Series 11-/22-MHL2

ø10, ø16, ø20, ø25, ø32, ø40
Parallel Type Wide Opening Air Gripper

How to Order

Clean series

11	Vacuum suction type

11—MHL 2 — 16 D 1 — M9N

22—MHL 2 — 16 D 1 — M9N

Wide opening

Number of fingers

2	2 fingers

Bore size

10	10 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm

Number of auto switches

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

Auto switch

Nil	Without auto switch (Built-in magnet)

Open/Close stroke (mm)

Symbol	Bore size					
	ø10	ø16	ø20	ø25	ø32	ø40
Nil	20	30	40	50	70	100
1	40	60	80	100	120	160
2	60	80	100	120	160	200

Copper, fluorine and silicone-free + Low particle generation

22	Vacuum suction type

Port thread type

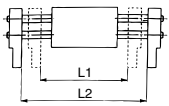
Nil	M	ø10, ø16, ø20, ø25
	Rc	ø32, ø40
TN	NPT	ø32, ø40
TG	G	ø32, ø40

Action

D	Double acting

Model/Stroke

Model	Bore size (mm)	Maximum operating frequency (c.p.m)	Open/Close stroke (mm) (L2-L1)	Width at closing (mm) (L1)	Width at opening (mm) (L2)	Weight (g)
11-/22-MHL2-10D	10	60	20	72	92	340
11-/22-MHL2-10D1		40	40	94	134	405
11-/22-MHL2-10D2			60	112	172	485
11-/22-MHL2-16D	16	60	30	84	114	660
11-/22-MHL2-16D1		40	60	126	186	870
11-/22-MHL2-16D2			80	146	226	1010
11-/22-MHL2-20D	20	60	40	98	138	1175
11-/22-MHL2-20D1		40	80	158	238	1645
11-/22-MHL2-20D2			100	178	278	1840
11-/22-MHL2-25D	25	60	50	116	166	1850
11-/22-MHL2-25D1		40	100	198	298	2720
11-/22-MHL2-25D2			120	216	336	2935
11-/22-MHL2-32D	32	30	70	150	220	3070
11-/22-MHL2-32D1		20	120	198	318	3985
11-/22-MHL2-32D2			160	242	402	4820
11-/22-MHL2-40D	40	30	100	188	288	5620
11-/22-MHL2-40D1		20	160	246	406	7180
11-/22-MHL2-40D2			200	286	486	8255



Note) The width at closing/opening represent the valve when the exterior of the workpiece is being held.

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Specifications

Bore size (mm)	10	16	20	25	32	40
Fluid	Air					
Action	Double acting					
Operating pressure (MPa)	0.15 to 0.6	0.1 to 0.6				
Ambient and fluid temperature	–10 to 60°C					
Repeatability	±0.1					
Lubrication	Not required					
Effective gripping force (N) at 0.5 MPa Note)	14	45	74	131	228	396
Grease	11-: Fluorine grease 22-: Lithium soap based grease					
Cleanliness class (ISO class)	11-/22-: Class 4					

Note) Gripping point = Bore size 10, 16, 20, 25: 40 mm, Bore size 32, 40: 80 mm

∗ Refer to the **WEB catalog** for details of gripping force at each gripping point.

Suction Flow Rate of Vacuum Suction Type (Reference values)

Size	Suction flow rate L/min (ANR)
10/16/20/25/32/40	One side 10

Auto Switch Specifications (Refer to the **WEB catalog** for further information on auto switches.)

Type		Auto switch model	Load voltage	Load current range	Indicator light	Applicable load
Solid state auto switch	2-wire	**D-M9B(V)**	24 VDC (10 to 28 VDC)	5 to 40 mA	Yes	24 VDC relay, PLC
	3-wire	**D-M9N(V)**	28 VDC or less	40 mA or less	Yes	24 VDC relay, PLC

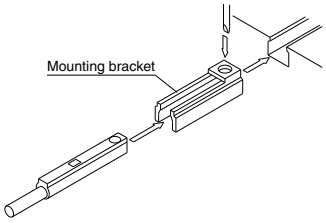
∗ When ordering the air gripper with the D-M9□ type auto switch, the auto switch mounting bracket is supplied with the product.
∗ When ordering the D-M9□ type auto switch separately, the auto switch mounting bracket (BMG2-012) is required.

PLC: Programmable Logic Controller

Refer to page 946 for the applicable auto switch list.

Auto Switch Mounting

1. To set the auto switch, insert the auto switch mounting bracket into the installation groove of the cylinder as shown below and set it roughly.
2. Insert the auto switch into the auto switch mounting bracket installation groove.
3. After confirming the detecting position, tighten the set screws (M2.5) attached to the auto switch and set it.
4. Be sure to change the detecting position in the state of step 2.



