

# Specification Sheet - Powerex Control Air LP Scroll System

Base Model Number: LST1505-4-5-K  
System Capacity: 136.8 CFM @ 100 PSIG  
Horsepower (total): 45HP (3 x 15)  
Sound Level: 72 d.b.a. @ 1 meter  
Receiver Size/Configuration: 200 Gallons/Vertical  
Voltage/Phase/Hertz: 460V, 3Phase, 60 Hertz

## GENERAL DESCRIPTION

This Scroll System is a skid mounted design consisting of multiple oil-less scroll compressors/modules, dual air dryers with purge control, dual filtration system, dew point monitor, wired control panel and corrosion resistant air receiver. The package shall be modular in design to fit through a standard 36" doorway. Package shall be provided with single point connections for electric, discharge air, and condensate drains.

## OILLESS SCROLL COMPRESSOR PUMP

The compressors shall be belt driven oil-less rotary scroll, single stage, air-cooled construction with absolutely no oil needed for operation. Each compressor to be equipped with the following components:

- Isolation, check and safety valve
- Electric motor, belts & beltguard
- After-cooler with separator
- T.M.P.D. (Thermal malfunction protection device)

## RECEIVER TANK

The A.S.M.E., National Board registered 200 psig working pressure, vertical air receiver is provided with:

- Sight gauge
- Pressure gauge
- Relief valve
- Manual and automatic tank drain
- 3-valve bypass
- Internal lining to resist corrosion

## CONTROL PANEL

Nema 12, UL508A listed and labeled with two control transformers with disconnect protected primary and secondary circuits. Panel shall have automatic alternation and reserve pump "in use" alarm with visual and audible indicators. All alarms shall have dry contacts on a labeled terminal strip for remote alarms. Panel will provide power for complete system including all desiccant dryers, drains, monitors, and alarms, with single-point electrical connection.

Each Compressor/Module shall be equipped with the following:

- Disconnect
- Magnetic starter
- Run light
- HOA switch
  
- High temperature shutdown with visual and audible alarms
- Hour meter

## AIR PURIFICATION SYSTEM

- Dual heat-less, desiccant air dryers
- Dual pre, after & final filters
- Dual pressure reducing valves
- Automatic dew point dependent switching to reduce purge frequency

## MONITORING EQUIPMENT

- Dew point with audible/visual alarms & dryer contacts remote alarm signal

## SYSTEM CONNECTIONS

The system is supplied with a remote intake connection and flexible connectors for both intake and discharge. All piping complies with current NFPA 99 requirements.

### **HMI DESCRIPTION**

The Air System is controlled by a Programmable Logic Controller (PLC). The operating status is displayed on the HMI 6" color touch screen panel on the front of the unit. The panel door will also include: audible and visual alarms with an acknowledge button, an HOA switch for each pump, and a 3-position dryer power switch.

The HMI controls allow the user to view system functions, factory set points, and navigate through the screens to get more information about the operation of the individual compressor modules. Service alerts and system alarm details are also displayed.

The HMI controls have integrated the dew point monitor, with real-time levels displayed on the HMI. Dry contacts for remote signaling include: reserve pump in use, high dew point, and a general fault to indicate the following: high temperature, high carbon monoxide, motor overload trip and reserve transformer in use.

The HMI screens will display the following:

- System pressure
- Compressor type
- Compressor status (for each compressor)
- Compressor run hours (per compressor)
- Model and Serial number of the unit
- Dew point level
- Sequence of Operation
- Alarm screens
- Fault indication
- Alarm history

Maintenance screens to include the following:

- Run hours (total and per compressor)
- Hours until scheduled maintenance alert
- A message window with required maintenance at set intervals for each compressor
- Dryer service alerts

Alerts will be displayed for any of the following:

- Compressor maintenance
- Dryer maintenance
- High Dew point level
- Reserve pump in use
- Any general fault alarm

### **PBMI DESCRIPTION**

The Air System is controlled by a Programmable Logic Controller (PLC). The operating status is displayed on the Powerex Building Management Integrator (PBMI) 6" color touch screen panel on the front of the unit. The PBMI controls are contained in a NEMA 4/12 enclosure. The control panel is UL508A listed and labeled. The panel door

will also include: audible and visual alarms with an acknowledge button, an HOA switch for each pump, and a 3-position dryer switch. The control panel meets NFPA 99 requirements for Level 1 medical air.

