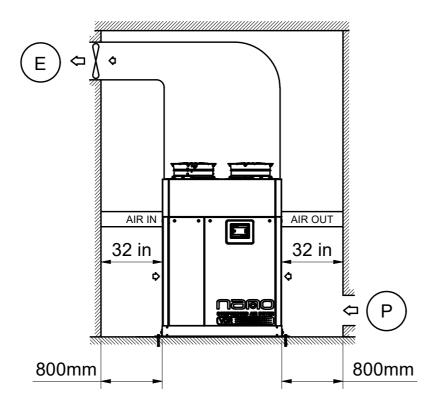


# **VENTILATION PROPOSAL 1**

# AIR IN AIR OUT 32 in B00mm 800mm

# VENTILATION PROPOSAL 2



		VENTILATION REQUIREMENTS					
		ME	TRIC	IMPERIAL			
	Dryer type / Ambient version	Cooling air Temp. limits	Max.cooling air Flow	Cooling air Temp. limits	Max.cooling air Flow		
	VDR6350 / 40°C	0-40°C	48000 m³/h	32-104°F	28240 ft³/min		
	VDR8450 / 40°C	0-40°C	48000 m³/h	32-104°F	28240 ft <sup>3</sup> /min		

### 1: DRYER UNIT

The unit should be installed on a level floor capable of taking the weight of the dryer. Dimensions stated on this drawing are minimum distances.

There must be a free space of 800mm / 32in around the dryer.

### 2 : COMPESSED AIR PIPES

All pipes should be installed stress free to the dryer unit.

All pipes should be installed so that there is no obstruction accessing the unit trough the removing panels.

Inlet pipe orientation must be straight or with a 90° upward bend to ensure equal air flow to all internal heat exchangers.

Compressed air pressure should never exceed the dryers design pressure. It is recommended to install a full flow safety valve at the dryer inlet.

The maximum total pipe lenght (including interconnecting piping between dryer and receiver) can be calculated as follows:

 $\Delta p = (L \times 450 \times Qc) / (d \times p)$ 

L = lenght of pipe (m)

 $\Delta p$  = pressure drop (recommended maximum = 0.1 bar / 1.5 psi )

d = inner diameter of pipe (mm)

p = absolute pressure at dryer outlet (bar(a))

Qc = Free air delivery of the compressor (I/s)

### 3 : FILTER (optional)

It is recommended to install compressed air filter at dryer inlet to achieve air purity class: iso 8573 - 1 : 2010 [2 : - : - ]

The air filter has to be supported and can't be mounted to the dryer directly without extra supports.

### 4 : AIR RECEIVER (optional)

Should be installed in a frost free room on a solid, level floor.

The prefered position depends of the most fluctuating flow.

Alternative 1 : In front of the dryer when the air flow from the compressor fluctuates the most.

Alternative 2: Behind the dryer when the air demand fluctuates the most.

### POWER SUPPLY

The cable has to be sized and installed by a qualified electrician.

### 5: VENTILATION (Air cooled dryer variant)

The inlet grid(s) (P) and ventilation fan (E) (if applicable) should be installed in such a way that natural circulation of air is guaranteed and recirculation of cooling air is avoided.

The required ventilation to limit the dryer room temperature is noted in the ventilation requirement table.

In ventilation proposal 2 the fan (E) capacity should match the dryer fan capacity at a pressure head equal to the pressure drop caused by cooling air ducting.

Max. allowable pressure drop in ducting after the dryer = 30 Pa

The air velocity to the grid(s) has to be limited to 5 m/s.

The direction of the cooling flows may never be inverted.

