

Vacuum Generator VLS

Larger sized single-stage vacuum ejectors



Now we offer $\varnothing 2.0, \varnothing 2.5, \varnothing 2.8$ mm nozzle types

NEW

Three nozzles option



VLS

Suction flow (※)

max. **7.0 SCFM**
or
200 ℓ /min[ANR]

Comparison with the compact vacuum generators



Nozzle dia.
 $\varnothing 0.5 \sim \varnothing 1.2$ mm
Suction flow (※)
max. **0.13 SCFM**, or
max. **38 ℓ /min[ANR]**

Nozzle dia.
 $\varnothing 0.3 \sim \varnothing 0.7$ mm
Suction flow (※)
max. **0.44 SCFM**, or
max. **1.25 ℓ /min[ANR]**

※) at the rated pressure 72.5psi (0.5MPa) - High vacuum type

- ◆ Boxed type Aluminum body
- ◆ Quiet operation with the cylinder type muffler
- ◆ Pressure gauge and sensor can be installed
- ◆ Simple structure - Easy maintenance



with digital pressure gauge



with pressure sensor

Vacuum generator VLS

Model Designation (Example)



⑥. Pressure indicator

Code		Pressure indicator type	
No entry		No pressure indicator (Rc1/8 female thread)	
G		Digital pressure gauge	
NV	Dual LCD Digital Pressure sensor	NPN open collector	SW 2points+Analog outputs
N2		PNP open collector	SW 2points outputs+copy function
PV	Pressure sensor	PNP open collector	SW 2points+Analog outputs
P2		PNP open collector	SW 2points outputs+copy function

⑤. Air supply port

Code	04
Female thread	Rc1/2

④. Vacuum port

Code	04
Female thread	Rc1/2

③. Nozzle size

Code	Nozzle dia. (mm)	Final vacuum (kPa)	Suction flow (ℓ/min[ANR])	Air consumption (ℓ/min[ANR])
20	ø2.0	-26.87 inHg	3.53scfm (100)	8.12scfm (230)
25	ø2.5		5.30scfm (150)	12.18scfm (345)
28	ø2.8	(-91)	7.06scfm (200)	14.48scfm (410)

②. Characteristic

Code	H
Type	High vacuum

①. Vacuum generator VLS

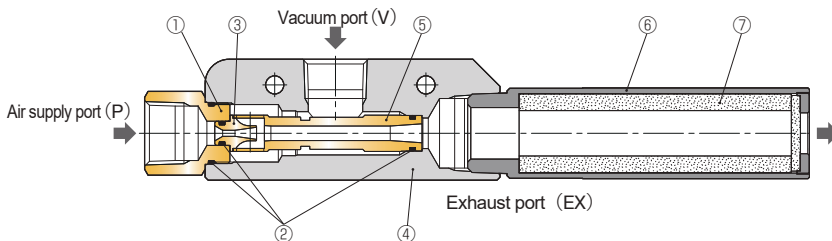
- ※1) Silencer is included in the same box
- ※2) Digital pressure gauge or Dual digital pressure sensor comes in the separate box
- ※3) The indicator port on the vacuum generator is plugged by a screw

Model Designation of Silencer



①. Silencer for VLS vacuum generator

Structure



No.	Parts	Material
①	Nozzle retainer	Brass (Nickel-plated)
②	O - ring	NBR
③	Nozzle	Brass (Nickel-plated) ※1
④	Main body	Aluminum (Anodized)
⑤	Diffuser	Brass
⑥	Silencer	PBT
⑦	Silencer element	PVF

※1) No nickel-plating on the ø2.8mm nozzle models

※2) The material of the plug screw for the pressure indicator port is steel (chrome-plated).

Specification

VLS vacuum generator

Fluid medium	Air, Inert gas
Service pressure range	21.75~101.5psi (0.15 ~ 0.7MPa)
Rated supply pressure	72.5psi (0.5MPa)
Service Temperature range	32~ 140°F (0~60°C)(No freezing)

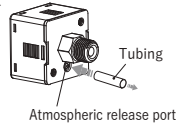
Digital pressure gauge

Model	GPD-V-01	
Rated pressure range	-101 ~ 0kPa	
Pressure indicating range	-101 ~ 10kPa (※1)	
Proof pressure	300kPa	
Fluid medium	Air, Non-corrosive/Non-flammable gas	
Power source	CR2032 Lithium battery	
Battery life	about 3 years (based on 5 times displays a day)	
Low power indicating function	Included	
Battery replacement	Replacable	
Display duration	60 seconds from the switch button being pushed	
Response time	2Hz (2 times/sec.)	
Repeatability	≤ ± 1% F.S. ± 1 digit	
LCD Display	7-segment display, 3.5-digit	
Indicator accuracy	±2% F.S. ± 1 digit or less (ambient temp. at : 25 ± 3°C)	
Protective structure	IP65 (※ 2)	
Ambient temp. range	Operating: 0~50°C, Stored: -10~60°C (No dew condensation or freezing)	
Ambient humidity range	Operating/Stored : 35~85%RH (No dew condensation)	
Vibration proof	Amplitude 1.5mm or 100m/s ² , 10Hz~150Hz~10Hz for one minute, 2hours each direction X, Y, Z	
Shock resistance	100m/s ² 3 times each in direction X, Y, Z	
Temperature characteristics	±2% F.S. (based on 25°C)	

