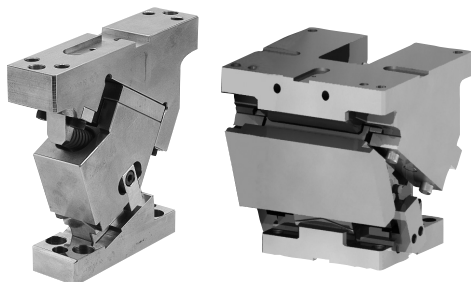


# Aerial Cam Unit General Description of UCMSG

## FOR PIERCE AND FLANGE



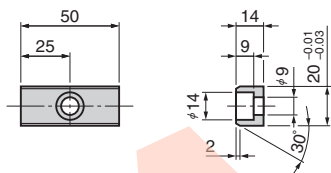
- Highly rigid structure with the overseas automobile manufacturer specification
- 50, 65, 80, 150, 200mm and 300mm are available for the mounting width.
- Angle 0° to 65° increments of 5° is available.  
(For 65 mm wide, angle 20° to 60° is in increments of 10°).
- ISO springs are used.

### Option for UCMSG

#### Metric Key Specification(-K)

##### UCMSG50/65

LKU20-50 (with 3-M8 × 15 bolts)

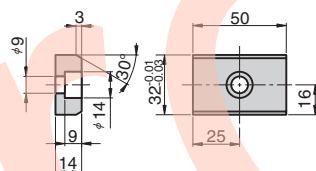


##### UCMSG80

LKU32-50 (with 3-M8 × 15 bolts)

##### UCMSG150/200/300

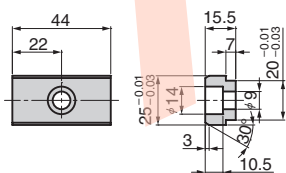
LKU32-50 (with 6-M8 × 15 bolts)



#### Metric Key Specification(-KA)

##### UCMSG50

LKA25-20-44 (with 3-M8 × 15 bolts)

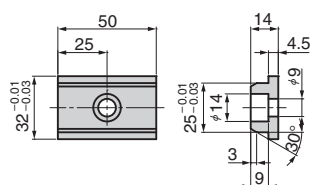


##### UCMSG80

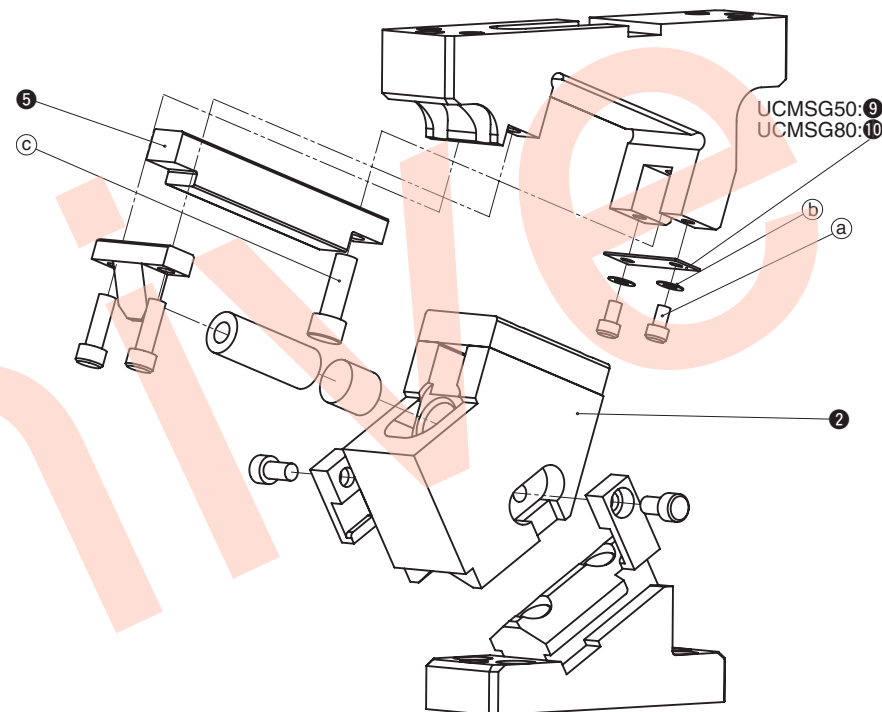
LKE25-32-50 (with 3-M8 × 15 bolts)

##### UCMSG150/200/300

LKE25-32-50 (with 6-M8 × 15 bolts)



### UCMSG50 (UCMSG80) Structure and Assembly / Disassembly



#### Disassembly method of UCMSG50 (same for UCMSG80)

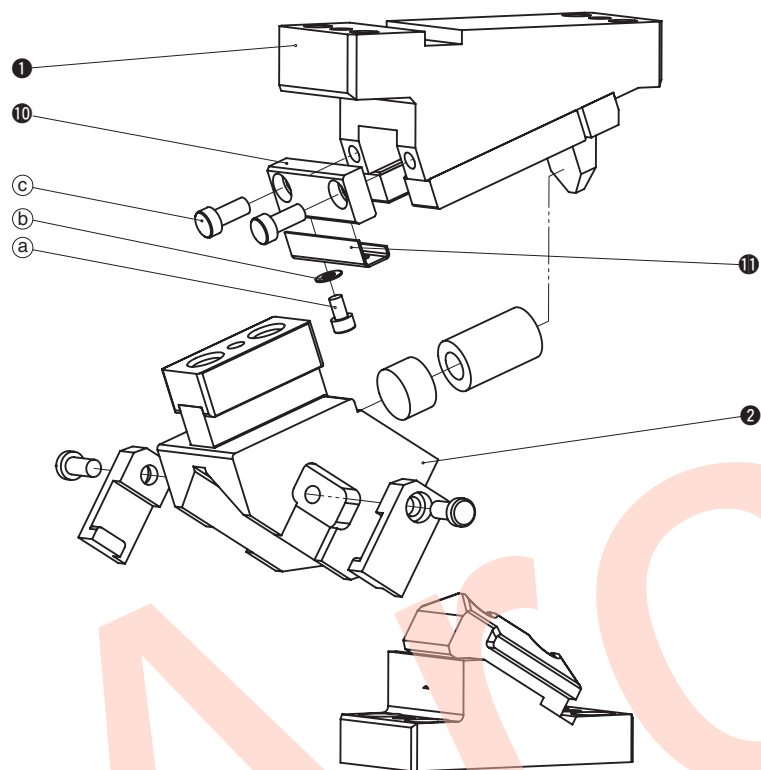
- 1) Remove hexagon socket head bolt (a) and washer (b) and remove safety plate (UCMSG50:9 UCMSG80:10).
- 2) Remove hexagon socket head bolt (c).
- 3) Shift guide bar (5) to the back then remove cam slider (2) from cam holder.

#### Assembly method of UCMSG50 (same for UCMSG80)

- 1) Assemble components in the reverse order of disassembly.
  - Make sure that there is no foreign matter on the sliding area and assemble components.
  - The clearance between the guide bar/cam slider and the cam holder is controlled. Match the stamped serial number on the holder and slider before assembly.
  - When cam is disassembled and then reassembled, please do not forget to assemble all bolts provided



### ■UCMSG65 Structure and Assembly / Disassembly



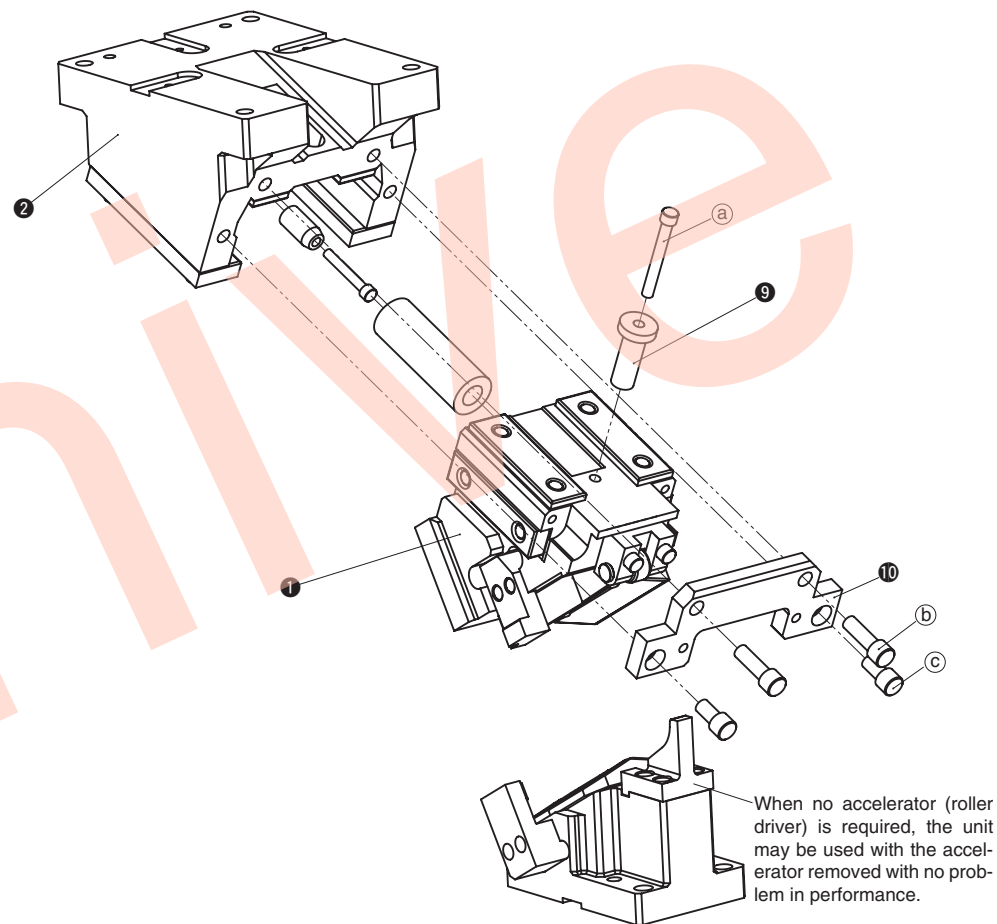
#### ●Disassembly method of UCMSG65

- 1) Remove hexagon socket head bolt (a) and washer (b), and remove safety plate (11).
- 2) Loosen hexagon socket head bolt (c). Remove stopper plate (10).
- 3) Pull cam slider (1) from cam holder (2) to the rear.

