

**ECLA****EUROPEAN CLASSIFICATION****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 [B01J3/00](#)) [N: (compressing means for refuse receptacles [B65F1/14B](#))]

**Note**

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

**B30B1/00**

**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**

**B30B1/00B**

- . [N: by explosive charges]

**B30B1/00C**

- . [N: by internal combustion mechanism]

**B30B1/00D**

- . [N: by an elastic bag or diaphragm expanded by fluid pressure]

**B30B1/00E**

- . [N: by thermal expansion or evaporation]

**B30B1/00F**

- . [N: by a scissor or lazy-tongs mechanism]

**B30B1/00G**

- . [N: using a fluid connection between the drive means and the press ram]

**B30B1/00H**

- . [N: by a rod swinging between a fixed plane and the ram]

**B30B1/02**

- . by lever mechanism (by toggle mechanism [B30B1/10](#))

**B30B1/04**

- . . operated by hand or foot

**B30B1/06**

- . . operated by cams, eccentrics, or cranks

**B30B1/08**

- . . operated by fluid-pressure means

**B30B1/10**

- . by toggle mechanism

**B30B1/10B**

- . . [N: operated by screw means]

**B30B1/10C**

- . . [N: operated by another toggle mechanism]

**B30B1/12**

- . . operated by hand or foot

**B30B1/14**

- . . operated by cams, eccentrics, or cranks

**B30B1/16**

- . . operated by fluid-pressure means

**B30B1/18**

- . by screw means [N: ([B30B9/30G2](#) takes precedence)] [C9710]

**B30B1/18B**

- . . [N: the screw being directly driven by an electric motor]

**B30B1/18C**

- . . [N: Braking mechanisms for the return movement of the press ram]

**B30B1/18D**

- . . [N: driven through friction roller means]

**B30B1/18E**

- . . [N: Control arrangements]

**B30B1/18F**

- . . [N: driven by a continuously rotatable flywheel with a coupling arranged between the flywheel and the screw]

- B30B1/20 . . driven by hand
- B30B1/22 . . driven through friction disc means
- B30B1/23 . . operated by fluid-pressure means
- B30B1/24 . by rack-and-pinion means [N: ([B30B9/30GG3](#) takes precedence)] [C9710]
- B30B1/26 . by cams, eccentrics, or cranks
- B30B1/26B . . [N: by cams]
- B30B1/26C . . [N: work stroke adjustment means]
- B30B1/26D . . [N: using a fluid connecting unit between drive shaft and press ram]
- B30B1/26E . . [N: Drive systems for the cam, eccentric or crank axis]
- B30B1/26F . . [N: using a toggle connection between driveshaft and press ram]
- B30B1/28 . . the cam, crank, or eccentric being disposed below the lower platen or table and operating to pull down the upper platen or slide
- B30B1/30 . by the pull of chains or ropes [N: ([B30B9/30G4](#) takes precedence)] [C9710]
- B30B1/32 . by plungers under fluid pressure
- B30B1/32B . . [N: using low pressure long stroke opening and closing means, and high pressure short stroke cylinder means]
- B30B1/32C . . [N: operated by hand or foot, e.g. using hydraulic jacks]
- B30B1/34 . . involving a plurality of plungers acting on the platen (gas operated 1/38)
- B30B1/36 . . having telescoping plungers (gas operated [B30B1/38](#))
- B30B1/38 . . wherein the plungers are operated by pressure of a gas, e.g. steam, air
- B30B1/40 . by wedge means
- B30B1/42 . by magnetic means, e.g. electro-magnetic
- B30B3/00 Presses characterised by the use of rotary pressing members, e.g. rollers, rings, discs**
- B30B3/00B . [N: Roll constructions]
- B30B3/02 . co-operating with a fixed member
- B30B3/04 . co-operating with one another, e.g. with co-operating cones
- B30B3/04B . . [N: with co-operating cones]
- B30B3/06 . . arranged one within another, e.g. with a roller disposed within a rotating ring and co-operating with the inner surface thereof
- B30B5/00 Presses characterised by the use of pressing means other than those mentioned in the preceding groups**
- B30B5/02 . wherein the pressing means is in the form of a flexible element, e.g. diaphragm, urged by fluid pressure
- B30B5/04 . wherein the pressing means is in the form of an endless band

