



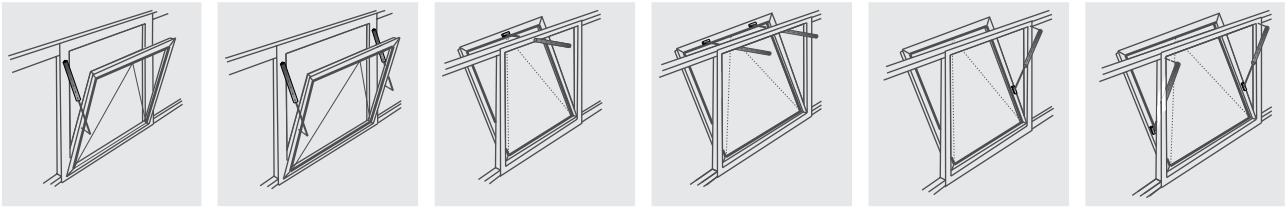
### SPECIAL FEATURES PLA

- For natural ventilation, smoke and heat exhausting and ferralux® NRWG (EN12101-2)
- Robust corrosion-resistant design in a slim aluminium housing (D = 36 mm), optionally in RAL colors
- Easy installation due to adjustable clamp ring and rear suspension
- Spindle is ball beared with end position dampening
- Stainless steel spindle tube
- Programmable parameters of Intelligent Control Electronics S12
  - Synchronised multi-operation and sequence control without add. devices
  - Electronic soft-start, soft-close and soft-stop at end of stroke control
  - Stroke, force, speed
  - Rebate control
- Protection rating IP 65
- With GoreTex membrane
- Suitable for operation with M-COM for the automatic configuration of synchronised run of multi drive systems and sequence control

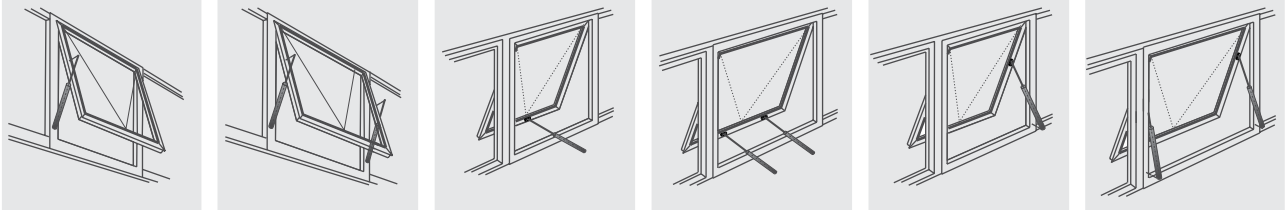
For this product series, a Type III Environmental Product Declaration (EPD) was issued according to ISO 14025 and EN 15804.  
 The LCA results of the different product types are listed at the end of this product catalogue.  
 The EPD documents can be viewed or downloaded from our homepage [www.aumueller-gmbh.de](http://www.aumueller-gmbh.de).

**FACADE**

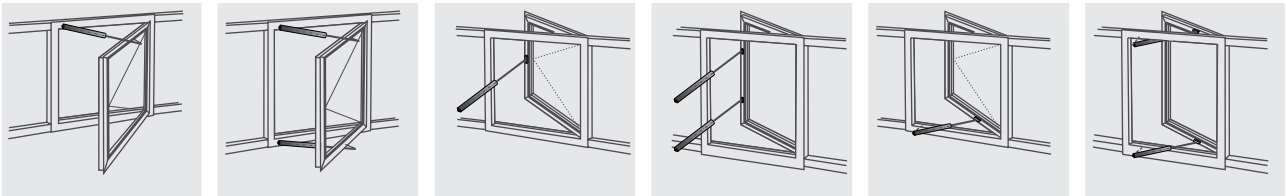
Bottom-hung



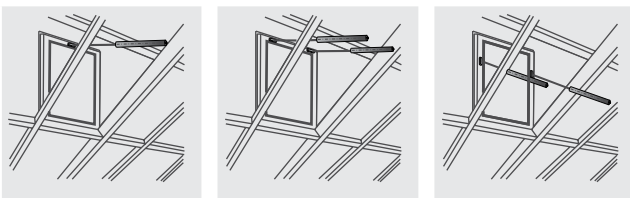
Top-hung



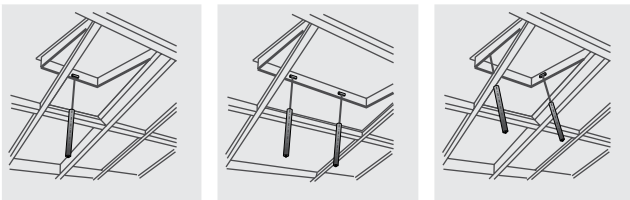
Side-hung

**ROOF**

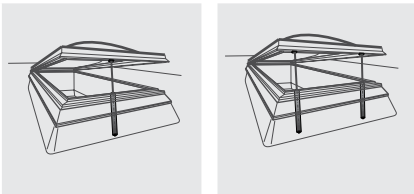
Bottom-hung



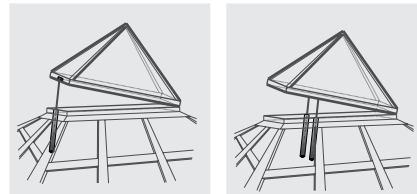
Top-hung

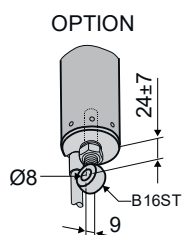
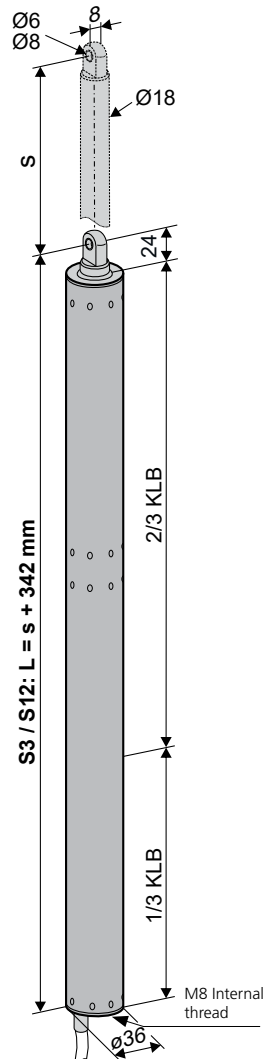
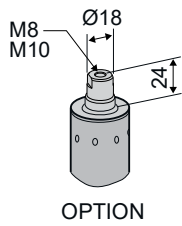


Sky light



Glass pyramid





- Application: natural ventilation, RWA, ferralux®-NRWG

### Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

### S3

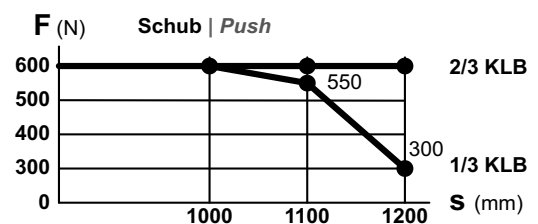
- Internal load dependent cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with Locking drives (S3 / S12)

### S12

- Internal Intelligent Control Electronics S12
- Options
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

## TECHNICAL DATA

|           |                           |                                             |
|-----------|---------------------------|---------------------------------------------|
| $U_N$     | Rated voltage             | 24V DC (19V ... 28V)                        |
| $I_N$     | Rated current             | 0,6 A                                       |
| $I_A$     | Cut-off current           | 0,8 A                                       |
| $P_N$     | Rated power               | 15 W                                        |
| <b>DC</b> | Duty cycle                | 5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.) |
|           | Protection rating         | IP 65                                       |
|           | Ambient temperature range | -5 °C ... +60 °C                            |
| $F_Z$     | Pulling force max.        | 600 N                                       |
| $F_A$     | Pushing force max.        |                                             |



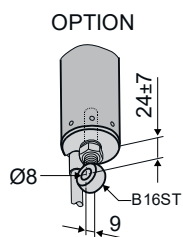
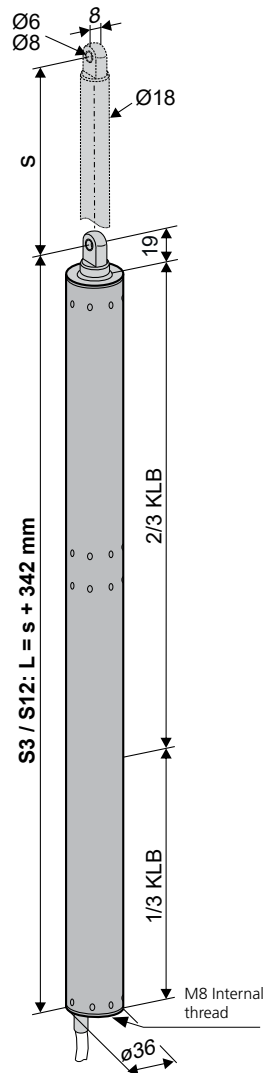
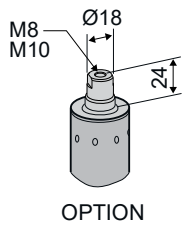
|          |                      |                                                                                       |
|----------|----------------------|---------------------------------------------------------------------------------------|
| $F_H$    | Pullout force        | 5000 N (fastening depended)                                                           |
|          | Spindle tube         | stainless steel                                                                       |
|          | Connecting cable     | non-halogen, grey 3 x 1,0 mm <sup>2</sup> , ~ 3 m                                     |
| <b>v</b> | Speed                | Factory settings:<br>X = 6,0 mm/s    ↷ = 6,0 mm/s                                     |
| <b>s</b> | Stroke               | Factory settings: see order data<br>Adjustment range: 5 – 1000 mm (S12), programmable |
| <b>L</b> | Length               | S3 / S12: s + 342 mm (see order data)                                                 |
|          | Sound pressure level | ≤ 70 dB (A)                                                                           |

## ORDER DATA

| s [mm] | L [mm] | Version       | Finish | PU/pcs. | Part.-No.     |  |  |
|--------|--------|---------------|--------|---------|---------------|--|--|
| 100    | 442    | PLA6 100 S3   | E6/C-0 | 1       | <b>564111</b> |  |  |
|        | 442    | PLA6 100 S12  |        | 1       | <b>546310</b> |  |  |
| 200    | 542    | PLA6 200 S3   | E6/C-0 | 1       | <b>564122</b> |  |  |
|        | 542    | PLA6 200 S12  |        | 1       | <b>546320</b> |  |  |
| 300    | 642    | PLA6 300 S3   | E6/C-0 | 1       | <b>564131</b> |  |  |
|        | 642    | PLA6 300 S12  |        | 1       | <b>546330</b> |  |  |
| 400    | 742    | PLA6 400 S3   | E6/C-0 | 1       | <b>564141</b> |  |  |
|        | 742    | PLA6 400 S12  |        | 1       | <b>546340</b> |  |  |
| 500    | 842    | PLA6 500 S3   | E6/C-0 | 1       | <b>564151</b> |  |  |
|        | 842    | PLA6 500 S12  |        | 1       | <b>546350</b> |  |  |
| 600    | 942    | PLA6 600 S3   | E6/C-0 | 1       | <b>564161</b> |  |  |
|        | 942    | PLA6 600 S12  |        | 1       | <b>546360</b> |  |  |
| 750    | 1092   | PLA6 750 S3   | E6/C-0 | 1       | <b>564176</b> |  |  |
|        | 1092   | PLA6 750 S12  |        | 1       | <b>546375</b> |  |  |
| 1000   | 1342   | PLA6 1000 S3  | E6/C-0 | 1       | <b>564201</b> |  |  |
|        | 1342   | PLA6 1000 S12 |        | 1       | <b>546400</b> |  |  |

