

Made to Order Air Gripper

Series **MH**□

Made to Order Common Specifications



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MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

D-□

Made to Order Common Specifications: Air Gripper -X4: Heat Resistance



1 Heat Resistance (−10 to 100°C) Symbol -X4

Seal material and grease have been changed, so that it could be used even at higher temperature up to 100 from −10°C.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHC	Angular style	MHC2	Double acting, Single acting (Normally open)		P.633
		MHCA2	Double acting, Single acting (Normally open)	Magnet is not built-in.	P.622
		MHCM2	Single acting (Normally open)	Magnet is not built-in.	P.631
MHF	Low profile	MHF2	Double acting		P.452
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)		P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)		
MHL	Wide opening	MHL2	Double acting		P.474
MHS	2-finger type	MHS2	Double acting		P.544
	3-finger type	MHS3	Double acting		P.552
	3-finger type with dust cover	MHSJ3	Double acting		P.562
	With through hole	MHSH3	Double acting		P.570
	With through hole and dust cover	MHSHJ3	Double acting		
	Long stroke 3-finger type	MHSL3	Double acting		P.586
	4-finger type	MHS4	Double acting		P.596
MHT	Toggle type	MHT2	Double acting		P.644
MHW	180° angular style	MHW2	Double acting		P.669
MHY	180° angular style cam style	MHY2	Double acting		P.662
MHZ	Parallel style (compact)	MHZA2	Double acting, Single acting (Normally open, Normally closed)	Magnet is not built-in.	P.388
	Parallel style with dust cover (compact)	MHZAJ2	Double acting, Single acting (Normally open, Normally closed)	Magnet is not built-in.	
	Parallel style	MHZ2	Double acting, Single acting (Normally open, Normally closed)		P.397 to 399
	Parallel style (long stroke)	MHZL2	Double acting, Single acting (Normally open, Normally closed)		P.414
	Parallel style with dust cover	MHZJ2	Double acting, Single acting (Normally open, Normally closed)		P.424

How to Order

Standard part number for each series **-X4**

Heat resistance

Specifications

Ambient temperature range	−10°C to 100°C
Seal material	Fluororubber
Grease	Heat resistant grease (GR-F)
Specifications/dimensions other than the above	Same as the standard type

Warning

Handling Precautions

Be aware that smoking cigarettes after your hands have come into contact with the grease used for this air gripper can create a gas that is hazardous to humans.

Note 1) Magnet is built-in, but when using an auto switch, the acceptable temperature range becomes −10 to 60 °C.

Note 2) With the part number for the dust cover option, only fluororubber (F) or silicon rubber (S) options may be selected.

Note 3) With the part number compatible with body options, only E type or M type are compatible.

Note 4) For lubrication, specialized grease GR-F is recommended.

Made to Order Common Specifications: Air Gripper -X5: Fluororubber Seal



2 Fluororubber Seal

Symbol
-X5

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHC	Angular style	MHC2	Double acting, Single acting (Normally open)		P.633
		MHCA2	Double acting, Single acting (Normally open)		P.622
		MHCM2	Single acting (Normally open)		P.631
MHF	Low profile	MHF2	Double acting		P.452
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)	Dust cover material is fluororubber only.	P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)	Dust cover material is fluororubber only.	
MHL	Wide opening	MHL2	Double acting		P.474
MHS	2-finger type	MHS2	Double acting		P.544
	3-finger type	MHS3	Double acting		P.552
	3-finger type with dust cover	MHSJ3	Double acting	Dust cover material is fluororubber only.	P.562
	With through hole	MHSH3	Double acting		P.570
	With through hole and dust cover	MHSHJ3	Double acting	Dust cover material is fluororubber only.	
	Long stroke 3-finger type	MHSL3	Double acting		P.586
MHT	Toggle type	MHT2	Double acting		P.644
		MHT2	Double acting		P.669
MHW	180° angular style	MHW2	Double acting		P.662
MHY	180° angular style cam style	MHY2	Double acting		P.662
MHZ	Parallel style (compact)	MHZA2	Double acting, Single acting (Normally open, Normally closed)		P.388
	Parallel style with dust cover (compact)	MHZAJ2	Double acting, Single acting (Normally open, Normally closed)	Dust cover material is fluororubber only.	
	Parallel style	MHZ2	Double acting, Single acting (Normally open, Normally closed)		P.397 to 399
	Parallel style (long stroke)	MHZL2	Double acting, Single acting (Normally open, Normally closed)		P.414
	Parallel style with dust cover	MHZJ2	Double acting, Single acting (Normally open, Normally closed)	Dust cover material is fluororubber only.	P.424

How to Order

Standard part number for each series **-X5**

Fluororubber Seal

Specifications

Seal material	Fluororubber
Specifications/dimensions other than the above	Same as the standard type of each series

- Note 1) Please contact SMC, since the type of chemical and the operating temperature may not allow the use of this product.
- Note 2) Since the standard-type magnet is built-in, please contact SMC for the product's adaptability to the operating environment.
- Note 3) For the air gripper with a dust cover, the dust cover material is also fluororubber. Thus, enter (F) for the fluororubber dust cover in the part number.
- Note 4) With the part number compatible with body options, only E type or M type are compatible.

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

D-□

Made to Order Common Specifications: Air Gripper -X7: Closing Direction Spring Assist



3 Closing Direction Spring Assist

Symbol

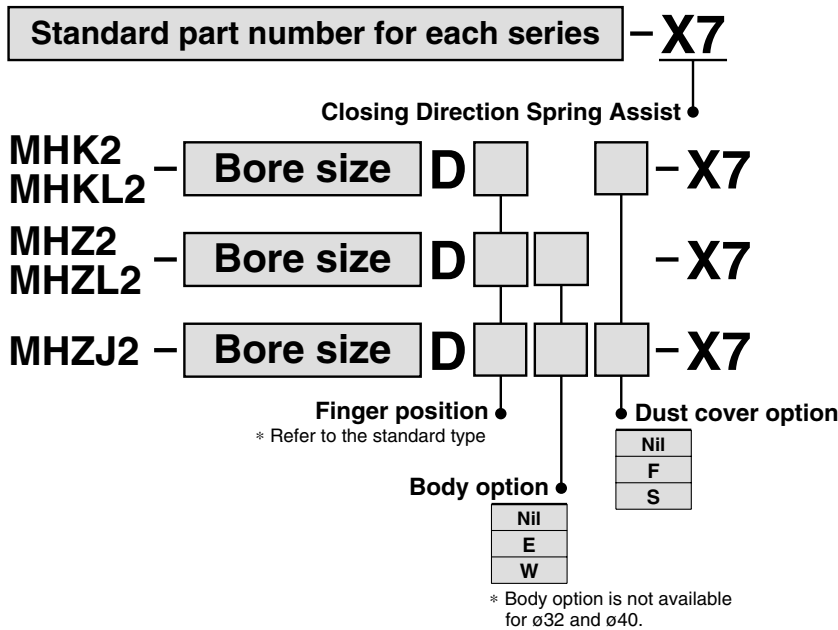
-X7

When gripping the exterior of the workpiece, this assists to hold the workpiece in place even when there is no supply of compressed air.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHK	Wedge cam operation glide guide	MHK2	Double acting		P.522
		MHKL2	Double acting		
MHZ	Parallel style	MHZ2	Double acting		P.397 to 399
	Parallel style (long stroke)	MHZL2	Double acting		P.414
	Parallel style with dust cover	MHZJ2	Double acting		P.424

How to Order



Note 1) Operating pressure is different from that of the standard double acting type. (Refer to the table below.)

Note 2) For the body options of MHZ2, MHZJ2 and MHZL2 ø10 to ø25, only E type or W type are compatible.

Note 3) Dimensions of MHZ2-32D/-40D and MHZL2 are the same as the single acting type.

Note 4) For internal grip, the gripping point range limit is the same as the standard type.

Specifications

MHK□2

Bore size (mm)		12	16	20	25
Operating pressure (MPa)		0.25 to 0.5			
Gripping Point Range Limit (External grip)		Refer to the graphs.			
MHK2	Mass (g)	76	114	237	443
	Gripping force (N)	Internal grip	12	25	44
		External grip	18.5	41	57
MHKL2	Mass (g)	105	165	314	565
	Gripping force (N)	Internal grip	11	22	40
		External grip	18.5	34	56.5

* Gripping force is measured at a pressure of 0.5 MPa, gripping point L = 20 mm, center of stroke.

MHZ□2

Bore size (mm)			6	10	16	20	25	32	40
Operating pressure (MPa)			0.3 to 0.6	0.35 to 0.6	0.25 to 0.6				
Gripping Point Range Limit (External grip)			Refer to the graphs.						
MHZ2	Mass (g)		27	55	115	240	435	760	1370
	Gripping force (N)	Internal grip	3.7	13	38	57	83	161	267
		External grip	5.5	14.5	40	50	84	187	300
MHZL2	Mass (g)		—	70	140	290	515	—	—
	Gripping force (N)	Internal grip	—	13	38	57	85	—	—
		External grip	—	14.5	40.5	50	82	—	—
MHZJ2	Mass (g)		28	60	130	255	460	—	—
	Gripping force (N)	Internal grip	3.7	12	31	56	83	—	—
		External grip	5.5	14.5	38	51	84	—	—

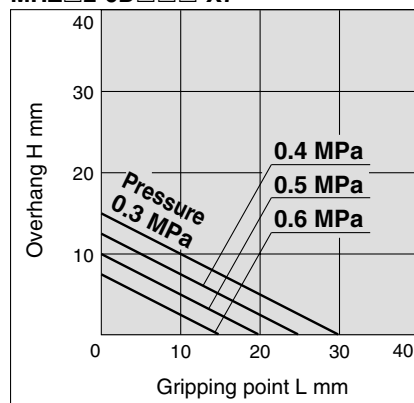
* Series MHZL2 ø32 and ø40 have the same dimensions as the single acting type.

* Gripping force is measured at a pressure of 0.5 MPa, gripping point L = 20 mm, center of stroke.

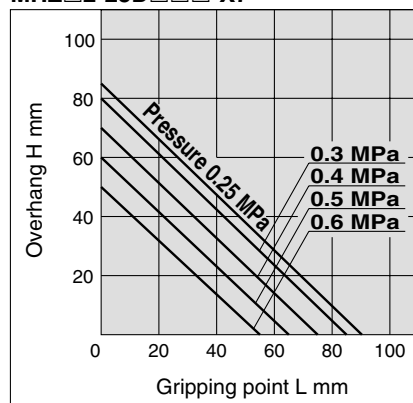
External Grip

Series MHZ ☐2

MHZ ☐2-6D ☐ ☐ ☐ -X7

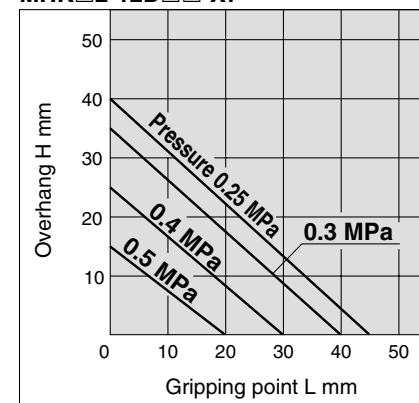


MHZ ☐2-25D ☐ ☐ ☐ -X7

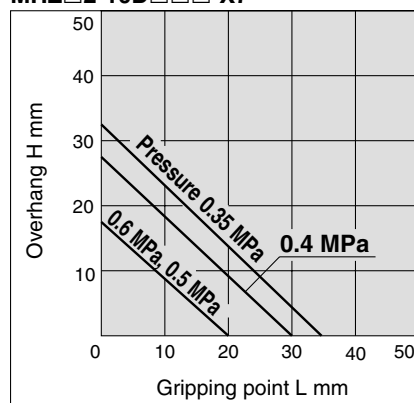


Series MHK ☐2

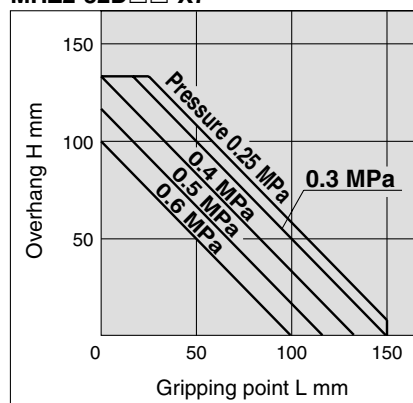
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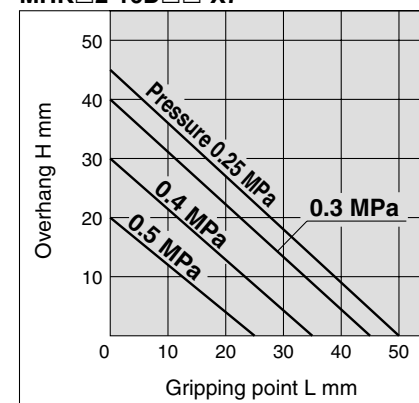
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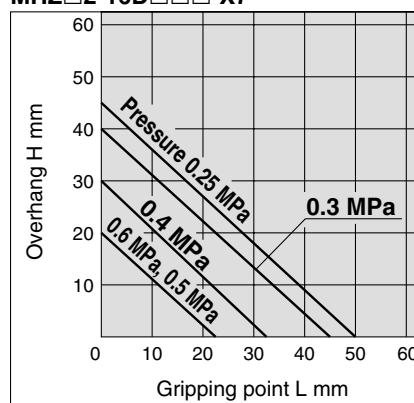
MHZ2-32D ☐ ☐ -X7



