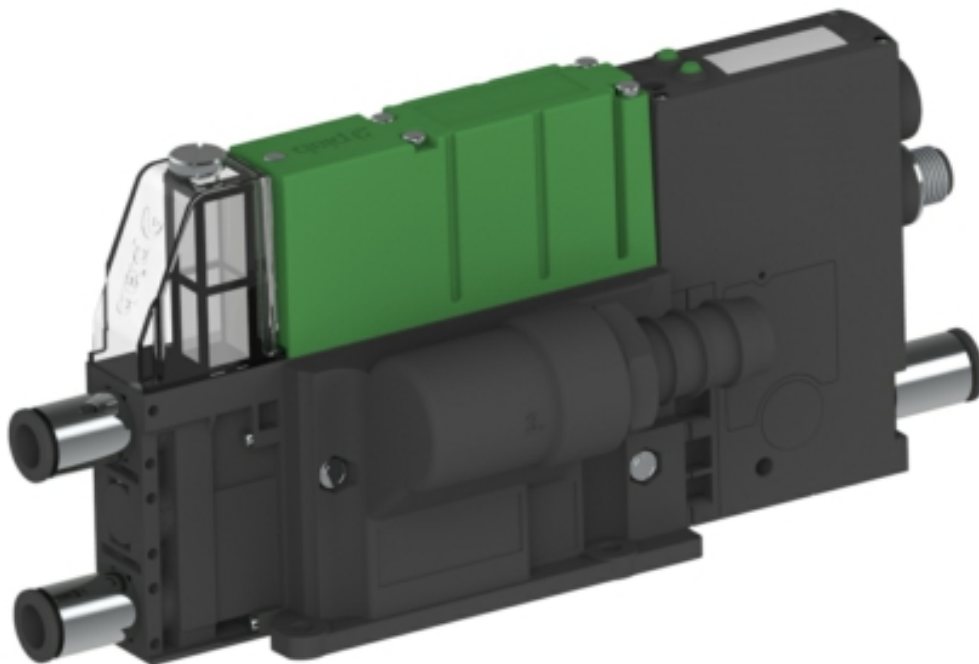


# piCOMPACT® 23

## SMART SX12 x1



- ▶ Configurable vacuum ejector based on COAX® technology with integrated controls.
- ▶ SX12 – new Patented COAX® ejector for medium sized vacuum/robot handling systems with combined characteristics for high vacuum flow and deep vacuum level (85 -kPa).
- ▶ Optimized design for high reliability, high vacuum flow and fast cycle times.
- ▶ High Speed valves with adaptive PWM (Pulse Width Modulation) to reduce heat generation and further improve reliability.
- ▶ Visual indicator for low power supply
- ▶ High vacuum performance.
- ▶ Easier maintenance and less dust sensitive thanks to external flap valves for cartridge(s) and reliable membrane valve design.

- ▶ Energy Saving (ES) function.
- ▶ ACM - Automatic Condition Monitoring (ES mode active or not). Sensibility is adjustable
- ▶ ALD -Automatic Level Determination (ES shut-off level and Hyst).
- ▶ Vacuum non-return valve included.
- ▶ User-friendly GUI with a display menu allowing users to re-set parameters and re-configure features
- ▶ Vacuum non-return valve included.
- ▶ Cleanable and replaceable filter element
- ▶ IODD pre configured with SAC-Patented Self-Adhesion control (SAC) function, automatically removes self-created and unwanted vacuum from suction cups, recommended in ergonomic manipulators for glass and metal.
- ▶ IODD pre configured with IBO-Patented Blow-off function with an automatic stop (IBO) when vacuum is removed in order to minimize air consumption and fine tune cycle times. Intelligent self-learning algorithm understands system volume automatically and fast.
- ▶ IODD pre configured with ATBO-Blow-off activated automatically after every vacuum cycle. Adjustable.
- ▶ Available sensor data; temperature, voltage, acceleration, cycle analysis and more, to help predict maintenance. Sensor data communicated over IO-link but also visual in the display menu
- ▶ Process data available when vacuum completely removed (Blow-off completed).
- ▶ Low noise level
- ▶ IO-link Vacuum switch with a user-friendly GUI with a display menu allowing users to re-set parameters and re-configure features
- ▶ Central silencer or central exhaust for lowest possible sound level and possibility to pipe away exhaust air.
- ▶ Can communicate with standard digital I/Os or IO-Link.

