

Magic Grippers

MV Series



MV10, MV15 Series

Feature

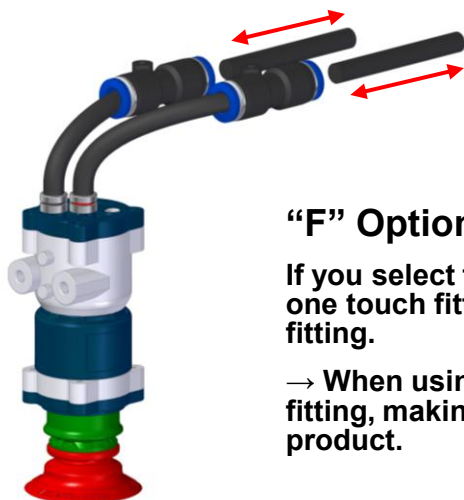
- ▶ Supports up to 4 vacuum cartridges for high vacuum flow rate applications
- ▶ Non return check valve (integrated).
- ▶ Both Magic Suction Cups and Suction Cups are available
- ▶ Options available in manifold type (with bracket) and robot-mounted flange
- ▶ Space-saving vertical design



Specification

Description	MV10-02	MV10-04	MV15-02	MV15-04
Max. Vacuum level	- 83 kPa	- 83 kPa	- 85 kPa	- 85 kPa
Open Vacuum flow	32 NI/min	64 NI/min	34 NI/min	68 NI/min
Max. Feed pressure	7 bar	7 bar	7 bar	7 bar
Temperature	-20 ~ 80 ° C	-20 ~ 80 ° C	-20 ~ 80 ° C	-20 ~ 80 ° C
Noise level	50 ~ 60 dBA	50 ~ 60 dBA	65 ~ 68 dBA	65 ~ 68 dBA
Weight	40.1 g	40.9 g	39.9 g	40.5 g

Fitting Option



“F” Option

If you select the “F” option, a Ø6 100mm hose and a Ø6 one touch fitting are assembled into the product hose fitting.

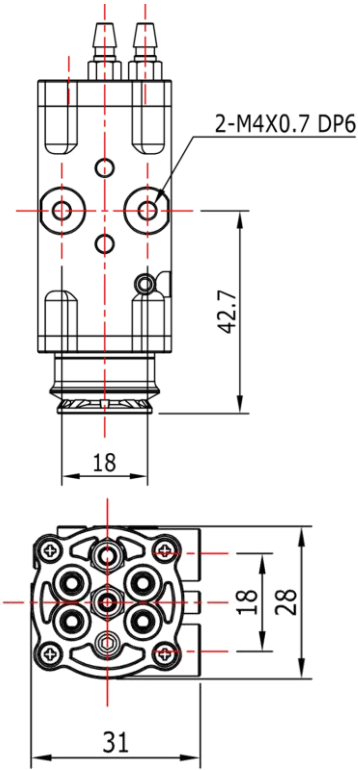
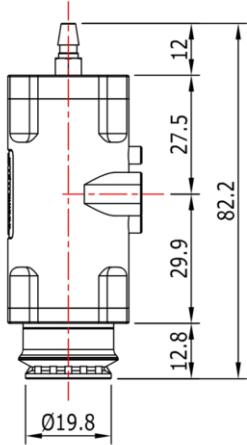
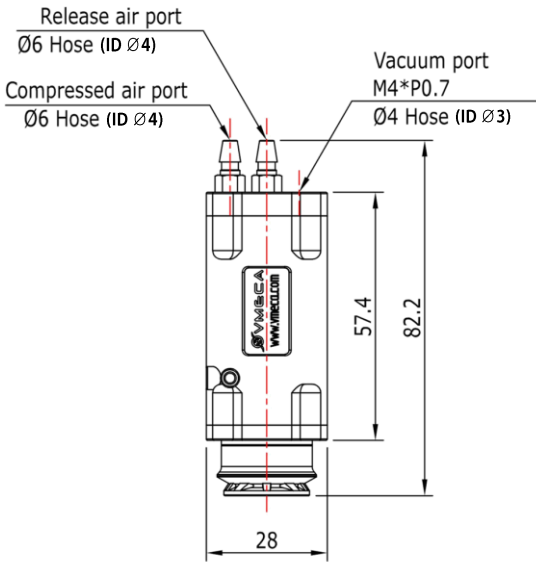
→ When using, the hose is connected to the one touch fitting, making it easy to disassemble the hose and product.

Vacuum Flow

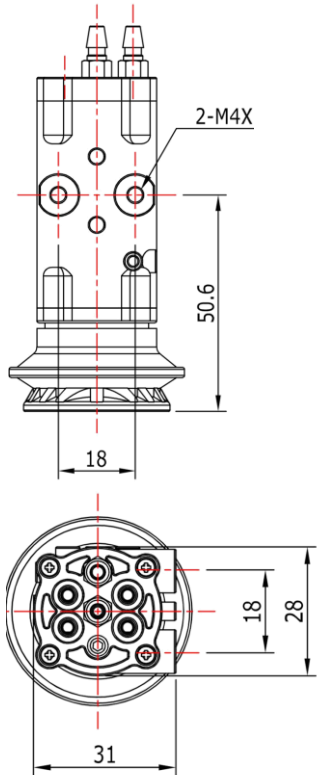
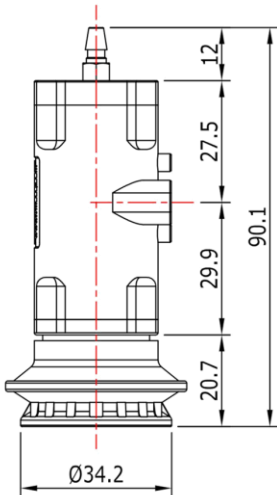
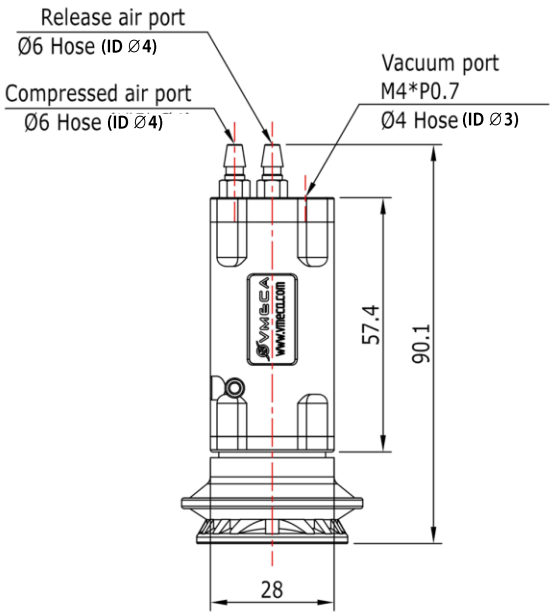
Model	Max. Vacuum (-kPa)	Feed Pressure (bar)	Air Consumption (NI/min)	Vacuum flow (NI/min) at different vacuum levels (-kPa)								
				0	10	20	30	40	50	60	70	80
MV10 - 02	50.0	1.1	11.8	23	12.6	4.4	3.2	1.4	-	-	-	-
	83.0	1.8	16.4	28.4	18.8	6.6	4.4	4	2.8	1.6	0.8	0.4
	83.0	2.2	20	32	23.8	10.2	4.6	2.8	2.6	1.8	0.6	0.2
	79.8	3	26	18	15.6	12.4	8.4	5.6	4	2.4	0.6	-
MV10 - 03	50.0	1.1	17.7	34.5	18.9	6.6	4.8	2.1	-	-	-	-
	83.0	1.8	24.6	42.6	28.2	9.9	6.6	6	4.2	2.4	1.2	0.6
	83.0	2.2	30	48	35.7	15.3	6.9	4.2	3.9	2.7	0.9	0.3
	79.8	3	39	27	23.4	18.6	12.6	8.4	6	3.6	0.9	-
MV10 - 04	50.0	1.1	23.6	46	25.2	8.8	6.4	2.8	-	-	-	-
	83.0	1.8	32.8	56.8	37.6	13.2	8.8	8	5.6	3.2	1.6	0.8
	83.0	2.2	40	64	47.6	20.4	9.2	5.6	5.2	3.6	1.2	0.4
	79.8	3	52	36	31.2	24.8	16.8	11.2	8	4.8	1.2	-

Model	Max. Vacuum (-kPa)	Feed Pressure (bar)	Air Consumption (NI/min)	Vacuum flow (NI/min) at different vacuum levels (-kPa)								
				0	10	20	30	40	50	60	70	80
MV15 - 02	66.5	3	26	29.2	21.2	15	12.4	9.8	5.8	2	-	-
	87.3	4	32.2	32.6	26.2	17	14.8	12.6	10.4	8.2	5	1.2
	85.8	5	37.2	33.8	28	21.2	13.6	11.6	9.8	7.6	4.8	0.8
MV15 - 03	66.5	3	39	43.8	31.8	22.5	18.6	14.7	8.7	3	-	-
	87.3	4	48.3	48.9	39.3	25.5	22.2	18.9	15.6	12.3	7.5	1.8
	85.8	5	55.8	50.7	42	31.8	20.4	17.4	14.7	11.4	7.2	1.2
MV15 - 04	66.5	3	52	58.4	42.4	30	24.8	19.6	11.6	4	-	-
	87.3	4	64.4	65.2	52.4	34	29.6	25.2	20.8	16.4	10	2.4
	85.8	5	74.4	67.6	56	42.4	27.2	23.2	19.6	15.2	9.6	1.6

