

Piab Vacuum Ejectors

BONDY

INDUSTRIAL EQUIPMENT SUPPLIER

For ordering and questions call

(+45) 70 15 14 14

Vacuum pumps/generators



VACUUM PUMPS/GENERATORS

Vacuum cartridges / custom integration
Inline
Compact/stackable
Combined pump and gripper
Standard
Extra safety
Chemical resistant

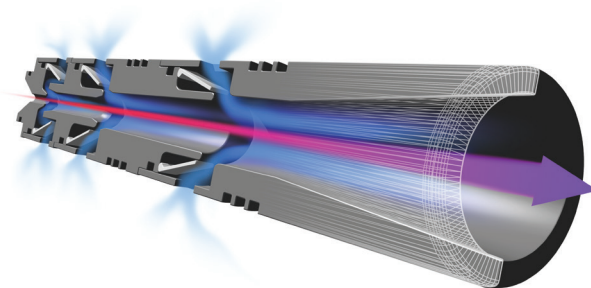
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COAX[®] technology

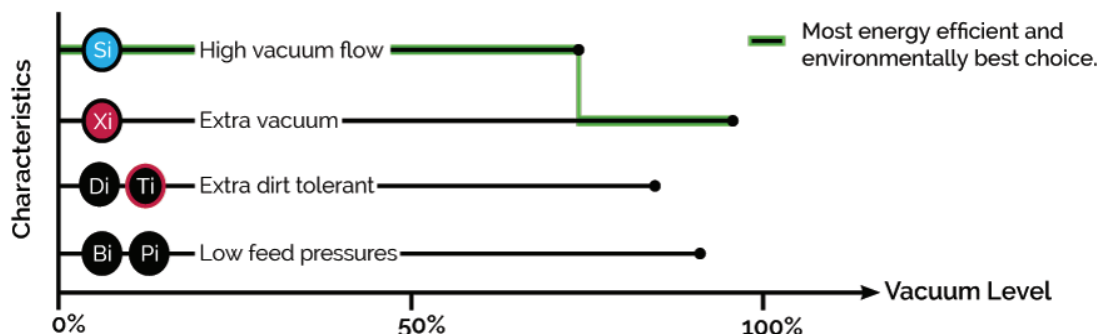
PIAB VACUUM PUMPS/GENERATORS ARE PREDOMINATELY BASED ON THE PATENTED COAX[®] TECHNOLOGY.

COAX[®] is an advanced solution for creating vacuum with compressed air. Based on Piab's multistage technology, COAX[®] cartridges are smaller, more efficient and more reliable than conventional ejectors, which allow for the design of a flexible, modular and efficient vacuum system. A vacuum system based on COAX[®] technology can provide you with three times more vacuum flow than conventional systems, allowing you to increase speed with high reliability while reducing energy consumption. COAX[®] cartridges exist in several sizes (MIDI, MINI & MICRO) and models (Bi, Pi, Si, Ti, Xi and Di), making them suitable for every application. The technology ensures excellent performance at both low and high feed pressures. Pumps based on COAX[®] technology can operate within the feed pressure range of 0.17 to 0.60 MPa.



CUSTOM INTEGRATION

- The two-stage COAX[®] cartridge MICRO is probably the world's smallest multistage vacuum ejector. Its low weight makes it suitable to integrate close to the suction point in high speed pick and-place applications of small objects.
- The two-stage COAX[®] cartridge MINI has small mounting dimensions and the three-stage COAX[®] cartridge MINI has high initial vacuum flow.
- The two-stage COAX[®] cartridge MIDI has small mounting dimensions and the three-stage COAX[®] cartridge MIDI has high initial vacuum flow. The MIDI cartridges are efficient generators of blow-air and are also suitable for fast evacuation of large volumes.



COAX® MICRO family



MICRO Bi03-2



MICRO Si02-2



MICRO Ti05-2



MICRO Xi2.5-2

The two-stage COAX® cartridge MICRO is probably the world's smallest multistage vacuum ejector. Its low weight makes it suitable to integrate close to the suction point in high speed pick-and-place applications of small objects.

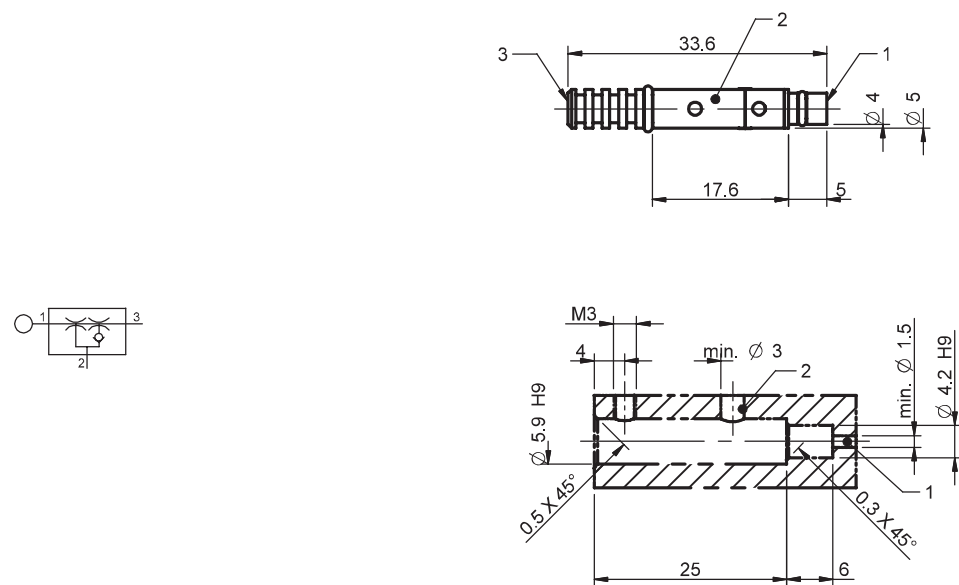
VACUUM FLOW

COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)									Max vacuum
	MPa	NI/s	0	10	20	30	40	50	60	70	80	-kPa
MICRO Bi03-2	0.18	0.14	0.23	0.15	0.06	0.04	0.035	0.023	0.013	0.006	—	83
MICRO Si02-2	0.6	0.12	0.28	0.21	0.12	0.08	0.07	0.06	0.04	0.02	—	75
MICRO Ti05-2	0.4	0.27	0.32	0.28	0.23	0.17	0.1	0.07	0.04	0.02	0.004	84
MICRO Xi2.5-2	0.5	0.13	0.24	0.17	0.1	0.06	0.04	0.03	0.02	0.01	0.01	92

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	-kPa
MICRO Bi03-2	0.18	0.14	0.5	1.4	3.9	6.4	10	16	28	51	83
MICRO Si02-2	0.6	0.12	0.41	1.01	2.01	3.3	4.9	6.9	10.2	—	75
MICRO Ti05-2	0.4	0.27	0.33	0.73	1.2	2	3.1	5	8.3	16.6	84
MICRO Xi2.5-2	0.5	0.13	0.49	1.23	2.48	4.5	7.3	11.3	18	28	92

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
COAX® cartridge MICRO Bi03-2	0106966
COAX® cartridge MICRO Bi03-2, holding cap	0106968
COAX® cartridge MICRO Si02-2	0113591
COAX® cartridge MICRO Si02-2, holding cap	0113593
COAX® cartridge MICRO Ti05-2	0123098
COAX® cartridge MICRO Ti05-2, holding cap	0125794
COAX® cartridge MICRO Xi2.5-2	0120297
COAX® cartridge MICRO Xi2.5-2, holding cap	0120283

COAX® MINI family



The two-stage COAX® cartridge MINI has small mounting dimensions and the three-stage COAX® cartridge MINI has high initial vacuum flow.

VACUUM FLOW

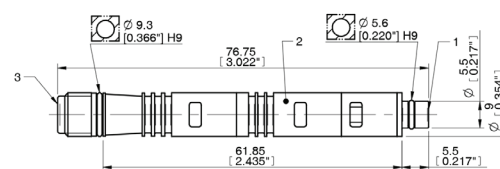
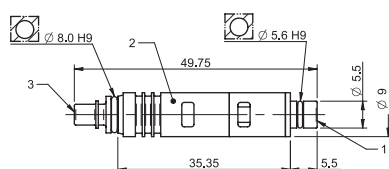
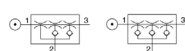
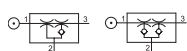
COAX® Cartridge	Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	90	
MINI Di16-2	0.6	0.75	0.64	0.57	0.49	0.41	0.35	0.29	0.18	0.04	—	—	73
MINI Pi12-2	0.32	0.44	0.68	0.6	0.44	0.27	0.19	0.14	0.1	0.06	0.03	—	90
MINI Pi12-3	0.32	0.44	1.4	0.6	0.44	0.27	0.19	0.14	0.1	0.06	0.03	—	90
MINI Pi12-3 FS	0.32	0.44	1.4	0.6	0.44	0.27	0.19	0.14	0.1	0.06	0.03	—	90
MINI Si08-2	0.6	0.44	0.77	0.67	0.51	0.33	0.23	0.16	0.12	0.08	—	—	75
MINI Si08-3	0.6	0.44	1.34	0.73	0.55	0.35	0.23	0.17	0.13	0.08	—	—	75

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	
MINI Si08-3 FS	0.6	0.44	1.34	0.73	0.55	0.35	0.23	0.17	0.13	0.08	—	—	75
MINI 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
MINI Xi10-3	0.5	0.46	1.43	0.7	0.5	0.33	0.19	0.15	0.11	0.07	0.045	0.011	94
MINI Xi10-3 FS	0.5	0.46	1.43	0.7	0.5	0.33	0.19	0.15	0.11	0.07	0.045	0.011	94

EVACUATION TIMES

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		
MINI Di16-2	0.6	0.75	0.17	0.35	0.58	0.84	1.15	1.58	2.49	—	—	73
MINI Pi12-2	0.32	0.44	0.17	0.32	0.58	1.1	1.8	2.7	4	6.4	—	90
MINI Pi12-3	0.32	0.44	0.08	0.23	0.49	1	1.7	2.6	3.9	6.3	—	90
MINI Pi12-3 FS	0.32	0.44	0.08	0.23	0.49	1	1.7	2.6	3.9	6.3	—	90
MINI Si08-2	0.6	0.44	0.14	0.31	0.55	0.9	1.4	2.1	3.1	—	—	75
MINI Si08-3	0.6	0.44	0.1	0.25	0.48	0.8	1.3	2	2.9	—	—	75
MINI Si08-3 FS	0.6	0.44	0.1	0.25	0.48	0.8	1.3	2	2.9	—	—	75
MINI Xi10-2	0.5	0.46	0.14	0.3	0.6	1	1.6	2.3	3.5	5.3	8.9	94
MINI Xi10-3	0.5	0.46	0.09	0.26	0.5	0.9	1.5	2.2	3.4	5.2	8.8	94
MINI Xi10-3 FS	0.5	0.46	0.09	0.26	0.5	0.9	1.5	2.2	3.4	5.2	8.8	94

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
COAX® cartridge MINI Di16-2	0204917
COAX® cartridge MINI Di16-2, holding cap	0204918
COAX® cartridge MINI Pi12-2	0106922
COAX® cartridge MINI Pi12-2, extra non-return valve	0106963
COAX® cartridge MINI Pi12-2, holding cap	0106924
COAX® cartridge MINI Pi12-2, holding cap, extra non-return valve	0106964
COAX® cartridge MINI Pi12-3	0106895
COAX® cartridge MINI Pi12-3, extra non-return valve	0106956
COAX® cartridge MINI Pi12-3, extra non-return valve, holding cap silencer, vacuum filter	0106676
COAX® cartridge MINI Pi12-3, holding cap	0106923
COAX® cartridge MINI Pi12-3, holding cap silencer, vacuum filter	0104265
COAX® cartridge MINI Pi12-3, holding cap, extra non-return valve	0106957
COAX® cartridge MINI Si08-2	0113583
COAX® cartridge MINI Si08-2, extra non-return valve	0113587
COAX® cartridge MINI Si08-2, holding cap	0113585
COAX® cartridge MINI Si08-2, holding cap, extra non-return valve	0113589
COAX® cartridge MINI Si08-3	0113214
COAX® cartridge MINI Si08-3, extra non-return valve	0113575
COAX® cartridge MINI Si08-3, extra non-return valve, holding cap silencer, vacuum filter	0113581
COAX® cartridge MINI Si08-3, holding cap	0113572
COAX® cartridge MINI Si08-3, holding cap silencer, vacuum filter	0113579

Description	Item No.
COAX® cartridge MINI Si08-3, holding cap, extra non-return valve	0113577
COAX® cartridge MINI Xi10-2	0120284
COAX® cartridge MINI Xi10-2, extra non-return valve	0120280
COAX® cartridge MINI Xi10-2, holding cap	0120294
COAX® cartridge MINI Xi10-2, holding cap, extra non-return valve	0120300
COAX® cartridge MINI Xi10-3	0120286
COAX® cartridge MINI Xi10-3, extra non-return valve	0120289
COAX® cartridge MINI Xi10-3, extra non-return valve, holding cap silencer, vacuum filter	0120776
COAX® cartridge MINI Xi10-3, holding cap	0120299
COAX® cartridge MINI Xi10-3, holding cap silencer, vacuum filter	0120775
COAX® cartridge MINI Xi10-3, holding cap, extra non-return valve	0120298

COAX® MIDI family



MIDI Pi48-2

MIDI Pi48-3

MIDI Si32-2

MIDI Si32-3

MIDI Xi40-2

MIDI Xi40-3

The two-stage COAX® cartridge MIDI has small mounting dimensions and the three-stage COAX® cartridge MIDI has high initial vacuum flow. The MIDI cartridges are efficient generators of blow-air and are also suitable for fast evacuation of large volumes.

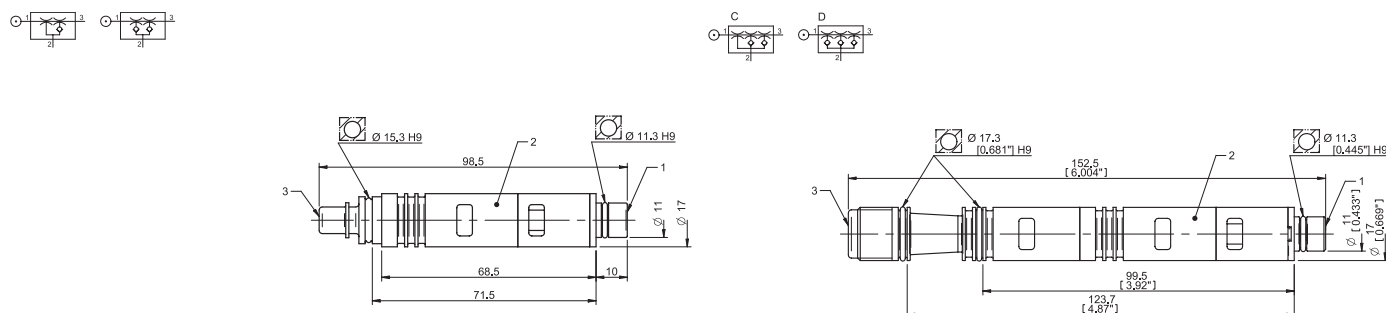
VACUUM FLOW

COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum
	MPa	NI/s	0	10	20	30	40	50	60	70	80	90	-kPa
MIDI Pi48-2	0.31	2	2.8	2.5	1.8	1.1	0.65	0.5	0.35	0.25	0.1	—	90
MIDI Pi48-3	0.31	2	5.6	2.5	1.8	1.1	0.65	0.5	0.35	0.25	0.1	—	90
MIDI Si32-2	0.6	1.75	3.3	3	2.6	1.7	0.9	0.6	0.5	0.35	—	—	75
MIDI Si32-3	0.6	1.75	6	3.5	2.6	1.7	0.9	0.6	0.5	0.35	—	—	75
MIDI Xi40-2	0.45	1.83	2.8	2.3	1.6	1	0.73	0.58	0.43	0.32	0.18	0.03	95
MIDI Xi40-3	0.45	1.83	5.9	3	2	1.3	0.73	0.58	0.43	0.32	0.18	0.03	95

EVACUATION TIMES

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
MIDI Pi48-2	0.31	2	0.03	0.07	0.13	0.26	0.46	0.7	1	1.6	4	90
MIDI Pi48-3	0.31	2	0.02	0.06	0.12	0.25	0.45	0.7	1	1.6	4	90
MIDI Si32-2	0.6	1.75	0.03	0.07	0.1	0.18	0.33	0.53	0.8	—	—	75
MIDI Si32-3	0.6	1.75	0.02	0.05	0.1	0.18	0.33	0.53	0.8	—	—	75
MIDI Xi40-2	0.45	1.83	0.04	0.09	0.17	0.28	0.44	0.63	0.9	1.3	2.3	95
MIDI 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

DIMENSIONAL DRAWING

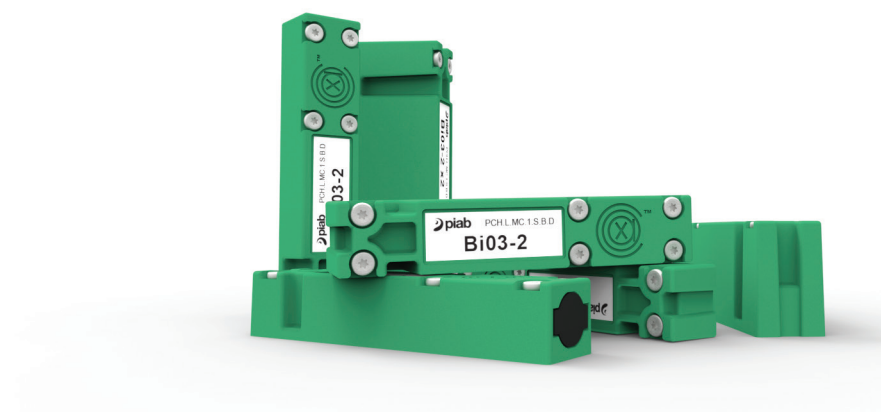


ORDERING INFORMATION

Description	Item No.
COAX® cartridge MIDI Pi48-2	0107125
COAX® cartridge MIDI Pi48-2, extra non-return valve	0107710
COAX® cartridge MIDI Pi48-2, holding cap	0107127
COAX® cartridge MIDI Pi48-2, holding cap, extra non-return valve	0107712
COAX® cartridge MIDI Pi48-3	0106639
COAX® cartridge MIDI Pi48-3, extra non-return valve	0107714
COAX® cartridge MIDI Pi48-3, extra non-return valve, sealings in Viton®	0124806
COAX® cartridge MIDI Pi48-3, holding cap	0107129
COAX® cartridge MIDI Pi48-3, holding cap, extra non-return valve	0107716
COAX® cartridge MIDI Pi48-3, sealings in Viton®	0117286
COAX® cartridge MIDI Si32-2	0107124
COAX® cartridge MIDI Si32-2, extra non-return valve	0107709
COAX® cartridge MIDI Si32-2, holding cap	0107126
COAX® cartridge MIDI Si32-2, holding cap, extra non-return valve	0107711
COAX® cartridge MIDI Si32-3	0107053

Description	Item No.
COAX® cartridge MIDI Si32-3, extra non-return valve	0107713
COAX® cartridge MIDI Si32-3, extra non-return valve, sealings in Viton®	0122176
COAX® cartridge MIDI Si32-3, holding cap	0107128
COAX® cartridge MIDI Si32-3, holding cap, extra non-return valve	0107715
COAX® cartridge MIDI Si32-3, sealings in Viton®	0114989
COAX® cartridge MIDI Xi40-2	0118747
COAX® cartridge MIDI Xi40-2, extra non-return valve	0118748
COAX® cartridge MIDI Xi40-2, holding cap	0118757
COAX® cartridge MIDI Xi40-2, holding cap, extra non-return valve	0118758
COAX® cartridge MIDI Xi40-3	0118724
COAX® cartridge MIDI Xi40-3, extra non-return valve	0118725
COAX® cartridge MIDI Xi40-3, extra non-return valve, sealings in Viton®	0124796
COAX® cartridge MIDI Xi40-3, holding cap	0118759
COAX® cartridge MIDI Xi40-3, holding cap, extra non-return valve	0118760
COAX® cartridge MIDI Xi40-3, sealings in Viton®	0124794

piCHIP10X family



The lightweight piCHIP10X unit is a small vacuum pump which is optimized for integration. It is flexible enough to surface mount quickly on a variety of materials. With its almost silent operation, the piCHIP10X is ideal for clean room operations. Medical and electronic industries are best suited to use this product in their vacuum applications. Because COAX® cartridges are up to twice as fast as other cartridges and provide three times more flow than a conventional ejector with the same air consumption, the piCHIP10X is able to provide a high performance even at low or fluctuating feed pressures (0.1-0.6 MPa).

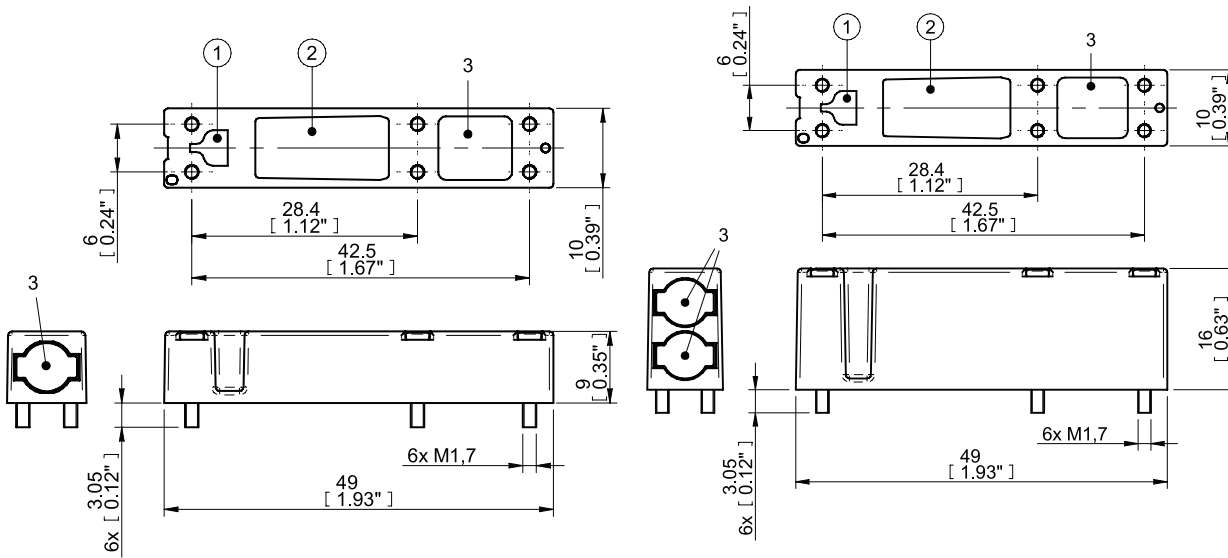
VACUUM FLOW

COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	-kPa	
MICRO Bi03-2	0.18	0.14	0.23	0.15	0.06	0.04	0.035	0.023	0.013	0.006	—	83	
MICRO Si02-2	0.6	0.12	0.28	0.21	0.12	0.08	0.07	0.06	0.04	0.02	—	75	
MICRO Ti05-2	0.4	0.27	0.32	0.28	0.23	0.17	0.1	0.07	0.04	0.02	0.004	84	
MICRO Xi2.5-2	0.5	0.13	0.24	0.17	0.1	0.06	0.04	0.03	0.02	0.01	0.01	92	

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	-kPa
MICRO Bi03-2	0.18	0.14	0.5	1.4	3.9	6.4	10	16	28	51	83
MICRO Si02-2	0.6	0.12	0.41	1.01	2.01	3.3	4.9	6.9	10.2	—	75
MICRO Ti05-2	0.4	0.27	0.33	0.73	1.2	2	3.1	5	8.3	16.6	84
MICRO Xi2.5-2	0.5	0.13	0.49	1.23	2.48	4.5	7.3	11.3	18	28	92

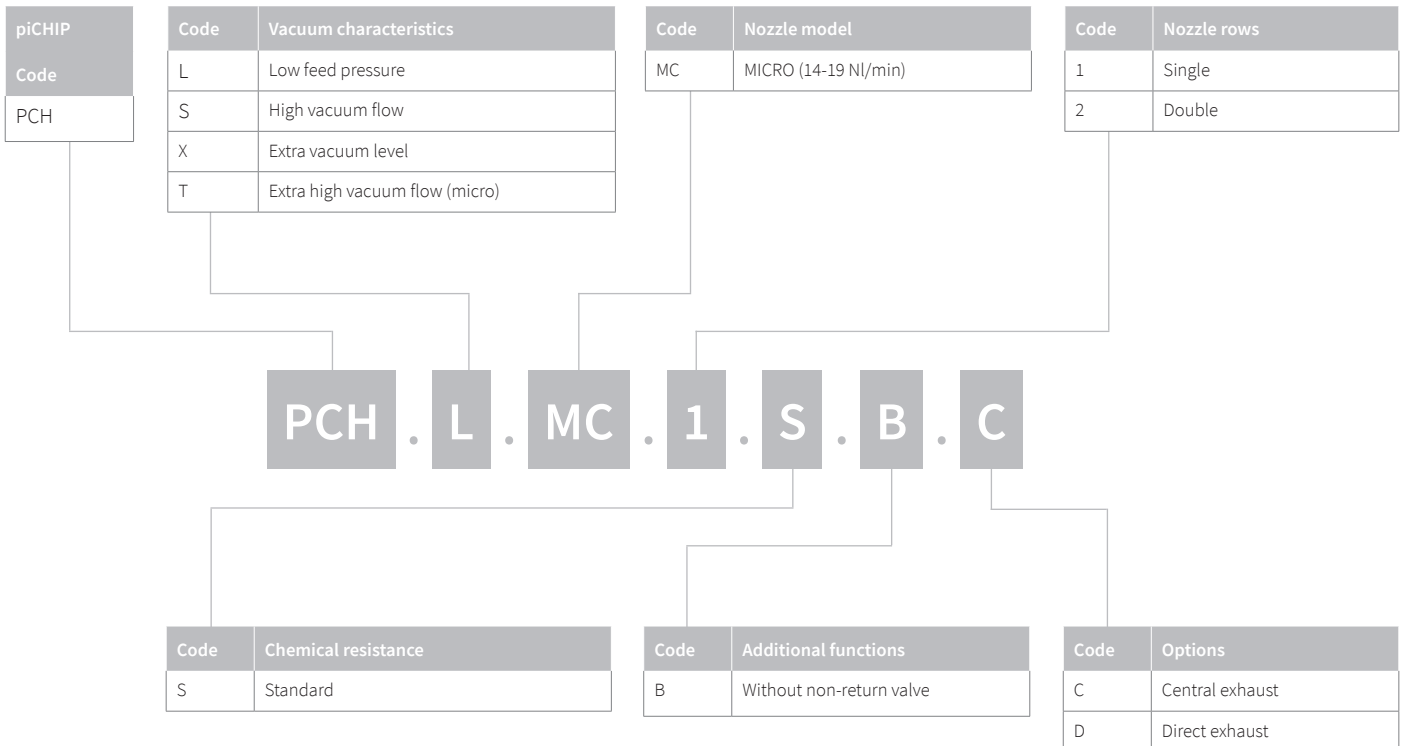
DIMENSIONAL DRAWING



ORDERING INFORMATION

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

piCHIP10X – CUSTOMER CODE



piINLINE® MICRO family



piINLINE® are small lightweight inline ejectors that use the patented COAX® technology inside. They can be mounted directly on a hose close to the suction cup (or point of suction). Piab's piINLINE® ejector program offers much better performance with at least 40-50% lower energy consumption compared to competing inline single-stage ejectors in corresponding sizes. Inline vacuum generators are especially common in electronic/semiconductor pick-and-place applications, dedicated packaging equipment, injection-molding automation and unloading/loading metal forming machines (bending, punching and laser-cutting).

The COAX® Cartridge Si/Ti for extra vacuum flow, Bi cartridge for reliability at low feed pressures. And Ti/Xi cartridge when high flow and deep vacuum is needed. The Ti cartridges are also extra dirt tolerant.

