

# Custom-order

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## ■ Change of rod end form (N\*\*)

Contact CKD for details on specifications, dimensions, prices and delivery.

### How to order

SCM - 00 - 40 B - 200 - N13 A23 WF25

Model No.

#### Compatible model

Model No.	Name
SCG	Tie rod cylinder
JSG	Tie rod cylinder with brake
SCP*3	Pencil shaped cylinder
CMK2	Medium bore size cylinder
SCA2	Medium bore size cylinder
SCS2	Large bore size cylinder
SCP*3-V	Miniature cylinder with valve
MDC2	Small direct mounting cylinder
SSD	Compact cylinder
SCM	Round shaped cylinder
ULK	Brake cylinder
JSC3/JSC4	Brake cylinder
FC*	Flat compact cylinder

#### Model No.

Refer to How to order for each model.

#### Rod end pattern

Code	Description
N1	Rod end female thread (with recess)
N11	Rod end female thread
N12	Rod end no thread
N14	Rod end sphere R
N13	Rod end male thread
N15	Rod end male thread (with recess)
N2	Rod end rod eye shape
N21	Rod end clevis bracket shape
N3	Rod end with groove
N31	Rod end with groove sphere R

#### Made-to-order dimensions

Refer to the dimensions list.

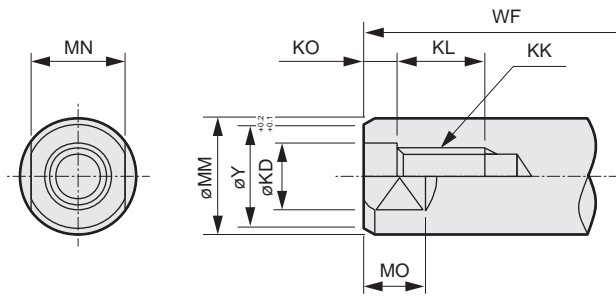
### ⚠ Precautions for custom ordering rod ends

1. Depending on designated dimensions, the same strength as the standard product may not be attained.
2. Dimensions, tolerance, and finish not given in drawings are left to CKD.

### ⚠ Precautions for model No. selection

1. When some dimensions must be changed, indicate the dimension code after the rod end pattern code, then indicate the designated dimensions.
2. When designating multiple items, designate items in order from the dimension codes given at left of the dimensions table.  
(Example) Model No. - N13KKM18 x 1.5A40WF20
3. When thread size is specified, an end nut is not attached.
4. Basic dimensions of N11 are the same as the female thread specifications of each model. \* Indicate only when the dimensions differ from the basic specifications.  
Basic dimensions of N13 are the same as the male thread specifications of each model.  
If designated dimensions are not required for N11 or N13, follow How to order for each model.  
(Incorrect) (Correct)  
(Example) SCM-00-40B-200-N13 → SCM-00-40B-200 (since N13 is standard, code is not required)  
SSD-50-50-N11 → SSD-50-50 (since N11 is standard, code is not required)  
SSD-50-50-N13 → SSD-50-50-N ("N" is used for the female thread code.)  
If the model does not have a code for the male or female threads in each model order, follow the rod end pattern given on this page.
5. Indicate the code following the rod end pattern after the model No. even if there are accessories, etc.  
(Incorrect) (Correct)  
(Example) SSD-50-50-N13KKM8-CB → SSD-50-50-CB-N13KKM8
6. This custom model No. is used for input and may differ from the official model No.
7. Consult with CKD separately for how to order double rod and back to back.

### Dimensions



When manufacturing with dimensions listed on the dimensions table, indicate pattern code "N1".  
When some dimensions must be changed, indicate the dimension code after the pattern code "N1", then indicate the designated dimensions.

Example SCM-00-40B-200-N1WF25

WF standard dimension is 20, but this is available at 25.

When designating multiple items, indicate codes in order from the left.

\*1: Dimensions of CMA2-E are shown in ( ).

\*2: Dimensions of SSD-G2/G3/KG2/KG3 are shown in ( ).

\*3: WF dimensions are different when selecting LB2 and FA of SSD. Contact CKD separately.

\*4: Dimensions of SCM-LD are shown in ( ).

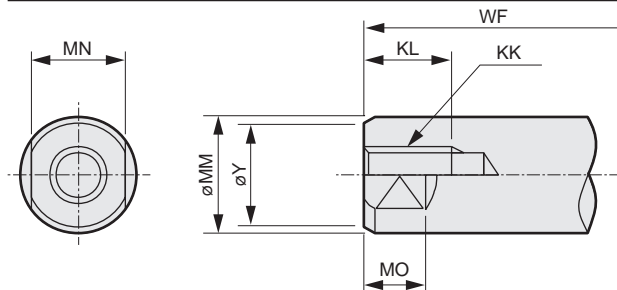
\*5: Dimensions of CMK2-G2/G3 are shown in ( ).

Series	Bore size	øMM	KK	øKD	KO	KL	øY	MN	MO	WF
CMK2	20	10	M 5x0.8	5	2.5	10	8	8	5	24
CKV2	25	12	M 6x1	6	3	10	10	10	5	23(28)
ULK	32	12	M 6x1	6	3	10	10	10	5	23(28)
*5	40	14	M 8x1.25	8	4	14	12	12	6	23(28)
CMA2	20	10	M 5x0.8	5	2.5	10	8	8	5	24(11)
JSM2	30	12	M 6x1	6	3	10	10	10	5	23(7)
*1	40	14	M 8x1.25	8	4	14	12	12	6	23(6)
SCG	32	12	M 6x1	6	3	10	10	10	5	25
SCG	40	16	M 8x1.25	8	4	14	14	14	6	21
JSG	50	20	M 10x1.5	10	5	16	18	17	8	23
	63	20	M 10x1.5	10	5	16	18	17	8	23
	80	25	M 12x1.75	12	5.5	18	22	22	11	32
	100	30	M 16x2	16	6	24	27	27	13	32
SCA2	40	16	M 8x1.25	8	4	14	14	14	8	33.5
	50	20	M 10x1.5	10	5	16	18	17	8	37
	63	20	M 10x1.5	10	5	16	18	17	8	35
	80	25	M 12x1.75	12	5.5	18	22	22	11	48
	100	30	M 16x2	16	6	24	27	27	13	53
SCS2	125	32	M 18x2.5	18	7.5	26	29	27	14	65
	140	32	M 18x2.5	18	7.5	26	29	27	14	67
	160	40	M 20x2.5	20	7.5	28	36	36	15	71
	180	45	M 22x2.5	22	7.5	30	41	41	17	78
	200	50	M 24x3	24	9	32	46	46	20	88
	250	60	M 30x3.5	30	10.5	36	56	55	22	94
JSC3	40	16	M 8x1.25	8	4	14	14	14	8	30
	50	20	M 10x1.5	10	5	16	18	17	8	34
	63	20	M 10x1.5	10	5	16	18	17	8	30
	80	25	M 12x1.75	12	5.5	18	22	22	11	43.5
	100	30	M 16x2	16	6	24	27	27	13	48
JSC4	125	35	M 18x2.5	18	7.5	26	32	30	14	55
	140	35	M 18x2.5	18	7.5	26	32	30	14	57
	160	40	M 20x2.5	20	7.5	28	36	36	16	71.5
	180	45	M 22x2.5	22	7.5	30	41	41	18	78.5
SSD	12	6	M 3x0.5	3	2	6	5	5	3.5	3.5
	16	8	M 4x0.7	4	2.5	8	7	6	3.5	3.5(8.5)
	20	10	M 5x0.8	5	2.5	7	8	8	4.5	4.5(9.5)
	25	12	M 6x1	6	3	12	10	10	5	5(10)
	32	16	M 8x1.25	8	4	13	14	14	7	7(12)
	40	16	M 8x1.25	8	4	13	14	14	7	7(12)
	50	20	M10x1.5	10	4.5	15	18	17	8	8(13)
	63	20	M10x1.5	10	4.5	15	18	17	8	8(13)
	80	25	M16x2	16	6	21	22	22	10	10(15)
	100	30	M20x2.5	20	7.5	27	27	27	12	12(17)
	125	35	M22x2.5	22	7.5	30	33	30	11	16
	140	35	M22x2.5	22	7.5	30	33	30	11	16
	160	40	M24x3	24	9	33	38	36	14	17
FCD	25	12	M 5x0.8	5	2.5	9	10	10	5	5
	32	16	M 6x1	6	3	11	14	14	7	7
	40	16	M 8x1.25	8	4	13	14	14	7	8
	50	20	M 8x1.25	8	4	13	18	17	8	9.5
	63	20	M10x1.5	10	5	15	18	17	8	9.5
SCM	20	8	M 4x0.7	4	2.5	8	7	6	4	17(9)
	25	10	M 5x0.8	5	2.5	10	8	8	5	18(10)
	32	12	M 6x1	6	3	10	10	10	5.5	18(10)
	40	16	M 8x1.25	8	4	14	14	14	6	20(9)
	50	20	M10x1.5	10	5	16	18	17	8	23(10)
	63	20	M10x1.5	10	5	16	18	17	8	23(10)
	80	25	M12x1.75	12	5.5	18	22	22	11	31
	100	30	M16x2	16	6	24	27	27	13	31

# Made-to-order product

Rod end female thread (pattern code "N11")

## Dimensions



\*1: "WF" is not listed in the MDC2 catalog. Dimensions of (O) should be regarded as "WF".

\*2: Y dimensions may be changed.

When manufacturing with dimensions listed on the dimensions table, indicate pattern code "N11".

When some dimensions must be changed, indicate the dimension code after the pattern code "N11", then indicate the designated dimensions.

Example SCM-00-40B-200-N11WF25

WF standard dimension is 20, but this is available at 25.

\*3: Dimensions of CMA2-E are shown in ( ).

\*4: Dimensions of SSD-G2/G3/KG2/KG3 are shown in ( ).

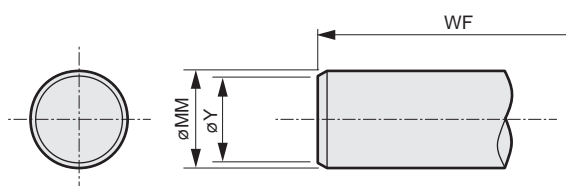
\*5: WF dimensions are different when selecting LB2 and FA of SSD. Contact CKD separately.

\*6: Dimensions of SCM-LD are shown in ( ).

\*7: Dimensions of CMK2-G2/G3 are shown in ( ).

Series	Bore size	øMM	KK	KL	øY	MN	MO	WF
CMK2	20	10	M 5x0.8	10	8	8	5	24
CKV2	25	12	M 6x1	10	10	10	5	23(28)
ULK	32	12	M 6x1	10	10	10	5	23(28)
	40	14	M 8x1.25	14	12	12	6	23(28)
CMA2	20	10	M 5x0.8	10	8	8	5	24(11)
JSM2	30	12	M 6x1	10	10	10	5	23(7)
*3	40	14	M 8x1.25	14	12	12	6	23(6)
SCG	32	12	M 6x1	10	10	10	5	25
SCG	40	16	M 8x1.25	14	14	14	6	21
JSG	50	20	M10x1.5	16	18	17	8	23
	63	20	M10x1.5	16	18	17	8	23
	80	25	M12x1.75	18	22	22	11	32
	100	30	M16x2	24	27	27	13	32
SCA2	40	16	M 8x1.25	14	14	14	8	33.5
	50	20	M10x1.5	16	18	17	8	37
	63	20	M10x1.5	16	18	17	8	35
	80	25	M12x1.75	18	22	22	11	48
	100	30	M16x2	24	27	27	13	53
SCS2	125	32	M18x2.5	26	29	27	14	65
	140	32	M18x2.5	26	29	27	14	67
	160	40	M20x2.5	28	36	36	15	71
	180	45	M22x2.5	30	41	41	17	78
	200	50	M24x3	32	46	46	20	88
	250	60	M30x3.5	36	56	55	22	94
JSC3	40	16	M 8x1.25	14	14	14	8	30
	50	20	M10x1.5	16	18	17	8	34
	63	20	M10x1.5	16	18	17	8	30
	80	25	M12x1.75	18	22	22	11	43.5
	100	30	M16x2	24	27	27	13	48
JSC4	125	35	M18x2.5	26	32	30	14	55
	140	35	M18x2.5	26	32	30	14	57
	160	40	M20x2.5	28	36	36	16	71.5
	180	45	M22x2.5	30	41	41	18	78.5
SSD	12	6	M 3x0.5	6	5	5	3.5	3.5
	16	8	M 4x0.7	8	7	6	3.5	3.5(8.5)
	20	10	M 5x0.8	7	8	8	4.5	4.5(9.5)
	25	12	M 6x1	12	10	10	5	5(10)
	32	16	M 8x1.25	13	14	14	7	7(12)
	40	16	M 8x1.25	13	14	14	7	7(12)
	50	20	M10x1.5	15	18	17	8	8(13)
	63	20	M10x1.5	15	18	17	8	8(13)
	80	25	M16x2	21	22	22	10	10(15)
	100	30	M20x2.5	27	27	27	12	12(17)
	125	35	M22x2.5	30	33	30	11	16
	140	35	M22x2.5	30	33	30	11	16
	160	40	M24x3	33	38	36	14	17
FCD	25	12	M 5x0.8	9	10	10	5	5
	32	16	M 6x1	11	14	14	7	7
	40	16	M 8x1.25	13	14	14	7	8
	50	20	M 8x1.25	13	18	17	8	9.5
	63	20	M10x1.5	15	18	17	8	9.5
SCM	20	8	M 4x0.7	8	7	6	4	17(9)
	25	10	M 5x0.8	10	8	8	5	18(10)
	32	12	M 6x1	10	10	10	5.5	18(10)
	40	16	M 8x1.25	14	14	14	6	20(9)
	50	20	M10x1.5	16	18	17	8	23(10)
	63	20	M10x1.5	16	18	17	8	23(10)
	80	25	M12x1.75	18	22	22	11	31
	100	30	M16x2	24	27	27	13	31
MDC2	6	4	M2.5x0.45	4	3.5	3.5	2.5	3
*1	8	5	M 3x0.5	5	4.5	4.5	2.5	3
	10	6	M 3x0.5	5	5	5	2.5	3

## Dimensions



\*1: "WF" is not listed in the SCP\*3 catalog. Dimensions of "13 mm" should be regarded as "WF".

