High Speed / High Frequency Cylinder

ø20, ø25, ø32

New

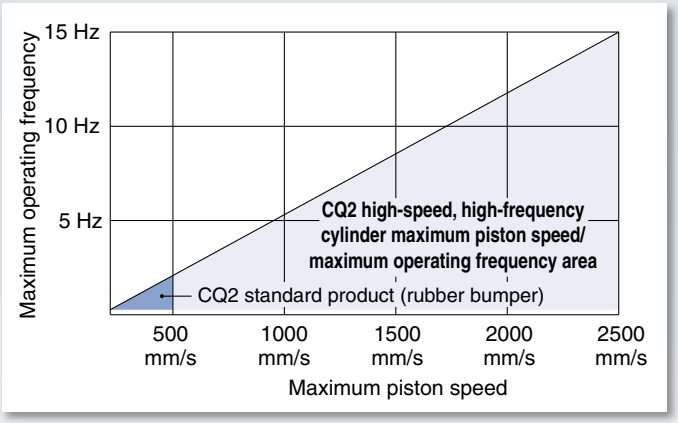
RoHS

Maximum piston speed:

2500 mm/s (➡ Refer to page 9.)

Maximum operating frequency:

15 Hz (➡ Refer to page 9.)



(CQ2: Based on SMC's recommended circuit conditions when the stroke is 5 mm)

CM2-X3423

CQ2-X3423

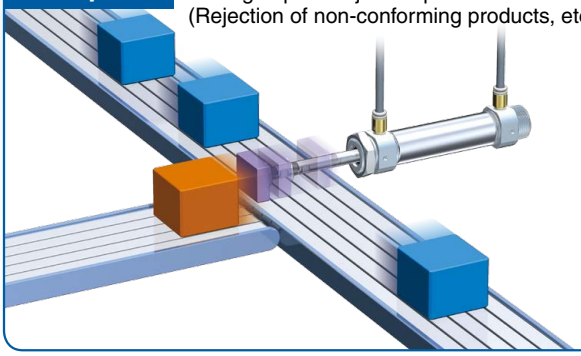
Kinetic energy:

1.5 times (Compared with the standard product)

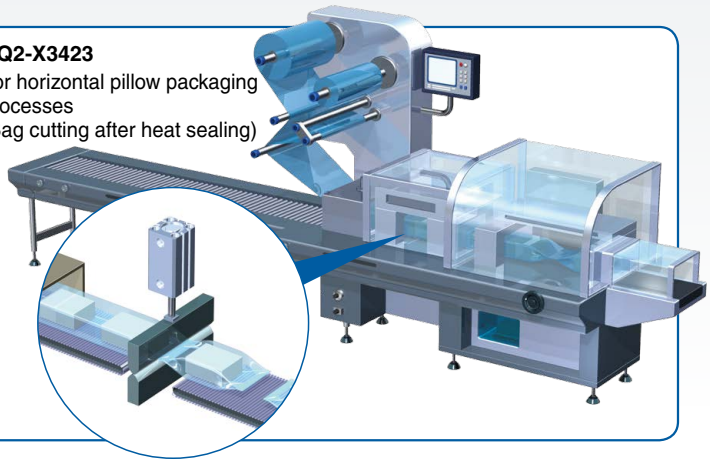
- Reduced impact due to revision of cushion structure
- Reduced weight of moving parts (piston rod, piston, etc.)

Application Examples

CM2-X3423
For high-speed rejection processes
(Rejection of non-conforming products, etc.)



CQ2-X3423
For horizontal pillow packaging processes
(Bag cutting after heat sealing)



Applicable Cylinder

Series	Maximum piston speed	Maximum operating frequency	Bore size [mm]			Cushion	Stroke [mm]	Mounting bracket	Auto switch
			20	25	32				
CM2-X3423 	2500 mm/s	12 Hz (at 25 mm stroke)	●	●	●	Rubber	25 to 100	Basic Foot bracket Flange	D-M9□ D-F7NJ
CQ2-X3423 		15 Hz (at 5 mm stroke)	●	●	●		5 to 50	Basic Foot bracket Compact foot bracket Flange	D-M9□

CM2/CQ2-X3423

SMC

High Speed / High Frequency Cylinder

CM2-X3423

ø20, ø25, ø32

RoHS

How to Order

	CM2 **B** **20** – **50** **Z1** – **X3423**
With auto switch	CDM2 **B** **20** – **50** **Z1** – **M9BW** **□** – **X3423**

With auto switch magnet ● ❶ ❷ ❸ ❹ ❺

❶ Mounting

B	Basic (Double-side bossed)
L	Axial foot bracket
F	Rod flange
G	Head flange

❷ Bore size

20	20 mm
25	25 mm
32	32 mm

❸ Cylinder stroke

Bore size	Standard stroke [mm]
20, 25, 32	25, 50, 75, 100

❹ Auto switch

Nil	Without auto switch

∗ For applicable auto switches, refer to the table below.
∗ The rail can only be mounted on the right side when viewed from the piston rod side. (Refer to page 16 for details.)

❺ Number of auto switches

Nil	2
S	1
n	n

Applicable Auto Switches / Refer to the **Web Catalog** for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage			Auto switch model		Lead wire length [m]					Pre-wired connector	Applicable load	
					DC		AC	Perpendicular	In-line	0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)			
Solid state auto switch	——	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	**M9NV**	**M9N**	●	●	●	○	—	○	IC circuit	Relay, PLC
				3-wire (PNP)				**M9PV**	**M9P**	●	●	●	○	—	○		
				2-wire		12 V		**M9BV**	**M9B**	●	●	●	○	—	○	—	
	Diagnostic indication (2-color indicator)			3-wire (NPN)		5 V, 12 V		**M9NWV**	**M9NW**	●	●	●	○	—	○	IC circuit	
				3-wire (PNP)				**M9PWV**	**M9PW**	●	●	●	○	—	○		
				2-wire		12 V		**M9BWV**	**M9BW**	●	●	●	○	—	○	—	
	Heat resistant (2-color indicator)			3-wire (NPN)		—		—	**F7NJ**	—	—	●	●	—	—	—	

∗ Lead wire length symbols: 0.5 m·····Nil (Example) M9N
1 m····· M (Example) M9NM
3 m····· L (Example) M9NL
5 m····· Z (Example) M9NZ

∗ Solid state auto switches marked with a "○" are produced upon receipt of order.

∗ Auto switch mounting method is rail mounting.
∗ Screws and nuts for 2 auto switches come with the rail.
∗ The auto switches and auto switch mounting brackets are packed together (not assembled).
∗ Use D-F7NJ heat-resistant auto switches when continuously operating at high speed/high frequency for long periods of time.

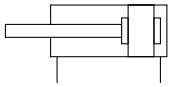
Specifications

Bore size [mm]	20	25	32
Action	Double acting, Single rod		
Fluid	Air		
Proof pressure	1.0 MPa		
Max. operating pressure	0.7 MPa		
Min. operating pressure	0.05 MPa		
Ambient and fluid temperatures	−10 to 40°C (No freezing)		
Lubrication	Not required (Non-lube)		
Piston speed	750 to 2500 mm/s		
Cushion	Rubber bumper		
Rod end thread	Male thread		
Allowable kinetic energy [J]	0.41	0.6	0.98
Stroke length tolerance	0 to +1.4 mm*1		

*1 Stroke length tolerance does not include the amount of bumper change.

Symbol

Double acting, Single rod



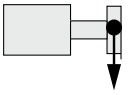
Mounting Brackets/Part Nos.

