



Pin clamp cylinder

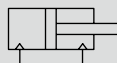
Double acting/single rod

PCC Series

Double acting/position locking

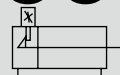
PCC-Q Series

JIS symbol



Double acting/single rod

JIS symbol



Double acting/position locking



Common specifications

Descriptions	PCC/PCC-Q
Bore size mm	50
Actuation	Double acting
Working fluid	Compressed air
Max. working pressure MPa	0.5 (≈73 psi, 5 bar)
Min. working pressure MPa	0.2 (≈29 psi, 2 bar)
Guaranteed proof pressure MPa	1.0 (≈150 psi, 10 bar)
Ambient temperature °C	-10 (14°F) to 60 (140°F)
Port size	Rc1/4
Working piston speed mm/s	50 to 300
Cushion	None
Lubrication	Not required

Theoretical clamping force

(Unit: N)

Pressure (MPa)	0.2	0.3	0.4	0.5
Clamping force (N)	329	494	659	824

Cylinder weight

Locating pin diameter	Standard					Position locking			
	A1	B1	C1	C2	D1	A1	B1	C1	C2
12.5	1.8	2.0	2.0	2.0	1.7	2.2	2.4	2.4	2.4
12.7	1.8	2.0	2.0	2.0	1.7	2.2	2.4	2.4	2.4
14.5	1.8	2.0	2.0	2.0	1.7	2.2	2.4	2.4	2.4
14.7	1.8	2.0	2.0	2.0	1.7	2.2	2.4	2.4	2.4
17.5	1.9	2.0	2.0	2.0	1.8	2.3	2.4	2.4	2.4
17.7	1.9	2.0	2.0	2.0	1.8	2.3	2.4	2.4	2.4
19.5	1.9	2.1	2.0	2.0	1.8	2.3	2.5	2.4	2.4
19.7	1.9	2.1	2.0	2.0	1.8	2.3	2.5	2.4	2.4
24.5	2.0	2.1	2.1	2.1	1.9	2.4	2.5	2.5	2.5
24.7	2.0	2.1	2.1	2.1	1.9	2.4	2.5	2.5	2.5

Clamp specifications

Descriptions	PCC/PCC-Q	
Clamp stroke length mm	With shim	Without shim
	10 to 12	12
Relief stroke mm	5	
Locating pin shape	Round shape	Diamond shape
Clamp lever	Single jaw	

Position locking part specifications

Descriptions	PCC-Q
Position locking method	Round slit method
Lock direction	Locked when clamping (cylinder forward)
Lock force N	943
Min. working pressure MPa	0.25 (≈36 psi, 2.5 bar) (Note)
Max. working pressure MPa	0.5 (≈73 psi, 5 bar)
Port size	Rc1/4
Lubrication	Not available

Note: Depending on the installation condition, it may start moving at 0.05 MPa. Therefore, pay attention to residual and exhaust pressure. (Unit: kg)

Switch specifications

Descriptions	Proximity 2-wire		
	T2YD	T2YDT	T2YDU (custom order)
Applications	Dedicated for programmable controller		
Indicator lamp	Red/green LED (Lit when ON)		
Load voltage	24 VDC ±10%		
Load current	5 to 20 mA		
Internal voltage drop	6 V or less		
Leakage current	1.0 mA or less		
Output delay time *1 (ON Delay, OFF delay)	60 ms or less		
Lead wire length	1 m (oil resistant vinyl cabtyre cable φ6, 0.5 mm ² x 2-conductor) *2	1 m (flame-resistant vinyl cabtyre cable φ6, 0.5 mm ² x 2-conductor) *2	0.3 m (flame-resistant vinyl cabtyre cable with M12 cable connector, AWG20, 2-conductor)
Insulation resistance	100 MΩ and over with 500 VDC megger		
Withstand voltage	No failure after 1 minute of 1,000 VAC application.		
Max. shock resistance	980 m/s ²		
Ambient temperature	-10 to +60°C		
Degree of protection	JIS C0920 (water-tight), IEC standards IP67, oil resistance		
Weight g	1 m:61 3 m:166 5 m:272		35

*1: Indicates the time from magnetic sensor detection of the piston magnet until switch output.

*2: 3 m and 5 m lead wires are available as options.

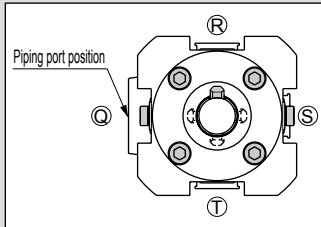
3: As the switch for AC magnetic field (T2YD) is for spot welding machine, it cannot be used with arc welding machine (DC).

*4: Flame-resistant lead wires are available as options.

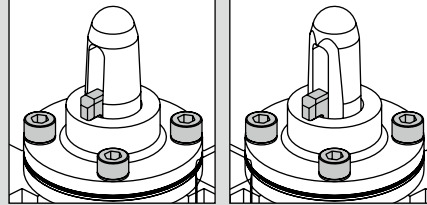
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Pin clamp cylinder PCC Series

The lever direction can be selected from 4 options.



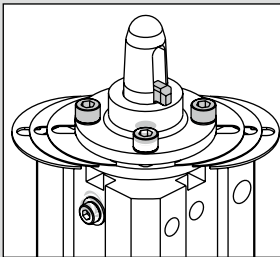
Two types of locating pin shape are available.



Round pin

Diamond pin

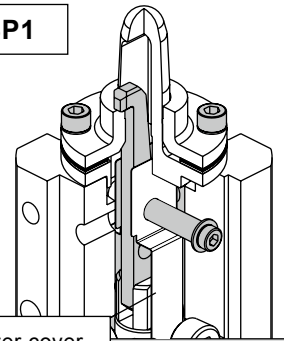
The receiving surface position of the workpiece can be adjusted by up to 2 mm (when unit with shim is selected)



Adjustable by 0.5 mm to 2 mm
One side $1 \times t1 + 2 \times t0.5$
(one side: 3, both sides: 6)

Spatter-proof

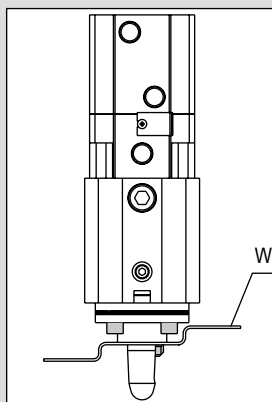
SP1



Spatter cover

SP1: Prevents spatter deposits in the clamp lever cam groove.

Position locking mechanism can be selected.



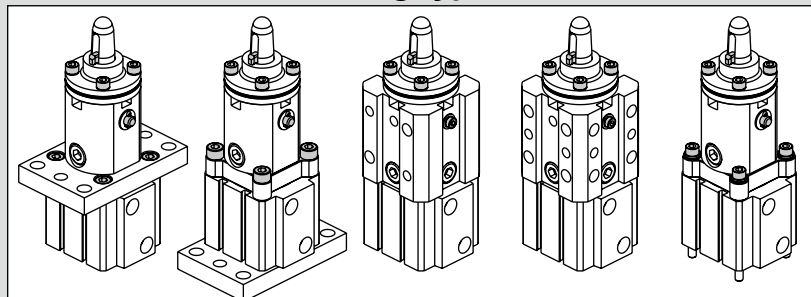
- It holds the clamp position regardless of the thickness of the workpiece
- It prevents the workpiece from falling out in emergencies.