\*2: SCP\*3-V is also the same.

\*3: For SSD-KU/SCM-U/SCA2-U (low friction cylinder), this pattern is not available.

\*4: "WF" is not listed in the MDC2 catalog. Dimensions of (O) should be regarded as "WF".

When manufacturing with dimensions listed on the dimensions table, indicate pattern code "N12".

When some dimensions must be changed, indicate the dimension code after the pattern code "N12", then indicate the designated dimensions.

Example

SCM-00-40B-200-N12WF25

WF standard dimension is 20, but this is available at 25.

\*5: Dimensions of CMA2-E are shown in ( ).

\*6: Dimensions of SSD-G2/G3/KG2/KG3 are shown in ( ).

\*7: WF dimensions are different when selecting LB2 and FA of SSD. Contact CKD separately.

\*8: Dimensions of SCM-LD are shown in ( ).

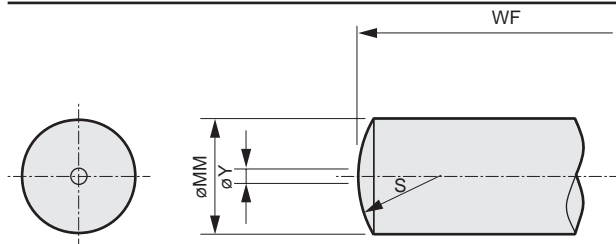
\*9: Dimensions of CMK2-G2/G3 are shown in ( ).

Series	Bore size	øMM	øY	WF
SCP*3 *1	6	3	2.5	13
	10	4	3.5	13
	16	5	4.5	13
CMK2	20	10	8	24
CKV2	25	12	10	23(28)
ULK	32	12	10	23(28)
*9	40	14	12	23(28)
CMA2	20	10	8	24(11)
JSM2	30	12	10	23(7)
*5	40	14	12	23(6)
SCG	32	12	10	25
SSG	40	16	14	21
	50	20	18	23
	63	20	18	23
	80	25	22	32
	100	30	27	32
SCA2	40	16	14	33.5
*3	50	20	18	37
	63	20	18	35
	80	25	22	48
	100	30	27	53
SCS2	125	32	29	65
	140	32	29	67
	160	40	36	71
	180	45	41	78
	200	50	46	88
	250	60	56	94
JSC3	40	16	14	30
	50	20	18	34
	63	20	18	30
	80	25	22	43.5
	100	30	27	48
JSC4	125	35	32	55
	140	35	32	57
	160	40	36	71.5
	180	45	41	78.5
SCP*3-V	10	4	3.5	13
*2	16	5	4.5	13
SSD	12	6	5	3.5
*3	16	8	7	3.5(8.5)
	20	10	8	4.5(9.5)
	25	12	10	5(10)
	32	16	14	7(12)
	40	16	14	7(12)
	50	20	18	8(13)
	63	20	18	8(13)
	80	25	22	10(15)
	100	30	27	12(17)
	125	35	33	16
	140	35	33	16
	160	40	38	17
FCD	25	12	10	5
	32	16	14	7
	40	16	14	8
	50	20	18	9.5
	63	20	18	9.5
SCM	20	8	7	17(9)
*3	25	10	8	18(10)
	32	12	10	18(10)
	40	16	14	20(9)
	50	20	18	23(10)
	63	20	18	23(10)
	80	25	22	31
	100	30	27	31
MDC2	4	2	1.5	3
*4	6	4	3.5	3
	8	5	4.5	3
	10	6	5	3

# Made-to-order product

Rod end sphere R (pattern code "N14")

## Dimensions



\*1: "WF" is not listed in the SCP\*3 catalog. Dimensions of "13 mm" should be regarded as "WF".

\*2: SCP\*3-V is also the same.

\*3: For SSD-KU/SCM-U/SCA2-U (low friction cylinder), this pattern is not available.

When manufacturing with dimensions listed on the dimensions table, indicate pattern code "N14".

When some dimensions must be changed, indicate the dimension code after the pattern code "N14", then indicate the designated dimensions.

Example SCM-00-40B-200-N14WF25

WF standard dimension is 20, but this is available at 25.

\*4: Dimensions of SSD-G2/G3/KG2/KG3 are shown in ( ).

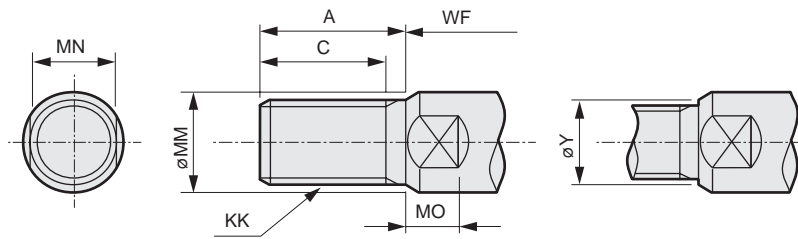
\*5: WF dimensions are different when selecting LB2 and FA of SSD. Contact CKD separately.

\*6: Dimensions of SCM-LD are shown in ( ).

\*7: Dimensions of CMK2-G2/G3 are shown in ( ).

Series	Bore size	øMM	øY	S	WF
SCP*3	6	3	0.3	3	13
*1	10	4	0.3	4	13
	16	5	0.3	5	13
CMK2	20	10	0.5	10	24
CKV2	25	12	0.5	12	23(28)
ULK	32	12	0.5	12	23(28)
*7	40	14	0.5	14	23(28)
SCG	32	12	0.5	12	25
SCG	40	16	1	16	21
JSG	50	20	1	20	23
	63	20	1	20	23
	80	25	1	25	32
	100	30	1	30	32
SCA2	40	16	1	16	33.5
	50	20	1	20	37
	63	20	1	20	35
	80	25	1	25	48
	100	30	1	30	53
SCS2	125	32	2	32	65
	140	32	2	32	67
	160	40	2	40	71
	180	45	2	45	78
	200	50	2	50	88
	250	60	2	60	94
JSC3	40	16	1	16	30
	50	20	1	20	34
	63	20	1	20	30
	80	25	1	25	43.5
	100	30	1	30	48
JSC4	125	35	2	35	55
	140	35	2	35	57
	160	40	2	40	71.5
	180	45	2	45	78.5
SCP*3-V	10	4	0.3	4	13
*2	16	5	0.3	5	13
SSD	12	6	0.5	6	3.5
*3	16	8	0.5	8	3.5(8.5)
	20	10	0.5	10	4.5(9.5)
	25	12	0.5	12	5(10)
	32	16	1	16	7(12)
	40	16	1	16	7(12)
	50	20	1	20	8(13)
	63	20	1	20	8(13)
	80	25	1	25	10(15)
	100	30	1	30	12(17)
	125	35	2	35	16
	140	35	2	35	16
	160	40	2	40	17
SCM	20	8	0.5	8	17(9)
*3	25	10	0.5	10	18(10)
	32	12	0.5	12	18(10)
	40	16	1	16	20(9)
	50	20	1	20	23(10)
	63	20	1	20	23(10)
	80	25	1	25	31
	100	30	1	30	31

### Dimensions



- \*1: The "WF" is not listed in the SCP\*3 catalog. Dimensions of "13mm" should be regarded as "WF".
- \*2: SCP\*3-V is also the same.
- \*3: When thread size is specified, an end nut is not attached. Y dimensions may be changed.

When manufacturing with dimensions listed on the dimensions table, indicate pattern code "N13". When some dimensions must be changed, indicate the dimension code after the pattern code "N13", then indicate the designated dimensions.

Example SCM-00-40B-200-N13A23WF27

This is available at 27 instead of WF standard dimension of 20, and 23 instead of A standard dimension of 30. When C dimension is not specified, the product is manufactured with standard differential dimension of (A-C).

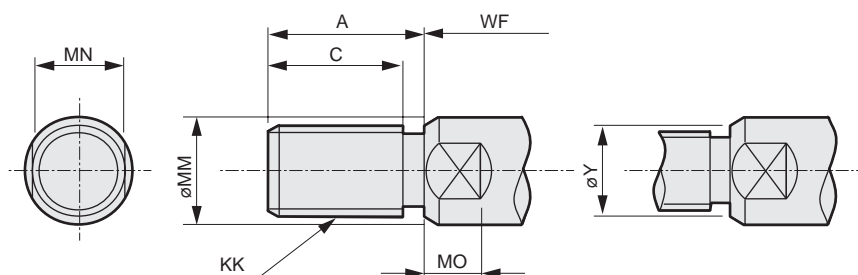
- \*4: CMA2-E is indicated with dimensions in ( ).
- \*5: SSD-G2/G3/KG2/KG3 is the dimensions in ( ).
- \*6: WF dimensions are different when selecting LB2 and FA of SSD. Contact CKD separately.
- \*7: Dimensions of SCM-LD are shown in ( ).
- \*8: CMK2-G2/G3 is the dimensions in ( ).

Series	Bore size	øMM	KK	C	A	øY	MN	MO	WF
SCP*3 *1	6	3	M 3 x 0.5	15	-	-	-	-	13
	10	4	M 4 x 0.7	15	-	-	-	-	13
	16	5	M 5 x 0.8	15	-	-	-	-	13
CMK2 CKV2 ULK *8	20	10	M 8 x 1	18	20	8	8	5	24
	25	12	M 10 x 1.25	20	23	10	10	5	23 (28)
	32	12	M 10 x 1.25	20	23	10	10	5	23 (28)
	40	14	M 12 x 1.5	22	25	12	12	6	23 (28)
CMA2 JSM2 *4	20	10	M 8 x 1	18	20	8	8	5	24 (11)
	30	12	M 10 x 1.25	20	23	10	10	5	23 (7)
	40	14	M 12 x 1.5	22	25	12	12	6	23 (6)
SCG SCG JSG	32	12	M 10 x 1.25	19.5	22	10	10	5.5	25
	40	16	M 14 x 1.5	27	30	14	14	6	21
	50	20	M 18 x 1.5	32	35	18	17	8	23
	63	20	M 18 x 1.5	32	35	18	17	8	23
SCA2	80	25	M 22 x 1.5	37	40	22	22	11	32
	100	30	M 26 x 1.5	37	40	26	27	13	32
	40	16	M 14 x 1.5	20	22	14	14	8	33.5
	50	20	M 18 x 1.5	26	28	18	17	8	37
	63	20	M 18 x 1.5	26	28	18	17	8	35
SCS2	80	25	M 22 x 1.5	34	36	22	22	11	48
	100	30	M 26 x 1.5	43	45	26	27	13	53
	125	32	M 30 x 1.5	47	50	30	27	14	65
	140	32	M 30 x 1.5	47	50	30	27	14	67
	160	40	M 36 x 1.5	53	56	36	36	15	71
JSC3	180	45	M 40 x 1.5	60	63	40	41	17	78
	200	50	M 45 x 1.5	69	72	45	46	20	88
	250	60	M 56 x 2	84	88	56	55	22	94
	40	16	M 14 x 1.5	20	22	14	14	8	30
	50	20	M 18 x 1.5	26	28	18	17	8	34
JSC4	63	20	M 18 x 1.5	26	28	18	17	8	30
	80	25	M 22 x 1.5	34	36	22	22	11	43.5
	100	30	M 26 x 1.5	43	45	26	27	13	48
	125	35	M 30 x 1.5	47	50	30	30	14	55
	140	35	M 30 x 1.5	47	50	30	30	14	57
SCP*3-V *2	160	40	M 36 x 1.5	53	56	36	36	16	71.5
	180	45	M 40 x 1.5	60	63	40	41	18	78.5
	10	4	M 4 x 0.7	15	-	-	-	-	13
	16	5	M 5 x 0.8	15	-	-	-	-	13
	12	6	M 5 x 0.8	9	10.5	5	5	3.5	3.5
SSD	16	8	M 6 x 1	10	12	6	6	3.5	3.5 (8.5)
	20	10	M 8 x 1.25	12	14	8	8	4.5	4.5 (9.5)
	25	12	M 10 x 1.25	15	17.5	10	10	5	5 (10)
	32	16	M 14 x 1.5	20.5	23.5	14	14	5	5 (10)
	40	16	M 14 x 1.5	20.5	23.5	14	14	5	5 (10)
	50	20	M 18 x 1.5	26	28.5	18	17	5	5 (10)
	63	20	M 18 x 1.5	26	28.5	18	17	5	5 (10)
	80	25	M 22 x 1.5	32.5	35.5	22	22	8	8 (13)
	100	30	M 26 x 1.5	32.5	35.5	26	27	8	8 (13)
	125	35	M 30 x 1.5	42	45	30	30	11	13
	140	35	M 30 x 1.5	42	45	30	30	11	13
	160	40	M 36 x 1.5	47	50	36	36	11	14
FCD	25	12	M 10 x 1.25	20	22	10	10	4	5
	32	16	M 14 x 1.5	20	22	14	14	6	7
	40	16	M 14 x 1.5	20	22	14	14	6	7
	50	20	M 18 x 1.5	26	28	18	17	8	8
	63	20	M 18 x 1.5	26	28	18	17	8	8
SCM	20	8	M 8 x 1.25	16	18	-	6	4	17 (9)
	25	10	M 10 x 1.25	20	22	-	8	5	18 (10)
	32	12	M 10 x 1.25	20	22	10	10	5.5	18 (10)
	40	16	M 14 x 1.5	27	30	14	14	6	20 (9)
	50	20	M 18 x 1.5	32	35	18	17	8	23 (10)
	63	20	M 18 x 1.5	32	35	18	17	8	23 (10)
	80	25	M 22 x 1.5	37	40	22	22	11	31
	100	30	M 26 x 1.5	37	40	26	27	13	31
MDC2 *3	6	4	M 3 x 0.5	6	8	3.5	3.5	2.5	3
	8	5	M 4 x 0.7	7	9	4.5	4.5	2.5	3
	10	6	M 5 x 0.8	9	11	5	5	2.5	3

# Made-to-order product

Rod end male thread (with recess) (pattern code "N15")

## Dimensions



\*1: When thread size is specified, an end nut is not attached. Y dimensions may be changed.

