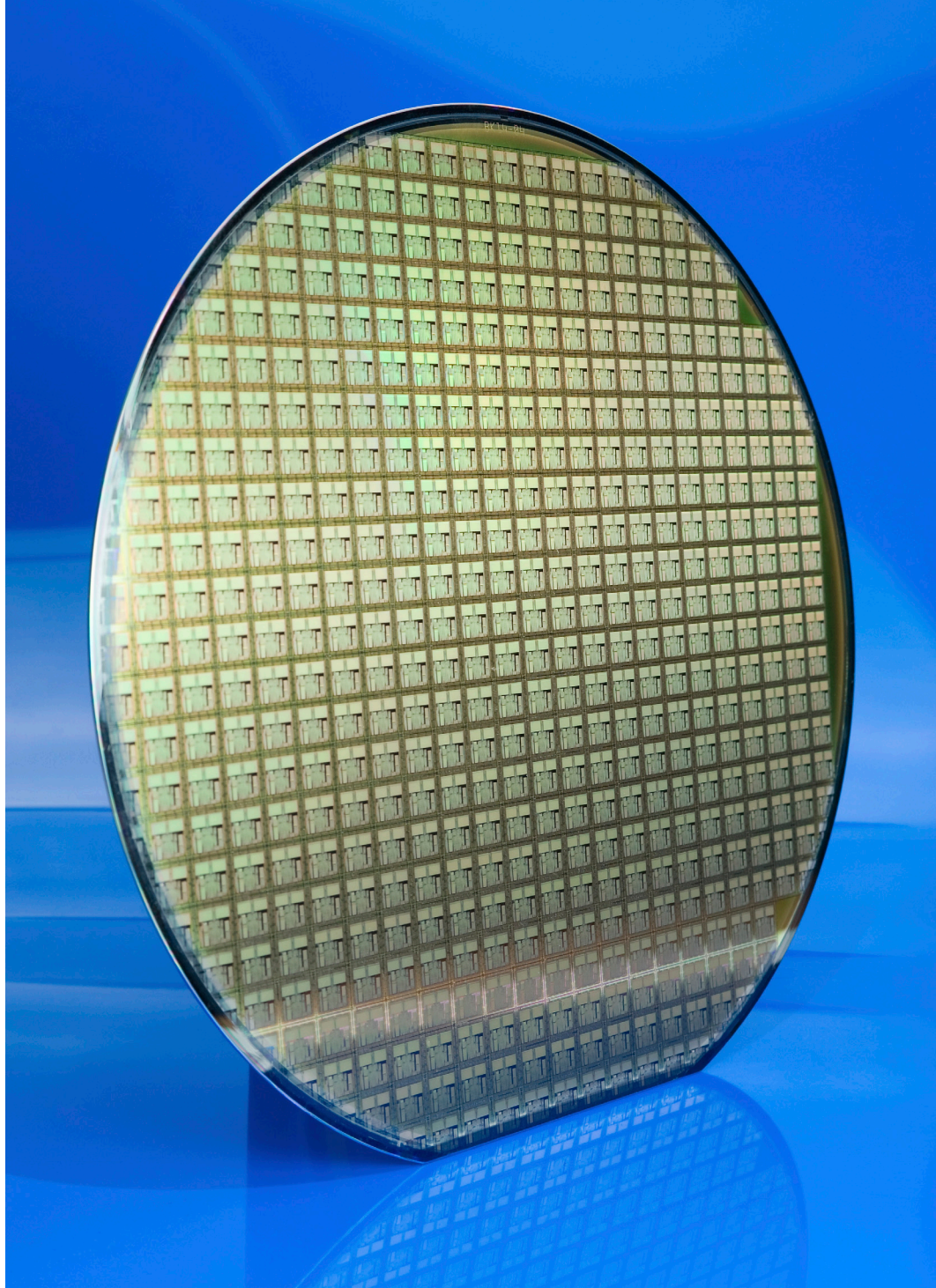
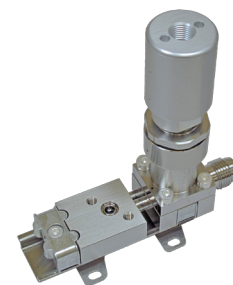


