RT 38857 en

314.3 Talo 2000
415.2 Talo 90
X31 erityisikkunat, lasikatot... SfB
F44 Hoito- ja huoltokoodi

Keraplast rooflights
Kera Group Oy

KERAPLAST

Prodlib
Download Orivent-BIM-objects from ProdLib-product library.

CE
EN 1873

Light and air

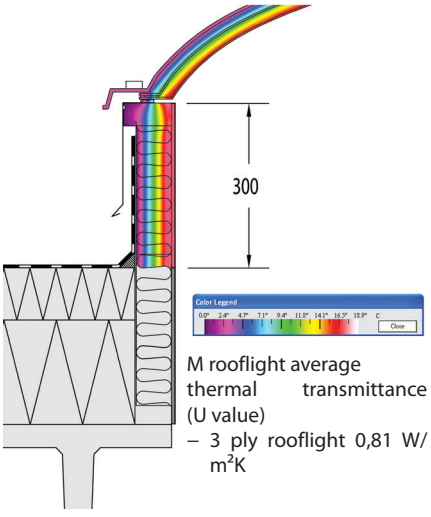
Dome rooflights convay daylight indoors. Equipped with various actuators these also provide fresh air ventilation, smoke ventilation and roof access. Dome rooflights work best on flat roofs where slope is less than 1:2 and light shaft height less than 1,5 m.

Weather durability, life cycle and ecology

Dome rooflights are manufactured of clear and weatherproof plastics. According to the quality system (ISO 9001) main factors for dome rooflights are the water tightness and life cycle. The expected life cycle for Keraplast dome rooflights is 25 years. Rooflights are often replaced in replacement of the entire roof. Old domes are recycleable energy waste.

CE marking of the rooflights

Keraplast rooflights are CE marked according to the EN 1873 standard. The rooflights have gone through comprehensive testing by notified body test laboratory. Furthermore the quality control has been organized according to the standard. Declaration of Performance (DoP) is presented and found at www.keragroup.fi.
The figure below describes the calculation formula of the U value. The required correlation value for U value by the building regulations is 1,0 W/m²K and maximum U value 2,0 W/m²K.



M rooflight average thermal transmittance (U value)
– 3 ply rooflight 0,81 W/m²K

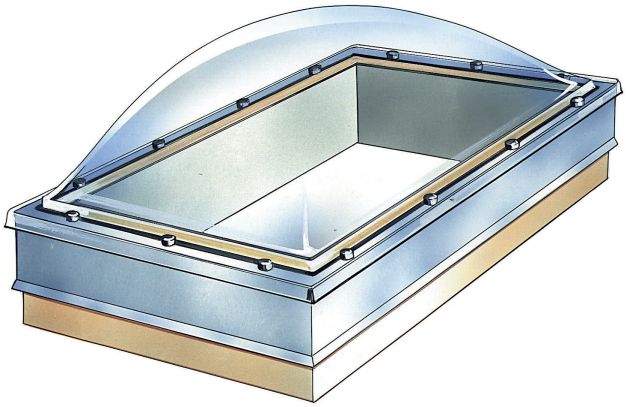
Valkea Mall, in Oulu, Finland

The inner court of an apartment building in Stockholm, Sweden.

Material, appearance and economic efficiency

Standard material for a dome rooflight is acrylic (PMMA). Keraplast also manufacturers domes of polycarbonate (PC) for such projects where higher impact resistance is required caused by traffic or mishandling. Polycarbonate is safer material than acrylic making it more suitable for example in school projects.

Domes are manufactured in domed and pyramid shape with opening geometry of square, rectangular and round. Colours are clear (standard), opal and smoke.
The rooflight with its upstand is a compact industrial component for contruction offering translucency, conserving heat and is watertight. The rooflights last long without service.



