (Country to be mentioned).
8. **Country of Origin** : France, Canada, Denmark, Finland, Germany, Italy, Japan, Netherlands, Norway, Sweden, UK and USA (Country to be mentioned).
9. **Manufacturer** : Name and full address with e-mail of manufacturer is to be mentioned.
10. **Principal / Supplier** : Name and full address with e-mail of manufacturer is to be mentioned.
11. **Local agent** : Name and full address with e-mail of supplier/ local agent is to be mentioned
12. **Year of Manufacturing** : 2025 or later.
13. **Qualification for Bidder.** Manufacturers of Dummy Load or their authorized distributor/ agent can submit quotations through their authorized local agent enlisted in DGDP. In case of offer from distributor/ agent, certificate of dealership/ agencyship from OEM is to be submitted with the offer. In this regard the following certificates are to be submitted with the offer (if not OEM):
 - a. Authorization Certificate from OEM.
 - b. Supply Assurance Certificate from OEM.
14. **Equipment Manufacturer and Reliability/ Requirement.** The items should be brand new, unused and of recent model, proven reliability in the field of operation. The supplier shall ensure the continuity of the operation and availability of necessary spares for at least 15 years each in case of obsolete model over time.
15. **User List.** List of users of the offered Dummy Load is to be mentioned with full address. The list shall provide the name of various navies/ coastguards with respective model and brand of offered Dummy Load. The Dummy Load should be widely used by various navies/ coastguards. The user list shall be used for the assessment of the offer.
16. **Condition for Acceptance of Quotation.** The quotation has to have supporting documents (booklets, leaflets, catalogues, brochures etc) with details about offered Dummy Load, If detailed information regarding specifications, manufacturer's manuals and catalogue for the quoted model of the Dummy Load, spare parts, accessories, scope of supply, etc are not provided the quotation will not be accepted.
17. **Acceptance/ Rejection of Bid.** DGDP/ BN reserves the right to accept or reject any bid or to terminate the bidding process and reject all bids at any time prior to the contract award (without thereby incurring any liability to the BIDDER).
18. **Classification/ Standard.** The offered item is to fulfill the requirement of IEEE/ IEC/ IMO and other competent internationally recognized standards. The applicable classification standard(s) of offered items are to be mentioned and should be well supported by the certificates/ OEM brochures.

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19. **Additional Features Offered by Bidder.** The bidder may suggest and offer additional features for the offered Multi Product Calibrator. In this case, Bidder is to explain the detailed advantage of that/ those features of the offered Multi Product Calibrator.

20. **Scope of Supply.**

- a. 01 x Complete set of Dummy Load 600 KVA with associated accessories and tools (as per paragraph 21 to 24).
- b. Cables (as per paragraph 25).
- c. Software and Backup Software (as per paragraph 25).
- d. Trolley (as per paragraph 28).
- e. Certification and Reports (as per paragraph 32).
- f. Manual/ Documentations (as per paragraph 33).
- g. Factory Acceptance Test (FAT) (as per paragraph 35).
- h. Local Training (as per paragraph 36).
- j. Test/ Trial and Acceptance (as per paragraph 43).

21. **General Feature.** The Dummy load is to have following features (but not limited to):

- a. The equipment should have the facility of adjustable load and power factor setting according to the test requirement.
- b. Human Machine Interface (HMI) display to operate, setting and configure the item.
- c. Current, voltage, frequency, power factor and power (active, reactive and apparent) should be displayed in HMI.
- d. Capable of transient test.
- e. The equipment should have option of displaying and printing the test result (graph of power, current, voltage, frequency and etc).
- f. Power Factor: 0.5 to 0.8.
- g. Resistive Load: 400-500 KW and Inductive Load: 300-400 KVAR.
- h. The dummy load is mounted on mobile trolley with cable storage.

22. **Basic Composition.** The system is to have following features:

- a. Resistive load bank.
- b. Inductive load bank.
- c. Self inductive banks composed of inductances.
- d. HMI with display.
- e. Incorporated Air Cooling System for load bank.

23. **Environmental Condition.**

- a. Ambient Operating Temperature : 5° C to + 55° C.
- b. Storage Temperature : To be mentioned.
- c. Relative Humidity : Up to 95 % (Non condensing).

