CPC  COOPERATIVE PATENT CLASSIFICATION

A  HUMAN NECESSITIES

HEALTH; AMUSEMENT

A61  MEDICAL OR VETERINARY SCIENCE; HYGIENE

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:

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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.
1/00  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


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 1/0011; cupping glasses A61M 1/081)]
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 subjection 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} tubes (vein strippers A61B 17/00008) take precedence), A61M 1/0011, A61M 1/0023.

{Suction-irrigation systems (aspiration tips; combined with tracheal tubes A61M 16/0463)} {Suction-irrigation, e.g. during surgery}

{Filters for solid matter (similar devices for dental use A61C 17/065)}

{Means preventing overflow or contamination of the pumping systems (combined with rigid drainage containers A61M 1/0001)}

{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}

{for clearing the contents of the tubes (vein strippers A61B 17/00008)}

{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 . . . {Piezoelectric 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}
1/1096 . . . {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, peristalsis (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}
Apart from the machine B01D 65/02 cleaning or sterilisation of membrane modules { Sterilisation or cleaning before or after use;
intracorporal (A61M 1/28)
Dialysates therefor } containing proteins, e.g. albumin
Apparatus for preparing dialysates (with
membrane unit)
| Holding or locking systems for the
| fluid, upstream and downstream of the
dialyser |
| with mechanically linked peristaltic dialysis fluid pumps one upstream, the other one downstream of the dialyser |
| with flow rate measurement of the dialysis fluid, upstream and downstream of the dialyser |
| with pulsatile dialysis fluid flow |
| with a dialyser bypass on the dialysis fluid line |
| (Holding or locking systems for the membrane unit) |
| [Dialysates therefor] |
| [Apparatus for preparing dialysates (with regeneration of dialysates A61M 1/1696)] |
| [Degasification (in general B01D 19/00)] |
| [Heating (for sterilisation A61M 1/1686)] |
| [with heat exchange between fresh and used dialysate] |
| [with temperature control] |
| [by dissolving solids] |
| [Details of containers] |
| [Flexible packaging for solid concentrates] |
| [using membrane filters, e.g. for sterilising the dialysate] |
| [using UV radiation sources for sterilising the dialysate] |
| [containing proteins, e.g. albumin] |
| [intracorporal (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 machine blood side] |
| [Checking the module characteristics before reuse] |
| [by heat] |
| [with recirculation of the sterilising fluid] |
| [using chemical substances] |
| [Detection of blood traces in dialysate (testing of the membrane modules B01D 65/10; investigating fluid-tightness of structures in general G01M 3/00)] |
| [with recirculating dialysing liquid] |
| [with dialysate 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] |
| [Dialysates 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)) |
| [Regulation parameters] |
irradiation { ; Extra-corporeal blood circuits }
circulatory system, e.g. temperature adaptation,
retroperfusion }

{ Reperfusion, e.g. of the coronary vessels, e.g. extra-corporeal circuits }

passes more than once through the treatment unit }

{ Extra-corporeal circuits in which the blood fluid ( A61M 1/3472 ) }

{ Plasmapheresis; Leucopheresis; Lymphopheresis with treatment of the filtrate }

solutions ( for preventing coagulation )

{ Adding 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 ]

[ the difference in weight between both ultra-filtrate and substitution reservoir being used as control signal ]

{ Substitution fluids }

[ having electrolytes not present in the dialysate ]

{ Circuits for the preparation thereof } [ using dialysate as substitution fluid ]

{ using treated filtrate as substitution fluid } [ with treatment of the filtrate ]

[ with filtrate treatment agent in the same enclosure as the membrane ]

[ by dialyzing the filtrate ]

[ by filtrating the filtrate using another cross-flow filter, e.g. a membrane filter ]

[ Biological, chemical treatment, e.g. chemical precipitation; treatment by absorbents ]

[ by biological cells ]

[ using treatment agents in suspension ]

[ Plasmapheresis; Leucopheresis; Lymphopheresis ( A61M 1/3472 takes precedence; single-needle processes A61M 1/3672 ) ]

{ 1/36 Other treatment of blood in a by-pass of the natural circulatory system, e.g. temperature adaptation, irradiation ; Extra-corporeal blood circuits } { Extra-corporeal circuits in which the blood fluid passes more than once through the treatment unit } { in the same direction } { in opposite directions } { Arrangements for blood-volume reduction of extra-corporeal circuits } { Regulation parameters } { Physical characteristics of the blood, e.g. haematocrit, urea } { before treatment } { after treatment } { Reperfusion, e.g. of the coronary vessels, e.g. retroperfusion } { Cleaning blood contaminated by local chemotherapy of a body part temporarily isolated from the blood circuit } { Batch-type treatment } { Magnetic separation } { changing physical properties of target cells by binding them to added particles to facilitate their subsequent separation from other cells, e.g. immunoaffinity } { Extra-corporeal blood circuits ( single-needle circuits A61M 1/3672 ) } { Level detectors; Level control } { Gas bubble detectors ( blood leak detection by change of transparency of dialysate A61M 1/1692; in infusion devices A61M 5/365; observing bubbles in a liquid pool for leak detection, in general G01M 3/06 ) } { Degassing devices; Buffer reservoirs; Drip chambers; Blood filters ( priming A61M 1/3643; blood filters for infusion A61M 5/165 ) } { degassing by changing pump speed, e.g. during priming } { Degassing by using vibrations } { Combined venous-cardiomyotomy reservoirs } { Blood component filters, e.g. leukocyte filters } { Constructional details } { having a flexible housing } { with a vapour trap } { Blood pressure control, pressure transducers specially adapted therefor } { Pressure isolators } { Priming, rinsing before or after use } { Mode of operation } { Expelling the residual body fluid after use, e.g. back to the body } { using recirculation of the priming solution } { using dialysate as priming or rinsing liquid } { through membranes, e.g. by inverted trans-membrane pressure [TMP] } { using gas, e.g. air } { Interfaces between patient blood circulation and extra-corporeal blood circuit } { Arterio-venous shunts, fistulae } { Monitoring patency or flow at connection sites; Detecting disconnections } { Indicating the amount of purified blood recirculating in the fistula or shunt } { Cannulae pertaining to extracorporeal circulation } { for haemodialysis } { Flow rate transducers; Flow integrators ( measuring the flow in general G01F ) } { for preparing cardiopлегia solutions } { Cardiac or cardiopulmonary bypass, e.g. for preparing cardioplegia solutions } { with assisted venous return } { Electrical impedance measurement of body fluids; Transducers specially adapted therefor } { Circuit parts not covered by the preceding subgroups of group A61M 1/3621 }
Syringes; Irrigators; Baths for subaqueous intestinal cleaning