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filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Modular Gas System

Modular Gas Delivery Stick Components for
Microelectronics Equipment Gas Boxes



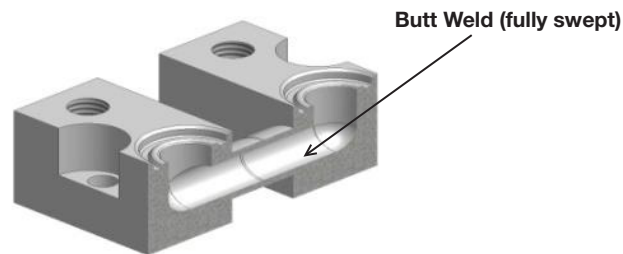
Modular Gas System

MGS, Performance and Value

Veriflo Division presents the Modular Gas System, a quick gas delivery system commonly used in Microelectronics tools. The upper components consist of current Veriflo core products. The Modular Gas System platform design has a versatile 1-1/8 inch surface mount platform. Many substrate style components are available to accommodate virtually any gas stick design.

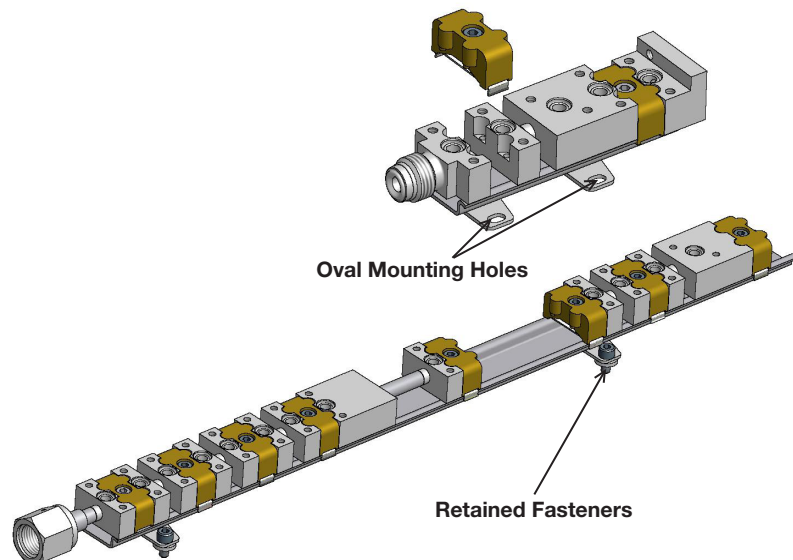
Design Features

- The welded “H” block design provides a clean fully swept flow path. The welded “H” block design also provides an option to convert to face seal lateral lines.

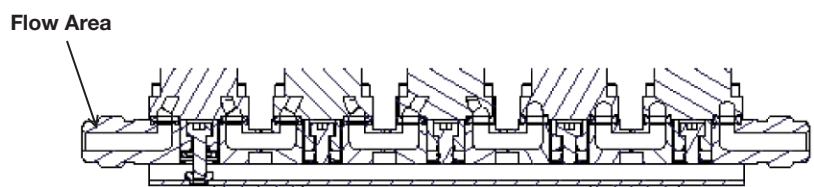


- Fastening system creates proper alignment of the substrate components thus reducing assembly time.

- The rail oval mounting holes allow ease of gas stick installation. Mounting bolts are retained in the rail for easy handling.

