In this paper a generic entrained flow gasifier is modelled in Aspen Plus using different designs e.g. wet/dry feed as well as wet and dry quench. The models are verified with the corresponding data from real existing plants or reference data from the literature. All of them are found to reproduce the raw gas composition as well as synthesis gas yield with acceptable deviation. The comparison of the selected designs revealed the poor performance of the wet feed compared to the dry design. The corresponding cold gas efficiency of 72.1