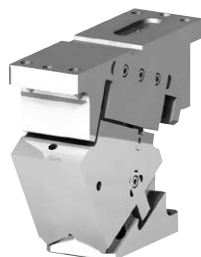


Aerial Cam Unit General Description of UCMSV

VDI-BAK STANDARD

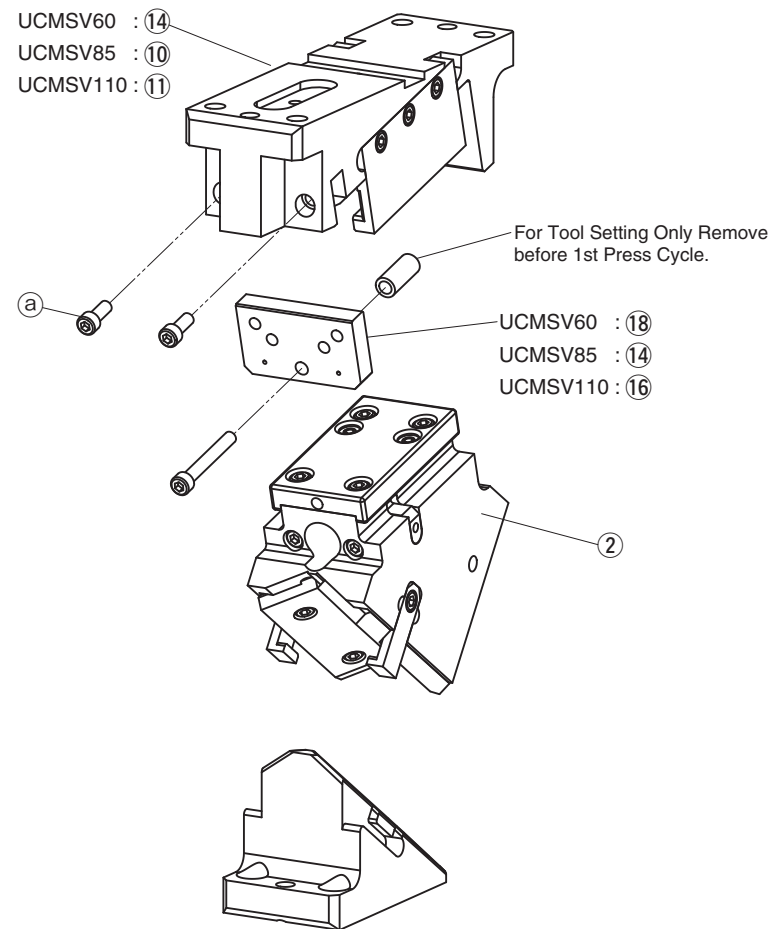


- 60, 85, 110, 165, 200, 250, 300, 350 and 400mm mounting widths are available.
- Available angles are from 0° to 75° in increments of 5°.
- Gas spring can be removed from the cam whilst in the die / press.
- Complying with VDI-BAK specification.

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	81.0				55	104.6	
		60	60.0				60	90.0				60	120.0	
		65	71.0				65	104.6				65	146.6	
		70	85.5				70	120.0				70	166.6	
		75	102.3				75	146.6				75	196.6	
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	81.0				55	104.6	
		60	60.0				60	90.0				60	120.0	
		65	71.0				65	104.6				65	146.6	
		70	85.5				70	120.0				70	166.6	
		75	102.3				75	146.6				75	196.6	
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	
		30	54.3				30	54.3				30	65.1	
		35	59.0				35	59.0				35	70.8	
		40	64.3				40	64.3				40	77.1	
		45	70.4				45	70.4				45	84.5	
		50	77.8				50	77.8				50	93.3	
		55	81.0				55	81.0				55	104.6	
		60	90.0				60	90.0				60	120.0	
		65	104.6				65	104.6				65	146.6	
		70	120.0				70	120.0				70	166.6	
		75	146.6				75	146.6				75	196.6	
	140	00	32.1				00	32.1				00	38.6	
		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	

