

F26B

DRYING SOLID MATERIALS OR OBJECTS BY REMOVING LIQUID THEREFROM (racks for drying fruit and vegetables A01F25/12; drying foodstuffs A23; drying hair A45D20/00; body-drying implements A47K10/00; drying household articles A47L, [N: e.g. drying footwear A47L23/20;] drying gases and vapours B01D; chemical and physical processes for dewatering or like separating liquids from solids B01D43/00; centrifugal apparatus B04; drying ceramics C04B33/30; drying yarns and fabrics in association with some other form of treatment D06C; drying frames for laundry without heating or positive air circulation, domestic and like spin-dryers, wringing and hot pressing laundry D06F; furnaces, kilns, ovens F27; [N: treatment including a drying step of semiconductor substrates, e.g. wafers, H01L21/00S2D4])

Definition statement

This subclass/group covers:

Processes and specific machines and arrangements for drying objects, solid materials or fluent materials containing solids by removing water or other liquids therefrom.

Relationship between large subject matter areas

Processing, e.g. drying of harvested produce	A01F
Dairy products	A01J
Food and foodstuffs; their treatment, e.g. drying	A23
Drying household articles	A47L
Drying gases and vapours	B01D
Physical Processes and their relevant apparatus	B01J
Centrifuges	B04B
Preparation or pre-treatment, e.g. drying, of plastics to be shaped	B29B

Presses in general	B30B
Cement Making	C04B
Drying of peat	C10F
Fuels, e.g. solid fuels not otherwise provided for	C10L
Drying yarns or fabrics in association with some other form of treatment	D06C
Drying textile articles	D06F
Production of cellulose, e.g. pulp	D21C
Impregnating or coating of paper	D21H
Regulating or controlling combustion	F23N
Feeding fuel to combustion apparatus	F23K and F23K
Drying, conditioning of air in general	F24F
Heat cycles, refrigeration	F25B
Furnaces, kilns, ovens in general	F27B
Details of furnaces, kilns and ovens in general	F27C
Cables, conductors and insulators	H01B
Capacitors	H01G
Feeding waste products to combustion apparatus	F23G

References relevant to classification in this subclass

This subclass/group does not cover:

Drying gases and vapours	B01D
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Evaporating of liquids	B01D 1/00
Treatment including a drying step of semiconductor substrates, e.g. wafers	H01L 21/67028

Informative references

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

Apparatus for preserving meat, fish, eggs, fruit, vegetables by drying	A23B/[CpcRefSymbol=03]
Apparatus for preserving meat, fish, eggs, fruit, vegetables by freeze drying	A23B/[CpcRefSymbol=037]
Preservation of foodstuff by drying	A23L 3/40
Machines for drying or roasting fruits or vegetables, e.g. coffee, cocoa, nuts	A23N 12/08
Drying of shoes during manufacture	A43D 95/10
Drying and activating adhesives in the process of glueing shoe parts	A43D 25/20
Drying Hair	A45D 20/00
Drying razor blades	A45D 27/48
Drying footwear	A47L 23/20
Body Drying Implements	A47K 10/00
Physical or chemical process or apparatus in general for separating liquids from solids	B01D 43/00
Drying of gases, i.e. removing vapour, e.g. water vapour	B01D 53/00
Treating solid materials in general with rotating drums	B01J 19/28

Drying grain before milling	B02B 1/08
Pre- or after-treatment, e.g. drying or curing, of surfaces to which liquids, e.g. coatings or paints, are applied	B05D 3/00
Auxiliary treatment of plastic granules, i.e. after making them	B29B 9/16
Drying plastic pellets, e.g. before the extruder	B29B 13/065
Apparatus for making layered products for laminating, e.g. by curing or drying	B32B 37/00
Drying vehicle bodies, e.g. cars, after washing	B60S 3/002
Drying of matches	C01F 1/06
Drying of sludge	C02F 11/12
Drying clay wares	C04B 33/30
Drying or dewatering of peat	C10F 5/02
Drying apparatus for fuels	C10L
Torrefying apparatus for fuels	C10L
Heating solid fuel briquettes of mineral origin	C10L 5/28
Solid biofuels	C10L 5/44
Drying leather or hides as part of the manufacturing process	C14B 1/58
Drying of retted fibres	D01B 1/48
Forcing gases through textile materials	D06B 5/00
Removing liquids from textile materials in association with previous	D06B 15/00

