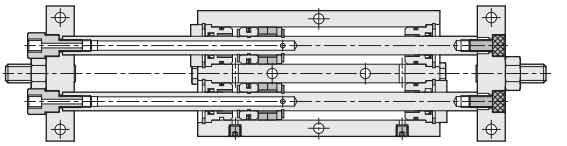
STM series Slide Unit

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
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)	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	50 ~ 700			
Lubrication	Lubrication free type			
Stroke adjusting range	-5 ~ 0			
Port size	M5×0.8		Rc 1/8	
Sensing device	With magnet			

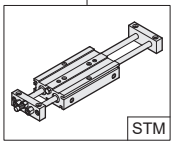
Standard stroke

Unit: mm

Bore size	Stroke
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

STM — Model

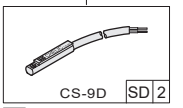


STM : The moveable cylinder body is moving

20 × 100 — Bore size / Stroke

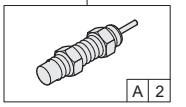
Bore size	Stroke
16 – Ø16	Ø16 – 25 ~ 250
20 – Ø20	Ø20 – 25 ~ 250
25 – Ø25	Ø25 – 25 ~ 250
32 – Ø32	Ø32 – 25 ~ 250

SD 2 — Sensor switch



SD : Sensor switch mark (CS-9D)
SB : Sensor switch mark (CS-9B)
2 : Quantity of sensor switch
1 = 1 PCS
2 = 2 PCS (Option)
(Note: If order sensor switch (-S), the sensor bracket is required.)

A 2 — Shock absorber

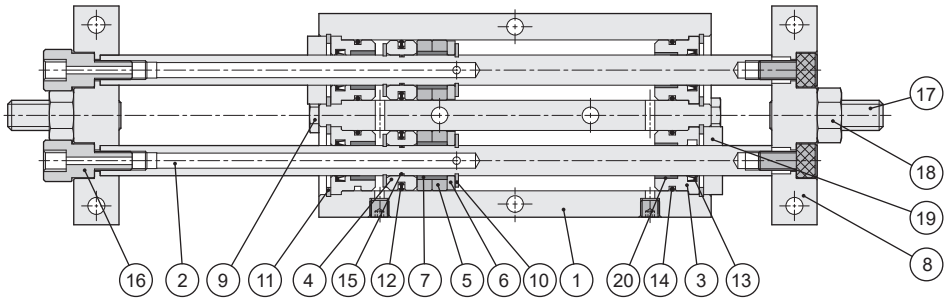


None: Without shock absorber
A : Shock absorber
1 = 1 set
2 = 2 sets (Option)

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

Internal structure



Components and material list

No.	Item	Material	No.	Item	Material
01	Body	Aluminum alloy	11	Clip	Spring steel
02	Rod	Carbon steel	12	Piston packing	NBR
03	Front cover	Aluminum alloy	13	Shaft packing	NBR
04	Piston	Copper alloy	14	Front cover O-ring	NBR
05	Magnet	Plastic magnet	15	Piston O-ring	NBR
06	Magnet 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	Bushing	Teflon

Note: The material of plate for STM Ø16, Ø20 is iron; The material of plate for STM Ø25, 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	2	2
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

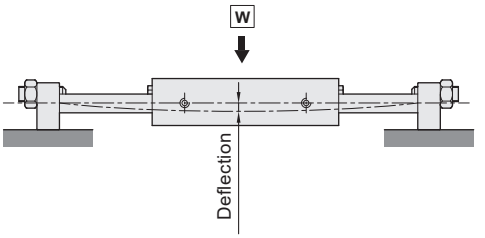
Note: The piston packing and shaft packing are from MITSUBISHI, SAKAGAMI or the same good level of quality material.

