

| Symbol | Typ | Titel |
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| F | Sektion | SECTION F — MECHANICAL ENGINEERING; LIGHTING; HEATING; WEAPONS; BLASTING |
| F16 | Klasse | ENGINEERING ELEMENTS OR UNITS; GENERAL MEASURES FOR PRODUCING AND MAINTAINING EFFECTIVE FUNCTIONING OF MACHINES OR INSTALLATIONS ; THERMAL INSULATION IN GENERAL |
| F16K | Unterklasse | VALVES; TAPS; COCKS; ACTUATING-FLOATS; DEVICES FOR VENTING OR AERATING <u>Constructional types (check valves F16K 15/00)</u> |
| F16K 1/00 | Hauptgruppe | Lift valves, i.e. cut-off apparatus with closure members having at least a component of their opening and closing motion perpendicular to the closing faces (diaphragm valves F16K 7/00) |
| F16K 1/02 | 1-Punkt Untergruppe | . with screw-spindle (F16K 1/12-F16K 1/28 take precedence; actuating mechanisms with screw-spindles F16K 31/50) |
| F16K 1/04 | 2-Punkt Untergruppe | . . with a cut-off member rigid with the spindle, e.g. main valves |
| F16K 1/06 | 2-Punkt Untergruppe | . . Special arrangements for improving the flow, e.g. special shape of passages or casings |
| F16K 1/08 | 3-Punkt Untergruppe | . . . in which the spindle is perpendicular to the general direction of flow |
| F16K 1/10 | 3-Punkt Untergruppe | . . . in which the spindle is inclined to the general direction of flow |
| F16K 1/12 | 1-Punkt Untergruppe | . with streamlined valve member around which the fluid flows when the valve is opened |
| F16K 1/14 | 1-Punkt Untergruppe | . with ball-shaped valve members (check valves F16K 15/04) |
| F16K 1/16 | 1-Punkt Untergruppe | . with pivoted closure members |
| F16K 1/18 | 2-Punkt Untergruppe | . . with pivoted discs or flaps |
| F16K 1/20 | 3-Punkt Untergruppe | . . . with axis of rotation arranged externally of valve member |
| F16K 1/22 | 3-Punkt Untergruppe | . . . with axis of rotation crossing the valve member, e.g. butterfly valves |
| F16K 1/226 | 4-Punkt Untergruppe | Shape or arrangement of the sealing |
| F16K 1/228 | 5-Punkt Untergruppe | Movable sealing bodies |
| F16K 1/24 | 1-Punkt Untergruppe | . with valve members that, on opening of the valve, are initially lifted from the seat and next are turned around an axis parallel to the seat |
| F16K 1/26 | 2-Punkt Untergruppe | . . Shape or arrangement of the sealing |
| F16K 1/28 | 3-Punkt Untergruppe | . . . Movable sealing bodies |
| F16K 1/30 | 1-Punkt Untergruppe | . specially adapted for pressure containers |
| F16K 1/32 | 1-Punkt Untergruppe | . Details (details of more general applicability F16K 25/00-F16K 51/00) |
| F16K 1/34 | 2-Punkt Untergruppe | . . Cutting-off parts (F16K 1/06, F16K 1/12, F16K 1/14, F16K 1/26 take precedence) |
| F16K 1/36 | 3-Punkt Untergruppe | . . . Valve members (for double-seat valves F16K 1/44) |
| F16K 1/38 | 4-Punkt Untergruppe | of conical shape |
| F16K 1/40 | 4-Punkt Untergruppe | of helical shape |
| F16K 1/42 | 3-Punkt Untergruppe | . . . Valve seats (for double-seat valves F16K 1/44) |
| F16K 1/44 | 3-Punkt Untergruppe | . . . Details of seats or valve members of double-seat valves |

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| F16K 1/46 | 3-Punkt Untergruppe | . . . Attachment of sealing rings |
| F16K 1/48 | 2-Punkt Untergruppe | . . Attaching valve members to valve-spindles [4] |
| F16K 1/50 | 2-Punkt Untergruppe | . . Preventing rotation of valve members |
| F16K 1/52 | 2-Punkt Untergruppe | . . Means for additional adjustment of the rate of flow |
| F16K 1/54 | 2-Punkt Untergruppe | . . Arrangements for modifying the way in which the rate of flow varies during the actuation of the valve |
