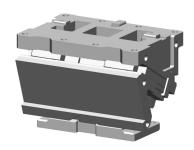
### Wide Type For Pierce and Flange

## **Aerial Cam Unit General Description of SUWB**

**OUTLINE OF SUWB** 



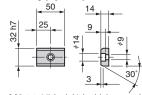
- 200, 300, 400, 500mm and 600mm are available for the mounting width.
- V-shaped guide.
- It is easy to lock at bottom or adjust without removing cam slide if you remove spring guide plate and spring.
- Angles from 0° to 60° are available in increments of 5°.
- 1 25°, 35°, 45°, 55° is made to order.
- \*\* Please contact your sales representative before using any gas spring other than those we recommend.

#### ■SUWB Specifications

lountin	g Surface	Working		Working Fo	rce kN(tonf)	Spring	
w	н	Angle	Travel	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Force N(kgf)	
		00	38.6				
		05	42.6				
		10	46.7				
		15	50.9				
		20	55.3				
		25	60.0	117.6	235.2	4900.3	
200	180	30	65.1	(12.0)	(24.0)	(499.7)	
		35	70.8	(12.0)	(24.0)	(433.7)	
		40	77.1				
		45	84.5				
		50	93.3				
		55	104.6				
		60	120.0				
		00	38.6				
		05	42.6				
		10	46.7				
		15	50.9				
		20	55.3				
		25	60.0	100.0	000.0	0000.0	
300	180	30	65.1	196.0	392.0	9800.6	
		35	70.8	(20.0)	(40.0)	(999.4)	
		40	77.1				
		45	84.5				
		50	93.3				
		55	104.6				
		60	120.0				
		00	38.6				
		05	42.6				
		10	46.7				
		15	50.9				
		20	55.3				
		25	60.0	0.45.6	400.6	0000.0	
400	180	30	65.1	245.0	490.0	9800.6	
		35	70.8	(25.0)	(50.0)	(999.4)	
		40	77.1				
		45	84.5				
		50	93.3				
		55	104.6				
		60	120.0				

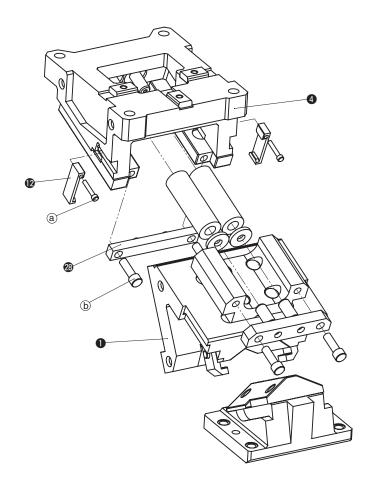
#### ounting Surface Working Force kN(tonf) Spring Working Standard Allowable Working Force (one million strokes) (300,000 strokes) Travel Force Angle N(kgf) 38.6 00 05 42.6 10 46.7 15 50.9 20 55.3 25 60.0 313.6 627.2 14701.0 500 180 30 65.1 (32.0)(64.0)(1499.1)35 70.8 40 77.1 45 84.5 50 93.3 55 104.6 120.0 60 00 38.6 42.6 05 10 46.7 15 50.9 20 55.3 25 60.0 392.0 784.0 19601.3 600 180 30 65.1 (40.0)(79.9)(1998.8)35 70.8 40 77.1 45 84.5 93.3 50 55 104.6 60 120.0

## ■For detailed specification of the key(option)



•M8 × 15 bolt(1 bolt) is attached.

#### ■SUWB Structure and Assembly / Disassembly

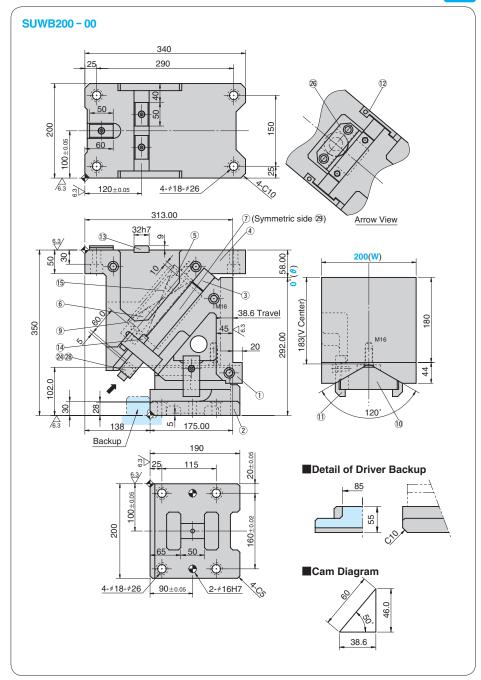


- Disassembly method of SUWB
- 1) Loosen hexagon socket head bolt (a) and remove safety plate (12).
- 2) Loosen hexagon socket head bolt (b) and remove stopper plate (29).
- 3) Pull and remove cam slider (1) from cam holder (4) to the rear.
- Assembly method of SUWB
- 1) Assemble components in the reverse 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

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





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Travel	Working Fo	rce kN(tonf)	N(tonf)   Spring Force N(kgf)			Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial	Final Load			Weight kg	Catalog No.	(W)	(θ)	PS PS
			817.2 (83.3)	4903.2 (499.7)	6776 (691.4)						No code (coil spring)
38.6	117.6	235.2		6689.4 (682.6)		36.1	95.0	SUWB	200	00	GK *NGK
36.0	(12.0)	(24.0)	_	6655.0 (679.1)	9141 (932.8)	30.1	95.0	SUWB	200	00	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No. **SUWB** 

00

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

■Space for removing

**SUWB** 200 00 NGK ·····Without gas spring

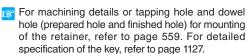
GK



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.







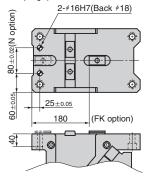
#### ■Spring Specification

	<u> </u>		
No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

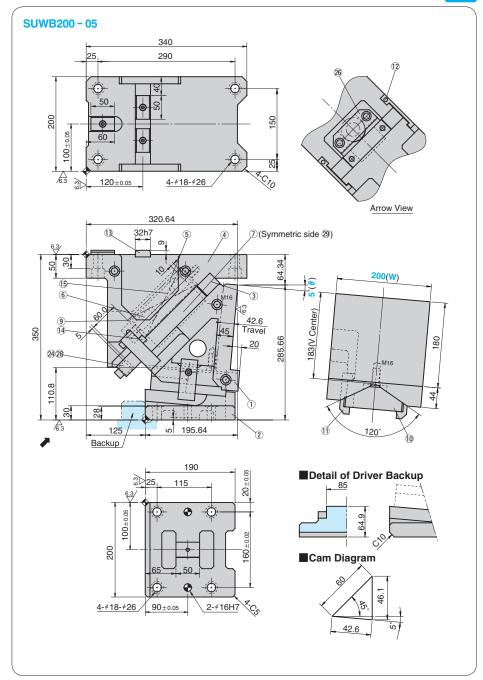
NO.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	1	Refer to the Spring Specification table
24)	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





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Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			817.2 (83.3)	4903.2 (499.7)	6744 (688.1)						No code (coil spring)
42.6	117.6	235.2		6689.4 (682.6)		36.1	94.8	SUWB	200	05	GK *NGK
42.0	(12.0)	(24.0)	_	6655.0 (679.1)	9109 (929.5)	30.1	94.0	SOWB	200	05	GD *NGD
				6709.2 (684.6)							GS *NGS



Order

Catalog No. **SUWB** 

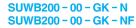
05 GK \*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

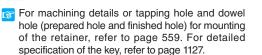
**SUWB** 200 05 NGK ·····Without gas spring



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



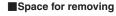


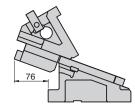




	<u> </u>						
No.	Spring type	Spring type Model Remark					
	_	TM50-225	Coil spring(constant = 68.1N/mm)				
15	GK	K750-63.5	Gas spring (KALLER)				
(13)	GD	L.750.075	Gas spring (DADCO)				
	GS SM.750.63		Gas spring (SDT)				

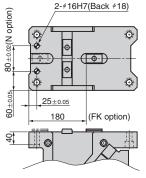
\*Guideline of coil spring durability 300,000 strokes





#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### ■ Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

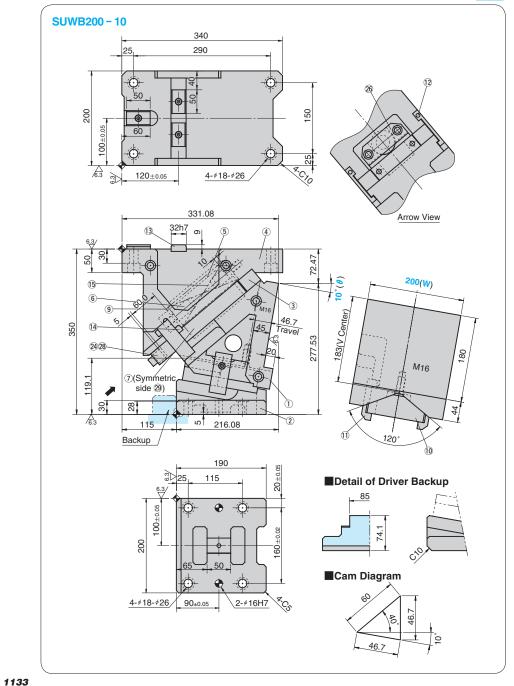
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	1	Refer to the Spring Specification table.
24)	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			817.2 (83.3)	4903.2 (499.7)	6710 (684.7)						No code (coil spring)
46.7	117.6	235.2		6689.4 (682.6)		36.1	94.6	SUWB	200	10	GK *NGK
40.7	(12.0)	(24.0)	_	6655.0 (679.1)	9075 (926.0)	30.1	94.0	SOWB	200	10	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No. **SUWB** 

10 GK \*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

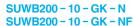
■Space for removing

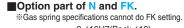
**SUWB** 10 - NGK ·····Without gas spring



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.





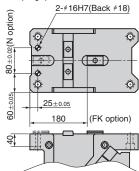


For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

	<u> </u>		
No.	No. Spring type Model		Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD L.750.075		Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes



#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

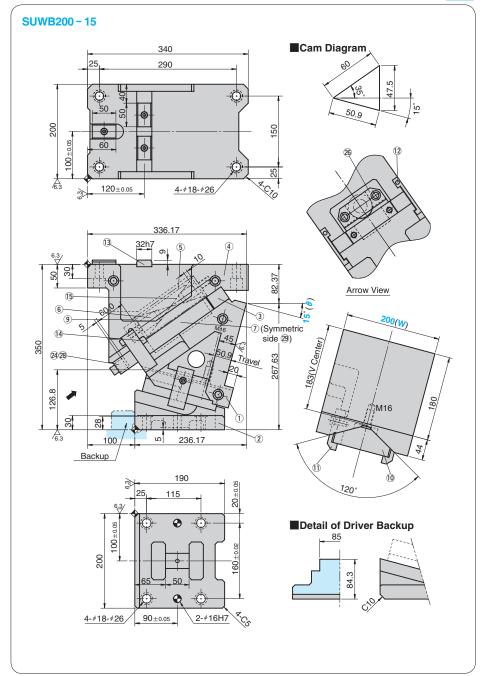
	No.	Description	Qty	Material and Remark
Ξ	11)	Positive Return Follower	2	S45C
	12	Safety Plate	2	SS400
	13	Key A	3	SS400
	14)	Key B	2	SS400
	15	Spring	1	Refer to the Spring Specification table
	24)	Stopper	2	Urethane
	26	Spring Guide Plate	1	SS400
	28	Stopper Plate	1	S45C
	29	Base Plate C-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





Travel	Working Fo Standard Working Force	Allowable	Initial	Final		Weight		Catalog No.	(W)	(θ)	Spring Type PS
	(one million strokes)	(300,000 strokes)	Load	Load	N(kgf)	kg	kg				
			817.2 (83.3)	4903.2 (499.7)	6674 (681.0)						No code (coil spring)
50.9	117.6	235.2		6689.4 (682.6)		36.1	93.3	SUWB	200	15	GK *NGK
50.9	(12.0)	(24.0)	_	6655.0 (679.1)	9039 (922.4)	30.1	93.3	SUWB	200	15	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No. **SUWB** 

**SUWB** 

GK 15

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

100

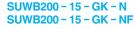
**■**Option part of N and FK.

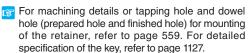
200 - 15 - NGK ·····Without gas spring



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.







#### ■Spring Specification

	<u> </u>		
No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15)	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

## \*Gas spring specifications cannot do FK setting. 2-#16H7(Back #18) (N option) 25±0.05 (FK option)

#### **■**Table of Components

No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12)	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15)	Spring	1	Refer to the Spring Specification table
24)	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

1136

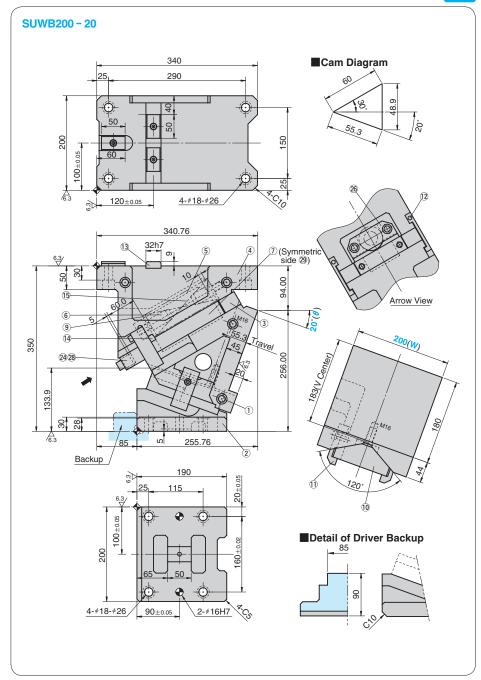
**SUWB** 200

1135

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





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Travel	Working Fo		Spring Fo	rce N(kgf)	Return		Total				Spring Type
S	Working Force	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)		Weight kg	Catalog No.	(W)	(θ)	PS
			817.2 (83.3)	4903.2 (499.7)	6636 (677.1)						No code (coil spring)
55.3	117.6	235.2		6689.4 (682.6)		36.1	92.7	SUWB	200	20	GK *NGK
55.3	(12.0)	(24.0)	_	6655.0 (679.1)	9002 (918.5)	30.1	92.7	SUWB	200	20	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No. **SUWB SUWB** 

GK

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

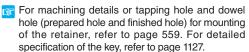
20 NGK ·····Without gas spring



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB200 - 20 - GK - N SUWB200 - 20 - GK - NF

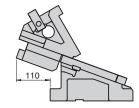


#### ■Spring Specification

	<u> </u>			
No.	Spring type	Model	Remark	
	_	TM50-225	Coil spring(constant = 68.1N/mm)	
15)	GK	K750-63.5	Gas spring (KALLER)	
(13)	GD L.750.075		Gas spring (DADCO)	
	GS	SM.750.63	Gas spring (SDT)	

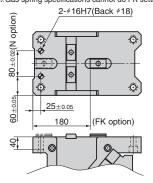
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

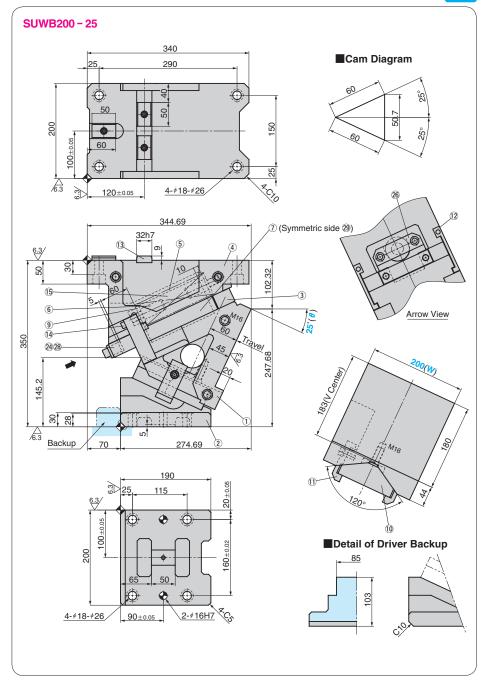
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15)	Spring	1	Refer to the Spring Specification table
24)	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





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Travel S	Working Fo Standard Working Force (one million strokes)	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load			Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			817.2 (83.3)	4903.2 (499.7)	6597 (673.2)						No code (coil spring)
60.0	117.6	235.2		6689.4 (682.6)		26.1	04.1	SUWB	200	25	GK *NGK
60.0	(12.0)	(24.0)	_	6655.0 (679.1)	8963 (914.5)	36.1	94.1	SUWB	200	25	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No. **SUWB** 

GK 25

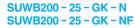
\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

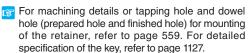
**SUWB** 25 NGK ·····Without gas spring



<b>Option Code</b>	Specification			
K	A key for driver is attached. (It is not assembled to the main unit.)			
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)			
FK	Move the key position forward. (Refer to the figure on the right.)			
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.			





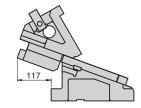


#### ■Spring Specification

_	- 1-	3 - 1					
ı	No.	Spring type	Model	Remark			
		_	TM50-225	Coil spring(constant = 68.1N/mm)			
	15	GK	K750-63.5	Gas spring (KALLER)			
		GD	L.750.075	Gas spring (DADCO)			
		GS	SM.750.63	Gas spring (SDT)			

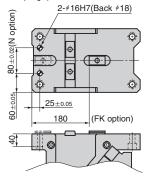
\*Guideline of coil spring durability 300,000 strokes

### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
<b>6</b>	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	1	Refer to the Spring Specification tabl
24	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

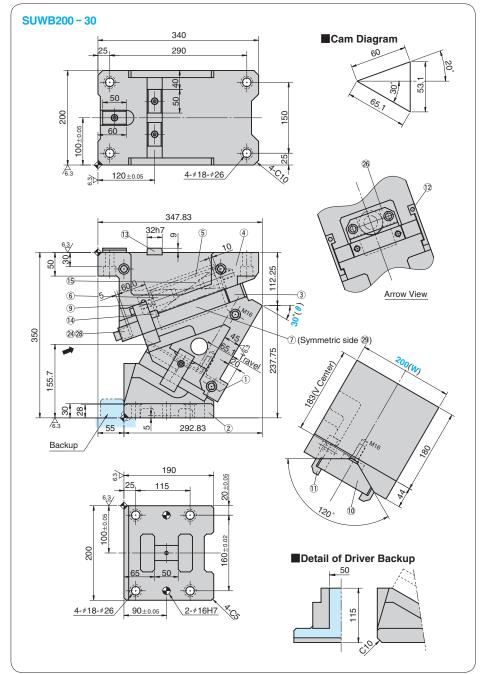
**SUWB** 200

Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			817.2 (83.3)	4903.2 (499.7)	6557 (669.1)						No code (coil spring)
65.1	117.6	235.2		6689.4 (682.6)		36.1	92.7	SUWB	200	30	GK *NGK
05.1	(12.0)	(24.0)	_	6655.0 (679.1)	8923 (910.5)	30.1	92.7	SUWB	200	30	GD *NGD
				6709.2 (684.6)							GS *NGS

GK



Catalog No. **SUWB SUWB** 

 $(\theta)$ 

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.

The parts for installing the spring are included.

■Space for removing

NGK ·····Without gas spring



Option

<b>Option Code</b>	Specification				
K	A key for driver is attached. (It is not assembled to the main unit.)				
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)				
FK	Move the key position forward. (Refer to the figure on the right.)				
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.				

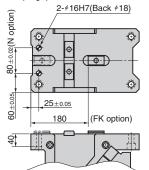


SUWB200 - 30 - GK - N SUWB200 - 30 - GK - NF

For machining details or tapping hole and dowel



\*Gas spring specifications cannot do FK setting.



hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### **■**Spring Specification

No.	Spring type	pring type Model Remark					
	_	TM50-225	Coil spring(constant = 68.1N/mm)				
15	GK	K750-63.5	Gas spring (KALLER)				
(13)	GD	L.750.075	Gas spring (DADCO)				
	GS	SM.750.63	Gas spring (SDT)				

\*Guideline of coil spring durability 300,000 strokes

#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	1	Refer to the Spring Specification table
24)	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

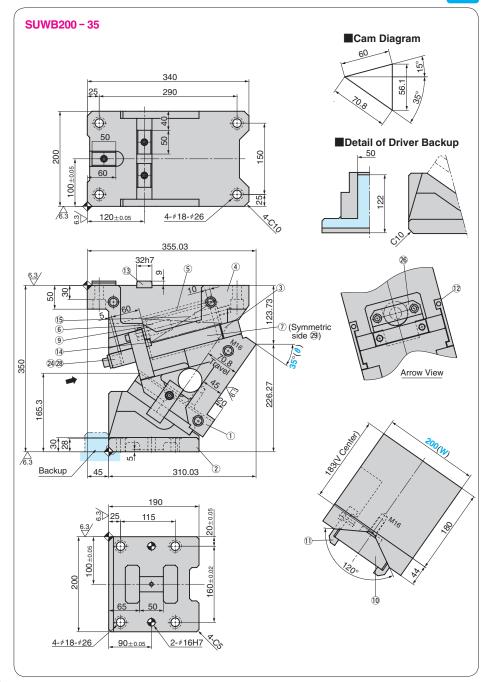
Bolts for assembly are not indicated.