Note: The D1 type is not supported.

With cleaning holes as standard.

As the cleaning hole has tapered pipe threading (Rc3/8), it can be used as an air blow port for internal cleaning.

Extensive mounting types are available.



A1

Top flange

B1

Bottom flange

C1

Side mounting
(2 surfaces)

C2

Side mounting
(2 surfaces)

D1

Bottom mounting

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

PCC/PCC-Q Series

- LCW
- LCR
- LCC
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC**
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

How to order

Basic

PCC — **C1** 5 **R** **177** **D** - **T2YD** **D** - **2** **SP1**

With position locking

PCC-Q **C1** 5 **R** **177** **D** - **T2YD** **D** - **2** **SP1**

Model No.

A Mounting
*1

B Clamp lever direction

C Locating pin diameter
*2

D Locating pin shape

E Switch model No.
*3, *5

F Switch quantity

G Shim

H Spatter-proof

⚠ Precautions for model No. selection

- *1 : When the position locking (Q) is selected, D1 (bottom mount) cannot be selected.
- *2 : Consult with CKD for other locating pin diameters.
- *3 : T type switches can also be installed. Consult with CKD for H and V type strong magnetic field switches.
- *4 : Refer to pages 1076 and 1093 for the switch specifications and usage guidelines.
- *5 : Switches are shipped with the product.

[Example of model No.]

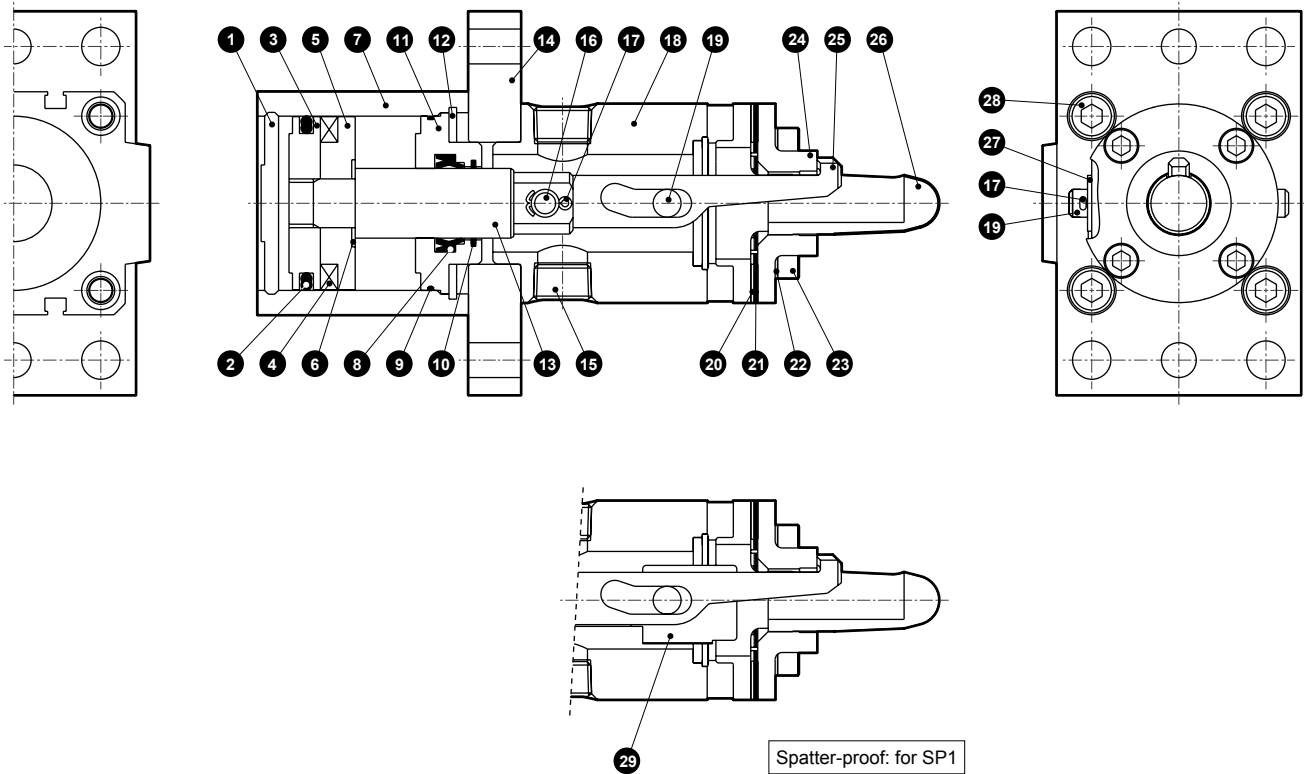
PCC-C15R177D-T2YDD-2SP1

Model: Pin clamp cylinder double acting/single rod

- A** Mounting : Side mounting
- B** Clamp lever direction : R
- C** Locating pin diameter : $\phi 17.7$
- D** Locating pin shape : Diamond pin
- E** Switch model No. : Strong magnetic field proof switch T2YD, 1 m lead wire
- F** Switch quantity : With switches on both sides
- G** Shim : With 2 mm shim
- H** Spatter protection : With spatter cover

Code	Content	
A Mounting *1		
A1	Top flange 	Bottom flange
	●: $\phi 10H7$ ○: $\phi 11$	
C1	Side mounting (2 surfaces) Port position Locating pin 	Side mounting (2 surfaces) Port position Locating pin
	●: $\phi 8H7$ ○: M10 Both mounting surfaces have the same shape	
D1	Bottom mount 	
B Clamp lever direction		
Q		
R		
S		
T		
C Locating pin diameter *2		
Code	Pin diameter	Applicable socket
125	$\phi 12.5$	$\phi 13$
127	$\phi 12.7$	
145	$\phi 14.5$	$\phi 15$
147	$\phi 14.7$	
175	$\phi 17.5$	$\phi 18$
177	$\phi 17.7$	
195	$\phi 19.5$	$\phi 20$
197	$\phi 19.7$	
245	$\phi 24.5$	$\phi 25$
247	$\phi 24.7$	
D Locating pin shape		
Blank	Round pin	
D	Diamond pin	
E Switch model No. *3, *5		
Code	Type	
T2YD*	2-color display for AC magnetic field	
T2YDT*		
T2YDU		
* Lead wire length		
Blank	1 m	
3	3 m	
5	5 m	
F Switch quantity		
Blank	Without switch	
R	With unclamp side switch	
H	With clamp side switch	
D	With switches on both sides	
G Shim		
0	Without shim	
2	With 2 mm shim	
H Spatter-proof		
Blank	No spatter-proofing	
SP1	With spatter cover	

Internal structure and parts list (PCC-A1)

