Vacuum Automation 2.1

## The future depends on good product choices

piab
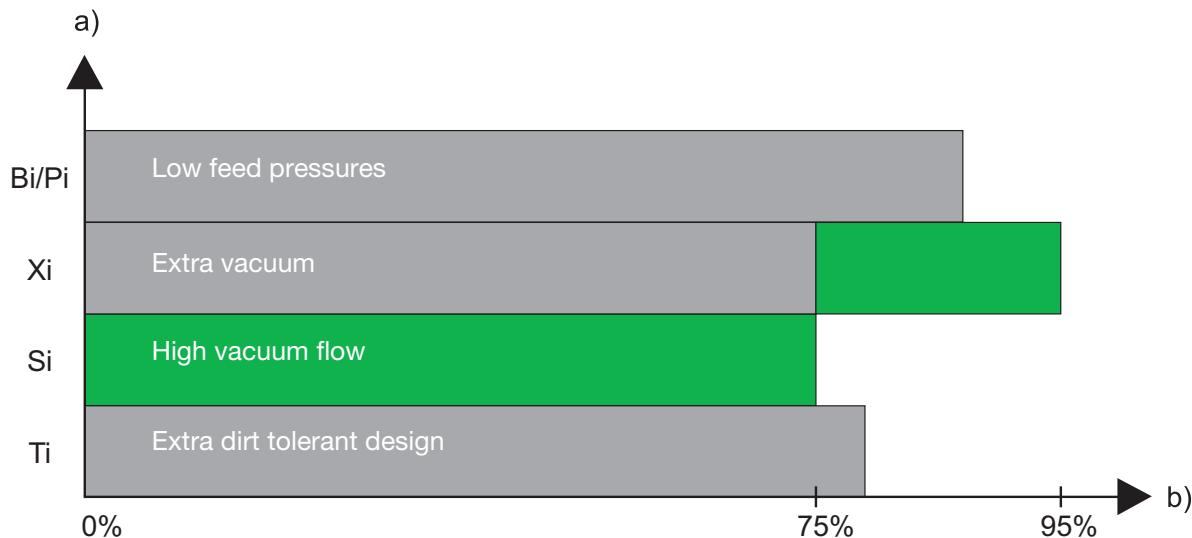
Selection guide

Which pump should I select?

Piab vacuum pumps are divided into series with different characteristics: Bi, Ti, Pi, Si, Xi. When you know what these letters mean and the applications for which they were developed, it will be easier to select the right pump.

COAX® cartridge	2-stage	3-stage	MICRO	MINI	MIDI	Vacuum level -kPa	Optimal usage				Applications
							Low feed pressure	Extra vacuum	High vacuum flow	Extra dirt tolerant	
Bi	x		x			83	x				Electronics, semiconductors
Ti	x		x			84				x	Leaking objects, pick and place small objects
Pi	x	x		x	x	90	x			x	Fluctuating compressed air pressure
Si	x	x	x	x	x	75			x	x*	High speed applications
Xi	x	x	x	x	x	95		x		x*	Sealed applications

*) Not recommended for the Si and Xi COAX® MICRO cartridge.

a) Characteristics, b) Vacuum level

Green = most energy efficient choice.

Vacuum flow at optimal feed pressure

| COAX® cartridge | Optimal feed pressure | Air consumption | Vacuum flow (Nl/s) at different vacuum levels (-kPa) | | | | | | | | | | Max Vacuum |
	Mpa	Nl/s	0	10	20	30	40	50	60	70	80	90	-kPa
Bi03-2	0.18	0.14	0.23	0.15	0.060	0.040	0.035	0.023	0.013	0.0060	–	–	83
Xi2.5-2	0.50	0.13	0.24	0.17	0.10	0.06	0.04	0.03	0.02	0.01	0.010	–	92
Si02-2	0.6	0.12	0.28	0.21	0.12	0.08	0.07	0.06	0.04	0.02	–	–	75
Ti05-2	0.4	0.27	0.32	0.28	0.23	0.17	0.10	0.07	0.04	0.02	0.004	–	84
Ti05-2	0.6	0.37	0.31	0.27	0.24	0.20	0.15	0.09	0.04	0.01	–	–	75
Pi12-2	0.314	0.44	0.68	0.60	0.44	0.27	0.19	0.14	0.10	0.060	0.030	–	90
Pi12-3	0.314	0.44	1.40	0.60	0.44	0.27	0.19	0.14	0.10	0.06	0.03	–	90
Si08-2	0.60	0.44	0.77	0.67	0.51	0.33	0.23	0.16	0.12	0.08	–	–	75
Si08-3	0.60	0.44	1.34	0.73	0.55	0.35	0.23	0.17	0.13	0.08	–	–	75
Xi10-2	0.5	0.46	0.75	0.63	0.49	0.33	0.19	0.15	0.11	0.07	0.045	0.011	94
Xi10-3	0.5	0.46	1.43	0.70	0.50	0.33	0.19	0.15	0.11	0.07	0.045	0.011	94
Pi48-2	0.30	2.0	2.8	2.5	1.8	1.1	0.65	0.50	0.35	0.25	0.1	–	90
Pi48-3	0.30	2.0	5.6	2.5	1.8	1.1	0.65	0.50	0.35	0.25	0.10	–	90
Si32-2	0.60	1.75	3.3	3.0	2.6	1.7	0.90	0.60	0.50	0.35	–	–	75
Si32-3	0.60	1.75	6.0	3.5	2.6	1.7	0.90	0.60	0.50	0.35	–	–	75
Xi40-2	0.45	1.83	2.8	2.3	1.6	1.0	0.73	0.58	0.43	0.32	0.18	0.03	95
Xi40-3	0.45	1.83	5.9	3.0	2.0	1.3	0.73	0.58	0.43	0.32	0.18	0.03	95

Evacuation time at optimal feed pressure

| COAX® cartridge | Optimal feed pressure | Air consumption | Evacuation time (s/l) to reach different vacuum levels (-kPa) | | | | | | | | | Max Vacuum |
	Mpa	Nl/s	10	20	30	40	50	60	70	80	90	-kPa
Bi03-2	0.18	0.14	0.50	1.4	3.9	6.4	10.0	16.0	28.0	51.0	–	83
Xi2.5-2	0.50	0.13	0.49	1.23	2.48	4.50	7.30	11.3	18.0	28.0	–	92
Si02-2	0.6	0.12	0.41	1.01	2.01	3.30	4.90	6.90	10.2	–	–	75
Ti05-2	0.4	0.27	0.33	0.73	1.20	2.00	3.10	5.00	8.30	16.6	–	84
Ti05-2	0.6	0.37	0.30	0.70	1.20	1.80	2.60	4.20	8.43	–	–	75
Pi12-2	0.314	0.44	0.17	0.32	0.58	1.1	1.8	2.7	4.0	6.4	–	90
Pi12-3	0.314	0.44	0.08	0.23	0.49	1.00	1.70	2.60	3.90	6.30	–	90
Si08-2	0.60	0.44	0.14	0.31	0.55	0.9	1.4	2.1	3.1	–	–	75
Si08-3	0.60	0.44	0.10	0.25	0.48	0.80	1.30	2.00	2.90	–	–	75
Xi10-2	0.5	0.46	0.14	0.3	0.6	1.0	1.6	2.3	3.5	5.3	8.9	94
Xi10-3	0.5	0.46	0.09	0.26	0.50	0.90	1.5	2.2	3.4	5.2	8.8	94
Pi48-2	0.30	2.0	0.030	0.070	0.13	0.26	0.46	0.70	1.0	1.6	4.0	90
Pi48-3	0.30	2.0	0.020	0.060	0.12	0.25	0.45	0.70	1.0	1.6	4.0	90
Si32-2	0.60	1.75	0.030	0.070	0.10	0.18	0.33	0.53	0.80	–	–	75
Si32-3	0.60	1.75	0.020	0.050	0.10	0.18	0.33	0.53	0.80	–	–	75
Xi40-2	0.45	1.83	0.04	0.09	0.17	0.28	0.44	0.63	0.90	1.3	2.3	95
XI40-3	0.45	1.83	0.022	0.062	0.12	0.22	0.37	0.57	0.84	1.2	2.2	95

The vacuum pumps/generators are classified according to their initial vacuum flow rate. There are Small with 10-180 Nl/min; Medium with 180-1700 Nl/min and Large with 101-918 m³/h.

Group	Initial flow	Vacuum pump/generator	
Small 10-180 Nl/min		piINLINE® MICRO & MINI	
		piCOMPACT10	
		P3010	
		Mini	

Features	Typical applications
▶ Basic design. ▶ Available with a two-stage COAX® cartridge MICRO or MINI. ▶ Installs directly on a vacuum hose near the suction point. ▶ Dirt tolerant and durable with generic "plug-and-play" design. ▶ Easy and simple installation with push-in connections. ▶ Generic plug-and-play design makes it easy to retrofit other.	▶ Injection moulding automation equipment. ▶ Sheet metal handling equipment, such as laser cutting, bending and punching machines. ▶ Pick-and-place, such as labelling machines.
▶ Available with one or up to six two-stage COAX® cartridge MICRO or MINI. ▶ Reduces air-consumption with 30–50% compared to other ejector technologies. ▶ Control valves for on/off and blow-off. ▶ Vacuum switches, vacuum display and energy saving features. ▶ Slim design. ▶ Can be mounted in a manifold for several units with a common compressed air port. ▶ Suitable when designing multi channel vacuum circuits. ▶ Large variety of electrical interfaces and cables.	▶ Electronic and semiconductor machine equipment. ▶ Small parts handling in plastic, consumer and sheet metal industries.
▶ Available with a three-stage COAX® cartridge MINI. ▶ Includes a flow-through silencer and a built-in vacuum filter for harsh environments. ▶ Slim, compact, configurable and modular design. ▶ Low weight.	▶ Robot handling equipment in plastic, consumer, furniture and automotive industries. ▶ Suitable for fast and reliable evacuation in sealed systems.
▶ These are small and lightwight vacuum pumps, MINI, with large capacity that can compensate for leakages. ▶ The Chip pump can be mounted onto various types of bottom plates and, through this, be given numerous connection possibilities. ▶ It can also be fitted with valves and/or a vacuum sensor.	▶ Where a small footprint is needed.

Group	Initial flow	Vacuum pump/generator	
Medium	180-1700 Nl/min	piINLINE® MIDI	
		P5010	
		P6010	
		piCLASSIC	

Specifications subject to change without notice.

Features	Typical applications
▶ Basic design. ▶ Available with a two-stage COAX® cartridge MIDI. ▶ Installs directly on a vacuum hose near the suction point. ▶ Dirt tolerant and durable with generic "plug-and-play" design. ▶ Easy and simple installation with push-in connections. ▶ Generic plug-and-play design makes it easy to retrofit other.	▶ Injection moulding automation equipment. ▶ Sheet metal handling equipment, such as laser cutting, bending and punching machines. ▶ Pick-and-place, such as labelling machines.
▶ Available with a two- or three-stage COAX® cartridge MIDI. ▶ Integrated flow-through silencer that is unaffected by dust and dirt. ▶ Substantially lower air-consumption as compared to conventional ejectors of similar sizes. ▶ Slim, compact, configurable and modular design. ▶ Low weight.	▶ Designed mainly for automated vacuum handling applications with robots or dedicated machines (for example packaging machines). ▶ Developed for requirements found in industries such as the plastic, automotive, consumer goods, graphic and glass.
▶ Available with one up to four three-stage COAX® cartridge MIDI. ▶ Provides up to 40% more flow than conventional vacuum pumps, while still reducing overall energy consumption. ▶ Durable and maintenance free. ▶ Provides powerful, whisper-quiet, and non-heat generating suction at extremely low feed pressures. ▶ Compact size.	▶ Automated material handling and other manufacturing processes in the automotive, robotic, graphics and packaging.
▶ Piab's classical vacuum pump design – now with upgraded design and COAX® technology. ▶ Available with one or up to six three-stage COAX® cartridge MIDI. ▶ New modular design makes for easy cleaning of ejector cartridges and gives an opportunity to upgrade the performance if needed. ▶ Large vacuum capacity in relation to size, suitable to replace larger electromechanical pumps, can be placed much closer to point of use and therefore reduce the flow losses for vacuum lines. ▶ Additional energy saving features available as options.	▶ Robot handling equipment in plastic, consumer, furniture and automotive industries. ▶ Packaging machines.

Group	Initial flow	Vacuum pump/generator	
Large	101-918 m³/h	Round pump	
		P6040	

Features	Typical applications
▶ Available in one configuration with 6x Si32-3 COAX® cartridge MIDI. ▶ Round pump is a large capacity pump in a very compact package – suitable for cramped areas. ▶ Vacuum and exhaust ports are in-line. ▶ Easy to install the pump into existing hose or pipe lines. ▶ Made of resistant materials. ▶ For environments with tough chemical conditions. ▶ COAX® cartridges are equipped with Viton® flap valves.	▶ For environments with tough chemical conditions. ▶ Vacuum forming, evacuation and filling of liquids, leak testing.
▶ Available with five to 16 three-stage COAX® cartridge MIDI. ▶ Same flow capacity as electromechanical pumps up to 4 kW. ▶ Modular, durable and virtually maintenance free design. ▶ Suitable as a blow pump in applications with up to 0.15 MPa over/back pressure. ▶ Option with control valves, vacuum switches and energy saving functions are available. ▶ Whisper-quiet and non-heat generating.	▶ Machine equipment for the graphic industry, e.g. off set press, post press machines. ▶ Liquid filling applications. ▶ Packaging machines.

Resistance of various materials

Resistance	PA	POM	ABS	AL	NBR	Viton® fluoroelastomers*
Weather, ozone	−	+	++	++	+	+++
Heat, aging	++	++	+	+++	++	+++
Oil, petrol	++	++	+	+	+++	+++
Hydrolysis	−	++	+	+++	++	++
Acid and alkali	+	+	−	−	++	++
Acetone	+++	+++	−	+++	−	−
Ammonia	+	−	−	++	+	−
Amyl alcohol	+++	+++	−	++	++	++
Benzene	+++	+++	−	++	−	+++
Butanol	−	+++	+++	++	++	+++
Cyclohexane	+++	+++	−	+++	++	+++
Ethanol	+++	+++	++	++	+	+++
Ethyl acetate	+++	+++	−	++	−	−
Hexane	++	+++	−	+++	+++	+++
Carbon tetrachloride	−	++	−	−	−	+++
Chlorobenzene	−	−	−	+++	−	+++
Chloroform	+++	+++	−	+	−	+++
Methanol	++	+++	−	++	+++	+
Methylene chloride	+	++	−	+	−	+++
Methyl ethyl ketone, MEK	+++	+	−	++	−	−
NaOH	+++	+	+	−	++	++
Propanol	−	+++	++	++	+++	+++
Sulphuric acid	−	−	++	−	+	+++
Tetrahydrofuran	+++	+++	−	−	−	−
Tetrachlorethylene	+++	+++	−	−	−	+++
Toulene	+++	+	−	+++	−	+++
Trichlorethane	+	+++	−	−	−	+++
Trichlorethylene	+	−	−	−	−	+++
Xylene	+++	+++	−	++	−	+++
Acetic acid	−	−	−	+	+	++

+++ *Recommended*
++ *Good, minor chemical attack*
+   *Limited, moderate chemical attack, limited service*
−   *Not recommended*
) Viton® is a registered trademark of DuPont Performance Elastomers.

Materials

PA	Polyamide, Nylon®, for example
POM	Acetal plastic, Polyoxymethylene, Delrin®, and Hostaform®, for example
ABS	Thermoplastic
AL	Aluminium
NBR	Nitrile
Viton®	Fluor rubber FPM (FKM)

Specifications subject to change without notice.

piINLINE® MICRO

▶ Patented COAX® cartridge technology.
▶ High vacuum flow capacity in relation to energy consumption.
▶ Low weight inline design with push-in fittings.
▶ Quick and easy installation directly on the hose.
▶ Si/Ti cartridge at 0.6 MPa for extra vacuum flow.
▶ Bi cartridge for reliability at low feed pressures.
▶ Ti/Xi cartridge at 0.4/0.5 MPa when high flow and deep vacuum is needed.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Material		PA, NBR, SS, TPE, CuZn, Al*
Temperature range	°C	-10-80

*) Only on 4-4 mm.

Technical data, specific
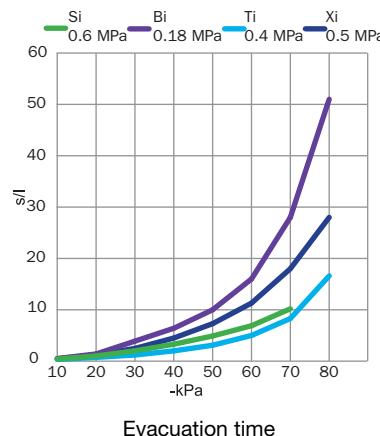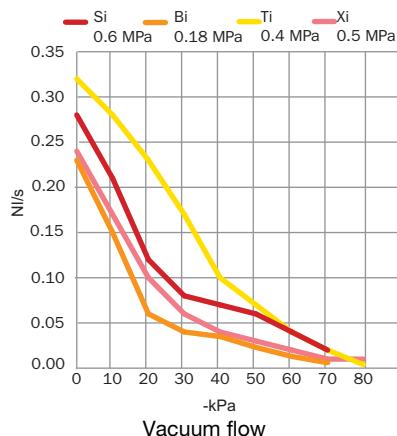
Description	Unit	Value					
		Bi4-4	Xi4-4	Si6-6	Bi6-6	Ti6-6	Xi6-6
Noise level, min-max	dBA	64-73	70-76	67-73	67-73	74-85	70-76
Weight	g	10	10	9.8	9.8	9.8	9.8
Connection, vacuum	mm	4	4	6	6	6	6
Connection, compressed air	mm	4	4	6	6	6	6

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Vacuum flow

| COAX® cartridge	Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)									Max vacuum
	MPa	Nl/s	0	10	20	30	40	50	60	70	80	-kPa
Si	0.6	0.12	0.28	0.21	0.12	0.08	0.07	0.06	0.04	0.02	—	75
Ti	0.6	0.37	0.31	0.27	0.24	0.20	0.15	0.09	0.04	0.01	—	75
Bi	0.18	0.14	0.23	0.15	0.060	0.040	0.035	0.023	0.013	0.006	—	83
Ti	0.4	0.27	0.32	0.28	0.23	0.17	0.10	0.07	0.04	0.02	0.004	84
Xi	0.5	0.13	0.24	0.17	0.10	0.06	0.04	0.03	0.02	0.01	0.01	92
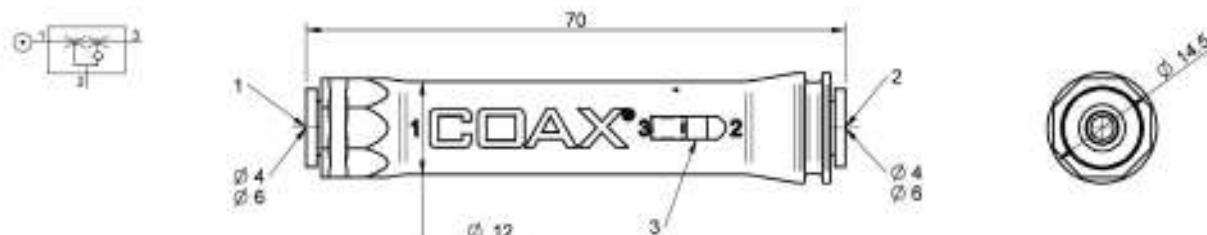
Evacuation time

COAX® cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum
	MPa	Nl/s	10	20	30	40	50	60	70	80	-kPa
Si	0.6	0.12	0.41	1.01	2.01	3.30	4.90	6.90	10.2	—	75
Ti	0.6	0.37	0.30	0.70	1.20	1.80	2.60	4.20	8.43	—	75
Bi	0.18	0.14	0.50	1.40	3.90	6.40	10.0	16.0	28.0	51.0	83
Ti	0.4	0.27	0.33	0.73	1.20	2.00	3.10	5.00	8.30	16.6	84
Xi	0.5	0.13	0.49	1.23	2.48	4.50	7.30	11.3	18.0	28.0	92

Vacuum flow

Evacuation time

Ordering information

Description	Art. No.
piINLINE® vacuum generator MICRO Bi, 4-4 mm	0122880
piINLINE® vacuum generator MICRO Xi, 4-4 mm	0122881
piINLINE® vacuum generator MICRO Si, 6-6 mm	0122882
piINLINE® vacuum generator MICRO Bi, 6-6 mm	0122883
piINLINE® vacuum generator MICRO Ti, 6-6 mm	0122022
piINLINE® vacuum generator MICRO Xi, 6-6 mm	0122884

Ordering information, accessories

Description	Art. No.
Snap-in piINLINE® 5x MICRO mounting bracket	0123093

piINLINE® MINI

- ▶ Patented COAX® cartridge technology.
- ▶ High vacuum flow capacity in relation to energy consumption.
- ▶ Low weight inline design with push-in fittings for vacuum and compressed air.
- ▶ Quick and easy installation directly on the hose.
- ▶ Si cartridge for extra vacuum flow.
- ▶ Pi cartridge for high performance at low feed pressures.
- ▶ Xi cartridge when high flow and deep vacuum is needed.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Material		PA, NBR, SS, CuZn, Al*
Temperature range	°C	-10-80

*) Only on 6-6 mm.

Technical data, specific
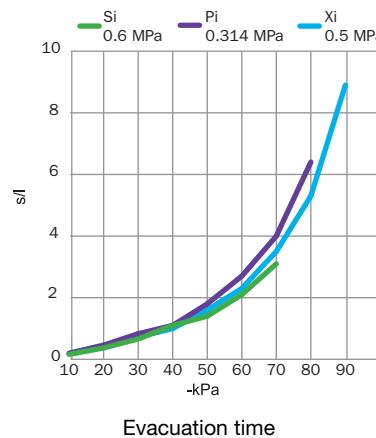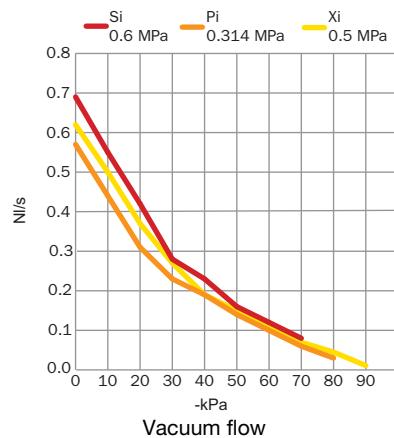
Description	Unit	Value					
		Si6-6	Pi6-6	Xi6-6	Si8-8	Pi8-8	Xi8-8
Noise level, min-max	dBA	68-84	69-85	81-85	68-84	69-85	81-85
Weight	g	23	23	23	21.8	21.8	21.8
Connection, vacuum	mm	6	6	6	8	8	8
Connection, compressed air	mm	6	6	6	8	8	8

Vacuum flow

| COAX® cartridge	Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	90	
Si	0.6	0.44	0.69	0.55	0.42	0.28	0.23	0.16	0.12	0.08	—	—	75
Pi	0.314	0.44	0.57	0.44	0.31	0.23	0.19	0.14	0.10	0.06	0.03	—	90
Xi	0.5	0.46	0.62	0.50	0.37	0.27	0.19	0.15	0.11	0.07	0.045	0.011	94
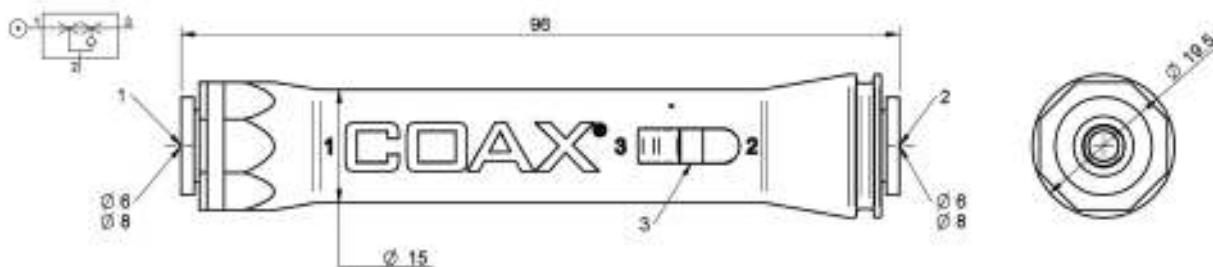
Evacuation time

COAX® cartridge	Feed pressure MPa	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
			10	20	30	40	50	60	70	80		
Si	0.6	0.44	0.16	0.37	0.66	1.10	1.40	2.10	3.10	—	—	75
Pi	0.314	0.44	0.20	0.46	0.83	1.10	1.80	2.70	4.00	6.40	—	90
Xi	0.5	0.46	0.18	0.41	0.72	1.00	1.60	2.30	3.50	5.30	8.90	94

Vacuum flow

Evacuation time

Ordering information

Description	Art. No.
piINLINE® vacuum generator MINI Si, 6-6 mm	0122025
piINLINE® vacuum generator MINI Pi, 6-6 mm	0122894
piINLINE® vacuum generator MINI Xi, 6-6 mm	0122895
piINLINE® vacuum generator MINI Si, 8-8 mm	0122896
piINLINE® vacuum generator MINI Pi, 8-8 mm	0122897
piINLINE® vacuum generator MINI Xi, 8-8 mm	0122898

Ordering information, accessories

Description	Art. No.
Snap-in piINLINE® 4x MINI mounting bracket	0123094

Vacuum pumps/generators Small

 piab

piCOMPACT10

- ▶ Ejector with COAX® patented technology.
- ▶ Reduced air-consumption with 30-50% compared to other ejector technologies.
- ▶ Easy to optimize vacuum performance with a varied selection of micro multi-stage ejectors.
- ▶ Unique low feed pressure version available, full performance from 0.18 MPa.
- ▶ Very low weight, 70g, and small footprint. The width is 10mm.
- ▶ Integrated supply and release valves, vacuum sensor/switch optional.
- ▶ Suitable for small objects in high-speed handling, such as surface mount machines in the electronic and semi-conductor industry.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Temperature range	°C	0-55
Weight (single piCOMPACT10 unit)	g	70
Weight (single piCOMPACT10 unit w/ vacuum sensor 1A Analog)	g	102
Weight (single piCOMPACT10 unit w/ vacuum sensor 1D, 2D Digital/Analog)	g	127
Material		PA, Al, NBR, SS, TPE

Technical data, noise level

COAX® cartridge	Feed pressure MPa	Noise level dBA
Bi	0.18	60-65
Si	0.6	63-68
Xi	0.5	63-66
Ti*	0.4	69-71
Ti*	0.6	69-75

Ti cartridge is suited for sealed applications at 0.4 MPa and for leaking applications at 0.6 MPa.

Technical data, valves

Description	Unit	Value Vacuum on/off valve, V1, Blow-off/Release valve, V2
Supply voltage	VDC	24 (21.6-26.4)
Feed pressure	MPa	0.1-0.7
Power consumption	W	1
Manual override		Yes, non-locking push style
Status indicator		LED
Function		NC
Wiring		Two lead wires (300 mm), open end

Vacuum flow
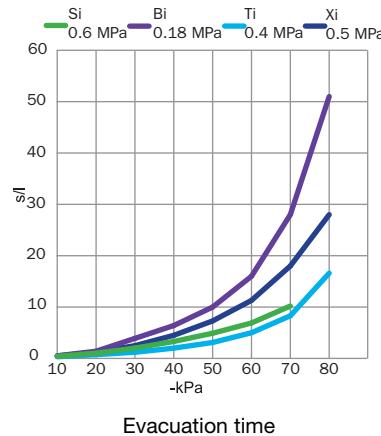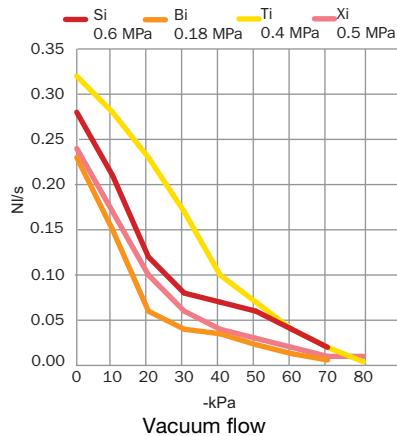
COAX® cartridge	Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)									Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	
Bi	0.18	0.14	0.23	0.15	0.060	0.040	0.035	0.023	0.013	0.006	—	83
Si	0.6	0.12	0.28	0.21	0.12	0.08	0.07	0.06	0.04	0.02	—	75
Xi	0.5	0.13	0.24	0.17	0.10	0.06	0.04	0.03	0.02	0.01	0.01	92
Ti	0.4	0.27	0.32	0.28	0.23	0.17	0.10	0.07	0.04	0.02	0.004	84
Ti	0.6	0.37	0.31	0.27	0.24	0.20	0.15	0.09	0.04	0.01	—	75

For vacuum flows at other feed pressure, see COAX® cartridge data sheets.

Specifications subject to change without notice.

Vacuum pumps/generators Small

Evacuation time

COAX® cartridge	Feed pressure MPa	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum -kPa
			10	20	30	40	50	60	70	80	
Bi	0.18	0.14	0.50	1.40	3.90	6.40	10.0	16.0	28.0	51.0	83
Si	0.6	0.12	0.41	1.01	2.01	3.30	4.90	6.90	10.2	—	75
Xi	0.5	0.13	0.49	1.23	2.48	4.50	7.30	11.3	18.0	28.0	92
Ti	0.4	0.27	0.33	0.73	1.20	2.00	3.10	5.00	8.30	16.6	84
Ti	0.6	0.37	0.30	0.70	1.20	1.80	2.60	4.20	8.43	—	75

For evacuation times at other feed pressures, see COAX®   cartridge data sheets.

Vacuum flow

Evacuation time

Ordering information

1. COAX® cartridge module	PC10 Code
COAX® cartridge Bi03-2, low feed pressure	B
COAX® cartridge Si02-2, high vacuum flow	S
COAX® cartridge Xi2.5-2, extra vacuum	X
COAX® cartridge Ti05-2, dirt tolerant design	T
COAX® cartridge Bi03-2, ozone resistant	BO

2. Supply and release valve	PC10 Code
Solenoid valve NC	01

3. Vacuum sensing	PC10 Code
No vacuum sensing	AA
No display, analog output	1A
Display, analog & digital output PNP	1D
Display, analog & digital output NPN	2D

4. Vacuum connection	PC10 Code
M5 female threaded connection	M5
4mm (5/32") push-in connector	D4
6mm push-in connector	D6

5. Accessories (under development)	PC10 Code
No accessory	AA

6. Number of units	PC10 Code
Single unit	1
2 units	2
3 units	3
4 units	4
5 units	5
6 units	6

Specifications subject to change without notice.

7. Manifold mount	PC10 Code
No manifold, stand-alone unit	01
Manifold mount, 2 units	02
Manifold mount, 3 units	03
Manifold mount, 4 units	04
Manifold mount, 5 units	05
Manifold mount, 6 units	06

All units must be of same configuration.

8. Compressed air connection	PC10 Code
M5 female threaded connection	M5
4mm (5/32") push-in connector	D4
6mm push-in connector	D6
6mm angle push-in connector	D6A
8mm (5/16") push-in connector	D8
8mm (5/16") angle push-in connector	D8A
BSPT/Rc1/8" female threaded connection	T18
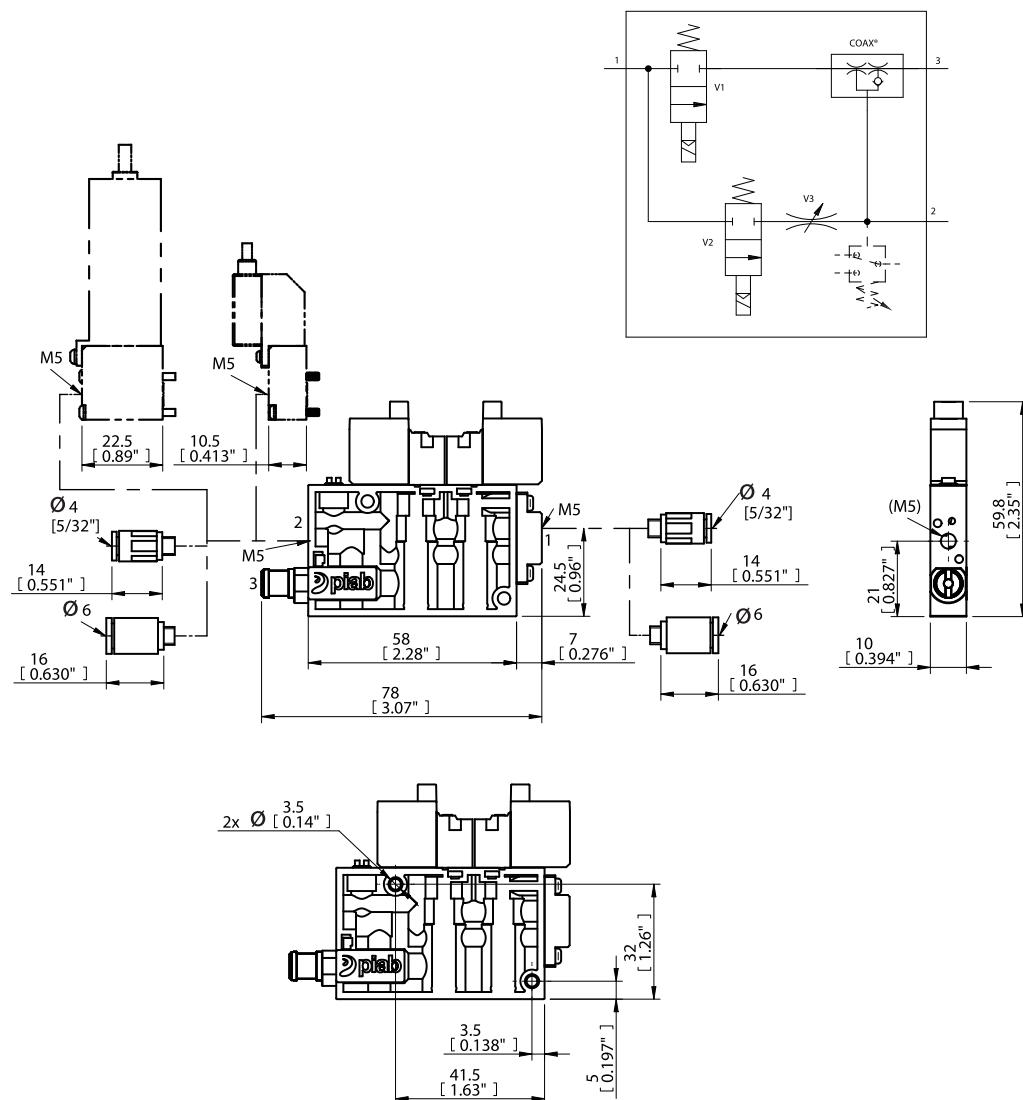
Example	Ordering number
COAX® Bi03-2, NC supply & release valve, no vacuum sensing, M5 female threaded vacuum connection, no accessory, single unit, no manifold, M5 female threaded compressed air connection	PC10.B.01.AA.M5.AA.1.01.M5

Ordering information, Accessories

Description	Art. No.
Cable 2-pin female, L=2m	0110157

If longer length cables are needed for valves, please note that (2) cables are needed for each piCOMPACT10, one for each valve.

Specifications subject to change without notice.

piCOMPACT10 Manifold mount

▶ Manifold mounted compact ejectors with COAX® patented technology.

▶ Reduced air-consumption with 30-50% compared to other ejector technologies.

▶ Easy to optimize vacuum performance with a varied selection of micro multi-stage ejectors.

▶ Unique low feed pressure version available, full performance from 0.18 MPa.

▶ Common feed port(s) for compressed air.

▶ Integrated supply and release valves, vacuum sensor/switch optional

▶ Suitable for small objects in high-speed handling, such as surface mount machines in the electronic and semi-conductor industry.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Temperature range	°C	0-55
Material		PA, AL, NBR, SS, TPE

Technical data, weight

Description	Weight (g)*		
	No vacuum switch	with vacuum switch 1A Analog	with vacuum switch 1D, 2D Digital
Manifold mount, 2 units	170-178	234-242	284-292
Manifold mount, 3 units	242-252	341-348	416-423
Manifold mount, 4 units	319-327	447-455	547-555
Manifold mount, 5 units	394-401	554-561	679-686
Manifold mount, 6 units	468-476	660-668	810-818

Weights vary depending on size of compressed air connector.

Technical data, noise level

COAX® cartridge	Feed pressure MPa	Noise level** dBA
Bi	0.18	60-65
Si	0.6	63-68
Xi	0.5	63-66
Ti*	0.4	69-71
Ti*	0.6	69-75

Ti cartridge is suited for sealed applications at 0.4 MPa and for leaking applications at 0.6 MPa.
**Noise level values are for a single unit.*

Technical data, valves

Description	Unit	Value Vacuum on/off valve, V1, Blow-off/Release valve, V2
Supply voltage	VDC	24 (21.6-26.4)
Feed pressure	MPa	0.1-0.7
Power consumption	W	1
Manual override		Yes, non-locking push style
Status indicator		LED
Function		NC
Wiring		Two lead wires (300 mm), open end
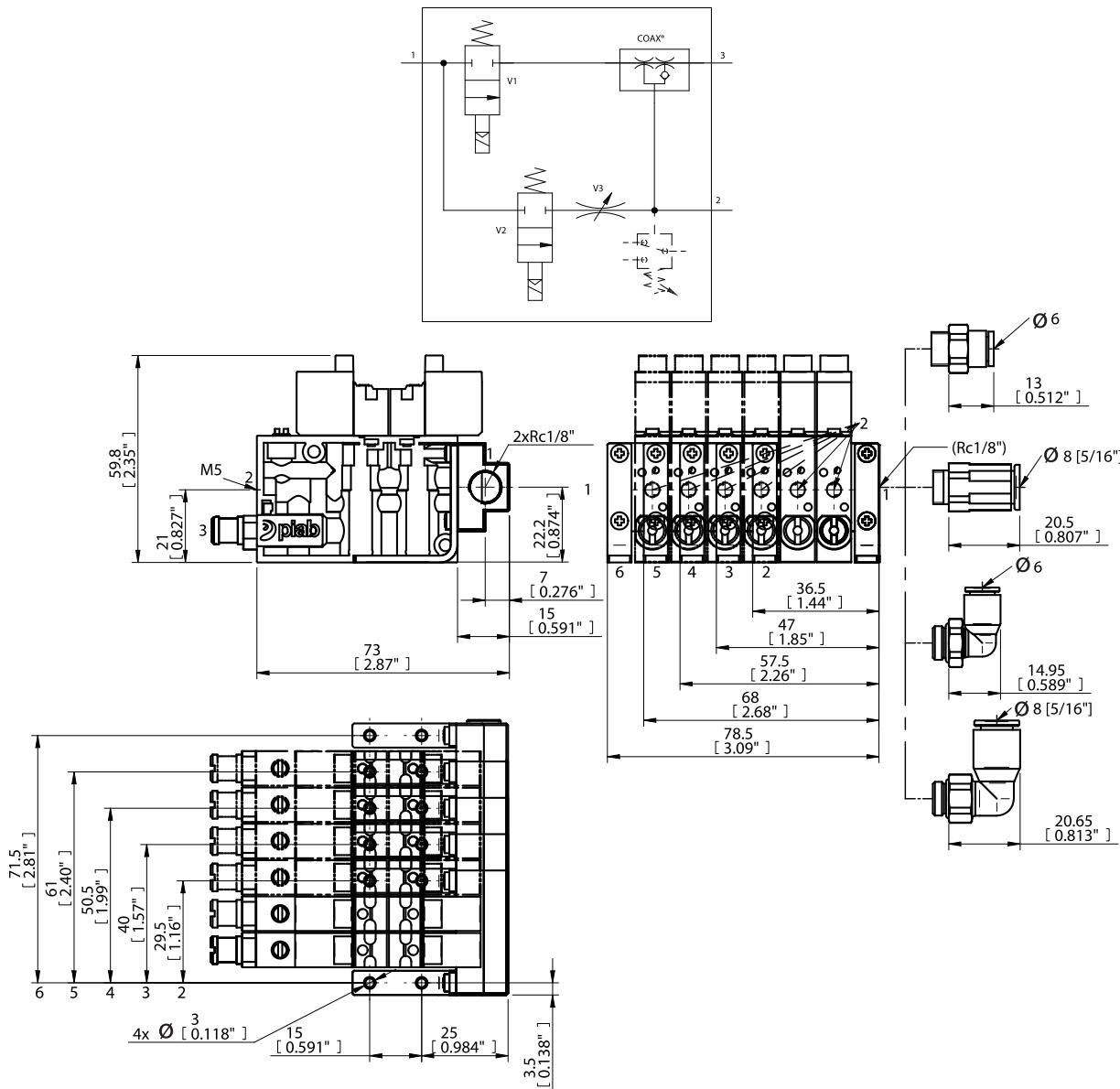
Performance tables

Depending upon choice of COAX® cartridge, performance data of the piCOMPACT10 can be found in the tables for vacuum flow and evacuation time on the piCOMPACT10 or Vacuum cartridges/integration datasheets.

