



Custom Pressure Systems

Rack, Cart and Customized Solutions



MENSOR CUSTOM SYSTEMS

Designed and built to your requirements

The systems described in this catalog are provided solely to showcase our capabilities. Some of the systems shown utilize instruments that are now supplemented using newer instruments. An example is those systems shown with the Mensor 8204 Dual Channel Pressure Controllers. The recent introduction of the Mensor CPC 6000 provides a more cost effective and technically superior pressure controller for many of the same applications. Mensor will work with the end user to provide a system that meets their application requirements.

<i>Advantages of having Mensor build your pressure system</i>	Mensor can offer our many years of pressure expertise to quickly solve most pressure application needs. We have experience designing, testing, and assembling pressure test systems. We have the resources and knowledge that allow us to integrate the necessary regulators, compressors, vacuum pumps, computers and software into a matched system. And we guarantee no one knows our pressure equipment inside and out better than we do.
<i>Typical application areas</i>	<ul style="list-style-type: none"> Wind tunnel system monitoring Avionics — air data test configurations Jet engine test cell calibration systems Pharmaceutical calibration carts Medical R&D applications Electrical utilities calibration standards Pressure switch calibration and qualification Systems Transmitter leak test systems Sensor qualification test systems General pressure calibration carts and racks Automotive and Avionics test cells
<i>Where to obtain more information</i>	<p>Customer Info Newsletter</p> <p>Call, Fax or Email: Mensor Corporation 201 Barnes Drive San Marcos, Texas 78666 Phone: 512.396.4200 Fax: 512.396.1820 E-mail: systems@mensor.com</p> <p>For current systems visit the Mensor web site at www.mensor.com</p>

NOTE: Product improvement is a continuous process at Mensor. We reserve the right to make changes to the product specifications and appearance to provide a better product to our customers.

DESIGNING YOUR CUSTOM SYSTEM

by Bob Fox, Custom Systems Manager

Custom pressure systems consist of the basic pressure instruments (measuring and/or controlling devices) along with the necessary accessories to make it functional for the user's application. The biggest advantage of a system is that one source is responsible for making everything work together.

Many of the important questions pertain to how the consumer is going to use the system. Mensor has created a checklist for clients to review when designing their custom system. It covers how the pressure will be monitored, if a pressure controller is required, what is the source of pressure or vacuum, whether or not an enclosure is necessary, what electrical power is required, environmental requirements, certifications and software. In addition, information about pressure range, accuracy, volume loads, flows, mobility requirements and ruggedness may be needed.


For example, the pressure source is chosen based on the pressure range that is required. A simple hand pump may work for some applications, but an air compressor may be required for others. Bottled gas supplies (rechargeable vs. replaceable) may be required for specialty gases or higher pressures. At much higher pressures, boosters may be required or may just be more economical. Regulating, buffering or conditioning the pressure to match the test device also factors into the selection process.

Electrical considerations are usually basic ones. There are typically two choices – AC or DC sources. AC sources are typically 100 to 125 volt and 220 to 240 volt, with frequencies of 50 and 60 Hz. DC system ranges typically run 5, 12, 24 or 48 volts DC.

A system can be mounted in a chassis, a rack or on a cart. Our pressure devices work well with a selected set of preferred enclosures. Customer requests are welcome even if it is just matching paint colors to existing company standards.

Software for controlling and monitor can be furnished. A large number of the systems have built-in embedded programs that operate the system. If a user interface is required, typically National Instruments LabVIEW® programs are generated or Visual Basic programs. Even text-based programs can be generated for simple tasks.

Custom systems require a customer to give fairly detailed specifications describing what is needed and how it will be used. A high degree of communication between Mensor and the customer is needed. This review of the design requirements is informal but helps to insure that the customer's expectations are met.

