Data sheet

piCOBOT® L

- Vacuum ejector based on patented COAX® technology with integrated controls.
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- Patented Intelligent Blow-Off (IBO) automatically activates and stops the Blow-Off when vacuum is removed from system and optimizes the usage of Blow-Off air.
- Valves with Adaptive Pulse Width Modulation (A-PWM).
- Extra valve protection with Automatic Condition Monitoring (ACM) function that detects if the object being handled is leaking or non-leaking, triggering the use of Energy Saving (ES) or not.
- Patented Self-Adhesion control (SAC) function automatically removes self-created and unwanted vacuum from suction cups.
- *Automatic Level Determination (ALD) function can reduce the energy usage up to 90-95% by optimizing the Energy Saving (ES) function.*

Technical data

Description	Unit	Value
Installation		
piCOBOT® weight (without suction cups)	oz	48.8
Max handled weight	oz	564.4
Material	-	PA, NBR, SS, Al, CuZn, Cu, PU
Electrical connection	-	Connector M8, 8-pin male
Typical current consumption	mA	200
In rush current	mA	<400
Valve shift peak current	mA	425
Feed pressure, max.	psi	101.5
Connection, compressed air	-	ø8 push-in angle connector
Connection, vacuum	-	G1/2" female
Environmental properties		
IP classification	-	IP65
Temperature range	F	32-104
Humidity	%RH	35-85
Vibration resistant at 2g xyz	Hz	8-200
Noise level range Foam gripper*	dBA	68-70
Noise level range Cup gripper**	dBA	68-70
Operations		
Pressure drop	psi	0.018
Blow-off flow with no counter pressure	scfm	0-13.98
Blow-off flow at 73 psi and 14.5 psi counter pressure	scfm	0.19
Hysteresis	-	Adjustable
Function, Vacuum/Blow-Off	-	NC vacuum + NC Blow-Off
Display	-	OLED and gyro display

Electrical input/output

Supply voltage	VDC	24 ± 10%
Electrical input/output	-	PNP/PNP or NPN/NPN
Analog output	V	1-5
Accuracy of F.S. (Full Scale) analog output	-	±3%
Manual override , electrically activated	-	Yes, non-locking push style
Signal range (digital output)	inHg	-29.92 – 41.34
Response time valve	ms	23
Switch output S1/S2, max	mA	2x40 simultaneously or 1x80 one at a time

*Foam gripper equipped with check valve technology

**Cup gripper equipped with 8 suction cups

Vacuum flow

Feed pressure Pump nozzle	Air consumption	Vacuum flow (scfm) at different vacuum levels (-inHg)									Max vacuum
psi	scfm	0	3	6	9	12	15	18	21	24	-inHg
72.62/ 62.37	9.37	14.66	12.80	10.21	7.20	4.32	2.59	1.99	1.19	0.42	26.57

