



## ENCLOSED OILLESS ROTARY SCROLL SYSTEM

### Standard Pressure

BASE MODEL NUMBER:	LSE40B545
HORSEPOWER:	40 HP Total (4 x 10HP)
PERFORMANCE:	<b>125 CFM @100 PSI (31.25 CFM each)</b>
AIR RECEIVER:	200 Gallon Vertical
SOUND LEVEL (Ea.):	<b>65 dba @ 1 METER</b>
VOLTAGE:	460V, 3ph, 60Hz
AIR DRYERS:	Dual Desiccant
MONITORS:	Dew Point with on demand purge savor

### GENERAL DESCRIPTION ENCLOSED OILLESS ROTARY SCROLL SYSTEM

The Laboratory Scroll Enclosure Systems are designed specifically for laboratory applications. They shall supply continuous oil free air by using the most advanced scroll technology available. Each unit includes scroll compressors mounted inside of a rigid steel sound enclosure. Enclosure to have a powder coat finish, and shall include sound deadening insulation. Noise levels shall not exceed 65 dBA per compressor unit with all internal compressor sets in operation.

System consists of (1) enclosed scroll compressor units, a master control panel, an air receiver, and a desiccant dryer package. Each enclosed compressor unit to include in-line intake filter with optional NPT connection for remote piping, high temperature shutdown, and an internal isolation ball valve. System includes (1) compressor modules, and (1) air purification module. Each module is shipped loose for field installation.

### OIL-LESS SCROLL COMPRESSOR PUMP

The compressors shall be belt driven oil-less rotary scroll single stage, air-cooled oil-less construction with absolutely no oil needed for operation. The rotary design shall not require any inlet or exhaust valves and shall be rated for 100% continuous duty. Tip seals shall be of a composite PTFE material and be rated for 8,000 hours operation. Compressor bearings shall be external to the air compression chamber, and shall all be serviceable for extended compressor life. Bearing maintenance shall not be required until 8,000 run hours. Compressors with bearings that are not accessible for service have a limited life span and shall not be accepted.

### COMPRESSOR CABINET CONTROLS

The controls shall be integrated with the compressor cabinet from the factory. A lighted on/off switch is provided along with a user friendly, touch screen, HMI type display panel. The controls will operate and continuously monitor the system and provide information and alarms to the user through the HMI display. Features include display of system pressure, pump run status, pump fault conditions (high temperature shutdown, motor overload fault), maintenance counters and warnings, system trends, and pump HOA control. System setup mode allows user to adjust system pressure setpoints, enable auto restart function, reset alarms, and reset maintenance counters. Compressor operation shall include the Powerex Variable-Pump-Drive control logic. Each compressor pump is automatically staged on or off individually based on actual system demand. Energy efficiency is maximized at all usage levels. Lead compressor status will rotate based on demand, as well as timed alternation to maintain equal run hours. Dry contacts are provided for remote monitoring of compressor fault conditions.

- Building automation communication gateway, through a gateway server card with BacNet® protocol and Web server features. Web server features include email notifications in case the system is in alarm or has achieved one of its maintenance intervals and requires service.
- Ethernet port for connection to BacNet® server or direct connection to facility Ethernet for viewing of system operations and status via device IP-address.



### **MASTER CONTROL PANEL**

The system shall include a UL listed master control panel to automatically alternate the lead/lag status of each compressor cabinet and to provide the required alarms. The control panel shall include a NEMA 12 enclosure with a single point electrical connection, C/B disconnect switches for each compressor unit and controls, duplexed 120V control transformers, PLC controlled alternation, lighted HOA switch for each compressor, and low pressure alarm. A general compressor fault alarm with audible and visual indicators is provided for indication of high temperature shutdown or motor overload fault conditions. All alarms shall have dry contacts on a labeled terminal strip for remote monitoring. All control and alarm functions shall remain energized while any compressor in the system remains electrically on-line. The lag compressor shall be able to start automatically if the lead compressor fails to operate.

### **AIR-COOLED AFTERCOOLER**

Aftercoolers are provided for each compressor pump. Each unit is constructed of copper tubing with metal headers and is to be mounted integral to the compressor enclosure.

### **MOISTURE SEPARATOR**

A liquid separator with automatic float condensate drain is provided to be installed after the final discharge of the air compressor and prior to the tank/dryer assembly.

### **AIR RECEIVER:**

200 Gallon ASME vertical air receiver with pressure gauge, safety valve, and auto no air loss drain

### **DRYER / FILTER DESCRIPTION**

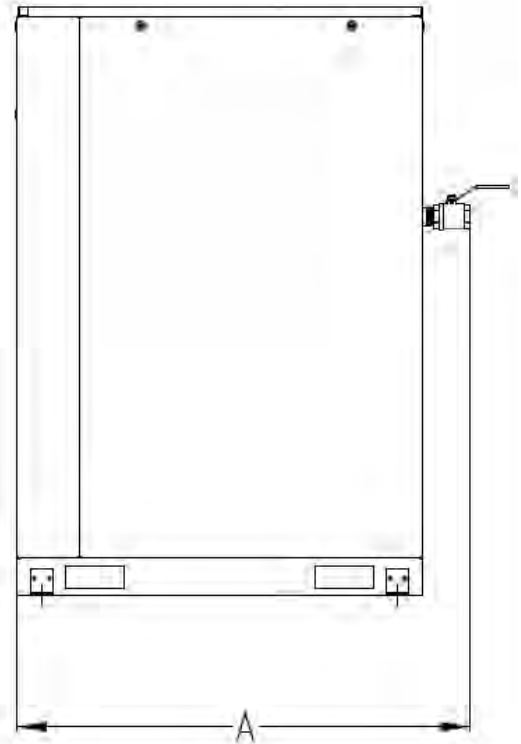
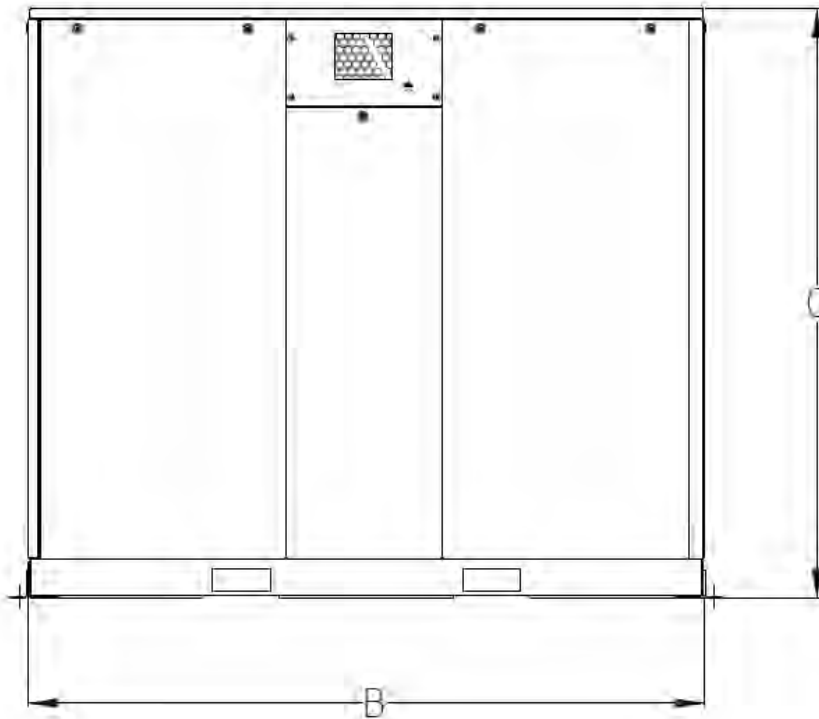
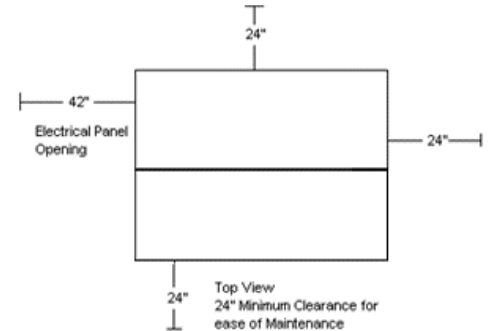
Dryer System design consists of parallel air dryers with isolation valves, particulate, coalescing, and activated carbon filters, and regulators, , and dew point monitor, corrosion resistant piping cleaned per CGA4.1 for oxygen use. Dryer system is equipped with the following:

