

DLV series double-stage liquid ring vacuum pump



DLV series two stage liquid ring vacuum pump is our new design based on 2SK pumps and combines Germany double-stage pump design criteria. This series has two compression processes, with steady suction speed in high vacuum, or keeping the high vacuum in a wide range of suction speed. Its efficiency in high vacuum is 35%-40% higher than that of single stage pump, but with less energy consumption.

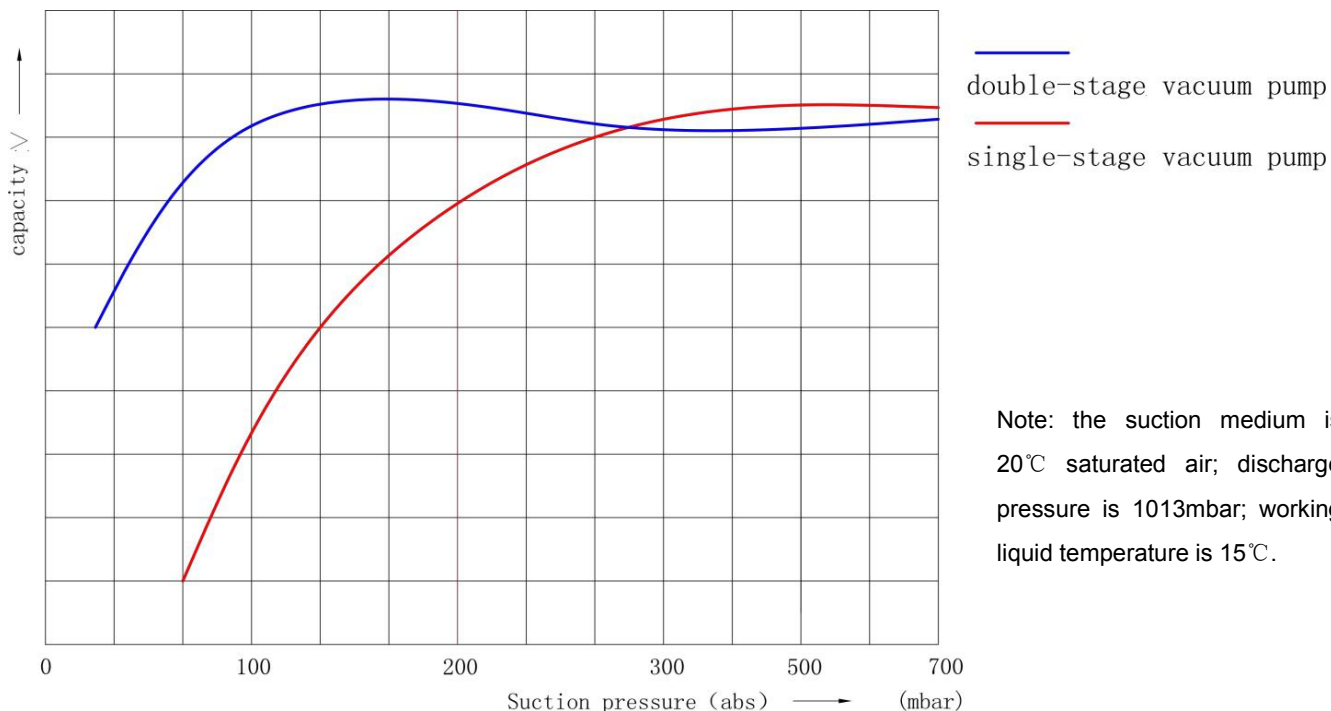
Product Features

- Wider range of suction pressure. Compared to other double stage pumps (suction pressure 50mbar-150mbarA), DLV pump works in 25mbar~1013mbar pressure, with less energy consumption, with 15%-20% lower than traditional ones.
- All kinds of models to fulfill various process requirements.
- Materials are optional to make the pump possible to work in various harsh environment, Such as carbon steel, stainless steel, dual-phase steel, titanium, etc .
- Scope of supply are optional, such as: pump head, pump with suction communicating pipe, separator and liquid pipes, pump aggregate with motor and base frame, complete set of closed cycle system with all auxiliary devices, the system with two or more stages when the inlet pressure is smaller than 33mbar (abs.).
- Single or double mechanical seal and several flush method.
- Precise casting, high standard accessories, imported bearing; high efficiency and energy saving.

