



A Trusted  
Partner In the  
Field of  
Instrumentation  
and Process  
Equipment



**TRIDENT EQUIPMENTS PVT. LTD.**

# About Trident



Trident Equipments Pvt. Ltd. was incorporated in 1998 by a team of highly skilled professionals, having experience of more than two decades in the Analytical and Process Instrumentation, with an objective to cater to the growing needs of the industry with cutting edge technology products and robust service network.

Today, with diverse product portfolio under its belt, Trident enjoys the reputation of being a leading solution provider of scientific instruments & equipment used in process, quality control and research.

Trident is proud to be associated with the companies of global repute for bridging the gap between manufacturers and customers by engaging in the distribution of quality and innovative products in India for these principals in the fields of Analytical and Process Instrumentation

Trident Equipments, in a very short span has earned itself a good reputation of providing prompt and specialized service with strong technical support team that offers a range of services which go beyond just the marketing of products. These include: Application Support, Servicing and Calibration On-site Testing Services and Training.

The hallmark of the team is a hard-core commitment to customer support and prompt service. As on today, the company has established a pan-India network of its own offices at major cities with highly qualified, dedicated sales and service professionals.

Our focus is on the individualized nature of our clients. We believe in providing complete customer satisfaction with a seamless experience through our products, services, knowledge and experience.

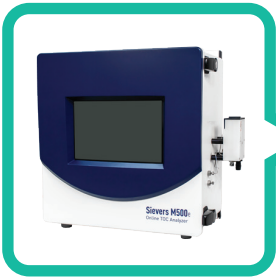


Analytical



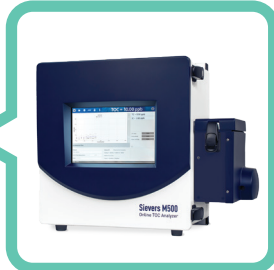
Process

# Siemens TOC Analyzer Spectrum



**M 500 e On-Line**  
0.03 ppb – 2,500 ppb

**M 500 On-Line**  
0.03 ppb – 2,500 ppb



**CheckPoint**  
Pharma: 0.21 ppb – 1,000 ppb  
eModel: 0.05 ppb – 1,000 ppb

**M9e On-Line and Portable**  
0.03 ppb – 50 ppm



**M9 Laboratory and Autosampler**  
0.03 ppb – 50 ppm

**M9 On-Line**  
0.03 ppb – 50 ppm



**M9 Portable**  
0.03 ppb – 50 ppm

**M5310 C Laboratory, Portable, On-Line**  
4 ppb to 50 ppm



**InnovOx Laboratory and On-Line**  
50 ppb to 50,000 ppm

**Microelectronics Water**

- UPW Loop • UPW Make-Up
- Diagnostics • Reclaim

**Pharmaceutical Water**

- Purified Water
- Water for Injection
- Cleaning Validation
- Diagnostics

**Drinking Water**

- EPA/State Compliance Monitoring
- Environmental
- Process Optimization
- Disinfection By-product Control

**Process water and wastewater**

- Process/Industrial
- Environmental
- Municipal
- Wastewater

# M9..... the next generation of Sievers TOC Analysers



## M9 Laboratory Superior Productivity

Measure discrete grab samples i.e. sample vials and sipper tubes or connect to the Sievers Autosampler to automate high-volume sample analysis.

Well suited to analyze a variety of sample matrices and concentrations.

Offers a small profile to efficiently use valuable bench space

Optional Stage 1 conductivity capability for simultaneous testing of TOC and conductivity.

Optional Turbo mode for rapid analysis even in lab

Doesn't require utilities or carrier gas



## M9 Online Uninterrupted Analysis

Continuous monitoring with the ability to easily introduce discrete grab samples and standards.

Wall-mounted with an IP-45 rated enclosure to withstand demanding process water environments.

Broad, linear TOC range allows excellent low-level sensitivity for ultrapure water analysis and high-level capability for cleaning validation or other challenging water samples.