200

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





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Travel	Working Force kN(tonf)		Spring Force N(kgf)			Slider Total				Spring Type	
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			817.2 (83.3)	4903.2 (499.7)	6516 (664.9)						No code (coil spring)
70.8	117.6	235.2		6689.4 (682.6)		36.1	94.8	SUWB	200	35	GK *NGK
70.6	(12.0)	(24.0)	_	6655.0 (679.1)	8882 (906.3)	30.1	94.0	SOWB	200	33	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No. **SUWB** 

35 GK \*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

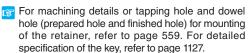
**SUWB** 35 NGK ·····Without gas spring



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB200 - 35 - GK - N SUWB200 - 35 - GK - NF

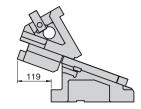


#### ■Spring Specification

No.	Spring type	Model	Remark		
	-	TM50-225	Coil spring(constant = 68.1N/mm)		
15	GK	K750-63.5	Gas spring (KALLER)		
	GD L.750.075		Gas spring (DADCO)		
	GS	SM.750.63	Gas spring (SDT)		

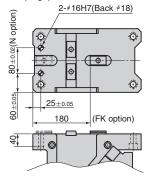
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### **■**Table of Components

No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	1	Refer to the Spring Specification table
24)	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

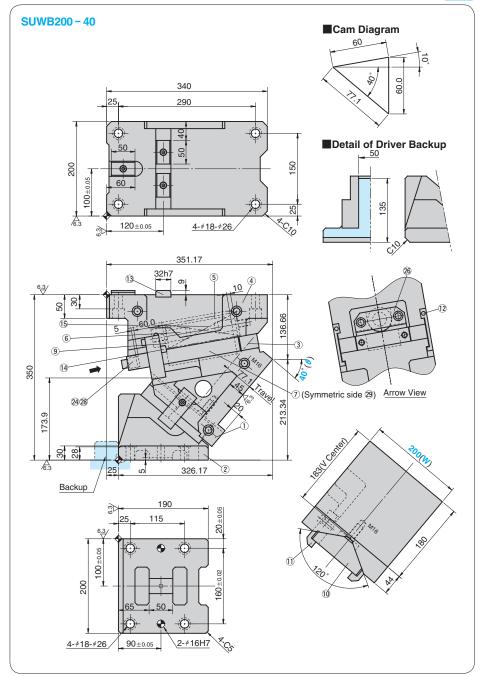
1145

### **Aerial Cam Unit**

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





Travel S	Working Fo Standard Working Force (one million strokes)	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			817.2 (83.3)	4903.2 (499.7)	6475 (660.7)						No code (coil spring)
77.1	117.6	235.2		6689.4 (682.6)		36.1	94.2	SUWB	200	40	GK *NGK
77.1	(12.0)	(24.0)	_	6655.0 (679.1)	8841 (902.1)	30.1	94.2	SOWB	200	40	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No. **SUWB** 

40

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing



GK



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB200 - 40 - GK - N SUWB200 - 40 - GK - NF

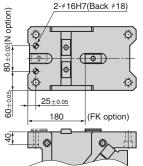
hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed

For machining details or tapping hole and dowel

specification of the key, refer to page 1127.



\*Gas spring specifications cannot do FK setting.



### **■**Spring Specification

	<u> </u>						
No.	Spring type	pring type Model Remark					
	_	TM50-225	Coil spring(constant = 68.1N/mm)				
15	GK	K750-63.5	Gas spring (KALLER)				
(13)	GD	L.750.075	Gas spring (DADCO)				
	GS	SM.750.63	Gas spring (SDT)				

\*Guideline of coil spring durability 300,000 strokes

#### **■**Table of Components

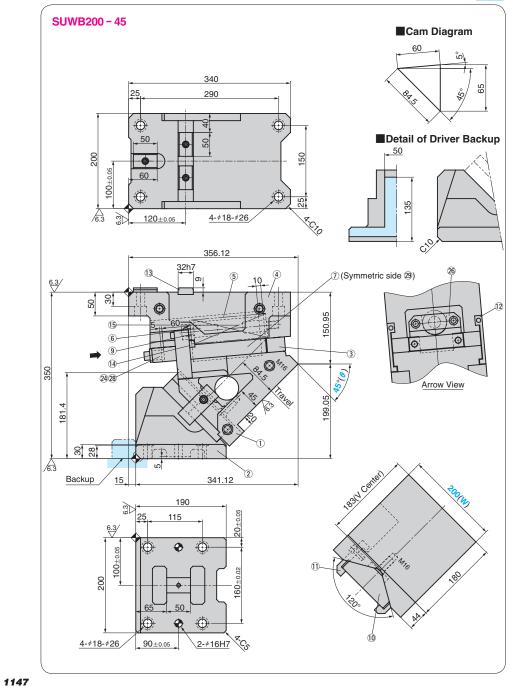
No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

1	٧o.	Description	Qty	Material and Remark
	11)	Positive Return Follower	2	S45C
	12)	Safety Plate	2	SS400
	13	Key A	3	SS400
	14)	Key B	2	SS400
	15	Spring	1	Refer to the Spring Specification table
	24)	Stopper	2	Urethane
	26	Spring Guide Plate	1	SS400
	28	Stopper Plate	1	S45C
	29	Base Plate C-R	1	Bronze with Graphite

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return	Slider	Total				Spring Type
S	Working Force	Allowable Working Force (300,000 strokes)	Initial	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			817.2 (83.3)	4903.2 (499.7)	6434 (656.5)						No code (coil spring)
84.5	117.6	235.2		6689.4 (682.6)		36.1	96.3	SUWB	200	45	GK *NGK
04.5	(12.0)	(24.0)	_	6655.0 (679.1)	8800 (897.9)	30.1	90.3	SUWB	200	40	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No.

**SUWB** 

45 GK \*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

116

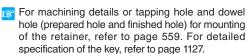
**SUWB** 200 45 NGK ·····Without gas spring



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled of the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



**SUWB200 - 45 - GK - N** SUWB200 - 45 - GK - NF



### ■Spring Specification

No.	Spring type	Model	Remark
	-	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

# 2-#16H7(Back #18) (N option) 25±0.05 (FK option)

\*Gas spring specifications cannot do FK setting.

**■**Option part of N and FK.

#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

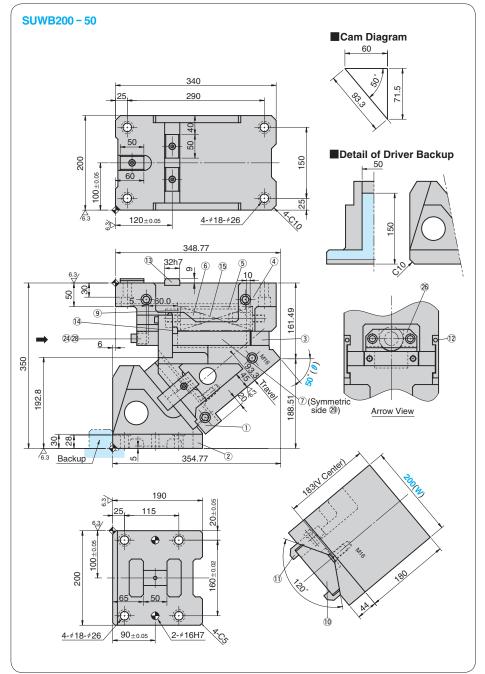
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	1	Refer to the Spring Specification table
24)	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			817.2 (83.3)	4903.2 (499.7)	6393 (652.4)						No code (coil spring)
93.3	117.6	235.2		6689.4 (682.6)		36.1	93.7	SUWB	200	50	GK *NGK
93.3	(12.0)	(24.0)	_	6655.0 (679.1)	8759 (893.7)	30.1	93.7	SUWB	200	30	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No. **SUWB** 

50 GK \*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

**SUWB** 50 NGK ·····Without gas spring

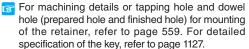


Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB200 - 50 - GK - N SUWB200 - 50 - GK - NF





#### ■Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### **■**Option part of N and FK. \*Gas spring specifications cannot do FK setting. 2-#16H7(Back #18) (N option) $25{\pm0.05}$ (FK option)

#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

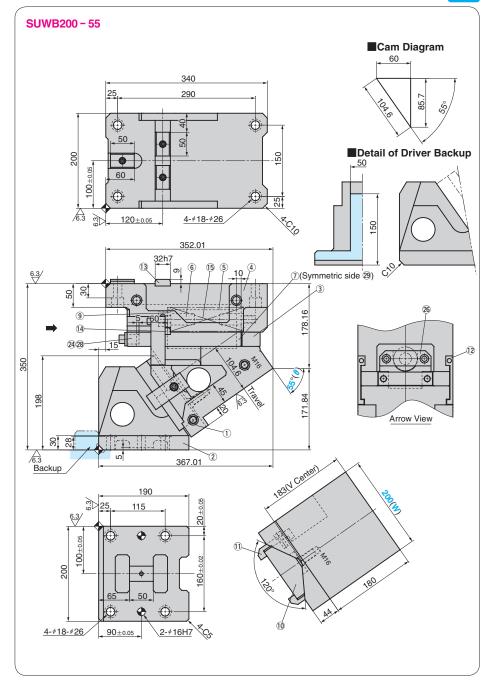
No.	. Description		<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12)	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	1	Refer to the Spring Specification table
24)	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





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Travel	Working Fo	rce kN(tonf)	Spring Fo	rce N(kgf)	Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial	Final Load			Weight kg	Catalog No.	(W)	(θ)	PS
			817.2 (83.3)	4903.2 (499.7)	6950 (709.2)						No code (coil spring)
104.6	117.6	235.2		6689.4 (682.6)		38.5	98.2	SUWB	200	55	GK *NGK
104.6	(12.0)	(24.0)	_	6655.0 (679.1)	9524 (971.8)	36.5	96.2	SUWB	200	55	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No. **SUWB** 

 $(\theta)$ GK **55** 

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**SUWB** 55 - NGK ·····Without gas spring



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



**SUWB200 - 55 - GK - N** SUWB200 - 55 - GK - NF

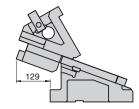
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

No.	Spring type	Model	Remark
	-	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

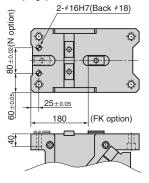
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer	1	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	1	Refer to the Spring Specification table
24)	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

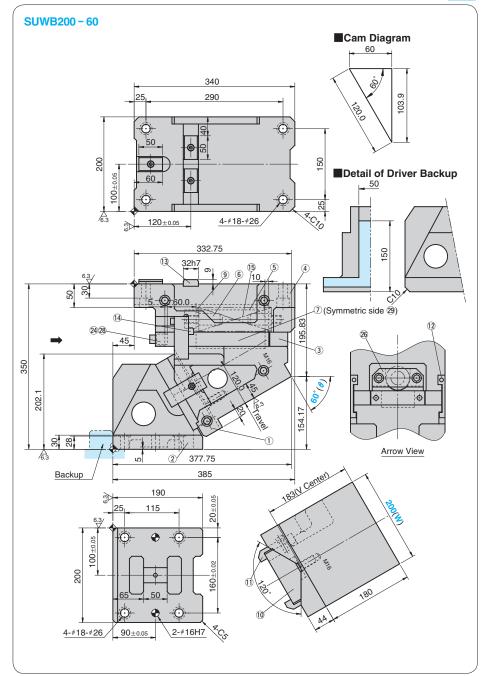
**SUWB** 200

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**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





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Travel	Working Force kN(tonf)		Spring Fo	rce N(kgf)	Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial	Final Load	Force N(kgf)		Weight kg	Catalog No.	(W)	(θ)	PS
			817.2 (83.3)	4903.2 (499.7)	7684 (784.1)						No code (coil spring)
120.0	117.6	117.6 235.2 (12.0) (24.0)	(00)	6689.4 (682.6)		38.7	97.3	SUWB	200	60	GK *NGK
120.0	(12.0)		_	6655.0 (679.1)	10530 (1074.4)		97.3	SOWB	200	00	GD *NGD
				6709.2 (684.6)							GS *NGS



Catalog No. **SUWB** 

60 GK 60

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

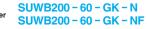
■Space for removing

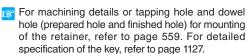
**SUWB** NGK ·····Without gas spring



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.
INF	Applicable to GK, GD and GS only.







#### ■Spring Specification

No.	Spring type	pring type Model Remark					
	_	TM50-225	Coil spring(constant = 68.1N/mm)				
15)	GK	K750-63.5	Gas spring (KALLER)				
(13)	GD	L.750.075	Gas spring (DADCO)				
	GS	SM.750.63	Gas spring (SDT)				

\*Guideline of coil spring durability 300,000 strokes

# \*Gas spring specifications cannot do FK setting. 2-#16H7(Back #18) (N option) 25±0.05 (FK option)

**■**Option part of N and FK.

#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	1	Bronze with Graphite
4	Cam Holder		FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	2	S45C
7	Base Plate C-L	1	Bronze with Graphite
9	Washer		S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	1	Refer to the Spring Specification table.
24	Stopper	2	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate C-R	1	Bronze with Graphite

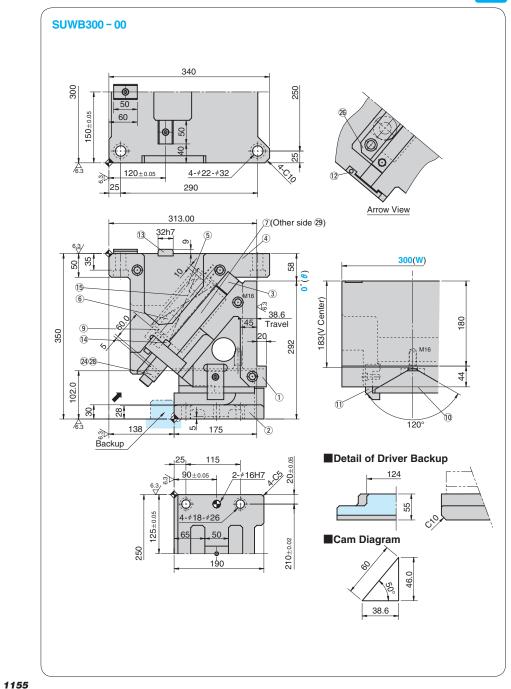
200

**SUWB** 

Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition



Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			1634.4 (166.6)	9806.4 (999.4)	13442 (1371.6)						No code (coil spring)
38.6	196.0	392.0		13378.8 (1365.2)		59.5	137.2	SUWB	300		GK *NGK
30.0	(20.0)	` /   ` /   _   10010.	13310.0 (1358.2)	18173 (1854.4)		137.2	SUWB	300	00	GD *NGD	
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

**SUWB** 

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included. 00 GK 00 NGK

·····Without gas spring



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 00 - GK - N SUWB300 - 00 - GK - NF

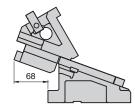
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

- 10	9 -		
No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
16	GK	K750-63.5	Gas spring (KALLER)
15	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

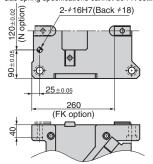
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



**Qty Material and Remark** 

#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	1	Bronze with Graphite
4	Cam Holder		FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer		S45C
10	Slide Guide	1	SS400 Copper powder sintered

11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	2	Refer to the Spring Specification table
24)	Stopper	3	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate D-R	1	Bronze with Graphite

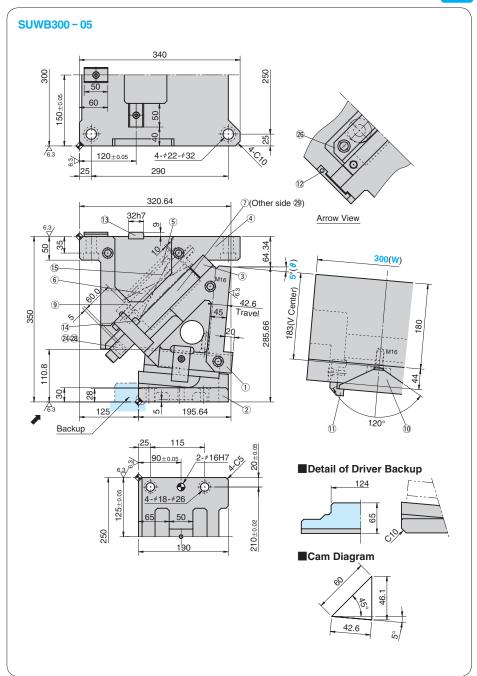
Description

A Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition



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Troval	Working Force kN(tonf)		Spring Fo	rce N(kgf)	Return	Slider	Total				Spring Type
Travel S	Working Force	Allowable Working Force (300,000 strokes)	Initial	Final Load		Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS PS
			1634.4 (166.6)	9806.4 (999.4)	13390 (1366.3)						No code (coil spring)
42.6	196.0	392.0		13378.8 (1365.2)		59.6	105.0		000	0.5	GK *NGK
42.0	(20.0)	(40.0)	_	13310.0 (1358.2)	18121 (1849.1)		135.9	SUWB	300	05	GD *NGD
				13418.4 (1369.2)							GS *NGS



Order

Catalog No. **SUWB** 

05 GK \*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

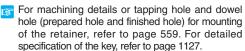
**SUWB** 05 NGK ·····Without gas spring



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled of the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 05 - GK - N SUWB300 - 05 - GK - NF

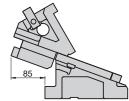


#### ■Spring Specification

No.	Spring type	Model	Remark			
_		TM50-225	Coil spring(constant = 68.1N/mm)			
15)	GK	K750-63.5	Gas spring (KALLER)			
(13)	GD L.750.075		Gas spring (DADCO)			
	GS	SM.750.63	Gas spring (SDT)			

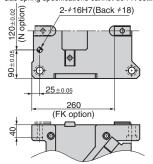
\*Guideline of coil spring durability 300,000 strokes

## ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	2	Refer to the Spring Specification tabl
24)	Stopper	3	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate D-R	1	Bronze with Graphite

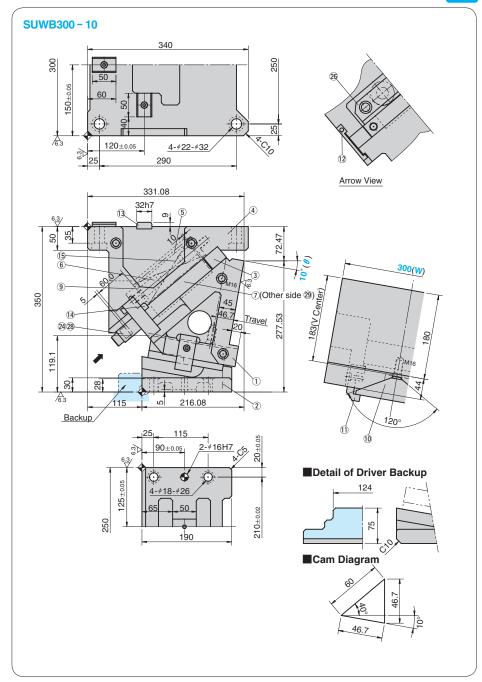
Bolts for assembly are not indicated.

**SUWB** 300

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**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition



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Travel S	Working Fo Standard Working Force (one million strokes)	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			1634.4 (166.6)	9806.4 (999.4)	13333 (1360.5)						No code (coil spring)
46.7	196.0	392.0		13378.8 (1365.2)		59.6	135.7	SUWB	300	10	GK *NGK
40.7	(20.0)	(40.0)	_	13310.0 (1358.2)	18064 (1843.3)		133.7	SUWB	300	10	GD *NGD
				13418.4 (1369.2)							GS *NGS



Order

Catalog No. **SUWB** 

300

10 GK \*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

**SUWB** 10 - NGK ·····Without gas spring



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 10 - GK - N SUWB300 - 10 - GK - NF

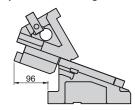
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

- 1	3 -1						
No.	Spring type	Model	Remark				
	_	TM50-225	Coil spring(constant = 68.1N/mm)				
(E)	GK	K750-63.5	Gas spring (KALLER)				
15	GD	L.750.075	Gas spring (DADCO)				
	GS	SM.750.63	Gas spring (SDT)				

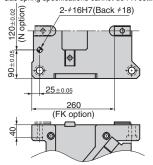
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

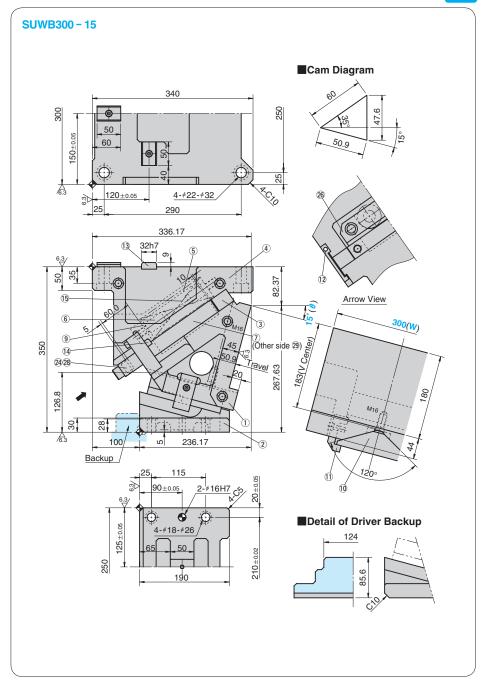
Е	Bolts	for	asser	mbly	are	not	indica	ıted.

