

**E03 WATER SUPPLY; SEWERAGE**

**E03B INSTALLATIONS OR METHODS FOR OBTAINING, COLLECTING, OR DISTRIBUTING WATER** (drilling wells, obtaining fluids in general from wells E21B; pipe-line systems in general F17D)

**Subclass index**

|              |                     |                          |                     |
|--------------|---------------------|--------------------------|---------------------|
| LAYOUT.....  | 1/00, 5/00          | INSTALLATIONS.....       | 3/00, 5/00,<br>9/00 |
| METHODS..... | 1/00, 3/00,<br>9/00 | PIPE SYSTEMS; TANKS..... | 7/00; 11/00         |

|             |   |              |  |
|-------------|---|--------------|--|
| <b>1/00</b> | <b>Methods or layout of installations for water supply</b><br>(E03B 3/00, E03B 9/00 take precedence) [4]  | <b>7/00</b>  | <b>Water main or service pipe systems</b> (pipes or tubes in general F16L)   |
| 1/02        | . for public or like main supply  | 7/02         | . Public or like main pipe systems   |
| 1/04        | . for domestic or like local supply   | 7/04         | . Domestic or like local pipe systems (domestic plumbing E03C 1/02)  |
| <b>3/00</b> | <b>Methods or installations for obtaining or collecting drinking water or tap water</b> (treatment of water C02F) [4]   | 7/07         | . Arrangement of devices, e.g. filters, flow controls, measuring devices, siphons, valves, in the pipe systems (devices <u>per se</u> , <u>see</u> the relevant classes for these devices)   |
| 3/02        | . from rain-water   | 7/08         | . . Arrangement of draining devices (draining devices in general F16K, F16L)   |
| 3/03        | . . Special vessels for collecting or storing rain-water for use in the household, e.g. water-butts   | 7/09         | . Component parts or accessories (tools for cleaning pipes B08B 9/02; devices for preventing contamination of drinking water pipes for domestic use E03C 1/10; devices for preventing damage in case of bursts of pipes F16L; heating of pipes in general F16L 53/00)                  |
| 3/04        | . from surface water  | 7/10         | . . Devices preventing bursting of pipes by freezing (devices preventing bursting of pipes in general F16L 55/00)  |
| 3/06        | . from underground  | 7/12         | . . . by preventing freezing   |
| 3/08        | . . Obtaining and confining water by means of wells (applicable to a combination of water and other liquids or to other liquids only E21B 43/00)  | 7/14         | . . Devices for thawing frozen pipes   |
| 3/10        | . . . by means of pit wells   | <b>9/00</b>  | <b>Methods or installations for drawing-off water</b><br>(domestic water-drawing devices E03C; taps or valves <u>per se</u> F16K) [4]  |
| 3/11        | . . . in combination with tubes, e.g. perforated, extending horizontally, or upwardly inclined, exterior to the pits  | 9/02         | . Hydrants; Arrangement of valves therein; Keys for hydrants   |
| 3/12        | . . . by means of vertical pipe wells   | 9/04         | . . Column hydrants  |
| 3/14        | . . . by means of horizontal or oblique wells   | 9/06         | . . . Covers   |
| 3/15        | . . . Keeping wells in good condition, e.g. by cleaning, repairing, regenerating; Maintaining or enlarging the capacity of wells or water-bearing layers (with artificial enrichment E03B 3/32) | 9/08         | . . Underground hydrants   |
| 3/16        | . . . Component parts of wells  | 9/10         | . . . Protective plates or covers  |
| 3/18        | . . . . Well filters (filters in general B01D 24/00 to B01D 35/00)  | 9/12         | . . . Stand-pipes  |
| 3/20        | . . . . . of elements of special shape  | 9/14         | . . Draining devices for hydrants  |
| 3/22        | . . . . . Selection of specified materials  | 9/16         | . . Devices for retaining foreign matter, e.g. sand  |
| 3/24        | . . . . . formed of loose materials, e.g. gravel  | 9/18         | . . Cleaning tools for hydrants  |
| 3/26        | . . . . . with packed filtering material  | 9/20         | . . Pillar fountains or like apparatus for dispensing drinking water   |
| 3/28        | . from humid air (condensing of vapours in general B01D 5/00; dehumidification of air for air-conditioning F24F 3/14)   | <b>11/00</b> | <b>Arrangements or adaptations of tanks for water supply</b> (water-butts E03B 3/03; storage aspects B65D, B65G, F17B, F17C; foundations E02D 27/38; construction or assembling of bulk storage containers employing civil engineering techniques E04H 7/00; tower aspects E04H 12/00) |
| 3/30        | . from snow or ice [4]  | 11/02        | . for domestic or like local water supply  |
| 3/32        | . with artificial enrichment, e.g. by adding water from a pond or a river   | 11/04        | . . without air regulator  |
| 3/34        | . . of underground water  | 11/06        | . . with air regulator   |
| 3/36        | . . of surface water  | 11/08        | . . . Air regulators   |
| 3/38        | . Curbs for springs   | 11/10        | . for public or like main water supply   |
| 3/40        | . Other devices for confining, e.g. trenches, drainage  |              |  |
| <b>5/00</b> | <b>Use of pumping plants or installations; Layouts thereof</b> (pumps, pumping plants or installations <u>per se</u> , F04)   |              |  |
| 5/02        | . arranged in buildings   |              |  |
| 5/04        | . arranged in wells   |              |  |
| 5/06        | . . Special equipment   |              |  |