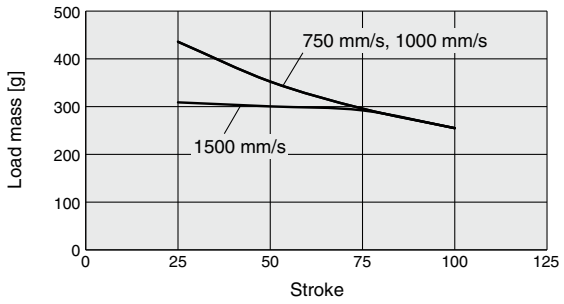
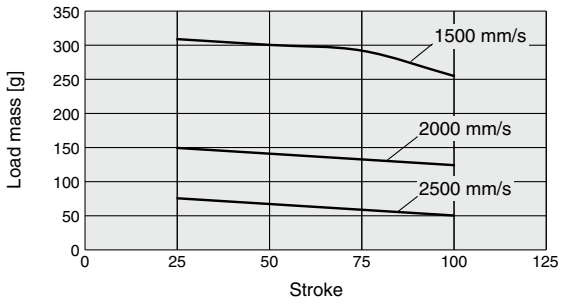
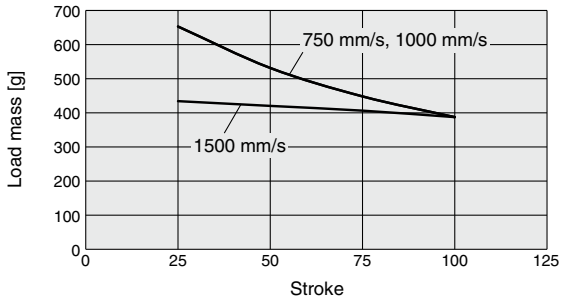
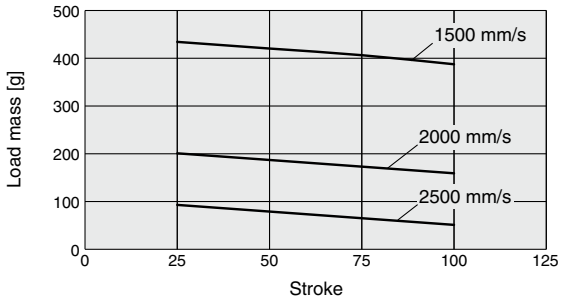
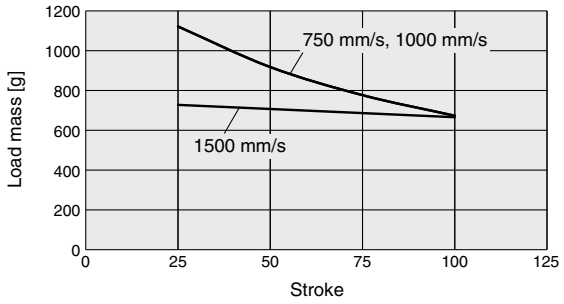
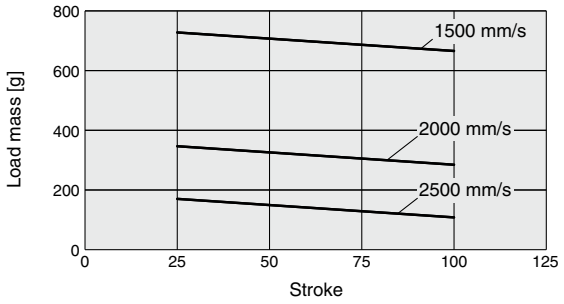
Mounting bracket	Min. order quantity	Bore size [mm]			Contents (for min. order quantity)
		20	25	32	
Foot bracket	2	CM-L020B	CM-L032B		2 foot brackets, 1 mounting nut
Foot bracket	1	CMZ1-L020B	CMZ1-L032B		1 foot bracket
Flange	1	CM-F020B	CM-F032B		1 flange

* Order two foot brackets per cylinder.
* A single foot is available.

Allowable Lateral Load at Rod End

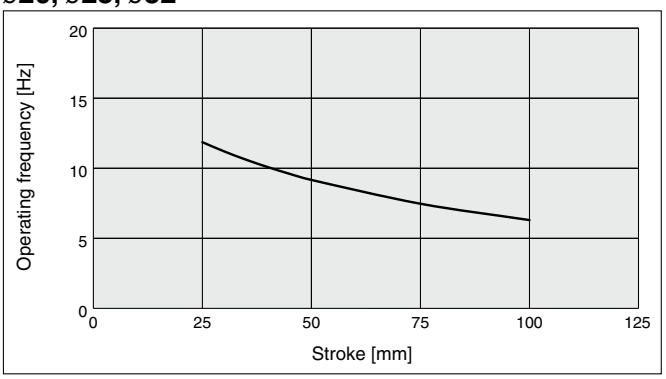
Mounting orientation: Horizontal



Bore size [mm]	Speed	
	750 mm/s to 1500 mm/s	1500 mm/s to 2500 mm/s
ø20		
ø25		
ø32		

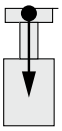
Operating Frequency (Guide)

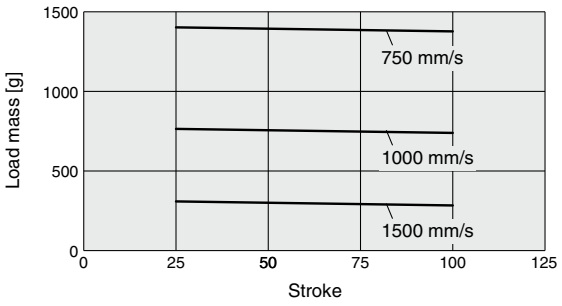
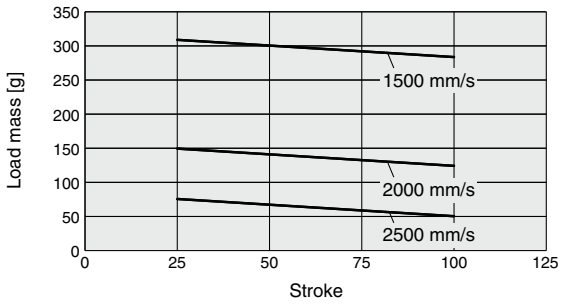
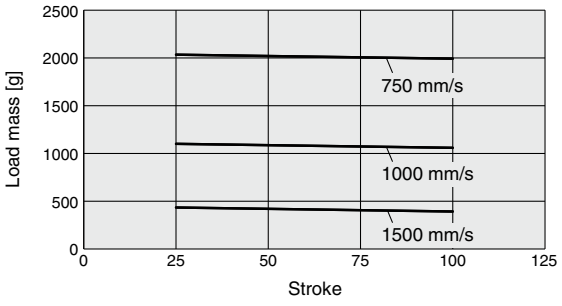
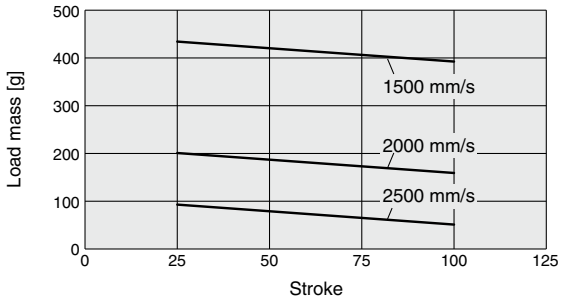
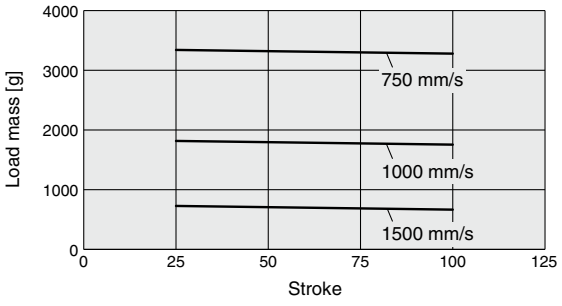
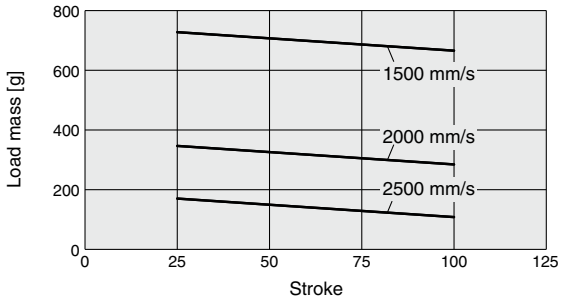
ø20, ø25, ø32



