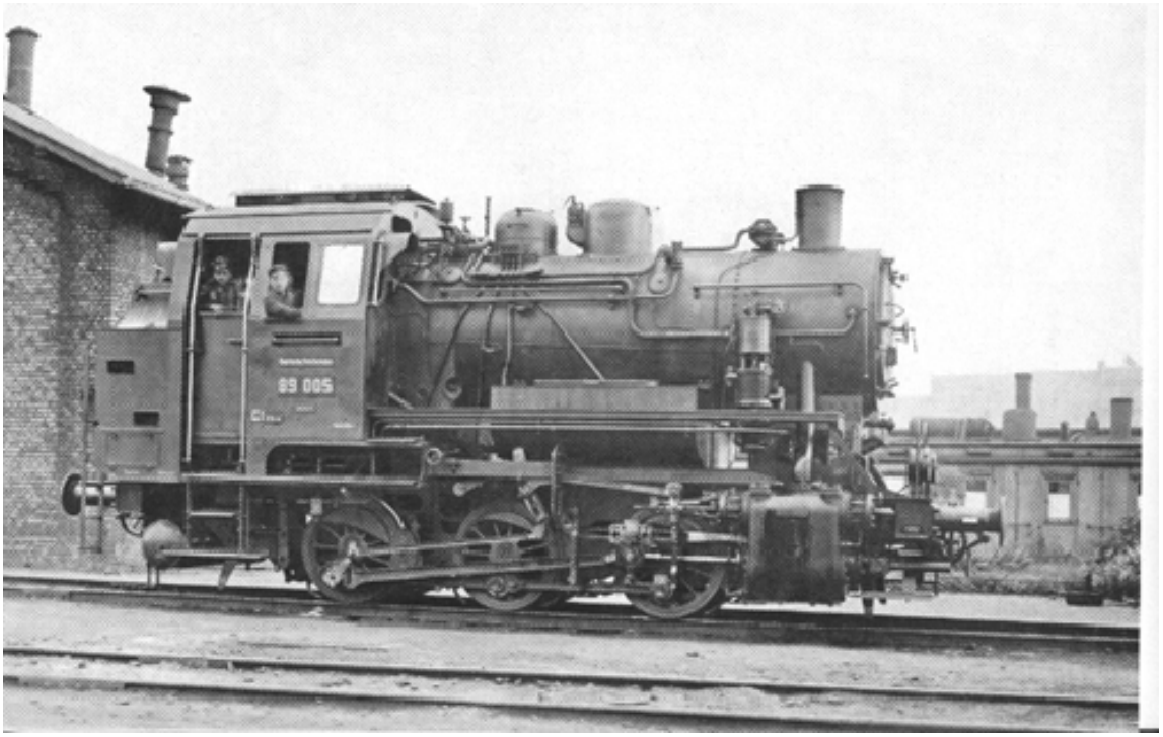
BR 89 – Only 10 built!

Märklin built over five million



DR 89 005. Superheating configuration. Photo:Lokbilderarchiv Bellingrodt; Märklin Magazin, 3/72, p. 29.

Consulting any Märklin catalog will reveal the ubiquitous 3000, the most widely produced Märklin engine ever. By early 2002 over five million had been built and production is still going strong! The catalogs only state that this model is based on a BR 89. So, you go to *Das Grosse Typenbuch Deutscher Lokomotiven* by Weisbrod, Bäzold and Obermayer to find out which BR 89 only to find, to your dismay, that there are many different BR 89s. Luckily there are many photographs and it doesn't take very long to narrow things down to BR $89^{0\ II}$. So, here are some words about this particular version of the BR 89.

In its program, the DRG had plans for switchers of 15, 17.5 and 20 tons axle loading but by 1930 with the BR 80, 81 and 87 in service, there was little progress made on a machine with 17.5 ton axle loading. In 1931, it was decided to proceed with development of a switcher of 15 ton axle loading. In 1934, the DRG made the decision to base the new engine, designated BR 89, on the BR 80 but it was to be a highly simplified BR 80. So, we see that design simplification and the conserving of strategic materials started much earlier than the drastic simplification of the BR 50 and BR 86. The first thing to go on the new BR 89 was the forged frame it being replaced with a welded plate frame. Water tanks were incorporated between the first and second axle and the tanks served to stiffen the plate frame. The feed dome was replaced by a feed valve. There was no feedwater cleaner or scum remover. The sand piping was greatly simplified. Single stage air pumps were used. A simple poppet valve (Coale design)

replaced the Ackermann safety valve. It is also worth noting that the construction of the BR 89 also made much greater use of welding than previous locomotives.

The locomotive committee of the DRG also wrestled with the question, "was this to be a machine based on superheating technology or saturated steam technology?" There were pros and cons to each argument. The decision was to build some of each and evaluate them side by side.

In 1934 Schwatrtzkopff delivered 89 001 to 89 003 using a saturated steam system. That same year, Henschel delivered 89 004 to 89 006 with superheating systems. Engines 89 001 and 89 004 were sent to LVA Grunewald in Berlin for evaluation. The others were assigned to Bw Anhalter Bahnhof in Berlin. The evaluation at LVA Grunewald and Anhalter Bahnhof showed that the machines with superheating were more powerful but also more fuel efficient.

In 1938 Henschel delivered four more superheating machines (80 007 to 010). The 1939 acquisition program called for ordering 120 of the new switcher but the war halted further deliveries. After the war, 89 001, 004, 006, 007 and 010 were in Poland with the PKP and of the five still in Germany, 89 002, 003 and 009 also had to be turned over to the PKP. Until 1962, 89 005 was stationed in Leipzig and 89 008 worked in Dresden until 1968, after which it was installed in the Dresden Transportation Museum. So, it is interesting that Märklin chose to build over a million of the 3000 when there were only 10 of the prototype.

Specifications

Years of service	1934 - 1962
Axle configuration	C (0-6-0); n2t; h2t
Service class	Gt 33.15
Top speed	28 mph (45 km/h)
Cylinder bore	16.5 in. (420 mm)
Piston stroke	21.6 in. (550 mm)
Wheel diameter	43.3 in. (1,100 mm)
Wheelbase	130 in. (3,300 mm)
Overall length (LüP)	31.5 ft (9,600 mm)
Empty weight 89 001 - 003	35.3 tons
89 004 - 010	36.2 tons
Service weight	46.6 tons
Power output	525 hp
Axle loading	15 tons
Boiler pressure	14 bar
Grating area	15.3 ft^2 (1.42 m^2)
Steaming area, 89 001 -003	960 ft^2 (89.2 m^2
89 004 - 010	731 ft^2 (67.9 m^2)

Superheating surface 004 - 010	259 ft^2 (24.1 m^2)
Boiler tube length	9.18 ft (2,800 mm)
Coal capacity	2.6 tons
Water capacity 001 - 003	158 ft^3 (4.5 m^3)
004 - 010	170 ft^3 (4.8 m^3)
Manufacturers	Schwartzkopff, Henschel
Road numbers	89 001 to 89 010

Sources:

"Das grosse Typenbuch deutscher Lokomotiven," Weisbrod, Bäzold, Obermayer, Transpress 1992, ISBN 3 334 70751-5.

"50 Jahre Einheitslokomotiven," Alfred B. Gottwaldt, Franckh Verlag, Stuttgart, 1975.

"Die Einheits-Tenderlokomotive der Baureihe 89," Märklin Magazin, 3/72, p. 27.