







Pump accessories



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Vacuum pump accessories		Features and benefits
1	 <p>Vacuum switches</p>	Our line includes inductive universal, electro-mechanical and pneumatic vacuum switches that are pre-set or adjustable.
2	 <p>Valves</p>	Choose between solenoid, electrically or vacuum-controlled valves. The vacuum controlled valve (Vacustat) shuts off the flow of compressed air to the pump when the pre-set level is reached, and consequently the consumption of compressed air is minimized.
3	 <p>Regulators</p>	Different vacuum pumps need different feed pressure for optimum performance. A filter regulator can easily be manually set to a desired pressure level, and be used to eliminate particles from the compressed air. A pilot regulator can be used to automatically set the feed pressure according to your needs.
4	 <p>Silencers</p>	Reduce noise from exhaust with a flow-through design.
5	 <p>Vacuum filters</p>	To filter dust and other small particles from the vacuum flow. Reduces the risk of operation breakdown or stoppage in the pump.
6	 <p>Other</p>	Body for COAX® cartridges, vacuum gauge, manometer etc.

Vacuum Pump Accessories

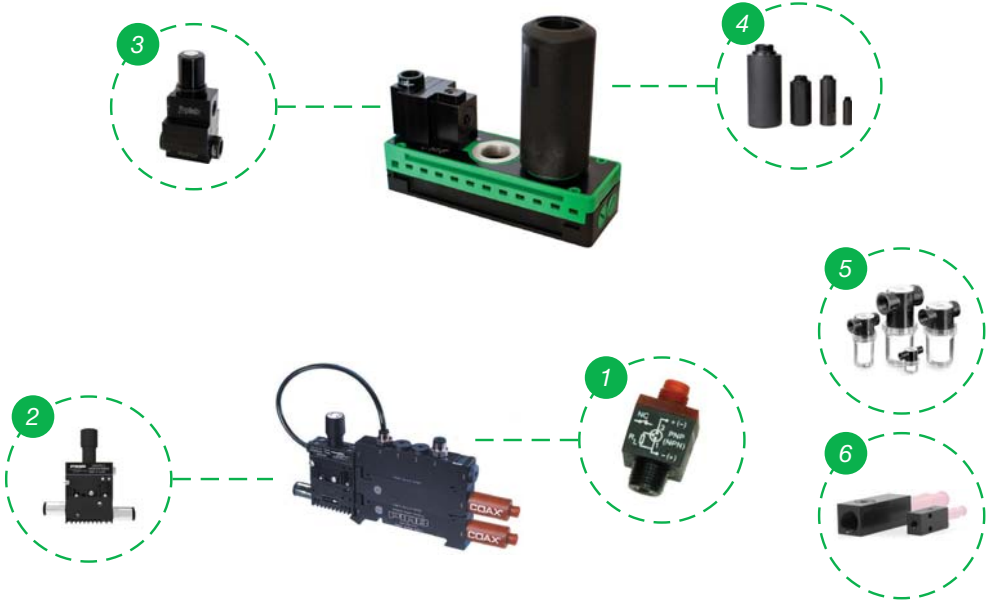


Image only to serve as an example.

- 1 Vacuum switches
- 2 Valves
- 3 Regulators
- 4 Silencers
- 5 Vacuum filters
- 6 Other

Specifications subject to change without notice.

Vacuum switches



Vacuum switches, pneumatic

- Converts a vacuum level to a pneumatic signal.
- Vacuum-actuated membrane linked to a pneumatic switch.
- Available preset or with adjustable vacuum level.



Vacuum switches, electromechanical

- Converts a vacuum level to an electric signal, VAC or VDC.
- Vacuum-actuated membrane linked to an electro-mechanical switch.
- Integrated cable with open ends included.
- Available preset or with adjustable vacuum level.



