Two-dimensional intensity modulation has been performed with physical wedges (beam attenuators); however, with new technology, dose profiles can be changed to any arbitrary angle with software implementation. Such wedges are called Dynamic, Soft, or Virtual and becoming popular for modern treatments. Physical wedges produce beam hardening and are prone to errors and omission of wedge factors causing catastrophic dosimetric problems. Unlike other manufacturers, Siemens creates Virtual Wedge (VW) such that Virtual Wedge Factor (VWF) is 1.0 for all energies, field sizes, and all wedges. Such implementation provides additional safety net for the misadministrations of radiation treatment. This unique feature (VWF=1.0) of VW was investigated for a Siemens MD2 unit. Measurements were performed using an ion chamber in air and at various depths in phantom for VWFs. The results indeed show that VWF is relatively independent of beam energy, depth, scattering condition (air versus phantom) and field sizes. Slight variations (±2%) in VWF taken over a period of time were shown to be directly related to the machine calibrations at low and high dose rates (MU/min) required to create VWs. This was confirmed by changing the machine calibration to ±2% in low and high dose rate (maximum 4%) for each VW measurement. It is concluded that VWF can be maintained to within ±1% over beam energies, clinical depths (≤20 cm), field sizes and all possible wedge angles, if cGy/MU calibration of machine in all dose rates is maintained within the national standard.