



**CENTRALBIDDING**  
FROM CENTRAL AUCTION HOUSE

**5000124692 MASS FLOW CONTROLLER 0-250 MCRS-250SLPM-D-DB15/CM**

Jefferson Parish Government

Project documents obtained from [www.CentralBidding.com](http://www.CentralBidding.com)

03-Nov-2018 02:38:14 AM

DATE: 11/01/2018

INVITATION TO BID  
THIS IS NOT AN ORDER

Page: 1

BID NO.: 50-00124692

**JEFFERSON PARISH**  
PURCHASING DEPARTMENT  
P.O. BOX 9  
GRETN, LA. 70054-0009  
504-364-2678

VENDOR: [Technology International, Inc.](#)

BUYER: CGASPER@jeffparish.net

**Bids will be received until 11:00 AM, 11/09/2018 via online at [www.jeffparishbids.net](http://www.jeffparishbids.net) or by hand delivery, USPS mail or other courier service to Purchasing Department, 200 Derbigny Street (General Government Building), Suite 4400, Gretna, LA 70053. For convenience, bidders may also submit bids in the East Bank Purchasing Department, Suite 404, Jefferson Parish Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Jefferson LA 70123. However, if submitting bids on the day of bid opening, bidders must submit at the West Bank location only.**

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law, as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647. A copy of these resolutions may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at [purchasing.jeffparish.net](http://purchasing.jeffparish.net) and clicking on On-line forms.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from <http://purchasing.jeffparish.net> and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Further, a current W-9 form and respective Tax Identification number must be supplied upon contract execution, should you be awarded a contract and/or issued purchase order. Failure to do so may result in delay of payment.

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Delivered, anywhere within the Parish as designated by the Purchasing Department. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications. JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit prices shall prevail.

JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE

PROTESTS: Only those vendors that submitted a bid in response to this solicitation may submit a protest in writing to the Director of the Purchasing within 48 hours of bid opening. The Purchasing Director will review it in connection with the Parish Attorney's Office as appropriate and a written response will be provided as soon as possible.

JEFFERSON PARISH reserves the right to cancel all or any part of an order if not shipped promptly. No charges will be allowed for parking or cartage unless specified in the quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel at any time and for any reason by issuing a THIRTY (30) day written notice to the contractor.

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alteration from the specifications must be indicated on the bid form for each item and upon request, product data for same must be submitted by the time specified by the Purchasing Department.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum.

All formal Addenda require written acknowledgment on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected; JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A117.1-1961).

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

**INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS****IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS**

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online. This is a secure site and authorized personnel have limited read access only. Bidders are encouraged to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at [www.jeffparishbids.net](http://www.jeffparishbids.net) to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at <http://purchasing.jeffparish.net>.

**ADDITIONAL REQUIREMENTS FOR THIS BID**

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE  
CORRESPONDING INSTRUCTIONS BELOW.

13

1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(i), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.
2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.
3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.
4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid envelope. Failure to comply will cause the bid to be rejected. Additionally if submitting the bid electronically, then the license number must be entered in the appropriate field in the Electronic Procurement system. Failure to comply will cause the bid to be rejected.
5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.
6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precautions must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.



**INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS**

7. **PUBLIC WORKS BIDS:** All awards for public works in excess of \$5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.
8. **NON-PUBLIC WORKS BIDS:** A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.
9. **NON-PUBLIC WORKS BIDS:** A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.
10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Prior to contract executions/purchase order issuance, the successful bidder will be required to provide final insurance certificates which shall name Jefferson Parish as an additional insured in accordance with the instructions in the aforementioned "Standard Insurance Requirements" sheet.
11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. Acceptable forms shall be limited to cashier's check, certified check, or surety bid bond. All sureties must be in original format (no copies). If submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.
12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.
13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.
14. **PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required;** This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
15. **NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required** in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.
16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.

**It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission; and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to Jefferson Parish Code of Ordinances Section 2-155.10(19). By submitting a bid, vendor acknowledges this and will abide by all provisions of the referenced Jefferson Parish Code of Ordinances.**



DATE: 11/01/2018  
BID NO.: 50-00124692

INVITATION TO BID  
THIS IS NOT AN ORDER

Page: 4

**JEFFERSON PARISH**  
PURCHASING DEPARTMENT  
P.O. BOX 9  
GRETN, LA. 70054-0009  
504-364-2678

VENDOR: Technology International, Inc.

BUYER: CGASPER

As per LSA-RS 47:301 et seq., all governmental bodies are excluded from payment of sales taxes to any Louisiana taxing body. Quotations shall be based on F.O.B. Agency warehouse or jobsite, anywhere within the Parish as designated by the Purchasing Department.

JEFFERSON PARISH reserves the right to cancel all or any part of an order if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel at any time and for any reason by issuing a THIRTY (30) day written notice to the contractor.

JEFFERSON PARISH is expecting all products to be new and all work to be done in workman-like manner, according to standard practices. Any deviations or alteration from the specifications must be indicated on the bid form for each item and upon request, product data for same must be submitted by the time specified by the Purchasing Department.

**DELIVERY: FOB JEFFERSON PARISH**

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES

See Attached

INDICATE STARTING TIME (IN DAYS) FOR CONSTRUCTION WORK

INDICATE COMPLETION TIME (IN DAYS) FOR CONSTRUCTION WORK

In the event that addenda are issued with this bid, bidders MUST acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: \_\_\_\_\_  
NUMBER: \_\_\_\_\_  
NUMBER: \_\_\_\_\_  
NUMBER: \_\_\_\_\_

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable) \_\_\_\_\_

**\*\*\* ALL BIDDERS MUST COMPLETE SECTION BELOW \*\*\***

FIRM NAME:

Technology International, Inc.

SIGNATURE:

(Must be signed here)



TITLE:

Business Development Exec.

