May 2022



AKKERMAN ENGINEERING SOLUTIONS ApS Torskekaj 1A, 3. sal, 6700 Esbjerg, Denmark CVR: 41 82 40 26

# CERTIFICATE

# PRODUCT

DALLAS prefabricated stair kit (PSK)



#### DESCRIPTION

Structural verification of the staircase Dallas product family. The maximum installation height from floor to top tread is 3250 mm and it has a maximum of 13 treads. The tread width is 650 mm. The following configurations are included in this certificate: Straightway and quarter-turn in any position except the top tread. Wall brackets are demanded in all quarter-turn configurations and straightway configurations with 12 and 13 treads. The required strength of the walls, deck and floor are not included in this verification.

# MATERIAL

Treads:		
35	mm	multiplex

Center stringer elements: Steel, S235 JR

Handrail: Ø42 mm PVC Balusters:

Steel, S235 JR

### PARTICULARITIES

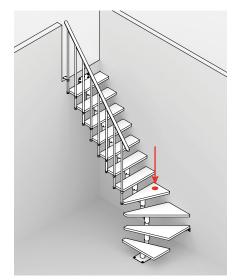
The structure is checked with FEM for deformations and stress.

### **EUROCODES**

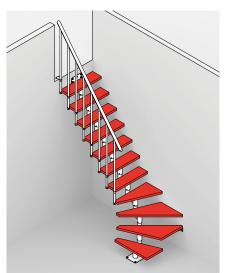
- » EAD 340006-00-0506
- » EN 1990:2002 Eurocode: Basis of Structural Design
- » EN 1991-1-1:2002 + AC:2009 Eurocode 1: Actions on structures Part 1-1
- » EN 1991-1-6:2005 + AC:2008 Eurocode 1: Actions on structures Part 1-6
- » EN 1993-1-5:2005 + AC:2009 Eurocode 3: Design of steel structures Part 1-5
- » EN 1993-1-8:2005 + AC:2009 Eurocode 3: Design of steel structures Part 1-8

### CONCLUSION

DOLLE DALLAS staircase is calculated according to Eurocodes [1] and the design is found to be strong and stable [2].



STAIR POINT LOAD Max. 2 kN ~ 200 kg



**STAIR SURFACE LOAD** Max. 2 kN/m<sup>2</sup> ~ 465 kg total load

**DESIGNATION** Complete product

#### REFERENCES

[1] DOLLE PSK verification procedure [2] DALLAS PSK FEA verification report

#### CLIENT

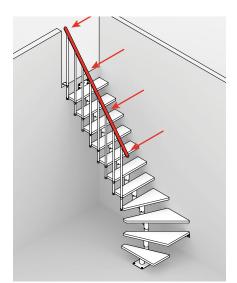


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Thomas Sillesen CEO AKKERMAN ENGINEERING SOLUTIONS ApS



LOAD ON HANDRAIL Max. 0,5 kN/m ~ 50 kg/m