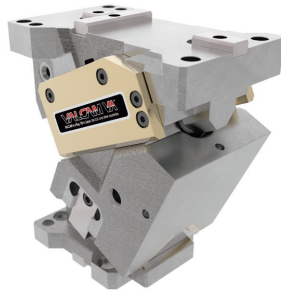


Product Information

- Complies with VDI.
- Compact design.
- High working forces.
- Suitable for high speed production.
- Bronze with solid lubricants wear plates.

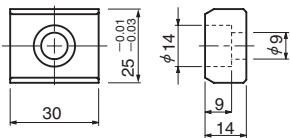


| Mount face width | Working Force [kN] 1,000,000 strokes | Working Angle (5° increments) | Catalog No. | Spring Type |
|------------------|---|----------------------------------|-------------|-------------|
| 65 | 117 | 0°~75° | VACBV65 | |
| 85 | 162 | 0°~75° | VACBV85 | |
| 110 | 206 | 0°~75° | VACBV110 | |
| 165 | 323 | 0°~75° | VACBV165 | |
| 200 | 515 | 0°~75° | VACBV200 | |
| 260 | 603 | 0°~75° | VACBV260 | |
| 330 | 735 | 0°~75° | VACBV330 | |
| 400 | 882 | 0°~75° | VACBV400 | |

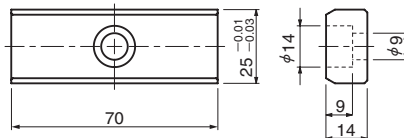
* Mount face widths 200, 260, 300, and 400 mm available in June 2024.

Key specifications

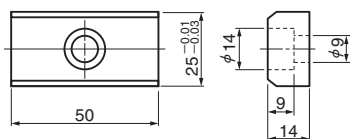
- Cam width 65, 85, 110, 165
(A M8 bolt is included.)



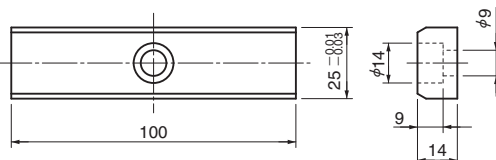
- Cam width 110
(A M8 bolt is included.)



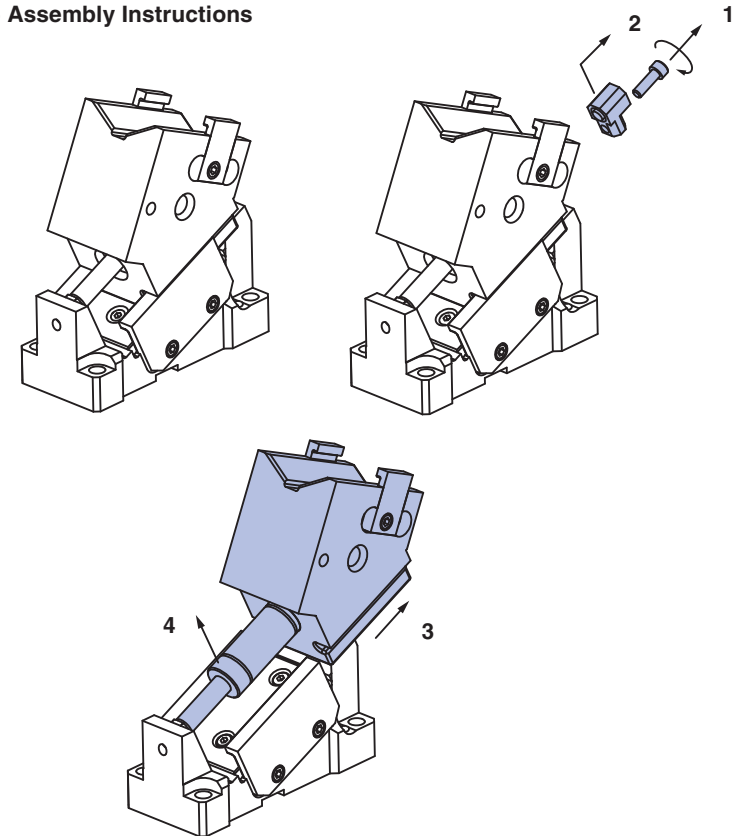
- Cam width 65, 85, 110, 165, 200, 260, 330, 400
LKU25-50 (A M8 bolt is included.)



