

# ecodyst

Accelerating the path to Discovery®

Modern, high-performance rotary evaporators with direct self-cooling condenser technology. No chillers. No dry ice.



Hydrogen Workhorse



Hydrogen Performance

## Some of our valued customers

Pfizer

J&J

GSK

AstraZeneca

Genentech

Eli Lilly

Panasonic

National Institutes of Health

Curia

UNC Chapel Hill

UC Berkeley

University of Oxford

NC State University

Princeton University

University of Michigan

U.S. Department of Energy

Purdue University

Bristol Myers Squibb

BP

Vanderbilt University

Merck



Smart Self-cooling



Fast Evaporation



Small Footprint



Energy Efficient



Eco-friendly



NO Water



NO Dry Ice



NO Glycol



NO Chiller

Reduce electricity consumption by over 50%, never have to change chiller fluids or find dry ice again, and dramatically decrease your run times! Ecodyst's Hydrogen is a high performance, self-cooling rotary evaporator with a compact footprint. The eco-friendly, energy-efficient, sustainable rotovap uses a built-in condenser which eliminates the need for glycol, dry ice or water while massively reducing coolant pull-down times and providing more heat transfer than even dry ice condensers.

By eliminating coolant and cutting electricity use by more than half, you will realize substantial operating cost savings. By combining the functions of a recirculating chiller and a rotary evaporator in the same compact body, you save precious lab space and eliminate messy tubing and leaks. The condenser cools to -20°C in just one minute and to -40°C in minutes, saving you time and making your lab more efficient.

**Available in two models:**

**Performance:** Built-in vacuum controller and touchscreen

**Workhorse:** LCD screen, lower cost



**Hydrogen Rotary Evaporator**

- Built-in condenser cools to -40°C
- From off to -20°C in 60 seconds
- 5L heating bath, room temp to 180°C
- Motorized evaporating flask lift
- Speed 20-280 rpm, timer, interval operation
- Accommodates up to 3000 mL evaporating flasks
- Built-in vacuum pump controller [Performance model only]
- Touchscreen display [Performance model only]
- Superior heat transfer - even vs. dry ice condensers!

*"The EcoChyll X1 has really accelerated our research because we don't have to wait for dry ice to arrive, it cools really quickly, and it evaporates really quickly. Since we constantly evaporate solvents in this type of research, overall we save a lot of time."*

**Dr. Vincent Lindsay, Assistant Professor,  
North Carolina State University**

**A lab at the University of Oxford ran a test to see how much time and energy savings were possible with the Ecodyst. The results are certain to impress you.**

**Download the study and see their data at [ecodyst.com/efficiency](http://ecodyst.com/efficiency).**

# Our devices are more than twice as fast and efficient as traditional rotovaps.

## Available In Two Models

	Hydrogen Workhorse	Hydrogen Performance
Screen	LCD	LED Touchscreen
Built-in Vacuum Controller	No	Yes
Condenser Temp. Range	RT to -40°C	RT to -40°C
Pull-down time to -20°C	1 minute	1 minute
Bath Temp. Range	RT to 180°C	RT to 180°C
Maximum Flask Size	3 liters	3 liters
Rotation Speed	20-280 rpm	20-280 rpm
Consumable coolant / dry ice	None	None

## Cooling Specifications

Condenser Temperature		Cooling Capacity		
°F	°C	BTU/h (+/-5%)	W (+/-5%)	Power Consumption (W) +/-5%
-40	-40	620	182	220
-30	-35	835	245	259
-20	-30	1116	327	300
-15	-25	1458	427	343
-10	-20	1857	544	388
5	-15	2322	680	434
10	-12	2844	833	482

Voltage: 100-120 V or 200-240 V, 50/60 Hz    Operating Temp Range: Ambient .... -40°C



Traditional rotary evaporators require coolants, which results in material waste. Ecodyst rotovaps use innovative direct self-cooling technology, reducing cost and eliminating material waste.

# Don't Want to Change Rotovaps?



Upgrades  
any existing  
rotovap

## EcoChyll X1 Benchtop Chiller

EcoChyll X1 is a powerful, small footprint smart self-cooling condenser with a large cooling surface area, and it is extremely quiet, efficient and fast. It is ready within 60 seconds of powering it on.

- Reduce energy consumption by over 50%
- Eliminate coolant waste & dry ice
- Reduce run times; reaches -10°C in one minute
- Much quieter than recirculating chillers
- Heat transfer superior to any glass condenser

## Praise for Ecodyst

*"As you know, I am a strong proponent of green chemistry and industrial processes. Thus, Ecodyst's unique solution is appealing to me, and I appreciate that the technology does not require a source of water or dry ice, eliminating the major sources of material waste associated with rotovaps. My students are also thrilled that the system is always available and has the ability to achieve temperature in less than five minutes (vs. more than 30 minutes for other technologies). This frees up time for students to focus on their science."*

**Professor Joseph DeSimone,  
Stanford University**

*"My laboratory in the Department of Chemistry at UC Berkeley has been happy to acquire three the EcoChyll and we have been thoroughly impressed with the system's performance. We have found the EcoChyll system to provide superior performance in terms of cooling. Our ability to control the temperature of the cold finger is critical. This has prevented the freezing of condensing solvents, which reduces efficiency. An aspect that we especially like is that the EcoChyll can be used during holidays/weekends when dry ice (for cooling purposes) is not delivered to our department."*

**Professor Richmond Sarpong,  
University of California, Berkeley**

*"My laboratory at NC State University purchased two EcoChyll units, and we have been thoroughly impressed with the system's performance. There is no doubt that the EcoChyll in our lab has significantly simplified our workflow and provided both cost savings and significant convenience as to not have to deal with dry ice. Compared to other chiller systems used previously this product is superior in every way and allows for constant, on-demand cooling at any time of day or night."*

**Professor Joshua Pierce, North  
Carolina State University**

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