

MULTI-STAGE AND MODULAR VACUUM GENERATORS PVP 150 MD / MDLP ÷ PVP 750 MD / MDLP - GENERAL DESCRIPTION

The special shape of these vacuum generators has allowed obtaining great suction capacities in very limited overall dimensions.

The new design stainless steel ejectors are assembled on modular frames; the overlapping of one or more frames defines the flow rate of the generators. They are supplied with a flow rate ranging from 85 e 900 m³/h and a maximum level of vacuum of -90KPa.

The supply pressure goes from 4-6 bar for MD items and from 1-3 bar for MDLP items. Level of vacuum and flow rate can be adjusted according to the supply air pressure. They are fully made with anodised aluminium.

The sealing gaskets and disc valves are EPDM as standard, but can be supplied in FKM upon request. Also upon request, an energy saving kit for the compressed air ES (Energy Saving System) can be supplied. It is composed of a pneumatic coaxial shutter valve for supply of the compressed air, an integrated pneumatic vacuum switch, a reed valve kit for the check system and a flexible tube with quick fitting to monitor and transmit the value of the level of vacuum to the vacuum switch.

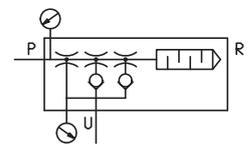
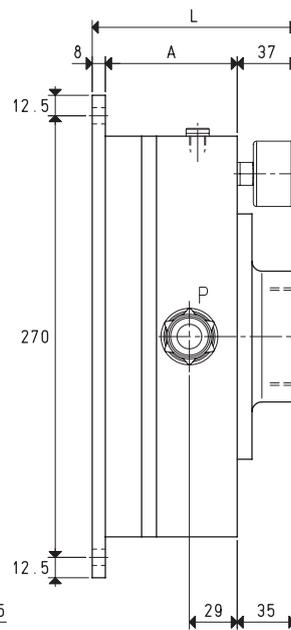
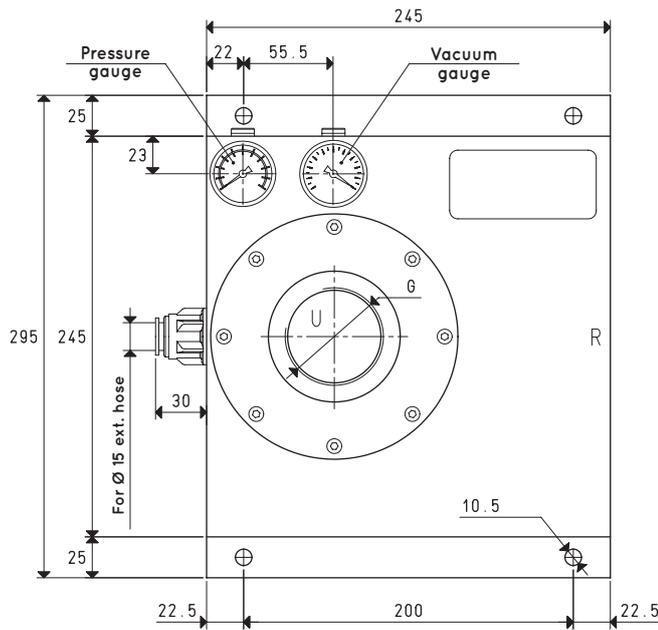
Perfectly soundproofed with silencers built into all generators, offering extremely quiet operation.





MULTI-STAGE AND MODULAR VACUUM GENERATORS PVP 150 MD / MDLP and PVP 300 MD / MDLP

3D drawings are available on vuotecnica.net



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

Item		PVP 150 MD			PVP 300 MD		
		Intake air flow rate	m ³ /h	160	180	200	320
Maximum level of vacuum	-KPa	65	82	90	65	82	90
Final pressure	abs. mbar	350	180	100	350	180	100
Supply pressure	bar	4	5	6	4	5	6
Optimal supply pressure	bar			6			6
Air consumption	NI/s	12.1	14.2	16.0	23.2	27.8	32.0
Temperature of use	°C			-20 / +80			-20 / +80
Noise level at optimal supply pressure	dB(A)			72			74
Weight	Kg			7.0			8.0
A				80			100
G	∅			G1" 1/2			G2"
L				125			145