(other apparatus for introducing medicines into the body A61M 29/000 - A61M 37/000)

3/00 Medical syringes, e.g. enemata; Irrigators
(A61M 5/000 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 3/060); 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 3/060)]
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. CO2]
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]
2005/1407 . . [Infusion of two or more substances]
2005/1408 . . [in parallel, e.g. manifolds, sequencing valves (access sites A61M 39/02; tube connectors A61M 39/10)]
2005/1409 . . [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 . . . [Holders 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 pressurising 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]
2005/14284 . . . . [with needle insertion means]
2005/14288 . . . . [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)]
2005/14296 . . . . [Computer-based infusion planning or simulation of spatio-temporal infusate distribution]
5/1445 . . . using pressurised reservoirs, e.g. pressurised by means of pistons
2005/14506 . . . . [mechanically driven, e.g. spring or clockwork]
2005/14513 . . . . [with secondary fluid driving or regulating the infusion]
5/1452 . . . . [pressurised by means of pistons]
5/14526 . . . . [the piston being actuated by fluid pressure]
2005/14533 . . . . [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]
2005/14573 . . . . [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])]
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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)
2005/158 . . . . [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 50/3001)]
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]
2005/1655 . . . . [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 or 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)]
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5/2053 . . . [Media being expelled from injector by pressurised fluid or vacuum (for infusion A61M 5/145, A61M 5/155)]
5/2056 . . . [With automatic needle insertion]
5/2066 . . . [comprising means for injection of two or more media, e.g. by mixing]
5/2072 . . . [preventing premature release, e.g. by making use of a safety lock]
5/2087 . . . [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 1/061)
5/2402 . . . [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]
5/2444 . . . [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]
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)]
5/287 . . . [by displacing occluding plugs]
5/288 . . . [by piercing without internal pressure increase (A61M 5/283 takes precedence)]
5/30 . . . Syringes for injection by jet action, without needle, e.g. for use with replaceable ampoules or carpules
5/3007 . . . [with specially designed jet passages at the injector's distal end]
5/3015 . . . [for injecting a dose of particles in form of powdered drug, e.g. mounted on a rupturable membrane and accelerated by a gaseous shock wave or supersonic gas flow (cell injection devices C12M 3/006)]
5/3022 . . . [Worn on the body, e.g. as patches (pressure infusion of the skin patch type A61M 5/14248)]
5/31 . . . Details
5/3045 . . . [Leak prevention means for proximal end of syringes, i.e. syringe end opposite to needle mounting end]
5/3053 . . . [Leak prevention means for distal end of syringes, i.e. syringe end for mounting a needle]
5/3064 . . . [Caps for syringes without needle]
5/3066 . . . [Plugs for syringes without needle]
5/3070 . . . [for needles]
5/3093 . . . [Caps sealing the needle bore by use of, e.g. air-hardening adhesive, elastomer or epoxy resin]
5/311 . . . [Plugs, i.e. sealing rods or styles closing the bore of needles]
5/3111 . . . [Incorporating self-aspirating means, e.g. to provide flashback]
5/3114 . . . [Filling or refilling]
5/3115 . . . [spring-assisted]
5/3117 . . . [Means preventing contamination of the medicament compartment of a syringe]
5/3118 . . . [via the distal end of a syringe, i.e. syringe end for mounting a needle cannula]
5/3122 . . . [comprising sealing means, e.g. sevorable caps, to be removed prior to injection by, e.g. tearing or twisting]
5/3121 . . . [via the proximal end of a syringe, i.e. syringe end opposite to needle cannula mounting end]
5/3124 . . . [having air entrapping or venting means, e.g. purging channels in pistons]
5/3125 . . . [specific display means, e.g. to indicate dose setting]
5/3126 . . . [Specific display means related to dosing]
5/3128 . . . [Incorporating one-way valves, e.g. pressure-relief or non-return valves]
5/3129 . . . [Syringe barrels (A61M 5/3205 and A61M 5/50 take precedence)]
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2005/3131 . . . . . . [specially adapted for improving sealing or sliding]
2005/3132 . . . . . . [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]
2005/3139 . . . . . . {Finger grips not integrally formed with the syringe barrel, e.g. using adapter with finger grips}
2005/314 . . . . . . [Flat shaped barrel forms, e.g. credit card shaped]
2005/3142 . . . . . . [Modular constructions, e.g. supplied in separate pieces to be assembled by end-user]
2005/3143 . . . . . . [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 (means)
5/31501 . . . . . . [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]
2005/31506 . . . . . . {formed as a single piece, e.g. moulded}
2005/31508 . . . . . . [provided on the piston-rod]
2005/3151 . . . . . . [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]
2005/31516 . . . . . . [reducing dead-space in the syringe barrel after delivery]
2005/31518 . . . . . . [designed to reduce the overall size of an injection device, e.g. using flexible or pivotally connected chain-like rod members]
2005/3152 . . . . . . [including gearings to multiply or attenuate the piston displacing force]
2005/31521 . . . . . . [Pistons with a forward extending skirt at their front end]
2005/31523 . . . . . . [for reducing reflux]
5/31525 . . . . . . [Dosing (burets, 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 (administrating 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]
2005/3154 . . . . . . [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)]
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5/3157 . . . . . . [Accuracy improving means]
5/31575 . . . . . . [using scaling up or down transmissions, e.g. gearbox]
5/3158 . . . . . . [Constitutional features or modes of drive mechanisms for piston rods]
5/31588 . . . . . . [based on axial translation, i.e. components directly operatively associated and axially moved with plunger rod]
5/3158 . . . . . . [performed by axially moving actuator operated by user, e.g. an injection button]
5/31581 . . . . . . [performed by rotationally moving or pivoting actuator operated by user, e.g. an injection lever or handle]
5/31583 . . . . . . [based on rotational translation, i.e. movement of piston rod is caused by relative rotation between the user activated actuator and the piston rod]
5/31585 . . . . . . [performed by axially moving actuator, e.g. an injection button]
5/31586 . . . . . . [performed by rotationally moving or pivoting actuator, e.g. an injection lever or handle]
2005/31588 . . . . . . [electrically driven]
5/3159 . . . . . . [Dose expelling manners]
5/31591 . . . . . . [Single dose, i.e. individually set dose administered only once from the same medicament reservoir, e.g. including single stroke limiting means]
5/31593 . . . . . . [Multi-dose, i.e. individually set dose repeatedly administered from the same medicament reservoir]
5/31595 . . . . . . [Pre-defined multi-dose administration by repeated overcoming of means blocking the free advancing movement of piston rod, e.g. by tearing or de-blocking]
5/31596 . . . . . . [comprising means for injection of two or more media, e.g. by mixing]
2005/31598 . . . . . . (having multiple telescopically sliding coaxial pistons encompassing volumes for components to be mixed)
5/32 . . . . . . Needles; Details of needles pertaining to their connection with syringe or hub (infusion needles A61M 5/158); Accessories for bringing the needle into, or holding the needle on, the body ((A61M 5/42, A61M 5/46 take precedence; guide needles for catheters A61M 25/065)); Devices for protection of needles ((apparatus specially adapted for cleaning or sterilising needles A61M 5/001)]
2005/3201 . . . . . . [Coaxially assembled needle cannulas placed on top of another, e.g. needles having different diameters]
5/3202 . . . . . . [Devices for protection of the needle before use, e.g. caps (A61M 5/50 takes precedence; for infusion spikes A61M 5/1626; protectors for sharp A61B 50/3001)]
5/3204 . . . . . . [Needle cap remover, i.e. devices to dislodge protection cover from needle or needle hub, e.g. deshielding devices]
5/3205 . . . . . . [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 3/0073; receptacles for refuse disposal in general B65F 1/000)]
2005/3206 . . . . . . [Needle or needle hub disconnecting devices forming part of or being attached to the hub or syringe body]
2005/3208 . . . . . . [by application of rotational movement to the needle hub, e.g. by use of electrically driven toothed wheels]
2005/3209 . . . . . . [comprising heat generating means, e.g. melt chamber]
5/321 . . . . . . [Means for protection against accidental injuries by used needles]
2005/3212 . . . . . . [Blunting means for the sharp end of the needle]
5/3213 . . . . . . [Caps placed axially onto the needle, e.g. equipped with finger protection guards (axially-extensible protective sleeves A61M 5/3243)]
2005/3215 . . . . . . [Tools enabling the cap placement]
5/3216 . . . . . . [Caps placed transversally onto the needle, e.g. pivotally attached to the needle base]
2005/3217 . . . . . . [Means to impede repositioning of protection cap from needle covering to needle uncovering position, e.g. catch mechanisms]
5/3219 . . . . . . [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]
5/322 . . . . . . [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)]
5/3221 . . . . . . [Constructional features thereof, e.g. to improve manipulation or functioning]
2005/3223 . . . . . . [Means impeding or disabling repositioning of used needles at the syringe nozzle]
2005/3224 . . . . . . [Means to disalign the needle tip and syringe nozzle]
2005/3226 . . . . . . [with means obstructing or blocking the needle mounting opening]
2005/3227 . . . . . . [the needle being retracted laterally outside the syringe barrel, e.g. with separate guideway]
2005/3228 . . . . . . [the needle being retracted by a member protruding laterally through a slot in the barrel, e.g. double-ended needles]
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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 }
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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 resheathing means destroying the needle A61M 5/321)}