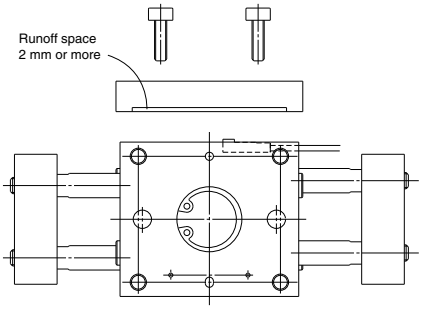
Note) Use a watchmaker's screwdriver with a grip diameter of 5 to 6 mm to tighten the set screws (M2.5).
The tightening torque should be 0.05 to 0.1 N·m.
As a rule, it should be turned about 90° beyond the point at which tightening can be felt.

Auto Switch Mounting Bracket Part No.

Auto switch part no.	Auto switch mounting bracket part no.
D-M9□(V) **D-M9□W(V)** **D-M9□A(V)**	BMG2-012

Auto Switch Mounting Brackets: Precautions

When auto switch is set on the mounting side as shown below, allow at least 2 mm runoff space on mounting plate since the auto switch is protruded from the gripper edge.



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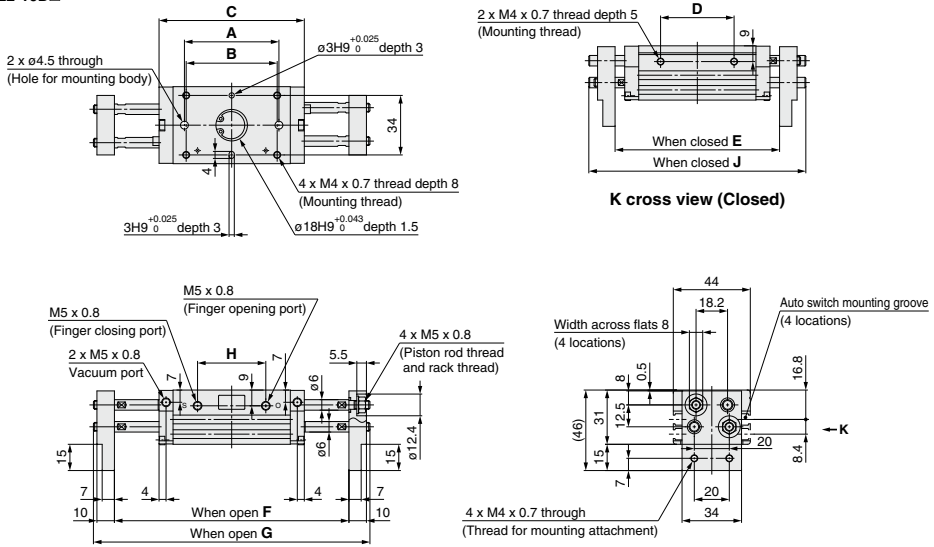
Dimensions

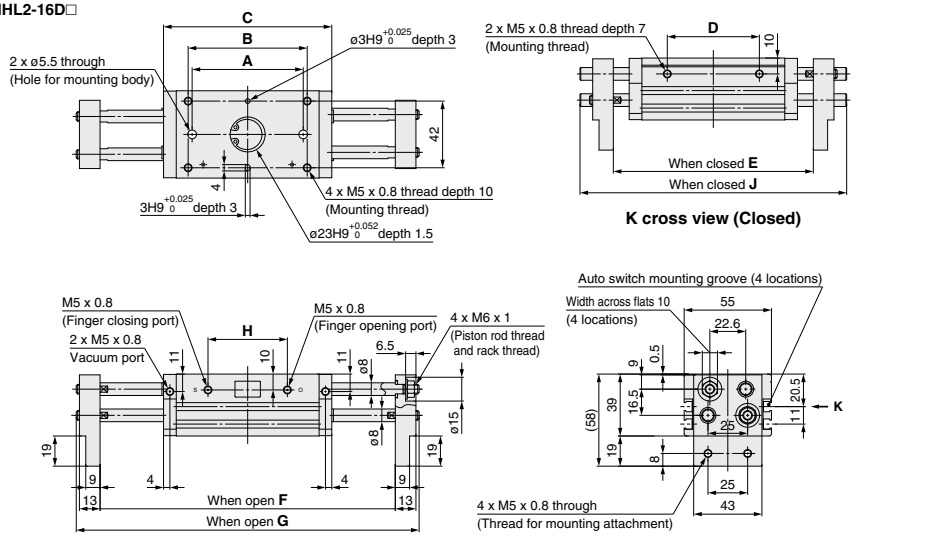
11-22-MHL2-10D□



(mm)

