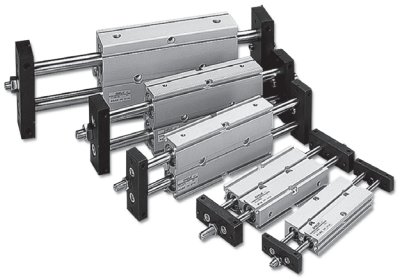
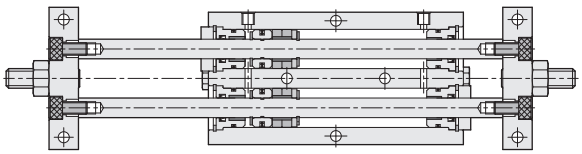
STU series Slide Unit

Product features

CHELIC



Internal structure



Theoretical force

Unit: kgf

Bore size (mm)	Piston rod dia (mm)	Piston area (cm²)	Air pressure (kgf/cm²)								
			1	2	3	4	5	6	7	8	9
Ø10	Ø6	1.0	–	2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0
Ø16	Ø8	3.02	(3.01)	6.03	9.04	12.06	15.07	18.09	21.11	24.12	27.14
Ø20	Ø10	4.71	4.7	9.4	14.1	18.8	23.6	28.3	33.0	37.7	42.4
Ø25	Ø12	7.55	7.5	16.1	22.6	30.2	37.7	45.3	52.8	60.4	68.0
Ø32	Ø16	12.06	12.1	24.1	36.2	48.2	60.3	72.4	84.4	96.5	108.5

Note: Above are theoretical date- please take into consideration the frictional resistance and the mechanical efficiency of value should be added calculation before using. (About 70%~80%)

Specification

Item \ Bore size (mm)	Ø10	Ø16	Ø20	Ø25	Ø32
Action	Double acting				
Fluid	Air				
Pressure range kgf/cm²(kPa)	1.5 ~ 9 (150 ~ 900)				
Max. operating pressure kgf/cm²(kPa)	9.5 (950)				
Ambient and fluid temperature ℃	0 ~ 60				
Piston speed mm/s	100 ~ 500				
Lubrication	Lubrication free type				
Stroke adjusting range	-5 ~ 0				
Port size	M5×0.8				Rc 1/8
Sensing device	With magnet				

Standard stroke

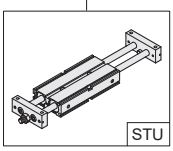
Unit: mm

Bore size	Stroke
Ø10	25, 50, 75, 100
Ø16	25, 50, 75, 100, 125, 150, 175, 200, 250
Ø20	25, 50, 75, 100, 125, 150, 175, 200, 250
Ø25	25, 50, 75, 100, 125, 150, 175, 200, 250
Ø32	25, 50, 75, 100, 125, 150, 175, 200, 250

Code of order

STU — 20 × 100 — SD 2 — A 2

Model



STU:
Body is mounted

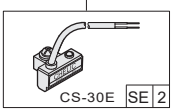
Bore size

10 – Ø10
16 – Ø16
20 – Ø20
25 – Ø25
32 – Ø32

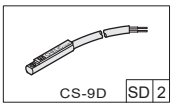
Stroke

Ø10 – 25 ~ 100
Ø16 – 25 ~ 250
Ø20 – 25 ~ 250
Ø25 – 25 ~ 250
Ø32 – 25 ~ 250

Sensor switch

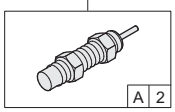


None: Without sensor switch
SE : Sensor switch mark (CS-30E)
2 : Quantity of sensor switch
※ Use for STUØ16~Ø32



SD : Sensor switch mark (CS-9D)
SB : Sensor switch mark (CS-9B)
2 : Quantity of sensor switch
1 = 1 PCS
2 = 2 PCS (Option)
※ Use for STUØ10~Ø32

Shock absorber



None:
Without shock absorber
A : Shock absorber
1 = 1 set
2 = 2 sets (Option)

How to select Shock absorber

Bore size	Model	Max. absorber
Ø 16	SAC-0806	2 N•m
Ø 20	SAC-0806	2 N•m
Ø 25	SAC-1008	4 N•m
Ø 32	SAC-1008	4 N•m