Dimensions - Basic Pump

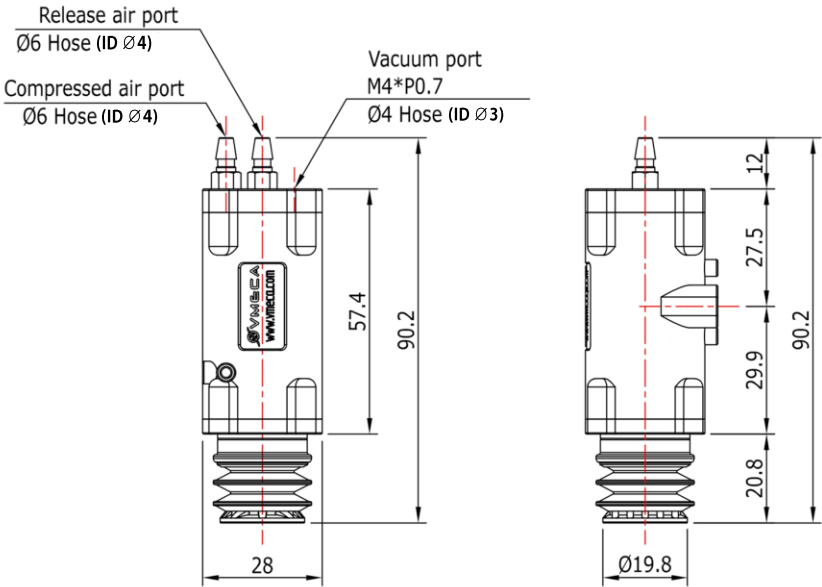


10 04
MV(15)-(02)-N1B20F
[TB1.5-20]

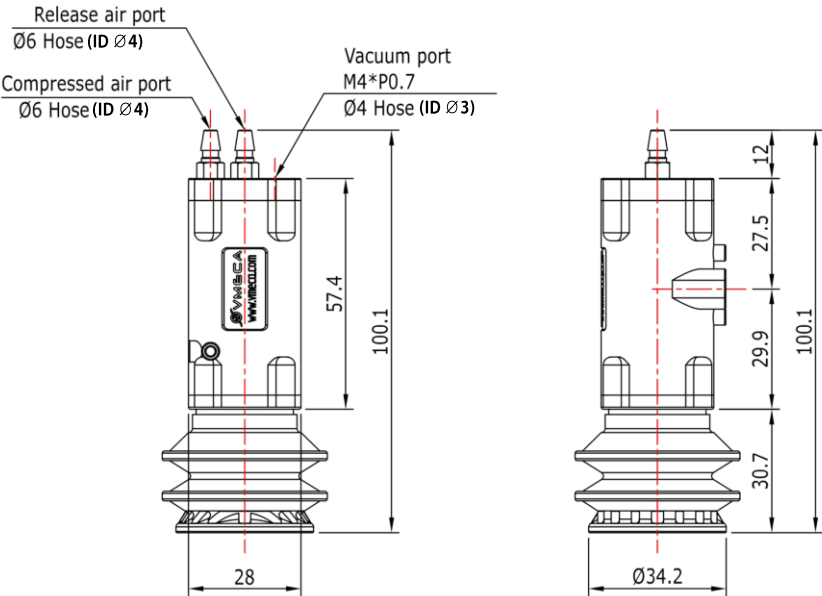
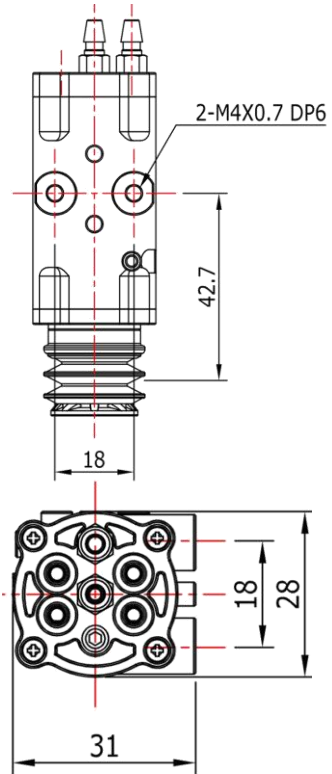


10 04
MV(15)-(02)-N1B40F
[TB1.5-40]

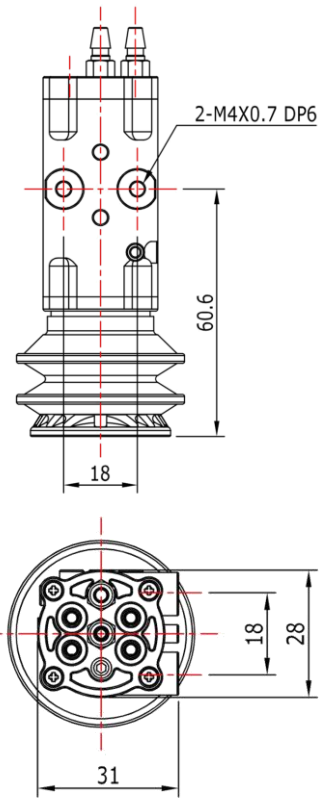
Dimensions - Basic Pump



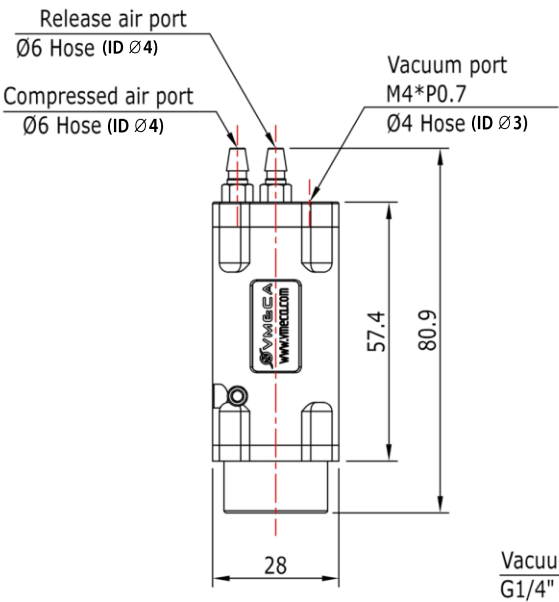
10 04
MV(15)-(02)-N2B20F
[TB2.5-20]



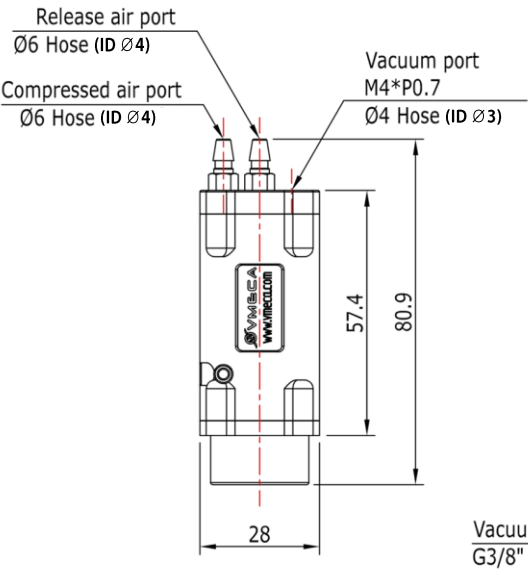
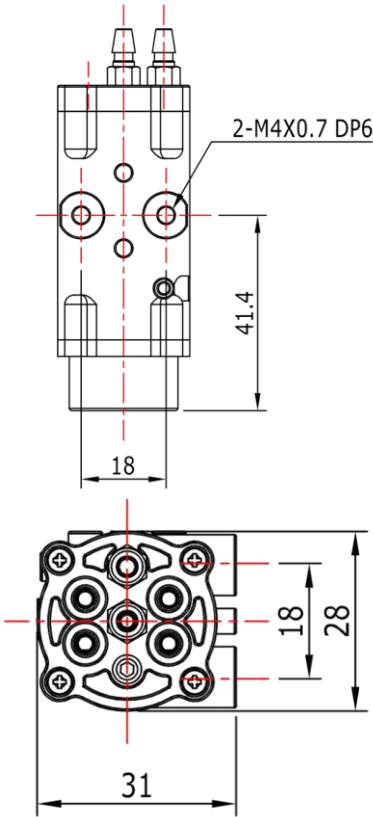
10 04
MV(15)-(02)-N2B40F
[TB2.5-40]



