

F25D

REFRIGERATORS; COLD ROOMS; ICE-BOXES; COOLING OR FREEZING APPARATUS NOT COVERED BY ANY OTHER SUBCLASS (refrigerated show cases [A47F 3/04](#); thermally-insulated vessels for domestic use [A47J 41/00](#); refrigerated vehicles, see the appropriate subclasses of classes [B60](#) - [B64](#); containers with thermal insulation in general [B65D 81/38](#); heat-transfer, heat-exchange or heat-storage materials, e.g. refrigerants, or materials for the production of heat or cold by chemical reactions other than by combustion [C09K 5/00](#); thermally-insulated vessels for liquefied or solidified gases [F17C](#); air-conditioning or air-humidification [F24F](#); refrigeration machines, plants or systems [F25B](#); cooling of instruments and comparable apparatus without refrigeration [G12B](#); cooling of engines or pumps, see the relevant classes)

Definition statement

This place covers:

Refrigerators; cold rooms; ice-boxes; cooling or freezing apparatus not covered by any other subclass.

Relationships with other classification places

[F24F](#): "air-conditioning" means the supply of air to rooms or spaces by means which provide for the treatment of the air in at least two of the following ways: heating-cooling-any other kind of treatment, e.g. humidification.

Other household appliance fields are [A47L](#) (domestic washing), [D06F](#) (domestic laundry driers), [F24B](#) (domestic stoves).

References

Limiting references

This place does not cover:

Refrigerated show cases	A47F 3/04
Thermally-insulated vessels for domestic use	A47J 41/00
Refrigerated vehicles	B60 - B64
Containers with thermal insulation in general	B65D 81/38
Heat-transfer, heat-exchange or heat-storage materials, e.g. refrigerants, or material for the production of heat or cold by chemical reactions other than by combustion	C09K 5/00
Cooling of engines or pumps	F04B , F04C , F04D
Thermally-insulated vessels for liquefied or solidified gases	F17C
Air-conditioning or air-humidification	F24F
Refrigeration machines, plants or systems	F25B
Production, working, storing or distribution of ice	F25C
Cooling of instruments and comparable apparatus without refrigeration	G12B

Informative references

Attention is drawn to the following places, which may be of interest for search:

Non-refrigerated containers specially adapted for transporting or storing living parts whilst preserving, e.g. cool boxes, blood bags or straws for seminal fluid	A01N 1/0263
Cooling of specific food	A23B
Cooling of meat	A23B 4/06
Cooling of fruit	A23B 7/04
Cooling of ice cream	A23G 9/00
Cooling of food in general	A23L 3/36
Cooled garments	A41D 13/0053
Casings for protecting, packaging, dispensing articles for surgery	A61B 50/30
Containers specially adapted for medical or pharmaceutical purposes	A61J 1/00
Cooling of protective clothing	A62B 17/006
Heat insulating devices, e.g. jackets for flasks, for laboratory	B01L11/02
Conveyors	B65G
Laptop cooling	G06F 1/20
Coin-freed or like apparatus with heating or cooling means	G07F 9/105
Computer/electronics cooling	H05K 7/00

Special rules of classification

Devices not associated with refrigerating machinery: [F25D 1/00-F25D 9/00](#)

Devices associated with refrigerating machinery: [F25D 11/00-F25D 16/00](#)

Details or features of the devices covered by groups [F25D 1/00](#) - [F25D 16/00](#):
[F25D 17/00-F25D 31/00](#)

Only classify a household appliance when a refrigerator or freezer is mentioned or when a refrigerator or freezer is shown in the drawings. Always circulate to the following household appliance fields:

[A47L](#) (domestic washing), [D06F](#) (domestic laundry driers), [F24B](#) (domestic stoves).

Glossary of terms

In this place, the following terms or expressions are used with the meaning indicated:

Device	means an enclosed space to be cooled; such devices being associated either with refrigerating machinery, e.g. in a refrigerator, or with other cold sources, e.g. in an ice-box.
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F25D 3/005

{combined with heat exchangers}

Special rules of classification

Classify in [F25D 3/005](#) when only details of the heat exchanger are claimed.

When heat exchangers are combined with a cooling cycle: [F25D 16/00](#).

When combined with or situated in refrigerators: [F25D 11/006](#).

F25D 3/02

using ice, e.g. ice-boxes

Special rules of classification

Not only use of ice, but also PCM's, i.e. Phase Change Materials, blue ice.