#### ●Assembly method of UCMSG65

- 1) Assemble components in the reverse order of disassembly.
  - Make sure that there is no foreign matter on the sliding area and assemble components.
  - The clearance between the guide bar/cam slider and the cam holder is controlled. Match the stamped serial number on the holder and slider before assembly.
  - When cam is disassembled and then reassembled, please do not forget to assemble all bolts provided

### ■UCMSG150, 200, 300 Structure and Assembly / Disassembly



#### ●Disassembly method of UCMSG150, 200, 300

- 1) Loosen hexagon socket head bolt (a) and remove hanger bolt sleeve (9).
- 2) Loosen hexagon socket head bolt (b, c) and remove backup plate (10).
- 3) Pull cam slider (1) from cam holder (2) to the rear.

#### ●Assembly method of UCMSG150, 200, 300

- 1) Assemble components in the reverse order of disassembly.
  - Make sure that there is no foreign matter on the sliding area and assemble components.
  - The clearance between the cam slider and the cam holder is controlled. Match the stamped serial number on the holder and slider before assembly.
  - When cam is disassembled and then reassembled, please do not forget to assemble all bolts provided

When no accelerator (roller driver) is required, the unit may be used with the accelerator removed with no problem in performance.

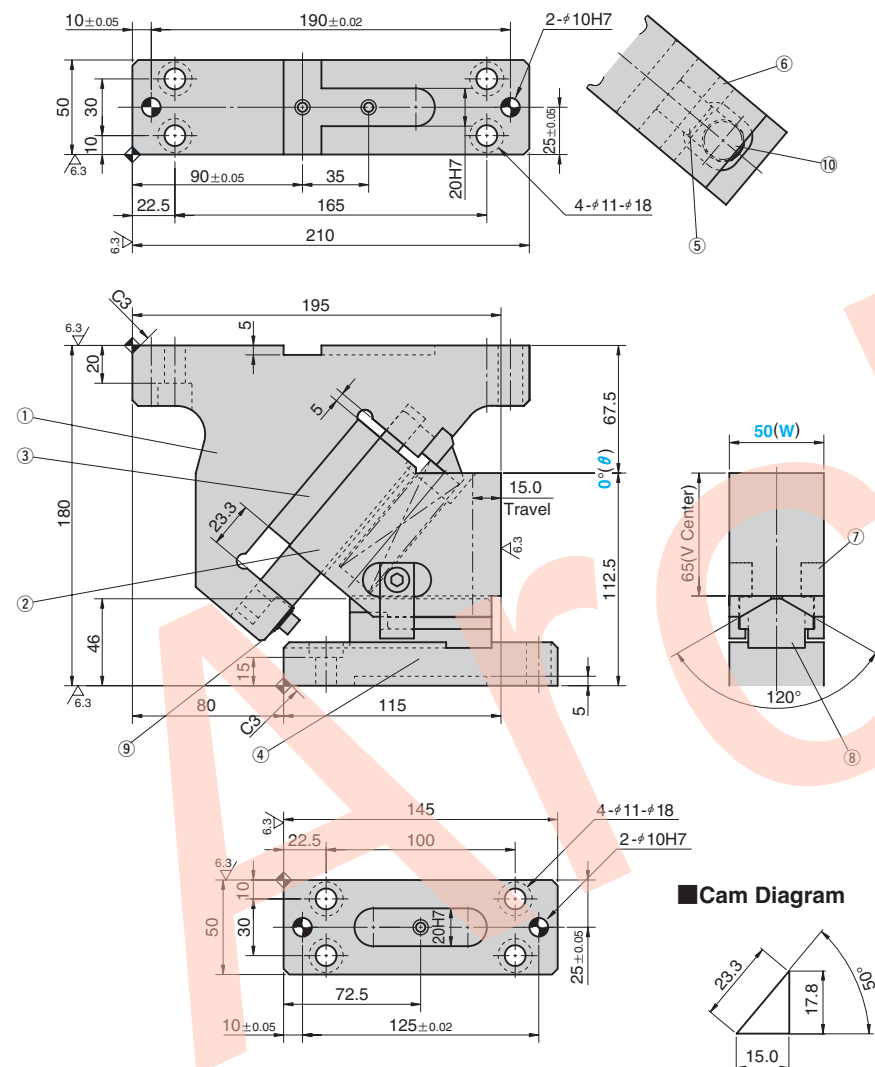


# Aerial Cam Unit

FOR PIERCE

CAD  
FILE

UCMSG50 - 00



Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
15.0	29.4 (3.0)	58.8 (6.0)	184.2 (18.8)	1097.6 (111.7)	1503 (153.4)	10.6	UCMSG	50	00



Order

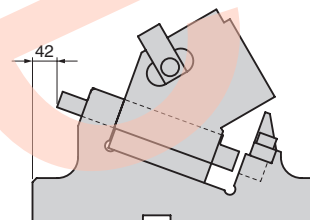
Catalog No. (W) - (θ)  
UCMSG 50 - 00



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to #13.

Space for removing



Order

UCMSG50 - 00 - K  
UCMSG50 - 00 - KA - N13

For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

Table of Components

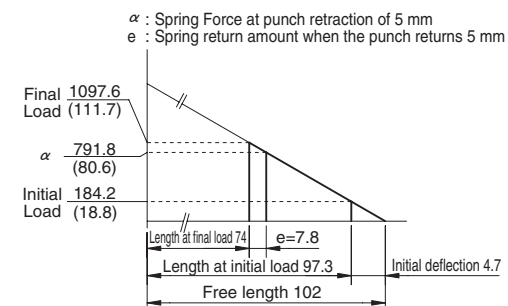
No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-102



Bolts for assembly are not indicated.

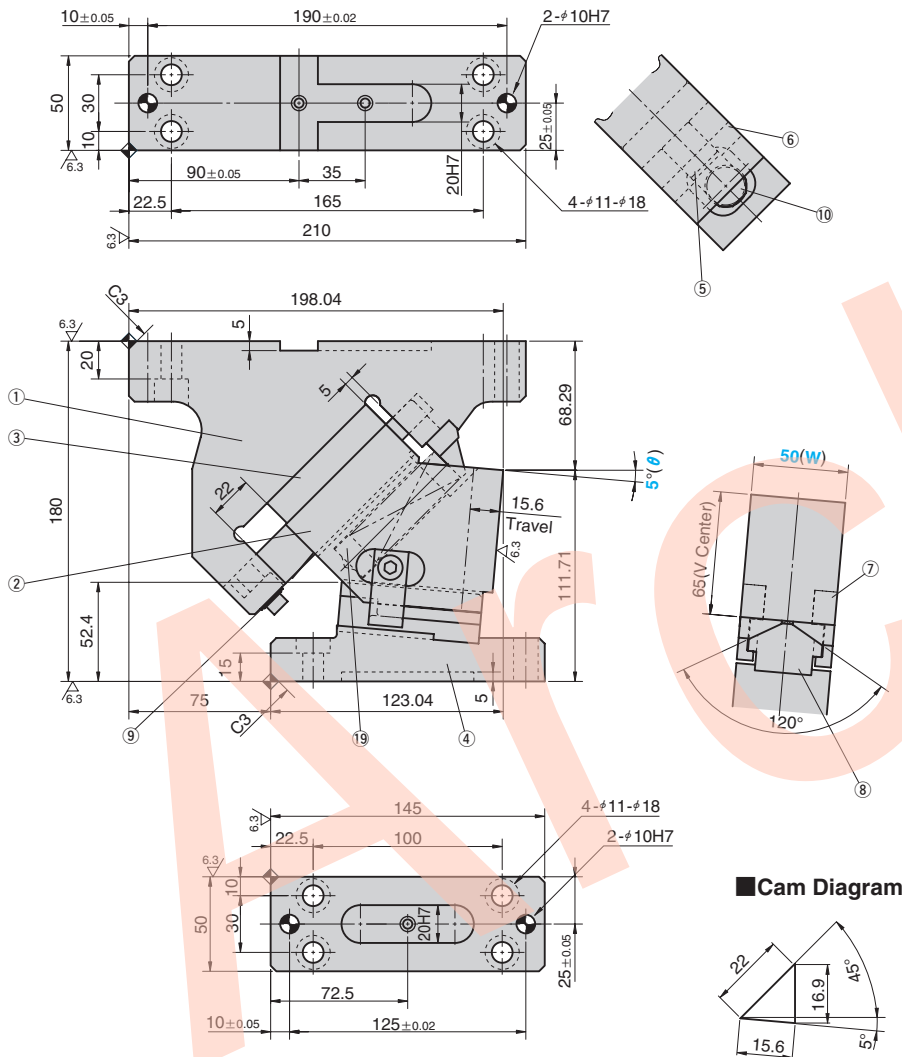
Spring Diagram

- Spring used TJH20-102 (1 piece)
- Spring constant 39.2N/mm(3.99kgf/mm)
- Guideline of spring durability 500,000 strokes





## UCMSG50 - 05



Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
15.6	29.4 (3.0)	58.8 (6.0)	179.6 (18.3)	1167.4 (118.8)	1589 (162.2)	10.3	UCMSG	50	05



Order

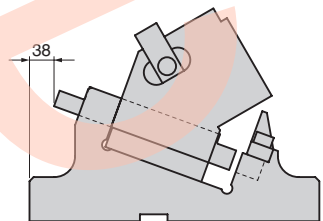
Catalog No.	(W)	—	(θ)
UCMSG	50	—	05



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to #13.

Space for removing



Order

UCMSG50 - 05 - K  
UCMSG50 - 05 - KA - N13



For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

Table of Components

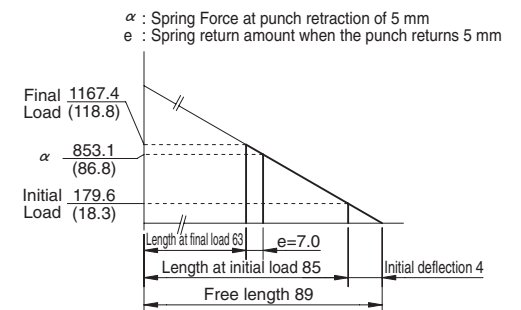
No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-89
⑪	Spacer	1	SS400(1020)



Bolts for assembly are not indicated.

