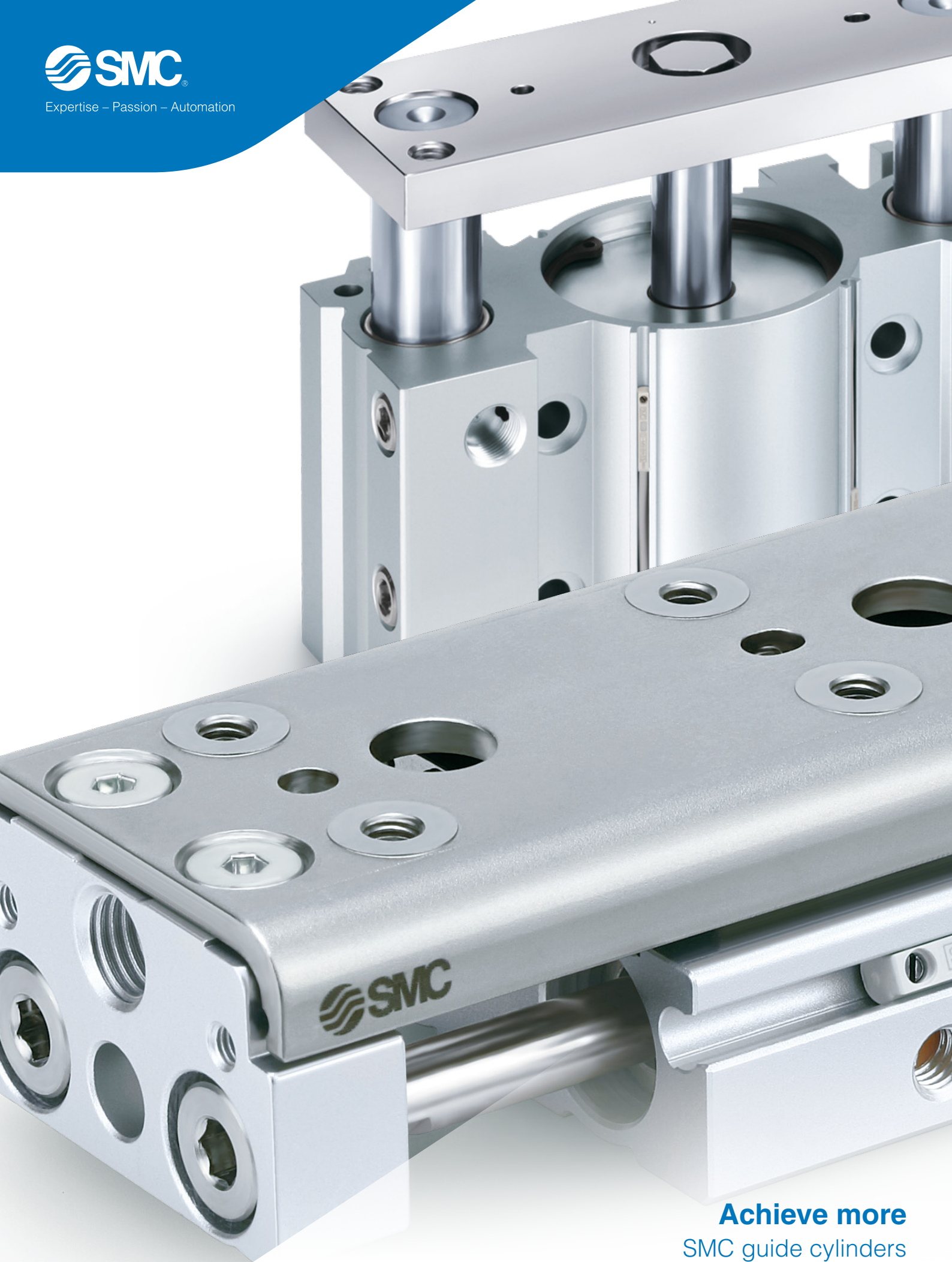
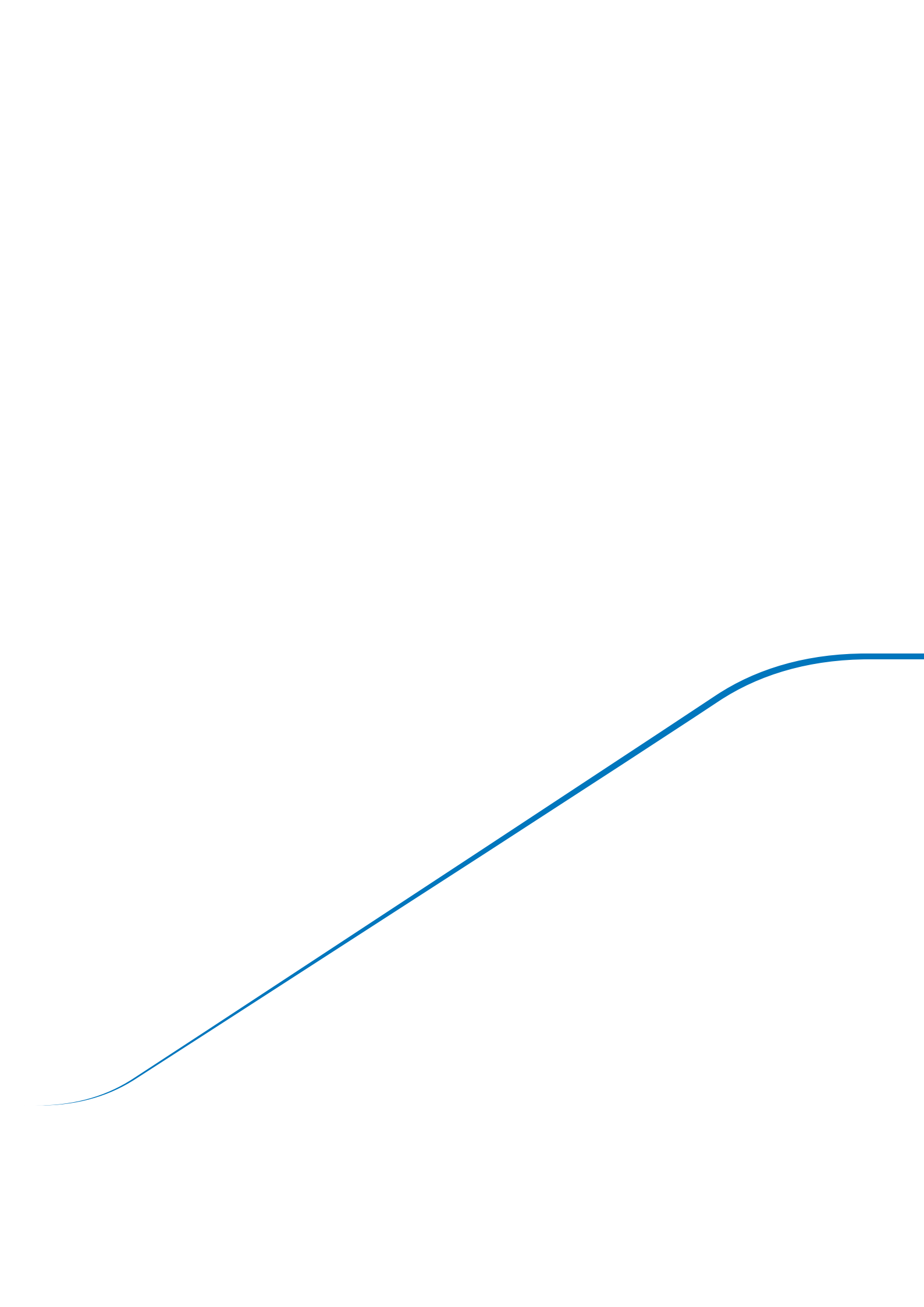




Expertise – Passion – Automation



Achieve more
SMC guide cylinders





SMC has been at the forefront of pneumatic technology for over 60 years, offering customers an unrivalled range of energy efficient air cylinders that deliver a solution for every need.

True pioneers, having been one of the first to create an air cylinder with an integrated guide, SMC is continuously innovating to guarantee our products meet the latest in automation demands.

Our guide cylinder range offers, lightweight, space saving solutions that are designed to drive down costs and drive up productivity.

We are here to support you every step of the way, thanks to our European wide team of experts and quick delivery times, so find out how you can achieve more with SMC in four simple steps.

Discover

Discover our comprehensive range of air slide tables and guide cylinders.

Cylinder selection

An intuitive online product selection, configuration and design tools for complex pneumatic and electric systems, as well as that human connection with access to one of our 1,500 expert engineers, located in 30 countries across Europe with the aim of making the product selection and design process as easy and seamless as possible.

Customisation

Our accessories range, allows us to offer a full suite of solutions including speed controllers and auto switches to shock absorbers and floating joints.

Order fulfilment

With a strong infrastructure throughout Europe, featuring our main factory in the Czech Republic and central warehouse in Antwerp, Belgium, we can respond quickly to the demands of globalisation and fast changing customer requirements.

Index

Compact guide cylinder

MGP Series p.4

Double power cylinder

MGZ Series p.10

Air slide table

MXQ-Z Series p.14

Compact cylinder with linear guide

MXZ Series p.22

Air slide table

MXJ Series p.26

Applications p.30

Related products p.32

Compact guide cylinder

MGP Series



Guide your movements precisely

Benefits

- ▶ **Get a precise guide movement** – $\pm 0.03^\circ$ of non-rotating accuracy.
- ▶ **Design compact and lightweight machines** – Reduced weight and required space due to guide rod and plate construction.
- ▶ **Adapt it easily to your application** – Wide range of product variation available.

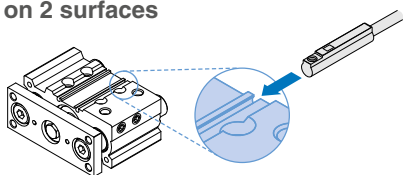
Main features

- ▶ **Piping is possible from 2 directions**
 - Top ported
 - Side ported.
- ▶ **Wide range of strokes**
Stocked products in European Central Warehouse.



4 types of mounting are possible

Round type auto switches can be mounted directly without spacer on 2 surfaces



Guide rod shortened

Space required between the bottom of the cylinder body and your equipment is reduced.



