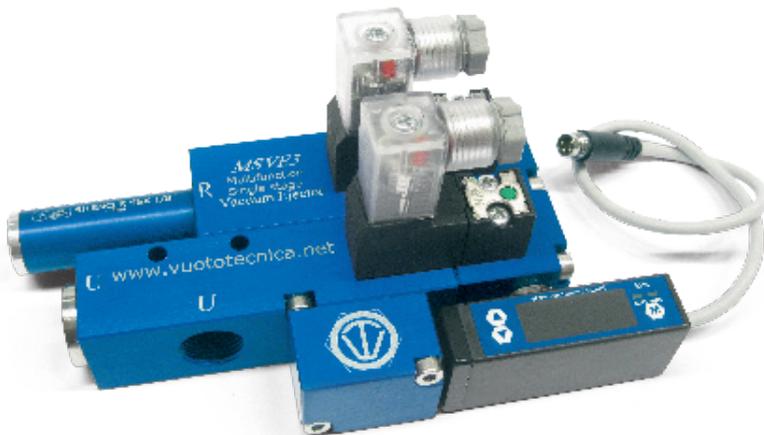


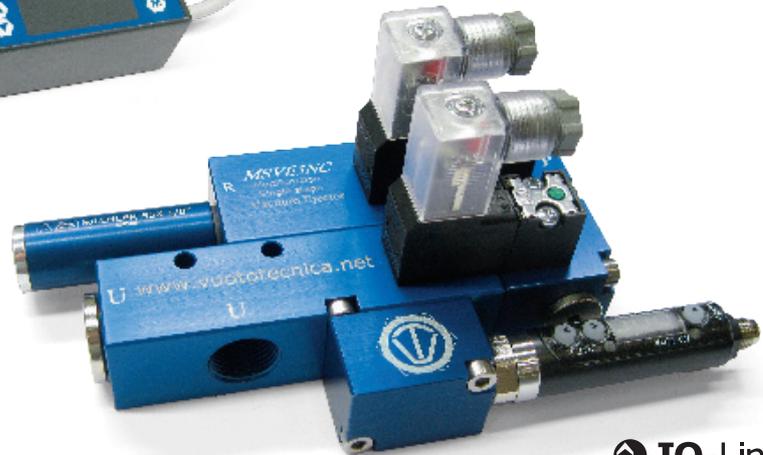
SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS SERIES MSVE - GENERAL DESCRIPTION

The vacuum generators of this new series can fully drive a negative pressure gripping system. By means of coaxial shutters, the original compressed air supply system feeds large quantities of air to both the ejectors and the ejection system, thereby ensuring faster gripping and release of the load. These vacuum generators are equipped with single-stage ejectors, are powered by low pressure (max. 4 bar), and feature an extremely high emptying speed in relation to their suction flow rate. All this allows for increasingly faster high-performance work cycles. Two micro solenoid valves manage the compressed air supply to the vacuum ejector and adjustable discharge blow off. The intensity and duration of the latter are managed through a screw-type flow regulator. The check valve built into the suction connector maintains the vacuum in the event of a power outage. A digital vacuum switch, equipped with a display and commutation LED, manages the compressed air supply and provides a signal to start a cycle under safety conditions. An anodised aluminium distributor with vacuum connectors has an integrated suction filter that can be easily inspected. By activating the compressed air power micro solenoid valve, the generator creates vacuum for use. As soon as the set maximum value is reached, the digital vacuum switch acts on the electric coil of the micro solenoid valve and stops the air supply, reactivating it when the vacuum falls below the minimum level.

Besides maintaining the vacuum level within set safety values (hysteresis), this modulation allows for considerable compressed air savings. A second signal from the vacuum switch (also adjustable and independent with respect to the first) can be used to start the cycle when the vacuum level reached is suitable for use. Once the work cycle is completed, the micro solenoid valve that supplies compressed air to the generator is deactivated while, at the same time, the ejection solenoid valve is activated for quick restoration of the atmospheric pressure upon use. The MSVE vacuum generators can be installed in any position and are suitable for suction gripping systems, handling metal sheets, glass, marble, ceramics, plastic, cardboard, wood, etc. and, in particular, for the industrial robotics sector, where equipment with excellent performance and limited weight and bulk are increasingly required.