Doesn't require utilities or carrier gas



## M9 Portable genuine Versatility

Lightweight, IP-21 rated, compact design can be hand-carried for TOC analysis anywhere

Measures discrete grab samples, automated analysis with the optional Sievers Autosampler, or On-Line mode

Designed for at-line cleaning validation Applications

Optional Stage 1 conductivity capability for simultaneous testing of TOC and conductivity.

Optional Turbo mode for rapid analysis even in lab

Doesn't require utilities or carrier gas

## M9 TOC Analyzers meet the needs of these industries:

### Pharmaceutical applications:

- PW, WFI, Cleaning Validation

### Microelectronics applications

- UPW Loop, UPW Make-up
- Diagnostics, Reclaim

## The M9 TOC Analyzers are engineered to meet stringent regulatory requirements:

- US Pharmacopeia (USP) <643> and <645>
- European Pharmacopeia (EP) 2.2.44 Total Organic Carbon
- Indian Pharmacopeia (IP) 2.4.30
- Chinese Pharmacopeia (CP) Appendix VIII R
- Japanese Pharmacopeia (JP16) 2.59 monographs

# Sievers M 500 On-Line Total Organic Carbon (TOC) Analyzer

The Sievers M 500 On-Line Total Organic Carbon (TOC) Analyzer provides continuous monitoring of organics in ultrapure water for pharmaceutical and power applications.

The reagentless M 500 provides superior analytical accuracy and performance found in all Sievers TOC Analyzers, and offers a range of options to meet specific customer needs



## Features & Benefits

### Science- Based Design

Sievers Membrane conduct-metric design eliminates false positive and false negative readings.

Accurate recovery of all classes of organics

### Ease of use

Exceptionally easy to install, operate and maintain.

Large color touch screen display, intuitive menu interface

Advanced auto zero feature for improved low level performance

## Pharmaceutical Applications

Designed to deliver science based risk management capability

Ability to be fully validatable to the standards of ICHQ2® enables it to be instrument of record for Real time Testing

Compliance with USP<643>, European Pharmacopeia EP 2.2.22, IP 2.4.30 , JP16 monographs for purified water and water for injection

## Upgrade Options

Can be configured or upgraded with a variety of hardware and software options

Conductivity option as per USP <645>

Automated USP system suitability, linear functionality

Dataguard for facilitating 21CFR Part 11 compliance

Optional Datashare 500 to view, share and create reports for encrypted data USB output

# Check Point

## Online/Portable TOC Sensor

Measure low-level total organic carbon (TOC) anywhere, anytime with the new CheckPoint Pharma and Check Point® On-Line/Portable Total Organic Carbon (TOC) sensors. Affordable, versatile, and portable, the CheckPoint sensors can be used online for continuous monitoring or hand-carried to any point in a water system for rapid diagnostic sampling and troubleshooting.

### key benefits

**Cost Effective** — Direct Conductometric Principle. They provide a reliable low-cost TOC approach useful for pharmaceutical Purified Water (PW) and Water for Injection (WFI) and semiconductor ultrapure water (UPW) monitoring applications.

**Rapid Analysis** — Featuring a default measurement every 15 seconds

**Versatility and Convenience** — The sensors can be used for continuous on-line monitoring, rapid online monitoring, or grab sampling.

**Easy to Use with Low Maintenance** — The reagentless CheckPoints are easy to operate and need minimal maintenance. Calibration is typically stable for six months.



# Sievers M5310 C TOC Analyzers



## M5310 C Online Uninterrupted Analysis

Continuous monitoring with the ability to easily introduce discrete grab samples and standards.

Compliant with USEPA Approved Analytical Method (SM 5310C and USEPA 415.3)

Equipped with standard internal Inorganic Carbon

Removal (ICR) module for improved accuracy when analyzing water high in inorganic carbon (IC)

Autoreagent mode for automatic calculation and implementation of optimal reagent flow rates

Broad analytical range from 4 ppb to 50 ppm

Twice-as-fast as Sievers' last generation TOC Analyzers, now with two-minute TOC analysis

Improved user-friendly, dashboard-style, touchscreen interface for simple operation and data review

Secured database structure for improved data searches and queries

Two-Stream Inlet configuration for the M5310C On-Line Analyzer

Online and portable models now with IP-45 and IP-21 enclosure ratings, respectively

