

# Custom systems

## Model 9415 multi-channel Pressure test system

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### Applications

- High speed production testing of pressure sensors
- Controlling pressure in large volumes
- Ideal for manufacturing

### Special features

- Remote transducer module
- High speed pressure control
- Ranges to 300 psi
- Touchscreen user interface



**Model 9415 - Multi-channel pressure test system**

### Description

The Mensor Model 9415 multi-channel pressure test system is optimized for controlling large volumes and constantly replenishing small amounts of air at a rapid rate. There are three primary pressure configurations, standard range, low pressure, and very low pressure. Additionally, it comes in different standard 19" rack form factors.

### Functionality

The Mensor Model 9415 Multi-Channel Pressure Test System is a mobile rack configured with either one four channel Model 9414 Quad Pressure Controller with four Mensor 6100 transducers, and two 9412 dual tank modules or one two channel Model 9414 Dual Pressure Controller with two Mensor 6100 transducers and one 9412 dual tank module. Both systems include a vacuum pump and related automated electrical and pneumatic switching devices. The 9412 tank modules contain either two or four ASME code pressure tanks rated for 300 psi working pressure. The full scale range on each control channel in the Model 9414 controller varies based on the configuration selected.

### Unit setup

The rack system is mounted on casters and should be installed on a level surface with adequate airflow. The emergency shutoff button on the 9414 controller, the rack power connection, and the safety valves on the side of the rack if so equipped should be accessible to the operator. Wheel chucks or threaded feet/supports should be used where appropriate to keep the unit in place. A dry, clean compressed air or nitrogen supply is required for operation. The remote transducer module Model 9418 should be mounted close to the test devices to minimize the pressure exchanges and maximize the operational speed of the system.

### Maintenance

Depending upon the transducers selected, the calibration interval can be 365 or 180 days. Either the entire unit can be shipped to Mensor for calibration or the transducers can be removed from the unit and shipped by themselves to Mensor. Only qualified technicians should open up the Model 9414 housing and remove the transducers.

Each new unit has a 1-year warranty from the date of delivery.

## Configuration options: Model 9415

Basic instruments - Model 9415	
Instrument version	Refer to "rack options" & "pneumatic range options"
Operating temperature	15 to 40 C
Storage temperature	0 to 50C
Humidity	10 to 85% RH (non-condensing)
Communications	RS-232, 57600 baud, 8, 1, N
Screen	7.0" color LCD with resistive touchscreen
Warm-up time	Approx. 15 min
Recommended pressure media	Quality class of 1.2.1 (ISO standard 8573.1) (Not suitable for oxygen use.)
Pneumatic interface	¼" Tube, 7/16-20 female SAE, 6mm tube, or 6mm push-to-connect tube fittings
Permissible supply port pressure	110 - 120% FS or 10 psi (0.69 bar), whichever is greater
Permissible measure/control port pressure	105% FS transducer range
Weight	~550lbs (250kg) to ~250lbs(113kg) configuration & option dependent
Dimensions refer to "rack options"	Refer to "rack options"
Power	100 to 240 VAC, 47 to 63 Hz, 1500 VA max, 750 VA typical

Rack options - Model 9415	
Tall rack(nominal dimensions)	Width ≈23" (58.42 cm) Height ≈72" with casters (182.88 cm) Depth ≈31.5"(80.01 cm)
Mid sized rack(nominal dimensions):	Width ≈23" (58.42 cm) Height ≈72" with casters (182.88 cm) Depth ≈31.5"(80.01 cm)
Short rack (nominal dimensions)	Width ≈23" (58.42 cm) Height ≈32" with casters (81.28 cm) Depth ≈24.5"(62.23 cm)
Double bay rack (nominal dimensions):	Width ≈ width of left rack+width of right rack Height ≈ tallest rack selected Depth ≈ deepest rack selected



1) A double bay rack is when two racks are joined together. These racks may or may not be of the same size. This is usually done when two 9415s are housed in the same system or additional functionality is needed.

