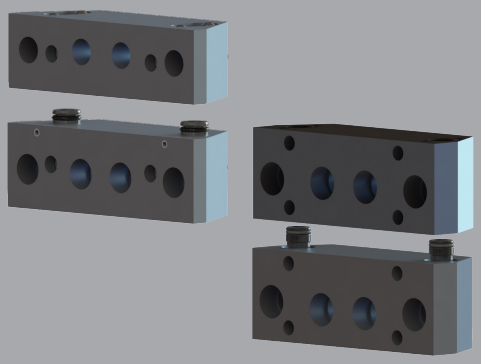
XCHANGE™ Utility Module
Medium Duty Pneumatic Module

The E80/100 & E125LP Pneumatic Modules pass fluid during an automatic tool changing operation.

Advantages:

- Valved/Checked interface on Master/Robot Side
- Additional connections for applications that need more than the imbedded pneumatic pass throughs built into the Master/Robot and Tool Sides
    - o Allows the use of two (2) imbedded and adds two (2) additional pass throughs



SPECIFICATIONS

Model	Compatible XCHANGE™ Tool Changers	Number of User Connections	Robot Adaptor Weight kg (lb)	Tool Adaptor Weight kg (lb)	User Interface*	Flow Cv
Pneumatic Module – E80/100	E80 and E100	4 *	0.28 (0.63)	0.34 (0.74)	1/4″ BSPP	0.37
Pneumatic Module – E125LP	E125LP	4 *	0.54 (1.19)	0.54 (1.19)	3/8″ BSPP	0.92

Operating Temperature: **5 - 60 °C (40 - 140 °F)**
User Pressure Range: **0- 7 bar (0 - 101 psi)**
Noise Emissions (Sound Pressure): **≤ 70 dB(A) in any direction***

* Allows the use of two (2) imbedded pass throughs and adds two (2) additional pass throughs.

FLOW FORMULAS

Imperial measurement units:

Flow of Gases (Pneumatic Module)

$$Q_G = 962 * Cv * \sqrt{\frac{P_1^2 - P_2^2}{G_G * T}}$$

Q_G = Gas flow rate in Standard Cubic Feet per Hour (SCFH)
Q = Valve flow rate in gallons per minute (US gpm)
Cv = Flow Coefficient = 1.54 for these modules
P_1 = Upstream (inlet) absolute pressure in pounds per square inch (psi)
P_2 = Downstream (outlet) absolute pressure in pounds per square inch (psi)
G_G = Specific gravity of medium where air at 70°F and 14.7 psia equals 1.0
G_F = Specific gravity of fluid related to water
T = Absolute temperature in °R (°F + 460)

Metric measurement units:

Flow of Gases (Pneumatic Module)

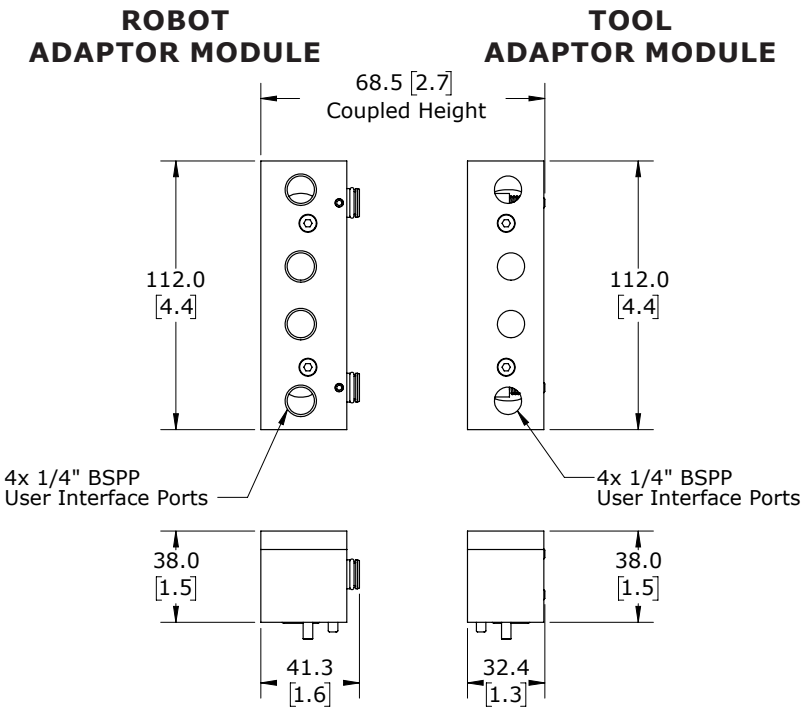
$$Q_G = 395 * Cv * \sqrt{\frac{P_1^2 - P_2^2}{G_G * T}}$$

