

• Bios Definer and Met Lab US Price List

Name	Part	Description	Price
Bios Definer™ 220 Primary Flow Meter			
Definer 220	200-220L	5 smL – 500 smL/min, rated accuracy ± 1% of reading standardized*, ±0.75% volumetric	\$2,000.00
Definer 220	200-220M	50 smL – 5,000 smL/min, rated accuracy ± 1% of reading standardized*, ±0.75% volumetric	\$2,000.00
Definer 220	200-220H	300 smL – 30,000 smL/min, rated accuracy ± 1% of reading standardized*, ±0.75% volumetric	\$2,000.00
<p>Each Definer 220 shipment includes a Universal 100-240V AC power adapter/charger, Bios Optimizer™ Software CD, PC serial cable, plastic leak test cap (1), NIST-Traceable calibration certificate, mini-manual, Swagelok® fittings (models L and M, 1/4"; model H only, 3/8").</p> <p>The universal power adapter/charger fits either a U.S., U.K., European or Australian plug configuration for use in multiple countries. Select one plug; for each additional plug, add \$5.00.</p> <p>*At gas pressure of 760 mmHg, and a gas temperature of 25° centigrade with standardization temperature set to 0° centigrade.</p>			
Bios Definer™ 220 Carry Cases			
Pelican 1200	100-250	Hard, heavy duty carry case with custom foam; Fits 1 Definer 220	\$55.95
Pelican 1520	100-251	Hard, heavy duty carry case with custom foam; Fits 2-3 Definer 220s	\$151.95
Case Logic Hip	100-258	Soft nylon water-resistant bag for waist or hand carry; Fits 1 Definer 220	\$24.99
Case Logic Shoulder	100-259	Soft nylon water-resistant bag for shoulder or hand carry; Fits 1 Definer 220	\$39.99
Bios Definer™ 220 Hardware			
PC Card	100-112	Provides a serial port for laptop computers	\$129.00
Serial Cable	100-113	RS-232 cable for Definer 220 to PC connection	\$10.00

Bios Definer™ 220 Accessories			
Adapter/Charger, Universal	100-222	Universal 100-240V, 12 VDC; single charger for use in multiple countries. Comes with one plug configuration of your choice: U.S., U.K., European or Australian plug configuration. For additional plugs, see part 100-215.	\$35.00
Adapter/Charger Universal Plug	100-215	Plug configuration for use with the universal adapter; please choose one or more of the following: U.S., U.K., European or Australian	\$5.00
Cable/Adapter	100-125	0 to 5 volt output cable/adapter for the Definer 220 provides a voltage signal proportional to the flow rate measured. It works with a special firmware, contact Bios for details.	\$200.00
Leak Test Plug	100-406	Leak test plug to fit 1/4" Swagelok® fitting, Definer 220, models L and M.	\$10.00
Leak Test Plug	100-407	Leak test plug to fit 3/8" Swagelok® fitting for Definer 220H	\$10.00
Fitting, Barbed	100-410	1/4" Swagelok® barbed fitting, 1 piece, Definer 220, models L and M	\$25.00
Fitting, Barbed	100-411	3/8" Swagelok® barbed fitting, Definer 220H	\$25.00
Ferrule	100-428	1/4" Swagelok® ferrule, Definer 220, models L and M	\$5.00
Ferrule	100-429	3/8" Swagelok® ferrule, Definer 220H	\$5.00
Swagelok® Reducer	100-432	3/8" Swagelok® to 1/4" Swagelok® reducer, Definer 220H	\$25.00
Ferrule and Nut	100-444	Swagelok® Nut and Ferrule set 1/4" for 220L and 220M	\$10.00
Ferrule and Nut	100-445	Swagelok® Nut and Ferrule set 3/8" for 220H	\$10.00
Bios Definer™ 110 Flow Transfer Standard			
Definer 110	200-110L	Flow Transfer Standard (FTS) for PM sampler calibration, .5 to 6L/min, rated accuracy +/- 1% of reading volumetric	\$500.00
Definer 110	200-110H	Flow Transfer Standard (FTS) for PM sampler calibration, 5 to 20L/min, rated accuracy +/- 1% of reading volumetric	\$500.00
Bios Definer™ 1020 Primary Flow Meter for High Flow			
Definer 1020	200-1020	5 - 500 SL/min, rated accuracy ±.25% of reading standardized*	\$30,000
<p>Universal 100-240V AC power adapter/charger, Bios Optimizer™ software CD, PC serial cable, leak test cable, NIST-traceable calibration certificate, manual, Swagelok® fittings and case.</p> <p>The universal power adapter/charger fits either a U.S., U.K., European or Australian plug configuration for use in multiple countries. Select one plug; for each additional plug, add \$5.00.</p> <p>Case: The Definer 1020 requires special case and shipping considerations. Please contact Bios or a Bios sales representative for information.</p> <p>*At a gas pressure of 760 mmHg, and a gas temperature of 25° centigrade with standardization temperature set to 21.1° centigrade.</p>			
Bios Definer™ 1020 Hardware			
Serial PC Card	100-112	Provides a serial port for laptop computers	\$129.00
Serial Cable	100-113	RS-232 cable for Bios product to PC connection	\$10.00

