

CLAIMS:

1. An intravenous infusion set (10) to administer continuous air free delivery of intravenous fluid to a patient, said intravenous infusion set (10) comprising: a drip
5 chamber (12), a flexible infusion line (22) of sufficient length connecting a lower end (20) of the drip chamber (12) to a standard connector (24) at the patient end so that a needle or a catheter could be connected to the patient; a roller clamp (26) arranged between the drip chamber (12) and the standard connector (24) being movable along the length of the flexible infusion line (22), said drip chamber
10 (12) provided with a spike (14) on the upper end (16) and a flow regulating and stopping member (18) at its lower end (20) configured to administer continuous air free delivery of intravenous fluid to patients.
2. The intravenous infusion set (10) as claimed in claim 1, wherein said flow
15 regulating and stopping member (18) is a hydrophilic membrane.
3. The intravenous infusion set (10) as claimed in claim 1, wherein the drip chamber (12) is provided with at least two chambers comprising a lower chamber (12a) and an upper chamber (12b) connected by a connecting means such as a
20 ring (32) defining a passage.
4. The intravenous infusion set (10) as claimed in claim 3, wherein a lower end of said lower chamber (12a) sealed with a connector (28) resulting into an outlet (38) which in turn is connected to flexible infusion line (22).
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5. The intravenous infusion set (10) as claimed in claim 1 to 4, wherein said flow regulating and stopping member (18) is sealed onto a sealing leg or ring (34) provided in the said connector (28).
- 30 6. The intravenous infusion set (10) as claimed in claim 1, wherein said flow regulating and stopping member (18) is arranged to seat in the lower end of the lower chamber (12a).

7. The intravenous infusion set (10) as claimed in claim 6, wherein the flow regulating and stopping member (18) has a proximal face (40) and a distal face (42) and the proximal face (40) of the member (18) includes a sealing area.
- 5 8. The intravenous infusion set (10) as claimed in claim 6 or 7, wherein said flow regulating and stopping member (18) is sealed onto said sealing leg or ring (34) by said sealing area.
9. The intravenous infusion set (10) as claimed in any one of claims 1 to 8,
10 wherein the hydrophilic membrane can be sealed to said sealing leg or ring (34) by heat sealing, adhesive sealing, ultrasonic welding, heated die, radio frequency, mechanical seal, insert molding, laser welding, press/snap fit, and annular ring with groove fitment.
- 15 10. The intravenous infusion set (10) as claimed in claim 6 or 7, wherein said flow regulating and stopping member (18) is sealed onto the distal face (42).
11. An intravenous infusion set (10) to administer continuous air free delivery of intravenous fluid to a patient, said intravenous infusion set (10) comprising: a drip
20 chamber (12), a flexible infusion line (22) of sufficient length connecting a lower end (20) of the drip chamber (12) to a standard connector (24) at the patient end so that a needle or a catheter could be connected to the patient; a roller clamp (26) arranged between the drip chamber (12) and the standard connector (24) being movable along the length of the flexible infusion line (22), said drip chamber
25 (12) provided with a spike (14) on the upper end (16), wherein the drip chamber (12) is provided with at least two chambers comprising a lower chamber (12a) and an upper chamber (12b) connected by a connecting means such as a ring (32) defining a passage, wherein a lower end of said lower chamber (12a) is sealed with a connector (28; 128) resulting into an outlet (38; 138) which in turn is
30 connected to the flexible infusion line (22), and wherein the outlet (38; 138) comprises a distal extension (38b; 138b) from the main body of the connector (28; 128) such that a fluid/liquid reservoir (29; 129) is formed on the distal side of the connector (28; 128).

12. The intravenous infusion set (10) as claimed in claim 11, wherein a sealing leg or ring (34; 134) is provided on the connector (28; 128) and forms the distal end of the reservoir (29; 129) opposite to a proximal reservoir bottom (31; 131),
5 wherein the distal extension (38b; 138b) protrudes distally from the reservoir bottom (31; 131) to define a ring-like reservoir (29; 129) around it.

13. The intravenous infusion set (10) as claimed in claim 11 or 12, wherein the distal extension (138b) of the outlet comprises one or more slits (138c), preferably
10 three slits, preferably periodically placed on the distal extension to connect the inside of the reservoir (129) through the outlet (138) with the outside in a direction perpendicular to the main extension direction of the drip chamber (12).

14. The intravenous infusion set (10) as claimed in claim 13, wherein the one
15 or more slits (138c) are configured to prevent bubbles from entering the infusion line 22, preferably wherein the one or more slits (138c) is/are serrated/rough.

15. The intravenous infusion set (10) as claimed in claim 13 or 14, wherein the one or more slits (138c) is/are located on a central portion which extends in a
20 distal to proximal direction along the distal extension (138b), preferably over more than 50% of the extension of the distal extension (138b) and/or preferably from the reservoir bottom (131).