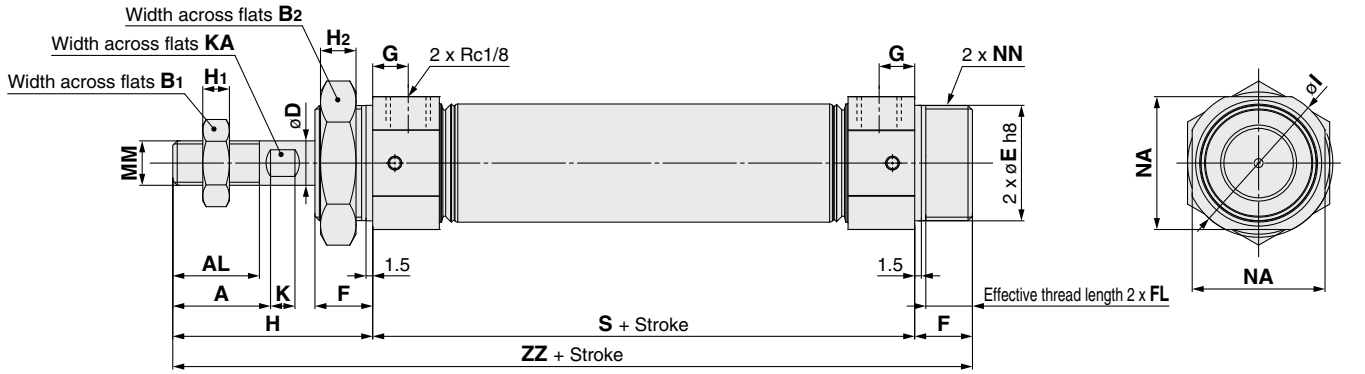
Allowable Lateral Load at Rod End

Mounting orientation: Vertical



Bore size [mm]	Speed	
	750 mm/s to 1500 mm/s	1500 mm/s to 2500 mm/s
ø20		
ø25		
ø32		

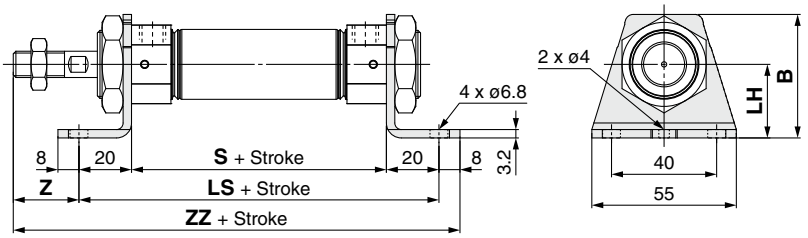
Dimensions: Mounting Brackets



[mm]

Bore size	Standard stroke	A	AL	B1	B2	D	E	F	FL	G	H	H1	H2	I	K	KA	MM	NA	NN	S	ZZ
20	25, 50, 75, 100	18	15.5	13	26	8	$20^{0}_{-0.033}$	13	10.5	8	41	5	8	28	5	6	M8 x 1.25	24	M20 x 1.5	77	131
25		22	19.5	17	32	10	$26^{0}_{-0.033}$	13	10.5	8	45	6	8	33.5	5.5	8	M10 x 1.25	30	M26 x 1.5	82	140
32		22	19.5	17	32	12	$26^{0}_{-0.033}$	13	10.5	8	45	6	8	37.5	5.5	10	M10 x 1.25	34.5	M26 x 1.5	84	142

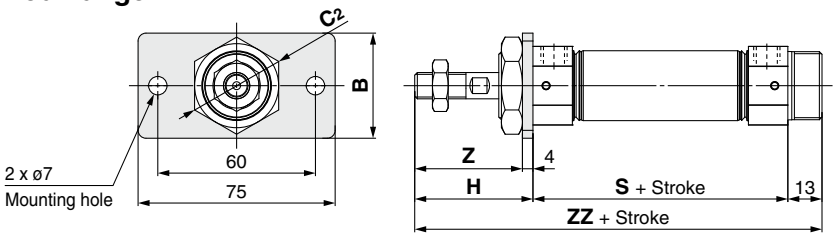
Foot bracket



[mm]

Bore size	B	LH	LS	S	Z	ZZ
20	40	25	117	77	21	146
25	47	28	122	82	25	155
32	47	28	124	84	25	157

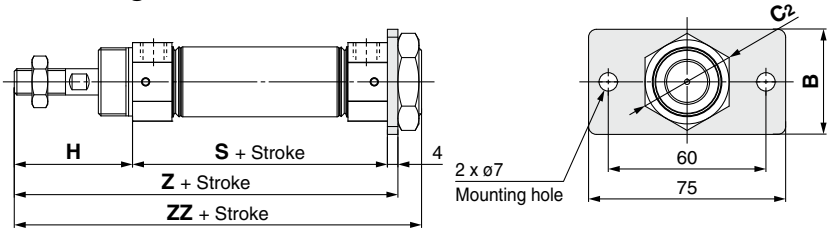
Rod flange



[mm]

Bore size	B	C2	H	S	Z	ZZ
20	34	30	41	77	37	131
25	40	37	45	82	41	140
32	40	37	45	84	41	142

Head flange



[mm]

Bore size	B	C2	H	S	Z	ZZ
20	34	30	41	77	122	131
25	40	37	45	82	131	140
32	40	37	45	84	133	142

High Speed / High Frequency Cylinder

CQ2-X3423

ø20, ø25, ø32

RoHS

How to Order

	CQ2 B 20 – 30 D C ☐ Z – X3423
With auto switch	CDQ2 B 20 – 30 D C ☐ Z – M9BW ☐ – X3423

With auto switch magnet ●

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽

❶ Mounting

B	Through-hole/Both ends tapped common (Standard)
L	Foot bracket
LC	Compact foot bracket
F	Rod flange
G	Head flange

❷ Bore size

20	20 mm
25	25 mm
32	32 mm

❸ Cylinder stroke

Bore size	Standard stroke [mm]
20, 25, 32	5, 10, 15, 20, 25, 30, 35, 40, 45, 50

❹ Action

D	Double acting

❺ Cushion

C	Rubber bumper

❻ Body option

Nil	Standard (Rod end female thread)
M	Rod end male thread

❼ Auto switch

Nil	Without auto switch

∗ For applicable auto switches, refer to the table below.

❽ Number of auto switches

Nil	2
S	1
n	n

Applicable Auto Switches / Refer to the **Web Catalog** for further information on auto switches.

Type	Special function	Electrical entry	Indicator light	Wiring (Output)	Load voltage DC		Load voltage AC	Auto switch model Perpendicular	Auto switch model In-line	Lead wire length [m]∗2 0.5 (Nil)	1 (M)	3 (L)	5 (Z)	None (N)	Pre-wired connector	Applicable load	
Solid state auto switch	——	Grommet	Yes	3-wire (NPN)	24 V	5 V, 12 V	—	**M9NV**	**M9N**	●	●	●	○	—	○	IC circuit	Relay, PLC
				3-wire (PNP)				**M9PV**	**M9P**	●	●	●	○	—	○		
				2-wire		12 V		**M9BV**	**M9B**	●	●	●	○	—	○	—	
	Diagnostic indication (2-color indicator)			3-wire (NPN)		5 V, 12 V		**M9NWV**	**M9NW**	●	●	●	○	—	○	IC circuit	
				3-wire (PNP)				**M9PWV**	**M9PW**	●	●	●	○	—	○		
				2-wire		12 V		**M9BWV**	**M9BW**	●	●	●	○	—	○	—	

∗ Lead wire length symbols: 0.5 m·····Nil (Example) M9NW
1 m····· M (Example) M9NWM
3 m····· L (Example) M9NWL
5 m····· Z (Example) M9NWZ

∗ Solid state auto switches marked with a "○" are produced upon receipt of order.

