

## EXPRESSION OF INTEREST

Ref: BEML/PLKD/PM/EOI/Br.Cylinder/20-21/

Date: 24.07.2020

**Sub: Invitation for Expression of Interest to solicit interest for the manufacturing and supply of Four types of Brake Cylinders required for BEML-TATRA 8X8 S-Cam Axle to BEML Ltd**

### **Objective:**

BEML Limited is a Defence PSU under the Ministry of Defence (MoD), Govt. of India. BEML HDT vehicles are mainly used for General Service and special projects carrying super structures as per MOD requirement. As part of indigenous program, the development and production of Brake cylinder is taken up by BEML. In this regard, BEML intends to identify reputed developer for the development and supply of Brake cylinder and associate in testing. Annual consumption of item is 150sets

1. 131612164012 - BRAKE CYLINDER (FRONT AXLE-I) - Qty/Ept = 2 No
2. 131612193017 - BRAKE CYLINDER (FRONT AXLE-II LH) - Qty/Ept = 1 No
3. 131612193019 - BRAKE CYLINDER (FRONT AXLE-II RH) - Qty/Ept = 1 No
4. 131612193004 - BRAKE CYLINDER (REAR AXLES-I & II) - Qty/Ept = 4 No

### **Brief About the Product:**

Brake Cylinder/Actuator consists of service and parking chambers. The air pressure applied into the service chamber is converted into mechanical output force. The parking chamber provides the mechanical braking force to park the vehicle. In addition, mechanical release arrangement is provided to release the parking brake. Internal Breather Valve (IBV) provided in the parking chamber enhances the life of the parking brake and ensures trouble-free life. Brake Cylinders should be of cost attractive, high performance product for the truck

### **Application:**

Brake cylinders are used for the control of brake cam in conjunction with pressurized air for S-Cam type axle. The brake cylinders are intended to use in Military truck of N3 category with a GVW of 34Ton. Other applications of the cylinder are subject to mutual agreement in advance with the manufacturer.

### **Description**

The brake cylinder comprises of the following main parts: body, piston, cover, piston rod and dust proof seating cups.

<b>Parameter</b>	<b>Specification</b>
Working medium	Air
Nominal Pressure	0.8 M Pa (8 Bar)
Operating temperature	-40°C to+80°C
Water immersion	1 meter depth for 1 hour
Technical life	2,00,000 Km
Return Force of Piston Rod for a stroke of 10mm	100 N
Stroke	77-4mm
Cylinder bore size	100H13mm
Port size	M16x1.5
Weight	Front axle I :2.80kg Front Axle II :7.65kg Rear axle :8.20kg

**Testing:**

Vendor to carry out the following testing

1. Endurance testing
2. Durability test
3. Salt Spray test
4. Cold chamber and hot chamber test
5. Vibration test
6. Water tightness test
7. Cyclic load test

Interested suppliers can visit BEML Palakkad to study the assembly in detail to understand the technical & functional requirements.

**1) P/N: 131612164012 - BRAKE CYLINDER (FRONT AXLE-I) - Qty/Ept = 2 No**



**2) P/N:131612193017 - BRAKE CYLINDER (FRONT AXLE-II RH) - Qty/Ept = 1 No**



**3) P/N: 131612193019 - BRAKE CYLINDER (FRONT AXLE-II LH) - Qty/Ept = 1 No**



**4) P/N: 131612193004 - BRAKE CYLINDER (REAR AXLES-I & II) - Qty/Ept = 4 No**



**Pre-Qualification Criteria:**

- i. Interested firms shall fulfill the following criteria while submitting the EoI.
- ii. Firm having more than 5 years of experience in design, development, and development of such products for automobile application
- iii. Firm with sound financial status – Consistently profit making for the past 3 years.
- iv. Firm should be certified for the latest Quality Management System.
- v. EOI may be responded by individual firm or a consortium of firms represented by a lead member. In case of consortium, lead member shall respond to the EOI and will be responsible for the success of the program.
- vi. The firm shall have the following basic and essential facilities to qualify to this EOI.
- vii. Latest CAD software & hardware for handling Design & Documentation
- viii. Capability to design and development of such products.

**Details of the firm to be provided with necessary supporting documents:**

- i. Company Registration certificate indicating name of the firm, year of establishment, incorporation details, Members of the Board, URL of the firm's website.
- ii. Name of the contact person, address, Telephone, Fax & email
- iii. Number of years of experience in design and development of such products..
- iv. Copy of the Supply Orders to brief the past and similar ongoing projects, if any.
- v. Details of IT infrastructure and certificates of quality management system of the firm.
- vi. Financial performance documents (Audited Balance sheets and Profit & Loss statements etc.) with details of turnover for last three (3) years
- vii. Details of Contract(s) or order(s) terminated before completion, if any
- viii. Details of any premature termination of job/supply order/contract for Min of Defence, India or any other Government / Quasi Government organization in India.
- ix. Value of largest two projects executed in last 5 years
- x. Capability to furnish Bank guarantees.
- xi. Details of important customers

### **Submission of EOI:**

In this context, Eoi in sealed cover, Providing manufacturing capability details, documents, similar existing product development details, covering letter and certificates (MSME,ISO etc) shall be submitted by interested reputed firms, superscribing “**Expression of Interest’ for development of Brake cylinders**” on or before **14:00 hours of 18.08.2020**

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DGM - Materials  
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The last date for receipt of EOI at the above address will be as per the information published and will be opened on the same date at 1515 hrs.

*BEML reserves the right to accept or reject any/all offers submitted by parties & cancel the process at any time without any liability and assigning any reason thereof*