The PBMI controls allow the user to view system functions, the factory set points, and navigate through the screens to get more information about the operation of the individual compressor modules. Staff can receive email notifications for service alerts and system alarms, the details of which are also displayed on the built-in webpage.

The PBMI controls have integrated the dew point monitor, with real-time levels displayed on the PBMI. Dry contacts for remote signaling include: reserve pump in use, high dew point, and a general fault to indicate the following: high temperature, high carbon monoxide, motor overload trip and reserve transformer in use. The PBMI controls contain a Building Automation System (BAS) communication gateway with BacNet® protocol and Web server features. The BAS communication gateway can support hundreds of pre-configured, labeled, and listed individual data points and utilizes a 10/100 BaseT Operation ethernet port connection.

Web server features include email notifications in case the system is in alarm for any reason or has achieved one of its maintenance intervals and requires service.

The PBMI screens will display the following:

- System pressure
- Compressor type
- Compressor status (for each compressor)
- Compressor run hours (per compressor)
- Model and Serial number of the unit
- Dew point level
- Sequence of Operation
- Alarm screens
- Fault indication
- Alarm history
- Maintenance screens to include the following:
  - Run hours (total and per compressor)
  - Hours until scheduled maintenance alert
  - A message window with required maintenance at set intervals for each compressor
  - Dryer service alerts

Alerts will be displayed and email notification sent for any of the following:

- Compressor maintenance
- Dryer maintenance
- High Dew point level
- Reserve pump in use
- Any general fault alarm

#### **MOTOR SLIDE BASE DESCRIPTION**

An adjustable motor base will be provided under each motor for ease of belt change and tensioning.

#### **EXTENDED WARRANTY DESCRIPTION**

The compressor pumps by themselves are covered for 3 years from startup. The balance of the system parts and labor coverage is for 18 months from shipment, or 12 months from start up, whichever occurs first. Purchasing of the extended warranty changes the parts and labor portion to 30 months from shipment, or 24 months from start up, whichever occurs first.

Quantity: 1 Unit

Lead Time: 6-8 Weeks

## Specification Sheet - Powerex Lab Air LP Scroll System

Base Model Number:	LST1005-4-5-K
System Capacity:	91.2 CFM @ 100 PSIG
Horsepower (total):	30HP (3 x 10)
Sound Level:	72 d.b.a. @ 1 meter
Receiver Size/Configuration:	200 Gallons/Vertical
Voltage/Phase/Hertz:	460V, 3Phase, 60 Hertz

#### **GENERAL DESCRIPTION**

This Scroll System is a skid mounted design consisting of multiple oil-less scroll compressors/modules, dual air dryers with purge control, dual filtration system, dew point monitor, wired control panel and corrosion resistant air receiver. The package shall be modular in design to fit through a standard 36" doorway. Package shall be provided with single point connections for electric, discharge air, and condensate drains.

#### **OILLESS SCROLL COMPRESSOR PUMP**

The compressors shall be belt driven oil-less rotary scroll, single stage, air-cooled construction with absolutely no oil needed for operation. Each compressor to be equipped with the following components:

- Isolation, check and safety valve
- Electric motor, belts & beltguard
- After-cooler with separator
- T.M.P.D. (Thermal malfunction protection device)

### RECEIVER TANK

The A.S.M.E., National Board registered 200 psig working pressure, vertical air receiver is provided with:

- Sight gauge
- Pressure gauge
- Relief valve
- Manual and automatic tank drain
- 3-valve bypass
- Internal lining to resist corrosion

### CONTROL PANEL

Nema 12, UL508A listed and labeled with two control transformers with disconnect protected primary and secondary circuits. Panel shall have automatic alternation and reserve pump "in use" alarm with visual and audible indicators. All alarms shall have dry contacts on a labeled terminal strip for remote alarms. Panel will provide power for complete system including all desiccant dryers, drains, monitors, and alarms, with single-point electrical connection.