UCMSV60 / 85 / 110 Assembly Instructions



Disassembly

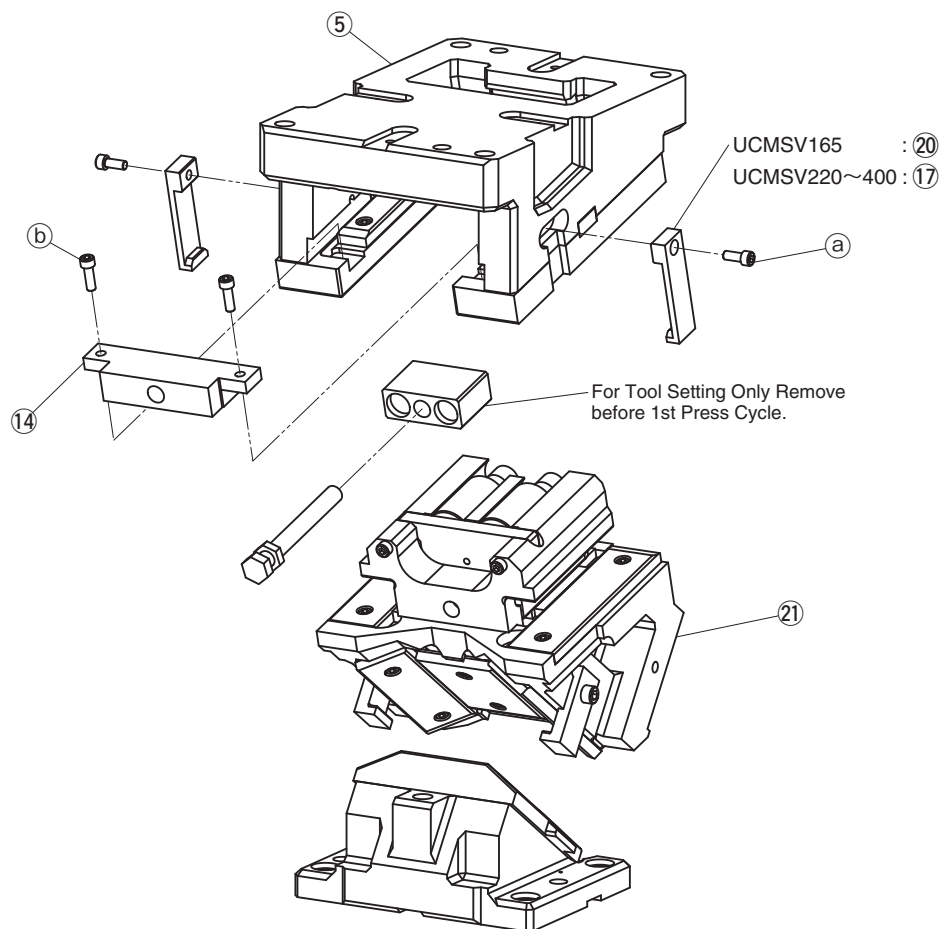
- 1) Remove Hexagon Socket Head Bolts (a), to pull out Stopper Plate (UCMSV60: 18, UCMSV85: 14, UCMSV110: 16).
- 2) Pull out and remove Cam Slider (2) from Cam Holder (UCMSV60: 14, UCMSV85: 10, UCMSV110: 11) to the rear.

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 tighten to the recommended torque after assembly and disassembly.

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



● Disassembly

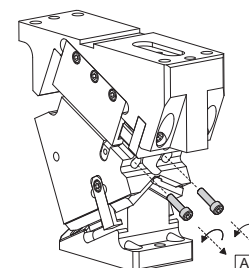
- 1) Remove Hexagon Socket Head Bolts (a), and remove Safety Plate (UCMSV165: 20, UCMSV200~400: 17).
- 2) Remove Hexagon Socket Head Bolts (b), and remove Stopper Plate (14).
- 3) Pull out and remove Cam Slider (21) from Cam Holder (5) to the rear.

