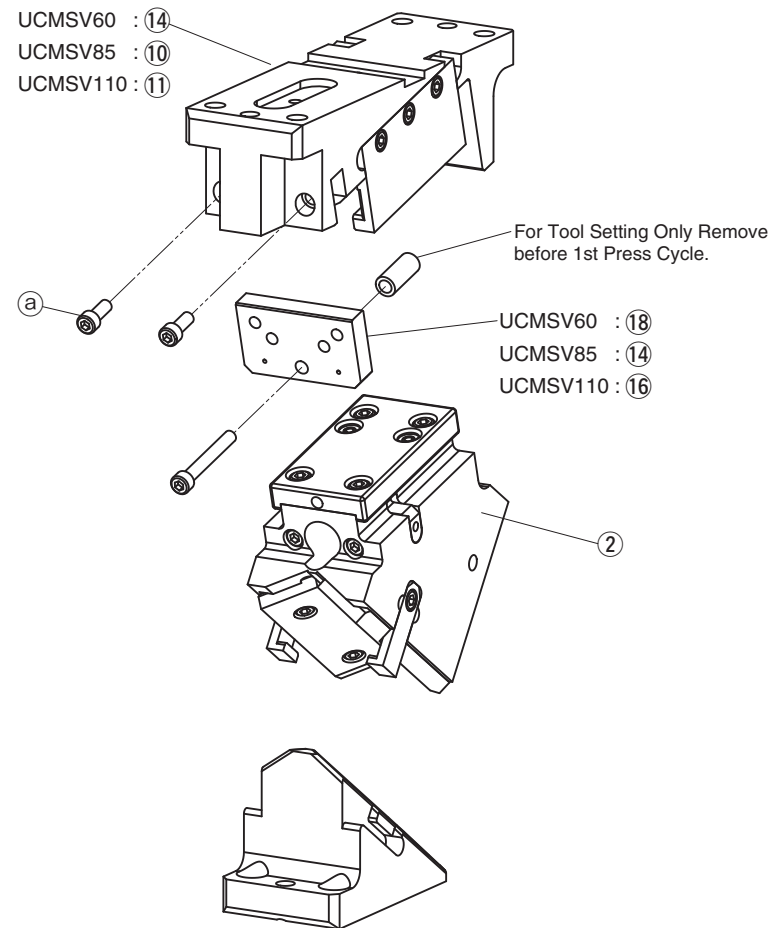


- 60, 85, 110, 165, 200, 250, 300, 350 and 400mm mounting widths are available.
- Available angles are from 0° to 75° in increments of 5°.
- Gas spring can be removed from the cam whilst in the die / press.
- Complying with VDI-BAK specification.