Ordering information

1. COAX® cartridge module	PC10 Code
COAX® cartridge Bi03-2, low feed pressure	B
COAX® cartridge Si02-2, high vacuum flow	S
COAX® cartridge Xi2.5-2, extra vacuum	X
COAX® cartridge Ti05-2, dirt tolerant design	T
COAX® cartridge Bi03-2, ozone resistant	BO

2. Supply and release valve	PC10 Code
Solenoid valve NC	01

3. Vacuum sensing	PC10 Code
No vacuum sensing	AA
No display, analog output	1A
Display, analog & digital output PNP	1D
Display, analog & digital output NPN	2D

4. Vacuum connection	PC10 Code
M5 female threaded connection	M5
4mm (5/32") push-in connector	D4
6mm push-in connector	D6

5. Accessories (under development)	PC10 Code
No accessory	AA

6. Number of units	PC10 Code
2 units	2
3 units	3
4 units	4
5 units	5
6 units	6

7. Manifold mount	PC10 Code
Manifold mount, 2 units	02
Manifold mount, 3 units	03
Manifold mount, 4 units	04
Manifold mount, 5 units	05
Manifold mount, 6 units	06

All units must be of same configuration.

8. Compressed air connection	PC10 Code
6mm push-in connector	D6
6mm angle push-in connector	D6A
8mm (5/16") push-in connector	D8
8mm (5/16") angle push-in connector	D8A
BSPT/Rc1/8" female threaded connection	T18

Example	Ordering number
COAX® Bi03-2, NC supply & release valve, analog vacuum sensor, M5 female threaded vacuum connection, no accessory, 2 units, manifold mount, 2 units, 8mm (5/16") push-in compressed air connection	PC10.B.01.1A.M5.AA.2.02.D8

For more information about fitting options on the vacuum side, please refer to piCOMPACT10 single unit dimensional drawing.

Ordering information, Accessories

Description	Art. No.
Cable 2-pin female, L=2m	0110157

If longer length cables are needed for valves, please note that (2) cables are needed for each piCOMPACT10, one for each valve.

piab

piCOMPACT10 Vacuum sensor/switch
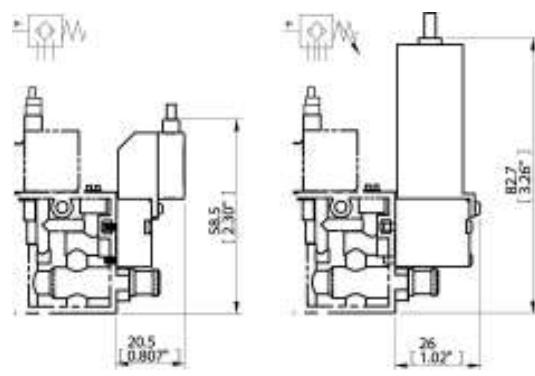
▶ Vacuum sensor/switch options for piCOMPACT10.

▶ Sensor with analog output 1-5 VDC.

▶ Digital switch with LED Display, PNP or NPN output + analog ouput (1-5 VDC).

▶ Easy to set vacuum level, hysteresis and change display units (bar, kPA, inHg, mmHg)

▶ 2m cable included, open ends.

Technical data

Description	Unit	Value	
		Vacuum sensor 1A Analog	**Vacuum sensor/switch 1D, 2D Digital/ Analog**
Vacuum range	-kPa	0-101	0-101
Overpressure, max.	MPa	0.5	0.5
Material		PC, Al	PC, Al
Temperature range	°C	0-50	0-50
Weight	g	32	57
Vacuum connection		M5 threaded female	M5 threaded female
Humidity	%RH	35-85	35-85
Safety classification		IP40	IP40
Voltage supply	VDC	10.8-30, Ripple (Vp-p) 10% max	10.8-30, Ripple (Vp-p) 10% max
Response time	ms	2	2
Dielectric strength, 1 min	VAC	100	100
Accuracy		±1% of F.S.	±2% of F.S.
Repeatability		-	±0.2% of F.S.
Analog output	VDC	1-5 (±0.1), linearity ±0.5% F.S. Output impedance 500 Ω	1-5 (±0.1), linearity ±0.5% F.S. Output impedance 500 Ω
Switch/digital output		-	PNP or NPN open collector Max 125mA (load current)
Display		-	3 1/2 digit 7 segment
Current consumption	mA	20 or less	60 or less
Vibration resistance	Hz	0-55, amplitude 1.5mm XYZ 2h	0-150, amplitude 1.5mm XYZ 2h

Ordering information, spare parts

	Description	Code	Art. No.
A	No display, analog output vacuum sensor	1A	0125645
B	Display, analog & digital output vacuum sesnor PNP	1D	0125648
B	Display, analog & digital output vacuum sensor NPN	2D	0125647

A   B

piab

P3010

▶ Patented COAX® technology.

▶ Available with three-stage COAX® cartridge MINI. Choose an Si cartridge for extra vacuum flow, a Pi cartridge for high performance at low feed pressure or an Xi cartridge when high flow and deep vacuum is needed.

▶ Includes a flow-through silencer and a built-in vacuum filter for harsh environments.

▶ Suitable for fast and reliable evacuation in sealed systems.

▶ Slim, compact, configurable and modular design.

▶ Low weight.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	66–68
Temperature range	°C	-10–50
Weight	g	110–330
Material		PP, PA, NBR, Al, SS

Vacuum flow

COAX® Cartridge	Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	90	
Pi12-3	0.314	0.44	1.40	0.60	0.44	0.27	0.19	0.14	0.10	0.060	0.030	—	90
Si08-3	0.6	0.44	1.34	0.73	0.55	0.35	0.23	0.17	0.13	0.08	—	—	75
Xi10-3	0.5	0.46	1.43	0.70	0.50	0.33	0.19	0.15	0.11	0.07	0.045	0.011	94

*For vacuum flows at other feed pressures, see COAX® Cartridge data sheets.*
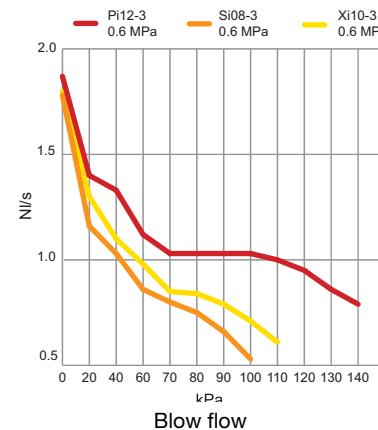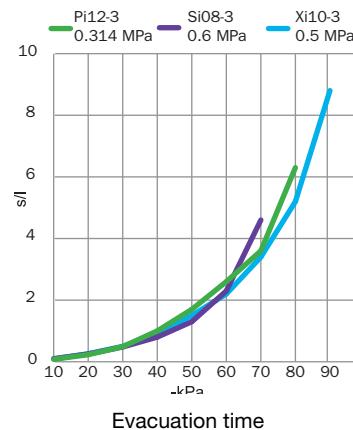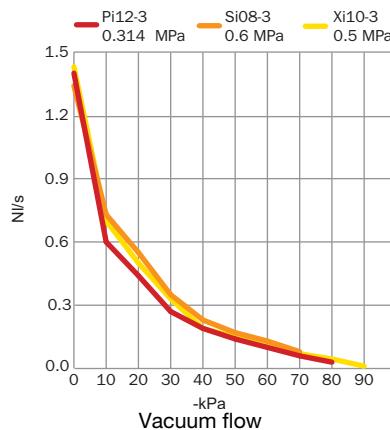
Evacuation time

COAX® Cartridge	Feed pressure MPa	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
			10	20	30	40	50	60	70	80	90	
Pi12-3	0.314	0.44	0.08	0.23	0.49	1.00	1.70	2.60	3.90	6.30	—	90
Si08-3	0.6	0.44	0.10	0.25	0.48	0.80	1.30	2.30	4.60	—	—	75
Xi10-3	0.5	0.46	0.09	0.26	0.50	0.90	1.5	2.2	3.4	5.2	8.8	94

For evacuation times at other feed pressures, see COAX® Cartridge data sheets.

Vacuum pumps/generators Small

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Blow flow

COAX® cartridge	Feed pressure	Air consumption	Blow flow (Nl/s) at different pressure levels (kPa)												Max pressure
	MPa	Nl/s	0	20	40	60	70	80	90	100	110	120	130	140	kPa
Pi12-3	0.6	0.75	1.87	1.4	1.33	1.12	1.03	1.03	1.03	1.03	1.0	0.95	0.86	0.79	140
Si08-3	0.6	0.44	1.78	1.16	1.03	0.86	0.80	0.75	0.66	0.53	—	—	—	—	70
Xi10-3	0.6	0.54	1.8	1.3	1.1	0.98	0.85	0.84	0.79	0.71	0.61	—	—	—	90

Vacuum flow

Evacuation time

Blow flow

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1	AE
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2	AG
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1	AA
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2	AC
COAX® cartridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1	AI
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2	AK
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

	3. Select connection and function module	P3010 Code
B	Connection module high 6x1/8"	01
A	Connection module low 3x1/8"	02
	Function Quick-release connection, 10 and 6 mm, 3 cm³	04
	Function Quick-release connection, 8 and 6 mm, 30 cm³	05
	Function Quick-release connection, 8 and 6 mm, 60 cm³	06
	Function Quick-release connection, 10 and 6 mm, 30 cm³	07
	Function Quick-release connection, 10 and 6 mm, 60 cm³	08
	Function Quick-release connection, 1/4" NPSF and 6 mm, 3 cm³	09
	Function Quick-release connection, 1/4" NPSF and 6 mm, 30 cm³	10
	Function Quick-release connection, 1/4" NPSF and 6 mm, 60 cm³	11
	Function Quick-release connection, 8 and 6 mm, 3 cm³	12
	Function AVM™2 NO	27
	Function AVM™2 NC (power off - NO)	28
	Function CU NC	29
	Function AVM™2 NO, automatic blow-off (1 sec)	30
	Function AVM™2 NC, automatic blow-off (1 sec)	31
	Function AVM™2 NC 2 (power off - NC)	32

*For detailed information on Quick-release, AVM™2 and CU, see separate datasheets.*

Specifications subject to change without notice.
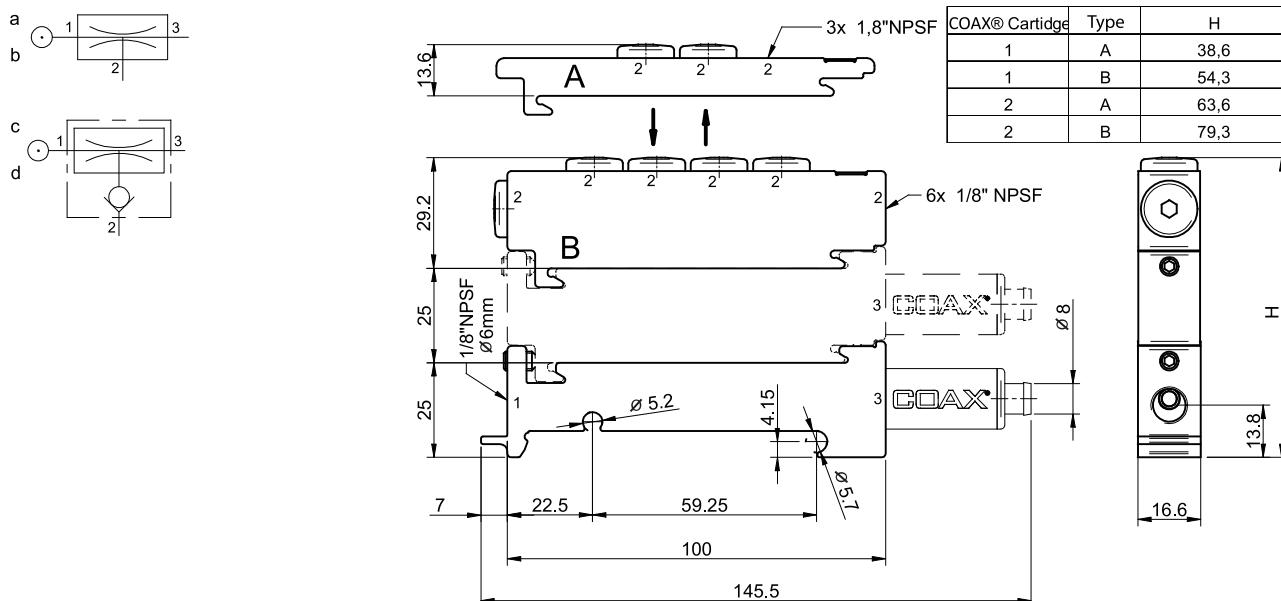
4. Select ES	P3010 Code
No energy saving	AA
Valve DS23	AB
ES Vacustat 2/2 NO, large hysteresis	AC
ES Vacustat 2/2 NO, small hysteresis	AD

For detailed information on Valve DS 23 and Vacustat, see separate datasheets.

5. Select vacuum sensing	P3010 Code
No vacuum sensing	00
Vacuum switch, adjustable, PNP NO MM8	01
Vacuum switch, adjustable, NPN NO MM8	02
Vacuum switch, adjustable, PNP NO LM8	05
Vacuum switch, adjustable, PNP NO DM8	09
Vacuum switch, adjustable, NPN NO DM8	10
Vacuum switch inductive, adjustable with knob	11
Vacuum switch VS4015 Ø6, 30 -kPa	18
Vacuum switch VS4015 Ø6, 50 -kPa	19
Vacuum switch VS4015 Ø6, 70 -kPa	20
Vacuum switch VS4016 G1/8" male, 30 -kPa	21
Vacuum switch VS4016 G1/8" male, 50 -kPa	22
Vacuum switch VS4016 G1/8" male, 70 -kPa	23

For detailed information on vacuum switches, see separate datasheets.

Example	Ordering number
Housing, connection Ø 6 mm Pi12-3FSx1, Connection module high 6x1/8", no energy saving, no vacuum sensing	P3010.00.AE.01.AA.00

COAX® Cartridge	Type	H
1	A	38,6
1	B	54,3
2	A	63,6
2	B	79,3

Ordering information, accessories

Description	Art. No.
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

piab

P3010 Quick Release Module

- ▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.
- ▶ Quick release volume from 3-60 cm³
- ▶ Includes a flow-through silencer and a built-in vacuum filter for harsh environments.
- ▶ Slim, compact, configurable and modular design.
- ▶ Low weight.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	66–68
Temperature range	°C	-10–50
Weight	g	168-320
Material		PP, PA, NBR, Al, SS

Performance tables

Depending upon choice of COAX® cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or Vacuum cartridges/integration datasheets.

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1	AE
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2	AG
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1	AA
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2	AC
COAX® cartridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1	AI
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2	AK
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

	3. Select connection and function module	P3010 Code
A	Function Quick-release connection, 10 and 6 mm, 3 cm³	04
B	Function Quick-release connection, 8 and 6 mm, 30 cm³	05
C	Function Quick-release connection, 8 and 6 mm, 60 cm³	06
B	Function Quick-release connection, 10 and 6 mm, 30 cm³	07
C	Function Quick-release connection, 10 and 6 mm, 60 cm³	08
A	Function Quick-release connection, 1/4" NPSF and 6 mm, 3 cm³	09
B	Function Quick-release connection, 1/4" NPSF and 6 mm, 30 cm³	10
C	Function Quick-release connection, 1/4" NPSF and 6 mm, 60 cm³	11
A	Function Quick-release connection, 8 and 6 mm, 3 cm³	12

4. Select ES	P3010 Code
No energy saving	AA
Valve DS23	AB
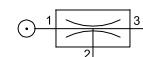
For detailed information on Valve DS 23, see separate datasheet.

Specifications subject to change without notice.
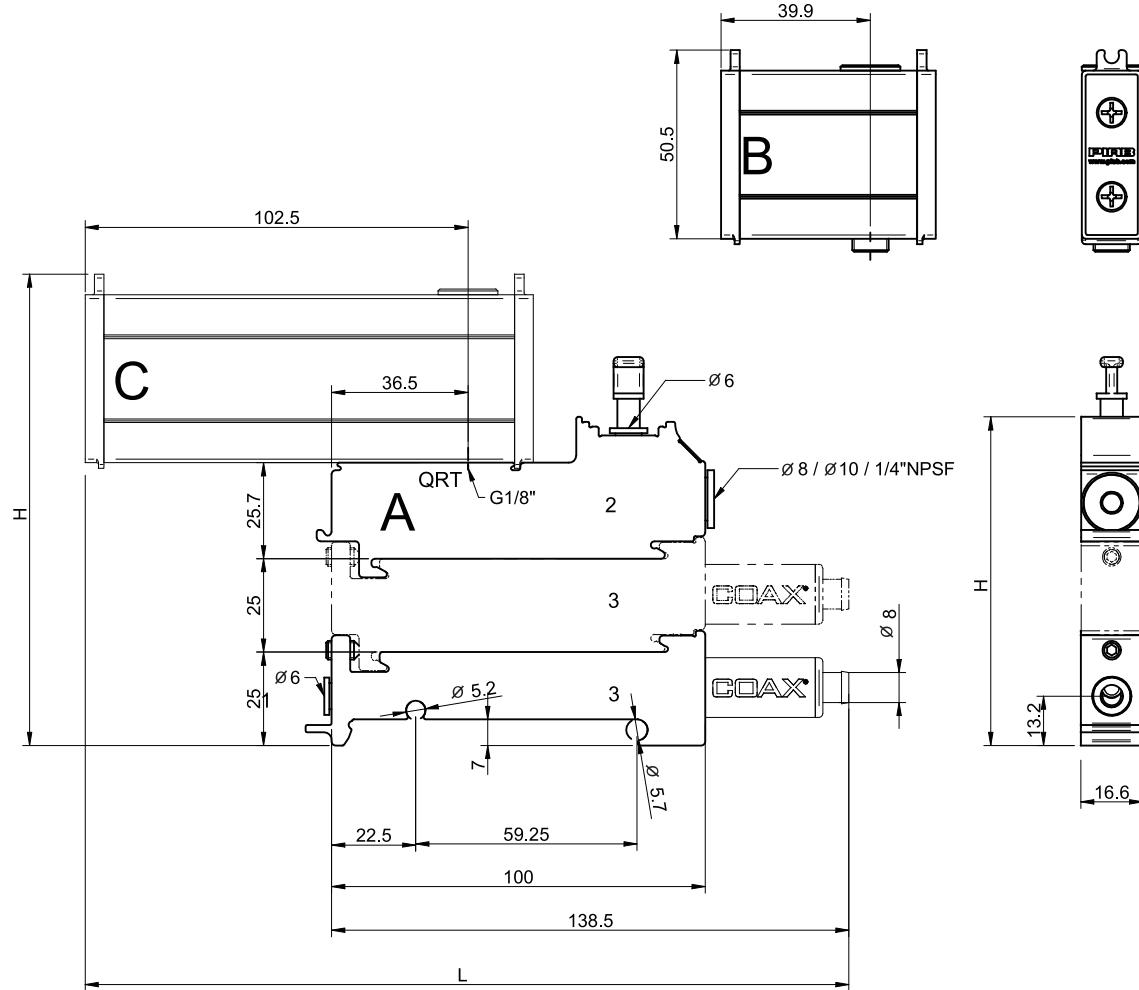
5. Select vacuum sensing	P3010 Code
No vacuum sensing	00
Vacuum switch, adjustable, PNP NO MM8	01
Vacuum switch, adjustable, NPN NO MM8	02
Vacuum switch, adjustable, PNP NO LM8	05
Vacuum switch, adjustable, PNP NO DM8	09
Vacuum switch, adjustable, NPN NO DM8	10
Vacuum switch inductive, adjustable with knob	11
Vacuum switch VS4015 Ø6, 30 -kPa	18
Vacuum switch VS4015 Ø6, 50 -kPa	19
Vacuum switch VS4015 Ø6, 70 -kPa	20

For detailed information on vacuum switches, see separate datasheets.

Example	Ordering number
Housing, connection Ø 6 mm Pi12-3FSx1, Function Quick-release module 10/6 3cm^3, no energy saving, no vacuum sensing	P3010.00.AE.04.AA.00

	A	B	C
1x COAX® Cartridge	H=63	H=102	H=102
2x COAX® Cartridge	H=88	H=127	H=127
Length (L)	L=139	L=142	L=205

Ordering information, accessories

Description	Art. No.
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

P3010 Energy saving

- ▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.
- ▶ Integrated air-saving function (ES Vacustat) that minimizes the air consumption by controlling the incoming air flow to the pump.
- ▶ Large hysteresis is recommended for sealed vacuum handling applications such as metal sheet, glass or plastic handling.
- ▶ Small hysteresis is recommended if a very accurate vacuum level has to be maintained in the process.
- ▶ Adjustable ES switch level.
- ▶ Pneumatic function.

Technical data

| Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	66–68
Temperature range	ºC	-10–50
Weight	g	197-349
Material		PP, PA, NBR, Al, SS
Signal range	-kPa	15-99
Function		2/2 NO
Flow at P1=6 bar and Δp=0.5 bar	Nl/s	7.3
kv		10
Life span	cycles	>10,000,000

Performance tables

Depending upon choice of COAX® cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or Vacuum cartridges/integration datasheets.

Ordering information

1. Select housing		P3010 Code
Housing, connection Ø=6 mm		00

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

3. Select connection and function module		P3010 Code
B	Connection module high 6x1/8"	01
A	Connection module low 3x1/8"	02

4. Select ES	P3010 Code
ES Vacustat 2/2 NO, large hysteresis	AC
ES Vacustat 2/2 NO, small hysteresis	AD

5. Select vacuum sensing	P3010 Code
No vacuum sensing	00
Vacuum switch VS4016 G1/8" male, 30 -kPa	21
Vacuum switch VS4016 G1/8" male, 50 -kPa	22
Vacuum switch VS4016 G1/8" male, 70 -kPa	23

For detailed information on VS4016, see separate datasheet.

Example	Ordering number
Housing, connection Ø 6 mm Pi12-3FSx1, non-return valve, Connection module high 6x1/8", ES Vacustat 2/2 NO, large hysteresis, no vacuum sensing	P3010.00.AF.01.AC.00

COAX® Cartridge	Type	H
1	A	38,6
1	B	54,3
2	A	63,6
2	B	79,3

Ordering information, accessories

Description	Art. No.
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

![piab logo]

P3010 Solenoid Valve

- ▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.
- ▶ DS 23 3/2 valve suitable for compressed air, filtration 40μ
- ▶ 2.5 W solenoid
- ▶ Manual override
- ▶ Includes a flow-through silencer and a built-in vacuum filter for harsh environments.
- ▶ Slim, compact, configurable and modular design.
- ▶ Low weight.

Technical data

Description	Unit	Value
Feed pressure, max	MPa	0.7
Feed pressure	MPa	0.2–0.6
Material		PP, PA, NBR, Al, SS, Ni, POM, CuZn
Working temperature	°C	-10–50
Weight	g	210-485
Connection compressed air		D=6
Connection exhaust		D=6
Supply voltage	VDC	24
Safety classification, DIN (c) socket		IP65
Display		LED
Flow, nominal	Nl/s	1.3
kv		1.2
Lifespan, mechanical	cycles	100,000,000
Power consumption	W	2.5
Load time rating	%	100
Electrical connection		DIN (c) socket

Performance tables

Depending upon choice of COAX® cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or Vacuum cartridges/integration datasheets.

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1	AE
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2	AG
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1	AA
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2	AC
COAX® cartridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1	AI
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2	AK
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

| 3. Select connection and function module		P3010 Code
B	Connection module high 6x1/8"	01
A	Connection module low 3x1/8"	02
	Function Quick-release connection, 10 and 6 mm, 3 cm³	04
	Function Quick-release connection, 8 and 6 mm, 30 cm³	05
	Function Quick-release connection, 8 and 6 mm, 60 cm³	06
	Function Quick-release connection, 10 and 6 mm, 30 cm³	07
	Function Quick-release connection, 10 and 6 mm, 60 cm³	08
	Function Quick-release connection, 8 and 6 mm, 3 cm³	12

For detailed information on Quick-release, see separate datasheet.

4. Select ES	P3010 Code
Valve DS23	AB

5. Select vacuum sensing	P3010 Code
No vacuum sensing	00
Vacuum switch, adjustable, PNP NO MM8	01
Vacuum switch, adjustable, NPN NO MM8	02
Vacuum switch, adjustable, PNP NO LM8	05
Vacuum switch, adjustable, PNP NO DM8	09
Vacuum switch, adjustable, NPN NO DM8	10
Vacuum switch inductive, adjustable with knob	11
Vacuum switch VS4015 Ø6, 30 -kPa	18
Vacuum switch VS4015 Ø6, 50 -kPa	19
Vacuum switch VS4015 Ø6, 70 -kPa	20
Vacuum switch VS4016 G1/8" male, 30 -kPa	21
Vacuum switch VS4016 G1/8" male, 50 -kPa	22
Vacuum switch VS4016 G1/8" male, 70 -kPa	23

For detailed information on vacuum switches, see separate datasheets.

Example	Ordering number
Housing, connection Ø 6 mm Pi12-3FSx1, Connection module high 6 x 1/8", Solenoid valve DS23, no vacuum sensing	P3010.00.AE.01.AB.00

COAX® Cartridge	Type	H
1	A	38,6
1	B	54,3
2	A	63,6
2	B	79,3

Ordering information, accessories

Description	Art. No.
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

P3010 Vacuum switch, adjustable with analogue output

▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.

▶ 1 output NO and 1 analogue output.

▶ Includes a flow-through silencer and a built-in vacuum filter for harsh environments.

▶ High system reliability in case of fluctuating or low feed pressure.

▶ Suitable for fast and reliable evacuation in sealed systems.

Technical data

Description	Unit	Value
Feed pressure, max. (pump)	MPa	0.7
Noise level	dBA	66-68
Pressure, max (switch)	MPa	0.2
Vacuum range	-kPa	0–100
Material		PP, PA, Al, PC, POM, NBR, SS
Temperature range	°C	-10-50
Weight	g	218-470
Function		NO, NPN/PNP
Hysteresis	%	1–15
Supply voltage	VDC	10.8–30
Voltage output	VDC	1–5
Safety classification		IP40
Analogue output, current max. (load resistance min. 5kΩ)	mA	1
Humidity	% RH	35–85
Response time	ms	2
Accuracy at 25°C		±3% F.S.
Current consumption, max	mA	17
High-voltage resistant	VAC	500
Insulation at 500 VDC	MOhm	100
Vibration resistance, 1,5 mm, XYZ, 2 h	Hz	10–500
Electric connection		M8 4 pin male
Current output, max	mA	80

Performance tables

Depending upon choice of COAX® cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or Vacuum cartridges/integration datasheets.

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1	AE
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2	AG
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1	AA

Vacuum pumps/generators Small

piab

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2	AC
COAX® cartridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1	AI
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2	AK
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

| 3. Select connection and function module	P3010 Code
Function Quick-release connection, 10 and 6 mm, 3 cm³	04
Function Quick-release connection, 8 and 6 mm, 30 cm³	05
Function Quick-release connection, 8 and 6 mm, 60 cm³	06
Function Quick-release connection, 10 and 6 mm, 30 cm³	07
Function Quick-release connection, 10 and 6 mm, 60 cm³	08
Function Quick-release connection, 1/4" NPSF and 6 mm, 3 cm³	09
Function Quick-release connection, 1/4" NPSF and 6 mm, 30 cm³	10
Function Quick-release connection, 1/4" NPSF and 6 mm, 60 cm³	11
Function Quick-release connection, 8 and 6 mm, 3 cm³	12

For detailed information on Quick-release, see separate datasheet.

4. Select ES	P3010 Code
No energy saving	AA
Valve DS23	AB

For detailed information on Valve DS 23, see separate datasheet.

5. Select vacuum sensing	P3010 Code
Vacuum switch, adjustable, PNP NO MM8	01
Vacuum switch, adjustable, NPN NO MM8	02

Example	Ordering number
Housing, connection Ø 6 mm Pi12-3FSx1, Function Quick-release module 10/6 3cm³, no energy saving, Vacuum switch PNP NO MM8	P3010.00.AE.04.AA.01

Ordering information, accessories

Description	Art. No.
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

Specifications subject to change without notice.

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P3010 Vacuum switch, adjustable with 1 output

▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.

▶ Includes a flow-through silencer and a built-in vacuum filter for harsh environments.

▶ High system reliability in case of fluctuating or low feed pressure.

▶ Suitable for fast and reliable evacuation in sealed systems.

Technical data

Description	Unit	Value
Feed pressure, max. (pump)	MPa	0.7
Noise level	dBA	66-68
Pressure, max. (switch)	MPa	0.2
Vacuum range	-kPa	0–100
Material		PP, PA, PC, Al, NBR, SS
Temperature range	°C	-10–50
Weight	g	174-426
Function		NO
Hysteresis		±2% F.S.
Voltage supply	VDC	10.8–30
Safety classification		IP40
Humidity	%RH	35–85
Response time, approx.	ms	1
Accuracy, at 25°C		±3% F.S.
Current consumption, max	mA	20
High-voltage resistance	VDC	500
Insulation at 500 VDC	MOhm	100
Vibration resistance, 1.5 mm, XYZ, 2 h	Hz	10–55
Current output, max	mA	80

Performance tables

Depending upon choice of COAX® cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or Vacuum cartridges/integration datasheets.

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1	AE
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2	AG
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1	AA
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2	AC
COAX® cartridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1	AI
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2	AK
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

piab

| 3. Select connection and function module	P3010 Code
Function Quick-release connection, 10 and 6 mm, 3 cm³	04
Function Quick-release connection, 8 and 6 mm, 30 cm³	05
Function Quick-release connection, 8 and 6 mm, 60 cm³	06
Function Quick-release connection, 10 and 6 mm, 30 cm³	07
Function Quick-release connection, 10 and 6 mm, 60 cm³	08
Function Quick-release connection, 1/4" NPSF and 6 mm, 3 cm³	09
Function Quick-release connection, 1/4" NPSF and 6 mm, 30 cm³	10
Function Quick-release connection, 1/4" NPSF and 6 mm, 60 cm³	11
Function Quick-release connection, 8 and 6 mm, 3 cm³	12

For detailed information on Quick-release, see separate datasheet.

4. Select ES	P3010 Code
No energy saving	AA
Valve DS23	AB

For detailed information on Valve DS 23, see separate datasheet.

5. Select vacuum sensing	P3010 Code
Vacuum switch, adjustable, PNP NO LM8	05

Example	Ordering number
Housing, connection Ø 6 mm Pi12-3FSx1, Function Quick-release module 10/6 3cm³, no energy saving, Vacuum switch PNP NO LM8	P3010.00.AE.04.AA.05

Ordering information, accessories

Description	Art. No.
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

P3010 Vacuum switch, adjustable with LED-Display

- ▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.
- ▶ Includes a flow-through silencer and a built-in vacuum filter for harsh environments.
- ▶ High system reliability in case of fluctuating or low feed pressure.
- ▶ Suitable for fast and reliable evacuation in sealed systems.

Technical data

Description	Unit	Value
Feed pressure, max. (pump)	MPa	0.7
Noise level	dBA	66-68
Pressure, max. (switch)	MPa	0.2
Vacuum range	-kPa	0–100
Material		PP, PA, PC, POM, NBR, Al, SS
Temperature range	°C	-10–50
Weight	g	220-472
Function		2 NO, NPN/PNP
Hysteresis	kPa	2
Voltage supply	VDC	12–24
Dielectric strength, 1 min	VAC	500
Safety classification		IP40
Humidity	%RH	35–85
Response time	ms	2
Accuracy at 25°C		±3% F.S
Current consumption, maximum	mA	35
Insulation resistance, at 500 VDC	MO/MW	100
Display		2-digits LED
Current output, max.	mA	80

Performance tables

Depending upon choice of COAX® cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or Vacuum cartridges/integration datasheets.

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1	AE
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2	AG
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1	AA
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2	AC
COAX® cartridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1	AI
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2	AK
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

Specifications subject to change without notice.

| 3. Select connection and function module	P3010 Code
Function Quick-release connection, 10 and 6 mm, 3 cm³	04
Function Quick-release connection, 8 and 6 mm, 30 cm³	05
Function Quick-release connection, 8 and 6 mm, 60 cm³	06
Function Quick-release connection, 10 and 6 mm, 30 cm³	07
Function Quick-release connection, 10 and 6 mm, 60 cm³	08
Function Quick-release connection, 1/4" NPSF and 6 mm, 3 cm³	09
Function Quick-release connection, 1/4" NPSF and 6 mm, 30 cm³	10
Function Quick-release connection, 1/4" NPSF and 6 mm, 60 cm³	11
Function Quick-release connection, 8 and 6 mm, 3 cm³	12

For detailed information on Quick-release, see separate datasheet.

4. Select ES	P3010 Code
No energy saving	AA
Valve DS23	AB

For detailed information on Valve DS 23, see separate datasheet.

5. Select vacuum sensing	P3010 Code
Vacuum switch, adjustable, PNP NO DM8	09
Vacuum switch, adjustable, NPN NO DM8	10

Example	Ordering number
Housing, connection Ø 6 mm Pi12-3FSx1, Function Quick-release module 10/6 3cm³, no energy saving, Vacuum switch PNP NO DM8	P3010.00.AE.04.AA.09

Ordering information, accessories

Description	Art. No.
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

P3010 Vacuum switch, inductive universal

▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.

▶ Adjustable vacuum switch is actuated at a set vacuum level and set by a knob.

▶ Includes a flow-through silencer and a built-in vacuum filter for harsh environments.

▶ High system reliability in case of fluctuating or low feed pressure.

▶ Suitable for fast and reliable evacuation in sealed systems.

Technical data

Description	Unit	Value
Feed pressure, max. (pump)	MPa	0.7
Noise level	dBA	66-68
Pressure, max (switch)	MPa	0.6
Material		PP, PBTP, PVC, PA, SS, NBR, POM, Al, CuZn
Temperature range	°C	-10-50
Weight	g	233-485
Function		PNP NO, PNP NC, NPN NO and NPN NC
Hysteresis	kPa	2
Cable		2 x 0.14 mm^2 x 2m
Supply voltage	VDC	24 (5–36)
Safety classification		IP67
Current Output, max	mA	200
Voltage drop, max	VDC	4.6

The switch must be connected in series with the load.

Performance tables

Depending upon choice of COAX® cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or Vacuum cartridges/integration datasheets.

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1	AE
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2	AG
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1	AA
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2	AC
COAX® cartridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1	AI
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2	AK
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

| 3. Select connection and function module	P3010 Code
Function Quick-release connection, 10 and 6 mm, 3 cm³	04
Function Quick-release connection, 8 and 6 mm, 30 cm³	05
Function Quick-release connection, 8 and 6 mm, 60 cm³	06
Function Quick-release connection, 10 and 6 mm, 30 cm³	07
Function Quick-release connection, 10 and 6 mm, 60 cm³	08
Function Quick-release connection, 1/4" NPSF and 6 mm, 3 cm³	09
Function Quick-release connection, 1/4" NPSF and 6 mm, 30 cm³	10
Function Quick-release connection, 1/4" NPSF and 6 mm, 60 cm³	11
Function Quick-release connection, 8 and 6 mm, 3 cm³	12

For detailed information on Quick-release, see separate datasheet.

4. Select ES	P3010 Code
No energy saving	AA
Valve DS23	AB

For detailed information on Valve DS 23, see separate datasheet.

5. Select vacuum sensing	P3010 Code
Vacuum switch inductive, adjustable with knob	11

Example	Ordering number
Housing, connection Ø 6 mm Pi12-3FSx1, Function Quick-release module 10/6 3cm³, no energy saving, Vacuum switch inductive, adj. knob	P3010.00.AE.04.AA.11

Ordering information, accessories

Description	Art. No.
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

P3010 Vacuum switch, mini, pre-set, push-in

▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.

▶ Electromechanical vacuum switch with digital output.

▶ Built-in red LED that indicates status.

▶ Includes a flow-through silencer and a built-in vacuum filter for harsh environments.

▶ High system reliability in case of fluctuating or low feed pressure.

▶ Suitable for fast and reliable evacuation in sealed systems.

Technical data

Description	Unit	Value
Feed pressure, max. (pump)	MPa	0.7
Noise level	dBA	66-68
Pressure, max (switch)	MPa	0.2
Material		PP, PA, Al, , NBR, TPU, SS, CuZn(Au)
Temperature range	°C	-10-50
Weight	g	173-425
Signal range	-kPa	30, 50 or 70 +5/-3
Function		PNP NO/NC, NPN NO/NC
Hysteresis	kPa	6 ± 1
Voltage	VDC	24 (12-30)
Safety classification		IP40
Current max	mA	100 inductive/400 resistive
Voltage drop, max (100mA/24V inductive load)	VDC	0.055
Response time	ms	4
Display		Red LED
Electric connection		M8 3-pin male

Performance tables

Depending upon choice of COAX® cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or Vacuum cartridges/integration datasheets.