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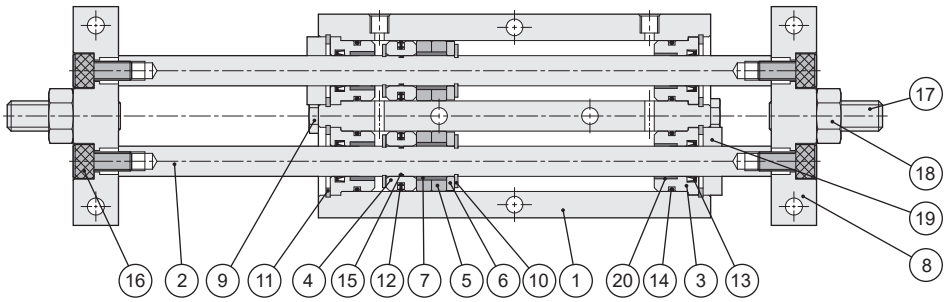
Internal structure



Components and material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	11	Snap ring	Spring steel
02	Rod	Carbon steel	12	Piston packing	NBR
03	Front cover	Aluminum alloy	13	Rod packing	NBR
04	Piston	Copper alloy	14	Front cover O-Ring	NBR
05	Magnet	Rubber magnet	15	Piston O-Ring	NBR
06	Magnetic cap	Copper alloy	16	Screw	Alloy steel
07	Magnet bush	Copper alloy	17	Screw	Alloy steel
08	Slider	Iron/ Aluminum alloy	18	Nut	Carbon steel
09	Stopper screw	Carbon steel	19	Lining	Rubber
10	Shaft Clip	Spring steel	20	Bearing	Teflon

Note : The material of plate for STU Ø10, Ø16, Ø20 is iron; The material of plate for STUØ25, Ø32 is aluminum alloy.

Packing and O-ring part list

Unit: mm

Item	Piston packing	Piston O-ring	Shaft packing	Front/ Rear cover O-ring
Quantity / Bore size	2	2	4	4
Ø10	DYP-10(4pcs)	4 × 1.0	DYR-6	8 × 1.0
Ø16	COP-16	6.3 × 0.8	DYR-8K	13.2 × 1.5
Ø20	COP-20	8 × 1.0	DYR-10SK	17.5 × 1.5
Ø25	COP-25	10 × 1.5	DYR-12	20.8 × 2.0
Ø32	COP-32	13.5 × 1.5	DYR-16	28.5 × 2.0

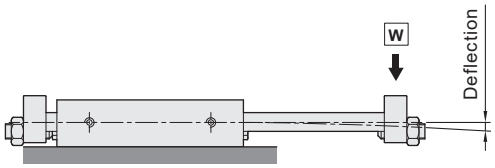
Note: The piston packing and shaft packing are from MITSUBISHI, SAKAGAMI or the same good level of quality material.

Weight

Bore size	Weight (kg)								
	Stroke (mm)								
mm	25	50	75	100	125	150	175	200	250
STU Ø10 × □	0.20	0.20	0.20	0.30	–	–	–	–	–
STU Ø16 × □	0.60	0.60	0.70	0.80	0.90	1.00	1.10	1.20	–
STU Ø20 × □	0.80	0.90	1.00	1.10	1.20	1.40	1.50	1.60	–
STU Ø25 × □	1.20	1.40	1.60	1.70	1.90	2.20	2.40	2.70	–
STU Ø32 × □	2.40	2.70	3.00	3.30	3.60	4.00	4.30	4.60	5.20

Allowable side load (Reference)

- The load condition of slide unit when body is mounted. (STU)

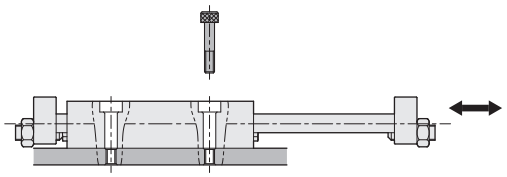


Unit: mm

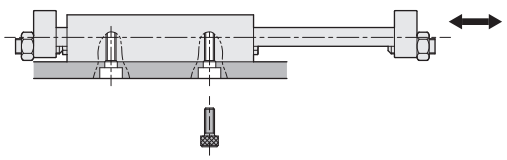
Model	W Load (Kgf) \ Stroke (mm)	50	100	150	200
STU-Ø10	0.3	0.08	0.30	–	–
STU-Ø16	0.5	0.07	0.15	0.30	0.50
STU-Ø20	0.7	0.05	0.15	0.30	0.50
STU-Ø25	1.0	0.05	0.10	0.20	0.40
STU-Ø32	2.0	0.03	0.10	0.20	0.30

