



Liquid Filtration Units *with Activated Carbon* Type 61V-C

Let's Be Clear!

**Removes dissolved hydrocarbons and
other impurities from amine and glycol
processes for the prevention of foaming
and reduction of corrosion**



WINSTON / ROYAL GUARD CORPORATION



Liquid Filtration Units *with Activated Carbon* Type 61V-C

Removes dissolved hydrocarbons and other impurities from amine and glycol processes to prevent foaming and reduce corrosion

The Winston/Royal Guard Type 61V-C Liquid Filter with virgin **activated carbon** removes dissolved hydrocarbons and other impurities from amine and glycol processes for the prevention of foaming and reduction of corrosion. The “activated” carbon has been processed typically by exposure to high temperature steam to open pores in each carbon particle. The activation process adds a much greater surface area and thus provides many times the adsorbing capabilities of the carbon. Typically, two or more low flow canisters filled with activated carbon are stacked inside the vessel.



Shown at right is the Type 61V-C with quick-opening closure and support skirt, and a radial flow carbon canister with perforated exterior housing.

How it works: A low volume liquid flow enters the filter housing and into the carbon-filled canisters. Here, the impurities are removed as they come into contact with the activated carbon and are adsorbed onto the exterior and interior porous surfaces of the carbon particle. The impurities do not “absorb”, or assimilate into the carbon, but rather “adsorb”, or accumulate on the carbon’s external surfaces. “Activating” the carbon creates pores throughout the granule which creates many times the original surface area. Typically, the carbon canisters are stacked two or three high and have a radial flow from outside to inside. The canisters are provided with a gasket on each end for excellent sealing and a top cap on the uppermost canister. The recommended flow rate for each canister is 1.5 GPM. For higher flow rates, multiple stacks of canisters may be employed.

The carbon filter should be protected upstream with reliable particulate filtration to prevent solid contamination from entering the carbon bed and congesting the open pores in the carbon particles. It is also important to provide particulate filtration downstream of the carbon filter to remove any carbon fines that may carry over. For both installations our Type 61 liquid filter is recommended.

Options include ASME Code stamp, Quick-opening closure, various support styles, lifting eyes, and other customer requirements.

ASME Code Certified: Winston/Royal Guard is an ASME Section VIII, Division 1 Code certified manufacturing facility with National Board certification. Capabilities include all types of non-destructive testing with a rigidly controlled Quality Control system.

WINSTON / ROYAL GUARD CORPORATION



Liquid Filtration Units *with Activated Carbon* Type 61V-C

The galvanized steel canister has a perforated exterior housing and interior core allowing for a radial flow through the carbon media. The flow exits through a 2" diameter opening in the bottom of the canister. Heavy wire lifting handles are provided in the top of the canister which can be folded flat after installation into the filter vessel. To aid in retention of the carbon media, a cotton bag is placed into the canister prior to filling. The canisters may be stacked two or three high. Vertical flow canisters are also available.

OPERATING SPECIFICATIONS:

- Recommended flow rate: 1.5 GPM per canister.
- Radial flow is outside to inside.
- Recommended maximum operating temperature is 150° F. for best retention of impurities. Higher temperatures may provide less retention.
- Gaskets are Buna-N for temperatures up to 250° F.
- Carbon canisters should not develop a significant increase in differential pressure during use when provided with proper upstream particulate filtration.

CANISTER:

- WCFL-1122 Series
- Galvanized steel enclosure
- Buna-N gaskets
- Cotton liner
- 11" diameter x 22" tall (nom.)
- Interior core diameter: 2"

CARBON:

- Carbon: activated virgin carbon
- Type: coal
- Mesh size of carbon: 8 x 30
- Molasses number: 400 (typ.)
- Iodine number: 1000 mg/g (min.)
- Ash, total: 12%

Mesh size refers to a measurement of the carbon granule. In this case, 85% of the granules will fall through an 8 x 8 US wire mesh sieve and 95% will be retained on a 30 x 30 US wire mesh sieve placed below.

