

SWIVEL - VENTURI VENT

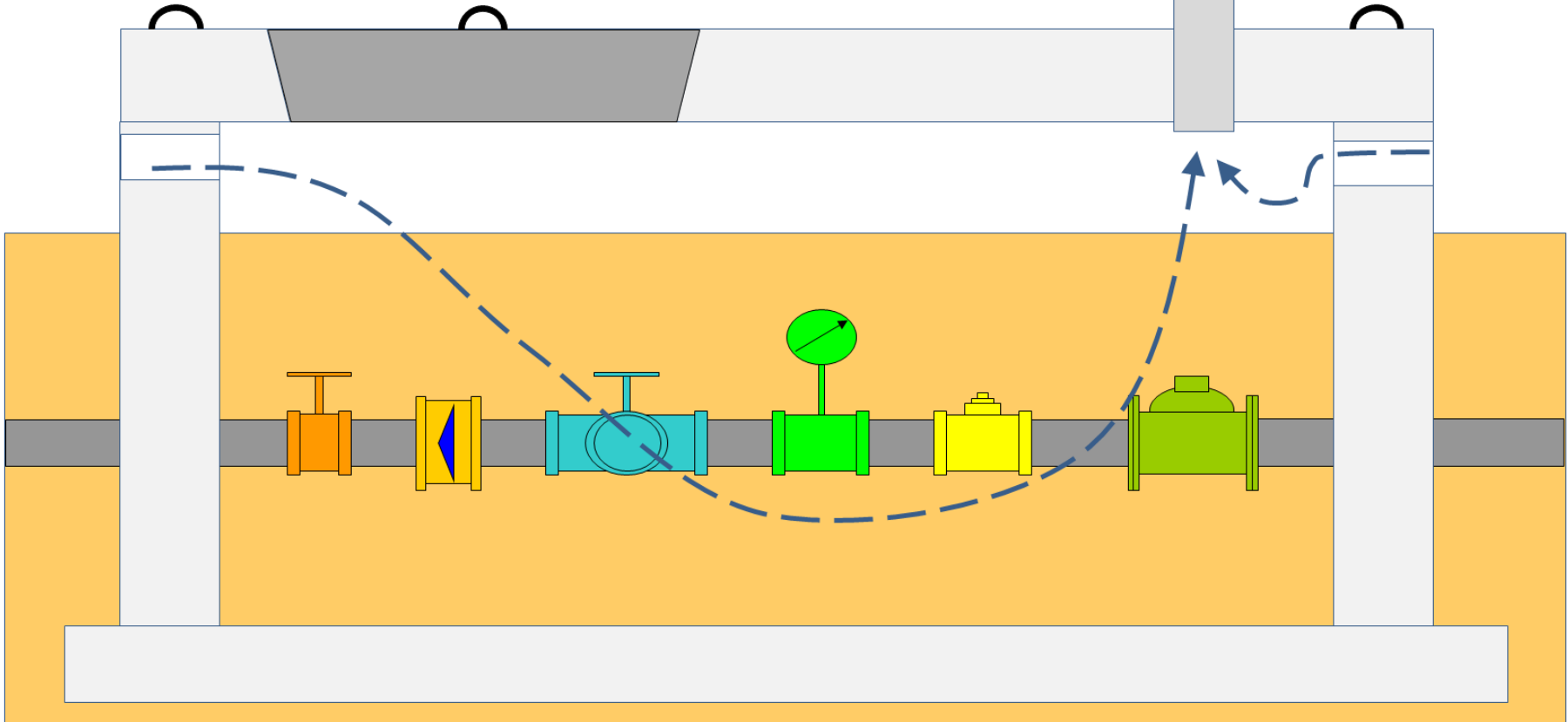
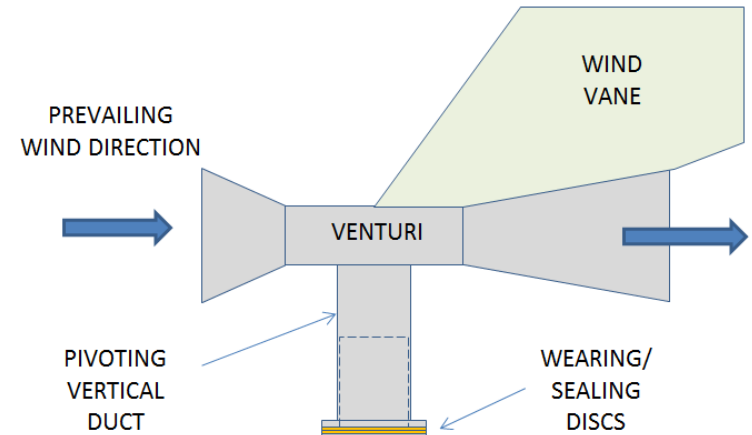
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Valve chambers are prone to a build up of moisture inside, firstly from water migrating through the walls and floor, and secondly from leaking valves. This leads to accelerated corrosion of valves and pipes. Moreover the T shaped ventilation pipes that are commonly installed in an attempt to lower the relative humidity inside the chambers are not effective ventilators, since they rely almost entirely on diffusion - an inefficient process.

A substantially more effective solution is to create dry air streams through the valve-chamber by making use of the venturi principle, whereby wind passing through the narrow horizontal duct is at a relatively high velocity and hence low pressure, and this 'sucks' the moist air out of the valve-chamber through a vertical duct. The moist air is replaced with relatively dry air from outside, and this air mingles with the moist air, thus lowering its RH.

Two innovations ensure that the venturi is always aligned with the prevailing wind direction. The first is a wind-vane fixed on top of the venturi as indicated, and the second is a vertical duct that can swivel relative to the valve chamber. The lower section of the duct is fixed to the chamber and moreover goes some distance up into the upper 'pivoting vertical duct', to prevent the latter from toppling. Furthermore use is made of wearing/sealing discs where the upper duct bears on the lower duct, to ensure that frictional effects offer minimal resistance to rotation as the wind changes direction.



See also www.damsforafrica.com for an alternative way of venting a valve-chamber, as well as our range of anti-theft/vandalism products, which are variously suitable for securing pump-houses, sub-stations, valve-chambers, control panels, boreholes, etc.