## OPTIONS

| Special model                                                   | PU/pcs.  | Part.-No.        |  |  |
|-----------------------------------------------------------------|----------|------------------|--|--|
| <b>Front Fixing</b>                                             |          |                  |  |  |
| Spindle tube end with interior thread M8                        | 1        | <b>515061</b>    |  |  |
| Spindle tube end with interior thread M10                       | 1        | <b>515060</b>    |  |  |
| <b>Drive housing painted/powder coated in other RAL colours</b> |          |                  |  |  |
| <b>Lump sum for coating</b>                                     |          | <b>516030</b>    |  |  |
| Specify at order stage:                                         | 1 – 20   | <b>516004</b>    |  |  |
|                                                                 | 21 – 50  | <b>516004</b>    |  |  |
|                                                                 | 51 – 100 | <b>516004</b>    |  |  |
|                                                                 | from 101 | <b>516004</b>    |  |  |
| <b>Extra length connecting cable:</b>                           |          |                  |  |  |
| 5 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>               |          | <b>501037</b>    |  |  |
| 10 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>              |          | <b>501039</b>    |  |  |
| <b>Mechanic stroke reduction S3</b>                             |          |                  |  |  |
| Stroke reduction without construction length - mechanically     | 1        | <b>516000</b>    |  |  |
| <b>Accessories for front / rear suspension</b>                  |          |                  |  |  |
| B16ST Eyebolt Ø8 mm, galvanized                                 | 1        | <b>100044</b>    |  |  |
| B16VA Eyebolt Ø8 mm, stainless steel                            | 1        | <b>100144</b>    |  |  |
| B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm              | 1        | <b>105510</b>    |  |  |
| B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm            | 1        | <b>105520</b>    |  |  |
| <b>Microprocessor programming S3</b>                            |          |                  |  |  |
| Motion monitored run / sequence control                         | 1        | <b>524181</b>    |  |  |
| <b>Microprocessor programming S12</b>                           |          |                  |  |  |
| Electronic stroke reduction 24V S12                             | 1        | <b>524190</b>    |  |  |
| Programming drives 24V / 230V S12                               | 1        | <b>524180</b>    |  |  |
| <b>Other lengths available on request</b>                       |          |                  |  |  |
| <b>Optional accessories</b>                                     | PU/pcs.  | <b>Part.-No.</b> |  |  |
| M-COM Configuration module for synchronised multi-drive systems | 1        | <b>524177</b>    |  |  |



- Application: natural ventilation, RWA, ferralux®-NRWG

### Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

### S3

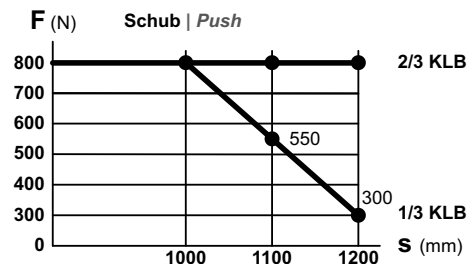
- Internal load dependend cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with locking drives (S3 / S12)

### S12

- Internal Intelligent Control Electronics S12
- Options
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

## TECHNICAL DATA

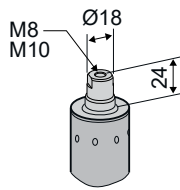
|           |                           |                                             |
|-----------|---------------------------|---------------------------------------------|
| $U_N$     | Rated voltage             | 24 V DC (19 V ... 28 V)                     |
| $I_N$     | Rated current             | 1,0 A                                       |
| $I_A$     | Cut-off current           | 1,4 A                                       |
| $P_N$     | Rated power               | 24 W                                        |
| <b>DC</b> | Duty cycle                | 5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.) |
|           | Protection rating         | IP 65                                       |
|           | Ambient temperature range | -5 °C ... +60 °C                            |
| $F_Z$     | Pulling force max.        | 800 N                                       |
| $F_A$     | Pushing force max.        |                                             |



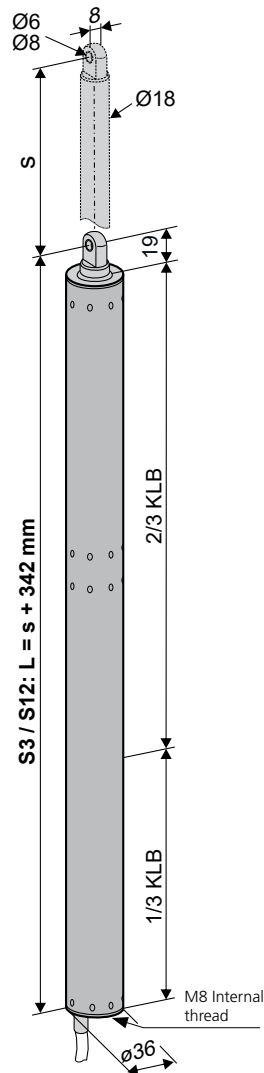
|          |                      |                                                                                       |
|----------|----------------------|---------------------------------------------------------------------------------------|
| $F_H$    | Pullout force        | 5000 N (fastening depended)                                                           |
|          | Spindle tube         | stainless steel                                                                       |
|          | Connecting cable     | non-halogen, grey 3 x 1,0 mm <sup>2</sup> , ~ 3 m                                     |
| <b>v</b> | Speed                | Factory settings:<br>X 10,0 mm/s 10,0 mm/s                                            |
| <b>s</b> | Stroke               | Factory settings: see order data<br>Adjustment range: 5 – 1000 mm (S12), programmable |
| <b>L</b> | Length               | S3 / S12: s + 342 mm (see order data)                                                 |
|          | Sound pressure level | ≤ 70 dB (A)                                                                           |

| ORDER DATA |        |               |        |         |               |  |
|------------|--------|---------------|--------|---------|---------------|--|
| s [mm]     | L [mm] | Version       | Finish | PU/pcs. | Part.-No.     |  |
| 100        | 442    | PLA8 100 S3   | E6/C-0 | 1       | <b>523711</b> |  |
|            | 442    | PLA8 100 S12  |        | 1       | <b>515210</b> |  |
| 200        | 542    | PLA8 200 S3   | E6/C-0 | 1       | <b>523721</b> |  |
|            | 542    | PLA8 200 S12  |        | 1       | <b>515220</b> |  |
| 300        | 642    | PLA8 300 S3   | E6/C-0 | 1       | <b>523731</b> |  |
|            | 642    | PLA8 300 S12  |        | 1       | <b>515230</b> |  |
| 400        | 742    | PLA8 400 S3   | E6/C-0 | 1       | <b>523741</b> |  |
|            | 742    | PLA8 400 S12  |        | 1       | <b>515240</b> |  |
| 500        | 842    | PLA8 500 S3   | E6/C-0 | 1       | <b>523751</b> |  |
|            | 842    | PLA8 500 S12  |        | 1       | <b>515250</b> |  |
| 600        | 942    | PLA8 600 S3   | E6/C-0 | 1       | <b>523761</b> |  |
|            | 942    | PLA8 600 S12  |        | 1       | <b>515260</b> |  |
| 750        | 1092   | PLA8 750 S3   | E6/C-0 | 1       | <b>523776</b> |  |
|            | 1092   | PLA8 750 S12  |        | 1       | <b>515275</b> |  |
| 1000       | 1342   | PLA8 1000 S3  | E6/C-0 | 1       | <b>523801</b> |  |
|            | 1342   | PLA8 1000 S12 |        | 1       | <b>515295</b> |  |

| OPTIONS                                                         |  |  |  |          |               |  |
|-----------------------------------------------------------------|--|--|--|----------|---------------|--|
| Special model                                                   |  |  |  | PU/pcs.  | Part.-No.     |  |
| <b>Front Fixing</b>                                             |  |  |  |          |               |  |
| Spindle tube end with interior thread M8                        |  |  |  | 1        | <b>515061</b> |  |
| Spindle tube end with interior thread M10                       |  |  |  | 1        | <b>515060</b> |  |
| <b>Drive housing painted/powder coated in other RAL colours</b> |  |  |  |          |               |  |
| <b>Lump sum for coating</b>                                     |  |  |  |          | <b>516030</b> |  |
| Specify at order stage:                                         |  |  |  | 1 – 20   | <b>516004</b> |  |
|                                                                 |  |  |  | 21 – 50  | <b>516004</b> |  |
|                                                                 |  |  |  | 51 – 100 | <b>516004</b> |  |
|                                                                 |  |  |  | from 101 | <b>516004</b> |  |
| <b>Extra length connecting cable:</b>                           |  |  |  |          |               |  |
| 5 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>               |  |  |  |          | <b>501037</b> |  |
| 10 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>              |  |  |  |          | <b>501039</b> |  |
| <b>Mechanic stroke reduction S3</b>                             |  |  |  |          |               |  |
| Stroke reduction without construction length - mechanically     |  |  |  | 1        | <b>516000</b> |  |
| <b>Accessories for front / rear suspension</b>                  |  |  |  |          |               |  |
| B16ST Eyebolt Ø8 mm, galvanized                                 |  |  |  | 1        | <b>100044</b> |  |
| B16VA Eyebolt Ø8 mm, stainless steel                            |  |  |  | 1        | <b>100144</b> |  |
| B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm              |  |  |  | 1        | <b>105510</b> |  |
| B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm            |  |  |  | 1        | <b>105520</b> |  |
| <b>Microprocessor programming S3</b>                            |  |  |  |          |               |  |
| Motion monitored run / sequence control                         |  |  |  | 1        | <b>524181</b> |  |
| <b>Microprocessor programming S12</b>                           |  |  |  |          |               |  |
| Electronic stroke reduction 24V S12                             |  |  |  | 1        | <b>524190</b> |  |
| Programming drives 24V / 230V S12                               |  |  |  | 1        | <b>524180</b> |  |
| <b>Other lengths available on request</b>                       |  |  |  |          |               |  |
| Optional accessories                                            |  |  |  | PU/pcs.  | Part.-No.     |  |
| M-COM Configuration module for synchronised multi-drive systems |  |  |  | 1        | <b>524177</b> |  |

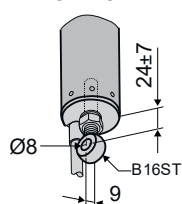


OPTION



S3 / S12: L = s + 342 mm

OPTION



- Application: natural ventilation, RWA, ferralux®-NRWG

### Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

### S3

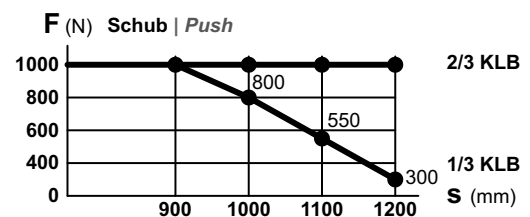
- Internal load dependent cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with locking drives (S3 / S12)

