

浦川流体设备（无锡）

PUTRONS FLUID EQUIPMENT (WUXI)



VL/VLH 节能船用立式/卧式管道及端吸泵

VL/VLH – Energy-saving Marine Vertical/Horizontal Pipeline/End Suction Pump



PUTRONS VL Pump Designation 浦川 VL 系列名称定义

Example 示例

VL	40	-	180	/	A	11	- P
1	2		3		4	5	6

1: Pump Type

- VL: Vertical pipeline pump
- VLH: Horizontal end suction pump (parts are common with VL pump except for pump casing)

2: Discharge Nozzle Nominal Diameter (mm)

- Discharge nozzle dia. 40mm
- Note: Equal Inlet & outlet dia. for impeller dia. ≤330mm as std. design

3: Impeller Nominal Diameter (mm)

- Impeller nominal dia. 180mm

4: Material Code

Material Code	Pump casing and rear cover	Impeller	Shaft
A	Cast iron GG25	Aluminum bronze CC482K	Chrome steel 2Cr13
Q	Ductile GG40	Aluminum bronze CC482K	Chrome steel 2Cr13
D	Tin bronze (RG5)	Aluminum bronze CC482K	ASTM 329
G	Cast steel (WCB)	Aluminum bronze CC482K	Chrome steel 2Cr13
R	ASTM 304 (CF8)	ASTM 304 (CF8)	ASTM 329
S	ASTM 316 (CF8M)	ASTM 316 (CF8M)	ASTM 329
Z	Silicon brass (HSi80-3)	Silicon brass (HSi80-3)	ASTM 329
L	ASTM 316L	ASTM 316L	ASTM 329
N	Nickel aluminum bronze CC482K	Aluminum bronze CC482K	ASTM 329
F	SAF2507 (1.4410)	SAF2507 (1.4410)	ASTM 329
T	Tailor-made	Tailor-made	Tailor-made

5: Code of Pump Configuration

- 11: No bearing at pump end
- 12: Impeller rear slide bearing
- 13: Impeller rear anti-friction bearing
- 15: Impeller rear slide & anti-friction bearing

6: Code of Inlet & Outlet flange ratings

Note: Factory flange standard is P, which is to be supplied by default in case flange ratings are not mentioned in the order.



1: 泵形式代号

- VL: 立式管道泵
- VLH: 卧式端吸泵 (除泵壳外其它零件和VL泵通用)

2: 泵出口直径 (mm)

- 泵出口直径40毫米
- 注: 叶轮直径330毫米以下时, 进出口口径相同。除非特殊设计。

3: 叶轮名义直径 (mm)

- 叶轮名义直径180毫米

4: 泵主要零件材料代号

材料代号	泵体和后盖	叶轮	轴
A	铸铁GG25	铝青铜 CC482K	2Cr13
Q	球铁GG40	铝青铜 CC482K	2Cr13
D	锡青铜(RG5)	铝青铜 CC482K	ASTM 329
G	铸钢(WCB)	铝青铜 CC482K	2Cr13
R	ASTM 304 (CF8)	ASTM 304 (CF8)	ASTM 329
S	ASTM 316 (CF8M)	ASTM 316 (CF8M)	ASTM 329
Z	硅黄铜(HSi80-3)	硅黄铜(HSi80-3)	ASTM 329
L	ASTM 316L	ASTM 316L	ASTM 329
N	镍铝青铜 CC482K	铝青铜 CC482K	ASTM 329
F	SAF2507(1.4410)	SAF2507(1.4410)	ASTM 329
T	客户定制	客户定制	客户定制

