

CERTIFICATE

- Client:** DOLLE A/S
- Product:** DOLLE Toronto | Gardenspin | Industria (Ø125 cm + Ø155 cm)
- Designation:** Product family
- Description:** Structural verification of the spiral staircase Toronto | Gardenspin | Industria (Ø125 cm + Ø155 cm). The spiral staircase has a maximum outer diameter of 155 cm. The maximum installation height is 3995 mm and it has maximum 16 treads and landing platform.
- The staircase is approved with the following treads:[Ø125 trimax] [Ø155 trimax]
[Steel Ø125 with three balustrades/step] [Steel Ø155 with four balustrades/step]
- Material:** Steps: Steel, S235 JRG2
Centre construction: Steel, S235 JRG2
Spacer: ABS
Step support pipe: Steel, S235 JRG2
Handrail: PVC-Rigid or LDPE
Balustrades: Steel, S235 JRG2
- Particularities:** The structure is checked with FEM for deformations and stress.
- Eurocodes:** EN 1991-1-1:2007 Eurocode 1: Actions on structures - Part 1-1
EN 1991-1-4:2007 Eurocode 1: Actions on structures - Part 1-4
EN 1993-1-8+AC:2007 Eurocode 3: Design of steel structures - Part 1-8
- References:** [1] DOLLE® Design basis for ladders and stairs, rev. 01
- Conclusion:** DOLLE Toronto | Gardenspin (Ø125 cm + Ø155 cm) is calculated according to Eurocodes [1] and the design is found to be strong and stable.



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Jan Riis Bovbjerg
Senior Management Consultant
BIIR ApS

A handwritten signature in black ink, appearing to read 'Jan Riis Bovbjerg'.