## Configuration options: Model 9415

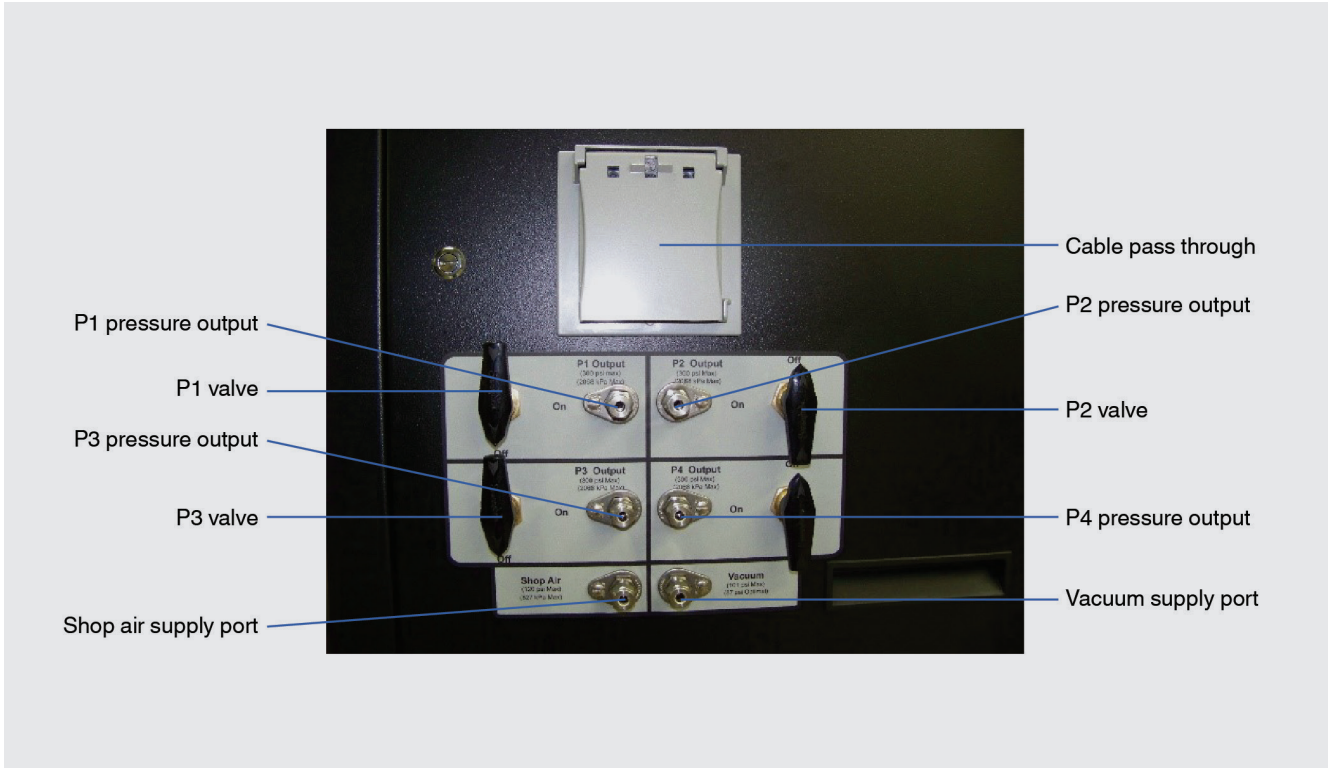
Pneumatic range options - Model 9415	
<b>Standard range</b>	
Pressure range (9414)	0 to 300 PSI absolute
Control channels per 9414	2 or 4
Measurement accuracy(9414)	0.01% of full scale
Standard control stability(9414)	0.01% of range
System total volume per 9414 channel	Approximately 11.8 liters using an 11 liter storage tank
Remote transducer ranges	Any range below 300 PSI absolute
Remote accuracy	0.01% IS-50
Max number of remote transducers	5
<b>Low pressure range</b>	
Pressure range (9414)	0 to 60 PSI absolute
Control channels per 9414	2 or 4
Measurement accuracy(9414)	0.01% of full scale
Standard control stability(9414)	0.01% of range
System total volume per 9414 channel	Approximately 11.8 liters using an 11 liter storage tank
Remote transducer ranges	Any range below 60 PSI absolute
Remote accuracy	0.01% IS-50
Max number of remote transducers	5
<b>Very low pressure range</b>	
Pressure range (9414)	0 to 15 PSI absolute
Control channels per 9414	2 or 4
Measurement accuracy(9414)	0.01% of full scale
Standard control stability(9414)	0.01% of range
System total volume per 9414 channel	Approximately 11.8 liters using an 11 liter storage tank
Remote transducer ranges	Any range between 0 to 0.33 PSI to 15 PSI gauge
Remote accuracy	0.03% of FS to 0.01% of FS depending on range
Max number of remote transducers	5

1) Transducer uncertainty options may vary depending on the desired pressure range.

