

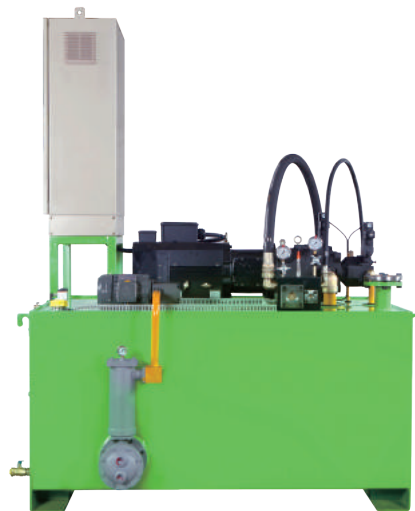
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Energy-saving Hydraulic Pump Station

Vulcanizing Machine of Rubber Tire



- First Generation
第一代



- Second Generation
第二代

CHUYA
HYDRAULIC MACHINE

輪胎硫化機
節能液壓泵站



Innovative Quality & Trust-worthy Service

公司簡介

志亞油壓五金有限公司成立於1988年，主要以專業設計製造各種液壓系統、油壓元件、邏輯閥組、測試設備、液壓教學設備為主軸，創立26年來持續並執著不斷「研究創新、技術提升、永續經營」之經營理念，並致力於開發及品質的提升，創造出更精密，更先進的產品來滿足客戶的需求。

有關於公司經營的理想與開發，于2003年創立子公司志堯油壓五金有限公司，更是秉持母公司傳承之精

神，嚴守品質及技術之根基，致力於發展高效率，低能耗的油電混合系統，以生產更環保，更高效的油壓單元。亦于2009年於大陸地區江蘇省太倉市創立了大陸分公司—太倉志霖液壓有限公司，並將公司目標定位於亞洲生產研發基地，以高品質為承諾，不斷的改進，研發更具環保及競爭力之產品，以服務顧客為目的，為堅守此承諾，將一本熱忱、細心，專業的服務宗旨，朝向「創新品質誠信服務」的理想邁進。

Company Profile

CZHIYA Hydraulic&Hardware Co., Ltd was established in 1988, focuses on the professional design and manufacture of various hydraulic systems, hydraulic components, logic valve group, test equipment, and hydraulic equipmen. In 28 years since founded, we always taking “research and innovation, technology upgrading, performance management” as the spiritual idea, and committed to promote and improve the quality of our products, creating a more sophisticated and more advanced products to meet the customer’s demands.

And for the ideal and development of our company, the subsidiary ZhiYao Hydraulic&Hardware Co., Ltd which founded in 2003, is inheriting and upholding the spirit of it’s parent company, strictly observe the high quality and

the main technology, and committed to the development of high efficiency&low energy consumption hybird system to produce more environmentally friendly and more efficient hydraulic power unit. Also in the 2009, our mainland branch-TAICANG ZHILIN Hydraulic Machinery Co., Ltd.-has been built in TAICANG city, JIANGSU province, China. Proforming as the Asian targeting the Asian R&D base, TAICANG ZHILIN Hydraulic Machinery Co., Ltd. takes high quality of products as commitment, and always carries on the sincere, scrupulous and professional service tenet stepping towards the ideal of “innovation quality, integrity services”.

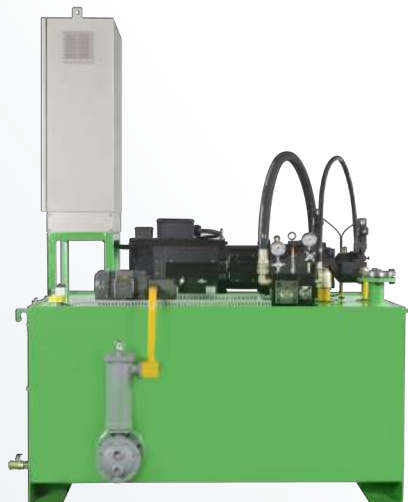


輪胎硫化機 節能液壓泵站

Energy - Saving Hydraulic Pump Station For Vulcanizing machine of Rubber Tire

本品為我司從事硫化機液壓泵站設計製造行業多年經驗改進之產品適用於摩托車胎、電動車胎、自行車胎等輪胎硫化機。

Applying for tires of motorcyle, electric-bike and bicycles.