F25D 3/06

Movable containers

Special rules of classification

Classify also in [F25D 2303/08](#).

F25D 3/08

portable, i.e. adapted to be carried personally

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Special arrangement or features of devices using cold storage material	F25D 2303/08
Type of cooled receptacles	F25D 2331/80
Lunch or picnic boxes	A45C 11/20
Drinking glasses	A47G 19/2205
Thermally insulated vessels with heat or cold storing elements or material for kitchen equipment	A47J 41/0044
Cooling bags for medical or therapeutic treatment of human body	A61F 7/10
Containers with thermal insulation in general	B65D 81/38
Materials undergoing a change of state from liquid to solid	C09K 5/06
Using latent heat	F28D 20/02

Special rules of classification

In case no details are claimed about cooling material, but only details about cooling box itself, no classification in [F25D 3/08](#).

Special arrangements or features of devices using cold storage material are additionally classified in [F25D 2303/08](#) and lower.

Features of the cooled receptacles are classified in [F25D 2331/80](#) and lower.

F25D 3/10

using liquefied gases, e.g. liquid air {(for cooling semiconductor devices [H01L 23/445](#))}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

For cooling semiconductor devices	H01L 23/445
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Special rules of classification

Only cooled rooms, otherwise classify in [F25B 19/005](#)

Classify in [F25D 3/12](#) when CO₂ snow (dry ice) is claimed or mentioned.

F25D 3/11

with conveyors carrying articles to be cooled through the cooling space

Special rules of classification

Conveyors in general	B65G
Stationary devices with conveyors carrying articles to be cooled through the cooling space	F25D 13/06
By conveyors	F25D 25/04
Using solidified gases with conveyors carrying articles to be cooled through the cooling space	F25D 3/127

F25D 3/12

using solidified gases, e.g. carbon-dioxide snow

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Solidifying carbon dioxide	C01B 32/55
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Special rules of classification

Classify in [F25D 3/10](#) when liquid N₂ is claimed or mentioned.

F25D 3/127

{Stationary devices with conveyors carrying articles to be cooled through the cooling space}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Using liquefied gases with conveyors carrying articles to be cooled through the cooling space	F25D 3/11
Stationary devices with conveyors carrying articles to be cooled through the cooling space	F25D 13/06
By conveyors	F25D 25/04
Conveyors in general	B65G

F25D 5/00

Devices using endothermic chemical reactions, e.g. using frigorific mixtures

Definition statement

This place covers:

Cooling by endothermic chemical reaction between substances triggered by for example rupturing/piercing a membrane.

F25D 7/00

Devices using evaporation effects without recovery of the vapour (butter or cheese dishes with cooling devices [A47G 19/26](#))

Definition statement

This place covers:

The cooling effect is derived from the evaporation of water, for which a supply of heat is required.

References

Limiting references

This place does not cover:

Vacuum coolers	F25D 31/00
Butter or cheese dishes with cooling devices	A47G 19/26
Evaporative coolers	F24F 5/0035 , F28D 5/00

Special rules of classification

Classification of devices using evaporation effects without recovery of the vapour at ambient pressure.

F25D 11/00**Self-contained movable devices, e.g. domestic refrigerators****References****Limiting references**

This place does not cover:

By forced circulation	F25D 17/06
Purses, travelling bags or baskets, suitcases	A45C
Hand carts	B62B
Containers for storage or transport of articles or materials	B65D

F25D 11/006

{with cold storage accumulators}

Special rules of classification

In case cold accumulators are arranged inside a refrigerator.

Cold storage accumulators in devices not associated with refrigerating machinery and emphasize on heat exchanger itself, classify in [F25D 3/005](#).

When heat exchangers are combined with a cooling system, classify in [F25D 16/00](#).

F25D 11/022

{with two or more evaporators}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Compression machines, plant, or systems, with several evaporator circuits, e.g. for varying refrigerating capacity	F25B 5/00
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F25D 11/025

{using primary and secondary refrigeration systems}

References**Informative references**

Attention is drawn to the following places, which may be of interest for search:

Machines, plant, or systems, using primary and secondary systems	F25B 25/005
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F25D 11/027**{of the sorption cycle type}****Special rules of classification**

Documents with one cooling compartment and sorption cycle classify in [F25D 11/027](#) and [F25D 11/00](#).