PRINT OR TYPE NAME:

Rifat Habib

ADDRESS:

1349 South International Pkwy, Suite 2411

CITY, STATE:

Lake Mary, Florida

ZIP:

32746

TELEPHONE:

( 407 ) 359-2373

FAX:

( 407 ) 359-2372

EMAIL ADDRESS:

tii@tii-usa.com

TOTAL PRICE OF ALL BID ITEMS: \$ 17,783.00

## INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00124692

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	2.00	EA	MASS FLOW CONTROLLERS, MASS FLOW METERS AND POWER ADAPTER FOR JEFFERSON PARISH WATER PLANT - WEST BANK		
			0001 MCRS-250SLPM-D-DB15/CM, 5IN, Gas: NH3, Range: 200SLPM  Description: Mass Flow Controller 0-250 SLPM w/display, Stainless sensor, DB15, custom calibrated full scale range of 200 SLPM, Backlit monochrome LCD screen 15 pin D-SUB (male) connector, RS-232 data communicatons, 2.1mm barrel power jack, primary 4-20mA output of mass flow 0-5 volt input for set point control, 24-30 Vdc, 750mA power requirement, 1/2 inch female NPT process connections 100:1 turndown ratio.	\$2,993.00	\$5,986.00
2	3.00	EA	0002 MCRS-100SLPM-D-DB15/CM, 5IN, Gas: NH3, Description: Mass Flow  Controller 0-100 SLPM w/display, Stainless sensor, Low Drop Value, DB15, Backlit monochrome LCD screen, 15 pin D-SUB (male) connector, RS-232 data communication, 2.1 mm barrel power jack, primary 4-20mA output of mass flow, 0-5 volt input for set point control, 24-30 Vdc, 750mA power requirement, 1/4 inch female NPT process connections 100:1 turndown ratio.	\$2,669.00	\$8,007.00
3	1.00	EA	0003 MS-250SLPM-D/5M, Gas: NH3, RTL: Mass Flow meter 0-250 SLPM, display  Stainless sensor, Backlit monochrome LCD screen, 8 pin mini_Din electrical connector, RS-232 data communication, 2.1 mm barrel power jack, primary 0-5 volt output of mass flow, 7-30 Vdc, 40mA power requirement, Right-to-Left flow, 1/2 inch female NPT process connections, 100:1 turndown ratio.	\$2,669.00	\$8,007.00
4	1.00	EA	0004 MS-100SLPM-D/5M, Gas: NH3, RTL: Description: Mass Flowmeter 0-100  SLPM, display, Stainless sensor, Backlit monochrome LCD screen, 8 pin mini_Din electrical connector, RS-232 data communication, 2.1 mm barrel power jack, primary 0-5 volt output of mass flow, 7-30 Vdc, 40mA power requirement, Right-to-Left flow, 1/4 inch female NPT process connections 100:1 turndown ratio.	\$1,700.00	\$1,700.00
5	2.00	EA	0005 Power Adapter - 24 VDC, 1 Amp (Worldwide)	\$60.00	\$120.00

## INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00124692

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
			<p>item # PVPS24U</p> <p>Location: West Bank Water Plant 4500 Westbank Expressway Marrero LA 70072</p> <p>Attn: David Mahner</p> <p>***Please see our Equipment Proposal TII/LA/1118/10210 attached.</p>		





# JEFFERSON PARISH

Department of Purchasing

Michael S. Yenni  
Parish President

Renny Sinino  
Director

July 2018

## CHANGES TO JEFFERSON PARISH BIDDING PROCEDURES

The East bank Office of Purchasing is now open! We are located in the Joseph S. Yenni Building, 1221 Elmwood Park Blvd., Suite 404, Jefferson, LA 70123. Bidders may submit bid responses at this location, pending authorization in each bid package. **Bidders should carefully read and must respond accordingly per the requirements of the bid packages. NOTE: Bidders submitting bids on the day of bid opening, bidders must submit at the West Bank location only.**

Other Changes Continued:

- For all advertised sealed bids, written evidence of signature authority must be included with bid submission.
- Current W9 Forms and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, a current W-9 form must be supplied upon contract execution, should you be awarded a contract and/or issued a purchase order.
- **Proof of insurance in the form of a current certificate evidencing coverages is required with bid submission.** Bidders must read the insurance requirements attachment included in each bid package for specific instructions. Upon contract execution, successful bidder must produce final insurance certificates in accordance with Jefferson Parish insurance requirements.

**Bidders should reference the "Additional Requirements" section of the bid instructions and/or the "Important Notice to Bidders" included in the bid package for specific requirements to respond accordingly.**

For more information, please call Jefferson Parish Purchasing at 504-364-2678.

Joseph S. Yenni Building – 1221 Elmwood Park Blvd., Ste. 404, Jefferson, LA 70123  
Office 504.364.2678  
General Government Bldg. – 200 Derbigny St – Suite 4400 - Gretna, LA 70053  
Office 504.364.2678  
Email: [Purchasing@jeffparish.net](mailto:Purchasing@jeffparish.net) Website: [www.jeffparish.net](http://www.jeffparish.net)



**Technology International, Inc.**  
1349 South International Pkwy, Suite 2411  
Lake Mary, FL 32746  
Tel: (407) 359-2373  
Fax: (407) 359-2372  
E-mail: [tii@tii-usa.com](mailto:tii@tii-usa.com)  
Website: [www.tii-usa.com](http://www.tii-usa.com)

## Equipment Proposal

**Description:** Mass Flow Controller 0-250 MCRS-250SLPM-DDB15/CM

**Solicitation #:** 5000124692

**Agency:** Jefferson Parish Government

**Our Ref:** TII/LA/1118/10210

**Date:** 11/08/2018

In response to your quote request for Mass Flow Controller 0-250 MCRS-250SLPM-DDB15/CM, Technology International, Inc. is pleased to submit the following for consideration:

ITEM NO.	QTY	DESCRIPTION/ MODEL NO.	UNIT PRICE	EXTD. PRICE
1	2	Alicat Part # MCRS-250SLPM-D-DB15S/CM, 5IN, Gas: NH3, Range (200SLPM) Mass Flow Controller 0 - 250 SLPM, Display, Stainless Sensor, DB15S	\$2,993.00	\$5,986.00
2	3	Alicat Part # MCRS-100SLPM-D-DB15/CM, 5IN, Gas: NH3 Mass Flow Controller 0-100 SLPM w/ Display, Stainless sensor, Low Drop Valve, DB15	\$2,669.00	\$8,007.00
3	1	Alicat Part # MS-250SLPM-D/5M, Gas: NH3, RTL Mass Flowmeter, 0 - 250 SLPM, Display, Stainless Sensors	\$1,970.00	\$1,970.00
4	1	Alicat Part # MS-100SLPM-D/5M, Gas: NH3, RTL Mass Flowmeter, 0 - 100 SLPM, Display, Stainless Sensor	\$1,700.00	\$1,700.00
5	2	Alicat Part # PVPS24U Power Adapter - 24 VDC, 1 Amp (Worldwide)	\$60.00	\$120.00

See attached data sheets

**Total price for all above.....\$17,783.00**

**Warranty:** Manufacturer's Standard warranty applies

**Delivery:**

- Estimated delivery is **6 WEEKS** after receipt of order and approved submittal
- All delivery dates quoted are subject to manufacturer's confirmation at time of order.
- Submittal data will be provided for approval after receipt of order (if applicable).
- Customer to provide equipment and personnel to unload.
- TII will deliver good title (MSO) to the Agency upon payment confirmation. The Agency is responsible for its own title work and registration (if applicable).