Easy data communications — export or collect data via USB, 4-20 mA, or Modbus TCP/IP outputs

Integrated On-Line Sampler (IOS) system allows testing of external samples and standards without removing the analyzer from the continuous water source



## InnovOx ES Laboratory

Patented supercritical water oxidation (SCWO) for superior TOC recovery and high reliability

Compliant with USEPA Approved Analytical Method (USEPA 415.1, 415.3 and 9060A, ASTM D5173, ISO 8245, etc)

Versatile measurement modes include TOC (TC-IC) or NPOC

Handles tough TOC samples, like cellulose and brine

Autosampler with stirring and rinse station options for high volume laboratory applications

Wide dynamic range up to 50,000 ppm TOC

Reliable NDIR detection technology with no moving Parts

Air Filter to purify ambient air and pressurize it sufficiently for use as a sparge and carrier gas and avoid the use of external carrier gas cylinders.

Improved user-friendly, dashboard-style, touchscreen interface for simple operation and data review

Easy data communications — export or collect data via USB, 4-20 mA, or Modbus TCP/IP outputs

### M5310 C TOC Analyzers meet the needs of these industries:

#### Pharmaceutical applications:

PW, WFI

#### Food Applications:

Drinking water, Distilled water

### InnovOx ES TOC Analyzers meet the needs of these industries:

Effluent treatment plant

#### Regulatory requirements compliance:

Maharashtra Pollution Control Board(MPCB),  
Common Pollution Control board(CPCB) for COD,BOD & TOC



## InnovOx Online TOC Analyzer

Patented supercritical water oxidation (SCWO) for superior TOC recovery and high reliability

Compliant with USEPA Approved Analytical Method (USEPA 415.1, 415.3 and 9060A, ASTM D5173, ISO 8245, etc)

Versatile measurement modes include TOC (TC-IC) or NPOC

Wide dynamic range of 50 ppb to 50,000 ppm TOC

Robust sample handling options for reliable operation even with high suspended solids

Reliable NDIR detection technology with no moving parts

High temperature option allows measurement of samples up to 85°C

Multi-stream capability. Either 2-stream (standard) or 5-stream (optional) configurations

Handles tough TOC samples, like cellulose and brine

### The M5310 C Analyzers are engineered to meet stringent regulatory requirements:

- US Pharmacopeia (USP) <643> and <645>
- European Pharmacopeia (EP) 2.2.44 Total Organic Carbon
- Indian Pharmacopeia (IP) 2.4.30
- Chinese Pharmacopeia (CP) Appendix VIII R
- Japanese Pharmacopeia (JP16) 2.59 monographs

- pH • ISE • Dissolved Oxygen • Conductivity • Colorimetry • Turbidity • Spectrophotometry • Titrimetry

With over 50 years of innovation and proven performance, Thermo Scientific Orion products provide you a full range of laboratory and on-line water analysis instruments serving markets such as environmental, water and wastewater, power, food and beverage, pharmaceutical and general laboratory.

In this catalog, you will find a comprehensive selection of meters, analyzers, electrodes and solutions that are recognized worldwide and will provide you the security that your quality standards are met.



### Versatility

The meter for today's needs and tomorrow's challenges. The Expandable modular Orion Versa Star design gives you the flexibility you need.



### Durability

Now more than ever, the Orion line meets requirements for field applications. The Star A meter kits include robust cases and complete accessories.

WE HAVE THE  
**PERFECT**  
METER  
FOR YOUR  
APPLICATION



### Performance

Now combine Orion Ross performance with built-in temperature measurement in one premium glass body electrode.

