6.1 | Arch shaped continuous rooflights without vents

6.1.1 | Technical description of standard

- continuous rooflights in accordance with EN 14963 (CE marked),
- straight base of height 300 mm ÷ 700 mm made of galvanized steel sheet of thickness adequate to the rooflights parameters (width, length, glazing thickness),
- bottom part of base has a circumferential flange of standard width 70 mm, for installing on the roof structure,
- rooflight base stiffened with bracing at 1500 mm or 3000 mm,
- continuous rooflight base adapted for installing thermal insulation of min. thickness 50 mm,
- continuous rooflight structure made of aluminium profiles of shape ensuring water run-off,
- rooflights glazing made of multi-chamber polycarbonate, available in various thicknesses and colors, glazing with $B_{ROOF}(t1)$ classification,
- continuous rooflights may be delivered with openable vents (more information in chapter 6.2 page 90).

6.1.2 | Arch shaped continuous rooflight design

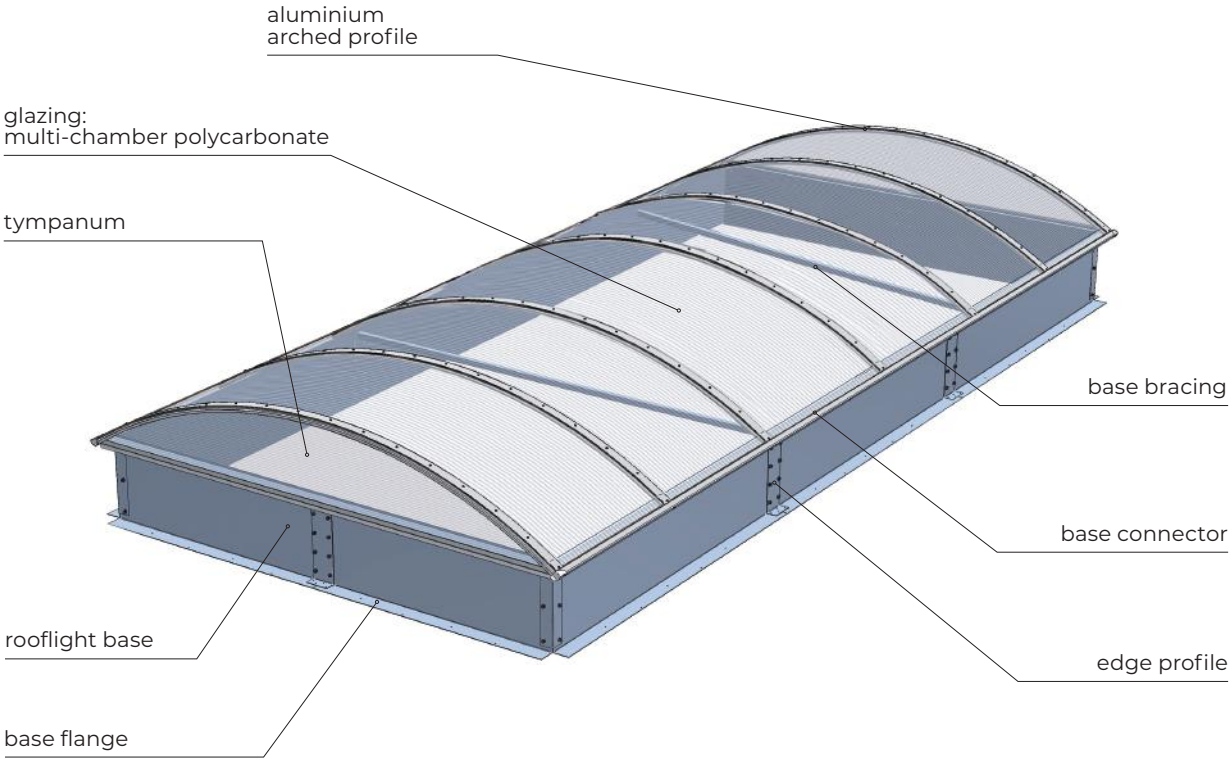


Fig. 80 *Design of mcr PROLIGHT arch shaped continuous rooflight*

6.1.3 | Technical drawings of arch shaped continuous rooflight

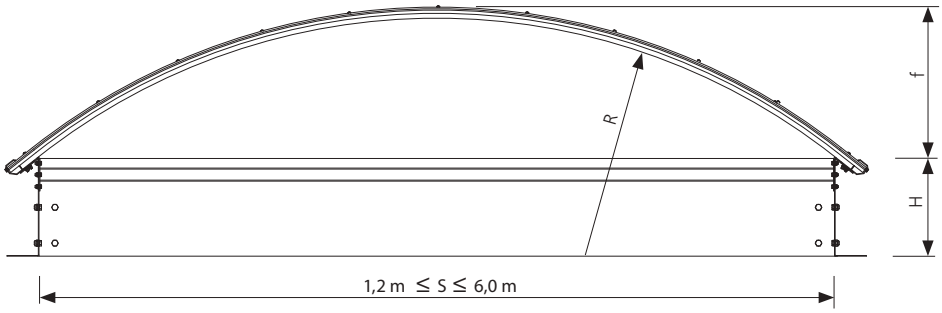


Fig. 81 *Cross section* **A-A** *of mcr PROLIGHT arch shaped continuous rooflight*

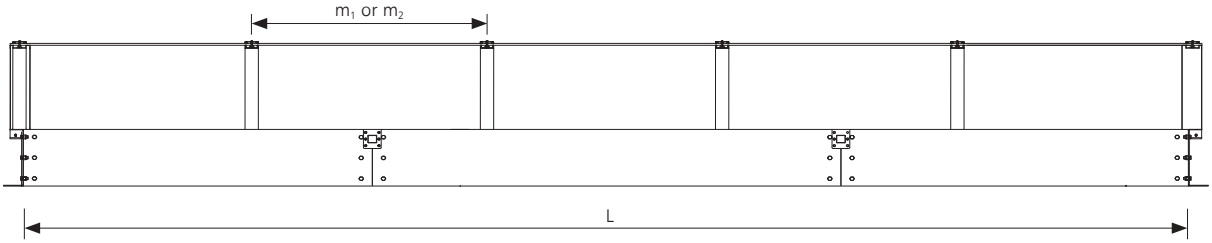


Fig. 82 *Cross section* **B-B** *of mcr PROLIGHT arch shaped continuous rooflight*

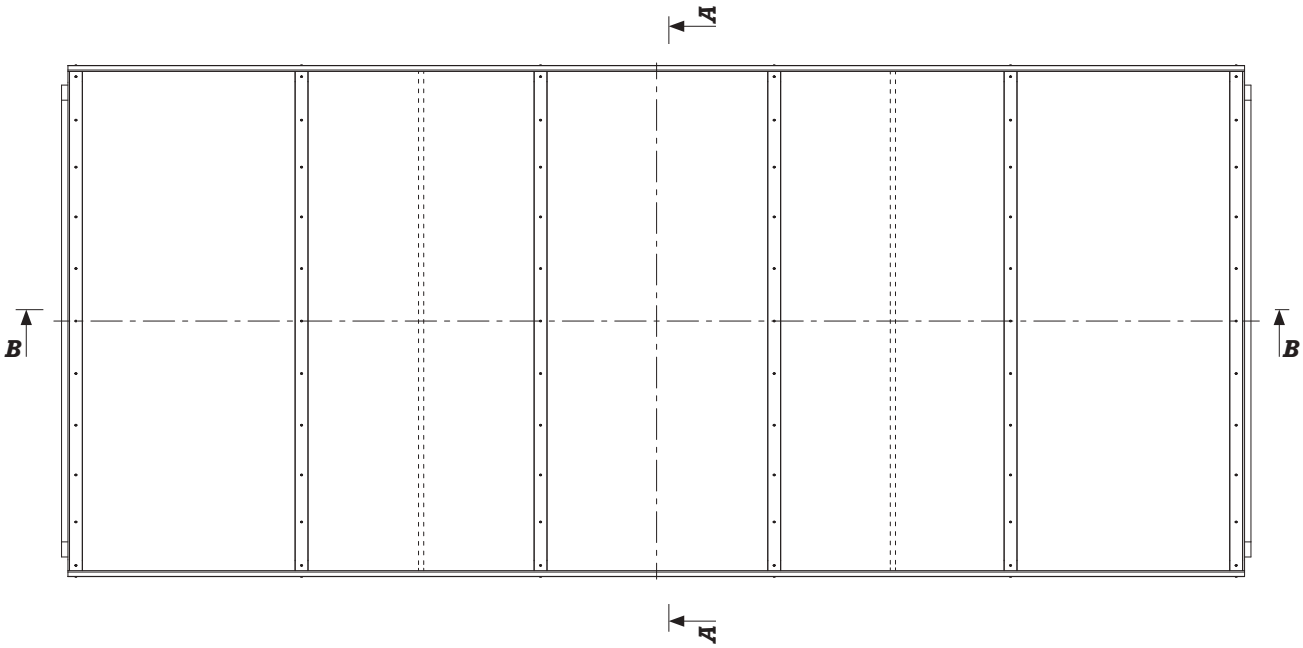


Fig. 83 *Top view of mcr PROLIGHT continuous rooflight*

S – continuous rooflight span [m]
L – rooflight length [m]
R – continuous rooflight radius [mm]
f – continuous rooflight rise [mm] – depends on glazing thickness, bending radius and rooflight span
H – continuous rooflight base height [mm]
m – modular spacing of bearing and pressing sections available in two sizes: m_1 = 710 mm or m_2 = 1060 mm

6.2 | Smoke vents integrated in arch shaped continuous rooflights

6.2.1 | Technical description of standard

- classification as per Certificate of constancy od performance No. 1396-CPR-0039 (CE marked),
- **continuous rooflights may be delivered with openable vents:**
  - smoke vents for exhausting smoke, heat and burning fumes,
  - ventilation vents for daily ventilation
- **smoke vent leaf opening angle:**
  - ≥ 140° for single-leaf vent,
  - ≥ 90° for double-leaf vent,
- **smoke exhaust control:** pneumatic, electric 24 V-,
- **ventilation control:** electric 230 V~.

6.2.2 | Arch shaped continuous rooflight design with integrated smoke vents design

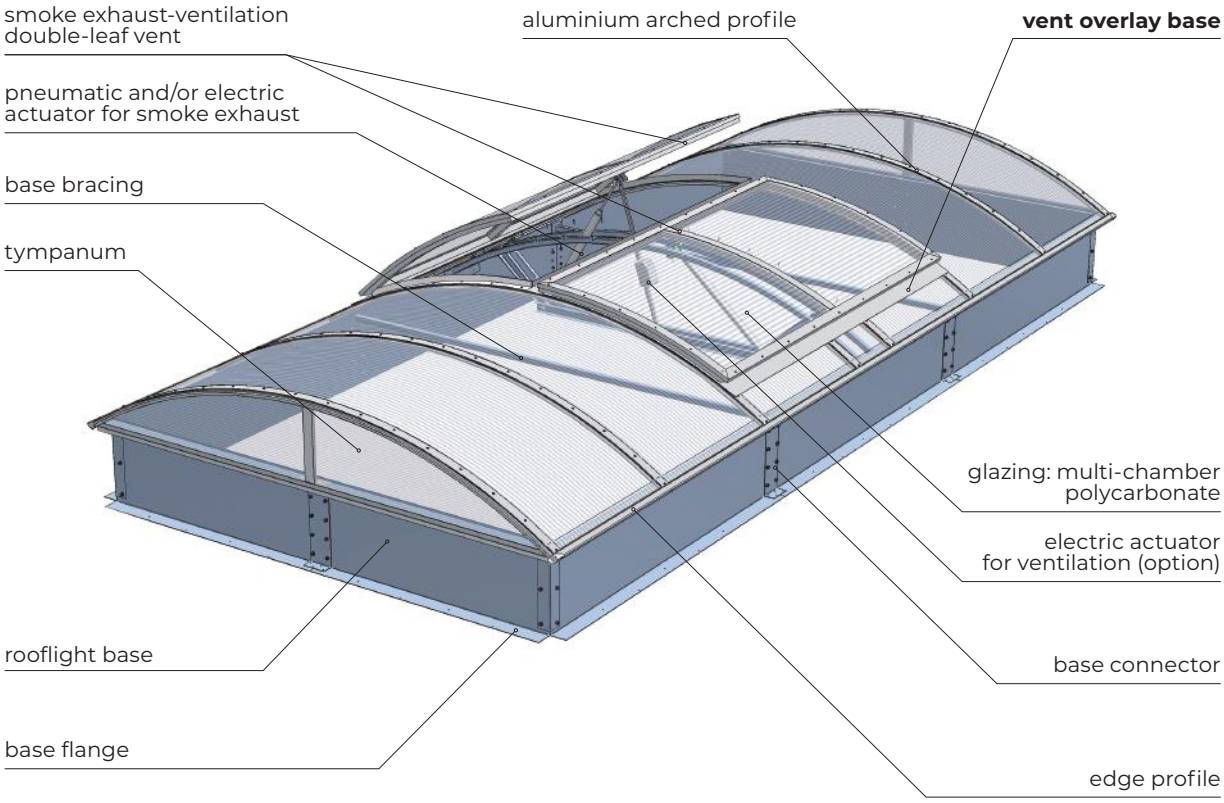


Fig. 84 *Design of mcr PROLIGHT arch shaped continuous rooflight with integrated smoke exhaust and daily ventilation double-leaf vent*

6.2.3 | Technical drawings of sample configurations of continuous rooflights with integrated smoke vents

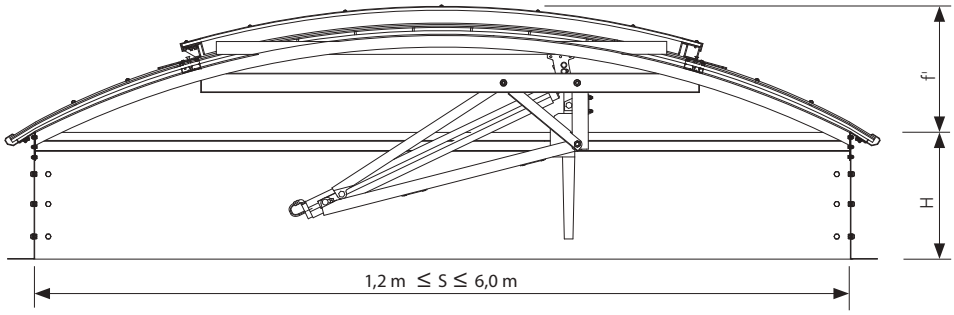


Fig. 85 *Cross section* **C-C** *of mcr PROLIGHT arch shaped continuous rooflight with integrated smoke exhaust and daily ventilation single-leaf vent*

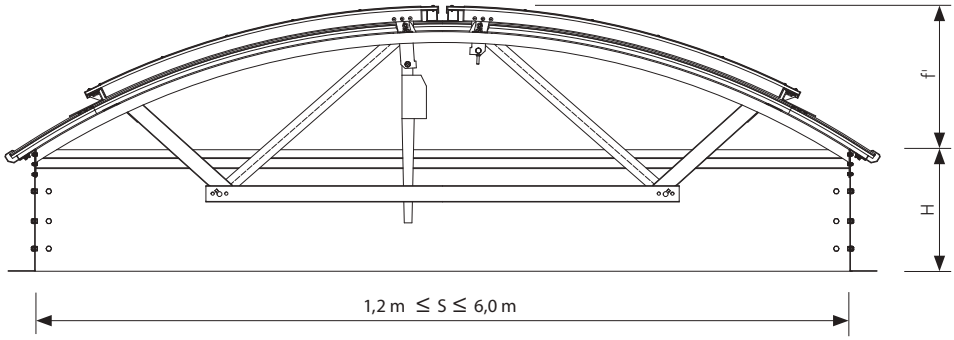


Fig. 86 *Cross section* **D-D** *of mcr PROLIGHT arch shaped continuous rooflight with integrated smoke exhaust and daily ventilation double-leaf vent*

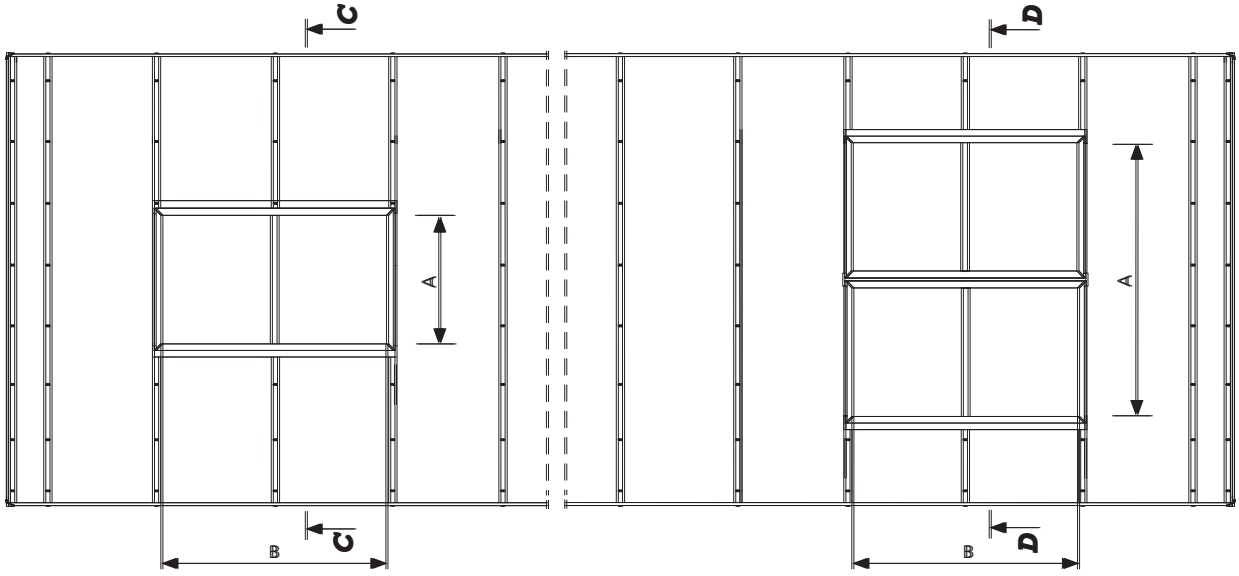


Fig. 87 *Top view of mcr PROLIGHT arch shaped continuous rooflight with integrated smoke exhaust and daily ventilation single and double-leaf vent*

S – continuous rooflight span [m]
f' – continuous rooflight rise [mm] – depends on glazing thickness, bending radius and rooflight span
H – continuous rooflight base height [mm]
A, B – nominal vent dimensions

6.2.4 | Available sizes table for smoke vents in arch shaped continuous rooflights as per CE 1396-CPR-0039

NOMINAL DIMENSIONS [A x B]	ACTIVE AREA A_a [m²]			
	SINGLE-LEAF VENTS		DOUBLE-LEAF VENTS	
[mm]	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS
1000 x 1000	0.44	0.72	0.42	0.66
1000 x 1100	0.47	0.8	0.46	0.73
1000 x 1200	0.51	0.87	0.5	0.81
1000 x 1300	0.54	0.95	0.54	0.88
1000 x 1400	0.57	1.02	0.58	0.95
1000 x 1500	0.6	1.09	0.62	1.03
1000 x 1600	0.63	1.17	0.67	1.1
1000 x 1700	0.66	1.24	0.71	1.17
1000 x 1800	0.68	1.32	0.76	1.25
1000 x 1900	0.71	1.39	0.8	1.32
1000 x 2000	0.73	1.46	0.85	1.39
1000 x 2100	0.75	1.54	0.9	1.47
1000 x 2200	0.77	1.61	0.95	1.54
1000 x 2300	0.79	1.68	1.0	1.61
1000 x 2400	0.81	1.76	1.05	1.69
1000 x 2500	0.83	1.83	1.1	1.76
1100 x 1000	0.48	0.8	0.45	0.73
1100 x 1100	0.52	0.88	0.49	0.82
1100 x 1200	0.56	0.96	0.53	0.9
1100 x 1300	0.6	1.04	0.57	0.98
1100 x 1400	0.63	1.12	0.62	1.06
1100 x 1500	0.67	1.2	0.66	1.14
1100 x 1600	0.7	1.29	0.71	1.22
1100 x 1700	0.73	1.37	0.76	1.3
1100 x 1800	0.76	1.45	0.8	1.38
1100 x 1900	0.79	1.53	0.85	1.47
1100 x 2000	0.82	1.61	0.9	1.55
1100 x 2100	0.84	1.69	0.95	1.63
1100 x 2200	0.87	1.78	1.0	1.71
1100 x 2300	0.89	1.86	1.05	1.79
1100 x 2400	0.91	1.94	1.11	1.87
1100 x 2500	0.93	2.02	1.16	1.95
1200 x 1000	0.52	0.87	0.48	0.81
1200 x 1100	0.57	0.96	0.52	0.9
1200 x 1200	0.61	1.05	0.56	0.99
1200 x 1300	0.65	1.14	0.61	1.08
1200 x 1400	0.69	1.23	0.66	1.16
1200 x 1500	0.73	1.32	0.7	1.25
1200 x 1600	0.77	1.41	0.75	1.34
1200 x 1700	0.8	1.49	0.8	1.43
1200 x 1800	0.84	1.58	0.85	1.52
1200 x 1900	0.87	1.67	0.9	1.61
1200 x 2000	0.9	1.76	0.95	1.7
1200 x 2100	0.93	1.85	1.0	1.79
1200 x 2200	0.96	1.94	1.06	1.88
1200 x 2300	0.99	2.03	1.11	1.97
1200 x 2400	1.01	2.12	1.17	2.06
1200 x 2500	1.04	2.21	1.22	2.15
1300 x 1000	0.56	0.95	0.51	0.88
1300 x 1100	0.61	1.04	0.55	0.98
1300 x 1200	0.66	1.14	0.6	1.08
1300 x 1300	0.7	1.24	0.65	1.17