liquid treatment	
Supporting means for linen or garments to be dried	D06F 57/00
Domestic laundry dryer, e.g. tumbler	D06F 58/00
De-watering of pulp	D21C 9/18
Machines for preparing, e.g. heating and drying, of paving materials for roads	E01C 19/05
Apparatus for drying pavement	E01C 23/14
Drying of constructions, e.g. buildings, and keeping them dry	E04B 1/70
Preparation of solid fuel prior to combustion, e.g. drying	F23K 1/00
Equipment for the use of solar heat	F24J 2/00
Drying of photographic film in processing apparatus	G03D 15/12
Drying step in manufacturing of electric cables	H01B 13/30
Drying step in manufacturing of electric insulators	H01B 19/02
Drying, filling, purifying of, e.g. oil cooled, transformers	H01F 27/14
Drying of, e.g. oil cooled, transformers	H01F
Drying step in manufacturing capacitors	H01G 13/04
Drying of waste products by heat prior to combustion	F23G 2201/10
Dewatering of waste products by mechanical means prior to	F23G 2201/20

combustion	
Drying of solid fuel prior combustion	F23K 2201/20
Production of biofuels through pyrolysis	Y02E 50/14
Production of biofuels through torrefaction	Y02E 50/15

Special rules of classification within this subclass

Documents dealing with drying specific solid materials or objects belonging to other subclasses are classified in [F26B](#) only, if the disclosed drying process or machine is of general interest, i.e. not limited to the specific solid material or object.

F26B 1/00

Preliminary treatment of solid materials or objects to facilitate drying[N: e.g. mixing or backmixing the materials to be dried with predominantly dry solids (F26B5/005 takes precedence)]

Definition statement

This subclass/group covers:

Preliminary treatment, i.e. not the actual drying treatment, of solid materials or objects.

References relevant to classification in this group

This subclass/group does not cover:

Applying a combustible liquid, which is burnt off later, onto the solid materials or objects	F26B 3/005
Dipping the solid materials or objects into, or mixing with, chemical liquids for subsequent drying	F26B 5/005

Informative references

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

Replacing liquid in wet solids by other liquid	B01D 12/00
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F26B 3/00

Drying solid materials or objects by processes involving the application of heat (in specific machines or apparatus F26B9/00 to F26B19/00)

Definition statement

This subclass/group covers:

Drying solid materials or objects by processes applying heat as primary drying principle.

References relevant to classification in this group

This subclass/group does not cover:

Processes involving direct heating, e.g. radiation, or indirect heating, e.g. convection, of the drying good merely as a measure to compensate cooling effects through evaporation, e.g. in a vacuum dryer	F26B 5/00
Heat generated by friction through ultrasonic vibrations	F26B 5/02
Condensing vapour other than steam onto the surface of the materials or objects to be dried	F26B 21/145

Informative references

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

Preserving food in general by spray drying	A23L 3/46
Spray drying liquids	B01D 1/16
Spray drying liquid solutions to obtain solids	B01D 1/18

Fluidised bed technique in general	B01J 8/24
UV-curing of paint	B01J 8/24
Equipment for the use of solar heat	F24J 2/00
Magnetrons for drying	H05B 6/78

Special rules of classification within this group

Specific machines or apparatus ([F26B 9/00](#) to [F26B 19/00](#)) being inherent to the process take precedence.

Therefore, inventions are additionally classified in [F26B 3/00](#) only, if the invention information lies within the process as such.

In any case, inventions are classified in [F26B 3/00](#), if adequate entries, i.e. classes, for machines or apparatuses do not exist.