MSVE 3



MSVE 5 NC IO

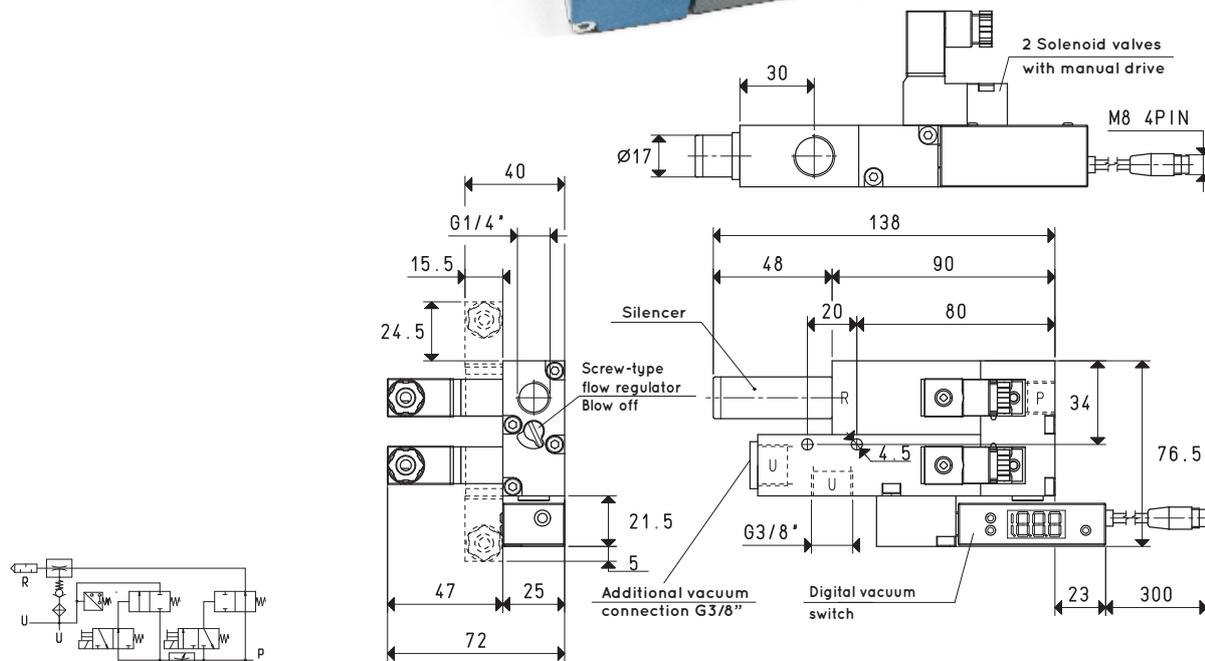
IO-Link Ready!



SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS MSVE 3 and MSVE 5



3D drawings are available on vuototecnica.net



P=COMPRESSED AIR CONNECTION R=EXHAUST U=VACUUM CONNECTION

Item		MSVE 3			MSVE 5		
Intake air flow rate	m ³ /h	2.6	2.8	3.0	4.9	5.1	5.1
Maximum level of vacuum	-KPa	40	61	85	40	61	85
Final pressure	mbar abs.	600	390	150	600	390	150
Supply pressure	bar	2	3	4	2	3	4
Air consumption	NI/s	0.7	0.9	1.2	1.3	1.7	2.2
Max quantity of air blown at 4 bar	l/min			650			650
Internal coaxial shutter position of supply				NO			NO
Supply solenoid valve absorption	W			2.0			2.0
Internal coaxial shutter position of ejection				NC			NC
Ejection solenoid valve absorption	W			2.0			2.0
Supply voltage	V			24DC			24DC
Vacuum switch output				PNP			PNP
Degree of protection	IP			40			40
Temperature of use	°C			-10 / +60			-10 / +60
Noise level at optimal supply pressure	dB(A)			48			44
Weight	g			493			493
Spare parts		MSVE 3	MSVE 3 IO	MSVE 5	MSVE 5 IO		
Sealing kit	item	00 15 503	00 15 503	00 15 503	00 15 503		
Digital vacuum switch	item	12 30 10	12 10 10 (IO-Link)	12 30 10	12 10 10 (IO-Link)		
NO supply solenoid valve	item	00 07 304	00 07 304	00 07 304	00 07 304		
NC supply and blowing solenoid valve	item	00 15 447	00 15 447	00 15 447	00 15 447		
Silencer	item	SSX 1/8"	SSX 1/8"	SSX 1/8"	SSX 1/8"		

Note: To order a generator with NC supply coaxial shutter, use item code MSVE..NC.

To order a generator with a digital vacuum switch, IO-Link, use article code MSVE..IO

To order a generator without a digital vacuum switch, use item code MSVE..SV.