|       |                            |       |   |
|-------|----------------------------|-------|---|
| 11/12 | . . . of high-level tanks  | 11/16 | . . . Adaptations of devices for putting pumping plants in and out of operation, e.g. automatic control devices |
| 11/14 | . . . of underground tanks |       |   |

**E03C DOMESTIC PLUMBING INSTALLATIONS FOR FRESH WATER OR WASTE WATER** (not connected to either water-supply main or to waste pipe A47K; devices of the kind used in the ground E03B, E03F); **SINKS**

|             |  |       |  |
|-------------|--|-------|--|
| <b>1/00</b> | <b>Domestic plumbing installations for fresh water or waste water; Sinks</b>   | 1/22  | . . . Outlet devices mounted in basins, baths, or sinks (stoppers A47K 1/14)   |
| 1/01        | . . . for combinations of baths, showers, sinks, wash-basins, closets, urinals, or the like  | 1/23  | . . . . with mechanical closure mechanisms   |
| 1/02        | . . . Plumbing installations for fresh water   | 1/232 | . . . . combined with overflow devices (overflow devices for basins or baths <u>per se</u> E03C 1/24)  |
| 1/04        | . . . Water-basin installations specially adapted to wash-basins or baths (valves, faucets, mixing valves, taps F16K)  | 1/24  | . . . Overflow devices for basins or baths (E03C 1/232 takes precedence)   |
| 1/042       | . . . . Arrangements on taps for wash-basins or baths for connecting to the wall   | 1/242 | . . . . automatically actuating supply or draining valves  |
| 1/044       | . . . . having a heating or cooling apparatus in the supply line (water heaters, e.g. with continuous flow, F24H)  | 1/244 | . . . . Separate devices to be placed on the outlet opening  |
| 1/046       | . . . . Adding soap, disinfectant, or the like, in the supply line (preventing contamination of drinking-water pipes E03C 1/10)                                  | 1/26  | . . . Object-catching inserts or similar devices for waste pipes or outlets (E03C 1/28 takes precedence)   |
| 1/048       | . . . . supplying water through two or more openings around or along one side of the water-basin   | 1/262 | . . . . combined with outlet stoppers  |
| 1/05        | . . . Arrangements of devices on wash-basins, baths, sinks, or the like, for remote control of taps (remote control of taps or the like, <u>per se</u> F16K)     | 1/264 | . . . . Separate sieves or similar object-catching inserts   |
| 1/06        | . . . Devices for suspending or supporting the supply pipe or supply hose of a shower-bath   | 1/266 | . . . . Arrangement of disintegrating apparatus in waste pipes or outlets; Disintegrating apparatus specially adapted for installation in waste pipes or outlets |
| 1/08        | . . . Jet regulators, e.g. anti-splash devices   | 1/28  | . . . Odour seals  |
| 1/084       | . . . . Jet regulators with aerating means   | 1/282 | . . . . combined with additional object-catching devices   |
| 1/086       | . . . . Jet regulators or jet guides, easily mountable on the outlet of taps   | 1/284 | . . . . having U-shaped trap   |
| 1/10        | . . . Devices for preventing contamination of drinking-water pipes, e.g. means for aerating self-closing flushing valves (vacuum-breakers in general F16K, F16L) | 1/286 | . . . . having hand-operated valves against return of waste water  |
| 1/12        | . . . Plumbing installations for waste water; Basins or fountains connected thereto (drainage devices in floors E03F 5/04); Sinks                                | 1/288 | . . . . having non-return valves against return of waste water (E03C 1/286 takes precedence)   |
| 1/122       | . . . Pipe-line systems for waste water in buildings (pipe-line systems in general F17D)   | 1/29  | . . . . having housing containing dividing wall, e.g. tubular  |
| 1/126       | . . . Installations for disinfecting or deodorising waste-water plumbing installations   | 1/292 | . . . . having elastic housing   |
| 1/14        | . . . Wash-basins connected to the waste pipe  | 1/294 | . . . . with provisions against loss of water lock   |
| 1/16        | . . . Wash-fountains connected to the waste pipe   | 1/295 | . . . . using air-supply valves  |
| 1/18        | . . . Sinks, whether or not connected to the waste-pipe  | 1/296 | . . . . using water-supply valves  |
| 1/181       | . . . . Anti-splash devices in sinks (jet regulators E03C 1/08)  | 1/298 | . . . . consisting only of non-return valve  |
| 1/182       | . . . . connected to the waste pipe  | 1/30  | . . . Devices to facilitate removing of obstructions in waste pipes or sinks   |
| 1/184       | . . . . adapted for attachment of washing machines or heating or cooling devices (washing machines for attachment D06F 7/00)                                     | 1/302 | . . . . using devices moved through the pipes  |
| 1/186       | . . . . Separate partition walls, lids, protecting borders, or the like, for sinks   | 1/304 | . . . . using fluid under pressure   |
| 1/20        | . . . Connecting baths or bidets to the waste pipe   | 1/306 | . . . . by means of a tube connected to the water mains  |
|             |  | 1/308 | . . . . by means of a pumping device   |
|             |  | 1/32  | . . . Holders or supports for basins   |
|             |  | 1/322 | . . . . connected to the wall only   |
|             |  | 1/324 | . . . . adjustable   |
|             |  | 1/326 | . . . . resting on the floor   |
|             |  | 1/328 | . . . . adjustable   |
|             |  | 1/33  | . . . Fastening sinks or basins in an apertured support  |