Item		PVP 150 MDLP			PVP 300 MDLP		
		Intake air flow rate	m ³ /h	85	146	170	190
Maximum level of vacuum	-KPa	30	64	88	30	64	88
Final pressure	abs. mbar	700	360	120	700	360	120
Supply pressure	bar	1	2	3	1	2	3
Optimal supply pressure	bar			3			3
Air consumption	NI/s	10.5	16.5	22.6	22.5	33.6	45.5
Temperature of use	°C			-20 / +80			-20 / +80
Noise level at optimal supply pressure	dB(A)			76			78
Weight	Kg			7.8			8.8
A				80			100
G	∅			G1" 1/2			G2"
L				125			145

Spare parts		PVP 150 MD / MDLP	PVP 300 MD / MDLP
Sealing kit and reed valves	item	00 KIT PVP 150 MD	00 KIT PVP 300 MD
Exhaust silencer	item	00 15 70	00 15 70
Silencer on nozzles	item	00 15 71	00 15 72
Vacuum gauge	item	09 03 15	09 03 15
Pressure gauge	item	09 03 25	09 03 25

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.

Add the letter R to the item for a generator supplied with an integrated check valve (Example: PVP 150 MDR).

Add the letters ES to the article for a generator supplied complete with an ES energy saving device (example: PVP 140 MD ES).

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

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

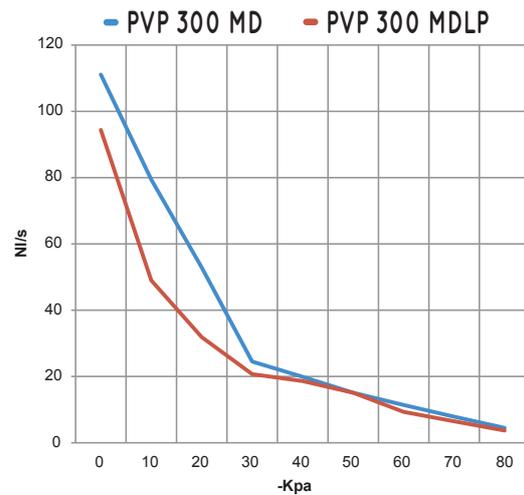
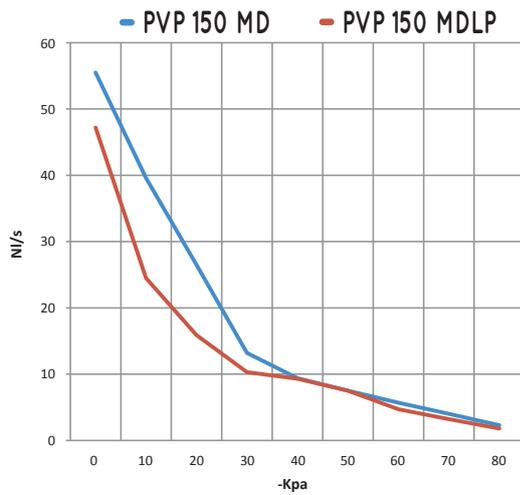
inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

Adapters for GAS - NPT threading available on page 1.134

MULTI-STAGE AND MODULAR VACUUM GENERATORS PVP 150 MD / MDLP and PVP 300 MD / MDLP

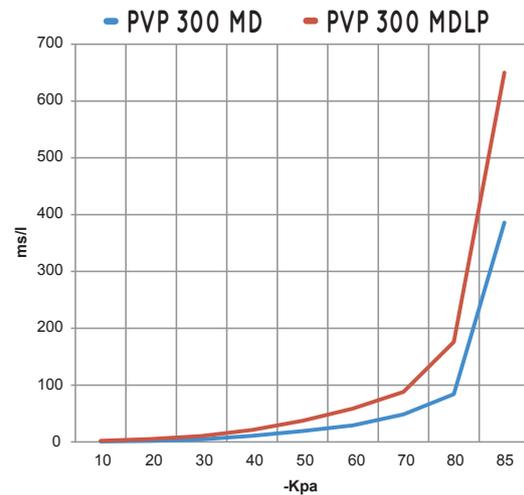
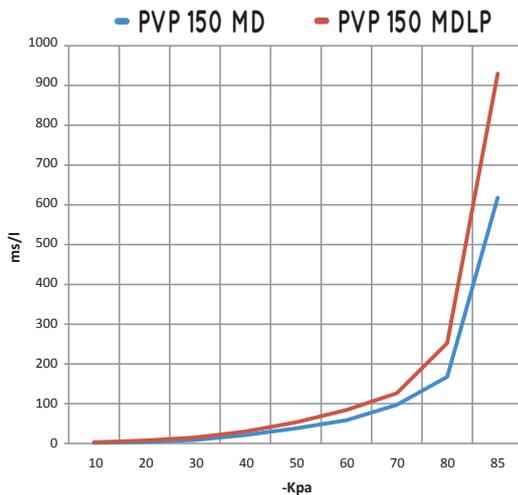


