

ECLA EUROPEAN CLASSIFICATION

B66F

HOISTING, LIFTING, HAULING OR PUSHING, NOT OTHERWISE PROVIDED FOR, e.g. DEVICES WHICH APPLY A LIFTING OR PUSHING FORCE DIRECTLY TO THE SURFACE OF A LOAD ([N: invalid lifting devices [A61G7/10](#)]; mounting artificial islands on piles or like supports [E02B17/00](#); scaffolding combined with lifting devices [E04G1/22](#); lifting devices for sliding forms [E04G11/24](#); lifting of buildings [E04G23/06](#); shores or struts [E04G25/00](#); lifts or other hoisting devices on ladders [E06C7/12](#); props for mining [E21D15/00](#)) [C0405]

[N: **WARNING**

[M1203]

The following IPC groups are not used in the internal ECLA classification scheme. Subject matter covered by these groups is classified in the following ECLA groups:

[B66F19/02](#) covered by [B66F19/00](#)
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B66F1/00

Devices, e.g. jacks, for lifting loads in predetermined steps

- B66F1/02 . with locking elements, e.g. washers, co-operating with posts
- B66F1/02B . . [N: the devices being operated by fluid pressure ([B66F1/08](#) takes precedence)]
- B66F1/04 . . the posts being toothed
- B66F1/06 . . . and the devices being actuated mechanically
- B66F1/08 . . . and the devices being operated by fluid pressure

B66F3/00

Devices, e.g. jacks, adapted for uninterrupted lifting of loads (mobile jacks of the garage type [B66F5/00](#))

- B66F3/00B . [N: with rocking arm or sector]
- B66F3/02 . with racks actuated by pinions
- B66F3/04 . . with several racks
- B66F3/06 . . with racks comprising pivotable toothed sections or segments, e.g. arranged in pairs
- B66F3/08 . screw operated ([B66F3/44](#) takes precedence; gearings [F16H](#))
- B66F3/10 . . with telescopic sleeves
- B66F3/12 . . comprising toggle levers (lazy-tongs mechanisms [B66F3/22](#))
- B66F3/14 . . actuated through pawl-and-ratchet mechanisms
- B66F3/16 . . actuated through bevel-wheel gearings
- B66F3/18 . . actuated through worm gearings
- B66F3/20 . . actuated through multiple or change-speed gearings
- B66F3/22 . Lazy-tongs mechanisms [N: ([B66F11/04A](#) takes precedence)]
- B66F3/24 . fluid-pressure operated (water-pressure machines [F03B](#); hydraulic gearings [F16H](#);

- cylinders, pistons [F16J](#); fluid-pressure servomotors [F15B](#))
- B66F3/24B . . [N: suspended jacks]
- B66F3/24D . . [N: comprising toggle levers (lazy-tongs mechanisms [B66F3/22](#))]
- B66F3/24F . . [N: pneumatically actuated ([B66F3/35](#) takes precedence)]
- B66F3/25 . . Constructional features
- B66F3/26 . . . Adaptations or arrangements of pistons
- B66F3/28 telescopic
- B66F3/30 . . . with positive brakes or lock
- B66F3/32 . . . with means for avoiding excessive shocks on completion of movements
- B66F3/35 . . . Inflatable flexible elements, e.g. bellows (inflatable load-engaging elements [B66F3/40](#); connection of valves to inflatable elastic bodies [B60C29/00](#)) [C9602]
- B66F3/36 . . . Load-engaging elements
- B66F3/38 adjustable relative to piston
- B66F3/40 inflatable (connection of valves to inflatable elastic bodies [B60C29/00](#)) [C9602]
- B66F3/42 . . . with self-contained pumps, e.g. actuated by hand
- B66F3/43 . . Pyrotechnical jacks
- B66F3/44 . with self-contained electric driving motors
- B66F3/46 . Combinations of several jacks with means for interrelating lifting or lowering movements
- B66F5/00** **Mobile jacks of the garage type mounted on wheels or rollers**
- B66F5/02 . with mechanical lifting gear
- B66F5/02B . . [N: screw-actuated]
- B66F5/04 . with fluid-pressure-operated lifting gear
- B66F7/00** **Lifting frames, e.g. for lifting vehicles; Platform lifts** ([N: [B66F11/04](#) takes precedence]; for lift-truck platform [B66F9/06](#)) [C9411]
- B66F7/02 . with platforms suspended from ropes, cables, or chains [N: or screws and movable along pillars]
- B66F7/02B . . [N: screw operated]
- B66F7/04 . . hydraulically or pneumatically operated
- B66F7/06 . with platforms supported by levers for vertical movement
- B66F7/06D . . [N: driven by screw or spindle] [N1204]
- B66F7/06H . . [N: Suspended platforms, i.e. the load platform hangs from the base] [N1204]
- B66F7/06M . . [N: with wheels for moving around the floor] [N1204]
- B66F7/06O . . [N: Mechanical arrangements not covered by the following subgroups] [N1204]
- B66F7/06S . . [N: Single levers, e.g. parallel links] [N1204]
- B66F7/06X . . [N: Scissor linkages, i.e. X-configuration] [N1204]

