

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

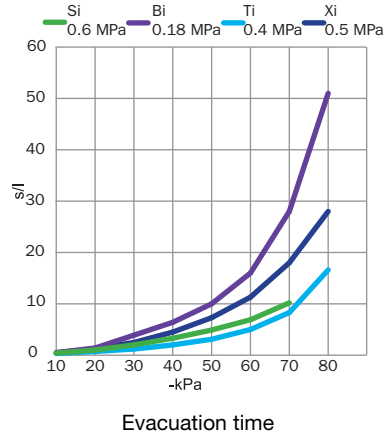
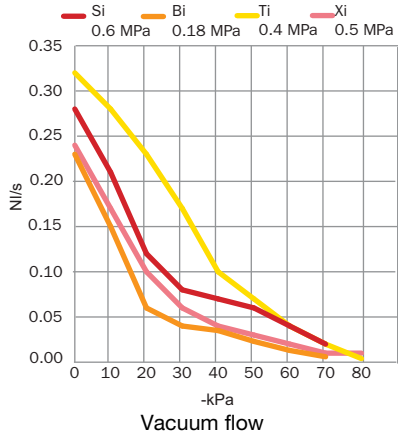
Description	Unit	Value					
		Bi4-4	Xi4-4	Si6-6	Bi6-6	Ti6-6	Xi6-6
Noise level, min-max	dBA	64-73	70-76	67-73	67-73	74-85	70-76
Weight	g	10	10	9.8	9.8	9.8	9.8
Connection, vacuum	mm	4	4	6	6	6	6
Connection, compressed air	mm	4	4	6	6	6	6

Vacuum flow

COAX® cartridge	Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)									Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	
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

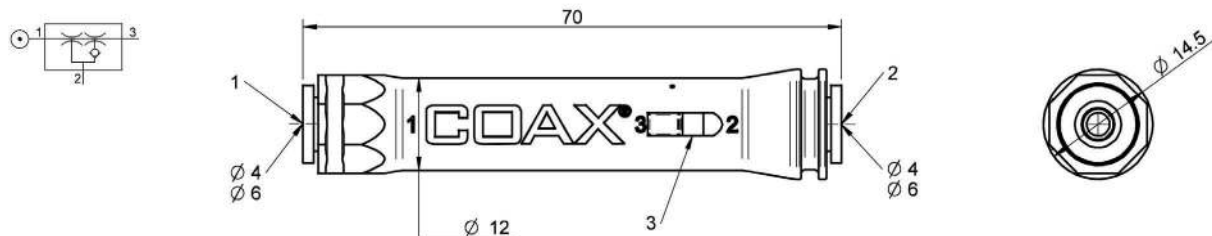
Evacuation time

COAX® cartridge	Feed pressure MPa	Air consumption NI/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	0.12	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



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

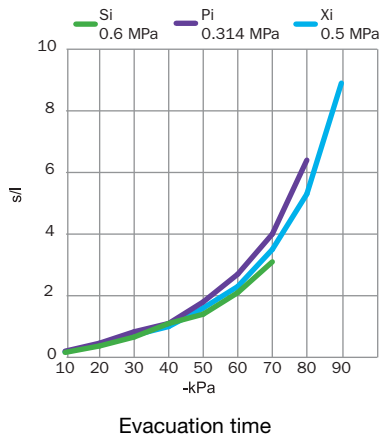
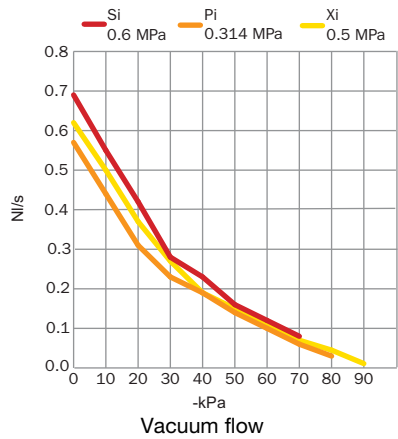
Description	Unit	Value					
		Si6-6	Pi6-6	Xi6-6	Si8-8	Pi8-8	Xi8-8
Noise level, min-max	dBA	68-84	69-85	81-85	68-84	69-85	81-85
Weight	g	23	23	23	21.8	21.8	21.8
Connection, vacuum	mm	6	6	6	8	8	8
Connection, compressed air	mm	6	6	6	8	8	8

Vacuum flow

COAX® cartridge	Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/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

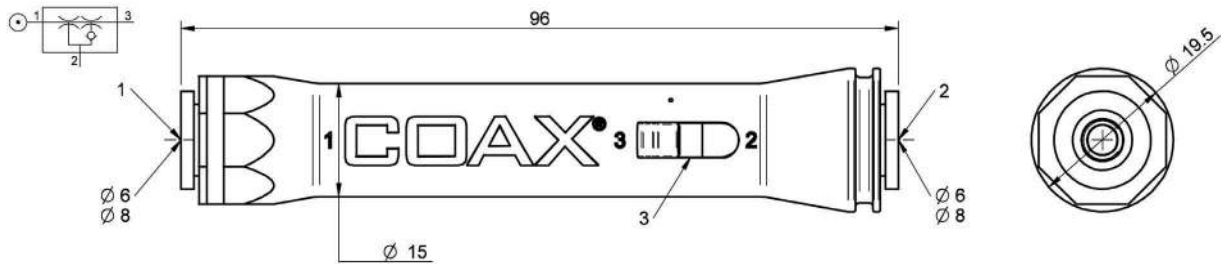
Evacuation time

COAX® cartridge	Feed pressure MPa	Air consumption NI/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



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

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, AI, 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

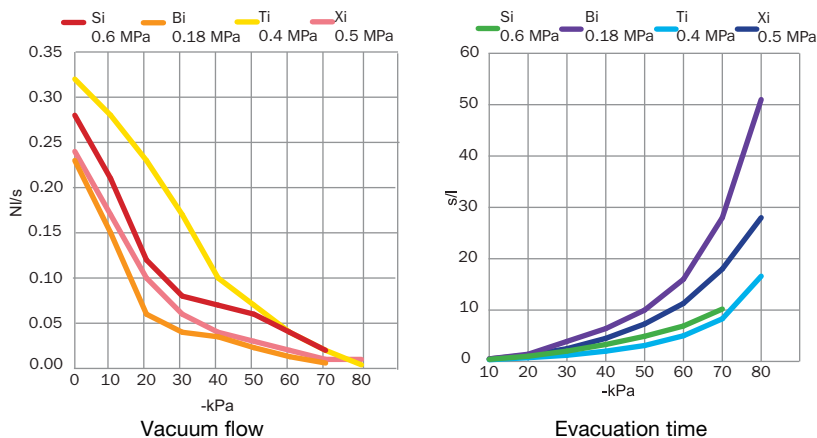
COAX® cartridge	Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80		
Bi	0.18	0.14	0.23	0.15	0.060	0.040	0.035	0.023	0.013	0.006	—	83	
Si	0.6	0.12	0.28	0.21	0.12	0.08	0.07	0.06	0.04	0.02	—	75	
Xi	0.5	0.13	0.24	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.

Evacuation time

COAX® cartridge	Feed pressure MPa	Air consumption NI/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.



Ordering information

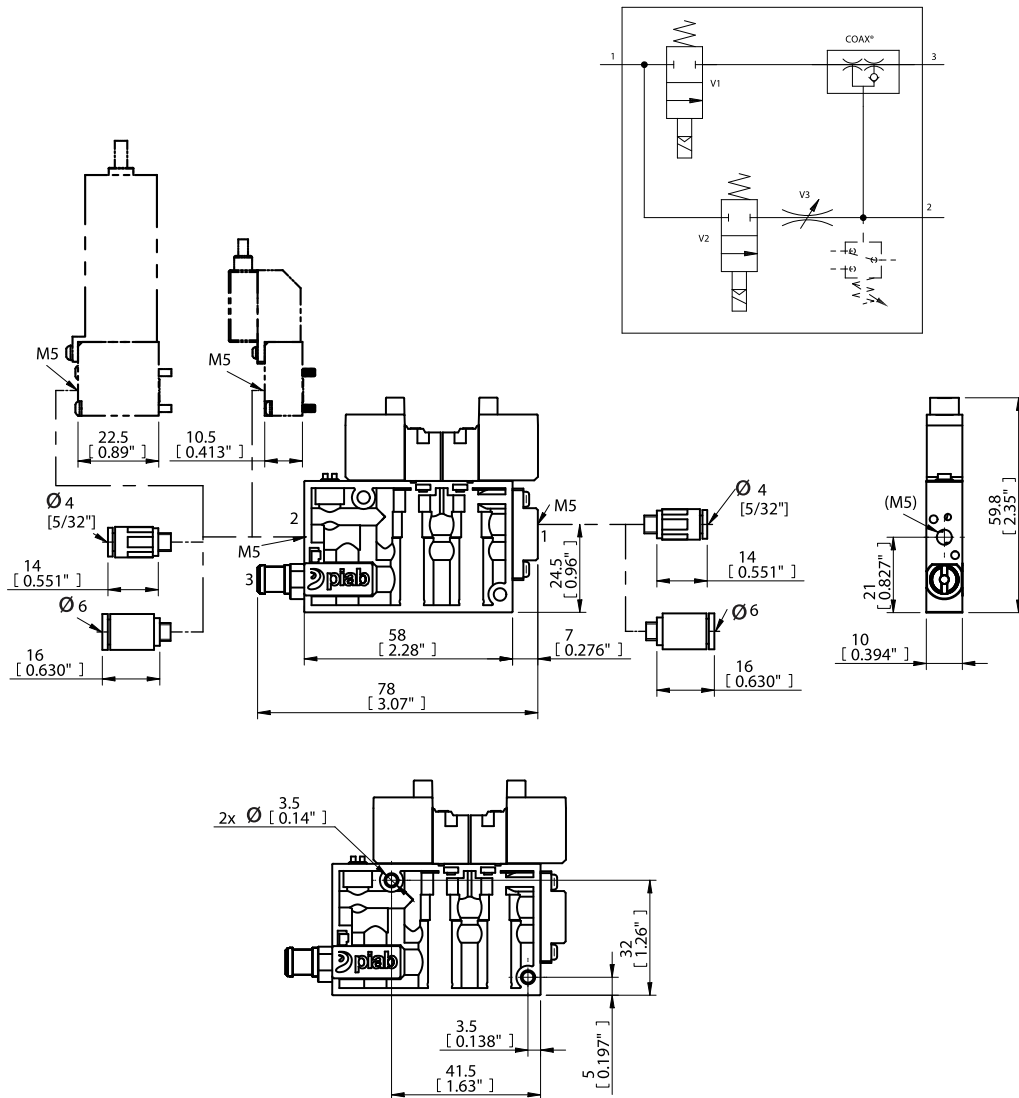
1. COAX® cartridge module	PC10 Code
COAX® cartridge Bi03-2, low feed pressure	B
COAX® cartridge Si02-2, high vacuum flow	S
COAX® cartridge Xi2.5-2, extra vacuum	X
COAX® cartridge Ti05-2, dirt tolerant design	T
COAX® cartridge Bi03-2, ozone resistant	BO
2. Supply and release valve	PC10 Code
Solenoid valve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

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.