※1) Indicator accuracy is not guaranteed for the pressure range 0 ~ 10kPa

※2) Insert a tubing in to the atmospheric release port to maintain IP65 (Fig. 1)

Fig. 1



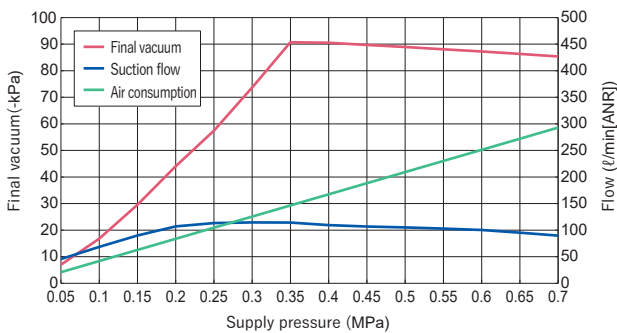
Pressure sensor

Model	VUS-32R		
Rated pressure range	-100.0 ~ 100.0kPa		
Proof pressure	300kPa		
Fluid medium	Air, Non-corrosive/Inert gas		
Power source	DC12V ~ 24V (Ripple ± 10% or below)		
Electrical consumption	40mA or below (no-load condition)		
SW output	Switch output	NPN open collector / PNP open collector	
	Max. current load	125mA	
	Max. supply voltage	DC30V / DC24V	
	Residual voltage	1.5V or less	
Repeatability	±0.2% F.S. ± 1 digit or below		
Hysteresis	One point set mode	Adjustable (※)	
	Hysteresis mode		
	Window comparator mode		
Response	2.5ms or less (Chattering-proof: 25ms, 100ms, 250ms, 500ms, 1000ms, 1500ms selectible)		
Output short circuit protection	Yes		
Digital display	3 colors (Red, Green, Orange) display (Sampling rate: 5times/sec)		
Indicator accuracy	± 2% F.S. ± 1 digit or less (at Ta=25 ± 3°C)		
Switch On indicator	Orange 1 & 2 indicator		
Analog output (Voltage output)	Output voltage: 1~5V ± 2.5% F.S. or less (within rated pressure range) Linearity : ± 1% F.S. or less, output impedance 1kΩ		
Resistance	Protective structure	IP40	
	Ambient temp. range	Operating: 0~50°C, Stored: -10~60°C (No condensation or freezing)	
	Ambient humidity range	Operating/Stored : 35~85%RH (No condensation)	
	Withstand voltage	1000VAC for one minute (Between housing and lead wire)	
	Insulation resistance	50MΩ or above (DC500V) (Between housing and lead wire)	
	Vibration proof	Amplitude 1.5mm or 100m/s ² , 10Hz~150Hz~10Hz for one minute, 2hours each direction X, Y, Z	
Shock resistance	100m/s ² 3 times each in direction X, Y, Z		
Temperature characteristics	±2.5% F.S. or less (at Ta=25°C, at temp. range 0 ~ +50°C)		
Cable	Oil-resistance cable (0.15mm ²)		

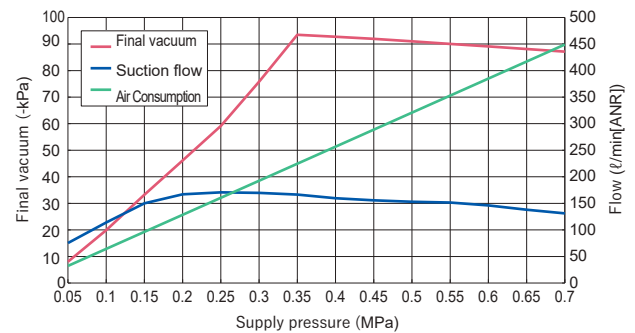
※) Hysteresis value is adjustable within 1~8 digits for one point set mode and window comparator mode

