CLAIMS:

1. A lock unit comprising:

a rotary-linear motion transfer mechanism comprising:

a helical member having helical groove(s) with a predetermined number of start(s) engageable with cooperating helical groove(s) formed in a hollow interior of a blocking member, wherein the blocking member is connected to the rotary-linear motion transfer mechanism; and

at least two steel balls disposed in the helical grooves or a steel ball disposed in each helical groove with the at least two steel balls or each steel ball being located within a respective hole formed through a wall thickness of the hollow blocking member, such that the at least two steel balls are located substantially opposite each other, so that the at least two steel balls support the helical member in a self-centering manner and the at least two steel balls roll in a frictionless manner; and

an electric motor is connected to drive the rotary-linear motion transfer mechanism;

such that, when the electric motor is activated to rotate, the blocking member is translated linearly between a locked position and a release position, with the blocking member in the locked position for securing a lock constituting the lock unit, and the blocking member in the release position for releasing the lock.

2. The lock unit according to claim 1, wherein:

a wall thickness of the blocking member is less than a diameter of the steel ball.

3. The lock unit according to claim 1, wherein an exterior surface of the blocking member has a projection and the projection is received in an axial groove formed along a receiving hole to provide a linear constraint to the blocking member.

4. The lock unit according to any one of claims 1-3, wherein the electric motor is configured as an electric gear motor.

5. The lock unit according to any one of claims 1-4, further comprising an electronic control unit that is accessible from an exterior of the lock, and a motor PCB that is located near the electric motor and located inside the lock, so that a control line is located on the motor PCB and is inaccessible from an exterior of the lock to prevent tamper operation of the electric motor by an external power or signal.

6. The lock unit according to claim 5, wherein the electronic control unit provides wireless communication and allows electronic operation of the lock unit via an application in a smartphone.

7. The lock unit according to any one of claims 1-6 is configured as a quarter turn latch lock, a slide bolt padlock, a U shackle padlock or a snap padlock.

8. The lock unit according to claim 7 is detachably mounted on a latch bar of the quarter turn latch lock.

9. The lock unit according to claim 8, further comprising an alignment unit or an alignment member disposed adjacent to the blocking member to align the locking position with an engaging stopper member.

10. The lock unit according to claim 9, further comprising a protection clip attachable to the engaging stopper member to avoid damage or wear on the stopper member.

11. The lock unit according to claim 7, wherein the blocking member is engageable in an annular groove formed at a locking end of a slide bolt of the slide bolt padlock.

12. The lock unit according to claim 11, further comprising a push button and an accompanying switch for toggling the lock unit between a sleep mode and a wake-up mode.

13. The lock unit according to claim 7, wherein the blocking member is engageable in a groove formed at a locking end of a U-shackle of the shackle padlock.