COOPERATIVE PATENT CLASSIFICATION

A61M

DEVICES FOR INTRODUCING MEDIA INTO, OR ONTO, THE BODY (introducing media into or onto the bodies of animals A61D 7/00; means for inserting tampons A61F 13/26; devices for administering food or medicines orally A61J; containers for collecting, storing or administering blood or medical fluids A61J 1/05); DEVICES FOR TRANSDUCING BODY MEDIA OR FOR TAKING MEDIA FROM THE BODY (surgery A61B; chemical aspects of surgical articles A61L); DEVICES FOR PRODUCING OR ENDING SLEEP OR STUPOR

NOTES
1. This subclass covers suction, pumping or atomising devices for medical use (e.g. cups, breast relievers, irrigators, sprays, powder insufflators, atomisers, inhalers), apparatus for general or local anaesthetics, devices or methods for causing a change in the state of consciousness, catheters, dilators, apparatus for introducing medicines into the body other than orally
2. Void
3. When classifying in this group, classification is also made in group B01D 15/08 insofar as subject matter of general interest relating to chromatography is concerned

WARNINGS
1. The following IPC groups are not in the CPC scheme. The subject matter for these IPC groups is classified in the following CPC groups:
   - A61M 1/18 covered by B01D 63/02, B01D 63/04
   - A61M 1/20 covered by B01D 63/06
   - A61M 1/22 covered by B01D 63/08
   - A61M 1/24 covered by B01D 63/10
   - A61M 3/04 covered by A61M 3/02
   - A61M 5/175 covered by A61M 5/168
   - A61M 5/303 covered by A61M 5/30
   - A61M 5/307 covered by A61M 5/30
   - A61M 25/08 covered by A61M 25/0105
   - A61M 25/082 covered by A61M 25/0116
   - A61M 25/085 covered by A61M 25/0122
   - A61M 25/088 covered by A61M 25/01
   - A61M 25/092 covered by A61M 25/0133
   - A61M 25/095 covered by A61M 25/01, A61B 5/00, A61N 1/056
   - A61M 25/098 covered by A61M 25/0108
   - A61M 25/12 covered by A61M 25/10, A61M 29/02
   - A61M 25/14 covered by A61M 25/0021
   - A61M 25/16 covered by A61M 25/0009
   - A61M 25/18 covered by A61M 25/0014
   - A61M 29/04 covered by A61M 29/02
   - A61M 36/00 covered by A61M 37/0069, A61N 5/10
   - A61M 36/02 covered by A61M 37/0069, A61N 5/10
   - A61M 36/06 covered by A61M 37/0069, A61N 5/10, A61M 15/02
   - A61M 36/08 covered by A61M 5/1785
   - A61M 36/10 covered by A61M 37/0069, A61N 5/10
   - A61M 36/12 covered by A61M 37/0069, A61N 5/10
   - A61M 36/14 covered by A61M 37/0069, A61N 5/10
2. 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.
Suction or pumping devices for medical purposes; Devices for carrying-off, for treatment of, or for carrying-over, body-liquids; Drainage systems; (A61M 3/00 - A61M 5/00, A61M 11/00 - A61M 16/00, A61M 27/00 - A61M 35/00 take precedence); catheters A61M 25/00; tube connectors, tube couplings, valves or branch units specially adapted for medical use A61M 39/00; devices for taking samples of blood A61B 5/14; implements for holding wounds open A61B 17/02; (saliva removers for dentists A61C 17/06); filters implantable into blood vessels A61F 2/01; pumps in general F04

WARNING


should be considered in order to perform a complete search.

1/0001 . [Containers for suction drainage, e.g. rigid containers]
1/0003 . [Self-contained vacuum aspirators]
1/0005 . [with means for emptying the suction container, e.g. by interrupting suction]
1/0007 . [Emptying the suction container without interrupting suction]
1/0009 . [incorporating a movable wall to create suction, e.g. syringes (with a flexible member creating suction A61M 1/001]; cupping glasses A61M 1/08)]
1/0011 . [Drainage containers incorporating a flexible member creating suction, e.g. bags in a low-pressure chamber, bellows]
1/0013 . [Two- or three-bottle systems for underwater drainage, e.g. for chest cavity drainage]
1/0015 . [Mechanical means for preventing flexible containers from collapsing when vacuum is applied inside, e.g. stents]
1/0017 . [Bag or liner in a rigid container, with suction applied to both]
1/0019 . [Drainage containers not being adapted for subject to vacuum, e.g. bags (devices worn by the patient for reception of urine A61F 5/44; emptying devices for drainage bags B65B 69/0016)]
1/0021 . [Gravity drainage systems (A61M 1/0019 takes precedence)]
1/0023 . [Suction drainage systems (containers therefor A61M 1/0001; suction-irrigation systems A61M 1/0058)]
Drainage tubes; Aspiration tips} {Tube strippers, i.e. for clearing the contents of the} {Suction pumps (A61M 1/0003, A61M 1/0062 take precedence)} {Intermittent or pulsating suction (A61M 1/0005, A61M 1/0047 takes precedence)} {Handpieces (aspiration tips A61M 1/008)} {with means for varying suction manually (suction control A61M 1/0031)} {by changing the size of the line} {by deformation of the fluid passage} {by changing the size of a vent (in combination with changing the section of the line A61M 1/0043)} {Means preventing overflow or contamination of the pumping systems (combined with rigid drainage containers A61M 1/0001)} {using valves with freely moving parts, e.g. float valves} {by filtering, sterilising or disinfecting the exhaust air, e.g. swellable filter valves} {by heat} {Filters for solid matter (similar devices for dental use A61C 17/065)} {Suction-irrigation systems (aspiration tips supplying fluids A61M 1/0084; combined with tracheal tubes A61M 16/0463)} {Determination of loss or gain of body fluids due to suction-irrigation, e.g. during surgery} {operating alternately (A61M 1/0064 takes precedence)} {Handpieces therefor} {Suction pumps (A61M 1/0003, A61M 1/0011, A61M 1/0023, A61M 1/10 take precedence)} {Piston pumps, e.g. syringes} {the barrel serving as aspiration container, e.g. in a breast pump} {Membrane pumps, e.g. bulbs} {by vacuum created above a liquid flowing from a closed container} {using Laval or Venturi jet pumps} {Tube strippers, i.e. for clearing the contents of the tubes (vein strippers A61B 1700008)} {Drainage tubes; Aspiration tips} {rotating} {With gas or fluid supply means, e.g. for supplying rinsing fluids, anticoagulants (for irrigation without suction A61M 3/0279; combined with tracheal tubes A61M 16/0463; dental instruments with combined rinsing and aspirating A61C 17/0208)} {Connectors therefor, e.g. detachable from hand-piece} {with a seal, e.g. to stick around a wound for isolating the treatment area} {having pumping means on suction site, e.g. miniature pump on wound dressing}
A61M

1/068 . . . . [having means for simultaneous feeding, e.g. with rubber nipple for feeding]

1/08 . . . . Cupping glasses

1/10 . . . . Blood pumps; Artificial hearts; Devices for mechanical circulatory assistance, e.g. intra-aortic balloon pumps (Artificial heart valves A61F 2/24; heart stimulation A61H 31/00)

1/1001 . . . . [General aspects of blood pumps irrespective of pump type]

1/1003 . . . . [skeletal muscle-powered]

1/1005 . . . . [with means for making a blood flow pulsatile (moving filter membranes used for pumping A61M 1/267; piston pumps A61M 1/1081)]

1/1006 . . . . [Blood pumps incorporated within another functional device, e.g. an oxygenator, a dialyser or a blood chamber]

1/1008 . . . . [Tubes; Connections therefor]

1/101 . . . . [Non-positive displacement pumps, e.g. impeller, centrifugal, vane pumps]

1/1012 . . . . [Constructional features thereof]

1/1013 . . . . [Types of bearings]

1/1015 . . . . [Magnetic bearings]

1/1017 . . . . [Hydrodynamic bearings]

1/1018 . . . . [with occluders preventing backflow]

1/102 . . . . [having a purge fluid supply]

1/1022 . . . . [using filtered blood as purge fluid]

1/1024 . . . . [having a collapsible rotor]

1/1025 . . . . [Details on blood sealings between rotational parts, e.g. sealing by axial forces]

1/1029 . . . . [Drive systems therefor]

1/1031 . . . . [using a motor with canned rotor, i.e. a motor enclosed within a casing along with the rotor so that the motor bearings are lubricated by the blood that is being pumped]

1/1032 . . . . [with hydraulic or pneumatic driving means]

1/1034 . . . . [using rotating cables for driving]

1/1036 . . . . [using rotating magnets for driving]

1/1037 . . . . [Pumps having flexible elements, e.g. with membranes, diaphragms, or bladder pumps (Moving membranes in blood filters used for pumping A61M 1/267)]

1/1039 . . . . [Peristaltic pumps]

1/1041 . . . . [Linear]

1/1043 . . . . [Constructional features thereof]

1/1044 . . . . [Compliance chamber containing a gas or liquid other than blood to compensate volume variations of a blood chamber]

1/1046 . . . . [Drive systems therefor, e.g. mechanically, electromechanically or skeletal muscle drive means]

1/1048 . . . . [characterised by way of converting the movement]

1/1049 . . . . [with means converting the rotation of a motor into a translational movement of the flexible element]

1/1051 . . . . [the axis of both movements being parallel, e.g. roller screw actuator, cylindrical cam transmission]

1/1053 . . . . [using non-rotary electrical means]

1/1055 . . . . [Electromagnetic means, e.g. solenoids or ferro-fluids, magnetostrictive means]

1/1056 . . . . [Thermo-electric means, e.g. shaped memory alloys]

1/1058 . . . . [Piezo-electric means]

1/106 . . . . [using hydraulic or pneumatic means]

1/1062 . . . . [with application of vacuum at the blood pump, e.g. to accelerate filling]

1/1063 . . . . [Diastole or systole switching by stopping or reversing a hydraulic or pneumatic pump operating at a much higher cyclical speed than the heart rate]

1/1065 . . . . [Diastole or systole switching by valve means between the blood pump and the hydraulic or pneumatic energy source]

1/1067 . . . . [using a blood vessel as flexible element (not used, see subgroups)]

1/1068 . . . . [using the heart as flexible element]

1/107 . . . . [Pulsating membrane pumps without valves, e.g. for counter pulsation, extra-arterial balloon pumps]

1/1072 . . . . [Intra-arterial balloon pumps, e.g. intra-aortic (intravascular pumps A61M 1/125)]

1/1074 . . . . [Intra-ventricular balloon pumps]

1/1075 . . . . [the pump membrane acting as inlet valve]

1/1081 . . . . [Piston pumps]

1/1082 . . . . [High-frequency pumps]

1/1084 . . . . [Venturi or jet pumps]

1/1086 . . . . [Regulating or controlling systems therefor]

1/1087 . . . . [Active valves for blood pumps or artificial hearts, i.e. using an external force for actuating the valve]

1/1089 . . . . [where the valve is formed by a flexible tube element which is clamped for restricting the flow]

1/1095 . . . . [Passive valves for blood pumps or artificial hearts, i.e. valves actuated by the fluid]

1/1098 . . . . [Valves having flexible or resilient parts, e.g. flap valve]

1/12 . . . . implantable into the body (not used, see subgroups)

1/122 . . . . [Heart assist devices, i.e. for assisting an ailing heart, using additional pumping means in the blood circuit]

1/125 . . . . [intravascular, i.e. introduced or implanted in an existing blood vessel]

1/127 . . . . [Energy supply devices, converters therefor]

1/14 . . . . Dialysis systems; Artificial kidneys; Blood oxygenators; (Reciprocating systems for treatment of body fluids, e.g. single needle systems for haemofiltration, pheresis (haemofiltration using non reciprocating systems A61M 1/34); extracorporeal blood circuit aspects A61M 1/36); (processes of separation using semi-permeable membranes B01D 61/00); semi-permeable membranes characterised by the material, manufacturing processes therefor B01D 71/00)

1/16 . . . . with membranes [{A61M 1/30 takes precedence; membranes per se B01D 69/00, B01D 71/00}]

1/1601 . . . . [Control or regulation]

1/1603 . . . . [Regulation parameters]

1/1605 . . . . [Physical characteristics of the dialysate fluid]

1/1607 . . . . . . . . [before use]

1/1609 . . . . . . . . [after use]

1/1611 . . . . . . . . [Weight of the patient]
[Profiling or modelling]
[using measurements made at different flow rates]
[using measurements made during a temporary variation of a characteristic of the fresh dialysis fluid]
[Sampled collection of used dialysate, i.e. obviating the need for recovery of whole dialysate quantity for post-dialysis analysis]

[Constructional aspects thereof (B01D 69/00, B01D 71/00 take precedence)]

[Disposal of membranes]

[Dialysyr of the outside perfusion type, i.e. blood flow outside hollow membrane fibres or tubes]

[Dialysyr of the inside perfusion type, i.e. blood flow inside hollow membrane fibres or tubes]

[with integral heat exchanger]

[with non-tubular membranes, e.g. sheets]

[with more than one dialyzer unit]

[with volume chamber balancing devices between used and fresh dialysis fluid]

[containing the whole volume of dialysis fluid used during a treatment session]

[linked by membranes]

[linked by pistons]

[with weighing of fresh and used dialysis fluid]

[with mechanically linked peristaltic dialysis fluid pumps one upstream, the other one downstream of the dialysyr]

[with flow rate measurement of the dialysis fluid, upstream and downstream of the dialysyr]

[with pulsatile dialysis fluid flow]

[with a dialysyr bypass on the dialysis fluid line]

[ Holding or locking systems for the membrane unit]

[Dialysyr therefor]

[Apparatus for preparing dialysyr with regeneration of dialysyr A61M 1/1696]

[Degasification (in general B01D 19/00)]

[Heating (for sterilisation A61M 1/1686)

[with heat exchange between fresh and used dialysyr]

[with temperature control]

[by dissolving solids]

[Details of containers]

[Flexible packaging for solid concentrates]

[using membrane filters, e.g. for sterilising the dialysyr]

[using UV radiation sources for sterilising the dialysyr]

[containing proteins, e.g. albumin]

[intracorporeal A61M 1/28 and A61F 2/022 take precedence]

[Sterilisation or cleaning before or after use (sterilisation of materials in general A61L; cleaning or sterilisation of membrane modules apart from the machine B01D 65/02)]

[both machine and membrane module, i.e. also the module blood side]

[Checking the module characteristics before reuse]

[by heat]

[with recirculation of the sterilising fluid]

[using chemical substances]