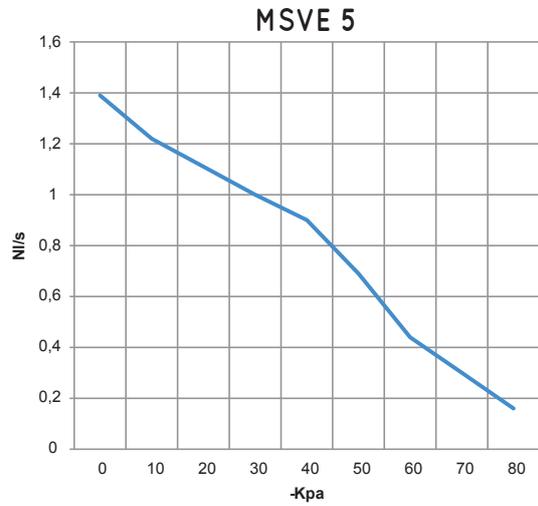
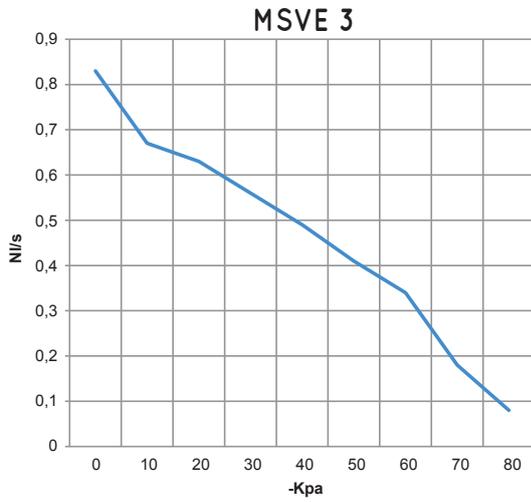
Note: All vacuum values indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

Vacuum generator supply must be carried out with non-lubricated compressed air, 5 micron filtration, in accordance with standard ISO 8573-1 class 4.

SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS MSVE 3 and MSVE 5

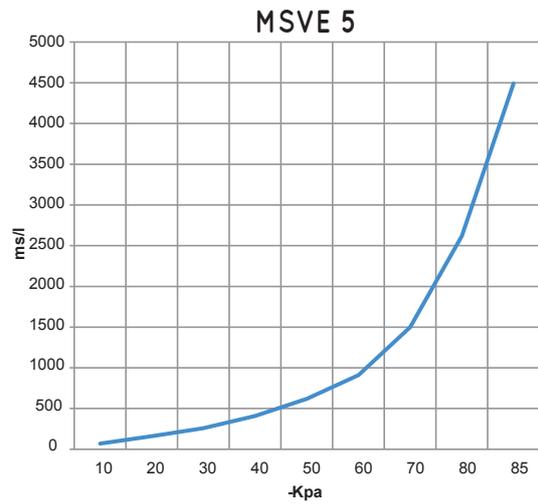
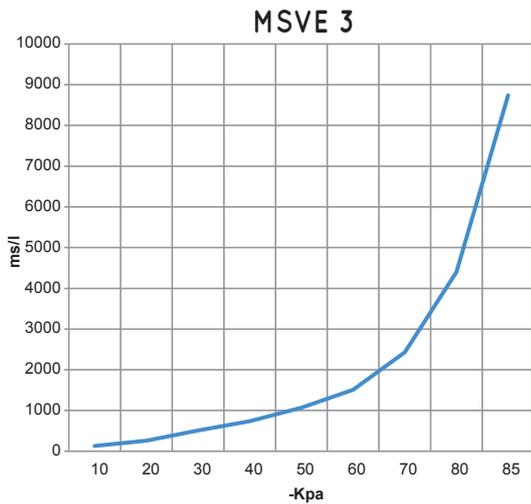


Air flow rate (NI/s) at different level of vacuum (-KPa) at optimal supply pressure



Generator item	Supp. press. bar	Air consumption NI/s	Air flow rate (NI/s) at different levels of vacuums (-KPa) at optimal supply pressure										Max vacuum -KPa
			0	10	20	30	40	50	60	70	80		
MSVE 3	4.0	1.2	0.83	0.67	0.63	0.56	0.49	0.41	0.34	0.18	0.08	85	
MSVE 5	4.0	2.2	1.39	1.22	1.11	1.00	0.90	0.69	0.44	0.30	0.16	85	

Evacuation rates (ms/l = s/m³) at different levels of vacuums (-KPa) at optimal supply pressure