**Freight:** Freight Included to Marrero LA 70072.

**Validity:** Quote is valid for 30 days.

**Payment Terms:** NET 30

**Prompt Payment discount:** 1/4 % 10 days

**\*\*\* Notes:**

- Quoted price is not available on a line item basis. This is an offer for a lump sum contract.
- Confirmation of price required prior to placing order of quantities other than listed.

**Technology International, Inc. Corporate data:**

We are a small business and our Tax Payer Identification Number (TIN): 650342335. The above price quoted does not include any sales, excise or similar taxes. If applicable agency must accrue and remit it directly."

We trust that this proposal will meet your requirements and we look forward to hearing from you.

If you have any questions or need more information, please contact us by phone at 407-359-2373, fax at 407-359-2372 or email us at [tii@tii-usa.com](mailto:tii@tii-usa.com)

Respectfully submitted,



Rifat Habib  
Business Development Exec.  
Technology International, Inc.



Technical Data for Alicat **MS** Mass Flow Meters

0 – 0.5 sccm Full Scale through 0 – 5000 slpm Full Scale



Alicat MS instruments are built for use with certain aggressive gases.

Standard Specifications (Contact Alicat for available options.)

Performance	MS Mass Flow Meter
Accuracy at calibration conditions after tare	± (0.8% of Reading + 0.2% of Full Scale)
High Accuracy at calibration conditions after tare	± (0.4% of Reading + 0.2% of Full Scale) High Accuracy option not available for units ranged under 5 sccm or over 500 slpm.
Accuracy for Bidirectional Meters at calibration conditions after tare	± (0.8% of reading + 0.2% of total span from positive full scale to negative full scale)
Repeatability	± 0.2% Full Scale
Zero Shift and Span Shift	0.02% Full Scale / °Celsius / Atm
Operating Range / Turndown Ratio	1% to 100% Full Scale / 100:1 Turndown
Maximum Measurable Flow Rate	up to 128% Full Scale (Gas Dependent)
Typical Response Time	10 ms (Adjustable)
Warm-up Time	< 1 Second

Operating Conditions	MS Mass Flow Meter
Mass Reference Conditions (STP)	25°C & 14.696 psia (standard — others available on request)
Operating Temperature	–10 to +60 °Celsius
Humidity Range (Non–Condensing)	0 to 100%
Maximum Internal Pressure (Static)	145 psig
Maximum Allowable Instantaneous Differential Pressure Across Device (Inlet to Outlet)	75 psid
Proof Pressure	175 psig
Mounting Attitude Sensitivity	None
Ingress Protection	IP40
Wetted Materials	316LSS, FFKM (Kalrez) standard; Viton, EPDM, Buna, Neoprene as needed for some gases. If your application demands a different material, please contact Alicat.

Communications / Power	MS Mass Flow Meter
Monochrome LCD or Color TFT Display with integrated touchpad	Simultaneously displays Mass Flow, Volumetric Flow, Pressure and Temperature
Digital Output Signal <sup>1</sup> Options	RS-232 Serial / RS-485 Serial / Modbus RTU / PROFIBUS / EtherNet/IP / DeviceNet / Modbus TCP/IP / EtherCAT
Analog Output Signal <sup>2</sup> Options	0-5 Vdc / 1-5 Vdc / 0-10 Vdc / 4-20 mA
Optional Secondary Analog Output Signal <sup>2</sup>	0-5 Vdc / 1-5 Vdc / 0-10 Vdc / 4-20 mA
Electrical Connection Options	8 Pin Mini-DIN / 9-pin D-sub (DB9) / 15-pin D-sub (DB15) / 6 pin locking / 8pin M12
Supply Voltage	7 to 30 Vdc (15-30 Vdc for 4-20 mA outputs)
Supply Current	0.040 Amp (+ output current on 4-20 mA)
1. The <b>Digital Output Signal</b> communicates Mass Flow, Volumetric Flow, Pressure and Temperature 2. The <b>Analog Output Signal</b> and <b>Optional Secondary Analog Output Signal</b> communicate your choice of Mass Flow, Volumetric Flow, Pressure or Temperature	

Features	MS Mass Flow Meter
Gas Select™ 5.0	<b>Gas Select™ 5.0</b> provides <b>130 Preloaded Gas Calibrations: See the following page for a complete list.</b> If your application calls for a gas not on this list, please let us know. We can also calibrate to a wide variety of complex gas mixtures involving up to eight gas constituents.
COMPOSER™	<b>COMPOSER™</b> is a feature of Gas Select™ 5.0 that allows users to defines up to 20 user gas compositions with up to 5 constituent gases per mix ( <a href="http://www.alicat.com/composer">www.alicat.com/composer</a> ).

Range Specific Specifications

Full Scale Flow Mass Meter	Pressure Drop <sup>1</sup> at FS Flow (psid) venting to atmosphere	Mechanical Dimensions <sup>2</sup>	Process Connections <sup>3</sup>
0.5 sccm to 1 sccm	1.0	4.4"H x 2.4"W x 1.1"D	M-5 (10-32) Female Thread Shipped with 316SS M-5 (10-32) Male Chemraz O-ring face seal to 1/8" Female NPT fittings.
2 sccm to 50 sccm	1.0		1/8" NPT Female
100 sccm to 20 slpm	1.0	4.6"H x 2.4"W x 1.1"D	1/4" NPT Female
50 slpm	2.0	5.1"H x 4.0"W x 1.6"D	1/2" NPT Female
100 slpm	2.5		3/4" NPT Female
250 slpm	2.1	5.7"H x 4.0"W x 1.6"D	(A 1-1/4" NPT Female optional process connection is available for 2000 slpm meters.)
500 slpm	4.0	6.0"H x 5.2"W x 2.9"D	1-1/4" NPT Female
1000 slpm	6.0		2" NPT Female
1500 slpm	9.0	7.0"H x 5.2"W x 3.9"D	
2000 slpm	5.0		
3000 slpm	7.1		
5000 slpm	3.4		

1. Lower Pressure Drops Available, please see our **WHISPER-Series** mass flow controllers at [www.alicat.com/whisper](http://www.alicat.com/whisper).