- 2 - Desiccant Air Dryers -40 F dew point
- 2 - .01 micron coalescing filters w/ DP indicator and auto drain
- 2 - 1 micron particulate filters w/ DP indicator
- 2 - Pressure reducing valves w/ gauges set @ 90 PSIG
- 1 - Final line safety valve (125 PSIG)
- 1 - Dew Point Monitor for purge control

### **SYSTEM CONNECTIONS**

The system is supplied with flexible connectors

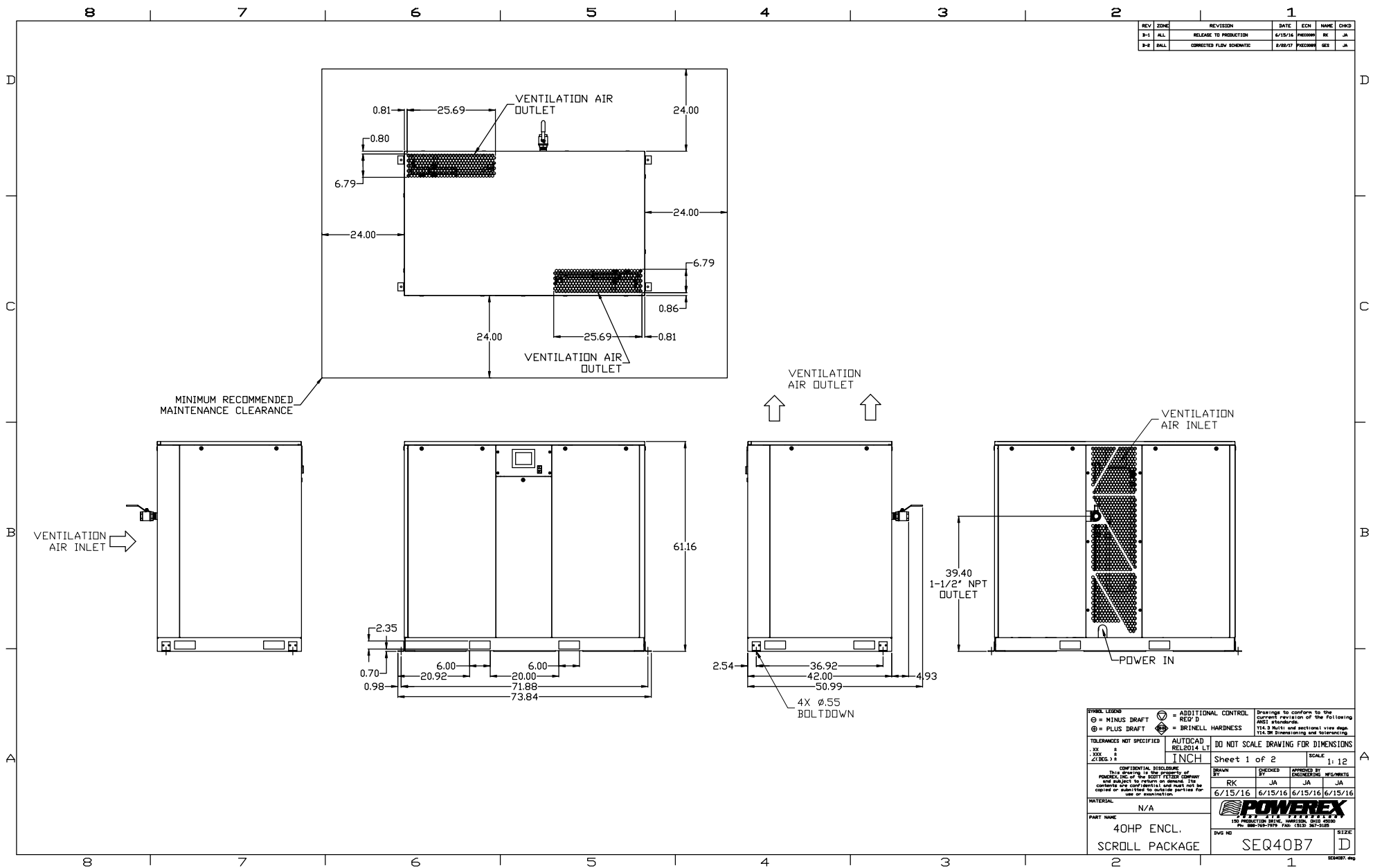
Dimensions				
Model	Dim. A	Dim. B	Dim. C	Outlet
SEQ40B	47"	73"	62"	1 ½"
SEH45B	47"	73"	62"	1 ½"
SEP50B	47"	73"	62"	1 ½"
SEH60B	47"	73"	62"	1 ½"