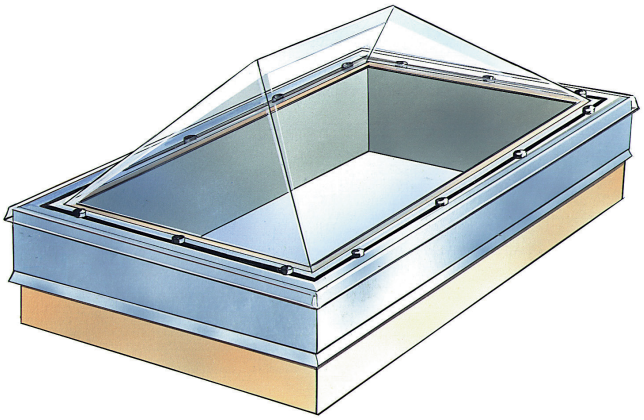


Figure 1
M3N rooflight
MR4 upstand
- Ventilation edge Flashing
- Bottom window 2 parts

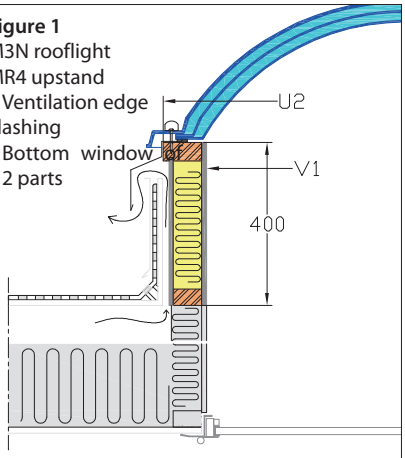


Figure 2
M3N rooflight
MAR7,5 energy stand
Flashing
Motor actuator

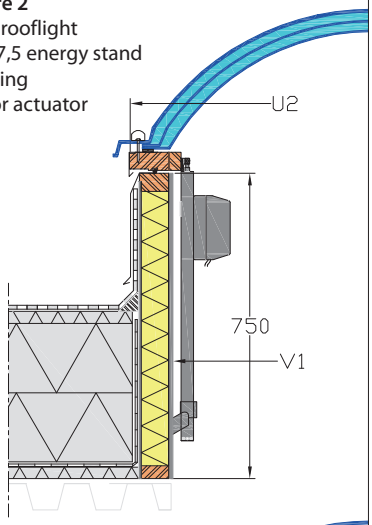
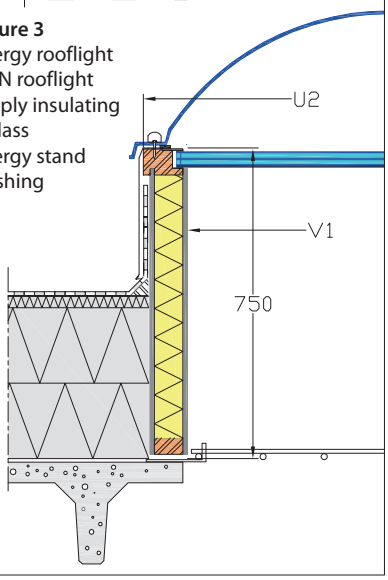


Figure 3
Energy rooflight
M1N rooflight
- 3 ply insulating glass

Energy stand
Flashing



M and PYRAMID M ROOFLIGHTS

Recommended applications

- Warm premises, 3 ply rooflights (M3N) and insulated upstands (MR/MAR)
- Semi warm premises, 2 ply rooflights (M2N) and insulated upstands (MR/MAR)

M rooflights	Nominal size (= light shaft size) V1 mm	Frame dimension U2 mm	Rooflight outer most dimension U3 mm	Rooflight height, mm M dome	Rooflight height, mm Pyramid dome
Pyramid M1N = 1 ply Pyramid M2N = 2 ply Pyramid M3N = 3 ply	600 x 600	800 x 800	860 x 860	220	300
	600 x 900	800 x 1100	860 x 1160	220	300
	600 x 1200	800 x 1400	860 x 1460	220	300
	900 x 900	1100 x 1100	1160 x 1160	300	450
	900 x 1200	1100 x 1400	1160 x 1460	300	450
	900 x 1800	1100 x 2000	1160 x 2060	300	450
	900 x 2100	1100 x 2300	1160 x 2360	300	450
	1000 x 1000	1200 x 1200	1260 x 1260	320	500
	1000 x 2000	1200 x 2200	1260 x 2260	320	500
	1200 x 1200	1400 x 1400	1460 x 1460	350	600
	1200 x 1800	1400 x 2000	1460 x 2060	350	600
	1200 x 2100	1400 x 2300	1460 x 2360	350	600
M1N = 1 ply M2N = 2 ply M3N = 3 ply	1200 x 2400	1400 x 2600	1460 x 2660	350	600
	1500 x 1500	1700 x 1700	1760 x 1760	390	750
	1800 x 1800	2000 x 2000	2060 x 2060	430	750 (folded)
	2100 x 2100	2300 x 2300	2360 x 2360	470	-

