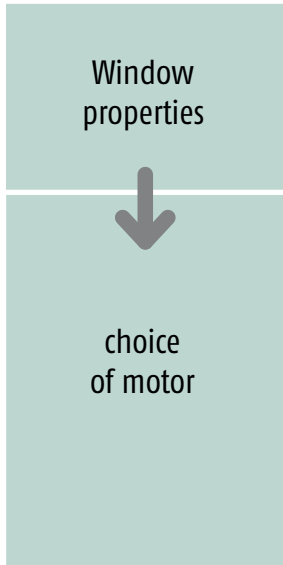


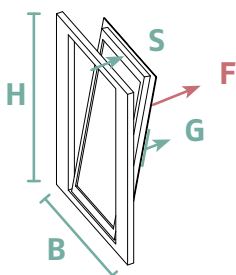
# SOLUTIONS FOR TOP OPENING WINDOWS



|                      |                                       |                        |                        |                        |                        |                        |                 |
|----------------------|---------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------|
| height of the window | 500mm - 1000mm                        |                        | 1000mm - 2000mm        |                        | 2000mm - 2500mm        |                        |                 |
| width of the window  | < 1500mm                              |                        | < 1500mm               |                        | < 1500mm               |                        |                 |
| desired opening (mm) | 200                                   | 250                    | 250                    | 420                    | 420                    | 600                    | 835             |
| power required *(N)  | 200                                   | 200                    | 200                    | 400                    | 400                    | 400                    | 400             |
| desired feed         | 240V~                                 | 240V~                  | 240V~                  | 240V~                  | 240V~                  | 240V~                  |                 |
|                      | 24V=                                  | 24V=                   | 24V=                   | 24V=                   | 24V=                   | 24V=                   | 24V=            |
| <b>motor type</b>    | <b>Linkeo 2</b>                       | <b>Linkeo 2</b>        | <b>Linkeo 2</b>        | <b>Linkeo 4</b>        | <b>Linkeo 4</b>        | <b>Linkeo 4</b>        | <b>Linkeo 4</b> |
| Ref number           | 230V<br>1 230 001<br>24V<br>1 230 000 | 1 230 003<br>1 230 002 | 1 230 003<br>1 230 002 | 1 230 007<br>1 230 005 | 1 230 007<br>1 230 005 | 1 230 008<br>1 230 006 | 1 230 004       |



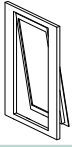
\* Calculation of the power required is based on the most common systems on the market For an exact calculation use the following formula.



F = needed force in Kg  
 S = desired stroke in mm  
 H = height of the window in mm  
 G = weight of the window in Kg

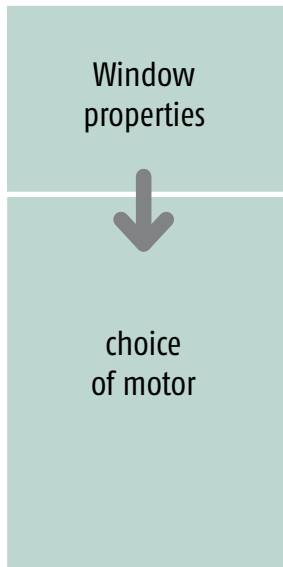
$$F = \frac{S}{H} \times \frac{G}{2}$$

- The width (B) of the window must not exceed 1500mm.
- The height of the window must be at least twice the size of the desired opening, this in connection with the maximum sag of the chain.



