CLAIMS

1. Apparatus for dispensing a liquid, in particular a saline solution, into one or more cavities (1) of one or more packaging shells for ophthalmic lenses, comprising:
a dispenser block (2),
a dispenser head (3) separate from the dispenser block (2), the dispenser head (3) being arranged spaced apart from the dispenser block (2), and one or more tubes (4) connecting the dispenser block (2) and the dispenser head (3),
wherein the dispenser block (2) comprises a reservoir (20) for the liquid to be dispensed, and one or more dosing pumps (21) for conveying the liquid from the reservoir (20) to the dispenser head (3),
and wherein the dispenser head (3) comprises one or more dispensing tips (30) arranged on the dispenser head (3), each of the one or more dispensing tips (30) being in fluid communication with the dispenser block (2) by a separate one of the one or more tubes (4), characterized in that the one or more dispensing tips (30) are detachably arranged on the dispenser head (3).

2. Apparatus according to claim 1, further comprising one or more tip connectors (31) which are fixedly arranged on the dispenser head (3), wherein each of the one or more dispensing tips (30) is detachably mounted to a corresponding one of the one or more tip connectors (31), and wherein the dispensing tips (30) and the tip connectors (31) have fluid fittings forming a leakage-free connection between the respective dispenser tip (30) and the corresponding tip connector (31) when being connected with one another.

3. Apparatus according to claim 2, wherein the one or more tip connectors (31) are fixedly arranged on a connector rail (33) arranged on the dispenser head (3).

4. Apparatus according to any one of claims 1 to 3, wherein the one or more dosing pumps of the dispenser block (2) are precision dosing pumps (21), in particular micro annular gear pumps.

5. Apparatus according to any one of claims 1 to 4, further comprising a storage container pump (5), in particular a peristaltic pump, for conveying the liquid from a storage container (6) to the reservoir (20).

6. Apparatus according to any one of claims 1 to 5, wherein the reservoir (20) is sealed against leakage of liquid, and wherein the reservoir (20) comprises an pressure compensation pipe (22) extending from the interior of the reservoir (20) to the ambient environment for pressure compensation in the interior of the reservoir (20), the pressure compensation pipe (22) comprising a sterile filter (23) arranged therein for avoiding contamination of the liquid in the reservoir (20) with foreign organic or inorganic matter by air passing through the pressure compensation pipe (22) into the reservoir (20).

7. Apparatus according to any one of claims 1 to 6, wherein the dispenser block (2) comprises a first liquid level sensor (24) for determining an operational liquid level (26) in the reservoir (20).

8. Apparatus according to claim 7, wherein the dispenser block (2) further comprises a second liquid level sensor (25) for determining a maximum liquid level in the reservoir (20) to prevent overflow of the reservoir (20).

9. Apparatus according to claim 8, further comprising a frame (7), with the first liquid level sensor (24) and the second liquid level sensor (25) being fixedly mounted to the frame (7), particularly outside of the reservoir (20).

10. Apparatus according to any one of claims 7 to 9, wherein each of the one or more dispensing tips (30) has a dispensing opening (34) at the lower end of the dispensing tip, with the dispensing opening (34) being arranged at the same level as the predetermined operation liquid level (26) in the reservoir (20) determined by the first liquid level sensor (24).

11. Apparatus according to any one of claims 1 to 10, further comprising a reservoir inlet pipe (28) connected to a storage container (6) and to the reservoir (20), and further comprising a particle filter (27) arranged in the reservoir inlet pipe (28) to

prevent particles from entering the reservoir (20) when the liquid is transported from the storage container (6) to the reservoir (20).

12. Apparatus according to claim 11, further comprising a bubble sensor (29) arranged at or in the reservoir inlet pipe (28) for determining when the storage container (6) is getting empty.

13. Apparatus according to any one of claims 10 to 12, wherein each of the one or more dosing pumps (21) comprises a controller configured to dispense a predetermined amount of liquid through the dispensing opening (34) of the respective dispensing tip (30) into the cavity (1) of the packaging shell, and further configured to thereafter retract the liquid from the dispensing opening (34) in the respective dispensing tip (30) to a predetermined level above the respective dispensing opening (34) to avoid unintentional spilling of liquid from the respective dispensing tip (30).

14. Packaging line for producing primary ophthalmic lens packages comprising a packaging shell containing in a cavity (1) thereof an ophthalmic lens immersed in a storage liquid, and a cover foil sealed to the packaging shell around the cavity (1), wherein the packaging line comprises a transport path for the packaging shells along which a plurality of packaging stations are arranged, a first packaging station for placing the ophthalmic lens into the cavity (1) of the packaging shell, a second packaging station in which the storage liquid is dosed into the cavity (1) of the packaging shell, and a third station in which the cover foil is placed onto the packaging shell and sealed to the packaging shell around the cavity (1), wherein the second packaging station comprises an apparatus according to any one of the preceding claims, with the separate dispenser head (3) having the one or more dispensing tips (30) attached thereto being arranged above the transport path while the dispensing block (2) is arranged laterally adjacent to the transport path.