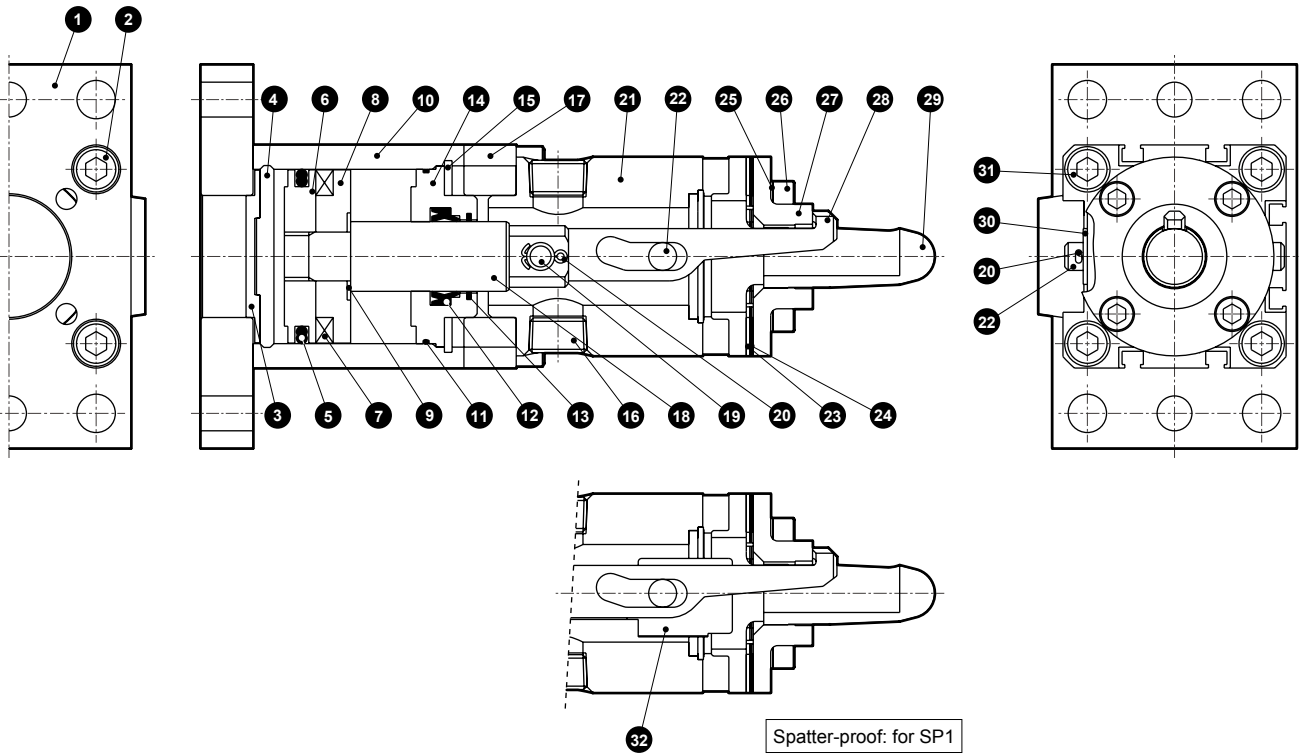


Cannot be disassembled

No.	Part name	Material	No.	Part name	Material
1	Cover	Aluminum alloy	16	Hinge pin (2)	Steel
2	Piston packing	Nitrile rubber	17	Split pin	Steel
3	Piston	Aluminum alloy	18	Guide	Aluminum alloy
4	Piston magnet	Plastic magnet	19	Hinge pin (1)	Steel
5	Spacer	Special resin	20	Shim 1	Stainless steel
6	Spacer washer	Stainless steel	21	Shim 0.5	Stainless steel
7	Body	Aluminum alloy	22	Conical spring washer	Steel
8	Rod packing	Nitrile rubber	23	Hexagon socket head cap screw	Steel
9	Rod metal gasket	Nitrile rubber	24	Spacer	Steel
10	Coil scraper	Phosphor bronze	25	Clamp lever	Steel
11	Rod metal	Special aluminum	26	Locating pin	Steel
12	C type snap ring	Steel	27	Plain washer	Steel
13	Piston rod	Steel	28	Hexagon socket head cap screw	Steel
14	Flange	Aluminum alloy	29	Spatter cover	Copper alloy
15	Plug	Steel			

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list (PCC-B1)

