

VACUUM

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VACUUM

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VACUUM EJECTOR SERIES NZH

NZH VACUUM EJECTOR

- ✓ Box type and body ported
- ✓ 7 nozzle diameters
- ✓ Large flow type
- ✓ One touch or threaded connection
- ✓ Built-in silencer (box type only)



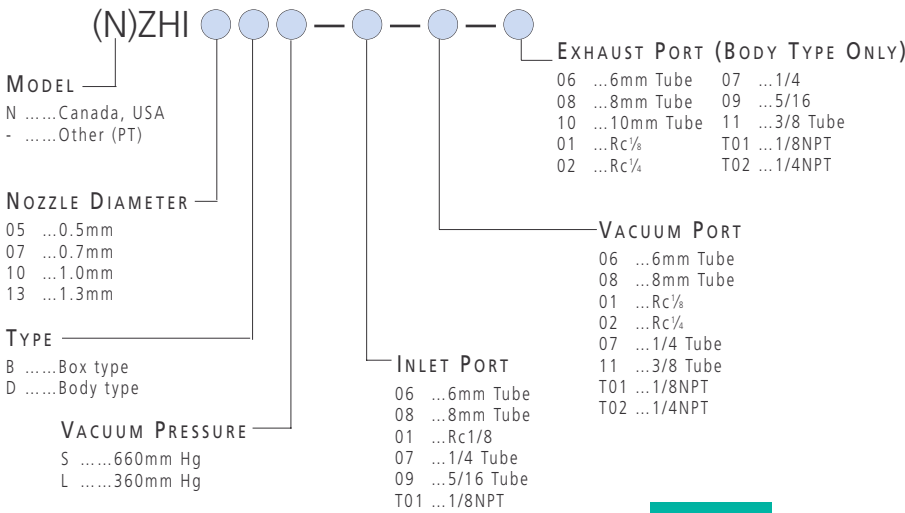
BOX TYPE



BODY TYPE

HOW TO ORDER

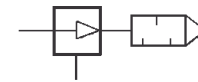
NZHI VACUUM EJECTOR



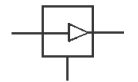
TECHNICAL SPECIFICATIONS

Fluid	Air
Operating Pressure Range	2.5-6 Bar / 37-90PSI
Max Operating Pressure	7 Bar / 100PSI
Operating Temperature Range	5 ~ 60°C / 40-140°F
Lubrication	Forbidden

SYMBOLS



Box type
(Built-in silencer)
ZH00B



Body ported type
(Without silencer)
ZH00D

DIMENSIONS

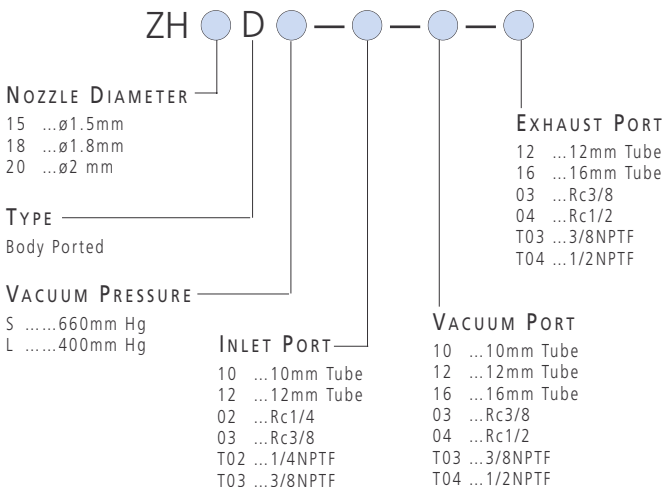
**MAXIMUM SUCTION FLOW RATE/
AIR CONSUMPTION UNIT (ℓn/min)**

Specifications	Max Vacuum Pressure* mmHg (Torr)	Nozzle Diameter mmø			
		0.5	0.7	1.0	1.3
Max Suction Flow Rate	S Type - 660 (100) L Type - 360 (400)	5	12	24	40
Air Consumption	S Type - 660 (100) L Type - 360 (400)	10	20	34	68

*Vacuum pressure is quoted as mmHg below atmospheric (Torr Absolute)
 1 Torr = 0.0197PSI

HOW TO ORDER

ZH VACUUM EJECTOR



DIMENSIONS

**MAXIMUM SUCTION FLOW RATE/
AIR CONSUMPTION UNIT (ℓn/min)**

Specifications	Max Vacuum Pressure mmHg (Torr)	Nozzle Diameter mmø		
		1.5	1.8	2.0
Max Suction Flow Rate SCFM (ℓn/min)	S Type - 26" (6600) L Type - 16" (400)	55	65	85
Air Consumption SCFM (ℓn/min)	S Type - 26" (660) L Type - 16" (400)	95	130	175

1 Torr = 0.0197PSI

VACUUM EJECTOR SERIES NZM

VACUUM EJECTOR SERIES NZM

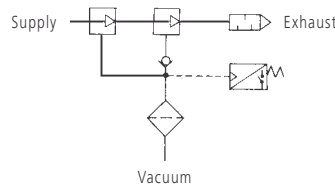
- ✓ All in one vacuum system
- ✓ Two stage nozzle design
- ✓ Suction flow rate 40% higher than traditional designs
- ✓ Silencer and suction filter
- ✓ Optional air supply and vacuum release valve
- ✓ Optional diaphragm or solid state vacuum switch
- ✓ Manifold mountable version



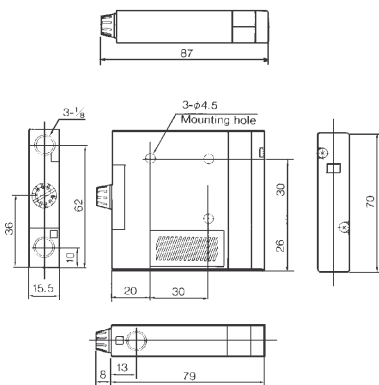
TECHNICAL SPECIFICATIONS

Fluid	Air
Max Operating Pressure	7 Bar / 100PSI
Operating Pressure	2 ~ 5.5 Bar / 30~80PSI
Operating Temperature	5 ~ 50°C (with valve) 40~120°F
	5 ~ 60°C (w/o valve) 40~140°F
Operating Valve (Air Supply & Release Valve)	Main: Poppet Valve
	Pilot: VJ114
Switch	Solid State Type ZSE1-0***
	Diaphragm State Type ZSM1-0***
Suction Filter	30µm PE (Polyethylene)
Lubrication	Forbidden
Solenoid Supply	24V DC

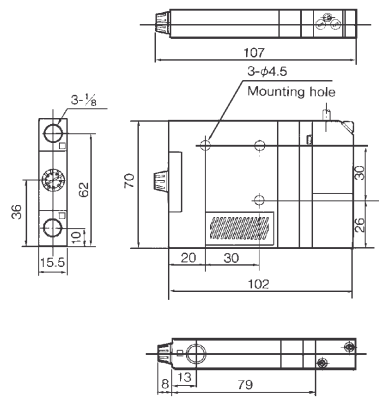
SYMBOLS



DIMENSIONS BASIC TYPE



DIMENSIONS WITH VACUUM SWITCH



HOW TO ORDER

(N)ZM VACUUM EJECTOR



NOZZLE DIAMETER
 05 ...0.5mm
 07 ...0.7mm
 10 ...1.0mm
 13 ...1.3mm

TYPE
 2Body Ported
 4Manifold Type-Common SUP
 6Manifold Type-Individual SUP

SUPPLY PRESSURE
 H5 Bar
 M3.5 Bar

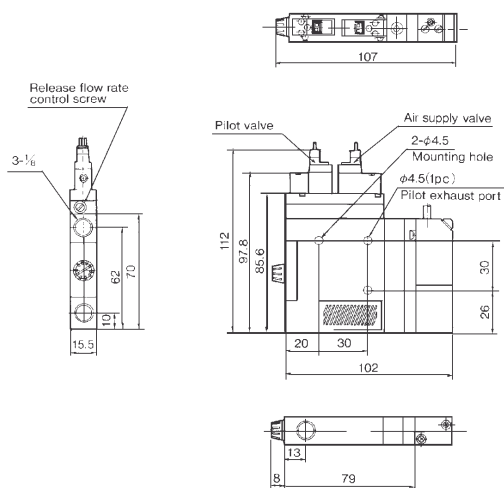
PORT THREAD
 Nil ...PT* Remove (N) when ordering
 TNPTF

SWITCHES
 Nil ...Without
 E15L Solid State (NPN)
 E55L Solid State (PNP)
 M21L Reed
 M15L Non-contact

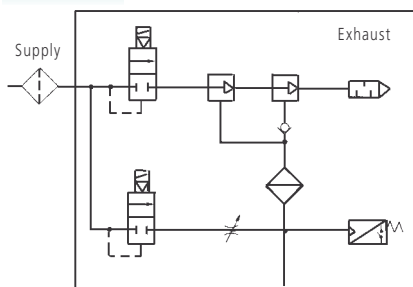
Model	Standard Supply Pressure	Max. Vacuum Pressure	Max. Suction Flow	Air Consumption
NZM05•H	5Kgf/cm ² / 75PSI	-630mmHg	18	12
NZM07•H	5Kgf/cm ² / 75PSI	-630mmHg	24	23
NZM10•H	5Kgf/cm ² / 75PSI	-630mmHg	36	46
NZM13•H	5Kgf/cm ² / 75PSI	-630mmHg	40	95
NZM07•M	3.5Kgf/cm ² / 50PSI	-630mmHg	20	16
NZM10•M	3.5Kgf/cm ² / 50PSI	-630mmHg	26	32
NZM13•M	3.5Kgf/cm ² / 50PSI	-630mmHg	36	70

VACUUM EJECTOR SERIES NZM

DIMENSIONS WITH VALVE AND VACUUM SWITCH



SYSTEM CIRCUIT



Vacuum

HOW TO ORDER NZM VACUUM EJECTOR WITH VALVES AND SWITCH

(N)ZM ● ● ● H-K5LZ — ●

NOZZLE DIAMETER

- 05 ...0.5mm
- 07 ...0.7mm
- 10 ...1.0mm
- 13 ...1.3mm

VOLTAGE

- 524VDC
- 612VDC

VACUUM SWITCH

- Nil ...Without
- E15L Solid State (NPN)
- E55L Solid State (PNP)
- M21L Reed
- M15L Non-Contact

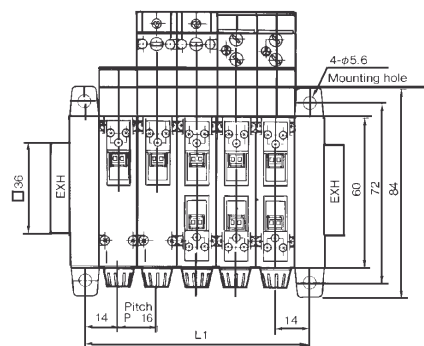
PORT THREAD

- Nil ...PT* Remove (N) when ordering
- TNPTF

TYPE

- 1Body Ported
- 3Manifold Type - Common SUP
- 5Manifold Type - Individual SUP

DIMENSIONS NZM VACUUM EJECTOR MANIFOLD



SERIES NZM VACUUM EJECTOR MANIFOLD

- ✓ 1 - 10 Stations
- ✓ Common supply and exhaust
- ✓ Maintenance and adjustment is possible without disassembly of the manifold



