

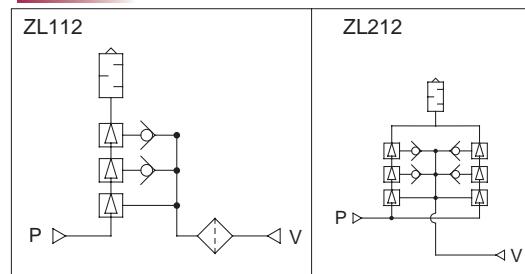
Multistage Ejector Series ZL

Features

- Multistage vacuum ejector.
- Three stage diffuser for greater efficiency.
- Single body or dual body available.
- Suction flows up to 200 l/min.
- Optional integrated pressure gauge or digital vacuum switch.
- Supply air control and release valves can be specified.
- Integrated silencer or ported exhaust.

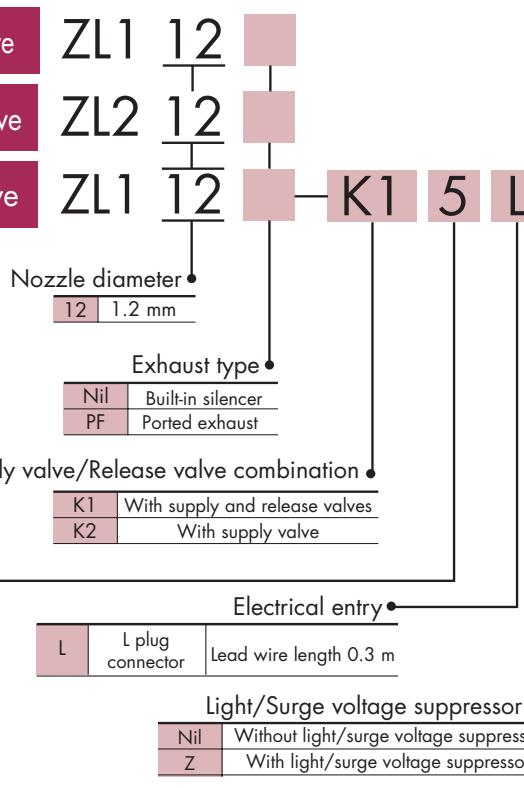


Symbol



How to order

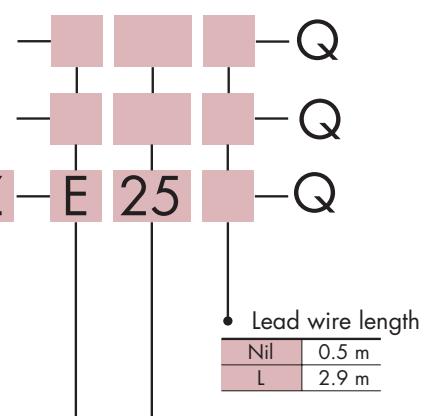
- Single body without valve
- Dual body without valve
- Single body with valve



DC specifications	
5	24 V
6	12 V
V	6 V
S	5 V
R	3 V

Vacuum pressure sensor

Nil	None
G	With vacuum pressure gauge
E	With digital vacuum pressure switch ZSE4
EB	With digital vacuum pressure switch ZSE4B



Digital vacuum pressure switch specifications

For E (ZSE4) EB (ZSE4B)	
25	NPN output
26	Analogue output
65	PNP output



CAD CD-ROM AVAILABLE



CATALOGUE **F813-B** AVAILABLE



PDF AVAILABLE ONLINE

Ejector Specifications

Model	ZL112	ZL212
Nozzle diameter	ø1.2 mm	ø1.2 mm x 2
Maximum suction flow rate	100 l/min (ANR)	200 l/min (ANR)
Air consumption	63 l/min (ANR)	126 l/min (ANR)
Maximum vacuum pressure	-84 kPa	-84 kPa
Maximum operating pressure	0.7 MPa	0.7 MPa
Supply pressure range	0.2 to 0.5 MPa	0.2 to 0.5 MPa
Standard supply pressure	0.4 MPa	0.4 MPa
Operating temperature range	5 to 50°C	5 to 50°C

ZL112 Standard



Supply/Release Valve Specifications (ZL112 only)

