



INSTITUT INTERNATIONAL DU FROID
INTERNATIONAL INSTITUTE OF REFRIGERATION

THE IIR...

At the heart of sustainable
development

The importance of refrigeration

Energy consumption of refrigeration equipment (including air-conditioning) must be reduced:

- Lack of energy infrastructures
- Indirect global warming impact
- Renewable energy – heat pumps, solar energy...

Most refrigeration equipment (including air-conditioning) use refrigerants:

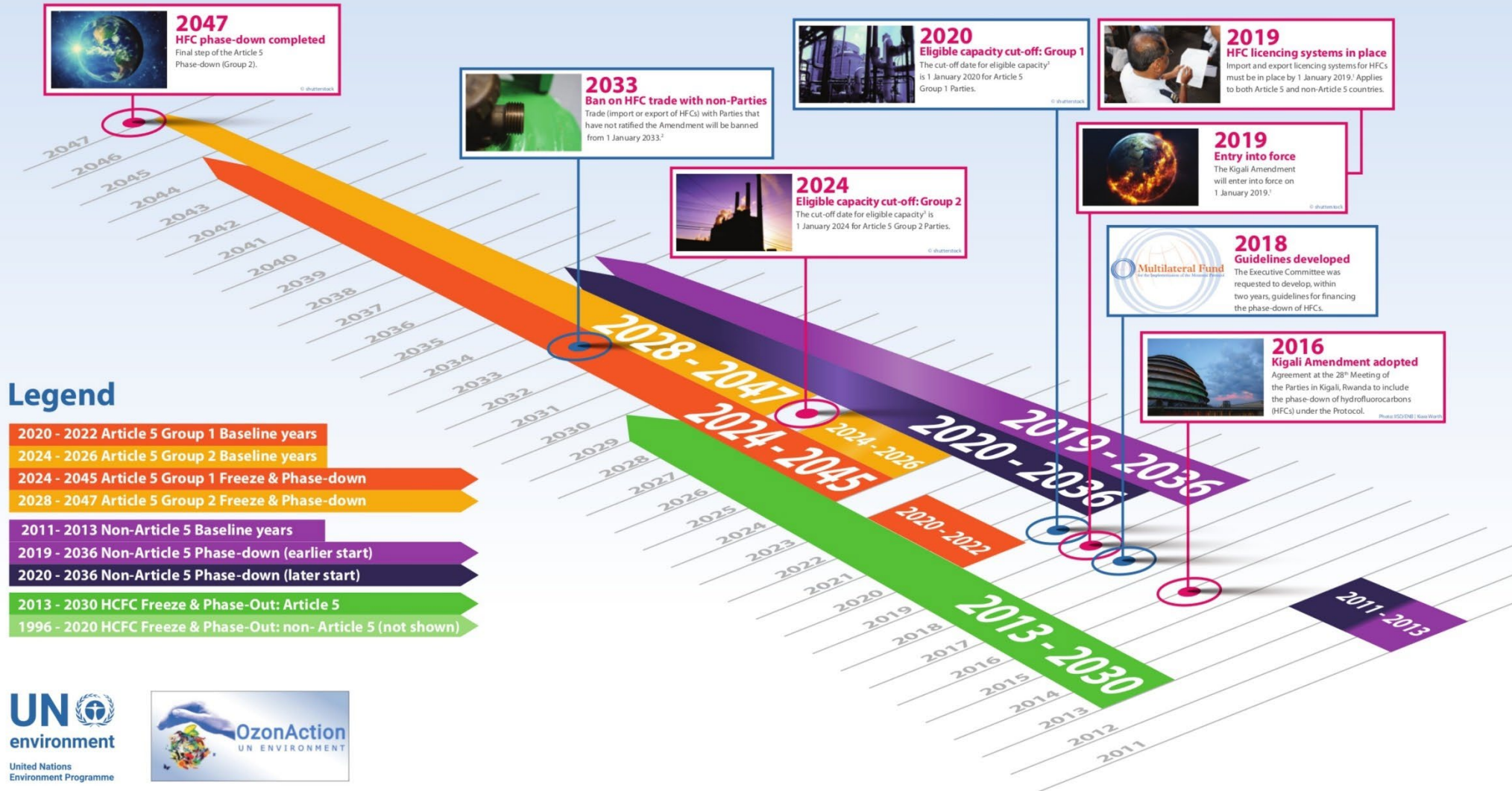
- CFCs and HCFCs destroy the stratospheric ozone layer

Most refrigerants (CFCs, HCFCs, HFCs) are potent greenhouse gases:

- HCFCs will be phased out
- HFCs will be phased down – Kigali Amendment

Consequences will be very important for the entire planet!

