

# Compact Vacuum Ejectors



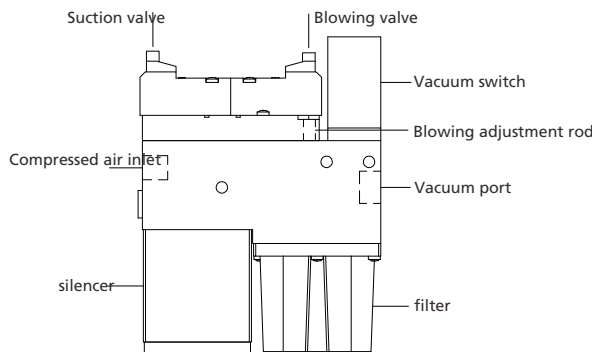
## Compact Vacuum Ejectors MMP

Suction capacity: 65 L/min to 200 L/min

Compact Vacuum Ejectors MMP



System Design Compact Vacuum Ejectors MMP



### Introduction and application

- ◆ Compact ejector for handling of airtight and slightly porous workpieces
- ◆ Suitable for handling metal sheets, packaging machinery and industrial robots in the automotive industry
- ◆ Pick-and-place applications with very short cycle times (due to the powerful blowing function, the workpiece can be quickly released)

### Design

- ◆ Basic body made from anodized aluminum; Composed of filter, silencer, two solenoid valves (suction/blowing), check valve
- ◆ Strong blowing function, the release time is reduced by about 50%
- ◆ can be normally open (NO) or closed (NC)
- ◆ Optional digital (VD) vacuum switch
- ◆ Suitable for filtered and oil-free compressed air (4-6bar)

### Ordering Data Compact Vacuum Ejectors MMP

Type	Nozzle size [mm]	Initial state of the blow valve	Blow valve and safety valve	System monitoring
MMP 15...	15=1.5mm			
MMP 20...	20=2.0mm	NC [ normally open ]	AS [ Blow valve and safety check valve ]	VD [ Digital vacuum switch ]
MMP 25...	25=2.5mm	NO [ normally closed ]		
MMP 30...	30=3.0mm			

### Ordering Data Accessories Compact Vacuum Ejectors MMP

Type	Solenoid valve connection nipple	Replaced silencer	Replacement filter cartridge
MMP 15 NO/NC AS	90.90.19.00005	90.05.03.00009	90.90.03.00005
MMP 15 NO/NC AS VD	90.90.19.00005	90.05.03.00009	90.90.03.00005
MMP 20 NO/NC AS	90.90.19.00005	90.05.03.00009	90.90.03.00005
MMP 20 NO/NC AS VD	90.90.19.00005	90.05.03.00009	90.90.03.00005
MMP 25 NO/NC AS	90.90.19.00005	90.05.03.00034	90.05.03.00005
MMP 25 NO/NC AS VD	90.90.19.00005	90.05.03.00034	90.05.03.00005
MMP 30 NO/NC AS	90.90.19.00005	90.05.03.00034	90.05.03.00005
MMP 30 NO/NC AS VD	90.90.19.00005	90.05.03.00034	90.05.03.00005

Combined Suction Cups

Vacuum Suction Cups

Composite Suction Cups

Special Grippers

Vacuum Gripping Systems

Mounting Elements

Vacuum Generators

Valve Technology

Switch And Monitoring

Vacuum Filters

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MMP 15... Type	Ordering Data	MMP 20... Type	Ordering Data
MMP 15 NO AS	90.05.01.00051	MMP 20 NO AS	90.05.01.00061
MMP 15 NC AS	90.05.01.00052	MMP 20 NC AS	90.05.01.00062
MMP 15 NO AS VD	90.05.01.00055	MMP 20 NO AS VD	90.05.01.00065
MMP 15 NC AS VD	90.05.01.00056	MMP 20 NC AS VD	90.05.01.00066