Part no.	SYJ514-□□□
Type of valve actuation	N.C.
Fluid	Air
Operating pressure range Internal pilot type	0.2 to 0.5 MPa
Ambient and fluid temperature	5 to 50°C
Response time (For 0.5 MPa)	25 ms or less
Maximum operating frequency ⁽¹⁾	5 Hz
Manual override	Non-locking push type/Locking slotted type
Pilot exhaust type	Pilot valve individual exhaust, Main valve/Pilot valve common exhaust
Lubrication	Not required
Mounting position	Unrestricted
Enclosure ⁽²⁾	Dust proof

ZL112 with valve



ZL112 with vacuum pressure gauge



Option Specifications

Digital Vacuum Pressure Switch Specifications

Part no.	ZSE4-00-□□-X105	ZSE4B-00-□□-X105
Display	LCD	LCD with backlight
Pressure setting range	-101 to 0 kPa	-101 to 10 kPa
Maximum operating pressure		200 kPa
Operation indicator light (Lights up when ON)		Green
Response frequency		200 Hz (5 ms)
Hysteresis	Hysteresis mode	Variable (3 digits or more)
	Window comparator mode	Fixed (3 digits)
Fluid		Air, Non-corrosive gas
Temperature characteristics		±3% F.S. or less
Repeatability		±1% F.S. or less
Operating voltage		12 to 24 VDC (Ripple ±10% or less)
Current consumption	25 mA or less	45 mA or less
Pressure indication		3 1/2 digits (Letter height 8 mm)
Self-diagnostic function		Over current ^{note1} , Over pressure, Data error, Presence of pressure at 0 clear
Operating temperature range		0 to 50°C (With no condensation)
Noise resistance		500 Vp-p, Pulse width: 1 mS, Start up: 1 nS
Withstand voltage		Between external terminal batch and case: 1000 VAC 50/60 Hz for 1 min.
Insulation resistance		Between external terminal batch and case: 2 MΩ (at 500 VDC)
ZSE4 ZSE4B	-25(L)	1 output NPN open collector 30 V, 80 mA or less
	-26(L)	Analogue output (1 to 5 V)
	-65(L)	1 output PNP open collector 80 mA or less

ZL212 with vacuum pressure gauge



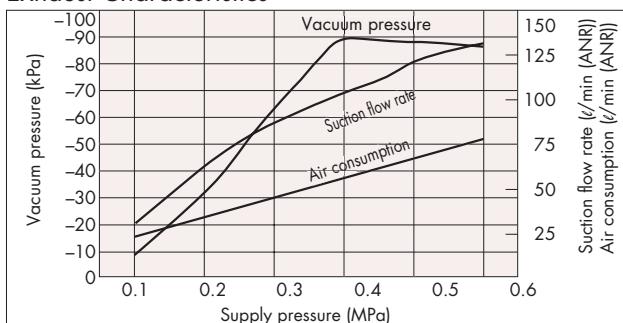
Vacuum Pressure Gauge Specifications

Part no.	GZ30S
Fluid	Air
Pressure range	-100 to 100 kPa
Scale range (Angular)	230°
Accuracy	3% F.S. (Full span)
Class	Class 3
Operating temperature range	±0 to 50°C
Material	Housing: Polycarbonate /ABS resin