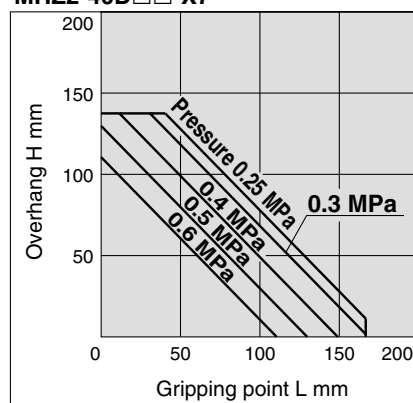
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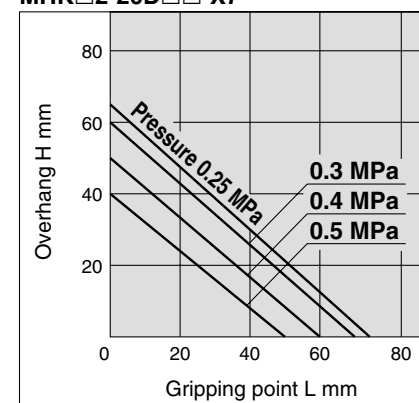
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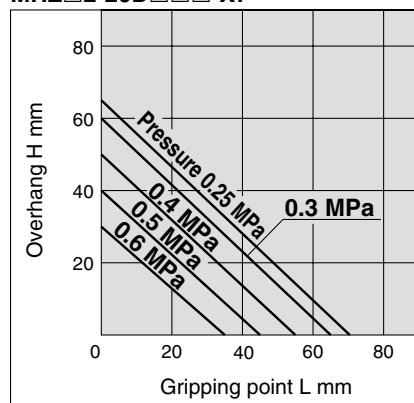
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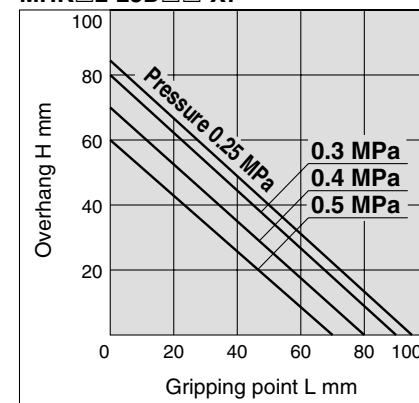
MHK ☐2-20D ☐ ☐ -X7



MHZ ☐2-20D ☐ ☐ ☐ -X7



MHK ☐2-25D ☐ ☐ -X7



MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X ☐

MRHQ

MA

D- ☐

Made to Order Common Specifications: Air Gripper -X12: Opening Direction Spring Assist



4 Opening Direction Spring Assist

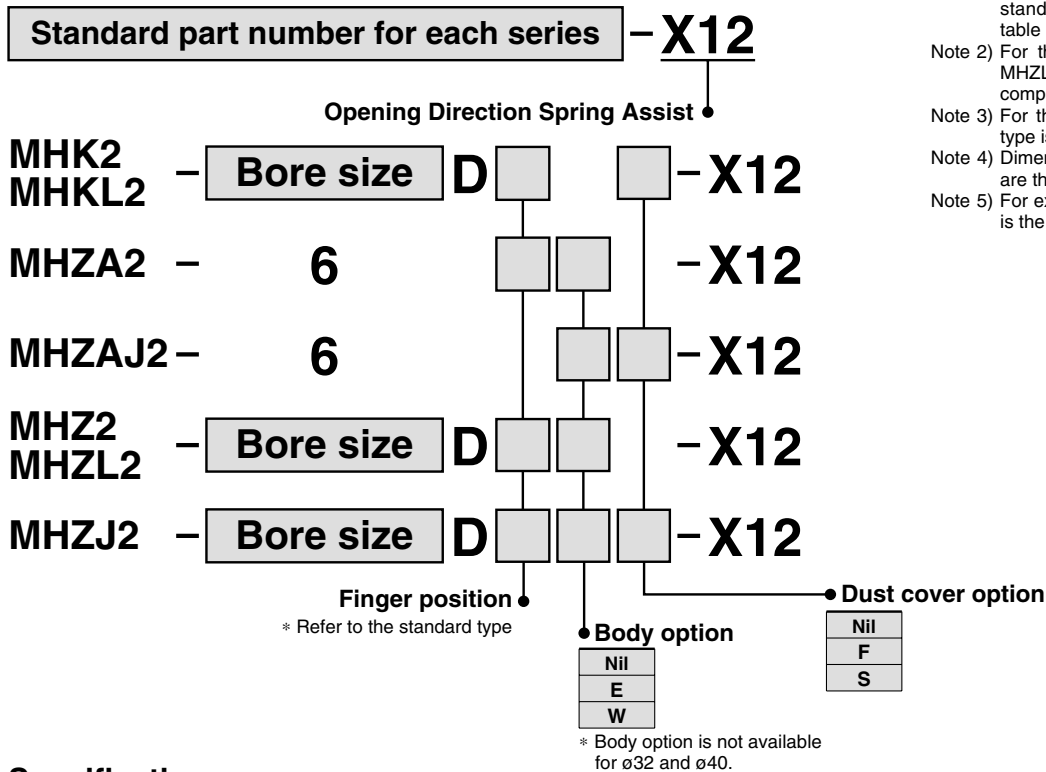
Symbol
-X12

When gripping the interior of the workpiece, this assists to hold the workpiece in place even when there is no supply of compressed air.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHK	Wedge cam operation glide guide	MHK2	Double acting		P.522
		MHKL2	Double acting		
MHZ	Parallel style (compact)	MHZA2	Double acting		P.388
	Parallel style with dust cover (compact)	MHZAJ2	Double acting		
	Parallel style	MHZ2	Double acting		P.397 to 399
	Parallel style (long stroke)	MHZL2	Double acting		P.414
	Parallel style with dust cover	MHZJ2	Double acting		P.424

How to Order



- Note 1) Operating pressure is different from that of the standard double acting type. (Refer to the table below.)
- Note 2) For the body options of MHZ2, MHZJ2 and MHZL2 ø10 to ø25, only E type or W type are compatible.
- Note 3) For the body option of MHZA(J)2-6D, only E type is compatible.
- Note 4) Dimensions of MHZ2-32D/-40D and MHZL2 are the same as the single acting type.
- Note 5) For external grip, the gripping point range limit is the same as the standard type.

Specifications

MHK□2

Bore size (mm)		12	16	20	25
Operating pressure (MPa)		0.25 to 0.5			
Gripping Point Range Limit (Internal grip)		Refer to the graphs.			
MHK2	Mass (g)	76	114	237	443
	Gripping force (N)	Internal grip	21.5	43	67
		External grip	9	23	34
MHKL2	Mass (g)	105	165	314	565
	Gripping force (N)	Internal grip	20.5	39	64.5
		External grip	9	17	32

* Gripping force is measured at a pressure of 0.5 MPa, gripping point L = 20 mm, center of stroke.

MHZ□2

Bore size (mm)			6	10	16	20	25	32	40
Operating pressure (MPa)			0.3 to 0.6	0.35 to 0.6	0.25 to 0.6				
Gripping Point Range Limit (Internal grip)			Refer to the graphs.						
MHZA2	Mass (g)		26	—	—	—	—	—	—
	Gripping force (N)	Internal grip	7.5	—	—	—	—	—	—
		External grip		—	—	—	—	—	—
MHZAJ2	Mass (g)		27	—	—	—	—	—	—
	Gripping force (N)	Internal grip	7.5	—	—	—	—	—	—
		External grip	1.9	—	—	—	—	—	—
MHZ2	Mass (g)		27	55	115	240	435	760	1370
	Gripping force (N)	Internal grip	7.5	20.5	51.5	74	122	217.5	351.5
		External grip	1.9	7.1	27	33	45	131	217
MHZL2	Mass (g)		—	70	140	290	515	—	—
	Gripping force (N)	Internal grip	—	20.5	51.5	74	117.5	—	—
		External grip	—	7.1	27	33	50	—	—
MHZJ2	Mass (g)		28	60	130	255	460	—	—
	Gripping force (N)	Internal grip	7.5	20	45.5	78.5	122	—	—
		External grip	1.9	6.3	24	28	45	—	—

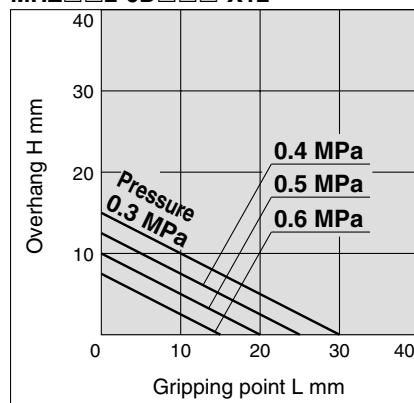
* Series MHZL2 ø32 and ø40 have the same dimensions as the single acting type.

* Gripping force is measured at a pressure of 0.5 MPa, gripping point L = 20 mm, center of stroke.