MMP 25... Type	Ordering Data	MMP 30... Type	Ordering Data
MMP 25 NO AS	90.05.01.00071	MMP 30 NO AS	90.05.01.00081
MMP 25 NC AS	90.05.01.00072	MMP 30 NC AS	90.05.01.00082
MMP 25 NO AS VD	90.05.01.00075	MMP 30 NO AS VD	90.05.01.00085
MMP 25 NC AS VD	90.05.01.00076	MMP 30 NC AS VD	90.05.01.00086

### Technical Data Compact Vacuum Ejectors MMP

Type	Nozzle size [ mm ]	Vacuum [ % ]	Maximum suction capacity [ l/min ]	Suction capacity [ m³/h ]	Air consumption suction [ l/min ]	Air consumption suction [ m³/h ]	Maximum air consumption suction [ l/min ]
MMP 15...	1.5	85	65	3.9	117	7.0	220
MMP 20...	2.0	85	116	7.0	190	11.4	220
MMP 25...	2.5	85	161	9.7	310	18.6	220
MMP 30...	3.0	85	200	12.0	420	25.2	220

Type	Noise level suction [ dB ]	Noise level free [ dB ]	operating pressure [ bar ]	Recomm. internal hose diameter compressed air [ mm ]	Recomm. internal hose diameter vacuum [ mm ]	Weight [ g ]	Operating temperature [ °C ]
MMP 15...	74	74	5...6	4	6	465	0...45
MMP 20...	76	78	5...6	4	9	465	0...45
MMP 25...	72	82	5...6	6	9	485	0...45
MMP 30...	82	82	5...6	9	11	485	0...45

### Suction capacity for various vacuum ranges [ l/min ]

Type	Vacuum [mbar]										
	0	-50	-100	-200	-300	-400	-500	-600	-700	-800	
MMP 15...	65	62.0	58.0	50.0	41.0	32.0	21.0	16.0	9.0	4.0	
MMP 20...	116	108.0	101.0	90.0	78.0	63.0	48.0	36.0	18.0	5.0	
MMP 25...	161	149.0	136.0	123.0	107.0	86.0	66.0	49.0	25.0	7.0	
MMP 30...	200	184.0	168.0	153.0	132.0	107.0	82.0	61.0	31.0	9.0	

### Suction capacity for various vacuum ranges [ s/l ]

Type	Vacuum [mbar]									
	-50	-100	-200	-300	-400	-500	-600	-700	-800	
MMP 15...	0.048	0.088	0.184	0.311	0.480	0.744	1.120	1.692	3.606	
MMP 20...	0.026	0.047	0.095	0.159	0.239	0.349	0.499	0.807	1.652	
MMP 25...	0.015	0.027	0.055	0.089	0.135	0.198	0.288	0.486	0.960	
MMP 30...	0.012	0.021	0.044	0.071	0.108	0.160	0.232	0.392	0.810	

- Combined Suction Cups
- Vacuum Suction Cups
- Composite Suction Cups
- Special Grippers
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- Mounting Elements
- Vacuum Generators
- Valve Technology
- Switch And Monitoring
- Vacuum Filters

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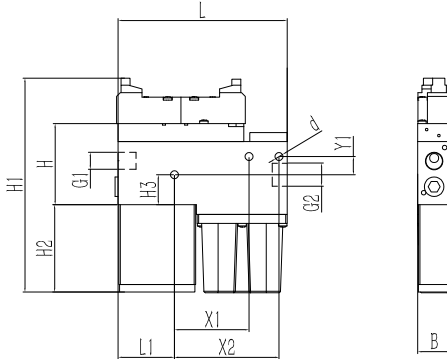


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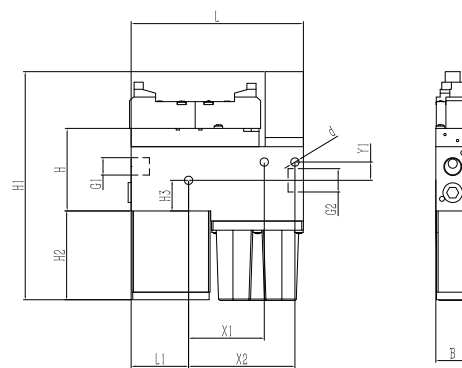
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### Design Data Compact Vacuum Ejectors MMP

