

# MVN

**豎軸多段透平泵**  
VERTICAL TYPE LONG-SPINDLE  
WELL PUMP



泵浦 曝氣系統 廢水處理機械

TAF水泵實驗室認證合格廠  
品質管理系統ISO 9001



綠色 · 安全 · 永續經營

**川源股份有限公司**

GSD INDUSTRIAL CO., LTD.

## 特點 FEATURES

- ▶佔地面積小：僅有立式電機及出口座露出於基礎座上，大幅減少所占用的面積。
- ▶效率高：葉輪經過多次實驗及修正，提高泵浦效率，降低動力成本，節省運轉費用。
- ▶無吸入揚程之困擾：泵浦葉輪深入水中，故吸入揚程不受限制。
- ▶軸功率變化小：不因水量改變而有明顯變化，提高泵浦可靠性及運轉壽命。
- ▶操作簡便：因泵體深入水下並有防止逆轉裝置，可直接啟動。
- ▶易於保養：構造精簡，零組件少，可靠性高，保養維修容易。
- ▶Small occupied area: only the vertical motor and the outlet seat are exposed on the baseplate, reducing the occupied area.
- ▶High efficiency: The impeller has many times of tests and corrections to improve pump efficiency, reduce power costs, and save operating costs.
- ▶Free with suction head: the pump impeller goes deep into the water, so the suction head is not limited.
- ▶Shaft power change is small: there is no obvious change due to the change of water volume, improving pump reliability and operating life
- ▶Easy to operate: because the pump casting goes deep into the water and has a reverse rotation prevention device, it can be started directly.
- ▶Easy to maintain: simple structure, few parts, high reliability, easy maintenance.

## 用途 APPLICATIONS

- ▶農業、園藝深井抽水等灌溉用
- ▶原水、海水等抽送用。
- ▶工廠、事業單位等各種用途給水用。
- ▶Agriculture, horticulture, deep well pumping, etc. for irrigation
- ▶For pumping raw water, sea water, etc.
- ▶Water supply for various application such as factories. .

## 構造 STRUCTURES

機組結構由泵體部分、裝有傳動軸的揚水管部分、泵座與電動機或間接傳動裝置三部分組成。

前兩部分位於井下，第三部分位於井上，其結構特性如下：

進水殼：入水口採鐘型設計，以減少摩擦損失。

- ▶葉輪：經多次實驗與分析，嚴謹控制鑄造品質，提高流道光滑程度，經動、靜平衡校正，提升效率與運轉穩定性。
- ▶導流殼：採用進口邊與葉片出口邊平行的混流式空間導葉，徑向尺寸小，節省空間效率高。
- ▶主軸：包含上、下傳動軸及泵軸三部分，採用碳素鋼或不鏽鋼材，若泵送汙水可在軸心外加護管保護軸心及軸承。
- ▶揚水管：標準長度2m，為凸緣接頭，接合處加裝軸承支架，以軸承固定軸心位置，確保運轉穩定。
- ▶出口泵座：出口彎頭經實驗及修正，將能量損失降到最低。
- ▶潤滑：液體如為常溫無雜質，不致造成主軸損壞，直接以此液作為滑動軸承之潤滑液，如抽送汙水或易損壞主軸之液體，於主軸及軸承外套裝護管，並於護管內導入清水或其他液體進行潤滑。
- ▶軸承：
  - ▶滾動軸承：於馬達座上，一為徑向滾珠軸承，一為止推滾珠軸承，止推軸承用以承受軸向推力負荷，防止零組件之破壞。
  - ▶滑動軸承：其餘軸承均為滑動軸承，使主軸及旋轉部件不因此泵長軸特性造成偏心及損壞，具引導及固定功能。

The unit structure is composed of three parts: the pump body, the pumping pipe with the drive shaft, the pump base and the electric motor or indirect transmission device. The first two parts are located in the well, and the third part is located in the well. Its structural characteristics are as follows:

- ▶Water inlet casting: The water inlet adopts a bell-shaped design to reduce friction loss.
- ▶Impeller: After many tests and analysis, the casting quality is strictly controlled, the smoothness of the flow channel is improved, and the dynamic and static balance are corrected, improving efficiency and stability of operation.
- ▶Guide casting: The mixed flow guide vane with the inlet side parallel to the blade outlet side is adopted, the radial size is small, and space-saving and high efficiency.
- ▶Shaft: The upper and lower drive shafts and the pump shaft are made of carbon steel or stainless steel. If pumping sewage, a shaft sleeve can be designed to protect the shaft and bearings.
- ▶Raising water pipe: Standard length 2m, flange joint, bearing bracket is installed at the joint, and the shaft center position is fixed by the bearing to ensure stable operation.
- ▶Outlet pump baseplate: The outlet elbow has been tested and corrected to minimize the energy loss.
- ▶Lubrication: If the liquid is normal temperature without impurities, it will not cause damage to the spindle. Use this liquid directly as the lubricating fluid for the sliding bearing, such as pumping waste water or liquid that easily damages the spindle, a protective tube is placed on the spindle and bearing, and water or other liquid is added into the protective tube for lubrication.
- ▶Bearing:
  - ▶Rolling bearings: On the motor seat, one is a radial ball bearing, and the other is a thrust ball bearing. The thrust bearing is used to bear the negative axial thrust load to prevent damage to components.
  - ▶Sliding bearing: The remaining bearings are sliding bearings, so that the main shaft and rotating parts will not be eccentric and damaged due to the characteristics of the long shaft of the pump, which is very attractive guide and fixed functions.