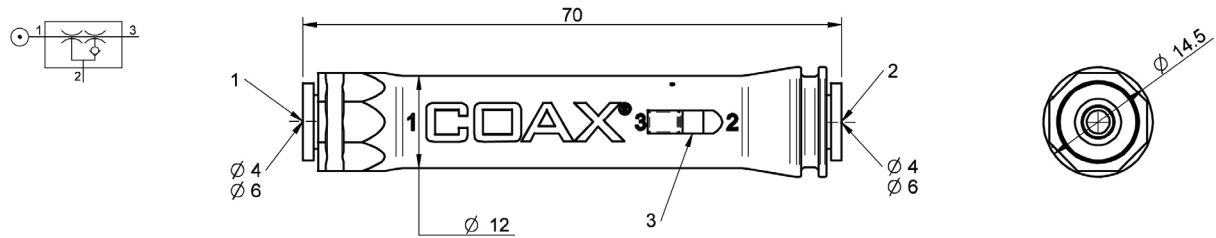
VACUUM FLOW

COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (l/s) at different vacuum levels (-kPa)										Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	-kPa	
MICRO Bi03-2	0.18	0.14	0.23	0.15	0.06	0.04	0.035	0.023	0.013	0.006	—	83	
MICRO Si02-2	0.6	0.12	0.28	0.21	0.12	0.08	0.07	0.06	0.04	0.02	—	75	
MICRO Ti05-2	0.4	0.27	0.32	0.28	0.23	0.17	0.1	0.07	0.04	0.02	0.004	84	
MICRO Ti05-2	0.6	0.37	0.31	0.27	0.24	0.2	0.15	0.09	0.04	0.01	—	75	
MICRO Xi2.5-2	0.5	0.13	0.24	0.17	0.1	0.06	0.04	0.03	0.02	0.01	0.01	92	

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	-kPa
MICRO Bi03-2	0.18	0.14	0.5	1.4	3.9	6.4	10	16	28	51	83
MICRO Si02-2	0.6	0.12	0.41	1.01	2.01	3.3	4.9	6.9	10.2	—	75
MICRO Ti05-2	0.4	0.27	0.33	0.73	1.2	2	3.1	5	8.3	16.6	84
MICRO Ti05-2	0.6	0.37	0.3	0.7	1.2	1.8	2.6	4.2	8.43	—	75
MICRO Xi2.5-2	0.5	0.13	0.49	1.23	2.48	4.5	7.3	11.3	18	28	92

DIMENSIONAL DRAWING



ORDERING INFORMATION

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

piINLINE® MINI family



piINLINE® are small lightweight inline ejectors that use the patented COAX® technology inside. They can be mounted directly on a hose close to the suction cup (or point of suction). Piab's piINLINE® ejector program offers much better performance with at least 40-50% lower energy consumption compared to competing inline single-stage ejectors in corresponding sizes. Inline vacuum generators are especially common in electronic/semiconductor pick-and-place applications, dedicated packaging equipment, injection-molding automation and unloading/loading metal forming machines (bending, punching and laser-cutting).

The COAX® Cartridge Si cartridge for extra vacuum flow, the Pi cartridge for high performance at low feed pressures. And the Xi cartridge when high flow and deep vacuum is needed.

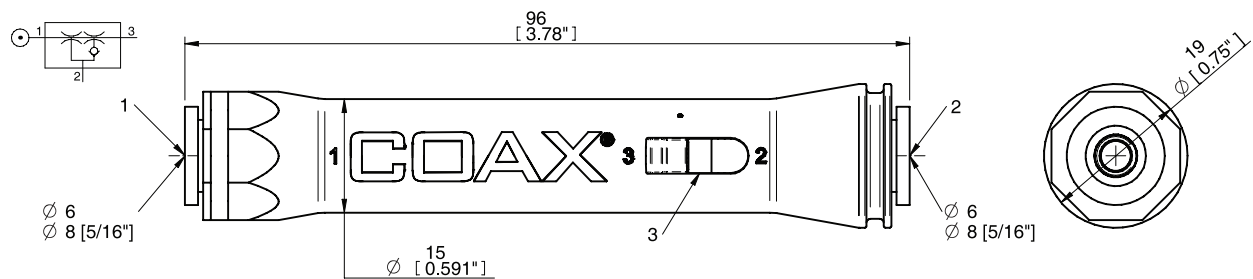
VACUUM FLOW

COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)											Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	90	-kPa	
MINI Si08-2	0.6	0.44	0.69	0.55	0.42	0.28	0.23	0.16	0.12	0.08	—	—	75	
MINI Pi12-2	0.32	0.44	0.57	0.44	0.31	0.23	0.19	0.14	0.1	0.06	0.03	—	90	
MINI Xi10-2	0.5	0.46	0.62	0.5	0.37	0.27	0.19	0.15	0.11	0.07	0.045	0.011	94	

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)										Max vacuum
	MPa		10	20	30	40	50	60	70	80	90	-kPa	
MINI Si08-2	0.6	0.44	0.16	0.37	0.66	1.1	1.4	2.1	3.1	—	—	75	
MINI Pi12-2	0.32	0.44	0.2	0.46	0.83	1.1	1.8	2.7	4	6.4	—	90	
MINI Xi10-2	0.5	0.46	0.18	0.41	0.72	1	1.6	2.3	3.5	5.3	8.9	94	

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
piINLINE® vacuum generator MINI Pi, 6-6 mm	0122894
piINLINE® vacuum generator MINI Pi, 8-8 mm	0122897
piINLINE® vacuum generator MINI Si, 6-6 mm	0122025
piINLINE® vacuum generator MINI Si, 8-8 mm	0122896
piINLINE® vacuum generator MINI Xi, 1/4"-1/4"	0205550
piINLINE® vacuum generator MINI Xi, 6-6 mm	0122895
piINLINE® vacuum generator MINI Xi, 8-8 mm	0122898

piINLINE® MIDI family



piINLINE® are small lightweight inline ejectors that use the patented COAX® technology inside. They can be mounted directly on a hose close to the suction cup (or point of suction). Piab's piINLINE® ejector program offers much better performance with at least 40-50% lower energy consumption compared to competing inline single-stage ejectors in corresponding sizes. Inline vacuum generators are especially common in electronic/semiconductor pick-and-place applications, dedicated packaging equipment, injection-molding automation and unloading/loading metal forming machines (bending, punching and laser-cutting).

The COAX® Cartridge Si cartridge for extra vacuum flow the Pi cartridge for high performance at low feed pressures. And the Xi cartridge when high flow and deep vacuum is needed.

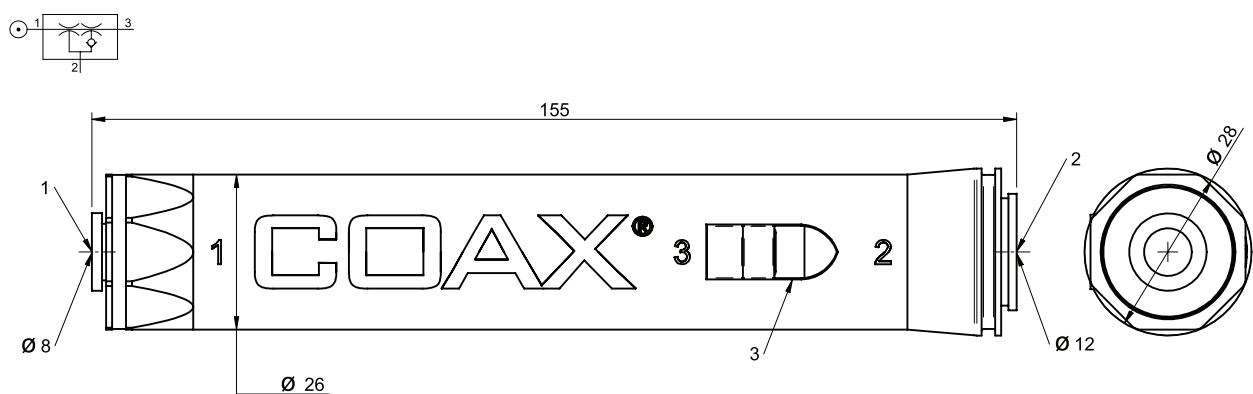
VACUUM FLOW

COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)											Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	90	-kPa	
MIDI Si32-2	0.6	1.75	3.1	2.5	1.9	1.2	0.7	0.6	0.5	0.35	—	—	75	
MIDI Pi48-2	0.31	2	2.7	2.2	1.5	0.93	0.65	0.5	0.35	0.25	0.1	—	90	
MIDI Xi40-2	0.45	1.83	2.8	2.3	1.6	1	0.73	0.58	0.43	0.32	0.18	0.03	95	

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)										Max vacuum
	MPa		10	20	30	40	50	60	70	80	90	-kPa	
MIDI Si32-2	0.6	1.75	3.1	2.5	1.9	1.2	0.7	0.6	0.5	0.35	—	75	
MIDI Pi48-2	0.31	2	0.04	0.1	0.18	0.3	0.48	0.71	1.05	1.85	4	90	
MIDI Xi40-2	0.45	1.83	0.04	0.09	0.17	0.28	0.44	0.63	0.9	1.3	2.3	95	

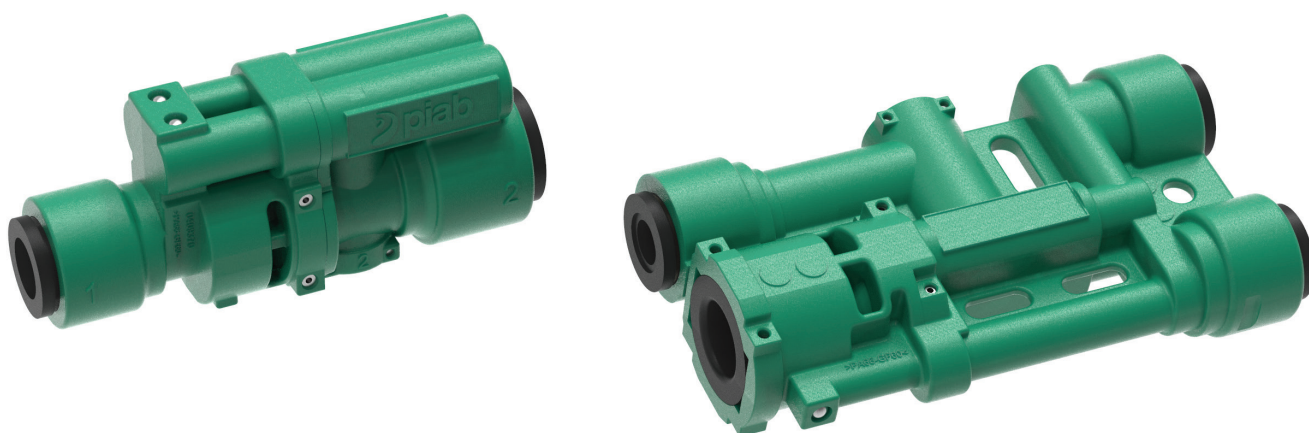
DIMENSIONAL DRAWING



ORDERING INFORMATION

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

piINLINE® Plus family



The ultra-lightweight vacuum ejectors feature a unique and integrated automatic release mechanism, and come in compact, minimised packages. Tailor-made for automotive press-shop automation, piINLINE®plus generators utilise the COAX® technology, ensuring low air consumption (typically 25 percent lower than competing technology), excellent suction capacity, and fast evacuation. Generators can be configured with either one or two MICRO COAX® cartridges; two cartridges for larger suction cups in high speed applications, or one cartridge for smaller suction cups or for reduced air consumption when high speed is not essential.

The integrated release function is available in two optional designs – the easily controllable Atmospheric Quick Release (AQR), which requires no extra compressed air hose, and the very fast performing Exhaust Block Release (EBR).

VACUUM FLOW

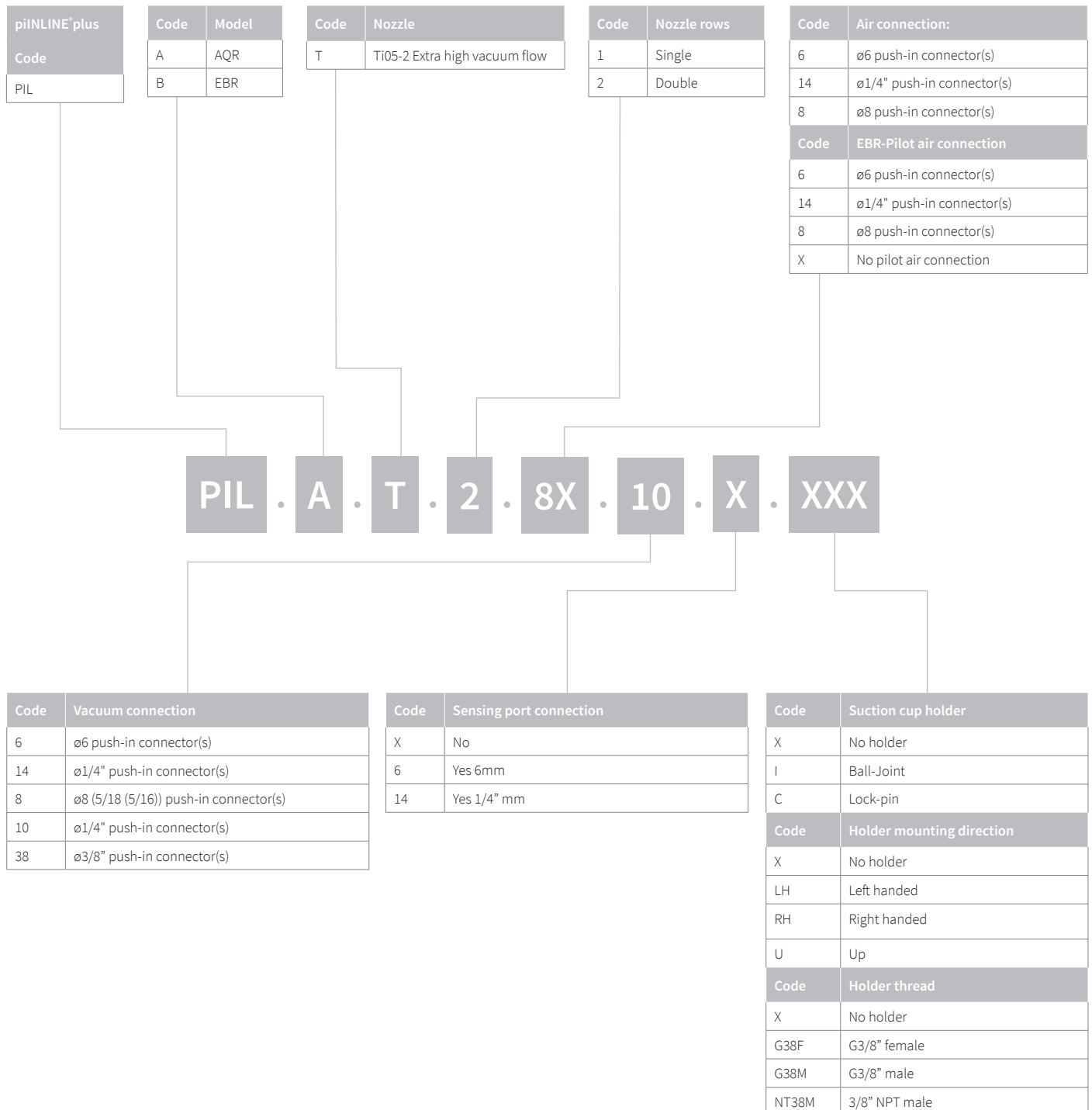
COAX® cartridge	Feed pressure	Air consumption	Vacuum flow (l/s) at different vacuum levels (-kPa)										Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	-kPa	
MICRO Ti05-2	0.5	0.64	0.62	0.56	0.48	0.38	0.26	0.14	0.06	0.02	0.004	81	

EVACUATION TIMES

COAX® cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	-kPa
MICRO Ti05-2	0.5	0.64	0.17	0.36	0.6	0.9	1.4	2.4	4.9	13.3	81

ORDERING INFORMATION

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

piINLINE® PLUS – CUSTOMER CODE

piSTAMP



piSTAMP offers easy retrofitting in the automotive press shop tooling. The ultra-lightweight vacuum generator features a unique and integrated release mechanism, and comes in a compact, minimised package. A fully decentralised design with compressed air ports at the side and vacuum port underneath, piSTAMP will fit perfectly in generic suction cup holders found in standard press shop tooling systems. piSTAMP utilises COAX® technology, typically 25 percent lower than competing technology, excellent suction capacity, and fast evacuation. The generator is normally supplied with two MICRO COAX® cartridges, supporting large suction cups in high speed applications. A one cartridge option is available for additional air consumption saving when used with smaller cups or at slower cycle speeds.

The integrated release function, the very fast acting Exhaust Block Release (EBR), is based on a durable polyurethane membrane which is not sensitive to dust. This ensures highly reliable production systems with improved uptime.

VACUUM FLOW

COAX® cartridge	Feed pressure	Air consumption	Vacuum flow (l/s) at different vacuum levels (-kPa)										Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	-kPa	
MICRO Ti05-2	0.5	0.64	0.62	0.56	0.48	0.38	0.26	0.14	0.06	0.02	0.004	81	

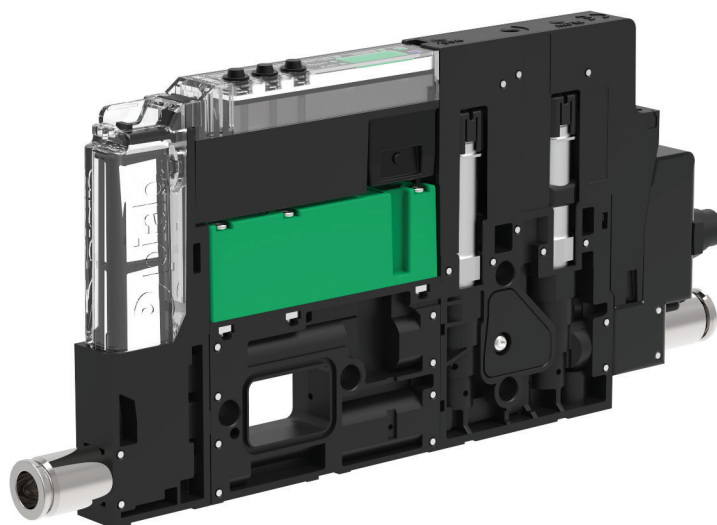
EVACUATION TIMES

COAX® cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	-kPa
MICRO Ti05-2	0.5	0.64	0.17	0.36	0.6	0.9	1.4	2.4	4.9	13.3	81

ORDERING INFORMATION

Name	Item No.
piSTAMP STX0785x2, 6-6 mm	0208767
piSTAMP STX0785x2, 8-8mm	0208766
piSTAMP STX0785x2, 1/4"-1/4"	0208768
piSTAMP COAX® MICRO Ti05-2x2, 6-6 mm	0207771
piSTAMP COAX® MICRO Ti05-2x2, 8-8 mm	0207770
piSTAMP COAX® MICRO Ti05-2x2, 1/4"-1/4"	0207772

piCOMPACT®10X



piCOMPACT® is an ejector family with integrated controls, so called compact or "all-in-one" ejector unit. It is a stackable platform with the possibility to mount several units in the same manifold and have common pneumatic and electrical connections. The focus during development has been on the most significant "key criteria" for these types of pumps, reliability and speed, as well as introducing some brand new attractive features/functions. That in combination with our state-of-the-art vacuum engine, COAX®, the product is outstanding. By working at low feed pressure and maximizing the utilization rate of the compressed air, the COAX® ejectors reduce energy consumption for manufacturers while increasing productivity and reliability. Its vacuum response to 50–60 -kPa is typically 30–50% faster compared to single stage technology. The piCOMPACT® is only 10 mm wide with a large 6 mm vacuum connection for maximum performance.

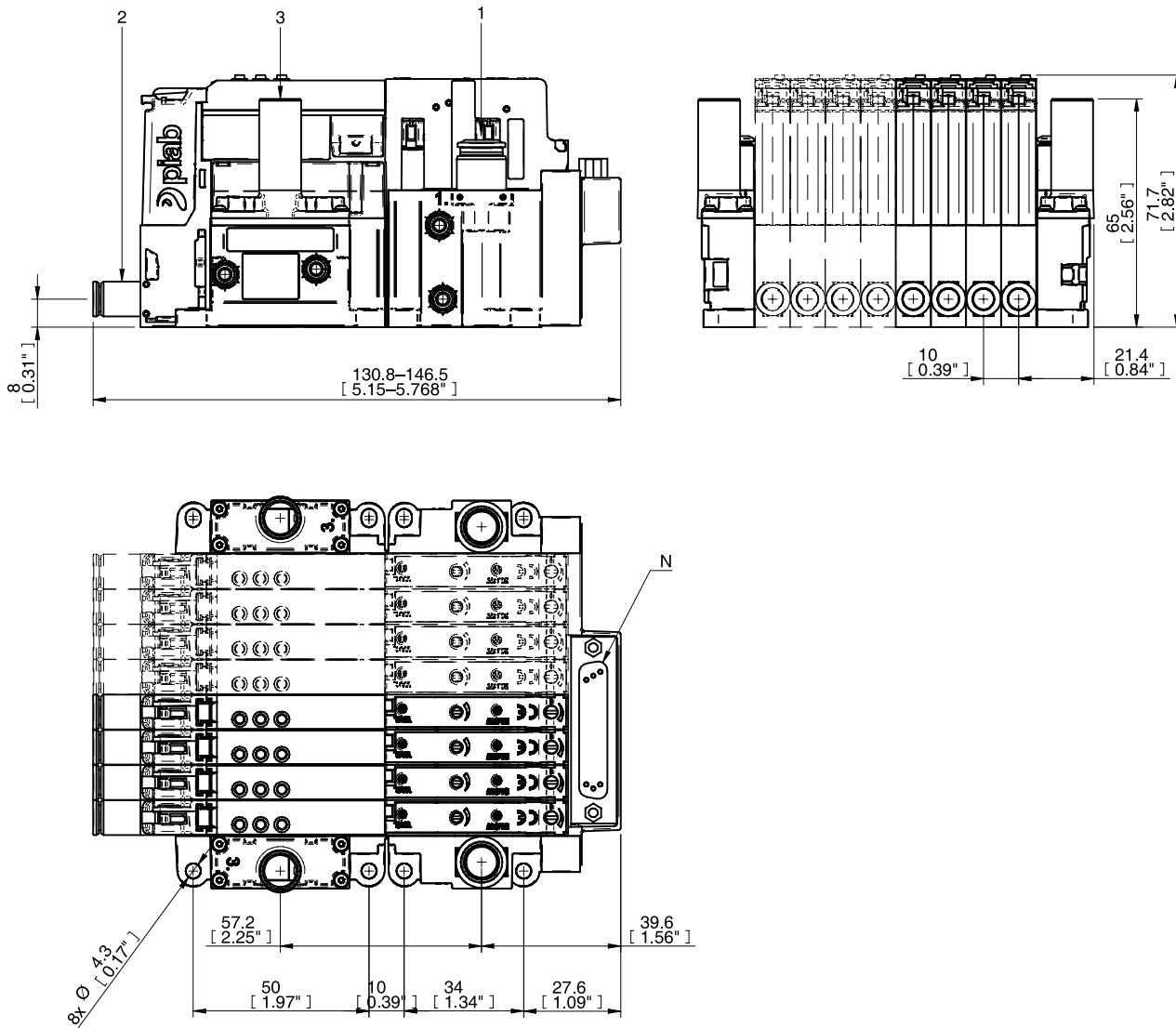
VACUUM FLOW

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	
MICRO Bi03-2	0.22/0.2*	0.14	0.21	0.14	0.063	0.021	0.016	0.014	0.007	0.004	82
MICRO Si02-2	0.604/0.6*	0.11	0.26	0.18	0.095	0.053	0.045	0.038	0.027	0.019	75
MICRO Ti05-2	0.43/0.4*	0.23	0.31	0.28	0.22	0.16	0.088	0.063	0.045	0.023	84
MICRO Xi2.5-2 * Pump/nozzle.	0.51/0.5*	0.13	0.23	0.15	0.079	0.044	0.036	0.03	0.023	0.013	91

EVACUATION TIMES

COAX® Cartridge	Feed pressure MPa	Air consumption NI/s	Evacuation time (ms) of 5 ml to reach different vacuum levels (-kPa)												Max vacuum -kPa
			0	10	20	30	40	50	60	70	75	80	90	Max	
MICRO Bi03-2	0.22/0.2*	0.14	5	9.9	20.4	53	99	153	228	354	—	552	—	652**	82
MICRO Si02-2	0.604/0.6*	0.11	5	8.9	16.2	31	48	68	95	136	185	—	—	185**	75
MICRO Ti05-2	0.43/0.4*	0.23	5	6.7	10.2	14.8	23	35	50	70	—	114	—	159**	84
MICRO Xi2.5-2 * Pump/nozzle, ** Evacuation time (ms) to max vacuum level (-kPa)	0.51/0.5*	0.13	5.1	8.9	16.2	35	59	87	121	169	—	250	421	464**	91

DIMENSIONAL DRAWING



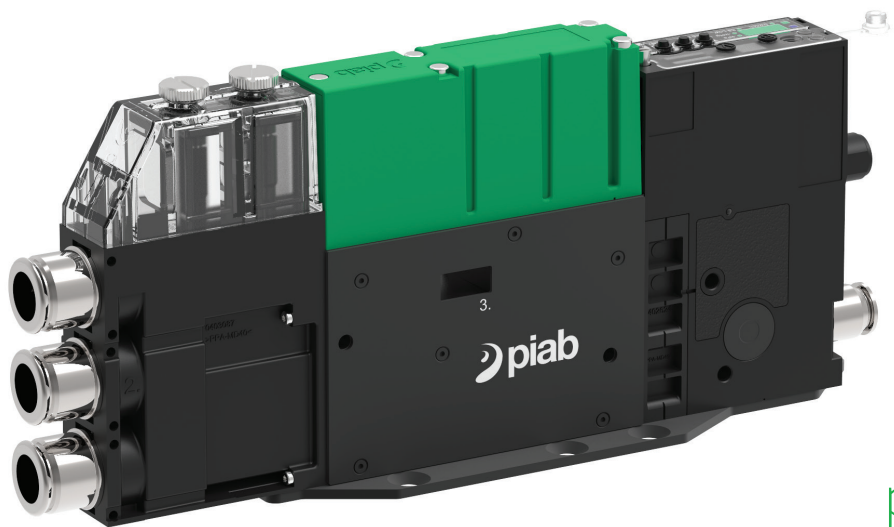
ORDERING INFORMATION

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

CUSTOMER CODE

For the configuration tables of piCOMPACT[®]10X go to page 232.

piCOMPACT[®]23



piCOMPACT[®] is an ejector family with integrated controls, so called compact or "all-in-one" ejector unit. It is a stackable platform with the possibility to mount several units in the same manifold and have common pneumatic and electrical connections. The focus during development has been on the most significant "key criteria" for these types of pumps, reliability and speed, as well as introducing some brand new attractive features/functions. That in combination with our state-of-the-art vacuum engine, COAX[®], the product is outstanding. By working at low feed pressure and maximizing the utilization rate of the compressed air, the COAX[®] ejectors reduce energy consumption for manufacturers while increasing productivity and reliability. Its vacuum response to 50–60 -kPa is typically 30–50% faster compared to single stage technology.

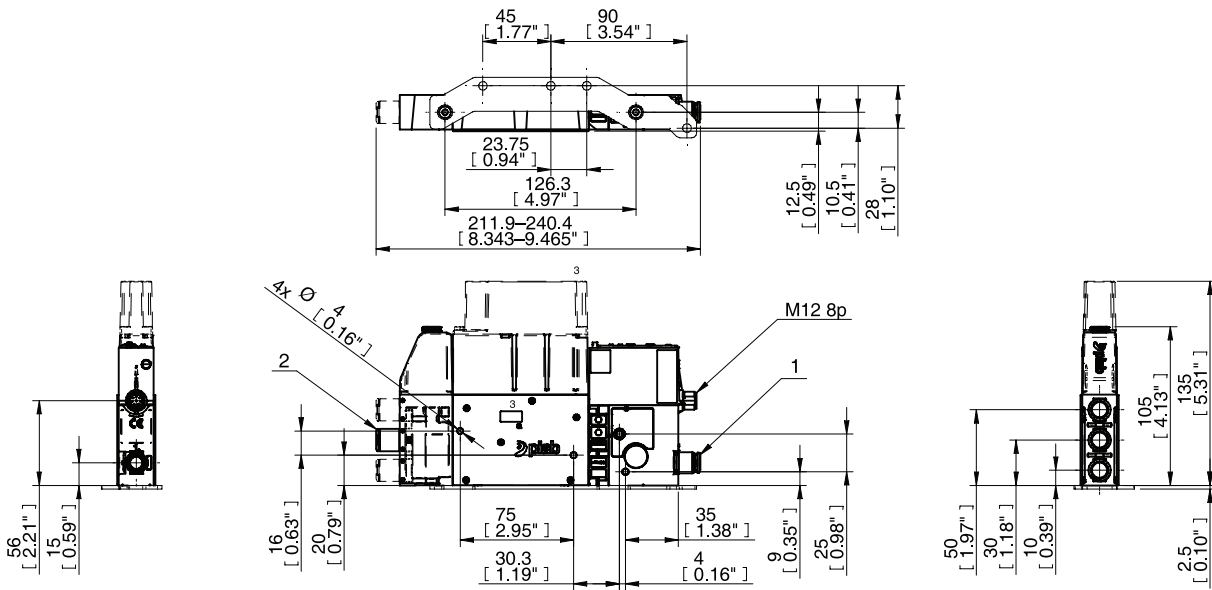
VACUUM FLOW

COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)									Max vacuum
	MPa	NI/s	0	10	20	30	40	50	60	70	80	-kPa
SX12	0.504/0.5*	0.72	1.22	1.03	0.78	0.52	0.27	0.21	0.15	0.09	0.03	85
SX42 * Pump/nozzle	0.47/0.43*	2.21	3.46	3.02	2.41	1.7	1.02	0.61	0.47	0.28	0.1	90

EVACUATION TIMES

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	
SX12	0.504/0.5*	0.72	0.082	0.201	0.374	0.674	1.216	1.914	2.978	6.187	85
SX42 * Pump/nozzle.	0.47/0.43*	2.21	0.038	0.074	0.123	0.204	0.356	0.577	0.879	1.718	90

DIMENSIONAL DRAWING



ORDERING INFORMATION

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

piSMART®


For more information on piSMART® and how Piab helps shape the industry of tomorrow go to page 409.

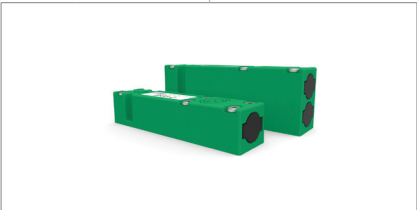
CUSTOMER CODE

For the configuration tables of **piCOMPACT**®23 go to page 234.