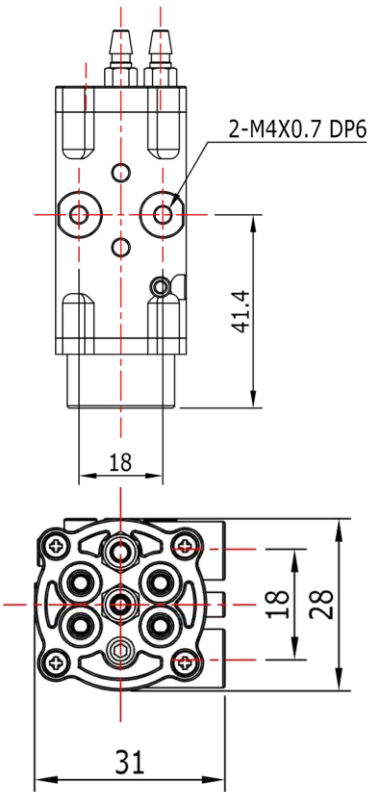
Dimensions - Basic Pump



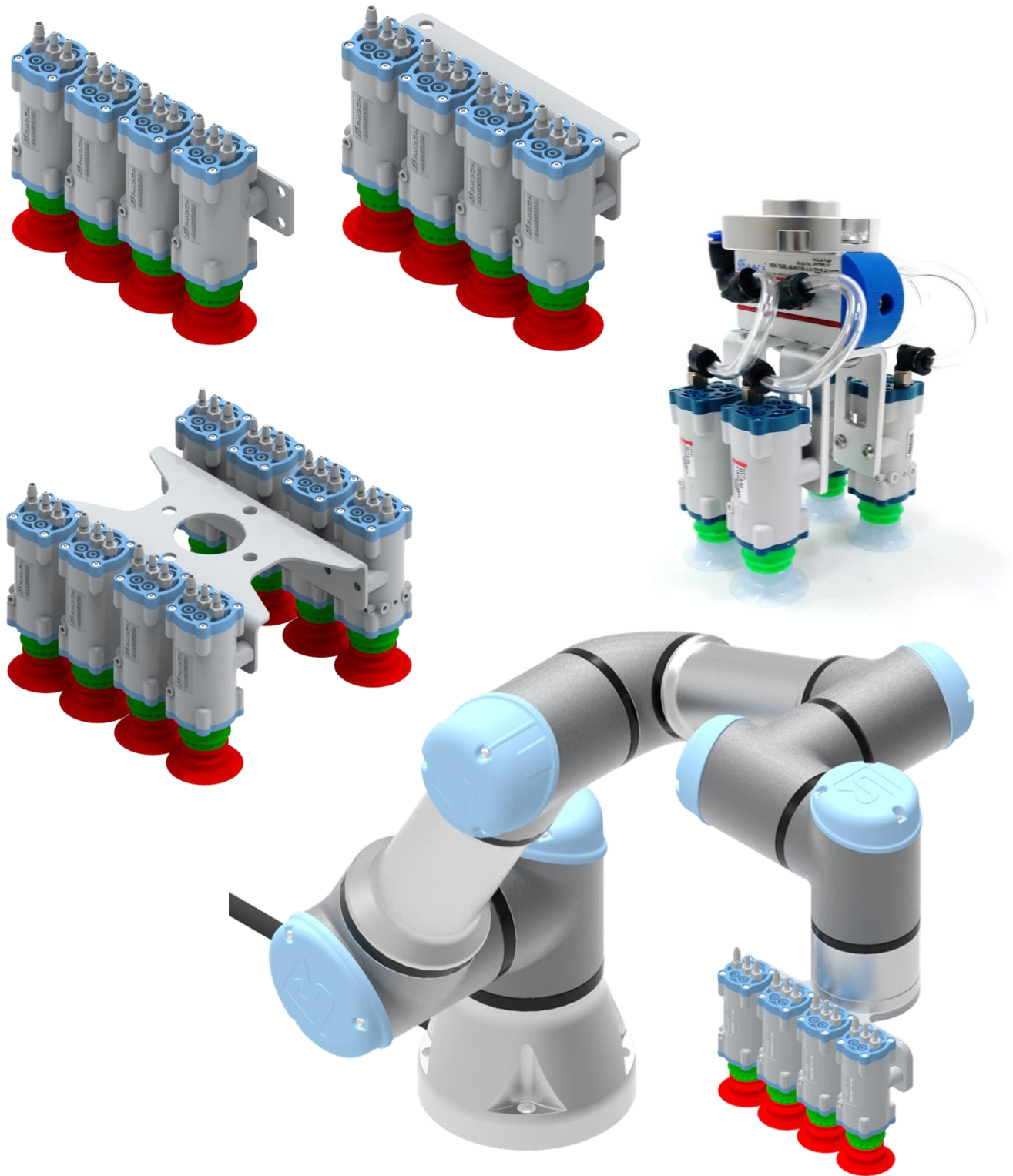
10 04
MV(15)-(02)-14F
[PF1/4" Female]



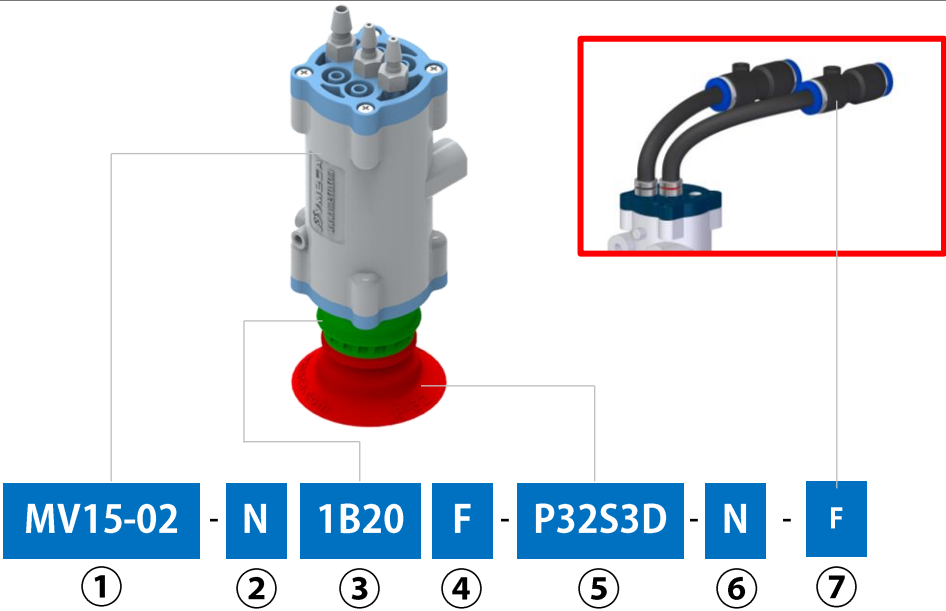
10 04
MV(15)-(02)-38F
[PF3/8" Female]



Applications



Build an Ordering No. (Magic Suction Cup type)



① Base pump	
Symbol	Description
MV10-02	Micro cartridge : VC102 Open vacuum flow : 32 NI/min
MV10-04	Micro cartridge : VC102 Open vacuum flow : 64 NI/min
MV15-02	Micro premium cartridge : VC152 Open vacuum flow : 34 NI/min
MV15-04	Micro premium cartridge : VC152 Open vacuum flow : 68 NI/min

*Please inquire when ordering MV10-01, MV15-01.

② Sealing	
Symbol	Description
N	NBR
E	EPDM
V	Viton

③ Top bellows	
Symbol	Description
1B20*	Top bellows 1 fold, 20mm
1B40*	Top bellows 1 fold, 40mm
2B20*	Top bellows 2 folds, 20mm
2B40*	Top bellows 2 folds, 40mm

*Top bellows 60mm option is not available for MV series.

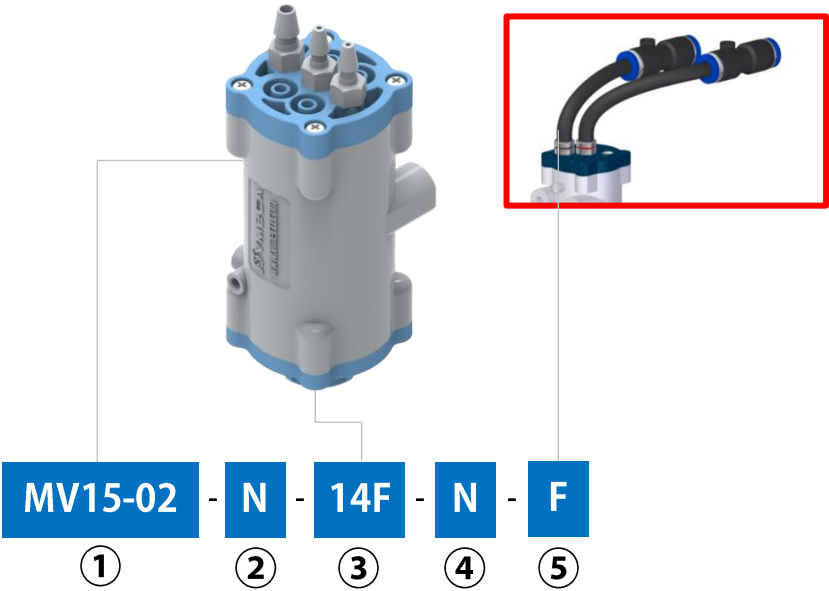
④ Vacuum filter	
Symbol	Description
F	Filter (200 mesh)

⑤ Suction lip	
Symbol	Description
	Refer to Magic Suction Cup catalog

⑥ Non-return valve	
Symbol	Description
Blank	No non-return valve
N	Non-return valve

⑦ Fitting Option	
Symbol	Description
Blank	Standard Fitting
F	100mm Hose + One Touch Fitting (Ø6)

Build an Ordering No. (Suction Cup type)



① Base pump

Symbol	Description
MV10-02	Micro cartridge : VC102 Open vacuum flow : 32 NI/min
MV10-03	Micro cartridge : VC102 Open vacuum flow : 48 NI/min
MV10-04	Micro cartridge : VC102 Open vacuum flow : 64 NI/min
MV15-02	Micro premium cartridge : VC152 Open vacuum flow : 34 NI/min
MV15-03	Micro premium cartridge : VC152 Open vacuum flow : 51 NI/min
MV15-04	Micro premium cartridge : VC152 Open vacuum flow : 68 NI/min

*Please inquire when ordering MV10-01, MV15-01.