F26B 3/08

so as to loosen them, e.g. to form a fluidised bed [N: ("fluidised-bed" technique in general B01J8/24; centrifugal fluidised beds F26B7/007)]

References relevant to classification in this group

This subclass/group does not cover:

Centrifugal fluidised beds	F26B 7/007
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Informative references

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

Fluidised bed technique in general	B01J 8/24
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F26B 3/12

in the form of a spray, [N: i.e. sprayed or dispersed emulsions or suspensions (spray drying of solutions B01D1/18)]

Informative references

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

Preserving food in general by spray drying	A23L 3/46
Spray drying liquids	B01D 1/16
Spray drying liquids or solutions to obtain solids	B01D 1/18
Freeze drying involving spraying	F26B 5/065

F26B 3/28

by radiation, e.g. from the sun

Informative references

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

UV-curing of paint	B05D 3/065
Equipment for the use of solar heat	F24J 2/00
Heated fluid, other than combustion gases, in tubes or passages acting as radiative element	F26B 23/10

F26B 3/347

Electromagnetic heating, e.g. induction heating or heating using microwave energy

Informative references

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

Magnetrons for drying	H05B 6/78
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F26B 5/00

Drying solid materials or objects by processes not involving the application of heat (separating liquids from solids by straining B01D; replacing liquids in wet solids by other liquids, e.g. water by spirit, B01D12/00 ; drying by electrophoresis B01J)

Definition statement

This subclass/group covers:

Drying solid materials or objects by processes applying a primary drying principle not involving heat.

Direct heating, e.g. radiation, or indirect heating, e.g. convection, of the drying good as measure to compensate cooling effects through evaporation are not considered to be a primary drying principle.

Relationship between large subject matter areas

Separating a liquid product from solids by straining: [B01D](#)

Drying by electrophoresis: [B01J](#)

Centrifuges in general; details of construction: [B04B](#)

Informative references

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

Apparatus for preserving meat, fish, eggs, fruit, vegetables by freeze drying	A23B/[CpcRefSymbol=037]
Preserving food in general by freeze drying	A23L 3/44
Domestic salad spin dryer	A47J 43/24
Replacing liquid in wet solids by other liquid	B01D 12/00
Physical or chemical process or apparatus for separating liquids from solids, in general	B01D 43/00
Centrifuges, details of construction	B04B
Metal rolling; removing liquids	B21B 45/0278

Presses for squeezing out liquids	B30B 9/02
Cleaning, e.g. drying paint applying hand tools	B44D 3/006
Drying of peat using presses, rolls or centrifuges	C10F 5/04
Wringing machines for textile articles with two or more cooperating rollers	D06F 45/00
Apparatus of the press type for expelling water from textile articles	D06F 47/00
Domestic spin dryers for textile articles	D06F 49/00
Wet end, e.g. filter belt type, of machines for making a continuous web of paper	D21F 1/00
Drying of constructions or buildings using electricity, e.g. electro-osmosis	E04B 1/7007
Dewatering of waste products by mechanical means prior to combustion	F23G 2201/20

F26B 5/005

[N: by dipping them into or mixing them with a chemical liquid, e.g. organic; chemical, e.g. organic, dewatering aids (F26B3/005 takes precedence; using chemical vapours or gases F26B21/14)]

Definition statement

This subclass/group covers:

by dipping them into or mixing them with a chemical liquid, e.g. organic; chemical, e.g. organic, dewatering aids

References relevant to classification in this group

This subclass/group does not cover:

Applying a combustible liquid onto the	F26B 3/005	11
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material, the liquid being burnt off subsequently	
Condensing vapour other than steam onto the surface of the material to be dried	F26B 21/145

Informative references

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

Replacing liquid in wet solids by other liquid	B01D 12/00
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F26B 5/06

the process involving freezing

Informative references

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

Apparatus for preserving meat, fish, eggs, fruit, vegetables by freeze drying	A23B/[CpcRefSymbol=037]
Preserving food in general by freeze drying	A23L 3/44

F26B 5/08

by centrifugal treatment

Informative references

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

Domestic salad spin dryer	A47J 43/24
Centrifuges	B04B
Cleaning, e.g. drying paint applying hand tools	B44D 3/006