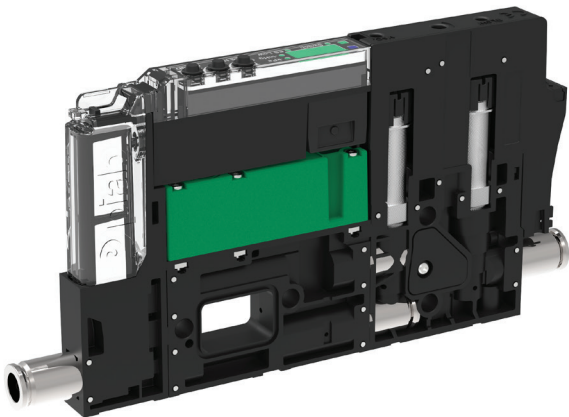
piCOMPACT®10X – CUSTOMER CODE

piCOMPACT™
Code
PC

	
Ejector performance	
Code	Vacuum characteristics
L	Low feed pressure
S	High vacuum flow
X	Extra vacuum level
T	Extra high vacuum flow

	
Ejector performance	
Code	Nozzle model
MC	MICRO (14–19 NL/min)
Code	Nozzle rows
1	Single
2	Double

Working enviroment	
Code	Chemical resistance
S	Standard



PC . S . MC2 . S . AAA . S16 . 1X . 6 . EI . CCP6

PC

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S

. MC2

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S

. AAA

. S16

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1X

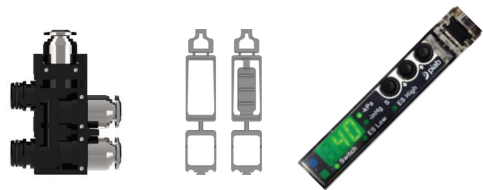
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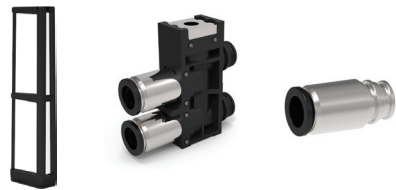
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EI

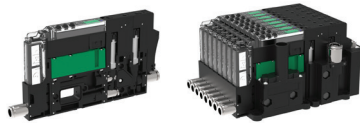
. CCP6



Functionality	
Code	Control functions
A	Electrical ES, vac and blow off
B	Electrical ES, vac and automatic blow off
C	Vac and blow off
D	Vac and automatic blow off (ATBO)
E	Vacuum on/off (vac)
Code	Non-return valve
B	Without non-return valve
A	With non-return valve
Code	Vacuum sensing
A	Display, analog and digital output
X	No vacuum sensing



Vacuum connect module	
Code	Vacuum filter
S	Vacuum filter 50 µm
X	No vacuum filter
Code	Vacuum port(s)/channel
1	1 vacuum port
2	2 vacuum ports
3	3 vacuum ports
Code	Vacuum connection(s)
4	Ø4 (5/32") push-in connector(s)
6	Ø6 push-in connector(s)
14	Ø1/4" push-in connector(s)



Single unit or manifold mount	
Code	Number of channels
1	1 channel
2	2 channels
3	3 channels
4	4 channels
5	5 channels
6	6 channels
7	7 channels
8	8 channels
Code	Split control from vacuum
X	No split
A	Split Ø4
B	Split Ø6
C	Split Ø1/4"



Air supply	
Code	Air connections
4	Ø4 (5/32") push-in connector
6	Ø6 push-in connector
14	Ø1/4" push-in connector
8	Ø8 (5/16") push-in connector
26	2 x Ø6 push-in connectors
214	2 x Ø1/4" push-in connectors
28	2 x Ø8 (5/16") push-in connectors



Mounting	
Code	Options
EC	Ejectors stacked with central exhaust
EN	Ejectors stacked with central silencer
EI	Ejector(s) for individual mounts



Electrical properties	
Code	Valve configuration
CC	NC vacuum + NC blow off
OC	NO vacuum + NC blow off
RC	NC 2/2 vacuum + NC 2/2 blow off
C	NC vacuum
O	NO vacuum
R	NC 2/2 vacuum
Code	Electrical input/output
P	PNP
N	NPN
Code	Electrical interface
6	6p connector(s)
A	M8 6p connector(s)
26	HD D-sub 26p connector
44	HD D-sub 44p connector



piCOMPACT®23 – CUSTOMER CODE

piCOMPACT®		Functionality		Functionality		Working enviroment	
Code		Code	Vacuum characteristics	Code	Nozzle model	Code	Chemical resistance
PC		F	High vacuum performance	12	SX12 (73–146 NI/min)	S	Standard
				42	SX42 (207–415 NI/min)		
				Code	Nozzle rows		
				1	Single		
				2	Double		



Functionality	
Code	Control functions
A	Electrical ES, vac and blow-off
B	Electrical ES, vac and automatic timer based blow-off (ATBO)
F	Electrical ES, vac, intelligent blow-off (IBO)
C	Vac and blow-off
D	Vac, automatic timer based blow-off (ATBO)
G	Vac and intelligent blow off (IBO)
E	Vacuum on/off (vac)
H	IO-Link pre-configured

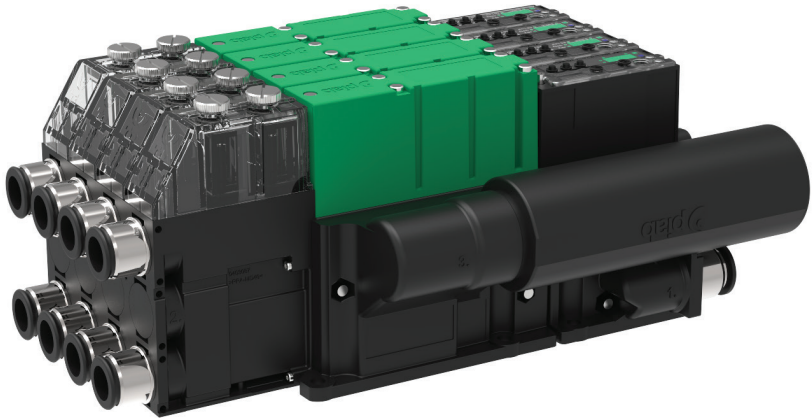
Vacuum connect module	
Code	Vacuum filter
S	Vacuum filter 50 µm
F	2× Vacuum filter 50 µm
X	No vacuum filter
Z	No vacuum filter including sensing port
Code	Vacuum ports(s) / channel
1	1 vacuum port
2	2 vacuum ports
3	3 vacuum ports
Code	Vacuum connection(s)
8	Ø8(5/16) push-in connector(s)
P1	Ø10 push-in connector(s)
P2	Ø3/8" push-in connector(s)
P3	Ø12 push-in connector(s)
P4	Ø1/2" push-in connector(s)
H1	12mm / 1/2" I.D. barb connector

Single unit or manifold mount	
Code	Number of channels
1	1 channel
2	2 channels
3	3 channels
4	4 channels
Code	Split control from vacuum
X	No split
B	Split Ø6
C	Split Ø1/4"
D	Split Ø8
E	Split Ø10
F	Split Ø3/8"

Code	Additional vacuum functions
	No extra vacuum control
Z	Self adhesion control (SAC)

Code	Internal check valves
B	Without non-return valve
A	With non-return valve
C	Amplified blow-off, without vacuum non-return valve (ABO)
D	Amplified blow-off, with vacuum non-return valve (ABO)
E	Pre-vacuum hovering, without vacuum non-return valve (PVH)
F	Pre-vacuum hovering, with vacuum non-return valve (PVH)
Code	Vacuum sensing
A	Display, analog and digital output
B	Display, 2× digital outputs
C	Display, leakage warning and digital output
D	IO-Link display
X	No vacuum sensing

Code	IO-Link Energy saving type
1	ES pre-set on 75 -kPa
2	ES Automatic level determination (ALD)
3	ES pre-set on 75 -kPa with ALD backup
0	No ES
Code	IO-Link Blow-off type
1	Automatic timer based blow-off (ATBO)
2	Intelligent blow off (IBO)
0	External control
Code	IO-Link Additional functions
1	Self adhesion control (SAC)
0	No IO-Link additional functions



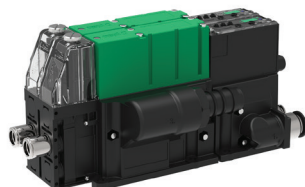
PC . F . 422 . S . AAA . F18 . 4X . 2P1 . EN . CCAB

PC . F . 122 . S . **H111AD** . S1P1 . 1X . 8 . EJ . CCCC



Air supply

Code	Air connections
6	Ø6 push-in connector
14	Ø1/4" push-in connector
8	Ø8(5/16") push-in connector
P1	Ø10 push-in connector
P2	Ø3/8" push-in connector
P3	Ø12 push-in connector(s)
P4	Ø1/2" push-in connector(s)
2P1	2× Ø10 push-in connector(s)
2P2	2× Ø3/8" push-in connector(s)
2P3	2× Ø12 push-in connector(s)
2P4	2× Ø1/2" push-in connector(s)



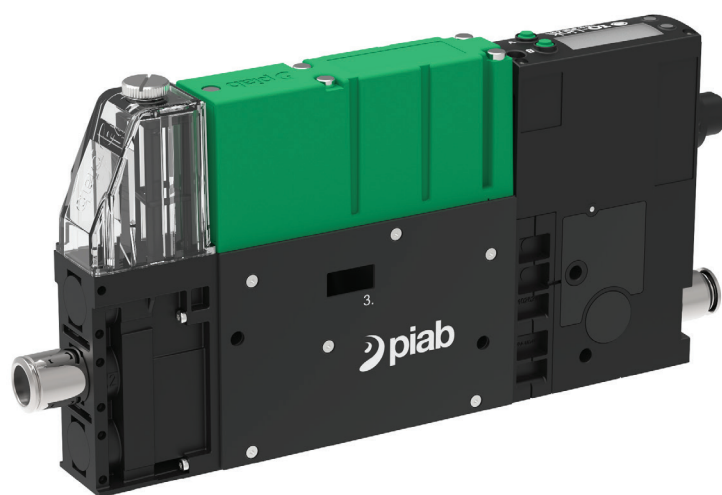
Mounting

Code	Ejector options
EC	Ejectors stacked with central exhaust
EN	Ejectors stacked with central silencer
EJ	Ejector(s) for individual mounts, integrated silencer
EK	Ejector(s) for individual mounts, top mounted silencer
EL	Ejector(s) for individual mounts, central exhaust
EM	Ejector(s) for individual mounts, central silencer



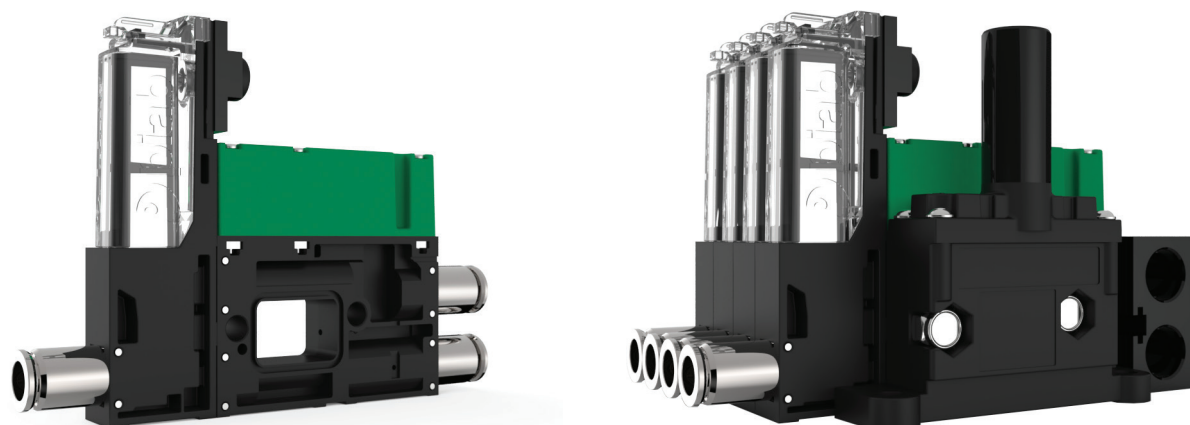
Electrical properties

Code	Valve configuration
CC	NC vacuum + NC blow off
FC	NC vacuum (power off - NO) + NC blow off
OC	NO vacuum + NC blow off
C	NC vacuum
O	NO vacuum
AC	Bi-stable vacuum valve + NC blow off
Code	Electrical input/output
A	PNP/PNP or NPN/NPN
B	Mixed mode
C	IO-Link, PNP/PNP
Code	Electrical interface
B	M12 8p connector(s)
C	M12 4p connector(s)



PC . F . 122 . S . **H111AD** . S1P1 . 1X . 8 . EJ . CCCC

piPUMP10X



Compact/stackable vacuum pumps are air-driven multistage ejector families, based on COAX® technology. It provides a high operational reliability, in case of fluctuating or low compressed-air pressure. Excellent performance when a quick response time when deep vacuum is needed. There is also a quick vacuum non-return valve as an option.

VACUUM FLOW

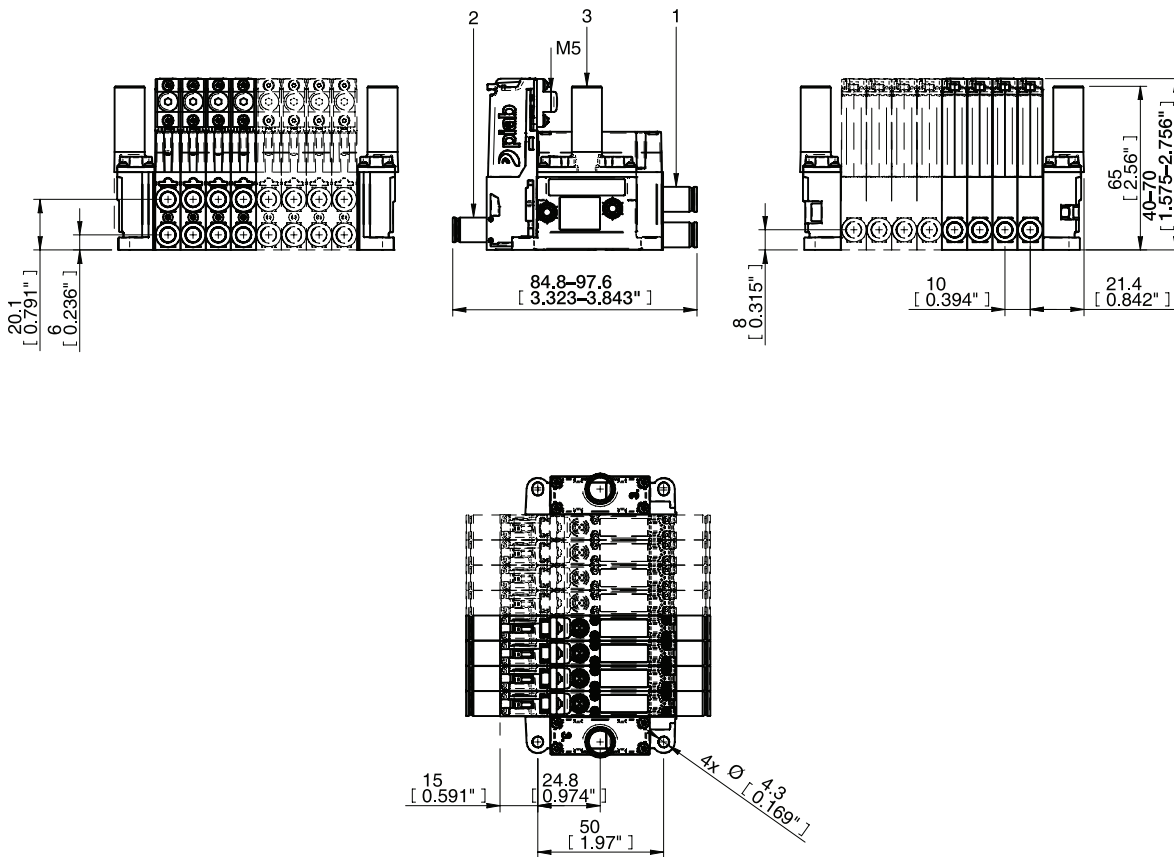
COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)								Max vacuum	
	MPa		0	10	20	30	40	50	60	70	-kPa	
MICRO Bi03-2	0.2	0.14	0.21	0.14	0.063	0.021	0.016	0.014	0.007	0.004	82	
MICRO Si02-2	0.6	0.11	0.26	0.18	0.095	0.053	0.045	0.038	0.027	0.019	75	
MICRO Ti05-2	0.4	0.23	0.31	0.28	0.22	0.16	0.088	0.063	0.045	0.023	84	
MICRO Xi2.5-2	0.5	0.13	0.23	0.15	0.079	0.044	0.036	0.03	0.023	0.013	91	

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)											Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	90	Max	
MICRO Bi03-2	0.2	0.14	5	9.9	20.4	53	99	153	228	354	552	—	652*	82
MICRO Si02-2	0.6	0.11	5	8.9	16.2	31	48	68	95	136	—	—	185*	75
MICRO Ti05-2	0.4	0.23	5	6.7	10.2	14.8	23	35	50	70	114	—	159*	84
MICRO Xi2.5-2	0.5	0.13	5.1	8.9	16.2	35	59	87	121	169	250	421	464*	91

* Evacuation time (ms) at max vacuum level (-kPa).

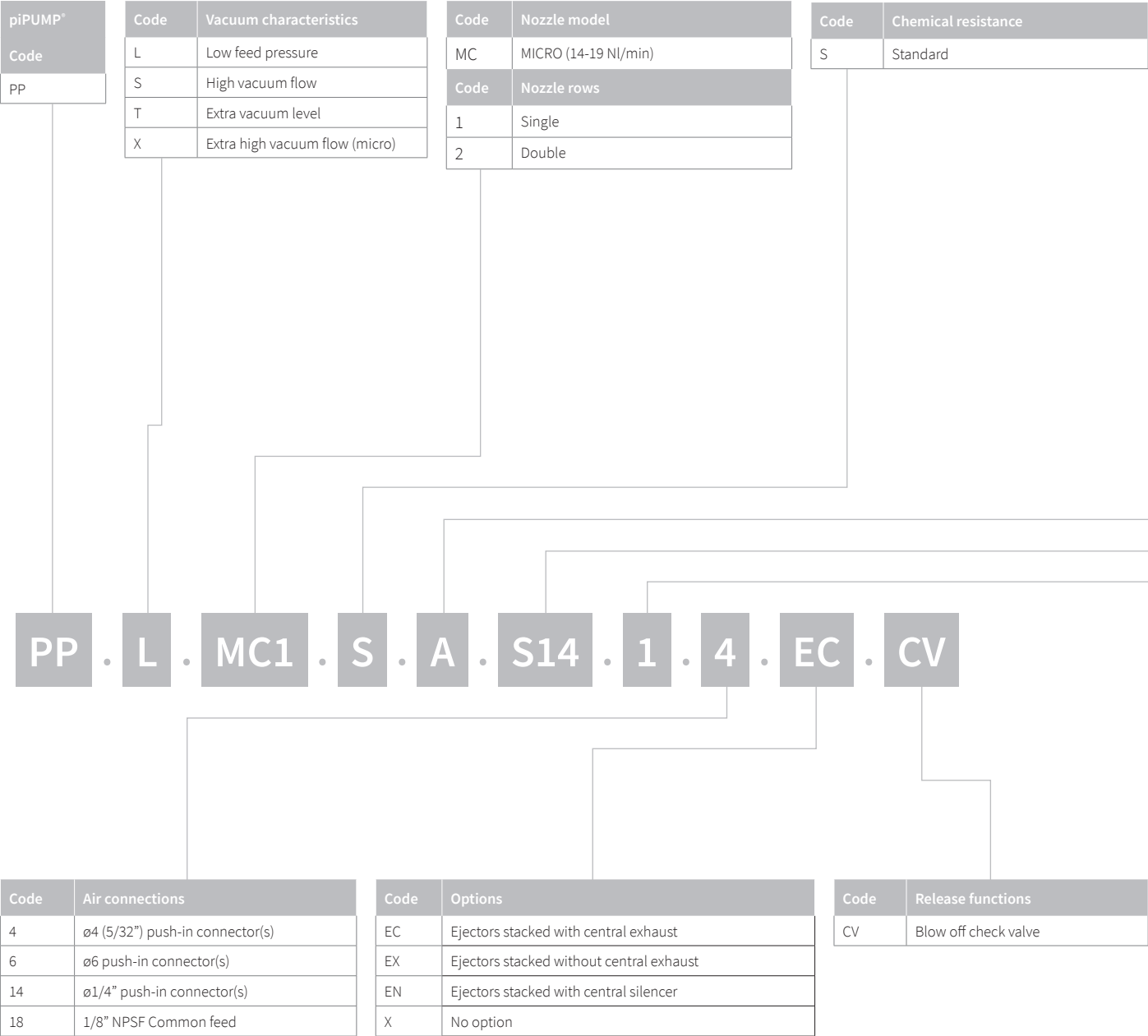
DIMENSIONAL DRAWING



ORDERING INFORMATION

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

piPUMP10X – CUSTOMER CODE

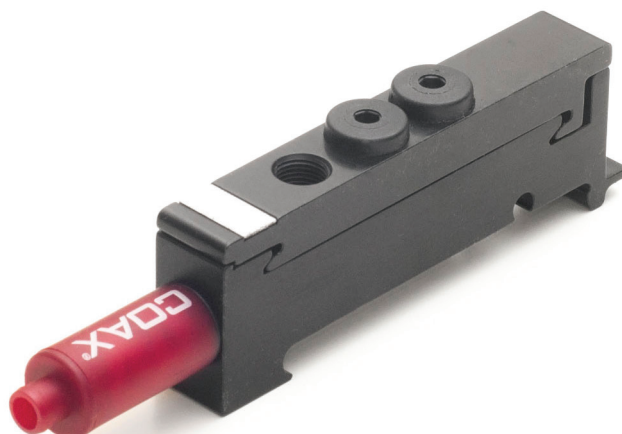


Code	Additional function
A	With non-return valve
B	Without non-return valve

Code	Vacuum filter
S	Vacuum filter 50 µm
X	No vacuum filter
Code	Vacuum port(s)/channel
1	1 vacuum port
2	2 vacuum ports
3	3 vacuum ports
Code	Vacuum connection(s)
4	ø4 (5/32") push-in connector(s)
6	ø6 push-in connector(s)
14	ø1/4" push-in connector(s)

Code	Number of channels
1	1 channel
2	2 channels
3	3 channels
4	4 channels
5	5 channels
6	6 channels
7	7 channels
8	8 channels

P3010 family



Compact/stackable vacuum pumps are air-driven multistage ejector families, based on COAX® technology, they are equipped with integrated controls and special functions, such as on/off valve, blow-off valve, vacuum switch, energy saving function etc. They are configurable platforms, making it easy to specify the exact control functions needed for the system.

It is 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. The P3010 includes a flow-through silencer and a built-in vacuum filter for harsh environments. It is suitable for fast and reliable evacuation in sealed systems.

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	
MINI Pi12-3	0.32	0.44	1.40	0.60	0.44	0.27	0.19	0.14	0.10	0.060	0.030	—	90
MINI Si08-3	0.6	0.44	1.34	0.73	0.55	0.35	0.23	0.17	0.13	0.08	—	—	75
MINI 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

EVACUATION TIMES

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	
MINI Pi12-3	0.32	0.44	0.08	0.23	0.49	1.00	1.70	2.60	3.90	6.30	—	90
MINI Si08-3	0.6	0.44	0.10	0.25	0.48	0.80	1.30	2.30	4.60	—	—	75
MINI 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

ACCESSORY DESCRIPTIONS



P3010 Quick release

The quick release function has a volume of 3–60 cm³. Quick release is done by accumulating and utilising the feed-air pressure as a boost. The ON/OFF is activated simultaneously with the P3010



P3010 ES

The P3010 has an integrated air-saving function (piSAVE® on/off) that minimises 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. And small hysteresis is recommended if a very accurate vacuum level has to be maintained in the process. It has an adjustable ES switch level and is a pneumatic function.



Solenoid Valve

The solenoid valve is an electric 3/2 valve with a possibility for manual override. As it has push in connections it is quick and easy to mount. The body has three M5 ports. It is suitable for compressed air with a filtration of 40 µm.



Vacuum switch

A vacuum switch can be used for many different applications. It converts a vacuum signal into an electric or pneumatic signal. Vacuum switches are available in many different versions, from very small electro-mechanicals with pre-set settings to pneumatics or programmable fully electronics. Some switches are designed to fit directly into the P3010 with an Ø 6 mm push-in.



AVM™2

The AVM™2 unit has built-in control and monitoring functions. The integrated energy saving function (ES) minimises the air consumption in sealed systems. It has valves for vacuum on/off and blow-off with electrical power failsafe function. The AVM™ has digital outputs, 16 pre-set combinations of vacuum levels, digital vacuum level display and a mechanical valve for blow-off flow adjustment.



CU

The CU has electric valves for vacuum on/off and blow-off and a mechanical valve for blow-off flow adjustment. It also has a special M12 4-pin cable assembly with LED for status of valve signal.

P3010 – CUSTOMER CODE

P3010 Code
P3010

Code	Connection interface
00	Housing connection Ø6 mm
01	Housing connection 1/8"

Code	COAX® Cartridge module
AA	COAX® Cartridge module Si08-3 FS ×1
AB	COAX® Cartridge module Si08-3 AFS* ×1
AC	COAX® Cartridge module Si08-3 FS ×2
AD	COAX® Cartridge module Si08-3 AFS* ×2
AE	COAX® Cartridge module Pi12-3 FS ×1
AF	COAX® Cartridge module Pi12-3 AFS* ×1
AG	COAX® Cartridge module Pi12-3 FS ×2
AH	COAX® Cartridge module Pi12-3 AFS* ×2
AI	COAX® Cartridge module Xi10-3 FS ×1
AJ	COAX® Cartridge module Xi10-3 AFS* ×1
AK	COAX® Cartridge module Xi10-3 FS ×2
AL	COAX® Cartridge module ×10-3 AFS* ×2

* AFS option has a non-return valve

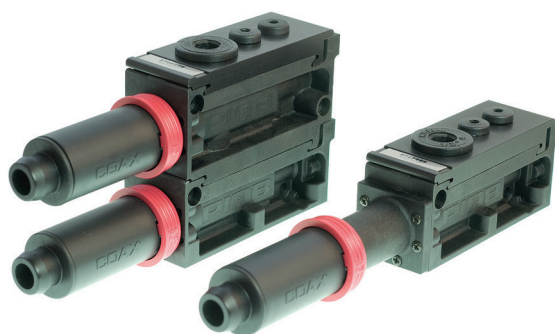
P3010 . 00 . AA . 01 . AA . 00

Code	Connection modules / function
01	Connection module high 6×1/8"
02	Connection module low 3×1/8"
04	Function Quick-release module 10/6 - 3
05	Function Quick-release module 8/6 - 30
06	Function Quick-release module 8/6 - 60
07	Function Quick-release module 10/6 - 30
08	Function Quick-release module 10/6 - 60
09	Function Quick-release module 1/4"/6 - 3 (NPSF)
10	Function Quick-release module 1/4"/6-30 (NPSF)
11	Function Quick-release module 1/4"/6-60 (NPSF)
12	Function Quick-release module 8/6-3
27	Function AVM™2 NO
28	Function AVM™2 NC (power off - NO)
29	Function CU NC
30	Function AVM™2 NO auto blow-off (1 sec)
31	Function AVM™2 NC auto blow-off (1 sec)
32	Function AVM™2 NC 2 (power off - NC)
33	Function CU NO

Code	Energy saving
AA	No energy saving (included in AVM™2)
AB	Solenoid valve DS23
AC	piSAVE® onoff 2/2 NO large hysteres
AD	piSAVE® onoff 2/2 NO small hysteres

Code	Vacuum sensing
00	No vacuum sensing (included in AVM™2)
01	Vacuum switch PNP NO MM8
02	Vacuum switch NPN NO MM8
05	Vacuum switch PNP NO LM8
09	Vacuum switch PNP NO DM8
10	Vacuum switch NPN NO DM8
11	Vacuum switch Inductive, adj. Knob
18	Vacuum switch VS4015 30 -kPa
19	Vacuum switch VS4015 50 -kPa
20	Vacuum switch VS4016 70 -kPa
21	Vacuum switch VS4016 30 -kPa
22	Vacuum switch VS4016 50 -kPa
23	Vacuum switch VS4016 70 -kPa

P5010 family



Compact/stackable vacuum pumps are air-driven multistage ejector families, based on COAX® technology. They are equipped with integrated controls and special functions, such as on/off valve, blow-off valve, vacuum switch, energy saving function etc. They are configurable platforms, making it easy to specify the exact control functions needed for the system.

It has a patented COAX® push-in technology that allows insertion and removal of the cartridge without tools. It is available 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. The P5010 has an integrated flow-through silencer that is unaffected by dust and dirt. It provides substantially lower air-consumption as compared to conventional ejectors of similar sizes.