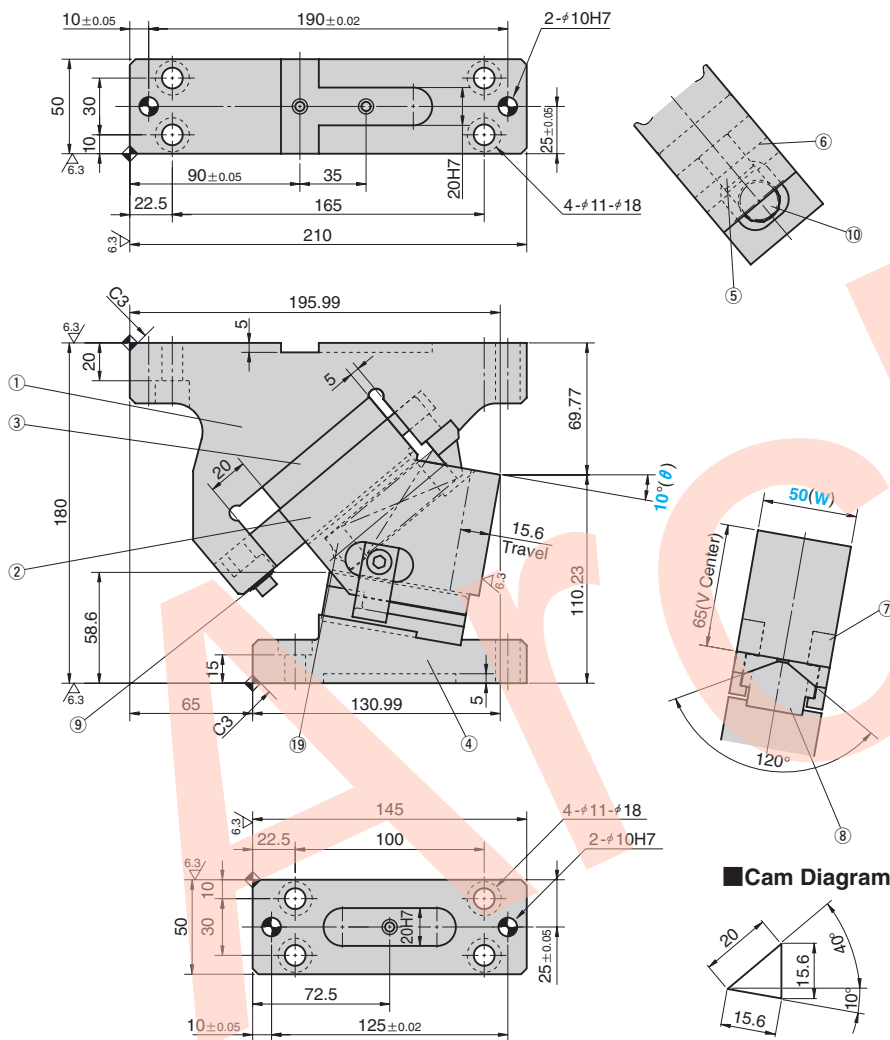
Spring Diagram

- Spring used TJH20-89 (1 piece)
- Spring constant 44.9N/mm(4.57kgf/mm)
- Guideline of spring durability 300,000 strokes





#### UCMSG50 - 10



Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
15.6	29.4 (3.0)	58.8 (6.0)	269.4 (27.4)	1167.4 (118.8)	1583 (161.5)	9.9	UCMSG	50	10



Order

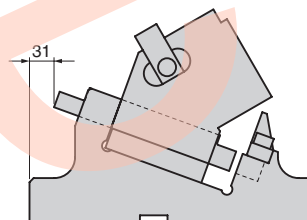
Catalog No.	(W)	—	(θ)
UCMSG	50	—	10



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to #13.

Space for removing



Order

UCMSG50 - 10 - K  
UCMSG50 - 10 - KA - N13

For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

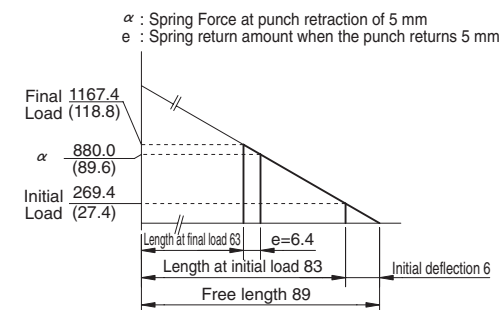
Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-89
⑪	Spacer	1	SS400(1020)

⚠ Bolts for assembly are not indicated.

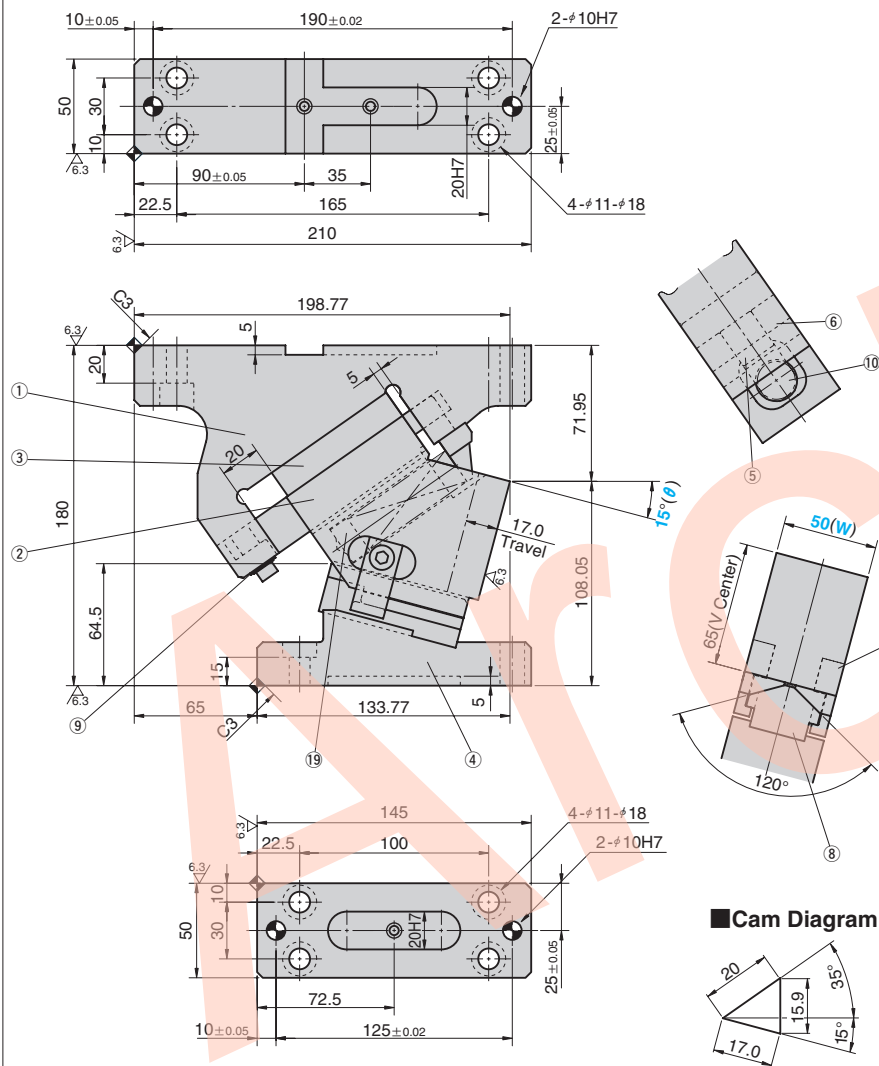
Spring Diagram

- Spring used TJH20-89 (1 piece)
- Spring constant 44.9N/mm(4.57kgf/mm)
- Guideline of spring durability 300,000 strokes





## UCMSG50 - 15



Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
17.0	29.4 (3.0)	58.8 (6.0)	269.4 (27.4)	1167.4 (118.8)	1576 (160.8)	9.7	UCMSG	50	15



Order

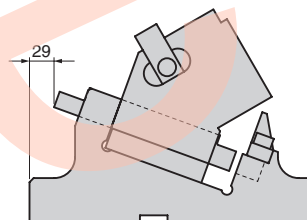
Catalog No.	(W)	—	(θ)
UCMSG	50	—	15



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to φ13.

Space for removing



Order

UCMSG50 - 15 - K  
UCMSG50 - 15 - KA - N13

For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

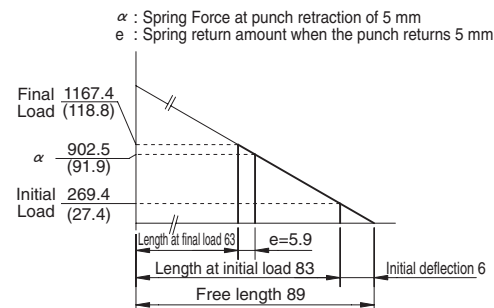
Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-89
⑪	Spacer	1	SS400(1020)

⚠ Bolts for assembly are not indicated.