The Path from Kigali: HFC Phase-Down Timeline



Key world figures

Roughly **5 billion** refrigeration, air-conditioning and heat pump systems in operation

Over **15 million** people employed in the refrigeration sector

Annual sales amount to approximately **500 billion USD**

Refrigeration consumes about **20%** of the overall electricity used

7.8% of greenhouse gases emissions are attributed to the refrigeration sector:
63% are indirect emissions and **37%** are direct emissions

Source: 38th IIR Informatory Note: The role of refrigeration in the global economy
35th IIR Informatory Note: The impact of the refrigeration sector on climate change



About us

International Institute of Refrigeration



Who is the IIR?



1st IIR International Congress of Refrigeration – 1908, Paris Sorbonne (France)

Founded in 1908

The IIR is an independent intergovernmental science and technology-based organisation

Objective: Worldwide dissemination of knowledge on all refrigeration technologies and uses

“Refrigeration for Sustainable Development”

Science and Technology Council

Five IIR Sections covering all fields of refrigeration!

Section A Cryogenics and liquefied gases	Section B Thermodynamics, equipment and systems	Section C Biology and food technology	Section D Storage and transport	Section E Air-conditioning, heat pumps and energy recovery
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Key domains include...

- Food quality and safety from farm to consumer
- Comfort in homes and commercial buildings
- Healthcare products and services
- Low temperature and liquefied gas technologies
- Energy efficiency
- Safe use of non-ozone depleting and low global warming refrigerants



International network

59

Member Countries

+950

Corporate and Private Members

+300

Experts



Food and Agriculture
Organization of the
United Nations



OzonAction



OECD
BETTER POLICIES FOR BETTER LIVES



AFD
AGENCE FRANÇAISE
DE DEVELOPPEMENT



CIHEAM



World Health
Organization

What do we do?

A refrigeration information network adapted to your needs!



FRIDOC

FRIDOC database

Accueil → Publications de l'IIF → Ouvrages de l'IIF

OUVRAGES DE L'IIF

L'IIF publie des ouvrages sur le froid et ses applications : documents de référence, guides, brochures et diagrammes sur les propriétés des frigorigènes.

SÉLECTION DE NOS PARUTIONS

<p>Options technologiques pour le froid commercial Technological options for retail refrigeration</p> <p>Auteur(s) : Foster A., Hammond E., Brown T. et al Editeur : IIF-IIR / London South Bank University Date de parution : Nov 2018 Format : ePub - Version anglaise</p> <p>Disponible</p> <p>Consulter →</p>	<p>Options technologiques pour le froid commercial Technological options for retail refrigeration</p> <p>Auteur(s) : Foster A., Hammond E., Brown T. et al Editeur : IIF-IIR / London South Bank University Date de parution : Nov 2018 Format : ePub - Version anglaise</p> <p>Disponible</p> <p>Consulter →</p>
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Rechercher dans FRIDOC

The most comprehensive refrigeration database in the world!