節能原理

通過對壓力的監測，配合負荷狀態在必要時供應需要的流量。

保壓時，為了補充洩漏油量，來實現保壓用必要的最低轉速進行運轉；液壓傳動裝置動作時，進行高速運轉，以供應所需流量。

The Principal Of Energy - Saving

By measuring the pressure, adjust the oil flow to a appropriate end while loading.

Replenish oil to make the machine run at a minimum speed when pressure maintains; run at a high speed in order to supply the flow when hydraulic actuator operates.

特點

將液壓和電機、伺服技術的融合使用

採用荷蘭進口ABB控制器、德國易福門壓力感測器和臺灣製造變頻馬達，節能達70%以上！（保壓狀態下與本公司產品相比）

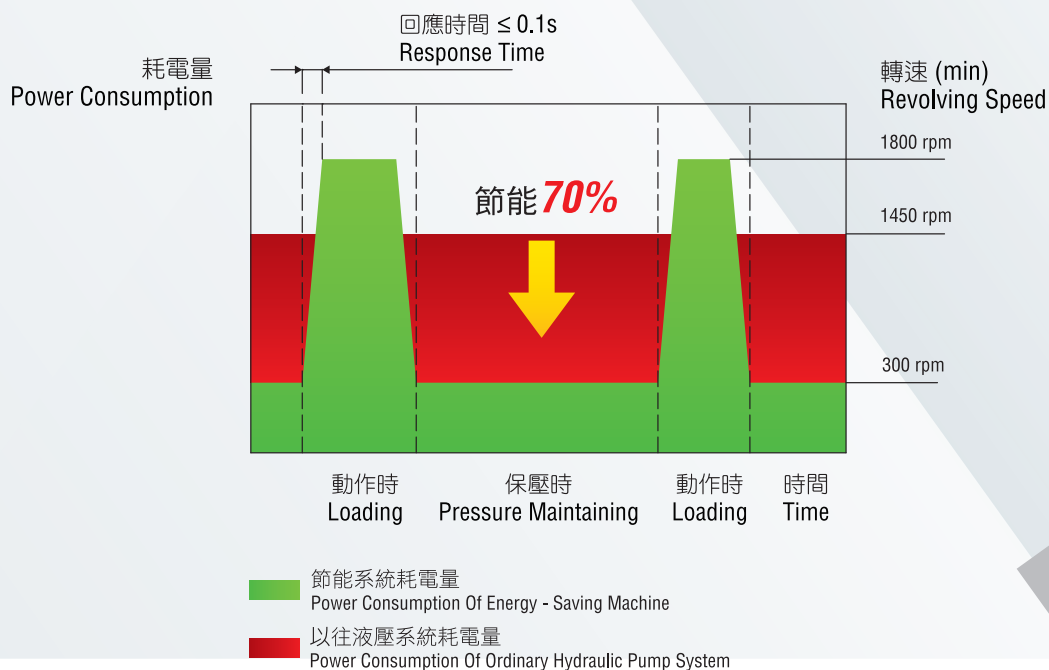
Characteristics

Merge the functions of hydraulic system, electrical machine and servo technique.

The product adopts ABB controller imported from Netherland, pressure sensor from IFM(Germany) and inverter motor manufactured in Taiwan, which saves at least 70% energy comparing with pressure maintaining ones.

液壓動作模式與節能

The Pattern of Hydraulic Pump

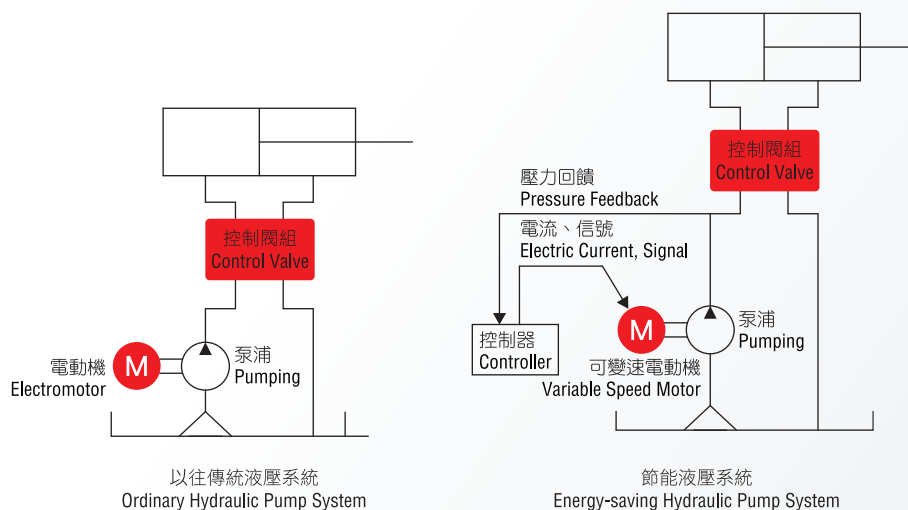


系統組成

由於低轉速使流量能保持在最小限度，液壓油的老化程度與以往相比有較大的改善。

System Composition

Oil flow will be kept at a minimum with low revolving speed. In this situation, the deterioration of oil slows down compared with ordinary machine.



