

Title (en)  
CONTROL DEVICE FOR AN INTERNAL COMBUSTION ENGINE

Title (de)  
REGELVORRICHTUNG FÜR EINE VERBRENNUNGSKRAFTMASCHINE

Title (fr)  
DISPOSITIF DE COMMANDE POUR UN MOTEUR À COMBUSTION INTERNE

Publication  
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Application  
**EP 17793661 A 20171103**

Priority

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Abstract (en)  
[origin: WO2018087004A1] Control devices for internal combustion engines are known with an intake duct (12), an exhaust gas recirculation duct (16) which opens into the intake duct (12), a housing (10), in which the intake duct (12) and at least one opening (14) of the exhaust gas recirculation duct (16) are configured, a shaft (36) which serves as a rotational axis (38) and is arranged in the housing (10) upstream of the opening (14) of the exhaust gas recirculation duct (16) with regard to the air flow and outside the throughflow cross section of a first duct section (19) of the intake duct (12), a control body (42) which is fastened eccentrically to the shaft (36), a first duct section (19), at the downstream end of which a first valve seat (50) is configured, against which the control body (42) bears in a first end position, and a second valve seat (72) on the second duct section, against which second valve seat (72) the control body (42) bears in a second end position. Said control devices have the disadvantage, however, of an increased pressure loss as a result of undesired eddy formation. In order to solve said problem, it is proposed according to the invention that the shape of a surface (54) of the control body (42), which surface (54) points towards the interior of the intake duct (12), in the second end position corresponds in a cross section perpendicularly with respect to the centre axis (20) over an angle of at least 90° to an inner wall surface (56) of the first duct section (19), which inner wall surface (56) adjoins the control flap (42).

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