Spring Diagram

- Spring used TJH20-89 (1 piece)
- Spring constant 44.9N/mm(4.57kgf/mm)
- Guideline of spring durability 300,000 strokes





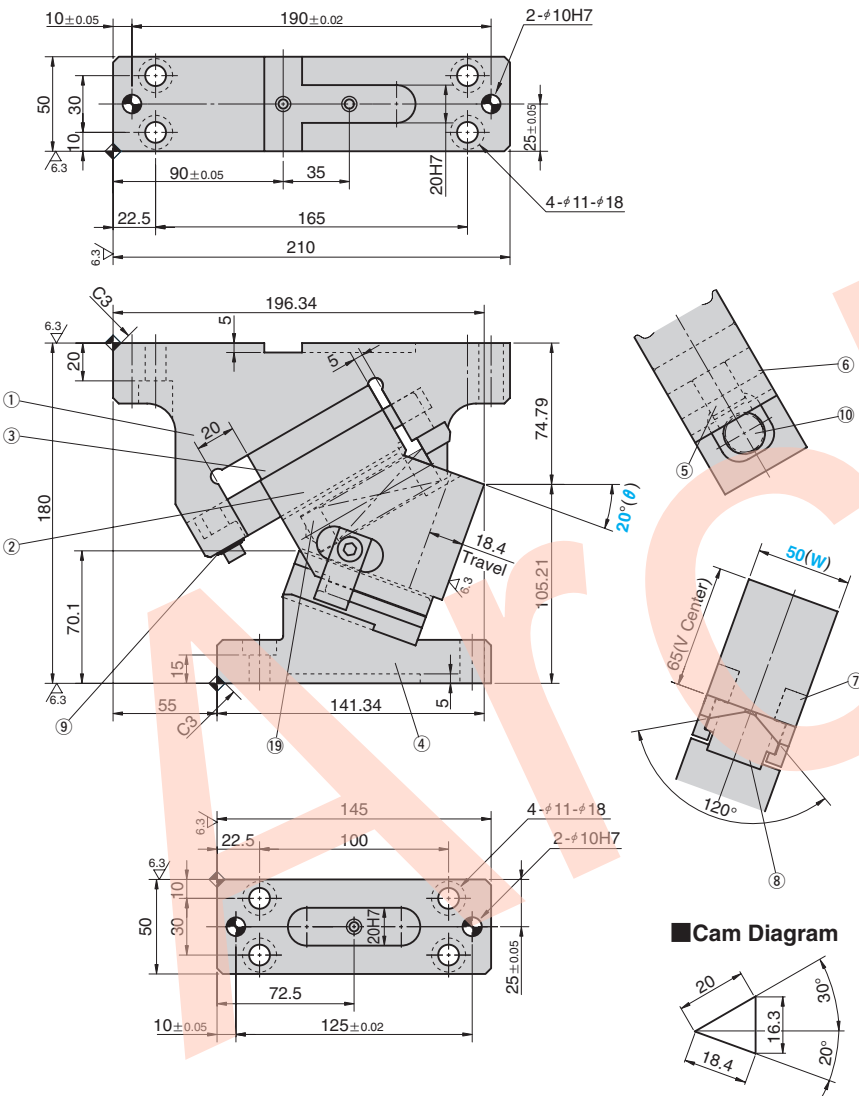
# Aerial Cam Unit

FOR PIERCE

CAD  
FILE

Cam Unit

UCMSG50 - 20



Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
18.4	29.4 (3.0)	58.8 (6.0)	269.4 (27.4)	1167.4 (118.8)	1569 (160.1)	9.4	UCMSG	50	20



Order

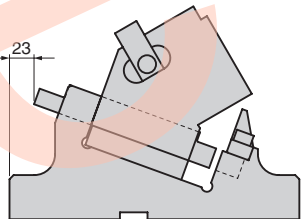
Catalog No.	(W)	—	(θ)
UCMSG	50	—	20



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to φ13.

Space for removing



Order

UCMSG50 - 20 - K  
UCMSG50 - 20 - KA - N13



For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

Table of Components

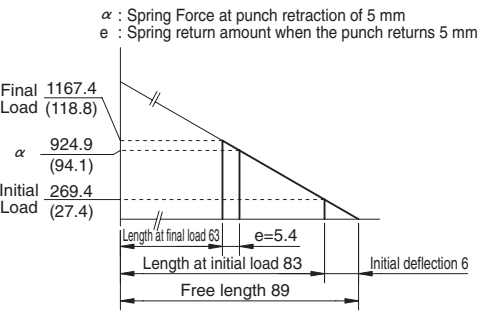
No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-89
⑲	Spacer	1	SS400(1020)



Bolts for assembly are not indicated.

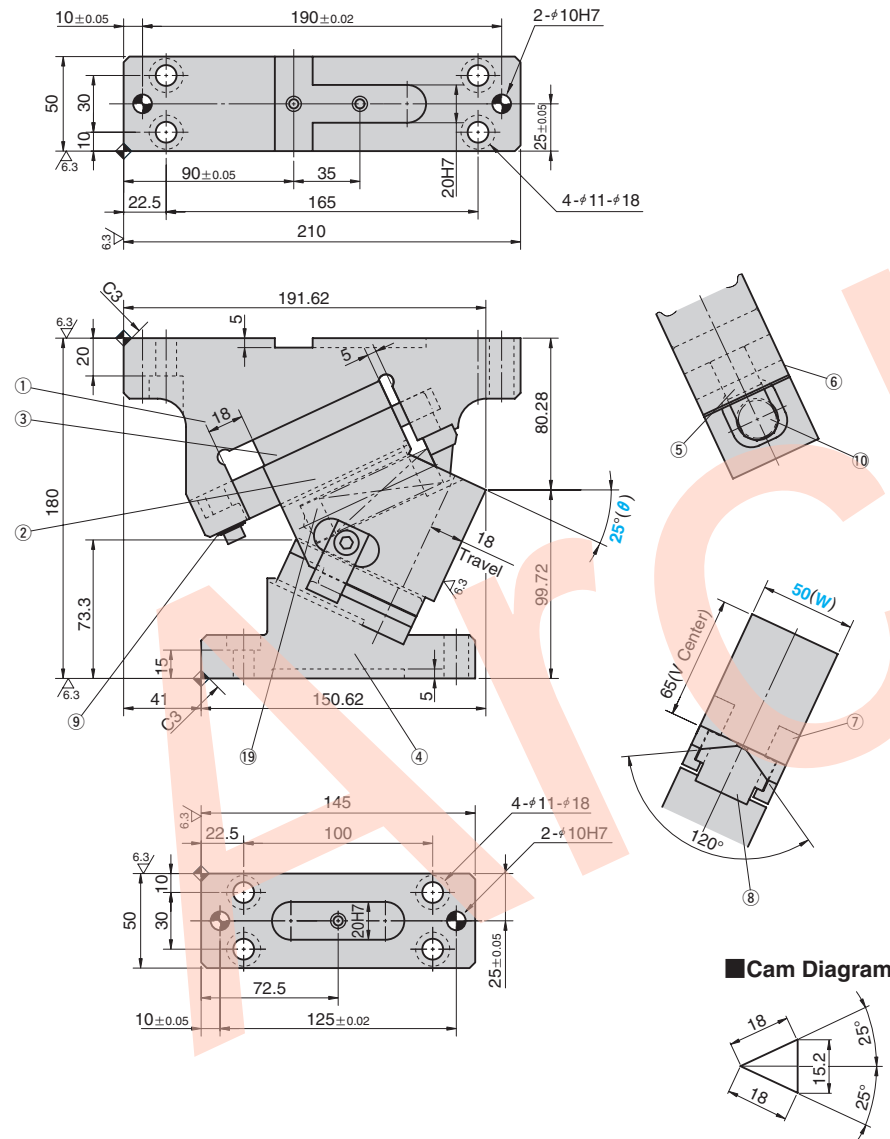
Spring Diagram

- Spring used TJH20-89 (1 piece)
- Spring constant 44.9N/mm(4.57kgf/mm)
- Guideline of spring durability 300,000 strokes





#### UCMSG50 - 25



■Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
18.0	29.4 (3.0)	58.8 (6.0)	359.2 (36.6)	1167.4 (118.8)	1562 (159.4)	9.4	UCMSG	50	25



Order

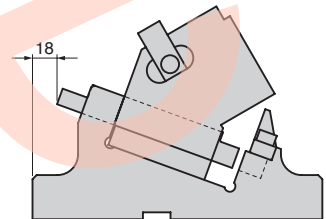
Catalog No.	(W)	—	(θ)
UCMSG	50	—	25



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to φ13.

■Space for removing



Order

UCMSG50 - 25 - K  
UCMSG50 - 25 - KA - N13



For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

■Table of Components

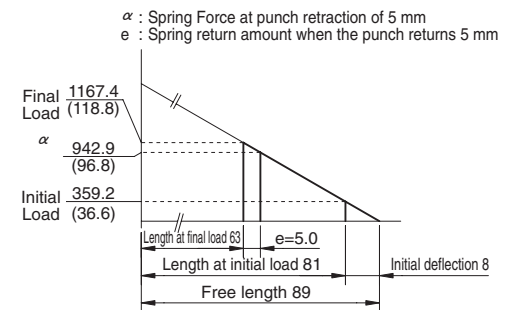
No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-89
⑪	Spacer	1	SS400(1020)



Bolts for assembly are not indicated.

■Spring Diagram

- Spring used TJH20-89 (1 piece)
- Spring constant 44.9N/mm(4.57kgf/mm)
- Guideline of spring durability 300,000 strokes





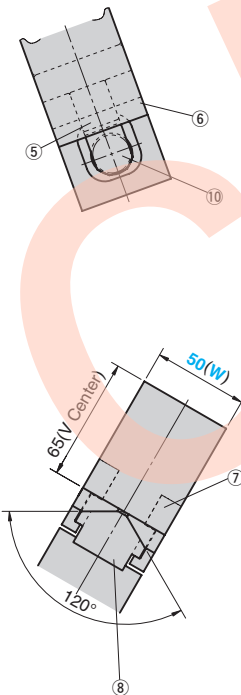
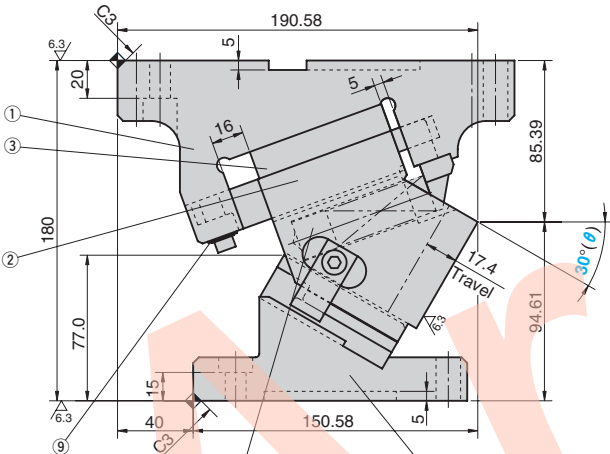
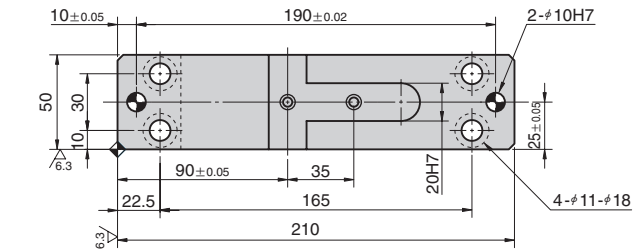
# Aerial Cam Unit

FOR PIERCE

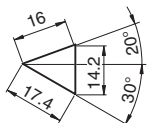
CAD  
FILE

Cam Unit

UCMSG50 - 30



Cam Diagram



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
17.4	29.4 (3.0)	58.8 (6.0)	263.0 (26.8)	1104.6 (112.6)	1474 (150.4)	9.2	UCMSG	50	30



Order

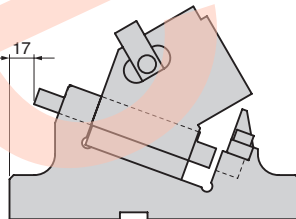
Catalog No. (W) - (θ)  
UCMSG 50 - 30



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to φ13.