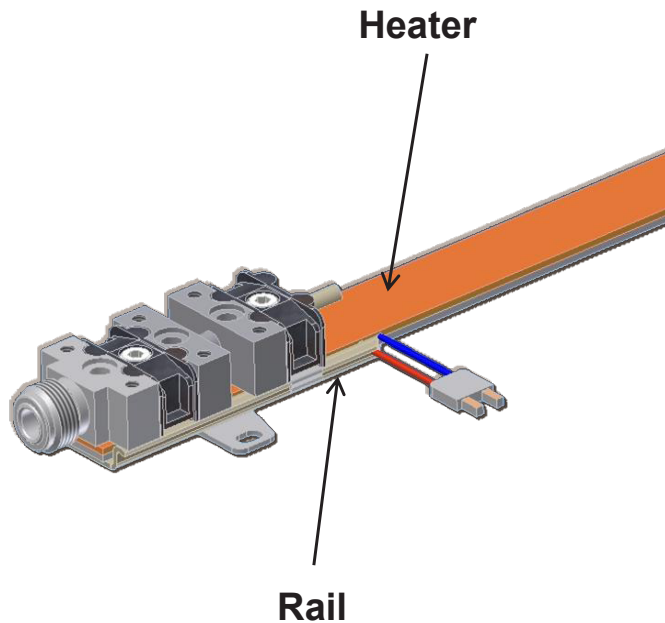


- Designed with a generous flow area, the gas stick has been qualified to flow 50 slpm of N₂ operating at 80 psig inlet pressure and 21 psig MFC pressure.



Modular Gas System Optional Features

Optional Gas Stick Heating

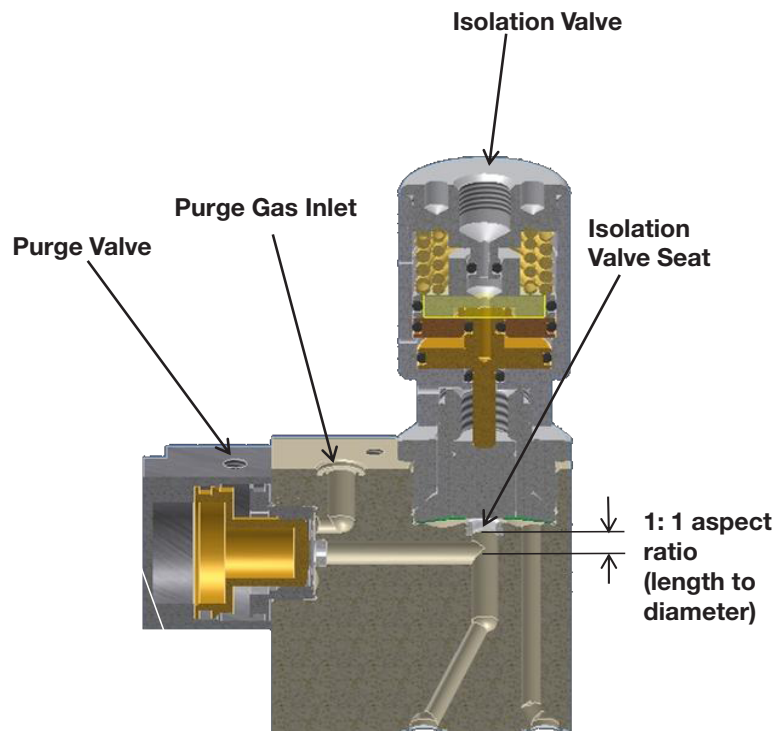


The Rail isolates the substrate from the panel to reduce heat sink effect

Rail mounting of the heater results in a clean, uncluttered assembly

Heater Specifications:
24 volt, K type thermocouple

Integrated Purge System

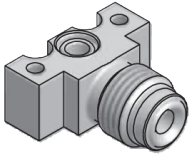


The purge gas is injected directly into the system below the isolation valve seat

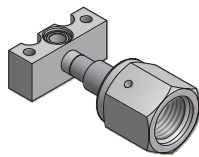
The 90 degree purge valve design eliminates dead leg by creating a 1:1 aspect ratio volume below the isolation valve seat