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	Noise level**
	MPa	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.

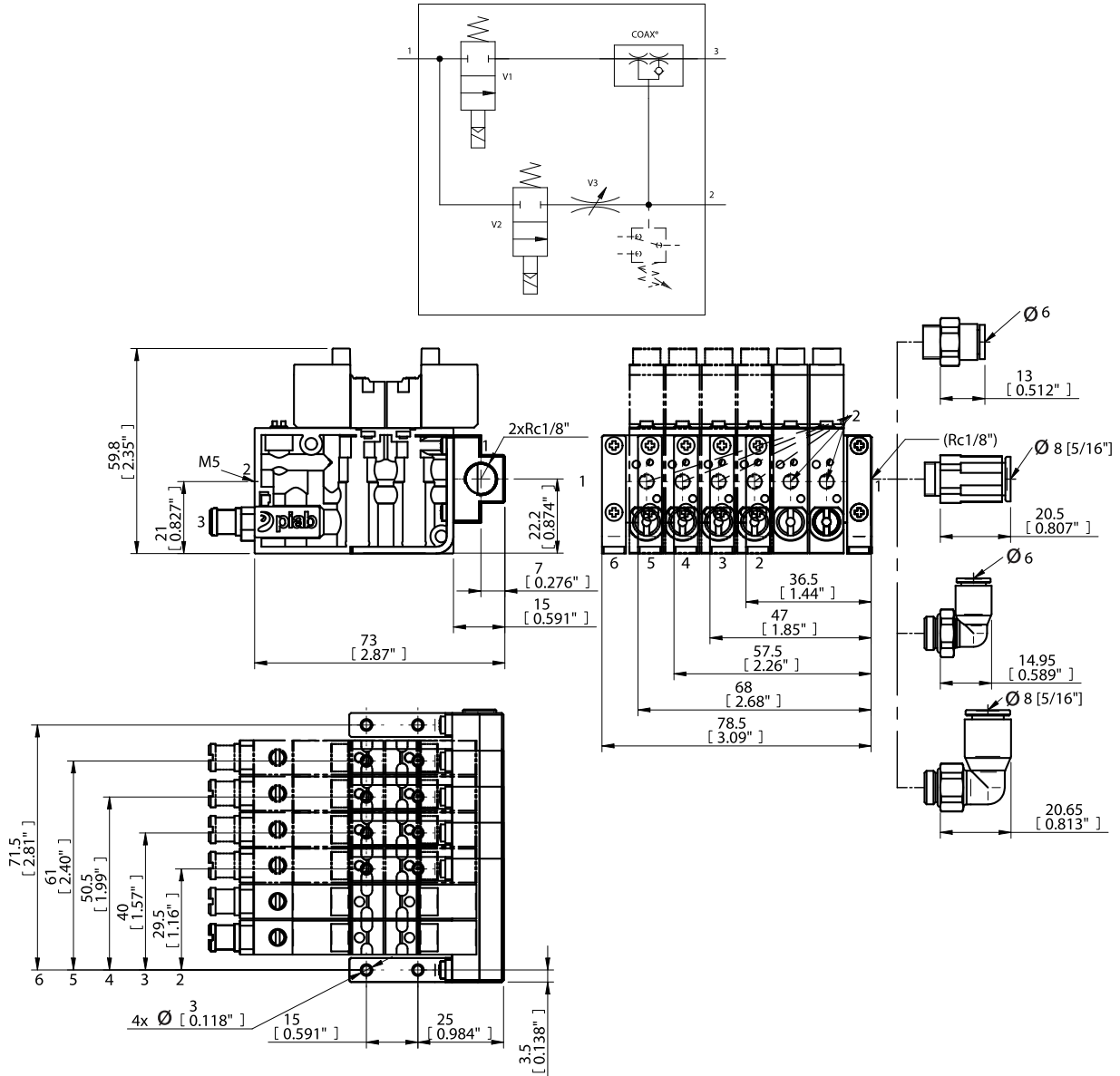
Ordering information

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.

piCOMPACT10 Vacuum sensor/switch



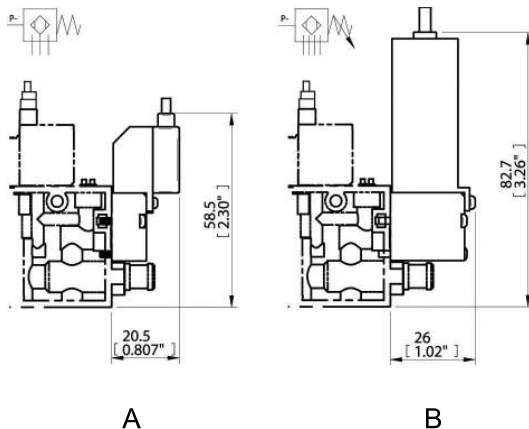
- ▶ Vacuum sensor/switch options for piCOMPACT10.
- ▶ Sensor with analog output 1-5 VDC.
- ▶ Digital switch with LED Display, PNP or NPN output + analog output (1-5 VDC).
- ▶ Easy to set vacuum level, hysteresis and change display units (bar, kPa, inHg, mmHg)
- ▶ 2m cable included, open ends.

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 sensor PNP	1D	0125648
B	Display, analog & digital output vacuum sensor NPN	2D	0125647



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 NI/s	Vacuum flow (NI/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.

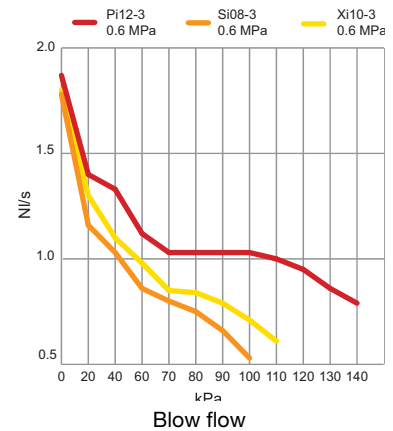
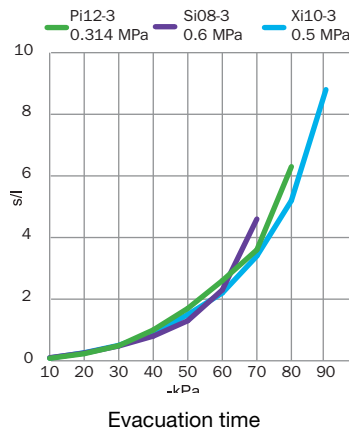
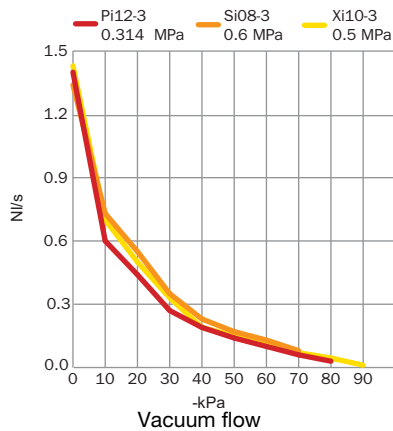
Evacuation time

COAX® Cartridge	Feed pressure MPa	Air consumption NI/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.

Blow flow

COAX® cartridge	Feed pressure MPa	Air consumption NI/s	Blow flow (NI/s) at different pressure levels (kPa)													Max pressure kPa
			0	20	40	60	70	80	90	100	110	120	130	140		
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	



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.

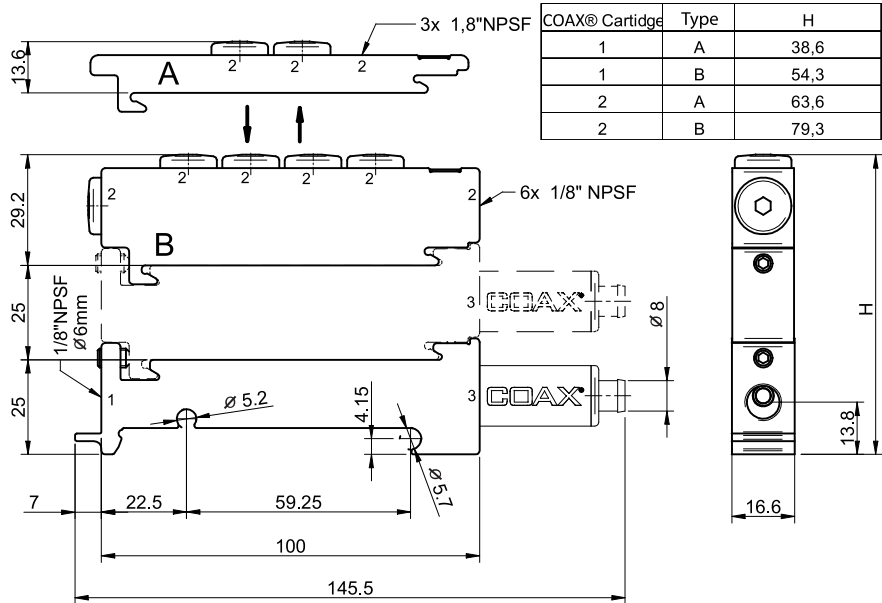
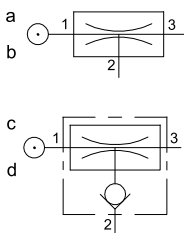
4. Select ES	P3010 Code
No energy saving	AA
Valve DS23	AB
ES Vacustat 2/2 NO, large hysteresis	AC
ES Vacustat 2/2 NO, small hysteresis	AD

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.