Space for removing



Order

UCMSG50 - 30 - K  
UCMSG50 - 30 - KA - N13



For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

Table of Components

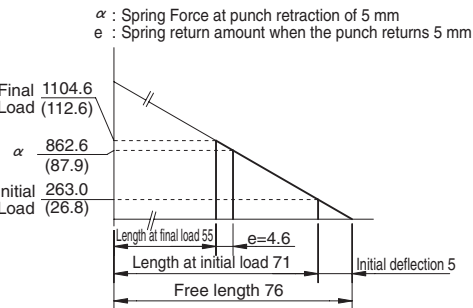
No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-76
⑲	Spacer	1	SS400(1020)



Bolts for assembly are not indicated.

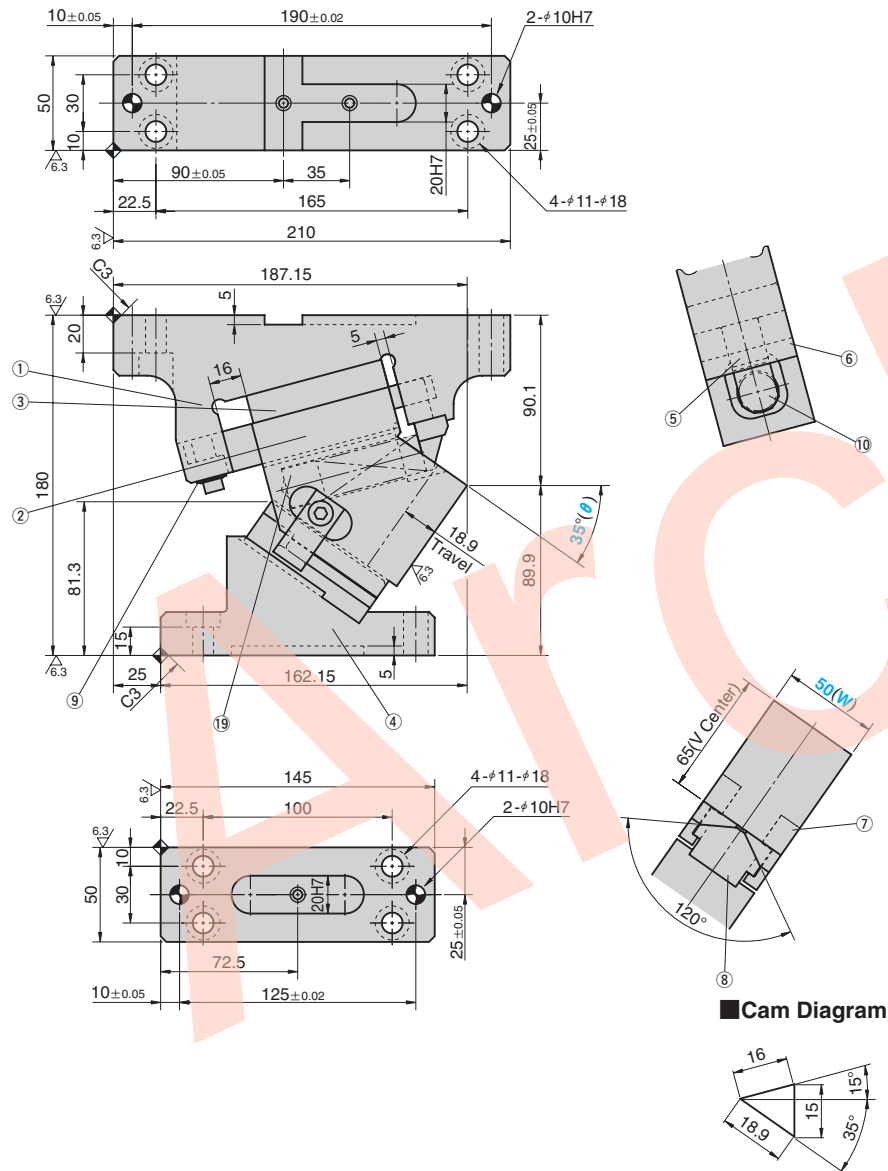
Spring Diagram

- Spring used TJH20-76 (1 piece)
- Spring constant 52.6N/mm(5.36kgf/mm)
- Guideline of spring durability 300,000 strokes





#### UCMSG50 - 35



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
18.9	29.4 (3.0)	58.8 (6.0)	263.0 (26.8)	1104.6 (112.6)	1466 (149.6)	9.2	UCMSG	50	35



Order

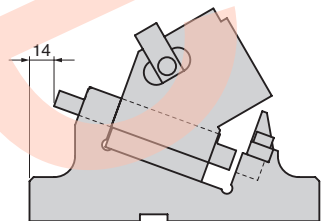
Catalog No.	(W)	—	(θ)
UCMSG	50	—	35



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to φ13.

■Space for removing



Order

UCMSG50 - 35 - K  
UCMSG50 - 35 - KA - N13

For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

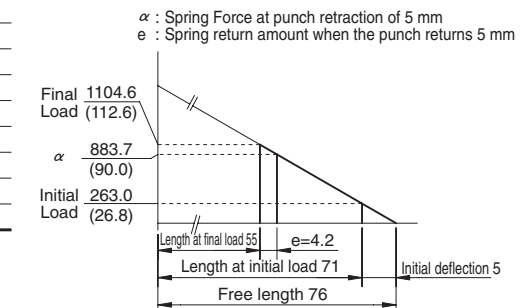
#### Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-76
⑪	Spacer	1	SS400(1020)

⚠ Bolts for assembly are not indicated.

#### Spring Diagram

- Spring used TJH20-76 (1 piece)
- Spring constant 52.6N/mm(5.36kgf/mm)
- Guideline of spring durability 300,000 strokes



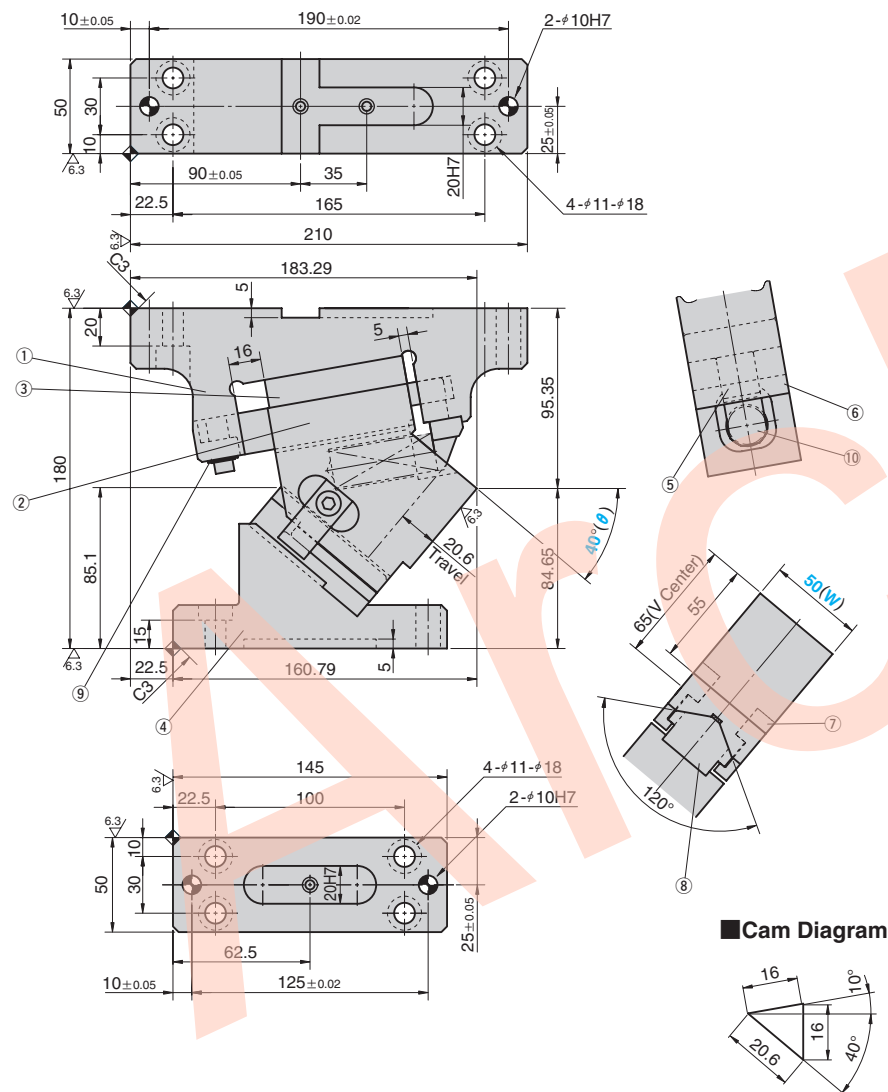


# Aerial Cam Unit

FOR PIERCE

CAD  
FILE

UCMSG50 - 40



Cam Diagram

Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
20.6	29.4 (3.0)	58.8 (6.0)	263.0 (26.8)	1104.6 (112.6)	1459 (148.8)	9.1	UCMSG	50	40



Order

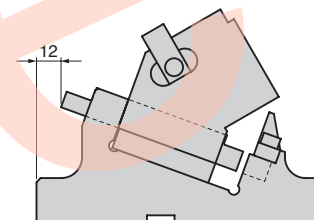
Catalog No. (W) - (θ)  
UCMSG 50 - 40



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to #13.