- B66F7/06X1 . . . [N: Multiple scissor linkages horizontally arranged] [N1204]
- B66F7/06X2 . . . [N: Multiple scissor linkages vertically arranged] [N1204]
- B66F7/06X2A [N: Auxiliary scissors, e.g. above main scissors] [N1204]
- B66F7/06X3 . . . [N: Scissor linkage plus tilting action] [N1204]
- B66F7/06Y . . [N: Asymmetric linkages, i.e. Y-configuration] [N1204]
- B66F7/08 . . hydraulically or pneumatically operated
- B66F7/08P . . . [N: pneumatically operated] [N1204]

- B66F7/10 . with platforms supported directly by jacks
- B66F7/12 . . by mechanical jacks
- B66F7/14 . . . screw operated
- B66F7/16 . . by one or more hydraulic or pneumatic jacks
- B66F7/18 . . . by a single central jack
- B66F7/20 . . . by several jacks with means for maintaining the platforms horizontal during movement

- B66F7/22 . with tiltable platforms ([tilting vehicles for unloading B65G67/34](#))

- B66F7/24 . for raising or lowering vehicles by their own power
- B66F7/24B . . [N: Ramps]
- B66F7/24D . . [N: Wheel supporting trolleys]

- B66F7/26 . for selective lifting of parts of vehicles ([mobile garage jacks B66F5/00](#))

- B66F7/28 . Constructional details, e.g. end stops, pivoting supporting members, sliding runners adjustable to load dimensions

- B66F9/00** **Devices for lifting or lowering bulky or heavy goods for loading or unloading purposes** ([mobile or transportable lifts in, or associated with, buildings and specially adapted to be shifted from one part of a building or other structure to another part or to another building or structure B66B9/16; cranes B66C](#)) [C9611]

- B66F9/02 . Stationary loaders or unloaders, e.g. for sacks
- B66F9/04 . . hydraulically actuated or controlled

- B66F9/06 . movable, with their loads, on wheels or the like, e.g. fork-lift trucks ([vehicle aspects B60 to B62; vehicles predominantly for transporting loads and modified to facilitate loading or unloading B60P1/00; low-lift hand trucks for transporting goods B62B3/06](#)) [C9611]
- B66F9/06B . . [N: characterised by having a lifting jib]
- B66F9/06D . . [N: Automatically guided]
- B66F9/06S . . non-masted ([mobile jacks of the garage type mounted on wheels or rollers B66F5/00](#)) [C9611]
- B66F9/065T . . . [N: with a telescopic boom]
- B66F9/07 . . Floor-to-roof stacking devices, e.g. "stacker cranes", "retrievers"
- B66F9/07B . . . [N: Travelling gear therefor] [N9604]
- B66F9/07S . . Constructional features or details

B66F9/075A	. . .	[N: Accessories, e.g. for towing, charging, locking] [N1204]
B66F9/075B	. . .	[N: Braking] [N1204]
B66F9/075C	. . .	[N: Details concerning the chassis] [N1204]
B66F9/075C2	. . . .	[N: Fuel or oil tank arrangements] [N1204]
B66F9/075C4	. . . .	[N: Variable length or width chassis] [N1204]
B66F9/075C6	. . . .	[N: Covers for e.g. engines or batteries] [N1204]
B66F9/075C8	. . . .	[N: Battery compartments] [N1204]
B66F9/075C8S	. . . . .	[N: Battery stoppers, i.e. means to hold battery in position] [N1204]
B66F9/075C10	. . . .	[N: Battery removal arrangements] [N1204]
B66F9/075D	. . .	[N: Overhead guards]
B66F9/075F	. . .	[N: Position control; Position detectors]
B66F9/075H	. . .	[N: Counterweights]
B66F9/075J	. . .	[N: Stabilizing means]
B66F9/075L	. . .	[N: Fork-lift trucks adapted to be carried by transport vehicles]
B66F9/075M	. . .	[N: Steering arrangements] [N1204]
B66F9/075P	. . .	[N: Propulsion arrangements] [N1204]
B66F9/075P6	. . . .	[N: not supported by wheels, e.g. tracks or air cushions] [N1204]
B66F9/075R	. . .	[N: Remote controls] [N1204]
B66F9/075S	. . .	[N: Suspension or mounting of wheels on chassis] [N1204]
B66F9/075T	. . .	[N: Details of operating station, e.g. seats, levers, operator platforms, cabin suspension] [N1204]
B66F9/075U	. . .	[N: Cooling arrangements for device or operator] [N1204]
B66F9/08	. . .	Masts; Guides; Chains
B66F9/08B	. . . .	[N: inclinable]
B66F9/08D	. . . .	[N: Multiple forks, i.e. more than one pair mounted on a single mast or with more than one mast] [N1204]
B66F9/08M	. . . .	[N: Monomasts] [N1204]
B66F9/10	. . . .	movable in a horizontal direction relative to truck
B66F9/10A	. . . . .	[N: Articulated, i.e. front chassis with wheels and mast rotatable relative to rear chassis with wheels] [N1204]
B66F9/12	. . .	Platforms; Forks; Other load supporting or gripping members
B66F9/12B	. . . .	[N: longitudinally movable]
B66F9/12D	. . . .	[N: rotatable about a longitudinal axis]
B66F9/12F	. . . .	[N: Working platforms]
B66F9/14	. . . .	laterally movable, e.g. swingable, for slewing or transverse movements
B66F9/14B	. . . . .	[N: with shuttle-type movement]
B66F9/14F	. . . . .	[N: Movements of forks either individually or relative to each other] [N1203]
B66F9/14F1	. . . . .	[N: Movements of forks relative to each other - symmetric] [N1204]
B66F9/14F2	. . . . .	[N: Movements of forks relative to each other - independent] [N1204]
B66F9/14F3	. . . . .	[N: Rotation of fork around vertical axis] [N1204]
B66F9/14S	. . . . .	[N: Side shift, i.e. both forks move together sideways relative to fork support] [N1204]
B66F9/14U	. . . . .	[N: Whole unit including fork support moves relative to mast] [N1204]