[Detection of blood traces in dialysyr (testing of the membrane modules B01D 65/10; investigating fluid-tightness of structures in general G01M 3/00)]

[with recirculating dialysyr liquid]

[with dialysyr regeneration]

[Blood oxygenators with or without heat-exchangers (A61M 1/1678 takes precedence; membranes therefor B01D 67/00, B01D 69/00, B01D 71/00)]

[and internal elements which are moving]

[rotating]

[inducing TAYLOR vortices]

[used for pumping]

[Peritoneal dialysis (Other peritoneal treatment, e.g. oxygenation)]

[Instillation other than by gravity]

[Operational modes]

[Continuous flow peritoneal dialysis (CFPD)]

[Catheters therefor]

[Dialysyr therefor]

[Priming (priming in extracorporeal blood circuits A61M 1/3643)]

[Reciprocating systems, alternately withdrawing blood from and returning it to the patient, e.g. single-lumen-needle dialysis or single needle systems for haemofiltration, pheresis]

[Details]

[having a reservoir for withdrawn untreated blood]

[having a reservoir for treated blood to be returned]

[Treatment chamber used as reservoir, e.g. centrifuge bowl or filter with movable membrane]

[Control of inversion point between collection and re-infusion phase]

[Pressure control, e.g. using substantially rigid closed, gas buffered or elastic reservoirs]

[Time control]

[Volume control, e.g. with open or flexible containers, by counting the number of pump revolutions, weighing]

[with trans-membrane pressure [TMP] increasing substantially continuously during arterial phase]

[Oxygenators without membranes]

[Antifoam; Defoaming]

[Surfactant coating; Improving wettability]

[using catalytic production of oxygen]

[Filtering material out of the blood by passing it through a membrane, i.e. haemofiltration, diafiltration] (A61M 1/30 takes precedence; extracorporeal blood circuit aspects A61M 1/36)}
circulatory system, e.g. temperature adaptation, {Reperfusion, e.g. of the coronary vessels, e.g.
{Extra-corporeal circuits in which the blood fluid
processes A61M 1/30
{Plasmapheresis; Leucopheresis; Lymphopheresis
takes precedence; single-needle
})
solutions (for preventing coagulation
{Diafiltration})
Added solutions to the blood, e.g. substitution
solutions (for preventing coagulation
A61M 1/3672)
Substitution fluid path
back through the membrane, e.g. by
inverted trans-membrane pressure [TMP]
upstream the filter
{with pre-dilution and post-dilution}
downstream the filter, e.g. post-dilution
with filtrate
Substitution rate control as a function of the
ultrafiltration rate
[in which the collected ultra-filtrate expels
an equal volume of substitution fluid from a
reservoir]
by mechanical linked pumps in both ultra-
filtrate and substitution flow line
{after changing physical properties of target cells
from the blood circuit}
{Magnetic separation}
{Physical characteristics of the filtrate, e.g.
urea]
{by measuring the filtrate rate, volume}
using distinct filters for dialysis and ultra-
filtration
{Adding solutions to the blood, e.g. substitution
solutions (for preventing coagulation
A61M 1/3672)}
Syringes; Irrigators; Baths for subaquatic intestinal cleaning

(Other apparatus for introducing medicines into the body A61M 29/00 - A61M 37/00)

3/00 Medical syringes, e.g. enemata; Irrigators
(A61M 5/00 takes precedence; pistons A61M 5/315)

**WARNING**


Until reclassification is complete, groups A61M 3/02 and A61M 3/0204 - A61M 3/022 should be considered to perform a complete search.

3/005 . . . [comprising means for injection of two or more media, e.g. by mixing]
3/02 . . . Enema; Irrigators
3/0204 . . . [Physical characteristics of the irrigation fluid, e.g. conductivity or turbidity]
3/0208 . . . [before use]
3/0212 . . . [after use]
3/0216 . . . [Pressure]
3/022 . . . [Volume: Flow rate]

3/0225 . . . [Devices on which the patient can sit, e.g. mounted on a toilet bowl (combined with bidets A61M 3/06); Devices containing liquid pumped by the patient's weight]
3/0229 . . . [Devices operating in a closed circuit, i.e. recycling the irrigating fluid]
3/0233 . . . [characterised by liquid supply means, e.g. from pressurised reservoirs]
3/0237 . . . [the pressure being generated in the reservoir, e.g. by gas generating tablets]
3/0241 . . . [the liquid being supplied by gravity]
3/0245 . . . [Containers therefor, e.g. with heating means, with storage means for cannula]
3/025 . . . [supplied directly from the pressurised water source, e.g. with medicament supply (combined with bidets A61M 3/06)]
3/0254 . . . [the liquid being pumped (by the patient's weight A61M 3/0225)]
3/0258 . . . [by means of electric pumps]
3/0262 . . . [manually, e.g. by squeezing a bulb]
3/0266 . . . [Stands, holders or storage means for irrigation devices (containers with storage means for cannula A61M 3/0245)]
3/027 . . . [Devices for holding the cannula in position, e.g. belts (cannula details A61M 3/0279)]
3/0275 . . . [Pulsating jets; Vibrating nozzles]
3/0279 . . . [Cannula; Nozzles; Tips; their connection means]
3/0283 . . . [with at least two inner passageways, a first one for irrigating and a second for evacuating]
3/0287 . . . [with an external liquid collector]
3/0291 . . . [with dilating fingers]
3/0295 . . . [with inflatable balloon]
3/06 . . . combined with bidets

5/00 Devices for bringing media into the body in a subcutaneous, intra-vascular or intramuscular way; Accessories therefor, e.g. filling or cleaning devices, arm-rests {vaccination appliances for veterinary use A61D 1/025} ; tube connectors, tube couplings, valves or branch units specially adapted for medical use A61M 39/00; containers specially adapted for medical or pharmaceutical purposes A61J 1/00; [combinations of vial and syringe for mixing or transferring their contents A61J 1/20; holders for containers for collecting, storing or administering blood or medical fluids A61J 1/16]

5/001 . . . [Apparatus specially adapted for cleaning or sterilising syringes or needles]
5/002 . . . [Packages specially adapted therefor, e.g. for syringes or needles, kits for diabetics (needle protection, e.g. caps, A61M 5/3202; for sharps A61B 50/3001)]
5/003 . . . [Kits for diabetics]

2005/004 . . . [Magazines with multiple needles directly inserted into an injection or infusion device, e.g. revolver-like magazines]
2005/005 . . . [Magazines with multiple ampoules directly inserted into an injection or infusion device, e.g. revolver-like magazines containing ampoules with or without needles]
2005/006 . . . [for gases, e.g. CO\textsubscript{2}]
5/007 . . . [for contrast media]
5/008 . . . [Racks for supporting syringes or needles (A61M 5/001 takes precedence)]
Syringes; Irrigators; Baths for subaquatic intestinal cleaning

5/14 . Infusion devices, e.g. infusing by gravity; Blood infusion; Accessories therefor (suction in pumping blood transfusion A61M 1/02; infusion containers A61J 1/05)

2005/1401 . . . [Functional features]
2005/1402 . . . [Priming]
2005/1403 . . . [Flushing or purging]
2005/1404 . . . [Keep vein-open rate [KVO], i.e. low flow rate]
2005/1405 . . . [Patient controlled analgesia [PCA]]
2005/1406 . . . [Minimizing backflow along the delivery catheter track]

5/1407 . . . [Infusion of two or more substances]
5/1408 . . . [in parallel, e.g. manifolds, sequencing valves (access sites A61M 39/02; tube connectors A61M 39/10)]
5/1409 . . . [in series, e.g. first substance passing through container holding second substance, e.g. reconstitution systems (needle sets A61M 5/162)]

5/141 . . . [with capillaries for restricting fluid flow]
5/1411 . . . [Drip chambers (A61M 5/162, A61M 5/1689, A61M 5/40 take precedence)]
5/1412 . . . [Burettes, measuring cylinders (for laboratory use B01L 3/02)]
5/1413 . . . [Modular systems comprising interconnecting elements]
5/1414 . . . [Hanging-up devices]
5/1415 . . . [Stands, brackets or the like for supporting infusion accessories]

2005/1416 . . . [placed on the body of the patient]
5/1417 . . . [Holder or handles for hanging up infusion containers]
5/1418 . . . [Clips, separators or the like for supporting tubes or leads]
5/142 . . . Pressure infusion, e.g. using pumps

**NOTE**

In this group, the following expression is used with the meaning indicated:

* "pressure infusion" includes powered injection working at a controlled rate

5/14204 . . . [with gas-producing electrochemical cell]
5/14208 . . . [with a programmable infusion control system, characterised by the infusion program]
5/14212 . . . [Pumping with an aspiration and an expulsion action]
5/14216 . . . [Reciprocating piston type]
5/14222 . . . [with double acting or multiple pistons]
5/14224 . . . [Diaphragm type]
5/14228 . . . [with linear peristaltic action, i.e. comprising at least three pressing members or a helical member]

**NOTE**

Pumps having tubular flexible working members F04B 43/08

5/14232 . . . [Roller pumps]

**NOTE**

Pumps having rollers for peristaltic action F04B 43/12

5/14236 . . . [Screw, impeller or centrifugal type pumps]

5/1424 . . . . [Manually operated pumps]
5/14244 . . . [adapted to be carried by the patient, e.g. portable on the body]
5/14248 . . . [of the skin patch type]
2005/14252 . . . . [with needle insertion means]
2005/14256 . . . . [with means for preventing access to the needle after use]
2005/1426 . . . . [with means for preventing access to the needle after use]
2005/14264 . . . . [with means for compensating influence from the environment]
2005/14268 . . . . [with a reusable and a disposable component]
2005/14272 . . . . [for emergency, field or home use, e.g. self-contained kits to be carried by the doctor]
5/14276 . . . . [specially adapted for implantation]
5/1428 . . . . [with manual infusion action]
5/14284 . . . . [with needle insertion means]
5/14288 . . . . [Infusion or injection simulation (simulation of surgery in general A61B 34/10; training for or simulation of use of injection or infusion devices G09B 23/285)]
2005/14292 . . . . [Computer-based infusion planning or simulation of spatio-temporal infusate distribution]

5/14296 . . . . [Pharmacokinetic models]
5/145 . . . using pressurised reservoirs, e.g. pressurised by means of pistons
5/14506 . . . . [mechanically driven, e.g. spring or clockwork]
5/14513 . . . . [with secondary fluid driving or regulating the infusion]
5/1452 . . . . [pressurised by means of pistons]
5/14526 . . . . [the piston being actuated by fluid pressure]
5/14533 . . . . [cam actuated]
5/1454 . . . . [spring-actuated, e.g. by a clockwork]
5/14546 . . . . [Front-loading type injectors]
2005/14553 . . . . . [comprising a pressure jacket]
5/1456 . . . . [with a replaceable reservoir comprising a piston rod to be moved into the reservoir, e.g. the piston rod is part of the removable reservoir]
5/14566 . . . . [with a replaceable reservoir for receiving a piston rod of the pump]
5/14573 . . . . . [with a replaceable reservoir for quick connection/disconnection with a driving system]
5/1458 . . . . [Means for capture of the plunger flange]
5/14586 . . . . [pressurised by means of a flexible diaphragm]
5/14593 . . . . [the diaphragm being actuated by fluid pressure]
5/148 . . . . flexible, [e.g. independent bags] (A61M 5/155 takes precedence)]
5/1483 . . . . [using flexible bags externally pressurised by fluid pressure]
5/1486 . . . . [the bags being substantially completely surrounded by fluid]
5/152 . . . . pressurised by contraction of elastic reservoirs [(containers for dispensing contents by contraction of an elastic bag provided therein, in general B65D 83/0061)]
Syringes; Irrigators; Baths for subaquatic intestinal cleaning

A61M

5/155 . . . . pressurised by gas [introduced into the reservoir]

5/158 . . . . Needles [for infusions; Accessories therefor, e.g. for inserting infusion needles, or for holding them on the body]

2005/1581 . . . . [Right-angle needle-type devices]

5/1582 . . . . Double lumen needles

2005/1583 . . . . [Needle extractors]

5/1585 . . . . [Needle inserters]

2005/1586 . . . . [Holding accessories for holding infusion needles on the body (holding devices for catheters A61M 25/02)]

2005/1587 . . . . [suitable for being connected to an infusion line after insertion into a patient]

2005/1588 . . . . [having means for monitoring, controlling or visual inspection, e.g. for patency check, avoiding extravasation]

5/162 . . . . Needle sets, i.e. connections by puncture between reservoir and tube (; Connections between reservoir and tube (in jet-action syringes A61M 5/30; connectors for tubes having sealed ends and a needle for piercing them A61M 39/14)]

2005/1623 . . . . [Details of air intake]

5/1626 . . . . [Needle protectors therefor (in combination with syringes A61M 5/3202; protectors for sharps A61B 50/0001)]

5/165 . . . . Filtering accessories, e.g. blood filters, filters for infusion liquids ([A61M 1/14], A61M 1/34, A61M 1/3627, A61M 1/3679, A61M 1/3687) take precedence; [needle sets with incorporated air inlet filters A61M 5/162)]

2005/1652 . . . . [Filter with duct, e.g. filtering element incorporated in a flow line, tube, duct]

5/1655 . . . . [Filter with fibers, e.g. filtering element in form of hollow fibers]

2005/1657 . . . . [Filter with membrane, e.g. membrane, flat sheet type infusion filter]

5/168 . . . . Means for controlling media flow to the body or for metering media to the body, e.g. drip meters, counters (; Monitoring media flow to the body (flow control in general G05D 7/00)

5/16804 . . . . [Flow controllers]

5/16809 . . . . [by repeated filling and emptying of an intermediate volume (pressure infusion using positive displacement pumps A61M 5/142)]

5/16813 . . . . [by controlling the degree of opening of the flow line]

5/16818 . . . . [by changing the height of the reservoir]

5/16822 . . . . [by controlling air intake into infusion reservoir (needle sets with air inlet A61M 5/162)]

5/16827 . . . . [controlling delivery of multiple fluids, e.g. sequencing, mixing via separate flow-paths (infusion of multiple fluids without using a controller A61M 5/1407)]

5/16831 . . . . [Monitoring, detecting, signalling or eliminating infusion flow anomalies (low-level float-valves causing cut-off A61M 5/40; indicating or recording presence, absence or direction of flow in general G01P 13/0066)]

5/16836 . . . . [by sensing tissue properties at the infusion site, e.g. for detecting infiltration (detecting tissue temperature for diagnostic purposes A61M 39/0247)]

