

INDUSTRIAL VACUUM AUTOMATION

System Components

Filters, valves, switches, gauges, silencers, fittings and hose.



5

System Components

Filters, valves, switches, gauges, silencers, fittings and hose.

The parts between the generator and the cup. Contamination and leakage are the two failure modes that account for most vacuum system downtime, and both are addressed here.

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Vacuum Filters

Particulate protection for the ejector nozzle, which is the component least tolerant of dust. Transparent housings allow a contamination check without a shutdown.



ZFA

Universal Vacuum Filter

6 VARIANTS

- The ZFA Series Universal Vacuum Filter is designed for use in vacuum and positive pressure systems with light or medium pollution levels
- It features a straight-through design, one-touch fitting, and is easy to mount with replaceable filter elements

VACUUM FLOW (NL/MIN)	RATED OPERATING PRESSURE RANGE (MPa)	OPERATING TEMPERATURE (°C)	WEIGHT (G)
10 to 140	-0.1~0.8	0~60	13 to 31

TECHNICAL DATA

Fluid	Air, Nitrogen	Rated Operating Pressure Range (MPa)	-0.1~0.8
Max Pressure Resistance (MPa)	1	Removal Efficiency (µm)	5
Operating Temperature (°C)	0~60		

VARIANTS: 6 SIZES

MODEL	HOSE DIAMETER (MM)	POSITIVE PRESSURE FLOW (NL/MIN)	VACUUM FLOW (NL/MIN)	WEIGHT (G)	DIMENSIONS (L X L1 X D X D)
ZFA54B	4	40	10	14	55.5 × 8 × 4 × 13
ZFA56B	6	130	75	13	55.5 × 8 × 6 × 13
ZFA76B	6	140	80	24	67 × 10.5 × 6 x 15.5
ZFA78B	8	280	110	24	69.5 × 12 × 8 × 16
ZFA710B	10	320	120	30	78.5 × 17 × 10 x 19.5
ZFA712B	12	370	140	31	78.5 × 17 × 12 x 21



ZFB Universal Vacuum Filter

5 VARIANTS

- The ZFB Series Universal Vacuum Filter is designed to filter dust and other particles from vacuum systems
- It features a transparent housing for easy contamination checks and replaceable filter elements, suitable for light to medium pollution levels

RATED OPERATING PRESSURE RANGE	WORKING TEMPERATURE	WEIGHT	MATERIAL
-100~0 kPa	-20~80 °C	70 to 550 g	PA, PC, PE

TECHNICAL DATA

Rated Operating Pressure Range	-100~0 kPa	Material	PA, PC, PE
Removal Efficiency	10 µm	Working Temperature	-20~80 °C

VARIANTS: 5 SIZES

MODEL	NOMINAL FLOW	INTERNAL VOLUME	FILTER AREA	WEIGHT
ZFB10B	150 NL/min	45 cm ³	0.003 m ²	70 g
ZFB15B	900 NL/min	195 cm ³	0.01 m ²	168 g
ZFB20B	900 NL/min	205 cm ³	0.01 m ²	170 g
ZFB25B	2,520 NL/min	495 cm ³	0.019 m ²	424 g
ZFB40B	5,100 NL/min	675 cm ³	0.023 m ²	550 g



ZFD Mini Vacuum Filter

ORDERING OPTIONS

① Series ZFD	② Connection specification 04 - φ4hose
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ZFE

Small Vacuum Filter

3 VARIANTS

- The ZFE Series is a small vacuum filter designed for use in vacuum systems with light and medium pollution levels
- It features a straight-through design, one-touch fitting, and a transparent housing for easy contamination indication

RATED OPERATING PRESSURE RANGE	WORKING TEMPERATURE	WEIGHT	APPLICABLE HOSE DIAMETER
-100~0 kPa	0~60 °C	6 g	φ2 / φ3.2 / φ4

TECHNICAL DATA

Fluid	Air	Rated operating pressure range	-100~0 kPa
Max pressure difference	1.5 bar	Nominal flow	10 NL/min
Removal efficiency	10 μm	Working temperature	0~60 °C
Applicable hose material	Nylon, PU	Weight	6 g
Dimensions (L)	59.5 mm	Dimensions (d)	6 mm

VARIANTS: 3 SIZES

MODEL	APPLICABLE HOSE DIAMETER	DIMENSIONS (L1)	DIMENSIONS (L2)	DIMENSIONS (D)
ZFE-02B	φ2	13 mm	13 mm	2 mm
ZFE-03B	φ3.2	11.5 mm	11.5 mm	3.2 mm
ZFE-04B	φ4	12.8 mm	12.8 mm	4 mm



ZFL

In-Line Vacuum Filter

ORDERING OPTIONS

① Series ZFL	② Port size 06 6 h - φ ose(Direct-insert type)
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Reference price NT\$286



ZFP Large-Flow Vacuum Filter

ORDERING OPTIONS

① **Series** ZFP ② **Nominal flow** 30 - 32m³/h

5.2

Control Valves

Pneumatically and electrically actuated valves for supply and exhaust control, normally open and normally closed.