| F16K 3/00 | Hauptgruppe | Gate valves or sliding valves, i.e. cut-off apparatus with closing members having a sliding movement along the seat for opening and closing (F16K 5/00 takes precedence; in barrages or weirs E02B 8/04) |
| F16K 3/02 | 1-Punkt Untergruppe | . with flat sealing faces; Packings therefor |
| F16K 3/03 | 2-Punkt Untergruppe | . . with a closure member in the form of an iris-diaphragm |
| F16K 3/04 | 2-Punkt Untergruppe | . . with pivoted closure members |
| F16K 3/06 | 3-Punkt Untergruppe | . . . in the form of closure plates arranged between supply and discharge passages (F16K 3/10 takes precedence) |
| F16K 3/08 | 4-Punkt Untergruppe | with circular closure plates rotatable around their centres |
| F16K 3/10 | 3-Punkt Untergruppe | . . . with special arrangements for separating the sealing faces or for pressing them together |
| F16K 3/12 | 2-Punkt Untergruppe | . . with wedge-shaped arrangements of sealing faces |
| F16K 3/14 | 3-Punkt Untergruppe | . . . with special arrangements for separating the sealing faces or for pressing them together |
| F16K 3/16 | 2-Punkt Untergruppe | . . with special arrangements for separating the sealing faces or for pressing them together (F16K 3/10, F16K 3/14 take precedence) |
| F16K 3/18 | 3-Punkt Untergruppe | . . . by movement of the closure members |
| F16K 3/20 | 3-Punkt Untergruppe | . . . by movement of the seats |
| F16K 3/22 | 1-Punkt Untergruppe | . with sealing faces shaped as surfaces of solids of revolution (F16K 13/02 takes precedence; with resilient valve members F16K 3/28) |
| F16K 3/24 | 2-Punkt Untergruppe | . . with cylindrical valve members |
| F16K 3/26 | 3-Punkt Untergruppe | . . . with fluid passages in the valve member |
| F16K 3/28 | 1-Punkt Untergruppe | . with resilient valve members |
| F16K 3/30 | 1-Punkt Untergruppe | . Details |
| F16K 3/312 | 2-Punkt Untergruppe | . . Line blinds |
| F16K 3/314 | 2-Punkt Untergruppe | . . Forms or constructions of slides; Attachment of the slide to the spindle |
| F16K 3/316 | 2-Punkt Untergruppe | . . Guiding of the slide |
| F16K 3/32 | 2-Punkt Untergruppe | . . Means for additional adjustment of the rate of flow |
| F16K 3/34 | 2-Punkt Untergruppe | . . Arrangements for modifying the way in which the rate of flow varies during the actuation of the valve |
| F16K 3/36 | 2-Punkt Untergruppe | . . Features relating to lubrication |
| F16K 5/00 | Hauptgruppe | Taps or cocks comprising only cut-off apparatus having at least one of the sealing faces shaped as a more or less complete surface of a solid of revolution, the opening and closing movement being predominantly rotary (taps of the lift-valve type F16K 1/00) |

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| F16K 5/02 | 1-Punkt Untergruppe | . with plugs having conical surfaces; Packings therefor |
| F16K 5/04 | 1-Punkt Untergruppe | . with plugs having cylindrical surfaces; Packings therefor |
| F16K 5/06 | 1-Punkt Untergruppe | . with plugs having spherical surfaces; Packings therefor |
| F16K 5/08 | 1-Punkt Untergruppe | . Details |
| F16K 5/10 | 2-Punkt Untergruppe | . . Means for additional adjustment of the rate of flow |
| F16K 5/12 | 2-Punkt Untergruppe | . . Arrangements for modifying the way in which the rate of flow varies during the actuation of the valve |
| F16K 5/14 | 2-Punkt Untergruppe | . . Special arrangements for separating the sealing faces or for pressing them together |
| F16K 5/16 | 3-Punkt Untergruppe | . . . for plugs with conical surfaces |
| F16K 5/18 | 3-Punkt Untergruppe | . . . for plugs with cylindrical surfaces |
