PU Series

- Compact in size, lightweight, and easy to install.
- The secondary vacuum tube reduces energy consumption by 40–50% compared with a single-stage vacuum generator of the same specifications.
- Equipped with a configurable silencer, it produces lower noise levels compared to traditional linear generators.
- The gas inlet and vacuum inlet feature snap-fit connections that allow for quick disassembly and facilitate easy cleaning.

How To Order

PU	① Suction flow rate	② Vacuum characteristics	③ Supply port	–	④ Vacuum port	⑤ Exhaust port	⑥ Bracket
	2	H	08	–	08	U	B

① Suction flow rate	
1	10 -19 L/min
2	40 -44 L/min
3	158 -171 L/min

② Vacuum characteristics	
B*	Ultra-low pressure type
H	High-vacuum type
L	High-throughputt ype
M	Low-pressure type

* Only PU1 has this feature.

③ Supply port		PU1	PU2	PU3
04	ø4	●	—	—
06	ø6	●	●	—
08	ø8	—	●	●

④ vacuum port		PU1	PU2	PU3
04	ø4	●	—	—
06	ø6	●	●	—
08	ø8	—	●	●
10	ø10	—	—	●
12	ø12	—	—	●

⑤ Exhaust port	
Nil	port exhaust
U	with a silencer pipe

⑥ Bracket	
Nil	Without bracket
B	With bracket

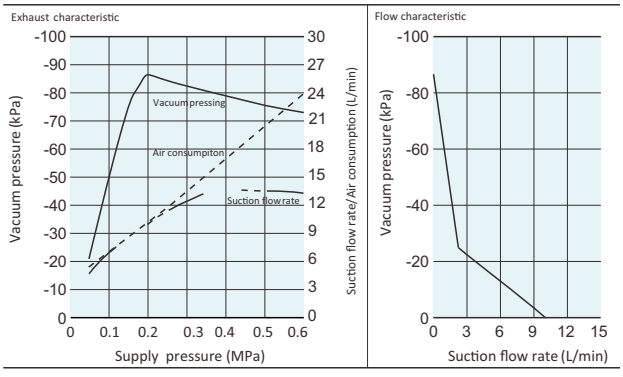
Specifications

Item \ Model		PU1				PU2			PU3		
		B	H	L	M	H	L	M	H	L	M
Nozzle diameter	(mm)	0.6	0.4	0.3	0.6	0.8	0.7	0.9	1.5	1.3	1.9
Fluids		Oil-free compressed air									
Operating temperature range	(℃)	0 ~ 60 (No ice formation)									
Operating pressure range	(MPa)	0.1 ~ 0.6									
Rated pressure	(MPa)	0.2	0.5	0.6	0.45	0.5		0.35	0.5		0.35
Achieve vacuum level	(kPa)	-83	-90	-75	-84	-93	-75	-90	-93	-75	-90
Suction flow rate	(L/min)	10	14	13.6	19	41.8	44	40	162	171	158
Air consumption	(L/min)	10.1	8.8	7.2	16.2	34.8	21	38.4	131	97	142

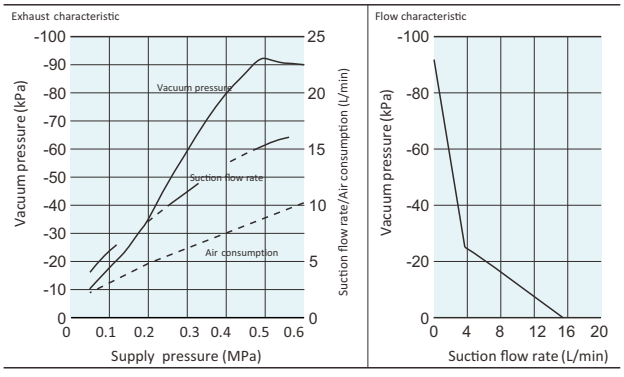
Characteristic Curve (reference Value)

