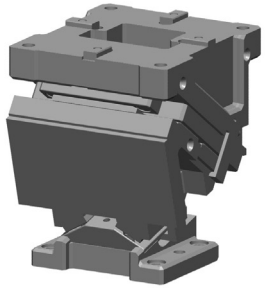
Aerial Cam Unit General Description of UCMSNR

NAAMS STANDARD

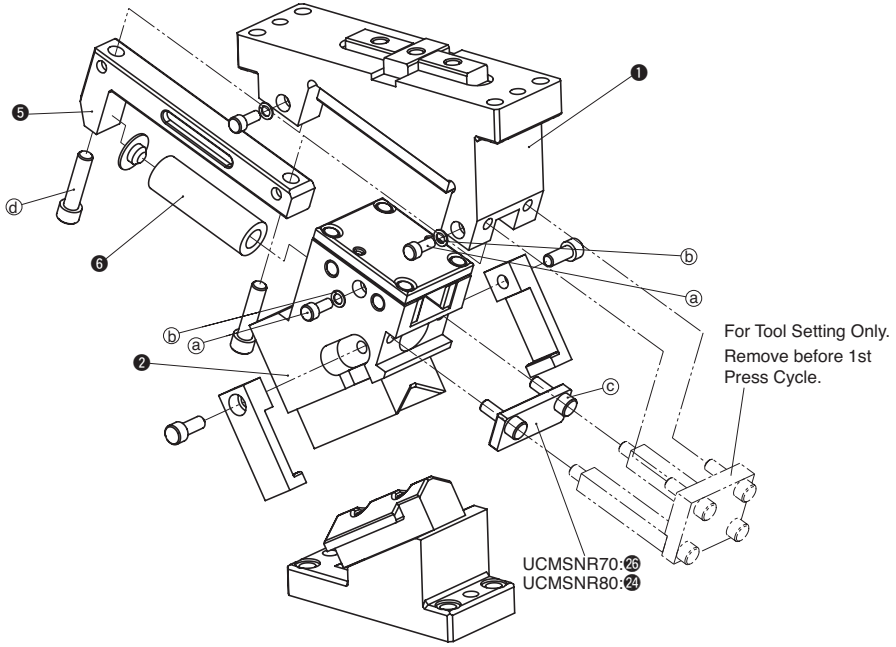


- Mounting surface widths 70, 80, 165, 200, 300, and 400 mm.
- Working angles from 0° to 60° in 5°increments.
- Easier adjustment of Slide Lock for the mounting surface width 165 mm or more.
- High-rigid structure with the material S45C.
- NAAMS Standard adapted.

⚠ 65°/ 70°/ 75° upon request.

⚠ **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.

■UCMSNR 70 and 80 Assembly / Dis-assembly

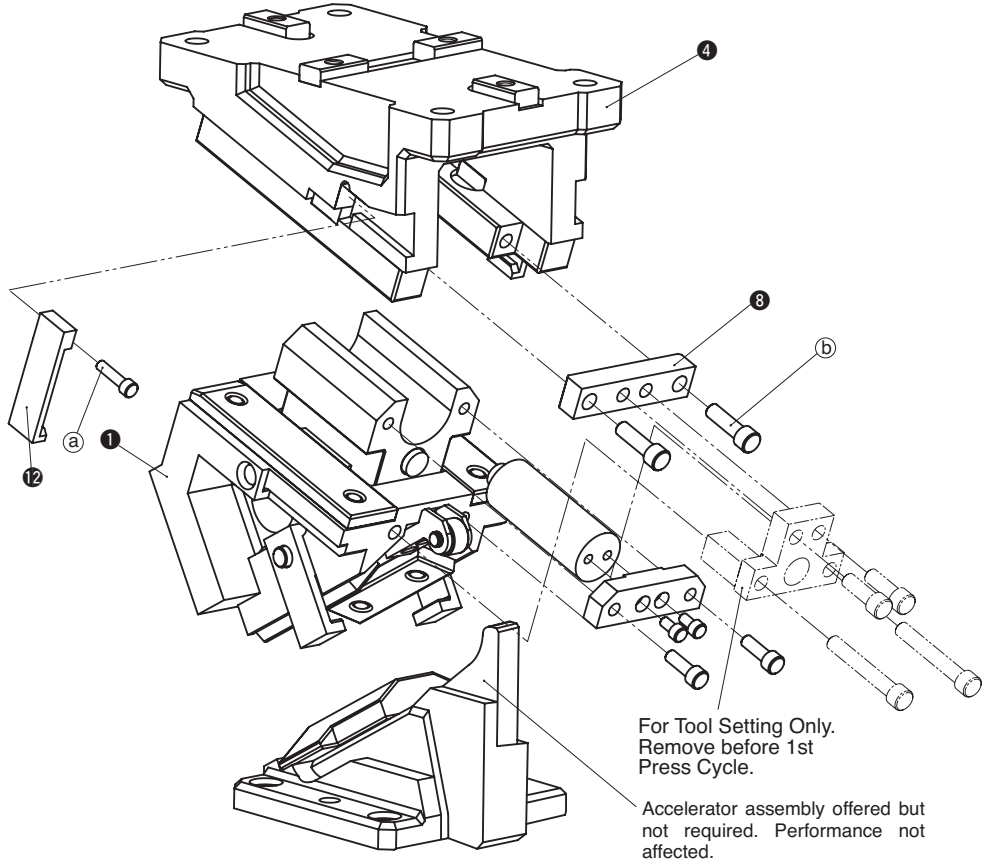


●Disassembling UCMSNR 70 and 80
1) Remove Hexagon Socket Head Bolt (ⓐ) and Coned Disc Spring (ⓑ).
2) Loosen Hexagon Socket Head Bolt (ⓒ), and remove Spring Stopper Plate (UCMSNR70: ㉖ UCMSNR80: ㉔). Pull out Spring (⑥).
3) Loosen Hexagon Socket Bolt (ⓓ), and remove Guide Bar (⑤) and Cam Slider (②) from Cam Holder (①).
4) Pull up to remove Guide Bar from Cam Slider.

●Re-assembly
Reassembly in the reverse procedure of disassembly.

NOTES ●Ensure that all parts are clean, particularly the sliding components, to which a small amount of grease is applied and is then placed on position.
●Take care the respective tolerances are observed when assembling the slider and holder, which also should be identified by the same serial number.
●Ensure that all bolts are tightened to the recommended torque.

