

### TECHNICAL SPECIFICATIONS FOR PROCUREMENT OF COMPRESSOR

1. Refer to: RFP No: BM(H)/CMM/RFP/25-26/2129, Date: 29-Jan-2026

2. Scope of work:

- A. Supply of compressor (400kgf/cm<sup>2</sup>) and manufacturing as per approved QA plan.
- B. Vendor should submit draft QA plan for scrutiny and approval by BAPL.
- C. The work includes training of Indian Navy nominated officers for duration of 10 working days.
- D. Vendor should provide CAMC for three years post expiry of warranty. The warranty should be for period of two years.

3. List of deliverables

The vendor has to supply the following as part of the order:

Sl. No.	Item Description	Reference Drawing no.	Item code	Quantity
1	Compressor 400kgf/cm <sup>2</sup>	-	350600801300	01 no.
2	Mobile Air storage trolley	-	-	01 no.
3	Standard tool set	-	-	01 set (Details to be shared by vendor)
4	MRLS	-	-	01 set (Details to be shared by Vendor).
5	Technical/ operational/Maintenance Manual	-	-	02 set (Hard/Soft copies)

Table 1: List of deliverables

4. Technical Specifications (Annexure 1)

A. Manufacturing

- (i) The draft QA plan and System Acceptance Test procedure should be shared by vendor and the same would be vetted/ approved by BAPL QC. The Manufacturing/ stage inspection will be conducted by BAPL rep. The detailed production drawing generation in AutoCAD / Hard copy (as required by End User) and manufacturing process sheets should be submitted to BrahMos for approval. The production quality / acceptance and testing / painting specification (Marine/ Naval standard) should be as per approved Quality Assurance Plan (QAP).
- (ii) Air cooled, oil lubricated compressor with following characteristics

- Working medium: Air
  - Compressor capacity: Min 140m<sup>3</sup>/hr
  - Suction pressure: 1.013Bar A
  - Discharge pressure: 400bar A
  - Ambient Temp: 50°C
  - Air filter at Suction
  - Automatic drainage of condensation with manual facility
  - Flexible hose on discharge with non-return valve.
- (iii) Prime mover
- Foot mounted diesel engine with robust frame structure.
  - Diesel engine should duly certify by CPCB/equivalent authority
  - Diesel engine air cooled as per BS standard
- (iv) Control panel
- Relay based starter cum control panel conforming to IP55
  - Panel to operate: Temp: 1°C to 50°C; Altitude: sea level; Humidity: 100RH; Wind Velocity: 100km/hr
  - Control panel should have indications and trip automatically in case of any electrical faults.
- (v) Mounting
- Compressor and prime mover shall be mounted on common skid coupled with belt. It should have anti-vibration mount. The system should be mounted on trolley with canopy. The trailer should be fitted with lifting hydraulic jacks with towing bar. The canopy units should be mounted on shock mounts with adequate ventilation and lighting.
- (vi) Separate storage space should be catered on the trolley.
- (vii) Painting: surface preparation shall be carried out as per ISO 8501-1:2007 and subsequently priming as per NCD 1435 pattern no N8010-P009545 and final painting as per NCD 1482, N8010-9009544 (Paint color: Grey/ Light Grey)

## **B. Technical Documentation**

The vendor shall share following documents with delivery of equipment:

- Safety and handling instruction.
- Maintenance/ service manual
- Drawing (Electrical/mechanical)
- Catalogue and MRLS

- Test procedure/reports/certificates
- Log books

**5. PDI / JRI**

- A. Pre-Delivery Inspection (PDI) will be carried out by M/s BAPL at vendor premises.
- B. Joint Receipt Inspection (JRI) will be carried out jointly by M/s BAPL, supplier and Rep of OTP Tunir at INS Tunir.

**6. Marking and Packing**

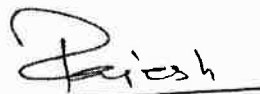
The deliverables shall be packed in wooden boxes/suitable container with supports for storage and transportation as per Def. standard norms.

**7. Delivery schedule and location**

- A. The item to be supplied within **12 months** from the date of issue of purchase order (Tentatively by 30 Dec 2026)
- B. Deliverables to be packed/ preserved and transported by the supplier to OTP Tunir.

  
Prepared by

  
Checked by

  
Approved by 20-01-2028

**TECHNICAL SPECIFICATIONS TRUCK MOUNTED  
ENGINE DRIVEN 400 BAR HP AIR COMPRESSOR**

**1. Compressor Specifications**

(a) : Multistage, reciprocating, air cooled, oil lubricated compressor meeting following technical parameters: -

- |       |                         |                          |
|-------|-------------------------|--------------------------|
| (i)   | Working medium          | : Air                    |
| (ii)  | Air compressor capacity | : 140 M <sup>3</sup> /Hr |
| (iii) | Suction pressure        | : 1.013 BarA             |
| (iv)  | Discharge pressure      | : 400 BarA               |
| (v)   | Ambient temperature     | : 50 deg C               |
| (vi)  | Lubrication system      | Splash and force feed    |

(b) The compressor package shall have the following:

- (i) Air filter on the suction.
- (ii) Inter- and after-coolers combined in one radiator block
- (iii) Separator after each cooler
- (iv) Automatic condensate draining system consisting with condensing bottle with level sight glass
- (v) Manual condensate drain valve on condensate bottle
- (vi) Pressure gauge after each stage, gauge-board mounted
- (vii) Relief valve after each stage
- (viii) Flexible hose on discharge with non-return valve
- (ix) All piping will be as per DIN 1.457 / DIN 1.4541

**2. Prime Mover**

(a) The prime mover shall be a foot mounted Diesel Engine, fixed on the base frame. Engine model will be HA694TC or Equivalent.