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, AI, 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

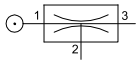
1. Select housing		P3010 Code
Housing, connection Ø=6 mm		00
Housing, connection 1/8" NPSF		01
2. COAX® cartridge modules		P3010 Code
COAX® cartridge module Pi12-3FSx1		AE
COAX® cartridge module Pi12-3FSx1, non-return valve		AF
COAX® cartridge module Pi12-3FSx2		AG
COAX® cartridge module Pi12-3FSx2, 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 cm ³	04
B	Function Quick-release connection, 8 and 6 mm, 30 cm ³	05
C	Function Quick-release connection, 8 and 6 mm, 60 cm ³	06
B	Function Quick-release connection, 10 and 6 mm, 30 cm ³	07
C	Function Quick-release connection, 10 and 6 mm, 60 cm ³	08
A	Function Quick-release connection, 1/4" NPSF and 6 mm, 3 cm ³	09
B	Function Quick-release connection, 1/4" NPSF and 6 mm, 30 cm ³	10
C	Function Quick-release connection, 1/4" NPSF and 6 mm, 60 cm ³	11
A	Function Quick-release connection, 8 and 6 mm, 3 cm ³	12
4. Select ES		P3010 Code
No energy saving		AA
Valve DS23		AB

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

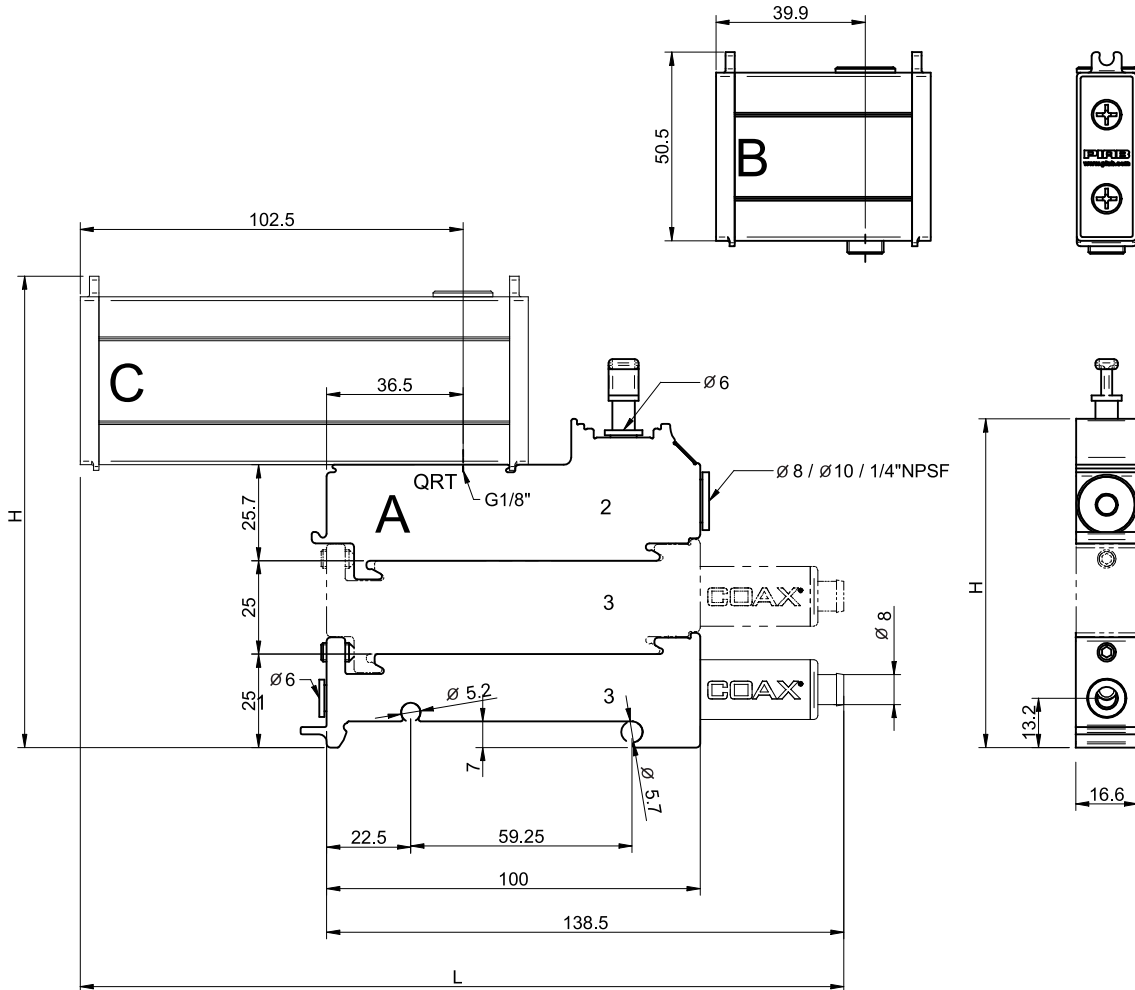
5. Select vacuum sensing	P3010 Code
No vacuum sensing	00
Vacuum switch, adjustable, PNP NO MM8	01
Vacuum switch, adjustable, NPN NO MM8	02
Vacuum switch, adjustable, PNP NO LM8	05
Vacuum switch, adjustable, PNP NO DM8	09
Vacuum switch, adjustable, NPN NO DM8	10
Vacuum switch inductive, adjustable with 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	dB(A)	66-68
Temperature range	°C	-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	NI/s	7.3
kv		10
Life span	cycles	>10,000,000

Performance tables

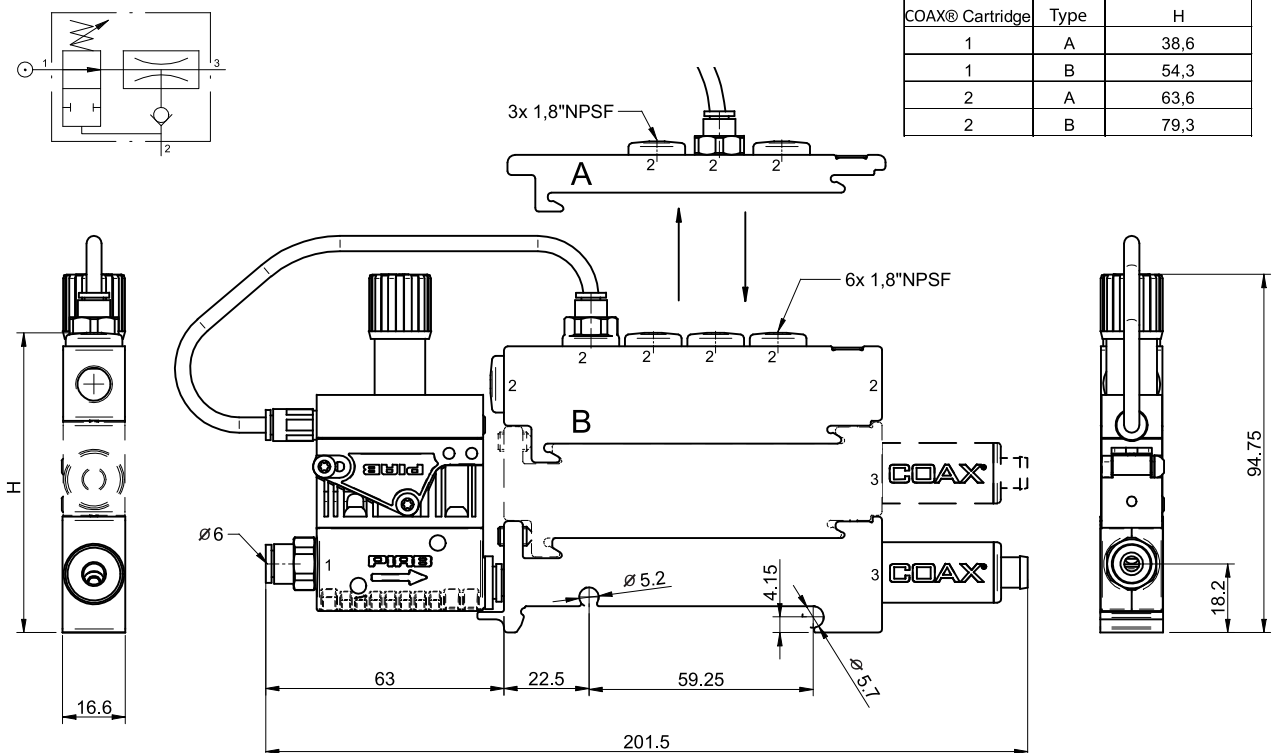
Depending upon choice of COAX® cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or Vacuum cartridges/integration datasheets.

Ordering information

1. Select housing		P3010 Code
Housing, connection $\varnothing=6$ 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 $\varnothing 6$ 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.

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	NI/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 cm ³	04
	Function Quick-release connection, 8 and 6 mm, 30 cm ³	05
	Function Quick-release connection, 8 and 6 mm, 60 cm ³	06
	Function Quick-release connection, 10 and 6 mm, 30 cm ³	07
	Function Quick-release connection, 10 and 6 mm, 60 cm ³	08
	Function Quick-release connection, 8 and 6 mm, 3 cm ³	12

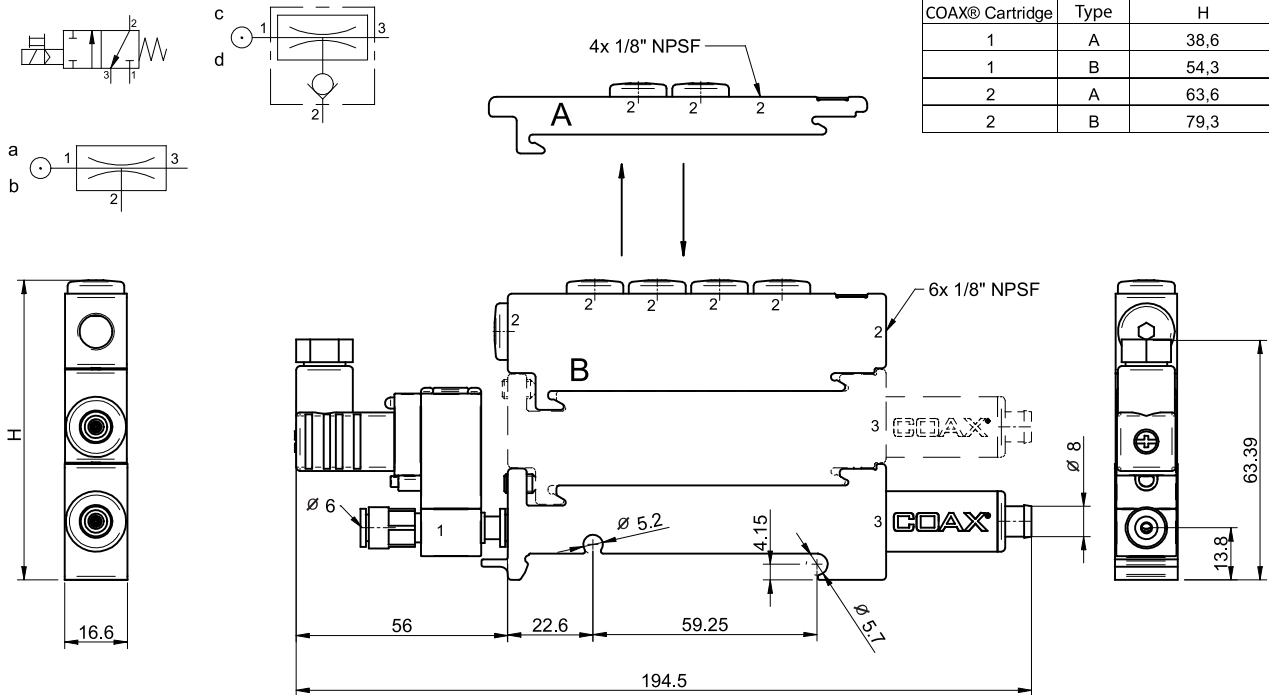
For detailed information on Quick-release, see separate datasheet.