Air flow rate (NI/s) at different levels of vacuums (-KPa) at optimal supply pressure



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		
PVP 150 MD	6.0	16.0	55.5	39.6	26.5	13.2	9.4	7.5	5.7	4.0	2.3	90	
PVP 300 MD	6.0	32.0	111.1	79.4	52.9	26.5	19.9	15.1	11.4	7.9	4.5	90	
PVP 150 MDLP	3.0	22.6	47.2	24.5	15.9	10.3	9.3	7.5	4.7	3.2	1.8	88	
PVP 300 MDLP	3.0	45.5	94.4	49.0	31.9	20.7	18.6	15.1	9.3	6.5	3.7	88	

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

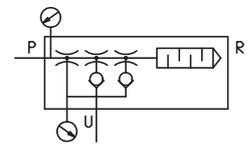
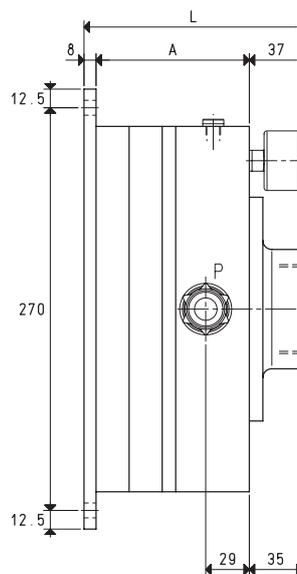
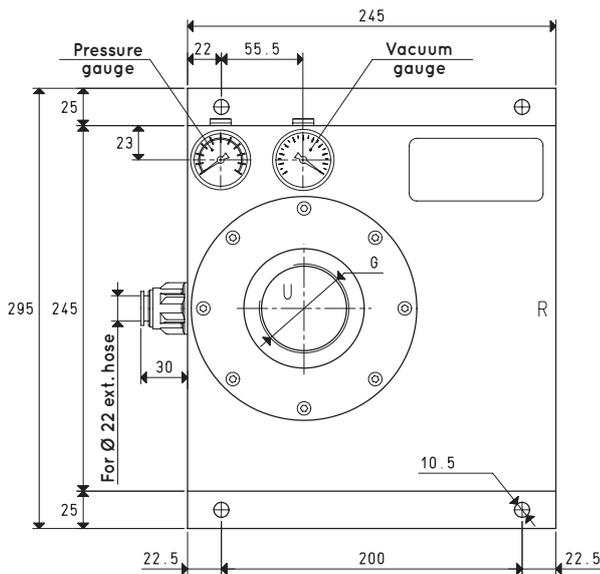


Generator item	Supp. press. bar	Air consumption NI/s	Evacuation rates (ms/l = s/m ³) at different levels of vacuums (-KPa) at optimal supply pressure									Max vacuum -KPa
			10	20	30	40	50	60	70	80	85	
PVP 150 MD	6.0	16.0	1.6	4.0	8.9	21.3	38.2	58.4	97.0	167.8	618	90
PVP 300 MD	6.0	32.0	0.8	2.0	4.4	10.6	19.1	29.2	48.5	83.9	386	90
PVP 150 MDLP	3.0	22.6	2.9	7.5	15.0	30.1	53.3	84.2	126.3	252.5	930	88
PVP 300 MDLP	3.0	45.5	2.0	5.2	10.5	21.0	37.2	58.7	88.0	176.1	650	88



MULTI-STAGE AND MODULAR VACUUM GENERATORS PVP 450 MD / MDLP and PVP 600 MD / MDLP

3D drawings are available on vuototecnica.net



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

Item		PVP 450 MD			PVP 600 MD		
		Intake air flow rate	m ³ /h	490	530	580	640
Maximum level of vacuum	-KPa	65	82	90	65	82	90
Final pressure	abs. mbar	350	180	100	350	180	100
Supply pressure	bar	4	5	6	4	5	6
Optimal supply pressure	bar			6			6
Air consumption	NI/s	35.4	40.6	47.8	45.4	56.8	63.2
Temperature of use	°C			-20 / +80			-20 / +80
Noise level at optimal supply pressure	dB(A)			74			78
Weight	Kg			9.1			10.3
A				122			142
G	∅			G3"			G3"
L				167			187