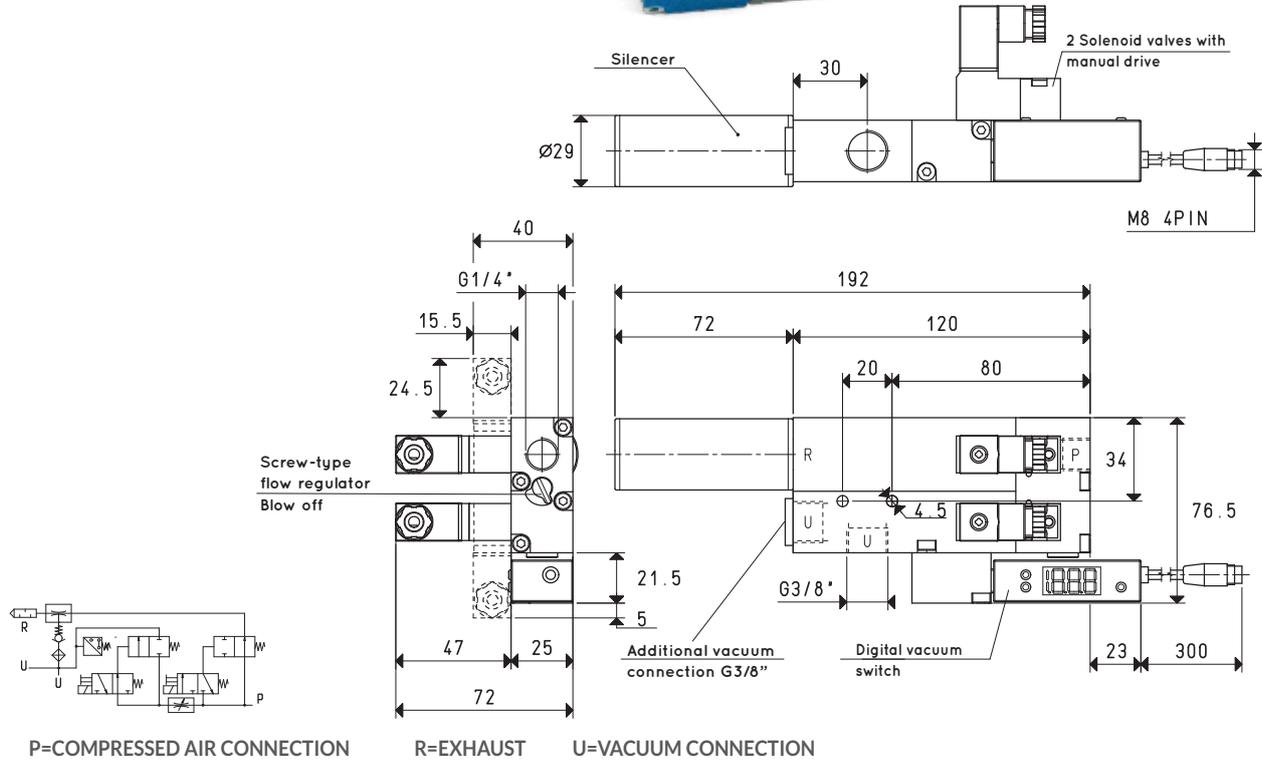


Generator item	Supp. press. bar	Air consumption NI/s	Evacuation rates (ms/l = s/m³) at different levels of vacuums (-KPa) at optimal supply pressure									Max vacuum -KPa
			10	20	30	40	50	60	70	80	85	
MSVE 3	4.0	1.2	130	260	510	740	1070	1510	2430	4400	8740	85
MSVE 5	4.0	2.2	70	160	260	410	620	910	1500	2620	4490	85



SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS MSVE 8 and MSVE 12

3D drawings are available on vuototecnica.net



P=COMPRESSED AIR CONNECTION

R=EXHAUST

U=VACUUM CONNECTION

Item		MSVE 8			MSVE 12		
Intake air flow rate	m ³ /h	8.0	8.6	8.8	12.0	12.2	12.5
Maximum level of vacuum	-KPa	40	60	90	40	60	90
Final pressure	mbar abs.	600	400	100	600	400	100
Supply pressure	bar	2	3	3.5	2	3	3.5
Air consumption	l/s	2.8	3.8	4.3	3.7	5.0	5.5
Max quantity of air blown at 3.5 bar	l/min			600			600
Internal coaxial shutter position of supply				NO			NO
Supply solenoid valve absorption	W			2.0			2.0
Internal coaxial shutter position of ejection				NC			NC
Ejection solenoid valve absorption	W			2.0			2.0
Supply voltage	V			24DC			24DC
Vacuum switch output				PNP			PNP
Degree of protection	IP			40			40
Temperature of use	°C			-10 / +60			-10 / +60
Noise level at optimal supply pressure	dB(A)			53			50
Weight	g			580			620
Spare parts		MSVE 8	MSVE 8 IO	MSVE 12	MSVE 12 IO		
Sealing kit	item	00 15 504	00 15 504	00 15 504	00 15 504		
Digital vacuum switch	item	12 30 10	12 10 10 (IO-Link)	12 30 10	12 10 10 (IO-Link)		
NO supply solenoid valve	item	00 07 304	00 07 304	00 07 304	00 07 304		
NC supply and blowing solenoid valve	item	00 15 447	00 15 447	00 15 447	00 15 447		
Silencer	item	SSX 3/8"	SSX 3/8"	SSX 3/8"	SSX 3/8"		

Note: To order a generator with NC supply coaxial shutter, use item code MSVE..NC.