Each Compressor/Module shall be equipped with the following:

- Disconnect
- Magnetic starter
- Run light
- HOA switch
- High temperature shutdown with visual and audible alarms
- Hour meter

### AIR PURIFICATION SYSTEM

- Dual heat-less, desiccant air dryers
- Dual pre, after & final filters
- Dual pressure reducing valves
- Automatic dew point dependent switching to reduce purge frequency

### MONITORING EQUIPMENT

- Dew point with audible/visual alarms & dryer contacts remote alarm signal

### SYSTEM CONNECTIONS

The system is supplied with a remote intake connection and flexible connectors for both intake and discharge. All piping complies with current NFPA 99 requirements.

### HMI DESCRIPTION

The Air System is controlled by a Programmable Logic Controller (PLC). The operating status is displayed on the HMI 6" color touch screen panel on the front of the unit. The panel door will also include: audible and visual alarms with an acknowledge button, an HOA switch for each pump, and a 3-position dryer power switch.

The HMI controls allow the user to view system functions, factory set points, and navigate through the screens to get more information about the operation of the individual compressor modules. Service alerts and system alarm details are also displayed.

The HMI controls have integrated the dew point monitor, with real-time levels displayed on the HMI. Dry contacts for remote signaling include: reserve pump in use, high dew point, and a general fault to indicate the following: high temperature, high carbon monoxide, motor overload trip and reserve transformer in use.

The HMI screens will display the following:

- System pressure
- Compressor type
- Compressor status (for each compressor)
- Compressor run hours (per compressor)
- Model and Serial number of the unit
- Dew point level
- Sequence of Operation
- Alarm screens
- Fault indication
- Alarm history
- Maintenance screens to include the following:
  - Run hours (total and per compressor)
  - Hours until scheduled maintenance alert
  - A message window with required maintenance at set intervals for each compressor
  - Dryer service alerts

Alerts will be displayed for any of the following:

- Compressor maintenance
- Dryer maintenance
- High Dew point level
- Reserve pump in use
- Any general fault alarm

### **PBMI DESCRIPTION**

The Air System is controlled by a Programmable Logic Controller (PLC). The operating status is displayed on the Powerex Building Management Integrator (PBMI) 6" color touch screen panel on the front of the unit. The PBMI controls are contained in a NEMA 4/12 enclosure. The control panel is UL508A listed and labeled. The panel door will also include: audible and visual alarms with an acknowledge button, an HOA switch for each pump, and a 3-position dryer switch. The control panel meets NFPA 99 requirements for Level 1 medical air.

The PBMI controls allow the user to view system functions, the factory set points, and navigate through the screens to get more information about the operation of the individual compressor modules. Staff can receive email notifications for service alerts and system alarms, the details of which are also displayed on the built-in webpage.

The PBMI controls have integrated the dew point monitor, with real-time levels displayed on the PBMI. Dry contacts for remote signaling include: reserve pump in use, high dew point, and a general fault to indicate the following: high temperature, high carbon monoxide, motor overload trip and reserve transformer in use. The PBMI controls contain a Building Automation System (BAS) communication gateway with BacNet® protocol and Web server features. The BAS communication gateway can support hundreds of pre-configured, labeled, and listed individual data points and utilizes a 10/100 BaseT Operation ethernet port connection.

Web server features include email notifications in case the system is in alarm for any reason or has achieved one of its maintenance intervals and requires service.

The PBMI screens will display the following:

- System pressure
- Compressor type
- Compressor status (for each compressor)
- Compressor run hours (per compressor)
- Model and Serial number of the unit
- Dew point level
- Sequence of Operation
- Alarm screens
- Fault indication
- Alarm history

Maintenance screens to include the following:

- Run hours (total and per compressor)
- Hours until scheduled maintenance alert
- A message window with required maintenance at set intervals for each compressor
- Dryer service alerts

Alerts will be displayed and email notification sent for any of the following:

- Compressor maintenance
- Dryer maintenance
- High Dew point level
- Reserve pump in use
- Any general fault alarm

### **MOTOR SLIDE BASE DESCRIPTION**

An adjustable motor base will be provided under each motor for ease of belt change and tensioning.