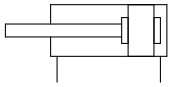
Specifications

Bore size [mm]	20	25	32
Action	Double acting, Single rod		
Fluid	Air		
Proof pressure	1.0 MPa		
Max. operating pressure	0.7 MPa		
Min. operating pressure	0.05 MPa		
Ambient and fluid temperatures	−10 to 40°C (No freezing)		
Lubrication	Not required (Non-lube)		
Piston speed	500 to 2500 mm/s		
Cushion	Rubber bumper		
Allowable kinetic energy [J]	0.16	0.27	0.43
Stroke length tolerance	0 to +1.0 mm*1		

*1 Stroke length tolerance does not include the amount of bumper change.

Symbol

Double acting, Single rod



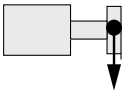
Mounting Brackets/Part Nos.

Bore size [mm]	Foot bracket*1	Compact foot bracket*1	Flange
20	CQ-L020-X3423	CQ-LC020-X3423	CQS-F020
25	CQ-L025-X3423	CQ-LC025-X3423	CQS-F025
32	CQ-L032-X3423	CQ-LC032-X3423	CQS-F032-X3423

*1 When ordering foot and compact foot brackets, order 2 pieces per cylinder.
* Parts included with each type of bracket are as follows.
Foot, Compact foot, Flange: Body mounting bolts

Allowable Lateral Load at Rod End

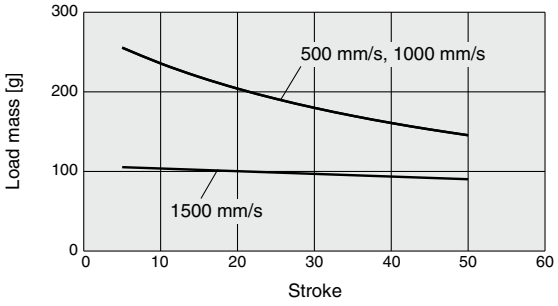
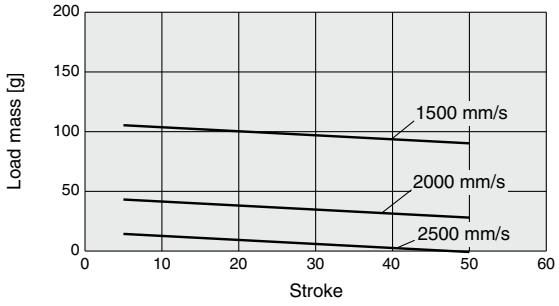
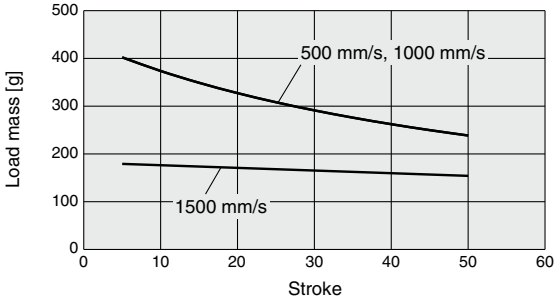
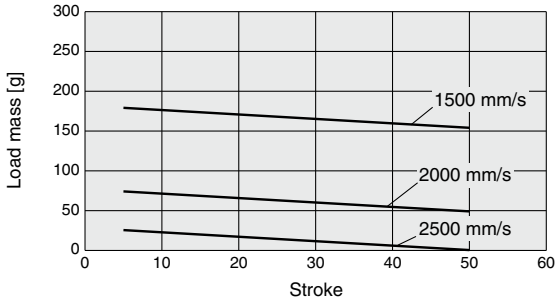
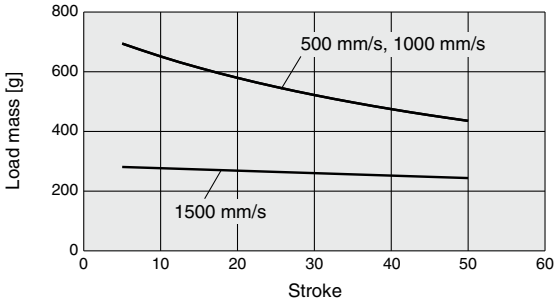
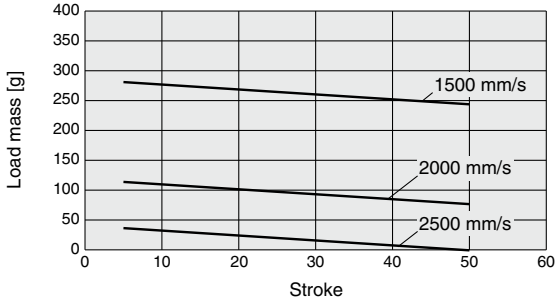
Mounting orientation: Horizontal



* When selecting the rod end male thread type, subtract the moving parts additional mass (table on the right) from the load mass (tables below) to find the load mass.

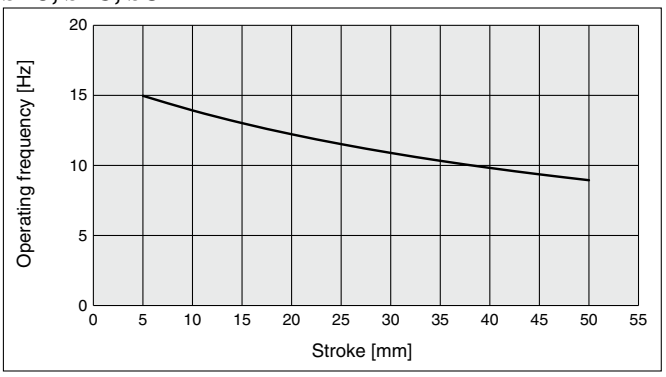
Male Thread Type Additional Mass

Bore	Moving parts additional mass
ø20	4.5 g
ø25	10.0 g
ø32	18.0 g

Bore size [mm]	Speed	
	500 mm/s to 1500 mm/s	1500 mm/s to 2500 mm/s
ø20		
ø25		
ø32		

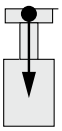
Operating Frequency (Guide)

ø20, ø25, ø32



Allowable Lateral Load at Rod End

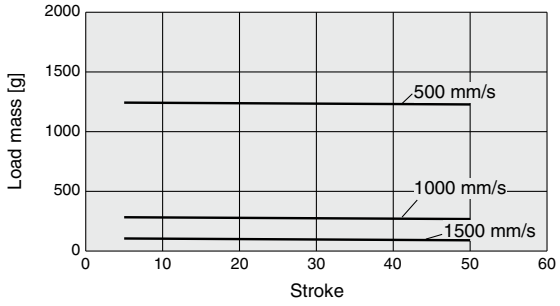
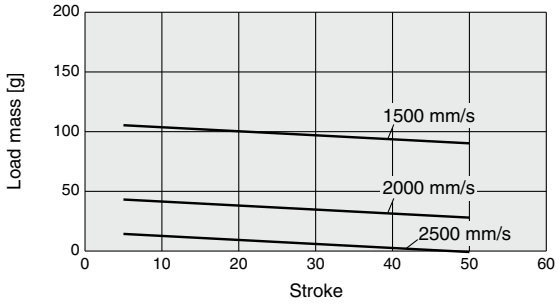
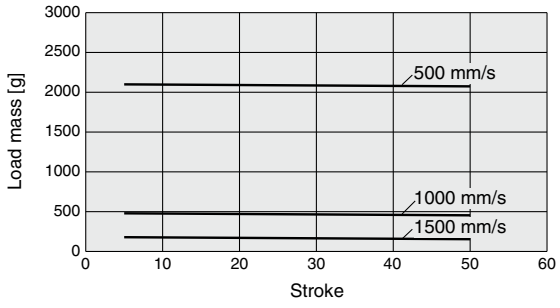
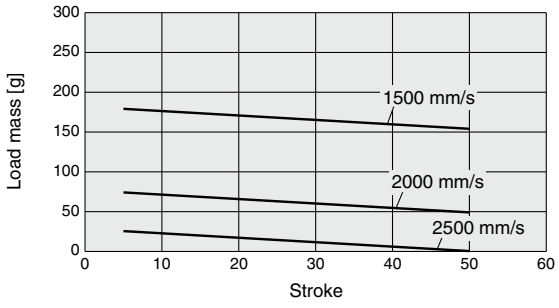
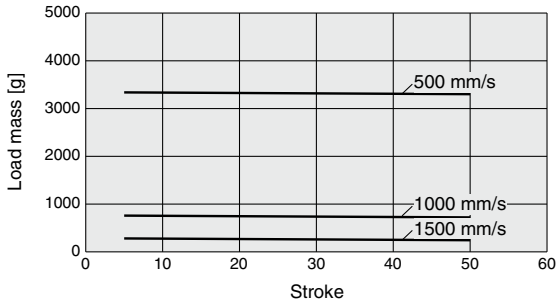
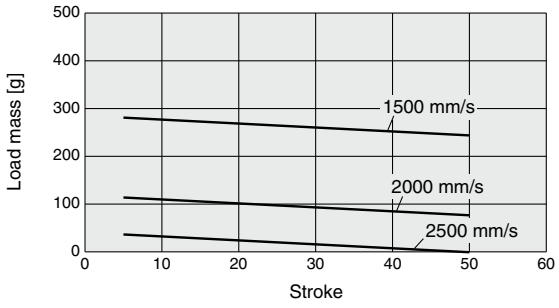
Mounting orientation: Vertical