■UCMSNR 165, 200, 300, and 400 Assembly / Dis-assembly



●Disassembling UCMSNR 165, 200, 300, and 400
1) Loosen Hexagon Socket Head Bolt (ⓐ) and remove Safety Plate (⑫).
2) Loosen Hexagon Socket Head Bolt (ⓑ) and remove Stopper Plate (⑧).
3) Pull up to remove Cam Slider (①) from Cam Holder (④).

●Re-assembly
Reassembly in the reverse procedure of disassembly.

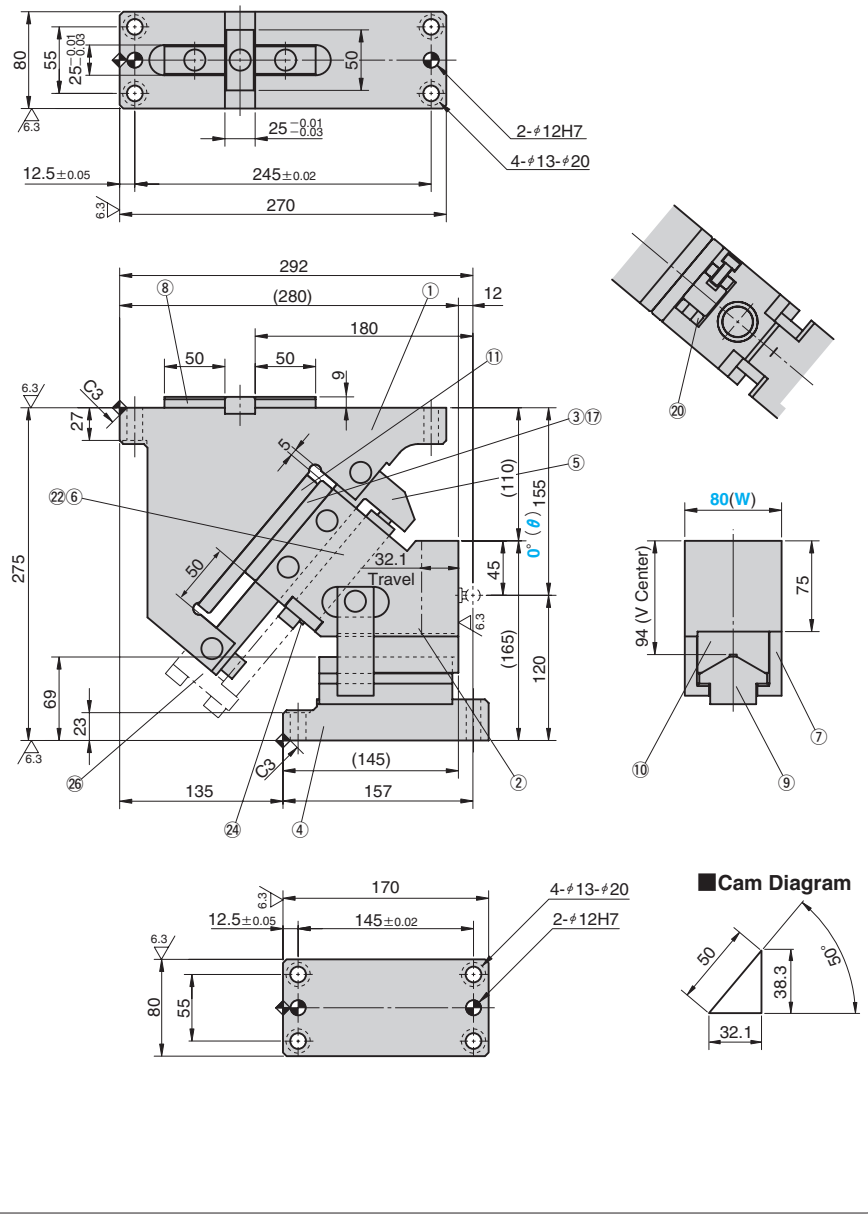
NOTES ●Ensure that all parts are clean, particularly the sliding components, to which a small amount of grease is applied and is then placed on position.
●Take care the respective tolerances are observed when assembling the slider and holder, which also should be identified by the same serial number.
●Ensure that all bolts are tightened to the recommended torque.

Aerial Cam Unit

NAAMS STANDARD

CAD FILE

UCMSNR80－00



■Cam Diagram

Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
32.1	166.7 (17.0)	–	2350.0 (239.6)	3177 (324.2)	27.9	UCMSNR	80	00	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W		θ		PS	
UCMSNR	80	–	00	–	GK	
UCMSNR	80	–	00	–	NGK	……Without gas spring
UCMSNR	80	–	00	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－00－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)

No.	Description	Qty	Material and Remark
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

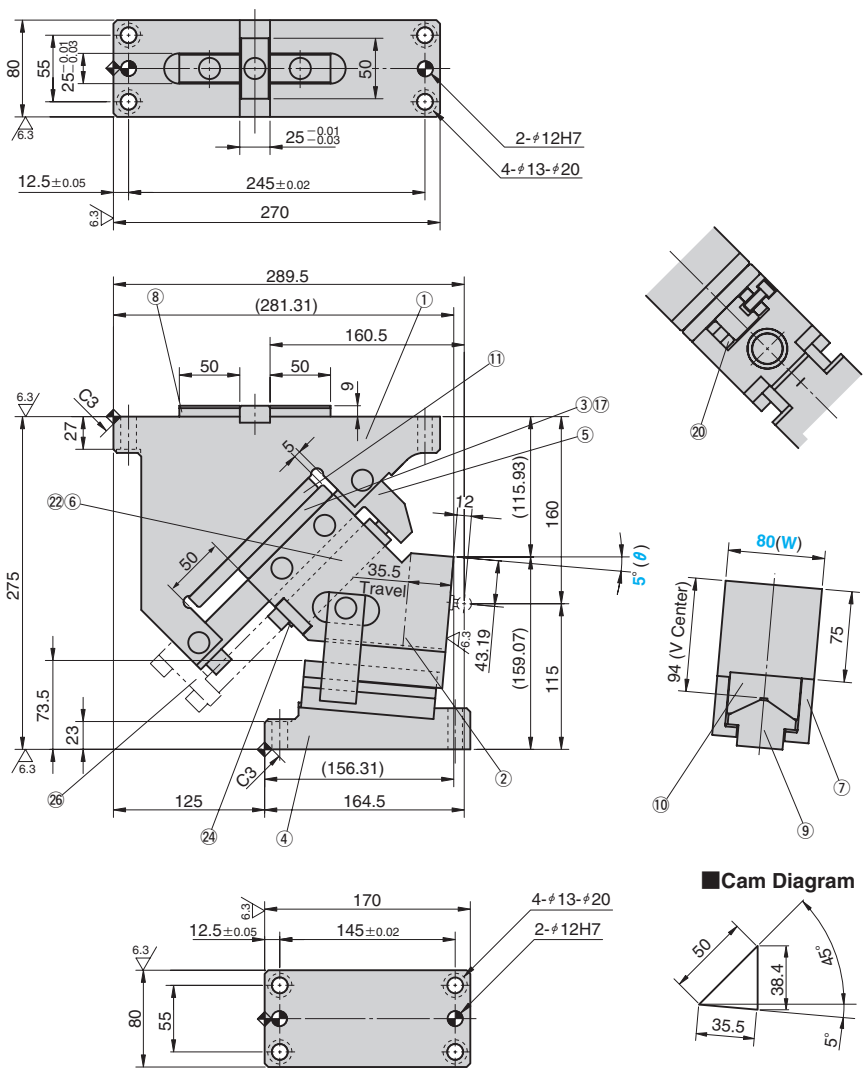
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