Item		PVP 450 MDLP			PVP 600 MDLP		
		Intake air flow rate	m ³ /h	250	440	500	330
Maximum level of vacuum	-KPa	30	64	88	30	64	88
Final pressure	abs. mbar	700	360	120	700	360	120
Supply pressure	bar	1	2	3	1	2	3
Optimal supply pressure	bar			3			3
Air consumption	NI/s	32.0	48.8	65.8	42.0	66.0	87.7
Temperature of use	°C			-20 / +80			-20 / +80
Noise level at optimal supply pressure	dB(A)			80			82
Weight	Kg			9.1			10.3
A				122			142
G	∅			G3"			G3"
L				167			187

Spare parts	item	PVP 450 MD / MDLP		PVP 600 MD / MDLP	
		Sealing kit and reed valves	00 KIT PVP 450 MD		00 KIT PVP 600 MD
Exhaust silencer	00 15 70		00 15 70		
Silencer on nozzles	00 15 71 + 00 15 72		N°2 00 15 72		
Vacuum gauge	09 03 15		09 03 15		
Pressure gauge	09 03 25		09 03 25		

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.

Add the letter R to the item for a generator supplied with an integrated check valve (Example: PVP 450 MDR).

Add the letters ES to the article for a generator supplied complete with an ES energy saving device (example: PVP 450 MD ES).

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

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

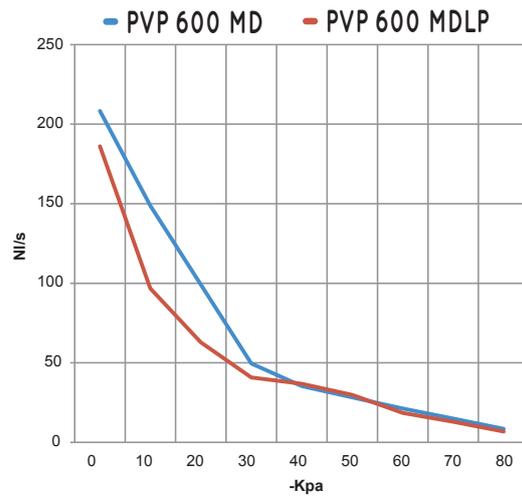
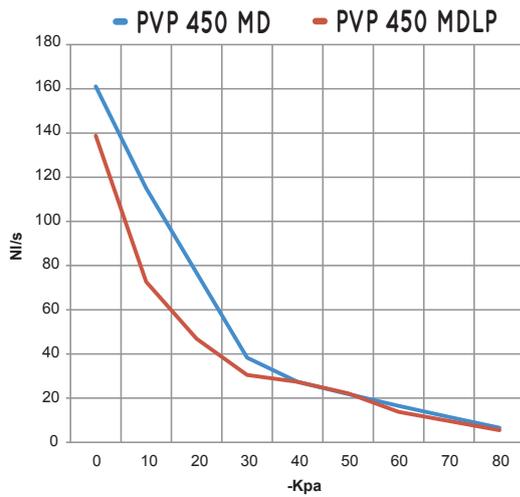
inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

Adapters for GAS - NPT threading available on page 1.134

MULTI-STAGE AND MODULAR VACUUM GENERATORS PVP 450 MD / MDLP and PVP 600 MD / MDLP

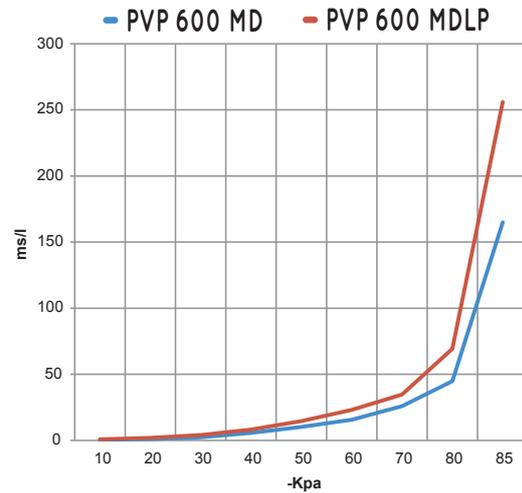
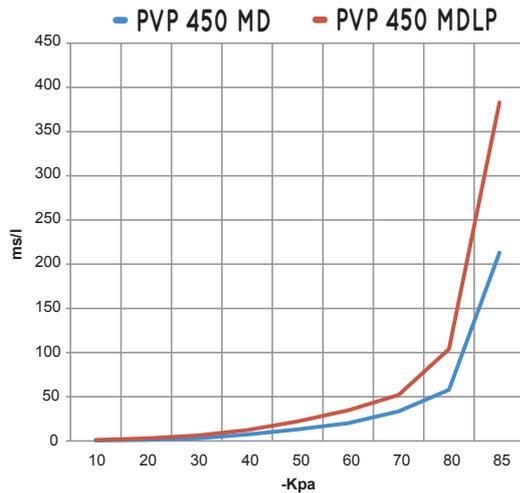


