

VD pump

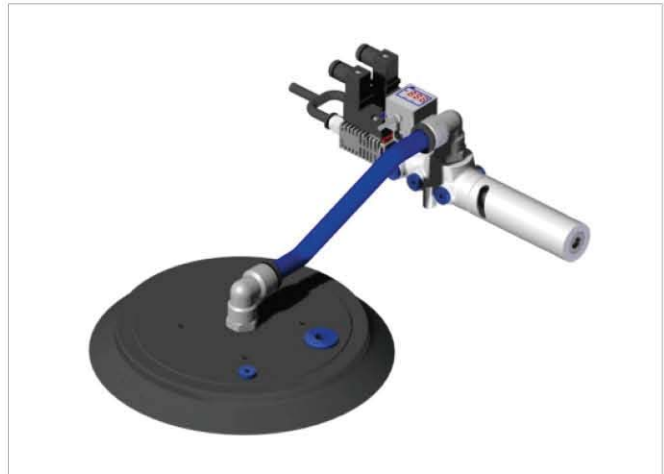
Features and Strengths

Highly operational reliability despite fluctuating or low compressed-air pressure
Optional different size main vacuum ports (G3/4" or G1/2").
Multiple vacuum side ports available with manifold body structure

Advantages

Excellent performance in most of every automation application
Reliable and stable operation - High vacuum level and vacuum flow in efficient air consumption
Optional Air-saving kit (AS-KIT) to minimize energy consumption
Easy to distribute vacuum connections.
VMECA twofold silencer - low noise level.
Optional air control and release control valve.

Application





Overall of specification

Model	Max. Vacuum level (- kPa)	Max. Feed Pressure (bar)	Max. Vacuum Flow (NI/m)	Air Consumption (NI/m)
VD303	93	7	341	152
VD302	93	7	171	152
VDL303	75	7	362	104
VDL302	75	7	200	104

VACUUM PUMPS / VD pumps

VD pump

VMECA VD pump can be combined with the optional vacuum On/ Off control valve, vacuum release valve and vacuum switch to create an optimal vacuum solution for many applications. VMECA VD pump has multiple vacuum ports on its main (G3/4" or G1/2") and size with manifold body design structure. Owing to this design structure it can easily distribute the vacuum connections. And VD pump is compact so it can be mounted closely to the point of use for reducing system volume.



Key advantages

VMECA vacuum cartridge integrated

Quick response time.

VMECA Twofold Silencer assures low noise levels.

Easily mountable and interchangeable vacuum cartridge

Highly operational reliability despite fluctuating or low compressed-air pressure

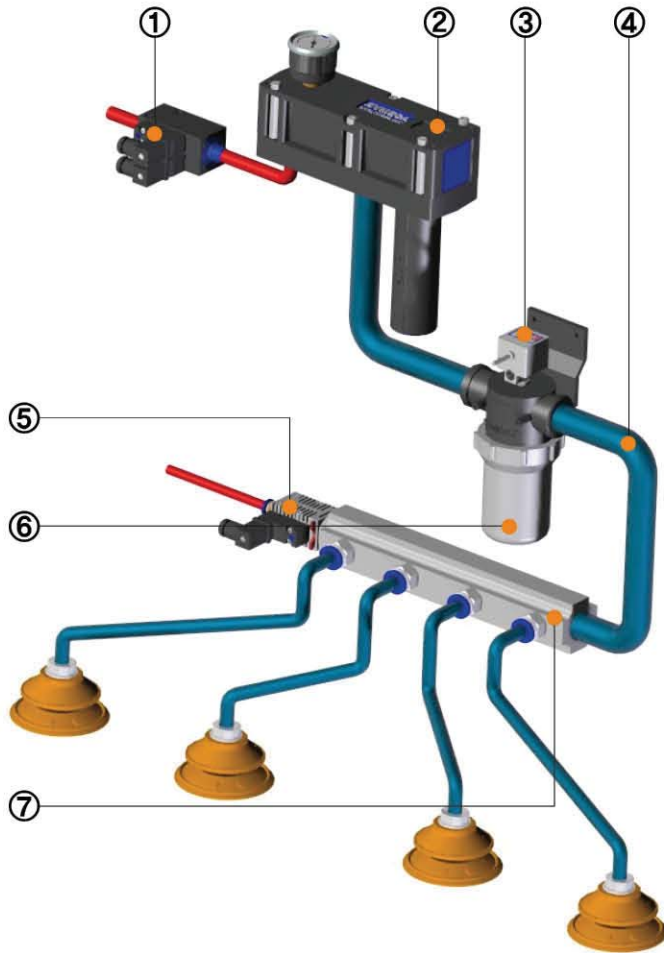
Optional Air-Saving kit (AS-KIT) to minimize energy consumption