NAAMS STANDARD

CAD FILE

UCMSNR80－05



■Cam Diagram

Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
35.5	166.7 (17.0)	–	2350.0 (239.6)	3169 (323.4)	27.5	UCMSNR	80	05	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W		θ		PS	
UCMSNR	80	–	05	–	GK	
UCMSNR	80	–	05	–	NGK	……Without gas spring
UCMSNR	80	–	05	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－05－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)

No.	Description	Qty	Material and Remark
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

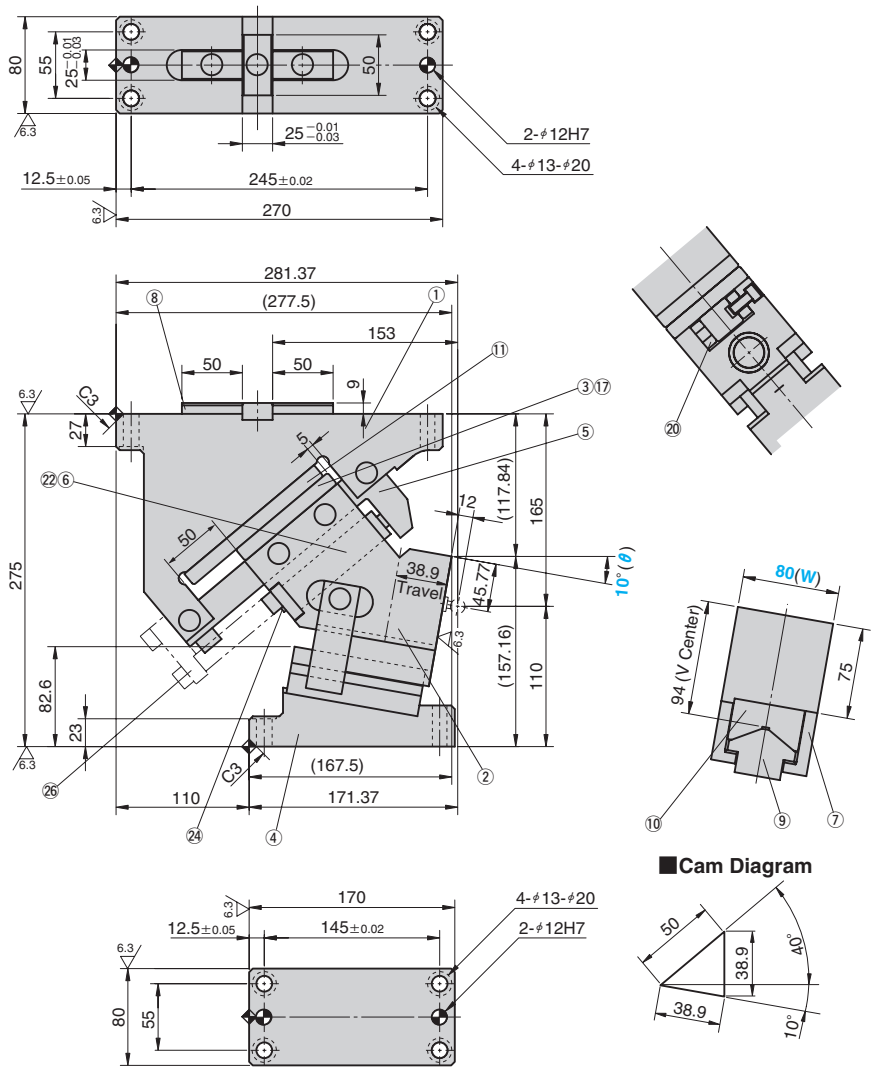
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

NAAMS STANDARD

CAD FILE

UCMSNR80－10



■Cam Diagram

Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
38.9	166.7 (17.0)	–	2350.0 (239.6)	3161 (322.5)	26.9	UCMSNR	80	10	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W		θ		PS	
UCMSNR	80	–	10	–	GK	
UCMSNR	80	–	10	–	NGK	……Without gas spring
UCMSNR	80	–	10	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－10－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)

No.	Description	Qty	Material and Remark
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

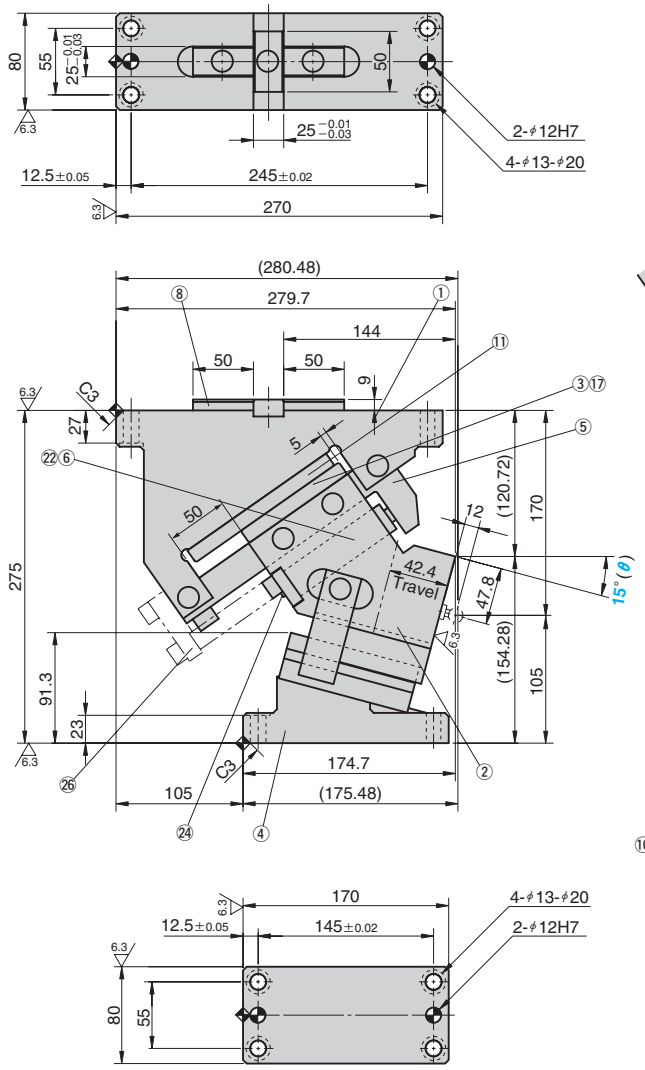
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