5/1684 . . . . [by detecting the amount of infusate remaining, e.g. signalling end of infusion]

5/16845 . . . . [by weight]

5/1685 . . . . [by detection of position of a floating member]

5/16854 . . . . [by monitoring line pressure]

5/16859 . . . . [Evaluation of pressure response, e.g. to an applied pulse]

2005/16863 . . . . [Occlusion detection]

2005/16868 . . . . [Downstream occlusion sensors]

2005/16872 . . . . [Upstream occlusion sensors]

5/16877 . . . . [Adjusting flow; Devices for setting a flow rate]

5/16881 . . . . [Regulating valves (on-off valves, e.g. clamps A61M 39/28)]

5/16886 . . . . [for measuring fluid flow rate, i.e. flowmeters]

5/1689 . . . . [Drip counters]

5/16895 . . . . [by monitoring weight change, e.g. of infusion container]

5/172 . . . . [Electrical or electronic ([A61M 5/16804, A61M 5/16831] take precedence)]

5/1723 . . . . [by using feedback of body parameters, e.g. blood-sugar, pressure (measurement of body parameters A61B 5/00)]

2005/1726 . . . . [the body parameters being measured at, or proximate to, the infusion site]

5/178 . . . . Syringes

5/1782 . . . . [Devices aiding filling of syringes in situ (combination of a vial and a syringe for transferring or mixing their contents A61J 1/2096, filling of medical containers in general B65B 3/003)]

5/1785 . . . . [comprising radioactive shield means (syringe shields or holders for storage of radioactive sources G21F 5/018)]

2005/1787 . . . . [Syringes for sequential delivery of fluids, e.g. first medicament and then flushing liquid]

5/19 . . . . [having more than one chamber (, e.g. including a manifold coupling two parallelly aligned syringes through separate channels to a common discharge assembly (surgical glue applicators A61B 17/00491)]

5/20 . . . . Automatic syringes, e.g. with automatically actuated piston rod, with automatic needle injection, filling automatically ([A61M 5/142, A61M 5/46] take precedence; [hypodermic projectiles F42B 12/54])

2005/2006 . . . . [Having specific accessories]

2005/2013 . . . . [triggering of discharging means by contact of injector with patient body]

2005/202 . . . . [cocking means, e.g. to bias the main drive spring of an injector]

2005/2026 . . . . [Semi-automatic, e.g. user activated piston is assisted by additional source of energy]

5/2033 . . . . [Spring-loaded one-shot injectors with or without automatic needle insertion (multishot dosing syringes A61M 5/3152, needle insertion only A61M 5/3287)]

5/204 . . . . [connected to external reservoirs for multiple refilling]

5/2046 . . . . [Media being expelled from injector by gas generation, e.g. explosive charge]
Syringes; Irrigators; Baths for subaquatic intestinal cleaning

5/282 . . . . [by compression of deformable ampoule or carpule wall]
5/283 . . . . [by telescoping of ampoules or carpules with the syringe body]
5/284 . . . . [comprising means for injection of two or more media, e.g. by mixing]
5/285 . . . . [with sealing means to be broken or opened]
5/286 . . . . [upon internal pressure increase, e.g. pierced or burst (A61M 5/283 takes precedence)]

5/2053 . . . . [Media being expelled from injector by pressurised fluid or vacuum (for infusion A61M 5/145, A61M 5/155)]

5/2066 . . . . [With automatic needle insertion]

5/2073 . . . . [preventing premature release, e.g. by making use of a safety lock]

5/208 . . . . [Release is possible only when device is pushed against the skin, e.g. using a trigger which is blocked or inactive when the device is not pushed against the skin]

5/2086 . . . . [having piston damping means, e.g. axially or rotationally acting retarders]

5/2093 . . . . [including concentration setting means]

5/24 . . . . Ampoule syringes, i.e. syringes with needle for use in combination with replaceable ampoules or carpules, e.g. automatic ([ampoules or carpules A61J 1/06])

5/2403 . . . . [Ampoule inserted into the ampoule holder]

5/2407 . . . . [from the rear]

5/2411 . . . . [from the front]

5/2414 . . . . [from the side]

5/2418 . . . . [comprising means for damping shocks on ampoule]

5/2422 . . . . [using emptying means to expel or eject media, e.g. pistons, deformation of the ampoule, or telescoping of the ampoule]

5/2425 . . . . [by compression of deformable ampoule or carpule wall]

5/2429 . . . . [by telescoping of ampoules or carpules with the syringe body]

5/2433 . . . . [Ampoule fixed to ampoule holder]

5/2437 . . . . [by clamping means]

5/244 . . . . . [by flexible clip]

5/2444 . . . . [by thread]

5/2448 . . . . [comprising means for injection of two or more media, e.g. by mixing]

5/2451 . . . . [preventing delivery before mixing is completed, e.g. by locking mechanisms]

5/2455 . . . . [with sealing means to be broken or opened]

5/2459 . . . . [upon internal pressure increase, e.g. pierced or burst (A61M 5/2429 takes precedence)]

5/2462 . . . . [by displacing occluding plugs]

5/2466 . . . . [by piercing without internal pressure increase (A61M 5/2429 takes precedence)]

5/247 . . . . . [with fixed or steady piercing means, e.g. piercing under movement of ampoule]

5/2474 . . . . . [with movable piercing means, e.g. ampoule remains fixed or steady]

5/2477 . . . . . [comprising means to reduce play of ampoule within ampoule holder, e.g. springs]

5/2481 . . . . [comprising means for biasing the ampoule out of the ampoule holder]

5/2485 . . . . [Ampoule holder connected to rest of syringe]

5/2488 . . . . [via rotation, e.g. threads or bayonet]

5/2492 . . . . [via snap connection]

5/2496 . . . . [via pivot]

5/28 . . . . Syringe ampoules or carpules, i.e. ampoules or carpules provided with a needle

5/281 . . . . [using emptying means to expel or eject media, e.g. pistons, deformation of the ampoule, or telescoping of the ampoule]
Syringes; Irrigators; Baths for subaquatic intestinal cleaning

5/3153 . . . . [specially adapted for improving sealing or sliding]
5/3153 . . . . [having flow passages for injection agents at the distal end of the barrel to bypass a sealing stopper after its displacement to this end due to internal pressure increase]
5/3134 . . . . [characterised by constructional features of the distal end, i.e. end closest to the tip of the needle cannula]
5/3135 . . . . [characterised by constructional features of the proximal end]
5/3137 . . . . [Specially designed finger grip means, e.g. for easy manipulation of the syringe rod]
5/3139 . . . . (Finger grips not integrally formed with the syringe barrel, e.g. using adapter with finger grips)
5/314 . . . . [Flat shaped barrel forms, e.g. credit card shaped]
5/3142 . . . . [Modular constructions, e.g. supplied in separate pieces to be assembled by end-user]
5/3143 . . . . [Damping means for syringe components executing relative movements, e.g. retarders or attenuators slowing down or timing syringe mechanisms]
5/3145 . . . . [Filters incorporated in syringes]
5/3146 . . . . [Priming, e.g. purging, reducing backlash or clearance]
5/3148 . . . . [Means for causing or aiding aspiration or plunger retraction]
5/315 . . . . [Pistons; Piston-rods; Guiding, blocking or restricting the movement of the rod (or piston); Appliances on the rod for facilitating dosing (by: Dosing mechanisms]
5/3150 . . . . [Means for blocking or restricting the movement of the rod or piston (A61M 5/5013 takes precedence)]
5/31505 . . . . [Integral with the syringe barrel, i.e. connected to the barrel so as to make up a single complete piece or unit]
5/31506 . . . . [formed as a single piece, e.g. moulded]
5/31508 . . . . [provided on the piston-rod]
5/3151 . . . . [by friction]
5/31511 . . . . [Piston or piston-rod constructions, e.g. connection of piston with piston-rod (A61M 5/5066 takes precedence)]
5/31513 . . . . [Piston constructions to improve sealing or sliding]
5/31515 . . . . [Connection of piston with piston rod]
5/31516 . . . . [reducing dead-space in the syringe barrel after delivery]
5/31518 . . . . [designed to reduce the overall size of an injection device, e.g. using flexible or pivotally connected chain-like rod members]
5/3152 . . . . [including gearing to multiply or attenuate the piston displacing force]
5/31521 . . . . [Pistons with a forward extending skirt at their front end]
5/31523 . . . . [for reducing reflux]
5/31525 . . . . [Dosing (burettes, pipettes B01L 3/02)]
5/31526 . . . . [by means of stepwise axial movements, e.g. ratchet mechanisms or detents]
5/31528 . . . . [by means of rotational movements, e.g. screw-thread mechanisms]
5/3153 . . . . [by single stroke limiting means]
5/31531 . . . . [Microsyringes, e.g. having piston bore diameter close or equal to needle shaft diameter]
5/31533 . . . . [Dosing mechanisms, i.e. setting a dose (administering mechanisms A61M 5/31565)]
5/31535 . . . . [Means improving security or handling thereof, e.g. blocking means, means preventing insufficient dosing, means allowing correction of overset dose]
5/31536 . . . . [Blocking means to immobilize a selected dose, e.g. to administer equal doses]
5/31538 . . . . [Permanent blocking, e.g. by medical personnel]
5/3154 . . . . [limiting maximum permissible dose]
5/31541 . . . . [Means preventing setting of a dose beyond the amount remaining in the cartridge]
5/31543 . . . . [piston rod reset means, i.e. means for causing or facilitating retraction of piston rod to its starting position during cartridge change]
5/31545 . . . . [Setting modes for dosing]
5/31546 . . . . [Electrically operated dose setting, e.g. input via touch screen or plus/minus buttons]
5/31548 . . . . [Mechanically operated dose setting member]
5/3155 . . . . [by rotational movement of dose setting member, e.g. during setting or filling of a syringe]
5/31551 . . . . [including axial movement of dose setting member]
5/31553 . . . . [without axial movement of dose setting member]
5/31555 . . . . [by purely axial movement of dose setting member, e.g. during setting or filling of a syringe]
5/31556 . . . . [Accuracy improving means]
5/31558 . . . . [using scaling up or down transmissions, e.g. gearbox]
5/3156 . . . . [using volume steps only adjustable in discrete intervals, i.e. individually distinct intervals]
5/31561 . . . . [using freely adjustable volume steps]
5/31563 . . . . [interacting with a displaceable stop member]
5/31565 . . . . [Administration mechanisms, i.e. constructional features, modes of administering a dose (dosing mechanisms for setting a dose A61M 5/31533)]
5/31566 . . . . [Means improving security or handling thereof]
5/31568 . . . . [Means keeping track of the total dose administered, e.g. since the cartridge was inserted]
5/3157 . . . . [Means providing feedback signals when administration is completed (A61M 5/20 takes precedence)]
5/31571 . . . . [Means preventing accidental administration (for automatic syringes A61M 5/20)]
Syringes; Irrigators; Baths for subaquatic intestinal cleaning

Accuracy improving means

Apparatus for removing or disposing of used needles or syringes, e.g. containers; Means for protection against accidental injuries from used needles (for sharps A61B 50/362; disintegrating apparatus in general B02C, e.g. B02C 19/0075, B23H 9/001; disposal of medical waste in general B09B 3/0075; receptacles for refuse disposal in general B65F 1/000)

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/001

Needle or needle hub disconnecting devices forming part of or being attached to the hub or syringe body

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/158

by application of rotational movement to the needle hub, e.g. by use of electrically driven toothed wheels

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/46

Means for protection against accidental injuries by used needles

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/162

Caps placed axially onto the needle, e.g. equipped with finger protection guards (axially-extensible protective sleeves A61M 5/3243)

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/162

Means to impede repositioning of protection cap from needle covering to needle uncovering position, e.g. catch mechanisms

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/162

Semi-automatic repositioning of the cap, i.e. in which the repositioning of the cap to the needle covering position requires a deliberate action by the user to trigger the repositioning of the cap, e.g. manual release of spring-biased cap repositioning means

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/162

Retractable needles, i.e. disconnected from and withdrawn into the syringe barrel by the piston (devices for protecting guide needles in combination with catheters A61M 25/0612)

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/162

Constructional features thereof, e.g. to improve manipulation or functioning

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/162

Means impeding or disabling repositioning of used needles at the syringe nozzle

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/162

Means to disalign the needle tip and syringe nozzle

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/162

with means obstructing or blocking the needle mounting opening

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/162

the needle being retracted laterally outside the syringe barrel, e.g. with separate guideway

Syringes; Irrigators; Baths for subaquatic intestinal cleaning or sterilising needles A61M 5/162

the needle being retracted by a member protruding laterally through a slot in the barrel, e.g. double-ended needles
Syringes; Irrigators; Baths for subaquatic intestinal cleaning

A61M

2005/323 . . . . . . . . . [Connection between plunger distal end and needle hub proximal end, e.g. stud protruding from the plunger]

2005/3231 . . . . . . . . . [Proximal end of needle captured or embedded inside piston head, e.g. by friction or hooks]

5/3232 . . . . . . . . . . . [Semi-automatic needle retraction, i.e. in which triggering of the needle retraction requires a deliberate action by the user, e.g. manual release of spring-biased retraction means]

5/3234 . . . . . . . . . . . [Fully automatic needle retraction, i.e. in which triggering of the needle does not require a deliberate action by the user]

2005/3235 . . . . . . . . . [triggered by radial deflection of the anchoring parts between needle mount and syringe barrel or needle housing, e.g. spreading of needle mount retaining hooks having slanted surfaces by engagement with correspondingly shaped surfaces on the piston at the end of an injection stroke]

2005/3236 . . . . . . . . . [Trigger provided at the distal end, i.e. syringe end for mounting a needle]

2005/3238 . . . . . . . . . [Trigger provided at the proximal end, i.e. syringe end opposite to needle mounting end]

2005/3239 . . . . . . . . . [triggered by dislodgement of outer part anchoring the needle portion to the inside of the syringe barrel wall, e.g. a ring-shaped portion]

2005/3241 . . . . . . . . . [Needle retraction energy is accumulated inside of a hollow plunger rod]

2005/3242 . . . . . . . . . [Needle retraction by vacuum]

5/3243 . . . . . . . . . . . [being axially-extensible, e.g. protective sleeves coaxially slidable on the syringe barrel (devices for protecting guide needles in combination with catheters A61M 25/0612)]

5/3245 . . . . . . . . . . . [Constructional features thereof, e.g. to improve manipulation or functioning]

2005/3246 . . . . . . . . . [being squeezably deformable for locking or unlocking purposes, e.g. with elliptical cross-section]

2005/3247 . . . . . . . . . [Means to impede repositioning of protection sleeve from needle covering to needle uncovering position]