I Comparison with typical installation

Multiple vacuum side ports available with manifold body structure
 Easy to distribute vacuum connections
 Minimum installation space
 Optional different size main vacuum ports (G3/4" or G1/2")

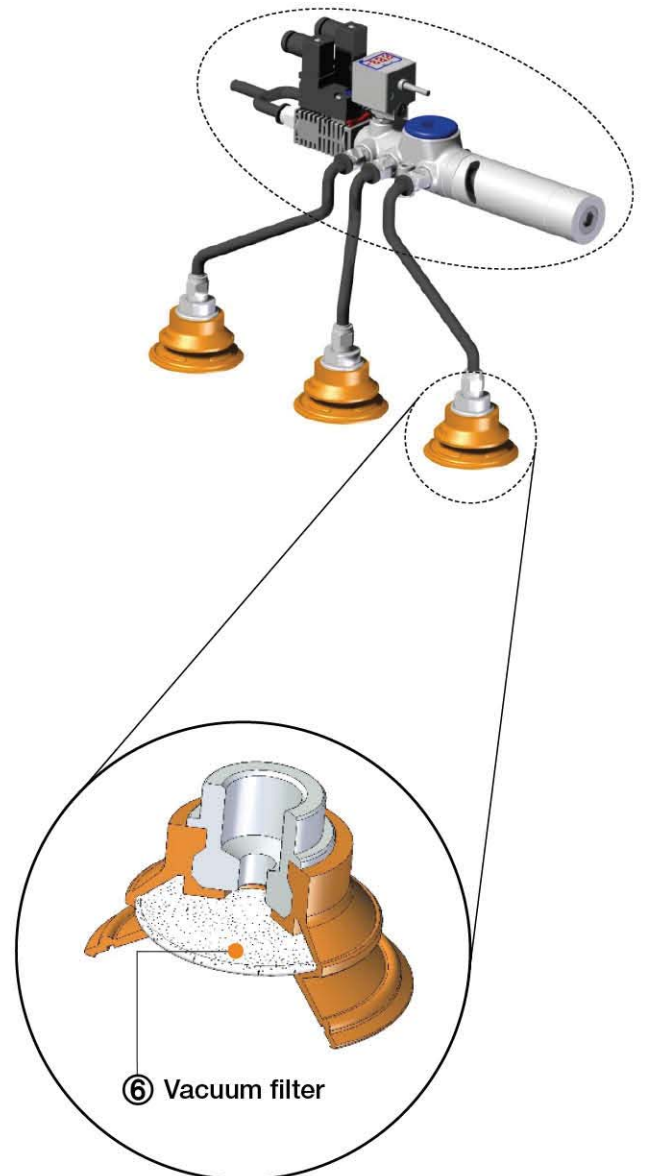
Typical installation



- ① Air control valve
- ② Vacuum pump
- ③ Digital vacuum switch
- ④ Main vacuum pipe line
- ⑤ Vacuum release control valve
- ⑥ Vacuum filter
- ⑦ Distributor (Manifold)

New solution with VMECA VD PUMP

①+②+③+④+⑤+⑥+⑦



VD303 / VDL303

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Located at
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- VMECA TWOFOLD Silencer – Low noise levels