(b) The drive to the compressor will be through pulley and a suitable V-belt.

(c) The Diesel Engine will be air cooled and as per BS 5514 standards.

**3. Starter cum Control Panel**

(a) Relay based Starter cum control panel will be flameproof & degree of protection conforming to IP 55. The control panel will house the necessary logic of the safe working of the compressor.

(b) The control panel shall be suitable for the following ambient conditions of operation for the system:

- |      |             |               |
|------|-------------|---------------|
| (i)  | Temperature | : 1°C to 50°C |
| (ii) | Altitude    | : Sea Level   |

- (iii) Humidity : 100% RH
- (iv) Wind Velocity : 100 Km/hr

(c) For the safety of Compressor, motor must trip for the following faults and panel should give Audio and Visual Indication. Annunciator display to be provided for the purpose.

- (i) Air discharge temperature final stage.
- (ii) Air discharge pressure final stage.
- (iii) Low lube oil pressure.

#### 4. Mounting

(a) The compressor and prime mover shall be mounted on a common skid and shall be coupled by means of belt drive.

(b) Other sub-Assembly components like control panel, drier, tool box etc. shall be suitably mounted.

(c) Anti vibration mounts shall be provided for the compressor skid.

5. Air Drier Heatless Type. This will consist of two sets of moisture absorber tower, one being used at a time to dry the outlet air from compressor, so that it give desired Dew point minus (-)60°C, the second being regenerated by passing dry air at low pressure of 10 K/cm<sup>2</sup> through the same. The absorber shall be adequate capacity of drying full flow 140 M<sup>3</sup>/hr of air at the working pressure 400 Bar. The desiccant used will be molecular sieves or equivalent. An online type dew point meter shall be provided in the air line after the dryer.

#### (a) In let Conditions of Air dryer

Medium	: Compressed Air
Flow	: 140 M <sup>3</sup> /hr
Pressure	: 400 BAR (G)
Min / Max Ambient Temp	: 20°C / 40 °C
Relative Humidity	: 90%
Filter	: One- 1 Micron filter One- 0.01 Micron filter

#### (b) Outlet Conditions of Air dryer

Pressure	: 400 Bar (g)
Maximum Temperature	: 60 °C
Max Allowable Pressure Drop	: 1.00 Bar (G)
Atmospheric Dew Point	: -60 Deg C.
Filter	: One- 1 Micron filter
Residual Oil Content	: 0.01 mg/M <sup>3</sup> (should have a auto blow unit for removal of residual oil)

Particle Content	: 1 Micron.
Purge loss	: 15%.
Design code	: As per PED/97/23IEG and AD 2000
Pressure Vessel	: ACME —SECTION VIII DIV-1.

(c) Other Data

Cycle Time	: 20Min
Electrical Power Supply	: 230 VAC $\pm$ 5%, 50 Hz
Power supply from the prime mover	
Desiccant	: Molecular Sieve
Protection	: IP55

6. Truck for Compressor and Engine. TATA SE 1613/Ashok Leyland /Equivalent of reputed make, Turbo BS III as per the following specification:-

(a) Engine	: Tata 697 TC IC Engine/ Equivalent
Type	: Turbo Charged intercooled Diesel Engine
No. of Cylinders	: 6 inline
Capacity	: 5883 CC
Air Filter	: Dry type, remote Mounted
Max. Engine Output	: 129 HP (96kw) at 2400 rpm
Max. torque	: 41 kgm. (410 Nm) at 1400-1700 rpm.
Fuel Injection Pump	: rotary, Mico
(b) Clutch	: 330 mm dia, single disc dry friction type
(c) Gear Box	: Tata GBS 40
Type	: Synchromesh on all forward gears & constant mesh on reverse gear
No. of gears	: 5 Forward, 1 Reverse
(d) Front Axle	: Heavy duty, Forged I beam, Reverse Elliot type
(e) Rear Axle	: Tata RA 108RR / Tata RA 109 RR
Type	: Single reduction, fully floating axle Shafts
Ratio	: 5.857:1 (41/7)
(f) Steering	: Power Steering 20.2: 1
(g) Frame	: Ladder type heavy duty frame with riveted / bolted cross members.
	Depth-223 mm, Width-60 mm, Thick-7 mm
(h) Suspension	: Semi-elliptical leaf spring at front & rear
Shock Absorbers	: Hydraulic double acting telescopic type at front
(i) Brakes	
Service Brakes	: Dual circuit full air S-Cam brakes

- Parking Brakes : Spring actuated parking brake acting on rear wheels with graduated hand brake valve
- (k) Engine exhaust brake : Coupled with service brake
- Wheel & Tyres : 10.00x20-16 PR/10R20-16PR Radial option 7.5x20 (For RA 109 RR)
- Wheel rims : 7.00x20 (for RA 108 RR)
- No. of wheels : Front: 2, Rear: 4, Spare: 1
- (l) Fuel Tank : 225 liters
- (m) Cab/Cowl : Resiliently mounted semi-forward all steel non-sleeper cabin/ cowl option
- (n) Electrical System : 12 Volts, 120 Ah capacity batter, 65 Amps alternator capacity
- (p) Performance
- Max. Climbing ability : 18% (in 1<sup>st</sup> gear with standard gear box & rear axle)
- Max. geared speed in top gear: 78 km/h