

## Estimation of pressure drop in gasket plate heat exchangers

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**Abstract.** In this paper, we present comparatively different methods of pressure drop calculation in the gasket plate heat exchangers (PHEs), using correlations recommended in literature on industrial data collected from a vegetable oil refinery. The goal of this study was to compare the results obtained with these correlations, in order to choose one or two for practical purpose of pumping power calculations. We concluded that pressure drop values calculated with Mulley relationship and Buonopane & Troupe correlation were close and also Bond's equation gave results pretty close to these but the pressure drop is slightly underestimated. Kumar correlation gave results far from all the others and its application will lead to oversize. In conclusion, for further calculations we will chose either the Mulley relationship or the Buonopane & Troupe correlation.

**Keywords:** pressure drop, edible oils, gasket plate heat exchangers.

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