2005/3279 . . . . {Breaking syringe nozzles or needle hubs}

5/328 . . . . {having needle tip encapsulating means, e.g. two-component hardenable compound or molten plastic}

2005/3282 . . . . {using mechanical means, e.g. mills}

5/3283 . . . . {using electric current between electrodes}

5/3284 . . . . {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 5/3125 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 5/855)

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 . . . . {Proruding 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 . . . . {having means for varying, regulating, indicating or limiting injection pressure (A61M 5/142 takes precedence; monitoring pressure in infusion systems A61M 5/1685)}

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}
Inhaling devices

15/00 Inhalators  \((\text{drug delivery in endotracheal tubes } A61M \, 16/04)\)

15/0001 . . . [Details of inhalators; Constructional features thereof]
15/0003 . . . [with means for dispensing more than one drug]
15/0005 . . . [with means for agitating the medicament]
15/0006 . . . [using rotating means]
15/0008 . . . . [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 check valves]
15/0016 . . . . [located upstream of the dispenser, i.e. not 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]
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]
Inhaling devices

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)

Inhaling devices shaped like cigars, cigarettes or particles

Inhaling devices inserted into the nose

Pumps therefor

Liquid ventilation

with alarm devices

Bag or bellow in a bottle

with sub-atmospheric pressure, e.g. during expiration

[by Venturi means]

[accessory therefor, e.g. sensors, vibrators, negative pressure]

[with means for creating vibrations in patients' airways]

[with sub-atmospheric pressure, e.g. during expiration]

[by Venturi means]

[with means for creating vibrations in patients' airways]

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[by Venturi means]

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[with sub-atmospheric pressure, e.g. during expiration]

[by Venturi means]
16/0463  . . [combined with suction tubes, catheters or the like; Outside connections]
16/0465  . . [Tracheostomy tubes; Devices for performing a tracheostomy; Accessoeries 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  . . [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]
2016/0102  . . [Measuring a parameter of the content of the delivered gas]
2016/0105 . . [the O₂ concentration]
2016/0103 . . [the CO₂ concentration]
2016/0105 . . [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 16/083]
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]
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 (A61M 16/1045 takes precedence)
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  . . Vapourising devices for anaesthetic preparations
16/183 . . . . . . . . . . [Filling systems]
Inhaling devices

Probes; Catheters; Dilators; Drainage appliances for wounds

25/00    Catheters; Hollow probes ([dilators A61M 2900]; [peritentional catheters A61M 1/285; tracheal tubes A61M 1604; for drainage A61M 2700]; for uterus, vagina or rectum A61M 3100; for measuring or testing A61B; [materials for catheters A61L 2900])