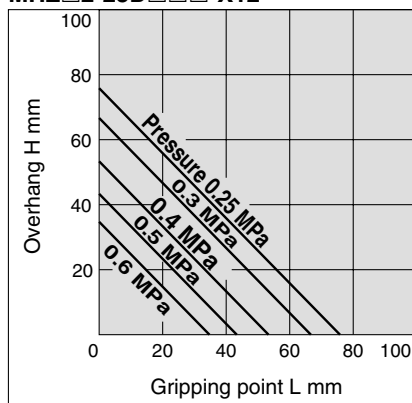
External Grip

Series MHZ ☐2

MHZ ☐2-6D ☐ ☐ ☐-X12

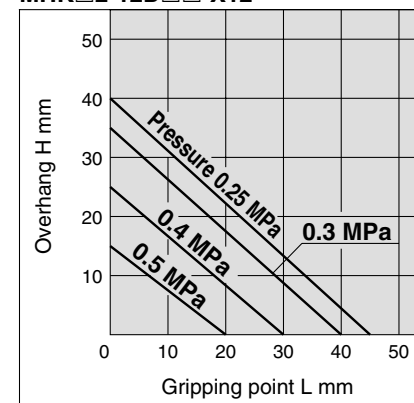


MHZ ☐2-25D ☐ ☐ ☐-X12

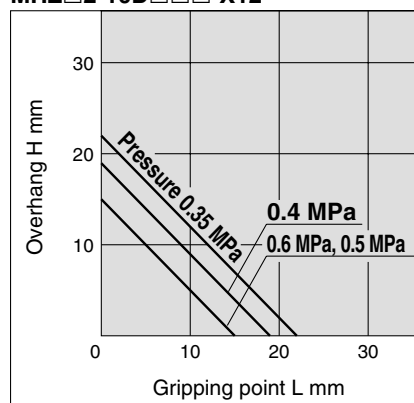


Series MHK ☐2

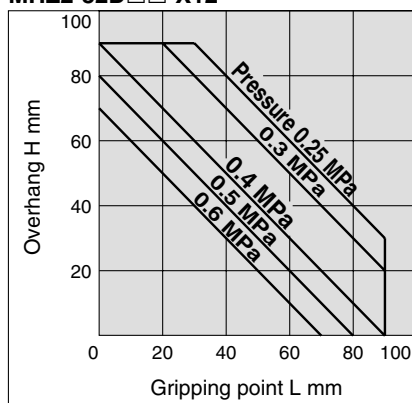
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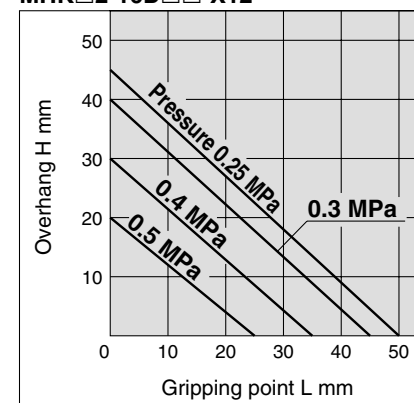
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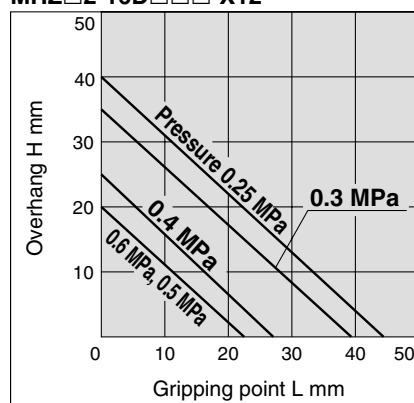
MHZ2-32D ☐ ☐-X12



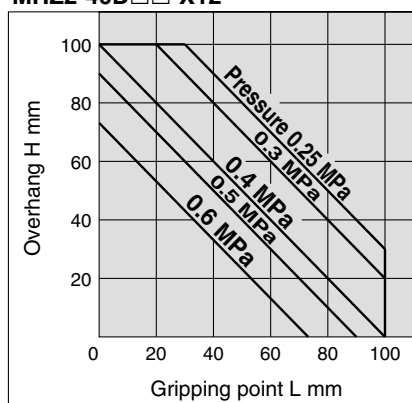
MHK ☐2-16D ☐ ☐-X12



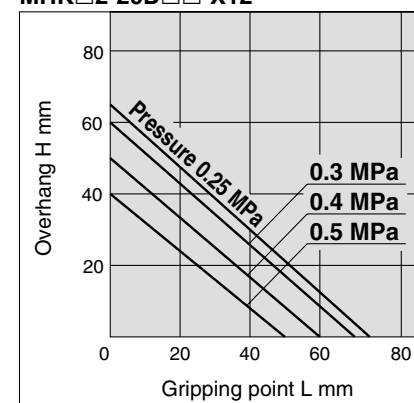
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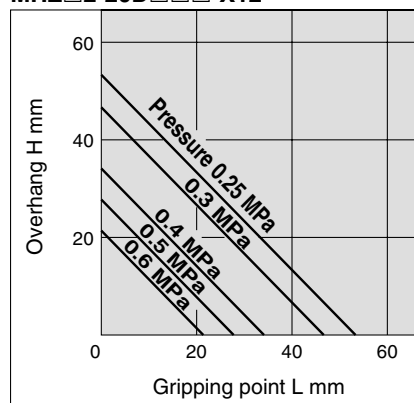
MHZ2-40D ☐ ☐-X12



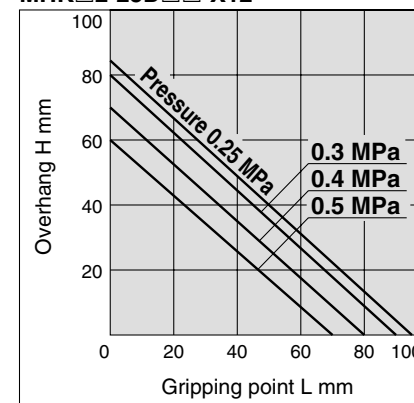
MHK ☐2-20D ☐ ☐-X12



MHZ ☐2-20D ☐ ☐ ☐-X12



MHK ☐2-25D ☐ ☐-X12



MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X ☐

MRHQ

MA

D- ☐

Made to Order Common Specifications: Air Gripper -X28: With Adjuster for Closing Stroke Adjustment



5 With Adjuster for Closing Stroke Adjustment

Symbol
-X28

Finger closing stroke can be fine-tuned by an adjustment bolt.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHL	Wide opening	MHL2	Double acting	ø10 to ø32	P.474

How to Order

Note) Please contact SMC for Series MHL2 ø40.

Standard part number for each series **-X28**

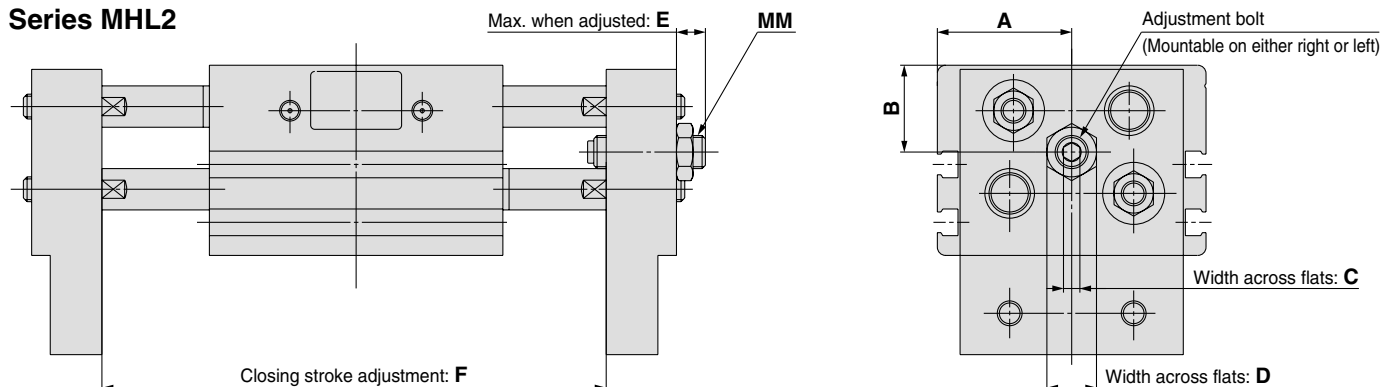
With Adjuster for Closing Stroke Adjustment

Specifications

Bore size (mm)	10, 16, 20, 25, 32
Adjustment range/ Adjustment bolt position	Refer to the dimensions and figures below.
Specifications/dimensions other than the above	Same as the standard type

Dimensions (Dimensions other than specified below are the same as the standard type.)

Series MHL2



Model	A	B	C	D	E	F	MM
MHL2-10D-X28	22	15.5	2.5	7	4	2	M5 x 0.8
MHL2-10D1-X28					11	16	
MHL2-10D2-X28					11	16	
MHL2-16D-X28	27.5	18.5	3	8	9.5	9	M6 x 1
MHL2-16D1-X28					13.5	20	
MHL2-16D2-X28					13.5	20	
MHL2-20D-X28	32.5	21	4	12	7.5	7	M8 x 1
MHL2-20D1-X28					8.5	9	
MHL2-20D2-X28					8.5	9	
MHL2-25D-X28	38	26	5	14	7.5	7	M10 x 1
MHL2-25D1-X28				17	15	18	M10 x 1.5
MHL2-25D2-X28					15	18	
MHL2-32D-X28	41	32	6	19	32.5	51	M12 x 1.75
MHL2-32D1-X28					32.5		
MHL2-32D2-X28					32.5		

Made to Order Common Specifications: Air Gripper -X32: Grease Change



6 Grease Change

Symbol

-X32

As condensation measures, grease used for rotary actuator has been changed to SMC-GF1.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHR	Rotary actuator	MHR2	Double acting		P.491
		MDHR2	Double acting		
		MHR3	Double acting		P.504
		MDHR3	Double acting		

How to Order

MHR
MDHR – Standard part number – **X32**
Grease Change •

Note) Do not use for lubrication.

Specifications

Grease	Fluorine grease (SMC-GF1)
Specifications/dimensions other than the above	Same as the standard type

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

D-□

Made to Order Common Specifications: Air Gripper -X39: With Grease Needle



7 With Grease Needle

Symbol
-X39

Lubrication from grease cup to interior is possible.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)	Not compatible with ø12	P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)		

How to Order

MHK Standard part number **-X39**
 With Grease Needle •

Note 1) Fill lubricant to the bearing from the grease cup in order to prevent foreign particles from getting in. The use of special grease MH-G01 for MHK is recommended.

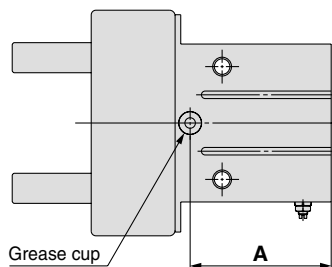
Note 2) Not compatible with ø12.

Specifications

Bore size (mm)	16, 20, 25
Action	Double acting, Single acting (Normally open, Normally closed)
Lubricant grease	MHK standard grease (MH-G01)
Grease nipple position	Refer to the dimensions and figure below.
Specifications/dimensions other than the above	Same as the standard type

Dimensions (Dimensions other than specified below are the same as the standard type.)

Series MHK2 Series MHKL2



Model	A (mm)
MHK2-16□□□-X39	30.5
MHK2-20□□□-X39	44.5
MHK2-25□□□-X39	45
MHKL2-16□□□-X39	36
MHKL2-20□□□-X39	42
MHKL2-25□□□-X39	47.5

Made to Order Common Specifications: Air Gripper -X41: Grooves for Auto Switch on Both Sides



8 Grooves for Auto Switch on Both Sides

Symbol

-X41

It is possible to select the auto switch mounting side. A maximum of 4 auto switches are mountable.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)		P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)		

How to Order

MHK Standard part number **-X41**

Grooves for Auto Switch on Both Sides •

MHK2
MHKL2 - Bore size - Switch type **-X41**

• Action

• Finger option

• Dust cover option

• Suffix for auto switch

Nil	2 pcs.
S	1 pc.
n	n pc.

* Possible to mount up to 4 auto switches

• Auto switch type

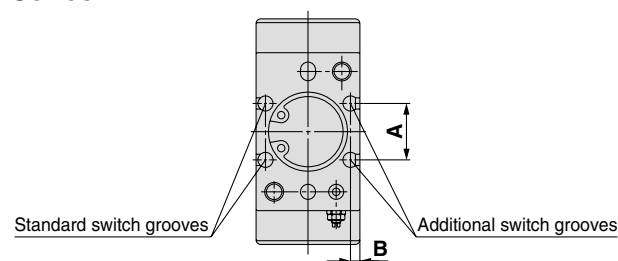
* Refer to the standard type.

Specifications

Bore size (mm)	12, 16, 20, 25
Additional switch groove position	Refer to the dimensions and figures below.
Specifications/dimensions other than the above	Same as the standard type

Dimensions (Dimensions other than specified below are the same as the standard type.)

Series MHK2 Series MHKL2



Model	(mm)	
	A	B
MHK2-12□□□-X41	10.4	1.8
MHKL2-12□□□-X41		
MHK2-16□□□-X41	12.8	1.6
MHKL2-16□□□-X41		

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

D-□

Made to Order Common Specifications: Air Gripper -X46: Fixed Orifice



9 Fixed Orifice

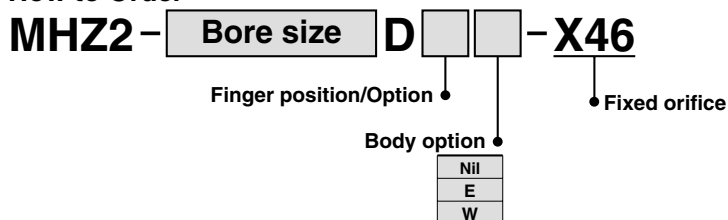
Symbol
-X46

Installation of a variable throttle allows adjustment of the finger opening/closing speed.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHZ	Parallel style	MHZ2	Double acting	ø10, ø16, ø20, ø25 only	P.398

How to Order



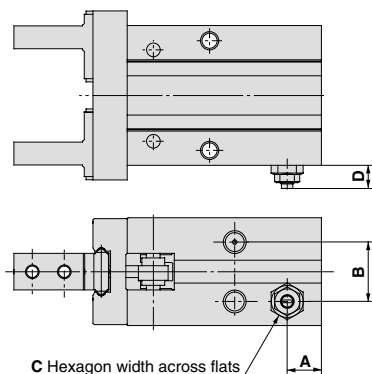
Note) Not available for ø6, ø32 and ø40.

