

MPM pump (Mega PM)



Suitable for handling

Features & Strengths

- ▶ Integrated with VMECA cartridge pump – Easily mountable and maintainable
- ▶ High vacuum flow with low energy consumption
- Available to replace 4kw(5Hp) electric motor pump
- ▶ Very low sound level
- ▶ Durable and light aluminum body

Products Structure

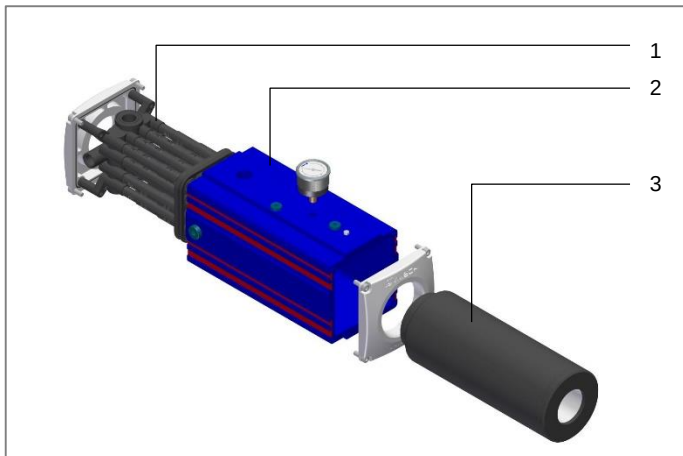
- ▶ VMECA Cartridge pump¹⁾ integrated
- ▶ Durable & light weight aluminum body²⁾
- ▶ VMECA innovative Silencer³⁾ for low sound level

Applications

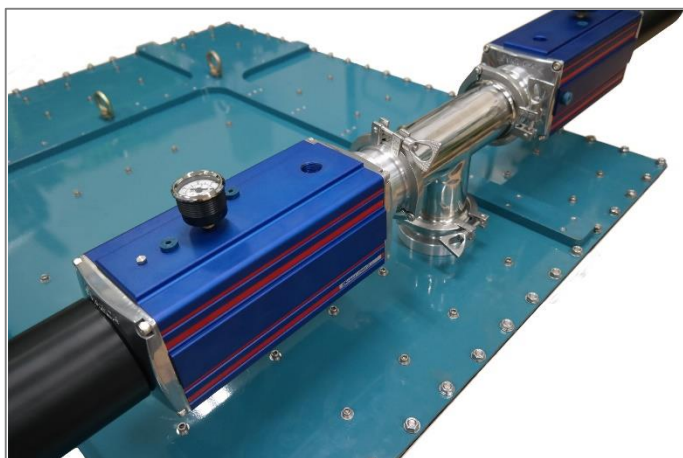
- ▶ Replacement for electric motor pump
- ▶ Metal sheet transfer
- ▶ Carton box
- ▶ Semiconductor industry
- ▶ Wood panel
- ▶ Electronic components
- ▶ Semiconductor machine



MPM pump – High capacity to replace 4kw(5Hp) motor pump



Products Structure of MPM pump



MPM pump being used for VGRIP system

MPM pump (Mega PM)

Designation Ordering No.

Model	Vacuum port	Silencer	Air Saving kit**	Air control valve - Voltage***	Release control valve - Voltage***	Solenoid Terminal***	Vacuum Switch***	Non-return Valve	Sealing
MPM303x6 MPM303x8 MPM303x10 MPM303x12 MPM303x14 MPM303x16	02 – G1½ “ 03 – G2” 04 – G2½ “	(No mark)* S	(No mark)* AS ASV	A3 – DC24V	R3 – DC24V	DN DL 2B 3B 4B	(No mark)* S2 S2P SG2 SG2P SG3 SGP	(No mark)* N	(No mark)* V – Viton E – EPDM
Example) MPM303x16-02 or MPM303x16-03S-ASV-A3R3-DL-S2									

* No mark means Standard.

