

Title (en)  
HYDRAULIC EXPANDING CHUCK

Title (de)  
HYDRAULIK-DEHNSPANNFUTTER

Title (fr)  
MANDRIN DE SERRAGE HYDRAULIQUE EXPANSIBLE

Publication  
**EP 3840902 A1 20210630 (DE)**

Application  
**EP 19758955 A 20190822**

Priority  
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Abstract (en)  
[origin: WO2020039034A1] The invention relates to a hydraulic expanding chuck for receiving and clamping a tool with a shank. The hydraulic expanding chuck has a main body (112), which on an axial side has a clamping portion (114) that extends along a longitudinal central axis (102) of the expanding chuck (100) and has a clamping part (118) which is located in a neck region (116) and in which are formed a central receiving opening (122) for receiving a tool shank and a chamber system to which a fluid pressure can be applied. The chamber system comprises at least one pressure chamber, which is separated from the receiving opening (122) in the radial direction by an expansion wall yielding elastically under the fluid pressure, and which can be supplied with fluid pressure by means of at least one axial pressure channel (362; 562) running from a piston clamping mechanism (120; 220) accommodated in a clamping region (213; 413) of the hydraulic expanding chuck. In order to improve the concentricity, at least in the region (213; 413) in which the piston clamping mechanism (120; 220; 320; 420; 520) is accommodated, the clamping portion is configured and/or machined in such a way that the recesses and cavities located in said region are positioned relative to one another and/or are distributed over the periphery such that deformations and/or distortions induced in the clamping region by a pressure buildup during clamping of the tool are superposed in such a way that the longitudinal central axis (2) of the neck region remains largely in alignment with the longitudinal central axis (2) of the expanding chuck.

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