B30B PRESSES IN GENERAL (producing ultra-high pressure or ultra-high pressure and high temperature to effect modifications of a substance, e.g. for making artificial diamonds B01J 3/00) { (compressing means for refuse receptacles B65F 1/1405) }

NOTE
This subclass provides for presses in general and also for those presses, for particular purposes, which are not provided for elsewhere.

WARNING
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 Presses, using a press ram, characterised by the features of the drive therefor, pressure being transmitted directly, or through simple thrust or tension members only, to the press ram or platen
1/01 . . by explosive charges
1/02 . . by internal combustion mechanism
1/03 . . by an elastic bag or diaphragm expanded by fluid pressure
1/05 . . by thermal expansion or evaporation
1/06 . . by a scissor or lazy-tongs mechanism
1/07 . . using a fluid connection between the drive means and the press ram
1/08 . . by a rod swinging between a fixed plane and the ram
1/02 . . by lever mechanism (by toggle mechanism B30B 1/10)
1/04 . . operated by hand or foot
1/06 . . operated by cams, eccentrics, or cranks
1/08 . . operated by fluid-pressure means
1/10 . . by toggle mechanism
1/103 . . { operated by screw means }
1/106 . . { operated by another toggle mechanism }
1/12 . . operated by hand or foot
1/14 . . operated by cams, eccentrics, or cranks
1/16 . . operated by fluid-pressure means
1/18 . . by screw means { (B30B 9/3064 takes precedence) }
1/181 . . { the screw being directly driven by an electric motor }
1/183 . . { Braking mechanisms for the return movement of the press ram }
1/185 . . { driven through friction roller means }
1/186 . . { Control arrangements }
1/188 . . { driven by a continuously rotatable flywheel with a coupling arranged between the flywheel and the screw }
1/20 . . driven by hand
1/22 . . driven through friction disc means
1/23 . . operated by fluid-pressure means
1/24 . . by rack-and-pinion means { (B30B 9/3067 takes precedence) }
1/26 . . by cams, eccentrics, or cranks
1/261 . . { by cams }
1/263 . . { work stroke adjustment means }
1/265 . . { using a fluid connecting unit between drive shaft and press ram }
1/266 . . { Drive systems for the cam, eccentric or crank axis }
1/268 . . { using a toggle connection between driveshaft and press ram }
1/28 . . the cam, crank, or eccentric being disposed below the lower platen or table and operating to pull down the upper platen or slide
1/30 . . by the pull of chains or ropes { (B30B 9/3071 takes precedence) }
1/32 . . by plungers under fluid pressure
1/323 . . { using low pressure long stroke opening and closing means, and high pressure short stroke cylinder means }
1/326 . . { operated by hand or foot, e.g. using hydraulic jacks }
1/34 . . involving a plurality of plungers acting on the platen (gas operated B30B 1/38)
1/36 . . having telescoping plungers (gas operated B30B 1/38)
1/38 . . wherein the plungers are operated by pressure of a gas, e.g. steam, air
1/40 . . by wedge means
1/42 . . by magnetic means, e.g. electromagnetic
3/00 Presses characterised by the use of rotary pressing members, e.g. rollers, rings, discs
3/005 . . { Roll constructions }
3/02 . . co-operating with a fixed member
3/04 . . co-operating with one another, e.g. with co-operating cones
3/045 . . { with co-operating cones }
Presses specially adapted for particular purposes

9/02 . . . for squeezing-out liquid from liquid-containing material, e.g. juice from fruits, oil from oil-containing material (kitchen equipment A47F; filtering, e.g. straining solids from liquids, using presses in combination with filtering elements B01D; expelling water from textile fabrics or laundry D06C, D06F; drying F26; clothes presses D06F 69/00, D06F 71/00))