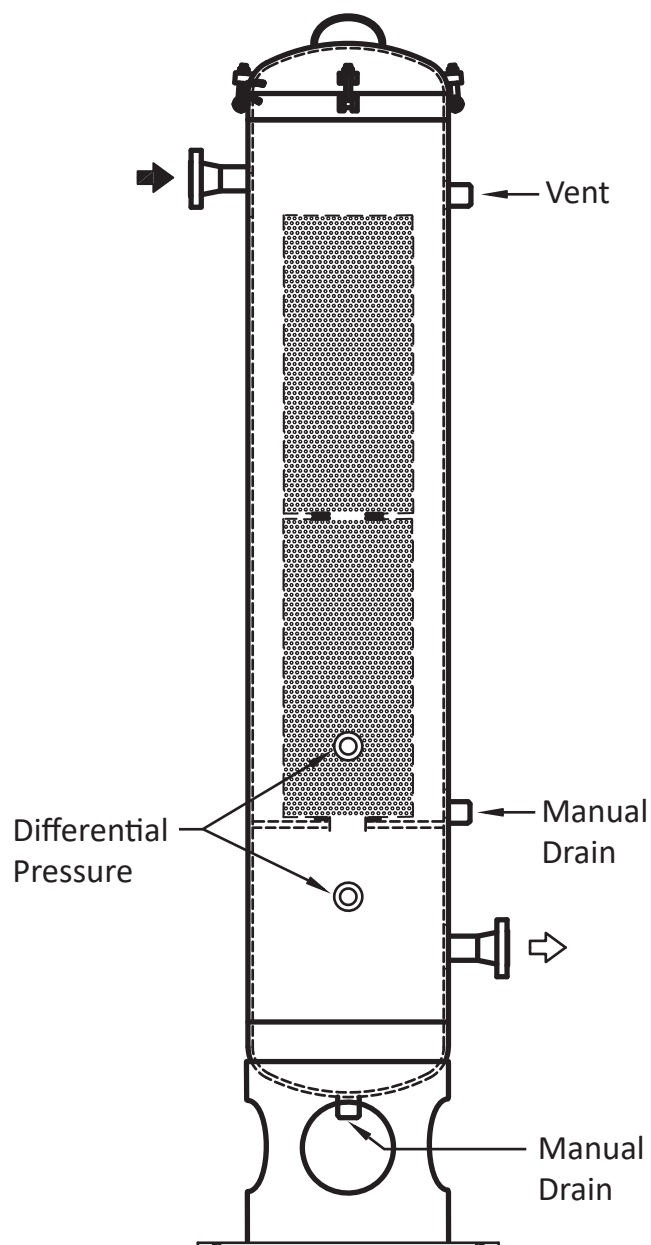
Molasses number is derived from the decolorization from molasses in solution, and refers to the measure of the content of mesopores (pores having diameters 2 - 50 nm) in the carbon granule after it has been activated compared to a standard carbon granule. The higher the number, the larger the molecule captured.

Iodine number is based on the amount of iodine adsorbed in testing, and is an indicator as to the porosity, or the content of micropores (pores having diameters ≤ 2 nm) in the carbon granule after it has been activated. The higher the number, the more activation in the carbon particle.

Ash is the measurement of oxides in the carbon granule expressed as a percentage. The lower the percentage, the higher the carbon portion of the granule and its activity.



Liquid Filtration Units *with Activated Carbon* Type 61V-C



**WCFL-1122R Radial Flow Canister
with perforated exterior**



Activated Carbon Granules

Specifications are subject to change without notice. 6-16-2021 (supersedes 7-6-2018)

WINSTON / ROYAL GUARD CORPORATION

P. O. Box 1145 • White Oak, Texas 75693 USA

Phone (800) 527-8465 • (903) 757-7341 • Fax (903) 759-6986

Winston-RoyalGuard.com • e-mail: sales@winston-royalguard.com

Copyright © 2021 Winston/Royal Guard Corporation. All rights reserved