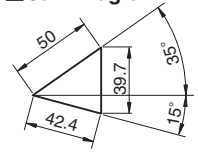
NAAMS STANDARD

CAD FILE

UCMSNR80－15



■Cam Diagram



Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
42.4	166.7 (17.0)	–	2350.0 (239.6)	3152 (321.6)	26.5	UCMSNR	80	15	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add “N” at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W		θ		PS	
UCMSNR	80	–	15	–	GK	
UCMSNR	80	–	15	–	NGK	……Without gas spring
UCMSNR	80	–	15	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－15－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)

No.	Description	Qty	Material and Remark
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

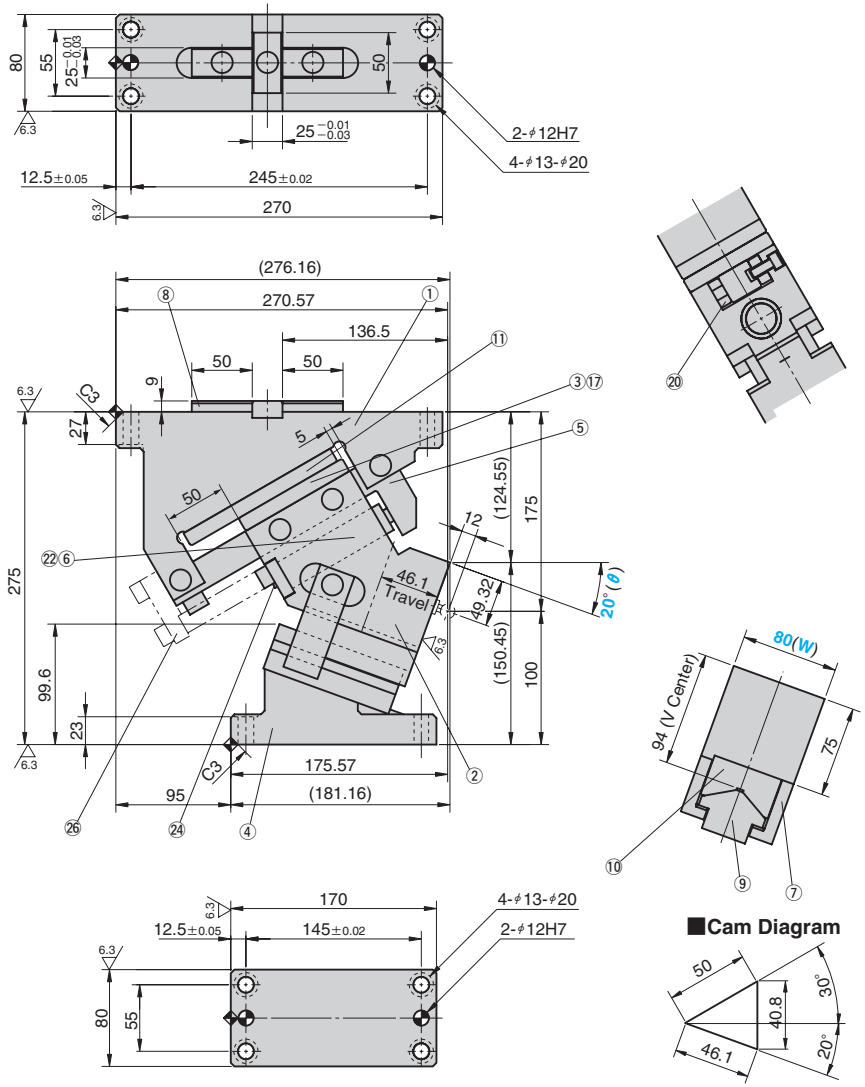
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

NAAMS STANDARD

CAD FILE

UCMSNR80－20



■Cam Diagram

Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
46.1	166.7 (17.0)	–	2350.0 (239.6)	3142 (320.6)	26.0	UCMSNR	80	20	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W	–	θ	–	PS	
UCMSNR	80	–	20	–	GK	
UCMSNR	80	–	20	–	NGK	……Without gas spring
UCMSNR	80	–	20	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－20－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

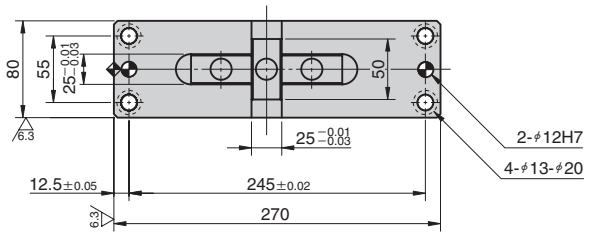
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

