Data Sheet

piCOBOT® Universal Robots

- Mechanical and electrical interfaces. Custom made for Universal Robots (UR) collaborative robots (UR3, UR5 and UR10 if not exceeding 7kg).
- Flexible setting options to perfectly match application needs.
- Vacuum ejector based on patented COAX® technology with integrated controls.
- Optimized design for high reliability.
- Light weight and low build height.
- UR software capabilities (URCaps) for quick and easy installation/implementation and programming, compatible with E-series and CB-series.
- 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) to reduce heat development and further improve reliability.
- 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.
- Integrated air/Energy-Saving (ES) function that automatically sets its own energy level and hysteresis in every cycle with the Automatic Level Determination (ALD) function. Energy usage can be reduced up to 90–95%.

TECHNICAL DATA

Description	Unit	Value
Installation		
piCOBOT® weight (without suction cups)	g	683
Max handled weight	g	7,000
Material	-	PA, NBR, SS, Al, FPM, CuZn, Cu, PU
Supply voltage	VDC	24 ± 10%
Electrical connection	-	Connector M8, 8-pin female
Typical current consumption	mA	200
In rush current	mA	800
Valve shift peak current	mA	425
Valve shift peak current time	ms	<32
Feed pressure, max.	MPa	0.7
Connection, compressed air	-	ø6 push-in angle connector
Connection, vacuum	-	G1/4" female
Environmental properties		
IP classification	-	IP54
Temperature range	°C	0-40
Humidity	%RH	35-85
Vibration resistant at 2g xyz	Hz	8-200
Noise level range*	dBA	52-63
Operations		
Pressure drop	MPa	0.06
Blow-off flow at 0.5 MPa and no counter pressure	Nl/s	0.282
Blow-off flow at 0.5 MPa and 0.1 MPa counter pressure	Nl/s	0.09
Hysteresis	-	Adjustable
Function, Vacuum/Blow-Off	-	NC vacuum + NC Blow-Off
Display	-	OLED and gyro display
Electrical input/output		
Electrical input/output	VDC	24, UR specific
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)	kPa	-101.3 - 140
Response time valve	ms	10 ± 2
Switch output S1/S2, max	mA	2x40 simultaneously or 1x80 one at a time

**Higher noise level = free running vacuum (cups open)*

VACUUM FLOW

Feed pressure Pump nozzle	Air consumption	Vacuum flow (Nl/s) at different vacuum levels (-kPa)									Max vacuum
MPa	Nl/s	0	10	20	30	40	50	60	70	80	-kPa
0.46 / 0.40	0.46	0.62	0.56	0.44	0.32	0.18	0.12	0.08	0.04	0.01	84