### S12

- Internal Intelligent Control Electronics S12
- Options
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

## TECHNICAL DATA

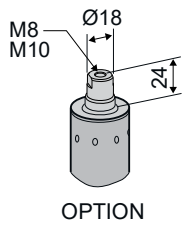
|           |                           |                                             |
|-----------|---------------------------|---------------------------------------------|
| $U_N$     | Rated voltage             | 24V DC (19V ... 28V)                        |
| $I_N$     | Rated current             | 0,8 A                                       |
| $I_A$     | Cut-off current           | 1,0 A                                       |
| $P_N$     | Rated power               | 19 W                                        |
| <b>DC</b> | Duty cycle                | 5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.) |
|           | Protection rating         | IP 65                                       |
|           | Ambient temperature range | -5 °C ... +60 °C                            |
| $F_Z$     | Pulling force max.        | 1000 N                                      |
| $F_A$     | Pushing force max.        |                                             |



|       |                      |                                                                                       |
|-------|----------------------|---------------------------------------------------------------------------------------|
| $F_H$ | Pullout force        | 5000 N (fastening depended)                                                           |
|       | Spindle tube         | stainless steel                                                                       |
|       | Connecting cable     | non-halogen, grey 3 x 1,0 mm <sup>2</sup> , ~ 3 m                                     |
| $v$   | Speed                | Factory settings:<br>↖ 4,6 mm/s ↗ 4,6 mm/s                                            |
| $s$   | Stroke               | Factory settings: see order data<br>Adjustment range: 5 – 1000 mm (S12), programmable |
| $L$   | Length               | S3 / S12: s + 342 mm (see order data)                                                 |
|       | Sound pressure level | ≤ 70 dB (A)                                                                           |

| ORDER DATA |        |                |        |         |               |  |
|------------|--------|----------------|--------|---------|---------------|--|
| s [mm]     | L [mm] | Version        | Finish | PU/pcs. | Part.-No.     |  |
| 100        | 442    | PLA101 100 S3  | E6/C-0 | 1       | <b>565111</b> |  |
|            | 442    | PLA101 100 S12 |        | 1       | <b>564910</b> |  |
| 200        | 542    | PLA101 200 S3  | E6/C-0 | 1       | <b>565121</b> |  |
|            | 542    | PLA101 200 S12 |        | 1       | <b>564922</b> |  |
| 300        | 642    | PLA101 300 S3  | E6/C-0 | 1       | <b>565131</b> |  |
|            | 642    | PLA101 300 S12 |        | 1       | <b>564930</b> |  |
| 400        | 742    | PLA 01 400 S3  | E6/C-0 | 1       | <b>565141</b> |  |
|            | 742    | PLA101 400 S12 |        | 1       | <b>564940</b> |  |
| 500        | 842    | PLA101 500 S3  | E6/C-0 | 1       | <b>565151</b> |  |
|            | 842    | PLA101 500 S12 |        | 1       | <b>564950</b> |  |
| 600        | 942    | PLA101 600 S3  | E6/C-0 | 1       | <b>565161</b> |  |
|            | 942    | PLA101 600 S12 |        | 1       | <b>564960</b> |  |
| 750        | 1092   | PLA101 750 S3  | E6/C-0 | 1       | <b>565176</b> |  |
|            | 1092   | PLA101 750 S12 |        | 1       | <b>564975</b> |  |
| 1000       | 1342   | PLA101 1000 S3 | E6/C-0 | 1       | <b>565201</b> |  |
|            | 1342   | 101 1000 S12   |        | 1       | <b>565000</b> |  |

| OPTIONS                                                         |  |  |  |          |               |  |
|-----------------------------------------------------------------|--|--|--|----------|---------------|--|
| Special model                                                   |  |  |  | PU/pcs.  | Part.-No.     |  |
| <b>Front Fixing</b>                                             |  |  |  |          |               |  |
| Spindle tube end with interior thread M8                        |  |  |  | 1        | <b>515061</b> |  |
| Spindle tube end with interior thread M10                       |  |  |  | 1        | <b>515060</b> |  |
| <b>Drive housing painted/powder coated in other RAL colours</b> |  |  |  |          |               |  |
| <b>Lump sum for coating</b>                                     |  |  |  |          | <b>516030</b> |  |
| Specify at order stage:                                         |  |  |  | 1 – 20   | <b>516004</b> |  |
|                                                                 |  |  |  | 21 – 50  | <b>516004</b> |  |
|                                                                 |  |  |  | 51 – 100 | <b>516004</b> |  |
|                                                                 |  |  |  | from 101 | <b>516004</b> |  |
| <b>Extra length connecting cable:</b>                           |  |  |  |          |               |  |
| 5 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>               |  |  |  |          | <b>501037</b> |  |
| 10 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>              |  |  |  |          | <b>501039</b> |  |
| <b>Mechanic stroke reduction S3</b>                             |  |  |  |          |               |  |
| Stroke reduction without construction length - mechanically     |  |  |  | 1        | <b>516000</b> |  |
| <b>Accessories for front / rear suspension</b>                  |  |  |  |          |               |  |
| B16ST Eyebolt Ø8 mm, galvanized                                 |  |  |  | 1        | <b>100044</b> |  |
| B16VA Eyebolt Ø8 mm, stainless steel                            |  |  |  | 1        | <b>100144</b> |  |
| B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm              |  |  |  | 1        | <b>105510</b> |  |
| B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm            |  |  |  | 1        | <b>105520</b> |  |
| <b>Microprocessor programming S3</b>                            |  |  |  |          |               |  |
| Motion monitored run / sequence control                         |  |  |  | 1        | <b>524181</b> |  |
| <b>Microprocessor programming S12</b>                           |  |  |  |          |               |  |
| Electronic stroke reduction 24V S12                             |  |  |  | 1        | <b>524190</b> |  |
| Programming drives 24V / 230V S12                               |  |  |  | 1        | <b>524180</b> |  |
| <b>Other lengths available on request</b>                       |  |  |  |          |               |  |
| Optional accessories                                            |  |  |  | PU/pcs.  | Part.-No.     |  |
| M-COM Configuration module for synchronised multi-drive systems |  |  |  | 1        | <b>524177</b> |  |



- Application: natural ventilation, RWA, ferralux®-NRWG

### Options

- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

### S3

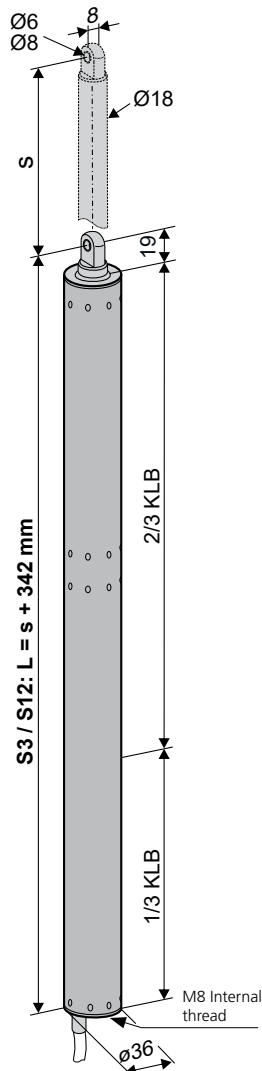
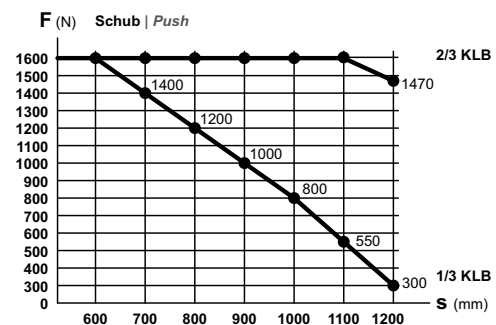
- Internal load dependend cut-off switch, post cycle resistant S3
- Programmable motion monitored run (up to 300 mm stroke)
- Programmable sequence control with locking drives (S3 / S12)

### S12

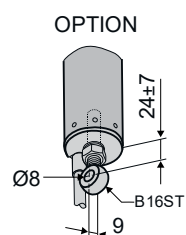
- Internal Intelligent Control Electronics S12
- Options
  - Programmable synchronised run (max. 4 drives) and special functions
  - M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)

## TECHNICAL DATA

|       |                           |                                             |
|-------|---------------------------|---------------------------------------------|
| $U_N$ | Rated voltage             | 24 V DC (19 V ... 28 V)                     |
| $I_N$ | Rated current             | 1,0 A                                       |
| $I_A$ | Cut-off current           | 1,2 A                                       |
| $P_N$ | Rated power               | 24 W                                        |
| DC    | Duty cycle                | 5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.) |
|       | Protection rating         | IP 65                                       |
|       | Ambient temperature range | -5 °C ... +60 °C                            |
| $F_Z$ | Pulling force max.        | 1600 N                                      |
| $F_A$ | Pushing force max.        |                                             |

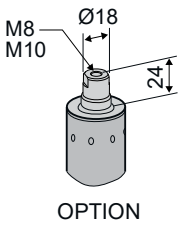


|       |                      |                                                                                      |
|-------|----------------------|--------------------------------------------------------------------------------------|
| $F_H$ | Pullout force        | 5000 N (fastening depended)                                                          |
|       | Spindle tube         | stainless steel                                                                      |
|       | Connecting cable     | non-halogen, grey 3 x 1,0 mm <sup>2</sup> , ~ 3 m                                    |
| $v$   | Speed                | Factory settings:<br>$\swarrow$ 4,0 mm/s $\searrow$ 4,0 mm/s                         |
| $s$   | Stroke               | Factory settings: see order data<br>Adjustment range: 5 – 750 mm (S12), programmable |
| $L$   | Length               | S3 / S12: s + 342 mm (see order data)                                                |
|       | Sound pressure level | ≤ 70 dB (A)                                                                          |