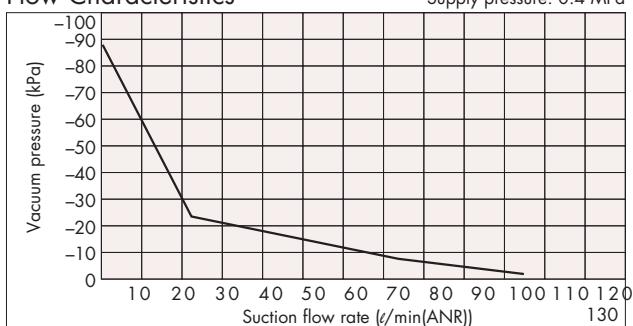
ZL Flow Rate Charts

ZL112

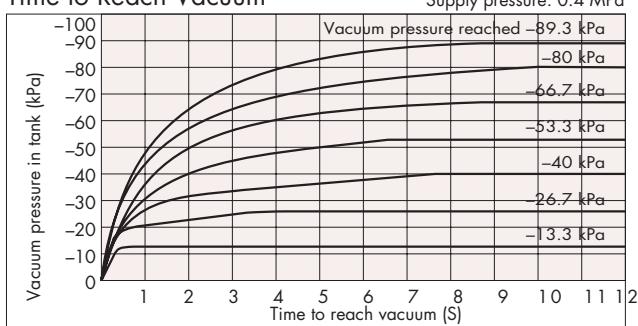
Exhaust Characteristics



Flow Characteristics



Time to Reach Vacuum

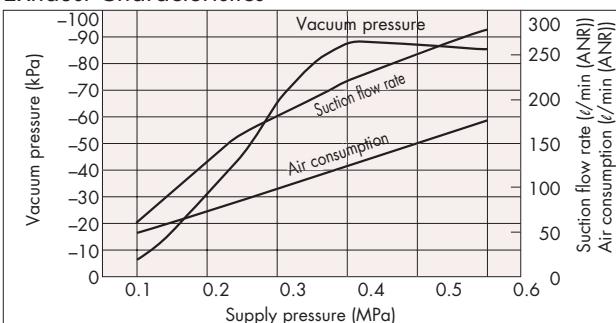


<How to Read the Graph>

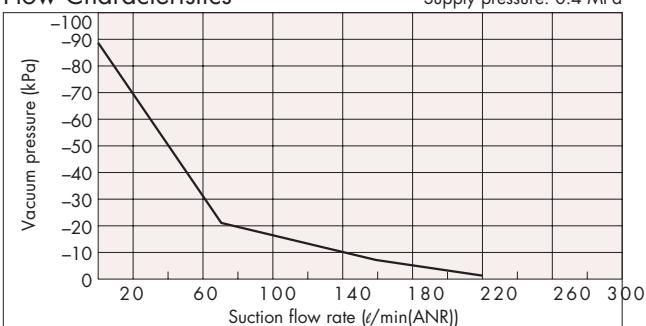
The graphics indicate the time required to reach a vacuum pressure determined by adsorption conditions for workpieces, etc., starting from atmospheric pressure in a 1ℓ sealed tank. Approximately 8.8 seconds are necessary to attain a vacuum pressure of -89.3 kPa.

ZL212

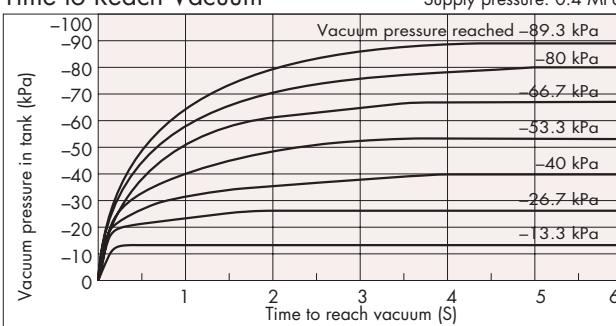
Exhaust Characteristics



Flow Characteristics

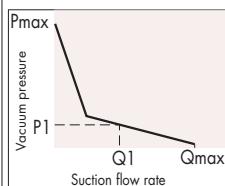


Time to Reach Vacuum



<How to Read the Graph>

The flow characteristics indicate the relationship between the vacuum pressure and the suction flow rate of the ejector, and show that when the suction flow rate changes the vacuum pressure also changes. In general, this indicates the relationship at the ejector's standard operating pressure. In the graph, P_{max} indicates the maximum vacuum pressure, and Q_{max} indicates the maximum suction flow rate. These are the values that are published as specifications in catalogs, etc. Changes in vacuum pressure are explained below.



- If the ejector's suction port is closed and sealed tight, the suction flow rate becomes "0" and the vacuum pressure increases to the maximum (P_{max}).
- If the suction port is opened and air is allowed to flow (the air leaks), the suction flow rate increases and the vacuum pressure decreases. (the condition of P_1 and Q_1)
- If the suction port is opened completely, the suction flow rate increases to the maximum (Q_{max}), while the vacuum pressure then drops almost to "0" (atmospheric pressure). When adsorbing work pieces which are permeable or subject to leakage, etc., caution is required as the vacuum pressure will not be very high.



