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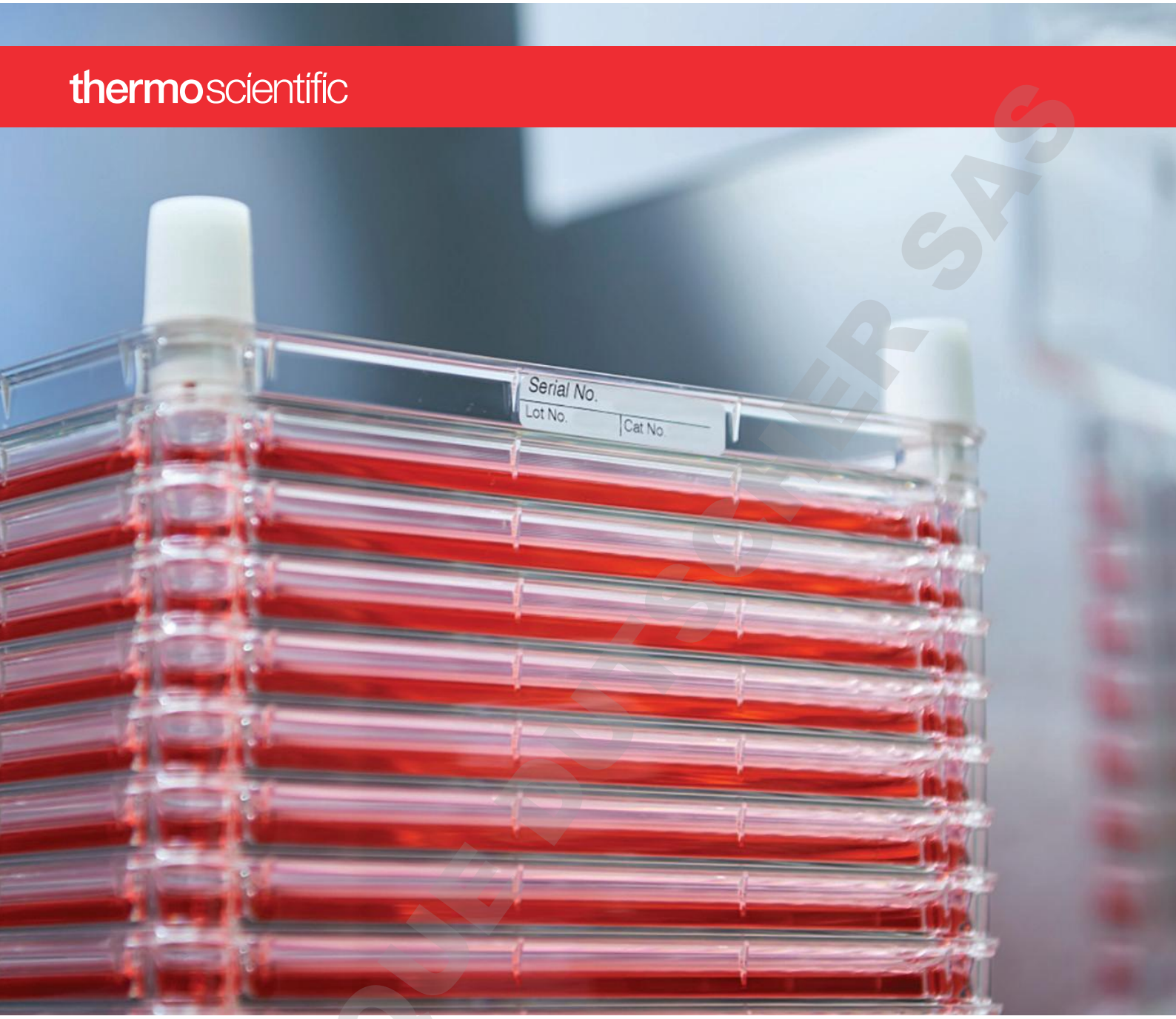


# Nunc Cell Factory systems

## For consistent cell culture performance

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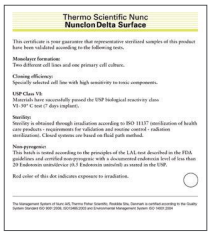
# The Thermo Scientific Nunc Cell Factory system difference


Thermo Scientific Nunc
Nunclon Delta Surface

This certificate is your guarantee that representative sterilized samples of this product have been validated according to the following tests.