② Sealing

Symbol	Description
N	NBR
E	EPDM
V	Viton

③ Top bellows

Symbol	Description
14F	Vacuum port PF1/4" Female
38F	Vacuum port PF3/8" Female

④ Non-return valve

Symbol	Description
Blank	No non-return valve
N	Non-return valve

⑤ Fitting Option

Symbol	Description
Blank	Standard Fitting
F	100mm Hose + One Touch Fitting (Ø6)

MV10S, MV15S Series

Feature

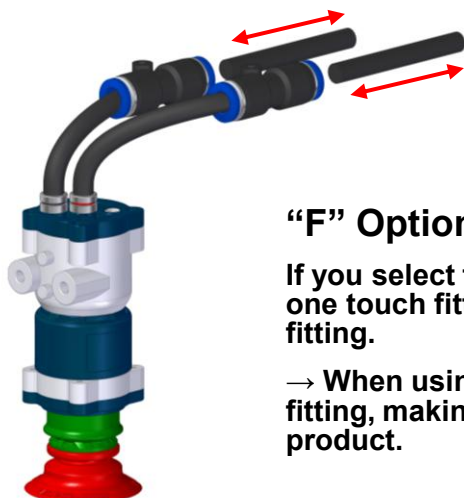
- ▶ Supports up to 4 vacuum cartridges for high vacuum flow rate applications
- ▶ Non return check valve (integrated).
- ▶ Both Magic Suction Cups and Suction Cups are available
- ▶ Options available in manifold type (with bracket) and robot-mounted flange
- ▶ Space-saving vertical design
- ▶ Reduced noise level with built-in two-fold silencer



Specification

Description	MV10S-02	MV10S-04	MV15S-02	MV15S-04
Max. Vacuum level	- 83 kPa	- 83 kPa	- 85 kPa	- 85 kPa
Open Vacuum flow	32 NI/min	64 NI/min	34 NI/min	68 NI/min
Max. Feed pressure	7 bar	7 bar	7 bar	7 bar
Temperature	-20 ~ 80 ° C	-20 ~ 80 ° C	-20 ~ 80 ° C	-20 ~ 80 ° C
Noise level	50 ~ 60 dBA	50 ~ 60 dBA	65 ~ 68 dBA	65 ~ 68 dBA
Weight	40.1 g	40.9 g	39.9 g	40.5 g

Fitting Option



“F” Option

If you select the “F” option, a Ø6 100mm hose and a Ø6 one touch fitting are assembled into the product hose fitting.

→ When using, the hose is connected to the one touch fitting, making it easy to disassemble the hose and product.

Vacuum Flow

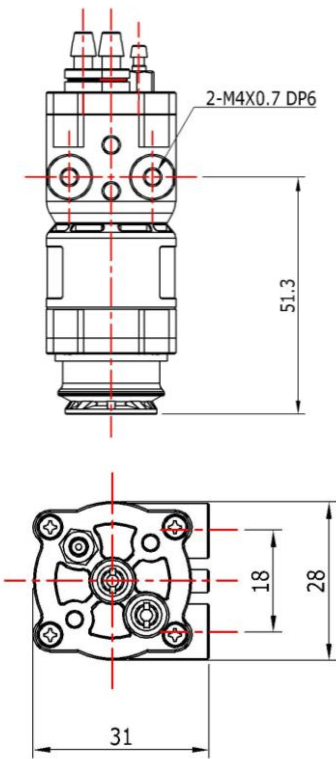
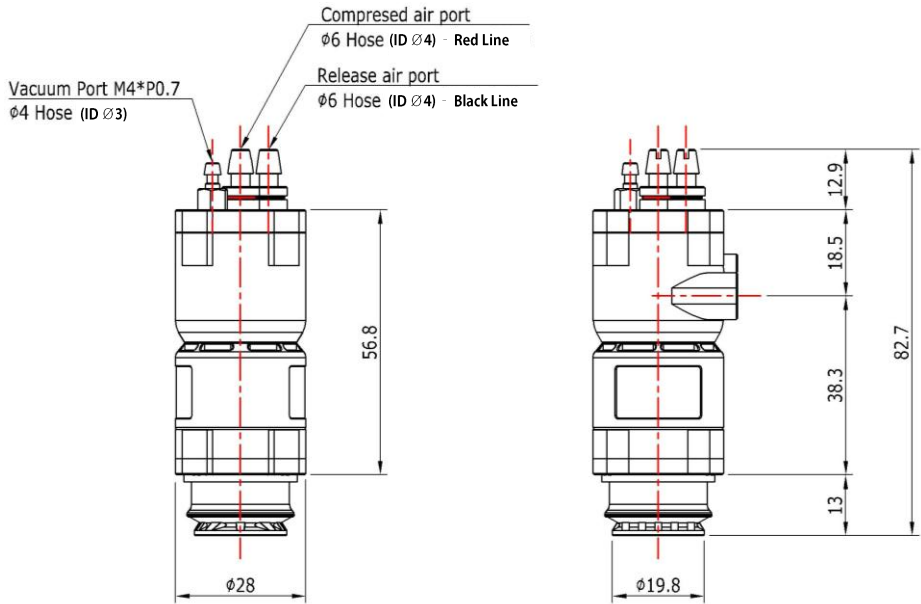
Model	Max. Vacuum (-kPa)	Feed Pressure (bar)	Air Consumption (NI/min)	Vacuum flow (NI/min) at different vacuum levels (-kPa)									
				0	10	20	30	40	50	60	70	80	90
MV10S - 02	50.0	1.1	11.8	23	12.6	4.4	3.2	1.4	-	-	-	-	-
	83.0	1.8	105.4	28.4	18.8	6.6	4.4	4	2.8	1.6	0.8	0.4	-
	83.0	2.2	20	32	23.8	10.2	4.6	2.8	2.6	1.8	0.6	0.2	-
	79.8	3	26	18	15.6	12.4	8.4	5.6	4	2.4	0.6	-	-

Model	Max. Vacuum (-kPa)	Feed Pressure (bar)	Air Consumption (NI/min)	Vacuum flow (NI/min) at different vacuum levels (-kPa)									
				0	10	20	30	40	50	60	70	80	90
MV10S - 04	50.0	1.1	23.6	46	25.2	8.8	6.4	2.8	-	-	-	-	-
	83.0	1.8	32.8	56.8	37.6	13.2	8.8	8	5.6	3.2	1.6	0.8	-
	83.0	2.2	40	64	47.6	20.4	9.2	5.6	5.2	3.6	1.2	0.4	-
	79.8	3	52	36	31.2	24.8	105.8	11.2	8	4.8	1.2	-	-

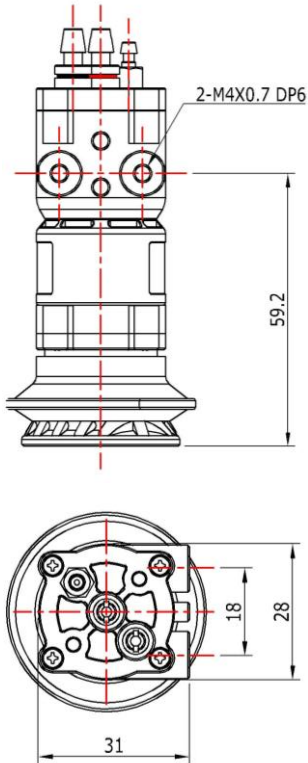
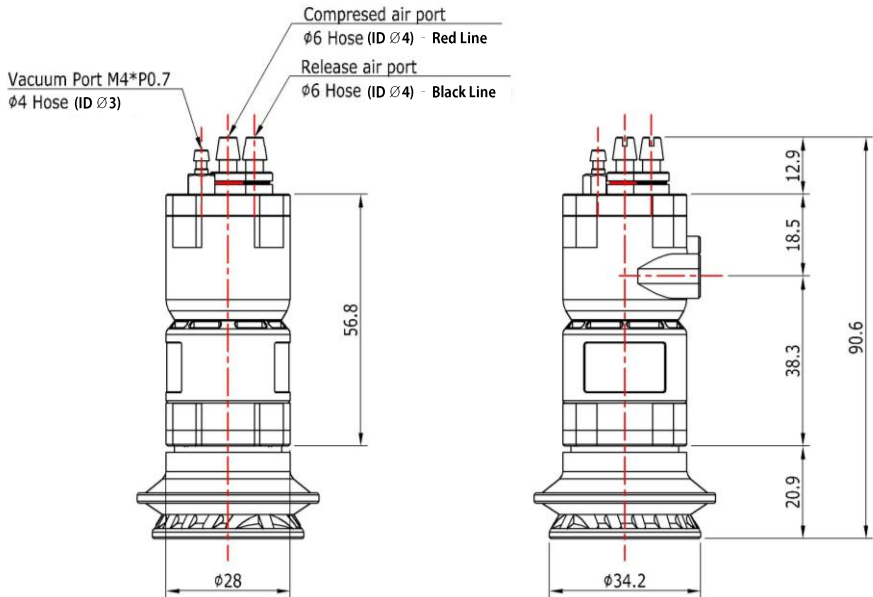
Model	Max. Vacuum (-kPa)	Feed Pressure (bar)	Air Consumption (NI/min)	Vacuum flow (NI/min) at different vacuum levels (-kPa)									
				0	10	20	30	40	50	60	70	80	90
MV15S - 02	66.5	3	26	29.2	21.2	15	12.4	9.8	5.8	2	-	-	-
	87.3	4	32.2	32.6	26.2	155	14.8	12.6	10.4	8.2	5	1.2	-
	85.8	5	37.2	33.8	28	21.2	13.6	11.6	9.8	7.6	4.8	0.8	-

Model	Max. Vacuum (-kPa)	Feed Pressure (bar)	Air Consumption (NI/min)	Vacuum flow (NI/min) at different vacuum levels (-kPa)									
				0	10	20	30	40	50	60	70	80	90
MV15S - 04	66.5	3	52	58.4	42.4	30	24.8	19.6	11.6	4	-	-	-
	87.3	4	64.4	65.2	52.4	34	29.6	25.2	20.8	105.4	10	2.4	-
	85.8	5	74.4	67.6	56	42.4	27.2	23.2	19.6	15.2	9.6	1.6	-