24. **Technical Specification.** Technical specification is as follows:

a. **Cabinet.**

- (1) Enclosure : Single.
- (2) Steel sheet : Galvanized steel or better.
- (3) Finish : No painting.
- (4) Handling : Trailer mounted.
- (5) Size (L x B x H) : To be mentioned.
- (6) Weight : To be mentioned.

b. **Cooling.**

- (1) Type : Fan cooled.
- (2) Power supply : External.
- (3) Auxiliary power : 380V to 440V, 50Hz.
- (4) Air flow : 480m³/min or more.
- (5) Speed of fan motor : 1500/min or more.

c. **Safety.**

- (1) Over temperature safety.
- (2) Airflow detection.
- (3) Overload protection with alarm.



d. **Electrical Characteristics.**

- (1) **Nominal Power Rating for Unit Under Test.** 500 kW, 380-440V, 3 Phase, 4 Wire, 50/60 Hz and 220V single phase 50/60Hz with neutral connection.
- (2) **Load Step Resolution.** 10 kW or less.
- (3) **Type of Resistance.** Stainless steel finned sheathed elements resistive alloy with low temperature drift (<2%).
- (4) **Protection Device.** Fuse and protective breaker (To be mentioned).
- (5) **Line Current Withstand Capacity for 3 Phase Circuit.** 820 Amps (Fault Level Current: To be mentioned).

e. **Connections.**

- (1) **Power Connections** : On copper bus bars.
- (2) **Auxiliary Supply** : On terminal blocks.
- (3) **Cable Entry** : Cable gland should be protected from water leakage.

f. **Local Control.**

- (1) Emergency stop push button.
- (2) Power supply on indicator.
- (3) Manual operation through a touch screen controller of appropriate size.
- (4) Manual power operation with up/ down from touch screen.
- (5) Phase sequence indication.

25. **Power Cable and Control Cable.**a. **Power Cable.**

- (1) **For Input Supply of Dummy Load.** 3 Phase 4 wire power cable (50 meter cable for each phase) for the input supply of 600 KVA Dummy Load. The cables are to be appropriate ratings and anti-rat bite protection. The specification of power cable is as follows (but not limited to):

- (a) Signal core supper flex min 120 mm² (120RM) 350 Amps.
- (b) Flexible rubber insulated cable.
- (c) High Grade Flexible Cross-linked Polyethylene (XLPE).
- (d) Nitrile Butadiene Rubber (NBR).
- (e) Class 5/class 6 extra flexible copper conductor.
- (f) Anti rat-bite protective shield.

- (2) **For Connecting the Dummy Load with Load Under Test.** 3 Phase 4 wire (300 meter x 04 pcs with lugs) for connecting the Dummy Load with load under test. The details of power cable is to be provided and cost per meter is to be quoted separately. The specification of power cable is as follows (but not limited to):

- (a) Signal core supper flex min 120 mm² (120RM) 350 Amps.
- (b) Flexible rubber insulated cable.
- (c) High Grade Flexible Cross-linked Polyethylene (XLPE).
- (d) Nitrile Butadiene Rubber (NBR).
- (e) Class 5/class 6 extra flexible copper conductor.
- (f) Anti rat-bite protective shield.

- b. **Control Cable.** Control cable (if required) for operating the offered Dummy Load with full functionality is to be provided by the supplier at the time of delivery of the equipment.

26. **Input Power Supply.** Available power supply in the installation site is 380~440V, 50Hz, 3 Phase and 220V, 50Hz, 1 Phase. The other power supply unit (if necessary) for the said system is to be provided by the Supplier.

27. **Standard Accessories.** Standard accessories must include every item and accessories, which are essential to make the offered system operational, whether those are mentioned in the specification or not are to be supplied by the bidder within the scope of the supply. Any such accessories, kit and items associated to operate the said equipment in full functionality are to be mentioned clearly with purpose and submit with offer mentioning item wise price.

28. **Mobile Trolley.** One in number mobile trolley with 04 (Four) wheels including suitable cable storage facility is to be provided for mounting and moving the dummy load near the unit under test. Price of Dummy Load to be quoted separately. Details of trolley are as follows:

- a. 04 (Four) Wheel.
- b. Metal structure with two axels.
- c. Heavy duty, Up to 4- 5 tons carrying capacity for dummy load without cable.
- d. Breaking system included
- e. Lunette ring/eye.
- f. One in number heavy duty mobile trolley, up to 3 – 4 tons capacity for storing and carrying cables.

29. **Optional Spares and Items.** A list of OEM recommended spares and items (if any) are to be quoted separately mentioning item-wise price. The buyer may select any item/ items from the proposed list.