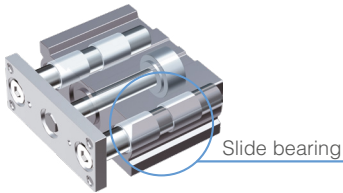
Space saving

Change of the guide rod end shape

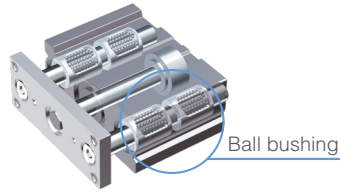
Short delivery times (European manufacturing).

► 3 types of bearing can be selected

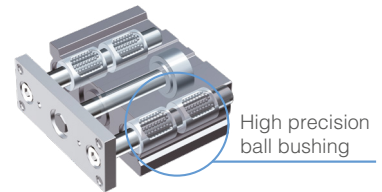
- Slide bearing MGPM Series. Suitable for lateral load applications such as a stopper where shock is applied.



- Ball bushing MGPL Series. Smooth operation suitable for pusher and lifter.



- High precision ball bushing MGPA Series. Suitable for minimising plate displacement.






**Actuator position sensor
D-MP series**

Get continuous information on cylinder position.
Up to 200 mm of measurement range.





Auto switches

Type	Auto switch with indicator light (3 m lead wire)	Auto switch with 2 colour indication (3 m lead wire)	Auto switch with pre-wired connector (M8-3pin) and 0.5 m lead wire
3-wire solid state, PNP			
2-wire solid state	D-M9PL	D-M9PWL	D-M9PSAPC
Reed	D-M9BL	D-M9BWL	D-M9BSAPC
	D-A93L	D-A93L	D-A93SAPC

Speed controllers

Piping is possible from 2 directions.

Bore size Ø [mm]	Port size	Speed controller with one touch fitting	Speed controller with indicator	Air saving speed controller with pressure reduction function	Air saving speed controller with rapid supply and exhaust function
12	M5				
16	M5	AS1201F-M5-06A	AS1201FS-M5-06	—	—
20	G1/8	AS2201F-01-06SA	AS2201FS-01-06S	AS22R-01-06	—
25	G1/8	AS2201F-01-06SA	AS2201FS-01-06S	AS22R-01-06	—
32	G1/8	AS2201F-01-06SA	AS2201FS-01-06S	AS22R-01-06	—
40	G1/8	AS2201F-01-06SA	AS2201FS-01-06S	AS22R-01-06	—
50	G1/4	AS2201F-02-08SA	AS2201FS-02-08S	AS32R-02-08	AS22Q-02-08
63	G1/4	AS2201F-02-08SA	AS2201FS-02-08S	AS32R-02-08	AS22Q-02-08
80	G3/8	AS3201F-03-10SA	AS3201FS-03-10S	AS32R-03-10	AS32Q-03-10
100	G3/8	AS3201F-03-10SA	AS3201FS-03-10S	AS32R-03-10	AS32Q-03-10

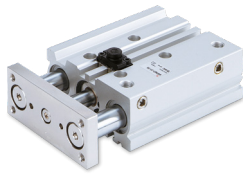
MG Series variation



Compact guide cylinder with air cushion. MGPA Series

Ø 16, Ø 20, Ø 25, Ø 32, Ø 40, Ø 50, Ø 63, Ø 80, Ø 100

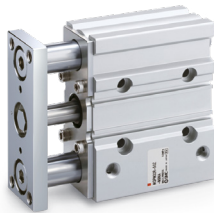
- Compact and lightweight design
- Strokes up to 400 mm
- Slide bearing, ball bushing bearing or high precision ball bushing bearing
- Non rotating accuracy: ± 0.01
- Reduced plate displacement: 0.05 mm (MGPA12-10 when load weight is 1.7 kg).



Compact guide cylinder with end lock. MGP-H/R Series

Ø 20, Ø 25, Ø 32, Ø 40, Ø 50, Ø 63, Ø 80, Ø 100

- Slide bearing, ball bushing bearing or high precision ball bushing bearing
- Drop prevention: Holding position at the stroke end.



Compact guide cylinder water resistant. MGPM□R/V-Z Series

Ø 20, Ø 25, Ø 32, Ø 40, Ø 50, Ø 63, Ø 80, Ø 100

- Slide bearing
- Ideal for machine tool environments exposed to coolants.



Compact guide cylinder wide type. MGPW Series

Ø 20, Ø 25, Ø 32, Ø 40, Ø 50, Ø 63

- Slide bearing, ball bushing bearing or high precision ball bushing bearing
- Designed to work with large workpieces.



Compact guide cylinder clean series. 12/13-MGP Z Series

Ø 12, Ø 16, Ø 20, Ø 25, Ø 32, Ø 40, Ø 50, Ø 63

- Ball bushing bearing
- Applicable in a clean room environment. Ideal for use in conveyor lines for semiconductor (LSI), liquid crystal (LCD), food processing, pharmaceutical, and electronic parts.



Compact guide cylinder with lock. MLGP Series

Ø 20, Ø 25, Ø 32, Ø 40, Ø 50, Ø 63, Ø 80, Ø 100

- Prevents dropping when the air supply is cut off or released
- Can be locked at any desired position
- Extension or retraction locking can be specified
- Ideal for applications when pressing or lifting and for holding a clamped position.



Compact guide cylinder heavy duty guide rod. MGPS Series

Ø 50, Ø 80

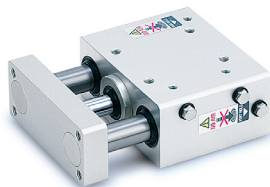
- Heavy duty guide rod type for improved load resistance
- Large diameter guide rods
- Slide bearing
- Lateral load resistance: 10 % increase
- Eccentric load resistance: 25 % increase
- Impact load resistance: 140 % increase.



Miniature guide rod cylinder. MGJ Series

Ø 6, Ø 10

- Slide bearing
- Non rotating accuracy of 0.1
- Mounting is possible from two directions
- Two auto switches can be mounted, even for 5 mm strokes
- Integral wiring & piping from one direction.



Hygienic design guide cylinder. HYG Series

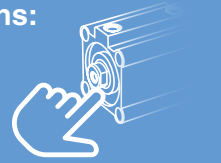
Ø 20, Ø 25, Ø 32, Ø 40, Ø 50, Ø 63

- Clean design with no external grooves
- Water resistant NBR or FKM seals for long service life in splash zones
- Slide bearing
- External switch rail and IP67 auto switches available
- Food grease (NSF H1 certified) is available
- Ideal for applications in the food industry.

How to order

Air cushion type	MGP	M	32	50	A	Z	
Basic type	MGP	M	32	50	Z		
Clean series	12	MGP	L	32	50	Z	
	①		②	③	④	⑤	⑥

Discover all MGP options:
mvp.smc.eu



① Clean room specifications

12	Relief port type
13	Vacuum port type

② Bearing type

M	Slide bearing
L	Ball bushing
A	High precision ball bushing

③ Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

④ Port thread type

—	M5 x 0.8
—	Rc
TN	NPT
TF	G

⑤ Standard strokes

Bore size Ø [mm]	Standard stroke [mm]
12, 16	10, 20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250
20, 25	20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400
32 to 100	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400

⑥ Standard strokes

Bore size Ø [mm]	Standard stroke [mm]
16	25, 50, 75, 100, 125, 150, 175, 200, 250
20 to 63	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400
80, 100	50, 75, 100, 125, 150, 175, 200, 250, 300, 350, 400

⑦ Made to order

-XA□	Change of guide rod end shape
-XB6	Heat resistant cylinder (-10 to 150 °C) ²⁾
-XB10	Intermediate stroke (Using exclusive body) ²⁾
-XB13	Low speed cylinder (5 to 50 mm/s) ²⁾
-XB22	Shock absorber soft type series RJ type ²⁾
-XC4	With heavy duty scraper ²⁾
-XC6	Made of stainless steel ²⁾
-XC8	Adjustable stroke cylinder/Adjustable extension type ²⁾
-XC9	Adjustable stroke cylinder/Adjustable retraction type ²⁾
-XC19	Intermediate stroke (Spacer type) ³⁾
-XC22	Fluororubber seal ²⁾
-XC35	With coil scraper ²⁾
-XC69	With shock absorber ^{1) 2)}
-XC79	Tapped hole, drilled hole, pinned hole machined additionally
-XC82	Bottom mounting type ²⁾
-XC85	Grease for food processing equipment
-XC88	Spatter resistant coil scraper, lube-retainer, grease for welding (Rod parts: stainless steel 304) ²⁾
-XC89W	Spatter resistant coil scraper, lube-retainer, grease for welding (Rod parts: S45C) ²⁾
-XC91	Spatter resistant coil scraper, grease for welding (Rod parts: S45C) ²⁾
-XC92	Dust resistant actuator ^{1) 2)}
-X144	Symmetrical port position ²⁾
-X471	Enlarged plate and body gap dimensions ²⁾
-X867	Side porting type (Plug location changed)

1) The shape is the same as the current product.

2) Only available for basic type.

3) Only available for air cushion type.

Specifications

Bore size Ø [mm]		12	16	20	25	32	40	50	63	80	100
Action		Double acting									
Fluid		Air									
Proof pressure		1.5 MPa									
Max. operating pressure		1.0 MPa									
Min. operating pressure	Basic type	0.12 MPa		0.1 MPa							
	Air cushion type	0.15 MPa	0.12 MPa								
Ambient and fluid temperature		-10 to 60 °C (No freezing)									
Piston speed ¹⁾		50 to 500 mm/s								50 to 400 mm/s	
Cushion	Basic type	Rubber bumper on both ends									
	Air cushion type	Air cushion on both ends (Without bumper)									
Lubrication		Not required (Non-lube)									
Stroke length tolerance		+1.5 0 mm									

1) Maximum speed with no load. Depending on the operating conditions, the piston speed may not be satisfied.

Compact guide
cylinder with lock MLGP M 32 50 Z - F

① ② ③ ④ ⑤

① Bearing type

M	Slide bearing
L	Ball bushing

② Bore size

20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

③ Port thread type

—	Rc
TN	NPT
TF	G

④ Standard strokes

Bore size Ø [mm]	Standard stroke [mm]
20, 25	20, 30, 40, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350
32 to 80	25, 50, 75, 100, 125, 150, 175, 200, 250, 300, 350
100	50, 75, 100, 125, 150, 175, 200, 250, 300, 350

⑤ Locking direction

F	Extension locking
B	Retraction locking

Cylinder specifications

Bore size Ø [mm]	20	25	32	40	50	63	80	100
Action	Double acting							
Fluid	Air							
Proof pressure	1.5 MPa							
Max. operating pressure	1.0 MPa							
Min. operating pressure	0.2 MPa ¹⁾							
Ambient and fluid temperature	-10 to 60 °C (No freezing)							
Piston speed ¹⁾	50 to 400 mm/s							
Cushion	Rubber bumper on both ends							
Lubrication	Not required (Non-lube)							
Stroke length tolerance	+1.5 0 mm							
Port size (Rc, NPT, G)	1/8			1/4			3/8	

1) When the unlocking air and cylinder operating air are not common, the minimum operating pressure is 0.15 MPa (The minimum operating pressure for the cylinder alone is 0.15 MPa).

