

Vacuum Ejector

Series ZH

Box Type (Built-in Silencer)/Body Ported Type

Nozzle diameter: $\varnothing 0.5$, $\varnothing 0.7$, $\varnothing 1.0$, $\varnothing 1.3$, $\varnothing 1.5$, $\varnothing 1.8$, $\varnothing 2.0$

Type S: Standard type

L: Large flow type

ZK2

ZQ

ZR

ZA

ZX

ZM

ZMA

ZL

ZH

ZU

ZYY

ZYX

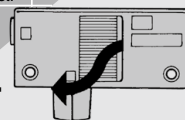
Compact and lightweight

The nozzle and the body, which have been made into a composite resin construction, are compact and lightweight.

Nozzle diameter $\varnothing 0.5 \sim 28$ g

Box type (Built-in silencer) Body ported

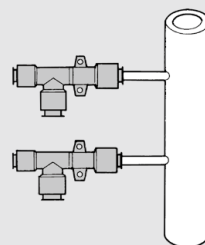
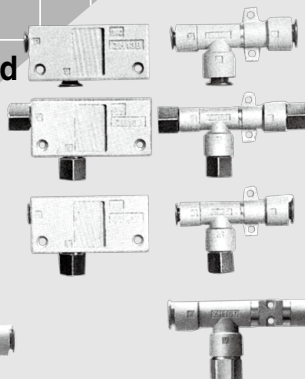
Two types are available in the series: the box type with a silencer exhaust, and the body ported type, with an individual exhaust.



<Silencer exhaust>

One-touch and screw-in connections can be combined.

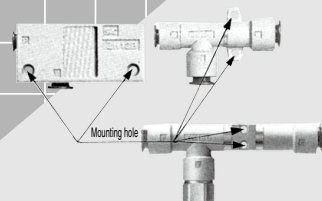
To suit the operating conditions, port connections can be combined with a choice of one-touch and screw-in connections.



<Centralized exhaust>

Body can be mounted and secured.

The body ported type is also provided with mounting holes for securing the body.



Vacuum Ejector Box Type (Built-in Silencer)/Body Ported Type Series ZH

RoHS

How to Order



Note Refer to "Table (1)" and "(2)" for the combination available for SUP, VAC and EXH port connection.

Box type
(Built-in silencer)

Body ported type
(Without silencer)



Nozzle diameter

Symbol	Size
05	0.5
07	0.7
10	1.0
13	1.3
15	1.5
18	1.8
20	2.0

Maximum vacuum
pressure

Symbol	Size
S	-88 kPa
L	-48 kPa

SUP. port size ^{Note)}

Symbol	Size	Style
06	6	One-touch
08	8	One-touch
10	10	One-touch
12	12	One-touch
01	Rc 1/8	Screw-in
02	Rc 1/4	Screw-in
03	Rc 3/8	Screw-in
F01	G 1/8	Screw-in
F02	G 1/4	Screw-in
F03	G 3/8	Screw-in

VAC. port size ^{Note)}

Symbol	Size	Style
06	6	One-touch
10	10	One-touch
12	12	One-touch
16	16	One-touch
01	Rc 1/8	Screw-in
02	Rc 1/4	Screw-in
03	Rc 3/8	Screw-in
04	Rc 1/2	Screw-in
F01	G 1/8	Screw-in
F02	G 1/4	Screw-in
F03	G 3/8	Screw-in
F04	G 1/2	Screw-in

EXH. port size ^{Note)}

Symbol	Size	Style
06	6	One-touch
08	8	One-touch
10	10	One-touch
12	12	One-touch
16	16	One-touch
01	Rc 1/8	Screw-in
02	Rc 1/4	Screw-in
03	Rc 3/8	Screw-in
04	Rc 1/2	Screw-in
F01	G 1/8	Screw-in
F02	G 1/4	Screw-in
F03	G 3/8	Screw-in
F04	G 1/2	Screw-in

Note) Do not make the piping diameter smaller, such as by connecting a reducer to the exhaust port, etc., since it may lower the performance.

* The thread ridge shape is conforming to G thread standard (JIS B 0202), but other shapes are not conforming to ISO16030 and ISO1179.

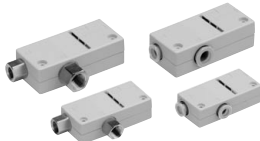
Table (1) Combination of Connection

Body type		SUP	VAC	EXH
Box type (Built-in silencer)	1	One-touch	One-touch	—
	2	One-touch	Screw-in	—
	3	Screw-in	Screw-in	—
Body ported type (Without silencer)	1	One-touch	One-touch	One-touch
	2	One-touch	Screw-in	One-touch
	3	Screw-in	Screw-in	Screw-in