_				
(	No.	Description	Qty	Material and Remark
_	11)	Positive Return Follower	2	S45C
_	12	Safety Plate	2	SS400
	13	Key A	3	SS400
	14)	Key B	2	SS400
	15	Spring	2	Refer to the Spring Specification tab
	24)	Stopper	3	Urethane
	26	Spring Guide Plate	1	SS400
	28	Stopper Plate	1	S45C
ed	29	Base Plate D-R	1	Bronze with Graphite



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition



Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	13274 (1354.5)						No code (coil spring)
50.9	196.0	392.0		13378.8 (1365.2)		59.6	133.0	SUWB	300	15	GK *NGK
50.9	(20.0)	(40.0)	_	13310.0 (1358.2)	18005 (1837.2)	59.0	133.0	SUWB	300	15	GD *NGD
				13418.4 (1369.2)							GS *NGS



Order

Catalog No. **SUWB** 

15

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

**SUWB** - 15 - NGK ······Without gas spring

GK



Option

<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 15 - GK - N SUWB300 - 15 - GK - NF

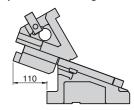
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

<u> </u>	<u> </u>					
No.	Spring type	Model	Remark			
	_	TM50-225	Coil spring(constant = 68.1N/mm)			
(E)	GK	K750-63.5	Gas spring (KALLER)			
15)	GD	L.750.075	Gas spring (DADCO)			
	GS	SM.750.63	Gas spring (SDT)			

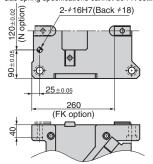
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### ■Table of Components

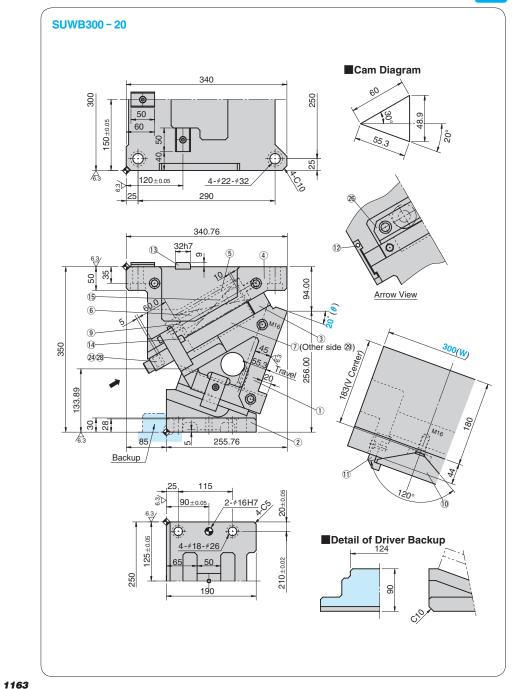
I	۷o.	Description	Qty	<b>Material and Remark</b>
	1	Cam Slider		FC250
	2	Cam Driver	1	FC250
_	3 Base Plate B		1	Bronze with Graphite
	4	Cam Holder	1	FC250
	(5)	Spring Guide Block	1	FCD500 with Graphite
_	6	Spring Guide Pin	4	S45C
	7	Base Plate D-L	1	Bronze with Graphite
	9	Washer	2	S45C
	10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	2	Refer to the Spring Specification table.
24)	Stopper	3	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate D-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 



Travel S	Working Fo Standard Working Force (one million strokes)	Allowable Working Force	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PSG
			1634.4 (166.6)	9806.4 (999.4)	13212 (1348.1)						No code (coil spring)
55.3	196.0	392.0		13378.8 (1365.2)		59.6	131.5	SUWB	300	20	GK *NGK
55.5	(20.0)	(40.0)	_	13310.0 (1358.2)	17943 (1830.9)		131.5	SUWB	300	20	GD *NGD
				13418.4 (1369.2)							GS *NGS



Order

Catalog No. **SUWB** 

20 GK \*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

**SUWB** 20 NGK ·····Without gas spring



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled of the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 20 - GK - N SUWB300 - 20 - GK - NF

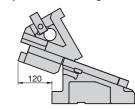
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

- 10.1	chang channen					
No.	Spring type	Model	Remark			
	_	TM50-225	Coil spring(constant = 68.1N/mm)			
15	GK	K750-63.5	Gas spring (KALLER)			
(13)	GD L.750.075		Gas spring (DADCO)			
	GS	SM.750.63	Gas spring (SDT)			

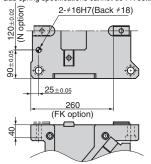
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



■Table of Components

No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	2	Refer to the Spring Specification table
24)	Stopper	3	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate D-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.



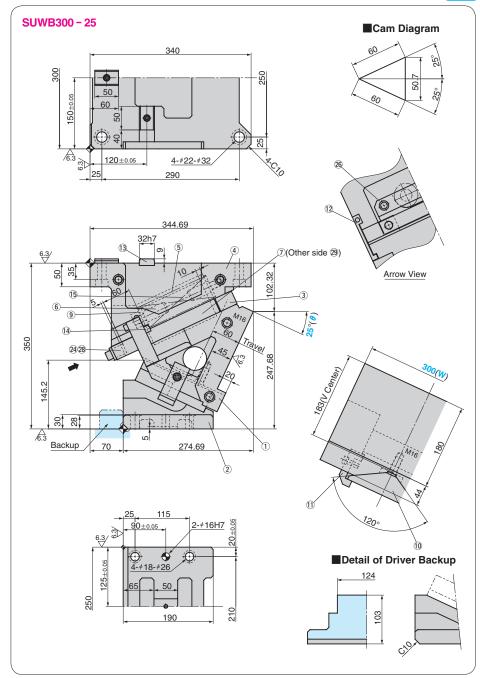
1165

### **Aerial Cam Unit**

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition





Travel	Working Fo	rce kN(tonf)	Spring Fo	rce N(kgf)	Return	Slider	Slider Total Weight Weight ( kg kg		(W)	(θ)	Spring Type
S	Working Force	Allowable Working Force (300,000 strokes)	Initial	Final Load	Force N(kgf)			Catalog No.			PS PS
			1634.4 (166.6)	9806.4 (999.4)	13147 (1341.6)						No code (coil spring)
60.0	196.0	392.0		13378.8 (1365.2)		59.6	131.0	SUWB	300	25	GK *NGK
60.0	(20.0)	(40.0)	_	13310.0 (1358.2)	17878 (1824.3)	59.0	131.0	SUWB	300	25	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

25

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

**SUWB** 25 NGK ·····Without gas spring

GK



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 25 - GK - N SUWB300 - 25 - GK - NF

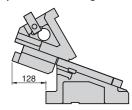
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

	- 10	9 -		
	No.	Spring type	Model	Remark
		_	TM50-225	Coil spring(constant = 68.1N/mm)
	16	GK	K750-63.5	Gas spring (KALLER)
	15	GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

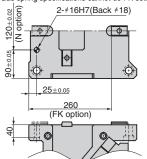
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



Qty Material and Remark

#### **■**Table of Components

No.	. Description		<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	2	Refer to the Spring Specification table
24)	Stopper	3	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate D-R	1	Bronze with Graphite

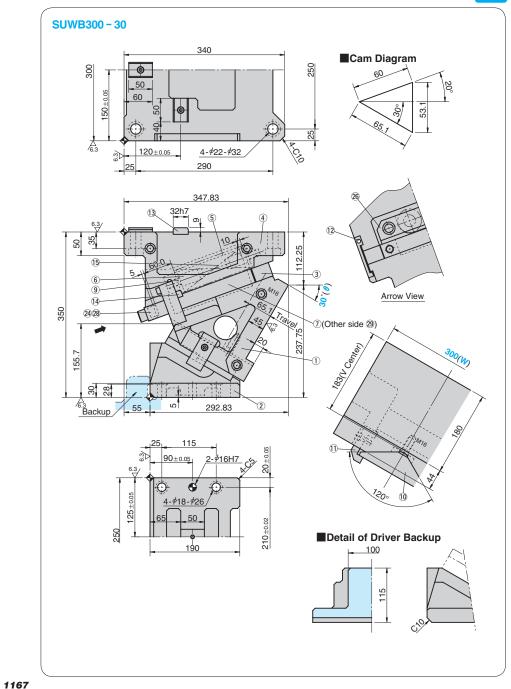
Description

A Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition



Trevel	Working Force kN(tonf)		Spring Force N(kgf)		Return S	Slider	Total				Spring Type
Travel S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	13081 (1334.8)						No code (coil spring)
65.1	196.0	392.0		13378.8 (1365.2)		59.6	131.0	SUWB	300		GK *NGK
05.1	(20.0)		_	13310.0 (1358.2)	17812 (1817.6)	59.6	131.0	SUWB	300	30	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

30

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

**SUWB** 30 NGK ·····Without gas spring

GK



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled o the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 30 - GK - N SUWB300 - 30 - GK - NF

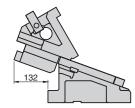
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

<u> </u>											
No.	Spring type	Model	Remark								
	_	TM50-225	Coil spring(constant = 68.1N/mm)								
(E)	GK	K750-63.5	Gas spring (KALLER)								
15)	GD L.750.075		Gas spring (DADCO)								
	GS SM.750.63		Gas spring (SDT)								

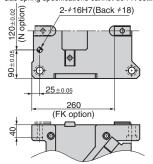
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

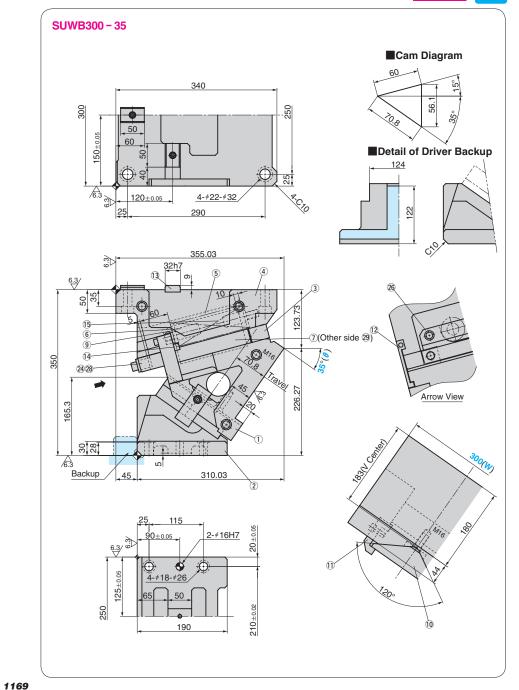
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15)	Spring	2	Refer to the Spring Specification tal
24)	Stopper	3	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate D-R	1	Bronze with Graphite

No. Description Qty Material and Remark



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition



Travel	Working Force kN(tonf)		N(tonf)   Spring Force N(kgf)		Return	Slider	Total				Spring Type
Travel S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	13014 (1328.0)						No code (coil spring)
70.8	196.0	392.0		13378.8 (1365.2)		59.6	131.8	SUWB	300		GK *NGK
70.6	(20.0)	(20.0) (40.0)	_	13310.0 (1358.2)	17745 (1810.7)		131.0	SUWB	300	35	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

35

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

**SUWB** 35 NGK ·····Without gas spring

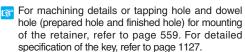
GK



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 35 - GK - N SUWB300 - 35 - GK - NF



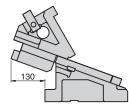
#### ■Spring Specification

- 10.1	oba ob.e										
No.	Spring type	Model	Remark								
	_	TM50-225	Coil spring(constant = 68.1N/mm)								
15	GK	K750-63.5	Gas spring (KALLER)								
(13)	GD L.750.075		Gas spring (DADCO)								
	GS SM.750.63		Gas spring (SDT)								

\*Guideline of coil spring durability 300,000 strokes

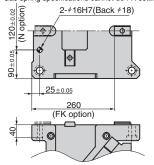
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#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



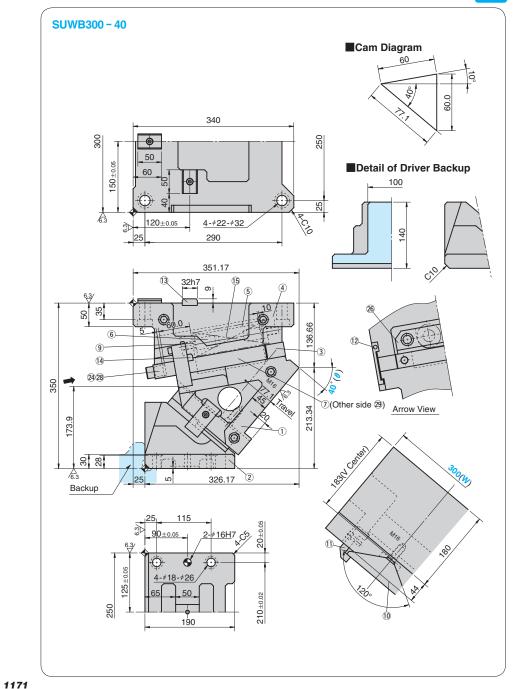
#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12)	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15)	Spring	2	Refer to the Spring Specification table.
24)	Stopper	3	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate D-R	1	Bronze with Graphite

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition



Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			1634.4 (166.6)	9806.4 (999.4)	12946 (1321.0)						No code (coil spring)
77.1	196.0	392.0		13378.8 (1365.2)		59.6	133.3	SUWB	300	40	GK *NGK
77.1	(20.0)	(40.0)	_	13310.0 (1358.2)	17677 (1803.8)		133.3	SOWB	300	40	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

40

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

**SUWB** 40 NGK ·····Without gas spring

GK



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled o the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 40 - GK - N SUWB300 - 40 - GK - NF

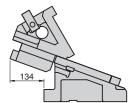
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

_ор	opining opeomeanen							
No.	Spring type	Model	Remark					
	_	TM50-225	Coil spring(constant = 68.1N/mm)					
15	GK	K750-63.5	Gas spring (KALLER)					
(13)	GD	L.750.075	Gas spring (DADCO)					
	GS	SM.750.63	Gas spring (SDT)					

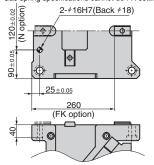
\*Guideline of coil spring durability 300,000 strokes

### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



**■**Table of Components

No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	2	Refer to the Spring Specification table.
24)	Stopper	3	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate D-R	1	Bronze with Graphite

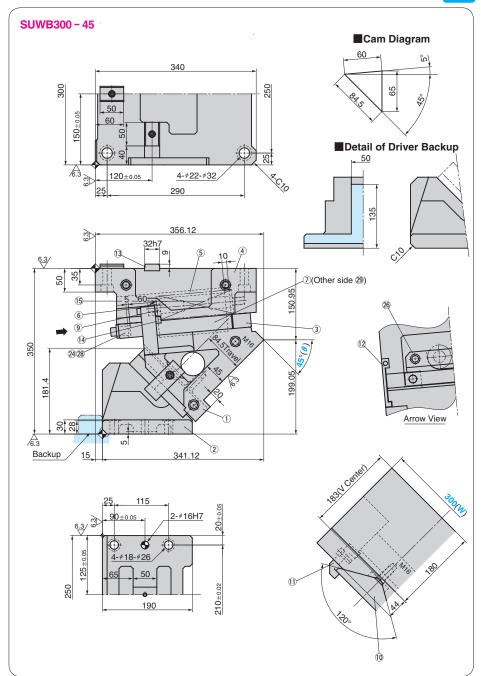
A Bolts for assembly are not indicated.

1173

### **Aerial Cam Unit**

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition



Travel	Working Fo	rce kN(tonf)	Spring Fo	rce N(kgf)	Return	Slider Total		Total			Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force	Initial	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	12878 (1314.1)						No code (coil spring)
84.5	196.0	392.0		13378.8 (1365.2)		59.6	134.8	SUWB	300	45	GK *NGK
04.5	(20.0)	(40.0)	_	13310.0 (1358.2)	17609 (1796.9)	59.6	134.0	SUWB	300	45	GD *NGD
				13418.4 (1369.2)							GS *NGS



Order

Catalog No. **SUWB** 

45

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

**SUWB** 45 NGK ·····Without gas spring

GK



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled o the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 45 - GK - N SUWB300 - 45 - GK - NF

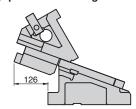
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

- 10.1	ang eperment						
No.	Spring type	Model	Remark				
	_	TM50-225	Coil spring(constant = 68.1N/mm)				
15	GK K750-63.5		Gas spring (KALLER)				
(13)	GD L.750.075		Gas spring (DADCO)				
	GS	SM.750.63	Gas spring (SDT)				

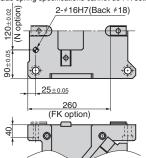
\*Guideline of coil spring durability 300,000 strokes

### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



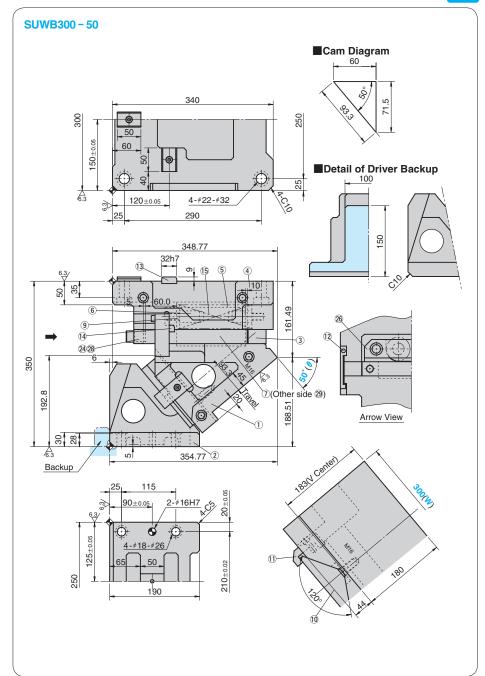
#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	1	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	2	Refer to the Spring Specification table
24)	Stopper	3	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate D-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 



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Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			1634.4 (166.6)	9806.4 (999.4)	12811 (1307.2)						No code (coil spring)
93.3	196.0	392.0		13378.8 (1365.2)		59.6	130.9	SUWB	300	50	GK *NGK
90.0	(20.0)	(40.0)	_	13310.0 (1358.2)	17542 (1790.0)		130.9	SOWB	300	50	GD *NGD
				13418.4 (1369.2)							GS *NGS



Order

Catalog No. **SUWB** 

**50** 

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

**SUWB 50** NGK ·····Without gas spring

GK



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled o the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 50 - GK - N SUWB300 - 50 - GK - NF

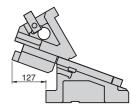
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

- 10.1	ang eperment						
No.	Spring type	Model	Remark				
	_	TM50-225	Coil spring(constant = 68.1N/mm)				
15	GK K750-63.5		Gas spring (KALLER)				
(13)	GD L.750.075		Gas spring (DADCO)				
	GS	SM.750.63	Gas spring (SDT)				

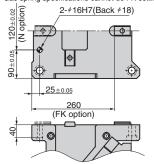
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



**■**Table of Components

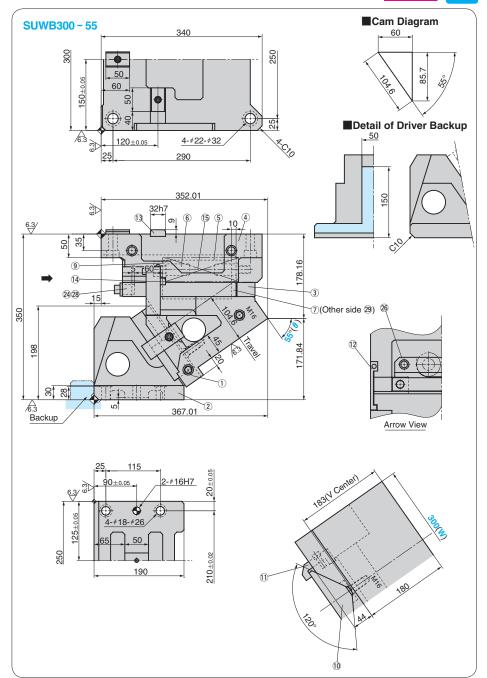
		_	
No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B		Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6			S45C
7			Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

	No.	Description	Qty	<b>Material and Remark</b>
	11)	Positive Return Follower	2	S45C
	12	Safety Plate	2	SS400
	13	Key A	3	SS400
	14)	Key B	2	SS400
	15	Spring	2	Refer to the Spring Specification tab
	24)	Stopper	3	Urethane
	26	Spring Guide Plate	1	SS400
	28	Stopper Plate	1	S45C
Ī	29	Base Plate D-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

#### WIDE TYPE FOR PIERCE AND FLANGE

Addition FILE



Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return S	Slider	Slider Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	13934 (1421.9)						No code (coil spring)
104.6	196.0 (20.0)	(00.0) (40.0)				61.0	133.0	SUWB	300		GK *NGK
104.0				01.0	133.0	SUWB	300	00   55	GD *NGD		
				13418.4 (1369.2)							GS *NGS



ler (

Catalog No. (W) - SUWB 300 -

(W) - (θ) - PS 300 - 55 - GK \*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

SUWB 300 - 55 - NGK ······Without gas spring



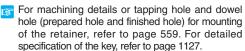
Option

Option Code	Specification					
K	A key for driver is attached. (It is not assembled to the main unit.)					
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)					
FK	Move the key position forward. (Refer to the figure on the right.)					
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.					



