

# MANUAL

## CU – Control Unit



P3010 CU

P5010 CU

P6010 CU

## EINLEITUNG

CU (Control Unit) ist eine Kontrolleinheit für die Vakuumpumpe. Die Anleitung ist für das CU spezifiziert, sie zeigt aber auch die Anschlussmöglichkeiten für Piab's Produkte Auswahl, zu welchen CU gebraucht werden kann. Für detailliertere Informationen zu den Steuereinheiten der Vakuumpumpen sehen Sie bitte die Unterlagen für die betreffenden Ejektoren an.

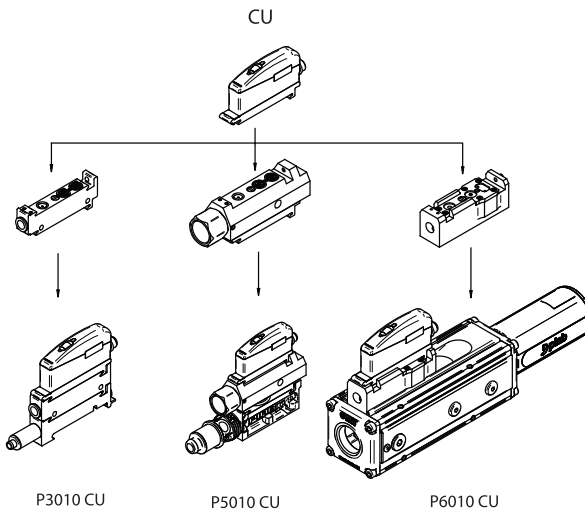
## FUNKTIONEN/MERKMALE

- ▶ Ventil (V1) für AN/AUS des Ejektors. Dieses Ventil ist normalerweise geschlossen (NC) oder normalerweise geöffnet (NO).
- ▶ Ventil (V2) für AN/AUS der Abblasfunktion.
- ▶ Justageventil (V3) für das Steuern des Abblasablaufes.
- ▶ Die CU Einheiten für P6010 Pumpen gibt es als Option mit einem separaten Abblas-Anschluß für das effiziente und direkte Abblasen in die Vakuumleitung.

## DESIGN

- ▶ Modular in zwei verschiedenen Hauptabschnitten, eine pilot valve unit und eine main Ventilmasseneinheit.
- ▶ Gestalten Sie das Maximum der Abblas-Leistungsfähigkeit.
- ▶ Schutzbedeckungen gegen Staub und Feuchtigkeit, IP65 [NEMA 4].
- ▶ Vereinbarung und Entwurf
- ▶ M12 4-PIN elektrischer Anschluß. Verwendbare Kabel ist als Zusatzgeräte vorhanden.

## ÜBERSICHT

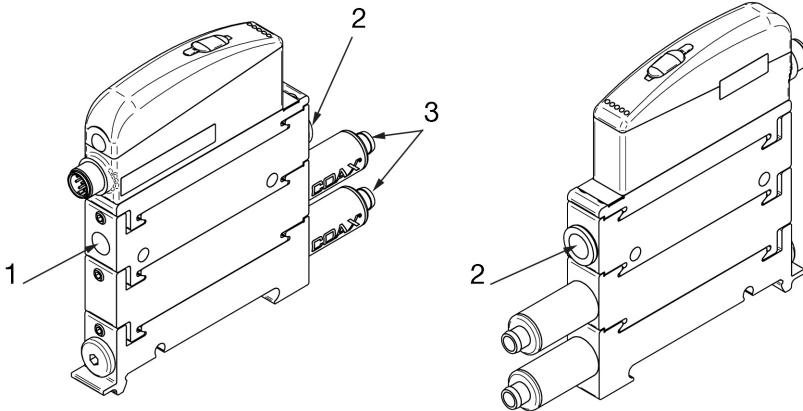


## INSTALLATION

Die Einheit kann in jeder Ausrichtung installiert werden. Darauf achten, dass der Strömungsschalldämpfer nicht blockiert wird. Beim Anschließen von Speiseluft- und Vakuumschläuchen an die Einheit ist es wichtig, Rohre mit den richtigen Maßen zu wählen, um Druckabfälle zu vermeiden. Drosselnde Innendurchmesser, lange Verrohrungsentfernungen, scharfe Knicke und kleine Anschlüsse vermeiden.

### PNEUMATISCHE INSTALLATION

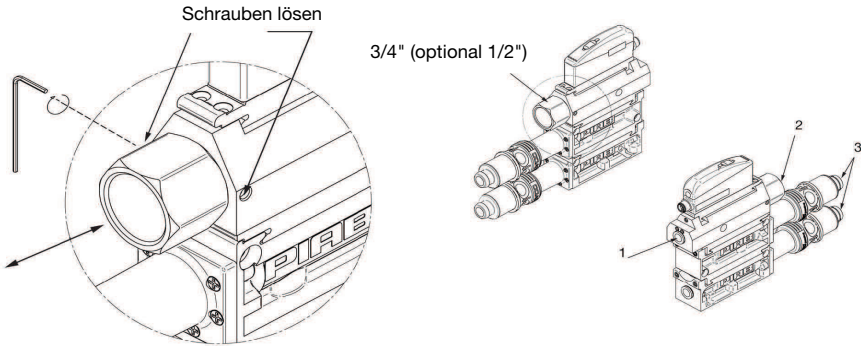
#### P3010 CU



1	Druckluft	G1/8", Ø6mm
2	Vakuum	Ø10mm, 1/4" NPSF
3	Abluft	Ø8mm

*Detailliertere Informationen finden Sie in der Zusammenbauzeichnung.*

## P5010 CU

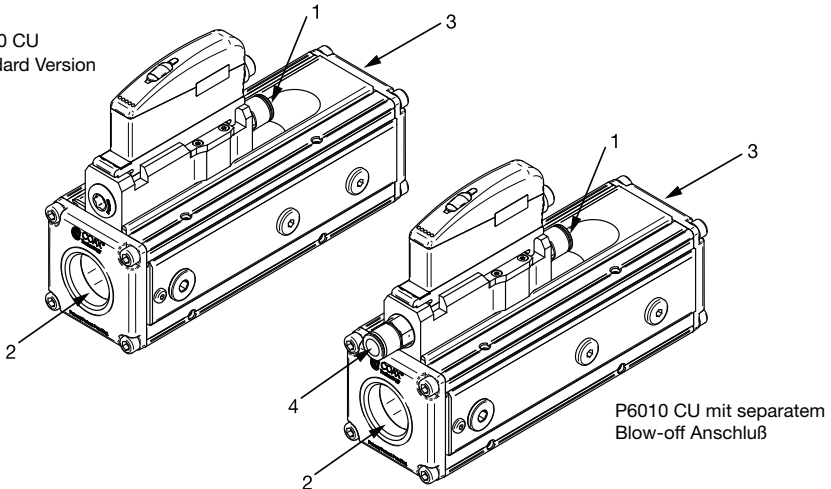


1	Druckluft	Ø3/8", Ø10mm
2	Vakuum	G3/4", G1/2", 3/4" NPSF, 1/2" NPSF
3	Abluft	Ø16mm

Detailliertere Informationen finden Sie in der Zusammenbauzeichnung.

## P6010 CU

P6010 CU  
Standard Version

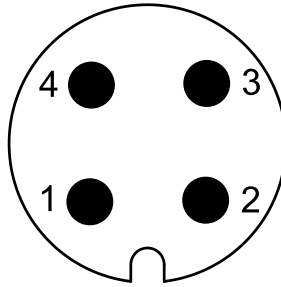


1	Druckluft	G1/4", Ø10mm
2	Vakuum	G1", G3/4", 1" NPSF, 3/4" NPSF
3	Abluft	G1", G3/4", 1" NPSF, 3/4" NPSF
4	Separater Abblas-Anschluß (Druckluft)	G1/4", Ø10mm

Detailliertere Informationen finden Sie in der Zusammenbauzeichnung.

## ELEKTRISCHE PIN-ANSCHLUSSKONFIGURATION

## M12 4-PIN STECKER



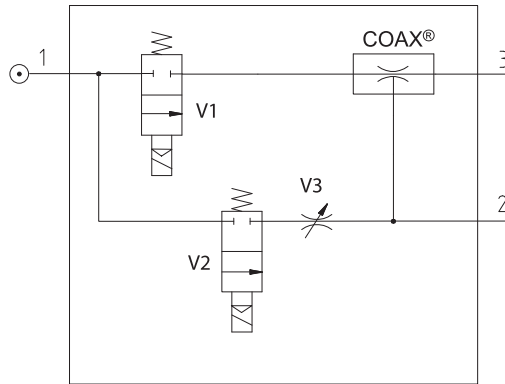
## PNP TYP

Pin Nr.	Name	Beschreibung	Kabelfarbe, Kabel 0121817
1	-	Nicht verwendet	Braun
2	$V_n 2$	Kontroll Signal, Abblas	Weiß
3	GND	GND	Blau
4	$V_n 1$	Kontroll Signal, on/off	Schwarz

## KABEL

Beschreibung	Art. Nr.
Kabel M12 4-pin Innengewinde, M 12 4-pin Außengewinde, PUR, L=2m	0118322
Kabel M12 4-pin Innengewinde, PUR, L=5m	0121817

## PNEUMATIKSCHEMA



COAX® Mehrstufige Steuereinheit.

V1 Vakuumventil, NC oder NO (NC wie gezeigt).

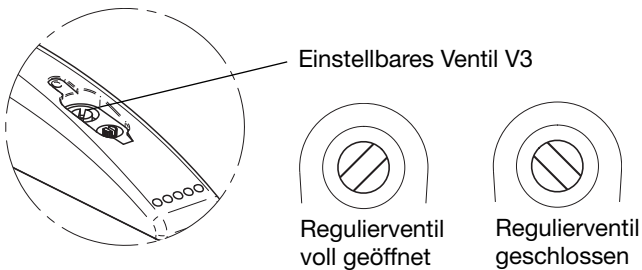
V2 Abblasventil, NC.

V3 Regulierbares Abblasventil

- ⊙ Anmerkung: Die Qualität der komprimierten Luft erfüllt die Anforderungen in DIN ISO 8573-1 Kategorie 4.

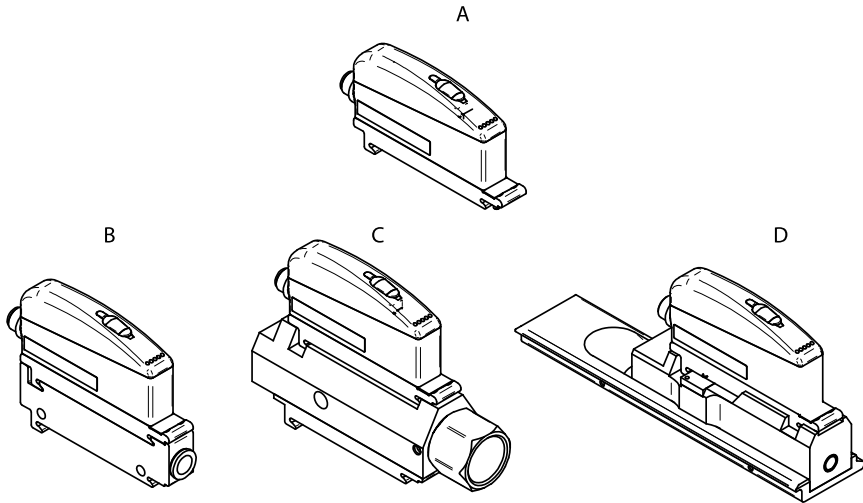
## EINSTELLEN DES ABLAS VOLUMENS

Die Strömungsgeschwindigkeit (Energie) vom Abblas ist durch ein sich einstellendes Ventil unendlich variabel.



## SERVICE UND WARTUNG

Die Module lassen sich leicht für Service und Wartung austauschen.



## ERSATZTEILE

	Beschreibung	Art. Nr.
A	Kontrolleinheit CU NC	0117924
A	Kontrolleinheit CU NO	0200384
B	Funktion P3010 CU NC	0117696
B	Funktion P3010 CU NO	0200386
C	Funktion P5010 CU NC, G-Gewinde	0117716
C	Funktion P5010 CU NC, NPSF-Gewinde	0117699
D	Funktion P6010 CU NC	0117719
D	Funktion P6010 CU NC, separater abblas-anschluß	0123115

## SCHUTZMAßNAHMEN

Falscher Gebrauch von Druckluft kann Verletzungen verursachen. Druckluft darf immer nur für den beabsichtigten Zweck verwendet werden. Nicht vergessen, immer die Druckluftversorgung abzuschalten, wenn die Module gereinigt oder instandgehalten werden.

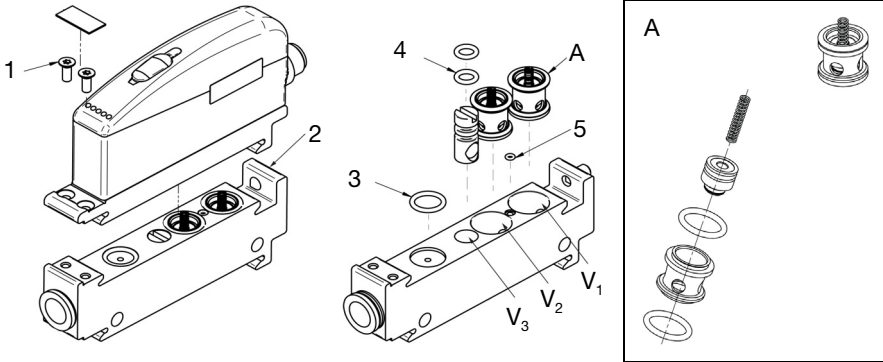
## GEWÄHRLEISTUNG

Piab bieten 5 Jahre Gewährleistung für die COAX® Cartridge. Für die Elektronik beträgt die Gewährleistung 2 Jahre, für Verschleißteile 1 Jahr.

## EXPLOSIONSDARSTELLUNGEN

### P3010 CU EXPLOSIONSDARSTELLUNG

Kontroll- und Ventileinheit



Pos.	Beschreibung
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
V <sub>1</sub>	Vakuum Ein/Aus Ventil
V <sub>2</sub>	Abblas Ventil
V <sub>3</sub>	Abblas Regulierventil

#### A. Reparatur-Kit

##### Art. Nr. 0124255

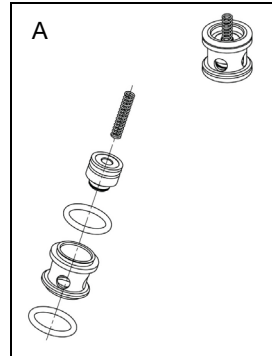
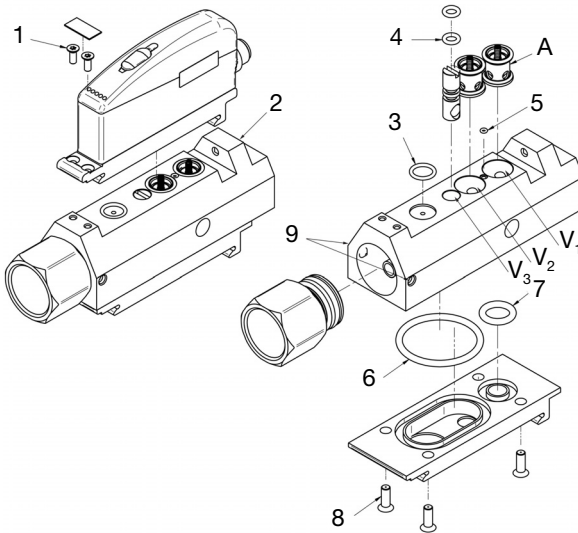
Schwarzes Sitzventil kpl. (incl. O-Ringe 11.1x1.6mm und Feder). Erhältlich für CU Einheiten ab Januar 2010.

Empfohlenes Fett: Klübersynth UH1 14-151 oder ein vergleichbares synthetisches Schmierfett.



## P5010 CU EXPLOSIONSDARSTELLUNG

Kontroll- und Ventileinheit



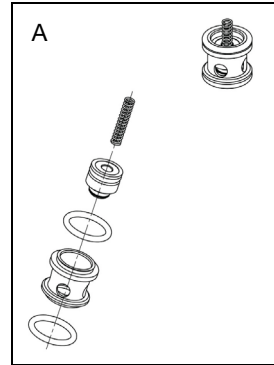
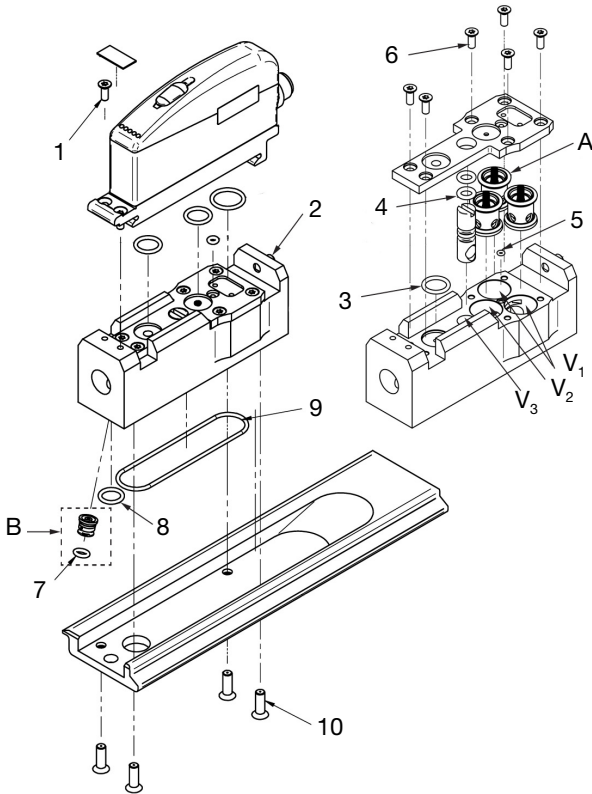
### A. Reparatur-Kit Art. Nr. 0124255

Schwarzes Sitzventil kpl. (incl. O-Ringe 11.1x1.6mm und Feder). Erhältlich für CU Einheiten ab Januar 2010.  
Empfohlenes Fett: Klübersynth UH1 14-151 oder ein vergleichbares synthetisches Schmierfett.

Pos.	Beschreibung
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	34.2x3mm
7	11x3mm
8	4x M5x10mm MFX
9	2x M5x6mm
V <sub>1</sub>	Vakuum Ein/Aus Ventil
V <sub>2</sub>	Abblas Ventil
V <sub>3</sub>	Abblas Regulierventil

## P6010 CU EXPLOSIONSDARSTELLUNG

Kontroll- und Ventileinheit



### A. Reparatur-Kit

Art. Nr. 0124255

Schwarzes Sitzventil kpl. (incl. O-Ringe 11.1x1.6mm und Feder). Erhältlich für CU Einheiten ab Januar 2010.