- Cam width 165
LKU25-100 (A M8 bolt is included.)



VACBV65-85 Assembly Instructions



- Disassembly
 - 1) Remove Hexagon Socket Head Bolts.
 - 2) Pull out Stopper Plate.
 - 3) Remove Cam Slider to the rear. (until Gas Spring is removable.)
 - 4) Remove Gas Spring.

- Assembly

Assembly is the reverse procedure of disassembly.

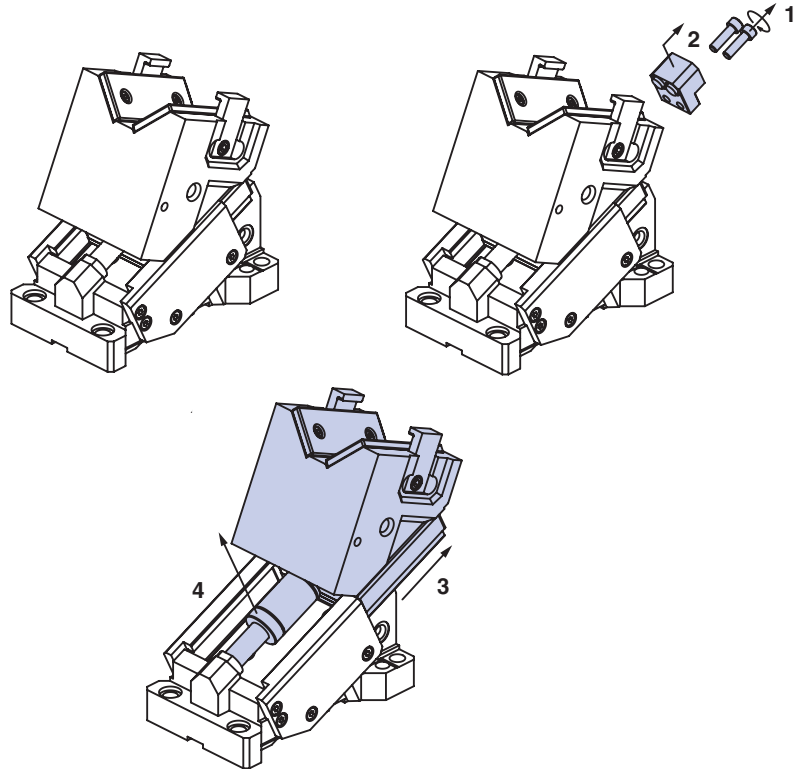
 - Ensure that all parts are clean, particularly the sliding components to which a small amount of lubricant is applied and is then placed in position.
 - Take care that the respective tolerances are observed when assembling Cam Slider and Cam Holder, which also should be identified by the same serial number.
 - Make sure that all bolts are tighten to the recommended torque after assembly and disassembly.

- ⚠ Gas Spring

Please contact your local sales representative if you prefer to use a gas spring not specified in our catalog. For use and maintenance of gas spring, please contact the manufacturer directly.

Product Information

■ VACBV110·165 Assembly Instructions



● Disassembly

- 1) Remove Hexagon Socket Head Bolts.
- 2) Pull out Stopper Plate.
- 3) Remove Cam Slider to the rear. (until Gas Spring is removable.)
- 4) Remove Gas Spring.