2005/3249 . . . . . . . . . [Means to disalign the needle tip and the distal needle passage of a needle protection sleeve]

2005/325 . . . . . . . . . . . [Means obstructing the needle passage at distal end of a needle protection sleeve]

2005/3252 . . . . . . . . . . . [being extended by a member protruding laterally through a slot in the syringe barrel]

2005/3253 . . . . . . . . . . . [disconnecting the needle hub from the syringe barrel during removal of the sleeve from the syringe barrel]

2005/3254 . . . . . . . . . . . [Shielding of proximal needles, e.g. for pen needles]

2005/3256 . . . . . . . . . . . [having folding ring sections]

5/3257 . . . . . . . . . . . [Semi-automatic sleeve extension, i.e. in which triggering of the sleeve extension requires a deliberate action by the user, e.g. manual release of spring-biased extension means]

2005/3258 . . . . . . . . . . . [being compressible or compressed along the needle]

5/326 . . . . . . . . . . . [Fully automatic sleeve extension, i.e. in which triggering of the sleeve does not require a deliberate action by the user]

2005/3261 . . . . . . . . . . . [triggered by radial deflection of the anchoring parts between sleeve and syringe barrel, e.g. spreading of sleeve retaining hooks having slanted surfaces by engagement with conically shaped collet of the piston rod during the last portion of the injection stroke of the plunger]

2005/3263 . . . . . . . . . . . [Trigger provided at the distal end, i.e. syringe end for mounting a needle]

2005/3264 . . . . . . . . . . . [Trigger provided at the proximal end, i.e. syringe end opposite to needle mounting end]

2005/3265 . . . . . . . . . . . [Degree of extension of sleeve to its needle covering position is progressively established by the degree of piston insertion into the syringe barrel]

2005/3267 . . . . . . . . . . . [Biased sleeves where the needle is uncovered by insertion of the needle into a patient's body]

2005/3268 . . . . . . . . . . . [having cantilever elastically spreadable arms, e.g. to accumulate energy during needle uncovering movement for urging protection sleeve to return to needle covering position]

5/3269 . . . . . . . . . . . [guided by means not coaxially aligned with syringe barrel, e.g. channel-like member formed on exterior surface of syringe barrel for guiding a pushing rod connected to and displacing needle safety sheath]

5/3271 . . . . . . . . . . . [with guiding tracks for controlled sliding of needle protective sleeve from needle exposing to needle covering position]

5/3272 . . . . . . . . . . . [having projections following labyrinth paths]

5/3273 . . . . . . . . . . . [freely sliding on needle shaft without connection to syringe or needle]

5/3275 . . . . . . . . . . . [being connected to the needle hub or syringe by radially deflectable members, e.g. longitudinal slats, cords or bands]
Syringes; Irrigators; Baths for subaquatic intestinal cleaning

A61M

5/3276 . . . . . (Means imparting rotational movement to the needle or needle hub in order to assist in its disconnection from syringe nozzle)

5/3278 . . . . . (Apparatus for destroying used needles or syringes (needle reshaping means destroying the needle A61M 5/321))

2005/3279 . . . . . [Breaking syringe nozzles or needle hubs]

2005/328 . . . . . (having needle tip encapsulating means, e.g. two-component hardenable compound or molten plastic)

2005/3282 . . . . . [using mechanical means, e.g. mills]

2005/3283 . . . . . [using electric current between electrodes]

2005/3284 . . . . . [Deformation of needle by deflection or bending]

5/3286 . . . . . [Needle tip design, e.g. for improved penetration]

5/3287 . . . . . [Accessories for bringing the needle into the body; Automatic needle insertion (A61M 5/20, A61M 5/31525 take precedence)]

2005/3289 . . . . . [with rotation of the needle, e.g. to ease penetration]

5/329 . . . . . [characterised by features of the needle shaft]

5/3291 . . . . . [Shafts with additional lateral openings]

5/3293 . . . . . [characterised by features of the needle hub]

5/3294 . . . . . [comprising means for injection of two or more media, e.g. by mixing]

5/3295 . . . . . [Multiple needle devices, e.g. a plurality of needles arranged coaxially or in parallel]

5/3297 . . . . . [Needles arranged coaxially]

5/3298 . . . . . [Needles arranged in parallel]

5/34 . . . . . Constructions for connecting the needle (. e.g. to syringe nozzle or needle hub (connecting catheter tubes to hubs A61M 25/0014))

2005/341 . . . . . [angularly adjustable or angled away from the axis of the injector]

2005/342 . . . . . [Off-center needles, i.e. needle connections not being coaxial with the longitudinal symmetry axis of syringe barrel]

5/343 . . . . . [Connection of needle cannula to needle hub, or directly to syringe nozzle without a needle hub (A61M 5/322 takes precedence)]

5/344 . . . . . [using additional parts, e.g. clamping rings or collets]

5/345 . . . . . [Adaptors positioned between needle hub and syringe nozzle]

5/346 . . . . . [friction fit (A61M 5/344 takes precedence)]

5/347 . . . . . [rotatable, e.g. bayonet or screw (A61M 5/344 takes precedence)]

5/348 . . . . . [snap lock, i.e. upon axial displacement of needle assembly (A61M 5/344 takes precedence)]

5/349 . . . . . [using adhesive bond or glues]

5/36 . . . . with means for eliminating or preventing injection or infusion of air into body (dialysis systems, blood oxygenators A61M 1/14; haemofiltration equipment A61M 1/34; {automatic tube cut-off A61M 39/281})

5/365 . . . . [Air detectors (A61M 5/1684 takes precedence; in extracorporeal blood circuits A61M 1/3626)]

5/38 . . . . using hydrophilic or hydrophobic filters

5/385 . . . . [using hydrophobic filters]

5/40 . . . . using low-level float-valve to cut off media flow from reservoir (position detection of a floating member A61M 5/1685)

5/42 . . . . having means for desensitising skin, for protruding skin to facilitate piercing, or for locating point where body is to be pierced

5/422 . . . . [Desensitising skin]

5/425 . . . . [Protruding skin to facilitate piercing, e.g. vacuum cylinders, vein immobilising means]

5/427 . . . . [Locating point where body is to be pierced, e.g. vein location means using ultrasonic waves, injection site templates]

5/44 . . . . having means for cooling or heating the devices or media

5/445 . . . . [the media being heated in the reservoir, e.g. warming bloodbags]

5/46 . . . . having means for controlling depth of insertion

5/48 . . . . using means for varying, regulating, indicating or limiting injection pressure (A61M 5/142 takes precedence ; monitoring pressure in infusion systems A61M 5/16854))

5/482 . . . . [Varying injection pressure, e.g. by varying speed of injection]

5/484 . . . . [Regulating injection pressure]

5/486 . . . . [Indicating injection pressure]

5/488 . . . . [Limiting injection pressure]

5/50 . . . . having means for preventing re-use, or for indicating if defective, used, tampered with or unsterile ([retractable needles or needle protectors with means for preventing re-use A61M 5/321])

2005/5006 . . . . [Having means for destroying the syringe barrel, e.g. by cutting or piercing]

5/5013 . . . . [Means for blocking the piston or the fluid passageway to prevent illegal refilling of a syringe]

5/502 . . . . [for blocking the piston]

2005/5026 . . . . . . [allowing single filling of syringe]

2005/5033 . . . . [by use of an intermediate blocking member positioned between the syringe barrel and the piston rod to prevent retraction of the latter, e.g. toothed clip placed on the piston rod]

5/504 . . . . [for blocking the fluid passageway]

2005/5046 . . . . [automatically, e.g. plug actuated by the piston head, one-way valve]

2005/5053 . . . . [Valve or plug actuated by fluid flow or fluid pressure allowing initial filling of the syringe]

2005/506 . . . . . . [Plug actuated by contact with fluid, e.g. hydrophilic expansion plug]

5/5066 . . . . [Means for preventing re-use by disconnection of piston and piston-rod]

2005/5073 . . . . . . [by breaking or rupturing the connection parts]

5/508 . . . . [Means for preventing re-use by disrupting the piston seal, e.g. by puncturing]
Sprayers; Atomisers; Insufflators

11/00 Sprayers or atomisers specially adapted for therapeutic purposes (in general B05B; [aerosol containers B65D 83/14])

**WARNING**


Until reclassification is complete, groups A61M 11/00 or respective subgroup and A61M 11/001 - A61M 11/008, A61M 11/042 - A61M 11/048, A61M 11/065 should be considered in order to perform a complete search.

11/001 . . [Particle size control]
11/002 . . [by flow deviation causing inertial separation of transported particles]
11/003 . . [by passing the aerosol trough sieves or filters]
11/005 . . [using ultrasonics (spraying or atomising liquids using ultrasonic vibrations in general B05B 17/06)]
11/006 . [operated by applying mechanical pressure to the liquid to be sprayed or atomised]
11/007 . . [Syringe-type or piston-type sprayers or atomisers]
11/008 . . [by squeezing, e.g. using a flexible bottle or a bulb]
11/02 . operated by air (or other gas) pressure applied to the liquid (or other product) to be sprayed or atomised ((sprayers for horticulture A01G, A01H; killing insects A01M; air humidifying by nozzles F24F 6/14, F24F 6/18; cooling by spraying F28B, F28C))
11/04 . operated by the vapour pressure of the liquid to be sprayed or atomised ((air-humidification, e.g. “room humidifiers” F24F 6/00))
11/041 . . [using heaters]
11/042 . . . [electrical]
11/044 . . . [with electrodes immersed in the liquid]
11/045 . . . [using another liquid as heat exchanger, e.g. bain-marie]
11/047 . . [by exothermic chemical reaction]
11/048 . . [with a flame, e.g. using a burner]
11/06 . of the injector type
11/065 . . [using steam as driving gas]
11/08 . . Pocket atomisers of the injector type ([aerosol cans A61M 15/009])

13/00 Insufflators for therapeutic or disinfectant purposes, i.e. devices for blowing a gas, powder or vapour into the body (hand-held units in which gas flow is produced by muscular energy at the moment of use B05B 11/062)

**WARNING**


Until reclassification is complete, groups A61M 15/00 or respective subgroup and A61M 15/0001 - A61M 15/0026, A61M 15/0001 - A61M 15/0043, A61M 15/0046 - A61M 15/0063, A61M 15/0066 - A61M 15/0083, A61M 15/0088, A61M 15/0093 - A61M 15/0098, A61M 15/025 A61M 15/085 should be considered in order to perform a complete search.

15/001 . . [Details of inhalators; Constructional features thereof]
15/003 . . [with means for dispensing more than one drug]
15/005 . . [with means for agitating the medicament]
15/006 . . . [using rotating means]
15/008 . . . . [rotating by airflow]
15/001 . . . [using ultrasonic means]
15/0011 . . . [with microcapsules, e.g. several in one dose]
15/0013 . . . [with inhalation check valves]
15/0015 . . . . [located upstream of the dispenser, i.e. not traversed by the product]
15/0016 . . . . [located downstream of the dispenser, i.e. traversed by the product]
15/0018 . . . [with exhalation check valves]
15/002 . . . [with air flow regulating means]
15/0021 . . . [Mouthpieces therefor]
15/0023 . . . . [retractable]
15/0025 . . . . [with caps]
15/0026 . . . . . [Hinged caps]
15/0028 . . . [using prepacked dosages, one for each application, e.g. capsules to be perforated or broken-up]
15/003 . . . [using capsules, e.g. to be perforated or broken-up]
15/0031 . . . . [by bursting or breaking the package, i.e. without cutting or piercing]
15/0033 . . . [Details of the piercing or cutting means]
15/0035 . . . . [Piercing means]
Inhaling devices

15/0036 . . . . . (hollow piercing means)
15/0038 . . . . . (Cutting means)
15/004 . . . . . [with fixed piercing or cutting means]
15/0041 . . . . . [with movable piercing or cutting means]
15/0043 . . . . . [Non-destructive separation of the package, e.g. peeling]
15/0045 . . . . . [using multiple prepacked dosages on a same carrier, e.g. blisters]
15/0046 . . . . . [characterized by the type of carrier]
15/0048 . . . . . [the dosages being arranged in a plane, e.g. on diskettes]
15/005 . . . . . [the dosages being arranged on a cylindrical surface]
15/0051 . . . . . [the dosages being arranged on a tape, e.g. strips]
15/0053 . . . . . [characterized by the type or way of disposal]
15/0055 . . . . . [the used dosages being coiled]
15/0056 . . . . . [the used dosages being crushed]
15/0058 . . . . . [the used dosages being cut from the carrier]
15/006 . . . . . [the used dosages being discarded out of the inhaler's housing]
15/0061 . . . . . [using pre-packed dosages having an insert inside]
15/0063 . . . . . [Storages for pre-packed dosages]
15/0065 . . . . . [Inhalators with dosage or measuring devices
(A61M 15/0028 takes precedence; dosage devices incorporated in aerosol cans B65D 83/52)]
15/0066 . . . . . [with means for varying the dose size]
15/0068 . . . . . [Indicating or counting the number of dispensed doses or of remaining doses]
15/007 . . . . . [Mechanical counters]
15/0071 . . . . . [having a display or indicator]
15/0073 . . . . . [on a ring]
15/0075 . . . . . [on a disc]
15/0076 . . . . . [on a drum]
15/0078 . . . . . [on a strip]
15/008 . . . . . [Electronic counters]
15/0081 . . . . . [Locking means]
15/0083 . . . . . [Timers]
15/0085 . . . . . [using ultrasonics (spraying or atomising liquids using ultrasonic vibrations in general B05B 17/06)]
15/0086 . . . . . [Inhalation chambers]
15/0088 . . . . . [with variable volume]
15/009 . . . . . [using medicine packages with incorporated spraying means, e.g. aerosol cans (pocket atomiser of the injector type A61M 11/08)]
15/0091 . . . . . [mechanically breath-triggered]
15/0093 . . . . . [without arming or cocking, e.g. acting directly on the delivery valve]
15/0095 . . . . . [Preventing manual activation in absence of inhalation]
15/0096 . . . . . [Hindering inhalation before activation of the dispenser]
15/0098 . . . . . [Activated by exhalation]
15/02 . . . . . [with activated or ionised (fluids, e.g. electrohydrodynamic [EHD] or electrostatic devices); Ozone-inhalators [with radioactive tagged particles]]
15/025 . . . . . [Bubble jet droplet ejection devices]
15/06 . . . . . [Inhaling appliances shaped like cigars, cigarettes or pipes {simulated smoking devices, e.g. imitation cigarettes, A24F 47/002}]
15/08 . . . . . [Inhaling devices inserted into the nose

15/085 . . . . . [Fixing means therefor]

16/000 Devices for influencing the respiratory system of patients by gas treatment, e.g. mouth-to-mouth respiration; Tracheal tubes (stimulating the respiratory movement by mechanical, pneumatic or electrical means, iron lungs combined with gas breathing means A61H 31/00)

WARNINGS


16/0003 . . . . . [Accessories therefor, e.g. sensors, vibrators, negative pressure]
16/0006 . . . . . [with means for creating vibrations in patients' airways]
Inhaling devices

16/009 . . . [with sub-atmospheric pressure, e.g. during expiration]
16/0012 . . . [by Venturi means]
16/0015 . . . [inhalation detectors]
16/0018 . . . [electrical]
16/0021 . . . [with a proportional output signal, e.g. from a thermistor]
16/0024 . . . [with an on-off output signal, e.g. from a switch]
16/0027 . . . [pressure meter]
16/003 . . . [with a flowmeter]
16/0033 . . . [electrical]
16/0036 . . . [in the breathing tube and used in both inspiratory and expiratory phase]
16/0039 . . . [in the inspiratory circuit]
16/0042 . . . [in the expiratory circuit]
16/0045 . . . [Means for re-breathing exhaled gases, e.g. for hyperventilation treatment]
16/0048 . . . [Mouth-to-mouth respiration (teaching or training models G09B 23/288)]
16/0051 . . . [with alarm devices]

**WARNING**

Group A61M 16/0051 is impacted by reclassification into groups A61M 16/021, A61M 16/022, A61M 16/024 and A61M 16/026. All groups listed in this Warning should be considered in order to perform a complete search.