- B30B5/06 . . co-operating with another endless band
- B30B5/06B . . . [N: urged by directly-acting fluid pressure]
- B30B5/06C . . . [N: using anti-friction means for the pressing band]
- B30B5/06C2 . . . . [N: using anti-friction roller means]

#### **B30B7/00 Presses characterised by a particular arrangement of the pressing members**

- B30B7/02 . having several platens arranged one above the other
- B30B7/02B . . [N: Feeding or discharging means]
- B30B7/02C . . [N: Spacer elements; Changing means therefor]
- B30B7/04 . wherein pressing is effected in different directions simultaneously or in turn

#### **B30B9/00 Presses specially adapted for particular purposes**

- B30B9/02 . for squeezing-out liquid from liquid-containing material, e.g. juice from fruits, oil from oil-containing material (kitchen equipment A47J; 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) [N: clothes presses [D06F69/00](#), [D06F71/00](#)]
- B30B9/04 . . using press rams
- B30B9/04B . . . [N: co-operating with casings mounted on a movable carrier, e.g. turntable]
- B30B9/04C . . . [N: co-operating with several adjacent casings]
- B30B9/04D . . . [N: Control arrangements]
- B30B9/06 . . . co-operating with permeable casings or strainers
- B30B9/06B . . . . [N: Extrusion presses]
- B30B9/06C . . . . [N: for making briquettes, e.g. from paper]
- B30B9/06D . . . . [N: with a retractable abutment member closing one end of the press chamber]
- B30B9/08 . . . co-operating with a rotary casing
- B30B9/10 . . . without use of a casing
- B30B9/10B . . . . [N: using a press ram co-operating with an intermittently moved endless conveyer]
- B30B9/12 . . using pressing worms or screws co-operating with a permeable casing
- B30B9/12B . . . [N: Screw constructions]
- B30B9/12C . . . [N: Means preventing the material from turning with the screw or returning towards the feed hopper]
- B30B9/12D . . . [N: using a rotatable and axially movable screw]
- B30B9/12E . . . [N: Control arrangements]
- B30B9/12F . . . [N: Feed means]
- B30B9/12G . . . [N: Vertical or inclined screw presses]
- B30B9/14 . . . operating with only one screw or worm
- B30B9/16 . . . operating with two or more screws or worms
- B30B9/16B . . . . [N: working in different chambers]
- B30B9/16C . . . . [N: the screws being coaxially disposed in the same chamber]

- B30B9/18 . . . with means for adjusting the outlet for the solid
- B30B9/20 . . using rotary pressing members, other than worms or screws, e.g. rollers, rings, discs
- B30B9/20B . . . [N: with co-operating cones]
- B30B9/20C . . . [N: using a roller with radially arranged vanes dividing the pressing space in separate chambers]
- B30B9/20D . . . [N: Roller-and-ring presses]
- B30B9/22 . . using a flexible member, e.g. diaphragm, urged by fluid pressure
- B30B9/22B . . . [N: the diaphragm being tubular]
- B30B9/24 . . using an endless pressing band
- B30B9/24B . . . [N: co-operating with a drum or roller]
- B30B9/24C . . . [N: comprising compartments which are recurrently constricted and expanded]
- B30B9/24D . . . [N: The squeezing-out being performed in several stages]
- B30B9/24E . . . [N: the edges of the band being folded over the material]
- B30B9/24F . . . [N: The material being conveyed around a drum between pressing bands]
- B30B9/24G . . . [N: Pressing band constructions]
- B30B9/24H . . . [N: Means for sealing the press zone]
- B30B9/26 . . Permeable casings or strainers
- B30B9/26B . . . [N: means disposed in the casing facilitating the squeezing-out of liquid]
- B30B9/26C . . . [N: Press cloths]
- B30B9/26D . . . [N: Strainer bars; Spacers]
- B30B9/28 . for forming shaped articles (from material in powder, granular, or paste form, e.g. briquetting presses [B30B11/00](#))
- B30B9/30 . for baling; Compression boxes therefor (baling hay, straw, or the like [A01F](#))
- B30B9/30C . . [N: Details]
- B30B9/30C2 . . . [N: Control arrangements]
- B30B9/30C3 . . . [N: Feed means]
- B30B9/30C4 . . . [N: Ejection means]
- B30B9/30C5 . . . [N: Odor eliminating means]
- B30B9/30C6 . . . [N: Press rams]
- B30B9/30C7 . . . [N: Extrusion chambers with adjustable outlet opening]
- B30B9/30C8 . . . [N: Retaining dogs]
- B30B9/30C9 . . . [N: Press boxes]
- B30B9/30C10 . . . [N: Means for conditioning the material to be pressed, e.g. paper shredding means]
- B30B9/30C11 . . . [N: Fluid removing means]
- B30B9/30D . . [N: Containers provided with, or connectable to, compactor means]
- B30B9/30D2 . . . [N: Containers with built-in compactor means]
- B30B9/30E . . [N: Drive arrangements for the press ram]
- B30B9/30E2 . . . [N: Hand- or foot-operated presses]
- B30B9/30F . . [N: Fluid-driven presses]
- B30B9/30G . . [N: Mechanically-driven presses]