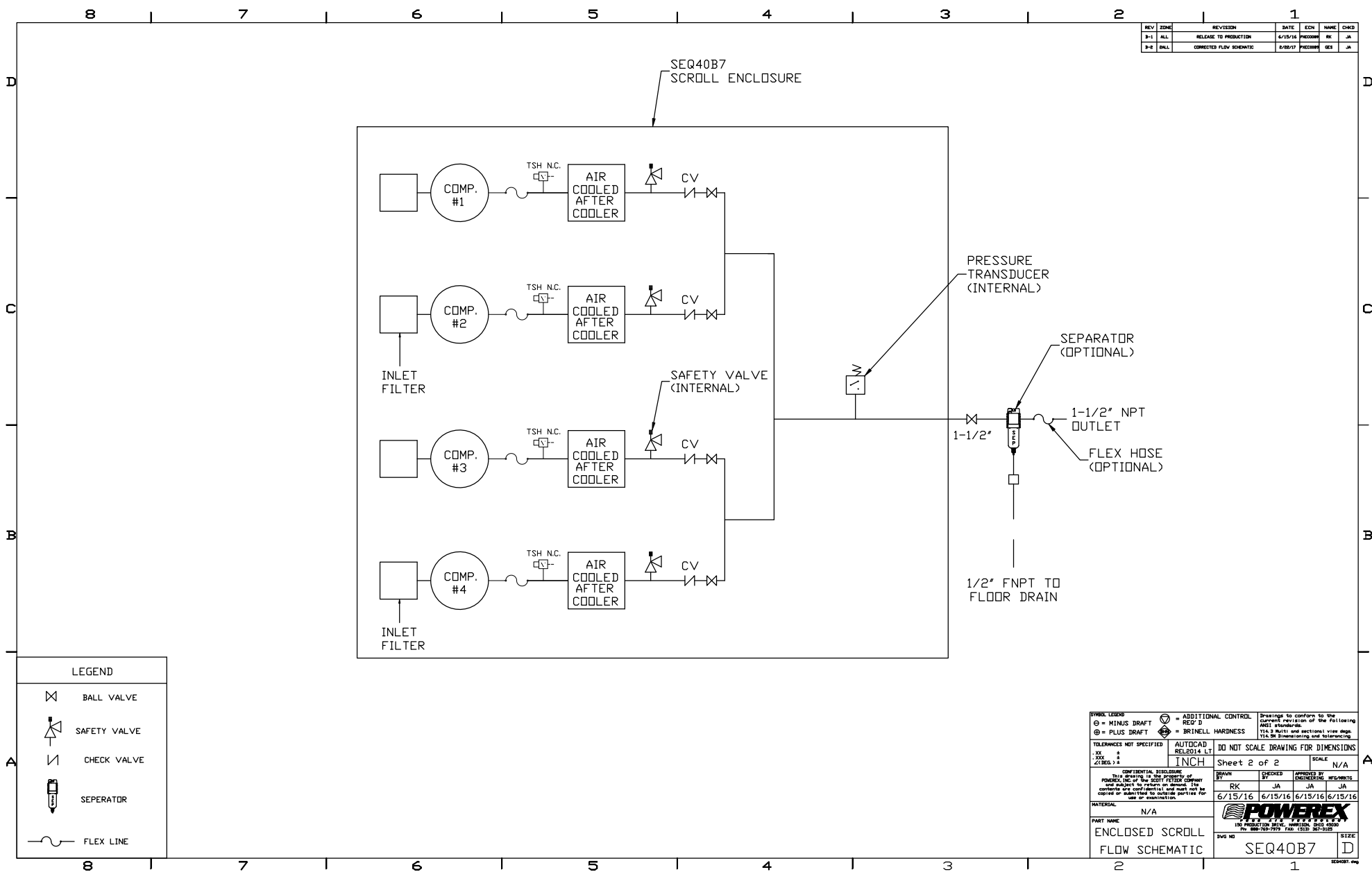


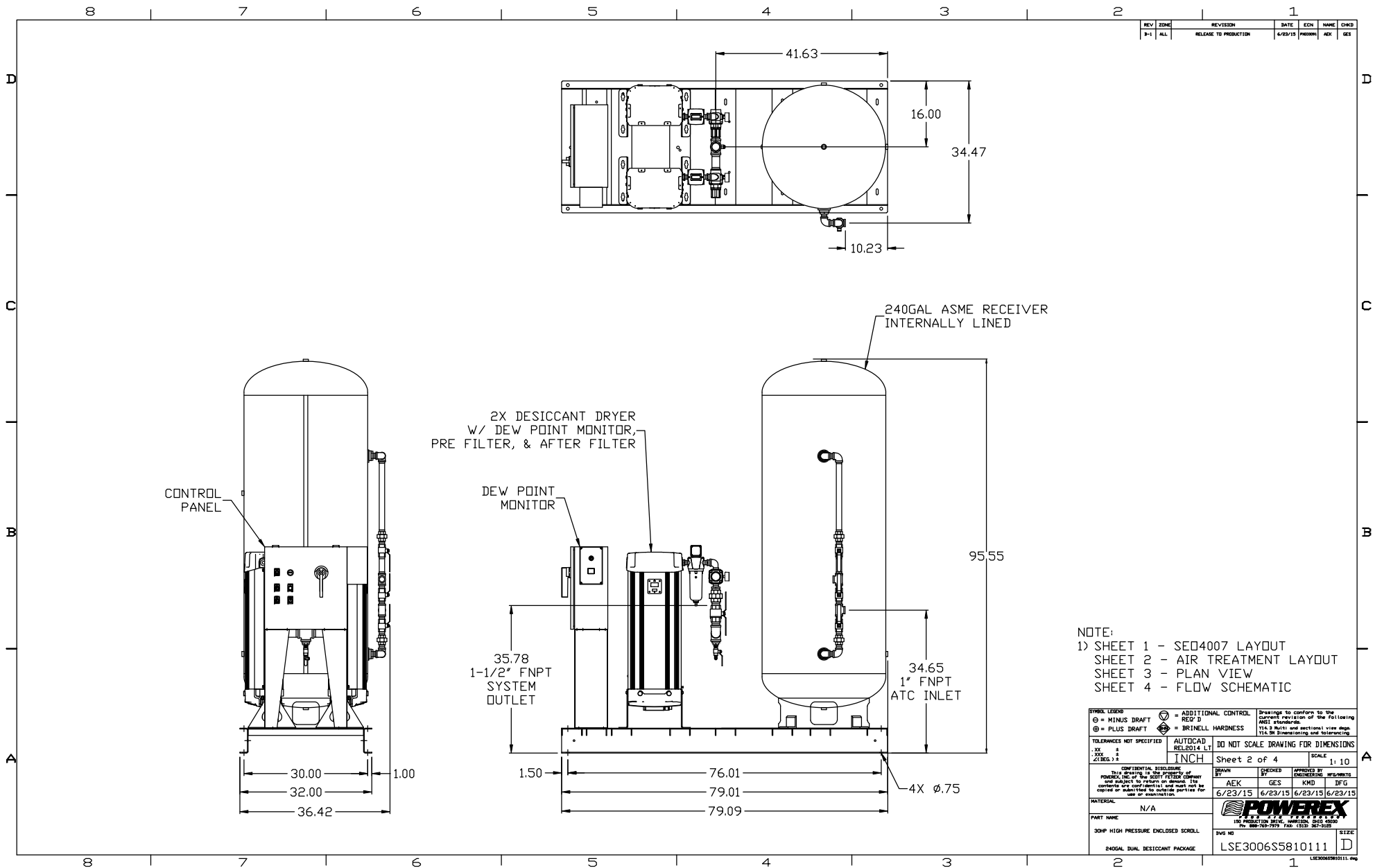
Enclosed Scroll Air Compressors										
Model	Total System HP	Pump HP <sup>1</sup>	SCFM @ 100 PSIG	Maximum Pressure (PSIG)	BTU/Hr	dB(A) Level	System F.L.A.			System Weight (lbs)
							208V	230V	460V	
SEQ40B	40	10 (4)	125	116	101,868	66	103.6	94	48	1600
SEH45B	45	7.5 (6)	139	116	114,601	66	116.6	105.8	53.8	2140
SEP50B	50	10 (5)	156	116	127,335	67	129.0	117	59.5	1870
SEH60B	60	10 (6)	187	116	152,802	69	154.4	140	71	2140