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



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, AI, 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

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 cm ³	04
Function Quick-release connection, 8 and 6 mm, 30 cm ³	05
Function Quick-release connection, 8 and 6 mm, 60 cm ³	06
Function Quick-release connection, 10 and 6 mm, 30 cm ³	07
Function Quick-release connection, 10 and 6 mm, 60 cm ³	08
Function Quick-release connection, 1/4" NPSF and 6 mm, 3 cm ³	09
Function Quick-release connection, 1/4" NPSF and 6 mm, 30 cm ³	10
Function Quick-release connection, 1/4" NPSF and 6 mm, 60 cm ³	11
Function Quick-release connection, 8 and 6 mm, 3 cm ³	12

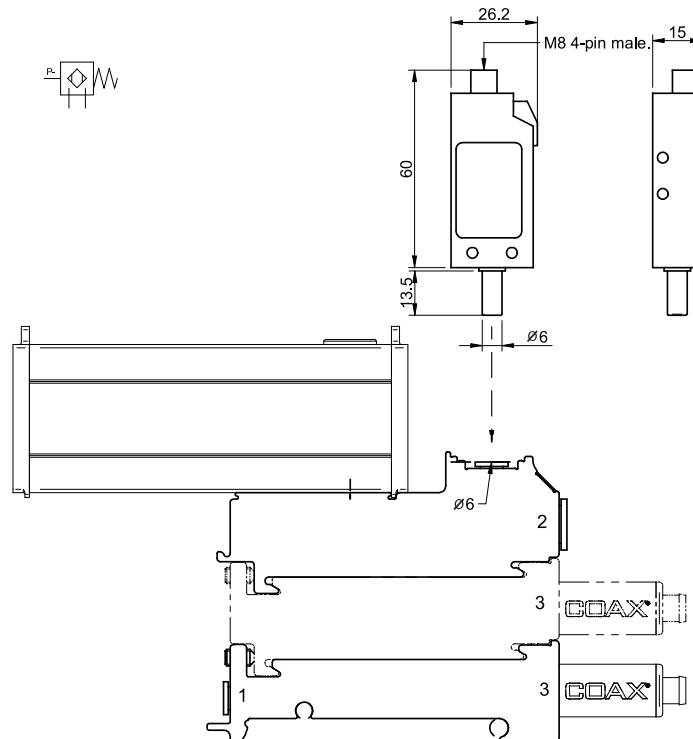
For detailed information on Quick-release, see separate datasheet.

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 3cm ³ , 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.

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

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

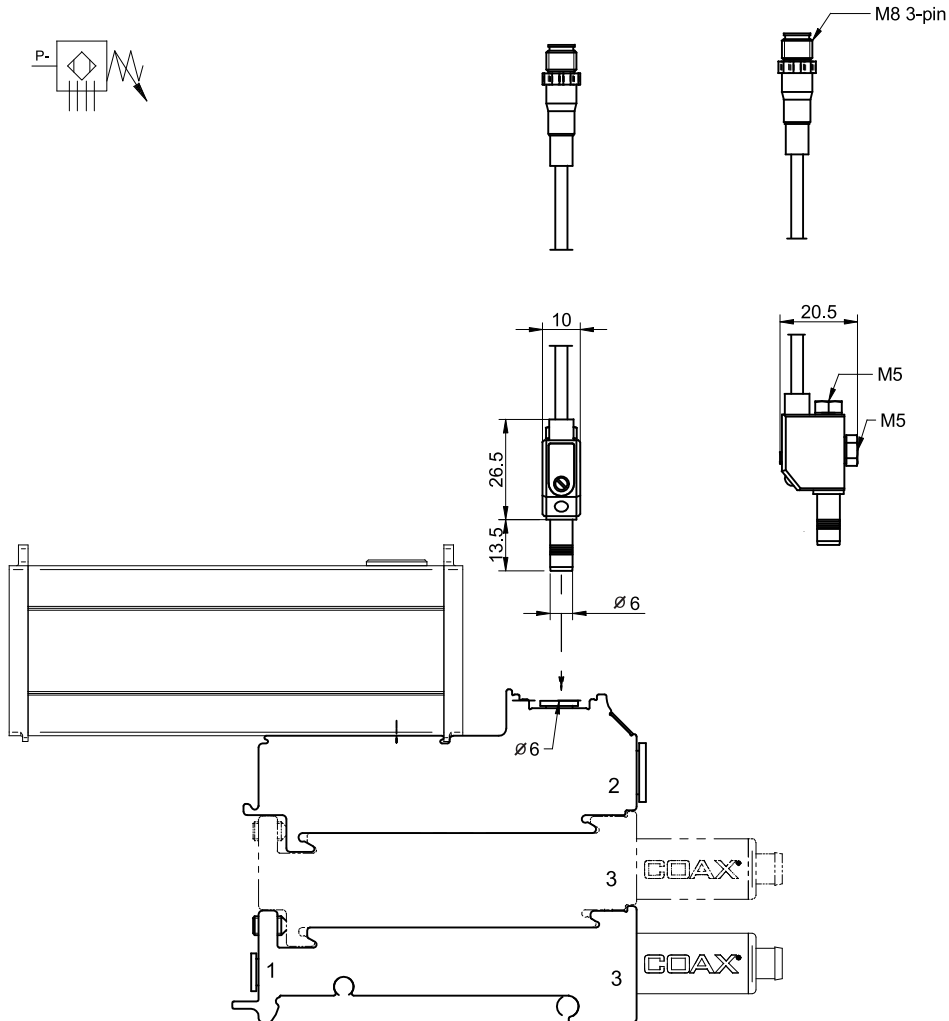
For detailed information on Quick-release, see separate datasheet.

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 3cm ³ , 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

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

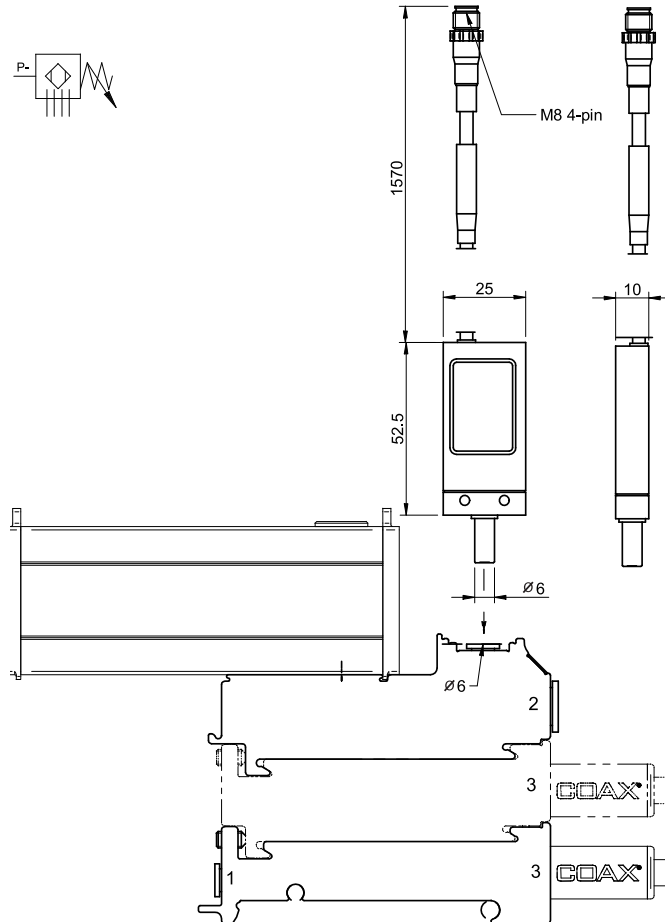
For detailed information on Quick-release, see separate datasheet.

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 3cm ³ , 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 cm ³	04
Function Quick-release connection, 8 and 6 mm, 30 cm ³	05
Function Quick-release connection, 8 and 6 mm, 60 cm ³	06
Function Quick-release connection, 10 and 6 mm, 30 cm ³	07
Function Quick-release connection, 10 and 6 mm, 60 cm ³	08
Function Quick-release connection, 1/4" NPSF and 6 mm, 3 cm ³	09
Function Quick-release connection, 1/4" NPSF and 6 mm, 30 cm ³	10
Function Quick-release connection, 1/4" NPSF and 6 mm, 60 cm ³	11
Function Quick-release connection, 8 and 6 mm, 3 cm ³	12

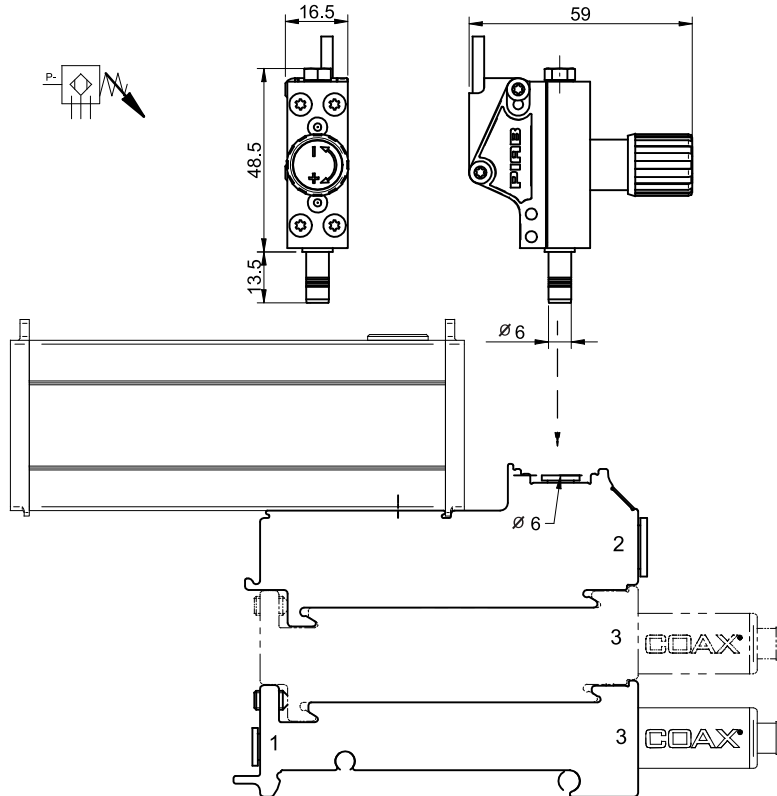
For detailed information on Quick-release, see separate datasheet.