Specifications

Bore size (mm)	10, 16, 20, 25
Action	Double acting
Needle position	Refer to the dimensions and figures below.
Specifications/dimensions other than the above	Same as the standard type

Dimensions (Dimensions other than specified below are the same as the standard type.)

Series MHZ2



Model	A	B	C	D*
MHZ2-10D□□-X46	9	11	4.5	5.2
MHZ2-16D□□-X46	7.5	13	7	5.8
MHZ2-20D□□-X46	10	15	7	6
MHZ2-25D□□-X46	10.7	20	7	6.2

Dimensions other than the above are identical to the standard type; refer to pages 405 to 408.

* Reference values to establish criteria for needle adjustment.

Adjust so that the finger opening/closing speed will be no greater than necessary. If the finger opening/closing speed is greater than necessary, impact forces acting on the fingers and other parts will increase. This can cause a loss of repeatability when gripping workpieces and have an adverse effect on the life of the unit.

This needle is used to adjust the finger closing speed. When adjusting the opening speed (attenuating impact during operation, etc.), use a meter-out control speed controller Series AS.

Guide for Internal Needle Adjustment

Model	Number of rotations from fully closed needle condition Note)
MHZ2-10D□□-X46	1/4 to 1/2
MHZ2-16D□□-X46	1/2 to 1
MHZ2-20D□□-X46	1 to 1 1/2
MHZ2-25D□□-X46	1 1/2 to 2

Note) The condition in which the needle is tightened gently until it stops.

Made to Order Common Specifications: Air Gripper -X50: Without Magnet



10 Without Magnet

Symbol
-X50

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHC	Angular style	MHC2	Double acting, Single acting (Normally open)		P.633
MHF	Low profile	MHF2	Double acting		P.452
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)		P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)		
MHL	Wide opening	MHL2	Double acting		P.474
MHS	2-finger type	MHS2	Double acting		P.544
	3-finger type	MHS3	Double acting		P.552
	3-finger type with dust cover	MHSJ3	Double acting		P.562
	With through hole	MHSH3	Double acting		P.570
	With through hole and dust cover	MHSHJ3	Double acting		
	Long stroke 3-finger type	MHSL3	Double acting		P.586
	4-finger type	MHS4	Double acting		P.596
MHT	Toggle type	MHT2	Double acting		P.644
MHW	180° angular style	MHW2	Double acting		P.669
MHY	180° angular style cam style	MHY2	Double acting		P.662
MHZ	Parallel style	MHZ2	Double acting, Single acting (Normally open, Normally closed)		P.397 to 399
	Parallel style (long stroke)	MHZL2	Double acting, Single acting (Normally open, Normally closed)		P.414
	Parallel style with dust cover	MHZJ2	Double acting, Single acting (Normally open, Normally closed)		P.424

How to Order

Standard part number for each series **-X50**

Without Magnet ●

Note 1) No symbol is specified for a product without a magnet as standard.

Note 2) Series MDHR comes with a magnet.
Use Series MHR when a product without a magnet is needed.

Specifications Same as the standard type of each series

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

D-□

Made to Order Common Specifications: Air Gripper -X51: MHQ2/MHQG2 Compatible Flat Finger Type

11 MHQ2/MHQG2 Compatible Flat Finger Type

Symbol
-X51

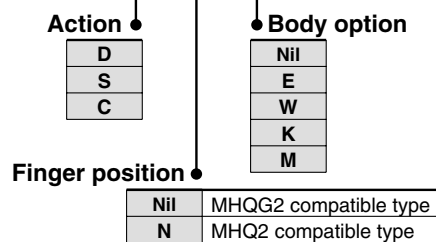
Previous Series MHQ2/MHQG2 compatible flat finger type is selectable for Series MHZ2.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHZ	Parallel style	MHZ2	Double acting	ø10, ø16, ø20, ø25 only	P.398

How to Order

MHZ2 – **Bore size** [] [] [] – **X51**



Note 1) Not available for ø6, ø32 and ø40.

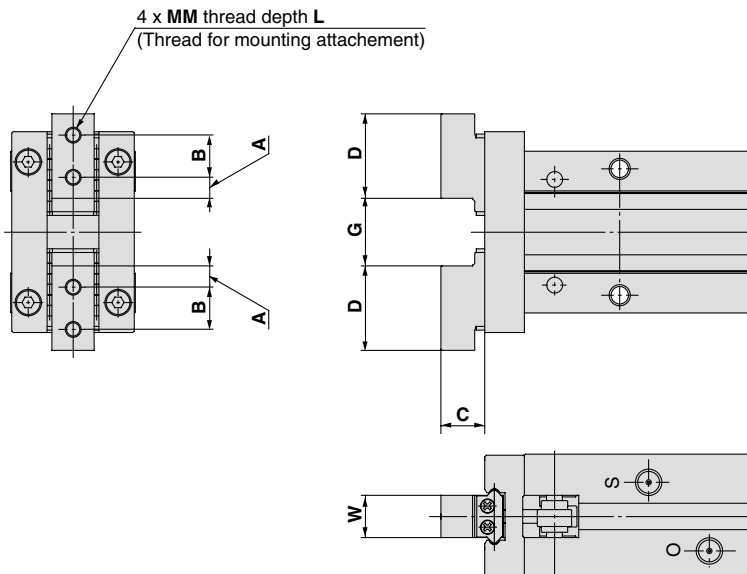
Note 2) An option symbol (3) for the flat finger type is not specified.

Specifications

Bore size (mm)	10, 16, 20, 25
Action	Double acting, Single acting (normally open, normally closed)
Finger dimensions	Refer to the dimensions and figures below.
Specifications/dimensions other than the above	Same as the standard type

Dimensions (Dimensions other than specified below are the same as the standard type.)

Series MHZ2



Model		A	B	C	D	G		MM	L	W
						Open	Closed			
MHZ2-10□□□-X51	MHQG2 compatible	3	6	5.2	12	9.7 ^{+2.2} ₀	5.7 ⁰ _{-0.4}	M2 x 0.4	3.6	5 ⁰ _{-0.05}
	MHQ2 compatible	2	5	5.2	9	9.7 ^{+2.2} ₀	5.7 ⁰ _{-0.4}	M2 x 0.4	3.6	5 ⁰ _{-0.05}
MHZ2-16□□□-X51	MHQG2 compatible	4	8	8.3	16	12.6 ^{+2.2} ₀	6.6 ⁰ _{-0.4}	M3 x 0.5	6	8 ⁰ _{-0.05}
	MHQ2 compatible	2.5	7	8.3	12	12.6 ^{+2.2} ₀	6.6 ⁰ _{-0.4}	M3 x 0.5	6	8 ⁰ _{-0.05}
MHZ2-20□□□-X51	MHQG2 compatible	5	10	10.5	20.8	17.2 ^{+2.2} ₀	7.2 ⁰ _{-0.4}	M4 x 0.7	8	10 ⁰ _{-0.05}
	MHQ2 compatible	3.3	9	10.5	15.5	17.2 ^{+2.2} ₀	7.2 ⁰ _{-0.4}	M4 x 0.7	8	10 ⁰ _{-0.05}
MHZ2-25□□□-X51	MHQG2 compatible	6.5	12	13.1	25	22.8 ^{+2.5} ₀	8.8 ⁰ _{-0.4}	M5 x 0.8	10	12 ⁰ _{-0.05}
	MHQ2 compatible	3.5	12	13.1	19	22.8 ^{+2.5} ₀	8.8 ⁰ _{-0.4}	M5 x 0.8	10	12 ⁰ _{-0.05}

Dimensions other than the above are identical to the standard type: refer to pages 405 to 408.

Made to Order Common Specifications: Air Gripper -X53: Ethylene Propylene Rubber Seal (EPDM)



12 Ethylene Propylene Rubber Seal

Symbol

-X53

Seal material has been changed to ethylene propylene (EPDM), and grease to fluorine grease.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHC	Angular style	MHC2	Double acting, Single acting (Normally open)		P.633
		MHCA2	Double acting, Single acting (Normally open)		P.622
MHF	Low profile	MHF2	Double acting		P.452
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)	Dust cover material is EPDM only.	P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)	Dust cover material is EPDM only.	
MHL	Wide opening	MHL2	Double acting		P.474
MHS	2-finger type	MHS2	Double acting		P.544
	3-finger type	MHS3	Double acting		P.552
	3-finger type with dust cover	MHSJ3	Double acting	Dust cover material is EPDM only.	P.562
	With through hole	MHSH3	Double acting		P.570
	With through hole and dust cover	MHSHJ3	Double acting	Dust cover material is EPDM only.	
	Long stroke 3-finger type	MHSL3	Double acting		P.586
	4-finger type	MHS4	Double acting		P.596
MHW	180° angular style	MHW2	Double acting		P.669
MHY	180° angular style cam style	MHY2	Double acting		P.662
MHZ	Parallel style (compact)	MHZA2	Double acting, Single acting (Normally open, Normally closed)		P.388
	Parallel style with dust cover (compact)	MHZAJ2	Double acting, Single acting (Normally open, Normally closed)	Dust cover material is EPDM only.	
	Parallel style	MHZ2	Double acting, Single acting (Normally open, Normally closed)		P.397 to 399
	Parallel style (long stroke)	MHZL2	Double acting, Single acting (Normally open, Normally closed)		P.414
	Parallel style with dust cover	MHZJ2	Double acting, Single acting (Normally open, Normally closed)	Dust cover material is EPDM only.	P.424

How to Order

Standard part number for each series – **X53**

Ethylene Propylene Rubber Seal (EPDM)

Note 1) For the product with a dust cover, dust cover material is also ethylene propylene rubber. Thus, enter no symbol for the dust cover in the part number.

Note 2) With the part number compatible with body options, only E type or M type are compatible.

Note 3) For lubrication, specialized grease GR-F is recommended.

Specifications

Seal material	Ethylene Propylene Rubber (EPDM)
Grease	Fluorine grease (GR-F)
Specifications/dimensions other than the above	Same as the standard type

Warning

Handling Precautions

Be aware that smoking cigarettes after your hands have come into contact with the grease used for this air gripper can create a gas that is hazardous to humans.

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

D-□

Made to Order Common Specifications: Air Gripper -X56: Axial Ported



13 Axial Ported

Symbol

-X56

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHC	Angular style	MHC2	Double acting, Single acting (Normally open)		P.633
		MHCA2	Double acting, Single acting (Normally open)		P.622
		MHCM2	Single acting (Normally open)		P.631
MHS	2-finger type	MHS2	Double acting		P.544
	3-finger type	MHS3	Double acting		P.552
	3-finger type with dust cover	MHSJ3	Double acting		P.562
	With through hole	MHSH3	Double acting	Center pusher type is not compatible.	P.570
	With through hole and dust cover	MHSHJ3	Double acting		
	Long stroke 3-finger type	MHSL3	Double acting		P.586
	4-finger type	MHS4	Double acting		P.596
MHZ	Parallel style (compact)	MHZA2	Double acting, Single acting (Normally open, Normally closed)		P.388
	Parallel style with dust cover (compact)	MHZAJ2	Double acting, Single acting (Normally open, Normally closed)		
	Parallel style	MHZ2	Double acting, Single acting (Normally open, Normally closed)	ø10, 16, 20, 25 only	P.398
	Parallel style (long stroke)	MHZL2	Double acting, Single acting (Normally open, Normally closed)		P.414
	Parallel style with dust cover	MHZJ2	Double acting, Single acting (Normally open, Normally closed)	ø10, 16, 20, 25 only	P.424

How to Order

Standard part number for each series - **X56**

Axial Ported

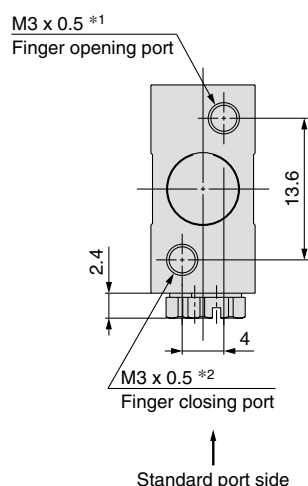
Note 1) Body option is not compatible.