Vacuum pressure — Air consumption - - - - - Suction flow rate - - -

PU1B □ Maximum vacuum level: -83 kPa



PU1H □ Maximum vacuum level: -9 1 kPa



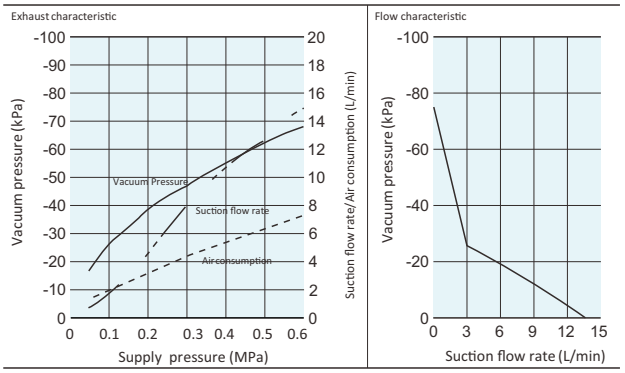
CommaElec

Characteristic Curve (reference Value)

Vacuum pressure | Air consumption | Suction flow rate

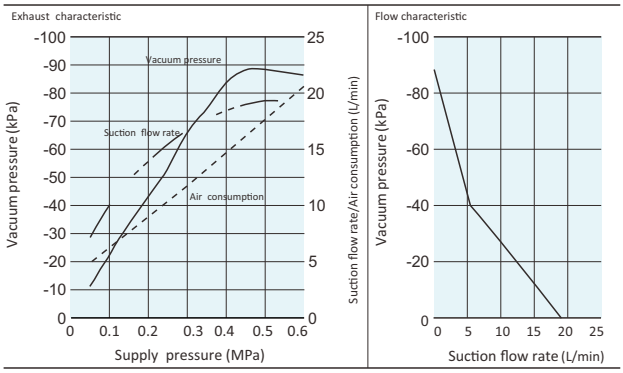
PU1L □

Maximum vacuum level: -75 kPa



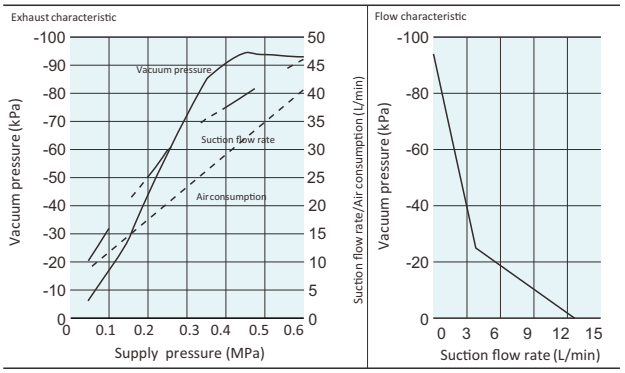
PU1M □

Maximum vacuum level: -84 kPa



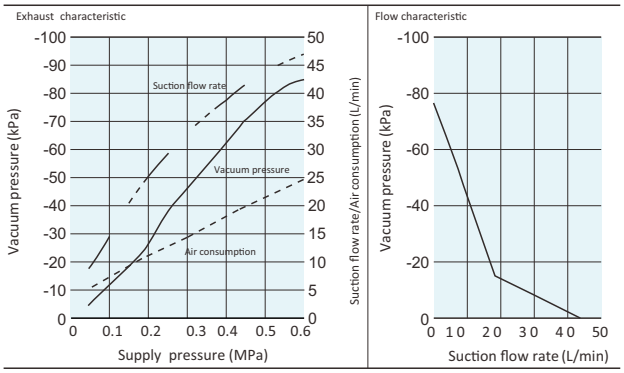
PU2H □

Maximum vacuum level: -93 kPa