## E03D WATER-CLOSETS OR URINALS WITH FLUSHING DEVICES; FLUSHING VALVES THEREFOR

Subclass index

## WATER-CLOSETS, FLUSHING DEVICES

|                             |            |
|-----------------------------|------------|
| General structure.....      | 1/00, 3/00 |
| Special constructions ..... | 5/00, 7/00 |

|                                    |             |
|------------------------------------|-------------|
| ACCESSORIES, COMPONENT PARTS ..... | 9/00, 11/00 |
| URINALS .....                      | 13/00       |

|             |   |             |   |
|-------------|---|-------------|---|
| <b>1/00</b> | <b>Water flushing devices with cisterns</b>   | <b>3/10</b> | Flushing devices with pressure-operated reservoir, e.g. air chamber   |
| 1/01        | Shape or selection of material for flushing cisterns  | 3/12        | Flushing devices discharging variable quantities of water (flushing cisterns discharging variable quantities of water E03D 1/14)  |
| 1/012       | Details of shape of cisterns, e.g. for connecting to wall, for supporting or connecting flushing-device actuators   | <b>5/00</b> | <b>Special constructions of flushing devices</b> (in motor vehicles or trailers B60R 15/00; in railway carriages B61D 35/00; in ships B63B 29/14; in aircraft B64D 11/02)   |
| 1/02        | High-level flushing systems   | 5/01        | using flushing pumps  |
| 1/04        | Cisterns with bell siphons  | 5/012       | combined with movable closure elements in the bowl outlet (bowls with closure elements between bottom or outlet and outlet pipe E03D 11/10)   |
| 1/05        | with movable siphon bells   | 5/014       | with devices for separate removal of liquids and solids   |
| 1/06        | Cisterns with tube siphons  | 5/016       | with recirculation of bowl-cleaning fluid   |
| 1/07        | with movable or deformable siphon tubes   | 5/02        | operated mechanically or hydraulically (E03D 5/01, E03D 5/12 take precedence)   |
| 1/08        | Siphon action initiated by air or water pressure  | 5/04        | directly by the seat or cover   |
| 1/10        | Siphon action initiated by raising the water level in the cistern, e.g. by means of displacement members  | 5/06        | directly by the door  |
| 1/12        | Siphon action initiated by outlet of air  | 5/08        | directly by foot  |
| 1/14        | Cisterns discharging variable quantities of water (twin or multiple flushing cisterns E03D 1/22; flushing devices operated by pressure of the water supply system and discharging variable quantities of water E03D 3/12) | 5/09        | directly by hand  |
| 1/16        | Cisterns for periodical discharge   | 5/092       | the flushing element, e.g. siphon bell, being actuated through a lever  |
| 1/18        | Cisterns empty when not in action   | 5/094       | the flushing element, e.g. siphon bell, being actuated through a cable, chain, or the like  |
