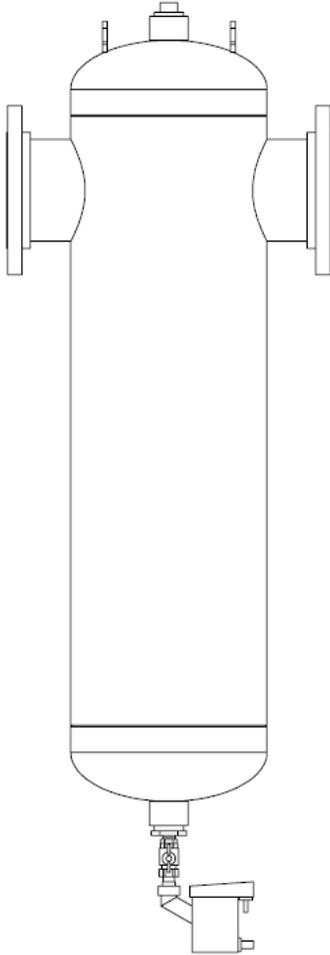


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Operating Manual

Flanged Water Separator



CLEARPOINT® Flange Water Separator Series

Models L100 to L200

READ MANUAL FIRST BEFORE INSTALLATION AND OPERATION



Table of Contents

DEFINITION OF THE SAFETY SYMBOLS	3
WARNINGS	3
INTRODUCTION	4
RECEIVING AND TRANSPORTING	5
SAFETY RULES	5
AREAS OF APPLICATION	6
TECHNICAL SPECIFICATIONS OVERVIEW	6
DIMENSIONS	7
FUNCTION	7
INSTALLATION SITE	8
POSITIONING:	8
INSTALLATION:	8

DEFINITION OF THE SAFETY SYMBOLS

					
Before attempting any service, please read the manual	General Warning: Risk of damage or injury	Electrical Hazard: Possibility of electrocution	Warning: Under pressure	Warning: High temperature	Warning: Non-breathable air
					
Warning: Water cannot be used to extinguish fire	Warning: Do not operate if parts are missing or have been tampered with	Warning: Machine level noise may exceed 85 dBA	Warning: Hearing protection required	Warning: All work to be performed by qualified personnel only	Operations that can be performed by qualified operators ¹
					
Compressed air inlet connection		Compressed air outlet connection		Connection point for condensate drain	

¹ Only experienced and trained personnel familiar with all of the relevant laws, rules and regulations, capable to perform the needed activities and to identify and avoid possible dangerous situations while handling, installing, using and servicing the machine.

WARNINGS

WARNING: VESSELS UNDER PRESSURE

- + In most countries, states, cities and/or local municipalities the installation, operation and maintenance of devices where pressure vessels are in use are subject to local boiler and pressure vessel regulations.
- + The end user is responsible for following all of the relevant laws, rules and regulations and ensuring that only experienced and trained personnel install and/or maintain filter assembly.
- + In most countries, states, cities and/or local municipalities the installation may only be carried out by a licensed installation company. Inspections must be carried out by a qualified and licensed third-party firm in accordance with all applicable laws, rules and regulations for the region where the filter is installed.
- + The pressure vessels used in this device are built according to the American Society of Mechanical Engineers (ASME) standard Section 8, Division 1.



Compressed Air Warning:

Compressed air is a highly dangerous energy source.

- + Never work on the filter while components are under pressure.
- + Never point the compressed air stream or the condensate drain outlet towards anybody.

The end user is responsible for the installation of the filter as laid out in this manual. If proper commissioning steps are not followed, the warranty will be void and dangerous situations involving injury or death and/or damages to the machine could occur.

Only qualified personnel can use and service electrically powered devices. Before attempting any maintenance:

- + Ensure that no part of the machine is powered and is locked out of the electrical mains by following proper "Lock-out, Tag-out" procedures and requirements.
- + Ensure that no part of the filter is under pressure by isolating the filter from the compressed air system.





Any change to the machine or to the standard operating parameters (see page 5), if not previously verified and authorized by the manufacturer, in addition to creating a potentially dangerous situation, will void the warranty.



Don't use water to extinguish fire on the filter or in the surrounding area.

INTRODUCTION



These instructions for installation and operation will help you to become more familiar with the CLEARPOINT® and enable you to utilize the device within the intended scope of application. Furthermore, the instructions contain important information for ensuring safe, correct and economic operation.



The individual directions have to be followed precisely as described in order to avoid hazards or damage. Additionally, it will be necessary to observe the accident prevention regulations valid in the operator's country and at the place of installation together with the approved rules of engineering practice concerning correct safety and work procedures.



All persons carrying out the installation, commissioning, maintenance or repair of the product on the operator's premises must have read and understood these instructions for installation and operation. The instructions should be permanently available at the place of installation.