# Orion Benchtop Meters series

## Premium Versa Star Series

Adjustable Color Graphic LCD

Step by step calibration and guides setup instructions

Four Customizable channels with modules with 10 methods per module

Measurement stability indicator and selectable read modes

Datalog reliability collects and data/time stamps up to 2000 measurements sets with optional sample ID and user ID

Calibration log stores 30 most recent calibrations per parameter with viewable graph for multipoint pH and ISE calibrations

Non-volatile memory preserves data and settings, even in the event of power loss

System access feature for administrator and up to 10 user accounts with custom access levels to meter functions including data/time, setup, data and calibration

Purchase Thermo Scientific™ Orion™ Navigator Pro™ computer software for computer control of meter functions and electronic records generation

Measured parameters:

pH or pH/LogR Modules One or two  
pH/ISE Modules Conductivity Module  
Optical/Polarographic DO Module  
pH and Conductivity Module pH/ISE.  
Conductivity and DO Modules



## Advanced Pro Star Series

Large 7-inch high-resolution colour touchscreen display

Onscreen text prompts to guide calibrations, instrument setup and troubleshooting

3 Administrator and 30 user account logins with custom access levels

10,000-point data log sets plus 20 calibration logs per parameter with data and time with GLP compliance

Build custom reports for data logs and calibration logs

Option to export to printer, computer or USB flash drive

Store and view the 20 most recent calibrations

Non Volatile meter memory ensures your data and settings are protected, even with loss of power

pH211 A211 pH/ORP Meter  
EC212 Conductivity Meter  
DO213 Dissolved Oxygen (DO) Meter  
PI214 pH/Ion Meter  
PC215 pH/Ion and Conductivity Meter  
PC216 pH/Ion & and DO Meter  
PI217 Dual Channel pH/Ion Meter  
MP218 pH/Ion, Conductivity & Dissolved Oxygen Meter



## Lab Star Series

Budget friendly pH Meter for simplified pH and ORP testing

Simplified, easy-to-use 5" backlit display

Small meter footprint saves space

Date and time stamped logs support GLP compliance

View active calibration logs with date and time to help ensure accuracy

500-point log with date and time to track critical data

Output data and calibration logs to a printer or computer for long-term data storage

Non Volatile meter memory ensures your data and settings are protected, even with loss of power

Lab Star 111 pH meter  
Lab Star 112 Conductivity meter  
Lab Star 113 DO meter

# Orion Benchtop Meters series

## Colorimetry, Turbidity and UV-Vis Spectrophotometry –The Optical Measurements Accurate Results, Within Your Reach

We've got you covered

Colorimeters and Turbidity meters both employ optical measurements. Optical measurements use light to quantify the amount of a colored or cloudy sample. Colorimeters are used to measure the concentration of a sample component. Turbidity meters can determine how cloudy the sample is and report a number value for the turbidity.



### Turbidity Meter

The AQ4500 turbidimeter has dual source LED that allows readings that comply with reporting requirements for both EPA and ISO 7027 methodologies

Nephelometric and ratiometric measurements with autoranging

IR mode options for measurement of wines and colored samples

Data log capacity of up to 100 data points

Reading ranges vary from 0 to 4000 with appropriate units based on test selected

Includes turbidity standards kit, rugged carrying case, and replacement vials

The AQ4500 is truly IP67 waterproof to a depth of 3 meters



### Colorimeter

Portable design with uncompromised performances

The AQ4000 colorimeter stores up to 189 pre-programmed methods and can record 100 data points in the field with a time and date stamp. Download later to a printer or computer in the lab.

Auto-ID: Automatically identifies the species to be measured, selects the method and the wavelength plus initiates the method– no buttons to push

Auto-Test Ampoules: Pre-measured liquid reagent ampoules are specially designed to work with the AQ4000



### Spectrophotometer

Spectrophotometers that meet your requirements – choose the AquaMate 8000 UV-Vis or AquaMate 7000 Vis

Simple and efficient sample analysis using over 260 preprogrammed methods for common reagent chemistries

One-point calibration adjustment feature ensures the highest accuracy from preprogrammed methods

User customizable methods for absorbance, % transmittance and concentration testing

Performance verification tests ensure wavelength accuracy and instrument functionality

# Thermo Scientific Orion Star T900 Series Titrators

## Potentiometric titrators for performing automated pH, redox, or ion titrations

### Thermo Scientific™ Orion Star™ T900 series titrators are designed to:

Increase laboratory productivity by automating titrations

Offers easy-to-use navigation from setup to live titration analysis to data transfer

Onscreen instructions, help menus and titrations on large color graphic touchscreen

Create and save up to ten custom user-defined methods or use preprogrammed protocols

Large, easy-to-view, lab glove compatible touchscreen display with onscreen instructions and help menus enables fast, easy setup and operation

Customizable methods save electrode, titrant and sample titration settings so routine procedures can be repeated without additional setup or pre-work and methods can be shared among titrators using a USB flash drive.