● Assembly

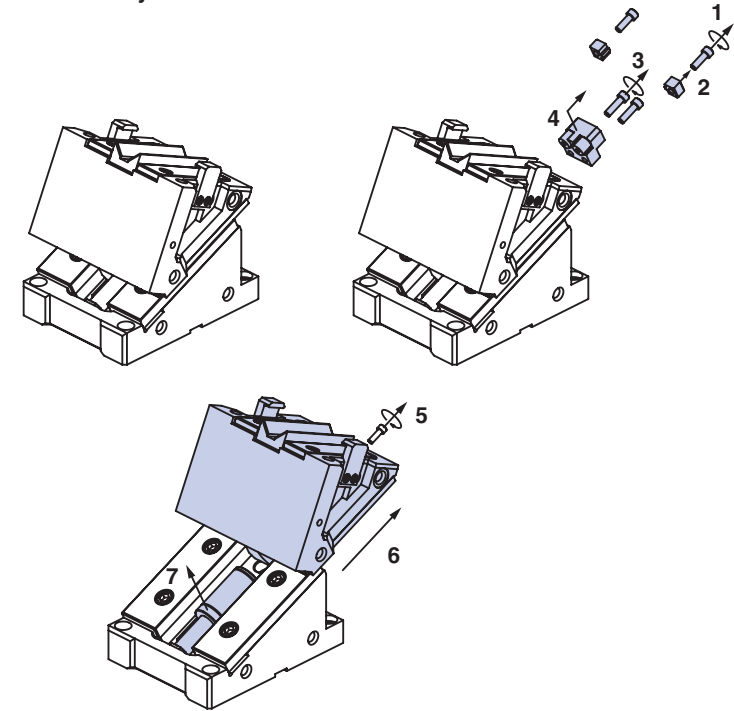
Assembly is the reverse procedure of disassembly.

- Ensure that all parts are clean, particularly the sliding components to which a small amount of lubricant is applied and is then placed in position.
- Take care that the respective tolerances are observed when assembling Cam Slider and Cam Holder, which also should be identified by the same serial number.
- Make sure that all bolts are tighten to the recommended torque after assembly and disassembly.

 Gas Spring

Please contact your local sales representative if you prefer to use a gas spring not specified in our catalog. For use and maintenance of gas spring, please contact the manufacturer directly.

■ VACBV200·260 Assembly Instructions



● Disassembly

- 1) Remove Hexagon Socket Head Bolts.
- 2) Pull out Stopper Plate.
- 3) Remove Hexagon Socket Head Bolts.
- 4) Pull out Stopper Plate.
- 5) Remove Hexagon Socket Head Bolts of Gas Spring.
- 6) Remove Cam Slider to the rear.
- 7) Remove Gas Spring.

● Assembly

Assembly is the reverse procedure of disassembly.

- Ensure that all parts are clean, particularly the sliding components to which a small amount of lubricant is applied and is then placed in position.
- Take care that the respective tolerances are observed when assembling Cam Slider and Cam Holder, which also should be identified by the same serial number.
- Make sure that all bolts are tighten to the recommended torque after assembly and disassembly.

 Gas Spring

Please contact your local sales representative if you prefer to use a gas spring not specified in our catalog. For use and maintenance of gas spring, please contact the manufacturer directly.

Aerial Cam Unit

| Working Force [kN] 1,000,000 strokes | Catalog No. | W | θ | Spring Type PS |
|---|--------------|------------|---------------------------------|--------------------------------|
| 323 | VACBV | 165 | 00~75 (5° increments) | GK NGK GD NGD |

GK: Gas Spring (KALLER) GD: Gas Spring (DADCO)
NGK/NGD: Without Gas Spring Parts for spring assembly are included.

| Order | Catalog No. | W | θ | PS | Option |
|-------|--------------|------------|-----------|-----------|-----------|
| | VACBV | 165 | 10 | GK | |
| | VACBV | 165 | 10 | GK | NF |

| Option Code | Specification |
|-------------|---------------------------|
| NF | Nitrogen gas not charged. |

Spring Specification

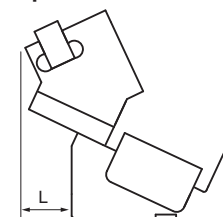
| θ | GK | | | GD | | |
|----------|------------------|--------------------|--------------|------------------|--------------------|--------------|
| | Final Load kN | Return Force kN | Spring Model | Final Load kN | Return Force kN | Spring Model |
| 00 | | 15.4 | | | 15.4 | |
| 05 | | 15.4 | | | 15.4 | |
| 10 | | 15.4 | | | 15.4 | |
| 15 | | 15.4 | | | 15.4 | |
| 20 | | 15.3 | | | 15.4 | |
| 25 | 11.5 | 15.3 | X750-50 | 11.5 | 15.3 | U.0800.050 |
| 30 | | 15.3 | | | 15.3 | |
| 35 | | 15.3 | | | 15.3 | |
| 40 | | 15.2 | | | 15.2 | |
| 45 | | 15.2 | | | 15.2 | |
| 50 | | 15.2 | | | 15.2 | |
| 55 | 11.1 | 15.9 | X750-50 | 11.1 | 15.9 | U.0800.050 |
| 60 | 11.6 | 18.3 | X750-38 | 11.6 | 18.3 | U.0800.038 |
| 65 | 11.5 | 20.6 | X750-32 | 11.5 | 20.6 | U.0800.032 |
| 70 | 10.7 | 22.1 | X750-32 | 10.7 | 22.1 | U.0800.032 |
| 75 | 10.6 | 26.1 | X750-25 | 10.6 | 26.1 | U.0800.025 |