Space for removing



Order

UCMSG50 - 40 - K  
UCMSG50 - 40 - KA - N13

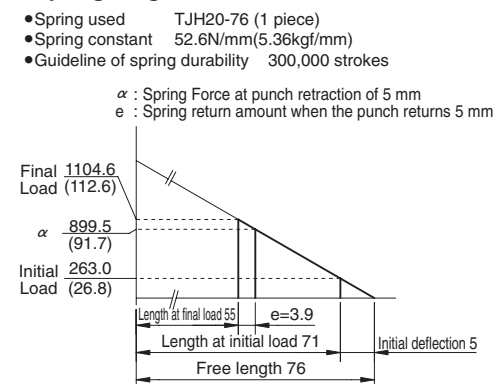
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-76

Bolts for assembly are not indicated.

Spring Diagram





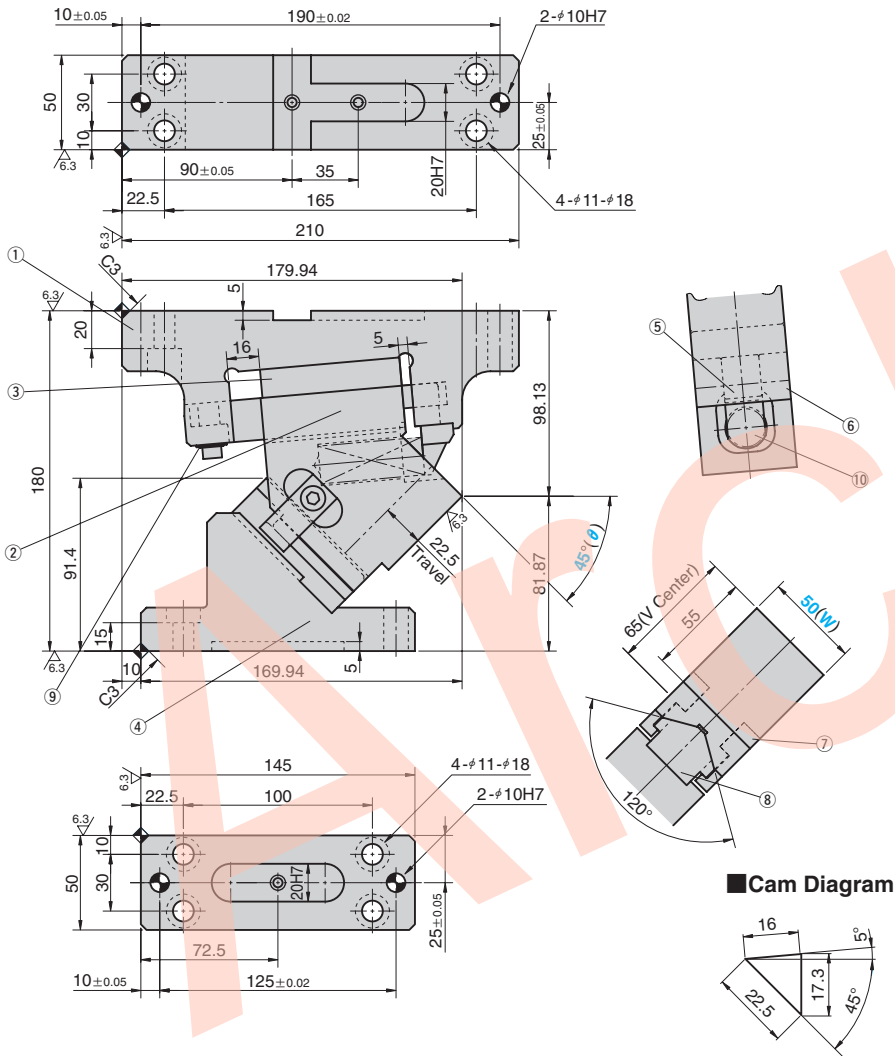
# Aerial Cam Unit

FOR PIERCE

CAD  
FILE

Cam Unit

UCMSG50 - 45



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
22.5	29.4 (3.0)	58.8 (6.0)	263.0 (26.8)	1104.6 (112.6)	1451 (148.1)	9.1	UCMSG	50	45



Order

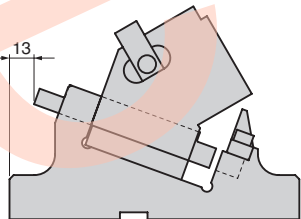
Catalog No.	(W)	—	(θ)
UCMSG	50	—	45



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to #13.

■Space for removing



Order

UCMSG50 - 45 - K  
UCMSG50 - 45 - KA - N13



For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

## Table of Components

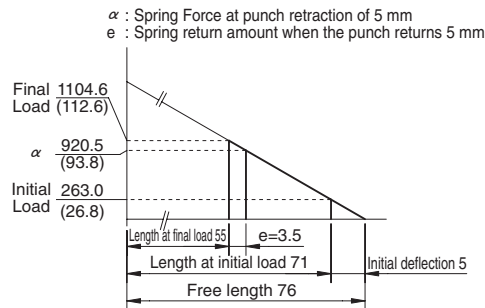
No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-76



Bolts for assembly are not indicated.

## Spring Diagram

- Spring used TJH20-76 (1 piece)
- Spring constant 52.6N/mm(5.36kgf/mm)
- Guideline of spring durability 300,000 strokes



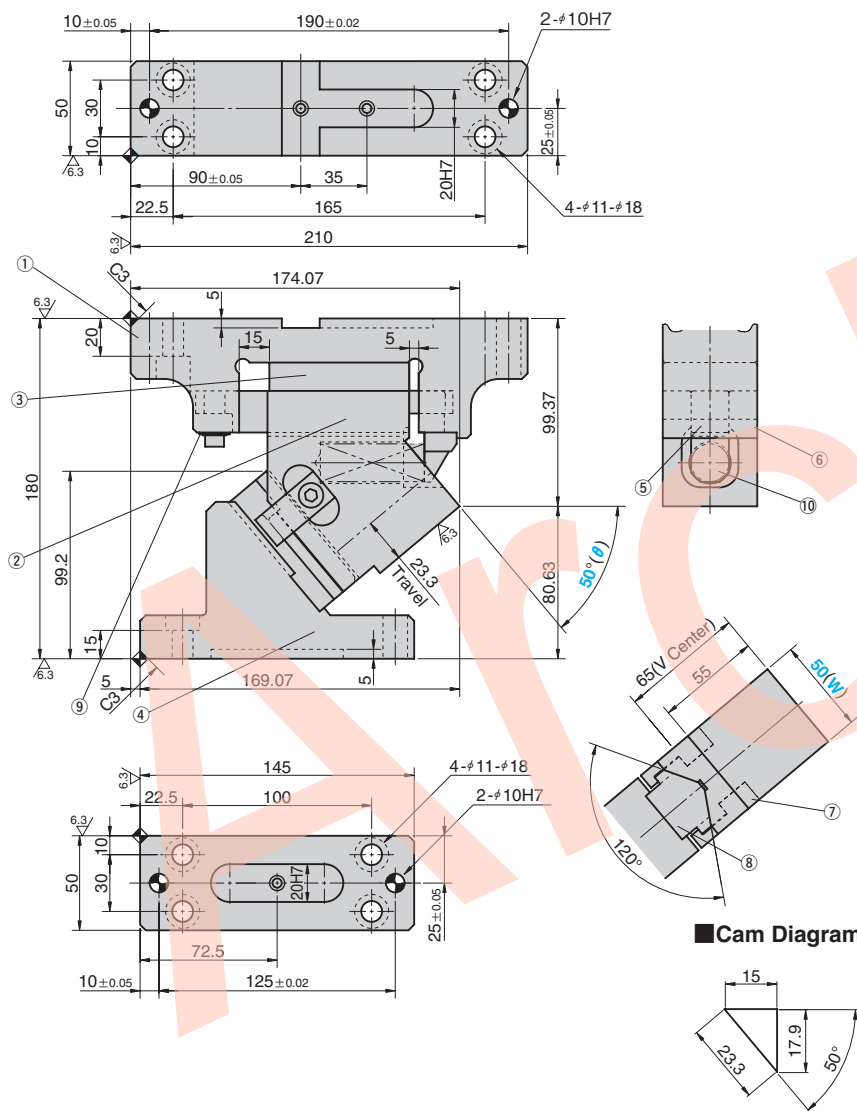


# Aerial Cam Unit

FOR PIERCE

CAD  
FILE

UCMSG50 - 50



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
23.3	29.4 (3.0)	58.8 (6.0)	315.6 (32.2)	1104.6 (112.6)	1443 (147.3)	9.0	UCMSG	50	50



Order

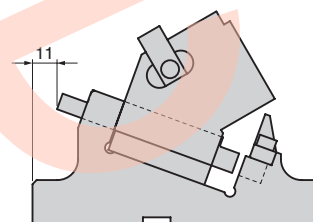
Catalog No. (W) - (θ)  
UCMSG 50 - 50



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to φ13.

■Space for removing



Order

UCMSG50 - 50 - K  
UCMSG50 - 50 - KA - N13

For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

## Table of Components

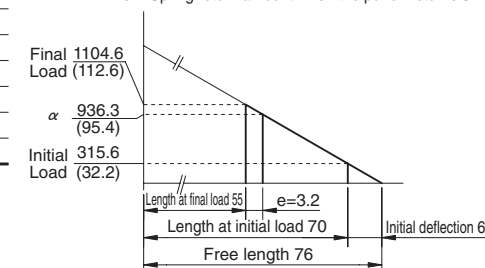
No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-76

⚠ Bolts for assembly are not indicated.

