

F25 REFRIGERATION OR COOLING; COMBINED HEATING AND REFRIGERATION SYSTEMS; HEAT PUMP SYSTEMS; MANUFACTURE OR STORAGE OF ICE; LIQUEFACTION OR SOLIDIFICATION OF GASES

F25D REFRIGERATORS; COLD ROOMS; ICE-BOXES; COOLING OR FREEZING APPARATUS NOT COVERED BY ANY OTHER SUBCLASS (refrigerated showcases 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 or comparable apparatus without refrigeration G12B; cooling of engines or pumps, see the relevant classes)

- (1) In this subclass, the following term is 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.
- (2) Attention is drawn to Note (2) following the title of subclass F24F. [5]

DEVICES NOT ASSOCIATED WITH REFRIGERATING MACHINERY

Using cold air or water; other cold materials or bodies 1/00; 3/00

Using endothermic chemical reactions, or evaporation without recovery 5/00, 7/00

Other devices, combinations 9/00

DEVICES ASSOCIATED WITH REFRIGERATING MACHINERY: SELF-CONTAINED MOVABLE; STATIONARY; OTHER.....

11/00; 13/00;
15/00, 16/00

STRUCTURAL PARTS OR ARRANGEMENTS, OF GENERAL APPLICATION: GENERAL; DEFROSTING;

HANDLING OF ARTICLES TO BE COOLED 23/00; 21/00;
25/00

CIRCULATING COOLING FLUID OR GAS; LIGHTING 17/00; 27/00

ARRANGEMENT OR MOUNTING: OF REFRIGERATION UNITS; OF CONTROL OR SAFETY DEVICES..... 19/00; 29/00

OTHER APPARATUS..... 31/00

Devices not associated with refrigerating machinery

- 1/00 Devices using naturally-cold air or water**
 1/02 . using naturally-cold water, e.g. household-tap water
- 3/00 Devices using other cold materials; Devices using cold-storage bodies**
 3/02 . using ice, e.g. ice-boxes
 3/04 . . Stationary cabinets
 3/06 . . Movable containers
 3/08 . . . portable, i.e. adapted to be carried personally
 3/10 . using liquefied gases, e.g. liquid air
 3/11 . . with conveyers carrying articles to be cooled through the cooling space [4]
 3/12 . using solidified gases, e.g. carbon-dioxide snow
 3/14 . . portable, i.e. adapted to be carried personally
- 5/00 Devices using endothermic chemical reactions, e.g. using frigorific mixtures**
 5/02 . portable, i.e. adapted to be carried personally
- 7/00 Devices using evaporation effects without recovery of the vapour** (butter or cheese dishes with cooling devices A47G 19/26)
- 9/00 Devices not covered by groups F25D 1/00 F25D 7/00; Combinations of devices covered by two or more of the groups F25D 1/00 F25D 7/00**

Devices associated with refrigerating machinery

- 11/00 Self-contained movable devices, e.g. domestic refrigerator**
 11/02 . with cooling compartments at different temperatures
 11/04 . specially adapted for storing deep-frozen articles (F25D 11/02 takes precedence)
- 13/00 Stationary devices, e.g. cold rooms**
 13/02 . with several cooling compartments, e.g. refrigerated locker systems
 13/04 . . the compartments being at different temperatures
 13/06 . with conveyers carrying articles to be cooled through the cooling space
- 15/00 Devices not covered by group F25D 11/00 or F25D 13/00, e.g. non-self-contained movable devices**

- 16/00 Devices using a combination of a cooling mode associated with refrigerating machinery with a cooling mode not associated with refrigerating machinery [5]**

Details or features of the devices covered by groups F25D 1/00 F25D 16/00 [5]

- 17/00 Arrangements for circulating cooling fluids; Arrangements for circulating gas, e.g. air, within refrigerated spaces [3]**
 17/02 . for circulating liquids, e.g. brine

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- 17/04 . for circulating gas, e.g. by natural convection [3]
- 17/06 . . by forced circulation
- 17/08 . . . using ducts
- 19/00 Arrangement or mounting of refrigeration units with respect to devices**
- 19/02 . plug-in type
- 19/04 . with more than one refrigeration unit
- 21/00 Defrosting; Preventing frosting; Removing condensed or defrost water** (removing ice or water from heat-exchange apparatus in general F28F 17/00; heating arrangements specially adapted for transparent or reflecting areas H05B 3/84)
- 21/02 . Detecting the presence of frost or condensate
- 21/04 . Preventing the formation of frost or condensate
- 21/06 . Removing frost (defrosting cycles F25B 47/02)
- 21/08 . . by electric heating
- 21/10 . . by spraying with fluid
- 21/12 . . by hot-fluid circulating system separate from the refrigerant system
- 21/14 . Collecting or removing condensed and defrost water; Drip trays

- 23/00 General constructional features** (F25D 21/00 takes precedence)
 - 23/02 . Doors; Covers (F25D 23/08 takes precedence)
 - 23/04 . . with special compartments, e.g. butter conditioners
 - 23/06 . Walls (F25D 23/08 takes precedence; containers with thermal insulation B65D 81/38) [4]
 - 23/08 . Parts formed wholly or mainly of plastics materials
 - 23/10 . Arrangements for mounting in particular locations, e.g. for built-in type, for corner type
 - 23/12 . Arrangements of compartments additional to cooling compartments; Combinations of refrigerators with other equipment, e.g. stove
 - 25/00 Charging, supporting, or discharging the articles to be cooled**
 - 25/02 . by shelves
 - 25/04 . by conveyers (in general B65G)
 - 27/00 Lighting arrangements** (in general F21)
 - 29/00 Arrangement or mounting of control or safety devices**
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- 31/00 Other cooling or freezing apparatus**