2. See drawings for metric equivalents.

2. Compatible with Swagelok® tube, Parker®, face seal, push connect and compression adapter fittings. VCR and SAE connections upon request.

Alicat Gas Select™ 5.0 Preloaded Gases

PURE NON-CORROSIVE GASES		
Gas Number	Short Name	Long Name
14	C2H2	Acetylene
0	Air	Air
1	Ar	Argon
16	i-C4H10	i-Butane
13	n-C4H10	n-Butane
4	CO2	Carbon Dioxide
3	CO	Carbon Monoxide
60	D2	Deuterium
5	C2H6	Ethane
15	C2H4	Ethylene (Ethene)
7	He	Helium
6	H2	Hydrogen
17	Kr	Krypton
2	CH4	Methane
10	Ne	Neon
8	N2	Nitrogen
9	N2O	Nitrous Oxide
11	O2	Oxygen
12	C3H8	Propane
19	SF6	Sulfur Hexafluoride
18	Xe	Xenon

BREATHING GASES		
Gas Number	Short Name	Long Name
164	EAN-32	32% O2 / 68% N2
165	EAN	36% O2 / 64% N2
166	EAN-40	40% O2 / 60% N2
167	HeOx-20	20% O2 / 80% He
168	HeOx-21	21% O2 / 79% He
169	HeOx-30	30% O2 / 70% He
170	HeOx-40	40% O2 / 60% He
171	HeOx-50	50% O2 / 50% He
172	HeOx-60	60% O2 / 40% He
173	HeOx-80	80% O2 / 20% He
174	HeOx-99	99% O2 / 1% He
175	EA-40	Enriched Air-40% O2
176	EA-60	Enriched Air-60% O2
177	EA-80	Enriched Air-80% O2
178	Metabol	Metabolic Exhalant (16% O2 / 78.04% N2 / 5% CO2 / 0.96% Ar)

CHROMATOGRAPHY GASES		
Gas Number	Short Name	Long Name
29	P-5	5% CH4 / 95% Ar
206	P-10	10% CH4 90% Ar

WELDING GASES		
Gas Number	Short Name	Long Name
23	C-2	2% CO2 / 98% Ar
22	C-8	8% CO2 / 92% Ar
21	C-10	10% CO2 / 90% Ar
140	C-15	15% CO2 / 85% Ar
141	C-20	20% CO2 / 80% Ar
20	C-25	25% CO2 / 75% Ar
142	C-50	50% CO2 / 50% Ar
24	C-75	75% CO2 / 25% Ar
25	He-25	25% He / 75% Ar
143	He-50	50% He / 50% Ar
26	He-75	75% He / 25% Ar
144	He-90	90% He / 10% Ar
27	A1025	90%He / 7.5%Ar / 2.5%CO2
28	Star29	Stargon CS 90% Ar / 8% CO2 / 2% O2

PURE CORROSIVES*		
Gas Number	Short Name	Long Name
32	NH3	Ammonia
80	1Butene	Butylene (1-Butene)
81	cButene	Cis-Butene (cis-2-butene)
82	iButene	Iso-Butene
83	tButene	Trans-Butene
84	COS	Carbonyl Sulfide
33	Cl2	Chlorine
85	CH3OCH3	Dimethylether
34	H2S	Hydrogen Sulfide (H2S)
31	NF3	NF3 (Nitrogen Trifluoride)
30	NO	NO (Nitric Oxide)
36	C3H6	Propylene (Propylene)
86	SiH4	Silane (SiH4)
35	SO2	Sulfur Dioxide
*Pure Corrosive gases are only available on S-Series instruments that are compatible with these gases. Gas numbers 33 and 35 are not available on controllers.		

BIOREACTOR GASES		
Gas Number	Short Name	Long Name
145	Bio-5M	5% CH4 / 95% CO2
146	Bio-10M	10% CH4 / 90% CO2
147	Bio-15M	15% CH4 / 85% CO2
148	Bio-20M	20% CH4 / 80% CO2
149	Bio-25M	25% CH4 / 75% CO2
150	Bio-30M	30% CH4 / 70% CO2
151	Bio-35M	35% CH4 / 65% CO2
152	Bio-40M	40% CH4 / 60% CO2
153	Bio-45M	45% CH4 / 55% CO2
154	Bio-50M	50% CH4 / 50% CO2
155	Bio-55M	55% CH4 / 45% CO2
156	Bio-60M	60% CH4 / 40% CO2
157	Bio-65M	65% CH4 / 35% CO2
158	Bio-70M	70% CH4 / 30% CO2
159	Bio-75M	75% CH4 / 25% CO2
160	Bio-80M	80% CH4 / 20% CO2
161	Bio-85M	85% CH4 / 15% CO2
162	Bio-90M	90% CH4 / 10% CO2
163	Bio-95M	95% CH4 / 5% CO2

LASER GASES		
Gas Number	Short Name	Long Name
179	LG-4.5	4.5% CO2 / 13.5% N2 / 82% He
180	LG-6	6% CO2 / 14% N2 / 80% He
181	LG-7	7% CO2 / 14% N2 / 79% He
182	LG-9	9% CO2 / 15% N2 / 76% He
183	HeNe-9	9% Ne / 91% He
184	LG-9.4	9.4% CO2 / 19.25% N2 / 71.35% He

