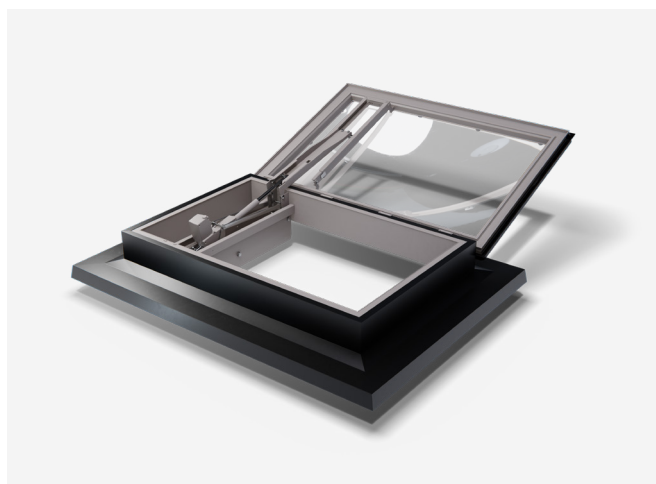


Technical Data Sheet –

Roof Single Leaf – Residential (RSL-R)



Roof Single Leaf – Residential (RSL-R) units are principally designed for smoke and heat ventilation in corridors within residential apartments, hotels, shops and offices. They are available as square, rectangular or circular.

Specific Features

- Certified to BS EN12101-2
- Compliant with Building Regulations Approved Document B and L
- Opens to 160 degrees within 60 seconds
- May incorporate roof access
- Provides natural comfort ventilation
- EN 1873 Impact Resistance 1200J
- Available as square, rectangular or circular
- May be glazed or solid insulated lid
- Available with PVC upstand or direct to builders upstand
- Internal fire rating B-s3, d0 to EN13501-1
- External fire rating B_{ROOF} (t4) to EN13501-5

Product Description

Roof Single Leaf – Residential (RSL-R) units are principally designed for smoke and heat ventilation in corridors within residential apartments, hotels, shops and offices. They are available as square, rectangular or circular.

They may be glazed in polycarbonate rooflight in single, double, triple or quad skin or with aluminium insulated solid cover. The polycarbonate rooflights are available as clear, opal or heat reflect. The aluminium insulated covers are available as mill finish or powder coated to any RAL colour.

The electric actuator is 24 volt DC and opens the units to 160° within 60 seconds. A wide range of upstands are available to accommodate roof insulation or an adaptor may be installed to builder's upstands. Roof Single Leaf – Residential (RSL-R) may also be used for roof access and to provide natural ventilation.

Technical Data Sheet –

Roof Single Leaf – Residential (RSL-R)

Thermal transmission

Values shown below are calculated U-Values, unless denoted otherwise. Complete unit U-Values are available on request.

Typical Values	U-Value (W/(m ² ·K))
Double Glazed	2.68
Triple Glazed	1.78
Quadruple Glazed	1.37
Solid aluminium insulated cover 32mm	0.80
Solid aluminium insulated cover 64mm	0.48

Air tightness

Air permeability class 2 according to EN1873:2014+A1:2016

Fire rating

Typical Values

Internal	B-s3, d0	EN13501-1
External	B _{ROOF} (t4)	EN13501-5
Service Temperature	-50°C – +120°C	

Sound reduction

Typical Values	(dB)
Double Glazed	20
Triple Glazed	22
Quadruple Glazed	23

160° actuator technical data

	LM70100	LM100160
Voltage	24V DC	24V DC
Current (with load)	Max 2.5 amp	Max 4.0 amp
Opening Angle	160°	160°
Ambient Operating Temperature	-15°C to +70°C	-15°C to +70°C
Operating Time	< 60 seconds	< 60 seconds
Protection Degree	min IP54	min IP54
Product Life Comfort Cycles	10,000	10,000
Weight	23kg	25kg
Size	700–1100mm	1000–1600mm

- Manufactured and certified to EN12101-2 Factory Production Control (FPC)
- Weather tightness to EN1873 Pass.
- Impact resistant to EN1873 1200 joules and ACRM Class B
- Resistance to Heat B300 EN12101-2 Annex G
- Snow Load SL500-1000 EN12101-2 Annex D-E
- Wind Load WL500-1500 EN12101-2 Annex F
- Low Ambient Temperature T (-15) EN12101-2 Annex D-E

