

# Certificate

## Certified Passive House Component

for cool, temperate climates; valid until 31.12.2017

Passive House Institute  
Dr. Wolfgang Feist  
64283 Darmstadt  
GERMANY

Category: **Roller shutter**  
 Manufacturer: **ALUPROF Plant in Opole**  
**45-446 Opole, POLAND**  
 Product name: **Under-plaster roller shutter system SP / SP-E 165**

The certification is based on a standard  
Passive House window frame.

### This certificate was awarded based on the following criteria:

The installed window is calculated with the roller shutter box  
at the top and guide rails on both sides.  
The heat losses are determined with  $U_g = 0.70 \text{ W}/(\text{m}^2\text{K})$ ,  
for window dimensions of  $1.23 \text{ m} * 1.48 \text{ m}$  and with

$$U_w = 0.80 \text{ W}/(\text{m}^2\text{K})$$

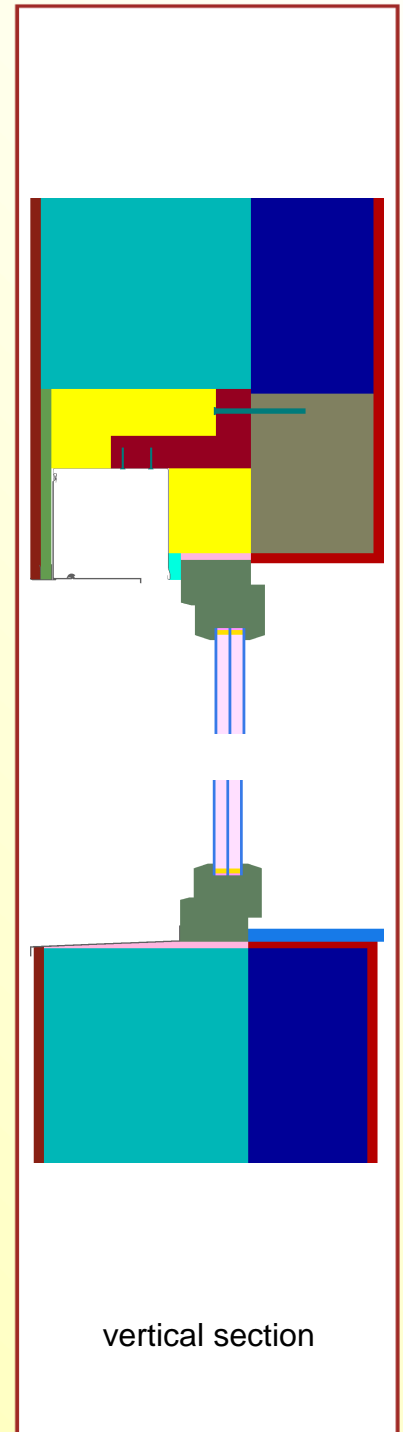
$$U_{w,\text{installed}} = 0.85 \text{ W}/(\text{m}^2\text{K}) \leq 0.85 \text{ W}/(\text{m}^2\text{K})$$

This result is valid only if the thermal quality of the window  
installation is equivalent or better than stated in the data sheet.