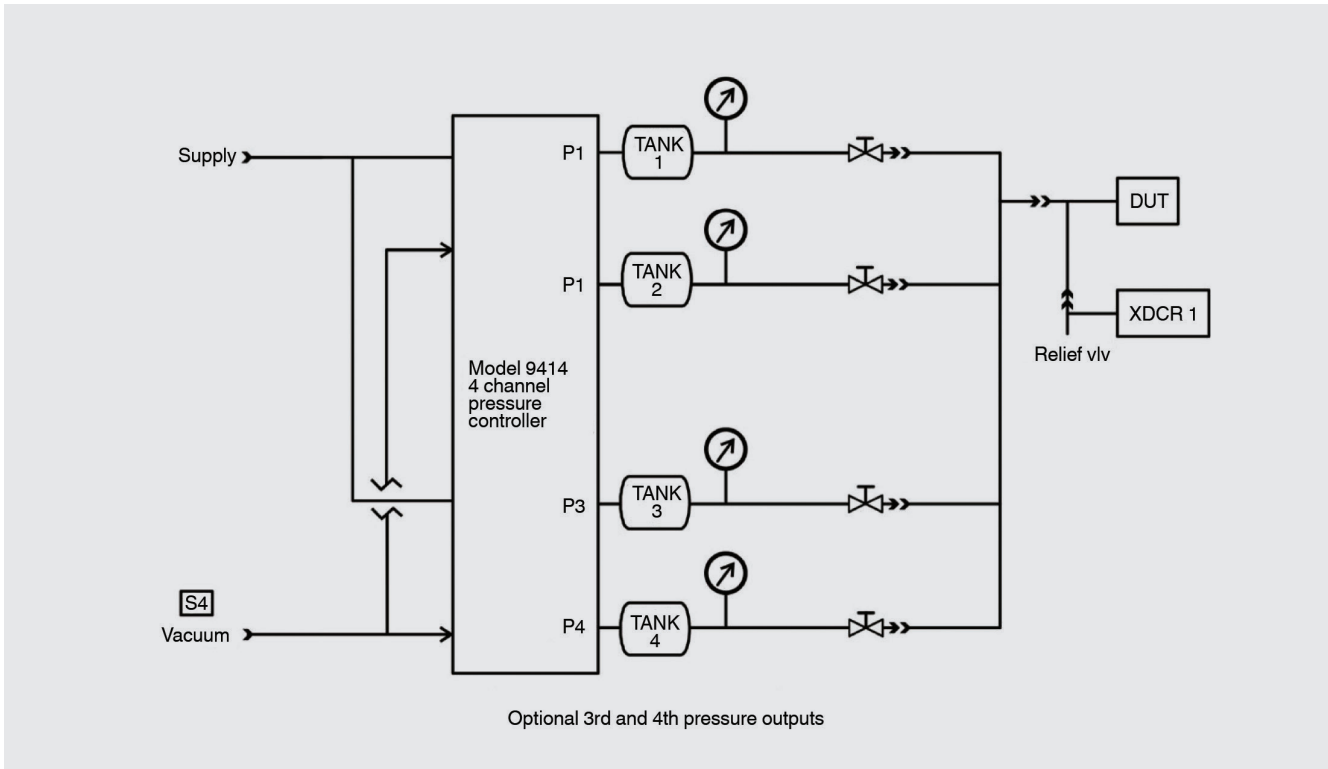
## Approvals

Logo	Description	Region
	<b>(EU declaration of conformity *(TBD)*</b> EU Importer: WIKA, 63911 Klingenberg, Germany *(TBD)*	European Union
	<b>UKCA declaration of conformity *(TBD)*</b> Importer: WIKA instruments Ltd, unit 6 & 7 Goya business park, the moor road, sevenoaks kent, TN15 5GY *(TBD)*	Great Britain

**9415 Pressure connections DUT panel ( 4 channel 9414 configuration)**



**Pneumatic schematic (4 channel 9414; 2 pressure output)**



## Scope of delivery

- A Model 9414 and two Model 9412s in a rack
- A Model 9418 (External transducer module)
- Internal power cord reel

## Options

- Internal vacuum pump
- External vacuum pump
- Interface cables
- Hoses
- Additional rack mounted units can be incorporated
- Two 9415s can be housed in the same system (Dependent upon rack configuration)

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**Mensor**  
201 Barnes Drive  
San Marcos, TX 78666  
Tel. (512) 396-4200  
Fax (512) 396-1820  
sales@mensor.com  
www.mensor.com