CLEARPOINT® water separators are built according to the state of the art and the approved safety rules of engineering practice. However, the use of the product can endanger the health and life of attending personnel or third parties and can have a considerable negative effect on the product itself or on the other material assets if:



- + The personnel is not properly trained,
- + The product is used for purposes other than the intended application,
- + The device is not correctly serviced or maintained

This can render the guarantee invalid

CLEARPOINT® devices are designed for gaseous neutral media without any aggressive substances. Non-observance of this condition excludes all liability claims. In the interest of further development,

BEKO TECHNOLOGIES reserves the right to implement changes at any time, while retaining the essential features of the device, if such changes become necessary to enhance the technical capacity of the device for reasons of safety or standard commercial practice.

RECEIVING AND TRANSPORTING

CLEARPOINT® water separators undergo stringent quality control procedures in the manufacturing plant and are handed over to the forwarding agent in perfect condition. Upon arrival of the goods, please check for any visible damage and, where appropriate, insist on a corresponding note on the delivery receipt. Get in touch with the forwarding agent and arrange for an assessment of the damage. The manufacturer is not responsible for any damage caused during transport.

After verification of the packaging upon receipt, place the unit as close as possible to the installation point before unpacking the contents.

- + To move the packaged unit, we suggest the use of a suitable crane or forklift. We do not recommend moving the unit by any hand operated or manual mechanism.
- + Handle with care. Heavy blows could cause irreparable damage.
- + Even when packaged, keep the machine protected from severe weather.



The packaging materials are recyclable. Each material must be properly disposed in a manner complying with the rules and regulations of the local municipality government.

SAFETY RULES

- The personnel carrying out the installation, commissioning, maintenance or repair of the device must be properly qualified for this type of work. In particular, the persons concerned with
 - + Be suitably trained and familiar with handling compressed- air systems besides being informed about the associated dangers,
 - + Know the content of the relevant instructions for installation and operation, and
 - + Possess vocational qualifications or entitlements in this particular field of work.



- Before the start of any work, the housing must first be depressurized.
- In the case the CLEARPOINT® water separators with BEKOMAT® all the rules of the separated instructions need to be complied with as well.
- To ensure safe functioning, only use the device within the operational limits (operating pressure, operating temperature, volumetric flow, material stability).
- Where a BEKOMAT® is installed, it must be ensured the device is designed for the stated volumetric flow of the compressed air or gas. Condensate surges into the device can impair the function.

- In the event of leaks, shut off the compressed air supply immediately and eliminate the cause in order to maintain safe and cost-effective operation.
- CLEARPOINT® water separators, including accessories, must be checked once a week. This applies in particular to the function of the drain.

AREAS OF APPLICATION

CLEARPOINT® water separators are designed for the separation of solid particles and liquid droplets from non aggressive compressed air or industrial gases.

L100-L200	
Maximum Operating Pressure:	230 psig
Minimum and Maximum Operating Temperature	41°F to 140°F