* When selecting the rod end male thread type, subtract the moving parts additional mass (table on the right) from the load mass (tables below) to find the load mass.

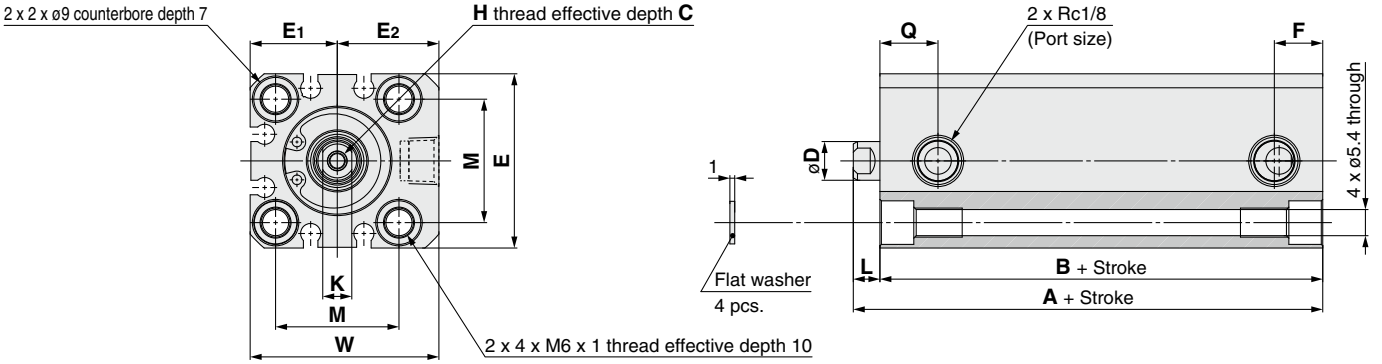
Male Thread Type Additional Mass

Bore	Moving parts additional mass
ø20	4.5 g
ø25	10.0 g
ø32	18.0 g

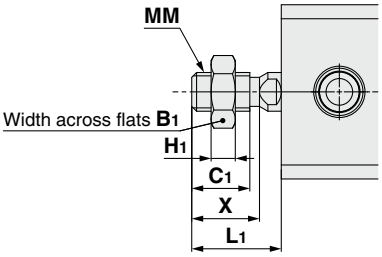
Bore size [mm]	Speed	
	500 mm/s to 1500 mm/s	1000 mm/s to 2500 mm/s
ø20		
ø25		
ø32		

Dimensions

ø20, ø25



Rod end male thread

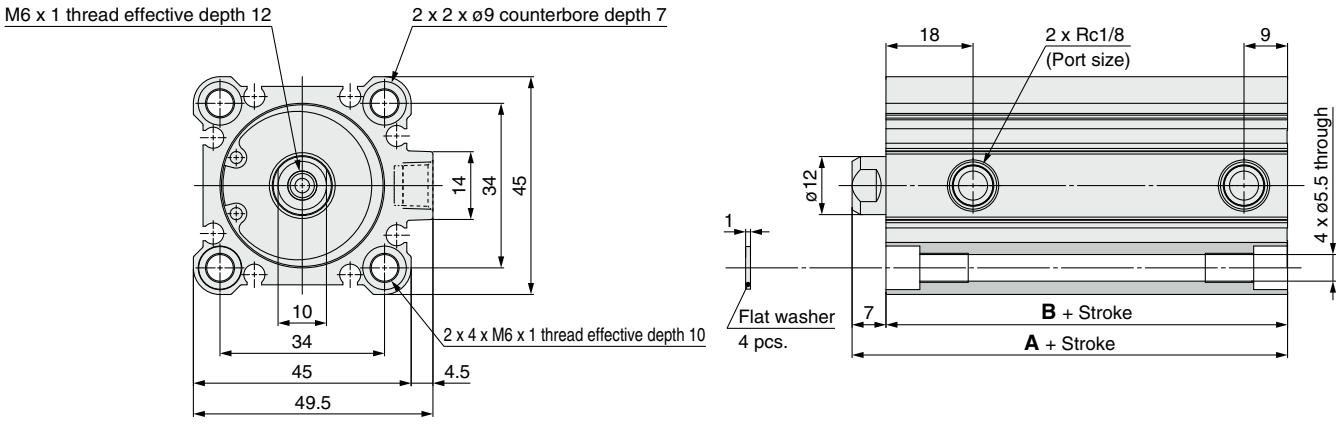


[mm]

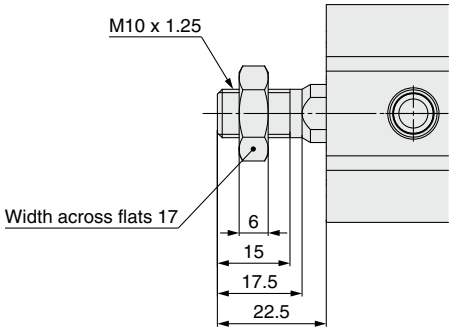
Bore size	Stroke range	Without auto switch		With auto switch		C	D	E	E1	E2	F	H
		A	B	A	B							
20	5 to 50	50.5	46	60.5	56	8	8	36	18	21	10	M4 x 0.7
25		54	49	64	59	7	10	40	20	23.5	10	M5 x 0.8

Bore size	Stroke range	K	L	M	Q	W	B1	C1	H1	L1	MM	X
20	5 to 50	6	4.5	25.5	12	39	13	12	5	18.5	M8 x 1.25	14
25		8	5	28	11	43.5	17	15	6	22.5	M10 x 1.25	17.5

ø32



Rod end male thread

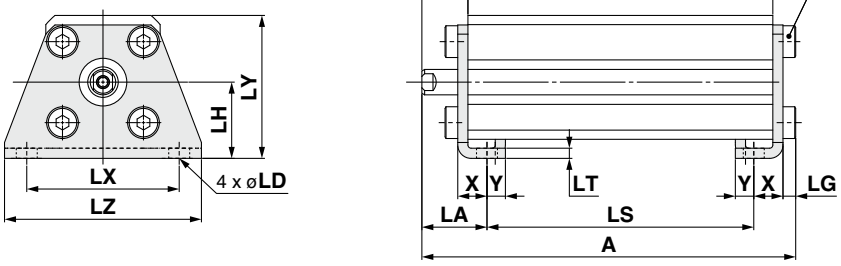


[mm]