Drying of peat using centrifuges	C10F 5/04
Domestic spin dryers for textile articles	D06F 49/00

F26B 5/12

by suction

References relevant to classification in this group

This subclass/group does not cover:

Machines for drying material of long length with progressive movement by applying suction	F26B 13/30 or F26B 13/16
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Informative references

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

Metal rolling; removing liquids	B21B 45/0278
Wet end, e.g. filter belt type, of machines for making a continuous web of paper	D21F 1/00

F26B 5/14

by applying pressure, e.g. wringing; by brushing; by wiping

References relevant to classification in this group

This subclass/group does not cover:

Machines for drying material of long length with progressive movement by applying pressure, brushing or wiping	F26B 13/28
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Informative references

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

Metal rolling; removing liquids	B21B 45/0278
Presses for squeezing out liquids	B30B 9/02
Drying of peat using presses or rolls	C10F 5/04
Wringing machines for textile articles with two or more cooperating rollers	D06F 45/00
Apparatus of the press type for expelling water from textile articles	D06F 47/00
Wet end, e.g. filter belt type, of machines for making a continuous web of paper	D21F 1/00

F26B 5/16

by contact with sorbent bodies, e.g. absorbent mould; by admixture with sorbent materials

References relevant to classification in this group

This subclass/group does not cover:

Machines for drying material of long length with progressive movement by employing sorbent surfaces	F26B 13/26
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F26B 7/00

Drying solid materials or objects by processes using a combination of processes not covered by a single one of groups F26B3/00 and F26B5/00 [N: (F26B1/005, F26B5/04, F26B23/026 take precedence)]

Definition statement

This subclass/group covers:

Drying solid materials or objects by processes using a synergy creating combination, opposed to a simple agglomeration, of a heat applying "hot" process and a "cold" process.

Special rules of classification within this group

Documents classified in the combination group [F26B 7/00](#) are also to be classified in the relevant "hot" group [F26B 3/00](#), [F26B 9/00](#) to [F26B 19/00](#) respectively, and the relevant "cold" group [F26B 5/00](#).

F26B 9/00

Machines or apparatus for drying solid materials or objects at rest or with only local agitation; Domestic airing cupboards [N: (domestic laundry drying cabinets or chambers having heating or ventilating means D06F58/10)]

Definition statement

This subclass/group covers:

Machines or apparatus for drying "large" objects at rest.

Machines or apparatus for drying solid materials or "small" objects, e.g. bulk materials at rest or with local agitation, e.g. fixed or moving "small" stirrer in a "large" silo.

Informative references

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

Ventilating means for stacks of agricultural products	A01F 25/08
Machines for drying or roasting fruits or vegetables, e.g. coffee, cocoa, nuts	A23N 12/08
Drying Hair	A45D 20/00
Drying razor blades	A45D 27/48
Body Drying Implements	A47K 10/00
Large containers having means for heating, cooling, aerating or other conditioning of contents	B65D 88/74
Supporting means for linen or garments to be dried	D06F 57/00
Domestic laundry drying cabinets	D06F 58/10

Drying or keeping dry of constructions, e.g. buildings	E04B 1/70
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F26B 9/003

[N:Small self-contained devices, e.g. portable]

Informative references

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

Drying razor blades	A45D 27/48
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F26B 9/006

[N:Removable covering devices, e.g. pliable or flexible]

Informative references

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

Roofs of drying chambers	F26B 25/10
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F26B 9/10

in the open air; in pans or tables in rooms; Drying stacks of loose material [N: on floors which may be covered, e.g. by a roof (ventilating means of stacks for agricultural produce A01F25/08)]

Informative references

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

Ventilating means for stacks of agricultural products	A01F 25/08
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F26B 11/00

Machines or apparatus for drying solid materials or objects

with movement which is non-progressive

Definition statement

This subclass/group covers:

Machines or apparatus for drying solid materials or objects with primarily non-progressive, i.e. stirring, movement.

The movement of solid materials in e.g. horizontal rotating drums such as kilns is considered not primarily progressive even though opposed inlets and outlets are typically present.