Lock specifications

Bore size Ø [mm]	20	25	32	40	50	63	80	100
Lock operation	Spring locking (Exhaust locking)							
Unlocking pressure	0.2 MPa or more							
Lock starting pressure	0.05 MPa or less							
Locking direction	One direction (Extension locking, Retraction locking)							
Maximum operating pressure	1.0 MPa							
Unlocking port size (Rc, NPT, G)	M5 x 0.8			1/4			1/4	
Holding force (Max. static load) [N] ¹⁾	157	245	402	629	982	1559	2513	3927

1) The holding force (max. static load) shows the maximum capability and does not show the normal holding capability.

Double power cylinder

MGZ Series



Double your thrust



Benefits

- ▶ **Use it with confidence in lifting and press applications** – “Piston in piston” construction with non-rotating mechanism ($\pm 0.3^\circ$ non-rotating accuracy)
- ▶ **Save space in your machine** – Approx. 30 % reduced overall length compared with standard cylinders in tandem arrangement
- ▶ **Adapt it to your application requirements** – Long strokes available and end lock type available

Main features

- ▶ **High load resistance**
Integrated slide bearing.
- ▶ **Compactness**
- ▶ **Double power cylinder without non-rotating mechanism available**
MGZR Series.



End lock type version available





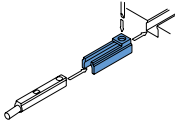
Long stroke version up to 1000 mm available

Standard stroke version stocked in European Central Warehouse.

Improved non-rotating accuracy: $\pm 0.3^\circ$ MGZ 32 to 80.

Auto switches

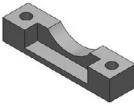

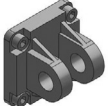

Auto switches can be mounted in grooves on 4 sides.

Bore size Ø [mm]	Type	Auto switch with indicator light (3 m lead wire)	Auto switch with 2 colour indication (3 m lead wire)	Auto switch with pre-wired connector (M8-3pin) and 0.5 m lead wire	Mounting bracket
20, 25, 32	3-wire solid state, PNP				
	2-wire solid state	D-M9BL	D-M9BWL	D-M9BSAPC	BMY3-016
	Reed	D-A93L	D-A93L, D-A90L	D-A93SAPC	BMY3-016
40, 50, 63, 83	3-wire solid state, PNP	D-M9PL	D-M9PWL	D-M9PSAPC	BMP1-032, BMG2-012
	2-wire solid state	D-M9BL	D-M9BWL	D-M9BSAPC	BMP1-032, BMG2-012
	Reed	D-A93L	D-A93L, D-A90L	D-A93SAPC	BMP1-032, BMG2-012

Speed controllers

Bore size Ø [mm]	Port size	Speed controller with one touch fitting	Speed controller with indicator	Dual speed controller
20	M5 x 0.8			
25	1/8	AS1201F-M5-06A	AS1201FS-M5-06A	ASD230F-M5-06
32	1/8	AS2201F-01-06SA	AS2201FS-01-06S	—
40	1/4	AS2201F-01-06SA	AS2201FS-01-06S	ASD330F-01-06S
50	1/4	AS2201F-02-08SA	AS2201FS-02-08S	ASD530F-02-08S
63	1/4	AS2201F-02-08SA	AS2201FS-02-08S	ASD530F-02-08S
80	3/8	AS3201F-03-10SA	AS3201FS-03-10S	ASD530F-03-10S

Mounting options

Bore size Ø [mm]	Foot	Flange	Double clevis ¹⁾	Double clevis bracket ¹⁾
20				
25	MGZ-L25	MGZ-F25	MGZ-D25	MB-B03
32	MGZ-L03	MGZ-F03	MGZ-D03	MB-B05
40	MGZ-L04	MGZ-F04	MGZ-D04	MB-B05
50	MGZ-L05	MGZ-F05	MGZ-D05	MB-B08
63	MGZ-L06	MGZ-F06	MGZ-D06	MB-B08
80	MGZ-L08	MGZ-F08	MGZ-D08	MB-B12

¹⁾ Only for MGZR

Rod end accessories

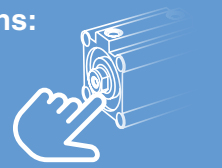
Bore size Ø [mm]	Floating joint ¹⁾
20	
25	JB40-8-125
32	JB63-10-150
40	JB80-16-200
50	JB100-20-250
63	JB100-20-250
80	JB140-22-250

¹⁾ Only for MGZR

How to order

Basic	MGZ	<table><tr><td></td><td>40</td><td></td><td>Z</td><td>-</td><td>100</td></tr></table>		40		Z	-	100
	40		Z	-	100			
End lock	MGZ	<table><tr><td></td><td>40</td><td></td><td>Z</td><td>-</td><td>100</td></tr></table> R		40		Z	-	100
	40		Z	-	100			
Without non-rotation mechanism	MGZ R	<table><tr><td></td><td>40</td><td></td><td>Z</td><td>-</td><td>100</td></tr></table>		40		Z	-	100
	40		Z	-	100			
		<table><tr><td>①</td><td>②</td><td>③</td><td>④</td><td>⑤</td></tr></table>	①	②	③	④	⑤	
①	②	③	④	⑤				

Discover all MGZ options:
mgz.smc.eu



① Mounting types

—	Basic type
L	Transaxial foot type
F	Front flange type
G	Rear flange type
D ¹⁾	Double clevis type

1) Only without non-rotation mechanism.

② Bore size

20	20 mm
25	25 mm
32	32 mm
40	40 mm ¹⁾
50	50 mm ¹⁾
63	63 mm ¹⁾
80	80 mm

1) End lock available.

③ Port thread type

—	M5 x 0.8	Ø 20
—	Rc	Ø 25, Ø 32,
TN	NPT	Ø 40, Ø 50,
TF	G	Ø 63, Ø 80

④ Coil scraper

—	Without
Z	With

⑤ Standard strokes

Bore size Ø [mm]	Standard stroke [mm]	Long stroke [mm]
20, 25	75, 100, 125, 150, 175, 200, 250, 300	350, 400, 450, 500, 600, 700, 800
32, 40, 50, 63, 80		350, 400, 450, 500, 600, 700, 800, 900, 1000

Intermediate strokes and strokes shorter than 75 mm are also available.

Specifications

Basic and without non-rotation mechanism

Bore size Ø [mm]		20	25	32	40	50	63	80
Action		Double acting/Single rod						
Fluid		Air						
Proof pressure		1.5 MPa						
Max. operating pressure		1.0 MPa						
Min. operating pressure		Standard stroke: 0.08 MPa						
		Long stroke: 0.12 MPa						
Ambient and fluid temperature		Without auto switch: -10 to 70 °C (with no freezing)						
		With auto switch: -10 to 60 °C (with no freezing)						
Lubrication		Non-lube						
Piston speed	OUT	50 to 700 mm/s						
	IN	50 to 350 mm/s	50 to 450 mm/s					
Stroke length tolerance		Up to 250 ^{+1.5} ₀ , 251 to 1000 ^{+1.4} ₀						
Cushion		Rubber bumper						
Screw tolerance		JIS class 2						
Mounting		Basic type, transaxial foot type, front flange type, rear flange type, double clevis type ¹⁾						

1) Double clevis type only without non-rotation mechanism.

End lock type

Bore size Ø [mm]		32	50	63
Action		Double acting/Single rod		
Fluid		Air		
Proof pressure		1.5 MPa		
Max. operating pressure		1.0 MPa		
Min. operating pressure		0.2 MPa ¹⁾		
Ambient and fluid temperature		Without auto switch: -10 to 70 °C (with no freezing)		
		With auto switch: -10 to 60 °C (with no freezing)		
Lubrication		Non-lube		
Piston speed	OUT	50 to 700 mm/s		
	IN	50 to 450 mm/s		
Stroke length tolerance		Up to 250 ^{+1.5} , 251 to 1000 ^{+1.4}		
Cushion		Rubber bumper		
Screw tolerance		JIS class 2		
Mounting		Basic type, transaxial foot type, front flange type, rear flange type		

1) 0.08 MPa (or 0.12 MPa for long strokes) except for the lock part.

Theoretical output

Model	Bore size Ø [mm]	Rod size [mm]	Operating direction	Piston area [mm ²]	Operating pressure [MPa]								
					0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
MGZ20	20 x 25	10	OUT	726	145	218	290	363	436	508	581	653	726
	20		IN	236	47	71	94	118	141	165	189	212	236
MGZ25	25 x 30	12	OUT	1085	217	326	434	543	651	760	868	977	1085
	25		IN	378	76	113	151	189	227	265	302	340	378
MGZ32	36 x 32	16	OUT	1621	324	486	648	811	973	1135	1297	1459	1621
	32		IN	603	121	181	241	302	362	422	482	543	603
MGZ40	45 x 40	20	OUT	2533	507	760	1013	1267	1520	1773	2026	2280	2533
	40		IN	942	188	283	377	471	565	659	754	848	942
MGZ50	55 x 50	25	OUT	3848	770	1154	1539	1924	2309	2694	3078	3463	3848
	50		IN	1473	295	442	589	737	884	1031	1178	1326	1473
MGZ63	68 x 63	32	OUT	5945	1189	1784	2378	2973	3567	4162	4756	5351	5945
	63		IN	2313	463	694	925	1157	1388	1619	1850	2082	2313
MGZ80	87 x 80	40	OUT	9715	1943	2915	3886	4858	5829	6801	7772	8744	9715
	80		IN	3770	754	1131	1508	1885	2262	2639	3016	3393	3770

Weights

Basic and end lock type

Bore size Ø [mm]		20	25	32	40	50	63	80
Standard weight	Basic type	0.47	0.69	1.04	1.90 (2.80)	3.03 (4.08)	4.83 (6.13)	8.63
	Foot	0.63	0.86	1.34	2.39 (3.29)	3.92 (4.97)	6.08 (7.39)	10.61
	Flange	0.58	0.83	1.32	2.34 (3.24)	3.79 (4.84)	5.83 (7.13)	9.92
Weight per each 50 mm of stroke		All mounting brackets	0.18	0.21	0.28	0.39 (0.41)	0.59 (0.61)	1.17

1) Value in () only for end lock type.