Dimensions - Basic Pump

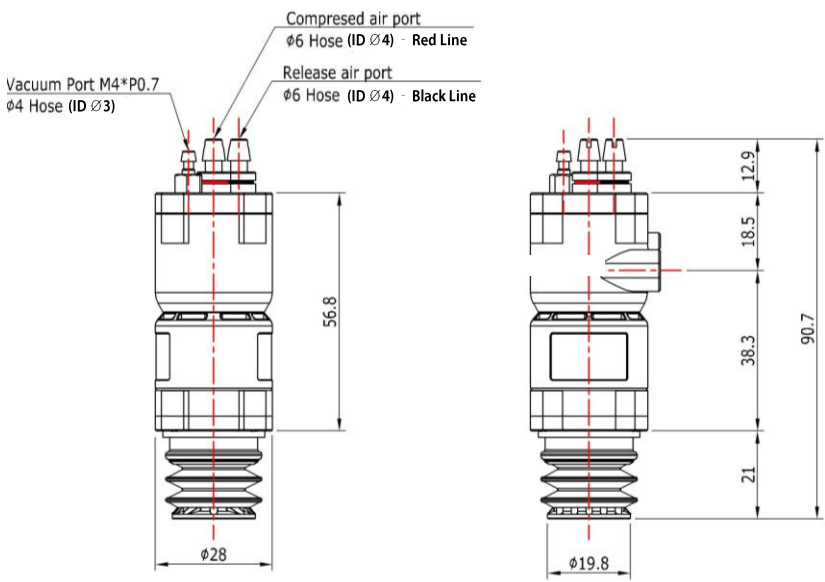


10S 02
MV(15S)-(04)-N1B20F
[TB1.5-20]

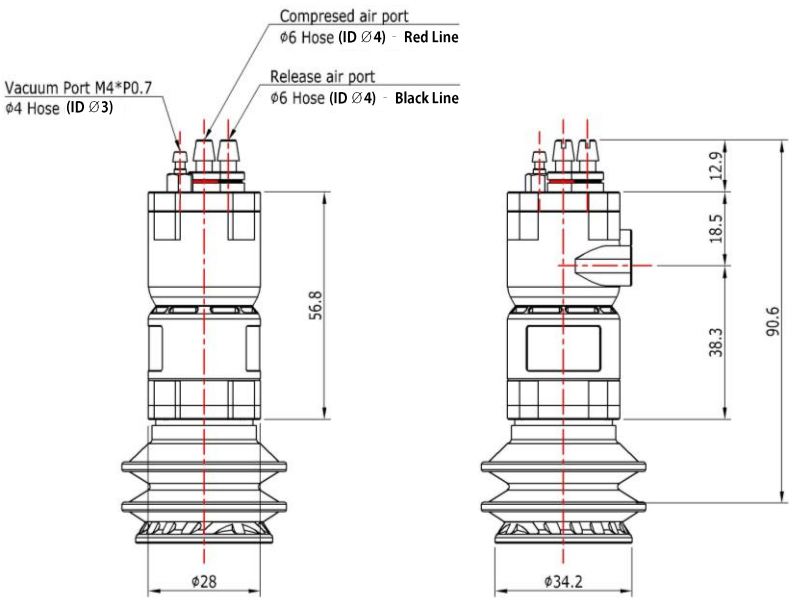
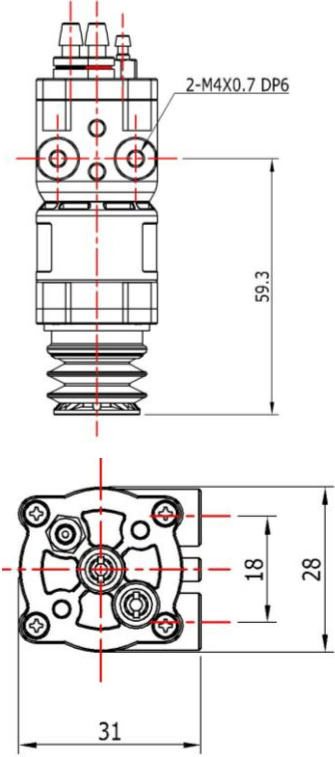


10S 02
MV(15S)-(04)-N1B40F
[TB2.5-20]

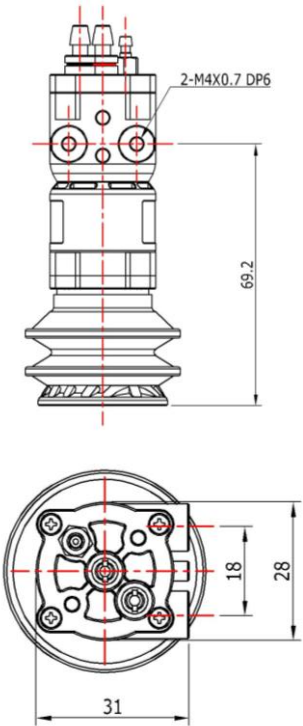
Dimensions - Basic Pump



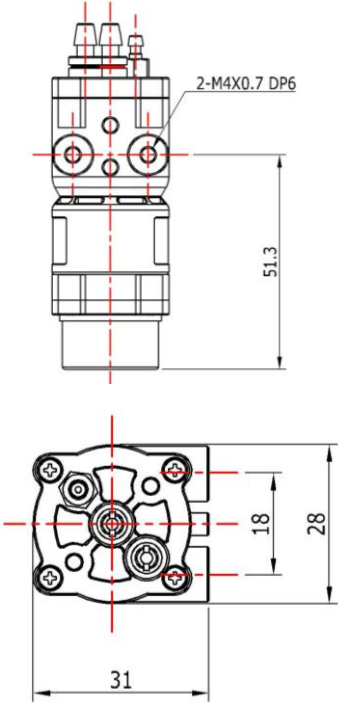
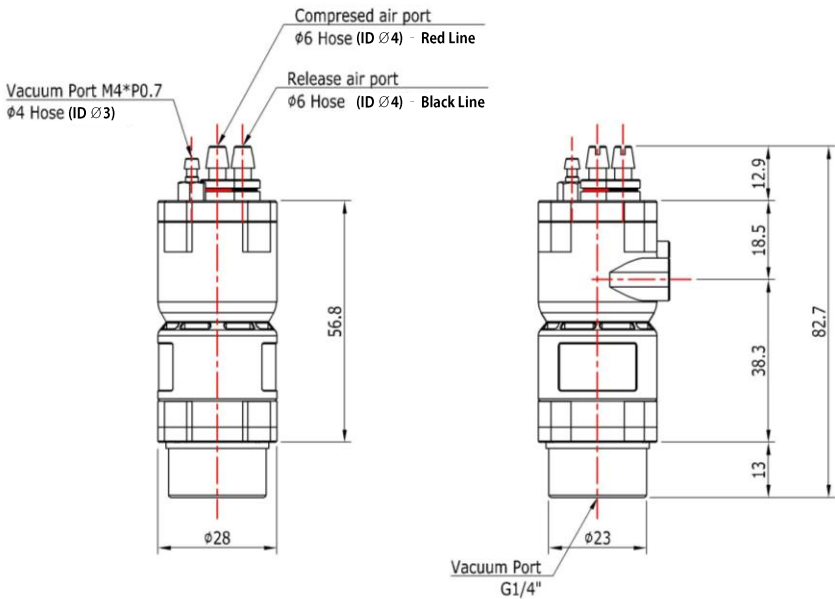
10S 02
MV(15S)-(04)-N2B20F
[TB1.5-20]



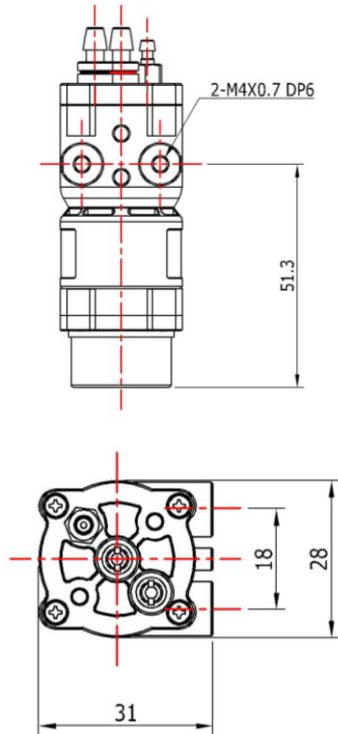
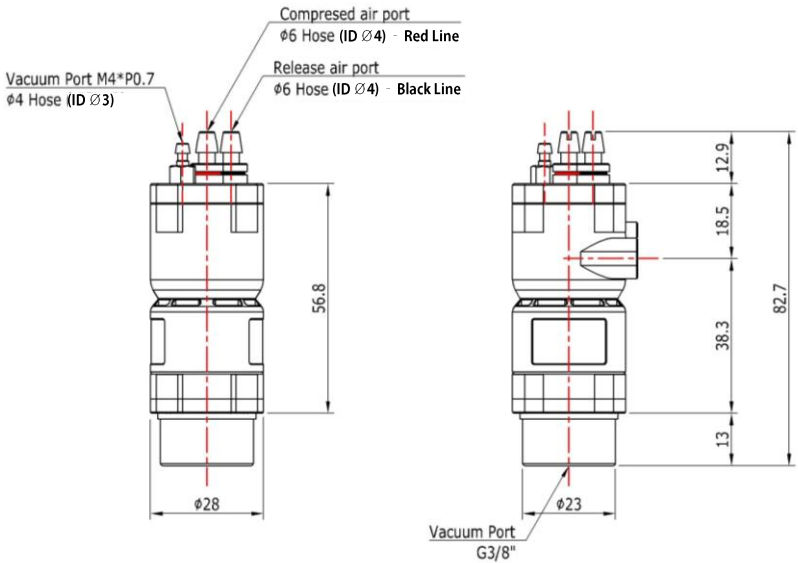
10S 02
MV(15S)-(04)-N2B40F
[TB2.5-20]