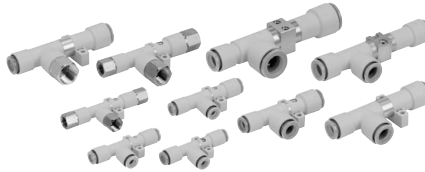
Table (2) Port Size

Model	Connection (One-touch/Screw-in)			
	SUP	VAC	EXH	
ZH05B	ø6, Rc 1/8 G 1/8	ø6, Rc 1/8 G 1/8	—	
ZH07B				
ZH10B				
ZH13B	ø8, Rc 1/8 G 1/8	ø10, Rc 1/4 G 1/4	—	
ZH05D	ø6, Rc 1/8 G 1/8	ø6, Rc 1/8 G 1/8		
ZH07D				
ZH10D	ø6, Rc 1/8 G 1/8	ø6, Rc 1/8 G 1/8	ø8, Rc 1/8 G 1/8	
ZH13D	ø8, Rc 1/8 G 1/8	ø10, Rc 1/4 G 1/4	ø10, Rc 1/4 G 1/4	
ZH15D	ø10, Rc 1/4 G 1/4	ø12, Rc 3/8 G 3/8	ø12, Rc 3/8 G 3/8	
ZH18D	ø12, Rc 3/8 G 3/8			
ZH20D	ø12, Rc 3/8 G 3/8	ø16, Rc 1/2 G 1/2	ø16, Rc 1/2 G 1/2	

Vacuum Ejector Box Type (Built-in Silencer)/Body Ported Type **Series ZH**

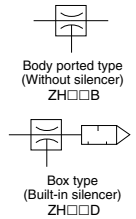


Box type: Type B



Body ported type: Type D

Ejector Symbol



Model

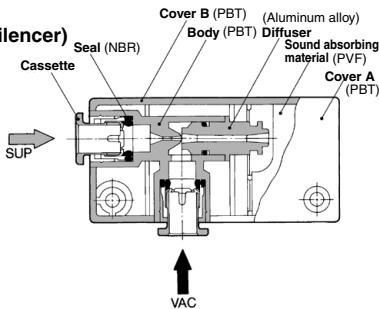
Model	Nozzle diameter (mm)	Body type	Max. vacuum pressure * (kPa)		Maximum suction flow rate (L/min (ANR))		Air consumption (L/min (ANR))	Connection (One-touch/Screw-in)			Weight (g)
			Type S	Type L	Type S	Type L	Type S/Type L	SUP	VAC	EXH	
ZH05B□	0.5	Box type (Built-in silencer)	-88	-48	5	8	13	ø6, Rc 1/8 G 1/8	ø6, Rc 1/8 G 1/8	-	28
ZH07B□	0.7				12	20	23				28
ZH10B□	1.0				24	34	46				33
ZH13B□	1.3				40	70	78				66
ZH05D□	0.5	Body ported type (Without silencer)	-88	-48	5	8	13	ø6, Rc 1/8 G 1/8	ø6, Rc 1/8 G 1/8	ø6, Rc 1/8 G 1/8	11
ZH07D□	0.7				12	20	23				12
ZH10D□	1.0				24	34	46				16
ZH13D□	1.3				40	70	78				27
ZH15D□	1.5	Body ported type (Without silencer)	-88	-53	55	75	95	ø10, Rc 1/4 G 1/4	ø12, Rc 3/8 G 3/8	ø12, Rc 3/8 G 3/8	43
ZH18D□	1.8				65	110	150	ø12, Rc 3/8 G 3/8			55
ZH20D□	2.0				85	135	185	ø12, Rc 3/8 G 3/8	ø16, Rc 1/2 G 1/2	ø16, Rc 1/2 G 1/2	95

Fluid: Air, Operating temperature: 5 to 50 °C, Max. operating pressure: 0.6 MPa. Standard supply pressure: 0.45 MPa

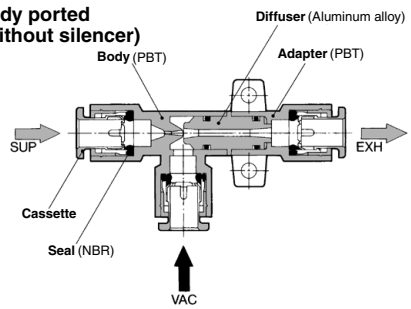
* Supply pressure: 0.45 MPa.

Construction

Box type (Built-in silencer)



Body ported (Without silencer)



⚠ Precautions

- Be sure to read before handling.
- Refer to front matter 35 for Safety Instructions and pages 899 to 901 for Vacuum Equipment Precautions.

⚠ Caution

Mounting

Make sure that an excessive amount of load or moment is not applied to the ejector body due to pipe connections or installation.

Exhaust piping

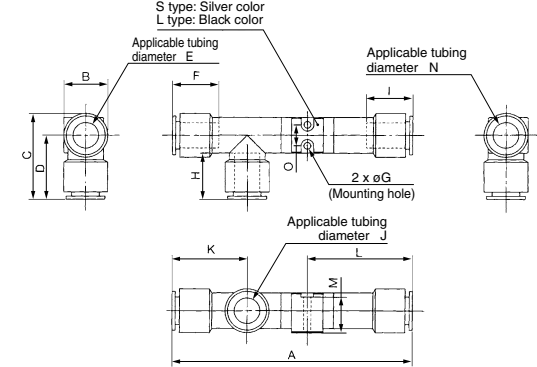
On the ZH□□□□ models, keep exhaust ports open on at least one side. Make sure that the back pressure of the exhaust pipe on the ZH□□□□ models is 0.005 MPa or less. (Reference: Using tubing with an applicable diameter, its length must be 0.5 m or less.)
(Port indication: P: supply port; V: vacuum port; E: exhaust port.)