Without non-rotation mechanism

Bore size Ø [mm]		20	25	32	40	50	63	80
Standard weight	Basic type	0.48	0.70	1.09	1.91	3.03	4.83	8.85
	Foot	0.63	0.86	1.34	2.39	3.92	6.08	10.61
	Flange	0.59	0.83	1.32	2.34	3.79	5.83	9.92
	Double clevis type	0.58	0.83	1.32	2.19	3.47	5.62	10.66
Weight per each 50 mm of stroke		All mounting brackets	0.19	0.22	0.29	0.39	0.59	1.21

Air slide table

MXQ-Z Series



Packed with features, simply the best



Benefits

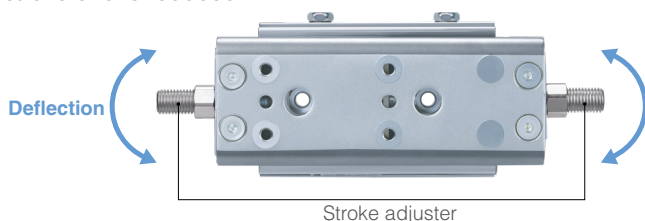
- **Further your application with the most compact, lightest and highest precision air slide table** – As little as 20 mm in height and 130 g in weight
- **Tailor MXQ to your individual needs** – 4 body types, 4 stroke adjuster types, centralised adjuster, buffer mechanism, end lock, axial piping and several extra options including dual stroke and special environment specifications
- **Avoid undesired moments, oscillations and vibrations** – Double rod construction & low centre of gravity design.

Main features

- **Allowable kinetic energy improved**
Reduced weight of movable parts.

Stroke adjuster available

The stroke adjuster is positioned in the centre. Play at the stroke end is reduced.



Low thrust with high rigidity type

Get a higher load capacity in a smaller space.



Improved visibility of the auto switch

Double-ported type

A piping port and auto switch mounting groove are provided on both sides for increased piping and wiring (also single side ported available).

► Stroke adjusters

- **Metal Stopper with Bumper**

High accuracy due to the integrated construction of the bumper and metal stopper:
Repeated positioning accuracy of ± 0.05 or less.
Improved cycle time.
Operating speed of 300 mm/sec.

- **Rubber Stopper**

Impact reduced by 1/2 compared with models without a stroke adjuster.

- **Shock Absorber**

Soft type/RJ.
Suitable for operations which require gentle stops, such as a lightweight workpiece transfers or low-speed transfers.

- **Metal Stopper**

Suitable for positioning.

**Axial piping available**

Centralised piping in axial direction to maintain clear space around the body.

Auto switches

Round type auto switches can be directly mounted on 3 surfaces without accessories.

Type	Auto switch with indicator light (3 m lead wire)	Auto switch with 2 colour indication (3 m lead wire)	Auto switch perpendicular type (3 m lead wire)	Auto switch with pre-wired connector (M8-3pin) and 0.5 m lead wire
3-wire solid state, PNP	D-M9PL	D-M9PWL	D-M9PWVL	D-M9PSAPC
2-wire solid state	D-M9BL	D-M9BWL	D-M9BWVL	D-M9BSAPC
Reed	D-A93L	D-A93L	D-A93VL	D-A93SAPC

Speed controllers

Bore size Ø [mm]	Port size	Speed controller with one touch fitting	Compact speed controller with one touch fitting
6	M5 x 0.8	AS1201F-M5-04A	JAS-LEA04-M5
8	M5 x 0.8	AS1201F-M5-04A	JAS-LEA04-M5
12	M5 x 0.8	AS1201F-M5-06A	JAS-LEA06-M5
16	M5 x 0.8	AS1201F-M5-06A	JAS-LEA06-M5
20	M5 x 0.8	AS1201F-M5-06A	JAS-LEA06-M5
25	M5 x 0.8	AS1201F-M5-06A	JAS-LEA06-M5

How to order

MXQ□A, MXQ□C, MXQ□

MXQ 12 A - 30 ZA -

① ② ③ ④ ⑤ ⑥

Discover all MXQ-Z options:
mxq-z.smc.eu



① Bore size	② Body option					③ Standard stroke [mm]	
	Double-ported type	Single side port type					
		Standard type	Symmetric type	Standard type	Symmetric type		
	A	C	CL	—	L		
6						10, 20, 30, 40, 50	
8						10, 20, 30, 40, 50, 75	
12						10, 20, 30, 40, 50, 75, 100	
16		—				10, 20, 30, 40, 50, 75, 100, 125	
20						10, 20, 30, 40, 50, 75, 100, 125, 150	
25						10, 20, 30, 40, 50, 75, 100, 125, 150 ²⁾	

1) No setting, as the standard model has the piping ports and auto switch mounting grooves on both sides.

2) Operating speed range is 50 to 300 mm/s. (Without stroke adjuster)

⑤ Functional option

Symbol	Functional option
—	Without functional option
1	With buffer
2	With end lock
3	Axial piping
4	With buffer, end lock
5	With buffer, axial piping
6	Centralized adjuster
7	Centralized adjuster (Symmetric)
8	Buffer, centralised adjuster
9	Buffer, centralised adjuster (Symmetric)

⑥ Made to order

Symbol	Specifications
X7	PTFE grease
X9	Grease for food processing equipment
X11	Long adjustment bolt (10 mm longer adjustment range)
X12	Long adjustment bolt (20 mm longer adjustment range)
X28	Long adjustment nut and bolt
X33	Without built-in auto switch magnet
X39	Fluororubber seal
X42	Anti-corrosive guide unit
X45	EPDM seal
X580	Low-speed specification (15 to 50 mm/s)
X2128	Heat-resistant specification (-10 to 100 °C)
X2192	Dual stroke specification ¹⁾
X2202	Extension stroke end adjuster fixed from the axial direction
X2100	End plat compatible with the current MXQ series ²⁾
X2200	Side adjuster specification ²⁾
X2201	Combined use of shock absorber + metal stopper ²⁾

1) Only for MXQ□A.

2) Only for MXQ□.

④ Adjuster option/Functional option combinations

Symbol	Adjuster type ⁹⁾		Adjuster mounting position ^{1) 8)}		Functional option combination											
			Extension stroke end	Retraction stroke end	—	1	2	3	4	5	6	7	8	9		
					Without functional option	With buffer _{2) 3)}	With end lock	Axial piping ₆₎	With buffer, end lock ₂₎	With buffer, axial piping _{2) 6)}	Centralized adjuster	Centralised adjuster (Symmetric) ₇₎	Buffer, centralised adjuster ₂₎	Buffer, centralised adjuster (Symmetric) _{2) 7)}		
Z	Without adjuster				○	○	○	○	○	○	×	×	×	×		
ZA	Metal stopper with bumper		●	●	○	×	×	○	×	×	○	○	×	×		
●				○	×	○	○	×	×	×	×	×	×			
ZC				●	○	×	×	○	×	×	○	○	○	○		
ZD	Rubber stopper		●	●	○	×	×	○	×	×	○	○	○	○		
●				○	○	○	○	○	×	×	×	×	×			
ZF				●	○	×	×	○	×	×	○	○	○	○		
ZG	Shock absorber/RJ		●	●	○	×	×	○	×	×	○	○	×	×		
●				○	×	○	○	×	×	×	×	×	×			
ZJ				●	○	×	×	○	×	×	○	○	○	○		
ZK	Metal stopper		●	●	○	×	×	○	×	×	○	○	○	○		
●				○	○	○	○	○	×	×	×	×	×			
ZM				●	○	×	×	○	×	×	○	○	○	○		
ZN	Shorter total length type ⁴⁾		Without adjuster		○	○ ⁵⁾	×	○	×	○ ⁵⁾	×	×	×	×		
ZP			Rubber stopper	●	○	×	×	○	×	×	×	×	×	×		
ZQ			Shock absorber/RJ	●	○	×	×	○	×	×	×	×	×	×		
ZS			Metal stopper with bumper	●	○	×	×	○	×	×	×	×	×	×		
ZT			Metal stopper	●	○	×	×	○	×	×	×	×	×	×		
ZBF	Extension stroke end adjuster	Metal stopper with bumper	Rubber stopper	●	●	○	×	×	○	×	×	○	○	×	×	
ZBJ			Shock absorber/RJ	●	●	○	×	×	○	×	×	○	○	×	×	
ZBM			Metal stopper	●	●	○	×	×	○	×	×	○	○	×	×	
ZEC			Rubber stopper	Metal stopper with bumper	●	●	○	×	×	○	×	×	○	○	○	○
ZEJ				Shock absorber/RJ	●	●	○	×	×	○	×	×	○	○	○	○
ZEM				Metal stopper	●	●	○	×	×	○	×	×	○	○	○	○
ZHC		Shock absorber/ RJ	Metal stopper with bumper	●	●	○	×	×	○	×	×	○	○	×	×	
ZHF			Rubber stopper	●	●	○	×	×	○	×	×	○	○	×	×	
ZHM			Metal stopper	●	●	○	×	×	○	×	×	○	○	×	×	
ZLC		Metal stopper	Metal stopper with bumper	●	●	○	×	×	○	×	×	○	○	○	○	
ZLF			Rubber stopper	●	●	○	×	×	○	×	×	○	○	○	○	
ZLJ			Shock absorber/RJ	●	●	○	×	×	○	×	×	○	○	○	○	

1) ●: Shipped together with the product, but not assembled

Without any symbol for the adjuster mounting position: The adjuster can be mounted afterward.

2) For the buffer mechanism, the buffer stroke will be shorter for the stroke that is adjusted by the extension stroke end adjuster.

3) If it is necessary to install a retraction stroke end adjuster with a buffer mechanism, use a buffer and centralized adjuster provided with a retraction stroke end adjuster on the rear end of the body. End lock or axial piping options cannot be mounted to centralized adjuster specification models.

4) Extension stroke end adjuster mounting holes have been removed to reduce the total length of the table.

5) The shorter total length type can be used, but a retraction stroke end adjuster cannot be mounted afterward.

6) For axial piping, the piping ports on both sides cannot be used.