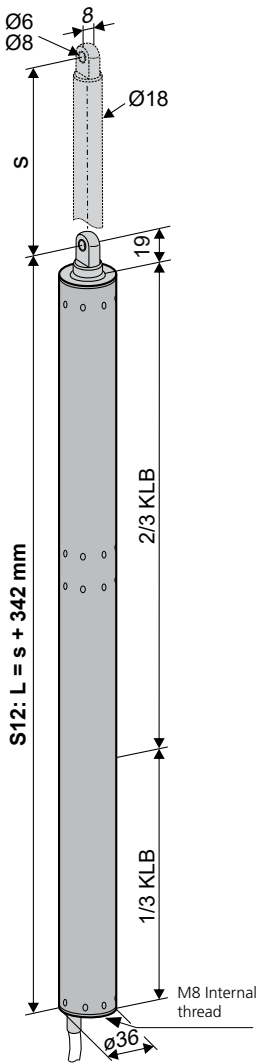


| ORDER DATA |        |                |        |         |               |  |
|------------|--------|----------------|--------|---------|---------------|--|
| s [mm]     | L [mm] | Version        | Finish | PU/pcs. | Part.-No.     |  |
| 100        | 442    | PLA116 100 S3  | E6/C-0 | 1       | <b>565312</b> |  |
|            | 442    | PLA116 100 S12 |        | 1       | <b>565510</b> |  |
| 200        | 542    | PLA116 200 S3  | E6/C-0 | 1       | <b>565321</b> |  |
|            | 542    | PLA116 200 S12 |        | 1       | <b>565520</b> |  |
| 300        | 642    | PLA116 300 S3  | E6/C-0 | 1       | <b>565331</b> |  |
|            | 642    | PLA116 300 S12 |        | 1       | <b>565530</b> |  |
| 400        | 742    | PLA116 400 S3  | E6/C-0 | 1       | <b>565341</b> |  |
|            | 742    | PLA116 400 S12 |        | 1       | <b>565540</b> |  |
| 500        | 842    | PLA116 500 S3  | E6/C-0 | 1       | <b>565351</b> |  |
|            | 842    | PLA116 500 S12 |        | 1       | <b>565550</b> |  |
| 600        | 942    | PLA116 600 S3  | E6/C-0 | 1       | <b>565361</b> |  |
|            | 942    | PLA116 600 S12 |        | 1       | <b>565560</b> |  |
| 750        | 1092   | PLA116 750 S3  | E6/C-0 | 1       | <b>565376</b> |  |
|            | 1092   | PLA116 750 S12 |        | 1       | <b>565575</b> |  |

| OPTIONS                                                         |          |               |  |
|-----------------------------------------------------------------|----------|---------------|--|
| Special model                                                   | PU/pcs.  | Part.-No.     |  |
| <b>Front Fixing</b>                                             |          |               |  |
| Spindle tube end with interior thread M8                        | 1        | <b>515061</b> |  |
| Spindle tube end with interior thread M10                       | 1        | <b>515060</b> |  |
| <b>Drive housing painted/powder coated in other RAL colours</b> |          |               |  |
| <b>Lump sum for coating</b>                                     |          | <b>516030</b> |  |
| Specify at order stage:                                         | 1 – 20   | <b>516004</b> |  |
|                                                                 | 21 – 50  | <b>516004</b> |  |
|                                                                 | 51 – 100 | <b>516004</b> |  |
|                                                                 | from 101 | <b>516004</b> |  |
| <b>Extra length connecting cable:</b>                           |          |               |  |
| 5 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>               |          | <b>501037</b> |  |
| 10 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>              |          | <b>501039</b> |  |
| <b>Mechanic stroke reduction S3</b>                             |          |               |  |
| Stroke reduction without construction length - mechanically     | 1        | <b>516000</b> |  |
| <b>Accessories for front / rear suspension</b>                  |          |               |  |
| B16ST Eyebolt Ø8 mm, galvanized                                 | 1        | <b>100044</b> |  |
| B16VA Eyebolt Ø8 mm, stainless steel                            | 1        | <b>100144</b> |  |
| B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm              | 1        | <b>105510</b> |  |
| B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm            | 1        | <b>105520</b> |  |
| <b>Microprocessor programming S3</b>                            |          |               |  |
| Motion monitored run / sequence control                         | 1        | <b>524181</b> |  |
| <b>Microprocessor programming S12</b>                           |          |               |  |
| Electronic stroke reduction 24V S12                             | 1        | <b>524190</b> |  |
| Programming drives 24V / 230V S12                               | 1        | <b>524180</b> |  |
| <b>Other lengths available on request</b>                       |          |               |  |
| Optional accessories                                            | PU/pcs.  | Part.-No.     |  |
| M-COM Configuration module for synchronised multi-drive systems | 1        | <b>524177</b> |  |

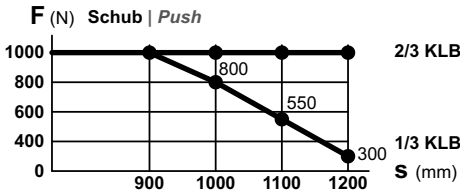


- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Options**
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

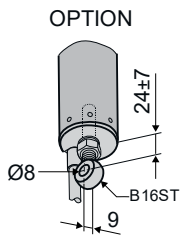


TECHNICAL DATA

|           |                           |                                             |
|-----------|---------------------------|---------------------------------------------|
| $U_N$     | Rated voltage             | 24 V DC (19 V ... 28 V)                     |
| $I_N$     | Rated current             | 1,9 A                                       |
| $I_A$     | Cut-off current           | 2,5 A                                       |
| $P_N$     | Rated power               | 45 W                                        |
| <b>DC</b> | Duty cycle                | 5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.) |
|           | Protection rating         | IP 65                                       |
|           | Ambient temperature range | -5 °C ... +60 °C                            |
| $F_Z$     | Pulling force max.        | 1000 N                                      |
| $F_A$     | Pushing force max.        |                                             |



|       |                      |                                                                   |
|-------|----------------------|-------------------------------------------------------------------|
| $F_H$ | Pullout force        | 5000 N (fastening depended)                                       |
|       | Spindle tube         | stainless steel                                                   |
|       | Connecting cable     | non-halogen, grey 3 x 1,0 mm <sup>2</sup> , ~ 3 m                 |
| $v$   | Speed                | Factory settings:<br>12,6 mm/s  12,6 mm/s                         |
| $s$   | Stroke               | Factory settings: see order data<br>Adjustment range: 5 – 1000 mm |
| $L$   | Length               | s + 342 mm (see order data)                                       |
|       | Sound pressure level | ≤ 70 dB (A)                                                       |

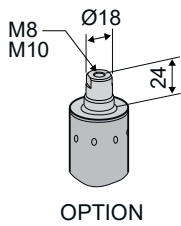


## ORDER DATA

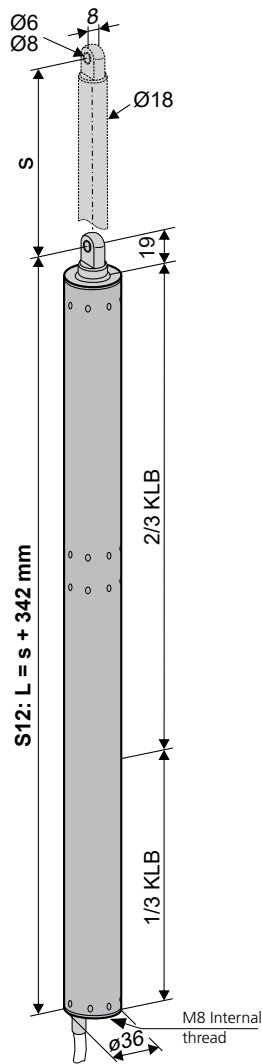
| s [mm] | L [mm] | Version        | Finish | PU/pcs. | Part.-No.     |  |  |
|--------|--------|----------------|--------|---------|---------------|--|--|
| 100    | 442    | PLA10 100 S12  | E6/C-0 | 1       | <b>523610</b> |  |  |
| 200    | 542    | PLA10 200 S12  | E6/C-0 | 1       | <b>523620</b> |  |  |
| 300    | 642    | PLA10 300 S12  | E6/C-0 | 1       | <b>523630</b> |  |  |
| 400    | 742    | PLA10 400 S12  | E6/C-0 | 1       | <b>523640</b> |  |  |
| 500    | 842    | PLA10 500 S12  | E6/C-0 | 1       | <b>523650</b> |  |  |
| 600    | 942    | PLA10 600 S12  | E6/C-0 | 1       | <b>523660</b> |  |  |
| 750    | 1092   | PLA10 750 S12  | E6/C-0 | 1       | <b>523675</b> |  |  |
| 1000   | 1342   | PLA10 1000 S12 | E6/C-0 | 1       | <b>523700</b> |  |  |

## OPTIONS

| Special model                                                   | PU/pcs.  | Part.-No.        |  |  |
|-----------------------------------------------------------------|----------|------------------|--|--|
| <b>Front Fixing</b>                                             |          |                  |  |  |
| Spindle tube end with interior thread M8                        | 1        | <b>515061</b>    |  |  |
| Spindle tube end with interior thread M10                       | 1        | <b>515060</b>    |  |  |
| <b>Drive housing painted/powder coated in other RAL colours</b> |          |                  |  |  |
| <b>Lump sum for coating</b>                                     |          | <b>516030</b>    |  |  |
| Specify at order stage:                                         | 1 – 20   | <b>516004</b>    |  |  |
|                                                                 | 21 – 50  | <b>516004</b>    |  |  |
|                                                                 | 51 – 100 | <b>516004</b>    |  |  |
|                                                                 | from 101 | <b>516004</b>    |  |  |
| <b>Extra length connecting cable:</b>                           |          |                  |  |  |
| 5 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>               |          | <b>501037</b>    |  |  |
| 10 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>              |          | <b>501039</b>    |  |  |
| <b>Accessories for front / rear suspension</b>                  |          |                  |  |  |
| B16ST Eyebolt Ø8 mm, galvanized                                 | 1        | <b>100044</b>    |  |  |
| B16VA Eyebolt Ø8 mm, stainless steel                            | 1        | <b>100144</b>    |  |  |
| B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm              | 1        | <b>105510</b>    |  |  |
| B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm            | 1        | <b>105520</b>    |  |  |
| <b>Microprocessor programming S12</b>                           |          |                  |  |  |
| Electronic stroke reduction 24V S12                             | 1        | <b>524190</b>    |  |  |
| Programming drives 24V / 230V S12                               | 1        | <b>524180</b>    |  |  |
| <b>Other lengths available on request</b>                       |          |                  |  |  |
| <b>Optional accessories</b>                                     | PU/pcs.  | <b>Part.-No.</b> |  |  |
| M-COM Configuration module for synchronised multi-drive systems | 1        | <b>524177</b>    |  |  |

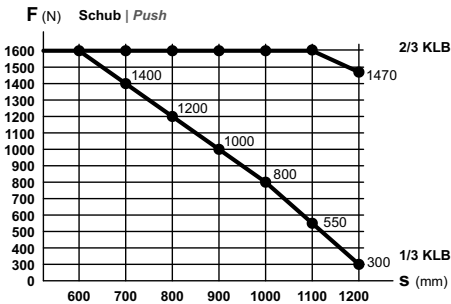


- Application: natural ventilation, RWA, ferralux®-NRWG
- Internal Intelligent Control Electronics S12
- Options**
- Programmable synchronised run (max. 4 drives) and special functions
- M-COM for automatic synchronised run of multi drive systems and automatic sequence control with locking drives (S3 / S12)
- Spindle tube end with interior thread for clevis
- Eyebolt and clevis for rear suspension

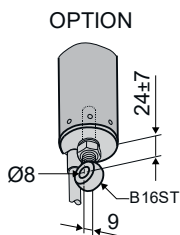


TECHNICAL DATA

|       |                           |                                             |
|-------|---------------------------|---------------------------------------------|
| $U_N$ | Rated voltage             | 24 V DC (19 V ... 28 V)                     |
| $I_N$ | Rated current             | 1,9 A                                       |
| $I_A$ | Cut-off current           | 2,5 A                                       |
| $P_N$ | Rated power               | 45 W                                        |
| $DC$  | Duty cycle                | 5 cycles (ED 30 % - ON: 3 min./OFF: 7 min.) |
|       | Protection rating         | IP 65                                       |
|       | Ambient temperature range | -5 °C ... +60 °C                            |
| $F_Z$ | Pulling force max.        | 1600 N                                      |
| $F_A$ | Pushing force max.        |                                             |



|       |                      |                                                                   |
|-------|----------------------|-------------------------------------------------------------------|
| $F_H$ | Pullout force        | 5000 N (fastening depended)                                       |
|       | Spindle tube         | stainless steel                                                   |
|       | Connecting cable     | non-halogen, grey 3 x 1,0 mm <sup>2</sup> , ~ 3 m                 |
| $v$   | Speed                | Factory settings:<br>7,0 mm/s  7,0 mm/s                           |
| $s$   | Stroke               | Factory settings: see order data<br>Adjustment range: 5 – 1000 mm |
| $L$   | Length               | s + 342 mm (see order data)                                       |
|       | Sound pressure level | ≤ 70 dB (A)                                                       |