When manufacturing with dimensions listed on the dimensions table, indicate pattern code "N15". When some dimensions must be changed, indicate the dimension code after the pattern code "N15", then indicate the designated dimensions.

Example SCM-00-40B-200-N15C20A23

This is available at 20 instead of C standard dimension of 27, and 23 instead of A standard dimension of 30. When C dimension is not specified, the product is manufactured with standard

Available with differential dimension of (A-C).

\*2: CMA2-E is indicated with dimensions in ( ).

\*3: SSD-G2/G3/KG2/KG3 is the dimensions in ( ).

\*4: WF dimensions are different when selecting LB2 and FA of SSD. Contact CKD separately.

\*5: Dimensions of SCM-LD are shown in ( ).

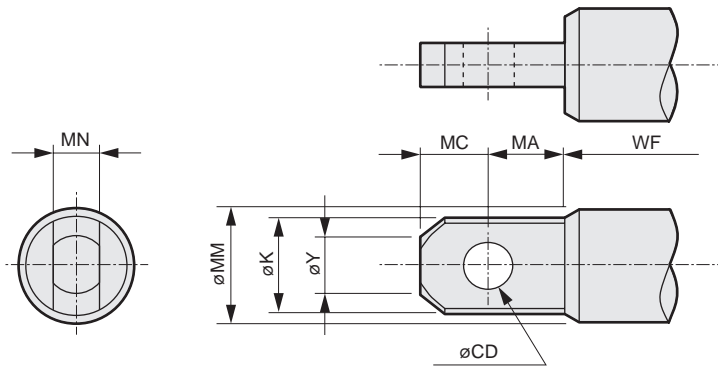
\*6: CMK2-G2/G3 is the dimensions in ( ).

Series	Bore size	øMM	KK	C	A	øY	MN	MO	WF
CMK2	20	10	M 8 x 1	18	20	8	8	5	24
CKV2	25	12	M 10 x 1.25	20	23	10	10	5	23 (28)
ULK	32	12	M 10 x 1.25	20	23	10	10	5	23 (28)
*6	40	14	M 12 x 1.5	22	25	12	12	6	23 (28)
CMA2	20	10	M 8 x 1	18	20	8	8	5	24 (11)
JSM2	30	12	M 10 x 1.25	20	23	10	10	5	23 (7)
*2	40	14	M 12 x 1.5	22	25	12	12	6	23 (6)
SCG	32	12	M 10 x 1.25	19.5	22	10	10	5	25
SCG	40	16	M 14 x 1.5	27	30	14	14	6	21
JSG	50	20	M 18 x 1.5	32	35	18	17	8	23
	63	20	M 18 x 1.5	32	35	18	17	8	23
	80	25	M 22 x 1.5	37	40	22	22	11	32
	100	30	M 26 x 1.5	37	40	26	27	13	32
SCA2	40	16	M 14 x 1.5	20	22	14	14	8	33.5
	50	20	M 18 x 1.5	26	28	18	17	8	37
	63	20	M 18 x 1.5	26	28	18	17	8	35
	80	25	M 22 x 1.5	34	36	22	22	11	48
	100	30	M 26 x 1.5	43	45	26	27	13	53
SCS2	125	32	M 30 x 1.5	47	50	30	27	14	65
	140	32	M 30 x 1.5	47	50	30	27	14	67
	160	40	M 36 x 1.5	53	56	36	36	15	71
	180	45	M 40 x 1.5	60	63	40	41	17	78
	200	50	M 45 x 1.5	69	72	45	46	20	88
	250	60	M 56 x 2	84	88	56	55	22	94
JSC3	40	16	M 14 x 1.5	20	22	14	14	8	30
	50	20	M 18 x 1.5	26	28	18	17	8	34
	63	20	M 18 x 1.5	26	28	18	17	8	30
	80	25	M 22 x 1.5	34	36	22	22	11	43.5
	100	30	M 26 x 1.5	43	45	26	27	13	48
JSC4	125	35	M 30 x 1.5	47	50	30	30	14	55
	140	35	M 30 x 1.5	47	50	30	30	14	57
	160	40	M 36 x 1.5	53	56	36	36	16	71.5
	180	45	M 40 x 1.5	60	63	40	41	18	78.5
SSD	12	6	M 5 x 0.8	9	10.5	5	5	3.5	3.5
	16	8	M 6 x 1	10	12	6	6	3.5	3.5 (8.5)
	20	10	M 8 x 1.25	12	14	8	8	4.5	4.5 (9.5)
	25	12	M 10 x 1.25	15	17.5	10	10	5	5 (10)
	32	16	M 14 x 1.5	20.5	23.5	14	14	5	5 (10)
	40	16	M 14 x 1.5	20.5	23.5	14	14	5	5 (10)
	50	20	M 18 x 1.5	26	28.5	18	17	5	5 (10)
	63	20	M 18 x 1.5	26	28.5	18	17	5	5 (10)
	80	25	M 22 x 1.5	32.5	35.5	22	22	8	8 (13)
	100	30	M 26 x 1.5	32.5	35.5	26	27	8	8 (13)
	125	35	M 30 x 1.5	42	45	30	30	11	13
	140	35	M 30 x 1.5	42	45	30	30	11	13
	160	40	M 36 x 1.5	47	50	36	36	11	14
FCD	25	12	M 10 x 1.25	20	22	10	10	4	5
	32	16	M 14 x 1.5	20	22	14	14	6	7
	40	16	M 14 x 1.5	20	22	14	14	6	7
	50	20	M 18 x 1.5	26	28	18	17	8	8
	63	20	M 18 x 1.5	26	28	18	17	8	8
SCM	20	8	-	-	-	-	-	-	-
	25	10	-	-	-	-	-	-	-
	32	12	M 10 x 1.25	20	22	10	10	5.5	18 (10)
	40	16	M 14 x 1.5	27	30	14	14	6	20 (9)
	50	20	M 18 x 1.5	32	35	18	17	8	23 (10)
	63	20	M 18 x 1.5	32	35	18	17	8	23 (10)
	80	25	M 22 x 1.5	37	40	22	22	11	31
	100	30	M 26 x 1.5	37	40	26	27	13	31

Ending



### Dimensions



#### Tolerance

Code	Dimensions	Tolerance
CD	Tolerances at right are used uniformly regardless of dimensions	H10
MN	10 or less	-0.1 -0.2
	10< ≤30	-0.1 -0.3
	30< ≤80	-0.1 -0.4

When manufacturing with dimensions listed on the dimensions table, indicate pattern code "N2".

When some dimensions must be changed, indicate the dimension code after the pattern code "N2", then indicate the designated dimensions.

Example: SCM-00-40B-200-N2CD5MA7.5

CD standard dimension is 6, but this is available at 5.

MA standard dimension is 9, but this is manufactured at 7.5.

\*1: Dimensions of SSD-G2/G3/KG2/KG3 are shown in ( ).

\*2: WF dimensions are different when selecting LB2 and FA of SSD. Contact CKD separately.

\*3: Dimensions of SCM-LD are shown in ( ).

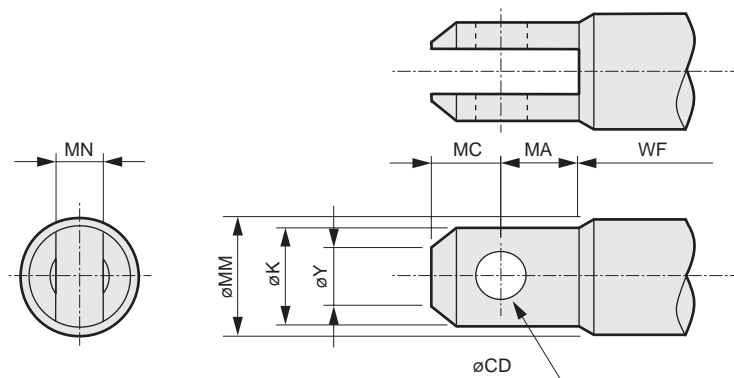
\*4: Dimensions of CMK2-G2/G3 are shown in ( ).

Series	Bore size	øMM	øCD	MN	MA	MC	øY	øK	WF
CMK2	20	10	4	4	6	4	5.4	9	24
CKV2	25	12	5	5	7.5	5	6.6	11	23(28)
ULK	32	12	5	5	7.5	5	6.6	11	23(28)
*4	40	14	6	6	9	6	7.8	13	23(28)
SCG	32	12	5	5	7.5	5	6.6	11	25
SCG	40	16	6	6	9	6	9	15	21
JSG	50	20	8	8	12	8	11.4	19	23
	63	20	8	8	12	8	11.4	19	23
	80	25	10	10	15	10	14.4	24	32
	100	30	12	12	18	12	17.4	29	32
SCA2	40	16	6	6	9	6	9	15	33.5
	50	20	8	8	12	8	11.4	19	37
	63	20	8	8	12	8	11.4	19	35
	80	25	10	10	15	10	14.4	24	48
	100	30	12	12	18	12	17.4	29	53
SCS2	125	32	14	14	21	14	19.8	30	65
	140	32	14	14	21	14	19.8	30	67
	160	40	16	16	24	16	22.8	38	71
	180	45	18	18	27	18	25.8	43	78
	200	50	20	20	30	20	28.8	48	88
	250	60	24	24	36	24	34.8	58	94
JSC3	40	16	6	6	9	6	9	15	30
	50	20	8	8	12	8	11.4	19	34
	63	20	8	8	12	8	11.4	19	30
	80	25	10	10	15	10	14.4	24	43.5
	100	30	12	12	18	12	17.4	29	48
JSC4	125	35	14	14	21	14	19.8	33	55
	140	35	14	14	21	14	19.8	33	57
	160	40	16	16	24	16	22.8	38	71.5
	180	45	18	18	27	18	25.8	43	78.5
SSD	12	6	-	-	-	-	-	-	-
	16	8	-	-	-	-	-	-	-
	20	10	4	4	6	4	5.4	9	4.5(9.5)
	25	12	5	5	7.5	5	6.6	11	5(10)
	32	16	6	6	9	6	9	15	5(10)
	40	16	6	6	9	6	9	15	5(10)
	50	20	8	8	12	8	11.4	19	5(10)
	63	20	8	8	12	8	11.4	19	5(13)
	80	25	10	10	15	10	14.4	24	8(13)
	100	30	12	12	18	12	17.4	29	8(13)
	125	35	14	14	21	14	19.8	33	13
	140	35	14	14	21	14	19.8	33	13
	160	40	16	16	24	16	22.8	38	14
SCM	20	8	-	-	-	-	-	-	-
	25	10	4	4	6	4	5.4	9	18(10)
	32	12	5	5	7.5	5	6.6	11	18(10)
	40	16	6	6	9	6	9	15	20(9)
	50	20	8	8	12	8	11.4	19	23(10)
	63	20	8	8	12	8	11.4	19	23(10)
	80	25	10	10	15	10	14.4	24	31
	100	30	12	12	18	12	17.4	29	31

# Made-to-order product

Rod end clevis shape (pattern code "N21")

## Dimensions



### Tolerance

Code	Dimensions	Tolerance
CD	Tolerances at right are used uniformly, regardless of dimensions	H10
MN	10 or less	+0.2 +0.1
	10< ≤30	+0.3 +0.1
	30< ≤80	+0.4 +0.1

When manufacturing with dimensions listed on the dimensions table, indicate pattern code "N21".

When some dimensions must be changed, indicate the dimension code after the pattern code "N21", then indicate the designated dimensions.

Example: SCM-00-40B-200-N21CD5MA7.5

CD standard dimension is 6, but this is available at 5.

MA standard dimension is 9, but this is manufactured at 7.5.

\*1: Dimensions of SSD-G2/G3/KG2/KG3 are shown in ( ).

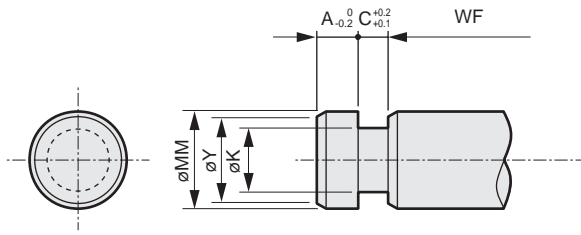
\*2: WF dimensions are different when selecting LB2 and FA of SSD. Contact CKD separately.

\*3: Dimensions of SCM-LD are shown in ( ).

\*4: Dimensions of CMK2-G2/G3 are shown in ( ).