Mounting type

- Top mounting type
  (Body is mounted, sliding block is moving)

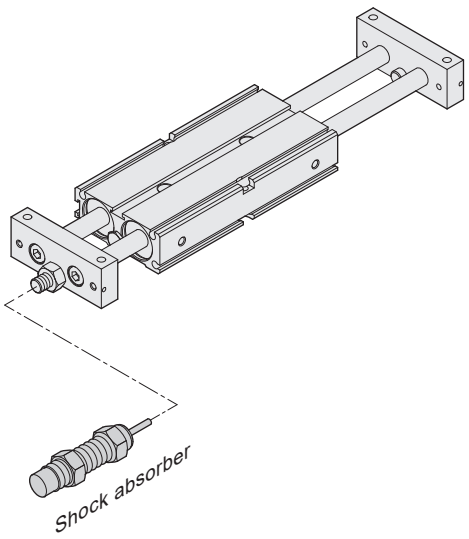


- Base mounting type
  (Body is mounted, sliding block is moving)



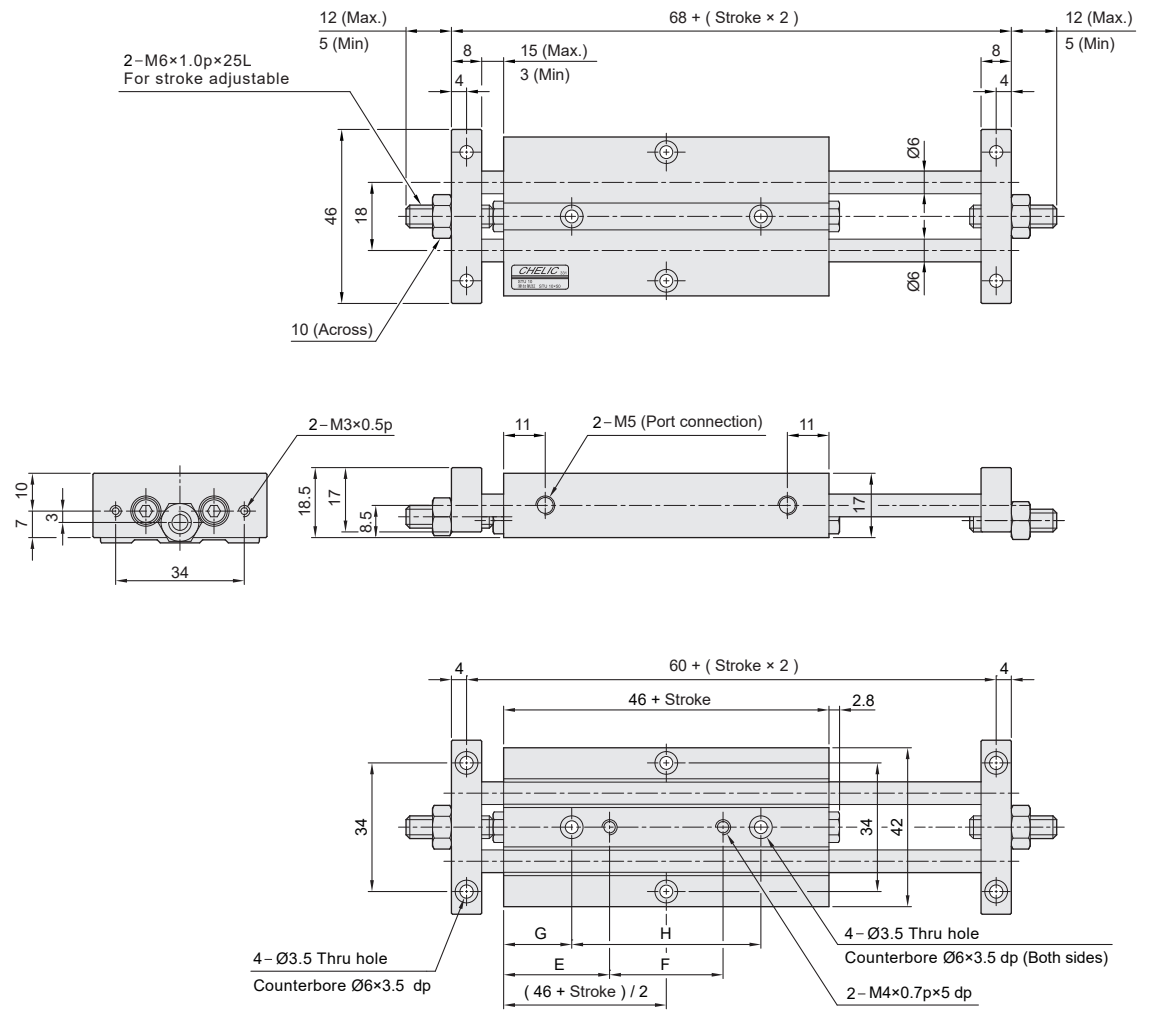
Stroke adjustable and with shock absorber