| 1/20        | Cisterns with tiltably-mounted containers   | 5/10        | operated electrically (E03D 5/01, E03D 5/12 take precedence)  |
| 1/22        | Twin or multiple flushing cisterns  | 5/12        | discharging periodically (high-level cisterns for periodical discharge E03D 1/16)   |
| 1/24        | Low-level flushing systems  | <b>7/00</b> | <b>Wheeled lavatories</b> (wheeled closets without flushing A47K 11/00; construction of land vehicles B62)  |
| 1/26        | Bowl with flushing cistern mounted on the rearwardly extending end of the bowl (shape or material of the cistern E03D 1/01; constructional features of the bowl E03D 11/02 to E03D 11/12)                                 | <b>9/00</b> | <b>Sanitary or other accessories for lavatories</b> (hand tools for cleaning the toilet bowl A47K 11/10; seats or covers for closets A47K 13/00; body supports, other than seats, for closets A47K 17/02; devices for preventing contamination of drinking-water pipes E03C 1/10) |
| 1/28        | Bowl integral with the flushing cistern   | 9/02        | Devices adding a disinfecting, deodorising or cleaning agent to the water while flushing, or in the flushing tank (apparatus for disinfection of materials or objects in general A61L 2/00; treatment of water in general C02F)   |
| 1/30        | Valves for high or low cisterns; Their arrangement (inlet valves, valves in general F16K)   | 9/03        | consisting of a separate container with an outlet through which the agent is introduced into the flushing water, e.g. by suction  |
| 1/32        | Arrangement of inlet valves (devices for reducing noise E03D 9/14)  | 9/04        | Special arrangement or operation of ventilating devices (ventilating rooms in general F24F)   |
| 1/33        | Adaptations or arrangements of floats (actuating-floats in general F16K 33/00)  | 9/05        | ventilating the bowl  |
| 1/34        | Flushing valves for outlets; Arrangement of outlet valves   | 9/052       | using incorporated fans [2]   |
| 1/35        | Flushing valves having buoyancy [2]   | 9/06        | Auxiliary chambers with water connection to the flushing pipe and adapted to receive utensils for bowl-cleaning, e.g. brushes   |
| 1/36        | Associated working of inlet and outlet valves   |             |   |
| 1/38        | Adaptations or arrangements of flushing pipes (noise-absorbing means in pipe systems F16L 55/00)  |             |   |
| <b>3/00</b> | <b>Flushing devices operated by pressure of the water supply system</b>   |             |   |
| 3/02        | Self-closing flushing valves (self-closing valves in general F16K 21/04)  |             |   |
| 3/04        | with piston valve and pressure chamber for retarding the valve-closing movement   |             |   |
| 3/06        | with diaphragm valve and pressure chamber for retarding the valve-closing movement  |             |   |
| 3/08        | with other retarding devices  |             |   |