	A	B	C	D	E	F	G	H	J
11-MHL2-10D	38	36	67	26	72	92	116	24	96
11-22-MHL2-10D1	54	52	83	42	94	134	158	39	124
11-22-MHL2-10D2	72	70	101	60	112	172	196	57	162

11-22-MHL2-16D□



(mm)

	A	B	C	D	E	F	G	H	J
11-22-MHL2-16D	40	45	76	28	84	114	144	26	114
11-22-MHL2-16D1	70	75	106	58	126	186	216	50	168
11-22-MHL2-16D2	90	95	126	78	146	226	256	70	208

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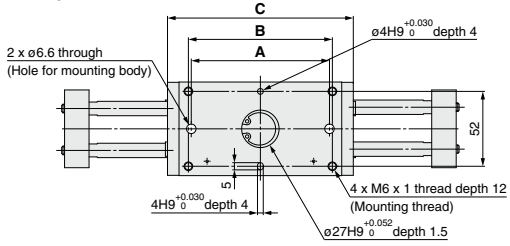
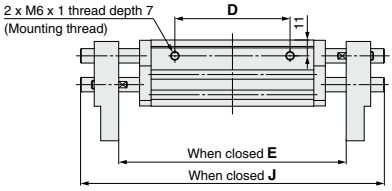
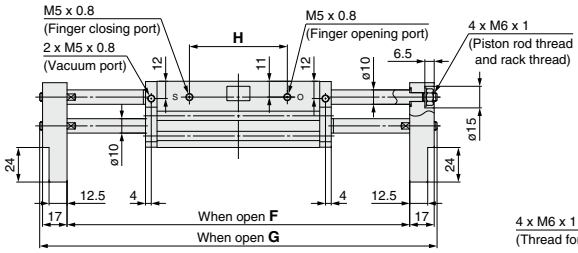
Dimensions

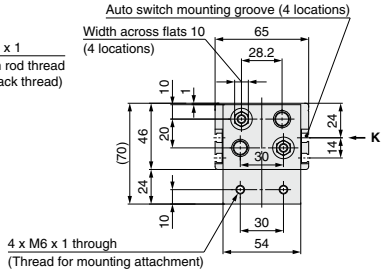
11-22-MHL2-20D□





K cross view (Closed)

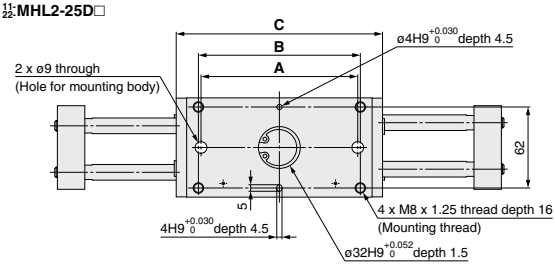


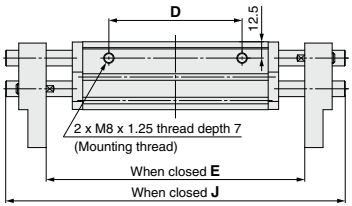


(mm)

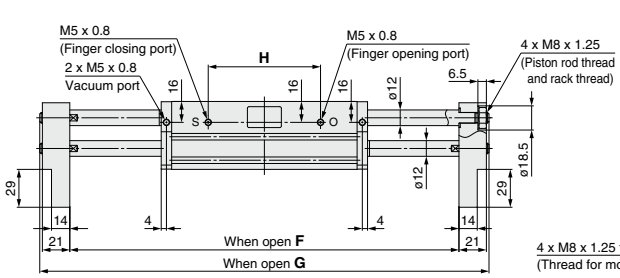
	A	B	C	D	E	F	G	H	J
11-22-MHL2-20D	54	58	87	38	98	138	176	32	136
11-22-MHL2-20D1	96	100	129	80	158	238	276	68	211
11-22-MHL2-20D2	116	120	149	100	178	278	316	88	251

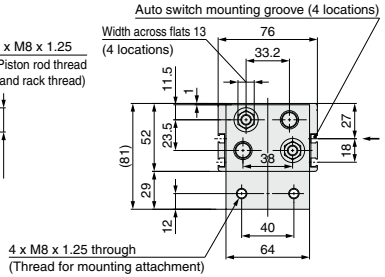
11-22-MHL2-25D□





K cross view (Closed)





(mm)