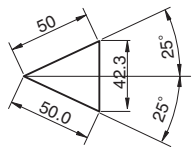
NAAMS STANDARD

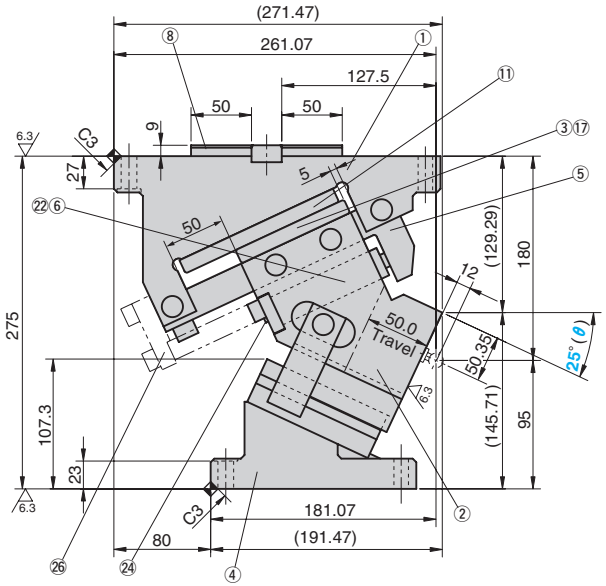
CAD FILE

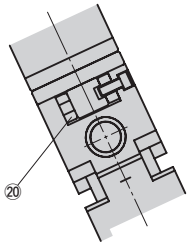
UCMSNR80－25

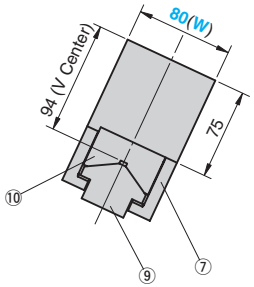


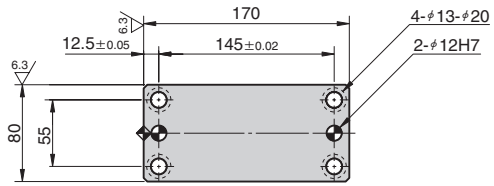
■Cam Diagram











Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
50.0	166.7 (17.0)	–	2350.0 (239.6)	3132 (319.6)	25.9	UCMSNR	80	25	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add “N” at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W	–	θ	–	PS	
UCMSNR	80	–	25	–	GK	
UCMSNR	80	–	25	–	NGK	……Without gas spring
UCMSNR	80	–	25	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－25－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)

No.	Description	Qty	Material and Remark
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

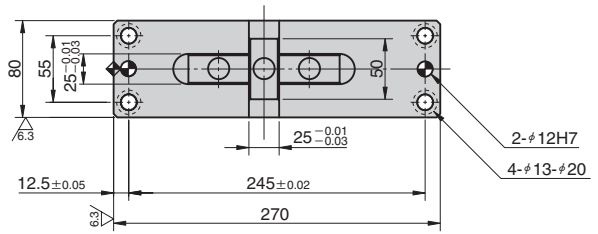
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

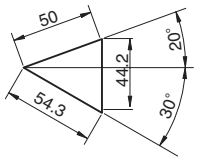
NAAMS STANDARD

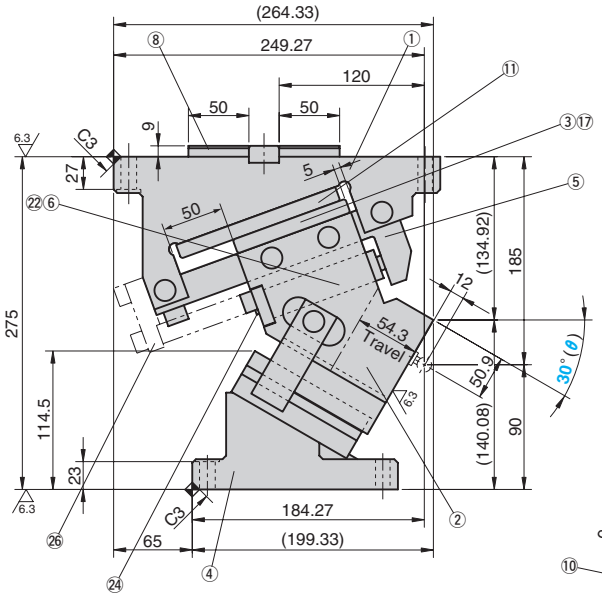
CAD FILE

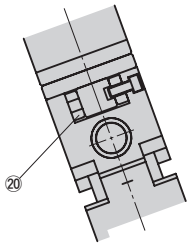
UCMSNR80－30

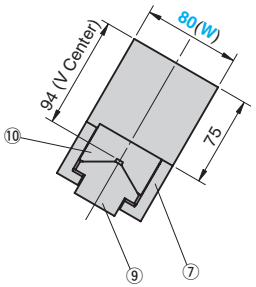


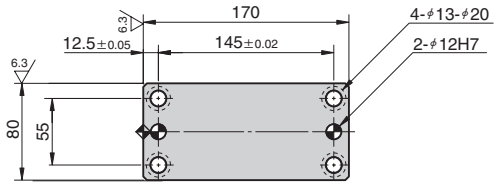
■Cam Diagram











Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
54.3	166.7 (17.0)	–	2350.0 (239.6)	3122 (318.6)	25.3	UCMSNR	80	30	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W		θ		PS	
UCMSNR	80	–	30	–	GK	
UCMSNR	80	–	30	–	NGK	……Without gas spring
UCMSNR	80	–	30	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－30－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)

No.	Description	Qty	Material and Remark
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

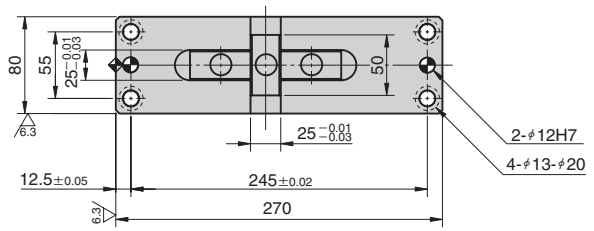
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

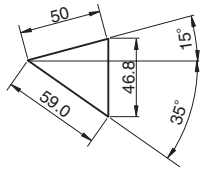
NAAMS STANDARD

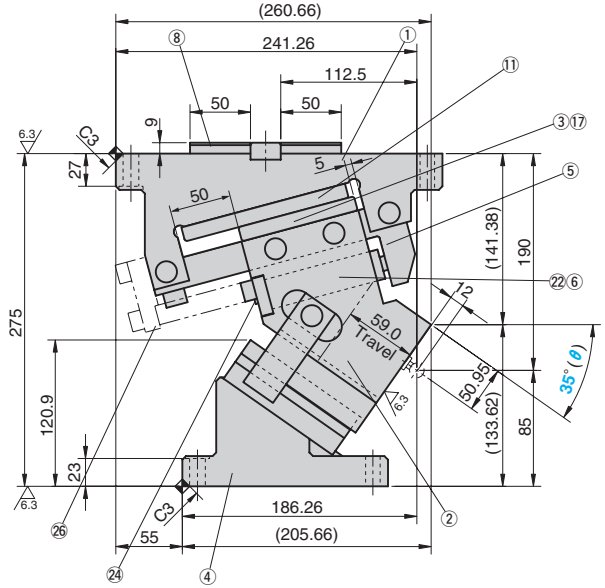
CAD FILE

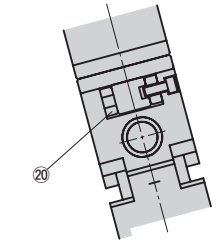
UCMSNR80－35

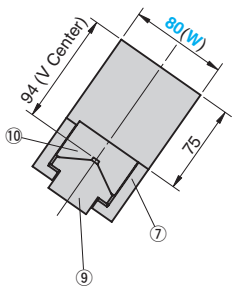


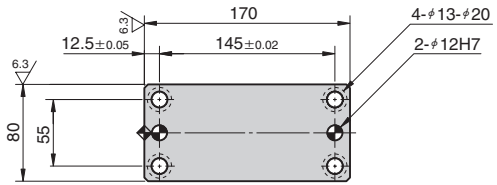
■Cam Diagram











Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
59.0	166.7 (17.0)	–	2350.0 (239.6)	3112 (317.6)	25.0	UCMSNR	80	35	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W	–	θ	–	PS	
UCMSNR	80	–	35	–	GK	
UCMSNR	80	–	35	–	NGK	……Without gas spring
UCMSNR	80	–	35	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－35－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