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

2. COAX® cartridge modules	P3010 Code
COAX® artridge module Pi12-3FSx1	AE
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2	AG
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1	AA
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2	AC
COAX® cartridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1	AI
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2	AK
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

3. Select connection and function module

| 3. Select connection and function module	P3010 Code
Function Quick-release connection, 10 and 6 mm, 3 cm³	04
Function Quick-release connection, 8 and 6 mm, 30 cm³	05
Function Quick-release connection, 8 and 6 mm, 60 cm³	06
Function Quick-release connection, 10 and 6 mm, 30 cm³	07
Function Quick-release connection, 10 and 6 mm, 60 cm³	08
Function Quick-release connection, 1/4" NPSF and 6 mm, 3 cm³	09
Function Quick-release connection, 1/4" NPSF and 6 mm, 30 cm³	10
Function Quick-release connection, 1/4" NPSF and 6 mm, 60 cm³	11
Function Quick-release connection, 8 and 6 mm, 3 cm³	12

For detailed information on Quick-release, see separate datasheet.

4. Select ES	P3010 Code
No energy saving	AA
Valve DS23	AB

For detailed information on Valve DS 23, see separate datasheet.

5. Select vacuum sensing	P3010 Code
Vacuum switch VS4015 Ø6, 30 -kPa	18
Vacuum switch VS4015 Ø6, 50 -kPa	19
Vacuum switch VS4015 Ø6, 70 -kPa	20

Example	Ordering number
Housing, connection Ø 6 mm Pi12-3FSx1, Function Quick-release module 10/6 3cm³, no energy saving, Vacuum switch VS4015 30 -kPa	P3010.00.AE.04.AA.18

Ordering information, accessories

Description	Art. No.
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

P3010 Vacuum switch, mini, pre-set, threaded

- ▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.
- ▶ Electromechanical vacuum switch with digital output.
- ▶ Built-in red LED that indicates status.
- ▶ Includes a flow-through silencer and a built-in vacuum filter for harsh environments.
- ▶ High system reliability in case of fluctuating or low feed pressure.
- ▶ Suitable for fast and reliable evacuation in sealed systems.

Technical data

Description	Unit	Value
Feed pressure, max. (pump)	MPa	0.7
Noise level	dBA	66-68
Pressure, max (switch)	MPa	0.2
Material		PP, PA, Al, , NBR, TPU, SS, CuZn(Au)
Temperature range	ºC	-10-50
Weight	g	115-362
Signal range	-kPa	30, 50 or 70 +5/-3
Function		PNP NO/NC, NPN NO/NC
Hysteresis	kPa	6 ± 1
Voltage	VDC	24 (12-30)
Safety classification		IP40
Current max	mA	100 inductive/400 resistive
Voltage drop, max (100mA/24V inductive load)	VDC	0.055
Response time	ms	4
Display		Red LED
Electric connection		M8 3-pin male

Performance tables

Depending upon choice of COAX® cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or Vacuum cartridges/integration datasheets.

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

| 2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1	AE
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2	AG
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1	AA
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2	AC
COAX® artridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1	AI
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2	AK
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

Specifications subject to change without notice.

3. Select connection and function module	P3010 Code
Connection module high 6x1/8"	01
Connection module low 3x1/8"	02

4. Select ES	P3010 Code
No energy saving	AA
Valve DS23	AB

For detailed information on Valve DS 23, see separate datasheet.

5. Select vacuum sensing	P3010 Code
Vacuum switch VS4016 G1/8" male, 30 -kPa	21
Vacuum switch VS4016 G1/8" male, 50 -kPa	22
Vacuum switch VS4016 G1/8" male, 70 -kPa	23

Example	Ordering number
Housing, connection Ø 6 mm Pi12-3FSx1, Connection module high 6x1/8", no energy saving, Vacuum switch VS4016 30 -kPa	P3010.00.AE.01.AA.21

Ordering information, accessories

Description	Art. No.
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

piab

P3010 AVM™2

▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.

▶ AVM™2, Automatic Vacuum Management, unit with built-in control and monitoring functions.

▶ Valves for vacuum on/off, blow-off, blow-off flow control and non-return valve.

▶ Option with Normally Closed "fail safe" on/off valve (NC). It changes to an open valve if power is lost and vacuum will be generated. A conventional normally closed on/off valve (NC 2) is also available. It stays closed if electrical power is lost or removed.

▶ Option with automatic blow-off (1 sec) reduces number of outputs needed from PLC or I/O box.

▶ Analogue vacuum sensor with two digital outputs.

▶ Digital display with "-kPa" or "-inHg" as unit options.

▶ Integrated energy saving function (ES) that minimizes the air consumption in sealed systems. The ES function can be activated manually or via a signal (signal override).

▶ Three-colour LED status indicators for valves, signal outputs and ES.

Technical data

| Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	66–68
Material		PA, NBR, Al, SS, PMMA
Temperature range	℃	0–50
Weight	g	250-330
Signal range, adjustable	-kPa	20-80
Hysteresis	kPa	7±1
Voltage	VDC	24 (22-28)
Ripple, max.	V_P	1V $_{rms}$
Current consumption, nominal	mA	110
Safety classification		IP65 [NEMA 4]
Current, max. output load		100
Display		LED indicators, numeric
Flow. blow-off	Nl/s	0-7.5

Performance tables

Depending upon choice of COAX® Cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or COAX® Cartridge datasheets.

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2, non-return valve	AD

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

3. Select connection and function module	P3010 Code
Function AVM™2 NO	27
Function AVM™2 NC (power off - NO)	28
Function AVM™2 NO, automatic blow-off (1 sec)	30
Function AVM™2 NC, automatic blow-off (1 sec)	31
Function AVM™2 NC 2 (power off - NC)	32

4. Select ES	P3010 Code
No energy saving	AA

5. Select vacuum sensing	P3010 Code
No vacuum sensing	00

Example	Ordering number
Housing, connection 1/8" NPSF Pi12-3FSx1, non-return valve, Function AVM2 NO, no energy saving function, no vacuum sensing	P3010.01.AF.27.AA.00

COAX® Cartridge	H	H1
1	102,4	31
2	127,4	56

AVM M12 8-pin
CU M12 4-pin

77.35

Ø6 / G1/8"

2x Ø 5.5

Ø10 / 1/4"NPSF

1

67

2

3

H1

25

25

6

Ø 8

T1

3 COAX

Ø 5.2

4.15

9.4

Ø 5.7

3 COAX

8.5

22.5

59.25

100

138.5

H

Ordering information, accessories

Description	Art. No.
Cable M12 8-pin female, PUR, L=2m	0110238
Cable M12 8-pin female, PUR, L=5m	0117746
Y-cable M12 8-pin female, 2xM12 4-pin male, PNP, PUR, L=2m	0118407
Y-cable M12 8-pin female, 2xM12 5-pin male, NPN, PUR, L=2m	0120229
Sealing kit P3010, NBR	0104201

The sealing kit includes flap valves, compressed air filter and vacuum filter.

P3010 CU

▶ Patented multistage COAX® cartridge - MINI - with Pi, Si, Xi cartridge.

▶ Integrated Control Unit (CU) with electric valves for vacuum on-off and blow-off control.

▶ Mechanical valve for blow-off flow adjustment.

▶ Slim, compact, configurable and modular design.

Technical data

| Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	66–68
Material		PA, NBR, Al, SS, PMMA
Temperature range	°C	0–50
Weight	g	236-316
Voltage	VDC	24 (22–28)
Safety classification		IP65 [NEMA 4]
Humidity	%RH	90
Current consumption, nominal	mA	60
Ripple, max.	V_P	1 V_{rms}
Flow, blow-off	Nl/s	0–7.5
Function, on/off		NC

Performance tables

Depending upon choice of COAX® Cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or COAX® Cartridge datasheets.

Ordering information

1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

2. COAX® cartridge modules	P3010 Code
COAX® cartridge module Pi12-3FSx1	AE
COAX® cartridge module Pi12-3FSx1, non-return valve	AF
COAX® cartridge module Pi12-3FSx2	AG
COAX® cartridge module Pi12-3FSx2, non-return valve	AH
COAX® cartridge module Si08-3FSx1	AA
COAX® cartridge module Si08-3FSx1, non-return valve	AB
COAX® cartridge module Si08-3FSx2	AC
COAX® cartridge module Si08-3FSx2, non-return valve	AD
COAX® cartridge module Xi10-3FSx1	AI
COAX® cartridge module Xi10-3FSx1, non-return valve	AJ
COAX® cartridge module Xi10-3FSx2	AK
COAX® cartridge module Xi10-3FSx2, non-return valve	AL

3. Select connection and function module	P3010 Code
Function CU NC	29

4. Select ES	P3010 Code
No energy saving	AA
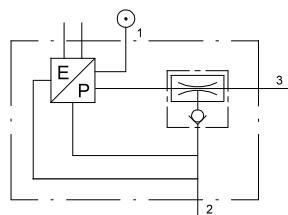
5. Select vacuum sensing	P3010 Code
No vacuum sensing	00
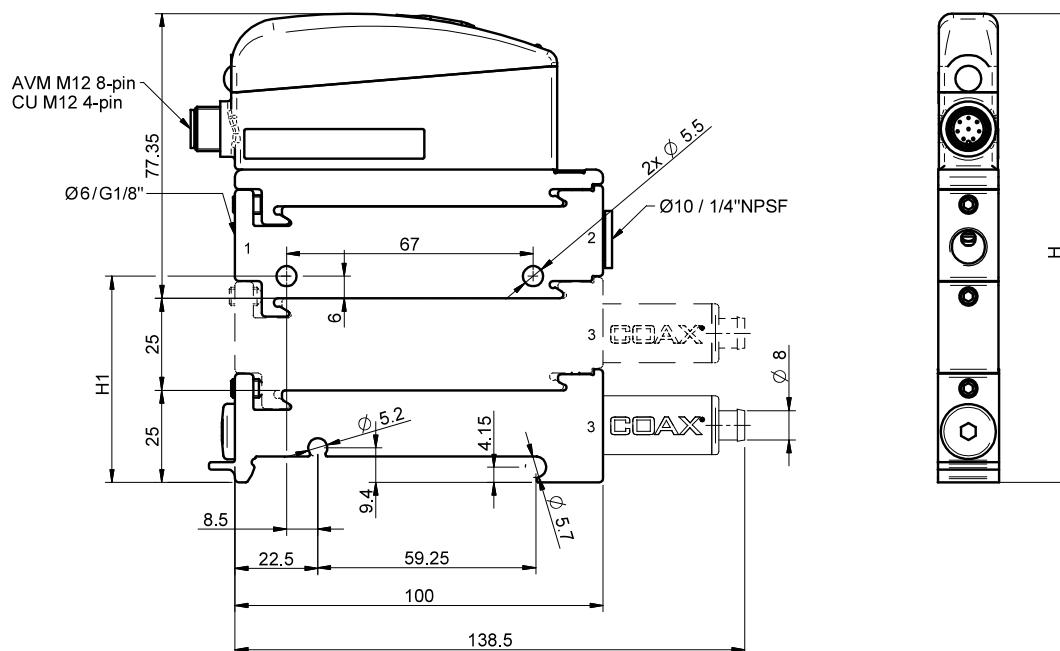
Example	Ordering number
Housing, connection 1/8" NPSF Pi12-3FSx1, Function CU NC, no energy saving function, no vacuum sensing	P3010.01.AE.29.AA.00

COAX® Cartridge	H	H1
1	102,4	31
2	127,4	56

AVM M12 8-pin
CU M12 4-pin

Ø6 / G1/8"

2x Ø 5.5

Ø10 / 1/4"NPSF

77.35

67

6

25

H1

25

8.5

Ø 5.2

4.15

9.4

Ø 5.7

22.5

59.25

100

138.5

Ø 8

COAX

COAX

H

Ordering information, accessories

Description	Art. No.
Cable M12 4-pin female, PUR, L=5m*	0121817
Cable M12 4-pin female, M12 4-pin male, PUR, L=2m	0118322
Sealing kit P3010, NBR	0104201

*The sealing kit includes flap valves, compressed air filter and vacuum filter. *) Pin No. 1 is not used.*

Vacuum pumps/generators Small

L7

▶ Large vacuum flows

▶ Small size and low weight

▶ Good for handling porous materials or if leakage is present

Supplied with compressed-air hose connector.
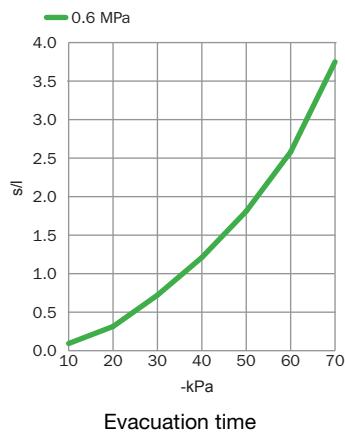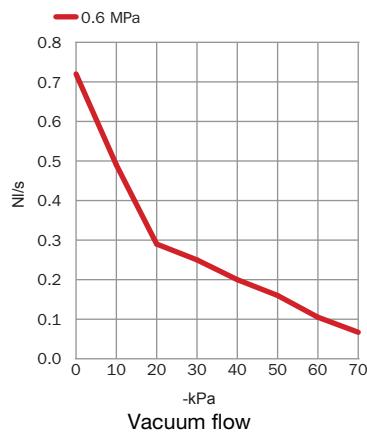
Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	°C	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

Vacuum flow

Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	80	90	-kPa
0.60	0.49	0.72	0.49	0.29	0.25	0.20	0.16	0.10	0.067	–	–	75
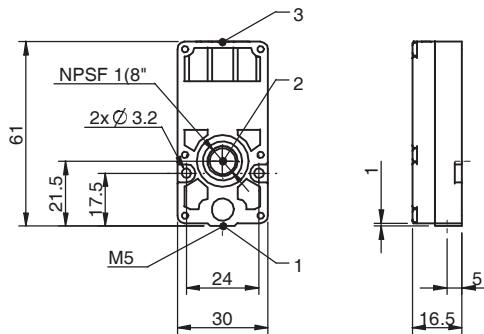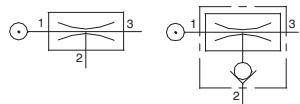
Evacuation time

Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	80	90	-kPa
0.60	0.49	0.093	0.31	0.72	1.2	1.8	2.6	3.8	–	–	75

Vacuum flow

Evacuation time

Ordering information

Description	Art. No.
Vacuum pump MINI L7, conn. A, NBR sealings	0102853

Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

piab

L14

- ▶ Large vacuum flows
- ▶ Small size and low weight
- ▶ Good for handling porous materials or if leakage is present
- ▶ Available with connection plate in aluminium (B1) and composite PA (B, C)

Supplied with push-in hose connector for compressed air (for pumps with connection plate B).
Supplied with push-in hose connector for compressed air and external through-flow silencer (for pumps with connection plate C).

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	°C	-20–80
Weight	g	35–60
Material		Al, ABS, PA, POM, SS, NBR

Vacuum flow

Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	80	90	-kPa
0.60	0.98	1.5	1.0	0.57	0.45	0.39	0.32	0.24	0.13	–	–	75
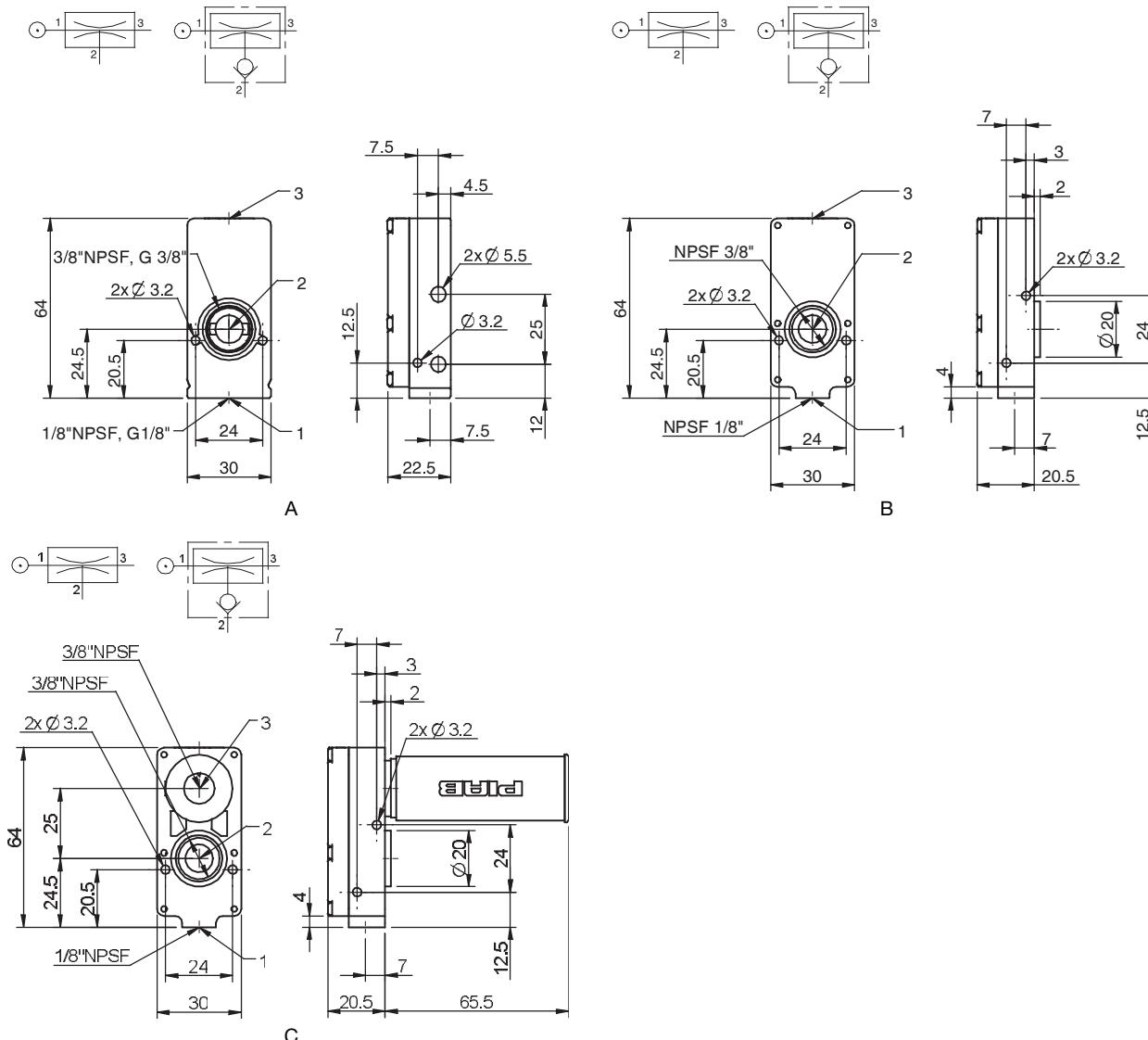
Evacuation time

Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	80	90		-kPa
0.60	0.98	0.064	0.17	0.36	0.59	0.88	1.3	1.8	–	–		75

Vacuum flow

Evacuation time

Vacuum pumps/generators Small

Ordering information

	Description	Art. No.
A	Vacuum pump MINI L14, conn. B1, NBR sealings	0102831
A	Vacuum pump MINI L14, conn. B1, NBR sealings, non-return valve	0102832
B	Vacuum pump MINI L14, conn. B, NBR sealings	0103055
C	Vacuum pump MINI L14, conn. C, NBR sealings	0102743

A

B

C

Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

piab

L28

- ▶ Large vacuum flows
- ▶ Small size and low weight
- ▶ Good for handling porous materials or if leakage is present
- ▶ Available with connection plate in aluminium (B1) and composite PA (B, C)

Supplied with push-in hose connector for compressed air (for pumps with connection plate B).
Supplied with push-in hose connector for compressed air and external through-flow silencer (for pumps with connection plate C).

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	ºC	-20–80
Weight	g	60–74
Material		Al, ABS, PA, POM, SS, NBR

Vacuum flow

Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	80	90	-kPa
0.60	2.0	2.6	1.7	1.1	0.89	0.74	0.55	0.36	0.17	–	–	75
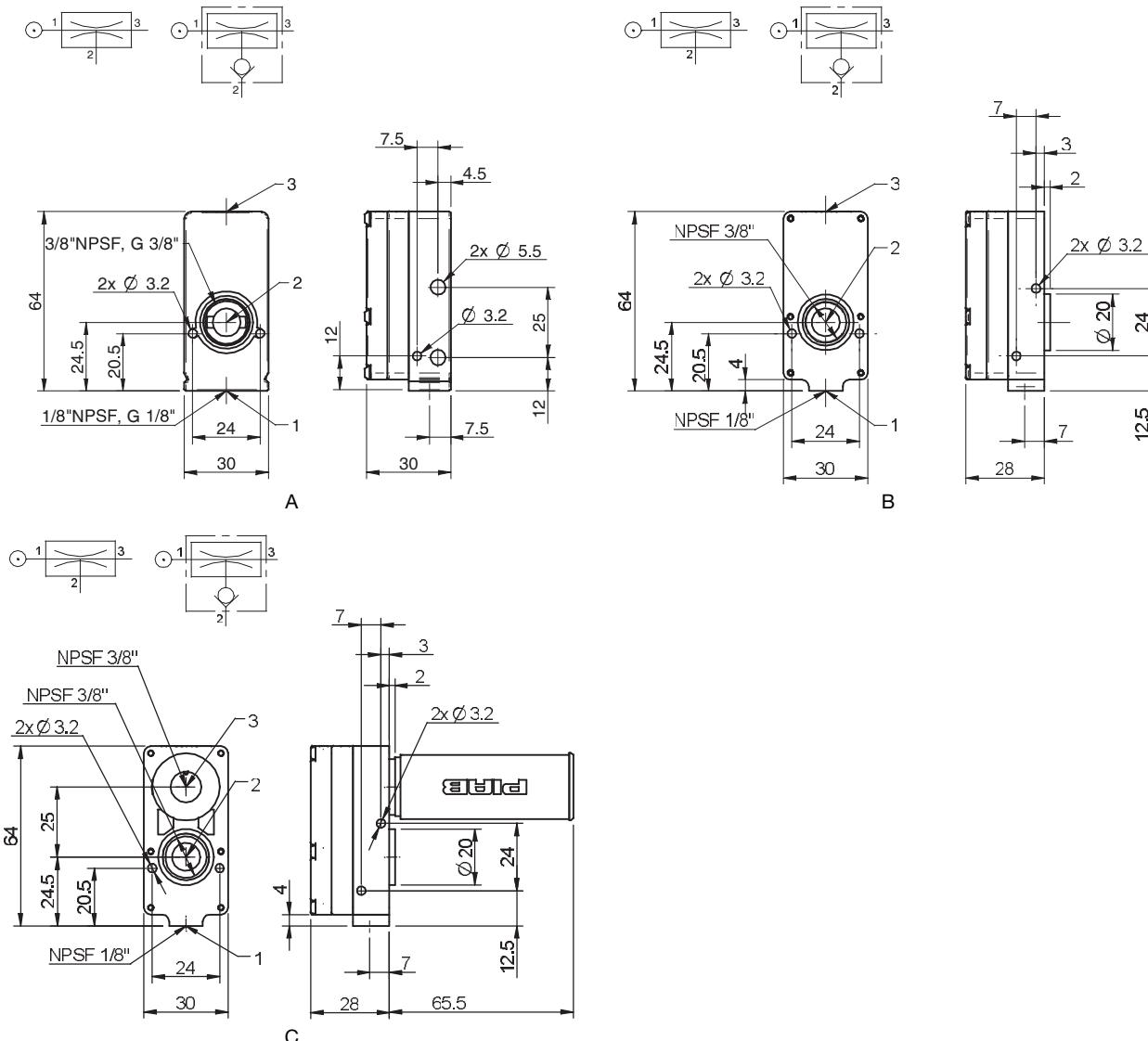
Evacuation time

Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	80	90		-kPa
0.60	2.0	0.047	0.11	0.20	0.32	0.46	0.69	1.1	–	–		75

Vacuum flow

Evacuation time

Vacuum pumps/generators Small

Ordering information

	Description	Art. No.
A	Vacuum pump MINI L28, conn. B1, NBR sealings	0102833
A	Vacuum pump MINI L28, conn. B1, NBR sealings, non-return valve	0102834
B	Vacuum pump MINI L28, conn. B, NBR sealings	0103061
B	Vacuum pump MINI L28, conn. B, NBR sealings, non-return valve	0103062
C	Vacuum pump MINI L28, conn. C, NBR sealings	0102749
C	Vacuum pump MINI L28, conn. C, NBR sealings, non-return valve	0102750

A

B

C

Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

Vacuum pumps/generators Small

M5L

▶ Medium vacuum levels to 90 -kPa

▶ Small size and low weight

▶ Operates at only 0.38 MPa

Supplied with compressed-air hose connector.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	ºC	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

Vacuum flow

Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	80	90	-kPa
0.60	0.55	0.73	0.50	0.26	0.14	0.12	0.10	0.080	0.050	0.020	–	84
0.38	0.38	0.58	0.30	0.22	0.18	0.14	0.10	0.080	0.040	0.010	–	81
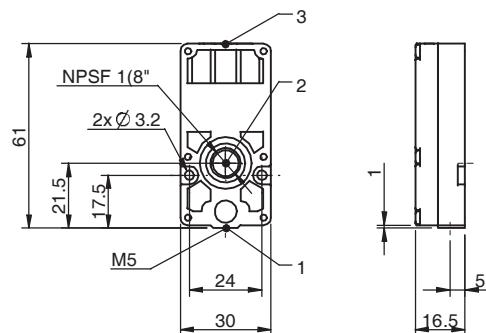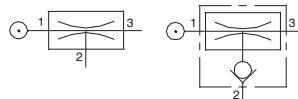
Evacuation time

Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	80	90	-kPa
0.60	0.55	0.13	0.36	1.0	1.8	2.8	4.0	5.7	9.4	–	84
0.38	0.38	0.20	0.61	1.2	1.8	2.6	3.8	5.9	11.1	–	81

Vacuum flow

Evacuation time

Specifications subject to change without notice.

Ordering information

Description	Art. No.
Vacuum pump MINI M5L, conn. A, NBR sealings	0102865
Vacuum pump MINI M5L, conn. A, NBR sealings, non-return valve	0102866

Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

Vacuum pumps/generators Small

M10L

- ▶ Medium vacuum levels to 90 -kPa
- ▶ Small size and low weight
- ▶ Operates at only 0.38 MPa

Supplied with compressed-air hose connector.

Technical data
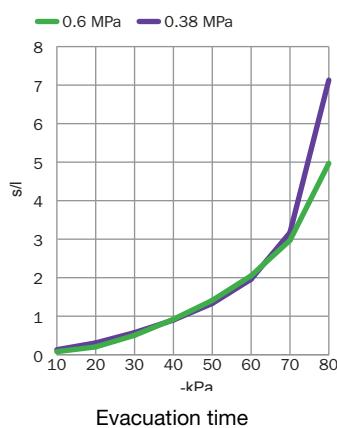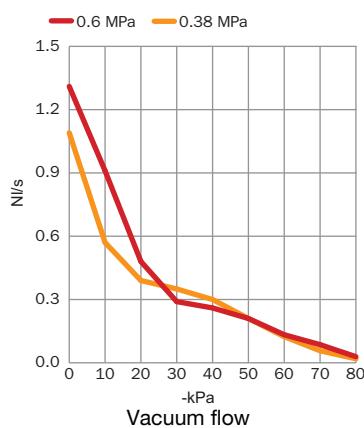
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	ºC	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

Vacuum flow

| Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
0.60	1.1	1.3	0.91	0.48	0.29	0.26	0.21	0.13	0.090	0.030	–	84
0.38	0.76	1.1	0.57	0.39	0.35	0.30	0.21	0.12	0.060	0.020	–	81
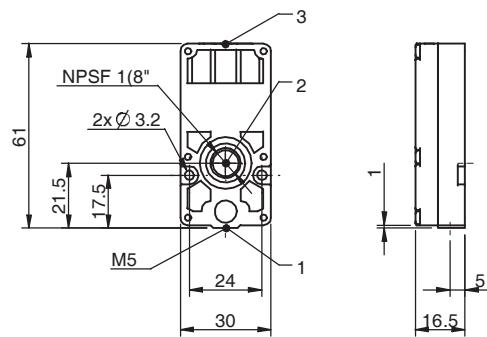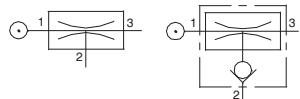
Evacuation time

Feed pressure MPa	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
		10	20	30	40	50	60	70	80	90	
0.60	1.1	0.079	0.20	0.50	0.92	1.4	2.1	3.0	5.0	–	84
0.38	0.76	0.13	0.31	0.57	0.90	1.3	2.0	3.2	7.1	–	81

Vacuum flow

Evacuation time

Ordering information

Description	Art. No.
Vacuum pump MINI M10L, conn. A, NBR sealings	0102871
Vacuum pump MINI M10L, conn. A, NBR sealings, non-return valve	0102872

Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

Vacuum pumps/generators Small

M20L

▶ Medium vacuum levels to 90 -kPa

▶ Small size and low weight

▶ Operates at only 0.38 MPa

▶ Available with connection plate in aluminium
 (B1) and composite PA (B, C)

Supplied with push-in hose connector for compressed air (for pumps with connection plate B).
Supplied with push-in hose connector for compressed air and external through-flow silencer (for pumps with connection plate C).

Technical data
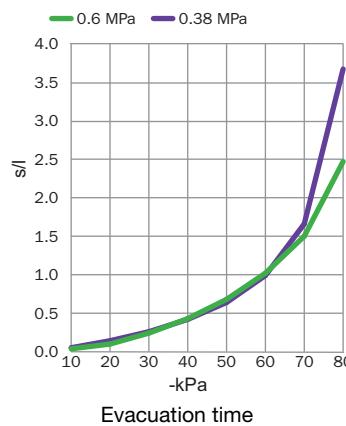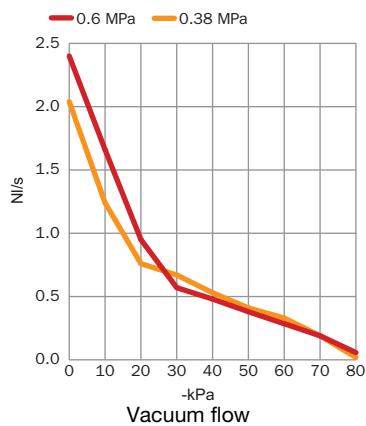
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	°C	-20–80
Weight	g	60–74
Material		Al, ABS, PA, POM, SS, NBR

Vacuum flow

Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	80	90	-kPa
0.60	2.2	2.4	1.7	0.95	0.57	0.48	0.38	0.29	0.19	0.060	–	84
0.38	1.5	2.0	1.2	0.76	0.67	0.53	0.41	0.33	0.19	0.020	–	81
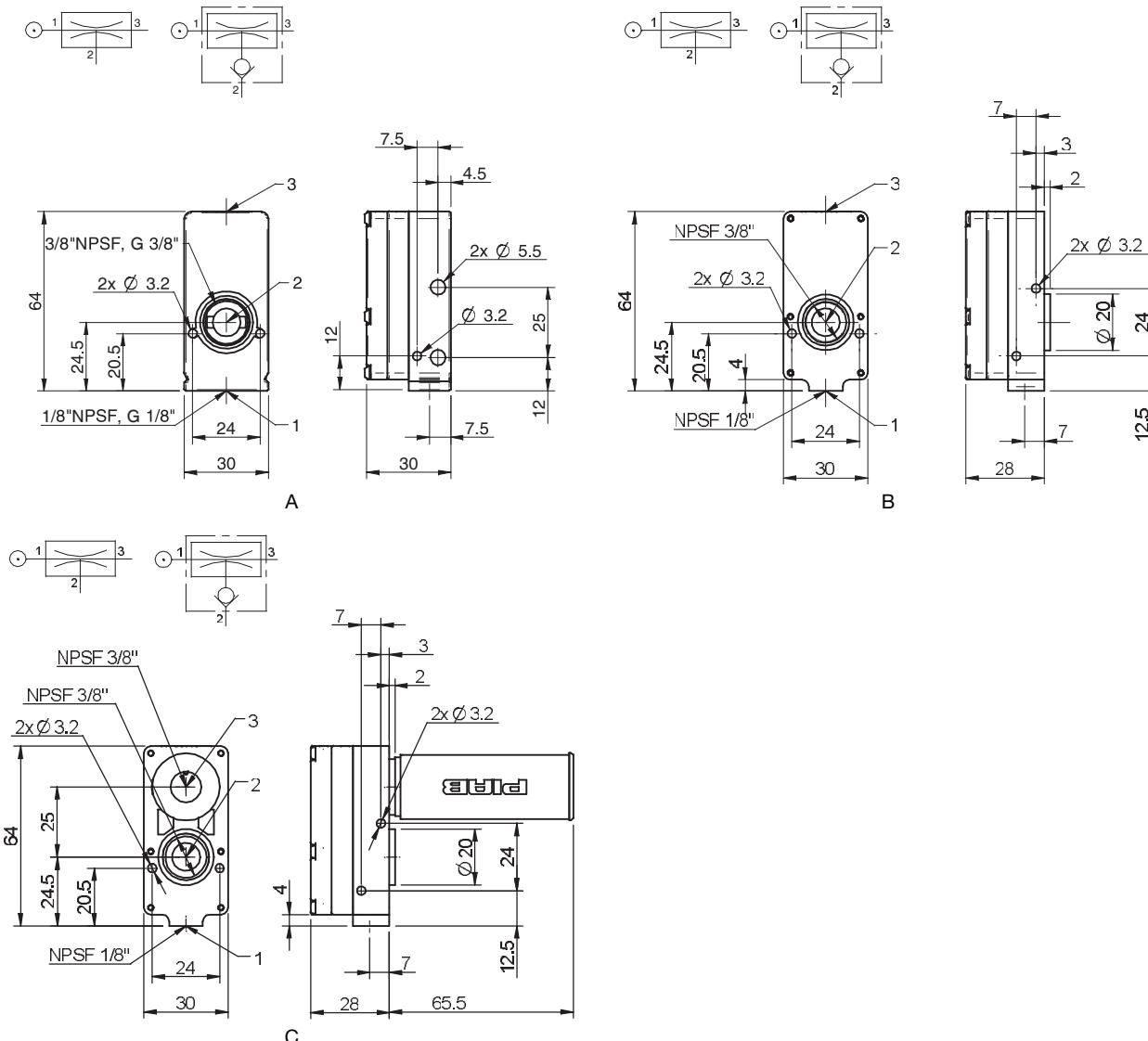
Evacuation time

Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	80	90		-kPa
0.60	2.2	0.038	0.10	0.24	0.43	0.68	1.0	1.5	2.5	–		84
0.38	1.5	0.052	0.14	0.26	0.42	0.64	1.0	1.7	3.7	–		81

Vacuum flow

Evacuation time

Specifications subject to change without notice.

Vacuum pumps/generators Small

Ordering information

	Description	Art. No.
A	Vacuum pump MINI M20L, conn. B1, NBR sealings	0102839
A	Vacuum pump MINI M20L, conn. B1, NBR sealings, non-return valve	0102840
B	Vacuum pump MINI M20L, conn. B, NBR sealings	0103079
B	Vacuum pump MINI M20L, conn. B, NBR sealings, non-return valve	0103080
C	Vacuum pump MINI M20L, conn. C, NBR sealings	0102767
C	Vacuum pump MINI M20L, conn. C, NBR sealings, non-return valve	0102768

A

B

C

Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

Vacuum pumps/generators Small

piab

X5L

▶ Extra vacuum level to 93 -kPa

▶ Small size and low weight

▶ Use in tightly sealed or non-porous applications

Supplied with compressed-air hose connector.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	62–66
Temperature range	ºC	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

Vacuum flow

Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	80	90	-kPa
0.40	0.39	0.48	0.24	0.12	0.11	0.10	0.086	0.071	0.057	0.030	0.006	93
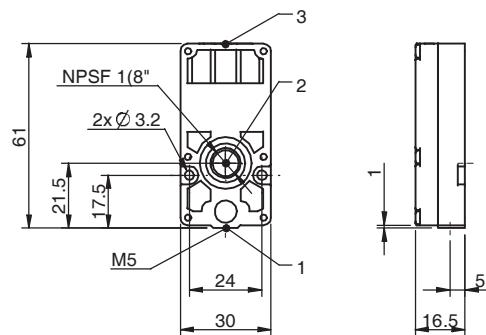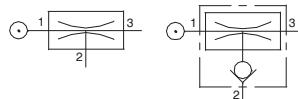
Evacuation time

Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	80	90	-kPa
0.40	0.39	0.17	0.82	1.7	2.7	3.9	5.4	7.4	10.6	22.5	93

Vacuum flow

Evacuation time

Specifications subject to change without notice.

Ordering information

Description	Art. No.
Vacuum pump MINI X5L, conn. A, NBR sealings	3222127
Vacuum pump MINI X5L, conn. A, NBR sealings, non-return valve	3222127A

Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

) Pin no. 5 is not used. M12 4-pin cable will fit the M12 5-pin connector.

Vacuum pumps/generators Small

X10L

▶ Extra vacuum level to 93 -kPa

▶ Small size and low weight

▶ Use in tightly sealed or non-porous applications

Supplied with compressed-air hose connector.

Technical data
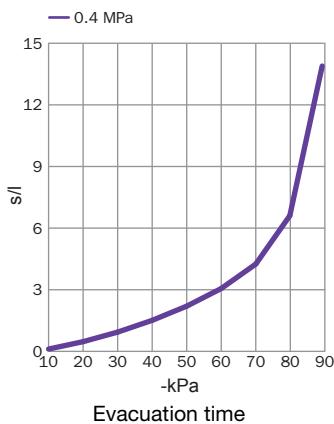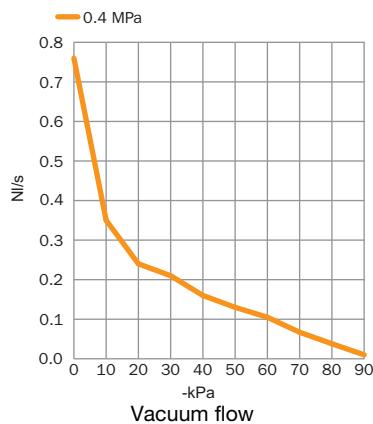
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	62–66
Temperature range	°C	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

Vacuum flow

Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	80	90	-kPa
0.40	0.79	0.76	0.35	0.24	0.21	0.16	0.13	0.10	0.070	0.040	0.010	93
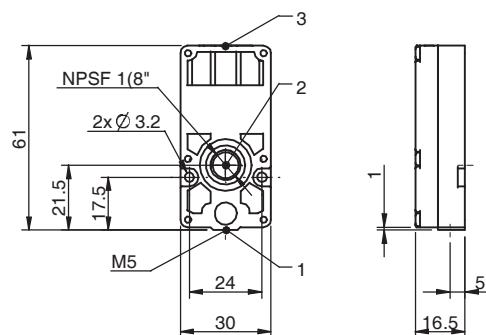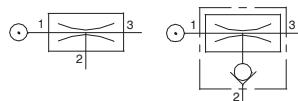
Evacuation time

Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	80	90	-kPa
0.40	0.79	0.11	0.47	0.94	1.5	2.2	3.1	4.3	6.6	14.0	93

Vacuum flow

Evacuation time

Ordering information

Description	Art. No.
Vacuum pump MINI X10L, conn. A, NBR sealings	3222157
Vacuum pump MINI X10L, conn. A, NBR sealings, non-return valve	3222157A

Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

piab

X20L

▶ Extra vacuum level to 93 -kPa

▶ Small size and low weight

▶ Use in tightly sealed or non-porous applications

▶ Available with connection plate in aluminium (B1) and composite PA (B, C)

Supplied with push-in hose connector for compressed air (for pumps with connection plate B). Supplied with push-in hose connector for compressed air and external through-flow silencer (for pumps with connection plate C).