- Adjustable screw can be used for adjusting the stroke of left and right to - 5 mm.
- Shock absorber can be installed for the top cushion.



STU Ø10 × ▭

STU 10 × ▭ ST



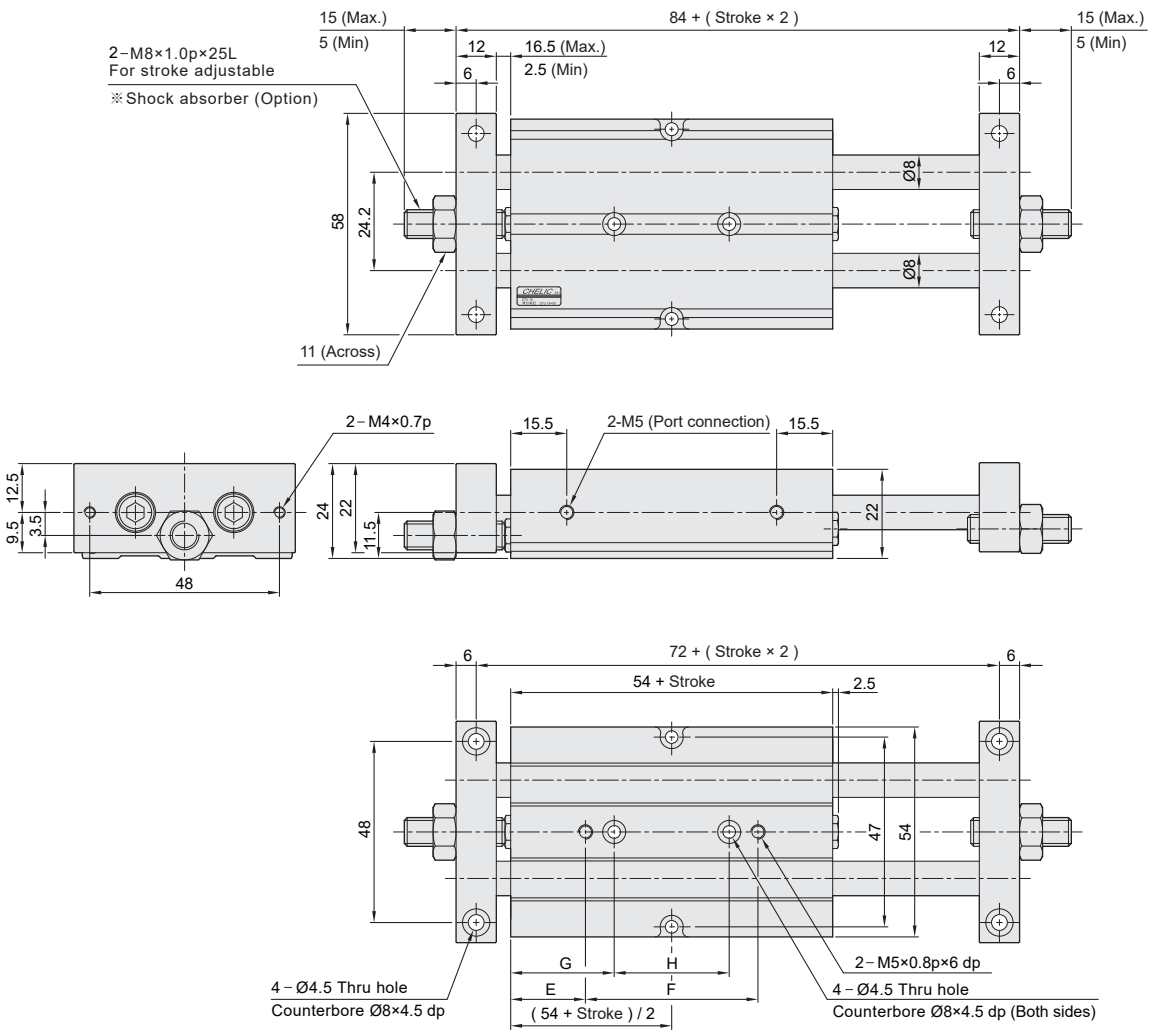
Dimension

Unit: mm

Stroke / Mark	25	50	75	100
E	28	28	28	28
F	15	40	65	90
G	18	18	18	18
H	35	60	85	110