Air flow rate (NI/s) at different levels of vacuums (-KPa) at optimal supply pressure



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		
PVP 450 MD	6.0	47.8	161.1	115.0	76.7	38.3	27.4	21.9	16.5	11.5	6.6	90	
PVP 600 MD	6.0	63.2	208.3	148.8	99.2	49.6	35.4	28.3	21.3	14.9	8.5	90	
PVP 450 MDLP	3.0	65.8	138.8	72.7	46.9	30.5	27.4	22.2	13.8	9.6	5.5	88	
PVP 600 MDLP	3.0	87.7	186.1	96.7	62.9	40.8	36.8	29.8	18.5	12.9	6.8	88	

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

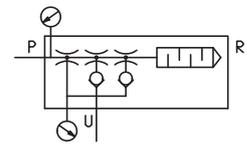
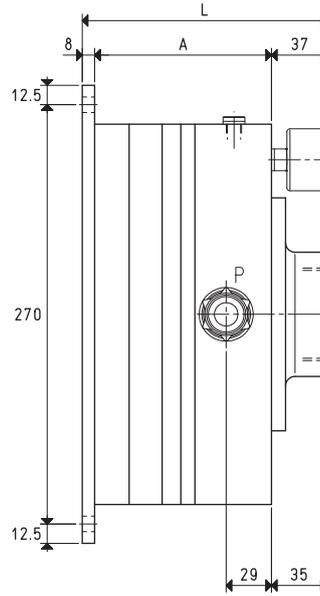
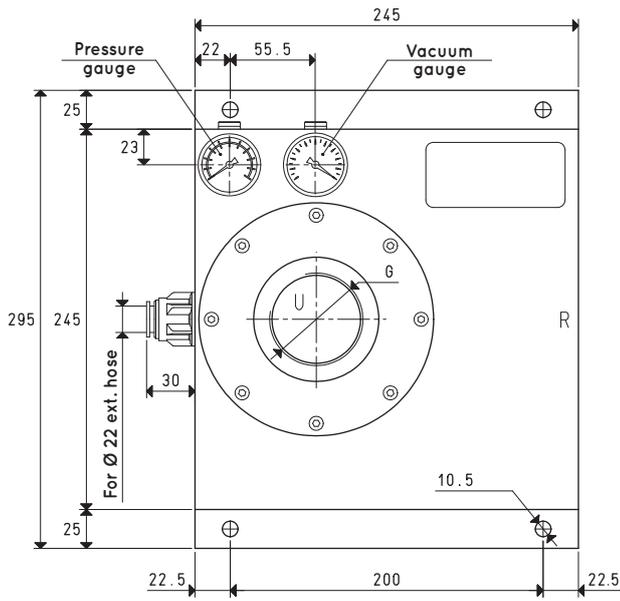


Generator item	Supp. press. bar	Air consumption NI/s	Evacuation rates (ms/l = s/m³) at different levels of vacuums (-KPa) at optimal supply pressure										Max vacuum -KPa
			10	20	30	40	50	60	70	80	85		
PVP 450 MD	6.0	47.8	0.5	1.4	3.0	7.4	13.2	20.1	33.5	57.9	213	90	
PVP 600 MD	6.0	63.2	0.4	1.0	2.4	5.7	10.2	15.6	25.9	44.8	165	90	
PVP 450 MDLP	3.0	65.8	1.2	3.0	6.2	12.4	22.0	34.7	52.0	104.1	383	88	
PVP 600 MDLP	3.0	87.7	0.8	2.0	4.1	8.2	14.6	23.1	34.7	69.4	256	88	



MULTI-STAGE AND MODULAR VACUUM GENERATORS PVP 750 MD / MDLP

3D drawings are available on vuototecnica.net



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

Item		PVP 750 MD		
Intake air flow rate	m ³ /h	650	780	900
Maximum level of vacuum	-KPa	65	82	90
Final pressure	abs. mbar	350	180	100
Supply pressure	bar	4	5	6
Optimal supply pressure	bar			6
Air consumption	NI/s	60.5	71.0	80.0
Temperature of use	°C			-20 / +80
Noise level at optimal supply pressure	dB(A)			84
Weight	Kg			12.7
A				164
G	∅			G3"
L				209
Item		PVP 750 MDLP		
Intake air flow rate	m ³ /h	420	650	800
Maximum level of vacuum	-KPa	30	64	88
Final pressure	abs. mbar	700	360	120
Supply pressure	bar	1	2	3
Optimal supply pressure	bar			3
Air consumption	NI/s	52.0	82.5	110.0
Temperature of use	°C			-20 / +80
Noise level at optimal supply pressure	dB(A)			85
Weight	Kg			12.7
A				164
G	∅			G3"
L				209
Spare parts		PVP 750 MD / MDLP		
Sealing kit and reed valves	item	00 KIT PVP 750 MD		
Exhaust silencer	item	00 15 70		
Silencer on nozzles	item	N°2 00 15 72 + 00 15 71		
Vacuum gauge	item	09 03 15		
Pressure gauge	item	09 03 25		

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.