Technical data
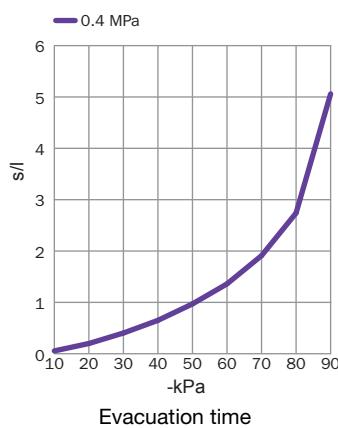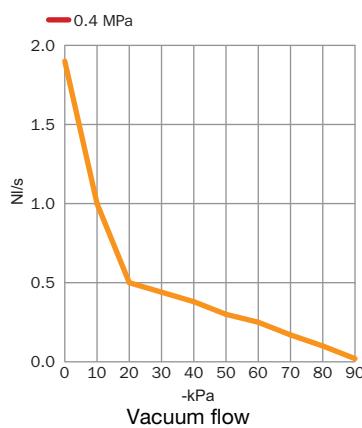
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	62–66
Temperature range	°C	-20–80
Weight	g	60–74
Material		Al, ABS, PA, POM, SS, NBR

Vacuum flow

Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	80	90	-kPa
0.40	1.6	1.9	1.0	0.50	0.44	0.38	0.30	0.25	0.17	0.10	0.020	93
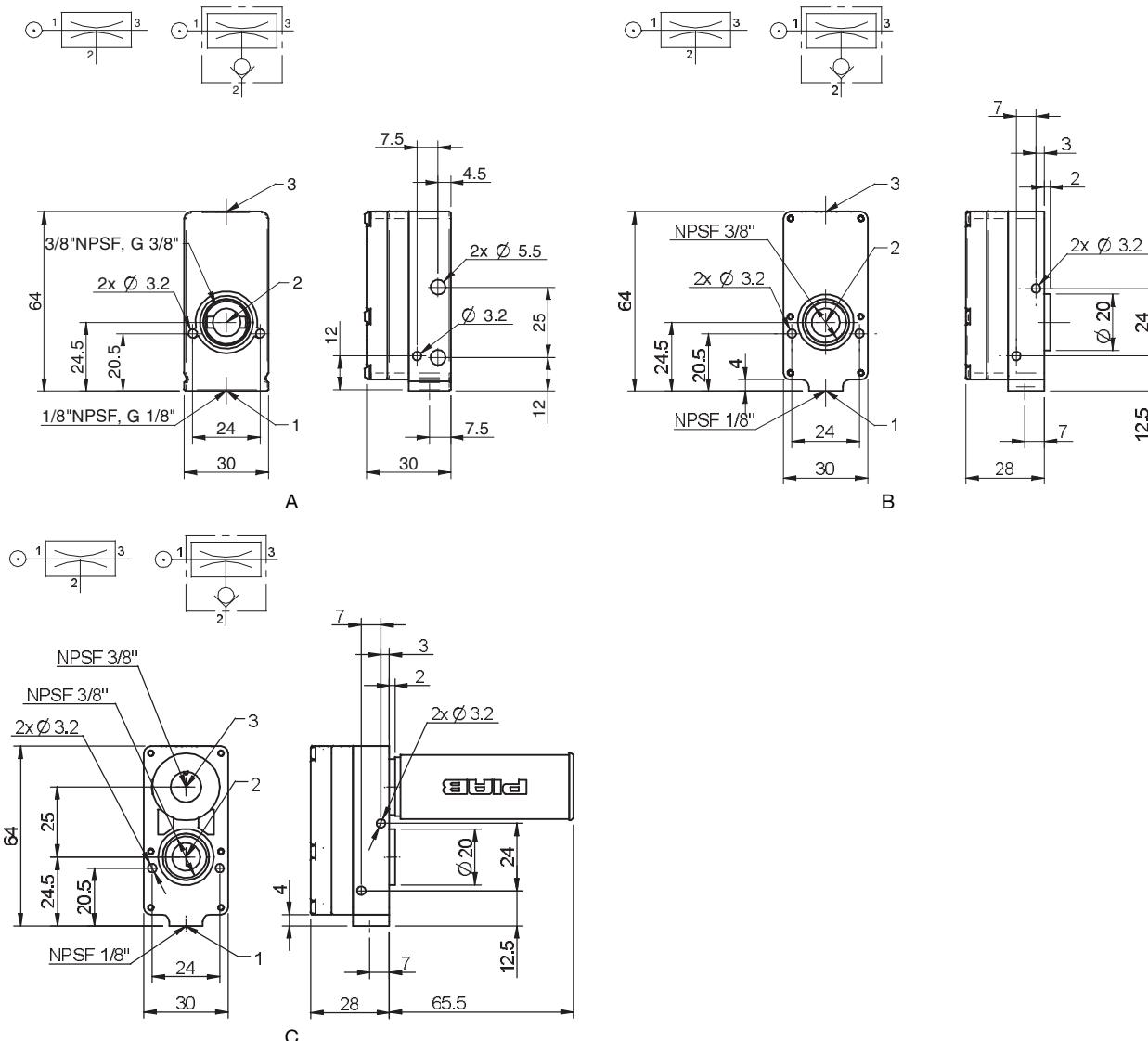
Evacuation time

Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum
MPa	Nl/s	10	20	30	40	50	60	70	80	90	-kPa
0.40	1.6	0.055	0.20	0.40	0.65	0.97	1.4	1.9	2.7	5.1	93

Vacuum flow

Evacuation time

Vacuum pumps/generators Small

Ordering information

	Description	Art. No.
A	Vacuum pump MINI X20L, conn. B1, NBR sealings	0103203
A	Vacuum pump MINI X20L, conn. B1, NBR sealings, non-return valve	0103204
B	Vacuum pump MINI X20L, conn. B, NBR sealings	3222278
B	Vacuum pump MINI X20L, conn. B, NBR sealings, non-return valve	3222278A
C	Vacuum pump MINI X20L, conn. C, NBR sealings	3222279
C	Vacuum pump MINI X20L, conn. C, NBR sealings, non-return valve	3222279A

A

B

C

Ordering information, accessories

Description	Art. No.
Sealing kit MINI 5–28, NBR	3201097
Sealing kit MINI 5–28, Viton®	3201097V
Sealing kit MINI 5–28, EPDM	3201097E

Sealing kits include flap valves, gaskets and compressed-air filters.

piINLINE® MIDI

- ▶ Patented COAX® cartridge technology.
- ▶ High vacuum flow capacity in relation to energy consumption.
- ▶ Low weight inline design with push-in fittings for vacuum and compressed air.
- ▶ Quick and easy installation directly on the hose.
- ▶ Si cartridge for extra vacuum flow.
- ▶ Pi cartridge for high performance at low feed pressures.
- ▶ Xi cartridge when high flow and deep vacuum is needed.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Material		PA, NBR, SS, CuZn
Temperature range	°C	-10-80

Technical data, specific
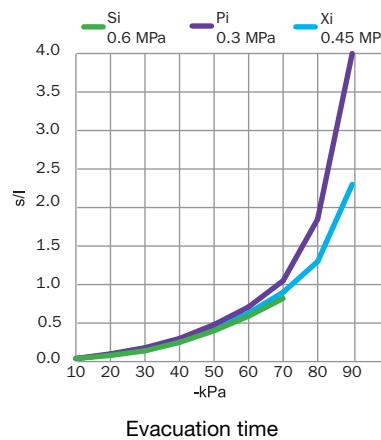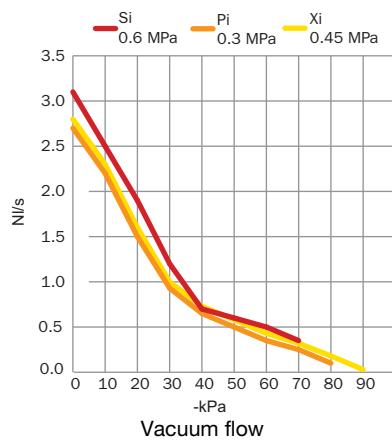
Description	Unit	Value		
		Si8-12	Pi8-12	Xi8-12
Noise level, min-max	dBA	90-98	90-98	93-99
Weight	g	87	87	87
Connection, vacuum	mm	12	12	12
Connection, compressed air	mm	8	8	8

Vacuum pumps/generators Medium

Vacuum flow

COAX® cartridge	Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	90	
Si	0.6	1.75	3.10	2.50	1.90	1.20	0.70	0.60	0.50	0.35	—	—	75
Pi	0.3	2.00	2.70	2.20	1.50	0.93	0.65	0.50	0.35	0.25	0.10	—	90
Xi	0.45	1.83	2.80	2.30	1.60	1.00	0.73	0.58	0.43	0.32	0.18	0.03	95
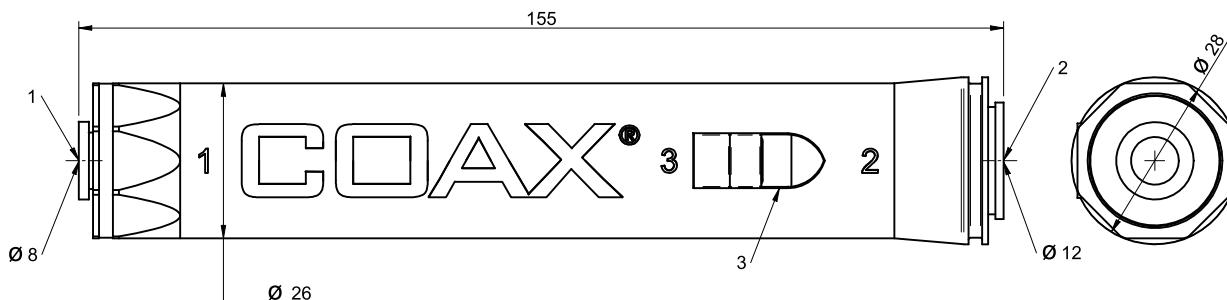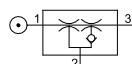
Evacuation time

COAX® cartridge	Feed pressure MPa	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
			10	20	30	40	50	60	70	80	90	
Si	0.6	1.75	0.04	0.08	0.14	0.25	0.40	0.59	0.82	—	—	75
Pi	0.3	2.00	0.04	0.10	0.18	0.30	0.48	0.71	1.05	1.85	4.00	90
Xi	0.45	1.83	0.04	0.09	0.17	0.28	0.44	0.63	0.90	1.30	2.30	95

Vacuum flow

Evacuation time

Ordering information

Description	Art. No.
piINLINE® vacuum generator MIDI Si, 8-12 mm	0122032
piINLINE® vacuum generator MIDI Pi, 8-12 mm	0122899
piINLINE® vacuum generator MIDI Xi, 8-12 mm	0122900

Ordering information, accessories

Description	Art. No.
Snap-in piINLINE® 1x MIDI mounting bracket	0123095
Snap-in piINLINE® 1x MIDI mounting bracket for silencer	0123096
Silencer piINLINE® MIDI	0123031

piab

P5010

▶ New patented COAX® push-in technology allows insertion and removal of the cartridge without tools.

▶ Available with a two or three-stage COAX® cartridge MIDI. Choose an Si cartridge for extra vacuum flow, a Pi cartridge for high performance at low feed pressure or an Xi cartridge when high flow and deep vacuum is needed.

▶ Integrated flow-through silencer that is unaffected by dust and dirt.

▶ Substantially lower air-consumption as compared to conventional ejectors of similar sizes.

▶ Slim, compact, configurable and modular design.

▶ Low weight.

Technical data

Description	Unit	Value
Feed pressure, max	MPa	0.7
Noise level *)	dBA	68–70
Temperature range	°C	-10–80
Weight	g	230–600
Material		AL,CuZn, NBR, PA, SS, PE

*) At vacuum level 40 -kPa and feed pressure 0.3 MPa.

Vacuum flow

COAX® cartridge	Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	90	
Pi48-2	0.30	2.0	5.6	2.5	1.8	1.1	0.65	0.50	0.35	0.25	0.10	—	90
Pi48-3	0.30	2.0	5.6	2.5	1.8	1.1	0.65	0.50	0.35	0.25	0.10	—	90
Si32-2	0.60	1.75	3.3	3.0	2.6	1.7	0.90	0.60	0.50	0.35	—	—	75
Si32-3	0.60	1.75	6.0	3.5	2.6	1.7	0.90	0.60	0.50	0.35	—	—	75
Xi40-2	0.45	1.83	2.8	2.3	1.6	1.0	0.73	0.58	0.43	0.32	0.18	0.03	95
Xi40-3	0.45	1.83	5.9	3.0	2.0	1.3	0.73	0.58	0.43	0.32	0.18	0.03	95

For vacuum flows at other feed pressures, see COAX® cartridge data sheets.

Evacuation time

COAX® cartridge	Feed pressure MPa	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
			10	20	30	40	50	60	70	80	90	
Pi48-2	0.30	2.0	0.030	0.070	0.13	0.26	0.46	0.70	1.0	1.6	4.0	90
Pi48-3	0.30	2.0	0.020	0.060	0.12	0.25	0.45	0.70	1.0	1.6	4.0	90
Si32-2	0.60	1.75	0.030	0.070	0.10	0.18	0.33	0.53	0.80	—	—	75
Si32-3	0.60	1.75	0.020	0.050	0.10	0.18	0.33	0.53	0.80	—	—	75
Xi40-2	0.45	1.83	0.04	0.09	0.17	0.28	0.44	0.63	0.90	1.3	2.3	95
Xi40-3	0.45	1.83	0.022	0.062	0.12	0.22	0.37	0.57	0.84	1.2	2.2	95

For evacuation times at other feed pressures, see COAX® cartridge data sheets.

Vacuum pumps/generators Medium

Blow flow

COAX® cartridge	Feed pressure	Air consumption	Blow flow (Nl/s) at different pressure levels (kPa)												Max pressure
	MPa	Nl/s	0	20	40	60	70	80	90	100	110	120	130	140	kPa
Pi48-2	0.6	3.5	6.15	6.15	5.95	5.03	4.49	4.49	4.49	4.49	4.49	4.26	4.0	3.63	140
Pi48-3	0.6	3.55	9.5	6.5	6.0	5.3	4.7	4.6	4.6	4.5	4.5	4.3	4.0	3.7	140
Si32-2	0.6	1.75	5.05	4.25	3.30	2.65	2.35	1.8	—	—	—	—	—	—	70
Si32-3	0.6	1.75	7.8	4.6	3.3	2.7	2.3	1.8	—	—	—	—	—	—	70
Xi40-2	0.6	2.33	5.1	4.6	3.4	3.3	3.1	2.8	2.4	—	—	—	—	—	90
Xi40-3	0.6	2.33	8.4	5.1	3.92	3.39	3.23	2.95	2.58	—	—	—	—	—	90

For performance graphs, see COAX® cartridge data sheets.

Ordering information

1. Select Housing	P5010 code
Housing, connection Ø 10 mm	00
Housing, connection Ø 3/8"	01

	2. COAX® push-in modules	P5010 Code
b	COAX® push-in module Pi48-2X1	AI
a	COAX® push-in module Pi48-3X1	AJ
d	COAX® push-in module Pi48-2X1, non-return valve	AK
c	COAX® push-in module Pi48-3X1, non-return valve	AL
b	COAX® push-in module Pi48-2X2	AM
a	COAX® push-in module Pi48-3X2	AN
d	COAX® push-in module Pi48-2X2, non-return valve	AO
c	COAX® push-in module Pi48-3X2, non-return valve	AP
b	COAX® push-in module Si32-2X1	AA
a	COAX® push-in module Si32-3X1	AB
d	COAX® push-in module Si32-2X1, non-return valve	AC
c	COAX® push-in module Si32-3X1, non-return valve	AD
b	COAX® push-in module Si32-2X2	AE
a	COAX® push-in module Si32-3X2	AF
d	COAX® push-in module Si32-2X2, non-return valve	AG
c	COAX® push-in module Si32-3X2, non-return valve	AH
b	COAX® push-in module Xi40-2X1	AQ
a	COAX® push-in module Xi40-3X1	AR
d	COAX® push-in module Xi40-2X1, non-return valve	AS
c	COAX® push-in module Xi40-3X1, non-return valve	AT
b	COAX® push-in module Xi40-2X2	AU
a	COAX® push-in module Xi40-3X2	AV
d	COAX® push-in module Xi40-2X2, non-return valve	AW
c	COAX® push-in module Xi40-3X2, non-return valve	AX

	3. Select connection and function module	P5010 Code
e	Connection module low, G connection	01
f	Connection module high, G connection	02
e	Connection module low, NPSF connection	03
f	Connection module high, NPSF connection	04
	Function AVM™2 NO, G connection	05
	Function AVM™2 NC (power off - NO), G connection	06
	Function AVM™2 NO, NPSF connection	07
	Function AVM™2 NC (power off - NO), NPSF connection	08
	Function CU NC, G connection	09
	Function CU NC, NPSF connection	10
	Function P5010 ES 2/2 NO large hysteresis	11
	Function P5010 ES 2/2 NO small hysteresis	12
	Function AVM™2 NO, automatic blow-off (1 sec), G connection	13
	Function AVM™2 NC, automatic blow-off (1 sec), G connection	14
	Function AVM™2 NC 2 (power off - NC), G connection	15
	Function AVM™2 NO, automatic blow-off (1 sec), NPSF connection	16
	Function AVM™2 NC, automatic blow-off (1 sec), NPSF connection	17
	Function AVM™2 NC 2 (power off - NC), NPSF connection	18
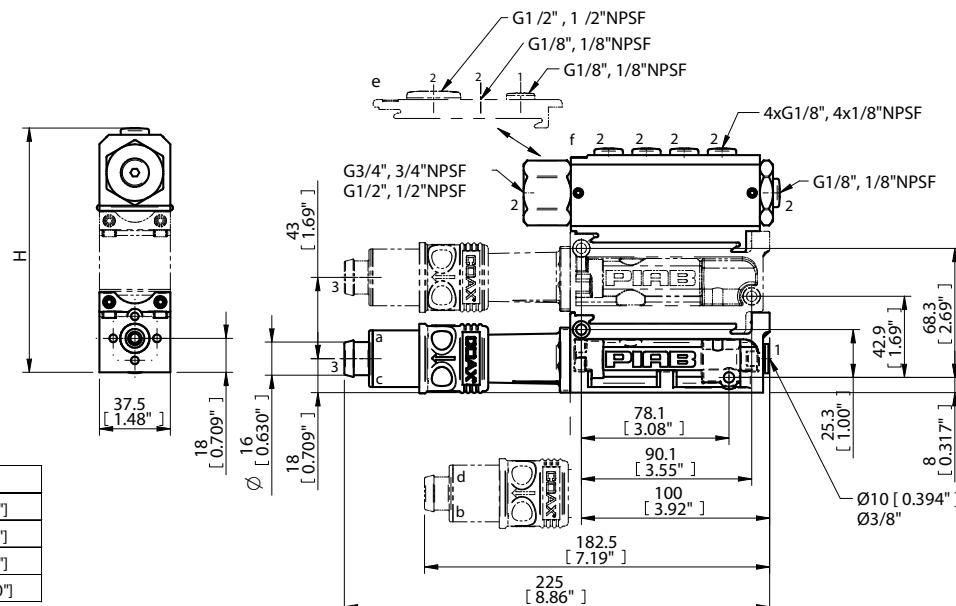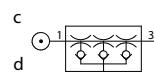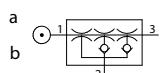
For detailed information on AVM™2, CU and ES, see separate datasheets.

Example	Ordering number
Housing, connection Ø 10 mm Pi48-2X1, Connection module, low G threads	P5010 00 AI 01

COAX	Conn.	H
x1	e	50,5 / [1,99"]
x1	f	86,5/ [3,41"]
x2	e	93,5 / [3,68"]
x2	f	129,5 / [5,10"]

Ordering information, accessories

Description	Art. No.
Common feed adapter Ø10 mm P5010	0117762
Mounting rail DIN P5010	0117763
Mounting rail x1 P5010	0118209
Mounting rail x2 P5010	0118208
Vacuum gauge 100 -kPa	0112531

Vacuum gauge recommended with high connection modules (02/04)

P5010 AVM™2

- ▶ P5010 multistage ejector with Pi, Si or Xi COAX® push-in cartridge(s).
- ▶ AVM™2, Automatic Vacuum Management, unit with built-in control and monitoring functions.
- ▶ Valves for vacuum on/off, blow-off, blow-off flow control and non-return valve.
- ▶ Option with Normally Closed "fail safe" on/off valve (NC). It changes to an open valve if power is lost and vacuum will be generated. A conventional normally closed on/off valve (NC 2) is also available. It stays closed if electrical power is lost or removed.
- ▶ Option with automatic blow-off (1 sec) reduces number of outputs needed from PLC or I/O box.
- ▶ Enhanced blow-off effect thanks to a directed blow-off pipe.
- ▶ Analogue vacuum sensor with two digital outputs, 16 pre-set combinations of signal levels to choose from.
- ▶ Digital display with "-kPa" or "-inHg" as unit options.
- ▶ Integrated energy saving function (ES) that minimizes the air consumption in sealed systems. The ES function can be activated manually or via a signal (signal override).
- ▶ Three-colour LED status indicators for valves, signal outputs and ES.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level *)	dBA	68–71
Temperature range	°C	0–50
Weight	g	430–720
Signal range, adjustable	-kPa	20–80
Hysteresis	kPa	7±1
Material		AL,CuZn, NBR, PA, SS, PE, PMMA
Voltage	VDC	24 (22–28)
Ripple, max.	V_p	$1V_{rms}$
Current consumption, nominal	mA	110
Safety classification		IP65 [NEMA 4]
Current, max. output load		100
Display		LED indicators, numeric
Flow. blow-off	Nl/s	0–7.5

*) At vacuum level 40 -kPa and at recommended feed pressure for respective push-in cartridge.
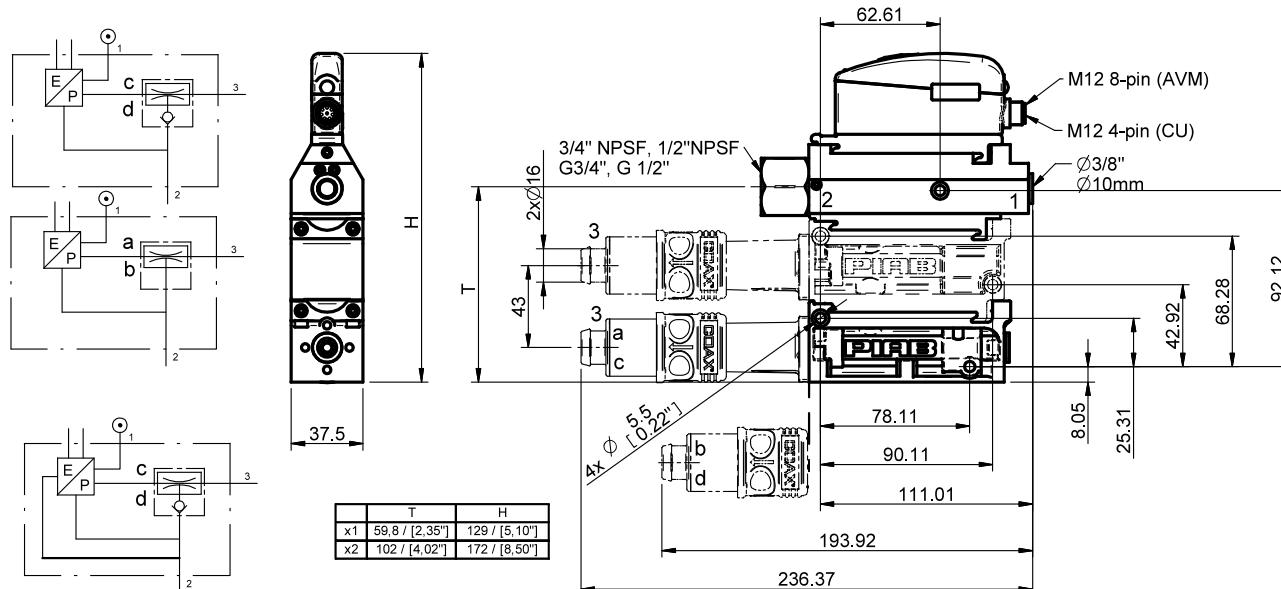
Ordering information

1. Select Housing	P5010 code
Housing, connection Ø 10 mm	00
Housing, connection Ø 3/8"	01

	2. COAX® push-in modules	P5010 Code
d	COAX® push-in module Pi48-2X1, non-return valve	AK
c	COAX® push-in module Pi48-3X1, non-return valve	AL
d	COAX® push-in module Pi48-2X2, non-return valve	AO

	2. COAX® push-in modules	P5010 Code
c	COAX® push-in module Pi48-3X2, non-return valve	AP
d	COAX® push-in module Si32-2X1, non-return valve	AC
c	COAX® push-in module Si32-3X1, non-return valve	AD
d	COAX® push-in module Si32-2X2, non-return valve	AG
c	COAX® push-in module Si32-3X2, non-return valve	AH
d	COAX® push-in module Xi40-2X1, non-return valve	AS
c	COAX® push-in module Xi40-3X1, non-return valve	AT
d	COAX® push-in module Xi40-2X2, non-return valve	AW
c	COAX® push-in module Xi40-3X2, non-return valve	AX

3. Functions	P5010 Code
Function AVM™2 NO, G connection	05
Function AVM™2 NC (power off - NO), G connection	06
Function AVM™2 NO, NPSF connection	07
Function AVM™2 NC (power off - NO), NPSF connection	08
Function AVM™2 NO, automatic blow-off (1 sec), G connection	13
Function AVM™2 NC, automatic blow-off (1 sec), G connection	14
Function AVM™2 NC 2 (power off - NC), G connection	15
Function AVM™2 NO, automatic blow-off (1 sec), NPSF connection	16
Function AVM™2 NC, automatic blow-off (1 sec), NPSF connection	17
Function AVM™2 NC 2 (power off - NC), NPSF connection	18

Example	Ordering number
Housing, connection Ø 10 mm Pi48-2X1, Function AVM™2, NO, G-threads	P5010 00 AK 05

	T	H
x1	59,8 / [2,35"]	129 / [5,10"]
x2	102 / [4,02"]	172 / [8,50"]

Ordering information, accessories

Description	Art. No.
Cable M12 8-pin female, PUR, L=2m	0110238
Cable M12 8-pin female, PUR, L=5m	0117746
Y-cable M12 8-pin female, 2xM12 4-pin male, PNP, PUR, L=2m	0118407
Y-cable M12 8-pin female, 2xM12 5-pin male, NPN, PUR, L=2m	0120229

Specifications subject to change without notice.

P5010 CU

▶ P5010 multistage ejector with Pi, Si or Xi COAX® push-in cartridge(s).

▶ Integrated Control Unit (CU) with electric valves for vacuum on-off and blow-off control.

▶ Mechanical valve for blow-off flow adjustment.

▶ Enhanced blow-off power thanks to a directed blow-off pipe.

▶ Slim, compact, configurable and modular design.
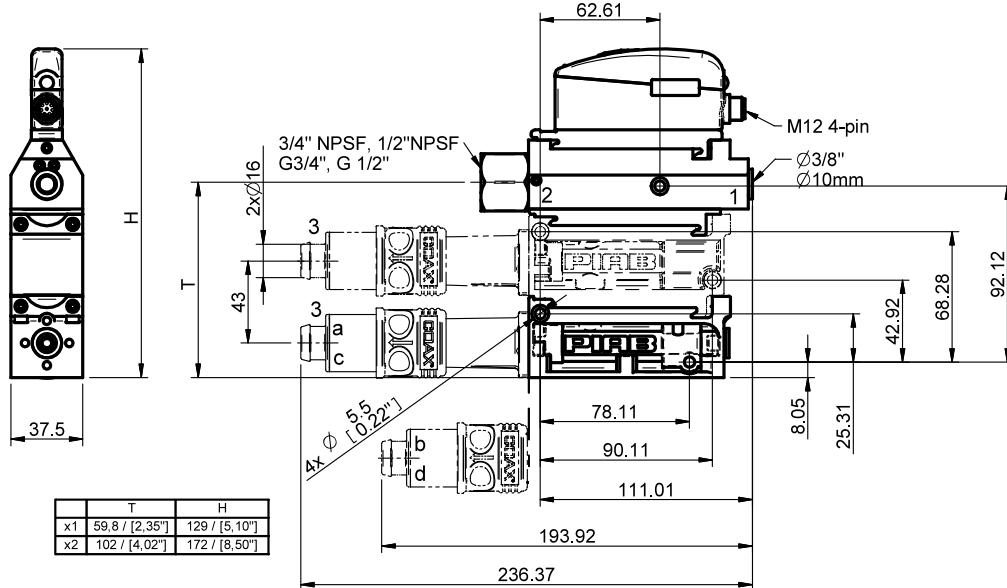
Technical data

Description	Unit	Value
Feed pressure, max	MPa	0.7
Noise level *)	dBA	68–71
Temperature range	°C	0–50
Weight	g	430–720
Material		AL,CuZn, NBR, PA, SS, PE, PMMA
Voltage	VDC	24 (22–28)
Safety classification		IP65 [NEMA4]
Humidity	%RH	90
Current consumption, nominal	mA	60
Ripple, max.	V_p	1 V_{rms}
Flow, blow-off	Nl/s	0–7.5
Function, on/off		NC

*) At vacuum level 40 -kPa and at recommended feed pressure for respective push-in cartridge.

Ordering information

1. Select Housing	P5010 code
Housing, connection Ø 10 mm	00
Housing, connection Ø 3/8"	01

	2. COAX® push-in modules	P5010 Code
b	COAX® push-in module Pi48-2X1	AI
a	COAX® push-in module Pi48-3X1	AJ
d	COAX® push-in module Pi48-2X1, non-return valve	AK
c	COAX® push-in module Pi48-3X1, non-return valve	AL
b	COAX® push-in module Pi48-2X2	AM
a	COAX® push-in module Pi48-3X2	AN
d	COAX® push-in module Pi48-2X2, non-return valve	AO
c	COAX® push-in module Pi48-3X2, non-return valve	AP
b	COAX® push-in module Si32-2X1	AA
a	COAX® push-in module Si32-3X1	AB
d	COAX® push-in module Si32-2X1, non-return valve	AC
c	COAX® push-in module Si32-3X1, non-return valve	AD
b	COAX® push-in module Si32-2X2	AE
a	COAX® push-in module Si32-3X2	AF
d	COAX® push-in module Si32-2X2, non-return valve	AG
c	COAX® push-in module Si32-3X2, non-return valve	AH
b	COAX® push-in module Xi40-2X1	AQ
a	COAX® push-in module Xi40-3X1	AR
d	COAX® push-in module Xi40-2X1, non-return valve	AS
c	COAX® push-in module Xi40-3X1, non-return valve	AT
b	COAX® push-in module Xi40-2X2	AU
a	COAX® push-in module Xi40-3X2	AV
d	COAX® push-in module Xi40-2X2, non-return valve	AW
c	COAX® push-in module Xi40-3X2, non-return valve	AX

3. Function	P5010 Code
Function CU NC, G connection	09
Function CU NC, NPSF connection	10

Example	Ordering number
Housing, connection Ø 10 mm Pi48-2X2, non-return valve, function CU NC G threads	P5010 00 AO 09

	T	H
x1	59,8 / [2,35"]	129 / [5,10"]
x2	102 / [4,02"]	172 / [8,50"]

Ordering information, accessories

Description	Art. No.
Cable M12 4-pin female, PUR, L=5m*	0121817
Cable M12 4-pin female, M12 4-pin male, PUR, L=2m	0118322

*) Pin No. 1 is not used.

Specifications subject to change without notice.

P5010 ES

- ▶ P5010 multistage ejector with Pi, Si or Xi COAX® push-in cartridge.
- ▶ Integrated air-saving function (ES) that minimises the air consumption by controlling the incoming air flow to the pump.
- ▶ Operates on a roughly similar system to that of a thermostat in a heating system.
- ▶ Large hysteresis is recommended for sealed vacuum handling applications such as metal sheet, glass or plastic handling.
- ▶ Small hysteresis is recommended if a very accurate vacuum level has to be maintained in the process.
- ▶ Adjustable ES switch level.
- ▶ Pneumatic function.
- ▶ Configurable and modular design.
- ▶ Separate port with built-in blow-off check valve. High flow capacity to maximize efficiency to release an object.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Feed pressure, minimum to break away for blow-off	MPa	0.4*
Noise level	dBA	68-71
Material		NBR, PA, Al, SS, POM, CuZn
Temperature range	°C	0-60
Weight	g	640-890
Signal range	-kPa	15-99
Function		2/2 NO
Flow, blow-off at 0.6 MPa	Nl/s	7.5

*For Pi cartridge(s) - do not use common feed pressure for pump and blow-off.

Technical data, specific
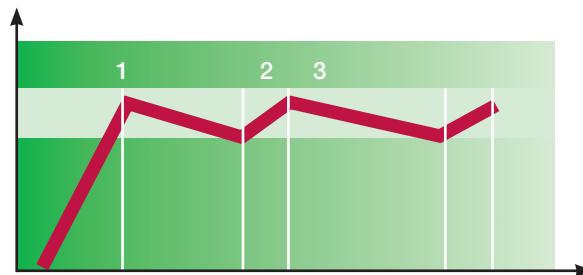
Description	Unit	Value	
		ES small hysteresis	ES large hysteresis
Hysteresis	kPa	1-6	5-10

Performance tables

Depending upon choice of COAX® cartridge, applicable performance data of the P5010 ES can be found in the tables for vacuum flow and evacuation time for models P5010 Pi, Si and Xi.

Function

A vacuum-controlled valve shuts off the flow of compressed air to the pump when the pre-set vacuum level is reached (1). The vacuum level is set by a knob. Because of minor leakage in a vacuum system the vacuum level drops, and after a while the start-up level of the valve is reached (2). Then the pump will start and work until the shut-off level is reached again (3), etc.

Connection for ES function*

A = Vacuum pump with non-return valve
B = Vacuum switch
C = Feed valve
D = Suction cup
E = Vacuum filter
*Connection for blow-off found with dimensional drawing below.
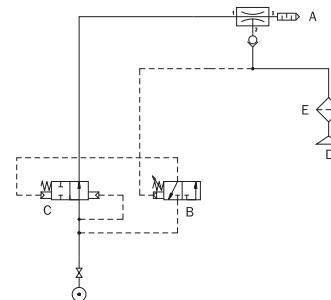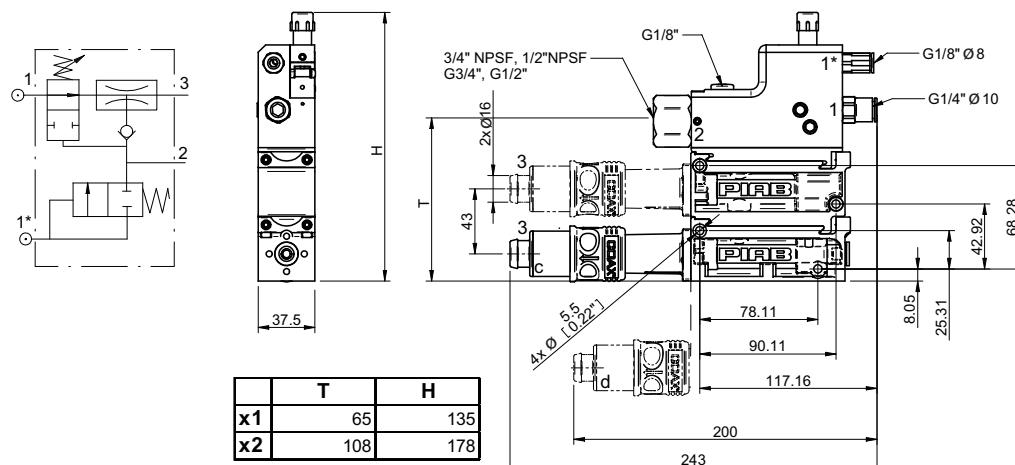
Ordering information

1. Select Housing	P5010 code
Housing, connection Ø 10 mm	00
Housing, connection Ø 3/8"	01

	2. COAX® push-in modules	P5010 Code
d	COAX® push-in module Pi48-2X1, non-return valve	AK
c	COAX® push-in module Pi48-3X1, non-return valve	AL
d	COAX® push-in module Pi48-2X2, non-return valve	AO
c	COAX® push-in module Pi48-3X2, non-return valve	AP
d	COAX® push-in module Si32-2X1, non-return valve	AC
c	COAX® push-in module Si32-3X1, non-return valve	AD
d	COAX® push-in module Si32-2X2, non-return valve	AG
c	COAX® push-in module Si32-3X2, non-return valve	AH
d	COAX® push-in module Xi40-2X1, non-return valve	AS
c	COAX® push-in module Xi40-3X1, non-return valve	AT
d	COAX® push-in module Xi40-2X2, non-return valve	AW
c	COAX® push-in module Xi40-3X2, non-return valve	AX

3. Function	P5010 Code
Function P5010 ES 2/2 NO large hysteresis	11
Function P5010 ES 2/2 NO small hysteresis	12

Example	Ordering number
Housing, connection Ø 10 mm Pi48-2X1, non-return valve, Function P5010 ES 2/2 NO small hysteresis	P5010 00 AK 12

	T	H
x1	65	135
x2	108	178

Specifications subject to change without notice.

Vacuum pumps Medium

P6010

- ▶ Patented COAX® technology.
- ▶ Available with a three-stage COAX® cartridge MIDI. Choose an Si cartridge for extra vacuum flow, a Pi cartridge for high performance at low feed pressure or an Xi cartridge when high flow and deep vacuum is needed.
- ▶ Substantially lower air consumption as compared to conventional ejectors.
- ▶ Modular design.
- ▶ Available with multiple connection alternatives.
- ▶ Low noise level.
- ▶ Short evacuation time.

Supplied with a vacuum gauge.