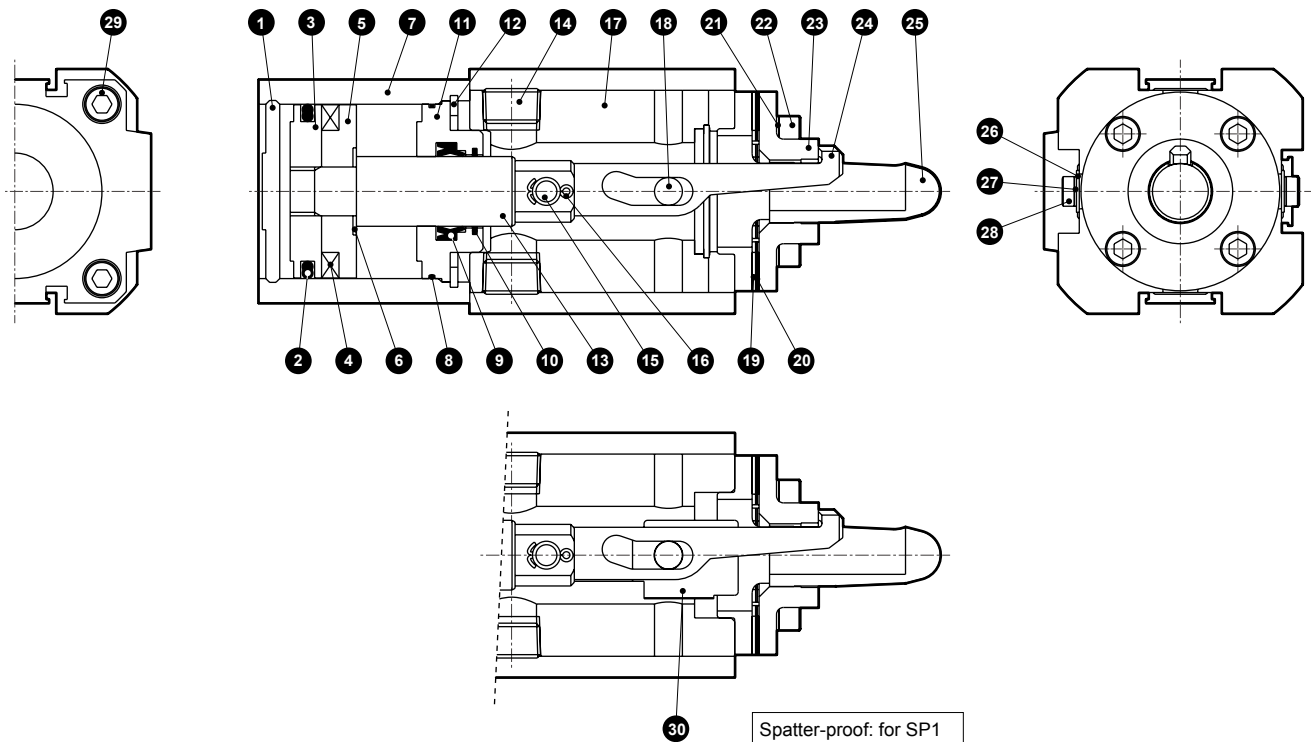


Cannot be disassembled

No.	Part name	Material	No.	Part name	Material
1	Flange	Aluminum alloy	17	Collar	Aluminum alloy
2	Hexagon socket head cap screw	Steel	18	Piston rod	Steel
3	Spigot ring	Aluminum alloy	19	Hinge pin (2)	Steel
4	Cover	Aluminum alloy	20	Split pin	Steel
5	Piston packing	Nitrile rubber	21	Guide	Aluminum alloy
6	Piston	Aluminum alloy	22	Hinge pin (1)	Steel
7	Piston magnet	Plastic magnet	23	Shim 1	Stainless steel
8	Spacer	Special resin	24	Shim 0.5	Stainless steel
9	Spacer washer	Stainless steel	25	Conical spring washer	Steel
10	Body	Aluminum alloy	26	Hexagon socket head cap screw	Steel
11	Rod metal gasket	Nitrile rubber	27	Spacer	Steel
12	Rod packing	Nitrile rubber	28	Clamp lever	Steel
13	Coil scraper	Phosphor bronze	29	Locating pin	Steel
14	Rod metal	Special aluminum	30	Plain washer	Steel
15	C type snap ring	Steel	31	Hexagon socket head cap screw	Steel
16	Plug	Steel	32	Spatter cover	Copper alloy

LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Internal structure and parts list (PCC-C1, PCC-C2)

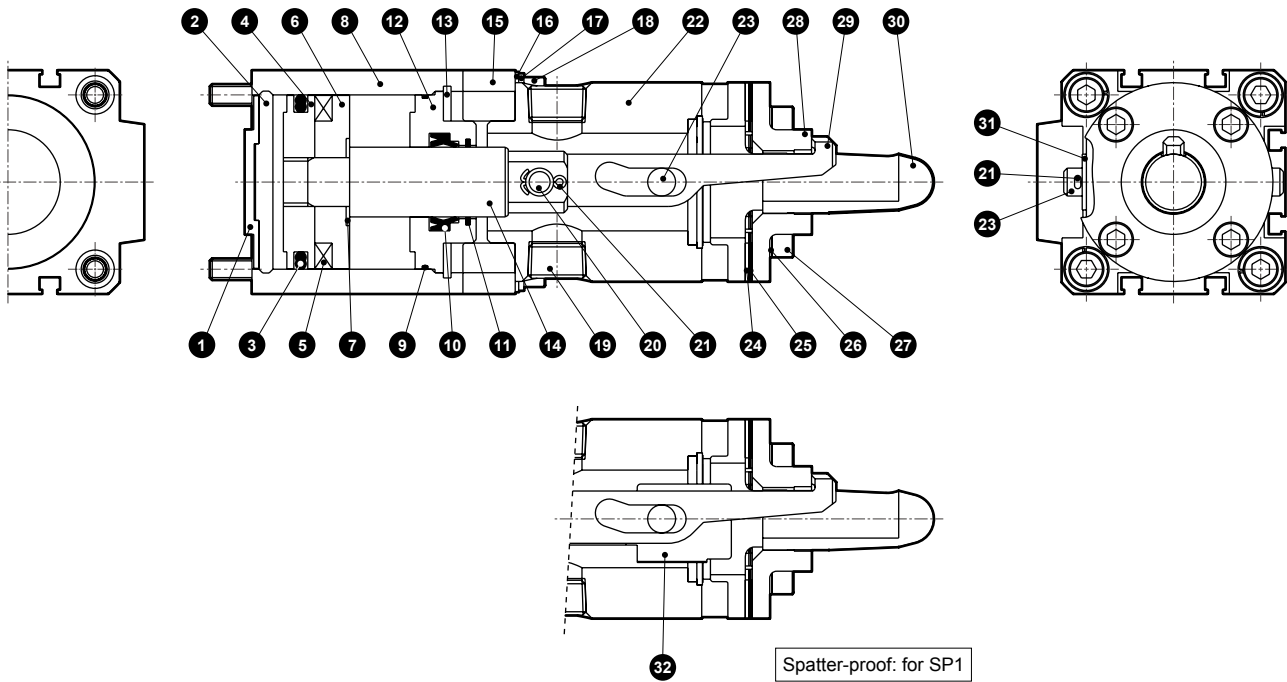


Cannot be disassembled

No.	Part name	Material	No.	Part name	Material
1	Cover	Aluminum alloy	16	Split pin	Steel
2	Piston packing	Nitrile rubber	17	Guide	Aluminum alloy
3	Piston	Aluminum alloy	18	Hinge pin (1)	Steel
4	Piston magnet	Plastic magnet	19	Shim 1	Stainless steel
5	Spacer	Special resin	20	Shim 0.5	Stainless steel
6	Spacer washer	Stainless steel	21	Conical spring washer	Steel
7	Body	Aluminum alloy	22	Hexagon socket head cap screw	Steel
8	Rod metal gasket	Nitrile rubber	23	Spacer	Steel
9	Rod packing	Nitrile rubber	24	Clamp lever	Steel
10	Coil scraper	Phosphor bronze	25	Locating pin	Steel
11	Rod metal	Special aluminum	26	Plain washer	Steel
12	C type snap ring	Steel	27	Conical spring washer	Steel
13	Piston rod	Steel	28	Hexagon socket head cap screw	Steel
14	Plug	Steel	29	Hexagon socket head cap screw	Steel
15	Hinge pin (2)	Steel	30	Spatter cover	Copper alloy

- LCW
- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC**
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

Internal structure and parts list (PCC-D1)

