Claims

1. Sex toy as a vibrator for erogenous stimulation, including an electric motor drive (1, 3) configured to rotationally drive at least one eccentric inertial mass (2), wherein the inertial mass is configured to eccentrically rotate in a rotational frequency range, to cause the vibrator to vibrate in this frequency range and thus in its working oscillation frequency range, wherein the diameter of the motor drive (1, 3) is between 5 mm and 50 mm,

characterized in that

the vibrator is designed in such a way that

A.) the working oscillation frequency in a range of f = 10–40 Hz;

and/or

B.) the rotational speed constant of the electric motor drive at a minimum drive voltage of 1 volt is in the range of 600 rpm/volt to 2,400 rpm/volt, while the rotational speed constant at a

maximum drive voltage of 10 volts is in the range of 60 rpm/volt to 240 rpm/volt, wherein for all drive voltages in between, the particular product of the drive voltage and the rotational speed constant in the drive voltage range of 1 volt to 10 volts results in rotational speeds of 600 rpm to 2,400 rpm;

and/or

C.) the torque constant of the electric motor drive is in the range of aa.) 0.001 mNm/A or 0.01 mNm/A or 0.1 mNm/A or 1.0 mNm/A or 10 mNm/A to bb.) 10 mNm/A or 20 mNm/A or 30 mNm/A or 40 mNm/A or 50 mNm/A.

2. Sex toy according to claim 1, characterized in that the working oscillation frequency is in one of the following ranges: f = 15–40 Hz, 20–40 Hz, 25–40 Hz, 30–40 Hz, 35–40 Hz, 10–35 Hz, 10–30 Hz, 10–25 Hz, 10–20 Hz, 10–15 Hz, 15–35 Hz, 15–30 Hz, 15–25 Hz, 15–20 Hz, 20–35 Hz, 20–30 Hz, 20–25 Hz, 25 Hz–35 Hz,

25–30 Hz, 30–35 Hz.

3. Sex toy according to any one of claims 1 to 2, characterized in that the electric motor drive (3) is free of a reduction gear.

4. Sex toy according to any one of claims 1 to 3, characterized in that a first enclosure (5) is situated inside the sex toy in the region of the inertial mass.

5. Sex toy according to any one of claims 1 to 4, characterized in that the electric motor drive (1, 3) is enclosed.

6. Sex toy according to any one of claims 1 to 5, characterized in that a control and/or regulation electronics system (6) that controls and/or regulates the electric motor drive (1, 3) is provided.

7. Sex toy according to claim 6, characterized in that the control and/or regulation electronics system (6) has a second enclosure (5).

8. Sex toy according to any one of claims 1 to 7, characterized in that at least one vibration transmission element (8) is situated in or at a wall (10) of the sex toy, the natural resonance of the vibration transmission element corresponding to the working oscillation frequency or being in the working oscillation frequency range.

9. Sex toy according to claim 8, characterized in that the vibration transmission element (8) has a tongue-shaped design.

10. Sex toy according to any one of claims 1 to 9, characterized in that the drive voltage is in the range of 1–5 volts or 1–3 volts or 3–5 volts.

11. Sex toy according to any one of claims 6 to 10, characterized in that the control and/or regulation electronics system (6) is configured for operation via a full bridge.

12. Sex toy according to claim 11, characterized in that the full bridge is configured for operation via a DC–DC converter.

13. Sex toy according to any one of claims 1 to 12, characterized in that the control and/or regulation electronics system (6) is programmed in such a way that at least one vibration program is retrieved or retrievable during operation, from a temporal standpoint at least one oscillation phase and at least one non-oscillation phase being provided.

14. Sex toy according to claim 13, characterized in that the control and/or regulation electronics system (6) is configured in such a way that at least 0.5

seconds and at most 3 seconds are required for powering up to the desired rotational frequency of the eccentric inertial mass (2), from the non-oscillation phase into the oscillation phase.

15. Sex toy according to any one of claims 13 to 14, characterized in that at least 0.5 seconds and at most 3 seconds are required for powering down from the desired rotational frequency of the eccentric inertial mass (2), from the oscillation phase into the non-oscillation phase.

16. Sex toy according to any one of claims 1 to 15, characterized in that the control and/or regulation electronics system (6) is designed in such a way for it to ramp up the drive voltage above the actual drive voltage to ensure powering up of the eccentric inertial mass (2) to the desired working oscillation frequency in a time window of at least 0.5 seconds and at most 3 seconds, in order to subsequently reduce the working

voltage to the actual drive voltage.

17. Sex toy according to any one of claims 1 to 16, characterized in that the control and/or regulation electronics system (6) is designed in such a way for it to bring the electric motor drive 1, 3 to a complete stop, during operation of the electric motor drive 1, 3 in its working oscillation frequency, in at least 0.5 seconds and at most 3 seconds by feeding a reverse-polarized current.

18. Sex toy according to any one of claims 1 to 17, characterized in that the sex toy has a control portion (20), and a vibration portion (22) that is connected via an elastic intermediate portion (21).

19. Sex toy according to claim 18, characterized in that a vibration damping element is situated inside the control portion (20).

20. Sex toy according to any one of claims 1 to 19, characterized in that the electric motor drive (1, 3) is designed as a double motor that includes a shaft configured to rotationally drive at least the one inertial mass (2), as a double motor that includes two shafts, each of which is configured to drive at least the one inertial mass (2), or as a simple motor that includes two shafts, each of which is configured to drive at least the one inertial mass (2).

21. Sex toy according to any one of claims 1 to 20, characterized in that the power source (9) is a battery.

22. Sex toy according to claim 21, characterized in that the battery is a Li-ion battery.

23. Method for operating a sex toy as a vibrator for generating vibrations, characterized in that a sex toy according to any one of claims 1 to 22 is used.

24. Use of a sex toy as a vibrator for generating vibrations, characterized in that it is a sex toy according to any one of claims 1 to 22.