Specifications

Description	MD303	MDL303
Max. Vacuum level	-93 kPa	-75 kPa
Open Vacuum flow	341 NI/min	362 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	446 g	445 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (NI/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VD303	75	2.2	302	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	93	3.0	338	152	106	64	33	32	22	16.5	6.4	1.9
	93	4.0	341	154	127.5	94	69	43	23.3	17.3	6.9	2.1
VDL303	60	4.0	302	176	110	70	46	28	6.8	-	-	-
	70	5.0	344	200	130	82	50	37.5	23	11.3	-	-
	75	6.0	362	194	154	100	52	38	32	22	-	-

Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (NI/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)								
			10	20	30	40	50	60	70	80	90
VD303	2.2	97	0.019	0.09	0.1	0.32	0.42	0.73	1.62	-	-
	3.0	118	0.015	0.07	0.18	0.28	0.38	0.64	0.8	1.2	3.8
	4.0	152	0.01	0.048	0.07	0.09	0.2	0.42	1.6	1	3.4
VDL303	4.0	70	0.028	0.09	0.17	0.29	0.38	0.8	-	-	-
	5.0	85	0.013	0.08	0.15	0.25	0.3	0.4	0.8	-	-
	6.0	104	0.012	0.07	0.12	0.2	0.28	0.36	0.6	-	-

VD302 / VDL302

Features and Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Located at
- Optional Air-Saving Kit available to minimize energy consumption
- Quick response time
- VMECA TWOFOLD Silencer – Low noise levels



Specifications

Description	MD302	MDL302
Max. Vacuum level	-93 kPa	-75 kPa
Open Vacuum flow	171 NI/min	200 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	427 g	426 g

Vacuum Flow

Model	Max. vacuum (-kPa)	Feed Pressure (bar)	Vacuum flow (NI/min) at different vacuum levels (-kPa)									
			0	10	20	30	40	50	60	70	80	90
VD302	75	2.2	164	122.5	88	53	31.4	28.5	16.5	4.6	-	-
	93	3.0	170	152	106	64	33	32	22	16.5	6.4	1.9
	93	4.0	171	154	127.5	94	69	43	23.3	17.3	6.9	2.1
VDL302	60	4.0	188	158	110	70	46	28	6.8	-	-	-
	70	5.0	195	176	130	82	50	37.5	23	11.3	-	-
	75	6.0	200	183	154	100	52	38	32	22	-	-