2025/0001 . . . (for pressure measurement)
2025/0002 . . . (with a pressure sensor at the distal end)
2025/0003 . . . (having an additional lumen transmitting fluid pressure to the outside for measurement)
2025/0004 . . . (having two or more concentrically arranged tubes for forming a concentric catheter system)
2025/0006 . . . (which can be secured against axial movement, e.g. by using a locking cuff)
2025/0007 . . . (Epidual 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 tube (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)
25/0025 . . . (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 20250681; catheters comprising telescoping coaxial elements A61M 20250175))
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))
Probes; Catheters; Dilators; Drainage appliances for wounds

[characterized by features relating to least one lumen located at the middle part of the catheter, e.g. slots, slits, valves, cuffs, apertures, notches, grooves or rapid exchange ports (catheter shaft surface irregularities A61M 2025/006)]

[characterized by features relating to least one lumen located at the distal part of the catheter, e.g. filters, plugs or valves (catheter tips A61M 2025/0067)]

[characterized by lumina for withdrawing or delivering, i.e. used for extracorporeal circuit treatment]

[characterized by at least one unconventionally shaped lumen, e.g. polygons, ellipsoids, wedges or shapes comprising concave and convex parts]

[characterized by elements which are assembled, connected or fused, e.g. splittable tubes, outer sheaths creating lumina or separate cores (making of catheters A61M 2025/0099)]

[characterized by a variable lumen cross-section by means of a resilient flexible septum or outer wall]

[with more than four lumina]

[characterized by lumina being arranged side-by-side]

[characterized by lumina being arranged coaxially]

[characterized by lumina being arranged circumferentially]

(pre-formed, e.g. specially adapted to fit with the anatomy of body channels (urethral catheters A61F 2024)]

[Microcatheters, cannula or the like having outside diameters around 1 mm or less]

[characterised by structural features]

[multi-layered, e.g. coated (coating materials A61L 29/08)]

[Coatings for improving slidability]

[the inner layer having a higher lubricity]

[with an outer layer made from silicon]

[with embedded materials for reinforcement, e.g. wires, coils, braids]

[made from fenestrated or weakened tubing layer]

[Localized reinforcement, e.g. where only a specific part of the catheter is reinforced, for rapid exchange guidewire port]

[having a variable stiffness along the longitudinal axis, e.g. by varying the pitch of the coil or braid]

[with regions for increasing flexibility]

[provided with an antibacterial agent, e.g. by coating, residing in the polymer matrix or releasing an agent out of a reservoir]

[Catheters delivering medicament other than through a conventional lumen, e.g. porous walls or hydrogel coatings]

[having an electroactive polymer material, e.g. for steering purposes, for control of flexibility, for locking, for opening or closing]

[characterised by structural features]

[locking, for opening or closing]

[for steering purposes, for control of flexibility, for releasing an agent out of a reservoir]

[being one or more injection needles]

[Multiple injection needles protruding axially, i.e. along the longitudinal axis of the catheter, from the distal tip]

[the needles having bent tips, i.e. the needle distal tips are angled in relation to the longitudinal axis of the catheter]

[Multiple injection needles protruding laterally from the distal tip]

[Single injection needle protruding axially, i.e. along the longitudinal axis of the catheter, from the distal tip]

[the needle having a bent tip, i.e. the needle distal tip is angled in relation to the longitudinal axis of the catheter]

[the single injection needle being fixed]
Probes; Catheters; Dilators; Drainage appliances for wounds

A61M

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]
25/0097 . . . . . [characterised by the hub (connectors A61M 39/101)]
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]
Probes; Catheters; Dilators; Drainage appliances for wounds

25/0631 . . . . [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]

25/0637 . . . . [Butterfly or winged devices, e.g. for facilitating handling or for attachment to the skin]

25/0643 . . . . [Devices having a blunt needle tip, e.g. due to an additional inner component]

25/065 . . . . [Guide needles]

2025/0656 . . . . [having a tip larger than the rest of the body]

25/0662 . . . . [Guide tubes]

25/0668 . . . . [splitable, tear apart]

2025/0675 . . . . [Introducing-sheath slitters]

2025/0681 . . . . [Systems with catheter and outer tubing, e.g. sheath, sleeve or guide tube]

2025/0687 . . . . [having means foratraumatic insertion in the body or protection of the tip of the sheath during insertion, e.g. special designs of dilators, needles or sheaths]

25/0693 . . . . [Flashback chambers]

25/09 . . . . Guide wires

2025/09008 . . . . [having a balloon]

25/09016 . . . . [with mandrils]

25/09025 . . . . [with sliding mandrils]

25/09033 . . . . [with fixed mandrils, e.g. mandrils fixed to tip; Tensionable wires]

25/09041 . . . . [Mechanisms for insertion of guide wires]

25/0905 . . . . [extendable, e.g. mechanisms for extension]

2025/09058 . . . . [Basic structures of guide wires]

2025/09066 . . . . [having a coil without a core possibly combined with a sheath]

2025/09075 . . . . [having a core without a coil possibly combined with a sheath]

2025/09083 . . . . [having a coil around a core]

2025/09091 . . . . [where a sheath surrounds the coil at the distal part]

2025/091 . . . . [having a lumen for drug delivery or suction]

2025/09108 . . . . [Methods for making a guide wire]

2025/09116 . . . . [Design of handles or shafts or gripping surfaces thereof for manipulating guide wires]

2025/09125 . . . . [Device for locking a guide wire in a fixed position with respect to the catheter or the human body]

25/09133 . . . . [having specific material compositions or coatings; Materials with specific mechanical behaviours, e.g. stiffness, strength to transmit torque]

2025/09141 . . . . [made of shape memory alloys which take a particular shape at a certain temperature]

2025/0915 . . . . [having features for changing the stiffness]

2025/09158 . . . . [when heated]

2025/09166 . . . . [having radio-opaque features]

2025/09175 . . . . [having specific characteristics at the distal tip]

2025/09183 . . . . [having tools at the distal tip]

2025/09191 . . . . [made of twisted wires]

25/10 . . . . Balloon catheters ([A61M 25/0125 takes precedence; embolectomy A61B 17/22032; retractors A61B 17/022; inflatable balloons for placing stents or stent-grafts A61F 2/958; stomach balloons for treatment of obesity A61F 5/0003; oesopha-gl tubes A61J 15/001])