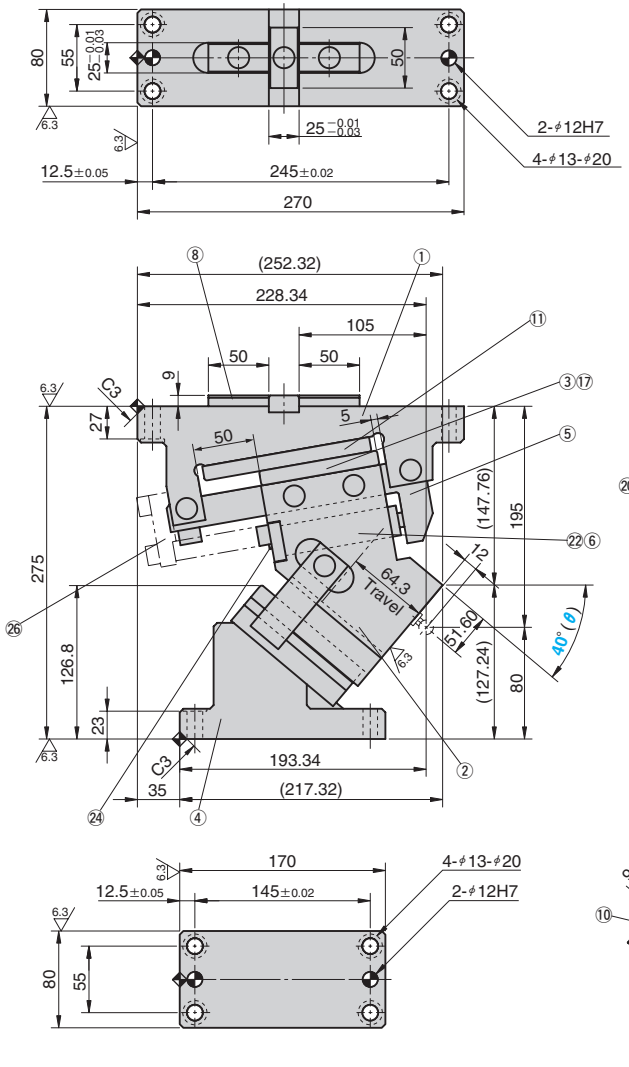
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

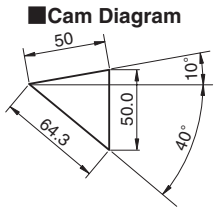
NAAMS STANDARD

CAD FILE

UCMSNR80－40



■Cam Diagram



Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
64.3	166.7 (17.0)	–	2350.0 (239.6)	3102 (316.5)	24.7	UCMSNR	80	40	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W		θ		PS	
UCMSNR	80	–	40	–	GK	
UCMSNR	80	–	40	–	NGK	……Without gas spring
UCMSNR	80	–	40	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－40－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

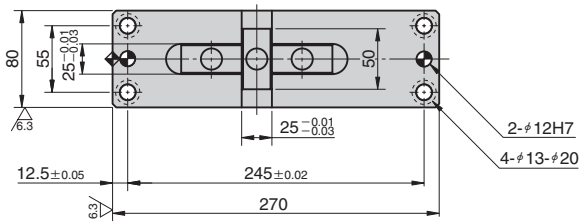
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

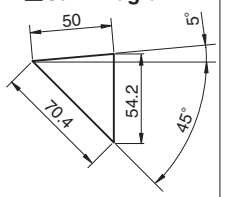
NAAMS STANDARD

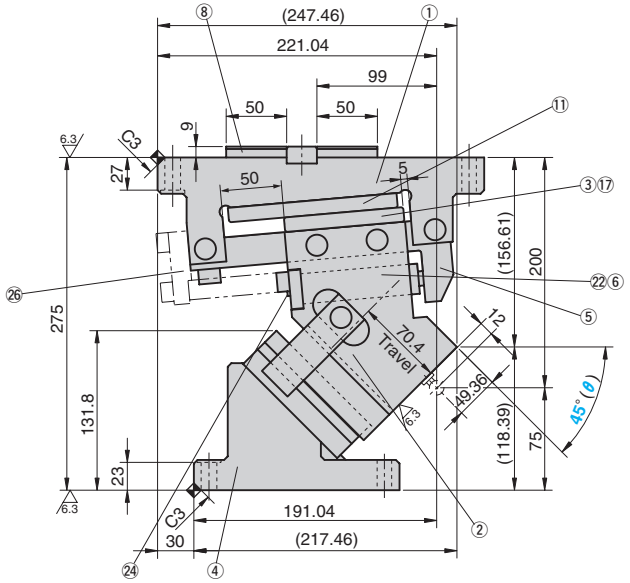
CAD FILE

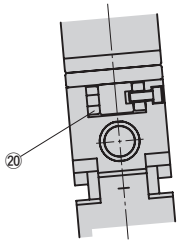
UCMSNR80－45

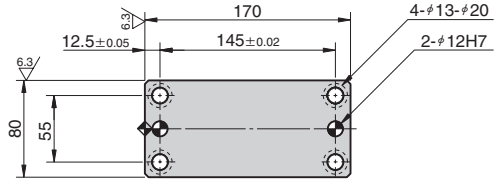


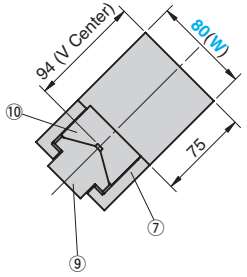
■Cam Diagram











Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
70.4	166.7 (17.0)	–	2350.0 (239.6)	3092 (315.5)	24.7	UCMSNR	80	45	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W	–	θ	–	PS	
UCMSNR	80	–	45	–	GK	
UCMSNR	80	–	45	–	NGK	……Without gas spring
UCMSNR	80	–	45	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－45－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)