HOW TO ORDER NZM VACUUM EJECTOR MANIFOLD

(N)ZZM ● — ● ● B

NUMBER OF STATIONS

- 01 ... 1 Station
- 02 ... 2 Stations
- to
- 10 ... 10 Stations

EXHAUST PORT

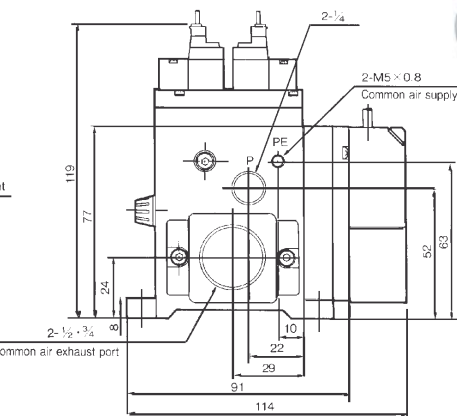
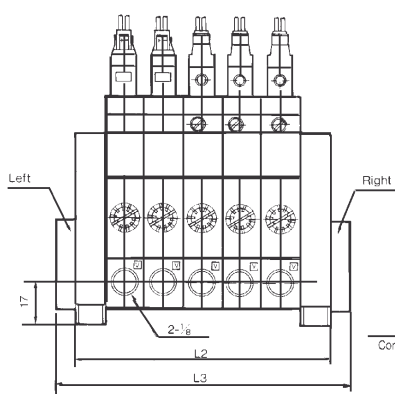
- 04 ... 1/2
- 06 ... 3/4

PORT THREAD

- Nil ...PT* Remove (N) when ordering
- TNPTF

EXHAUST ADAPTOR LOCATION

- BBoth Ends



Fitted with an Optional Silencer Series NAN: see section Air Preparation Accessories

n	1	2	3	4	5	6	7	8	9	10
L1	28	44	60	76	92	108	124	140	156	172
L2	40	56	72	88	104	120	136	152	168	184
L3	50	72	88	104	120	136	168	168	184	200

VACUUM MULTISTAGE VACUUM EJECTOR

MULTISTAGE VACUUM EJECTOR SERIES (N)ZL

- ✓ Three stage defuser system - for high flow, low air consumption and energy saving
- ✓ Compact design - aesthetic appearance, easy to locate
- ✓ Free Mount type - mounting from three sides possible
- ✓ Built-in One-touch Fittings - for easy piping
- ✓ Built-in Silencer and Suction Filter
- ✓ Optional Vacuum Pressure Switch or Gauge



TECHNICAL SPECIFICATIONS

Model	(N)ZL112	(N)ZL112-G	(N)ZL112-E□	(N)ZL212
Nozzle Diameter	Ø1.2mm			Ø1.2mm x 2
Max Suction Flow	100 l/m (ANR)			200 l/m (ANR)
Air Consumption	63 l/m (ANR)			126 l/m (ANR)
Max Vacuum Pressure	-84kPa (-12PSI)			-12PSI
Max Operating Pressure	0.7MPa / 100PSI			100PSI
Supply Pressure Range	0.2 ~ 0.5MPa / 30 ~ 75PSI			30 ~ 75 PSI
Standard Supply Pressure	0.4MPa / 160PSI			160PSI
Operating Temperature Range	5 ~ 50°C / 40~120PSI			40~120 PSI
Option	Vacuum pressure gauge, Vacuum pressure switch			

OPTION SPECIFICATIONS

VACUUM PRESSURE GAUGE SPECIFICATIONS

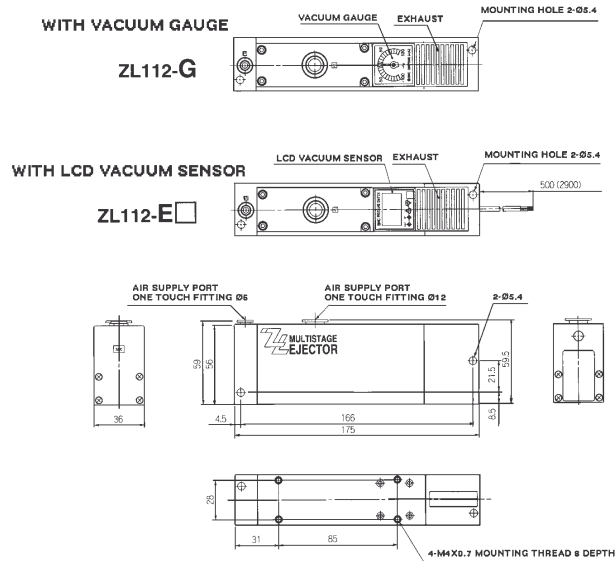
Model	GZ30S
Fluid	Air
Pressure range	-100 ~ 100kPa / -15~15PSI
Scale angle	230°
Accuracy	±3% F.S. (Full Span)
Class	Class 3
Operating temperature range	0 ~ 50°C / 32~120°F
Material	Case: Polycarbonate/ABS resin

OPTION SPECIFICATIONS

VACUUM PRESSURE DIGITAL SWITCH SPECIFICATIONS

Model	ZSE4-00-25(L)-X105	ZSE4-00-26(L)-X105
Output Specification	1 output, NPN open collector 30V 80mA	1~5V ±5% FS load impedance 1kΩ
Fluid	Air	
Setting Pressure Range	0~-101kPa, -760mmHg, -14.7PSI, 1.01bar	
Min Display Unit	1kPa, 5mmHg, 0.1PSI, 0.01 bar	
Hysteresis	Hysteresis mode, wind comparator mode	
Temperature Specification	±3%F.S. (Full span) or less	
Repeatability	±1% or less	
Power supply	DC12~24V (Ripple ±10% or less)	
Indicator light	Light at ON Switch output 1 : Green	Light at ON : Green
Current consumption	25mA or less	
Error indicator	Red indicator light flashes / LCD error message	
Max. operating pressure	200kPa / 130PSI	
Operating temperature range	0~50°C / 32~120°F	
Electrical entry	Grommet Oil proof vinyl cable gray Ø3.4 0.2mm ²	

DIMENSIONS



HOW TO ORDER

MULTISTAGE VACUUM EJECTOR SERIES NZL

(N)ZL112 — ● ●

- MODEL
-NZL112
 -NZL212

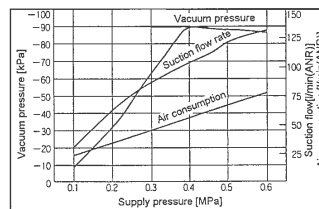
SWITCH & WIRING SPECS (E OPTION ONLY)

- 25L ...3 wire LCD/Non Analog Output NPN
- 26L ...3 wire Analog Output (1 ~ 5V)
- 65L ...3 Wire LCD/Non Analog Output PNP

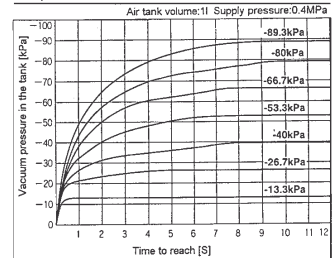
GAUGE & SWITCH OPTION

-No gauge or switch option
- GWith vacuum pressure gauge
- EWith vacuum pressure digital switch

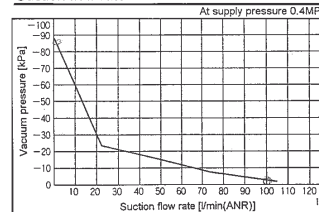
Ejector Characteristics



Response time



Suction flow rate



AIR SUCTION FILTER SERIE NZFA

NZFA AIR SUCTION FILTER

- ✓ Compact and lightweight
- ✓ Protects vacuum equipment
- ✓ Large filtration area
- ✓ Easy replacement of element

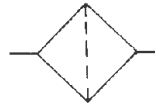


TECHNICAL SPECIFICATIONS

Fluid	Air, Dry Nitrogen
Operating Pressure Range	Negative Pressure
Proof Pressure	5 Bar / 75PSI
Operating Temperature Range	5 ~ 60°C / 40~140°F
Filtration	30µm
Element Proof Differential Pressure	1.5 Bar / 20PSI

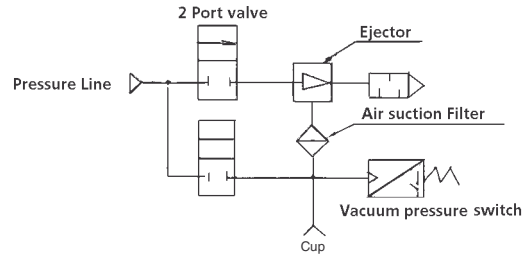
Model	Port Size	Recommendable Air Flow l _n /min
NZFA100-T01	1/8	50
NZFA200-T02	1/4	200

SYMBOLS



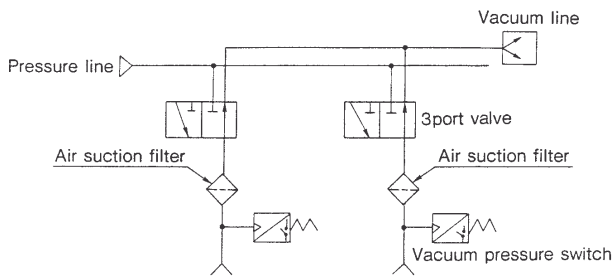
APPLICATION TO EJECTOR SYSTEM

Install to protect vacuum equipment, avoid reverse positive pressure blow.