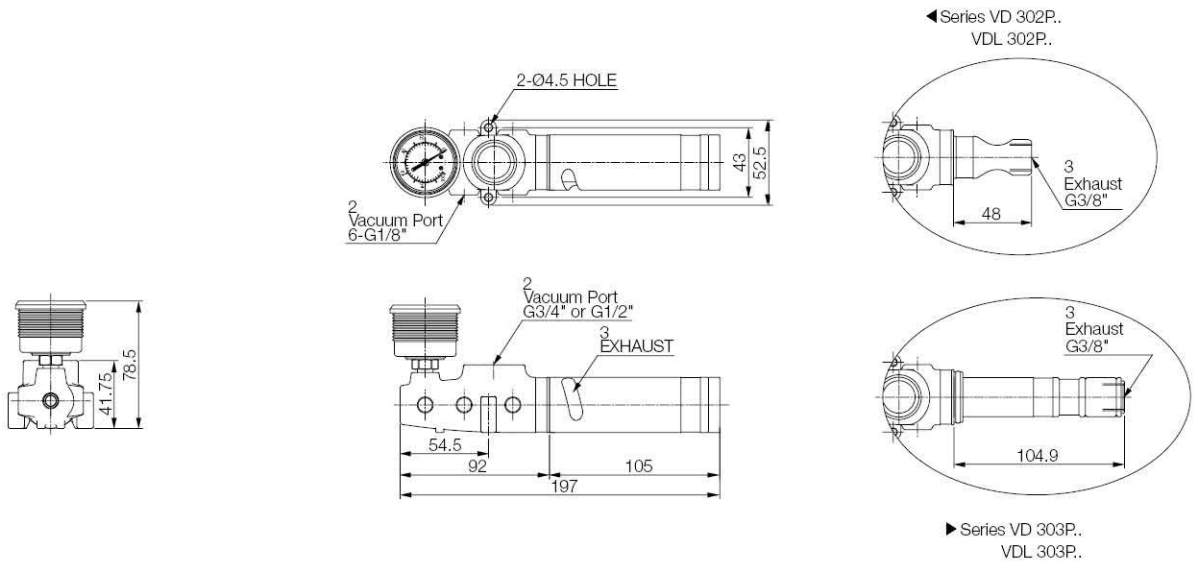
Evacuation Time

Model	Feed Pressure (bar)	Air Consumption (NI/min)	Evacuation time in sec / liter to reach different vacuum levels (-kPa)									
			10	20	30	40	50	60	70	80	90	
VD302	2.2	97	0.03	0.12	0.21	0.38	0.47	0.73	1.62	-	-	
	3.0	118	0.027	0.1	0.19	0.3	0.4	0.64	0.8	1.2	3.8	
	4.0	152	0.026	0.058	0.09	0.1	0.25	0.5	0.69	1.05	3.5	
VDL302	4.0	70	0.035	0.084	0.17	0.29	0.38	0.8	-	-	-	
	5.0	85	0.027	0.08	0.15	0.25	0.3	0.4	0.8	-	-	
	6.0	104	0.028	0.08	0.12	0.2	0.28	0.36	0.6	-	-	

VACUUM PUMPS / VD pumps

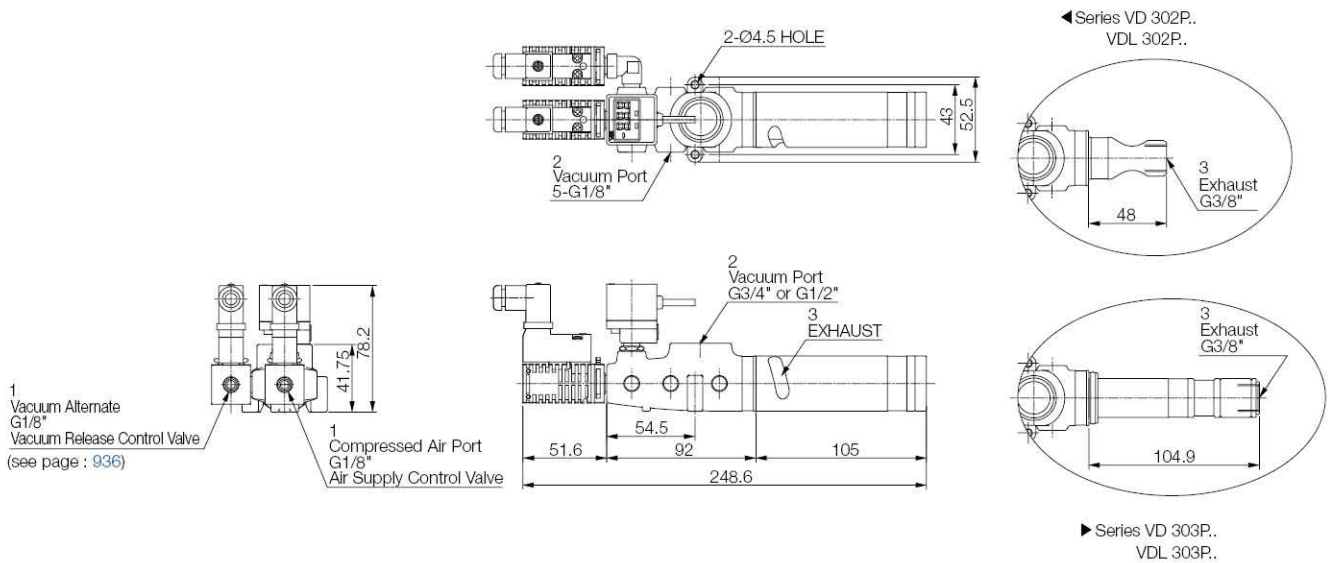
I Dimensions – Basic Pump

[Unit : mm[in]]