| F16K 5/20 | 3-Punkt Untergruppe | . . . for plugs with spherical surfaces |
| F16K 5/22 | 2-Punkt Untergruppe | . . Features relating to lubrication |
| F16K 7/00 | Hauptgruppe | Diaphragm cut-off apparatus, e.g. with a member deformed, but not moved bodily, to close the passage (container gates or closures operating by deformation of flexible walls B65D 90/56; means for plugging pipes or hoses F16L 55/10) |
| F16K 7/02 | 1-Punkt Untergruppe | . with tubular diaphragm |
| F16K 7/04 | 2-Punkt Untergruppe | . . constrictable by external radial force |
| F16K 7/06 | 3-Punkt Untergruppe | . . . by means of a screw-spindle, cam, or other mechanical means |
| F16K 7/07 | 3-Punkt Untergruppe | . . . by means of fluid pressure |
| F16K 7/08 | 2-Punkt Untergruppe | . . constrictable by twisting |
| F16K 7/10 | 1-Punkt Untergruppe | . with inflatable member |
| F16K 7/12 | 1-Punkt Untergruppe | . with flat, dished, or bowl-shaped diaphragm |
| F16K 7/14 | 2-Punkt Untergruppe | . . arranged to be deformed against a flat seat |
| F16K 7/16 | 3-Punkt Untergruppe | . . . the diaphragm being mechanically actuated, e.g. by screw-spindle or cam |
| F16K 7/17 | 3-Punkt Untergruppe | . . . the diaphragm being actuated by fluid pressure |
| F16K 7/18 | 1-Punkt Untergruppe | . with diaphragm secured at one side only, e.g. to be laid on the seat by rolling action |
| F16K 7/20 | 1-Punkt Untergruppe | . with a compressible solid closure member |
| F16K 11/00 | Hauptgruppe | Multiple-way valves, e.g. mixing valves; Pipe fittings incorporating such valves; Arrangement of valves and flow lines specially adapted for mixing fluid [4] |
| F16K 11/02 | 1-Punkt Untergruppe | . with all movable sealing faces moving as one unit |
| F16K 11/04 | 2-Punkt Untergruppe | . . comprising only lift valves |
| F16K 11/044 | 3-Punkt Untergruppe | . . . with movable valve members positioned between valve seats [4] |
| F16K 11/048 | 3-Punkt Untergruppe | . . . with valve seats positioned between movable valve members [4] |
| F16K 11/052 | 3-Punkt Untergruppe | . . . with pivoted closure members, e.g. butterfly valves [4] |
| F16K 11/056 | 3-Punkt Untergruppe | . . . with ball-shaped valve members [4] |

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| F16K 11/06 | 2-Punkt Untergruppe | . . comprising only sliding valves |
| F16K 11/065 | 3-Punkt Untergruppe | . . . with linearly sliding closure members [4] |
| F16K 11/07 | 4-Punkt Untergruppe | with cylindrical slides [4] |
| F16K 11/072 | 3-Punkt Untergruppe | . . . with pivoted closure members [4] |
| F16K 11/074 | 4-Punkt Untergruppe | with flat sealing faces [4] |
| F16K 11/076 | 4-Punkt Untergruppe | with sealing faces shaped as surfaces of solids of revolution [4] |
| F16K 11/078 | 3-Punkt Untergruppe | . . . with pivoted and linearly movable closure members [4] |
| F16K 11/08 | 2-Punkt Untergruppe | . . comprising only taps or cocks |
| F16K 11/083 | 3-Punkt Untergruppe | . . . with tapered plug [2] |
| F16K 11/085 | 3-Punkt Untergruppe | . . . with cylindrical plug [2] |
| F16K 11/087 | 3-Punkt Untergruppe | . . . with spherical plug [2] |
| F16K 11/10 | 1-Punkt Untergruppe | . with two or more closure members not moving as a unit |
| F16K 11/12 | 2-Punkt Untergruppe | . . with one plug turning in another |
| F16K 11/14 | 2-Punkt Untergruppe | . . operated by one actuating member, e.g. a handle (with one plug turning in another F16K 11/12) |
| F16K 11/16 | 3-Punkt Untergruppe | . . . which only slides, or only turns, or only swings in one plane |