**Monolayer formation:**
Two different cell lines and one primary cell culture.

**Cloning efficiency:**
Specially selected cell line with high sensitivity to toxic components.

**USP Class VI:**
Materials have successfully passed the USP biological reactivity class VI (50° C test (7 days implant).

**Sterility:**
Sterility is obtained through irradiation according to ISO 11137 (sterilization of health care products - requirements for validation and routine control - radiation sterilization). Closed systems are based on fluid path method.

**Non-pyrogenic:**
This batch is tested according to the principles of the LAL test described in the FDA guidelines and certified non-pyrogenic with a documented endotoxin level of less than 20 Endotoxin units/device (0.5 Endotoxin units/ml) as stated in the USP.

Red color of this dot indicates exposure to irradiation.

### Assured performance from lot to lot and format to format

The Thermo Scientific™ Nunclon™ Delta cell culture certification includes verification of monolayer formation and cloning efficiency across multiple cell lines. Scale up from Thermo Scientific™ Nunc™ Dishes and Flasks to the Thermo Scientific™ Nunc™ Cell Factory™ system with consistency, reliability, and confidence.

### Entrust your process to a truly aseptic design

The Nunc Cell Factory system's direct plug-and-play ports options enable you to optimize your process with confidence. No threaded screw caps to wet, exchange, or back off, which are common causes for contamination. Entrust your process with pre-assembled Nunc Cell Factory system solutions.

### No adhesive, no solvent, no bubble

The Nunc Cell Factory system is constructed of polystyrene chambers and assembled with welded technology—what you see is what you get.

### Customize with alternative port configurations and tubing sets

Further enhance your Nunc Cell Factory system with additional port options, including 3/8 in. (1.9 mm) OD barbed port and male MPC quick-disconnect fittings. Optimize your process with tubing sets pre-assembled directly onto your Nunc Cell Factory system.

### Five manufacturing lines

With local manufacturing on three continents, we ensure continuity of supply, so you can rest assured Nunc Cell Factory systems are there when you need them. Regional supply is key to your global expansion.

Find out more at **thermofisher.com/cellfactory**

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# Compact, single-use systems for easy scale-up

## Nunc Standard Cell Factory systems

Obtain faster results and lot-to-lot consistency with Nunc Cell Factory systems. A proven solution for large-scale production of cells, vaccines, and therapeutic proteins, these systems have the same growth kinetics as laboratory-scale cell culture products. The ports of the system make it easy to customize and close, with custom tubing assemblies that facilitate venting, filling, and harvesting; available in 1-, 2-, 4-, 10-, and 40-tray versions.

**Standard Cell Factory systems**

Nunclon Delta surface. Polystyrene chambers. Sterile.

| Cat. No. | No. of layers | Cull culture area | Nominal dimensions (L x W x H) | No. per pack | No. per case |
|---|---|---|---|---|---|
| 165250 | 1 | 632 $cm^2$ | 335 x 205 x 35 mm (13.2 x 8.1 x 1.4 in.) | 1 | 8 |
| 167695 | 2 | 1,264 $cm^2$ | 335 x 205 x 53 mm (13.2 x 8.1 x 2.1 in.) | 1 | 6 |
| 140004 | 4 | 2,528 $cm^2$ | 335 x 205 x 87 mm (13.2 x 8.1 x 3.4 in.) | 1 | 10 |
| 164327 | 10 | 6,320 $cm^2$ | 335 x 205 x 190 mm (13.2 x 8.1 x 7.5 in.) | 1 | 2 |
| 170009 | 10 | 6,320 $cm^2$ | 335 x 205 x 190 mm (13.2 x 8.1 x 7.5 in.) | 1 | 6 |
| 139446 | 40 | 25,280 $cm^2$ | 335 x 205 x 698 mm (13.2 x 8.1 x 27.5 in.) | 1 | 2 |

**Each Nunc Cell Factory system includes a set of:**

White Tyvek™ filter adaptor caps (Cat. No. 167525)

Port cover cap, blue (Cat. No. 170615)

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# Efficient, economic option for increasing production capacity

## Nunc High Density Cell Factory systems

Thermo Scientific™ Nunc™ High Density Cell Factory systems provide a simple solution for increasing cell culture yields. With its additional layers, the new High Density Cell Factory systems are designed to optimize your process by increasing your output, while maintaining the same manufacturing footprint as with the standard Nunc Cell Factory system.