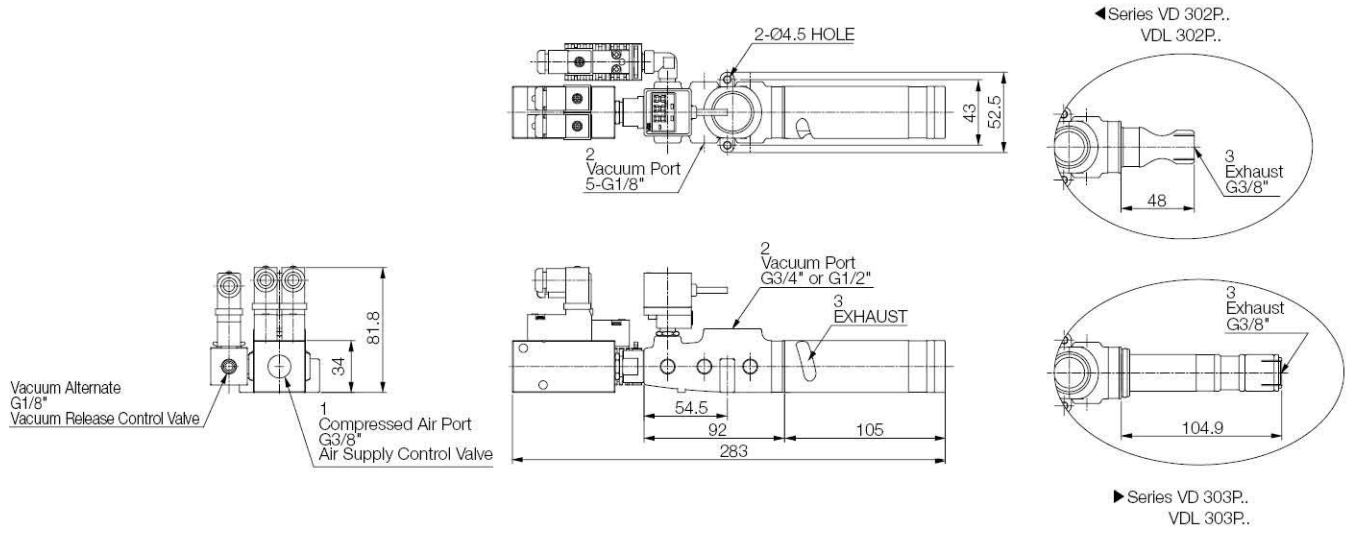
I Dimensions – With accessories

[Unit : mm[in]]



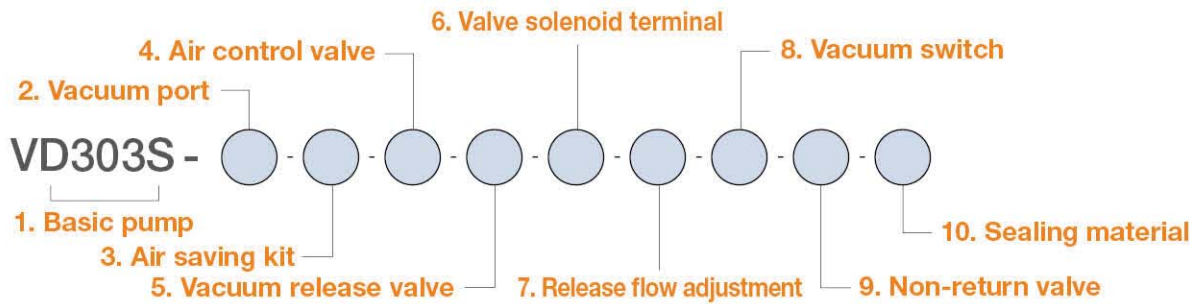
I Dimensions – With accessories

[Unit : mm[in]]



VACUUM PUMPS / VD pumps

I Build an Ordering No.