Empfohlenes Fett: Klübersynth UH1 14-151 oder ein vergleichbares synthetisches Schmierfett.

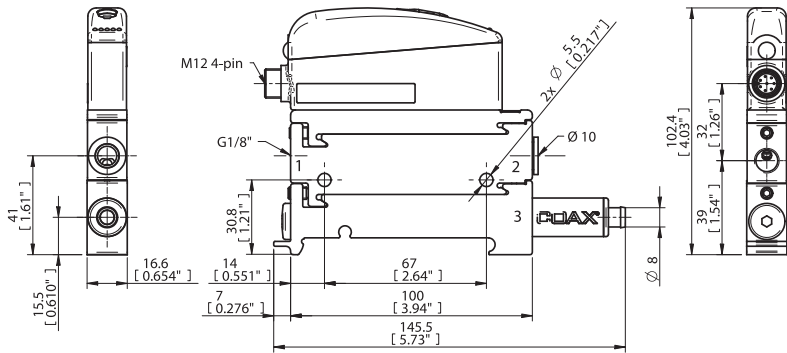
B. Teile für den separaten Abblas-Impuls.

Pos.	Beschreibung
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	6x M3x8mm TX
7	4.1x1.6mm
8	8.1x1.6mm
9	49x1.6mm
10	4x M4x12mm MFX
V <sub>1</sub>	Vakuum Ein/Aus Ventil
V <sub>2</sub>	Abblas Ventil
V <sub>3</sub>	Abblas Regulierventil

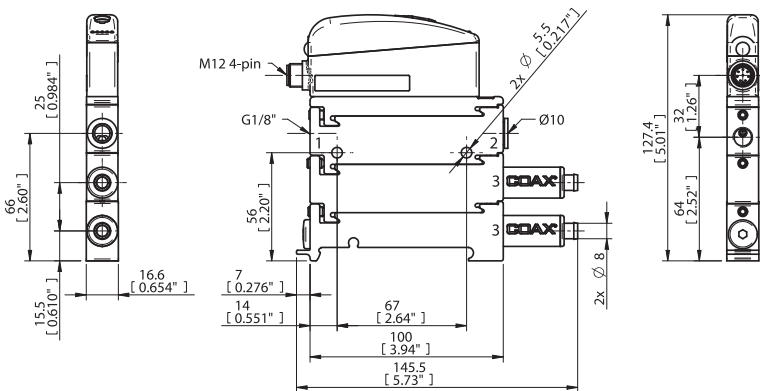
# ABMESSUNGEN

## P3010

### 1 COAX® Cartridge

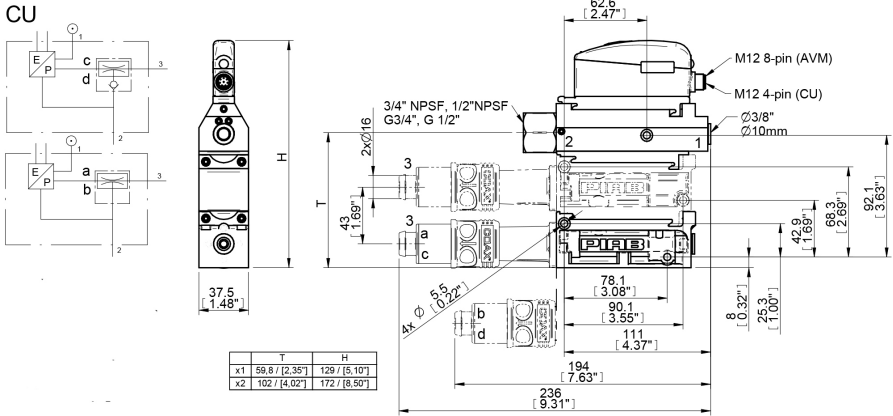


### 2 COAX® Cartridge



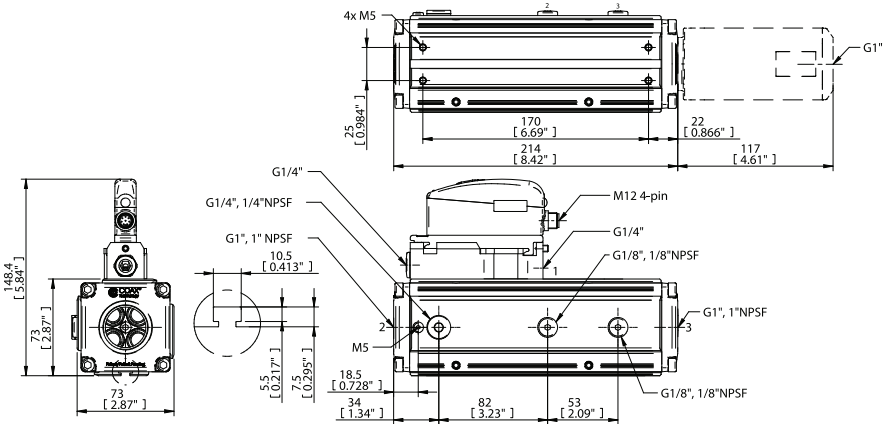
1. Steckanschluss, 2. Vakuum, 3. Abluft

P5010



1. Steckanschluss, 2. Vakuum, 3. Abluft

P6010



1. Steckanschluss, 2. Vakuum, 3. Abluft

## TECHNISCHE DATEN

<b>Generelle elektrische Charaktereigenschaften</b>	
Betriebsspannung	22–28 VDC (typisch 24 VDC)
Maximale Welle	1V <sub>RMS</sub> , 50-60 Hz
Energieverbrauch	Nom. 1.5 W @ 28 VDC (max. 3 W)
MTBF (elektronisch)	40,000 Stunden entsprechen MIL-HDBK-217E

<b>Ventil Einheiten</b>	
Funktion on/off	Normal geschlossen (NC) oder normal offen (NO)
Abblasfunktion	Normal geschlossen (NC)

<b>Sonstige Daten</b>	
Maximum Überdruck	0.7 MPa
Abblaskapazität	Variierbar 0–7.5NI/s
Betriebstemperatur	0-50°C
Material	Al, PA, NBR, SS, PMMA, ABS
Schutz Grad	IP65 [NEMA 4]
Kabel (Zubehör)	2 m und 5 m PUR
Luftfeuchtigkeit	90 %RH

## **INTRODUCTION**

CU is a Control Unit for vacuum ejectors. This manual is specific for CU but it also shows the interfaces to the ejector platforms in Piab's product range where CU may be used. For more detailed information on the vacuum ejector, please see the manuals for the respective ejectors.

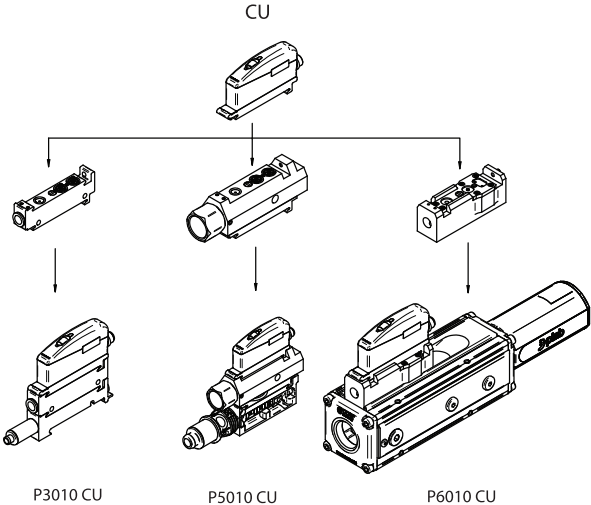
### **FUNCTIONS/FEATURES**

- ▶ Valve (V1) for ON/OFF of the ejector. This valve is normally closed (NC) or normally open (NO).
- ▶ Valve (V2) for ON/OFF of the blow-off function. This valve is normally closed (NC).
- ▶ Adjustment valve (V3) for controlling the blow-off flow.
- ▶ On CU units for P6010, there is an option to blow from a separate port to maximize blow-off efficiency in the vacuum system.

### **DESIGN**

- ▶ Modular in two separate main sections, one pilot valve unit and one main valve unit.
- ▶ Design that maximizes the blow-off efficiency.
- ▶ Protective covers against dust and humidity, IP65 [NEMA 4].
- ▶ Compact and slim design.
- ▶ M12 4-pin electric connection. Suitable cable is available as an accessory.

OVERVIEW

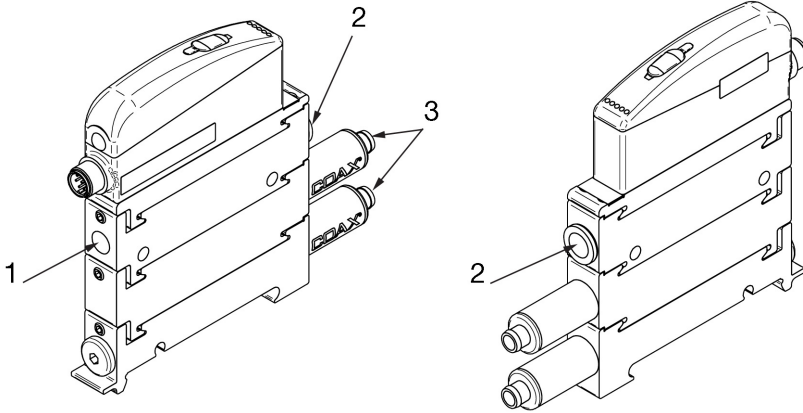


## INSTALLATION

CU can be installed in any orientation. Ensure that the exhaust from the ejector is not blocked. When connecting supply air and vacuum hoses to the unit, it is important to choose proper pipe dimensions to prevent pressure drops. Avoid restrictive inner diameters, long piping distances, sharp bends and small-sized connections.

### PNEUMATIC INSTALLATION

#### P3010 CU

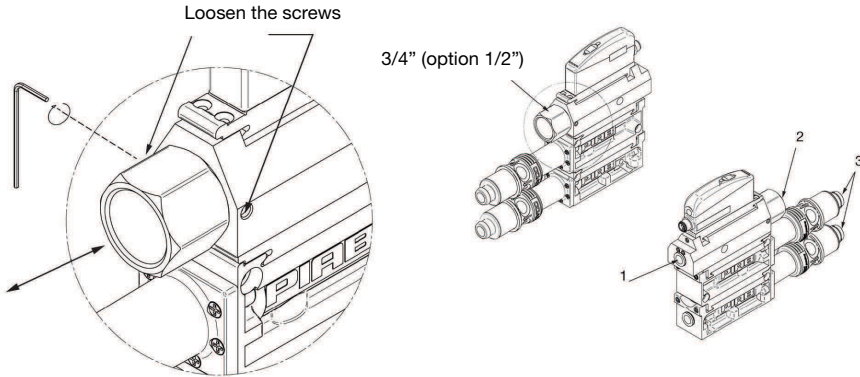


1	Compressed air	G1/8", Ø6mm
2	Vacuum	Ø10mm, 1/4" NPSF
3	Exhaust	Ø8mm

*For more detailed information see dimensional drawing.*



**P5010 CU**

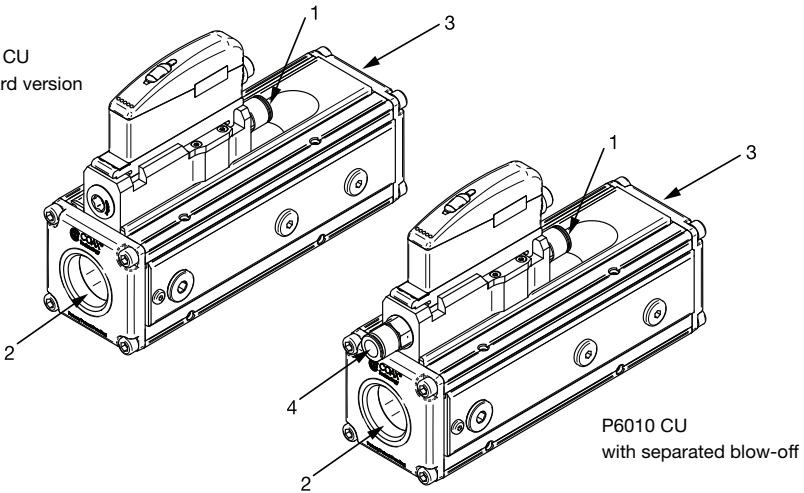


1	Compressed air	Ø3/8", Ø10mm
2	Vacuum	G3/4", G1/2", 3/4" NPSF, 1/2" NPSF
3	Exhaust	Ø16mm

For more detailed information see dimensional drawing.

**P6010 CU**

P6010 CU  
standard version

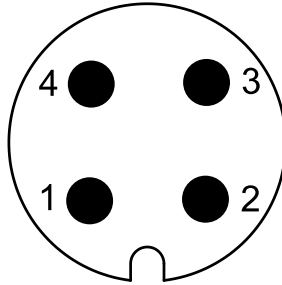


1	Compressed air	G1/4", Ø10mm
2	Vacuum	G1", G3/4", 1" NPSF, 3/4" NPSF
3	Exhaust	G1", G3/4", 1" NPSF, 3/4" NPSF
4	Separate blow-off (compressed air)	G1/4", Ø10mm

For more detailed information see dimensional drawing.

## ELECTRICAL CONNECTION, PIN CONFIGURATION

### CONNECTOR M12 4-PIN



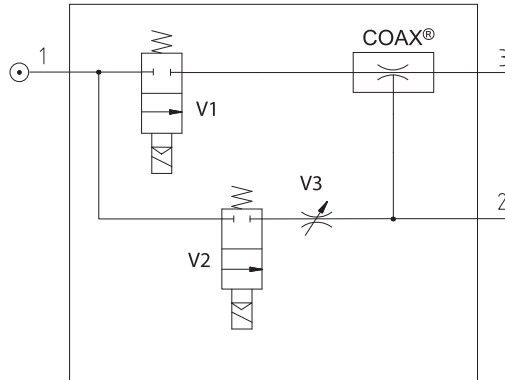
### PNP TYPE

Pin No.	Name	Description	Wiring colour cable 0121817
1	-	Not in use	Brown
2	V <sub>in 2</sub>	Control signal, Blow off	White
3	GND	GND	Blue
4	V <sub>in 1</sub>	Control signal, on/off	Black

### CABLE ASSEMBLY

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

## PNEUMATIC DIAGRAM



COAX® Multi-stage ejector.

V1 Vacuum valve, NC or NO (NC shown)

V2 Blow-off valve, NC.

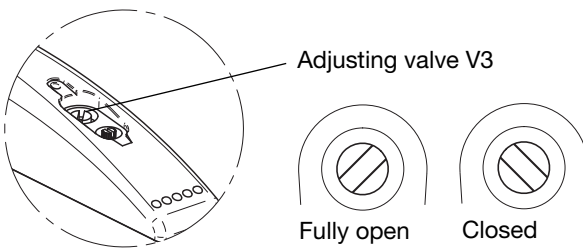
V3 Adjustable blow-off valve.



**Note:** The quality of the compressed air shall fulfil the requirements in DIN ISO 8573-1 class 4.

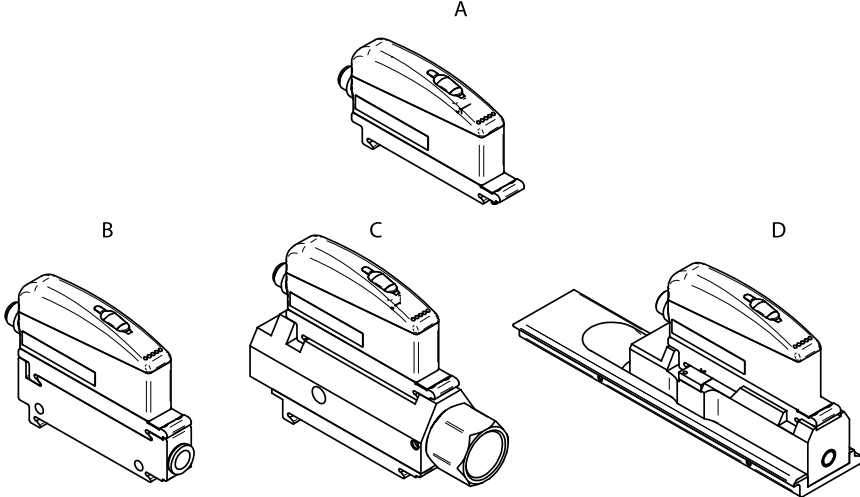
## SETTING BLOW-OFF POWER

The flow rate (power) from the blow-off is infinitely variable by an adjusting valve.



## SERVICE AND MAINTENANCE

The modules are easy to replace for service and maintenance.



### SPARE PARTS

	Description	Art. No.
A	Control unit CU NC	0117924
A	Control unit CU NO	0200384
B	Function P3010 CU NC	0117696
B	Function P3010 CU NO	0200386
C	Function P5010 CU NC, G connection	0117716
C	Function P5010 CU NC, NPSF connections	0117699
D	Function P6010 CU NC	0117719
D	Function P6010 CU NC, separated blow-off	0123115

### SAFETY PRECAUTIONS

Irresponsible use of supply air may cause injury. Supply air must never be used for anything else than designated purposes. Remember to always shut off the air supply when cleaning or servicing the modules.

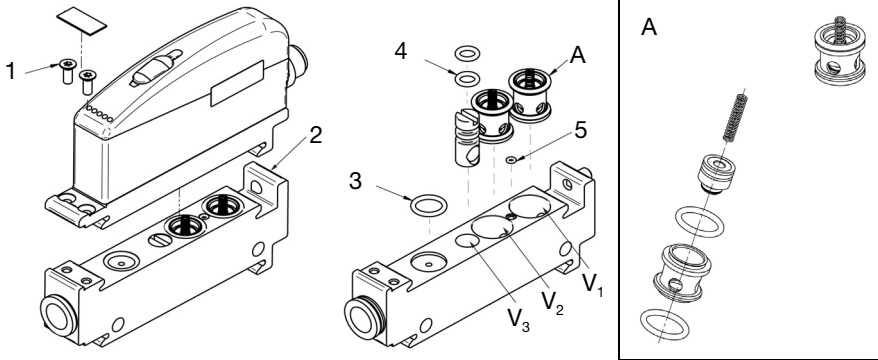
### WARRANTY

Piab provides a 5-year warranty for COAX® vacuum cartridges. For the electronics the guarantee period is 2 years and for wearing parts 1 year.