UCMSV Specifications

| Mount face | | Working Angle | Travel | Working Force kN(tonf) | Mount face | | Working Angle | Travel | Working Force kN(tonf) | Mount face | | Working Angle | Travel | Working Force kN(tonf) | | | | | | | | |
|------------|-----|---------------|--------|---------------------------|------------|-------|---------------|--------|---------------------------|------------|-----|---------------|--------|---------------------------|----|-------|----|-------|----|-------|----|-------|
| W | H | | | | W | H | | | | W | H | | | | | | | | | | | |
| 60 | 100 | 00 | 19.3 | 75 (7.6) | 165 | 115 | 00 | 32.1 | 171 (17.5) | 300 | 155 | 00 | 38.6 | 364 (37.1) | | | | | | | | |
| | | 05 | 21.3 | | | | 05 | 35.5 | | | | 05 | 42.6 | | | | | | | | | |
| | | 10 | 23.3 | | | | 10 | 38.9 | | | | 10 | 46.7 | | | | | | | | | |
| | | 15 | 25.4 | | | | 15 | 42.4 | | | | 15 | 50.9 | | | | | | | | | |
| | | 20 | 27.6 | | | | 20 | 46.1 | | | | 20 | 55.3 | | | | | | | | | |
| | | 25 | 30.0 | | | | 25 | 50.0 | | | | 25 | 60.0 | | | | | | | | | |
| | | 30 | 32.6 | | | | 30 | 54.3 | | | | 30 | 65.1 | | | | | | | | | |
| | | 35 | 35.4 | | | | 35 | 59.0 | | | | 35 | 70.8 | | | | | | | | | |
| | | 40 | 38.6 | | | | 40 | 64.3 | | | | 40 | 77.1 | | | | | | | | | |
| | | 45 | 42.3 | | | | 45 | 70.4 | | | | 45 | 84.5 | | | | | | | | | |
| | | 50 | 46.7 | | | | 50 | 77.8 | | | | 50 | 93.3 | | | | | | | | | |
| | | 55 | 52.3 | | | | 55 | 87.2 | | | | 55 | 104.6 | | | | | | | | | |
| 85 | 110 | 00 | 19.3 | 100 (10.2) | 200 | 115 | 00 | 32.1 | 218 (22.2) | 350 | 155 | 00 | 38.6 | 405 (41.3) | | | | | | | | |
| | | 05 | 21.3 | | | | 05 | 35.5 | | | | 05 | 42.6 | | | | | | | | | |
| | | 10 | 23.3 | | | | 10 | 38.9 | | | | 10 | 46.7 | | | | | | | | | |
| | | 15 | 25.4 | | | | 15 | 42.4 | | | | 15 | 50.9 | | | | | | | | | |
| | | 20 | 27.6 | | | | 20 | 46.1 | | | | 20 | 55.3 | | | | | | | | | |
| | | 25 | 30.0 | | | | 25 | 50.0 | | | | 25 | 60.0 | | | | | | | | | |
| | | 30 | 32.6 | | | | 30 | 54.3 | | | | 30 | 65.1 | | | | | | | | | |
| | | 35 | 35.4 | | | | 35 | 59.0 | | | | 35 | 70.8 | | | | | | | | | |
| | | 40 | 38.6 | | | | 40 | 64.3 | | | | 40 | 77.1 | | | | | | | | | |
| | | 45 | 42.3 | | | | 45 | 70.4 | | | | 45 | 84.5 | | | | | | | | | |
| | | 50 | 46.7 | | | | 50 | 77.8 | | | | 50 | 93.3 | | | | | | | | | |
| | | 55 | 52.3 | | | | 55 | 87.2 | | | | 55 | 104.6 | | | | | | | | | |
| 110 | 145 | 00 | 32.1 | 150 (15.3) | 250 | 115 | 00 | 32.1 | 284 (29.0) | 400 | 155 | 00 | 38.6 | 450 (45.9) | | | | | | | | |
| | | 05 | 35.5 | | | | 05 | 35.5 | | | | 05 | 42.6 | | | | | | | | | |
| | | 10 | 38.9 | | | | 10 | 38.9 | | | | 10 | 46.7 | | | | | | | | | |
| | | 15 | 42.4 | | | | 15 | 42.4 | | | | 15 | 50.9 | | | | | | | | | |
| | | 20 | 46.1 | | | | 20 | 46.1 | | | | 20 | 55.3 | | | | | | | | | |
| | | 25 | 50.0 | | | | 25 | 50.0 | | | | 25 | 60.0 | | | | | | | | | |
| | 140 | 30 | 54.3 | | | | 30 | 54.3 | | | | 30 | 65.1 | | 30 | 65.1 | 30 | 70.8 | 30 | 70.8 | 30 | 77.1 |
| | | 35 | 59.0 | | | | 35 | 59.0 | | | | 35 | 70.8 | | 35 | 70.8 | 35 | 84.5 | 35 | 84.5 | 35 | 93.3 |
| | | 40 | 64.3 | | | | 40 | 64.3 | | | | 40 | 77.1 | | 40 | 77.1 | 40 | 93.3 | 40 | 104.6 | 40 | 120.0 |
| | | 45 | 70.4 | | | | 45 | 70.4 | | | | 45 | 84.5 | | 45 | 84.5 | 45 | 93.3 | 45 | 104.6 | 45 | 120.0 |
| | | 50 | 77.8 | | | | 50 | 77.8 | | | | 50 | 93.3 | | 50 | 93.3 | 50 | 104.6 | 50 | 120.0 | 50 | 131.2 |
| | | 55 | 87.2 | | | | 55 | 87.2 | | | | 55 | 104.6 | | 55 | 104.6 | 55 | 120.0 | 55 | 131.2 | 55 | 142.4 |
| 140 | 60 | 100.0 | 60 | 100.0 | 60 | 120.0 | 60 | 120.0 | 60 | 142.4 | 60 | 164.8 | 60 | 187.2 | | | | | | | | |
| | 65 | 94.6 | 65 | 94.6 | 65 | 115.5 | 65 | 115.5 | 65 | 137.9 | 65 | 160.3 | 65 | 182.7 | | | | | | | | |
| | 70 | 81.9 | 70 | 81.9 | 70 | 102.8 | 70 | 102.8 | 70 | 125.1 | 70 | 147.5 | 70 | 169.9 | | | | | | | | |
| | 75 | 70.4 | 75 | 70.4 | 75 | 90.4 | 75 | 90.4 | 75 | 112.8 | 75 | 135.2 | 75 | 157.6 | | | | | | | | |
| | 80 | 60.0 | 80 | 60.0 | 80 | 78.0 | 80 | 78.0 | 80 | 100.4 | 80 | 122.8 | 80 | 145.2 | | | | | | | | |
| | 85 | 50.0 | 85 | 50.0 | 85 | 65.6 | 85 | 65.6 | 85 | 88.0 | 85 | 110.4 | 85 | 132.8 | | | | | | | | |