F25D 13/06**with conveyors carrying articles to be cooled through the cooling space****References****Informative references**

Attention is drawn to the following places, which may be of interest for search:

Using liquefied gases with conveyors carrying articles to be cooled through the cooling space	F25D 3/11
Using solidified gases with conveyors carrying articles to be cooled through the cooling space	F25D 3/127
By conveyors	F25D 25/04
Conveyors in general	B65G

F25D 15/00**Devices not covered by group [F25D 11/00](#) or [F25D 13/00](#), e.g. non-self-contained movable devices****Definition statement**

This place covers:

Products cooled by a cooling system at a remote place;

Devices for freezing of pipes for forming a frozen ice plug in a section of a pipe to be repaired.

Movable devices implies also refrigerators.

Special rules of classification

Classify also in [F25D 17/02](#) in case of cooling by circulating a coolant.

Classify also in [F25D 17/06](#) in case of cooling by cold air.

F25D 16/00**Devices using a combination of a cooling mode associated with refrigerating machinery with a cooling mode not associated with refrigerating machinery****Special rules of classification**

When heat exchangers are combined with a cooling system, classify in [F25D 16/00](#).

In case cold accumulators are arranged inside a refrigerator, classify in [F25D 11/006](#).

Cold storage accumulators in devices not associated with refrigerating machinery and emphasize on heat exchanger itself, classify in [F25D 3/005](#).

F25D 17/005**{in cold rooms}****Special rules of classification**Classification in [F25B 25/005](#) when primary refrigeration cycle is important.**F25D 17/04****for circulating air, e.g. by convection****Definition statement***This place covers:*

Circulation of air by natural convection.

References**Limiting references***This place does not cover:*

Forced circulation of air is classified in	F25D 17/06
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F25D 17/042**{Air treating means within refrigerated spaces (air conditioning in general [F24F](#))}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Treating air flowing to refrigeration compartments	F25D 2317/04
Preservation or chemical ripening of fruit or vegetables	A23B 7/00
Preservation of food in general	A23L 3/00
Disinfection, sterilization or deodorization of air	A61L 9/00
Filtering material for liquid or gaseous fluids	B01D 39/00
Ion generating apparatus	H01T 23/00

Special rules of classificationTreating air flowing to refrigeration compartments by purification (dehumidification, humidification, deodorizing, ozone generator and uv-lamp) is additionally classified in [F25D 2317/041](#) and lower.Treating air flowing to refrigeration compartments by creating a vacuum in a storage compartment to store products under vacuum is additionally classified in [F25D 2317/043](#). Vacuum cooling is classified in [F25D 31/00](#).

F25D 17/045**{Air flow control arrangements}****Definition statement***This place covers:*

Air dampers; Air valves.

F25D 17/06**by forced circulation****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Air flow control arrangements	F25D 17/045
Special arrangements or features of forced air circulation within refrigerated spaces	F25D 17/06
Ventilator details	F04

Special rules of classificationCirculation of air by natural convection is classified in [F25D 17/04](#).Control of air circulation is also classified in [F25D 17/06](#).Special arrangements or features of forced air circulation within refrigerated spaces are additionally classified in [F25D 17/06](#) and lower.Additionally classify in [F25D 21/002](#) in case of defrost control.**F25D 17/08****using ducts****Definition statement***This place covers:*

Ducts for cooling by radiation, i.e. indirect cooling.

F25D 19/00**Arrangement or mounting of refrigeration units with respect to devices {or objects to be refrigerated, e.g. infra-red detectors}****Definition statement***This place covers:*

Mounting of complete refrigeration units.

References

Limiting references

This place does not cover:

Mounting of components of refrigerating machinery	F25D 23/006
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F25D 21/002

{Defroster control}

References

Limiting references

This place does not cover:

Classification in [F25B 47/02](#) when frost is removed by heat of the refrigeration cycle.

F25D 21/06

Removing frost (defrosting cycles [F25B 47/02](#))

References

Limiting references

This place does not cover:

Classification in [F25B 47/02](#) when frost is removed by heat of the refrigeration cycle.

Informative references

Attention is drawn to the following places, which may be of interest for search:

Alternate defrosting	F25B 2347/021
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F25D 21/14

Collecting or removing condensed and defrost water; Drip trays

References

Limiting references

This place does not cover:

Passenger or goods spaces characterized by condensed liquid drainage means	B60H 1/3233
Removing condensate in air-conditioning	F24F 13/22
Collecting and removing condensate for heat-exchangers	F28B 9/08

Informative references

Attention is drawn to the following places, which may be of interest for search:

Special arrangements or features of collecting condense or defrost water	F25D 21/14
Cooling refrigerating machinery	F25D 23/003

Special rules of classification

Special arrangements or features of collecting condense or defrost water are additionally classified in [F25D 21/14](#) and lower.