Weight

Bore size	Weight (kg)								
	Stroke (mm)								
mm	25	50	75	100	125	150	175	200	250
STM Ø16 × □	0.60	0.70	0.80	0.80	0.90	1.00	–	–	–
STM Ø20 × □	0.80	0.90	1.10	1.10	1.30	1.40	1.60	1.70	–
STM Ø25 × □	1.30	1.50	1.70	1.90	2.00	2.30	2.60	2.80	–
STM Ø32 × □	2.60	2.90	3.20	3.50	3.80	4.00	4.40	4.80	–

Allowable side load (Reference)

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

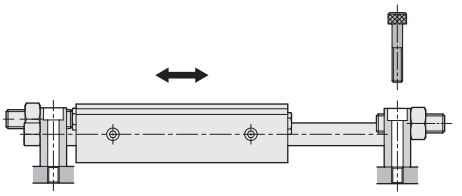


Unit: mm

Model	W Load (Kgf) \ Stroke (mm)	50	100	150	200
STM-Ø16	3.0	0.06	0.08	0.15	0.30
STM-Ø20	4.0	0.06	0.08	0.15	0.20
STM-Ø25	5.0	0.05	0.06	0.12	0.15
STM-Ø32	6.0	0.04	0.05	0.07	0.09

Mounting type

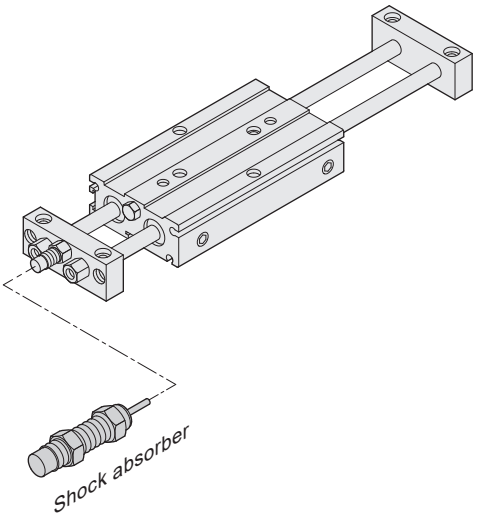
- Base mounting type
  (The cylinder body fixed but two sliders moveable)



STM is the type that has moveable cylinder body

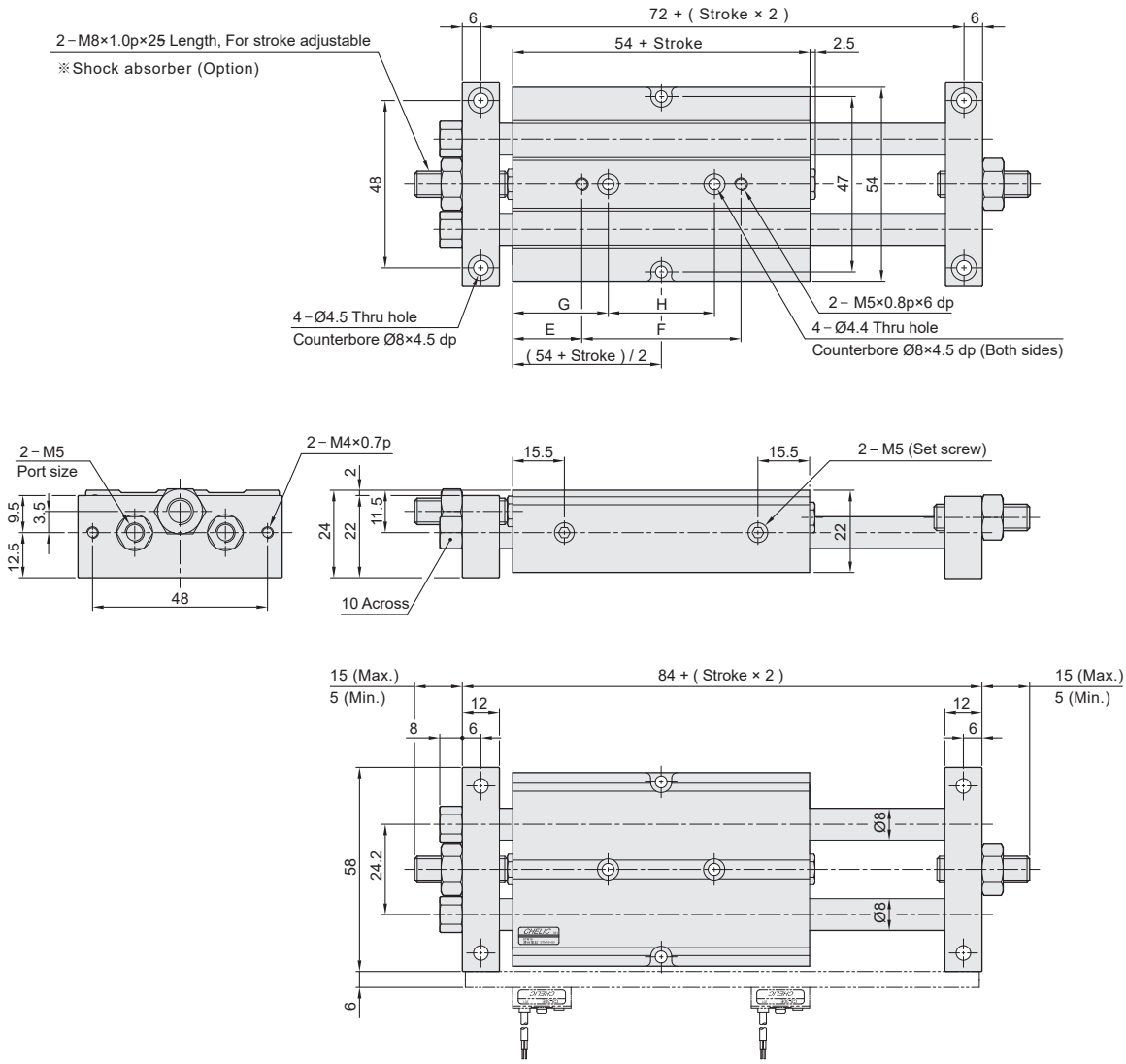
Stroke adjustable and with shock absorber