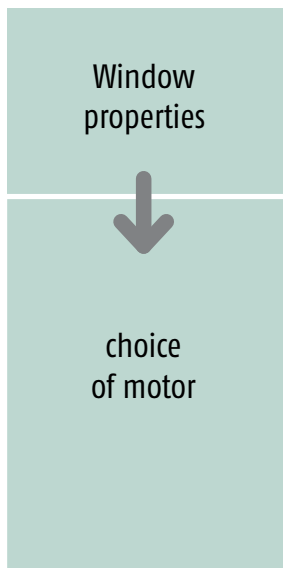
# SOLUTIONS FOR BOTTOM OPENING WINDOWS

## with chain motors



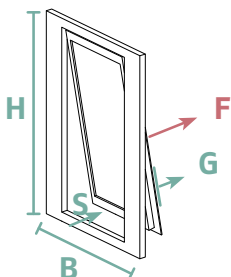
|                      |                                       |                        |                        |                        |                        |                        |                 |
|----------------------|---------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------|
| height of the window | 500mm - 1000mm                        |                        | 1000mm - 2000mm        |                        | 2000mm - 2500mm        |                        |                 |
| width of the window  | < 1500mm                              |                        | < 1500mm               |                        | < 1500mm               |                        |                 |
| desired opening (mm) | 200                                   | 250                    | 250                    | 420                    | 420                    | 600                    | 835             |
| power required *(N)  | 200                                   | 200                    | 200                    | 400                    | 400                    | 400                    | 400             |
| desired feed         | 240V~                                 | 240V~                  | 240V~                  | 240V~                  | 240V~                  | 240V~                  |                 |
|                      | 24V=                                  | 24V=                   | 24V=                   | 24V=                   | 24V=                   | 24V=                   | 24V=            |
| <b>motor type</b>    | <b>Linkeo 2</b>                       | <b>Linkeo 2</b>        | <b>Linkeo 2</b>        | <b>Linkeo 4</b>        | <b>Linkeo 4</b>        | <b>Linkeo 4</b>        | <b>Linkeo 4</b> |
| Ref number           | 230V<br>24V<br>1 230 001<br>1 230 000 | 1 230 003<br>1 230 002 | 1 230 003<br>1 230 002 | 1 230 007<br>1 230 005 | 1 230 007<br>1 230 005 | 1 230 008<br>1 230 006 | 1 230 004       |

## with rod motors



|                      |                                       |                        |                        |                        |                        |                        |                        |
|----------------------|---------------------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| height of the window | 500mm-1000mm                          | 1000mm - 2000mm        |                        | 2000mm - 2500mm        |                        |                        |                        |
| width of the window  | < 1500mm                              | < 1500mm               |                        | < 1500mm               |                        |                        |                        |
| desired opening (mm) | 0-200                                 | 0-200                  | 0-300                  | 450                    | 1000                   | 450                    |                        |
| power required *(N)  | 200                                   | 200                    | 200                    | 400                    | 400                    | 400                    |                        |
| desired feed         | 240V~                                 | 240V~                  | 240V~                  | 240V~                  | 240V~                  | 240V~                  |                        |
|                      | 24V=                                  | 24V=                   | 24V=                   | 24V=                   | 24V=                   | 24V=                   |                        |
| <b>motor type</b>    | <b>Rodeo</b>                          | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>           |                        |
| Ref number           | 230V<br>24V<br>1 230 009<br>1 230 010 | 1 230 009<br>1 230 010 | 1 230 011<br>1 230 012 | 1 230 015<br>1 230 016 | 1 230 011<br>1 230 012 | 1 230 015<br>1 230 016 | 1 230 013<br>1 230 014 |

\* Calculation of the power required is based on the most common systems on the market For an exact calculation use the following formula.



F = needed force in Kg  
 S = desired stroke in mm  
 H = height of the window in mm  
 G = weight of the window in Kg

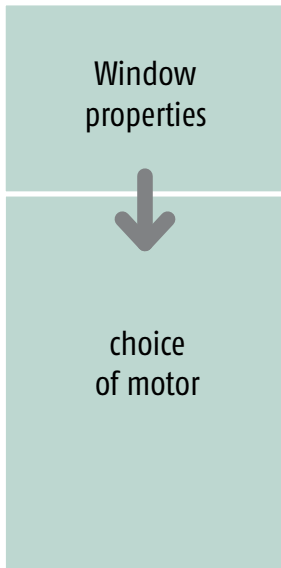
$$F = \frac{S}{H} \times \frac{G}{2}$$

- The width (B) of the window must not exceed 1500mm.



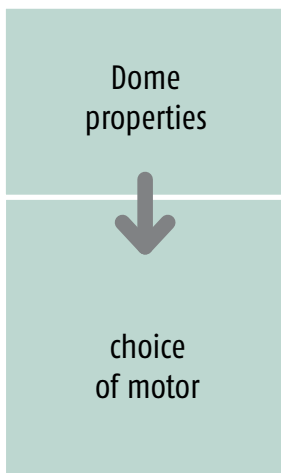
# SOLUTIONS FOR SKYLIGHTS & DOMES

## Skylights



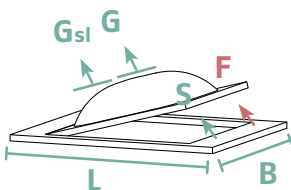
|                      |                 |                        |                        |                        |  |
|----------------------|-----------------|------------------------|------------------------|------------------------|--|
| height of the window | 500mm - 1000mm  |                        | 1000mm - 2000mm        |                        | <p>Skylights are available in many types. The manner of rotation can vary as well.</p> <p>A Velux type skylight in a horizontal roof that can be tilted to 30° has a distributed weight of 50% at the hinges and 50% at the motor.</p> <p>In skylights that swivel in the middle, the weight is nil and the power needed is determined only by the friction of the window.</p> |
| width of the window  | < 1500mm        |                        | < 1500mm               |                        |  |
| desired opening (mm) | 200             | 250                    | 250                    | 420                    |  |
| power required *(N)  | 200             | 200                    | 200                    | 400                    |  |
| desired feed         | 240V~           | 240V~                  | 240V~                  | 240V~                  |  |
|                      | 24V=            | 24V=                   | 24V=                   | 24V=                   |  |
| <b>motor type</b>    | <b>Linkeo 2</b> | <b>Linkeo 2</b>        | <b>Linkeo 2</b>        | <b>Linkeo 4</b>        |  |
| Ref number           | 230V<br>24V     | 1 230 001<br>1 230 000 | 1 230 003<br>1 230 002 | 1 230 003<br>1 230 002 | 1 230 007<br>1 230 005   |