Weight

| θ | Total Weight kg | Cam Slider Weight kg | Max. Tool Length mm | Max. Tool Weight*1 kg |
|----------|--------------------|----------------------------|---------------------------|-----------------------------|
| 00 | 64.7 | | | |
| 05 | 63.8 | | | |
| 10 | 63.4 | | | |
| 15 | 63.0 | | | |
| 20 | 62.7 | | | |
| 25 | 62.5 | 26.5 | | |
| 30 | 62.3 | | | |
| 35 | 62.6 | | | |
| 40 | 63.5 | | 115 | 16.0 |
| 45 | 64.1 | | | |
| 50 | 64.6 | | | |
| 55 | 64.9 | 26.8 | | |
| 60 | 65.3 | 27.0 | | |
| 65 | 66.0 | 27.2 | | |
| 70 | 66.0 | 26.6 | | |
| 75 | 66.5 | 27.5 | | |

Rear Removal Space

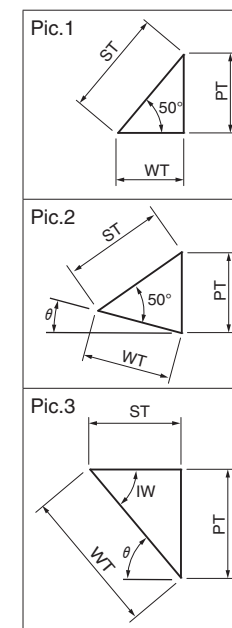
| θ | L mm |
|----------|---------|
| 00 | 16 |
| 05 | 28 |
| 10 | 39 |
| 15 | 50 |
| 20 | 58 |
| 25 | 73 |
| 30 | 88 |
| 35 | 98 |
| 40 | 105 |
| 45 | 116 |
| 50 | 127 |
| 55 | 134 |
| 60 | 141 |
| 65 | 150 |
| 70 | 150 |
| 75 | 152 |



*1 Tool weight is estimated value. Allowable tool weight varies depending on press speed.

