

SAFE, GREEN, AND SUSTAINABLE HANDLING OF CATALYSTS IN CONTINUOUS FLOW



**CLEAN
HYDROGENATION**



**CONTINUOUS
FLOW TECHNOLOGY**



**IMPROVED
SAFETY**

Catalysis made safe and simple

CatCarts[®] are designed to make the handling of heterogeneous catalysts much safer and easier. These cartridges are reusable and compatible with the Phyto-Flow[™] system.

CatCarts[®] are made of a stainless-steel tube packed with a solid catalyst of a specific particle size range. A **filter system** at each end of the tube allows liquid to pass through the column while the catalyst remains inside.

We offer a **wide range** of different catalysts to suit most types of hydrogenation reactions: from the more common types, such as palladium on carbon and Raney-type nickel, to catalysts used for selective hydrogenations, such as rhenium catalysts.

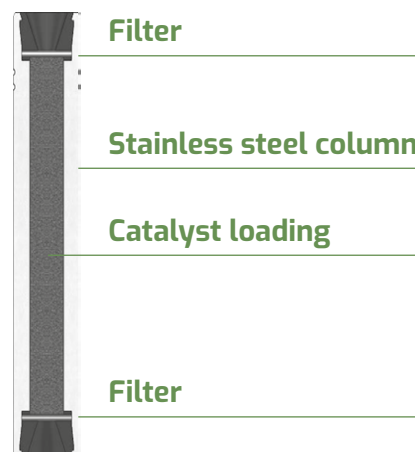
Advantages

- Safe handling – no contact between the user and the catalyst
- Exchange of the catalyst is quick and seamless
- No catalyst filtration is necessary
Ability to reuse catalyst with different substrates
- More efficient mixing of phases leading to higher reaction rates

How to use?

The insertion and exchange of CatCarts® into the reactor chamber is a very simple process. The user needs only to open the CatCart® holder, remove the used CatCart® and replace it with another cartridge. The whole process takes only a few seconds.

During a reaction, the liquid or gas-liquid mixture enters the CatCart® placed in the heated zone. The reaction takes place on the catalyst surface while the mixture passes through the cartridge. All the catalyst remains in the cartridge, so the user can proceed without catalyst filtration. After thorough washing with solvent, the CatCart® may be used again for the next reaction.



Select the CatCart® which suits your chemistry best

Various types and sizes of catalyst cartridges are available for a wide range of chemical applications.

- CatCarts® and MicroCatCarts™:** preloaded for small-scale reactions and catalyst screening
- MidiCarts™:** preloaded for scale-up, up to 1 kg/day production
- Metal-metal sealed cartridges:** customizable loading, from gram to kilogram scale synthesis

	Length (mm)	Catalyst bed length (mm)	Internal diameter (mm)
30 mm CatCarts®	30	24	4
70 mm CatCarts®	70	64	4
MicroCatCarts™	30	8	4
MidiCarts™	116	90	9.5
Metal-metal sealed columns	125, 250 or custom sizes	Variable	Variable

ThalesNano LLC

50 S. Penn St. Suite B-2
Hatboro PA. 19040 USA

Phone: 215-534-3365

E-mail: sales@phyto-flow.com



www.phyto-flow.com