B30B9/30G2	. . . [N: by screw means] [N9710]
B30B9/30G3	. . . [N: by rack-and-pinion means] [N9710]
B30B9/30G4	. . . [N: by the pull of chains or ropes] [N9710]
B30B9/30H	. . [N: with press boxes on a movable carrier, e.g. turntable]
B30B9/30K	. . [N: with precompression means]
B30B9/30L	. . [N: with compression means other than rams performing a rectilinear movement]
B30B9/30M	. . [N: using a stationary press ram co-operating with a movable press box]
B30B9/30N	. . [N: Extrusion presses]
B30B9/30P	. . [N: with two or more stationary press boxes co-operating alternately with a press ram or simultaneously with press rams]
B30B9/30R	. . [N: the means against which, or wherein, the material is compacted being retractable]
B30B9/32	. for consolidating scrap metal or for compacting used cars
B30B9/32B	. . [N: for consolidating empty containers, e.g. cans]
B30B9/32B2	. . . [N: between jaws pivoting with respect to each other]
B30B9/32B2B	. . . . [N: operated by hand or foot]
B30B9/32B4	. . . [N: between rotary pressing members, e.g. rollers, discs]
B30B9/32C	. . [N: provided with shearing means for the scrap metal, or adapted to co-operate with a shearing machine]
B30B9/32D	. . [N: for briquetting scrap metal]
B30B9/32E	. . [N: for making furnace charges]
<b>B30B11/00</b>	<b>Presses specially adapted for forming shaped articles from material in particulate or plastic state, e.g. briquetting presses, tableting presses (for clay or mixtures containing cement <a href="#">B28B</a>; for plastics materials <a href="#">B29</a>)</b>
B30B11/00B	. [N: using a flexible element, e.g. diaphragm, urged by fluid pressure; Isostatic presses]
B30B11/00B2	. . [N: Isostatic press chambers; Press stands therefor]
B30B11/00C	. [N: using a roller with radially arranged vanes dividing the pressing space in separate chambers]
B30B11/00D	. [N: involving the use of very high pressures, (for the formation of artificial diamonds or boronitrides <a href="#">B01J3/06D</a> )]
B30B11/00E	. [N: Control arrangements]
B30B11/00E2	. . [N: for roller presses]
B30B11/00F	. [N: using a plurality of pressing members working in different directions]
B30B11/00M	. [N: Applying a magnetic field to the material]
B30B11/02	. using a ram exerting pressure on the material in a moulding space
B30B11/02B	. . [N: whereby the material is subjected to vibrations]
B30B11/02C	. . [N: whereby the material is transferred into the press chamber by relative movement between a ram and the press chamber]

- B30B11/02D . . [N: Particular press methods or systems]
- B30B11/04 . . co-operating with a fixed mould
- B30B11/06 . . . each charge of the material being compressed against the previously formed body
- B30B11/08 . . co-operating with moulds carried by a turntable
- B30B11/08B . . . [N: for multi-layer articles]
- B30B11/10 . . . intermittently rotated
- B30B11/12 . . co-operating with moulds on the circumference of a rotating drum
- B30B11/14 . . co-operating with moulds on a movable carrier other than a turntable or a rotating drum
  