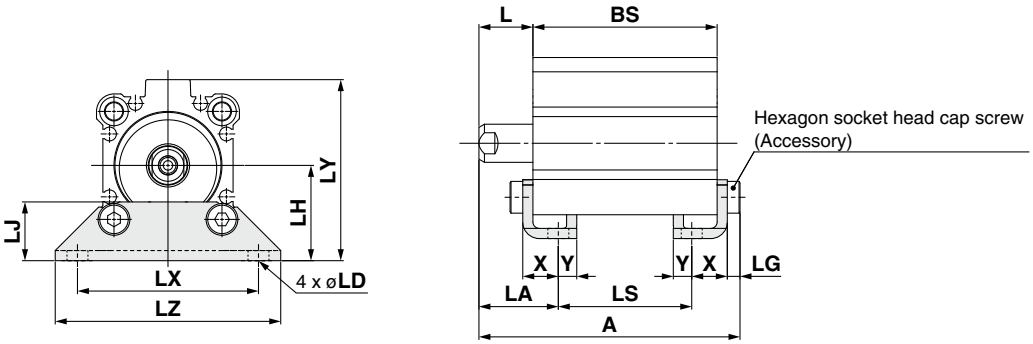
Bore size	Stroke range	Without auto switch		With auto switch	
		A	B	A	B
32	5 to 50	60	53	70	63

Dimensions: Mounting, Foot Bracket

ø20, ø25



ø32



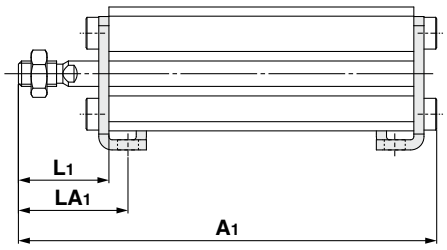
∗ BS indicates the overall length of the cylinder tube to be used.

[mm]

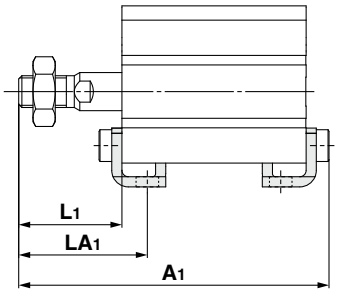
Bore size	Part no.	A	A_1	L	L_1	LA	LA_1	LD	LG	LH	LJ	LS	LT	LX	LY	LZ	X	Y
20	CQ-L020-X3423	BS + 21.7	BS + 35.7	14.5	28.5	20.5	34.5	6.6	4	24	—	BS-12	3.2	48	45	62	9.2	5.8
25	CQ-L025-X3423	BS + 22.2	BS + 39.7	15	32.5	22.5	40	6.6	4	26	—	BS-15	3.2	52	49.5	66	10.7	5.8
32	CQ-L032-X3423	BS + 24.2	BS + 39.7	17	32.5	25	40.5	6.6	4	30	18.5	BS-16	3.2	57	57	71	11.2	5.8

Rod end male thread

ø20, ø25



ø32

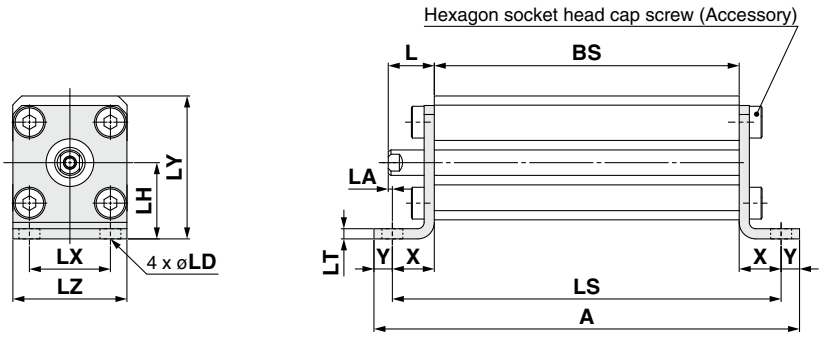


[mm]

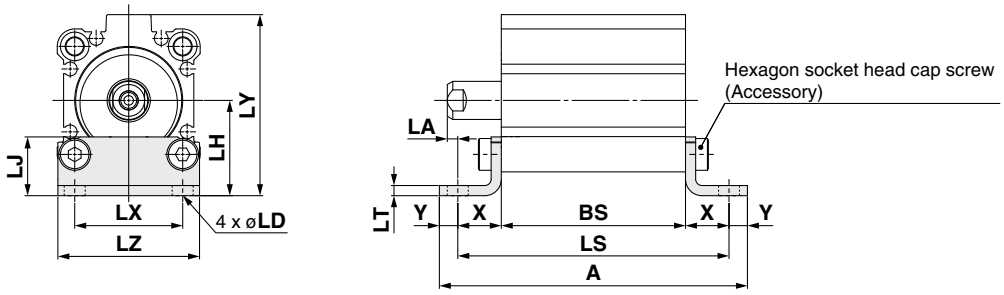
Bore size	A_1	L_1	LA_1
20	BS + 35.7	28.5	34.5
25	BS + 39.7	32.5	40
32	BS + 39.7	32.5	40.5

Dimensions: Mounting, Compact Foot Bracket

ø20, ø25



ø32



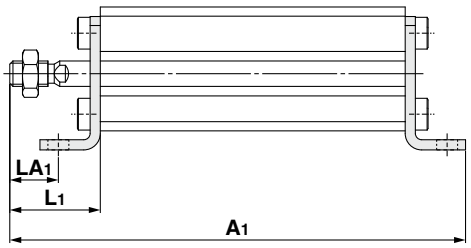
∗ BS indicates the overall length of the cylinder tube to be used.

[mm]

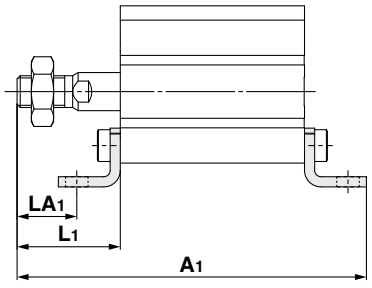
Bore size	Part no.	A	A_1	L	L_1	LA	LA_1	LD	LH	LJ	LS	LT	LX	LY	LZ	X	Y
20	CQ-LC020-X3423	BS + 38	BS + 47.5	14.5	28.5	1.3	15.3	6.6	24	—	BS + 26.4	3.2	25.5	42	36	13.2	5.8
25	CQ-LC025-X3423	BS + 38	BS + 51.5	15	32.5	1.8	19.3	6.6	26	—	BS + 26.4	3.2	28	46	40	13.2	5.8
32	CQ-LC032-X3423	BS + 39	BS + 52	17	32.5	3.3	18.8	6.6	30	18.5	BS + 27.4	3.2	34	57	45	13.7	5.8

Rod end male thread

ø20, ø25



ø32

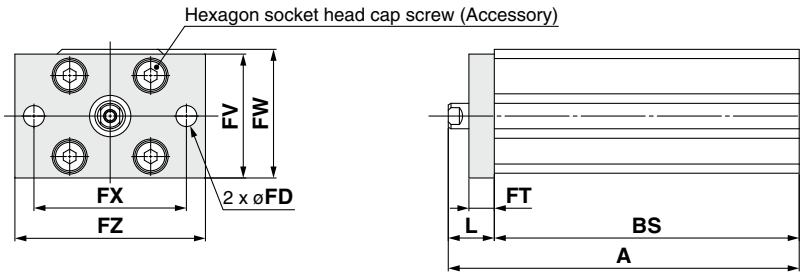


[mm]

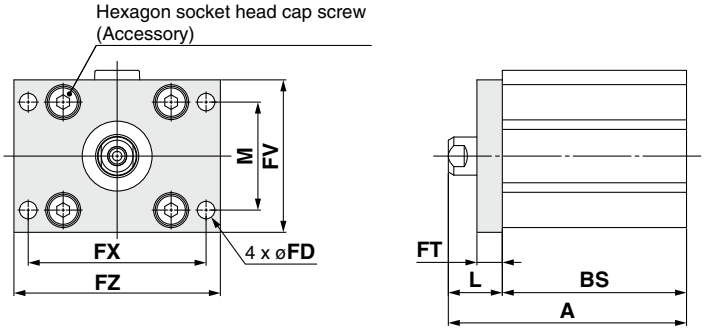
Bore size	A_1	L_1	LA_1
20	BS + 47.5	28.5	15.3
25	BS + 51.5	32.5	19.3
32	BS + 52	32.5	18.8

Dimensions: Mounting, Rod Flange

ø20, ø25



ø32



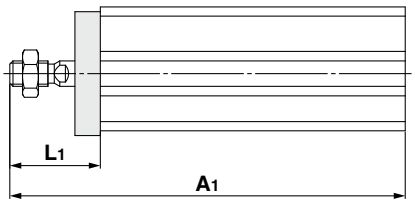
∗ BS indicates the overall length of the cylinder tube to be used.