- 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.



STM Ø16 × ▭

STM 16 × ▭ ST

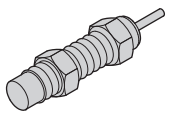


Dimension

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

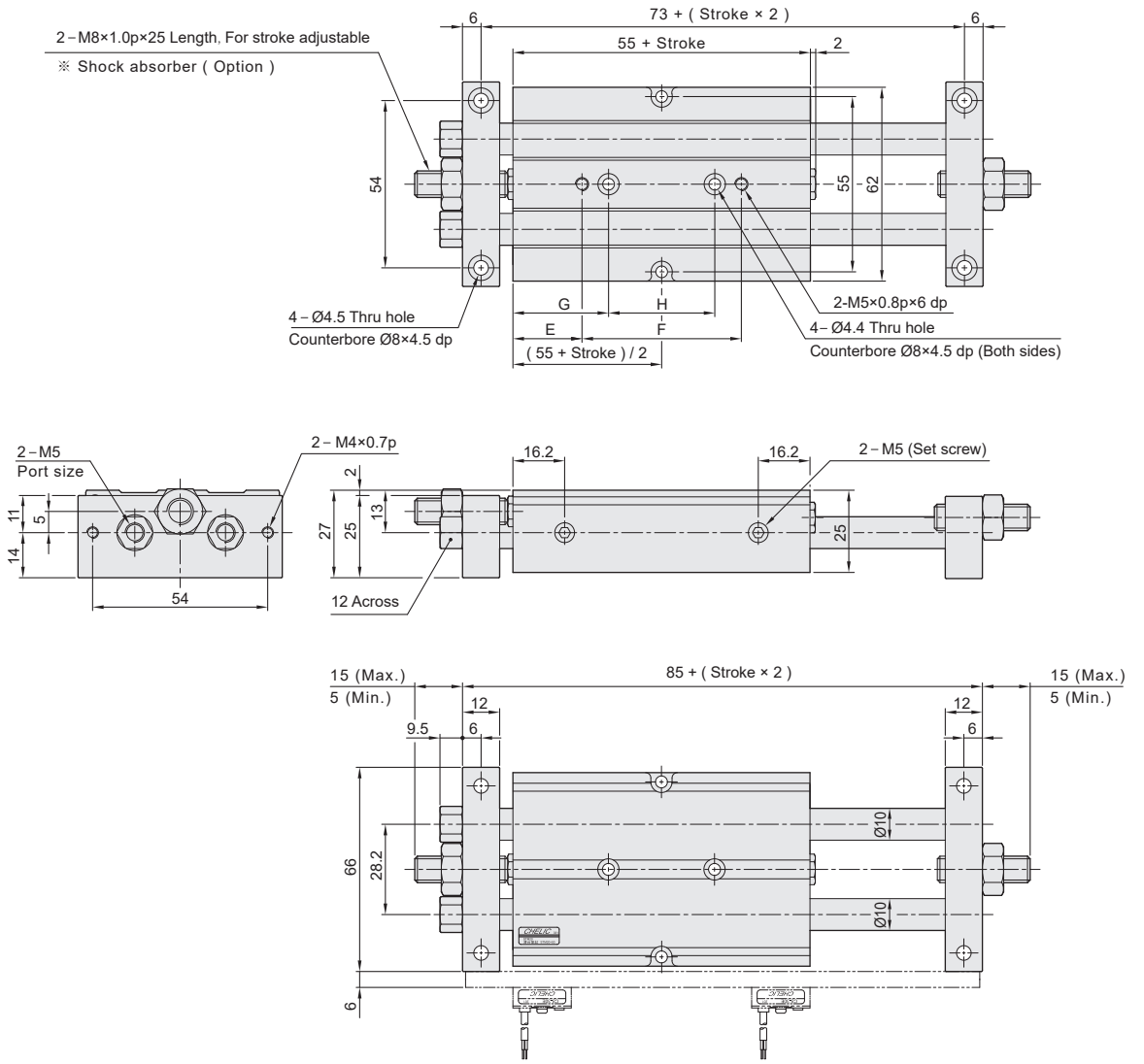
Option/ Shock absorber



SAC-0806

STM Ø20 × □

STM 20 × □ ST

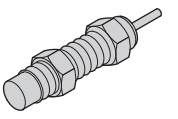


Dimension