● Assembly

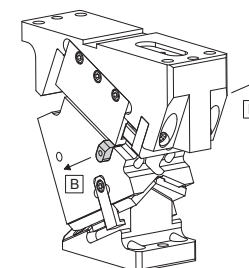
Assembly is the reverse procedure of disassembly.

- 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.

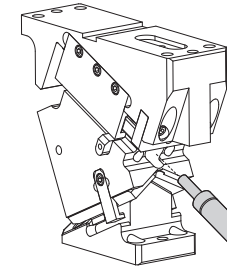
■ UCMSV60/85/110 Removing gas spring



Remove the screws of the spring stopper [A]

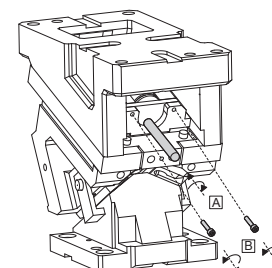


Slide out the spring stopper [B]

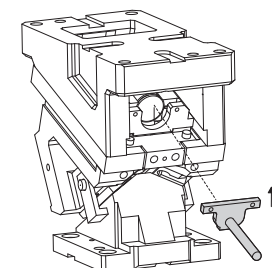


Remove the gas spring backward [C]

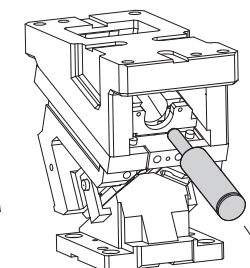
■ UCMSV165/200/250/300/350/400 Removing gas spring



-Screw the mounting lever [A]
-Remove the screws of the spring stopper [B]

