

# CERTIFICATE

<b>Client:</b>	DOLLE A/S
<b>Product:</b>	DOLLE Graz
<b>Designation:</b>	Complete product
<b>Description:</b>	Structural verification of the centre-stringer staircase Graz. The maximum installation height from floor to top tread is 2700 mm and it has maximum 12 treads. The product is approved with minimum 5 balustrades. The staircase can turn from 0 to 90 degrees. The screws for fastening the top module to the wall are not included in this verification.
<b>Material:</b>	Treads: 35 mm multiplex Centre construction: Steel, S235 JRG2 Handrail: Ø25 mm Steel, S235 JRG2 Balustrades: Ø25 mm Steel, S235 JRG2
<b>Particularities:</b>	The structure is checked with FEM for deformations and stress.
<b>Eurocodes:</b>	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
<b>References:</b>	[1] DOLLE® Design basis for ladders and stairs, rev. 01
<b>Conclusion:</b>	DOLLE Graz staircase 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'.