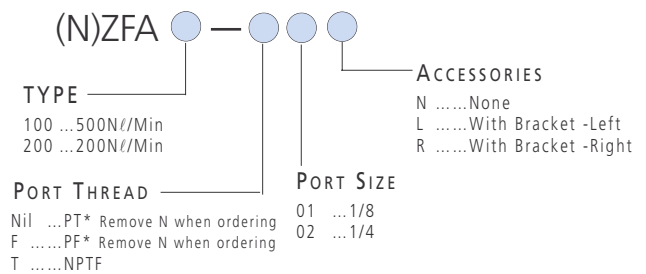
DIMENSIONS

APPLICATION TO VACUUM PUMP SYSTEM



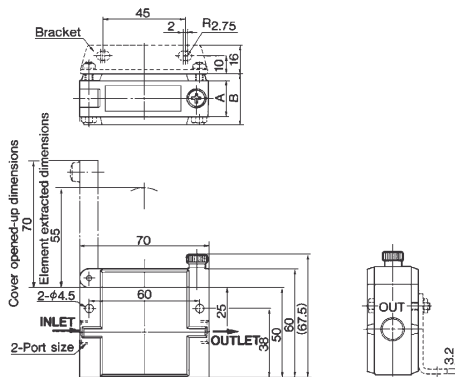
HOW TO ORDER

(N)ZFA AIR SUCTION FILTER



DIMENSIONS

(N)ZFA AIR SUCTION FILTER



Model	Port Size	A	B
(N)ZFA100-01	1/8	8	18
(N)ZFA200-02	1/4	20	28

ELEMENT

EJ001H-030N (100 Series)

EJ101H-030N (200 Series)

BRACKET

BP-1H

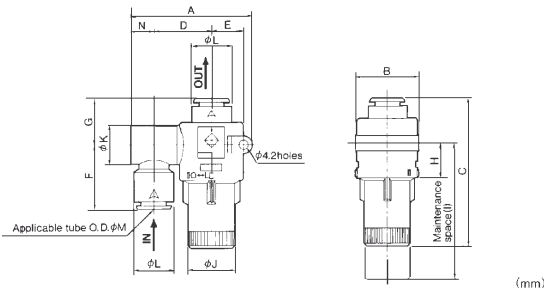
VACUUM AIR SUCTION FILTER

AIR SUCTION FILTER SERIES NZFB

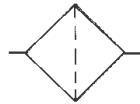


- ✓ Built-in one-touch fittings
- ✓ Tubing can be installed through 360°
- ✓ Compact and light weight
- ✓ Simple element change

DIMENSIONS AIR SUCTION FILTER SERIES NZFB



SYMBOLS



	Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
MM size	ZFB100-04	48	26	53	22.5	12.5	24	17.5	15	50	15.5	14.4	12.8	4/6	8.5
	ZFB100-06													6	
	ZFB200-06	52	28	65	24.5	13.5	27	19.5	16	61	17.5	16.6	15.2	6/8	9.5
	ZFB200-08													8	
	ZFB300-08	57	30	69.5	27	14.5	29.5	21	17	65	21.5	18	18.5	8/10	11
	ZFB300-10													10	
Inch size	(N)ZFB101-05	48	26	53	22.5	12.5	24	17.5	15	50	15.5	14.4	12.8	5/16"	8.5
	(N)ZFB101-07			54			24.2	17.7						1/4"	
	(N)ZFB201-07	52	28	65	24.5	13.5	27.2	19.7	16	61	17.5	16.6	15.2	1/4"	9.5
	(N)ZFB301-11	57	30	70	27	14.5	30.2	21.7	17	65	21.5	18	18.5	5/8"	11
	(N)ZFB401-13	64.5	34	87.5	30.5	16.5	34	24	21.5	81	25.6	23	21.7	1/2"	13.5

HOW TO ORDER AIR SUCTION FILTER SERIES (N)ZFB



BODY SIZE	TUBE SIZE ODMM
100 ...Max 20 l/n/min	04 ...Ø4
200 ...Max 50 l/n/min	06 ...Ø6
300 ...Max 75 l/n/min	08 ...Ø8
101 ...Max 20 l/n/min	10 ...Ø10
201 ...Max 30 l/n/min	05 ...Ø3/16"
301 ...Max 60 l/n/min	07 ...Ø1/4"
401 ...Max 100 l/n/min	11 ...Ø3/8"
	13 ...Ø1/2"

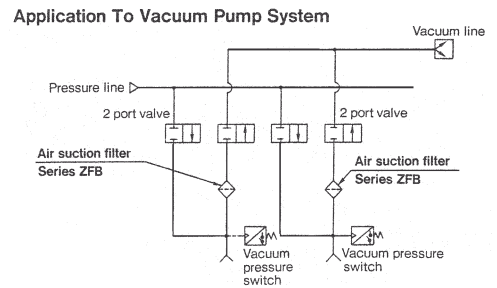
ACCESSORIES AIR SUCTION FILTER SERIES (N)ZF1B

ELEMENT	
I-34S-A(N)ZFB100, 101
I-35S-A(N)ZFB200, 201
I-36S-A(N)ZFB300, 301
I-39S-A(N)ZFB401

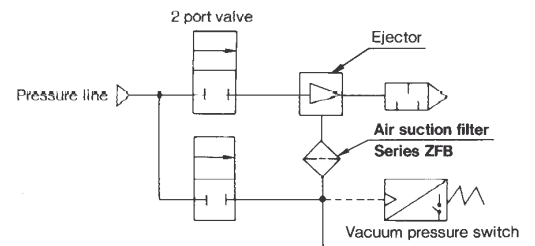
TECHNICAL SPECIFICATIONS

Fluid	Air, dry nitrogen
Operating Pressure	Negative pressure
Proof Pressure	5 Bar / 75PSI
Temperature Range	0~60°C (No freezing) / 32~140°F
Filtration	30 µm
Element Proof DP	1.5 Bar / 24PSI
Applicable Tube Material	Nylon, Soft Nylon, Polyurethane

APPLICATION TO VACUUM PUMP SYSTEM



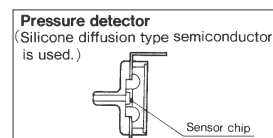
APPLICATION TO EJECTOR SYSTEM



VACUUM SWITCH SERIES ZS

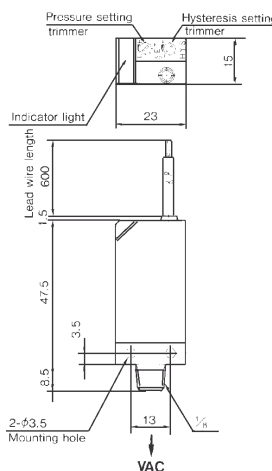
VACUUM SWITCH SERIES ZSE1

- ✓ Solid State
- ✓ Quick Response – 10 ms
- ✓ Compact Size
- ✓ Semiconductor Type Pressure Sensor
- ✓ NPN and PNP Versions



DIMENSIONS

VACUUM SWITCH SERIES ZSE1 GROMMET TYPE

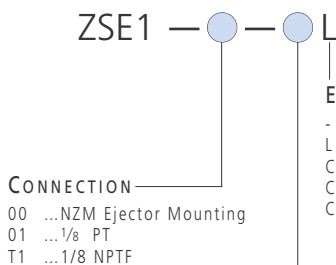


TECHNICAL SPECIFICATIONS

Fluid	Air
Setting pressure range	0~760mmHg / 0~30inHg
Hysteresis	Adjustable 1~10% of range
Accuracy	±3% F.S. (5~40°C) 40~100°F ±5% F.S. (0~60°C) 32~140°F
Supply voltage	12~24VDC (Ripple ±10% or less)
Output	Open collector (NPN/PNP) 30V Max. 80mA
Trimmer adjustment	200°
Indicator light	Lighting under ON condition
Power consumption	17mA 24VDC (under ON condition)
Max. pressure	2 Bar / 28PSI
Temperature range	0 ~ 60°C / 32~140°F

HOW TO ORDER

VACUUM SWITCH SERIES ZSE1



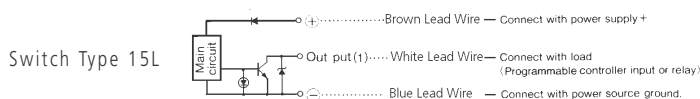
ELECTRICAL ENTRY

-Grommet (24")
- LGrommet (120")
- Cw/Plug Connector (24")
- CLw/Plug Connector (120")
- CN ...Plug Type (w/o Lead)

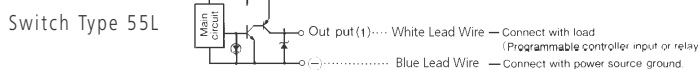
SWITCH TYPE

- 14 ...Solid State (NPN)
- 15 ...Solid State (NPN)
- 16 ...Solid State (NPN)
- 17 ...Solid State (NPN)
- 18 ...Solid State (NPN)
- 19 ...Solid State (NPN)
- 55 ...Solid State (PNP)

CIRCUIT ZSE1



ZSE1-••-55



ACCESSORIES

VACUUM SWITCH SERIES ZS

- Interface plate for ZM Ejector
- P31806-01(blank)
- P31806-02(use with switch)

VACUUM SWITCH SERIES ZS

VACUUM SWITCH SERIES ZSM1 DIAPHRAGM TYPE

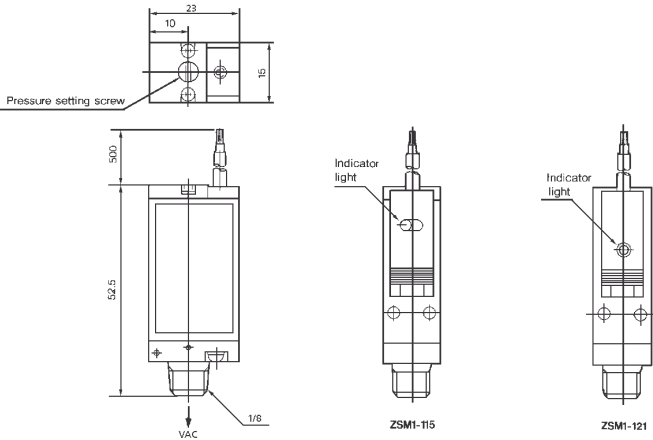


- ✓ 100 ms Response Time
- ✓ Compact Size

ZSM1 (VACUUM EJECTOR TYPE)

DIMENSIONS

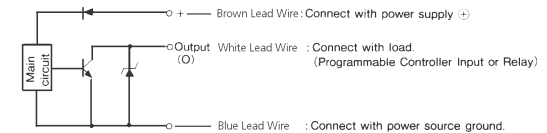
VACUUM SWITCH SERIES ZSM1 (THREADED TYPE)



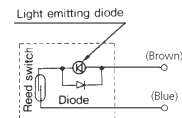
TECHNICAL SPECIFICATIONS

Model	ZSM1-115	ZSM1-121
Electrical switch type	Solid state NPN	Contact (reed switch)
Fluid	Air, Inert gases	
Max. pressure	5 Bar / 75PSI	
Setting pressure range	- 200 ~ - 600mmHg - 8 ~ 26inHg	
Adjustment screw	Range = 18 turns	
Max. hysteresis	110mmHg	150mmHg
Temperature range	5 ~ 60°C / 40~140°F	
Supply voltage	10 ~ 26VDC	100VAC
Indicator light	Lighting under ON condition (LED)	
Wire	3wire	2wire
Port size	1/8 (Male)	

CIRCUIT ZSM1-115



ZSM1-121



HOW TO ORDER

VACUUM SWITCH SERIES ZSM1

ZSM1 — ● ●

CONNECTION

- 0NEM Ejector Mounting
- 1 1/8 PT
- T1 1/8 NPTF

SWITCH TYPE

- 15L ...Solid state (NPN)
- 21L ...Contact reed

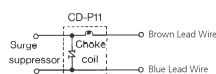
ACCESSORIES

CONTACT PROTECTION BOX

Diaphragm type switches have no built-in contact protection circuit. Use this box for induction load, 5m or more lead wire length and 100V AC.