25/1002 . . . . [characterised by balloon shape (A61M 25/1006, A61M 25/1009 take precedence)]

2025/1004 . . . . [Balloons with folds, e.g. folded or multifolded]

25/1006 . . . . [Balloons formed between concentric tubes]

25/1009 . . . . [Balloons anchored to a disc or plate]

25/1011 . . . . [Multiple balloon catheters]

2025/1013 . . . . [with concentrically mounted balloons, e.g. being independently inflatable]

2025/1015 . . . . [having two or more independently movable balloons where the distance between the balloons can be adjusted, e.g. two balloon catheters concentric to each other forming an adjustable multiple balloon catheter system]

25/1018 . . . . [Balloon inflating or inflation-control devices]

25/10181 . . . . [Means for forcing inflation fluid into the balloon]

25/10182 . . . . [Injector syringes]

25/10183 . . . . [Compressible bulbs]

25/10184 . . . . [Means for controlling or monitoring inflation or deflation]

25/10185 . . . . [Valves]

25/10186 . . . . [One-way valves]

25/10187 . . . . [Indicators for the level of inflation or deflation]

25/10188 . . . . [Inflation or deflation data displays]

2025/102 . . . . [driven by a solenoid-activated pump]

2025/1022 . . . . [driven by a rotary motor-activated pump]

2025/1025 . . . . [Connections between catheter tubes and inflation tubes]

25/1027 . . . . [Making of balloon catheters]

25/1029 . . . . [Production methods of the balloon members, e.g. blow-moulding, extruding, deposition or by wrapping a plurality of layers of balloon material around a mandril]

25/1031 . . . . [Surface processing of balloon members, e.g. coating or deposition; Mounting additional parts onto the balloon member's surface]

25/1034 . . . . [Joining of shaft and balloon]

25/1036 . . . . [Making parts for balloon catheter systems, e.g. shafts or distal ends (A61M 25/1029 takes precedence)]

25/1038 . . . . [Wrapping or folding devices for use with balloon catheters]

25/104 . . . . [used for angioplasty]

2025/1043 . . . . [with special features or adapted for special applications]

2025/1045 . . . . [for treating bifurcations, e.g. balloons in y-configuration, separate balloons or special features of the catheter for treating bifurcations]

2025/1047 . . . . [having centering means, e.g. balloons having an appropriate shape]

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]
Probes; Catheters; Dilators; Drainage appliances for wounds

A61M

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 orovable 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]

2025/1097 . . . [with perfusion means for enabling blood circulation only while the balloon is in an inflated state, e.g. temporary by-pass within balloon]

27/00 Drainage appliances for wounds or the like, [i.e. wound drains, implanted drains] (implements for holding wounds open A61B 17/02; middle ear drainage A61F 11/002; other drainage devices A61M 1/00])

27/002 . . . [Implant devices for drainage of body fluids from one part of the body to another (intracocular A61F 9/00781; middle ear A61F 11/002)]

27/004 . . . [with at least a part of the circuit outside the body]

27/006 . . . [Cerebrospinal drainage; Accessories therefor, e.g. valves]

27/008 . . . [pre-shaped, for use in the urethral or ureteral tract]

29/00 Dilators with or without means for introducing media, e.g. remedies (instruments for performing visual medical inspections of cavities or tubes of the body A61B 1/00)

29/02 . . . [Dilators made of swellable material ([balloon catheters for angioplasty A61M 25/104])]

29/025 . . . [characterised by the guiding element]

31/00 Devices for introducing or retaining media, e.g. remedies, in cavities of the body (A61M 25/00 takes precedence; introducing or retaining ophthalmic products into the ocular cavities A61F 9/0008)

31/002 . . . [Devices for releasing a drug at a continuous and controlled rate for a prolonged period of time (artificial gland structures or devices A61F 2/22; intra-uterine contraceptive devices A61F 6/14; tampons for introducing into the vagina A61F 13/20; A61L 15/00; suppositories or bougies for intra-vaginal or intra-uterine application A61K 9/02; physical forms of medicinal preparations for sustained or differential drug release A61K 9/20, A61K 9/50)]

31/005 . . . [for contrast media]

31/007 . . . [Injectors for solid bodies, e.g. suppositories]

35/00 Devices for applying (i.e. spreading), media, e.g. remedies, on the human body (devices for handling toilet or cosmetic substances A45D; absorbent pads, e.g. swabs [for medical use], A61F 13/15)

WARNING

Group A61M 35/00 is impacted by reclassification into groups A61M 35/10, A61M 35/20, A61M 35/25, and A61M 35/30.

All groups listed in this Warning should be considered in order to perform a complete search.

35/003 . . . [Portable hand-held applicators having means for dispensing or spreading integral media (hand-held massage devices with liquid delivery A61H 7/003)]

35/006 . . . [using sponges, foams, absorbent pads or swabs as spreading means]

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]
Probes; Catheters; Dilators; Drainage appliances for wounds

![Image with OCR text]

**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.

**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)

- [37/0007] . . . (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)
- [37/0023] . . . (Drug applicators using microneedles)
- [37/0033] . . . (having a lumen)
- [37/0038] . . . (having a channel at the side surface)
- [37/0046] . . . (Solid microneedles)
- [37/0053] . . . (Methods for producing microneedles)
- [37/0061] . . . (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)

- [39/0009] . . . (Assemblies therefor designed for particular applications, e.g. contrast or saline injection, suction or irrigation]
- [39/0018] . . . (designed for flushing a line, e.g. by a by-pass)
- [39/0027] . . . (for mixing several substances from different containers)

- [2039/0006] . . . (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)
- [2039/0208] . . . (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)
- [2039/0244] . . . (having means for detecting an inserted needle)
- [2039/0247] . . . (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 feeding tubes A61J 15/0053; means for fixing a feeding tube outside of the body A61J 15/0053))
- [2039/025] . . . (through bones or teeth, e.g. through the skull)
- [2039/0252] . . . (for access to the lungs)
- [2039/0255] . . . (for access to the gastric or digestive system)
- [2039/0258] . . . (for vascular access, e.g. blood stream access)
- [2039/0261] . . . (Means for anchoring port to the body, or ports having a special shape or being made of a specific material to allow easy implantation/integration in the body)
- [2039/0264] . . . (with multiple inlets or multiple outlets)
- [2039/0267] . . . (comprising sensors or electrical contacts)
A61M