7) Only the centralized adjuster is symmetric.

8) For details on the adjuster mounting position, refer to the next page.

9) The metal stopper with bumper option is not available for Ø 6.

Specifications

Bore size Ø [mm]	6	8	12	16	20	25
Piping port size	M5 x 0.8					
Fluid	Air					
Action	Double acting					
Operating pressure	0.15 to 0.7 MPa ¹⁾ (End lock: 0.35 to 0.7 MPa) ¹⁾					
Proof pressure	1.05 MPa					
Ambient and fluid temperatures	-10 to 60 °C					
Operating speed range (Average operating speed)	50 to 500 mm/s (Metal stopper with bumper: 50 to 300 mm/s) (Metal stopper: 50 to 200 mm/s) * in the standard stroke table on page 20: 50 to 300 mm/s					
Cushion (Without stroke adjuster)	Internal rubber bumper					
Cushion (With stroke adjuster)	Metal stopper with bumper, rubber stopper, shock absorber, metal stopper					
Lubrication	Non-lube					
Auto switch	Solid state auto switch, reed auto switch (2-wire, 3-wire) 2-colour indicator solid state auto switch (2-wire, 3-wire)					
Stroke length tolerance	+2 to 0 mm					

1) Refer to the metal stopper with bumper for the minimum operating pressure of the metal stopper with bumper. If the operating pressure is lower than the minimum operating pressure, the repeated accuracy will decline.
Minimum operating pressure of the metal stopper with bumper: Pressure required to fully compress the protrusion of the bumper to get in contact with the metal part.
The operating pressure of the bore size 20 cylinder with shock absorber is 0.15 to 0.6 MPa.

Theoretical output

The dual rod ensures an output twice that of current cylinders.

Bore size Ø [mm]	Rod size [mm]	Operating direction	Piston area [mm ²]	Operating pressure [MPa]					
				0.2	0.3	0.4	0.5	0.6	0.7
6	3	OUT	57	11	17	23	29	34	40
		IN	42	8	13	17	21	25	29
8	4	OUT	101	20	30	40	51	61	71
		IN	75	15	23	30	38	45	53
12	6	OUT	226	45	68	90	113	136	158
		IN	170	34	51	68	85	102	119
16	6	OUT	402	80	121	161	201	241	281
		IN	346	69	104	138	173	207	242
20	8	OUT	628	126	188	251	314	377	440
		IN	528	106	158	211	264	317	369
25	10	OUT	982	196	295	393	491	589	687
		IN	825	165	247	330	412	495	577

1) When the metal stopper with bumper is used for positioning, the theoretical output may vary depending on the full compression force of the bumper.

With end lock

Model	MXQ6□	MXQ8□	MXQ12A	MXQ16□	MXQ20□	MXQ25□
Operating pressure range [MPa]	0.35 to 0.7					
Holding force [N]	12	12	23	45	70	110

With buffer mechanism

Model		MXQ6□	MXQ8□	MXQ12A	MXQ16□	MXQ20□	MXQ25□
Operating speed range [mm/s]		50 to 500 (Horizontal mounting 50 to 300)					
Buffer stroke [mm]		5		10			
Buffer stroke load [N]	Stroke at 0 [mm]	3	5	9	16	25	40
	Maximum stroke	6	8	15	24	38	59

Adjusters

Metal stopper with bumper

Model	MXQ8A MXQ8C MXQ8	MXQ12A MXQ12C MXQ12	MXQ16A MXQ16C MXQ16	MXQ20A MXQ20C MXQ20	MXQ25A MXQ25C MXQ25
Max. absorbed energy [J]	0.018	0.04	0.08	0.12	0.18
Stroke absorption [mm]	2	2.8	3.6	4.4	5.5
Min. operating pressure of metal stopper with bumper ^{1) 2)} [MPa]	0.3	0.3	0.2	0.2	0.2
Reference) Full compression force of bumper [N]	20	42	65	97	154
Mounting screw size [mm]	M6 x 0.75	M8 x 1	M10 x 1	M12 x 1	M14 x 1.5

1) Minimum operating pressure required to fully compress the protrusion of the bumper to get in contact with the metal part

When using the metal stopper with bumper for positioning, use it at a pressure level exceeding the minimum operating pressure. For vertical mounting, the workpiece mass should be taken into consideration.

2) Not available for Ø 6

Rubber stopper

Model	MXQ6A MXQ6C MXQ6	MXQ8A MXQ8C MXQ8	MXQ12A MXQ12C MXQ12	MXQ16A MXQ16C MXQ16	MXQ20A MXQ20C MXQ20	MXQ25A MXQ25C MXQ25
Max. absorbed energy [J]	0.06		0.12	0.2	0.4	0.6
Mounting screw size [mm]	M6 x 0.75		M8 x 1	M10 x 1	M12 x 1	M14 x 1.5

Shock absorber/RJ

Model	MXQ6A MXQ6C MXQ6	MXQ8A MXQ8C MXQ8	MXQ12A MXQ12C MXQ12	MXQ16A MXQ16C MXQ16	MXQ20A MXQ20C MXQ20	MXQ25A MXQ25C MXQ25
Max. absorbed energy [J]	0.35		0.5	1.5	3	3.7
Stroke absorption [mm]	3		5	6	7	10
Collision speed [mm/s]	50 to 500					
Max. operating frequency [cycle/min]	80		80	70		45
Max. allowable thrust [N]	150		245	422		814
Spring force (Extended) [N]	1.3		2.8	5.4		6.4
Spring force (Compressed) [N]	3.9		4.9	8		15
Mounting screw size [mm]	M6 x 0.75		M8 x 1	M10 x 1		M14 x 1.5

Metal stopper

Model	MXQ6A MXQ6C MXQ6	MXQ8A MXQ8C MXQ8	MXQ12A MXQ12C MXQ12	MXQ16A MXQ16C MXQ16	MXQ20A MXQ20C MXQ20	MXQ25A MXQ25C MXQ25
Max. absorbed energy [J]	0.009		0.02	0.04	0.06	0.09
Mounting screw size [mm]	M6 x 0.75		M8 x 1	M10 x 1	M12 x 1	M14 x 1.5

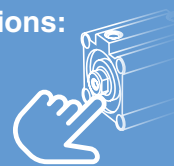
How to order

MXQ□A, MXQ□C, MXQ□

MXQ 12 B - 30 ZA -

① ② ③ ④ ⑤

Discover all MXQ-Z options:
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① Bore size	② Body option		③ Standard stroke [mm]
	Standard type B	Symmetric type BL	
6			10, 20, 30, 40, 50 ² , 75 ²
8			10, 20, 30, 40, 50, 75 ² , 100 ²
12			10, 20, 30, 40, 50, 75, 100, 125
16		— ¹⁾	10, 20, 30, 40, 50, 75, 100 ² , 125 ² , 150 ²
20			10, 20, 30, 40, 50, 75, 100, 125 ² , 150 ²⁾

1) No setting, as the standard model has the piping ports and auto switch mounting grooves on both sides.

2) Operating speed range is 50 to 300 mm/s. (Without stroke adjuster)

④ Adjuster option/Functional option combinations

Symbol	Adjuster type ³⁾			Adjuster mounting position ¹⁾		
				Extension stroke end	Retraction stroke end	
Z	Without adjuster					
ZA	Metal stopper with bumper			●	●	
ZB				●		
ZC					●	
ZD	Rubber stopper			●	●	
ZE				●		
ZF					●	
ZG	Shock absorber/RJ			●	●	
ZH				●		
ZJ					●	
ZK	Metal stopper			●	●	
ZL				●		
ZM					●	
ZN	Shorter total length type ²⁾		Without adjuster			
ZP					Rubber stopper	●
ZQ					Shock absorber/RJ	●
ZS					Metal stopper with bumper	●
ZT					Metal stopper	●
ZBF	Metal stopper with bumper	Retraction stroke end adjuster	Rubber stopper	●	●	
ZBJ			Shock absorber/RJ	●	●	
ZBM			Metal stopper	●	●	
ZEC			Metal stopper with bumper	●	●	
ZEJ	Rubber stopper		Shock absorber/RJ	●	●	
ZEM			Metal stopper	●	●	
ZHC			Metal stopper with bumper	●	●	
ZHF			Rubber stopper	●	●	
ZHM	Shock absorber/RJ		Metal stopper	●	●	
ZLC			Metal stopper with bumper	●	●	
ZLF			Rubber stopper	●	●	
ZLJ	Metal stopper		Shock absorber/RJ	●	●	

1) ●: Shipped together with the product, but not assembled

Without any symbol for the adjuster mounting position: The adjuster can be mounted afterward.

2) Extension stroke end adjuster mounting holes have been removed to reduce the total length of the table.

3) The metal stopper with bumper option is not available for Ø 6.

⑤ Made to order

Symbol	Specifications
X7	PTFE grease
X9	Grease for food processing equipment
X11	Long adjustment bolt (10 mm longer adjustment range)
X12	Long adjustment bolt (20 mm longer adjustment range)
X28	Long adjustment nut and bolt
X33	Without built-in auto switch magnet
X39	Fluororubber seal
X42	Anti-corrosive guide unit
X45	EPDM seal
X580	Low-speed specification (15 to 50 mm/s)
X2128	Heat-resistant specification (-10 to 100 °C)
X2202	Extension stroke end adjuster fixed from the axial direction

Specifications

Bore size Ø [mm]	6	8	12	16	20
Piping port size	M5 x 0.8				
Fluid	Air				
Action	Double acting				
Operating pressure	0.15 to 0.7 MPa ¹⁾				
Proof pressure	1.05 MPa				
Ambient and fluid temperatures	-10 to 60 °C				
Operating speed range (Average operating speed)	50 to 500 mm/s (Metal stopper with bumper: 50 to 300 mm/s) (Metal stopper: 50 to 200 mm/s) * in the standard stroke table on page 24: 50 to 300 mm/s				
Cushion (Without stroke adjuster)	Internal rubber bumper				
Cushion (With stroke adjuster)	Metal stopper with bumper, rubber stopper, shock absorber, metal stopper				
Lubrication	Non-lube				
Auto switch	Solid state auto switch, reed auto switch (2-wire, 3-wire) 2-colour indicator solid state auto switch (2-wire, 3-wire)				
Stroke length tolerance	+2 to 0 mm				

- 1) Refer to the metal stopper with bumper for the minimum operating pressure of the metal stopper with bumper. If the operating pressure is lower than the minimum operating pressure, the repeated accuracy will decline.
Minimum operating pressure of the metal stopper with bumper: Pressure required to fully compress the protrusion of the bumper to get in contact with the metal part.