- **Increase your yield**—30% more surface area and yield* all within the standard Nunc Cell Factory system footprint
- **Enhance your productivity**—increase your labor and handling efficiencies by achieving more output in a single process run
- **Improve your process economics**—increase your manufacturing capacity without capital investment
- **Seize environmental opportunities**—consume less, and reduce your decontamination and waste disposal costs

**Nunc High Density Cell Factory systems**
Nunclon Delta surface. Polystyrene chambers. Sterile.

| Cat. No. | No. of layers | Cull culture area | Nominal dimensions (L x W x H) | No. per pack | No. per case |
|---|---|---|---|---|---|
| 169160 | 3 | 1,896 $cm^2$ | 333 x 204 x 54 mm (13.1 x 8.0 x 2.1 in.) | 1 | 4 |
| 169118 | 13 | 8,216 $cm^2$ | 333 x 204 x 186 mm (13.1 x 8.0 x 7.3 in.) | 1 | 3 |
| 169102 | 52 | 32,864 $cm^2$ | 333 x 204 x 698 mm (13.1 x 8.0 x 27.5 in.) | 1 | 1 |

* The increase in yield may vary depending on the type of cells cultured.

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# Versatile and easy to use

## Nunc EasyFill Cell Factory systems

Thermo Scientific™ Nunc™ EasyFill™ Cell Factory™ systems are an out-of-the-box, multi-layer solution, as easy to use as a T-flask. Scale up with confidence. These systems feature our certified Thermo Scientific™ Nunclon™ Delta cell culture surface, which is available on most Nunc cell culture products to assure consistent performance from lot to lot and from format to format.

- **Save valuable space**—each 10-layer Nunc EasyFill Cell Factory system is equivalent to 36 T175 flasks
- **Enhance productivity**—fill and empty 5 times faster compared to T175 flasks
- **Achieve fast start-up**—to get started, simply pour your media and cells directly into the large opening
- **Versatile port**—designed to facilitate pouring and aseptic filling techniques

**Nunc EasyFill Cell Factory systems**

Nunclon Delta surface. Polystyrene chambers. Sterile.

| Cat. No. | No. of trays | Cell culture area | Nominal dimensions L x W x H | Quantity per pack/case |
|---|---|---|---|---|
| 140000 | 1 | 632 $cm^2$ | 335 x 205 x 35 mm (13.2 x 8.1 x 1.4 in.) | 1/6 |
| 140250 | 2 | 1,264 $cm^2$ | 335 x 205 x 53 mm (13.2 x 8.1 x 2.1 in.) | 1/6 |
| 140360 | 4 | 2,528 $cm^2$ | 335 x 205 x 87 mm (13.2 x 8.1 x 3.4 in.) | 1/4 |
| 140400 | 10 | 6,320 $cm^2$ | 335 x 205 x 190 mm (13.2 x 8.1 x 7.5 in.) | 1/2 |
| 140410 | 10 | 6,320 $cm^2$ | 335 x 205 x 190 mm (13.2 x 8.1 x 7.5 in.) | 1/6 |
| 140440 | 40 | 25,280 $cm^2$ | 335 x 205 x 698 mm (13.2 x 8.1 x 27.5 in.) | 1/2 |