Informative references

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

Treating in general with rotating drums	B01J 19/28
Machines for preparing, e.g. heating and drying, of paving materials for roads	E01C 19/05

F26B 11/02

**in moving drums or other mainly-closed receptacles
(F26B11/18 takes precedence)**

Informative references

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

Treating in general with rotating drums	B01J 19/28
Machines for preparing, e.g. heating and drying, of paving materials for roads	E01C 19/05

F26B 11/022

[N: Arrangements of drives, bearings, supports]

Informative references

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

Driving arrangements specific to drying machines in general	F25B 25/02
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F26B 11/024

[N:Arrangements for gas-sealing the drum]

Informative references

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

Seals, locks for drying machines in general	F25B 25/00D
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F26B 11/026

[N: Arrangements for charging or discharging the materials to be dried, e.g. discharging by reversing drum rotation, using spiral type inserts]

Informative references

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

Charging and discharging of bulk materials to drying machines in general	F26B 25/002
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F26B 11/028

[N: Arrangements for the supply or exhaust of gaseous drying medium for direct heat transfer, e.g. perforated tubes, annular passages, burner arrangements, dust separation, combined direct and indirect heating]

Definition statement

This subclass/group covers:

Arrangement for the supply or exhaust of gaseous drying medium for direct heat transfer, e.g. perforated tubes, annular passages, burner arrangements, dust separation, combined direct and indirect heat transfer

Informative references

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

Arrangements for supplying drying gas in general	F26B 21/00
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F26B 11/04

rotating about a horizontal or slightly-inclined axis [N: (F26B11/022, F26B11/024, F26B11/026, F26B11/028 take precedence)]

Informative references

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

Machines for preparing, e.g. heating and drying, of paving materials for roads	E01C 19/05
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F26B 13/00

Machines and apparatus for drying fabrics, fibres, yarns, or other materials in long lengths, with progressive movement

Definition statement

This subclass/group covers:

Machines and apparatus for drying materials in long length. The materials move progressively through the apparatus either in the form of a coil or uncoiled, e.g. in the form of a web.

References relevant to classification in this group

This subclass/group does not cover:

Drying yarn hanks	F26B 15/124
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Informative references

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

Drying fishing lines	A01K 97/16
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Apparatus for making layered products for laminating, e.g. by curing or drying	B32B 37/00
Treating, e.g. drying, webs after printing	B41F 23/00
Drying filamentary material, e.g. sheets, webs or cables during package formation	B65H 71/00
Drying yarns during spinning or twisting	D01H 13/30
Forcing gases through textile materials	D06B 5/00
Removing liquids from textile materials in association with previous liquid treatment	D06B 15/00
Wet end, e.g. filter belt type, of machines for making a continuous web of paper	D21F 1/00
Dryer sections of machines for making a continuous web of paper	D21F 5/00
Paper-impregnating material characterized by its constitution	D21H 17/00
Paper-impregnating material characterized by its function, form or properties	D21H 21/00
Drying step in manufacturing of cables	H01B 13/30
Drying step in manufacturing of insulators	H01B 19/02

F26B 13/005

[N: Seals, locks, e.g. gas barriers for web drying enclosures]

Informative references

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

Seal, looks in drying apparatus in general	F26B 25/008
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F26B 13/24

Arrangements of devices using drying processes not involving heating (such processes per se F26B5/00)

Informative references

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

Metal rolling; removing liquids	B21B 45/0278
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F26B 13/26

using sorbent surfaces, e.g. bands or coverings on rollers

Informative references

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

Drying process by contact with sorbent bodies	F26B 5/16
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F26B 13/28

for applying pressure; for brushing; for wiping

Informative references

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

Drying process applying pressure, brushing, wiping	F26B 5/14
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F26B 15/00

Machines or apparatus for drying objects with progressive movement; Machines or apparatus with progressive movement for drying batches of material in compact form (F26B13/00, F26B17/00 take precedence; conveyers in general B65G)

Definition statement

This subclass/group covers:

Machines or apparatus for drying objects or object-like batches, e.g. material in a container.