Add the letter R to the item for a generator supplied with an integrated check valve (Example: PVP 750 MDR).

Add the letters ES to the article for a generator supplied complete with an ES energy saving device (example: PVP 750 MD ES).

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

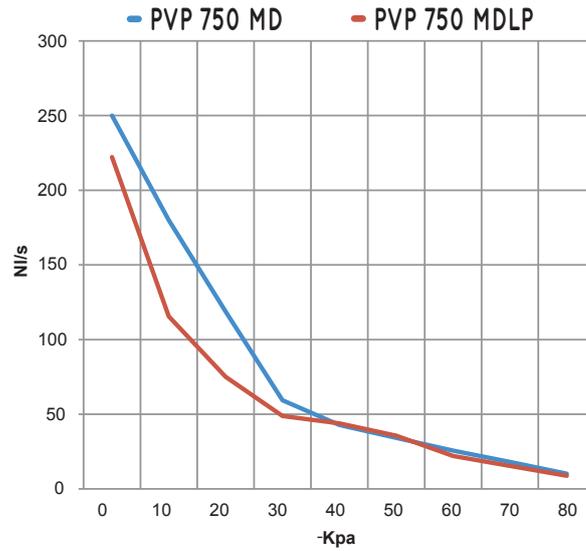
Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

Adapters for GAS - NPT threading available on page 1.134

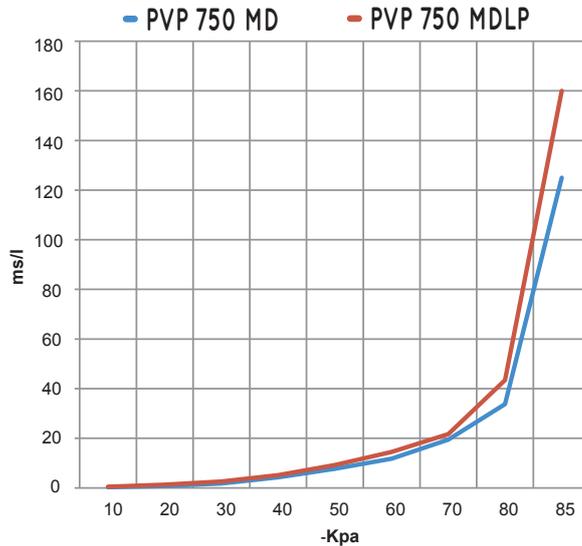


Air flow rate (NI/s) at different levels of vacuums (-KPa) at optimal supply pressure



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		
PVP 750 MD	6.0	80.0	250.0	180.0	118.8	59.4	42.8	34.2	25.7	18.0	10.2	90	
PVP 750 MDLP	3.0	110.0	222.2	115.5	75.1	48.8	43.9	35.6	22.0	15.4	8.8	88	