No.	Description	Qty	Material and Remark
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

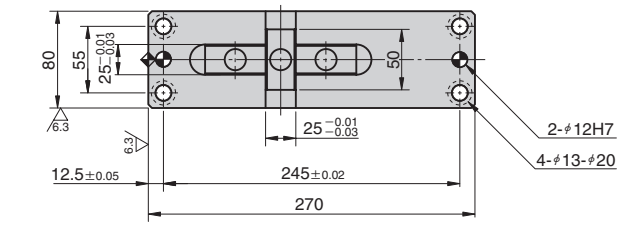
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

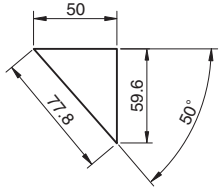
NAAMS STANDARD

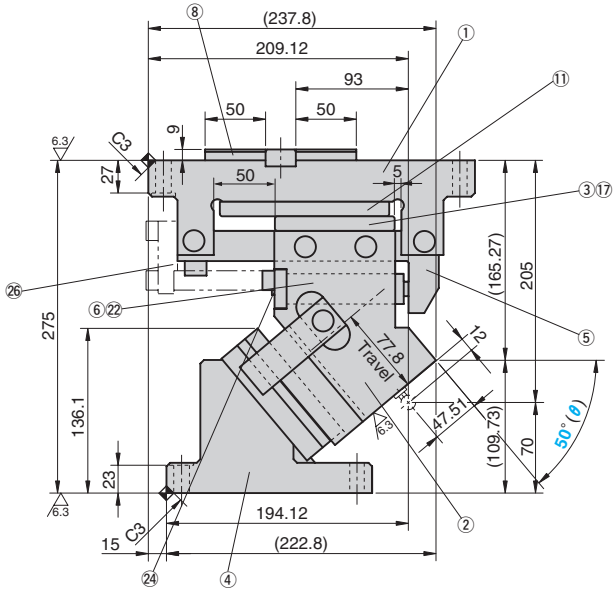
CAD FILE

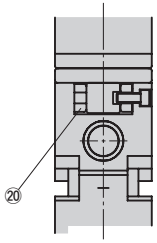
UCMSNR80－50

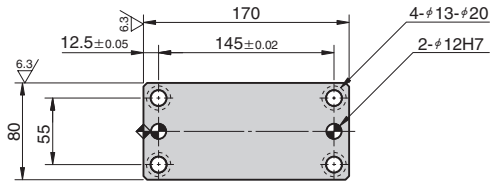


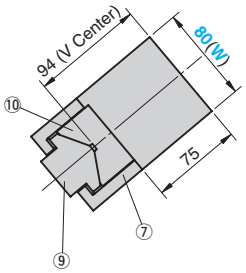
■Cam Diagram











Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
77.8	166.7 (17.0)	–	2350.0 (239.6)	3081 (314.4)	24.9	UCMSNR	80	50	GK *NGK
			1421.0 (145.0)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.5 (7.5)	1223.6 (124.8)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W		θ		PS	
UCMSNR	80	–	50	–	GK	
UCMSNR	80	–	50	–	NGK	……Without gas spring
UCMSNR	80	–	50	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－50－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)

No.	Description	Qty	Material and Remark
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

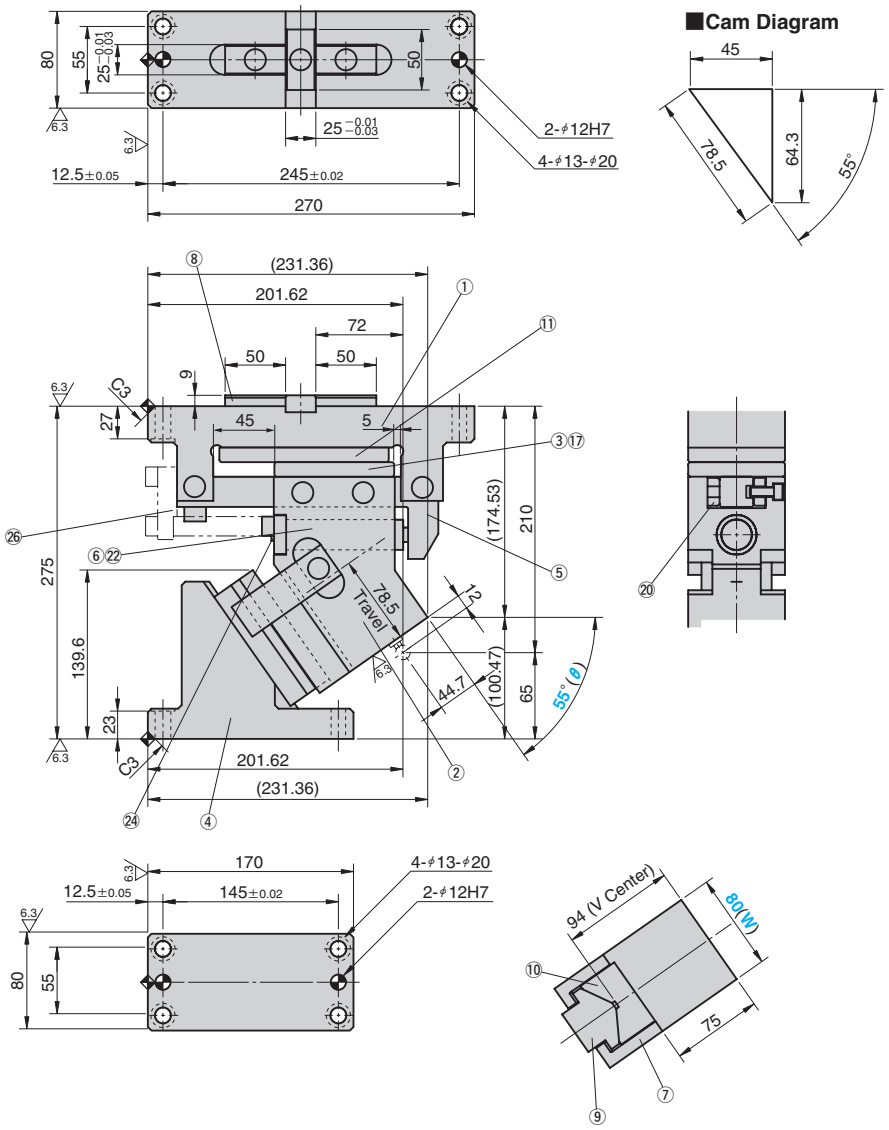
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