## Technical data

Description	Unit	Value
Feed pressure, max.	MPa	0.7
Temperature range	°C	0-40
Total weight	g	576
Material	-	PA, NBR, SS, TPE, PP, Al, CuZn, PVC
Noise level range	dBA	50-52
Connection, compressed air	-	ø6 push-in connector(s)
Connection, vacuum	-	ø8 push-in connector(s)
Supply voltage	VDC	24 (21.6 – 26.4)
Electrical input/output	-	PNP/PNP or NPN/NPN
Electrical connection	-	Connector M12, 8p male
Switch output 1, max	mA	100
Analog output	V	1-5
Signal range (digital output)	-kPa	-101.3...140
Hysteresis	-kPa	Adjustable
Safety classification	-	IP65
Humidity	%RH	35-85
Accuracy, of F.S. (Full Scale)	-	± 3%
Display	-	OLED and gyro display
Typical current consumption	mA	200
Valve shift peak current	mA, ms	425, <32
In rush current	mA	800
Manual override, electrically activated	-	Yes, non-locking push style
Function, Vacuum / Blow-off	-	NC vacuum + NC blow off
Response time	ms	18±6
Pressure drop	MPa	0.004
Blow-off flow at 0.5 MPa and no counter pressure	NI/s	0-2.3
Blow-off flow at 0.5 MPa and 0.1 MPa counter pressure	NI/s	-
Baudrate	kBaud	38.4
Min cycle time	ms	5
PD	bytes	3
IO-Link Revision		1.1

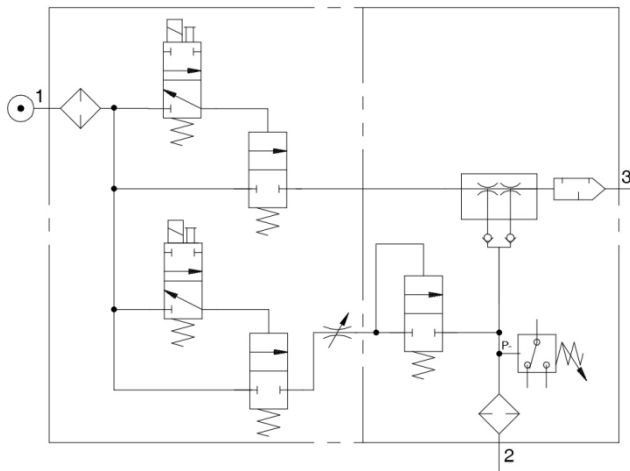
## Vacuum flow

Feed pressure pump / nozzle	Air consumption per pump / nozzle	Vacuum flow (NI/s) at different vacuum levels (-kPa)										Max vacuum	
		0	10	20	30	40	50	60	70	80	-kPa		
MPa	NI/s												
0.504 / 0.50	0.72	1.22	1.03	0.78	0.52	0.27	0.21	0.15	0.09	0.03		85	

## Evacuation time

Feed pressure pump / nozzle	Air consumption per pump / nozzle	Evacuation time (s/l) to reach different vacuum levels (-kPa)									Max vacuum
		10	20	30	40	50	60	70	80	-kPa	
MPa	NI/s										
0.504 / 0.50	0.72	0.082	0.201	0.374	0.674	1.216	1.914	2.978	6.187		85

