nano

S1 oil water separators

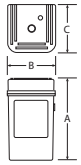
operating & maintenance manual

sizing & specifications

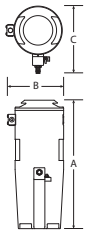
separator model	inlet	outlet	rated flow [2]		dimensions (inches)			approx. weight	wall mounting bracket	replacement media kit
	NPT/PTC [1]	NPT/PTC [1]	scfm	Nm³/h	A	B	C	lbs	part no.	part no.
SEP 60 ST	¼" (x1) [1]	⅜" (x1) [1]	60	102	9.4	5.5	5.5	2.9	included	SEP 60 MRK
SEP 120 ST	½" (x4)	¾" (x1)	120	204	19.7	8.5	10.1	6.0	120 WMK	SEP 120 MRK
SEP 360 ST	½" (x4)	¾" (x1)	360	612	25.8	13.6	11.1	7.9	360 WMK	SEP 360 MRK
SEP 900 ST	½" (x4)	¾" (x1)	900	1529	38.9	17.0	19.5	32.6	-	SEP 900 MRK
SEP 1250 ST [3]	½" (x4)	¾" (x1)	1250	2124	38.9	19.1	19.5	45.0	-	SEP 1250 MRK
SEP 1800 ST	½" (x8)	¾" (x1)	1800	3058	38.9	38.9	20.5	69.0	-	SEP 1800 MRK
SEP 2500 ST [3]	½" (x8)	¾" (x1)	2500	4248	38.9	43.2	21.5	95.0	-	SEP 2500 MRK
SEP 3500 ST	¾" (x2)	¾" (x1)	3500	5947	39.4	39.4	27.6	319	-	SEP 3500 MRK
SEP 7000 ST	¾" (x2)	¾" (x1)	7000	11,893	39.4	43.3	43.3	467	-	SEP 7000 MRK

specifications	SEP 60 ST	SEP 120 to 2500	SEP 3500	SEP 7000
expected media life [4]	8000 hours @ 30 cfm 5000 hours @ 60 cfm	5000 hours	16000 hours @ 3500 cfm 8000 hours @ 5000 cfm	16000 hours @ 7000 cfm 8000 hours @ 10,000 cfm
maximum oil carry over [5]	< 20 ppm	< 20 ppm	< 20 ppm	< 20 ppm
warranty	2 years	10 years	2 years	2 years
max condensate inlet pressure	232 psig	232 psig	232 psig	232 psig
inlet condensate temperature range	35 to 110°F	35 to 110°F	35 to 110°F	35 to 110°F

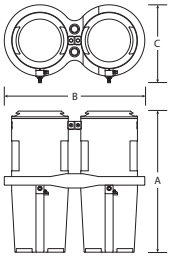
(1) inlet and outlet connections on the SEP 60 ST are push to connect. All other models are NPT threaded
(2) sizing assumes an oil flooded compressor using mineral or synthetic lubricant with a maximum oil carry-over of 5 mg/m3 or less
(3) available summer 2015
(4) media life decreases with increased condensate flow. For media life estimates at other flow rates contact support@n-psi.com
(5) for use with PAG compressor lubricants contact n-psi technical support or email support@n-psi.com