16/0054 . . . [Liquid ventilation]
16/0057 . . . [Pumps therefor]
16/006 . . . [Tidal volume membrane pumps]
16/0063 . . . [Compressors]
16/0066 . . . [Blowers or centrifugal pumps]
16/0069 . . . [the speed thereof being controlled by respiratory parameters, e.g. by inhalation]
16/0072 . . . [Tidal volume piston pumps]
16/0075 . . . [Bellows-type]
16/0078 . . . [Breathing bags]
16/0081 . . . [Bag or bellow in a bottle]
16/0084 . . . [Self-reinflatable by elasticity, e.g. resuscitation squeeze bags]
16/0087 . . . [Environmental safety or protection means, e.g. preventing explosion]
16/009 . . . [Removing used or expired gases or anaesthetic vapours (Filtering, sterilising or disinfecting the exhaust air in drainage systems A61M 1/0052; Bacterial filters in the expiratory path A61M 16/1065)]
16/0093 . . . [by adsorption, absorption or filtration]
16/0096 . . . [High frequency jet ventilation]
16/01 . specially adapted for anaesthetising

A61M 16/0051

16/021 . . . [operated by electrical means (A61M 16/202 – A61M 16/205 take precedence)]

**WARNING**

Group A61M 16/021 is incomplete pending reclassification of documents from groups A61M 16/00 and A61M 16/0051.

Groups A61M 16/00, A61M 16/0051 and A61M 16/021 should be considered in order to perform a complete search.

16/022 . . . [Control means therefor]

**WARNING**

Group A61M 16/022 is incomplete pending reclassification of documents from groups A61M 16/00 and A61M 16/0051.

Groups A61M 16/00, A61M 16/0051 and A61M 16/022 should be considered in order to perform a complete search.

16/024 . . . [including calculation means, e.g. using a processor]

**WARNING**

Group A61M 16/024 is incomplete pending reclassification of documents from groups A61M 16/00 and A61M 16/0051.

Groups A61M 16/00, A61M 16/0051 and A61M 16/024 should be considered in order to perform a complete search.

16/026 . . . . . . [specially adapted for predicting, e.g. for determining an information representative of a flow limitation during a ventilation cycle by using a root square technique or a regression analysis]

**WARNING**

Group A61M 16/026 is incomplete pending reclassification of documents from groups A61M 16/00 and A61M 16/0051.

Groups A61M 16/00, A61M 16/0051 and A61M 16/026 should be considered in order to perform a complete search.

16/04 . Tracheal tubes (catheters in general A61M 25/00)
16/0402 . . . [Special features for tracheal tubes not otherwise provided for]
16/0404 . . . . . . [with means for selective or partial lung respiration]
16/0406 . . . . . . [implanted flow modifiers]
16/0409 . . . . . . [with mean for closing the oesophagus]
16/0411 . . . . . . [with means for differentiating between oesophageal and tracheal intubation]
16/0413 . . . . . . [with detectors of CO₂ in exhaled gases]
16/0415 . . . . . . [with access means to the stomach]
16/0418 . . . . . . [with integrated means for changing the degree of curvature, e.g. for easy intubation]
16/042 . . . . . . [with separate conduits for in-and expiration gas, e.g. for limited dead volume]
16/0422 . . . . . . [Laser-resistant]
16/0425 . . . . . . [Metal tubes]
16/0427 . . . . . . [with removable and re-insertable liner tubes, e.g. for cleaning]
Inhaling devices

16/0429 . . . [with non-integrated distal obturators]
16/0431 . . . [with a cross-sectional shape other than circular]
16/0434 . . . [Cuffs]
16/0436 . . . [Special fillings therefor]
16/0438 . . . [Liquid-filled]
16/044 . . . [External cuff pressure control or supply, e.g. synchronisation with respiration]
16/0443 . . . [Special cuff-wall materials (A61M 16/0481, A61M 16/0422 take precedence)]
16/0445 . . . [Special cuff forms, e.g. undulated]
16/0447 . . . [Bell, canopy or umbrella shaped]
16/045 . . . [with cuffs partially or completely inflated by the respiratory gas]
16/0452 . . . [following the inspiration and expiration pressure]
16/0454 . . . [Redundant cuffs]
16/0456 . . . [one cuff within another]
16/0459 . . . [one cuff behind another]
16/0461 . . . [Nasoorotracal tubes]
16/0463 . . . [combined with suction tubes, catheters or the like; Outside connections]
16/0465 . . . [Tracheostomy tubes; Devices for performing a tracheostomy; Accessories therefor, e.g. masks, filters]
16/0468 . . . [with valves at the proximal end limiting exhalation, e.g. during speaking or coughing (air passages from trachea to oesophagus or to pharynx, artificial epiglottis A61F 2/203)]
16/047 . . . [Masks, filters, surgical pads, devices for absorbing secretions, specially adapted therefor]
16/0472 . . . [Devices for performing a tracheostomy]
16/0475 . . . [having openings in the tube]
16/0477 . . . [with incorporated means for delivering or removing fluids]
16/0479 . . . [above the cuff, e.g. giving access to the upper trachea]
16/0481 . . . [through the cuff wall]
16/0484 . . . [at the distal end]
16/0486 . . . [Multi-lumen tracheal tubes]
16/0488 . . . [Mouthpieces; Means for guiding, securing or introducing the tubes (guiding or introducing with laryngoscopes A61B 1/267; holding devices on the body A61M 25/02)]
16/049 . . . [Mouthpieces]
16/0493 . . . [with means for protecting the tube from damage caused by the patient's teeth, e.g. bite block]
16/0495 . . . [with tongue depressors]
16/0497 . . . [Tube stabilizer]
16/06 . Respiratory or anaesthetic masks
16/0605 . . . [Means for improving the adaptation of the mask to the patient]
16/0611 . . . [with a gusset portion]
16/0616 . . . [with face sealing means comprising a flap or membrane projecting inwards, such that sealing increases with increasing inhalation gas pressure]
16/0622 . . . [having an underlying cushion]
16/0627 . . . [with sealing means on a part of the body other than the face, e.g. helmets, hoods or domes]
16/0633 . . . [with forehead support]
16/0638 . . . [in the form of a pivot]
16/0644 . . . [having the means for adjusting its position]
16/065 . . . [in the form of a pivot]
16/0655 . . . [in the form of a linear or curvilinear slide]
2016/0661 . . . [with customised shape]
16/0666 . . . [Nasal cannulas or tubing (devices for improving normal breathing through the nose A61F 5/08; nose filters A62B 23/06; outside holding devices A61M 25/02)]
16/0672 . . . [Nasal cannula assemblies for oxygen therapy]
16/0677 . . . [Gas-saving devices therefor]
16/0683 . . . [Holding devices therefor]
16/0688 . . . [by means of an adhesive]
16/0694 . . . [Chin straps]
16/08 . Bellows; Connecting tubes (having means for taking samples G01N 1/22); Water traps; Patient circuits)
16/0808 . . . [Condensation traps]
16/0816 . . . [Joints or connectors]
16/0825 . . . [with ball-sockets]
16/0833 . . . [T- or Y-type connectors, e.g. Y-piece]
16/0841 . . . [for sampling]
16/085 . . . [Gas sampling]
16/0858 . . . [Pressure sampling ports]
16/0866 . . . [Passive resistors therefor]
16/0875 . . . [Connecting tubes]
16/0883 . . . [Circuit type]
16/0891 . . . [Closed circuit, e.g. for anaesthesia]
16/10 . Preparation of respiratory gases or vapours
16/1005 . . . [with O2 features or with parameter measurement]
16/101 . . . [using an oxygen concentrator]
16/1015 . . . [using a gas flush valve, e.g. oxygen flush valve]
2016/102 . . . [Measuring a parameter of the content of the delivered gas]
2016/1025 . . . [the O2 concentration]
2016/103 . . . [the CO2 concentration]
2016/1035 . . . [the anaesthetic agent concentration]
16/104 . . . [specially adapted for anaesthetics (A61M 16/18 takes precedence)]
16/1045 . . . [Devices for humidifying or heating the inspired gas by using recovered moisture or heat from the expired gas]
16/105 . . . [Filters (A61M 16/047, A61M 16/22 take precedence; water traps A61M 16/08)]
16/1055 . . . [bacterial]
16/106 . . . [in a path]
16/1065 . . . [in the expiratory path]
16/107 . . . [in the inspiratory path]
16/1075 . . . [by influencing the temperature (A61M 16/1045 takes precedence)]
16/108 . . . [before being humidified or mixed with a beneficial agent]
16/1085 . . . [after being humidified or mixed with a beneficial agent]
16/109 . . . [the humidifying liquid or the beneficial agent]
16/1095 . . . [in the connecting tubes]
16/12 . . . by mixing different gases
16/122 . . . [with dilution]
16/125 . . . [Diluting primary gas with ambient air]


Inhaling devices

A61M

16/127 . . . . . . {by Venturi effect, i.e. entrainment mixers}
16/14 . . by mixing different fluids, one of them being in a liquid phase
16/142 . . . . . . {with semi-permeable walls separating the liquid from the respiratory gas}
16/145 . . . . . . {using hollow fibres}
16/147 . . . . . . {the respiratory gas not passing through the liquid container}
16/16 . . Devices to humidify the respiration air
16/161 . . . . . . {with means for measuring the humidity}
16/162 . . . . . . [Water reservoir filling system, e.g. automatic]
16/164 . . . . . . {including a liquid inlet valve system}
16/165 . . . . . . {with a float actuator}
16/167 . . . . . . . . . . . . . . . . . {acting vertically on the valve}
16/168 . . . . . . {having a dual float}
16/18 . . Vaporising devices for anaesthetic preparations
16/183 . . . . . . [Filling systems]
16/186 . . . . . . [Locking systems]
16/20 . . Valves specially adapted to medical respiratory devices
16/201 . . . . . . [Controlled valves]
16/202 . . . . . . {electrically actuated}
16/203 . . . . . . {Proportional}
16/204 . . . . . . {used for inhalation control}
16/205 . . . . . . . . . . {used for exhalation control}
16/206 . . . . . . [Capsule valves, e.g. mushroom, membrane valves]
16/207 . . . . . . [Membrane valves with pneumatic amplification stage, i.e. having master and slave membranes]
16/208 . . . . . . {Non-controlled one-way valves, e.g. exhalation, check, pop-off non-rebreathing valves]
16/209 . . . . . . {Relief valves}
16/22 . . Carbon dioxide-absorbing devices {; Other means for removing carbon dioxide} (cartridges with absorbing substances for respiratory apparatus A62B 19/00)

Other devices for producing sleep or stupor:

Devices for ending sleep or stupor

19/00 Local anaesthetics (syringes therefor A61M 5/00); Hypothermia (A61M 5/42 takes precedence; cooling blood in a bypass of the arterial system A61M 1/36)

21/00 Other devices or methods to cause a change in the state of consciousness; Devices for producing or ending sleep by mechanical, optical, or acoustical means, e.g. for hypnosis

2021/0005 . . . . . . {by the use of a particular sense, or stimulus}
2021/0011 . . . . . . {in a subliminal way, i.e. below the threshold of sensation}
2021/0016 . . . . . . {by the smell sense}
2021/0022 . . . . . . {by the tactile sense, e.g. vibrations}
2021/0027 . . . . . . {by the hearing sense}
2021/0033 . . . . . . {subsonic}
2021/0038 . . . . . . {ultrasonic}
2021/0044 . . . . . . {by the sight sense}
2021/005 . . . . . . {images, e.g. video}
2021/0055 . . . . . . {with electric or electro-magnetic fields}
2021/0061 . . . . . . {Simulated heartbeat pulsed or modulated}

2021/0066 . . . . . . {with heating or cooling}
2021/0072 . . . . . . {with application of electrical currents}
2021/0077 . . . . . . {with application of chemical or pharmacological stimulus}
2021/0083 . . . . . . {especially for waking up}
2021/0088 . . . . . . {modulated by a simulated respiratory frequency}
21/0094 . . . . . . {Isolation chambers used therewith, i.e. for isolating individuals from external stimuli (other treatment rooms or enclosures A61G 10/00)}
21/02 . . . . . . {for inducing sleep or relaxation, e.g. by direct nerve stimulation, hypnosis, analgesia (for massage A61H; electrotherapy A61N, e.g. applying alternating or intermittent electric currents for producing anaesthesia A61N 1/36021)}

Probes; Catheters; Dilators; Drainage appliances for wounds

25/00 Catheters; Hollow probes (dilators A61M 29/00; peritoneal catheters A61M 1/285; tracheal tubes A61M 16/04; for drainage A61M 27/00; for uterus, vagina or rectum A61M 31/00) ; for measuring or testing A61B; {materials for catheters A61L 29/00} )