6.2.4 | Available sizes table for smoke vents in arch shaped continuous rooflights as per CE 1396-CPR-0039

NOMINAL DIMENSIONS [A x B]	ACTIVE AREA A_a [m²]			
	SINGLE-LEAF VENTS		DOUBLE-LEAF VENTS	
[mm]	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS
1300 x 1400	0.75	1.33	0.69	1.27
1300 x 1500	0.79	1.43	0.74	1.37
1300 x 1600	0.83	1.53	0.79	1.46
1300 x 1700	0.87	1.62	0.84	1.56
1300 x 1800	0.91	1.72	0.9	1.66
1300 x 1900	0.95	1.82	0.95	1.76
1300 x 2000	0.98	1.91	1.0	1.85
1300 x 2100	1.02	2.01	1.06	1.95
1300 x 2200	1.05	2.11	1.11	2.05
1300 x 2300	1.08	2.2	1.17	2.15
1300 x 2400	1.11	2.3	1.23	2.24
1300 x 2500	1.14	2.4	1.29	2.34
1400 x 1000	0.6	1.02	0.54	0.95
1400 x 1100	0.66	1.12	0.58	1.06
1400 x 1200	0.71	1.23	0.63	1.16
1400 x 1300	0.76	1.33	0.68	1.27
1400 x 1400	0.81	1.44	0.73	1.38
1400 x 1500	0.85	1.54	0.78	1.48
1400 x 1600	0.9	1.64	0.84	1.59
1400 x 1700	0.94	1.75	0.89	1.69
1400 x 1800	0.99	1.85	0.94	1.8
1400 x 1900	1.03	1.96	1.0	1.9
1400 x 2000	1.07	2.06	1.05	2.01
1400 x 2100	1.11	2.17	1.11	2.11
1400 x 2200	1.14	2.27	1.17	2.22
1400 x 2300	1.18	2.37	1.23	2.32
1400 x 2400	1.21	2.48	1.29	2.43
1400 x 2500	1.25	2.58	1.35	2.53
1500 x 1000	0.65	1.09	0.57	1.03
1500 x 1100	0.7	1.2	0.62	1.14
1500 x 1200	0.76	1.32	0.67	1.25
1500 x 1300	0.81	1.43	0.72	1.37
1500 x 1400	0.86	1.54	0.77	1.48
1500 x 1500	0.92	1.65	0.82	1.59
1500 x 1600	0.97	1.76	0.88	1.71
1500 x 1700	1.01	1.88	0.93	1.82
1500 x 1800	1.06	1.99	0.99	1.93
1500 x 1900	1.11	2.1	1.05	2.05
1500 x 2000	1.15	2.21	1.11	2.16
1500 x 2100	1.19	2.32	1.16	2.27
1500 x 2200	1.23	2.43	1.22	2.39
1500 x 2300	1.27	2.55	1.29	2.5
1500 x 2400	1.31	2.66	1.35	2.61
1500 x 2500	1.35	2.77	1.41	2.73
1600 x 1000	0.69	1.17	0.6	1.1
1600 x 1100	0.75	1.29	0.65	1.22
1600 x 1200	0.81	1.41	0.7	1.34
1600 x 1300	0.86	1.53	0.75	1.46
1600 x 1400	0.92	1.64	0.81	1.59
1600 x 1500	0.98	1.76	0.86	1.71
1600 x 1600	1.03	1.88	0.92	1.83
1600 x 1700	1.08	2	0.98	1.95

6.2.4 | Available sizes table for smoke vents in arch shaped continuous rooflights as per CE 1396-CPR-0039

NOMINAL DIMENSIONS [A x B]	ACTIVE AREA A_a [m²]			
	SINGLE-LEAF VENTS		DOUBLE-LEAF VENTS	
[mm]	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS
1600 x 1800	1.13	2.12	1.04	2.07
1600 x 1900	1.18	2.24	1.1	2.19
1600 x 2000	1.23	2.36	1.16	2.31
1600 x 2100	1.28	2.48	1.22	2.44
1600 x 2200	1.32	2.6	1.28	2.56
1600 x 2300	1.37	2.72	1.34	2.68
1600 x 2400	1.41	2.84	1.41	2.8
1600 x 2500	1.45	2.96	1.47	2.92
1700 x 1000	0.73	1.24	0.62	1.17
1700 x 1100	0.79	1.37	0.68	1.3
1700 x 1200	0.86	1.49	0.73	1.43
1700 x 1300	0.92	1.62	0.79	1.56
1700 x 1400	0.98	1.75	0.85	1.69
1700 x 1500	1.04	1.88	0.9	1.82
1700 x 1600	1.1	2	0.96	1.95
1700 x 1700	1.15	2.13	1.02	2.08
1700 x 1800	1.21	2.26	1.08	2.21
1700 x 1900	1.26	2.38	1.15	2.34
1700 x 2000	1.31	2.51	1.21	2.47
1700 x 2100	1.36	2.64	1.27	2.6
1700 x 2200	1.41	2.76	1.34	2.73
1700 x 2300	1.46	2.89	1.4	2.86
1700 x 2400	1.51	3.02	1.47	2.99
1700 x 2500	1.55	3.15	1.53	3.12
1800 x 1000	0.77	1.32	0.65	1.25
1800 x 1100	0.84	1.45	0.71	1.38
1800 x 1200	0.9	1.58	0.77	1.52
1800 x 1300	0.97	1.72	0.83	1.66
1800 x 1400	1.03	1.85	0.89	1.8
1800 x 1500	1.1	1.99	0.95	1.93
1800 x 1600	1.16	2.12	1.01	2.07
1800 x 1700	1.22	2.26	1.07	2.21
1800 x 1800	1.28	2.39	1.13	2.35
1800 x 1900	1.34	2.53	1.19	2.48
1800 x 2000	1.39	2.66	1.26	2.62
1800 x 2100	1.45	2.79	1.32	2.76
1800 x 2200	1.5	2.93	1.39	2.9
1800 x 2300	1.55	3.06	1.46	3.03
1800 x 2400	1.6	3.2	1.53	3.17
1800 x 2500	1.65	3.33	1.6	3.31
1900 x 1000	0.81	1.39	0.68	1.32
1900 x 1100	0.88	1.53	0.74	1.47
1900 x 1200	0.95	1.67	0.8	1.61
1900 x 1300	1.02	1.82	0.86	1.76
1900 x 1400	1.09	1.96	0.92	1.9
1900 x 1500	1.16	2.1	0.99	2.05
1900 x 1600	1.22	2.24	1.05	2.19
1900 x 1700	1.29	2.38	1.11	2.34
1900 x 1800	1.35	2.53	1.18	2.48
1900 x 1900	1.41	2.67	1.24	2.63
1900 x 2000	1.47	2.81	1.31	2.78
1900 x 2100	1.53	2.95	1.38	2.92

6.2.4 | Available sizes table for smoke vents in arch shaped continuous rooflights as per CE 1396-CPR-0039

NOMINAL DIMENSIONS [A x B]	ACTIVE AREA A_a [m²]			
	SINGLE-LEAF VENTS		DOUBLE-LEAF VENTS	
[mm]	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS
1900 x 2200	1.59	3.09	1.45	3.07
1900 x 2300	1.65	3.24	1.52	3.21
1900 x 2400	1.7	3.38	1.59	3.36
1900 x 2500	1.75	3.52	1.66	3.5
2000 x 1000	0.85	1.46	0.71	1.39
2000 x 1100	0.92	1.61	0.77	1.55
2000 x 1200	1	1.76	0.84	1.7
2000 x 1300	1.07	1.91	0.9	1.85
2000 x 1400	1.15	2.06	0.96	2.01
2000 x 1500	1.22	2.21	1.03	2.16
2000 x 1600	1.29	2.36	1.09	2.31
2000 x 1700	1.36	2.51	1.16	2.47
2000 x 1800	1.42	2.66	1.22	2.62
2000 x 1900	1.49	2.81	1.29	2.78
2000 x 2000	1.55	2.96	1.36	2.93
2000 x 2100	1.62	3.11	1.43	3.08
2000 x 2200	1.68	3.26	1.5	3.24
2000 x 2300	1.74	3.41	1.57	3.39
2000 x 2400	1.8	3.56	1.65	3.54
2000 x 2500	1.85	3.71	1.72	3.7
2100 x 1000	-	-	0.74	1.47
2100 x 1100	-	-	0.81	1.63
2100 x 1200	-	-	0.87	1.79
2100 x 1300	-	-	0.93	1.95
2100 x 1400	-	-	1.0	2.11
2100 x 1500	-	-	1.07	2.27
2100 x 1600	-	-	1.13	2.44
2100 x 1700	-	-	1.2	2.6
2100 x 1800	-	-	1.27	2.76
2100 x 1900	-	-	1.34	2.92
2100 x 2000	-	-	1.41	3.08
2100 x 2100	-	-	1.49	3.24
2100 x 2200	-	-	1.56	3.41
2100 x 2300	-	-	1.63	3.57
2100 x 2400	-	-	1.71	3.73
2100 x 2500	-	-	1.78	3.89
2200 x 1000	0.93	1.61	0.77	1.54
2200 x 1100	-	-	0.84	1.71
2200 x 1200	-	-	0.9	1.88
2200 x 1300	-	-	0.97	2.05
2200 x 1400	-	-	1.04	2.22
2200 x 1500	-	-	1.11	2.39
2200 x 1600	-	-	1.18	2.56
2200 x 1700	-	-	1.25	2.73
2200 x 1800	-	-	1.32	2.9
2200 x 1900	-	-	1.39	3.07
2200 x 2000	-	-	1.46	3.24
2200 x 2100	-	-	1.54	3.41
2200 x 2200	-	-	1.61	3.58
2200 x 2300	-	-	1.69	3.75
2200 x 2400	-	-	1.77	3.91
2200 x 2500	-	-	1.84	4.08

6.2.4 | Available sizes table for smoke vents in arch shaped continuous rooflights as per CE 1396-CPR-0039

NOMINAL DIMENSIONS [A x B]	ACTIVE AREA A_a [m²]			
	SINGLE-LEAF VENTS		DOUBLE-LEAF VENTS	
[mm]	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS
2300 x 1000	-	-	0.8	1.61
2300 x 1100	-	-	0.87	1.79
2300 x 1200	-	-	0.94	1.97
2300 x 1300	-	-	1.01	2.15
2300 x 1400	-	-	1.08	2.32
2300 x 1500	-	-	1.15	2.5
2300 x 1600	-	-	1.22	2.68
2300 x 1700	-	-	1.29	2.86
2300 x 1800	-	-	1.37	3.03
2300 x 1900	-	-	1.44	3.21
2300 x 2000	-	-	1.52	3.39
2300 x 2100	-	-	1.59	3.57
2300 x 2200	-	-	1.67	3.75
2300 x 2300	-	-	1.75	3.92
2300 x 2400	-	-	1.83	4.1
2300 x 2500	-	-	1.91	4.28
2400 x 1000	-	-	0.83	1.69
2400 x 1100	-	-	0.9	1.87
2400 x 1200	-	-	0.97	2.06
2400 x 1300	-	-	1.04	2.24
2400 x 1400	-	-	1.11	2.43
2400 x 1500	-	-	1.19	2.61
2400 x 1600	-	-	1.26	2.8
2400 x 1700	-	-	1.34	2.99
2400 x 1800	-	-	1.41	3.17
2400 x 1900	-	-	1.49	3.36
2400 x 2000	-	-	1.57	3.54
2400 x 2100	-	-	1.65	3.73
2400 x 2200	-	-	1.72	3.91
2400 x 2300	-	-	1.81	4.1
2400 x 2400	-	-	1.89	4.29
2400 x 2500	-	-	1.97	4.47
2500 x 1000	-	-	0,86	1,76
2500 x 1100	-	-	0,93	1,95
2500 x 1200	-	-	1,0	2,15
2500 x 1300	-	-	1,08	2,34
2500 x 1400	-	-	1,15	2,53
2500 x 1500	-	-	1,23	2,73
2500 x 1600	-	-	1,3	2,92
2500 x 1700	-	-	1,38	3,12
2500 x 1800	-	-	1,46	3,31
2500 x 1900	-	-	1,54	3,5
2500 x 2000	-	-	1,62	3,7
2500 x 2100	-	-	1,7	3,89
2500 x 2200	-	-	1,78	4,08
2500 x 2300	-	-	1,86	4,28
2500 x 2400	-	-	1,95	4,47
2500 x 2500	-	-	2,03	4,67

6.2.5 | Smoke vents control in arch shaped continuous rooflights as per CE 1396-CPR-0039

For correct operation, smoke vents as well as smoke exhaust & ventilation vents require devices controlling their opening and closing. A set of such devices constitutes a system for smoke exhaust control or smoke exhaust and ventilation control.
Depending on the type of devices used, it may be designed as a:

- **pneumatic** smoke exhaust control system,
- **24 V-/48 V- electric** smoke exhaust control system with ventilation function, 48 V- or Actulux control (more on page 21),
- **pneumatic and electric** control system; the pneumatic part is responsible for smoke exhaust, while the 230 V~ electric part – for ventilation.

Smoke exhaust control systems are activated as follows:

1. **automatic** – through a thermo switch installed in the vent (pneumatic system), or by optical smoke sensors (electric system),
2. **manual** – by a release of CO_2 cartridges in alarm box (pneumatic system), or by operation of RPO-1 emergency pushbutton (electric system),
3. **FAS signal** – by external impulse from fire alarm system (FAS) sent to an electromagnet installed in the alarm box (pneumatic system) or directly to smoke exhaust control unit (electric system).

6.2.6 | Technical data

SINGLE-LEAF VENTS IN ARCH SHAPED CONTINUOUS ROOFLIGHTS					
VENT DIMENSIONS (*)	**PNEUMATIC CONTROL (***)**			**ELECTRIC CONTROL (***)**	
	PNEUMATIC ACTUATOR		MIN. CAPACITY OF CO_2 CARTRIDGE SL 950	POWER CONSUMPTION [A] BY ELECTRIC ACTUATOR FOR CLASS	
	STROKE	DIAMETER			
[mm]	[mm]	[mm]	[g]	**SL 250**	**SL 550**
1000 x 1000	550	50	40	1.6	2.0
1000 x 1200	550	50	40	1.6	2.6
1000 x 1400	550	50	40	1.6	2.6
1000 x 1600	550	50	40	2.0	4.0
1000 x 1800	550	50	40	2.0	4.0
1000 x 2000	550	50	40	2.0	4.0
1000 x 2200	550	50	40	2.6	4.0
1000 x 2500	550	50	40	2.6	6.0
1200 x 1000	550	50	40	2.0	4.0
1200 x 1200	550	50	40	2.0	4.0
1200 x 1600	550	50	40	2.6	6.0
1200 x 1800	550	50	40	2.6	6.0
1200 x 2100	550	50	55	4.0	6.0
1200 x 2500	550	50	55	4.0	6.0
1400 x 1000	750	50	40	2.6	4.0
1500 x 1500	750	50	55	4.0	6.0
1500 x 1800	750	50	55	4.0	8.0
1500 x 2100	750	50	80	6.0	8.0
1500 x 2500	750	50	80	6.0	-
1600 x 1000	750	50	40	2.6	6.0
1800 x 1000	1050	63	80	6.0	8.0
1800 x 1800	1050	63	120	6.0	-
1800 x 2100	1050	63	120	8.0	-
1800 x 2500	1050	63	120	8.0	-
2000 x 1000	1050	63	80	6.0	8.0
2000 x 2000	1050	63	120	8.0	-
2000 x 2100	1050	63	120	8.0	-
2000 x 2500	1050	63	120	-	-
2200 x 1000	1300	63	120(**)	-	-

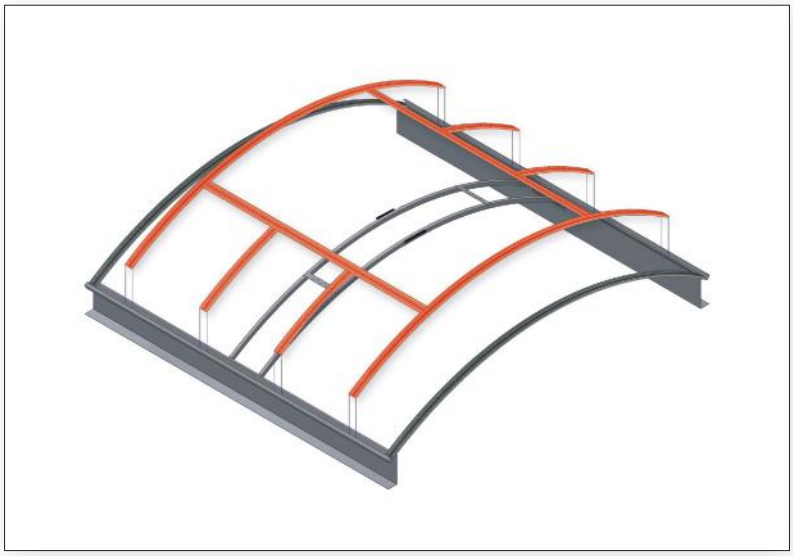
(*) For different smoke vent dimensions than specified in the table control system should be selected for larger size of the vent.
(**) SL 500
(***) For selected sizes there are different SL options available:
– For electric control: SL 750, SL 950, SL 1300 and SL 1600
– For pneumatic control: SL 250, SL 550, SL 750, SL 1300, SL 1600 and SL 2000

6.2.6 | Technical data

SINGLE-LEAF VENTS IN ARCH SHAPED CONTINUOUS ROOFLIGHTS					
VENT DIMENSIONS (*)	**PNEUMATIC CONTROL (***)**			**ELECTRIC CONTROL (***)**	
	PNEUMATIC ACTUATOR		MIN. CAPACITY OF CO_2 CARTRIDGE SL 950	POWER CONSUMPTION [A] BY ELECTRIC ACTUATOR FOR CLASS	
	STROKE	DIAMETER			
[mm]	[mm]	[mm]	[g]	**SL 250**	**SL 550**
1000 x 2500	400	40	40	2 x 0.8	2 x 1.3
1200 x 1200	400	40	24	2 x 0.8	2 x 1.0
1200 x 1500	400	40	24	2 x 0.8	2 x 1.0
1200 x 2100	400	40	24	2 x 0.8	2 x 1.3
1500 x 1500	400	40	24	2 x 1.6	2 x 2.0
1500 x 2100	400	40	40	2 x 1.6	2 x 2.6
1500 x 2500	400	40	40	2 x 1.6	2 x 2.6
1800 x 2100	550	40	55	2 x 1.6	2 x 4.0
2000 x 2100	600	40	55	2 x 2.0	2 x 4.0
2000 x 2500	600	40	80	2 x 2.0	2 x 4.0
2200 x 2500	700	40	80	2 x 4.0	2 x 6.0
2400 x 2500	750	40	120	2 x 4.0	2 x 6.0
2500 x 2500	850	40	120	2 x 4.0	2 x 8.0

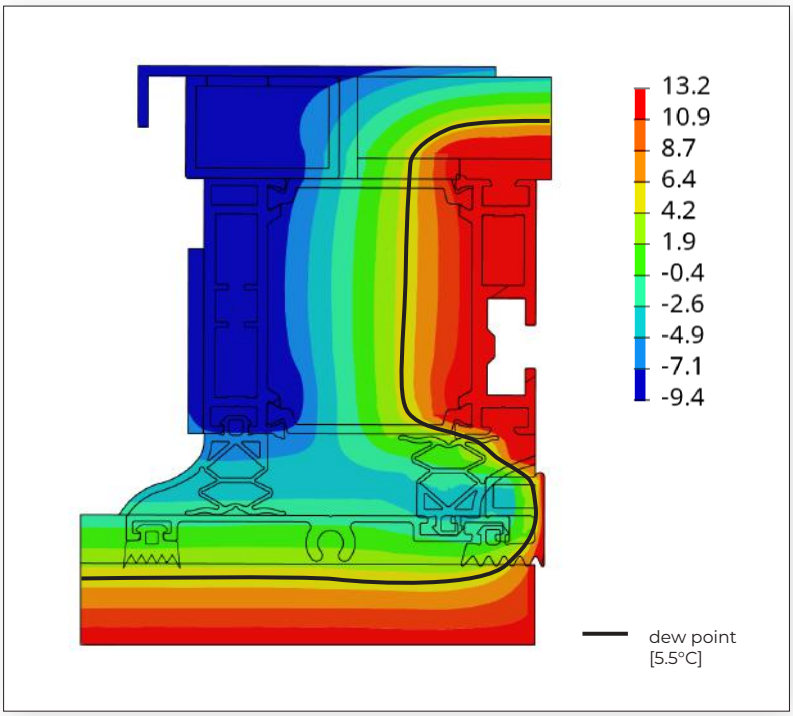
(*) For different smoke vent dimensions than specified in the table control system should be selected for larger size of the vent.
(**) For selected sizes there are different SL options available:
– For electric control: SL 750, SL 950, SL 1300, SL 1600 and SL 2000
– For pneumatic control: SL 550, SL 1300, SL 1600 and SL 2000

» Advantages of mcr PROLIGHT TB vents



Simplified design

The mcr PROLIGHT TB smoke vents feature a simplified design that **eliminates the need for an overlay base for the vent frame.** The use of an advanced, multi-stage sealing system enhances tightness and simplifies installation. With a reduced number of components and lower weight, the system is more cost-effective in transport and installation while maintaining high thermal insulation performance.