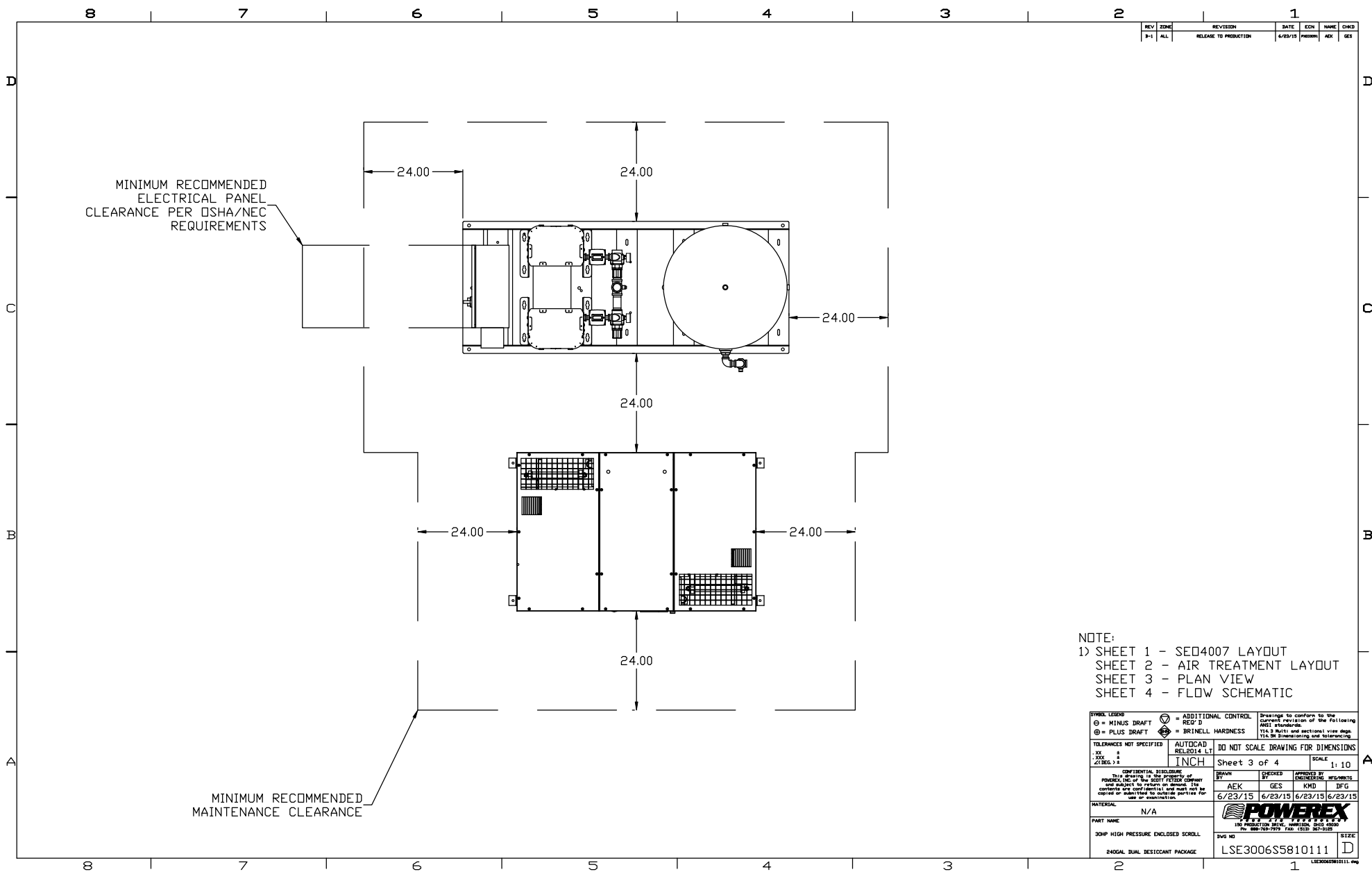
**Notes:**

- 1 – Actual BHP is less than rated name plate. Contact Powerex for BHP rating.
- 2 – 3 Year Limited Warranty
- 3 – UL/CSA Certified

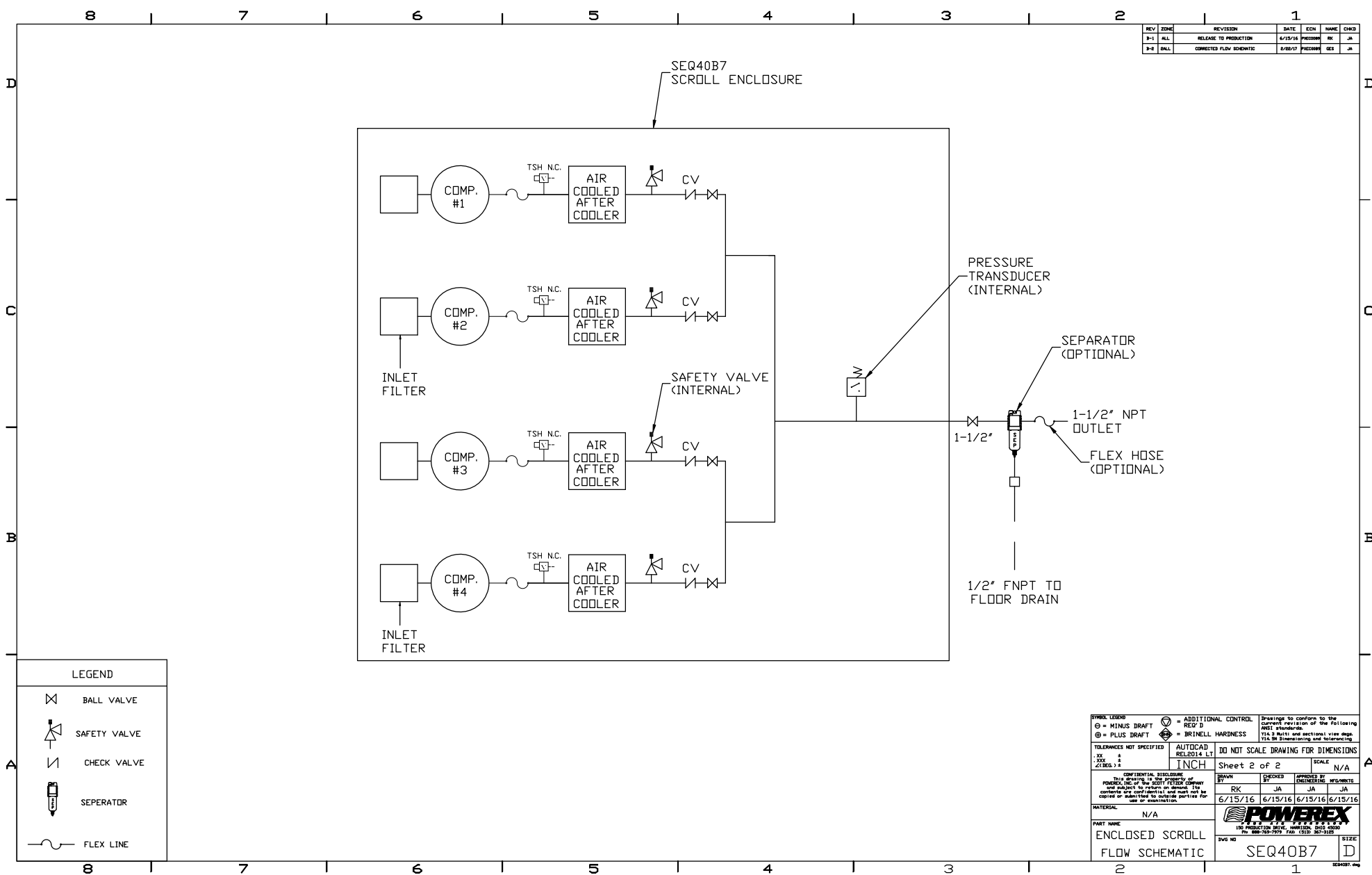








SYMBOL LEGEND ⊖ = MINUS DRAFT ⊕ = PLUS DRAFT		ADDITIONAL CONTROL REO'D BRINELL HARDNESS		Drawings to conform to the current revision of the following AWSI standards: AWSI 2-10.1 and AWSI 2-10.2 AWSI 2-10.3 and AWSI 2-10.4	
TOLERANCES NOT SPECIFIED .XX ± .XXX ± .001 ±		AUTOCAD RELEASE L1 INCH		DO NOT SCALE DRAWING FOR DIMENSIONS Sheet 3 of 4	
CONFIDENTIAL DISCLOSURE This drawing is the property of POWEREX, INC. or its subsidiary POWEREX COMPANY and is subject to return on demand. The contents are confidential and must not be copied or reproduced for any other purpose without the written consent of POWEREX, INC.		DRAWN BY AEK		CHECKED BY GES	
MATERIAL N/A		APPROVED BY KMD		SCALE 1:10	
PART NAME 30HP HIGH PRESSURE ENCLOSED SCROLL		DATE 6/23/15		DATE 6/23/15	
30HP DUAL DESICCANT PACKAGE		DATE 6/23/15		DATE 6/23/15	
DWG NO LSE3006SS5810111		DATE 6/23/15		DATE 6/23/15	
SIZE D		DATE 6/23/15		DATE 6/23/15	



REV	ZONE	REVISION	DATE	ECN	NAME	CHKD
9-1	ALL	RELEASE TO PRODUCTION	6/15/16	PRECORP	RK	JA
9-2	ALL	CORRECTED FLOW SCHEMATIC	6/16/17	PRECORP	GES	JA

LEGEND	
	BALL VALVE
	SAFETY VALVE
	CHECK VALVE
	SEPERATOR
	FLEX LINE

<b>SYMBOL LEGEND</b>		- ADDITIONAL CONTROL		Drawings to conform to the current revision of the following:	
⊖ = MINUS DRAFT		REQ'D		ANY, STANDARD	
⊕ = PLUS DRAFT		BKINELL	HARDNESS	11A = Relt. and sectional view angle	
TOLERANCES NOT SPECIFIED		AUTOCAD RELEASED LT		DO NOT SCALE DRAWING FOR DIMENSIONS	
INCH		Sheet 2 of 2		SCALE	
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MATERIAL		6/15/16		6/15/16	
PART NAME		ENCLOSED SCROLL FLOW SCHEMATIC		SIZE	
N/A		SEQ40B7		D	





## Oil-less Scroll Enclosure Systems



*Now including systems up to 60hp!*

## OIL-LESS SCROLL TECHNOLOGY



Powerex has led scroll technology since 1991 when we introduced the first completely oil-less scroll air compressor. Our technology and expertise in clean, dry air systems is unmatched. Powerex manufactures compressors, pumps, air receivers, control panels, air dryers, dew point monitors, and more, to provide a total system approach to your air compressor needs. All facilities are ISO9001 registered so you can be assured of the highest quality. The enclosed scroll compressors feature compact footprints, energy efficient operation, low maintenance, and environmentally friendly design, all in one complete package.