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

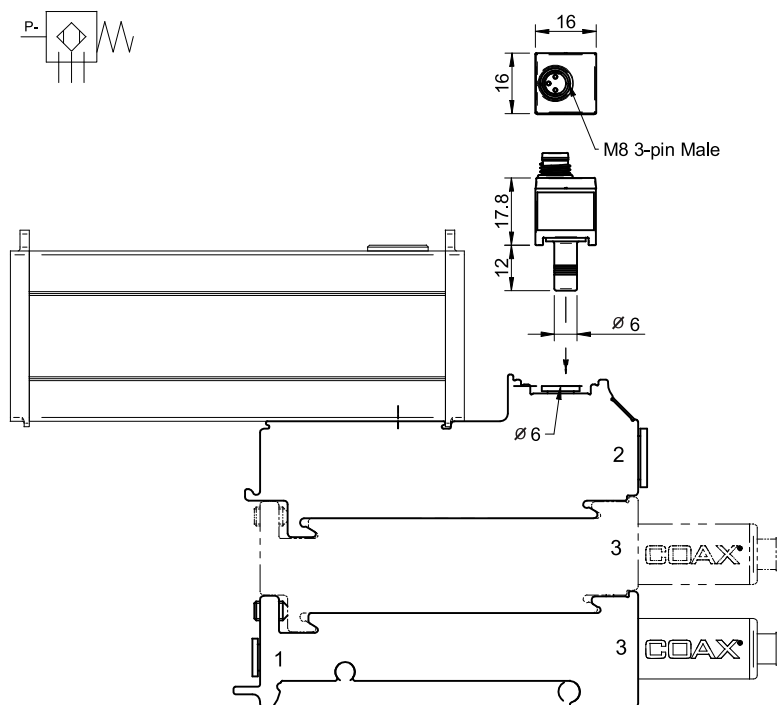
For detailed information on Quick-release, see separate datasheet.

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 3cm ³ , 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	°C	-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

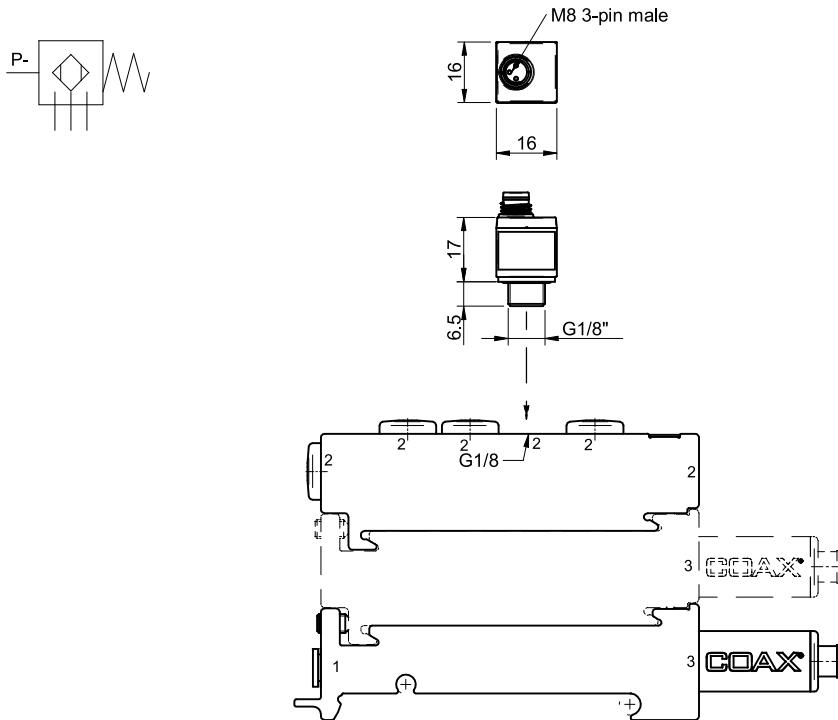
3. Select connection and function module	P3010 Code
Connection module high 6x1/8"	01
Connection module low 3x1/8"	02

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.

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, AI, SS, PMMA
Temperature range	°C	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	NI/s	0–7.5

Performance tables

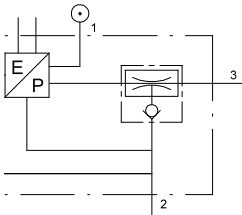
Depending upon choice of COAX® Cartridge, performance data of the P3010 can be found in the tables for vacuum flow, evacuation time and blow flow on the P3010 or COAX® Cartridge datasheets.

Ordering information

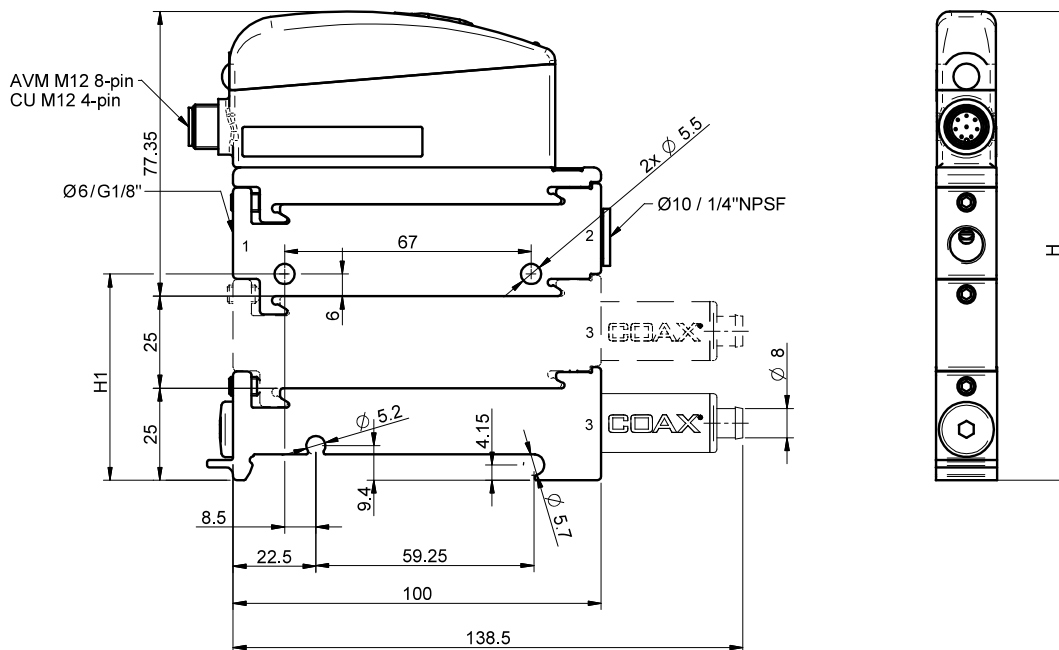
1. Select housing	P3010 Code
Housing, connection Ø=6 mm	00
Housing, connection 1/8" NPSF	01

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



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, AI, 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	NI/s	0-7.5
Function, on/off		NC

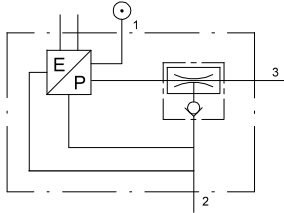
Performance tables

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.

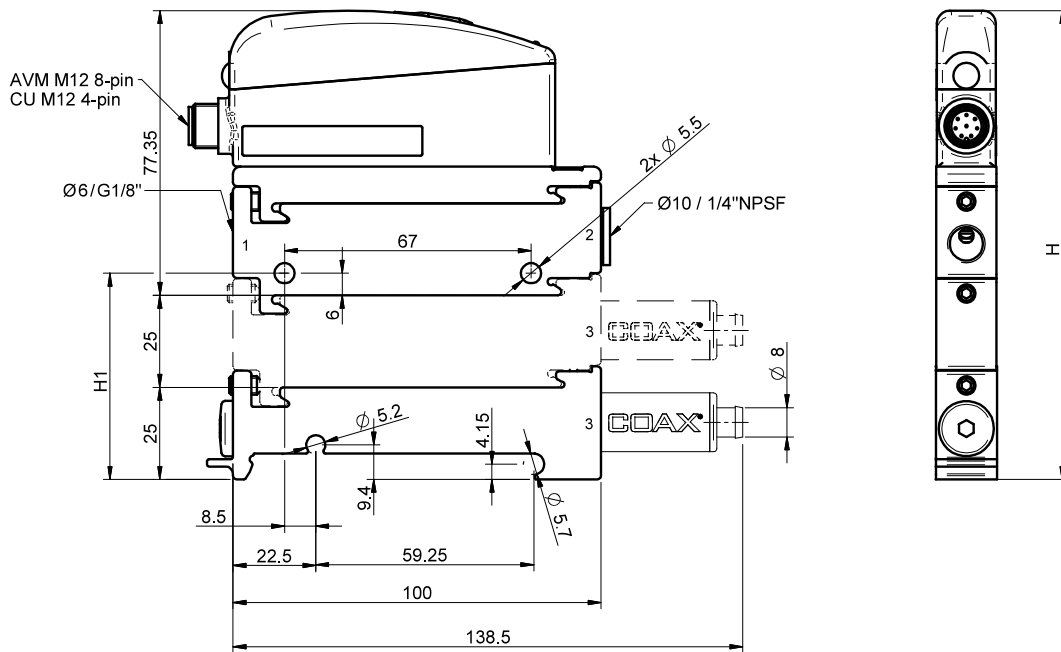
Ordering information

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



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.

