

S-8-392.1


FUNCTIONAL REQUIREMENTS FOR HIGH TENSILE TIGHTLOCK 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 IR:-

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|-----|---|---|
| 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
(under the sun) | :70°C |
| | - Maximum Temperature
(under shade) | :45° C |
| | - Minimum
Temperature(at night) | :-5°C |
| | - 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-LIIB variants) |
| 12. | (i) Maximum coupling/uncoupling operations: 12 per day.
(ii) Speed at the time of coupling loco with rake: | |

- a) On platform line – 3kmph
- b) In yard shunting – 5 kmph

- 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/sec²
- 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 SI.Rs only)
- 18. Coach Strength : Satisfies end load requirements
as per UIC 566


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