採用德國IFM原裝進口液位元溫度感測器

普通機械式開關在介質中進行檢測時，由於物料的沉積和磨損經常會導致故障，但我司選用IFM感測器，其中無任何機械部件使得感測器特別耐用可靠且可以即時顯示當前液位高度，並有溫度監控的功能；回應速度快（450ms）、精度高（ ± 5 ）、外殼防護等級為IP67，同時具有開關量輸出，可供用戶端銜接PLC接收報警訊號。

Adopt Liquid Temperature Sensor Imported The Original Package From IFM (Germany)

Ordinary mechanical detects a switch in the medium. because material deposition and wear often leads to failure, we choose the IFM sensors. no mechanical components, which makes sensors are particularly durable and reliable. It can real-time display current for height, and has the function of the temperature monitoring; Fast response speed (450 ms), high precision, for IP67 protection grade, has the switch output at the same time, for the client to connect PLC receives alarm signals.

吸油過濾器

過濾器相當於人體的腎，起到過濾血液（液壓油）保護人體（液壓系統）的作用，過濾各種的雜質，其中包括：外部進入液壓系統的雜質，工作過程產生的雜質，運動作相對磨損產生的金屬粉末，油液因氧化變質產生的膠質、瀝青質、炭渣等；液壓系統中的故障的75%以上是由於液壓油中混入雜質造成的，因此維護油液的清潔，防止油液的污染，對液壓系統是很重要的！我司採用150目過濾精度的吸油篩檢程式和20 μ 過濾精度的回油篩檢程式，可以大幅提高液壓系統的使用壽命，保護液壓元件！

Suction Filter

Filter is equivalent to the body's kidneys, filtering the blood (hydraulic oil) to protect the human body (hydraulic system), the effect of filtering various impurities, including: the external into the hydraulic system of the impurities, work process of impurities, relative wear of the metal powder in the movement, the oil for the oxidation of colloid and asphaltene, carbon residue, etc. More than 75% of the fault of hydraulic system are caused by hydraulic oil mixed with impurity. Therefore, maintain the cleanness of the oil, prevent the pollution of oil, the hydraulic system is very important. We use 150 μ filtration precision of oil suction filter and 20 μ return oil filter precision, can greatly improve the service life of the hydraulic system, protection of hydraulic components.

啟動前的注意事項

- ① 通過油面計檢查油箱中的液壓油是否已經達到指定液位。
 - (1) 上限位，黃色標識：規定液位（標稱容量）
 - (2) 下限位，紅色標識：最低液位
- ② 動力單元接線請按照圖表方式正確連接
若接線錯誤則電機逆向運轉，不排油，壓力錶無壓力。如果繼續運轉則泵可能會造成磨損。
- ③ 通過泵浦注油口向泵殼內注入液壓油，否則會導致泵浦磨損。

電控箱側 Electric Cabinet Side	電源側 Power Supply Side
U	→ R
V	→ S
W	→ T

Precautions Before You Start

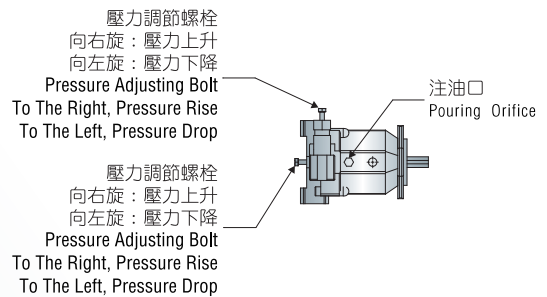
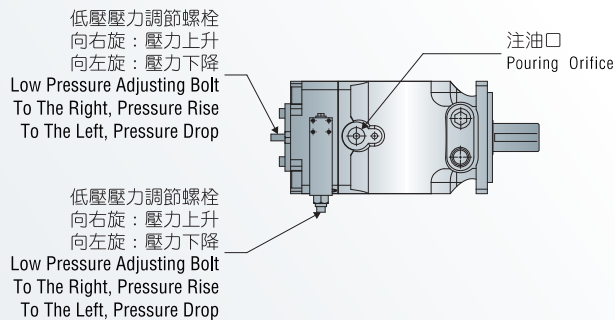
- ① Use the oil tank gauge to check whether the hydraulic oil has reached the specified level.
 - (1) Upper limit value(marked yellow): Specified level (Nominal capacity)
 - (2) Lower limit value(marked red): lowest level
- ② Connect the correct wiring of the power unit according to the following method.
If the reverse operation of the motor wiring error, no drain, no display voltmeter. If it continue to operate, the pump may cause wear and tear.
- ③ Inject hydraulic oil to the pump housing by pumping hydraulic fluid, otherwise it will cause pump wear.