 Custom Systems Order Checklist	
Pressure Monitoring:	
DPG Model _____	Transducer _____ Range: _____
Pressure Controller:	
6000/600, 8000, 8100, 82xx, Other _____	Range: _____
Vacuum Sources:	
Lubricated Mechanical Pump	Venturi Transducer
Non-lubricated Pump	Hand Pump
P/V Controller	User Supplied
Pressure Sources:	
Compressor	Booster
Bottle/Regulator	User Supplied _____
Enclosures:	
Rack	Cart (size ___x___x___) Black Box
Electrical Inputs:	
AC Source - 100, 120, 220, 240 VAC 50 Hz, 60 Hz, 400 Hz	
DC Source - 5, 9, 12, 24, 28, 48 VDC, Battery, or Other	
Electrical Outputs:	
Environment:	
Operating Temp _____	Power Consumption _____
Storage Temp _____	Special Maintenance _____
Size Restrictions _____	Daily Usage _____
Weight Restrictions _____	
Required Certifications:	
UL, CE, FCC, ISO9000, NIST, A2LA, RoHS, WEEE, CofC, Other _____	
Software Requirements:	
C, C++, LabVIEW, VB, Other _____	
User Interfaces:	
Display (LCD, LED, VF, Other _____), Keypad/Touch Screen, Black Box	
RS-232 RS-485 GPIB Ethernet USB Other _____	

The systems listed below are shown on the following pages and provided solely to showcase our capabilities.

RACK EQUIPMENT

Model 9415	Designed for production testing, characterizing and calibration of semiconductor pressure sensors
Model 85	Works well in applications requiring transporting of test equipment in less than optimum conditions
Model 9304	Designed to provide measurement, calibration and leak testing for wind tunnel applications
Model 9400	Designed to monitor/calibrate low differential air sensors prevalent in pharmaceutical industry
Model 9443	Quartz pressure control rack with shop air pressure booster and liquid separator

CARTS AND MOBILE EQUIPMENT

Model 9301	Designed for jet engine testing
Model 9401	Designed for low pressure
Model 9403	Designed for high pressure
Model 9404	Designed to test/calibrate air data computers, altimeters, airspeed indicators and avionics type pressure devices
Model 9405	Many features of 9401 & 9406 and utilizes stainless steel features (easily maintained if used in medical environment)
Model 9406	Designed for jet engine testing and has a 6-wheel design for high mobility

BENCH OR DESKTOP EQUIPMENT

Model 9435	Custom designed pressure calibration bench used to calibrate and maintain pressure transmitters
Model 9440	Industrial pressure work bench provides basic tooling and computer for service work
Model 17714	Provides post-controller pressure distribution to external devices
Model 9003	Designed to monitor pressure close to pressure source and electronically viewed in a control room up to 4000 ft away
Model 9300	A multi-range pressure standard system with hand-held terminal
9302 & 9303	Designed to measure a window range of wind speeds and to monitor air density on high and/or low pressure sides
Model 9414	Designed as a 2 or 4 channel controller and optimized for high speed and precise control of test pressures in a continuous production test process
Model 9416	Designed as a large volume pneumatic pressure controller
Model 9417	Designed as an extremely large volume pneumatic pressure controller
Model 9424	Single channel pressure controller optimized for speed in medium to large volume applications
Model 9426	A special application pressure controller with media temperature monitoring
Model 9427	Wind tunnel pressure system that includes a calibration sled for external calibration of the measurement transducers
Model 9441	A modified Air Data Test Set with a 3-channel pneumatic pressure monitor/controller/calibrator
Model 9500	Specifically designed to test for small pneumatic leaks in single and dual port pressure transmitters
Model 17712	Configured for wet outside environments and distant pressure monitoring up to 4000 feet or 1300 meters

MISCELLANEOUS ACCESSORIES AND SUPPORT EQUIPMENT

Model 73, 74, 75	Pressure booster systems — Shop air pressure booster, low pressure booster, and a Haskel Air booster reconfigured for mounting in a standard 19" instrumentation rack
9420A and B	Remote transducer display module for calibrating, testing or permanent readout of Mensor transducers
Model 9442	Pressure regulating console designed as an accessory to the Mensor Workbench Model 9440
Model 80C	Vacuum pump/compressor set — In avionics terms, set is capable of 60,000 ft of altitude and airspeeds in excess of 1000 knots. The vacuum pump and compressor are both oil-less
Model 81	Designed to complement requirements of an ADTS and contains 2 independent vacuum pumps and single compressor

Rack Equipment

For fixed location applications, such as a production line or calibration laboratory, rack-based systems provide a space saving approach reducing the floor/bench space required for a complete pressure calibration system. Standard EIA 19 inch wide instrument racks can be provided to house all system components. In addition to multiple pressure calibrators, rack systems can include all ancillary support items such as vacuum pumps, regulators, and power distribution. Each system is configured to individual customer requirements.