CONTACT PROTECTION BOX/INTERNAL CIRCUIT



ACCESSORIES

VACUUM SWITCH SERIES ZSE1

- Interface plate for ZSM Ejector
- P31806-01(blank)
- P31806-02(use with switch)
- CD-P11 Contact protection box

HANDLE OPERATED VACUUM REGULATOR SERIES T203

✓ A vacuum regulator, installed after a vacuum pump, which regulates vacuum at any level

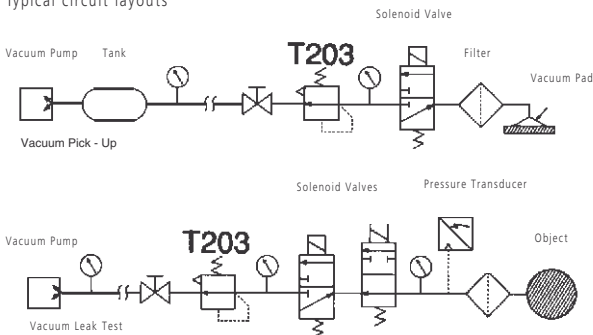


TECHNICAL SPECIFICATIONS

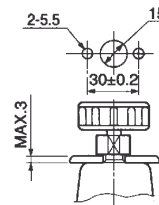
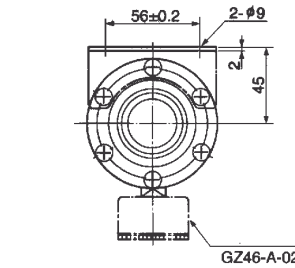
Setting vacuum10~750 Torr (mmHg)
Sensitivity1 Torr (mmHg)
Repeatability±3 Torr (mmHg)
Max. flow rate120 NI/min
Weight520gf
Operating temperature-5~+60°C / 23~140°F
Connection portRc ¼, Rc ⅜

TECHNICAL SPECIFICATIONS

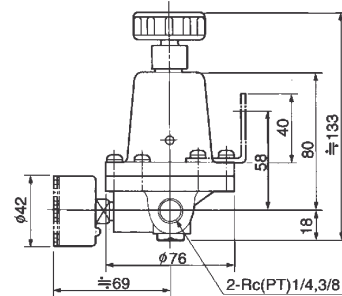
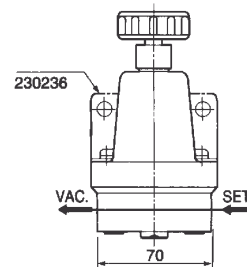
Typical circuit layouts



DIMENSIONS VACUUM REGULATOR

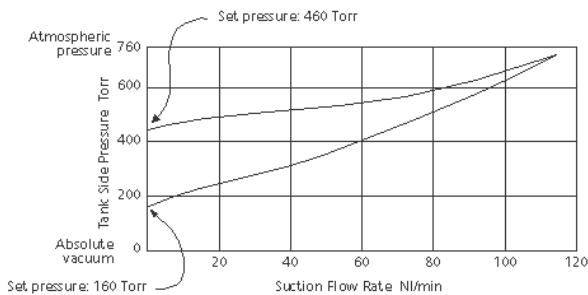


T203-1-0*-X2
Panel Mount Type



T203-1-0*

FLOW CHARACTERISTICS



ACCESSORIES T203

Bracket230236
Gauge (Scale in mmHg)GZ46-A-02

How To ORDER VACUUM REGULATOR SERIES T203

T203 — 1 — ● — ● — ● — ●

PORT SIZE

02 ...1/4
03 ...3/8

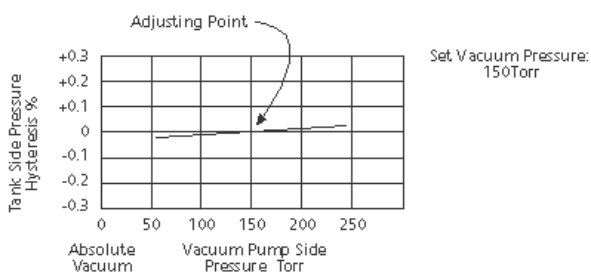
OPTION

Nil ...None
B With Bracket
GWith Gauge

PANEL MOUNT OPTION

Nil ...Standard
X2 ...Panel Mount Option

PRESSURE CHARACTERISTICS



ZPT VACUUM PADS VERTICAL ENTRY WITHOUT BUFFER

TECHNICAL SPECIFICATIONS

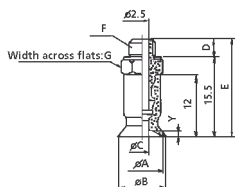
Vacuum Entry	Vertical type
Mounting	Use connection for vacuum entry

Pad Type	Flat type	Flat with rib	Deep type
Pad Dia (mm)	2, 4, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16, 20, 25, 32, 40, 50	10, 16, 25, 40
Material (Color)	NBR (Black)		
Hardness	50° shore		



DIMENSIONS

PAD DIAMETERS 02, 04, 06, 08

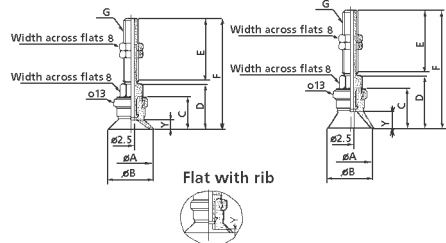


FLAT TYPE

Model	ØA	ØB	ØC	F:M5x0.8			F:M6x1			Y
				D	E	G	D	E	G	
ZPT02U	2	2.6	1.2							0.8
ZPT04U	4	4.8	1.6	3	19	7	4	20	8	
ZPT06U	6	7	2.5							1
ZPT08U	8	9								

DIMENSIONS

PAD DIAMETERS 010, 013, 016



FLAT TYPE - FLAT WITH RIB

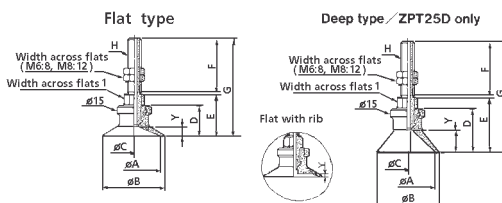
Model	ØA	ØB	C	D	G:M5x0.8		G:M6x1		Y	
					E	F	E	F	Flat	Flat with rib
ZPT10U	10	12	12	17	20	38	25	43	3	1.7
ZPT13U	13	15	12	17	20	38	25	43	3	1.8
ZPT16U	16	18	12.5	17.5	20	38.5	25	43.5	3.5	1.2

DEEP TYPE

Model	ØA	ØB	C	D	G:M5x0.8		G:M6x1		Y
					E	F	E	F	
ZPT10D	10	12	15	20	20	41	25	46	6
ZPT16D	16	18	16	21	20	42	25	47	7

DIMENSIONS

PAD DIAMETERS 020, 025, 032



FLAT TYPE - FLAT WITH RIB

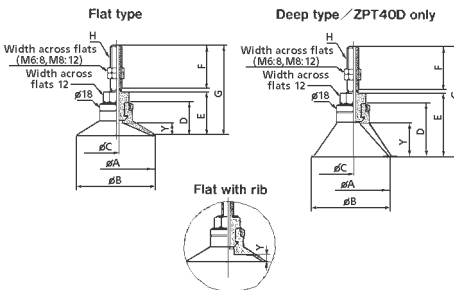
Model	ØA	ØB	D	H : M6x1					H : M8x1					Y	
				ØC	E	F	G	I	ØC	E	F	G	I	Flat	Flat with rib
ZPT20U	20	23	14	3	19	25	45	8	3.5	24	15	40	12	4	1.7
ZPT25U	25	28	14	3	19	25	45	8	3.5	24	15	40	12	4	1.8
ZPT32U	32	35	14.5	3	19.5	25	45	8	3.5	24.5	15	40.5	12	4.5	2.3

DEEP TYPE

Model	ØA	ØB	D	H:M6x1					H:M8x1					Y
				ØA	E	F	G	I	ØC	E	F	G	I	
ZPT25D	25	28	20	3	25.5	25	51	8	3.5	30.5	15	46	12	10

DIMENSIONS

PAD DIAMETERS 040, 050



FLAT TYPE - FLAT WITH RIB

Model	ØA	ØB	D	E	H:M6x1			H:M8x1			Y	
					ØC	F	G	ØC	F	G	Flat	Flat with rib
ZPT40U	40	43	18.5	24.5	3	15	50.5	4.5	15	40.5	6.5	3.3
ZPT50U	50	53	19.5	25.5	3	15	51.5	4.5	15	41.5	7.5	3.8

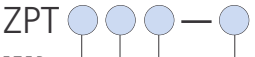
DEEP TYPE

Model	ØA	ØB	D	E	H:M6x1			H:M6x1			Y
					ØC	F	G	ØC	F	G	
ZPT40D	40	43	29	35.5	3	25	61	4.5	15	51	17

VACUUM PADS SERIES ZP

HOW TO ORDER

ZPT PAD VERTICAL TYPE WITHOUT BUFFER

ZPT 

PAD DIAMETER

- 02 ...Ø2
- 04 ...Ø4
- 06 ...Ø6
- 08 ...Ø8
- 10 ...Ø10
- 13 ...Ø13
- 16 ...Ø16
- 20 ...Ø20
- 25 ...Ø25
- 32 ...Ø32
- 40 ...Ø40
- 50 ...Ø50

PAD MATERIAL

- NNitrile rubber (standard)
- SSilicon rubber
- UUrethane
- FFluorine rubber
- GN ...Anti-static Nitrile rubber
- GS ...Anti-static Silicon rubber

PAD TYPE

- UFlat
- CFlat with Rib (Not ø2,4,6,8)
- DDeep (ø10,16,25,40)
- BBellows (Not ø2,4)

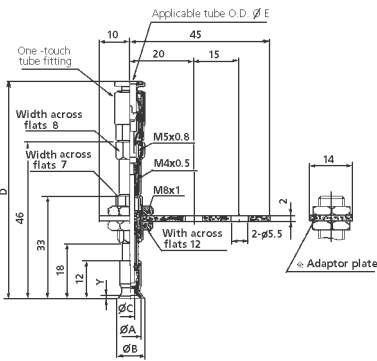
VACUUM ENTRY (ALSO MOUNTING THREAD DIA)

	SYMBOL	THREAD DIAMETER	ø2-ø8	ø10-ø16	ø20-ø32	ø40•ø50
Male Thread	A5	M5x0.8	•	•	-	-
	A6	M6x1	•	•	•	•
	A8	M8x1	-	-	•	•
Female Thread	B4	M4x0.7	•	-	-	-
	B5	M5x0.8	•	•	•	-
	B6	M6x1	-	-	•	-
	B8	M8x1.25	-	•	•	•
	B01	1/8PT	-	•	•	•