Isothermal Distribution

A numerical analysis conducted in compliance with current standards presents a detailed isothermal distribution within the PROLIGHT TB smoke vent. The isothermal graph illustrates the optimized thermal efficiency of the structure.

The effective thermal insulation of the mcr PROLIGHT TB vent results from the precise design of thermal insulation zones, improving the energy performance of the entire structure and ensuring user thermal comfort. **By eliminating thermal bridges,** this solution meets the highest energy efficiency standards and contributes to reducing the operational costs of buildings in which it is installed.

Load-Bearing Frame

A specially designed leaf frame profile **allows for quick assembly/disassembly** of the traverse.

Improved Thermal Performance

The wing profile features a thermal break and multiple sealing levels. **This prevents thermal bridges** and potential moisture condensation.

New Profiles

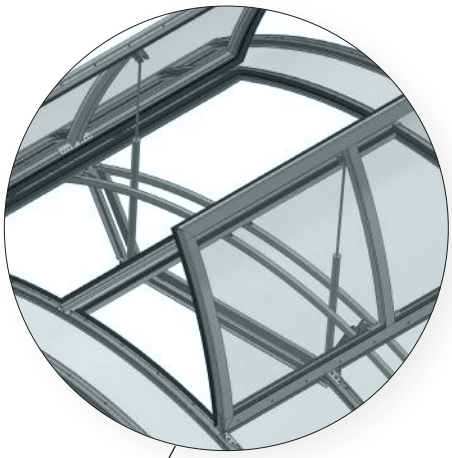
The leaf frame structure is connected using specially designed corners (without welding).

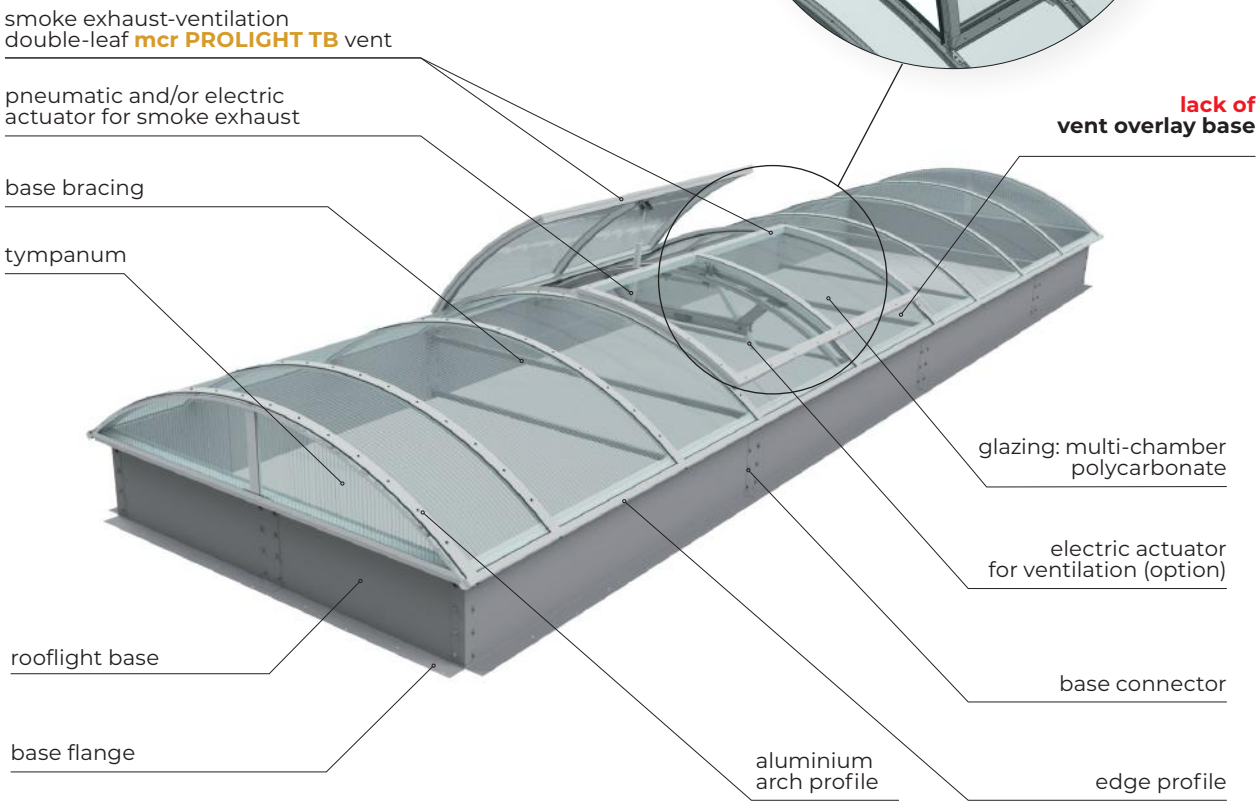
6.3 | Smoke vents mcr PROLIGHT TB integrated in arched shaped continuous rooflights

6.3.1 | Technical description of standard

- Parameters compliant with the Classification Report EN 12101-2 FIRES-JR-005-20-NURE edition 2 and confirmed Certificate of constancy od performance No. 1396-CPR-0189,
- **smoke exhaust vents mcr PROLIGHT TB:**
  - no overlay base, ensuring simpler and faster installation,
  - no thermal bridges,
- high sealing performance,
- modified leaf construction (warm leaf frame profile with thermal insulation inserts),
- **smoke vent leaf opening angle:**
  - single-leaf vent ≥ 140°,
  - double-leaf vent 90° – 100°,
- **improved water drainage with a new gutter system:**
  - additional detachment for increased slope,
  - leaf drip edges directing water to the central gutter,
- **smoke ventilation control:** pneumatic, electric 24 V-,
- **ventilation control:** electric 230 V~.

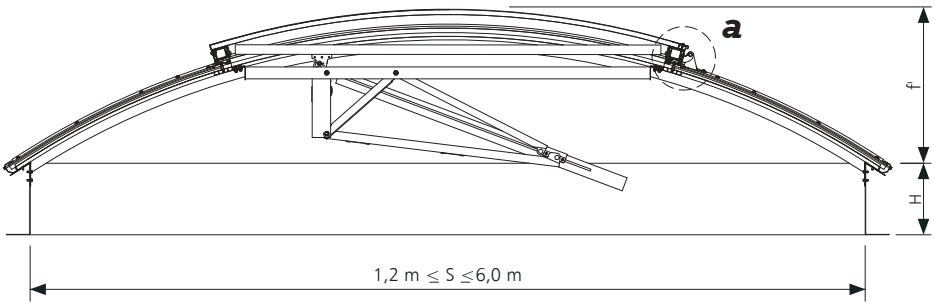
6.3.2 | Arched shaped continuous rooflight with mcr PROLIGHT TB smoke vents design





Rys. 88 *Design of mcr PROLIGHT arch shaped continuous rooflight with integrated mcr PROLIGHT TB smoke exhaust and daily ventilation double-leaf vent*

6.3.3 | Technical drawings of sample configurations of continuous rooflights with integrated smoke vents mcr PROLIGHT TB



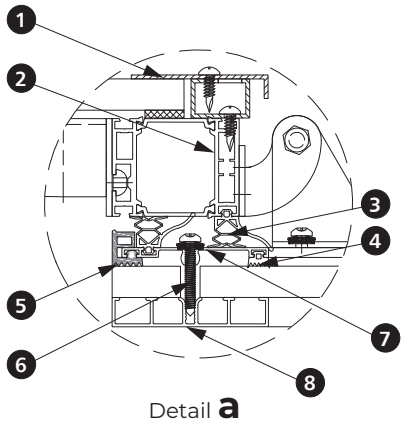


Fig. 89 *Cross section* **E-E** *of arch shaped continuous rooflight with integrated* ***mcr PROLIGHT TB*** *smoke exhaust and daily ventilation single-leaf vent*

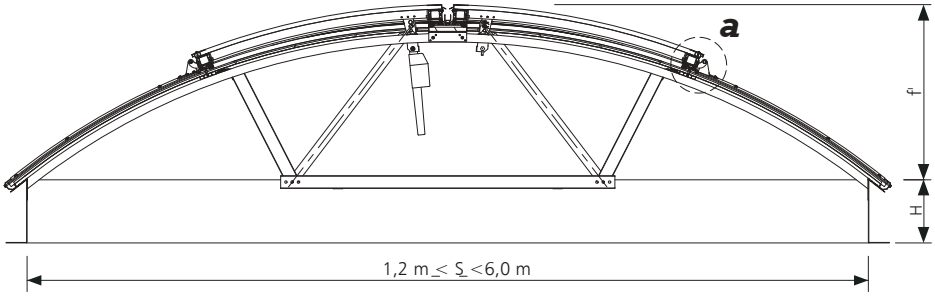


Fig. 90 *Cross section* **F-F** *of arch shaped continuous rooflight with integrated* ***mcr PROLIGHT TB*** *smoke exhaust and daily ventilation double-leaf vent*

1. pressing frame	4. gasket SIM-02	7. pressure profile D75
2. leaf profile TB	5. inner gasket	8. load-bearing profile N80x15
3. outer leaf gasket	6. screw with EPDM washer DIN 7981	

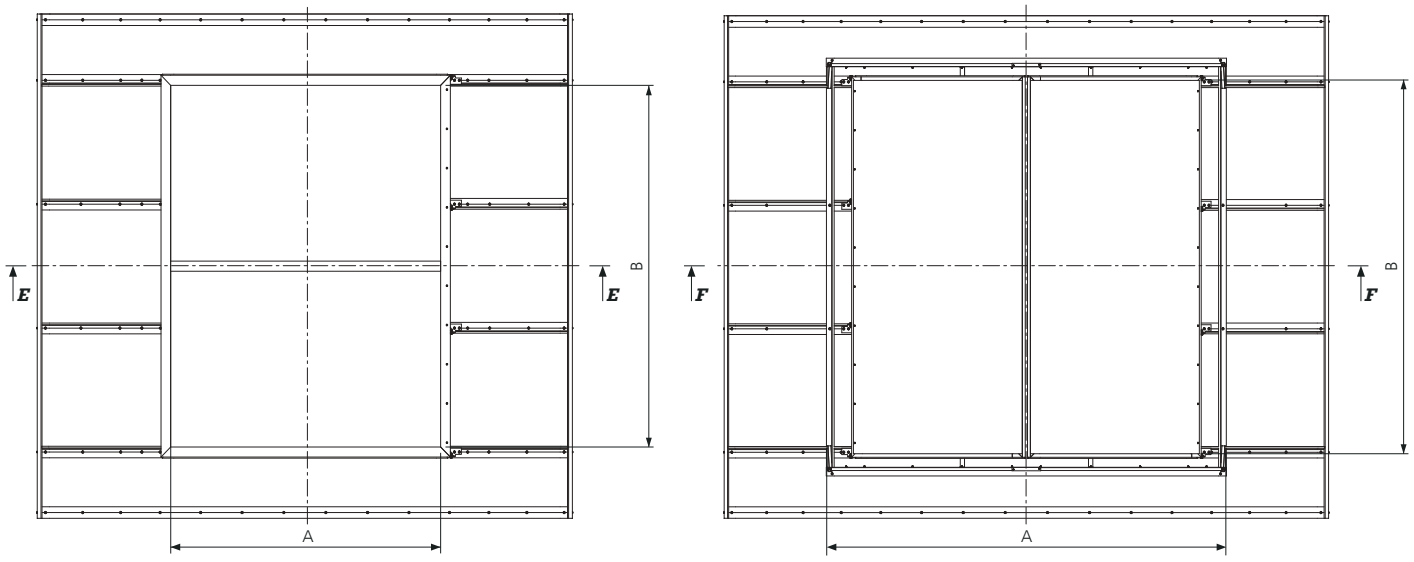


Fig. 91 *Top view of arch shaped continuous rooflight with integrated* ***mcr PROLIGHT TB*** *smoke exhaust and daily ventilation single and double-leaf vent*

S – continuous rooflight span [m]
f' – continuous rooflight rise with vent / vents [mm] – depends on glazing thickness, bending radius and rooflight span
H – continuous rooflight base height [mm]
A, B – nominal vent dimensions [mm]

6.3.4 | Available sizes table for smoke vents in arch shaped continuous rooflights as per CE 1396-CPR-0189

NOMINAL DIMENSIONS [A x B]	ACTIVE AREA A_a [m²]			
	SINGLE-LEAF VENTS		DOUBLE-LEAF VENTS	
[mm]	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS
1000 x 1000	0.44	0.72	0.42	0.66
1000 x 1100	0.47	0.8	0.46	0.73
1000 x 1200	0.51	0.87	0.5	0.81
1000 x 1300	0.54	0.95	0.54	0.88
1000 x 1400	0.57	1.02	0.58	0.95
1000 x 1500	0.6	1.09	0.62	1.03
1000 x 1600	0.63	1.17	0.67	1.1
1000 x 1700	0.66	1.24	0.71	1.17
1000 x 1800	0.68	1.32	0.76	1.25
1000 x 1900	0.71	1.39	0.8	1.32
1000 x 2000	0.73	1.46	0.85	1.39
1000 x 2100	0.75	1.54	0.9	1.47
1000 x 2200	0.77	1.61	0.95	1.54
1000 x 2300	0.79	1.68	1.0	1.61
1000 x 2400	0.81	1.76	1.05	1.69
1000 x 2500	0.83	1.83	1.1	1.76
1100 x 1000	0.48	0.8	0.45	0.73
1100 x 1100	0.52	0.88	0.49	0.82
1100 x 1200	0.56	0.96	0.53	0.9
1100 x 1300	0.6	1.04	0.57	0.98
1100 x 1400	0.63	1.12	0.62	1.06
1100 x 1500	0.67	1.2	0.66	1.14
1100 x 1600	0.7	1.29	0.71	1.22
1100 x 1700	0.73	1.37	0.76	1.3
1100 x 1800	0.76	1.45	0.8	1.38
1100 x 1900	0.79	1.53	0.85	1.47
1100 x 2000	0.82	1.61	0.9	1.55
1100 x 2100	0.84	1.69	0.95	1.63
1100 x 2200	0.87	1.78	1.0	1.71
1100 x 2300	0.89	1.86	1.05	1.79
1100 x 2400	0.91	1.94	1.11	1.87
1100 x 2500	0.93	2.02	1.16	1.95
1200 x 1000	0.52	0.87	0.48	0.81
1200 x 1100	0.57	0.96	0.52	0.9
1200 x 1200	0.61	1.05	0.56	0.99
1200 x 1300	0.65	1.14	0.61	1.08
1200 x 1400	0.69	1.23	0.66	1.16
1200 x 1500	0.73	1.32	0.7	1.25
1200 x 1600	0.77	1.41	0.75	1.34
1200 x 1700	0.8	1.49	0.8	1.43
1200 x 1800	0.84	1.58	0.85	1.52
1200 x 1900	0.87	1.67	0.9	1.61
1200 x 2000	0.9	1.76	0.95	1.7
1200 x 2100	0.93	1.85	1.0	1.79
1200 x 2200	0.96	1.94	1.06	1.88
1200 x 2300	0.99	2.03	1.11	1.97
1200 x 2400	1.01	2.12	1.17	2.06
1200 x 2500	1.04	2.21	1.22	2.15
1300 x 1000	0.56	0.95	0.51	0.88
1300 x 1100	0.61	1.04	0.55	0.98
1300 x 1200	0.66	1.14	0.6	1.08
1300 x 1300	0.7	1.24	0.65	1.17

6.3.4 | Available sizes table for smoke vents in arch shaped continuous rooflights as per CE 1396-CPR-0189

NOMINAL DIMENSIONS [A x B]	ACTIVE AREA A_a [m²]			
	SINGLE-LEAF VENTS		DOUBLE-LEAF VENTS	
[mm]	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS
1300 x 1400	0.75	1.33	0.69	1.27
1300 x 1500	0.79	1.43	0.74	1.37
1300 x 1600	0.83	1.53	0.79	1.46
1300 x 1700	0.87	1.62	0.84	1.56
1300 x 1800	0.91	1.72	0.9	1.66
1300 x 1900	0.95	1.82	0.95	1.76
1300 x 2000	0.98	1.91	1.0	1.85
1300 x 2100	1.02	2.01	1.06	1.95
1300 x 2200	1.05	2.11	1.11	2.05
1300 x 2300	1.08	2.2	1.17	2.15
1300 x 2400	1.11	2.3	1.23	2.24
1300 x 2500	1.14	2.4	1.29	2.34
1400 x 1000	0.6	1.02	0.54	0.95
1400 x 1100	0.66	1.12	0.58	1.06
1400 x 1200	0.71	1.23	0.63	1.16
1400 x 1300	0.76	1.33	0.68	1.27
1400 x 1400	0.81	1.44	0.73	1.38
1400 x 1500	0.85	1.54	0.78	1.48
1400 x 1600	0.9	1.64	0.84	1.59
1400 x 1700	0.94	1.75	0.89	1.69
1400 x 1800	0.99	1.85	0.94	1.8
1400 x 1900	1.03	1.96	1.0	1.9
1400 x 2000	1.07	2.06	1.05	2.01
1400 x 2100	1.11	2.17	1.11	2.11
1400 x 2200	1.14	2.27	1.17	2.22
1400 x 2300	1.18	2.37	1.23	2.32
1400 x 2400	1.21	2.48	1.29	2.43
1400 x 2500	1.25	2.58	1.35	2.53
1500 x 1000	0.65	1.09	0.57	1.03
1500 x 1100	0.7	1.2	0.62	1.14
1500 x 1200	0.76	1.32	0.67	1.25
1500 x 1300	0.81	1.43	0.72	1.37
1500 x 1400	0.86	1.54	0.77	1.48
1500 x 1500	0.92	1.65	0.82	1.59
1500 x 1600	0.97	1.76	0.88	1.71
1500 x 1700	1.01	1.88	0.93	1.82
1500 x 1800	1.06	1.99	0.99	1.93
1500 x 1900	1.11	2.1	1.05	2.05
1500 x 2000	1.15	2.21	1.11	2.16
1500 x 2100	1.19	2.32	1.16	2.27
1500 x 2200	1.23	2.43	1.22	2.39
1500 x 2300	1.27	2.55	1.29	2.5
1500 x 2400	1.31	2.66	1.35	2.61
1500 x 2500	1.35	2.77	1.41	2.73
1600 x 1000	0.69	1.17	0.6	1.1
1600 x 1100	0.75	1.29	0.65	1.22
1600 x 1200	0.81	1.41	0.7	1.34
1600 x 1300	0.86	1.53	0.75	1.46
1600 x 1400	0.92	1.64	0.81	1.59
1600 x 1500	0.98	1.76	0.86	1.71
1600 x 1600	1.03	1.88	0.92	1.83
1600 x 1700	1.08	2	0.98	1.95