Technical data

Description	Unit	Value
Feed pressure, max	MPa	0.7
Noise level*	dBA	60–67
Temperature range	°C	-10–80
Weight	g	1700–1800
Material		Al, PA, NBR, SS, TPE

*At vacuum level 40 -kPa and feed pressure 0.3 MPa.

Vacuum flow

COAX® cartridge	Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	90	
Pi48-3	0.30	2.0	5.6	2.5	1.8	1.1	0.65	0.50	0.35	0.25	0.10	—	90
Si32-3	0.60	1.75	6.0	3.5	2.6	1.7	0.90	0.60	0.50	0.35	—	—	75/52*
Xi40-3	0.45	1.83	5.9	3.0	2.0	1.3	0.73	0.58	0.43	0.32	0.18	0.03	95/51*

Values for one COAX® cartridge. Mulitply with number of cartidges. For vacuum flows at other feed pressures, see section Vacuum cartridges/integration.
* COAX® cartridge module, 1x flap valve

Evacuation time

| COAX® cartridge	Feed pressure MPa	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
			10	20	30	40	50	60	70	80	90	
Pi48-3	0.30	2.0	0.020	0.060	0.12	0.25	0.45	0.70	1.0	1.6	4.0	90
Si32-3	0.60	1.75	0.020	0.050	0.10	0.18	0.33	0.53	0.80	—	—	75/52*
Xi40-3	0.45	1.83	0.022	0.062	0.12	0.22	0.37	0.57	0.84	1.2	2.2	95/51*

Values for one COAX® cartridge. Divide with number of cartidges. For evacuation times at other feed pressures, see section Vacuum cartridges/integration.
* COAX® cartridge module, 1x flap valve

Vacuum pumps Medium

Blow flow

COAX® cartridge	Feed pressure	Air consumption	Blow flow (Nl/s) at different pressure levels (kPa)												Max pressure
	MPa	Nl/s	0	20	40	60	70	80	90	100	110	120	130	140	kPa
Pi48-3	0.6	3.55	9.5	6.5	6.0	5.3	4.7	4.6	4.6	4.6	4.5	4.3	4.0	3.7	140
Si32-3	0.6	1.75	7.8	4.6	3.3	2.7	2.3	1.8	—	—	—	—	—	—	80
Xi40-3	0.6	2.33	8.4	5.1	3.92	3.39	3.23	2.95	2.58	—	—	—	—	—	90

Values for one COAX® cartridge. Multiply with number of cartridges.

Vacuum flow

Evacuation time

Blow flow

Ordering information

1. Housing	P6010 Code
Housing	P6010

|	2. COAX® cartridge modules	P6010 code
	COAX® cartridge module blind x4	AA
a	COAX® cartridge module Pi48-3X1	AJ
a	COAX® cartridge module Pi48-3X2	AK
a	COAX® cartridge module Pi48-3X3	AL
a	COAX® cartridge module Pi48-3X4	AM
b	COAX® cartridge module Pi48-3X1, non-return valve	AN
b	COAX® cartridge module Pi48-3X2, non-return valve	AO
b	COAX® cartridge module Pi48-3X3, non-return valve	AP
b	COAX® cartridge module Pi48-3X4, non-return valve	AQ
a	COAX® cartridge module Si32-3X1	AB
a	COAX® cartridge module Si32-3X2	AC
a	COAX® cartridge module Si32-3X3	AD
a	COAX® cartridge module Si32-3X4	AE
b	COAX® cartridge module Si32-3X1, non-return valve	AF
b	COAX® cartridge module Si32-3X2, non-return valve	AG
b	COAX® cartridge module Si32-3X3, non-return valve	AH
b	COAX® cartridge module Si32-3X4, non-return valve	AI
a	COAX® cartridge module Si32-3X1, 1x flap valve	BB
a	COAX® cartridge module Si32-3X2, 1x flap valve	BC
a	COAX® cartridge module Si32-3X3, 1x flap valve	BD
a	COAX® cartridge module Si32-3X4, 1x flap valve	BE
a	COAX® cartridge module Xi40-3X1	AR
a	COAX® cartridge module Xi40-3X2	AS
a	COAX® cartridge module Xi40-3X3	AT
a	COAX® cartridge module Xi40-3X4	AU
b	COAX® cartridge module Xi40-3X1, non-return valve	AV
b	COAX® cartridge module Xi40-3X2, non-return valve	AW
b	COAX® cartridge module Xi40-3X3, non-return valve	AX
b	COAX® cartridge module Xi40-3X4, non-return valve	AY
a	COAX® cartridge module Xi40-3X1, 1x flap valve	BJ
a	COAX® cartridge module Xi40-3X2, 1x flap valve	BK
a	COAX® cartridge module Xi40-3X3, 1x flap valve	BL
a	COAX® cartridge module Xi40-3X4, 1x flap valve	BM

Specifications subject to change without notice.

3. Mounting	P6010 Code
Mounting T-slot, Cover plate with PIAB label	01

4. Select Cover plate and Function	P6010 Code
Cover plate G thread connections, cover plate plain	LA
Cover plate NPSF thread connections, cover plate plain	LJ
Cover plate Classic G thread connections, cover plate plain	LI
Cover plate Classic NPSF thread connections, cover plate plain	LK
Function PCC Vacuum, cover plate G thread connections	LB
Function PCC Vacuum, cover plate NPSF thread connections	LT
Function AVM™2 NO, cover plate G thread connections	LU
Function AVM™2 NC, cover plate G thread connections	LV
Function AVM™2 NO, cover plate NPSF thread connections	LW
Function AVM™2 NC, cover plate NPSF thread connections	LX
Function CU NC, cover plate G thread connections	LY
Function CU NC, cover plate NPSF thread connections	LZ

AVM™2 NO = Normally open valve for vacuum on/off, AVM™2 NC = Normally closed valve for vacuum on/off. CU NC = Normally closed valve for vacuum on/off. For detailed information on Classic plate, PCC, AVM™2 and CU, see separate datasheets.

5. Select Connections for vacuum and exhaust	P6010 Code
Connections 2x G1"	51
Connections 2x G1", silencer 1"	52
Connections 2x G3/4"	53
Connections 2x G3/4", silencer 3/4"	54
Connections 2x 1" NPSF	55
Connections 2x 1" NPSF, silencer 1"	56
Connections 2x 3/4" NPSF	57
Connections 2x 3/4" NPSF, silencer 3/4"	58

Example	Ordering number
P6010 Pi48-3X1, Mounting T-slot, Cover plate G-threads, Connections 2x G1" and silencer 1"	P6010 AJ 01 LA 52

Ordering information, accessories

Description	Art. No.
Silencer G1"	0112499
Silencer 1" NPSF	0113003
Manometer 250 kPa	0112533
Manometer 1 MPa	0112532

P6010 Classic

▶ Patented COAX® technology
▶ Connections can be made on the long side of the ejector
▶ Retro-compatible withPIAB's Classic model in regard to mounting

Supplied with a vacuum gauge.

Technical data

Description	Unit	Value
Feed pressure, max	MPa	0.7
Noise level*	dBA	50–67
Temperature range	°C	-10–80
Weight	g	1700–1800
Material		Al, PA, NBR, SS, TPE

At vacuum level 40 -kPa and feed pressure 0.3–0.6 MPa.
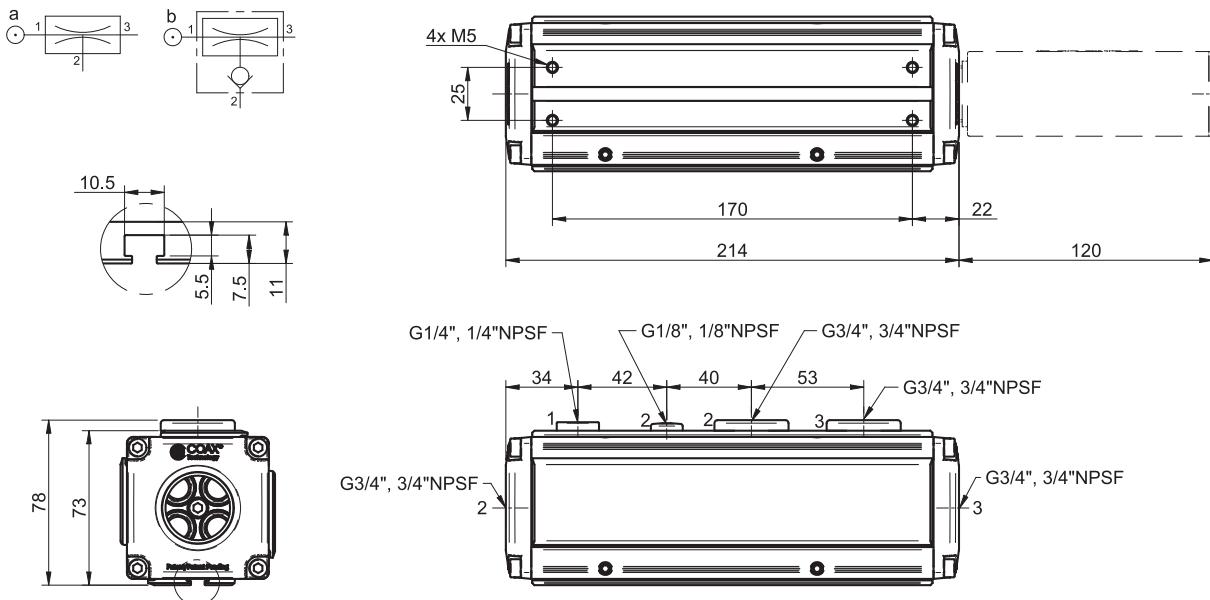
Performance tables

Depending upon choice of COAX® cartridge, performance data of the P6010 Classic can be found in the tables for vacuum flow, evacuation time and blow flow for models P6010 Pi, Si and Xi.

Ordering information

1. Housing	P6010 Code
Housing	P6010

	2. COAX® cartridge modules	P6010 code
	COAX® cartridge module blind x4	AA
a	COAX® cartridge module Pi48-3X1	AJ
a	COAX® cartridge module Pi48-3X2	AK
a	COAX® cartridge module Pi48-3X3	AL
a	COAX® cartridge module Pi48-3X4	AM
b	COAX® cartridge module Pi48-3X1, non-return valve	AN
b	COAX® cartridge module Pi48-3X2, non-return valve	AO
b	COAX® cartridge module Pi48-3X3, non-return valve	AP
b	COAX® cartridge module Pi48-3X4, non-return valve	AQ
a	COAX® cartridge module Si32-3X1	AB
a	COAX® cartridge module Si32-3X2	AC
a	COAX® cartridge module Si32-3X3	AD
a	COAX® cartridge module Si32-3X4	AE
b	COAX® cartridge module Si32-3X1, non-return valve	AF
b	COAX® cartridge module Si32-3X2, non-return valve	AG
b	COAX® cartridge module Si32-3X3, non-return valve	AH
b	COAX® cartridge module Si32-3X4, non-return valve	AI
a	COAX® cartridge module Si32-3X1, 1x flap valve	BB
a	COAX® cartridge module Si32-3X2, 1x flap valve	BC
a	COAX® cartridge module Si32-3X3, 1x flap valve	BD
a	COAX® cartridge module Si32-3X4, 1x flap valve	BE
a	COAX® cartridge module Xi40-3X1	AR
a	COAX® cartridge module Xi40-3X2	AS
a	COAX® cartridge module Xi40-3X3	AT
a	COAX® cartridge module Xi40-3X4	AU
b	COAX® cartridge module Xi40-3X1, non-return valve	AV
b	COAX® cartridge module Xi40-3X2, non-return valve	AW

Specifications subject to change without notice.

	2. COAX® cartridge modules	P6010 code
b	COAX® cartridge module Xi40-3X3, non-return valve	AX
b	COAX® cartridge module Xi40-3X4, non-return valve	AY
a	COAX® cartridge module Xi40-3X1, 1x flap valve	BJ
a	COAX® cartridge module Xi40-3X2, 1x flap valve	BK
a	COAX® cartridge module Xi40-3X3, 1x flap valve	BL
a	COAX® cartridge module Xi40-3X4, 1x flap valve	BM

3. Mounting	P6010 Code
Mounting T-slot, Cover plate with PIAB label	01

4. Cover plates	P6010 Code
Cover plate Classic G thread connections, cover plate plain	LI
Cover plate Classic NPSF thread connections, cover plate plain	LK

5. Connections for vacuum and exhaust	P6010 Code
Connections 2x G3/4"	53
Connections 2x G3/4", silencer 3/4"	54
Connections 2x 3/4" NPSF	57
Connections 2x 3/4" NPSF, silencer 3/4"	58

Example	Ordering number
P6010 Pi48-3X4, Mounting T-slot, Cover plate Classic G-threads, Connections 2x G3/4" and silencer 3/4"	P6010 AM 01 LI 54

Ordering information, accessories

Description	Art. No.
Manometer 250 kPa	0112533
Manometer 1 MPa	0112532
Silencer G3/4"	3216002

P6010 AVM™2

▶ COAX® P6010 multistage ejector with Pi, Si or Xi vacuum cartridge(s).

▶ AVM™2, Automatic Vacuum Management, unit with built-in control and monitoring functions.

▶ Valves for vacuum on/off and blow-off.

▶ Special safety feature for the version with normally closed on/off valve. It changes to an open valve if power is lost (E-stop).

▶ Analogue vacuum sensor with two digital outputs, 16 pre-set combinations of signal levels to choose from.

▶ Digital display with "-kPa" or "-inHg" as unit options.

▶ Integrated energy saving function (ES) that minimizes the air consumption in sealed systems. The ES function can be activated manually or via a signal (signal override).

▶ Three-colour LED status indicators for valves, signal outputs and ES.

▶ On AVM™2 units for P6010, there is an option to blow from a separate port to maximize blow-off efficiency in the vacuum system.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level, range	dBA	50–70
Material		Al, PA, NBR, SS, PMMA, TPE
Temperature range	°C	0–50
Weight, range	g	2000–2100
Signal range, adjustable	-kPa	20–80
Hysteresis	kPa	7±1
Voltage	VDC	24 (22–28)
Safety classification		IP65 [NEMA 4]
Current, max. output load	mA	100
Humidity	%RH	90
Current consumption, nominal	mA	110
Ripple, max.	V_P	1 V_{rms}
Display		LED indicators, numeric
Flow, blow-off	Nl/s	0–7.5

Technical data, specific
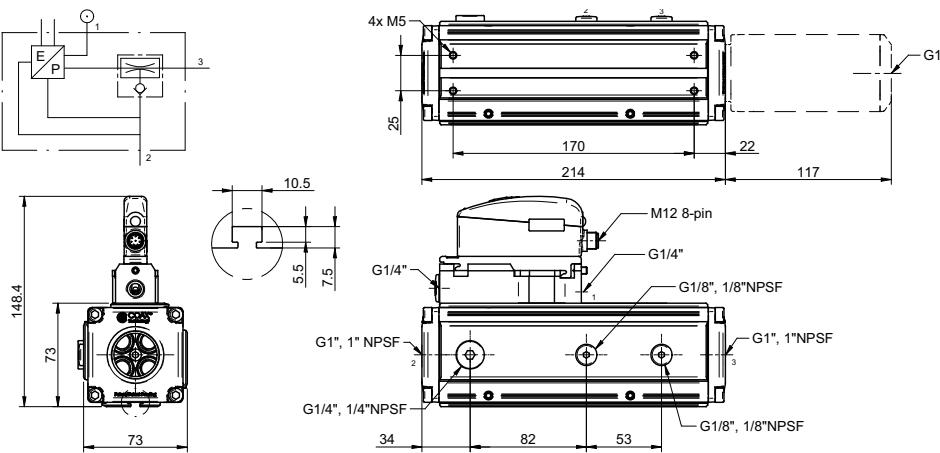
Description	Value	
	LU, LW, MA, MC (P6010 Code)	LV, LX, MB, MD (P6010 Code)
Function, on/off	NO	NC

Performance tables

Depending upon choice of COAX® cartridge, applicable performance data of the P6010 AVM™2 can be found in the tables for vacuum flow and evacuation time for models P6010 Pi, Si and Xi.

Ordering information

1. Housing	P6010 Code
Housing	P6010

2. COAX® cartridge modules	P6010 code
COAX® cartridge module Pi48-3X1, non-return valve	AN
COAX® cartridge module Pi48-3X2, non-return valve	AO
COAX® cartridge module Pi48-3X3, non-return valve	AP
COAX® cartridge module Pi48-3X4, non-return valve	AQ
COAX® cartridge module Si32-3X1, non-return valve	AF
COAX® cartridge module Si32-3X2, non-return valve	AG
COAX® cartridge module Si32-3X3, non-return valve	AH
COAX® cartridge module Si32-3X4, non-return valve	AI
COAX® cartridge module Xi40-3X1, non-return valve	AV
COAX® cartridge module Xi40-3X2, non-return valve	AW
COAX® cartridge module Xi40-3X3, non-return valve	AX
COAX® cartridge module Xi40-3X4, non-return valve	AY

3. Mounting	P6010 Code
Mounting T-slot, Cover plate with PIAB label	01

4. Cover plates	P6010 Code
Function AVM™2 NO, cover plate G thread connections	LU
Function AVM™2 NC, cover plate G thread connections	LV
Function AVM™2 NO, cover plate NPSF thread connections	LW
Function AVM™2 NC, cover plate NPSF thread connections	LX
Function AVM™2 NO, cover plate G thread connections, separated blow-off	MA
Function AVM™2 NC, cover plate G thread connections, separated blow-off	MB
Function AVM™2 NO, cover plate NPSF thread connections, separated blow-off	MC
Function AVM™2 NC, cover plate NPSF thread connections, separated blow-off	MD

NO = Normally open valve for vacuum on/off, NC = Normally closed valve for vacuum on/off.

5. Select Connections for vacuum and exhaust	P6010 Code
Connections 2x G1"	51
Connections 2x G1", silencer 1"	52
Connections 2x G3/4"	53
Connections 2x G3/4", silencer 3/4"	54
Connections 2x 1" NPSF	55
Connections 2x 1" NPSF, silencer 1"	56
Connections 2x 3/4" NPSF	57
Connections 2x 3/4" NPSF, silencer 3/4"	58

Example	Ordering number
P6010 Si32-3X2, non-return valve, Mounting T-slot, Cover plate with AVM™2 NO function and G-threads, Connections 2x G1" and silencer 1"	P6010 AG 01 LU 52

Ordering information, accessories

Description	Art. No.
Silencer G1"	0112499
Silencer 1" NPSF	0113003
Manometer 1 MPa	0112532
Cable M12 8-pin female, PUR, L=2m	0110238
Cable M12 8-pin female, PUR, L=5m	0117746
Y-cable M12 8-pin female, 2xM12 4-pin male, PNP, PUR, L=2m	0118407
Y-cable M12 8-pin female, 2xM12 5-pin male, NPN, PUR, L=2m	0120229

Specifications subject to change without notice.

P6010 CU

▶ COAX® P6010 multistage ejector with Pi, Si or Xi vacuum cartridge(s).

▶ Integrated Control Unit (CU) with electric valves for vacuum on-off and blow-off control.

▶ Mechanical valve for blow-off flow adjustment.

▶ Configurable and modular design.

▶ On CU units for P6010, there is an option to blow from a separate port to maximize blow-off efficiency in the vacuum system.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level, range	dBA	50–70
Material		Al, PA, NBR, SS, PMMA, TPE
Temperature range	°C	0–50
Weight, range	g	2000–2100
Function, on/off		NC
Voltage	VDC	24 (22–28)
Safety classification		IP65 [NEMA 4]
Humidity	%RH	90
Current consumption, nominal	mA	60
Ripple, max.	VP	1 V_{rms}
Flow, blow-off	Nl/s	0–7.5

Performance tables

Depending upon choice of COAX® cartridge, applicable performance data of the P6010 CU can be found in the tables for vacuum flow, evacuation time and blow flow for models P6010 Pi, Si and Xi.

Ordering information

1. Housing	P6010 Code
Housing	P6010

	2. COAX® cartridge modules	P6010 code
	COAX® cartridge module blind x4	AA
a	COAX® cartridge module Pi48-3X1	AJ
a	COAX® cartridge module Pi48-3X2	AK
a	COAX® cartridge module Pi48-3X3	AL
a	COAX® cartridge module Pi48-3X4	AM
b	COAX® cartridge module Pi48-3X1, non-return valve	AN
b	COAX® cartridge module Pi48-3X2, non-return valve	AO
b	COAX® cartridge module Pi48-3X3, non-return valve	AP
b	COAX® cartridge module Pi48-3X4, non-return valve	AQ
a	COAX® cartridge module Si32-3X1	AB
a	COAX® cartridge module Si32-3X2	AC
a	COAX® cartridge module Si32-3X3	AD
a	COAX® cartridge module Si32-3X4	AE
b	COAX® cartridge module Si32-3X1, non-return valve	AF
b	COAX® cartridge module Si32-3X2, non-return valve	AG
b	COAX® cartridge module Si32-3X3, non-return valve	AH
b	COAX® cartridge module Si32-3X4, non-return valve	AI
a	COAX® cartridge module Xi40-3X1	AR
a	COAX® cartridge module Xi40-3X2	AS
a	COAX® cartridge module Xi40-3X3	AT
a	COAX® cartridge module Xi40-3X4	AU

	2. COAX® cartridge modules	P6010 code
b	COAX® cartridge module Xi40-3X1, non-return valve	AV
b	COAX® cartridge module Xi40-3X2, non-return valve	AW
b	COAX® cartridge module Xi40-3X3, non-return valve	AX
b	COAX® cartridge module Xi40-3X4, non-return valve	AY
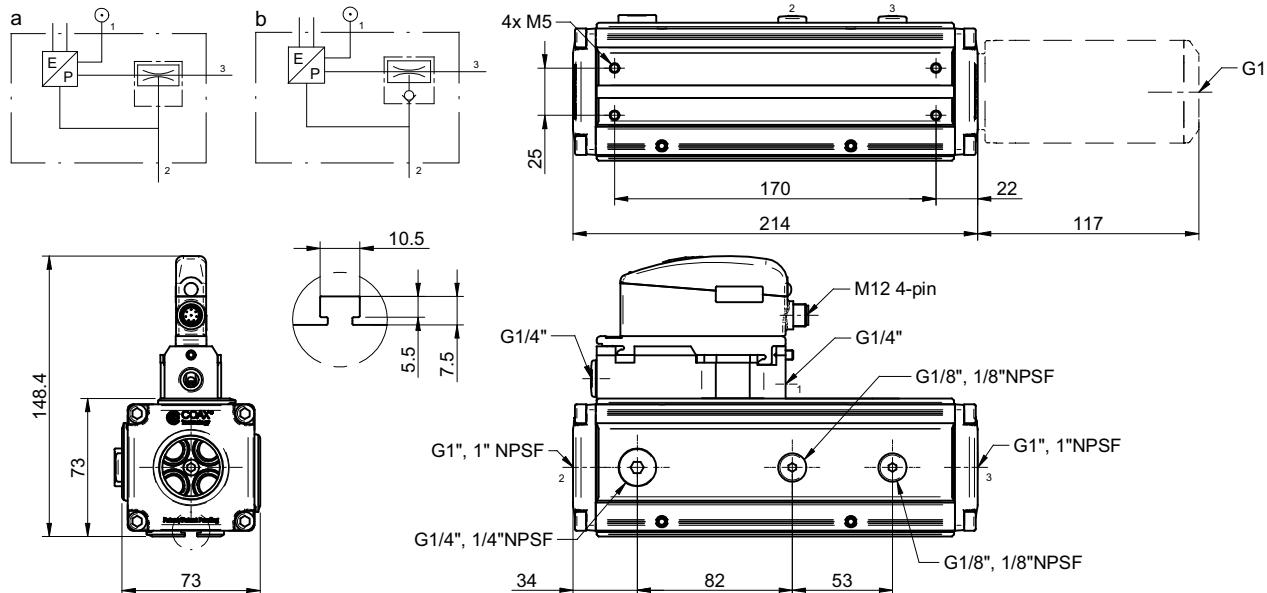
3. Mounting	P6010 Code
Mounting T-slot, Cover plate with PIAB label	01

4. Cover plates	P6010 Code
Function CU NC, cover plate G thread connections	LY
Function CU NC, cover plate NPSF thread connections	LZ
Function CU NC, cover plate G thread connections, separated blow-off	ME
Function CU NC, cover plate NPSF thread connections, separated blow-off	MF

NC = Normally closed valve for vacuum on/off.

5. Select Connections for vacuum and exhaust	P6010 Code
Connections 2x G1"	51
Connections 2x G1", silencer 1"	52
Connections 2x G3/4"	53
Connections 2x G3/4", silencer 3/4"	54
Connections 2x 1" NPSF	55
Connections 2x 1" NPSF, silencer 1"	56
Connections 2x 3/4" NPSF	57
Connections 2x 3/4" NPSF, silencer 3/4"	58

Example	Ordering number
P6010 Si32-3X2, non-return valve, Mounting T-slot, Cover plate with CU NC function and G-threads, Connections 2x G1" and silencer 1"	P6010 AG 01 LY 52

Ordering information, accessories

Description	Art. No.
Silencer G1"	0112499
Silencer 1" NPSF	0113003
Manometer 1 MPa	0112532
Cable M12 4-pin female, PUR, L=5m*	0121817
Cable M12 4-pin female, M12 4-pin male, PUR, L=2m	0118322

) Pin No. 1 is not used.

Specifications subject to change without notice.

Vacuum pumps/generators Medium

piab

P6010 PCC

- ▶ COAX® P6010 multistage ejector with Pi, Si or Xi vacuum cartridge(s).
- ▶ PPC , Piab Cruise Control, is programmable for constant vacuum level in the system
- ▶ Quick adjustment
- ▶ Easy to install in control systems
- ▶ Low power consumption, 24 VDC/120 mA
- ▶ Integrated analogue vacuum or blow-pressure sensor

Supplied with a vacuum gauge.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	1.0
Feed pressure, min.	MPa	0.12
Air consumption, internal	Nl/s	0.04
Noise level	dBA	50–70
Material		Al, CuZn, PA, NBR, SS
Temperature range	°C	3–50
Connection, vacuum & exhaust		G1"/1"NPSF
Connection, compressed air		G1/4"
Connection, regulator/exhaust		G1/8"
Voltage supply	VDC	24 (21.8–26.4)
Voltage signal, input	VDC	0–10
Safety classification		IP65
Current consumption	mA	30
Electric connection		M12 5-pin male
Pressure drop	MPa	0.1
Linearity	%FS	<1.5
Hysteresis	%FS	<0.5
Repeatability	%FS	<0.5
Regulator operating range, vacuum level	-kPa	0-90
Input impedance, signal in	kΩ	55
Nominal flow rate (0.6 MPa in, 0.1 Mpa P)	Nl/s	18.3
Outlet pressure, to vacuum pump	MPa	0.02-0.9
Particle size, max.	μm	20

The design of PCC requires that the inlet pressure is 0.1 MPa higher than the outlet pressure.

Performance tables

Depending upon choice of COAX® Cartridge, applicable performance data of the P6010 PCC can be found in the tables for vacuum flow and evacuation time for models P6010 Pi, Si and Xi.

Ordering information

1. Housing	P6010 Code
Housing	P6010

	2. COAX® cartridge modules	P6010 code
	COAX® cartridge module blind x4	AA
a	COAX® cartridge module Pi48-3X1	AJ
a	COAX® cartridge module Pi48-3X2	AK
a	COAX® cartridge module Pi48-3X3	AL
a	COAX® cartridge module Pi48-3X4	AM
b	COAX® cartridge module Pi48-3X1, non-return valve	AN
b	COAX® cartridge module Pi48-3X2, non-return valve	AO
b	COAX® cartridge module Pi48-3X3, non-return valve	AP
b	COAX® cartridge module Pi48-3X4, non-return valve	AQ
a	COAX® cartridge module Si32-3X1	AB
a	COAX® cartridge module Si32-3X2	AC
a	COAX® cartridge module Si32-3X3	AD

Specifications subject to change without notice.

	2. COAX® cartridge modules	P6010 code
a	COAX® cartridge module Si32-3X4	AE
b	COAX® cartridge module Si32-3X1, non-return valve	AF
b	COAX® cartridge module Si32-3X2, non-return valve	AG
b	COAX® cartridge module Si32-3X3, non-return valve	AH
b	COAX® cartridge module Si32-3X4, non-return valve	AI
a	COAX® cartridge module Xi40-3X1	AR
a	COAX® cartridge module Xi40-3X2	AS
a	COAX® cartridge module Xi40-3X3	AT
a	COAX® cartridge module Xi40-3X4	AU
b	COAX® cartridge module Xi40-3X1, non-return valve	AV
b	COAX® cartridge module Xi40-3X2, non-return valve	AW
b	COAX® cartridge module Xi40-3X3, non-return valve	AX
b	COAX® cartridge module Xi40-3X4, non-return valve	AY

3. Mounting	P6010 Code
Mounting T-slot, Cover plate with PIAB label	01

4. Cover plates	P6010 Code
Function PCC Vacuum, cover plate G thread connections	LB
Function PCC Vacuum, cover plate NPSF thread connections	LT

5. Select Connections for vacuum and exhaust	P6010 Code
Connections 2x G1"	51
Connections 2x G1", silencer 1"	52
Connections 2x G3/4"	53
Connections 2x G3/4", silencer 3/4"	54
Connections 2x 1" NPSF	55
Connections 2x 1" NPSF, silencer 1"	56
Connections 2x 3/4" NPSF	57
Connections 2x 3/4" NPSF, silencer 3/4"	58

Example	Ordering number
P6010 Si32-3X2, Mounting T-slot, Cover plate with PCC vacuum function and G-threads, Connections 2x G1" and silencer 1"	P6010 AC 01 LB 52

Specifications subject to change without notice.

Ordering information, accessories

Description	Art. No.
Silencer G1"	0112499
Silencer 1" NPSF	0113003
Manometer 1 MPa	0112532
Cable M12 4-pin female PUR, 5m*	0121817

*) Pin no. 5 is not used. M12 4-pin cable will fit the M12 5-pin connector.

piCLASSIC Si32-3

▶ Patented COAX® technology inside – the most energy efficient ejector technology.

▶ The Si cartridge offers extra vacuum flow.

▶ Suitable for handling porous materials or if leakage is present.

▶ Large capacity range, available with 1 to 6 COAX® Si32 three-stage cartridges.

▶ Can be easily be upgraded with more capacity if needed.

▶ Low-weight, configurable and modular design.

▶ Easy disassembly for maintenance.

Technical data

Description	Unit	Value
Feed pressure, optimum	MPa	0.60
Feed pressure, max.	MPa	0.7
Max. vacuum	-kPa	75
Internal volume, vacuum chamber, 1-2 cartridges	cm³	140
Internal volume, vacuum chamber, 3-4 cartridges	cm³	246
Internal volume, vacuum chamber, 5-6 cartridges	cm³	353
Noise level at 40 -kPa & optimal feed pressure	dBA	66-77
Temperature range	°C	-10-80
Materials		PA, Al, SS, NBR (FKM), CuZn

Technical data, specific

Weight	Value (g)
1-2 cartridges	500-550
3-4 cartridges	720-790
5-6 cartridges	795-875
Silencer	120
Vacuum gauge	50

Vacuum flow at recommended feed pressure (0.6 MPa)

COAX® cartridge	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)							
		0	10	20	30	40	50	60	70
Si32-3 x1	1.75	6.00	3.50	2.60	1.70	0.90	0.60	0.50	0.35
Si32-3 x2	3.50	12.0	7.00	5.20	3.40	1.80	1.20	1.00	0.70
Si32-3 x3	5.25	18.0	10.5	7.80	5.10	2.70	1.80	1.50	1.10
Si32-3 x4	7.00	24.0	14.0	10.4	6.80	3.60	2.40	2.00	1.40
Si32-3 x5	8.75	25.5	15.8	12.4	8.50	4.50	3.00	2.50	2.10
Si32-3 x6	10.5	28.8	17.9	14.8	10.2	5.40	3.60	3.00	2.20
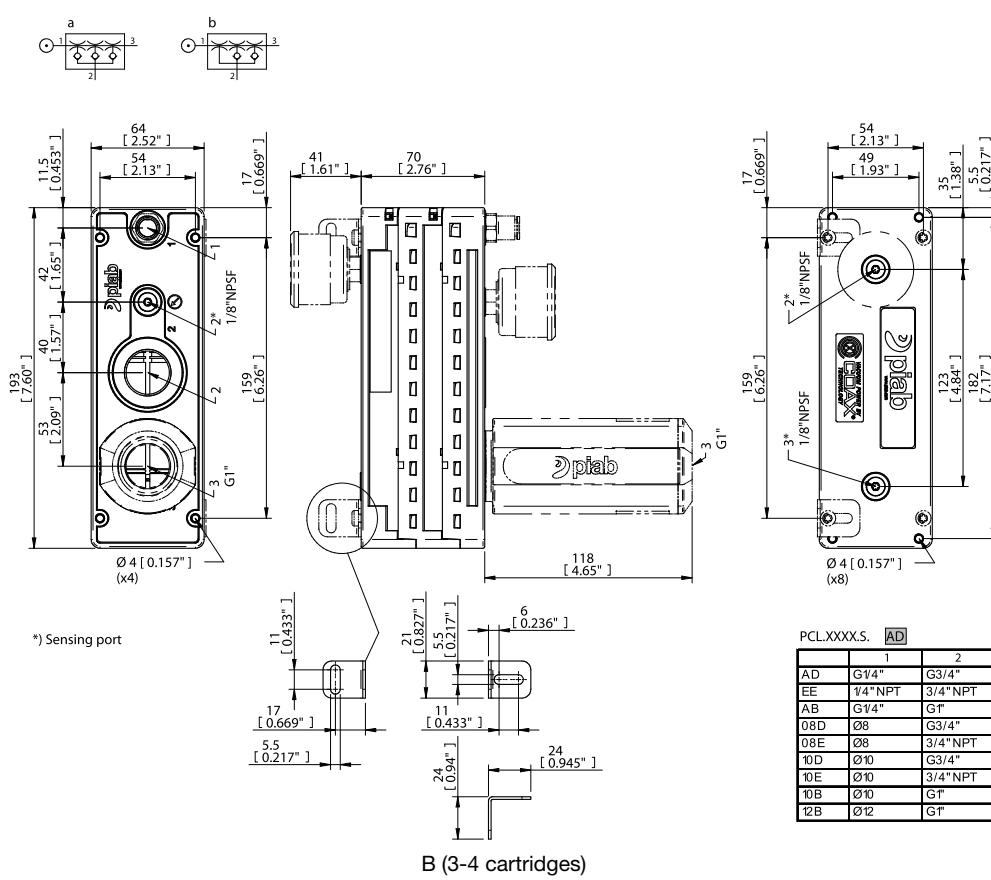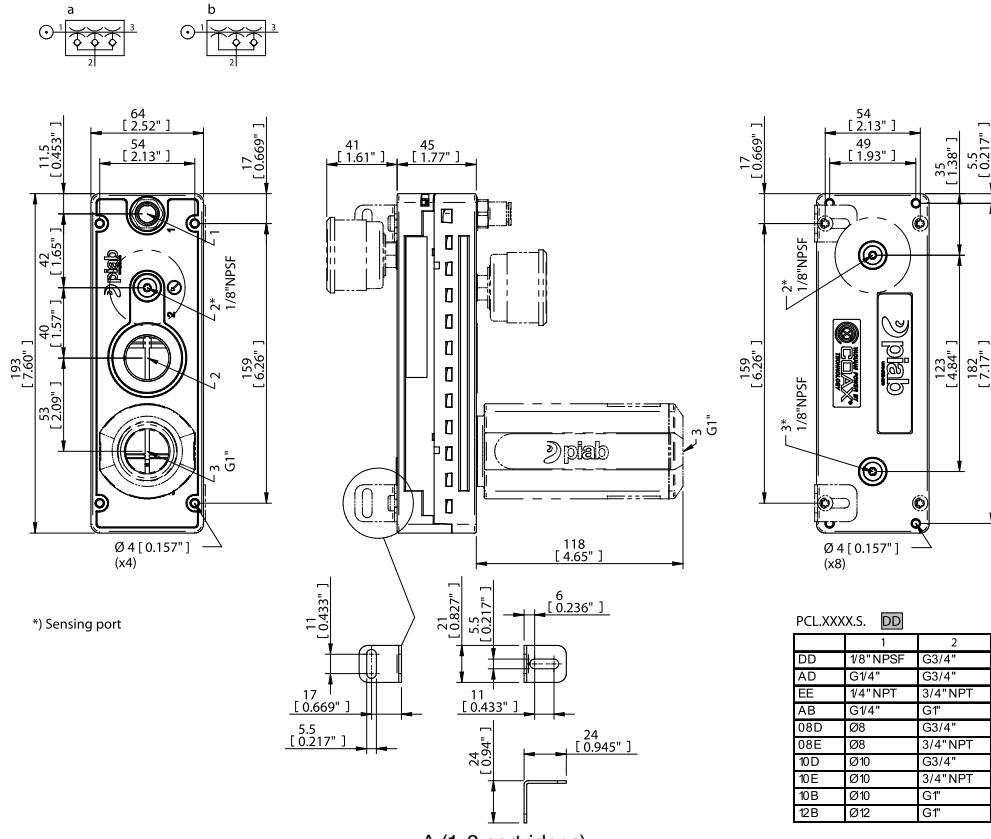
Evacuation time at recommended feed pressure (0.6 MPa)

COAX® cartridge	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)						
		10	20	30	40	50	60	70
Si32-3 x1	1.75	0.02	0.05	0.10	0.18	0.33	0.53	0.80
Si32-3 x2	3.50	0.01	0.025	0.05	0.09	0.17	0.27	0.40
Si32-3 x3	5.25	0.007	0.017	0.033	0.06	0.11	0.18	0.27
Si32-3 x4	7.00	0.005	0.013	0.025	0.045	0.083	0.13	0.20
Si32-3 x5	8.75	0.005	0.012	0.022	0.036	0.066	0.11	0.16
Si32-3 x6	10.5	0.004	0.010	0.018	0.03	0.055	0.09	0.13
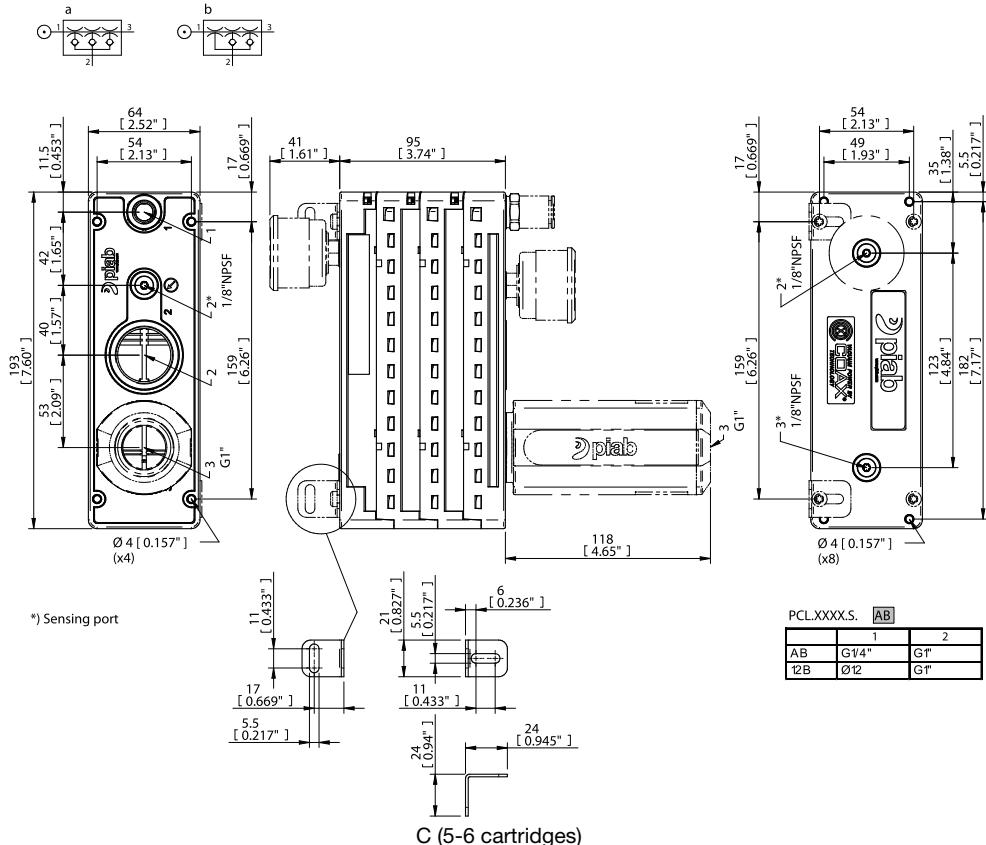
Vacuum pumps/generators Medium

Ordering information

1. Housing	piCLASSIC Code
Housing	PCL

	2a. COAX® cartridge modules	piCLASSIC Code
A	COAX® cartridge module Si32-3x1	S1
A	COAX® cartridge module Si32-3x2	S2
B	COAX® cartridge module Si32-3x3	S3
B	COAX® cartridge module Si32-3x4	S4
C	COAX® cartridge module Si32-3x5	S5
C	COAX® cartridge module Si32-3x6	S6

	2b. Valve Configuration	piCLASSIC Code
a	Standard	B
b	Non-return valve	A

2c. Sealing material	piCLASSIC Code
Nitrile	N
Viton	V

3. Function	piCLASSIC Code
Standard	S

4a. Compressed air connection	piCLASSIC Code
G1/4" female	A
1/4" NPT female	E
1/8" NPSF (G) female	D
*Push-in 8 mm (5/32")-1/4" female	08
*Push-in 10 mm-1/4" female	10
*Push-in 12 mm-1/4" female	12

Compressed air push-in connector included separately.