B66F9/14U1	. . . . .	[N: Whole unit including fork support moves sideways] [N1204]
B66F9/14U2	. . . . .	[N: Whole unit including fork support rotates] [N1204]
B66F9/16	. . . . .	inclinable relative to mast
B66F9/16F	. . . . .	[N: Foldable forks, i.e. where only the horizontal section moves] [N1204]
B66F9/18	. . . . .	Load gripping or retaining means
B66F9/18B	. . . . .	[N: by suction means]
B66F9/18C	. . . . .	[N: by magnetic means] [N9604]
B66F9/18D	. . . . .	[N: Coplanar side clamps]
B66F9/18F	. . . . .	[N: Roll clamps]
B66F9/18G	. . . . .	[N: by internally expanding grippers] [N9604]
B66F9/18H	. . . . .	[N: Container lifting frames]
B66F9/18J	. . . . .	[N: Drum lifting devices]
B66F9/18L	. . . . .	[N: Stacked-bricks lifting devices] [M1207]
B66F9/19	. . . . .	Additional means for facilitating unloading
B66F9/19B	. . . . .	[N: for pushing the load]
B66F9/20	. . . . .	Means for actuating or controlling masts, platforms, or forks (power take-off from vehicle transmissions, combined with vehicle propulsion systems B60K)
B66F9/20B	. . . . .	[N: Arrangements for transmitting pneumatic, hydraulic or electric power to movable parts or devices (for cranes B66C13/12)]
B66F9/22	. . . . .	Hydraulic devices or systems
B66F9/24	. . . . .	Electrical devices or systems

B66F11/00 **Lifting devices specially adapted for particular uses not otherwise provided for**
(ground-engaging vehicle fittings for supporting, lifting or manoeuvring the vehicle [B60S9/00](#)) [C9611]

B66F11/04	. . . . .	for movable platforms or cabins, e.g. on vehicles, permitting workmen to place themselves in any desired position for carrying out required operations ([N: Working platforms on fork-lift trucks B66F9/12F ;) vehicle aspects of service vehicles B60P3/14 ; platforms for cleaning windows A47L3/02 ; devices for rescuing persons from buildings A62B1/02 ; liftable or lowerable platforms for use on ladders E06C7/16 ; maintenance travellers for bridges E01D19/10 ; scaffolds on an extensible sub-structure E04G1/22)
B66F11/04A	. . . . .	[N: actuated by lazy-tongs mechanisms or articulated levers]
B66F11/04B	. . . . .	[N: Working platforms suspended from booms]
B66F11/04B2	. . . . .	[N: of the telescoping type]
B66F11/04D	. . . . .	[N: Mobile camera platform]

B66F13/00 **Common constructional features or accessories**

B66F13/00B	[N: Thrust chain devices]
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B66F15/00 **Crowbars or levers**

B66F17/00 **Safety devices, e.g. for limiting or indicating lifting force**

B66F17/00B	[N: for fork-lift trucks]
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B66F17/00D . [N: for working platforms]

B66F19/00 **Hoisting, lifting, hauling or pushing, not otherwise provided for**

B66F19/00B . [N: Lifting devices for manhole covers]