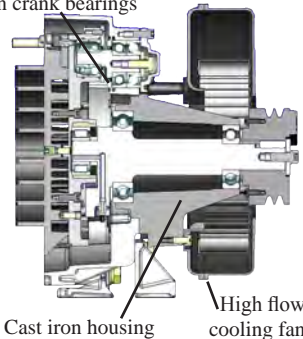
### TECHNOLOGY & INNOVATION

The scroll pump has few moving parts making it reliable and easier to maintain. The self lubricating tip seals and absence of a gearbox means the pump is truly 100% oil free. As the leaders in scroll pump technology, our latest

design incorporates several innovative features:

- Main bearings are housed in durable cast iron instead of aluminum which prevents fretting and premature failure of the bearing race. This pump can be operated at 100% duty with confidence.
- The patented bearing re-grease feature has been improved to allow maintenance from the front side of the pump, cutting service time in half.
- The patented tip seal design yields the highest flow rates and longevity of any other dry scroll compressor.
- The improved efficiency and cooling results in lower operating temperatures.
- Extremely low vibration.
- Industry first 10hp scroll pump improves system efficiency by producing more output using fewer pumps.

Patented grease-able  
pin crank bearings



### WhisperAIR™ SOUND ENCLOSURE CABINET

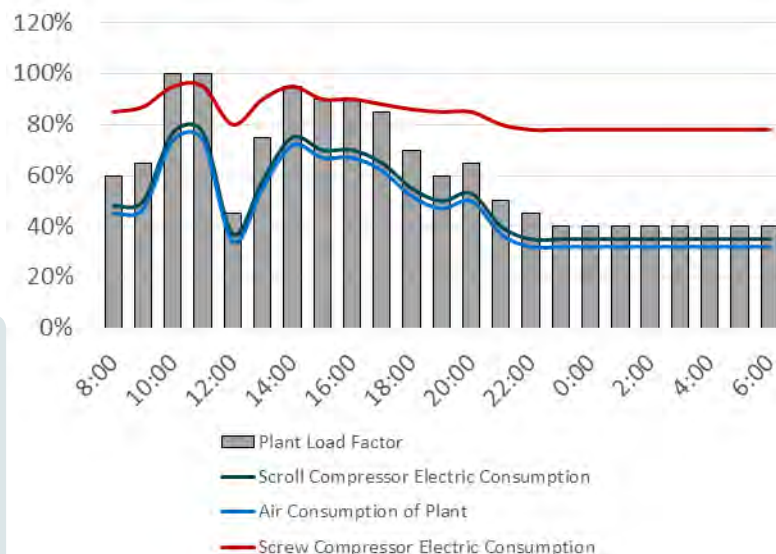


Powerex's trademarked oil-free enclosure systems offer the lowest noise levels in the industry. Each system is packaged in a rigid steel frame with powder coated panels and lined with sound-deadening insulation. The low noise levels are unmatched in the industry and allow installation at the point of use, while the small footprint simultaneously maximizes floor space.

### ENERGY EFFICIENCY

With the Powerex Variable-Pump-Drive system, each compressor pump is automatically staged on/off individually based on actual system demand, maximizing energy efficiency at all usage levels. Lead compressor status will alternate every time a pump is called for – or every 10 minutes, whichever comes first – which maintains equal run hours and extends maintenance intervals.

Redundancy is built into our system with our multiple pump design, eliminating the need to purchase an additional compressor.



## SYSTEMS SPECIFICATIONS

Standard Pressure Models				
Model	HP	Maximum Pressure (PSIG)*	Performance SCFM @ 100 PSIG	Operating Pressure (PSIG)†
SES0208 <sup>1</sup>	2	116	5.7	95-115
SES0308 <sup>1,2</sup>	3	116	8.8	95-115
SES0508 <sup>1,2</sup>	5	116	15.2	95-115
SED1007	10	116	30.5	90-116
SET1507	15	116	45.7	90-116
SED15B7	15	116	46.2	90-116
SEQ2007	20	116	61	90-116
SED20B7	20	116	62.4	90-116
SET2257	22.5	116	69.3	90-116
SEH3007	30	116	91.5	90-116
SET30B7	30	116	93.6	90-116
SEO4007	40	116	122	90-116
SEQ40B7	40	116	124.8	90-116
SEH45B7	45	116	138.6	90-116
SEP50B7	50	116	156	90-116
SEH60B7	60	116	187.2	90-116

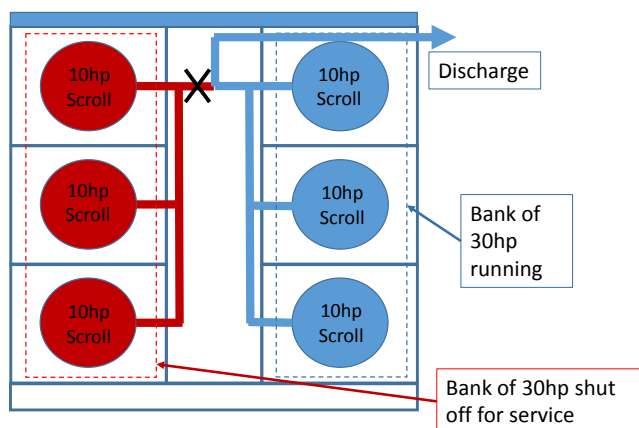
High Pressure Models				
Model	HP	Maximum Pressure (PSIG)*	Performance SCFM @ 100 PSIG	Operating Pressure (PSIG)†
SES0308HP <sup>1,2</sup>	3	145	7.1	115-145
SES0508HP <sup>1,2</sup>	5	145	12.5	115-145
SED1007HP	10	145	25	119-145
SET1507HP	15	145	37.5	119-145
SEQ2007HP	20	145	50	119-145
SEH3007HP	30	145	75	119-145
SEO4007HP	40	145	100	119-145

\*Performance and maximum pressure shown at sea level conditions.

†Operating pressure range adjustable (consult factory for parameters).

<sup>1</sup>Single phase models use motors that require input voltage of 230V.

<sup>2</sup>Single phase 3 HP units require the installation of an additional 30 gal external tank and 5 HP units will require the installation of additional 60 gal external tank.



### PUMP BANK ISOLATION – 40-60hp

40-60hp systems have two isolatable compressor banks to allow for ease of maintenance and service

- Mechanically – ball valves
- Electrically – motor protector disconnect and circuit breakers
- OSHA-approved service on half capacity while other half is running

## SYSTEMS FEATURES

### 3-5 HP SIMPLEX MODELS

- 3-5 HP systems are UL/CSA certified.
- Integral 13 gallon tank ASME/CRN.
- Inlet filtration with replaceable element.
- Front mounted control panel includes:
  - On/Off switch.
  - Power on light.
  - High temperature shutdown with indication light.
  - Run time hourmeter.
  - Pressure gauge.
  - Automatic start/stop operation.
  - Control voltage starter with motor overload protection.
- Internal vibration isolators.
- Air-cooled aftercooler.
- ODP Motor.

### 10-60 HP MULTIPLEX MODELS

- 10-20 HP systems are UL/CSA certified.
- Inlet filtration with replaceable element.
- Front mounted control panel includes:
  - On/Off switch.
  - Power on light.
  - High temperature shutdown with indication on the display.
  - Run time hourmeter for each pump.
  - Maintenance counter with alarm warning display.
  - System pressure display.
  - Full voltage starter with overload protection.
  - General compressor fault with remote contacts.
- Internal vibration isolators.
- Air-cooled aftercooler for each compressor.
- TEFC Motor.