ZPT VACUUM PADS VERTICAL ENTRY WITH BUFFER



DIMENSIONS PAD DIAMETERS Ø2, Ø4, Ø6, Ø8

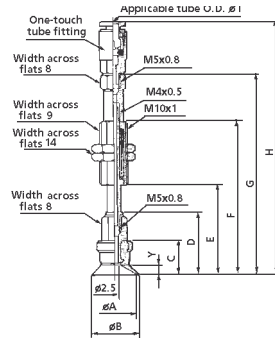


Adaptor plate: Provide as standard

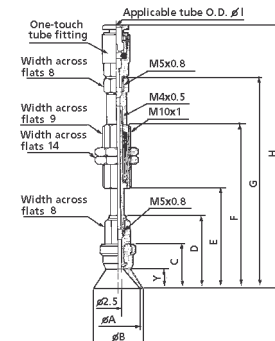
FLAT TYPE

Model	ØA	ØB	ØC	E:M3x0.5		E:M5x0.8		Y
				D	F	D	F	
ZPT02U	2	2.6	1.2	3	6	5	8	0.8
ZPT04U	4	4.8	1.6	3	6	5	8	0.8
ZPT06U	6	7	2.5	3	6	5	8	0.8
ZPT08U	8	9	2.5	3	6	5	8	1

DIMENSIONS PAD DIAMETERS Ø10, Ø13, Ø16



Deep type / ZPT10D-16D only



TECHNICAL SPECIFICATIONS

Vacuum entry	Vertical type
Buffer type	Non-rotation type (K)
Buffer stroke	For Ø2-Ø8...6mm
	For Ø10-Ø50...10mm

Pad type	Flat type	Flat with rib	Deep type
Pad dia. (mm)	2, 4, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16, 20, 25, 32, 40, 50	10, 16, 25, 40
Material (colour)	NBR (Black)		
Hardness	50° shore		

SPRING FORCE (N)

Pad dia. (mm)	0 stroke	Stroke end
Ø2-Ø8	0.8	1.2
Ø10-Ø32	1	3
Ø40, Ø50	2	5

HOW TO ORDER
SEE NEXT PAGE 

FLAT TYPE - FLAT WITH RIB

Model	ØA	ØB	C	D	E	F	G	Y	
								Flat	Flat with rib
ZPT10U	10	12	12	21	32.5	55.5	68.5	3	1.7
ZPT13U	13	15	12	21	32.5	55.5	68.5	3	1.8
ZPT16U	16	18	12.5	21.5	33	56	69	3.5	1.2

DEEP TYPE

Model	ØA	ØB	C	D	E	F	G	Y
ZPT10D	10	12	15	24	35.5	58.5	71.5	6
ZPT16D	16	18	16	25	36.5	59.5	72.5	7

VACUUM PADS SERIES ZP

HOW TO ORDER

ZPT PAD VERTICAL TYPE WITH BUFFER



PAD DIAMETER

- 02 ...Ø2
- 04 ...Ø4
- 06 ...Ø6
- 08 ...Ø8
- 10 ...Ø10
- 13 ...Ø13
- 16 ...Ø16
- 20 ...Ø20
- 25 ...Ø25
- 32 ...Ø32
- 40 ...Ø40
- 50 ...Ø50

PAD TYPE

- UFlat
- CFlat with Rib (Not ø2,4,6,8)
- DDeep (ø10,16,25,40)
- BBellows (Not ø2,4)

PAD MATERIAL

- NNitrile rubber (standard)
- SSilicon rubber
- UUrethane
- FFluorine rubber
- GN ...Anti-static Nitrile rubber
- GS ...Anti-static Silicon rubber

MOUNTING THREAD

	Symbol	Thread dia.	Ø2-Ø8	Ø10-Ø32	Ø40-Ø50
Male thread	A8	M8X1	●		
	A10	M10X1		●	
	A14	M14X1			●

VACUUM ENTRY

	Symbol	Port size	Ø2-Ø8	Ø10-Ø32	Ø40-Ø50
One-touch tube fitting	04	Ø4 tube	●	●	
	06	Ø6 tube	●	●	●
	08	Ø8 tube			●

BUFFER

	Symbol	Stroke	Ø2-Ø8	Ø10-Ø32	Ø40-Ø50	
	K6	6mm	●			Non-Rotating
	K10	10mm		●	●	Non-Rotating
	J6	6mm	●			With Buffer
	J10	10mm		●	●	With Buffer

ZPR VACUUM PADS HORIZONTAL TYPE VACUUM ENTRY WITH BUFFER - ONE TOUCH FITTING

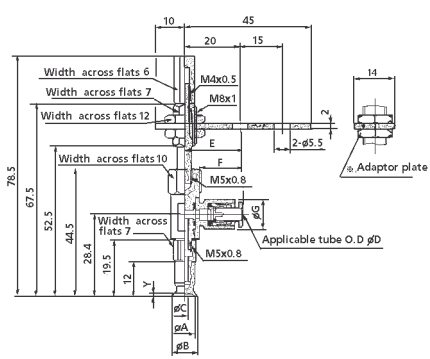


TECHNICAL SPECIFICATIONS

Vacuum Entry	Horizontal type		
Buffer Type	Non-rotation type (K)		
Buffer Stroke	For Ø2-Ø8....6mm		
	For Ø10-Ø50....10mm		
Pad Type	Flat type	Flat with rib	Deep type
Pad Diameter (mm)	2, 4, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16, 20, 25, 32, 40, 50	10, 16, 25, 40
Material (Color)	NBR (Black)		
Hardness	50° shore		

DIMENSIONS

PAD DIAMETERS Ø2, Ø4, Ø6, Ø8



FLAT TYPE

Model	ØA	ØB	ØC	ØD:Ø4			ØD:Ø6			Y
				E	F	ØG	E	F	ØG	
ZPR02U	2	2.6	1.2	20.6	15.6	10.4	21.6	16.6	12.8	0.8
ZPR04U	4	4.8	1.6							0.8
ZPR06U	6	7	2.5							0.8
ZPR08U	8	9	2.5							1

APPLICABLE TUBE

Applicable Tube O.D.	ØE
Ø4	10.4
Ø6	12.8

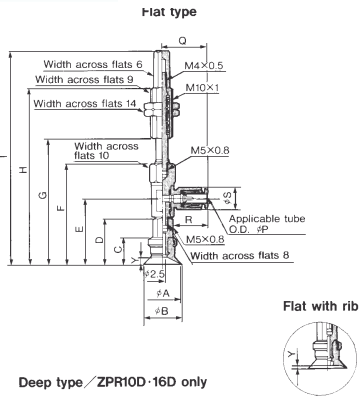
→ Adaptor plate: Provided as standard

MORE DIMENSIONS SEE NEXT PAGE

VACUUM PADS SERIES ZP

DIMENSIONS

PAD DIAMETERS Ø10, Ø13, Ø16



FLAT TYPE - FLAT WITH RIB

Model	ØA	ØB	C	D	E	F	G	H	I	Y	
										Flat	Flat with Rib
ZPR10 $\frac{1}{2}$	10	12	12	21	29.9	46	57	80	91	3	1.7
ZPR13 $\frac{1}{2}$	13	15	12	21	29.9	46	57	80	91	3	1.8
ZPR16 $\frac{1}{2}$	16	18	12.5	21.5	30.4	46.5	57.5	80.5	91.5	3.5	1.2

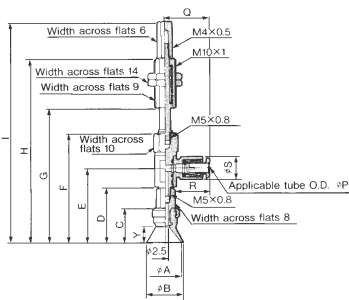
DEEP TYPE

Model	A	ØB	C	D	E	F	G	H	I	Y
ZPR10D	10	12	15	24	32.9	49	60	83	94	6
ZPR16D	16	18	16	25	33.9	50	61	84	95	7

APPLICABLE TUBE

Applicable Tube O.D.	ØP	Q	R	ØS
Ø4	4	20.6	15.6	10.4
Ø6	6	21.6	16.6	12.8

Deep type / ZPR10D-16D only



FLAT TYPE - FLAT WITH RIB

Model	A	ØB	C	D	E	F	G	H	I	Y	
										Flat	Flat with Rib
ZPR20	20	23	14	29	39.8	57.6	68.6	91.5	102.6	4	1.7
ZPR25	25	28	14	29	39.8	57.6	68.6	91.5	102.6	4	1.8
ZPR32	32	35	14.5	29.5	40.3	58.1	69.1	92	103.1	4.5	2.3

DEEP TYPE

Model	ØA	ØB	C	D	E	F	G	H	I	Y
ZPR25D	25	28	20	35	45.8	63.6	74.6	97.6	108.6	10

APPLICABLE TUBE

Applicable Tube OD	ØP	Q	R	ØS
Ø4	4	23.3	15.8	10.4
Ø6	6	24.3	16.8	12.8
Ø8	8	26.2	18.7	15.2

HOW TO ORDER ZPR PAD HORIZONTAL TYPE WITH BUFFER



PAD DIAMETER

- 02 Ø2 16 Ø16
- 04 Ø4 20 Ø20
- 06 Ø6 25 Ø25
- 08 Ø8 32 Ø32
- 10 Ø10 40 Ø40
- 13 Ø13 50 Ø50

PAD TYPE

- U Flat
- C Flat with Rib (Not ø2,4,6,8)
- D Deep (ø10,16,25,40)
- B Bellows (Not ø2,4)

PAD MATERIAL

- N Nitrile Rubber (standard)
- S Silicon Rubber
- U Urethane
- F Fluorine Rubber
- GN Anti-static Nitrile Rubber
- GS Anti-static Silicon Rubber

FLAT TYPE - FLAT WITH RIB

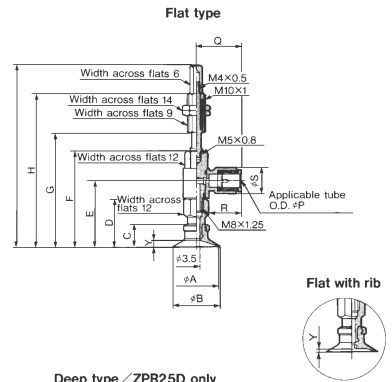
Model	ØA	ØB	C	D	E	F	G	H	I	Y	
										Flat	Flat with Rib
ZPR40 $\frac{1}{2}$	40	43	18.5	32	42.8	60.6	72.6	122.6	140.6	6.5	3.3
ZPR50 $\frac{1}{2}$	50	53	19.5	33	43.8	61.6	73.6	123.6	141.6	7.5	3.8

DEEP TYPE

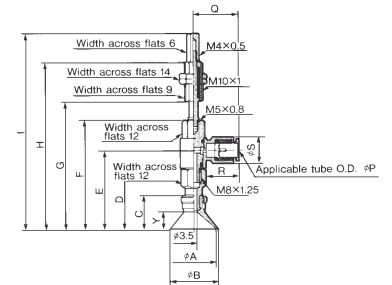
Model	ØA	ØB	C	D	E	F	G	H	I	Y
ZPR40D	40	43	29	42.5	53.3	71.1	81.1	133.1	151.1	17