## ORDER DATA

| s [mm] | L [mm] | Version        | Finish | PU/pcs. | Part.-No.     |  |  |
|--------|--------|----------------|--------|---------|---------------|--|--|
| 100    | 442    | PLA16 100 S12  | E6/C-0 | 1       | <b>565710</b> |  |  |
| 200    | 542    | PLA16 200 S12  | E6/C-0 | 1       | <b>565720</b> |  |  |
| 300    | 642    | PLA16 300 S12  | E6/C-0 | 1       | <b>565730</b> |  |  |
| 400    | 742    | PLA16 400 S12  | E6/C-0 | 1       | <b>565740</b> |  |  |
| 500    | 842    | PLA16 500 S12  | E6/C-0 | 1       | <b>565750</b> |  |  |
| 600    | 942    | PLA16 600 S12  | E6/C-0 | 1       | <b>565760</b> |  |  |
| 750    | 1092   | PLA16 750 S12  | E6/C-0 | 1       | <b>565775</b> |  |  |
| 1000   | 1342   | PLA16 1000 S12 | E6/C-0 | 1       | <b>565800</b> |  |  |

## OPTIONS

| Special model                                                   | PU/pcs.  | Part.-No.        |  |  |
|-----------------------------------------------------------------|----------|------------------|--|--|
| <b>Front Fixing</b>                                             |          |                  |  |  |
| Spindle tube end with interior thread M8                        | 1        | <b>515061</b>    |  |  |
| Spindle tube end with interior thread M10                       | 1        | <b>515060</b>    |  |  |
| <b>Drive housing painted/powder coated in other RAL colours</b> |          |                  |  |  |
| <b>Lump sum for coating</b>                                     |          | <b>516030</b>    |  |  |
| Specify at order stage:                                         | 1 – 20   | <b>516004</b>    |  |  |
|                                                                 | 21 – 50  | <b>516004</b>    |  |  |
|                                                                 | 51 – 100 | <b>516004</b>    |  |  |
|                                                                 | from 101 | <b>516004</b>    |  |  |
| <b>Extra length connecting cable:</b>                           |          |                  |  |  |
| 5 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>               |          | <b>501037</b>    |  |  |
| 10 m – non-halogen, grey – 3 x 1,0 mm <sup>2</sup>              |          | <b>501039</b>    |  |  |
| <b>Accessories for front / rear suspension</b>                  |          |                  |  |  |
| B16ST Eyebolt Ø8 mm, galvanized                                 | 1        | <b>100044</b>    |  |  |
| B16VA Eyebolt Ø8 mm, stainless steel                            | 1        | <b>100144</b>    |  |  |
| B27ST Clevis M8x16 mm, galvanized, thread M8x45 mm              | 1        | <b>105510</b>    |  |  |
| B28ST Clevis M10x20 mm, galvanized, thread M10x50 mm            | 1        | <b>105520</b>    |  |  |
| <b>Microprocessor programming S12</b>                           |          |                  |  |  |
| Electronic stroke reduction 24V S12                             | 1        | <b>524190</b>    |  |  |
| Programming drives 24V / 230V S12                               | 1        | <b>524180</b>    |  |  |
| <b>Other lengths available on request</b>                       |          |                  |  |  |
| <b>Optional accessories</b>                                     | PU/pcs.  | <b>Part.-No.</b> |  |  |
| M-COM Configuration module for synchronised multi-drive systems | 1        | <b>524177</b>    |  |  |

| OVERVIEW OF BRACKETS        |                     |               |              |      |                               |                                             |         |            |             |      |           |             |                   |   |   |
|-----------------------------|---------------------|---------------|--------------|------|-------------------------------|---------------------------------------------|---------|------------|-------------|------|-----------|-------------|-------------------|---|---|
| Typical applications        |                     |               |              |      | 1                             | 2                                           | 3       | 4          | 5           | 6    | 7         | 8           |                   |   |   |
| Frame bracket               |                     |               |              |      | K5                            | K5                                          | K5      | K17        | K82         | K127 | K122-1    | K7          |                   |   |   |
| Mounting aid                |                     |               |              |      |                               |                                             | K21     |            |             |      |           |             |                   |   |   |
| Bracket accessories         |                     |               |              |      | clamping ring B4 (36 mm-G1/8) |                                             |         |            |             |      |           |             |                   |   |   |
| Casement bracket            |                     |               |              |      | F29-1                         | F1, F1V, F1.1, F10.6, F10.8S, F11, F13, F40 |         |            |             | F11  | F36       | F12         |                   |   |   |
| Special application         |                     |               |              |      | Heroal 085D                   |                                             |         |            |             |      | Wing 105D | AWS 57RO    | Sky light Essmann |   |   |
| Space requirement           |                     | min.          | [mm]         |      | 50                            | 50                                          | 40 – 50 | 70         | 45          | 35   | 68        | 120         |                   |   |   |
| Window material             |                     | Alu           |              |      | ●                             | ●                                           | ●       | ●          | ●           | ●    | ●         |             |                   |   |   |
|                             |                     | Wood          |              |      |                               | ●                                           | ●       | ●          | ●           | ●    |           |             |                   |   |   |
|                             |                     | PVC           |              |      |                               |                                             | ●       | ●          | ●           | ●    |           |             | ●                 |   |   |
| Type of window and mounting | Bot-<br>tom<br>hung | in-<br>ward   | HSK          | FM   |                               |                                             |         | ■          |             |      | ■         |             |                   |   |   |
|                             |                     |               |              | RM   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             |                     |               | NSK          | FM   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             |                     |               |              | RM   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             |                     | out-<br>ward  | HSK          | RM   |                               |                                             |         | ●          |             |      | ●         |             |                   |   |   |
|                             |                     |               |              | PR   |                               |                                             | ●       |            | ●           |      |           |             |                   |   |   |
|                             |                     |               | NSK          | RM   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             |                     |               |              | PR   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             | Top<br>hung         | in-<br>ward   | HSK          | FM   |                               |                                             |         |            | ■           |      |           | ■           |                   |   |   |
|                             |                     |               |              | RM   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             |                     |               | NSK          | FM   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             |                     |               |              | RM   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             |                     | out-<br>ward  | HSK          | RM   |                               |                                             |         | ●          |             |      | ●         |             |                   |   |   |
|                             |                     |               |              | PR   |                               |                                             | ●       |            | ●           |      |           |             |                   |   |   |
|                             |                     |               | NSK          | RM   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             |                     |               |              | PR   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             | Side<br>hung        | in-<br>ward   | HSK          | FM   |                               |                                             |         |            | ■           |      |           | ■           |                   |   |   |
|                             |                     |               |              | RM   |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             |                     | NSK           | FM           |      |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             |                     |               | RM           |      |                               |                                             |         |            |             |      |           |             |                   |   |   |
|                             | Roof                | out-<br>ward  | HSK          | RM   |                               | ●                                           |         | ●          |             |      | ●         |             |                   |   |   |
|                             |                     |               |              | PR   |                               |                                             | ●       |            | ●           |      |           |             |                   |   |   |
|                             |                     |               | NSK          | RM   |                               |                                             |         | ●          |             |      |           | ●           |                   | ● |   |
|                             |                     |               |              | PR   |                               |                                             | ●       |            | ●           |      |           |             |                   |   |   |
|                             |                     | Sky-<br>light | out-<br>ward | HSK  | RM                            |                                             |         | ●          |             |      | ●         |             | ●                 |   | ● |
|                             |                     |               |              |      | NSK                           | RM                                          |         |            |             |      |           |             |                   |   |   |
| FAB(*1)                     |                     |               | Solo         | [mm] |                               |                                             |         |            | 450 – 1300  |      |           |             | 600 – 1200        |   |   |
|                             |                     |               | Sync2        | [mm] |                               |                                             |         |            | 1200 – 2400 |      |           |             | 1200 – 2400       |   |   |
| FAH(*1)                     |                     | Solo          | [mm]         |      |                               |                                             |         | 450 – 1500 |             |      |           | 600 – 1200  |                   |   |   |
|                             |                     | Sync2         | [mm]         |      |                               |                                             |         | 450 – 2500 |             |      |           | 1200 – 1500 |                   |   |   |

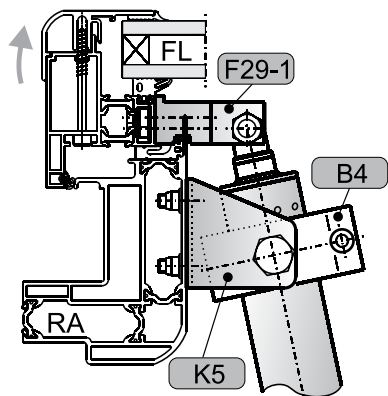
**LEGEND**

● suitable    ■ not recommended

(\*1) Sample value of the casement dimensions. The actual casement dimensions depend on the stroke and the position of the drives to the hinges. The values of FAB/FAH are to be used analogue for side hung windows.