## ACCESSORIES & OPTIONS

- Air receivers 30-600 gal.
- Desiccant air treatment systems.
- Refrigerated air treatment systems.

- Remote inlet filters.
- Master lead/lag controllers for multiple cabinets.
- NFPA 99 compliant systems.

- Laboratory system packaging.
- CO monitor
- Dewpoint monitor
- 50Hz motors

## WHY POWEREX?

Powerex has been designing and packaging systems since 1988 and has built a foundation on engineering, innovation, quality and service to become a leader in both air and vacuum systems. Because of our high level of vertical integration and a full in-house engineering team, Powerex has the ability to customize a system to meet your air or vacuum requirements.



For more information, contact your local Powerex distributor or Powerex sales representative today!



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# nano



## ultra-high purity compressed air dryers

flow capacity: 3 - 1110 scfm (5 - 1900 Nm<sup>3</sup>/hr)

# D<sup>1|2|3</sup>

# ultra-high purity compressed air dryers

flow capacity: 3 - 1110 scfm (5 -1900 Nm<sup>3</sup>/hr)

# D<sup>1|2|3</sup>

Leading edge technology and more than 100 years of **experience**...nano-purification solutions, your world-class provider of state-of-the-art compressed air and gas solutions to industry.

Our commitment at n-psi is to work alongside our **customers** and provide unique solutions with the highest quality products to solve your specific challenges.

A wealth of experience and leading edge products are only part of the equation. n-psi realize that world-class customer **service** is the most important component to any successful business.

Experience. Customer. Service... **n-psi**



## clean and dry

Clean and dry compressed air is essential in every efficient and profitable manufacturing and process operation worldwide. nano-purification solutions' vast experience includes food, beverage, chemical, laboratory, medical and natural gas applications.

n-psi understands your needs and has created the nano range of high-performance, energy-saving compressed air and gas purification products to provide clean and dry compressed air and gases at an affordable price with unrivaled reliability.



## design

Our experienced team of design engineers are world leading specialists in the design of new and unique industrial compressed air treatment products and compressed air dryers.



## research & development

A core element of our capabilities - founded on cumulative decades of practical engineering expertise - our R&D team is continually looking for improved performance and reliability.



## manufacture

Ultra-high purity compressed air dryers are manufactured at our state of the art facility to the highest standards of build quality to ensure equipment reliability and high levels of performance.

# nano D<sup>1|2|3</sup> compressed air dryers

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Clean and dry compressed air is easily achieved with nano ultra-high purity compressed air dryers.

nano dryers reliably give you:

- more for your money - everything needed for installation is in the box
- moisture and particulate protection of your production process
- lower life cycle costs - low energy costs and simplified maintenance
- built in dew point monitoring (optional)
- space saving - models up to 177 scfm can be easily wall mounted
- safe and quiet operation
- flows from 3 to 1110 scfm at 100 psig operating pressure
- peace of mind - the most reliable product of its kind

Designed for use in the compressor room, at the point of application or integrated into your original equipment, nano dryers are an effective solution to the problems caused by contaminated compressed air.



**reliability is built in...** and backed by our 5 year\* product warranty

## benefits - get more for your money

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### guaranteed performance

- nano dryers have been 100% function and performance tested at the factory to ensure the highest standard of performance, delivering compressed air purity in accordance with ISO8573:1 – 2001, Class 2 dirt (1 micron) and Class 2 water (-40° F pressure dew point)

### reliable operation

- high efficiency moisture removal and reliable operation with PLC controlled solenoid valves
- integral volumetric flow limiter prevents overflow ensuring consistent dew point performance

### quiet depressurization

- unique exhaust air silencers significantly reduce noise levels

### energy saving design

- integrated inlet separator (D<sup>1</sup> only) and outlet filtration eliminates the need for external filters
- advanced design limits regeneration purge air usage to approximately 15%
- energy saving dew point monitoring option can save up to 60% during reduced inlet moisture loading

### PLC controls and digital display

- a clear digital display provides a full view of PLC operation and monitoring data

### high quality construction

- 100% tested for leaks, proper operation and dew point performance

### easy to install space saving design

- easy to install & ready for use, the D<sup>1</sup> & D<sup>2</sup> packages include a power cable and mounting brackets for either floor or wall mounting
- the compact design allows installation in spaces too small for a traditional dryer

### easy to maintain

- patented, combined filter and desiccant cartridges (D<sup>1</sup> & D<sup>2</sup>) can be serviced in less than 15 minutes
- integrated inlet separator (D<sup>1</sup> only) and outlet filtration
- convenient service kits for easy and efficient maintenance
- integrated exhaust air silencers require no maintenance or replacement

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\* standard two year warranty extends to five years automatically with addition of the -ES (energy saving dew point control) option on all D1|2|3 dryers.

# nano dryers – D<sup>1</sup> & D<sup>2</sup> in detail

## patented combined filter & desiccant cartridges

- built in inlet water separator (D<sup>1</sup> only) eliminates the cost and pressure drop of installing a separate inlet filter in small oil-free compressor applications\*
- desiccant and outlet filtration are integrated into a single cartridge (eliminates the cost and pressure drop of installing separate filters)
- high density filled desiccant provides maximum adsorption capacity
- easy to replace cartridges simplify maintenance requirements

## PLC controlled operation

- the dryer is operated by a robust and reliable PLC control system offering valuable features including 'power on', 'hours run' and 'service required' indicators
- memory retention built into the PLC enables the controller to pick up where it left off in the drying cycle, ensuring consistently clean and dry air downstream
- compressor synchronization is a standard energy saving feature which starts and stops the dryer with a signal from the compressor or point-of-use equipment to eliminate purge loss when drying is not required

## energy saving dew point control option

- with this option, a dew point sensor is incorporated into the dryer providing the ultimate in energy savings
- the outlet dew point is constantly monitored allowing the cycle time to be adjusted depending on the actual moisture load - saving valuable purge air
- dew point is conveniently displayed on the PLC
- The -ES option reduces valve actuation increasing service life and includes an extended 5-year valve warranty



## floor or wall installation

- can be floor or wall mounted - simply by rotating the feet 90°

## optimum dew point performance

- dryers are provided as standard set for a -40°F dew point. Optional dew points from -4°F to -94°F are available
- air velocity and, therefore, air to desiccant contact time, is carefully controlled via a pressure maintaining device to ensure optimum dew point performance

## constant flow and pressure

- pressure is equalized before switching columns to ensure uninterrupted compressed air and consistent air pressure. Equalization also ensures long desiccant life due to minimized desiccant attrition

## reliable high performance valves

- the NDL 010 to 050 use ball valves and two pilot operated solenoid valves for proven performance and reliability
- the NDL 060 to 090 use four pilot operated solenoid valves
- the NDL 100 to 130 use two integrated coaxial flow valves for inlet air and two pilot operated solenoid valves for exhaust