F25D 23/003

{for cooling refrigerating machinery}

Definition statement

This place covers:

Cooling of compressor and condenser of refrigerated enclosures.

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Special arrangements or details for cooling refrigerating machinery	F25D 2323/002
Cooling of compressor or motor	F25B 31/006
Condensers with refrigerant heat exchange tubes positioned inside or around a vessel containing water or pcm to cool the refrigerant gas	F25B 2339/046
Water-cooled condensers	F25B 2339/047

F25D 23/006

{for mounting refrigerating machinery components}

Definition statement

This place covers:

Mounting of components of refrigerating machinery.

References

Limiting references

This place does not cover:

Mounting of complete refrigeration units:	F25D 19/00
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Special rules of classification

Special arrangements or features for cooling refrigerating machinery are additionally classified in [F25D 2323/002](#) and lower.

F25D 23/02

Doors; Covers ([F25D 23/08](#) takes precedence {locks or fastenings [E05B 65/0042](#)})

References

Limiting references

This place does not cover:

Details not related to door itself, e.g. hinges, handles, actuators, dispensers are classified in	F25D 23/028
Parts formed wholly or mainly of plastics materials	F25D 23/08
Transparent doors	A47F 3/0434

Informative references

Attention is drawn to the following places, which may be of interest for search:

Special arrangements or details of doors or covers not otherwise covered	F25D 23/028 , F25D 23/04
Night covers display case	A47F 3/0469
Locks or fastenings	E05B 65/0042
Doors	E06B

Special rules of classification

[F25D 23/08](#) takes precedence.

French doors are additionally classified in [F25D 2323/021](#);

Doors that can be pivoted either left-handed or right-handed are additionally classified in [F25D 2323/022](#).

Door in door constructions are additionally classified in [F25D 2323/023](#).

F25D 23/028

{Details}

References

Limiting references

This place does not cover:

Details of refrigerator doors are classified in [F25D 23/02](#).

Informative references

Attention is drawn to the following places, which may be of interest for search:

Handles	A47B 95/02 , F24C 15/024 , E05F 11/54
Locks or fastenings	E05B 65/0042 , E05C
Hinges	E05D , F25D 2323/024

Special rules of classification

All details not related to refrigerator door itself, e.g. hinges, handles, actuators, dispensers are classified in [F25D 23/028](#).

Door hinges are additionally classified in [F25D 2323/024](#).

F25D 23/06

Walls ([F25D 23/08](#) takes precedence; containers with thermal insulation [B65D 81/38](#))

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Insulation	F25D 2201/00
Collapsible walls	F25D 2323/061
Inflatable walls	F25D 2323/062
Details of cabinets, racks or shelf units	A47B 96/00
Shaping or joining of plastics; Shaping of substances in a plastic state, in general; after-treatment of shaped products, e.g. repairing	B29C
Foaming	B29C 44/00
Extrusion molding	B29C 47/00
Production of refrigerators	B29L 2031/7622
Insulation, layered products	B32B
Containers with thermal insulation	B65D 81/38
Insulation, vacuum panel	E04B 1/803
Supports for pipes, cables or protective tubing	F16L 3/00
Supports for pipes or cables inside other pipes or sleeves	F16L 7/00
Thermal insulation in general	F16L 59/00

Special rules of classification

[F25D 23/08](#) takes precedence.

Insulation (with respect to heat or sound) is additionally classified in [F25D 2201/00](#).

Collapsible walls are additionally classified in [F25D 2323/061](#).

Inflatable walls are additionally classified in [F25D 2323/062](#).

F25D 23/087**{Sealing strips}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Magnetic gaskets	E05C 19/161
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F25D 23/126**{Water cooler}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Refrigerator doors; covers	F25D 23/02
Special arrangements or details of the water filter for the water/ice dispenser	F25D 2323/121
Special arrangements or details of the water tank for the water/ice dispenser	F25D 2323/122
Filtering devices	B01D 35/00
Dispensing beverages	B67D
Ice dispenser	F25C 5/22

Special rules of classification

Additionally classify in:

[F25D 23/02](#) when details of the door are claimed.[F25C 5/22](#) when details of an ice dispenser are claimed.[F25D 2323/121](#) when special arrangements or details of the water filter are claimed.[F25D 2323/122](#) when special arrangements or details of the water tank are claimed.**F25D 25/00****Charging, supporting, and discharging the articles to be cooled****Special rules of classification**

Additionally classify in:

[F25D 2331/80](#): Type of cooled receptacles.