DIMENSIONS

PAD DIAMETERS Ø20, Ø25, Ø32

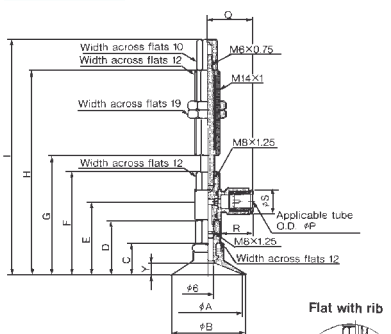


Deep type / ZPR25D only

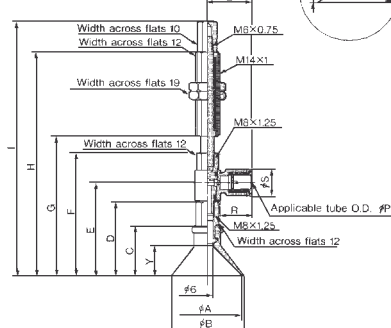


DIMENSIONS

PAD DIAMETERS Ø40, Ø50



Deep type / ZPR40D only



MOUNTING THREAD

Symbol	Thread Dia	Ø2-Ø8	Ø10-Ø16	Ø20-Ø32	Ø40-Ø50
		Male Thread	A8 A10 A14	M8X1 M10X1 M14X1	● ●

VACUUM ENTRY

Symbol	Port Size	Ø2-Ø8	Ø10-Ø16	Ø20-Ø32	Ø40-Ø50
		One-touch Tube Fitting	04 06 08	Ø4 Tube Ø6 Tube Ø8 Tube	● ● ●

BUFFER

Symbol	Stroke	Ø2-Ø8	Ø10-Ø16	Ø20-Ø32	Ø40-Ø50	
K6	6mm	●				Non-Rotating
K10	10mm		●	●	●	Non-Rotating
J6	6mm	●				With Buffer
J10	10mm		●	●	●	With Buffer

APPLICABLE TUBE

Applicable Tube OD	ØP	Q	R	ØS
Ø6	6	24.3	16.8	12.8
Ø8	8	26.2	18.7	15.2

VACUUM VACUUM PADS SERIES ZP

ZPR VACUUM PADS HORIZONTAL TYPE VACUUM ENTRY WITHOUT BUFFER - ONE TOUCH FITTING

TECHNICAL SPECIFICATIONS

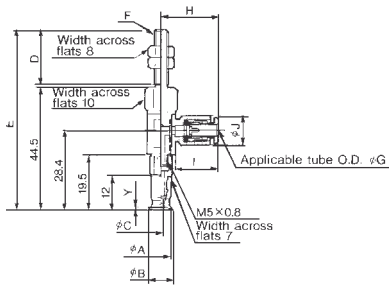
Vacuum Entry	Horizontal Type
Connection	With One-touch Tube Fitting

Pad Type	Flat Type	Flat with Rib	Deep Type
Pad Dia (mm)	2, 4, 6, 8, 10, 13, 16, 20, 25, 32, 40, 50	10, 13, 16, 20, 25, 32, 40, 50	10, 16, 25, 40
Material (Color)	NBR (Black)		
Hardness	50°		



DIMENSIONS

PAD DIAMETERS Ø2, Ø4, Ø6, Ø8



FLAT TYPE

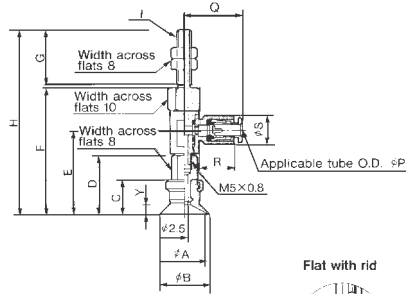
Model	ØA	ØB	ØC	F: M5X0.8		F: M6X1		Y
				D	E	D	E	
ZPR02U	2	2.6	1.2	20	65.5	25	70.5	0.8
ZPR04U	4	4.8	1.6					0.8
ZPR06U	6	7	2.5					0.8
ZPR08U	8	9	2.5					1

APPLICABLE TUBE

Applicable Tube OD	ØG	H	I	ØJ
Ø4	4	20.6	15.6	10.4
Ø6	6	21.6	16.68	12.88

DIMENSIONS

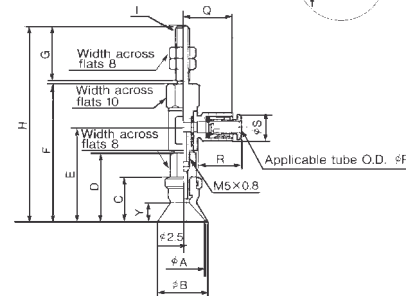
PAD DIAMETERS Ø10, Ø13, Ø16



Flat with rid



Deep type / ZPR10D-16D only



FLAT TYPE - FLAT WITH RIB

Model	ØA	ØB	C	D	E	F	I: M5X0.8		I: M6X1		Y	
							G	H	G	H	Flat	Flat with rib
ZPR10 ^{1/2}	10	12	12	21	29.9	46	20	67	25	72	3	1.7
ZPR13 ^{1/2}	13	15	12	21	29.9	46	20	67	25	72	3	1.8
ZPR16 ^{1/2}	16	18	12.5	21.5	30.4	46.5	20	67.5	25	72	3.5	1.2

DEEP TYPE

Model	ØA	ØB	C	D	E	F	I: M5X0.8		I: M6X1		Y
							G	H	G	H	
ZPR10D	10	12	15	24	32.9	49	20	70	25	75	6
ZPR16D	16	18	16	25	33.9	50	20	71	25	76	7

APPLICABLE TUBE

Applicable Tube OD	ØP	Q	R	ØS
Ø4	4	20.6	15.6	10.4
Ø6	6	21.6	16.6	12.8

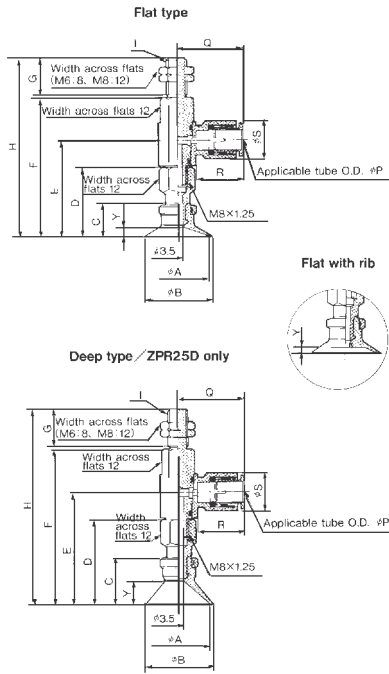
MORE DIMENSIONS
SEE NEXT PAGE

HOW TO
ORDER
SEE NEXT PAGE

VACUUM PADS SERIES ZP

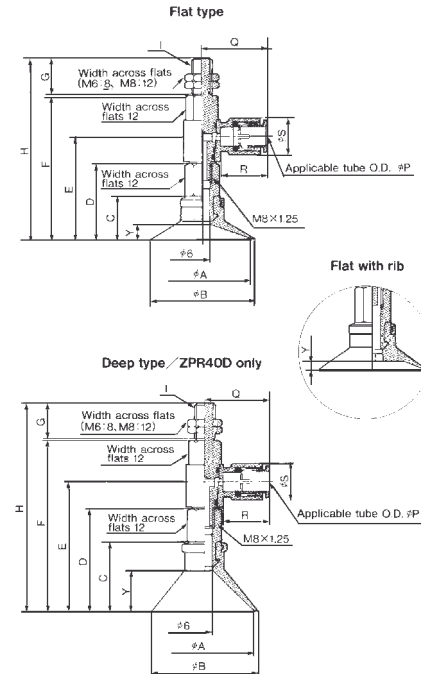
DIMENSIONS

PAD DIAMETERS Ø20, Ø25, Ø32



DIMENSIONS

PAD DIAMETERS Ø40, Ø50



FLAT TYPE - FLAT WITH RIB

Model	ØA	ØB	C	D	E	F	I: M6X1		I: M8X1		Y	
							G	H	G	H	Flat	Flat with rib
ZPR20 $\frac{1}{2}$	20	23	14	29	39.8	57.6	25	83.5	15	73.5	4	1.7
ZPR25 $\frac{1}{2}$	25	28	14	29	39.8	57.6	25	83.5	15	73.5	4	1.8
ZPR32 $\frac{1}{2}$	32	35	14.5	29.5	40.3	58.1	25	84	15	74	4.5	2.3

DEEP TYPE

Model	ØA	ØB	C	D	E	F	I: M6X1		I: M8X1		Y
							G	H	G	H	
ZPR25D	25	28	20	35	48.5	63.6	25	89.5	15	79.5	10

APPLICABLE TUBE

Applicable Tube OD	ØP	Q	R	ØS
Ø4	4	23.3	15.8	10.4
Ø6	6	24.3	16.8	12.8
Ø8	8	26.2	18.7	15.2

FLAT TYPE - FLAT WITH RIB

Model	ØA	ØB	C	D	E	F	I: M6X1		I: M8X1		Y	
							G	H	G	H	Flat	Flat with rib
ZPR40 $\frac{1}{2}$	40	43	18.5	32	42.8	60.6	25	86.5	15	76.5	6.5	3.3
ZPR50 $\frac{1}{2}$	50	53	19.5	33	43.8	61.6	25	87.5	15	77.5	7.5	3.8

DEEP TYPE

Model	ØA	ØB	C	D	E	F	I: M6X1		I: M8X1		Y
							G	H	G	H	
ZPR40D	40	43	29	42.5	53.3	71.1	25	97	15	87	17

APPLICABLE TUBE

Applicable Tube OD	ØP	Q	R	ØS
Ø6	6	24.3	16.8	12.8
Ø8	8	26.2	18.7	15.2

HOW TO ORDER

ZPR PAD HORIZONTAL TYPE WITHOUT BUFFER

ZPR ○ ○ ○ — ○ — ○

PAD DIAMETER

- 02 ...Ø2
- 04 ...Ø4
- 06 ...Ø6
- 08 ...Ø8
- 10 ...Ø10
- 13 ...Ø13
- 16 ...Ø16
- 20 ...Ø20
- 25 ...Ø25
- 32 ...Ø32
- 40 ...Ø40
- 50 ...Ø50

PAD TYPE

- UFlat
- CFlat with Rib (Not ø2,4,6,8)
- DDeep (ø10,16,25,40)
- BBellows (Not ø2,4)

PAD MATERIAL

- NNitrile Rubber (Standard)
- SSilicon Rubber
- UUrethane
- FFluorine Rubber
- GN ...Anti-static Nitrile Rubber
- GS ...Anti-static Silicon Rubber

MOUNTING THREAD

Symbol	Thread Dia	Ø2-Ø8	Ø10-Ø16	Ø20-Ø32	Ø40-Ø50
A5	M5X0.8	●	●		
A6	M6X1	●	●	●	●
A8	M8X1			●	●