CAD CD-ROM AVAILABLE

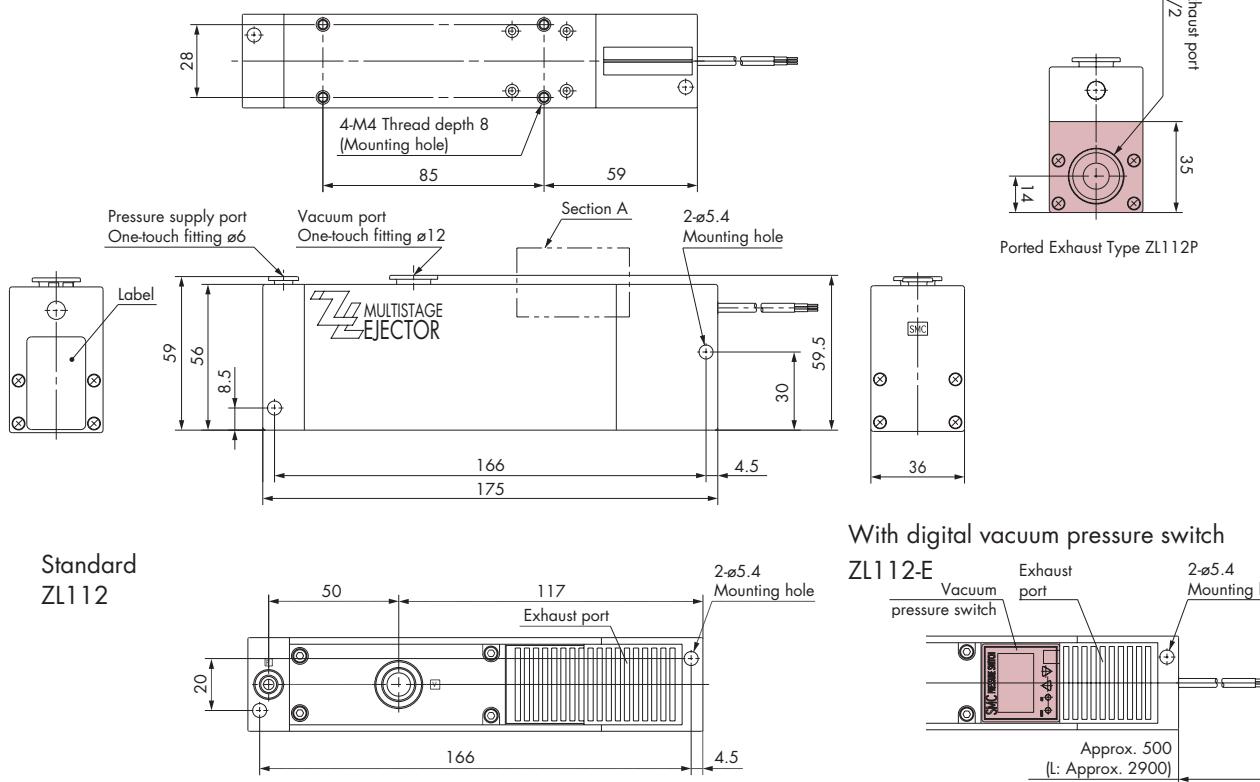


CATALOGUE E813-B AVAILABLE



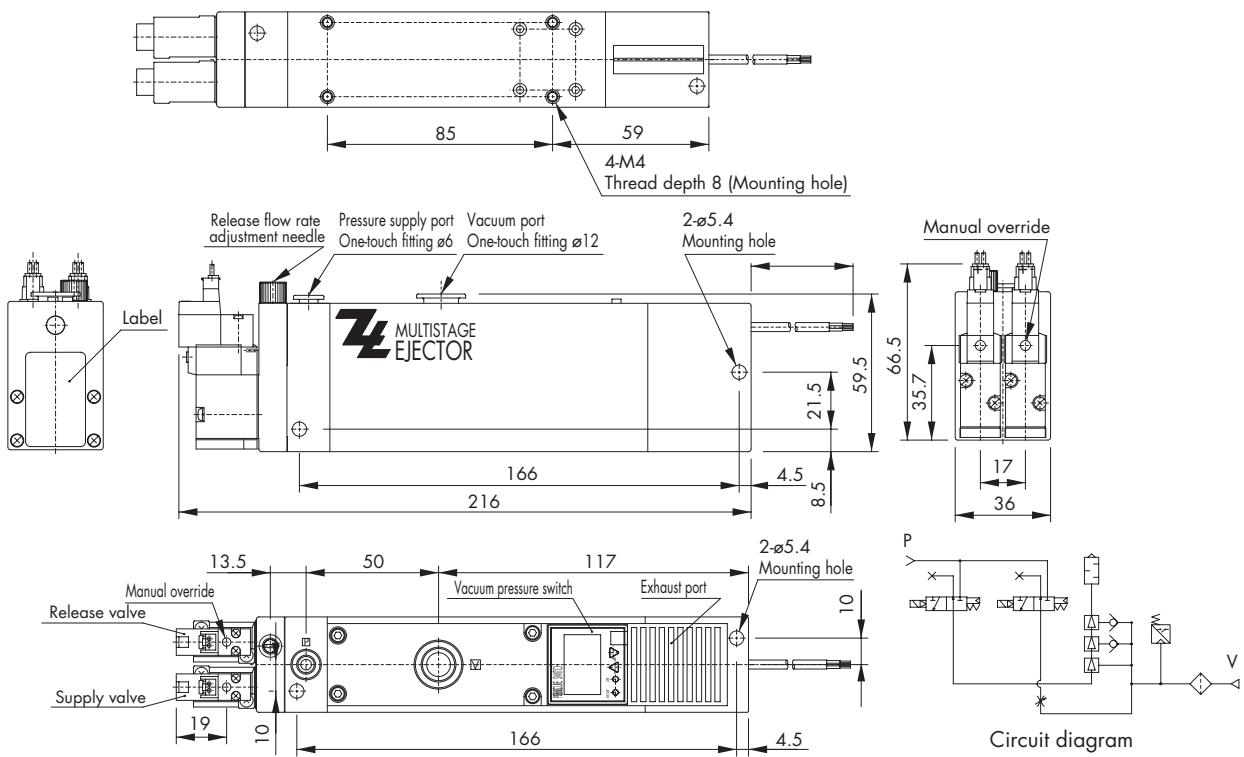
PDF AVAILABLE ONLINE

Dimensions: Series ZL112 (Without valve)



Dimensions: Series ZL112 (With Valve)

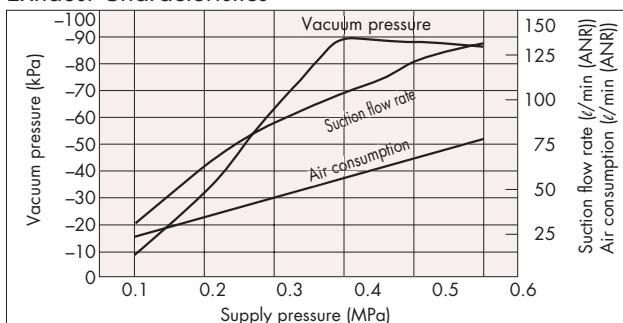
With supply valve and release valve ZL112-K1□L□□-E25(L)-M