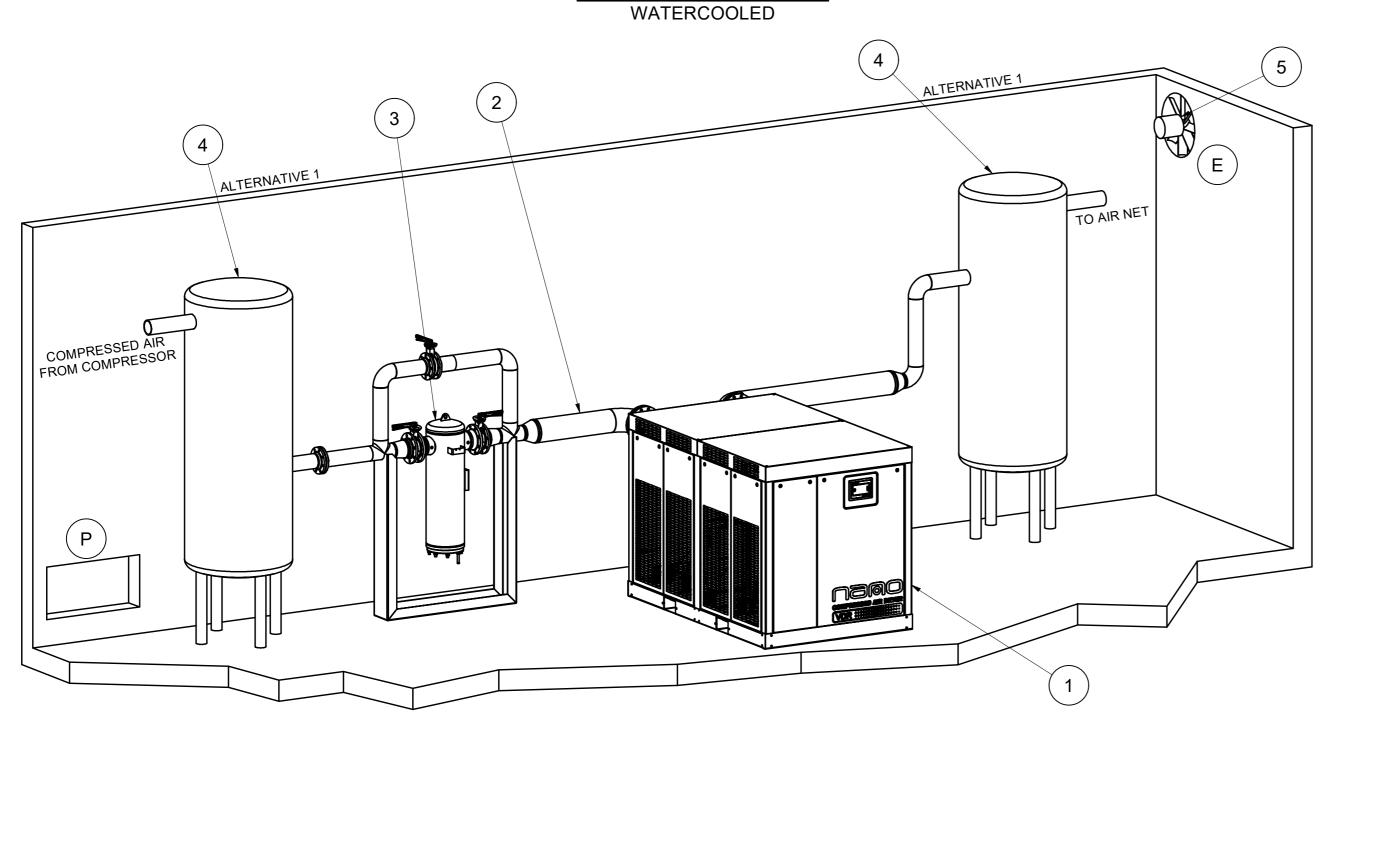
### **DRAIN PIPES**

Drain pipes to drain collector must not dip into the water. For draining of pure condensate water, install an oil / water separator. Consult Nano.

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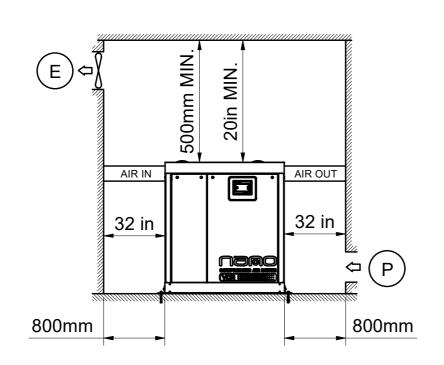
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VDR6350 / VDR8450

# VENTILATION PROPOSAL



### 1: DRYER UNIT

The unit should be installed on a level floor capable of taking the weight of the dryer. Dimensions stated on this drawing are minimum distances.

There must be a free space of 800mm / 32in around the dryer.

### 2: COMPESSED AIR PIPES

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All pipes should be installed so that there is no obstruction accessing the unit trough the removing panels.

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 $\Delta p = (L \times 450 \times Qc)/(d \times p)$ 

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 $\Delta p$  = pressure drop (recommended maximum = 0.1 bar / 1.5 psi )

d = inner diameter of pipe (mm)

p = absolute pressure at dryer outlet (bar(a))

Qc = Free air delivery of the compressor (I/s)

### 3: FILTER (optional)

It is recommended to install compressed air filter at dryer inlet to achieve air purity class: iso 8573 - 1 : 2010 [2 : - : - ]

The air filter has to be supported and can't be mounted to the dryer directly without extra supports.

### 4 : AIR RECEIVER (optional)

Should be installed in a frost free room on a solid, level floor.

The prefered position depends of the most fluctuating flow.

Alternative 1: In front of the dryer when the air flow from the compressor fluctuates the most.

Alternative 2: Behind the dryer when the air demand fluctuates the most.

### **POWER SUPPLY**

The cable has to be sized and installed by a qualified electrician.

### <u>5 : VENTILATION</u> ( Water cooled dryer variant )

The inlet grid(s) P and ventilation fan E (if applicable) should be installed in such a way that natural circulation of air is guaranteed and recirculation of cooling air is avoided.

### **DRAIN PIPES**

1839007672-M1

Parent 3D model

Ed . Version 3D

Drain pipes to drain collector must not dip into the water. For draining of pure condensate water, install an oil / water separator. Consult Nano.

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