	A	B	C	D	E	F	G	H	J
11-22-MHL2-25D	66	70	104	48	116	166	212	38	162
11-22-MHL2-25D1	120	124	158	102	198	298	344	86	260
11-22-MHL2-25D2	138	142	176	120	216	336	382	104	298

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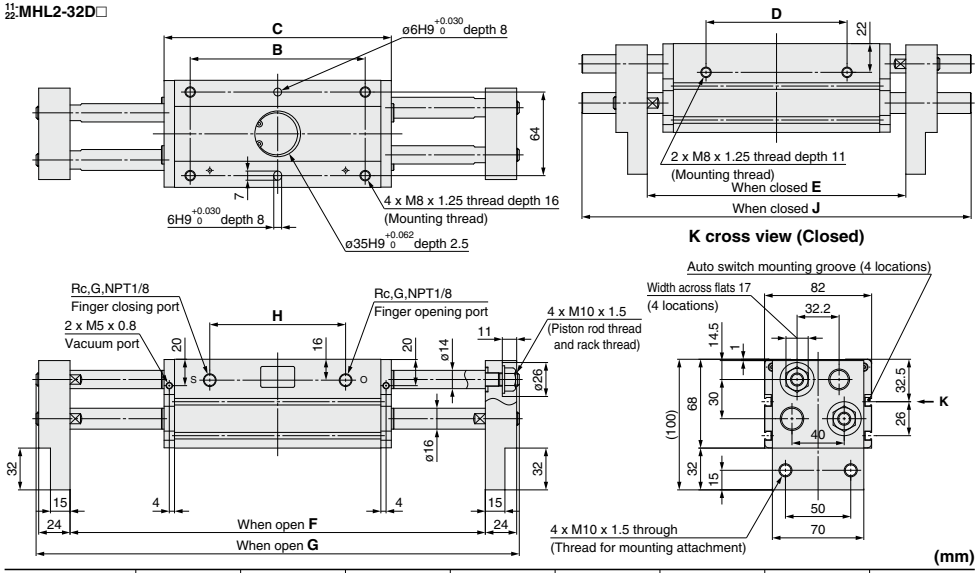
Dimensions

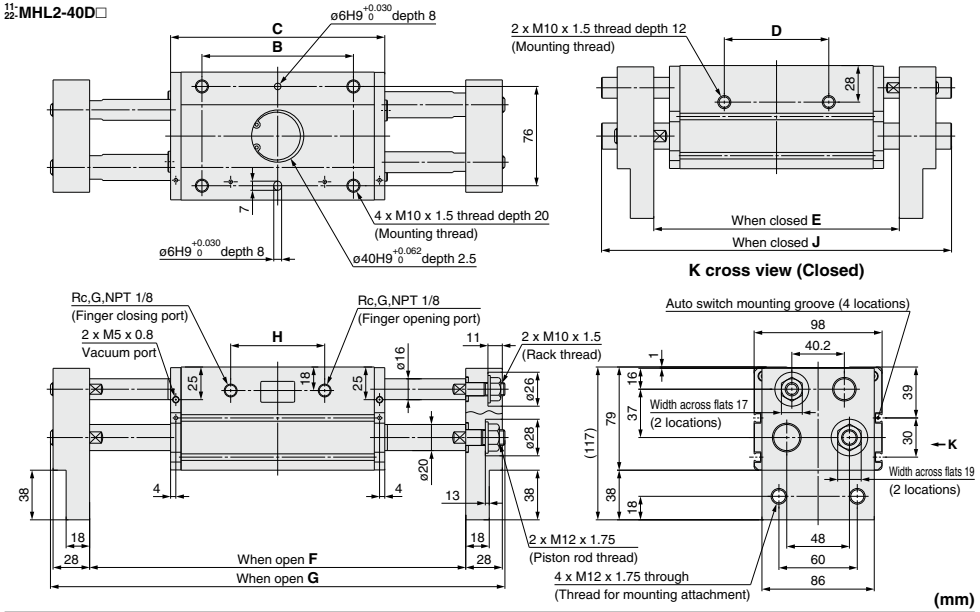
11-22-MHL2-32D□



(mm)

	B	C	D	E	F	G	H	J
11-22-MHL2-32D	86	126	60	150	220	272	56	202
11-22-MHL2-32D1	134	174	108	198	318	370	104	298
11-22-MHL2-32D2	178	218	152	242	402	454	148	382

11-22-MHL2-40D□



(mm)

	B	C	D	E	F	G	H	J
11-22-MHL2-40D	116	164	80	188	288	348	72	268
11-22-MHL2-40D1	174	222	138	246	406	466	130	386
11-22-MHL2-40D2	214	262	178	286	486	546	170	466

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