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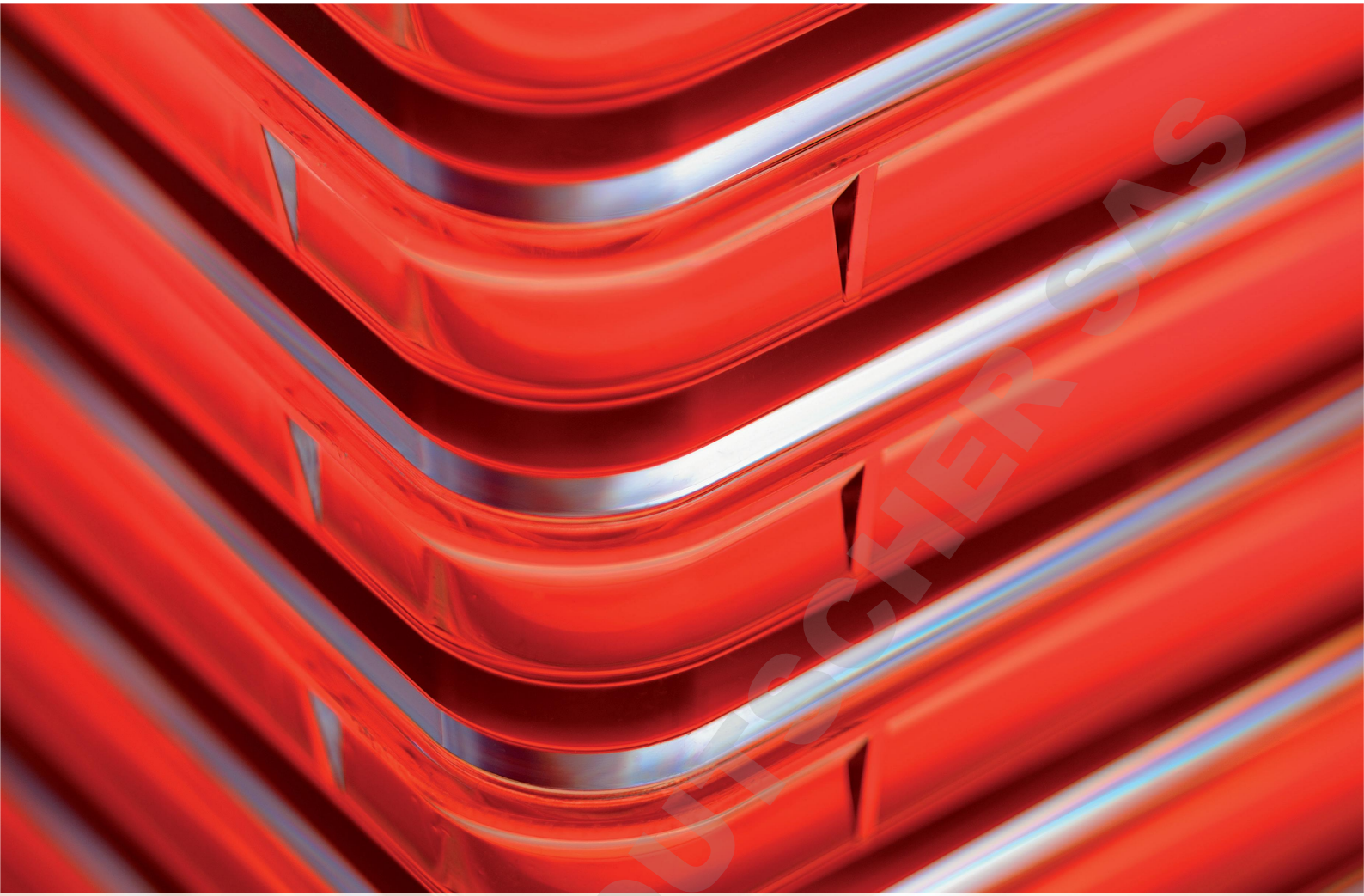

# More confidence—less risk

## Certified non-cytotoxic, non-pyrogenic, and adhesive-free

Nunc Cell Factory multi-layer systems are designed for a variety of biological and commercial applications. With a certified sterility assurance level of $10^{-6}$ achieved following ISO 11137-2 guidelines and Nunclon Delta surface treatment, you can be assured of consistent performance from layer to layer and from lot to lot. Our cell culture certification includes verification of monolayer formation and cloning efficiency using four different cell lines.