Adjusters

Metal stopper with bumper

Model	MXQ8B	MXQ12B	MXQ16B	MXQ20B
Max. absorbed energy [J]	0.018	0.04	0.08	0.12
Stroke absorption [mm]	2	2.8	3.6	4.4
Min. operating pressure of metal stopper with bumper ^{1) 2)} [MPa]	0.3	0.3	0.2	0.2
Reference) Full compression force of bumper [N]	20	42	65	97
Mounting screw size [mm]	M8 x 1	M10 x 1	M12 x 1	M14 x 1.5

- 1) Minimum operating pressure required to fully compress the protrusion of the bumper to get in contact with the metal part
When using the metal stopper with bumper for positioning, use it at a pressure level exceeding the minimum operating pressure. For vertical mounting, the workpiece mass should be taken into consideration.
2) Not available for Ø 6

Rubber stopper

Model	MXQ6B	MXQ8B	MXQ12B	MXQ16B	MXQ20B
Max. absorbed energy [J]	0.06	0.12	0.2	0.4	0.6
Mounting screw size [mm]	M6 x 0.75	M8 x 1	M10 x 1	M12 x 1	M14 x 1.5

Shock absorber/RJ

Model	MXQ6B	MXQ8B	MXQ12B	MXQ16B	MXQ20B
Max. absorbed energy [J]	0.35	0.5	1.5	3	3.7
Stroke absorption [mm]	3	5	6	7	10
Collision speed [mm/s]	300 to 500	50 to 500			
Max. operating frequency [cycle/min]	80	80	70	45	
Max. allowable thrust [N]	150	245	422	814	
Spring force (Extended) [N]	1.3	2.8	5.4	6.4	
Spring force (Compressed) [N]	3.9	4.9	8	15	
Mounting screw size [mm]	M6 x 0.75	M8 x 1	M10 x 1	M14 x 1.5	

Metal stopper

Model	MXQ6A MXQ6C MXQ6	MXQ8A MXQ8C MXQ8	MXQ12A MXQ12C MXQ12	MXQ16A MXQ16C MXQ16	MXQ20A MXQ20C MXQ20	MXQ25A MXQ25C MXQ25
Max. absorbed energy [J]	0.009		0.02	0.04	0.06	0.09
Mounting screw size [mm]	M6 x 0.75		M8 x 1	M10 x 1	M12 x 1	M14 x 1.5

Theoretical output

The dual rod ensures an output twice that of current cylinders.

Bore size Ø [mm]	Rod size [mm]	Operating direction	Piston area [mm ²]	Operating pressure [MPa]					
				0.2	0.3	0.4	0.5	0.6	0.7
6	3	OUT	57	11	17	23	29	34	40
		IN	42	8	13	17	21	25	29
8	4	OUT	101	20	30	40	51	61	71
		IN	75	15	23	30	38	45	53
12	6	OUT	226	45	68	90	113	136	158
		IN	170	34	51	68	85	102	119
16	6	OUT	402	80	121	161	201	241	281
		IN	346	69	104	138	173	207	242
20	8	OUT	628	126	188	251	314	377	440
		IN	528	106	158	211	264	317	369

- 1) When the metal stopper with bumper is used for positioning, the theoretical output may vary depending on the full compression force of the bumper.

Compact cylinder with linear guide

MXZ Series



Our unique combination

Benefits

- **Benefit from the dimensions of a compact cylinder and the high precision of a guided one**
- **Stop, position or transfer lightweight workpieces** – Ideal for applications where a short and precise stroke is needed
- **Mount it directly** – Through head mounting.

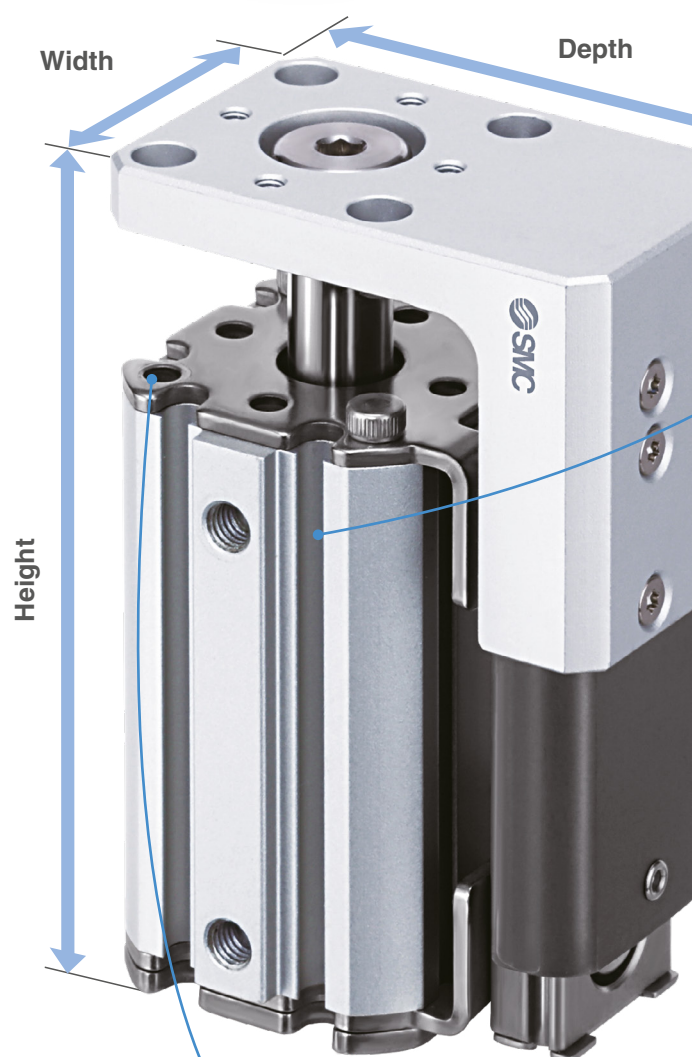
Main features

- **MXZ uses the body of our JCQ, the compact version of a compact cylinder**

Ø	Width [mm]	Height [mm]	Depth [mm]
12	23	44	37.4
16	26	45	40.9
20	30	49.5	49.4
25	33.5	54	57.4

- **A linear guide is integrated into the cylinder**
The linear guide provides accuracy and ensures linearity when transferring workpieces. It is able to withstand lateral loads.
- **Pilot port location is selectable when ordering the product**

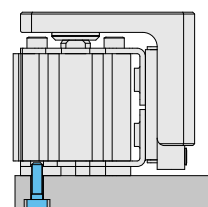
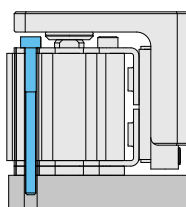
RoHS



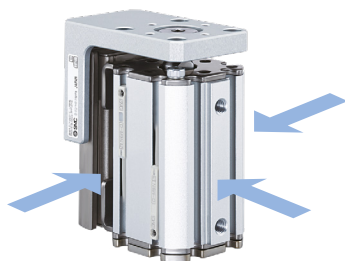
Two mounting styles are possible through the head cover

Through-hole mounting

Tap mounting



Compact auto switches (D-M9□) can be directly mounted on 3 surfaces without accessories







Port location is selectable when ordering the product

Series variations

Series	Bore size Ø [mm]	Standard stroke [mm]										Option
		5	10	15	20	25	30	35	40	45	50	
MXZ	12	●	●	●	●	●	●	—	—	—	—	Pilot location selectable
	16	●	●	●	●	●	●	—	—	—	—	
	20	●	●	●	●	●	●	●	●	●	●	
	25	●	●	●	●	●	●	●	●	●	●	

Auto switches

Type	Auto switch with 3 m lead wire	Perpendicular auto switch (3 m lead wire)	Auto switch with 2 colour indication (3 m lead wire)	Auto switch, short type (3 m lead wire)
3-wire solid state, PNP	 D-F8PL	 D-M9PWVL	 D-M9NWL	 D-M9PL-5
2-wire solid state	D-F8BL	D-M9BWVL	D-M9BWL	D-M9BL-5

Speed controllers

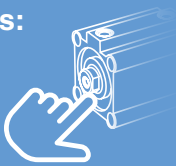
Bore size Ø [mm]	Port size	Speed controller with one touch fitting, elbow type	Compact speed controller with one touch fitting
			
12	M3 x 0.5	AS1201F-M3-04A-X790	JAS-LEA04-M3
16	M3 x 0.5	AS1201F-M3-06A-X790	JAS-LEA04-M3
20	M5 x 0.8	AS1201F-M5-06A	JAS-LEA06-M5
25	M5 x 0.8	AS1201F-M5-06A	JAS-LEA06-M5

How to order

MXZ 32 - 50

① ② ③ ④

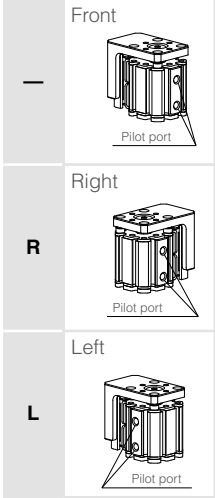
Discover all MXZ options:
mxz.smc.eu



① Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm

② Pilot port location



③ Stroke/Minimum stroke for auto switch mounting

Bore size	Standard stroke [mm]									
	5	10	15	20	25	30	35	40	45	50
12	●	●	●	●	●	●	—	—	—	—
16	●	●	●	●	●	●	—	—	—	—
20	●	●	●	●	●	●	●	●	●	●
25	●	●	●	●	●	●	●	●	●	●

④ Option

—	Without mounting bolt
L	With mounting bolt

1) 2 mounting bolts are shipped together with the product, (but not assembled).