Cam Diagram

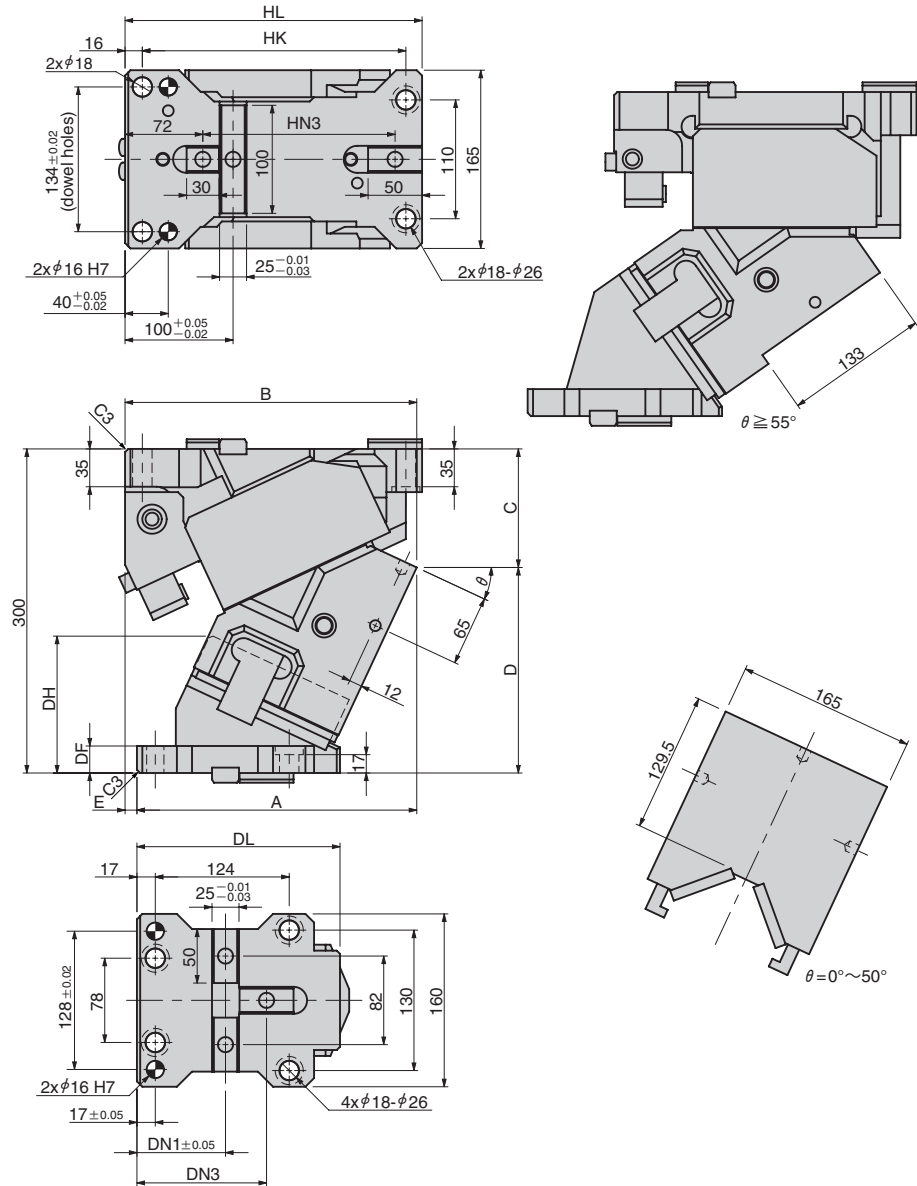
| θ | WT | PT | ST | IW | Pic. |
|----------|------|------|----|----|------|
| 00 | 30.9 | 36.8 | | | 1 |
| 05 | 34.1 | 36.9 | | | |
| 10 | 37.3 | 37.3 | | | |
| 15 | 40.7 | 38.1 | | | |
| 20 | 44.2 | 39.1 | | | |
| 25 | 48.0 | 40.6 | 48 | | 2 |
| 30 | 52.1 | 42.5 | | | |
| 35 | 56.6 | 44.9 | | | |
| 40 | 61.7 | 48.0 | | | |
| 45 | 67.6 | 52.0 | | | |
| 50 | 74.7 | 57.2 | | 50 | |
| 55 | 75.0 | 61.4 | 43 | 55 | |
| 60 | 74.0 | 64.1 | 37 | 60 | |
| 65 | 73.4 | 66.5 | 31 | 65 | 3 |
| 70 | 73.1 | 68.7 | 25 | 70 | |
| 75 | 73.4 | 70.9 | 19 | 75 | |



