

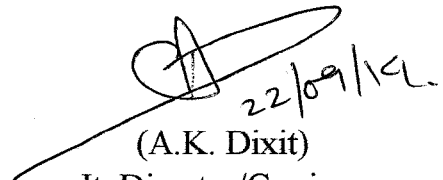
**FUNCTIONAL REQUIREMENTS FOR HIGH TENSILE TIGHT
LOCK CENTRE BUFFER COUPLER WITH AAR 'H' TYPE
HEAD FOR FITMENT ON BG PASSENGER COACHES OF
INDIAN RAILWAYS**

The coupler should be capable of meeting the following operating requirements of Indian Railways:-

1. Coach Type : Broad Gauge Passenger Coaches
(Fitted with CBC)
2. Axle Load : 16.25t (max.)
3. Gross Load (Coach) : 65t (max.)
4. Gross Load (Train) : 1700 t (max. Without loco)
5. Grade : 1 in 37 (steepest)
6. Speed (maximum) : 160 km/h
7. Curve (Sharpest) : 175 m (radius)
8. Climatic & Environmental Conditions:-
 - Maximum Temperature : 70°C
(Under the sun)
 - Maximum Temperature : 45° C
(Under shade)
 - Minimum Temperature : -5°C
(at night)
 - Rainfall : Fairly Heavy
 - Humidity : 100% saturation
 - Environment : Dusty during hot weather and
saline in coastal areas
9. Coupler Height (for coaches) : 1105 mm (from Rail Level)
10. Coupler Height (for locos) : 1090 mm (from Rail Level)
11. Wheel Diameter (for coaches) : 915 mm (new)
825 mm (condemning-ICF)
845 mm (condemning-LHB variants)
12. (i) Maximum coupling/uncoupling operations: 12 per day.
(ii) Maximum permitted speed for shunting in Indian Railways and shunting conditions/requirements to be as per G & SR (General and Subsidiary Rules) of Indian Railways.

13. Type of Brake System : Graduated Release Twin Pipe Air Brake System generally as per UIC 540. Coaches shall be equipped with disc brakes or clasp type brakes having composition or cast iron brake blocks.
14. Braking Distance of Train : 1200 m from a speed of 160 km/h
15. Maximum deceleration : 1.3 m/sec^2
16. Rolling Resistance of Coaching Stock : $R = 0.685 + 0.0211V + 0.000082 V^2$
Where, R= Rolling Resistance in kg/t of coach weight and
V= Speed in km/h
17. Side Buffers : On end coaches next to locos.
(Power Cars and SLRs only)
18. Coach Strength : Satisfies end load requirements as per UIC 566

The Coupler while meeting the above requirements shall also ensure jerk free operation under the operating conditions mentioned above.


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