9/04 . . . using press rams
9/042 . . . [co-operating with casings mounted on a movable carrier, e.g. turntable]
9/045 . . . [co-operating with several adjacent casings]
9/047 . . . [Control arrangements]
9/06 . . . co-operating with permeable casings or strainers
9/062 . . . [Extrusion presses]
9/065 . . . [for making briquettes, e.g. from paper]
9/067 . . . [with a retractable abutment member closing one end of the press chamber]
9/08 . . . co-operating with a rotary casing
9/10 . . . without use of a casing
9/105 . . . [using a press ram co-operating with an intermittently moved endless conveyor]
9/12 . . . using pressing worms or screws co-operating with a permeable casing
9/121 . . . [Screw constructions]
9/122 . . . [Means preventing the material from turning with the screw or returning towards the feed hopper]
9/124 . . . [using a rotatable and axially movable screw]
9/125 . . . [Control arrangements]
9/127 . . . [Feed means]
9/128 . . . [Vertical or inclined screw presses]
9/14 . . . operating with only one screw or worm
9/16 . . . operating with two or more screws or worms
9/163 . . . [working in different chambers]
9/166 . . . [the screws being coaxially disposed in the same chamber]
9/18 . . . with means for adjusting the outlet for the solid
9/20 . . . using rotary pressing members, other than worms or screws, e.g. rollers, rings, discs
9/202 . . . [with co-operating cones]
9/205 . . . [using a roller with radially arranged vanes dividing the pressing space in separate chambers]
9/207 . . . [Roller-and-ring presses]
9/22 . . . using a flexible member, e.g. diaphragm, urged by fluid pressure
9/225 . . . [the diaphragm being urged]
9/24 . . . using an endless pressing band
9/241 . . . [co-operating with a drum or roller]
9/242 . . . [comprising compartments which are recurrently constricted and expanded]
9/243 . . . [The squeezing-out being performed in several stages]
9/245 . . . [the edges of the band being folded over the material]
9/246 . . . [The material being conveyed around a drum between pressing bands]
9/247 . . . [Pressing band constructions]
9/248 . . . [Means for sealing the press zone]
9/26 . . . Permeable casings or strainers
9/262 . . . [means disposed in the casing facilitating the squeezing-out of liquid]
9/265 . . . [Press cloths]
9/267 . . . [Strainer bars; Spacers]
9/28 , for forming shaped articles (from material in powder, granular, or paste form, e.g. briquetting presses B30B 11/00)
9/30 , for baling; Compression boxes therefor (baling hay, straw, or the like A01F)
9/303 . . . [Details]
9/3007 . . . [Control arrangements]
9/301 . . . [Feed means]
9/3014 . . . [Ejection means]
9/3017 . . . [Odor eliminating means]
9/3021 . . . [Press rams]
9/3025 . . . [Extrusion chambers with adjustable outlet opening]
9/3028 . . . [Retaining dogs]
9/3032 . . . [Press boxes]
9/3035 . . . [Means for conditioning the material to be pressed, e.g. paper shredding means]
9/3039 . . . [Fluid removing means]
9/3042 . . . [Containers provided with, or connectable to, compactor means]
9/3046 . . . [Containers with built-in compactor means]
9/305 . . . [Drive arrangements for the press ram]
9/3053 . . . [Hand- or foot-operated presses]
9/3057 . . . [Fluid-driven presses]
9/306 . . . [Mechanically-driven presses]
9/3064 . . . [by screw means]
9/3067 . . . [by rack-and-pinion means]
9/3071 . . . [by the pull of chains or ropes]
9/3075 . . . [with press boxes on a movable carrier, e.g. turntable]
9/3078 . . . [with precompression means]
9/3082 . . . [with compression means other than rams performing a rectilinear movement]
9/3085 . . . [using a stationary press ram co-operating with a movable press box]
B30B

11/00 Presses specially adapted for forming shaped articles from material in particulate or plastic state, e.g. briquetting presses, tabletting presses (for clay or mixtures containing cement B28B; for plastics materials B29)