### Following hygiene requirement is fulfilled:

$$f_{Rsi} = 0.25 \geq 0,70$$

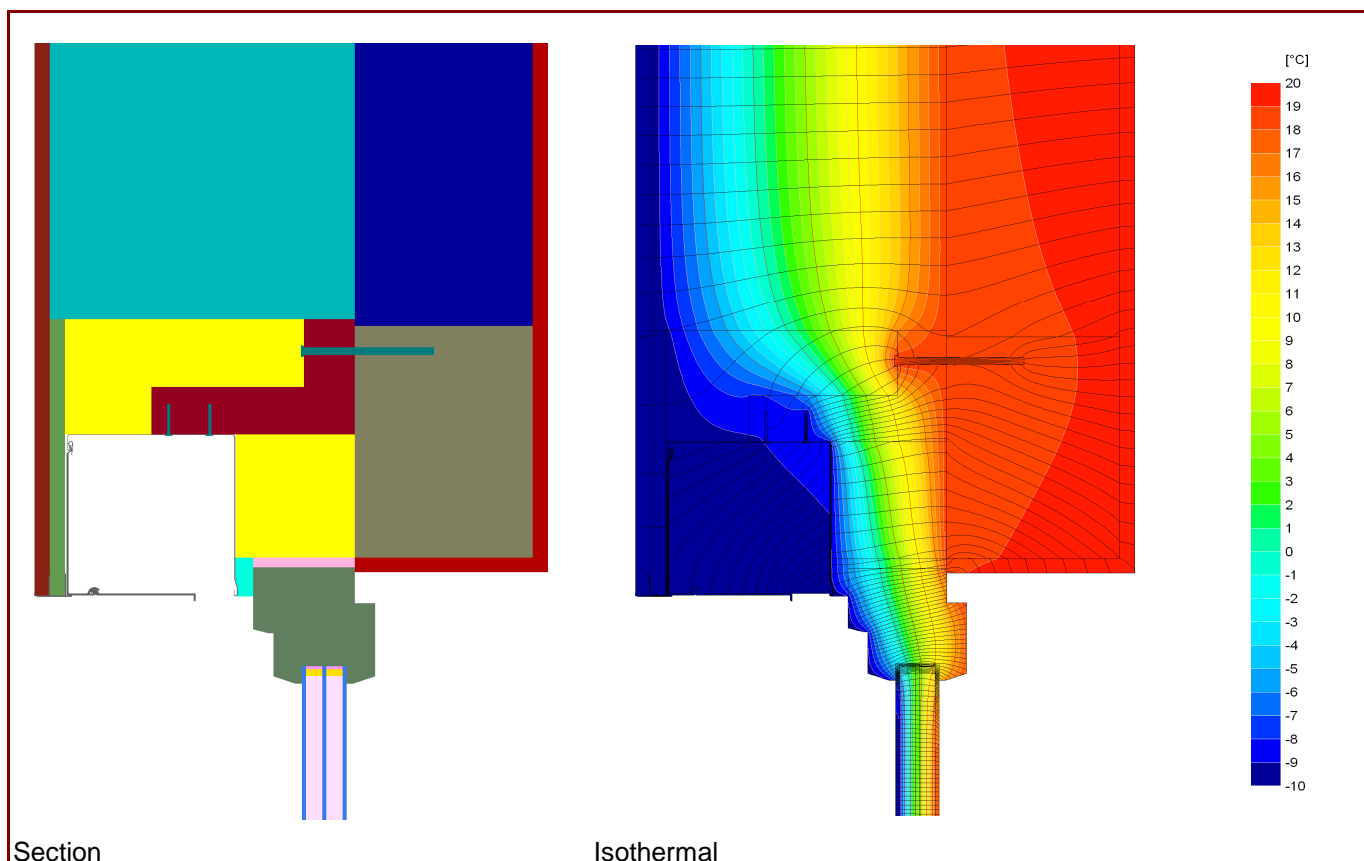
For further information, please see the data sheet



# Data Sheet ALUPROF Plant in Opole, Under-plaster roller shutter system SP / SP-E 165

**Manufacturer** ALUPROF Plant in Opole  
 ul. Gostawicka 3, 45-446 Opole, POLAND  
 Tel.: +48 77 400 00 00  
 Email: aluprof@aluprof.eu, www.aluprof.eu/en

**Window** standard frame V5



## Description

Aluminium roller shutter with PUR insulation ( $\lambda = 0,024 \text{ W}/(\text{m}^2\text{K})$ ), fixed with an angle of PUR rigid foam; the guide rails are fixed at the frame with a thermal separation;  
 The certificate is also valid for smaller boxes, if they are installed analog to the installation shown above.