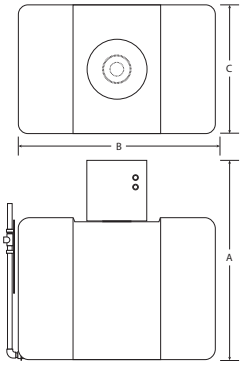
SEP 60 ST



SEP 120 to 1250 ST



SEP 1800 & 2500 ST



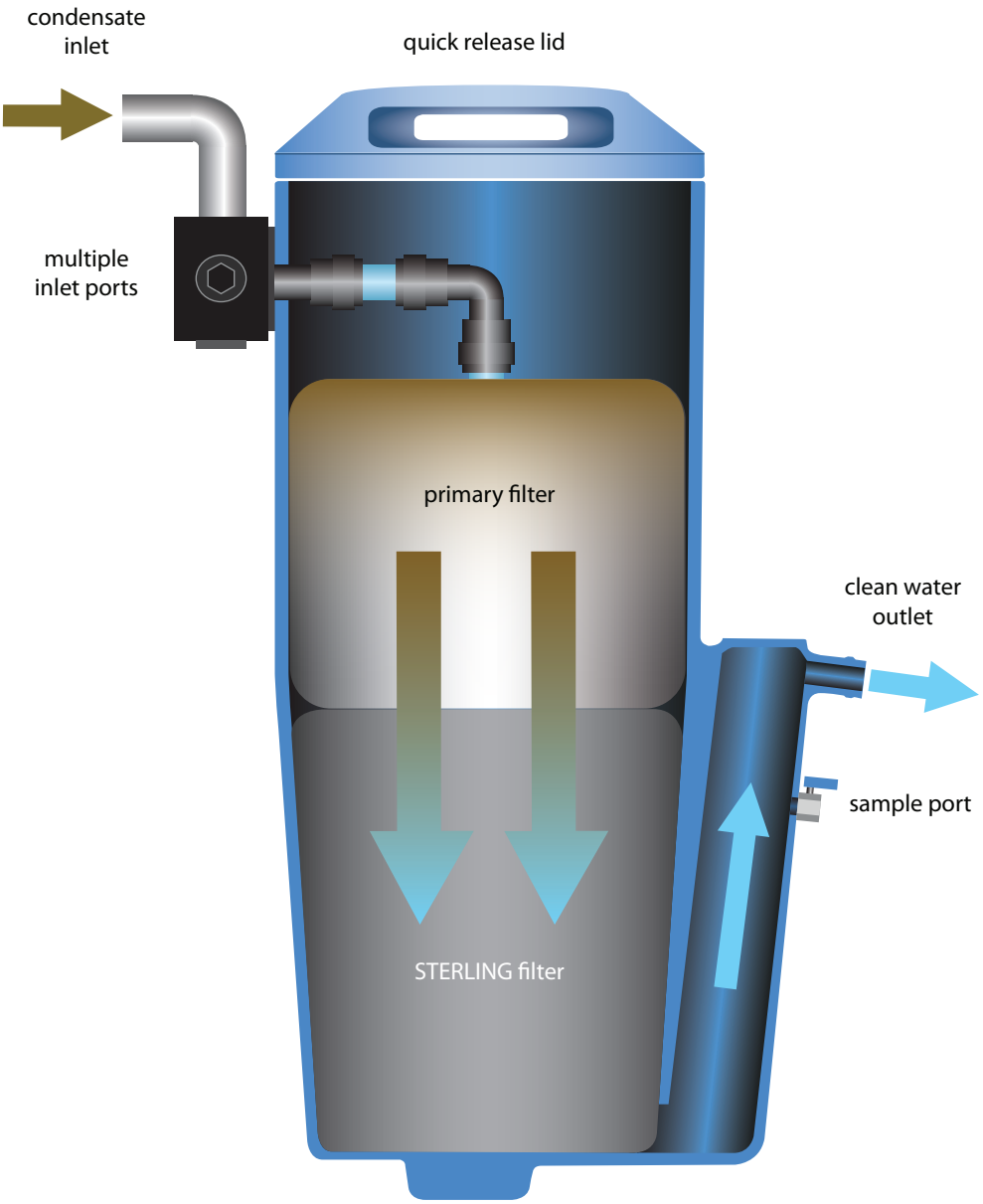
SEP 3500 & 7000 ST

introduction

Always read the instructions before installation and use. All service work must be performed by competent properly trained service technicians.

Our unique range of oil water separators employ a technologically advanced design and patented filter media to ensure that your company's discharge of compressor condensate meets (or is below) local legal permissible limits. Please remember that it is the responsibility of the user to check local regulations to ensure that the discharge quality is within legal limits.

note: it is important to use only genuine n-psi Sepura service kits with their patented STERLING media. The use of any other media will significantly impact system performance. Carbon bags are NOT suitable for use in any of these condensate separators



SEP 120 to 1250 ST model shown

SEP 60 ST

The SEP 60 ST is a disposable oil water separator. Once the media has been saturated with oil (as indicated by an outlet oil level approaching legal permissible limits), the unit must be replaced. Failure to regularly monitor outlet oil levels and replace the unit when required may result in you exceeding local legal permissible limits for oil content in water discharge.