5: 泵结构代号

- 11: 泵端无轴承
- 12: 叶轮后滑动轴承
- 13: 叶轮后球轴承
- 15: 叶轮后滑动轴承和球轴承

6: 泵进出口法兰标准代号

注: 厂家法兰默认标准是P。如果订单上法兰标准未作要求时, 按P供货。

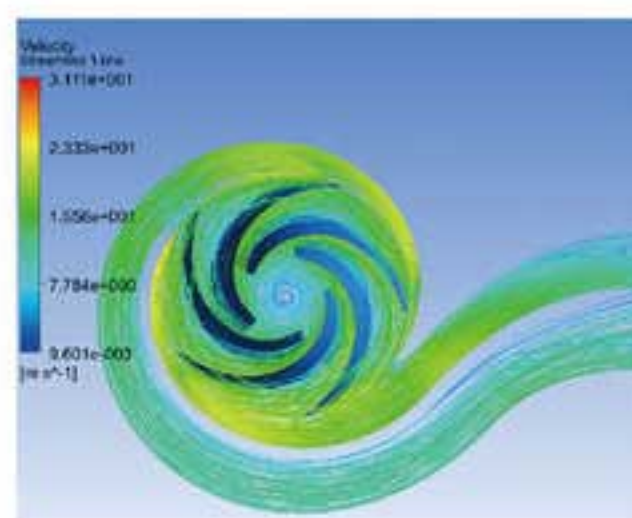
A	ANSI B16.5 150lb
N	ANSI B16.5 300lb
P	DIN2632 PN10
L	DIN2633 PN16
D	DIN2634 PN25
J	JIS 5k flange
S	JIS 10k flange



Typical application:

Suitable for a variety of marine applications, including seawater cooling systems, low temperature cooling systems, high temperature cooling systems, ballast water pumps and fire pumps.

1. Invention patent product. Patent number: ZL 201510051291.1;
2. High reliability:
 - Shorter pump height to significantly reduce vibration and noise;
 - Imported high-performance composite material for wear ring is optional to ensure the longest service life and lowest wear;
 - Durability and service life are highly improved through optimized structure and precision processing;
3. Footprint and weight reduced:
 - Re-optimization targeting marine service. Reducing the weight by up to 30% and reducing the product height by up to 20% compared to well-known international marine pumps;
4. High efficiency:
 - Energy-saving products by using optimized hydraulic model (high-order equation G2-A surface design method) to improve efficiency and cavitation performance; in conformance with MEI0.7 European energy-saving standards; efficiency is about 5% higher than well-known international marine pumps;
5. Easy to maintain:
 - Modular design; the main components of different structures (back cover, bracket, shaft, etc.) are interchangeable. Altering or upgrading the configuration only requires to replace the relevant parts module while keeping installation dimensions unchanged;
 - Mechanical seal and impeller can be replaced without disassembling the pump volute, motor or bracket. The maintenance time can be saved by about 50% compared with well-known international marine pumps;
6. Mechanical seal is standard configuration; double mechanical seal or packing seal is optional;
7. Pump can be upgraded to common self-priming pump or strong self-priming pump for cavitation-prone installations;
8. Double volute design greatly reduces the radial force of the pump and the weight of the pump casing;

**典型应用:**

适用于多种船舶应用场合, 包括海水冷却系统、低温冷却系统、高温冷却系统、压载水泵和消防泵。

- 1、发明专利产品 专利号: ZL 201510051291.1;
- 2、高可靠性:
 - 泵高度大幅降低, 振动及噪音显著减小;
 - 口环可采用进口高性能复合材料以确保最长的使用寿命和最低的磨损;
 - 通过优化的结构及精密加工, 显著改善耐用性及使用寿命;
- 3、减小占用空间及减轻重量:
 - 针对船用的特点进行了重新优化, 比知名国外船用泵重量减少最大达到30%, 产品高度最大降低约20%;
- 4、高效率:
 - 节能产品, 全新优化的水力模型(高阶方程G2 - A面设计方法), 提高了效率和汽蚀性能, 全部满足MEI0.7欧洲节能标准, 比知名国外船用泵效率提高约5%;
- 5、易维修维护:
 - 模块化设计, 不同结构的主要部件(后盖, 支架, 轴等)通用, 改变或升级配置只需要替换相应的零件模块, 外形安装尺寸不变;
 - 泵可在不拆卸泵体、电机和支架的情况下更换机封和叶轮, 维修和更换时间比知名国外船用泵厂产品节省约50%;
- 6、机械密封为标准配置; 可选配双机封或填料密封;
- 7、对于易汽蚀安装场所, 产品可升级为普通自吸泵或强自吸泵;
- 8、双蜗壳设计, 大大减小泵的径向力和泵壳的重量;

