

## Dimensions for Runs and Rectangular Treads - Housing

### ONTARIO BUILDING CODE

#### 9.8.3.1. Straight and Curved Runs in Stairs

(1) Except as permitted in Sentence (2), stairs shall consist of,

- (a) straight flights,
- (b) curved flights, or
- (c) spiral stairs.

(2) Stairs within houses and individual dwelling units may consist of,

- (a) flights with rectangular treads and winders provided winders as described in Article 9.8.4.5. are installed between floor levels, or
- (b) flights with a mix of rectangular and tapered treads provided all tapered treads within a flight turn in the same direction.

#### 9.8.4.2. Dimensions for Runs and Rectangular Treads

(1) The run for rectangular treads shall conform to Table 9.8.4.1.

(2) The depth of a rectangular tread shall be not less than its run and not more than its run plus 25 mm.

#### Applicable Requirements from Table 9.8.4.1. Rise for Rectangular Treads, Tapered Treads and Winders and Run for Rectangular Treads

| Stair Type                    | Max. Run, mm, for Rectangular Treads | Min. Run, mm, for Rectangular Treads |
|-------------------------------|--------------------------------------|--------------------------------------|
| Private stairs <sup>(1)</sup> | 355                                  | 255                                  |

Notes to Table 9.8.4.1.:

(1) Private stairs are:

- (a) interior stairs within a house or an individual dwelling unit,

- (b) exterior stairs serving a house or an individual dwelling unit, and
- (c) exterior stairs serving a garage that serves a house or an individual dwelling unit.

### OBJECTIVE

The objective of this Builder Tip is to ensure the design and construction of rectangular treads conform to the maximum and minimum run dimensions of the Building Code.

As of January 1, 2022 all permits issued for houses and individual dwelling units that include the construction of straight flights of stairs must conform to the dimensional requirements of Table 9.8.4.1. The minimum run dimension has been increased from 201 mm to 255 mm. See Diagram no. 1 in this Builder Tip for an illustration on the differences that the 45 mm difference will have on a typical flight of stairs with ceiling height of 2.4 m.

The National Research Council's Assessment of Health Burdens reported 21% of all unintentional falls resulting in severe injuries are stair-related falls. 82% of stair falls occur in residential homes. This Building Code change addresses the issue involving falls on stairs by increasing the minimum run for flights of stairs as larger runs offer more space for better foot placement and larger foot sizes. In addition, the increase in run size creates a greater margin of stability.

In conclusion, larger runs reduce the risk of falls for all age groups and in all conditions such as poor lighting.

### New Definition:

**Flight:** Means a series of steps between landings.

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### HOUSING - MINIMUM RUN FOR RECTANGULAR TREADS AS OF JANUARY 1, 2022

