

## piCLASSIC Pi48-3



- ▶ Patented COAX® technology inside – the most energy efficient ejector technology.
- ▶ High performance reliability in cases of fluctuating or low compressed air pressure.
- ▶ Deep vacuum level achieved at very low feed pressure, 0.3 MPa.
- ▶ Fluctuating compressed air is commonplace in large plants and when the compressor has a high degree of utilization.
- ▶ Large capacity range, available with 1 to 6 COAX® Pi48 three-stage cartridges. A smaller piCLASSIC can easily be upgraded with more capacity if needed.
- ▶ Low-weight, configurable and modular design.
- ▶ Easy disassembly for maintenance.

### Technical data

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

### Technical data, specific

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

### Vacuum flow at recommended feed pressure (0.30 MPa)

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

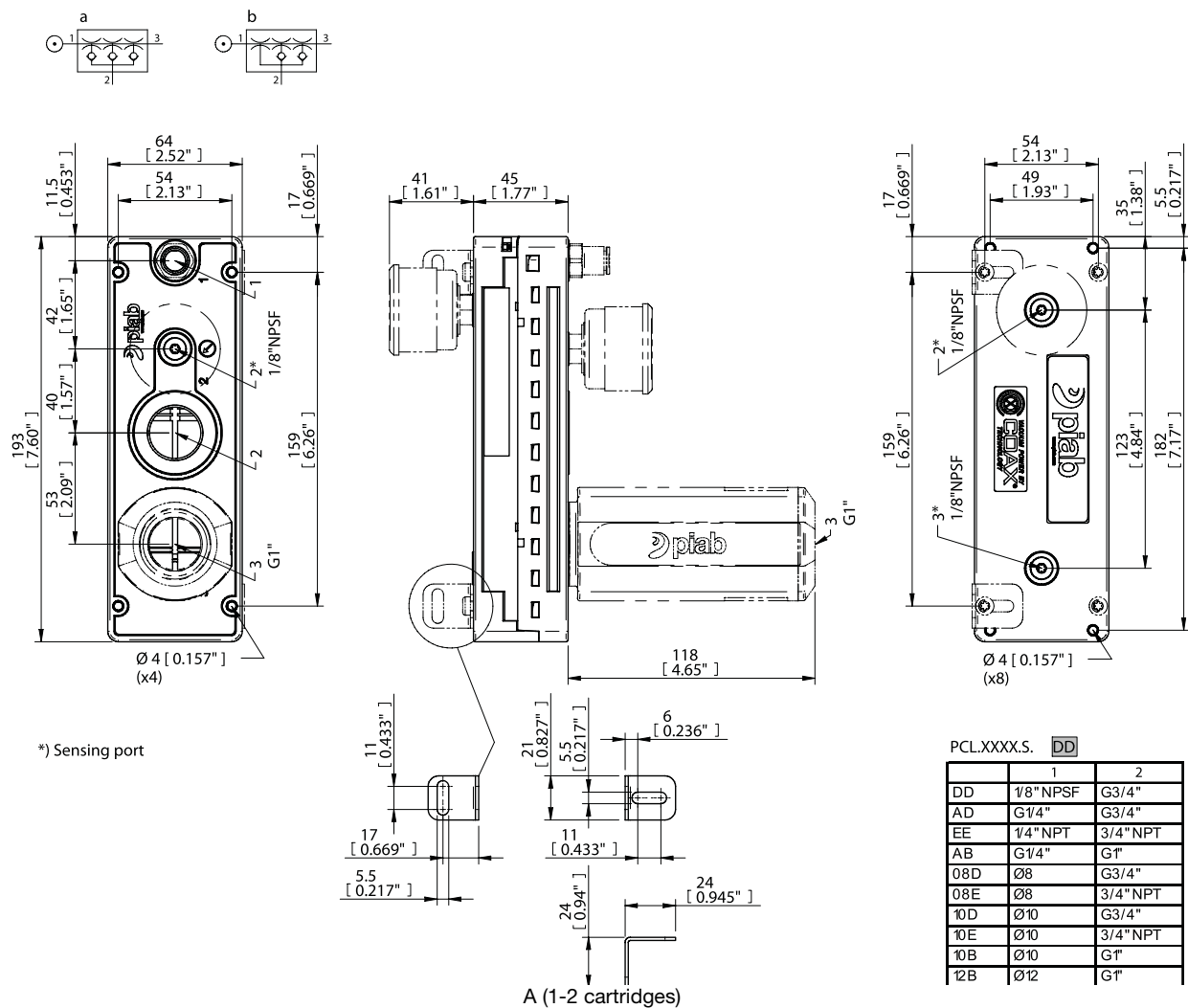
### Evacuation time at recommended feed pressure (0.30 MPa)

