

Updated 29/11/2021

A source for wheelsets: <http://www.das-service.de/modellbahn-radsatz/index.php>

I sometimes purchase non-Marklin rolling stock to add variety. Because I like to make them compatible with the Marklin 3 rail system, I change the wheelsets to non-insulated AC type. To assist me I use a table, which shows brandname and various dimensions. I can measure the original DC wheels, and choose an appropriate replacement.

The axle length is the measurement across the tip of the axle. (I have listed only pin-point type wheel sets, there are shoulder type axle ends in some Trix models).

The back-to-back (b to b) measurement is between the inside faces of the wheels along the axle. Diameter of tread is self-explanatory, but it is the outer edge, not the diameter against the flange.

So each line of detail shows “brandname (and catalogue # if known), axle length in mm, b to b in mm, tread diam. in mm.” The table is comma delimited, so you can use it in a spreadsheet.

I show proven workable replacements in compatible sets.

The following Types are not rigid examples.

Type A are typical general Marklin stock for era 1, II, III and IV.

Type B are a smaller diameter wheel, presumably used in more modern era V and era VI.

Type C are a longer axle used in some models.

These were one-off measurements on a sample, and may vary across production by 0.1 or 0.2mm.

The repetitive accuracy of modern quantity machining is remarkable, although we don't know what percentage of production is discarded under quality checks.

I show proven workable replacements in compatible sets.

Type A AC Disc wheels

Marklin,24.5,14.0,10.0

Fleischmann 6560,23.85,13.85,10.5

Brawa 2181,23.8,13.9,10.6

Type B AC Disc wheels - (also use for US freight rolling stock)

Marklin,24.5,14.25,9.0

Roco 40195,24.7,14.0,9.0

Type C AC *nominal axle length of 25mm*

Fleischmann 6561,24.95,13.95,10.3

Original DC wheelsets as follows:

Type A DC Disc wheels

Older Fleischmann 1950/1960/1970,23.85,14.35,10.5

Newer Trix,24.5,14.1,10.0

Newer Liliput,24.6,14.25,10.3

Type C DC *nominal axle length of 25mm*

Older Fleischmann 1950/1960/1970,24.8,14.35,10.5

Roco,24.8,14.0,10.5

Rivarossi (modern era), 25,-,10.0

This table shows Marklin product number, diameter across tread, length of axle, type.

Marklin AC wheel sets:

700020: Wheel Dia: 12 mm Axle Length: 24.9 mm Design: stepped axle end
700070: Wheel Dia: 12 mm Axle Length: 25.2 mm Design: stepped axle
700080: Wheel Dia: 12 mm Axle Length: 26.2 mm Design: stepped axle
700100: Wheel Dia: 10 mm Axle Length: 26.0 mm Design: stepped axle
700150: Wheel Dia: 10 mm Axle Length: 24.4 mm Design: tapered axle end *I guess this is the standard wheel set that comes with many Marklin items that I purchase*

Marklin DC wheel sets: (AC 700150 equivalent is DC 700580)

700190: Wheel Dia: 10 mm Axle Length: 24.8 mm Design: stepped axle
700200: Wheel Dia: 10 mm Axle Length: 24.1 mm Design: stepped axle
700230: Wheel Dia: 10 mm Axle Length: 24.4 mm Design: tapered axle end, spoke wheels
700530: Wheel Dia: 12 mm Axle Length: 24.9 mm Design: stepped axle
700590: Wheel Dia: 10 mm Axle Length: 26.0 mm Design: stepped axle, DC
700600: Wheel Dia: 10 mm Axle Length: 24.8 mm Design: stepped axle, DC

?? DC wheel set for the beer car 48114 2 x 700270

DC wheel set for 48162 insider acid car 2 x 700580 (equivalent to the standard 700150 AC wheel set supplied by Marklin).

?? DC wheel set for 46097 era II spoked wheel 6 x 62301211, spoked wheel 2 x 32376004 and 2 x 700580

E320 552 Wheel Dia: 9 mm Axle Length: 24.8 mm Design: tapered axle, DC NEM *I guess this is the standard wheel set (if not RP25) that comes with many Trix items of US rolling stock*

E320 551 Wheel Dia: 9 mm Axle Length: 24.8 mm Design: tapered axle, (Märklin) AC wheel *I guess this is the standard wheel set that comes with many Marklin items of US rolling stock*

These latter are Trix catalogue numbers (as confirmed with my dealer).

Sometimes trial and error is required to ensure that wheels spin freely. For example, I recently replaced a standard Liliput wheel set, but had to use the Type B AC, because the height/depth of the flanges on Type A AC fouled the under-frame of the wagon. I have not included flange depth in the table, because it is not usually an issue.

Flange width is another measurement that is not usually an issue. However, with the Marklin puko being as close as 14.0 mm to an opposite rail in curve points and crossovers, the b to b measurement is important. I have on occasion had both Marklin and non-Marklin wheel flanges on long-wheelbase stock touch the puko and cause a momentary short. In these cases, I check the b to b, and if OK I focus attention on the track. I file the puko thinner, usually by about 0.1 to 0.2mm, and this makes all the difference.

Rolling stock sold for the US market in HO, such as Atlas, Athearn, Bachmann, BLI, Red Caboose, Accurail, Model Power, Mantua etc have a wheel set (RP25 standard, nominally 9mm in diameter at the outside of the tread) that does not run well on Marklin track.

Marklin have an exact equivalent for these wheels (type B AC in the table above), and I tried them on one of my Athearn freight cars. They are perfect and work fine on my C track. The numbers are 320 552 NEM DC wheel set (for 2 rail), and 320 551 (Märklin) AC wheel set for your 3 rail track.

These could be Marklin or Trix numbers, their databases are very unspecific.

The wheels are basically the same. Do not use the Marklin AC wheels on your 2 rail layout, as it will create a short circuit.

You should try your dealer to get these wheels for you.

I am unable to find them online or in the Marklin or Trix catalogues.

I hope the table is of use to some. I take no responsibility for the accuracy or for the application of this data.