To order a generator with a digital vacuum switch, IO-Link, use article code MSVE..IO

To order a generator without a digital vacuum switch, use item code MSVE..SV.

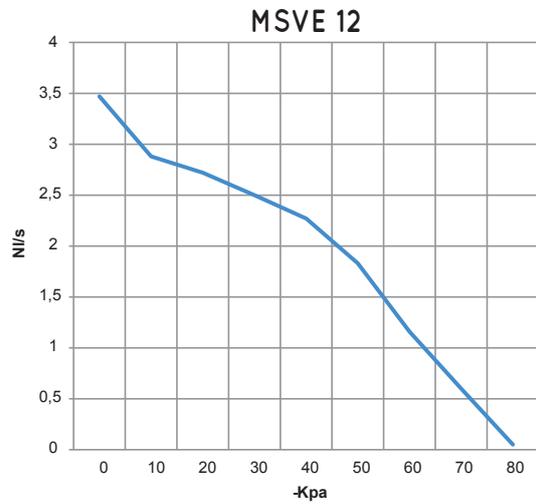
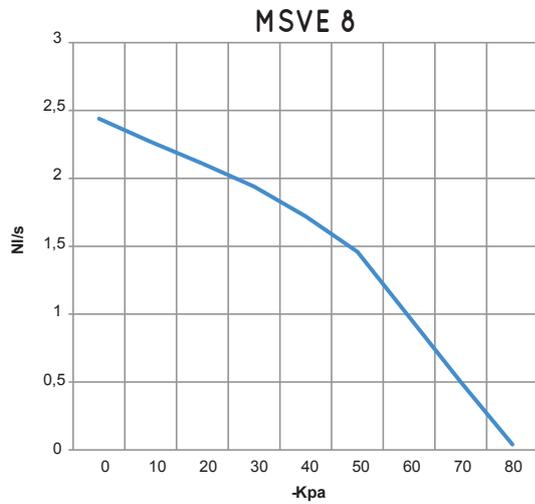
Note: All vacuum values indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

Vacuum generator supply must be carried out with non-lubricated compressed air, 5 micron filtration, in accordance with standard ISO 8573-1 class 4.

SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS MSVE 8 and MSVE 12

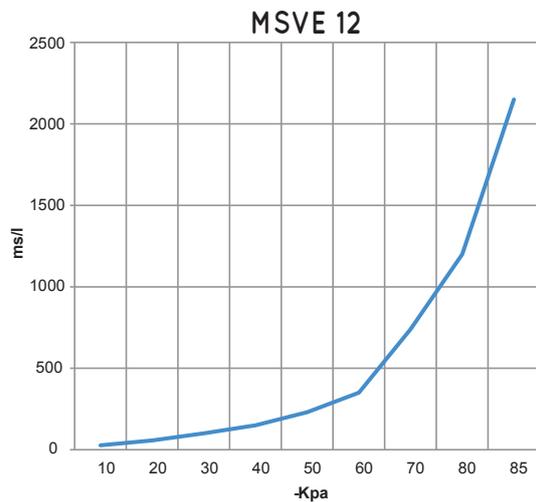
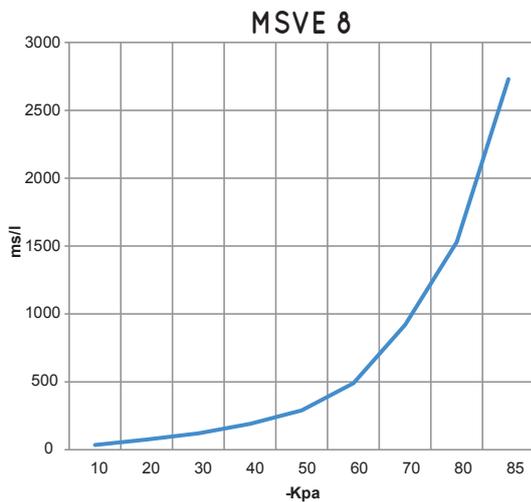


Air flow rate (NI/s) at different level of vacuum (-KPa) at optimal supply pressure



Generator item	Supp. press. bar	Air consumption NI/s	Air flow rate (NI/s) at different levels of vacuums (-KPa) at optimal supply pressure										Max vacuum -KPa
			0	10	20	30	40	50	60	70	80		
MSVE 8	3.5	4.3	2.44	2.27	2.11	1.94	1.72	1.46	0.98	0.50	0.04	90	
MSVE 12	3.5	5.5	3.47	2.88	2.72	2.50	2.27	1.83	1.16	0.60	0.05	90	