Q_G = Gas flow rate in Standard Cubic Meters per Hour (m^3/h)
Q = Valve flow rate in Cubic Meters per Hour (m^3/h)
Cv = Flow Coefficient = 1.54 for these modules
P_1 = Upstream (inlet) absolute pressure in bar
P_2 = Downstream (outlet) absolute pressure in bar
G_G = Specific gravity of medium where air at 20°C and 1 bar equals 1.0
G_F = Specific gravity of fluid related to water
T = Absolute temperature in °R (°F + 460)

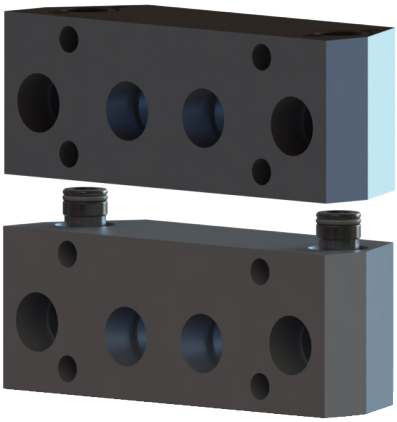
EFFECTO GROUP
Applied Robotics · tecnomors · GRIP

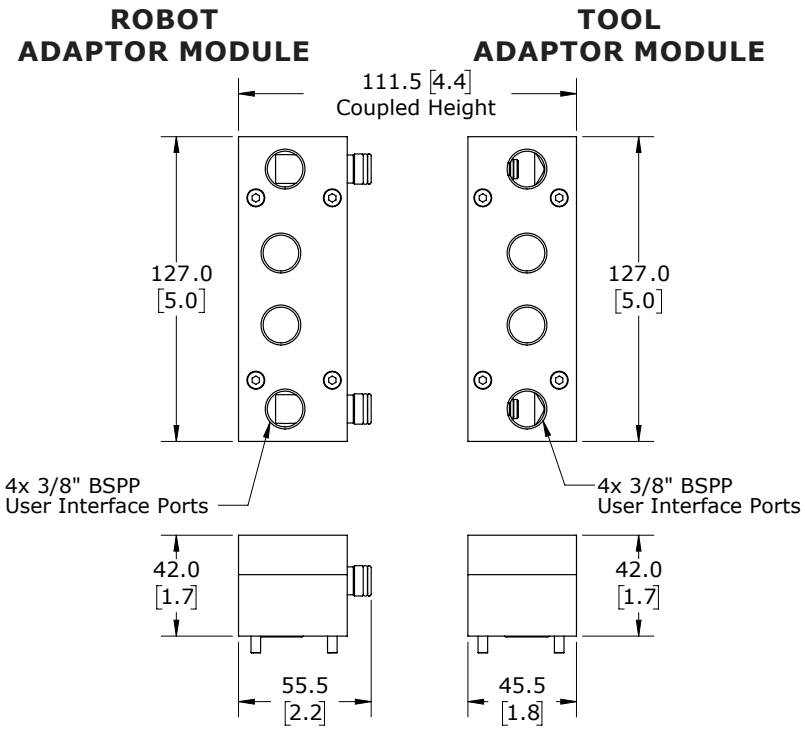
PRODUCT INFORMATION

E80/100 MODULES



E125LP MODULES





* Dimensions are in millimeters (inches).
** All dimensions are descriptive and subject to variation for technical upgrading. We reserve the right to make variations without prior notification.

Applied Robotics
A COMPANY OF EFFECTO

Applied Robotics
648 Saratoga Road
Glenville, NY 12302 USA
Tel. +1 518 384 1000 Fax +1.5183841200
info@appliedrobotics.com
www.appliedrobotics.com

EFFECTO

EFFECTO GROUP S.p.A.
Via Roma, 141/143
28017 San Maurizio d'Opaglio (NO) - Italy
Tel. +39 0322 96142 Fax +39 0322 967453
info@effecto.com
www.effecto.com

01.2023_Rev.03_EU