## Spring Diagram

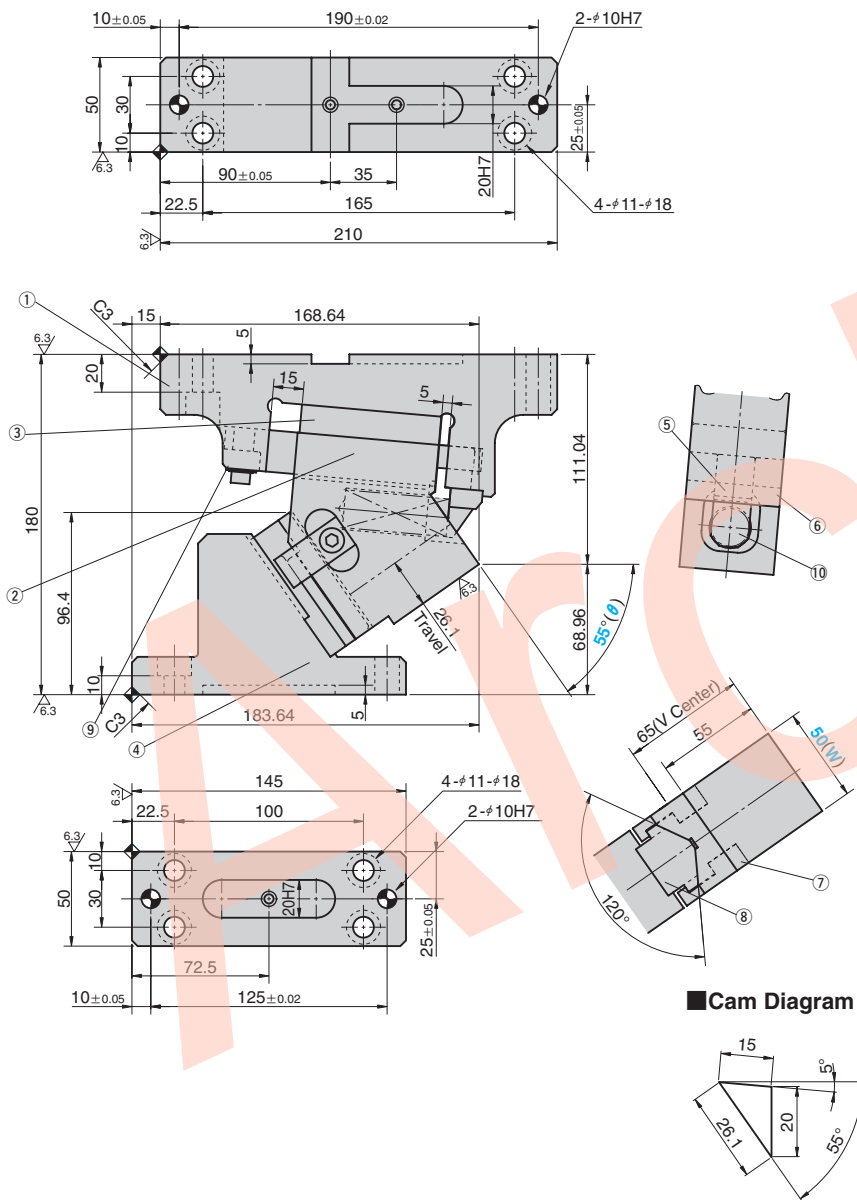
- Spring used TJH20-76 (1 piece)
- Spring constant 52.6N/mm(5.36kgf/mm)
- Guideline of spring durability 300,000 strokes

α : Spring Force at punch retraction of 5 mm  
e : Spring return amount when the punch returns 5 mm





#### UCMSG50 - 55



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
26.1	29.4 (3.0)	58.8 (6.0)	315.6 (32.2)	1104.6 (112.6)	1436 (146.5)	9.5	UCMSG	50	55



Order

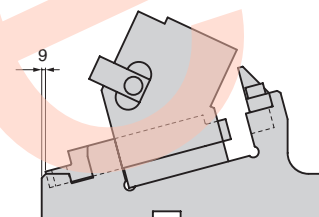
Catalog No.	(W)	—	(θ)
UCMSG	50	—	55



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to #13.

■Space for removing



Order

UCMSG50 - 55 - K  
UCMSG50 - 55 - KA - N13

For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

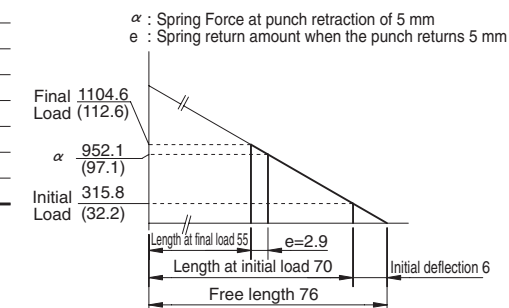
#### Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-76

⚠ Bolts for assembly are not indicated.

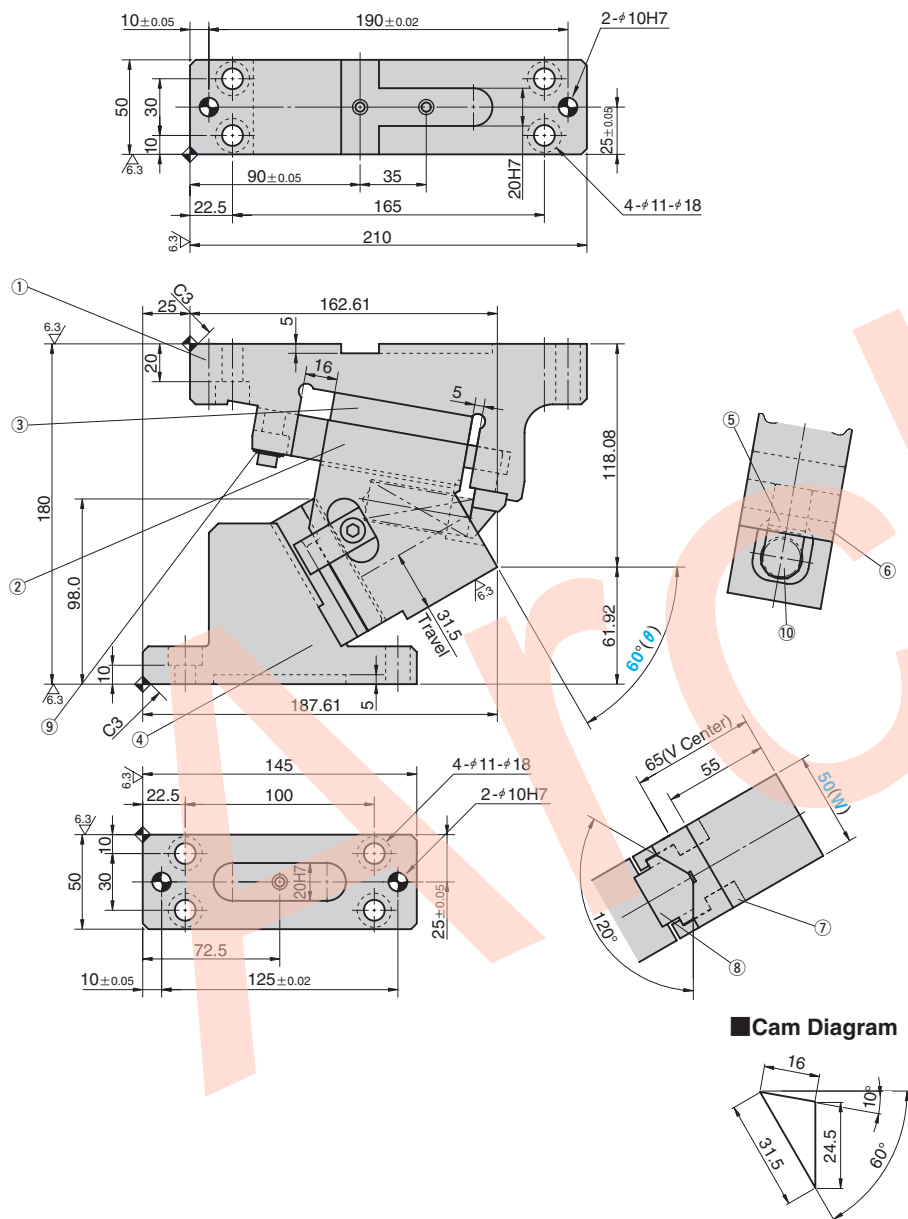
#### Spring Diagram

- Spring used TJH20-76 (1 piece)
- Spring constant 52.6N/mm(5.36kgf/mm)
- Guideline of spring durability 300,000 strokes





#### UCMSG50 - 60



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
31.5	29.4 (3.0)	58.8 (6.0)	263.0 (26.8)	1104.6 (112.6)	1428 (145.7)	9.7	UCMSG	50	60



Order

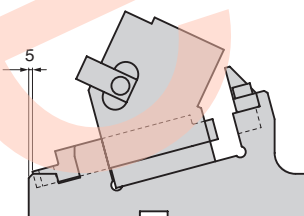
Catalog No. (W) - (θ)  
UCMSG 50 - 60



Option

Option Code	Specification
K	A metric key is attached. (It is not assembled to the main unit.)
KA	Metric dedicated key is attached for both cam holder and driver. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to φ13.

Space for removing



Order

UCMSG50 - 60 - K  
UCMSG50 - 60 - KA - N13

For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1259.

#### Table of Components

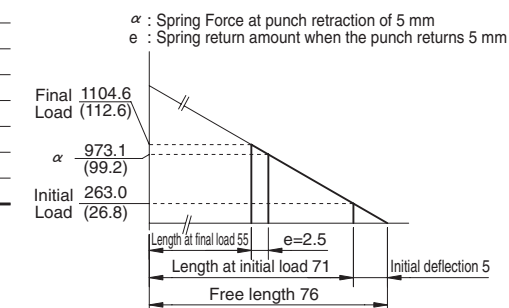
No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Lower Slider	1	SF700 with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Positive Return Follower	2	NAK55
⑧	Slide Guide	1	Bronze with Graphite
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	TJH20-76



Bolts for assembly are not indicated.