Characteristics

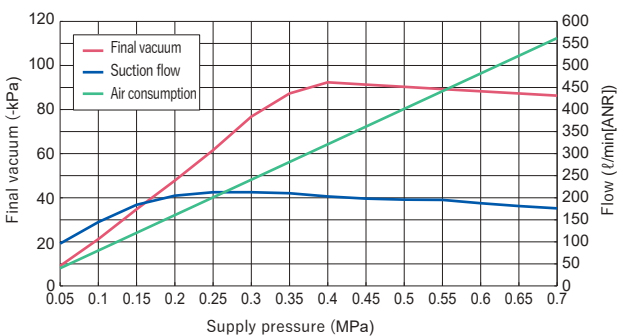
VLSH20 vacuum characteristics



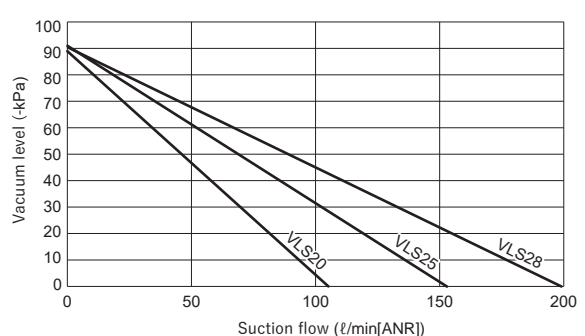
VLSH25 vacuum characteristics



VLSH28 vacuum characteristics



Flow characteristics

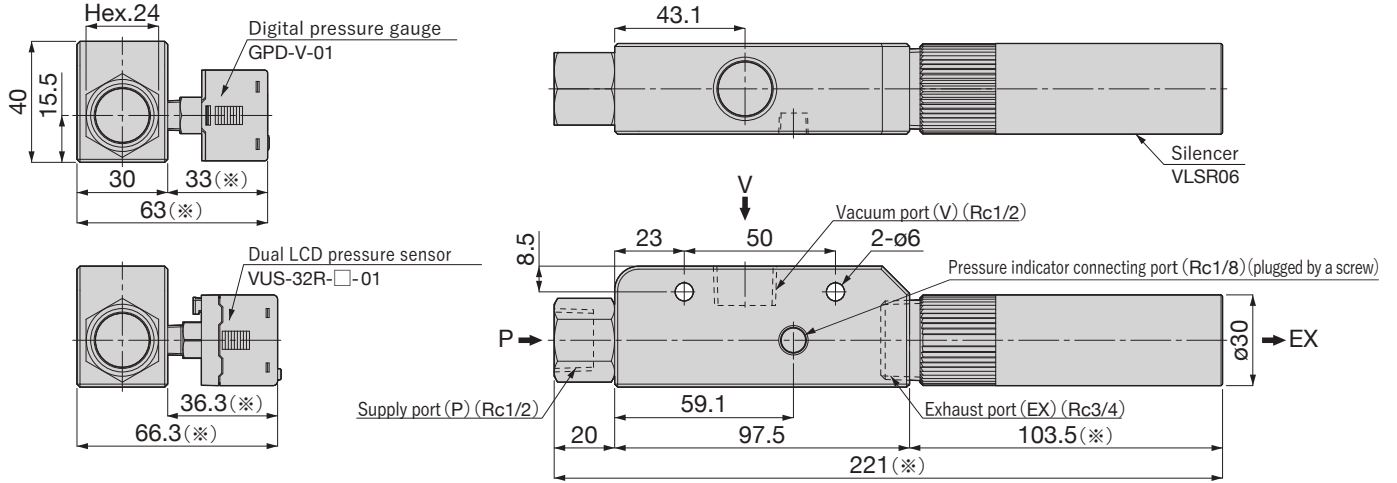


Vacuum generator VLS

Dimensions

Unit : mm

VLSH Vacuum Generator



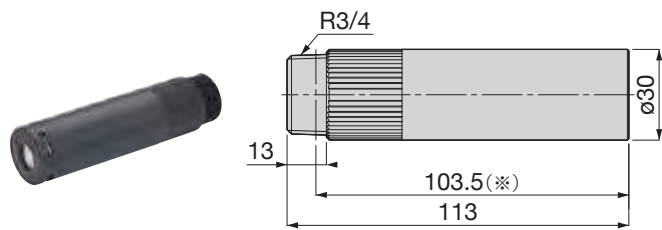
※) Length with the silencer being installed

Model	Weight (g)
VLSH20-0404	344
VLSH20-0404-G	381
VLSH20-0404-NV	424
VLSH20-0404-N2	
VLSH20-0404-PV	
VLSH20-0404-P2	

Model	Weight (g)
VLSH25-0404	341
VLSH25-0404-G	378
VLSH25-0404-NV	421
VLSH25-0404-N2	
VLSH25-0404-PV	
VLSH25-0404-P2	

Model	Weight (g)
VLSH28-0404	338
VLSH28-0404-G	375
VLSH28-0404-NV	418
VLSH28-0404-N2	
VLSH28-0404-PV	
VLSH28-0404-P2	

VLSR Silencer



※) Length after installation

Model	Weight (g)
VLSR06	34

Gauge/Switch

GPD Digital Pressure Gauge

for vacuum



Model

GPD-V-01

VUS-32 Dual LCD Digital Pressure Sensor

Compound pressure type



Model

VUS-32R-NV-01

VUS-32R-N2-01

VUS-32R-PV-01

VUS-32R-P2-01