NAAMS STANDARD

CAD FILE

UCMSNR80－55



■Cam Diagram

Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
78.5	166.7 (17.0)	–	2265.4 (230.9)	3352 (342.0)	25.8	UCMSNR	80	55	GK *NGK
			1379.8 (140.7)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.6 (7.5)	1108.6 (113.0)						ISO *NISO

＊When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W		θ		PS	
UCMSNR	80	–	55	–	GK	
UCMSNR	80	–	55	–	NGK	……Without gas spring
UCMSNR	80	–	55	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－55－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)

No.	Description	Qty	Material and Remark
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

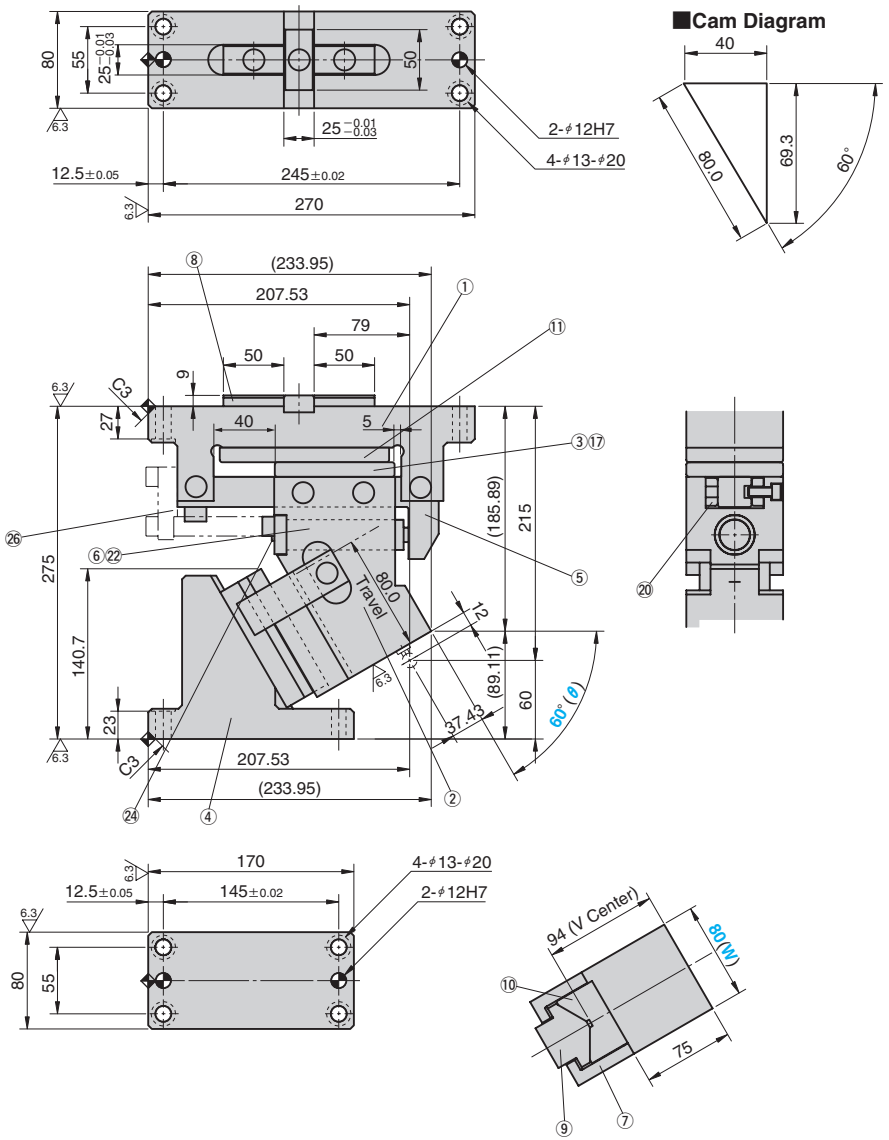
⚠ Bolts for assembly are not indicated.

Aerial Cam Unit

NAAMS STANDARD

CAD FILE

UCMSNR80－60



Travel S	Working Force kN(tonf)	Spring Force N(kgf) Initial Load	Spring Force N(kgf) Final Load	Return Force N(kgf)	Total Weight kg	Catalog No.	W	θ	Spring Type PS
80.0	166.7 (17.0)	–	2180.8 (222.3)	3706 (378.1)	26.2	UCMSNR	80	60	GK *NGK
			1338.6 (136.5)						GD *NGD
			2280.0 (232.5)						GS *NGS
		73.6 (7.5)	993.6 (101.3)						ISO *NISO

* When supplying your own Nitrogen Spring, please add "N" at the beginning of your spring selection to ensure you are supplied the correct mounting hard ware.

Order

Catalog No.	W	–	θ	–	PS	
UCMSNR	80	–	60	–	GK	
UCMSNR	80	–	60	–	NGK	……Without gas spring
UCMSNR	80	–	60	–	NISO	……Without coil spring

Option

Option Code	Specification
NF	Nitrogen gas not charged.

Order UCMSNR80－60－GK－NF

■Spring Specification

No.	PS	Spring Model	Remark
⑥	GK	M2-150-50	Gas Spring (KALLER)
	GD	C180-38.BU	Gas Spring (DADCO)
	GS	SFND.150.50	Gas Spring (SDT)
	ISO	TJL32-152	Coil Spring (constant = 23.0N/mm)

Guideline of spring durability 500,000 strokes

■Table of Components

No.	Description	Qty	Material and Remark
①	Cam Holder	1	FCD450
②	Cam Slider	1	FC250
③	Wear Plate	1	Bronze with Graphite
④	Cam Driver	1	FC250
⑤	Guide Bar	1	S45C(1045)
⑥	Spring	1	Refer to the spring specification table.
⑦	Positive Return Follower	2	S45C(1045)
⑧	Key A	3	SS400(1020)
⑨	Cam Slide Guide	1	Bronze with Graphite
⑩	Cam Slide Guide	1	S45C(1045)

No.	Description	Qty	Material and Remark
⑪	Slide Plate	1	S45C(1045)
⑰	Stopper	2	Urethane
⑳	Wear Plate	2	Bronze with Graphite
㉒	Spring Guide Pin	(1)	S45C(1045) ISO specification only
㉔	Spring Stopper Plate	1	SS400(1020)
㉖	Slide Lock Plate	1	SS400(1020)

⚠ Bolts for assembly are not indicated.