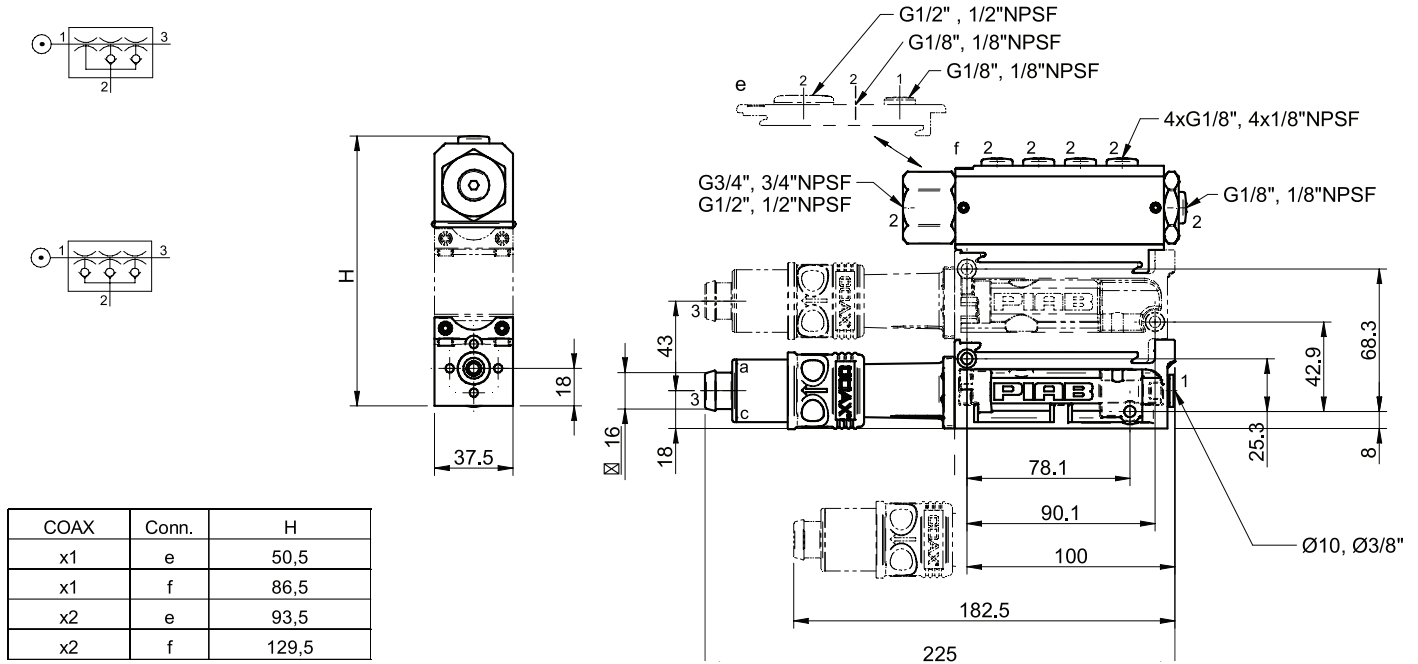
VACUUM FLOW

COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)											Max vacuum
	MPa	NI/s	0	10	20	30	40	50	60	70	80	90	-kPa	
Pi48-2	0.31	2	2.8	2.5	1.8	1.1	0.65	0.5	0.35	0.25	0.1	—	90	
Pi48-3	0.31	2	5.6	2.5	1.8	1.1	0.65	0.5	0.35	0.25	0.1	—	90	
Si32-2	0.6	1.75	3.3	3	2.6	1.7	0.9	0.6	0.5	0.35	—	—	75	
Si32-3	0.6	1.75	6	3.5	2.6	1.7	0.9	0.6	0.5	0.35	—	—	75	
Xi40-2	0.45	1.83	2.8	2.3	1.6	1	0.73	0.58	0.43	0.32	0.18	0.03	95	
Xi40-3	0.45	1.83	5.9	3	2	1.3	0.73	0.58	0.43	0.32	0.18	0.03	95	

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	90	-kPa
Pi48-2	0.31	2	0.03	0.07	0.13	0.26	0.46	0.7	1	1.6	4	90
Pi48-3	0.31	2	0.02	0.06	0.12	0.25	0.45	0.7	1	1.6	4	90
Si32-2	0.6	1.75	0.03	0.07	0.1	0.18	0.33	0.53	0.8	—	—	75
Si32-3	0.6	1.75	0.02	0.05	0.1	0.18	0.33	0.53	0.8	—	—	75
Xi40-2	0.45	1.83	0.04	0.09	0.17	0.28	0.44	0.63	0.9	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

DIMENSIONAL DRAWING



ORDERING INFORMATION

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ACCESSORY DESCRIPTIONS



AVM™2

The AVM™2 unit has built-in control and monitoring functions. The integrated energy saving function (ES) minimises the air consumption in sealed systems. It has valves for vacuum on/off and blow-off with electrical power failsafe function. The AVM™ has digital outputs, 16 pre-set combinations of vacuum levels, digital vacuum level display and a mechanical valve for blow-off flow adjustment.



CU

The CU has electric valves for vacuum on/off and blow-off and a mechanical valve for blow-off flow adjustment. It also has a special M12 4-pin cable assembly with LED for status of valve signal.



P5010 ES

The P5010 has an integrated air-saving function (piSAVE® onoff) that minimises 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. And small hysteresis is recommended if a very accurate vacuum level has to be maintained in the process. It has an adjustable ES switch level and is a pneumatic function.

P5010 – CUSTOMER CODE

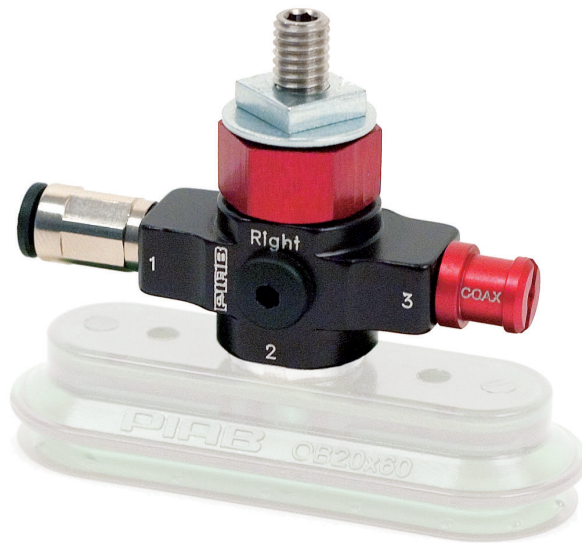
P5010 Code	Code	Connection interface
	00	Housing, connection Ø 10 mm
	01	Housing, connection Ø 3/8"

P5010 . 00 . AA . 01

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

Code	Connection modules/function
01	Connection module low, G connection
02	Connection module high, G connection
03	Connection module low, NPSF connection
04	Connection module high, NPSF connection
05	Function AVM®2 NO, G connection
06	Function AVM®2 NC (power off - NO), G connection
07	Function AVM®2 NO, NPSF connection
08	Function AVM®2 NC (power off - NO), NPSF connection
09	Function CU NC, G connection
10	Function CU NC, NPSF connection
11	Function ES Vacustat 2/2 NO large hysteres
12	Function ES Vacustat 2/2 NO small hysteres
13	Function AVM®2 NO, automatic blow-off (1 sec), G connection
14	Function AVM®2 NC, automatic blow-off (1 sec), G connection
15	Function AVM®2 NC 2 (power off - NC), G connection
16	Function AVM®2 NO, automatic blow-off (1 sec), NPSF connection
17	Function AVM®2 NC, automatic blow-off (1 sec), NPSF connection
18	Function AVM®2 NC 2 (power off - NC), NPSF connection

VGS™ 2010 family



Piab VGS™ – A product design where different suction cups are integrated with vacuum cartridges based on the patented COAX® technology. The “vacuum gripper” makes selection, sizing and installation of a vacuum system easier. With a VGS™ you will enjoy the benefits of a more cost-efficient and reliable decentralized vacuum system. It has a low weight at 25–39 g.

It is available with a two-stage COAX® cartridge MICRO. Choose Bi for low feed pressure, Si for high vacuum flow, Xi for extra vacuum and Ti at 0,4/0,6 MPa for extra capacity/dirt tolerance. This VGS™ is compatible with any suction cup with G1/8” male fitting.

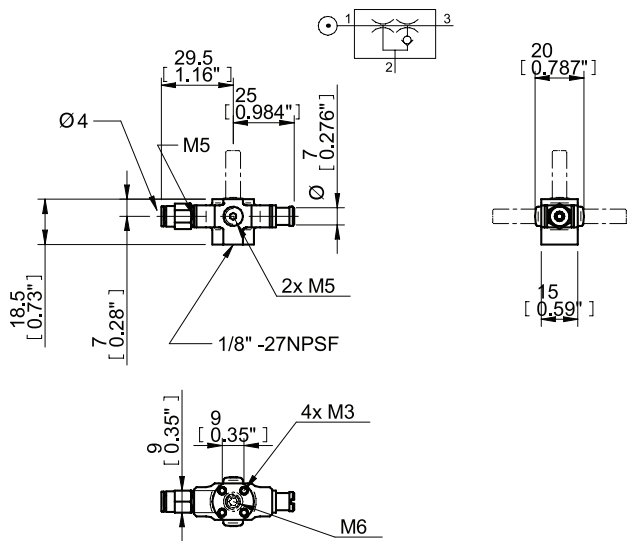
VACUUM FLOW

COAX® Cartridge	Feed pressure	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)								Max vacuum -kPa
	MPa		0	10	20	30	40	50	60	70	
MICRO Bi03-2	0.2	0.14	0.23	0.15	0.06	0.04	0.035	0.023	0.013	0.006	83
MICRO Si02-2	0.5	0.10	0.27	0.19	0.09	0.08	0.07	0.05	0.02	—	70
MICRO Ti05-2	0.4	0.09	0.25	0.15	0.08	0.07	0.05	0.03	—	—	60
MICRO Ti05-2	0.5	0.10	0.27	0.19	0.09	0.08	0.07	0.05	0.02	—	70
MICRO Xi2.5-2	0.6	0.12	0.28	0.21	0.12	0.08	0.07	0.06	0.04	0.02	75

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption NI/s	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum -kPa
	MPa		10	20	30	40	50	60	70	80	
MICRO Bi03-2	0.2	0.14	0.5	1.4	3.9	6.4	10	16	28	51	83
MICRO Si02-2	0.6	0.12	0.41	1.01	2.01	3.3	4.9	6.9	10.2	—	75
MICRO Ti05-2	0.4	0.27	0.33	0.73	1.2	2	3.1	5	8.3	16.6	84
MICRO Ti05-2	0.6	0.37	0.3	0.7	1.2	1.8	2.6	4.2	8.43	—	75
MICRO Xi2.5-2	0.5	0.13	0.49	1.23	2.48	4.5	7.3	11.3	18	28	92

DIMENSIONAL DRAWING



ORDERING INFORMATION

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VGS™ 2010 – CUSTOMER CODE

VGS2010 . AB . 01 . BA

VGS2010
Code
VGS2010

Code	COAX*
AA	No COAX® cartridge (slave unit)
AB	COAX® cartridge MICRO Bi03-2
AF	COAX® cartridge MICRO Si02-2
AJ	COAX® cartridge MICRO Xi2.5-2
AN	COAX® cartridge MICRO Ti05-2

Code	Mounting orientation
00	4x M3 top, flush mount
01	M6 19 mm top, profile kit
02	M6 19 mm right, profile kit
03	M6 19 mm left, profile kit

Code	Suction cup
BA	No suction cup
DA	BX25P 30°/60° Shore A
DB	BX25P 60° Shore A
DC	FC20P 50° Shore A
DD	F25CP 50° Shore A
DE	OB20x60P 60° Shore A
DF	OF10x30P 50° Shore A
DG	OF15x45P 50° Shore A

VGS™ 3010 family



Piab VGS™ – A product design where different suction cups are integrated with vacuum cartridges based on the patented COAX® technology. The “vacuum gripper” makes selection, sizing and installation of a vacuum system easier. With a VGS™ you will enjoy the benefits of a more cost-efficient and reliable decentralized vacuum system. It has a low weight at 111–340 g.

It is available with two- or three-stage COAX® cartridge MINI. Choose a Di cartridge, for very harsh environments, combining high dust and high humidity levels, 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. The three-stage cartridge will give extra high initial vacuum flow, which is suitable in high speed applications. The VGS™ is compatible with any suction cup with G3/8” male fitting.

VACUUM FLOW

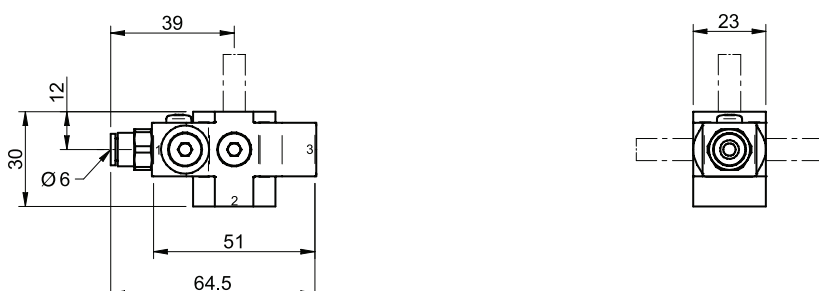
COAX® Cartridge	Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	90	
MINI Di16-2	0.6	0.75	0.64	0.57	0.49	0.41	0.35	0.29	0.18	0.04	—	—	73
MINI Pi12-2	0.32	0.44	0.68	0.6	0.44	0.27	0.19	0.14	0.1	0.06	0.03	—	90
MINI Pi12-3	0.32	0.44	1.4	0.6	0.44	0.27	0.19	0.14	0.1	0.06	0.03	—	90
MINI Si08-2	0.6	0.44	0.77	0.67	0.51	0.33	0.23	0.16	0.12	0.08	—	—	75
MINI Si08-3	0.6	0.44	1.34	0.73	0.55	0.35	0.23	0.17	0.13	0.08	—	—	75
MINI Xi10-2	0.5	0.46	0.75	0.63	0.49	0.33	0.19	0.15	0.11	0.07	0.04	0.011	94
MINI Xi10-3	0.5	0.46	1.43	0.7	0.5	0.33	0.19	0.15	0.11	0.07	0.04	0.011	94

EVACUATION TIMES

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	
MINI Di16-2	0.6	0.75	0.17	0.35	0.58	0.84	1.15	1.58	2.49	—	—	73
MINI Pi12-2	0.32	0.44	0.17	0.32	0.58	1.1	1.8	2.7	4.0	6.4	—	90
MINI Pi12-3	0.32	0.44	0.08	0.23	0.49	1	1.7	2.6	3.9	6.3	—	90

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	
MINI Si08-2	0.6	0.44	0.14	0.31	0.55	0.9	1.4	2.1	3.1	—	—	75
MINI Si08-3	0.6	0.44	0.1	0.25	0.48	0.8	1.3	2	2.9	—	—	75
MINI Xi10-2	0.5	0.46	0.14	0.3	0.6	1	1.6	2.3	3.5	5.3	8.9	94
MINI Xi10-3	0.5	0.46	0.09	0.26	0.5	0.9	1.5	2.2	3.4	5.2	8.8	94

DIMENSIONAL DRAWING



ORDERING INFORMATION

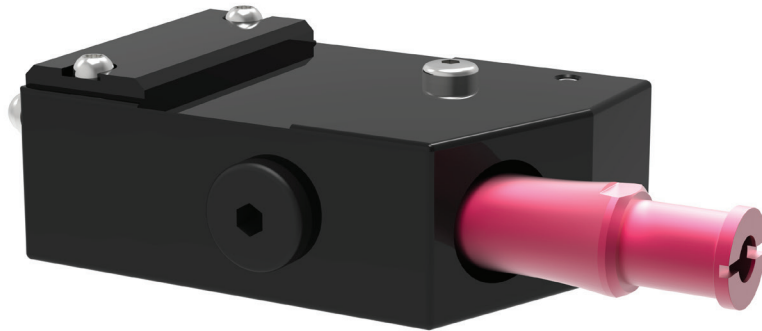
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VGS™3010 – CUSTOMER CODE

VGS3010 . AB . 01 . 38

VGS3010 Code	Code	COAX®	Code	Mounting orientation	Suction cup
VGS3010	AA	No COAX® cartridge (slave unit)	00	4x M4 top, flush mount	Visit piab.com for the full range of suction cups available for VGS™3010
	AB	MINI Pi12-2	01	M8 16 mm top	
	AC	MINI Pi12-3	02	M8 16 mm right	
	AD	MINI Pi12-2, non-return valve	03	M8 16 mm left	
	AE	MINI Pi12-3, non-return valve	04	M8 27 mm top, profile kit	
	AF	MINI Si08-2	05	M8 27 mm right, profile kit	
	AG	MINI Si08-3	06	M8 27 mm left, profile kit	
	AH	MINI Si08-2, non-return valve	07	M6 22 mm top, profile kit	
	AI	MINI Si08-3, non-return valve	08	M6 22 mm right, profile kit	
	AJ	MINI Xi10-2	09	M6 22 mm left, profile kit	
	AK	MINI Xi10-3	11	Ball joint VGS™3010 right	
	AL	MINI Xi10-2, non-return valve	12	Ball joint VGS™3010 left	
	AM	MINI Xi10-3, non-return valve	13	Lock-pin VGS™3010 right	
	AN	MINI Di16-2	14	Lock-pin VGS™3010 left	
			15	Level compensator LC30	

VGS™ 3040 family



This is a product design where different suction cups can be integrated with vacuum cartridges based on the patented COAX® technology. The “vacuum gripper” makes selection, sizing and installation of a vacuum system easier. With a VGS™ you will enjoy the benefits of a more cost-efficient and reliable decentralized vacuum system. The VGS™ is compatible with any suction cup with G3/8” male fitting. It has a low weight at 204–340 g.

It is available with two- or three-stage COAX® cartridge MINI. Choose a Di cartridge, for very harsh environments, combining high dust and high humidity levels, 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. The three-stage cartridge will give extra high initial vacuum flow, which is suitable in high speed applications.

It is available in lockpin 16, 19 or balljoint mountings, industry standard as well as level compensator to compensate for differences in level of object. It can also be fitted with different functions as energy saving, release or blow off.

VACUUM FLOW

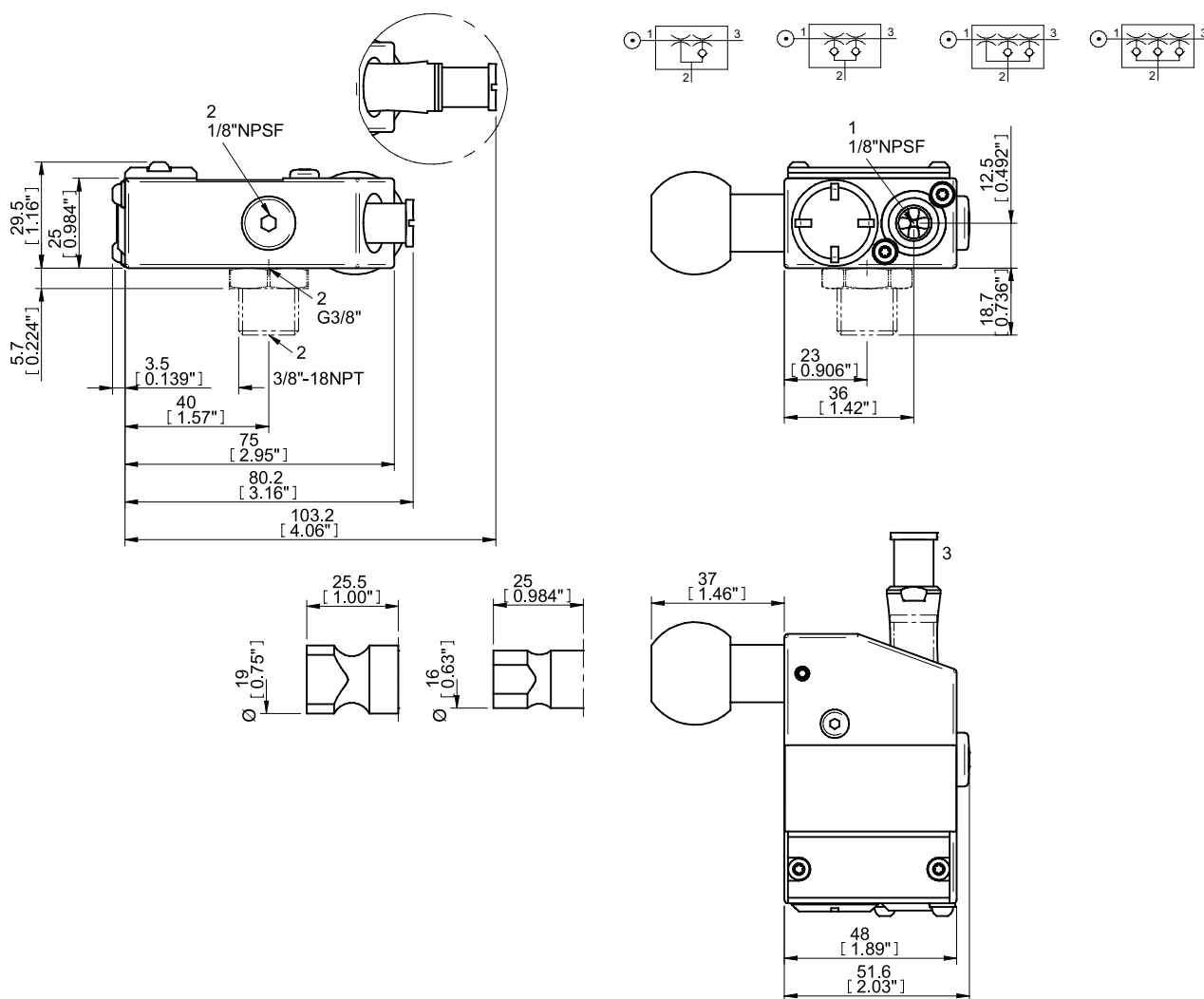
COAX® Cartridge	Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	90	
MINI Pi12-2	0.32	0.44	0.68	0.6	0.44	0.27	0.19	0.14	0.1	0.06	0.03	—	90
MINI Pi12-3	0.32	0.44	1.4	0.6	0.44	0.27	0.19	0.14	0.1	0.06	0.03	—	90
MINI Si08-2	0.6	0.44	0.77	0.67	0.51	0.33	0.23	0.16	0.12	0.08	—	—	75
MINI Si08-3	0.6	0.44	1.34	0.73	0.55	0.35	0.23	0.17	0.13	0.08	—	—	75
MINI 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
MINI Xi10-3	0.5	0.46	1.43	0.7	0.5	0.33	0.19	0.15	0.11	0.07	0.045	0.011	94

EVACUATION TIMES

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	
MINI Pi12-2	0.32	0.44	0.17	0.32	0.58	1.1	1.8	2.7	4	6.4	—	90
MINI Pi12-3	0.32	0.44	0.08	0.23	0.49	1	1.7	2.6	3.9	6.3	—	90

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	
MINI Si08-2	0.6	0.44	0.14	0.31	0.55	0.9	1.4	2.1	3.1	—	—	75
MINI Si08-3	0.6	0.44	0.1	0.25	0.48	0.8	1.3	2	2.9	—	—	75
MINI Xi10-2	0.5	0.46	0.14	0.3	0.6	1	1.6	2.3	3.5	5.3	8.9	94
MINI Xi10-3	0.5	0.46	0.09	0.26	0.5	0.9	1.5	2.2	3.4	5.2	8.8	94

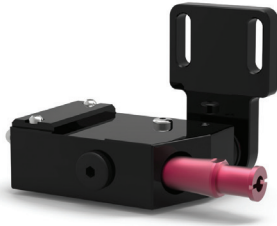
DIMENSIONAL DRAWING



ORDERING INFORMATION

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

ACCESSORY DESCRIPTIONS



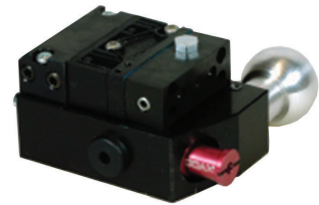
VGS™3040 with profile mount

It makes the attachment easy to a standard extrusion and profile systems with an adjustable position. This will give a quick setup and changeover.



VGS™3040 with level compensator

It is available with level compensator to compensate for differences in level of object.



VGS™3040 with piSAVE® onoff

It has an integrated energy-saving device, piSAVE® onoff, results in very low air consumption in sealed applications. The built-in blow off check valve will provide a fast release of the object. It has an adjustable vacuum controlled 2/2 NO valve and is available with large hysteresis for object handling and small hysteresis for process applications.



VGS™3040 with piSAVE® release

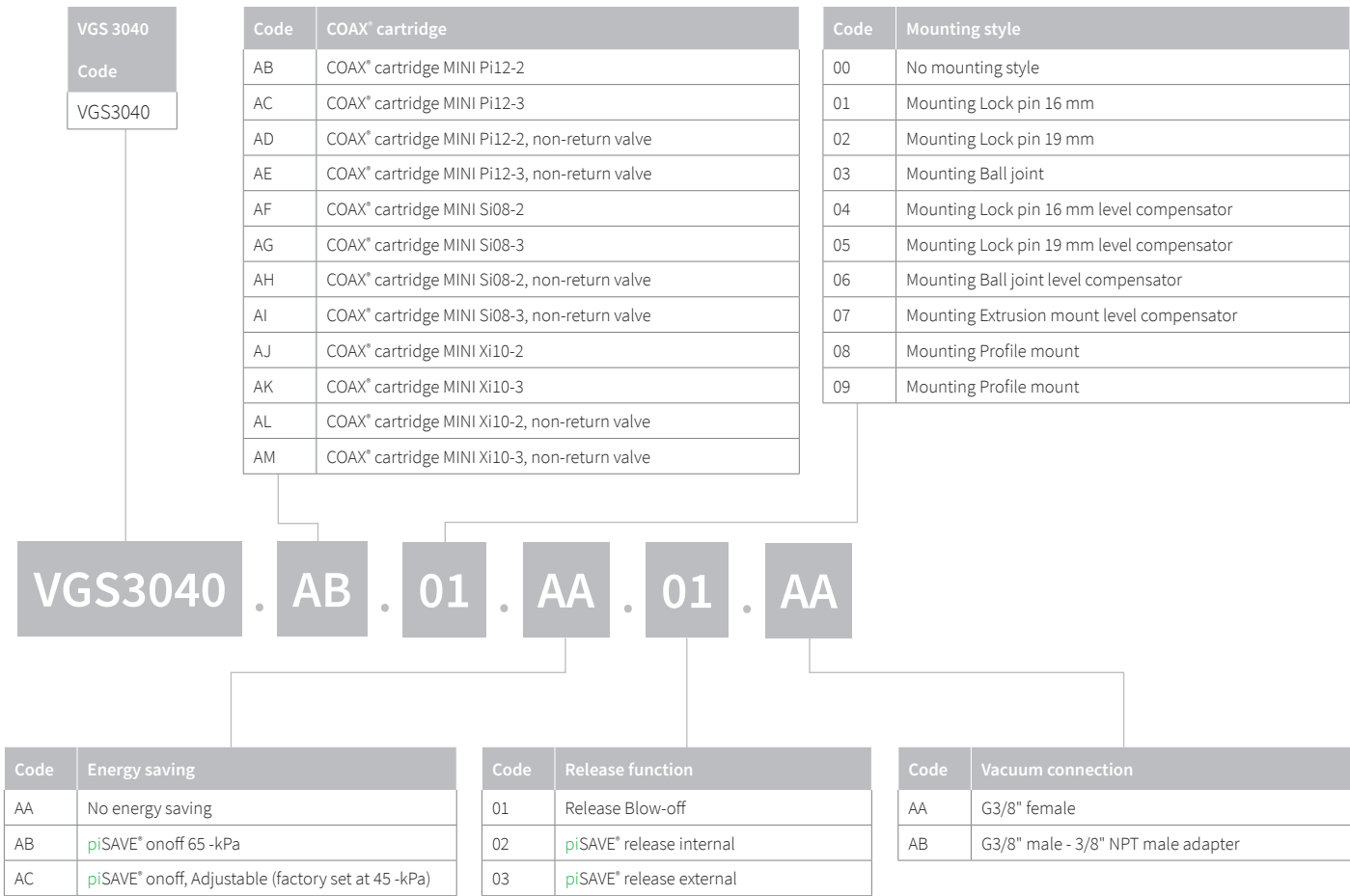
It has a built-in quick release for fast release of object. It works with an internal or separate feed of air. It equalises pressure in the suction cups to provide fast release of the product. The piSAVE® release will provide an extra fast release by accumulating and utilising the feed-air pressure as a boost. It has an ON/OFF activated simultaneously with the ejector and no additional controls required — use a single 3/2 control valve for the ejector and piSAVE® release.



VGS™3040 with blow off

It has a built-in blow off check valve for fast release of object. Prevents vacuum from being pulled through the blow-off lines, which means faster response time and completely independent vacuum units.

VGS™3040 – CUSTOMER CODE



VGS™5010 family



Piab VGS™ – A product design where different suction cups are integrated with vacuum cartridges based on the patented COAX® technology. The “vacuum gripper” makes selection, sizing and installation of a vacuum system easier. With a VGS™ you will enjoy the benefits of a more cost-efficient and reliable decentralized vacuum system. It has a low weight at 413–679 g.

The VGS™5010 is specially designed for handling larger parts, such as car body sheets as it is compatible with any suction cup with G1/2” male fitting. It is also 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. The three-stage cartridge will give extra high initial vacuum flow, suitable in high speed applications.