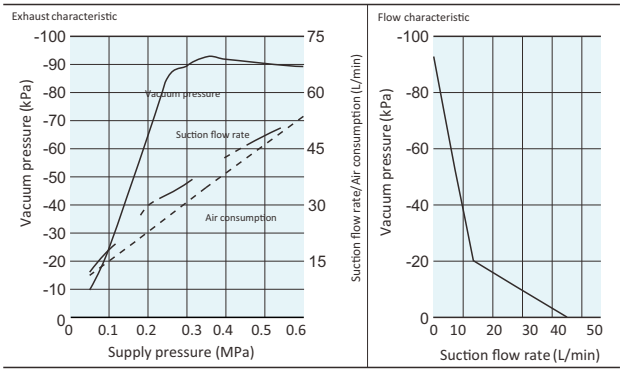
PU2L □

Maximum vacuum level: -75 kPa



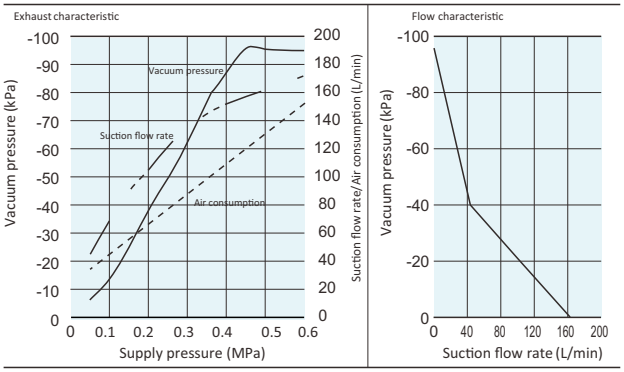
PU2M □

Maximum vacuum level: -90 kPa



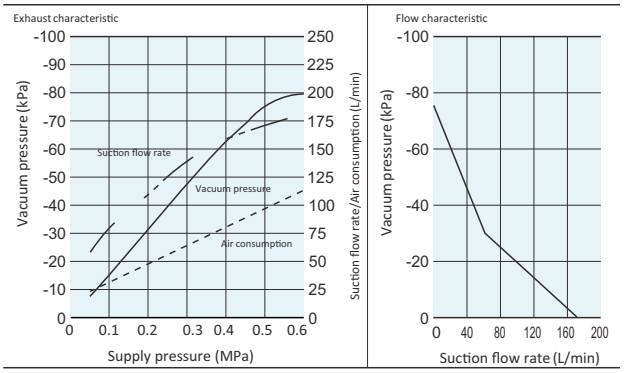
PU3H □

Maximum vacuum level: -93 kPa



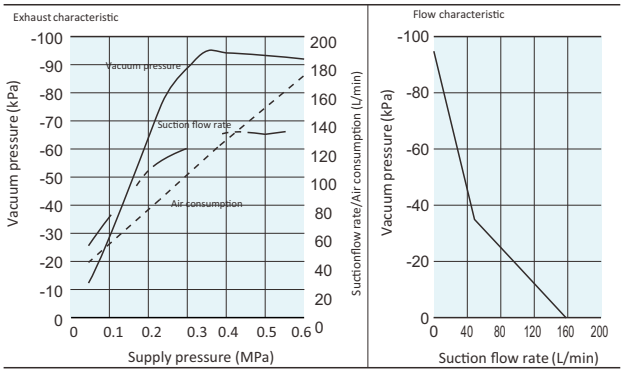
PU3L □

Maximum vacuum level: -75 kPa



PU3M □

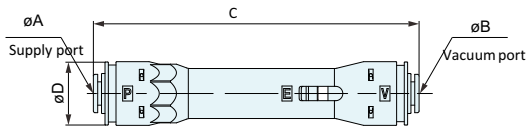
Maximum vacuum level: -90 kPa



PU Series Linear Multi-stage Vacuum Generator

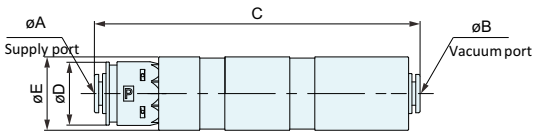
outline dimension

(mm)