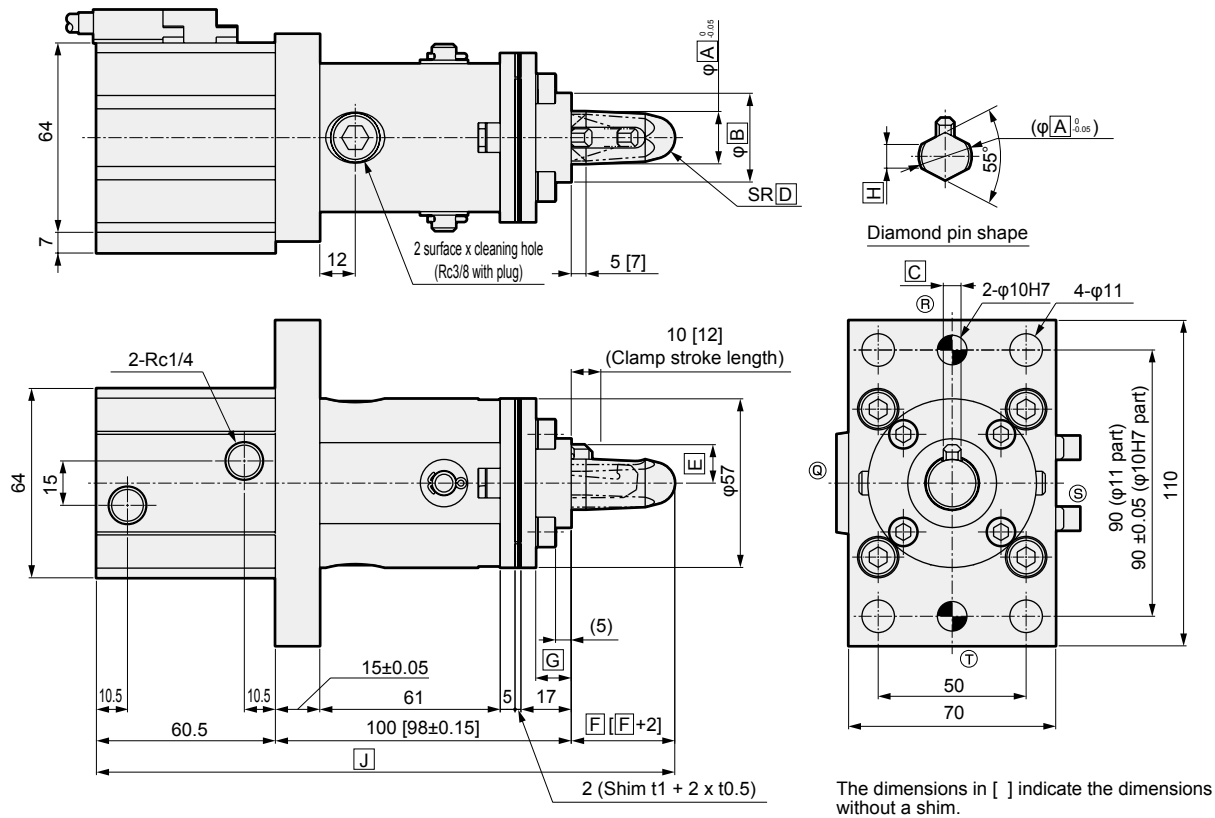


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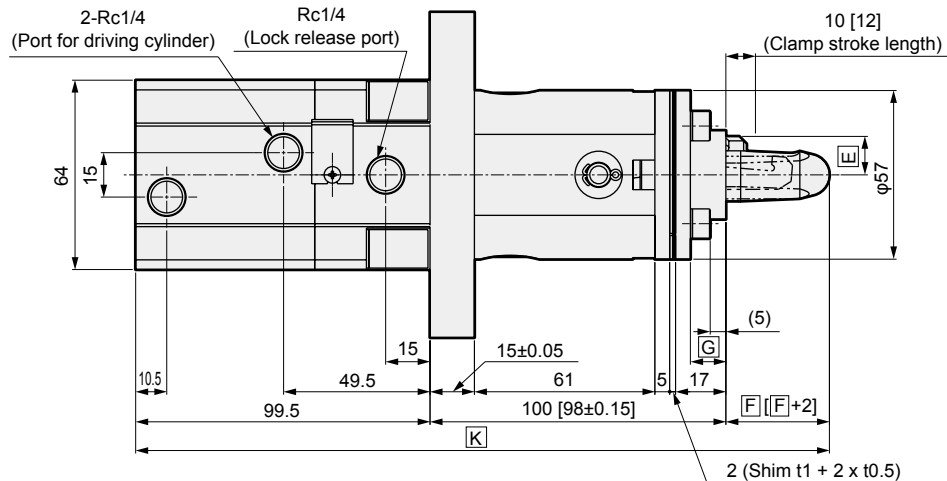
No.	Part name	Material	No.	Part name	Material
1	Spigot ring	Aluminum alloy	17	Spring washer	Steel
2	Cover	Aluminum alloy	18	Hexagon socket head cap screw	Steel
3	Piston packing	Nitrile rubber	19	Plug	Steel
4	Piston	Aluminum alloy	20	Hinge pin (2)	Steel
5	Piston magnet	Plastic magnet	21	Split pin	Steel
6	Spacer	Special resin	22	Guide	Aluminum alloy
7	Spacer washer	Stainless steel	23	Hinge pin (1)	Steel
8	Body	Aluminum alloy	24	Shim 1	Stainless steel
9	Rod metal gasket	Nitrile rubber	25	Shim 0.5	Stainless steel
10	Rod packing	Nitrile rubber	26	Conical spring washer	Steel
11	Coil scraper	Phosphor bronze	27	Hexagon socket head cap screw	Steel
12	Rod metal	Special aluminum	28	Spacer	Steel
13	C type snap ring	Steel	29	Clamp lever	Steel
14	Piston rod	Steel	30	Locating pin	Steel
15	Collar	Aluminum alloy	31	Plain washer	Steel
16	Plain washer	Steel	32	Spatter cover	Copper alloy

Dimensions (PCC-A1, PCC-QA1)