STU Ø16 × □

STU 16 × □ ST

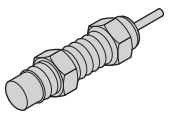


Dimension

Unit: mm

Stroke / Mark	25	50	75	100	125	150	175	200	250
E	19.5	22	24.5	27	29.5	42	54.5	67	77
F	40	60	80	100	120	120	120	120	150
G	29.5	32	34.5	37	39.5	52	64.5	77	92
H	20	40	60	80	100	100	100	100	120

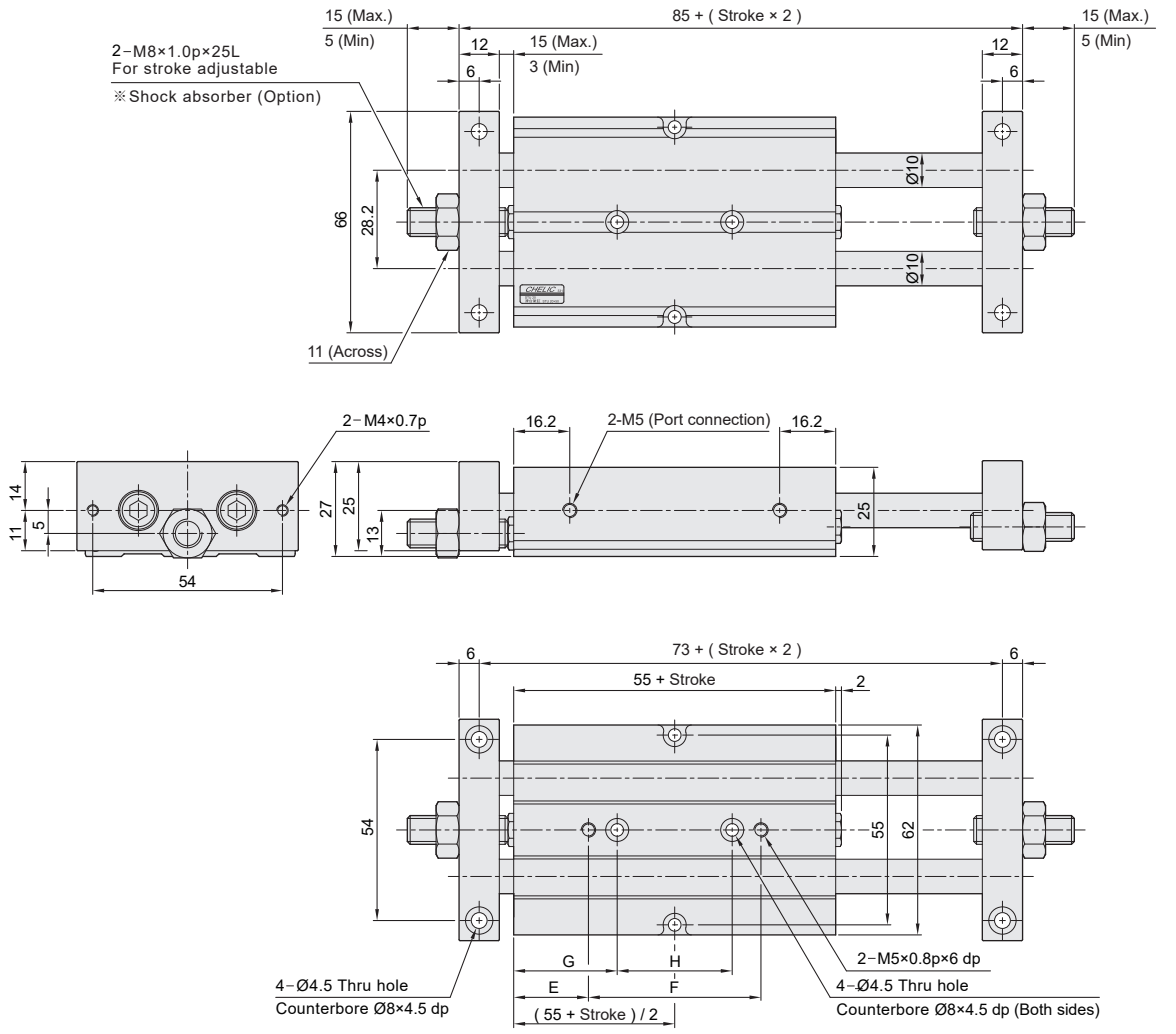
Option/ Shock absorber



SAC-0806

STU Ø20 × □

STU 20 × □ ST

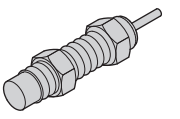


Dimension

Unit: mm

Stroke / Mark	25	50	75	100	125	150	175	200	250
E	20	22.5	25	27.5	30	42.5	55	67.5	77.5
F	40	60	80	100	120	120	120	120	150
G	30	32.5	35	37.5	40	52.5	65	77.5	92.5
H	20	40	60	80	100	100	100	100	120