Order 💍

SUWB300 - 55 - GK - N SUWB300 - 55 - GK - NF

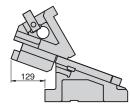




- 10.1						
No.	Spring type	Model	Remark			
	_	TM50-225	Coil spring(constant = 68.1N/mm)			
15	GK K750-63.5		Gas spring (KALLER)			
(13)	GD	L.750.075	Gas spring (DADCO)			
	GS	SM.750.63	Gas spring (SDT)			

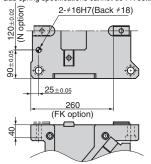
\*Guideline of coil spring durability 300,000 strokes

#### ■Space for removing



#### ■Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



#### **■**Table of Components

No.	. Description		Material and Remark
1	Cam Slider	1	FC250
2	S		FC250
3			Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

NO.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	2	SS400
15	Spring	2	Refer to the Spring Specification table.
24)	Stopper	3	Urethane
26	Spring Guide Plate	1	SS400
28	Stopper Plate	1	S45C
29	Base Plate D-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

SS400 Copper powder sintered

Base Plate D-R

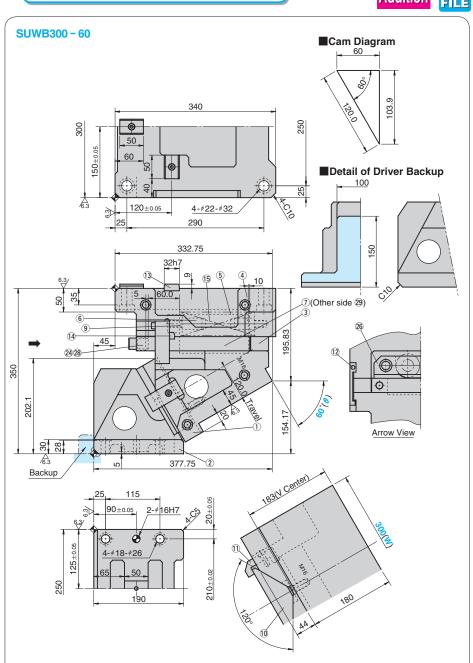
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### **Aerial Cam Unit**

**WIDE TYPE FOR PIERCE AND FLANGE** 



Travel S	Working Fo Standard Working Force (one million strokes)	Allowable Working Force	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			1634.4 (166.6)	9806.4 (999.4)	15401 (1571.5)						No code (coil spring)
100.0	196.0	392.0		13378.8 (1365.2)		60.0	106.1	OLIMP.	000		GK *NGK
120.0	(20.0)	(40.0)	13310.0 (1358.2)	21092 (2152.3)	63.2	136.1	SUWB	300	60	GD *NGD	
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

60 GK \*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.
The parts for installing the spring are included.

**SUWB** 60 NGK ·····Without gas spring



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled o the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB300 - 60 - GK - N SUWB300 - 60 - GK - NF

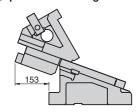
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

#### ■Spring Specification

- 10	3 cheemen					
No.	Spring type	Model	Remark			
	- TM50-225		Coil spring(constant = 68.1N/mm)			
16	GK K750-63.5		Gas spring (KALLER)			
15	GD L.750.075		Gas spring (DADCO)			
	GS	SM.750.63	Gas spring (SDT)			

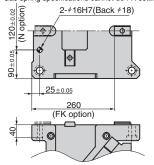
\*Guideline of coil spring durability 300,000 strokes

### ■Space for removing



#### **■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting.



**Qty Material and Remark** 

#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	3 Base Plate B		Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	1	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate D-L	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

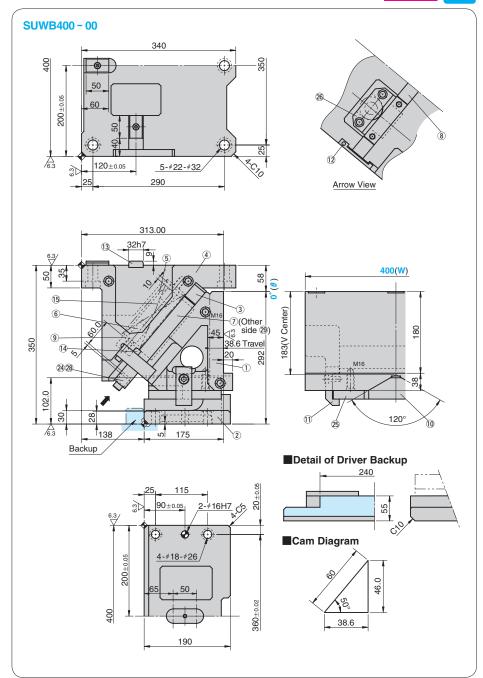
	U)	Positive neturn Follower		3430
	12	Safety Plate	2	SS400
	13	Key A	3	SS400
	14)	Key B	2	SS400
	15	Spring	2	Refer to the Spring Specification table.
	24	Stopper	3	Urethane
	26	Spring Guide Plate	1	SS400
	28	Stopper Plate	1	S45C
red	29	Base Plate D-R	1	Bronze with Graphite
_				

Description

A Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return		Total				Spring Type	
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS	
			1634.4 (166.6)	9806.4 (999.4)	13599 (1387.7)						No code (coil spring)	
38.6	245.0	490.0		13378.8 (1365.2)		77.7	191.1	SUWB	400	00	GK *NGK	
30.0	(25.0)	(50.0)	_	13310.0 (1358.2)	18330 (1870.5)		191.1	SOWB	400	00	GD *NGD	
				13418.4 (1369.2)							GS *NGS	



Catalog No. **SUWB** 

(W) 400

GK 00

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

59

No. Description Qty Material and Remark

2 S45C

2 SS400

3 SS400

■Option part of N and FK.

- NGK .....Without gas spring **SUWB** 400



tion	Option Code	Specification
	K	A key for driver is attached. (It is not assembled to the main unit.)
	N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
		Mayo the leave position forward

Move the key position forward. FK (Refer to the figure on the right.) Nitrogen gas is not charged. NF Applicable to GK, GD and GS only.

SUWB400 - 00 - GK - N SUWB400 - 00 - GK - NF

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 1127.

#### ■Spring Specification

No.	Spring type	Model	Remark			
	_	TM50-225	Coil spring(constant = 68.1N/mm)			
15	GK	K750-63.5	Gas spring (KALLER)			
(13)	GD	L.750.075	Gas spring (DADCO)			
	GS SM.750.63		Gas spring (SDT)			

\*Guideline of coil spring durability 300,000 strokes

## 2-#16H7(Back #18) 200±0.02 (N option) $25{\pm0.05}$ 215 (FK option)

\*Gas spring specifications cannot do FK setting.

#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

	1	FC250	14)	Key B	3	SS400			
ock	2	FCD500 with Graphite	15	Spring	2	Refer to the Spring Specification table.			
in	4	S45C	24	Stopper	4	Urethane			
L	1	Bronze with Graphite	25	Plate	R/L1	SS400 Copper powder sintered			
	1	Bronze with Graphite	26	Spring Guide Plate	2	SS400			
	2	S45C	28	Stopper Plate	2	S45C			
	1	SS400 Copper powder sintered	29	Base Plate C-R	1	Bronze with Graphite			
, lala	bly are not indicated								

1) Positive Return Follower

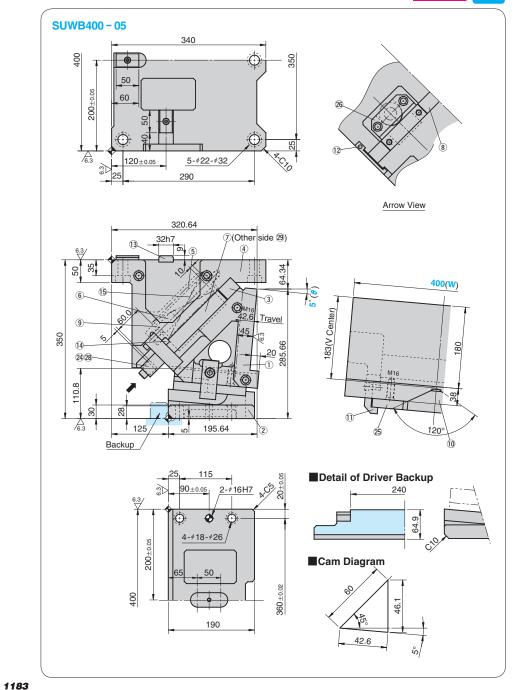
12 Safety Plate

13 Key A

⚠ Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial	Final Load		Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	13531 (1380.7)						No code (coil spring)
42.6	245.0	490.0		13378.8 (1365.2)		77.8	189.3	SUWB	400	05	GK *NGK
42.0	(25.0)	(50.0)	_	13310.0 (1358.2)	18262 (1863.5)		109.3	SUWB	400	05	GD *NGD
				13418.4 (1369.2)							GS *NGS



(W) Catalog No. **SUWB** 400

**SUWB** 

**(θ)** 05 \* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

 NGK .....Without gas spring 400

GK



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB400 - 05 - GK - N SUWB400 - 05 - GK - NF

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 1127.

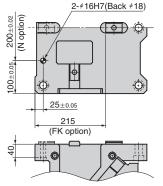
#### ■Spring Specification

No.	Spring type	Model	Remark			
	_	TM50-225	Coil spring(constant = 68.1N/mm)			
15	GK	K750-63.5	Gas spring (KALLER)			
(13)	GD	L.750.075	Gas spring (DADCO)			
	GS SM.750.63		Gas spring (SDT)			

\*Guideline of coil spring durability 300,000 strokes

**■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting



**■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

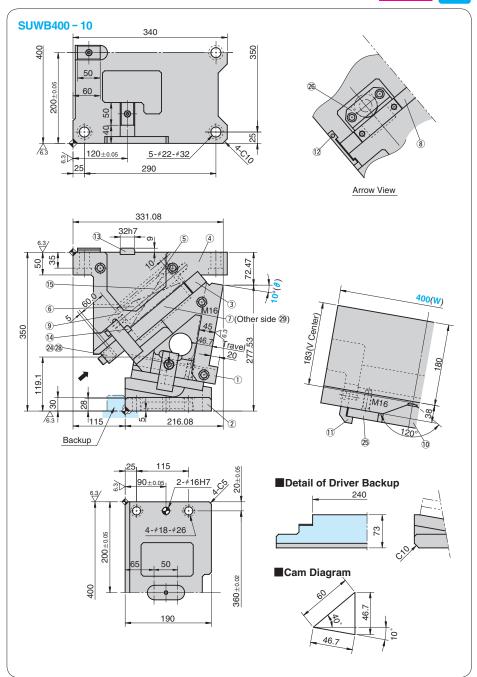
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15)	Spring	2	Refer to the Spring Specification table
24)	Stopper	4	Urethane
25)	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

400

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS PS
			1634.4 (166.6)	9806.4 (999.4)	13457 (1373.2)						No code (coil spring)
46.7	245.0	490.0		13378.8 (1365.2)		77.8	188.0	SUWB	400	10	GK *NGK
40.7	(25.0)	(50.0)	_	13310.0 (1358.2)	18189 (1856.0)	77.0	100.0	SUWB		10	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

GK 10

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

■Space for removing

10 - NGK .....Without gas spring **SUWB** 



Option

<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



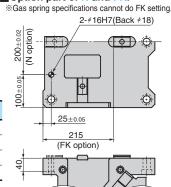
SUWB400 - 10 - GK - N SUWB400 - 10 - GK - NF

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 1127.

#### ■Spring Specification

No.	Spring type	Model	Remark			
	_	TM50-225	Coil spring(constant = 68.1N/mm)			
(15)	GK	K750-63.5	Gas spring (KALLER)			
(13)	GD	L.750.075	Gas spring (DADCO)			
	GS	SM.750.63	Gas spring (SDT)			

\*Guideline of coil spring durability 300,000 strokes



#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

ı	110.	Description	Gty	waterial and Hemaik
	11)	Positive Return Follower	2	S45C
	12	Safety Plate	2	SS400
	13	Key A	3	SS400
	14)	Key B	3	SS400
	15)	Spring	2	Refer to the Spring Specification table
	24)	Stopper	4	Urethane
	25)	Plate	R/L1	SS400 Copper powder sintered
	26	Spring Guide Plate	2	SS400
	28	Stopper Plate	2	S45C
	29	Base Plate C-R	1	Bronze with Graphite

No Description Oty Material and Remark

A Bolts for assembly are not indicated.

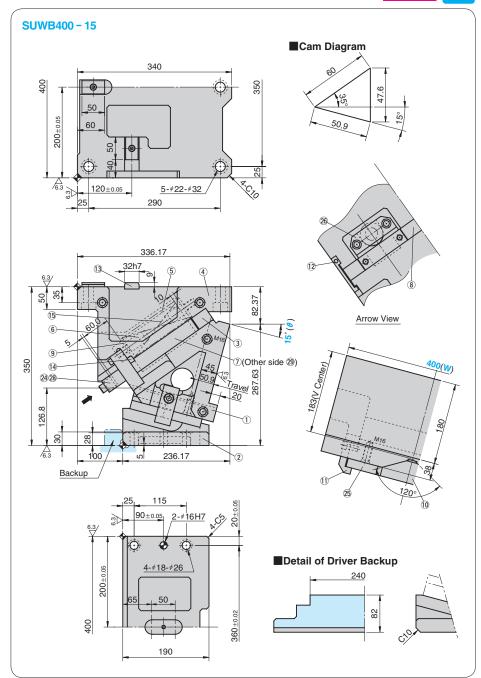
**SUWB** 400

1185



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel	* ' '		1 0 (07				Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	13380 (1365.3)						No code (coil spring)
50.9	245.0	490.0		13378.8 (1365.2)		77.8	186.1	SUWB	400	15	GK *NGK
50.9	(25.0)	(50.0)	_	13310.0 (1358.2)	18111 (1848.1)		100.1	SUWB	400	15	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

(W) 400

**(θ)** 15 GK \*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

100

**■**Option part of N and FK.

15 - NGK .....Without gas spring **SUWB** 400



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB400 - 15 - GK - N SUWB400 - 15 - GK - NF

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 1127.

#### ■Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

## 2-#16H7(Back #18) 200±0.02 (N option) $25{\pm0.05}$ 215 (FK option)

\*Gas spring specifications cannot do FK setting

#### ■Table of Components

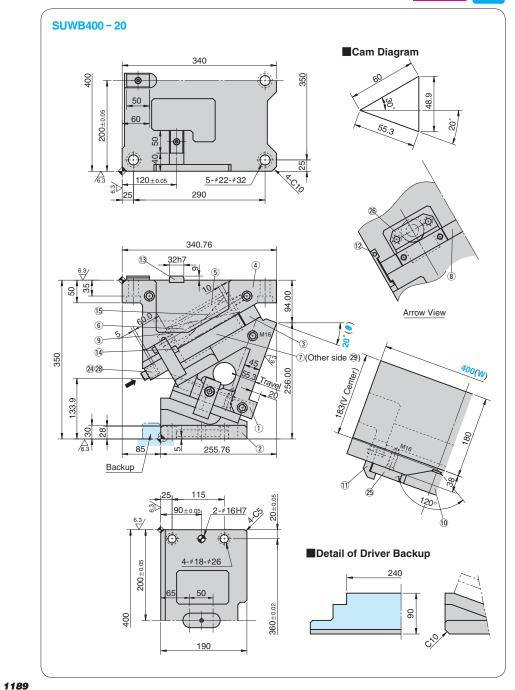
No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15	Spring	2	Refer to the Spring Specification table
24)	Stopper	4	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS PS
			1634.4 (166.6)	9806.4 (999.4)	13299 (1357.0)						No code (coil spring)
55.3	245.0	490.0		13378.8 (1365.2)		77.8	185.3	SUWB	400	00	GK *NGK
55.3	(25.0)	(50.0)	_	13310.0 (1358.2)	18030 (1839.8)	//.0	100.3	SUWB	400	20	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

20

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

110

**■**Option part of N and FK.

**SUWB** - NGK .....Without gas spring

GK



Option

<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



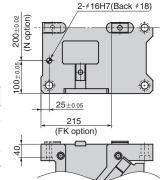
SUWB400 - 20 - GK - N SUWB400 - 20 - GK - NF

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 1127.

#### ■Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes



\*Gas spring specifications cannot do FK setting

#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

_12	Safety Plate	2	SS400
13	Key A	3	SS400
14	Key B	3	SS400
15	Spring	2	Refer to the Spring Specification table.
24	Stopper	4	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate C-R	1	Bronze with Graphite

1) Positive Return Follower

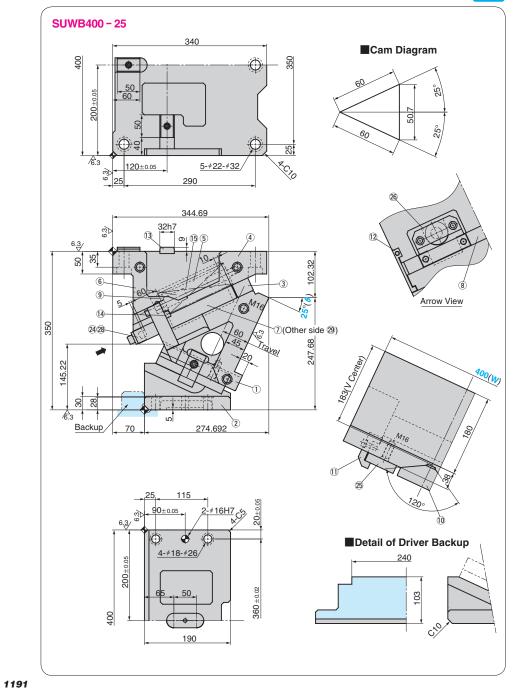
Description Qty Material and Remark

Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 





Travel	Working Fo	rce kN(tonf)	Spring Fo	rce N(kgf)	Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS PS
			1634.4 (166.6)	9806.4 (999.4)	13215 (1348.4)						No code (coil spring)
60.0	245.0	490.0		13378.8 (1365.2)		77.8	188.1	SUWB	400	25	GK *NGK
60.0	(25.0)	(50.0)	_	13310.0 (1358.2)	17946 (1831.2)		100.1	SUWB	400	25	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

(W)

GK 25

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

■Space for removing

**SUWB**  NGK .....Without gas spring 400



Option

<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



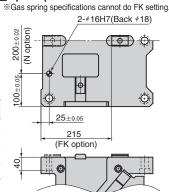
SUWB400 - 25 - GK - N SUWB400 - 25 - GK - NF

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 1127.

#### **■**Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes



#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

645C	2
Bronze with Graphite	2
Bronze with Graphite	2
S45C	2
SS400 Copper powder sintered	2
ot indicated.	