F25D 25/02

by shelves

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Special arrangements or features of shelves with several possible configurations	F25D 2325/021
Special arrangements or features of shelves made of glass or ceramic	F25D 2325/022
Special arrangements or features of shelves made of wires	F25D 2325/023
Type of cooled receptacles	F25D 2331/80
Drawers, shelves	A47B
Show stands, hangers or shelves	A47F 7/00

Special rules of classification

Additionally classify in:

[F25D 2325/021](#): Special arrangements or features of shelves with several possible configurations

[F25D 2325/022](#): Special arrangements or features of shelves made of glass or ceramic

[F25D 2325/023](#): Special arrangements or features of shelves made of wires

[F25D 2331/80](#): Type of cooled receptacles.

F25D 25/022

{Baskets}

Definition statement

This place covers:

Wire baskets.

F25D 25/025

{Drawers}

References

Informative references

Attention is drawn to the following places, which may be of interest for search:

Type of cooled receptacles	F25D 2331/80
Drawers	A47B

Special rules of classification

Additionally classify drawers opened by sliding doors in [F25D 23/021](#).

F25D 25/04**by conveyors (in general [B65G](#))****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Using liquefied gases with conveyors carrying articles to be cooled through the cooling space	F25D 3/11
Using solidified gases with conveyors carrying articles to be cooled through the cooling space	F25D 3/127
Stationary devices with conveyors carrying articles to be cooled through the cooling space	F25D 13/06
Conveyors in general	B65G

Special rules of classificationShelves or drawers which can be adjusted in height are classified in [A47B 57/06](#).**F25D 27/00****Lighting arrangements (in general [F21](#))****Definition statement***This place covers:*

Lighting arrangements for lighting cooling enclosures, both inside and outside the enclosure.

Relationships with other classification placesLighting in general: [F21](#).**References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Special arrangements or features for lighting arrangements on the external side of the refrigerator, freezer or cooling box	F25D 2327/001
Lighting devices	F21V 33/00
Circuit arrangements for electric light sources	H05B 37/00

F25D 29/00**Arrangement or mounting of control or safety devices****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Control issues F25D	F25D 2600/00
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Means for sensing or measuring F25D ; Sensors therefor F25D	F25D 2700/00
Arrangement or mounting of control or safety devices	F25B 49/00
Telecontrol of temperature	G05D 23/1905
Inventory	G06Q 10/087

Special rules of classification

[F25D 17/06](#) takes precedence;

[F25D 21/00](#) takes precedence;

[F25B 49/02](#) takes precedence, classify in [F25D 29/00](#) to distinguish a refrigerator over a refrigeration cycle.

[F25B 5/00](#) takes precedence, classify in [F25D 29/00](#) or [F25D 11/022](#) to distinguish a refrigerator over a refrigeration cycle.

Additional classification of control issues in [F25D 2600/00](#).

Additional classification of means for sensing or measuring and sensors therefor in [F25D 2700/00](#).

F25D 29/005

{Mounting of control devices}

Definition statement

This place covers:

Mounting of control devices; Mounting of sensors to refrigeration devices

Special rules of classification

Mounting of sensors to refrigeration devices are classified in [F25D 29/005/CCA](#).

F25D 31/00

Other cooling or freezing apparatus

Definition statement

This place covers:

Cooling by creating a vacuum.

References

Limiting references

This place does not cover:

Storing of products in a refrigerated enclosure under vacuum:	F25D 2317/043
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F25D 31/002**{Liquid coolers, e.g. beverage cooler (receptacle coolers [F25D 31/006](#))}****References****Limiting references***This place does not cover:*

Repectacle coolers	F25D 31/006
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Informative references*Attention is drawn to the following places, which may be of interest for search:*

Cooling of liquids with pour-throughs	F25D 2331/811
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F25D 31/006**{specially adapted for cooling receptacles, e.g. tanks}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Type of cooled receptacles	F25D 2331/80
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F25D 31/007**{Bottles or cans}****References****Informative references***Attention is drawn to the following places, which may be of interest for search:*

Type of cooled receptacles	F25D 2331/80
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F25D 31/008**{Drinking glasses}****Definition statement***This place covers:*

Pre-chilling of glasses.

References**Informative references***Attention is drawn to the following places, which may be of interest for search:*

Type of cooled receptacles; Glasses	F25D 2331/808
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