- B30B11/16 . using pocketed rollers, e.g. two co-operating pocketed rollers
- B30B11/16B . . [N: Roll constructions]
  
- B30B11/18 . using profiled rollers
  
- B30B11/20 . Roller-and-ring machines, i.e. with roller disposed within a ring and co-operating with the inner surface of the ring
- B30B11/20B . . [N: for extruding material]
- B30B11/20B2 . . . [N: Ring constructions]
- B30B11/20B2B . . . . [N: Rings with adjustable extrusion openings]
- B30B11/20B3 . . . [N: using an annular series of radial die cells, especially for crop material]
- B30B11/20B4 . . . [N: Feed means]
- B30B11/20B5 . . . [N: Roller constructions; Mounting of the rollers]
  
- B30B11/22 . Extrusion presses; Dies therefor ([extruding by the use of roller-and-ring machines B30B11/20](#))
- B30B11/22B . . [N: extrusion dies]
- B30B11/22C . . [N: using several circumferentially spaced rollers, e.g. skewed rollers]
- B30B11/22D . . [N: Extrusion chambers]
- B30B11/22D2 . . . [N: with adjustable outlet opening]
- B30B11/22E . . [N: Means for dividing the extruded material into briquets]
- B30B11/22F . . [N: using pressing means, e.g. rollers moving over a perforated die plate]
- B30B11/24 . . using screws or worms
- B30B11/24B . . . Drive means therefor; screw bearings
- B30B11/24C . . . [N: using two or more screws working in the same chamber]
- B30B11/24D . . . [N: using two or more screws working in different chambers]
- B30B11/24E . . . [N: Screw constructions]
- B30B11/24F . . . [N: Means preventing the material from turning with the screw or returning towards the feed hopper]
  
- B30B11/26 . . using press rams
- B30B11/26B . . . [N: with precompression means]
- B30B11/28 . . using perforated rollers or discs
- B30B11/30 . . using directly-acting fluid pressure
  
- B30B11/34 . for coating articles, e.g. tablets

<b>B30B12/00</b>	<b>Presses not provided for in groups <a href="#">B30B1/00</a> to <a href="#">B30B11/00</a></b>
<b>B30B13/00</b>	<b>Methods of pressing not special to the use of presses of any one of the preceding main groups</b>
<b>B30B15/00</b>	<b>Details of, or accessories for, presses; Auxiliary measures in connection with pressing (<a href="#">safety devices F16P</a>)</b>
B30B15/00B	. [N: for briquetting presses]
B30B15/00B2	. . [N: lubricating means]
B30B15/00B3	. . [N: Deairing means]
B30B15/00C	. [N: Drive arrangements for movable carriers, e.g. turntables]
B30B15/00D	. [N: means for adjusting the space between the press slide and the press table, i.e. the shut height]
B30B15/00D2	. . [N: using an adjustable connection between the press drive means and the press slide]
B30B15/00D3	. . [N: Control arrangements therefor]
B30B15/00E	. [N: releasing means for jammed presses]
B30B15/00F	. [N: for fluid driven presses]
B30B15/00G	. [N: Inclinal presses]
B30B15/00H	. [N: Counterbalancing means for movable press elements]
B30B15/00K	. [N: Means for maintaining the press table, the press platen or the press ram against tilting or deflection]
B30B15/00L	. [N: Noise or vibration isolation means]
B30B15/00M	. [N: Dust eliminating means; Mould or press ram cleaning means]
B30B15/00N	. [N: Lubricating means ( <a href="#">B30B15/00B2</a> takes precedence)]
B30B15/00P	. [N: Press load monitoring means ( <a href="#">B30B15/28B</a> takes precedence)]
B30B15/02	. Dies; Inserts therefor; Mounting thereof; Moulds ( <a href="#">extrusion dies B30B11/22</a> )
B30B15/02B	. . [N: Moulds for compacting material in powder, granular or pasta form]
B30B15/02B2	. . . [N: using elastic mould parts]
B30B15/02C	. . [N: Mounting of dies, platens or press rams]
B30B15/02D	. . [N: Loading or unloading of dies, platens or press rams]
B30B15/04	. Frames; Guides
B30B15/04B	. . [N: Guides]