6.3.4 | Available sizes table for smoke vents in arch shaped continuous rooflights as per CE 1396-CPR-0189

NOMINAL DIMENSIONS [A x B]	ACTIVE AREA A_a [m²]			
	SINGLE-LEAF VENTS		DOUBLE-LEAF VENTS	
[mm]	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS
1600 x 1800	1.13	2.12	1.04	2.07
1600 x 1900	1.18	2.24	1.1	2.19
1600 x 2000	1.23	2.36	1.16	2.31
1600 x 2100	1.28	2.48	1.22	2.44
1600 x 2200	1.32	2.6	1.28	2.56
1600 x 2300	1.37	2.72	1.34	2.68
1600 x 2400	1.41	2.84	1.41	2.8
1600 x 2500	1.45	2.96	1.47	2.92
1700 x 1000	0.73	1.24	0.62	1.17
1700 x 1100	0.79	1.37	0.68	1.3
1700 x 1200	0.86	1.49	0.73	1.43
1700 x 1300	0.92	1.62	0.79	1.56
1700 x 1400	0.98	1.75	0.85	1.69
1700 x 1500	1.04	1.88	0.9	1.82
1700 x 1600	1.1	2	0.96	1.95
1700 x 1700	1.15	2.13	1.02	2.08
1700 x 1800	1.21	2.26	1.08	2.21
1700 x 1900	1.26	2.38	1.15	2.34
1700 x 2000	1.31	2.51	1.21	2.47
1700 x 2100	1.36	2.64	1.27	2.6
1700 x 2200	1.41	2.76	1.34	2.73
1700 x 2300	1.46	2.89	1.4	2.86
1700 x 2400	1.51	3.02	1.47	2.99
1700 x 2500	1.55	3.15	1.53	3.12
1800 x 1000	0.77	1.32	0.65	1.25
1800 x 1100	0.84	1.45	0.71	1.38
1800 x 1200	0.9	1.58	0.77	1.52
1800 x 1300	0.97	1.72	0.83	1.66
1800 x 1400	1.03	1.85	0.89	1.8
1800 x 1500	1.1	1.99	0.95	1.93
1800 x 1600	1.16	2.12	1.01	2.07
1800 x 1700	1.22	2.26	1.07	2.21
1800 x 1800	1.28	2.39	1.13	2.35
1800 x 1900	1.34	2.53	1.19	2.48
1800 x 2000	1.39	2.66	1.26	2.62
1800 x 2100	1.45	2.79	1.32	2.76
1800 x 2200	1.5	2.93	1.39	2.9
1800 x 2300	1.55	3.06	1.46	3.03
1800 x 2400	1.6	3.2	1.53	3.17
1800 x 2500	1.65	3.33	1.6	3.31
1900 x 1000	0.81	1.39	0.68	1.32
1900 x 1100	0.88	1.53	0.74	1.47
1900 x 1200	0.95	1.67	0.8	1.61
1900 x 1300	1.02	1.82	0.86	1.76
1900 x 1400	1.09	1.96	0.92	1.9
1900 x 1500	1.16	2.1	0.99	2.05
1900 x 1600	1.22	2.24	1.05	2.19
1900 x 1700	1.29	2.38	1.11	2.34
1900 x 1800	1.35	2.53	1.18	2.48
1900 x 1900	1.41	2.67	1.24	2.63
1900 x 2000	1.47	2.81	1.31	2.78
1900 x 2100	1.53	2.95	1.38	2.92

6.3.4 | Available sizes table for smoke vents in arch shaped continuous rooflights as per CE 1396-CPR-0189

NOMINAL DIMENSIONS [A x B]	ACTIVE AREA A_a [m²]			
	SINGLE-LEAF VENTS		DOUBLE-LEAF VENTS	
[mm]	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS
1900 x 2200	1.59	3.09	1.45	3.07
1900 x 2300	1.65	3.24	1.52	3.21
1900 x 2400	1.7	3.38	1.59	3.36
1900 x 2500	1.75	3.52	1.66	3.5
2000 x 1000	0.85	1.46	0.71	1.39
2000 x 1100	0.92	1.61	0.77	1.55
2000 x 1200	1	1.76	0.84	1.7
2000 x 1300	1.07	1.91	0.9	1.85
2000 x 1400	1.15	2.06	0.96	2.01
2000 x 1500	1.22	2.21	1.03	2.16
2000 x 1600	1.29	2.36	1.09	2.31
2000 x 1700	1.36	2.51	1.16	2.47
2000 x 1800	1.42	2.66	1.22	2.62
2000 x 1900	1.49	2.81	1.29	2.78
2000 x 2000	1.55	2.96	1.36	2.93
2000 x 2100	1.62	3.11	1.43	3.08
2000 x 2200	1.68	3.26	1.5	3.24
2000 x 2300	1.74	3.41	1.57	3.39
2000 x 2400	1.8	3.56	1.65	3.54
2000 x 2500	1.85	3.71	1.72	3.7
2100 x 1000	-	-	0.74	1.47
2100 x 1100	-	-	0.81	1.63
2100 x 1200	-	-	0.87	1.79
2100 x 1300	-	-	0.93	1.95
2100 x 1400	-	-	1.0	2.11
2100 x 1500	-	-	1.07	2.27
2100 x 1600	-	-	1.13	2.44
2100 x 1700	-	-	1.2	2.6
2100 x 1800	-	-	1.27	2.76
2100 x 1900	-	-	1.34	2.92
2100 x 2000	-	-	1.41	3.08
2100 x 2100	-	-	1.49	3.24
2100 x 2200	-	-	1.56	3.41
2100 x 2300	-	-	1.63	3.57
2100 x 2400	-	-	1.71	3.73
2100 x 2500	-	-	1.78	3.89
2200 x 1000	0.93	1.61	0.77	1.54
2200 x 1100	-	-	0.84	1.71
2200 x 1200	-	-	0.9	1.88
2200 x 1300	-	-	0.97	2.05
2200 x 1400	-	-	1.04	2.22
2200 x 1500	-	-	1.11	2.39
2200 x 1600	-	-	1.18	2.56
2200 x 1700	-	-	1.25	2.73
2200 x 1800	-	-	1.32	2.9
2200 x 1900	-	-	1.39	3.07
2200 x 2000	-	-	1.46	3.24
2200 x 2100	-	-	1.54	3.41
2200 x 2200	-	-	1.61	3.58
2200 x 2300	-	-	1.69	3.75
2200 x 2400	-	-	1.77	3.91
2200 x 2500	-	-	1.84	4.08

6.3.4 | Available sizes table for smoke vents in arch shaped continuous rooflights as per CE 1396-CPR-0189

NOMINAL DIMENSIONS [A x B]	ACTIVE AREA A_a [m²]			
	SINGLE-LEAF VENTS		DOUBLE-LEAF VENTS	
[mm]	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS	WITHOUT WIND DEFLECTORS	WITH WIND DEFLECTORS
2300 x 1000	-	-	0.8	1.61
2300 x 1100	-	-	0.87	1.79
2300 x 1200	-	-	0.94	1.97
2300 x 1300	-	-	1.01	2.15
2300 x 1400	-	-	1.08	2.32
2300 x 1500	-	-	1.15	2.5
2300 x 1600	-	-	1.22	2.68
2300 x 1700	-	-	1.29	2.86
2300 x 1800	-	-	1.37	3.03
2300 x 1900	-	-	1.44	3.21
2300 x 2000	-	-	1.52	3.39
2300 x 2100	-	-	1.59	3.57
2300 x 2200	-	-	1.67	3.75
2300 x 2300	-	-	1.75	3.92
2300 x 2400	-	-	1.83	4.1
2300 x 2500	-	-	1.91	4.28
2400 x 1000	-	-	0.83	1.69
2400 x 1100	-	-	0.9	1.87
2400 x 1200	-	-	0.97	2.06
2400 x 1300	-	-	1.04	2.24
2400 x 1400	-	-	1.11	2.43
2400 x 1500	-	-	1.19	2.61
2400 x 1600	-	-	1.26	2.8
2400 x 1700	-	-	1.34	2.99
2400 x 1800	-	-	1.41	3.17
2400 x 1900	-	-	1.49	3.36
2400 x 2000	-	-	1.57	3.54
2400 x 2100	-	-	1.65	3.73
2400 x 2200	-	-	1.72	3.91
2400 x 2300	-	-	1.81	4.1
2400 x 2400	-	-	1.89	4.29
2400 x 2500	-	-	1.97	4.47
2500 x 1000	-	-	0.86	1.76
2500 x 1100	-	-	0.93	1.95
2500 x 1200	-	-	1.0	2.15
2500 x 1300	-	-	1.08	2.34
2500 x 1400	-	-	1.15	2.53
2500 x 1500	-	-	1.23	2.73
2500 x 1600	-	-	1.3	2.92
2500 x 1700	-	-	1.38	3.12
2500 x 1800	-	-	1.46	3.31
2500 x 1900	-	-	1.54	3.5
2500 x 2000	-	-	1.62	3.7
2500 x 2100	-	-	1.7	3.89
2500 x 2200	-	-	1.78	4.08
2500 x 2300	-	-	1.86	4.28
2500 x 2400	-	-	1.95	4.47
2500 x 2500	-	-	2.03	4.67

6.3.5 | Smoke vents control in arch shaped continuous rooflights as per CE 1396-CPR-0189

For correct operation, smoke vents as well as smoke exhaust & ventilation vents require devices controlling their opening and closing. A set of such devices constitutes a system for smoke exhaust control or smoke exhaust and ventilation control.
Depending on the type of devices used, it may be designed as a:

- **pneumatic** smoke exhaust control system,
- **24 V- electric** smoke exhaust control system with ventilation function,
- **pneumatic and electric** control system; the pneumatic part is responsible for smoke exhaust, while the 230 V~ electric part – for ventilation.

Smoke exhaust control systems are activated as follows:

1. **automatic** – through a thermo switch installed in the vent (pneumatic system), or by optical smoke sensors (electric system),
2. **manual** – by a release of CO_2 cartridges in alarm box (pneumatic system), or by operation of RPO-1 emergency pushbutton (electric system),
3. **FAS signal** – by external impulse from fire alarm system (FAS) sent to an electromagnet installed in the alarm box (pneumatic system) or directly to smoke exhaust control unit (electric system).

6.3.6 | Technical data

SINGLE-LEAF VENTS mcr PROLIGHT TB IN ARCH SHAPED CONTINUOUS ROOFLIGHTS					
VENT DIMENSIONS (*)	PNEUMATIC CONTROL (***)			ELECTRIC CONTROL (***)	
	PNEUMATIC ACTUATOR		MIN. CAPACITY OF CO_2 – CARTRIDGE – SL 950	POWER CONSUMPTION [A] BY ELECTRIC ACTUATOR FOR CLASS	
	STROKE	DIAMETER			
[mm]	[mm]	[mm]	[g]	**SL 250**	**SL 550**
1000 x 1000	550	50	40	1.6	2.0
1000 x 1200	550	50	40	1.6	2.6
1000 x 1400	550	50	40	1.6	2.6
1000 x 1600	550	50	40	2.0	4.0
1000 x 1800	550	50	40	2.0	4.0
1000 x 2000	550	50	40	2.0	4.0
1000 x 2200	550	50	40	2.6	4.0
1000 x 2500	550	50	40	2.6	6.0
1200 x 1000	550	50	40	2.0	4.0
1200 x 1200	550	50	40	2.0	4.0
1200 x 1600	550	50	40	2.6	6.0
1200 x 1800	550	50	40	2.6	6.0
1200 x 2100	550	50	55	4.0	6.0
1200 x 2500	550	50	55	4.0	6.0
1400 x 1000	750	50	40	2.6	4.0
1500 x 1500	750	50	55	4.0	6.0
1500 x 1800	750	50	55	4.0	8.0
1500 x 2100	750	50	80	6.0	8.0
1500 x 2500	750	50	80	6.0	-
1600 x 1000	750	50	40	2.6	6.0
1800 x 1000	1050	63	80	6.0	8.0
1800 x 1800	1050	63	120	6.0	-
1800 x 2100	1050	63	120	8.0	-
1800 x 2500	1050	63	120	8.0	-
2000 x 1000	1050	63	80	6.0	8.0
2000 x 2000	1050	63	120	8.0	-
2000 x 2100	1050	63	120	8.0	-
2000 x 2500	1050	63	120	-	-
2200 x 1000	1300	63	120(**)	-	-

(*) For different smoke vent dimensions than specified in the table control system should be selected for larger size of the vent.
(**) SL 500
(***) For selected sizes there are different SL options available:
– For electric control: SL 750, SL 950, SL 1300 and SL 1600
– For pneumatic control: SL 250, SL 550, SL 750, SL 1300, SL 1600 and SL 2000

6.3.6 | Technical data

SINGLE-LEAF VENTS mcr PROLIGHT TB IN ARCH SHAPED CONTINUOUS ROOFLIGHTS					
VENT DIMENSIONS (*)	PNEUMATIC CONTROL (***)			ELECTRIC CONTROL (***)	
	PNEUMATIC ACTUATOR		MIN. CAPACITY OF CO_2 – CARTRIDGE – SL 950	POWER CONSUMPTION [A] BY ELECTRIC ACTUATOR FOR CLASS	
	STROKE	DIAMETER			
[mm]	[mm]	[mm]	[g]	**SL 250**	**SL 550**
1000 x 2500	400	40	40	2 x 0,8	2 x 1,3
1200 x 1200	400	40	24	2 x 0,8	2 x 1,0
1200 x 1500	400	40	24	2 x 0,8	2 x 1,0
1200 x 2100	400	40	24	2 x 0,8	2 x 1,3
1500 x 1500	400	40	24	2 x 1,6	2 x 2,0
1500 x 2100	400	40	40	2 x 1,6	2 x 2,6
1500 x 2500	400	40	40	2 x 1,6	2 x 2,6
1800 x 2100	550	40	55	2 x 1,6	2 x 4,0
2000 x 2100	600	40	55	2 x 2,0	2 x 4,0
2000 x 2500	600	40	80	2 x 2,0	2 x 4,0
2200 x 2500	700	40	80	2 x 4,0	2 x 6,0
2400 x 2500	750	40	120	2 x 4,0	2 x 6,0
2500 x 2500	850	40	120(**)	2 x 4,0	2 x 8,0

(*) For different smoke vent dimensions than specified in the table control system should be selected for larger size of the vent.
(**) SL 500
(***) For selected sizes there are different SL options available:
– For electric control: SL 750, SL 950, SL 1300 and SL 1600
– For pneumatic control: SL 250, SL 550, SL 750, SL 1300, SL 1600 and SL 2000

6.4 | Non-standard solutions

Parameters	Triangular shaped rooflights	Pyramid skylights	Dome skylights
			
Classification of rooflight	Certificate of Conformity in accordance EN 14963: » **DL1000 / DL1125 / DL1500 / DL 2000 / DL 2050 / DL 2500** – resistance to downward loads as per EN 14963, dependent on glazing thickness » **UL 1000/ UL 1500** – resistance to pull-off loads as per EN 14963, dependent on glazing thickness » Resistance of glazing to hard body impact as per EN 14963 » Resistance of glazing to large soft body impact as per EN 14963 for **SB300 class** » Fire performance for external fire, class **B_{ROOF}(t1)** as per EN 13501-5+A1		
Skylight span / diameter	1.2 ≤ S ≤ 5.0 m	1.2 ≤ S ≤ 5.0 m	1.2 ≤ D ≤ 6.0 m
Geometry	**Skylight inclination angle:** » 30° < α < 60°, » optimum α = 45°		**Dome base shape:** » regular polygon inscribed into a circle of diameter D
Module length	m_1 = 710 mm or m_2 = 1060 mm		
Glazing	» multi-chamber polycarbonate panel (PCA) of th. 10 mm, 16 mm, 20 mm, 25 mm, » B_{ROOF}(t1) classification – multi-chamber polycarbonate panel, as above + polyester panel, » multiple glazing with multi-chamber polycarbonate, see Section 8 for details – page 121.		
Ventilation vents	» **0.65 x 0.65 m – 1.5 x 1.9 m** for module 710 mm » **1.0 x 1.0 m – 1.4 x 2.0 m** for module 1060 mm	» **0.65 x 0.65 m – 1.26 x 1.3 m** for module 710 mm » **1.0 x 1.0 m – 1.4 x 1.0 m** for module 1060 mm	-
Non-standard options » alternative base sheet thickness of 2.5 mm for self-supporting base of modular length up to 6.0 m » skylight elements painted to any RAL color » custom base height of h ≥ 300 mm » custom width of circumferential flange of base, » self-supporting base of modular length up to 6.0 m » custom base design » safety nets » available in configuration with soft body impact resistance up to 1200 J			

6.4.1 | Triangular shaped continuous rooflights

6.4.1.1 | Technical description of standard

- continuous rooflights in accordance with EN 14963 (CE marked),
- **width:** 1.2 ÷ 5.0 m,
- straight base of height 300 mm ÷ 700 mm made of galvanized steel sheet of thickness adequate to the rooflight parameters (width, length, glazing thickness),
- bottom part of base has a circumferential flange of standard width 70 mm, for installing on the roof structure,
- rooflight base hardened using bracing spaced at 1500 mm or 3000 mm,
- continuous rooflight base adapted for installing thermal insulation of min. thickness 50 mm,
- continuous rooflight structure made of aluminium profiles of shape ensuring water run-off,
- continuous rooflights glazing made of multi-chamber polycarbonate, available in various thicknesses and colors,
- **continuous rooflights may be delivered with openable vents:**
  – ventilation vents for daily ventilation of facilities,
- **ventilation control:** electric 230 V~.