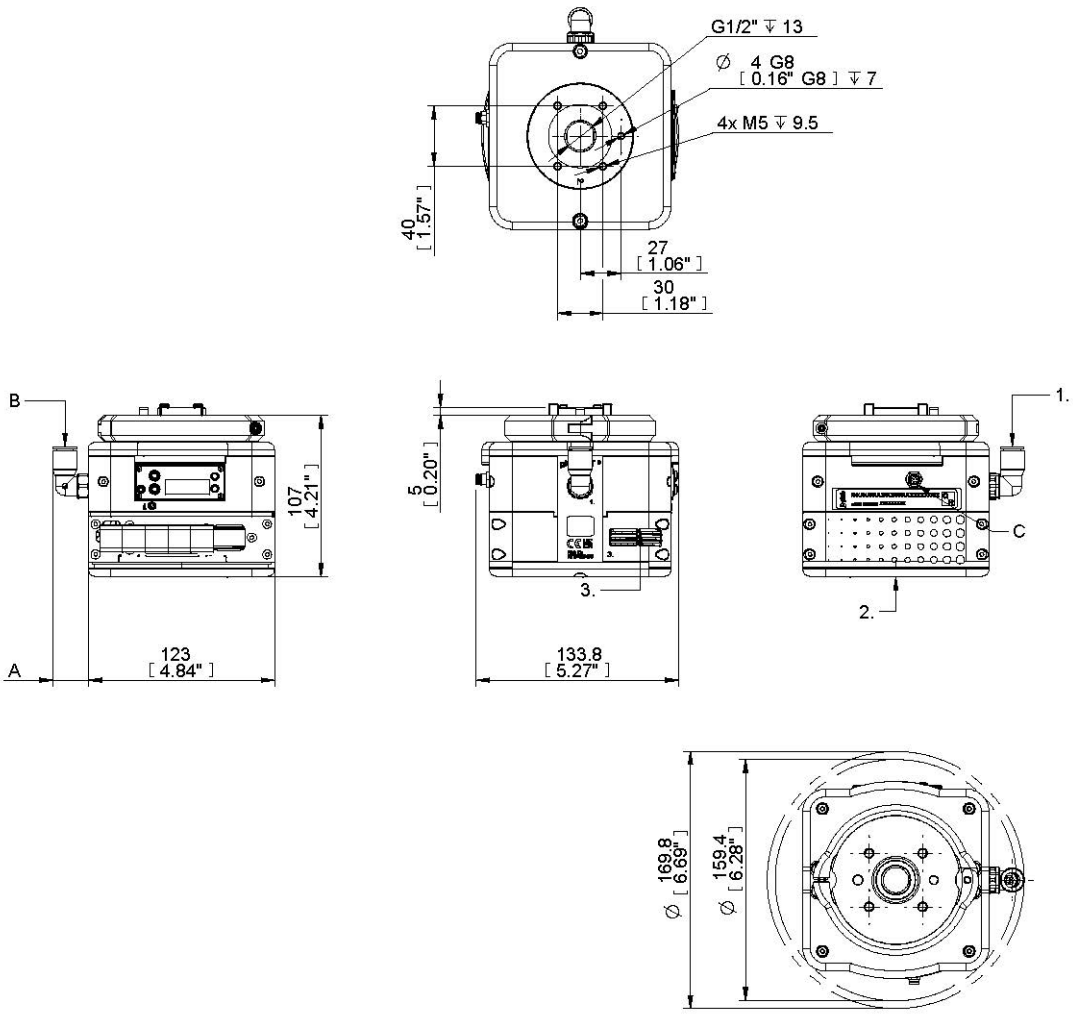
Evacuation time

Feed pressure Pump nozzle	Air consumption	Evacuation time (s/cf) to reach different vacuum levels (-inHg)								Max vacuum
psi	scfm	3	6	9	12	15	18	21	24	-inHg
72.62/ 62.37	9.37	0.44	0.96	1.65	2.69	4.43	7.05	10.82	18.28	26.57

Values specified in this data sheet are tested at (unless otherwise stated):

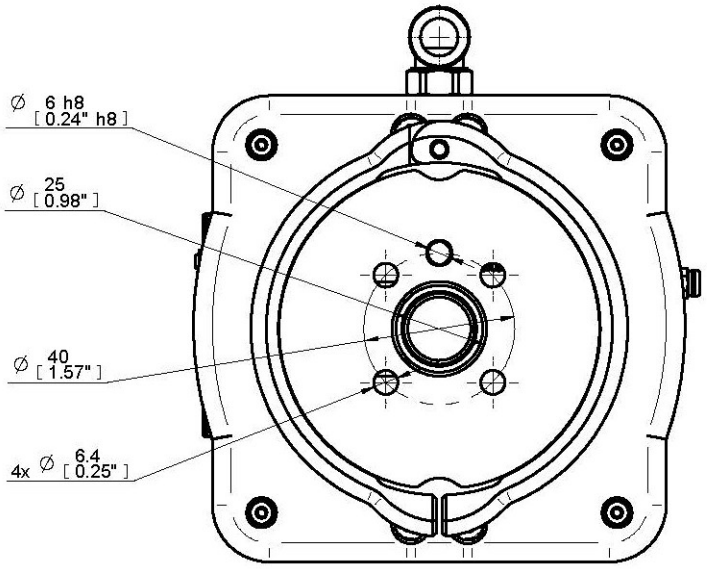
- Room temperature (20°C [68°F] ± 3°C [5.5°F]).
- Standard atmosphere (101.3 [29.9 inHg] ± 1.0 kPa [0.3 inHg]).
- Relative humidity 20-70%.
- Compressed air quality, DIN ISO 8573-1 class 4.