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

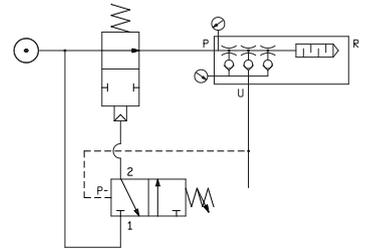
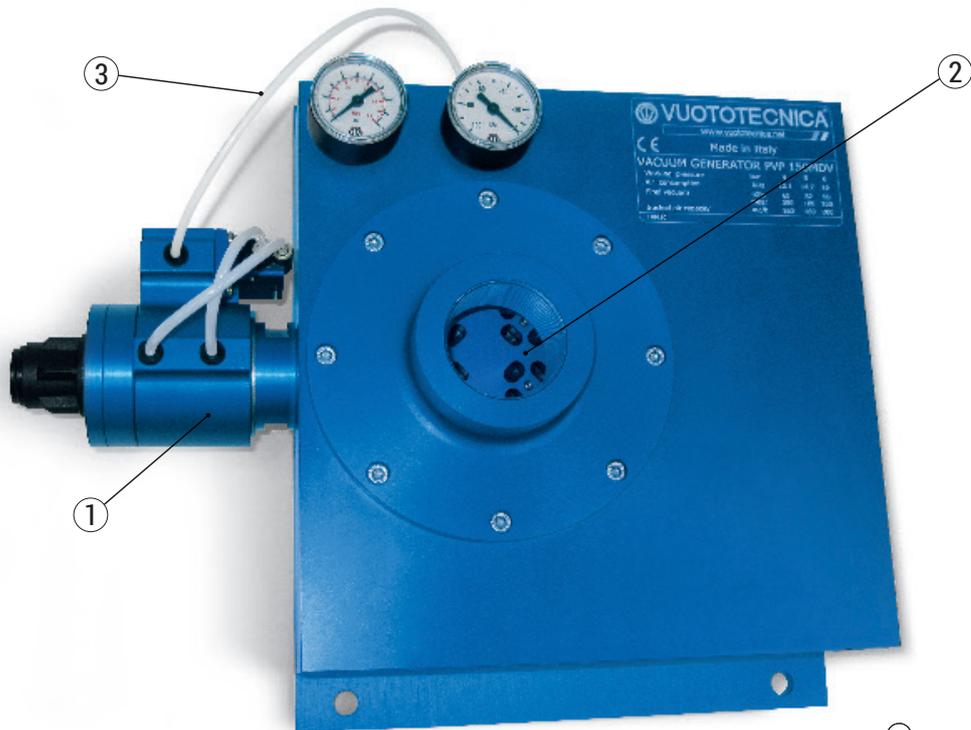


Generator item	Supp. press. bar	Air consumption NI/s	Evacuation rates (ms/l = s/m³) at different levels of vacuums (-KPa) at optimal supply pressure										Max vacuum -KPa
			10	20	30	40	50	60	70	80	85		
PVP 750 MD	6.0	80.0	0.3	0.8	1.8	4.3	7.7	11.8	19.5	33.8	125	90	
PVP 750 MDLP	3.0	110.0	0.5	1.3	2.6	5.2	9.2	14.5	21.7	43.4	160	88	



ACCESSORIES FOR VACUUM GENERATORS PVP 150 MD / MDLP ÷ PVP 750 MD / MDLP

3D drawings are available on vuototecnica.net



COMPLETE KIT FOR ENERGY SAVING DEVICE ES

The three components described above make up an energy saving kit for the compressed air supply ES (Energy Saving System). In fact, the ES device acts directly on the generator, making it operate only within the preset vacuum values, thus limiting compressed air supply consumption; all this entails considerable energy savings. This kit has been specifically designed for the PVP 150-750 MD/MDLP series of generators.



Item	For generator item	Weight g
ES 05	PVP 150 ÷ 750 MD / MDLP	596

Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

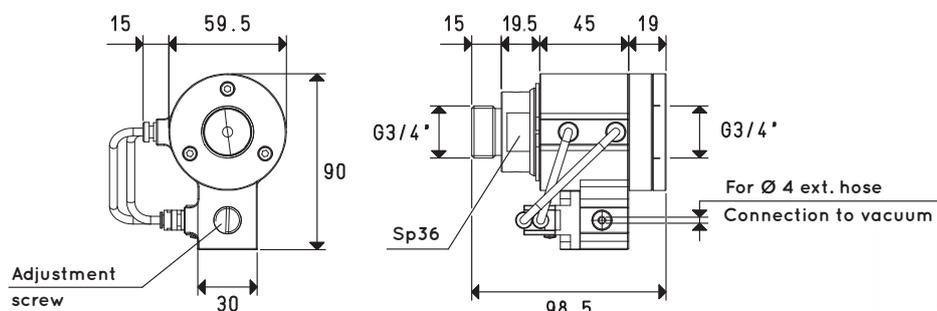
inch = $\frac{\text{mm}}{25.4}$; pounds = $\frac{\text{g}}{453.6} = \frac{\text{Kg}}{0.4536}$