6.4.1.2 | Triangular shaped continuous rooflight design

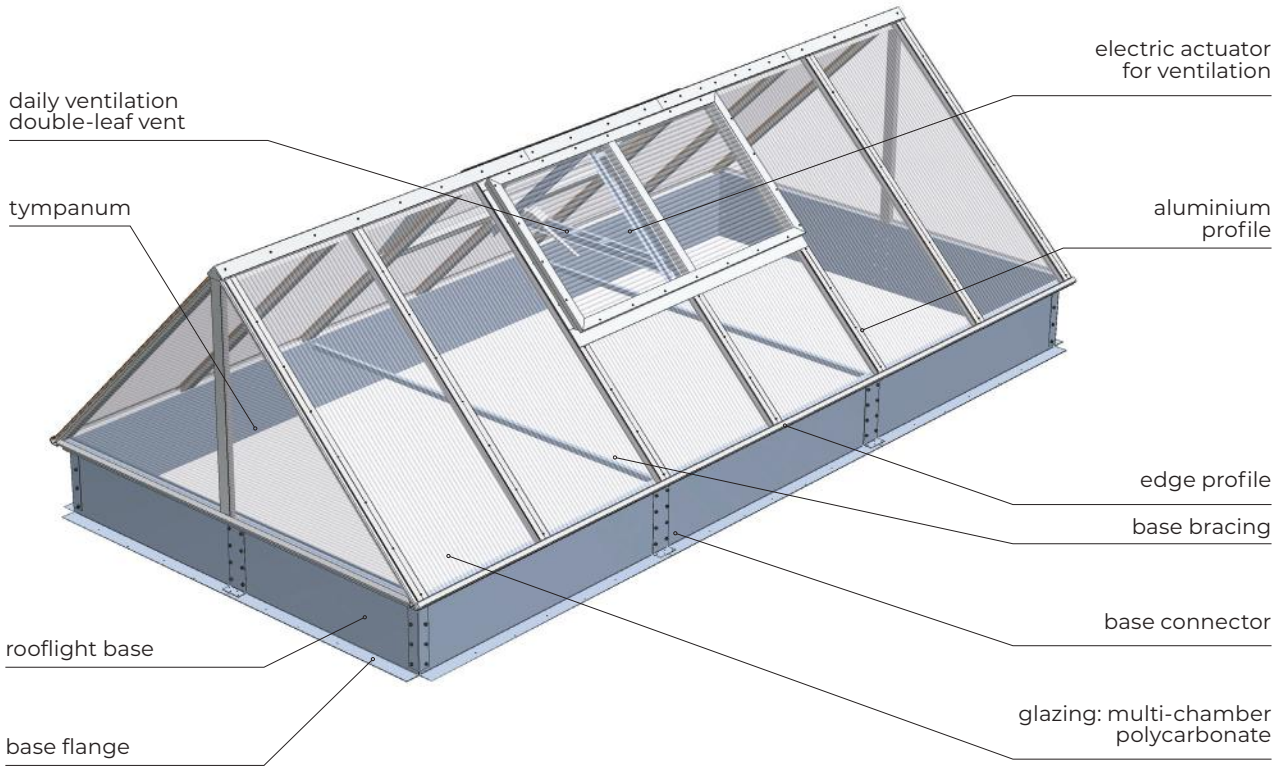


Fig. 92 *Design of mcr PROLIGHT triangular shaped continuous rooflight with double-leaf vent, with electric actuator for daily ventilation*

6.4.1.3 | Technical drawings of triangular shaped continuous rooflight

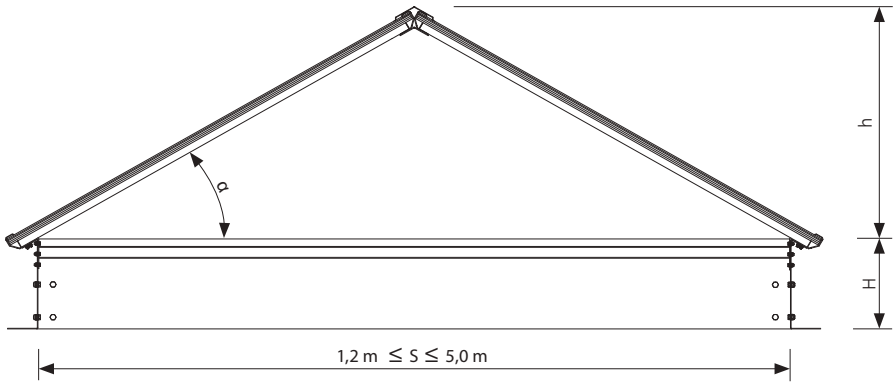


Fig. 93 *Cross section* **A-A** *of mcr PROLIGHT triangular shaped continuous rooflight*

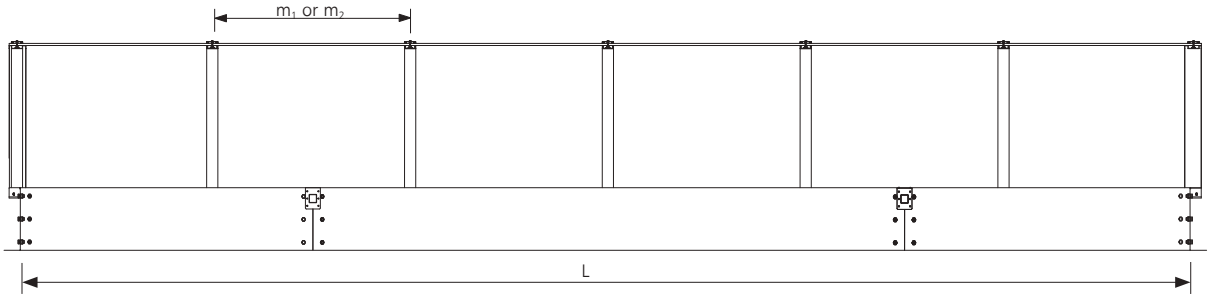


Fig. 94 *Cross section* **B-B** *of mcr PROLIGHT triangular shaped continuous rooflight*

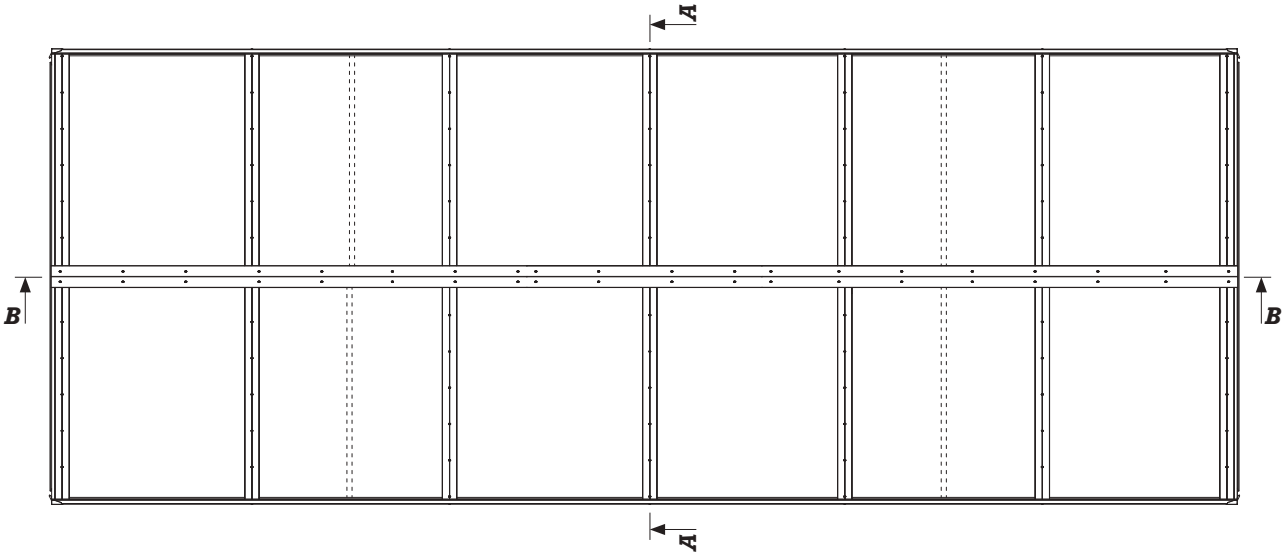


Fig. 95 *Top view of mcr PROLIGHT triangular shaped continuous rooflight*

S – continuous rooflight span [m]
H – continuous rooflight base height [mm]
h – continuous rooflight height [mm], dependent on rooflight angle of inclination and span
m – modular spacing of load-bearing and pressure profiles available in two dimensions: m_1 = 710 mm or m_2 = 1060 mm

6.4.1.4 | Technical drawings of sample configurations of triangular shaped continuous rooflights with ventilation vents

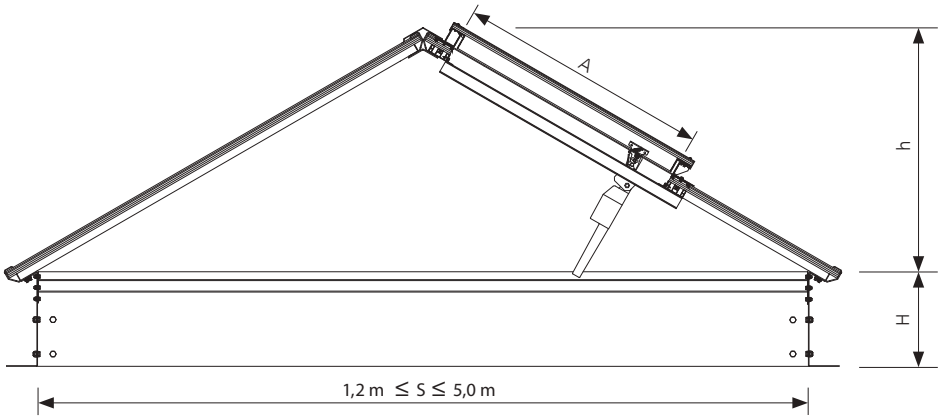


Fig. 96 *Cross section* **C-C** *of mcr PROLIGHT triangular shaped continuous rooflight with daily ventilation single-leaf vent*

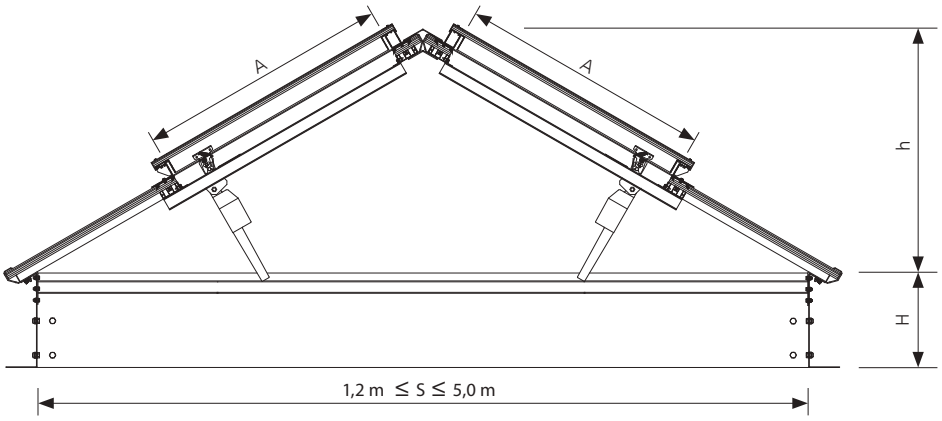


Fig. 97 *Cross section* **D-D** *of mcr PROLIGHT triangular shaped continuous rooflight with daily ventilation double-leaf vent*

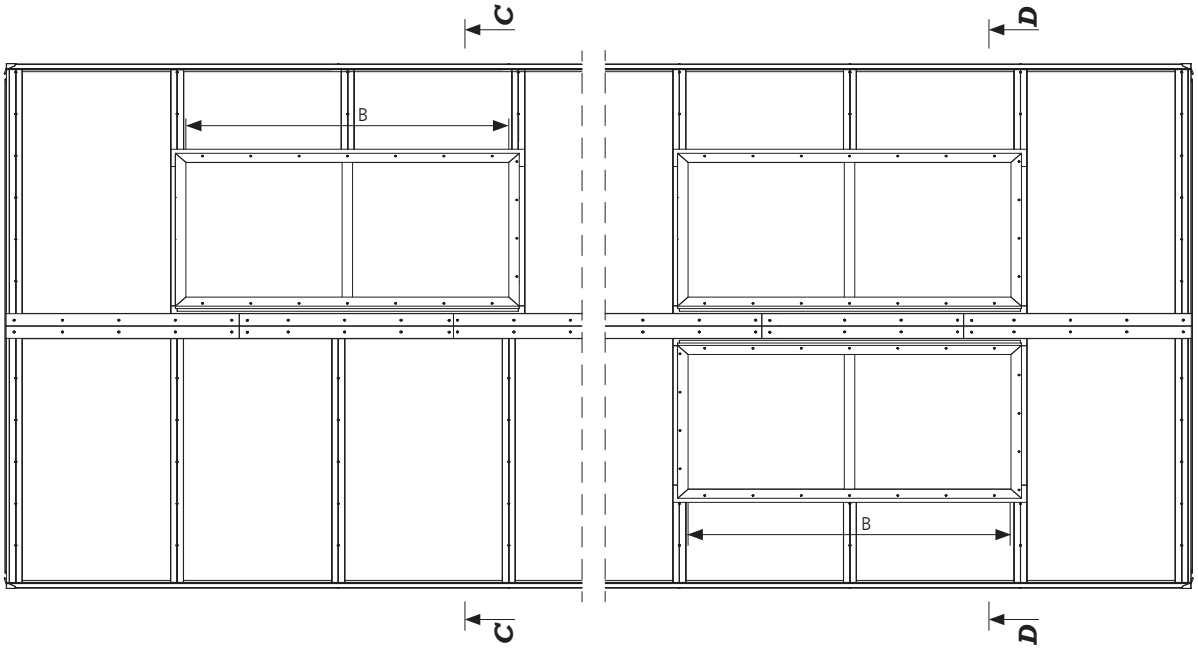


Fig. 98 *Top view of mcr PROLIGHT triangular shaped continuous rooflight with daily ventilation single-leaf and double-leaf vent*

S – continuous rooflight span [m]
H – continuous rooflight base height [mm]
h – continuous rooflight height [mm], dependent on rooflight angle of inclination and span
A, B – nominal vent dimensions [mm]

6.4.1.5 | Available sizes for ventilation vents in triangular shaped continuous rooflights

NOMINAL DIMENSIONS [A x B] [mm]	NOTES (*)
650 x 650	Strips with a module of 710 mm
1000 x 650	Strips with a module of 710 mm
1200 x 650	Strips with a module of 710 mm
1000 x 1000	Strips with a module of 1060 mm
1200 x 1000	**Strips with a module of 1060 mm**
1400 x 1000	**Strips with a module of 1060 mm**
1000 x 2000	**Strips with a module of 1060 mm**
1200 x 2000	**Strips with a module of 1060 mm**
1400 x 2000	**Strips with a module of 1060 mm**
1000 x 1300	Strips with a module of 710 mm
1200 x 1300	Strips with a module of 710 mm
1260 x 1300	Strips with a module of 710 mm
1000 x 1900	Strips with a module of 710 mm
1200 x 1900	Strips with a module of 710 mm
1400 x 1900	Strips with a module of 710 mm
1500 x 1900	Strips with a module of 710 mm

(*) Module – Dimension between 2 bearing profiles of the rooflight which is either m_1 = 710 mm or m_2 = 1060 mm

6.4.2 | Pyramid skylights

6.4.2.1 | Technical description of standard

- skylights in accordance with EN 14963 (CE marked),
- **width:** 1.2 ÷ 5.0 m,
- straight base of height 300 mm ÷ 700 mm made of galvanized steel sheet of thickness adequate to the skylight parameters (width, length, glazing thickness),
- bottom part of base has a circumferential flange of standard width 70 mm, for installing on the roof structure,
- skylight base adapted for installing thermal insulation of min. thickness 50 mm,
- skylight structure made of aluminium profiles of shape ensuring water run-off,
- skylight glazing made of multi-chamber polycarbonate, available in various thicknesses and colors,
- **skylights can be equipped with single-leaf ventilation vents within the dimensional range:**
  – 0.65 x 0.65 m – 1.26 x 1.3 m for the 710 mm module,
  – 1.0 x 1.0 m – 1.4 x 1.06 m for the 1060 mm module,
- **ventilation control:** electric 230 V~.

6.4.2.2 | Pyramid skylight design

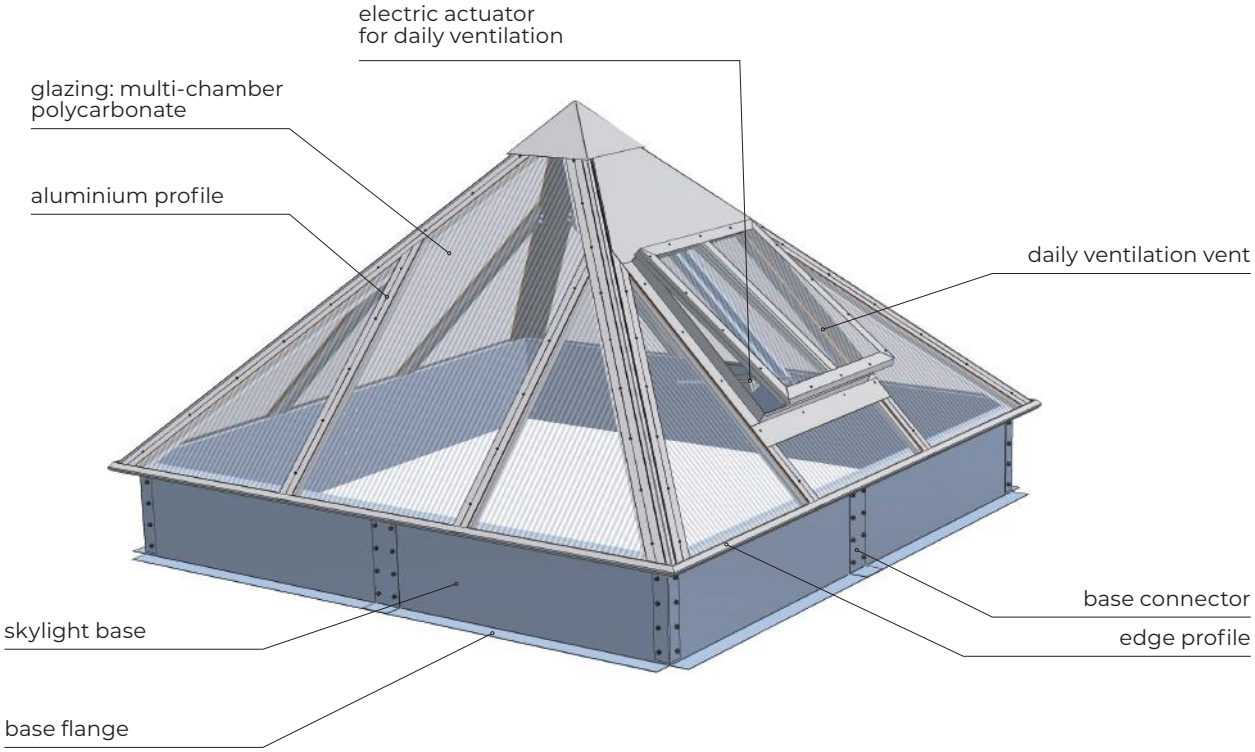


Fig. 99 *Design of mcr PROLIGHT pyramid skylight with smoke vent, with electric actuator for daily ventilation*

6.4.2.3 | Technical drawings of pyramid skylight

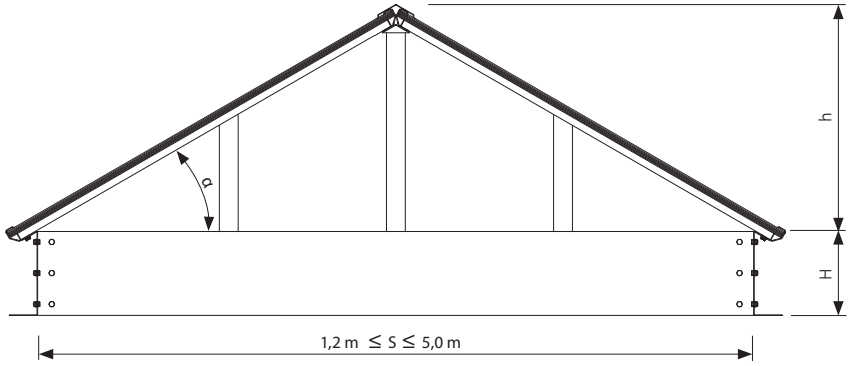


Fig. 100 *Cross section* **A-A** *of mcr PROLIGHT pyramid skylight*

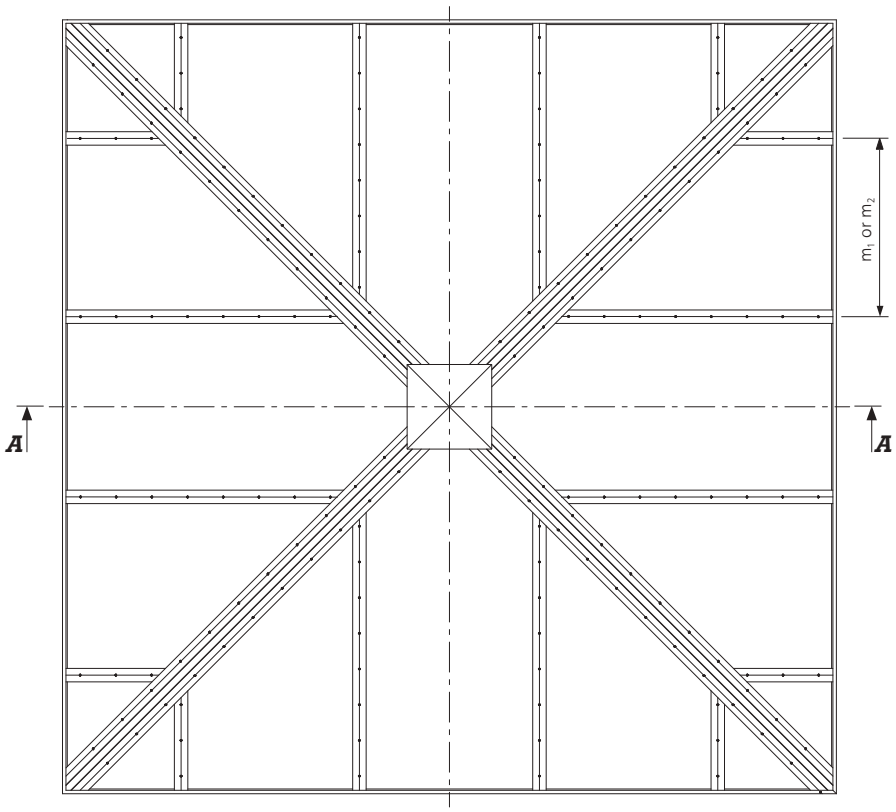


Fig. 101 *Top view of mcr PROLIGHT pyramid skylight*

S – skylight span [m]
H – skylight base height [mm]
h – skylight height [mm] – dependent on inclination angle
α – inclination angle of rooflight walls, 30° < α < 60°
m – modular spacing of load-bearing and pressure profiles available in two dimensions: m_1 = 710 mm or m_2 = 1060 mm