VACUUM FLOW

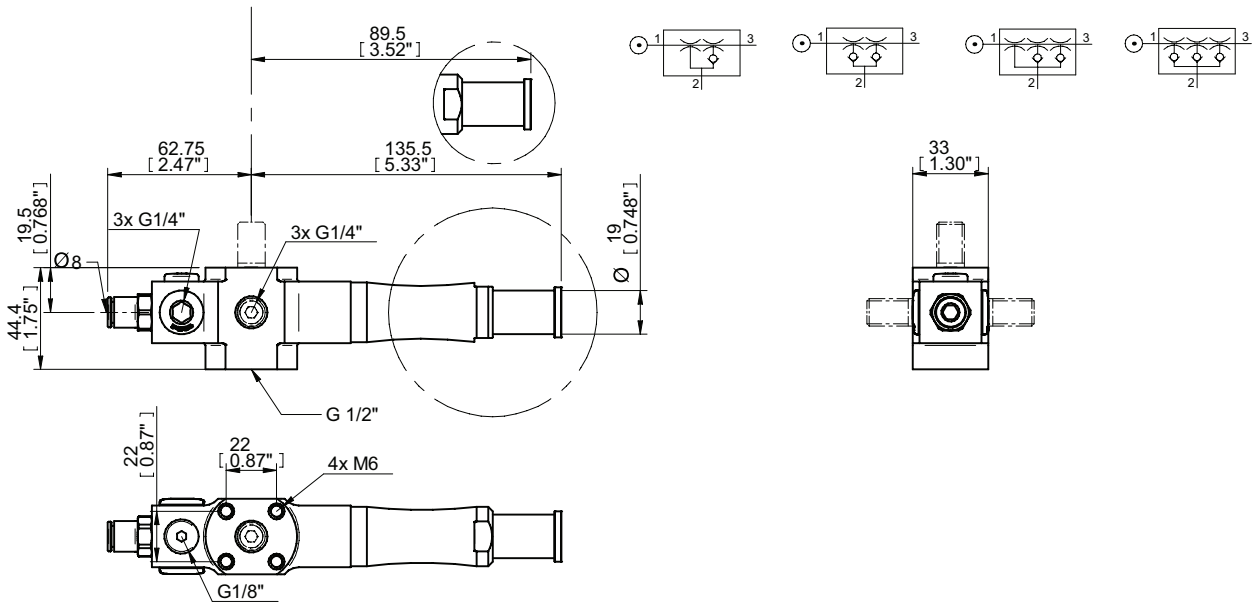
COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)											Max vacuum
	MPa	NI/s	0	10	20	30	40	50	60	70	80	90	-kPa	
MIDI Pi48-2	0.31	2	2.8	2.5	1.8	1.1	0.65	0.5	0.35	0.25	0.1	—	90	
MIDI Pi48-3	0.31	2	5.6	2.5	1.8	1.1	0.65	0.5	0.35	0.25	0.1	—	90	
MIDI Si32-2	0.6	1.75	3.3	3	2.6	1.7	0.9	0.6	0.5	0.35	—	—	75	
MIDI Si32-3	0.6	1.75	6	3.5	2.6	1.7	0.9	0.6	0.5	0.35	—	—	75	
MIDI Xi40-2	0.45	1.83	2.8	2.3	1.6	1	0.73	0.58	0.43	0.32	0.18	0.03	95	
MIDI Xi40-3	0.45	1.83	5.9	3	2	1.3	0.73	0.58	0.43	0.32	0.18	0.03	95	

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	90	-kPa
MIDI Pi48-2	0.31	2	0.03	0.07	0.13	0.26	0.46	0.7	1	1.6	4	90
MIDI Pi48-3	0.31	2	0.02	0.06	0.12	0.25	0.45	0.7	1	1.6	4	90
MIDI Si32-2	0.6	1.75	0.03	0.07	0.1	0.18	0.33	0.53	0.8	—	—	75
MIDI Si32-3	0.6	1.75	0.02	0.05	0.1	0.18	0.33	0.53	0.8	—	—	75

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	
MIDI Xi40-2	0.45	1.83	0.04	0.09	0.17	0.28	0.44	0.63	0.9	1.3	2.3	95
MIDI 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

DIMENSIONAL DRAWING



ORDERING INFORMATION

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

VGS™5010 – CUSTOMER CODE

VGS 5010
Code
VGS5010

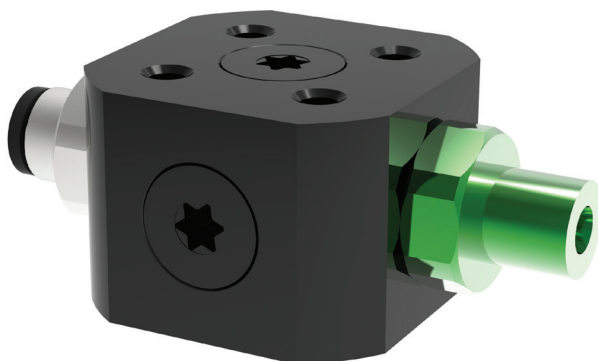
Code	COAX® cartridge
AA	No COAX® cartridge (slave unit)
AB	COAX® cartridge MIDI Pi48-2
AC	COAX® cartridge MIDI Pi48-3
AD	COAX® cartridge MIDI Pi48-2, non-return valve
AE	COAX® cartridge MIDI Pi48-3, non-return valve
AF	COAX® cartridge MIDI Si32-2
AG	COAX® cartridge MIDI Si32-3
AH	COAX® cartridge MIDI Si32-2, non-return valve
AI	COAX® cartridge MIDI Si32-3, non-return valve
AJ	COAX® cartridge MIDI Xi40-2
AK	COAX® cartridge MIDI Xi40-3
AL	COAX® cartridge MIDI Xi40-2, non-return valve
AM	COAX® cartridge MIDI Xi40-3, non-return valve

Code	Mounting style
00	4×M6 top, flush mount
01	4×M6 top, angle bracket
02	M12 20 mm top
03	M12 20 mm right
04	M12 20 mm left
05	M12 20 mm top, angle bracket
06	M12 20 mm right, angle bracket
07	M12 20 mm left, angle bracket

VGS5010 . AB . 00 . BA

Code	Suction cup
BA	No suction cup
CO	BF110P 30°/60° Shore A
CP	BF110P 60° Shore A
CQ	BX110P 30°/60° Shore A
CR	BX110P 60° Shore A
CS	F110P 30°/60° Shore A
CT	F110P 60° Shore A
CU	OB65x170P 30°/60° Shore A
CV	OB65x170P 60° Shore A
CX	BL50-3P 30°/70° Shore A
CY	BX75P 30°/60° Shore A
CZ	BX75P 60° Shore A

COAX® in piGRIP®



This is a fully decentralized vacuum unit based on patented COAX® technology. It provides the quickest response time and very high energy efficiency. The COAX® in piGRIP® is available with a variation of two stage COAX® MICRO cartridges. The COAX® in piGRIP® is compatible with any suction cup with G1/8" male fitting.

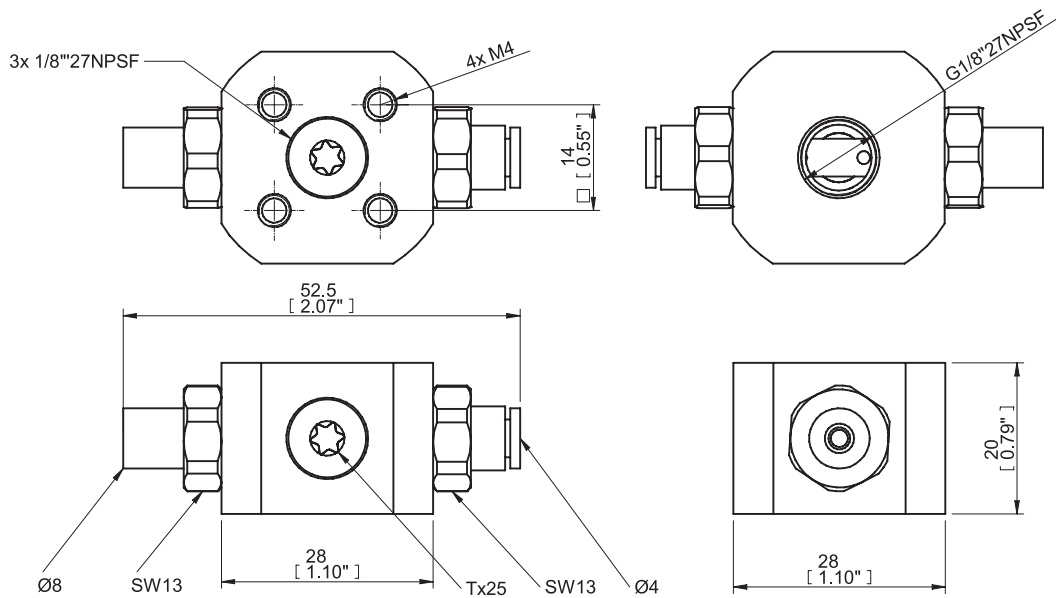
VACUUM FLOW

COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (l/s) at different vacuum levels (-kPa)										Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	-kPa	
MICRO Bi03-2	0.18	0.14	0.23	0.15	0.06	0.04	0.035	0.023	0.013	0.006	—	83	
MICRO Si02-2	0.6	0.12	0.28	0.21	0.12	0.08	0.07	0.06	0.04	0.02	—	75	
MICRO Ti05-2	0.4	0.27	0.32	0.28	0.23	0.17	0.1	0.07	0.04	0.02	0.004	84	
MICRO Xi2.5-2	0.5	0.13	0.24	0.17	0.1	0.06	0.04	0.03	0.02	0.01	0.01	92	

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	-kPa
MICRO Bi03-2	0.18	0.14	0.5	1.4	3.9	6.4	10	16	28	51	83
MICRO Si02-2	0.6	0.12	0.41	1.01	2.01	3.3	4.9	6.9	10.2	—	75
MICRO Ti05-2	0.4	0.27	0.33	0.73	1.2	2	3.1	5	8.3	16.6	84
MICRO Xi2.5-2	0.5	0.13	0.49	1.23	2.48	4.5	7.3	11.3	18	28	92

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
COAX® in piGRIP® Bi	0201096
COAX® in piGRIP® Si	0200345
COAX® in piGRIP® Ti	0200346
COAX® in piGRIP® Xi	0200344

piCLASSIC



It is 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. This pump has a substantially lower air consumption compare to competition, it is compact with no moving parts. It can be configured with 1–6 cartridges. This pump can easily be upgraded with more capacity if needed. And it is also easy to disassemble for maintenance.

VACUUM FLOW

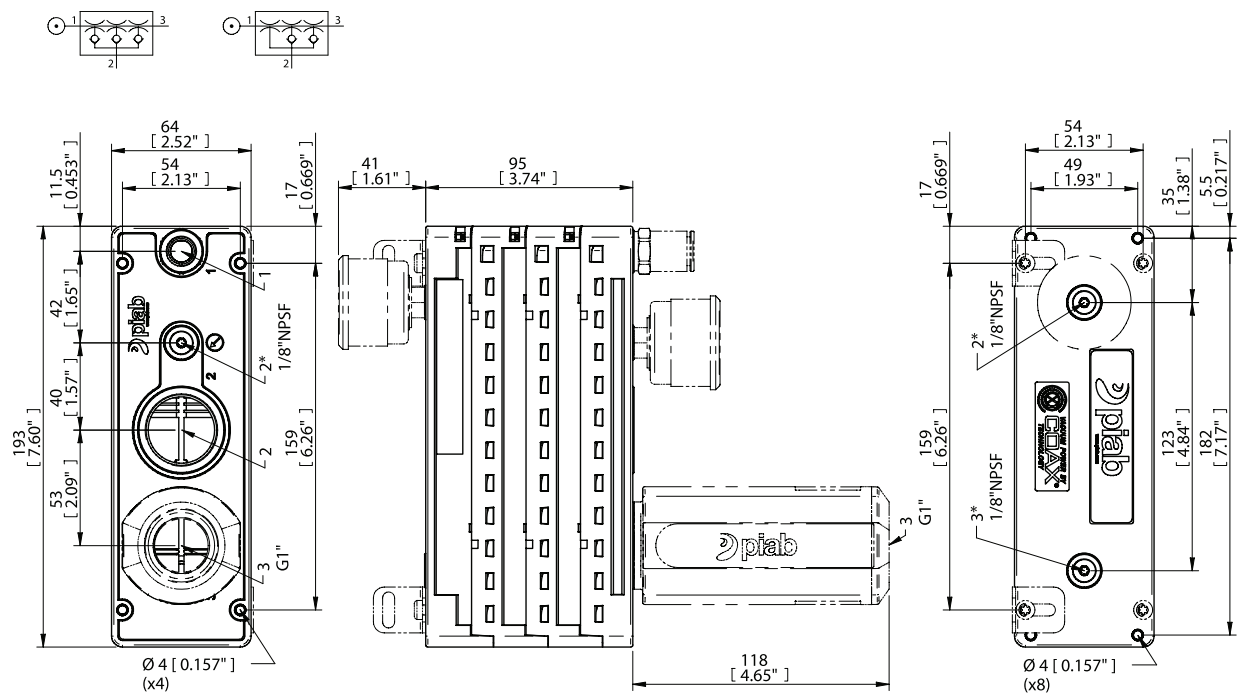
COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum
	MPa	NI/s	0	10	20	30	40	50	60	70	80	90	-kPa
MIDI Si32-3 x1	0.6	1.75	6	3.5	2.6	1.7	0.9	0.6	0.5	0.35	—	—	75
MIDI Si32-3 x2	0.6	3.5	12	7	5.2	3.4	1.8	1.2	1	0.7	—	—	75
MIDI Si32-3 x3	0.6	5.25	18	10.5	7.8	5.1	2.7	1.8	1.5	1.1	—	—	75
MIDI Si32-3 x4	0.6	7	24	14	10.4	6.8	3.6	2.4	2	1.4	—	—	75
MIDI Si32-3 x5	0.6	8.75	25.5	15.8	12.4	8.5	4.5	3	2.5	2.1	—	—	75
MIDI Si32-3 x6	0.6	10.5	28.8	17.9	14.8	10.2	5.4	3.6	3	2.2	—	—	75
MIDI Pi48-3 x1	0.31	2	5.6	2.5	1.8	1.1	0.65	0.5	0.35	0.25	0.1	—	90
MIDI Pi48-3 x2	0.31	4	11.2	5	3.6	2.2	1.3	1	0.7	0.5	0.2	—	90
MIDI Pi48-3 x3	0.31	6	16.8	7.5	5.4	3.3	1.95	1.5	1.05	0.75	0.3	—	90
MIDI Pi48-3 x4	0.31	8	22.4	10	7.2	4.4	2.6	2	1.4	1	0.4	—	90
MIDI Pi48-3 x5	0.31	10	23.8	11.3	8.6	5.5	3.25	2.5	1.75	1.25	0.5	—	90
MIDI Pi48-3 x6	0.31	12	26.9	12.8	10.3	6.6	3.9	3	2.1	1.5	0.6	—	90
MIDI Xi40-3 x1	0.45	1.83	5.9	3	2	1.3	0.73	0.58	0.43	0.32	0.18	0.03	95
MIDI Xi40-3 x2	0.45	3.66	11.8	6	4	2.6	1.46	1.16	0.86	0.64	0.36	0.06	95

COAX® Cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
	MPa		0	10	20	30	40	50	60	70	80	90	
MIDI Xi40-3 x3	0.45	5.49	17.7	9	6	3.9	2.19	1.74	1.29	0.96	0.54	0.09	95
MIDI Xi40-3 x4	0.45	7.32	23.6	12	8	5.2	2.92	2.32	1.72	1.28	0.72	0.12	95
MIDI Xi40-3 x5	0.45	9.15	25.1	13.5	9.5	6.5	3.65	2.9	2.15	1.6	0.9	0.15	95
MIDI Xi40-3 x6	0.45	11	28.3	15.3	11.4	7.8	4.38	3.44	2.58	1.92	1.08	0.18	95

EVACUATION TIMES

COAX® Cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum -kPa
	MPa		10	20	30	40	50	60	70	80	90	
MIDI Si32-3 x1	0.6	1.75	0.02	0.05	0.1	0.18	0.33	0.53	0.8	—	—	75
MIDI Si32-3 x2	0.6	3.5	0.01	0.025	0.05	0.09	0.17	0.27	0.4	—	—	75
MIDI Si32-3 x3	0.6	5.25	0.007	0.017	0.033	0.06	0.11	0.18	0.27	—	—	75
MIDI Si32-3 x4	0.6	7	0.005	0.013	0.025	0.045	0.083	0.13	0.2	—	—	75
MIDI Si32-3 x5	0.6	8.75	0.005	0.012	0.022	0.036	0.066	0.11	0.16	—	—	75
MIDI Si32-3 x6	0.6	10.5	0.004	0.01	0.018	0.03	0.055	0.09	0.13	—	—	75
MIDI Pi48-3 x1	0.31	2	0.02	0.06	0.12	0.25	0.45	0.7	1	1.6	4	90
MIDI Pi48-3 x2	0.31	4	0.01	0.03	0.06	0.13	0.23	0.35	0.5	0.8	2	90
MIDI Pi48-3 x3	0.31	6	0.007	0.02	0.04	0.08	0.15	0.23	0.33	0.53	1.33	90
MIDI Pi48-3 x4	0.31	8	0.005	0.015	0.03	0.06	0.11	0.18	0.25	0.4	1	90
MIDI Pi48-3 x5	0.31	10	0.005	0.014	0.028	0.05	0.09	0.14	0.2	0.32	0.8	90
MIDI Pi48-3 x6	0.31	12	0.004	0.013	0.025	0.04	0.08	0.12	0.17	0.27	0.67	90
MIDI Xi40-3 x1	0.45	1.83	0.022	0.062	0.12	0.22	0.37	0.57	0.84	1.2	2.2	95
MIDI Xi40-3 x2	0.45	3.66	0.011	0.031	0.06	0.11	0.19	0.29	0.42	0.6	1.1	95
MIDI Xi40-3 x3	0.45	5.49	0.007	0.021	0.04	0.07	0.12	0.19	0.28	0.4	0.73	95
MIDI Xi40-3 x4	0.45	7.32	0.006	0.016	0.03	0.055	0.09	0.14	0.21	0.3	0.55	95
MIDI Xi40-3 x5	0.45	9.15	0.005	0.014	0.026	0.044	0.07	0.11	0.17	0.24	0.44	95
MIDI Xi40-3 x6	0.45	11	0.005	0.012	0.022	0.04	0.06	0.1	0.14	0.2	0.37	95

DIMENSIONAL DRAWING



*) Sensing port

PCL.XXX.X.S.		AB
	1	2
AB	G1/4"	G1"
2B	Ø12	G1"

ORDERING INFORMATION

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

ACCESSORY DESCRIPTIONS



piCLASSIC Energy saving

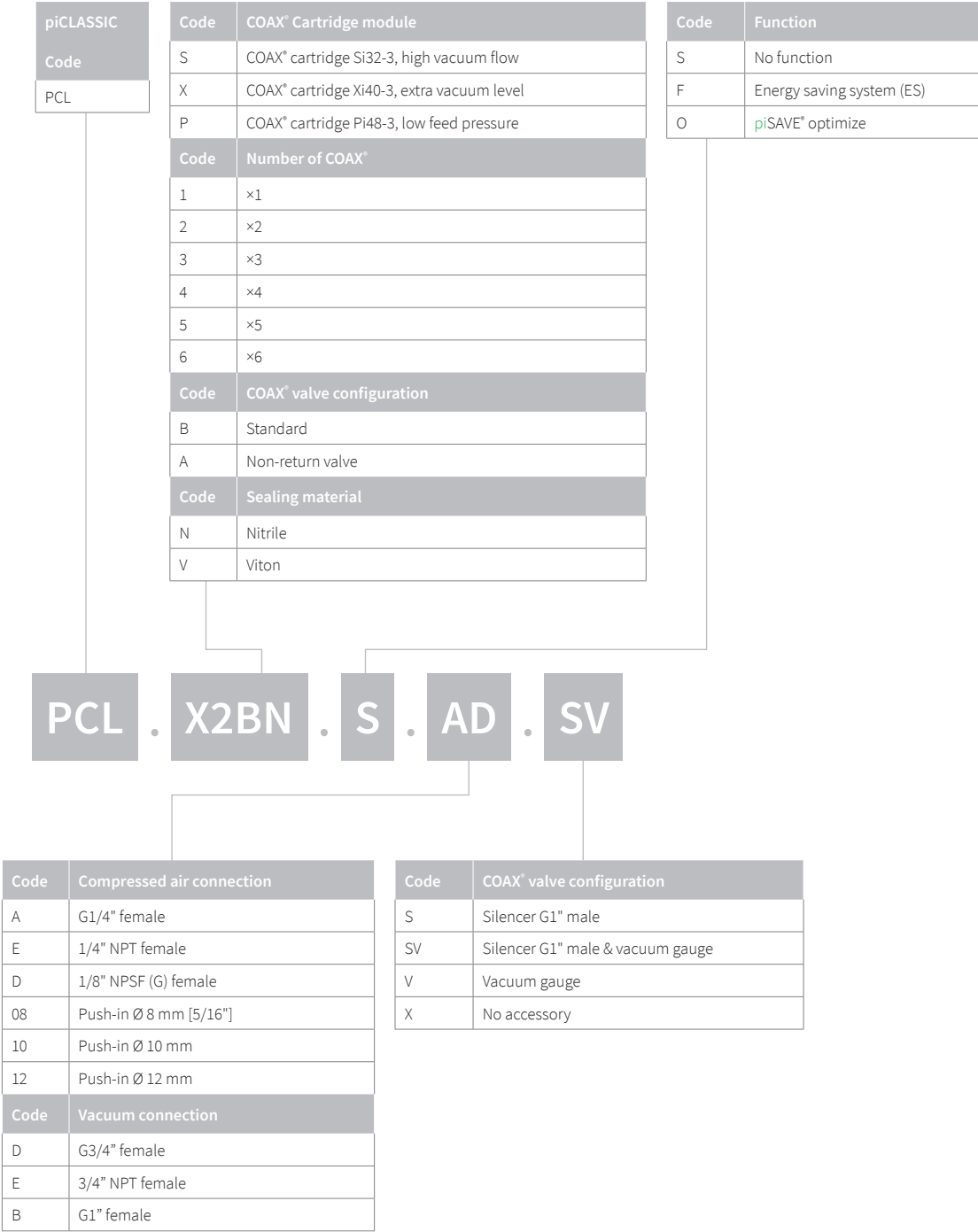
piCLASSIC has an integrated air-saving function (piSAVE® onoff) that minimises the air consumption by controlling the incoming air flow to the pump. Large hysteresis is recommended for sealed vacuum handling applications such as metal sheet, glass or plastic handling. And small hysteresis is recommended if a very accurate vacuum level has to be maintained in the process. It has an adjustable ES switch level and is a pneumatic function.



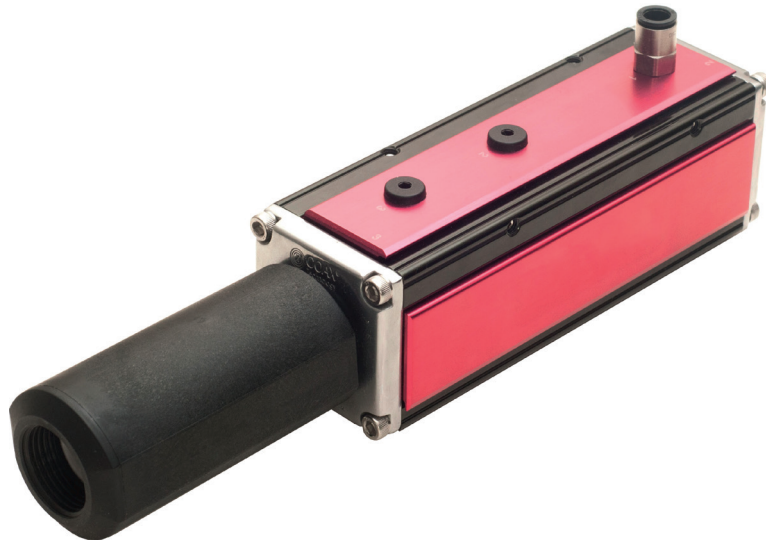
piCLASSIC piSAVE® optimize

The piSAVE® optimize is a vacuum controlled proportional pressure regulator, a fully pneumatic device suitable for air-driven ejectors/pumps. The feed pressure to the vacuum pump/ejector is automatically regulated and controlled to maintain the set vacuum level. Air/energy usage is kept to a minimum for the application (optimized). It is recommended for leaking and sealed applications to save energy and secure the right vacuum level.

piCLASSIC – CUSTOMER CODE



P6010



As with the majority of our pumps, it is available with the patented COAX® technology and 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. The P6010 consumes substantially less air compared to conventional ejectors. It also has quicker evacuation times and a low noise level. It is available with multiple connection alternatives. It can be configured with 1–4 cartridges.

VACUUM FLOW

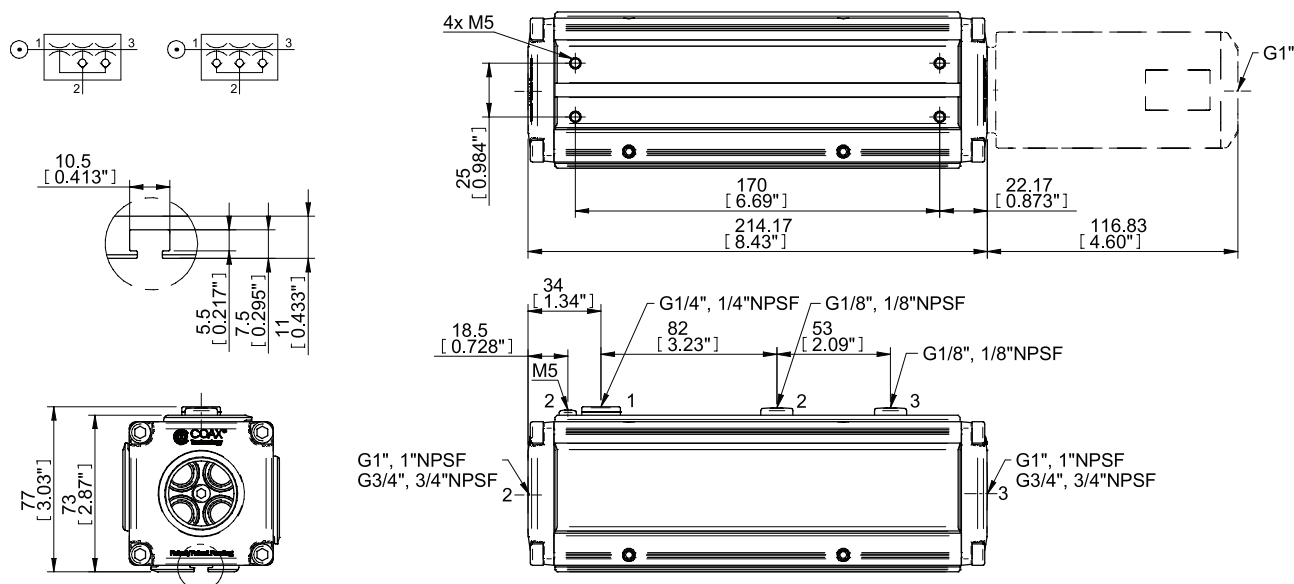
COAX® Cartridge	Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	90	
Pi48-3	0.31	2	5.6	2.5	1.8	1.1	0.65	0.5	0.35	0.25	0.1	—	90
Pi48-3 ×2	0.31	4	11.2	5	3.6	2.2	1.3	1	0.7	0.5	0.2	—	90
Pi48-3 ×3	0.31	6	16.8	7.5	5.4	3.3	1.95	1.5	1.05	0.75	0.3	—	90
Pi48-3 ×4	0.31	8	22.4	10	7.2	4.4	2.6	2	1.4	1	0.4	—	90
Si32-3	0.6	1.75	6	3.5	2.6	1.7	0.9	0.6	0.5	0.35	—	—	75/52*
Si32-3 ×2	0.6	3.5	12	7	5.2	3.4	1.8	1.2	1	0.7	—	—	75/52*
Si32-3 ×3	0.6	5.25	18	10.5	7.8	5.1	2.7	1.8	1.5	1.05	—	—	75/52*
Si32-3 ×4	0.6	7	24	14	10.4	6.8	3.6	2.4	2	1.4	—	—	75/52*
Xi40-3	0.45	1.83	5.9	3	2	1.3	0.73	0.58	0.43	0.32	0.18	0.03	95/51*
Xi40-3 ×2	0.45	3.66	11.8	6	4	2.6	1.46	1.16	0.86	0.64	0.36	0.06	95/51*
Xi40-3 ×3	0.45	5.49	17.7	9	6	3.9	2.19	1.74	1.29	0.96	0.54	0.09	95/51*
Xi40-3 ×4	0.45	7.32	23.6	12	8	5.2	2.92	2.32	1.72	1.28	0.72	0.12	95/51*

* With 1x flap valve.