### **EXTENDED WARRANTY DESCRIPTION**

The compressor pumps by themselves are covered for 3 years from startup. The balance of the system parts and labor coverage is for 18 months from shipment, or 12 months from start up, whichever occurs first. Purchasing of the extended warranty changes the parts and labor portion to 30 months from shipment, or 24 months from start up, whichever occurs first.

Quantity: 1 Unit

Lead Time: 6-8 Weeks

## **Specification Sheet - Powerex Dental Air HP Scroll System**

Base Model Number:	MST1505HP-4-5-K-SPL
System Capacity:	136.8 CFM @ 100 PSIG (145# max)
Horsepower (total):	45HP (3 x 15)
Sound Level:	72 d.b.a. @ 1 meter
Receiver Size/Configuration:	200 Gallons/Vertical
Voltage/Phase/Hertz:	460V, 3Phase, 60 Hertz

### **GENERAL DESCRIPTION**

This Scroll System is a skid mounted design consisting of multiple oil-less scroll compressors/modules, dual air dryers with purge control, dual filtration system, dew point and CO monitors, wired control panel and corrosion resistant air receiver. The package shall be modular in design to fit through a standard 36" doorway. Package shall be provided with single point connections for electric, discharge air, and condensate drains.

### **OILLESS SCROLL COMPRESSOR PUMP**

The compressors shall be belt driven oil-less rotary scroll, single stage, air-cooled construction with absolutely no oil needed for operation. Each compressor to be equipped with the following components:

- Isolation, check and safety valve
- Electric motor, belts & beltguard
- After-cooler with separator
- T.M.P.D. (Thermal malfunction protection device)

### **RECEIVER TANK**

The A.S.M.E., National Board registered 200 psig working pressure, vertical air receiver is provided with:

- Sight gauge
- Pressure gauge
- Relief valve
- Manual and automatic tank drain
- 3-valve bypass
- Internal lining to resist corrosion

## **CONTROL PANEL**

Nema 12, UL508A listed and labeled with two control transformers with disconnect protected primary and secondary circuits. Panel shall have automatic alternation and reserve pump "in use" alarm with visual and audible indicators. All alarms shall have dry contacts on a labeled terminal strip for remote alarms. Panel will provide power for complete system including all desiccant dryers, drains, monitors, and alarms, with single-point electrical connection.

Each Compressor/Module shall be equipped with the following:

- Disconnect
- Magnetic starter
- Run light
- HOA switch
- High temperature shutdown with visual and audible alarms
- Hour meter

## **AIR PURIFICATION SYSTEM**

- Dual heat-less, desiccant air dryers -40F
- Dual pre, after & final filters
- Dual pressure reducing valves
- Automatic dew point dependent switching to reduce purge frequency

## **MONITORING EQUIPMENT**

- Dew point with audible/visual alarms & dryer contacts remote alarm signal
- CO monitor with audio/visual alarms

## **SYSTEM CONNECTIONS**

The system is supplied with a remote intake connection and flexible connectors for both intake and discharge. All piping complies with current NFPA 99 requirements.

## **HMI DESCRIPTION**

The Air System is controlled by a Programmable Logic Controller (PLC). The operating status is displayed on the HMI 6" color touch screen panel on the front of the unit. The panel door will also include: audible and visual alarms with an acknowledge button, an HOA switch for each pump, and a 3-position dryer power switch.

The HMI controls allow the user to view system functions, factory set points, and navigate through the screens to get more information about the operation of the individual compressor modules. Service alerts and system alarm details are also displayed.

The HMI controls have integrated the dew point monitor, with real-time levels displayed on the HMI. Dry contacts for remote signaling include: reserve pump in use, high dew point, and a general fault to indicate the following: high temperature, high carbon monoxide, motor overload trip and reserve transformer in use.