Substrate Components

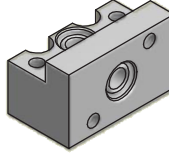
End Fittings



E1 = 50115710

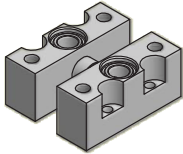


E2 = 50115895

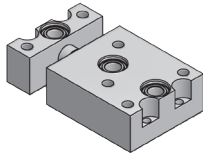


E3 = 50115709

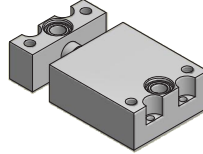
Substrate Connectors



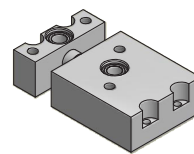
S1 = 50115712



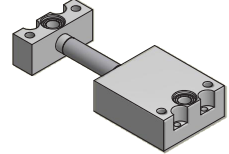
S2 = 50115713



S3 = 50115796

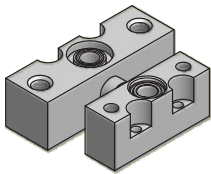


S4 = 50115799

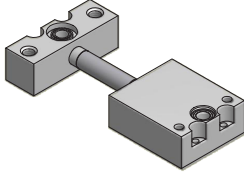


S5 = 50115897

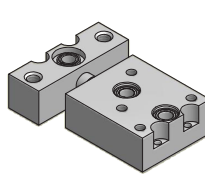
1.5" MFC Connectors



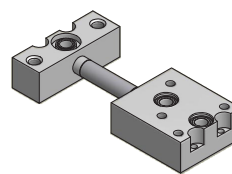
M1 = 50115715



M2 = 50115794



M3 = 50115810



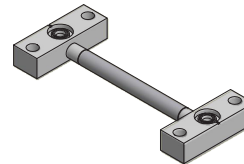
M4 = 50115992

Spacers



| Part Number | Description |
|-------------|------------------------|
| 50116072 | SPACER 1.125 MFC AL |
| 50116069 | SPACER 1.5 COMPACT MFC |

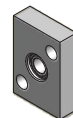
MFC Jumper



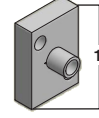
J1 = 50115660

Optional Top Connectors

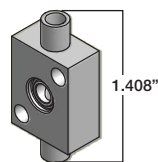
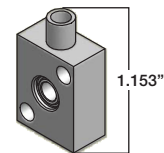
| Description | Lateral Spacing |
|---------------------|-----------------|
| T2 + T3 | 1.40" |
| T4 + T5 | 1.76" |
| T2 or T3 + T4 or T5 | 1.58" |
| T1 + T1 | Any |