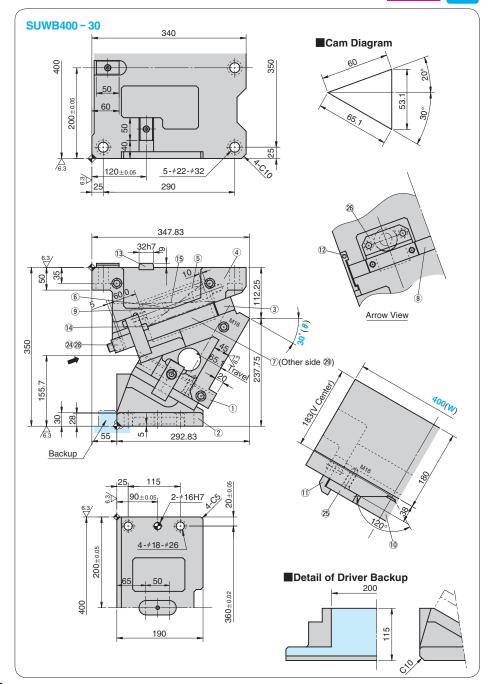
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15	Spring	2	Refer to the Spring Specification table
24)	Stopper	4	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate C-R	1	Bronze with Graphite

**SUWB** 400

Bolts for assembly are not

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel S	Working For Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			1634.4 (166.6)	9806.4 (999.4)	13129 (1339.6)						No code (coil spring)
65.1	245.0	490.0		13378.8 (1365.2)		77.8	185.8	SUWB	400	20	GK *NGK
05.1	(25.0)	(50.0)	_	13310.0 (1358.2)	17860 (1822.4)		100.0	SUWB	400	30	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

(W) 400

GK 30

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

■Space for removing

**SUWB** - NGK .....Without gas spring 400

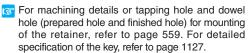


Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



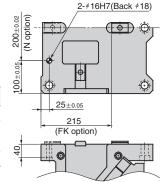
SUWB400 - 30 - GK - N SUWB400 - 30 - GK - NF



#### ■Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes



\*Gas spring specifications cannot do FK setting

■Table of Components

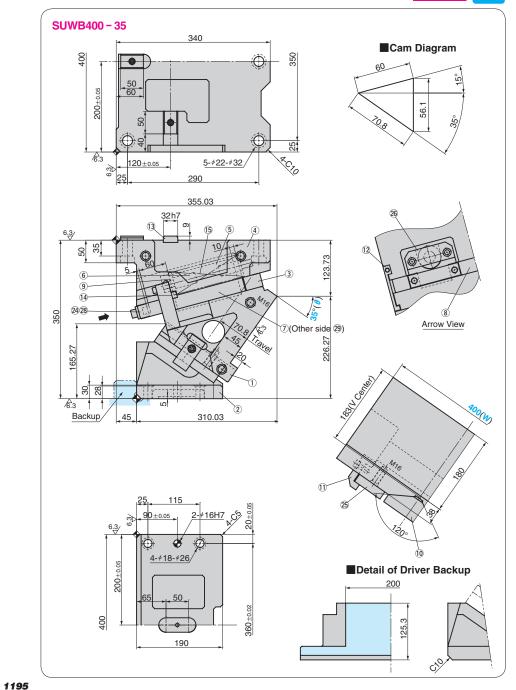
No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12)	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15	Spring	2	Refer to the Spring Specification table.
24)	Stopper	4	Urethane
25)	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return	Slider	Total				Spring Type
S	Working Force	Allowable Working Force (300,000 strokes)	Initial	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	13041 (1330.7)						No code (coil spring)
70.8	245.0	245.0 490.0		13378.8 (1365.2)		77.8	192.4	SUWB	400	0.5	GK *NGK
70.8	(25.0)	(50.0)	_	13310.0 (1358.2)	17772 (1813.5)		192.4	SUWB	400	35	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

(W) GK 35

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

■Space for removing

119

**SUWB**  NGK .....Without gas spring 400



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



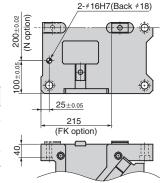
SUWB400 - 35 - GK - N SUWB400 - 35 - GK - NF

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 1127.

#### **■**Spring Specification

No.	Spring type	Model	Remark			
	-	TM50-225	Coil spring(constant = 68.1N/mm)			
<b>1</b> 2	GK	K750-63.5	Gas spring (KALLER)			
15	GD L.750.075		Gas spring (DADCO)			
	GS	SM.750.63	Gas spring (SDT)			

\*Guideline of coil spring durability 300,000 strokes



\*Gas spring specifications cannot do FK setting

**■**Table of Components

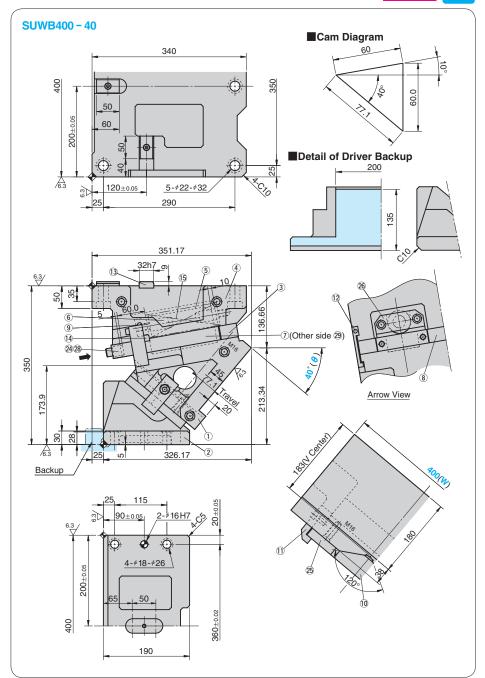
No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

8	Base Plate E		Bronze with Graphite			
9 Washer		2	S45C			
10 Slide Guide		1	SS400 Copper powder sintered			
Nolts for assembly are not indicated.						

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
(15)	Spring	2	Refer to the Spring Specification table.
24)	Stopper	4	Urethane
25)	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate C-R	1	Bronze with Graphite

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel			Spring Fo	rce N(kgf)			Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)		12952 (1321.7)						No code (coil spring)
77.1	245.0	490.0		13378.8 (1365.2)		77.8	191.9	SUWB	400	40	GK *NGK
77.1	(25.0)	(50.0)	_	13310.0 (1358.2)	17684 (1804.4)		191.9	SUWB	400	40	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. (W) **SUWB** 

**(θ)** GK 400 40

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting

2-#16H7(Back #18)

■Space for removing

 NGK .....Without gas spring **SUWB** 400



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB400 - 40 - GK - N **SUWB400 - 40 - GK - NF** 

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 1127.

#### ■Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD L.750.075		Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

# 200±0.02 (N option) $25{\pm0.05}$ 215 (FK option)

Description Qty Material and Remark

2 SS400

3 SS400

#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

	14)	Key B	3	SS400
aphite	15	Spring	2	Refer to the Spring Specification table.
	24	Stopper	4	Urethane
ohite	25	Plate	R/L1	SS400 Copper powder sintered
ohite	26	Spring Guide Plate	2	SS400
	28	Stopper Plate	2	S45C
der sintered	29	Base Plate C-R	1	Bronze with Graphite

Positive Return Follower 2 S45C

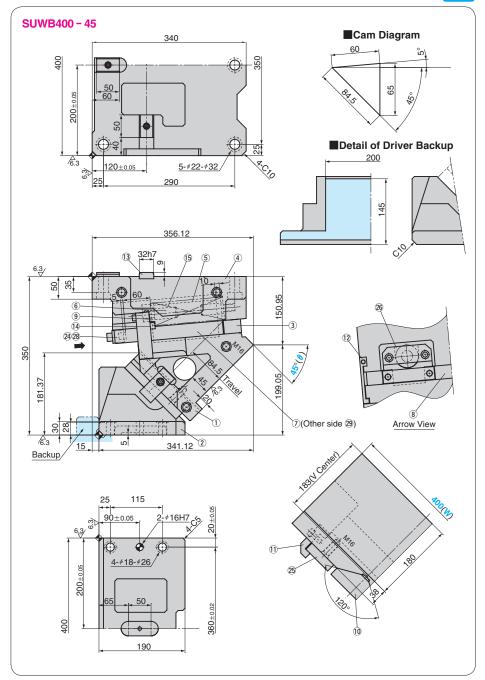
12 Safety Plate

13 Kev A

Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 





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Troval	Working Fo	rce kN(tonf)	Spring Force N(kgf)		Return	Slider	Total				Spring Type
Travel S	Working Force	Allowable Working Force (300,000 strokes)	Initial	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	12864 (1312.6)						No code (coil spring)
84.5	245.0	245.0 490.0 (25.0) (50.0)		13378.8 (1365.2)		77.8	195.9	SUWB	400	45	GK *NGK
04.5	(25.0)		_	13310.0 (1358.2)	17595 (1795.4)					45	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

(W) 45 \*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

 $25{\pm0.05}$ 

215

\*Gas spring specifications cannot do FK setting

2-#16H7(Back #18)

■Space for removing

116

 NGK .....Without gas spring **SUWB** 400

GK



Option

<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.

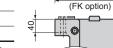


SUWB400 - 45 - GK - N SUWB400 - 45 - GK - NF

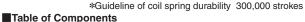
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

### ■Spring Specification

No.	Spring type Mode		Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)



200±0.02 (N option)



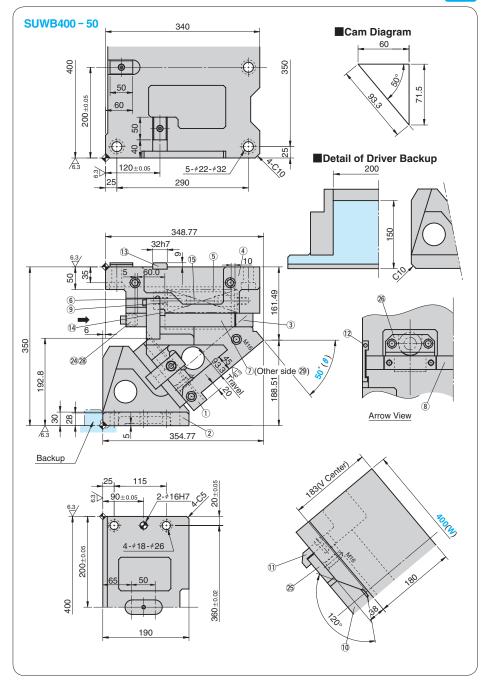
No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
(10)	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15	Spring	2	Refer to the Spring Specification table.
24)	Stopper	4	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 





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Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			1634.4 (166.6)	9806.4 (999.4)	12775 (1303.6)						No code (coil spring)
93.3	245.0	5.0 490.0		13378.8 (1365.2)		77.8	101.0	OUW.D	400		GK *NGK
93.3	(25.0)	(50.0)	_	13310.0 (1358.2)	17507 (1786.4)		191.8	SUWB	400	50	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No. **SUWB** 

GK **50** 

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

■Space for removing

127

 NGK .....Without gas spring **SUWB** 400



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB400 - 50 - GK - N SUWB400 - 50 - GK - NF

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 1127.

#### **■**Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 200±0.02 (N option) $25{\pm0.05}$ 215 (FK option)

\*Gas spring specifications cannot do FK setting

#### ■ Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

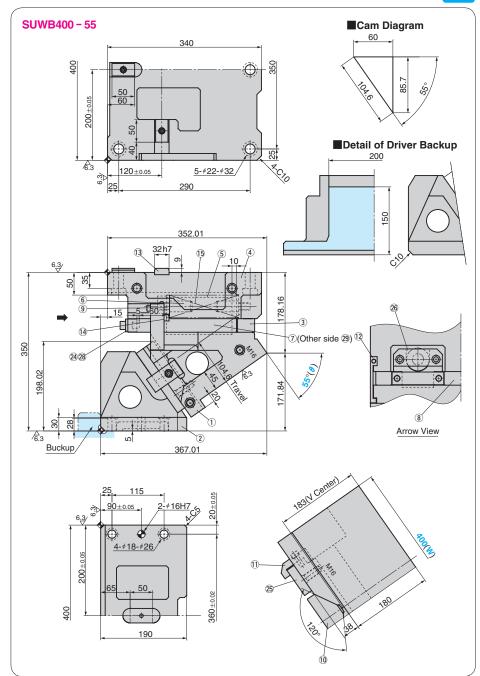
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15)	Spring	2	Refer to the Spring Specification table
24)	Stopper	4	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

1202

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel			Spring Force N(kgf)				Total			(0)	Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	13893 (1417.6)						No code (coil spring)
104.6	245.0	490.0		13378.8 (1365.2)		80.7	198.5	SUWB	400		GK *NGK
104.0	(25.0)	(50.0)	· / _   10010.0	13310.0 (1358.2)	19040 (1942.8)	80.7	196.5			55	GD *NGD
				13418.4 (1369.2)							GS *NGS



Catalog No.

(W) **SUWB** 

400 55 \*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

\*Gas spring specifications cannot do FK setting

2-#16H7(Back #18)

■Space for removing

 NGK .....Without gas spring **SUWB** 400

GK



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



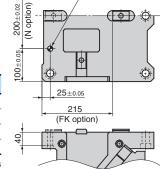
SUWB400 - 55 - GK - N SUWB400 - 55 - GK - NF

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 1127.

#### ■Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes



■Table of Components

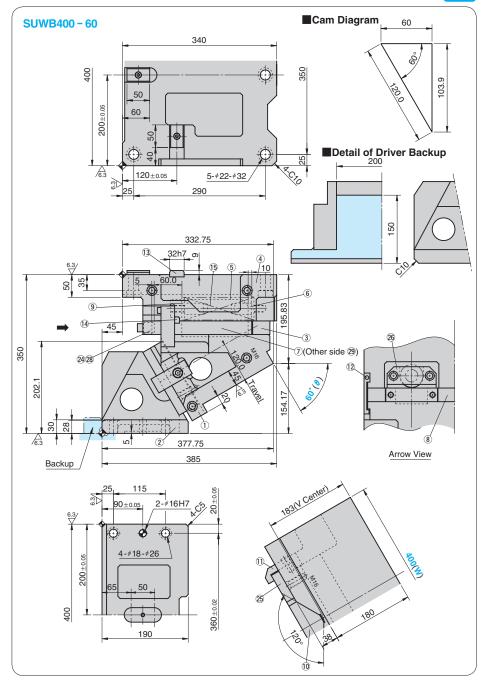
No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

<u></u>	ondo didido			,,,,,	OOPP	··
V	Bolts for assembly	are	not	ind	icated	d.

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15)	Spring	2	Refer to the Spring Specification table.
24)	Stopper	4	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate C-R	1	Bronze with Graphite

**WIDE TYPE FOR PIERCE AND FLANGE** 





Travel			Spring Force N(kgf)		Return	Slider	Total		(140)	(0)	Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	kg	kg	Catalog No.	(W)	(θ)	PS
			1634.4 (166.6)	9806.4 (999.4)	15355 (1566.9)						No code (coil spring)
120.0	245.0	5.0 490.0		13378.8 (1365.2)		82.9	201.1	SUWB	400		GK *NGK
120.0	(25.0)	(50.0)	_	13310.0 (1358.2)	21046 (2147.6)	62.9	201.1	SUWB	400	60	GD *NGD
				13418.4 (1369.2)							GS *NGS



(W) Catalog No. **SUWB** 400 60

GK

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

 $25{\pm0.05}$ 

215 (FK option)

\*Gas spring specifications cannot do FK setting.

2-#16H7(Back #18)

(<del>(</del>

■Space for removing

153

200±0.02 (N option)

- NGK .....Without gas spring **SUWB** 400



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB400 - 60 - GK - N SUWB400 - 60 - GK - NF

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 1127.

### ■Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

### \*Guideline of coil spring durability 300,000 strokes **■**Table of Components

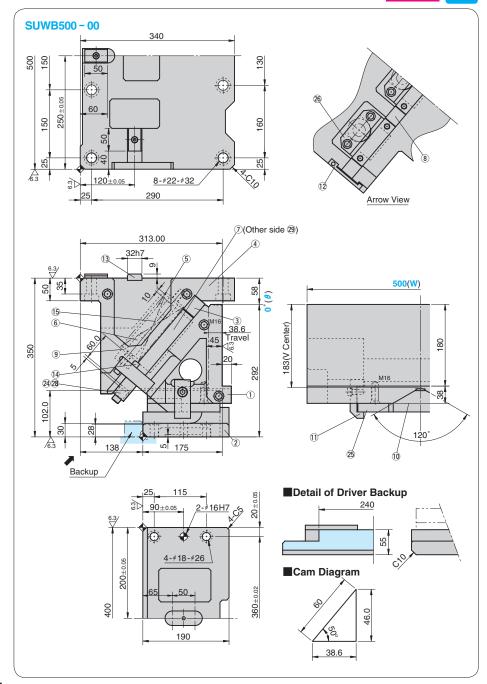
No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
<u>(6)</u>	Spring Guide Pin	4	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate E	1	Bronze with Graphite
9	Washer	2	S45C
10	Slide Guide	1	SS400 Copper powder sintered

V	Bolts for	assembly	are	not	indicated.
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**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable	Initial	Final Load		Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS PS
			2451.6	14709.8 (1499.0)							No code (coil spring)
38.6	313.6	627.2		20068.2 (2047.8)		00.6	222.3	SUWB	500	00	GK *NGK
36.6	(32.0)	(64.0)	_	19965.0 (2037.2)	27340 (2789.8)	98.6	222.3	SUWB	500	00	GD *NGD
				20127.6 (2053.8)							GS *NGS



Catalog No. **SUWB** 

(W) **500** 

 $(\theta)$ GK 00

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Option part of N and FK.

■Space for removing

**SUWB** 500 NGK ·····Without gas spring



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled of the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 00 - GK - N SUWB500 - 00 - GK - NF

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 1127.

### ■Spring Specification

<u> </u>				
No.	Spring type Model		Remark	
	_	TM50-225	Coil spring(constant = 68.1N/mm)	
(15)	GK	K750-63.5	Gas spring (KALLER)	
(13)	GD	L.750.075	Gas spring (DADCO)	
	GS	SM.750.63	Gas spring (SDT)	

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 230±0.02 (N option) **(** 0 25±0.05 280 (FK option)

\*Gas spring specifications cannot do FK setting

#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	3	FCD500 with Graphite
6	Spring Guide Pin	6	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate F	2	Bronze with Graphite
9	Washer	3	S45C
10	Slide Guide	1	SS400 Copper powder sintered

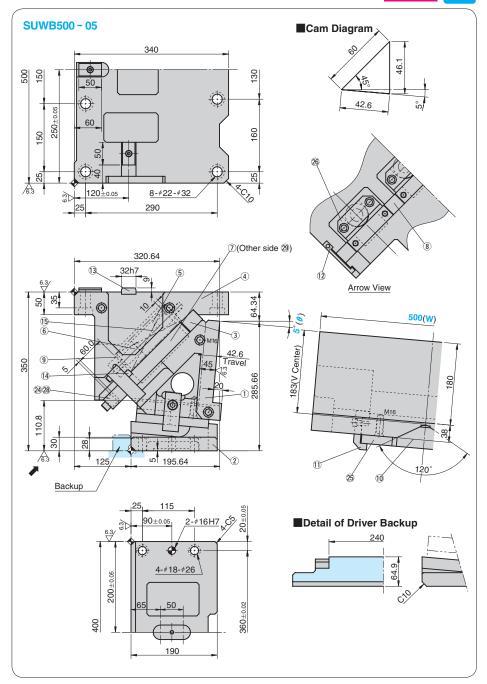
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15	Spring	3	Refer to the Spring Specification table
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel	Working Fo	rce kN(tonf)	Spring Fo	rce N(kgf)	Return	Slider	Total				Spring Type
S	Working Force	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS PS
			2451.6 (249.8)	14709.8 (1499.0)							No code (coil spring)
42.6	313.6	627.2		20068.2 (2047.8)		98.6	220.4	SUWB	500	05	GK *NGK
42.0	(32.0)	(64.0)	_	19965.0 (2037.2)			220.4	SOWB	300	05	GD *NGD
				20127.6 (2053.8)							GS *NGS



Catalog No. **SUWB 500** 

 $(\theta)$ GK 05

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

**■**Option part of N and FK.

**SUWB**  NGK ·····Without gas spring 500



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 05 - GK - N SUWB500 - 05 - GK - NF

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 1127.