The HMI screens will display the following:

- System pressure
- Compressor type
- Compressor status (for each compressor)
- Compressor run hours (per compressor)
- Model and Serial number of the unit
- CO level
- Dew point level
- Sequence of Operation
- Alarm screens
- Fault indication
- Alarm history

Maintenance screens to include the following:

- Run hours (total and per compressor)
- Hours until scheduled maintenance alert

- A message window with required maintenance at set intervals for each compressor
- Dryer service alerts

Alerts will be displayed for any of the following:

- Compressor maintenance
- Dryer maintenance
- High Dew point level
- High CO level
- Reserve pump in use
- Any general fault alarm

### **PBMI DESCRIPTION**

The Air System is controlled by a Programmable Logic Controller (PLC). The operating status is displayed on the Powerex Building Management Integrator (PBMI) 6" color touch screen panel on the front of the unit. The PBMI controls are contained in a NEMA 4/12 enclosure. The control panel is UL508A listed and labeled. The panel door

will also include: audible and visual alarms with an acknowledge button, an HOA switch for each pump, and a 3-position dryer switch. The control panel meets NFPA 99 requirements for Level 1 medical air.

The PBMI controls allow the user to view system functions, the factory set points, and navigate through the screens to get more information about the operation of the individual compressor modules. Staff can receive email notifications for service alerts and system alarms, the details of which are also displayed on the built-in webpage.

The PBMI controls have integrated the dew point monitor, with real-time levels displayed on the PBMI. Dry contacts for remote signaling include: reserve pump in use, high dew point, and a general fault to indicate the following: high temperature, high carbon monoxide, motor overload trip and reserve transformer in use. The PBMI controls contain a Building Automation System (BAS) communication gateway with BacNet® protocol and Web server features. The BAS communication gateway can support hundreds of pre-configured, labeled, and listed individual data points and utilizes a 10/100 BaseT Operation ethernet port connection.

Web server features include email notifications in case the system is in alarm for any reason or has achieved one of its maintenance intervals and requires service.

The PBMI screens will display the following:

- System pressure
- Compressor type
- Compressor status (for each compressor)
- Compressor run hours (per compressor)
- Model and Serial number of the unit
- Dew point level
- CO level
- Sequence of Operation
- Alarm screens
- Fault indication
- Alarm history

Maintenance screens to include the following:

- Run hours (total and per compressor)
- Hours until scheduled maintenance alert
- A message window with required maintenance at set intervals for each compressor
- Dryer service alerts

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Alerts will be displayed and email notification sent for any of the following: Compressor maintenance

- Dryer maintenance
- High Dew point level
- High CO level
- Reserve pump in use
- Any general fault alarm

### **MOTOR SLIDE BASE DESCRIPTION**

An adjustable motor base will be provided under each motor for ease of belt change and tensioning.

### **EXTENDED WARRANTY DESCRIPTION**

The compressor pumps by themselves are covered for 3 years from startup. The balance of the system parts and labor coverage is for 18 months from shipment, or 12 months from start up, whichever occurs first. Purchasing of the extended warranty changes the parts and labor portion to 30 months from shipment, or 24 months from start up, whichever occurs first.

Quantity: 1 Unit

Lead Time: 6-8 Weeks

## **Specification Sheet - Powerex Medical Air LP Scroll System**

Base Model Number:	MSQ1505-4-5-K
System Capacity:	149.4 CFM @ 50 PSIG
Horsepower (total):	60HP (4 x 15)
Sound Level:	72 d.b.a. @ 1 meter
Receiver Size/Configuration:	200 Gallons/Vertical
Voltage/Phase/Hertz:	460V, 3Phase, 60 Hertz

### **GENERAL DESCRIPTION**

This Scroll System is a skid mounted design consisting of multiple oil-less scroll compressors/modules, dual air dryers with purge control, dual filtration system, dew point and CO monitors, wired control panel and corrosion resistant air receiver. The package shall be modular in design to fit through a standard 36" doorway. Package shall be provided with single point connections for electric, discharge air, and condensate drains.