● PCC-A1



● PCC-QA1

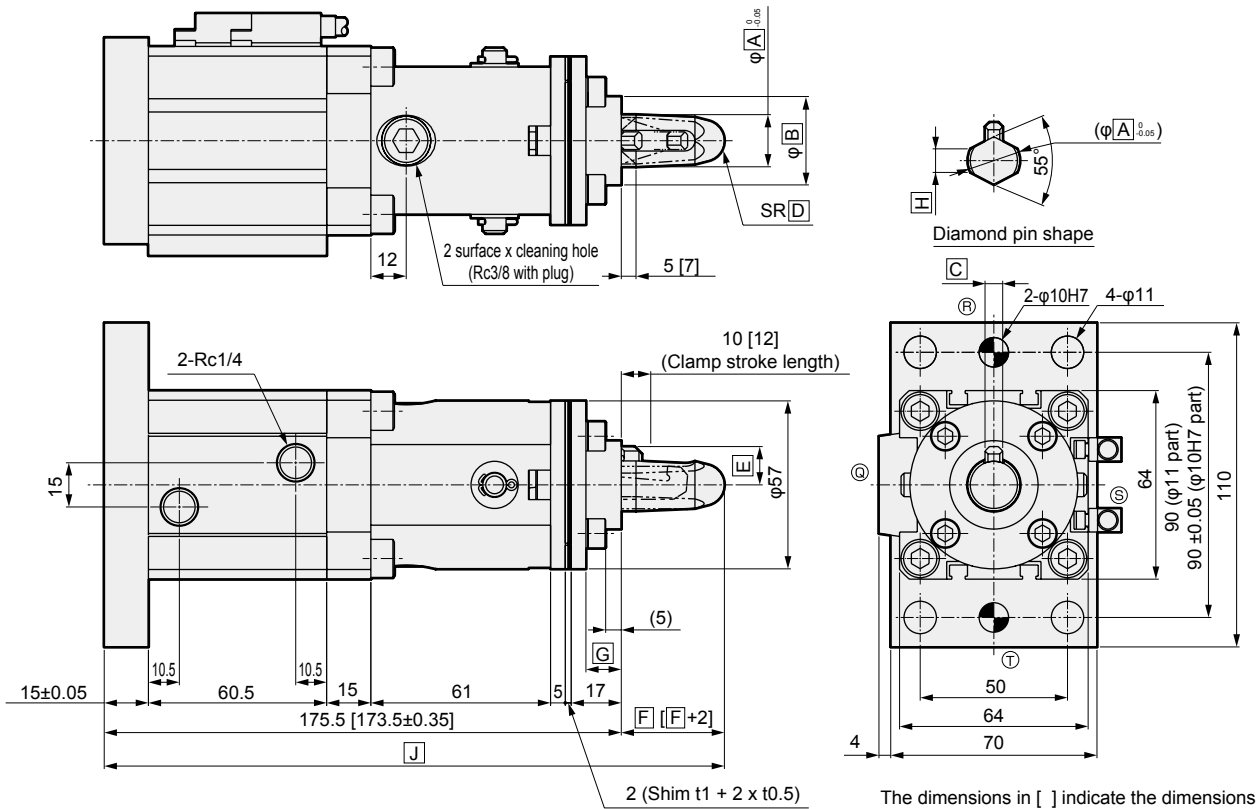


Code	Common dimensions (mm)									
Locating pin φ (mm)	A	B	C	D	E	F	G	H	J	K
φ12.5	12.5	30	4.5	5	9.5	30	12	6	190.5	229.5
φ12.7	12.7	30	4.5	5	9.5	30	12	6	190.5	229.5
φ14.5	14.5	30	6	5	11	30	12	7	190.5	229.5
φ14.7	14.7	30	6	5	11	30	12	7	190.5	229.5
φ17.5	17.5	30	6	7	13	35	12	8	195.5	234.5
φ17.7	17.7	30	6	7	13	35	12	8	195.5	234.5
φ19.5	19.5	30	6	8	14	35	12	10	195.5	234.5
φ19.7	19.7	30	6	8	14	35	12	10	195.5	234.5
φ24.5	24.5	40	6	9	16.5	35	11.5	12	195.5	234.5
φ24.7	24.7	40	6	9	16.5	35	11.5	12	195.5	234.5

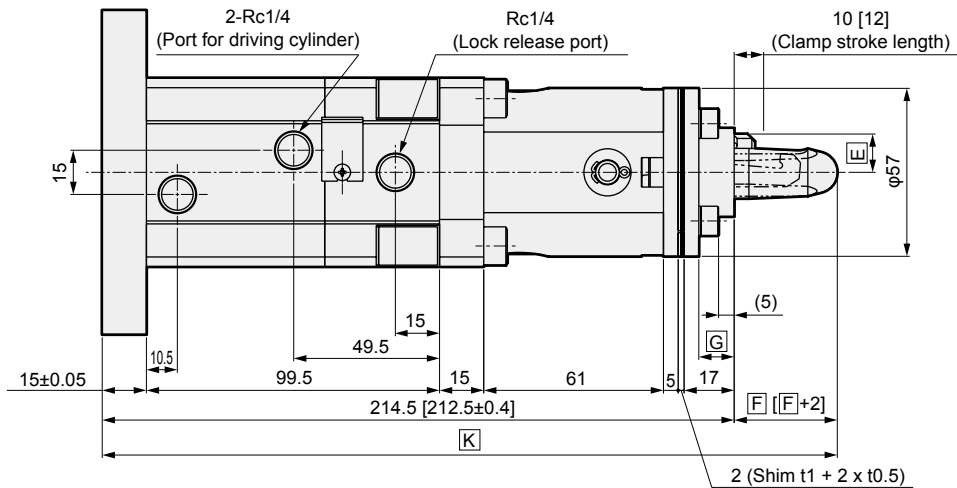
- LCW
- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC**
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC**
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending

Dimensions (PCC-B1, PCC-QB1)

● PCC-B1



● PCC-QB1

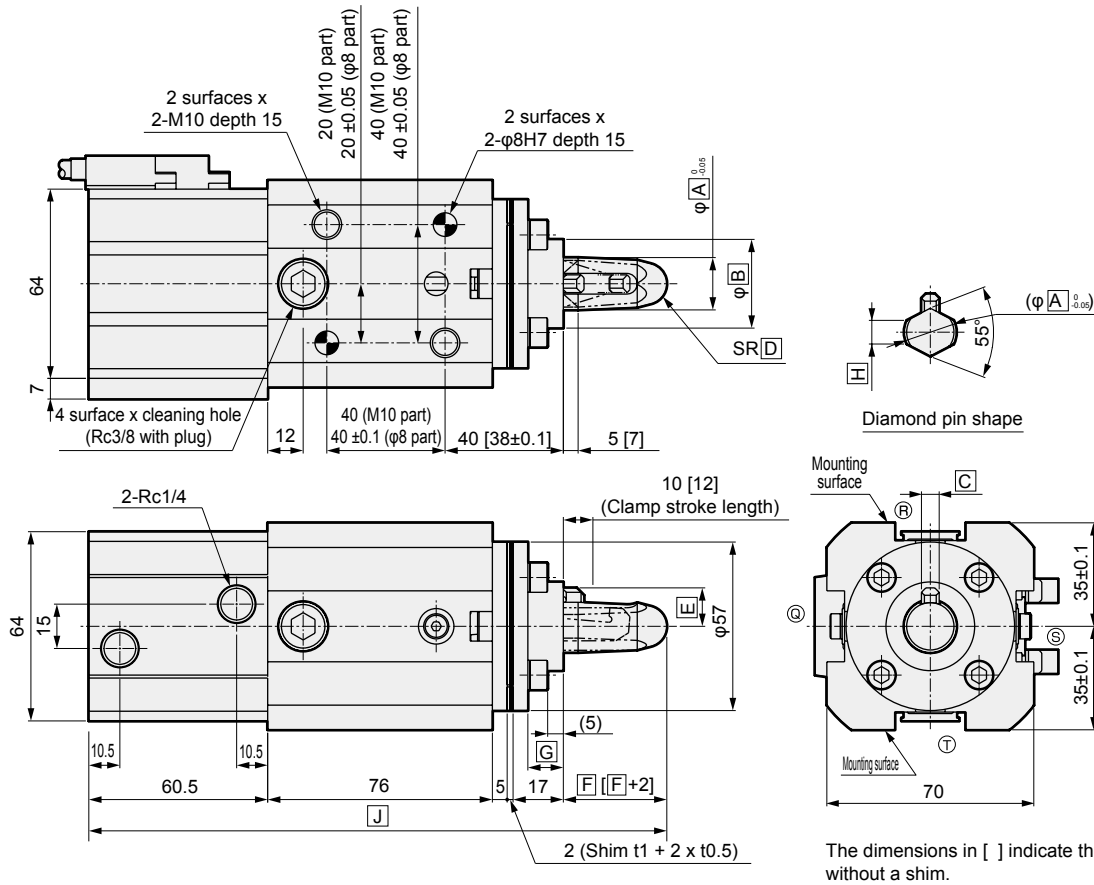


Code	Common dimensions (mm)									
	A	B	C	D	E	F	G	H	J	K
φ12.5	12.5	30	4.5	5	9.5	30	12	6	205.5	244.5
φ12.7	12.7	30	4.5	5	9.5	30	12	6	205.5	244.5
φ14.5	14.5	30	6	5	11	30	12	7	205.5	244.5
φ14.7	14.7	30	6	5	11	30	12	7	205.5	244.5
φ17.5	17.5	30	6	7	13	35	12	8	210.5	249.5
φ17.7	17.7	30	6	7	13	35	12	8	210.5	249.5
φ19.5	19.5	30	6	8	14	35	12	10	210.5	249.5
φ19.7	19.7	30	6	8	14	35	12	10	210.5	249.5
φ24.5	24.5	40	6	9	16.5	35	11.5	12	210.5	249.5
φ24.7	24.7	40	6	9	16.5	35	11.5	12	210.5	249.5