Vacuum switches, inductive universal

- Converts a vacuum level to a digital signal, 24 VDC.
- Vacuum-actuated membrane linked to a proximity-inductive universal switch.
- Integrated cable with open ends included.
- PNP NO/NC or NPN NO/NC output functions.
- The switch must be connected in series with the load.

Technical Data

Description	Hysteresis	Signal range
Vacuum switch, pneumatic, adjustable with screw and knob (NO)	0.90 -inHg	3.00–28.0 -inHg
Vacuum switch, pneumatic, adjustable with screw and knob (NC)	3.50 -inHg	4.50–28.0 -inHg
Vacuum switch, pneumatic, preset (NO 7.5 -inHg)	0.90 -inHg	6.30–8.70 -inHg
Vacuum switch, pneumatic, preset (NO 19.0 -inHg)	0.90 -inHg	16.6–21.4 -inHg
Vacuum switch, pneumatic, preset (NC 9.0 -inHg)	3.50 -inHg	7.50–10.5 -inHg
Vacuum switch, pneumatic, preset (NC 21.0 -inHg)	3.50 -inHg	18.0–24.0 -inHg
Vacuum switch, electro-mechanical, adjustable with screw & knob	3.00 -inHg	4.00–28.0 -inHg
Vacuum switch, electro-mechanical, preset (Signal range 7.5 -inHg)	3.00 -inHg	6.00–9.00 -inHg
Vacuum switch, inductive universal, adjustable with knob Ø6	0.60 -inHg	3.00–28.0 -inHg
Vacuum switch, inductive universal, adjustable with knob	0.60 -inHg	3.00–28.0 -inHg
Vacuum switch, inductive universal, preset (Signal range 3.0 -inHg)	0.60 -inHg	2.70–3.30 -inHg
Vacuum switch, inductive universal, preset (Signal range 9.0 -inHg)	0.60 -inHg	8.10–9.90 -inHg

Ordering information

For a complete list of available vacuum switches visit piab.com. On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register to receive full access to all resources available.



Mini vacuum switch, AI, pre-set VS4118/VS4128

- Pre-set vacuum switch with digital output.
- Durable and compact design with G1/8" 90° angle swivel connection for easy installation.
- VS4118 hardwired enables PNP NO/NC or NPN NO/NC functionality.
- VS4128 suitable for plug in I/Os. Available in PNP NO or NPN NO models.
- Possible to connect several units serially with T-connectors to provide a common output (VS4128 PNP).



Mini vacuum switch, pre-set VS4015/VS4016

- Pre-set vacuum switch with digital output.
- Very low weight and small format, push-in or thread connections.
- PNP NO/NC or NPN NO/NC output functions.

Technical Data

Description	Hysteresis	Signal range
Vacuum Switch VS4128 9.0 -inHg, M12 PNP NO	2.36 -inHg	8.10–10.5 -inHg
Vacuum Switch VS4128 15.0 -inHg, M12 PNP NO	2.36 -inHg	14.1–16.5 -inHg
Vacuum Switch VS4118 9.0 -inHg, M8 PNP/NPN NO/NC	2.36 -inHg	20.9–22.5 -inHg
Vacuum Switch VS4118 15.0 -inHg, M8 PNP/NPN NO/NC	2.36 -inHg	8.10–10.5 -inHg
Vacuum Switch VS4118 21.0 -inHg, M8 PNP/NPN NO/NC	2.36 -inHg	14.1–16.5 -inHg
Vacuum Switch VS4128 15.0 -inHg, M12 NPN NO	2.36 -inHg	20.9–22.5 -inHg
Vacuum switch VS4015, Ø6, 9.0 -inHg	1.58–2.08 -inHg	7.80–10.2 -inHg
Vacuum switch VS4015, Ø6, 15.0 -inHg	1.58–2.08 -inHg	13.8–16.2 -inHg
Vacuum switch VS4015, Ø6, 21.0 -inHg	1.58–2.08 -inHg	19.8–22.2 -inHg
Vacuum switch VS4016, G1/8" male, 9.0 -inHg	1.58–2.08 -inHg	7.80–10.2 -inHg
Vacuum switch VS4016, G1/8" male, 15.0 -inHg	1.58–2.08 -inHg	13.8–16.2 -inHg
Vacuum switch VS4016, G1/8" male, 21.0 -inHg	1.58–2.08 -inHg	19.8–22.2 -inHg