EVACUATION TIMES

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	
Pi48-3	0.31	2	0.02	0.06	0.12	0.25	0.45	0.7	1	1.6	4	90
Pi48-3 × 2	0.31	4	0.01	0.03	0.06	0.125	0.23	0.35	0.5	0.8	2	90
Pi48-3 × 3	0.31	6	0.0067	0.02	0.04	0.083	0.15	0.23	0.33	0.53	1.33	90
Pi48-3 × 4	0.31	8	0.005	0.015	0.03	0.063	0.11	0.175	0.25	0.4	1	90
Si32-3	0.6	1.75	0.02	0.05	0.1	0.18	0.33	0.53	0.8	—	—	75/52*
Si32-3 × 2	0.6	3.5	0.01	0.025	0.05	0.09	0.17	0.27	0.4	—	—	75/52*
Si32-3 × 3	0.6	5.25	0.0067	0.017	0.033	0.06	0.11	0.17	0.27	—	—	75/52*
Si32-3 × 4	0.6	7	0.005	0.0125	0.025	0.045	0.083	0.13	0.2	—	—	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*
Xi40-3 × 2	0.45	3.66	0.011	0.031	0.06	0.11	0.19	0.29	0.42	0.6	1.1	95/51*
Xi40-3 × 3	0.45	5.49	0.0073	0.021	0.04	0.073	0.12	0.19	0.28	0.4	0.73	95/51*
Xi40-3 × 4 * With 1x flap valve.	0.45	7.32	0.0055	0.0155	0.03	0.055	0.093	0.14	0.21	0.3	0.55	95/51*

DIMENSIONAL DRAWING



ORDERING INFORMATION

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

ACCESSORY DESCRIPTIONS



P6010 Classic

Very similar to the P6010 with the patented COAX® technology. The connections can be made on the long side of the ejector and is retro-compatible with Piab's Classic model in regard to mounting.



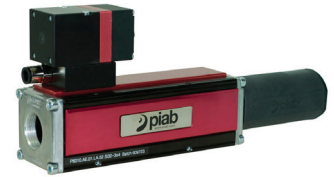
P6010 AVM™2

The AVM™2 unit has built-in control and monitoring functions. The integrated energy saving function (ES) minimises the air consumption in sealed systems. It has valves for vacuum on/off and blow-off with electrical power failsafe function. The AVM™ has digital outputs, 16 pre-set combinations of vacuum levels, digital vacuum level display and a mechanical valve for blow-off flow adjustment.



P6010 CU

The CU has electric valves for vacuum on/off and blow-off and a mechanical valve for blow-off flow adjustment. It also has a with special M12 4-pin cable assembly with LED for status of valve signal.



P6010 PCC

Different vacuum pumps need different feed pressure for optimum performance. The PCC is programmable for constant vacuum level, as the input signal regulates the feed pressure to maintain a constant vacuum level. It has an integrated analogue vacuum sensor.

P6010 – CUSTOMER CODE

P6010 Code	Code	COAX® Cartridge module	Code	Mounting
P6010	AA	COAX® Cartridge module Blind ×4	01	Mounting T-slot, Cover plate PIAB label
	AB	COAX® Cartridge module Si32-3×1		
	AC	COAX® Cartridge module Si32-3×2		
	AD	COAX® Cartridge module Si32-3×3		
	AE	COAX® Cartridge module Si32-3×4		
	AF	COAX® Cartridge module Si32-3×1, non-return valve		
	AG	COAX® Cartridge module Si32-3×2, non-return valve		
	AH	COAX® Cartridge module Si32-3×3, non-return valve		
	AI	COAX® Cartridge module Si32-3×4, non-return valve		
	BB	COAX® Cartridge module Si32-3×1, 1× flap valve		
	BC	COAX® Cartridge module Si32-3×2, 1× flap valve		
	BD	COAX® Cartridge module Si32-3×3, 1× flap valve		
	BE	COAX® Cartridge module Si32-3×4, 1× flap valve		
	AJ	COAX® Cartridge module Pi48-3×1		
	AK	COAX® Cartridge module Pi48-3×2		
	AL	COAX® Cartridge module Pi48-3×3		
	AM	COAX® Cartridge module Pi48-3×4		
	AN	COAX® Cartridge module Pi48-3×1, non-return valve		
	AO	COAX® Cartridge module Pi48-3×2, non-return valve		
	AP	COAX® Cartridge module Pi48-3×3, non-return valve		
	AQ	COAX® Cartridge module Pi48-3×4, non-return valve		
	AR	COAX® Cartridge module Xi40-3×1		
	AS	COAX® Cartridge module Xi40-3×2		
	AT	COAX® Cartridge module Xi40-3×3		
	AU	COAX® Cartridge module Xi40-3×4		
	AV	COAX® Cartridge module Xi40-3×1, non-return valve		
	AW	COAX® Cartridge module Xi40-3×2, non-return valve		
	AX	COAX® Cartridge module Xi40-3×3, non-return valve		
	AY	COAX® Cartridge module Xi40-3×4, non-return valve		
	BJ	COAX® Cartridge module Xi40-3×1, 1× flap valve		
	BK	COAX® Cartridge module Xi40-3×2, 1× flap valve		
	BL	COAX® Cartridge module Xi40-3×3, 1× flap valve		
	BM	COAX® Cartridge module Xi40-3×4, 1× flap valve		

P6010

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AA

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LA

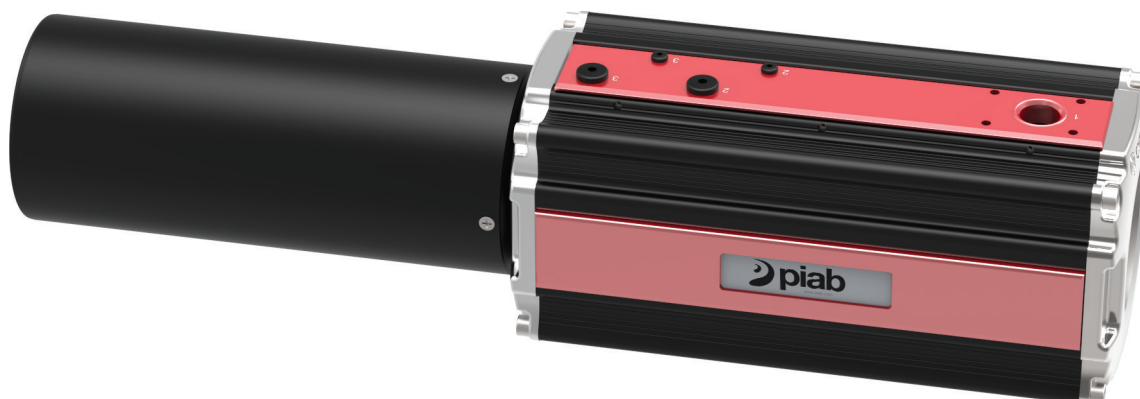
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51

Code	Cover/Function plates
LA	Cover plate G thread connections, Cover plate plain
LB	Function PCC Vacuum, Cover plate G thread connections
LI	Cover plate Classic G thread connections, Cover plate plain
LJ	Cover plate NPSF thread connections, Cover plate plain
LK	Cover plate Classic NPSF thread connections, Cover plate plain
LT	Function PCC Vacuum, Cover plate NPSF thread connections
LU	Function AVM™2 NO, Cover plate G thread connections
LV	Function AVM™2 NC, Cover plate G thread connections
LW	Function AVM™2 NO, Cover plate NPSF thread connections
LX	Function AVM™2 NC, Cover plate NPSF thread connections
LY	Function CU NC, Cover plate G thread connections
LZ	Function CU NC, Cover plate NPSF thread connections
MA	Function AVM™2 NO, Cover plate G thread connections SB
MB	Function AVM™2 NC, Cover plate G thread connections SB
MC	Function AVM™2 NO, Cover plate NPSF thread connections SB
MD	Function AVM™2 NC, Cover plate NPSF thread connections SB
ME	Function CU NC, Cover plate G thread connections SB
MF	Function CU NC, Cover plate NPSF thread connections SB

Code	Cover/Function plates
51	Connections 2x G1"
52	Connections 2x G1", silencer 1"
53	Connections 2x G3/4"
54	Connections 2x G3/4", silencer 3/4"
55	Connections 2x 1" NPSF
56	Connections 2x 1" NPSF, silencer 1"
57	Connections 2x 3/4" NPSF
58	Connections 2x 3/4" NPSF, silencer 3/4"

P6040



The P6040 comes with the patented COAX® technology. It is 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. This pump has a substantially lower air consumption compare to competition, it is compact with no moving parts. It can be configured with 5–16 cartridges.

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	
MIDI Pi48-3 ×5	0.3	10	28	12.5	9	5.5	3.25	2.5	1.75	1.25	0.5	—	90
MIDI Pi48-3 ×6	0.3	12	33.6	15	10.8	6.6	3.9	3	2.1	1.5	0.6	—	90
MIDI Pi48-3 ×7	0.3	14	39.2	17.5	12.6	7.7	4.55	3.5	2.45	1.75	0.7	—	90
MIDI Pi48-3 ×8	0.3	16	44.8	20	14.4	8.8	5.2	4	2.8	2	0.8	—	90
MIDI Pi48-3 ×9	0.3	18	50.4	22.5	16.2	9.9	5.85	4.5	3.15	2.25	0.9	—	90
MIDI Pi48-3 ×10	0.3	20	56	25	18	11	6.5	5	3.5	2.5	1	—	90
MIDI Pi48-3 ×11	0.3	22	61.6	27.5	19.8	12.1	7.15	5.5	3.85	2.75	1.1	—	90
MIDI Pi48-3 ×12	0.3	24	67.2	30	21.6	13.2	7.8	6	4.2	3	1.2	—	90
MIDI Pi48-3 ×13	0.3	26	72.8	32.5	23.4	14.3	8.45	6.5	4.55	3.25	1.3	—	90
MIDI Pi48-3 ×14	0.3	28	78.4	35	25.2	15.4	9.1	7	4.9	3.5	1.4	—	90
MIDI Pi48-3 ×15	0.3	30	84	37.5	27	16.5	9.75	7.5	5.25	3.75	1.5	—	90
MIDI Pi48-3 ×16	0.3	32	89.6	40	28.8	17.6	10.4	8	5.6	4	1.6	—	90
MIDI Si32-3 ×5	0.6	8.75	30	17.5	13	8.5	4.5	3	2.5	1.75	—	—	75/52*
MIDI Si32-3 ×6	0.6	10.5	36	21	15.6	10.2	5.4	3.6	3	2.1	—	—	75/52*

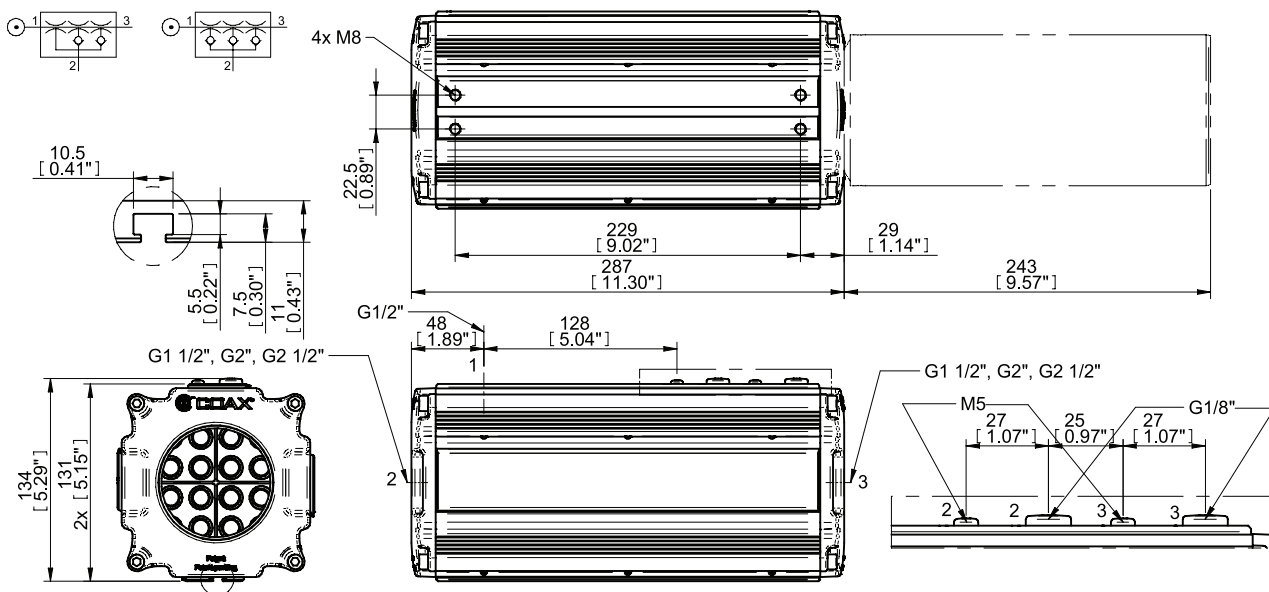
COAX® Cartridge	Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum -kPa
			0	10	20	30	40	50	60	70	80	90	
MIDI Si32-3 ×7	0.6	12.25	42	24.5	18.2	11.9	6.3	4.2	3.5	2.45	—	—	75/52*
MIDI Si32-3 ×8	0.6	14	48	28	20.8	13.6	7.2	4.8	4	2.8	—	—	75/52*
MIDI Si32-3 ×9	0.6	15.75	54	31.5	23.4	15.3	8.1	5.4	4.5	3.15	—	—	75/52*
MIDI Si32-3 ×10	0.6	17.5	60	35	26	17	9	6	5	3.5	—	—	75/52*
MIDI Si32-3 ×11	0.6	19.25	66	38.5	28.6	18.7	9.9	6.6	5.5	3.85	—	—	75/52*
MIDI Si32-3 ×12	0.6	21	72	42	31.2	20.4	10.8	7.2	6	4.2	—	—	75/52*
MIDI Si32-3 ×13	0.6	22.75	78	45.5	33.8	22.1	11.7	7.8	6.5	4.55	—	—	75/52*
MIDI Si32-3 ×14	0.6	24.5	84	49	36.4	23.8	12.6	8.4	7	4.9	—	—	75/52*
MIDI Si32-3 ×15	0.6	26.25	90	52.5	39	25.5	13.5	9	7.5	5.25	—	—	75/52*
MIDI Si32-3 ×16	0.6	28	96	56	41.6	27.2	14.4	9.6	8	5.6	—	—	75/52*
MIDI Xi40-3 ×5	0.45	9.15	29.5	15	10	6.5	3.65	2.9	2.15	1.6	0.9	0.15	95/51*
MIDI Xi40-3 ×6	0.45	10.98	35.4	18	12	7.8	4.38	3.48	2.58	1.92	1.08	0.18	95/51*
MIDI Xi40-3 ×7	0.45	12.81	41.3	21	14	9.1	5.11	4.06	3.01	2.24	1.26	0.21	95/51*
MIDI Xi40-3 ×8	0.45	14.64	47.2	24	16	10.4	5.84	4.64	3.44	2.56	1.44	0.24	95/51*
MIDI Xi40-3 ×9	0.45	16.47	53.1	27	18	11.7	6.57	5.22	3.87	2.88	1.62	0.27	95/51*
MIDI Xi40-3 ×10	0.45	18.3	59	30	20	13	7.3	5.8	4.3	3.2	1.8	0.3	95/51*
MIDI Xi40-3 ×11	0.45	20.13	64.9	33	22	14.3	8.03	6.38	4.73	3.52	1.98	0.33	95/51*
MIDI Xi40-3 ×12	0.45	21.96	70.8	36	24	15.6	8.76	6.96	5.16	3.84	2.16	0.36	95/51*
MIDI Xi40-3 ×13	0.45	23.79	76.7	39	26	16.9	9.49	7.54	5.59	4.16	2.34	0.39	95/51*
MIDI Xi40-3 ×14	0.45	25.62	82.6	42	28	18.2	10.22	8.12	6.02	4.48	2.52	0.42	95/51*
MIDI Xi40-3 ×15	0.45	27.45	88.5	45	30	19.5	10.95	8.7	6.45	4.8	2.7	0.45	95/51*
MIDI Xi40-3 ×16 * With 1x flap valve.	0.45	29.28	94.4	48	32	20.8	11.68	9.28	6.88	5.12	2.88	0.48	95/51*

EVACUATION TIMES

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	
MIDI Pi48-3 ×5	0.3	10	0.004	0.012	0.024	0.05	0.09	0.14	0.2	0.32	0.8	90
MIDI Pi48-3 ×6	0.3	12	0.0033	0.01	0.02	0.042	0.075	0.12	0.17	0.27	0.67	90
MIDI Pi48-3 ×7	0.3	14	0.0029	0.0086	0.017	0.036	0.064	0.1	0.14	0.23	0.57	90
MIDI Pi48-3 ×8	0.3	16	0.0025	0.0075	0.015	0.031	0.056	0.088	0.13	0.2	0.5	90
MIDI Pi48-3 ×9	0.3	18	0.0022	0.0067	0.013	0.028	0.05	0.078	0.11	0.18	0.44	90
MIDI Pi48-3 ×10	0.3	20	0.002	0.006	0.012	0.025	0.045	0.07	0.1	0.16	0.4	90
MIDI Pi48-3 ×11	0.3	22	0.0018	0.0055	0.011	0.023	0.041	0.064	0.091	0.15	0.36	90
MIDI Pi48-3 ×12	0.3	24	0.0017	0.005	0.01	0.021	0.038	0.058	0.083	0.13	0.33	90
MIDI Pi48-3 ×13	0.3	26	0.0015	0.0046	0.0092	0.019	0.035	0.054	0.077	0.12	0.31	90
MIDI Pi48-3 ×14	0.3	28	0.0014	0.0043	0.0086	0.018	0.032	0.05	0.071	0.11	0.29	90
MIDI Pi48-3 ×15	0.3	30	0.0013	0.004	0.008	0.017	0.03	0.047	0.067	0.11	0.27	90
MIDI Pi48-3 ×16	0.3	32	0.0013	0.0038	0.0075	0.016	0.029	0.044	0.063	0.1	0.25	90
MIDI Si32-3 ×5	0.6	8.75	0.004	0.01	0.02	0.036	0.066	0.11	0.16	—	—	75/52*
MIDI Si32-3 ×6	0.6	10.5	0.0033	0.0083	0.017	0.03	0.055	0.088	0.13	—	—	75/52*
MIDI Si32-3 ×7	0.6	12.25	0.0029	0.0071	0.014	0.026	0.047	0.076	0.11	—	—	75/52*
MIDI Si32-3 ×8	0.6	14	0.0025	0.0063	0.013	0.023	0.041	0.066	0.1	—	—	75/52*
MIDI Si32-3 ×9	0.6	15.75	0.0022	0.0056	0.011	0.02	0.037	0.059	0.089	—	—	75/52*
MIDI Si32-3 ×10	0.6	17.5	0.002	0.005	0.01	0.018	0.033	0.053	0.08	—	—	75/52*
MIDI Si32-3 ×11	0.6	19.25	0.0018	0.0045	0.0091	0.016	0.03	0.048	0.073	—	—	75/52*
MIDI Si32-3 ×12	0.6	21	0.0017	0.0042	0.0083	0.015	0.028	0.044	0.067	—	—	75/52*
MIDI Si32-3 ×13	0.6	22.75	0.0015	0.0038	0.0077	0.014	0.025	0.041	0.062	—	—	75/52*
MIDI Si32-3 ×14	0.6	24.5	0.0014	0.0036	0.0071	0.013	0.024	0.038	0.057	—	—	75/52*
MIDI Si32-3 ×15	0.6	26.25	0.0013	0.0033	0.0067	0.012	0.022	0.035	0.053	—	—	75/52*
MIDI Si32-3 ×16	0.6	28	0.0013	0.0031	0.0063	0.011	0.021	0.033	0.05	—	—	75/52*
MIDI Xi40-3 ×5	0.45	9.15	0.0044	0.012	0.024	0.044	0.074	0.11	0.17	0.24	0.44	95/51*
MIDI Xi40-3 ×6	0.45	10.98	0.0037	0.01	0.02	0.037	0.062	0.095	0.14	0.2	0.37	95/51*

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	
MIDI Xi40-3 ×7	0.45	12.81	0.0031	0.0089	0.017	0.031	0.053	0.081	0.12	0.17	0.31	95/51*
MIDI Xi40-3 ×8	0.45	14.64	0.0028	0.0078	0.015	0.028	0.046	0.071	0.11	0.15	0.28	95/51*
MIDI Xi40-3 ×9	0.45	16.47	0.0024	0.0069	0.013	0.024	0.041	0.063	0.093	0.13	0.24	95/51*
MIDI Xi40-3 ×10	0.45	18.3	0.0022	0.0062	0.012	0.022	0.037	0.057	0.084	0.12	0.22	95/51*
MIDI Xi40-3 ×11	0.45	20.13	0.002	0.0056	0.011	0.02	0.034	0.052	0.076	0.11	0.2	95/51*
MIDI Xi40-3 ×12	0.45	21.96	0.0018	0.0052	0.01	0.018	0.031	0.048	0.07	0.1	0.18	95/51*
MIDI Xi40-3 ×13	0.45	23.79	0.0017	0.0048	0.0092	0.017	0.029	0.044	0.065	0.092	0.17	95/51*
MIDI Xi40-3 ×14	0.45	25.62	0.0016	0.0044	0.0086	0.016	0.027	0.041	0.06	0.086	0.16	95/51*
MIDI Xi40-3 ×15	0.45	27.45	0.0015	0.0041	0.008	0.015	0.025	0.038	0.056	0.08	0.15	95/51*
MIDI Xi40-3 ×16 * With 1x flap valve.	0.45	29.28	0.0014	0.0039	0.0075	0.014	0.023	0.036	0.053	0.075	0.14	95/51*

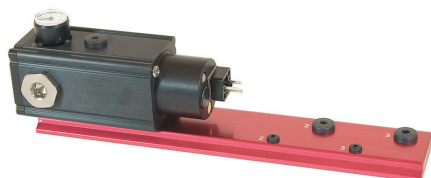
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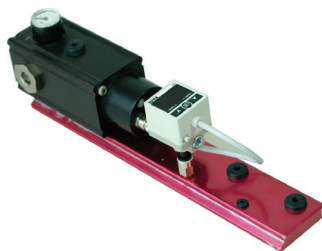
For a complete list of available pumps and combinations with further information visit piab.com. On our webpage you will also be able to find dimensional drawings, CAD-drawings and much more. Register and get full access to all resources available.

ACCESSORY DESCRIPTIONS



P6040 V30

Piab P6040 multi stage ejector with Si, Pi or Xi COAX® technology. Modular design for flexible performance. Compact and durable with no moving parts. Electric 3/2 valve for on/off. Manometer for feed pressure control



P6040 ES Vacuum

Piab P6040 multi stage ejector with Si, Pi or Xi COAX® technology. Modular design for flexible performance. Compact and durable with no moving parts. Electrically operated air-saving device. Adjustable vacuum controlled 2/2 NO valve. Manometer for feed pressure control. Recommended for non-leaking system.

P6040 – CUSTOMER CODE

P6040 Code	Code	Application type	Code	Mounting	Code	Cover/Function plates
P6040	V	Vacuum	00	Mounting T-slot	AA	Connection G1/2"
	B	Blow			AB	Connection 4x G1/2"
					AC	Function Valve v30
					AD	Function ES-Vacuum

P6040 . V . AA . 00 . AA . 00

Code	Connections for vacuum and exhaust
00	Connections G 1 1/2"
01	Connections G 2"
02	Connections G 2 1/2"
03	Connection G 1 1/2", silencer
04	Connection G 2", silencer
05	Connection G 2 1/2", silencer
06	Connection G 1 1/2", inlet silencer
07	Connection G 2", inlet silencer
08	Connection G 2 1/2", inlet silencer

Code												COAX [®] Cartridge module
×5	×6	×7	×8	×9	×10	×11	×12	×13	×14	×15	×16	
AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	COAX [®] Cartridge module Pi48-3
AY	AZ	BA	BB	BC	BD	BE	BF	BG	BH	BI	BJ	COAX [®] Cartridge module Pi48-3, 1x flap valve
AM	AN	AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	COAX [®] Cartridge module Pi48-3, non-return valve
BK	BL	BM	BN	BO	BP	BQ	BR	BS	BT	BU	BV	COAX [®] Cartridge module Si32-3
CI	CJ	CK	CL	CM	CN	CO	CP	CQ	CR	CS	CT	COAX [®] Cartridge module Si32-3, 1x flap valve
BW	BX	BY	BZ	CA	CB	CC	CD	CE	CF	CG	CH	COAX [®] Cartridge module Si32-3, non-return valve
CU	CV	CW	CX	CY	CZ	DA	DB	DC	DD	DE	DF	COAX [®] Cartridge module Xi40-3
DS	DT	DU	DV	DW	DX	DY	DZ	EA	EB	EC	ED	COAX [®] Cartridge module Xi40-3, 1x flap valve
DG	DH	DI	DJ	DK	DL	DM	DN	DO	DP	DQ	DR	COAX [®] Cartridge module Xi40-3, non-return valve

Round pump



This round pump is available with the energy efficient COAX® cartridges. It is designed for high vacuum flow with 6x COAX® Si MIDI cartridges. Still it is small, compact and lightweight (1.6 kg). Easy to mount and install with integrated hose connectors.

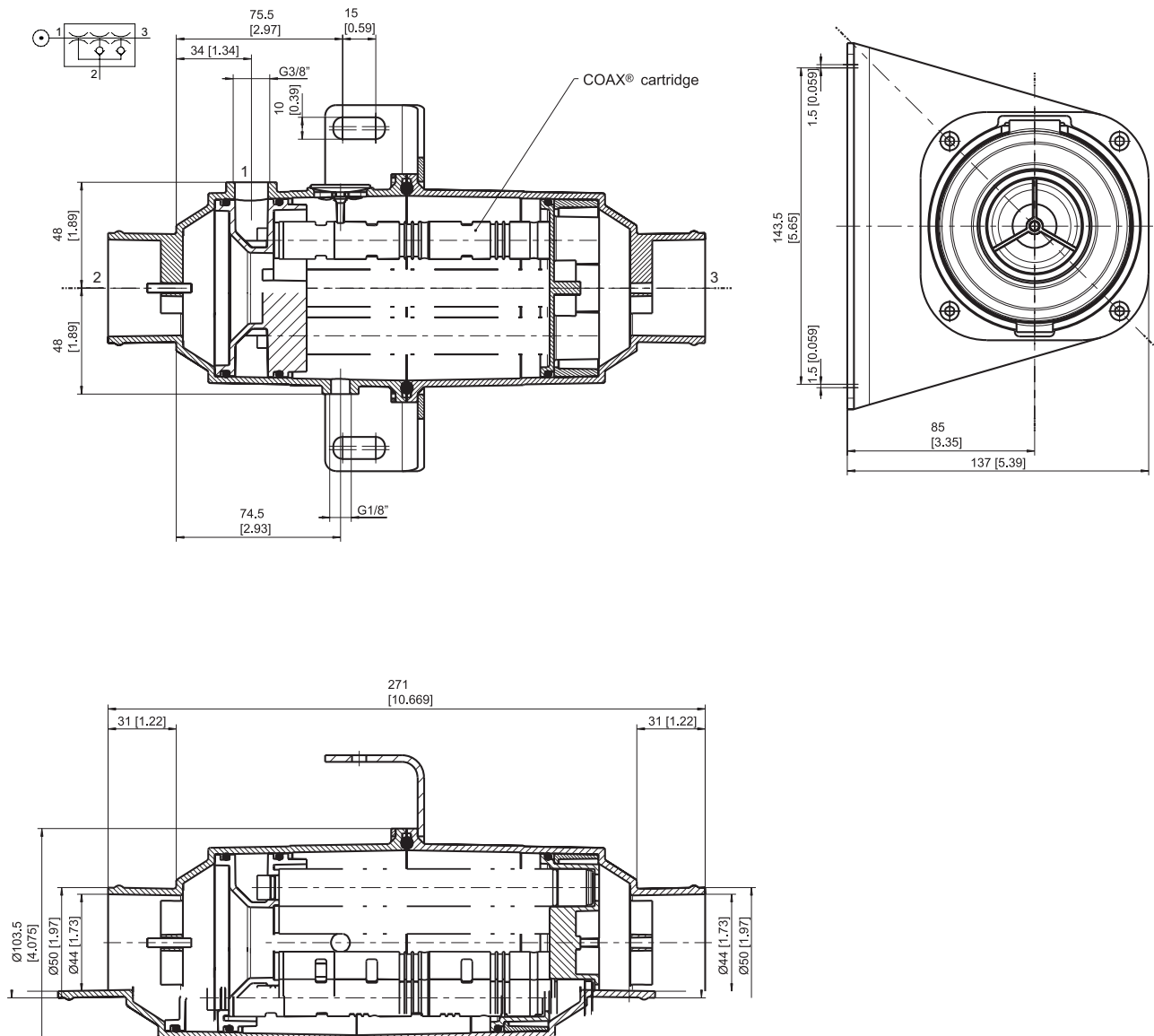
VACUUM FLOW

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	
MIDI Si32-3 ×6	0.4	7.5	30	17.4	11.4	7.2	4.8	2.4	0.6	—	60
MIDI Si32-3 ×6	0.5	9	34.2	19.8	13.2	8.4	5.1	3.72	2.1	1.08	70
MIDI Si32-3 ×6	0.6	10.5	36	21	15.6	10.2	5.4	3.6	3	2.1	75

EVACUATION TIMES

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	
MIDI Si32-3 ×6	0.4	7.5	0.005	0.012	0.023	0.04	0.07	0.167	—	60
MIDI Si32-3 ×6	0.5	9	0.003	0.01	0.018	0.035	0.058	0.1	0.167	70
MIDI Si32-3 ×6	0.6	10.5	0.003	0.008	0.017	0.03	0.055	0.088	0.133	75

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
Round pump COAX® 6×Si32-3	0121632

MINI L pumps family



This family of pumps provides a large vacuum flow even though they are very small in size and lightweight. Vacuum level to 75 -kPa. Some pumps in this family are available with connection plate in aluminium or composite PA. These are recommended to use when the handled product is made of porous material such as cardboard, wood or paper.