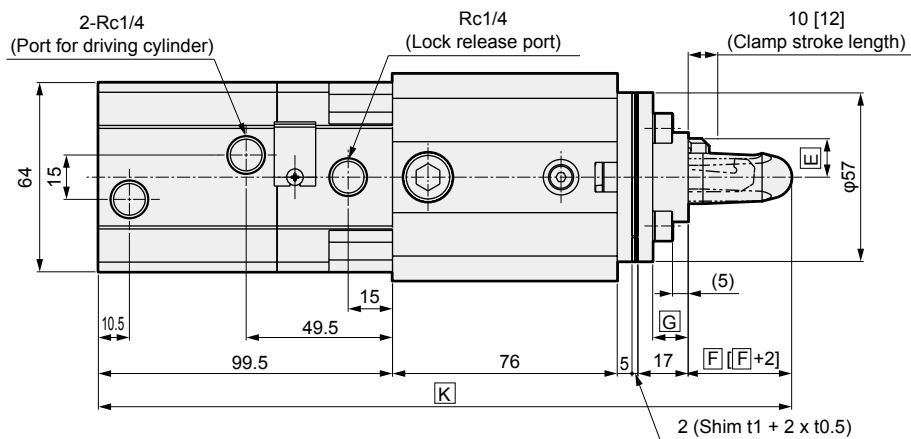
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions (PCC-C1, PCC-QC1)

● PCC-C1



● PCC-QC1 (position locking)

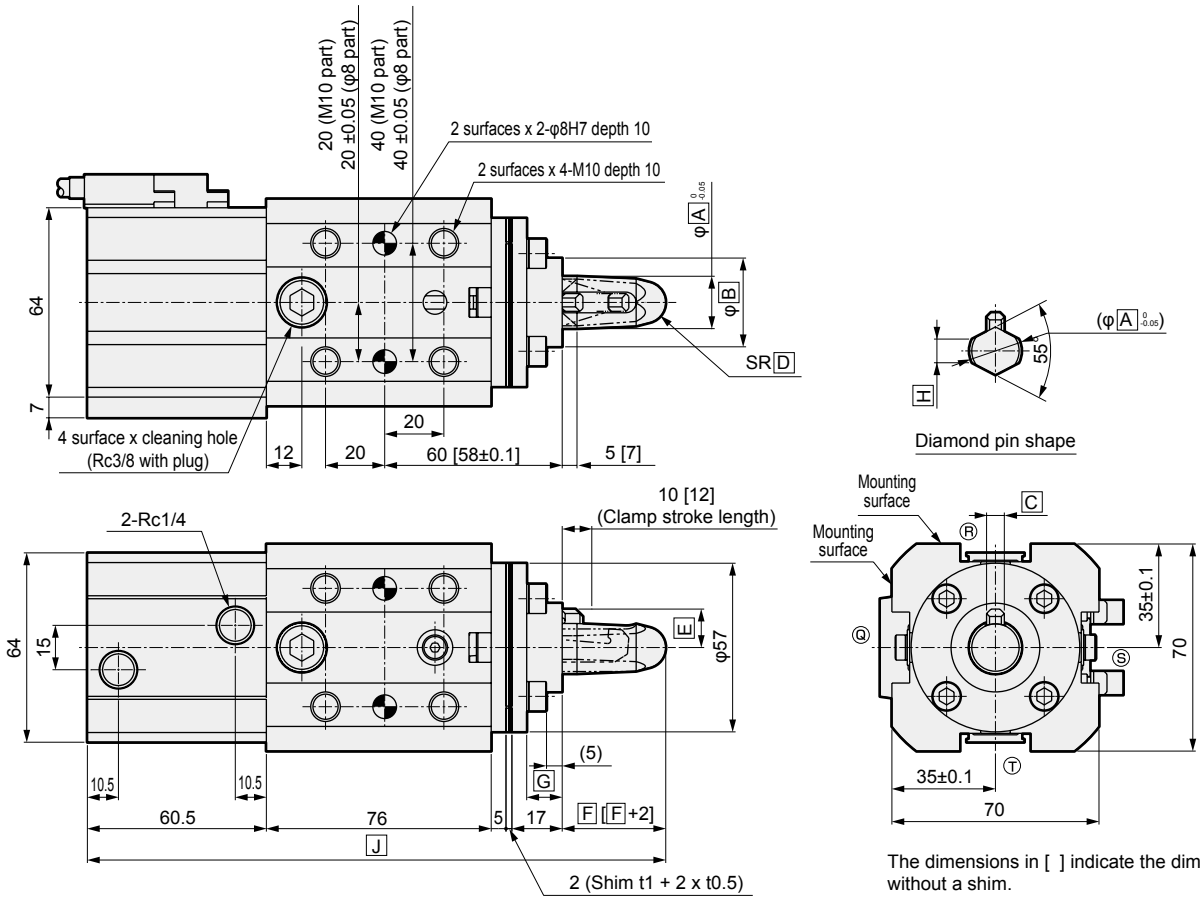


Code	Common dimensions (mm)									
Locating pin φ (mm)	A	B	C	D	E	F	G	H	J	K
φ12.5	12.5	30	4.5	5	9.5	30	12	6	190.5	229.5
φ12.7	12.7	30	4.5	5	9.5	30	12	6	190.5	229.5
φ14.5	14.5	30	6	5	11	30	12	7	190.5	229.5
φ14.7	14.7	30	6	5	11	30	12	7	190.5	229.5
φ17.5	17.5	30	6	7	13	35	12	8	195.5	234.5
φ17.7	17.7	30	6	7	13	35	12	8	195.5	234.5
φ19.5	19.5	30	6	8	14	35	12	10	195.5	234.5
φ19.7	19.7	30	6	8	14	35	12	10	195.5	234.5
φ24.5	24.5	40	6	9	16.5	35	11.5	12	195.5	234.5
φ24.7	24.7	40	6	9	16.5	35	11.5	12	195.5	234.5

