

Claims

1. A method for regulating the operation of a milk pump by applying a vacuum by means of a vacuum source operatively coupled with a control for controlling the operation of the vacuum source, wherein the control receives a signal indicative of a volume flow (V) of milk and adjusts at least one of the following operational parameters of the vacuum source: vacuum strength, cycle frequency or shape of vacuum profile over time.
2. The method of claim 1, wherein the operational parameters are adjusted after commencement of an expression phase (E, G).
3. The method of claim 1 or 2, wherein the signal is indicative of a quantitative volume flow (V).
4. The method of any of the preceding claims, wherein at least one of the operational parameters of the vacuum source, preferably all of the operational parameters, are set on default (D) if the signal indicative of a volume flow (V) of milk is between a low flow threshold and a high flow threshold.
5. The method of claim 4, wherein the at least one of the operational parameters of the vacuum source is intensified (I), if the signal indicative of the volume flow (V) of milk is above the high flow threshold.
6. The method of claim 4 or 5, wherein the at least one of the operational parameters of the vacuum source is decreased (DE), if the signal indicative of the volume flow (V) of milk is below the low flow threshold.
7. The method of claim 6, wherein the at least one of the operational parameters of the vacuum source applied during stimulation (S) is selected in the expression phase (E; G), if the signal indicative of the volume flow (V) of milk is below the low flow threshold.
8. The method of any of the preceding claims, wherein the at least one of the operational parameters of the vacuum source is adjusted if the value of the change of the volume flow (V) over time (dV/dt) approaches a zero value.
9. The method of claim 8, wherein the at least one of the operational parameters of the vacuum source is intensified if a positive value of the change of the volume flow (V) over time (dV/dt) approaches a zero value.

10. The method of claim 8, wherein the at least one of the operational parameters of the vacuum source is decreased if a negative value of the change of the volume flow (V) over time (dV/dt) approaches a zero value.
11. The method to any of the proceeding claims, wherein the value of the change of the volume flow (V) over time (dV/dt) is analyzed and that the at least one of the operational parameters of the vacuum source is intensified in case of a high value of the change of the volume flow (V) over time (dV/dt) and is decreased in case of a low value of the change of the volume flow (V) over time (dV/dt).
12. The method to any of the proceeding claims, wherein the volume flow (V) during at least one vacuum cycle (C1, C2, C3) is analyzed to adjust the at least one of the operational parameters of the vacuum source for at least one subsequent vacuum cycle (C2, C3).
13. The method to any of the proceeding claims, wherein the volume flow (V) during at least one vacuum cycle (C1, C2, C3) is analyzed as to the peak volume flow (V) and/or the total volume flow (V) during said at least one vacuum cycle (C1, C2, C3) and

that the at least one of the operational parameters of the vacuum source is intensified in at least one subsequent vacuum cycle (C2, C3) if the peak volume flow (PV1, PV2) and/or the total volume flow (V) increases between an earlier and a later vacuum cycle and

that the at least one of the operational parameters of the vacuum source is decreased in at least one subsequent vacuum cycle (C2, C3) if the peak volume flow (V) and/or the total volume flow (V) decreases between an earlier and a later vacuum cycle.
14. The method to any of the proceeding claims, wherein the at least one of the operational parameters is adjusted on the basis of data stored in a memory storing operational parameter history and/or volume flow (V) of milk history.
15. The method according to proceeding claim 12 or 13, wherein information indicative of volume flow (V) during the at least one vacuum cycle is obtained from a memory storing operational parameter history and/or volume flow (V) of milk history.