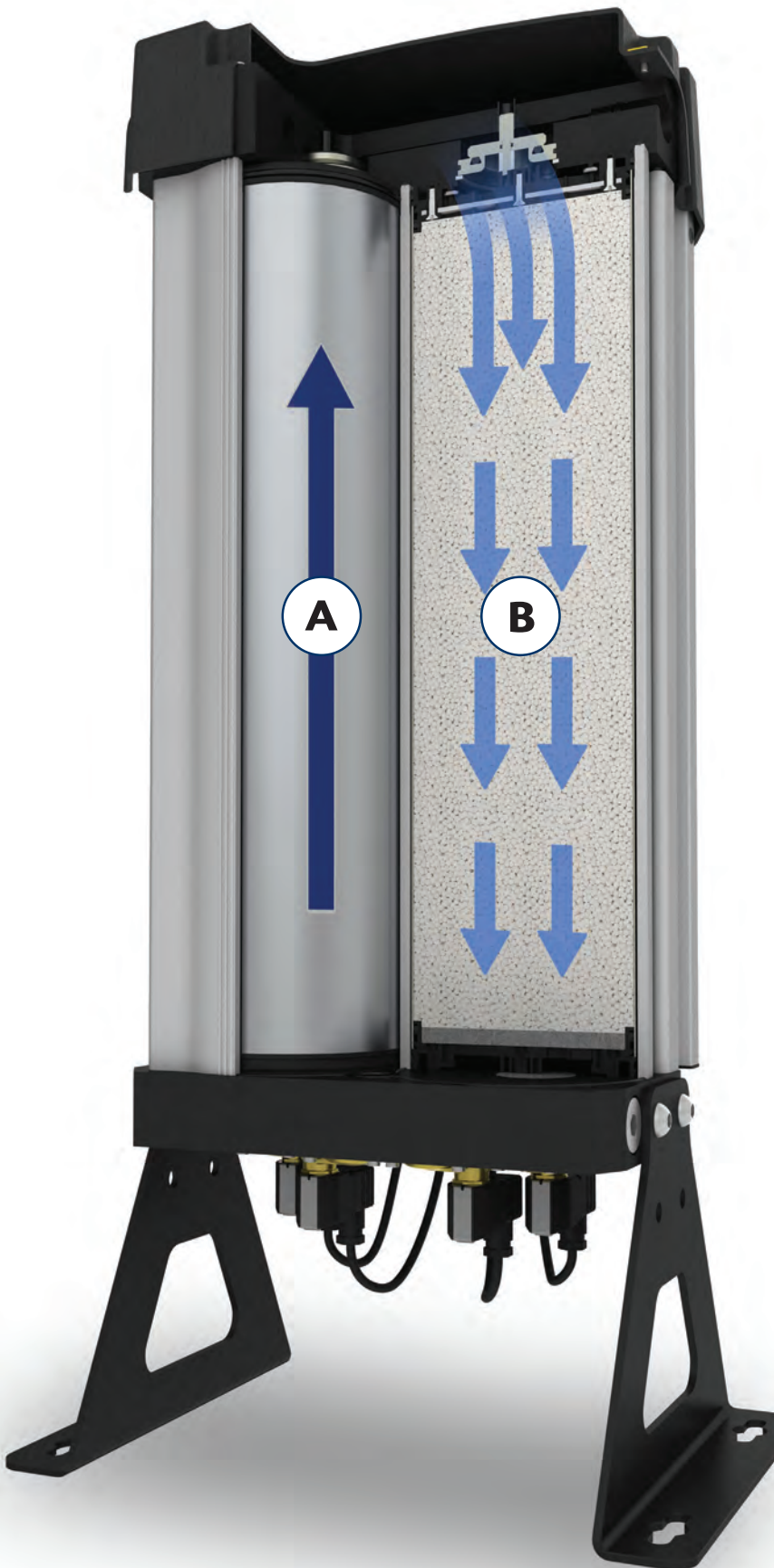
## maximum corrosion protection

- high tensile aluminum columns are alocromed then externally powder coated to provide maximum protection for corrosive environments



\* applies to the D<sup>1</sup> only. For oil flooded compressors, an upstream coalescing inlet filter is required





These advanced dryers use the pressure swing adsorption principle to efficiently dry compressed air. They use a heatless twin tower configuration (see diagram opposite) housed in a modular design. Each column contains a unique (and patented) desiccant cartridge which incorporates an inlet separator (D<sup>1</sup> only) and outlet filtration.

Wet air from the compressor aftercooler enters the dryer and is directed into column A.

D<sup>1</sup> only: Bulk liquids (water) and particles are removed by the separator on the inlet of the cartridge. Water is retained within the dryer until the column is regenerated, when it will be vented to atmosphere as it is depressurized.

D<sup>1</sup> & D<sup>2</sup>: Air passes through the desiccant bed where moisture vapor is adsorbed. Then the dry air passes through a particle filter which retains any desiccant particles (< 1 micron / ISO8573.1 class 2 for dust).

Simultaneously, a small amount of dry air is counter-flowed down through cartridge B and exhausted to atmosphere, removing the moisture and regenerating the desiccant.

The dryer is controlled by a PLC which periodically switches the solenoid valves, reversing the function of each column and therefore ensuring the continuous supply of dry air.

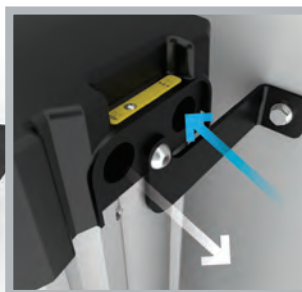
Scan this tag with your mobile device to download a technical paper describing the performance limitations of typical twin tower desiccant dryers and how the unique design of the nano D<sup>1/2/3</sup> overcomes them to provide effective and efficient dehydration of compressed air.



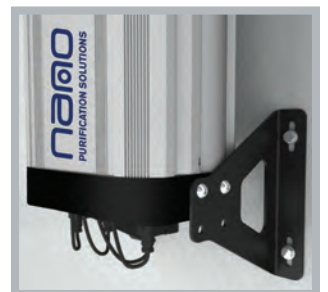
unique patented cartridge design



PLC controls with clear text display



flexible piping & installation options



mount on the floor or the wall

# nano dryers – D<sup>3</sup> in detail

## combined desiccant & after filter column

- high density filled desiccant columns provides maximum adsorption capacity
- built in after filter ensures reliable downstream air quality

## PLC controlled operation

- the dryer is operated by a robust and reliable PLC control system, offering valuable features including 'power on', 'hours run' and 'service required' indicators
- memory retention built into the PLC enables the controller to pick up where it left off in the drying cycle, ensuring consistently clean and dry air downstream
- compressor synchronization is a standard energy saving feature which starts and stops the dryer with a signal from the compressor or point-of-use equipment to eliminate purge loss when drying is not required

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- the -ES option reduces valve actuation increasing service life and includes an extended 5-year valve warranty



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- dryers are provided as standard set for a -40°F dew point. Optional dew points from -4°F to -94°F are available

## constant flow and pressure

- pressure is equalized before switching columns to ensure uninterrupted compressed air and consistent air pressure. Equalization also ensures long desiccant life due to minimized desiccant attrition

## two stage maintenance free silencer

- exhaust air is directed into perforated chambers housed within the lower manifold eliminating external mufflers. The air is then directed under the dryer away from operators and traffic lanes in the compressor room

## maximum corrosion protection

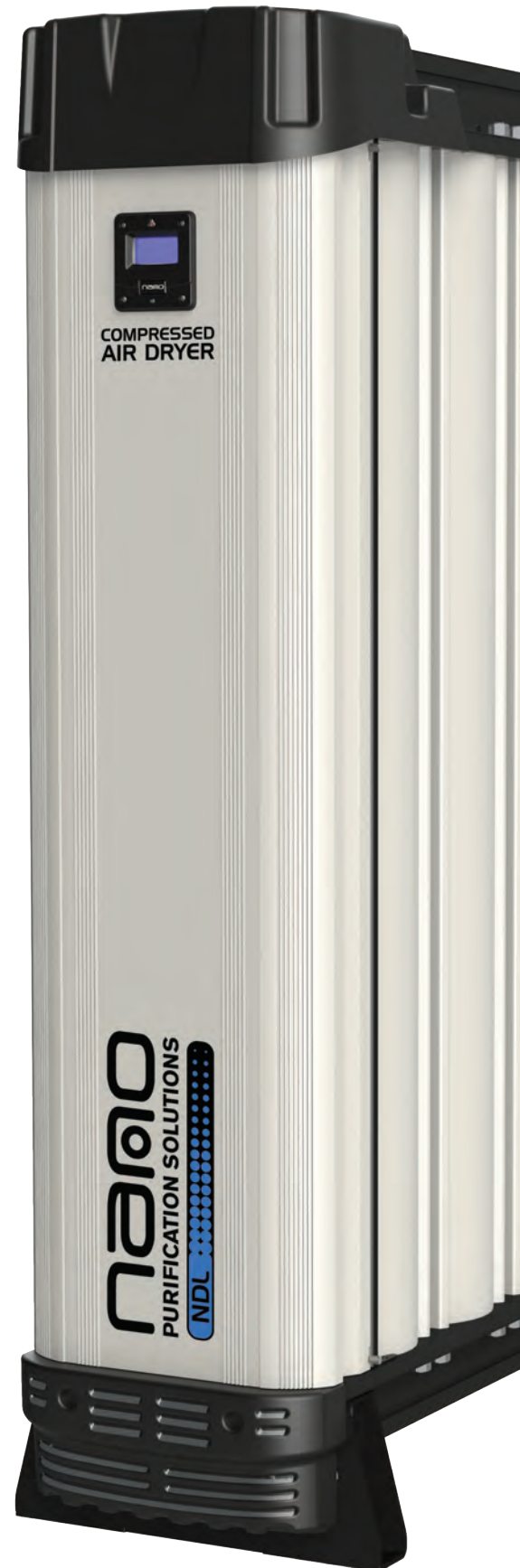
- high tensile aluminum columns are first alocromed and then externally powder coated to provide maximum protection for corrosive environments