### ■Spring Specification

	No.	Spring type Model		Remark
Ī		_	TM50-225	Coil spring(constant = 68.1N/mm)
	(15)	GK	K750-63.5	Gas spring (KALLER)
	(13)	GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

1 SS400 Copper powder sintered

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 230±0.02 (N option) 0 25±0.05 280 (FK option)

\*Gas spring specifications cannot do FK setting

Table of Commonants

	able of Components								
No	. Description	Qty	<b>Material and Remark</b>						
1	Cam Slider	1	FC250						
2	Cam Driver	1	FC250						
3	Base Plate A	2	Bronze with Graphite						
4	Cam Holder	1	FC250						
(5)	Spring Guide Block	3	FCD500 with Graphite						
6	Spring Guide Pin	6	S45C						
7	Base Plate C-L	1	Bronze with Graphite						
8	Base Plate F	2	Bronze with Graphite						
9	Washer	3	S45C						

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12)	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15	Spring	3	Refer to the Spring Specification table
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintere
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

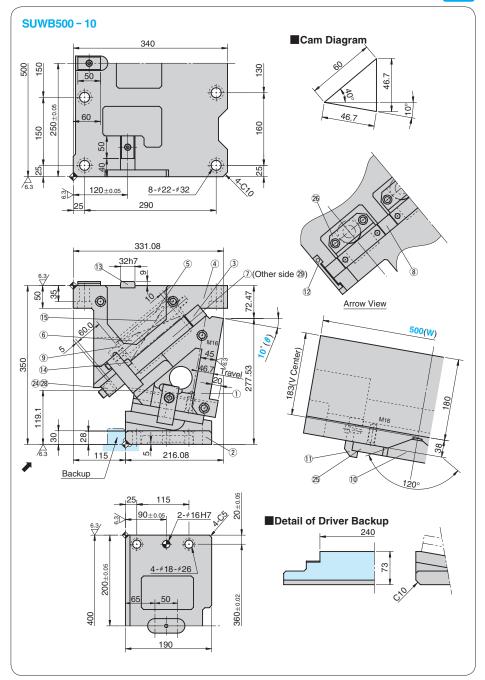
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**SUWB** 

10 Slide Guide

**WIDE TYPE FOR PIERCE AND FLANGE** 





Travel S	Working Fo Standard Working Force (one million strokes)	Allowable Working Force	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			2451.6 (249.8)	14709.8 (1499.0)							No code (coil spring)
46.7	313.6	627.2		20068.2 (2047.8)		98.6	218.8	SUWB	500	10	GK *NGK
40.7	(32.0)	(64.0)	_	19965.0 (2037.2)	27159 (2771.4)		210.0	SOWB	500	10	GD *NGD
				20127.6 (2053.8)							GS *NGS



Catalog No.

(W) **SUWB 500** 

 $(\theta)$ GK 10

\*If no spring is required, specify "NGK", "NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

■Space for removing

**SUWB** 500 NGK ·····Without gas spring 10



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 10 - GK - N SUWB500 - 10 - GK - NF

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 1127.

### ■Spring Specification

	No.	Spring type Model		Remark
Ī		_	TM50-225	Coil spring(constant = 68.1N/mm)
	(15)	GK	K750-63.5	Gas spring (KALLER)
	(13)	GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 230±0.02 (N option) 0 25±0.05 280 (FK option)

\*Gas spring specifications cannot do FK setting

■ Table of Components

No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	3	FCD500 with Graphite
6	Spring Guide Pin	6	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate F	2	Bronze with Graphite
9	Washer	3	S45C
10	Slide Guide	1	SS400 Copper powder sintered

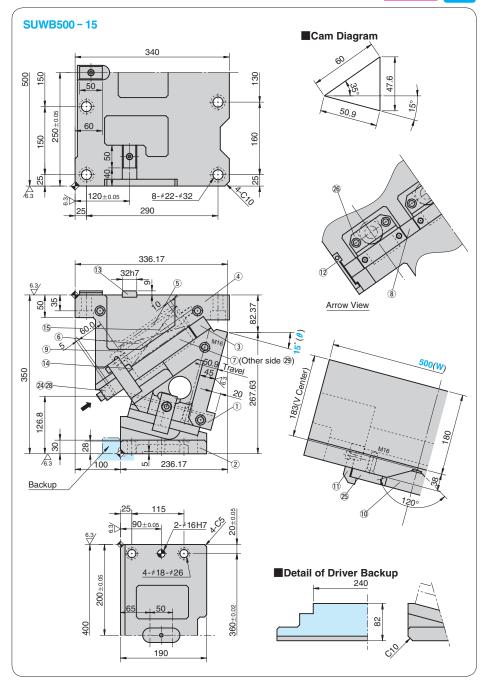
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15	Spring	3	Refer to the Spring Specification table
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 





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Travel	Working Fo		Spring Fo	rce N(kgf)	Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			2451.6	14709.8 (1499.0)							No code (coil spring)
50.9	313.6	627.2		20068.2 (2047.8)		00.6	216.3	SUWB	500	15	GK *NGK
50.9	(32.0)	(64.0)	_	19965.0 (2037.2)		98.6	216.3	SUWB	500	15	GD *NGD
				20127.6 (2053.8)							GS *NGS



Catalog No. **SUWB** 

 $(\theta)$ GK 15

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

■Space for removing

**SUWB** 500 NGK ·····Without gas spring 15



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 15 - GK - N SUWB500 - 15 - GK - NF

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 1127.

### ■Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15	GK	K750-63.5	Gas spring (KALLER)
	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

# 2-#16H7(Back #18) 230±0.02 (N option) **(** 25±0.05 220 (FK option)

\*Gas spring specifications cannot do FK setting.

#### ■ Table of Components

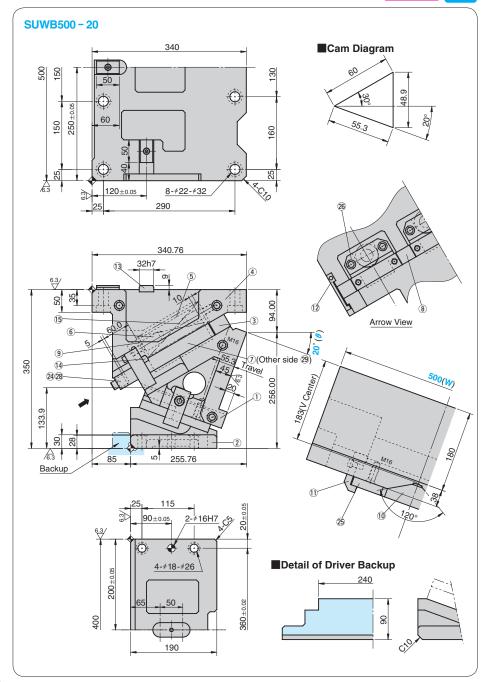
No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	3	FCD500 with Graphite
6	Spring Guide Pin	6	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate F	2	Bronze with Graphite
9	Washer	3	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15	Spring	3	Refer to the Spring Specification table
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintere
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel S	Working Fo Standard Working Force (one million strokes)	Allowable Working Force	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			2451.6 (249.8)	14709.8 (1499.0)							No code (coil spring)
55.3	313.6	627.2		20068.2 (2047.8)		98.6	215.1	SUWB	500	20	GK *NGK
55.5	(32.0)	(64.0)	_	19965.0 (2037.2)	26958 (2750.8)		215.1	SOWB	300	20	GD *NGD
				20127.6 (2053.8)							GS *NGS



Catalog No. (W) **SUWB 500** 

 $(\theta)$ GK 20

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Option part of N and FK.

■Space for removing

**SUWB** 500 NGK ·····Without gas spring



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled of the cam holder. (Refer to the figure on the right
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 20 - GK - N SUWB500 - 20 - GK - NF

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 1127.

### ■Spring Specification

	No.	Spring type	Model	Remark
Ī		_	TM50-225	Coil spring(constant = 68.1N/mm)
	15	GK	K750-63.5	Gas spring (KALLER)
		GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 230±0.02 (N option) 0 135±0.05

\*Gas spring specifications cannot do FK setting.

220 (FK option)

#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	3	FCD500 with Graphite
6	Spring Guide Pin	6	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate F	2	Bronze with Graphite
9	Washer	3	S45C
(10)	Slide Guide	1	SS400 Copper powder sintered

① Positive Return Follower         2         S45C           ② Safety Plate         2         SS400           ③ Key A         3         SS400           ④ Key B         4         SS400	ription  Qty  Material an	ia Kemark
(3) Key A 3 SS400	eturn Follower 2 S45C	
0 1,	late 2 SS400	
(14) Key B 4 SS400	3 SS400	
S 1.10, 2	4 SS400	
(15) Spring 3 Refer to the Spring Specification	3 Refer to the Spring	Specification table
24 Stopper 6 Urethane	6 Urethane	
25 Plate R/L1 SS400 Copper powder sint	R/L1 SS400 Copper p	powder sintere
26 Spring Guide Plate 3 SS400	àuide Plate 3 SS400	
28 Stopper Plate 3 S45C	Plate 3 S45C	
Base Plate C-R 1 Bronze with Graphite	ate C-R 1 Bronze with G	iraphite

No. December On March of Dec

A Bolts for assembly are not indicated.

1216

**SUWB** 

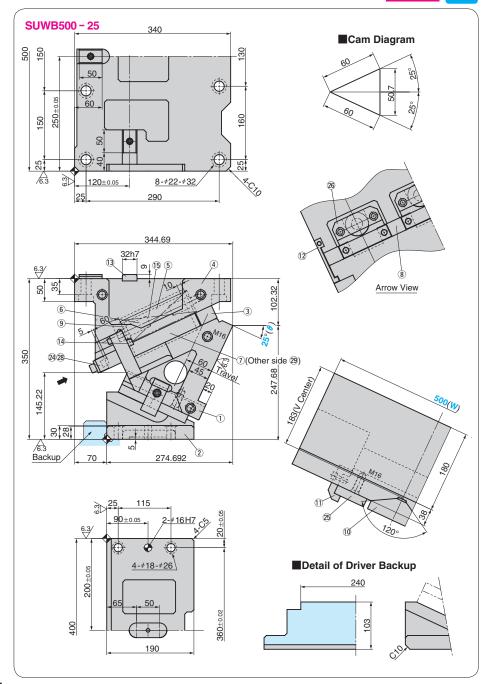
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**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			2451.6 (249.8)	14709.8 (1499.0)							No code (coil spring)
60.0	313.6	627.2		20068.2 (2047.8)		98.6	217.1	SUWB	500	25	GK *NGK
60.0	(32.0)	(64.0)	_	19965.0 (2037.2)	26852 (2740.0)		217.1	SUWB	500	25	GD *NGD
				20127.6 (2053.8)							GS *NGS



Catalog No. **SUWB** 

 $(\theta)$ 25 **500** 

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

**SUWB 500** NGK ·····Without gas spring

GK



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 25 - GK - N SUWB500 - 25 - GK - NF

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 1127.

### ■Spring Specification

<u> </u>			
No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
(15)	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### ■Option part of N and FK. \*Gas spring specifications cannot do FK setting 2-#16H7(Back #18) 230±0.02 (N option) 0 135±0.05 0

280 (FK option)

**■**Table of Components

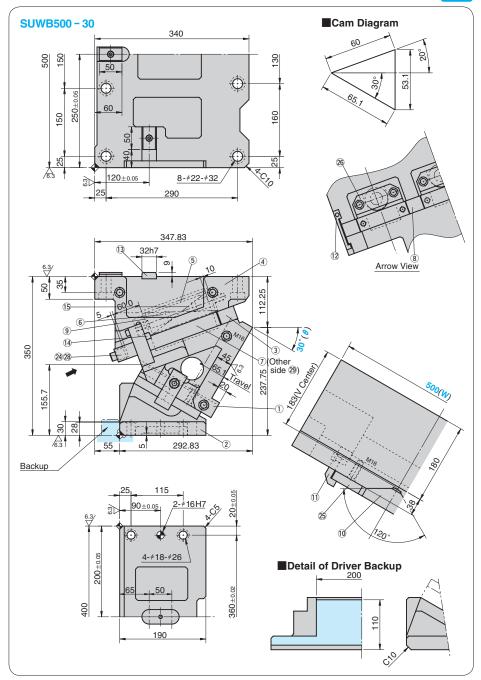
No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	3	FCD500 with Graphite
6	Spring Guide Pin	6	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate F	2	Bronze with Graphite
9	Washer	3	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15	Spring	3	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 





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Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return	Slider	Total				Spring Type
S	Working Force	Allowable Working Force (300,000 strokes)	Initial	Final Load			Weight kg	Catalog No.	(W)	(θ)	PS
			2451.6 (249.8)	14709.8 (1499.0)							No code (coil spring)
65.1	313.6	627.2		20068.2 (2047.8)		98.6	216.1	SUWB	500	30	GK *NGK
05.1	(32.0)	(64.0)	_	19965.0 (2037.2)			210.1	SOWB	300	30	GD *NGD
				20127.6 (2053.8)							GS *NGS



Catalog No. 30 **SUWB 500** 

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

**SUWB** 500 NGK ·····Without gas spring

GK



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 30 - GK - N SUWB500 - 30 - GK - NF

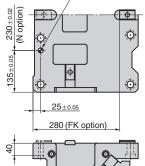
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

### ■Spring Specification

	No.	Spring type	Model	Remark
Ī		_	TM50-225	Coil spring(constant = 68.1N/mm)
	(15)	GK	K750-63.5	Gas spring (KALLER)
	(13)	GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

# **■**Option part of N and FK. \*Gas spring specifications cannot do FK setting 2-#16H7(Back #18)



#### **■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	3	FCD500 with Graphite
6	Spring Guide Pin	6	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate F	2	Bronze with Graphite
9	Washer	3	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15	Spring	3	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

Bolts for assembly are not indicated.

**SUWB** 500

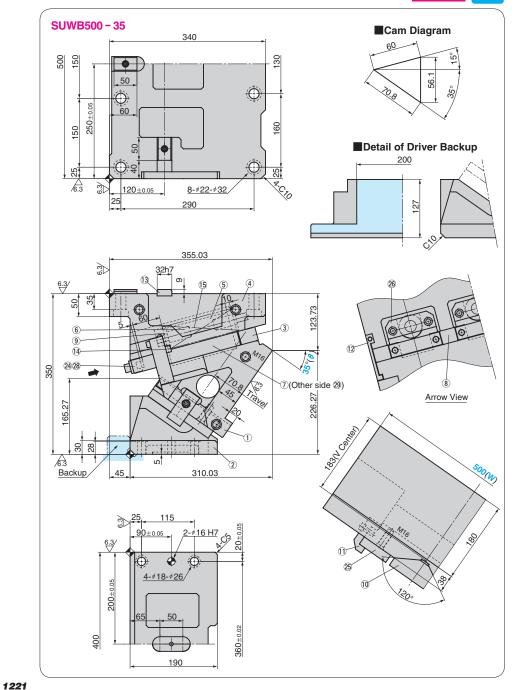
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**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return	Slider	Total				Spring Type			
S	Working Force	Allowable Working Force (300,000 strokes)	Initial	Final Load			Weight kg	Catalog No.	(W)	(θ)	PS			
			2451.6 (249.8)	14709.8 (1499.0)							No code (coil spring)			
70.8	313.6	627.2		20068.2 (2047.8)		98.6	222.1	CHWD	CHWD	SUWB	CHWD	500	35	GK *NGK
70.6	(32.0)	(64.0)	_	19965.0 (2037.2)			222.1	SOMP	500	33	GD *NGD			
				20127.6 (2053.8)							GS *NGS			



Catalog No. **SUWB** 500 **SUWB 500** 

 $(\theta)$ GK 35 - NGK .....Without gas spring

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

119

■Option part of N and FK.

\*Gas spring specifications cannot do FK setting



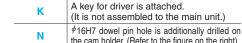
Option

<u></u>	Option









Option Code

the cam holder. (Refer to the figure on the right) Move the key position forward. FK (Refer to the figure on the right.)

Nitrogen gas is not charged. Applicable to GK, GD and GS only. NF



**SUWB500 - 35 - GK - N** SUWB500 - 35 - GK - NF

Specification

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 1127.

### ■Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
Œ	GK	K750-63.5	Gas spring (KALLER)
15)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 230±0.02 (N option) 0 0 25±0.05 280 (FK option)

#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	3	FCD500 with Graphite
6	Spring Guide Pin	6	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate F		Bronze with Graphite
9	9 Washer		S45C
10	Slide Guide	1	SS400 Copper powder sintered

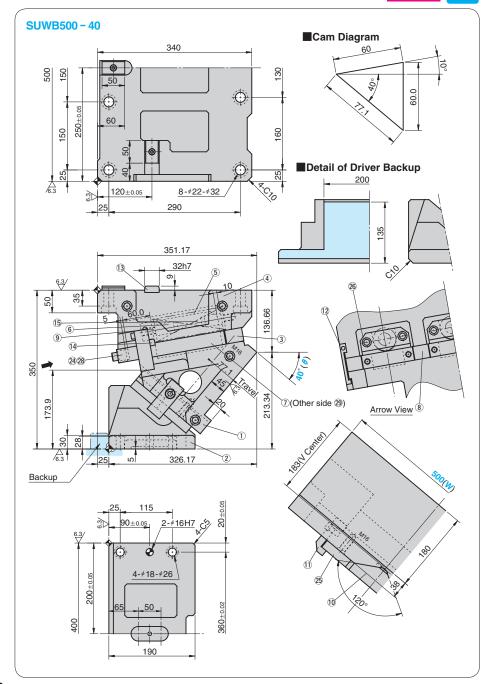
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15	Spring	3	Refer to the Spring Specification tabl
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintere
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel	Working Fo	ng Force kN(tonf)   Spring Force N(kgf)   F		Return	Slider	Total				Spring Type		
S	Working Force	Allowable Working Force (300,000 strokes)	Initial	Final Load			Weight kg	Weight Catalog No.		(θ)	PS	
			2451.6 (249.8)	14709.8 (1499.0)							No code (coil spring)	
77.1	313.6	627.2		20068.2 (2047.8)		98.6	220.4	SUWB	500	40	GK *NGK	
77.1	(32.0)	(64.0)	_	19965.0 (2037.2)			220.4	SOWB	300	40	GD *NGD	
				20127.6 (2053.8)							GS *NGS	



Catalog No. **SUWB 500** 

GK 40

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

■Option part of N and FK.

**SUWB**  NGK ·····Without gas spring 500



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled of the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 40 - GK - N SUWB500 - 40 - GK - NF

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 1127.

#### ■Spring Specification

_	<u> </u>		
No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
(15)	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 230±0.02 (N option) **(** 0 25±0.05 280 (FK option)

\*Gas spring specifications cannot do FK setting

#### **■**Table of Components

No	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder		FC250
(5)	Spring Guide Block	3	FCD500 with Graphite
6	Spring Guide Pin	6	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate F	2	Bronze with Graphite
9	9 Washer		S45C
10	Slide Guide	1	SS400 Copper powder sintered

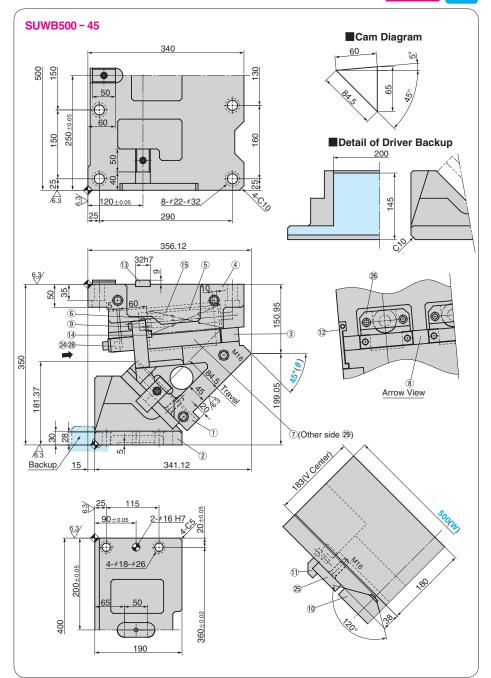
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12)	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15)	Spring	3	Refer to the Spring Specification table
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintere
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel	Working Fo	Force kN(tonf)   Spring Force N(kgf)   F		Return	Slider	Total				Spring Type	
S	Working Force	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			2451.6 (249.8)	14709.8 (1499.0)							No code (coil spring)
84.5	313.6	627.2		20068.2 (2047.8)		98.6	223.0	SUWB	500	45	GK *NGK
04.5	(32.0)	(64.0)	_	19965.0 (2037.2)			223.0	SOWB	500	40	GD *NGD
				20127.6 (2053.8)							GS *NGS



Catalog No. **SUWB** 

 $(\theta)$ 45

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included. GK

■Space for removing

116

■Option part of N and FK.



Specification



**Option Code** Option

A key for driver is attached. (It is not assembled to the main unit.)  $\phi$ 16H7 dowel pin hole is additionally drilled on Ν the cam holder. (Refer to the figure on the right)

Move the key position forward. FK (Refer to the figure on the right.) Nitrogen gas is not charged. Applicable to GK, GD and GS only. NF

Order

SUWB500 - 45 - GK - N SUWB500 - 45 - GK - NF

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 1127.