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Vacuum switches



Vacuum switch 3-color digital display M8

- 2 PNP outputs, NO or NC. Independently selectable for each output.
- 3-color LCD display, easy readout.
- 7 programmable vacuum units, for example kPa, inHg, mmHg, etc.
- Dual display allows actual and set value to be displayed at the same time.
- Selectable "Key-Lock mode" with display indicator to avoid unauthorized changes.
- Selectable "Power-Save mode" with display indicator.
- Mounting brackets included.



Vacuum switch, adjustable with analog output

- Converts vacuum to an analog output signal and an adjusted vacuum level to a digital output.
- Adjustable hysteresis.
- Separate cable with open ends included.



Vacuum switch, adjustable with LED-display

- Converts adjusted vacuum levels to 2 separate digital outputs.
- Digital vacuum level display.
- Integrated cable with M8 connector included.

Technical Data

Description	Hysteresis	Signal range
Vacuum switch 3-color digital display M8	Adjustable, 0.30–2.40 -inHg	0–29.9 -inHg
Vacuum switch, MM8	1–5 % F.S.	0–29.9 -inHg
Vacuum switch, DM8	2 % F.S.	0–29.9 -inHg

Ordering information

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Vacuum switch, LM8

- Converts an adjusted vacuum level to a digital output.
- Very low weight and small format with push-in connection.
- Integrated cable with M8 connector included.



Vacuum switch, adjustable for P2010

- Converts an adjusted vacuum level to a digital output signal for pressure or vacuum.
- NC in vacuum range 0–29.9 -inHg. NO in pressure range 0–87 psi.
- Very low weight and small format with M5 90° angle swivel connection.
- Integrated cable with open ends included.



Vacuum Switches, Electric EVS

- EVS 54 with Calibrated Adjustment Dial.
- EVS 100 NEMA 4X.
- SPDT Switch, wired NO or NC.
- Electrical Rating: 15 amps 125/250 VAC resistive.

Technical Data

Description	Hysteresis	Signal range
Vacuum switch, LM8	2 % F.S.	0–29.9 -inHg
Vacuum switch, M5	2 % F.S.	0–29.9 -inHg to 87 psi
Vacuum switch, EVS 54 electric	1.5–3.5 -inHg	0–29.9 -inHg
Vacuum switch, EVS 100 electric	1.0–2.0 -inHg	0–29.9 -inHg

Ordering information

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Valves



piSAVE release

- Equalizes pressure in the suction cups to provide fast release of the product.
- Extra fast release by accumulating and utilising the feed-air pressure as a boost.
- ON/OFF activated simultaneously with the ejector.
- No additional controls required — use a single 3/2 control valve for the ejector and piSAVE release.



AQR

- Equalizes pressure in vacuum gripper systems to provide fast release of product.
- Consumes no additional compressed air.
- ON/OFF activated simultaneously with the ejector.
- No additional controls required — use a single 3/2 control valve for the pump and AQR.



QR

- For vacuum pump P3010.
- Quick release by accumulating and utilising the feed-air pressure as a boost.
- ON/OFF activated simultaneously with the P3010
- Three sizes for optimizing release volume with system volume.