Note 2) Series MHSH3 and MHSJ3 (center pusher type) are not compatible.

Dimensions (Dimensions other than specified below are the same as the standard type.)

(mm)

Series MHCA2-6 Series MHZA2-6



Series MHCA2

*1) Single acting (normally open) type is not available with a finger opening port. Standard opening port will be a breathing hole.

Series MHZA2, MHZAJ2

*1) Normally open type is not available with a finger opening port. Standard opening port will be a breathing hole.

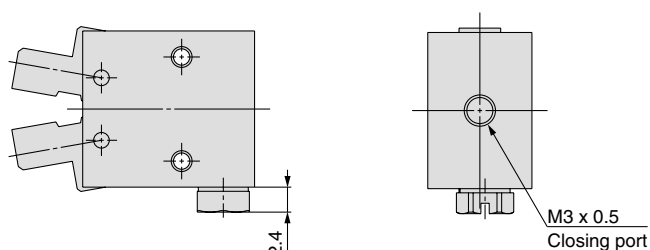
*2) Normally closed type is not available with a finger closing port. Standard closing port will be a breathing hole.

Note 1) Standard port is blocked with a M-3P plug.

M-3P plug is not interchangeable with a hexagon socket head set screw.

Note 2) This cannot be mounted from top side.

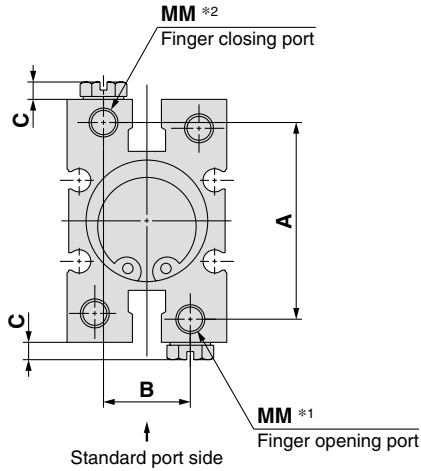
Series MHCM2-7S



Note 1) Standard port is blocked with a M-3P plug.

Dimensions (Dimensions other than specified below are the same as the standard type.)

Series MHC2
Series MHZ2
Series MHZL2
Series MHZJ2



Series MHC2

(mm)

Model	A	B	C	MM
MHC2-10 ³ -X56	13	11	2.4	M3 x 0.5
MHC2-16 ³ -X56	22.6	13	3	M3 x 0.5
MHC2-20 ³ -X56	34	15	3	M5 x 0.8
MHC2-25 ³ -X56	44	20	3	M5 x 0.8

*1) For the single acting type, a standard port does not include a plug and will be a breathing hole.

For the single acting type, axial opening ports are not available.

Note 1) Switch groove and standard port positions are different for each model.

Note 2) Standard port is blocked with a M-3P or M-5P plug.

Series MHZ2

(mm)

Model	A	B	C	MM
MHZ2-10□□□-X56	13	11	2.4	M3 x 0.5
MHZ2-16□□□-X56	22	15	3	M3 x 0.5
MHZ2-20□□□-X56	34	15	3	M5 x 0.8
MHZ2-25□□□-X56	44	20	3	M5 x 0.8

Series MHZL2

(mm)

Model	A	B	C	MM
MHZL2-10□□□-X56	13	11	2.4	M3 x 0.5
MHZL2-16□□□-X56	22.6	13	3	M3 x 0.5
MHZL2-20□□□-X56	34	15	3	M5 x 0.8
MHZL2-25□□□-X56	44	20	3	M5 x 0.8

Series MHZJ2

(mm)

Model	A	B	C	MM
MHZJ2-10□□□-X56	13	11	2.4	M3 x 0.5
MHZJ2-16□□□-X56	22.6	13	3	M3 x 0.5
MHZJ2-20□□□-X56	34	15	3	M5 x 0.8
MHZJ2-25□□□-X56	44	20	3	M5 x 0.8

*1) For the normally open type, a finger opening port is not available.

*2) For the normally closed type, a finger closing port is not available.

Note 1) Please contact SMC for bore sizes $\phi 32$ and $\phi 40$ of Series MHZ2.

Note 2) A plug is located at the same position for the end boss type.

Note 3) Bore size $\phi 6$ of Series MHZ2 and MHZJ2 is not compatible.

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

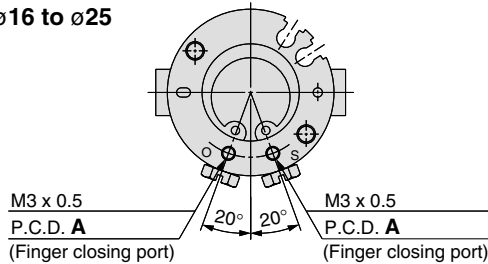
D-□

Series **MH**□

Dimensions (Dimensions other than specified below are the same as the standard type.)

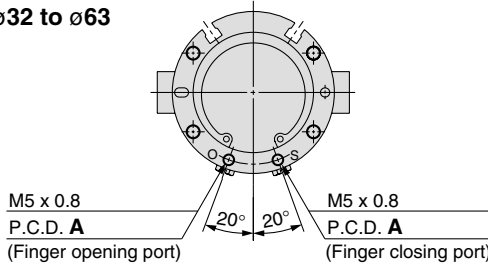
Series **MHS**²₄

ø16 to ø25



(mm)	
Model	A
MHS ² ₄ -16D-X56	23
MHS ² ₄ -20D-X56	27
MHS ² ₄ -25D-X56	32

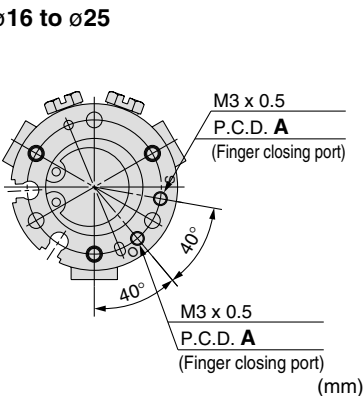
ø32 to ø63



(mm)	
Model	A
MHS ² ₄ -32D-X56	44
MHS ² ₄ -40D-X56	52
MHS ² ₄ -50D-X56	62
MHS ² ₄ -63D-X56	75

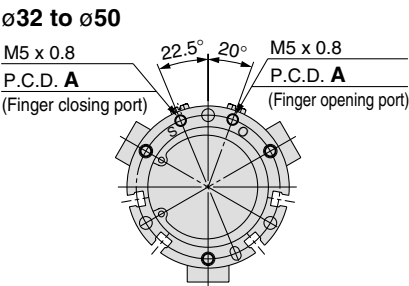
Series **MHS**³_{L3}

ø16 to ø25



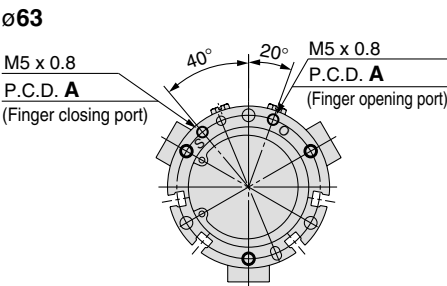
(mm)	
Model	A
MHS ³ _{L3} -16D-X56	23
MHS ³ _{L3} -20D-X56	28
MHS ³ _{L3} -25D-X56	34

ø32 to ø50



(mm)	
Model	A
MHS ³ _{L3} -32D-X56	44
MHS ³ _{L3} -40D-X56	53
MHS ³ _{L3} -50D-X56	62

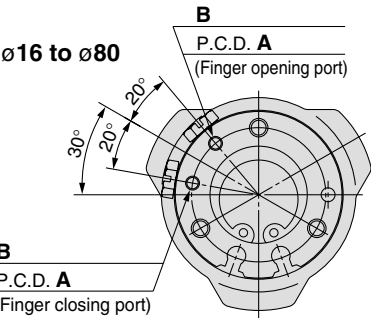
ø63



(mm)	
Model	A
MHS ³ _{L3} -63D-X56	75

Series **MHSH3**

Series **MHS**^{J3}_{HJ3}



(mm)		
Model	A	B
MHSH3-16D-X56	23	M3 x 0.5
MHSJ3-16D□-X56		
MHSH3-20D-X56	27	
MHSJ3-20D□-X56		
MHSH3-25D-X56	32	M5 x 0.8
MHSJ3-25D□-X56		
MHSH3-32D-X56	44	
MHSJ3-32D□-X56		
MHSH3-40D-X56	52	
MHSJ3-40D□-X56		
MHSH3-50D-X56	63	
MHSJ3-50D□-X56		
MHSH3-63D-X56	78	
MHSJ3-63D□-X56		
MHSH3-80D-X56	94	
MHSJ3-80D□-X56		

- Note 1) Standard side piping ports are blocked with the following plugs.
ø16: M-3P plug
ø20 to ø63: M-5P plug
ø80: Rc 1/8 tapered screw plug
- Note 2) For Series MHS3 and MHSL3, a piping port cannot be used depending on the port size since the port is located close to a positioning pin hole or long hole, or just above the pin hole.
- Note 3) Please contact SMC separately for bore sizes ø80, ø100 and ø125 of Series MHS3 and MHSL3.

Made to Order Common Specifications: Air Gripper -X63: Fluorine Grease



14 Fluoro Grease

Symbol
-X63

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHC	Angular style	MHC2	Double acting, Single acting (Normally open)		P.633
		MHCA2	Double acting, Single acting (Normally open)		P.622
		MHCM2	Single acting (Normally open)		P.631
MHF	Low profile	MHF2	Double acting		P.452
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)		P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)		
MHL	Wide opening	MHL2	Double acting		P.474
MHR	Rotary actuator	MHR2	Double acting		P.491
		MDHR2	Double acting		
		MHR3	Double acting		P.504
		MDHR3	Double acting		
MHS	2-finger type	MHS2	Double acting		P.544
	3-finger type	MHS3	Double acting		P.552
	3-finger type with dust cover	MHSJ3	Double acting		P.562
	With through hole	MHSH3	Double acting		P.570
	With through hole and dust cover	MHSHJ3	Double acting		
	Long stroke 3-finger type	MHSL3	Double acting		P.586
	4-finger type	MHS4	Double acting		P.596
MHT	Toggle type	MHT2	Double acting		P.644
MHW	180° angular style	MHW2	Double acting		P.669
MHY	180° angular style cam style	MHY2	Double acting		P.662
MHZ	Parallel style (compact)	MHZA2	Double acting, Single acting (Normally open, Normally closed)		P.388
	Parallel style with dust cover (compact)	MHZAJ2	Double acting, Single acting (Normally open, Normally closed)		
	Parallel style	MHZ2	Double acting, Single acting (Normally open, Normally closed)		
	Parallel style (long stroke)	MHZL2	Double acting, Single acting (Normally open, Normally closed)		P.414
	Parallel style with dust cover	MHZJ2	Double acting, Single acting (Normally open, Normally closed)		P.424

How to Order

Standard part number for each series **-X63**

Fluorine Grease

Note) For lubrication, specialized grease GR-F is recommended.

Specifications

Grease	Fluorine Grease (GR-F)
Specifications/dimensions other than the above	Same as the standard type

⚠ Warning

Handling Precautions

Be aware that smoking cigarettes after your hands have come into contact with the grease used for this air gripper can create a gas that is hazardous to humans.