- B30B15/04C . . [N: Prestressed frames]
- B30B15/04D . . [N: Means preventing deflexion of the frame, especially for C-frames]
- B30B15/04E . . [N: Mountings of press columns]
- B30B15/04F . . [N: C-shaped frames (with means for preventing deflection [B30B15/04D](#))]
- B30B15/04G . . [N: Laminated frame structures]
  
- B30B15/06 . Platens or press rams
- B30B15/06B . . [N: Cushion plates]
- B30B15/06C . . [N: Press plates]
- B30B15/06C2 . . . [N: with heating or cooling means]
- B30B15/06D . . [N: Press rams]
- B30B15/06D2 . . . [N: with means for equalizing the pressure exerted by a plurality of press rams]
- B30B15/06E . . [N: Drive connections, e.g. pivotal]
  
- B30B15/08 . Accessory tools, e.g. knives; mountings therefor
  
- B30B15/10 . Brakes specially adapted for presses (brakes in general [F16D](#))
  
- B30B15/12 . Clutches specially adapted for presses (clutches in general [F16D](#))
  
- B30B15/14 . Control arrangements for mechanically-driven presses
- B30B15/14B . . [N: controlling the brake or the clutch]
- B30B15/14C . . [N: for stopping the press shaft in a predetermined angular position]
- B30B15/14D . . [N: for synchronising a line of presses]
- B30B15/14E . . [N: Electrical control arrangements]
  
- B30B15/16 . Control arrangements for fluid-driven presses (pumps per se [F04](#); hydraulic accumulators per se [F15B](#); valves per se [F16K](#); control devices in general [G05](#))
- B30B15/16B . . [N: controlling the ram speed and ram pressure, e.g. fast approach speed at low pressure, low pressing speed at high pressure]
- B30B15/16C . . [N: for accumulator-driven presses]
- B30B15/16D . . [N: for pneumatically-hydraulically driven presses]
- B30B15/16E . . [N: Electrical control arrangements]
- B30B15/16F . . [N: for pneumatically driven presses ([B30B5/16D](#) takes precedence)]
- B30B15/18 . . controlling the reciprocating motion of the ram
- B30B15/18B . . . [N: Controlling the filling of the press cylinder during the approach stroke of the ram, e.g. prefill-valves]
- B30B15/18C . . . [N: Controlling the return movement of the ram, e.g. decompression valves]
- B30B15/20 . . . controlling the speed of the ram, e.g. the speed of the approach, pressing or return strokes
- B30B15/22 . . controlling the degree of pressure applied by the ram during the pressing stroke
- B30B15/24 . . controlling the movement of a plurality of actuating members to maintain parallel movement of the platen or press beam
- B30B15/24B . . . [N: using auxiliary cylinder and piston means as actuating members]
  
- B30B15/26 . Programme control arrangements



- B30B15/28 . Arrangements for preventing distortion of, or damage to, presses or parts thereof
- B30B15/28B . . [N: overload limiting devices (in general [F16H35/10](#))]
- B30B15/28B2 . . . [N: using a breakage element]
- B30B15/28B4 . . . [N: releasing fluid from a fluid chamber subjected to overload pressure]
- B30B15/28C . . [N: preventing a full press stroke if there is an obstruction in the working area]
- B30B15/28D . . [N: preventing unintended ram movement, e.g. using blocking devices]
- B30B15/28E . . [N: preventing over-run or reverse-run of the press shaft]
  
- B30B15/30 . Feeding material to presses
- B30B15/30B . . [N: Feeding material in particulate or plastic state to moulding presses]
- B30B15/30B2 . . . [N: by using feed frames or shoes with relative movement] with regard to the mould or moulds
- B30B15/30B2B . . . . [N: for multi-layer articles]
- B30B15/30B3 . . . [N: in a continuous manner, e.g. for roller presses, screw extrusion presses]
  
- B30B15/32 . Discharging presses
  
- B30B15/34 . Heating or cooling presses or parts thereof