Bios Definer™ 1020 Accessories			
Adapter/Charger	100-223	Charger 100-240V, 12 VDC; U.S. plug configuration only	\$75.00
Swagelok® Reducer	100-436	Swagelok® reducer used to reduce from a 1 1/2" Swagelok® fitting to 1" tube OD, Definer 1020	\$206.00
Swagelok® Reducer	100-437	Swagelok® reducer used to reduce from a 1" Swagelok® fitting to 3/4" tube OD, Definer 1020	\$46.50
Swagelok® Reducer	100-438	Swagelok® reducer used to reduce from a 1" Swagelok® fitting to 1/2" tube OD, Definer 1020	\$35.00
Swagelok® Ferrule	100-439	Swagelok® Nut and Ferrule Set 1 1/2", Definer 1020	\$106.00
Swagelok® Ferrule	100-440	Swagelok® Nut and Ferrule Set 1", Definer 1020	\$30.50
Swagelok® Ferrule	100-441	Swagelok® Nut and Ferrule Set 3/4", Definer 1020	\$17.00
Swagelok® Ferrule	100-442	Swagelok® Nut and Ferrule Set 1/2", Definer 1020	\$10.50
Bios Met Lab® ML-500 Primary Piston Prover			
Primary standard with flow range with rated accuracy of $\pm 0.25\%$ volumetric. $\pm 0.40\%$ of reading standardized*, combined standard uncertainty.			
ML-500-B	200-500-B	Base unit; fits any one of the three available interchangeable flow cells	\$2,000.00
ML-500-10	200-500-10	Low flow cell, flow from 5 – 500 sccm	\$7,900.00
ML-500-24	200-500-24	Medium flow cell, flow from 50 – 5,000 sccm	\$7,900.00
ML-500-44	200-500-44	High flow cell, flow from 500 – 50,000 sccm	\$7,900.00
<p>Base includes: Universal 100-240V AC power adapter/charger, Bios Optimizer™ software CD, PC serial cable, leak test cable, NIST-traceable calibration certificate and manual. Flow cell includes Swagelok® fittings (models 10 and 24, 1/4"; model 44 only, 1/2").</p> <p>The universal power adapter/charger fits either a U.S., U.K., European or Australian plug configuration for use in multiple countries. Select one plug; for each additional plug, add \$5.00.</p> <p>*At gas pressure of 760 mmHg, and a gas temperature of 25° centigrade with standardization temperature set to 0° centigrade.</p>			
Bios Met Lab® ML-800 Primary Piston Prover			
Primary standard with flow range with rated accuracy $\pm 0.15\%$ of reading standardized*, combined standard uncertainty, Ultra Low Flow accuracy 0.5 to 1.0 sccm $\pm 0.50\%$ of reading, 1.0 to 40 sccm $\pm 0.25\%$ of reading.			
ML-800-B	200-800-B	Base unit; fits any one of the three available interchangeable flow cells	\$5,500.00
ML-800-3	200-800-3	Ultra Low Cell, flow 0.5 to 50 sccm	\$15,000.00
ML-800-10	200-800-10	Low flow cell, flow from 5 – 500 sccm	\$10,500.00
ML-800-24	200-800-24	Medium flow cell, flow from 50 – 5,000 sccm	\$10,500.00
ML-800-44	200-800-44	High flow cell, flow from 500 – 50,000 sccm	\$10,500.00
<p>Base includes: Universal 100-240V AC power adapter/charger, Bios Optimizer™ software CD, PC serial cable, leak test cable, NIST-traceable calibration certificate and manual. Flow cell includes Swagelok® fittings (models 10 and 24, 1/4"; model 3 only, 1/8"; model 44 only, 1/2").</p> <p>The universal power adapter/charger fits either a U.S., U.K., European or Australian plug configuration for use in multiple countries. Select one plug; for each additional plug, add \$5.00.</p> <p>*At gas pressure of 760 mmHg, and a gas temperature of 25° centigrade with standardization temperature set to 0° centigrade.</p>			