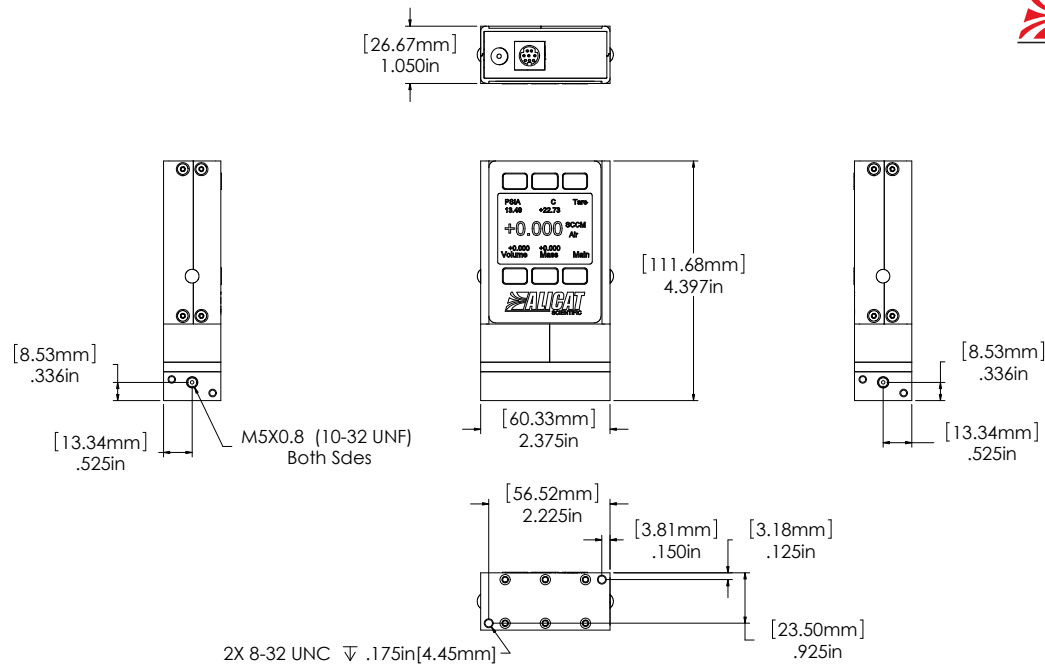
O2 CONCENTRATOR GASES		
Gas Number	Short Name	Long Name
197	OCG-89	89% O2 / 7% N2 / 4% Ar
198	OCG-93	93% O2 / 3% N2 / 4% Ar
199	OCG-95	95% O2 / 1% N2 / 4% Ar

REFRIGERANTS*		
Gas Number	Short Name	Long Name
100	R-11	Trichlorofluoromethane
101	R-115	Chloropentafluoroethane
102	R-116	Hexafluoroethane
103	R-124	Chlorotetrafluoroethane
104	R-125	Pentafluoroethane
105	R-134A	Tetrafluoroethane
106	R-14	Tetrafluoromethane
107	R-142b	Chlorodifluoroethane
108	R-143a	Trifluoroethane
109	R-152a	Difluoroethane
110	R-22	Difluoromonochloromethane
111	R-23	Trifluoromethane
112	R-32	Difluoromethane
113	RC-318	Octafluorocyclobutane
114	R-404A	44% R-125 / 4% R-134A / 52% R-143A
115	R-407C	23% R-32 / 25% R-125 / 52% R-134A
116	R-410A	50% R-32 / 50% R-125
117	R-507A	50% R-125 / 50% R-143A
*Refrigerant gases are only available on S-Series instruments that are compatible with these gases.		

FUEL GASES		
Gas Number	Short Name	Long Name
185	Syn Gas-1	40% H2 + 29% CO + 20% CO2 + 11% CH4
186	Syn Gas-2	64% H2 + 28% CO + 1% CO2 + 7% CH4
187	Syn Gas-3	70% H2 + 4% CO + 25% CO2 + 1% CH4
188	Syn Gas-4	83%H2+14%CO+3%CH4
189	Nat Gas-1	93% CH4 / 3% C2H6 / 1% C3H8 / 2% N2 / 1% CO2
190	Nat Gas-2	95% CH4 / 3% C2H6 / 1% N2 / 1% CO2
191	Nat Gas-3	95.2% CH4 / 2.5% C2H6 / 0.2% C3H8 / 0.1% C4H10 / 1.3% N2 / 0.7% CO2
192	Coal Gas	50% H2 / 35% CH4 / 10% CO / 5% C2H4
193	Endo	75% H2 + 25% N2
194	HHO	66.67% H2 / 33.33% O2
195	HD-5	LPG 96.1% C3H8 / 1.5% C2H6 / 0.4% C3H6 / 1.9% n-C4H10
196	HD-10	LPG 85% C3H8 / 10% C3H6 / 5% n-C4H10

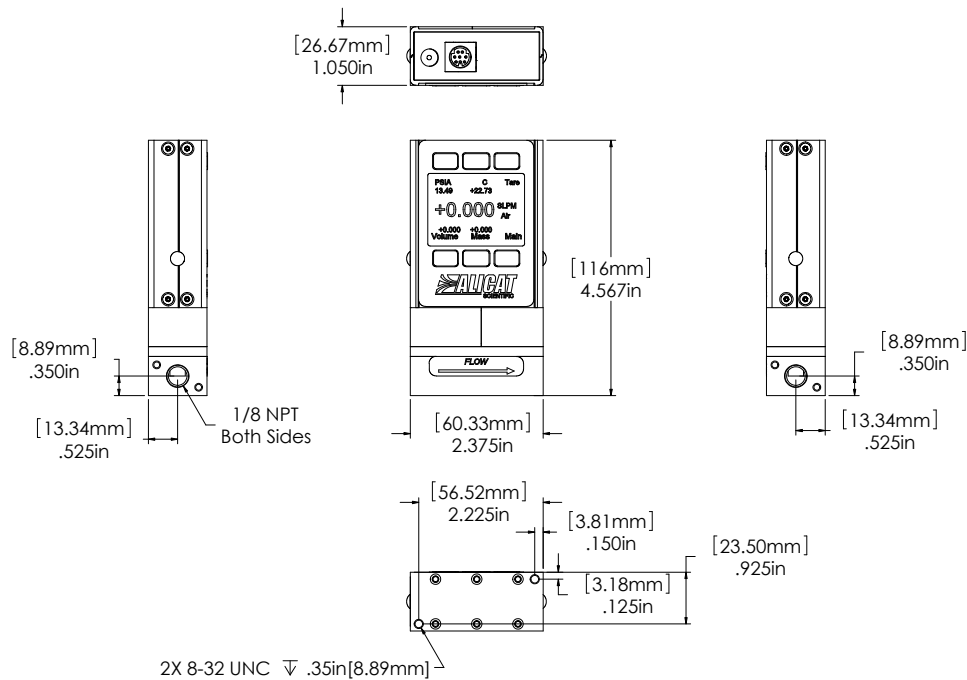
STACK GASES		
Gas Number	Short Name	Long Name
200	FG-1	2.5% O2 / 10.8% CO2 / 85.7% N2 / 1% Ar
201	FG-2	2.9% O2 / 14% CO2 / 82.1% N2 / 1% Ar
202	FG-3	3.7% O2 / 15% CO2 / 80.3% N2 / 1% Ar
203	FG-4	7% O2 / 12% CO2 / 80% N2 / 1% Ar
204	FG-5	10% O2 / 9.5% CO2 / 79.5% N2 / 1% Ar
205	FG-6	13% O2 / 7% CO2 / 79% N2 / 1% Ar

