 TREAD STEP


SUITABLE FOR OUTDOOR

METAL STAIR STRINGERS "Building the tradie in you."

FEATURES:
> Convenient and easy to install
> Available off-the-shelf in 2 to 5 tread stringer sets
> Hot-dip galvanised
>Standard with 175 mm rise
> Rise is at an angle of 35 degrees
> Designed to take a maximum tread width of 1000 mm
> To suit tread 250 mm in depth


Available at:


## CREATE YOUR STEPS IN 3 SIMPLE STAGES EASY AS A, B, C

## A. PLANNING

1. Check with your local council regarding any compliance requirements. It is recommended that a structural engineer also be consulted.
2. Calculate the number of steps required. Measure the vertical height from the finished level of the landing to the ground. Divide the height by 175 , round off to the nearest whole number and subtract 1 .
For example: $\mathrm{H}=500 \div 175=2.85(3)-1$ = 2 step stringer.

## B. WHAT YOU'LL NEED

1. One set of stair stringers, size as determined by number of steps required.
2. Four M12 bolts and nuts (or choose a fixing applicable to your job), length sufficient to cover the thickness of the top mounting bracket and vertical support to which the mounting brackets will be fixed.
3. Concrete mix.
4. The following tools:
(a) Shovel
(b) Tape measure and pencil
(c) Level and string line
(d) Power drill and 13 mm drill bit


HARDAZ Stringers are an in-ground foot style as it is the most popular form of stair stringer. After bolting the top hanger brackets into place, the base of the stringer is concreted into a suitable footing in the ground. The leg on the stringer is approx 220 mm long, giving ample anchorage into a concrete footing.

## C. CONSTRUCTION

Note: The stringers are engineered to provide a rise height of 175 mm and accommodate treads of 250 mm in depth and up to 1000 mm in width. Minimum tread thickness should be 50 mm .

1. To determine how far from the vertical surface the stringer will protrude, multiply the number of steps by 250 and then minus 175. This will give you the centre point of the stringer foot (base) to concrete it in place (see $\mathbf{A}$ in diagram for calculation).
2. Position the top mounting bracket of one stringer on the vertical support so that the height difference between the top of the landing and the top of the tread to be used is 175 mm (see $\mathbf{B}$ in diagram). Mark out bolt positions, drill holes and bolt bracket onto support. Repeat procedure to position the second stringer. Be mindful that the maximum tread width must not exceed 1000 mm .
3. Concrete each stringer post into position. NB: To comply with the current Building Code of Australia, the stringer rise must be consistent, including the first step and last step up to the landing. The ground level may need to be built up or excavated to achieve this.
Allow concrete to fully set before fixing treads into position.

## HINTS \& TIPS

- Each stringer has $2 \times 14 \mathrm{~mm}$ (approximately) holes drilled in the top bracket, 50 mm apart to allow easy installation.
- If you are attaching the stringer top bracket to concrete, use a Loxin expansion anchor of appropriate diameter and length.
- Each riser has two holes approximately 150 mm apart to allow the attachment of the tread.


## INSTALLATION GUIDE

| NO. OF <br> STEPS | VERTICAL <br> HEIGHT <br> $(\mathbf{m m})$ | HORIZONTAL <br> LENGTH <br> $(\mathbf{m m})$ | NO. OF <br> RISERS | PRO- <br> JECTION |
| :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | 525 | 500 | $\mathbf{3}$ | 325 |
| $\mathbf{3}$ | 700 | 750 | $\mathbf{4}$ | 575 |
| $\mathbf{4}$ | 875 | 1000 | $\mathbf{5}$ | 825 |
| $\mathbf{5}$ | 1050 | 1250 | $\mathbf{6}$ | 1075 |