Evacuation rates (ms/l = s/m³) at different levels of vacuums (-KPa) at optimal supply pressure

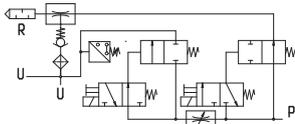
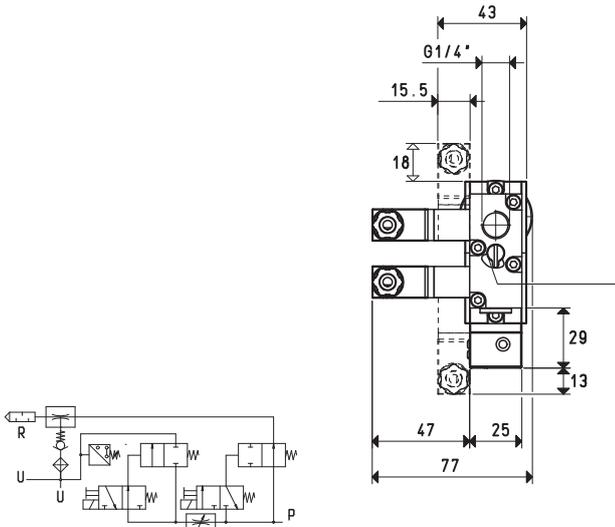
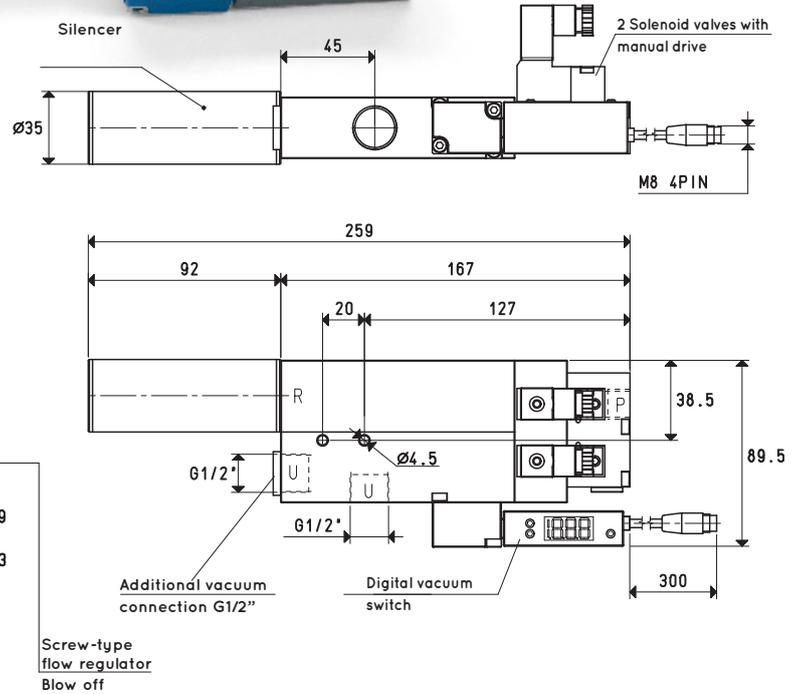


Generator item	Supp. press. bar	Air consumption NI/s	Evacuation rates (ms/l= s/m ³) at different levels of vacuums (-KPa) at optimal supply pressure									Max vacuum -KPa
			10	20	30	40	50	60	70	80	85	
MSVE 8	3.5	4.3	35	75	120	190	290	490	920	1530	2730	90
MSVE 12	3.5	5.5	27	57	100	150	230	350	740	1200	2150	90



SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS MSVE 20

3D drawings are available on vuototecnica.net



P=COMPRESSED AIR CONNECTION R=EXHAUST U=VACUUM CONNECTION

Item	MSVE 20			
Intake air flow rate	m ³ /h	18	19	20
Maximum level of vacuum	-kPa	40	60	90
Final pressure	mbar abs.	600	400	100
Supply pressure	bar	2	3	4
Air consumption	Nl/s	4.9	6.6	8.0
Max quantity of air blown at 4 bar	l/min			650
Internal coaxial shutter position of supply				NO
Supply solenoid valve absorption	W			2.0
Internal coaxial shutter position of ejection				NC
Ejection solenoid valve absorption	W			2.0
Supply voltage	V			24DC
Vacuum switch output				PNP
Degree of protection	IP			40
Temperature of use	°C			-10 / +60
Noise level at optimal supply pressure	dB(A)			70
Weight	kg			1.04
Spare parts		MSVE 20	MSVE 20 IO	
Sealing kit	item	00 15 560	00 15 560	
Digital vacuum switch	item	12 30 10	12 10 10 (IO-Link)	
NO supply solenoid valve	item	00 07 304	00 07 304	
NC supply and blowing solenoid valve	item	00 15 447	00 15 447	
Silencer	item	SSX 1/2"	SSX 1/2"	

Note: To order a generator with NC supply coaxial shutter, use item code MSVE..NC.