MODEL 9415 – HIGH SPEED MULTI-CHANNEL PRESSURE CONTROLLER

The Model 9415 is a series of pressure control systems that are predominately used in production testing, characterizing and calibrating of semiconductor pressure sensors. It typically is configured with a semiconductor chip handler to rapidly test and calibrate trays or tubes of sensors at up to five test pressures using up to four pressure control channels. The system is optimized for switching speed and the ability to rapidly reset test pressures. The system utilizes one or two Mensor CPC 6000 controllers or the Mensor Model 9414 Dual or Quad Channel Pressure Controller for pressure generation and control and external transducer modules as measurement standards. The systems can be configured in short or tall racks with room for proprietary test equipment or computers.



MODEL 85 – SHOCK MOUNTED PRESSURE SET

This pressure cabinet is housed in a shock mount rack. It is shown with a Mensor Model 8201 Dual Channel Controller, but can be utilized with any one of Mensor's precision pressure controllers. Source pressure is provided by rechargeable pressure storage tanks incorporated into the bottom of the rack and regulated with front panel bottle regulators and gauges. The system works well in applications that require transporting of test equipment in less than optimum conditions.



MODEL 9304 – AIR DATA MEASUREMENT SYSTEM FOR WIND TUNNEL MONITORING

The Model 9304 Air Data Measurement System provides redundant measurement, calibration and leak testing for wind tunnel applications. The rack mounted PC utilizes IEEE-488 and serial communications to control pumps, compressors and controllers when performing calibration of secondary transducers and system leak tests of the overall system prior to usage. During testing, the system provides backup test data to mainframe computers over an Ethernet network. Test program is written using National Instruments LabVIEW® and displayed on a large touch screen user interface.



MODEL 9400 – CALIBRATION RACK

The Model 9400 is a half height, self-contained system used to monitor and calibrate low differential air sensors prevalent in the pharmaceutical industry. The rack includes a precision pressure calibrator, internal pressure storage tanks, vacuum pump and storage drawer to provide a mobile test bench in a rack.



MODEL 9443 – QUARTZ PRESSURE CONTROL RACK

The Model 9443 Quartz Pressure Control Rack consists of a Mensor Model 8100 Quartz Pressure Controller, a Mensor Model 73 Shop Air Pressure Booster and a Model 90 Liquid Separator with automatic drain/purge control housed in a short 19" wide instrumentation rack. The pressure range of the Model 8100 is 2.1 MPa or approximately 305 psi. The supply pressure for this controller is derived from a user-supplied 5 to 7 Bar dry, compressed air supply and boosted to approximately 325 psi (2.25 MPa) using the Model 73 Shop Air Pressure Booster. To minimize the possibility of contamination of the Quartz Pressure Controller from a test device, the Model 90 Liquid Separator traps a finite amount of liquid contaminants and automatically purges the trap any time the Model 8100 is vented.



Carts and Mobile Equipment

The warm-up time for Mensor pressure calibrators is typically 15 minutes or less, providing an ideal solution for applications requiring a mobile, cart based system. Mensor has designed a variety of customized systems which include all required support components for self-contained operation. Accessories such as rechargeable air/nitrogen cylinders with regulators to provide supply pressure and vacuum pumps for sub-atmospheric pressure control can be mounted in the cart. Systems can also include a PC and lockable storage drawers for documentation, fittings, hoses and tools. Pneumatic tires with casters provide extreme mobility.