| F16K 11/18 | 3-Punkt Untergruppe | . . . with separate operating movements for separate closure members |
| F16K 11/20 | 2-Punkt Untergruppe | . . operated by separate actuating members (with one plug turning in another F16K 11/12) |
| F16K 11/22 | 3-Punkt Untergruppe | . . . with an actuating member for each valve, e.g. interconnected to form multiple-way valves |
| F16K 11/24 | 3-Punkt Untergruppe | . . . with an electromagnetically-operated valve, e.g. for washing machines |
| F16K 13/00 | Hauptgruppe | Other constructional types of cut-off apparatus (means for plugging pipes or hoses F16L 55/10); Arrangements for cutting-off [4] |
| F16K 13/02 | 1-Punkt Untergruppe | . with both sealing faces shaped as small segments of a cylinder and the moving member pivotally mounted |
| F16K 13/08 | 1-Punkt Untergruppe | . Arrangements for cutting-off [4] |
| F16K 13/10 | 2-Punkt Untergruppe | . . by means of liquid or granular medium [4] |
| | | Functional types |
| F16K 15/00 | Hauptgruppe | Check valves (valves specially adapted for inflatable balls A63B 41/00) |
| F16K 15/02 | 1-Punkt Untergruppe | . with guided rigid valve members |
| F16K 15/03 | 2-Punkt Untergruppe | . . with a hinged closure member |
| F16K 15/04 | 2-Punkt Untergruppe | . . shaped as balls |
| F16K 15/06 | 2-Punkt Untergruppe | . . with guided stems |
| F16K 15/08 | 2-Punkt Untergruppe | . . shaped as rings |
| F16K 15/10 | 3-Punkt Untergruppe | . . . integral with, or rigidly fixed to, a common valve plate |
| F16K 15/12 | 3-Punkt Untergruppe | . . . Springs for ring valves [3] |

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|-------------------|---------------------|---|
| F16K 15/14 | 1-Punkt Untergruppe | . with flexible valve members |
| F16K 15/16 | 2-Punkt Untergruppe | . . with tongue-shaped laminae |
| F16K 15/18 | 1-Punkt Untergruppe | . with actuating mechanism; Combined check valves and actuated valves |
| F16K 15/20 | 1-Punkt Untergruppe | . specially designed for inflatable bodies, e.g. tyres (connecting valves to inflatable elastic bodies B60C 29/00) |
| F16K 17/00 | Hauptgruppe | Safety valves; Equalising valves (pressure relief devices for aerosol containers B65D 83/70) |
| F16K 17/02 | 1-Punkt Untergruppe | . opening on surplus pressure on one side; closing on insufficient pressure on one side (check valves F16K 15/00) |
| F16K 17/04 | 2-Punkt Untergruppe | . . spring-loaded |
| F16K 17/06 | 3-Punkt Untergruppe | . . . with special arrangements for adjusting the opening pressure |
| F16K 17/08 | 3-Punkt Untergruppe | . . . with special arrangements for providing a large discharge passage |
| F16K 17/10 | 3-Punkt Untergruppe | . . . with auxiliary valve for fluid operation of the main valve |
| F16K 17/12 | 2-Punkt Untergruppe | . . weight-loaded |
| F16K 17/14 | 2-Punkt Untergruppe | . . with fracturing member |
| F16K 17/16 | 3-Punkt Untergruppe | . . . with fracturing diaphragm |
| F16K 17/164 | 2-Punkt Untergruppe | . . and remaining closed after return of the normal pressure |
| F16K 17/168 | 2-Punkt Untergruppe | . . combined with manually-controlled valves, e.g. a valve combined with a safety valve |
| F16K 17/18 | 1-Punkt Untergruppe | . opening on surplus pressure on either side |
| F16K 17/19 | 2-Punkt Untergruppe | . . Equalising valves predominantly for tanks |
| F16K 17/192 | 3-Punkt Untergruppe | . . . with closure member in the form of a movable liquid column |
| F16K 17/194 | 3-Punkt Untergruppe | . . . weight-loaded |
| F16K 17/196 | 3-Punkt Untergruppe | . . . spring-loaded |