Series	Bore size	øMM	øCD	MN	MA	MC	øY	øK	WF
CMK2	20	10	4	4	6	4	5.4	9	24
CKV2	25	12	5	5	7.5	5	6.6	11	23(28)
ULK	32	12	5	5	7.5	5	6.6	11	23(28)
*4	40	14	6	6	9	6	7.8	13	23(28)
SCG	32	12	5	5	7.5	5	6.6	11	25
SCG	40	16	6	6	9	6	9	15	21
JSG	50	20	8	8	12	8	11.4	19	23
	63	20	8	8	12	8	11.4	19	23
	80	25	10	10	15	10	14.4	24	32
	100	30	12	12	18	12	17.4	29	32
SCA2	40	16	6	6	9	6	9	15	33.5
	50	20	8	8	12	8	11.4	19	37
	63	20	8	8	12	8	11.4	19	35
	80	25	10	10	15	10	14.4	24	48
	100	30	12	12	18	12	17.4	29	53
SCS2	125	32	14	14	21	14	19.8	30	65
	140	32	14	14	21	14	19.8	30	67
	160	40	16	16	24	16	22.8	38	71
	180	45	18	18	27	18	25.8	43	78
	200	50	20	20	30	20	28.8	48	88
	250	60	24	24	36	24	34.8	58	94
JSC3	40	16	6	6	9	6	9	15	30
	50	20	8	8	12	8	11.4	19	34
	63	20	8	8	12	8	11.4	19	30
	80	25	10	10	15	10	14.4	24	43.5
	100	30	12	12	18	12	17.4	29	48
JSC4	125	35	14	14	21	14	19.8	33	55
	140	35	14	14	21	14	19.8	33	57
	160	40	16	16	24	16	22.8	38	71.5
	180	45	18	18	27	18	25.8	43	78.5
SSD	12	6	-	-	-	-	-	-	-
	16	8	-	-	-	-	-	-	-
	20	10	4	4	6	4	5.4	9	4.5(9.5)
	25	12	5	5	7.5	5	6.6	11	5(10)
	32	16	6	6	9	6	9	15	5(10)
	40	16	6	6	9	6	9	15	5(10)
	50	20	8	8	12	8	11.4	19	5(10)
	63	20	8	8	12	8	11.4	19	5(10)
	80	25	10	10	15	10	14.4	24	8(13)
	100	30	12	12	18	12	17.4	29	8(13)
	125	35	14	14	21	14	19.8	33	13
	140	35	14	14	21	14	19.8	33	13
	160	40	16	16	24	16	22.8	38	14
SCM	20	8	-	-	-	-	-	-	-
	25	10	4	4	6	4	5.4	9	18(10)
	32	12	5	5	7.5	5	6.6	1	18(10)
	40	16	6	6	9	6	9	15	20(9)
	50	20	8	8	12	8	11.4	19	23(10)
	63	20	8	8	12	8	11.4	19	23(10)
	80	25	10	10	15	10	14.4	24	31
	100	30	12	12	18	12	17.4	29	31

## Dimensions



When manufacturing with dimensions listed on the dimensions table, indicate pattern code "N3".  
When some dimensions must be changed, indicate the dimension code after the pattern code "N3", then indicate the designated dimensions.

Example: SCM-00-40B-200-N3WF25

WF standard dimension is 20, but this is available at 25.

\*1: Dimensions of SSD-G2/G3/KG2/KG3 are shown in ( ).

\*2: WF dimensions are different when selecting LB2 and FA of SSD. Contact CKD separately.

\*3: Dimensions of SCM-LD are shown in ( ).

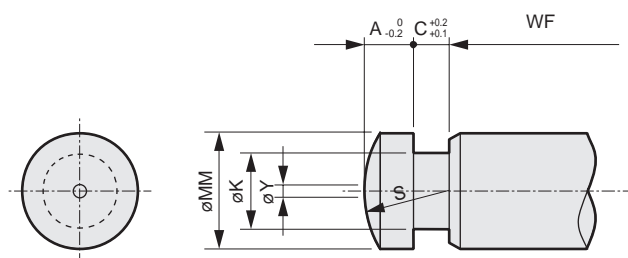
\*4: Dimensions of CMK2-G2/G3 are shown in ( ).

Series	Bore size	øMM	øK	C	A	øY	WF
CMK2	20	10	6	4	4	8	24
CKV2	25	12	7.2	4.8	4.8	10	23(28)
ULK	32	12	7.2	4.8	4.8	10	23(28)
*4	40	14	8.4	5.6	5.6	12	23(28)
SCG	32	12	7.2	4.8	4.8	10	25
SCG	40	16	9.6	6.4	6.4	14	21
JSG	50	20	12	8	8	18	23
	63	20	12	8	8	18	23
	80	25	15	10	10	22	32
	100	30	18	12	12	27	32
SCA2	40	16	9.6	6.4	6.4	14	33.5
	50	20	12	8	8	18	37
	63	20	12	8	8	18	35
	80	25	15	10	10	22	48
	100	30	18	12	12	27	53
SCS2	125	32	21	14	14	29	65
	140	32	21	14	14	29	67
	160	40	24	16	16	36	71
	180	45	27	18	18	41	78
	200	50	30	20	20	46	88
	250	60	36	22	22	56	94
JSC3	40	16	9.6	6.4	6.4	14	30
	50	20	12	8	8	18	34
	63	20	12	8	8	18	30
	80	25	15	10	10	22	43.5
	100	30	18	12	12	27	48
JSC4	125	35	21	14	14	32	55
	140	35	21	14	14	32	57
	160	40	24	16	16	36	71.5
	180	45	27	18	18	41	78.5
SSD	12	6	-	-	-	-	-
	16	8	-	-	-	-	-
	20	10	6	4	4	8	4.5(9.5)
	25	12	7.2	4.8	4.8	10	5(10)
	32	16	9.6	6.4	6.4	14	7(12)
	40	16	9.6	6.4	6.4	14	7(12)
	50	20	12	8	8	18	8(13)
	63	20	12	8	8	18	8(13)
	80	25	15	10	10	22	10(15)
	100	30	18	12	12	27	12(17)
	125	35	21	14	14	33	16
	140	35	21	14	14	33	16
	160	40	24	16	16	38	17
SCM	20	8	-	-	-	-	-
	25	10	6	4	4	8	18(10)
	32	12	7.2	4.8	4.8	10	18(10)
	40	16	9.6	6.4	6.4	14	20(9)
	50	20	12	8	8	18	23(10)
	63	20	12	8	8	18	23(10)
	80	25	15	10	10	22	31
	100	30	18	12	12	27	31

# Made-to-order product

Rod end with groove sphere R (pattern code "N31")

## Dimensions



When manufacturing with dimensions listed on the dimensions table, indicate pattern code "N31".  
When some dimensions must be changed, indicate the dimension code after the pattern code "N31", then indicate the designated dimensions.

Example SCM-00-40B-200-N31WF25

WF standard dimension is 20, but this is available at 25.

\*1: Dimensions of SSD-G2/G3/KG2/KG3 are shown in ( ).

\*2: WF dimensions are different when selecting LB2 and FA of SSD. Contact CKD separately.

\*3: Dimensions of SCM-LD are shown in ( ).

\*4: Dimensions of CMK2-G2/G3 are shown in ( ).

Series	Bore size	øMM	øK	C	A	S	øY	WF
CMK2	20	10	6	4	4	10	0.5	24
CKV2	25	12	7.2	4.8	4.8	12	0.5	23(28)
ULK	32	12	7.2	4.8	4.8	12	0.5	23(28)
*4	40	14	8.4	5.6	5.6	14	0.5	23(28)
SCG	32	12	7.2	4.8	4.8	12	0.5	25
SCG	40	16	9.6	6.4	6.4	16	1	21
JSG	50	20	12	8	8	20	1	23
	63	20	12	8	8	20	1	23
	80	25	15	10	10	25	1	32
	100	30	18	12	12	30	1	32
SCA2	40	16	9.6	6.4	6.4	16	1	33.5
	50	20	12	8	8	20	1	37
	63	20	12	8	8	20	1	35
	80	25	15	10	10	25	1	48
	100	30	18	12	12	30	1	53
SCS2	125	32	21	14	14	32	1	65
	140	32	21	14	14	32	2	67
	160	40	24	16	16	40	2	71
	180	45	27	18	18	45	2	78
	200	50	30	20	20	50	2	88
	250	60	36	22	22	60	2	94
JSC3	40	16	9.6	6.4	6.4	16	1	30
	50	20	12	8	8	20	1	34
	63	20	12	8	8	20	1	30
	80	25	15	10	10	25	1	43.5
	100	30	18	12	12	30	1	48
JSC4	125	35	21	14	14	35	1	55
	140	35	21	14	14	35	2	57
	160	40	24	16	16	40	2	71.5
	180	45	27	18	18	45	2	78.5
SSD	12	6	-	-	-	-	-	-
	16	8	-	-	-	-	-	-
	20	10	6	4	4	10	0.5	4.5(9.5)
	25	12	7.2	4.8	4.8	12	0.5	5(10)
	32	16	9.6	6.4	6.4	16	1	7(12)
	40	16	9.6	6.4	6.4	16	1	7(12)
	50	20	12	8	8	20	1	8(13)
	63	20	12	8	8	20	1	8(13)
	80	25	15	10	10	25	1	10(15)
	100	30	18	12	12	30	1	12(17)
	125	35	21	14	14	35	2	16
	140	35	21	14	14	35	2	16
	160	40	24	16	16	40	2	17
SCM	20	8	-	-	-	-	-	-
	25	10	6	4	4	10	0.5	18(10)
	32	12	7.2	4.8	4.8	12	0.5	18(10)
	40	16	9.6	6.4	6.4	16	1	20(9)
	50	20	12	8	8	20	1	23(10)
	63	20	12	8	8	20	1	23(10)
	80	25	15	10	10	25	1	31
	100	30	18	12	12	30	1	31



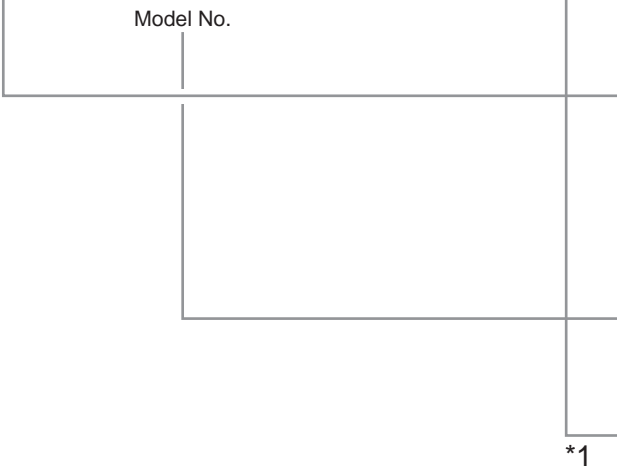
Made-to-order product

Port/cushion needle position specification (-XR\*\*\*\*)

Content: Specify the port and cushion needle positions.

How to order

SCA2 - 00 - 40 B - 100 - XR 1334



Compatible model	
Model No.	Name
SCA2	Medium bore size cylinder
SCS2	Large bore size cylinder

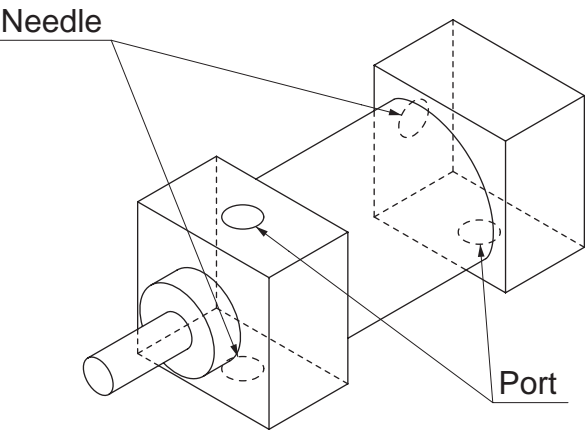
Model No.	
Refer to How to order for each model.	

Port/cushion needle position	
1	
2	
3	
4	

Precautions for model No. selection

- \*1: The numbers indicate, in order, the port position on rod side, the needle position on rod side, the port position on head side and the needle position on head side. Numbering is as viewed from the piston rod side.
- \*2: Combination in which port and needle position are on the same side is not available for SCA2.

Outline drawing



■ Downsized port (-XF)

Content: Reduce the port size to the next size down from standard. (Using bushing)

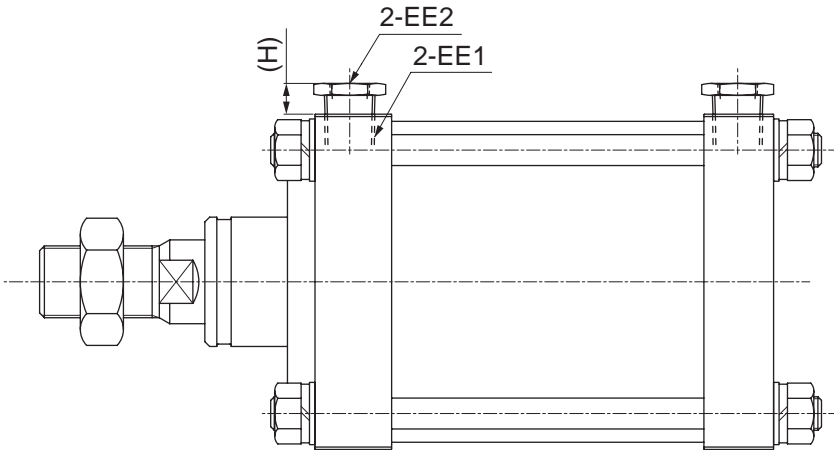
How to order

SCS2 - 00 - 125 B - 100 - XF

Model No.

Compatible model	
Model No.	Name
SCS2	Large bore size cylinder
Model No.	
Refer to How to order for each model.	

Dimensions



Bore size	EE1	EE2	H
ø125	Rc1/2	Rc3/8	13
ø140	Rc3/4	Rc1/2	15
ø160			
ø180			
ø200	Rc1	Rc3/4	14
ø250			

Made-to-order product

■ Rotating assembly mounting bracket (-XK\*)

Content: Specify the mounting bracket mounting position.