MODEL 9301 – MOBILE PRESSURE CALIBRATION CART FOR JET ENGINE TESTING

The Model 9301 has a pressure controller for generating pressure and 10 pressure measurement standards for measuring specific pressure ports used on jet engines. The cart is designed to operate inside the engine cell, but has a large vacuum fluorescent display that is readable outside of the work area. Provisions are made to isolate fuels, oils and other liquids from the pressure media. Rechargeable pressure storage tanks provide source pressure for the controller.



MODEL 9401 – LOW PRESSURE CALIBRATION CART

The Model 9401 is a low pressure calibration cart that can be equipped with any of Mensor's pressure controllers or calibrators. Rather than using high pressure storage tanks for source pressure, this cart can be equipped with a compressor (dry or lubricated) and optionally with a vacuum pump (dry or lubricated) that provide longer service intervals with less maintenance and recharge times. The cart includes multiple drawers that can be locked for storage of documentation, laptop, hoses, fittings, and other tools.



MODEL 9403A – HIGH PRESSURE CALIBRATION CART

Originally designed for the Mensor PCS 400 and Mensor Model 410 High Pressure Control Unit, this cart is capable of generating pneumatic pressures up to 6500 psi from a 300 psi external supply. Precision pressure control is provided by the PCS 400, 410 combination. The system is equipped with supply regulators, high pressure hoses and a retractable power cord on an industrial cart.



MODEL 9404 – AIR DATA TEST SET CALIBRATION CART

The Model 9404 is a mobile calibration cart based on the Mensor 8201 ADTS and is designed to test and calibrate air data computers, altimeters, airspeed indicators and other avionics type pressure devices. Internal to the cart is a dry vacuum pump and compressor capable of simulating altitudes up to 60,000 feet and sub-sonic airspeeds. Although not designed for totally open air environments, this unit can easily be moved from one aircraft to another in a hanger type environment.



MODEL 9405 – CALIBRATION CART WITH STAINLESS STEEL SURFACES

The Model 9405 has many of the features of the 9401 and 9406 calibration carts. This system utilizes stainless steel surfaces that can be maintained in a medical environment. The system is shown with a CPC 6000 controller, but can be equipped with any of Mensor's pressure controllers. It can also be equipped with vacuum pumps, compressor or rechargeable bottle pressure supplies.



MODEL 9406 – HIGH MOBILITY CALIBRATION CART

The Model 9406 is designed for jet engine testing. It consists of two Mensor Model 8100 Quartz Pressure Calibrators, vacuum pump and rechargeable pressure supply tanks. It is equipped with dual supply regulators that allows testing and control of high pressure and low pressure devices. It is also equipped with a pressure/volume controller capable of manually calibrating extremely low pressure devices. The cart is a six wheel design allowing the unit to turn in place in confined areas. It is equipped with lifting hooks for transporting and crane lifting. Lockable drawers allow storage of tools, hoses, documentation and laptop computer.



Bench or Desktop Equipment

In addition to rack and cart based systems, Mensor also provides custom engineered solutions for a wide variety of pressure measurement, calibration measurement and calibration applications. Applications have included stand-alone vacuum pump compressor sets, large volume controllers, multi-channel high speed pressure controllers, remote pressure monitoring equipment, multiple digital pressure gauges mounted in a portable case complete with external quick connects for pressure input and output, medical device calibration carts and pressure booster assemblies.

MODEL 9435 – TRANSMITTER CALIBRATION BENCH SYSTEM

The Model 9435 Transmitter Calibration Bench is a custom designed pressure calibration bench used to calibrate and maintain pressure transmitters. It consists of a rack mounted Mensor CPC 6000 Automated Pressure Calibrator, Mensor CPC 8000 High Pressure Calibrator with vacuum pump and pressure booster.

This particular configuration can calibrate transmitters up to 250 bars but can be extended to 400 bars or 6000 psi. The bench is a standing height 30 inch by 72 inch laboratory type bench with multiple shelves, drawers and light. Mounted on the bench is a Mensor Model 9436 Instrumentation Display Console that provides control of the vacuum pump and all calibrators using a Windows based application and special calibration assistant routines. The console is geared for those that may not be metrologists, but periodically need to calibrate transmitters or other pressure devices.