2025/0001 . . . . . . {for pressure measurement (not used)}
2025/0002 . . . . . . {with a pressure sensor at the distal end}
2025/0003 . . . . . . {having an additional lumen not used}
2025/0004 . . . . . . {having two or more concentrically arranged tubes for use as a concentric catheter system}
2025/0006 . . . . . . {which can be secured against axial movement, e.g. by using a locking cuff}
2025/0007 . . . . . . {Epidural catheters}
2025/0008 . . . . . . {having visible markings on its surface, i.e. visible to the naked eye, for any purpose, e.g. insertion depth markers, rotational markers or identification of type}
25/0009 . . . . . . {Making of catheters or other medical or surgical tubes}
25/001 . . . . . . {Forming the tip of a catheter, e.g. bevelling process, join or taper}
25/0012 . . . . . . {with embedded structures, e.g. coils, braids, meshes, strands or radiopaque coils}
25/0013 . . . . . . {Weakening parts of a catheter tubing, e.g. by making cuts in the tube or reducing thickness of a layer at one point to adjust the flexibility}
25/0014 . . . . . . {Connecting a tube to a hub}
25/0015 . . . . . . {Making lateral openings in a catheter tube, e.g. holes, slits, ports, piercings of guidewire ports; Methods for processing the holes, e.g. smoothing the edges}
25/0017 . . . . . . {specially adapted for long-term hygiene care, e.g. urethral or indwelling catheters to prevent infections}
2025/0018 . . . . . . {having a plug, e.g. an inflatable plug for closing catheter lumens}
2025/0019 . . . . . . {Cleaning catheters or the like, e.g. for reuse of the device, for avoiding replacement}
25/002 . . . . . . {Packages specially adapted therefor (combined with means for introducing catheters, e.g. dispensers, A61M 25/0113); catheter kit packages (for surgical articles A61B 50/30)}
25/0021 . . . . . . {characterised by the form of the tubing (A61M 25/0054 takes precedence)}
25/0023 . . . . . . {by the form of the lumen, e.g. cross-section, variable diameter}
25/0024 . . . . . . {Expandable catheters or sheaths}
Probes; Catheters; Dilators; Drainage appliances for wounds

2025/0025 . . . . [having a collapsible lumen]
25/0026 . . . . [Multi-lumen catheters with stationary elements (catheter assemblies comprising a catheter in combination with a guide tube, sheath or sleeve A61M 2025/0061; catheters comprising telescoping coaxial elements A61M 2025/0175)]
25/0028 . . . . [characterized by features relating to at least one lumen located at the proximal part of the catheter, e.g. alterations in lumen shape or valves (catheter hubs A61M 25/0097)]
25/0029 . . . . [characterized by features relating to at least one lumen located at the middle part of the catheter, e.g. slots, flaps, valves, cuffs, apertures, notches, grooves or rapid exchange ports (catheter shaft surface irregularities A61M 2025/006)]
25/003 . . . . . . [characterized by lumina for withdrawing or delivering, i.e. used for extracorporeal circuit treatment]
25/0032 . . . . [characterized by at least one unconventionally shaped lumen, e.g. polygons, ellipsoids, wedges or shapes comprising concave and convex parts]
25/0034 . . . . [characterized by elements which are assembled, connected or fused, e.g. splittable tubes, outer sheaths creating lumina or separate cores (making of catheters A61M 25/0009)]
25/0035 . . . . [characterized by a variable lumen cross-section by means of a resilient flexible septum or outer wall]
25/0036 . . . . [with more than four lumina]
25/0037 . . . . [characterized by lumina being arranged side-by-side]
25/0039 . . . . [characterized by lumina being arranged coaxially]
25/004 . . . . [characterized by lumina being arranged circumferentially]
25/0041 . . . . [pre-formed, e.g. specially adapted to fit with the anatomy of body channels (urethral catheters A61M 204)]
25/0042 . . . . [Microcatheters, cannula or the like having outside diameters around 1 mm or less]
25/0043 . . . . [characterised by structural features]
25/0045 . . . . [multi-layered, e.g. coated (coating materials A61L 29/08)]
25/0046 . . . . [Coatings for improving slidability]
25/0047 . . . . . . [the inner layer having a higher lubricity]
25/0048 . . . . . . . . [with an outer layer made from silicon]
25/005 . . . . [with embedded materials for reinforcement, e.g. wires, coils, braids]
25/0051 . . . . [made from fenestrated or weakened tubing layer]
25/0052 . . . . [Localized reinforcement, e.g. where only a specific part of the catheter is reinforced, for rapid exchange guidewire port]
25/0053 . . . . [having a variable stiffness along the longitudinal axis, e.g. by varying the pitch of the coil or braid]
25/0054 . . . . [with regions for increasing flexibility]
2025/0056 . . . . [provided with an antibacterial agent, e.g. by coating, residing in the polymer matrix or releasing an agent out of a reservoir]
2025/0057 . . . . [Catheters delivering medicament other than through a conventional lumen, e.g. porous walls or hydrogel coatings]
2025/0058 . . . . [having an electroactive polymer material, e.g. for steering purposes, for control of flexibility, for locking, for opening or closing]
2025/0059 . . . . [having means for preventing the catheter, sheath or lumens from collapsing due to outer forces, e.g. compressing forces, or caused by twisting or kinking]
2025/006 . . . . [having a special surface topography or special surface properties, e.g. roughened or knurled surface]
2025/0062 . . . . [having features to improve the sliding of one part within another by using lubricants or surfaces with low friction (coatings A61M 2025/0046)]
2025/0063 . . . . [having means, e.g. styles, mandrils, rods or wires to reinforce or adjust temporarily the stiffness, column strength or pulsability of catheters which are already inserted into the human body]
2025/0064 . . . . [which become stiffer or softer when heated]
2025/0065 . . . . [which become stiffer or softer when becoming wet or humid, e.g. immersed within a liquid]
25/0067 . . . . [characterised by the distal end, e.g. tips (A61M 25/0054, A61M 25/04 take precedence; balloon catheters A61M 25/10)]
25/0068 . . . . [Static characteristics of the catheter tip, e.g. shape,atraumatic tip, curved tip or tip structure]
25/0069 . . . . [Tip not integral with tube]
25/007 . . . . [Side holes, e.g. their profiles or arrangements; Provisions to keep side holes unblocked]
25/0071 . . . . [Multiple separate lumens (multiple separate lumens throughout the catheter A61M 25/0026)]
25/0073 . . . . [Tip designed for influencing the flow or the flow velocity of the fluid, e.g. inserts for twisted or vortex flow (general flow characteristics A61M 2206/10)]
25/0074 . . . . [Dynamic characteristics of the catheter tip, e.g. openable, closable, expandable or deformable]
25/0075 . . . . [Valve means]
25/0076 . . . . [Unidirectional valves]
25/0078 . . . . . . [for fluid inflow from the body into the catheter lumen]
25/0079 . . . . [Separate user-activated means, e.g. guidewires, guide tubes, balloon catheters or sheaths, for sealing off an orifice, e.g. a lumen or side holes, of a catheter]
25/008 . . . . [Strength or flexibility characteristics of the catheter tip]
25/0081 . . . . [Soft tip]
25/0082 . . . . [Catheter tip comprising a tool]
25/0084 . . . . [being one or more injection needles]
25/0085 . . . . [Multiple injection needles protruding axially, i.e. along the longitudinal axis of the catheter, from the distal tip]
25/0086 . . . . [the needles having bent tips, i.e. the needle distal tips are angled in relation to the longitudinal axis of the catheter]
Probes; Catheters; Dilators; Drainage appliances for wounds

A61M

2025/0087 . . . . [Multiple injection needles protruding laterally from the distal tip]
2025/0089 . . . . [Single injection needle protruding axially, i.e. along the longitudinal axis of the catheter, from the distal tip]
2025/0009 . . . . [the needle having a bent tip, i.e. the needle distal tip is angled in relation to the longitudinal axis of the catheter]
2025/0091 . . . . [the single injection needle being fixed]
2025/0092 . . . . [Single injection needle protruding laterally from the distal tip]
2025/0093 . . . . [wherein at least one needle is a microneedle]
2025/0095 . . . . [being one or more needles protruding from the distal tip and which are not used for injection nor for electro-simulation, e.g. for fixation purposes]
2025/0096 . . . . [being laterally outward extensions or tools, e.g. hooks or fibres]
2025/0097 . . . . [characterised by the hub (connectors A61M 39/10)]
2025/0098 . . . . [having a strain relief at the proximal end, e.g. sleeve]
25/01 . . . . [Introducing, guiding, advancing, emplacing or holding catheters (A61M 25/10 takes precedence)]
25/0102 . . . . [Insertion or introduction using an inner stiffening member, e.g. stylet or push-rod]
25/0105 . . . . [Steering means as part of the catheter or advancing means; Markers for positioning (systems for detection of markers A61B)]
25/0108 . . . . [using radio-opaque or ultrasound markers]
25/0111 . . . . [Aseptic insertion devices]
25/0113 . . . . [Mechanical advancing means, e.g. catheter dispensers]
25/0116 . . . . [self-propelled, e.g. autonomous robots (A61M 25/0122 takes precedence)]
25/0119 . . . . [Eversible catheters]
25/0122 . . . . [with fluid drive by external fluid in an open fluid circuit]
25/0125 . . . . [Catheters carried by the bloodstream, e.g. with parachutes; Balloon catheters specially designed for this purpose]
25/0127 . . . . [Magnetic means; Magnetic markers]
25/013 . . . . [One-way gripping collars]
25/0133 . . . . [Tip steering devices]
25/0136 . . . . [Handles therefor]
25/0138 . . . . [having flexible regions as a result of weakened outer material, e.g. slots, slits, cuts, joints or coils]
25/0141 . . . . [having flexible regions as a result of using materials with different mechanical properties]
25/0144 . . . . [having flexible regions as a result of inner reinforcement means, e.g. struts or rods]
25/0147 . . . . [with movable mechanical means, e.g. pull wires]
25/015 . . . . [Details of the distal fixation of the movable mechanical means]
25/0152 . . . . [with pre-shaped mechanisms, e.g. pre-shaped stylets or pre-shaped outer tubes]
25/0155 . . . . [with hydraulic or pneumatic means, e.g. balloons or inflatable compartments]
25/0158 . . . . [with magnetic or electrical means, e.g. by using piezo materials, electroactive polymers, magnetic materials or by heating of shape memory materials]
25/0161 . . . . [wherein the distal tips have two or more deflection regions]
25/0163 . . . . [Looped catheters]
25/0166 . . . . [Sensors, electrodes or the like for guiding the catheter to a target zone, e.g. image guided or magnetically guided]
25/0169 . . . . [Changing a catheter while keeping the guidewire in place]
25/0172 . . . . [Exchanging a guidewire while keeping the catheter in place]
25/0175 . . . . [having telescopic features, interengaging nestable members movable in relations to one another]
25/0177 . . . . [having external means for receiving guide wires, wires or stiffening members, e.g. loops, clamps or lateral tubes]
25/018 . . . . [Catheters having a lateral opening for guiding elongated means lateral to the catheter]
25/0183 . . . . [Rapid exchange or monorail catheters]
25/0186 . . . . [Catheters with fixed wires, i.e. so called "non-over-the-wire catheters"]
25/0188 . . . . [having slitted or breakaway lumens]
25/0191 . . . . [Suprapubic catheters]
25/0194 . . . . [Tunnelling catheters]
25/0197 . . . . [for creating an artificial passage within the body, e.g. in order to go around occlusions]
25/02 . . . . [Holding devices, e.g. on the body]
25/0206 . . . . [where the catheter is secured by using devices worn by the patient, e.g. belts or harnesses]
25/0213 . . . . [where the catheter is attached by means specifically adapted to a part of the human body]
25/022 . . . . [specifically adapted for the mouth]
25/0226 . . . . [specifically adapted for the nose]
25/0233 . . . . [specifically adapted for attaching to a body wall by means which are on both sides of the wall, e.g. for attaching to an abdominal wall]
25/024 . . . . [having a clip or clamp system]
25/0246 . . . . [fixed on the skin having a cover for covering the holding means]
25/0253 . . . . [where the catheter is attached by straps, bands or the like secured by adhesives]
25/026 . . . . [where the straps are releasably secured, e.g. by hook and loop-type fastening devices]
25/0266 . . . . [using pads, patches, tapes or the like]
25/0273 . . . . [having slits to place the pad around a catheter puncturing site]
25/028 . . . . [having a mainly rigid support structure]
25/0286 . . . . [anchored in the skin by suture or other skin penetrating devices]
25/0293 . . . . [Catheter, guide wire or the like with means for holding, centering, anchoring or frictionally engaging the device within an artificial lumen, e.g. tube (natural lumen, e.g. vessels A61M 25/04)]
25/04 . . . . [in the body, e.g. expandable ((A61M 25/10, A61M 16/0488 take precedence)]
25/06 . . . . [Body-piercing guide needles or the like]
25/0606 . . . . ["Over-the-needle" catheter assemblies, e.g. I.V. catheters]
[Devices for protecting the needle; Devices to help insertion of the needle, e.g. wings or holders]

[with means for protecting only the distal tip of the needle, e.g. a needle guard]

[with a permanent connection to the needle hub, e.g. a guiding rail, a locking mechanism or a guard advancement mechanism]

[having means for fully covering the needle after its withdrawal, e.g. needle being withdrawn inside the handle or a cover being advanced over the needle]

[Butterfly or winged devices, e.g. for facilitating handling or for attachment to the skin]

[Devices having a blunt needle tip, e.g. due to an additional inner component]

[Guide needles]

[having a tip larger than the rest of the body]

[Guide tubes]

[splittable, tear apart]

[Introducing-sheath slitters]

[System with catheter and outer tubing, e.g. sheath, sleeve or guide tube]

[having means for atraumatic insertion in the body or protection of the tip of the sheath during insertion, e.g. special designs of dilators, needles or sheaths]

[Flashback chambers]

[Guide wires]

[with a balloon]

[with mandril(s)]

[with sliding mandrils]

[with fixed mandril(s), e.g. mandril(s) fixed to tip; Tensionable wires]

[Mechanisms for insertion of guide wires]

[extendable, e.g. mechanisms for extension]

[Basic structures of guide wires (not used)]

[having a coil without a core possibly combined with a sheath]

[having a core without a coil possibly combined with a sheath]

[having a coil around a core]

[where a sheath surrounds the coil at the distal part]

[having a lumen for drug delivery or suction]

[Methods for making a guide wire]

[Design of handles or shafts or gripping surfaces thereof for manipulating guide wires]

[Device for locking a guide wire in a fixed position with respect to the catheter or the human body]

[having specific material compositions or coatings; Materials with specific mechanical behaviours, e.g. stiffness, strength to transmit torque]