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

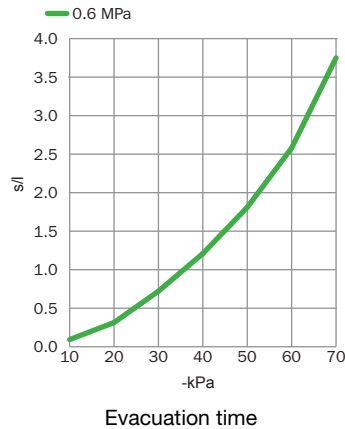
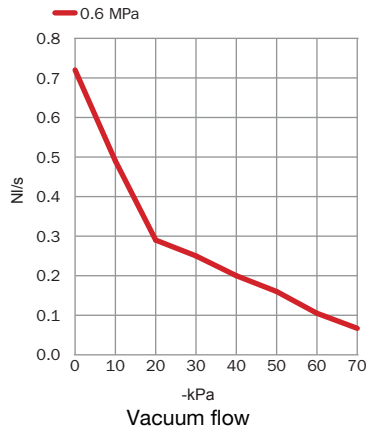
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	°C	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

Vacuum flow

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

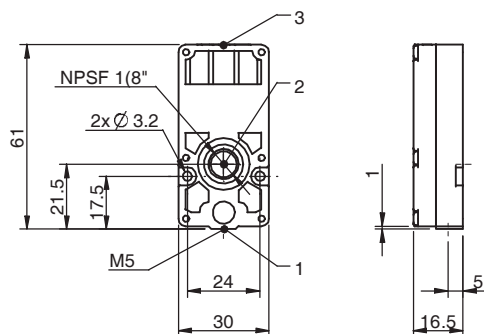
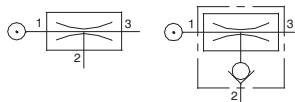
Evacuation time

Feed pressure MPa	Air consumption NI/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	0.49	0.093	0.31	0.72	1.2	1.8	2.6	3.8	–	–	75



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.

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

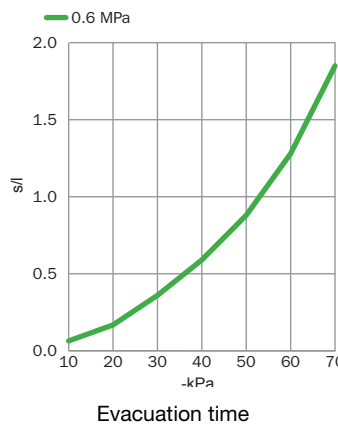
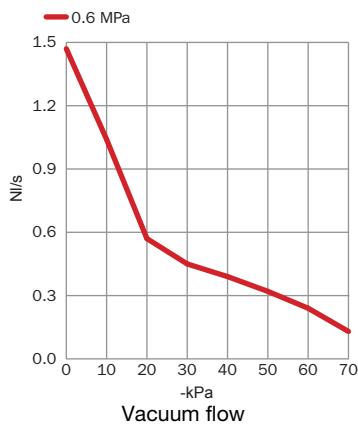
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dB(A)	57-68
Temperature range	°C	-20-80
Weight	g	35-60
Material		Al, ABS, PA, POM, SS, NBR

Vacuum flow

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

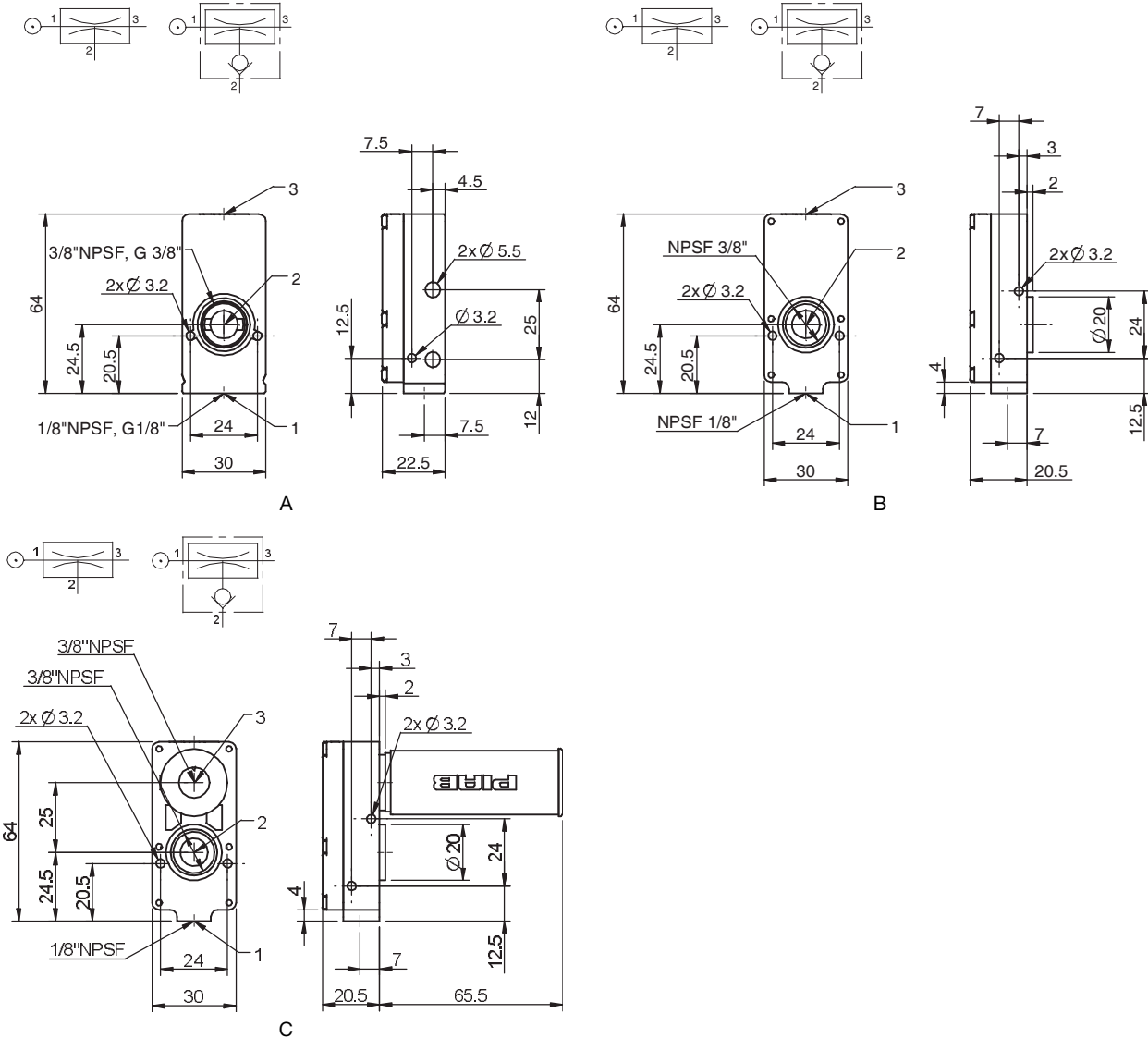
Evacuation time

Feed pressure MPa	Air consumption NI/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	0.98	0.064	0.17	0.36	0.59	0.88	1.3	1.8	-	-	75



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



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.

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

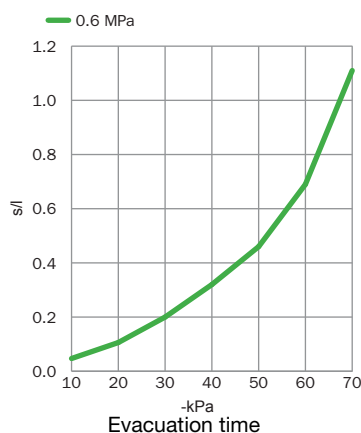
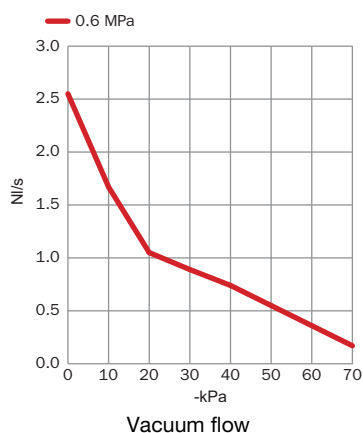
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dB(A)	57-68
Temperature range	°C	-20-80
Weight	g	60-74
Material		Al, ABS, PA, POM, SS, NBR