6.4.2.4 | Technical drawings of pyramid skylight with ventilation vent

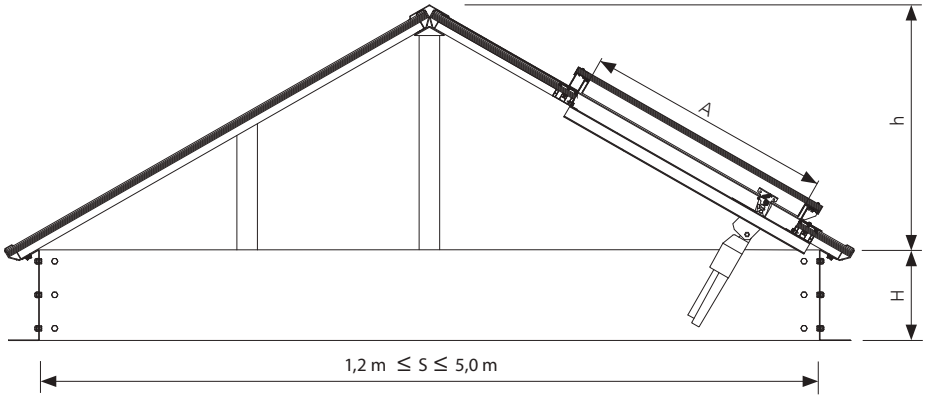


Fig. 102 *Cross section* **A-A** *of mcr PROLIGHT pyramid skylight with daily ventilation vent*

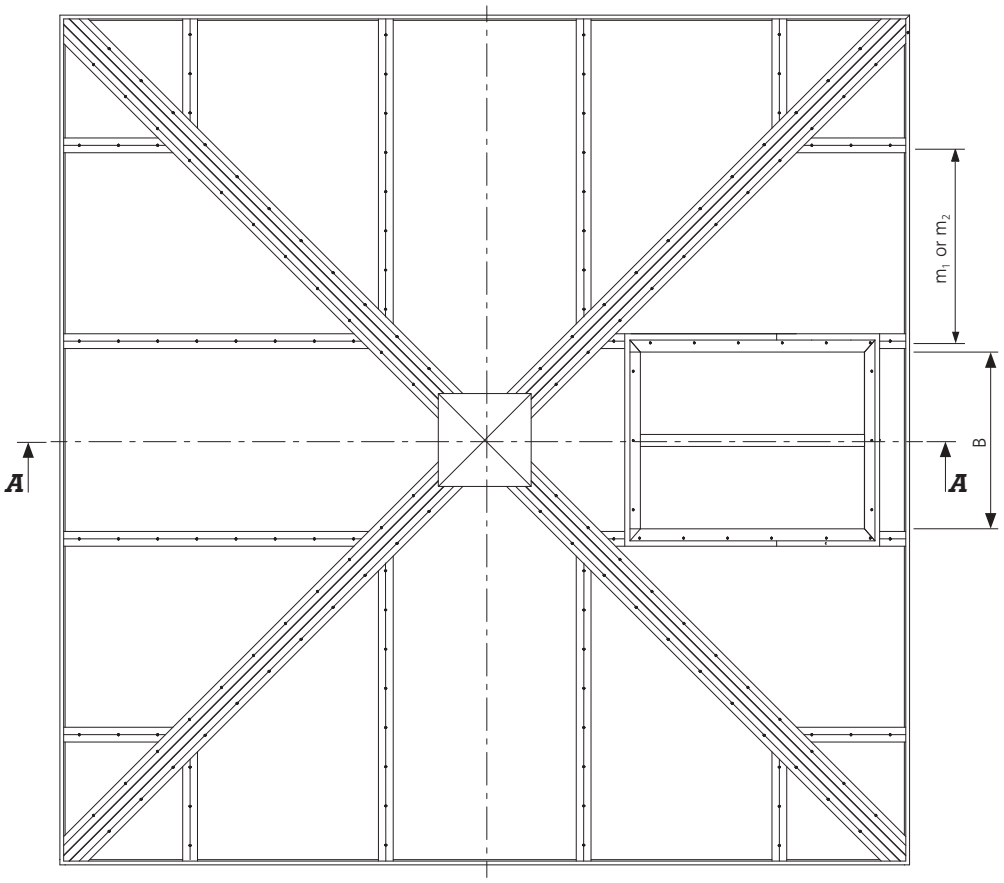


Fig. 103 *Top view of mcr PROLIGHT pyramid skylight with daily ventilation vent*

S – skylight span [m]
H – skylight base height [mm]
h – skylight height [mm] – dependent on inclination angle
A, B – nominal vent dimensions [mm]
m – modular spacing of load-bearing and pressure profiles available in two dimensions: m_1 = 710 mm or m_2 = 1060 mm.

6.4.2.5 | Available sizes table for ventilation vents in pyramid skylights

NOMINAL DIMENSIONS [A x B] [mm]	NOTES (*)
650 x 650	Skylights with module 710 mm
1000 x 650	Skylights with module 710 mm
1200 x 650	Skylights with module 710 mm
1000 x 1000	**Skylights with module 1060 mm**
1200 x 1000	**Skylights with module 1060 mm**
1400 x 1000	**Skylights with module 1060 mm**
1000 x 1300	Skylights with module 710 mm
1200 x 1300	Skylights with module 710 mm
1260 x 1300	Skylights with module 710 mm

(*) Module – Dimension between 2 bearing profiles of the skylight which is either m_1 = 710 mm or m_2 = 1060 mm

6.4.3 | Dome skylights

6.4.3.1 | Technical description of standard

- skylights in accordance with EN14963 (CE marked),
- **width:** 1.2 ÷ 6.0 m,
- straight base of height 300 mm ÷ 700 mm made of galvanized steel sheet of thickness adequate to the skylight parameters (width, length, glazing thickness),
- bottom part of base has a circumferential flange of standard width 70 mm, for installing on the roof structure,
- skylight base adapted for installing thermal insulation of min. thickness 50 mm,
- skylight structure made of aluminium profiles of shape ensuring water run-off,
- multi-chamber polycarbonate skylight glazing available in various thicknesses and colors.

6.4.3.2 | Dome skylight design

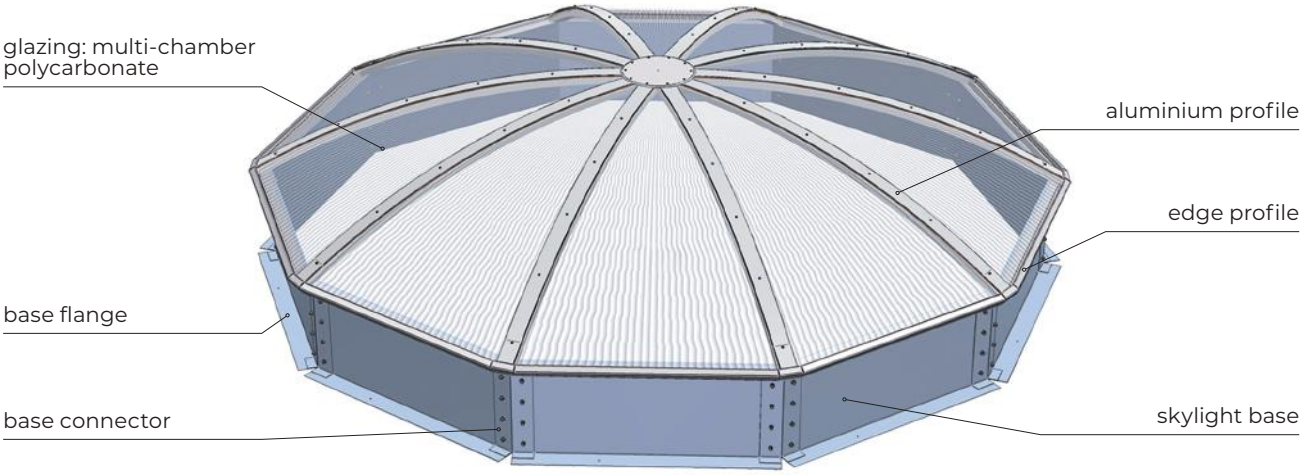


Fig. 104 *mcr PROLIGHT dome skylight design*

6.4.3.3 | Technical drawings of dome skylight

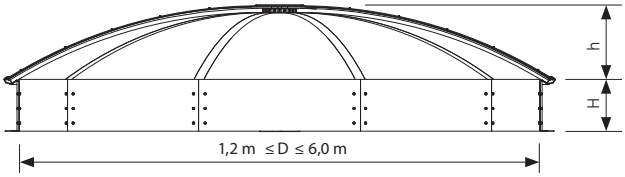


Fig. 105 *Cross section* **A-A** *of mcr PROLIGHT dome skylight*

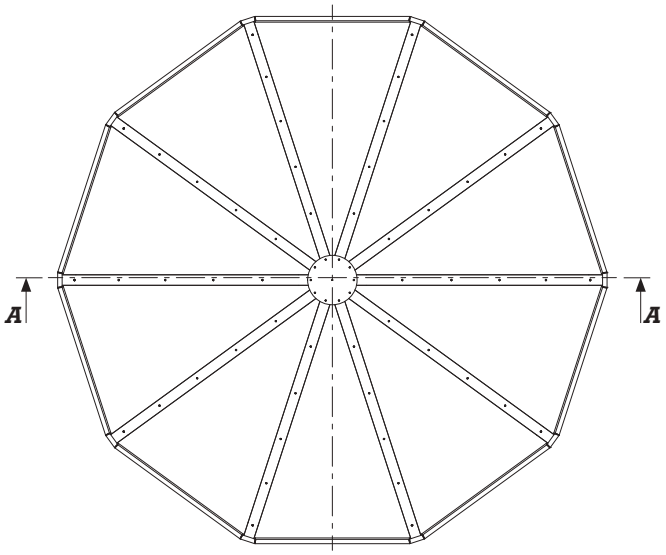
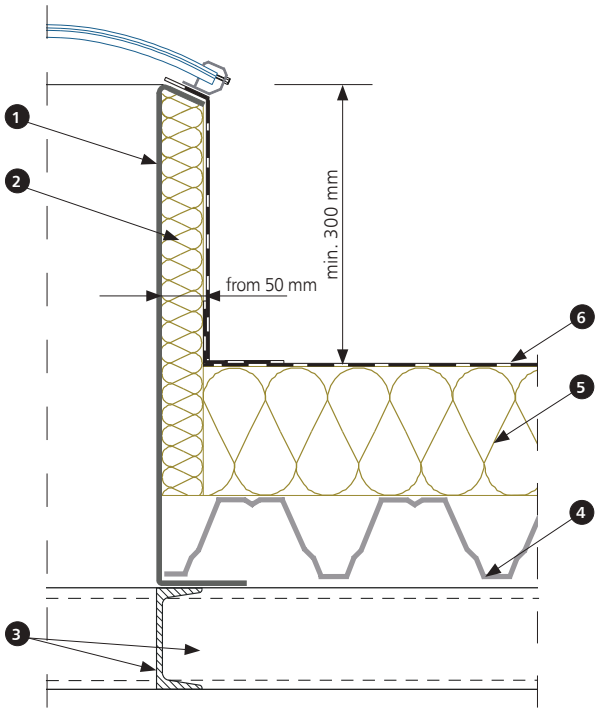


Fig. 106 *Top view of mcr PROLIGHT dome skylight*

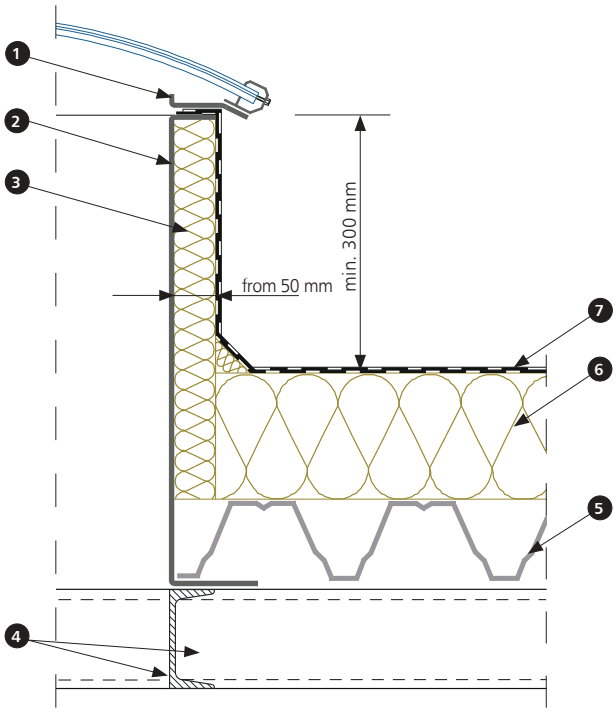
D – skylight diameter [m]
H – skylight base height [mm]
h – skylight height [mm], dependent on dome radius and skylight diameter [mm]
R – dome radius depends on the glazing thickness [mm]

7. | Installation of continuous rooflight bases

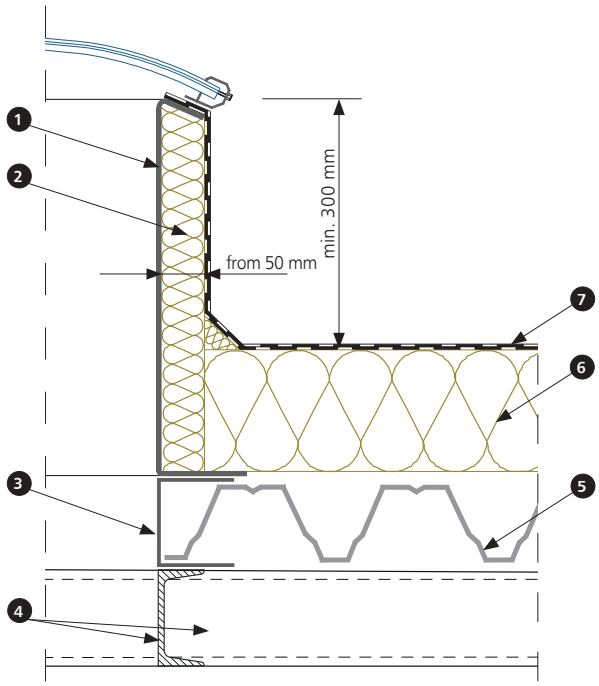
7.1 | Installation of continuous rooflight bases on steel structure



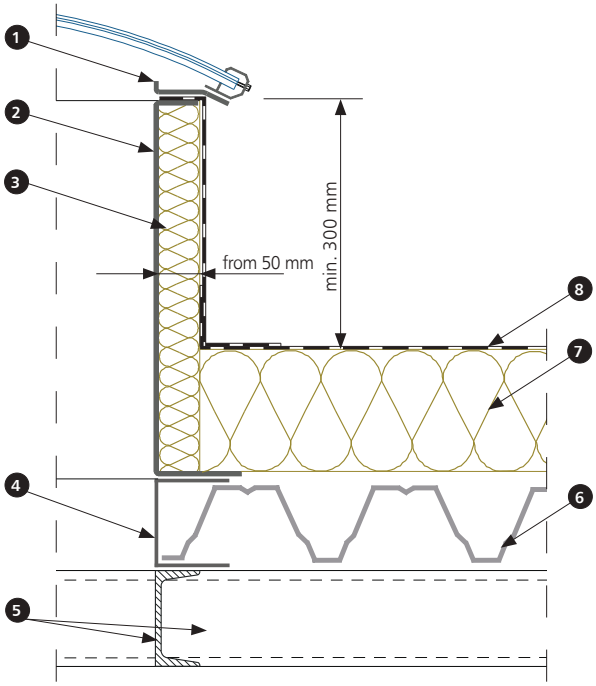
1. continuous rooflight steel base
2. thermal insulation of base
3. supporting steel profile e.g. purlin, trimmer
4. trapezoidal metal sheet
5. thermal insulation of roof
6. PVC membrane



1. continuous rooflight overlay base
2. continuous rooflight steel base
3. thermal insulation of base
4. supporting steel profile e.g. purlin, trimmer
5. trapezoidal metal sheet
6. thermal insulation of roof
7. roofing paper

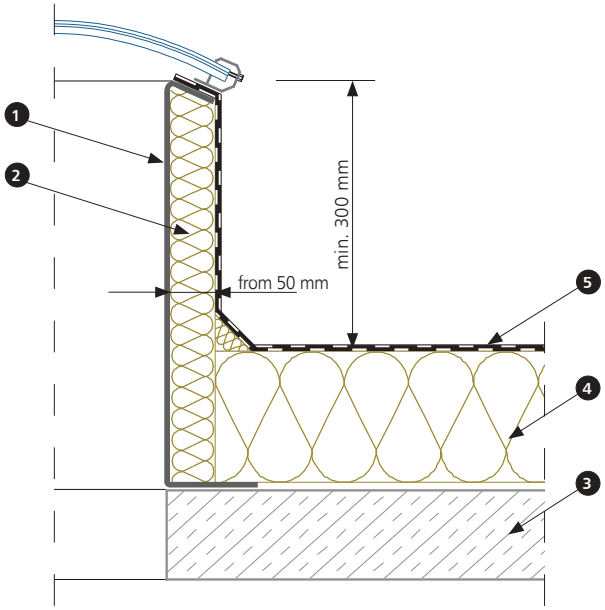


1. continuous rooflight steel base
2. thermal insulation of base
3. additional flashing
4. supporting steel profile e.g. purlin, trimmer
5. trapezoidal metal sheet
6. thermal insulation of roof
7. roofing paper

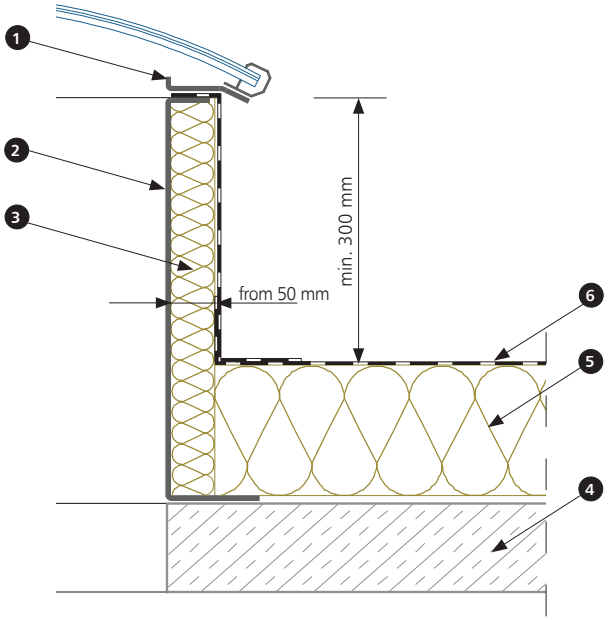


1. continuous rooflight overlay base
2. continuous rooflight steel base
3. thermal insulation of base
4. additional flashing
5. supporting steel profile e.g. purlin, trimmer
6. trapezoidal metal sheet
7. thermal insulation of roof
8. PVC membrane

7.2 | Installation of continuous rooflight bases on reinforced concrete structure