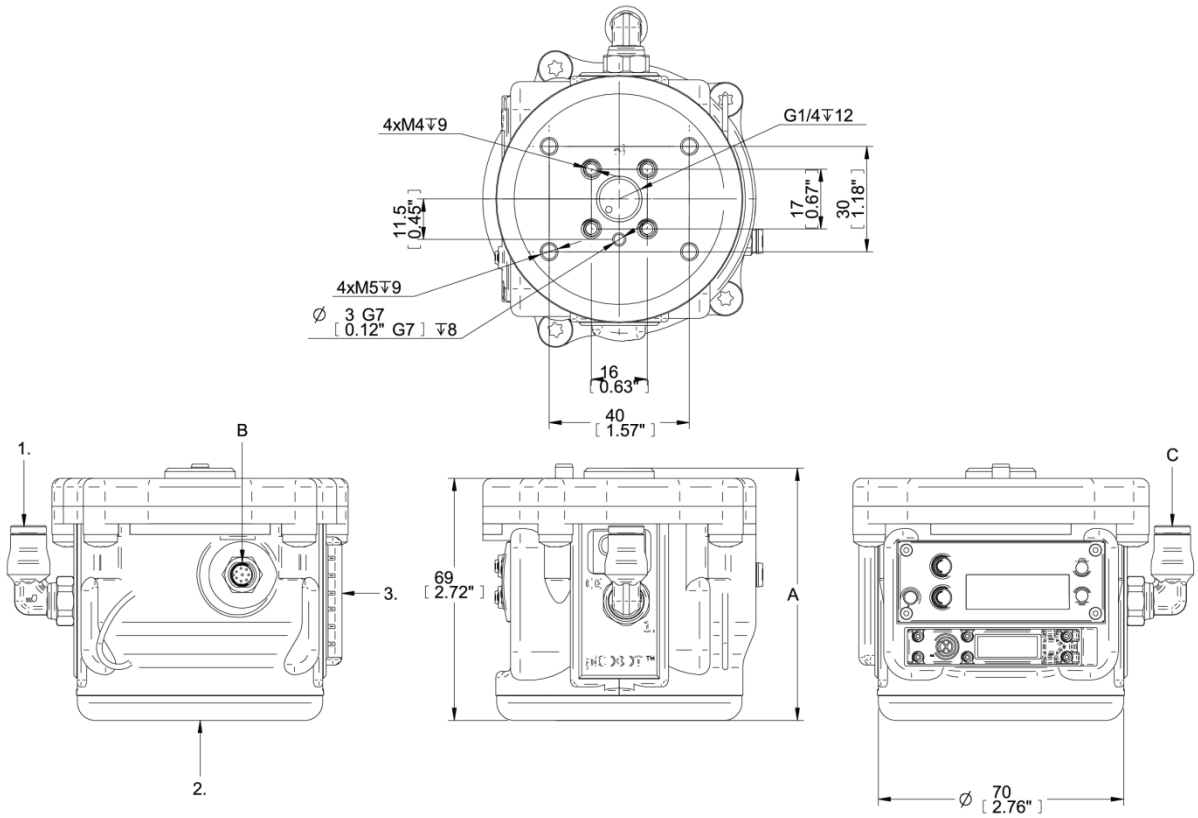
EVACUATION TIME

Feed pressure Pump nozzle	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	-kPa
0.46 / 0.40	0.46	0.169	0.369	0.633	1.036	1.699	2.628	4.104	7.567	84

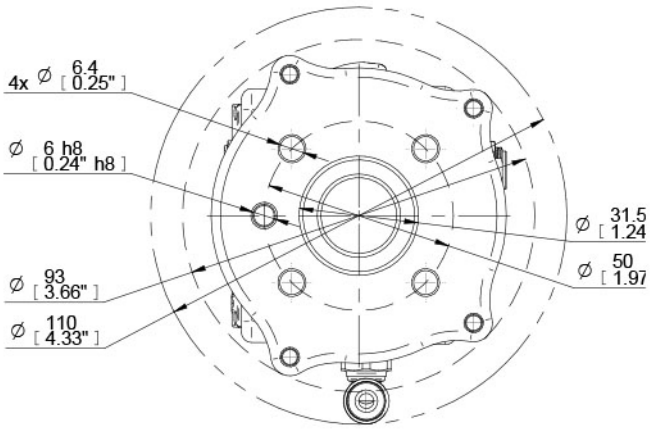
DIMENSIONS

Description	Unit	Value
A	mm [in]	74.0 [2.91]
B	-	M8 8-pin female
C	mm	Ø6

Pos	Description
1	Compressed air
2	Vacuum
3	Exhaust



Adapter plate ISO 9409-1-50 – 4 – M6



ORDERING INFORMATION

Description	Code

piCOBOT® Universal Robots, ISO 9409-1-50 – 4 – M6, Extra high vacuum flow (micro), MICRO (14-19 Nl/min), Double, Standard input/output, ES Automatic level determination (ALD), Intelligent Blow-Off (IBO), Self adhesion control (SAC), [-kPa], Analog and digital output, No vacuum filter, ø6 push-in angle connector, NC vacuum + NC Blow-Off, UR specific, Cable M8-8p male/M8-8p fem, No gripper, No option, No suction cup	PCO.U1.M01.T.MC2.S221PA.X.6.CC.A.XXX

ORDERING INFORMATION, ACCESSORIES

Description	Code
Adjustable gripper	0212848