

CLAIMS

1. A self-propelled module (10) for oversize loads, characterized in that it comprises:

- two ground movement assemblies (11, 12) with oil-pressure controlled
5 actuation,
- a transverse rocker (13) arranged between said movement assemblies (11, 12), which are coupled thereto independently,
- oil-pressure controlled suspension means (14, 15), arranged on
corresponding oscillating supports (16, 17) coupled to said transverse rocker
10 (13),
- a load-bearing frame (18), supported by said oil-pressure controlled
suspension means (14, 15), comprising an oil-pressure controlled circuit
adapted to serve said ground movement assemblies (11, 12) and said
suspension means (14, 15),
- 15 – a rotary distribution unit (19), having a vertical axis (X), mounted on said
load-bearing frame (18) for supplying the ground movement assemblies (11,
12) and the oil-pressure controlled suspension means (14, 15), a first part
(20) of said rotary distribution unit (19) being fixed to said load-bearing
frame (18), a second part (21) being free to rotate about the vertical axis (X)
20 with respect to said first part (20),
- a resting bed (22), which is supported by a center bearing (23) that is
coaxial to said rotary distribution unit (19),
- below said resting bed (22) there being means for the relative rotation,
about said vertical axis (X), of said resting surface (22) with respect to said
25 load-bearing frame (18).

2. The self-propelled module according to claim 1, characterized in that said ground movement assemblies (11, 12) are each constituted by a tracked shoe, which comprises a track (25) constituted by a chain of flat elements (26) for resting on the ground which are arranged side by side and
30 are mutually coupled by means of perforated longitudinal brackets (28) and

respective transverse pivots (29).

3. The self-propelled module according to claim 2, characterized in that one or more friction reduction devices, for example roller bearings (32), are mounted on said pivots (29) and are adapted to receive by resting
5 contact one or more gliding plates (33, 34, 35, 36) arranged so that each one glides on a row of roller bearings (32).

4. The self-propelled module according to one or more of the preceding claims, characterized in that said track (25) is moved by two opposite pinions (37, 38), which in turn are actuated by corresponding oil-
10 pressure controlled motors (41, 42) mounted on a gliding plate (33).

5. The self-propelled module according to one or more of the preceding claims, characterized in that said transverse rocker (13) comprises a central body (47) from which two opposite hubs (48, 49) extend which are intended for insertion in corresponding central coaxial holes (50) of the
15 gliding plates (33, 34, 35, 36).

6. The self-propelled module according to one or more of the preceding claims, characterized in that said oil-pressure controlled suspension means (14, 15) are constituted by two oil-pressure controlled cylinders (14, 15).

20 7. The self-propelled module according to one or more of the preceding claims, characterized in that said load-bearing frame (18) has an H-like plan shape that is formed by a central body (54) and by two opposite side walls (55, 56), said central body having a seat (51) for the fixing of the first part (20) of the rotary distribution unit (19), two opposite recesses (52,
25 53) being formed between the side walls, the body of the oil-pressure controlled cylinders (14, 15) being fixed therein.

8. The self-propelled module according to one or more of the preceding claims, characterized in that an oil-pressure controlled circuit adapted to serve said ground movement assemblies (11, 12) and said
30 suspension means (14, 15) is constituted by a series of connected holes

provided in the central body (54) and in the side walls (55, 56) of the load-bearing frame (18).

9. The self-propelled module according to one or more of the preceding claims, characterized in that the following ducts for connection to
5 the rotary distribution unit (19) are provided in said load-bearing frame (18):

- outgoing and return ducts (57, 58) for the oil toward the oil-pressure controlled cylinders (14, 15),
- a duct (59) for connection to a first motor (41) of the first movement
10 assembly (11),
- a duct (60) for connection to a second motor (42) of the first movement assembly (11),
- a duct (61) for connection to a first motor (41a) of the second movement assembly (12),
- 15 – a duct (62) for connection to a second motor (42a) of the second movement assembly (12).

10. The self-propelled module according to one or more of the preceding claims, characterized in that said first part (20) is constituted by a tubular body, with a flange (65) for fixing to the bottom of the seat (51) of
20 the load-bearing frame (18).

11. The self-propelled module according to one or more of the preceding claims, characterized in that said second part (19) has a cylindrical central body (66), which is contoured to arrange itself in the central hole of the first part (20), and a connection head (67) that is provided
25 with radial holes for connection to an external service hydraulic system of the module (10).

12. The self-propelled module according to one or more of the preceding claims, characterized in that between the first part (20) and the cylindrical central body (66) there are as many annular ducts (68, 69, 70, 71,
30 72, 73) as there are ducts formed on the load-bearing frame (18), each one

of said annular ducts (68, 69, 70, 71, 72, 73) being connected and interposed between:

- a corresponding upper duct, which is provided in the second part (21) and is connected to the external service hydraulic system of the module
5 (10),
- and a corresponding lower duct provided in the first part (20).

13. The self-propelled module according to one or more of the preceding claims, characterized in that said center bearing (23) is arranged so as to surround the first part (20) of the rotary distribution unit (19) and is
10 supported by said first part (20), said center bearing (23) being free to rotate with respect to the first part (20) by virtue of the interposition of a centering bearing with axial rollers (90), and resting on a bearing with radial rollers (91), a first lower annular element (92) of which is fixed to said first part (20) while the second upper annular element (93) is fixed to the center
15 bearing (23) that rests thereon.

14. The self-propelled module according to one or more of the preceding claims, characterized in that said resting bed (22) is fixed on the center bearing (23) by means of a central contrast plate (94), which is provided centrally with a circular opening the edges (95) of which are fixed
20 to the center bearing (23).

15. The self-propelled module according to one or more of the preceding claims, characterized in that between the bed (22) and the contrast plate (94) there is an interspace (97) that is adapted to allow the placement therein of the connection head (67) of the rotary distribution unit (19) and
25 the passage of the tubes for connection to the external hydraulic service system.

16. The self-propelled module according to one or more of the preceding claims, characterized in that said means (24) for relative rotation, with respect to said vertical axis (X), of said resting bed (22) with respect to
30 said load-bearing frame (18) comprise a steering ring (98) with a rotation

axis that coincides with the axis (X), fixed to the load-bearing frame (18) and extended so as to lie above the movement units (11, 12), said steering ring (98) being turned by means of a gearmotor (99), which is actuated by an electric motor (100), by interposition of an intermediate gear (101)
5 mounted on a floating assembly (102), for tensioning, the rotation being transmitted from the gearmotor (99) to the intermediate gear (101) by means of a first chain (103), the rotation being transmitted from the intermediate gear (101) to the steering ring (98) by means of a second chain (104) that is arranged to pass also in the floating tensioning assembly (102).