Technical Data

Description	Flow, atmospheric	Volume (Quick-Release)
piSAVE release G1/8"	8.16 scfm	–
piSAVE release G1/4"	16.6 scfm	–
Atmospheric quick-release valve – AQR	6.99 scfm	–
Quick-Release module P3010	–	0.18 in ³
Quick-Release tank module P3010	–	1.83 in ³
Quick-Release tank module P3010	–	3.66 in ³

Ordering information

For a complete list of available valves visit piab.com. On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register to receive full access to all resources available.



piSAVE sense

- Vacuum check valves which allows a few suction cups to miss the object(s) and still maintain enough vacuum level in the system with quick response and release times.
- The vacuum check valves shall be used in a centralized vacuum system, one for each suction cup.
- Designing with vacuum check valves will require a smaller vacuum pump and save energy.
- Suitable for handling different size or different number of leaking or sealed objects such as MDF boards, corrugated cardboards or metal sheets with a flexible handling device.
- Also suitable for objects with surface leakage around the lip of the suction cup.
- The smallest sizes are mainly suitable for sealed and smooth materials, such as metal and glass (02/06 for small cups and 03/60 for large cups).
- The valves are supplied separately for integration or mounted in an AI-fitting with female and male threaded connections to facilitate installation.

piSAVE restrict

- Vacuum flow restrictors which allows a few suction cups to miss the object(s) and still maintain enough vacuum level in the system.
- Suitable for handling different size sealed sheets/objects with the same flexible lifting device.
- The vacuum flow restrictors shall be used in a centralized vacuum system, one for each suction cup.
- Designing with flow restrictors will require a smaller vacuum pump and save energy.
- Available in three sizes with different flow performance/characteristics to suit different size suction cups.
- The restrictors are integrated in an AI-fitting with female and male threaded connections to facilitate installation.

Technical Data

Description	Pump flow/cup min.	Pump flow/cup to close valve	Leakage flow, max.
piSAVE sense 02/60 (yellow)	0.002 (@ 13.3 -inHg) scfm	0.44 (@ 0.9 -inHg) scfm	–
piSAVE sense 03/60 (green)	0.13 (@ 13.3 -inHg) scfm	0.78 (@ 0.9 -inHg) scfm	–
piSAVE sense 04/60 (blue)	0.32 (@ 13.3 -inHg) scfm	1.17 (@ 2.1 -inHg) scfm	–
piSAVE sense 05/60 (red)	0.53 (@ 13.3 -inHg) scfm	1.53 (@ 3.3 -inHg) scfm	–
piSAVE restrict multiple port fitting 0.7	–	–	0.17 scfm
piSAVE restrict multiple port fitting 1.0	–	–	0.34 scfm
piSAVE restrict multiple port fitting 1.3	–	–	0.57 scfm

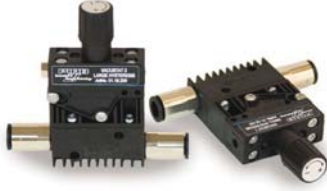
Ordering information

For a complete list of available valves visit piab.com. On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register to receive full access to all resources available.

Specifications subject to change without notice.



Valves



piSAVE onoff

- Independent pneumatic air-saving device for vacuum pumps.
- Adjustable vacuum controlled 2/2 NO valve.
- Available with large hysteresis for object handling and small hysteresis for process applications.
- The Vacustat is recommended for vacuum pumps in non-leaking systems.
- The vacuum pump must be fitted with a non-return valve.



Blow-off Check valve G1/8"

- Prevents vacuum from being pulled through the blow-off lines, which means faster response time and completely independent vacuum units.
- Reliable quick-release function even in larger systems with several units, due to the very low feed pressure required to break away for blow-off.
- Suitable in applications where cleaning of the suction cup filters or cooling of the object to be picked is important.

Technical Data

Description	Flow	Flow rate
piSAVE onoff	15.5 scfm	–
Blow-off Check valve G1/8"	–	3.18–5.93 scfm (@ 44-101.5 psi)

Ordering information

For a complete list of available suction cup valves visit piab.com. On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register to receive full access to all resources available.