## EXPLODED VIEWS

### P3010 CU EXPLODED VIEW

Control and valve unit



Pos.	Description
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
V <sub>1</sub>	Vacuum on/off valve
V <sub>2</sub>	Blow-off valve
V <sub>3</sub>	Blow-off adjustment valve

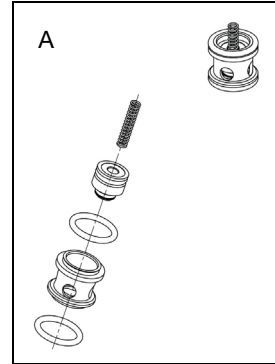
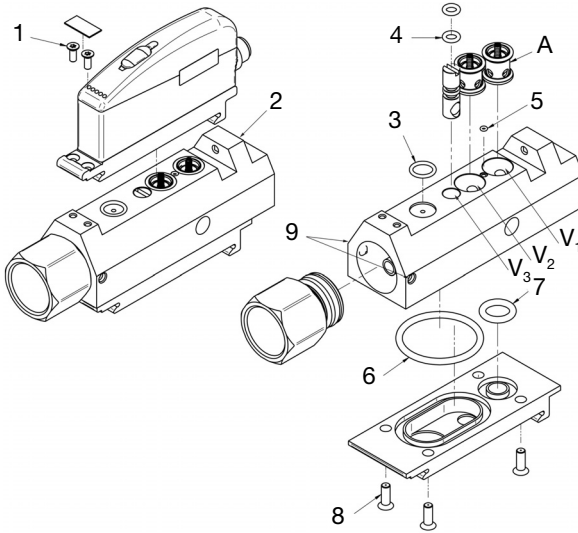
#### A. Repair kit

##### Art. No. 0124255

Black poppet valve cpl (incl. o-rings 11.1x1.6mm and spring). Valid for CU units produced from January 2010. Recommended grease: Klübersynth UH1 14-151 or similar synthetic lubricating grease.

## P5010 CU EXPLODED VIEW

Control and valve unit



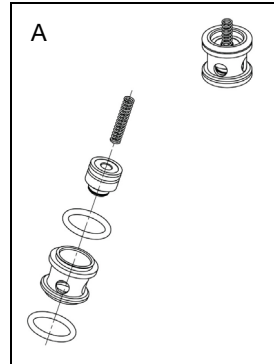
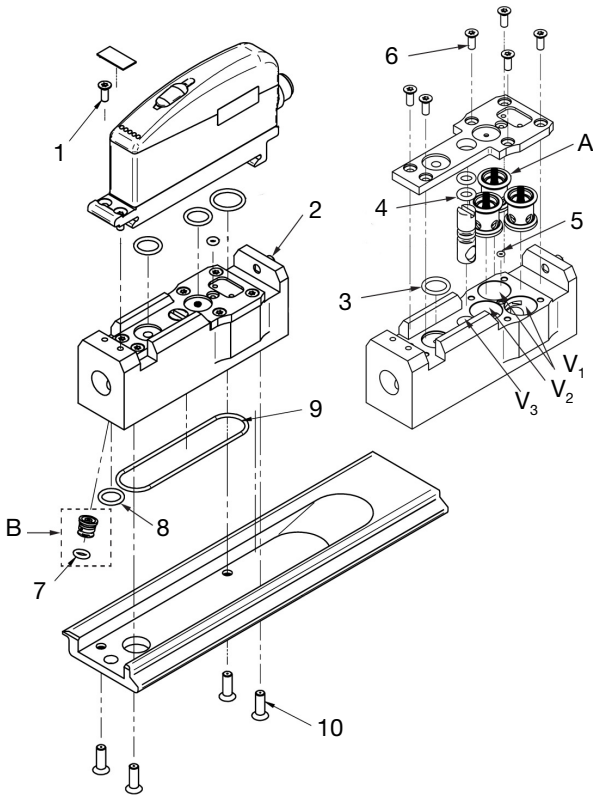
### A. Repair kit, Art. No. 0124255

Black poppet valve cpl (incl. o-rings 11.1x1.6mm and spring). Valid for CU units produced from January 2010. Recommended grease: Klübersynth UH1 14-151 or similar synthetic lubricating grease.

Pos.	Description
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	34.2x3mm
7	11x3mm
8	4x M5x10mm MFX
9	2x M5x6mm
V <sub>1</sub>	Vacuum on/off valve
V <sub>2</sub>	Blow-off valve
V <sub>3</sub>	Blow-off adjustment valve

**P6010 CU EXPLODED VIEW**

Control and valve unit



**A. Repair kit,  
Art. No. 0124255**

Black poppet valve cpl (incl. o-rings 11.1x1.6mm and spring). Valid for CU units produced from January 2010. Recommended grease: Klübersynth UH1 14-151 or similar synthetic lubricating grease.

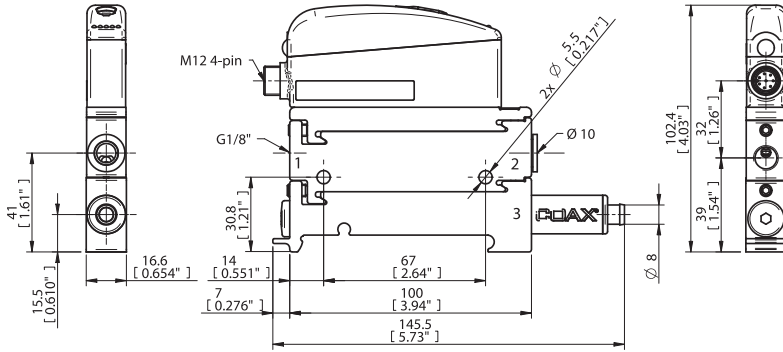
**B. Spare parts used in the separated blow-off.**

Pos.	Description
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	6x M3x8mm TX
7	4.1x1.6mm
8	8.1x1.6mm
9	49x1.6mm
10	4x M4x12mm MFX
V <sub>1</sub>	Vacuum on/off valve
V <sub>2</sub>	Blow-off valve
V <sub>3</sub>	Blow-off adjustment valve

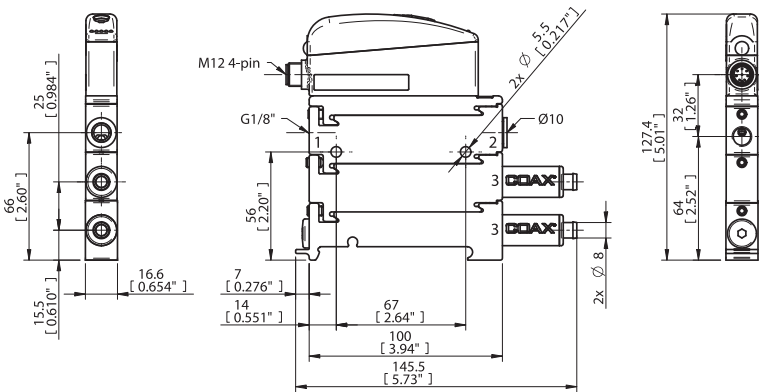
## DIMENSIONS

### P3010

#### 1 COAX® cartridge



#### 2 COAX® cartridges

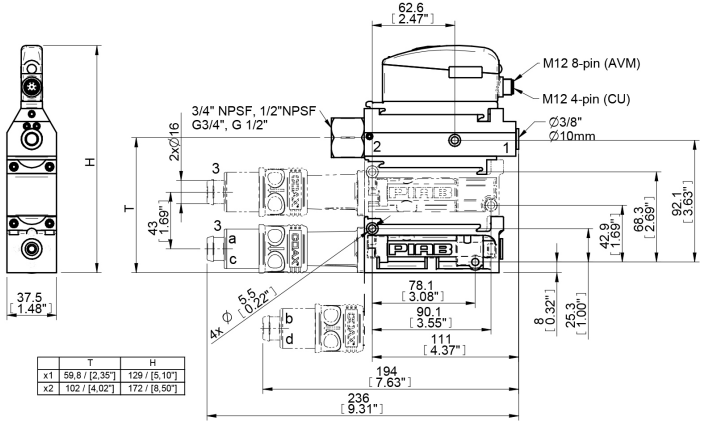
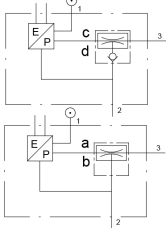


1. Compressed air, 2. Vacuum, 3. Exhaust



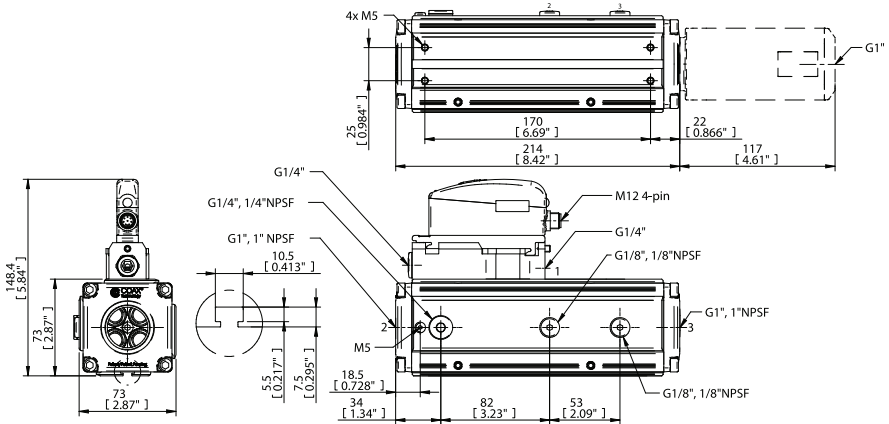
P5010

CU



1. Compressed air, 2. Vacuum, 3. Exhaust

P6010



1. Compressed air, 2. Vacuum, 3. Exhaust

## TECHNICAL DATA

<b>General electric characteristics</b>	
Supply voltage	22–28 VDC (typical 24 VDC)
Maximum ripple	1V <sub>RMS</sub> , 50-60 Hz
Power consumption	Nom. 1.5 W @ 28 VDC (max. 3 W)
MTBF (electronics)	40,000 hours according to MIL-HDBK-217E
<b>Valve units</b>	
Function on/off	Normally closed (NC) or normally open (NO)
Function blow-off	Normally closed (NC)
<b>Other data</b>	
Maximum overpressure	0.7 MPa [101.5 psi]
Blow-off capacity	Adjustable 0–7.5NI/s [0–15.9 scfm]
Operating temperature	0–50°C [32–122°F]
Materials	Al, PA, NBR, SS, PMMA, ABS
Degree of protection	IP65 [NEMA 4]
Cable (accessory)	2 m [6.6 feet] and 5 m [16.4 feet] PUR
Humidity	90 %RH



## INTRODUCCIÓN

CU (Control Unit) es una unidad de control para eyectores de vacío. Este manual es específico para CU, pero también muestra las interfaces a las plataformas del eyector en la gama de productos Piab donde el CU puede ser utilizado. Para una información más detallada sobre el eyector de vacío, por favor vea los manuales para los respectivos eyectores.

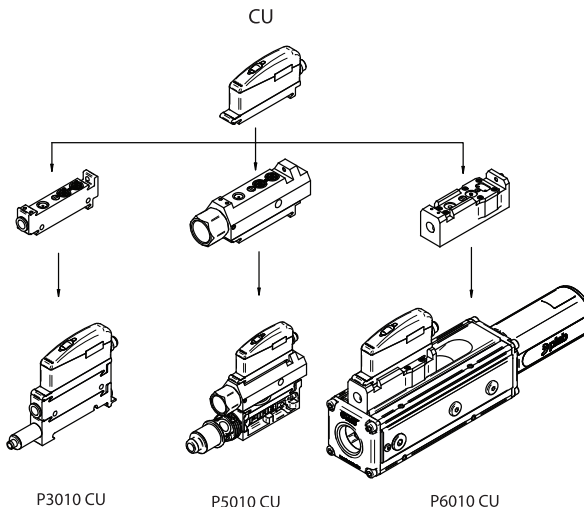
### FUNCIONES/CARACTERÍSTICAS

- ▶ Válvula (V1) del eyector para ON/OFF. Esta válvula es normalmente cerrada (NC) o normalmente abierta (NO).
- ▶ Válvula (V2) para ON/OFF de la función de soplado.
- ▶ Válvula de ajuste (V3) para controlar el caudal de soplado.
- ▶ En las unidades CU para las P6010, hay una opción para soplar desde un puerto separado, para maximizar la eficiencia del soplado en el sistema de vacío.

### DISEÑO

- ▶ Modular, separado en dos secciones principales, una pilot valve unidad y una main unidad de válvulas.
- ▶ Diseño que maximiza la eficacia del soplado.
- ▶ Cubiertas protectoras contra el polvo y la humedad, IP65 [NEMA 4].
- ▶ Diseño compacto y ligero.
- ▶ Conector eléctrico M12 4-pin. Los cables adecuados están disponibles como accesorios. Suitable cable is available as accessory.

### DESCRIPCIÓN

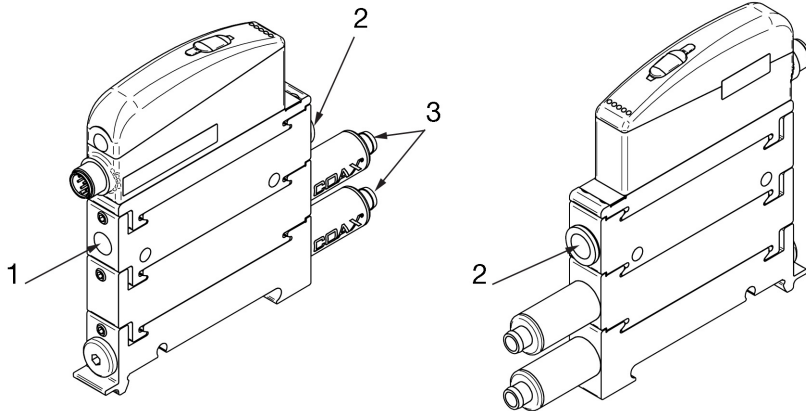


## INSTALACIÓN

El CU puede ser instalado con cualquier orientación. Asegúrese de que el escape del eyector no esté bloqueado. Cuando conecte la manguera de entrada de aire y de vacío a la unidad, es importante que elija las dimensiones correctas de tubo para evitar caídas de presión. Evite diámetros reducidos que provoquen estrangulaciones, tuberías largas, curvas cerradas o conectores de pequeñas dimensiones.

### INSTALACIÓN NEUMÁTICA

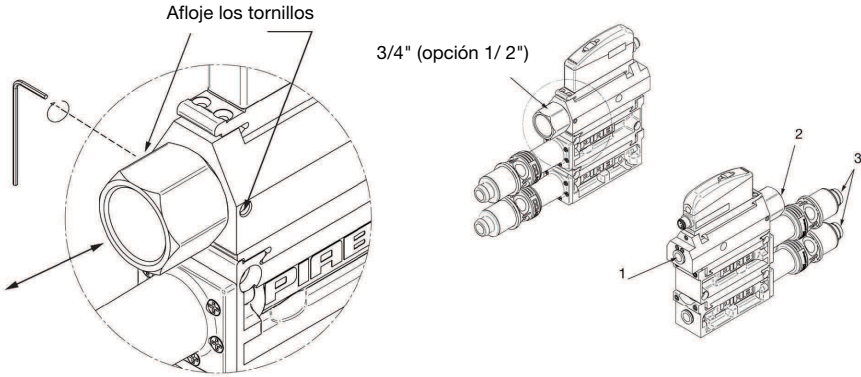
#### P3010 CU



1	Aire comprimido	G1/8", Ø6mm
2	Vacío	Ø10mm, 1/4" NPSF
3	Escape	Ø8mm

Para información más detallada vea el dibujo con anotaciones.

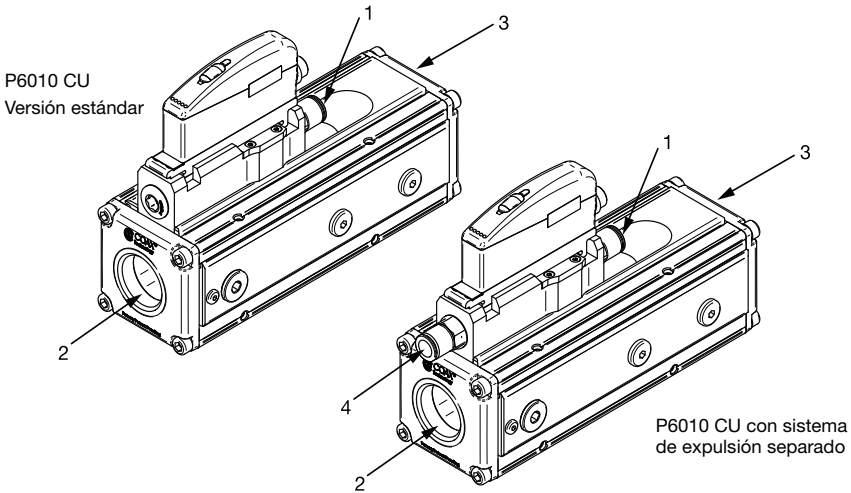
### P5010 CU



1	Aire comprimido	Ø3/8", Ø10mm
2	Vacio	G3/4", G1/2", 3/4" NPSF, 1/2" NPSF
3	Escape	Ø16mm

Para información más detallada vea el dibujo con anotaciones.

### P6010 CU

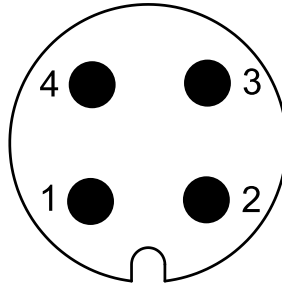


1	Aire comprimido	G1/4", Ø10mm
2	Vacio	G1", G3/4", 1" NPSF, 3/4" NPSF
3	Escape	G1", G3/4", 1" NPSF, 3/4" NPSF
4	Soplado separado (aire comprimido)	G1/4", Ø10mm

Para información más detallada vea el dibujo con anotaciones.

## CONFIGURACIÓN DE LA CONEXIÓN ELÉCTRICA PIN

### CONNECTOR M12 4-PIN



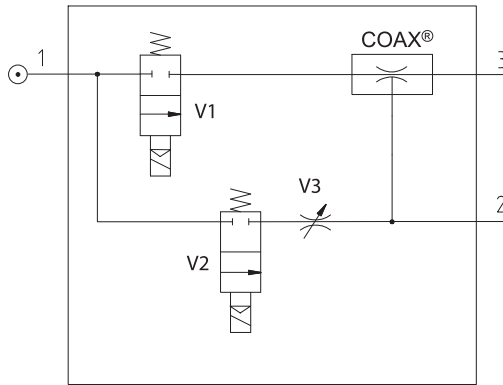
### TIPO PNP

Pin No.	Nombre	Descripción	Colores del cableado Cable 0121817
1	–	No utilizado	Marrón
2	V <sub>in</sub> 2	Señal de control, soplado	Blanco
3	GND	GND	Azul
4	V <sub>in</sub> 1	Señal de control, on/off	Negro

### CABLE DE MONTAJE

Descripción	Art. No.
Cable M12 4-pin hembra, M12 4-pin macho, PUR, L=2m	0118322
Cable M12 4-pin hembra, PUR, L=5m	0121817

## DIAGRAMA NEUMÁTICO



COAX® Ejector multietapa.