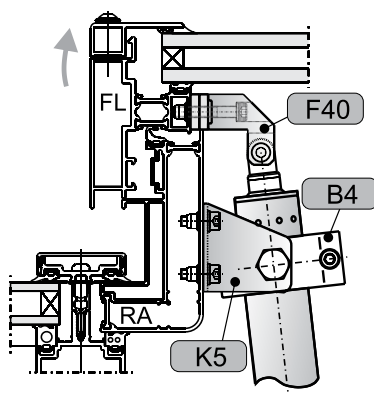
## TYPICAL APPLICATIONS

1 RM, HSK, roof outward opening



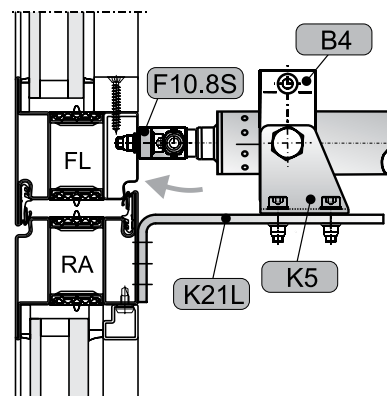
View on aluminium window

2 RM, HSK, roof outward opening



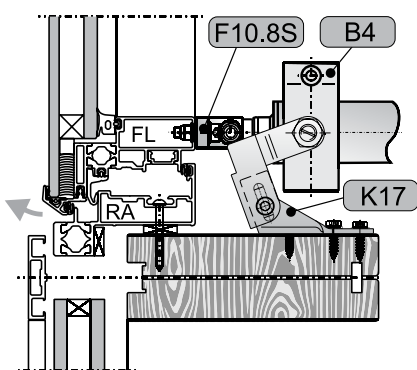
View on aluminium window

3 RM, HSK, top hung outward opening



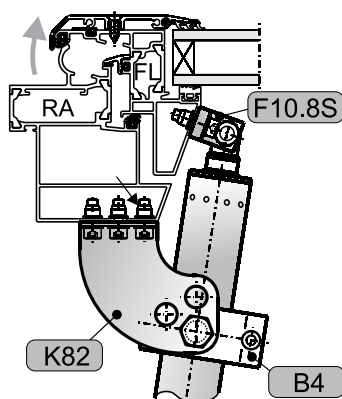
View on steel window

4 RM, HSK, top hung outward opening



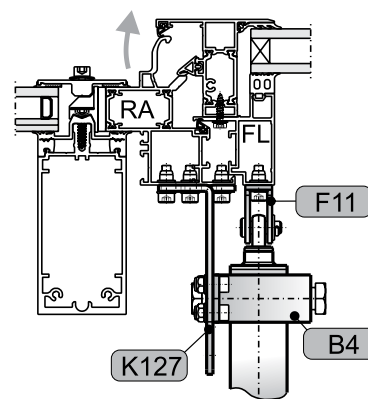
View on aluminium window

5 RM, HSK, roof outward opening



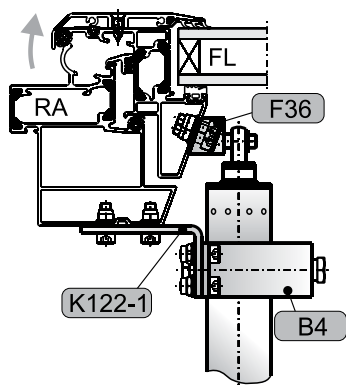
View on aluminium window

6 RM, NSK, roof outward opening



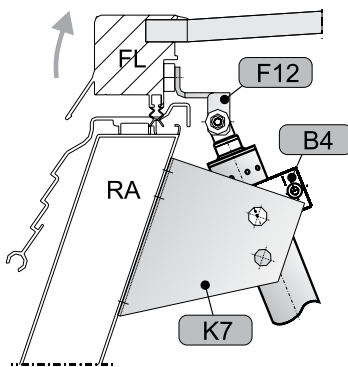
View on aluminium window

7 RM, NSK, roof outward opening



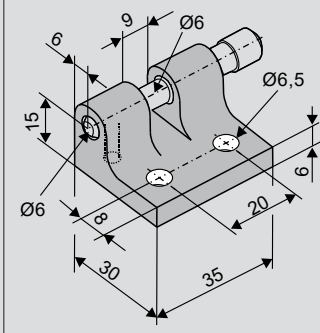
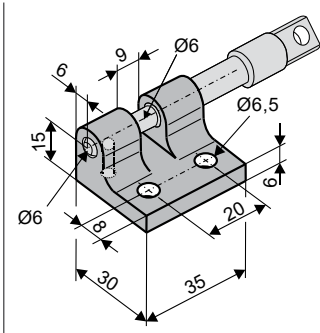
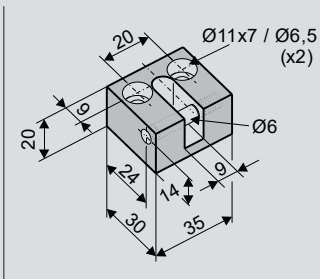
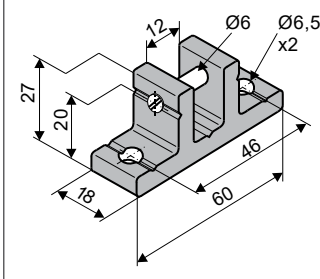
View on aluminium window

8 RM, HSK, sky-light



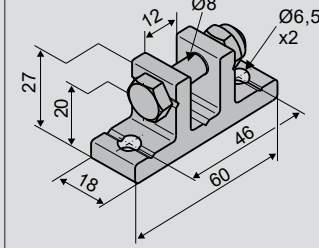
View on sky light

CASEMENT BRACKETS

|       |                                                                                     |                                                                                                                                                                                                                                                          |                                                                                                                                                                                        |  |
|-------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| F1    |    | <p><b>Application</b></p> <p>Surface mounting on the <b>main closing edge</b> of casement profiles of outward opening windows or skylights, for drives with <b>front or rear suspension</b> with bore <b>Ø6 mm</b>, manual removal of drive possible</p> | <p><b>Part.-No. 150102</b></p> <p><b>Material/Finish</b><br/>aluminium, diecast</p> <p><b>Feature/Equipment</b><br/>1x locking bolt Ø6 mm</p> <p><b>Load</b><br/>max. 1000 N</p>       |  |
| F1.1  |   | <p><b>Application</b></p> <p>Surface mounting on the <b>main closing edge</b> of casement profiles of outward opening windows or skylights, for drives with <b>front or rear suspension</b> with bore <b>Ø6 mm</b>, manual removal of drive possible</p> | <p><b>Part.-No. 150110</b></p> <p><b>Material/Finish</b><br/>aluminium, diecast</p> <p><b>Feature/Equipment</b><br/>1x locking spring bolt Ø6 mm</p> <p><b>Load</b><br/>max. 600 N</p> |  |
| F1V   |  | <p><b>Application</b></p> <p>Surface mounting on the <b>main closing edge</b> of casement profiles of outward opening windows or skylights, for drives with <b>front or rear suspension</b> with bore <b>Ø6 mm</b></p>                                   | <p><b>Part.-No. 150101</b></p> <p><b>Material/Finish</b><br/>aluminium</p> <p><b>Feature/Equipment</b><br/>1x grub screw Ø6 mm</p> <p><b>Load</b><br/>max. 1600 N</p>                  |  |
| F10.6 |  | <p><b>Application</b></p> <p>Surface mounting on <b>main closing edge</b> of casement profiles of outward opening windows or skylights, for drives with <b>front or rear suspension</b> with bore <b>Ø6 mm</b>, threaded stud bolt</p>                   | <p><b>Part.-No. 151000</b></p> <p><b>Material/Finish</b><br/>aluminium</p> <p><b>Feature/Equipment</b><br/>1x stud bolt Ø6 mm</p> <p><b>Load</b><br/>max. 1600 N</p>                   |  |

## CASEMENT BRACKETS

## F10.8S

**Application**

**Surface mounting** on the **main closing edge** of casement profiles of outward opening windows, for drives with **front or rear suspension** with bore **Ø8 mm**

**Part.-No. 151105**

**Material/Finish**

aluminium

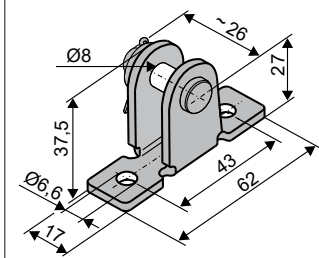
**Feature/Equipment**

1x nut M8,  
1x screw M8x35

**Load**

max. 3000 N

## F11ST

**Application**

**Surface mounting** on the **side closing edge** of casement/ window frame profiles of in-/outward opening windows or on skylights, for drives with front or rear suspension with bore **Ø8 mm**, mounting holes aligned with central axis of drive

**Part.-No. 151400**

**Material/Finish**

steel galvanized

**Feature/Equipment**

1x bolt Ø8 mm,  
1x washer,  
1x cotter pin

**Load**

max. 3000 N

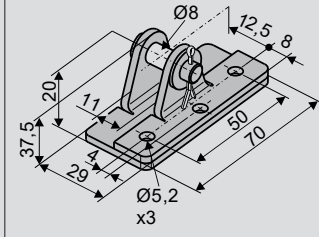
## F11VA

**Part.-No. 151401**

**Material/Finish**

stainless steel

## F13

**Application**

**Surface mounting** on the **side closing edge** of casement/ window frame profiles of in-/outward opening windows or on skylights, for drives with front or rear suspension with bore **Ø8 mm**, mounting holes not aligned with the central axis of drive

**Part.-No. 151405**

**Material/Finish**

steel galvanized

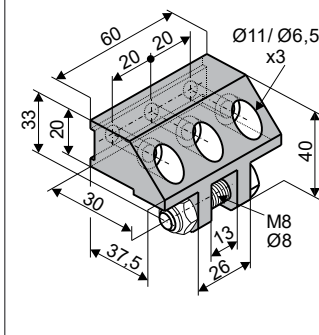
**Feature/Equipment**

1x bolt Ø8 mm,  
1x washer,  
1x cotter pin

**Load**

max. 1600 N

## F40

**Application**

**Surface mounting** on the **main closing edge** of the casement profiles of outward opening roof windows, for drives with **front or rear suspension** with bore **Ø8 mm**

**Part.-No. 155172**

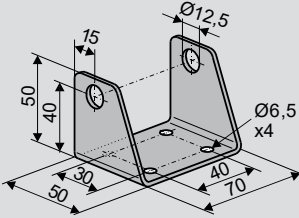
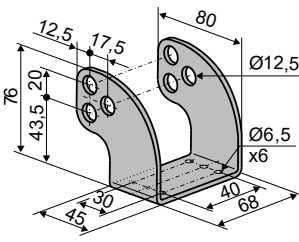
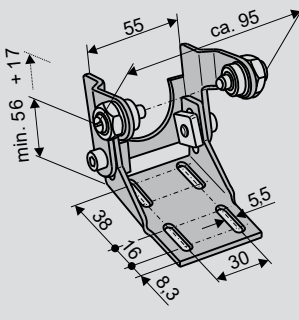
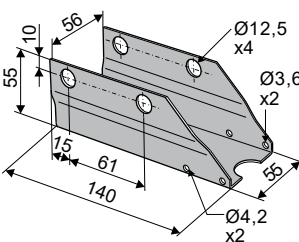
**Material/Finish**

aluminium

**Feature/Equipment**

1x screw M8x35,  
1x nut M8

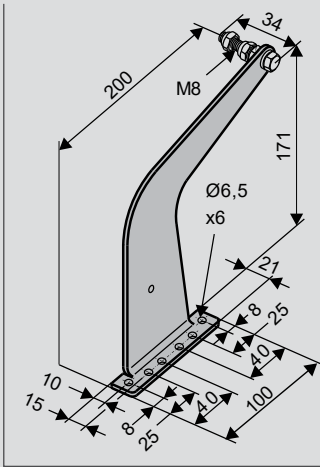
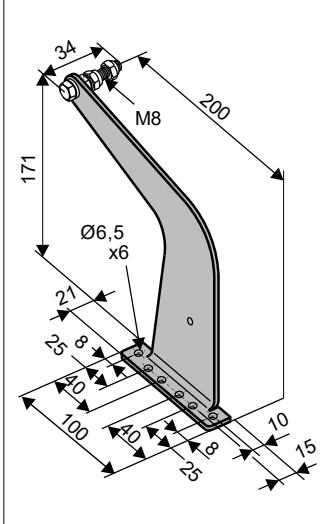
## FRAME BRACKETS

|             |                                                                                     |                                                                                                                                                                                                                                                                   |                                                                                                                                                                          |  |
|-------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>K5</b>   |    | <p><b>Application</b></p> <p>Surface mounting on the main closing edge of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for <b>swivelling suspension</b> of drives</p> <p>PLA with B4,<br/>SP8 with B13,<br/>LKS with B7</p> | <p>Part.-No. 155800</p> <p><b>Material/Finish</b><br/>stainless steel</p> <p><b>Feature/Equipment</b><br/>drilled holes Ø12,5 mm</p>                                     |  |
| <b>K82</b>  |   | <p><b>Application</b></p> <p>Surface mounting on the main closing edge of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for <b>swivelling suspension</b> of drives</p> <p>PLA with B4,<br/>SP8 with B13,<br/>LKS with B7</p> | <p>Part.-No. 151320</p> <p><b>Material/Finish</b><br/>stainless steel</p> <p><b>Feature/Equipment</b><br/>drilled holes Ø12,5 mm</p>                                     |  |
| <b>K17</b>  |  | <p><b>Application</b></p> <p>Surface mounting on the main closing edge of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for <b>swivelling suspension</b> of drives</p> <p>PLA with B5,<br/>SP with B12</p>                   | <p>Part.-No. 159200</p> <p><b>Material/Finish</b><br/>steel galvanized</p> <p><b>Feature/Equipment</b><br/>adjustable height</p>                                         |  |
| <b>K4-L</b> |  | <p><b>Application</b></p> <p>Surface mounting on the main closing edge of the upstand of skylight domes</p> <p>Eternit for swivelling suspension of drives</p> <p>PLA with B4,<br/>SP with B11,</p>                                                               | <p>Part.-No. 155610</p> <p><b>Material/Finish</b><br/>steel galvanized</p> <p><b>Feature/Equipment</b><br/>2x screw Taptite M4x10,<br/>1x nut M4,<br/>1x screw M4x65</p> |  |