ZVAA Pneumatic Control Valve

ORDERING OPTIONS

① **Series** ZVAA ② **Connection thread** G1F - G1/8 female thread



ZVAB Pneumatic Control Valve

2 VARIANTS

- The ZVAB Series is a vacuum actuated exhaust valve designed for pneumatic control
- It features options for normally open and normally closed configurations, allowing for versatile applications in vacuum systems

AIR SUPPLY PRESSURE (BAR)	WORKING TEMPERATURE (°C)	WEIGHT (G)	CONNECTION THREAD
1.5~8	-10~60	44	G1/8 male thread

TECHNICAL DATA

Air Supply Pressure (bar)	1.5~8	Working Temperature (°C)	-10~60
Weight (g)	44	Connection Thread	G1/8 male thread

VARIANTS: 2 SIZES

MODEL	OUTPUT FUNCTION	SIGNAL RANGE (KPA)	HYSTERESIS (KPA)
ZVAB-NC	NC	15~95	12
ZVAB-NO	NO	10~95	3



ZVAC Pneumatic Control Valve

- The ZVAC Series is a pneumatic control valve designed for vacuum applications
- It operates in a normally open mode and is suitable for air supply pressures ranging from 1.0 to 8.0 bar

AIR SUPPLY PRESSURE	WORKING TEMPERATURE	WEIGHT	CONNECTION THREAD
1.0~8.0 bar	0~60 °C	55 g	G1/8 male thread

TECHNICAL DATA

Control Mode	Pneumatic control	Action Mode	Normally open (NO)
Air Supply Pressure	1.0~8.0 bar	Working Temperature	0~60 °C
Weight	55 g	Connection Thread	G1/8 male thread



ZVEA Electric Control Valve

ORDERING OPTIONS

- ① Series ZVEA
- ② Connection thread G1F - G1/8 female thread



ZVD Touch Valve

ORDERING OPTIONS

- ① Series ZVD
- ② Specification G2M - Mounting thread G1/4

5.3

Check & Non-Return Valves

Hold vacuum in the gripping circuit when a neighbouring cup is uncovered, and prevent backflow on supply failure.



ZVCM Non-Return Valve

ORDERING OPTIONS

- ① Series ZVCM
- ② Vacuum generator connection thread M5F - M5×0.8 female thread



ZVR

Check Valve

ORDERING OPTIONS

05 $\varnothing$ 0.5mm	G1M G1/8 male thread G1F - G1/8 female thread
06 $\varnothing$ 0.6mm	G2M G1/4 male thread G2F - G1/4 female thread
10 $\varnothing$ 1.0mm	G3M G3/8 male thread G3F - G3/8 female thread
12 $\varnothing$ 1.2mm	G4M G1/2 male thread G4F - G1/2 female thread
M Male thread	F Female thread
ZVR04 M5M	ZVR04 M5F
ZVR05 G1M	ZVR05 G1F
ZVR06 G2M	ZVR06 G2F
ZVR10 G3M	ZVR10 G3F
ZVR12 G4M	ZVR12 G4F

Two independent columns of the ordering key. Any code in one column may be combined with any code in the other; the rows carry no pairing.

Reference price NT\$350



ZVRM

Check Valve

3 VARIANTS

ORDERING VARIANTS

M5M	G1M
ZVRM03-M5M	-
ZVRM05-M5M	ZVRM05-G1M
ZVRM07-M5M	ZVRM07-G1M

ORDERING OPTIONS

05 $\varnothing$ 0.5mm	G1M G1/8 male thread
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Reference price NT\$7,104

Blow - Off & Throttle Valves

Release and flow control at the cup, where the dead volume to be repressurised is smallest.



ZVS Fast Blow - Off Valve

- Fast vacuum break as it is mounted directly on the suction cup

ORDERING OPTIONS

G2F G1/4 female thread	G1/4 male thread
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ZVT Throttle Valve

6 VARIANTS

ORDERING VARIANTS

G1M	G2M
ZVT25-G1M	-
ZVT40-G1M	ZVT40-G2M
ZVT60-G1M	ZVT60-G2M
ZVT80-G1M	ZVT80-G2M
ZVT100-G1M	ZVT100-G2M
ZVT120-G1M	ZVT120-G2M

ORDERING OPTIONS

40 $\varnothing$ 0.4mm 100 - $\varnothing$ 1.0mm 200 - $\varnothing$ 2.0mm	G2M G1/4 male thread
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Switches & Gauges

Digital pressure switches with setpoint output for part-present interlocks, and mechanical gauges for commissioning.