Aerial Cam Unit

VACBV165

CAD FILE

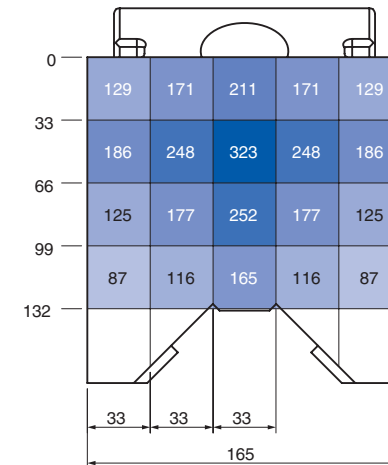


| θ | A | B | C | D | E | HL | HK | HN3 | DH | DL | DN1 | DN3 | DF |
|----|--------|--------|--------|--------|------|-----|-----|-----|-------|-----|-----|-----|----|
| 00 | 184.00 | 261.00 | 74.00 | 226.00 | 77 | 250 | 219 | 153 | 88.7 | | | | 23 |
| 05 | 200.19 | 264.19 | 78.59 | 221.41 | 64 | 255 | 224 | 158 | 97.2 | | | | |
| 10 | 215.98 | 266.98 | 86.10 | 213.90 | 51 | 260 | 229 | 163 | 103.7 | | | | |
| 15 | 231.38 | 268.38 | 94.48 | 205.52 | 37 | 265 | 234 | 168 | 110.2 | | | | |
| 20 | 247.41 | 270.41 | 101.70 | 198.30 | 23 | 270 | 239 | 173 | 118.5 | | | | |
| 25 | 259.08 | 270.08 | 109.74 | 190.26 | 11 | 275 | 244 | 178 | 126.7 | 188 | 82 | 120 | |
| 30 | 274.40 | 267.40 | 118.56 | 181.44 | -7 | 275 | 244 | | 134.5 | | | | |
| 35 | 286.40 | 266.40 | 128.13 | 171.87 | -20 | 280 | 249 | 183 | 142.0 | | | | |
| 40 | 302.10 | 267.10 | 140.43 | 159.57 | -35 | 285 | 254 | 188 | 147.0 | | | | 25 |
| 45 | 311.53 | 260.53 | 153.43 | 146.57 | -51 | 285 | 254 | | 151.3 | | | | |
| 50 | 318.71 | 251.71 | 165.10 | 134.90 | -67 | | | | 157.3 | 183 | | | |
| 55 | 326.27 | 246.27 | 167.18 | 132.82 | -80 | | | | 158.8 | 180 | | | |
| 60 | 331.61 | 239.61 | 172.77 | 127.23 | -92 | 280 | 249 | 183 | 164.9 | | | | |
| 65 | 343.85 | 235.85 | 173.59 | 126.41 | -108 | | | | 168.4 | 175 | 70 | 108 | |
| 70 | 347.60 | 236.60 | 177.84 | 122.16 | -111 | | | | 175.9 | 170 | | | |
| 75 | 349.35 | 232.35 | 185.82 | 114.18 | -117 | | | | 175.5 | 161 | | | |

Working Force Distribution Diagram

The working forces indicated in the mount face distribution diagram are reached by putting the tooling center of gravity within each area for the following pictures.