## Thermal data for the window frame

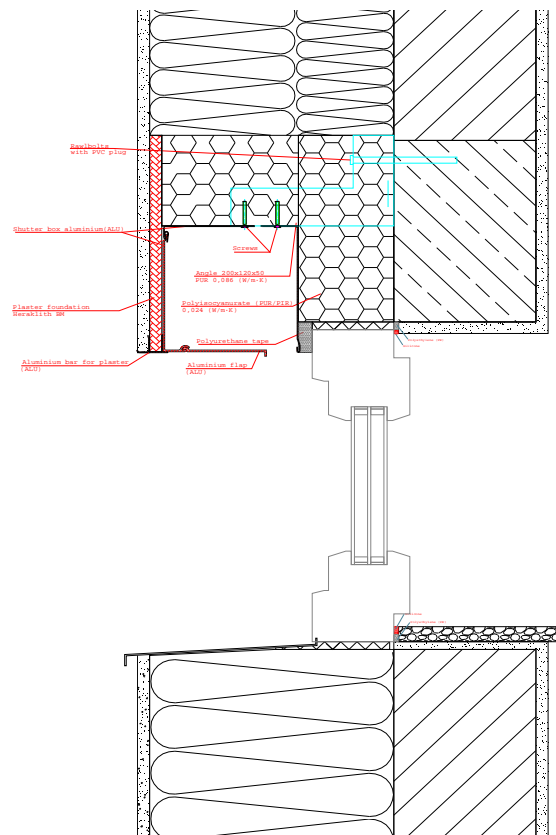
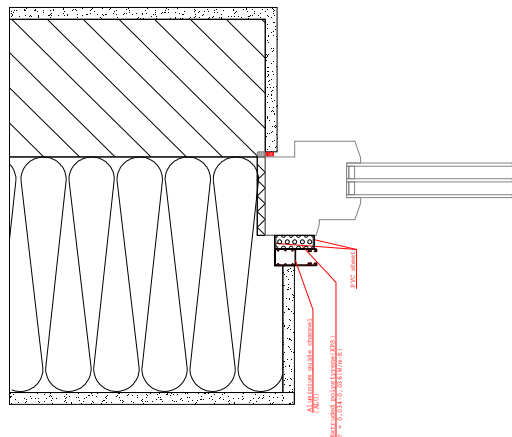
	$U_f$ -value [W/(m <sup>2</sup> K)]	Width [mm]	$\Psi_g$ [W/(mK)]	$f_{Rsi=0.25}$ [-]
spacer			Superspacer TriSeal*	
bottom	0.80	120	0.027	0.72
side/top	0.80	120	0.027	

\* Spacers of lower thermal quality lead to higher thermal losses and lower glass edge temperatures.

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## certified Installation

**EIFS (300mm WLG 035)**  
with standard window V5



### Installation based thermal bridge $\Psi_{\text{instal}}$ in Passive House suitable wall

Position		EIFS
bottom	[W/(mK)]	0.021
top	[W/(mK)]	0.025
side	[W/(mK)]	0.010
$U_{W,\text{instal}}$	[W/(m <sup>2</sup> K)]	0.85

### Explanatory notes

The window U-values were calculated based on a 1.23 m by 1.48 m window  $U_g = 0.70 \text{ W/(m}^2\text{K)}$ .

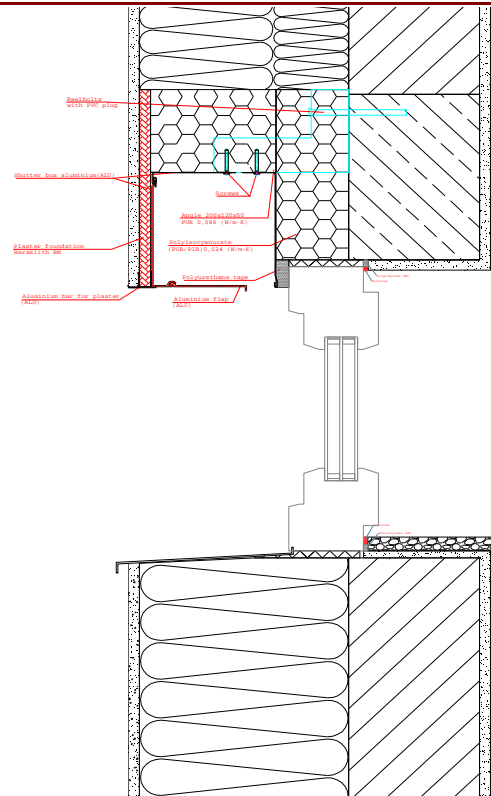
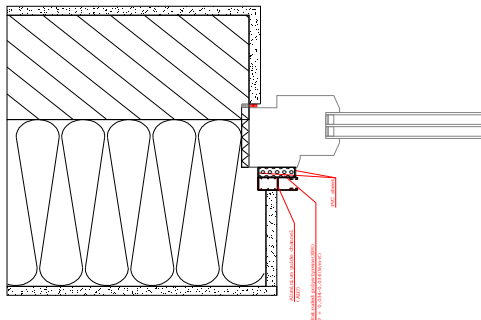
If better glazing is used, the window U-values decreases. The influence of a ceiling connection instead of a concrete lintel above the window is negligible as long as the EIFS is not weakened.