PLC controller with clear text display



high density filled desiccant columns





### flexibility is built right in

We've designed the D<sup>3</sup> with simplicity of service in mind. As standard, the columns are high density filled and include a built in after filter for reliable downstream air quality. For even greater ease of service, pre-filled and pre-assembled desiccant / after filter cartridges are available as a time saving option.



### reliable high performance valves

Inlet, exhaust and outlet air are controlled using coaxial flow valves integrated into the upper and lower manifolds. The valves provide unrestricted flow capacity and are designed for durability, ease of maintenance and long service life.



# sizing & specifications

dryer model	inlet & outlet	rated flow <sup>(2)</sup>		dimensions (inches)			approx. weight	recommended pre filter <sup>(3)</sup>
	NPT(f) <sup>(1)</sup>	scfm	Nm³/h	A	B	C	lbs	part no.
D¹								
NDL 010	¾" <sup>(1)</sup>	3	5.1	17	9	10	18	NF 0008 M01
NDL 020	¾" <sup>(1)</sup>	5	8.5	17	9	10	18	NF 0008 M01
NDL 030	¾" <sup>(1)</sup>	10	17	25	9	10	28	NF 0015 M01
NDL 040	¾" <sup>(1)</sup>	15	26	35	9	13	36	NF 0015 M01
NDL 050	½" <sup>(1)</sup>	24	41	43	9	13	43	NF 0025 M01
D²								
NDL 060	1"	34	58	30	17	13	88	NF 0090 M01
NDL 070	1"	41	70	30	17	13	88	NF 0090 M01
NDL 080	1"	53	90	36	17	13	119	NF 0090 M01
NDL 090	1"	66	112	36	17	13	119	NF 0090 M01
NDL 100	1"	88	150	43	17	13	141	NF 0090 M01
NDL 110	1"	106	180	49	17	13	172	NF 0135 M01
NDL 120	1"	132	224	59	17	13	209	NF 0175 M01
NDL 130	1"	177	301	72	17	13	262	NF 0175 M01
D³								
NDL 2110	2"	212	360	47	12	25	366	NF 0450 M01
NDL 2120	2"	276	469	57	12	25	441	NF 0450 M01
NDL 2130	2"	400	680	70	12	25	547	NF 0450 M01
NDL 3130	2"	560	951	70	12	31	778	NF 0700 M01
NDL 4130	2 ½"	750	1274	70	12	38	1010	NF 0850 M01
NDL 6120	2 ½"	828	1407	57	12	51	1155	NF 0850 M01
NDL 6130	2 ½"	1110	1886	70	12	51	1473	NF 1250 M01

specifications	standard	optional
maximum particle size (ISO class) <sup>(4)</sup>	class 2 (1 micron)	class 1 (0.01 micron)
maximum water content (ISO class) <sup>(4)</sup>	class 2 (-40°F pdp)	class 1 (-94°F) & class 3 (-4°F)
minimum operating pressure	58 psig	-
maximum operating pressure	145 or 232 psig <sup>(5)</sup>	consult factory
recommended operating temp range	50 to 100°F <sup>(6)</sup>	-
design operating temperature range	50 to 122°F <sup>(6)</sup>	-
power supply requirements	100 to 240 VAC / 50 or 60 Hz	-

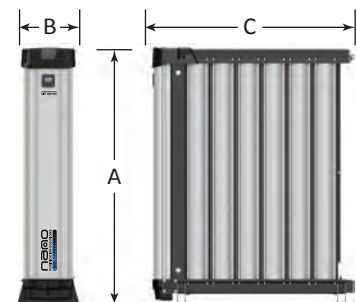
pressure correction factors <sup>(7)</sup>												
inlet air pressure (psig)	60	75	90	100	115	130	145	160	175	190	205	235
correction factor	0.63	0.75	0.88	1	1.13	1.25	1.38	1.50	1.63	1.75	1.88	2.13

temperature & dew point correction factors <sup>(7)</sup>									
inlet air temperature (°F)	75	100	104	113	122	pressure dew point (°F)	-4	-40	-94
correction factor	1	1	0.97	0.88	0.73	correction factor	1.10	1.00	0.70

- (1) NDL 010 to 050 have push to connect fittings on the inlet and outlet. All other models have NPT(F) threaded connections
- (2) at inlet conditions of 100 psig and 100°F and a -40°F outlet pressure dew point. For all other conditions refer to the correction factors above
- (3) recommended for all applications. Required when dryer is to be installed immediately downstream of an oil lubricated compressor. To order with a pre-filter add "-F" to the model number (i.e. NDL 120-F)
- (4) per ISO 8573.1:2001 (E)
- (5) NDL 010 to 130 are 232 psig MAWP as standard. NDL 2110 to 6130 are 145 psig MAWP as standard. Higher pressures available
- (6) NDL 010 to 090 have a minimum recommended operating and design temperature of 40°F
- (7) to be used as a rough guide only. All applications should be confirmed by n-psi. Contact support@n-psi.com



NDL 010 to 130



NDL 2110 to 6130

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## Dewpoint Monitor

### ENGINEERING SPECIFICATIONS

- Sensor Output: 0V-5V
- Alarm Indication: Audible alarm, red alarm light with push to test, and push to acknowledge
- Alarm Output: 10 AMP @ 115 VAC rated normally closed contact.
- Alarm Horn: 95+ dB(A), at 120 VAC, at 24 inches (61 cm), at 25°C
- Dryer Control Signals: 10 AMP @ 115 VAC rated normally open contact
- Dimensions: 9.1" x 5.5" x 5"
- Net Weight: 5 lbs
- Enclosure: UL Listed Polycarbonate NEMA-4X Electrical Box
- Power Requirements: 110-120VAC
- Fuse: Type FNM 1.25-amp
- Operating Pressure: 10-150 psig with a minimal flow rate
- Operating Temperature: 32°F to 131°F



### FEATURES

- Patented auto calibration to ensure accuracy
- Polymer sensor technology for fast response times
- Sensor is immune to water, particulate contamination, oil vapor and most chemicals
- Visual and audible alarms for high dewpoint (includes dry contacts)
- Dewpoint demand purge control feature to control desiccant air dryers

Model	Dewpoint Range	Enclosure	High Alarm	Contact Open for Purge Rate Fixed Mode	Contact Closed for Purge Saver Mode
PDPM1001JJ*	-60°F to 54°F	NEMA 4	35°F	-10°F to 54°F	Below -15°F
PDPM1001AJ	-60°F to 54°F	NEMA 4	35°F	-10°F to 54°F	Below -15°F
PDPM1001JL†	-60°F to 54°F	NEMA 4	40°F	N/A	N/A
PDPM1004AJ	-60°F to 54°F	NEMA 4	-20°F	-40°F to 54°F	Below -45°F
PDPM2001AJ	-148°F to 32°F	NEMA 4	Specified	N/A	N/A

\* -JJ model comes with power cord. -AJ model does not.

† -JL model is commonly used with refrigerated dryers.