

Title (en)
Piston-cylinder for welding gun

Title (de)
Schweisszangenzyylinder

Title (fr)
Piston-cylindre pour pince de soudage

Publication
EP 0914896 A3 19991215 (DE)

Application
EP 98119668 A 19981017

Priority
DE 19747298 A 19971025

Abstract (en)
[origin: EP0914896A2] A double-acting piston/cylinder unit, provided with three pressure chambers for respectively performing a hollow piston advance stroke, a work piston work stroke and a piston return stroke, has an additional pressure chamber which performs the work piston return stroke and which is at least partially located between the hollow piston and the work piston. A double-acting piston/cylinder unit is equipped with a first pressure chamber (7) which is located between a hollow advance stroke piston (3) and a cylinder head (6) and which performs the hollow piston advance stroke, a second pressure chamber (8) which is located between the hollow advance stroke piston (3) and a work piston (5) and which performs the work piston work stroke and a third return stroke pressure chamber (11) which is located between the hollow advance stroke piston and work piston assembly (9) and a cylinder base (10) and which encloses the piston rod (4). The novelty comprises the provision of a fourth pressure chamber (12) which produces the return stroke of the work piston (5) and which is at least partially located between the hollow advance stroke piston (3) and the work piston (5).

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B23K 11/31

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F15B 11/036 (2006.01); **F15B 15/20** (2006.01)

CPC (source: EP)
F15B 11/036 (2013.01); **F15B 15/204** (2013.01); **F15B 2211/7055** (2013.01)

Citation (search report)
• [XY] WO 9217311 A1 19921015 - SEMPRESS B V MASCHF [NL]
• [DY] EP 0715925 A1 19960612 - NIMAK AUTOMATISIERTE SCHWEISST [DE]
• [PX] US 5789719 A 19980804 - PARY JAMES [US], et al

Cited by
EP1239166A1; FR2865950A1; EP1286814A4; CN113389767A; EP2829479A1; WO2005084871A1; WO2006130120A1

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