How to order

SCA2 - 00 - 40 B - 100 - XK1

Model No.

Compatible model	
Model No.	Name
SCA2	Medium bore size cylinder
SCG	Tie rod cylinder
SCS2	Large bore size cylinder
JSC3	Brake cylinder
JSG	Tie rod cylinder with brake
JSC4	Brake cylinder

Model No.
Refer to How to order for each model.

Mounting bracket installation position	
XK1	The mounting bracket is rotated 90° clockwise.
XK2	The mounting bracket is rotated 180° clockwise.
XK3	The mounting bracket is rotated 270° clockwise.

⚠ Precautions for model No. selection

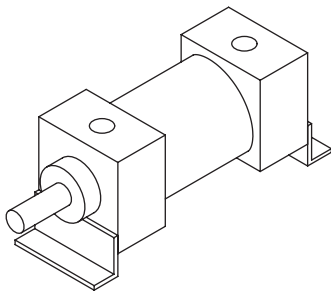
\*1: Only XK1 (90° rotation) is available for flange and trunnion.

\*1

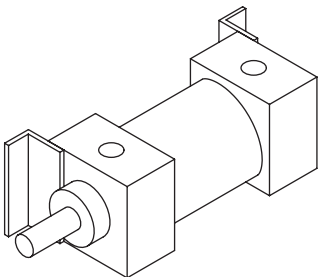
Outline drawing

\* The port and cushion needle positions remain the same.

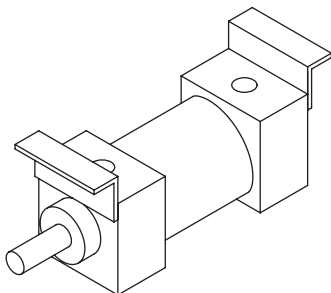
● Basic



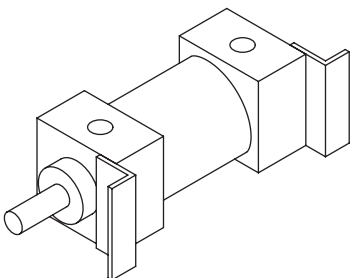
● K1



● K2



● K3





### Specifying trunnion position (-XAQ\*\*)

Content: Specify the length between the end face of rod cover and the center of trunnion shaft.

How to order

**SCA2** - **TC** - **40** **B** - **100** - **XAQ** **130**

Model No.

#### Compatible model

Model No.	Name
<b>SCG</b>	Tie rod cylinder
<b>SCA2</b>	Medium bore size cylinder
<b>SCS2</b>	Large bore size cylinder
<b>CAV2</b>	Cylinder with valve
<b>COV*2</b>	Cylinder with valve
<b>JSG</b>	Tie rod cylinder with brake
<b>JSC3/JSC4</b>	Brake cylinder

#### Model No.

Refer to How to order for each model.

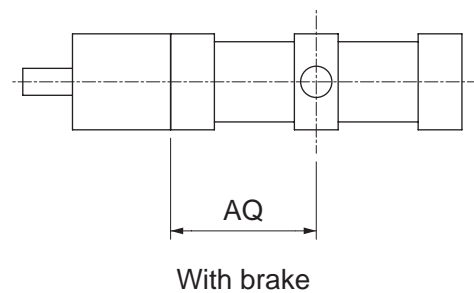
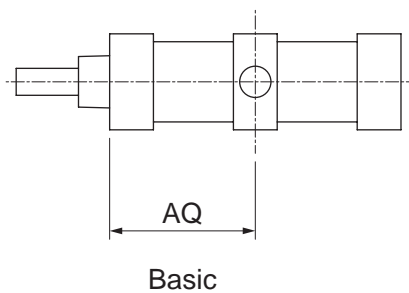
#### Made-to-order dimensions

Refer to the dimensions list.

#### ⚠ Precautions for model No. selection

- \*1: Reference point for cylinder with brake is also the rod cover.  
(Note that it is not the brake end face.)
- \*2: As for the 2-stage and back to back, contact CKD separately.

### Outline drawing



# Made-to-order product

## ■ Rod eye pin/clevis pin split pin (-XP5)

Content: Change the snap ring of rod eye pin and clevis pin to the split pin.

How to order

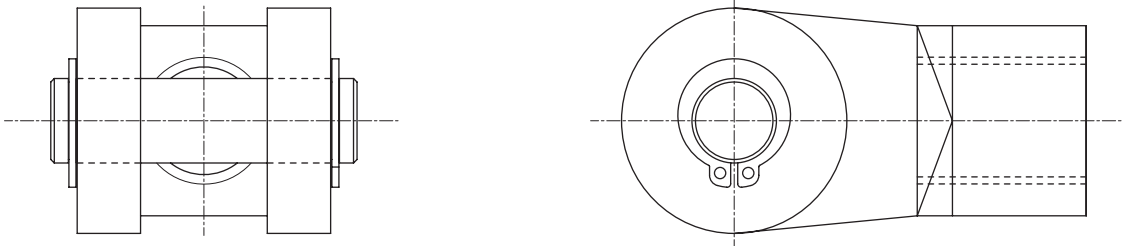
SCA2 - 00 - 40 B - 100 - Y - XP5

Model No.

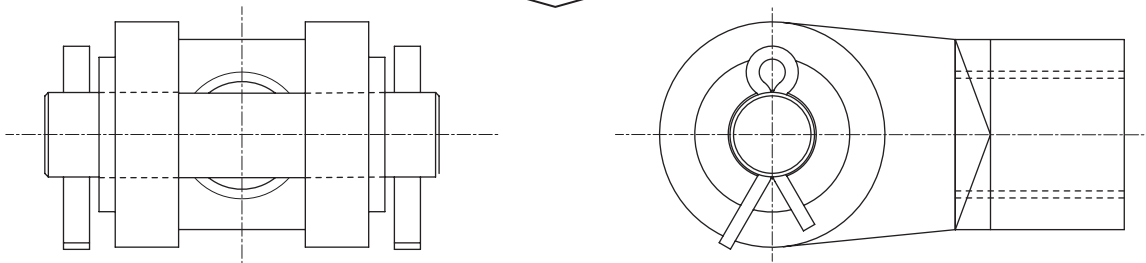
Compatible model	
Model No.	Name
SCM	Round shaped cylinder
SCA2	Medium bore size cylinder
SCS2	Large bore size cylinder
SSD2	Compact cylinder
SSD	Compact cylinder
JSC3/JSC4	Brake cylinder
Model No.	
Refer to How to order for each model.	

## Outline drawing

● Snap ring



● Split pin



Pin diameter	Split pin size
12	ø4x20
14	ø4x20
20	ø4x25
25	ø4x30
28	ø5x35
32	ø5x40
40	ø5x50
50	ø5x60

■ **Fixing rod eye with pin (-XP7)**

Description: A spring pin is driven into the rod eye to prevent loosening.

How to order

**SCA2 - TC - 40 B - 100 - Y - XP7**

Model No.

**- For XP7-S005: SCG and JSG**

**Compatible model**

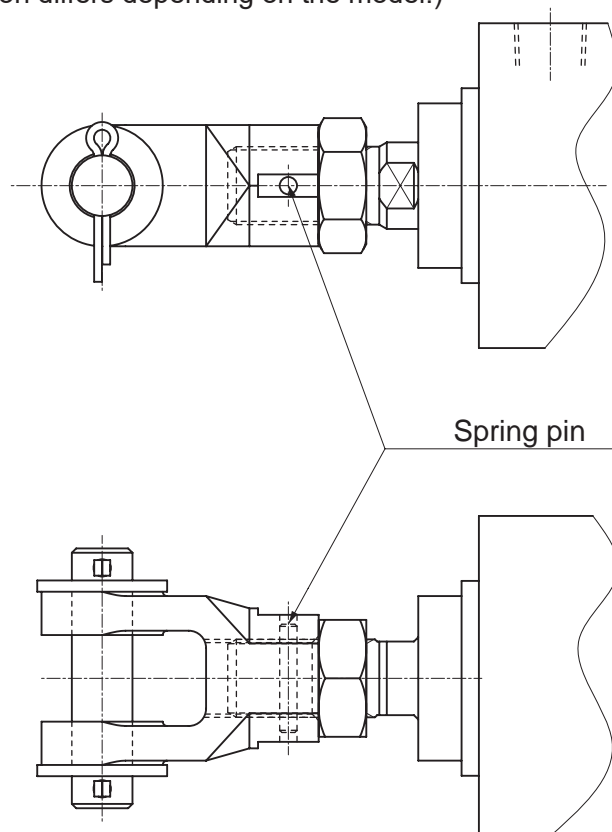
Model No.	Name
	Round shaped cylinder
	Tie rod cylinder
	Medium bore size cylinder
	Medium bore size cylinder
	Compact cylinder
	Compact cylinder
	Brake cylinder
	Tie rod cylinder with brake

**Model No.**

Refer to How to order for each model.

**Outline drawing**

The dimensions are the same as those of the type with rod eye.  
(Spring pin drive-in direction differs depending on the model.)



# Made-to-order product

## ■ Rod eye pin/clevis pin split pin specifications, fixing rod eye with pin (-XP8)

Content: Change the snap ring of rod eye pin and clevis pin to the split pin. + A spring pin is driven into the rod eye pin to prevent loosening. (XP5 + XP7)

How to order

SCA2 - 00 - 40 B - 100 - Y - XP8

Model No.

Compatible model	
Model No.	Name
SCM	Round shaped cylinder
SCA2	Medium bore size cylinder
SCS2	Large bore size cylinder
SSD2	Compact cylinder
SSD	Compact cylinder
JSC3/JSC4	Brake cylinder
Model No.	
Refer to How to order for each model.	

## Outline drawing

The installation dimensions are the same as those of the type with rod eye.

Tie rod extension (-XMX\*)

Content: Specify the dimensions of projecting section of tie rod thread part.

How to order

SCS2

- LB -

125

B -

100

- XMX

55

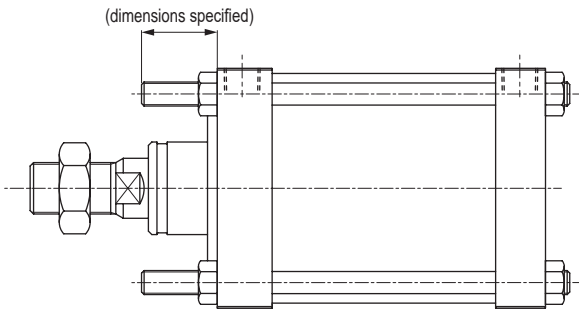
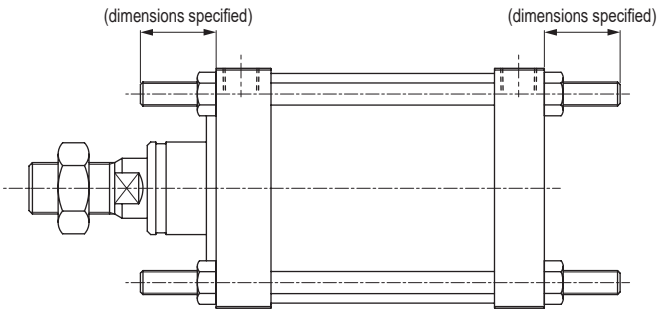
\*

Model No.

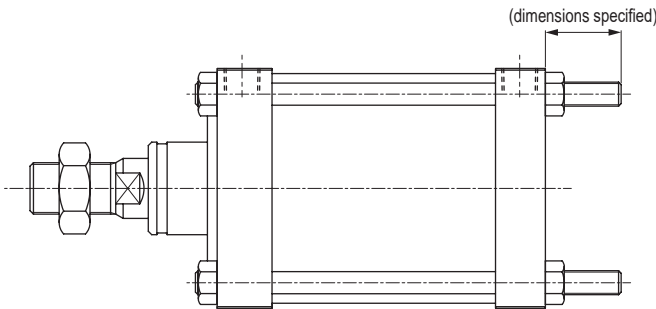
Compatible model	
Model No.	Name
SCS2	Large bore size cylinder
Model No.	
Refer to How to order for each model.	
Made-to-order dimensions	
Refer to the dimensions list.	
* Selection of rod side or head side	
Blank	Eight tie rods are extended on rod side and head side
R	Four tie rods are extended on rod side
H	Four tie rods are extended on head side

Outline drawing

- Eight tie rods are extended on rod side and head side (XMX\*)
- Four tie rods are extended on rod side (XMX\*R)



- Four tie rods are extended on head side (XMX\*H)



Made-to-order product

Made-to-order product

■ Tie rod material SUS (-XM1)

Content: Change the tie rod material to stainless steel. (The washer and nut are not changed.)

How to order

SCA2 - 00 - 40 B - 100 - XM1

Model No.

Compatible model	
Model No.	Name
SCA2	Medium bore size cylinder
SCS2	Large bore size cylinder
Model No.	
Refer to How to order for each model.	

Dimensions

Same as the standard.

■ Without bellows (-XJ9)

Content: Piston rod dimensions the same as those with bellows, without assembling bellows.

How to order

SCA2 - 00 - 40 B - 100 - XJ9

Model No.

Compatible model	
Model No.	Name
CMK2	Medium bore size cylinder
CMA2	Medium bore size cylinder
SCM	Round shaped cylinder
SCG	Tie rod cylinder
SCA2	Medium bore size cylinder
SCS2	Large bore size cylinder
ULK	Brake cylinder
JSK2	Brake cylinder
JSM2	Brake cylinder
JSG	Tie rod cylinder with brake
JSC3/JSC4	Brake cylinder
Model No.	
Refer to How to order for each model.	

Dimensions

The dimensions are the same as those with bellows but bellows are not attached.