As a rough guide, the SEP 60 ST oil water separator has been designed to clean condensate from a compressor system up to 60 scfm to 5 ppm or less* outlet oil content, for a period of up to 5000 hours. Actual life may be more or less depending on the specifics of your application, and can only be confirmed by regularly testing the outlet water quality.

* acceptable local oil levels for sewer discharge may be more or less. It is the user's responsibility to know your local waste water quality regulations and ensure compliance

installation

1. attach the wall plate (provided) to a suitable wall or compressor cabinet

WARNING! be sure to isolate the compressor and look out carefully for cables and pipes when drilling the connection hole

2. slide the unit on to the wall plate, with the venting tubes at the top
3. connect the drain points to the inlet port using 1/4" tubing by inserting the tube into the push fitting
4. connect 3/8" tubing into the outlet fitting and feed to the drain. Ensure a steady fall from the outlet point to the drain with no kinks or tight bends in the tubing

note: always use automatic drains. Set timed drains to a very short "open" time. Never use manual drains, which can flood the condensate separator forcing partially treated or untreated condensate to be discharged

never discharge to a storm drain or surface water. Test outlet quality weekly using the test kit provided and replace before outlet water is cloudy or oil content exceeds local legal waste water quality requirements

replacement

WARNING! ensure that the condensate drains connected to the separator cannot operate during replacement

1. disconnect the inlet and outlet tubes from their quick connect fittings
2. lift the unit from the wall plate
3. the replacement kit includes a shipping lid and plug. Clip the shipping lid onto the top and insert the plug into outlet of the old separator
4. the old separator is now sealed for transportation to a licensed waste disposal site
5. slide the new unit onto the existing wall plate and connect inlet and outlet tubing as outlined in "Installation" above

specifications	SEP 60 ST
expected media life [1]	8000 hours (or 2 years) @ 30 cfm 5000 hours (or 1 year) @ 60 cfm
maximum oil carry over [2]	< 20 ppm
warranty	2 years
max condensate inlet pressure	232 psig
inlet condensate temperature range	35 to 110°F

(1) whichever comes first. Media life decreases with increased condensate flow. For media life estimates at other flow rates contact support@n-psi.com

(2) using mineral or blended synthetic oils. For use with PAG compressor lubricants contact n-psi technical support or email support@n-psi.com

SEP 120 ST to SEP 2500 ST

The SEP 120 ST to SEP 2500 ST models use disposable STERLING media bags. Once the media has been saturated with oil (as indicated by an outlet oil level approaching legal permissible limits), the media bags must be replaced. Failure to regularly monitor outlet oil levels and replace the unit when required may result in you exceeding local legal permissible limits for oil content in water discharge.

The estimated life of the media for each model is provided in the table below. Actual life may be more or less depending on the specifics of your application, and can only be confirmed by regularly testing the outlet water quality. It is the user's responsibility to know your local waste water quality regulations and ensure compliance.

installation

1. all parts needed for installation are shipped inside the separator housing. Open your n-psi Sepura oil water separator by removing the top and remove all of the parts and media bags from the housing. Ensure that you have all the necessary parts to complete the installation process per the table below

specifications	SEP 120	SEP 360	SEP 900	SEP 1250	SEP 1800	SEP 2500
separator housing & lid	1	1	1	1	2	2
joining collar	na	na	na	a	1	1
STERLING media bag(s)	1	1	1	2	2	4
needle felt pre filter bag(s)	1	1	1	1	2	2
metal retaining clips	1	1	2	4	4	8
connection kit	1	1	1	1	1	1

2. install the inlet connecting block to one side of the condensate separator using the screws provided. Extra blocks can be purchased if more inlet connections are required