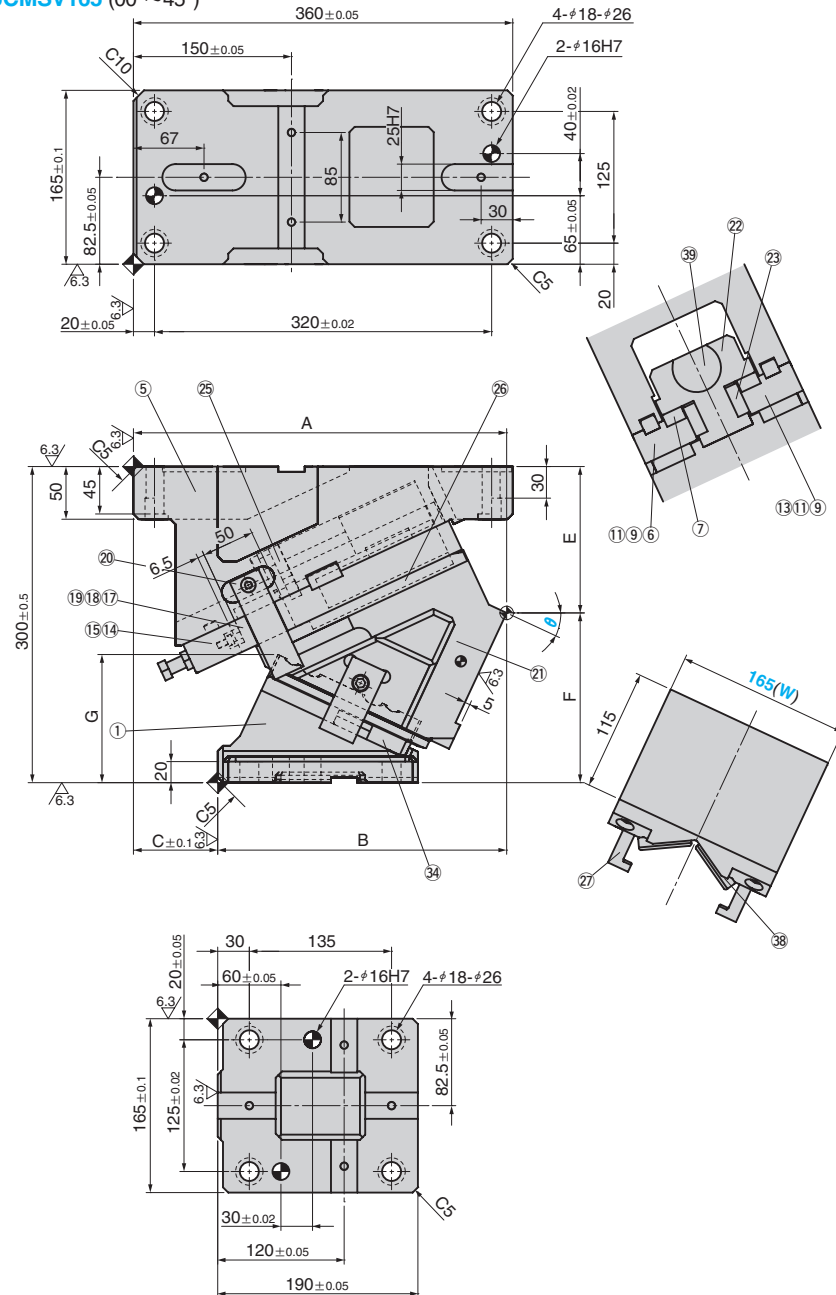


Slide out the spring stopper [C]



Remove the gas spring backward [D]

UCMSV165 (00°~45°)



θ	Travel	A	B	C	E	F	G
00	32.1	360.00	210.00	150	95.00	205.00	77.5
05	35.5	356.25	222.25	134	100.91	199.09	87.8
10	38.9	359.27	241.27	118	111.09	188.91	94.6
15	42.4	355.78	244.78	111	122.47	177.53	101.0
20	46.1	355.68	262.68	93	130.00	170.00	111.8
25	50.0	354.25	274.25	80	138.92	161.08	121.6
30	54.3	357.28	287.28	70	148.28	151.72	131.3
35	59.0	345.80	281.80	64	158.89	141.11	139.9
40	64.3	344.27	286.27	58	170.38	129.62	147.7
45	70.4	344.86	304.86	40	182.66	117.34	154.5

Working Force kN	Return Force N(kgf)	Catalog No.	(W)	θ	Spring Type PS
	14996 (1530.3)			00	
	14972 (1527.8)			05	
	14945 (1525.0)			10	
	14918 (1522.3)			15	GS
171	14890 (1519.4)	UCMSV	165	20	GK
	14860 (1516.3)			25	GD
	14830 (1513.2)			30	*NGP
	14799 (1510.1)			35	
	14768 (1506.9)			40	
	14736 (1503.7)			45	

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



Order

Catalog No.	(W)	—	θ	—	PS
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UCMSV 165 — 25 — GK

■ **Spring Specification (Qty 1)**

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

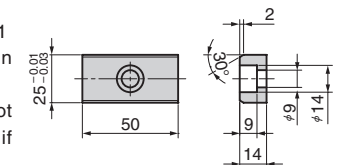


 **Option**

■ Key Specification

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.1671
- Cam diagram is shown in p.1669
- NF : Gas Springs are not filled with nitrogen gas if delivery is by air freight.



(with M8×15 bolt)