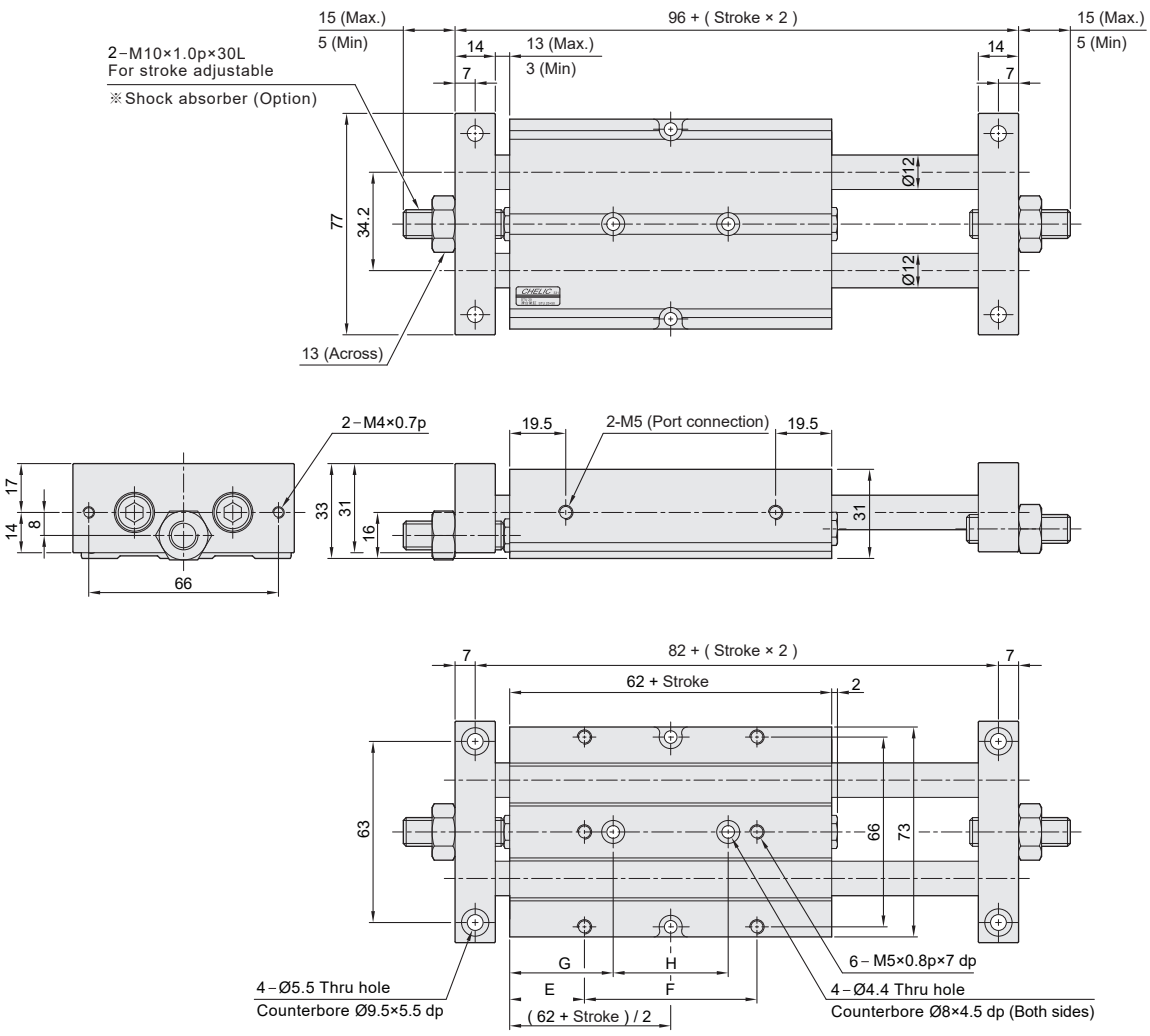
Option/ Shock absorber



SAC-0806

STU Ø25 × □

STU 25 × □ ST

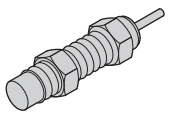


Dimension

Unit: mm

Stroke / Mark	25	50	75	100	125	150	175	200	250
E	23.5	26	28.5	31	33.5	46	58.5	71	81
F	40	60	80	100	120	120	120	120	150
G	33.5	36	38.5	41	43.5	56	68.5	81	96
H	20	40	60	80	100	100	100	100	120