Dimensions - Basic Pump

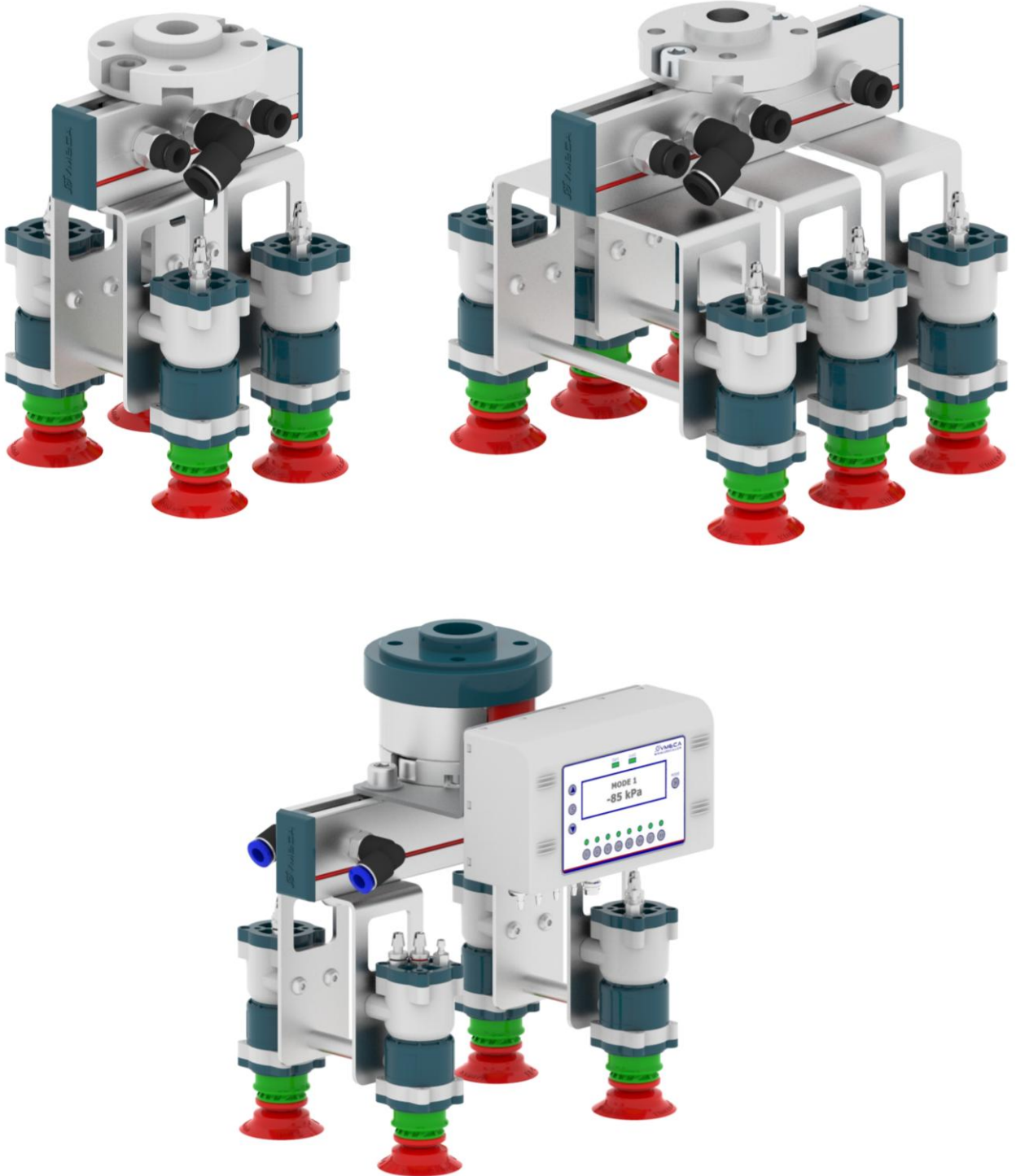


10S 02
MV(15S)-(04)-14F
[PF1/4" Female]

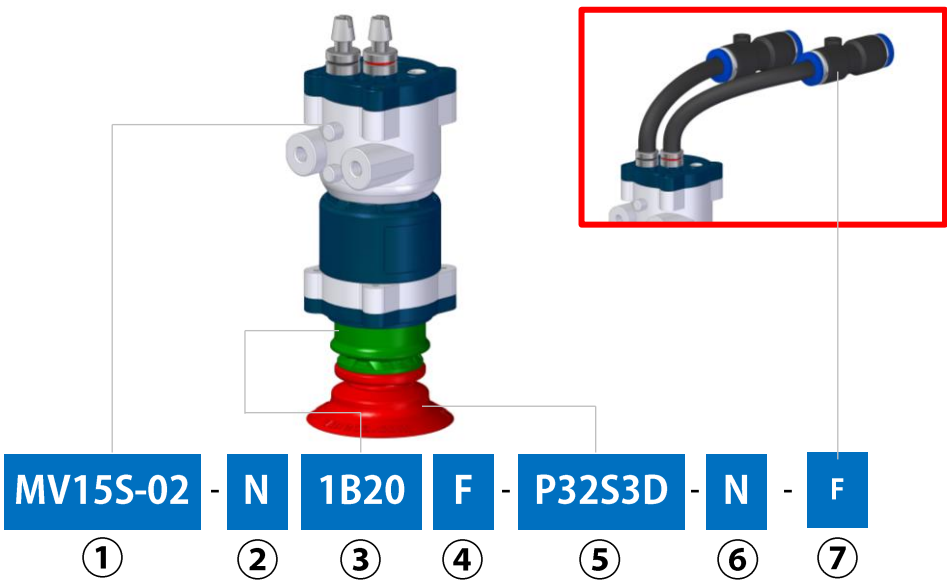


10S 02
MV(15S)-(04)-38F
[PF3/8" Female]

Applications



Build an Ordering No. (Magic Suction Cup type)



① Base pump	
Symbol	Description
MV10S-02	Micro cartridge : VC102 Open vacuum flow : 32 NI/min
MV10S-04	Micro cartridge : VC102 Open vacuum flow : 64 NI/min
MV15S-02	Micro premium cartridge : VC152 Open vacuum flow : 34 NI/min
MV15S-04	Micro premium cartridge : VC152 Open vacuum flow : 68 NI/min

*Please inquire when ordering MV10-01, MV15-01.

② Sealing	
Symbol	Description
N	NBR
E	EPDM
V	Viton

③ Top bellows	
Symbol	Description
1B20*	Top bellows 1 fold, 20mm
1B40*	Top bellows 1 fold, 40mm
2B20*	Top bellows 2 folds, 20mm
2B40*	Top bellows 2 folds, 40mm

*Top bellows 60mm option is not available for MV series.

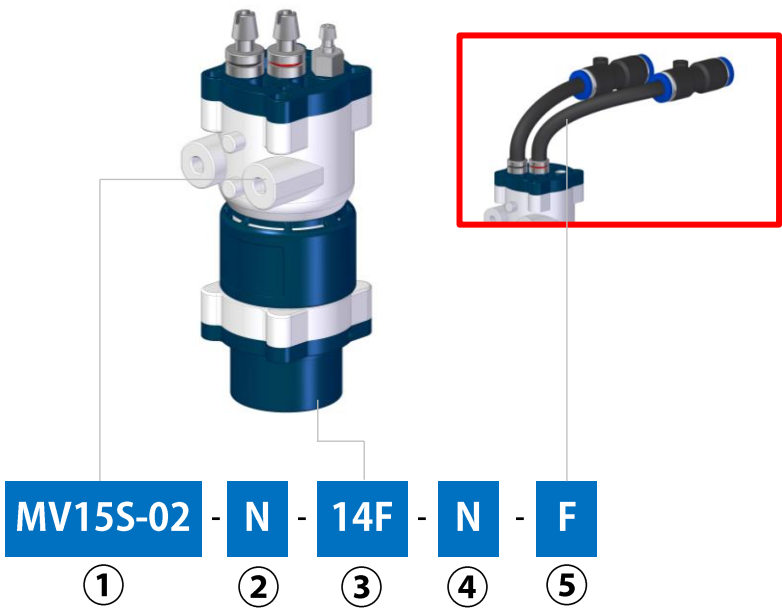
④ Vacuum filter	
Symbol	Description
F	Filter (200 mesh)

⑤ Suction lip	
Symbol	Description
	Refer to Magic Suction Cup catalog

⑥ Non-return valve	
Symbol	Description
Blank	No non-return valve
N	Non-return valve

⑦ Fitting Option	
Symbol	Description
Blank	Standard Fitting
F	100mm Hose + One touch fitting (Ø6)

Build an Ordering No. (Suction Cup type)



① Base pump

Symbol	Description
MV10S-02	Micro cartridge : VC102 Open vacuum flow : 32 NI/min
MV10S-03	Micro cartridge : VC102 Open vacuum flow : 48 NI/min
MV10S-04	Micro cartridge : VC102 Open vacuum flow : 64 NI/min
MV15S-02	Micro premium cartridge : VC152 Open vacuum flow : 34 NI/min
MV15S-03	Micro premium cartridge : VC152 Open vacuum flow : 51 NI/min
MV15S-04	Micro premium cartridge : VC152 Open vacuum flow : 68 NI/min

*Please inquire when ordering MV10-01, MV15-01.