### **OILLESS SCROLL COMPRESSOR PUMP**

The compressors shall be belt driven oil-less rotary scroll, single stage, air-cooled construction with absolutely no oil needed for operation. Each compressor to be equipped with the following components:

- Isolation, check and safety valve
- Electric motor, belts & beltguard
- After-cooler with separator
- T.M.P.D. (Thermal malfunction protection device)

### **RECEIVER TANK**

The A.S.M.E., National Board registered 200 psig working pressure, vertical air receiver is provided with:

- Sight gauge
- Pressure gauge
- Relief valve
- Manual and automatic tank drain
- 3-valve bypass
- Internal lining to resist corrosion

### **CONTROL PANEL**

Nema 12, UL508A listed and labeled with two control transformers with disconnect protected primary and secondary circuits. Panel shall have automatic alternation and reserve pump "in use" alarm with visual and audible indicators. All alarms shall have dry contacts on a labeled terminal strip for remote alarms. Panel will provide power for complete system including all desiccant dryers, drains, monitors, and alarms, with single-point electrical connection.

Each Compressor/Module shall be equipped with the following:

- Disconnect
- Magnetic starter
- Run light
- HOA switch
- High temperature shutdown with visual and audible alarms
- Hour meter

## AIR PURIFICATION SYSTEM

- Dual heat-less, desiccant air dryers
- Dual pre, after & final filters
- Dual pressure reducing valves
- Automatic dew point dependent switching to reduce purge frequency

## MONITORING EQUIPMENT

- Dew point with audible/visual alarms & dryer contacts remote alarm signal
- CO monitor with audio/visual alarms

## SYSTEM CONNECTIONS

The system is supplied with a remote intake connection and flexible connectors for both intake and discharge. All piping complies with current NFPA 99 requirements.

## **HMI DESCRIPTION**

The Air System is controlled by a Programmable Logic Controller (PLC). The operating status is displayed on the HMI 6" color touch screen panel on the front of the unit. The panel door will also include: audible and visual alarms with an acknowledge button, an HOA switch for each pump, and a 3-position dryer power switch.

The HMI controls allow the user to view system functions, factory set points, and navigate through the screens to get more information about the operation of the individual compressor modules. Service alerts and system alarm details are also displayed.

The HMI controls have integrated the dew point monitor, with real-time levels displayed on the HMI. Dry contacts for remote signaling include: reserve pump in use, high dew point, and a general fault to indicate the following: high temperature, high carbon monoxide, motor overload trip and reserve transformer in use.

The HMI screens will display the following:

- System pressure
- Compressor type
- Compressor status (for each compressor)
- Compressor run hours (per compressor)
- Model and Serial number of the unit
- CO level
- Dew point level
- Sequence of Operation
- Alarm screens
- Fault indication
- Alarm history

Maintenance screens to include the following:

- Run hours (total and per compressor)
- Hours until scheduled maintenance alert
- A message window with required maintenance at set intervals for each compressor
  
- Dryer service alerts

Alerts will be displayed for any of the following:

- Compressor maintenance
  
- Dryer maintenance
- High Dew point level
- High CO level
- Reserve pump in use
- Any general fault alarm

### **PBMI DESCRIPTION**

The Air System is controlled by a Programmable Logic Controller (PLC). The operating status is displayed on the Powerex Building Management Integrator (PBMI) 6" color touch screen panel on the front of the unit. The PBMI controls are contained in a NEMA 4/12 enclosure. The control panel is UL508A listed and labeled. The panel door

will also include: audible and visual alarms with an acknowledge button, an HOA switch for each pump, and a 3-position dryer switch. The control panel meets NFPA 99 requirements for Level 1 medical air.

The PBMI controls allow the user to view system functions, the factory set points, and navigate through the screens to get more information about the operation of the individual compressor modules. Staff can receive email notifications for service alerts and system alarms, the details of which are also displayed on the built-in webpage.