V1 Válvula de vacío NC o N0 (Se muestra NC).

V2 Válvula de soplado, NC.

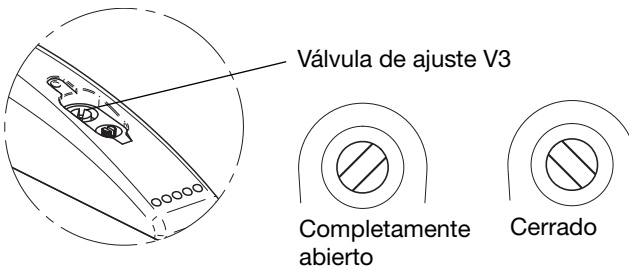
V3 Válvula ajustable de soplado.



**Nota:** La calidad del aire comprimido debe satisfacer los requerimientos según DIN ISO 8573-1 clase 4.

## AJUSTAR POTENCIA DE SOPLADO

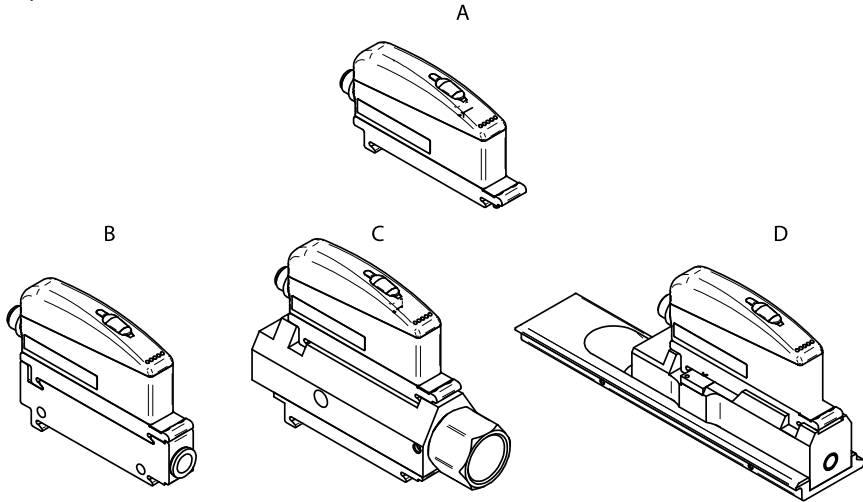
El caudal (potencia) de soplado es infinitamente variable por una válvula de ajuste.





## MANTENIMIENTO Y REPARACIÓN

Los módulos son fáciles de reemplazar para realizar operaciones de mantenimiento y reparación.



### PIEZAS DE RECAMBIO

	Descripción	Art. No.
A	Unidad de control CU NC	0117924
A	Unidad de control CU NO	0200384
B	Función P3010 CU NC	0117696
B	Función P3010 CU NO	0200386
C	Función P5010 CU NC, conexión G	0117716
C	Función P5010 CU NC, conexión NPSF	0117699
D	Función P6010 CU NC	0117719
D	Función P6010 CU NC, soplado separado	0123115

### PRECAUCIONES DE SEGURIDAD

El uso irresponsable de la alimentación de aire comprimido puede causar heridas. La alimentación de aire nunca deberá ser utilizada para otro propósito que no sea aquel para el que está diseñada. Recuerde, cerrar siempre la alimentación de aire para realizar operaciones de limpieza o reparación de los módulos.

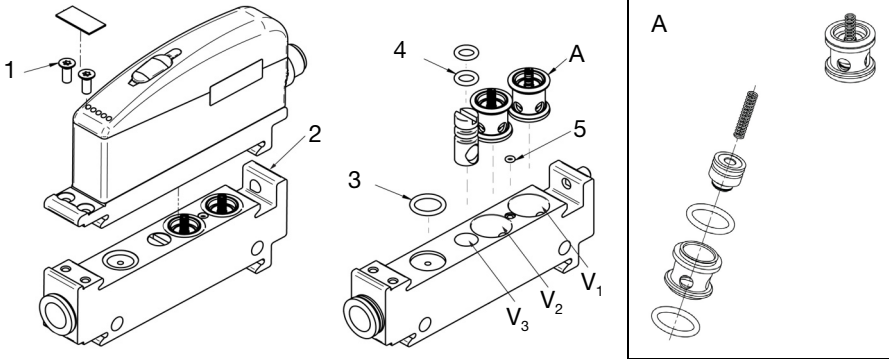
### GARANTÍA

Los cartuchos de vacío COAX® tienen un periodo de garantía de 5 años. Para los componentes electrónicos, la garantía es de 2 años y para componentes con desgaste, 1 año.

## VISTAS EXPLOSIONADAS

### VISTAS EXPLOSIONADAS DE P3010 CU

Unidad de control y válvula



Pos.	Descripción
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
V <sub>1</sub>	Válvula de vacío on/off
V <sub>2</sub>	Válvula de soplado
V <sub>3</sub>	Válvula de ajuste del soplado

#### A. Kit de reparación

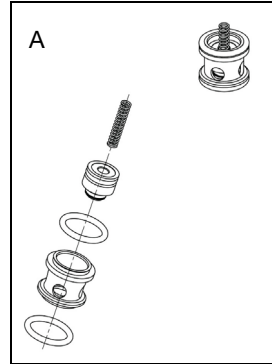
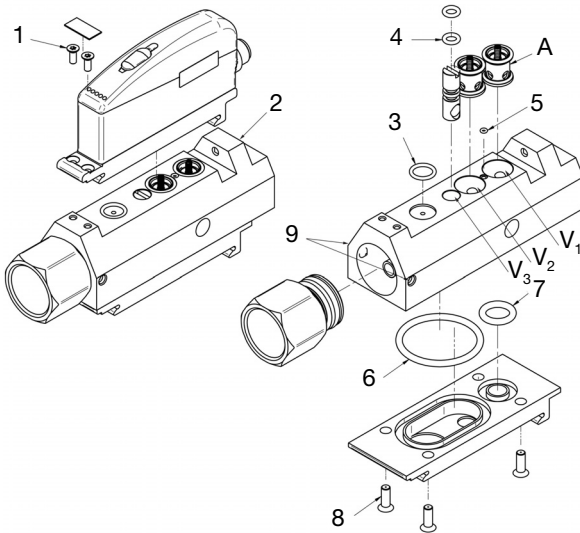
##### Art. No. 0124255

Acoplador negro de válvula de elevación (incluye empaques en O de 11.1 x 1.6mm y resorte). Válido para unidades CU fabricadas a partir de enero de 2010.

Recomendaciones de engrasado: Klübersynth UH1 14-151 o grasa lubricante sintética similar.

**VISTAS EXPLOSIONADAS DE P5010 CU**

Unidad de control y válvula



**A. Kit de reparación  
Art. No. 0124255**

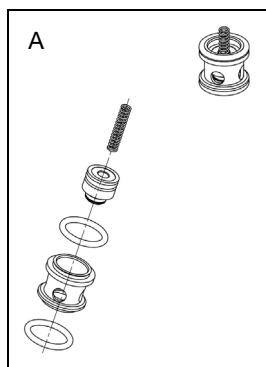
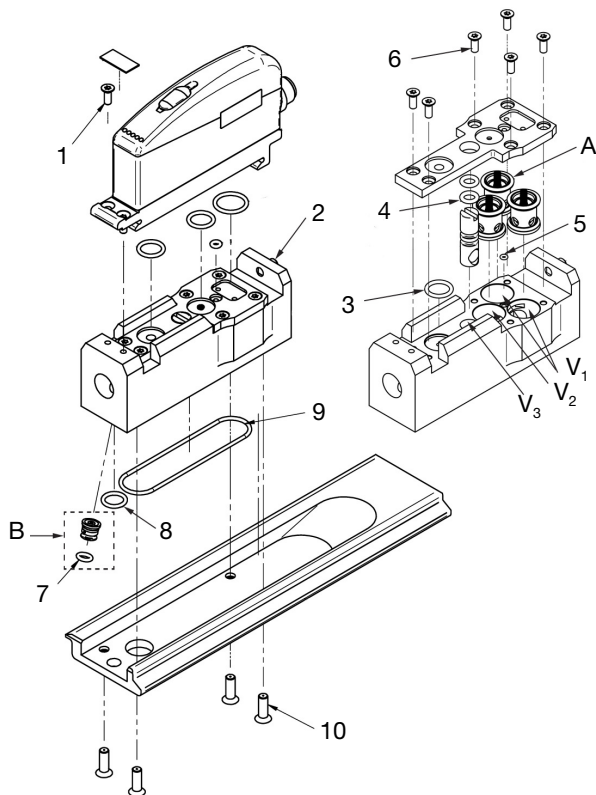
Acoplador negro de válvula de elevación (incluye empaques en O de 11.1 x 1.6mm y resorte). Válido para unidades CU fabricadas a partir de enero de 2010.

Recomendaciones de engrasado: Klübersynth UH1 14-151 o grasa lubricante sintética similar.

Pos.	Descripción
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	34.2x3mm
7	11x3mm
8	4x M5x10mm MFX
9	2x M5x6mm
V <sub>1</sub>	Válvula de vacío on/off
V <sub>2</sub>	Válvula de soplado
V <sub>3</sub>	Válvula de ajuste del soplado

## VISTAS EXPLOSIONADAS DE P6010 CU

Unidad de control y válvula



### A. Kit de reparación

**Art. No. 0124255**

Acoplador negro de válvula de elevación (incluye empaques en O de 11.1 x 1.6mm y resorte). Válido para unidades CU fabricadas a partir de enero de 2010.

Recomendaciones de engrasado: Klübersynth UH1 14-151 o grasa lubricante sintética similar.

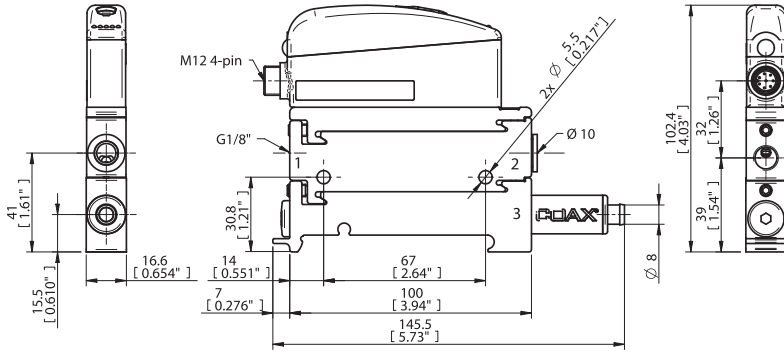
**B.** Piezas utilizadas en el soplado separado.

Pos.	Descripción
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	6x M3x8mm TX
7	4.1x1.6mm
8	8.1x1.6mm
9	49x1.6mm
10	4x M4x12mm MFX
V <sub>1</sub>	Válvula de vacío on/off
V <sub>2</sub>	Válvula de soplado
V <sub>3</sub>	Válvula de ajuste del soplado

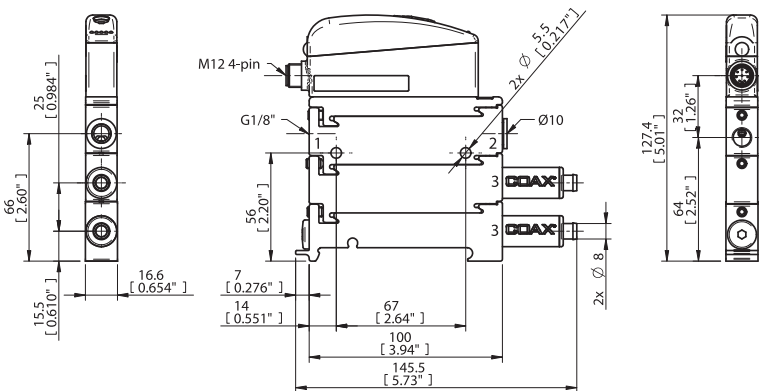
# DIMENSIONES

## P3010

### 1 COAX® cartucho



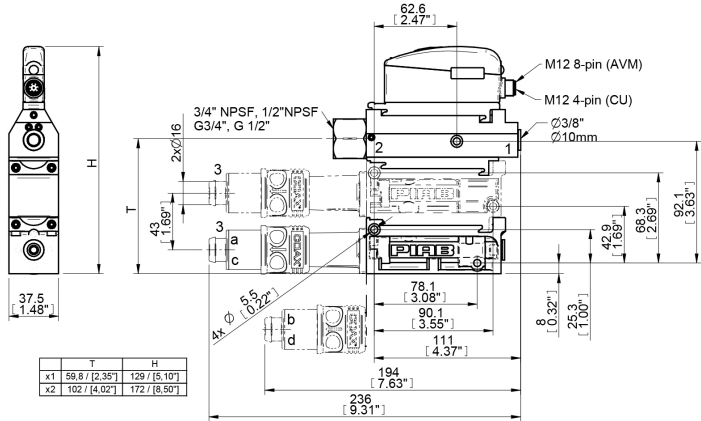
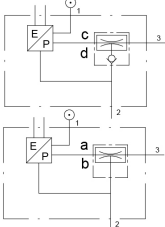
### 2 COAX® cartucho



1. Aire comprimido, 2. Vacío, 3. Escape

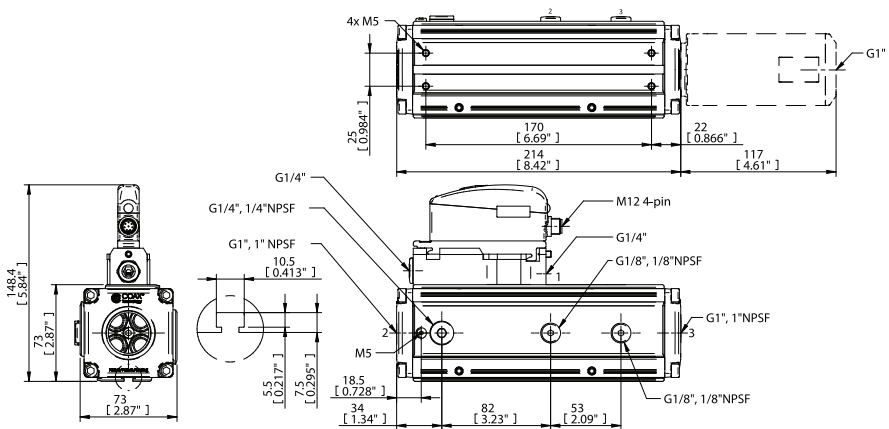
**P5010**

CU



1. Aire comprimido, 2. Vacío, 3. Escape

**P6010**



1. Aire comprimido, 2. Vacío, 3. Escape

## DATOS TÉCNICOS

<b>Características eléctricas generales</b>	
Tensión de alimentación	22–28 VDC (típica 24 VDC)
Fluctuación máxima	1V <sub>RMS</sub> , 50-60 Hz
Consumo	Nom. 1.5 W @ 28 VDC (máx. 3 W)
MTBF (electrónicos)	40,000 horas de acuerdo a MIL-HDBK-217E

<b>Unidades de válvulas</b>	
Función on/off	Normalmente cerrado (NC) o Normalmente abierto (NO)
Función de soplado	Normalmente cerrado (NC)

<b>Otros datos</b>	
Presión máxima	0.7 MPa
Capacidad de soplado	Ajustable 0–7.5NI/s
Temperatura de trabajo	0-50°C
Materiales	Al, PA, NBR, SS, PMMA, ABS
Índice de protección	IP65 [NEMA 4]
Cable (accesorios)	2 m y 5 m PUR
Humedad	90 %RH

## INTRODUCTION

CU (Control Unit) est un dispositif de gestion du vide pour pompes à vide à air comprimé. Ce manuel est spécifique à CU, mais il présente également les interfaces des modèles de la gamme des pompes Piab sur lesquels CU peut s'adapter. Pour plus de détails sur les pompes à vide, veuillez vous reporter aux manuels correspondants.

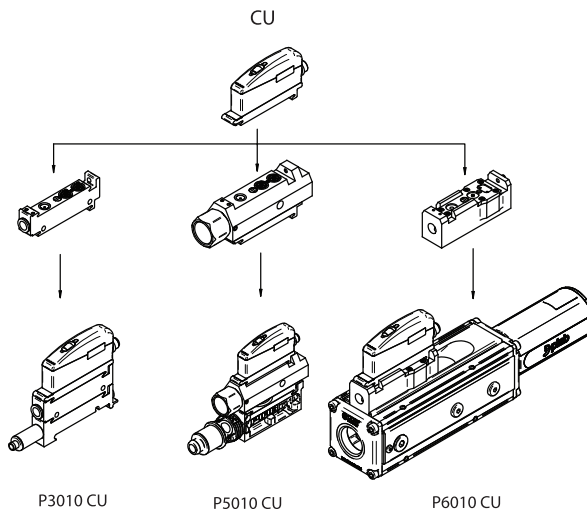
### FONCTIONS/ CARACTÉRISTIQUES

- ▶ Electrovanne (V1) de Marche/Arrêt de la pompe. Cette vanne peut-être Normalement Fermée (NF) ou Normalement Ouverte (NO).
- ▶ Electrovanne (V2) de Marche/Arrêt du contre-soufflage.
- ▶ Vanne de réglage (V3) du débit de contre-soufflage.
- ▶ Port séparé optionnel sur le CU de la P6010, pour renforcer l'efficacité du contre-soufflage dans le réseau de vide.

### CONCEPTION

- ▶ Modulaire en deux parties principales distinctes, une Pilot valve unité et une main unité pneumatique.
- ▶ Efficacité du contre-soufflage optimisée.
- ▶ Capot de protection IP65 [NEMA 4] contre la poussière et l'humidité.
- ▶ Compact et de faible largeur.
- ▶ Connecteur électrique M12 4-contacts. Câble de raccordement proposé en option.