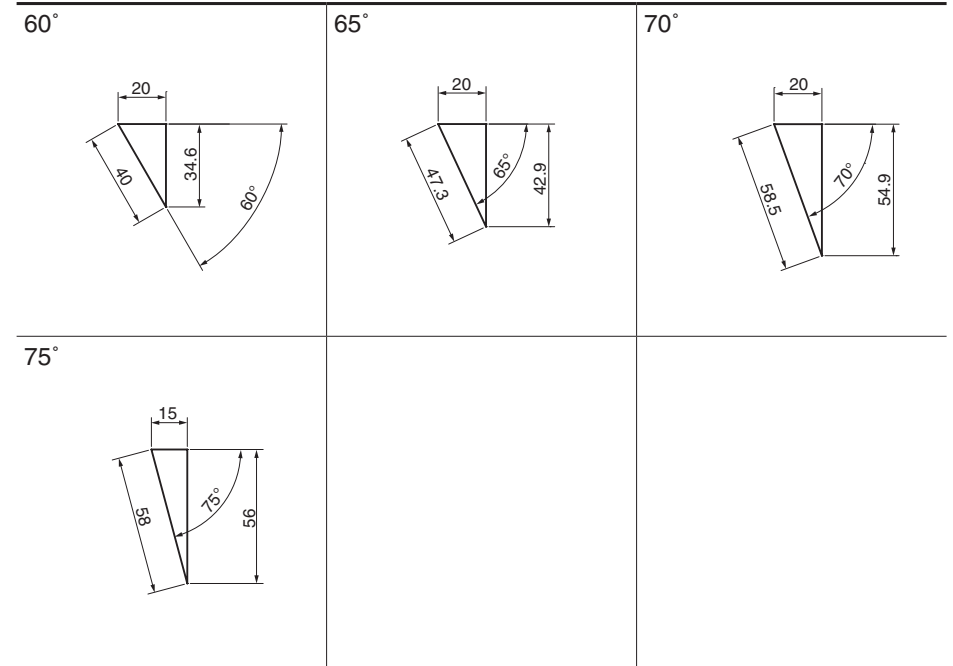
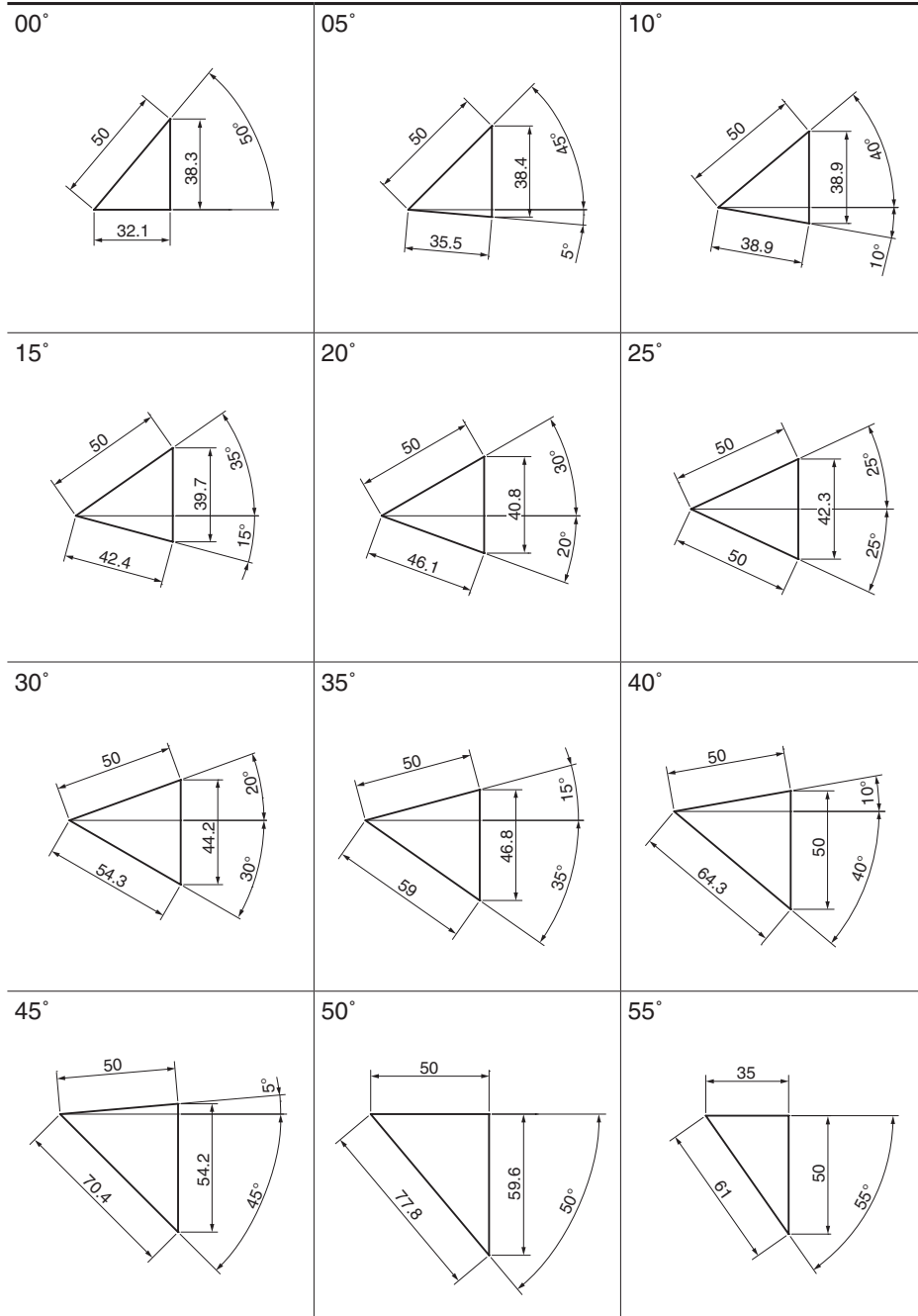