Standard M rooflights are manufactured from clear acrylic (PMMA) and for special purposes of polycarbonate (PC). Pyramid rooflights manufactured only from acrylic. Glare shade opal rooflight are made by order.
Installations accessories are spring screws and EPDM cellular rubber gaskets.

Upstands

Fixed	Openable	Structure/insulation thickn.	Height, mm
SR	SAR	solid wood	190
MR	MAR	mineral wool insulated/70	300, 400, 600, 750, 900
Energy MR	Energy MAR	PU insulated/70	300, 400, 600, 750, 900
Conical 60° MR	Conical 60° MAR	insulated/100	300, 400, 600, 750

Insulated upstands have wooden frame and mineral wool insulation. Inner surface is made of 8 mm silicate sheet and the exterior of plywood. For the assembly vapor barrier extends about 30 cm beyond the lower edge.
Flashings are of colour coated steel sheet, thickness 0,5 mm, standard colour RR 21, height 240 mm.
If the attic requires ventilation through the upstands, ventilated upstand is recommended. Note. A 2-part sheet, check figure 1.

Figure 4
Pyramid M3N rooflight
Conical MR6 upstand
Flashing

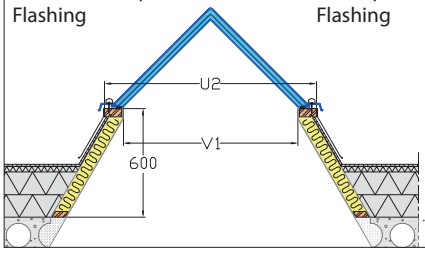
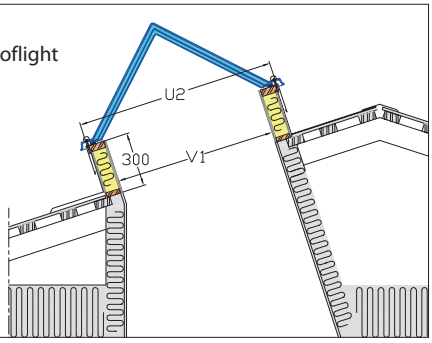
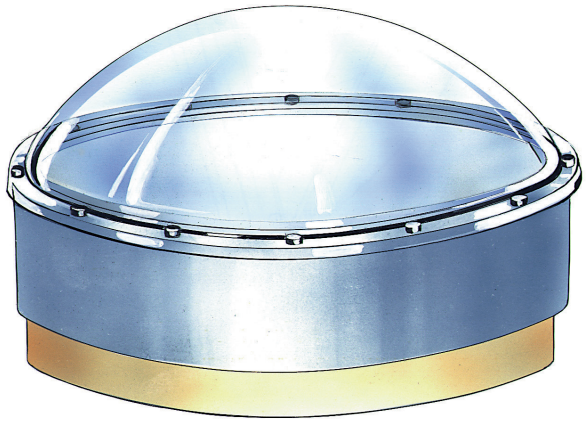
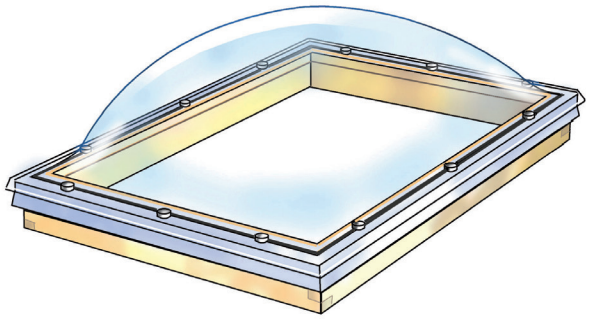


Figure 5
Pyramid M3N rooflight
MR3 upstand
Flashing







MP rooflights (round)