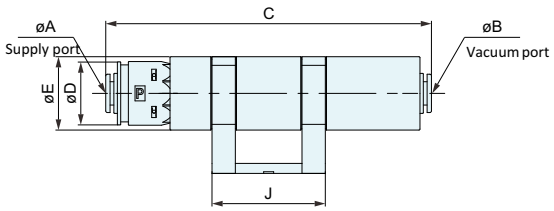
Model	① Suction flow rate	② Vacuum characte-ristics	③ Supply port	④ Vacuum port	øA	øB	C	øD
PU	1	B H L M	04	04	4	4	70.4	14.5
				06		6	70.7	
			06	06	6	6	71	
	2	H L M	06	06	6	6	98	19
				08		8	99	
			08	08	8	8	100	
	3	H L M	08	08	8	8	157.5	28
				10		10	158	
				12		12	159	

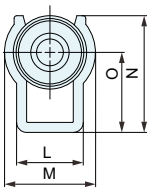
Order example:**PU2H06-08**

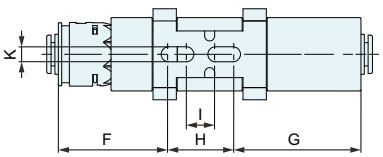


Model	① Suction flow rate	② Vacuum characte-ristics	③ Supply port	④ Vacuum port	⑤ Exhaust port	øA	øB	C	øD	øE
PU	1	B H L M	04	04	U	4	4	70.4	14.5	17.7
				06			6	70.7		
			06	06		6	6	71		
	2	H L M	06	06		6	6	98	19	22
				08			8	99		
			08	08		8	8	100		
	3	H L M	08	08		8	8	157.5	28	32
				10			10	158		
				12			12	159		

Order example:**PU2H08-08U**



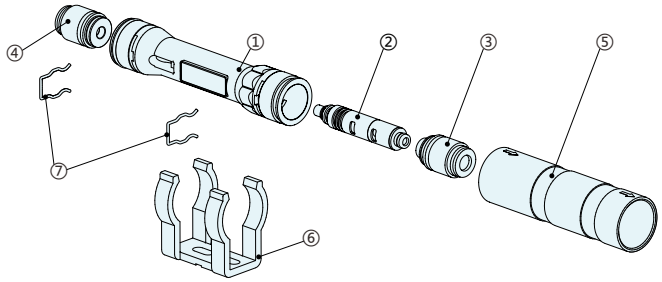




Model	① Suction flow rate	② Vacuum charace-ristics	③ Supply port	④ Vacuum port	⑤ Exhaust port	⑥ Bracket	øA	øB	C	øD	øE	F	G	H	I	J	K	L	M	N	O
PU	1	B H L M	04	04	U	B	4	4	70.4	14.5	17.7	23.9	27.4	13.5	6.4	30	4.5	18	23.5	20	29
				06				6	70.7												
			06	06			6	6	71												
	2	H L M	06	06			6	6	98	19	22	33.2	38.6	19.2	8.7	34	4.5	20	27.5	25	35
				08				8	99												
			08	08			8	8	100												
	3	H L M	08	08			8	8	157.5	28	32	61.6	65.2	24.2	10.8	44	5.3	25.6	37.5	28.5	44
				10				10	158												
				12				12	159												

Order example:**PU3H08-12UB**

Replaceable parts model numbers



Component parts

No.	Component Name	Main Materials	Remarks
1	Subject	Resin	—
2	Vacuum generator	Resin	In addition to resins, HNBR and NBR are also used.
3	Supply port quick-connect assembly	Brass / Aluminum alloy	In addition to non-electrolytic nickel plating and brass (PU3 main aluminum alloy), resin, stainless steel, and NBR are also used.
4	Vacuum port quick-connect assembly	Brass / Aluminum Alloy	In addition to non-electrolytic nickel plating and brass (PU3 main aluminum alloy), resin, stainless steel, and NBR are also used.
5	Silencer pipe	PC	—
6	Cradle	PBT	—
7	Card Clip	SUS304	—