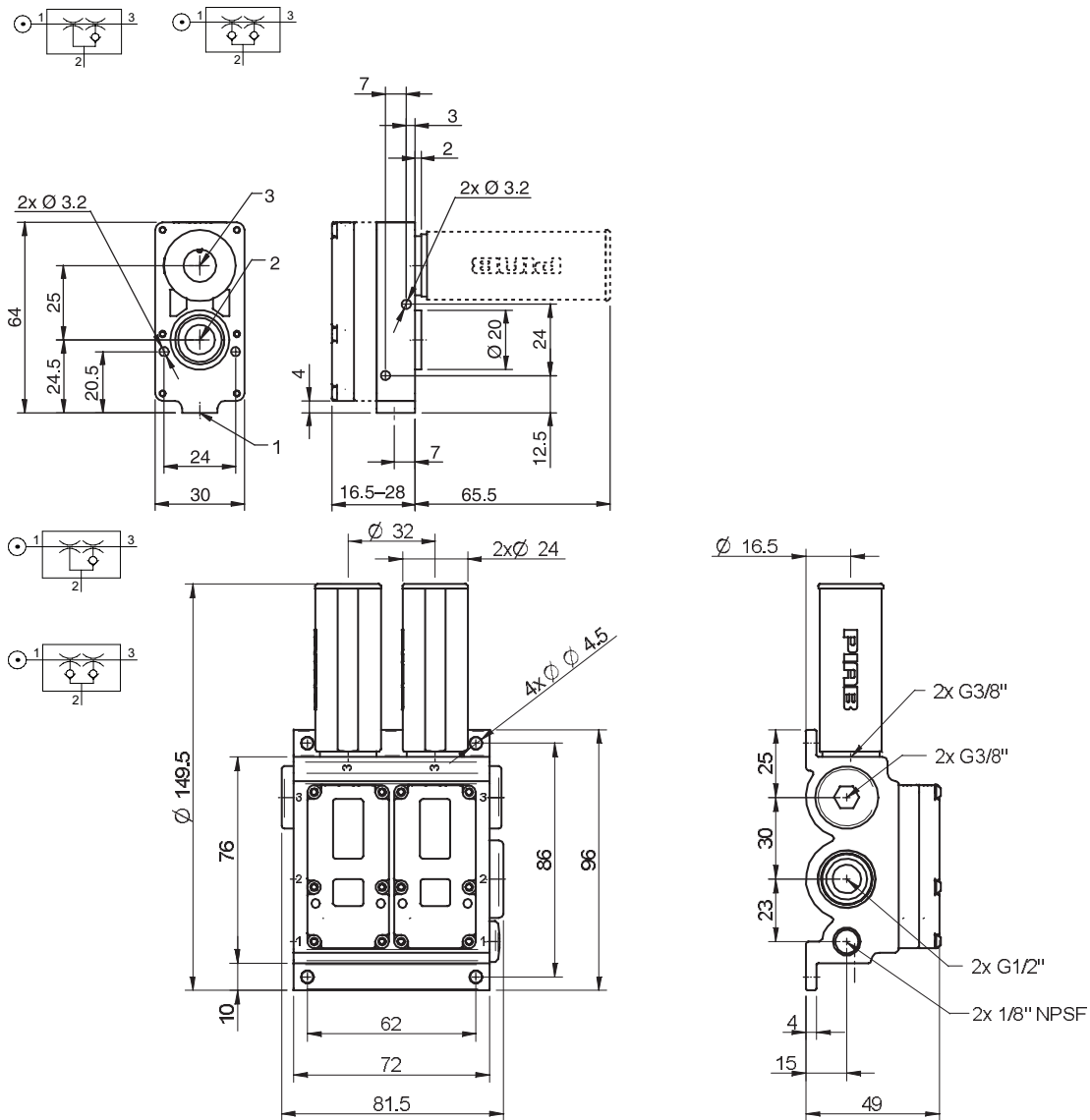
VACUUM FLOW

Pump name	Feed pressure	Air consumption	Vacuum flow (l/s) at different vacuum levels (-kPa)								Max vacuum
	MPa		0	10	20	30	40	50	60	70	-kPa
L7	0.6	0.49	0.72	0.49	0.29	0.25	0.2	0.16	0.1	0.067	75
L14	0.6	0.98	1.5	1	0.57	0.45	0.39	0.32	0.24	0.13	75
L28	0.6	2	2.6	1.7	1.1	0.89	0.74	0.55	0.36	0.17	75
L56	0.6	4	5.1	3.5	2	1.7	1.4	1.1	0.81	0.43	75

EVACUATION TIMES

Pump name	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)							Max vacuum
	MPa		10	20	30	40	50	60	70	-kPa
L7	0.6	0.49	0.093	0.31	0.72	1.2	1.8	2.6	3.8	75
L14	0.6	0.98	0.064	0.17	0.36	0.59	0.88	1.3	1.8	75
L28	0.6	2	0.047	0.11	0.2	0.32	0.46	0.69	1.1	75
L56	0.6	4	0.023	0.053	0.1	0.16	0.23	0.33	0.5	75

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
Vacuum pump MINI L7, conn. A, NBR sealings	0102853
Vacuum pump MINI L14, conn. C, NBR sealings	0102743
Vacuum pump MINI L14, conn. B1, NBR sealings	0102831
Vacuum pump MINI L14, conn. B1, NBR sealings, non-return valve	0102832
Vacuum pump MINI L14, conn. B, NBR sealings	0103055
Vacuum pump MINI L28, conn. C, NBR sealings	0102749
Vacuum pump MINI L28, conn. C, NBR sealings, non-return valve	0102750
Vacuum pump MINI L28, conn. B1, NBR sealings	0102833
Vacuum pump MINI L28, conn. B1, NBR sealings, non-return valve	0102834
Vacuum pump MINI L28, conn. B, NBR sealings	0103061
Vacuum pump MINI L28, conn. B, NBR sealings, non-return valve	0103062
Vacuum pump MINI L56, conn. K, NBR sealings	0102797
Vacuum pump MINI L56, conn. K, NBR sealings, non-return valve	0102798

MINI M-L pumps family



This pump family with its very small size and low weight provide extra vacuum level to 84 -kPa. Some models are available with the connection plate in aluminium or composite PA. These are recommended to use when the handled product is made of a sealed material or a non-porous material such as plastic, metal or glass.

VACUUM FLOW

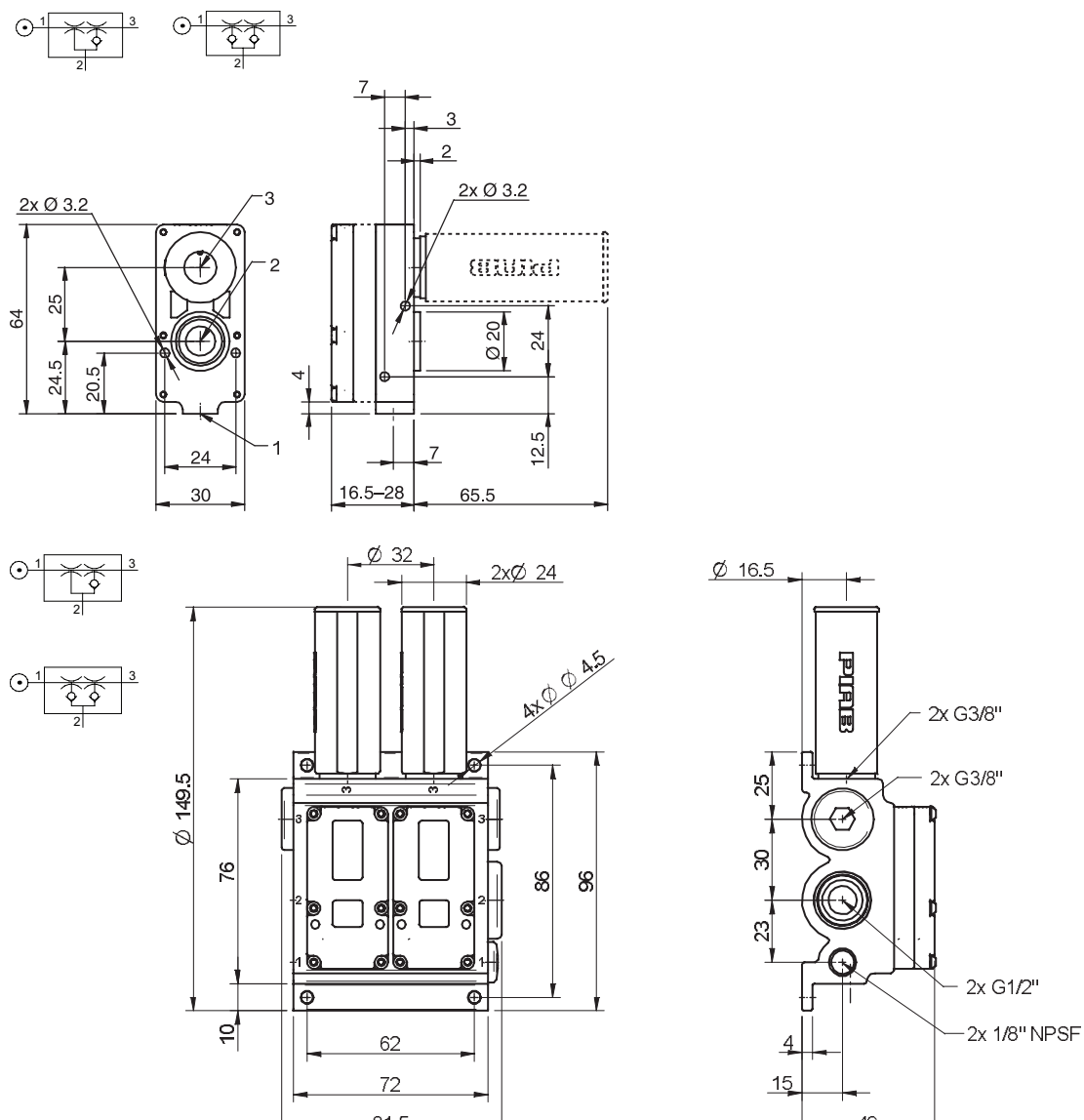
Pump name	Feed pressure	Air consumption	Vacuum flow (l/s) at different vacuum levels (-kPa)										Max vacuum
	MPa	l/s	0	10	20	30	40	50	60	70	80	-kPa	
M5L	0.38	0.38	0.58	0.3	0.22	0.18	0.14	0.1	0.08	0.04	0.01	81	
M5L	0.6	0.55	0.73	0.5	0.26	0.14	0.12	0.1	0.08	0.05	0.02	84	
M10L	0.38	0.76	1.1	0.57	0.39	0.35	0.3	0.21	0.12	0.06	0.02	81	
M10L	0.6	1.1	1.3	0.91	0.48	0.29	0.26	0.21	0.13	0.09	0.03	84	
M20L	0.38	1.5	2	1.2	0.76	0.67	0.53	0.41	0.33	0.19	0.02	81	
M20L	0.6	2.2	2.4	1.7	0.95	0.57	0.48	0.38	0.29	0.19	0.06	84	
M40L	0.38	3	4	2.2	1.4	1.2	1	0.71	0.43	0.19	0.05	81	
M40L	0.6	4.4	4.8	3.1	1.7	1.1	0.93	0.74	0.57	0.36	0.11	84	

EVACUATION TIMES

Pump name	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	-kPa
M5L	0.38	0.38	0.2	0.61	1.2	1.8	2.6	3.8	5.9	11.1	81
M5L	0.6	0.55	0.13	0.36	1	1.8	2.8	4	5.7	9.4	84
M10L	0.38	0.76	0.13	0.31	0.57	0.9	1.3	2	3.2	7.1	81
M10L	0.6	1.1	0.079	0.2	0.5	0.92	1.4	2.1	3	5	84

Pump name	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	
M20L	0.38	1.5	0.052	0.14	0.26	0.42	0.64	1	1.7	3.7	81
M20L	0.6	2.2	0.038	0.1	0.24	0.43	0.68	1	1.5	2.5	84
M40L	0.38	3	0.03	0.074	0.13	0.21	0.32	0.5	0.95	1.6	81
M40L	0.6	4.4	0.031	0.064	0.13	0.22	0.34	0.5	0.7	1.3	84

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
Vacuum pump MINI M5L, conn. A, NBR sealings	0102865
Vacuum pump MINI M5L, conn. A, NBR sealings, non-return valve	0102866
Vacuum pump MINI M10L, conn. A, NBR sealings	0102871
Vacuum pump MINI M10L, conn. A, NBR sealings, non-return valve	0102872
Vacuum pump MINI M20L, conn. B, NBR sealings	0103079
Vacuum pump MINI M20L, conn. B, NBR sealings, non-return valve	0103080
Vacuum pump MINI M20L, conn. B1, NBR sealings	0102839
Vacuum pump MINI M20L, conn. B1, NBR sealings, non-return valve	0102840
Vacuum pump MINI M20L, conn. C, NBR sealings	0102767
Vacuum pump MINI M20L, conn. C, NBR sealings, non-return valve	0102768
Vacuum pump MINI M40L, conn. K, NBR sealings	0102805
Vacuum pump MINI M40L, conn. K, NBR sealings, non-return valve	0102806

MINI X-L pumps family



This pump family with its very small size and low weight provide extra vacuum level to 93 -kPa. Some models are available with the connection plate in aluminium or composite PA. These are recommended to use when the handled product is made of a sealed material or a non-porous material such as plastic, metal or glass.

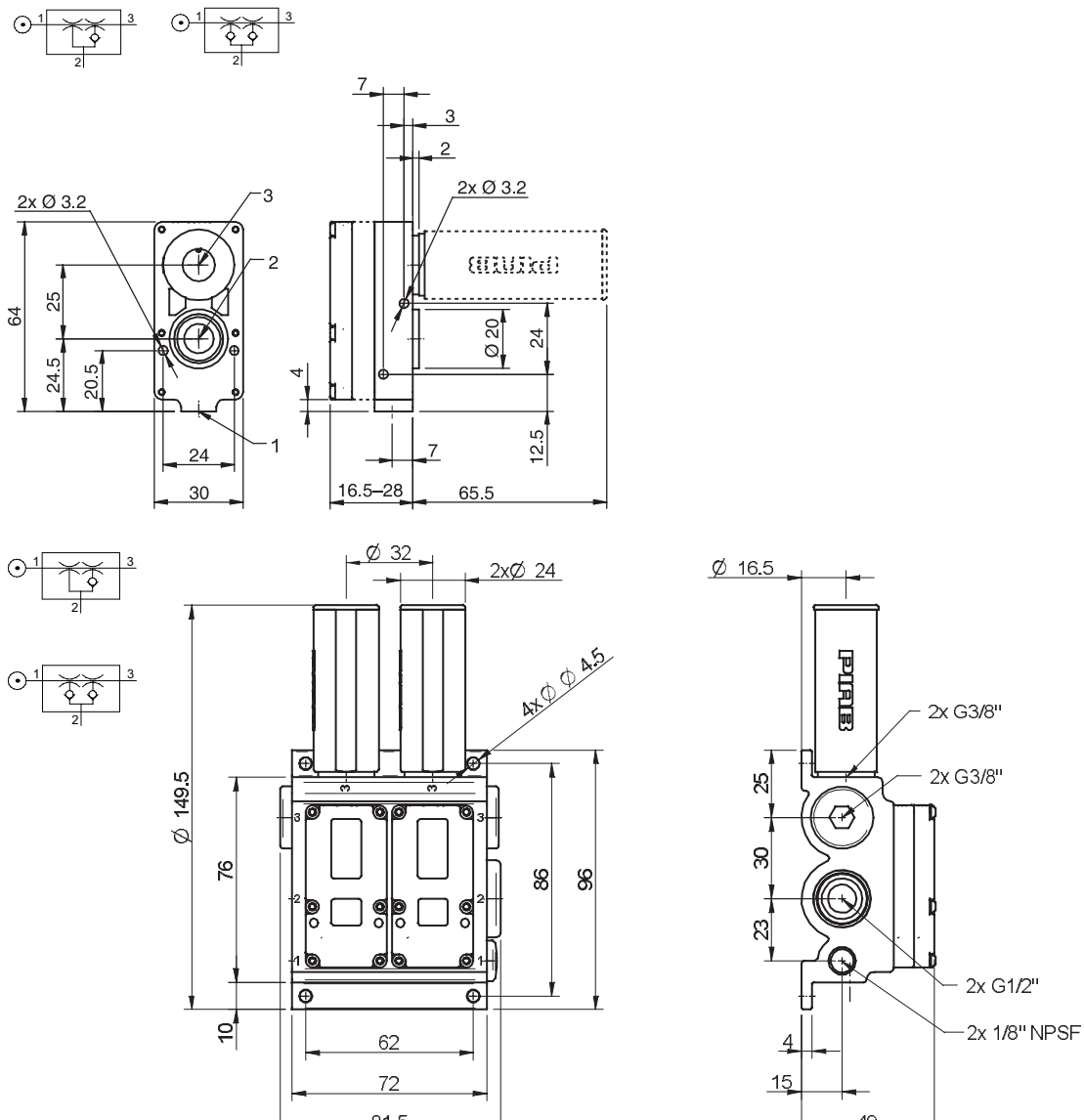
VACUUM FLOW

Pump name	Feed pressure	Air consumption	Vacuum flow (l/s) at different vacuum levels (-kPa)											Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	90	-kPa	
X5L	0.4	0.39	0.48	0.24	0.12	0.11	0.1	0.086	0.071	0.057	0.03	0.006	93	
X10L	0.4	0.79	0.76	0.35	0.24	0.21	0.16	0.13	0.1	0.07	0.04	0.01	93	
X20L	0.4	1.6	1.9	1	0.5	0.44	0.38	0.3	0.25	0.17	0.1	0.02	93	
X40L	0.4	3.1	3.2	1.5	1	0.9	0.7	0.6	0.5	0.4	0.17	0.038	93	

EVACUATION TIMES

Pump name	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)										Max vacuum
	MPa		10	20	30	40	50	60	70	80	90	-kPa	
X5L	0.4	0.39	0.17	0.82	1.7	2.7	3.9	5.4	7.4	10.6	22.5	93	
X10L	0.4	0.79	0.11	0.47	0.94	1.5	2.2	3.1	4.3	6.6	14	93	
X20L	0.4	1.6	0.055	0.2	0.4	0.65	0.97	1.4	1.9	2.7	5.1	93	
X40L	0.4	3.1	0.038	0.12	0.22	0.33	0.48	0.68	1.2	2.2	3.2	93	

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
Vacuum pump MINI X5L, conn. A, NBR sealings	3222127
Vacuum pump MINI X5L, conn. A, NBR sealings, non-return valve	3222127A
Vacuum pump MINI X10L, conn. A, NBR sealings	3222157
Vacuum pump MINI X10L, conn. A, NBR sealings, non-return valve	3222157A
Vacuum pump MINI X20L, conn. B, NBR sealings	3222278
Vacuum pump MINI X20L, conn. B, NBR sealings, non-return valve	3222278A
Vacuum pump MINI X20L, conn. B1, NBR sealings	0103203
Vacuum pump MINI X20L, conn. B1, NBR sealings, non-return valve	0103204
Vacuum pump MINI X20L, conn. C, NBR sealings	3222279
Vacuum pump MINI X20L, conn. C, NBR sealings, non-return valve	3222279A
Vacuum pump MINI X40L, conn. K, NBR sealings	0100423
Vacuum pump MINI X40L, conn. K, NBR sealings, non-return valve	0100425

MAXI MLL pumps family



MLL 200/400



MLL800



MLL1200

This is probably the largest compressed-air driven pump in the market. Some of the models have an optional energy saving feature.

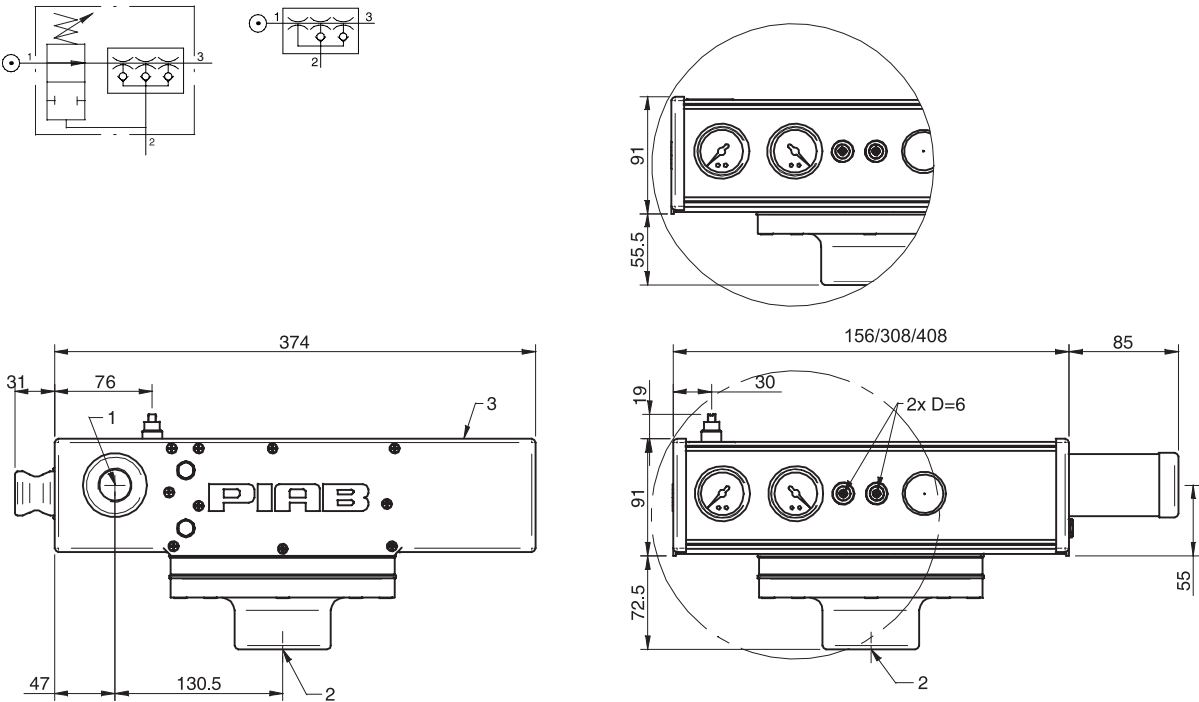
VACUUM FLOW

Pump name	Feed pressure	Air consumption	Vacuum flow (l/s) at different vacuum levels (-kPa)											Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	90	-kPa	
MLL200	0.6	14	48	27	18.1	9.5	4.8	3.3	2.4	1.1	0.48	0.01	91	
MLL400	0.6	28	92	52	35	18.4	9.2	6.4	4.6	2.2	0.92	0.02	91	
MLL800	0.6	56	176	99	67	35	17.6	12.3	8.8	4.2	1.8	0.04	91	
MLL1200	0.6	84	255	143	97	51	26	17.9	12.8	6.1	2.6	0.05	91	

EVACUATION TIMES

Pump name	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)										Max vacuum
	MPa		10	20	30	40	50	60	70	80	90	-kPa	
MLL200	0.6	14	0.003	0.008	0.014	0.03	0.06	0.1	0.16	0.29	0.82	91	
MLL400	0.6	28	0.0015	0.004	0.007	0.015	0.03	0.05	0.08	0.15	0.41	91	
MLL800	0.6	56	0.0008	0.0018	0.0035	0.008	0.014	0.024	0.04	0.072	0.2	91	
MLL1200	0.6	84	0.0005	0.0012	0.0023	0.0052	0.009	0.016	0.027	0.048	0.14	91	

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
Vacuum pump MAXI MLL200, NBR sealings, G 1 1/2"	3101056
Vacuum pump MAXI MLL400, NBR sealings	3101057
Vacuum pump MAXI MLL400, NBR sealings, ES	0100742
Vacuum pump MAXI MLL800, NBR sealings, ES	0100743
Vacuum pump MAXI MLL800, NBR sealings	3101058
Vacuum pump MAXI MLL1200, NBR sealings	3101059
Vacuum pump MAXI MLL1200, NBR sealings, ES	0100744

Ejector 300

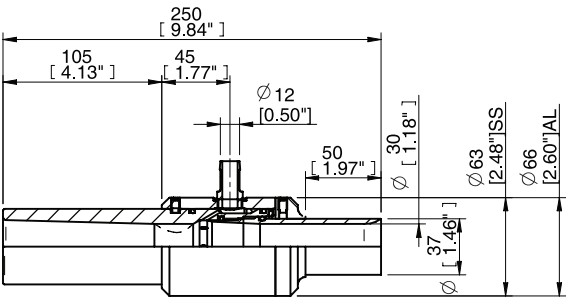


This is a compact ejector pump which is normally used when a large flow with low vacuum is desired. The air consumption and capacity can be adjusted. Small amounts of material and contaminants can be conveyed. This product is available in stainless steel or aluminium. When it is fitted with an insert, the ejector changes characteristics providing higher vacuum at lower flow. It is delivered with a 3/8" hose nipple for the compressed air connection.

VACUUM FLOW

Feed pressure MPa	Air consumption NI/s	Vacuum flow (NI/s) at 0 -kPa		Max vacuum (-kPa)	
		Ejector 300	With insert	Ejector 300	With insert
0.1	8.3	55	32	3.5	5
0.2	13.3	85	47	6	11
0.3	18.3	110	59	8	16
0.4	23.3	126	64	10.5	20
0.5	28.3	141	64	12	21.5
0.6	33.3	152	59	12.5	21.8

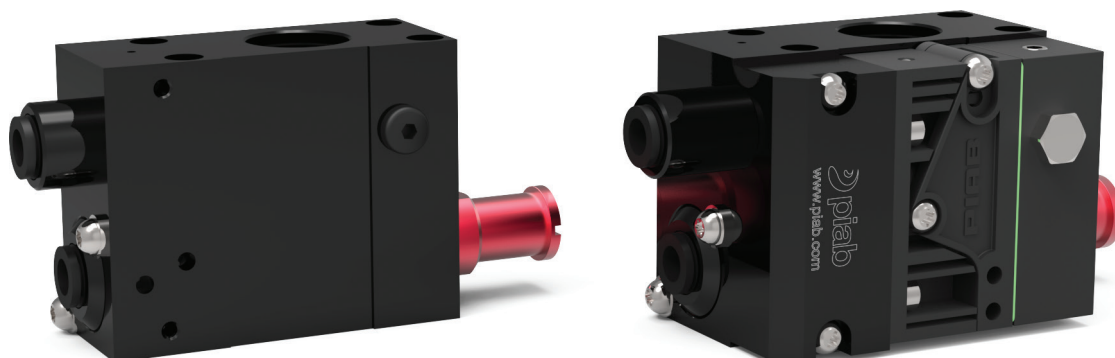
DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
Ejector 300 Aluminium	3108001
Ejector 300 Stainless steel	3108002
Insert 200 Aluminium cpl.	3108003
Insert 200 Stainless steel cpl.	3108004

piSECURE



This vacuum pump combines high security and the most energy-efficient solution for sealed material, COAX® technology with automatic air-saving function. It has a check valve that traps vacuum in sealed applications and an integrated energy saving device that results in virtually no energy consumption. It is an excellent product when working with vacuum handling devices that have to comply and fulfil legislated lifting norms for handling devices, for example (DIN/SS) – EN 13155, ASME Standard B30.20, etc.

As the piSECURE uses the two stage COAX® MINI Xi10-2 ejector it will provide a fast evacuation to 94 -kPa. It is suitable to use as decentralized (one per cup) for maximum safety. It also has an integrated blow-off release valve for fast and reliable release of object. The optional air saving function (piSECURE ES) can save up to 99% of consumption.

