

FLOW CONTROL VALVE WITH EDDY CURRENT DAMPENING

ABSTRACT

5 A valve is provided having an inlet to receive a flowable particulate media and an outlet to
dispense the media. The valve has an inlet portion with a funnel and repelling magnets. A
shuttle sleeve extends from the inlet portion to allow a shuttle to slide along a central axis
between an opened and a closed position. The shuttle has shuttle magnets that are oriented to
have poles that face the repelling magnets to create a biasing force that biases the shuttle
towards the closed position. When the shuttle moves, the shuttle magnets create eddy currents
10 in a tube. The closed position is defined by a sealing edge of the shuttle contacting a sealing
surface on a flow director. A capacitive sensor surrounds the flow director to measure the
amount of media that is dispensed by the valve.

Fig. 1