Vacuum flow

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

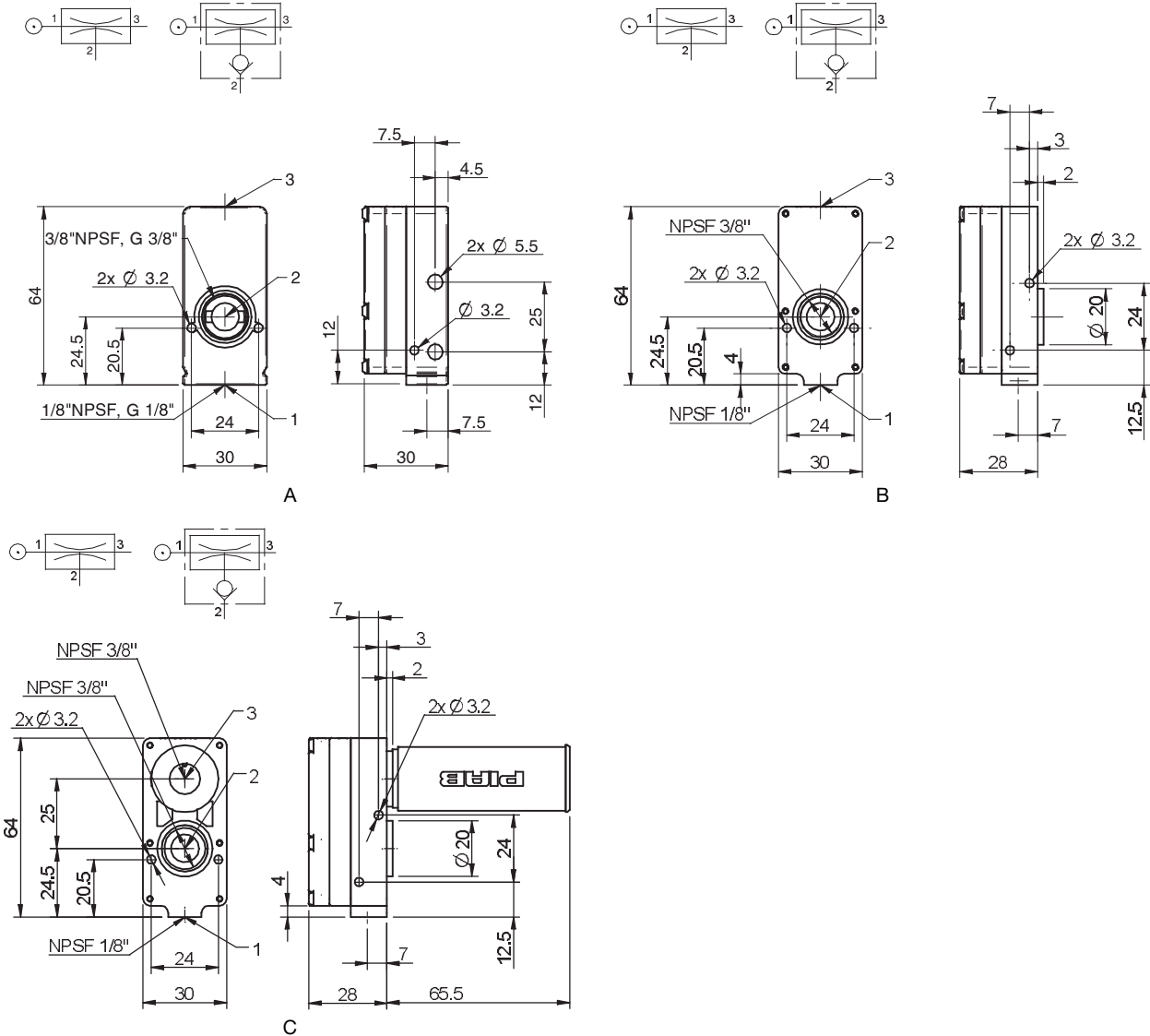
Evacuation time

Feed pressure MPa	Air consumption NI/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	2.0	0.047	0.11	0.20	0.32	0.46	0.69	1.1	-	-	75



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



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.

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

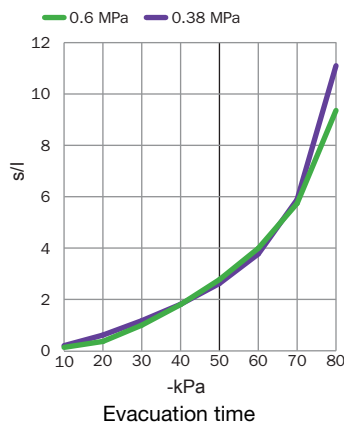
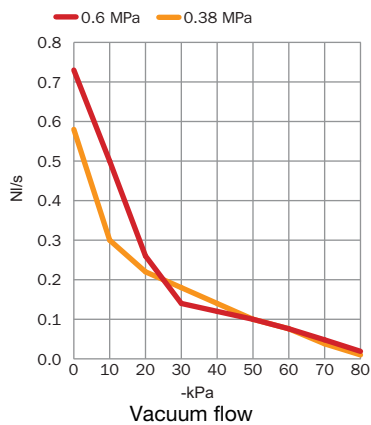
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	°C	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

Vacuum flow

Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)											Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90		
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	

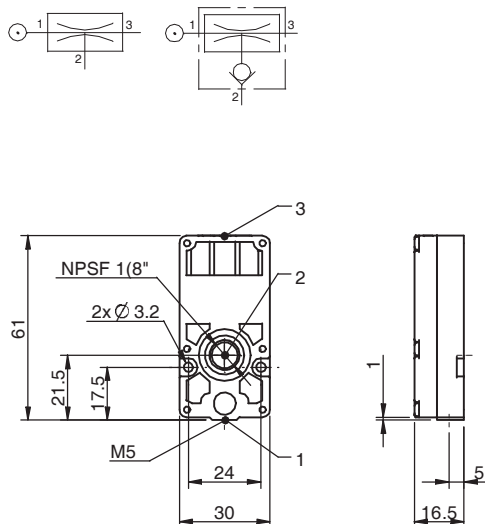
Evacuation time

Feed pressure MPa	Air consumption NI/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	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	



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.

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

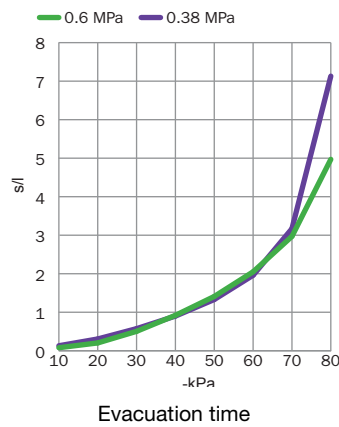
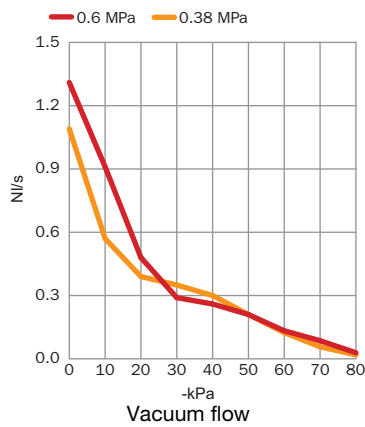
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57–68
Temperature range	°C	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

Vacuum flow

Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/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	

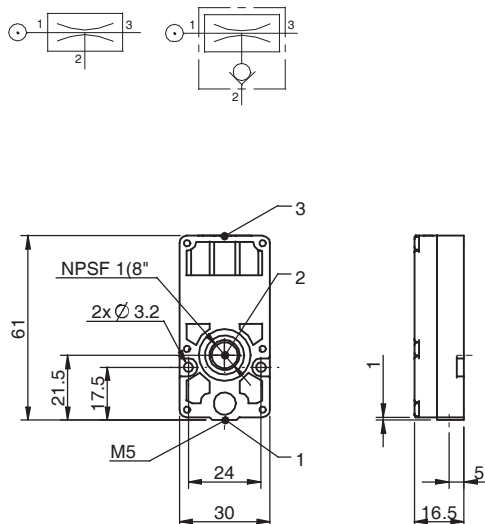
Evacuation time

Feed pressure MPa	Air consumption NI/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	



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.

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

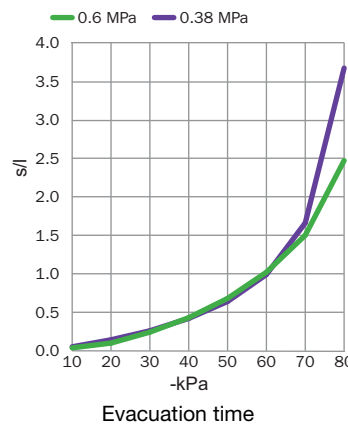
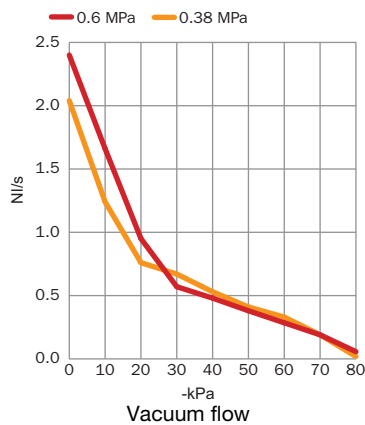
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	57-68
Temperature range	°C	-20-80
Weight	g	60-74
Material		Al, ABS, PA, POM, SS, NBR

Vacuum flow

Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)											Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90		
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	

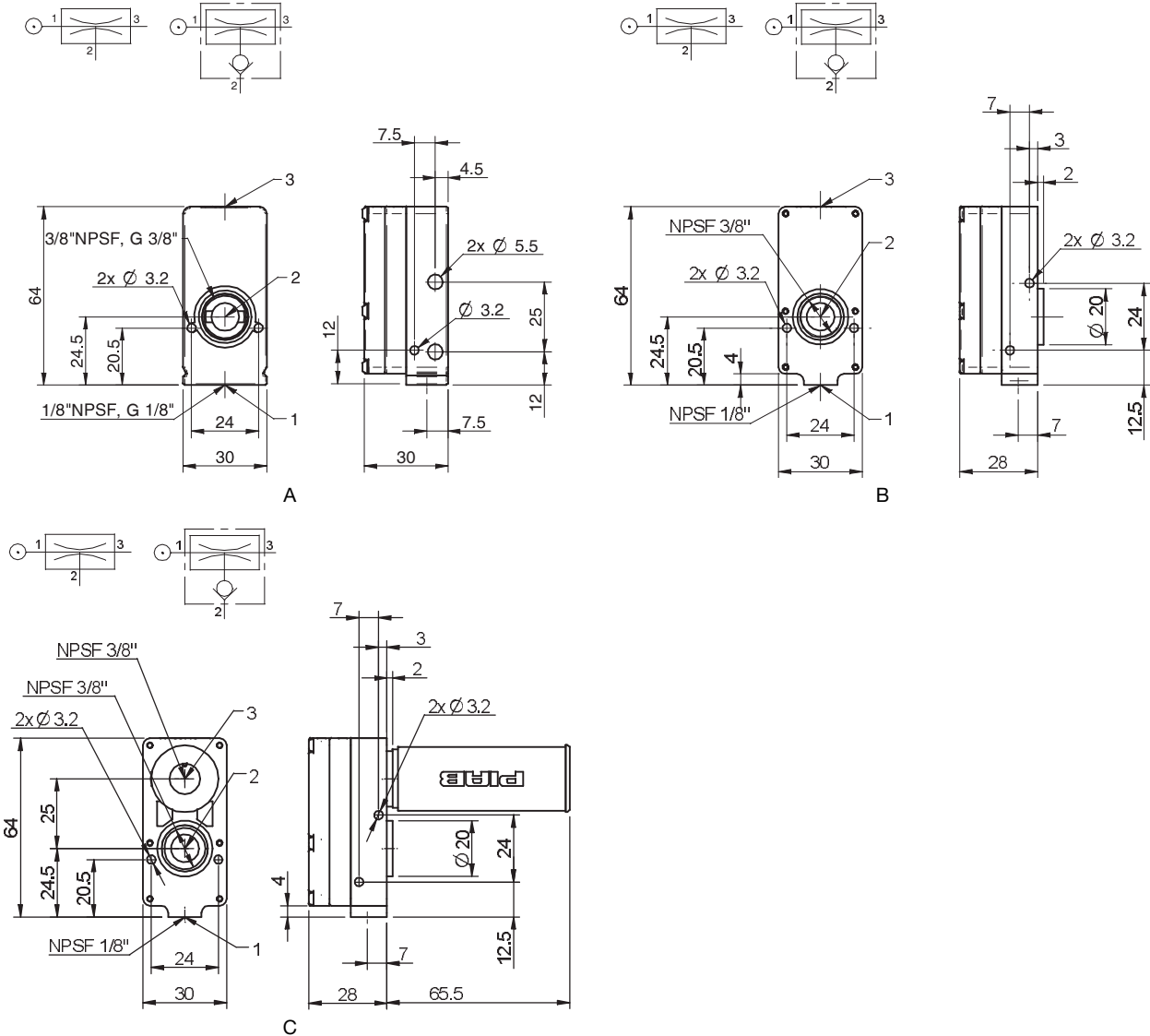
Evacuation time

Feed pressure MPa	Air consumption NI/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	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	



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



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.