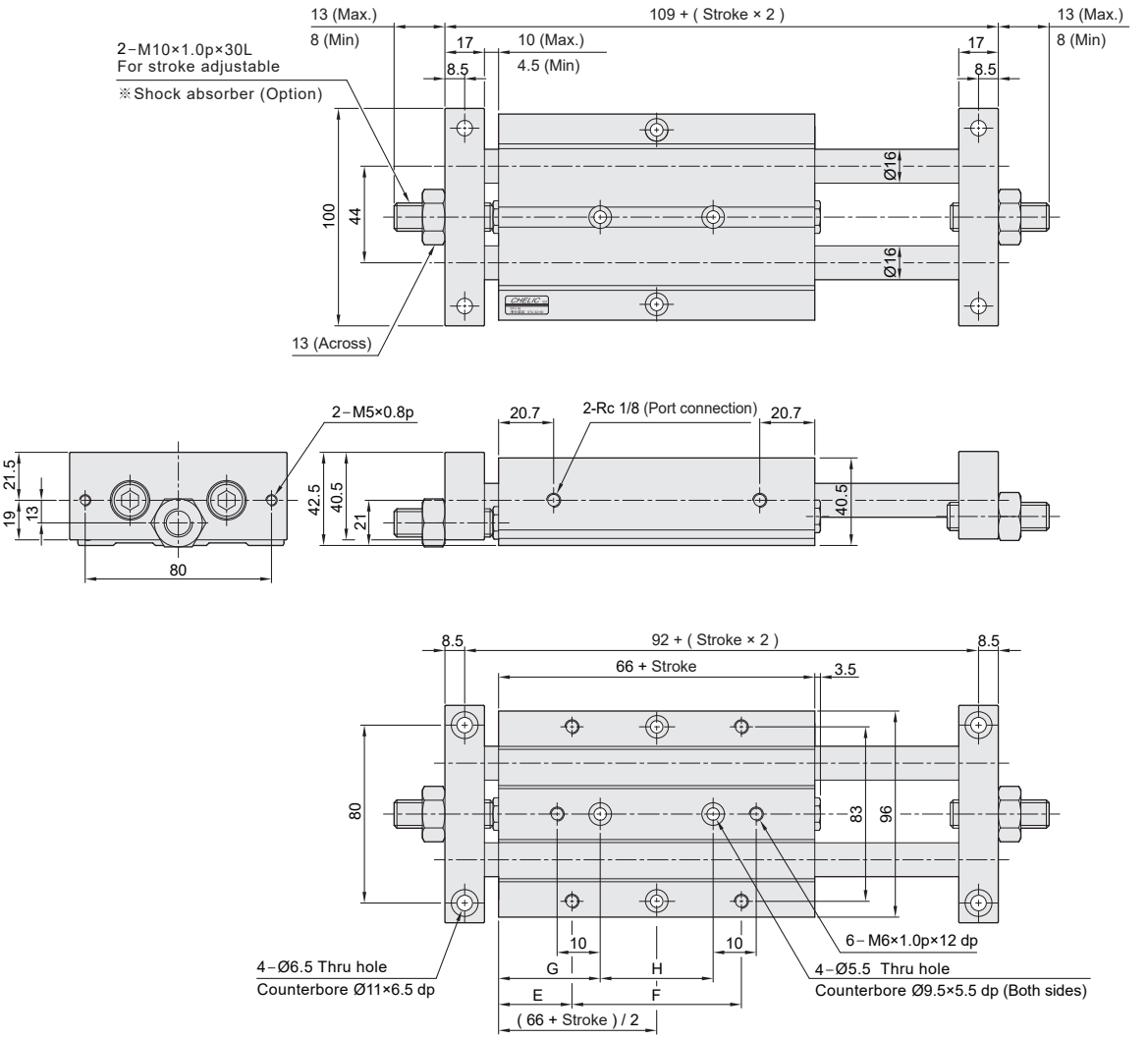
Option/ Shock absorber



SAC-1008

STU Ø32 × □

STU 32 × □ ST

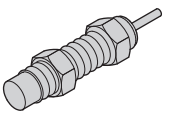


Dimension

Unit: mm

Stroke / Mark	25	50	75	100	125	150	175	200	250
E	30.5	33	30.5	33	35.5	48	60.5	73	83
F	30	50	80	100	120	120	120	120	150
G	35.5	38	40.5	43	45.5	58	70.5	83	83
H	20	40	60	80	100	100	100	100	150

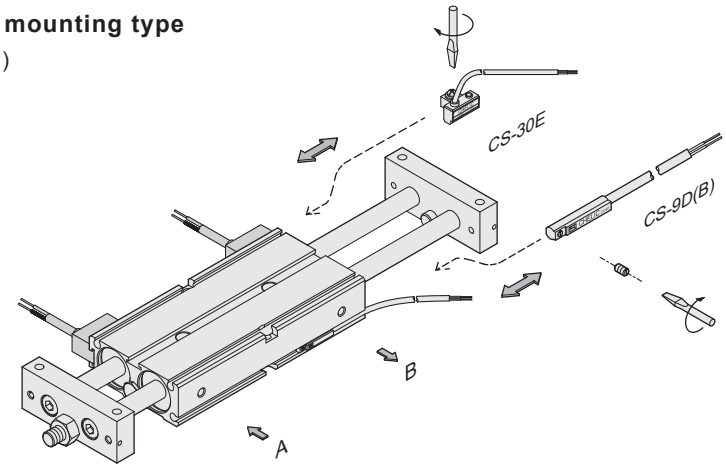
Option/ Shock absorber



SAC-1008

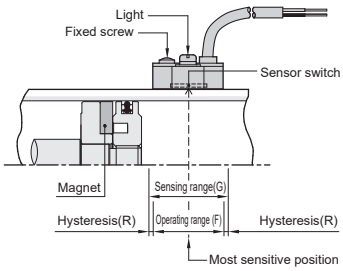
Sensor switch mounting type

- CS-30E, CS9D(B)

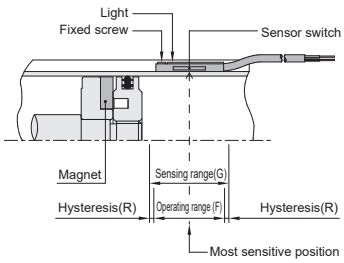


Sensor switch setting and operating range

- CS - 30E



- CS - 9D (B)



Sensing range

Sensor switch is fixed on the cylinder body. The magnetic piston head will activate the sensor switch when it enters the operating range. It has 0.5mm differential.