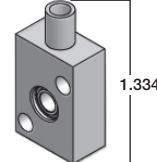
T1 = 50115793



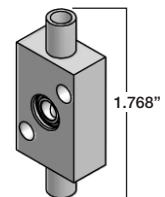
T2 = 50115891



T3 = 50115892



T4 = 50116003



T5 = 50116004

Flow Components

Valves



V1 = SM930-HK



V2 = SM930MS



V3 = SM930LPNCS



V4 = SM930LPNOS



V7 = SM930LPHY



V8 = Integrated Purge Valve

Regulators



R1(30 psig), **R2**(60 psig), **R3**(100 psig) = SMTR



R4(30 psig), **R5**(60 psig) = SMSQ2Micro

Tools

Hand Tools



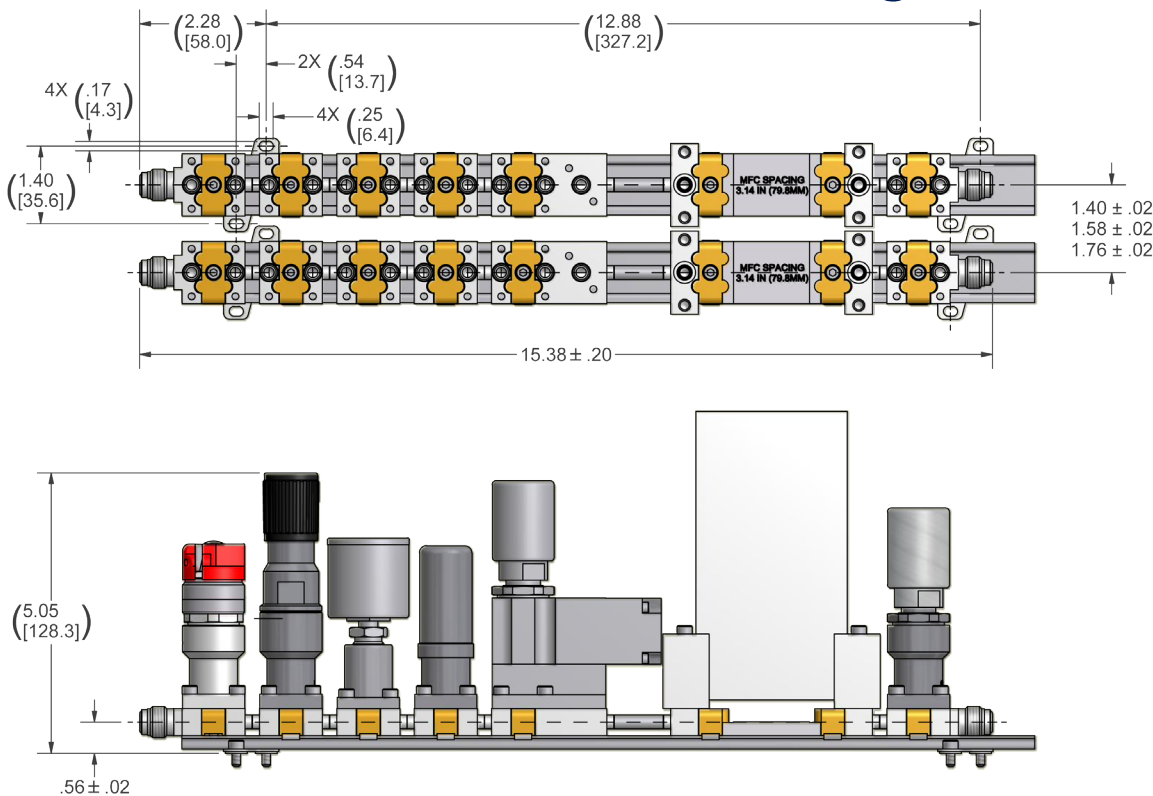
| Part Number | Description |
|-------------|--|
| 15000691 | TORQUE SCREWDRIVER, PRESET 6-8 IN-LBS 3MM HEX |
| 15000692 | TORQUE SCREWDRIVER, PRESET 24-25 IN-LBS 3MM HEX |

Gasket and Screws



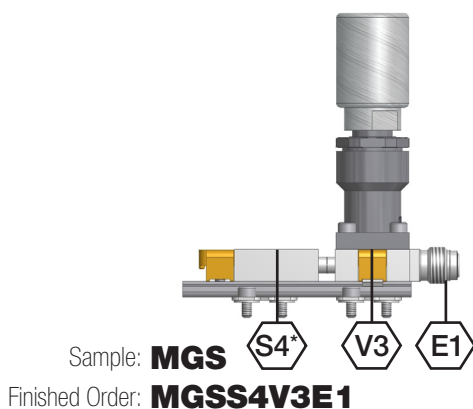
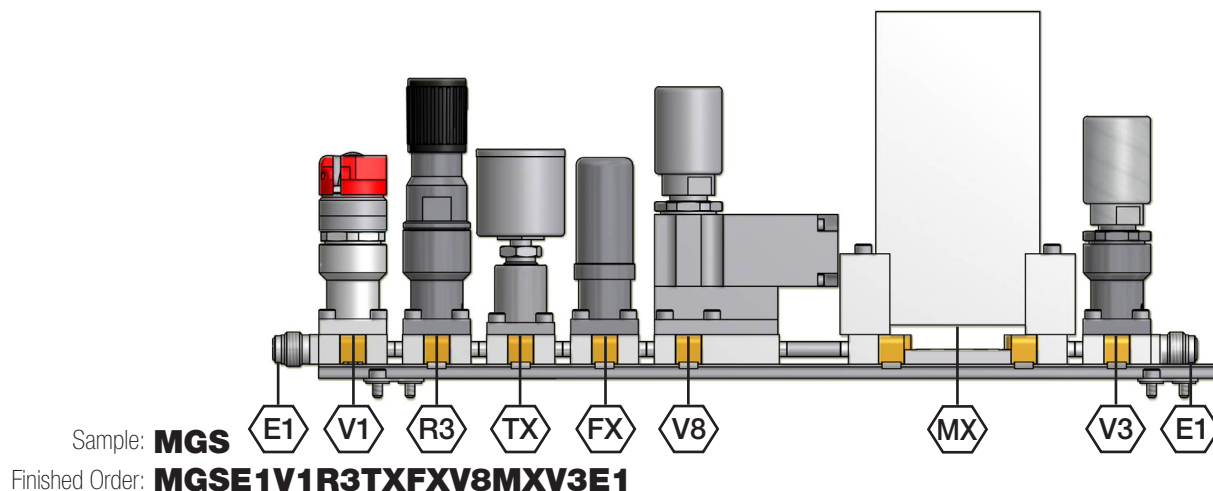
| Part Number | Description |
|-------------|----------------------|
| 56600459 | GASKET 1-1/8" W-SEAL |
| 56600381 | M4-0.7x35mm |
| 56600506 | M5-0.8x40mm |
| 56600460 | M4-0.7x12mm |