To order a generator with a digital vacuum switch, IO-Link, use article code MSVE..IO

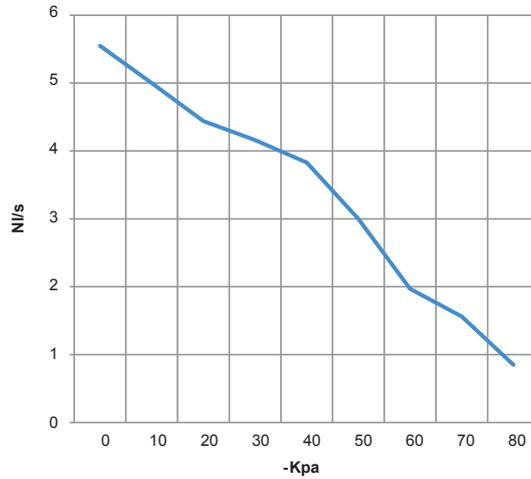
To order a generator without a digital vacuum switch, use item code MSVE..SV.

Note: All vacuum values indicated in the table are valid at the normal atmospheric pressure of 1013 mbar and obtained with a constant supply pressure.

Vacuum generator supply must be carried out with non-lubricated compressed air, 5 micron filtration, in accordance with standard ISO 8573-1 class 4.

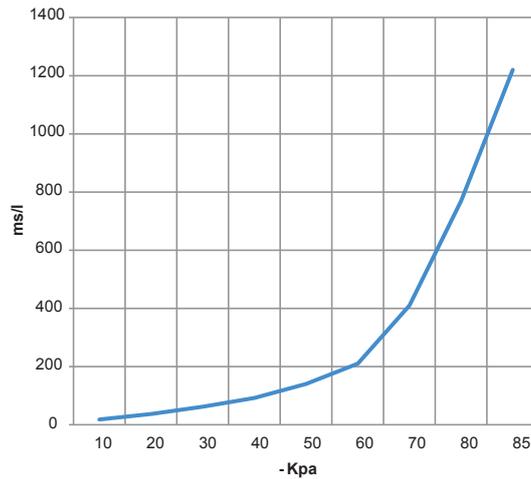


Air flow rate (NI/s) at different level of vacuum (-KPa) at optimal supply pressure



Generator item	Supp. press. bar	Air consumption NI/s	Air flow rate (NI/s) at different levels of vacuums (-KPa) at optimal supply pressure										Max vacuum -KPa
			0	10	20	30	40	50	60	70	80		
MSVE 20	4	8	5.55	5.00	4.44	4.16	3.83	3.00	1.97	1.56	0.85	90	

Evacuation rates (ms/l = s/m³) at different levels of vacuums (-KPa) at optimal supply pressure