Valves – Vacuum check valves



Vacuum Check Valve VT-1H

- Check valve that traps vacuum in sealed applications for safe operation.
- Built-in blow off check valve for fast release of object.
- Available in lock pin 16, 19 or ball joint mountings, industry standard.
- Available with level compensator to compensate for differences in level of object.



Vacuum Check Valve VT-1H with COAX®

- Two-stage COAX® cartridge MINI Pi12-2 integrated.
- Check valve that traps vacuum in sealed applications for safe operation.
- Built-in blow off check valve for fast release of object.
- Available in lock pin 16, 19 or ball joint mountings, industry standard.
- Available with level compensator to compensate for differences in level of object.



Vacuum Check Valve VT-1H Vacustat with COAX®

- Two-stage COAX® cartridge MINI Pi12-2 integrated.
- Check valve that traps vacuum in sealed applications for safe operation.
- Built-in blow off check valve for fast release of object.
- Integrated energy-saving device, Vacustat results in virtually no air consumption in sealed applications.
- Available in lock pin 16, 19 or ball joint mountings, industry standard.
- Available with level compensator to compensate for differences in level of object.

Technical Data

Description	Vacuum flow, max.
Vacuum Check Valve VT-1H	1.44 scfm
Vacuum Check Valve VT-1H with COAX®	1.44 scfm
Vacuum Check Valve VT-1H Vacustat with COAX®	1.44 scfm

Ordering information

For a complete list of available vacuum check valves visit piab.com. On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register to receive full access to all resources available.

Regulators



piSAVE optimize

- Vacuum controlled proportional pressure regulator, a fully pneumatic device suitable for air-driven ejectors/pumps.
- The feed pressure to the vacuum pump/ejector is automatically regulated and controlled to maintain the set vacuum level. Air/energy usage is kept to a minimum for the application (optimized).
- Recommended for leaking and sealed applications to save energy and secure the right vacuum level.
- Extra port for Vacuum gauge.
- Air ventilation port with filter.
- Swivel compressed air connections.
- piSAVE optimize gives maximum feed pressure/ flow to vacuum pump/ejector until vacuum level starts to build up.
- Separate mounting bracket kit.
- Upgrade kit - available as an integrated module for piCLASSIC and Classic vacuum pumps.

Technical Data

Description	Vacuum flow
piSAVE optimize	3.54–31.78 scfm (@ recommended ejector/pump feed pressure)
PCC (Piab Cruise Control)	0–38.8 scfm

Ordering information

For a complete list of available regulators visit [piab.com](https://www.piab.com). On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register to receive full access to all resources available.



PCC (Piab Cruise Control)

- For vacuum pump P6010.
- Programmable for constant vacuum level.
- The signal input regulates the feed pressure to maintain a constant vacuum level.
- Integrated analog vacuum sensor.



Pilot regulator

- Pilot-operated pressure regulator with secondary pressure relief and flow compensation.
- Suitable for remote control.

Technical Data

Description	Flow
Pressure regulator, pilot operated, G1/4"	19.1 scfm
Regulator 1/4", manometer	19.1 scfm

Ordering information

For a complete list of available regulators visit piab.com. On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register to receive full access to all resources available.



Regulator

- Regulator for optimizing feed pressure to vacuum pumps or smaller vacuum systems.
- Manometer for feed pressure control.

Silencers



Silencer MINI/MIDI

- Reduces noise from exhaust on MINI/MIDI piINLINE®.

Silencers

- Reduce noise from exhaust.
- Flow-through design.

Silencer COAX®

- Reduces noise from the exhaust.
- Compatible with aluminium holders for MINI and MIDI COAX® cartridges.
- Simple snap locking when mounting.
- Through-flow design that eliminates the risk of impaired performance due to clogging of the silencer.

Technical Data

Description	Noise level, reduction
Silencer piINLINE® MINI	10 dBA
Silencer piINLINE® MIDI	15 dBA
Silencer	10 dBA
Silencer COAX®	> 10 dBA

Ordering information

For a complete list of available silencers visit piab.com. On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register to receive full access to all resources available.

