



## **BR 96 & Bavarian Gt 2x4 Mallet 0-8-0+0-8-0T**

In 1913/1914, Maffei built fifteen of these 0-8-0+0-8-0 tank locomotives to work on three steeply-graded stretches of the Bavarian State Railways. In 1919 three of them were given to Belgium as partial WWI reparations. They were built with an axle weight limit of 15 tons, which enabled them to be used during WWI over sections which had bridges with temporary repairs, notably the famous Liege gradient in Belgium. In 1923 ten additional units were constructed with various design improvements, some of which were incorporated into earlier models. The last Br96 was withdrawn from service in 1954.

When first introduced, the Br96 was the heaviest tank locomotive in Europe, weighing in at 120 tons - a weight that soon increased to 123 tons. In 1923, the Prussian T-20 (Br95) tank locomotive, which weighed 127.5 tons, made its debut on the German Railways. Although it had an axle load of 20 tons, its performance was equal of the Br96. For this reason, the second build of Br96 locomotives in 1922/1923 had larger high-pressure cylinders, super heaters, a refined smoke stack design and greater fuel capacity. Thus improved, the Br96 was able to take a 540 ton train at 12mph/20 km/h up a gradient of 2.5%. With passenger trains

of normal weight, the Br96 could climb the same gradient at 20mph/32 km/h.

They were perhaps the most impressive tank locomotive in Europe. With their 16 coupled wheels and 4 sets of outside valve gear, they provided a true spectacle of power in motion. The Br96 was the most magnificent "Mallet" ever to operate in Europe. Aster produced two versions: Deutsche Reichsbahn No. 96022 in black and Bavarian Gt2 x 4/4 No. 5772 in green.

## Specifications

**Scale/Gauge:** 1/32. No. 1 Gauge (45 mm)

**Total weight:** 6.8 kg.

**Dimensions:**

**Length:** 555 mm.

**Width:** 104 mm

**Height:** 147 mm.

**Engines:** 4-Cylinder Compound

**Front Low Pressure:** Two Cylinders, Bore 13 mm x Stroke 18 mm

**Rear High Pressure:** Two Cylinders, Bore 10 mm x Stroke 18 mm

**Steam Port:** 1.5 mm, Lap 1.2 mm

**Valve Travel:** 5.4 mm, Cut-off 80.2 %

**Valve Gears:** Walschaert's with screw reverser

**Boiler Type:** "C" type (External Diameter 54mm x Length 280 mm)

**Water Capacity:** 360 cc at 80% full

**Pressure:** 4.0 to 4.5 kg/cm

**Fittings:** 2 x Safety Valve, Throttle Valve, Blower Valve, Water Gauge, Pressure Gauge, Whistle, Whistle Valve, By-Pass Valve, 2 x Water Check Valves, & Feed Water Heater of Capacity 10 cc

## **Feed Water Pumps**

- (A) Axle Driven Pump mounted on the trailing driver (Rear)  
Pump Ram 5 mm x Stroke 6 mm
- (B) Hand Operating Pump mounted in the Side Water Tank (Right)  
Pump Ram 8 mm x Stroke 12 mm

**Lubricator Type:** Roscoe Displacement type in the Side Water Tank (Left), Capacity 140 cc

**Fuel Tank:** Capacity 170 cc of methanol

**Alcohol Burner:** 4 Wick Tube Alcohol Burner

