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The Netherlands

## Determination of thermal transmittance according to EN 12428:2013 (4 appendices)

### Work requested

The client supplied drawings of overhead sectional doors of Epco residential sandwich panels and Doco hardware, with seal 24750 or 225010, for calculation of its total U-value. Appendix 3 shows the design of the two constructions.

### Calculation and test methods

Calculations of the profile sections was performed using the THERM 6.3 program. Values of the thermal conductivity and applied boundary conditions are shown in appendix 1. The accredited part in this report is the determination of thermal conductivity according to EN 12667 (Appendix 4). Point thermal bridges has been calculated by the calculation software HEAT3 according to EN ISO 10211.

### Calculation results

Panel	Doco hardware and seal system	Door daylight size (W x H)	U <sub>d</sub>
Epco residential 40mm	24750	3.0 x 2.44	1.6 W/(m <sup>2</sup> K)
Epco residential 40mm	225010	3.0 x 2.44	1.4 W/(m <sup>2</sup> K)

The calculations are shown in greater detail in appendix 2.

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### Appendices

- 1 Material data and boundary conditions
- 2 Calculation of thermal transmittance
- 3 Calculated sections
- 4 Determination of thermal conductivity

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