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

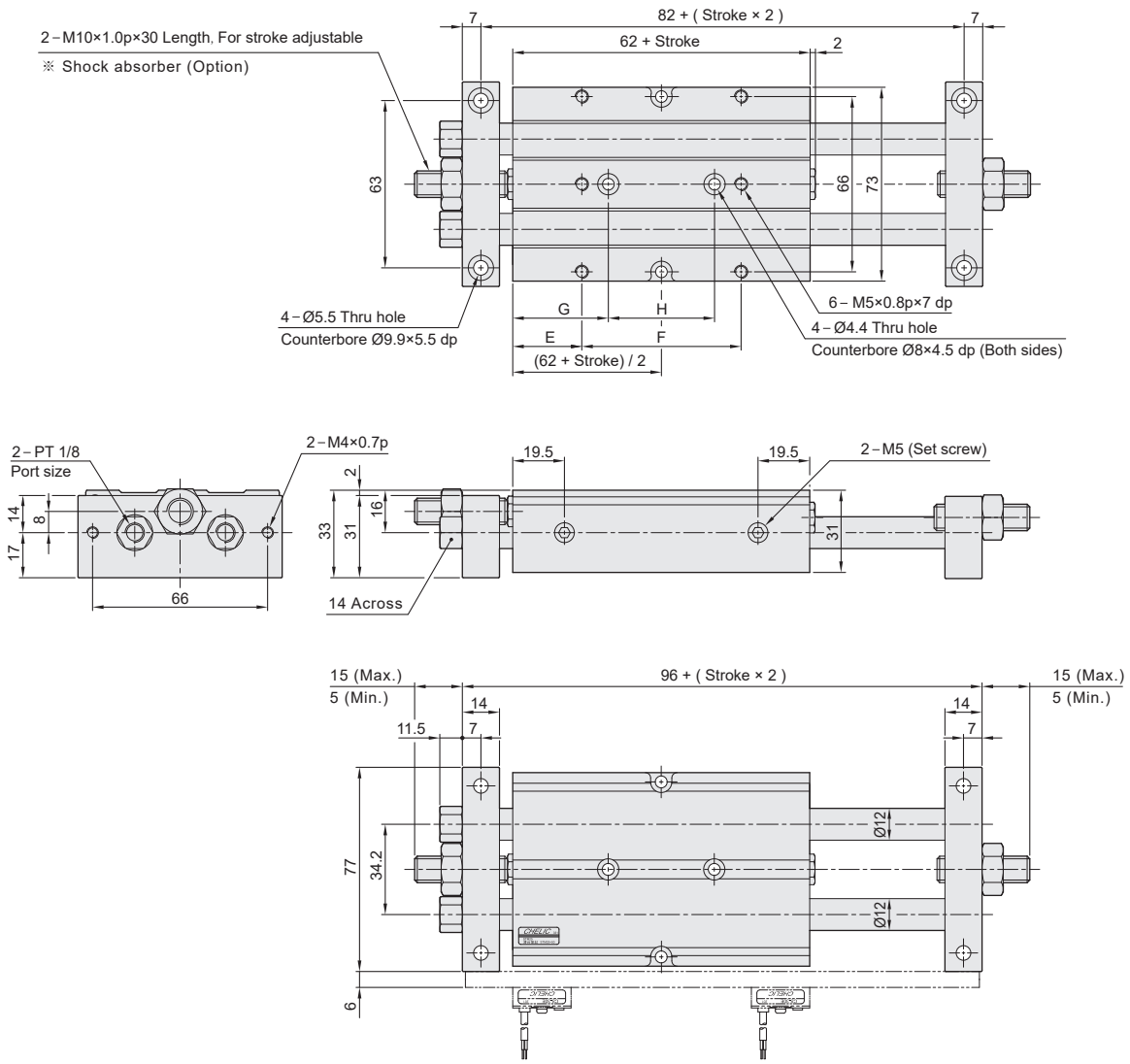
Option/ Shock absorber



SAC-0806

STM Ø25 × ▭

STM 25 × ▭ ST

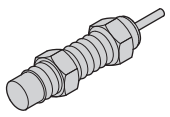


Dimension

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

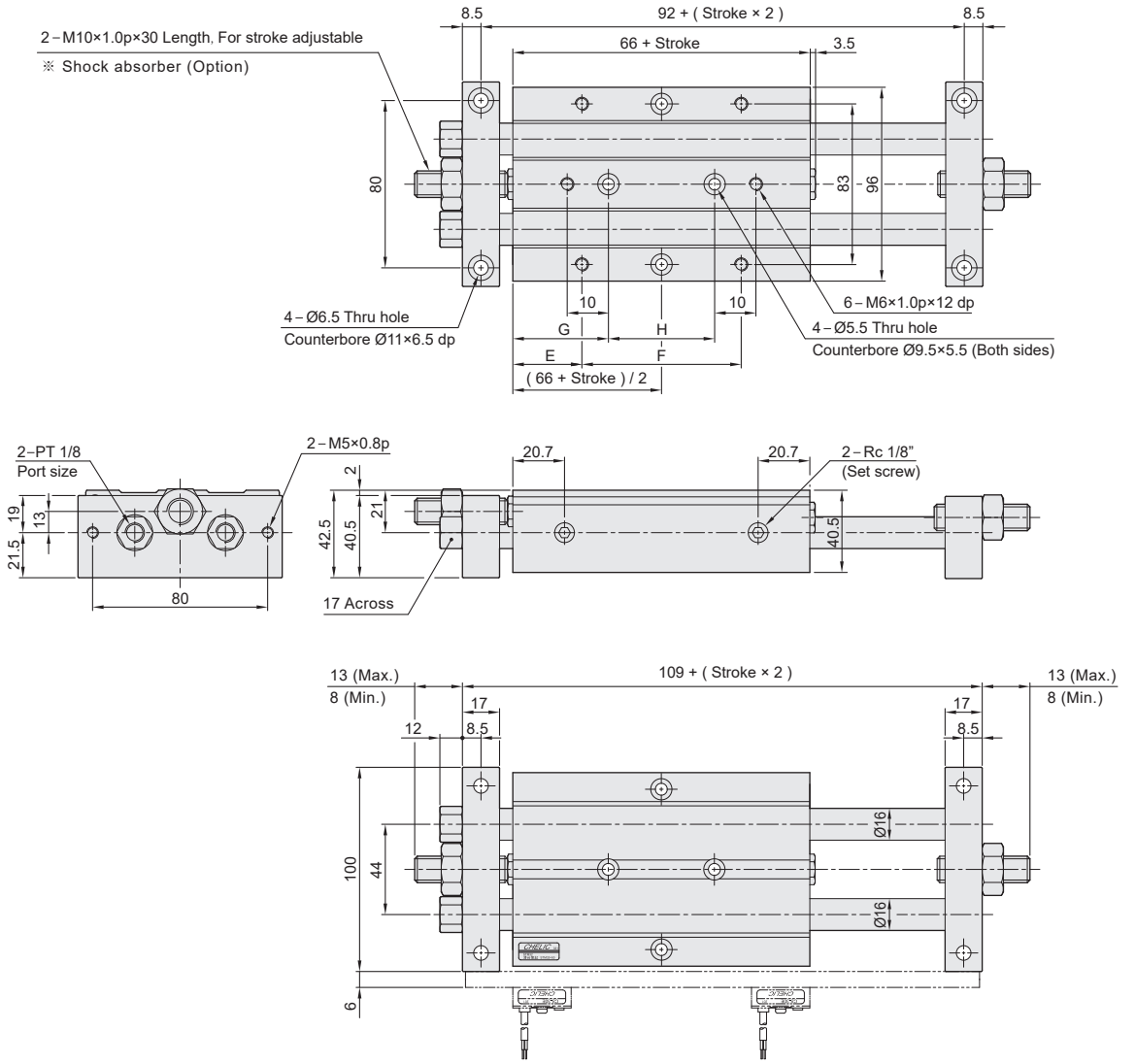
Option/ Shock absorber



SAC-1008

STM Ø32 × ▭

STM 32 × ▭ ST

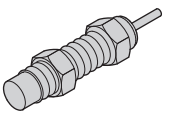