Field of application

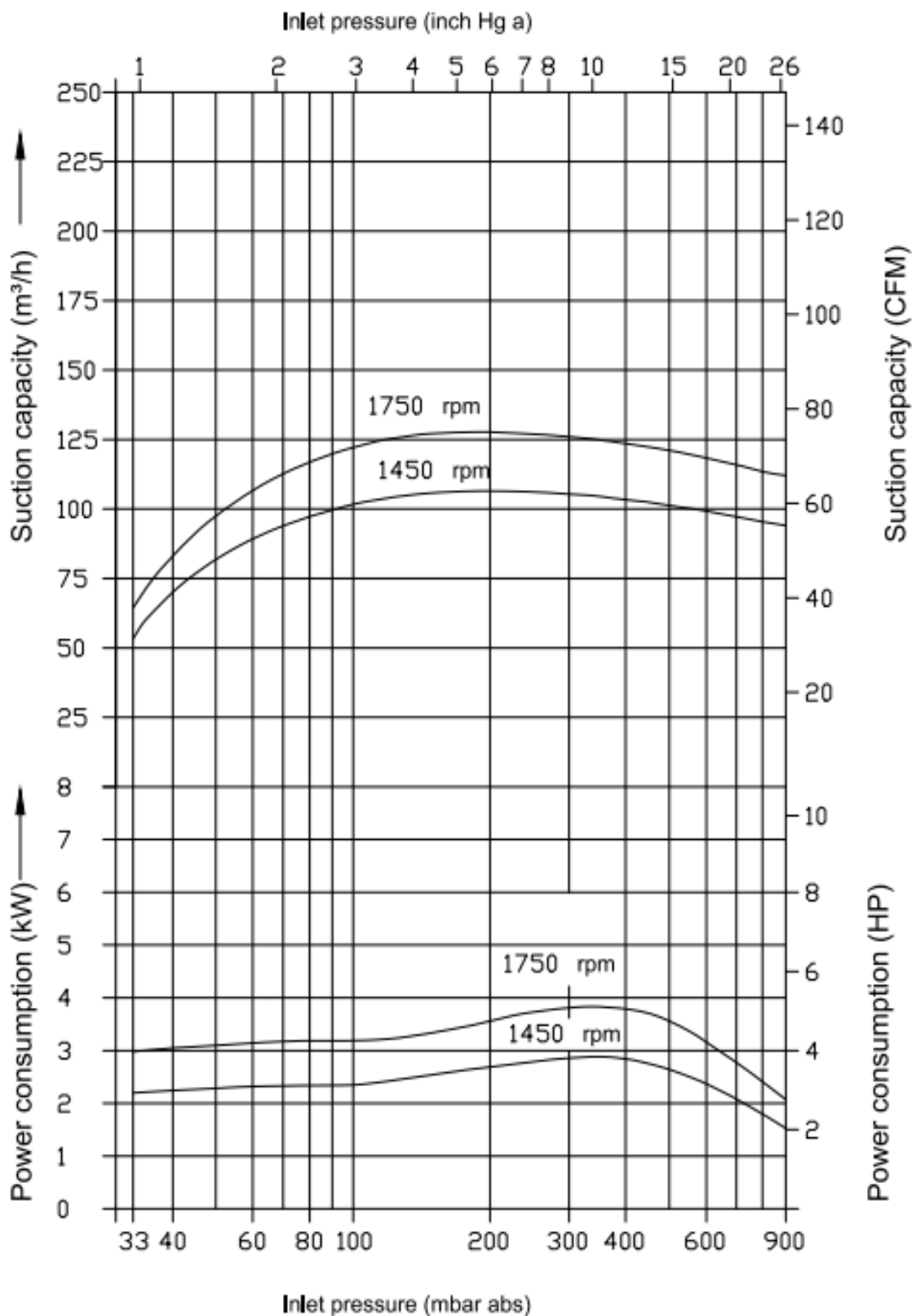
DLV series pumps are very suitable for the process of vacuum drying, evaporation, distillation, concentration, filtering, degassing in industry of food, pharmacy, chemical, power plant, paper making, textile, metallurgy etc.

Two-stage liquid ring pump compared



From the performance curve above we can see that, single stage pump is suitable to work in a condition which do not ask for high vacuum, and its capacity is large; however in relative high vacuum, its capacity declines obviously (it declines rapidly below 200mbar and below 100mbar it is seriously declined), under this condition, the pump efficiency is quite low but cost more energy. However for double stage pump, it has larger capacity in relative high vacuum, and in high vacuum its efficiency is 30%-40% higher than single stage ones and consume less energy. Therefore double stage pump is more suitable than the single one to work in the condition asking for high vacuum and large capacity at the same time.

The performance curve of DLV-110



Suction capacity and power consumption depending on inlet pressure

The characteristics are applicable for compression of 20°C (68°F) dry air from inlet pressure to atmospheric pressure (30 inch Hg a). Service liquid is water at 15°C (59°F).

