

Features

- **Powered by the TruViu™ utility towers and the TruBio™ OS**
- **Modular and flexible**
- **Plug and play with TruViu™ PLSS and RDPD towers**
- **Stand-alone analog control**
- **Gas contacts only metallic parts for high cleanliness**

TruFlow™ Gas Manifold

The TruFlow™ gas manifold design leverages the well-known “gas stick” concept used in semiconductor process tools, so that the gases only contact clean metallic surfaces. TruFlow™ interfaces easily with the TruViu™ utility tower family. The TruFlow™ gas control system consists of up to six mass flow controllers and associated solenoid valves attached to a manifold: it can control the flow rates of up to six different gases, and direct each gas to one of three independent headers/spargers. The TruFlow™ gas manifold maximizes safety (no gas comes in contact with electrical wiring), maintains UL compliance, and facilitates planned maintenance of the system.



The Finesse service group can provide higher precision calibration of the mass flow controller (MFC) units in the TruFlow™ gas stick. Specifically, normal factory calibration for a MFC having a 0 to 12 slpm range involves a 32-point linearization of the MFC flow over evenly spaced points within the full range. If the MFC is then used only in the 0 to 3 SLPM range, the linearization curve contains only 9 points of the original calibration. The Finesse “high precision” calibration option involves using additional calibration points to generate the linearized curve in the operating range of interest. For example, 24 points would be used in the 0 to 3 SLPM range, and the remaining 8 calibration points would be used in the 3 to 12 SLPM range for a “low range” calibration of MFC in the example. The precision method can be applied to either the lower third, middle third, or upper third of the full operating range for any MFC.

Dimensions*

TruFlow™ 7”H x 11”W x 7”D*

Specifications

| | |
|------------------------|--|
| Rating | NEMA 2 NEMA 4x (2008 release) |
| Operating Temperature | 0–40°C (32–113°F) |
| Storage Temperature | -25–70°C (-15 –158°F) |
| Relative Humidity | 5–95% (non-condensing) |
| Weight/Shipping Weight | 27 lb/34 lb (12.3 kg/15.5) |
| Certification | Designed for CE |
| Inlet Pressure | 30–35 psig |
| Outlet Pressure | 30–35 psig |
| Accuracy | ±0.8% of rate ±0.3% Full Scale (Burkert) |
| Repeatability | ±0.1% Full Scale (Burkert) |

Components

| | |
|-----------------------|---|
| Mass Flow Controllers | Up to six (6) per manifold/vessel for TruViu™ PLSS Up to four (4) per manifold/vessel for TruViu™ RDPD |
| Solenoid valves | Three (3) per gas |
| Headers/Spargers | Three (3) total per manifold |

* Subject to change without notice

TruFlow Part Numbers

| TFL TruFlow | MFC Type | Slot 1 | Slot 2 | Slot 3 | Slot 4 | Slot 5 | Slot 6 |
|-----------------------|--------------------------------|---|---|---|---|---|---|
| | -XX | -X#Y | -X#Y | -X#Y | -X#Y | -X#Y | -X#Y |
| TFL TruFlow | -BT Burkert | -000 No MFC (blank) | -000 No MFC (blank) | -000 No MFC (blank) | -000 No MFC (blank) | -000 No MFC (blank) | -000 No MFC (blank) |
| | -BK Brooks (2008) | -X A (air), O (O ₂), N (N ₂), C (CO ₂) | -X A (air), O (O ₂), N (N ₂), C (CO ₂) | -X A (air), O (O ₂), N (N ₂), C (CO ₂) | -X A (air), O (O ₂), N (N ₂), C (CO ₂) | -X A (air), O (O ₂), N (N ₂), C (CO ₂) | -X A (air), O (O ₂), N (N ₂), C (CO ₂) |
| | | -Y L (low), N (normal), H (High) | -Y L (low), N (normal), H (High) | -Y L (low), N (normal), H (High) | -Y L (low), N (normal), H (High) | -Y L (low), N (normal), H (High) | -Y L (low), N (normal), H (High) |
| | | -# Flow rate in SLPM: | -# Flow rate in SLPM: | -# Flow rate in SLPM: | -# Flow rate in SLPM: | -# Flow rate in SLPM: | -# Flow rate in SLPM: |
| | | 1 (0.05 - 55), 2 (0.3-1.65) 3 (1-11), 4 (9-30) for A, O, N | 1 (0.05 - 55), 2 (0.3-1.65) 3 (1-11), 4 (9-30) for A, O, N | 1 (0.05 - 55), 2 (0.3-1.65) 3 (1-11), 4 (9-30) for A, O, N | 1 (0.05 - 55), 2 (0.3-1.65) 3 (1-11), 4 (9-30) for A, O, N | 1 (0.05 - 55), 2 (0.3-1.65) 3 (1-11), 4 (9-30) for A, O, N | 1 (0.05 - 55), 2 (0.3-1.65) 3 (1-11), 4 (9-30) for A, O, N |
| | | 1 (0.01 - 33), 2 (0.1-0.65), 3 (0.5-5.5), 4 (3-9.9) for C | 1 (0.01 - 33), 2 (0.1-0.65), 3 (0.5-5.5), 4 (3-9.9) for C | 1 (0.01 - 33), 2 (0.1-0.65), 3 (0.5-5.5), 4 (3-9.9) for C | 1 (0.01 - 33), 2 (0.1-0.65), 3 (0.5-5.5), 4 (3-9.9) for C | 1 (0.01 - 33), 2 (0.1-0.65), 3 (0.5-5.5), 4 (3-9.9) for C | 1 (0.01 - 33), 2 (0.1-0.65), 3 (0.5-5.5), 4 (3-9.9) for C |

TFL TruFlow
-MFC spare MFC
-X#Y (same as above)

Examples

TFL-BT-A1L-O1L-N2N-C1N (released product)

TFL-BT-A1N-A3L-O1N-O3L-C1L-N4N (released product)

TFL-BK-A2L-O2L-N3N-C2L-A3N-O3N (2008 release)

TFL-BK-N1N (2008 release)