保養、檢查

- ① 油溫：請在10°C~60°C範圍內使用
本系統設有溫度升高自動啟動水冷馬達裝置，如若系統溫度超過60°C或超過50°C水冷馬達沒啟動請聯繫本公司技術人員。
- ② 液壓油更換時間：初期時在運行三個月後進行更換，此後在確認污染情況後再進行更換，或者每年更換一次。
- ③ 油箱內部及篩檢程式的檢查和清潔：每六個月一次，或者4000小時進行一次（任意一個先到的）。

Maintenance, inspection

- ① Oil temperature: Use within 10-60°C
The system is equipped with temperature water cooling motor unit which will start automatically when the temperature is over 60 or 50. If the water-cooler motor did not start, please contact the company's technical staff.
- ② Expiry date of Hydraulic oil :
Oil to be replaced every running for three months for the beginning. Later, replace it once a year or confirming contamination before replacement.
- ③ Inside tank and filters inspection and cleaning :
Once every six months, or 40,000 hours once (any one of the first reached)



主要技術參數 - 第二代

Main Technical Parameters - Second Generation

系統壓力 System Pressure	高壓 High pressure	210kg / cm ²	
	低壓 Low Pressure	40kg / cm ²	
系統流量 System Flow	高壓 High Pressure	最大流量 Max	28.8L / min
		最小流量 Min	4.8L / min
	低壓 Low Pressure	最大流量 Max	225L / min
		最小流量 Min	37.5L / min
油箱容積 Oil Tank Capacity	1300L		
電壓 Voltage	380V/50HZ		
電機功率 Motor Power	15KW		
液壓油 Hydraulic Oil	一般礦物質油相當於ISO VG32 General mineral oil equivalent to ISO VG32		

如有特殊需求可連絡我司訂製
If you have any special needs, please contact us.

- 本品為柱塞泵浦，啟動液壓站前需從注油口向泵殼體內注入液壓油，否則會導致泵浦內部不必要的磨損和向液壓系統中注入大量空氣！
- This product is a plunger-style pump. Before starting the hydraulic pump station, please inject hydraulic oil from the fuel inlet to the pump casing, otherwise it will cause unnecessary abrasion inside the pump and inject a large amount of air in the hydraulic system.

水冷卻器使用注意事項

- ① 冷卻水最高壓力為0.5MPa
- ② 冷卻水應使用淡水並符合下表水質要求；冷卻管內應防止異物進入；冬季停機時應將水排盡以防凍結。
- ③ 定期（根據工作環境，建議半年或一年）清洗銅管內側污垢。