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

D-□

Made to Order Common Specifications: Air Gripper -X64: Finger: Side Tapped



15 Finger: Side Tapped

Symbol
-X64

Attachments can be mounted even on models without a finger option (side tapped mounting) using a tap on the side.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHC	Angular style	MHC2	Double acting, Single acting (Normally open)		P.633
		MHCA2	Double acting, Single acting (Normally open)		P.622
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)	Refer to Note 5).	P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)		
MHZ	Parallel style with dust cover (compact)	MHZAJ2	Double acting, Single acting (Normally open, Normally closed)		P.388
	Parallel style with dust cover	MHZJ2	Double acting, Single acting (Normally open, Normally closed)		P.424

How to Order

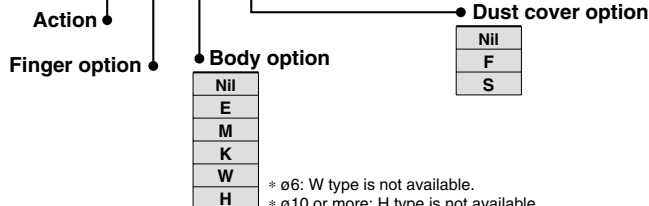
MHCA2 - 6 1 -X64

MHC2 - Bore size 1 -X64

MHZAJ2 - 6 1 -X64

MHZJ2 - 6 1 -X64

MHZJ2 - Bore size 1 -X64



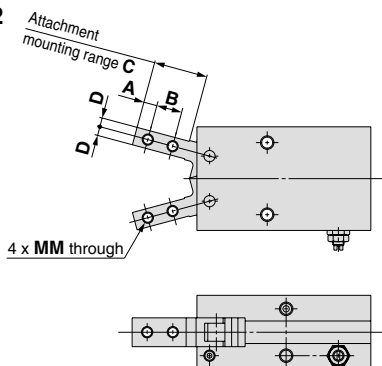
Note 1) Refer to the standard type for the details of body option and dust cover option.

Note 2) Finger option: "1" fixed

Note 3) Since Series MHC2 is a modified version of the standard type and not retreated, modified parts may rust.

Dimensions (Dimensions other than specified below are the same as the standard type.)

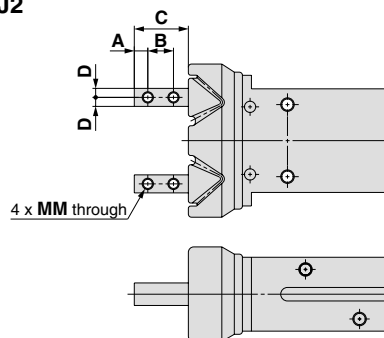
Series MHCA2 Series MHC2



(mm)

Model	A	B	C	D	MM
MHCA2-6□1□-X64	2.5	5	11	2	M2 x 0.4
MHC2-6□1□-X64	2.5	5	11	2	M2 x 0.4
MHC2-10□1□-X64	3	5.7	12	2	M2.5 x 0.45
MHC2-16□1□-X64	4	7	16	3.5	M3 x 0.5
MHC2-20□1□-X64	5.2	9	20	4	M4 x 0.7
MHC2-25□1□-X64	8	12	27	5	M5 x 0.8

Series MHZAJ2 Series MHZJ2



(mm)

Model	A	B	C	D	MM
MHZAJ2-6□1□□-X64	2.5	5	11	2	M2 x 0.4
MHZJ2-6□1□□-X64	2.5	5	11	2	M2 x 0.4
MHZJ2-10□1□□-X64	3	5.7	12	2	M2.5 x 0.45
MHZJ2-16□1□□-X64	4	7	15	2.5	M3 x 0.5
MHZJ2-20□1□□-X64	5	9	20	4	M4 x 0.7
MHZJ2-25□1□□-X64	6	12	25	5	M5 x 0.8

How to Order

MHK2
MHKL2 - **Bore size** - **X64**

Action •

Dust cover option

Finger option •

Nil	Carbon steel
1	Stainless steel

Nil
F
S

* When 1 is entered for finger option, it means that finger is made of stainless steel.

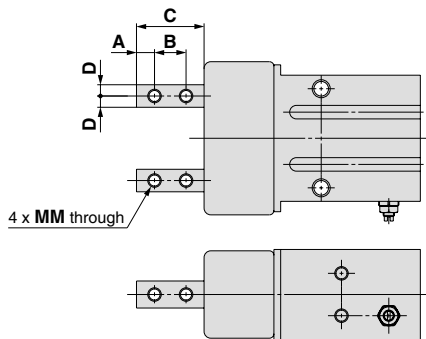
Note 4) Refer to the standard type for the details of the dust cover option.

Note 5) For only Series MHK2 and MHKL2, finger option "1" means a stainless steel finger.

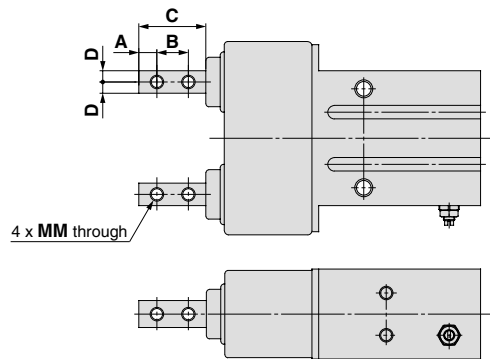
Note 6) Since Series MHK(L)2 is additionally modified as a side tapped and not treated, it may rust when the standard finger is used.

Dimensions (Dimensions other than specified below are the same as the standard type.)

Series MHK2



Series MHKL2



Model	A	B	C	D	MM
MHK2-12 -X64	4	7	15	2.5	M3 x 0.5
MHKL2-12 -X64					
MHK2-16 -X64	4	7	15	2.5	M3 x 0.5
MHKL2-16 -X64					
MHK2-20 -X64	5	9	21	4	M4 x 0.7
MHKL2-20 -X64			20		
MHK2-25 -X64	6	12	26	5	M5 x 0.8
MHKL2-25 -X64			25		

(mm)

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X ☐

MRHQ

MA

D- ☐

Made to Order Common Specifications: Air Gripper -X65: Finger: Through-holes in Opening/Closing Direction



16 Finger: Through-holes in Opening/Closing Direction Symbol -X65

Even for models without a finger option (through-holes in opening/closing directions) setting, attachments are mountable using through-holes in opening and closing directions.

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHC	Angular style	MHC2	Double acting, Single acting (Normally open)		P.633
		MHCA2	Double acting, Single acting (Normally open)		P.622
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)	Refer to Note 5).	P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)		
MHZ	Parallel style with dust cover (compact)	MHZAJ2	Double acting, Single acting (Normally open, Normally closed)		P.388
	Parallel style with dust cover	MHZJ2	Double acting, Single acting (Normally open, Normally closed)		P.424

How to Order

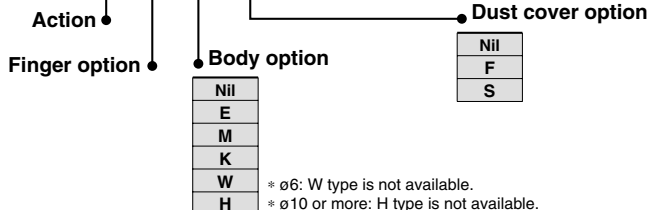
MHCA2 - 6 2 2 -X65

MHC2 - Bore size 2 -X65

MHZAJ2 - 6 2 2 -X65

MHZJ2 - 6 2 2 -X65

MHZJ2 - Bore size 2 2 -X65



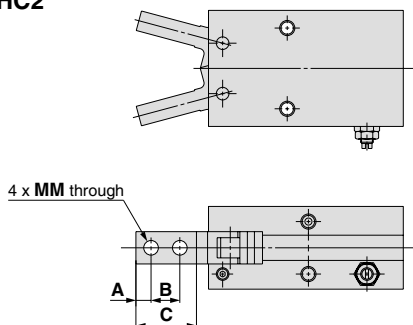
Note 1) Refer to the standard type for the details of body option and dust cover option.

Note 2) Finger option: "2" fixed

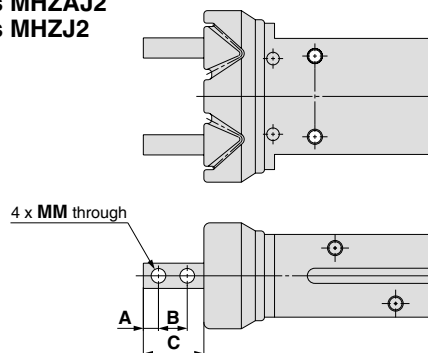
Note 3) Since Series MHC2 is a modified version of the standard type and not retreated, modified parts may rust.

Dimensions (Dimensions other than specified below are the same as the standard type.)

Series MHCA2 Series MHC2



Series MHZAJ2 Series MHZJ2



Model	A	B	C	MM
MHCA2-6 2 2 -X65	2.5	5	11	ø2.4
MHC2-6 2 -X65	2.5	5	11	ø2.4
MHC2-10 2 -X65	3	5.7	12	ø2.9
MHC2-16 2 -X65	4	7	16	ø3.4
MHC2-20 2 -X65	5.2	9	20	ø4.5
MHC2-25 2 -X65	8	12	27	ø5.5

Model	A	B	C	MM
MHZAJ2-6 2 2 2 -X65	2.5	5	11	ø2.4
MHZJ2-6 2 2 -X65	2.5	5	11	ø2.4
MHZJ2-10 2 2 2 -X65	3	5.7	12	ø2.9
MHZJ2-16 2 2 2 -X65	4	7	15	ø3.4
MHZJ2-20 2 2 2 -X65	5	9	20	ø4.5
MHZJ2-25 2 2 2 -X65	6	12	25	ø5.5

How to Order

MHK2
MHKL2 - **Bore size** - **X65**

Action •

Dust cover option •

Finger option •

Nil	Carbon steel
1	Stainless steel

Nil
F
S

* When 1 is entered for finger option, it means that finger is made of stainless steel.

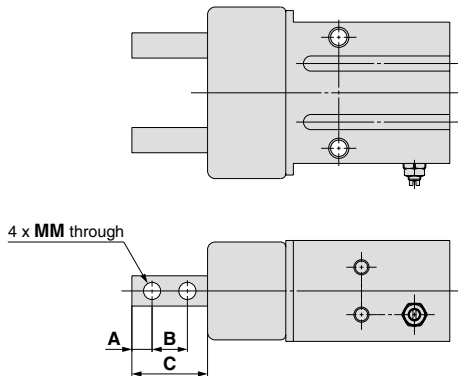
Note 4) Refer to the standard type for the details of the dust cover option.

Note 5) For only Series MHK2 and MHKL2, finger option "2" means a stainless steel finger. For other models, finger option "2" is not applicable.

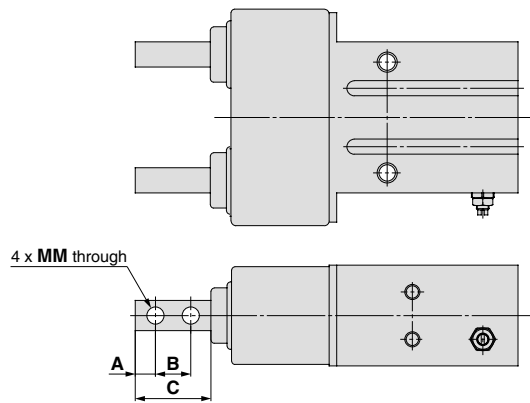
Note 6) Since Series MHK(L)2 is additionally modified with through-holes in opening/closing directions and is not treated, it may rust when the standard finger is used.

Dimensions (Dimensions other than specified below are the same as the standard type.)

