

INTEGRAL COACH FACTORY , CHENNAI- 600 038					
SPECIFICATION FOR DOUBLE SIDE SWING INTERCOMMUNICATION DOOR FOR AIR- CONDITIONED COACHES				ICF/MD/SPEC-268 ISSUE STATUS:01 Rev.: 00 DATE:09/10/2014	
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**1. SCOPE:**

The specification covers the general and technical requirements of double side swing intercommunication door. The general arrangement, mounting and scope of supply shall be as per drawings referred in the tender description

**2. APPLICABILITY:**

These doors are to be fitted in conventional air-conditioned coaches as intercommunication door.

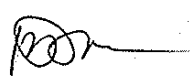
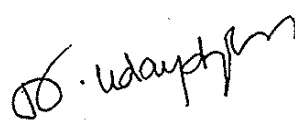
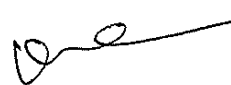

**3. Eligibility Criteria**

3.1 Firms shall have experience in manufacture and supply in bulk quantity of aluminium intercommunication doors or aluminium sliding doors to PUs/Railways. Firm shall also have experience in stainless steel manufacturing. Proof for the same shall be submitted along with offer.

**4 FUNCTIONAL REQUIREMENTS:**

Door should fulfill the following conditions during operation.

- 4.1 Door shall be able to open in controlled manner on both directions.
- 4.2 Top pivot and bottom pivot assembly shall provide smooth running without jerks.
- 4.3 EPDM rubber sealing shall be provided in the non-pivot side edge of door to arrest the ingress of dust / dirt / moisture in closed condition. EPDM rubber profile shall be suitably fixed with aluminium profile by using appropriate adhesive to withstand against rubbing action with the door frame.

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**SPECIFICATION FOR DOUBLE SIDE SWING  
INTERCOMMUNICATION DOOR FOR AIR-  
CONDITIONED COACHES**

ICF/MD/SPEC-268  
ISSUE STATUS:01  
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4.4 Door closer should be concealed & double action in design & shall be tested for 5 lakh cycles operation as per EN 1154 & shall be certified by Underwriters Laboratories Incorporated, USA. Firm shall submit test report & authorization letter from the door closer manufacturer along with the offer and during submission of the prototype sample.

4.5 The door shall have a pleasant and good looking appearance. The door assembly shall be powder coated as per ICF/MD/Spec.-091. The colour shade of powder coating shall be of Mid Buff to shade No.6101 / 01116 of Nerocoat or similar.

**5.0 DOOR CLOSURE MECHANISM:**

5.1 Unlike conventional door closers, these door closers are double acting (swinging on both sides) with cam action technology with the body concealed in the door and track mechanism fitted on the door frame. The door closer shall be of DORMA ITS 96 with steel frame mounting kit or equivalent with approval of ICF/Mechanical Design.



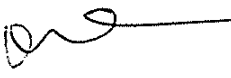

5.2 The Door closer shall have following features:

5.2.1 Adjustable closing speed & latching speed by means of a valve.

5.2.2 Closing force (spring strength) variable by means of adjustable screw.

5.2.3 Cushioned stop position adjustable between 80 deg. to 130 deg. provided on the track mechanism.

5.2.4. Non Handed and UL Marked.

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**6 TECHNICAL REQUIREMENTS:**

- 6.1 The maximum force necessary for opening the door shall not be more than 50 Newton.
- 6.2 Fire characteristics of non-metallic items used in the door assembly shall be as per appendix-6 of UIC 564(2).
- 6.3 All the requirements indicated in the tender description drawing shall be followed.
- 6.4 Honey comb aluminium core shall be tightly packed between door inner and outer panels to avoid drumming effect as shown in the drawing.

**7. INTERFACE WITH THE CAR BODY:**

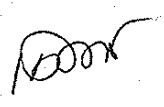
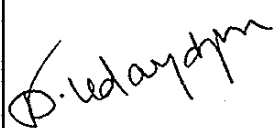
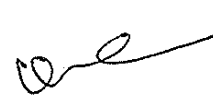
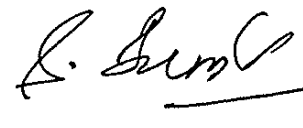
The fixing dimensions, tolerances and mounting arrangements of doors shall be as per drawing indicated in tender description.

**8. MECHANICAL STRENGTH REQUIREMENTS:**

- 8.1 The passenger coaches running on Indian Railways are designed for a service life of 25 years. The doors are to be developed and assembled accordingly.
- 8.2 Resistance to vermin:  
Selection of the material (insulation, sealant, rubber etc.) should be done with due consideration to their resistance to vermin (e.g. termite)

**9. PACKING:**

Door assembly shall be suitably packed with bubble wrap and corrugated sheet to avoid damage during transit and storage.

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**10. WARRANTY:**

The supplier shall give warranty for the complete or part of door including door closer, for failing or proving unsatisfactory in service due to defective design, material or workmanship within 36 months from the date of regular supply and shall replace the same at his own cost and risk.


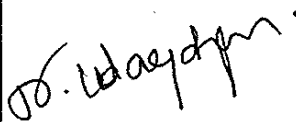
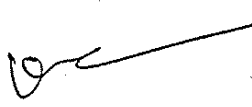

**11. MARKING:**

The supplier shall fix metallic stickers on each door mentioning name of the supplier and month of supply of doors. These stickers shall not be conspicuous to the passengers.

**12. Documents to be submitted by supplier for prototype approval:**

The following documents along with the prototype assembly shall be submitted..


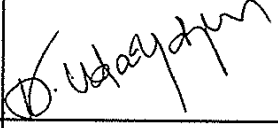

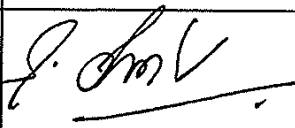
- 12.1 Instructions for mounting and adjusting the doors, changing the door and wearing parts.
- 12.2 Maintenance and repair instructions.
- 12.3 Endurance test certificate for door closing/opening mechanism.
- 12.4 Supplier details of spare parts.
- 12.5 For improvements/ modifications if any suggested by the firm, design approval shall be taken before start of manufacturing.

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**13. Testing of prototype :**

- 13.1 The supplier shall supply one prototype of doors along with the documents indicated above for prototype approval before commencing bulk supply. Prototype shall be fitted on the coach / mock-up for checking the smooth running and proper fitment / functioning of the doors. The bulk manufacturing shall be undertaken only after the approval of prototype.
- 13.2 Fire test: Non-metallic items used in the door shall be tested for the fire retardant properties as per appendix-6 of UIC-564-2 and firm shall submit certificate from NABL approved laboratory .

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