Tips of water cooler

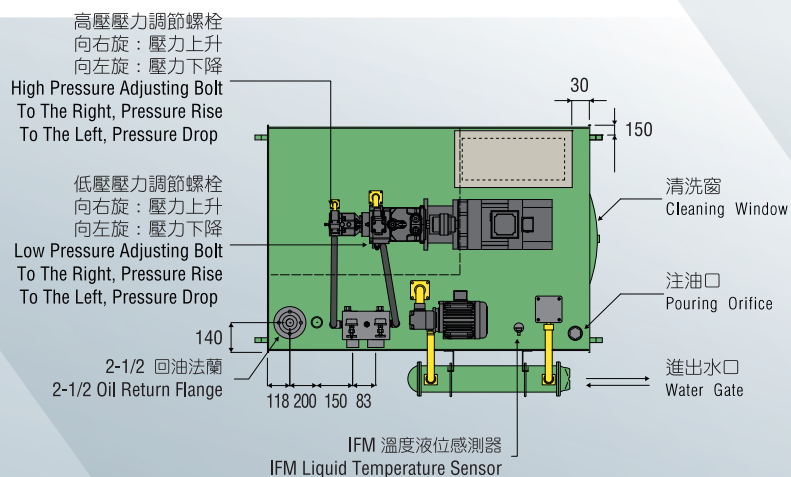
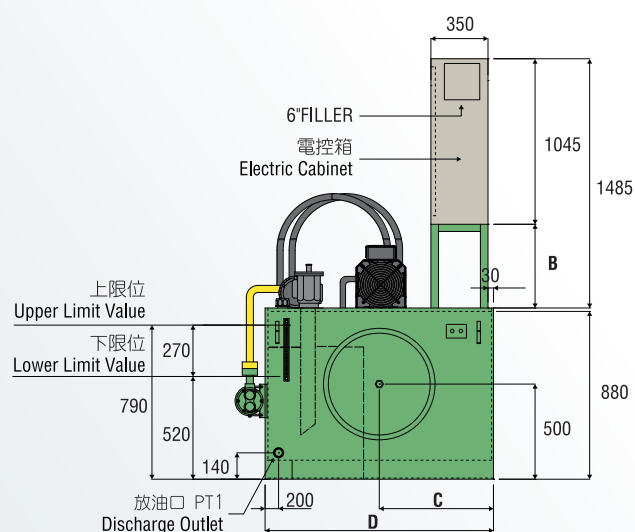
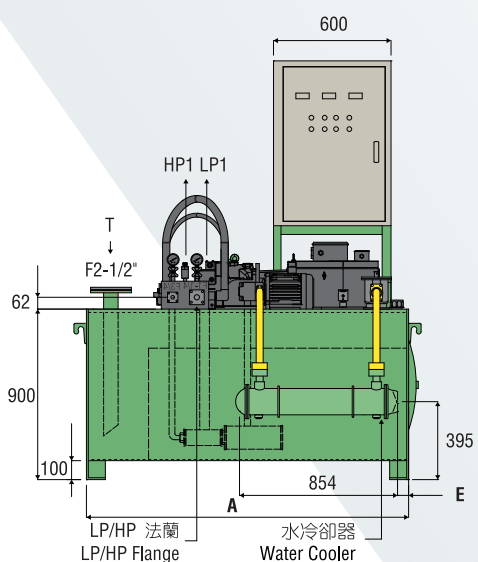
- ① The maximum pressure of the cooling water is 0.5MPa
- ② Use fresh water as cooling water which should meet the following quality requirements. Prevent the entry of foreign matter inside the cooling pipe. Drained the machine before shutdown in winter.
- ③ Routine (According to the working environment, it is recommended six months or a year). Clean the inside dirt of brass pipe.

	水質標準項目 Water Quality Standards		傾向 Tendency	
			腐蝕 Corrosion	形成水垢 Formation Of Scale
基準項目 Main Items	pH[25℃]	6.5~8.2	○	○
	導電率[25℃](μS/cm)Conductivity	800 ↓	○	○
	硫酸離子(mgSO ₄ ²⁻ /L)Sulfate ion	200 ↓	○	-
	總硬度(mgCaCO ₃ /L)Calcification	200 ↓	-	○
參考項目 Other Items	鐵(mgFe /L) Fe	1.0 ↓	○	○
	硫化物離子(mgS ²⁻ /L) Sulfide	-	○	-
	氫離子(mgNH ₄ ⁺ /L) Hydrogen ion	1.0 ↓	○	-
	離子狀二氧化矽(mgSiO ₂ /L) Silica ion	50 ↓	-	○

尺寸如有變更恕不另行通知
Dimensions are subject to change without prior notice.

第一代
力車胎硫化機
節能系統
左機型

First Generation of **Energy - Saving**
Vulanizing System of Rubber Tire
(at left)