MODEL 9440 – CALIBRATION/REPAIR BENCH

The Model 9440 is a simple industrial work bench suitable for pressure service work. The bench is a mobile 2 foot x 6 foot bench with phenolic top, one shelf, and a four foot overhead work light. A separate mobile tool cart can also be included with or without common tools. The unit can also include a Dell ® or similar computer capable of holding test programs, instructions or other documents.



MODEL 17714 – PRESSURE INTERFACE UNIT

The Model 17714 Pressure Interface Unit provides computer controllable routing of high pressure nitrogen and vacuum to an external pressure controller and the distribution of controller output. The system consists of an internal vacuum pump, high pressure solenoid valves, filters and regulators and a high accuracy pressure transducer. The Model 17714 functions as a pre-controller and provides post-controller pressure distribution to external devices.



MODEL 9003 – WIND TUNNEL PRESSURE MONITOR

The Model 9003 consists of four differential pressure transducers mounted in a tray with analog outputs. The transducers are remotely monitored using the rack mounted control enclosure shown. The configuration allows pressure to be monitored close to the pressure source and electronically viewed in a control room up to 4000 feet away.



MODEL 9300 – MULTI-RANGE PRESSURE STANDARDS

The Model 9300 consists of seven high accuracy pressure transducers connected to a single pressure input port. Individual transducer range can be remotely selected or an auto-ranging function can be implemented. RS-232 or RS-485 serial communications is provided for connection to user supplied computer or hand held terminal as shown.



MODELS 9302 & 9303 – WIND TUNNEL PRESSURE MONITORS

These models consist of two or more low pressure differential pressure transducers used to measure a window range of wind speeds. Single or dual barometric transducers can be incorporated to monitor the air density on the high and/or low pressure sides. System is mounted in a NEMA 12 enclosure for weather protection and provides RS-232 or RS-485 serial communications to the host monitoring location.



MODEL 9414 – DUAL AND QUAD CHANNEL PRESSURE CONTROLLERS

The Model 9414 can be built as a two or four channel controller. It is optimized for high speed and precise control of test pressures in a continuous production test process. It is the heart of the Mensor 9415 test system used in semiconductor pressure sensor testing.



MODEL 9416 – LARGE VOLUME PRESSURE CONTROLLER

The Model 9416 is a large volume pneumatic pressure controller capable of controlling volumes even larger than the Mensor PCS 400, but with similar control characteristics.



MODEL 9417 – EXTREMELY LARGE VOLUME PRESSURE CONTROLLER

The Model 9417 is a pneumatic pressure controller capable of controlling large pressure vessels in excess of 150 cubic foot volume at pressures up to 120 psi. The intended function of this system is to control pressure in a large volume and monitor the leakage into as many as three smaller volumes within that large volume.



MODEL 9424 – SPECIAL APPLICATION PRESSURE CONTROLLER

The Model 9424 is a single channel pressure controller optimized for speed in medium to large volume applications. It has been used in medical packaging applications and high speed pressure calibration applications. It is a derivative of the dual and quad channel Model 9414, but can be utilized at pressures up to 1500 psi.



MODEL 9426 – LARGE VOLUME LEAK TESTER WITH MEDIA TEMP COMPENSATION

The Model 9426 is a special application pressure controller with media temperature monitoring. It is a single channel controller tuned to quickly control 60 to 90 liter volumes, perform leak tests and compensate for media temperature changes.