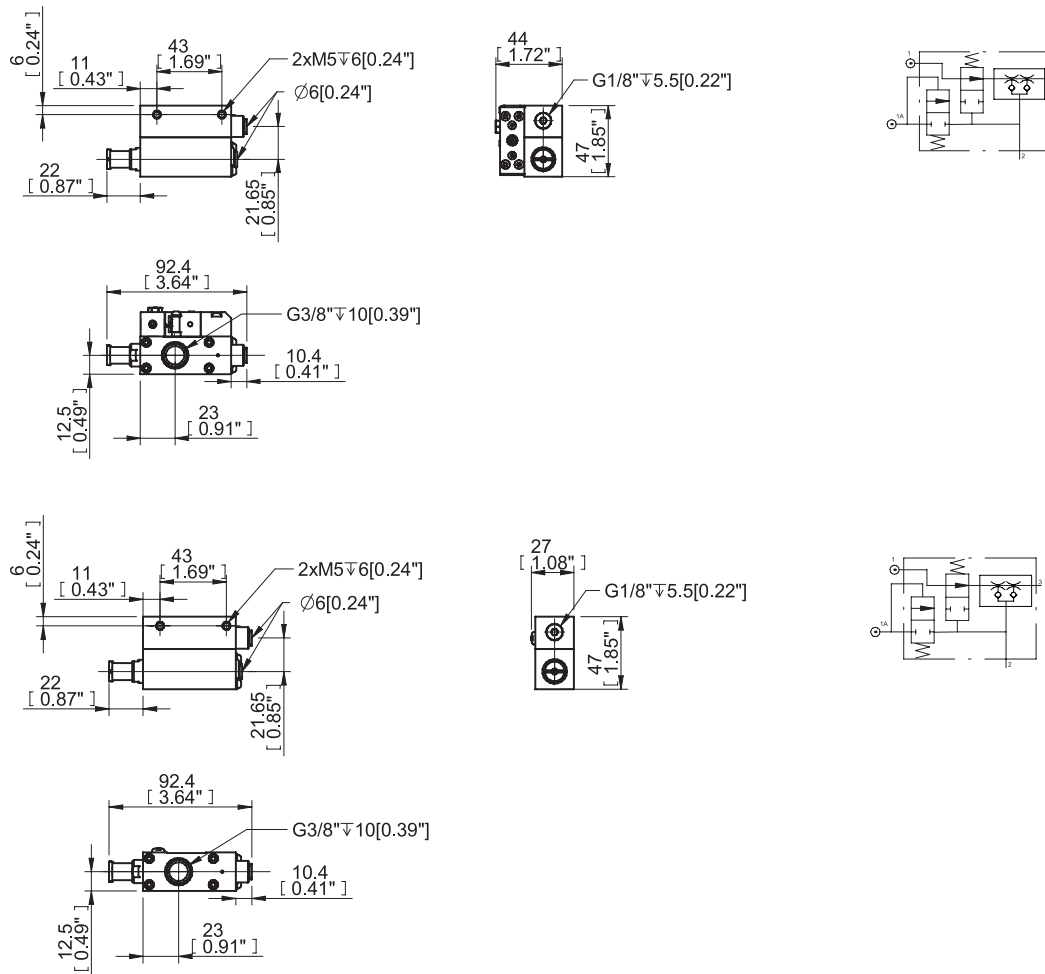
VACUUM FLOW

COAX® cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum
	MPa	NI/s	0	10	20	30	40	50	60	70	80	90	-kPa
MINI Xi10-2	0.45	0.42	0.75	0.61	0.45	0.28	0.19	0.15	0.11	0.07	0.043	0.003	92
MINI 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
MINI Xi10-2	0.6	0.54	0.74	0.63	0.53	0.42	0.3	0.16	0.11	0.08	0.041	0.01	93

EVACUATION TIMES

COAX® cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	90	-kPa
MINI Xi10-2	0.45	0.42	0.15	0.3	0.6	1.1	1.6	2.3	3.5	5.3	9.6	92
MINI Xi10-2	0.5	0.46	0.14	0.3	0.6	1	1.6	2.3	3.5	5.3	8.9	94
MINI Xi10-2	0.6	0.54	0.15	0.3	0.5	0.8	1.3	2	3.1	4.8	8.7	93

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
piSECURE COAX® X10-2 ES	0200984
piSECURE COAX® X10-2	0200986

Vacuum Check Valve VT-1H with COAX®



This vacuum pump combines high security and the most energy-efficient solution for sealed material, COAX® technology with automatic air-saving function. It has a check valve that traps vacuum in sealed applications and an integrated energy saving device that results in virtually no energy consumption. It is an excellent product when working with vacuum handling devices that have to comply and fulfil legislated lifting norms for handling devices, for example (DIN/SS) – EN 13155, ASME Standard B30.20, etc.

It has the two-stage COAX® cartridge MINI Pi12-2 integrated and is available in lock pin 16, 19 or ball joint mountings, industry standard. It is also available with level compensator to compensate for differences in level of object.

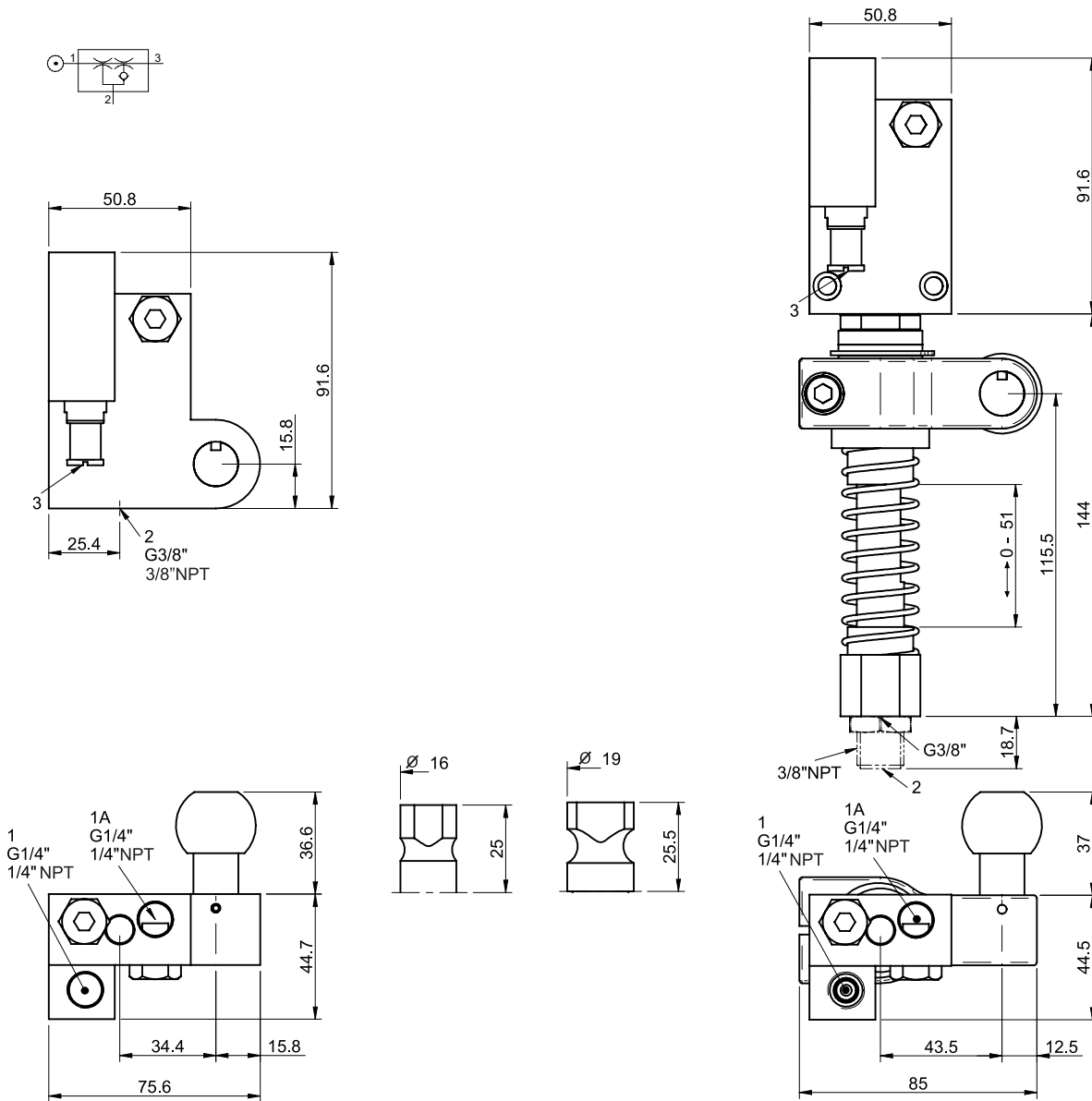
VACUUM FLOW

COAX® cartridge	Feed pressure	Air consumption	Vacuum flow (l/s) at different vacuum levels (-kPa)										Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	-kPa	
MINI Pi12-2	0.32	0.44	0.68	0.6	0.44	0.27	0.19	0.14	0.1	0.06	0.03	90	

EVACUATION TIMES

COAX® cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum
	MPa	NI/s	10	20	30	40	50	60	70	80	-kPa
MINI Pi12-2	0.32	0.44	0.17	0.32	0.58	1.1	1.8	2.7	4	6.4	90

DIMENSIONAL DRAWING

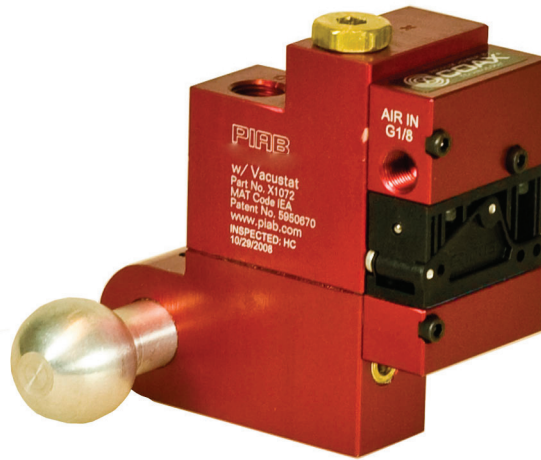


ORDERING INFORMATION

Description	Item No.
Vacuum Check Valve VT-1H COAX®, G threads, Ball joint, Left hand connection	0110435
Vacuum Check Valve VT-1H COAX®, G threads, Ball joint, Right hand connection	0121018
Vacuum Check Valve VT-1H COAX®, G threads, Lock pin 16, Left hand connection	0109276
Vacuum Check Valve VT-1H COAX®, G threads, Lock pin 16, Right hand connection	0121007

Description	Item No.
Vacuum Check Valve VT-1H COAX®, G threads, Lock pin 19, Left hand connection	0111147
Vacuum Check Valve VT-1H COAX®, G threads, Lock pin 19, Right hand connection	0119573
Vacuum Check Valve VT-1H COAX®, NPT threads, Ball joint, Left hand connection	0121056
Vacuum Check Valve VT-1H COAX®, NPT threads, Ball joint, Right hand connection	0121057
Vacuum Check Valve VT-1H COAX®, NPT threads, Lock pin 16, Left hand connection	0121026
Vacuum Check Valve VT-1H COAX®, NPT threads, Lock pin 16, Right hand connection	0121025
Vacuum Check Valve VT-1H COAX®, NPT threads, Lock pin 19, Left hand connection	0121038
Vacuum Check Valve VT-1H COAX®, NPT threads, Lock pin 19, Right hand connection	0121039
Vacuum Check Valve VT-1H COAX® with level compensator, G threads, Ball joint, Left hand connection	0120990
Vacuum Check Valve VT-1H COAX® with level compensator, G threads, Ball joint, Right hand connection	0121021
Vacuum Check Valve VT-1H COAX® with level compensator, G threads, Lock pin 16, Left hand connection	0109278
Vacuum Check Valve VT-1H COAX® with level compensator, G threads, Lock pin 16, Right hand connection	0121010
Vacuum Check Valve VT-1H COAX® with level compensator, G threads, Lock pin 19, Left hand connection	0120991
Vacuum Check Valve VT-1H COAX® with level compensator, G threads, Lock pin 19, Right hand connection	0121015
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Ball joint, Left hand connection	0121062
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Ball joint, Right hand connection	0121063
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Lock pin 16, Left hand connection	0121032
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Lock pin 16, Right hand connection	0121031
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Lock pin 19, Left hand connection	0121044
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Lock pin 19, Right hand connection	0121045

Vacuum Check Valve VT-1H Vacustat with COAX®



This vacuum pump combines high security and the most energy-efficient solution for sealed material, COAX® technology with automatic air-saving function. It has a check valve that traps vacuum in sealed applications and an integrated energy saving device that results in virtually no energy consumption. It is an excellent product when working with vacuum handling devices that have to comply and fulfil legislated lifting norms for handling devices, for example (DIN/SS) – EN 13155, ASME Standard B30.20, etc.

It has the two-stage COAX® cartridge MINI Pi12-2 integrated and is available in lock pin, 16, 19 or ball joint mountings, industry standard. It is also available with level compensator to compensate for differences in level of object. This pump has an integrated energy-saving device, Vacustat that results in virtually no air consumption in sealed applications.

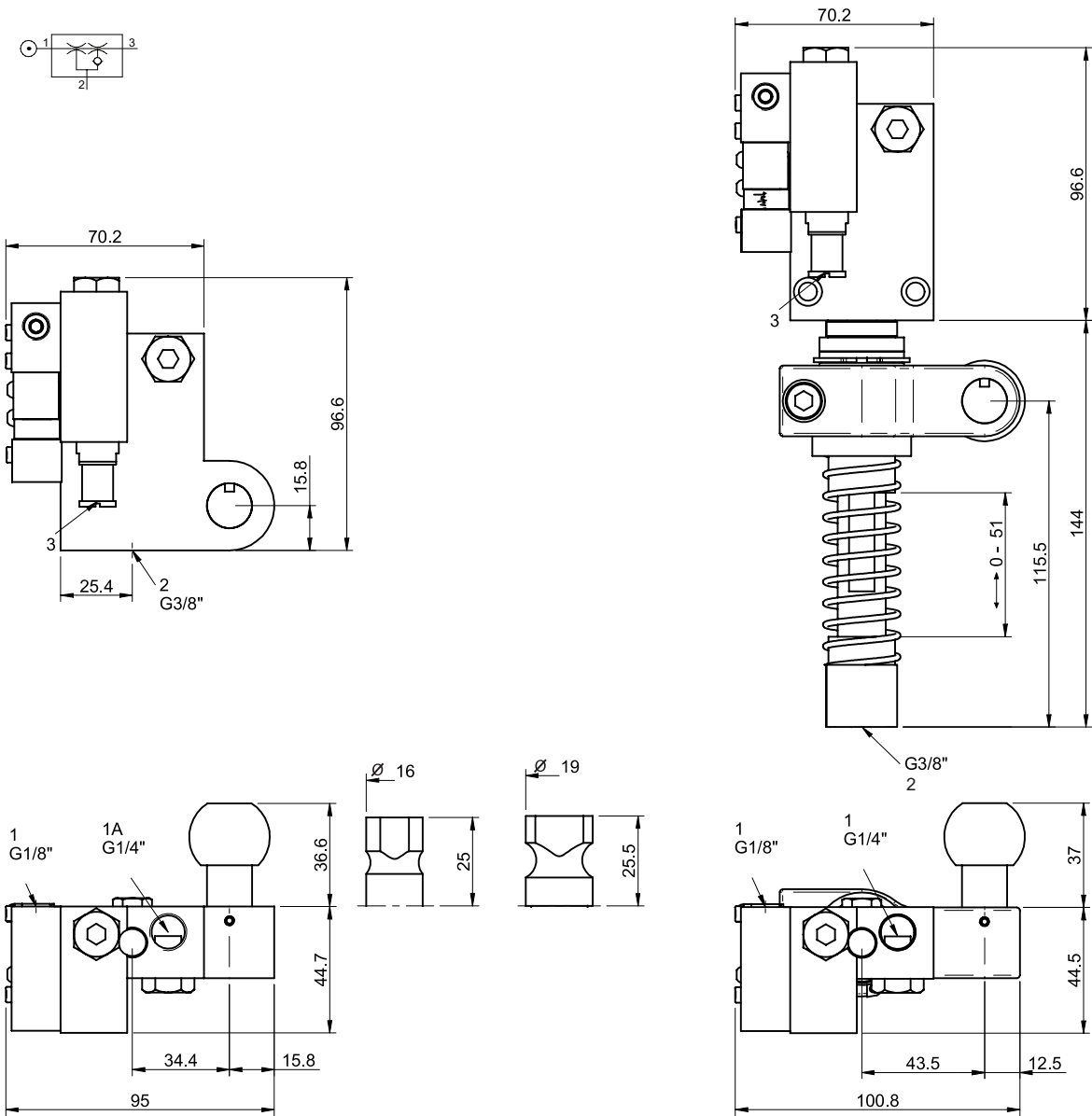
VACUUM FLOW

COAX® cartridge	Feed pressure	Air consumption	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum
	MPa		0	10	20	30	40	50	60	70	80	-kPa	
MINI Pi12-2	0.32	0.44	0.68	0.6	0.44	0.27	0.19	0.14	0.1	0.06	0.03	90	

EVACUATION TIMES

COAX® cartridge	Feed pressure	Air consumption	Evacuation time (s/l) to reach different vacuum levels (-kPa)								Max vacuum
	MPa		10	20	30	40	50	60	70	80	-kPa
MINI Pi12-2	0.32	0.44	0.17	0.32	0.58	1.1	1.8	2.7	4	6.4	90

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
Vacuum Check Valve VT-1H Vacustat with COAX®, G threads, Ball joint, Left hand connection	0119676
Vacuum Check Valve VT-1H Vacustat with COAX®, G threads, Ball joint, Right hand connection	0121019
Vacuum Check Valve VT-1H Vacustat with COAX®, G threads, Lock pin 16, Left hand connection	0120994
Vacuum Check Valve VT-1H Vacustat with COAX®, G threads, Lock pin 16, Right hand connection	0121008

Description	Item No.
Vacuum Check Valve VT-1H Vacustat with COAX®, G threads, Lock pin 19, Left hand connection	0120995
Vacuum Check Valve VT-1H Vacustat with COAX®, G threads, Lock pin 19, Right hand connection	0121013
Vacuum Check Valve VT-1H Vacustat with COAX®, NPT threads, Ball joint, Left hand connection	0127836
Vacuum Check Valve VT-1H Vacustat with COAX®, NPT threads, Ball joint, Right hand connection	0127837
Vacuum Check Valve VT-1H Vacustat with COAX® with level compensator, G threads, Ball joint, Left hand connection	0120997
Vacuum Check Valve VT-1H Vacustat with COAX® with level compensator, G threads, Ball joint, Right hand connection	0121022
Vacuum Check Valve VT-1H Vacustat with COAX® with level compensator, G threads, Lock pin 16, Left hand connection	0120996
Vacuum Check Valve VT-1H Vacustat with COAX® with level compensator, G threads, Lock pin 16, Right hand connection	0121011
Vacuum Check Valve VT-1H Vacustat with COAX® with level compensator, G threads, Lock pin 19, Left hand connection	0120998
Vacuum Check Valve VT-1H Vacustat with COAX® with level compensator, G threads, Lock pin 19, Right hand connection	0121016
Vacuum Check Valve VT-1H COAX® with level compensator, G threads, Lock pin 16, Left hand connection	0109278
Vacuum Check Valve VT-1H COAX® with level compensator, G threads, Lock pin 16, Right hand connection	0121010
Vacuum Check Valve VT-1H COAX® with level compensator, G threads, Lock pin 19, Left hand connection	0120991
Vacuum Check Valve VT-1H COAX® with level compensator, G threads, Lock pin 19, Right hand connection	0121015
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Ball joint, Left hand connection	0121062
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Ball joint, Right hand connection	0121063
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Lock pin 16, Left hand connection	0121032
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Lock pin 16, Right hand connection	0121031
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Lock pin 19, Left hand connection	0121044
Vacuum Check Valve VT-1H COAX® with level compensator, NPT threads, Lock pin 19, Right hand connection	0121045

Classic H40



A traditional Piab vacuum pump developed to be used within the chemical industry or in chemically aggressive environments. It can achieve higher vacuum levels, even down to 99.8 -kPa. Vacuum pump Classic H40 is constructed of composite PPS. We recommend it to be used with practically zero leakage present and in nonporous applications.

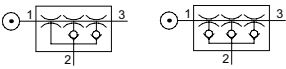
VACUUM FLOW

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	95	99	
0.6	2.6	2.8	2.1	1.5	0.9	0.4	0.3	0.2	0.14	0.1	0.095	0.019	0.005	99.8

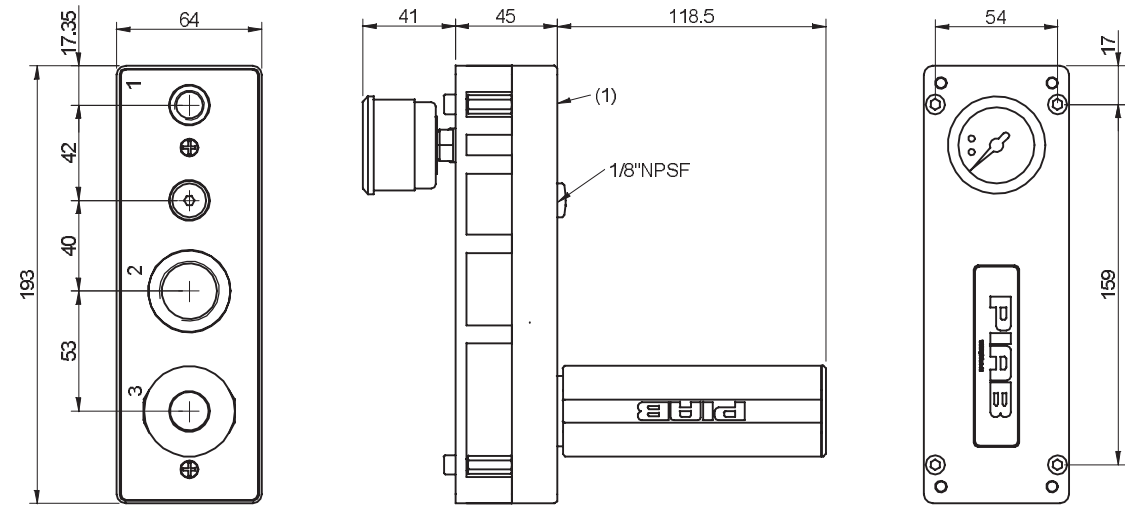
EVACUATION TIMES

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	95	99	99,5	
0.6	2.6	0.032	0.075	0.15	0.32	0.64	1.1	1.7	2.6	3.9	5.5	9.8	12	99.8

DIMENSIONAL DRAWING



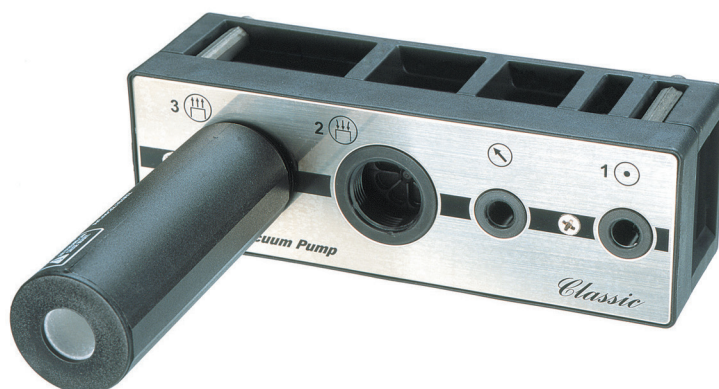
	1	2	3
D	1/8"NPSF	G3/4"	G3/4"
AD	G1/4"	G3/4"	G3/4"
E	1/4"NPT	3/4"NPT	3/4"NPT



ORDERING INFORMATION

Description	Item No.
Vacuum pump CLASSIC H40, composite PPS(D), Viton® sealings	0100194

Classic H120



A traditional Piab vacuum pump developed to be used within the chemical industry or in chemically aggressive environments. It can achieve higher vacuum levels, even down to 100.8 -kPa. It is available with connection plate in composite PPS or aluminium. We recommend it to be used with practically zero leakage present and in nonporous applications.

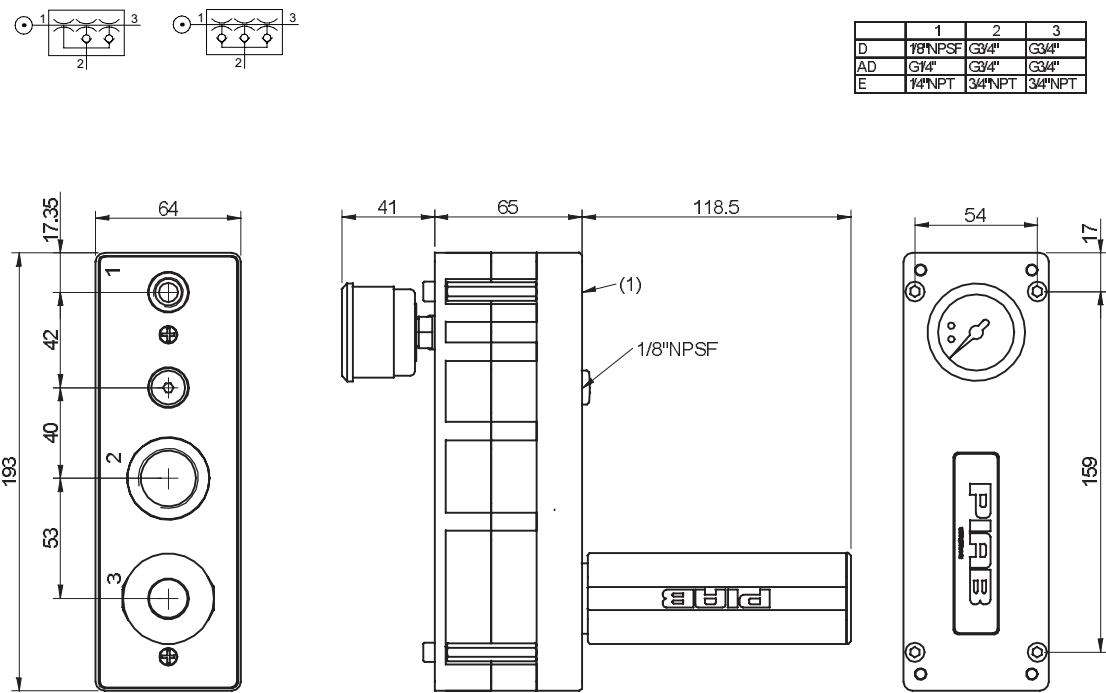
VACUUM FLOW

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	95	99	
0.6	7.6	8.4	6.6	4.7	2.7	1.5	1.2	0.86	0.62	0.43	0.1	0.05	0.01	100.8

EVACUATION TIMES

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	95	99	99,5	100,3	
0.6	7.6	0.018	0.033	0.06	0.11	0.18	0.27	0.42	0.62	1.3	2.1	4.2	5.4	8.3	100.8

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
Vacuum pump CLASSIC H120, connection plate composite PPS(D), Viton® sealings	0100212
Vacuum pump CLASSIC H120, conn. AD, NBR sealings	0102131

Lab Vac LVH40



This vacuum pump is tailor-made for laboratory applications, such as degassing, vacuum filtering, gel drying and rotation evaporation. It can achieve high vacuum levels to 20 mbar abs. with a maximum vacuum flow of 9 m³/h. There is no risk for “back draft” which can cause damaged test samples. Its low noise level, easy installation and maintenance is widely appreciated.

It has a high chemical resistance, with an option to have with Kalrez sealing material which normally makes the chemical resistance unsurpassed.

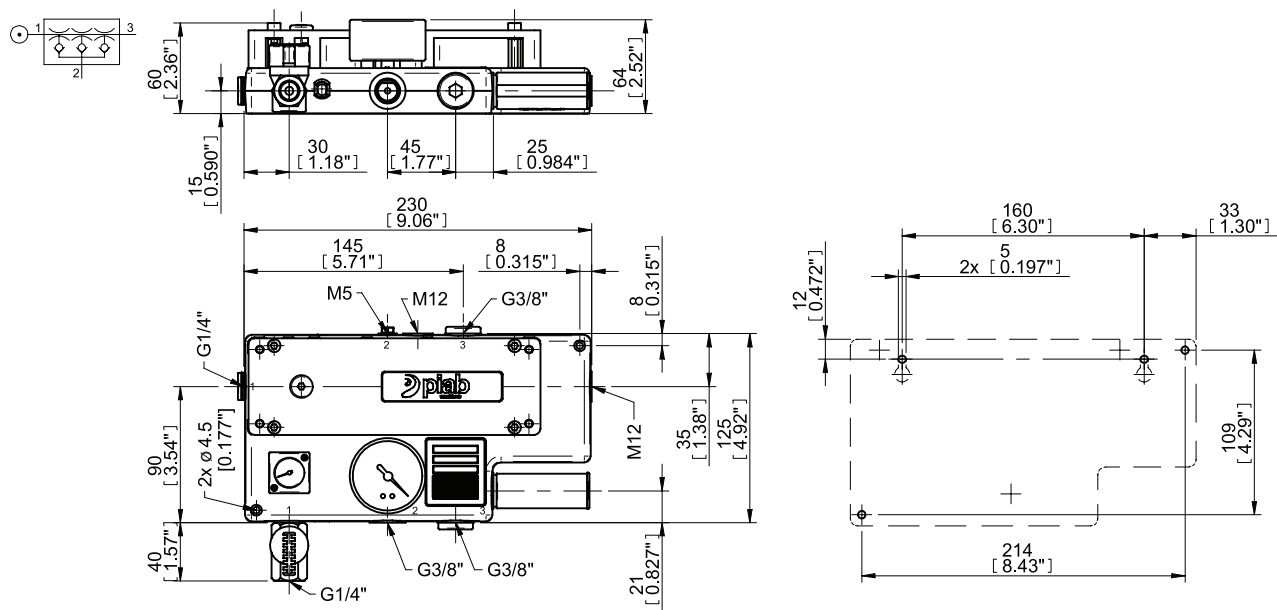
VACUUM FLOW

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	95	
0.60	2.6	2.5	1.8	1.3	0.7	0.53	0.35	0.24	0.16	0.12	0.06	0.02	98

EVACUATION TIMES

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	95	
0.60	2.6	0.04	0.09	0.18	0.41	0.71	1.09	1.65	2.48	3.91	6.01	98

DIMENSIONAL DRAWING



ORDERING INFORMATION

Description	Item No.
Lab Vac LVH40K6, Viton® sealings, Kalrez flap valves	0103684
Lab Vac LVH40K6, EPDM sealings, Kalrez flap valves	0124540

BONDY

INDUSTRIAL EQUIPMENT SUPPLIER



Transmission



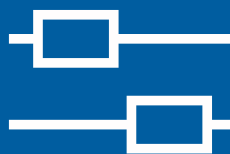
Handling



Motor & Gear



Vacuum Conveying



Linear



Support

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