2039/027 . . . [having a particular valve, seal or septum {septum A61M 2039/0036}]
2039/0273 . . . [for introducing catheters into the body]
2039/0276 . . . [for introducing or removing fluids into or out of the body]
2039/0279 . . . [for introducing medical instruments into the body, e.g. endoscope, surgical tools]
2039/0282 . . . [with implanted tubes connected to the port]
2039/0285 . . . [with sterilisation means, e.g. antibacterial coatings, disinfecting pads, UV radiation LEDs or heating means in the port]
2039/0288 . . . [protectors, caps or covers therefor]
2039/0291 . . . [method or device for implanting it in the body]
2039/0294 . . . [having a specific shape matching the shape of a tool to be inserted therein, e.g. for easy introduction, for sealing purposes, guide]
2039/0297 . . . [at least part of it being inflatable, e.g. for anchoring, sealing or removing]
39/04 . . . having pierceable self-sealing members
2039/042 . . . [Shrouds encircling the access needle preventing accidental needle-stick]
39/045 . . . [pre-slit to be pierced by blunt instrument]
2039/047 . . . [the self-sealing member being a viscous fluid]
39/06 . . . Haemostasis valves, i.e. gaskets sealing around a needle, catheter or the like, closing on removal thereof
39/0606 . . . [without means for adjusting the seal opening or pressure {A61M 39/0693 takes precedence}]
39/0613 . . . [with means for adjusting the seal opening or pressure {A61M 39/0693 takes precedence}]
2039/062 . . . [used with a catheter]
2039/0626 . . . [used with other surgical instruments, e.g. endoscope, trocar]
2039/0633 . . . [the seal being a passive seal made of a resilient material with or without an opening]
2039/064 . . . . . [Slit-valve]
2039/0646 . . . . . [Duckbill-valve]
2039/0653 . . . . . [Perforated disc]
2039/066 . . . . . [Septum-like element]
2039/0666 . . . . . [Flap-valve]
2039/0673 . . . . . [comprising means actively pressing on the device passing through the seal, e.g. inflatable seals, diaphragms, clamps]
2039/068 . . . . . [having a seal being made of or coated with a special material]
2039/0686 . . . . . [comprising more than one seal]
39/0693 . . . . . [including means for seal penetration]
39/08 . . . Tubes; Storage means specially adapted therefor
2039/082 . . . . . [Multi-lumen tubes]
2039/085 . . . . . [external enteral feeding tubes {feeding tubes inside the stomach or intestines A61J 15/00}]
2039/087 . . . . . [Tools for handling tubes, e.g. crimping tool for connecting tubes to a connector]
39/10 . . . 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}
2039/1005 . . . . . [Detection of disconnection]
39/1011 . . . . . [Locking means for securing connection; Additional tamper safeties {A61M 39/16 takes precedence}]
2039/1016 . . . . . [Unlocking means providing a secure or comfortable disconnection]
Clamping means for squeezing flexible tubes, e.g. roller clamps

Wedge clamps, e.g. roller clamps with inclined guides

Wedge formed by a slot having varying width, e.g. slide clamps

by bending or twisting the tube

2202/00 Special media to be introduced, removed or treated (applying radioactive material A61N 5/1028)

The classification symbols A61M 2202/0007, A61M 2202/0092 are not listed first when assigned to patent documents.

They are used only when associated to other subgroups of A61M 2202/00 in combination sets.

Example: A61M 2202/0417, A61M 2202/0057

2202/007 . . . introduced into the body
2202/0014 . . . removed from the body
2202/0021 . . . removed from and reintroduced into the body, e.g. after treatment
2202/0028 . . . fluid entering a filter
2202/0035 . . . fluid leaving the cross-flow filter without having passed through the filtering element
2202/0042 . . . filtrate, i.e. the fluid passing through the filter
2202/005 . . . residue retained by the filter due to size
2202/0057 . . . retained by adsorption
2202/0064 . . . changed by biological action
2202/0071 . . . product to be retained or harvested, e.g. by pheresis
2202/0078 . . . changed by chemical action
2202/0085 . . . product washed out
2202/0092 . . . starting product created by centrifuging
2202/02 . . . Gases

2202/0208 . . . Oxygen
2202/0216 . . . Ozone
2202/0225 . . . Carbon oxides, e.g. Carbon dioxide
2202/0233 . . . Carbon monoxide
2202/0241 . . . Anaesthetics; Analgesics
2202/025 . . . Helium
2202/0258 . . . Krypton (KR)
2202/0266 . . . Nitrogen (N)
2202/0275 . . . Nitric oxide [NO]
2202/0283 . . . Nitrous oxide (N₂O)
2202/0291 . . . Xenon
2202/03 . . . Gases in liquid phase, e.g. cryogenic liquids
2202/04 . . . Liquids
2202/0401 . . . Ascitics
2202/0403 . . . Gall; Bile
2202/0405 . . . Lymph
2202/0407 . . . Lymphocytes
2202/0409 . . . B-Lymphocytes
2202/0411 . . . T-Lymphocytes
2202/0413 . . . Blood
2202/0415 . . . Plasma
2202/0417 . . . Immunoglobulin
2202/0419 . . . Immunoglobulin G
2202/0421 . . . Beta-2-microglobulin
Vaccines
Pathogenic agents
Bone-marrow
Body tissue
Proteins
Solids
Viruses
endothelial cells
Sweat glands
Faeces; Excretions
Powder
Desiccants
Urine
Obstetrical, amniotic fluid
Pleural
non-physiological
Saliva
made from a compacted product by abrading
Urea
Surfactant, e.g. for the lung
Glucose
Alcohol
Enteral feeding product
Anaesthetics (see A61M 2202/0417)
Heparin
Oxygenated solutions
haemodiluting
cryo-cardioplegic
cardio-pumping
cryo-cardioplegic
Low-density lipoprotein
Macrophages, e.g. monocytes
many granules in their cytoplasm
Granulocytes, i.e. leucocytes containing
Blood stem cells
Neocytes, e.g. reticulocytes
Free haemoglobin
Gerocytes
Red blood cells; Erythrocytes
White blood cells; Leucocytes (lymphocytes A61M 2202/0407)
Granulocytes, i.e. leucocytes containing
many granules in their cytoplasm
Proteins (immunoglobulin A61M 2202/0417; beta-2-microglobulin A61M 2202/0421; thrombin A61M 2202/0425; haemoglobin A61M 2202/0433)
Fibrinogen, also called factor I
Fibrin
Factor VIII
Fibrinase, i.e. Factor XIII
Lipoprotein
High-density lipoprotein
Low-density lipoprotein
Placental blood, umbilical cord blood
Cerebrospinal fluid
Saliva
non-physiological
cardioplegic
cryo-cardioplegic
haemodiluting
Oxygenated solutions
Heparin
Anaesthetics (see also A61M 19/00)
Enteral feeding product
Alcohol
Glucose
Surfactant, e.g. for the lung
Toxic
Pleural
Obstetrical, amniotic fluid
Urine
Urea
Solids
Desiccants
Powder
made from a compacted product by abrading
Faeces; Excretions
Proteins
Lipoids
Body tissue
Sweat glands
Collagen
endothelial cells
Bone-marrow
Pathogenic agents
Bacteria
Viruses
Vaccines