Automated titrant delivery system with high-accuracy burette and dispenser provides consistent results and automatic results calculations simplifies analysis and reduces computational errors.

Internal data storage maintains a history of sample titrations, titrant standardizations, electrode calibrations and direct measurements all with date and time stamp-to preserve critical data and facilitate easy data transfer to an external device.

#### Orion Star T910 pH Titrator

START9100, START9101, START9102

#### Orion Star T920 Redox Titrator

START9200, START9201

#### Orion Star T930 Ion Titrator

START9300, START9301

#### Orion Star T940 All-in-One Titrator

START9400, START9401, START9402



## UV-Vis & Microvolume Spectrophotometer

### OPTIZEN Alpha (Molecular Spectroscopy Double beam spectrophotometer)

OPTIZEN Alpha can grasp the quantitative characteristics such as density or purity by measuring transmittance or optical density according to wavelength of sample in the range of ultraviolet rays and visible ray. It's designed as a double-beam type spectrophotometer for various fields such as environment, biotechnology, chemistry, etc. The system utilizes an additional reference beam to improve the measurement performance by compensating the intensity fluctuation of its light source.

Double-beam Type

Spectral Bandwidth : 1 nm

Offers Wavelength Range of 190 - 1100 nm help

Measurable Range : -4 A - 4 A

8 Cell holder (Initially installed)

Voice support

Offering self-diagnosis function

Easily and quickly call up the information that is being measured or analyzed by registering it in your favorites.

Changing to the remote mode and then can link it with PC by using OPTIZEN View.

The measurement is possible in the optimal condition by checking the equipment's operation time, lamp warm up condition and accumulated using time in real time.

OPTIZEN Alpha's login function can prevent the measured data from leaking to many and undesigned persons.

Various cell compatibility and fast cell type choice.

Automatic measurement of lots of samples by equipping multi-cell.

Convenient voice service and volume control.

Offers 32GB storage.

Data can be printed by connecting to the machine without Installing a printer driver

520 mm\*500 mm\*200 mm

### OPTIZEN NanoQ (Life Science Microvolume Spectrophotometer)

It supplies extremely fast and easy quantitative analysis of nucleic acid and protein by UV-Vis absorption spectrophotometry.

Wide wavelength microvolume spectrophotometer with modern design and user convenience UI

Provides microvolume sample (1μL) measuring mode and cuvette measuring mode for wide range of concentration

Set over 20 measuring modes

Measures the absorption spectrum UV-Vis (190 - 850 nm) in seconds using by array type spectrophotometer technology with Xenon lamp and CMOS-sensor(2048 pixels)

Absorbance Accuracy 3% (at 0.97A at 302 nm)

Maximum Concentration 16,500 ng/μL (dsDNA), 400 mg/mL (BSA)

Provides various algorithms like Peak/Valley detection

Measuring Mode : Nucleic Acid(dsDNA, ssDNA, RNA), Protein(Lysozyme, BSA, IgG), OD600

OPTIZEN Secure OPTIZEN Secure is Windows® PC software can manage, check and trace user activities(Login, measurement, print) at OPTIZEN View.

You need OPTIZEN View(CFR mode included) to use

OPTIZEN Secure.



# Thermo Scientific™ Gallery™

## Discrete Analyzer

Designed to increase efficiency for photometric (colorimetric and enzymatic) and electrochemical (pH and conductivity) analysis, the Thermo Scientific™ Gallery™ Discrete Analyzer provides fast, reproducible results in a compact, benchtop design.

Experience simultaneous analysis of multiple analytes with the discrete cell technology of the Thermo Scientific™ Gallery™ and Thermo Scientific™ Gallery™ Plus discrete analyzer for the full range of environmental, food and beverage and enzyme analysis.