[mm]

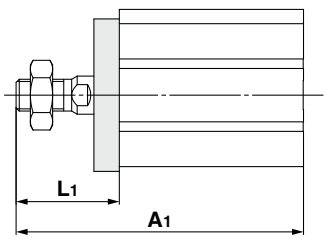
Bore size	Part no.	A	A_1	A_2	A_3	FD	FT	FV	FX	FZ	L	L_1	L_2	L_3	M
20	CQS-F020	BS + 14.5	BS + 28.5	BS + 12.5	BS + 26.5	6.6	8	39	48	60	14.5	28.5	4.5	18.5	—
25	CQS-F025	BS + 15	BS + 32.5	BS + 13	BS + 30.5	6.6	8	42	52	64	15	32.5	5	22.5	—
32	CQ-F032-X3423	BS + 17	BS + 32.5	BS + 15	BS + 30.5	5.5	8	48	56	65	17	32.5	7	22.5	34

Rod end male thread

ø20, ø25



ø32

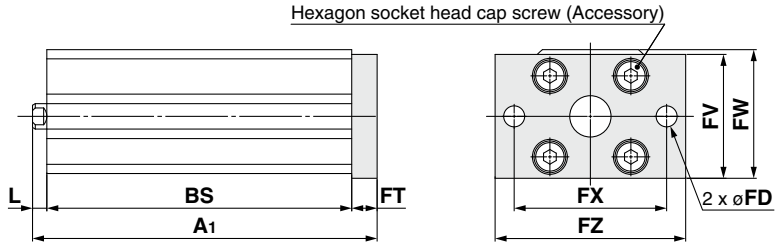


[mm]

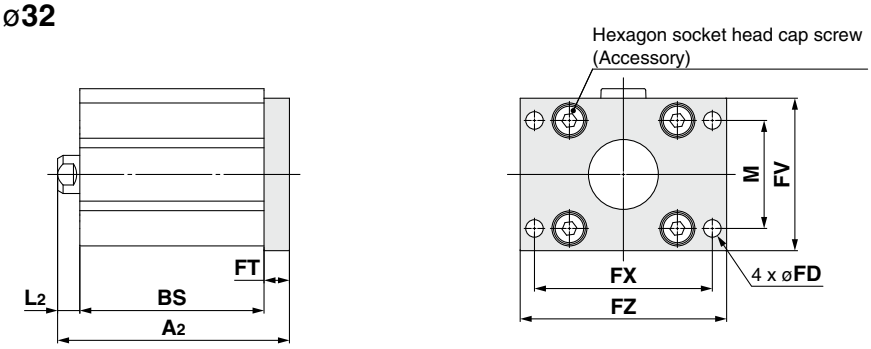
Bore size	A1	L1
20	BS + 28.5	28.5
25	BS + 32.5	32.5
32	BS + 32.5	32.5

Dimensions: Mounting, Head Flange

ø20, ø25



ø32



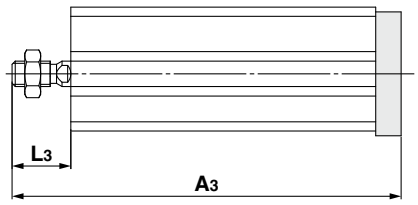
∗ BS indicates the overall length of the cylinder tube to be used.

[mm]

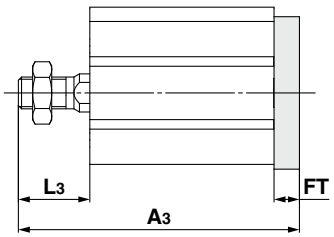
Bore size	Part no.	A	A1	A2	A3	FD	FT	FV	FX	FZ	L	L1	L2	L3	M
20	CQS-F020	BS + 14.5	BS + 28.5	BS + 12.5	BS + 26.5	6.6	8	39	48	60	14.5	28.5	4.5	18.5	—
25	CQS-F025	BS + 15	BS + 32.5	BS + 13	BS + 30.5	6.6	8	42	52	64	15	32.5	5	22.5	—
32	CQ-F032-X3423	BS + 17	BS + 32.5	BS + 15	BS + 30.5	5.5	8	48	56	65	17	32.5	7	22.5	34

Rod end male thread

ø20, ø25



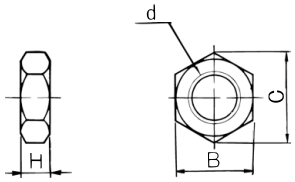
ø32



[mm]

Bore size	A3	L3
20	BS + 26.5	18.5
25	BS + 30.5	22.5
32	BS + 30.5	22.5

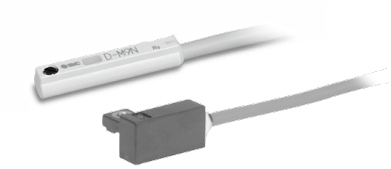
Rod End Nut



[mm]

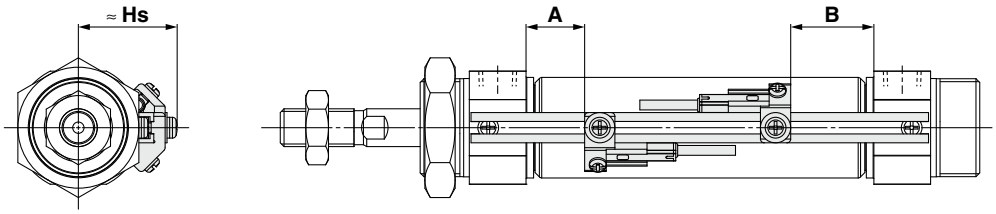
Bore size	Part no.	d	H	B	C
20	NT-02	M8 x 1.25	5	13	15.0
25, 32	NT-03	M10 x 1.25	6	17	19.6

Auto Switch Mounting

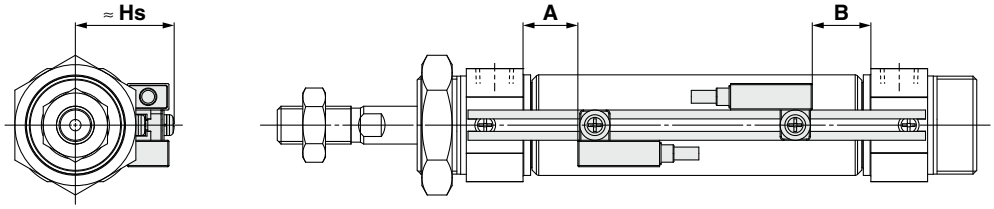


Auto Switch Proper Mounting Position (Detection at stroke end) and Mounting Height

D-M9□(V), D-M9□W(V)



D-F7NJ



[mm]

Bore size	Auto switch model					
	D-M9□(V) D-M9□W(V)			D-F7NJ		
	A	B	Hs	A	B	Hs
20	13.5	16.5	23.5	12.5	15.5	23.5
25	15.5	22	26.5	14.5	21	26.5
32	16	23.5	30	15	22.5	30

Minimum Stroke for Auto Switch Mounting

n: Number of auto switches [mm]

Auto switch model	Number of auto switches		
	With 1 pc.	With 2 pcs.	With n pcs.
D-M9□(V) **D-M9□W(V)**	25	25	10 + 15 (n - 2) (n = 4, 6···)
D-F7NJ			15 + 20 (n - 2) (n = 4, 6···)

Operating Range

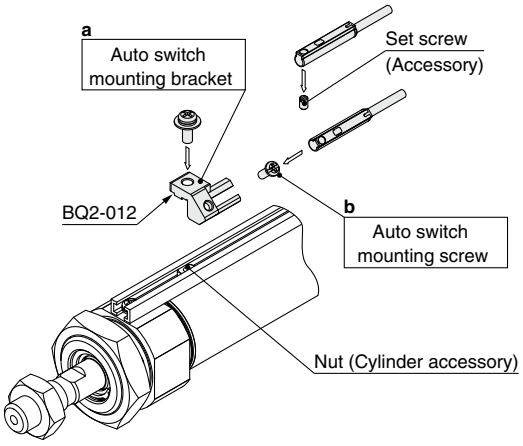
[mm]

Auto switch model	Bore size		
	20	**25**	**32**
D-M9□(V) **D-M9□W(V)**	3	3.5	4

∗ Values which include hysteresis are for reference purposes only. They are not a guarantee (assuming approximately ±30% dispersion) and may change substantially depending on the ambient environment.