ceramists.

2205/00 General characteristics of the apparatus

2205/02

characterised by a particular materials

2205/0205

Materials having antiseptic or antimicrobial properties, e.g. silver compounds, rubber with sterilising agent

2205/0211

. Ceramics

2205/0216

Materials providing elastic properties, e.g. for facilitating deformation and avoid breaking

2205/0222

. Materials for reducing friction

2205/0227

. Materials having sensing or indicating function, e.g. indicating a pressure increase

2205/0233

. Conductive materials, e.g. antistatic coatings for spark prevention

2205/0238

. the material being a coating or protective layer

2205/0244

. Micromachined materials, e.g. made from silicon wafers, microelectromechanical systems [MEMS] or comprising nanotechnology

2205/025

. Materials providing resistance against corrosion

2205/0255

. in acidic environments or acidic fluids

2205/0261

. in alcalic environments or alcalic fluids

2205/0266

. Shape memory materials

2205/0272

. Electro-active or magneto-active materials

2205/0277

. Chemo-active materials

2205/0283

. Electro-active polymers [EAP]

2205/0288

. Electro-rheological or magneto-rheological materials

2205/0294

. Piezoelectric materials

2205/0299

. implanted

2205/05

. combined with other kinds of therapy

2205/051

. with radiation therapy

2205/052

. infra-red

2205/053

. ultra-violet

2205/054

. with electrotherapy

2205/055

. with electrophoresis

2205/056

. with active exercise

2205/057

. with magnetotherapy

2205/058

. with ultrasound therapy

2205/07

. having air pumping means

2205/071

. hand operated

2205/073

. Syringe, piston type

2205/075

. Bulb type

2205/076

. mouth operated

2205/078

. foot operated

2205/10

. with powered movement mechanisms

2205/103

. rotating

2205/106

. reciprocating

2205/11

. with means for preventing cross-contamination when used for multiple patients

2205/12

. with interchangeable cassettes forming partially or totally the fluid circuit

2205/121

. interface between cassette and base

2205/122

. using evacuated interfaces to enhance contact

2205/123

. with incorporated reservoirs

2205/125

. with incorporated filters

2205/126

. with incorporated membrane filters

2205/127

. with provisions for heating or cooling

2205/128

. with incorporated valves

2205/13

. with means for the detection of operative contact with patient, e.g. lip sensor

2205/14

. Detection of the presence or absence of a tube, a connector or a container in an apparatus