MMP 15 to 30 NC/NO AS



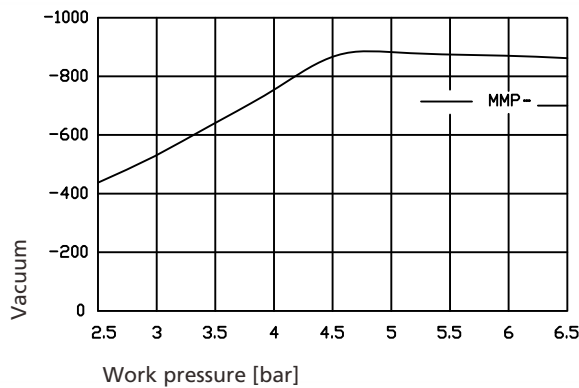
MMP 15 to 30 NC/NO AS VD



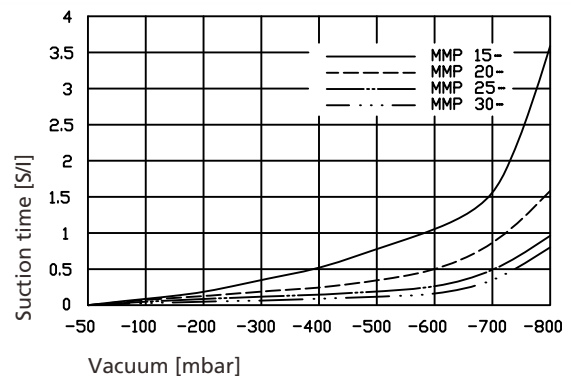
Type	Dimensions [mm]												
	B	d	G1	G2	H	H1	H2	H3	L	L1	X1	X2	Y1
MMP15 NC/NO AS	22.0	5.5	G1/4"-F	G3/8"-F	54	142.5	58.5	20	112.5	37.5	49.5	69.5	12
MMP 20 NC/NO AS	22.0	5.5	G1/4"-F	G3/8"-F	54	142.5	58.5	20	112.5	37.5	49.5	69.5	12
MMP 25 NC/NO AS	22.0	5.5	G1/4"-F	G3/8"-F	54	157.5	73.5	20	112.5	37.5	49.5	69.5	12
MMP 30 NC/NO AS	22.0	5.5	G1/4"-F	G3/8"-F	54	157.5	73.5	20	112.5	37.5	49.5	69.5	12
MMP 15 NC/NO AS VD	22.0	5.5	G1/4"-F	G3/8"-F	54	149.5	58.5	20	112.5	37.5	49.5	69.5	12
MMP 20 NC/NO AS VD	22.0	5.5	G1/4"-F	G3/8"-F	54	149.5	58.5	20	112.5	37.5	49.5	69.5	12
MMP 25 NC/NO AS VD	22.0	5.5	G1/4"-F	G3/8"-F	54	164.5	73.5	20	112.5	37.5	49.5	69.5	12
MMP 30 NC/NO AS VD	22.0	5.5	G1/4"-F	G3/8"-F	54	164.5	73.5	20	112.5	37.5	49.5	69.5	12

### Performance curve Compact Vacuum Ejectors MMP

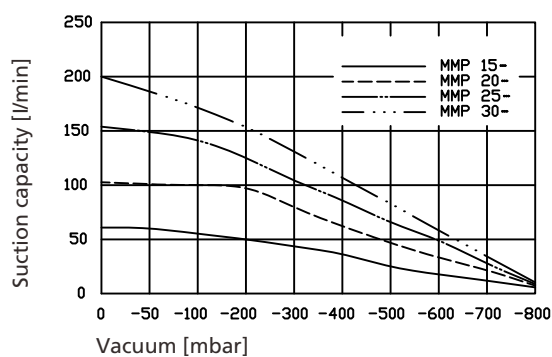
Vacuum ranges for various operating pressures



Suction times for various vacuum ranges



Suction capacity for various vacuum ranges



Combined Suction Cups

Vacuum Suction Cups

Composite Suction Cups

Special Grippers

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