4b. Vacuum connection	piCLASSIC Code
G3/4" female	D
3/4" NPT female	E
G1" female	B

5. Accessory	piCLASSIC Code
None	X
Silencer G1" male	S
Vacuum gauge	V
Silencer G1" male & vacuum gauge	SV

Example	Ordering number
piCLASSIC Si32-3x1, Standard Valve, Nitrile Sealing, Function Standard, Connections Comp. Air G1/4" female--Vacuum G3/4" female, Silencer G1" male & vacuum gauge	PCL.S1BN.S.AD.SV

Dimensional drawing for piCLASSIC Si32-3

*) Sensing port

A (1-2 cartridges)

PCL.XXXX.S. DD

	1	2
DD	1/8" NPSF	G3/4"
AD	G1/4"	G3/4"
EE	1/4" NPT	3/4" NPT
AB	G1/4"	G1"
08D	Ø8	G3/4"
08E	Ø8	3/4" NPT
10D	Ø10	G3/4"
10E	Ø10	3/4" NPT
10B	Ø10	G1"
12B	Ø12	G1"

*) Sensing port

B (3-4 cartridges)

PCL.XXXX.S. AD

	1	2
AD	G1/4"	G3/4"
EE	1/4" NPT	3/4" NPT
AB	G1/4"	G1"
08D	Ø8	G3/4"
08E	Ø8	3/4" NPT
10D	Ø10	G3/4"
10E	Ø10	3/4" NPT
10B	Ø10	G1"
12B	Ø12	G1"

Dimensional drawing for piCLASSIC Si32-3

*) Sensing port

C (5-6 cartridges)

PCL.XXXX.S.	AB		
		1	2
AB		G1/4"	G1"
12B		Ø12	G1"

Crossover Classic to piCLASSIC

Classic Art. No.	Classic Code No.	piCLASSIC Art. No.	piCLASSIC Code No.
0102117	L25B6ADN	9904047	PCL.S1BN.S.08D.SV
0102119	L50B6ADN	9904040	PCL.S2BN.S.08D.SV
0102121	L100B6ADN	9904043	PCL.S3BN.S.08D.SV
0102122	L100B6ADNA	9904052	PCL.S3AN.S.08D.SV
0102027	L50B6-DN	9904050	PCL.S2BN.S.DD.SV
0102401	L25B6-EN	9904048	PCL.S1BN.S.08E.SV
0102403	L50B6-EN	9904046	PCL.S2BN.S.08E.SV
0102405	L100B6-EN	9904045	PCL.S3BN.S.08E.SV

Ordering information, accessories

Description	Art. No.
Silencer G3/4" with thread insert 1"-3/4"	0126362

Recommended for piCLASSIC pumps with 1-2 cartridges. Choose a piCLASSIC without Silencer G 1" in the ordering code.

Vacuum pumps/generators Medium

piab

piCLASSIC Pi48-3

▶ Patented COAX® technology inside – the most energy efficient ejector technology.

▶ High performance reliability in cases of fluctuating or low compressed air pressure.

▶ Deep vacuum level achieved at very low feed pressure, 0.3 MPa.

▶ Fluctuating compressed air is commonplace in large plants and when the compressor has a high degree of utilization.

▶ Large capacity range, available with 1 to 6 COAX® Pi48 three-stage cartridges. A smaller piCLASSIC can easily be upgraded with more capacity if needed.

▶ Low-weight, configurable and modular design.

▶ Easy disassembly for maintenance.

Technical data

Description	Unit	Value
Feed pressure, optimum	MPa	0.30
Feed pressure, max.	MPa	0.7
Max. vacuum	-kPa	90
Internal volume, vacuum chamber, 1-2 cartridges	cm³	140
Internal volume, vacuum chamber, 3-4 cartridges	cm³	246
Internal volume, vacuum chamber, 5-6 cartridges	cm³	353
Noise level at 40 -kPa & optimal feed pressure	dBA	65-68
Temperature range	°C	-10-80
Materials		PA, Al, SS, NBR (FKM), CuZn

Technical data, specific

Weight	Value (g)
1-2 cartridges	500-550
3-4 cartridges	720-790
5-6 cartridges	795-875
Silencer	120
Vacuum gauge	50

Vacuum flow at recommended feed pressure (0.30 MPa)

| COAX® cartridge	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								
	Nl/s	0	10	20	30	40	50	60	70	80
Pi48-3 x1	2.0	5.6	2.5	1.8	1.1	0.65	0.50	0.35	0.25	0.10
Pi48-3 x2	4.0	11.2	5.0	3.6	2.2	1.3	1.0	0.70	0.50	0.20
Pi48-3 x3	6.0	16.8	7.5	5.4	3.3	1.95	1.5	1.05	0.75	0.30
Pi48-3 x4	8.0	22.4	10.0	7.2	4.4	2.6	2.0	1.4	1.0	0.40
Pi48-3 x5	10.0	23.8	11.3	8.6	5.5	3.25	2.5	1.75	1.25	0.50
Pi48-3 x6	12.0	26.9	12.8	10.3	6.6	3.9	3.0	2.1	1.5	0.60
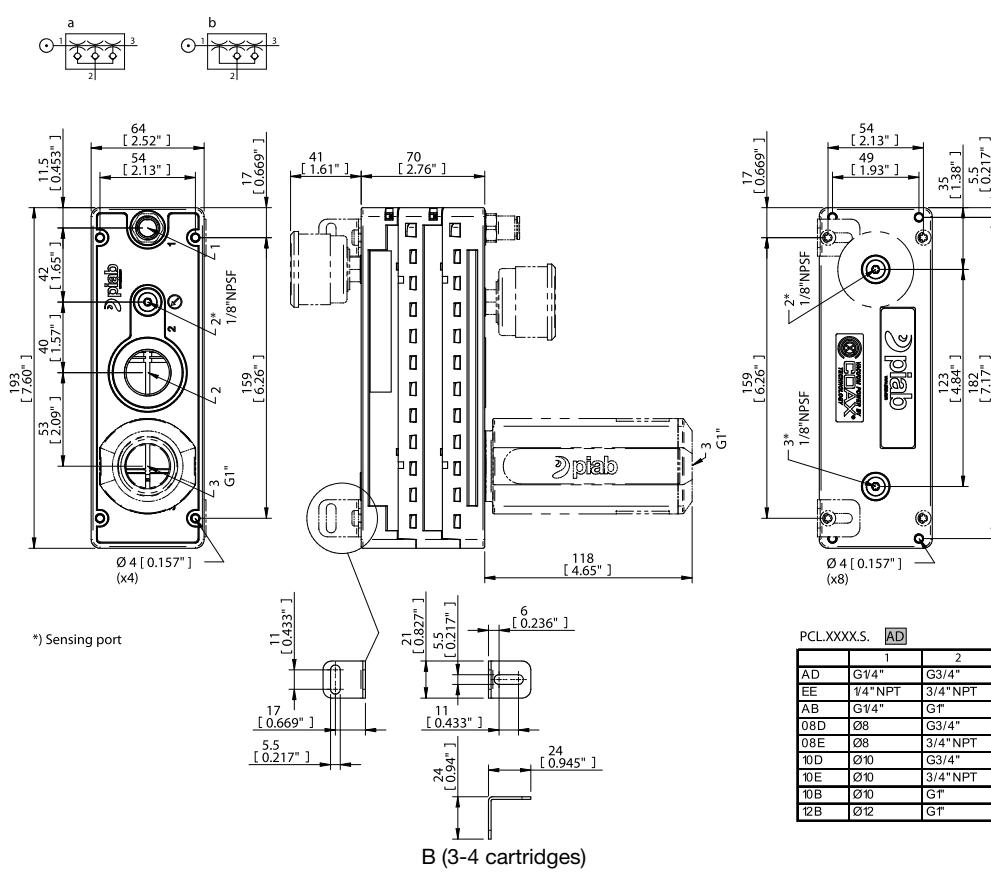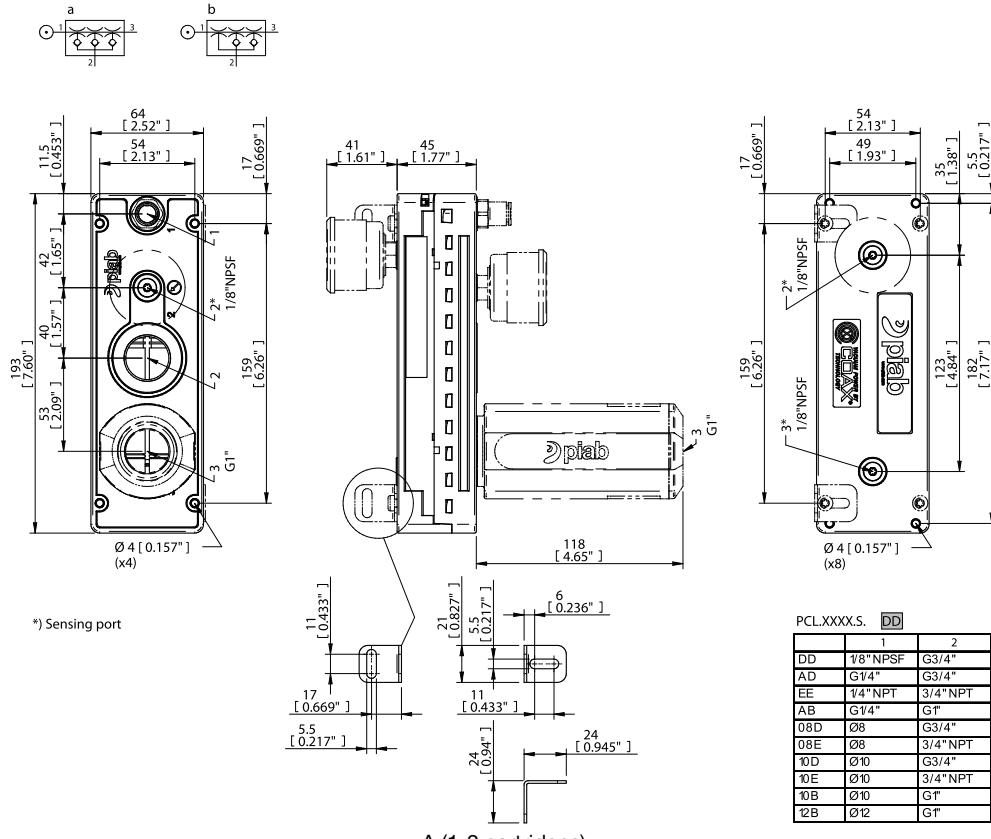
Evacuation time at recommended feed pressure (0.30 MPa)

COAX® cartridge	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								
	Nl/s	10	20	30	40	50	60	70	80	90
Pi48-3 x1	2.0	0.020	0.060	0.12	0.25	0.45	0.70	1.0	1.6	4.0
Pi48-3 x2	4.0	0.010	0.030	0.06	0.13	0.23	0.35	0.50	0.80	2.0
Pi48-3 x3	6.0	0.007	0.020	0.04	0.08	0.15	0.23	0.33	0.53	1.33
Pi48-3 x4	8.0	0.005	0.015	0.03	0.06	0.11	0.18	0.25	0.40	1.0
Pi48-3 x5	10.0	0.005	0.014	0.028	0.05	0.09	0.14	0.20	0.32	0.80
Pi48-3 x6	12.0	0.004	0.013	0.025	0.04	0.08	0.12	0.17	0.27	0.67
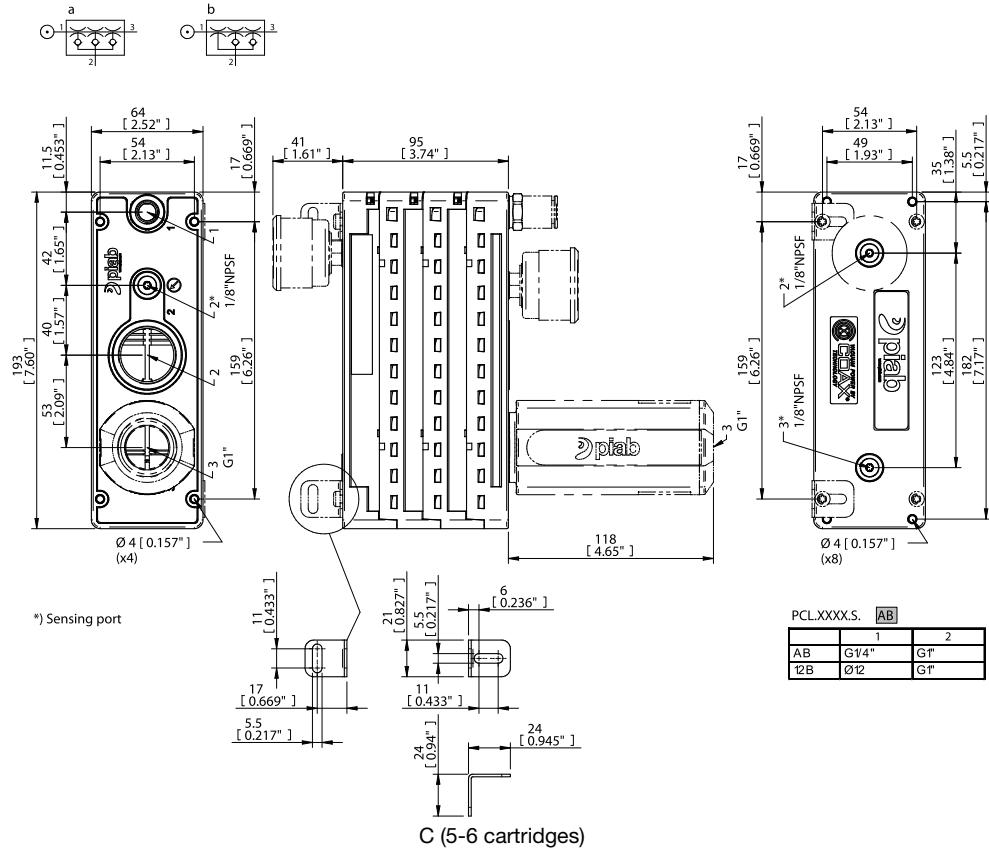
Specifications subject to change without notice.

Vacuum pumps/generators Medium

Ordering information

1. Housing	piCLASSIC Code
Housing	PCL

	2a. COAX® cartridge modules	piCLASSIC Code
A	COAX® cartridge module Pi48-3x1	P1
A	COAX® cartridge module Pi48-3x2	P2
B	COAX® cartridge module Pi48-3x3	P3
B	COAX® cartridge module Pi48-3x4	P4
C	COAX® cartridge module Pi48-3x5	P5
C	COAX® cartridge module Pi48-3x6	P6

	2b. Valve Configuration	piCLASSIC Code
a	Standard	B
b	Non-return valve	A

2c. Sealing material	piCLASSIC Code
Nitrile	N
Viton	V

3. Function	piCLASSIC Code
Standard	S

4a. Compressed air connection	piCLASSIC Code
G1/4" female	A
1/4" NPT female	E
1/8" NPSF (G) female	D
*Push-in 8 mm (5/32")-1/4" female	08
*Push-in 10 mm-1/4" female	10
*Push-in 12 mm-1/4" female	12

*Compressed air push-in connector included separately.

4b. Vacuum connection	piCLASSIC Code
G3/4" female	D
3/4" NPT female	E
G1" female	B

5. Accessory	piCLASSIC Code
None	X
Silencer G1" male	S
Vacuum gauge	V
Silencer G1" male & vacuum gauge	SV

Example	Ordering number
piCLASSIC Pi48-3x1, Standard Valve, Nitrile Sealing, Function Standard, Connections Comp. Air G1" female--Vacuum G3/4" female, Silencer G1" male & vacuum gauge	PCL.P1BN.S.AD.SV

Dimensional drawing for piCLASSIC Pi48-3

*) Sensing port

A (1-2 cartridges)

PCL.XXXX.S. DD

	1	2
DD	1/8" NPSF	G3/4"
AD	G1/4"	G3/4"
EE	1/4" NPT	3/4" NPT
AB	G1/4"	G1"
08D	Ø8	G3/4"
08E	Ø8	3/4" NPT
10D	Ø10	G3/4"
10E	Ø10	3/4" NPT
10B	Ø10	G1"
12B	Ø12	G1"

*) Sensing port

B (3-4 cartridges)

PCL.XXXX.S. AD

	1	2
AD	G1/4"	G3/4"
EE	1/4" NPT	3/4" NPT
AB	G1/4"	G1"
08D	Ø8	G3/4"
08E	Ø8	3/4" NPT
10D	Ø10	G3/4"
10E	Ø10	3/4" NPT
10B	Ø10	G1"
12B	Ø12	G1"

Dimensional drawing for piCLASSIC Pi48-3

*) Sensing port

C (5-6 cartridges)

PCL.XXXX.S.	AB	
	1	2
AB	G1/4"	G1"
12B	Ø12	G1"

piab

piCLASSIC Xi40-3

▶ Patented COAX® technology inside – the most energy efficient ejector technology.

▶ The Xi cartridge offers high flow at deep vacuum levels to 95 -kPa.

▶ Suitable for non-porous applications when deep vacuum level is needed.

▶ Large capacity range, available with 1 to 6 COAX® Xi40 three-stage cartridges. A smaller piCLASSIC can easily be upgraded with more capacity if needed.

▶ Low-weight, configurable and modular design.

▶ Easy disassembly for maintenance.

Technical data

Description	Unit	Value
Feed pressure, optimum	MPa	0.45
Feed pressure, max.	MPa	0.7
Max. vacuum	-kPa	95
Internal volume, vacuum chamber, 1-2 cartridges	cm³	140
Internal volume, vacuum chamber, 3-4 cartridges	cm³	246
Internal volume, vacuum chamber, 5-6 cartridges	cm³	353
Noise level at 40 -kPa & optimal feed pressure	dBA	64-69
Temperature range	°C	-10-80
Materials		PA, Al, SS, NBR (FKM), CuZn

Technical data, specific

Weight	Value (g)
1-2 cartridges	500-550
3-4 cartridges	720-790
5-6 cartridges	795-875
Silencer	120
Vacuum gauge	50

Vacuum flow at recommended feed pressure (0.45 MPa)

| COAX® cartridge	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
Xi40-3 x1	1.83	5.9	3.0	2.0	1.3	0.73	0.58	0.43	0.32	0.18	0.03
Xi40-3 x2	3.66	11.8	6.0	4.0	2.6	1.46	1.16	0.86	0.64	0.36	0.06
Xi40-3 x3	5.49	17.7	9.0	6.0	3.9	2.19	1.74	1.29	0.96	0.54	0.09
Xi40-3 x4	7.32	23.6	12.0	8.0	5.2	2.92	2.32	1.72	1.28	0.72	0.12
Xi40-3 x5	9.15	25.1	13.5	9.5	6.5	3.65	2.90	2.15	1.60	0.90	0.15
Xi40-3 x6	11.0	28.3	15.3	11.4	7.8	4.38	3.44	2.58	1.92	1.08	0.18
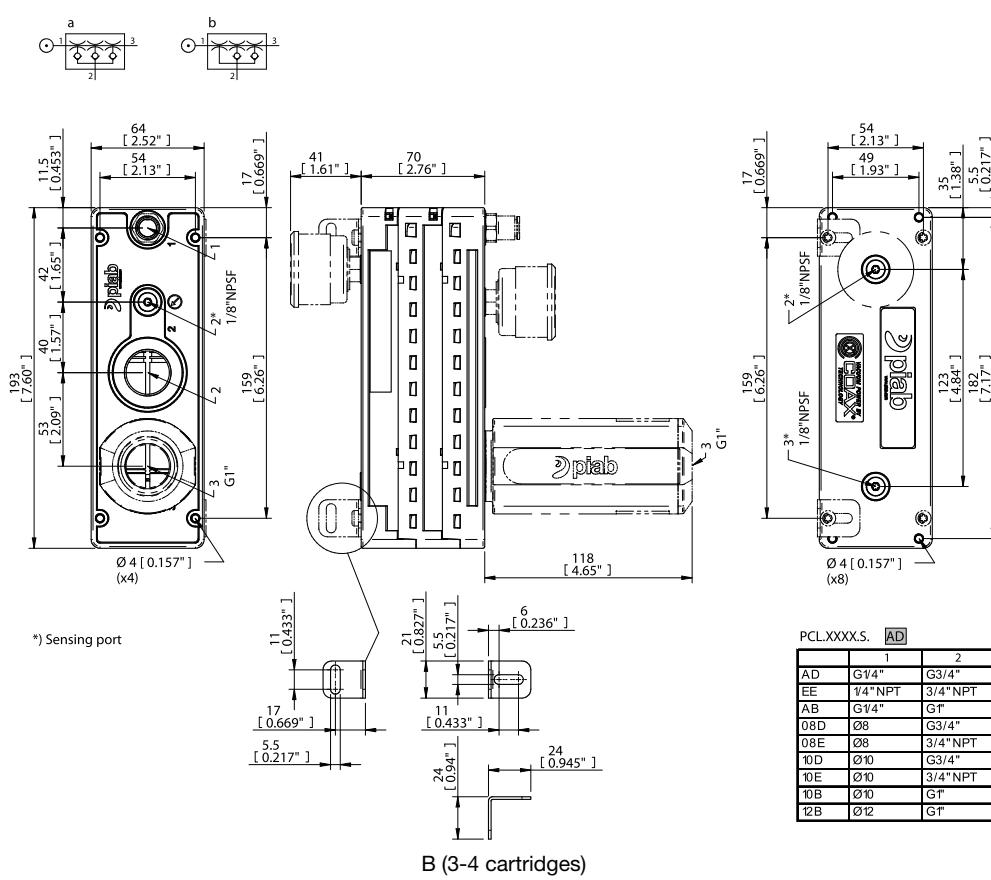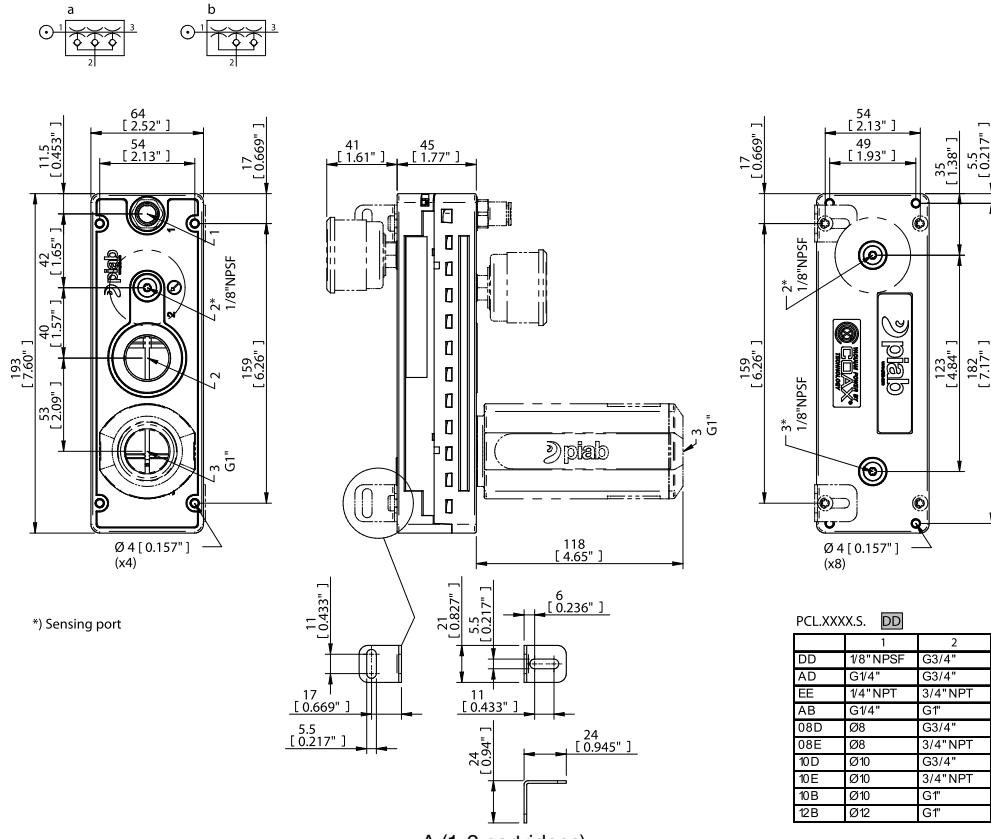
Evacuation time at recommended feed pressure (0.45 MPa)

COAX® cartridge	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
Xi40-3 x1	1.83	0.022	0.062	0.12	0.22	0.37	0.57	0.84	1.2	2.2
Xi40-3 x2	3.66	0.011	0.031	0.06	0.11	0.19	0.29	0.42	0.6	1.1
Xi40-3 x3	5.49	0.007	0.021	0.04	0.07	0.12	0.19	0.28	0.4	0.73
Xi40-3 x4	7.32	0.006	0.016	0.03	0.055	0.09	0.14	0.21	0.3	0.55
Xi40-3 x5	9.15	0.005	0.014	0.026	0.044	0.07	0.11	0.17	0.24	0.44
Xi40-3 x6	11.0	0.005	0.012	0.022	0.040	0.06	0.10	0.14	0.20	0.37
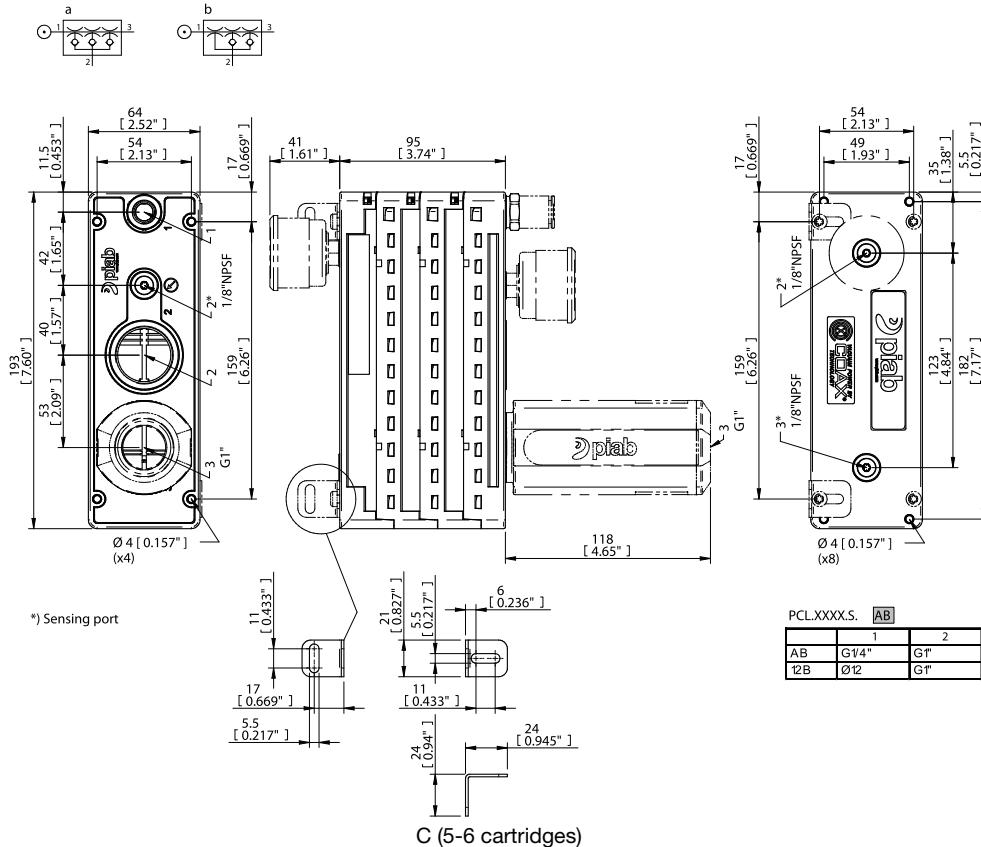
Vacuum pumps/generators Medium

Ordering information

1. Housing	piCLASSIC Code
Housing	PCL

	2a. COAX® cartridge modules	piCLASSIC Code
A	COAX® cartridge module Xi40-3x1	X1
A	COAX® cartridge module Xi40-3x2	X2
B	COAX® cartridge module Xi40-3x3	X3
B	COAX® cartridge module Xi40-3x4	X4
C	COAX® cartridge module Xi40-3x5	X5
C	COAX® cartridge module Xi40-3x6	X6

	2b. Valve Configuration	piCLASSIC Code
a	Standard	B
b	Non-return valve	A

2c. Sealing material	piCLASSIC Code
Nitrile	N
Viton	V

3. Function	piCLASSIC Code
Standard	S

4a. Compressed air connection	piCLASSIC Code
G1/4" female	A
1/4" NPT female	E
1/8" NPSF (G) female	D
*Push-in 8 mm (5/32")-1/4" female	08
*Push-in 10 mm-1/4" female	10
*Push-in 12 mm-1/4" female	12

Compressed air push-in connector included separately.

4b. Vacuum connection	piCLASSIC Code
G3/4" female	D
3/4" NPT female	E
G1" female	B

5. Accessory	piCLASSIC Code
None	X
Silencer G1" male	S
Vacuum gauge	V
Silencer G1" male & vacuum gauge	SV

Example	Ordering number
piCLASSIC Xi40-3x1, Standard Valve, Nitrile Sealing, Function Standard, Connections Comp. Air G1/4" female--Vacuum G3/4" female, Silencer G1" male & vacuum gauge	PCL.X1BN.S.AD.SV

Dimensional drawing for piCLASSIC Xi40-3

*) Sensing port

A (1-2 cartridges)

PCL.XXXX.S. **DD**

	1	2
DD	1/8" NPSF	G3/4"
AD	G1/4"	G3/4"
EE	1/4" NPT	3/4" NPT
AB	G1/4"	G1"
08D	Ø8	G3/4"
08E	Ø8	3/4" NPT
10D	Ø10	G3/4"
10E	Ø10	3/4" NPT
10B	Ø10	G1"
12B	Ø12	G1"

*) Sensing port

B (3-4 cartridges)

PCL.XXXX.S. **AD**

	1	2
AD	G1/4"	G3/4"
EE	1/4" NPT	3/4" NPT
AB	G1/4"	G1"
08D	Ø8	G3/4"
08E	Ø8	3/4" NPT
10D	Ø10	G3/4"
10E	Ø10	3/4" NPT
10B	Ø10	G1"
12B	Ø12	G1"

Dimensional drawing for piCLASSIC Xi40-3

*) Sensing port

C (5-6 cartridges)

PCL.XXXX.S. AB	1	2
AB	G1/4"	G1"
12B	Ø12	G1"

Crossover Classic to piCLASSIC

Classic Art. No.	Classic Code No.	piCLASSIC Art. No.	piCLASSIC Code No.
0102133	M25B5-ADN	9904039	PCL.X1BN.S.08D.SV
0102184	M25B6-ADN	9904039	PCL.X1BN.S.08D.SV
0102135	M50B5-ADN	9904034	PCL.X2BN.S.08D.SV
0102113	M50B6-ADN	9904034	PCL.X2BN.S.08D.SV
0102137	M100B5-ADN	9904035	PCL.X3BN.S.08D.SV
0102115	M100B6-ADN	9904035	PCL.X3BN.S.08D.SV
0102136	M50B5-ADNA	9904053	PCL.X2AN.S.08D.SV
0102138	M100B5-ADNA	9904051	PCL.X3AN.S.08D.SV
0102031	M25B5-DN	9904044	PCL.X1BN.S.DD.SV
0100366	M25B6-DN	9904044	PCL.X1BN.S.DD.SV
0102033	M50B5-DN	9904041	PCL.X2BN.S.DD.SV
0100372	M50B6-DN	9904041	PCL.X2BN.S.DD.SV
0102035	M100B5-DN	0126065	piCLASSIC Xi x3, Connection plate DD
0100378	M100B6-DN	0126065	piCLASSIC Xi x3, Connection plate DD
0102411	M25B5-EN	9904038	PCL.X1BN.S.08E.SV
0102395	M25B6-EN	9904038	PCL.X1BN.S.08E.SV
0102413	M50B5-EN	9904036	PCL.X3BN.S.08E.SV
0102397	M50B6-EN	9904036	PCL.X2BN.S.08E.SV
0102415	M100B5-EN	9904037	PCL.X3BN.S.08E.SV
0102399	M100B6-EN	9904037	PCL.X3BN.S.08E.SV

piCLASSIC Si32-3 Energy Saving

▶ Integrated Energy Saving device, results in a large air-consumption reduction.

▶ Recommended for sealed or almost sealed applications.

▶ Patented COAX® technology inside – the most energy efficient ejector technology.

▶ The Si cartridge offers extra good vacuum flow.

▶ Available with 1 to 4 COAX® Si32 three-stage cartridges.

▶ Low-weight, configurable and modular design.

▶ Easy disassembly for maintenance.

Technical data

Description	Unit	Value
Feed pressure, optimum	MPa	0.60
Feed pressure, max.	MPa	0.7
Max. vacuum	-kPa	75
Internal volume, vacuum chamber, 1-2 cartridges	cm³	140
Internal volume, vacuum chamber, 3-4 cartridges	cm³	246
Noise level at 40 -kPa & optimal feed pressure	dBA	66-77
Temperature range	°C	-10-60
Materials		PA, Al, SS, NBR (FKM), CuZn, POM
Hysteresis	kPa	12
Kv, Flow @ P1=0.6 MPa and ∆p=0.1 Mpa	Nl/s	7.8
Life span	cycles	>10,000,000

Technical data, specific

Weight	Value (g)
1-2 cartridges	600-630
3-4 cartridges	820-870
Silencer	120
Vacuum gauge	50

Vacuum flow at recommended feed pressure (0.6 MPa)

| COAX® cartridge	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)							
	Nl/s	0	10	20	30	40	50	60	70
Si32-3 x1	1.75	6.00	3.50	2.60	1.70	0.90	0.60	0.50	0.35
Si32-3 x2	3.50	12.0	7.00	5.20	3.40	1.80	1.20	1.00	0.70
Si32-3 x3	5.25	18.0	10.5	7.80	5.10	2.70	1.80	1.50	1.10
Si32-3 x4	7.00	24.0	14.0	10.4	6.80	3.60	2.40	2.00	1.40

Evacuation time at recommended feed pressure (0.6 MPa)

COAX® cartridge	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)						
	Nl/s	10	20	30	40	50	60	70
Si32-3 x1	1.75	0.02	0.05	0.10	0.18	0.33	0.53	0.80
Si32-3 x2	3.50	0.01	0.025	0.05	0.09	0.17	0.27	0.40
Si32-3 x3	5.25	0.007	0.017	0.033	0.06	0.11	0.18	0.27
Si32-3 x4	7.00	0.005	0.013	0.025	0.045	0.083	0.13	0.20

Specifications subject to change without notice.

Ordering information

1. Housing	piCLASSIC Code
Housing	PCL

	2a. COAX® cartridge modules	piCLASSIC Code
A	COAX® cartridge module Si32-3x1	S1
A	COAX® cartridge module Si32-3x2	S2
B	COAX® cartridge module Si32-3x3	S3
B	COAX® cartridge module Si32-3x4	S4

	2b. Valve Configuration	piCLASSIC Code
b	Non-return valve	A

2c. Sealing material	piCLASSIC Code
Nitrile	N
Viton	V

3. Function	piCLASSIC Code
Energy saving system (ES)	F

4a. Compressed air connection	piCLASSIC Code
1/8" NPSF (G) female	D
*Push-in 8 mm (5/32")-1/4" female	08

Compressed air push-in connector included separately.

