## walraven

## WHA1H Highload Anchor

(L 03 54)

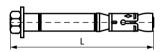
ultimate performance anchor for cracked concrete and seismic conditions

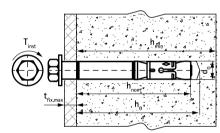




## Features and Benefits

- very high load capacity
- ETA Option 1 approval for cracked and non-cracked concrete
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- seismic performance categories C1 and C2 for design of anchorages under seismic action
- material: steel
- zinc plated
- substrate type:
  - cracked concrete
  - non-cracked concrete





| Part No.  | Code         | Size | L      | d <sub>0</sub> | h <sub>0</sub> | h <sub>min</sub> | h <sub>nom</sub> | t <sub>fix,max</sub> | Rec. Tension Load<br>C20/25 Uncracked<br>Concrete | Rec. Tension Load<br>C20/25 Cracked<br>Concrete | Pack 1 |
|-----------|--------------|------|--------|----------------|----------------|------------------|------------------|----------------------|---|---|--------|
|           |              |      |        | (mm)           | (mm)           | (mm)             | (mm)             | (mm)                 | (kN)  | (kN)  |        |
| 609832150 | WHA1H 15x110 | M10  | 110 mm | 15             | 95             | 140              | 85               | 15                   | 14.29*  | 7.62*   | 25     |
| 609832151 | WHA1H 15x136 | M10  | 136 mm | 15             | 95             | 140              | 85               | 45                   | 14.29   | 7.62*   | 25     |
| 609832180 | WHA1H 18x117 | M12  | 117 mm | 18             | 105            | 160              | 95               | 10                   | 17.20*  | 12.26*  | 20     |

\* Recommended loads: are stated for single anchors; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4.

The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design.

For more information, please refer to the ETA report.

Complementary