**MS-Series**  
0 – 0.5 sccm  
0 – 1 sccm  
0 – 2 sccm  
0 – 5 sccm  
0 – 10 sccm  
0 – 20 sccm  
0 – 50 sccm



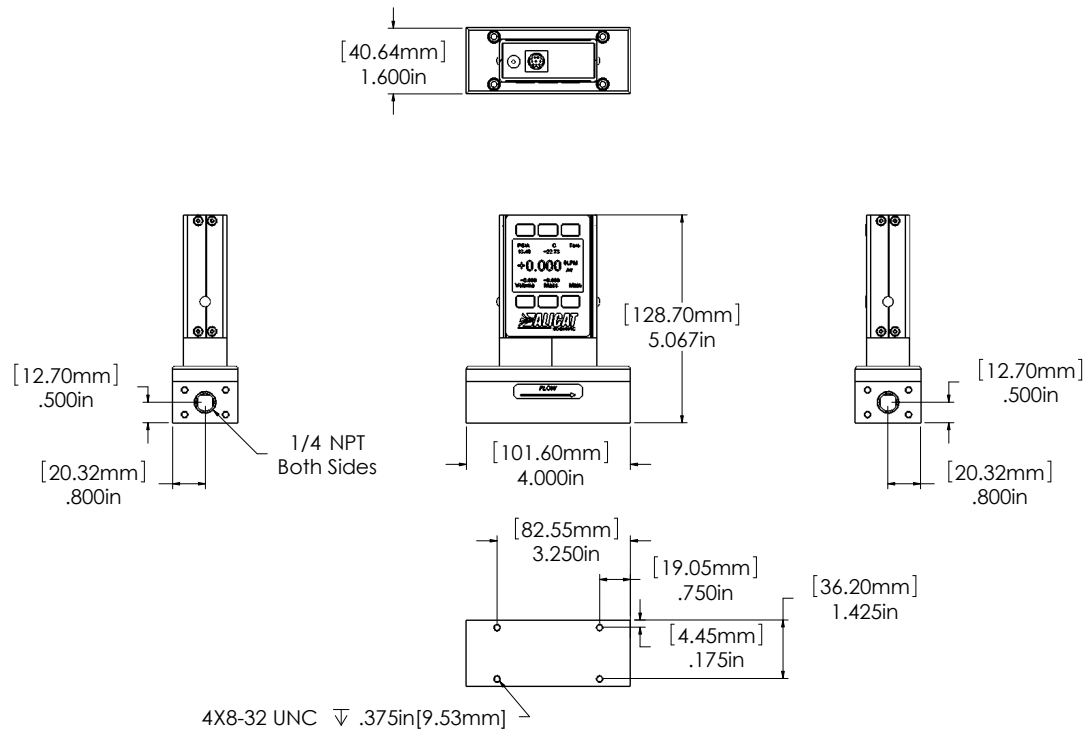
0.5 sccm to 50 sccm approximate shipping weight: 0.8lb

**MS-Series**  
0 – 100 sccm  
0 – 200 sccm  
0 – 500 sccm  
0 – 1 slpm  
0 – 2 slpm  
0 – 5 slpm  
0 – 10 slpm  
0 – 20 slpm



100 sccm to 20 slpm approximate shipping weight: 1.0 lb

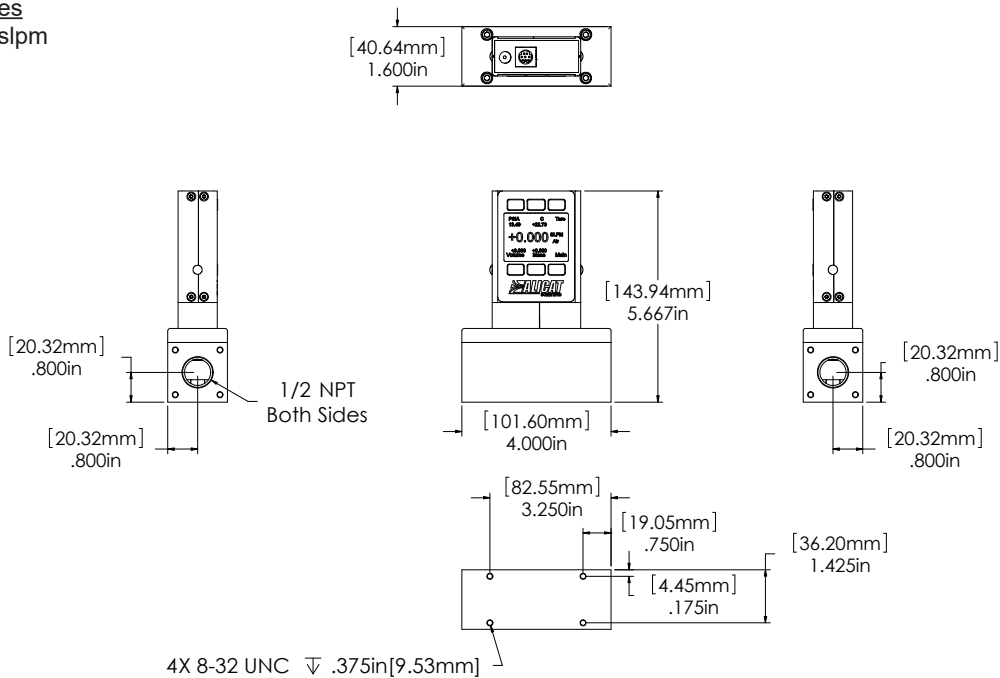
**MS-Series**  
0 – 50 slpm  
0 – 100 slpm



50 slpm to 100 slpm approximate shipping weight: 2.4 lb.