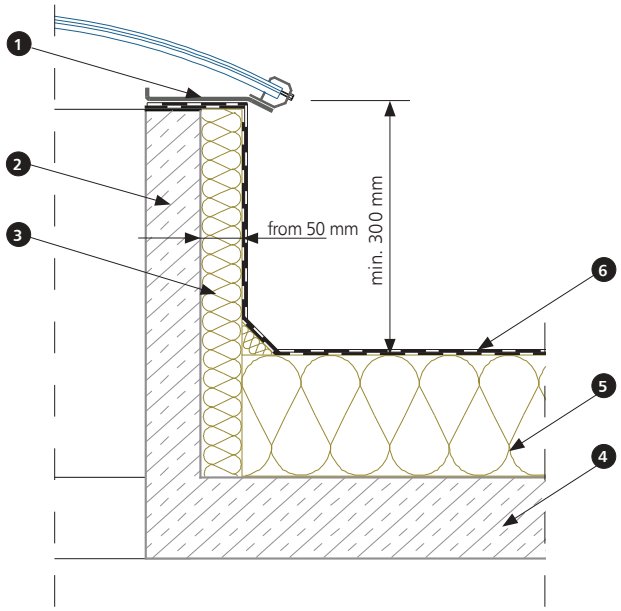


1. continuous rooflight steel base
2. thermal insulation of base
3. ceiling, e.g. reinforced concrete slab
4. thermal insulation of roof
5. roofing paper



1. continuous rooflight overlay base
2. continuous rooflight steel base
3. thermal insulation of base
4. ceiling, e.g. reinforced concrete slab
5. thermal insulation of roof
6. PVC membrane

7.3 | Installation of continuous rooflight standard bases on reinforced concrete, steel or wooden plinth

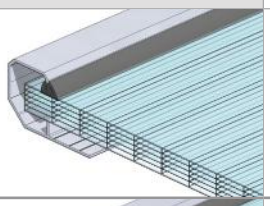
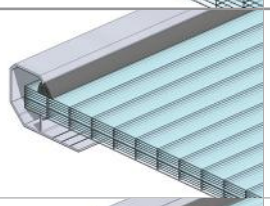
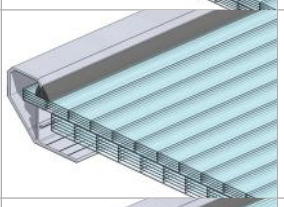
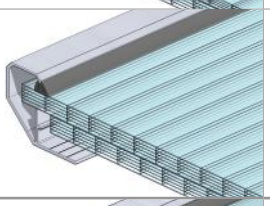
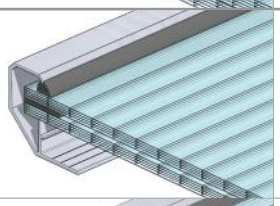
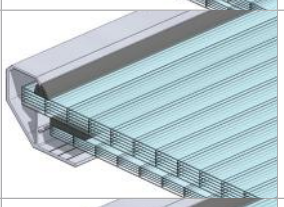
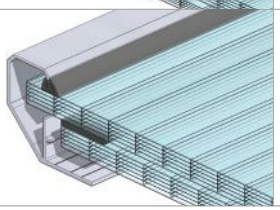


1. continuous rooflight overlay base
2. plinth (concrete, steel or wooden) (*)
3. thermal insulation of plinth
4. ceiling, e.g. reinforced concrete slab
5. thermal insulation of roof
6. roofing paper

(*) Possibility of mounting the overlay base on a wooden or steel plinth.

8. | Continuous rooflight glazing

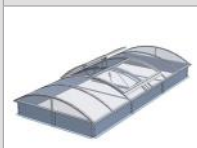
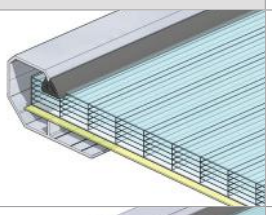
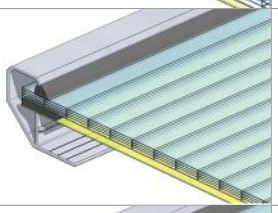
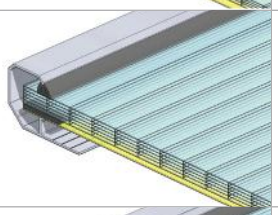
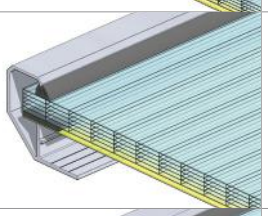
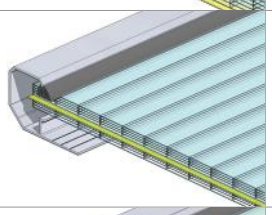
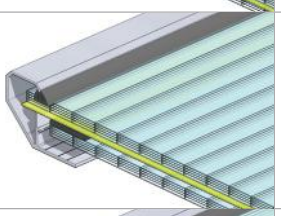
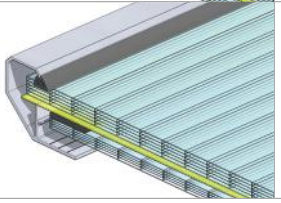
A wide range of glazing options is available for mcr PROLIGHT continuous rooflights.
Choosing the right glazing will contribute:
» sunlight intensity,
» thermal insulation of building,
» operating safety.

Glazing type			Type			
			Arch shaped rooflight	Non-standard solutions		
				Triangular shaped rooflight	Pyramidal shaped rooflight	Dome rooflight
						
Single	PCA		●	●	●	●
Multiple (*)	PCA 10 + PCA 10		●	-	-	-
	PCA 10 + PCA 16		●	-	-	-
	PCA 16 + PCA 16		●	-	-	-
Multiple with air gap (PP) (*)	PCA 10 + PP + PCA 10		●	-	-	-
	PCA 16 + PP + PCA 10		●	-	-	-
	PCA 16 + PP + PCA 16		●	-	-	-

LEGEND:
PCA – multi-chamber polycarbonate panel
PCA 10 – multi-chamber polycarbonate panel of 10 mm thickness
PCA 16 – multi-chamber polycarbonate panel of 16 mm thickness
PCA 20 – multi-chamber polycarbonate panel of 20 mm thickness
PCA 25 – multi-chamber polycarbonate panel of 25 mm thickness
PP – air gap
NRO – NRO polyester panel, B_{ROOF}(t1) glazing or fiberglass mat

(*) dimensional range for skylight specified to 4.0 m

8. | Continuous rooflight glazing

Glazing type			Type			
			Arch shaped rooflight	Non-standard solutions		
				Triangular shaped rooflight	Pyramidal shaped rooflight	Dome rooflight
						
Classification $B_{ROOF}(t1)$ (*)	PCA + NRO		●	●	●	-
	PCA 10 + PP + NRO		●	-	-	-
	PCA 16 + PP + NRO		●	-	-	-
	PCA 20 + PP + NRO		●	-	-	-
	PCA 10 + NRO + PCA 10 (**)		●	-	-	-
	PCA 10 + NRO + PP + PCA 10		●	-	-	-
	PCA 16 + NRO + PP + PCA 10		●	-	-	-

LEGEND:
PCA – multi-chamber polycarbonate panel
PCA 10 – multi-chamber polycarbonate panel of 10 mm thickness
PCA 16 – multi-chamber polycarbonate panel of 16 mm thickness
PCA 20 – multi-chamber polycarbonate panel of 20 mm thickness
PCA 25 – multi-chamber polycarbonate panel of 25 mm thickness
PP – air gap
NRO – NRO polyester panel, $B_{ROOF}(t1)$ glazing or fiberglass mat

(*) dimensional range for rooflight specified to 4.0 m

(**) dimensional range for rooflight specified to 3.5 m

8.1 | Single glazing

8.1.1 | Multi-chamber polycarbonate panel (PCA)

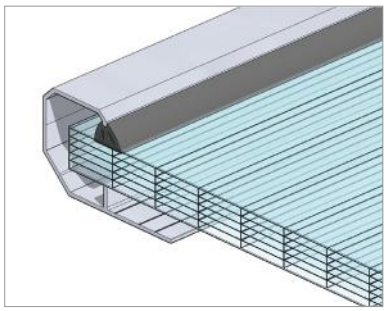


Fig. 107 *Rooflight glazing: multi-chamber polycarbonate panel (PCA)*

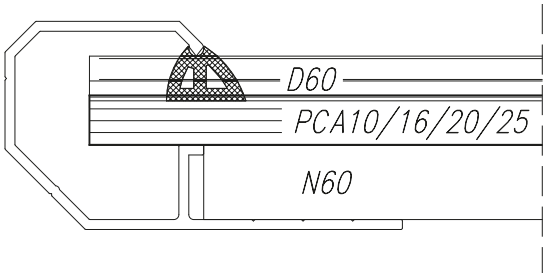


Fig. 108 *Rooflight section glazing: single multi-chamber polycarbonate panel*

SINGLE PANEL PARAMETERS (PCA)	PCA 10		PCA 16	
	CLEAR	OPAL	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	2.2÷2.9 W/m²K		1.77÷2.0 W/m²K	
LIGHT TRANSMISION Lt	64÷73 %	57÷61 %	56÷64 %	45÷54 %
ACOUSTIC INSULATION R_w	18÷19 dB		18÷19 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B-s1,d0		– B-s1,d0 – B-s2,d0	

SINGLE PANEL PARAMETERS (PCA)	PCA 20		PCA 25	
	CLEAR	OPAL	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.59÷1.8 W/m²K		1.4÷1.6 W/m²K	
LIGHT TRANSMISION Lt	56÷64 %	45÷54 %	54÷64 %	38÷50 %
ACOUSTIC INSULATION R_w	21 dB		22 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	– B-s1,d0 – B-s2,d0		B-s2,d0	

8.2 | Multi-layer glazing

8.2.1 | Two multi-chamber polycarbonate 10 mm panels (PCA 10+PCA 10)

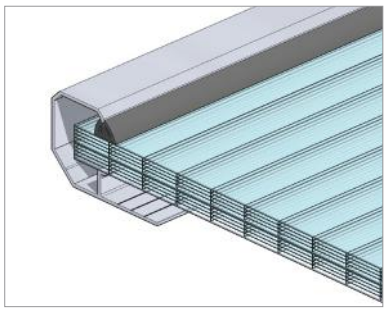


Fig. 109 *Rooflight glazing: two multi-chamber polycarbonate panels (PCA 10 + PCA 10)*

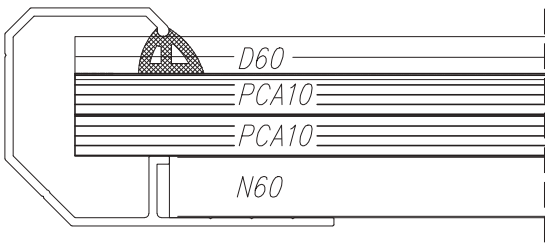


Fig. 110 *Section of rooflight of width 1.2÷3.5 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 10 + PCA 10)	PCA 10 + PCA 10	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.3÷1.8 W/m²K	
LIGHT TRANSMISION Lt	53÷77 %	19÷58 %
ACOUSTIC INSULATION R_w	min. 19 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B-s1,d0	

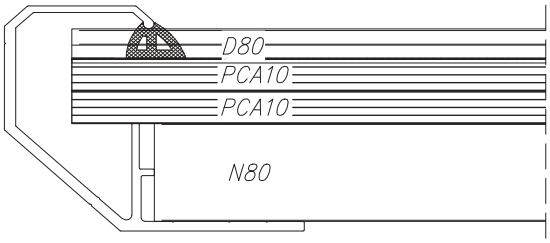


Fig. 111 *Section of rooflight of width 3.5÷4.0 m; supporting profile (N) and pressing profile (D) of width 80 mm*

All parameters of polycarbonate sheets are specified for standard execution.

8.2.2 | Two multi-chamber polycarbonate 10 mm and 16 mm panels (PCA 10+PCA 16)

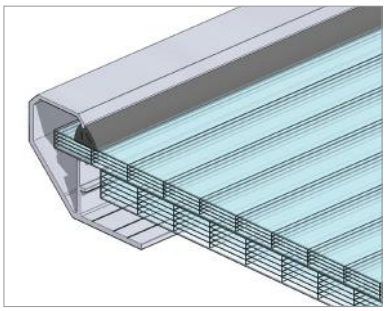


Fig. 112 *Rooflight glazing: two multi-chamber polycarbonate panels (PCA 10 + PCA 16)*

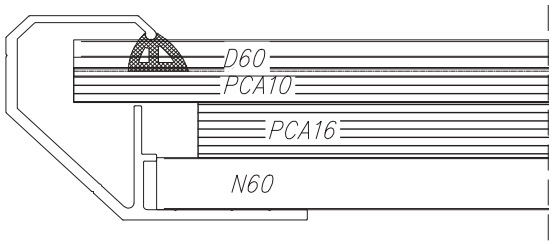


Fig. 113 *Section of rooflight of width 1.5÷4.0 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 10 + PCA 16)	PCA 10 + PCA 16	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.1÷1.4 W/m²K	
LIGHT TRANSMISION Lt	39÷64 %	13÷54 %
ACOUSTIC INSULATION R_w	min. 18 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	– B-s1,d0 – B-s2,d0	

8.2.3 | Two multi-chamber polycarbonate 16 mm panels (PCA 16+PCA 16)

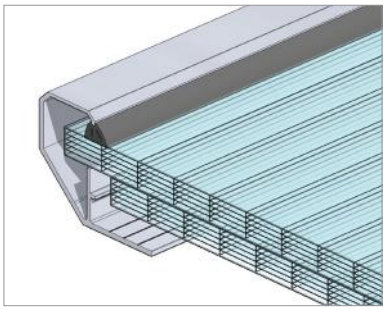


Fig. 114 *Rooflight glazing: two multi-chamber polycarbonate panels (PCA 16 + PCA 16)*

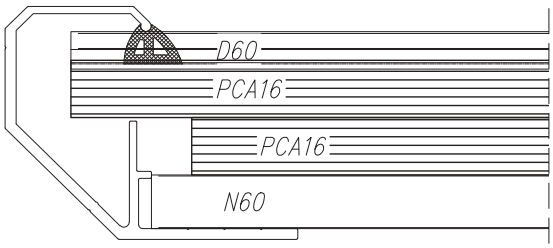


Fig. 115 *Section of rooflight of width 1.5÷6.0 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 16 + PCA 16)	PCA 16 + PCA 16	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.0÷1.1 W/m²K	
LIGHT TRANSMISION Lt	29÷47 %	9÷29 %
ACOUSTIC INSULATION R_w	min. 18 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	– B-s1,d0 – B-s2,d0	

All parameters of polycarbonate sheets are specified for standard execution.

8.2.4 | Two multi-chamber polycarbonate 10 mm panels with air gap (PCA 10+PP+PCA 10)

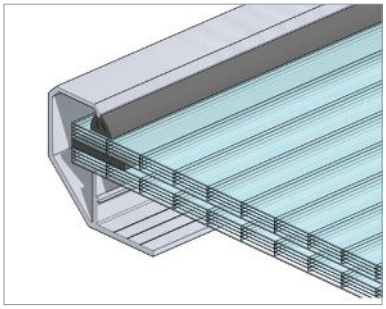


Fig. 116 *Rooflight glazing: two multi-chamber polycarbonate panels (PCA 10 + PCA 10) with air gap between (PP)*

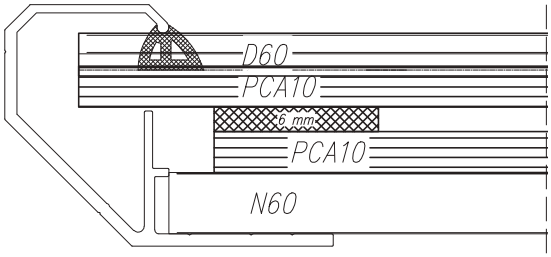


Fig. 117 *Section of rooflight of width 1.2÷3.5 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 10 + PP + PCA 10)	PCA 10 + PP + PCA 10	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.3÷1.8 W/m²K	
LIGHT TRANSMISION Lt	53÷77 %	19÷58 %
ACOUSTIC INSULATION R_w	min. 19 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B-s1,d0	

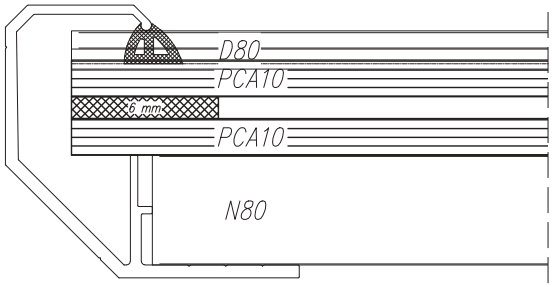


Fig. 118 *Section of rooflight of width 3.5÷4.0 m; supporting profile (N) and pressing profile (D) of width 80 mm*

8.2.5 | Two multi-chamber polycarbonate 16 mm and 10 mm panels with air gap (PCA 16+PP+PCA 10)

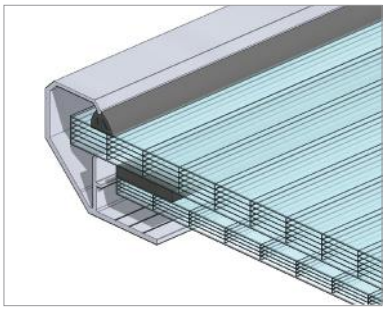


Fig. 119 *Rooflight glazing: two multi-chamber polycarbonate panels (PCA 16 + PCA 10) with air gap between (PP)*

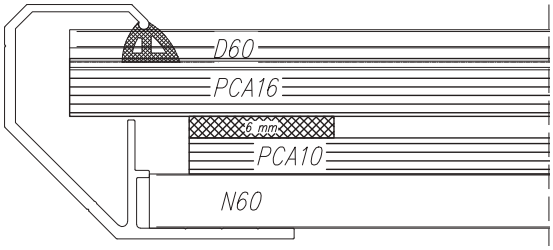


Fig. 120 *Section of rooflight of width 1.5÷6.0 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 16 + PP + PCA 10)	PCA 16 + PP + PCA 10	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.0÷1.1 W/m²K	
LIGHT TRANSMISION Lt	39÷64 %	13÷54 %
ACOUSTIC INSULATION R_w	min. 18 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	– B-s1,d0 – B-s2,d0	

All parameters of polycarbonate sheets are specified for standard execution.

8.2.6 | Two multi-chamber polycarbonate 16 mm panels with air gap (PCA 16+PP+PCA 16)

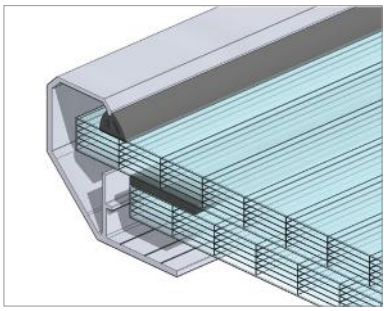


Fig. 121 *Rooflight glazing: two multi-chamber polycarbonate panels (PCA 16 + PCA 16) with air gap between (PP)*

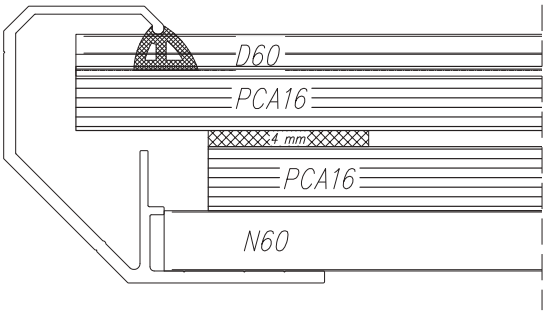


Fig. 122 *Section of rooflight of width 1.5÷4.0 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 16 + PP + PCA 16)	PCA 16 + PP + PCA 16	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	0.9÷1.0 W/m²K	
LIGHT TRANSMISION Lt	20÷22 %	13÷54 %
ACOUSTIC INSULATION R_w	min. 21 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B-s1,d0	

8.2.7 | Multi-chamber polycarbonate panel and NRO panel (PCA+NRO)

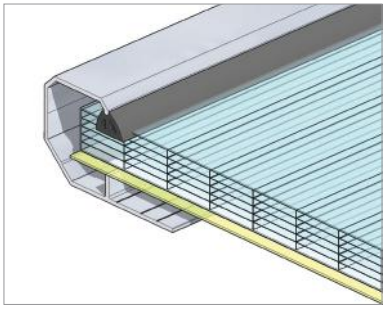


Fig. 123 *Rooflight glazing: multi-chamber polycarbonate panel (PCA), NRO panel*

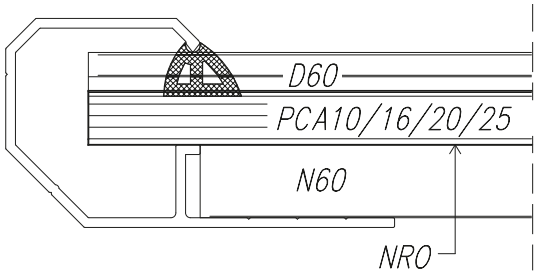


Fig. 124 *Rooflight section; glazing – single multi-chamber polycarbonate panel and NRO panel*

PANEL SET PARAMETERS (PCA) I POLYESTER PANEL NRO	PCA 10 + NRO		PCA 16 + NRO	
	CLEAR	OPAL	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	2.2÷2.9 W/m²K		1.77÷2.0 W/m²K	
LIGHT TRANSMISION Lt	51÷58 %	45÷49 %	45÷51 %	36÷43 %
ACOUSTIC INSULATION R_w	18÷19 dB		18÷19 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B_{ROOF}(t1)		B_{ROOF}(t1)	

PANEL SET PARAMETERS (PCA)	PCA 20 + NRO		PCA 25 + NRO	
	CLEAR	OPAL	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.59÷1.8 W/m²K		1.4÷1.6 W/m²K	
LIGHT TRANSMISION Lt	45÷51 %	36÷43 %	43÷51 %	30÷40 %
ACOUSTIC INSULATION R_w	21 dB		22 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B_{ROOF}(t1)		B_{ROOF}(t1)	

All parameters of polycarbonate sheets are specified for standard execution.