30. **Special Tools.** A list of special tools (if required) is to be quoted separately mentioning item-wise price. The buyer may select any of the item/ items from the proposed list.

31. **Software and Backup Software.** The supplier is to provide all related software OS and backup software (original licensed copy) required for the dummy load in CD/DVD/Flash drive format with step by step installation/ re-installation/ re-configuration instructions. The list of such software is to be submitted with the offer. Any special tools and interfacing cable (if required) for installation/ re-installation/ re-configuration are to be provided.

32. **Certificate and Reports.**

(1) Following certificates and reports are to be provided in English for the offered item including associated equipment/ accessories **with the offer**:

- (a) Supply Assurance Certificate.
- (b) Guarantee and Warranty Certificates.
- (c) After Sales Service Support Certificate.

(2) Following certificates and reports are to be provided in English for the offered item including associated equipment/ accessories **during delivery**:

- (a) Supply Assurance Certificate.
- (b) 'Quality Assurance Certificates' for each item and their associated equipment and instruments from OEM is to be provided.
- (c) 'FAT Certificates'.
- (d) Certificate of Genuine Product and Brand-New Item.
- (e) Guarantee and Warranty Certificates.
- (f) After Sales Service Support Certificate.

33. **Documentations.** 01 (One) set of following documents and manuals in English are to be provided **at free of cost** at the time of delivery:

- (a) Operating Manual.
- (b) Technical Manual with Circuit Diagram (It lasts upto the component level).
- (c) Maintenance Manual.
- (d) Parts Catalogue with parts Identification List (PIL).

34. **Brochures/ Booklet.** One set of original brochures/ booklets in English having details technical information about the offered Portable Dummy Load with Accessories are to be provided along with the quotation for evaluation/ assessment.

35. **Factory Acceptance Test (FAT).** Following FAT is to be carryout in OEM premises for the offered equipment:

a. FAT will be carried out by a team of 02 (Two) BN members for duration of 03 (Three) working days in OEM premises at the buyer's expense. Both way air fare, accommodation and food for the FAT team will be borne by BN. All types of movement/ transportation (air/sea/road) of the team within the manufacturer's country, reception and arrangement for entry into the country/ concerned area for the FAT are to be arranged by the supplier. The item-wise cost in this respect is to be quoted in the offer. The supplier should inform the buyer about the date of FAT (schedule) and FAT criteria at least 08 (Eight) weeks prior to the date of FAT. FAT procedure shall be forwarded to the buyer 08(Eight) weeks prior to the date of commencement of the FAT to the concerned directorate for approval of BN.

b. On return from the country of manufacturer, the FAT team will submit the report to concerned Directorate at Naval Headquarters. Naval Headquarters will, forward final decision along with FAT report, basing on which DGDP will render clearance for shipment of stores to the



supplier concerned. The supplier will not make shipment of any item of the contract without clearance from DGDP.

c. The objective of FAT will be to check the capability of the system as per the technical specification mentioned in the offer. The FAT will be carried out at manufacture's factory premises. In this regard, the FAT protocol is to be submitted for approval by BN well in advance.

d. During FAT, various tests for checking performance are to be carried out and recorded. After FAT, a joint test report will be prepared and signed by both the seller and buyer's representative.

e. Location of FAT to be mentioned.

36. **Local Training.** The manufacturer/ supplier is to send one competent engineer to provide onboard operation and maintenance training to BN personnel for a duration of 05 (five) working days after test, trial and commissioning. Training schedule is to be provided during delivery of the item. A detailed training content and materials are to be provided at least 06 (Six) weeks prior to the local training. The cost of airfare (to and from Bangladesh), accommodation, food and internal transportation (to and from work site and hotel) of the manufacturer's/ supplier engineer are to be borne by the supplier. Cost of local training is to be quoted separately. The training should include (but not limited to) the following:

- a. System composition, configuration, principle of operation and troubleshooting.
- b. Software installation, operation and configuration for smooth conducting of all the tests.
- c. Theoretical concept and procedure of tests (practical).
- d. Repair and maintenance.

37. **Delivery.**

a. **Delivery Time.** The items shall be delivered within **09 (Nine)** months after signing the contract.

b. **Place of Delivery:** NSD Chattogram.

c. Incase of CFR, the supplier shall carry the items from sea port/ air port (as applicable) to NSD Chattogram at the cost and risk of supplier.