ZPDE

High - Precision Digital Pressure Switch

- Easy to read, Easy to operate with the clear display

TECHNICAL DATA

Model	Accessories	-
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ZPDT

High - Precision Digital Pressure Switch

- Easy to operate with the clear display

ORDERING OPTIONS

Model	Accessories
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ZPMR

Mechanical Pressure Gauge

ORDERING OPTIONS

V Negative	G1/8 male thread
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Reference price NT\$370

Silencers

Exhaust noise attenuation. An unsilenced ejector at full flow is the loudest item on most gripping tools.



ZSA

Pneumatic Silencer

ORDERING OPTIONS

- ① Series ZSA
- ② Connection thread G1M - G1/8 male thread

Fittings, Hose & Accessories

One-touch and barbed fittings, cup fittings, shunts, block plugs, reinforced hose and clamps.



PJP

Universal One-Touch Fitting

- The PJP Series consists of universal one-touch fitting connectors designed for use in vacuum systems
- These connectors are made from a copper alloy and are suitable for harsh environments, offering a long lifetime

MATERIAL	HOSE DIAMETER OPTIONS
Copper alloy	φ4, φ6, φ8, φ10, φ12, φ14

TECHNICAL DATA

Material
Copper alloy
Type
Universal one-touch fitting connectors
Connection Thread Options
M5×0.8 male thread, G1/8 male thread, G1/4 male thread, G3/8 male thread, G1/2 male thread
Hose Diameter Options
φ4, φ6, φ8, φ10, φ12, φ14
Dimensions
Varies by model (e.g., PJP-I-A4-M5M: d=4, D=9, L=16, LG=5)



PJQ Universal Hose Barb Fitting

ORDERING OPTIONS

B8 $\varnothing$ 8	G1M G1/8 male thread
B10 $\varnothing$ 10	G2M G1/4 male thread
B12 $\varnothing$ 12	G3M G3/8 male thread
B19 $\varnothing$ 19	G4M G1/2 male thread
B25 $\varnothing$ 25	G6M G3/4 male thread
B32 $\varnothing$ 32	G8M G1 male thread

Two independent columns of the ordering key. Any code in one column may be combined with any code in the other; the rows carry no pairing.



PJS Suction Cup Fitting

TECHNICAL DATA

M - male thread	F - female thread	PJS-M5M-SC2	PJS-M5F-SC1
PJS-M5M-SC3	PJS-M5F-SC4	-	PJS-M5F-SC5



PDA Universal Block Plug

5 VARIANTS

ORDERING VARIANTS

COUNTERSUNK HEAD SEALING

PDA-I-M5M

PDA-I-G1M

PDA-I-G2M

PDA-I-G3M

PDA-I-G4M

HORIZONTAL SEALING

PDA-L-M5M

PDA-L-G1M

PDA-L-G2M

PDA-L-G3M

PDA-L-G4M

ORDERING OPTIONS

L Horizontal sealing	G1M G1/8 male thread
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PDR Positive-Pressure Vacuum Shunt

- Large diameter inlet and outlet are optional
- Low flow resistance
- Solution of hose diversion

TECHNICAL DATA

Large Diameter Inlet/Outlet
Optional

Flow Resistance
Low

Hose Diversion Solution
Yes

Model Options
['PDR-G2F-5-G1F', 'PDR-G3F-5-G2F', 'PDR-G2F-9-G1F', 'PDR-G3F-9-G2F']

Branching Port Connection Thread
['G1/8 female', 'G1/4 female', 'G3/8 female']

Weight
['PDR-G2F-5-G1F: 90g', 'PDR-G3F-5-G2F: 110g', 'PDR-G2F-9-G1F: 120g', 'PDR-G3F-9-G2F: 240g']



PTK Stainless Steel Hose Clamp

ORDERING OPTIONS

- ① **Series** PTK ② **Specification** 18-32 , 21-38 , 21-44 ,



PTS

Steel-Reinforced Transparent PVC Hose

- The PTS Series PVC Transparent Stainless Steel Hose is designed for high axial strength and can withstand high pressure and vacuum compression
- It features good chemical resistance, acid resistance, and alkali resistance

OPERATING PRESSURE RANGE	MATERIAL
0.2~7.0 bar	PVC, Stainless Steel

TECHNICAL DATA

Material
PVC, Stainless Steel
Operating Pressure Range
0.2~7.0 bar
Inner Diameter
19, 25, 32, 40, 45, 50, 60, 65, 70, 75 mm
Outer Diameter
25, 32, 41, 50, 55, 60, 72, 77, 83, 89 mm
Bending Radius
100, 128, 164, 200, 220, 256, 288, 308, 332, 356 mm
Weight
0.32, 0.5, 0.65, 0.87, 1.1, 1.24, 1.7, 1.86, 2, 2.15 kg/m

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