Technical Data Sheet –

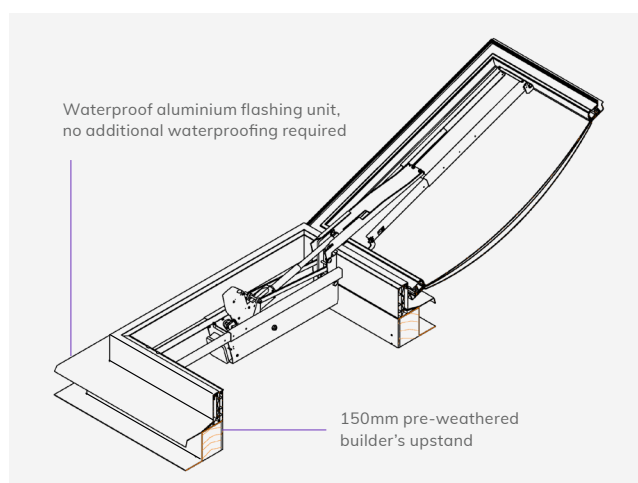
Roof Single Leaf – Residential (RSL-R)

Optional Features

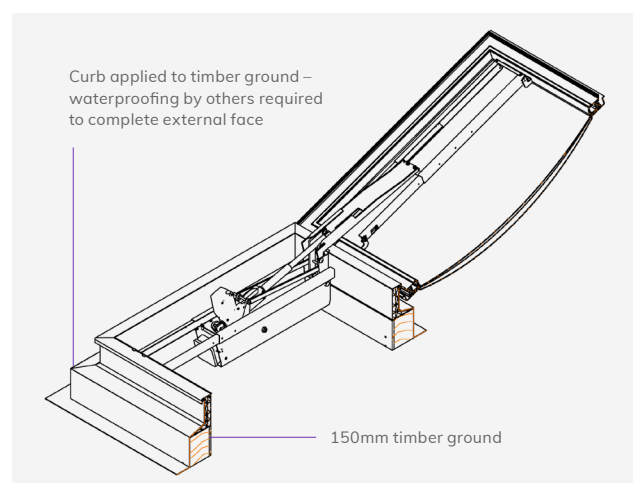
- Polyester powder coating, internal colour white 9010 as standard; any RAL colour available externally
- Purpose made adaptor base available enabling the unit to be installed to builder's upstand curb or profile roof
- Fall arrest grid certified to EN1873 Soft Body Impact 1200 joules is available for protection of opening when in the open position
- Aerodynamic wind deflectors are available to optimize aerodynamic efficiency
- A wide range of Roof Single Leaf - Residential Smoke Controls and accessories are available including smoke and comfort control

RSL-R Application Options

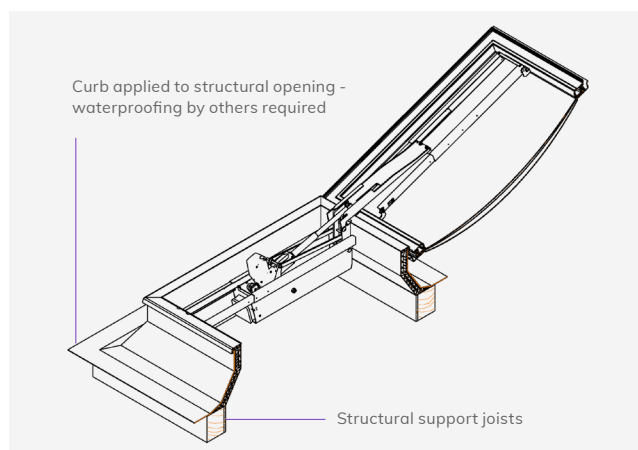
Option 1: RSL-R Applied to a 150mm Builder's Upstand, Collar Version



Option 2: RSL-R Applied to a 150mm Builder's Upstand, Curb Version



Option 3 - RSL-R Applied to a Structural Aperture



Technical Data Sheet –

Roof Single Leaf – Residential (RSL-R)