11/001 . . . [using a flexible element, e.g. diaphragm, urged by fluid pressure; Isostatic presses]
11/002 . . . [Isostatic press chambers; Press stands therefor]
11/003 . . . [using a roller with radially arranged vanes dividing the pressing space in separate chambers]
11/004 . . . [involving the use of very high pressures, (for the formation of artificial diamonds or boronitrides B01J 3/065)]
11/005 . . . [Control arrangements]
11/006 . . . [for roller presses]
11/007 . . . [using a plurality of pressing members working in different directions]
11/008 . . . [Applying a magnetic field to the material]
11/02 . . . using a ram exerting pressure on the material in a moulding space
11/022 . . . [whereby the material is subjected to vibrations]
11/025 . . . [whereby the material is transferred into the press chamber by relative movement between a ram and the press chamber]
11/027 . . . [Particular press methods or systems]
11/04 . . . co-operating with a fixed mould
11/06 . . . each charge of the material being compressed against the previously formed body
11/08 . . . co-operating with moulds carried by a turntable
11/085 . . . [for multi-layer articles]
11/10 . . . intermittently rotated
11/12 . . . co-operating with moulds on the circumference of a rotating drum
11/14 . . . co-operating with moulds on a movable carrier other than a turntable or a rotating drum
11/16 . . . using pocketed rollers, e.g. two co-operating pocketed rollers
11/165 . . . [Roll constructions]
11/18 . . . using profiled rollers
11/20 . . . Roller-and-ring machines, i.e. with roller disposed within a ring and co-operating with the inner surface of the ring
11/201 . . . [for extruding material]
11/202 . . . [Ring constructions]

11/204 . . . . . . [Rings with adjustable extrusion openings]
11/205 . . . . . . [using an annular series of radial die cells, especially for crop material]
11/207 . . . . . . [Feed means]
11/208 . . . . . . [Roller constructions; Mounting of the rollers]
11/22 . . . . . . Extrusion presses; Dies therefor (extruding by the use of roller-and-ring machines B30B 11/20)
11/221 . . . . . . [extrusion dies]
11/222 . . . . . . [using several circumferentially spaced rollers, e.g. skewed rollers]
11/224 . . . . . . [Extrusion chambers]
11/225 . . . . . . . [with adjustable outlet opening]
11/227 . . . . . . [Means for dividing the extruded material into briquets]
11/228 . . . . . . [using pressing means, e.g. rollers moving over a perforated die plate]
11/24 . . . . . . using screws or worms
11/241 . . . . . . [Drive means therefor; screw bearings]
11/243 . . . . . . [using two or more screws working in the same chamber]
11/245 . . . . . . [using two or more screws working in different chambers]
11/246 . . . . . . [Screw constructions]
11/248 . . . . . . [Means preventing the material from turning with the screw or returning towards the feed hopper]
11/26 . . . . using press rams
11/265 . . . . . . [with precompression means]
11/28 . . . . using perforated rollers or discs
11/30 . . . . using directly-acting fluid pressure
11/34 . . . . for coating articles, e.g. tablets

12/00 Presses not provided for in groups B30B 1/00 - B30B 11/00

13/00 Methods of pressing not special to the use of presses of any one of the preceding main groups