## FRAME BRACKETS

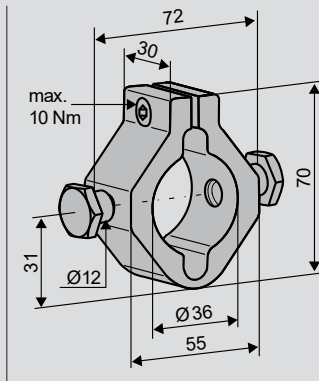
|                                  |  |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                 |  |  |
|----------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| K15                              |  | <p><b>Application</b></p> <p><b>Surface mounting</b> on the <b>side closing edge</b> of window frame profiles of in-/outward opening windows, by obliquely arranged drives with <b>rear suspension</b> with bore <b>Ø8 mm</b></p> <p><b>Required space</b> on the frame <b>40 mm</b></p> | <p><b>Part.-No.</b> 307000</p> <p><b>Material/Finish</b><br/>steel galvanized</p> <p><b>Feature/Equipment</b><br/>H=150 mm, t=4 mm</p>                          |  |  |
| <b>Optional accessories</b>      |  |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                 |  |  |
| B16ST Eyebolt<br>(Ø8 x 40 mm ST) |  |                                                                                                                                                                                                                                                                                          | Part.-No. 100044                                                                                                                                                |  |  |
| B16VA Eyebolt<br>(Ø8 x 40 mm VA) |  |                                                                                                                                                                                                                                                                                          | Part.-No. 100144                                                                                                                                                |  |  |
| K15-Set                          |  | <p><b>Application</b></p> <p><b>Surface mounting</b> on the <b>side closing edge</b> like RWA-1000/1100 hardware sets</p> <p><b>Required space</b> on the frame <b>40 mm</b></p>                                                                                                         | <p><b>Part.-No.</b> 517590</p> <p><b>Material/Finish</b><br/>steel galvanized</p> <p><b>Feature/Equipment</b><br/>Set:<br/>1x K15<br/>1x F11ST<br/>1x B16ST</p> |  |  |
| K37                              |  | <p><b>Application</b></p> <p><b>Surface mounting</b> on the <b>side closing edge</b> of window frame profiles of in-/outward opening windows, by obliquely arranged drives with rear suspension with bore <b>Ø8 mm</b></p> <p><b>Required space</b> on the frame <b>40 mm</b></p>        | <p><b>Part.-No.</b> 307500</p> <p><b>Material/Finish</b><br/>steel galvanized</p> <p><b>Feature/Equipment</b><br/>H=250 mm, t=5 mm</p>                          |  |  |
| <b>Optional accessories</b>      |  |                                                                                                                                                                                                                                                                                          |                                                                                                                                                                 |  |  |
| B16ST Eyebolt<br>(Ø8 x 40 mm ST) |  |                                                                                                                                                                                                                                                                                          | Part.-No. 100044                                                                                                                                                |  |  |
| B16VA Eyebolt<br>(Ø8 x 40 mm VA) |  |                                                                                                                                                                                                                                                                                          | Part.-No. 100144                                                                                                                                                |  |  |

FRAME BRACKETS

|      |                                                                                    |                                                                                                                                                                                                                                                                           |                                                                                                                                       |  |
|------|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--|
| K97L |   | <b>Application</b><br><b>Surface mounting</b> on the <b>side closing edge</b> of window frame profiles of inward opening side hung windows, by obliquely arranged drives with <b>rear suspension</b> with bore <b>Ø8 mm</b> .<br><b>Required space on the frame 20 mm</b> | <b>Part.-No. 160938</b><br><b>Material/Finish</b><br>stainless steel,<br>vibratory grinding<br><b>Feature/Equipment</b><br>left hand  |  |
|      |                                                                                    | <b>Optional accessories</b>                                                                                                                                                                                                                                               |                                                                                                                                       |  |
|      |                                                                                    | <b>B16ST</b> Eyebolt<br>(Ø8 x 40 mm ST)                                                                                                                                                                                                                                   | <b>Part.-No. 100044</b>                                                                                                               |  |
| K97R |  | <b>Application</b><br><b>Surface mounting</b> on the <b>side closing edge</b> of window frame profiles of inward opening side hung windows, by obliquely arranged drives with <b>rear suspension</b> with bore <b>Ø8 mm</b> .<br><b>Required space on the frame 20 mm</b> | <b>Part.-No. 160939</b><br><b>Material/Finish</b><br>stainless steel,<br>vibratory grinding<br><b>Feature/Equipment</b><br>right hand |  |
|      |                                                                                    | <b>Accessories</b>                                                                                                                                                                                                                                                        |                                                                                                                                       |  |
|      |                                                                                    | <b>B16ST</b> Eyebolt<br>(Ø 8 x 40 mm ST)                                                                                                                                                                                                                                  | <b>Part.-No. 100044</b>                                                                                                               |  |
|      |                                                                                    | <b>B16VA</b> Eyebolt<br>(Ø8 x 40 mm VA)                                                                                                                                                                                                                                   | <b>Part.-No. 100144</b>                                                                                                               |  |

## OPTIONAL ACCESSORIES

B4

**Application**

**Adjustable clamping** of the PLA drive housing, for surface mounting with **swivelling suspension** on **K5, K7, K82, K22, K22-1, K127** (preferably on outward opening windows)

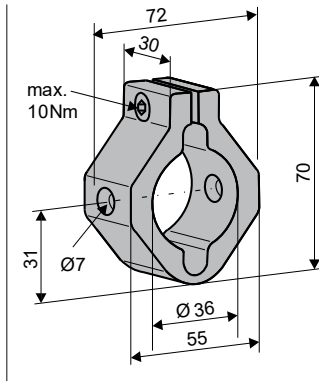
**Part-No. 515900****Material/Finish**

aluminium (antreated), stainless steel

**Feature/Equipment**

2x B8 collar screw Ø12mm, G1/8  
1x cylinder head screw M6x16

B5

**Application**

**Adjustable clamping** of the PLA drive housing, for surface mounting with **swivelling suspension** on **K17** (preferably on outward opening windows)

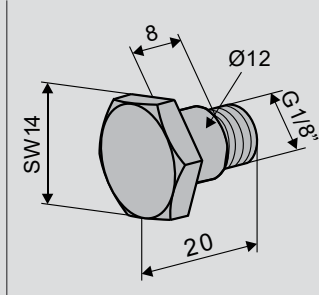
**Part-No. 515825****Material/Finish**

aluminium (antreated), stainless steel

**Feature/Equipment**

2x holes Ø7 mm  
1x cylinder head screw M6x16

B8

**Application**

**Swivelling suspensin** of the clamp rings  
**B4** for PLA  
**B7** for LKS  
or of the clamping blocks  
**B11, B13** for SP  
for U-shaped frame brackets with bore Ø12,5 mm

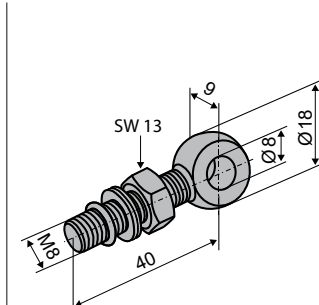
**Part-No. 172800****Material/Finish**

stainless steel

**Feature/Equipment**

Collar Ø12 mm, G1/8"

B16ST

**Application**

**Eye bolt** for rear or front suspension of spindle drives with **M8** thread in the rear base cap or in the spindle tube

**Part-No. 100044****Material/Finish**

steel galvanized

**Feature/Equipment**

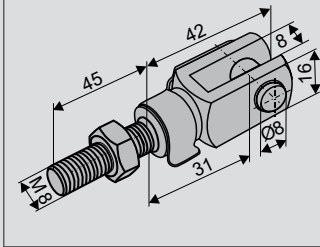
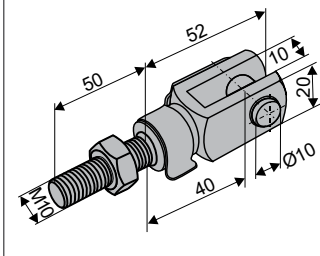
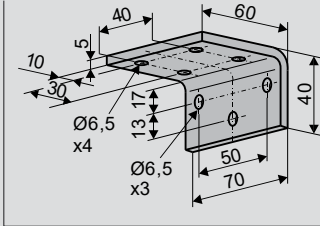
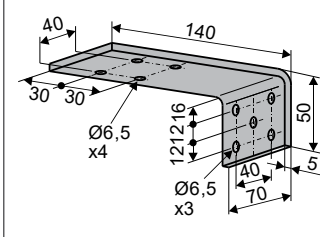
M8x40 (Eye Ø8 mm),  
1 x nut M8 + Nordlock-safety-washer + O-ring  
max. screw-in depth in the drive 25 mm

B16VA

**Part-No. 100144****Material/Finish**

stainless steel (V2A)