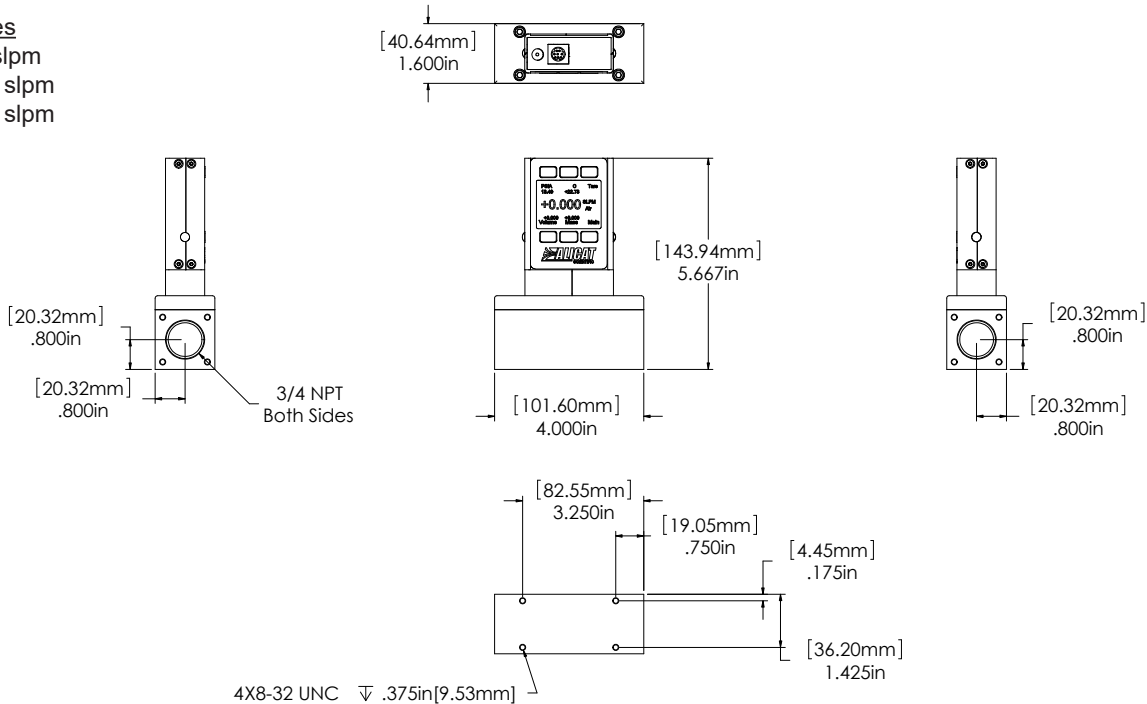


MS-Series  
0 – 250 slpm



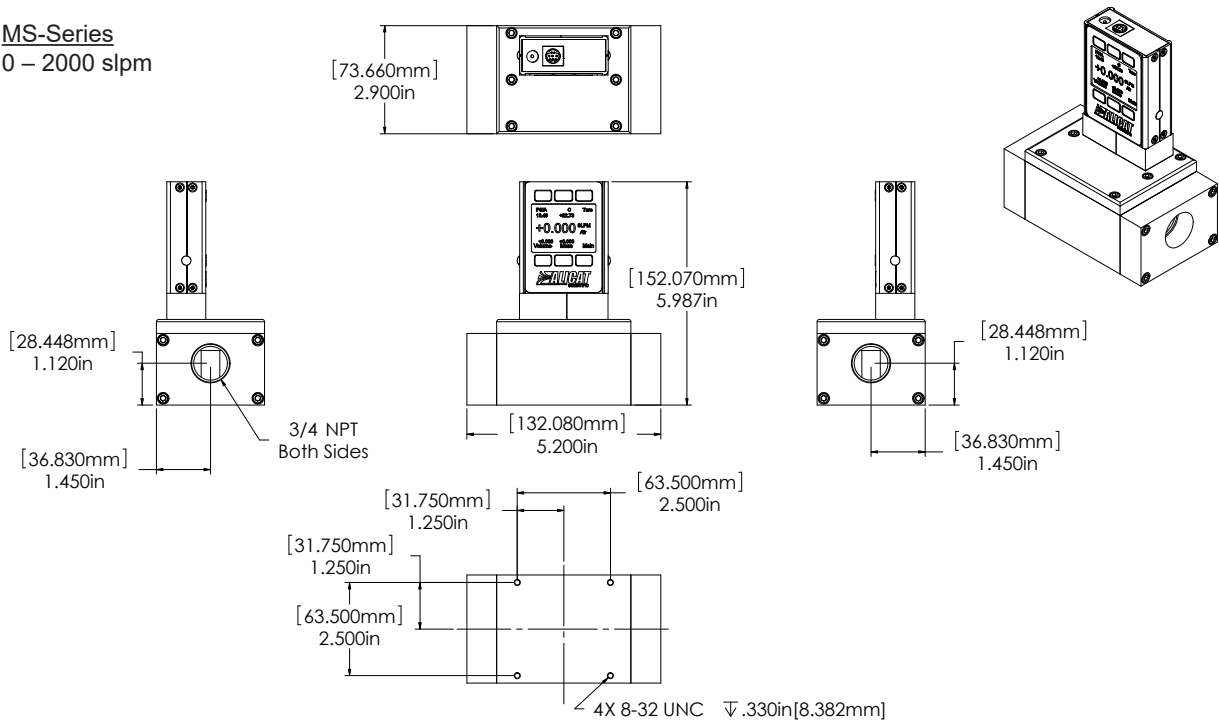
250 slpm approximate shipping weight: 3.2 lb.