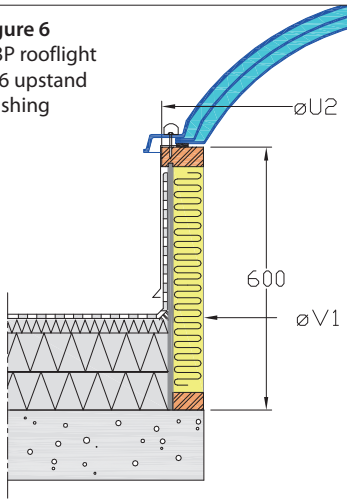
Application

- Warm and semi warm premises, as with M rooflights

	Opening V1 mm	Outer dimension of dome U2 mm	Outer most dimension of dome U3 mm	Dome height mm
M1P = 1-ply M2P = 2-ply M3P = 3-ply	Ø 600	Ø 800	Ø 860	220
	Ø 900	Ø 1100	Ø 1160	300
	Ø 1000	Ø 1200	Ø 1260	320
	Ø 1200	Ø 1400	Ø 1460	350
	Ø 1500	Ø 1700	Ø 1760	390
	Ø 1800	Ø 2000	Ø 2060	430
	Ø 2100	Ø 2300	Ø 2360	470

Round rooflights' (MP) standard delivery is of clear acrylic and for special needs of polycarbonate.
As per order also opal. Upstand construction as those of M serie roofligths.

Figure 6
M3P rooflight
PR6 upstand
Flashing



K ROOFLIGHTS

- K rooflights are mostly from 1960s' and 1970s'.

Recommended application

- Renovations, summer places and shelters

K-rooflights	Nominal size (= light opening) V1 mm	Frame Outer dimension U2 mm	Outer most dimension of dome U3 mm	Dome height mm
K1N = 1 ply K2N = 2 ply K3N = 3 ply	600 x 600	710 x 710	760 x 760	220
	600 x 900	710 x 1010	760 x 1060	220
	600 x 1200	710 x 1310	760 x 1360	220
	750 x 750	860 x 860	910 x 910	250
	1000 x 1000	1110 x 1110	1160 x 1160	300
	1000 x 2000	1110 x 2110	1160 x 2160	300
	1250 x 1250	1360 x 1360	1410 x 1410	350
	1500 x 1500	1610 x 1610	1660 x 1660	390

Standard K-rooflights are made of clear acrylic. For special needs of polycarbonate.
As per oder also of opal. Installation accessories: spring screws and EPDM gaskets.
Installation frames are of solid wood, thickness 45 mm. The height of the fixed frame (ERN) is 180 mm and the openable one (ARN) 190 mm. Flashings are 90 mm high, colour RR 21.

Figure 7 (semi warm space)
K2N rooflight
SARinstallation frame
Spiral opener

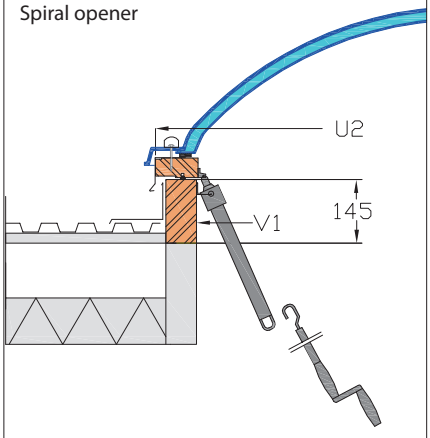
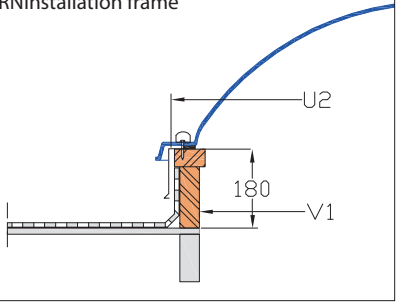


Figure 8 (shelter)
K1N rooflight
ERNinstallation frame



Access to the roof

An exit to the roof through a staircase roof access is often required in apartment buildings. Then the solution is integrated smoke exhaust and roof access dome with a rack actuator (see figure 9). For roof access only there is a mechanical exit gear, model ULOSK.

Ventilation

In the summer heat the rooflights provide excellent ventilation. Motor driven actuators are recommended.