FRIDOC database includes all IIR publications and seminal works in refrigeration

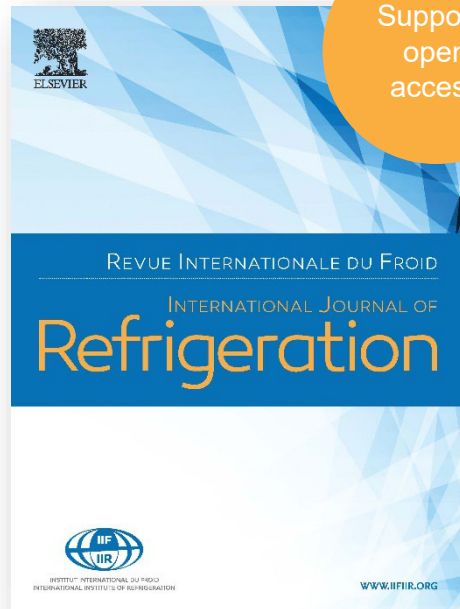
Unlimited downloads for IIR members

- Over 107,000 scientific and technical references



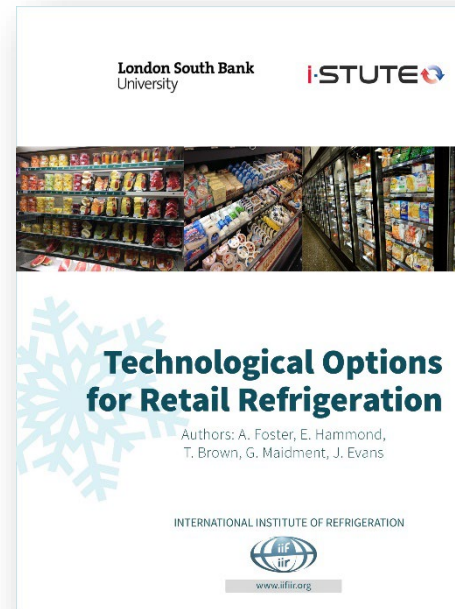
FRIDOC

FRIDOC database: Most consulted

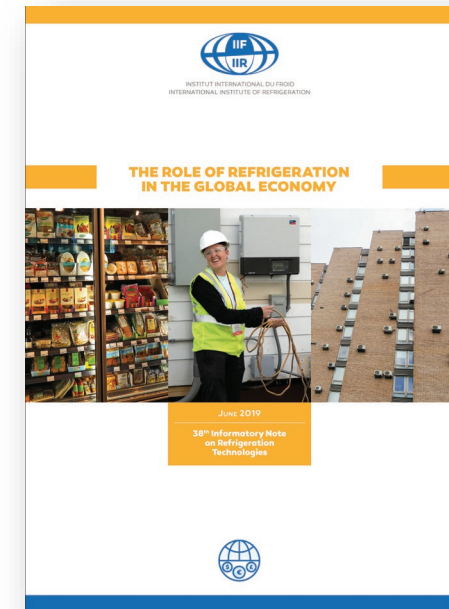


Supports
open
access

International Journal
of Refrigeration



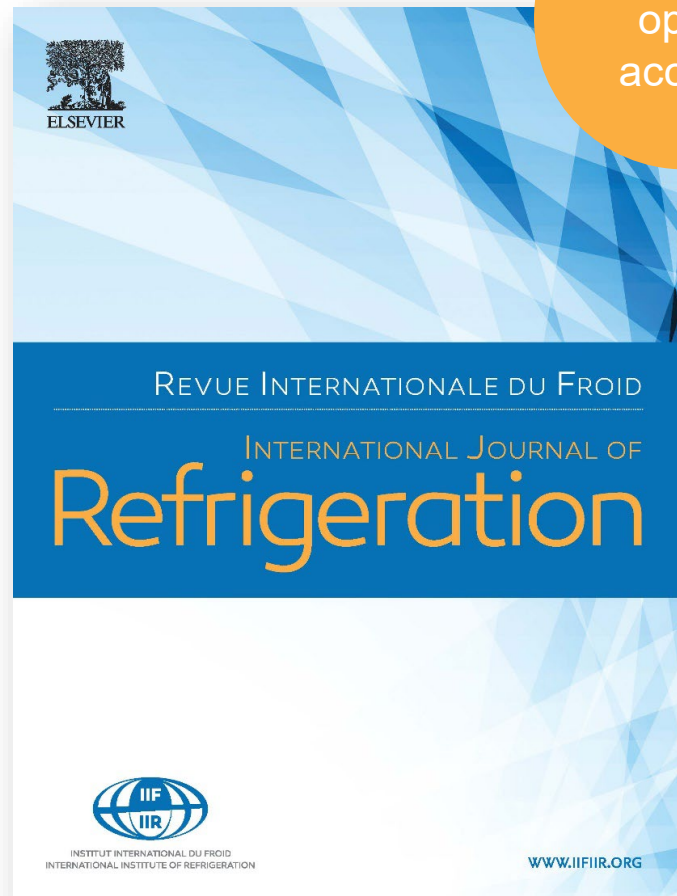
Guides and reports



Informatory Notes

International Journal of Refrigeration

Supports
open
access



The IJR is a peer reviewed scientific journal

The best in its field!

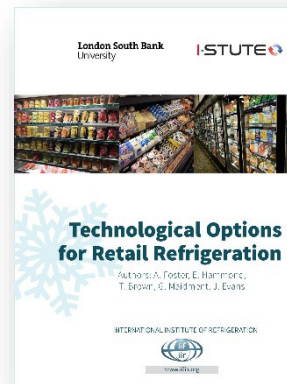
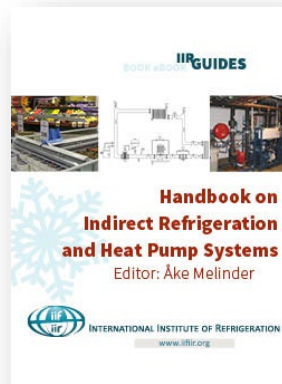
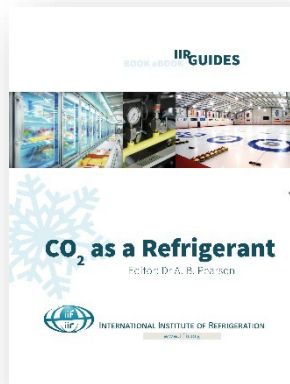
IIR members can access all editions of the IJR online