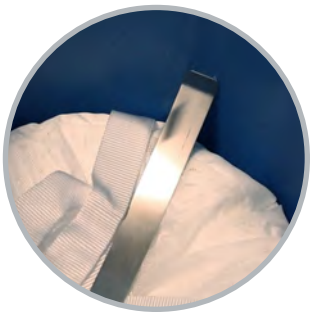
3. install the circular blanking plug into the opposite side of the unit from the inlet block using the screws provided

4. fill the unit with clean water and check for leaks. If no leaks are present remove the water and proceed to Step 5

5. the STERLING filter is a white netting bag tied at the top. It is shipped inside a clear plastic bag to keep it clean and dry. REMOVE THE STERLING FILTER FROM THE CLEAR PLASTIC BAG and insert into the separator housing, pushing it gently but firmly to the bottom of the housing. There is no need to pre-soak the media bag

note: failure to remove the STERLING media bag from the clear plastic bag will prevent the unit from functioning correctly

6. insert the metal retainer with its bent ends facing upwards. Slide it down until it makes contact with the top of the STERLING media bag. DO NOT COMPRESS THE MEDIA BAG *(for the SEP 900 and 1250 use two retaining clips at 90 degrees to each other. For the SEP 1800 & 2500 use two retaining clips at 90 degrees to each other in each tower)*



7. insert the needle felt filter into the separator housing with the inlet tube at the top
8. connect the inlet block to the inlet tube using the fittings provided. There is no need to pre-soak the media bag
9. install the top on the separator housing

10. install the cap on the sample port and thread the outlet tube fitting onto the outlet port if needed. Spares are provided in case of loss
11. connect drain points to the inlet ports. Seal any inlet port connections not used
12. connect tubing into the outlet fitting and feed to the drain. Ensure a steady fall from the outlet point to the drain with no kinks or tight bends in the tubing

never discharge to a storm drain or surface water. Test outlet quality weekly using the test kit provided and replace before outlet water is cloudy or oil content exceeds local legal waste water quality requirements

media replacement

WARNING! ensure that the condensate drains connected to the separator cannot operate during replacement

1. remove the top cover
2. disassemble the fittings connecting the inlet to the needle felt filter
3. remove the needle felt filter, placing it in the clear plastic bag provided with the replacement media kit
4. remove the steel retaining clip(s)
5. remove the STERLING media bag, placing it in the clear plastic disposal bag provided with the replacement media kit
6. dispose of the spent media bags safely and in accordance with local waste disposal requirements
7. reassemble the unit per the steps 5 through 9 outlined in “installation” above

specifications	SEP 120 to 2500 ST
expected media life (1)	5000 hours
maximum oil carry over (2)	< 20 ppm
warranty	10 years
max condensate inlet pressure	232 psig
inlet condensate temperature range	35 to 110°F

(1) whichever comes first. Media life decreases with increased condensate flow. For media life estimates at other flow rates contact support@n-psi.com

(2) using mineral or blended synthetic oils. For use with PAG compressor lubricants contact n-psi technical support or email support@n-psi.com

SEP 120 to 1250 ST

SEP 1800 & 2500ST

SEP 3500 ST & SEP 7000 ST

The SEP 3500 ST and SEP 7000 ST are semi-disposable oil water separators for large compressed air systems up to 10,000 cfm. They consist of either a 158 or 264 gallon container partially filled with STERLING media, a stainless steel pressure relief chamber and outlet piping. Once the media has been saturated with oil (as indicated by an outlet oil level approaching legal permissible limits), the entire container (with the exception of the stainless steel pressure relief chamber and outlet piping) must be replaced. This unique design allows quick, easy and safe disposal of the collected oil and spent media. Failure to regularly monitor outlet oil levels and replace the unit when required may result in you exceeding local legal permissible limits for oil content in water discharge.