| COAX® cartridge | Air consumption<br>NI/s | Evacuation time (s/l) to reach different vacuum levels (-kPa) |       |       |      |      |      |      |      |      |
|-----------------|-------------------------|---------------------------------------------------------------|-------|-------|------|------|------|------|------|------|
|                 |                         | 10                                                            | 20    | 30    | 40   | 50   | 60   | 70   | 80   | 90   |
| Pi48-3 x1       | 2.0                     | 0.020                                                         | 0.060 | 0.12  | 0.25 | 0.45 | 0.70 | 1.0  | 1.6  | 4.0  |
| Pi48-3 x2       | 4.0                     | 0.010                                                         | 0.030 | 0.06  | 0.13 | 0.23 | 0.35 | 0.50 | 0.80 | 2.0  |
| Pi48-3 x3       | 6.0                     | 0.007                                                         | 0.020 | 0.04  | 0.08 | 0.15 | 0.23 | 0.33 | 0.53 | 1.33 |
| Pi48-3 x4       | 8.0                     | 0.005                                                         | 0.015 | 0.03  | 0.06 | 0.11 | 0.18 | 0.25 | 0.40 | 1.0  |
| Pi48-3 x5       | 10.0                    | 0.004                                                         | 0.012 | 0.024 | 0.05 | 0.09 | 0.14 | 0.20 | 0.32 | 0.80 |
| Pi48-3 x6       | 12.0                    | 0.003                                                         | 0.010 | 0.023 | 0.04 | 0.08 | 0.12 | 0.17 | 0.27 | 0.67 |

## Ordering information

| 1. Housing                                                                                                                                                        |                                 | piCLASSIC Code   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|------------------|
| Housing                                                                                                                                                           |                                 | PCL              |
| 2a. COAX® cartridge modules                                                                                                                                       |                                 | piCLASSIC Code   |
| A                                                                                                                                                                 | COAX® cartridge module Pi48-3x1 | P1               |
| A                                                                                                                                                                 | COAX® cartridge module Pi48-3x2 | P2               |
| B                                                                                                                                                                 | COAX® cartridge module Pi48-3x3 | P3               |
| B                                                                                                                                                                 | COAX® cartridge module Pi48-3x4 | P4               |
| C                                                                                                                                                                 | COAX® cartridge module Pi48-3x5 | P5               |
| C                                                                                                                                                                 | COAX® cartridge module Pi48-3x6 | P6               |
| 2b. Valve Configuration                                                                                                                                           |                                 | piCLASSIC Code   |
| a                                                                                                                                                                 | Standard                        | B                |
| b                                                                                                                                                                 | Non-return valve                | A                |
| 2c. Sealing material                                                                                                                                              |                                 | piCLASSIC Code   |
| Nitrile                                                                                                                                                           |                                 | N                |
| Viton                                                                                                                                                             |                                 | V                |
| 3. Function                                                                                                                                                       |                                 | piCLASSIC Code   |
| Standard                                                                                                                                                          |                                 | S                |
| 4a. Compressed air connection                                                                                                                                     |                                 | piCLASSIC Code   |
| G1/4" female                                                                                                                                                      |                                 | A                |
| 1/4" NPT female                                                                                                                                                   |                                 | E                |
| 1/8" NPSF (G) female                                                                                                                                              |                                 | D                |
| *Push-in 8 mm (5/32")-1/4" female                                                                                                                                 |                                 | 08               |
| *Push-in 10 mm-1/4" female                                                                                                                                        |                                 | 10               |
| *Push-in 12 mm-1/4" female                                                                                                                                        |                                 | 12               |
| <i>*Compressed air push-in connector included separately.</i>                                                                                                     |                                 |                  |
| 4b. Vacuum connection                                                                                                                                             |                                 | piCLASSIC Code   |
| G3/4" female                                                                                                                                                      |                                 | D                |
| 3/4" NPT female                                                                                                                                                   |                                 | E                |
| G1" female                                                                                                                                                        |                                 | B                |
| 5. Accessory                                                                                                                                                      |                                 | piCLASSIC Code   |
| None                                                                                                                                                              |                                 | X                |
| Silencer G1" male                                                                                                                                                 |                                 | S                |
| Vacuum gauge                                                                                                                                                      |                                 | V                |
| Silencer G1" male & vacuum gauge                                                                                                                                  |                                 | SV               |
| Example                                                                                                                                                           |                                 | Ordering number  |
| piCLASSIC Pi48-3x1, Standard Valve, Nitrile Sealing, Function Standard, Connections Comp. Air G1/4" female--Vacuum G3/4" female, Silencer G1" male & vacuum gauge |                                 | PCL.P1BN.S.AD.SV |