Selection and sizing

Refer to the vacuum equipment model selection on pages 877 to 898.

Body Ported Type (Without silencer): ZH18D_S-□-□-□, ZH20D_S-□-□-□

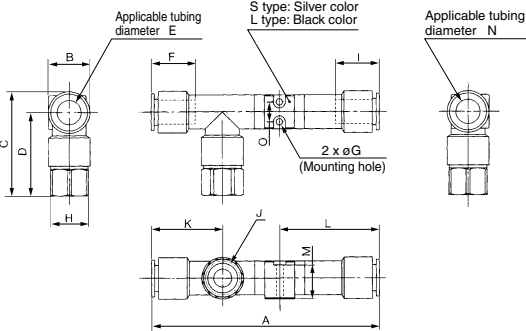
One-touch connection



Model	A	B	C	D	øE	F	øG	H
ZH18DS-12-12-12	114	21	41	30.5	ø12	21.8	ø3.5	21.8
ZH18DL-12-12-12								
ZH20DS-12-16-16	124.6	26.8	46	35.5	ø12	21.8	ø3.5	24.2
ZH20DL-12-16-16								

Model	I	øJ	K	L	M	øN	O
ZH18DS-12-12-12	21.8	ø12	35.5	50	17	ø12	10
ZH18DL-12-12-12							
ZH20DS-12-16-16	24.2	ø16	38.5	54.3	22	ø16	12
ZH20DL-12-16-16							

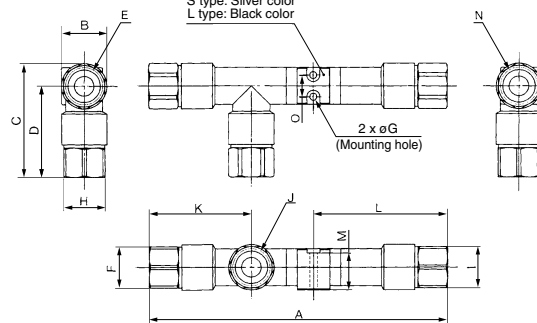
One-touch and screw-in connection



Model	A	B	C	D	øE	F	øG	H
ZH18DS-12-03-12	114	21	52.5	42	ø12	21.8	ø3.5	19
ZH18DL-12-03-12								
ZH20DS-12-04-16	124.6	26.8	61	50.5	ø12	21.8	ø3.5	24
ZH20DL-12-04-16								
ZH18DS-12-F03-12	114	21	52.5	42	ø12	21.8	ø3.5	19
ZH18DL-12-F03-12								
ZH20DS-12-F04-16	124.6	26.8	67	56.5	ø12	21.8	ø3.5	24
ZH20DL-12-F04-16								

Model	I	J	K	L	M	øN	O
ZH18DS-12-03-12	21.8	Rc 3/8	35.5	50	17	ø12	10
ZH18DL-12-03-12							
ZH20DS-12-04-16	24.2	Rc 1/2	38.5	54.3	22	ø16	12
ZH20DL-12-04-16							
ZH18DS-12-F03-12	21.8	G 3/8	35.5	50	17	ø12	10
ZH18DL-12-F03-12							
ZH20DS-12-F04-16	24.2	G 1/2	38.5	54.3	22	ø16	12
ZH20DL-12-F04-16							

Screw-in connection



Model	A	B	C	D	E	F	øG	H
ZH18DS-03-03-03	137	21	52.5	42	Rc 3/8	19	ø3.5	19
ZH18DL-03-03-03								
ZH20DS-03-04-04	151.1	26.8	61	50.5	Rc 3/8	19	ø3.5	24
ZH20DL-03-04-04								
ZH18DS-F03-F03-F03	137	21	52.5	42	G 3/8	19	ø3.5	19
ZH18DL-F03-F03-F03								
ZH20DS-F03-F04-F04	151.1	26.8	67	56.5	G 3/8	19	ø3.5	24
ZH20DL-F03-F04-F04								

Model	I	J	K	L	M	N	O
ZH18DS-03-03-03	19	Rc 3/8	47	61.5	17	Rc 3/8	10
ZH18DL-03-03-03							
ZH20DS-03-04-04	24	Rc 1/2	50	69.3	22	Rc 1/2	12
ZH20DL-03-04-04							
ZH18DS-F03-F03-F03	19	G 3/8	47	61.5	17	G 3/8	10
ZH18DL-F03-F03-F03							
ZH20DS-F03-F04-F04	24	G 1/2	50	75.3	22	G 1/2	12
ZH20DL-F03-F04-F04							

* Please contact SMC for combinations other than listed above.