Specifications

Bore size Ø [mm]	12	16	20	25
Pilot port	M3 x 0.5		M5 x 0.8	
Fluid	Air			
Action	Double acting			
Operating pressure	0.1 to 0.7 MPa			
Proof pressure	1.05 MPa			
Ambient and fluid temperature	5 to 60 °C			
Piston speed (Average speed)	50 to 500 mm/s			
Cushion	Rubber bumper			
Lubrication	Non-lube			
Auto switch	Solid state auto switch (2-wire, 3-wire) 2-colour indicator solid state auto switch (2-wire, 3-wire)			
Stroke length tolerance	+ 1.3 to 0 mm (when pressure is not applied)			

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

Theoretical output

Bore size Ø [mm]	Rod size [mm]	Operating direction	Piston area [mm ²]	Operating pressure [MPa]					
				0.2	0.3	0.4	0.5	0.6	0.7
12	6	OUT	113	23	34	45	57	68	79
		IN	85	17	25	34	42	51	59
16	8	OUT	201	40	60	80	101	121	141
		IN	151	30	45	60	75	90	106
20	10	OUT	314	63	94	126	157	188	220
		IN	236	47	71	94	118	141	165
25	12	OUT	491	98	147	196	245	295	344
		IN	378	76	113	151	189	227	264

Weights

[g]

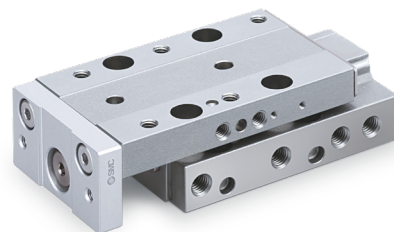
Bore size Ø [mm]	Standard stroke [mm]									
	5	10	15	20	25	30	35	40	45	50
12	105	114	124	132	142	152	—	—	—	—
16	126	136	146	156	166	175	—	—	—	—
20	195	211	225	239	255	270	285	300	314	329
25	284	304	324	343	363	384	403	423	442	462

Air slide table

MXJ Series



High precision in limited space



Benefits

- **Downsize your machine** – as small as 18 mm in height (Ø 12 mm)
- **Boost your machine performance** – High-precision liner guide: 0.005 mm (Travelling parallelism)
- **Mount as you wish** – Mounting pin holes on 4 surfaces, allowing manifold set-up.

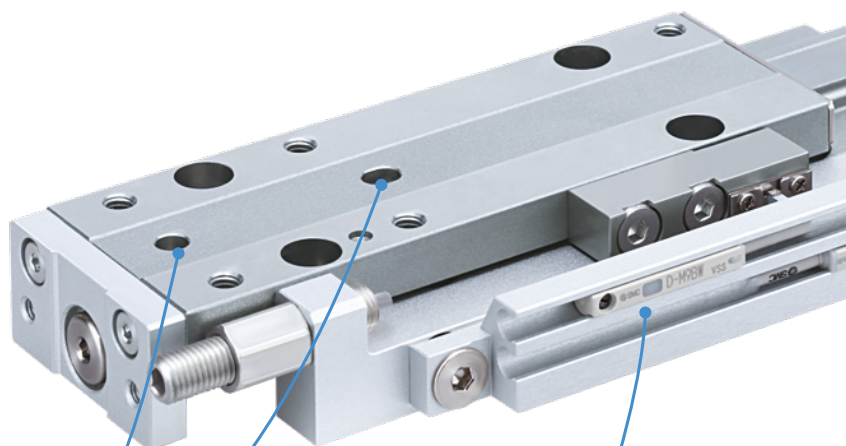
High precision linear guide
0.005 mm travelling parallelism.

Main features

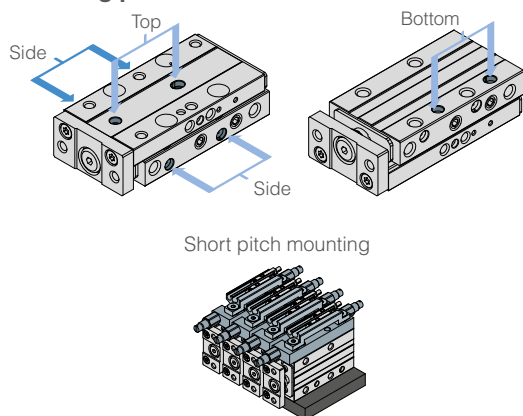
► Compact design

Ø	Total length	Height	Width
12	70 ¹⁾	18	34
16	72 ¹⁾	23	40

1) For 10 stroke.



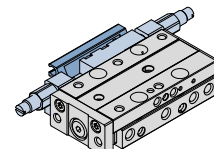
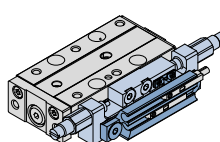
Mounting pin holes on 4 surfaces

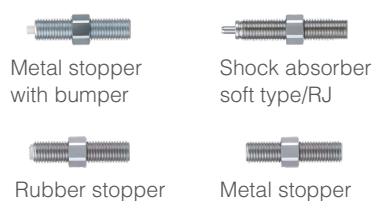


Position of the auto switch, adjuster and pilot port can be changed

Standard mounting

Symmetric mounting



Stopper variations**Adjuster options**

Part number	Bore size Ø [mm]	Stroke [mm]	Adjuster type
MXJ-CS4-□	4.5	5, 10	Metal stopper on both ends
MXJ-CS6-□	6	5, 10, 15	
MXJ-CS8-□	8	5, 10, 15, 20	
MXJZ-CS12-□A	12	10, 20, 30, 50	Metal stopper with bumper
MXJZ-CS16-□A	16		
MXJZ-AS12-□A	12		Rubber stopper
MXJZ-AS16-□A	16		
MXJZ-JS12-□A	12		Shock absorber
MXJZ-JS16-□A	16		
MXJZ-DS12-□A	12		Metal stopper
MXJZ-DS16-□A	16		

□: Stroke length

Auto switches

Compact auto switches can be mounted directly.

Type	Perpendicular auto switch (3 m lead wire)	Auto switch with 2 colour indication (3 m lead wire)	Auto switch, short type (3 m lead wire)	Auto switch with pre-wired connector (M8-3pin) and 0.5 m lead wire
3-wire solid state, PNP	D-M9PWVL	D-M9NWL	D-M9PL-5	D-M9PSAPC
2-wire solid state	D-M9BWVL	D-M9BWL	D-M9BL-5	D-M9BSAPC

Speed controllers

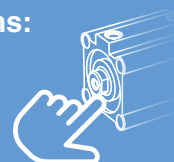
Bore size Ø [mm]	Port size	Speed controller with one touch fitting	Compact speed controller with one touch fitting
4.5	M3 x 0.5	AS1201F-M3-04A-X790	JAS-LEA04-M3
6	M3 x 0.5	AS1201F-M3-04A-X790	JAS-LEA04-M3
8	M3 x 0.5	AS1201F-M3-06A-X790	JAS-LEA04-M3
12	M5 x 0.8	AS1201F-M5-06A	JAS-LEA06-M5
16	M5 x 0.8	AS1201F-M5-06A	JAS-LEA06-M5
25	M5 x 0.8	AS1201F-M5-06A	JAS-LEA06-M5

How to order

Ø 4.5, Ø 6, Ø 8 MXJ 6 - 10

① ② ③ ④ ⑤ ⑥

Discover all MXJ options:
mxj.smc.eu



① Bore size

4	4.5 mm
6	6 mm
8	8 mm

② Option

—	Standard
L	Symmetric

③ Stroke [mm]

4	5, 10
6	5, 10, 15
8	5, 10, 15, 20

④ Adjuster option

—	Without adjuster
CS	Metal stopper on extension end
CT	Metal stopper on retraction end
C	Metal stopper on both ends

⑤ Functional option

—	Without option
P	Axial piping type

⑥ Switch rail

—	With magnet and switch rail
N	Without magnet and switch rail

Specifications

Model	MXJ4	MXJ6	MXJ8
Bore size Ø [mm]	4.5	6	8
Piping port size	M3		
Fluid	Air		
Action	Double acting		
Operating pressure	0.15 to 0.7 MPa		
Proof pressure	1.05 MPa		
Ambient and fluid temperature	-10 to 60 °C		
Operating speed range	50 to 500 mm/s (Metal stopper: 50 to 200 mm/s)		
Cushion	Rubber bumper (Metal stopper: Without cushion)		
Lubrication	Non-lube		
Stroke adjuster	Standard equipment		
Stroke adjusting range (metal stopper)	Both ends each 0 to 5 mm		
Auto switch	Reed switch (2-wire, 3-wire) Solid state switch (2-wire, 3-wire) 2-colour indication solid state switch (2-wire, 3-wire)		
Stroke length tolerance	+1 0 mm		

Theoretical output



Model	Bore size Ø [mm]	Rod size [mm]	Operating direction	Piston area [mm²]	Operating pressure [MPa]					
					0.2	0.3	0.4	0.5	0.6	0.7
MXJ4	4.5	2	OUT	16	3	5	6	8	10	11
			IN	13	3	4	5	6	8	9
MXJ6	6	3	OUT	28	6	8	11	14	17	20
			IN	21	4	6	8	11	13	15
MXJ8	8	4	OUT	50	10	15	20	25	30	35
			IN	38	8	11	15	19	23	26

Ø 12, Ø 16 MXJ 12 - 10 Z -
① ② ③ ④ ⑤ ⑥

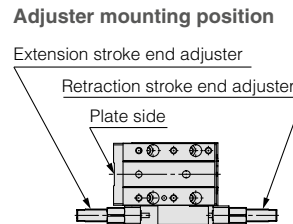
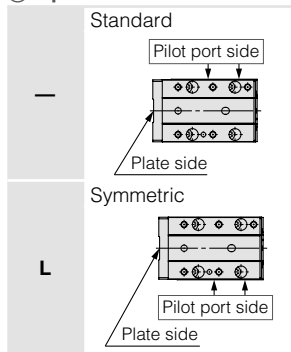
① Bore size

12	12 mm
16	16 mm

③ Stroke [mm]

12	10, 20, 30, 50
16	10, 20, 30, 50

② Option



④ Adjuster option

Symbol	Adjuster type	Adjuster mounting position	
		Extension stroke end	Retraction stroke end
—	Without adjuster	—	—
A	Metal stopper with bumper	●	●
B		●	—
C		—	●
D	Rubber stopper	●	●
E		●	—
F	Shock absorber	—	●
G		●	●
H		●	—
J	Metal stopper	—	●
K		●	●
L		●	—
M		—	●

⑤ Switch rail

		Standard	Symmetric
		Pilot port side	Pilot port side
—	With switch rail (With magnet)		
	With switch rail and adjuster (With magnet)		
N	Without switch rail (Without magnet)		

Adjuster shown is the shock absorber type.