② Sealing

Symbol	Description
N	NBR
E	EPDM
V	Viton

③ Top bellows

Symbol	Description
14F	Vacuum port PF1/4" Female
38F	Vacuum port PF3/8" Female

④ Non-return valve

Symbol	Description
Blank	No non-return valve
N	Non-return valve

⑤ Fitting Option

Symbol	Description
Blank	Standard Fitting
F	100mm Hose + One touch fitting (Ø6)

MV20 Series

Feature

- ▶ Supports up to 4 vacuum cartridges for high vacuum flow rate applications
- ▶ Non return check valve (integrated).
- ▶ Both Magic Suction Cups and Suction Cups are available
- ▶ Options available in manifold type (with bracket) and robot-mounted flange
- ▶ Space-saving vertical design
- ▶ Reduced noise level with built-in two-fold silencer



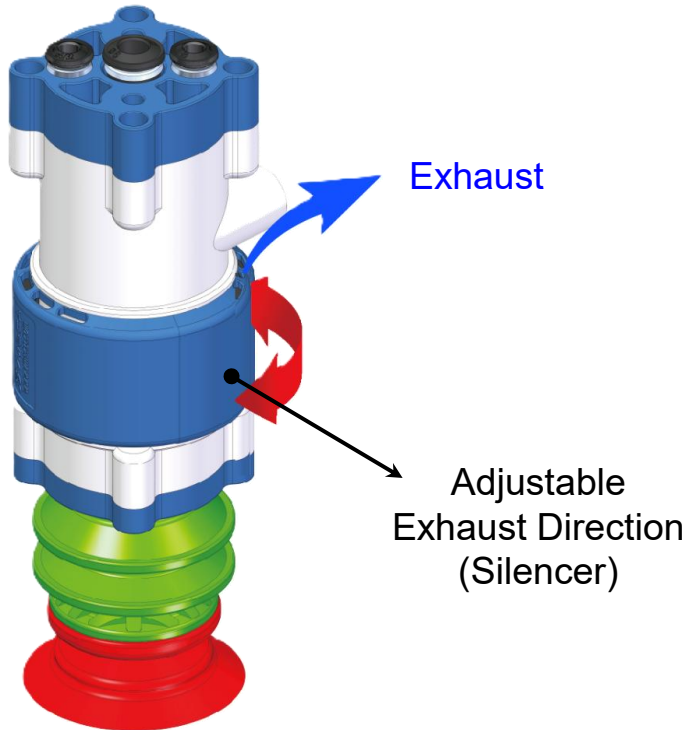
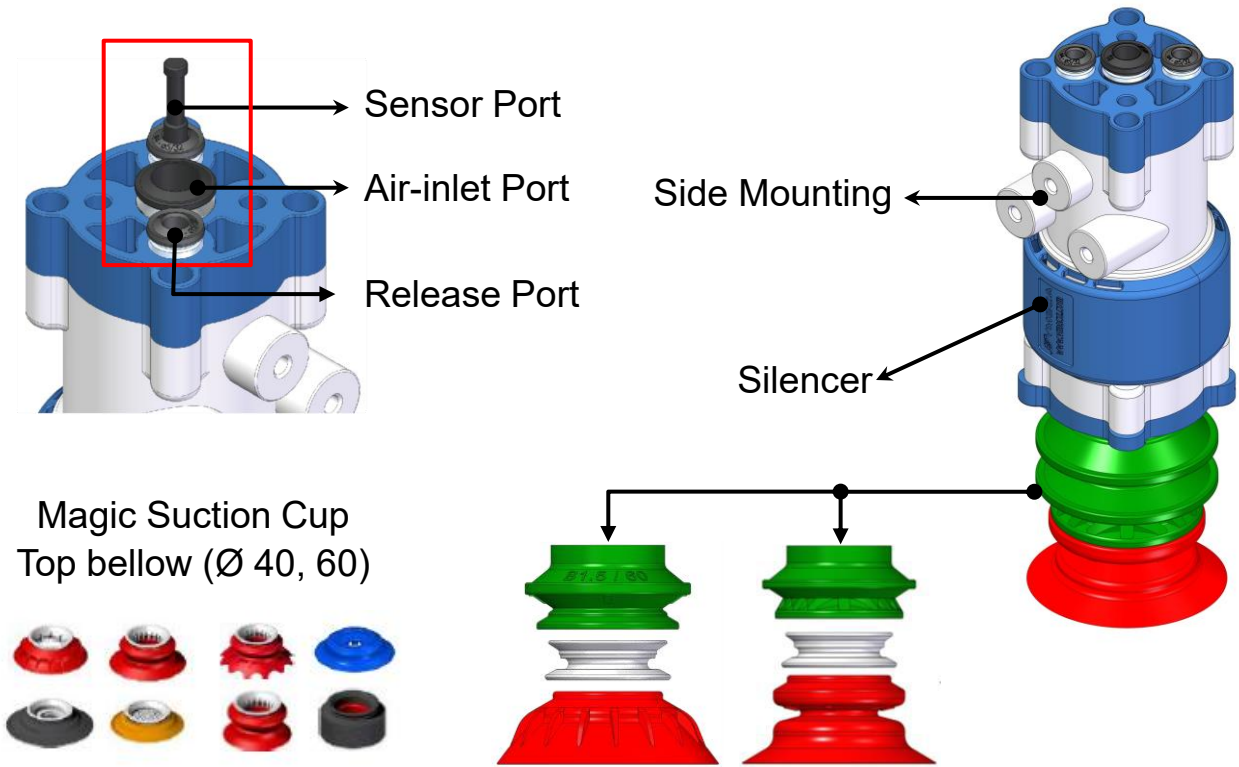
Specification

Description	MV20-02	MV20-04
Max. Vacuum level	- 89.1 kPa	- 89.4 kPa
Open Vacuum flow	80.7 NI/min	122 NI/min
Max. Feed pressure	7 bar	7 bar
Temperature	-20 ~ 80 ° C	-20 ~ 80 ° C
Noise level	50 ~ 60 dBA	50 ~ 60 dBA
Weight	143 g	145 g

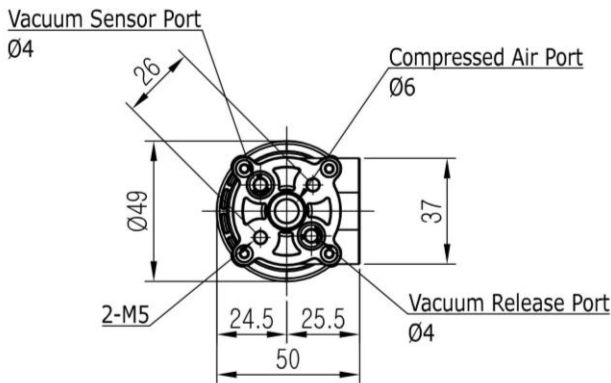
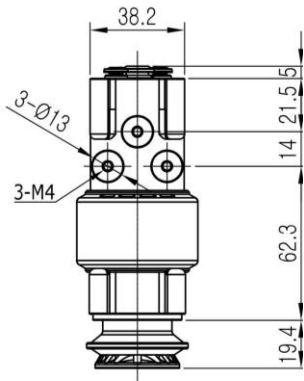
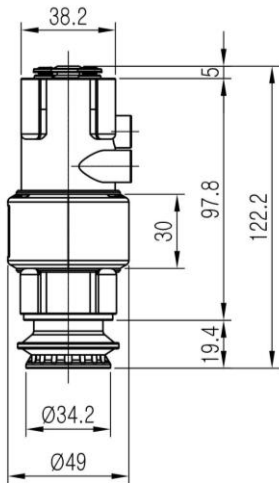
Vacuum Flow

Model	Max. Vacuum (-kPa)	Feed Pressure (bar)	Air Consumption (NI/min)	Vacuum flow (NI/min) at different vacuum levels (-kPa)								
				0	10	20	30	40	50	60	70	80
MV20 - 02	81.6	3	67	64.5	55.2	44.3	34.7	29.2	24.7	21.5	10.6	2.6
	89.1	3.6	77	79.3	67.3	51.6	36.2	30.2	25.8	23.4	16.8	8.3
	88	4	82.5	76.6	65.8	51.6	39.3	29.2	24.4	23.1	16.8	7.1
	86.5	5	98	79.6	69.2	57.5	46.8	33	25	22.6	14.4	4.6
	84.7	6	112	80.7	72.4	64	50	37.7	27	22.4	12.5	3.5
MV20 - 04	76.4	3	104	108	85	66	55.1	46.7	34.2	23.4	11.2	-
	89.4	3.8	121	119	98	71	56.1	50.2	45.4	32.2	24.6	13.7
	88.7	4	125	120	99	72	56.2	50.2	43.7	31.8	24.8	12.7
	87.1	5	150	122	104	83	72.6	51	38.5	30.4	24.3	10.4
	85.7	6	173	122	110	95	87.7	63.8	47.2	32.6	23.6	8.1

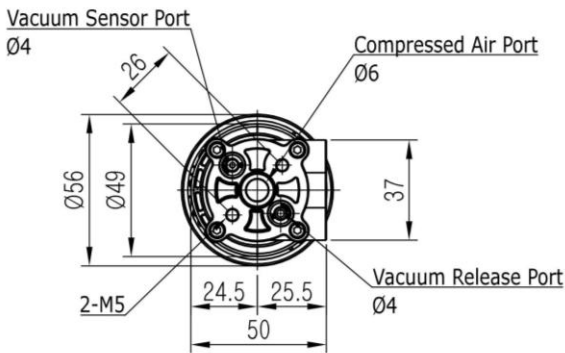
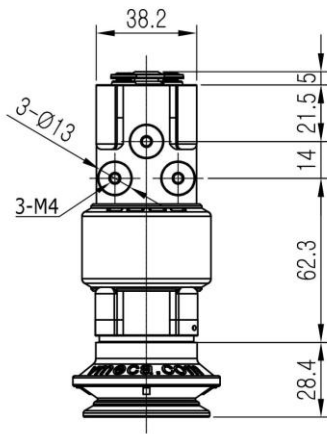
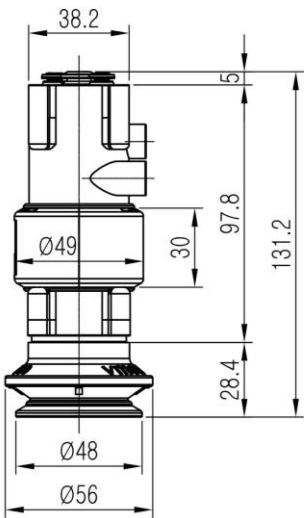
Structure & Installation