Fluoro rubber for scraper/rod packing (-XT9)

Content: Only the rod side packing (rod packing and scraper) is changed to FKM.

How to order

SCA2 - 00 - 40 B - 100 - XT9

Model No.

Compatible model	
Model No.	Name
SCA2	Medium bore size cylinder
SCS2	Large bore size cylinder
Model No.	
Refer to How to order for each model.	

Dimensions

Same as the standard.

## Made-to-order product

### Other custom order products

#### Packing fluoro (-T2)

Content: Change the rod packing, piston packing and O-rings to FKM. (The cushion packing is not changed.)

How to order

**SCA2** - **T2** - **00** - **40** **B** - **100**

Model No.

#### Compatible model

Model No.	Name
<b>CMK2</b>	Medium bore size cylinder
<b>CMA2</b>	Medium bore size cylinder
<b>SCM</b>	Round shaped cylinder
<b>SCG</b>	Tie rod cylinder
<b>SCA2</b>	Medium bore size cylinder
<b>SCS2</b>	Large bore size cylinder
<b>SSD2</b>	Compact cylinder
<b>SSD</b>	Compact cylinder

#### Model No.

Refer to How to order for each model.

Outline drawing

Same as the standard.

#### With 2 rod nuts (-A2)

Content: 2 rod nuts (same as the standard) are included at shipment.

How to order

**SCA2** - **00** - **40** **B** - **100** - **A2**

**SSD** - **50** - **50** - **NA2**

Model No.

Compatible model

\* Be sure to insert "N" code if the standard piston rod end form such as SSD and FCD are female threads.

#### Compatible model

Model No.	Name
<b>CMK2</b>	Medium bore size cylinder
<b>CMA2</b>	Medium bore size cylinder
<b>SCM</b>	Round shaped cylinder
<b>SCG</b>	Tie rod cylinder
<b>SCA2</b>	Medium bore size cylinder
<b>SCS2</b>	Large bore size cylinder
<b>SSD2</b>	Compact cylinder
<b>SSD</b>	Compact cylinder
<b>FCD</b>	Flat compact cylinder
<b>ULK</b>	Brake cylinder
<b>JSK2</b>	Brake cylinder
<b>JSM2</b>	Brake cylinder
<b>JSG</b>	Tie rod cylinder with brake
<b>JSC3/JSC4</b>	Brake cylinder
<b>USSD</b>	Position locking compact cylinder

#### Model No.

Refer to How to order for each model.

Outline drawing

Ending

The dimensions are the same as those of the standard except that 2 rod nuts are included.



■ Symmetric port position (-O)  
Content: Position the port opposite to the standard port position.

How to order

STG - M - 50 - 50 - P6 O

\* Insert the code without a hyphen immediately after the option code.

Model No.

Compatible model

Model No.	Name
STG	Guided cylinder
STS/L	Guided cylinder

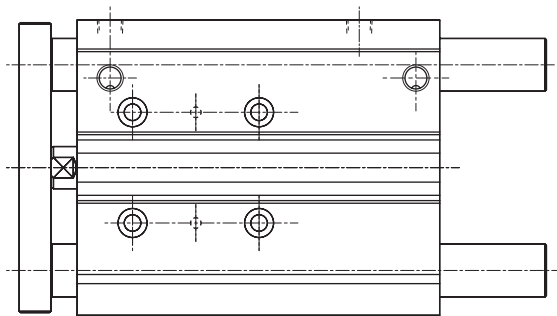
Model No.

Refer to How to order for each model.

Outline drawing

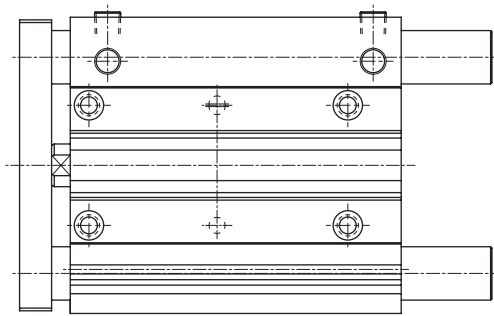
The port position is on the opposite side, as below.

● STG



↑ The port of the standard is on this side.

● STS/L



↑ The port of the standard is on this side.

■ Double solenoid (-D)

How to order

CKV2 - D - LB - 20 - 100

Model No.

Compatible model

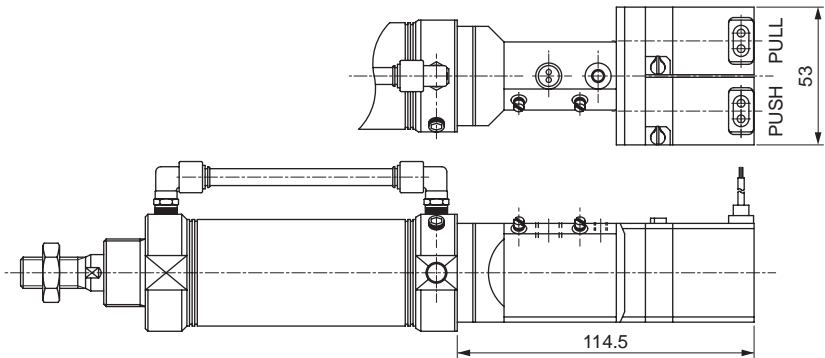
Model No.	Name
CKV2	Small cylinder with valve

Model No.

Refer to How to order for each model.

Outline drawing

The dimensions are the same as those of the standard except for the dimensions below.



Made-to-order product

Low speed (-O)  
Content: Low speed (working speed range 10 to 200 mm/S)

How to order

CMK2 - O - 00 - 25 - 50

Model No.

Compatible model	
Model No.	Name
CMK2	Medium bore size cylinder
Model No.	
Refer to How to order for each model.	

Outline drawing

Same as the standard.

With spigot (-R1 and R2)  
Content: Spigot is deployed on the cylinder shaft center.

How to order

SSD-L - 32 - 50 - N R1

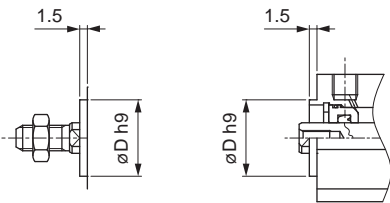
Model No.

\* Insert the code without a hyphen immediately after the option code.

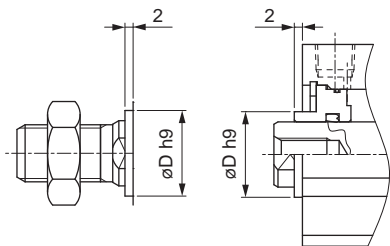
Compatible model	
Model No.	Name
SSD	Compact cylinder
Model No.	
Refer to How to order for each model.	
With spigot	
R1	With spigot on rod side
R2	With spigot on head side

Outline drawing

With spigot on rod side (R1)  
·ø12, ø16

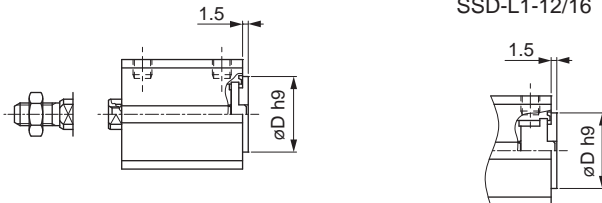


·ø20 to ø100



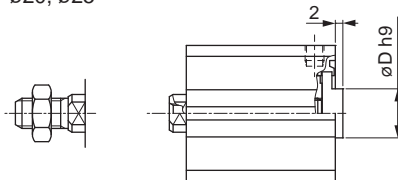
Bore size	øDh9
ø12	15
ø16	20
ø20	13
ø25	15
ø32	21
ø40	28
ø50	35
ø63	35
ø80	43
ø100	59

With spigot on head side (R2)  
·ø12, ø16

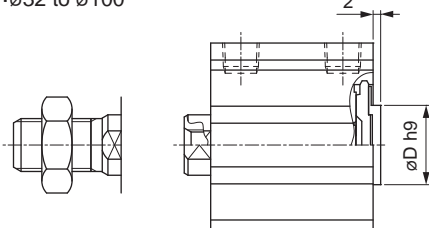


·For SSD-L-12/16-5  
SSD-L1-12/16

·ø20, ø25



·ø32 to ø100



Bore size	øDh9
ø12	15
ø16	20
ø20	13
ø25	15
ø32	21
ø40	28
ø50	35
ø63	35
ø80	43
ø100	59

# Introduction of customized products

		Page
Linear guide hand	LHA-**-L1	Ending 112
High gripping force hand	HHC/HHD	Ending 114
High gripping force chuck	CKT/CKU	Ending 114
Magnet suction hand	MHC2	Ending 116
Flexible support	FSB	Ending 118
Free position lock unit	FPL	Ending 120
Ultra low sliding balance cylinder	BBS	Ending 122

# Long stroke has been added to LHA series!!

## Long stroke

Handles common workpieces with **double stroke**.

[mm]

	CS (standard)	CS-L1
LHA-01	5	10
LHA-03	9	18
LHA-04	11	22
LHA-05	15	30
LHA-06	20	40

## High rigidity

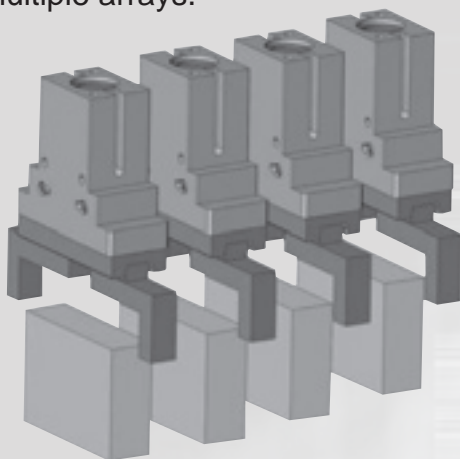
## High precision

## Long service life

Uses an integrated linear guide.

## Space saving

Body is thin, enabling multiple arrays.



## Linear guide hand LHA-\*\*-L1 Series

## How to order

**LHA** - **01CS** - **L1** - **T2H** - **R**

A
Long stroke
B
C

A Size	B Switch model No.					C Switch quantity	
01CS	Axial lead wire	Radial lead wire	Contact	Lead wire	* Lead wire length	R	1 on open side
03CS						H	1 on closed side
04CS	T2H*	T2V*	Proximity	2-wire	Blank	D	
05CS	T3H*	T3V*		3-wire	3		
06CS					5		
					1 m		2
					3 m		
					5 m		

Note: Contact CKD for rubber cover specifications.

## Specifications

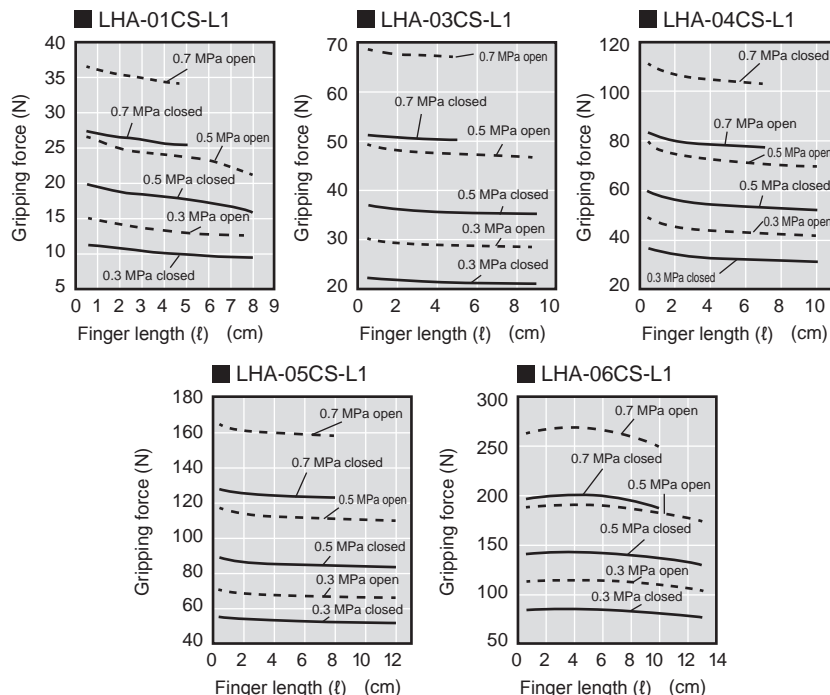
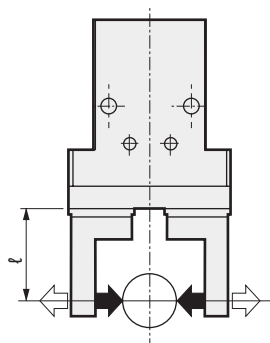
Item	LHA-**-L1				
Size	01CS	03CS	04CS	05CS	06CS
Cylinder bore size mm	ø12	ø16	ø20	ø25	ø32
Actuation	Double acting (Note)				
Working fluid	Compressed air				
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)				
Min. working pressure MPa	0.1 (≈15 psi, 1 bar)				
Ambient temperature °C	5 (41°F) to 60 (140°F)				
Port size	M3	M5			
Operating stroke mm	10	18	22	30	40
Rod diameter mm	ø6	ø8	ø10	ø12	ø16
Repeatability mm	±0.01				
Product weight g	94	190	370	620	970
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)				

Note: Single acting: Contact CKD for normally open and normally closed specifications.

## Gripping force performance data

The gripping force in the opening/closing directions with finger length L of hand with a supply pressure of 0.3, 0.5 and 0.7 MPa is shown.