MS-Series  
0 – 500 slpm  
0 – 1000 slpm  
0 – 1500 slpm



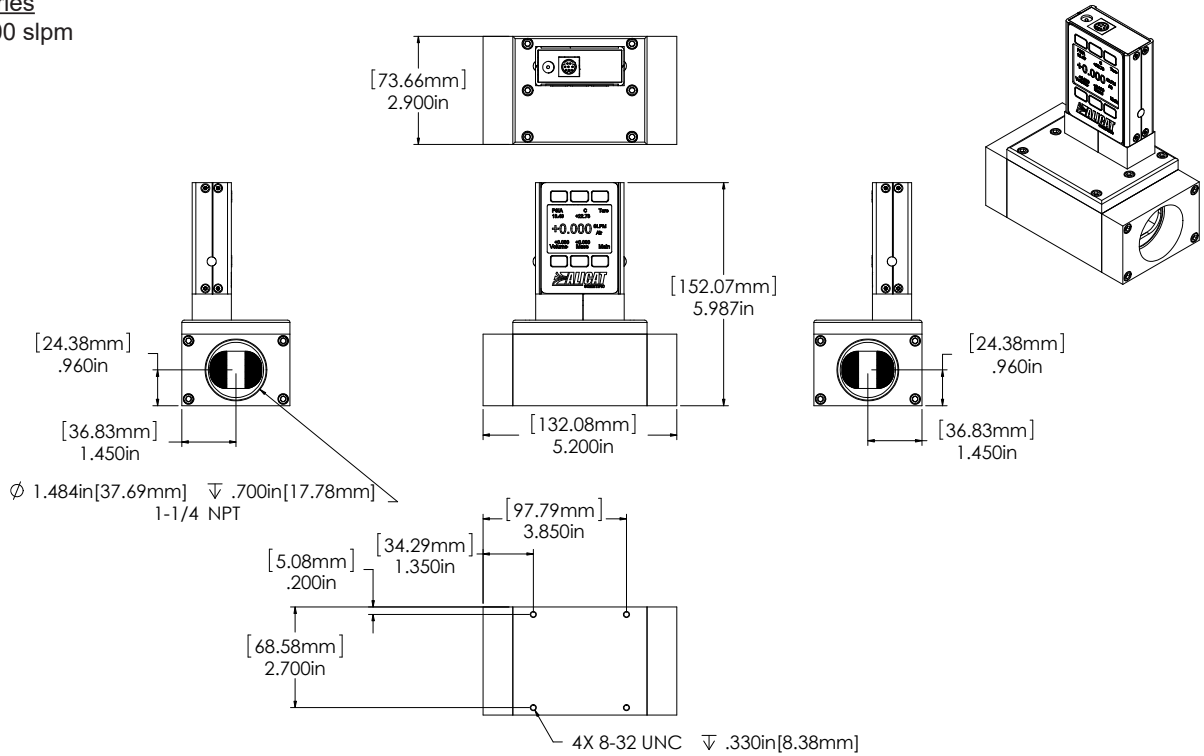
500 slpm to 1500 slpm approximate shipping weight: 3.5 lb

MS-Series  
0 – 2000 slpm



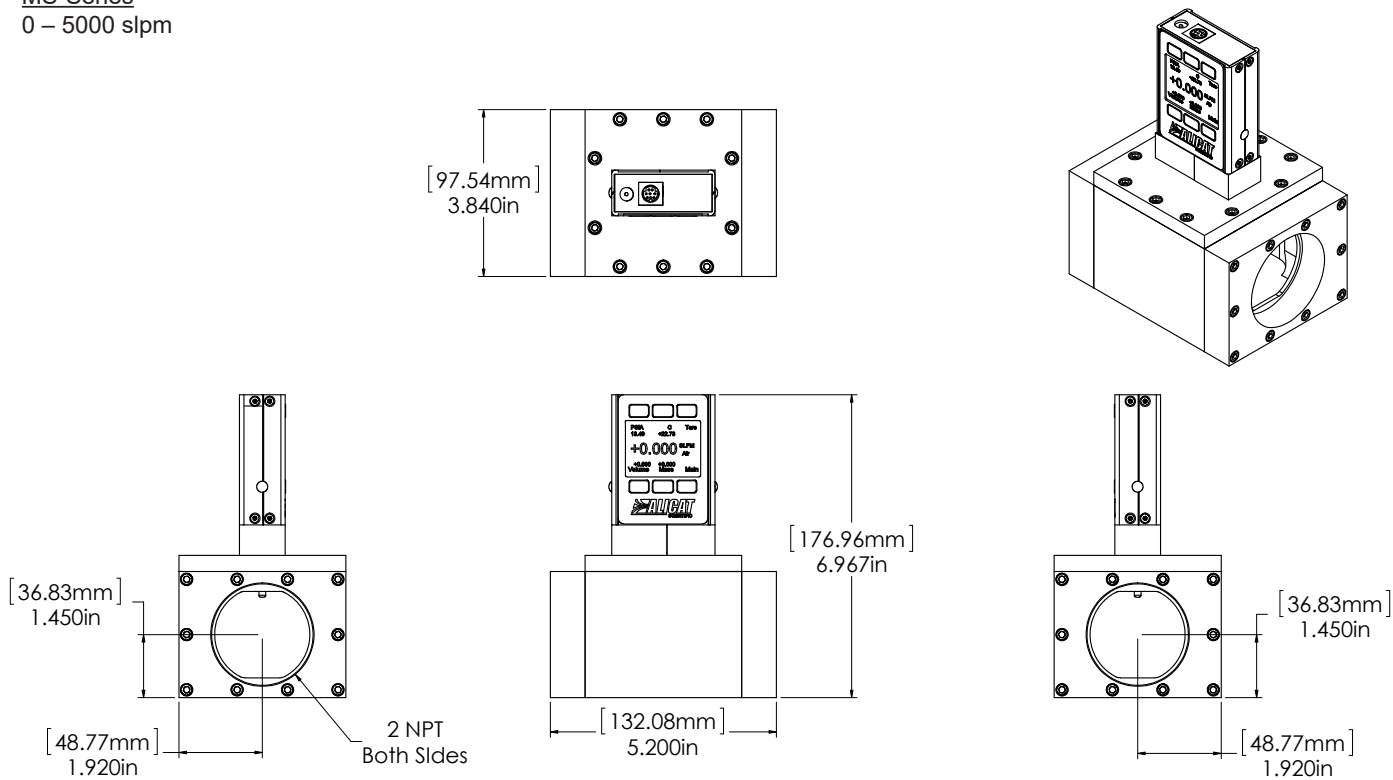
2000 slpm approximate shipping weight: 4.5 lb

MS-Series  
0 – 3000 slpm



3000 slpm approximate shipping weight: 4.5 lb

MS-Series  
0 – 5000 slpm



5000 slpm approximate shipping weight: 14 lb