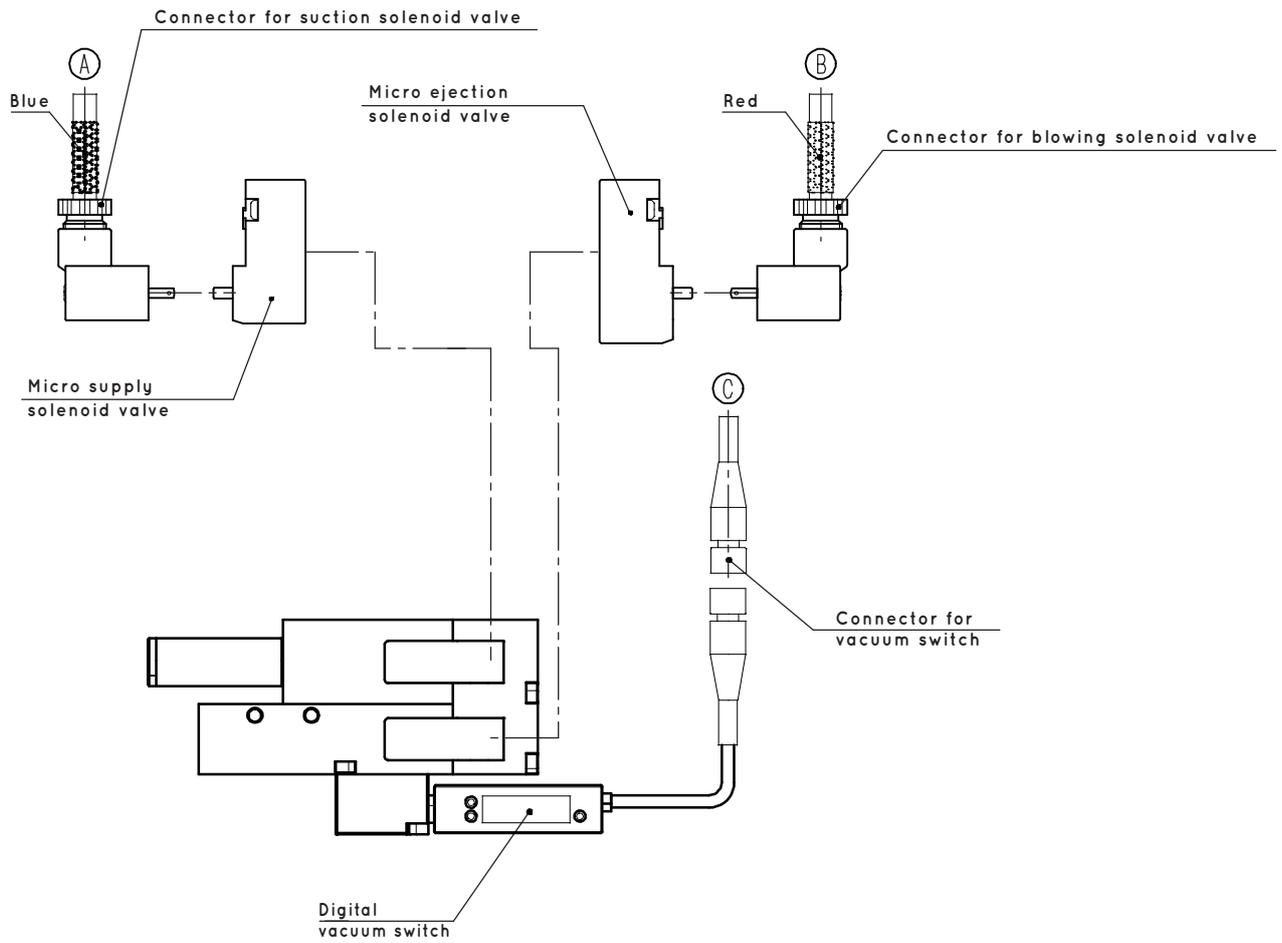


Generator item	Supp. press. bar	Air consumption NI/s	Evacuation rates (ms/l = s/m³) at different levels of vacuums (-KPa) at optimal supply pressure										Max vacuum -KPa
			10	20	30	40	50	60	70	80	85		
MSVE 20	4	8	18	37	62	92	140	210	410	770	1220	90	



ACCESSORIES AND SPARE PARTS FOR SINGLE-STAGE AND MULTI-FUNCTION VACUUM GENERATORS, SERIES MSVE

3D drawings are available on vuototecnica.net





Cable set with built-in energy saving device for MSVE.. generator

Item	Description
00 15 202	Set of cables with built-in energy saving device for connection to: - Digital vacuum switch - NO micro supply solenoid valve - NC micro ejection solenoid valve Cable length - 5 m

Note: The IO-Link signal cannot be handled by the energy-saving cable set.



Cable set with built-in energy saving device for MSVE..NC generator

Item	Description
00 15 203	Set of cables with built-in energy saving device for connection to: - Digital vacuum switch - NC micro supply solenoid valve - NC micro ejection solenoid valve Cable length - 5 m

Note: The IO-Link signal cannot be handled by the energy-saving cable set.

Connector

Item	Description
00 15 157	Form C connector, with LED for the micro-solenoid valves



M8 3 PIN Connector

Item	Description
00 07 424	M8 3 PIN Connector with LED for micro solenoid valves



Cable with axial connector

Item	Description
00 12 20	Electrical connection cable with M8 - 4 pin axial connector for digital vacuum switch length 5 m



Cable with radial connector

Item	Description
00 12 21	Electrical connection cable with M8 - 4 pin radial connector for digital vacuum switch length 5 m





Feeding and blowing micro-solenoid valves with low electric coil



	Item Micro supply solenoid valve	Item Micro ejection solenoid valve
MSVE	00 07 304	00 15 447
MSVE NC	00 15 447	00 15 447

SSX Exhaust silencers

Item	By generators item
SSX 1/4"	MSVE 3 - MSVE 5
SSX 3/8"	MSVE 8 - MSVE 12
SSX 1/2"	MSVE 20



Sealing kit

Item	By generators item
00 15 503	MSVE 3 - MSVE 5
00 15 504	MSVE 8 - MSVE 12
00 15 560	MSVE 20



Digital vacuum switch

Item	Description
12 30 10	Digital vacuum switch