** In Air Saving kit section, AS option is not available for Air control valve and ASV option is with Air control valve.

** In AS (ASV) kit option, Non-return valve automatically added – No necessary to mark “N” on Model Ordering Designation.

*** For additional valve & switch information, section “Valve and Switch” on request.

High vacuum flow – MPM pump

Model	Code	Model	Code
MPM303x6-02S	1B81 0100 000	MPM303x6-04S	1B81 0300 000
MPM303x8-02S	1B82 0100 000	MPM303x8-04S	1B82 0300 000
MPM303x10-02S	1B83 0100 000	MPM303x10-04S	1B83 0300 000
MPM303x12-02S	1B84 0100 000	MPM303x12-04S	1B84 0300 000
MPM303x14-02S	1B85 0100 000	MPM303x14-04S	1B85 0300 000
MPM303x16-02S	1B86 0100 000	MPM303x16-04S	1B86 0300 000
MPM303x6-03S	1B81 0200 000		
MPM303x8-03S	1B82 0200 000		
MPM303x10-03S	1B83 0200 000		
MPM303x12-03S	1B84 0200 000		
MPM303x14-03S	1B85 0200 000		
MPM303x16-03S	1B86 0200 000		

Spare Part – Silencer

Model	Description	Code
VT504	Direct silencer with G2½” port	130 1E0

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Technical Data

Description	Unit	Data	Description	Unit	Data
Supply air type	-	Dry Compressed Air	Supply air pressure	bar	3~6, Max 7
Max. vacuum level	kPa	-92	Working temperature	°C	-20 ~ 80
Max. flow rate	NI/min	5456	Sound level	dBA	55~62
Air consumption	NI/min	588 ~ 2144	Net weight*	g	6300

* Net weight is calculated for MPM303x16-02

Performance Data (Vacuum flow at different vacuum level)

Model	Max. Vacuum (-kPa)	Feed pressure (MPa)	Vacuum flow (NI/min) at different vacuum level –kPa(-mmHg)									
			0 (0)	10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)	80 (600)	90 (675)
MPM303X6	75	0.22	1812	735	528	318	188.4	171	99	27.6	-	-
	93	0.3	2028	912	636	384	198	192	132	99	38.4	11.4
	93	0.4	2046	924	765	564	414	258	139.8	103.8	41.4	12.6
MPM303X8	75	0.22	2416	980	704	424	251.2	228	132	36.8	-	-
	93	0.3	2704	1216	848	512	264	256	176	132	51.2	15.2
	93	0.4	2728	1232	1020	752	552	344	186.4	138.4	55.2	16.8
MPM303X10	75	0.22	3020	1225	880	530	314	285	165	46		
	93	0.3	3380	1520	1060	640	330	320	220	165	64	19
	93	0.4	3410	1540	1275	940	690	430	233	173	69	21
MPM303X12	75	0.22	3624	1470	1056	636	376.8	342	198	55.2	-	-
	93	0.3	4056	1824	1272	768	396	384	264	198	76.8	22.8
	93	0.4	4092	1848	1530	1128	828	516	279.6	207.6	82.8	25.2
MPM303X14	75	0.22	4228	1715	1232	742	439.6	399	231	64.4	-	-
	93	0.3	4732	2128	1484	896	462	448	308	231	89.6	26.6
	93	0.4	4774	2156	1785	1316	966	602	326.2	242.2	96.6	29.4
MPM303X16	75	0.22	4832	1960	1408	848	502.4	456	264	73.6	-	-
	93	0.3	5408	2432	1696	1024	528	512	352	264	102.4	30.4
	93	0.4	5456	2464	2040	1504	1104	688	372.8	276.8	110.4	33.6