PUTRONS VL Family
浦川 VL 立式泵系列产品



VL - 180/D



VL - 215/D



VL - 265/A

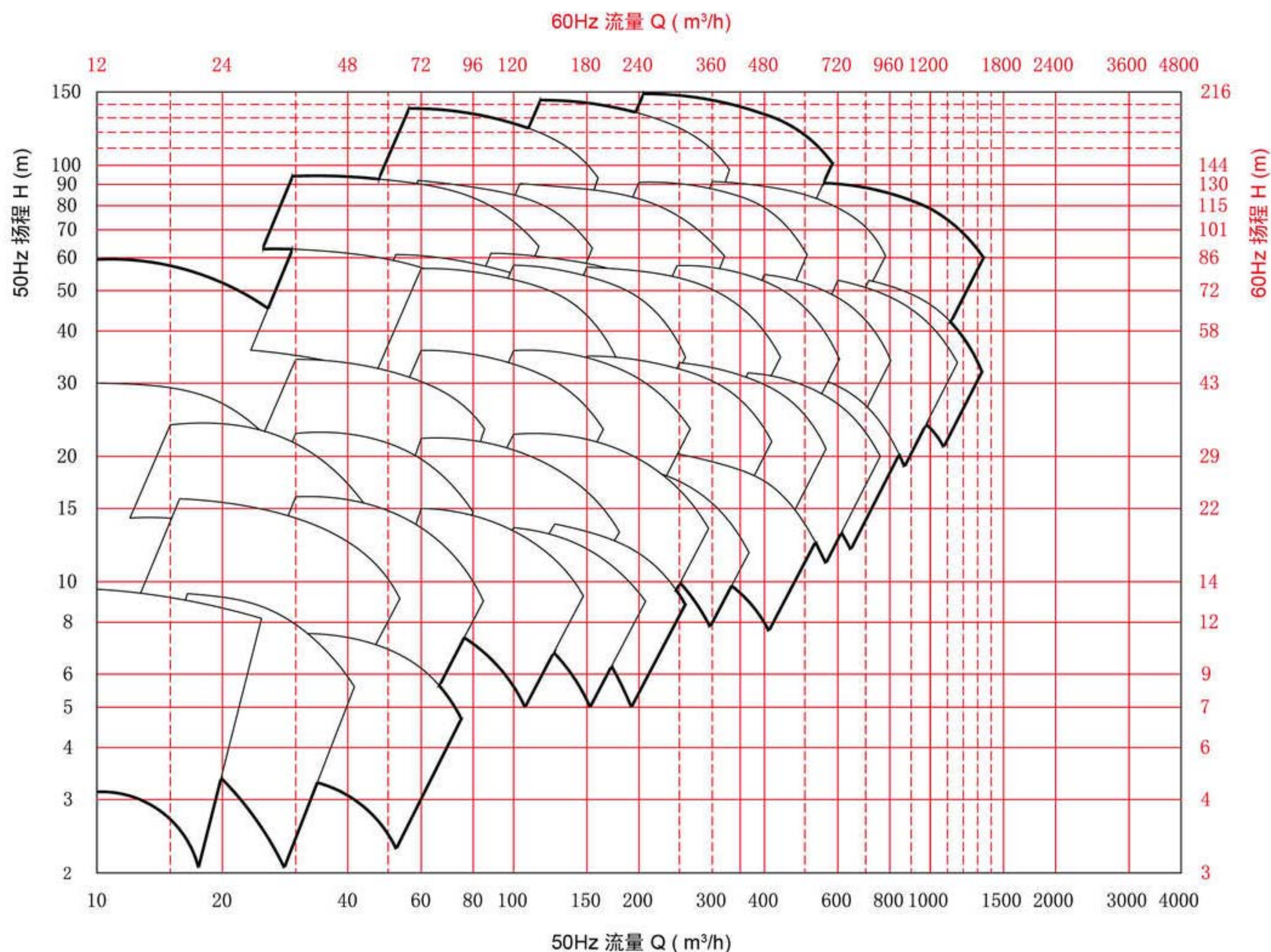


VL - 330/D



VL - 415/F

- For selection of pumps, please email psales@putrons.com or contact Putrons sales engineer.
 泵选型请电邮 psales@putrons.com 或直接联系浦川流体销售工程师。