UCMSV60 / 85 / 110 Assembly Instructions



Disassembly

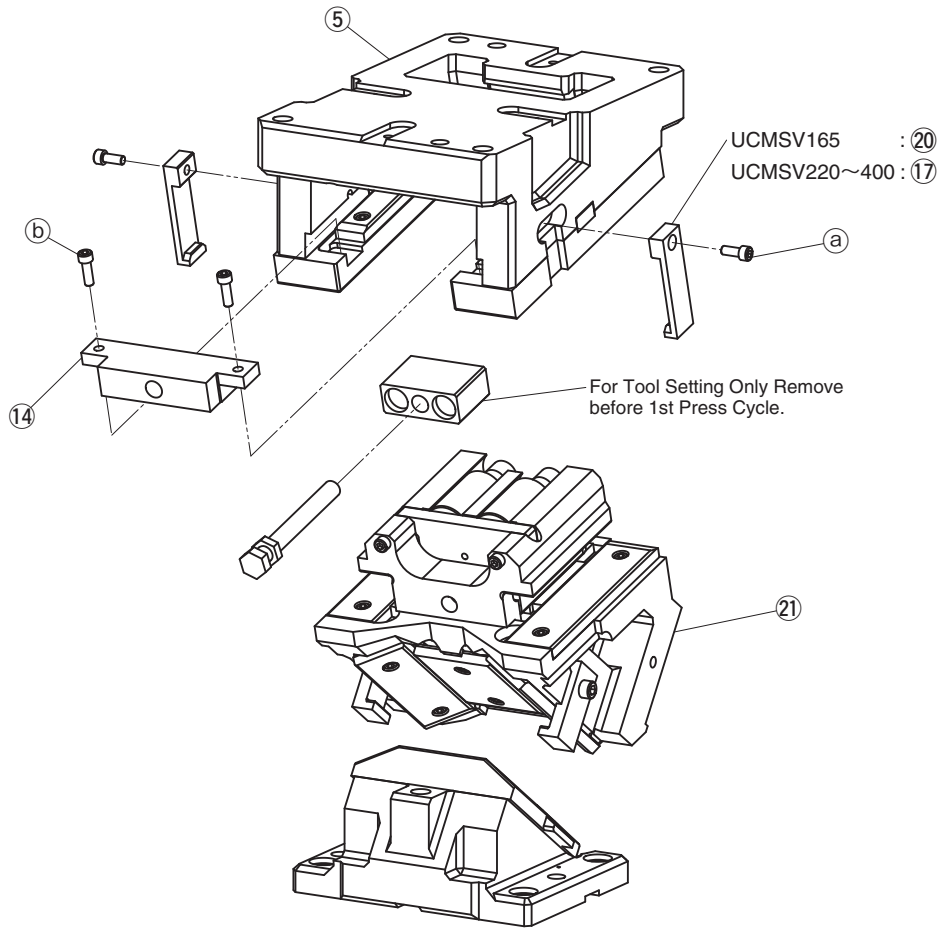
- 1) Remove Hexagon Socket Head Bolts (Ⓐ), to pull out Stopper Plate (UCMSV60: 18, UCMSV85: 14, UCMSV110: 16).
- 2) Pull out and remove Cam Slider (Ⓒ) from Cam Holder (UCMSV60: 14, UCMSV85: 10, UCMSV110: 11) to the rear.

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 tightened to the recommended torque after assembly and disassembly.

■ UCMSV165/200/250/300/350/400 Assembly Instructions



● Disassembly

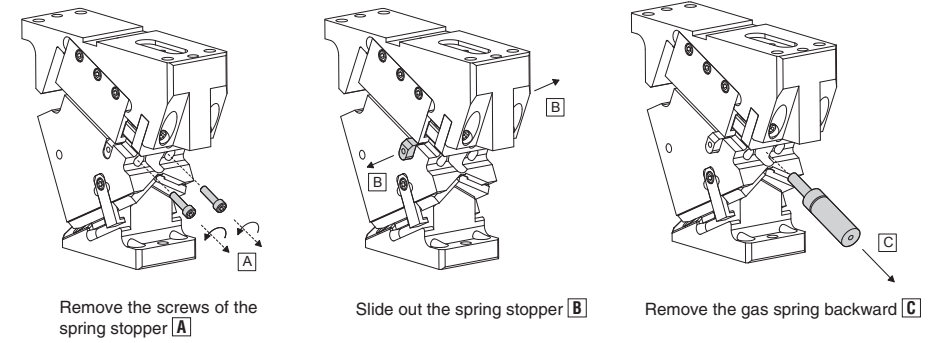
- 1) Remove Hexagon Socket Head Bolts (a), and remove Safety Plate (UCMSV165: ⑳,UCMSV200~400: ⑰).
- 2) Remove Hexagon Socket Head Bolts (b), and remove Stopper Plate (14).
- 3) Pull out and remove Cam Slider (21) from Cam Holder (5) to the rear.