[made of shape memory alloys which take a particular shape at a certain temperature]

[having features for changing the stiffness]

[when heated]

[having radio-opaque features]

[having specific characteristics at the distal tip]

[having tools at the distal tip]
NOTE
This group also covers balloon catheters with centering means other than centering means using balloons

2025/105 . . . [having a balloon suitable for drug delivery, e.g. by using holes for delivery, drug coating or membranes]

2025/1052 . . . [for temporarily occluding a vessel for isolating a sector]

2025/1054 . . . [having detachable or disposable balloons]

2025/1056 . . . [having guide wire lumens outside the main shaft, i.e. the guide wire lumen is within or on the surface of the balloon]

2025/1059 . . . [having different inflatable sections mainly depending on the response to the inflation pressure, e.g. due to different material properties (with different compartments A61M 2025/1072)]

2025/1061 . . . [having separate inflations tubes, e.g. coaxial tubes or tubes otherwise arranged apart from the catheter tube]

2025/1063 . . . [having only one lumen used for guide wire and inflation, e.g. to minimise the diameter]

2025/1065 . . . [having a balloon which is inversely attached to the shaft at the distal or proximal end]

2025/1068 . . . [having means for varying the length or diameter of the deployed balloon, this variations could be caused by excess pressure]

2025/107 . . . [having a longitudinal slit in the balloon]

2025/1072 . . . [having balloons with two or more compartments]

2025/1075 . . . [having a balloon composed of several layers, e.g. by coating or embedding]

2025/1077 . . . [having a system for expelling the air out of the balloon before inflation and use]

2025/1079 . . . [having radio-opaque markers in the region of the balloon]

2025/1081 . . . [having sheaths or the like for covering the balloon but not forming a permanent part of the balloon, e.g. retractable, dissolvable or tearable sheaths]

2025/1084 . . . [having features for increasing the shape stability, the reproducibility or for limiting expansion, e.g. containments, wrapped around fibres, yarns or strands]

2025/1086 . . . [having a special balloon surface topography, e.g. pores, protuberances, spikes or grooves]

2025/1088 . . . [having special surface characteristics depending on material properties or added substances, e.g. for reducing friction]

2025/109 . . . [having balloons for removing solid matters, e.g. by grasping or scraping plaque, thrombus or other matters that obstruct the flow]

2025/1093 . . . [having particular tip characteristics]

2025/1095 . . . [with perfusion means for enabling blood circulation while the balloon is in an inflated state or in a deflated state, e.g. permanent by-pass within catheter shaft]
Probes; Catheters; Dilators; Drainage appliances for wounds

35/10 . . [Wearable devices, e.g. garments, glasses or masks]

WARNING

Group A61M 35/10 is incomplete pending reclassification of documents from group A61M 35/00.

Groups A61M 35/00 and A61M 35/10 should be considered in order to perform a complete search.

35/20 . . [Non-portable devices, e.g. spraying booths]

WARNING

Group A61M 35/20 is incomplete pending reclassification of documents from group A61M 35/00.

Groups A61M 35/00 and A61M 35/20 should be considered in order to perform a complete search.

35/25 . . [specially adapted for the application of sunscreen, tanning or self-tanning lotions]

WARNING

Group A61M 35/25 is incomplete pending reclassification of documents from group A61M 35/00.

Groups A61M 35/00 and A61M 35/25 should be considered in order to perform a complete search.

35/30 . . [Gas therapy for therapeutic treatment of the skin]

WARNING

Group A61M 35/30 is incomplete pending reclassification of documents from group A61M 35/00.

Groups A61M 35/00 and A61M 35/30 should be considered in order to perform a complete search.

37/00 Other apparatus for introducing media into the body (for reproduction or fertilisation A61B 17/425; apparatus for iontophoresis or cataphoresis A61N 1/30; Percutany, i.e. introducing medicines into the body by diffusion through the skin (salt baths A61H 33/04)

2037/0007 . . [having means for enhancing the permeation of substances through the epidermis, e.g. using suction or depression, electric or magnetic fields, sound waves or chemical agents]

37/0015 . . [by using microneedles]

2037/0023 . . [Drug applicators using microneedles]

2037/0003 . . [having a lumen]

2037/0038 . . [having a channel at the side surface]

2037/0046 . . [Solid microneedles]

2037/0053 . . [Methods for producing microneedles]

2037/0061 . . [Methods for using microneedles]

37/0069 . . [Devices for implanting pellets, e.g. markers or solid medicaments (for introducing of radioactive sources for interstitial radiation therapy, i.e. brachytherapy A61N 5/1027)]

37/0076 . . [Tattooing apparatus (apparatus for marking animals A01K 11/00; vaccine applicators having needles or other puncturing means A61B 17/205)]

37/0084 . . [Tattooing apparatus with incorporated liquid feeding device]

37/0092 . . [using ultrasonic, sonic or infrasonic vibrations, e.g. phonophoresis]

39/00 Tubes, tube connectors, tube couplings, valves, access sites or the like, specially adapted for medical use (for respiratory devices, e.g. tracheal tubes A61M 16/00; artificial heart valves A61F 2/24)

WARNING

Not complete, see A61J 1/14

2039/0009 . . [Assemblies therefor designed for particular applications, e.g. contrast or saline injection, suction or irrigation]

2039/0018 . . [designed for flushing a line, e.g. by a by-pass]

2039/0027 . . [for mixing several substances from different containers]

2039/0036 . . [characterised by a septum having particular features, e.g. having venting channels or being made from antimicrobial or self-lubricating elastomer]

2039/0045 . . [Radiopaque indicia]

2039/0054 . . [Multiple layers]

2039/0063 . . [Means for alignment of the septum, e.g. septum rim with alignment holes]

2039/0072 . . [Means for increasing tightness of the septum, e.g. compression rings, special materials, special constructions]

2039/0081 . . [Means for facilitating introduction of a needle in the septum, e.g. guides, special construction of septum]

2039/009 . . [Means for limiting access to the septum, e.g. shields, grids]

39/02 . . Access sites

2039/0202 . . [for taking samples]

2039/0205 . . [for injecting media]

39/0208 . . [Subcutaneous access sites for injecting or removing fluids (transcutaneous access sites A61M 39/0247; implantable infusion devices A61M 5/14276)]

2039/0211 . . . . [with multiple chambers in a single site]

2039/0214 . . . . [some or all chambers sharing a single septum]

2039/0217 . . . . [at least some chambers being stacked separated by another septum]

2039/022 . . [being accessible from all sides, e.g. due to a cylindrically-shaped septum]

2039/0223 . . [having means for anchoring the subcutaneous access site]

2039/0226 . . [having means for protecting the interior of the access site from damage due to the insertion of a needle]

2039/0229 . . [having means for facilitating assembling, e.g. snap-fit housing or modular design]

2039/0232 . . [having means for facilitating the insertion into the body]

2039/0235 . . [having an additional inlet, e.g. for a guidewire or a catheter tube]

2039/0238 . . [having means for locating the implanted device to insure proper injection, e.g. radio-emitter, protuberances, radio-opaque markers]

2039/0241 . . [having means for filtering]
[having means for detecting an inserted needle]

Semi-permanent or permanent transcutaneous or percutaneous access sites to the inside of the body (peritoneal dialysis catheters A61M 1/285; tracheostomy devices A61M 16/0465; measuring pressure within the body A61B 5/03; colostomy devices A61F 5/445; gastroscopy feeding tubes A61J 15/0015; means for fixing a feeding tube outside of the body A61J 15/0053)]

[through bones or teeth, e.g. through the skull]

[for access to the lungs]

[for access to the gastric or digestive system]

[for vascular access, e.g. blood stream access]

[Means for anchoring port to the body, or ports having a specific shape or being made of a specific material to allow easy implantation/integration in the body]

[with multiple inlets or multiple outlets]

[comprising sensors or electrical contacts]

[having a particular valve, seal or septum (septum A61M 2039/0036)]

[for introducing catheters into the body]

[for introducing or removing fluids into or out of the body]

[for introducing medical instruments into the body, e.g. endoscope, surgical tools]

[with implanted tubes connected to the port]

[with sterilisation means, e.g. antibacterial coatings, disinfecting pads, UV radiation LEDs or heating means in the port]

[protectors, caps or covers therefor]

[method or device for implanting it in the body]

[having a specific shape matching the shape of a tool to be inserted therein, e.g. for easy introduction, for sealing purposes, guide]

[at least part of it being inflatable, e.g. for anchoring, sealing or removing]

[having pierceable self-sealing members]

[Shrouds encircling the access needle preventing accidental needle-stick]

[pre-slit to be pierced by blunt instrument]

[the self-sealing member being a viscous fluid]

Haemostasis valves, i.e. gaskets sealing around a needle, catheter or the like, closing on removal thereof

[without means for adjusting the seal opening or pressure (A61M 39/0693 takes precedence)]

[with means for adjusting the seal opening or pressure (A61M 39/0693 takes precedence)]

[used with a catheter]

[used with other surgical instruments, e.g. endoscope, trocar]

[the seal being a passive seal made of a resilient material with or without an opening]

[Slit-valve]

[Duckbill-valve]

[Perforated disc]

[Septum-like element]

[Flap-valve]

[comprising means actively pressing on the device passing through the seal, e.g. inflatable seals, diaphragms, clamps]

[having a seal being made of or coated with a special material]

[comprising more than one seal]

[including means for seal penetration]

[Tubes; Storage means specially adapted therefor]

[Multi-lumen tubes]

[external enteral feeding tubes (feeding tubes inside the stomach or intestines A61J 15/0050)]

[Tools for handling tubes, e.g. crimping tool for connecting tubes to a connector]

[Tube connectors; Tube couplings (A61M 39/02 takes precedence; connecting needles to syringes or hubs A61M 5/34; connecting catheter tubes to hubs A61M 25/0014)]

[Detection of disconnection]

[Locking means for securing connection; Additional tamper safeties (A61M 39/16 takes precedence)]

[Unlocking means providing a secure or comfortable disconnection]

[additionally providing electrical connection]

[Quick-acting type connectors]

[Swivel nut connectors, e.g. threaded connectors, bayonet-connectors]

[Union screw connectors, e.g. hollow screw or sleeve having external threads]

[Verifying the connection, e.g. audible feedback, tactile feedback, visual feedback, using external light sources]

[Multi-channel connectors or couplings, e.g. for connecting multi-lumen tubes (multi-channel connectors in general F16L 37/56)]

[Rotating or swivel joints (in general F16L 27/00)]

[Break-apart tubing connectors or couplings]

[having protection means, e.g. sliding sleeve to protect connector itself, shrouds to protect a needle present in the connector, protective housing, isolating sheath]

[with a septum present in the connector]

[Adapters, e.g. couplings adapting a connector to one or several other connectors]

[having a plurality of female connectors, e.g. Luer connectors]

[having a plurality of male connectors, e.g. Luer connectors]

[at least partly incompatible with standard connectors, e.g. to prevent fatal mistakes in connection]

[for joining a flexible tube to a rigid attachment]

[for connecting tubes having sealed ends (needle sets A61M 5/162; having valves closing automatically on disconnection of line A61M 39/20)]

[both tube ends being sealed by meltable membranes pierced after connection by use of heat, e.g. using radiant energy]

[by cutting and welding]

[having provision for disinfection or sterilisation (A61M 39/142 takes precedence; methods or apparatus for disinfection or sterilisation A61L 2/00)]

[with antiseptic agent incorporated within the connector]
Methods or apparatus for making the connection under sterile conditions, i.e. sterile docking

39/20 . . . Closure caps or plugs for connectors or open ends of tubes

2039/205 . . . {comprising air venting means}

39/22 . . . Valves or arrangement of valves (A61M 39/02. A61M 39/024, A61M 39/16 take precedence; regulating valves in infusion systems A61M 5/1688; in devices worn by the patient for the reception of urine, faeces, catamenial or other discharge, or in colostomy devices A61F 5/4405)

39/221 . . . {Frangible or piercable closures within tubing (A61M 39/14 takes precedence; frangible closures for containers A61J 1/14)}

2039/222 . . . {frangible within tubing or bags}

39/223 . . . {Multiway valves}

39/224 . . . {of the slide-valve type}

39/225 . . . {Flush valves, i.e. bypass valves for flushing line}

39/226 . . . {Spindles or actuating means}

39/227 . . . {Valves actuated by a secondary fluid, e.g. hydraulically or pneumatically actuated valves}

39/228 . . . {with a tubular diaphragm constrictable by radial fluid force}

39/229 . . . {Stopcocks}

39/24 . . . Check- or non-return valves

2039/2406 . . . {designed to quickly shut upon the presence of back-pressure}

2039/2413 . . . {designed to reduce and or shut-off the flow when a certain maximum flow limit is exceeded}

2039/242 . . . {designed to open when a predetermined pressure or flow rate has been reached, e.g. check valve actuated by fluid}

2039/2426 . . . {Slit valve}

2039/2433 . . . {Valve comprising a resilient or deformable element, e.g. flap valve, deformable disc}

2039/244 . . . {Hinged closure member, e.g. flap valve}

2039/2446 . . . {Flexible} 

2039/2453 . . . {not being fixed to the valve body}

2039/246 . . . {being fixed along all or a part of its periphery}

2039/2466 . . . {being fixed in its center}

2039/2473 . . . {Valve comprising a non-deformable, movable element, e.g. ball-valve, valve with movable stopper or reciprocating element}

2039/248 . . . {Ball-valve}

2039/2486 . . . {Guided stem, e.g. reciprocating stopper}

2039/2493 . . . {Check valve with complex design, e.g. several inlets and outlets and several check valves in one body}

39/26 . . . Valves closing automatically on disconnecting the line and opening on reconnection thereof (check valves A61M 39/24)

2039/261 . . . {where the fluid space within the valve is increasing upon disconnection}

2039/262 . . . {having a fluid space within the valve remaining the same upon connection and disconnection, i.e. neutral-drawback valve}

2039/263 . . . {where the fluid space within the valve is decreasing upon disconnection}

2039/265 . . . {electrically operated, e.g. a male connector closing an electrical circuit upon connection to a female valve portion}

2039/266 . . . {where the valve comprises venting channels, e.g. to insure better connection, to help decreasing the fluid space upon disconnection, or to help the fluid space to remain the same during disconnection}

2039/267 . . . {having a sealing sleeve around a tubular or solid stem portion of the connector}

2039/268 . . . {wherein the stem portion is moved for opening and closing the valve, e.g. by translation, rotation}

39/28 . . . Clamping means for squeezing flexible tubes, e.g. roller clamps (tube strippers A61M 1/007)