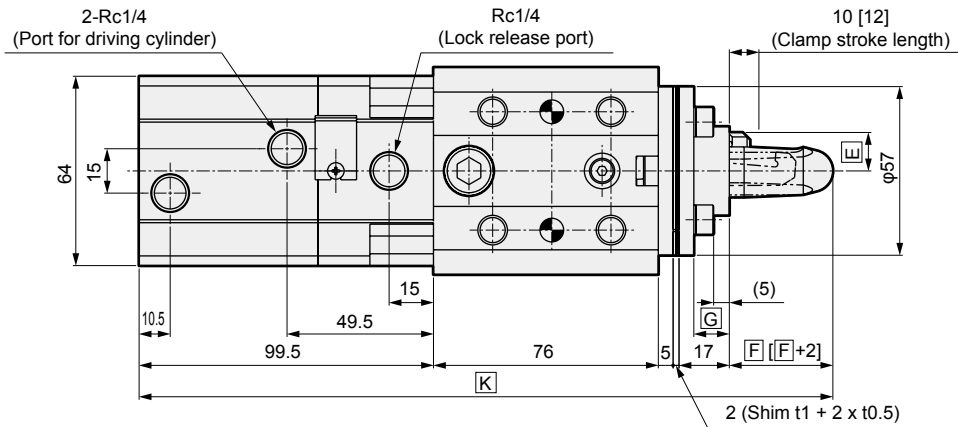
LCW
LCR
LCG
LCX
LCM
STM
STG
STS/STL
STR2
UCA2
ULK*
JSK/M2
JSG
JSC3/JSC4
USSD
UFCD
USC
JSB3
LMB
LML
HCM
HCA
LBC
CAC4
UCAC2
CAC-N
UCAC-N
RCC2
RCS
PCC
SHC
MCP
GLC
MFC
BBS
RRC
GRC
RV3*
NHS
HR
LN
Hand
Chuk
MecHnd/Chuk
ShkAbs
FJ
FK
SpdContr
Ending

Dimensions (PCC-C2, PCC-QC2)

● PCC-C2

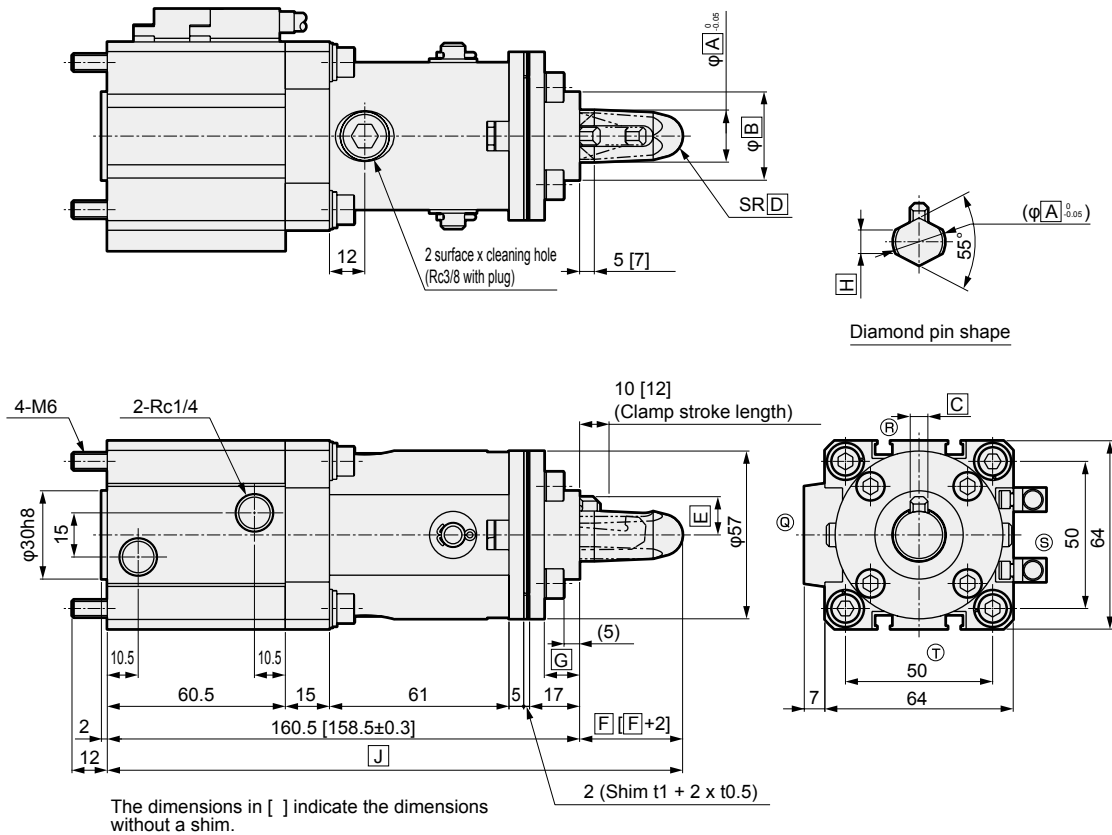


● PCC-QC2



Code	Common dimensions (mm)									
	A	B	C	D	E	F	G	H	J	K
φ12.5	12.5	30	4.5	5	9.5	30	12	6	190.5	229.5
φ12.7	12.7	30	4.5	5	9.5	30	12	6	190.5	229.5
φ14.5	14.5	30	6	5	11	30	12	7	190.5	229.5
φ14.7	14.7	30	6	5	11	30	12	7	190.5	229.5
φ17.5	17.5	30	6	7	13	35	12	8	195.5	234.5
φ17.7	17.7	30	6	7	13	35	12	8	195.5	234.5
φ19.5	19.5	30	6	8	14	35	12	10	195.5	234.5
φ19.7	19.7	30	6	8	14	35	12	10	195.5	234.5
φ24.5	24.5	40	6	9	16.5	35	11.5	12	195.5	234.5
φ24.7	24.7	40	6	9	16.5	35	11.5	12	195.5	234.5

Dimensions (PCC-D1)



Code	Common dimensions (mm)								
Locating pin ϕ (mm)	A	B	C	D	E	F	G	H	J
$\phi 12.5$	12.5	30	4.5	5	9.5	30	12	6	190.5
$\phi 12.7$	12.7	30	4.5	5	9.5	30	12	6	190.5
$\phi 14.5$	14.5	30	6	5	11	30	12	7	190.5
$\phi 14.7$	14.7	30	6	5	11	30	12	7	190.5
$\phi 17.5$	17.5	30	6	7	13	35	12	8	195.5
$\phi 17.7$	17.7	30	6	7	13	35	12	8	195.5
$\phi 19.5$	19.5	30	6	8	14	35	12	10	195.5
$\phi 19.7$	19.7	30	6	8	14	35	12	10	195.5
$\phi 24.5$	24.5	40	6	9	16.5	35	11.5	12	195.5
$\phi 24.7$	24.7	40	6	9	16.5	35	11.5	12	195.5

- LCW
- LCR
- LCG
- LCX
- LCM
- STM
- STG
- STS/STL
- STR2
- UCA2
- ULK*
- JSK/M2
- JSG
- JSC3/JSC4
- USSD
- UFCD
- USC
- JSB3
- LMB
- LML
- HCM
- HCA
- LBC
- CAC4
- UCAC2
- CAC-N
- UCAC-N
- RCC2
- RCS
- PCC**
- SHC
- MCP
- GLC
- MFC
- BBS
- RRC
- GRC
- RV3*
- NHS
- HR
- LN
- Hand
- Chuk
- MecHnd/Chuk
- ShkAbs
- FJ
- FK
- SpdContr
- Ending