38. **Shipment.**

a. **Source of Supply.** The source of supply of the offered systems are to be mentioned. It should be from the country of manufacturer or country of origin.

b. **Port of Shipment:** To be mentioned. The port of shipment is to be from the country of manufacturer or country of origin.

c. **Consignee.** The supplied item shall be the following consignee:

The Commanding Officer
Naval Stores Depot
New Mooring, Chattogram,
Bangladesh
BIN-002349278-0503

or Officer In Charge
Naval Stores Sub Depot Dhaka
Naval Unit Khilkhet
Namapara, Dhaka-1229, Bangladesh

d. All items are to be brand new and to be delivered in seaworthy packing to ensure safe transit by sea. Certificates in this regard are to be provided during delivery.

e. All packages are to have packing notes showing their contents in detail and all packages shall be marked with the name and address of the consignee and gross weight.

39. **Project Timeline.** The project timeline indication month-wise event is to be provided with the offer and another reviewed project time line with project implementation plan is to be submitted after 15 days of signing the contract.

40. **Warranty, Guarantee and After Sales Service.**

a. **Warranty.**

(1) 12 (Twelve) months manufacturer's warranty for trouble free operation is to be provided for the item from the date of acceptance by the purchaser. If any component and submit of the supplied items becomes defective during the warranty period, the overall warranty shall be extended automatically for the period of subject component remains defective.



(2) For warranty repair/ replacement, the supplier shall collect the defective item from NSD, Chittagong/ NSD Khulna/ NSSD, Dhaka (as applicable) and re-supply the same to collecting place after warranty repair or for replacement within 90 (ninety) days from the date of defect at no cost to the purchaser.

b. **Bank Guarantee (BG) for Warranty.** The BIDDER shall issue a Bank Guarantee (BG) during submission of last 20% payment for a value of **@.05% (Five percent) of the total CFR value** from any scheduled bank in Bangladesh in favour of The Senior Finance Controller (Navy), Sailors Colony, Lalasarai, Mirpur-14, Dhaka-1206, representing Bangladesh Navy, Peoples Republic of Bangladesh, information to The Directorate General Defence Purchase, Ministry of Defence, Peoples Republic of Bangladesh. This BG shall remain valid until the warranty period of the Dummy Load and other items (not withstanding minor deficiencies which would be mutually settled and agreed between PURCHASER and BIDDER) in Bangladesh, and it shall expire on receipt of **Warranty Completion Certificate**. If the contractual obligation warrants the extension of the validity of the BG, the BIDDER shall remain liable to do so at its own cost. In case of material failure of the BIDDER to fulfill its contractual obligation as per the terms and conditions of the contract, the BG in full or part thereof may be forfeited at the discretion of the PURCHASER.

c. **Guarantee.** The supplier is to give guarantee of continued supply of spares for at least 10 (Ten) years at a reasonable price (not exceeding 3% per year). Certificate is to be submitted with the offer.

d. **After Sales Service.** After sale service should be available with the local agent of supplier and is to be provided as and when required for indefinite period or at least 15 years after the installation. If any system, equipment etc becomes obsolete or out of production during or after the installation period (at least upto 15 years), the supplier is to submit alternative of same/ improved version for selecting the suitable replacement.

41. **Technical Support.** Technical support is to be provided to solve any maintenance and operational problem arising with the item for a considerable period (To be mentioned). An assurance by the Bidder stating agreement in this respect is to be submitted with the offer.

42. **Test/ Trial and Acceptance.**

a. Site Acceptance Test (SAT) shall be conducted at BN premises in presence of both parties. All consumables and special tools/ test equipment for the SAT are to be provided by the supplier.

b. On completion of satisfactory Test/ Trial and commissioning, an acceptance certificate will be issued by BN.

43. **Validity.** The offer will remain valid till 30 June 2026.

44. **Terms of Payment.** Payment shall be made through an Irrevocable Letter of Credit (LC). LC shall be opened at the expense of the PURCHASER and **100% LC** value shall be made operative in favour of Supplier. CFR/ CPT value being the value of the supplied goods, payment shall be made as under:

a. **1st Installment.** 80% of CFR value shall be paid **after shipment of hardware and software** and on submission of the following documents to the bank:

(1) Original Airway Bill (AWL)/ Bill of Landing (BL) must be issued by air lines/ shipping lines or authorized agent of shipping lines/ air lines against DGDP contract reference (after signing the contract). LC number, and Bangladesh bank registration number are to be mentioned in AWL/ BL. Freight amount must be shown separately otherwise only FCA value shall be paid. All documents to be submitted (01) original with at least (05) five copies other than bill of lading shall be (03) three original with (03) three copies. In addition to this, following shall also be considered:

- (a) Name of the carrier must be indicated in AWL/ BL.
- (b) Must be signed by carrier or a named agent for/ on behalf of the carrier.