MODEL 9427 – WIND TUNNEL PRESSURE SYSTEM

The Model 9427 Wind Tunnel Pressure System is a two channel pneumatic pressure measuring and controlling instrument with an external Transducer Calibration Sled. It contains five measurement transducers arranged with a high range sensor (0 to 32.5 psi absolute) and a low range sensor (0 to 15 psi absolute) on each channel along with a barometric reference transducer that can be monitored independently or used as a precision reference to automatically null the readings of the other four internal transducers. The instrument can be operated from the front panel over a RS-232 serial port or a 10/100 bps Ethernet port. Each of the five removable transducers has an accuracy of 0.010% of reading down to 50% of span and 0.005% of FS below 50% of span and a precision of 0.003% of span with a 365 day recommended calibration interval. They are similar in appearance to the transducers found in the Mensor CPC 6000 Automated Pressure Calibrator and include built-in overpressure relief valves set to approximately 110% of range. The system is housed in an aluminum chassis having dimensions of 17.75" (45.085 cm) wide, 7" (17.78 cm) high and 17.5" (44.45 cm) deep. Standard rack ears add 1.25 (3.175 cm) to the width and 1.75" (4.445 cm) to the depth. All porting extends from the rear of the chassis and adds additional depth depending on fittings and connections to the unit. The unit is configured for desktop or rack mounting in a standard 19" instrumentation rack and has a 4U height when the chassis feet are removed. The unit operates from universal power (100 to 240 volt 50/60 Hz) at 2 amps maximum. The overall system includes a Calibration Sled for external calibration of the measurement transducers.



MODEL 9441 – THREE CHANNEL MODIFIED ADTS PRESSURE CONTROLLER

The Model 9441 Modified ADTS Pressure Controller is a three channel pneumatic pressure monitor/controller/calibrator. The range of each channel is zero to 8000 PSF of absolute zero reference pressure. The unit is configured with special solenoid valves to emulate the operation of a previous generation test setup per user documents. The instrument can be operated from the front panel, or over a RS-232 serial port or a 10/100 bps Ethernet port. The instrument utilizes three Mensor CPT 6180 Digital Pressure Transducers for measurement. The transducers are mounted inside the unit and can be accessed for calibration through the front panel operation, or either communication port. It has an accuracy of 0.010% of reading down to 50% of full scale and 0.005% for full scale below 50% and a precision of 0.003% of span with a 365 day recommended calibration interval. The Model 9441 is housed in an aluminum chassis having dimensions of 17.75" (45.085 cm) wide, 7" (17.78 cm) high and 17.5" (44.45 cm) deep. Standard rack ears add 1.25 (3.175 cm) to the width and 1.75" (4.445 cm) to the depth. All porting extends from the rear of the chassis and adds additional depth depending on fittings and connections to the unit. The unit is configured for desktop or rack mounting in a standard 19" instrumentation rack, 4U height with the chassis feet removed. A heavy duty vacuum pump can be included to support the Model 9441.



MODEL 9500 – LEAK TEST SYSTEM FOR TRANSMITTERS

The Model 9500 is specifically designed to test for small pneumatic leaks in single and dual port pressure transmitters. It is predominately a 'black box' device that communicates and shares data with a host system. Some front panel indicators provide status and a Pass/Fail indication to the user.



MODEL 17712 – REMOTE QUARTZ TRANSDUCER MODULE

The Remote Transducer Module is an independent Quartz Resonance Sensor having a one year calibration cycle. It is configured for wet outside environments and distant pressure monitoring (up to 4000 feet or 1300 meters) using RS-485 serial communications.



Miscellaneous Accessories and Support Equipment

MODEL 73 – SHOP AIR PRESSURE BOOSTER

The Model 73 Shop Air Pressure Booster generates 325 to 750 psi from 70 to 150 psi clean dry shop air source. The Model 73 consists of a single 5 to 1 pressure boost stage with limits for speed control and maximum output pressure control. The unit is purely a mechanical device and has no electrical requirements.



MODEL 74 – LOW PRESSURE BOOSTER

The Model 74 Low Pressure Booster generates 1500 psi Nitrogen using a 130 psi dry nitrogen source and 85 psi shop air drive. The system consists of a 4 to 1 primary stage pressure booster and a 15 to 1 secondary stage booster. Each pump is controlled by a high flow regulator to set the output pressure of the stage and a drive speed valve to control the rate at which the pump operates.