Auto Switch Mounting Brackets/Part Nos.

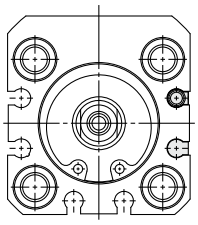
Auto switch model	Bore size [mm]		
	ø20	**ø25**	**ø32**
D-M9□(V) **D-M9□W(V)**	BQ2-012 (A set of a, b)		

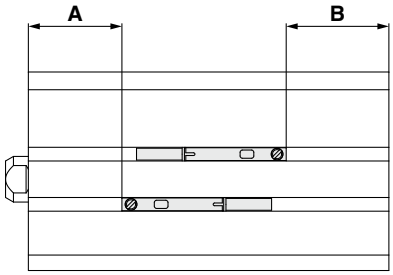


∗ When adding a D-M9□(W)(V), order BQ-1 and BQ2-012 auto switch mounting brackets separately.
When adding a D-F7NJ, order a BQ-1 auto switch mounting bracket separately.

CDQ2-X3423
D-M9
Auto Switch Mounting

Auto Switch Proper Mounting Position
∗ Adjust the auto switch after confirming the operating conditions in the actual setting.

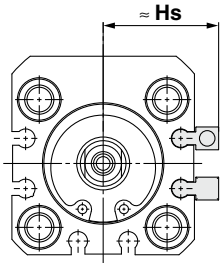




[mm]

Bore size	D-M9□(V) D-M9□W(V)	
	A	B
20	23.0	21.0
25	24.5	22.5
32	28.5	22.5

Auto Switch Mounting Height
∗ Adjust the auto switch after confirming the operating conditions in the actual setting.



Auto Switch Mounting Height [mm]

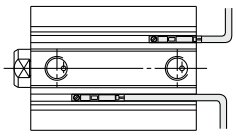
Auto switch model / Bore size	D-M9□V D-M9□WV
	Hs
20	24.5
25	26.5
32	32.5

Minimum Stroke for Auto Switch Mounting
∗ Adjust the auto switch after confirming the operating conditions in the actual setting.

Applicable Cylinder Series: CDQ2 [mm]

Number of auto switches	D-M9□(V)	D-M9□W(V)
With 1 pc.	5	5
With 2 pcs.	5	10

∗ The dimension stated in ( ) shows the minimum stroke for the auto switch mounting when the auto switch does not project from the end surface of the cylinder body and hinder the lead wire bending space. (Refer to the figure below.) The auto switch and auto switch mounting bracket are ordered separately.



Operating Range [mm]

Auto switch model	Bore size		
	20	**25**	**32**
D-M9□(V) **D-M9□W(V)**	3	3.5	4

∗ Values which include hysteresis are for reference purposes only. They are not a guarantee (assuming approximately ±30% dispersion) and may change substantially depending on the ambient environment.

CM2/CQ2-X3423
Specific Product Precautions

Be sure to read this before handling the products. Refer to the back cover for safety instructions. For actuator and auto switch precautions, refer to "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: https://www.smcworld.com

Precautions

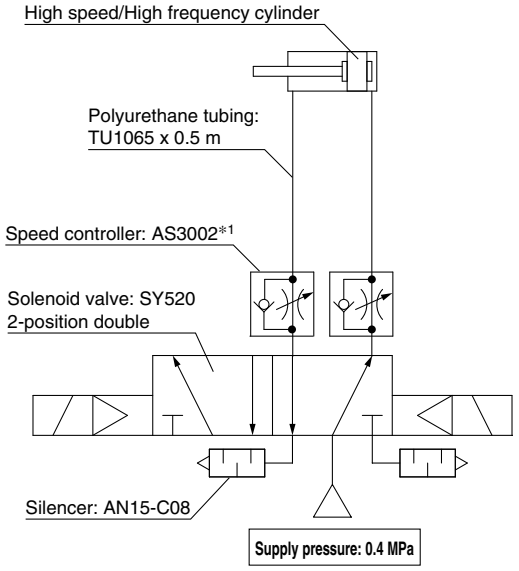
⚠Warning

1. The surface of the cylinder tube may become hot when continuously operated at high speed/high frequency for long periods of time. Therefore, refrain from touching the tube with bare hands.

The surface of the cylinder tube may become hot depending on the pneumatic circuit, operating conditions, and surrounding environment.

Pay attention not to touch it because doing so can cause burns.

∗ We recommend the following circuit as a measure against the above.



∗1 As a measure against cylinder heat generation, install the speed controller as close to the solenoid valve as possible.

⚠Caution

1. High-speed, high-frequency operation may not be possible depending on the pneumatic circuit.
(Solenoid valves, silencers, piping, fittings, speed controllers, etc.)

2. With high-speed operation, there is a larger impact at the end of the stroke.
Adjust the operating speed and load mass, and use within the allowable kinetic energy range.

⚠ Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of **"Caution," "Warning"** or **"Danger."** They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)*1), and other safety regulations.

⚠ Danger : **Danger** indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

⚠ Warning: **Warning** indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

⚠ Caution: **Caution** indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

*1) ISO 4414: Pneumatic fluid power - General rules and safety requirements for systems and their components
ISO 4413: Hydraulic fluid power - General rules and safety requirements for systems and their components
IEC 60204-1: Safety of machinery - Electrical equipment of machines - Part 1: General requirements
ISO 10218-1: Robots and robotic devices - Safety requirements for industrial robots - Part 1:Robots
etc.

⚠ Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/ equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. SMC products cannot be used beyond their specifications. They are not developed, designed, and manufactured to be used under the following conditions or environments. Use under such conditions or environments is not allowed.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Use for nuclear power, railways, aviation, space equipment, ships, vehicles, military application, equipment affecting human life, body, and property, combustion equipment, entertainment equipment, emergency shut-off circuits, press clutches, brake circuits, safety equipment, etc., and use for applications that do not conform to standard specifications such as catalogs and operation manuals.
3. Use for interlock circuits, except for use with double interlock such as installing a mechanical protection function in case of failure. Please periodically inspect the product to confirm that the product is operating properly.

⚠ Caution

SMC develops, designs, and manufactures products to be used for automatic control equipment, and provides them for peaceful use in manufacturing industries.
Use in non-manufacturing industries is not allowed.
Products SMC manufactures and sells cannot be used for the purpose of transactions or certification specified in the Measurement Act of each country.
The new Measurement Act prohibits use of any unit other than SI units in Japan.

Limited warranty and Disclaimer/ Compliance Requirements

The product used is subject to the following "Limited warranty and Disclaimer" and "Compliance Requirements".
Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.*2)
   Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided.
   This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

*2) **Suction cups (Vacuum pads) are excluded from this 1 year warranty.**
A suction cup (vacuum pad) is a consumable part, so it is warranted for a year after it is delivered.
Also, even within the warranty period, the wear of a product due to the use of the suction cup (vacuum pad) or failure due to the deterioration of rubber material are not allowed by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

⚠ Safety Instructions	Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use.