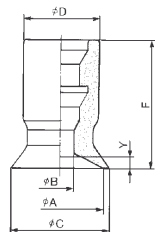
VACUUM ENTRY

Symbol	Port Size	Ø2-Ø8	Ø10-Ø16	Ø20-Ø32	Ø40-Ø50
One-Touch Tube Fitting	Ø4 tube	●	●	●	
	Ø6 tube	●	●	●	●
	Ø8 tube			●	●

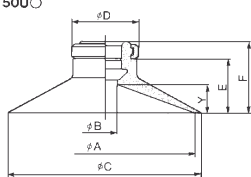
ZP SERIES VACUUM PADS

DIMENSIONS ZP VACUUM PADS

ZP02U○ ~ 08U○



ZP10U○ ~ 50U○

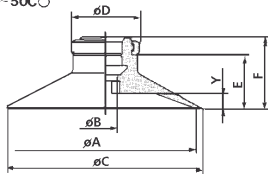


FLAT TYPE PAD

Part No	Type	ØA	ØC	ØB	D	E	F	Y
ZP02U•	U02	2	2.6	1.2	7	-	12	0.8
ZP04U•	U04	4	4.8	1.6	7	-	12	0.8
ZP06U•	U06	6	7	2.5	7	-	12	0.8
ZP08U•	U08	8	9	2.5	7	-	12	1
ZP10U•	U10	10	12	4	13	7.7	12	3
ZP13U•	U13	13	15	4	13	7.7	12	3
ZP16U•	U16	16	18	4	13	8.2	12.5	3.5
ZP20U•	U20	20	23	4	15	9.5	14	4
ZP25U•	U25	25	28	4	15	9.5	14	4
ZP32U•	U32	32	35	4	15	10	14.5	4.5
ZP40U•	U40	40	43	7	18	13.7	18.5	6.5
ZP50U•	U50	50	53	7	18	14.7	19.5	7.5

DIMENSIONS ZP VACUUM PADS

ZP10C○ ~ 50C○



FLAT TYPE PAD WITH RIB

Part No	Type	ØA	ØC	ØB	ØD	E	F	Y
ZP10C•	C10	10	12	4	13	7.7	12	1.7
ZP13C•	C13	13	15	4	13	7.7	12	1.8
ZP16C•	C16	16	18	4	13	8.2	12.5	1.2
ZP20C•	C20	20	23	4	15	9.5	14	1.7
ZP25C•	C25	25	28	4	15	9.5	14	1.8
ZP32C•	C32	32	35	4	15	10	14.5	2.3
ZP40C•	C40	40	43	7	18	13.7	18.5	3.3
ZP50C•	C50	50	53	7	18	14.7	19.5	3.3

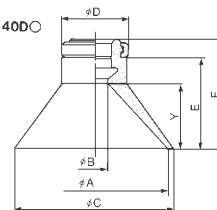
DIMENSIONS ZP VACUUM PADS

- ✓ 288 Standard Options
- ✓ 12 Diameters
- ✓ 4 Types
- ✓ 6 Materials



DIMENSIONS ZP VACUUM PADS

ZP10D○ ~ 40D○



DEEP TYPE PAD

Part No	Type	G	ØC	ØB	ØD	E	F	Y
ZP10D•	D10	10	12	4	13	10.7	15	6
ZP16D•	D16	16	18	4	13	11.7	16	7
ZP25D•	D25	25	28	4	15	15.5	20	10
ZP40D•	D40	40	43	7	18	24.2	29	17

Part No	Type	ØA	ØB	ØC	ØD	E	F	ØG	ØH	Y
ZP06B	B06	6	7	2.5	7	-	13	3.3	9.1	4
ZP08B	B08	8	9	2.5	7	-	13	4.7	10.1	4
ZP10B	B10	10	12	4	13	11.7	16	5.5	13.8	5.5
ZP13B	B13	13	15	4	13	14.2	18.5	8.7	19	7.5
ZP16B	B16	16	18	4	13	15.7	20	9.9	21	8.5
ZP20B	B20	20	22	4	15	19	23.5	12.1.4	25	10.5
ZP25B	B25	25	27	4	15	19.5	24	15.6	28	10.5
ZP32B	B32	32	34	4	15	24.5	29	18.9	37	14
ZP40B	B40	40	43	7	18	29.2	34	24.4	48	16
ZP50B	B50	50	53	7	18	33.2	38	32.4	57	19

HOW TO ORDER ZP VACUUM PADS



PAD DIAMETER

- 02 ...Ø2
- 04 ...Ø4
- 06 ...Ø6
- 08 ...Ø8
- 10 ...Ø10
- 13 ...Ø13
- 16 ...Ø16
- 20 ...Ø20
- 25 ...Ø25
- 32 ...Ø32
- 40 ...Ø40
- 50 ...Ø50

PAD MATERIAL

- NNitrile Rubber (Standard)
- SSilicon Rubber
- UUrethane
- FFluorine Rubber
- GN ...Anti-static Nitrile Rubber
- GS ...Anti-static Silicon Rubber

PAD TYPE

- UFlat
- CFlat with Rib (Not ø2,4,6,8)
- DDeep (ø10,16,25,40)
- BBellows (Not ø2,4)

VACUUM PADS SERIES ZPT/ZPX

VACUUM

HEAVY DUTY VACUUM PADS SERIES ZPT/ZPX

- ✓ Wide Range of Materials: NBR, Silicon, Fluorine, Urethane, EPM
- ✓ Heavy Duty Range of Sizes from Ø40 ~ Ø125
- ✓ Choice of Mounting Styles - Orthogonal or Axial Vacuum Entry
- ✓ Optional Spring Loaded Buffer
- ✓ 4 Choices of Buffer Stroke



		Standard Type		Buffer Mount Type
ZPT	Axial Vacuum Entry			
ZPX	90° Vacuum Entry			

Buffer Stroke	Ø Pad	Ø40	Ø50	Ø63	Ø80	Ø100	Ø125
25		•	•	•	•	•	•
50		•	•	•	•	•	•
75		•	•	•	•	•	•
100		-	-	-	-	•	•

VACUUM SOLENOID VALVE REFERRAL

This section is written to assist the selection of solenoid valves for use in vacuum applications.

BACKGROUND

Many current pneumatic "solenoid" valves are actually of solenoid-pilot construction. The solenoid does not operate directly upon the spool or poppet within the valve. What the solenoid does is open a very small pilot valve. This controls the passage of air bled from the "P" or pressure port of the valve. The main valve is pneumatically operated by this air, switched by the solenoid.

The advantages of this arrangement, using the air pressure within the valve to do the work, are dramatically reduced size and power consumption of the solenoid, and a faster response. The disadvantage is that this type of valve is incapable of operating without pressure applied – as in a vacuum system.

Also the design of spool or poppet used in a valve may rely on positive pressure for its operation. e.g. A poppet may be pushed on to a seat by positive pressure, but "lifted" back off by vacuum, resulting in a leak. For this reason internal design may preclude ostensibly suitable valves from vacuum applications.

Series VT Not Available In The USA

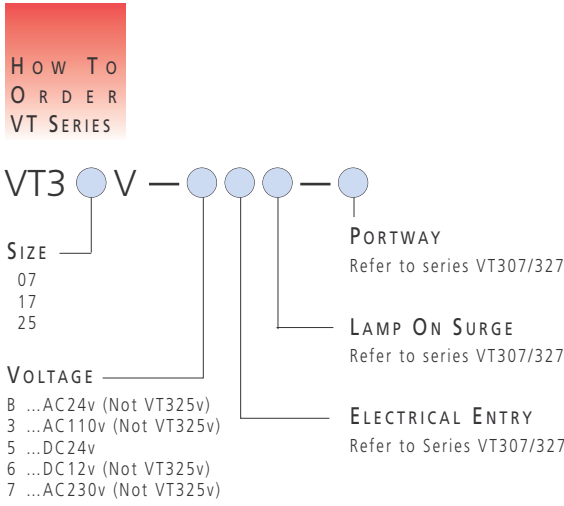
VALVE TYPES AVAILABLE

To operate a solenoid pilot valve in a vacuum system, a separate pressure supply must be supplied to the valve to move the spool or poppet as described above. This is known as External Pilot type and can be used when a separate positive pressure supply can be provided.

The alternative option is to operate the spool directly with the solenoid – the "direct acting" type. This can be used in a pure vacuum system, when no positive pressure supply is available.

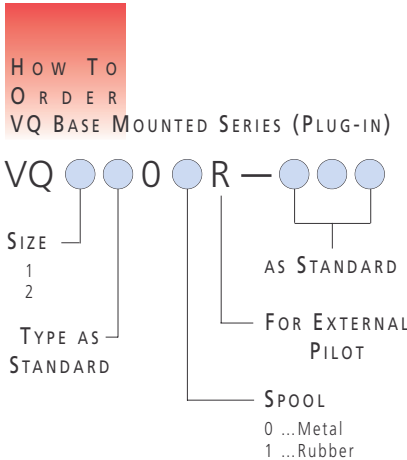
THREE-PORT VALVES

DIRECT ACTING – VT SERIES
(SEE VALVE SECTION) VACUUM VERSION



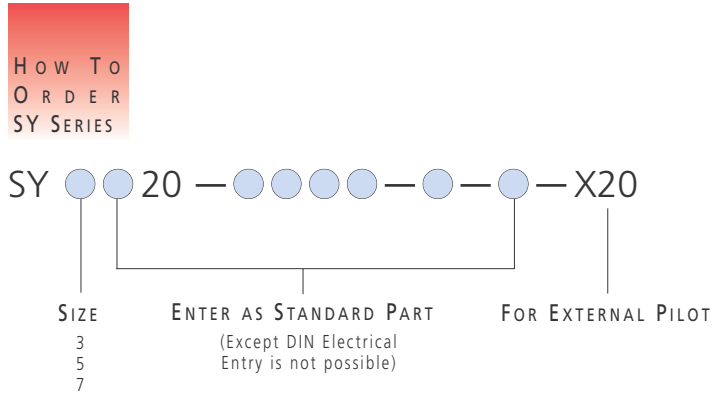
VZ100 SERIES (SEE VALVE SECTION)

External Pilot Types
VG342R (See Valve Section) VP34IR, VP54IR, VP74IR (See Valve Section)
VNB Series (See Valve Section)

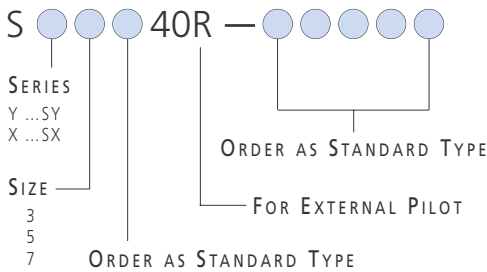


FIVE-PORT VALVES

SY BODY PARTED (SEE VALVE SECTION)



How To ORDER SY/SX BASE MOUNTED SERIES (TO SUIT TYPE 42 MANIFOLDS)