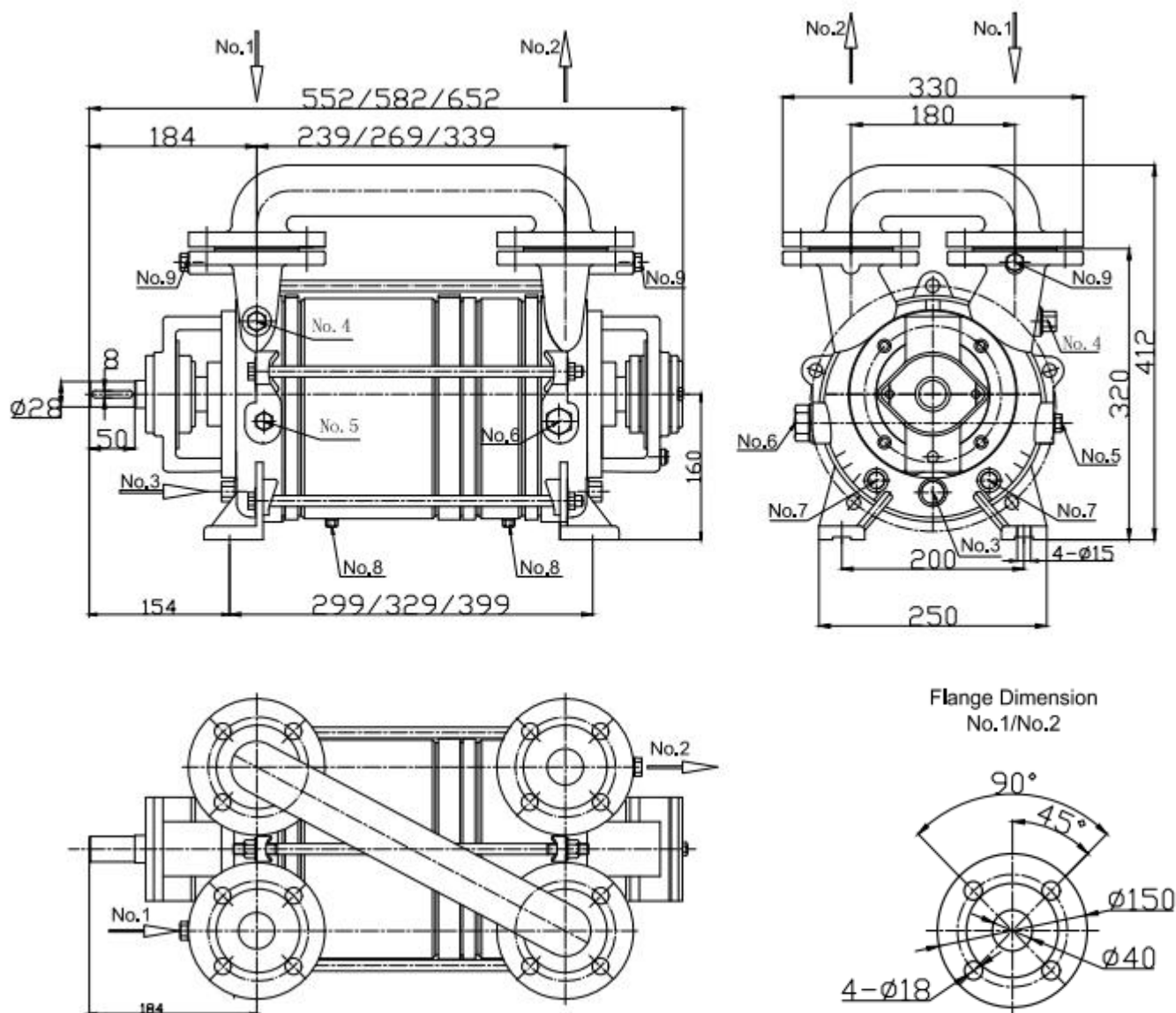
The tolerance of the suction capacity is -10% and of the power consumption +10%.

With different operating conditions performance characteristics change (e.g. differing gas operating liquid conditions, conveying of additional liquids and/or pumping of gas-steam mixtures).

Technical data

Model	Motor speed	Motor power		Max. suction capacity		Min. inlet pressure	
	r/min	kw	HP	m ³ /h	CFM	mbar	Inch Hg a
DLV-110	1450	3.0	4	110	65	33	1.0
	1750	4.0	5.5	132	80	33	1.0

Dimension drawing



Size chart

Position	N0.1	N0.2	N0.3	N0.4	N0.5	N0.6	N0.7	N0.8	N0.9
Size	DN40	DN40	G1/2 "	G1/2 "	G1/4 "	G3/4 "	G1/4 "	G1/4 "	G1/4 "

Application	Inlet	Outlet	Service Liquid	Relief valve spare connector	Auto-drain valve spare connector	Spare connector	Drain plugs	Drain plugs	Spare connector
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Note: All dimensions in this brochure are for reference only, final dimensions are subject to our specification.