(2) 'Supplier's Signed Commercial Invoice' for (freight/ services amount to be shown separately (if applicable)) representing 80% of CFR value as stated in the contract.

(3) 'Packing List' signed by the authorized representative of the shipping company or exporter.

(4) 'Certificate of Origin' signed by the Manufacturer's Authorized Person/Authorized Official of the exported country.

(5) 'Manufacturer's Certificate' Signed by the MANUFACTURER/ SUPPLIER. Certifying that product has been produced as per technical data/ analytical data and specification as per contract.

(6) 'Manufacturer's Warranty Certificate' Signed by the MANUFACTURER/ SUPPLIER.

(7) 'Factory Acceptance Test (FAT)/ Pre-Shipment Inspection (PSI) Completion Certificate' signed by the SUPPLIER.

(8) 'Quality Assurance Certificate' (QAC) signed by the SUPPLIER.

(9) 'Shipment Clearance Letter' Signed by DGDP (Directorate General Defense Purchase, Dhaka, Bangladesh) as PURCHASER.

b. **2nd Installment.** 20% of CFR value shall be paid **after successfully commissioning the system** and on submission of the following documents to the bank:

(1) 'Supplier's Signed Commercial Invoice' for representing 20% of CFR/CPT value as stated in the contract.

(2) 'Final Acceptance Certificate' issued by the PURCHASER after successful completion of installation, integration with related ship borne equipment, HAT, SAT and commissioning of system.

(3) The bidder shall submit the relevant document of 5% BG of CFR value, which shall be released on submission of warranty completion certificate.

c. **Installment of FAT, Training and Services.**

(1) **Factory Acceptance Test (FAT).** 100% cost of Factory Acceptance Test (FAT) shall be paid **after successful completion of Factory Acceptance Test (FAT)** and on submission of the following documents to the bank:

(a) 'Factory Acceptance Test (FAT)' signed by the PURCHASER for the successful completion of the Factory Acceptance Test (FAT) in OEM premises.

(b) 'Supplier's Signed Commercial Invoice' for representing 100% of Factory Acceptance Test (FAT) value as stated in the contract.

(2) **Local Training.** 100% cost of Local Training shall be paid **after successful completion of local training** and on submission of the following documents to the bank:

(a) 'Local Training Completion Certificate' Signed by the PURCHASER for the successful completion of the Local Training in Bangladesh.

(b) 'Supplier's Signed Commercial Invoice' for 100% of Local Training value as stated in the contract.

(4) **Installation, Supervision and Setting to Work (STW).** 100% cost of Installation, Supervision and Setting to Work (STW) shall be paid **after successful completion** of Installation, Supervision and Setting to Work (STW) and on submission of the following documents to the bank:

(a) Installation, Supervision and Setting to Work (STW) Signed by the PURCHASER for the successful completion of the Installation, Supervision and Setting to Work (STW) in Bangladesh.

(b) 'Supplier's Signed Commercial Invoice' for 100% of Installation, Supervision and Setting to Work (STW) value as stated in the contract.

(5) **Test/ Trial and Acceptance.** 100% cost of Test/ Trial and Acceptance shall be paid **after successful completion** of final Test/ Trial and Acceptance and on submission of the following documents to the bank:

(a) 'Final Test/ Trial and Acceptance' Signed by the PURCHASER for the successful completion of Final Test/ Trial and Acceptance in Bangladesh.

(b) 'Supplier's Signed Commercial Invoice' for 100% of Test/ Trial and Acceptance value as stated in the contract.

45. **Price.** Price of the each item of the total offer is to be shown separately (e.g. price of the main equipment, additional accessories, Installation, local training, warranty/ guarantee etc) and then grand total of the foreign currency to be shown on the original offer submitted by the bidder. Moreover, if the item is imported against this tender, price to be quoted without import duties.

46. **Compliance Statement.** A clear and complete compliance statement of the tender supported by the product catalogue and Brochure with necessary specification and drawing/ diagram is to be submitted for evaluation of the quotation. Incomplete compliance statement will attribute to cancellation of the offer. If any clause of this specification does not commensurate with offered item practically, the deviation has to be spelt out clearly.