The PBMI controls have integrated the dew point monitor, with real-time levels displayed on the PBMI. Dry contacts for remote signaling include: reserve pump in use, high dew point, and a general fault to indicate the following: high temperature, high carbon monoxide, motor overload trip and reserve transformer in use. The PBMI controls contain a Building Automation System (BAS) communication gateway with BacNet® protocol and Web server features. The BAS communication gateway can support hundreds of pre-configured, labeled, and listed individual data points and utilizes a 10/100 BaseT Operation ethernet port connection.

Web server features include email notifications in case the system is in alarm for any reason or has achieved one of its maintenance intervals and requires service.

The PBMI screens will display the following:

- System pressure
- Compressor type
- Compressor status (for each compressor)
- Compressor run hours (per compressor)
- Model and Serial number of the unit
- Dew point level
- CO level
- Sequence of Operation
- Alarm screens
- Fault indication
- Alarm history

Maintenance screens to include the following:

- Run hours (total and per compressor)
- Hours until scheduled maintenance alert
- A message window with required maintenance at set intervals for each compressor
- Dryer service alerts

Alerts will be displayed and email notification sent for any of the following:

- Compressor maintenance
- Dryer maintenance
- High Dew point level
- High CO level
- Reserve pump in use
- Any general fault alarm

### **MOTOR SLIDE BASE DESCRIPTION**

An adjustable motor base will be provided under each motor for ease of belt change and tensioning.

### **EXTENDED WARRANTY DESCRIPTION**

The compressor pumps by themselves are covered for 3 years from startup. The balance of the system parts and labor coverage is for 18 months from shipment, or 12 months from start up, whichever occurs first. Purchasing of the extended warranty changes the parts and labor portion to 30 months from shipment, or 24 months from start up, whichever occurs first.

Quantity: 1 Unit

# Specification Sheet - Powerex Medical Air LP Scroll System (Temporary System and/or Building 7)

Base Model Number:	MST0503-4-5-K
System Capacity:	38.6 CFM @ 50 PSIG
Horsepower (total):	15HP (3 x 5)
Sound Level:	72 d.b.a. @ 1 meter
Receiver Size/Configuration:	80 Gallons/Vertical
Voltage/Phase/Hertz:	460V, 3Phase, 60 Hertz

## GENERAL DESCRIPTION

This Scroll System is a skid mounted design consisting of multiple oil-less scroll compressors/modules, dual air dryers with purge control, dual filtration system, dew point and CO monitors, wired control panel and corrosion resistant air receiver. The package shall be modular in design to fit through a standard 36" doorway. Package shall

be provided with single point connections for electric, discharge air, and condensate drains.

## OILLESS SCROLL COMPRESSOR PUMP

The compressors shall be belt driven oil-less rotary scroll, single stage, air-cooled construction with absolutely no oil needed for operation. Each compressor to be equipped with the following components:

- Isolation, check and safety valve
- Electric motor, belts & beltguard
- After-cooler with separator
- T.M.P.D. (thermal malfunction protection device)

## RECEIVER TANK

The A.S.M.E., National Board registered 200 psig working pressure, vertical air receiver is provided with:

- Sight gauge
- Pressure gauge
- Relief valve
- Manual and automatic tank drain
- 3-valve bypass
- Internal lining to resist corrosion

## CONTROL PANEL

Nema 12, UL508A listed and labeled with two control transformers with disconnect protected primary and secondary circuits. Panel shall have automatic alternation and reserve pump "in use" alarm with visual and audible indicators. All alarms shall have dry contacts on a labeled terminal strip for remote alarms. Panel will provide power for complete system including all desiccant dryers, drains, monitors, and alarms, with single-point electrical connection.

Each Compressor/Module shall be equipped with the following:

- Disconnect
- Magnetic starter
- Run light HOA switch

High temperature shutdown with visual and audible alarms  
Hour meter

#### AIR PURIFICATION SYSTEM

Dual heat-less, desiccant air dryers  
Dual pre, after & final filters  
Dual pressure reducing valves  
Automatic dew point dependent switching to reduce purge frequency

#### MONITORING EQUIPMENT

Dew point with audible/visual alarms & dryer contacts remote alarm signal  
CO monitor with audio/visual alarms

#### SYSTEM CONNECTIONS

The system is supplied with a remote intake connection and flexible connectors for both intake and discharge. All piping complies with current NFPA 99 requirements.