### VUE ÉCLATÉE



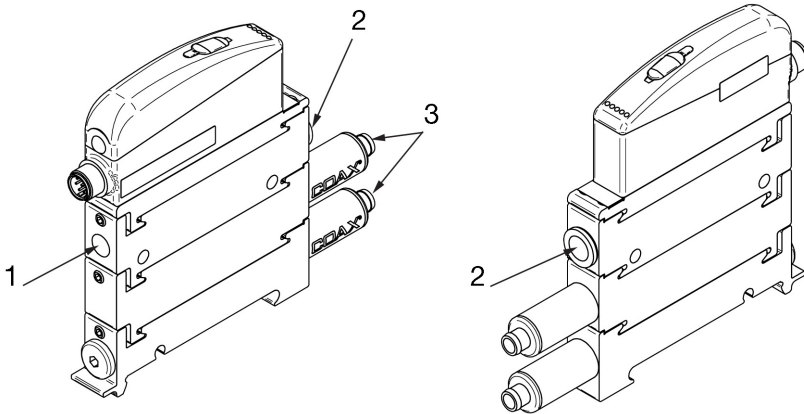


## RACCORDEMENTS

CU peut être installé dans n'importe quel sens. Veillez à ce que l'échappement de la pompe ne soit pas obstrué. Pour le raccordement de l'alimentation en air comprimé et de l'aspiration, choisir des tuyaux de dimensions adéquates pour limiter les pertes de charges. Eviter les réductions de diamètres, les canalisations trop longues, les coudes en équerre et les raccords sous dimensionnés.

### RACCORDEMENTS PNEUMATIQUES

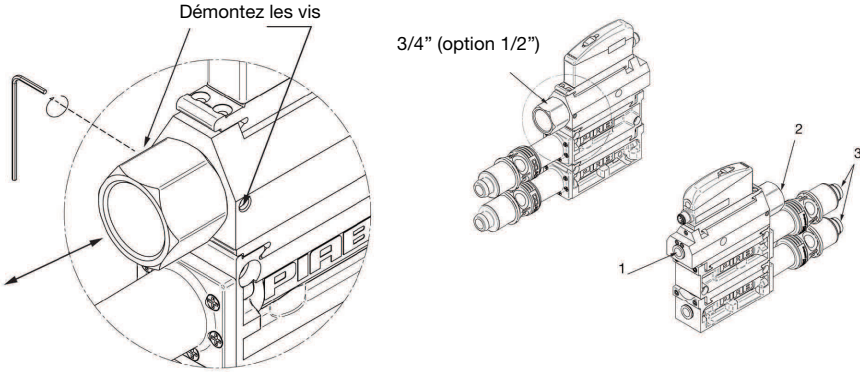
#### P3010 CU



1	Air comprimé	G1/8", Ø6mm
2	Aspiration	Ø10mm, 1/4" NPSF
3	Echappement	Ø8mm

*Pour plus d'informations, veuillez vous reporter au schéma dimensionnel.*

**P5010 CU**

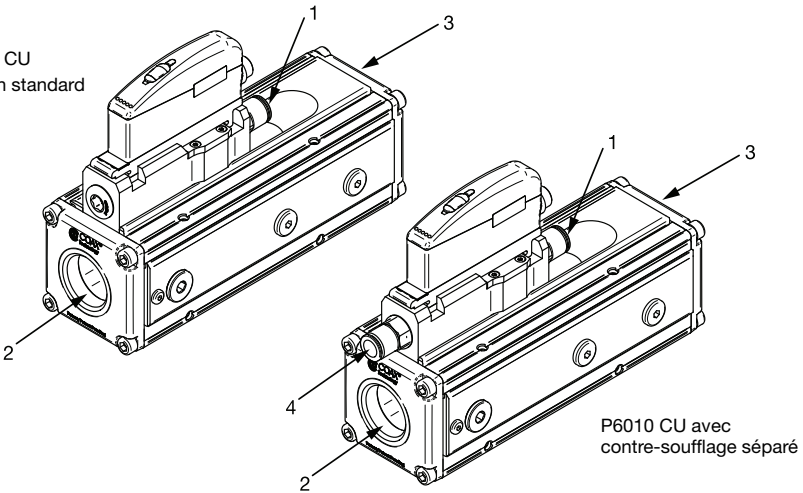


1	Air comprimé	Ø3/8", Ø10mm
2	Aspiration	G3/4", G1/2", 3/4" NPSF, 1/2" NPSF
3	Echappement	Ø16mm

Pour plus d'informations, veuillez vous reporter au schéma dimensionnel.

**P6010 CU**

P6010 CU  
Version standard

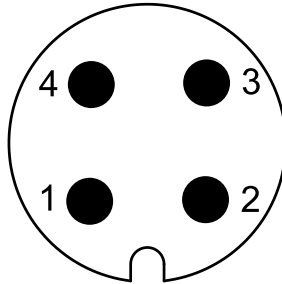


1	Air comprimé	G1/4", Ø10mm
2	Aspiration	G1", G3/4", 1" NPSF, 3/4" NPSF
3	Echappement	G1", G3/4", 1" NPSF, 3/4" NPSF
4	Contre-soufflage séparé (air comprimé)	G1/4", Ø10mm

Pour plus d'informations, veuillez vous reporter au schéma dimensionnel.

## RACCORDEMENT ÉLECTRIQUE, REPÉRAGE DES BORNES

### CONNECTEUR M12 4-CONTACTS



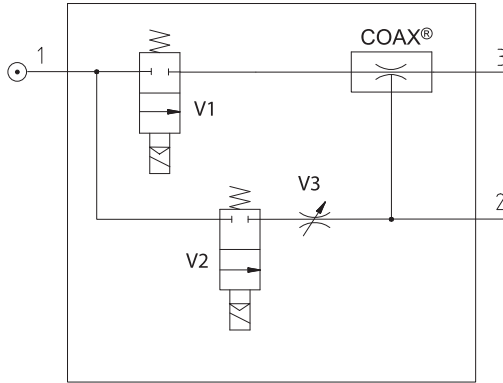
### TYPE PNP

Borne n°	Nom	Description	Code couleur Câble 0121817
1	-	Non utilisé	Marron
2	$V_{in} 2$	Entrée de commande, Contre-soufflage	Blanc
3	GND	GND	Bleu
4	$V_{in} 1$	Entrée de commande , Marche/Arrêt	Noir

### CÂBLE DE RACCORDEMENT

Description	Art. No.
Câble M12 femelle 4 contacts, M12 mâles 4 contacts, PUR, L=2m	0118322
Câble M12 femelle 4 contacts, PUR, L=5m	0121817

## SCHÉMA PNEUMATIQUE



COAX® Ejecteur multi-étagé COAX®.

V1 Electrovanne pour l'aspiration, NF ou NO (NF sur le schéma).

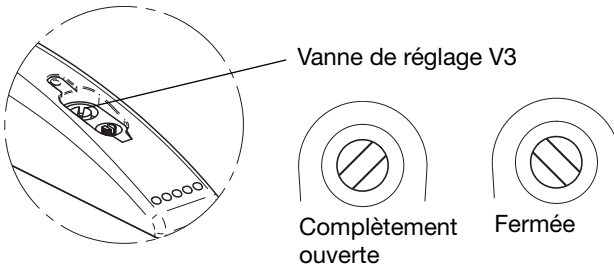
V2 Electrovanne de contre-soufflage, NF.

V3 Vanne de réglage du débit du contre-soufflage.

⦿ **Note:** La qualité de l'air comprimé utilisé doit répondre à la norme DIN ISO 8573-1 en classe 4.

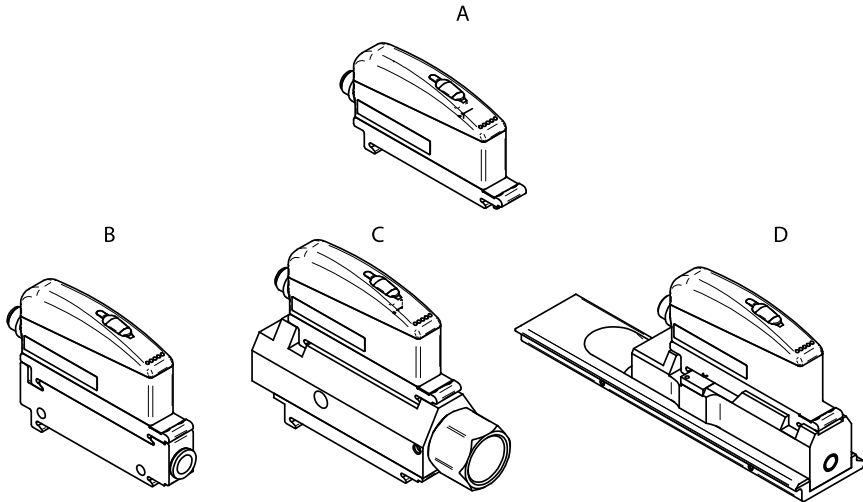
## RÉGLAGE DE LA PUISSANCE DE CONTRE-SOUFFLAGE

Le débit (puissance) de contre-soufflage peut être ajusté par une vanne réglable.



## ENTRETIEN ET MAINTENANCE

Les modules sont faciles à remplacer à des fins d'entretien et de maintenance.



### PIÈCES DÉTACHÉES

	Description	Art. No.
A	Unité de commande CU NF	0117924
A	Unité de commande CU NO	0200384
B	Fonction P3010 CU NF	0117696
B	Fonction P3010 CU NO	0200386
C	Fonction P5010 CU NF, raccordement Gaz	0117716
C	Fonction P5010 CU NF, raccordement NPSF	0117699
D	Fonction P6010 CU NF	0117719
D	Fonction P6010 CU NF, contre-soufflage séparé	0123115

### PRÉCAUTIONS DE SÉCURITÉ

Une mauvaise utilisation de l'alimentation en air comprimé risque de provoquer de graves blessures. L'alimentation en air ne doit jamais être utilisée à des fins autres que celles pour lesquelles elle est prévue. Veillez à fermer l'alimentation en air lors du nettoyage ou de l'entretien des modules.

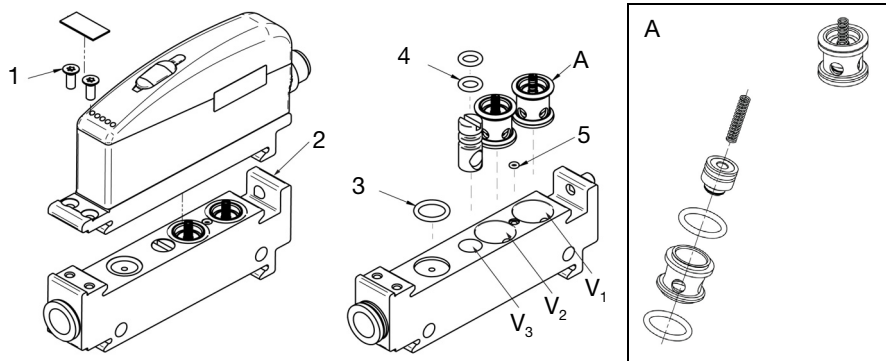
### GARANTIE

Les cartouches à vide COAX® sont garanties pendant 5 ans. Pour les pièces électroniques, la période de garantie est de 2 ans et de 12 mois pour les pièces d'usure.

## VUES ÉCLATÉES

### VUE ÉCLATÉE P3010 CU

Unité de commande et module électrovannes



Pos.	Description
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
V <sub>1</sub>	Vanne marche/arrêt aspiration
V <sub>2</sub>	Vanne marche/arrêt de contre-soufflage
V <sub>3</sub>	Vanne de réglage du contre-soufflage

#### A. Kit de réparation

##### Réf. 0124255

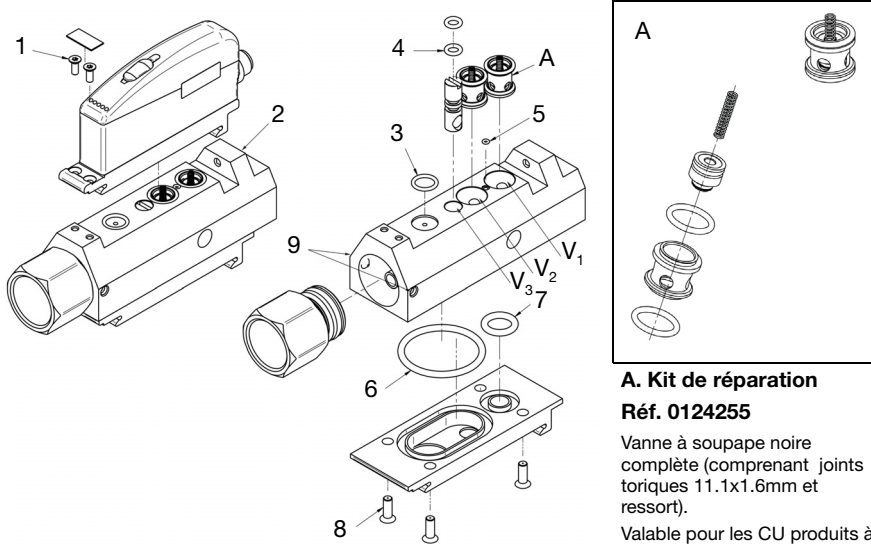
Vanne à soupape noire complète (comprenant joints toriques 11.1x1.6mm et ressort).

Valable pour les CU produits à partir de janvier 2010.

Graisse recommandée : Klübersynth UH1 14-151 ou graisse synthétique lubrifiante équivalente.

## VUE ÉCLATÉE P5010 CU

Unité de commande et module électrovannes



### A. Kit de réparation

Réf. 0124255

Vanne à soupape noire complète (comprenant joints toriques 11.1x1.6mm et ressort).

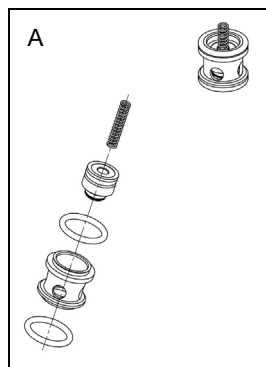
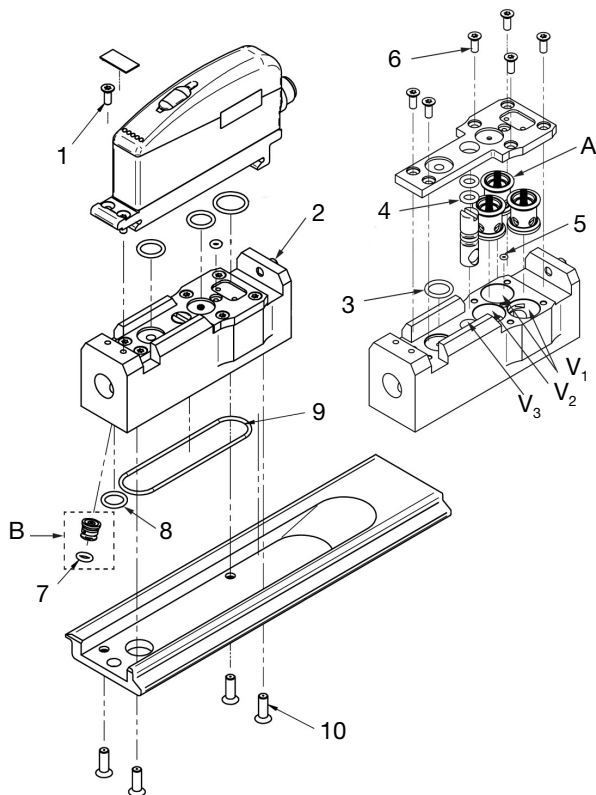
Valable pour les CU produits à partir de janvier 2010.

Graisse recommandée : Klübersynth UH1 14-151 ou graisse synthétique lubrifiante équivalente.

Pos.	Description
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	34.2x3mm
7	11x3mm
8	4x M5x10mm MFX
9	2x M5x6mm
V <sub>1</sub>	Vanne de marche/arrêt aspiration
V <sub>2</sub>	Vanne de contre-soufflage
V <sub>3</sub>	Vanne de réglage du contre-soufflage

## VUE ÉCLATÉE P6010 CU

Unité de commande et module électrovannes



### A. Kit de réparation

Réf. 0124255

Vanne à soupape noire complète (comprenant joints toriques 11.1x1.6mm et ressort).

Valable pour les CU produits à partir de janvier 2010.

Graisse recommandée : Klübersynth UH1 14-151 ou graisse synthétique lubrifiante équivalente.

