

where: V_g is the volume of the gaseous (liquid) reaction mixture passing through the catalyst per unit time, m^3/s ;

V_c is catalyst volume (contact mass), m^3 ; t_c is contact time in seconds, s.

Volumetric velocity (W) is the volume of the reaction mixture passing through a unit volume of catalyst per unit time, $\text{m}^3/\text{m}^3\text{-h}$ or h^{-1} . It should be borne in mind that the second notation is very arbitrary, since volume units differ.