39/281 . . . {Automatic tube cut-off devices, e.g. squeezing tube on detection of air}

2039/282 . . . {including severing of the tube}

39/283 . . . {Screw clamps}

39/284 . . . {Lever clamps}

39/285 . . . {Cam clamps, e.g. roller clamps with eccentric axis}

39/286 . . . {Wedge clamps, e.g. roller clamps with inclined guides}

39/287 . . . {Wedge formed by a slot having varying width, e.g. slide clamps}

39/288 . . . {by bending or twisting the tube}

Gases

Anaesthetics; Analgesics

Carbon oxides, e.g. Carbon dioxide

Ozone

Carbon monoxide

Carbon monoxide

Carbon dioxide

Carbon dioxide

Gas

Oxygen

Helium
A61M

2202/0258  Krypton (KR)  2202/0498  Urea
2202/0266  Nitrogen (N)  2202/026  Solids
2202/0275  Nitric oxide [NO]  2202/0262  Desiccants
2202/0283  Nitrous oxide (N₂O)  2202/0264  Powder
2202/0291  Xenon  2202/0266  made from a compacted product by abrading
2202/03  Gases in liquid phase, e.g. cryogenic liquids  2202/0268  Faeces; Excretions
2202/04  Liquids  2202/027  Proteins
2202/0401  Ascitic  2202/028  Lipoïds
2202/0403  Gall; Bile  2202/029  Body tissue
2202/0405  Lymph  2202/0292  Sweat glands
2202/0407  Lymphocytes  2202/0295  Collagen
2202/0409  B-Lymphocytes  2202/0297  endothelial cells
2202/0411  T-Lymphocytes  2202/10  Bone-marrow
2202/0413  Blood  2202/20  Pathogenic agents
2202/0415  Plasma  2202/203  Bacteria
2202/0417  Immunoglobulin  2202/206  Viruses
2202/0419  , Immunoglobulin G  2202/30  Vaccines
2202/0421  Beta-2-microglobulin  2202/00  General characteristics of the apparatus
2202/0423  Serum; Human serous fluid, i.e. plasma  2202/002  characterised by a particular materials
without fibrinogen  2202/0205  Materials having antiseptic or antimicrobial
2202/0425  Thrombin  properties, e.g. silver compounds, rubber with
2202/0427  Platelets; Thrombocytes  sterilising agent
2202/0429  Red blood cells; Erythrocytes  2202/0211  Ceramics
2202/0431  Gerocytes  2202/0216  Materials providing elastic properties, e.g. for
2202/0433  Free haemoglobin facilitating deformation and avoid breaking
2202/0435  Neocytes, e.g. reticuloocytes  2202/0222  Materials for reducing friction
2202/0437  Blood stem cells  2202/0227  Materials having sensing or indicating function,
2202/0439  White blood cells; Leucocytes (lymphocytes  e.g. indicating a pressure increase
A61M 2202/0407)  2202/0233  Conductive materials, e.g. antistatic coatings for
2202/0441  Granulocytes, i.e. leucocytes containing spark prevention
many granules in their cytoplasm  2202/0238  the material being a coating or protective layer
2202/0443  Macrophages, e.g. monocyes  2202/0244  Micromachined materials, e.g. made from silicon
2202/0445  Proteins (immunoglobulin A61M 2202/0417; wafers, microelectromechanical systems [MEMS]
beta-2-microglobulin A61M 2202/0421; or comprising nanotechnology
thrombin A61M 2202/0425; haemoglobin A61M 2202/0433)  2202/025  Materials providing resistance against corrosion
2202/0447  Glycoproteins  2202/0255  in acidic environments or acidic fluids
2202/0449  Fibrinogen, also called factor 1  2202/0261  in alcalic environments or alcalic fluids
2202/045  Fibrin  2202/0266  Shape memory materials
2202/0452  Factor VIII  2202/0272  Electro-active or magneto-active materials
2202/0454  Fibrinase, i.e. Factor XIII  2202/0277  Chemo-active materials
2202/0456  Lipoprotein  2202/0283  Electro-active polymers [EAP]
2202/0458  High-density lipoprotein  2202/0288  Electro-rheological or magneto-rheological
2202/046  Low-density lipoprotein  materials  2202/0294  Piezoelectric materials
2202/0462  Placental blood, umbilical cord blood  2202/04  implanted
2202/0464  Cerebrospinal fluid  2202/05  combined with other kinds of therapy
2202/0466  Saliva  2202/051  with radiation therapy
2202/0468  non-physiological  2202/052  infrar-red
2202/047  cardioplegic  2202/053  ultra-violet
2202/0472  cryo-cardioplegic  2202/054  with electrotherapy
2202/0474  haemodiluting  2202/055  with electrophoresis
2202/0476  Oxygenated solutions  2202/056  with active exercise
2202/0478  Heparin  2202/057  with magnetotherapy
2202/048  Anaesthetics (see also A61M 19/00)  2202/058  with ultrasound therapy
2202/0482  Enteral feeding product  2202/057  having air pumping means
2202/0484  Alcohol  2202/071  hand operated
2202/0486  Glucose  2202/073  Syringe, piston type
2202/0488  Surfactant, e.g. for the lung  2202/075  Bulb type
2202/049  Toxic  2202/076  mouth operated
2202/0492  Pleural  2202/078  foot operated
2202/0494  Obstetrical, amniotic fluid  2202/10  with powered movement mechanisms
2202/0496  Urine

CPC - 2019.05
Controlling, regulating or measuring with radio-opaque indicia sensitive to tilting or inclination, e.g. spill-over prevention

Constructional features of carpules, syringes or connectors or a container in an apparatus

Detection of leaks

with back-up system in case of failure

with redundant control systems

with alarm

the sound being generated pneumatically

the sound being acoustically amplified, e.g. by resonance

Constructional features of carpusles, syringes or blisters

Avoiding coring, e.g. preventing formation of particles during puncture

by the needle tip shape

by the seal material

insensitive to tilting or inclination, e.g. spill-over prevention

Tilt detection, e.g. for warning or shut-off

preventing use

preventing reuse, e.g. of disposables

preventing unwanted use

with radio-opaque indicia

Controlling, regulating or measuring

Using a biosensor

Optical measuring means

used as turbidity change detectors, e.g. for priming-blood or plasma-hemoglobin interface detection

used specific wavelengths

Electromagnetic, inductive or dielectric measuring means

Force measuring means

PH measuring means

Measuring

Pressure; Flow

Measuring or controlling the flow rate

Controlling, regulating pressure or flow by means of a valve by-passing a pump

stabilising pressure or flow to avoid excessive variation

Measuring or controlling pressure at the body treatment site

Pressure measurement using a water column

Controlling upstream pump pressure

Controlling downstream pump pressure

Measuring barometric pressure, e.g. for compensation

with minimised length of fluid lines; Taking into account the elastic expansion of fluid lines to increase accuracy

Rotational speed

Temperature

Temperature compensation

Acoustical, e.g. ultrasonic, measuring means

Masses, volumes, levels of fluids in reservoirs, flow rates

Upper level detectors

Low level detectors

Continuous level detection (A61M 2205/3393 takes precedence)

by weighing the reservoir

Reservoirs being alternately filled and emptied for measuring flow rate or delivered volume

Communication

with implanted devices, e.g. external control

using magnetic means

using telemetric means

using mechanical means, e.g. subcutaneous pushbuttons

using electrical conduction through the body of the patient

Range

remote, e.g. between patient's home and doctor's office

local, e.g. within room or hospital

sublocal, e.g. between console and disposable

with non implanted data transmission devices, e.g. using external transmitter or receiver

using modern, internet or bluetooth

using telemetric means, e.g. radio or optical transmission

related to heating or cooling

cooled

by body heat

by gas flow

by controlled mixing of fluids at different temperatures

thermally insulated

by chemical reaction

by heat accumulators, e.g. ice, sand

by Joule effect, i.e. electric resistance

by liquid heat exchangers

using heat loss of a motor

thermo-electric, e.g. Peltier effect, thermocouples, semi-conductors

by electromagnetic radiation, e.g. IR waves

microwaves

by mechanical waves, e.g. ultrasonic

Reducing noise

making noise when used correctly

making noise when used incorrectly

with microprocessors or computers

User interfaces, e.g. screens or keyboards

Touch-screens; Virtual keyboard or keypads; Virtual buttons; Soft keys; Mouse touches

Means for facilitating use, e.g. by people with impaired vision
2205/825 . . . using mechanical generation of electricity, e.g. hand cranked generators
2205/8256 . . . being integrated in the case or housing of the apparatus
2205/8262 . . . connectable to external power source, e.g. connecting to automobile battery through the cigarette lighter
2205/8268 . . . Fuel storage cells
2205/8275 . . . Mechanical
2205/8281 . . . spring operated
2205/8287 . . . operated by an external magnetic or electromagnetic field
2205/8293 . . . Solar
2205/8294 . . . for treating several patients simultaneously

2206/00 Characteristics of a physical parameter; associated device therefor
2206/10 . . . Flow characteristics
2206/11 . . . Laminar flow
2206/12 . . . the flow being spirally in a plane, e.g. against a plane side of a membrane filter element
2206/14 . . . Static flow deviators in tubes disturbing laminar flow in tubes, e.g. archimedes screws
2206/16 . . . Rotating swirling helical flow, e.g. by tangential inflows
2206/18 . . . Coaxial flows, e.g. one flow within another
2206/20 . . . having means for promoting or enhancing the flow, actively or passively
2206/22 . . . eliminating pulsatile flows, e.g. by the provision of a dampening chamber

2207/00 Methods of manufacture, assembly or production
2207/10 . . . Device therefor

2209/00 Ancillary equipment
2209/01 . . . Remote controllers for specific apparatus
2209/02 . . . Equipment for testing the apparatus
2209/04 . . . Tools for specific apparatus
2209/045 . . . for filling, e.g. for filling reservoirs
2209/06 . . . Packaging for specific medical equipment
2209/08 . . . Supports for equipment
2209/082 . . . Mounting brackets, arm supports for equipment
2209/084 . . . Supporting bases, stands for equipment
2209/086 . . . Docking stations
2209/088 . . . on the body
2209/10 . . . Equipment for cleaning

2210/00 Anatomical parts of the body
2210/005 . . . used as an access side to the body
2210/02 . . . Bones
2210/04 . . . Skin
2210/06 . . . Head
2210/0606 . . . Face
2210/0612 . . . Eyes
2210/0618 . . . Nose
2210/0625 . . . Mouth
2210/0631 . . . Gums
2210/0637 . . . Teeth
2210/0643 . . . Tongue
2210/065 . . . Throat; Pharynx
2210/0656 . . . Epiglottis
2210/0662 . . . Ears
2210/0668 . . . Middle ear
2210/0675 . . . Eustachian tube
A61M

2210/0681 . . Sinus (maxillaris)
2210/0687 . . Skull, cranium
2210/0693 . . Brain, cerebrum
2210/08 . . Limbs
2210/083 . . Arms
2210/086 . . Legs
2210/10 . . Trunk
2210/1003 . . Spinal column
2210/1007 . . Breast; mammary
2210/101 . . Pleural cavity
2210/1014 . . Diaphragm
2210/1017 . . Peritoneal cavity
2210/1021 . . Abdominal cavity
2210/1025 . . Respiratory system (A61M 2210/0618 takes precedence)
2210/1028 . . Larynx
2210/1032 . . Trachea
2210/1035 . . Bronchi
2210/1039 . . Lungs
2210/1042 . . Alimentary tract (A61M 2210/0618 takes precedence)
2210/1046 . . Pharynx
2210/105 . . Oesophagus
2210/1053 . . Stomach
2210/1057 . . Duodenum
2210/106 . . Small intestine
2210/1064 . . Large intestine
2210/1067 . . Anus
2210/1071 . . Liver; Hepar
2210/1075 . . Gall bladder
2210/1078 . . Urinary tract
2210/1082 . . Kidney
2210/1085 . . Bladder
2210/1089 . . Urethra
2210/1092 . . Female
2210/1096 . . Male
2210/12 . . Blood circulatory system
2210/122 . . Pericardium
2210/125 . . Heart
2210/127 . . Aorta
2210/14 . . Female reproductive, genital organs
2210/1408 . . Ovaries
2210/1416 . . Ova, ovum
2210/1425 . . Uterine tubes
2210/1433 . . Uterus
2210/1441 . . Ovocytes
2210/145 . . Embryo, fetus
2210/1458 . . Placenta
2210/1466 . . Umbilical cord
2210/1475 . . Vagina
2210/1483 . . Labia
2210/1491 . . Clitoris
2210/16 . . Male reproductive, genital organs
2210/161 . . Testis
2210/162 . . Epididymis
2210/163 . . Ductus deferens
2210/164 . . Seminal vesicles
2210/165 . . Sperm ducts
2210/166 . . Prostate
2210/167 . . Penis
2210/168 . . Scrotum, Scrotums

Parts of the body

2230/00 Measuring parameters of the user

NOTE

(In this group, symbol A61M 2230/005 is only used as subsequent symbol in C-Sets and should not be allocated as single symbols.)

2230/005 . . Parameter used as control input for the apparatus
2230/04 . . Heartbeat characteristics, e.g. ECG, blood pressure modulation
2230/06 . . Heartbeat rate only
2230/08 . . Other bio-electrical signals
2230/10 . . Electroencephalographic signals
2230/14 . . Electro-oculogram [EOG]
2230/16 . . Visual evoked potential [VEP]
2230/18 . . Rapid eye-movements [REM]
2230/20 . . Blood composition characteristics
2230/201 . . Glucose concentration
2230/202 . . Partial carbon oxide pressure, e.g. partial dioxide pressure (P-CO2)
2230/204 . . Partial carbon monoxide pressure (P-CO)
2230/205 . . Partial oxygen pressure (P-O2)
2230/207 . . Hematocrit
2230/208 . . pH-value
2230/30 . . Blood pressure (A61M 2230/04 takes precedence)
2230/40 . . Respiratory characteristics
2230/42 . . Rate
2230/43 . . Composition of exhalation
2230/432 . . Partial CO2 pressure (P-CO2)
2230/435 . . Partial O2 pressure (P-O2)
2230/437 . . Anaesthetic agent concentration
2230/46 . . Resistance or compliance of the lungs
2230/50 . . Temperature
2230/60 . . Muscle strain, i.e. measured on the user
2230/62 . . Posture
2230/63 . . Motion, e.g. physical activity
2230/65 . . Impedance, e.g. conductivity, capacity

2240/00 Specially adapted for neonatal use

2250/00 Specially adapted for animals