B. Pièces utilisées dans le contre-soufflage séparé.

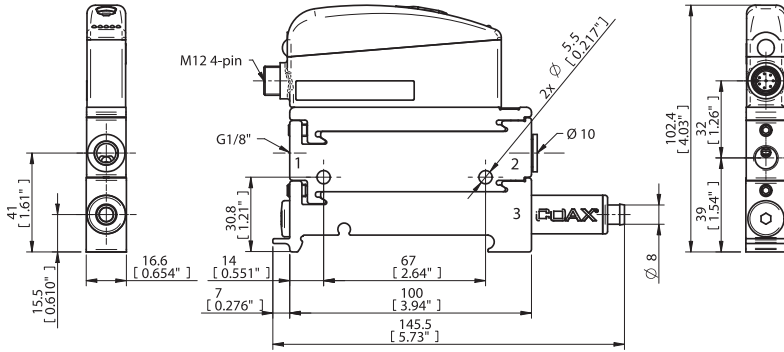
Pos.	Description
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	6x M3x8mm TX
7	4.1x1.6mm
8	8.1x1.6mm
9	49x1.6mm
10	4x M4x12mm MFX
V <sub>1</sub>	Vanne marche/arrêt aspiration
V <sub>2</sub>	Vanne de contre-soufflage
V <sub>3</sub>	Vanne de réglage du contre-soufflage



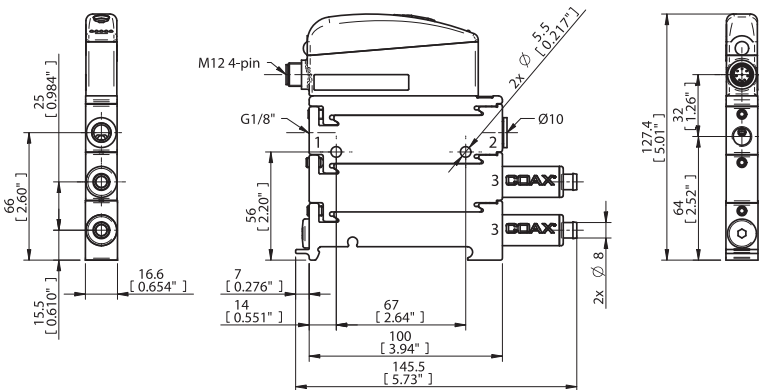
# DIMENSIONS

## P3010

### 1 cartouche COAX®



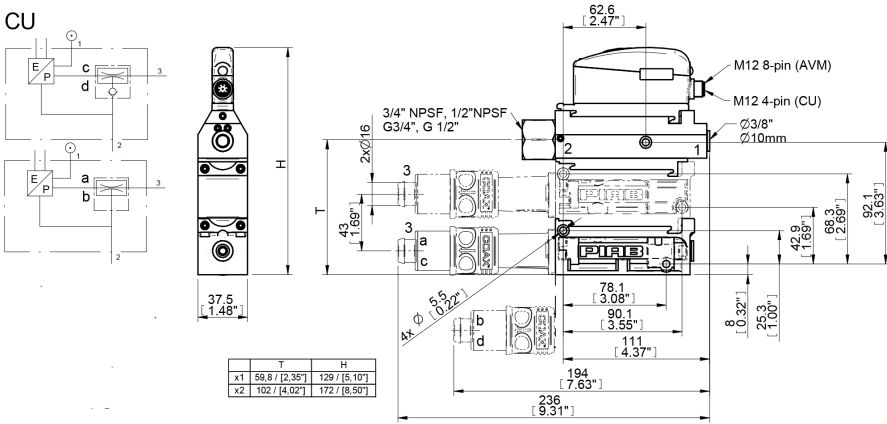
### 2 cartouche COAX®



1. Air comprimé, 2. Aspiration, 3. Refoulement

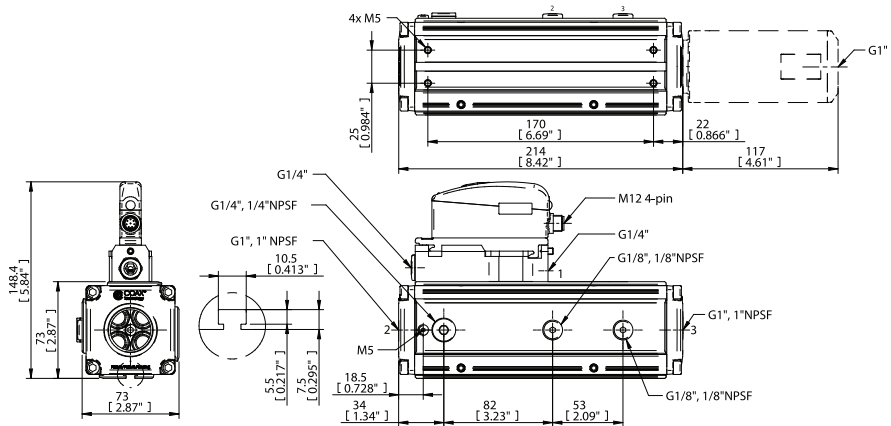
P5010

CU



1. Air comprimé, 2. Aspiration, 3. Refoulement

P6010



1. Air comprimé, 2. Aspiration, 3. Refoulement

## CARACTERISTIQUES TECHNIQUES

<b>Caractéristiques électriques générales</b>	
Tension d'alimentation	22–28 VDC ( 24 VDC nominale)
Ondulation maximum	1V <sub>RMS</sub> , 50-60 Hz
Consommation électrique	1,5 W nom. sous 28 VDC (max. 3 W)
MTBF (électronique)	40.000 heures selon MIL-HDBK-217E

<b>Electrovannes</b>	
Electrovanne de Marche/Arrêt	Normalement fermée (NF) ou normalement ouverte (NO)
Electrovanne de contre-soufflage	Normalement fermée (NF)

<b>Autres caractéristiques</b>	
Surpression maximum	0.7 MPa
Débit du contre-soufflage	Réglable entre 0–7.5NI/s
Plage de température de fonctionnement	0-50°C
Matériaux	Al, PA, NBR, SS, PMMA, ABS
Degré de protection	IP65 [NEMA 4]
Câbles (accessoires en option)	2 m ou 5 m PUR
Humidité	90 %RH

## INTRODUZIONE

Il dispositivo CU (Control Unit) è un'unità di controllo per pompe a vuoto. Questo manuale è specifico per CU ma al suo interno sono inoltre rappresentate le interfacce di connessione con altri prodotti Piab su cui il medesimo può essere utilizzato. Per ulteriori informazioni consultare i manuali relativi ai singoli prodotti.

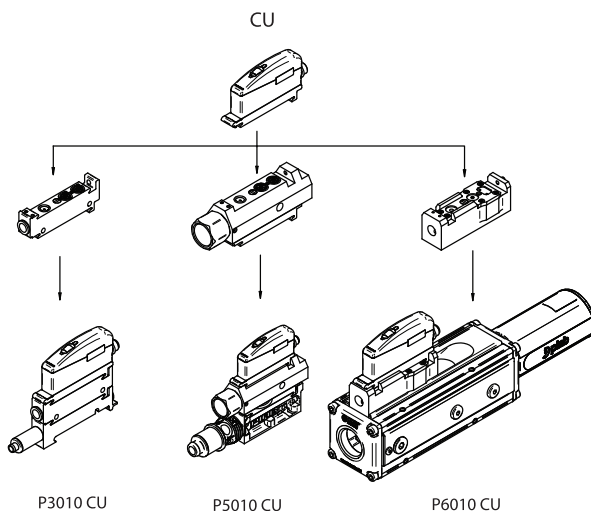
## FUNZIONI/CARATTERISTICHE

- ▶ Valvola (V1) per ON/OFF vuoto. Questa valvola è normalmente chiusa (NC) o normalmente aperta (NO).
- ▶ Valvola (V2) per ON/OFF del controsoffio.
- ▶ Valvola regolabile (V3) per il controllo della portata del controsoffio.
- ▶ Le unità CU per le P6010 sono dotate di una porta separata per soffio realizzata per massimizzare l'efficienza del contro soffio nel circuito del vuoto.

## DESIGN

- ▶ Modulare suddiviso in due principali sezioni, un'unità pilot valve unit ed un'unità di valvola one main valve unit.
- ▶ Design che permette di massimizzare l'efficienza del controsoffio.
- ▶ Protezione da polvere e umidità, isolamento classe IP65 [NEMA 4].
- ▶ Design compatto e lineare.
- ▶ Connessione elettrica M12 4-pin. Sono disponibili come accessori i cavi adeguati per la connessione.

## COMPONENTI PRINCIPALI

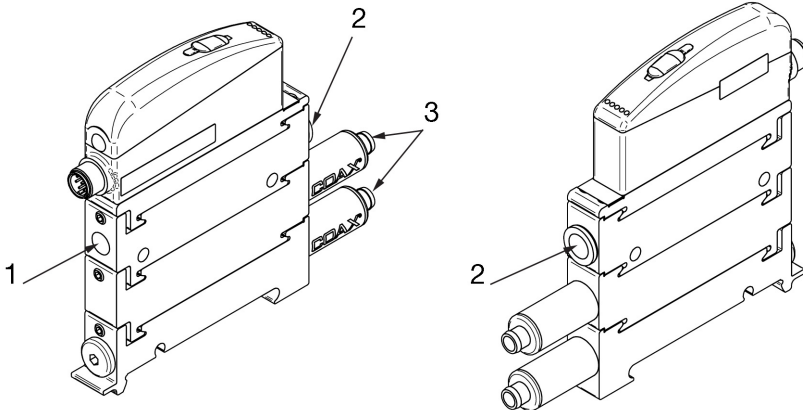


## INSTALLAZIONE

Il dispositivo CU può essere orientato nello spazio in maniera libera. Assicurarsi che lo scarico dell'eiettore non sia occluso. Collegando la sorgente di alimentazione con l'unità è importante scegliere il tubo appropriato al fine di prevenire le cadute di pressione. Evitare tubi con passaggio interno limitato e di elevata lunghezza, curve a gomito e connettori con strozzature interne.

### CONNESSIONE PNEUMATICA

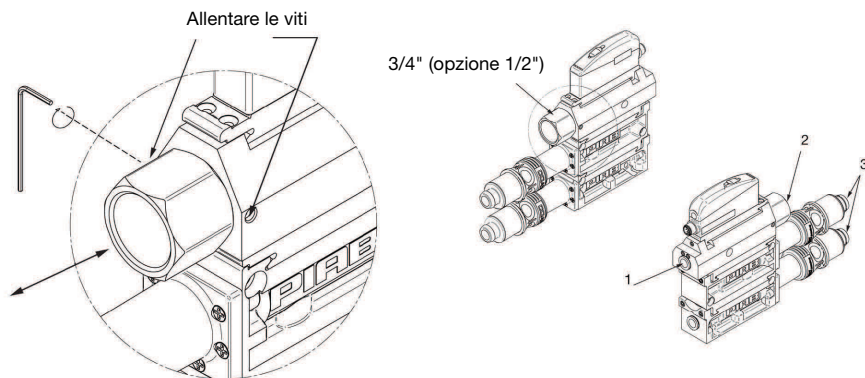
#### P3010 CU



1	Aria compressa	G1/8", Ø6mm
2	Vuoto	Ø10mm, 1/4" NPSF
3	Scarico	Ø8mm

*Per maggiori dettagli vedere disegno dimensionale.*

**P5010 CU**

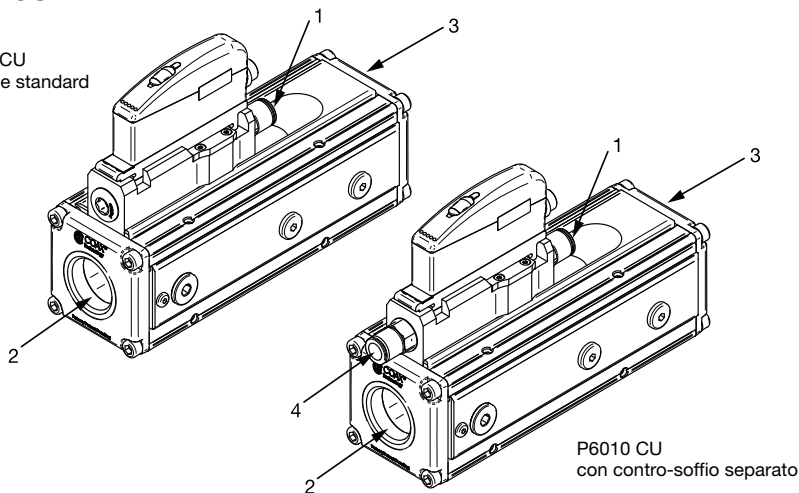


1	Aria compressa	Ø3/8", Ø10mm
2	Vuoto	G3/4", G1/2", 3/4" NPSF, 1/2" NPSF
3	Scarico	Ø16mm

Per maggiori dettagli vedere disegno dimensionale.

**P6010 CU**

P6010 CU  
versione standard

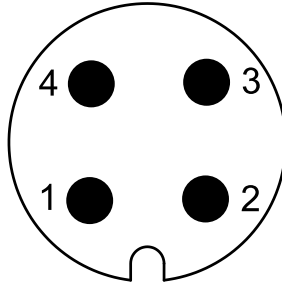


1	Aria compressa	G1/4", Ø10mm
2	Vuoto	G1", G3/4", 1" NPSF, 3/4" NPSF
3	Scarico	G1", G3/4", 1" NPSF, 3/4" NPSF
4	Controsoffio separato (aria compressa)	G1/4", Ø10mm

Per maggiori dettagli vedere disegno dimensionale.

## CONNESSIONE ELETTRICA

### CONNESSIONE M12 4-PIN



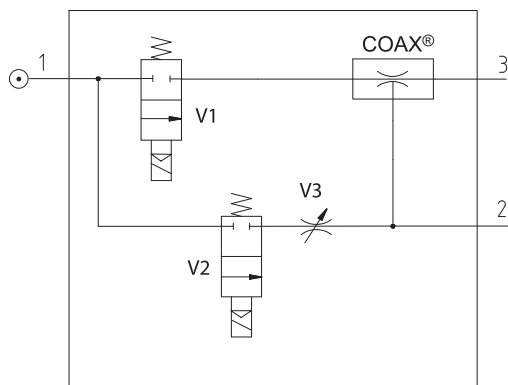
### CONNESSIONE PNP

Pin	Nome	Descrizione	Colore cavo 0121817
1	-	Usato	Marrone
2	$V_{in} 2$	Segnale di controllo controsoffio	Bianco
3	GND	GND	Blu
4	$V_{in} 1$	Segnale di controllo on/off	Nero

### CAVO DI CONNESSIONE

Descrizione	Art. No.
Cavo M12 4-pin femmina, M12 4-pin maschio, PUR, L=2m	0118322
Cavo M12 4-pin femmina, PUR, L=5m	0121817

## SCHEMA PNEUMATICO



COAX® Eiettore Multi-stadio.

V1 Valvola per vuoto, NC o NO (Mostrata NC).

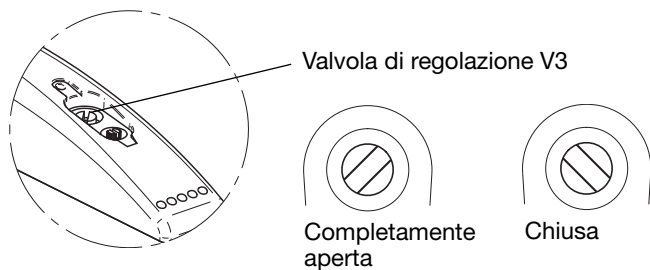
V2 Valvola per controsoffio, NC.

V3 Regolazione intensità controsoffio

⊙ **Nota:** La qualità dell'aria compressa deve soddisfare le regolamentazione DIN ISO 8573-1 class 4.

## IMPOSTARE L'INTENSITÀ DEL CONTROSOFFI

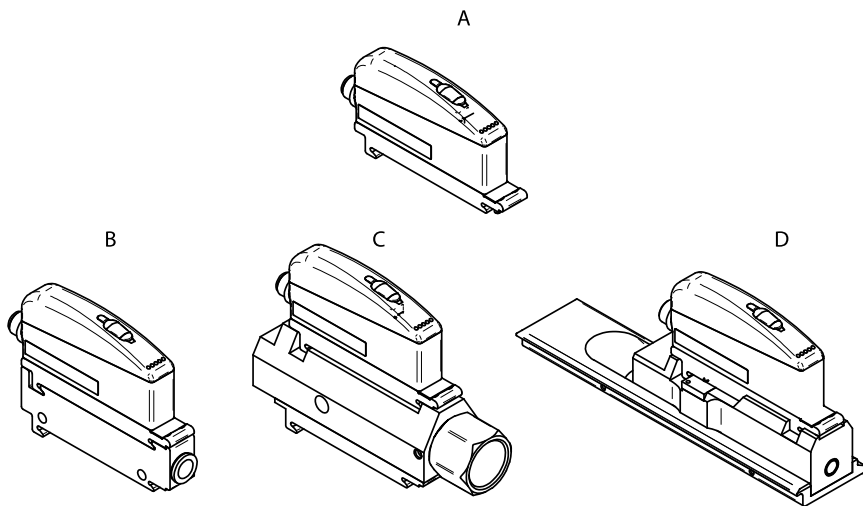
L'intensità del controsoffio può essere variata agendo sulla vite di regolazione.





## MANUTENZIONE

I moduli sono di semplice sostituzione per le operazioni di manutenzione..



## RICAMBI

	Descrizione	Cod. rif.
A	Unità di controllo CU NC	0117924
A	Unità di controllo CU NO	0200384
B	Funzione P3010 CU NC	0117696
B	Funzione P3010 CU NO	0200386
C	Funzione P5010 CU NC, filettature Gas	0117716
C	Funzione P5010 CU NC, filettature NPSF	0117699
D	Funzione P6010 CU NC	0117719
D	Funzione P6010 CU NC, contro soffio separato	0123115

## ISTRUZIONI DI SICUREZZA

L'uso scorretto dell'aria compressa può causare danni alle persone ed alle cose. L'aria compressa non deve mai essere utilizzata per scopi differenti da quelli previsti. Scollegare sempre l'aria compressa durante le operazioni di pulizia e manutenzione dei moduli.

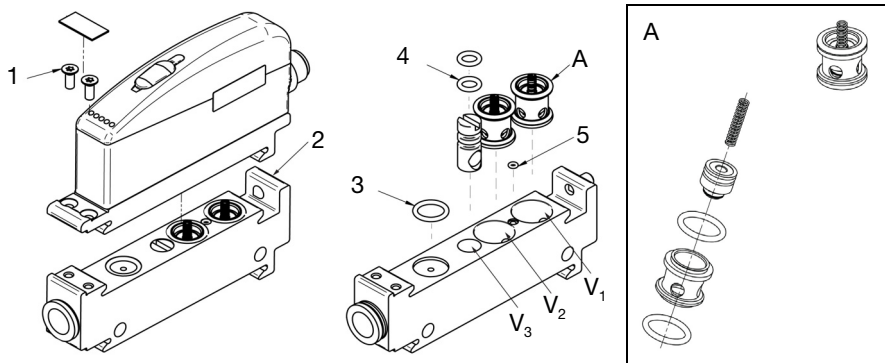
## GARANZIA

Le pompe a cartuccia COAX® sono coperte da 5 anni di garanzia. La garanzia per l'elettronica è di 2 anni e per i materiali di consumo di 1 anno.

## VISTE ESPLOSE

### VISTA ESPLOSO P3010 CU

Unità di controllo



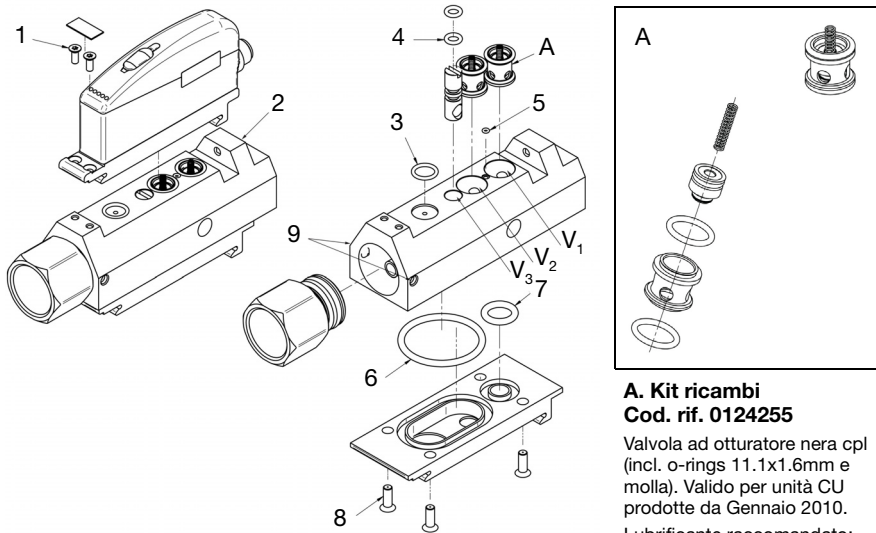
Pos.	Descrizione
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
V <sub>1</sub>	Valvola on/off vuoto
V <sub>2</sub>	Valvola controsoffio
V <sub>3</sub>	Vite regolazione controsoffio

#### A. Kit ricambi Cod. rif. 0124255

Valvola ad otturatore nera cpl (incl. o-rings 11.1x1.6mm e molla). Valido per unità CU prodotte da Gennaio 2010.  
Lubrificante raccomandato: Klübersynth UH1 14-151 o lubrificanti sintetici simili.

