



Introduction to SMC's Non F-Gas (CO₂ Refrigerant) Thermo-chillers for the Semiconductor Industry

GWP: 1
(Natural refrigerant)

EU refrigerant regulations:
GWP150 or more
US refrigerant regulations:
GWP700 or more
California, US refrigerant regulations: GWP750 or more

* "GWP" indicates the global warming potential. The values are based on the IPCC AR4.

Air transport possible

No air transport restrictions for non-toxic and non-flammable*² refrigerants

*² A1 (ASHRAE34 standard)

Footprint reduced by 21%*³

Slim design allows for efficient chiller layout.

*³ SMC comparison

Improved workability

The circulating fluid can be refilled from the front.

No F-Gas management required

Eliminates the need for periodic inspections based on the Fluorocarbon Emissions Control Act (Japan)

No F-Gas recovery & disposal costs

Eliminates the need to pay for F-Gas recovery & disposal



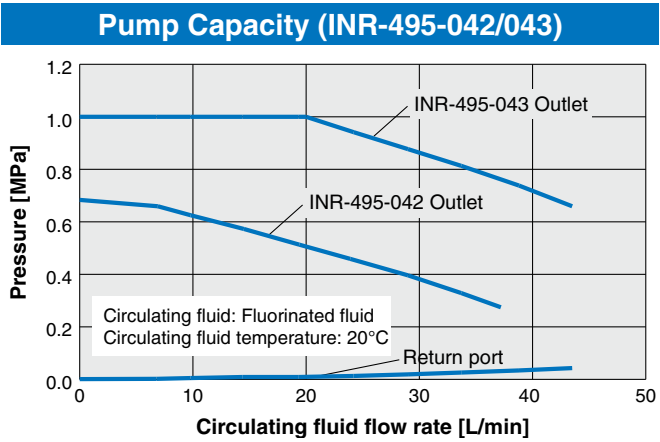
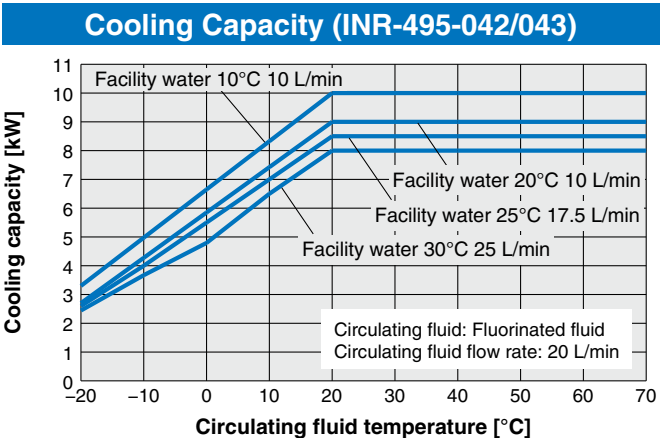
INR-495-042/043

P-E23-7 [Ⓐ]



- Refrigerant in use: CO₂ (R744)
- GWP: 1
- Standards: SEMI/CE/UL

Specifications	Series	INR-495-042	INR-495-043	New HRZ
Set temperature range [°C]		-20 to 70		-20 to 90
Temperature stability [°C]		±1.0		±0.1
Cooling capacity [kW] (@20°C)		8.5 (@20°C)		10 (@20°C)
Breaker capacity [A]		20	30	
Dimensions [mm]		307 (W) x 849 (D) x 1640 (H)		380 (W) x 870 (D) x 950 (H) (Dimensions equivalent to those of the existing HRZ)
Release date		Currently available		Scheduled for September 2024



GWP Comparison					
Environmental burden	Smaller	←			Larger
GWP*1	1	150 or less	151 to 1000	1001 to 2999	3000 or more
Air transport	Yes	No	No	Yes	Yes
Refrigerant (Example)	R744 (CO ₂)	R454C	R32	R410A	R404A

*1 Global Warming Potential

SMC's Global Maintenance Network

Thanks to a solid inventory of maintenance parts and an experienced chiller support team capable of conducting repairs and replacements, SMC is able to respond to customers' issues quickly and precisely. As SMC's high-quality services are available to customers all over the world, you can rest assured that you'll have our continued support long after purchase.

Americas	Europe	Asia and Oceania
Brazil U.S.A. Mexico	Austria Czech Republic Denmark Finland France Germany Hungary Ireland Italy Latvia Netherlands	Norway Poland Russia Slovakia Slovenia Spain/Portugal Sweden Switzerland Turkey U.K.
		Australia China Hong Kong India Indonesia Japan Korea Malaysia
		New Zealand Philippines Singapore Taiwan Thailand Vietnam

* The names of countries and regions listed in each area are alphabetically indexed

Safety Instructions Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use.

SMC Corporation