● Assembly

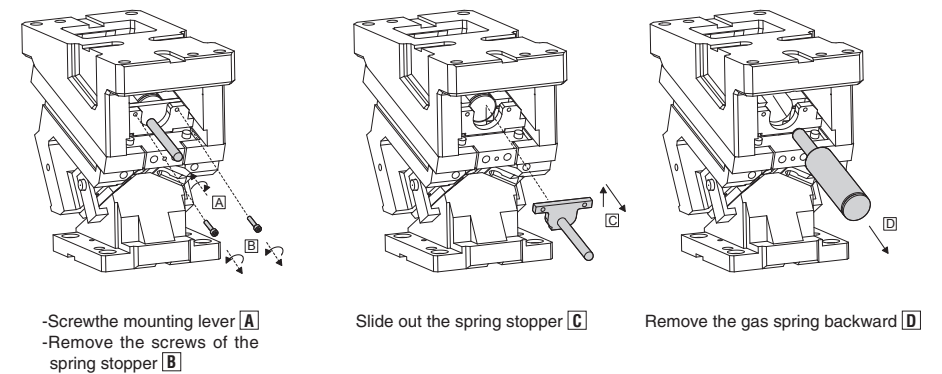
Assembly is the reverse procedure of disassembly.

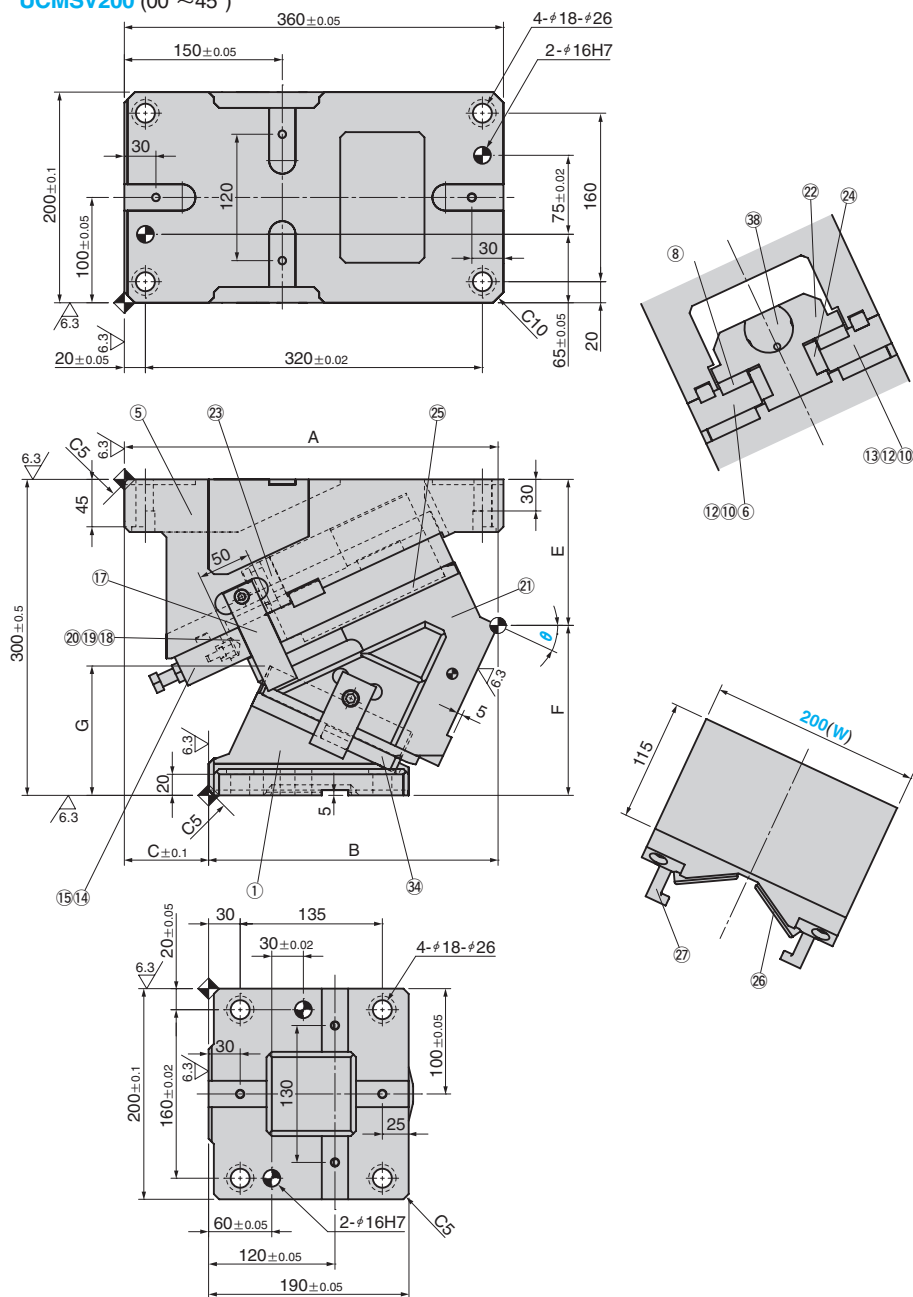
- Ensure that all parts are clean, particularly the sliding components to which a small amount of lubricant is applied and is then placed in position.
- Take care that the respective tolerances are observed when assembling Cam Slider and Cam Holder, which also should be identified by the same serial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