Dimension

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	120

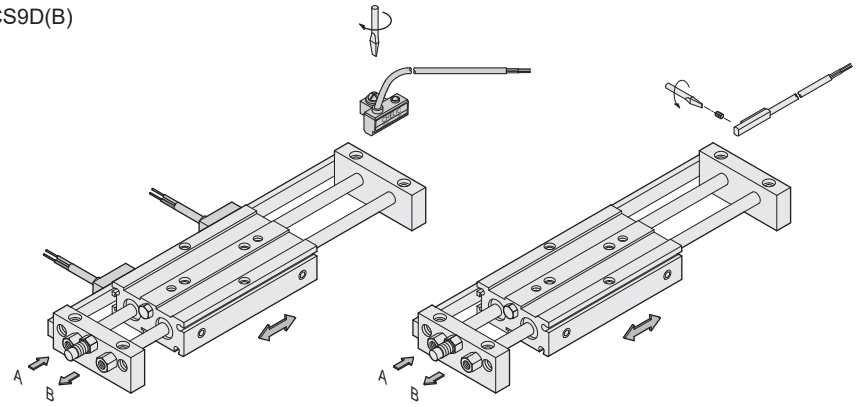
Option/ Shock absorber



SAC-1008

Sensor switch mounting type

- CS-30F, CS9D(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 below table)

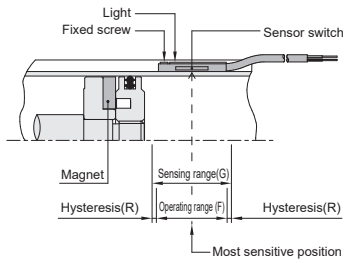
Unit: mm

Model	CS-9D(B)	
Bore size	Operating range (F)	Hysteresis(R)
Ø16	8	1.2
Ø20	11	1.2
Ø25	9	1.5
Ø32	9	1.5

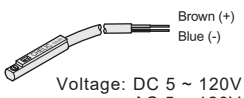
Note: ( ) is the data detected sideway.

Sensor switch setting and operating range

- CS - 9D (B)

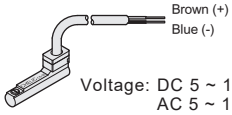


Sensor switch introduction



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

CS-9D



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

CS-9B