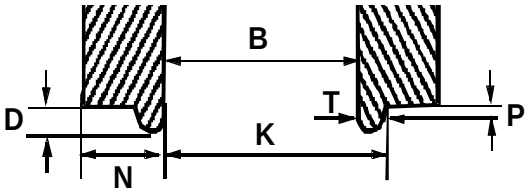
Wheel Sets
Tracking Dimensions

Binding Standard **Dimensions in mm** **Edition 2009** (20111116)
(First English Edition)

This standard is the basis for the manufacturing and testing of wheels and wheel sets, which are suited for operation on track produced according to NEM 110. The NMRA standards S 3, S 4, and the NRMA recommendation RP 25 were considered as much as possible.

The dimensions deviate from the scale reductions from prototypes in the interest of operational reliability.



Dimension Table

Gauge G	K [2]		B		N [3]		N1 [3]	T		D [4]		P
of track	min	max [1]	min	max [1]	min [1]	max	min	min [1] [5]	max	min [1]	max	
6.5	5.7	5.9	5.25	5.5	1.55	1.6	-	0.4	0.45	0.5	0.6	0.10
9	7.9	8.1	7.4	7.6	2.0	2.2	1.8	0.5	0.6	0.5	0.9	0.15
12	10.8	11.0	10.2	10.4	2.3	2.5	2.0	0.6	0.7	0.5	1.0	0.20
16.5	15.1	15.3	14.4	14.6	2.7	2.9	2.4	0.7	0.9	0.6	1.2	0.25
22.5	20.7	20.9	19.9	20.1	3.5	3.7	3.1	0.8	1.0	0.7	1.4	0.30
32	29.7	30.0	28.8	29.1	4.3	4.5	3.7	0.9	1.2	0.8	1.6	0.40
45	42.9	43.1	41.8	42.0	4.4	4.6	-	1.1	1.3	1.0	1.6	0.50
64	61.3	61.6	59.9	60.2	6.0	6.8	-	1.4	1.6	1.3	2.0	0.60

Remarks

1) Achieving these values results in the greatest prototypical similarity.

2) It is not permitted to arbitrarily combine limits for dimensions ***T***, flange thickness, and ***B***, back to back distance, in order to stay within the dimensional limits for ***K***. ***K*** is the controlling dimension.

3) The wheel thickness can be smaller than N_{min} when the conditions of Remark 4) for wheel flange running are satisfied and when the limitation $K + N > G_{max}$ (per NEM 110) are maintained.
Without wheel flange running one can apply the limit value for the wheel width, ***N1***, so long as the flangeway width at the frog does not exceed the dimension of F_{min} (per NEM 110). Otherwise expect an obvious sinking in the frog gap.

4) The adherence to the maximum slot width F_{max} (per NEM 110) in the frog, enables operation with the community of wheels whose flanges have varying heights, ***D***. If, due to wheel set rotation, it is necessary to exceed the dimension F_{max} (per NEM 110) in the slot region, then the minimum flange height ***D*** is allowed to only be 0.1mm less than the maximum. The slot depth H_{max} (per NEM 110) is then only allowed to be ≥ H_{min} + 0.1 mm.

5) The application of ***Tmin*** should accompany ***Kmax***, to avoid creating unnecessarily large wheel set gauge deviations on the track.