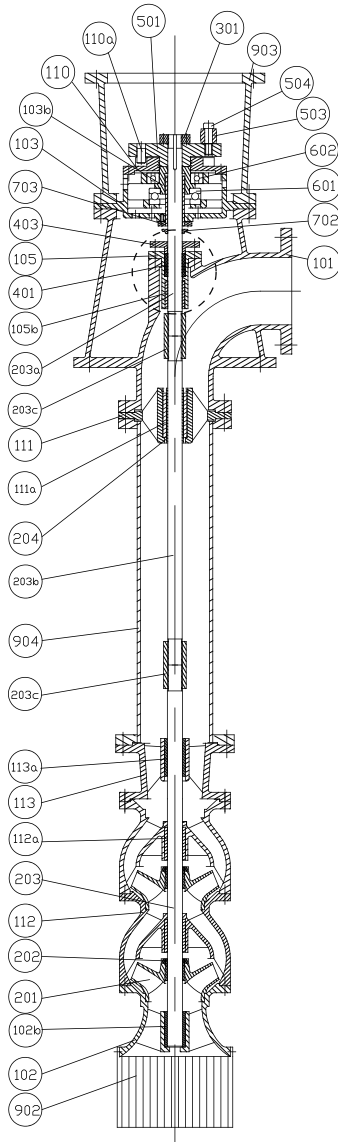
## 型號說明 PRODUCT NUMBER DESCRIPTION

**MVN - 100 - 3T**

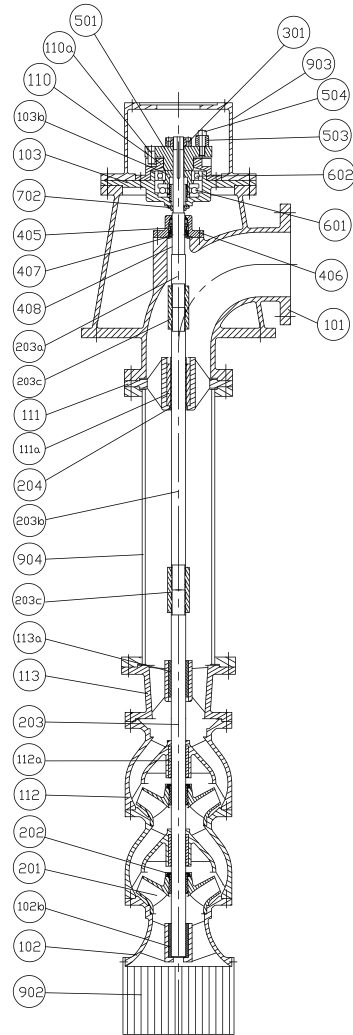
MVN	100	3T	段數	NO. OF STAGES
			口徑	OUTLET DAIMETER(mm)
			標準型式MVN	PUMP TYPE

# 結構圖 CONSTRUCTIONS

填料結構示意圖



機械軸封結構示意圖



NO.	名稱NAME	NO.	名稱NAME	NO.	名稱NAME	NO.	名稱NAME
101	出口座 Discharge head	111a	水中軸承 Bearing	203c	軸接頭 Shaft coupling	503	聯軸器橡膠 Coupling bushing
102	入口殼 Suction bell-mouthed	112	導輪Guude vane	204	軸套筒 Sleeve casing	504	聯軸器螺栓 Bolt & nut
102b	水中軸承 Bearing	112a	水中軸承 Bearing	301	調整螺母 Shaft adjusting	601	止推軸承 Thrust bearing
103	軸承箱 Bearing housing	113	出口殼 Discharge casing	401	填料 Packing	602	球軸承 Ball bearing
103b	軸承裡襯 Bearing block	113a	水中軸承 Bearing	403	填料蓋 Gland	702	擋水環 O-ring
105	填料函殼 Stuffing box	201	葉輪 Impeller	405	機械軸封 Mechanical seal	703	封油管 Dill guard pipe
105b	軸套 Sleeve	202	斜套 Adapter	406	軸封壓蓋 Seal cover	902	濾網 Filter
110	逆止盤 Ratchet wheel	203	泵軸 Pump shaft	407	軸封固定環 Seal seat	903	馬達座 Motor baseplate
110a	逆止桿 Ratchet bar	203a	頂軸 Head shaft	501	聯軸器 Coupling	904	柱管 Column pipe
111	中間托架 Shafting bracket	203b	柱軸 Line shaft				

備註: 可依需求設計不同結構及不同材質, 請索取單張結構圖、尺寸圖及性能曲線圖  
 MVN is custom-made product, please request a single structure drawing, size drawing and performance curve.





綠色 · 安全 · 永續經營

川源股份有限公司

GSD INDUSTRIAL CO., LTD.



Changeable Market 以卓越的行動力  
should be satisfied with  
Superior Action  
滿足市場快速變化

MVN-202104

Contact CMSA, scan now!



本型錄內容如有變更恕不另行通知 We reserve the right to contents without notice.