Adapters for GAS - NPT threading available on page 1.134

ACCESSORIES FOR VACUUM GENERATORS PVP 150 MD / MDLP ÷ PVP 750 MD / MDLP

① - COAXIAL SHUTTER SERVO-CONTROLLED SUPPLY VALVE

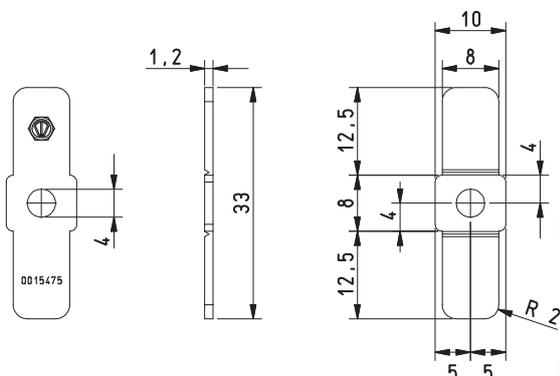
This is an innovative valve with coaxial shutter, pneumatically driven by the integrated vacuum switch on it, able to intercept the compressed air supply to the vacuum generator, with operating pressures between 1.5 and 7 bar. The vacuum switch has the task of removing and returning a pneumatic signal when a preset and adjustable level of vacuum is reached. The pressure differential existing between the set maximum value and that of restoring the signal at rest is not adjustable and is equal to about 100 mbar. The pneumatic vacuum switch, acting on the coaxial shutter supply valve automatically maintains the maximum and minimum level of vacuum within the differential value.



Item	For generator item	Sealing kit item	Weight g
07 04 71	PVP 150 ÷ 750 MD / MDLP	00 KIT 07 04 71	570

② - REED VALVE KIT FOR CHECK DEVICE ON VACUUM GENERATORS

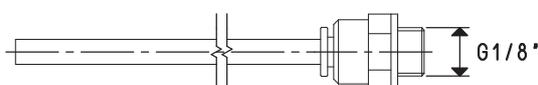
This reed valve kit, specifically designed to be integrated on PVP 150/750 MD/MDLP vacuum generators, has the task of preventing the return of atmospheric air into the vacuum system (tanks, autoclaves, intake systems depression, vacuum cups, etc.), when the generator stops, guaranteeing the seal and maintaining the level of vacuum reached in use.



Item	For generator item	No. pc.	Weight g
00 KIT TRASMD-MDR	PVP 150 ÷ 750 MD / MDLP	6	16

③ - FLEXIBLE TUBE FOR CONNECTION TO VACUUM

This flexible tube is fitted on one end with a 1/8" quick-fit coupling, to be screwed onto one of the two vacuum generator connections reserved for the vacuum gauge, while the other free end is inserted into the fitting installed on the pneumatic vacuum switch. The task of this tube is to continuously monitor the value of the level of vacuum reached in use and to transmit it to the vacuum switch.



Item	For supply valve item	Weight g
00 15 496	07 03 71 - 07 04 71	10



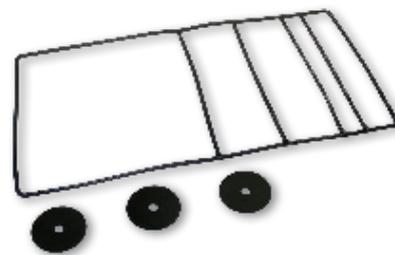


ACCESSORIES FOR VACUUM GENERATORS PVP 150 MD / MDLP ÷ PVP 750 MD / MDLP

3D drawings are available on vuototecnica.net

Sealing kit and reed valves

Item	By generators item
00 KIT PVP 150 MD	PVP 150 MD / MDLP
00 KIT PVP 300 MD	PVP 300 MD / MDLP
00 KIT PVP 450 MD	PVP 450 MD / MDLP
00 KIT PVP 600 MD	PVP 600 MD / MDLP
00 KIT PVP 750 MD	PVP 750 MD / MDLP



Sound absorbing material on the exhaust

Item	By generators item	Quantity
00 15 70	PVP 150 MD / MDLP	1 piece
	PVP 300 MD / MDLP	1 piece
	PVP 450 MD / MDLP	1 piece
	PVP 600 MD / MDLP	1 piece
	PVP 750 MD / MDLP	1 piece



Sound absorbing material on ejectors

Item		00 15 71	00 15 72
PVP 150 MD / MDLP	No. pc.	1	1-piece
PVP 300 MD / MDLP	No. pc.	-	11piece
PVP 450 MD / MDLP	No. pc.	1	11piece
PVP 600 MD / MDLP	No. pc.	-	22pieces
PVP 750 MD / MDLP	No. pc.	1	12piece



Vacuum gauge Ø 40 mm with 1/8" coaxial gas coupler

Item	By generators item
09 03 15	All



Pressure gauge Ø 40 mm with 1/8" coaxial gas coupler

Item	bar	By generators item
09 03 25	1 ÷ 10	All



Transformation ratio: N (newton) = Kg x 9.81 (force of gravity)

inch = $\frac{mm}{25.4}$; pounds = $\frac{g}{453.6} = \frac{Kg}{0.4536}$

Adapters for GAS - NPT threading available on page 1.134