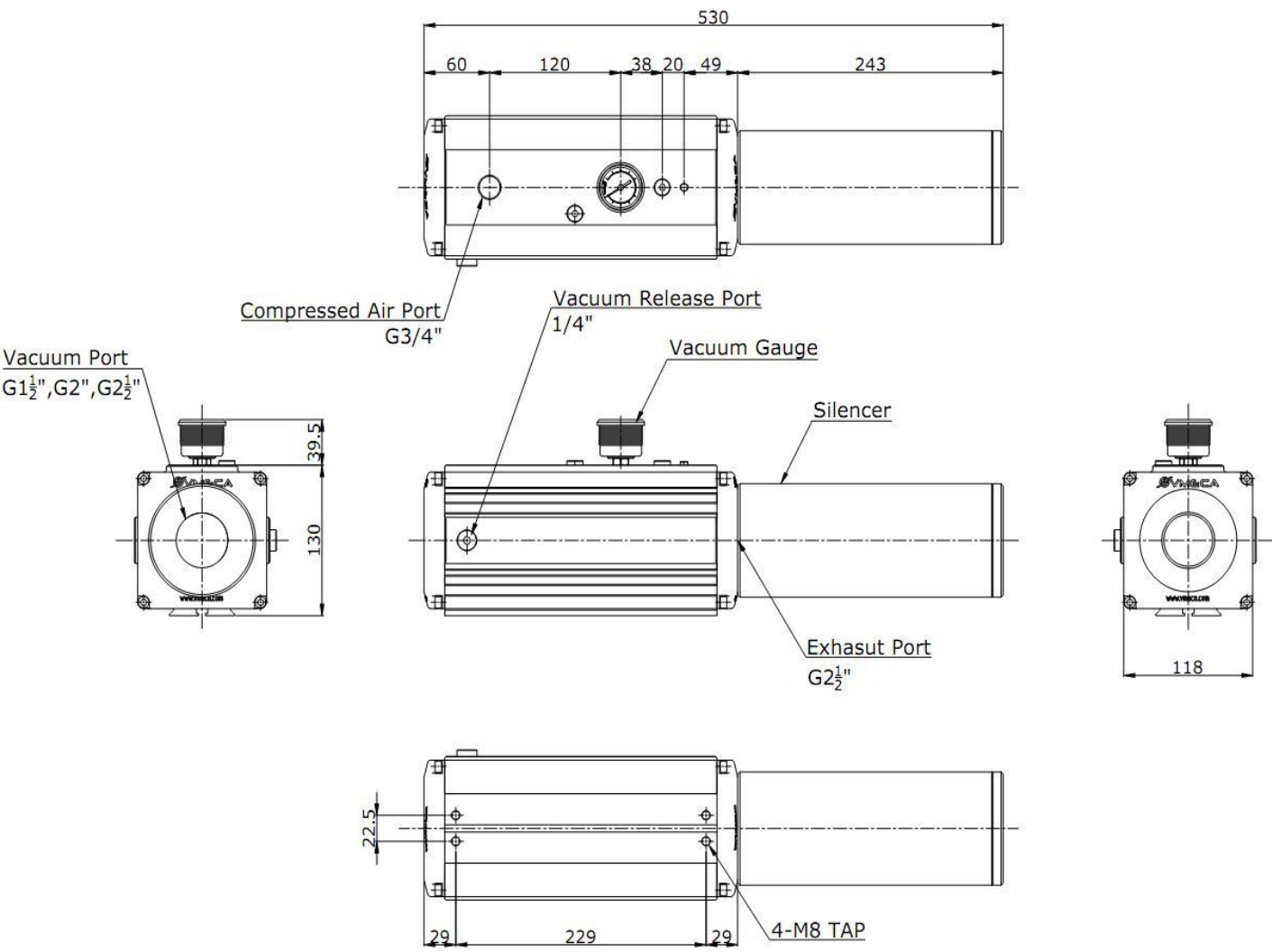
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Performance Data (Evacuation time at different vacuum level)

