

ABSTRACT OF THE DISCLOSURE

A fluid-switchable flow rate control system that permits free changing of the full scale flow rate and
5 which can control a plurality of kinds of fluids with high precision.

The fluid-switchable flow rate control system controls the flow rate of fluid with the pressure P_1 on the upstream side of the orifice member held about
10 twice or more higher than the downstream pressure P_2 , the fluid-switchable flow rate control system comprising an orifice member 8 replaceable with another to provide a suitable orifice diameter according to the kind of fluid and the flow rate
15 range, a control valve 2 provided on the upstream side thereof, a pressure detector 6 provided between the control valve 2 and the orifice member 8, and a flow rate calculation circuit 14 where, from the pressure P_1 detected by the pressure detector, the flow rate Q_c is
20 calculated by the equation $Q_c = KP_1$ (K : constant), a flow rate-setting circuit 16 for outputting flow rate setting signal Q_e , a flow rate conversion circuit 18 for multiplying the calculated flow rate signal Q_c by the flow rate conversion rate k into switch-over
25 calculated flow rate signal Q_f ($Q_f = kQ_c$) to change

the full scale flow rate, and a calculation control circuit 20 to output the difference between the switch-over calculation flow rate signal Q_f and the flow rate setting signal Q_e as control signal Q_y to
5 the drive 4 of the control valve 2, thereby opening or closing the control valve to bring the control signal Q_y to zero, thus controlling the flow rate on the downstream side of the orifice member.