Vacuum Filters



Vacuum filters – plastic

- To filter dust and other small particles from the vacuum flow.
- Reduces the risk of operation breakdown or stoppage in the pump.
- Replaceable filter element.
- Available with special filter element with increased filter area.

Vacuum filters – metal

- To filter dust and other small particles from the vacuum flow.
- Reduces the risk of operation breakdown or stoppage in the pump.

Inline filters

- Translucent, inert polypropylene housing allows for visual inspection.
- These miniature filters can be used on compressed air lines or vacuum lines to protect vacuum pumps, vacuum switches and valves from contamination.
- Filter is constructed of chemically inert porous polyethylene and has a recommended working pressure up to 65 psi.

Technical Data

Description	Pressure	Removal efficiency	Flow, nominal
Vacuum filter G1/2" (5 µm) & G3/4" (5 µm)	-14.5–0 psi	5 µm	12.3 scfm
Vacuum filter G1½" (5 µm)	-14.5–0 psi	5 µm	19.1 scfm
Vacuum filter G1/8", 1/8" NPT & 1/4" NPT	-14.5–0 psi	10 µm	2.97 scfm
Vacuum filter G3/8" & 3/8" NPT	-14.5–0 psi	10 µm	5.30 scfm
Vacuum filter G1/2", G3/4", 1/2" NPT & 3/4" NPT	-14.5–0 psi	10 µm	31.8 scfm
Vacuum filter G1", G1½", 1" NPT & 1 1/2" NPT	-14.5–0 psi	10 µm	89.0 scfm
Vacuum filter, 3/8" NPT steel, 3/4" NPT steel	-14.5–0 psi	5 µm	13.8 scfm
Vacuum filter, 1/2" NPT steel	-14.5–0 psi	5 µm	21.0 scfm
Vacuum filter, 1" NPT steel	-14.5–0 psi	5 µm	35.0 scfm
Vacuum filter, 1 1/2" NPT steel	-14.5–0 psi	5 µm	79.9 scfm
Vacuum filter, 2" NPT steel	-14.5–0 psi	5 µm	175 scfm
Vacuum filter, 2 1/2" NPT steel	-14.5–0 psi	5 µm	212 scfm
Inline filter	-14.69–65 psi	10 µm	0.42 scfm
Inline filter	-14.69–65 psi	25 µm	1.06 scfm

Ordering information

For a complete list of available vacuum filters visit piab.com. On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register to receive full access to all resources available.

Other



Body for COAX® cartridge

- Aluminium bodies for COAX® MINI and MIDI cartridges.
- All 2-stage and 3-stage cartridges, equipped with a red aluminium holder, will fit.
- The mini body has a stackable design with extra port for sensing or blow-off.
- The midi body has a special vacuum-exhaust inline design, which minimizes the influence of dust on the cartridge.
- Cartridge has to be ordered separately.



Vacuum gauge and manometers

- Analog indicator, springjoint – lever system.
- The instruments include nut for installation on a panel.
- Vacuum gauge to 30 -inHg, Manometers to 36.25 and 150 psi.



POREX™ mufflers

- The POREX™ muffler is designed to specifically reduce air blast noise created at exhaust ports of pneumatic valves.
- The porous plastic body is made of high density porous polyethylene.
- The muffler is available in three (3) air flows: fine flow (FF-red base-35 micron), standard flow (black base-70 micron) and coarse flow (CF-green base-250 micron).

Technical Data

Description	Noise level, reduction
POREX™ Muffler 1/8"	8–13 dBA
POREX™ Muffler 1/4"	4–16 dBA
POREX™ Muffler 3/8"	4–10 dBA
POREX™ Muffler 1/2"	10–20 dBA
POREX™ Muffler 3/4"	8–16 dBA
POREX™ Muffler 1"	14–18 dBA

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