The objects or batches move progressively through the machine or apparatus.

F26B 17/00

Machines or apparatus for drying materials in loose, plastic, or fluidised form, e.g. granules, staple fibres, with progressive movement (F26B13/00 takes precedence; [N: feed or discharge arrangements F26B25/002])

Definition statement

This subclass/group covers:

Machines or apparatus for drying materials in loose form, plastic or fluidized form.

The materials move progressively through the machine or apparatus.

References relevant to classification in this group

This subclass/group does not cover:

Machines with primarily non-progressive movement of materials, e.g. mixing of materials	F26B 11/00
Fibres forming a material of long length, e.g. yarn, web	F26B 13/00

Informative references

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

Machines for drying or roasting fruits or vegetables, e.g. coffee, cocoa, nuts	A23N 12/08
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Drying tobacco	A24B 3/04
Drying grain before milling	B02B 1/08
Treatment, e.g. drying of wood particles in the production of pressed articles, e.g. boards	B27N 1/00

Special rules of classification within this group

The movement of materials through rotating drums, e.g. kiln, is considered non-progressive; rotating drums are therefore classified in [F26B 11/00](#)

F26B 17/02

**with movement performed by belts carrying the materials;
with movement performed by belts [N: or elements attached to endless belts or chains] propelling the materials over stationary surfaces [N: (the movement being in a helical path F26B15/26; F26B17/003, F26B17/263 take precedence)]**

Informative references

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

Process with stationary surface conducting heat	F26B 3/20
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F26B 17/10

with movement performed by fluid currents, e.g. issuing from a nozzle, [N: e.g. pneumatic, flash, vortex or entrainment dryers] (F26B3/08 takes precedence)

Informative references

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

Apparatus using free vortex flow for separating in general	B04C
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F26B 17/107

[N: pneumatically inducing within the drying enclosure a curved flow path, e.g. circular, spiral, helical; Cyclone or Vortex dryers (swirl or curved flow path induced mechanically, i.e. by rotating element F26B3/0923)]

References relevant to classification in this group

This subclass/group does not cover:

Drying processes for loose materials involving a fluidised bed	F26B 3/08
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Informative references

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

Apparatus using free vortex flow for separating in general	B04C
Jet Mills, e.g. for drying and milling, having a cyclone or vortex type flow pattern	B02C 19/06

F26B 17/14

the materials moving through a counter-current of gas

Informative references

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

Drying plastic pellets, e.g. before the extruder	B29B 13/065
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F26B 17/24

with movement performed by shooting or throwing the materials, [N: e.g. after which the materials are subject to impact (F26B17/108 takes precedence)]

Informative references

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

Auxiliary treatment of plastic granules, e.g. after making them	B29B 9/16
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F26B 17/26

with movement performed by reciprocating or oscillating conveyers propelling materials over stationary surfaces; with movement performed by reciprocating or oscillating shelves, sieves, or trays ([N: F26B17/006 takes precedence])

Informative references

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

Auxiliary treatment of plastic granules, e.g. after making them	B29B 9/16
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F26B 19/00

Machines or apparatus for drying solid materials or objects not covered by groups F26B9/00 to F26B17/00

Definition statement

This subclass/group covers:

Miscellaneous machines and machines of any type for drying solid materials or objects featuring a self contained mobile arrangement, the drying taking place with the mobile machine at rest or with moving machine, e.g. moving along or around the large object to be dried.

Special rules of classification within this group

Combinations of two or more non-mobile machines individually covered by groups [F16B 9/00](#) to [F26B 17/00](#) to be classified in [F26B 20/00](#).

Self contained mobile devices to be classified also in the relevant "stationary" groups [F26B 9/00](#) to [F26B 19/00](#).