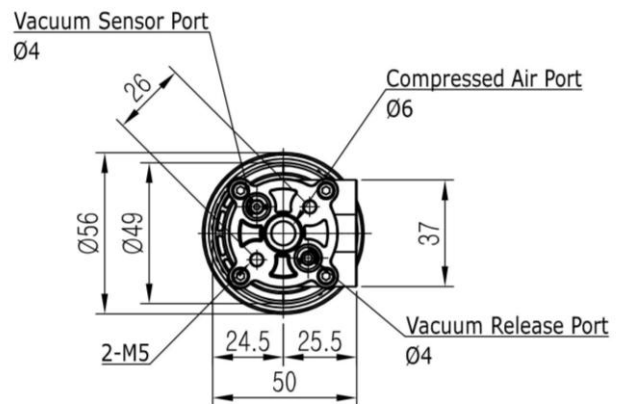
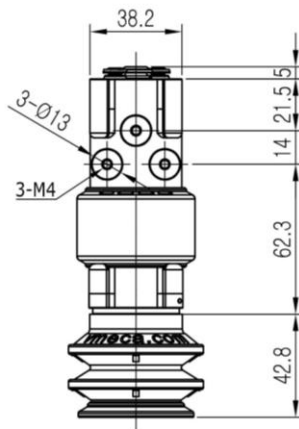
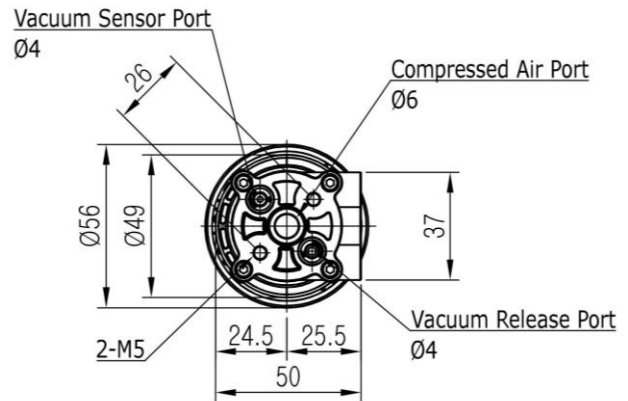
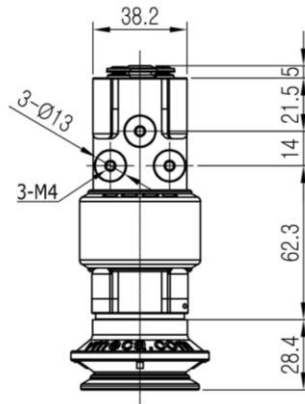
Dimensions - Basic Pump



04
MV20-(02)-N1B40F
[TB1.5-40]

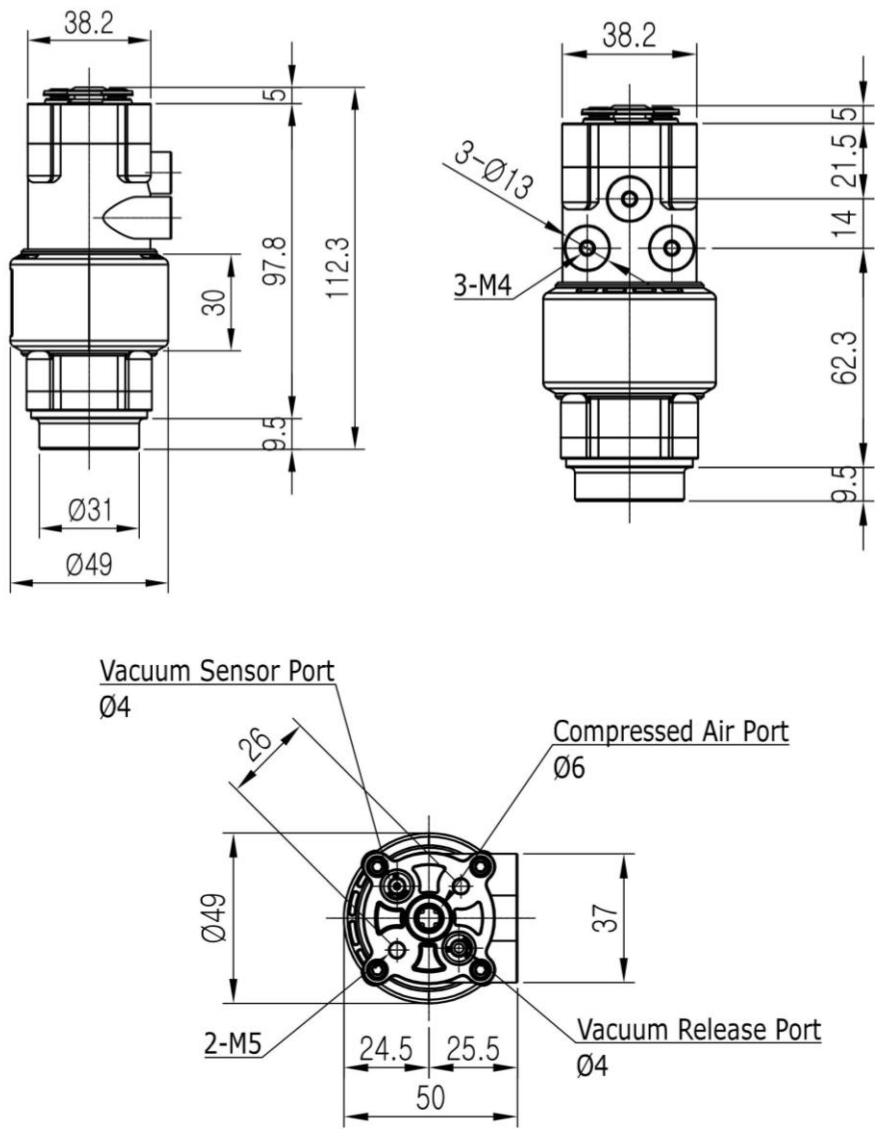


04
MV20-(02)-N1B60F
[TB1.5-60]



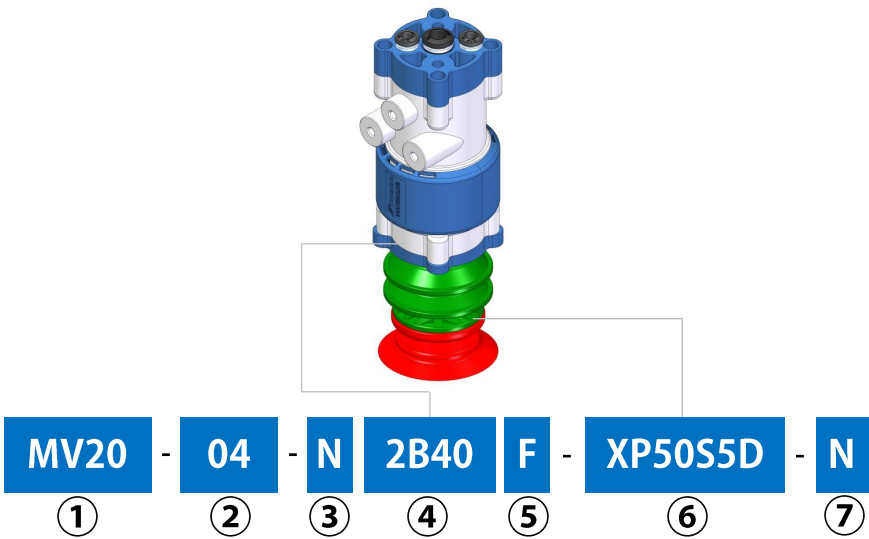
21

Dimensions - Basic Pump



04
MV20-(02)-12F
[PF1/2" Female]

Build an Ordering No. (Magic Suction Cup type)



① Base pump	
Symbol	Description
MV20	Mini cartridge 2-Stage

② Body type	
Symbol	Description
02	Vacuum Flow Max. 80.7 NI/min
04	Vacuum Flow Max. 122 NI/min

③ Sealing	
Symbol	Description
N	NBR
E	EPDM
V	Viton

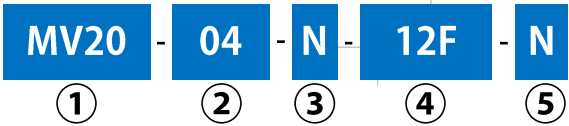
④ Top bellows	
Symbol	Description
1B40	Top bellows 1 fold, 40mm
1B60	Top bellows 1 fold, 60mm
2B40	Top bellows 2 folds, 40mm
2B60	Top bellows 2 folds, 60mm

⑤ Vacuum filter	
Symbol	Description
F	Filter (200 mesh)

⑥ Suction lip	
Symbol	Description
	Please refer to the Magic Cup catalog

⑦ Non-return valve	
Symbol	Description
Blank	Without non-return valve
N	Non-return valve

Build an Ordering No. (Suction Cup type)



① Base pump

Symbol	Description
MV20	Micro cartridge 2-Stage

② Body type

Symbol	Description
02	Vacuum Flow Max. 80.7 NI/min
04	Vacuum Flow Max. 122 NI/min

③ Sealing

Symbol	Description
N	NBR
E	EPDM
V	Viton

④ Top bellows

Symbol	Description
1B40	Top bellows 1 fold, 40mm
1B60	Top bellows 1 fold, 60mm
2B40	Top bellows 2 folds, 40mm
2B60	Top bellows 2 folds, 60mm

⑤ Non-return valve

Symbol	Description
Blank	Without non-return valve
N	Non-return valve