| F16K 17/20 | 1-Punkt Untergruppe | . Excess-flow valves (actuated in consequence of shock or similar extraneous influence F16K 17/36) |
| F16K 17/22 | 2-Punkt Untergruppe | . . actuated by the difference of pressure between two places in the flow line |
| F16K 17/24 | 3-Punkt Untergruppe | . . . acting directly on the cutting-off member |
| F16K 17/26 | 4-Punkt Untergruppe | operating in either direction |
| F16K 17/28 | 4-Punkt Untergruppe | operating in one direction only |
| F16K 17/30 | 5-Punkt Untergruppe | spring-loaded |
| F16K 17/32 | 3-Punkt Untergruppe | . . . acting on a servo-mechanism or on a catch-releasing mechanism |
| F16K 17/34 | 2-Punkt Untergruppe | . . in which the flow-energy of the flowing medium actuates the closing mechanism |
| F16K 17/36 | 1-Punkt Untergruppe | . actuated in consequence of extraneous circumstances, e.g. shock, change of position |
| F16K 17/38 | 2-Punkt Untergruppe | . . of excessive temperature |
| F16K 17/40 | 1-Punkt Untergruppe | . with fracturing member, e.g. fracturing diaphragm, fusible joint (valves with fracturing member opening on surplus pressure on one side F16K 17/14) |

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| F16K 17/42 | 1-Punkt Untergruppe | . Valves preventing penetration of air in the outlet of containers for liquids |
| F16K 21/00 | Hauptgruppe | Fluid-delivery valves (specially adapted for aerosol containers B65D 83/44; for liquid handling B67D; for flushing devices for water-closets or the like E03D) |
| F16K 21/02 | 1-Punkt Untergruppe | . providing a continuous small flow |
| F16K 21/04 | 1-Punkt Untergruppe | . Self-closing valves, i.e. closing automatically after operation |
| F16K 21/06 | 2-Punkt Untergruppe | . . in which the closing movement, either retarded or not, starts immediately after opening |
| F16K 21/08 | 3-Punkt Untergruppe | . . . with ball-shaped closing members |
| F16K 21/10 | 3-Punkt Untergruppe | . . . with hydraulic brake cylinder acting on the closure member |
| F16K 21/12 | 3-Punkt Untergruppe | . . . with hydraulically-operated opening means; with arrangements for pressure relief before opening |
| F16K 21/14 | 2-Punkt Untergruppe | . . with special means for preventing the self-closing |
| F16K 21/16 | 2-Punkt Untergruppe | . . closing after a predetermined quantity of fluid has been delivered (F16K 21/10 takes precedence) |
| F16K 21/18 | 2-Punkt Untergruppe | . . closed when a rising liquid reaches a predetermined level (float-actuated valves F16K 31/18) |
| F16K 21/20 | 3-Punkt Untergruppe | . . . by means making use of air-suction through an opening closed by the rising liquid |
| F16K 23/00 | Hauptgruppe | Valves for preventing drip from nozzles |
| F16K 24/00 | Hauptgruppe | Devices, e.g. valves, for venting or aerating enclosures (equalising valves F16K 17/00; arrangement or mounting in pipes or pipe systems F16L 55/07; venting or aerating as an additional function of steam traps or like apparatus F16T; ventilation of rooms, vehicles, <u>see</u> the appropriate subclass, e.g. F24F) [2] |
| F16K 24/02 | 1-Punkt Untergruppe | . the enclosure being itself a valve, tap, or cock [2] |
| F16K 24/04 | 1-Punkt Untergruppe | . for venting only (F16K 24/02 takes precedence) [2] |
| F16K 24/06 | 1-Punkt Untergruppe | . for aerating only (F16K 24/02 takes precedence) [2] |
| | | <u>Details</u> |
| F16K 25/00 | Hauptgruppe | Details relating to contact between valve members and seats (movement of valve members other than for opening and closing F16K 29/00; sealing constructions, <u>see</u> the appropriate groups according to the type of valve) |