F26B 19/005

[N: Self-contained mobile devices, e.g. for agricultural produce (movable devices with radiation means F26B3/28;

small self-contained devices for drying objects at rest F26B9/003]]

References relevant to classification in this group

This subclass/group does not cover:

Small self-contained devices for drying objects at rest	F26B 9/003
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Informative references

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

Harvester with Dryer	A01D 41/133
Large containers having means for heating, cooling, aerating or other conditioning of contents	B65D 88/74
Drying, or keeping dry, of constructions, e.g. buildings	E04B 1/70
Apparatus for drying pavement	E01C 23/14
Movable devices with radiation means	F26B 3/28

F26B 20/00

Combinations of machines or apparatus covered by two or more of groups F26B9/00 to F26B19/00

Definition statement

This subclass/group covers:

Combinations of machines or apparatus, either creating a synergetic effect or being a simple agglomeration, covered by two or more of groups [F26B 9/00](#) to [F26B 19/00](#).

F26B 21/00

Arrangements [N: or duct systems, e.g. in combination with pallet boxes,] for supplying and controlling air or gases for

drying solid materials or objects ([N: F26B9/10 takes precedence; systems for vehicle body drying B60S3/002]; air conditioning or ventilation in general F24F)

Definition statement

This subclass/group covers:

Arrangements for supplying drying air or gases or steam to the drying apparatus or directly to (or into) the object or solid materials.

Arrangements for routing and circulating the drying air or gases or steam.

Arrangements for controlling the properties of drying air or gases or steam.

Condensing vapour other than steam onto the surface of the materials or objects to be dried.

References relevant to classification in this group

This subclass/group does not cover:

Machines or apparatus for drying solid materials in the open air or in large rooms featuring drying air supply arrangements	F26B 9/10
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Informative references

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

Details, component parts of blowers in general	F04D 29/00
Valves in general	F16K
Processes condensing steam onto the surface of the materials or objects to be dried	F26B 3/00

F26B 21/001

[N: Drying-air generating units, e.g. movable, independent of drying enclosure]

Informative references

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

Apparatus for drying pavement	E01C 23/14
Drying of constructions, e.g. buildings	E04B 1/7015

F26B 21/006

[N: the gas supply or exhaust being effected through hollow spaces or cores in the materials or objects, e.g. tubes, pipes, bottles (F26B9/003 and F26B9/103 take precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Small self contained devices	F26B 9/003
Drying air channels placed in a stack	F26B 9/103

Informative references

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

Drying footwear	A47L 23/20
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F26B 21/008

[N: the objects being flexible articles, which may be blown up by the drying gas, e.g. tubes, sausage casings (fire hoses A62C33/02)]

Informative references

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

Drying fire hoses	A62C 33/02
Providing support for textile articles to be dried, such as garments, gloves or stockings	D06F 59/00

F26B 21/08

Humidity

Informative references

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

Separation of gases and vapours by absorption in general	B01D 53/14
Drying gases	B01D 53/26

F26B 21/083

[N: by using sorbent or hygroscopic materials, e.g. chemical substances, molecular sieves]

Informative references

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

Separation of gases and vapors by adsorption in general	B01D 53/02
Drying gases by adsorption	B01D 53/261

F26B 21/086

[N: by condensing the moisture in the drying medium, which may be recycled, e.g. using a heat pump cycle]

Informative references

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

Solvent recovery by condensation	B01D 5/00
Solvent recovery by sublimation	B01D 7/00
Separation of gases and vapours by condensation in general	B01D 53/002
Drying gases by condensation	B01D 53/265

Treatment of dryer exhaust gas by e.g. condensation	F26B 25/006
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F26B 21/145

[N: Condensing the vapour onto the surface of the materials to be dried (using condensing steam F26B3/00; using chemical liquids F26B5/005)]

Informative references

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

Processes condensing steam onto the surface of the materials or objects to be dried	F26B 3/00
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F26B 23/00

Heating arrangements ([N: by radiation, e.g. infra-red, ultra-violet, solar F26B3/28 and F26B3/30]; using heated air or gases F26B21/00)

Definition statement

This subclass/group covers:

Heating arrangements providing a heat source for drying machines, located outside or within the drying enclosure. Drying air, gas, steam or vapour supply arrangements.

