

TOP-90 sound reduction

VELUX®
Commercial


Sound insulation that protects and promotes daylight yield
 Fall-through protection for permanently secure traffic routes
 Executable as comfortable and economical roof access

TOP-90 sound reduction

- consisting of PMMA, 2-skinned opal/clear and an internal 8 mm laminated safety glass pane matt/clear, the "hybrid dome rooflight" TOP-90 sound reduction offers significant product advantages in terms of sound insulation and fall-through protection at the thermal insulation level of a 3-skinned dome rooflight. It can also be combined with components for preventive fire protection, roof access and comfort ventilation.

Product benefits

- possible to comply with official acoustic emissions limits e.g. in mixed commercial zones
- reduction of acoustic emissions e.g. in areas near airports
- permanent fall-through protection in closed position/
ventilation position up to 300 mm
 - according to DIN 18008-6:2018-02 (acc. to the investigation report of the B 18 1412.4 TU-Darmstadt/DE)
 - can be used as pneumatic or electric SHEV according to DIN EN 12101-2
- enables convenient and economical roof access



TOP-90 with 8 mm LSG
= TOP-90 sound reduction



TOP-90



TOP-90 sound reduction open dome rooflight with ventilation motor

Product advantages in detail

Sound insulation

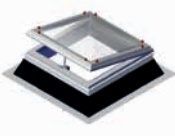
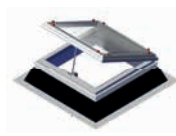
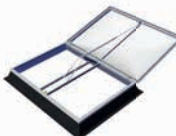

The "hybrid dome rooflight" TOP-90 sound reduction has a sound insulation value of 36 dB for the dome rooflight element alone. In combination with an upstand, a sound insulation value of min. 32 dB is achieved. This value means the halving of the human perception of the sound level compared to 2- or 3-skinned dome rooflights with a sound insulation value of 20, respectively 22 dB (according to DIN EN 1873: 2014 - 5.10 Airborne sound insulation, table 1).

Fall-through protection

For the verification of the fall-through safety, the DIN 18008-6:2018-02 was used to test the glass component of the TOP-90 sound reduction "hybrid dome rooflight" in accordance with the recognized state of the art. By carrying out pendulum impact tests with a twin tire, the fall-through protection was proven and certified by the TU Darmstadt.

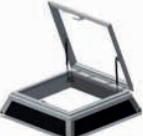

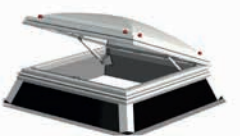

Equipment comfort ventilation / SHEV (LBO / EN 12101-2)

Different equipment and their combination allow versatile functionality and variance

Comfort ventilation	Stairwell smoke extraction (LBO)	Smoke heat exhaust (EN 12101-2)	Smoke heat exhaust (EN 12101-2) + comfort ventilation
230V / 300 mm ventilation stroke	24V / 500 mm ventilation stroke	pneumatic or electric (24V)	pneumatic or electric (24V / 48V / 230V) approx 300 mm ventilation stroke
for the daily, natural ventilation and deaeration of rooms; or building sections	to support the fire department in the removal of smoke from stairwells and for the daily ventilation of stairwells	for qualified smoke and heat extraction from buildings with SHEV fittings for certified NSHEVs in accordance with EN 12101-2	for qualified smoke and heat extraction from buildings with SHEV fittings for certified NSHEVs in accordance with EN 12101-2 and for daily, natural aeration and ventilation
			

Equipment roof access

Different equipment and their combination allow versatile functionality and variance

Roof exit mechanical	Roof exit mechanical + electro	Roof exit mechanical + electro	Comfort roof exit
DA-M	DA-M-EL 230V / 400 mm ventilation stroke	DA-M-EL 24V / 500 / 600 mm ventilation stroke	DA-EL
purely mechanical roof exit with tandem gas pressure spring set for support + locking unit	Tandem gas spring set for support + comfort ventilation for daily, natural aeration and deaeration	Tandem gas spring set for support + comfort ventilation for daily, natural ventilation or to support smoke dissipation	electric tandem roof exit fitting (24V / 48V) for comfortable roof access with particularly large opening angle (up to 90°), as well as for daily, natural ventilation or to support smoke evacuation
			

Options glazing

Besides the standard PMMA dome rooflight, other options offer additional features