| F16K 25/02 | 1-Punkt Untergruppe | . Arrangements using fluid issuing from valve members or seats |
| F16K 25/04 | 1-Punkt Untergruppe | . Arrangements for preventing erosion, not otherwise provided for |
| F16K 27/00 | Hauptgruppe | Construction of housings (methods for welding housings B23K); Use of materials therefor |
| F16K 27/02 | 1-Punkt Untergruppe | . of lift valves (for reducing the flow resistance of screw-spindle lift-valves F16K 1/06) |
| F16K 27/04 | 1-Punkt Untergruppe | . of sliding valves |
| F16K 27/06 | 1-Punkt Untergruppe | . of taps or cocks |
| F16K 27/07 | 1-Punkt Untergruppe | . of cutting-off parts of tanks, e.g. tank-cars [4] |
| F16K 27/08 | 1-Punkt Untergruppe | . Guiding yokes for spindles; Means for closing housings; Dust caps, e.g. for tyre valves |
| F16K 27/10 | 1-Punkt Untergruppe | . Welded housings |
| F16K 27/12 | 1-Punkt Untergruppe | . Covers for housings |
| F16K 29/00 | Hauptgruppe | Arrangements for movement of valve members other than for opening or closing the valve, e.g. for grinding-in, for preventing sticking |

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| F16K 29/02 | 1-Punkt Untergruppe | . providing for continuous motion |
| F16K 31/00 | Hauptgruppe | Operating means; Releasing devices |
| F16K 31/02 | 1-Punkt Untergruppe | . electric; magnetic |
| F16K 31/04 | 2-Punkt Untergruppe | . . using a motor |
| F16K 31/05 | 3-Punkt Untergruppe | . . . specially adapted for operating hand-operated valves or for combined motor and hand operation |
| F16K 31/06 | 2-Punkt Untergruppe | . . using a magnet |
| F16K 31/08 | 3-Punkt Untergruppe | . . . using a permanent magnet |
| F16K 31/10 | 3-Punkt Untergruppe | . . . with additional mechanism between armature and closure member |
| F16K 31/11 | 4-Punkt Untergruppe | with additional hand operating means [2] |
| F16K 31/12 | 1-Punkt Untergruppe | . actuated by fluid (fluid-actuated check valves F16K 15/00; fluid-actuated safety valves F16K 17/00) |
| F16K 31/122 | 2-Punkt Untergruppe | . . the fluid acting on a piston (F16K 31/143, F16K 31/163, F16K 31/363, F16K 31/383 take precedence) [2] |
| F16K 31/124 | 3-Punkt Untergruppe | . . . servo actuated [2] |
| F16K 31/126 | 2-Punkt Untergruppe | . . the fluid acting on a diaphragm, bellows, or the like (F16K 31/145, F16K 31/165, F16K 31/365, F16K 31/385 take precedence) [2] |
| F16K 31/128 | 3-Punkt Untergruppe | . . . servo actuated [2] |
| F16K 31/14 | 2-Punkt Untergruppe | . . for mounting on, or in combination with, hand-actuated valves |
| F16K 31/143 | 3-Punkt Untergruppe | . . . the fluid acting on a piston |
| F16K 31/145 | 3-Punkt Untergruppe | . . . the fluid acting on a diaphragm |
| F16K 31/16 | 2-Punkt Untergruppe | . . with a mechanism, other than pulling- or pushing-rod, between fluid motor and closure member (with float F16K 31/18) |
| F16K 31/163 | 3-Punkt Untergruppe | . . . the fluid acting on a piston |
| F16K 31/165 | 3-Punkt Untergruppe | . . . the fluid acting on a diaphragm |
| F16K 31/18 | 2-Punkt Untergruppe | . . actuated by a float (floats F16K 33/00; float-actuated valves in steam-traps F16T 1/20, in boilers F22D 5/08) |
| F16K 31/20 | 3-Punkt Untergruppe | . . . actuating a lift valve |
| F16K 31/22 | 4-Punkt Untergruppe | with the float rigidly connected to the valve |
| F16K 31/24 | 4-Punkt Untergruppe | with a transmission with parts linked together from a single float to a single valve |
| F16K 31/26 | 5-Punkt Untergruppe | with the valve guided for rectilinear movement and the float attached to a pivoted arm |
| F16K 31/28 | 4-Punkt Untergruppe | with two or more floats actuating one valve |