## Domes



|                                   |              |                        |                        |                        |                        |                        |                        |                        |
|-----------------------------------|--------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| width of the dome                 | < 1500mm     | < 1500mm               |                        | < 1500mm               |                        |                        |                        |                        |
| desired opening (mm) (adjustable) | 0-200        | 0-200                  | 0-300                  | 0-300                  |                        | 0-500                  |                        |                        |
| power required *(N)               | 450          | 450                    | 450                    | 1000                   | 450                    | 1000                   | 450                    |                        |
| desired feed                      | 240V~        | 240V~                  | 240V~                  | 240V~                  | 240V~                  | 240V~                  | 240V~                  |                        |
|                                   | 24V=         | 24V=                   | 24V=                   | 24V=                   | 24V=                   | 24V=                   | 24V=                   |                        |
| <b>motor type</b>                 | <b>Rodeo</b> | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>           |                        |
| Ref number                        | 230V<br>24V  | 1 230 009<br>1 230 010 | 1 230 009<br>1 230 010 | 1 230 011<br>1 230 012 | 1 230 015<br>1 230 016 | 1 230 011<br>1 230 012 | 1 230 015<br>1 230 016 | 1 230 013<br>1 230 014 |

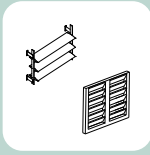
\* Calculation of the power required is based on the most common systems on the market For an exact calculation use the following formula.



F = needed force in Kg  
 S = desired stroke in mm  
 H = height of the window in mm  
 G = weight of the window in Kg  
 Gst = snow load per m2

$$F = \frac{G + G_{st}}{2}$$

- The width (B) of the window must not exceed 1500mm.
- The height of the window must be at least twice the size of the desired sag, this in connection with the maximum sag of the chain.



# SOLUTIONS FOR LOUVRES & SUN SHADES

Louvre properties



choice of motor



Sun shade properties

## LOUVRES

Louvre windows are made from a set of small transparent or opaque louvres made of glass or plastic. Theoretically the louvres are in balance and therefore do not require power to turn them. As a result the 450 N motor is often sufficient to handle the friction in the system. Check with every system what extension is wanted. The most common type is 200 mm but there are other possibilities. The motor is normally attached to the back of the system and is hidden in the width of the profile.

|                                      |              |                        |                        |                        |                        |                        |  |
|--------------------------------------|--------------|------------------------|------------------------|------------------------|------------------------|------------------------|--|
| desired opening (mm)<br>(adjustable) | 0-200        | 0-200                  | 0-300                  |                        | 0-300                  |                        | 0-500  |
| power required *(N)                  | 450          | 450                    | 450                    | 1000                   | 450                    | 1000                   | 450  |
| desired feed                         | 240V~        | 240V~                  | 240V~                  | 240V~                  | 240V~                  | 240V~                  | 240V~  |
|                                      | 24V=         | 24V=                   | 24V=                   | 24V=                   | 24V=                   | 24V=                   | 24V=   |
| <b>motor type</b>                    | <b>Rodeo</b> | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>           | <b>Rodeo</b>                                     |
| Ref number                           | 230V<br>24V  | 1 230 009<br>1 230 010 | 1 230 009<br>1 230 010 | 1 230 011<br>1 230 012 | 1 230 015<br>1 230 016 | 1 230 011<br>1 230 012 | 1 230 015<br>1 230 016<br>1 230 013<br>1 230 014 |

## SUN SHADES

Sun Shades in slats or strips consist of a set of strips (usually between 100 and 400 mm wide) which are mounted in a horizontal or vertical configuration. It is almost impossible to calculate the power required in advance because it depends on the friction of the strips and the power transfer. The power of the motor must also be estimated higher if you expect that the strips will not continue to rotate perfectly around their axis over a longer period of time. Because of the nature of the application the motor may need to be fully exposed to the weather. When exposed to the weather Somfy recommend covering the motor to ensure protection.