MODEL 75 – RACK MOUNTED PRESSURE BOOSTER

A Haskel Air Pressure Booster reconfigured for mounting in a standard 19 inch 6U (10.5 inch tall) instrumentation rack. Minimum input pressure source is 300 psi. Maximum output pressure is 6500 psi. Unit can be supplied with external air compressor for low pressure drive source of 80 to 120 psi.



MODEL 9420A – REMOTE TRANSDUCER DISPLAY MODULE

The Model 9420A is a small LCD display and power supply for the Mensor Series 6000, 6100 and the new 6180 digital pressure transducers. It provides a desktop or rack mountable display for calibrating, testing, or permanent readout of these Mensor transducers.



MODEL 9420B – REMOTE TRANSDUCER DISPLAY MODULE

The Model 9420B is similar to the Model 9420A but has additional features on the front panel, can handle up to two transducers and can interface with the customer's computer.



MODEL 9442 – PRESSURE REGULATING CONSOLE

The Model 9442 is designed as an accessory to the Mensor Workbench Model 9440. It is engineered to accept two pressure inputs and a vacuum input and provide three regulated pressure outputs and a vacuum output port. A high pressure nitrogen supply input (up to 7000 psi or 500 Bar) can be regulated to 6500 psi or less for operation with a CPC 8000 Pressure Controller or 1500 psi or less for a CPC 6000 Pressure Controller. A low pressure shop air supply is intended for use with low pressure CPC 6000 Pressure Controllers and other low pressure devices. A vacuum pass-through port provides convenient access to vacuum and is located next to the regulated pressure ports.



MODEL 80C – VACUUM PUMP/COMPRESSOR SET

In this configuration, the compressor is oil-less with a maximum pressure of 50 psi with an open flow of 1.5 cfm. The vacuum pump is also oil-less and can achieve 28.5 inHG of vacuum with an open flow of 0.8 cfm. In avionics terms, this set is capable of 60,000 feet of altitude and airspeeds in excess of 1000 knots. Both units are shock mounted to reduce noise and vibration. Each unit has a separate power switch/breaker and can be run independently.

This same system can also be produced in a standard 19 inch, 4U (7" high) rack mount chassis.



MODEL 81 – DUAL VACUUM SINGLE COMPRESSOR

The Mensor Model 81 contains two independent vacuum pumps and a single compressor. It is designed to complement the requirements of an Air Data Test Set (ADTS). The unit is housed in a desktop or rack mountable enclosure similar in style to the Mensor 8201 ADTS. The compressor is an oil-less pressure pump with an open flow of 1.5 cfm and a usable pressure of approximately 50 psi. The unit can achieve as much as 75 psi maximum under certain conditions. The vacuum pumps are also oil-less and each can achieve a vacuum of 28.5 inHG with an open flow of 0.8 cfm. In avionics terms, this set is capable of 60,000 feet of altitude and airspeeds in excess of 1000 knots. All three units are shock mounted to reduce noise and vibration. Each unit has a power switch/breaker and can be run independently. A photo of rack mount configuration is shown. The desktop unit is similar without the rack mounting ears and rack slides.



LEAN CLEAN GREEN

Mensor Corporation is dedicated to manufacturing quality products in a "Lean, Clean and Green" environment. All of our processes are regularly evaluated to promote continuous improvement. Kaizen events, 5S, and SQDC boards are used on a regular basis to promote lean manufacturing. Our 5S program is called "5S plus". The traditional 5S program represents **Sort, Set, Shine, Standardize** and **Sustain**, where "5S plus" includes **Safety**. We have containers designated to recycle paper, metal, electronics and cardboard. Waste is recycled to do our part in keeping our environment green.

The calibration program at Mensor is accredited by A2LA as complying with both the ISO/IEC 17025:2005 and the ANSI/NCSL Z540-1-1994 standards. All Mensor primary standards are traceable to NIST. Mensor Corporation is registered to ISO9001:2008.



Represented by:



Mensor Corporation

201 Barnes Drive
San Marcos, Texas 78666
phone: 512.396.4200
fax: 512.396.1820

web site: www.mensor.com
e-mail: systems@mensor.com