### **Automated operation and reliable technology**

An integrated platform for photometric and electrochemical analysis can be operated simultaneously

Continuous access to samples, reagents, and cuvettes without interruption of routine workflow

Increased throughput with a sample capacity of up to 350 tests/hour

Minimal sample pre-treatment required

Dilutions and repeat analyses are handled automatically

### **Robust capability**

Combined sample and reagent disk with up to 180 sample positions and reagent disk for 42 reagents

Measurements cover a large concentration range with excellent reproducibility

User-specific applications can be developed to meet individual testing needs

Several blanking possibilities to eliminate sample matrix effects

Ability to achieve detection of very low levels (ppb)

Wavelength range from 340nm to 880nm

### **Compact design and economical**

System reagents eliminate time-consuming reagent preparation, freeing operators for other tasks

Unique low-volume cuvette design for less reagent waste and potentially lowering operation costs

Contamination-free analysis using disposable cuvettes

No need for an external water source

### **Versatile and user-friendly**

Accommodates a variety of sample cups and primary tubes

No additional priming or method changeover time

Intuitive graphical user interface

Automatic start-up and shutdown protocols

### **Access the wide range of testing parameters for diverse applications**

Drinking water, Industrial water, wastewater

Food and beverage

Detergent and enzyme



## Integrated Laboratory Water Purification System

### Cascada Lab Water systems

provides optimum water quality to support diverse laboratory needs.

### With potable water as the feed

Cascada system enables laboratories to achieve the highest purity water.

### Avidity pretreatment & Two stage

ensures consistent water quality.

### Smart user interface

helps customer to take informed decision on consumable replacement.

## AVIDITY PRETREATMENT & TWO STAGE RO

Cascada I	Cascad II I	Cascada III I
Ideal for type I application	Optimum water quality to support all laboratory needs	Tap to ultrapure
Feed water dm/RO/wfi/distilled	7 Purification steps integrated in single unit	Avidity pretreatment unit
Application specific consumables	Standard unit – Customized configuration	Consistent water quality

## Cascada Double Pass RO



- Eliminates the need for softener
- Provides consistent permeate water in varying feed water condition
- Superior permeate water quality improves the life expectancy of further purification packs
- Hence considerable saving on cost of ownership

Feed Water Conductivity	Single Stage RO Permeate	Double Pass RO Permeate
1500	75	3.75
1200	60	3
1000	50	2.5



## BECKMAN COUTER LS 13 320 XR Particle Size Analyzer

### For big improvements that help you spot small differences

The LS 13 320 XR offers best-in-class particle size distribution data from advanced PIDS technology, which enables high-resolution measurements and an expanded dynamic range. Like the LS 13 320, the XR particle size analyzer provides fast, accurate results, and helps you streamline workflows to optimize efficiency. Some big improvements help you reliably spot small differences that can have a huge impact on your particle analysis data.

### Key Features

Direct measurement range from 10 nm – 3,500 µm

Automatically highlights pass/fail results for faster quality control

Enhanced software that simplifies method creation for standardized measurements

New control standards to adequately verify instrument/module performance

Fluid Compatibility: Emulsions, Suspensions, Powders

### Features (Spot Small Differences)

Laser diffraction plus advanced Polarization Intensity Differential Scattering (PIDS) technology enable high-resolution measurement & reporting of real data down to 10 nm

Provides accurate, reliable detection of multiple particle sizes in a single sample

### Easy-To-Use Software

ADAPT Software features automatic pass/fail check

Pre-configured methods deliver results with 3 clicks or less

Simplifies analyzer operation by experts & novice users alike

1-click overlay with historical data

Intuitive user diagnostics keep you informed during sampling

Simplified method creation for standardized measurements

### ADAPT Software enables 21 CFR Part 11

Customizable security system to meet diverse needs

Choose from 4 security levels

High-security configuration supports 21 CFR Part 11

### PIDS Technology\* for Direct Detection of 10 nm Particles

3 light wavelengths (450, 600, & 900 nm) irradiate samples with vertical & horizontal polarized light

Analyzer measures scattered light from samples over a range of angles

Differences between horizontally & vertically radiated light for each wavelength yield high-resolution particle size distribution data



Microfluidics is the high Pressure Homogenizer manufacturer that consistently innovates superior technologies to achieve unrivalled results in uniform nanoemulsions, cell disruption and uniform particle size reduction with seamless scale-up and unparalleled repeatability.