⑥ Made to order

-X11	Long adjustment bolt (10 mm longer adjustment range)
-X12	Long adjustment bolt (20 mm longer adjustment range)
-X39	Fluororubber seal
-X42	Anti-corrosive guide unit
-X45	EPDM seal
-X53	Reed auto switch
-X2128	Heat-resistant specification (-10 to 100 °C)
-X2410	Low-speed specification (15 to 50 mm/s)

Specifications

Model	MXJ12	MXJ16
Bore size Ø [mm]	12	16
Piping port size	M5 x 0.8	
Fluid	Air	
Action	Double acting	
Operating pressure ¹⁾	0.1 to 0.7 MPa	
Proof pressure	1.05 MPa	
Ambient and fluid temperature	-10 to 60 °C	
Piston speed (Average speed) ²⁾	50 to 500 mm/s (Metal stopper: 50 to 200 mm/s) (Metal stopper with bumper: 50 to 300 mm/s)	
Cushion (Without adjuster)	Rubber bumper	
Cushion (With adjuster)	Metal stopper, Metal stopper with bumper, Rubber stopper, Shock absorber	
Lubrication	Non-lube	
Auto switch	Solid state auto switch (2-wire, 3-wire), 2-color indicator solid state auto switch (2-wire, 3-wire)	
Stroke length tolerance	+2 to 0 mm (When no pressure is applied)	

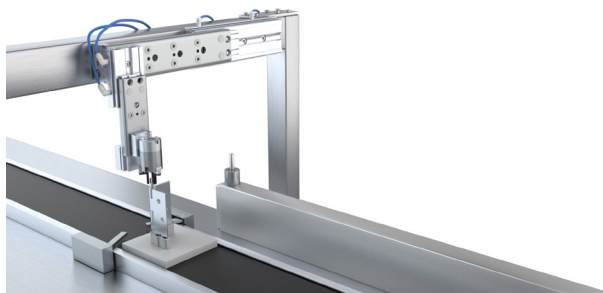
- 1) If the operating pressure is lower than the minimum operating pressure, the repeated accuracy will decline. Minimum operating pressure of the metal stopper with bumper: Pressure required to fully compress the protrusion of the bumper to get in contact with the metal part.
- 2) Please consider the weight of the moving parts. For some product models, the allowable kinetic energy can be exceeded only by the weight of the moving parts.

Applications

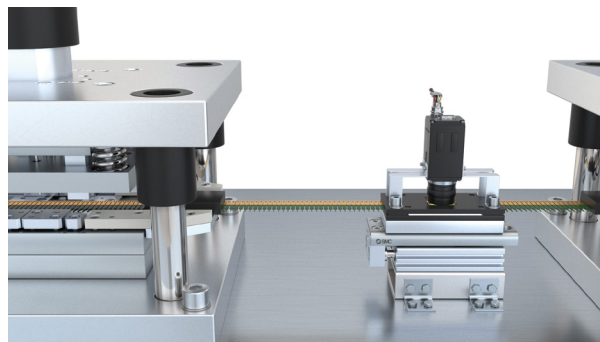
Slide tables

Use MXQ or MXJ series for:

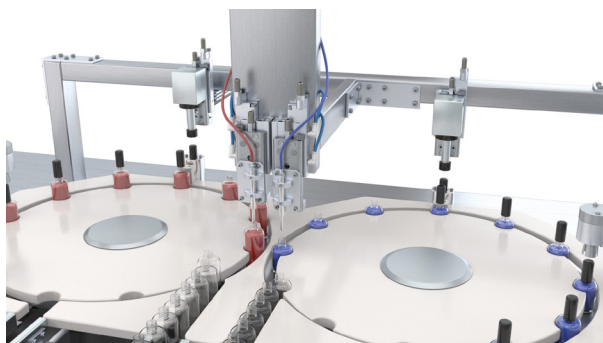
Precise positioning movements



Operations with high frequency

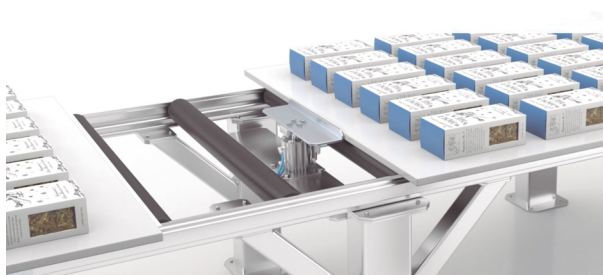


Applications with space limitations



Use MXZ series for:

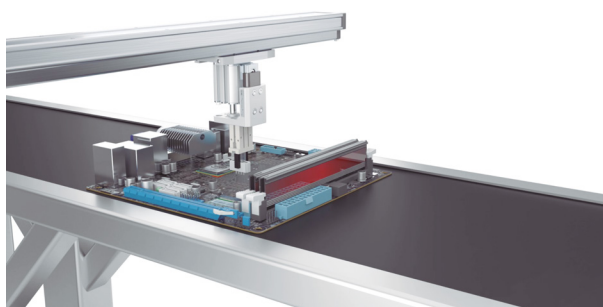
Stopper in automatic lines



Positioning operations



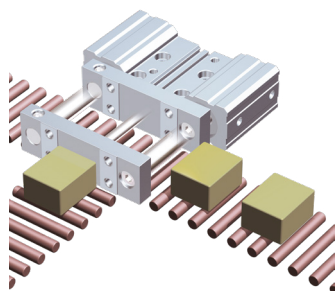
Transferring lightweight workpieces



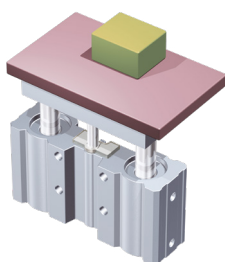
Guided cylinders

Use MGP series for:

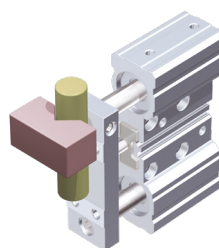
Pushing



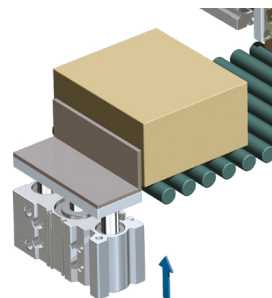
Lifting



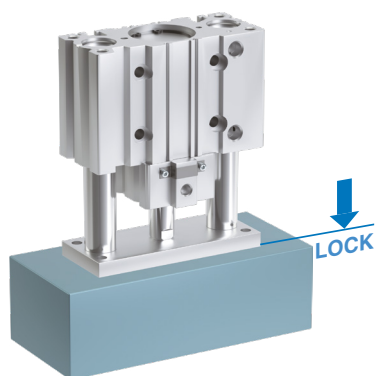
Clamping



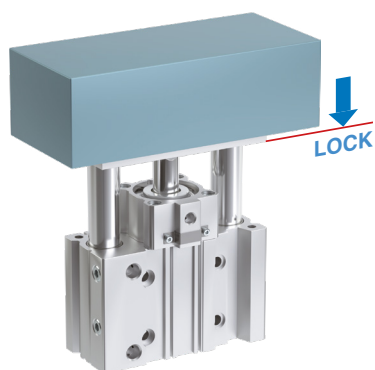
Stopper



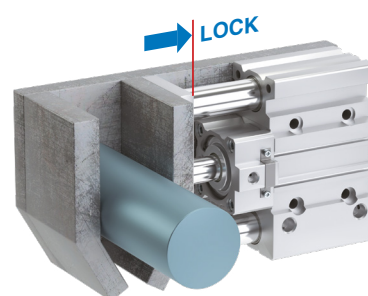
Drop prevention for press fitting jig



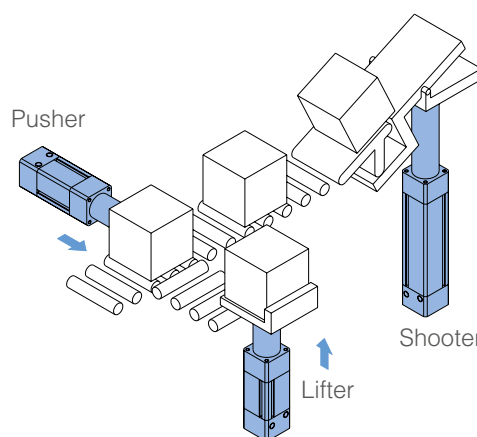
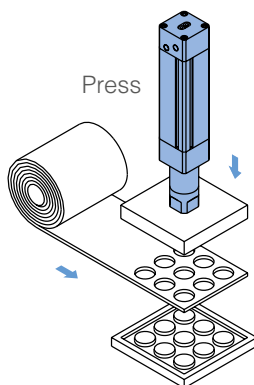
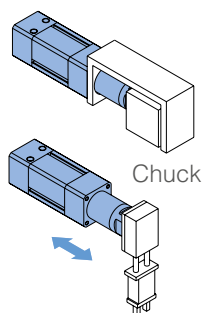
Drop prevention for lifter



Holding a clamped condition

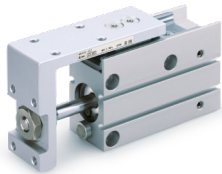


Use MGZ series for:



Related products

Other solutions slides tables

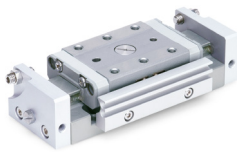


Compact slide table



MXH Series

- Bore sizes: 6, 10, 16, 20 mm
- Allowable moment improved by up to 240 %
- Piping is possible in 3 directions.

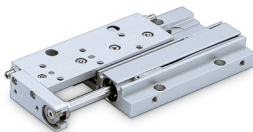


Precision air slide table



MXP Series

- Cylinder with built-in linear guide
- Heat treated stainless steel body and table
- Indicated for applications in which high precision is needed (travelling parallelism 0.004 mm or less).



Low profile slide table



MXF Series

- The parallel design of the guide and cylinder creates a slim and compact slide
- Deflection reduction and great support to eccentric loads.

Other solutions guide cylinders



Low profile slide table



JMGP Series

- Bore sizes: 12 to 100 mm
- Allowable moment improved by up to 240 %
- Suitable for pushing, lifting or clamping in a transport line.



Compact guide cylinder



MGQ Series

- Bore sizes: 12 to 100 mm
- Air cylinder with an integrated guide that achieves lateral load resistance and high non-rotating accuracy
- Suitable for stoppers and lifters in the conveyor line.



Guide table



MGF Series

- Low-profile compact cylinder
- Cylinder with a large concentric guiding sleeve that provides excellent eccentric load resistance.



Expertise – Passion – Automation

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Slovenia	+386 (0)73885412	www.smc.si	office@smc.si
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