## VISTA ESPLOSO P5010 CU

Unità di controllo



### A. Kit ricambi Cod. rif. 0124255

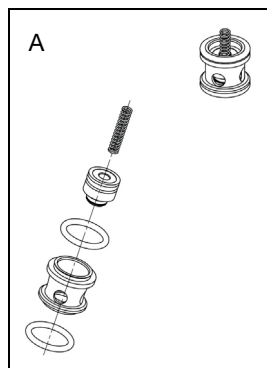
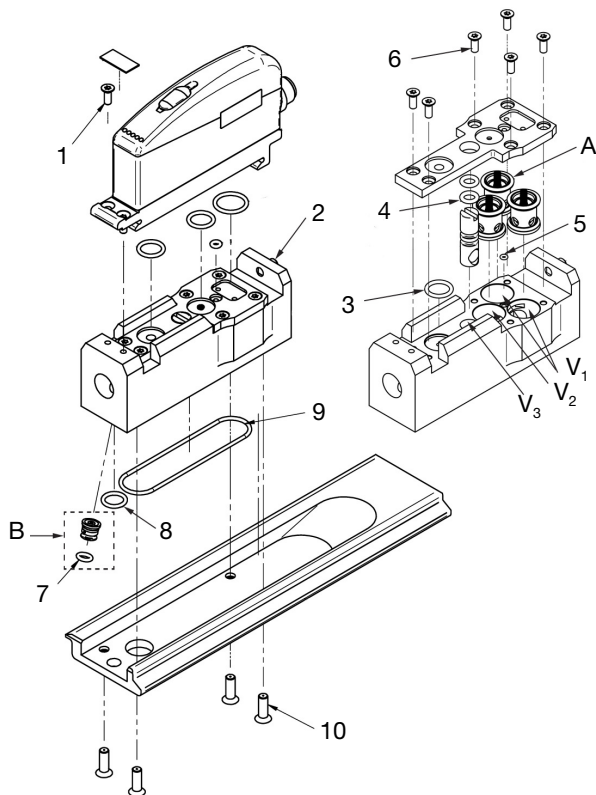
Valvola ad otturatore nera cpl  
(incl. o-rings 11.1x1.6mm e  
molla). Valido per unità CU  
prodotte da Gennaio 2010.

Lubrificante raccomandato:  
Klübersynth UH1 14-151 o  
lubrificanti sintetici simili.

Pos.	Descrizione
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	34.2x3mm
7	11x3mm
8	4x M5x10mm MFX
9	2x M5x6mm
V <sub>1</sub>	Valvola on/off vuoto
V <sub>2</sub>	Valvola controsoffio
V <sub>3</sub>	Vite regolazione controsoffio

## VISTA ESPLOSO P6010 CU

Unità di controllo



### A. Kit ricambi Cod. rif. 0124255

Valvola ad otturatore nera cpl (incl. o-rings 11.1x1.6mm e molla). Valido per unità CU prodotte da Gennaio 2010.

Lubrificante raccomandato: Klübersynth UH1 14-151 o lubrificanti sintetici simili.

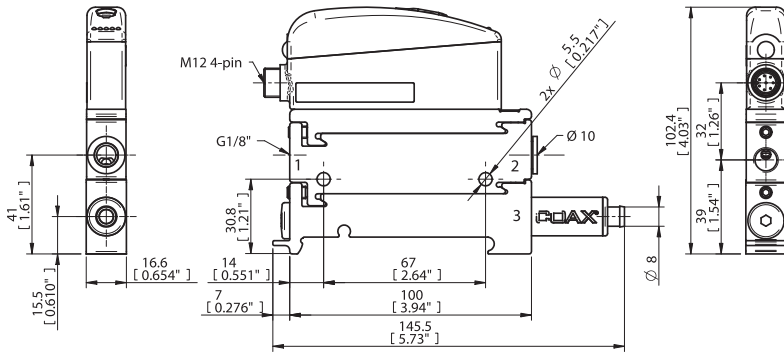
B. Parti utilizzate nel controsoffio separato.

Pos.	Descrizione
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	6x M3x8mm TX
7	4.1x1.6mm
8	8.1x1.6mm
9	49x1.6mm
10	4x M4x12mm MFX
V <sub>1</sub>	Valvola on/off vuoto
V <sub>2</sub>	Valvola controsoffio
V <sub>3</sub>	Vite regolazione controsoffio

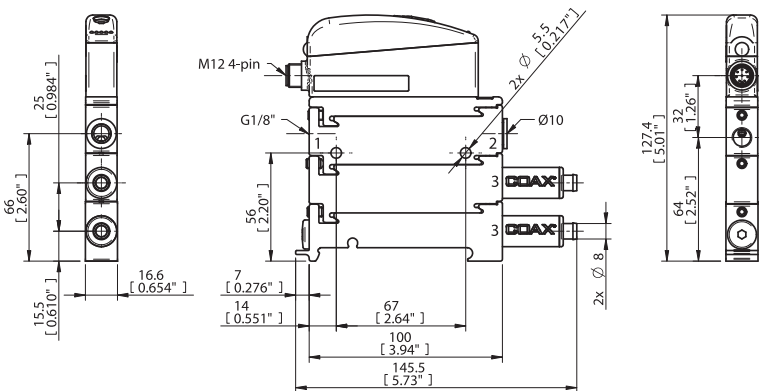
# DIMENSIONI

## P3010

### 1 cartuccia COAX®



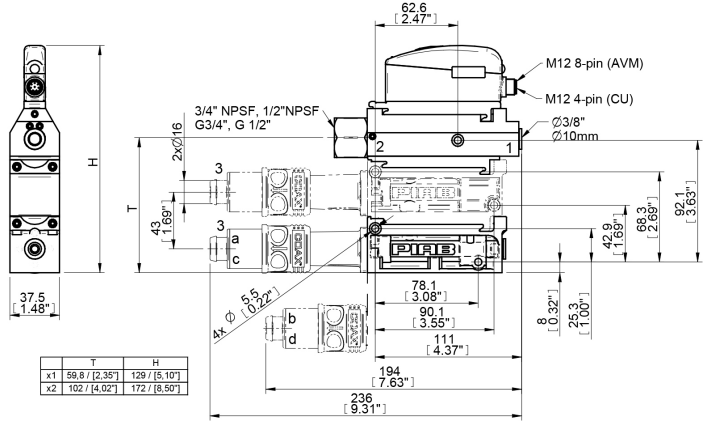
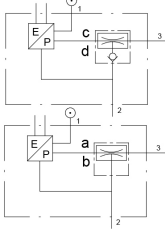
### 2 cartuccia COAX®



1. Aria compressa, 2. Vuoto, 3. Scarico

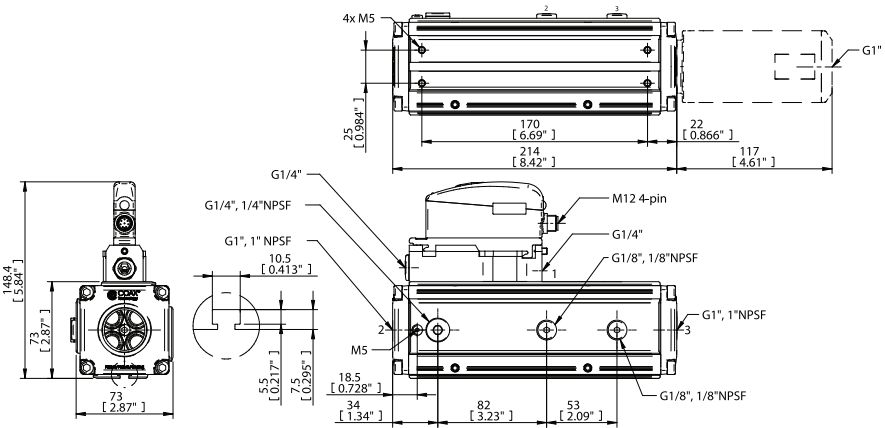
**P5010**

CU



1. Aria compressa, 2. Vuoto, 3. Scarico

**P6010**



1. Aria compressa, 2. Vuoto, 3. Scarico

## CARATTERISTICHE TECNICHE

<b>Caratteristiche elettriche generali</b>	
Tensione di alimentazione	22–28 VDC (tipica 24 VDC)
Ripple massimo	1V <sub>RMS</sub> , 50-60 Hz
Corrente assorbita	Nom. 1.5 W @ 28 VDC (max. 3 W)
Affidabilità	40.000 ore secondo MIL-HDBK-217E
<b>Elettrovalvole</b>	
Valvola per on/off	Normalmente chiusa (NC) o normalmente aperta (NO)
Valvola per controsoffio	Normalmente chiusa (NC)
<b>Altre caratteristiche</b>	
Sovrapressione massima	0.7 MPa
Portata del controsoffio	Regolabile, 0–7.5NI/s
Temperatura di lavoro	0–50°C
Materiali	Al, PA, NBR, SS, PMMA, ABS
Classe di protezione	IP65 [NEMA 4]
Cavo (accessorio)	2 m e 5 m PUR
Umidità	90 %RH

## INLEDNING

CU (Control Unit) är en styr- och kontrollenhet till vakuüm-ejektorer. Denna manual är specifik för CU, men visar även gränssnitten mot de ejektorplattformar ur Piabs sortiment, där CU passar in. För mer detaljerad information om vakuümejektorn hänvisas till manualen för respektive ejektor.

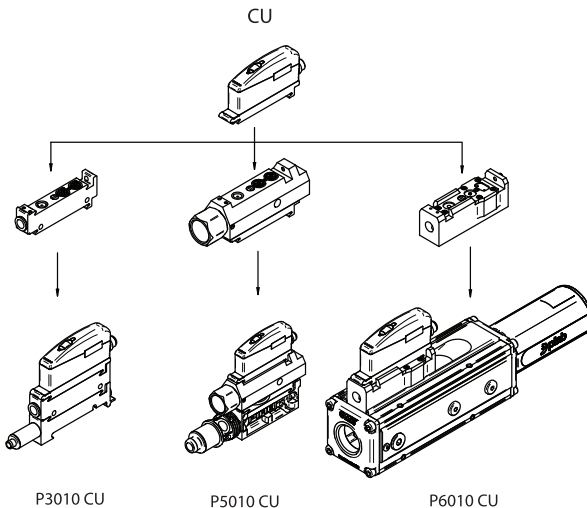
## FUNKTIONER/EGENSKAPER

- ▶ Ventil (V1) för tillslag/frånslag av ejektorn finns som normalt stängd (NC) eller normalt öppen (NO).
- ▶ Ventil (V2) för tillslag/frånslag av friblåsfunktionen.
- ▶ Justeringsventil (V3) för kontroll av friblåsflödet.
- ▶ CU moduler för P6010 finns i varianter med friblåsning från en separat port, vilket maximerar friblåseffektiviteten i vakuümsystemet.

## KONSTRUKTION

- ▶ Modulär i två separata huvuddelar, en pilotventil och en huvudventilenhet.
- ▶ Konstruktion som maximerar friblåseffekten.
- ▶ Skyddshöljen mot damm och fukt, IP65 [NEMA 4].
- ▶ Kompakt och slimmad design.
- ▶ M12 4-pin elektrisk anslutning. Lämplig kabel finns som tillbehör.

## ÖVERSIKT



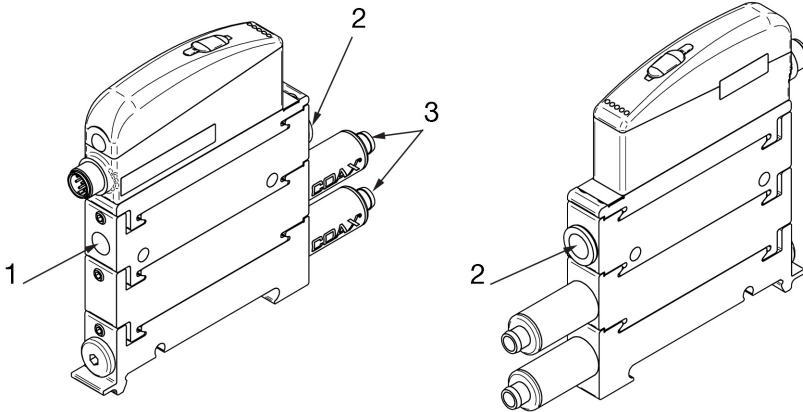


## INSTALLATION

CU kan installeras i vilken orientering som helst. Se till att utblåset från ejektorn inte blockeras. Vid anslutning av tryckluft- och vakuumslangar till enheten är det viktigt att välja korrekt slang- och rördimensioner för att förhindra tryckfall. Undvik restriktiva innerdiametrar, långa rörledningar, skarpa böjar och för små kopplingar.

### PNEUMATISK INSTALLATION

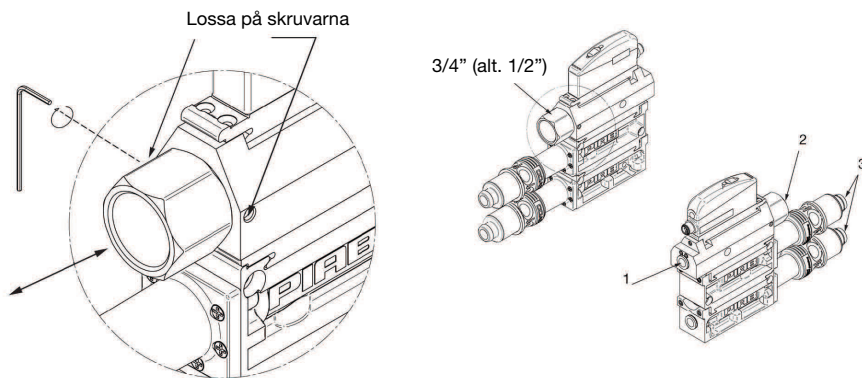
#### P3010 CU



1	Tryckluft	G1/8", Ø6mm
2	Vakuum	Ø10mm, 1/4" NPSF
3	Utblås	Ø8mm

För mer detaljerad information, se måttskiss.

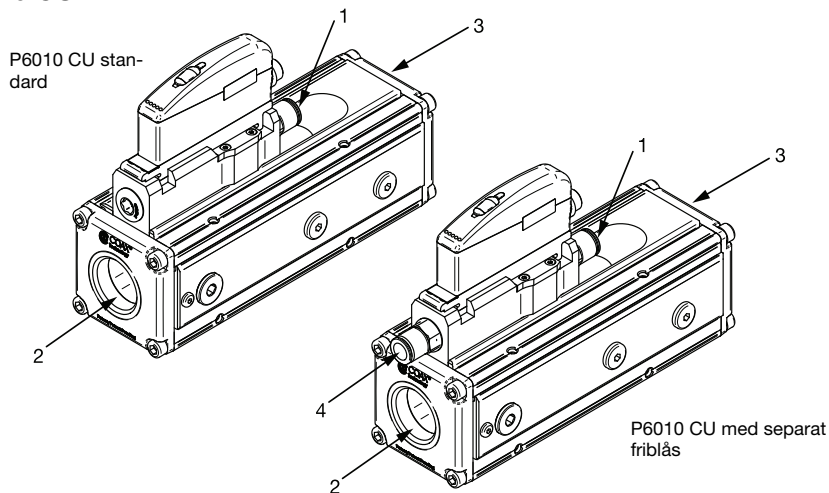
## P5010 CU



1	Tryckluft	Ø3/8", Ø10mm
2	Vakuum	G3/4", G1/2", 3/4" NPSF, 1/2" NPSF
3	Utblås	Ø16mm

För mer detaljerad information, se måttskiss.

## P6010 CU

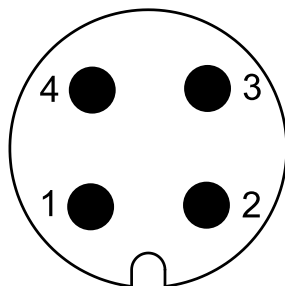


1	Tryckluft	G1/4", Ø10mm
2	Vakuum	G1", G3/4", 1" NPSF, 3/4" NPSF
3	Utblås	G1", G3/4", 1" NPSF, 3/4" NPSF
4	Separat friblås (tryckluft)	G1/4", Ø10mm

För mer detaljerad information, se måttskiss.

## ELEKTRISK ANSLUTNING, PIN-KONFIGURATION

## M12 4-PIN-ANSLUTNING



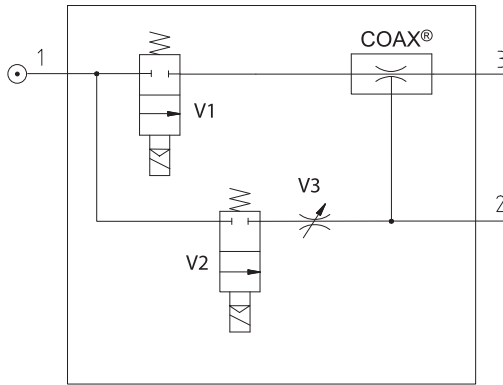
## PNP-TYP

Pin nr.	Namn	Beskrivning	Färg på ledare Kabel 0121817
1	–	Används ej	Brun
2	V <sub>in</sub> 2	Styrsignal, Friblås	Vit
3	GND	GND	Blå
4	V <sub>in</sub> 1	Styrsignal, På/Av	Svart

## KABLAR

Beskrivning	Art. Nr.
Kabel M12 4-pin hona, M12 4-pin hane, PUR, L=2m	0118322
Kabel M12 4-pin hona, PUR, L=5m	0121817

## PNEUMATISKT DIAGRAM



COAX® Flerstegsejektor

V1 Ventil vakuum, NC eller NO (NC visas)

V2 Ventil friblås, NC

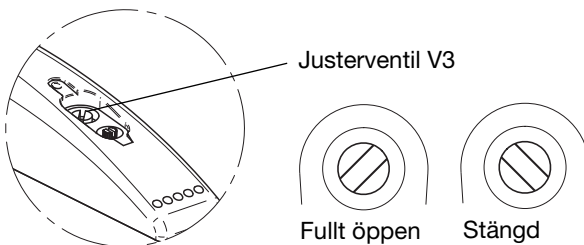
V3 Justerbar friblåsventil.



