Claims

1. A maintenance unit for one or more print heads (101), wherein the maintenance unit comprises

a drum (102) with a covering (103) thereon;
a nozzle (104) supplied by a pipe (105) which is so arranged that is provides a cleaning liquid to the covering;
a roller (106) which is so arranged that it presses against the covering (103) on the drum (102) to wring excessive cleaning liquid out of the covering (103);
wherein the individual components are so arranged, that in the direction of movement of the drum, the roller (106) is arranged between the nozzle (104) and the one or more print heads (101).

2. Maintenance unit according to claim 1, wherein the roller (106) is so arranged, that it presses against the covering (103) on the drum (102) at a position which is in the lower half of the drum.

3. Maintenance unit according to claim 1 or 2, wherein the nozzle (104) is so arranged, that it jets cleaning liquid onto the covering (103) on the drum (102) at a position which is in the lower half of the drum.

4. Maintenance unit according to any one of the preceding claims, wherein the roller (106) is so arranged that it is pressing against the covering (103) with a force sufficient to wring excessive cleaning liquid out of the covering, such that upon pressing the covering against the one or more print heads (101) no droplets of cleaning liquid are formed on the surface plate of the one or more print heads and/or no cleaning liquid is pressed in the cavities of the one or more print heads.

5. Maintenance unit according to any one of the preceding claims, wherein the cleaning liquid provided through the nozzle (104) is water.

6. Maintenance unit according to any one of the preceding claims, wherein the drum (102) and/or the roller (106) are made of metal or plastic material.

7. Maintenance unit according to any one of the preceding claims, wherein the covering (103) is made of a suture-less, lint free material selected from the group consisting of close-mesh woven synthetic tissue and foam.

8. Maintenance unit according to any one of the preceding claims, wherein the distance between the surfaces of the drum (102) and the roller (106) is corresponding to the depth the print head (101) is caving into the covering (103).

9. Maintenance unit according to any one of the preceding claims, wherein the covering (103) is a suture-less, lint free foam, and
wherein, in operation of the maintenance unit, the covering behind the roller (106) is a damp covering containing from 150 to 210 $\mu l/cm^3$ of cleaning liquid.

10. A method for cleaning one or more print heads (101) from adhering ink, in particular adhering ink which is fully or partly cured and/or fully or partly dried, wherein the method comprises the steps of
(a) wetting a covering (103) on a drum (102) with a cleaning liquid;
(b) wringing excessive cleaning liquid out of the covering (103) to render the covering damp; and
(c) wiping the surface plate of the one or more print heads (101) with the damp covering (103) on the drum (102) to remove adhering ink which is fully or partly cured and/or fully or partly dried.

11. Method according to claim 10, wherein the step (c) of wiping the surface plate of the one or more print heads (101) comprises pressing the one or more print heads (101) against the damp covering (103) on the drum (102).

12. Method according to claim 10, wherein the step (b) of wringing excessive cleaning liquid out of the covering (103) comprises pressing a roller (106) against the covering (103) on the drum (102) at a position which is in the lower half of the drum.

13. Method according to claim 10, wherein the step (a) of wetting the covering (103) on the drum (102) with a cleaning liquid comprises supplying cleaning liquid through a nozzle (104) to the covering (103) at a position which is in the lower half of the drum.

14. Method according to any one of the preceding claims, wherein the drum (102) is rotated at a speed of from 60 to 120 rpm, and the roller (106) is passively rotated accordingly.

15. Use of a maintenance unit according to any one of claims 1 to 9 and/or a method according to any one of claims 10 to 14 for cleaning one or more print heads (101) from adhering ink which is fully or partly cured and/or fully or partly dried, in the automated manufacture of a contact lens, in particular a silicone hydrogel contact lens.

CLAIMS

1. A maintenance unit for one or more print heads (101), wherein the maintenance unit comprises:

a drum with a covering thereon;

a nozzle supplied by a pipe which is so arranged that the nozzle jets cleaning liquid onto the covering on the drum at a position which is in the lower half of the drum and the nozzle provides a cleaning liquid to the covering;

a roller which is so arranged that it presses against the covering on the drum to wring excessive cleaning liquid out of the covering:

wherein the nozzle and the roller are so arranged, that in the direction of movement of the drum, the roller is arranged between the nozzle and the one or more print heads.

2. Maintenance unit according to claim 1, wherein the roller is so arranged, that it presses against the covering on the drum at a position which is in the lower half of the drum.

3. Maintenance unit according to claim 1, wherein the roller is so arranged that it is pressing against the covering with a force sufficient to wring excessive cleaning liquid out of the covering, such that upon pressing the covering against the one or more print heads no droplets of cleaning liquid are formed on the surface plate of the one or more print heads and/or no cleaning liquid is pressed in the cavities of the one or more print heads.

4. Maintenance unit according to claim 1, wherein the roller is so arranged that it is pressing against the covering with a force sufficient to wring excessive cleaning liquid out of the covering, such that upon pressing the covering against the one or more print heads no droplets of cleaning liquid are formed on the surface plate of the one or more print heads and/or no cleaning liquid is pressed in the cavities of the one or more print heads.

5. Maintenance unit according to claim 1, wherein the roller is so arranged that it is pressing against the covering with a force sufficient to wring excessive cleaning liquid out of the covering, such that upon pressing the covering against the one or more print heads no droplets of cleaning liquid are formed on the surface plate of the one or more print heads and/or no cleaning liquid is pressed in the cavities of the one or more print heads.

6. Maintenance unit according to claim 1, wherein the cleaning liquid provided through the nozzle is water.

7. Maintenance unit according to claim 1, wherein the drum and/or the roller are made of metal or plastic material.

8. Maintenance unit according to claim 1, wherein the covering is made of a suture-less, lint free material selected from a group consisting of close-mesh woven synthetic tissue and foam.

9. Maintenance unit according to claim 1, wherein the covering is made of a suture-less, lint free material selected from a group consisting of close-mesh woven synthetic tissue and foam.

10. Maintenance unit according to claim 1, wherein the distance between the surfaces of the drum and the roller is corresponding to the depth the print head is caving into the covering.

11. Maintenance unit according to claim 1, wherein the covering is a suture-less, lint free foam, and

wherein, in operation of the maintenance unit, the covering behind the roller is a damp covering containing from 150 to 210 $\mu l/cm^3$ of cleaning liquid.

12. Maintenance unit according to claim 2, wherein the roller is so arranged that it is pressing against the covering with a force sufficient to wring excessive cleaning liquid out of the covering, such that upon pressing the covering against the one or more print heads no droplets of cleaning liquid are formed on the surface plate of the one or more print heads and/or no cleaning liquid is pressed in the cavities of the one or more print heads.

13. Maintenance unit according to claim 2, wherein the covering is made of a suture-less, lint free material selected from a group consisting of close-mesh woven synthetic tissue and foam.