

BAE *NOVA TRANS* BAE *SPECIAL RAIL*

Made in
Germany

Material Handling Equipment



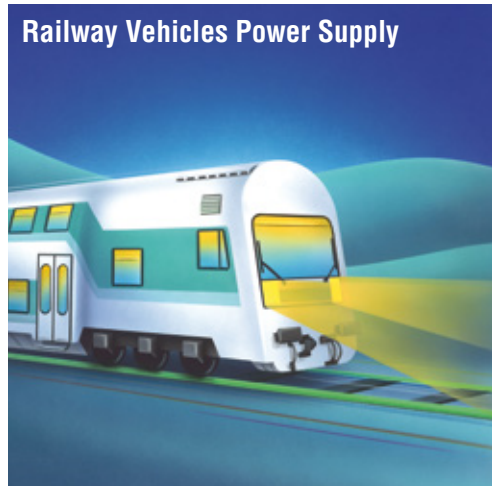
Warehouse Handling Equipment



On-Board Power Supply



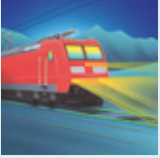








Railway Vehicles Power Supply



Batteries for Motive Power and Rail Traffic Applications













Batteries for Motive Power and Rail Traffic

Applications	Motive Power	Motive Power	Rail Traffic
			
			
Type	PzS	PzV	PzS
			
Technology	Vented (VLA) (EUW ¹ prepared)	Valve regulated (VRLA)	Vented (VLA) (EUW ¹ prepared)
Maintenance	Low maintenance	Maintenance free	Low maintenance
Nominal capacity (5 h)	120 – 1,550 Ah	110 – 1,250 Ah	120 – 1,550 Ah
Nominal voltage	2 V	2 V	2 V
Positive electrode	19 tubes plate	19 tubes plate	19 tubes plate
Width	198 mm	198 mm	198 mm
Container (UL-94 rating)	PP (HB/V-0)	PP (HB/V-0)	PP (HB/V-0)
Electrolyte	Diluted sulphuric acid	GEL	Diluted sulphuric acid
Plug/Valve	Vent plug with electrolyte level indicator; optional with BAE AQUAMATIC	Valve with flash arrestor	Vent plug with electrolyte level indicator; optional with BAE AQUAMATIC
Pole bushing	BAE screwed pole 100 % acid and gas tight	BAE screwed pole 100 % acid and gas tight	BAE screwed pole 100 % acid and gas tight
Type of thread	M10 with brass inlay	M10 with brass inlay	M10 with brass inlay
Cycles acc. to DIN EN 60254, IEC 60254	20 % DoD: 6,000	20 % DoD: 3,600	20 % DoD: 6,000
	40 % DoD: 3,000	40 % DoD: 1,800	40 % DoD: 3,000
	60 % DoD: 2,000	60 % DoD: 1,200	60 % DoD: 2,000
	80 % DoD: 1,500	80 % DoD: 900	80 % DoD: 1,500

Reference temperature: 30 °C

¹ Electrolyte agitation BAE **AIRTEC**

fic Applications

Rail Traffic	Rail Traffic	Rail Traffic	Rail Traffic
 	 	 	 
PzS	PzV	PzV	GiV
			
Vented (VLA) (EUW ¹ prepared)	Valve regulated (VRLA)	Valve regulated (VRLA)	Valve regulated (VRLA)
Low maintenance	Maintenance free	Maintenance free	Maintenance free
165 – 440 Ah	110 – 1,250 Ah	150 – 400 Ah	75 – 500 Ah
2 V	2 V	2 V	2 V
23 tubes plate	19 tubes plate	23 tubes plate	Flat grid plate
238 mm	198 mm	238 mm	198 mm
PP (HB/V-0)	PP (HB/V-0)	PP (HB/V-0)	PP (HB/V-0)
Diluted sulphuric acid	GEL	GEL	GEL
Vent plug with electrolyte level indicator; optional with BAE AQUAMATIC	Valve with flash arrestor	Valve with flash arrestor	Valve with flash arrestor
BAE screwed pole 100 % acid and gas tight	BAE screwed pole 100 % acid and gas tight	BAE screwed pole 100 % acid and gas tight	BAE screwed pole 100 % acid and gas tight
M10 with brass inlay	M10 with brass inlay	M10 with brass inlay	M10 with brass inlay
20 % DoD: 6,000	20 % DoD: 3,600	20 % DoD: 3,600	High power performance battery; not suitable for cyclic applications
40 % DoD: 3,000	40 % DoD: 1,800	40 % DoD: 1,800	
60 % DoD: 2,000	60 % DoD: 1,200	60 % DoD: 1,200	
80 % DoD: 1,500	80 % DoD: 900	80 % DoD: 900	

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Traction applications

BAE batteries for traction applications are used whenever highest demands on performance can be found. Batteries designed to highest quality standards are especially mandatory under challenging mechanical stress in cyclic applications. In every application, from multiple shifts to warehousing in food markets BAE products meet the highest requirements on life time and profitability. The positive tubular plates of excellent quality are decisive for the stable capacity and reliability of the battery. The pole bushings are specially adapted to meet the daily demands of forklift truck operation, allowing strong mechanical stress and facilitating safe operation, while offering, at the same time, reduced maintenance effort.

BAE batteries for traction applications are available in low-maintenance VLA and in maintenance-free VRLA-GEL design, depending on customer requirements. Of course, the range meets the current DIN and IEC standards. Customer orientation is our strength, and it enables us to develop customized solutions. The automatic water refill system (BAE **AQUAMATIC**) and the electrolyte agitation (BAE **AIRTEC**) are the perfect complement for BAE traction batteries, focusing the reduction of operating costs and increased reliability.

Railway applications

BAE batteries for railway vehicles are used to ensure the power supply in railway traffic. The fields of application of BAE railway batteries are as numerous as the variety of different applications defined by the needs and characteristics of the vehicle. No matter if it is emergency power supply in passenger cars, starting the engines of diesel locomotives, upgrading electric locomotives, or use for direct drive, BAE always offers an optimized and unique solution for the needs of the customer. Thanks to several electrolyte and plate technologies and a wide capacity range, BAE Batterien GmbH covers the entire range of railway traffic applications optimally.

Fire protection: Even exclusive customer requests such as containers and lids according to Fire Safety Standards NF F 16-101/16-102 can be met. The material of the containers and lids is certified in accordance with the above-mentioned standards, and tests confirm their Flammability Class of I3 and Toxicity Detection Class of F2. If necessary, the entire battery or cell including connectors can be made of self-extinguishing material according to UL 94 V-0.

BAE batteries for traction and railway applications reflect outstanding quality by:

- fully insulated battery design to ensure touch protection
- robust battery design in tubular or grid plate technology for highest durability and cycle stability
- very good charging behaviour
- unique, double-sealed, screwed pole bushing for highest reliability
- optional electrolyte agitation BAE **AIRTEC** (PIT = „Pipe in Tube“ technology) for PzS batteries to optimize operational costs and increase reliability
- significant improvement in battery operation by additional accessories such as temperature sensors

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Energy from Batteries