



BONA830EM

BONA373 BONA320

BONA378 BONA319

Stress optimised wheels | product specification

Wheels for freight wagons designed by GHH-BONATRANS have been the standard for all types of freight wagons on the European market for decades and are valued for their safety, reliability and long service life. They are used on half of all freight trains operating across Europe. Stress optimised railway wheels are specifically designed for high mechanical and thermal loads generated by tread brakes on freight wagons. GHH-BONATRANS provides a full range of wheels to meet specific operating requirements: payload maximisation, low noise emissions, demanding operating conditions, or a universal wheel solution for the entire freight wagon fleet.

KEY FEATURES

- Extended service life
- Low life cycle costs (LCC)
- Exceptional safety and reliability
(not subject to JNS and BAV restrictions)
- Mutual interchangeability with other wheels
- Versions for axle loads 23.5 t and 25 t
- Optimised for composite brake blocks (L, LL, K)



GHH-BONATRANS
Pioneers of wheelset solutions

Exceptional safety and reliability

All GHH-BONATRANS freight wagon wheels are designed for safe and unrestricted operation across the European rail network, even under high thermal and mechanical loads associated with modern freight traffic and use of composite brake blocks.

Our special designs of the wheel web and its transition to the rim provide a high level of operational safety and reliability, supporting stable performance on demanding routes and under challenging operating conditions.

All wheels are certified in accordance with the TSI subsystem "Rolling Stock - Freight Wagons".

Low Life Cycle Costs (LCC)

Extended service life and low life cycle costs are key features of GHH-BONATRANS wheels, achieved through the enhanced **BONA^{STAR}ER7** steel grade. The steel grade meets the requirements of TSI and EN 13262 and has substantially higher resistance to wear and damage due to rolling contact fatigue (RCF).

BONA³¹⁸ BONA³¹⁹









- Primarily designed for extreme mechanical and thermal loading
- Steel grade: ER7 or **BONA^{STAR}ER7** for extended service life, both EN 13262 compliant

BONA^{830EM}

- Modern wheel with a high safety factor, optimised weight and low noise, designed for both universal use and extreme mechanical and thermal loading
- Substantially lower LCC and even longer service life thanks to the 830 mm limit wear groove, and the enhanced **BONA^{STAR}ER7** steel grade (EN 13262)
- Ø840 mm limit wear groove version available (if Ø830 mm not applicable)

BONA³¹³ BONA³²⁰

- **BONA³¹³** – lowest weight (313 kg) within the segment of wheels for axle load 25 t, proven safe design
- Higher service life thanks to the enhanced **BONA^{STAR}ER7** steel grade (EN 13262)
- Very low noise **BONA³²⁰** (**BONA³¹³** variant) with high-efficiency **BONA^{SILENCE}R+** noise damper

	Axle Load (t)	Demanding operating conditions	Low weight	Limit wear groove (mm)	Enhanced BONA^{STAR}ER7 steel grade	Noise level
BONA^{830EM}	23.5 or 25			830 or 840	yes	lowest noise among undamped wheels
BONA³¹³	23.5 or 25			840	yes	BONA³²⁰ with noise damper BONA^{SILENCE}R+
BONA³¹⁸	23.5			840	at customer's disposal	
BONA³¹⁹	25			840	at customer's disposal	