**Notera:** Tryckluftens kvalitet skall uppfylla DIN ISO 8573-1 klass 4.

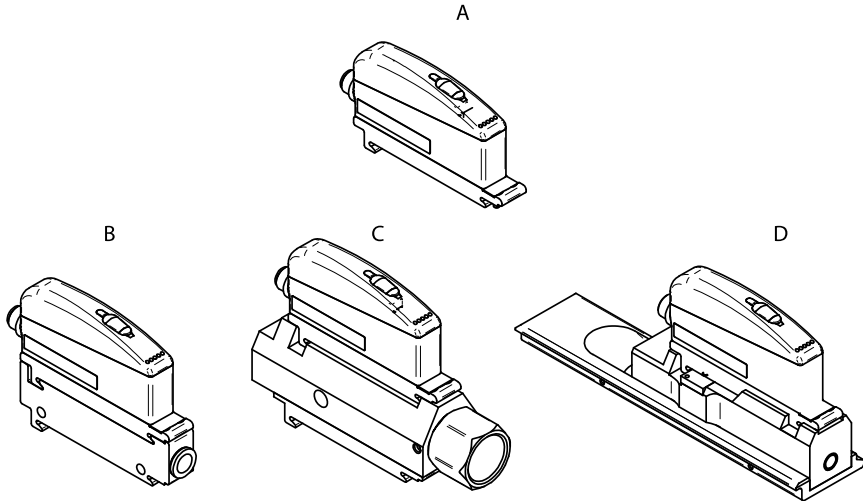
## INSTÄLLNING AV FRIBLÅSEFFEKTEN

Flödet (effekten) från friblåset är steglöst reglerbart med hjälp av en justerventil.



## REPARATION OCH UNDERHÅLL

Modulerna kan enkelt bytas ut för reparation och underhåll.



### RESERVDELAR

	Benämning	Art. nr.
A	Kontrollenhet CU NC	0117924
A	Kontrollenhet CU NO	0200384
B	Funktion P3010 CU NC	0117696
B	Funktion P3010 CU NO	0200386
C	Funktion P5010 CU NC, G anslutning	0117716
C	Funktion P5010 CU NC, NPSF anslutning	0117699
D	Funktion P6010 CU NC	0117719
D	Funktion P6010 CU NC, separerad friblåsport	0123115

### SÄKERHETSÅTGÄRDER

Ansvarslöst användande av tryckluft kan orsaka personskador. Tryckluft får aldrig användas till något annat än det avsedda ändamålet. Kom ihåg att alltid stänga av tillförseln av tryckluft vid rengöring eller reparation av modulerna.

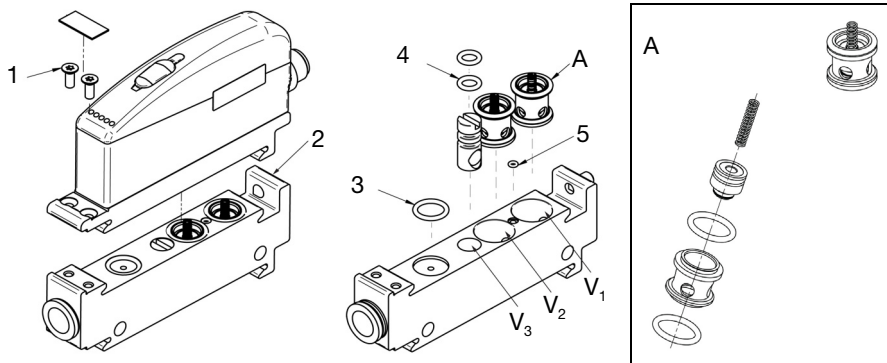
### GARANTI

Piab ger 5 års garanti för COAX® cartridges. För elektroniken är garantiperioden 2 år och för slitdelar 1 år.

## SPRÄNGSKISSER

### P3010 CU SPRÄNGSKISS

Kontroll- och ventilenhet



Pos.	Beskrivning
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
V <sub>1</sub>	Vakuumpå/av-ventil
V <sub>2</sub>	Friblåsventil
V <sub>3</sub>	Justerbar friblåsventil

#### A. Reparationssats

##### Art. Nr. 0124255

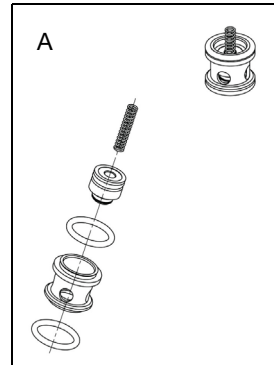
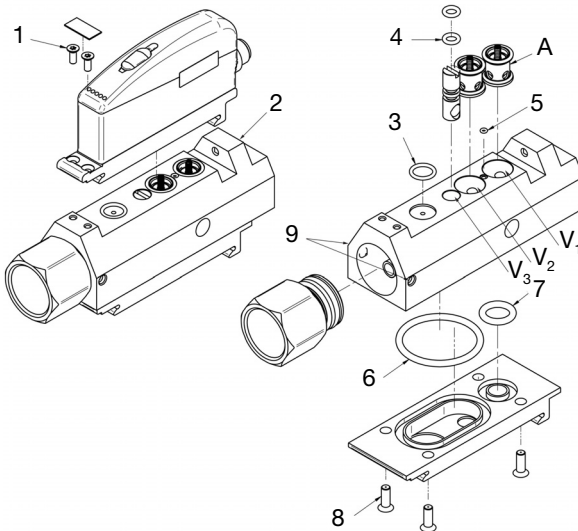
Svart poppet ventil kpl (inkl. o-ringar 11.1x1.6mm och fjäder).

Gäller för CU-enheter producerade från januari 2010.

Rek. fett: Klübersynth UH1 14-151 eller liknande syntetiskt smörjfett.

## P5010 CU SPRÄNGSKISS

Kontroll- och ventilenhet



### A. Reparationsats Art. Nr. 0124255

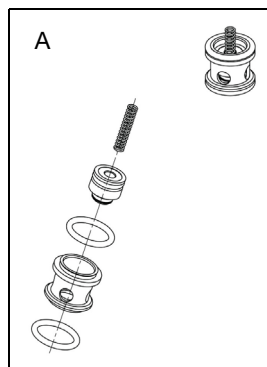
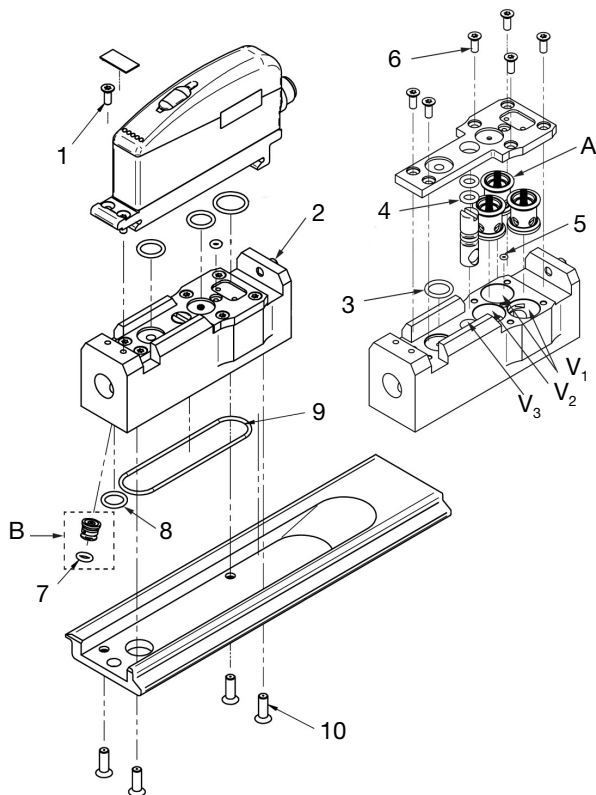
Svart poppet ventil kpl (inkl. o-ringar 11.1x1.6mm och fjäder).  
Gäller för CU-enheter producerade från januari 2010.

Rek. fett: Klübersynth UH1 14-151 eller liknande syntetiskt smörjfett.

Pos.	Beskrivning
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	34.2x3mm
7	11x3mm
8	4x M5x10mm MFX
9	2x M5x6mm
V <sub>1</sub>	Vakuumpå/av-ventil
V <sub>2</sub>	Fribläsventil
V <sub>3</sub>	Justerbar fribläsventil

## P6010 CU SPRÄNGSKISS

Kontroll- och ventilenhet



### A. Reparationssats Art. Nr. 0124255

Svart poppet ventil kpl (inkl. o-ringar 11.1x1.6mm och fjäder).  
Gäller för CU-enheter producerade från januari 2010.

Rek. fett: Klübersynth UH1 14-151 eller liknande syntetiskt smörjfett.

**B.** Delar som används i versionen med separerad friblåsport.

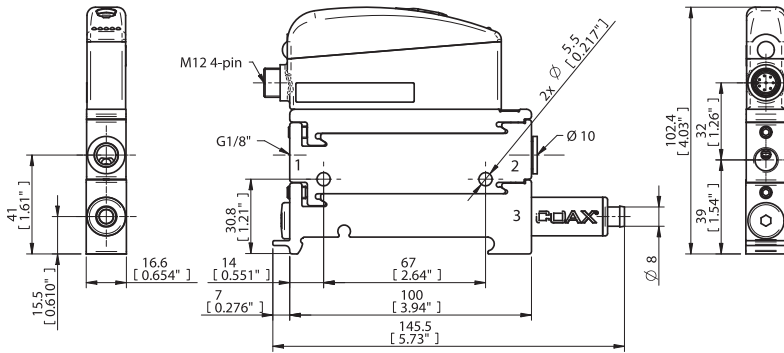
Pos.	Beskrivning
1	2x M3x8mm TX
2	M5x10
3	9.1x1.6mm
4	2x 4.76x1.78mm
5	1.4x1mm
6	6x M3x8mm TX
7	4.1x1.6mm
8	8.1x1.6mm
9	49x1.6mm
10	4x M4x12mm MFX
V <sub>1</sub>	Vakuumpå/av-ventil
V <sub>2</sub>	Friblåsventil
V <sub>3</sub>	Justerbar friblåsventil



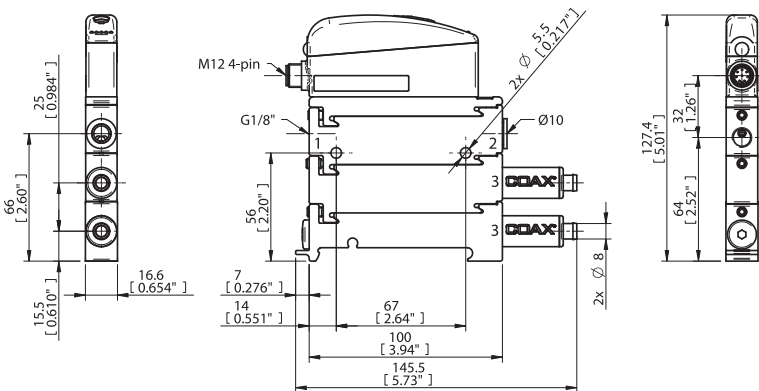
# DIMENSIONER

## P3010

### 1 COAX® cartridge



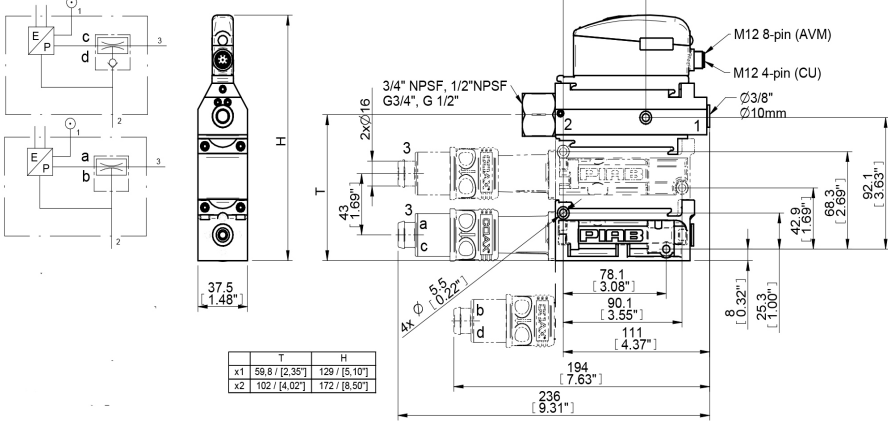
### 2 COAX® cartridge



1. Tryckluft, 2. Vakuum, 3. Utblås

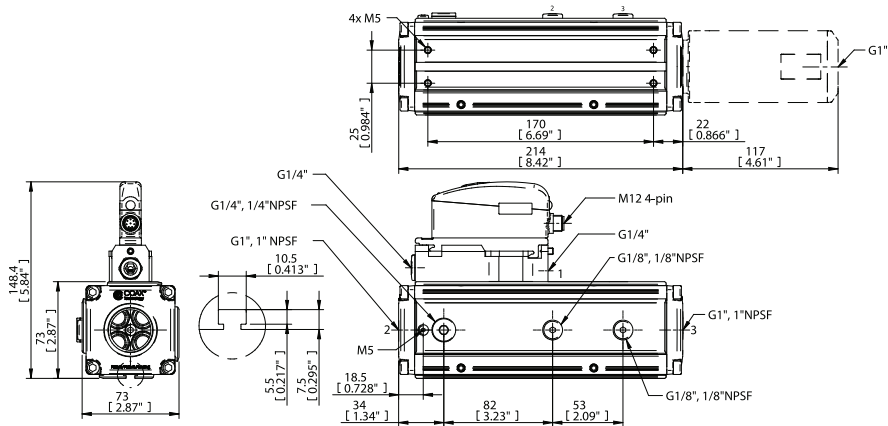
**P5010**

CU



1. Tryckluft, 2. Vakuum, 3. Utblås

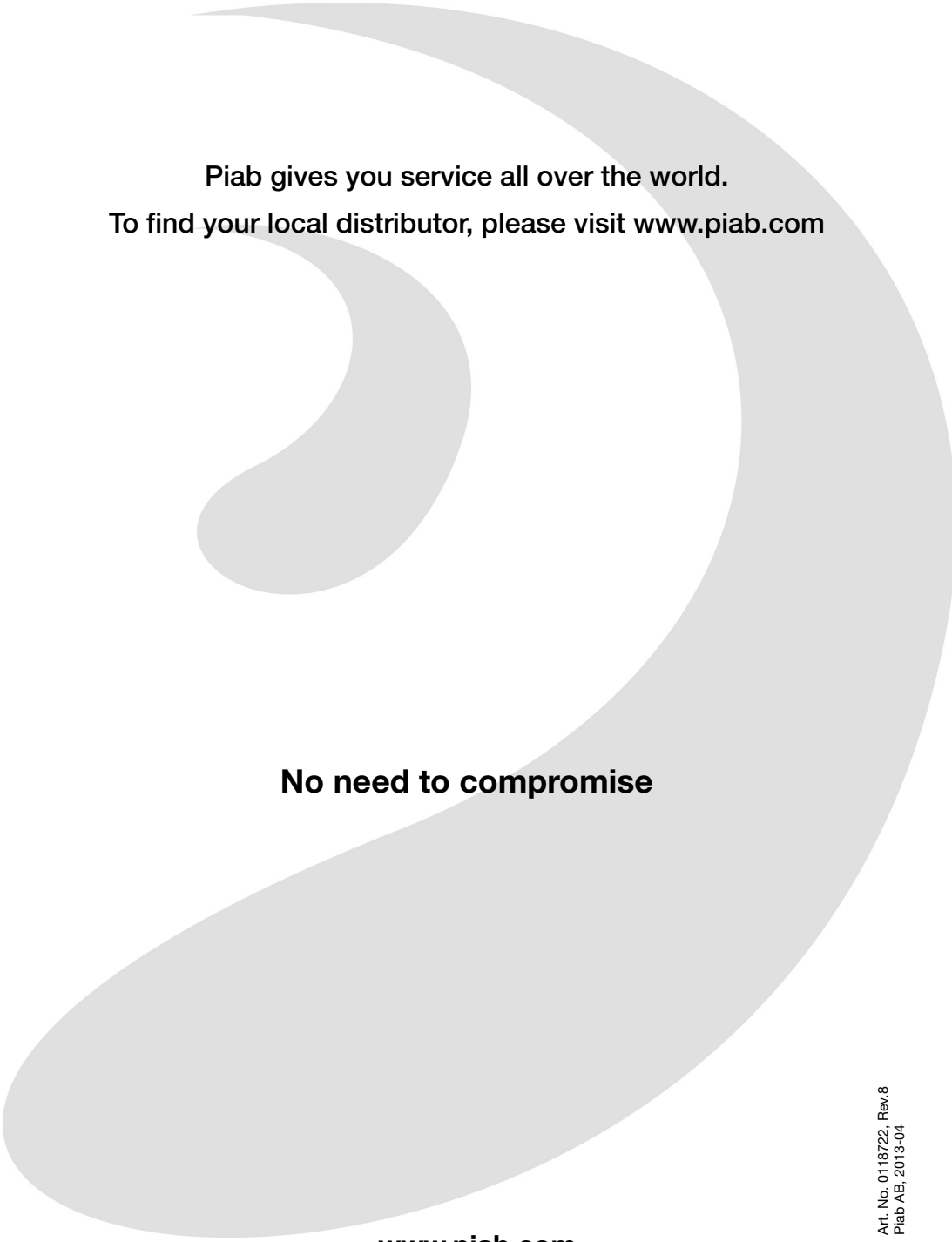
**P6010**



1. Tryckluft, 2. Vakuum, 3. Utblås

## TEKNISKA DATA

<b>Allmän elektrisk karakteristik</b>	
Spänningsförsörjning	22–28 VDC (typiskt 24 VDC)
Max rippelspänning	1V <sub>RMS</sub> , 50-60 Hz
Effektförbrukning	Nom. 1.5 W @ 28 VDC (max. 3 W)
MTBF (elektronik)	40000 tim enl MIL-HDBK-217E
<b>Ventiler</b>	
Funktion till/från	Normalt stängd (NC) eller normalt öppen (NO)
Funktion friblås	Normalt stängd (NC)
<b>Övriga data</b>	
Maximalt övertryck	0.7 MPa
Friblåscapacitet	Justerbar 0-7.5NI/s
Arbetstemperatur	0-50°C
Material	AI, PA, NBR, SS, PMMA, ABS
Skyddsklass	IP65 [NEMA 4]
Kabel (tillbehör)	2 m och 5 m PUR
Fuktighet	90 %RH



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**No need to compromise**

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