■ UCMSV60/85/110 Removing gas spring



■ UCMSV165/200/250/300/350/400 Removing gas spring



UCMSV200 (00°~45°)


| θ | Travel | A | B | C | E | F | G |
|----------|--------|--------|--------|-----|--------|--------|-------|
| 00 | 32.1 | 360.00 | 210.00 | 150 | 95.00 | 205.00 | 78.5 |
| 05 | 35.5 | 356.25 | 222.25 | 134 | 100.91 | 199.09 | 88.8 |
| 10 | 38.9 | 359.27 | 241.27 | 118 | 111.09 | 188.91 | 95.6 |
| 15 | 42.4 | 355.78 | 244.78 | 111 | 122.47 | 177.53 | 101.9 |
| 20 | 46.1 | 355.68 | 262.68 | 93 | 130.00 | 170.00 | 112.7 |
| 25 | 50.0 | 354.88 | 274.88 | 80 | 138.62 | 161.38 | 122.8 |
| 30 | 54.3 | 357.28 | 287.28 | 70 | 148.28 | 151.72 | 132.2 |
| 35 | 59.0 | 345.80 | 281.80 | 64 | 158.89 | 141.11 | 140.7 |
| 40 | 64.3 | 344.27 | 286.27 | 58 | 170.38 | 129.62 | 148.4 |
| 45 | 70.4 | 344.86 | 304.86 | 40 | 182.66 | 117.34 | 155.2 |

| Working Force kN | Return Force N(kgf) | Catalog No. | (W) | θ | Spring Type PS |
|------------------|---------------------|-------------|-----|----------|----------------|
| | 15061 (1536.8) | | | 00 | |
| | 15030 (1533.6) | | | 05 | |
| | 14996 (1530.2) | | | 10 | |
| | 14961 (1526.7) | | | 15 | GS |
| 218 | 14925 (1523.0) | UCMSV | 200 | 20 | GK |
| | 14887 (1519.1) | | | 25 | GD |
| | 14849 (1515.2) | | | 30 | *NGP |
| | 14810 (1511.2) | | | 35 | |
| | 14770 (1507.2) | | | 40 | |
| | 14730 (1503.1) | | | 45 | |

Mark * Without gas spring but accessories for installation of each type are included.

Order **Catalog No.** **(W)** - **θ** - **PS**
UCMSV 200 - 25 - GK

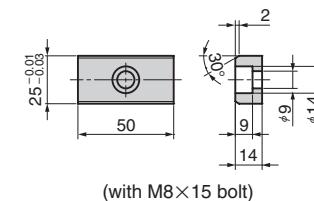
Spring Specification (Qty 1)

| Spring Type PS | θ | Spring Force N(kgf) | | Model |
|----------------|----------|---------------------|----------------|-----------------------|
| | | Initial Force | Final Force | |
| GK | | | 10892 (1111.4) | X750-063-TD (KALLER) |
| GD | 00~45 | - | 10526 (1074.1) | U.0800.063.TO (DADCO) |
| GS | | | 11190 (1141.8) | SFC.750.63 (SDT) |

Option

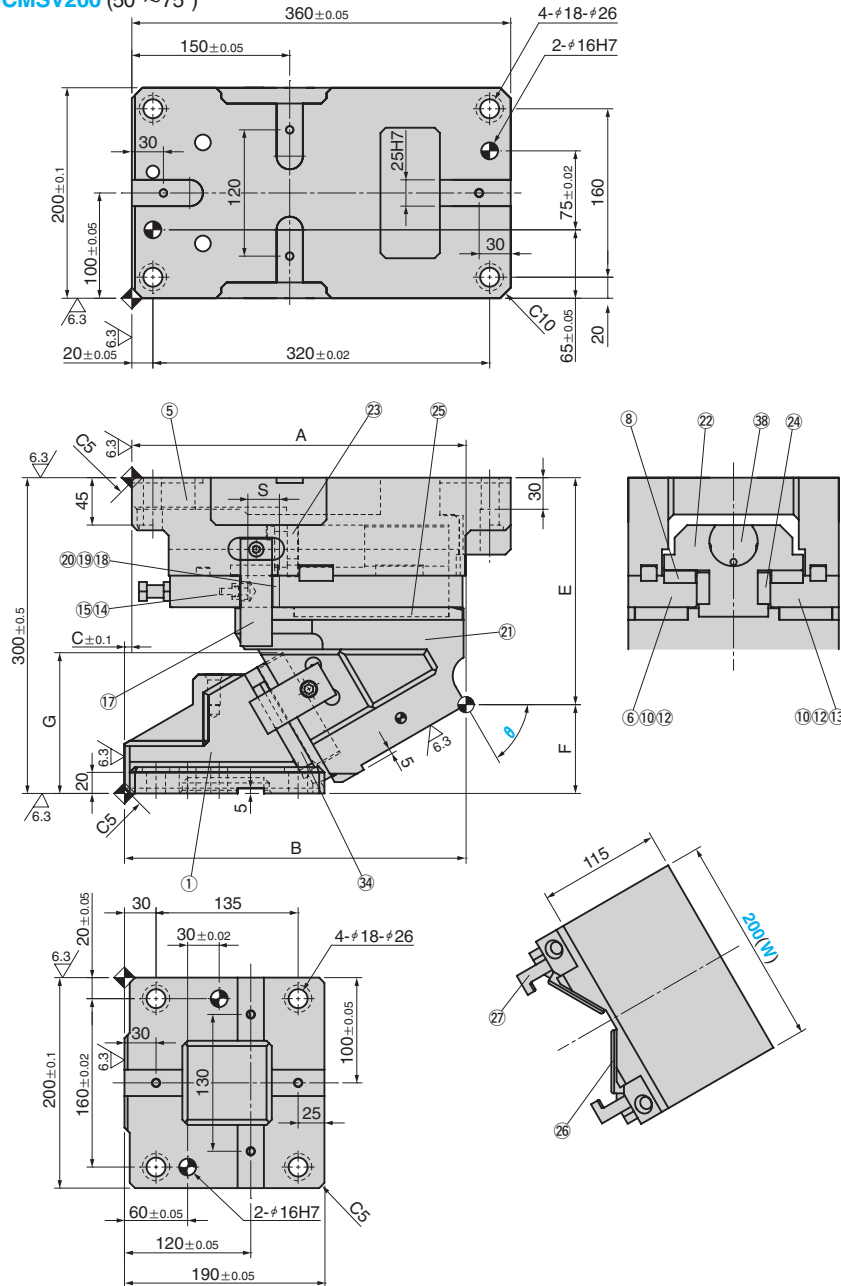
| Code | Specification |
|------|---|
| K | Dedicated key is attached. (It is not assembled to the main unit) |
| NF | Nitrogen gas is not charged. Applicable to GK, GS and GD only. |

