February 2023



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

CERTIFICATE

PRODUCT

DUBLIN prefabricated stair kit (PSK)



DESCRIPTION

Structural verification of the staircase Dublin product family. The maximum installation height from floor to top tread is 3375 mm and it has a maximum of 15 treads. When the staircase is installed with 13, 14 or 15 treads then a support post is demanded. The maximum tread width is 710 mm. The following configurations are included in this certificate: Straightway, quarter turn and half turn. Turn can be positioned any place on the staircase except from top tread. Dublin is approved with Classic II, Classic III and Style6 banister. The required strength of the walls, deck and floor are not included in this verification.

MATERIAL

Treads:	Center stringer elements:
38 mm oak or beech	Steel, S235 JR

Handrail: Ø40 mm beech or oak

Balusters: Steel, S235 JR

PARTICULARITIES

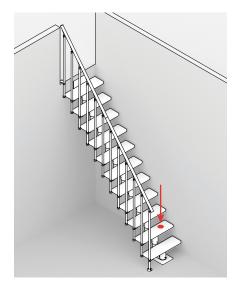
The structure is checked with FEM for deformations and stress.

EUROCODES

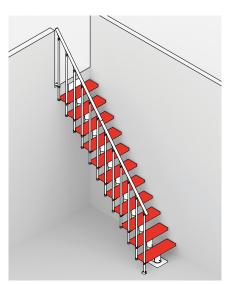
- » EAD 340006-00-0506
- » EN 1990:2002 Eurocode: Basis of Structural Design
- EN 1991-1-1:2002 + AC:2009 Eurocode 1: Actions on structures Part 1-1 »
- EN 1991-1-6:2005 + AC:2008 Eurocode 1: Actions on structures Part 1-6 »
- EN 1993-1-5:2005 + AC:2009 Eurocode 3: Design of steel structures Part 1-5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

CONCLUSION

DOLLE DUBLIN 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/m² ~ 400 kg total load

DESIGNATION Complete product

REFERENCES

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

CLIENT

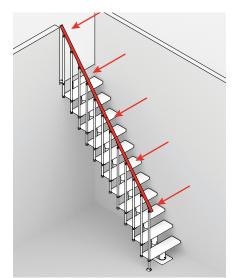


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LOAD ON HANDRAIL Max. 0,5 kN/m ~ 50 kg/m