2205/15

. Detection of leaks
A61M

2205/16 . with back-up system in case of failure
2205/17 . with redundant control systems
2205/18 . with alarm
2205/183 . the sound being generated pneumatically
2205/186 . the sound being acoustically amplified, e.g. by resonance
2205/19 . Constructional features of carpules, syringes or blisters
2205/192 . Avoiding coring, e.g. preventing formation of particles during puncture
2205/195 . by the needle tip shape
2205/197 . by the seal material
2205/21 . insensitive to tilting or inclination, e.g. spill-over prevention
2205/215 . Tilt detection, e.g. for warning or shut-off
2205/27 . preventing use
2205/273 . preventing reuse, e.g. of disposables
2205/276 . preventing unwanted use
2205/32 . with radio-opaque indicia
2205/33 . Controlling, regulating or measuring
2205/3303 . Using a biosensor
2205/3306 . Optical measuring means
2205/331 . used as turbidity change detectors, e.g. for priming-blood or plasma-hemoglobin-interface detection
2205/3313 . used specific wavelengths
2205/3317 . Electromagnetic, inductive or dielectric measuring means
2205/332 . Force measuring means
2205/3324 . PH measuring means
2205/3327 . Measuring
2205/3331 . Pressure; Flow
2205/3334 . Measuring or controlling the flow rate
2205/3337 . Controlling, regulating pressure or flow by means of a valve by-passing a pump
2205/3341 . stabilising pressure or flow to avoid excessive variation
2205/3344 . Measuring or controlling pressure at the body treatment site
2205/3348 . Pressure measurement using a water column
2205/3351 . Controlling upstream pump pressure
2205/3355 . Controlling downstream pump pressure
2205/3358 . Measuring barometric pressure, e.g. for compensation
2205/3362 . with minimised length of fluid lines; Taking into account the elastic expansion of fluid lines to increase accuracy
2205/3365 . Rotational speed
2205/3368 . Temperature
2205/3372 . Temperature compensation
2205/3375 . Acoustical, e.g. ultrasonic, measuring means
2205/3379 . Masses, volumes, levels of fluids in reservoirs, flow rates
2205/3382 . Upper level detectors
2205/3386 . Low level detectors
2205/3389 . Continuous level detection (A61M 2205/3393 takes precedence)
2205/3393 . by weighing the reservoir
2205/3396 . Reservoirs being alternately filled and emptied for measuring flow rate or delivered volume
2205/35 . Communication
2205/3507 . with implanted devices, e.g. external control
2205/3515 . using magnetic means
2205/3523 . using telemetric means
2205/353 . using mechanical means, e.g. subcutaneous pushbuttons
2205/3538 . using mechanical means, e.g. subcutaneous pushbuttons
2205/3546 . Range
2205/3553 . remote, e.g. between patient’s home and doctor’s office
2205/3561 . local, e.g. within room or hospital
2205/3569 . sublocal, e.g. between console and disposable
2205/3576 . with non implanted data transmission devices, e.g. using external transmitter or receiver
2205/3584 . using modem, internet or bluetooth
2205/3592 . using telemetric means, e.g. radio or optical transmission
2205/36 . related to heating or cooling
2205/3606 . . cooled
2205/3613 . by body heat
2205/362 . by gas flow
2205/3626 . by controlled mixing of fluids at different temperatures
2205/3633 . thermally insulated
2205/364 . by chemical reaction
2205/3646 . by heat accumulators, e.g. ice, sand
2205/3653 . by Joule effect, i.e. electric resistance
2205/366 . by liquid heat exchangers
2205/3666 . by heat loss of a motor
2205/3673 . thermo-electric, e.g. Peltier effect, thermocouples, semi-conductors
2205/368 . by electromagnetic radiation, e.g. IR waves
2205/3686 . . microwaves
2205/3693 . by mechanical waves, e.g. ultrasonic
2205/42 . Reducing noise
2205/43 . making noise when used correctly
2205/44 . making noise when used incorrectly
2205/50 . with microprocessors or computers
2205/502 . User interfaces, e.g. screens or keyboards
2205/505 . . Touch-screens; Virtual keyboard or keypads; Virtual buttons; Soft keys; Mouse touches
2205/507 . . Head Mounted Displays [HMD]
2205/52 . with memories providing a history of measured varying parameters of apparatus or patient
2205/58 . Means for facilitating use, e.g. by people with impaired vision
2205/581 . by audible feedback
2205/582 . by tactile feedback
2205/583 . by visual feedback
2205/584 . . having a color code
2205/585 . . having magnification means, e.g. magnifying glasses
2205/586 . . Ergonomic details therefor, e.g. specific ergonomics for left or right-handed users
2205/587 . Lighting arrangements
2205/588 . by olfactory feedback, i.e. smell
2205/59 . Aesthetic features, e.g. distraction means to prevent fears of child patients
2205/60 . with identification means
2205/6009 . for matching patient with his treatment, e.g. to improve transfusion security
2205/6018 . providing set-up signals for the apparatus configuration
2205/6027 . . Electric-conductive bridges closing detection circuits, with or without identifying elements, e.g. resistances, zener-diodes
2205/6036 . . characterised by physical shape, e.g. array of activating switches
2205/6045 . . having complementary physical shapes for indexing or registration purposes
2205/6054 . . Magnetic identification systems
2205/6063 . . Optical identification systems
2205/6072 . . Bar codes
2205/6081 . . Colour codes
2205/609 . . Biometric patient identification means
2205/70 . . with testing or calibration facilities
2205/702 . . automatically during use
2205/705 . . Testing of filters for clogging (blood in dialysate A61M 1/1692)
2205/707 . . Testing of filters for clogging
2205/75 . . with filters
2205/7509 . . for virus
2205/7518 . . bacterial
2205/7527 . . liqophilic, hydrophilic
2205/7536 . . allowing gas passage, but preventing liquid passage, e.g. liqophilic, hydrophobic, water-repellent membranes
2205/7545 . . for solid matter, e.g. microaggregates
2205/7554 . . with means for unclogging or regenerating filters
2205/7563 . . with means preventing clogging of filters
2205/7572 . . with means for preventing contamination of the environment when replaced
2205/7581 . . with means for switching over to a fresh filter on clogging or saturation
2205/759 . . for removing preservatives, e.g. heavy metal compositions
2205/80 . . voice-operated command
2205/82 . . Internal energy supply devices
2205/8206 . . battery-operated
2205/8212 . . with means or measures taken for minimising energy consumption
2205/8218 . . Gas operated
2205/8225 . . using incorporated gas cartridges for the driving gas
2205/8231 . . using electrochemical gas generating device for the driving gas
2205/8237 . . Charging means
2205/8243 . . by induction
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
2205/84 . . 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
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 take precedence)
2210/1028 . . Larynx
2210/1032 . . Trachea
A61M

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2210/1035</td>
<td>Bronchi</td>
</tr>
<tr>
<td>2210/1039</td>
<td>Lungs</td>
</tr>
</tbody>
</table>
| 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 | Gallbladder                                      |
| 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                                |
| 2220/04  | Respiratory characteristics                       |
| 2220/06  | Heartbeat characteristics, e.g. ECG, blood pressure modulation |
| 2220/08  | Other bio-electrical signals                      |
| 2220/10  | Electroencephalographic signals                   |
| 2220/14  | Electro-oculogram [EOG]                          |
| 2220/16  | Visual evoked potential [VEP]                     |
| 2220/18  | Rapid eye-movements [REM]                         |

**Parts of the body**

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<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>2220/20</td>
<td>Blood composition characteristics</td>
</tr>
<tr>
<td>2220/201</td>
<td>Glucose concentration</td>
</tr>
<tr>
<td>2220/202</td>
<td>Partial carbon oxide pressure, e.g. partial dioxide pressure (P-CO2)</td>
</tr>
<tr>
<td>2220/204</td>
<td>Partial carbon monoxide pressure (P-CO)</td>
</tr>
<tr>
<td>2220/205</td>
<td>Partial oxygen pressure (P-O2)</td>
</tr>
<tr>
<td>2220/207</td>
<td>Hematocrit</td>
</tr>
<tr>
<td>2220/208</td>
<td>pH-value</td>
</tr>
<tr>
<td>2220/30</td>
<td>Blood pressure <em>(A61M 2230/04 takes precedence)</em></td>
</tr>
<tr>
<td>2220/40</td>
<td>Resistance or compliance of the lungs</td>
</tr>
<tr>
<td>2230/04</td>
<td>Heartbeat characteristics, e.g. ECG, blood pressure modulation</td>
</tr>
<tr>
<td>2230/06</td>
<td>Heartbeat rate only</td>
</tr>
<tr>
<td>2230/08</td>
<td>Other bio-electrical signals</td>
</tr>
<tr>
<td>2230/10</td>
<td>Electroencephalographic signals</td>
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<td>2230/14</td>
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<td>Rapid eye-movements [REM]</td>
</tr>
</tbody>
</table>

**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.

- Parameter used as control input for the apparatus
- Measuring parameters of the user

CPC - 2020.05