Order

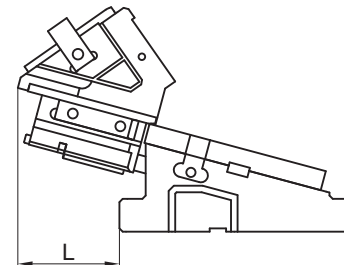
UCMSV165 - 25 - GK - NF

Aerial Cam Unit UCMSV165 Cam Diagram

VDI-BAK STANDARD



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	172
55	172
60	169
65	169
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
⑦	Wear Plate	2	Bronze with Graphite
⑨	Key	4	SS400
⑪	Key	2	SS400
⑬	Base Plate L	1	S45C
⑭	Stopper Plate	1	S45C
⑮	Stopper	1	Urethane (PCU15)
⑰	Lock Block	1	SS400
⑱	Hexagonal Bolt	2	SCM435 M12×140
⑲	Hexagonal Nut	2	SCM435 M12
⑳	Safety Plate	2	S45C
㉑	Cam Slider	1	GGG60
㉒	Spring Guide	1	S45C
㉓	Slide Plate(VSM-13)	2	Bronze with Graphite
㉔	Gas Spring Guide Plate	1	S45C
㉕	Slide Plate(VSM-20)	2	Bronze with Graphite
㉖	Cam Positive Return Plate	2	S45C
㉗	Cam Slide Guide	1	S45C
㉘	Slide Plate(VSM-24)	2	Bronze with Graphite
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
⑦	Wear Plate	2	Bronze with Graphite
⑨	Key	4	SS400
⑪	Key	2	SS400
⑬	Base Plate L	1	S45C
⑭	Stopper Plate	1	S45C
⑮	Stopper	1	Urethane (PCU15)
⑰	Lock Block	1	SS400
⑱	Hexagonal Bolt	2	SCM435 M12×140
⑲	Hexagonal Nut	2	SCM435 M12
⑳	Safety Plate	2	S45C
㉑	Cam Slider	1	GGG60
㉒	Spring Guide	1	S45C
㉓	Slide Plate(VSM-13)	2	Bronze with Graphite
㉔	Gas Spring Guide Plate	1	S45C
㉕	Slide Plate(VSM-20)	2	Bronze with Graphite
㉖	Cam Positive Return Plate	2	S45C
㉗	Cam Slide Guide	1	S45C
㉘	Slide Plate(VSM-23)	2	Bronze with Graphite
㉙	Gas Spring	1	Refer to the specification table

Bolts for assembly are not indicated.