Dimensional drawing



Description	Unit	Value		Pos.	Description
A	mm [in]	25.8 [1.02"]		1	Compressed air
B	mm	8		2	Vacuum
C	-	M8 8-pin male connection		3	Exhaust

Adapter plate ISO 9409-1-40– 4 – M6



ISO 9409-1-40-4-M6

Foam Gripper

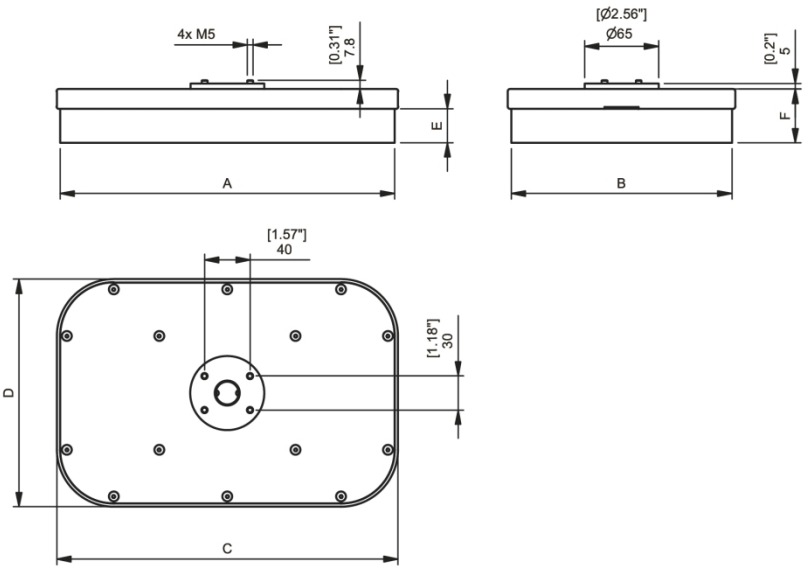
Features Foam Gripper

- The piCOBOT® foam gripper, developed by Kenos®, are highly configurable to fit a large range of picking applications.
- Configure size and thickness of foam and flow distribution technology to optimize the gripper for your need.
- Check valves require smaller vacuum pump and can still maintain the vacuum level even if the whole surface of the gripper is not covered. Different recommended check valves for different porosities of handled material.

Technical Data Foam Gripper

Description	Unit	Value
Temperature range	F	32-122
Weight	oz	19.7
Material	-	PEHD, EPDM, POM, SS, Steel
Material, foam	-	EPDM

Dimensions Foam Gripper



	mm [in]
A	134 [5.28'']
B	134 [5.28'']
C	140 [5.51'']
D	140 [5.51'']
E	20 [0.79'']
F	44.2 [1.74'']

Ordering information – Current configuration

Description piCOBOT® L	Product code PCO.G.M03.F.422.S120PB.X.8.CCA.B.FA
Robot manufacturer	General piCOBOT
Mechanical interface	ISO 9409-1-40– 4 – M6
Vacuum characteristics	High vacuum performance
Nozzle model	SX42 (207-830 Nl/min)
Nozzle rows	Double
Communication interface	Standard input/output
Energy saving type	ES pre-set on 70 -kPa [20.7 -inHg]
Blow-Off type	Intelligent Blow-Off (IBO)
Additional function	No additional functions
Vacuum sensing unit	[-kPa]
Vacuum sensing	2x digital outputs
Tool changer	Without tool changer
Air connection	ø8 push-in angle connector
Valve configuration	NC vacuum + NC Blow-Off
Electrical input/output	PNP/PNP or NPN/NPN
Cable	Cable M8-8p female, 3.0 m, open end
Gripper	Foam gripper
Foam dimension	140x140x20mm, Pick and place