4b. Vacuum connection	piCLASSIC Code
G3/4" female	D
3/4" NPT female	E

5. Accessory	piCLASSIC Code
None	X
Silencer G1" male	S
Vacuum gauge	V
Silencer G1" male & vacuum gauge	SV

Example	Ordering number
piCLASSIC Si32-3x1, Non-return Valve, Nitrile Sealing, Energy saving Function, Connections Comp. Air 1/8" NPSF (G) female--Vacuum G3/4" female, Silencer G1" male & vacuum gauge	PCL.S1AN.F.DD.SV

Dimensional drawing for piCLASSIC Si32-3 ES
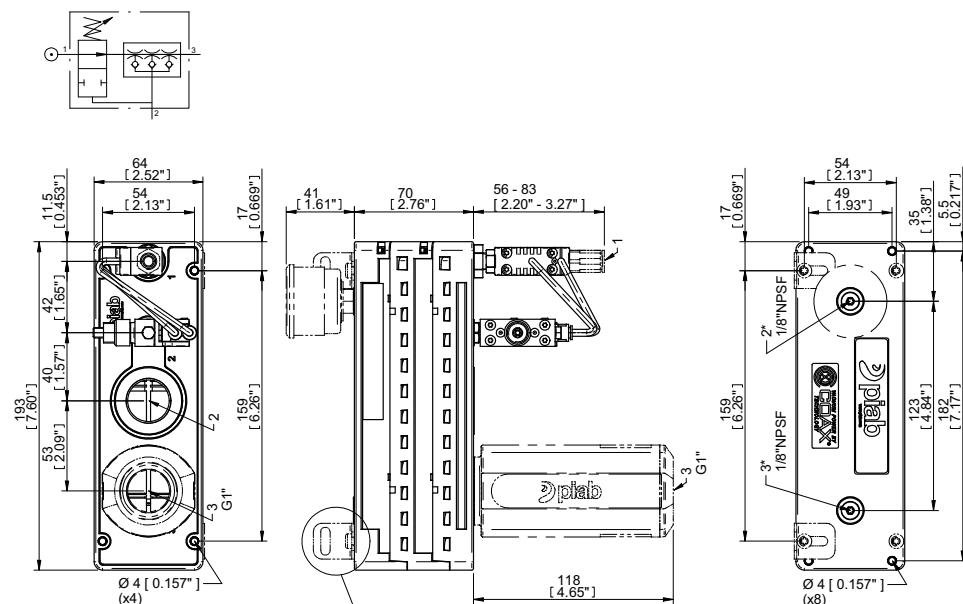
*) Sensing port

PCL.XXAX F.DD XX	1	2
F.DD	1/8" NPSF	G3/4"
F.DE	1/8" NPSF	3/4" NPT
F.08D	Ø8	G3/4"
F.08E	Ø8	3/4" NPT

A (1-2 cartridges)

*) Sensing port

PCL.XXAX F.DD XX	1	2
F.DD	1/8" NPSF	G3/4"
F.DE	1/8" NPSF	3/4" NPT
F.08D	Ø8	G3/4"
F.08E	Ø8	3/4" NPT

B (3-4 cartridges)

piCLASSIC Pi48-3 Energy Saving

- ▶ Integrated Energy Saving device, results in a large air-consumption reduction.
- ▶ Recommended for sealed or almost sealed applications.
- ▶ Patented COAX® technology inside – the most energy efficient ejector technology.
- ▶ High performance reliability in cases of fluctuating or low compressed air pressure.
- ▶ Deep vacuum level achieved at very low feed pressure, 0.3 MPa.
- ▶ Available with 1 or 2 COAX® Pi48 three-stage cartridges.
- ▶ Low-weight, configurable and modular design.
- ▶ Easy disassembly for maintenance.

Technical data

Description	Unit	Value
Feed pressure, optimum	MPa	0.30
Feed pressure, max.	MPa	0.7
Max. vacuum	-kPa	90
Internal volume, vacuum chamber, 1-2 cartridges	cm³	140
Noise level at 40 -kPa & optimal feed pressure	dBA	65-68
Temperature range	°C	-10-60
Materials		PA, Al, SS, NBR (FKM), CuZn, POM
Hysteresis	kPa	12
Kv, Flow @ P1=0.6 MPa and Δp=0.1 Mpa	Nl/s	7.8
Life span	cycles	>10,000,000

Technical data, specific

Weight	Value (g)
1-2 cartridges	600-630
Silencer	120
Vacuum gauge	50
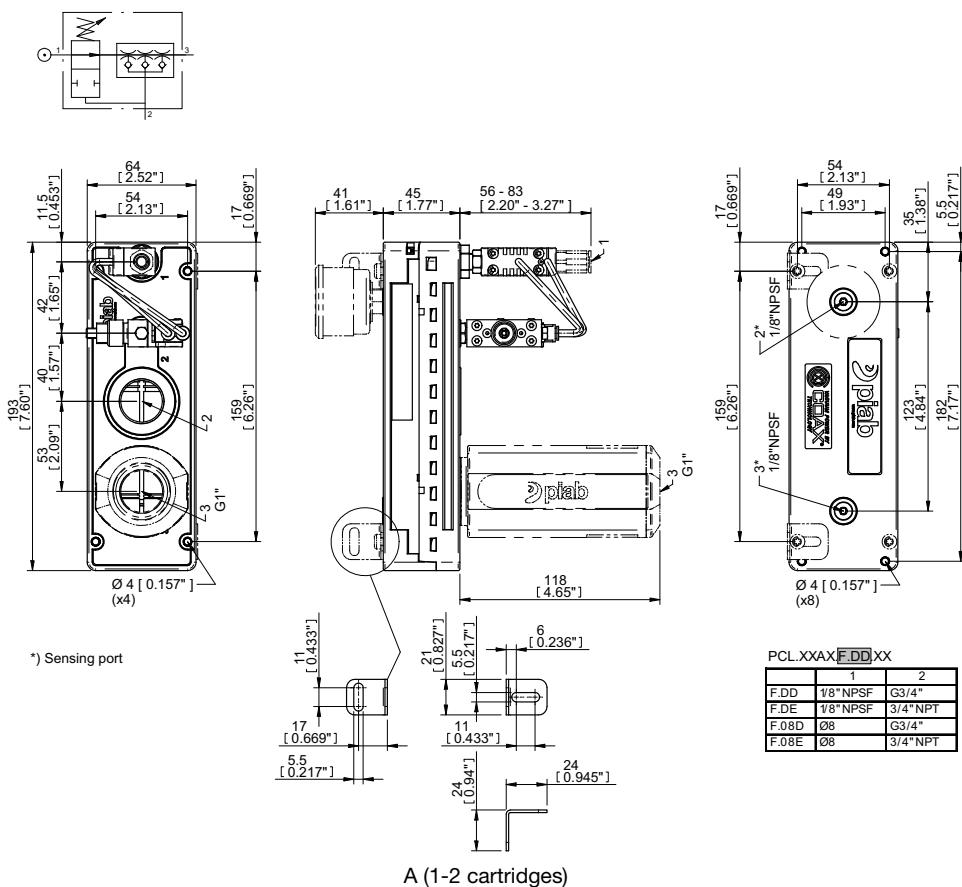
Vacuum flow at recommended feed pressure (0.30 MPa)

COAX® cartridge	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								
		0	10	20	30	40	50	60	70	80
Pi48-3 x1	2.0	5.6	2.5	1.8	1.1	0.65	0.50	0.35	0.25	0.10
Pi48-3 x2	4.0	11.2	5.0	3.6	2.2	1.3	1.0	0.70	0.50	0.20

Evacuation time at recommended feed pressure (0.30 MPa)

COAX® cartridge	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
Pi48-3 x1	2.0	0.020	0.060	0.12	0.25	0.45	0.70	1.0	1.6	4.0
Pi48-3 x2	4.0	0.010	0.030	0.06	0.13	0.23	0.35	0.50	0.80	2.0

Ordering information

1. Housing		piCLASSIC Code
Housing		PCL

2a. COAX® cartridge modules		piCLASSIC Code
COAX® cartridge module Pi48-3x1		P1
COAX® cartridge module Pi48-3x2		P2

	2b. Valve Configuration	piCLASSIC Code
b	Non-return valve	A

2c. Sealing material		piCLASSIC Code
Nitrile		N
Viton		V

3. Function		piCLASSIC Code
Energy saving system (ES)		F

4a. Compressed air connection		piCLASSIC Code
1/8" NPSF (G) female		D
*Push-in 8 mm (5/32")-1/4" female		08

*Compressed air push-in connector included separately.

4b. Vacuum connection		piCLASSIC Code
G3/4" female		D
3/4" NPT female		E

5. Accessory		piCLASSIC Code
None		X
Silencer G1" male		S
Vacuum gauge		V
Silencer G1" male & vacuum gauge		SV

Example	Ordering number
piCLASSIC Pi48-3x1, Non-return Valve, Nitrile Sealing, Energy saving Function, Connections Comp. Air 1/8" NPSF (G) female--Vacuum G3/4" female, Silencer G1" male & vacuum gauge	PCL.P1AN.F.DD.SV

PCL.XXAX F.DD XX		
	1	2
F.DD	1/8" NPSF	G3/4"
F.DE	1/8" NPSF	3/4" NPT
F.08D	Ø8	G3/4"
F.08E	Ø8	3/4" NPT

*) Sensing port

A (1-2 cartridges)

piab

piCLASSIC Xi40-3 Energy Saving

▶ Integrated Energy Saving device, results in a large air-consumption reduction.
▶ Recommended for sealed or almost sealed applications.
▶ Patented COAX® technology inside – the most energy efficient ejector technology.
▶ The Xi cartridge offers high flow at deep vacuum levels to 95 -kPa.
▶ Available with 1 to 3 COAX® Xi40 three-stage cartridges.
▶ Low-weight, configurable and modular design.
▶ Easy disassembly for maintenance.

Technical data

Description	Unit	Value
Feed pressure, optimum	MPa	0.45
Feed pressure, max.	MPa	0.7
Max. vacuum	-kPa	95
Internal volume, vacuum chamber, 1-2 cartridges	cm³	140
Internal volume, vacuum chamber, 3 cartridges	cm³	246
Noise level at 40 -kPa & optimal feed pressure	dBA	64-69
Temperature range	°C	-10-60
Materials		PA, Al, SS, NBR (FKM), CuZn, POM
Hysteresis	kPa	12
Kv, Flow @ P1=0.6 MPa and Δp=0.1 Mpa	Nl/s	7.8
Life span	cycles	>10,000,000

Technical data, specific

Weight	Value (g)
1-2 cartridges	600-630
3 cartridges	820
Silencer	120
Vacuum gauge	50

Vacuum flow at recommended feed pressure (0.45 MPa)

COAX® cartridge	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)									
		0	10	20	30	40	50	60	70	80	90
Xi40-3 x1	1.83	5.9	3.0	2.0	1.3	0.73	0.58	0.43	0.32	0.18	0.03
Xi40-3 x2	3.66	11.8	6.0	4.0	2.6	1.46	1.16	0.86	0.64	0.36	0.06
Xi40-3 x3	5.49	17.7	9.0	6.0	3.9	2.19	1.74	1.29	0.96	0.54	0.09
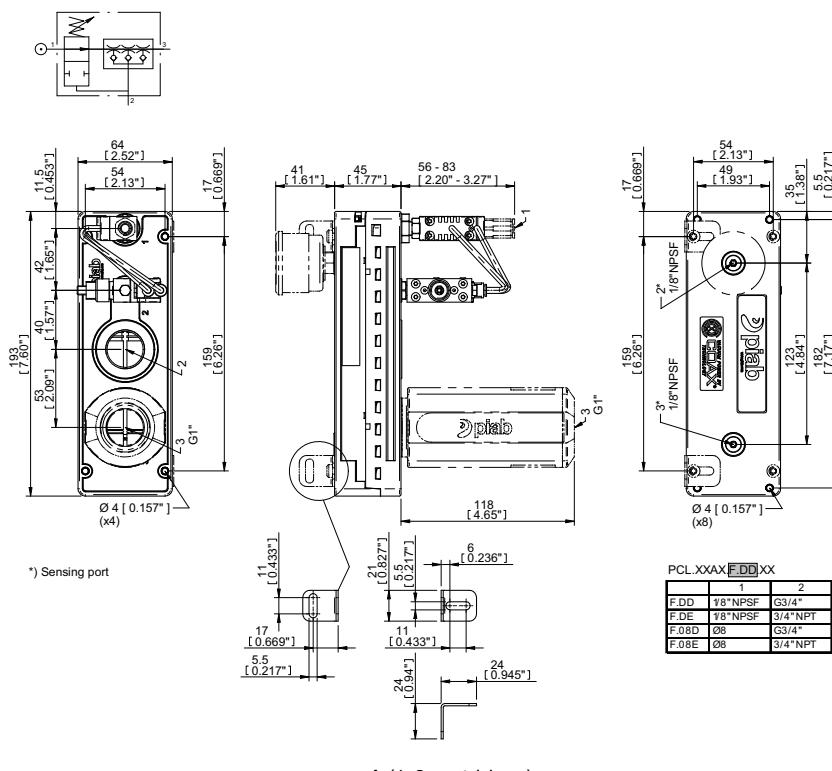
Evacuation time at recommended feed pressure (0.45 MPa)
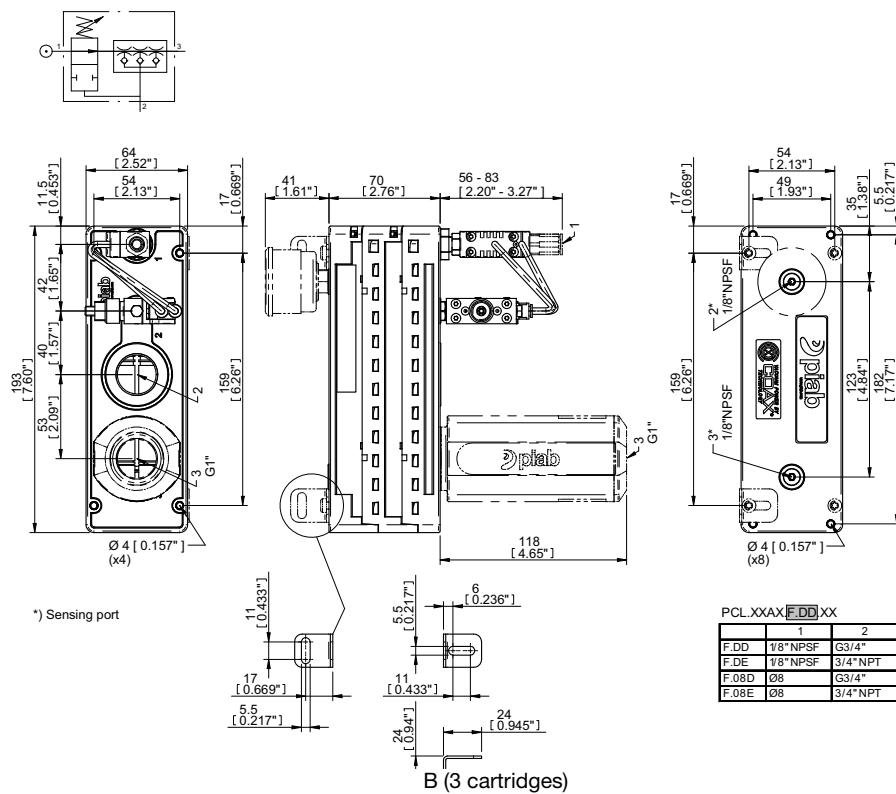
COAX® cartridge	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)								
		10	20	30	40	50	60	70	80	90
Xi40-3 x1	1.83	0.022	0.062	0.12	0.22	0.37	0.57	0.84	1.2	2.2
Xi40-3 x2	3.66	0.011	0.031	0.06	0.11	0.19	0.29	0.42	0.6	1.1
Xi40-3 x3	5.49	0.007	0.021	0.04	0.07	0.12	0.19	0.28	0.4	0.73

Ordering information

1. Housing	piCLASSIC Code
Housing	PCL

	2a. COAX® cartridge modules	piCLASSIC Code
A	COAX® cartridge module Xi40-3x1	X1
A	COAX® cartridge module Xi40-3x2	X2
B	COAX® cartridge module Xi40-3x3	X3

	2b. Valve Configuration	piCLASSIC Code
b	Non-return valve	A

2c. Sealing material	piCLASSIC Code
Nitrile	N
Viton	V

3. Function	piCLASSIC Code
Energy saving system (ES)	F

4a. Compressed air connection	piCLASSIC Code
1/8" NPSF (G) female	D
*Push-in 8 mm (5/32")-1/4" female	08

Compressed air push-in connector included separately.

4b. Vacuum connection	piCLASSIC Code
G3/4" female	D
3/4" NPT female	E

5. Accessory	piCLASSIC Code
None	X
Silencer G1" male	S
Vacuum gauge	V
Silencer G1" male & vacuum gauge	SV

Example	Ordering number
piCLASSIC Xi40-3x1, Non-return Valve, Nitrile Sealing, Energy saving Function, Connections Comp. Air 1/8" NPSF (G) female--Vacuum G3/4" female, Silencer G1" male & vacuum gauge	PCL.X1AN.F.DD.SV

Dimensional drawing for piCLASSIC Xi40-3 ES

PCL.XXAX.F.DD.XX		
	1	2
F.DD	1/8" NPSF	G3/4"
F.DE	1/8" NPSF	3/4" NPT
F.08D	Ø8	G3/4"
F.08E	Ø8	3/4" NPT

*) Sensing port

A (1-2 cartridges)

*) Sensing port

B (3 cartridges)

PCL.XXAX.F.DD.XX

	1	2
F.DD	1/8" NPSF	G3/4"
F.DE	1/8" NPSF	3/4" NPT
F.08D	Ø8	G3/4"
F.08E	Ø8	3/4" NPT

Crossover Classic to piCLASSIC

Classic Art. No.	Classic Code No.	piCLASSIC Art. No.	piCLASSIC Code No.
0103092	M50B5-ADNAF	9904049	PCL.X2AN.F.08D.SV
0103265	M100B6-ADNAF	9904051	PCL.X3AN.F.08D.SV

piab

Mounting brackets
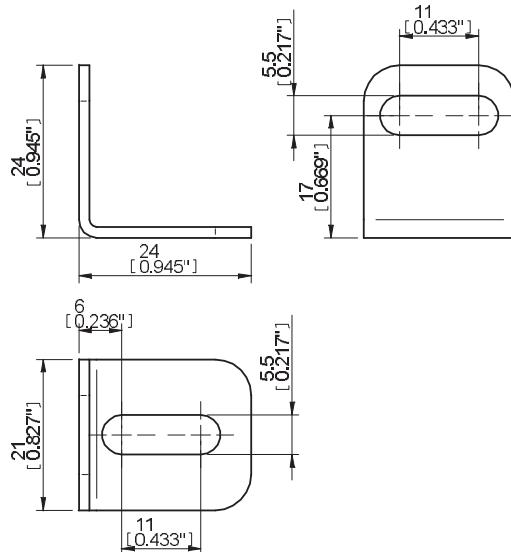
▶ Corrosion-resistant material.
▶ Included as a set (2 pieces) with each vacuum pump.
▶ Suitable for vacuum pumps piCLASSIC.

Technical data
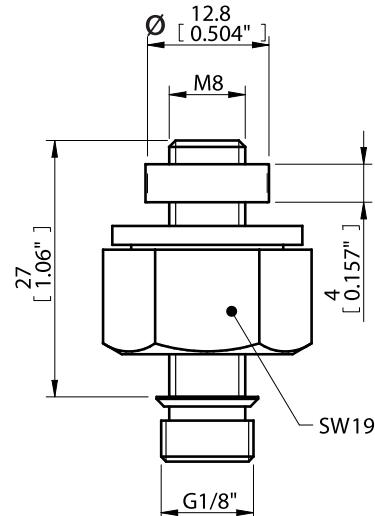
Description	Unit	Value	
		0124869	0125073
Weight	g	10-27	56
Material		SS	Al, SS, Steel

Ordering information

	Description	Art. No.
A	Mounting bracket piCLASSIC cpl	0124869
B	Mounting kit M8/27 piCLASSIC, profile	0125073

A

B

Round pump

- ▶ Energy efficient due to the COAX® technology
- ▶ High vacuum flow with 6x COAX® Si MIDI cartridges
- ▶ Small, compact and light in weight
- ▶ Easy to mount and install in a vacuum line
- ▶ Integrated hose connectors

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noice level	dBa	70–82
Material		PPS, PA, NBR, Viton®, SS
Temperature range	°C	-10–80
Weight	g	1130

Vacuum flow
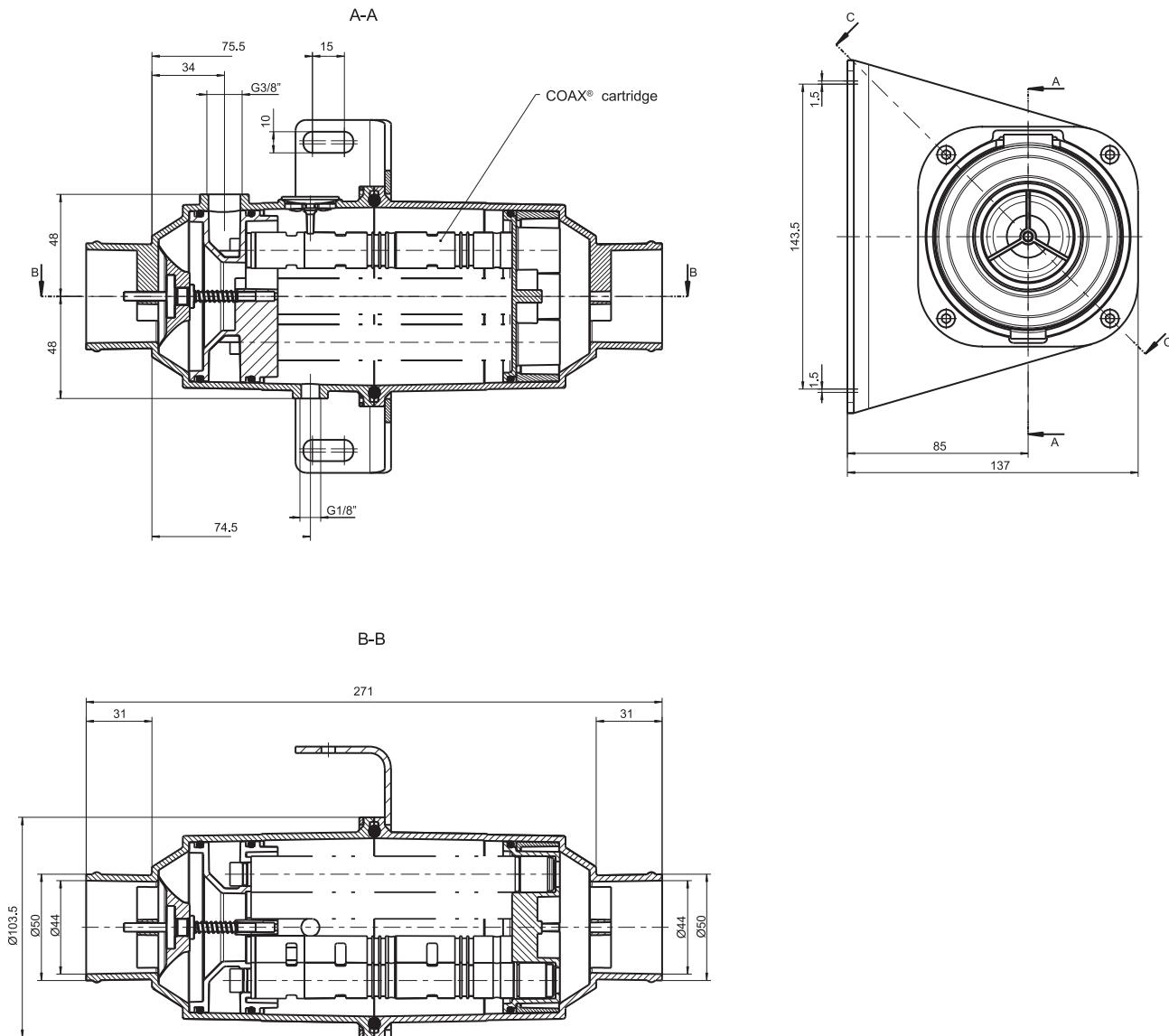
Feed pressure MPa	Air consumption Nl/s	Vacuum flow (Nl/s) at different vacuum levels (-kPa)								Max vacuum -kPa
		0	10	20	30	40	50	60	70	
0.40	7.5	30.0	17.4	11.4	7,2	4.8	2.4	0.6	—	60
0.50	9.0	34.2	19.8	13.2	8.4	5.1	3.72	2.1	1.08	70
0.60	10.5	36.0	21.0	15.6	10.2	5.4	3.6	3.0	2.1	75

Evacuation time

Feed pressure MPa	Air consumption Nl/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)							Max vacuum -kPa
		10	20	30	40	50	60	70	
0.40	7.5	0.005	0.012	0.023	0.040	0.070	0.167	—	60
0.50	9.0	0.003	0.010	0.018	0.035	0.058	0.100	0.167	70
0.60	10.5	0.003	0.008	0.017	0.030	0.055	0.088	0.133	75

piab

Ordering information

Description	Art. No.
Round pump COAX® 6xSi32-3	0121632

A-A

COAX® cartridge

75.5
34
15
G3/8"
10
48
48
B
B
G1/8"
74.5

C
1.5
143.5
1.5
A
85
137
A
C

B-B

271
31
31
Ø103.5
Ø50
Ø44
Ø44
Ø50

Vacuum pumps/generators Large

piab

P6040

► Patented COAX® technology.
► Available with a three-stage COAX® cartridge MIDI. Choose an Si cartridge for extra vacuum flow, a Pi cartridge for high performance at low feed pressure or an Xi cartridge when high flow and deep vacuum is needed.
► Substantially lower air consumption.
► Modular design for flexible performance.
► Compact and durable with no moving parts.

Technical data

Description	Unit	Value
Feed pressure, max	MPa	0.7
Noise level	dBA	57–76
Temperature range	°C	-10–80
Weight	g	4300–5600
Material		Al, PA, NBR, SS, POM, HDPE

Vacuum flow

COAX® cartridge	Feed pressure	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)										Max vacuum
	MPa	Nl/s	0	10	20	30	40	50	60	70	80	90	-kPa
Pi48-3	0.30	2.0	5.6	2.5	1.8	1.1	0.65	0.50	0.35	0.25	0.10	—	90/53*
Si32-3	0.60	1.75	6.0	3.5	2.6	1.7	0.90	0.60	0.50	0.35	—	—	75/52*
Xi40-3	0.45	1.83	5.9	3.0	2.0	1.3	0.73	0.58	0.43	0.32	0.18	0.03	95/51*

Values for one COAX® cartridge. Mulitply with number of cartidges. For vacuum flows at other feed pressures, see section Vacuum cartridges/integration.

* COAX® cartridge module, 1x flap valve

Evacuation time

COAX® cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum
	MPa	Nl/s	10	20	30	40	50	60	70	80	90	-kPa
Pi48-3	0.30	2.0	0.020	0.060	0.12	0.25	0.45	0.70	1.0	1.6	4.0	90/53*
Si32-3	0.60	1.75	0.020	0.050	0.10	0.18	0.33	0.53	0.80	—	—	75/52*
Xi40-3	0.45	1.83	0.022	0.062	0.12	0.22	0.37	0.57	0.84	1.2	2.2	95/51*
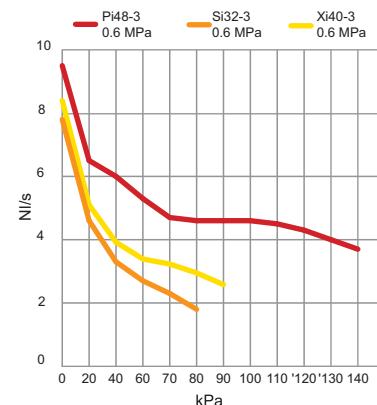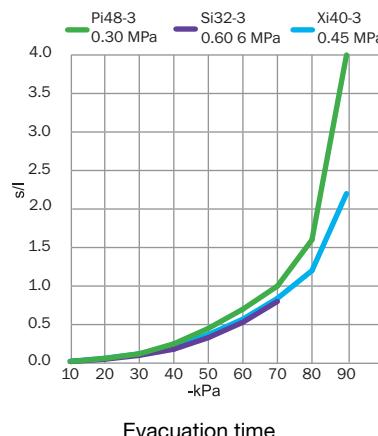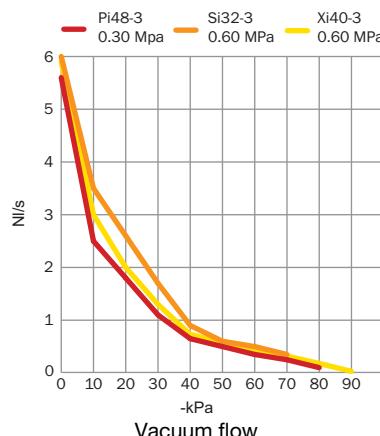
Values for one COAX® cartridge. Divide with number of cartridges. For evacuation times at other feed pressures, see section Vacuum cartridges/integration.

* COAX® cartridge module, 1x flap valve

Blow flow

COAX® cartridge	Feed pressure	Air consumption	Blow flow (Nl/s) at different pressure levels (kPa)												Max pressure
	MPa	Nl/s	0	20	40	60	70	80	90	100	110	120	130	140	kPa
Pi48-3	0.6	3.55	9.5	6.5	6.0	5.3	4.7	4.6	4.6	4.6	4.5	4.3	4.0	3.7	140
Si32-3	0.6	1.75	7.8	4.6	3.3	2.7	2.3	1.8	—	—	—	—	—	—	80
Xi40-3	0.6	2.33	8.4	5.1	3.92	3.39	3.23	2.95	2.58	—	—	—	—	—	90

Values for one COAX® cartridge. Multiply with number of cartridges.

Vacuum pumps/generators Large

Vacuum flow

Evacuation time

Blow flow

Ordering information

1. Housing	P6040 Code
Housing P6040	P6040

2. Select Application type	P6040 Code
P6040 Blow	B
P6040 Vacuum	V

	3. COAX® cartridge modules	P6040 Code
a	COAX® cartridge module Pi48-3X5	AA
a	COAX® cartridge module Pi48-3X6	AB
a	COAX® cartridge module Pi48-3X7	AC
a	COAX® cartridge module Pi48-3X8	AD
a	COAX® cartridge module Pi48-3X9	AE
a	COAX® cartridge module Pi48-3X10	AF
a	COAX® cartridge module Pi48-3X11	AG
a	COAX® cartridge module Pi48-3X12	AH
a	COAX® cartridge module Pi48-3X13	AI
a	COAX® cartridge module Pi48-3X14	AJ
a	COAX® cartridge module Pi48-3X15	AK
a	COAX® cartridge module Pi48-3X16	AL
b	COAX® cartridge module Pi48-3X5, non-return valve	AM
b	COAX® cartridge module Pi48-3X6, non-return valve	AN
b	COAX® cartridge module Pi48-3X7, non-return valve	AO
b	COAX® cartridge module Pi48-3X8, non-return valve	AP
b	COAX® cartridge module Pi48-3X9, non-return valve	AQ
b	COAX® cartridge module Pi48-3X10, non-return valve	AR
b	COAX® cartridge module Pi48-3X11, non-return valve	AS
b	COAX® cartridge module Pi48-3X12, non-return valve	AT
b	COAX® cartridge module Pi48-3X13, non-return valve	AU
b	COAX® cartridge module Pi48-3X14, non-return valve	AV
b	COAX® cartridge module Pi48-3X15, non-return valve	AW
b	COAX® cartridge module Pi48-3X16, non-return valve	AX
c	COAX® cartridge module Pi48-3X5, 1x flap valve	AY
c	COAX® cartridge module Pi48-3X6, 1x flap valve	AZ
c	COAX® cartridge module Pi48-3X7, 1x flap valve	BA
c	COAX® cartridge module Pi48-3X8, 1x flap valve	BB
c	COAX® cartridge module Pi48-3X9, 1x flap valve	BC
c	COAX® cartridge module Pi48-3X10, 1x flap valve	BD
c	COAX® cartridge module Pi48-3X11, 1x flap valve	BE
c	COAX® cartridge module Pi48-3X12, 1x flap valve	BF
c	COAX® cartridge module Pi48-3X13, 1x flap valve	BG
c	COAX® cartridge module Pi48-3X14, 1x flap valve	BH
c	COAX® cartridge module Pi48-3X15, 1x flap valve	BI
c	COAX® cartridge module Pi48-3X16, 1x flap valve	BJ
a	COAX® cartridge module Si32-3X5	BK
a	COAX® cartridge module Si32-3X6	BL
a	COAX® cartridge module Si32-3X7	BM
a	COAX® cartridge module Si32-3X8	BN

Specifications subject to change without notice.

	3. COAX® cartridge modules	P6040 Code
a	COAX® cartridge module Si32-3X9	BO
a	COAX® cartridge module Si32-3X10	BP
a	COAX® cartridge module Si32-3X11	BQ
a	COAX® cartridge module Si32-3X12	BR
a	COAX® cartridge module Si32-3X13	BS
a	COAX® cartridge module Si32-3X14	BT
a	COAX® cartridge module Si32-3X15	BU
a	COAX® cartridge module Si32-3X16	BV
b	COAX® cartridge module Si32-3X5, non-return valve	BW
b	COAX® cartridge module Si32-3X6, non-return valve	BX
b	COAX® cartridge module Si32-3X7, non-return valve	BY
b	COAX® cartridge module Si32-3X8, non-return valve	BZ
b	COAX® cartridge module Si32-3X9, non-return valve	CA
b	COAX® cartridge module Si32-3X10, non-return valve	CB
b	COAX® cartridge module Si32-3X11, non-return valve	CC
b	COAX® cartridge module Si32-3X12, non-return valve	CD
b	COAX® cartridge module Si32-3X13, non-return valve	CE
b	COAX® cartridge module Si32-3X14, non-return valve	CF
b	COAX® cartridge module Si32-3X15, non-return valve	CG
b	COAX® cartridge module Si32-3X16, non-return valve	CH
c	COAX® cartridge module Si32-3X5, 1x flap valve	CI
c	COAX® cartridge module Si32-3X6, 1x flap valve	CJ
c	COAX® cartridge module Si32-3X7, 1x flap valve	CK
c	COAX® cartridge module Si32-3X8, 1x flap valve	CL
c	COAX® cartridge module Si32-3X9, 1x flap valve	CM
c	COAX® cartridge module Si32-3X10, 1x flap valve	CN
c	COAX® cartridge module Si32-3X11, 1x flap valve	CO
c	COAX® cartridge module Si32-3X12, 1x flap valve	CP
c	COAX® cartridge module Si32-3X13, 1x flap valve	CQ
c	COAX® cartridge module Si32-3X14, 1x flap valve	CR
c	COAX® cartridge module Si32-3X15, 1x flap valve	CS
c	COAX® cartridge module Si32-3X16, 1x flap valve	CT
a	COAX® cartridge module Xi40-3X5	CU
a	COAX® cartridge module Xi40-3X6	CV
a	COAX® cartridge module Xi40-3X7	CW
a	COAX® cartridge module Xi40-3X8	CX
a	COAX® cartridge module Xi40-3X9	CY
a	COAX® cartridge module Xi40-3X10	CZ
a	COAX® cartridge module Xi40-3X11	DA
a	COAX® cartridge module Xi40-3X12	DB
a	COAX® cartridge module Xi40-3X13	DC
a	COAX® cartridge module Xi40-3X14	DD
a	COAX® cartridge module Xi40-3X15	DE
a	COAX® cartridge module Xi40-3X16	DF
b	COAX® cartridge module Xi40-3X5, non-return valve	DG
b	COAX® cartridge module Xi40-3X6, non-return valve	DH
b	COAX® cartridge module Xi40-3X7, non-return valve	DI
b	COAX® cartridge module Xi40-3X8, non-return valve	DJ
b	COAX® cartridge module Xi40-3X9, non-return valve	DK
b	COAX® cartridge module Xi40-3X10, non-return valve	DL
b	COAX® cartridge module Xi40-3X11, non-return valve	DM
b	COAX® cartridge module Xi40-3X12, non-return valve	DN
b	COAX® cartridge module Xi40-3X13, non-return valve	DO
b	COAX® cartridge module Xi40-3X14, non-return valve	DP
b	COAX® cartridge module Xi40-3X15, non-return valve	DQ
b	COAX® cartridge module Xi40-3X16, non-return valve	DR
c	COAX® cartridge module Xi40-3X5, 1x flap valve	DS
c	COAX® cartridge module Xi40-3X6, 1x flap valve	DT
c	COAX® cartridge module Xi40-3X7, 1x flap valve	DU
c	COAX® cartridge module Xi40-3X8, 1x flap valve	DV
c	COAX® cartridge module Xi40-3X9, 1x flap valve	DW
c	COAX® cartridge module Xi40-3X10, 1x flap valve	DX
c	COAX® cartridge module Xi40-3X11, 1x flap valve	DY
c	COAX® cartridge module Xi40-3X12, 1x flap valve	DZ
c	COAX® cartridge module Xi40-3X13, 1x flap valve	EA

|	3. COAX® cartridge modules	P6040 Code
c	COAX® cartridge module Xi40-3X14, 1x flap valve	EB
c	COAX® cartridge module Xi40-3X15, 1x flap valve	EC
c	COAX® cartridge module Xi40-3X16, 1x flap valve	ED
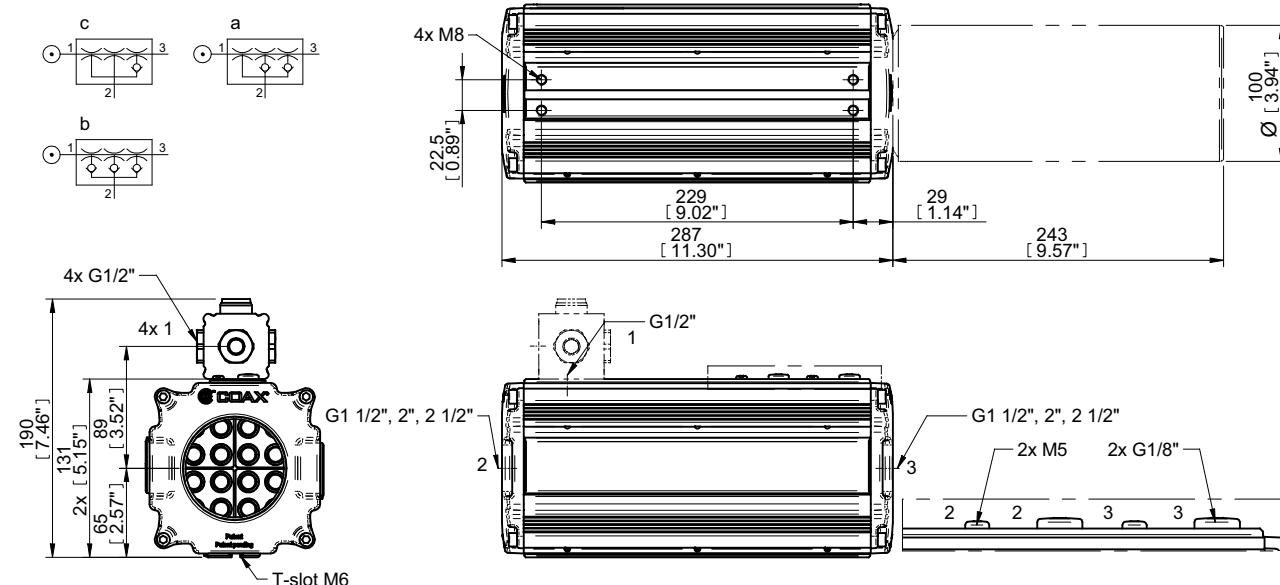
4. Mounting	P6040 Code
T-slot	00

5. Select Cover plate, function	P6040 Code
Connection G1/2"	AA
Connection 4x G1/2"	AB
Function V30	AC
Function ES Vacuum	AD

For detailed information on V30 and ES Vacuum, see separate datasheets.

