

ABSTRACT

An object is to increase the mechanical efficiency of an injection molding machine, decrease the inertia, and decrease the axial length. The injection molding machine comprises a cylinder member; an injection member disposed within the cylinder member such that the injection member can advance and retract; an injection motor (82); and a transmission shaft which is connected to the injection member such that the transmission shaft can rotate relative to the injection member. The transmission shaft has a rotation transmission portion, to which rotation of the injection motor (82) is transmitted, as well as a motion conversion portion for converting rotational motion to linear motion. The injection motor (82) and the transmission shaft are disposed on the same axis, and the transmission shaft is advanced and retracted inside the rotor (92) of the injection motor (82). In this case, since rotation of the injection motor (82) is transmitted directly to the transmission shaft without intervention of a speed reduction mechanism, a pulley, and the like, mechanical efficiency can be improved, and inertia can be decreased. Further, the time required for changeover from the injection stage to the pressure holding stage is shortened. Since the transmission shaft is advanced and retracted inside the rotor (92) of the injection motor (82), the injection molding machine can be reduced in axial length.

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