

VKL 70-5 RS

WIPED-FILM SHORT PATH DISTILLATION SYSTEM

ROOT 
SCIENCES

VKL 70-5 RS

Key Features

- **Throughput Capability:** 1,200-1,500 mL/h
- **Optimal Yields and Potency:** Finished distillate contains up to 99.85% total cannabinoids
- **Fully Jacketed System:** Heated from start to finish, negating the use of heating tape or heat guns to keep product moving through the system
- **True Continuous Feed:** Unique design allows uninterrupted operation through continuous feed into the system and dispenses finished product to atmosphere without breaking vacuum
- **Fully Pump-Driven Operation:** Integrated pumps provide full operator control over feed and discharge rate instead of relying on gravity fed systems
- **Expert On-Site Training:** Instructions for operation of equipment and proprietary parameters for producing distillate are included with purchase
- **Service and Maintenance:** Root Sciences offers Gold and Platinum service packages to keep your equipment in top operational condition



What is Short-Path Molecular Distillation?

Short-path molecular distillation is a technique used to purify compounds, such as cannabinoids, through a thermal separation process, utilizing a deep vacuum to reduce the boiling point of the desirable components, fractioning substances based on their boiling points.

Wiped-film distillation utilizes wipers to spread the feed-stock into a thin film on the evaporator, which greatly increases the surface area and decreases the residence time (or how long the crude oil is exposed to high temperatures). By using an internal condenser, the distilled vapor travels a short path before condensing, enabling efficient operation with little waste and minimal thermal degradation. This process operates in a continuous manner to enable rapid, repeatable, and scalable production. With a low operating cost, high throughput, and unbeatable reliability, wiped-film distillation has become the most popular method of purifying crude extracts to produce high potency concentrates.

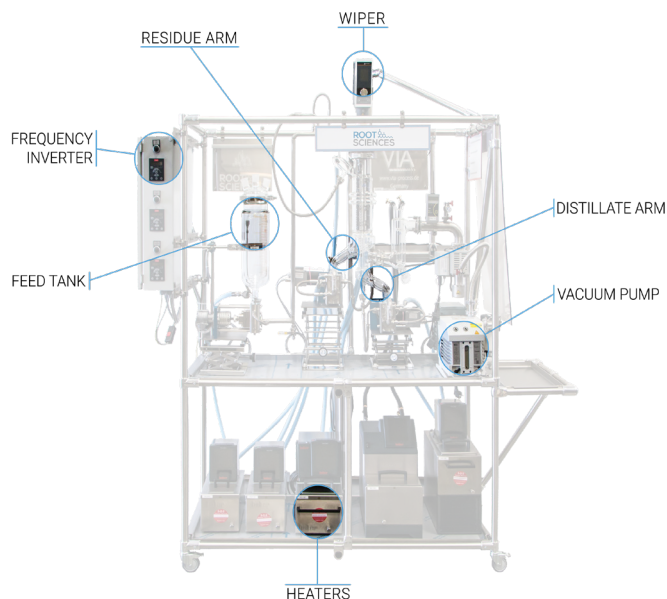
A necessary precursor for cannabinoid isolation, short-path molecular distillation is the preferred technology utilized during the production of CBD and CBG isolates.

Short-Path Wiped-Film Distillation Equipment

Root Sciences' wiped-film molecular distillation plants are specifically intended for the processing of cannabis and hemp crude oil, with honest and accurate throughput/yield rates reflecting that. Designed and manufactured by VTA of Germany, these machines are expertly engineered to produce distillate that can be used in a wide variety of products commonly found on the market today.

Equipment is available to suit a range of operations, from small-scale labs focusing on the recreational THC market, all the way up to large-scale hemp processing facilities focusing on industrial CBD production, and everything in between.

The VKL 70-5 is Root Sciences' entry-level system in the distillation lineup and is suitable for processors in need of industry-standard production rates for the recreational cannabis market. If increased production rates are desired, the VKL can easily be combined in series with an additional VKL unit, doubling effective throughput and simplifying the process flow. The dual-system upgrade option adds redundancy (for maintenance or in the event of downtime) and can also be performed at a later stage, allowing your equipment to grow with your operation.



DISTILLATION

ROI / Payback Period

Material	Cannabis	Hemp	Cannabis	Hemp
Daily Processing Time	8-hour (one shift)		24-hour continuous (three shifts)	
Daily Distillate Yield	5 L		15 L	
Daily Distillate Value	\$34,200	\$18,400	\$102,600	\$55,200
Payback Period	10.6 days	22 days	3.5 days	7.3 days

Specifications

Throughput	1,200-1,500 mL/h
Distillate yield (per 8 hr. shift)	4.8-5.4 L
Evaporator surface area	0.05 m ²
Power requirements	1Φ 240 V, 60 Hz, 60 A
Stages	Single
Dimensions (L x W x H)	5.8' x 3.2' x 7.1'
Weight (gross)	580 kg
Certification	UL ready (all necessary individual components are UL listed)
Warranty	1 year (excluding glass and vacuum system)



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About Root Sciences

Root Sciences is the global leader in the distribution of equipment and support services for processing facilities in the cannabis and hemp industries, representing premium extraction, distillation, and other post-processing technologies. However, we are in the unique position of being much more than an equipment distributor. Backed by years of hands-on experience in both growing and processing, our collective knowledge as a team of seasoned practitioners and process engineers is unmatched in the industry.

For Root Sciences, the sale is just the beginning, as we aim to nurture a long-term partnership with all of our clients. After delivering and installing equipment, our training and after-sales support is where we really add value. This is where Root Sciences' in-house knowledge and experience becomes so crucial, as we will have everything set up and running efficiently on day one. Furthermore, we are always just a phone call or an email away whenever support is needed. We also offer extended service and maintenance packages to keep your equipment in top condition and minimize the risk of downtime for your operations. As your partner, we have your back.