### ■Spring Specification

No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
(15)	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 230±0.02 (N option) $\Box$ 0 0 25±0.05 280 (FK option)

\*Gas spring specifications cannot do FK setting

#### **■**Table of Components

N	lo.	Description	Qty	<b>Material and Remark</b>
(	1	Cam Slider	1	FC250
(	2	Cam Driver	1	FC250
(	3	Base Plate A	2	Bronze with Graphite
(	4	Cam Holder		FC250
(	5	Spring Guide Block	3	FCD500 with Graphite
(	6	Spring Guide Pin	6	S45C
(	7)	Base Plate C-L	1	Bronze with Graphite
(	8	Base Plate F		Bronze with Graphite
(	9 Washer			S45C
(	10	Slide Guide	1	SS400 Copper powder sintered

NO.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12)	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15)	Spring	3	Refer to the Spring Specification table
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintere
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

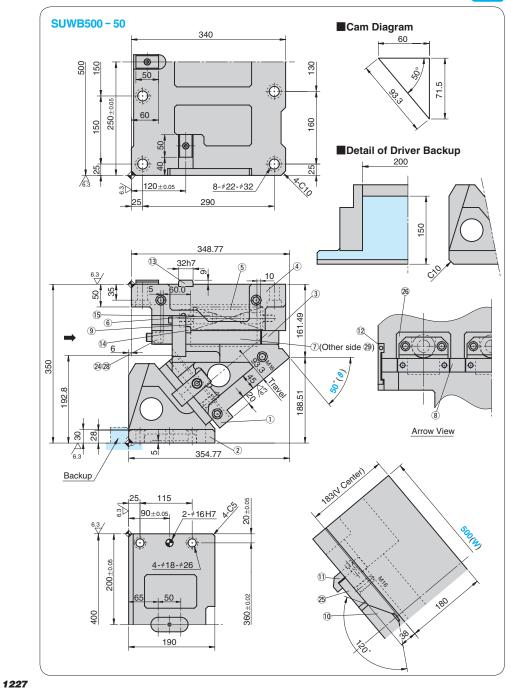
Bolts for assembly are not indicated.

**SUWB** 500

1226

**WIDE TYPE FOR PIERCE AND FLANGE** 





Travel S	Standard Working Force	Allowable Working Force	Initial	rce N(kgf) Final		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
	(one million strokes)	(300,000 strokes)		Load	ĸg	ĸg				No code
			2451.6 (249.8)	14709.8 (1499.0)						No code (coil spring)
93.3	313.6	627.2		20068.2 (2047.8)	98.6	220.1	SUWB	500	50	GK *NGK
93.3	(32.0)	(64.0)	_	19965.0 (2037.2)		220.1	SOWB	300	30	GD *NGD
				20127.6 (2053.8)						GS *NGS



Catalog No. **SUWB** 

 $(\theta)$ **50 500** 

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

■Space for removing

**SUWB** 500 NGK ·····Without gas spring

GK



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled the cam holder. (Refer to the figure on the right
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 50 - GK - N SUWB500 - 50 - GK - NF

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 1127.

### ■Spring Specification

	No. Spring type		Model	Remark
Ī		_	TM50-225	Coil spring(constant = 68.1N/mm)
	(15)	GK	K750-63.5	Gas spring (KALLER)
	(13)	GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 230±0.02 (N option) **(** 0 25±0.05 280 (FK option)

\*Gas spring specifications cannot do FK setting

#### **■**Table of Components

No	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
(2	Cam Driver	1	FC250
(3	Base Plate A	2	Bronze with Graphite
(4	<ul><li>4 Cam Holder</li><li>5 Spring Guide Block</li><li>6 Spring Guide Pin</li></ul>		FC250
(5			FCD500 with Graphite
6			S45C
(7	Base Plate C-L	1	Bronze with Graphite
(8	8 Base Plate F 9 Washer		Bronze with Graphite
9			S45C
10	Slide Guide	1	SS400 Copper powder sintered

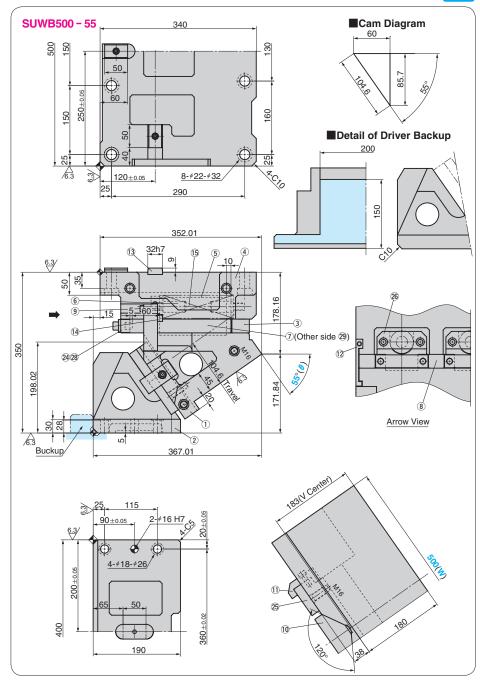
No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15	Spring	3	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 





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Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS				
			2451.6 (249.8)	14709.8 (1499.0)							No code (coil spring)				
104.6	313.6	627.2		20068.2 (2047.8)	4.0	102.2	100.0	100.0	100.0	100.0	227.2	SUWB	500	55	GK *NGK
104.6	(32.0)	(64.0)	_	19965.0 (2037.2)	28600 (2918.3)		221.2	SOWB	500	55	GD *NGD				
				20127.6 (2053.8)							GS *NGS				



Catalog No.

**SUWB** 

**55 500** 

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**■**Option part of N and FK.

■Space for removing

**SUWB** 500 NGK ·····Without gas spring

GK



Option

ption Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 55 - GK - N SUWB500 - 55 - GK - NF

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 1127.

### ■Spring Specification

	<u> </u>			
	No.	Spring type	Model	Remark
	15	_	TM50-225	Coil spring(constant = 68.1N/mm)
		GK	K750-63.5	Gas spring (KALLER)
		GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 230±0.02 (N option) **(** 0 25±0.05 280 (FK option)

\*Gas spring specifications cannot do FK setting

#### **■**Table of Components

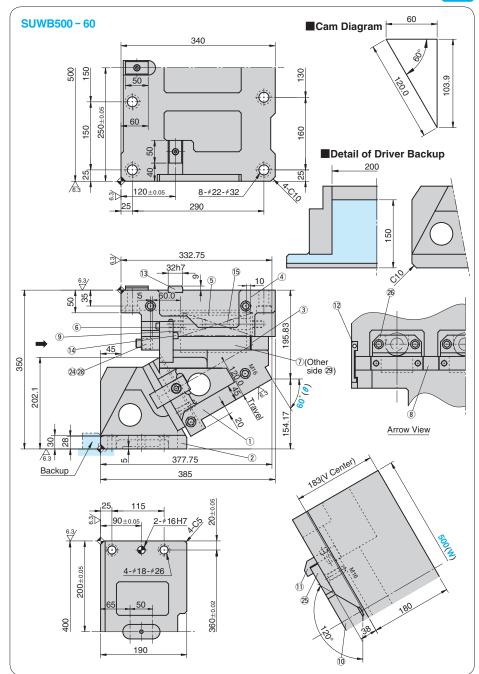
No	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
(2	Cam Driver	1	FC250
(3	Base Plate A	2	Bronze with Graphite
(4	<ul><li>4 Cam Holder</li><li>5 Spring Guide Block</li><li>6 Spring Guide Pin</li></ul>		FC250
(5			FCD500 with Graphite
6			S45C
(7	Base Plate C-L	1	Bronze with Graphite
(8	8 Base Plate F 9 Washer		Bronze with Graphite
9			S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15	Spring	3	Refer to the Spring Specification table
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

### **WIDE TYPE FOR PIERCE AND FLANGE**





Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load			Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			2451.6 (249.8)	14709.8 (1499.0)							No code (coil spring)
100.0	313.6	627.2		20068.2 (2047.8)		104.4	000 5	CUMB	500		GK *NGK
120.0	(32.0)	(64.0)	_	19965.0 (2037.2)	31616 (3226.1)		236.5	SUWB	500	60	GD *NGD
				20127.6 (2053.8)							GS *NGS



Catalog No. **SUWB 500** 

GK 60

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Option part of N and FK.

■Space for removing

**SUWB** 500 NGK ·····Without gas spring



Option

Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled of the cam holder. (Refer to the figure on the right
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB500 - 60 - GK - N SUWB500 - 60 - GK - NF

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 1127.

#### ■Spring Specification

	<u> </u>			
	No.	Spring type	Model	Remark
	15	_	TM50-225	Coil spring(constant = 68.1N/mm)
		GK	K750-63.5	Gas spring (KALLER)
		GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### 2-#16H7(Back #18) 230±0.02 (N option) 0 0 25±0.05 280 (FK option)

\*Gas spring specifications cannot do FK setting

#### ■Table of Components

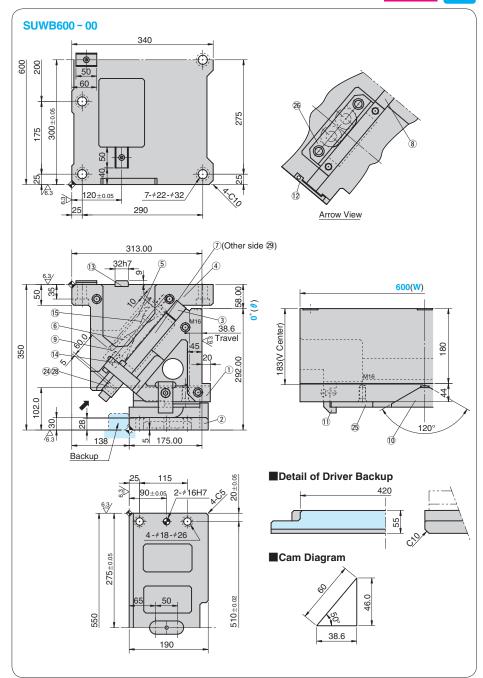
No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate A	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	3	FCD500 with Graphite
6	Spring Guide Pin	6	S45C
7	Base Plate C-L	1	Bronze with Graphite
8	Base Plate F	2	Bronze with Graphite
9	Washer	3	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	4	SS400
15)	Spring	3	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	3	SS400
28	Stopper Plate	3	S45C
29	Base Plate C-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel	Working Fo		Spring Fo	rce N(kgf)	Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
38.6	392.0	784.0		26757.5 (2730.4)		127.0	281.4	SUWB	600	00	GK *NGK
30.0	(40.0)	(79.9)	_	26620.0 (2716.3)			201.4	SOWB	000	00	GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No. **SUWB** 

GK 00

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

**SUWB** 600 NGK ·····Without gas spring



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 00 - GK - N SUWB600 - 00 - GK - NF

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 1127.

### ■ Spring Specification

No.	Spring type	Model	Remark		
	_	TM50-225	Coil spring(constant = 68.1N/mm)		
16	GK K750-63.5		Gas spring (KALLER)		
15)	GD	L.750.075	Gas spring (DADCO)		
	GS	SM.750.63	Gas spring (SDT)		

\*Guideline of coil spring durability 300,000 strokes

# 400±0.02 (N option) 2-#16H7(Back #18) $25 \pm 0.05$ 215(FK option)

\*Gas spring specifications cannot do FK setting

■Option part of N and FK.

#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15)	Spring	4	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphite

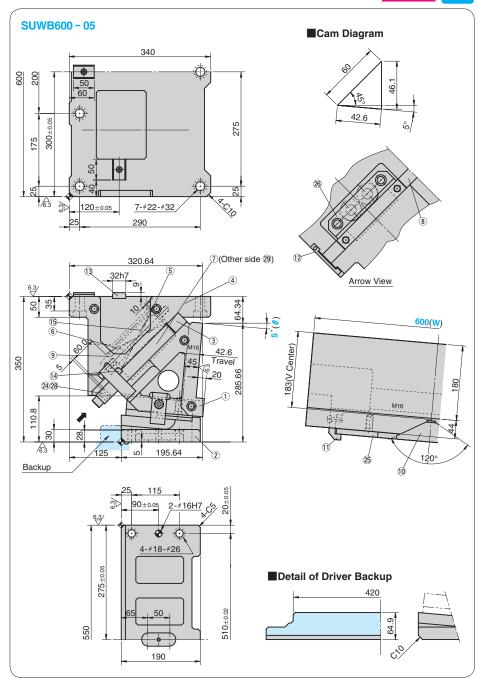
A Bolts for assembly are not indicated.





**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel	Working Fo		Spring Fo	rce N(kgf)			Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
42.6	392.0	784.0		26757.5 (2730.4)		127.0	277.9	SUWB	600	05	GK *NGK
42.0	(40.0)	(79.9)	_	26620.0 (2716.3)	36302 (3704.3)		277.9	SOWB	800	05	GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No. **SUWB** 

05

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

**SUWB** 600 NGK ·····Without gas spring

GK



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 05 - GK - N SUWB600 - 05 - GK - NF

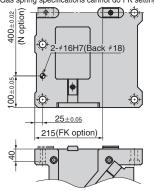
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

### ■Spring Specification

<u> </u>	<u> </u>		
No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
15)	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

■Option part of N and FK. \*Gas spring specifications cannot do FK setting



#### ■Table of Components

No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C
10	Slide Guide	1	SS400 Copper powder sintered

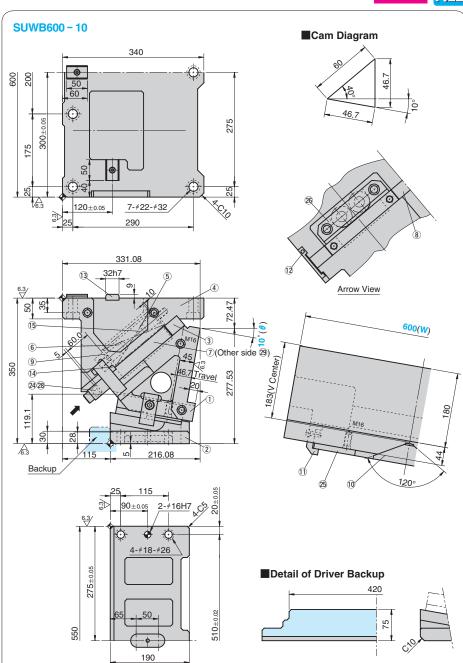
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15	Spring	4	Refer to the Spring Specification table
24	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphite

Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load			Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			3268.8	19612.8 (1998.7)							No code (coil spring)
46.7	392.0 (40.0)	784.0 (79.9)		26757.5 (2730.4)		127.0	274.1	SUWB	600	40	GK *NGK
40.7			_	26620.0 (2716.3)						10	GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No. **SUWB** 

GK 10

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Option part of N and FK.

■Space for removing

**SUWB**  NGK ·····Without gas spring 600



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 10 - GK - N SUWB600 - 10 - GK - NF

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 1127.

### ■Spring Specification

<u> </u>					
No.	Spring type	Model	Remark		
	_	TM50-225	Coil spring(constant = 68.1N/mm)		
(15)	GK	K750-63.5	Gas spring (KALLER)		
(13)	GD	L.750.075	Gas spring (DADCO)		
	GS	SM.750.63	Gas spring (SDT)		

\*Guideline of coil spring durability 300,000 strokes

# 400±0.02 (N option) 2-#16H7(Back #18) $25 \pm 0.05$ 215(FK option)

\*Gas spring specifications cannot do FK setting

■Table of Components

No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15)	Spring	4	Refer to the Spring Specification table
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphite

1 SS400 Copper powder sintered

**SUWB** 

1238

600

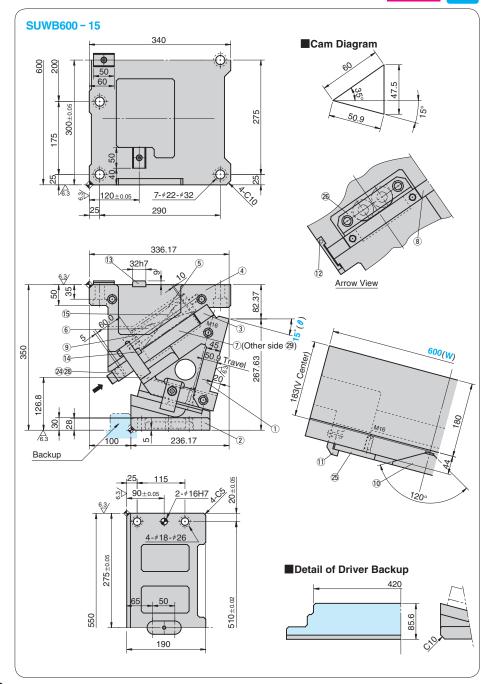
Bolts for assembly are not indicated.

10 Slide Guide



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel S	Working Fo Standard Working Force (one million strokes)	Allowable Working Force	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
50.9	392.0	784.0		26757.5 (2730.4)		127.0	272.3	SUWB	600	15	GK *NGK
50.9	(40.0)	(79.9)	_	26620.0 (2716.3)			212.3	SOWB	000	15	GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No. **SUWB** 

(W)

 $(\theta)$ GK 15

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**SUWB** 600 NGK ·····Without gas spring



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 15 - GK - N SUWB600 - 15 - GK - NF

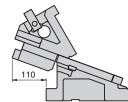
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

### ■Spring Specification

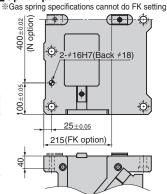
<u> </u>					
No.	Spring type	Model	Remark		
	_	TM50-225	Coil spring(constant = 68.1N/mm)		
(15)	GK	K750-63.5	Gas spring (KALLER)		
(13)	GD	L.750.075	Gas spring (DADCO)		
	GS	SM.750.63	Gas spring (SDT)		

\*Guideline of coil spring durability 300,000 strokes

### ■Space for removing



■Option part of N and FK.



#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C
10	Slide Guide	1	SS400 Copper powder sintered

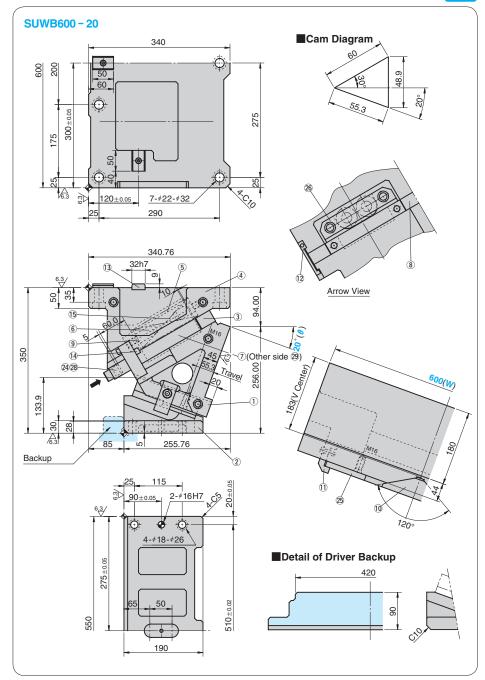
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15	Spring	4	Refer to the Spring Specification table
24	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 





Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return		Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial Load	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
55.3	392.0 (40.0)	784.0 (79.9)		26757.5 (2730.4)		127.0	268.8	SUWB	600	20	GK *NGK
55.5			_	26620.0 (2716.3)					000		GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No. **SUWB** 

20

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**SUWB**  NGK ·····Without gas spring 600

GK



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 20 - GK - N SUWB600 - 20 - GK - NF

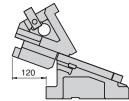
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

### ■Spring Specification

	No.	Spring type	Model	Remark
	15	_	TM50-225	Coil spring(constant = 68.1N/mm)
		GK	K750-63.5	Gas spring (KALLER)
		GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

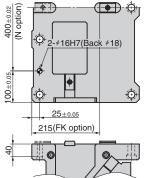
\*Guideline of coil spring durability 300,000 strokes

### ■Space for removing



■Option part of N and FK.