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

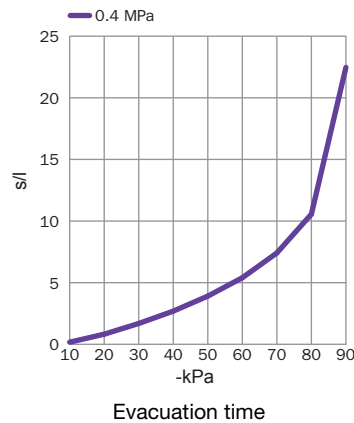
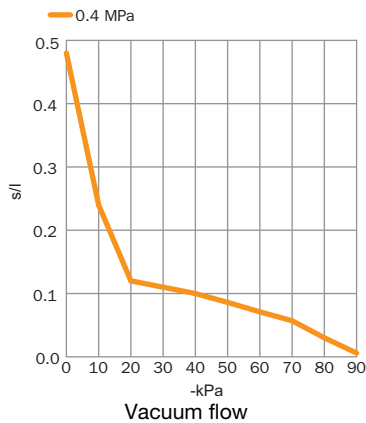
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	62–66
Temperature range	°C	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

Vacuum flow

Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)											Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90		
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	

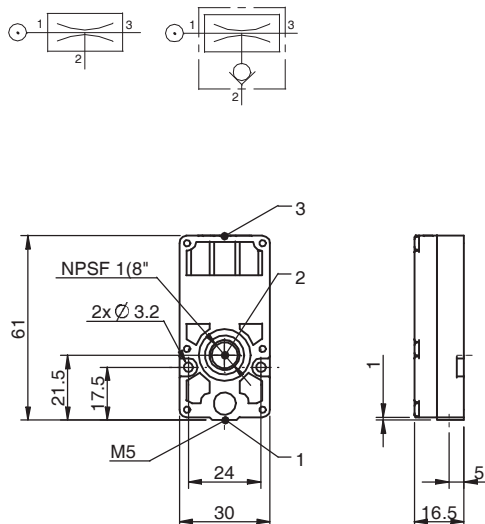
Evacuation time

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



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.

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

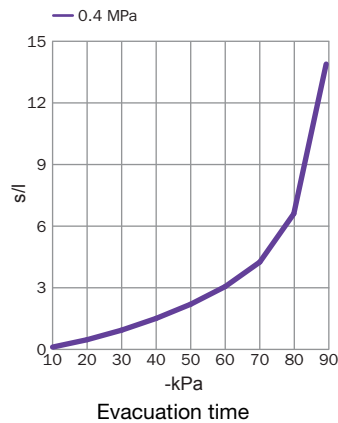
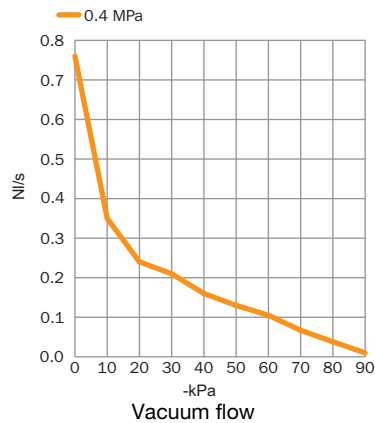
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dBA	62–66
Temperature range	°C	-20–80
Weight	g	30
Material		PA, POM, NBR, SS

Vacuum flow

Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
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

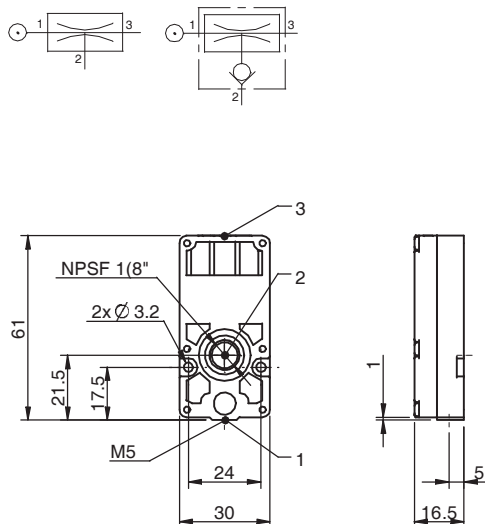
Evacuation time

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



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.

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

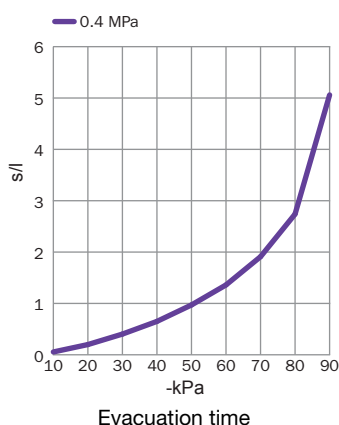
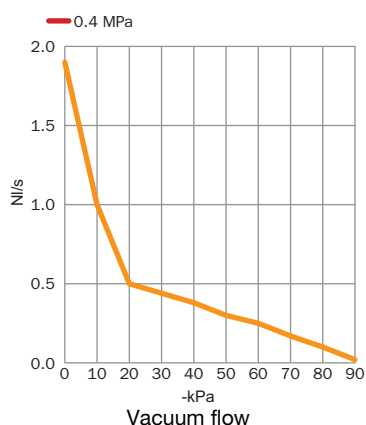
Description	Unit	Value
Feed pressure, max.	MPa	0.7
Noise level	dB(A)	62-66
Temperature range	°C	-20-80
Weight	g	60-74
Material		Al, ABS, PA, POM, SS, NBR

Vacuum flow

Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
		0	10	20	30	40	50	60	70	80	90	
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

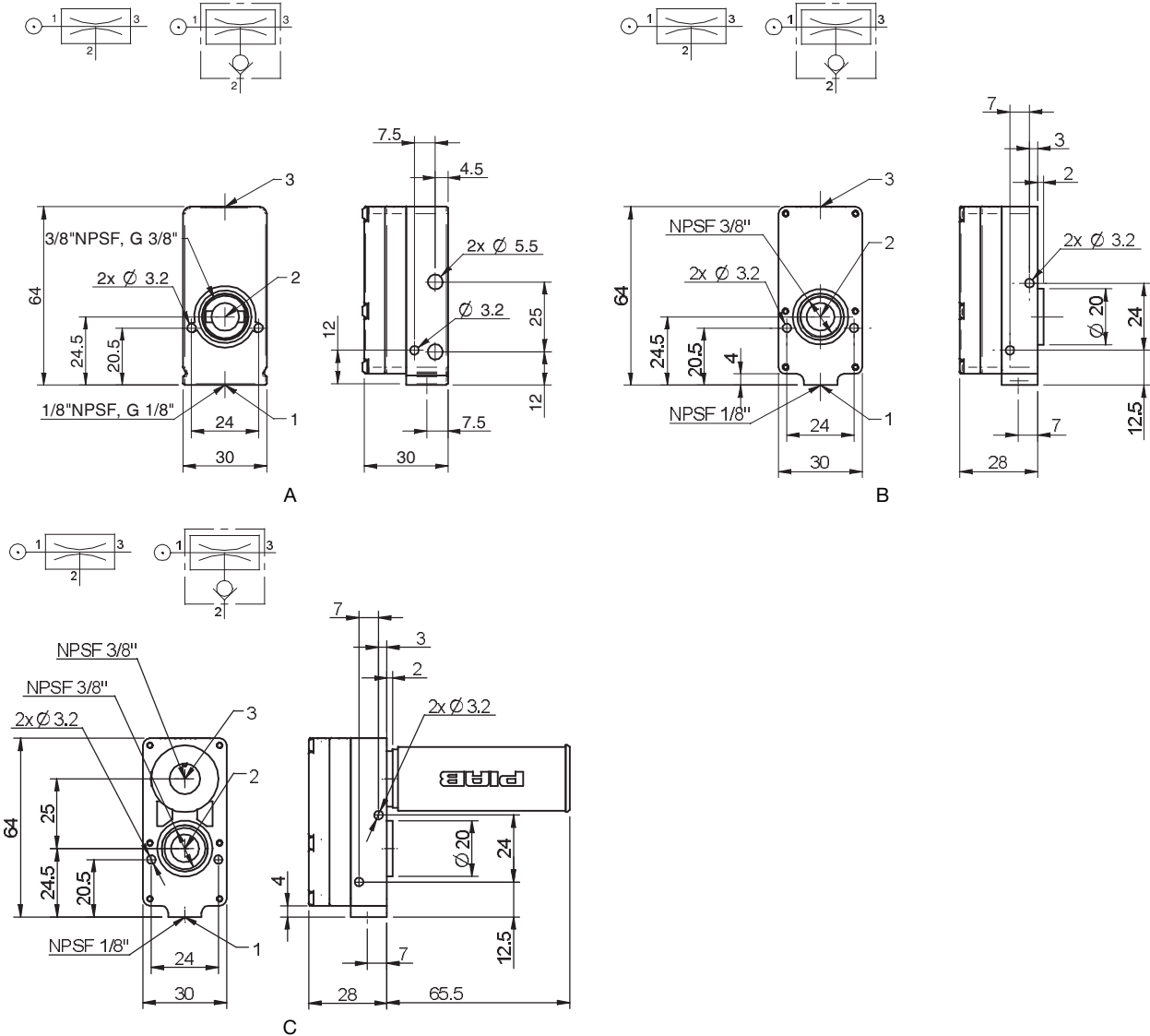
Evacuation time

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



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



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.