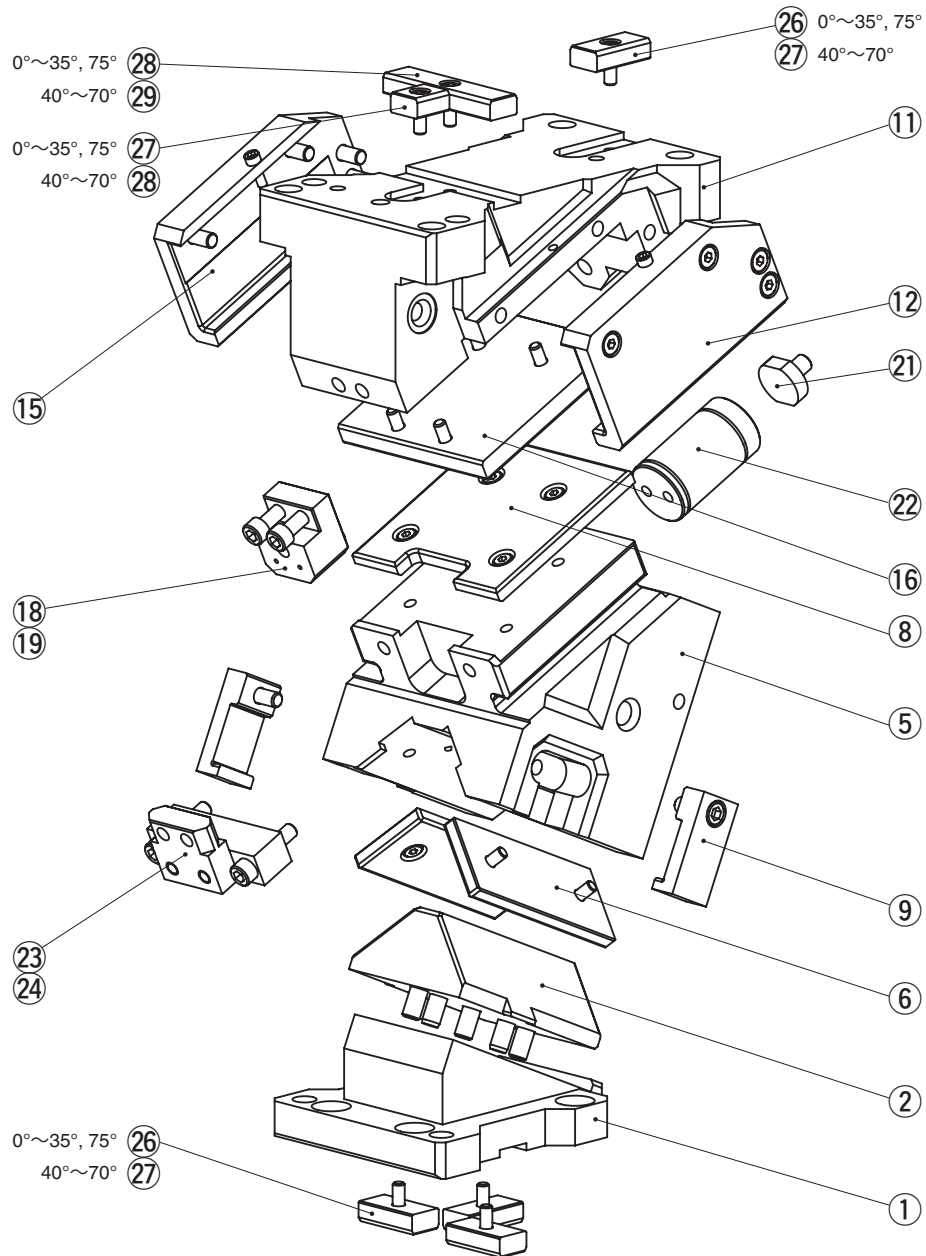
Working force (kN) allowed for up to 1,000,000 strokes



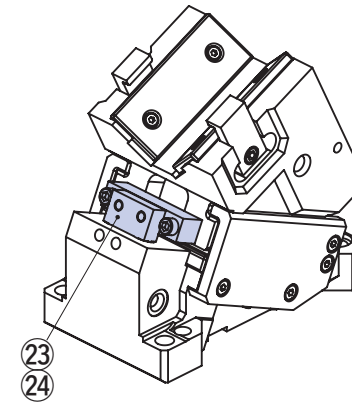
Refer to page 525 for Table of Components.

Aerial Cam Unit

VACBV165



● Lock System



| No. | Description | Qty | Material and Remark |
|-----|-----------------|-----|------------------------------------|
| 1 | Cam Driver | 1 | Cast Iron |
| 2 | Cam Slide Guide | 1 | Bronze with Graphite |
| 5 | Cam Slider | 1 | Cast Iron |
| 6 | Slide Plate 01 | 2 | Steel |
| 8 | Slide Plate 02 | 1 | Steel |
| 9 | Positive Return | 2 | Steel |
| 11 | Cam Holder | 1 | Cast Iron |
| 12 | Slide Keeper A | 1 | Bronze with Graphite |
| 15 | Slide Keeper B | 1 | Bronze with Graphite |
| 16 | Wear Plate | 1 | Bronze with Graphite |
| 18 | Stopper Plate | 1 | Steel |
| 19 | Stopper | 2 | — |
| 21 | Pin | 1 | Steel |
| 22 | Gas Spring | 1 | Refer to the Spring Specification. |
| 23 | Lock Plate 01 | 1 | Steel |
| 24 | Lock Plate 02 | 1 | Steel |
| 26 | Key | 4 | LKU25-50 0°~35°, 75° |
| 27 | Key | 4 | LKU25-50 40°~70° |
| 27 | Key | 1 | Steel 0°~35°, 75° |
| 28 | Key | 1 | Steel 40°~70° |
| 28 | Key | 1 | LKU25-100 0°~35°, 75° |
| 29 | Key | 1 | LKU25-100 40°~70° |

Bolts, nuts, dowels, and washers for assembly are not indicated.