## **Digitally Controlled Lab Unit for Small Sample Material Processing**

Operates at Pressure upto 23,000PSI

Requires a minimum sample size of 14ml

Temperature control through cooling coil and cooling batch

2 modes of operation for various compressor sizes

Easily autoclavable

Dependable Process Performance with Maintenance reminder and operator alerts

Field upgradable firmware



## **Electrically Powered Lab Unit for Small Sample Processing**

Operates at Pressure upto 30,000psi

Requires a minimum samples size of 14ml

Suitable for laboratory and benchtop applications

Diamond interaction chamber

Digital Pressure Control

Integrated Stroke Counter with maintenance reminder

Dependable Process Performance with Maintenance reminder and operator alerts

Field upgradable firmware



## **A "Plug and Play" Electric Benchtop Laboratory Homogenizer For continuous High Shear Fluid Processing**

300 ml glass feed reservoir

Diamond interaction chamber

Ceramic (Zirconia) plunger

Stainless steel enclosure

Electric/hydraulic drive method

Mechanical product pressure gauge



## **LV1 Low Volume Microfluidizer® Homogenizer High Shear Fluid Processor for the Smallest Samples**

Ceramic interaction chamber

Can Process minimum samples size of 1ml

Stainless steel enclosure

Electric/hydraulic drive method

10 ml syringe-type feed and collector reservoirs

# MP350 Microlyser™ Processor

## A New Innovation in High Shear Production Scale Cell Disruption Processing

Consistent shear rates with fewer passes achieves high quality yields with limited risk of denaturation and reduced processing time

Controlled temperature regulation preserves the integrity of temperature-sensitive contents

Efficient separation prevents clogging issues and delivers shorter filtration times

Ease of cleaning limits downtime and prevents contamination

Repeatable results provides consistency batch-to-batch

21CFR Part 11 data logging system provides an audit trail for process pressure, temperature, alarms and batch records

Operating pressure up to 30,000 PSI (2068 bar) delivers optimal process efficiencies

Modular skid system for product feed arrangement with SIP and CIP capabilities to meet biotech industry standards

Ceramic plungers with U-cup seals ensure zero leaks in addition to reduced maintenance time and ease of cleaning

Flow rate range up to 300lph @ 2068 bar



M110P

M110EH

M700 Series

**SCALE - UP IS GUARANTEED FROM LAB THROUGH PRODUCTION**

## Grant Instruments

Inspired by innovation, quality, and reliability, Grant designs and develops innovative and scientific temperature control products and data acquisition technologies for the scientific, industrial and healthcare markets worldwide.

### Scientific Temperature Control Equipment includes the following range:

- Heated circulating and stirred baths
- Refrigerated and heated circulating baths
- Unstirred water baths
- Shaking water baths
- Ultrasonic baths
- Dry block heaters
- Rockers and rotators
- Shakers, mixers and stirrers
- Thermoshakers with heating and cooling
- Orbital incubator shaker
- Centrifuges and vortex mixers
- Densitometers

### Features :

- Intuitive
- High performance
- Reliable

### Industries catered to :

Academia, teaching laboratories, hospitals, engineering, automotive, environmental, food manufactures, utilities, transportation, pharmaceutical.



### Customer Support Includes:

- On-site support across India
- Technical and application support by experienced specialists
- Calibration and validation support with traceable standards
- Installation, preventive maintenance and repairs on demand
- Remote support via telephone, email and internet access
- Qualified engineers/ technicians trained and certified by our principals periodically are spread across the country
- Regional offices are equipped with critical spares to address emergencies and ensure maximum uptime of the equipment

### Branch offices:

Pune  
Ahmedabad  
Hyderabad  
Bengaluru  
Delhi  
Kolkata  
Visakhapatnam  
Chennai

**Head office: Mumbai  
Trident Equipments Pvt Ltd.**

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**TRIDENT EQUIPMENTS PVT. LTD.**