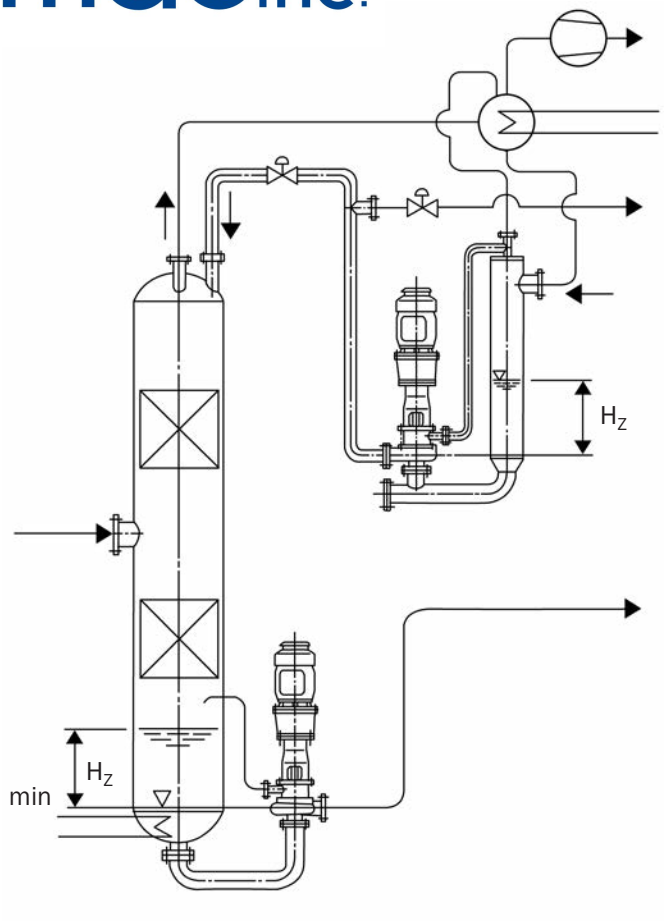

BUNGARTZ

COLUMNS

Head and bottom product.

There is always a boiling condition above the supply-end liquid level in rectification columns. As a rule the pump's intake pressure is a vacuum.

Conventional pumps are therefore located at atmospheric conditions, which require a necessary suction head of up to 10 m.

The self-regulating pump is equipped with a pressure balance to be fed to the vacuum of the plant (pressure balance line). As a result of this measure the pump has a NPSH value close to zero and can extract directly from the vacuum. The supply level (H_z) is self-adjusting without any level control depending on the pump delivery quantity and is always below 2 m at design performance. The exact value is specified in the quotation or can be taken from the pump characteristic curve. In the area of the supply level, the maximum speed must not exceed 0.15 m/s, as otherwise steam content is carried away as well.

For the quiet running of the pump, free from internal cavitation, it is important that the pressure balance line is always connected to the gas area of the intake vessel and is not flooded during pump operation.

The pump is capable of emptying the plant completely down to $H_z = 0$. Thus the vertical position of the pump installation determines the minimum liquid level in the column.