Operating range

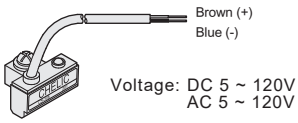
When piston head moves the switch setting and adjustment will be based on the responding range generated by the magnetic field and the switch.(Please refer to the right table)

Unit: mm

Model	CS-30E		CS-9D(B)	
Bore size	Operating range (F)	Hysteresis(R)	Operating range (F)	Hysteresis(R)
Ø10	10 (8)	1	8	1
Ø16	9 (5)	1.2	8	1.2
Ø20	13 (11)	1.2	11	1.2
Ø25	10.5 (9)	1.5	9	1.5
Ø32	10.5 (9)	1.5	9	1.5

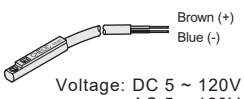
Note: 1. STU Ø10, Ø16 is the number of sensor switch CS-30S
2. ( ) is the data detected sideway.

Sensor switch introduction



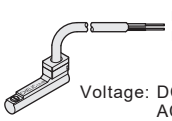
Voltage: DC 5 ~ 120V
AC 5 ~ 120V

CS-30E



Voltage: DC 5 ~ 120V
AC 5 ~ 120V

CS-9D



Voltage: DC 5 ~ 120V
AC 5 ~ 120V

CS-9B