Heat protection	Hail protection I	Hail protection II
"HEATSTOP"	"SUPERTOP"	"HAILSTOP"
PMMA / PMMA	PC / PMMA	PC / PC
	VKF-No.: 30883	VKF-No.: 25035

Technical data

- thermal transfer coefficient
 U value = 1.9 W/m²K according to DIN EN 1873:2006¹
 U_t = 2.0 W/m²K according to DIN EN 1873:2014²
 $U_{rc,ref300}$ = 1.39 W/m²K according to DIN EN 1873:2014³
- airborne sound reduction value: R_w = 36 dB
- airborne sound reduction index complete product: R_w = 32 dB

1) according to EN ISO 6946

2) U_t according to DIN EN 1873:2014 for horizontal installation

3) $U_{rc,ref300}$ = reference value of the total heat transfer coefficient of a dome rooflight of order size 120 x 120 cm with an upstand with the height of 300 mm (here: ISO-THERM upstand) according to DIN EN 1873:2014

Photometric values

TOP-90 sound reduction			
opal/clear/clear		opal/clear/opal	
Light transmission [TL]	Total energy transmittance [g-value]	Light transmission [TL]	Total energy transmittance [g-value]
71 %	65 %	55 %	58 %

Photometric values

SUPERTOP-90 sound reduction			
opal/clear/clear		opal/clear/opal	
Light transmission [TL]	Total energy transmittance [g-value]	Light transmission [TL]	Total energy transmittance [g-value]
49 %	48 %	37 %	42 %

Product range of the TOP-90 sound reduction dome rooflight

Order sizes [LCOW upstand] cm x cm	TOP-90 sound reduction with standard upstand type AK	TOP-90 sound reduction with upstand type RAK	Light permeation dimension [UCOW] cm x cm	24V roof exit on ISO-THERM upstand steep [UCOW = LCOW] ¹	Addition to the ventilated dome rooflight TOP-90 sound reduction	
					NEW typ DA-M ² (tandem- gas spring)	NEW typ DA-M-EL ² (tandem gas pressure spring + factory-assembled chain linear actuator 24V / 230V)
60 x 60	•	-	40 x 40	-	-	-
60 x 90	•	-	40 x 70	-	-	-
80 x 80	•	-	60 x 60	-	-	-
90 x 90	•	-	70 x 70	-	• NEW	• NEW
90 x 120	•	-	70 x 100	-	• NEW	• NEW
100 x 100	•	•	80 x 80	-	-	-
100 x 150	•	•	80 x 130	-	•	•
100 x 200	•	•	80 x 180	-	• NEW	• NEW
100 x 250	•	•	80 x 230	-	-	-
120 x 120	• ^{5/6}	•	100 x 100	• ³	•	•
120 x 150	• ^{5/6}	•	100 x 130	• ³	•	•
120 x 170	-	-	100 x 150	• ⁴	•	•
120 x 180	• ^{5/6}	•	100 x 160	• ⁴	• NEW	• NEW
120 x 240	• ^{5/6}	•	100 x 220	-	-	-
120 x 270	• ^{5/6}	-	100 x 250	-	-	-
125 x 125	• ^{5/6}	•	105 x 105	-	-	-
125 x 250	• ^{5/6}	•	105 x 230	-	-	-
140 x 140	-	-	120 x 120	• ³	-	-
150 x 100	-	-	130 x 80	-	•	•
150 x 120	-	-	130 x 100	-	•	•
150 x 150	• ^{5/6}	•	130 x 130	• ³	• NEW	• NEW
150 x 180	• ^{5/6}	•	130 x 160	• ⁴	-	-
150 x 210	• ⁵	•	130 x 190	• ⁴	-	-
150 x 240	• ⁵	•	130 x 220	-	-	-
150 x 250	• ⁵	•	130 x 230	-	-	-
150 x 270	• ⁵	-	130 x 250	-	-	-
180 x 180	• ⁵	•	160 x 160	-	-	-
180 x 240	• ⁵	•	160 x 220	-	-	-
180 x 250	• ⁵	•	160 x 230	-	-	-

• = available - = not available

Notes

1) Opening angle for hinges on the long side generally approximate 90°

2) Opening angle approximate 70°

3) Opening angle for hinges on the short side approximate 90°

4) Opening angle for hinges on the short side approximate 60°

5) Use as pneumatic SHEV according to DIN EN 12101-2

6) Use as electrical SHEV according to DIN EN 12101-2