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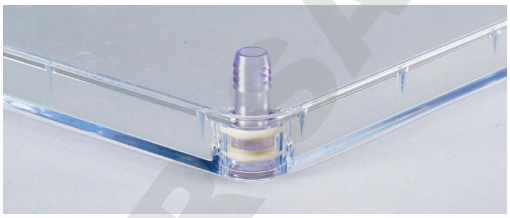
# Connectivity made easy

A full line of accessories is available for the Nunc Cell Factory systems, supporting the use of aseptic methods for fluid handing related to filling, inoculation, feeding, and harvesting. These accessories enable further development of the applications requiring a more closed cell culture system, reducing the number of open interventions.



| Cat. No. | 146008 | 147074 | 140067 | 140080 | 170769 | 140815 | 140817 |
|---|---|---|---|---|---|---|---|
| Description | Nunc EasyFill replacement vent caps | Nunc EasyFill vent/close cap | 1.0 µm air vent filter assembly | 0.22 µm air vent filter assembly | Start-up kit* | Tubing set with female MPC connector | Feed tubing set with male MPC connector |
| Material | HDPE | HDPE | HDPE Closure | HDPE Closure | – | – | – |
| Gamma irradiated | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Units per packs/case | 1/10 | 1/100 | 1/2 | 1/2 | 1/1 | 1/2 | 1/2 |
| System compatibility | Nunc EasyFill | Nunc EasyFill | Nunc EasyFill | Nunc EasyFill | All | All | All |

* Includes HDPE connector (Cat. No. 171840), white Tyvek filter adapter cap (Cat. No. 167525), port cover caps (Cat. No. 170615), tubing clamp, and 2 m silicone tubing. Clamp and tubing not sold separately.

| Cat. No. | 140099 | 171840 | 173250 | 167525 | 170615 | 179553 | 173248 | 173249 |
|---|---|---|---|---|---|---|---|---|
| Description | Nunc Cell Factory connector | Nunc Cell Factory connector | Nunc Cell Factory connector (autoclavable) | White Tyvek filter adaptor cap | Port cover cap, blue | Individual 1.0 µm air vent filter | 1.0 µm air vent filter assembly | 0.22 µm air vent filter assembly |
| Material | PC | HDPE | FEP | HDPE | HDPE | – | – | – |
| Gamma-irradiated | No | No | No | Yes | Yes | Yes | Yes | Yes |
| Units per pack/case | 10/10 | 10/10 | 2/2 | 1/20 | 2/40 | 1/10 | 1/2 | 1/2 |
| System compatibility | All | All | All | All | All | All | All | All |

For information visit **thermofisher.com/cfaccessories**

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# Maximize productivity with automation solutions

Develop a fully commercial-scale process using Nunc Cell Factory systems. Equipment options include an automated manipulator, a $CO_2$ incubator, and a shaker. The versatile cart and racks systems are compatible with all equipment and allow simultaneous processing of 12 CF10/HDCF13 systems or 4 CF40/HDCF52 systems.

## Nunc automated Cell Factory manipulator

The Thermo Scientific™ Nunc™ Cell Factory™ manipulator is a fully programmable system that automates the handling of Nunc Cell Factory systems. Simplify and achieve constant and reliable processes. Designed for use in clean room environments, all functions can be activated by the touch of a button. Note: A simple component adjustment is needed for use with High Density Cell Factory systems.

## Nunc Cell Factory Shaker system

The Thermo Scientific™ Nunc™ Cell Factory™ shaker system offers an automated solution for the detachment of cells from Nunc Cell Factory systems; it eliminates the need for shaking and pounding, and supports workflow efficiency.

## Nunc Cell Factory incubator

The Thermo Scientific™ Nunc™ Cell Factory™ incubator is a mobile solution for incubation of 48 CF10/HDCF13 systems or 16 CF40/HDCF52 systems. It is available with and without $CO_2$ control.

## Nunc Cell Factory Racks and Carts

Manipulate, incubate, and transport efficiently using Nunc Cell Factory Racks and Carts. Each rack can hold up to four Nunc Cell Factory 40 systems or twelve Cell Factory 10 systems. Racks and carts are designed to integrate perfectly with all Nunc Cell Factory equipment.

Find out more at **thermofisher.com/cfequipment**

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