Dimensions refer to the outer edge of the window frame.

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## additional installation situations

### EIFS (280mm WLG 035) with standard window V5

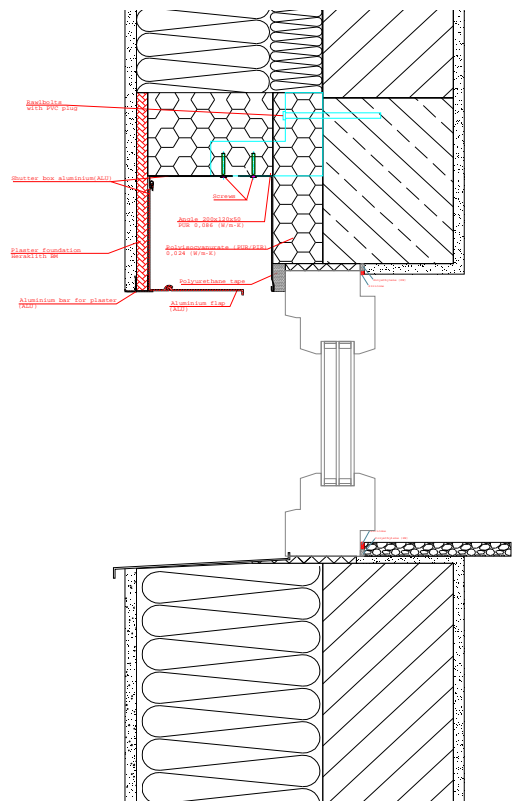
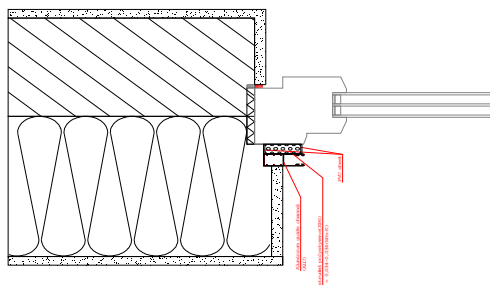


$\Psi_{\text{instal. bottom}}$	= 0.027 W/(mK)
$\Psi_{\text{instal. top}}$	= 0.035 W/(mK)
$\Psi_{\text{instal. side}}$	= 0.015 W/(mK)
$U_{W, \text{instal.}}$	= 0.87 W/(m <sup>2</sup> K) *

\* not certified.

This installation detail does not fulfill the criteria. The heat losses are higher, if the window frame is situated towards the masonry rather than in the insulation layer. These losses have to be compensated for elsewhere.

### EIFS (250 mm WLG 035) with standard window V5



$\Psi_{\text{instal. bottom}}$	= 0.043 W/(mK)
$\Psi_{\text{instal. top}}$	= 0.062 W/(mK)
$\Psi_{\text{instal. side}}$	= 0.027 W/(mK)
$U_{W, \text{instal.}}$	= 0.91 W/(m <sup>2</sup> K) *

\* not certified.

This installation detail does not fulfill the criteria. The heat losses are higher, if the window frame is situated towards the masonry rather than in the insulation layer. These losses have to be compensated for elsewhere.