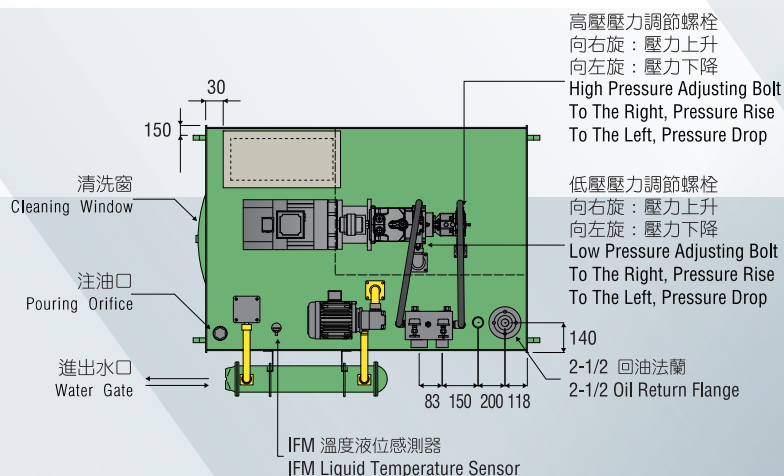
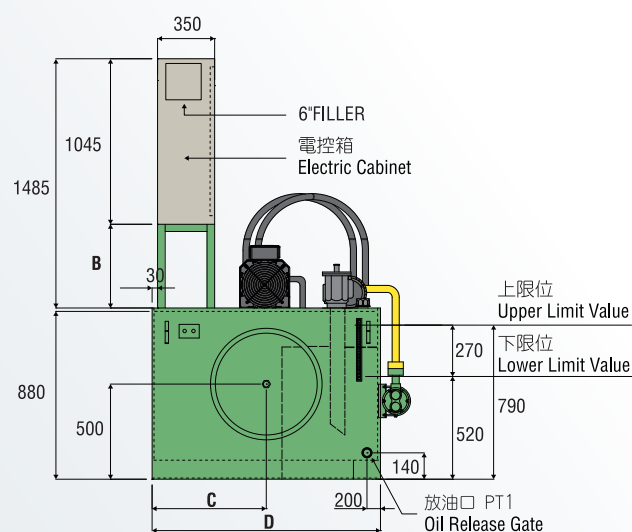
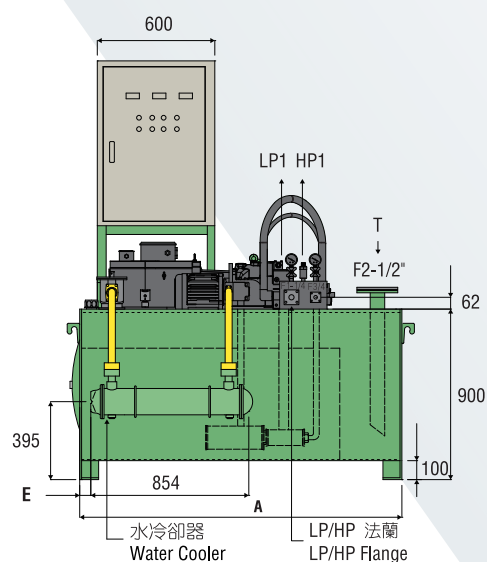


電機 Electrical Machine		20HP-4P	25HP-4P
型號 Type		CH131015-L	CH140901-L
尺寸 Size (cm)	A	1700	1800
	B	335	440
	C	600	650
	D	1200	1300
	E	100	170

尺寸如有變更恕不另行通知
Dimensions are subject to change without prior notice.

第一代
力車胎硫化機
節能系統
右機型

First Generation of **Energy - Saving**
Vulanizing System of Rubber Tire
(at right)



電機 Electrical Machine		20HP-4P	25HP-4P
型號 Type		CH131015-R	CH140901-R
尺寸 Size (cm)	A	1700	1800
	B	335	440
	C	600	650
	D	1200	1300
	E	100	170

尺寸如有變更恕不另行通知
Dimensions are subject to change without prior notice.

第二代 力車胎硫化機 節能系統 左機型

Second Generation of **Energy-Saving Vulcanizing System of Rubber Tire** (at left)

本品為第一代力車胎節能系統的升級版本，重新佈局各液壓元件、輔件的擺放位置，為客戶提供更多的選擇；並升級了水冷卻器和回油過濾系統。

This is the upgrade version of the first generation, laying out the placement of the various hydraulic components, auxiliary parts, providing customers with more choices, upgraded the water cooler and oil filter system.