| F16K 31/30 | 3-Punkt Untergruppe | . . . actuating a gate valve or sliding valve |
| F16K 31/32 | 3-Punkt Untergruppe | . . . actuating a tap or cock |
| F16K 31/34 | 3-Punkt Untergruppe | . . . acting on pilot valve controlling the cut-off apparatus |
| F16K 31/36 | 2-Punkt Untergruppe | . . in which fluid from the conduit is constantly supplied to the fluid motor |
| F16K 31/363 | 3-Punkt Untergruppe | . . . the fluid acting on a piston (F16K 31/38 takes precedence) |

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|-------------------|---------------------|--|
| F16K 31/365 | 3-Punkt Untergruppe | . . . the fluid acting on a diaphragm |
| F16K 31/38 | 3-Punkt Untergruppe | . . . in which the fluid works directly on both sides of the fluid motor, one side being connected by means of a restricted passage and the motor being actuated by operating a discharge from that side (F16K 31/40 takes precedence) |
| F16K 31/383 | 4-Punkt Untergruppe | the fluid acting on a piston |
| F16K 31/385 | 4-Punkt Untergruppe | the fluid acting on a diaphragm |
| F16K 31/40 | 3-Punkt Untergruppe | . . . with electrically-actuated member in the discharge of the motor |
| F16K 31/42 | 2-Punkt Untergruppe | . . by means of electrically-actuated members in the supply or discharge conduits of the fluid motor (F16K 31/40 takes precedence) |
| F16K 31/44 | 1-Punkt Untergruppe | . Mechanical actuating means |
| F16K 31/46 | 2-Punkt Untergruppe | . . for remote operation |
| F16K 31/48 | 2-Punkt Untergruppe | . . actuated by mechanical timing-device, e.g. with dash-pot (self-closing valves F16K 21/16) |
| F16K 31/50 | 2-Punkt Untergruppe | . . with screw-spindle |
| F16K 31/52 | 2-Punkt Untergruppe | . . with crank, eccentric, or cam |
| F16K 31/524 | 3-Punkt Untergruppe | . . . with a cam |
| F16K 31/528 | 3-Punkt Untergruppe | . . . with pin and slot |
| F16K 31/53 | 2-Punkt Untergruppe | . . with toothed gearing |
| F16K 31/54 | 3-Punkt Untergruppe | . . . with pinion and rack |
| F16K 31/56 | 2-Punkt Untergruppe | . . without stable intermediate position, e.g. with snap action |
| F16K 31/58 | 2-Punkt Untergruppe | . . comprising a movable discharge-nozzle |
| F16K 31/60 | 2-Punkt Untergruppe | . . Handles |
| F16K 31/62 | 2-Punkt Untergruppe | . . Pedals or like operating members, e.g. actuated by knee or hip |
| F16K 31/64 | 1-Punkt Untergruppe | . responsive to temperature variation (dependant on excessive temperature F16K 17/38; control of fire-fighting equipment A62C 37/00; devices for preventing bursting of water pipes by freezing E03B 7/10) [4] |
| F16K 31/66 | 2-Punkt Untergruppe | . . electrically or magnetically actuated, e.g. by magnets with variable magnetic characteristics [4] |
| F16K 31/68 | 2-Punkt Untergruppe | . . actuated by fluid pressure or volumetric variation in a confined chamber [4] |
| F16K 31/70 | 2-Punkt Untergruppe | . . mechanically actuated, e.g. by a bimetallic strip [4] |
| F16K 31/72 | 1-Punkt Untergruppe | . Operating means or releasing devices specifically adapted to enhance the speed of valve response [4] |
| F16K 33/00 | Hauptgruppe | Floats for actuation of valves or other apparatus |
| F16K 35/00 | Hauptgruppe | Means to prevent accidental or unauthorised actuation |
| F16K 35/02 | 1-Punkt Untergruppe | . to be locked or disconnected by means of a push or pull |
| F16K 35/04 | 1-Punkt Untergruppe | . yieldingly resisting the actuation |
| F16K 35/06 | 1-Punkt Untergruppe | . using a removable actuating or locking member, e.g. a key (F16K 35/10, F16K 35/12 take precedence) |