8.2.8 | 10 mm multi-chamber polycarbonate panel, air gap and NRO panel (PCA 10+PP+NRO)

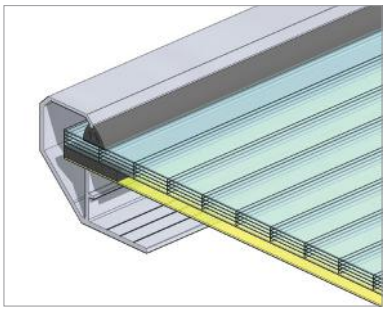


Fig. 125 *Rooflight glazing: multi-chamber polycarbonate panel (PCA 10), NRO panel with air gap between (PP)*

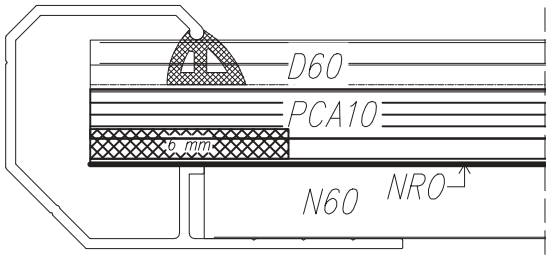


Fig. 126 *Section of rooflight of width 1.2÷3.5 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 10 + PP + NRO)	PCA 10 + PP + NRO	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1,8÷2,0 W/m²K	
LIGHT TRANSMISION Lt	13÷24 %	6÷18 %
ACOUSTIC INSULATION R_W	min. 19 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B_{ROOF}(t1)	

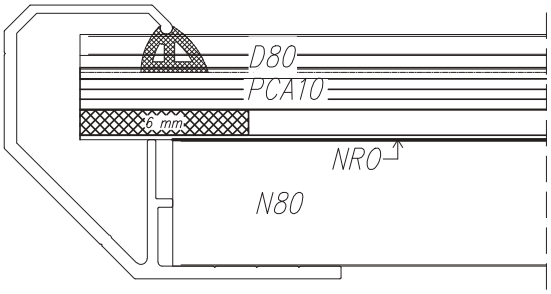


Fig. 127 *Section of rooflight of width 1.5÷4.0 m; supporting profile (N) and pressing profile (D) of width 80 mm*

8.2.9 | 16 mm multi-chamber polycarbonate panel, air gap and NRO panel (PCA 16+PP+NRO)

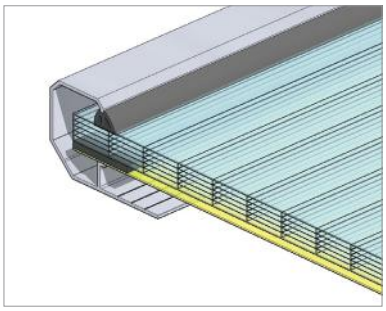


Fig. 128 *Rooflight glazing: multi-chamber polycarbonate panel (PCA 16), NRO panel with air gap between (PP)*

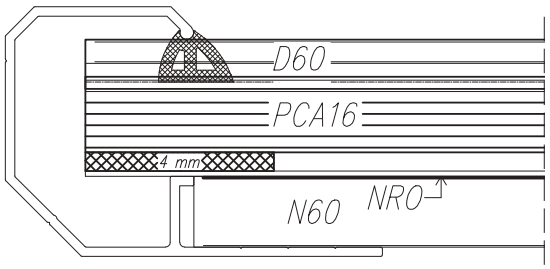


Fig. 129 *Section of rooflight of width 1.5÷4.0 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 16 + PP + NRO)	PCA 16 + PP + NRO	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.5÷1.6 W/m²K	
LIGHT TRANSMISION Lt	11÷21 %	6÷16 %
ACOUSTIC INSULATION R_W	min. 19 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B_{ROOF}(t1)	

All parameters of polycarbonate sheets are specified for standard execution.

8.2.10 | 20 mm multi-chamber polycarbonate panel, air gap and NRO panel (PCA 20+PP+NRO)

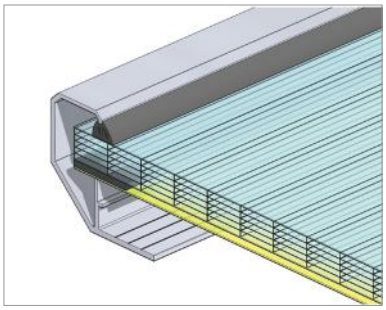


Fig. 130 *Rooflight glazing: multi-chamber polycarbonate panel (PCA 10), NRO panel with air gap between (PP)*

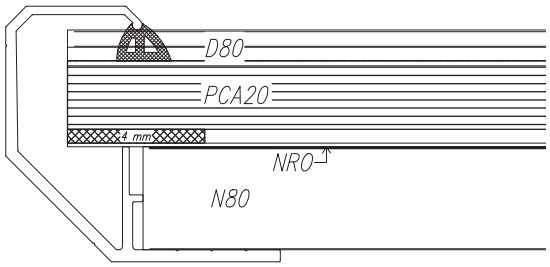


Fig. 131 *Section of rooflight of width 2.0÷4.0 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 20 + PP + NRO)	PCA 20 + PP + NRO	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.3÷1.4 W/m²K	
LIGHT TRANSMISION Lt	11÷19 %	5÷16 %
ACOUSTIC INSULATION R_W	min. 19 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B_{ROOF}(t1)	

8.2.11 | Multi-chamber polycarbonate 10 mm panel and NRO panel (PCA 10+NRO+PCA10) or fiberglass mat

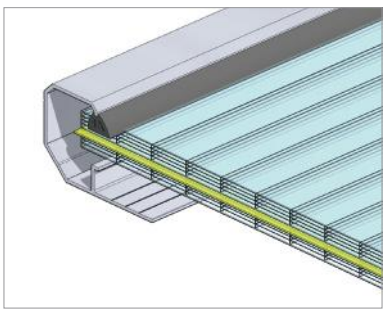


Fig. 132 *Rooflight glazing: two multi-chamber polycarbonate panels (PCA 10 + PCA 10) with NRO panel between*

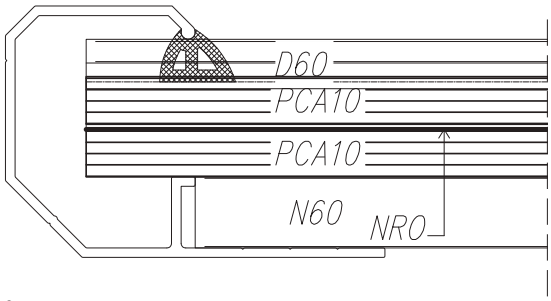


Fig. 133 *Section of rooflight of width 1.2÷3.5 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 10 + NRO + PCA 10)	PCA 10 + NRO + PCA10	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.3÷1.5 W/m²K	
LIGHT TRANSMISION Lt	10÷22 %	4÷17 %
ACOUSTIC INSULATION R_W	min. 19 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B_{ROOF}(t1)	

All parameters of polycarbonate sheets are specified for standard execution.

8.2.12 | Multi-chamber polycarbonate 10 mm panel with NRO panel and air gap (PCA 10+NRO+PP+PCA 10)

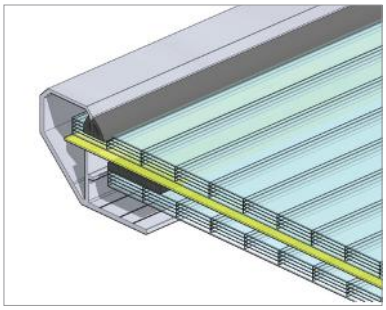


Fig. 134 *Rooflight glazing: two multi-chamber polycarbonate panels (PCA 10 + PCA 10) with air gap (PP) and NRO panel between*

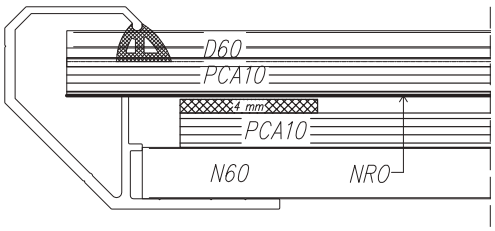


Fig. 135 *Section of rooflight of width 1.2÷3.5 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 10 + NRO + PP + PCA 10)	PCA 10 + NRO + PP + PCA 10	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.2÷1.3 W/m²K	
LIGHT TRANSMISION Lt	10÷22 %	4÷17 %
ACOUSTIC INSULATION R_w	min. 18 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B_{ROOF}(t1)	

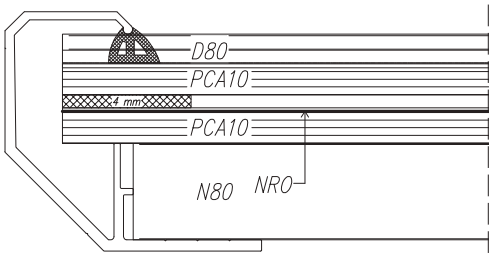


Fig. 136 *Section of rooflight of width 4.0 m; multi-chamber polycarbonate panel (PCA), NRO panel*

8.2.13 | Two multi-chamber polycarbonate 16 mm and 10 mm panels with NRO panel and air gap (PCA 16+NRO+PP+PCA 10)

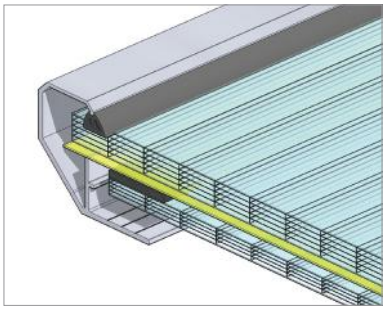


Fig. 137 *Rooflight glazing: two multi-chamber polycarbonate panels (PCA 16 + PCA 10) with NRO panel and air gap (PP) between*

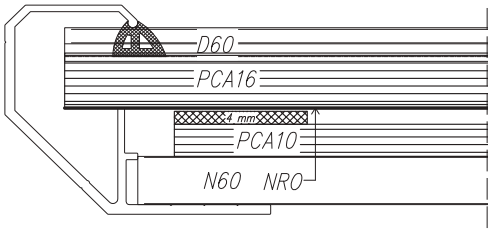


Fig. 138 *Section of rooflight of width 1.5÷6.0 m; supporting profile (N) and pressing profile (D) of width 60 mm*

PANEL SET PARAMETERS (PCA 16 + NRO + PP + PCA 10)	PCA 16 + NRO + PP + PCA 10	
	CLEAR	OPAL
HEAT TRANSFER COEFFICIENT U	1.0÷1.1 W/m²K	
LIGHT TRANSMISION Lt	2÷16 %	6÷16 %
ACOUSTIC INSULATION R_w	min. 18 dB	
FIRE PERFORMANCE (AS PER EN 13501-1)	B_{ROOF}(t1)	

All parameters of polycarbonate sheets are specified for standard execution.

9. | Additional equipment for continuous rooflights

Equipment / Product type	Wind deflectors	Anti-burglar grid	Safety net 1200 J	Limit switch
				
Smoke vents in continuous rooflights	●	●	●	●
Daily ventilation vents in continuous rooflights	●	●	●	●
Fixed continuous rooflights (without vents)	-	● (*)	● (**)	-

(*) Anti-burglar grid available only for selected dimensions of continuous rooflights
(**) Safety net available only for selected dimensions of continuous rooflights

9.1 | Wind deflectors

» a smoke vent element increasing its active area,
» **wind deflectors are used as standard equipment in smoke exhaust vents mcr PROLIGHT and mcr PROLIGHT TB**,
» they consists of wind shield fixed to the base with mounting consoles,
» wind deflectors dimensions range: 100 ÷ 300 mm (depending on type and width of vent integrated in rooflight),
» wind shields made of aluminium sheet; mounting consoles made of galvanized steel sheet,
» **non-standard options:**
– powder coating of wind deflectors.

Wind deflectors are installed in smoke vents in pairs:
» in the free corners of single-leaf vents in arched rooflights,
» on the width of the double-leaf vent in arched rooflights.

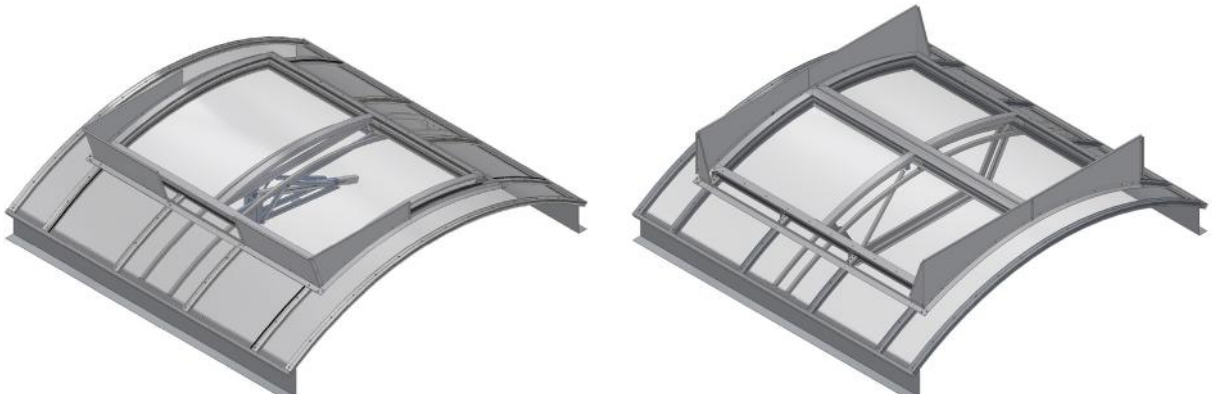


Fig. 139 *Wind deflectors in single-leaf and doube-leaf smoke vent installed in continuous rooflight*

9.2 | Anti-burglar grid

» application in vents within the full dimensional range in continuous rooflights of span up to 6 m,
» prevents from access of unauthorized persons, and from falling inside,
» conforms to class 2 anti-burglar resistance as per ENV 1627,
» resistant to impact of large, soft body, up to maximum energy of 1200 J – corresponds to SB1200 class as per EN 1873 standard,
» made of ø21 mm galvanized steel rods fixed in steel sections; the pipes rotate, preventing sawing off,
» rods additionally stringed with cross-bar,
» grid installed in the device base,
» maximum distance between rods of the grid – 180 mm,
» powder painted or galvanized grid.

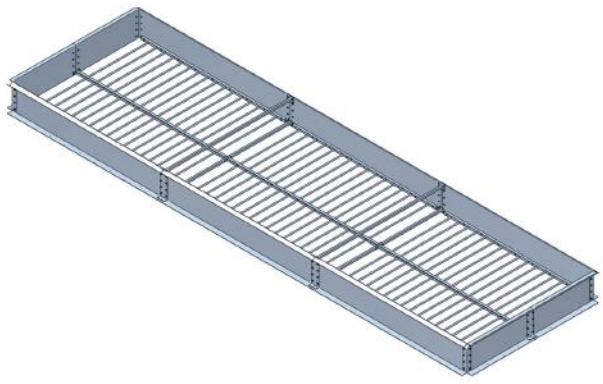


Fig. 140 *Anti-burglar grid installed in continuous rooflight base*

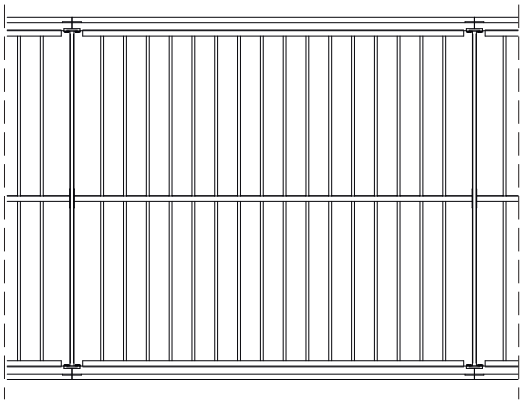


Fig. 141 *Top view of anti-burglar of installed in continuous rooflight*

9.3 | Safety net 1200 J

» application in vents within the full dimensional range in continuous rooflights of span up to 3.6 m,
» protects from falling through the vent,
» resistant to impact of large, soft body, up to maximum energy of 1200 J – corresponds to SB1200 class as per EN 1873 standard,
» net installed in the device base,
» made of galvanized steel rods of 4÷8 mm diameter, with 100 x 100 mm to 150 x 650 mm mesh,
» **net non-standard options:**
– powder coating,
» optional safety (safeguard) net making, conformant with EN 1263-1, providing fall protection,
» the net is made of polypropylene ropes and installed in the vent base.

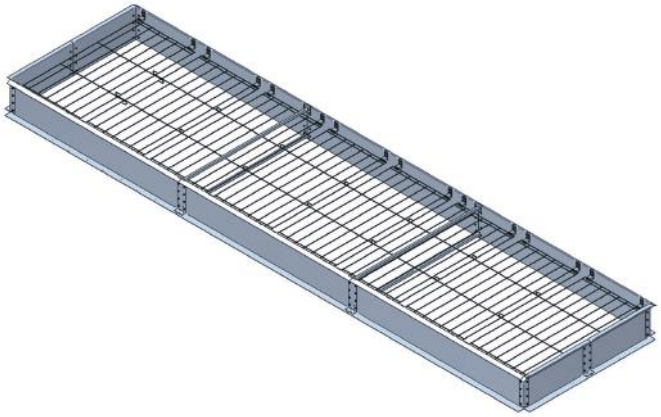


Fig. 142 *Safety net 1200 J installed in continuous rooflight base*

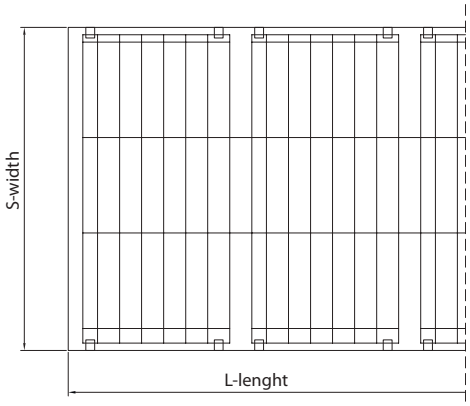


Fig. 143 *Top view of safety net installed in continuous rooflight*

9.4 | Limit switch

» used for signaling the position of the leaf in a smoke exhaust or ventilation vent, to display the status of the device on a synoptic panel or to transmit a signal to the fire signaling system,
» **depending on the configuration, it is possible to indicate three position states:**
– complete closure of the vent,
– complete opening of the vent,
– any opening of the vent,
» it has two voltage-free contacts NO and NC,
» voltage range up to 115 V- or up to 250 V~,
» the current load capacity of the contacts is a maximum of 5 A (resistive load) and depends on the type of load,
» switch durability class IP65.

Fig. 144 *Limit switch in smoke vent installed in continuous rooflight*