Bios Met Lab® Carry Cases			
Pelican 1550	100-254	Hard, heavy duty carry case with custom foam, for ML-500: Fits 1 base and 1 flow cell	\$145.00
Pelican 1600	100-255	Hard, heavy duty carry case with custom foam, for ML-800: Fits 1 base and 1 flow cell	\$170.00
Pelican 1650	100-257	Hard, heavy duty carry case with custom foam: ML-500, fits 1 base, 2-3 flow cells; ML-800, fits 1 base, 2-3 flow cells	\$240.00
Bios Met Lab® Hardware			
Serial PC Card	100-112	Provides a serial port for laptop computers	\$129.00
Serial Cable	100-113	RS-232 cable for Bios product to PC connection	\$10.00
Bios Met Lab® Accessories			
Battery	100-203	6V rechargeable, sealed lead acid battery for ML-500	\$25.00
Battery	100-206	6V rechargeable, sealed lead acid battery for ML-800	\$45.50
Adapter/Charger Universal	100-224	Universal 100-240V, 12 VDC; single charger for use in multiple countries. Comes with one plug configuration of your choice: U.S., U.K., European or Australian plug configuration. For additional plugs, see part 100-215.	\$50.00
Adapter/Charger Universal Plug	100-215	Plug configuration for use with the universal adapter; please choose one or more of the following: U.S., U.K., European or Australian	\$5.00
Leak Test Cable	100-116	Met Lab series leak test cable	\$10.00
Leak Test Plug	100-406	Leak test plug to fit 1/4" Swagelok® fitting	\$10.00
Leak Test Plug	100-407	Leak test plug to fit 3/8" Swagelok® fitting	\$10.00
Leak Test Plug	100-408	Leak test plug to fit 1/2" Swagelok® fitting	\$10.00
Fitting, Barbed	100-410	1/4" Swagelok® barbed fitting, 1 piece	\$25.00
Fitting, Barbed	100-411	3/8" Swagelok® barbed fitting, 1 piece	\$25.00
Fitting, Barbed	100-412	1/2" Swagelok® barbed fitting, 1 piece	\$25.00
Fitting, Purge	100-425	Custom-installed purge fittings to enable a continuous flow of nitrogen through the inner measurement tube of a Met Lab flow cell during calibration of other gases	\$300.00
Ferrule	100-428	1/4" Swagelok® ferrule	\$5.00
Ferrule	100-429	3/8" Swagelok® ferrule	\$5.00
Ferrule	100-430	1/2" Swagelok® ferrule	\$5.00
Swagelok® Reducer	100-433	Swagelok® reducer used to reduce from 1/4" Swagelok® fitting to 1/2" tube OD, used for adapting ML-800 and ML-500 High Flow Cell with 1/2" exhaust port to accept 1/4" Swagelok® connection.	\$25.00
Filter	100-443	Replacement two micron inlet filter for the ML-800-3 Cell	\$167.00
Ferrule and Nut	100-446	Swagelok® Nut and Ferrule Set 1/8" for the ML-800-3 Cell	\$10.00