| F16K 35/08 | 1-Punkt Untergruppe | . requiring setting according to a code, e.g. permutation locks |
| F16K 35/10 | 1-Punkt Untergruppe | . with locking caps or locking bars |

| Symbol | Typ | Titel |
|-------------------|---------------------|--|
| F16K 35/12 | 1-Punkt Untergruppe | . with sealing wire |
| F16K 35/14 | 1-Punkt Untergruppe | . interlocking two or more valves |
| F16K 35/16 | 1-Punkt Untergruppe | . with locking member actuated by magnet |
| F16K 37/00 | Hauptgruppe | Special means in or on valves or other cut-off apparatus for indicating or recording operation thereof, or for enabling an alarm to be given |
| F16K 39/00 | Hauptgruppe | Devices for relieving the pressure on the sealing faces |
| F16K 39/02 | 1-Punkt Untergruppe | . for lift valves |
| F16K 39/04 | 1-Punkt Untergruppe | . for sliding valves |
| F16K 39/06 | 1-Punkt Untergruppe | . for taps or cocks |
| F16K 41/00 | Hauptgruppe | Spindle sealings |
| F16K 41/02 | 1-Punkt Untergruppe | . with stuffing-box |
| F16K 41/04 | 2-Punkt Untergruppe | . . with at least one ring of rubber or like material between spindle and housing |
| F16K 41/06 | 2-Punkt Untergruppe | . . with at least one ring attached to both spindle and housing |
| F16K 41/08 | 2-Punkt Untergruppe | . . with at least one ring provided with axially-protruding peripheral closing-lip |
| F16K 41/10 | 1-Punkt Untergruppe | . with diaphragm, e.g. shaped as bellows or tube |
| F16K 41/12 | 2-Punkt Untergruppe | . . with approximately flat diaphragm |
| F16K 41/14 | 1-Punkt Untergruppe | . with conical flange on the spindle which co-operates with a conical surface in the housing |
| F16K 41/16 | 1-Punkt Untergruppe | . with a flange on the spindle which rests on a sealing ring |
| F16K 41/18 | 2-Punkt Untergruppe | . . sealing only when the closure member is in the opened position |
| F16K 43/00 | Hauptgruppe | Auxiliary closure means in valves, which in case of repair, e.g. rewashering, of the valve, can take over the function of the normal closure means; Devices for temporary replacement of parts of valves for the same purpose |
| F16K 47/00 | Hauptgruppe | Means in valves for absorbing fluid energy (for pipes F16L 55/00) |
| F16K 47/02 | 1-Punkt Untergruppe | . for preventing water-hammer or noise |
| F16K 47/04 | 1-Punkt Untergruppe | . for decreasing pressure, the throttle being incorporated in the closure member |
| F16K 47/06 | 2-Punkt Untergruppe | . . with a throttle in the form of a helical channel |
| F16K 47/08 | 1-Punkt Untergruppe | . for decreasing pressure and having a throttling member separate from the closure member |
| F16K 47/10 | 2-Punkt Untergruppe | . . in which the medium in one direction must flow through the throttling channel, and in the other direction may flow through a much wider channel parallel to the throttling channel |
| F16K 47/12 | 2-Punkt Untergruppe | . . the throttling channel being of helical form |
| F16K 47/14 | 2-Punkt Untergruppe | . . the throttling member being a perforated membrane |
| F16K 47/16 | 2-Punkt Untergruppe | . . the throttling member being a cone |
| F16K 49/00 | Hauptgruppe | Means in or on valves for heating or cooling (for pipes F16L 53/00; thermal insulation in connection with pipes or pipe systems F16L 59/16) |
| F16K 51/00 | Hauptgruppe | Other details not peculiar to particular types of valves or cut-off apparatus |
| F16K 51/02 | 1-Punkt Untergruppe | . specially adapted for high-vacuum installations [2] |
| F16K 99/00 | Hauptgruppe | Subject matter not provided for in other groups of this subclass [2006.01] |