- **First published in 1978**
- **Over 6,000 articles**
- **12 issues per year**
- **3.629 Impact Factor**



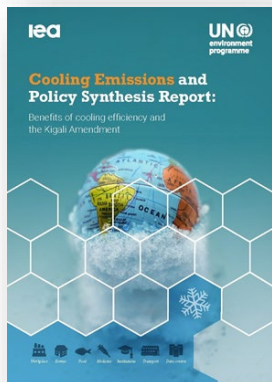
FRIDOC

Guides and reports



Publications addressing key issues at the heart of refrigeration

IIR members receive a discount of up to 25% on purchases



- Over 4,000 books, guides and reports by the IIR or its partners



FRIDOC

Informatory Notes

Refrigeration Technologies

- 42nd Note: State of the art of new technologies applied to chillers
- 41st Note: Air source heat pumps for space heating and cooling
- 40th Note: Solar cooling
- 39th Note: Whole-body cryotherapy/cryostimulation
- 38th Note: The role of refrigeration in the global economy
- 35th Note: The impact of the refrigeration sector on climate change

Refrigeration and Food

- 7th Note: The carbon footprint of the cold chain
- 6th Note: The role of refrigeration in worldwide nutrition

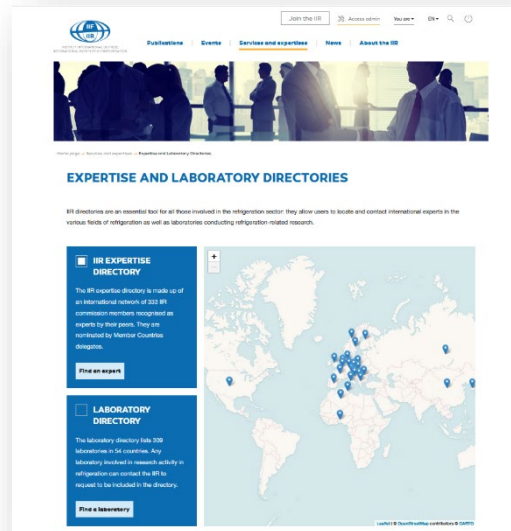
Cold Chain Technology briefs



Designed to meet the needs of decision-makers worldwide



Information resources



Two Professional Directories
Expertise and Laboratories



International Dictionary
of Refrigeration

and much more!...

- Encyclopedia of Refrigeration
- Monthly newsletter
- Sector monitoring
- Personalised documentation search
- eAlerts

FRIDOC

- Conference papers
- Policy briefs
- Thematic files
- Files on regulation

Conferences

- **International Congress of Refrigeration**
- Sustainability and the Cold Chain
- Caloric Cooling and Applications of Caloric Materials
- IIR-Gustav Lorentzen on Working Fluids
- Application of HFO Refrigerants
- Ammonia and CO2 Refrigeration Technologies
- Compressors and Refrigerants
- Cryogenics
- Thermophysical Properties and Transfer Processes of Refrigerants
- Phase-Change Materials and Slurries for Refrigeration and Air-Conditioning
- Liquefied Natural Gas

And also...

- Co-sponsored conferences
- International meetings

Reduced
registration
fees for
members to
IIR
conferences



IIR Working Groups

Striving to achieve a common objective

- Refrigeration safety
- Whole-body cryotherapy or cryostimulation
- Careers in refrigeration "CARE"
- Cold chain in hot countries
- Demand-oriented non-uniform indoor environment
- Dehumidification in air-conditioning
- Data and modelling tools for food refrigeration and the cold chain – FRISBEE international
- Cold chain for pharmaceutical products
- Phase-change materials and slurries for refrigeration and air-conditioning
- Magnetic cooling



Research and development projects



A consortium partner in international research projects since 2011 with:

- Countries funds (Norway...)
- The European Commission
- The World Bank
- UN Environment Programme, UNIDO....

**Contact us for support
on your next project!**



Become a member!

Benefits include:

- Access to an international network of refrigeration experts
- Unlimited downloads from FRIDOC
- Reduced registration fees to IIR conferences
- Access to all articles of the IJR
- News and updates on the refrigeration sector

Sign-up
online

Benefactor members:



Call for
abstracts now
open!



ICR 2023

See you in Paris, France!

26th IIR International Congress of Refrigeration
August 21-25, 2023



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INTERNATIONAL INSTITUTE OF REFRIGERATION
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Thank you