Bios Integrator™ Command, Control and Readout Device			
Integrator	200-001	MFC/MFM Control, Command and Readout device	\$2,500.00
Bios Integrator™ Accessories			
Cord	100-218	Power cord for Integrator 120 volt	\$28.00
Cord	100-219	Power cord for Integrator 240 volt	\$28.00
Integrator MFC cable	100-100	Cable three feet long connects between the Bios Integrator and customers Mass Flow Controller (MFC), for most Brooks MFCs with voltage control. Check with Bios for compatibility.	\$100.00
Integrator MFC cable	100-101	Cable three feet long connects between the Bios Integrator and customers Mass Flow Controller (MFC), for most Brooks MFCs with current control. Check with Bios for compatibility.	\$100.00
Integrator MFC cable	100-102	Cable three feet long connects between the Bios Integrator and customers Mass Flow Meter (MFM), for most Brooks MFMs with voltage control. Check with Bios for compatibility.	\$100.00
Integrator MFM cable	100-103	Cable three feet long connects between the Bios Integrator and customers Mass Flow Meter (MFM), for most Porter MFMs. Check with Bios for compatibility.	\$100.00
Integrator MFC cable	100-104	Cable three feet long connects between the Bios Integrator and customers Mass Flow Controller (MFC), for most STEC MFCs. Check with Bios for compatibility.	\$100.00
Integrator MFM cable	100-105	Cable three feet long connects between the Bios Integrator and customers Mass Flow Controller (MFC), for most Porter MFCs with voltage control. Check with Bios for compatibility.	\$100.00
Integrator MFC cable	100-106	Cable three feet long connects between the Bios Integrator and customers Mass Flow Controller (MFC), for most UNIT MFCs. Check with Bios for compatibility.	\$100.00
Integrator MFM cable	100-107	Cable three feet long connects between the Bios Integrator and customers Mass Flow Meter (MFM), for most UNIT MFMs. Check with Bios for compatibility.	\$100.00
Integrator MFC cable	100-108	Cable three feet long connects between the Bios Integrator and customers Mass Flow Controller (MFC), for most TYLAN MFCs. Check with Bios for compatibility.	\$100.00
Integrator MFM cable	100-109	Cable three feet long connects between the Bios Integrator and customers Mass Flow Meter (MFM), for most TYLAN MFMs. Check with Bios for compatibility.	\$100.00
Integrator MFC cable	100-110	Cable three feet long connects between the Bios Integrator and customers Mass Flow Controller (MFC), for most STEC MFCs with voltage control. Check with Bios for compatibility.	\$100.00
Integrator MFM cable	100-111	Cable three feet long connects between the Bios Integrator and customers Mass Flow Meter (MFM), for most Sierra MFMs. Check with Bios for compatibility.	\$100.00
Integrator MFM cable	100-119	Cable three foot long connects between the Bios Integrator and customers Mass Flow Meter (MFM), for most Brooks MFMs with current control (25 to 15). Check with Bios for compatibility.	\$100.00
Integrator MFC cable	100-120	Cable three feet long connects between the Bios Integrator and customers Mass Flow Controller (MFC), for most Brooks MFCs with voltage control (25 to 15). Check with Bios for compatibility.	\$100.00