Inline installations

With 300 mm medium beams the rooflights can be installed on the line. In this application sloped water channels are between the rooflights, that are joined to the surrounding flashings with a flat lock seam. The field installations rather with aluminum gutter profiles.

Flashings

The flashings of the rooflights are of color coated sheet metal, colour code RR20 or RR21. Made to order light coloured sheets, as well as aluminum sheets available.

Notice! In case the flashings of the rooflights are made at the site light coloured sheets should be used. In sunshine the dark sheets strongly collect heat and may prematurely age the acrylic rooflight.

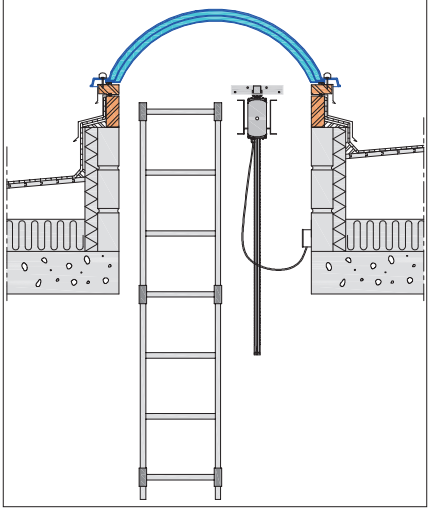
Extended size and special rooflights

The large size roof openings are covered with dome shaped extended size rooflights with a Ø 3…6 m. The structure consists of 1-2 m2 acrylic sections joint to the steel frame with aluminum profiles.
In addition to the standard size rooflights there is a large variety of special sized rooflights from 500. . .2500 mm. The manufacturing method of the domes allow also varying geometrical forms. The typical forms are triangle, polygon or oval.

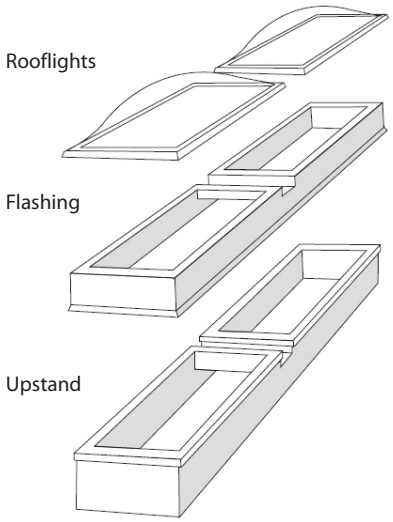
Service and installations

Keraplast services and installs rooflights and smoke vents in Finland. For service in your area, please check with the local dealer.

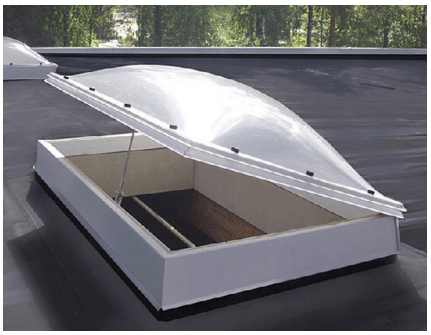
Figure 9
Combined exit and smoke hatch
- M3N rooflight
- SAR installation frame
- DXD ULOSK actuator
- Ladder (not included)



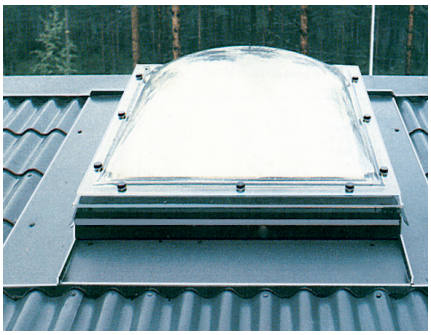
On the line installation



Extended size rooflight, diameter 6,0 m, Loiste Energia Oy, in Kajaani, Finland



Roof vent, Luhta company, in Nastola, Finland



A house rooflight installation on a corrugated roof

MANUFACTURING, SALES AND INSTALLATION

Kera Group Oy
Käkeläntie 41
FI-16300 ORIMATTILA, FINLAND
Tel. +358 3 544 3100
info@keragroup.fi
www.keragroup.fi

ORGANISATION CERTIFIED BY Inspecta
ISO 9001

KERAPLAST