Operating data

50 Hz	60 Hz
Head range: 5~150 m 15~500 feet	Head range: 5~220 m 15~720 feet
Flow rate range: 2~1500 m³/h 9~6600 USgpm	Flow rate range: 3~1800 m³/h 13~7900 USgpm
Medium temperature range: • With standard mechanical seal, max. medium temperature is up to 160 °C / 320 °F; • With special mechanical seal or configuration, max. medium temperature is up to 220 °C / 428 °F;	

操作数据

50 Hz	60 Hz
扬程范围: 5~150 m 15~500 feet	扬程范围: 5~220 m 15~720 feet
流量范围: 2~1500 m³/h 9~6600 USgpm	流量范围: 3~1800 m³/h 13~7900 USgpm
介质温度范围: • 采用标准机械轴封, 最高温度可达 160 °C / 320 °F; • 采用特殊机械轴封或结构, 最高温度可达 220 °C / 428 °F;	

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PUTRONS VL Illustration of Spare Parts Replacement

浦川 VL 立式泵拆卸换备件示意图



1

Rotate motor stand protective cover

旋转电机座防护罩



2

Rotate to remove cover;
unscrew coupling bolts

旋转取出护罩；拧下联轴器螺栓



3

Remove intermediate coupling;
remove coupling screw

取出中间联轴器；拧下泵联轴器固定螺钉



4

Remove coupling; unscrew bearing cover and housing bolts

取出泵联轴器；拧下轴承盖和轴承座螺栓



5

Remove bearing cover and housing; remove mechanical seal

取出轴承盖和轴承座；取出机械密封



6

Loosen pump cover bolts; lift pump cover

松掉泵盖螺栓，抬起泵盖



7

Remove pump cover; lift pump shaft and impeller

取出泵盖，抬起泵轴和叶轮



8

Remove pump shaft and impeller

取出泵轴和叶轮

1 Pump casing

泵体

- Double volute design significantly reduces the radial force and the weight of the pump. The weight is reduced by up to 30% compared to well-known international marine pumps;
- Multiple materials available;
- Horizontal installation available;
- 双蜗壳设计，大大减小泵的径向力和泵壳的重量，比知名国外船用泵重量减少最大达到30%；
- 多种材料可以选择；
- 可卧式安装；

2 Mechanical seal

机械密封

- Various mechanical or packing seal available;
- Max. temperature of the mechanical seal structure is up to 220°C;
- Patented anti-particle mechanical seal protection;
- 多种机封密封或填料结构可选择；
- 机封结构最高温度可达220°C；
- 专利防污机封保护；

3 Wear ring

口环

- Multiple materials available to ensure the longest service life and lowest wear
- 多种材料可选择，以确保最长的使用寿命和最低的磨损

4 Impeller

叶轮

- Optimized hydraulic model (high-order equation G2-A surface design method) to improve efficiency and cavitation performance; in conformance with MEI0.7 European energy-saving standards; efficiency is about 5% higher than well-known international marine pumps;
- Modularized for vertical self-priming pump configuration;
- 全新优化的水力模型（高阶方程G2 - A面设计方法），提高了效率和汽蚀性能，全部满足MEI0.7欧洲节能标准，比知名国外船用泵效率提高约5%；
- 可模块化用于立式自吸泵配置；

5 Bearing

轴承

- Modular configuration of heavy-duty and light-duty bearings is optional, without changing pump and motor stand size, and is always easy to maintain
- 模块化配置的重载和轻载轴承可选，不改变泵、电机支架安置尺寸，始终保持方便拆卸特点

6 Motor stand

电机支架

- The unchanged stand is used for all configuration options, such as heavy load, light load, single mechanical seal, double mechanical seal, self-priming, while keeping high stability and frame structure without affecting site installation;
- The height of the motor stand is about 20% lower than that of other manufacturers, and the removal of the pump seal and impeller does not require the removal of the motor stand;
- 唯一不变的支架可用于所有配置选项，如重载、轻载、单机封、双机封、自吸，高稳定和框架结构都不变，从而对客户现场配置的改变不会带来影响；
- 电机支架高度比其它厂家高度低约20%，并且拆卸泵机封和叶轮不需要拆卸下电机支架；

7 Coupling

联轴器

- Easy to maintain due to the design of coupling with intermediate joint
- 带中间节的联轴器结构，便于拆卸和维护





● 浦川流体办公室和工厂
PUTRONS Factories and Offices

PUTRONS

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