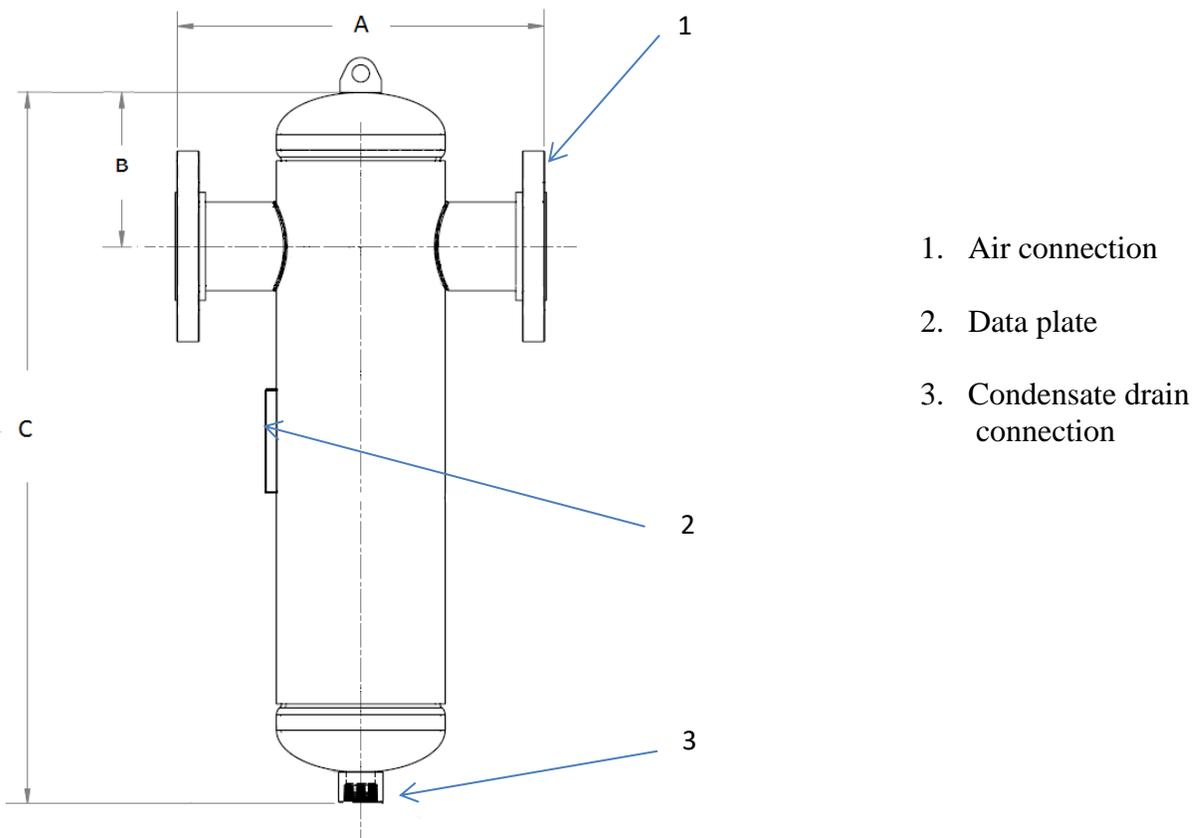
TECHNICAL SPECIFICATIONS OVERVIEW

Model	Pipe Size ANSI Flange Class# 150	Flow Rate *)scfm	A In	B In	C In	Volume Gallons	Weight Lbs
L100	4" FLG	1900	16.75	6.955	39.50	7.7	150
L102	4" FLG	2800	18.875	7.75	37.25	11.8	230
L150	6" FLG	3800	19.10	7.80	50.24	17.0	294
L156	6" FLG	6500	21.125	9.75	52.625	23.73	350
L200	8" FLG	7500	22.875	12.375	67.625	38.69	500



*) Volumetric flow at 100 psi operating pressure, related to 68°F (20 °C) and 14.5 psi absolute(1.0 bar)

DIMENSIONS



FUNCTION

The separator housings are equipped with internal swirl inserts, which causes air entering at high speed to be invested with a rapid rotation motion. The acceleration this causes produces a large centrifugal force on the particles and droplets within the compressed air, which propels them on the outer wall. Gravity causes them to drip from there into the collecting chamber from which they are then drained.

INSTALLATION SITE



Serious consideration should be given when selecting the installation site for the water separator, as an improper location could directly affect the proper operation of the water separator. This unit is not suitable to be used in explosive atmospheres, where risk of fire could exist, in the presence of gaseous or solid pollutants or in outdoor applications or areas exposed to the elements.



Don't use water to extinguish fire on or in the surrounding area filter installation.



Technicians that service the unit must wear hearing protection while servicing. Each employee must select a proper personal protection device (PPD) hearing protector such as earmuffs, ear canal caps or earplugs in order to prevent permanent hearing damage or loss.

Minimum Installation Requirements:

- + Select a clean, dry room that is free of dust and protected from atmospheric disturbances.
- + Maximum operating pressure of 230 psig
- + Minimum operating temperature of +41 °F
- + Maximum operating temperature of +140 °F
- + Allow a clearance of at least 3' on all sides of the water separator in order easily facilitate all maintenance needs.

POSITIONING:

The housing should be mounted in a vertical position. Observe the direction of flow which is indicated by an arrow on the housing.

INSTALLATION:

For better efficiency, it is recommended to install the device at a preferably cool, but frost-protected point along the pipe network.

Furthermore, it is recommended to install a shutoff valve both on the inlet and the outlet side of the water separator. A bypass line with an additional shutoff valve should be installed so that the pipe network can still be supplied with compressed air during routine maintenance work.



The water separator is supplied with an electronically level-controlled condensate drain, type BEKOMAT®, as standard. Please observe the instructions in the corresponding documentation.



DO NOT DISPOSE OF THE CONDENSATE INTO THE ENVIRONMENT

The condensate collected in the water separator contains oil particles released into the air stream by the compressor. Dispose the condensate in compliance with all local, state and Federal rules and regulations. We highly recommend the installation of either a QWIK-PURE® or ÖWAMAT® oil-water separator at the final collection point for all condensate discharge lines within the facility (i.e. from the main header).

For technical product support please call +1 (800) 235-6797 and select Option 2

The product categories

 **Condensate drainage**
BEKOMAT®

 **Filtration**
CLEARPOINT®

 **Measurement technology**
METPOINT®

 **Condensate processing**
ÖWAMAT® | QWIK-PURE® | BEKOSPLIT®

 **Drying**
DRYPOINT®

 **Process technology**
BEKOKAT®



BEKO TECHNOLOGIES CORP.
900 Great Southwest Pkwy SW
Atlanta, GA 30336
USA
Phone +1 (404) 924-6900
Fax +1 (404) 629-6666
beko@bekousa.com
www.bekousa.com



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