

CERTIFICATE

Client:	DOLLE
Product:	DOLLE Toronto Gardenspin (Ø185 cm)
Designation:	Product family
Description:	Structural verification of the spiral staircase Toronto Gardenspin (Ø185 cm). The spiral staircase has a maximum outer diameter of 185 cm. The maximum installation height is 3525 mm and it has maximum 14 treads and landing platform.
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 (Ø185 cm) is calculated according to Eurocodes [1] and the design is found to be strong and stable.

ISO 9001 : 2015
Management System Certification
BUREAU VERITAS
Certification Denmark A/S



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Jan Riis Bovbjerg
Senior Management Consultant
BIIR ApS

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