- Open direction (←) - - - - (shown with broken line)
- Closed direction (→) ——— (shown with continuous line)

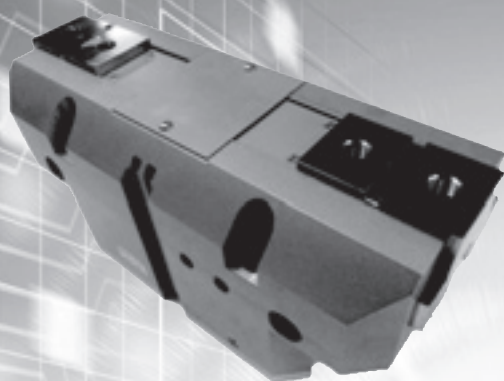


Customized product

Ending

# High gripping force hand-chuck

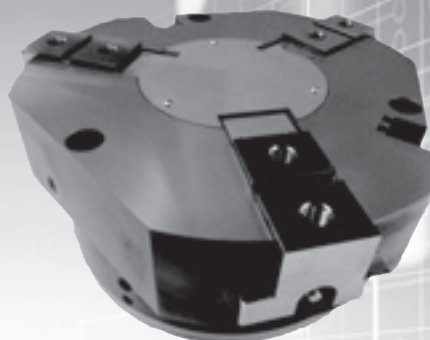
## Four new models now added!!



### High gripping power hand

- HHC Series - Long stroke length
- HHD Series - High gripping power

Model No.	Gripping power	Stroke length
HHC-160CS	4,200N	70 mm
HHD-160CS	5,333N	40 mm



### High gripping power chuck

- CKT Series - Long stroke length
- CKU Series - High gripping power

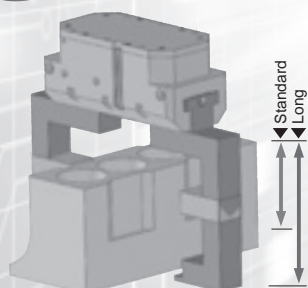
Model No.	Gripping power	Stroke length
CKT-250CS	5,500N	70 mm
CKU-250CS	8,333N	40 mm

High rigidity

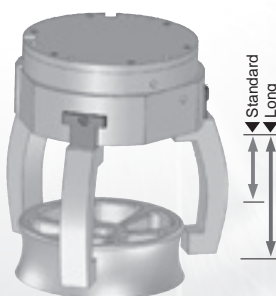
Also compatible with long jaw

Lightweight

Ultra-lightweight



Model No.	Max. jaw length
HHC-160CS	350 mm
HHD-160CS	300 mm



Model No.	Max. jaw length
CKT-160CS	280 mm
CKU-160CS	210 mm

Downsizing/material optimization

T type switch supported

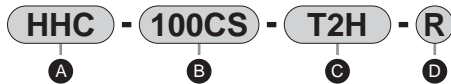
T type switch is mountable to the switch fixing groove on the body side

- 2-wire/3-wire proximity switch
- Coolant proof switch

High gripping force hand HHC/HHD Series, high gripping force chuck CKT/CKU Series



## How to order



A Model	B Size	C Switch model No. (*1)					D Switch quantity	
HHC	100CS	Axial lead wire	Radial lead wire	Contact	Lead wire	* Lead wire length	R	1 on open side
HHD	125CS						H	1 on closed side
CKT	160CS	T2H*	T2V*	Proximity	2-wire	Blank	D	2
CKU	200CS	T3H*	T3V*		3-wire	3		
	250CS					5		

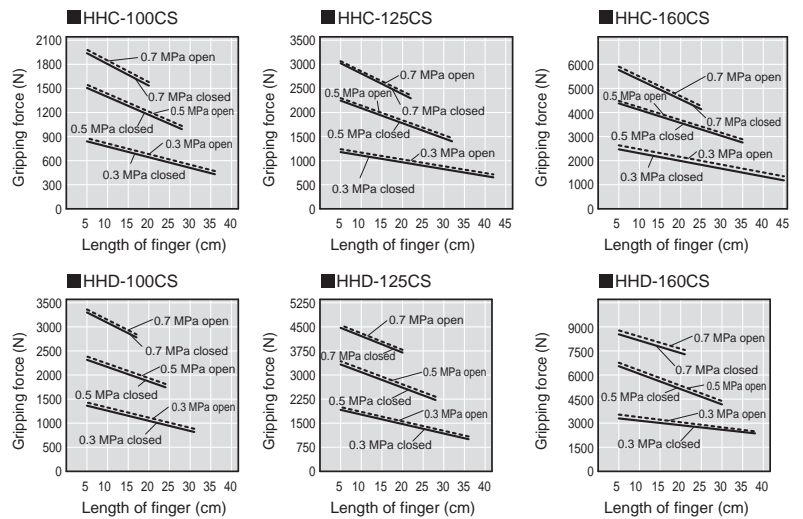
\*1: Coolant proof switch is also supported. Contact CKD for details.

## Hand specifications

### ● HHC/HHD

Item	HHC-100CS	HHD-100CS	HHC-125CS	HHD-125CS	HHC-160CS	HHD-160CS
Size	100CS		125CS		160CS	
Cylinder bore size mm	ø91 or equiv.		ø125 or equiv.		ø173 or equiv.	
Actuation	Double acting					
Working fluid	Compressed air					
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)					
Min. working pressure MPa	0.3 (≈44 psi, 3 bar)					
Ambient temperature °C	5 (41°F) to 60 (140°F)					
Port size	Rc1/8				Rc1/4	
Operating stroke mm	50	28	60	34	70	40
Rod diameter mm	ø30		ø36		ø40	
Theoretical grip (0.5 MPa) N	1400	2200	2100	3150	4200	5333
Width mm	234	224	270	260	314	304
Depth mm	100		115		140	
Height mm	111		126.5		141	
Max. jaw length mm	280	240	320	280	350	300
Repeatability mm	±0.03					
Product weight kg	4.5		7.0		11.5	
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)					

### ● Gripping force performance data

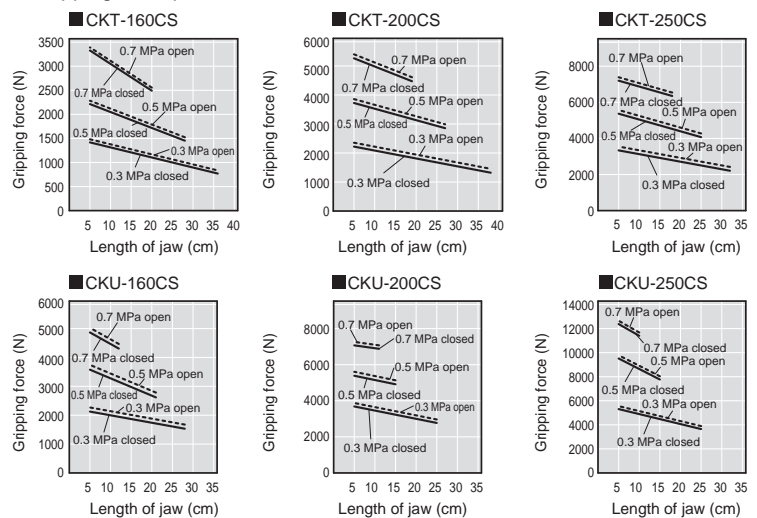


## Chuck specifications

### ● CKT/CKU

Item	CKT-160CS	CKU-160CS	CKT-200CS	CKU-200CS	CKT-250CS	CKU-250CS
Size	160CS		200CS		250CS	
Cylinder bore size mm	ø160		ø200		ø250	
Actuation	Double acting					
Working fluid	Compressed air					
Max. working pressure MPa	0.7 (≈100 psi, 7 bar)					
Min. working pressure MPa	0.3 (≈44 psi, 3 bar)					
Ambient temperature °C	5 (41°F) to 60 (140°F)					
Port size	Rc1/8				Rc1/4	
Operating stroke mm	50	28	60	34	70	40
Rod diameter mm	ø30		ø36		ø40	
Theoretical grip (0.5 MPa) N	2100	3400	3600	5833	5500	8333
O.D. mm	264	250	304	290	344	336
Height mm	109		131		149	
Max. jaw length mm	280	210	270	150	250	150
Repeatability mm	±0.03					
Product weight kg	10		17		27	
Lubrication	Not required (use turbine oil class 1 ISO VG32 if necessary for lubrication)					

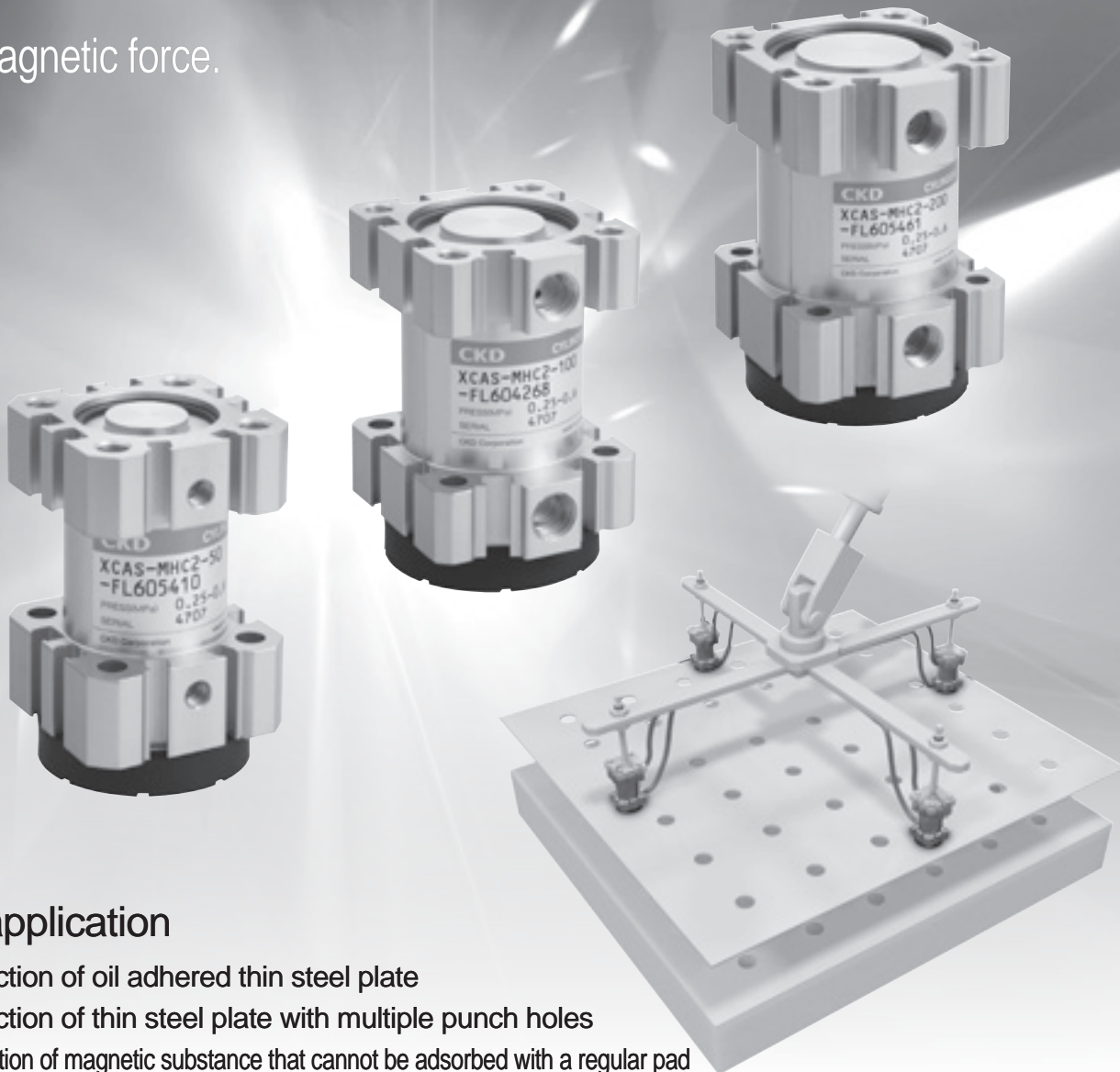
### ● Gripping force performance data



# Gripped by magnetic force.

Unlike the conventional vacuum suction method,  
it is a new type of hand that adsorbs the workpiece  
by magnetic force.

**+ Variation**



## By application

- Suction of oil adhered thin steel plate
- Suction of thin steel plate with multiple punch holes
- Suction of magnetic substance that cannot be adsorbed with a regular pad

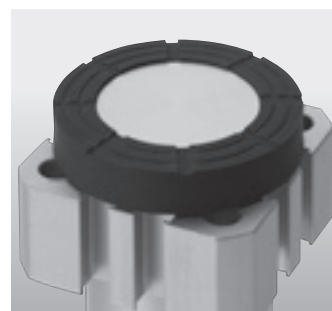
## Magnet suction hand MHC2 Series



## Secure suction of oil adhered steel plate or steel plate with punch holes.

### Improved by significantly reducing product weight.

- Three types of suction force, 50, 100 and 200 N.
- No air consumption when held with suction, energy saving as compared to general vacuum pads.
- Equipped as standard with suction workpiece anti-slip rubber.



\* MHC2 Series Anti-slip part

## Main specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar, °F = 9/5°C + 32

Item	MHC2-50	MHC2-100	MHC2-200
Working fluid	Compressed air		
Actuation	Double acting		
Max. working pressure (MPa)	0.6 MPa		
Min. working pressure (MPa)	0.25 MPa		
Proof pressure (MPa)	0.9 MPa		
Ambient temperature (°C)	-5°C to 60°C (no freezing)		
Port size	M5	Rc1/8	
Suction force (N) Note 1	50	100	200
Residual suction force (N)	1 or less		
Product weight (g)	170	240	440

Note 1: The ability to hold a static vertical load. Note that the safety factor has not been taken into consideration.