6. Select Connections for vacuum and blow	P6040 Code
Connection G 1 1/2"	00
Connection G 2"	01
Connection G 2 1/2"	02
Connection G 1 1/2", silencer	03
Connection G 2", silencer	04
Connection G 2 1/2", silencer	05
Connection G 1 1/2", inlet silencer	06
Connection G 2", inlet silencer	07
Connection G 2 1/2", inlet silencer	08

Example	Ordering No.
P6040 Vacuum, Pi48-3X5, Mounting T-slot, Cover plate with 4 connections G1/2", Connection G 2 1/2" and silencer	P6040 V AA 00 AB 05
P6040 Vacuum, Pi48-3X5, Mounting T-slot, Cover plate with connection G1/2", Connection G 2 1/2" and silencer	P6040 V AA 00 AA 05

Ordering information, accessories

Description	Art. No.
Manometer 250 kPa	3101626

P6040 Function V30
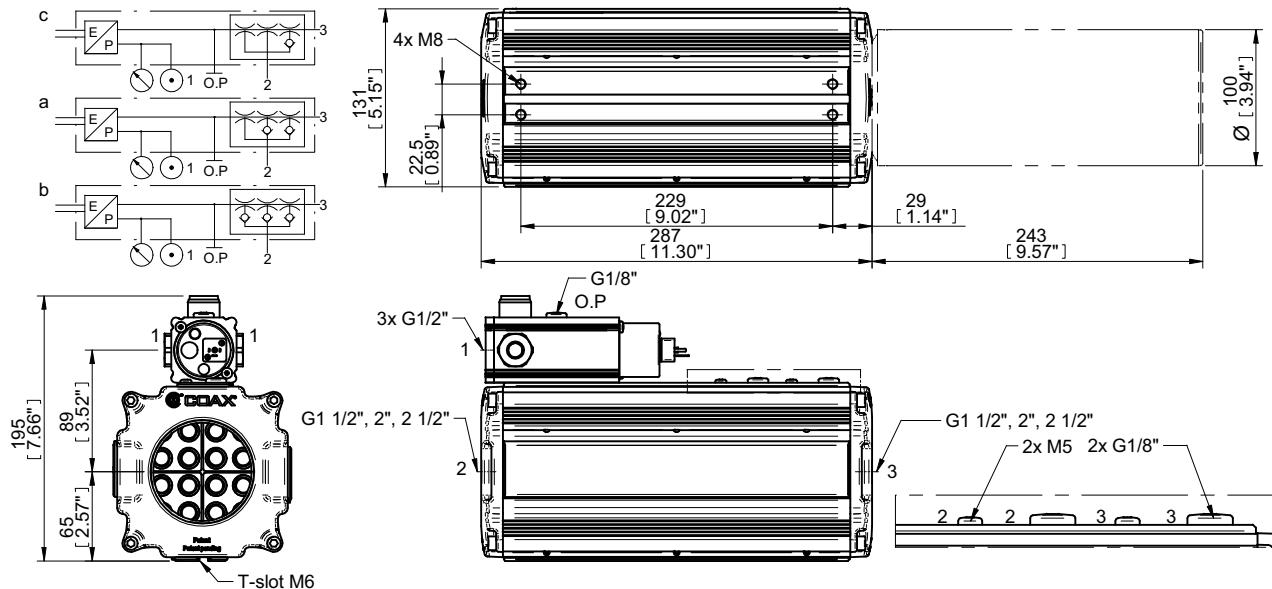
- ▶ Patented COAX® technology
- ▶ Substantially lower air consumption
- ▶ Modular design for flexible performance
- ▶ Compact and durable with no moving parts
- ▶ With its low energy consumption it can be controlled directly from the control system

Technical data

Description	Unit	Value
Feed pressure	MPa	0.7
Noise level	dBA	57–76
Temperature range	°C	0–50
Voltage	V	24
Voltage range	V	14-28
Current consumption	mA	40
Ripple	V_P	1 V_{rms}
Safety classification	IP	65
Display		LED
Weight	g	4900–5900
Material		Al, PA, NBR, SS, POM, HDPE, CuZn, PBT

Ordering information

Description	Art. No.
Function V30	0117783

Example	Ordering No.
P6040 Vacuum, Pi48-3X5, Mounting T-slot, Cover plate with function V30, Connection G 2 1/2" and silencer	P6040 V AA 00 AC 05

piab

P6040 Function ES Vacuum
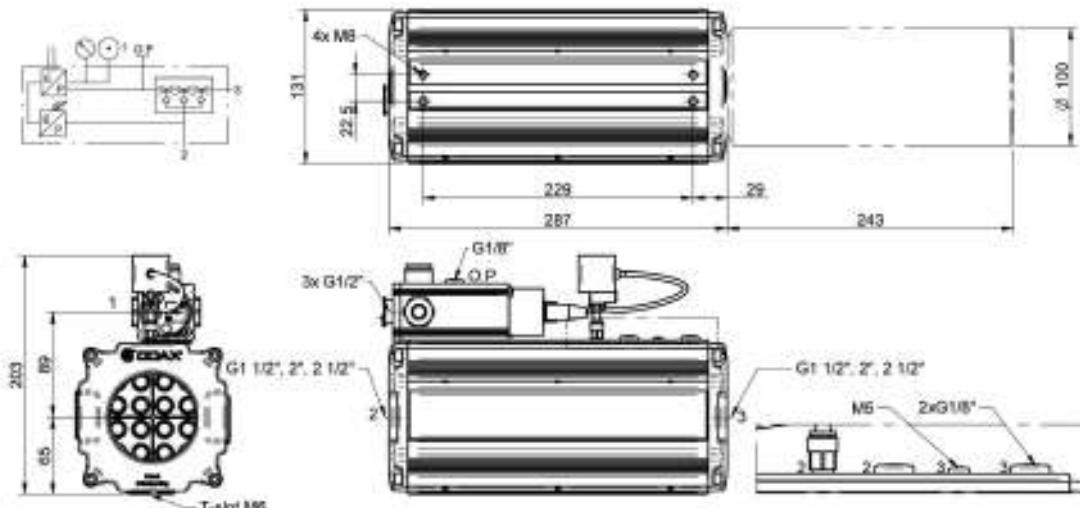
▶ Patented COAX® technology

▶ Substantially lower air consumption

▶ Modular design for flexible performance

▶ Compact and durable with no moving parts

▶ Saves energy when the vacuum requirement varies

Technical data

Description	Unit	Value
Feed pressure	MPa	0.7
Noise level	dBA	57–76
Temperature range	°C	0–50
Signal range	-kPa	15–95
Hysteresis	kPa	1-79
Voltage	V	24
Voltage range	V	14-28
Current consumption	mA	60
Ripple	V_P	1 V_{rms}
Safety classification	IP	40
Display		LED
Weight	g	5000–6000
Material		Al, PA, NBR, SS, POM, HDPE, PC, CuZn, PBT

Ordering information

Description	Art. No.
Function ES Vacuum	0117784

Example	Ordering No.
P6040 Vacuum, Si32-3X5 with non-return valve, Mounting T-slot, Cover plate with function ES vacuum, Connection G 2 1/2" with silencer	P6040 V BW 00 AD 05

Silencer MINI
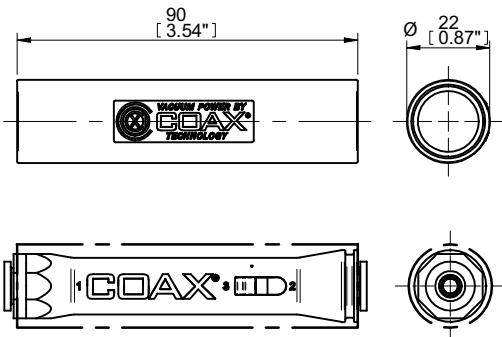
▶ Reduces noise from exhaust on piINLINE® MINI.

Technical data

Description	Unit	Value
Noise level, max. reduction	dBA	10
Material		Al
Weight	g	20

Ordering information

Description	Art. No.
Silencer piINLINE® MINI	0125466

90 [3.54"]   Ø 22 [0.87"]

Ordering information, accessories

Description	Art. No.
Snap-in piINLINE® 1x MINI mounting bracket for silencer	0126009

Silencer MIDI
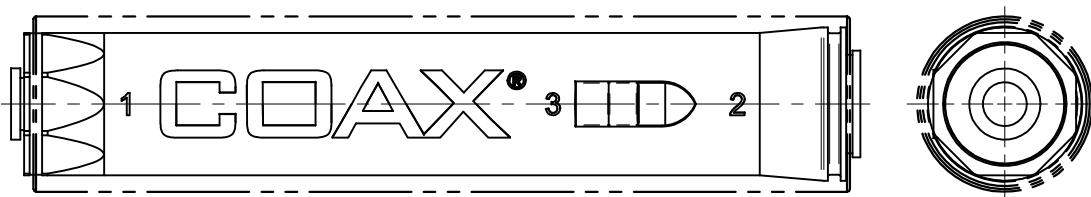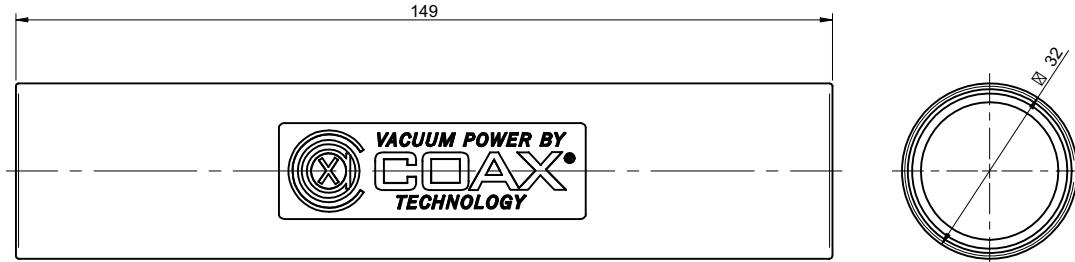
▶ Reduces noise from exhaust on MIDI piINLINE®.

Technical data

Description	Unit	Value
Noise level, max. reduction	dBA	15
Material		Al
Weight	g	70

Ordering information

Description	Art. No.
Silencer piINLINE® MIDI	0123031

Ordering information, accessories

Description	Art. No.
Snap-in piINLINE® 1x MIDI mounting bracket for silencer	0123096

P3010 mounting rail

▶ Rigid and easy to mount
▶ For dynamic loads
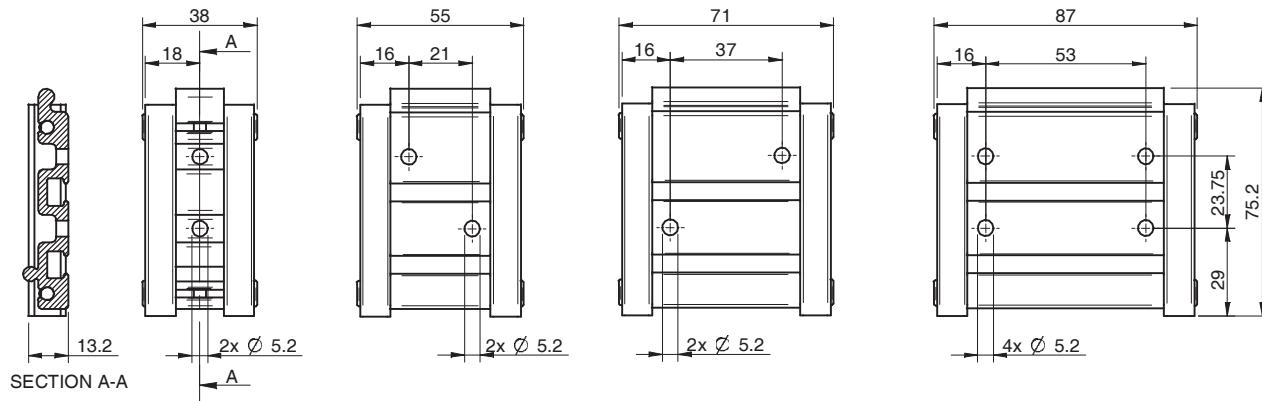
Technical data

Description	Unit	Value
Temperature range	°C	-10–50
Weight	g	60–120
Material		Al, SS

Ordering information

Description	Art. No.
Mounting rail P3010, one pump module	0106167
Mounting rail P3010, 2 pump modules	0106162
Mounting rail P3010, 3 pump modules	0106168
Mounting rail P3010, 4 pump modules	0106160

P3010 common-feed adapters
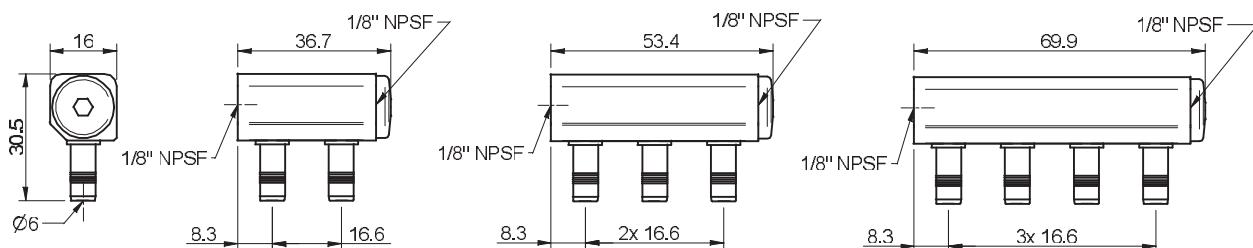
▶ One compressed air connection required to feed air to several pumps.

Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Temperature range	°C	-10–50
Weight	g	20–40
Material		Al, PPS

Ordering information

Description	Art. No.
Common-feed adapter P3010, 2 pump modules	0106157
Common-feed adapter P3010, 3 pump modules	0106158
Common-feed adapter P3010, 4 pump modules	0106159

P3010 exhaust adapter
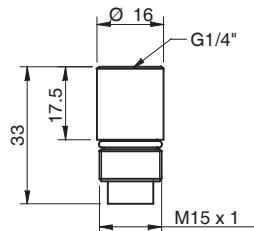
▶ Connection of exhaust air
▶ For clean environment
▶ Directed blowing air

Technical data

Description	Unit	Value
Temperature range	℃	-10–50
Weight	g	8
Connection, exhaust		G1/4" / Ø16 mm
Material		Al

Ordering information

Description	Art. No.
Exhaust adapter	0106344

Mountings P5010
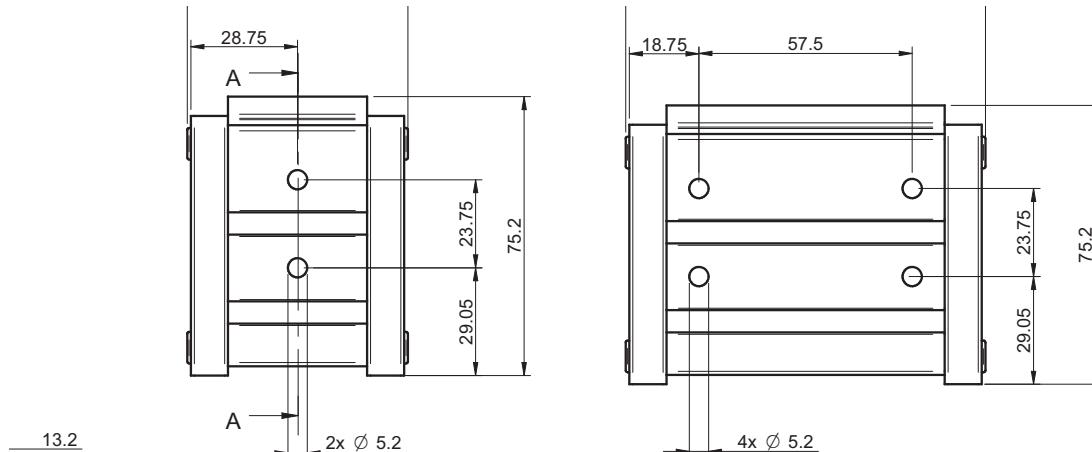
▶ P5010 Piab mounting rail
  - Rigid and suitable for dynamic loads.
  - Available for one or two pump modules.
▶ P5010 DIN mounting
  - Fits industry standard DIN rail systems.
  - Easy to mount and dismount.

Technical data
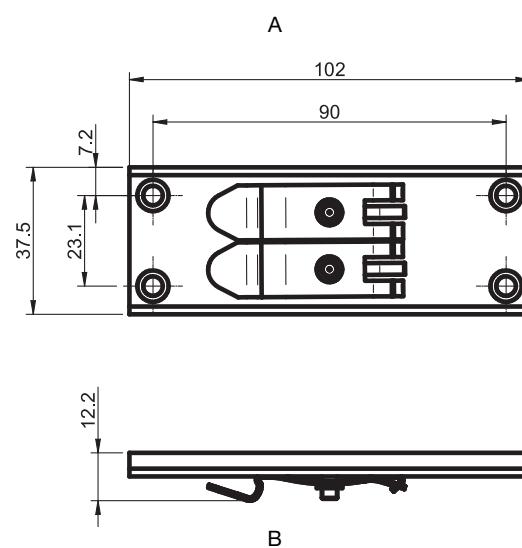
Description	Unit	Value
Temperature range	°C	-10-80
Weight	g	122-203
Material		Al, SS

Ordering information

	Description	Art. No.
A	Mounting rail x1 P5010	0118209
A	Mounting rail x2 P5010	0118208
B	Mounting rail DIN P5010	0117763

ION A-A

A

B

Common feed adapter P5010
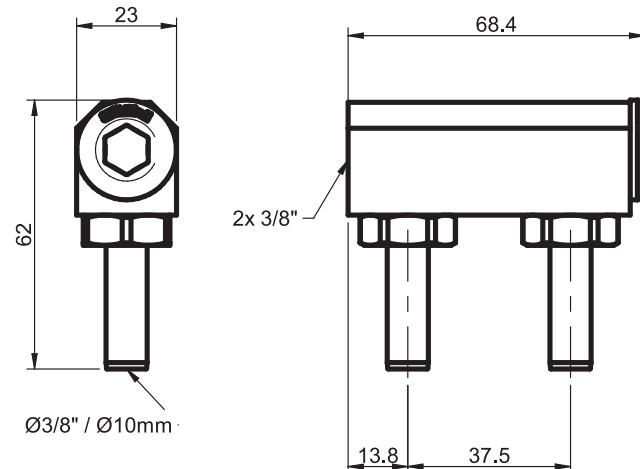
▶ One compressed-air connection required to feed air to two P5010 vacuum pumps.

▶ Suitable when two P5010 pumps are used for a dual-channel system (shoe-laced system).

Technical data

Description	Unit	Value
Temperature range	°C	-10-80
Weight	g	70
Material		Al, NBR, PA

Ordering information

Description	Art. No.
Common feed adapter Ø10 mm P5010	0117762

23

62

Ø3/8" / Ø10mm

68.4

2x 3/8"

13.8   37.5

Vacuum filters

▶ 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

Technical data
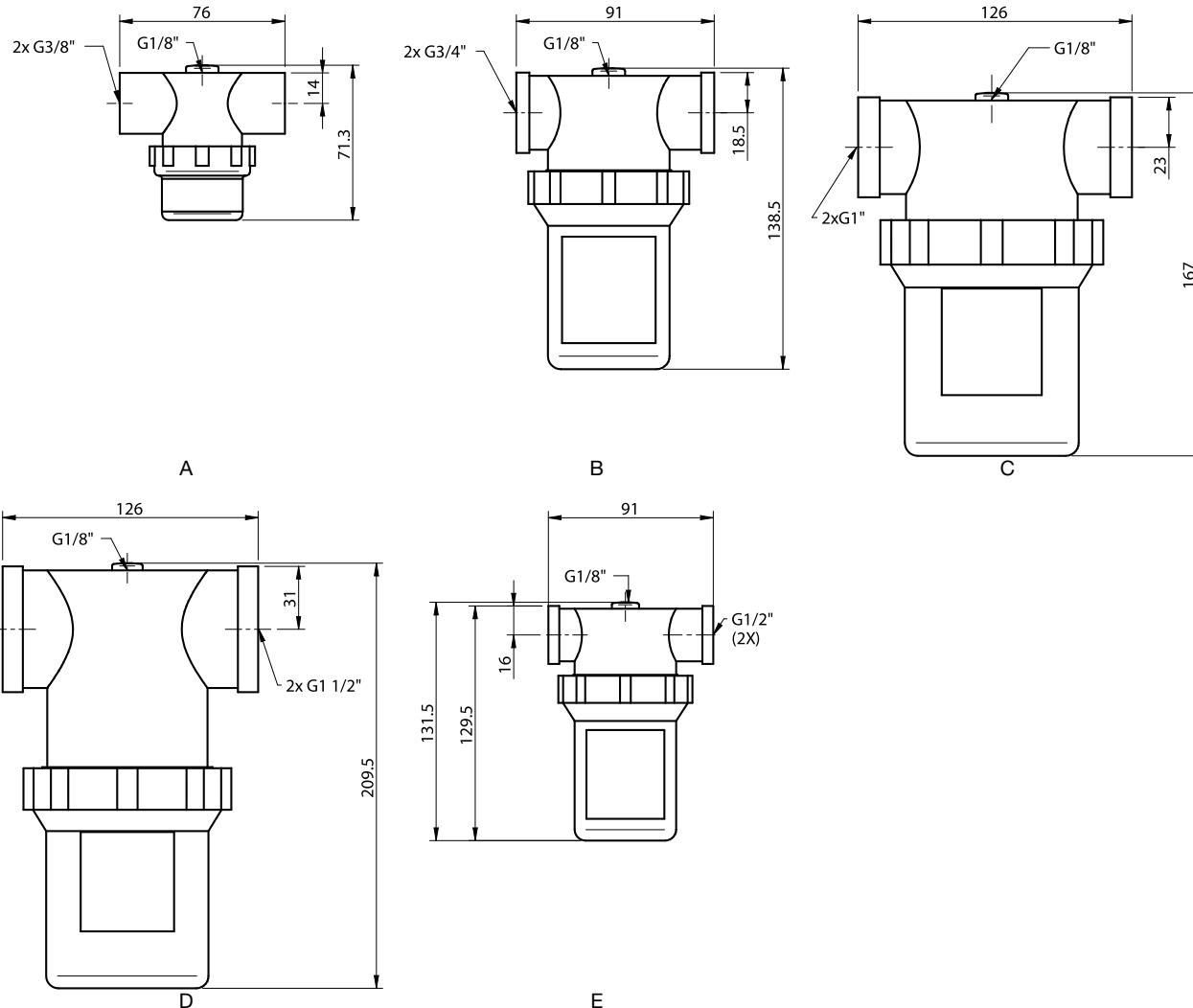
Description	Unit	Value
Pressure range	MPa	-0.1–0 MPa
Material		PE, PP, PA
Temperature range	ºC	-20–80
Removal efficiency	μm	10

Technical data, specific

Description	Unit	Value				
		3116671	3116651	3116652	3116672	3116653
Weight	g	70	168	170	424	550
Flow nominal	Nl/s	2.5	15	15	42	85
Volume Internal	cm³	45	195	205	495	675
Filter area	m²	0.003	0.010	0.010	0.019	0.023

Ordering information

	Description	Art. No.
A	Vacuum filter G3/8"	3116671
B	Vacuum filter G3/4"	3116652
C	Vacuum filter G1"	3116672
D	Vacuum filter G1½"	3116653
E	Vacuum filter G1/2"	3116651
E	Vacuum filter G1/2" (special)	0110521
B	Vacuum filter G3/4" (special)	0110522
D	Vacuum filter G1 1/2" (special)	0110523

A

B

C

D

E

Technical data, accessories

Description	Unit	Value					
		3116673	3116674	3116675	3116676	3116223	3116224
Weight	g	7	26	50	74	80	144
Filter area	m²	0.003	0.010	0.019	0.023	0.028	0.074
Removal efficiency	µm	10	10	10	10	5	5

Ordering information, accessories

Description	Art. No.
Filter element 3/8"	3116673
Filter element 1/2" & 3/4"	3116674
Filter element 1"	3116675
Filter element 1½"	3116676
Filter element 1/2" & 3/4" (special)	3116223
Filter element 1½" (special)	3116224

Vacuum filter S

▶ To filter dust and other small particles from the vacuum flow.

▶ Reduces the risk of operation breakdown or stoppage in the pump.

Technical data
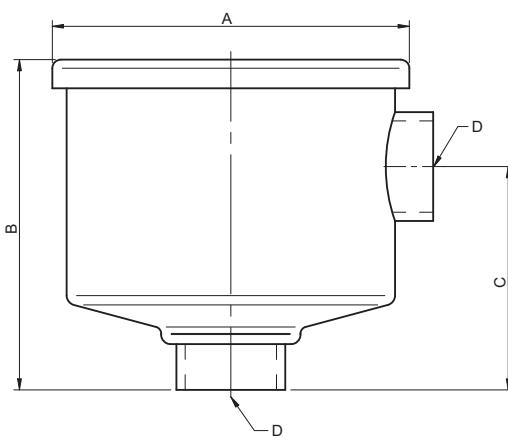
Description	Unit	Value
Pressure range	MPa	-0.1–0
Material		Baked enamel steel, SS, NBR, Polyester
Temperature range	°C	-30–90
Removal efficiency	μm	5

Technical data, specific

Description	Unit	Value			
		3116709	3116654	3116710	0111311
Weight	kg	1.0	2.1	4.9	4.2
Flow	Nl/s	16.5	37.7	82.6	100
Volume, internal	cm	810	2560	5830	7000
Filter area	cm	600	1900	4200	7500

Ordering information

Description	Art. No.
Vacuum filter 1", steel	3116709
Vacuum filter 1 1/2", steel	3116654
Vacuum filter 2", steel	3116710
Vacuum filter 2 1/2", steel	0111311

Measures

Description	Art. No.	A [Ø mm]	B [mm]	C [mm]	D
Vacuum filter 1", steel	3116709	150	111	67	G 1"
Vacuum filter 1 1/2", steel	3116654	185	170	115	G 1 1/2"
Vacuum filter 2", steel	3116710	220	260	130	G 2"
Vacuum filter 2 1/2", steel	0111311	200	260	134	G 2 1/2"

Technical data, accessories

Description	Unit	Value			
		3116711	3116658	3116712	0111558
Weight	kg	0.18	0.53	1.00	0.50
Material		Polyester	Polyester	Polyester	Polyester
For Vacuum Filter		3116709	3116654	3116710	0111311

Ordering information, accessories

Description	Art. No.
Filter element 1"	3116711
Filter element 1 1/2"	3116658
Filter element 2"	3116712
Filter element 2 1/2"	0111558

Filter fittings

- ▶ Adjustable mounting angle due to the use of locking nut.
- ▶ No need for seal with Teflon tape or glue due to the use of O-ring seals.

Technical data
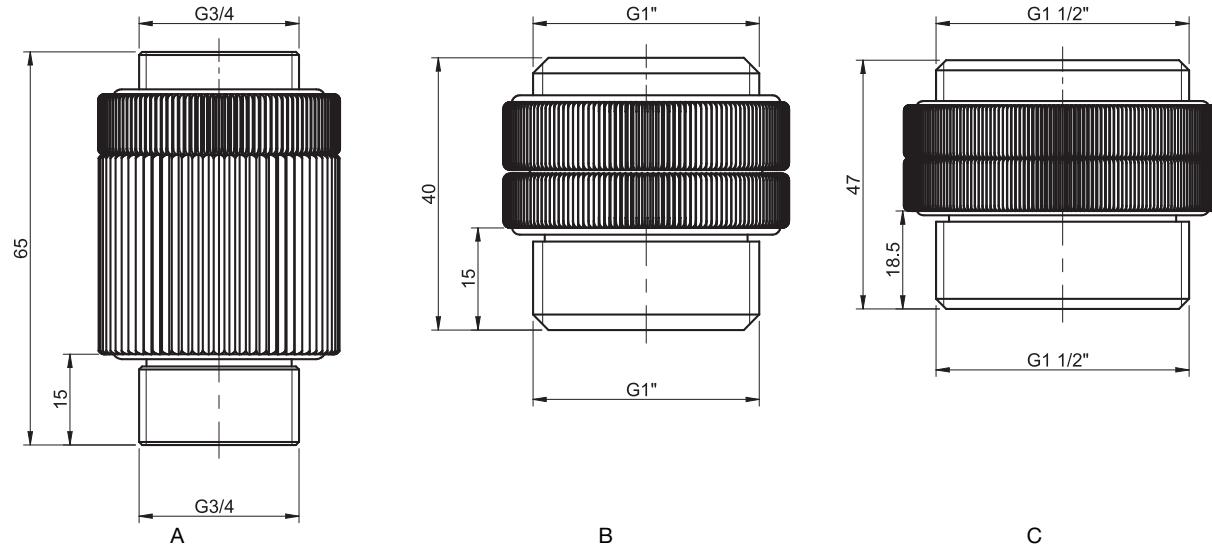
Description	Unit	Value
Material		Al, NBR
Temperature range	°C	-20–80

Technical data, specific

Description	Unit	Value		
		3330052	0113979	3330051
Weight	g	90	58	110
Connection		2 x G3/4"	2 x G1"	2 x G1 1/2"

Ordering information

	Description	Art. No.
A	Filter fitting 3/4"	3330052
B	Filter fitting 1"	0113979
C	Filter fitting 1 1/2"	3330051

Silencers

▶ Reduce noise from exhaust
▶ Flow-through design

Technical data
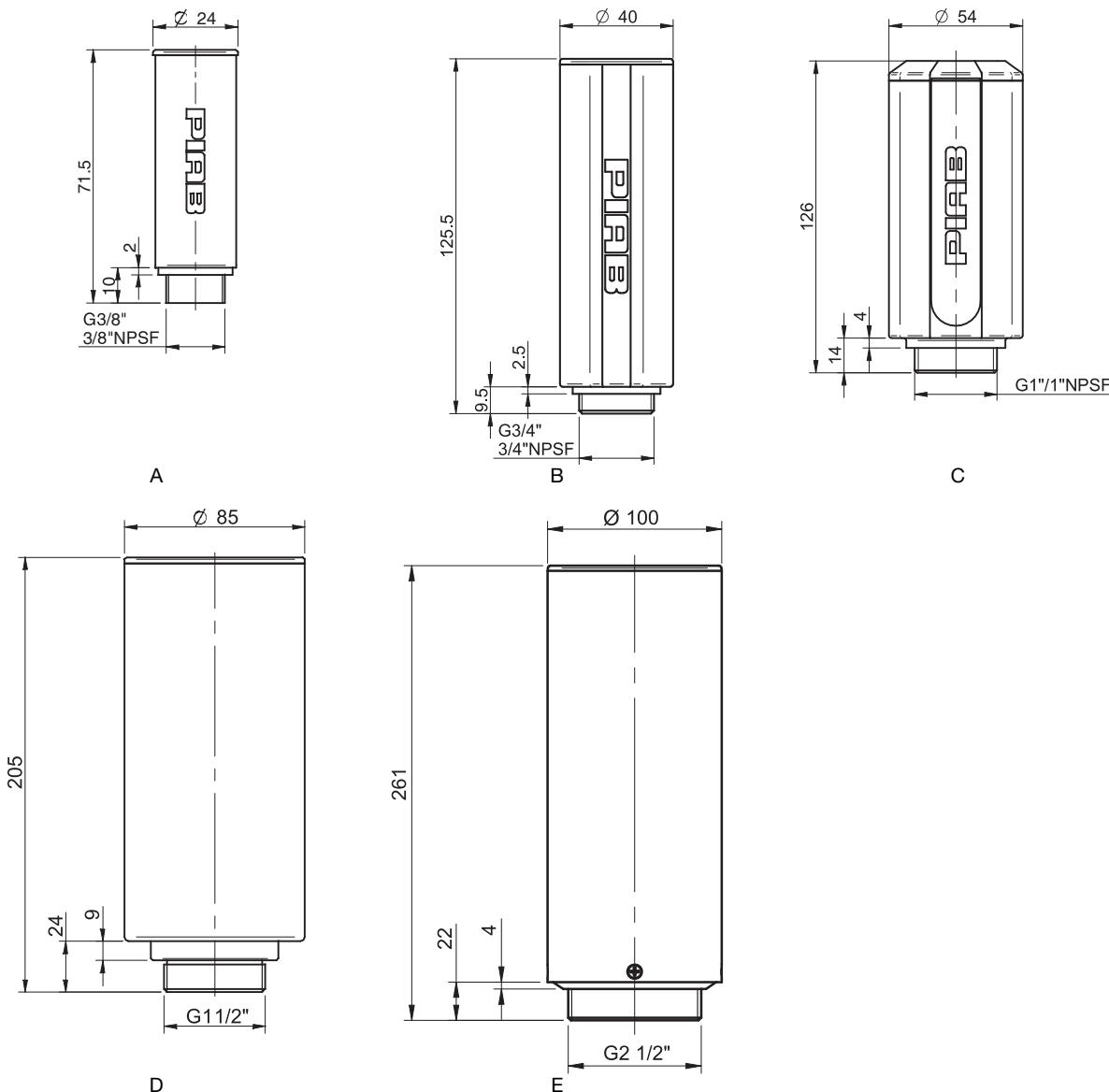
Description	Unit	Value	
			0117605
Noise level reduction, approximately	dB(A)	-10	-10
Temperature range	°C	-20–100	-20–100
Material		PA, HDPE	Al, POM, HDPE, SS

Technical data, specific

Description	Unit	Value				
		3216009	3216002	0112499/0113003	0103224	0117782
Weight	g	14	61	120	425	893

piab

Ordering information

	Description	Art. No.
A	Silencer G3/8"	3216009
B	Silencer G3/4"	3216002
C	Silencer G1"	0112499
C	Silencer 1" NPSF	0113003
D	Silencer G1½"	0103224
E	Silencer G2½"	0117782

Ø 24

71.5

2

10

G3/8"
3/8"NPSF

A

Ø 40

125.5

2.5

9.5

G3/4"
3/4"NPSF

B

Ø 54

126

4

14

G1"/1"NPSF

C

Ø 85

205

24

9

G11/2"

D

Ø 100

261

22

4

G2 1/2"

E

Silencer COAX®

▶ Reduces noise from the exhaust
▶ Compatible with aluminium holders for COAX® MINI and COAX® MIDI 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	Unit	Value
Material		PA, TPU, PE
Temperature range	°C	-20–80
Noice level reduction	dB(A)	≥10
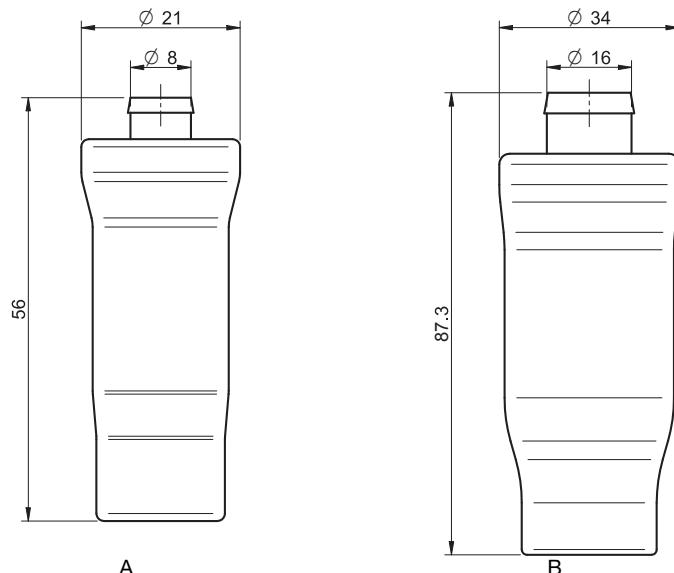
Technical data, specific

Description	Unit	Value	
		0111977	0111976
Weight	g	8.64	36.56

Ordering information

	Description	Art. No.
A	Silencer COAX® MINI	0111977
B	Silencer COAX® MIDI	0111976

A

B
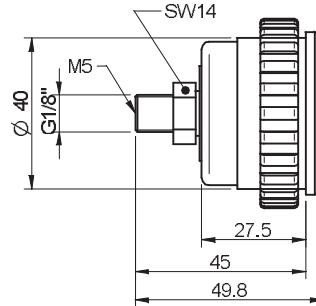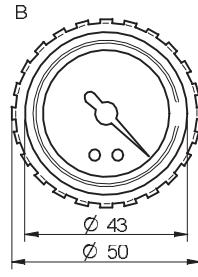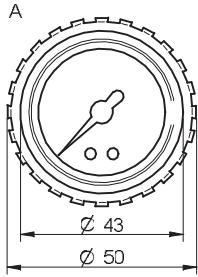
Connection kits

▶ Push-in connectors with hose dimensions compatible with the pump connections.

▶ Corrosion-resistant material.

▶ Complete kit for one pump.

Technical data

Description	Unit	Value		
		Connection kits	Barrel nipples	Hose connectors
Temperature range	℃	-25–75	0-60	0-80
Material		POM, NBR, SS, CuZn, Al	PVC	PPG

Technical data, specific

Description	0104902	0104903	3207010
Connection kit for vacuum pump	MINI 10	MINI 5-20	CLASSIC 25-120
Connection plate	A	B, C	D
Hose dimension ** for compressed air	d=4 mm	D=6 mm	D=8 mm
Hose dimension ** for vacuum	D=6 or 8 mm	D=10 mm	d=12, 19, 25 mm

* Remote control
** d = inner diameter, D = outer diameter

Technical data, specific

Description	0118715	0118716	0118717	0118714	0106856	0106858	0106860
Thread	G1 1/2"	G2"	G2 1/2"	G2 1/2"	G1 1/2"	G2"	G2"
Hose dimension	—	—	—	Ø75	Ø40	Ø60/64	Ø50
Max pressure (bar)*	PN16	PN16	PN16	PN10	PN10	PN10	PN10

* at 20℃, water temperature.

Ordering information

Description	Art. No.
Connection kit for pump MINI 10, connection plate A	0104902
Connection kit for pump MINI 5-20, connection plate C and pump MINI 10-20, connection plate B	0104903
Connection kit for pump CLASSIC 25-120, connection plate D	3207010
Barrel nipple G1½" PVC	0118715
Barrel nipple G2" PVC	0118716
Barrel nipple G2½" PVC	0118717
Hose connector 2½"–75, plastic	0118714
Hose connector 1½"–40, plastic	0106856
Hose connector 2"–60/64, plastic	0106858
Hose connector 2"–50, plastic	0106860