1. Basic pump	Description	Ordering No.
	VD pump, 3-Stage Cartridge, Two-fold silencer	VD303S
	VD pump, 3-Stage Cartridge, Plug	VD303P
	VD pump, 2-Stage Cartridge, Plug	VD302P
	VD pump, 3-Stage "L" Cartridge, Two-fold silencer	VDL303S
	VD pump, 3-Stage "L" Cartridge, Plug	VDL303P
	VD pump, 2-Stage "L" Cartridge, Plug	VDL302P
2. Vacuum port	Description	Ordering No.
	Vacuum port G3/4"	34
	Vacuum port G1/2"	12
3. Air saving kit	Description	Ordering No.
	No air saving kit	Blank
	Air saving kit without air control valve	AS
	Air saving kit integrated with air control valve	ASV
4. Air control valve	Description	Ordering No.
	No air control valve	Blank
	Air control valve, AC110V	A1
	Air control valve, AC220V	A2
	Air control valve, DC24V	A3
	Double air control valve, AC110V	D1
	Double air control valve, AC220V	D2
	Double air control valve, DC24V	D3
5. Vacuum release valve	Description	Ordering No.
	No vacuum release valve	Blank
	Vacuum release valve, AC110V	R1
	Vacuum release valve, AC220V	R2
	Vacuum release valve, DC24V	R3
6. Valve solenoid terminal	Description	Ordering No.
	Solenoid Terminal, DIN, No LW	DN
	Solenoid Terminal, DIN, Lamp, No LW	DL
	Solenoid Terminal, Conn, Lamp & 0.3m LW: Only available with DC24V	CL
	Solenoid Terminal, DIN, 2 in 1 BUS cable: Not available with Double Solenoid Valve	2B
	Solenoid Terminal, DIN, 3 in 1 BUS cable: Not available with Double Solenoid Valve	3B
	Solenoid Terminal, DIN, 4 in 1 BUS cable: available with Double Solenoid Valve	4B
	- 3B and 4B are available only with DC24V and S2 or S2P vacuum switch	
7. Release flow adjustment	Description	Symbol
	No release flow adjustment	Blank
	Release flow adjustment	A

I Build an Ordering No.

8. Vacuum switch	Description	Ordering No.
	No vacuum switch	Blank
	Digital switch, No analog supply, M8-4pins, NPN	S2
	Digital switch, No analog supply, M8-4pins, PNP	S2P
	Digital switch, No analog supply, Grommet, NPN	SG2
	Digital switch, No analog supply, Grommet, PNP	SG2P
	Digital switch, Analog supply, Grommet, NPN	SG3
	Digital switch, Analog supply, Grommet, PNP	SG3P

9. Non-return valve	Description	Ordering No.
	No non-return valve	Blank
	Non-return valve: No need with Air saving kit	N

10. Sealing material	Description	Ordering No.
	NBR	Blank
	VITON	V
	EPDM	E

I Spare Parts – Basic pumps

Model	Description	Weight (g)
VD302P-34	VD pump, 2-Stage Cartridge, Plug, Vacuum port : G3/4"	
VD302P-12	VD pump, 2-Stage Cartridge, Plug, Vacuum port : G1/2"	
VD303P-34	VD pump, 3-Stage Cartridge, Plug, Vacuum port : G3/4"	
VD303P-12	VD pump, 3-Stage Cartridge, Plug, Vacuum port : G1/2"	
VD303S-34	VD pump, 3-Stage Cartridge, Two-fold silencer, Vacuum port : G3/4"	
VD303S-12	VD pump, 3-Stage Cartridge, Two-fold silencer, Vacuum port : G1/2"	
VDL302P-34	VD pump, 2-Stage "L" Cartridge, Plug, Vacuum port : G3/4"	
VDL302P-12	VD pump, 2-Stage "L" Cartridge, Plug, Vacuum port : G1/2"	
VDL303P-34	VD pump, 3-Stage "L" Cartridge, Plug, Vacuum port : G3/4"	
VDL303P-12	VD pump, 3-Stage "L" Cartridge, Plug, Vacuum port : G1/2"	
VDL303S-34	VD pump, 3-Stage "L" Cartridge, Two-fold silencer, Vacuum port : G3/4"	
VDL303S-12	VD pump, 3-Stage "L" Cartridge, Two-fold silencer, Vacuum port : G1/2"	

I Spare Parts – Plug & Silencer

Model	Description	Weight (g)
VCP-M25-302	Holding plug for MD302 / MDL302 vacuum pumps	31.04
VCP-M25-303	Holding plug for MD303 / MDL303 vacuum pumps	59.32
VTTs-M25	Two-Fold Silencer for MD303 / MDL303 vacuum pumps	78.34