型號說明 Model Coding

CH1511020-R-LF1HF1-15

產品系列號
Product ID

R: 右機型 Right Engine
L: 左機型 Left Engine

設計代號
Design Code

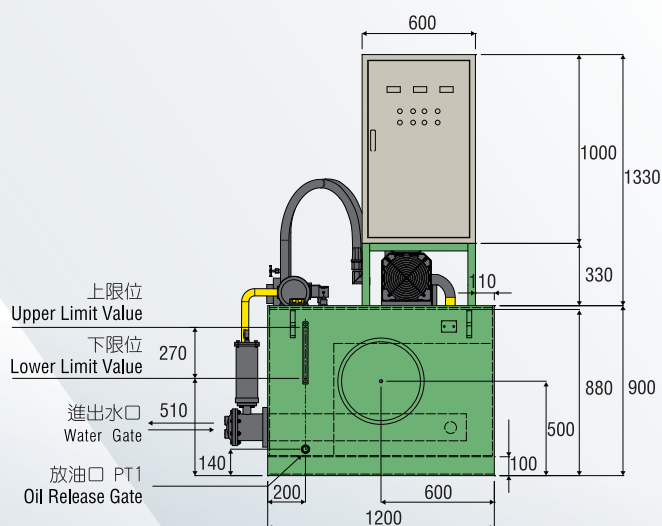
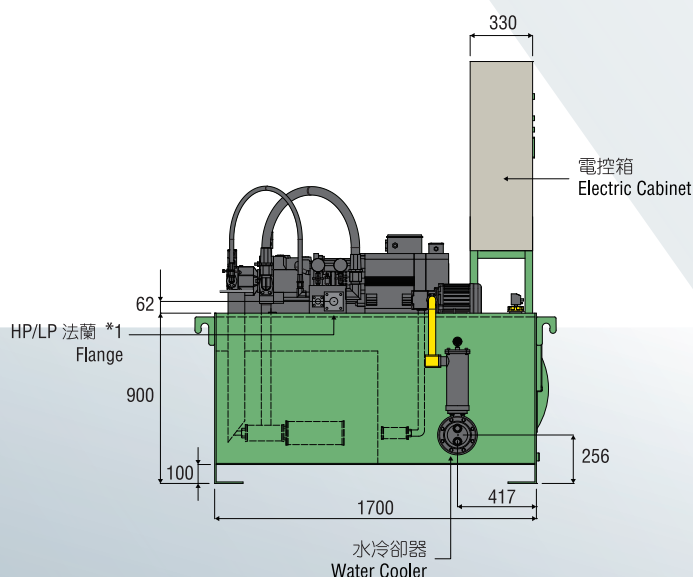
HP、LP出口法蘭型號（詳情參照法蘭選配表）
Discharge Flange Model (For More Details, Please Refer To Flanged Table)

插入式水冷卻器

熱交換器為日本大生品牌先進轉造技術製造的高密度低翅片銅管，比一般同類型熱交換性能提高20%以上；並採用與回油過濾器一體化設計，體積更小、整體外形更加美觀。

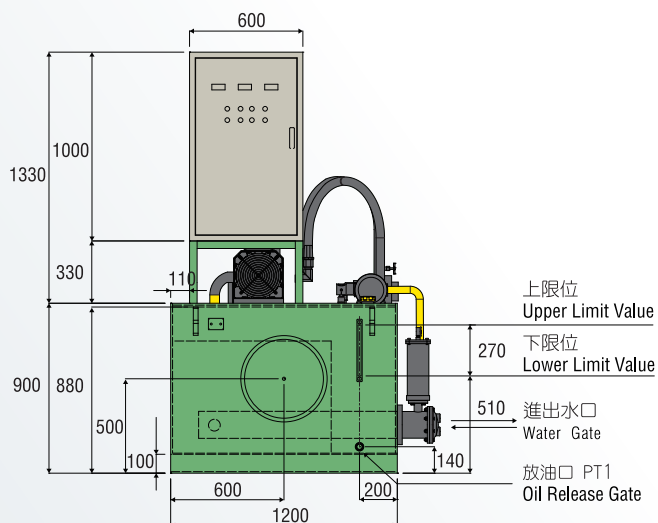
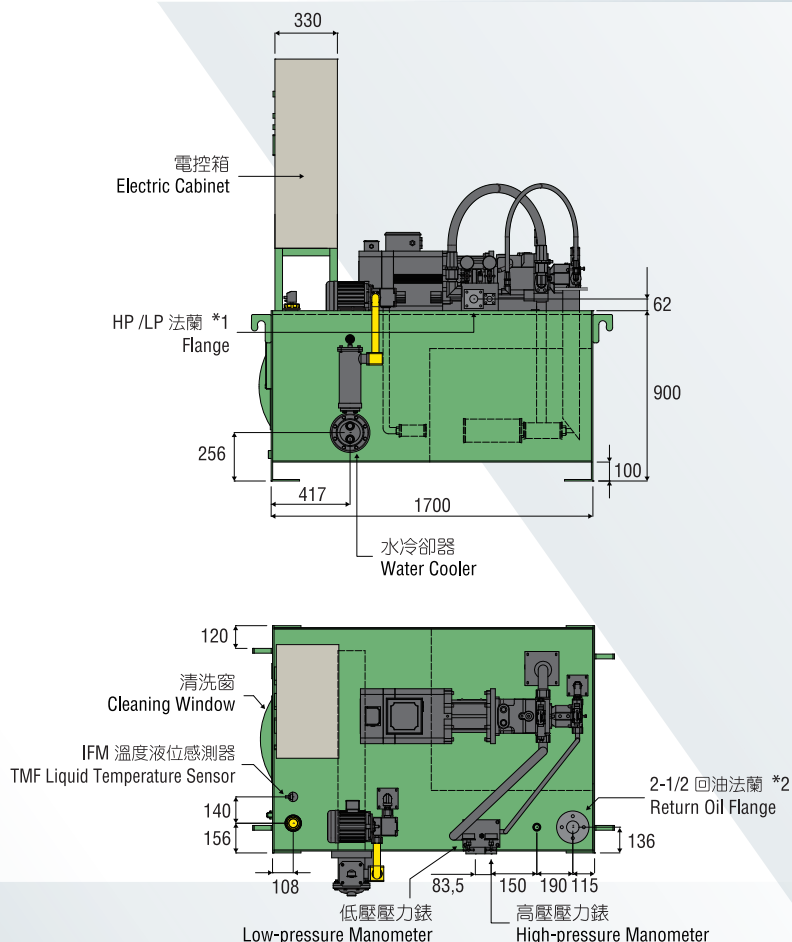
Plug-in Water Cooler