\*Gas spring specifications cannot do FK setting



#### ■ Table of Components

N	ο.	Description	Qty	<b>Material and Remark</b>
(1	D	Cam Slider	1	FC250
(2	(	Cam Driver	1	FC250
(3	(8	Base Plate B	2	Bronze with Graphite
(4	Cam Holder     Spring Guide Block		1	FC250
(5			2	FCD500 with Graphite
(6	(	Spring Guide Pin	8	S45C
(7	0	Base Plate G-L	1	Bronze with Graphite
(8	(8			Bronze with Graphite
(9	(			S45C
1	0	Slide Guide	1	SS400 Copper powder sintered

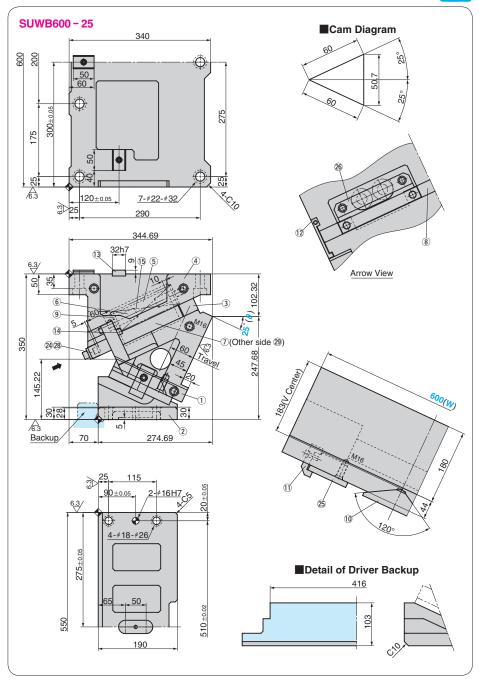
No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15	Spring	4	Refer to the Spring Specification table
24	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 





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Travel S	Working Fo Standard Working Force (one million strokes)	Allowable Working Force	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
60.0	392.0	784.0		26757.5 (2730.4)		127.0	268.3	SUWB	600	25	GK *NGK
60.0	(40.0)	(79.9)	_	26620.0 (2716.3)	35786 (3651.6)		200.3	SUWB	600	25	GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No. **SUWB** 

(W) GK 25

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

**SUWB** 600 NGK ·····Without gas spring



φ 16H7 dowel pin hole is additionally drill	ption Code	Specification
the cam holder. (Refer to the figure on the Move the key position forward.	K	A key for driver is attached. (It is not assembled to the main unit.)
	N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
	FK	
NF Nitrogen gas is not charged. Applicable to GK, GD and GS only.	NF	



SUWB600 - 25 - GK - N SUWB600 - 25 - GK - NF

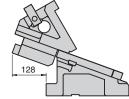
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

### ■Spring Specification

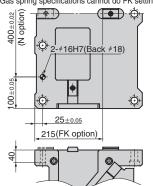
	No.	Spring type	Model	Remark
	15	_	TM50-225	Coil spring(constant = 68.1N/mm)
		GK	K750-63.5	Gas spring (KALLER)
		GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

# ■Space for removing



■Option part of N and FK. \*Gas spring specifications cannot do FK setting

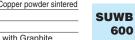


#### ■ Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B		Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8			Bronze with Graphite
9			S45C
10	Slide Guide	1	SS400 Copper powder sintered

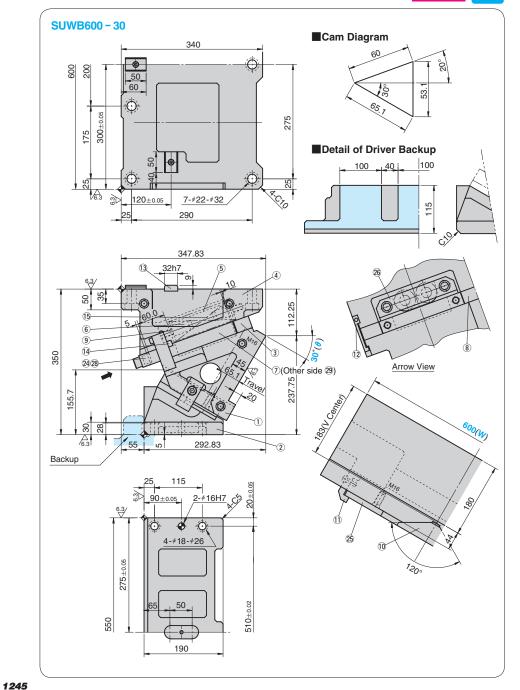
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15	Spring	4	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel	Working Force kN(tonf)		Spring Force N(kgf)		Return	Slider	Total				Spring Type
S	Standard Working Force (one million strokes)	Allowable Working Force (300,000 strokes)	Initial	Final Load	Force N(kgf)	Weight kg	Weight kg	Catalog No.	(W)	(θ)	PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
65.1	392.0	784.0		26757.5 (2730.4)		107.0	276.6	SUWB	600	30	GK *NGK
05.1	(40.0)	.0) (79.9)	_	26620.0 (2716.3)		127.0	270.0	SUWB	000	30	GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No.

**SUWB** 

GK 30

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

**SUWB** 600 - NGK ·····Without gas spring



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 30 - GK - N SUWB600 - 30 - GK - NF

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 1127.

### ■Spring Specification

	No.	Spring type	Model	Remark
	15	_	TM50-225	Coil spring(constant = 68.1N/mm)
		GK	K750-63.5	Gas spring (KALLER)
		GD	L.750.075	Gas spring (DADCO)
		GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

# 400±0.02 (N option) 2-#16H7(Back #18) $25 \pm 0.05$ 215(FK option)

■Option part of N and FK.

\*Gas spring specifications cannot do FK setting

**■**Table of Components

No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	Material and Remark
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15	Spring	4	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphit

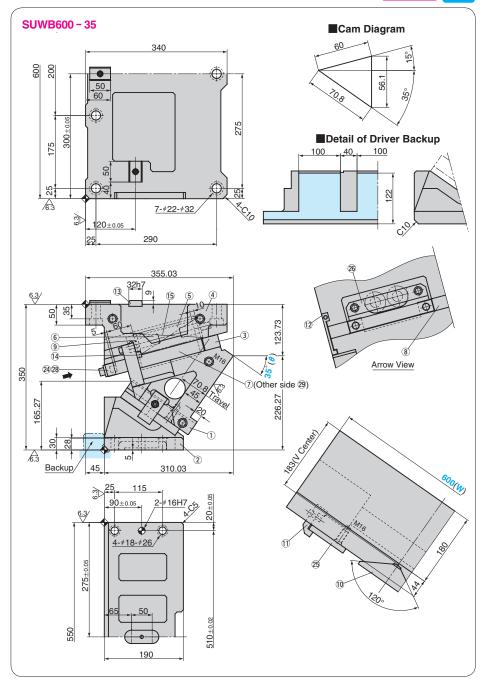
A Bolts for assembly are not indicated.

**SUWB** 

600

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)	Weight	Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
70.8	392.0	784.0		26757.5 (2730.4)		127.0	276.0	SUWB	600	35	GK *NGK
70.8	(40.0)	(79.9)	_	26620.0 (2716.3)			276.0	SUWB	600		GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No. **SUWB** 

GK 35

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Option part of N and FK.

400±0.02 (N option)

\*Gas spring specifications cannot do FK setting

2-#16H7(Back #18)

 $25 \pm 0.05$ 

215(FK option)

■Space for removing

**SUWB**  NGK ·····Without gas spring 600



Option

<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 35 - GK - N SUWB600 - 35 - GK - NF

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 1127.

### ■Spring Specification

■ Table of Components

No.	Spring type	Model	Remark						
	_	TM50-225	Coil spring(constant = 68.1N/mm)						
15)	GK	K750-63.5	Gas spring (KALLER)						
(13)	GD	L.750.075	Gas spring (DADCO)						
	GS	SM.750.63	Gas spring (SDT)						

\*Guideline of coil spring durability 300,000 strokes

# No. Description Qty Material and Remark

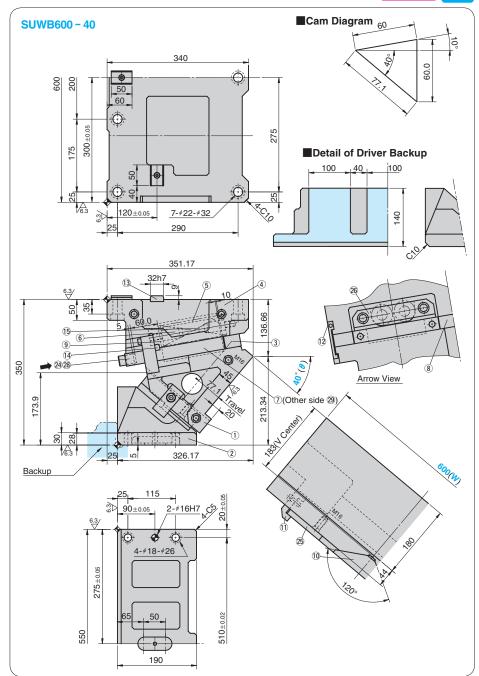
No.	Description	Qty	Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C
10	Slide Guide	1	SS400 Copper powder sintered

11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15)	Spring	4	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphit

A Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 

Addition FILE



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Travel S	Standard Working Force	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
77.1	392.0	784.0		26757.5 (2730.4)		107.0	285.2	SUWB	600		GK *NGK
//.1	(40.0)	(79.9)	_	26620.0 (2716.3)		127.0	200.2	SUWB	800	40	GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No.

**SUWB** 

GK 40

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

**SUWB**  NGK ·····Without gas spring 600



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 40 - GK - N **SUWB600 - 40 - GK - NF** 

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 1127.

### ■Spring Specification

No.	Spring type	Model	Remark					
	_	TM50-225	Coil spring(constant = 68.1N/mm)					
15)	GK	K750-63.5	Gas spring (KALLER)					
(13)	GD	L.750.075	Gas spring (DADCO)					
	GS	SM.750.63	Gas spring (SDT)					

\*Guideline of coil spring durability 300,000 strokes

# 400±0.02 (N option) 2-#16H7(Back #18) $25 \pm 0.05$ 215(FK option)

■Option part of N and FK.

\*Gas spring specifications cannot do FK setting

**⊕** 

#### ■Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C
10	Slide Guide	1	SS400 Copper powder sintered

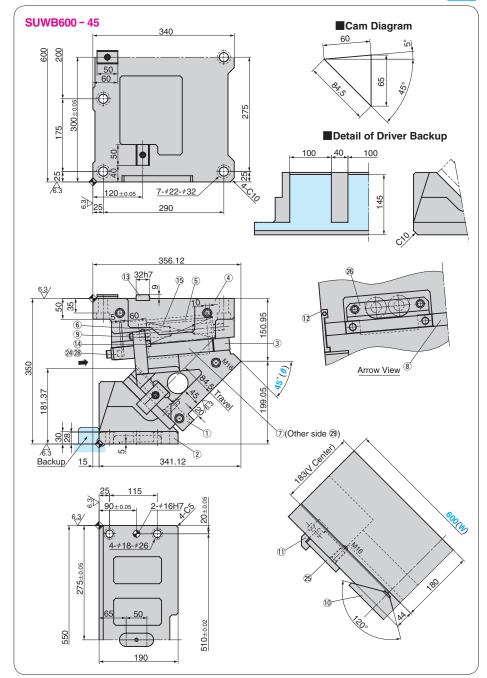
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15)	Spring	4	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphite

↑ Bolts for assembly are not indicated.



**WIDE TYPE FOR PIERCE AND FLANGE** 





Travel S	Working Fo Standard Working Force (one million strokes)	Allowable Working Force	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
04.5	392.0	784.0		26757.5 (2730.4)		107.0	004.4	SUWB	600		GK *NGK
84.5	(40.0)	' I \ ' I — I	26620.0 (2716.3)	35213 (3593.1)	127.0	284.4	SUWB	000	45	GD *NGD	
				26836.8 (2738.4)							GS *NGS



Catalog No.

**SUWB** 

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type.  $(\theta)$ GK 45

The parts for installing the spring are included.

**SUWB**  NGK ·····Without gas spring 600



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 45 - GK - N SUWB600 - 45 - GK - NF

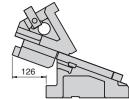
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

### ■Spring Specification

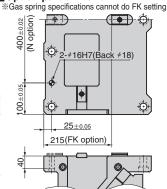
No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
Œ	GK	K750-63.5	Gas spring (KALLER)
15)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

### ■Space for removing



■Option part of N and FK.



■ Table of Components

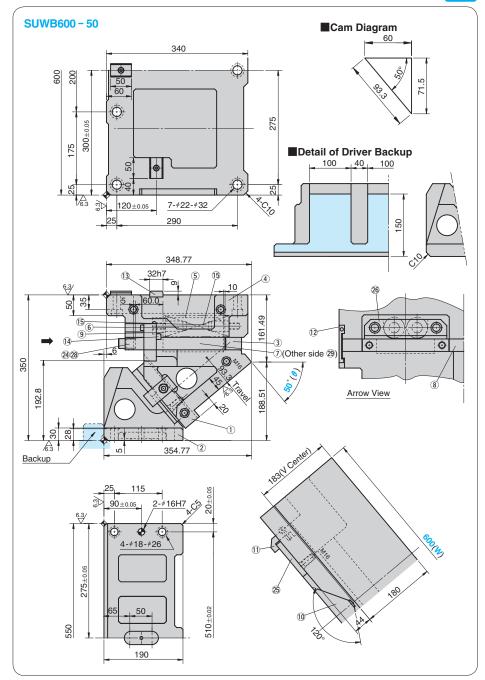
No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15)	Spring	4	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

**WIDE TYPE FOR PIERCE AND FLANGE** 





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Travel S	Working Fo Standard Working Force (one million strokes)	Allowable Working Force	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
93.3	392.0	784.0		26757.5 (2730.4)		407.0	000 5	SUWB	IWP COO		GK *NGK
93.3	(40.0)	(79.9)	_	26620.0 (2716.3)	35069 (3578.4)	127.0	283.5	SUWB	600	50	GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No. **SUWB** 

(W)  $(\theta)$ GK **50** 

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

**SUWB** 600 NGK ·····Without gas spring



<b>Option Code</b>	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 50 - GK - N SUWB600 - 50 - GK - NF

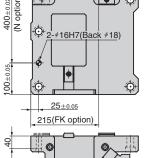
For machining details or tapping hole and dowel hole (prepared hole and finished hole) for mounting of the retainer, refer to page 559. For detailed specification of the key, refer to page 1127.

### Spring Specification

_ <b></b>	9 -			
No.	Spring type	Model	Remark	
	_	TM50-225	Coil spring(constant = 68.1N/mm)	
15	GK	K750-63.5	Gas spring (KALLER)	
(13)	GD L.750.075		Gas spring (DADCO)	
	GS	SM.750.63	Gas spring (SDT)	

\*Guideline of coil spring durability 300,000 strokes

### ■Option part of N and FK. \*Gas spring specifications cannot do FK setting 400±0.02 (N option) 2-#16H7(Back #18)



**■**Table of Components

No.	Description	Qty	<b>Material and Remark</b>
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C
10	Slide Guide	1	SS400 Copper powder sintered

I	No.	Description	Qty	<b>Material and Remark</b>
	11)	Positive Return Follower	2	S45C
	12	Safety Plate	2	SS400
_	13	Key A	3	SS400
	14)	Key B	3	SS400
	15	Spring	4	Refer to the Spring Specification table
	24)	Stopper	6	Urethane
	25	Plate	R/L1	SS400 Copper powder sintered
	26	Spring Guide Plate	2	SS400
	28	Stopper Plate	2	S45C
	29	Base Plate G-R	1	Bronze with Graphite

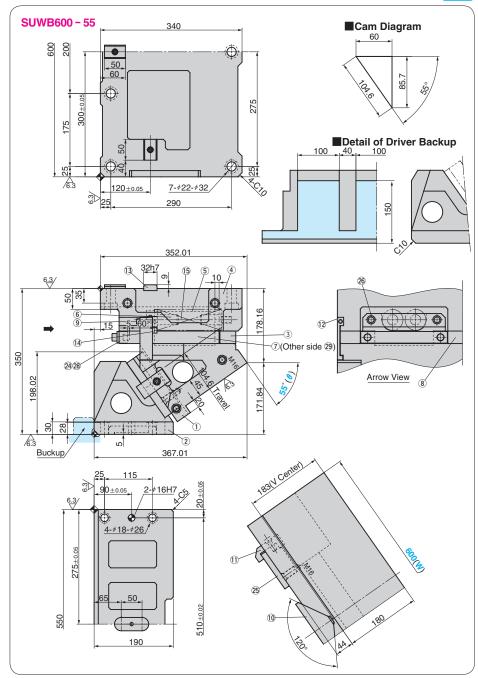
A Bolts for assembly are not indicated.

1255

### **Aerial Cam Unit**

**WIDE TYPE FOR PIERCE AND FLANGE** 





Travel S	Working Fo Standard Working Force (one million strokes)	rce kN(tonf) Allowable Working Force (300,000 strokes)	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
104.6	392.0	784.0		26757.5 (2730.4)		132.8	292.0	SUWB	600	55	GK *NGK
104.6	(40.0)	(79.9)	_	26620.0 (2716.3)	38140 (3891.9)		292.0	SOWB	000	55	GD *NGD
				26836.8 (2738.4)							GS *NGS



Catalog No. **SUWB** 

(W)

 $(\theta)$ GK 55

\* If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Space for removing

**SUWB** 600 NGK ·····Without gas spring



Option Code	Specification
K	A key for driver is attached. (It is not assembled to the main unit.)
N	$\phi$ 16H7 dowel pin hole is additionally drilled or the cam holder. (Refer to the figure on the right)
FK	Move the key position forward. (Refer to the figure on the right.)
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.



SUWB600 - 55 - GK - N SUWB600 - 55 - GK - NF

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 1127.

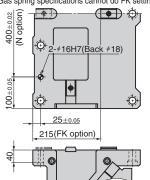
### ■Spring Specification

<u> </u>			
No.	Spring type	Model	Remark
	_	TM50-225	Coil spring(constant = 68.1N/mm)
(15)	GK	K750-63.5	Gas spring (KALLER)
(13)	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes



■Option part of N and FK. \*Gas spring specifications cannot do FK setting



■ Table of Components

No.	o. Description		Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C
10	Slide Guide	1	SS400 Copper powder sintered

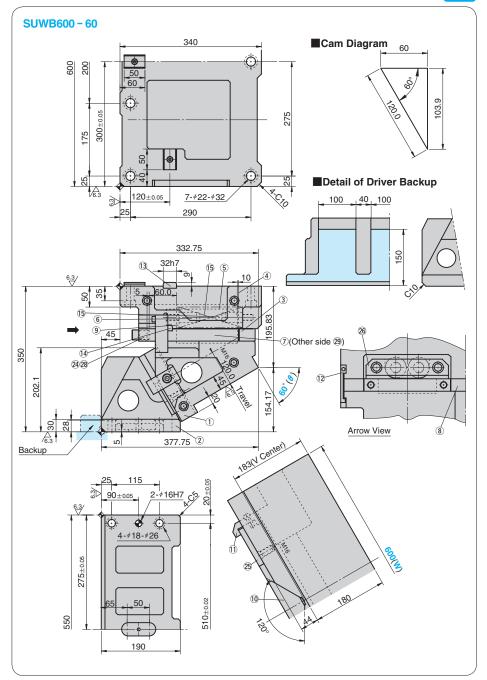
No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12)	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15)	Spring	4	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

600

**WIDE TYPE FOR PIERCE AND FLANGE** 





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Travel S	Working Fo Standard Working Force (one million strokes)	Allowable Working Force	Initial	rce N(kgf) Final Load	Return Force N(kgf)		Total Weight kg	Catalog No.	(W)	(θ)	Spring Type PS
			3268.8 (333.1)	19612.8 (1998.7)							No code (coil spring)
120.0	392.0			26757.5 (2730.4)		133.1	295.6	SUWB	600		GK *NGK
120.0	(40.0)		26620.0 (2716.3)	42169 (4302.9)		293.0	SOWB	600	60	GD *NGD	
				26836.8 (2738.4)							GS *NGS



Catalog No. **SUWB** 

(W)  $(\theta)$ 600

\*If no spring is required, specify "NGK","NGD" and "NGS", prefixing "N" to the GK, GD and GS spring type. The parts for installing the spring are included.

■Option part of N and FK.

\*Gas spring specifications cannot do FK setting

2-#16H7(Back #18)

■Space for removing

153

400±0.02 (N option)

**SUWB** 600 NGK ·····Without gas spring

GK



Option Code	Specification			
K	A key for driver is attached. (It is not assembled to the main unit.)			
N	$\phi$ 16H7 dowel pin hole is additionally drilled on the cam holder. (Refer to the figure on the right)			
FK	Move the key position forward. (Refer to the figure on the right.)			
NF	Nitrogen gas is not charged. Applicable to GK, GD and GS only.			



SUWB600 - 60 - GK - N SUWB600 - 60 - GK - NF

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 1127.

### ■Spring Specification

<u> </u>	<del></del>		
No.	Spring type	Model	Remark
15	_	TM50-225	Coil spring(constant = 68.1N/mm)
	GK	K750-63.5	Gas spring (KALLER)
	GD	L.750.075	Gas spring (DADCO)
	GS	SM.750.63	Gas spring (SDT)

\*Guideline of coil spring durability 300,000 strokes

# 00±0.05 $25 \pm 0.05$ 215(FK option)

#### **■**Table of Components

No.	Description		Material and Remark
1	Cam Slider	1	FC250
2	Cam Driver	1	FC250
3	Base Plate B	2	Bronze with Graphite
4	Cam Holder	1	FC250
(5)	Spring Guide Block	2	FCD500 with Graphite
6	Spring Guide Pin	8	S45C
7	Base Plate G-L	1	Bronze with Graphite
8	Base Plate H	1	Bronze with Graphite
9	Washer	4	S45C
10	Slide Guide	1	SS400 Copper powder sintered

No.	Description	Qty	<b>Material and Remark</b>
11)	Positive Return Follower	2	S45C
12	Safety Plate	2	SS400
13	Key A	3	SS400
14)	Key B	3	SS400
15)	Spring	4	Refer to the Spring Specification table.
24)	Stopper	6	Urethane
25	Plate	R/L1	SS400 Copper powder sintered
26	Spring Guide Plate	2	SS400
28	Stopper Plate	2	S45C
29	Base Plate G-R	1	Bronze with Graphite

A Bolts for assembly are not indicated.

**SUWB** 

600