Size Range

Size Ref	Daylight Size (mm)	Roof Opening Size (mm) 150mm Vertical Upstand <i>Applicable to option 1 & 2</i>	Roof Opening Size (mm) 300mm Splayed Upstand <i>Applicable to option 3</i>	Aero-dynamic Free Area* (Aa) PVC 150 V	Aero-dynamic Free Area* (Aa) PVC 300 S	Free Area (m ²)	Actuator Max Load (A)	Offset Actuator (LHS viewed from front)	Snow Load (SL)	Wind Load (WL)
Square Units										
RSL-R.70.70	700 x 700	700 x 700	900 x 900	0.20	0.32	0.39	2.5	✓	500	750
RSL-R.75.75	750 x 750	750 x 750	950 x 950	0.23	0.36	0.46	2.5	✓	500	750
RSL-R.80.80	800 x 800	800 x 800	1000 x 1000	0.26	0.40	0.54	2.5	✓	500	750
RSL-R.85.85	850 x 850	850 x 850	1050 x 1050	0.29	0.44	0.62	2.5	✓	500	750
RSL-R.90.90	900 x 900	900 x 900	1100 x 1100	0.32	0.48	0.71	2.5	✓	500	750
RSL-R.100.100	1000 x 1000	1000 x 1000	1200 x 1200	0.55	0.68	0.90	2.5	✓	500	750
RSL-R.105.105	1050 x 1050	1050 x 1050	1250 x 1250	0.61	0.73	1.00	2.5	✓	500	750
RSL-R.110.110	1100 x 1100	1100 x 1100	1300 x 1300	0.67	0.81	1.11	4.0	✓	1000	1500
RSL-R.120.120	1200 x 1200	1200 x 1200	1400 x 1400	0.79	0.96	1.34	4.0	✓	1000	1500
RSL-R.130.130	1300 x 1300	1300 x 1300	1500 x 1500	0.93	1.10	1.59	4.0	✓	1000	1500
Rectangular Units										
RSL-R.70.100	700 x 1000	700 x 1000	900 x 1200	0.28	0.43	0.60	2.5	✓	500	1500
RSL-R.70.130	700 x 1300	700 x 1300	900 x 1500	0.36	0.54	0.81	2.5	✓	500	1500
RSL-R.70.150	700 x 1500	700 x 1500	900 x 1700	0.42	0.61	0.95	2.5	✓	500	1500
RSL-R.70.160	700 x 1600	700 x 1600	900 x 1800	0.45	0.65	1.02	2.5	✓	500	1500
RSL-R.70.200	700 x 2000	700 x 2000	900 x 2200	0.56	0.80	1.30	2.5	X	500	1500
RSL-R.70.220	700 x 2200	700 x 2200	900 x 2400	0.62	0.86	1.44	2.5	X	500	1500
RSL-R.75.105	750 x 1050	750 x 1050	950 x 1250	0.32	0.48	0.69	2.5	✓	500	1500
RSL-R.75.125	750 x 1250	750 x 1250	950 x 1450	0.38	0.55	0.84	2.5	✓	500	1500
RSL-R.75.165	750 x 1650	750 x 1650	950 x 1850	0.50	0.70	1.14	2.5	✓	500	1500
RSL-R.75.175	750 x 1750	750 x 1750	950 x 1950	0.53	0.59	1.21	2.5	✓	500	1500
RSL-R.75.225	750 x 2250	750 x 2250	950 x 2450	0.68	0.93	1.59	2.5	X	350	1500
RSL-R.80.110	800 x 1100	800 x 1100	1000 x 1300	0.35	0.52	0.78	2.5	✓	500	1500
RSL-R.80.130	800 x 1300	800 x 1300	1000 x 1500	0.42	0.60	0.94	2.5	✓	500	1500
RSL-R.80.140	800 x 1400	800 x 1400	1000 x 1600	0.45	0.64	1.02	2.5	✓	500	1500
RSL-R.80.160	800 x 1600	800 x 1600	1000 x 1800	0.51	0.72	1.18	2.5	✓	350	1500
RSL-R.80.170	800 x 1700	800 x 1700	1000 x 1900	0.54	0.76	1.26	2.5	X	350	1500
RSL-R.80.180	800 x 1800	800 x 1800	1000 x 2000	0.58	0.61	1.34	2.5	X	350	1500
RSL-R.80.200	800 x 2000	800 x 2000	1000 x 2200	0.64	0.88	1.50	2.5	X	350	1500
RSL-R.80.220	800 x 2200	800 x 2200	1000 x 2400	0.70	0.96	1.66	2.5	X	350	1500

Note: Aa values shown in *italic* are based on simple assessment procedure with $C_v = 0.4$

*Aa values standard without wind deflectors

Technical Data Sheet –

Roof Single Leaf – Residential (RSL-R)