Bios Flow Bench Gas Delivery Module			
Flow Bench	100-025	A Gas Flow Delivery System used for calibrating Mass Flow Controllers (MFCs) where the exhaust of the MFC is at atmospheric pressure. Includes an on-off valve, precision pressure regulator, pressure gauge, and MFC mounting stand. This flow bench is designed for a maximum gas flow of 50 Liters per min. Requires customer connection to a gas source of approximately 100 psi. For use with the Met Lab Series.	\$3,750.00
Flow Bench	100-028	This add-on Module allows calibration of device under test (DUT) at back pressure of up to 60 PSI. Includes a Pressure gauge and a Back Pressure Regulator. Requires (100-025 or 100-030H/L). This flow bench is designed for a maximum gas flow of 50 Liters per min. For use with the Met Lab Series.	\$1,750.00
Flow Bench	100-029	Calibration Station- Definer 110/FTS calibration System; includes Gast pump, digital manometer & flow bench. In addition, an ML-500 is required for laboratory calibration of flow transfer standards such as the Bios Definer 110 or Chinook Engineering Streamline FTS. The flow bench includes an adapter and needle valve. This calibration station is designed for a maximum gas flow of 30 Liters per min. For use with the Met Lab Series.	\$4,500.00
Flow Bench	100-030L	General Purpose Flow Bench, 0 to 5 SLM; A gas flow delivery system used for calibrating rotameters, bubble meters, and flow calibrators. Includes an on-off valve, precision pressure regulator, high side pressure gauge, low flow needle valve, low side pressure gauge and A/B valve. This flow bench is designed for a maximum gas flow of 5 Liters per min. Requires customer connection to a gas source of approximately 100 psi. For use with the Met Lab Series.	\$4,500.00
Flow Bench	100-030H	General Purpose Flow Bench, 0 to 50 SLM; A gas flow delivery system used for calibrating rotameters, bubble meters, and flow calibrators. Includes an on-off valve, precision pressure regulator, high side pressure gauge, high flow needle valve, low side pressure gauge and A/B valve. This flow bench is designed for a maximum gas flow of 50 Liters per min. Requires customer connection to a gas source of approximately 100 psi. For use with the Met Lab Series.	\$4,500.00
Flow Bench	100-031	General Purpose Flow Bench 5 -500 SLM; A gas flow delivery system used for calibrating rotameters, bubble meters, and flow calibrators. Includes a precision pressure regulator, high side pressure gauge, needle valve for 5 to 50 SLM and A/B valve for needle valve outlet, two sonic nozzles for flows from 50 to 500 SLM with a A/B valve for sonic nozzle output. Requires customer connection to a gas source of approximately 100 psi. For use with the Definer 1020.	\$9,500.00
Bios Flow Bench Accessories			
Mounting plate	100-001	Breadboard 6 inches wide 20 inches long, allows mouning of all Bios accessory items for calibration set ups	\$425.00
Pressure regulator	100-002	Max inlet pressure 400 PSI, 0-100 PSI outlet, high purity regulator, CV 0.15	\$650.00
Back pressure regulator	100-003	Max inlet pressure 100 PSI, 0-100 PSI regulation range, high purity regulator, CV 0.08	\$650.00

MFC Stand	100-004	Mounting stand for MFC calibration	\$460.00
Pressure Gauge	100-005	High Purity 2 inch pressure gauge 0 – 100 PSI	\$340.00
Shut-off valve	100-006	Packless stainless steel shut off valve 1/4 turn	\$520.00
Precision needle valve - low flow	100-007	Precision needle valve stainless 0 to 0.007 CV capacity	\$645.00
Precision needle valve - high flow	100-008	Precision needle valve stainless 0 to 0.047 CV capacity	\$645.00
3-way valve	100-009	A three way air valve for switching gas flow between a calibrator and instrument under test "A-B Calibration"	\$310.00
Connector	100-010	Flow Bench Connector kit, contains, flow bench mounting plates together to make larger platforms as needed for custom flow bench arrangements. One kit required per additional 100-001 joined.	\$48.00
Bios Flow Stable Sources			
MFS	100-500	Stable Multiple Flow Source Flow Bench	\$6,000.00
PFS	100-501	Precision Flow Source Regulator	\$500.00
Regulator	100-513	In-line regulator for constant insertion pressure for high flow (DC-IR-H, for PM 2.5 Samplers)	\$99.00
Bios Met Lab® ML-350 Primary Piston Prover Accessories			
The ML-350 has been discontinued, but we still offer replacement parts for your convenience.			
Battery	100-205	6V rechargeable, sealed lead acid battery for ML-350	\$35.00
Pelican 1450	100-253	Hard, heavy duty carry case with custom foam: Fits 1 ML-350	\$99.00
Pelican 1600	100-255	Hard, heavy duty carry case with custom foam: Fits 2 ML-350s	\$155.00
Pelican 1610	100-256	Hard, heavy duty carry case with custom foam: Fits 3 ML-350s	\$185.00
Case SB-ES7	100-260	Padded shoulder bag with detachable shoulder strap: Fits 1 ML-350	\$50.00
Adapter	100-224	Universal 100-240V, 12 VDC; single charger for use in multiple countries. Comes with one plug configuration of your choice: U.S., U.K., European or Australian plug configuration. For additional plugs, see part 100-215.	\$50.00
Adapter	100-215	For use with universal adapter; additional plug configurations for U.S.A., U.K., Europe and Australia – please specify	\$5.00



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