#### Spring Diagram

- Spring used TJH20-76 (1 piece)
- Spring constant 52.6N/mm(5.36kgf/mm)
- Guideline of spring durability 300,000 strokes

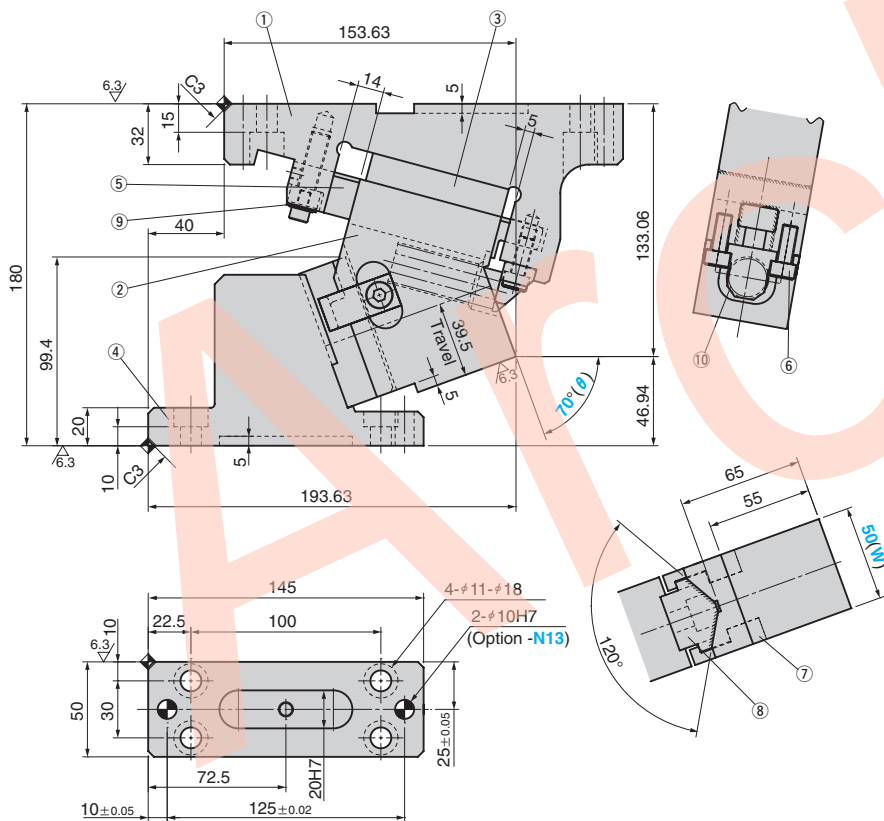
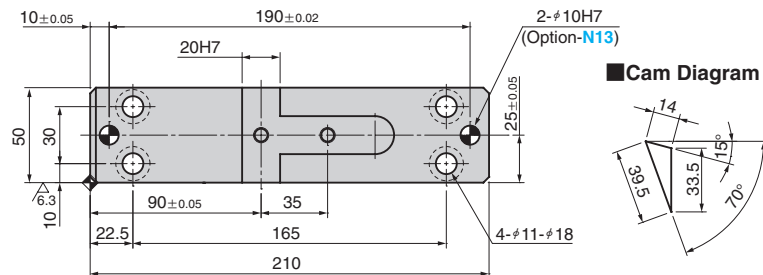








### UCMSG50 - 70



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
39.5	29.4 (3.0)	58.8 (6.0)	263.0 (26.8)	999.4 (101.9)	1393 (142.2)	10.1	UCMSG	50	70



Order

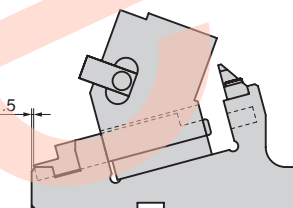
Catalog No.	(W)	(θ)
UCMSG	50	70



Option

Option Code	Specification
K	Desicated key is attached. (It is not assembled to the main unit.)
KA	A metric key is attached. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to φ13

### Space for removing



Order

UCMSG50 - 70 - K  
UCMSG50 - 70 - N13

For machining details or tapping hole and  
dowel hole (prepared hole and finished hole)  
for mounting of the retainer, refer to page 561.  
For detailed specification of the key refer to  
page 1259.

### Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Cam Lower Slider	1	FCS with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Cam Positive Return	2	NAK55
⑧	Cam Slide Guide	1	Bronze with Graphite(SO#50SP7)
⑨	Safety Plate	1	SS400(1020)
⑩	Coil Spring	1	SWOSC-V TJH20-76

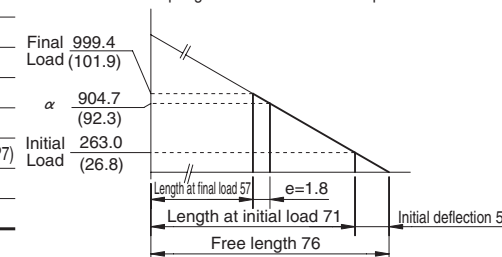


Bolts for assembly are not indicated.

### Spring Diagram

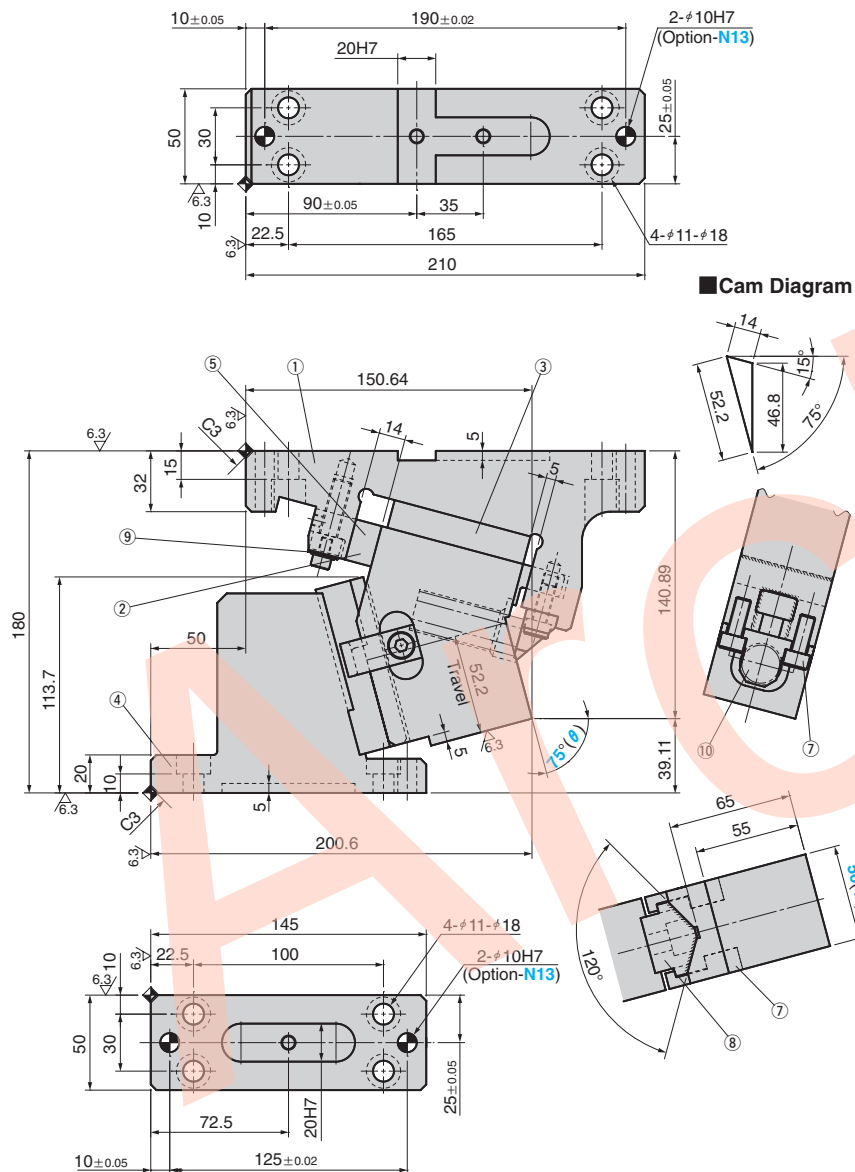
- Spring used TJH20-76 (1 piece)
- Spring constant 52.6N/mm(5.36kgf/mm)
- Guideline of spring durability 1,000,000 strokes

α : Spring Force at punch retraction of 5 mm  
e : Spring return amount when the punch returns 5 mm





### UCMSG50 - 75



Travel S	Working Force kN(tonf)		Spring Force N(kgf)		Return Force N(kgf)	Total Weight kg	Catalog No.	(W)	(θ)
	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load					
52.2	29.4 (3.0)	58.8 (6.0)	263.0 (26.8)	999.4 (101.9)	1540 (157.2)	10.1	UCMSG	50	75



Order

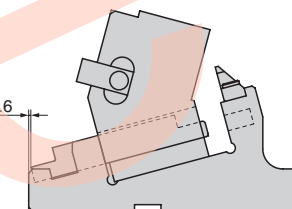
Catalog No.	(W)	(θ)
UCMSG	50	75



Option

Option Code	Specification
K	Desicated key is attached. (It is not assembled to the main unit.)
KA	A metric key is attached. (It is not assembled to the main unit.)
N13	Dowel pin holes of cam holder and cam driver are changed to φ13

■Space for removing



Order

UCMSG50 - 75 - K  
UCMSG50 - 75 - N13

For machining details or tapping hole and  
dowel hole (prepared hole and finished hole)  
for mounting of the retainer, refer to page 561.  
For detailed specification of the key refer to  
page 1259.

### Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	S45C(1045)
②	Cam Slider	1	S45C(1045)
③	Cam Lower Slider	1	FCS with Graphite
④	Cam Driver	1	S45C(1045)
⑤	Guide Bar	1	SCM440 with Graphite
⑥	Spring Block	1	SS400(1020)
⑦	Cam Positive Return	2	NAK55(1020)
⑧	Cam Slide Guide	1	Bronze with Graphite(SO#50SP7)
⑨	Safety Plate	1	SS400
⑩	Coil Spring	1	SWOSC-V TJH20-76



Bolts for assembly are not indicated.

### Spring Diagram

- Spring used TJH20-76 (1 piece)
  - Spring constant 52.6N/mm(5.36kgf/mm)
  - Guideline of spring durability 1,000,000 strokes
- α : Spring Force at punch retraction of 5 mm  
e : Spring return amount when the punch returns 5 mm