Size Ref	Daylight Size (mm)	Roof Opening Size (mm) 150mm Vertical Upstand <i>Applicable to option 1 & 2</i>	Roof Opening Size (mm) 300mm Splayed Upstand <i>Applicable to option 3</i>	Aero-dynamic Free Area* (Aa) PVC 150 V	Aero-dynamic Free Area* (Aa) PVC 300 S	Free Area (m²)	Actuator Max Load (A)	Offset Actuator (LHS viewed from front)	Snow Load (SL)	Wind Load (WL)
Rectangular Units										
RSL-R.80.230	800 x 2300	800 x 2300	1000 x 2500	0.74	1.00	1.74	2.5	X	350	1500
RSL-R.90.120	900 x 1200	900 x 1200	1100 x 1400	0.43	0.62	0.98	2.5	✓	500	1500
RSL-R.90.150	900 x 1500	900 x 1500	1100 x 1700	0.54	0.75	1.25	2.5	✓	500	1500
RSL-R.100.130	1000 x 1300	1000 x 1300	1200 x 1500	0.72	0.88	1.20	2.5	✓	500	1500
RSL-R.100.150	1000 x 1500	1000 x 1500	1200 x 1700	0.81	1.02	1.40	2.5	✓	500	1500
RSL-R.100.160	1000 x 1600	1000 x 1600	1200 x 1800	0.85	1.08	1.50	4.0	✓	1000	1500
RSL-R.100.190	1000 x 1900	1000 x 1900	1200 x 2100	0.99	1.29	1.80	4.0	X	1000	1500
RSL-R.100.200	1000 x 2000	1000 x 2000	1200 x 2200	1.04	1.35	1.90	4.0	X	1000	1500
RSL-R.100.220	1000 x 2200	1000 x 2200	1200 x 2400	1.14	1.47	2.10	4.0	X	500	1500
RSL-R.100.230	1000 x 2300	1000 x 2300	1200 x 2500	1.20	1.56	2.20	4.0	X	500	1500
RSL-R.105.165	1050 x 1650	1050 x 1650	1250 x 1850	0.90	1.16	1.63	4.0	X	1000	1500
RSL-R.105.225	1050 x 2250	1050 x 2250	1250 x 2450	1.20	1.56	2.26	4.0	X	500	1500
RSL-R.110.140	1100 x 1400	1100 x 1400	1300 x 1600	0.82	1.04	1.44	4.0	✓	1000	1500
RSL-R.110.170	1100 x 1700	1100 x 1700	1300 x 1900	0.99	1.24	1.77	4.0	X	1000	1500
RSL-R.110.230	1100 x 2300	1100 x 2300	1300 x 2500	1.32	1.69	2.43	4.0	X	500	1500
RSL-R.120.140	1200 x 1400	1200 x 1400	1400 x 1600	0.87	1.14	1.58	4.0	✓	1000	1500
RSL-R.120.150	1200 x 1500	1200 x 1500	1400 x 1700	0.97	1.21	1.70	4.0	✓	1000	1500
RSL-R.120.170	1200 x 1700	1200 x 1700	1400 x 1900	1.10	1.06	1.94	4.0	✓	1000	1500
RSL-R.120.180	1200 x 1800	1200 x 1800	1400 x 2000	1.14	1.43	2.06	4.0	X	500	1500
RSL-R.120.210	1200 x 2100	1200 x 2100	1400 x 2300	1.31	1.67	2.42	4.0	X	500	1500
RSL-R.120.220	1200 x 2200	1200 x 2200	1400 x 2400	1.42	1.34	2.54	4.0	X	500	1500
RSL-R.130.160	1300 x 1600	1300 x 1600	1500 x 1800	1.10	1.43	1.98	4.0	✓	500	1500
RSL-R.130.190	1300 x 1900	1300 x 1900	1500 x 2100	1.31	1.61	2.37	4.0	X	500	1500
RSL-R.130.200	1300 x 2000	1300 x 2000	1500 x 2200	1.04	1.32	2.50	4.0	X	500	1500
RSL-R.130.220	1300 x 2200	1300 x 2200	1500 x 2400	1.14	1.44	2.76	4.0	X	500	1500
RSL-R.130.230	1300 x 2300	1300 x 2300	1500 x 2500	1.20	1.50	2.89	4.0	X	500	1500

Note: Aa values shown in *italic* are based on simple assessment procedure with $C_v = 0.4$

*Aa values standard without wind deflectors