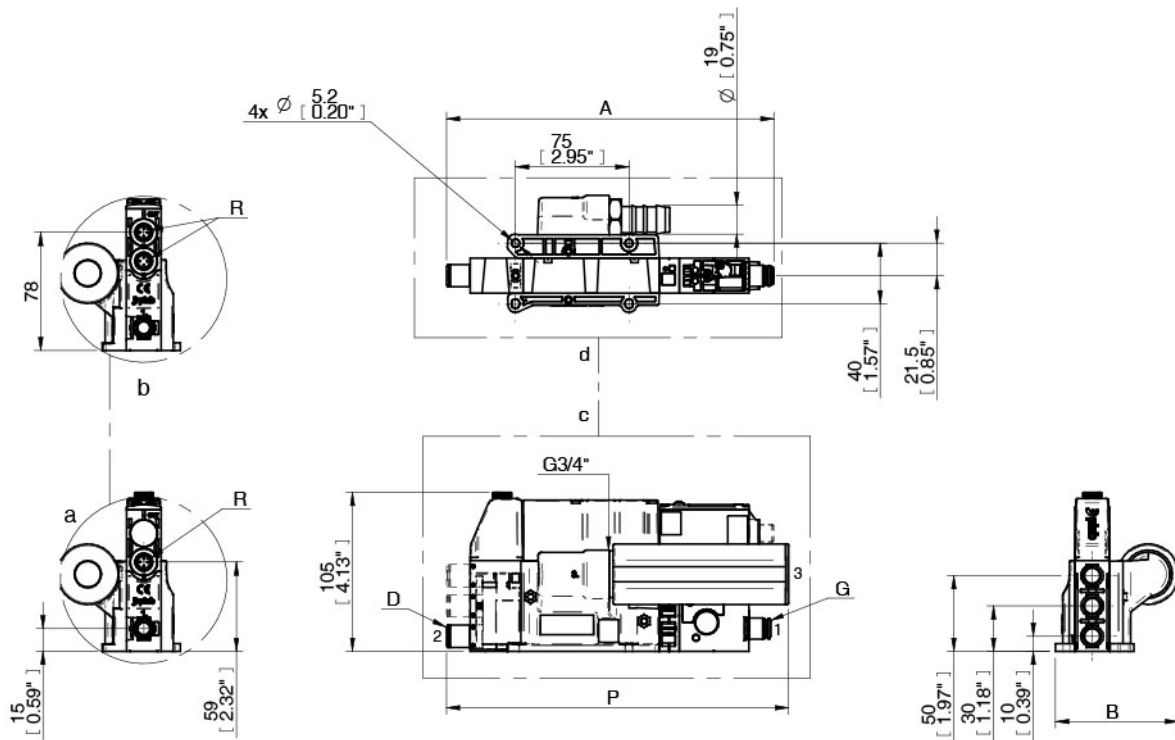
Dimensional drawing



A	215.4 [8.48"]
B	77.3 [3.04"]
D	ø8
G	ø6
R	M12 8 pins [M12 8 pins"]

a	M12 8p connector(s)
d	Ejector(s) for individual mounts, central exhaust

Note: Filter and vacuum sensor are optional



Ordering information

Description	Product code
<p>piCOMPACT®SX12 x1 High vacuum performance, SX12 (73-146 NI/min), Single, Standard, Electrical ES, vac and blow off, No extra vacuum control, , With non-return valve, Display, analog and digital output, 2 vacuum ports, ø8 push-in connector(s), 1 channel, No split, ø6 push-in connector(s), Ejector(s) for individual mounts, central exhaust, NC vacuum + NC blow off, PNP/PLC or NPN/NPN, M12 8p connector(s)</p>	<p>PCS.F.121.S.KAAA.S28.1X.6.EL.CCAB</p>

## Ordering information, accessories

Description	Art. No.
Filter element FM23-50, 4 pcs	0205487
Cable M12 8-pin female, PUR, L=2m	0110238
Cable M12 8-pin female, PUR, L=5m	0117746
Y-cable M12 8-pin female, 2xM12 4-pin male, PNP, PUR, L=0.5m	0207535
Y-cable M12 8-pin female, 2xM12 4-pin male, NPN, PUR, L=0.5m	0207534
Cable extension M12 8p fem, M12 8p male, L=2.5m	0208046