15/00 Details of, or accessories for, presses; Auxiliary measures in connection with pressing (safety devices F16P)
15/0005 . . . [for briquetting presses]
15/0011 . . . [lubricating means]
15/0017 . . . [Dearing means]
15/0023 . . . [Drive arrangements for movable carriers, e.g. turntables]
15/0029 . . . [means for adjusting the space between the press slide and the press table, i.e. the shut height]
15/0035 . . . [using an adjustable connection between the press drive means and the press slide]
15/0041 . . . [Control arrangements therefor]
15/0047 . . . [releasing means for jammed presses]
15/0052 . . . [for fluid driven presses]
15/0058 . . . [Inclinable presses]
15/0064 . . . [Counterbalancing means for movable press elements]
15/007 . . . [Means for maintaining the press table, the press platen or the press ram against tilting or deflection]
15/0076 . . . [Noise or vibration isolation means]
15/0082 . . . [Dust eliminating means; Mould or press ram cleaning means]
15/0088 . . . [Lubricating means (B30B 15/0011 takes precedence)]
15/0094  .  [Press load monitoring means (B30B 15/281 takes precedence)]
15/02  .  Dies; Inserts therefor; Mounting thereof; Moulds (extrusion dies B30B 11/22)
15/022  .  [Moulds for compacting material in powder, granular of pasta form]
15/024  .  .  [using elastic mould parts]
15/026  .  .  [Mounting of dies, platens or press rams]
15/028  .  .  [Loading or unloading of dies, platens or press rams]
15/04  .  Frames; Guides
15/041  .  .  [Guides]
15/042  .  .  [Prestressed frames]
15/044  .  .  [Means preventing deflection of the frame, especially for C-frames]
15/045  .  .  [Mountings of press columns]
15/047  .  .  [C-shaped frames (with means for preventing deflection B30B 15/044)]
15/048  .  .  [Laminated frame structures]
15/06  .  Platens or press rams
15/061  .  .  [Cushion plates]
15/062  .  .  [Press plates]
15/064  .  .  .  [with heating or cooling means]
15/065  .  .  [Press rams]
15/067  .  .  .  [with means for equalizing the pressure exerted by a plurality of press rams]
15/068  .  .  .  [Drive connections, e.g. pivotal]
15/08  .  .  Accessory tools, e.g. knives; Mountings therefor
15/10  .  Brakes specially adapted for presses (brakes in general F16D)
15/12  .  Clutches specially adapted for presses (clutches in general F16D)
15/14  .  .  Control arrangements for mechanically-driven presses
15/142  .  .  [controlling the brake or the clutch]
15/144  .  .  [for stopping the press shaft in a predetermined angular position]
15/146  .  .  [for synchronising a line of presses]
15/148  .  .  [Electrical control arrangements]
15/16  .  .  Control arrangements for fluid-driven presses (pumps per se F04; hydraulic accumulators per se F15B; valves per se F16K; control devices in general G05)
15/161  .  .  [controlling the ram speed and ram pressure, e.g. fast approach speed at low pressure, low pressing speed at high pressure]
15/163  .  .  [for accumulator-driven presses]
15/165  .  .  [for pneumatically-hydraulically driven presses]
15/166  .  .  [Electrical control arrangements]
15/168  .  .  [for pneumatically driven presses (B30B 15/165 takes precedence)]
15/18  .  .  controlling the reciprocating motion of the ram
15/183  .  .  [Controlling the filling of the press cylinder during the approach stroke of the ram, e.g. prefill-valves]
15/186  .  .  [Controlling the return movement of the ram, e.g. decompression valves]
15/20  .  .  controlling the speed of the ram, e.g. the speed of the approach, pressing or return strokes
15/22  .  .  controlling the degree of pressure applied by the ram during the pressing stroke
15/24  .  .  controlling the movement of a plurality of actuating members to maintain parallel movement of the platen or press beam
15/245  .  .  .  [using auxiliary cylinder and piston means as actuating members]
15/26  .  .  Programme control arrangements
15/28  .  .  Arrangements for preventing distortion of, or damage to, presses or parts thereof
15/281  .  .  .  [overload limiting devices (in general F16H 35/10)]
15/282  .  .  .  [using a breakage element]
15/284  .  .  .  [releasing fluid from a fluid chamber subjected to overload pressure]
15/285  .  .  .  [preventing a full press stroke if there is an obstruction in the working area]
15/287  .  .  .  [preventing unintended ram movement, e.g. using blocking devices]
15/288  .  .  .  [preventing over-run or reverse-run of the press shaft]
15/30  .  .  Feeding material to presses
15/302  .  .  .  [Feeding material in particulate or plastic state to moulding presses]
15/304  .  .  .  [by using feed frames or shoes with relative movement with regard to the mould or moulds]
15/306  .  .  .  .  [for multi-layer articles]
15/308  .  .  .  .  [in a continuous manner, e.g. for roller presses, screw extrusion presses]
15/32  .  .  Discharging presses
15/34  .  .  Heating or cooling presses or parts thereof