Change the vacuum generator model

Model	B	H	L	M
PU1	PU1-EJ2B-A	PU1-EJ2H-A	PU1-EJ2L-A	PU1-EJ2M-A
PU2	—	PU2-EJ2H-A	PU2-EJ2L-A	PU2-EJ2M-A
PU3	—	PU3-EJ2H-A	PU3-EJ2L-A	PU3-EJ2M-A

Change the quick connector assembly model

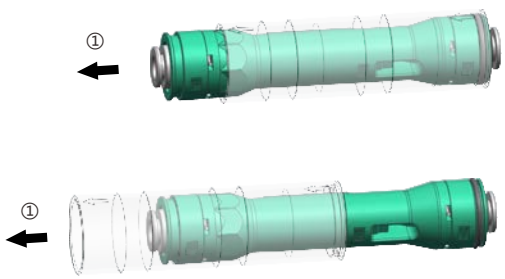
Model / Tube	PU1		PU2		PU3	
	③Supply port	④Vacuum port	③Supply port	④Vacuumport	③supply port	④Vacuumport
ø4	KJ06H-C4		—	—	—	
ø6	KJ06H-C6		KQ10H-C6B	KQ10H-C6	—	
ø8	—		KQ10H-C8B	KQ10H-C8	KQ12H-C8	
ø10	—		—	—	—	KQ12H-C10
ø12	—		—	—	—	KQ12H-C12

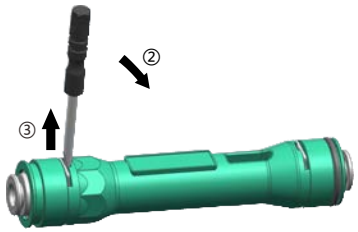
Replacement of silencer tubes, brackets, and clamp models

Model	Silencer pipe	Cradle	Card Clip
PU1	PU-UR001	ZFC-BR003	PUW-1
PU2	PU-UR002	ZFC-BR004	PUW-2
PU3	PU-UR003	PU-BR003	PUW-3

Replacement and Cleaning Guidelines

Pull out the silencer tube from the ①(P-port) direction; insert the tip of a precision screwdriver into the clamping mechanism; move the screwdriver in the direction indicated by ②; pull out the clamping mechanism in the direction indicated by ③; remove the quick-connect joint; and pull out the vacuum generator tube.





When cleaning the product, use compressed air or a soft brush (water and soap) to remove dirt from the vacuum generator. Another convenient method for cleaning the product is to use an ultrasonic cleaner (if available).

Debugging

Observation or error	Primary cause	Measure	Remarks
Low vacuum level	Insufficient intake pressure	Check the supply air pressure at the vacuum generator's compressed air port.	Ensure that the dimensions of the compressed air supply components are sufficient to avoid pressure drops within the system.
	Compressed air leakage results in insufficient supply pressure.	Check whether the quick connector and O-ring are clean and in good condition.	—
	Vacuum generator nozzle clogging	Disassemble the vacuum generator, inspect the vacuum generation tube, and perform nozzle cleaning if necessary.	—
	Vacuum leakage at the check valve disc	Disassemble the vacuum generator and inspect the one-way valve disc of the vacuum generation tube to ensure it is clean and in good condition. If necessary, clean or replace it.	Ensure the use of appropriate check valve disc sealing materials.
	Vacuum generator tube clogging	Disassemble the vacuum generator and inspect the vacuum generation tube. If necessary, perform cleaning.	—
	Silencer or exhaust port (E) clogged	Perform a visual inspection of the interior of the silencer or the exhaust outlet to check for any dirt or debris; if necessary, clean them.	—
Intermittent exhaust noise	When a vacuum generator is generating a vacuum, under standard supply pressure conditions where the vacuum level reaches its peak, intermittent noise (or sound) may be heard on the exhaust side, and the vacuum level may fail to stabilize.	If the required vacuum range for adsorption is sufficiently wide, there will be no issues with its use. If intermittent noise is affecting or interfering with the pressure switch's setpoint, please slightly adjust the supply pressure to avoid the pressure range where the intermittent noise occurs.	—