## E03D – E03F

|       |   |       |   |
|-------|---|-------|---|
| 9/08  | . Devices in the bowl producing upwardly-directed sprays; Modifications of the bowl for use with such devices (showers A47K 3/28; bathing devices for special therapeutic or hygienic purposes A61H 33/00, for specific parts of the body A61H 35/00) | 11/08 | . . Bowls with means producing a flushing water swirl   |
| 9/10  | . Waste-disintegrating apparatus combined with the bowl   | 11/10 | . . Bowls with closure elements provided between bottom or outlet and the outlet pipe; Bowls with pivotally supported inserts |
| 9/12  | . Means to prevent freezing of lavatories   | 11/11 | . . Bowls combined with a reservoir, e.g. containing apparatus for disinfecting or for disintegrating                         |
| 9/14  | . Noise-reducing means combined with flushing valves (noise-absorbing means in pipe systems F16L 55/00)   | 11/12 | . Swivel-mounted bowls, e.g. for use in restricted spaces   |
| 9/16  | . Water pressure regulating means in flushing pipes   | 11/13 | . Parts or details of bowls; Special adaptations of pipe joints or couplings for use with bowls [2]                           |
| 11/00 | <b>Other component parts of water-closets</b> (pipe joints or couplings in general F16L)  | 11/14 | . . Means for connecting the bowl to the wall, e.g. to a wall outlet [2]  |
| 11/02 | . Water-closet bowls (auxiliary chambers with connections to flushing water for bowl-cleaning utensils E03D 9/06; modified for using upwardly-directed sprays E03D 9/08; seats or covers A47K 13/00)  | 11/16 | . . Means for connecting the bowl to the floor, e.g. to a floor outlet [2]  |
| 11/04 | . . Bowls of flat shape with only slightly inclined bottom  | 11/17 | . . Means for connecting the bowl to the flushing pipe [2]  |
| 11/06 | . . Bowls with downwardly-extending flanges   | 11/18 | . Siphons (for pipes in general F16L 43/00, F16L 45/00)   |
|       |   | 13/00 | <b>Urinals</b> (without flushing devices A47K 11/00)  |

## E03F SEWERS; CESSPOOLS

### Subclass index

|                 |              |
|-----------------|--------------|
| SEWERS .....    | 1/00 to 9/00 |
| CESSPOOLS ..... | 11/00, 7/00  |

|       |  |       |   |
|-------|--|-------|---|
| 1/00  | <b>Methods, systems, or installations for draining-off sewage or storm water</b>   | 5/16  | . . Devices for separating oil, water, or grease from sewage in drains leading to the main sewer  |
| 3/00  | <b>Sewer pipe-line systems</b>   | 5/18  | . Tanks for disinfecting, neutralising, or cooling sewage (arrangements in tanks as to the biological or chemical aspect C02F)  |
| 3/02  | . Arrangement of sewer pipe-lines or pipe-line systems   | 5/20  | . Siphon pipes or inverted siphons (for connections of baths, basins, or the like E03C 1/12)  |
| 3/04  | . Pipes or fittings specially adapted to sewers (manufacture of concrete tubes B28; pipes or pipe fittings in general F16L)  | 5/22  | . Adaptations of pumping plants for lifting sewage (wheeled apparatus for emptying sewers or cesspools E03F 7/10; pumps, pumping plants, <u>per se</u> F04)   |
| 3/06  | . Methods of, or installations for, laying sewer pipes (making pipes <u>in situ</u> F16L 1/038) [6]  | 5/24  | . Installations for neutralising explosions in sewers   |
| 5/00  | <b>Sewerage structures</b>   | 5/26  | . Installations for stirring-up sewage  |
| 5/02  | . Manhole shafts or other inspection chambers (in general E02D 29/12); Snow-filling openings; Accessories (covers or frames for manholes or the like E02D 29/14)   | 7/00  | <b>Other installations or implements for operating sewer systems, e.g. for preventing or indicating stoppage; Emptying cesspools</b>  |
| 5/04  | . Gullies with or without odour seals or sediment traps  | 7/02  | . Shut-off devices (in general F16K)  |
| 5/042 | . . Arrangements of means against overflow of water, backing-up from the drain   | 7/04  | . . Valves for preventing return flow   |
| 5/046 | . . adapted to be used with kerbs (E03F 5/06 takes precedence)   | 7/06  | . Devices for restraining rats or other animals   |
| 5/06  | . . Gully gratings   | 7/08  | . Hand implements for emptying sewers or cesspools  |
| 5/08  | . Ventilation of sewers  | 7/10  | . Wheeled apparatus for emptying sewers or cesspools  |
| 5/10  | . Collecting-tanks; Equalising-tanks for regulating the run-off; Laying-up basins  | 7/12  | . Installations enabling inspection personnel to drive along sewer canals   |
| 5/12  | . Emergency outlets  | 9/00  | <b>Arrangements or fixed installations for cleaning sewer pipes, e.g. by flushing</b> (sediment traps, rakes, screens, or the like, arranged in sewer lines E03F 5/14; cleaning pipes in general, devices for cleaning pipes B08B 9/02) |
| 5/14  | . Devices for separating liquid or solid substances from sewage, e.g. sand or sludge traps, rakes or grates (for use in sewage purification plants or both in sewage purification plants or in sewer systems B01D, C02F) | 11/00 | <b>Cesspools</b> (emptying cesspools E03F 7/00; features relating to treatment of sewage C02F)  |