MGS Dimensional Drawing



Ordering Information

Build a Modular Gas System by using the component designators listed below.



* Refer to the Substrate Connector section on page 4

Basic

MGS

End Fittings

E1 = 50115710

E2 = 50115895

E3 = 50115709

Regulators

R1 = SMTR30

R2 = SMTR60

R3 = SMTR100

R4 = SMSQ2Micro30

R5 = SMSQ2Micro60

Valves

SM930 Series

V1 = HK LockOut-TagOut

V2 = Mini-Lever

V3 = Air Operated, Low Pressure, Normally Closed

V4 = Air Operated, Low Pressure, Normally Open

V5 = Air Operated, Low Pressure Normally Closed with Limit Switch

V6 = Air Operated, Low Pressure, Normally Open with Limit Switch

V7 = Hybrid Valve

V8 = Integrated Purge Valve

Customer Supplied Components

TX = Transducer Location

MX = MFC Location

FX = Filter Location

PX = Purge Line Location

Spacers

SP1 = 50116072

SP2 = 50116069

Optional MFC Jumper

J1 = 50115660

Optional Top Connectors

T1 = 50115793

T2 = 50115891

T3 = 50115892

T4 = 50116003

T5 = 50116004

Optional Heater

H = Heater K-Type Thermocouple, 24V

Consult factory for other heater types

Safety Guide and Installation and Operating Instructions available at

www.parker.com/veriflo

Modular Gas System

Specifications

| Materials of Construction | |
|---------------------------|--|
| Wetted | |
| Blocks | 316L SST per SEMI F20 Ultra High Purity Grade |
| Gaskets | 316L Stainless Steel High Purity Grade |
| Non-wetted | |
| Bracket | 304 Stainless Steel |
| Slide Lock Washer | Zinc |
| Clip | Stainless Steel |
| Screws | Silver Plated A2 Stainless Steel (70 KSI min. tensile strength) |
| Retaining Washer | Nylon |
| Operating Conditions | |
| Maximum Inlet | |
| AOP | 125 psig (8.6 barg) |
| Manual | 250 psig (17 barg) |
| Temperature | -40°C to 50°C |
| Heater | K-Type Thermocouple, 24V 50°C max Operating Temperature <i>Consult Factory for User Manual</i> |

| Functional Performance | |
|------------------------|---|
| Design | |
| Burst Pressure | |
| AOP | 375 psig |
| Manual | 750 psig |
| Proof Pressure | |
| AOP | 188 psig |
| Manual | 375 psig |
| Leak Rate | |
| Inboard Test Method | |
| External | 2 X 10 ⁻¹⁰ scc/sec He |
| Internal | <i>See individual components for Internal Leak Rates.</i> |

For additional information on materials of construction, functional performance and operating conditions, please contact factory.

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