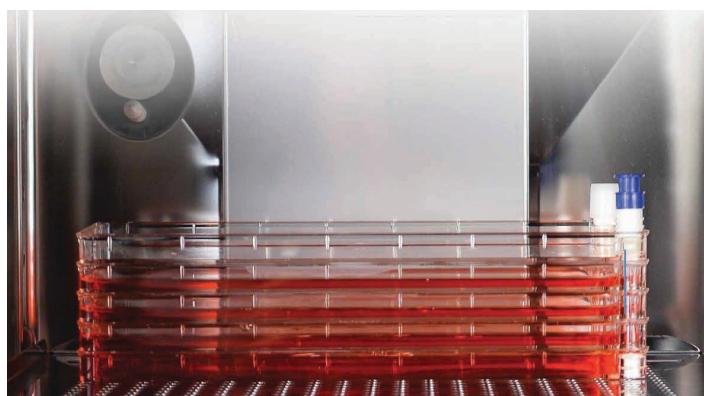


## Why combine Heracell and Forma CO<sub>2</sub> incubators and Nunc Cell Factory Systems as you expand your cell culture?

With expanding techniques for growing neuronal, immune-derived, and stem cells or production of vaccines and biological therapies, cell culture labs, research institutes, and biotechnology and pharmaceutical companies are investigating scale-up of adherent cell culture. A convenient and economic approach will extend capacity and optimize cell growth by combining the technologies of Thermo Scientific™ CO<sub>2</sub> incubators and Thermo Scientific™ Nunc™ Cell Factory™ systems. Thermo Scientific™ Forma™ and Heracell™ CO<sub>2</sub> incubators come in a wide range of sizes and features to augment cell growth. Nunc Cell Factory systems provide a certified culturing surface, space-saving flexibility, and options that adjust with your current and future needs. Table 1 offers a convenient guide with common configurations for efficient combination.



### Thermo Scientific CO<sub>2</sub> incubators: a history of optimal growth and contamination control

Building on more than 60 years of CO<sub>2</sub> incubator design, the Thermo Scientific CO<sub>2</sub> incubator portfolio offers different models to fit the needs of your lab and your project goals.

**Table 1. Nunc Cell Factory systems are ideal for use in a variety of Thermo Scientific CO<sub>2</sub> incubators.** Shown are estimates of the number of Nunc Cell Factory systems that will fit per shelf and per chamber in popular CO<sub>2</sub> incubator models.

Thermo Scientific CO <sub>2</sub> incubators						
Nunc Cell Factory system	Heracell VIOS 160i, Forma Steri-Cycle i160, Heracell 150i	Forma Water Jacket, Forma Direct Heat models	Heracell VIOS 250i, Forma Steri-Cycle i250, Heracell 240i	Forma Steri-Cult	Forma Steri-Cult	Large-Capacity Reach-In
	150–165 L	184 L	240–255 L	232 L	323 L	821 L
<b>Nunc Cell Factory system number per shelf</b>						
Standard 2-layer, high-density 3-layer	2	2	3	2	3	6
Standard 4-layer	2	2	3	2	3	6
Standard 10-layer, high-density 13-layer	2	2	3	2	3	6
<b>Nunc Cell Factory system number per chamber</b>						
Standard 2-layer, high-density 3-layer	8 (4 shelves)	5	15 (5 shelves)	8	12	42 (7 shelves)
Standard 4-layer	8 (4 shelves)	5	12 (4 shelves)	8	12	42 (7 shelves)
Standard 10-layer, high-density 13-layer	4	4 (2 shelves)	6 (2 shelves)	6	9	30 (5 shelves)

Available sizes range from 40 L (1.4 ft<sup>3</sup>) to 821 L (29 ft<sup>3</sup>). Cell culturists around the globe acknowledge the importance of fan-assisted active air circulation and in-chamber sensors for critical culturing conditions that mimic the *in vivo* environment. Standard contamination control features include proven ISO Class 5 HEPA filtration and automated high-temperature sterilization cycles verified to meet international pharmacopeia requirements.

Selected models offer protected, integrated humidity systems, 100% pure copper interiors, increased weight capacity, and reinforced shelves to support your expanding culture goals. Cutting-edge CO<sub>2</sub>, oxygen, and temperature sensors provide accurate, long-lived feedback and constantly monitor and react to the same conditions your cells experience.

## **Nunc Cell Factory systems: flexibility and consistency**

Multi-layered Nunc Cell Factory systems with Thermo Scientific™ Nunclon™ Delta cell culture certification offers lot-to-lot and format-to-format performance consistency to support your research and cGMP goals. The plug-and-play ports of the Nunc Cell Factory system minimize common causes of contamination such as wetted filter caps, screw cap exchanges, or loss of closure torque due to back-off. Sizes range from the 1-layer Cell Factory system to a 52-layer system offering surface areas of 632 cm<sup>2</sup> up to 32,864 cm<sup>2</sup> in a single unit. The Nunc High Density Cell Factory systems offer 30% more surface area and yield in the same footprint as the standard Nunc Cell Factory system. Increase your capacity without consuming additional manufacturing space. Process changes are minimized with the integration of common Nunc Cell Factory system design elements including the same materials of construction. It is scalability without the challenges of changing production platform or capital investments. The Nunc High Density Cell Factory system is available in 3-, 13-, and 52-layer formats.



## **Combine these technologies for maximum benefit**

Nunc Cell Factory systems are a natural fit with Thermo Scientific CO<sub>2</sub> incubators. The combination offers optimal cell growth and effective contamination control. Together, they are increasingly adopted in cGMP environments due to Thermo Scientific™ product technology leadership, reliability, and ease of use.

## **Summary**

For scale-up of leading-edge cell culture applications, Nunc Cell Factory systems together with Thermo Scientific CO<sub>2</sub> incubators provide superior culturing environments, efficient cell growth, and large-capacity lab incubation platforms to power your research and production goals.

Find out more at [thermofisher.com/co2](https://thermofisher.com/co2) and [thermofisher.com/cellfactory](https://thermofisher.com/cellfactory)

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