References relevant to classification in this group

This subclass/group does not cover:

Radiation heating the drying good	F26B 3/00
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F26B 23/001

[N:using waste heat]

Informative references

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

Waste heat recuperation with combustion	F23G 2206/00
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F26B 23/02

using combustion heating ([N: F26B3/305, F26B13/186, F26B21/001,] F26B23/10 take precedence)

References relevant to classification in this group

This subclass/group does not cover:

Heating rollers for drying materials of long length	F26B 13/186
Drying-air generating units	F26B 21/001
Combustion for generating IR radiation, either through flame radiation or combustion heated tubes	F26B 3/305

Informative references

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

Regulating or controlling combustion	F23N
Arrangements of gas flames for drying materials of long length	F26B 13/22
Waste combustion control aspects	F23G 2207/00

F26B 23/028

[N:using solid fuel; burning the dried product]

Informative references

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

Using combustion flue gas to predry fuel	F23G 2206/10
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F26B 25/00

Details of general application not covered by group F26B21/00 or F26B23/00 (loading, conveying, and unloading in general B65G)

Definition statement

This subclass/group covers:

Details of machines or processes other than arrangements of drying air or gas supply or heating arrangements such as:

Cleaning arrangements, e.g. for drying chambers.

Loading, unloading and other handling of objects or materials to be dried or dried.

Treatment of dryer exhaust gases.

Seals, locks and air curtains for drying enclosures.

Alarm, safety and fire protection systems.

Driving mechanisms specific for drying machines.

Agitating, stirring or scraping devices.

Drying chambers and parts thereof.

Rollers, e.g. for conveying specific to drying machines and their requirements.

Controlling the drying process depending on the liquid content of dried material or wet material being charged.

References relevant to classification in this group

This subclass/group does not cover:

Driving mechanisms covered by another subclass, e.g. regarding centrifuges	B04B 9/00
Driving mechanisms for rotary drums, e.g. kiln	F26B 11/022
Arrangements for gas sealing drum dryers, e.g. kilns	F26B 11/024

Loading and unloading materials in rotary drums, e.g. kilns	F26B 11/026
Seals, locks for web drying enclosures	F26B 13/005
Rollers and driving mechanisms for rollers for drying material of long length	F26B 13/14
Treatment of dryer exhaust gas through incineration of volatiles	F26B 13/22
Loading and unloading of wicket conveyor	F26B 15/085
Material feeding means for pneumatic, flash or vortex dryers	F26B 17/103
Safety and fire protection system using inert gases	F26B 21/14

Informative references

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

Large containers having means for heating, cooling, aerating or other conditioning of contents	B65D 88/74
Loading, conveying and unloading in general	B65G
Driving mechanisms in connection with general conveying machines	B65G
Mixing or backmixing of wet materials to be charged, thus changing the liquid content	F26B 1/00
Drying process involving brushing or wiping	F26B 5/14
Stationary drying chamber with mechanical agitating device	F26B 9/082

Loading and unloading materials in rotary drums, e.g. kilns	F26B 11/026
Moving stirring devices in stationary drums	F26B 11/12
Moving stirring devices in stationary dishes, tray or pans	F26B 11/22
Arrangements for wiping material of long length, e.g. webs	F26B 13/28
Scraping device to remove dried material from roller or disc, e.g. doctor blade	F26B 17/286

F26B 25/002

[N: for bulk goods (F26B17/103 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Loading and unloading materials in rotary drums, e.g. kilns	F26B 11/026
Material feeding means for pneumatic, flash or vortex dryers	F26B 17/103

Informative references

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

Devices for feeding particles into and evacuation of particles out of the reactor	B01J 8/0015
Loading and unloading materials in rotary drums, e.g. kilns	F26B 11/026
Material feeding means for pneumatic, flash or vortex dryers	F26B 17/103

F26B 25/008

[N: Seals, locks, e.g. gas barriers or air curtains, for drying enclosures (F26B11/024 and F26B13/005 take precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Arrangements for gas sealing drum dryers, e.g. kilns	F26B 11/024
Seals, locks for web drying enclosures	F26B 13/005

Informative references

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

Seals in general	F16J 15/00
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