- Parts list is shown in p.1679
- Cam diagram is shown in p.1677
- NF : Gas Springs are not filled with nitrogen gas if delivery is by air freight.



(with M8×15 bolt)

Order **UCMSV200 - 25 - GK - NF**

UCMSV200 (50°~75°)


| θ | Travel | A | B | C | E | F | G | S |
|----------|--------|--------|--------|-----|--------|--------|-----|----|
| 50 | 77.8 | 327.27 | 317.27 | 10 | 195.63 | 104.37 | 142 | 50 |
| 55 | 52.3 | 324.39 | 324.39 | 0 | 210.20 | 89.80 | 132 | |
| 60 | 60 | 317.59 | 324.59 | -7 | 215.63 | 84.37 | 134 | 30 |
| 65 | 71 | 319.23 | 334.23 | -15 | 231.40 | 68.60 | 133 | |
| 70 | 58.5 | 313.07 | 338.07 | -25 | 245.67 | 54.33 | 134 | |
| 75 | 77.3 | 306.08 | 341.08 | -35 | 260.24 | 39.76 | 133 | 20 |

| Working Force kN | Return Force N(kgf) | Catalog No. | (W) | θ | Spring Type PS |
|------------------|---------------------|-------------|-----|----------|----------------|
| 218 | 14691 (1499.0) | UCMSV | 200 | 50 | |
| | 14688 (1498.8) | | | 55 | GS |
| | 16243 (1657.4) | | | 60 | GK |
| | 18313 (1868.6) | | | 65 | GD |
| | 20465 (2088.3) | | | 70 | *NGP |
| | 24477 (2497.6) | | | 75 | |

Mark * Without gas spring but accessories for installation of each type are included.

Order **UCMSV 200 - 60 - GK**

Spring Specification (Qty 1)

| Spring Type PS | θ | Spring Force N(kgf) | | Model |
|----------------|----------|---------------------|----------------|-----------------------|
| | | Initial Force | Final Force | |
| GK | 50 | | 10892 (1111.4) | X750-063-TD (KALLER) |
| GD | | - | 10526 (1074.1) | U.0800.063.TO (DADCO) |
| GS | | | 11190 (1141.8) | SFC.750.63 (SDT) |
| GK | 55~65 | | 10040 (1024.5) | X750-050-TD (KALLER) |
| GD | | - | 11360 (1159.2) | U.0800.050.TO (DADCO) |
| GS | | | 10290 (1050.0) | SFC.750.50 (SDT) |
| GK | 70~75 | | 9716 (991.4) | X750-038-TD (KALLER) |
| GD | | - | 9446 (963.9) | U.0800.038.TO (DADCO) |
| GS | | | 9947 (1015.0) | SFC.750.38 (SDT) |

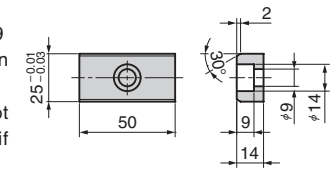


| Code | Specification |
|------|---|
| K | Dedicated key is attached. (It is not assembled to the main unit) |
| NF | Nitrogen gas is not charged. Applicable to GK, GS and GD only. |

