Claims

1. A rotary table (1), comprising a stationary housing (2) and an indexing plate (3) for accommodating a workpiece, which indexing plate (3) is mounted rotatably about a central rotational axis (Z) relative to the stationary housing (2), wherein at least one clamping brake (4), which can be actuated from a clamping position into a non-clamping position, is formed between the stationary housing (2) and the rotatably mounted indexing plate (3), and wherein the clamping brake (4) comprises a spring element (5) for actuating a brake pad (7) as well as a means (6) for applying an adjustable force onto the spring element (5), wherein the means (6) can exert at least one force directly or indirectly onto the brake pad (7), which force is controllable, more particularly is adjustable in its magnitude, in the direction of the spring force of the spring element (5), wherein the braking forces of the brake pad (7) act directly on the indexing plate (3).

2. The rotary table (1) according to Claim 1, wherein said means (6) can also exert a force on the brake pad (7), which force can be controlled to act against the spring force of the spring element (5).

3. The rotary table (1) according to Claims 1 and 2, characterized in that the clamping brake (4) has a brake disc (8) and a brake spring (9), wherein the brake spring (9) represents the spring element (5).

4. The rotary table (1) according to Claim 3, characterized in that the brake spring (9) is installed in the clamping brake (4) under preload, such that a spring force (F) presses the brake pad (7) against the brake disc (8) and the clamping brake (4) is in the clamping position.

5. The rotary table (1) according to Claims 1 to 4, characterized in that a hydraulically or pneumatically generated force of the means (6) counteracting the spring force (F) of the spring element (5), is activated, and in that said activated force is applied to the brake pad (7) for displacing the clamping brake (4) from the clamping position to the non-clamping position.

6. The rotary table (1) according to any one of Claims 1 to 5, characterized in that a piston (6) presses the brake pad (7) against a second spring element (11) by

means of the spring element (5), and in that the second spring element (11) presses the brake disc (8) against the housing (2).

7. The rotary table (1) according to Claims 1 to 5, characterized in that a hydraulically or pneumatically generated force, is applied to the brake pad (7) in the direction of the spring force (F) for completely blocking a rotational movement of the indexing plate (3).

8. The rotary table (1) according to Claims 1 to 6, characterized in that the spring force as well as the braking forces and the counteracting forces act parallel to the central rotational axis (Z).

9. The rotary table (1) according to Claims 5 or 7, characterized in that fluid-conducting lines (10) for the hydraulics or the pneumatics are disposed in the stationary housing (2) and the indexing plate (3) for activating the spring force of the means (6).

10. The rotary table (1) according to Claims 1 to 8, characterized in that the force of the means (6) acts directly on or at the spring element (5) for reducing or releasing the braking force.

11. The rotary table (1) according to Claims 1 to 9, characterized in that the spring element (5) blocks the indexing plate (3) when the means (6) are inactive or in case of failure of the effect of the means (6).

12. The rotary table (1) according to Claims 5, 7 or 9, characterized in that the failure of the effect of the means (6) is a state in which the pneumatics for generating the force of the means (6) is inactive.

13. The rotary table (1) according to Claims 1 to 10, characterized in that the failure of the effect of the means (6) is a state in which a control electronics for controlling the spring force of the means (6) is inactive.