The estimated life of the media for each model is provided in the table below. Actual life may be more or less depending on the specifics of your application, and can only be confirmed by regularly testing the outlet water quality. It is the user's responsibility to know your local waste water quality regulations and ensure compliance.

installation

1. install the n-psi Sepura condensate cleaner by fork lift on to a level floor
2. there is some benefit from pre-filling with water, though it is not a necessity, so do so if convenient
3. connect condensate drain points to the inlet connections. There are no special requirements for drain types – but we recommend our zero air loss drains as energy saving devices. Seal any inlet connections not used
4. connect tubing or piping to the outlet fitting and feed to the drain. Ensure a steady fall from the outlet point to the drain with no kinks or tight bends in the tubing or piping

never discharge to a storm drain or surface water. Test outlet quality weekly using the test kit provided and replace before outlet water is cloudy or oil content exceeds local legal waste water quality requirements

replacement

WARNING! ensure that the condensate drains connected to the separator cannot operate during replacement

1. turn off the outlet valve and disconnect the inlet and outlet tubes

2. remove the pressure relief chamber and the outlet piping and set aside. These items will be reused

3. remove the entire container and have it disposed of in accordance with local codes for waste disposal

5. replace container using an n-psi replacement separator, and instal the stainless steel pressure relief chamber and outlet piping

6. follow the steps outlined in "installation" above

WARNING! do not attempt to refill the container with any other media. This will significantly impact performance and could cause a blockage. leading to an overflow

specifications	SEP 3500	SEP 7000
expected media life [1]	16000 hours @ 3500 cfm 8000 hours @ 5000 cfm	16000 hours @ 7000 cfm 8000 hours @ 10,000 cfm
maximum oil carry over [2]	< 20 ppm	< 20 ppm
warranty	2 years	2 years
max condensate inlet pressure	232 psig	232 psig
inlet condensate temperature range	35 to 110°F	35 to 110°F

(1) whichever comes first. Media life decreases with increased condensate flow. For media life estimates at other flow rates contact support@n-psi.com

(2) using mineral or blended synthetic oils. For use with PAG compressor lubricants contact n-psi technical support or email support@n-psi.com

using the sample kit

It is advisable to test the outlet water quality on all separators on a weekly basis. Use the water quality bottle that was provided with the unit to determine the level of contamination in the outlet water. Take a sample of the outlet water either through the test port or from the outlet port itself. The test strip in the test bottle is scaled for levels of 5, 10, 15 and 20 ppm outlet quality. The test bottle is intended to be used as a quick visual check of the outlet water quality. Please remember that it is the responsibility of the user to check local regulations to ensure that the discharge quality is within legal limits.

never discharge to a storm drain or surface water. Test outlet quality weekly using the test kit provided and replace before outlet water is cloudy or oil content exceeds local legal waste water quality requirements

wall mounting bracket (optional)

An optional wall mounting bracket is available for SEP 120 ST and SEP 360 ST models, so instead of requiring just a fraction of the floor space of a traditional separator, they require none at all.

Taking advantage of the compact size and light weight of the Sepura oil water separators, this simple yet innovative bracket allows you to mount your SEP 120 ST or SEP 360 ST separator on the wall. Install it next to a compressor or dryer for a clean simple installation. Built from a heavy duty and corrosion resistant galvanized steel, these brackets have a quick release clamp for easy maintenance access.

- saves valuable floor space
- quick and easy to install
- robust galvanized steel construction
- quick release clamp
- easy maintenance access

specifications	120 WMK	360 WMK
height	20”	26”
width	6.5”	9.0”
depth	7.5”	9.5”
weight	3.5 lbs	5.5 lbs

nano alternative media kits

Stop wasting time & money on replacement carbon bags. Carbon is messy, time consuming, provides inconsistent performance, and is bad for the environment. n-psi sells our STERLING Mmedia replacement kits to fit virtually all brands of oil water separators. Get the legendary performance of the advanced STERLING filtration technology - even if you own another brand of separator.

The benefits of upgrading to STERLING media replacement kits:

- twice the oil holding capacity of carbon - longer life
- half the contact time as carbon - higher flow capacity
- clean, light, dust free, and easier to handle, install & remove
- no pre-soaking - save 12-24 hours during start up & replacement
- doesn’t settle, crush or fracture - consistent performance
- 100% recycled & recyclable material - environmentally friendly

Contact us before your next change-out.

notes

nano-purification solutions
11330 vanstory drive
huntersville, nc 28078
usa

tel: (704) 897-2182
fax: (704) 897-2183
support@n-psi.com
www.n-psi.com