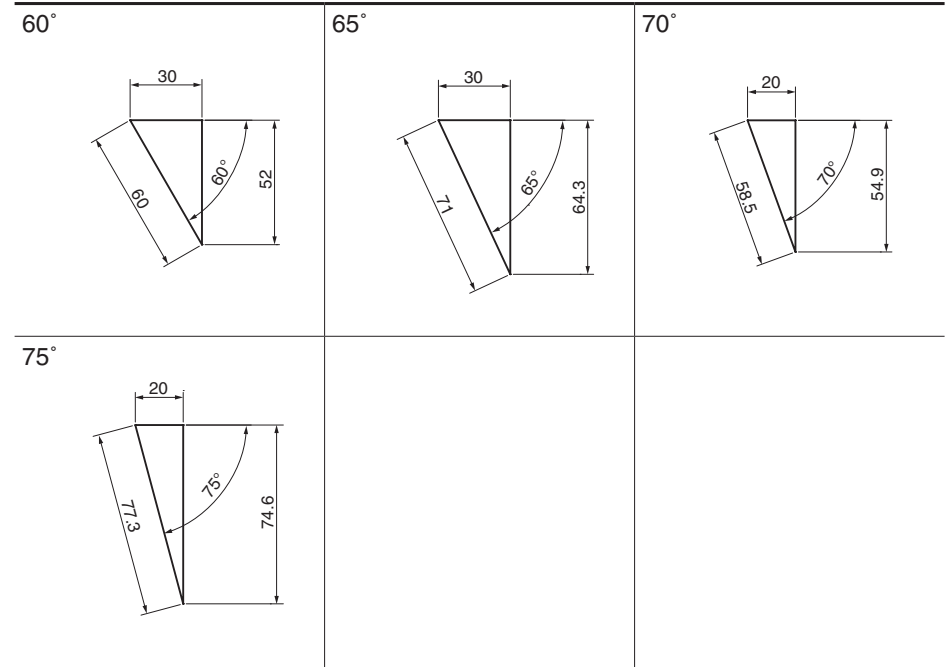
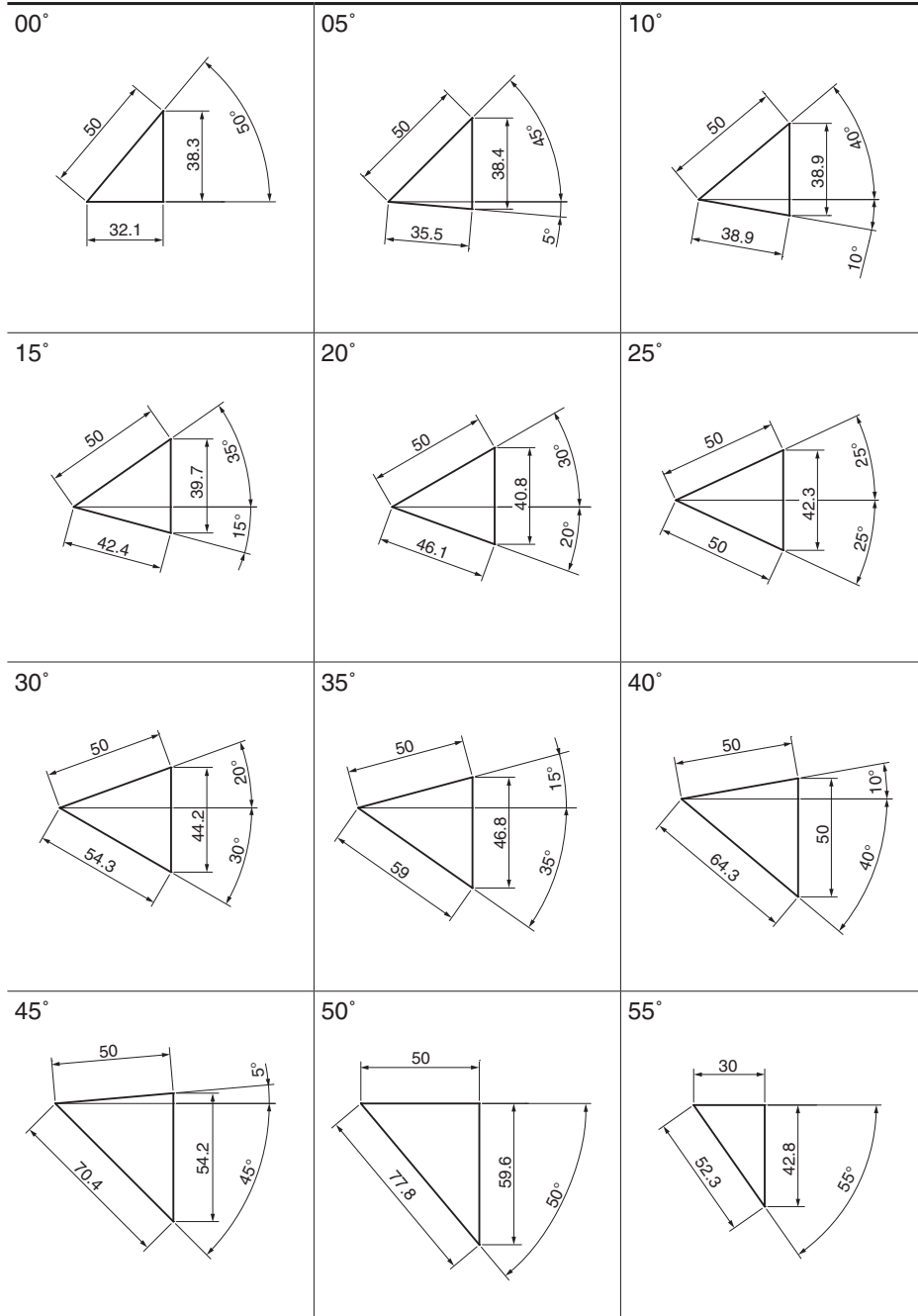
- Parts list is shown in p.1679
- Cam diagram is shown in p.1677
- NF : Gas Springs are not filled with nitrogen gas if delivery is by air freight.