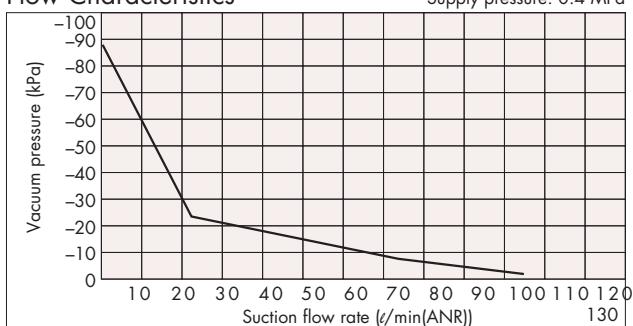
ZL Flow Rate Charts

ZL112

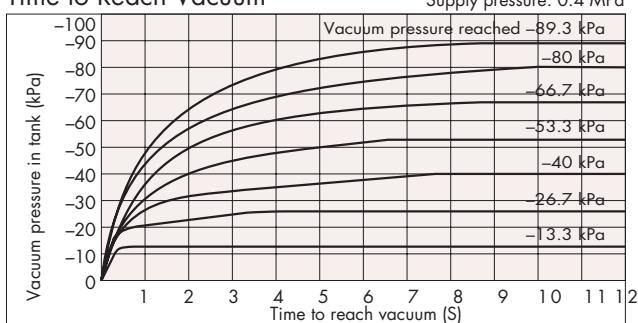
Exhaust Characteristics



Flow Characteristics



Time to Reach Vacuum

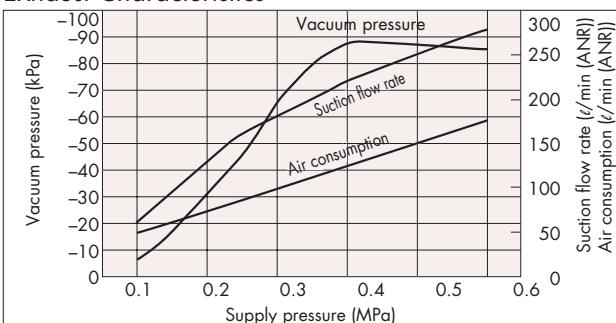


<How to Read the Graph>

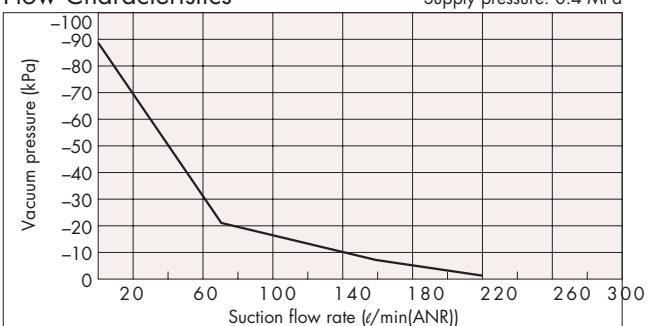
The graphics indicate the time required to reach a vacuum pressure determined by adsorption conditions for workpieces, etc., starting from atmospheric pressure in a 1/2 sealed tank. Approximately 8.8 seconds are necessary to attain a vacuum pressure of -89.3 kPa.

ZL212

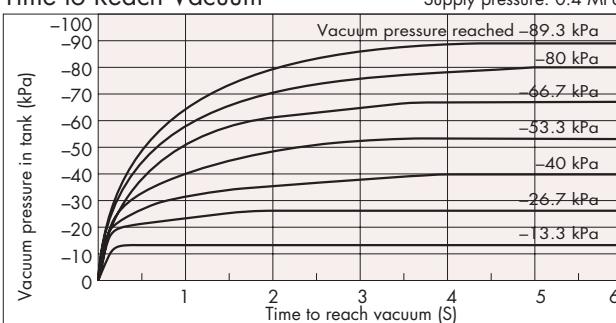
Exhaust Characteristics



Flow Characteristics

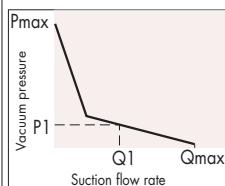


Time to Reach Vacuum



<How to Read the Graph>

The flow characteristics indicate the relationship between the vacuum pressure and the suction flow rate of the ejector, and show that when the suction flow rate changes the vacuum pressure also changes. In general, this indicates the relationship at the ejector's standard operating pressure. In the graph, P_{max} indicates the maximum vacuum pressure, and Q_{max} indicates the maximum suction flow rate. These are the values that are published as specifications in catalogs, etc. Changes in vacuum pressure are explained below.



- If the ejector's suction port is closed and sealed tight, the suction flow rate becomes "0" and the vacuum pressure increases to the maximum (P_{max}).
- If the suction port is opened and air is allowed to flow (the air leaks), the suction flow rate increases and the vacuum pressure decreases. (the condition of P_1 and Q_1)
- If the suction port is opened completely, the suction flow rate increases to the maximum (Q_{max}), while the vacuum pressure then drops almost to "0" (atmospheric pressure). When adsorbing work pieces which are permeable or subject to leakage, etc., caution is required as the vacuum pressure will not be very high.



CAD CD-ROM AVAILABLE



CATALOGUE E813-B AVAILABLE



PDF AVAILABLE ONLINE

Page 1481