

**Abstract**

The pneumatic structural component according to the invention comprises an essentially cylindrical airtight hollow body (1) with radius  $r_h$  and length  $L_h$  and two caps 5 (5), which is made from a flexible, but low-stretch, preferably textile material. The hollow body (1) on its side exposed to the loading it carries a pressure rod (2) of length  $L_h$ , which is secured against sideways buckling and at both its ends carries a node (3). At least one pair of 10 tension elements (4) is joined to the pressure rod (2) in the nodes (3). The tension elements (4) run screw-shaped and contra-rotating in a whole number of circuits around the hollow body (1) and intersect each other at positions (8), which lie on a surface line (7) opposite to the pressure rod 15 (2). The pressure rod (2), the surface line (7) and the longitudinal axis of the hollow body, referenced A define a plane E in which the engaging loads and forces lie.

(Fig. 1b)



\*162162\*



\*G00002\*