Order **UCMSV200 - 60 - GK - NF**

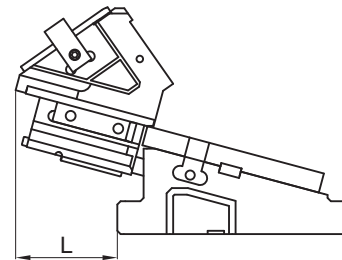
Key Specification



(with M8×15 bolt)



■ Rear Removal Space



| θ | L |
|----------|-----|
| 00 | 55 |
| 05 | 80 |
| 10 | 95 |
| 15 | 113 |
| 20 | 124 |
| 25 | 133 |
| 30 | 136 |
| 35 | 155 |
| 40 | 160 |
| 45 | 159 |
| 50 | 173 |
| 55 | 172 |
| 60 | 172 |
| 65 | 172 |
| 70 | 169 |
| 75 | 169 |

■ $\theta = 00^\circ \sim 50^\circ$

| No. | Description | Qty | Material and Remark |
|-----|---------------------------|-----|----------------------------------|
| ① | Cam Driver | 1 | GGG60 |
| ⑤ | Cam Holder | 1 | GGG60 |
| ⑥ | Base Plate R | 1 | S45C |
| ⑧ | Slide Plate(VSM-15) | 2 | Bronze with Graphite |
| ⑩ | Key | 4 | SS400 |
| ⑫ | Key | 2 | SS400 |
| ⑬ | Base Plate L | 1 | S45C |
| ⑭ | Stopper Plate | 1 | S45C |
| ⑮ | Stopper | 1 | Urethane (PCU15) |
| ⑰ | Safety Plate | 2 | S45C |
| ⑱ | Lock Block | 1 | SS400 |
| ⑲ | Hexagonal Bolt | 2 | SCM435 M12×140 |
| ⑳ | Hexagonal Nut | 2 | SCM435 M12 |
| ㉑ | Cam Slider | 1 | GGG60 |
| ㉒ | Spring Guide | 1 | S45C |
| ㉓ | Gas Spring Guide Plate | 1 | S45C |
| ㉔ | Slide Plate(VSM-13) | 2 | Bronze with Graphite |
| ㉕ | Slide Plate(VSM-25) | 2 | Bronze with Graphite |
| ㉖ | Slide Plate(VSM-29) | 2 | Bronze with Graphite |
| ㉗ | Cam Positive Return Plate | 2 | S45C |
| ㉘ | Cam Slide Plate | 1 | S45C |
| ㉙ | Gas Spring | 1 | Refer to the specification table |

Bolts for assembly are not indicated.

■ $\theta = 55^\circ \sim 75^\circ$

| No. | Description | Qty | Material and Remark |
|-----|---------------------------|-----|----------------------------------|
| ① | Cam Driver | 1 | GGG60 |
| ⑤ | Cam Holder | 1 | GGG60 |
| ⑥ | Base Plate R | 1 | S45C |
| ⑧ | Slide Plate(VSM-15) | 2 | Bronze with Graphite |
| ⑩ | Key | 4 | SS400 |
| ⑫ | Key | 2 | SS400 |
| ⑬ | Base Plate L | 1 | S45C |
| ⑭ | Stopper Plate | 1 | S45C |
| ⑮ | Stopper | 1 | Urethane (PCU15) |
| ⑰ | Safety Plate | 2 | S45C |
| ⑱ | Lock Block | 1 | SS400 |
| ⑲ | Hexagonal Bolt | 2 | SCM435 M12×140 |
| ⑳ | Hexagonal Nut | 2 | SCM435 M12 |
| ㉑ | Cam Slider | 1 | GGG60 |
| ㉒ | Spring Guide | 1 | S45C |
| ㉓ | Gas Spring Guide Plate | 1 | S45C |
| ㉔ | Slide Plate(VSM-13) | 2 | Bronze with Graphite |
| ㉕ | Slide Plate(VSM-25) | 2 | Bronze with Graphite |
| ㉖ | Slide Plate(VSM-28) | 2 | Bronze with Graphite |
| ㉗ | Cam Positive Return Plate | 2 | S45C |
| ㉘ | Cam Slide Plate | 1 | S45C |
| ㉙ | Gas Spring | 1 | Refer to the specification table |

Bolts for assembly are not indicated.