## Comparison of options

Model No.	Anti-slip	Switch detection	Workpiece adherence prevention
MHC-10			
MHC-50 (existing product)		●	●
MHC2-50 (new)	●		
MHC-100 (existing product)		●	●
MHC2-100 (new)	●		
MHC2-200 (new)	●		
MHC-250 (existing product)		●	●



\* For an overview of the MHC Series, refer to the Techno Report (CC-974).



- Take care with the working environment, as a strong magnet is built in.
- The suction force is the force that can hold a static load in the vertical direction.
  - Suction force may not meet specifications if the product is used in a horizontally mounted (horizontal mounting) state and at an angle.
  - Suction force may not be achieved when impact and vibration are applied and also when moment load is applied.
- Suction force may not be achieved depending on the thickness and size of the workpiece.
- Suction force is reduced by up to 20% if ambient temperature or workpiece temperature is 60°C or more.

Customized product

# Just put the workpiece there.

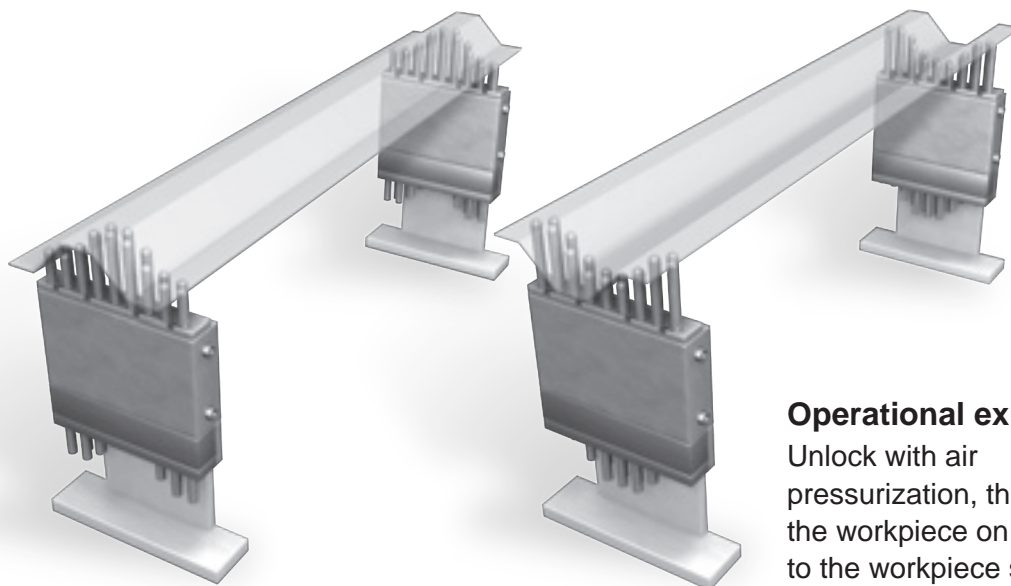
Supports any shape flexibly,  
so dedicated jigs are not required!  
Reduces changeover time.



## Flexible support FSB Series

## Features

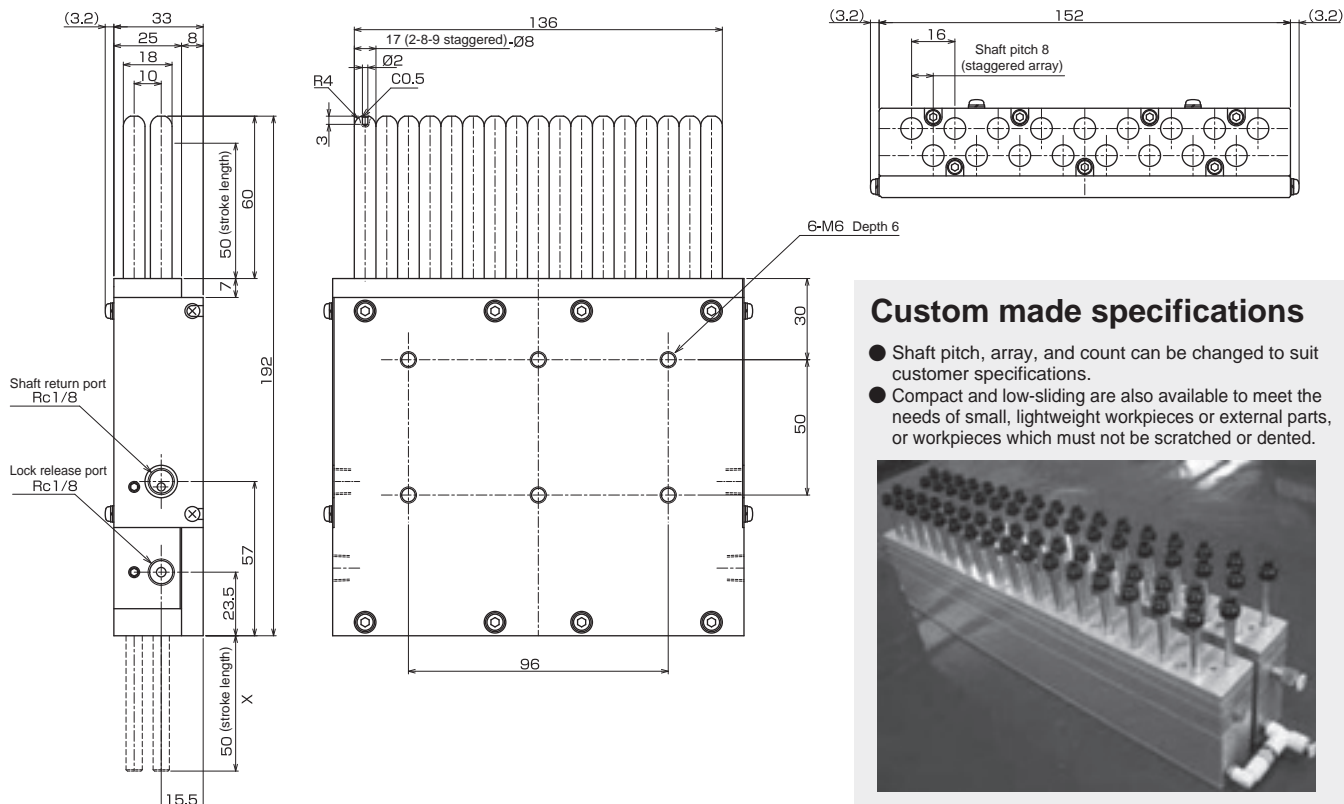
- Molds itself to the shape of any workpiece for holding.
- Changeover is easy even with different workpiece shapes.
- Also usable as a robot hand.



## Operational explanation

Unlock with air pressurization, then press the workpiece on and mold it to the workpiece shape. Lock with air exhaust to hold the shape.

## Dimensions



## Custom made specifications

- Shaft pitch, array, and count can be changed to suit customer specifications.
- Compact and low-sliding are also available to meet the needs of small, lightweight workpieces or external parts, or workpieces which must not be scratched or dented.



Customized product

# Just let it take shape

Just press on the mating surface for parallel adjustment.  
Proprietary locking mechanism holds the angle.

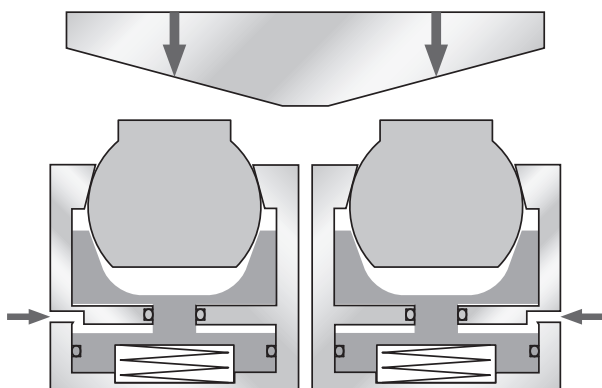


**Free position lock unit FPL Series**

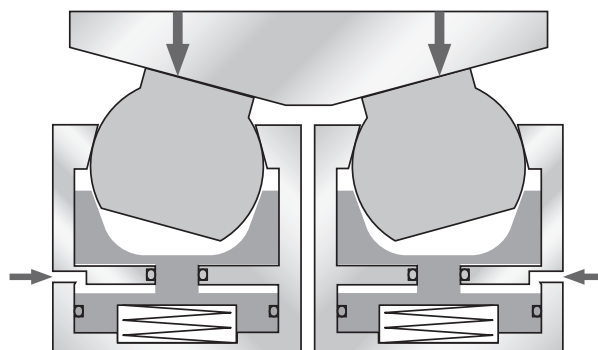
## Features

- Dedicated jig is no longer required.
- Molds to the workpiece shape and holds it. (tilt direction)
- Lock releases with air pressurization. Safety structure locks with air exhaust.
- Holds workpiece up to  $\pm 20^\circ$  range.

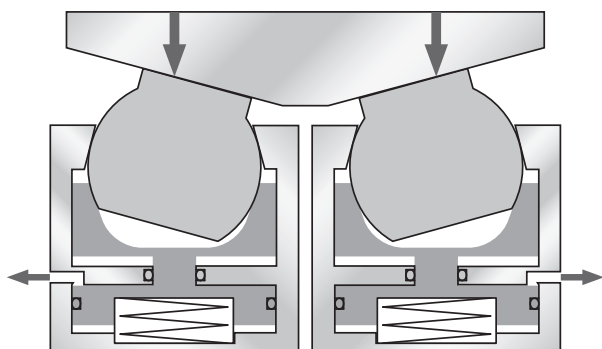
- ① Pressurize air to release lock. The molding surface slides freely.



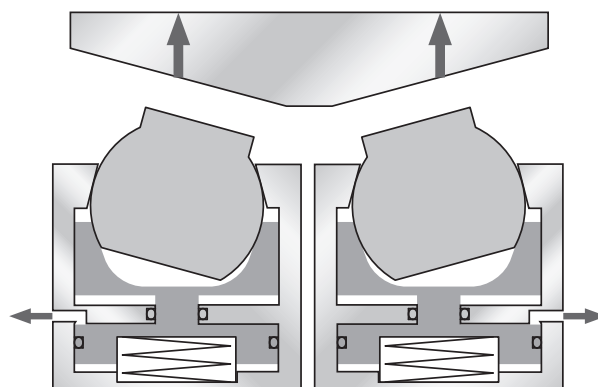
- ② Press the workpiece on. The surface molds to the tilted surface.



- ③ Exhaust air to lock. Molds to the workpiece tilt surface and holds the current position.



- ④ Because the position is held, readjustment is not required as long as it uses the same workpiece.



# Light as a feather

Balance cylinder that prevents operator stress.

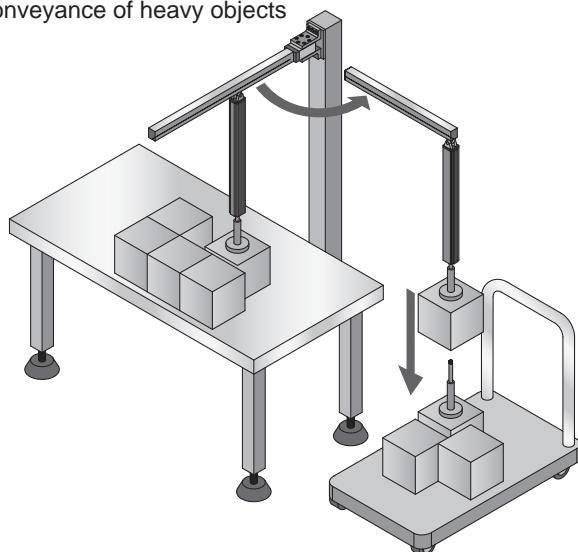


- With position locking mechanism for safety concerns (BBS-OU)
- Special packing and treatment for low sliding
- Compatible with lateral load as well (BBS-OS/OU-B)

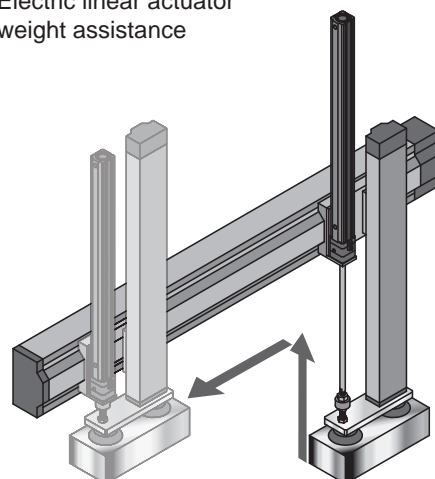
**Ultra low sliding balance cylinder BBS Series**

## Applications

- Conveyance of heavy objects



- Electric linear actuator weight assistance



## Main specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar, °F = 9/5°C + 32

Item		BBS-OS/BBS-OU			
		32	40	50	63
Working fluid		Clean compressed air			
Max. working pressure (MPa)		1.0 (BBS-OS), 0.6 (BBS-OU)			
Min. working pressure (MPa)	Cylinder	0.05			
	Lock	0.25 (BBS-OU only)			
Proof pressure (MPa)		1.5 (BBS-OS), 0.9 (BBS-OU)			
Ambient temperature (°C)		5°C to 60°C (no freezing)			
Bore size (mm)		Ø32	Ø40	Ø50	Ø63
Port size		Rc 1/8	Rc 1/4	Rc 1/4	Rc 3/8
Max. stroke length (mm)		500			
Working piston speed (mm/s)		1 to 1,000 (Operate within the allowable absorbed energy.)			
Cushion *1		Rubber cushion			
Lubrication		Not advisable			
Max. load (kg) *2	BBS-OS	49	76	120	190
	BBS-OU	29	46	72	114
Holding force (N) (BBS-OU only)		588	588	980	1470
No-load sliding resistance (N) *3		10 or less			

\*1: Depending on the type, the allowable absorbed energy varies.

\*2: Differs according to the pressurizing direction and working pressure.

\*3: Indicates the load at which the piston rod operates with no load and atmospheric release.