#### **HMI DESCRIPTION**

The Air System is controlled by a Programmable Logic Controller (PLC). The operating status is displayed on the HMI 6" color touch screen panel on the front of the unit. The panel door will also include: audible and visual alarms with an acknowledge button, an HOA switch for each pump, and a 3-position dryer power switch.

The HMI controls allow the user to view system functions, factory set points, and navigate through the screens to get more information about the operation of the individual compressor modules. Service alerts and system alarm details are also displayed.

The HMI controls have integrated the dew point monitor, with real-time levels displayed on the HMI. Dry contacts for remote signaling include: reserve pump in use, high dew point, and a general fault to indicate the following: high temperature, high carbon monoxide, motor overload trip and reserve transformer in use.

The HMI screens will display the following:

- System pressure
- Compressor type
- Compressor status (for each compressor)
- Compressor run hours (per compressor)
- Model and Serial number of the unit
- CO level
- Dew point level
- Sequence of Operation
- Alarm screens
- Fault indication
- Alarm history
- Maintenance screens to include the following:
  - Run hours (total and per compressor)
  - Hours until scheduled maintenance alert

- A message window with required maintenance at set intervals for each compressor
- Dryer service alerts

Alerts will be displayed for any of the following:

- Compressor maintenance
- Dryer maintenance
- High Dew point
- level High CO level
- reserve pump in use
- any general fault alarm

### **PBMI DESCRIPTION**

The Air System is controlled by a Programmable Logic Controller (PLC). The operating status is displayed on the Powerex Building Management Integrator (PBMI) 6" color touch screen panel on the front of the unit. The PBMI controls are contained in a NEMA 4/12 enclosure. The control panel is UL508A listed and labeled. The panel door will also include: audible and visual alarms with an acknowledge button, an HOA switch for each pump, and a 3-position dryer switch. The control panel meets NFPA 99 requirements for Level 1 medical air.

The PBMI controls allow the user to view system functions, the factory set points, and navigate through the screens to get more information about the operation of the individual compressor modules. Staff can receive email notifications for service alerts and system alarms, the details of which are also displayed on the built-in webpage.

The PBMI controls have integrated the dew point monitor, with real-time levels displayed on the PBMI. Dry contacts for remote signaling include: reserve pump in use, high dew point, and a general fault to indicate the following: high temperature, high carbon monoxide, motor overload trip and reserve transformer in use. The PBMI controls contain a Building Automation System (BAS) communication gateway with BacNet® protocol and Web server features. The BAS communication gateway can support hundreds of pre-configured, labeled, and listed individual data points and utilizes a 10/100 BaseT Operation ethernet port connection.

Web server features include email notifications in case the system is in alarm for any reason or has achieved one of its maintenance intervals and requires service.

The PBMI screens will display the following:

- System pressure
- Compressor type
- Compressor status (for each compressor)
- Compressor run hours (per compressor)
- Model and Serial number of the unit
- Dew point level
- CO level
- Sequence of Operation
- Alarm screens
- Fault indication
- Alarm history
- Maintenance screens to include the following:
  - Run hours (total and per compressor)
  - Hours until scheduled maintenance alert

- A message window with required maintenance at set intervals for each compressor
- Dryer service alerts

Alerts will be displayed and email notification sent for any of the following:

- Compressor maintenance
- Dryer maintenance
- High Dew point level
- High CO level
- Reserve pump in use
- Any general fault alarm

**MOTOR SLIDE BASE DESCRIPTION**

An adjustable motor base will be provided under each motor for ease of belt change and tensioning.

**EXTENDED WARRANTY DESCRIPTION**

The compressor pumps by themselves are covered for 3 years from startup. The balance of the system parts and labor coverage is for 18 months from shipment, or 12 months from start up, whichever occurs first. Purchasing of the extended warranty changes the parts and labor portion to 30 months from shipment, or 24 months from start up, whichever occurs first.

Quantity: 1 Unit