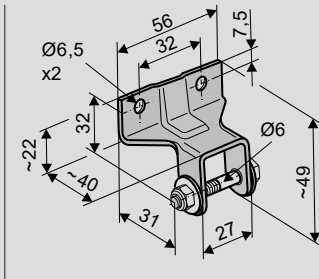
OPTIONAL ACCESSORIES

|                                                                                                        |                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                  |  |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p><b>B27ST</b></p>   | <p><b>Application</b></p> <p>Clevis for rear or front suspension of spindle drives with <b>M8</b> thread in the rear base cap or in the spindle tube</p>                                              | <p><b>Part.-No. 105510</b></p> <p><b>Material/Finish</b><br/>steel galvanized</p> <p><b>Feature/Equipment</b><br/>Clevis M8 x 40 mm with spring bolt Ø8 mm and thread M8 x 45 mm<br/>1x nut M10 + Nordlock-safety-washer + O-ring, max. screw-in depth in the drive 25 mm</p>    |  |
| <p><b>B28ST</b></p>   | <p><b>Application</b></p> <p>Clevis for rear or front suspension of spindle drives with <b>M10</b> thread in the rear base cap or in the spindle tube</p>                                             | <p><b>Part.-No. 105520</b></p> <p><b>Material/Finish</b><br/>steel galvanized</p> <p><b>Feature/Equipment</b><br/>Clevis M10 x 40 mm with spring bolt Ø10 mm and thread M10 x 50 mm<br/>1x nut M10 + Nordlock-safety-washer + O-ring, max. screw-in depth in the drive 25 mm</p> |  |
| <p><b>K21K</b></p>   | <p><b>Application</b></p> <p>Shift the fastening level of the frame brackets <b>K5, K29</b> from the horizontal to the vertical position of the <b>main closing edge</b> of window frame profiles</p> | <p><b>Part.-No. 159900</b></p> <p><b>Material/Finish</b><br/>steel galvanized</p>                                                                                                                                                                                                |  |
| <p><b>K21L</b></p>  | <p><b>Application</b></p> <p>Shift the fastening level of the frame brackets <b>K5, K29</b> from the horizontal to the vertical position of the <b>main closing edge</b> of window frame profiles</p> | <p><b>Part.-No. 159905</b></p> <p><b>Material/Finish</b><br/>steel galvanized</p>                                                                                                                                                                                                |  |

## SPECIFIC APPLICATIONS

## SKY-LIGHT ESSMANN TYP 810

F12

**Application**

Surface mounting on the **main closing edge** of the case-ment profiles of skylight domes **Essmann 810** for drives with **front suspension** with bore **Ø6 mm**

**Part.-No. 151500****Material/Finish**

steel galvanized

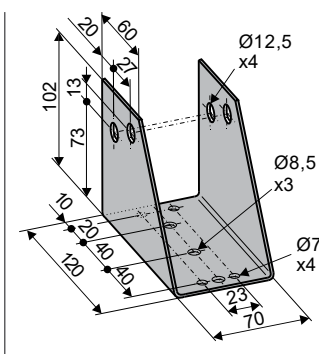
**Feature/Equipment**

1x screw M6,  
1x washer,  
1x nut

**Load**

max. 800 N

K7

**Application**

Surface mounting on the **main closing edge** of the upstand of skylight domes **Essmann 810** for **swivelling suspension** of drives  
**PLA** with **B4**,  
**SP** with **B13**,  
**LKS** with **B7**

**Part.-No. 157500****Material/Finish**

steel galvanized

**Feature/Equipment**

drilled holes Ø12,5 mm

**Accessories**

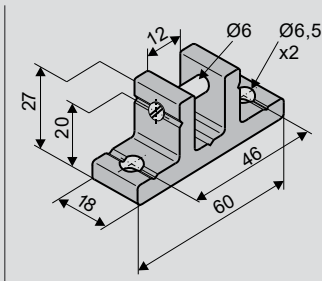
**B4** clamp ring PLA  
(Ø36 mm, G1/8)

**Part.-No. 515900**

### SPECIFIC APPLICATIONS

#### SCHÜCO AWS 57RO, WICONA WICTEC 50, RAICO WING 105D – HSK

F10.8S



#### Application

Surface mounting on the **main closing edge** of casement profiles of outward opening windows, for drives with **front or rear suspension** with bore **Ø8 mm**

Part-No. 151105

**Material/Finish**  
aluminium

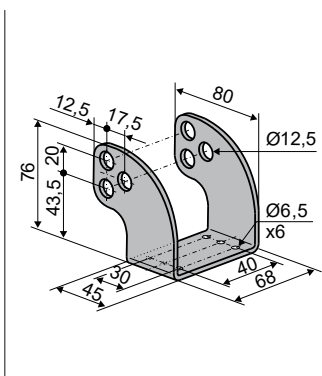
#### Feature/Equipment

1x nut M8,  
1x screw M8x35

#### Load

max. 3000 N

K82



#### Application

Surface mounting on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives

PLA with **B4**,  
SP8 with **B13**,  
LKS with **B7**

Part-No. 151320

**Material/Finish**  
stainless steel

#### Feature/Equipment

drilled holes Ø12,5 mm

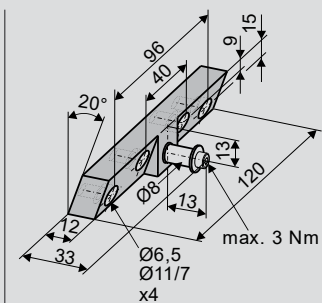
#### Accessories

**B4** clamp ring PLA  
(Ø36 mm, G1/8)

Part-No. 515900

#### SCHÜCO AWS 57R – NSK

F36



#### Application

Surface mounting on the **side closing edge** of outward opening casement profiles of roof windows **Schüco AWS 57RO**, for drives with **front suspension** with bore **Ø8 mm**

Part-No. 155170

**Material/Finish**  
aluminium,

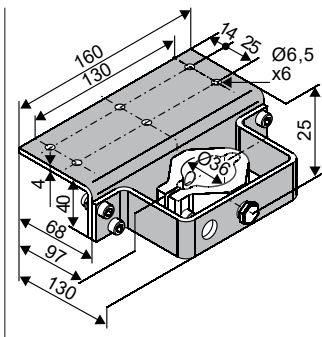
stainless steel

#### Feature/Equipment

1x bolt Ø8 mm,  
1x screw M4,

1x washer A4,3

K122-1



#### Application

Surface mounting on the **side closing edge** of window frame profiles of outward opening roof windows **Schüco AWS 57RO**, **Wicona Wictec 50** for **swivelling suspension** of drives

PLA with **B4**

Part-No. 155116

**Material/Finish**  
stainless steel

#### Feature/Equipment

without clamping ring B4

#### Accessories

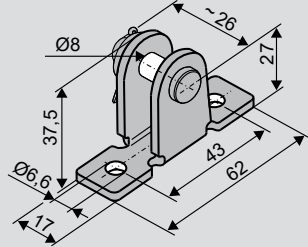
**B4** clamp ring PLA  
(Ø 36 mm, G1/8)

Part-No. 515900

## SPECIFIC APPLICATIONS

## RAICO WING 105D – NSK

F11ST



F11VA

**Application**

**Surface mounting** on the **side closing edge** of casement/ window frame profiles of in-/outward opening windows or on skylights, for drives with **front or rear suspension** with bore **Ø8 mm**, mounting holes aligned with central axis of drive

**Part-No. 151400****Material/Finish**

steel galvanized

**Feature/Equipment**

1x bolt Ø8 mm,  
1x washer,  
1x cotter pin

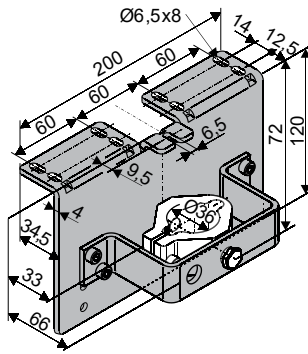
**Load**

max. 3000 N

**Part-No. 151401****Material/Finish**

stainless steel

K127

**Application**

**Surface mounting** on the **side closing edge** of window frame profiles of outward opening roof windows **Raico Wing 105D** for **swivelling suspension** of drives **PLA** with **B4**

**Part-No. 155119****Material/Finish**

stainless steel

**Feature/Equipment**

without clamping ring B4

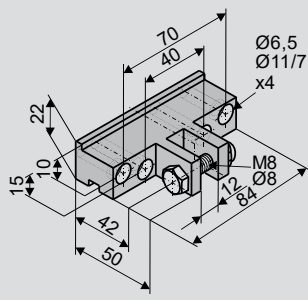
**Accessories**

**B4** clamp ring PLA  
(Ø36 mm, G1/8)

**Part-No. 515900**

## HEROAL 085D – HSK

F29-1

**Application**

**Surface mounting** on the **main closing edge** of casement profiles of roof windows **Heroal 085D** for drives with **front suspension** with bore **Ø8 mm**

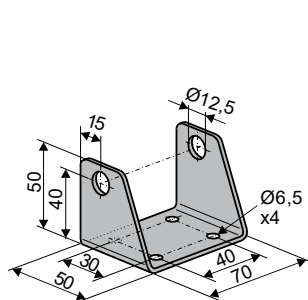
**Part-No. 155158****Material/Finish**

aluminium  
(natural anodized),  
stainless steel

**Feature/Equipment**

1x screw M8x35,  
1x nut M8

K5

**Application**

**Surface mounting** on the **main closing edge** of window frame profiles or on the mullion/transom of outward opening (roof-)windows, for **swivelling suspension** of drives **PLA** with **B4**, **SP5** with **B13**, **LKS** with **B7**

**Part-No. 155800****Material/Finish**

stainless steel

**Feature/Equipment**

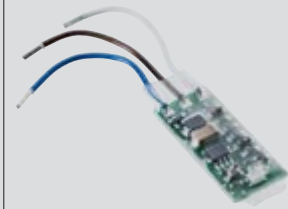
drilled holes Ø12,5 mm

**Accessories**

**B4** clamp ring PLA  
(Ø36 mm, G1/8)

**Part-No. 515900**

## OPTIONAL ACCESSORIES

| Main control unit |                                                                                   |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                          |  |
|-------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| M-COM             |  | <b>Application</b><br><b>Configuration module</b> for automatic configuration and monitoring of max. 4 opening drives / 2 locking drives version S12 / S3 in synchronised multi-drive systems<br><br><b>Rated voltage:</b><br>24 V DC (19 V ... 28 V)<br><b>Current consumption:</b><br><12 mA<br><b>Drive type:</b> S12 | <b>Part.-No. 524177</b><br><br><b>Protection rating</b><br>IP30 rubber envelope<br><b>Ambient temperature range</b><br>0 °C ... + 70 °C<br><b>Dimensions</b><br>45 x 17 x 6 mm<br><b>Connecting wires</b><br>3 wires 0,5 mm² x 50 mm<br><b>Feature/Equipment</b><br>Printed circuit board with components and connection wires to be installed in connection box to be supplied on site. |  |
|                   |                                                                                   |                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                          |  |

## CASEMENT BRACKETS AND FRAME BRACKETS

| Special model                                                  | PU/pcs.  | Part.-No. |  |  |
|----------------------------------------------------------------|----------|-----------|--|--|
| Casement brackets painted / powder coated in other RAL colours |          |           |  |  |
| Lump sum for coating                                           |          | 516030    |  |  |
| Specify at order stage:                                        | 1 – 20   | 516032    |  |  |
|                                                                | 21 – 50  | 516032    |  |  |
|                                                                | 51 – 100 | 516032    |  |  |
|                                                                | from 101 | 516032    |  |  |
| Frame brackets painted / powder coated in other RAL colours    |          |           |  |  |
| Lump sum for coating                                           |          | 516030    |  |  |
| Specify at order stage:                                        | 1 – 20   | 516031    |  |  |
|                                                                | 21 – 50  | 516031    |  |  |
|                                                                | 51 – 100 | 516031    |  |  |
|                                                                | from 101 | 516031    |  |  |