CHECK VALVE SERIES NAK2000

CHECK VALVE FOR VACUUM

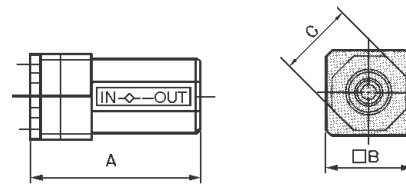
- ✔ Can be used with Vacuum Pressure -3 to -100kPa
- ✔ Low Cracking Pressure: 0.03MPa



TECHNICAL SPECIFICATIONS (N)AK2000 SERIES

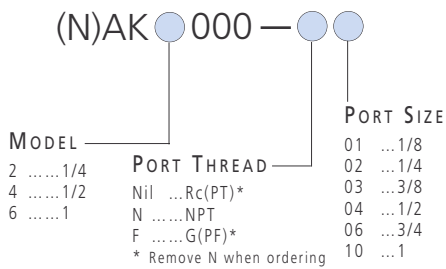
Proof Pressure	1.5MPa / 220PSI
Operating Pressure	0.003 ~ 1MPa / 0.4 ~ 145PSI
Pressure Range Vacuum	-3 to -100KPa / -0.4 ~ 14.5PSI
Fluid	Air
Temperature	5 ~ 60°C / 40 ~ 40°F
Port Size	Rc(PT) 1/8, 1/4
Effective Area	01: 25mm ² 02: 27.5mm ²

DIMENSIONS SERIES NAK



Model	Port Size NPT	A	B	C
NAK2000-N01, 02	1/8, 1/4	50	25	22
NAK4000-N02, 03, 04	1/4, 3/8, 1/2	67	36	36
NAK6000-N06, 10	3/4, 1	95	50	50

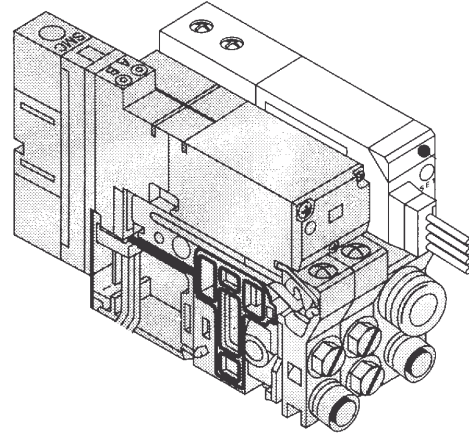
HOW TO ORDER (N)AK2000 SERIES



EJECTOR UNIT: FOR VQ1000

VACUUM EJECTOR UNIT VQ1000 SERIES BASE MOUNTED, PLUG-IN TYPE

- ✓ Vacuum Ejector mounted on Manifold Base
- ✓ Avoids the requirement for Separate Valve and Vacuum Ejector
- ✓ Reduces Piping and Wiring
- ✓ Space Saving



TECHNICAL SPECIFICATIONS

Unit No.	VVQ1000-1-J A&C M	VVQ1000-1-J B&D M
Nozzle Diameter (mm)	0.7	1
Max Suction Flow Rate (NI/min)	11	20
Max Vacuum Pressure	-630mmHg	
Max Operating Pressure	0.8MPa / 120PSI	
Standard Supply Pressure	0.5Mpa / 70PSI	
Operating Temperature	5~50°C / 40~120°F	

**TECHNICAL SPECIFICATIONS
EJECTOR UNITS**

Max No of Units	No of Valve Stations
6	0-3
5	4-6
4	7-10
3	11-13

**HOW TO ORDER
VACUUM PRESSURE SWITCH**

ZSE1 — 00 — ● ●

- ELECTRICAL ENTRY**
- Blank ...With 0.6m Grommet Lead
 - LWith 3m Grommet Lead
 - CWith 0.6m Connector Lead
 - CLWith 3m Connector Lead
 - CNWithout Connector Lead*

* When ordering switch with lead wire of 5m long, indicate both part numbers (see below).

**SWITCH TYPE/VOLTAGE
(SOLID STATE: 12~24VDC)**

- 14 ...NPN/1 setting, three revolution adjustment
- 15 ...NPN/1 setting, 200° adjustment
- 16 ...NPN/2 setting, three revolution adjustment
- 17 ...NPN/2 setting, 200° adjustment
- 18 ...NPN/1 setting, three revolution adjustment, analog
- 19 ...NPN/1 setting, 200° adjustment, analog
- 55 ...PNP/1 setting, 200° adjustment

HOW TO ORDER CONNECTOR

- Without lead wire (connector 1pc, socket 4pcs)ZS-20-A
- With lead wireZS-20-5A-50

LEAD WIRE

- Blank 0.6m
- 30 ...3m
- 50 ...5m

**HOW TO ORDER
Vacuum Ejector Unit**

VVQ1000 — I — J ● M

MANIFOLD TYPE
1Plug-in Unit

NOZZLE DIAMETER & VACUUM SWITCH OPTION

- AØ0.7 Including Vacuum Release Valve with Vacuum Switch
- BØ1.0 Including Vacuum Release Valve with Vacuum Switch
- CØ0.7 Including Vacuum Release Valve without Vacuum Switch
- DØ1.0 Including Vacuum Release Valve without Vacuum Switch

**HOW TO ORDER
VACUUM EJECTOR VALVE**

VVQ1000 — I — J ●

MANIFOLD TYPE
1Plug-in Unit

NOZZLE DIAMETER
AØ0.7: With Vacuum Release Valve
BØ1.0: With Vacuum Release Valve

FREE MOUNT CYLINDER FOR VACUUM SERIES ZCDUK

- ✓ Vacuum Connection through Piston Rod
- ✓ Precise and Direct Mounting
- ✓ Non-Rotating Piston Rod
- ✓ Bore Sizes Ø10~32mm
- ✓ Auto Switches Available



TECHNICAL SPECIFICATIONS

Cylinder Bore (mm)	10, 16, 20, 25, 32										
Type	Double Acting Type/Non-Rotating Piston Rod										
Fluid	Air										
Proof Pressure	1MPa / 145PSI										
Max Operating Pressure	0.7MPa / 100PSI										
Min Operating Pressure	Ø10, Ø16, - 0.7kgf/cm ² / 10PSI Ø20, Ø25, Ø32 - 0.6kgf/cm ² / 9PSI										
Vacuum Port Pressure	-760 mmHg ~ 6kgf/cm ² / -15 ~ 90PSI										
Ambient and Fluid Temperature	5 ~ 60°C / 40 ~ 140°F										
Lubrication	Not Required										
Cushion	Both Side Rubber Cushion										
Stroke allowance	+1.0 0										
Thread tolerance	JIS 2 Class										
Rod tip screw : Yes or No	Yes, No (Pad Direct Mounting)										
Mounting	Basic Type										
Non-rotating piston rod accuracy	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td>Ø10</td> <td>Ø16</td> <td>Ø20</td> <td>Ø25</td> <td>Ø32</td> </tr> <tr> <td colspan="2">±0.8°</td> <td colspan="3">±0.5°</td> </tr> </table>	Ø10	Ø16	Ø20	Ø25	Ø32	±0.8°		±0.5°		
Ø10	Ø16	Ø20	Ø25	Ø32							
±0.8°		±0.5°									

HOW TO ORDER SERIES ZCDUK

ZC UK — D —

AUTOSWITCH —

-Without
DWith

TYPE —

Ccap mounting/Male thread
DCap mounting/Pad direct mounting
QRod mounting/Male thread
RRod mounting/Pad direct mounting

BORE SIZE —

10 ...Ø10mm
16 ...Ø16mm
20 ...Ø20mm
25 ...Ø25mm
32 ...Ø32mm

STROKE —

5, 10, 15, 20, 25, 30Ø10, 16mm only
5, 10, 15, 20, 25, 30, 40, 50Ø20, 25, 32mm only

AUTO SWITCHES —

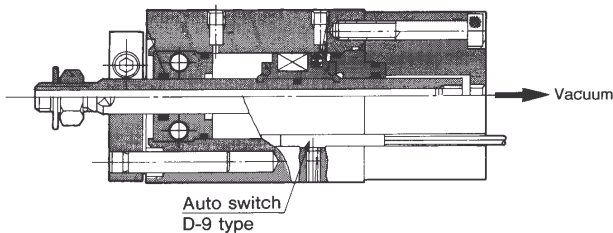
Reed
D-90 (DC Only)
D-97 (w/LED, DC Only)
A-90A (AC or DC)
D-93A (w/LED, AC or DC)

Solid State
D-F9N (W/LED, 3 Wire NPN)
D-F9P (W/LED, 3 Wire PNP)
D-F9B (W/LED, 2 Wire)

NO OF SWITCHES

-2 Switches
S1Switch

**Pad direct mounting
In case of {ZC(D)UKD}**



For cap type mounting, care should be taken not to exceed 6 bar when ejecting the workpiece

VACUUM VACUUM EJECTOR SERIES ZU

ZU VACUUM EJECTOR

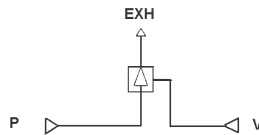
- ✓ Integrated One Touch Tube Fittings for 6mm Tube
- ✓ High Flow and High Vacuum Variants
- ✓ 2 Nozzle Sizes Available
- ✓ Standard Product is Copper Free
- ✓ Lightweight



TECHNICAL SPECIFICATIONS

Fluid	Air
Max Operating Pressure	0.7MPa / 100PSI
Ambient Temperature Range	5~60°C / 40~140°F
Tube Size	6mm
Normal Operating Pressure	0.45MPa / 65PSI

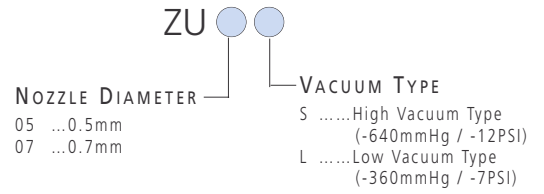
SYMBOLS



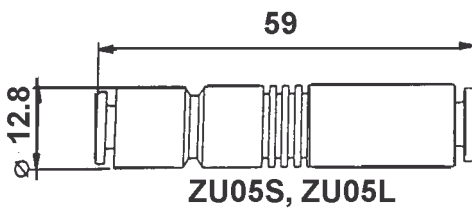
TECHNICAL SPECIFICATIONS

Model	ZU05S	ZU07S	ZU05L	ZU07L
Nozzle Diameter (mm)	0.5	0.7	0.5	0.7
Vacuum Generated	mmHg	-640	-640	-360
	PSI	-12	-12	-7
Suction Flow Rate	n//min	7	9	10
Air Consumption	n//min	9.5	19	9.5

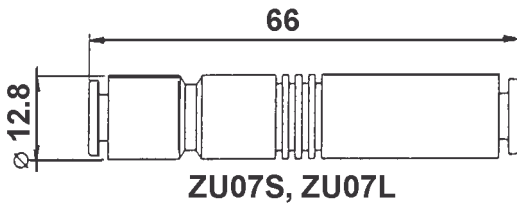
HOW TO ORDER ZU VACUUM EJECTOR



DIMENSIONS SERIES ZU



APPLICABLE TUBE OD $\varnothing 6$



APPLICABLE TUBE OD $\varnothing 6$