Model	Feed pressure (MPa)	Air Consumption (NI/min)	Time, s/l, to evacuate a volume to different vacuum level –kPa (-mmHg)								
			10 (75)	20 (150)	30 (225)	40 (300)	50 (375)	60 (450)	70 (525)	80 (600)	90 (675)
MPM303X6	0.22	588	0.0038	0.013	0.0483	0.055	0.08	0.128	0.28	-	-
	0.3	672	0.0032	0.0098	0.0217	0.0433	0.0733	0.115	0.162	0.263	0.642
	0.4	804	0.003	0.0088	0.0133	0.025	0.0433	0.093	0.143	0.26	0.63
MPM303X8	0.22	784	0.0029	0.0098	0.0363	0.0413	0.06	0.096	0.21	-	-
	0.3	896	0.0024	0.0074	0.0163	0.0325	0.055	0.086	0.121	0.1975	0.481
	0.4	1072	0.0023	0.0066	0.01	0.0188	0.0325	0.07	0.1075	0.195	0.473
MPM303X10	0.22	980	0.0023	0.0078	0.029	0.033	0.048	0.077	0.168	-	-
	0.3	1120	0.0019	0.0059	0.013	0.026	0.044	0.069	0.097	0.158	0.385
	0.4	1340	0.0018	0.0053	0.008	0.015	0.026	0.056	0.086	0.156	0.378
MPM303X12	0.22	1176	0.0019	0.0065	0.0242	0.0275	0.04	0.064	0.14	-	-
	0.3	1344	0.0016	0.0049	0.0108	0.0217	0.0367	0.0575	0.081	0.132	0.321
	0.4	1608	0.0015	0.0044	0.0067	0.0125	0.0217	0.047	0.072	0.13	0.315
MPM303X14	0.22	1372	0.0016	0.0056	0.0207	0.0236	0.0343	0.055	0.12	-	-
	0.3	1568	0.0014	0.0042	0.0093	0.0186	0.0314	0.0493	0.0693	0.1129	0.275
	0.4	1876	0.0013	0.0038	0.0057	0.0107	0.0186	0.04	0.0614	0.1114	0.27
MPM303X16	0.22	1568	0.0014	0.0049	0.0181	0.0206	0.03	0.048	0.105	-	-
	0.3	1792	0.0012	0.0037	0.0081	0.0163	0.0275	0.0431	0.0606	0.0988	0.2406
	0.4	2144	0.0011	0.0033	0.005	0.0094	0.0163	0.035	0.0538	0.0975	0.2363

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Dimensional Data



[Measure unit : mm[in]]

Valve & Switch

Ordering No. for overall Valve & Switch

Model	Ordering Designation	Description	Remark
Air control valve - Voltage	A1	AC110V	
	A2	AC220V	
	A3	DC24V	
	D1	Double solenoid – AC110V	* Double solenoid valve is available only for 'DN' or 'DL' on Solenoid Terminal option
	D2	Double solenoid – AC220V	
	D3	Double solenoid – DC24V	
Release control valve - Voltage	R1	AC110V	
	R2	AC220V	
	R3	DC24V	
Solenoid Terminal	DN	Din type without lead wire	
	DL	Din type with lamp without lead wire	
	2B	Din type with '2 in 1' BUS cable (Air control valve + release control valve)	* '2B' is not available for Double solenoid
	3B	Din type with '3 in 1' BUS cable (Air control valve + release control valve + Digital switch)	* '3B' is not available for Double solenoid * '3B' is available only for DC24V
	4B	Din type with '4 in 1' BUS cable (Double Air control valve + release control valve + Digital switch)	* '4B' is available only for DC24V
Vacuum Switch	No Mark – Standard	Vacuum Gauge	
	S2	Digital Display output 2points, No analog supply M8-4Pin connector type 0.3m lead wire	
	S2P	PNP open collector of S2	
	SG2	Digital Display output 2points, No analog supply Grommet type 4-Core 2m lead wire	* VCM8 42 (M8-4Pin connector wire) is available only for 'S2' or 'S2(P)'
	SG2P	PNP open collector of SG2	
	SG3	Digital Display output 2points, Analog supply Grommet type 5-Core 2m lead wire	
	SG3P	PNP open collector of SG3	