The Heat exchanger is made in advanced manufacturing technology by Taisei Japan with high density low finned tubes, 20% greater than the average heat transfer performance of the same type, oil return filter integrated. Therefore it's smaller and the overall appearance is more beautiful.



第二代 力車胎硫化機 節能系統 右機型

Second Generation of **Energy-Saving** **Vulanizing System of Rubber Tire** (at right)



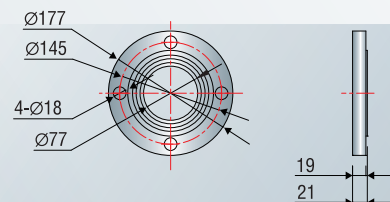
*1 高壓、低壓出口法蘭，詳情請參照可選配件表。

*2 回油法蘭尺寸詳圖如下：

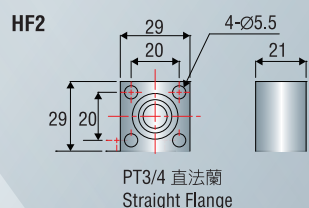
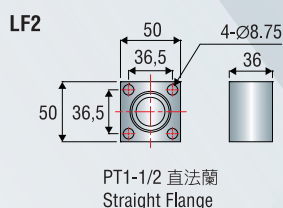
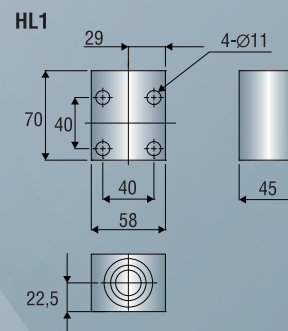
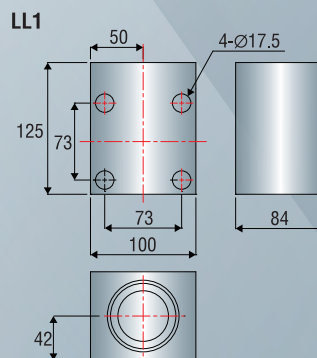
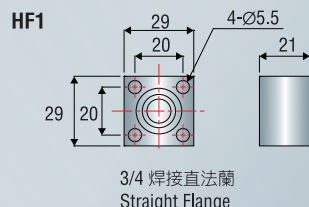
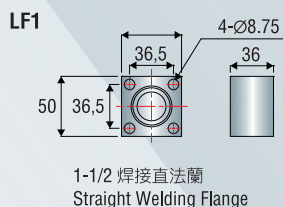
*1 For high / low pressure discharge flange, please refer to accessories list.

*2 Details of return oil flange.

2-1/2 回油法蘭 Oil Return Flange



可選配HP、LP油口法蘭 Either HP, LP Flange Can Be Applied



1-1/2 焊接直角法蘭
Welding Rectangular Flange

3/4 焊接直角法蘭
Welding Rectangular Flange



CHUYA
HYDRAULIC MACHINE



台灣

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