Dimensional drawing for piCLASSIC Pi48-3



## Dimensional drawing for piCLASSIC Pi48-3

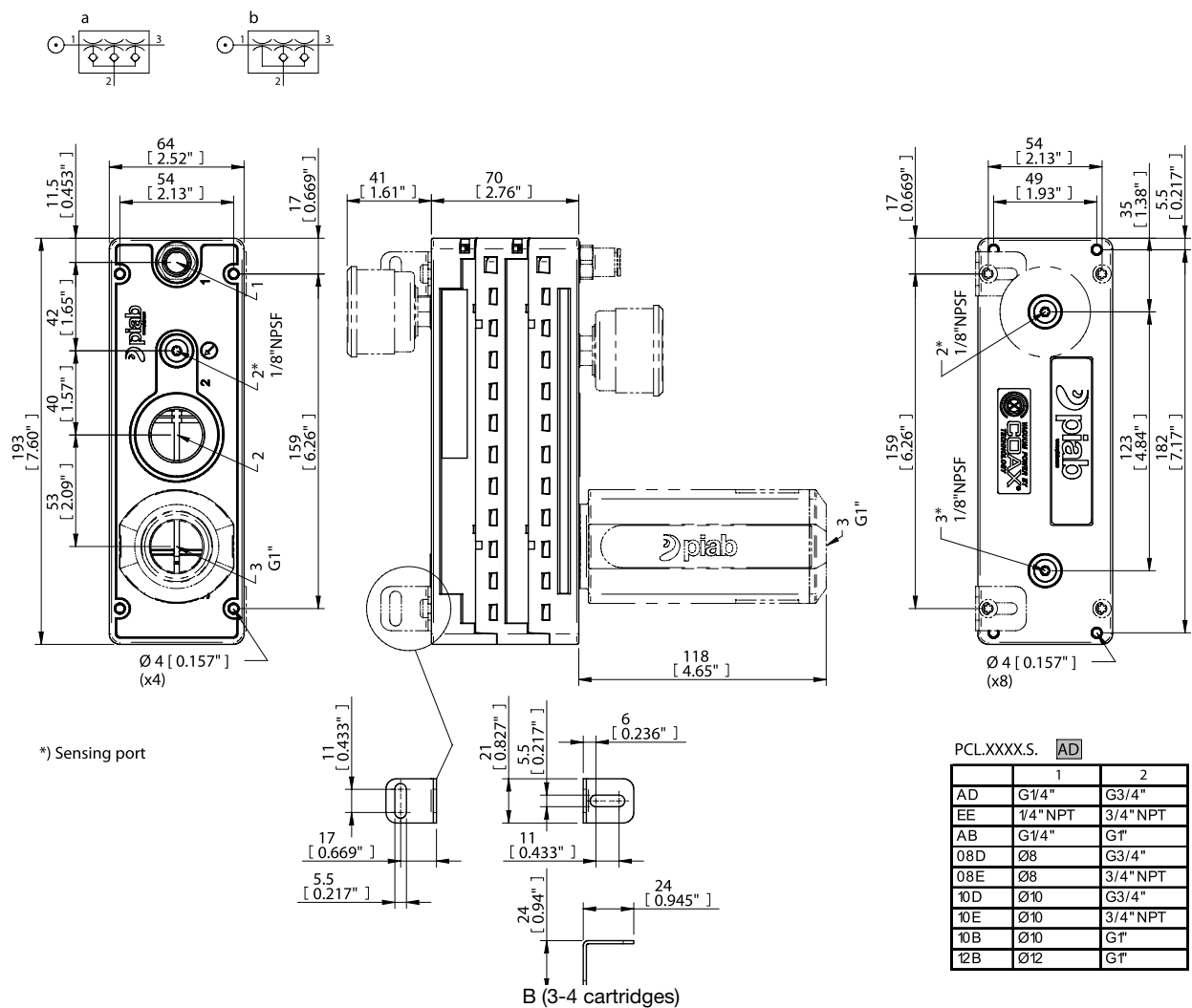


Figure 1 consists of two circuit diagrams, (a) and (b), each showing a three-terminal device. In both diagrams, a horizontal line represents the main signal path with terminals 1, 2, and 3. Terminal 1 is on the left, terminal 2 is in the middle, and terminal 3 is on the right. A box encloses the internal components of the device. In diagram (a), the box contains three internal nodes connected to terminals 1, 2, and 3. In diagram (b), the box contains a similar structure but with a different internal connection for terminal 2.

