

"ACTUATOR FOR GATES WITH GRIPPING AND LIFTING PARTS"

The present invention refers to an actuator for the movement of gates.

5 In the present state of the art, gate actuators are known comprising two opposite actuator cylinders axially aligned and oppositely protruding from a central body having an output pinion controlled in rotation by the cylinders themselves. These types of actuators are generally intended
10 to be buried in a specific recess located at a pivoting point of the gate to be moved, so that the pinion can be suitably connected to the gate. The actuator is fairly heavy and is difficult to transport manually, above all due to the elongated shape with heavy central body. Not only is
15 transport difficult but also the operation of dropping it down into or taking it out of the recess. The problem is not overcome however because, generally speaking, there is no desire to change the general structure of the actuators, by now well consolidated in the field.

20 The general object of the present invention is to overcome the above problems by supplying an actuator of the type mentioned above, that can be more easily operated manually, without the need to change its structure in any substantial way.

25 In view of such object, the idea has been to make, in accordance with the invention, a gate actuator comprising two opposite actuator cylinders axially aligned and oppositely protruding from a central body having an output pinion controlled by the cylinders, characterized in that

on each cylinder is fitted a handle part that surrounds the cylinder and which defines at the top a gripping and lifting handle.

To make the explanation of the innovative principles of the present invention and its advantages with respect to the state of the art clearer, a description will be given below, with the aid of the attached drawings, of a possible exemplary embodiment that applies such principles. In the drawings:

- 10 - figure 1 represents a schematic perspective view of an actuator according to the invention;
- figure 2 represents a front view of a part of the handle of the actuator of figure 1;
- figure 3 represents a side view of the handle part of figure 2.

With reference to the illustrations, figure 1 shows a hydraulic actuator for gates, generically indicated by 10, which comprises two opposite actuator cylinders 11, 12 that are axially aligned and oppositely protruding from a central body 13. From the central body 13 protrudes, at the top, an output pinion 14 controlled in rotation in two directions by means of the hydraulic cylinders, according to a mechanism not further shown or described here, being well known and easily imaginable by the expert technician.

25 The actuator is in general meant to be buried in a recess to have the pinion suitably connected to the gate to be moved. On each cylinder 11 and 12 is fitted a respective handle part 15 that surrounds the cylinder and which defines, above, a gripping and lifting handle 16. The handle part

has a much smaller thickness than its extension across the cylinder.

As can be seen in figure 2, each handle part 15 advantageously has a generically rectangular shape with a first part 17 for coupling to the cylinder and a second part 18 above the first and which defines the handle 16.

The first part 17 is substantially ring-shaped to surround the respective cylinder, advantageously defining a central passage with generically circular edge to accommodate with little play the cylindrical body of the actuator cylinder. The first ring-shaped part has inner edge with radial cavities 19 for the through accommodation of cylinder fitting and interconnection rods 20. This creates a sturdy fastening and prevents the uncontrolled rotation of the handle around the cylinder axis. The handle part is also substantially ring-shaped so it can be firmly gripped with one hand.

The handle part is advantageously sliding along the body of the respective cylinder between the central body 13 and an opposite head area 21 of the respective cylinder. This allows easy adjustment of the centre distance between the handles.

Always advantageously, the handle part is made pressed of plastic material, with strengthening ribbing (as can also be seen in the figure 3) and this makes it possible to save material while ensuring the part is sturdy and suitable for the weight of the actuator.

At this point, it is clear how the preset objects have been achieved. The manual movement supports are integrated in

the design of the automatism, though they do not require changes to the general structure, and have an ergonomic shape which makes them integral with the automatism and at the same time favors a firm and fast manual grip. A balanced
5 two-hand grip is obtained at points suitably apart and with the heavy part arranged with centre of gravity at the grip areas. Furthermore, the possibility of having the handle parts sliding along the cylinders makes it possible to adapt their position from time to time to the build of the
10 person, always permitting a comfortable and safe grip. All this gives the invention considerable usefulness to favor and speed up the transport phase and the installation phase of the actuator. In fact, the automatism can be quickly moved in a fast and totally safe way with the aid of the
15 hands only.

Naturally, the above description of an embodiment applying the innovative principles of the present invention is shown by way of example only and must not therefore be deemed a limitation within the ambit of the patent right claimed
20 here. For example, other aesthetic or assembly solutions can be imagined without departing from the spirit of the solution presented and claimed herein. The power output can also be different from a rotating pinion.

CLAIMS

1. Actuator (10) for gates comprising two opposite actuator cylinders (11, 12) axially aligned and oppositely protruding
5 from a central body (13) having an output pinion (14) controlled by the cylinders, characterized in that on each cylinder (11, 12) a handle part (15) is fitted that surrounds the cylinder and which defines, above, a gripping and lifting handle (16).
- 10 2. Actuator as in claim 1, characterized in that each handle part (15) has a first part (17) defining a central passage surrounding the cylinder and a second part (18) above the first and which defines the handle.
3. Actuator as in claim 2, characterized in that the first
15 part has an inner edge of the central passage for the cylinder having cavities (19) for the through accommodation of cylinder fitting rods (20).
4. Actuator as in claim 3, characterized in that the said inner edge forms a substantially circular passage.
- 20 5. Actuator as in claim 1, characterized in that each handle part (15) has a generically rectangular shape.
6. Actuator as in claim 1, characterized in that the handle part is sliding along the body of the respective cylinder between the central body and an opposite cylinder
25 head area.
7. Actuator as in claim 1, characterized in that the handle part is made pressed of plastic material.
8. Actuator as in claim 6, characterized in that the handle part has strengthening ribbing.