Series MHK2



Series MHKL2



Model	A	B	C	MM
MHK2-12 -X65	4	7	15	ø3.4
MHKL2-12 -X65				
MHK2-16 -X65	4	7	15	ø3.4
MHKL2-16 -X65				
MHK2-20 -X65	5	9	21	ø4.5
MHKL2-20 -X65			20	
MHK2-25 -X65	6	12	26	ø5.5
MHKL2-25 -X65			25	

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X☐

MRHQ

MA

D-☐

Made to Order Common Specifications: Air Gripper -X77^A_B: Dust Cover Adhesion



17 Dust Cover Adhesion (Powerful adhesive used)

Symbol
-X77

Dustproof and dripproof

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)		P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)		
MHS	3-finger type with dust cover With through hole and dust cover	MHSJ3	Double acting		P.562
		MHSHJ3	Double acting		P.570
MHZ	Parallel style with dust cover (compact) Parallel style with dust cover	MHZAJ2	Double acting, Single acting (Normally open, Normally closed)		P.388
		MHZJ2	Double acting, Single acting (Normally open, Normally closed)		P.424

How to Order

Standard part number for each series **-X77A**

Dust Cover Adhesion •

How to Order

Standard part number for each series **-X77B**

Dust Cover Adhesion/Finger part only •

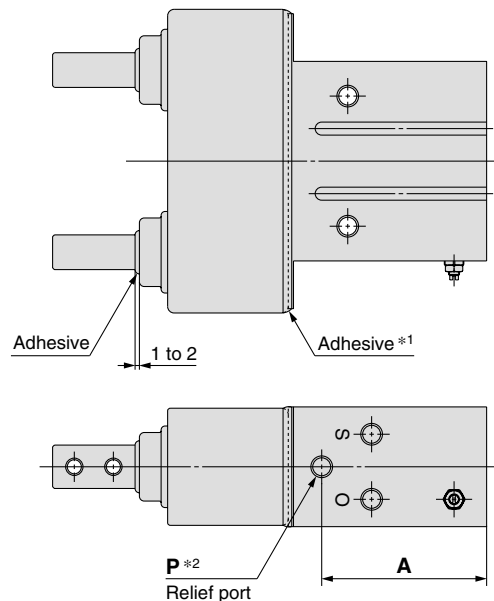
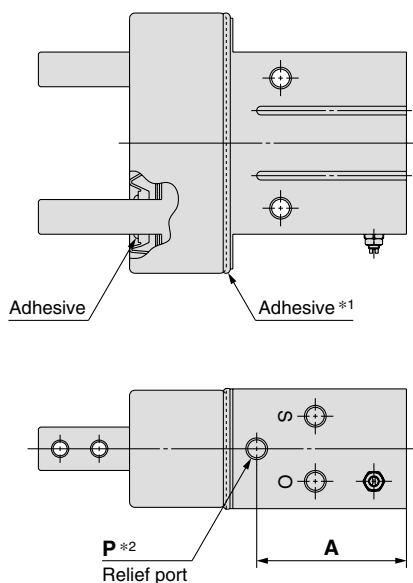
- Note 1) For -X77B, only the finger part is bonded.
 Note 2) The relief port can be attached to both -X77A and -X77B.
 Note 3) The dust cover cannot be removed and replaced.
 Note 4) Be sure to connect the dust cover to the relief port used for dust cover breathing before operating.

Specifications

Adhesive	Cyano superglue
----------	-----------------

Dimensions (Dimensions other than specified below are the same as the standard type.)

MHK²_{L2}-□D□□-X77^A_B

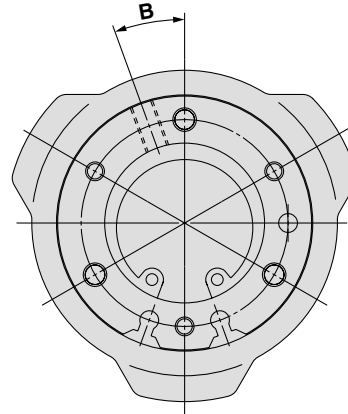
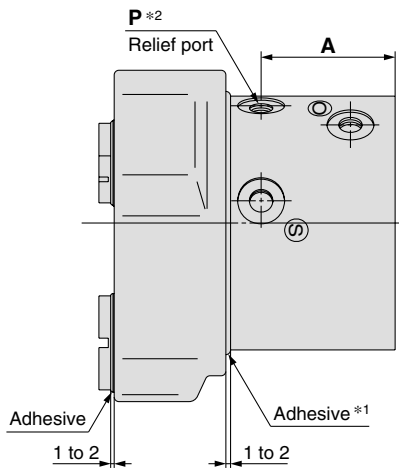


Model	A	P
MHK2-12D□□-X77 ^A _B	26.5	M3 x 0.5
MHK2-16D□□-X77 ^A _B	28.5	
MHK2-20D□□-X77 ^A _B	34.5	
MHK2-25D□□-X77 ^A _B	37	M5 x 0.8
MHKL2-12D□□-X77 ^A _B	31	M3 x 0.5
MHKL2-16D□□-X77 ^A _B	33	
MHKL2-20D□□-X77 ^A _B	38	
MHKL2-25D□□-X77 ^A _B	44	M5 x 0.8

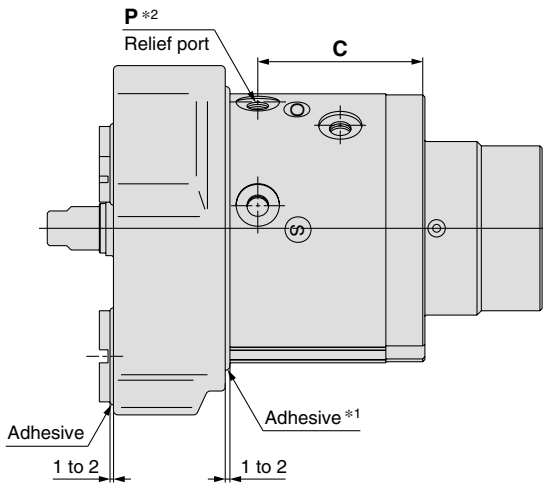
- *1) For -X77B, the body part is not bonded, but only the finger part.
 *2) Use the relief port after being piped.

Dimensions (Dimensions other than specified below are the same as the standard type.)

MHSJ3- D -X77^A_B
MHSHJ3- D -X77^A_B



With center pusher



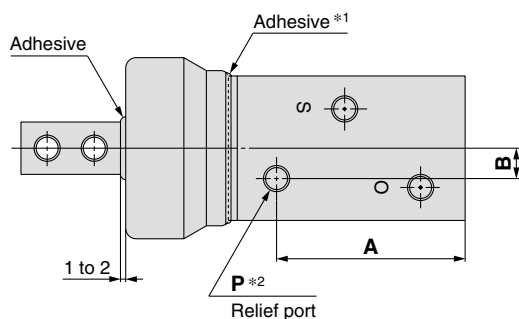
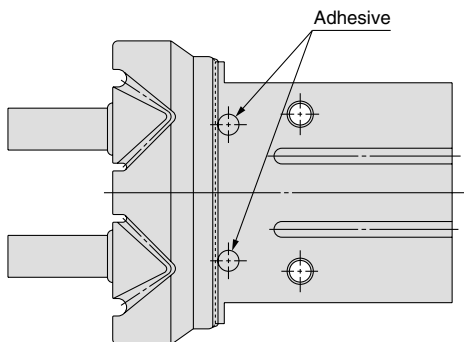
Model	A	B	C	P
MHSJ3-16D -X77 ^A _B	21	25°	—	M3 x 0.5
MHSJ3-20D -X77 ^A _B	21		—	
MHSJ3-25D -X77 ^A _B	25		—	
MHS _{HJ} 3-32D -X77 ^A _B	28.5	20°	37.5	M5 x 0.8
MHS _{HJ} 3-40D -X77 ^A _B	29		38.5	
MHS _{HJ} 3-50D -X77 ^A _B	38		49	
MHS _{HJ} 3-63D -X77 ^A _B	41		54	
MHS _{HJ} 3-80D -X77 ^A _B	45		58	

*1) For -X77B, the body part is not bonded, but only the finger part.

*2) Use the relief port after being piped.

*3) Body through-hole mounting is not possible.

MHZJ2- D -X77^A_B



Series MHZJ2

Model	A	B	P
MHZJ2-10D -X77 ^A _B	27	4.2	M3 x 0.5
MHZJ2-16D -X77 ^A _B	28.8	5	
MHZJ2-20D -X77 ^A _B	36	5.8	M5 x 0.8
MHZJ2-25D -X77 ^A _B	43	6.8	

*1) For -X77B, the body part is not bonded, but only the finger part.

*2) Use the relief port after being piped.

Made to Order Common Specifications: Air Gripper -X78^A_B: Dust Cover Caulking



18 Dust Cover Caulking (Silicon Caulking Agent Used)

Symbol
-X78

Dustproof and dripproof

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)		P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)		
MHS	3-finger type with dust cover With through hole and dust cover	MHSJ3	Double acting		P.562
		MHSHJ3	Double acting		P.570
MHZ	Parallel style with dust cover (compact)	MHZAJ2	Double acting, Single acting (Normally open, Normally closed)		P.388
	Parallel style with dust cover	MHZJ2	Double acting, Single acting (Normally open, Normally closed)		P.424

How to Order

Standard part number for each series **-X78A**

Dust Cover Caulking •

Note 1) For -X78B, caulking is applied to only the finger part.

Note 2) Relief port can be mounted on both -X78A and -X78B.

Note 3) Use the dust cover after being piped to the relief port for dust cover breathing.

How to Order

Standard part number for each series **-X78B**

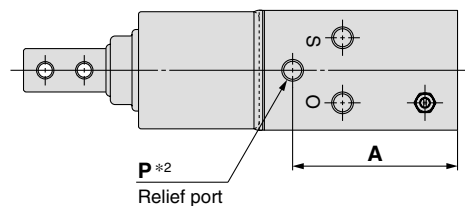
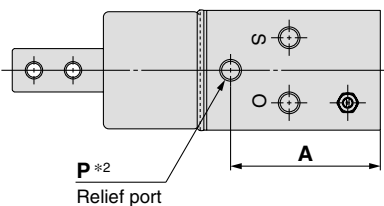
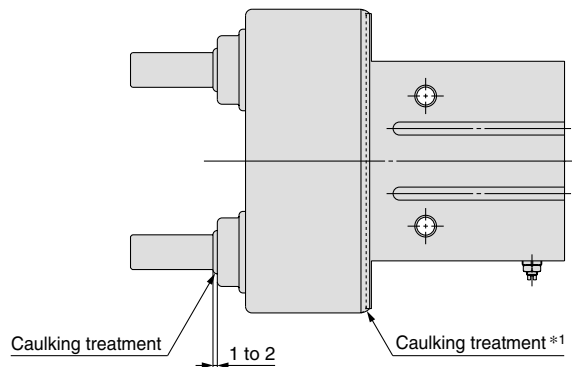
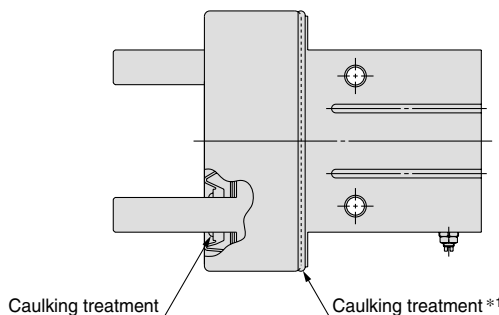
Dust Cover Caulking/Finger part only •

Specifications

Caulking agent	Silicon adhesive, Sealant (white)
----------------	-----------------------------------

Dimensions (Dimensions other than specified below are the same as the standard type.)

