

Single Shaft Vertical Pump with Tail-Piece vs Multi Shaft Vertical Pump

Advantages of a single shaft vertical pump with tail-piece over multishaft vertical pump:

Vertical pumps are often required to be installed in applications where the liquids need to be pumped out from great depths. One obvious solution is to have a multi-shaft long pump wherein the impeller and casing are submerged to the bottom most level of the liquid. However, this type of construction, although possible, has cost implications due to long shaft assemblies, and reliability may be hampered on a periodic basis. A simpler solution is to go for a single shaft pump with a tail-piece arrangement. The tail-piece acts as a suction pipe and can empty the liquid to the bottom most level. The pump can be configured to stop working on emptying the tank and restart when the liquid level reaches the casing level again. In this configuration, there are inherent commercial and technical benefits during purchase and lifecycle of the pump.



Cantilever Single Shaft Pump	Parameter	Multi Shaft Pump
Not Required	Flushing	Required
High	Efficiency	Comparatively low
Possible	Dry running	Not Possible
Upto 2900 rpm (smaller pump for same duty)	Speed	Upto 1450 rpm (larger pumps for same duty)
Low	Vibrations	Comparatively high
Low	Wear & Tear	High
Easy	Handling	Difficult
Less	Weight	High
Less	Price	Comparatively High
Low	Spares Cost	High
Wide	Operating Range	Limited
High	Restart Level	Low