MHK_{L2}-□D□□-X78^A_B



Model	A	P
MHK2-12D□□-X78 ^A _B	26.5	M3 x 0.5
MHK2-16D□□-X78 ^A _B	28.5	
MHK2-20D□□-X78 ^A _B	34.5	M5 x 0.8
MHK2-25D□□-X78 ^A _B	37	
MHKL2-12D□□-X78 ^A _B	31	M3 x 0.5
MHKL2-16D□□-X78 ^A _B	33	
MHKL2-20D□□-X78 ^A _B	38	M5 x 0.8
MHKL2-25D□□-X78 ^A _B	44	

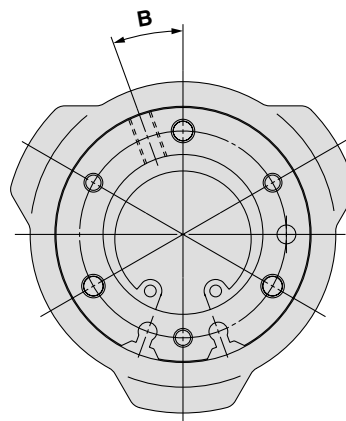
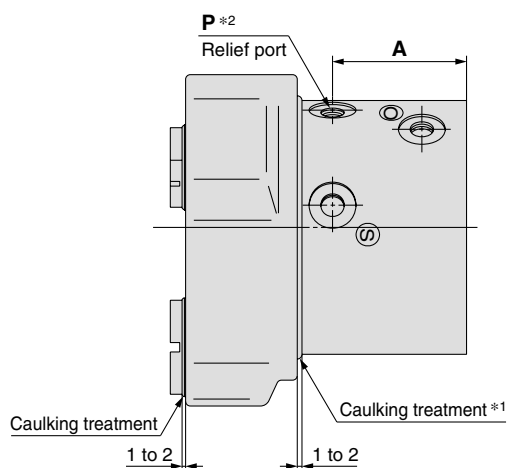
(mm)

*1) Caulking treatment is not applied to the body of -X78B, but only to the finger part.

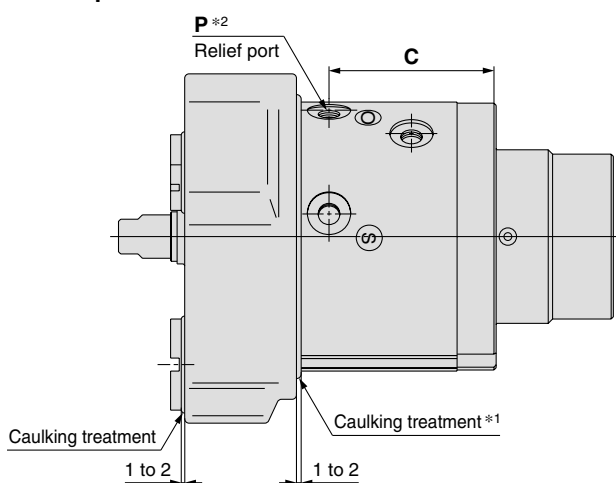
*2) Use the relief port after being piped.

Dimensions (Dimensions other than specified below are the same as the standard type.)

MHSJ3- D -X78^A_B
MHSHJ3- D -X78^A_B



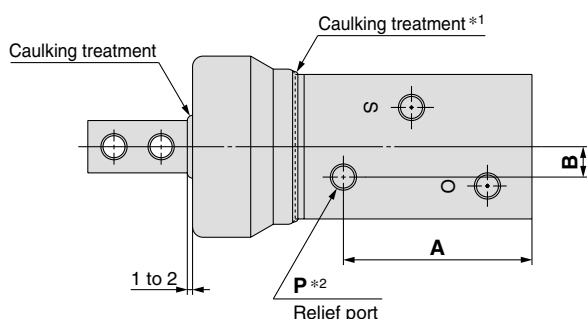
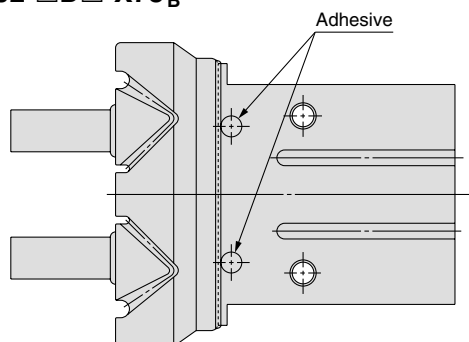
With center pusher



Model	A	B	C	P
MHSJ3-16D -X78 ^A _B	21	25°	—	M3 x 0.5
MHSJ3-20D -X78 ^A _B	21		—	M5 x 0.8
MHSJ3-25D -X78 ^A _B	25	20°	—	
MHS _{HJ} 3-32D -X78 ^A _B	28.5		37.5	
MHS _{HJ} 3-40D -X78 ^A _B	29		38.5	
MHS _{HJ} 3-50D -X78 ^A _B	38		49	
MHS _{HJ} 3-63D -X78 ^A _B	41		54	
MHS _{HJ} 3-80D -X78 ^A _B	45		58	

*1) Caulking treatment is not applied to the body of -X78B, but only to the finger part.
*2) Use the relief port after being piped.
*3) Body through-hole mounting is not possible.

MHZJ2- D -X78^A_B



Series MHZJ2

Model	A	B	P
MHZJ2-10D -X78 ^A _B	27	4.2	M3 x 0.5
MHZJ2-16D -X78 ^A _B	28.8	5	
MHZJ2-20D -X78 ^A _B	36	5.8	M5 x 0.8
MHZJ2-25D -X78 ^A _B	43	6.8	

*1) Caulking treatment is not applied to the body of -X78B, but only to the finger part.
*2) Use the relief port after being piped.

Made to Order Common Specifications: Air Gripper -X79: Grease for Food



19 Grease for Food

Symbol

-X79

Use grease for food (NSF-H1 certified).

Applicable Series

Series	Description	Model	Action	Note	Standard model page
MHC	Angular style	MHC2	Double acting, Single acting (Normally open)		P.633
		MHCA2	Double acting, Single acting (Normally open)		P.622
		MHCM2	Single acting (Normally open)		P.631
MHF	Low profile	MHF2	Double acting		P.452
MHK	Wedge cam operation slide guide	MHK2	Double acting, Single acting (Normally open, Normally closed)		P.522
		MHKL2	Double acting, Single acting (Normally open, Normally closed)		
MHL	Wide opening	MHL2	Double acting		P.474
MHS	2-finger type	MHS2	Double acting		P.544
	3-finger type	MHS3	Double acting		P.552
	3-finger type with dust cover	MHSJ3	Double acting		P.562
	With through hole	MHSH3	Double acting		P.570
	With through hole and dust cover	MHSHJ3	Double acting		
	Long stroke 3-finger type	MHSL3	Double acting		P.586
	4-finger type	MHS4	Double acting		P.596
MHW	180° angular style	MHW2	Double acting		P.669
MHY	180° angular style cam style	MHY2	Double acting		P.662
MHZ	Parallel style (compact)	MHZA2	Double acting, Single acting (Normally open, Normally closed)		P.388
	Parallel style with dust cover (compact)	MHZAJ2	Double acting, Single acting (Normally open, Normally closed)		
	Parallel style	MHZ2	Double acting, Single acting (Normally open, Normally closed)		P.397 to 399
	Parallel style (long stroke)	MHZL2	Double acting, Single acting (Normally open, Normally closed)		P.414
	Parallel style with dust cover	MHZJ2	Double acting, Single acting (Normally open, Normally closed)		P.424

How to Order

Standard part number for each series - **X79**

Grease for Food

Note) For lubrication, specialized grease GR-H is recommended.

Specifications

Grease	Grease for food (NSF-H1 certified)
Specifications/dimensions other than the above	Same as the standard type

Warning

Handling Precautions

Be aware that smoking cigarettes after your hands have come into contact with the grease used for this air gripper can create a gas that is hazardous to humans.

Caution

Do not use air grippers in a food-related environment.

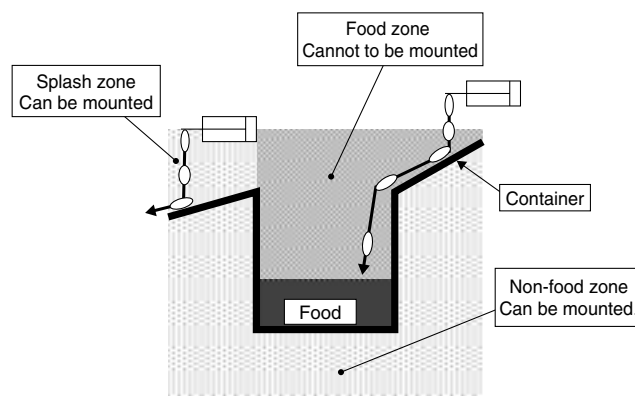
<Cannot be mounted>

Food zone.....Food may directly contact with air grippers, and is treated as food products.

<Can be mounted>

Splash zone.....Food may directly contact with air grippers, but is not treated as food products.

Non-food zone.....Air grippers do not directly contact food.



Made to Order Air Gripper

Series *MHT2*

Made to Order Individual Specifications



1 -X5060	Double Rod Cylinder	Page P.712
2 -X5070	With Boss in Head Side	P.713

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

D-□

1 Double Rod Cylinder

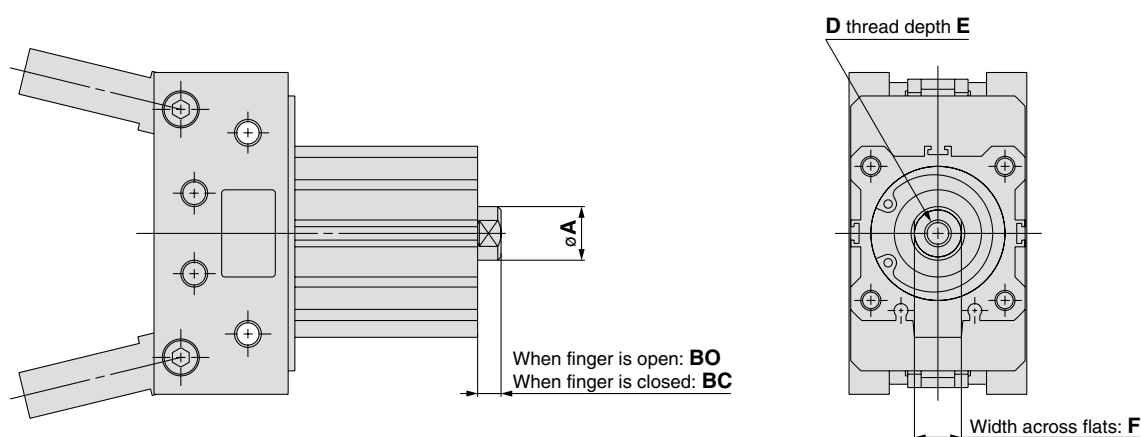
Symbol
-X5060

MHT2 – Bore Size **D – X5060**

Use a double rod cylinder where a standard single rod cylinder (Series CDQ2) is used.

Note) When the toggle is used to grip a workpiece, if the rod is pushed or a load is placed on it, the work piece may be dropped since the toggle mechanism does not work.

Dimensions (Dimensions other than specified below are the same as the standard type.)



Model	A	BO	BC	D	E	F	Mass (g)
MHT2-32D-X5060	16	7	22	M8 x 1.25	13	14	863
MHT2-40D-X5060	16	7	22	M8 x 1.25	13	14	1,194
MHT2-50D-X5060	20	7	27	M10 x 1.5	15	17	2,108
MHT2-63D-X5060	20	7	27	M10 x 1.5	15	17	2,933

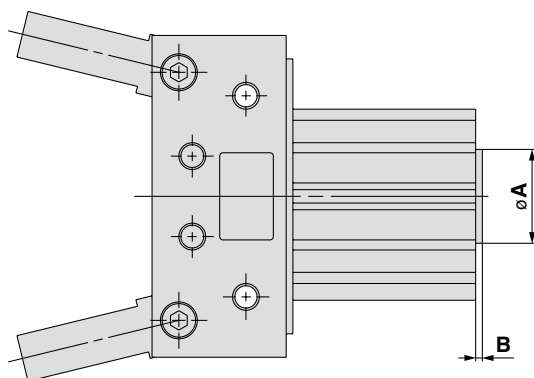
2 With Boss in Head Side

Symbol
-X5070

MHT2 – Bore Size D – X5070

Use the cylinder Series CDQ2 with boss in head side.

Dimensions (Dimensions other than specified below are the same as the standard type.)



Model	A	B	Mass (g)
MHT2-32D-X5070	21h9 ⁰ _{-0.052}	2	805
MHT2-40D-X5070	28h9 ⁰ _{-0.052}	2	1,097
MHT2-50D-X5070	35h9 ⁰ _{-0.062}	2	1,943
MHT2-63D-X5070	35h9 ⁰ _{-0.062}	2	2,825

MHZ

MHF

MHL

MHR

MHK

MHS

MHC

MHT

MHY

MHW

-X□

MRHQ

MA

D-□