



GDX-50/40



GDX-Ex

## GDX-高低温一体机

DYNAMIC TEMPERATURE CONTROL SYSTEM

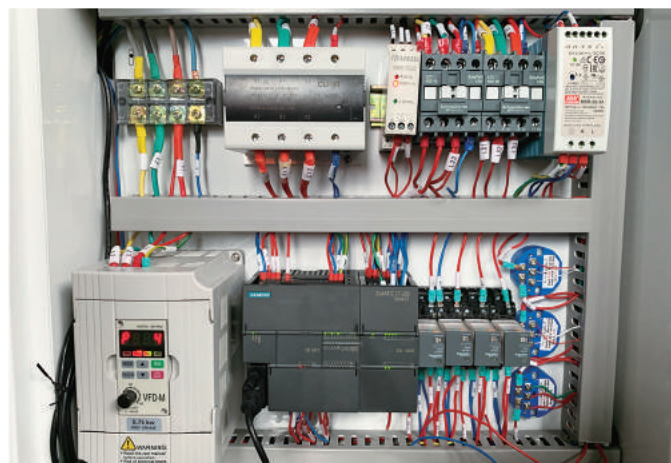
高低温一体机它是通过泵浦驱动传热介质(通常为水或油)从装有内置加热器的油箱中到达控温设备,再从控温设备回到油箱。控制器根据温度传感器测量的热流体温度或控温设备内部温度,调节热流体的温度从而调节控温设备的温度。广泛应用于石油化工、机械、医药、电子电镀、电泳,铝氧化、化工反应釜等工业生产需要的特殊温度控制的场所。

The high and low temperature all-in-one machine is pumped to drive the heat transfer medium (usually water or oil) from the oil tank with built-in heater to the temperature control equipment, and then from the temperature control equipment to the oil tank. The controller adjusts the temperature of the thermal fluid according to the temperature of the thermal fluid measured by the temperature sensor or the internal temperature of the temperature control device to adjust the temperature. In this process, there are processes of heating and releasing heat. It is widely used in petrochemical, machinery, medicine, electronic electroplating, electrophoresis, aluminum oxidation, chemical reactor and other places where needs special temperature control.

## 主要特点

MAIN FEATURES

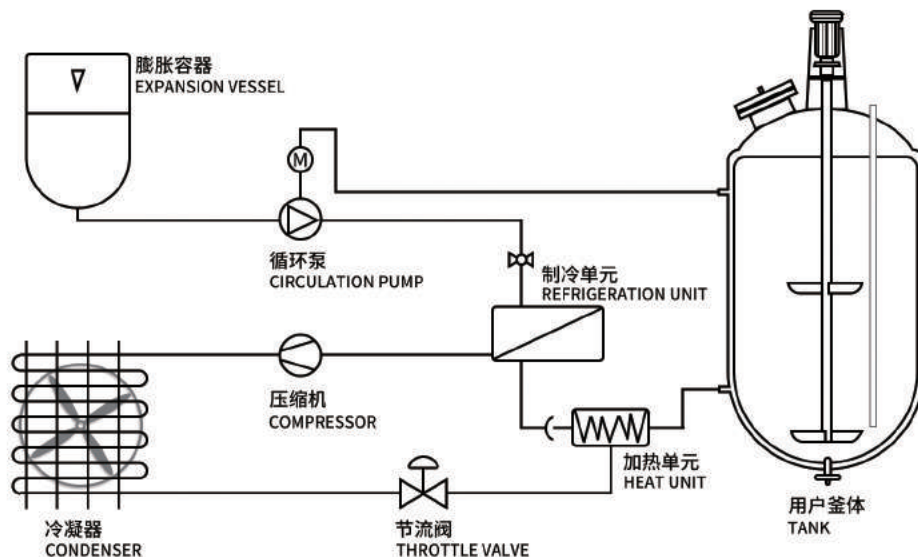
- 温度范围从-120°C~200°C
- 采用板式换热器、管道式加热器提高加热和制冷效率
- 采用磁力驱动泵, 没有轴封泄漏问题
- 全密闭系统, 延长导热液体寿命
- 多功能报警系统和安全功能
- 采用自主研发的低发热量、高流速、耐高-低温循环泵
- Temperature range: -120°C~200°C
- Magnetic drive pump, no shaft seal leakage problem
- Fully closed system, prolonging the life of heat conducting fluid
- Multifunctional alarm system and safety function
- Using plate heat exchanger and pipeline heater to improve heating and cooling efficiency
- Adopt self-developed circulation pump with low heat, withstanding high and low temperature





## 原理示意图

### SCHEMATIC DIAGRAM



采用封闭式管道设计，高效板式换热器，降低导热液需求量的同时，提高系统的热量利用率，实现快速升降温度。导热介质在一个密闭系统中，带有膨胀器，膨胀容器中的导热介质不参与循环，无论是高温还是低温，膨胀容器槽保持 $RT \sim 60^{\circ}\text{C}$ ，有效降低导热介质在运行中吸收水分和挥发的风险。这样的原理和功能对使用人员来说有诸多优势：因为只有膨胀腔体内的导热介质才和空气中的氧气接触，可以降低导热介质被氧化和吸收空气中水分的风险。

The closed pipe design and high-efficiency plate type exchanger are adopted to reduce the demand of heat-conducting fluid, improve the heat utilization rate of the system, and realize rapid temperature rise and fall. The heat conducting medium in a closed system is equipped with an expander. The heat conducting medium in the expansion vessel does not participate in the circulation. Whether it is high temperature or low temperature, the expansion vessel tank is kept at  $RT \sim 60^{\circ}\text{C}$ , which effectively reduces the risk of moisture absorption and volatilization of the heat conducting medium during operation. This principle and function have many advantages for the user: because only the heat conducting medium in the expansion chamber is in contact with the oxygen in the air, the risk of the heat conducting medium being oxidized and absorbing moisture in the air can be reduced.



客户案例：高低温 + 玻璃反应釜 CUSTOMER CASE: GDH + GLASS REACTOR





## 完善的安全保护

### MULTIPLE PROTECTION

设置多种保护机制以确保系统的安全运行，关键的保护功能有：双重过温保护、制冷系统高低压保护、泵过载保护、压缩机过载保护、高低液位报警、相序/漏电保护器、断电保护、循环管路关死保护。操作中出现的异常情况能及时报警并显示在操作屏幕上。

在夏天环境温度高的情况下，也有优越降温效果，所有-45℃以下制冷加热控温系统风冷仪器设备，均加有对立的水冷辅助换热器。

A variety of protection mechanisms are set up to ensure the safe operation of the system. The key protection functions include: double over temperature protection, high and low pressure protection of refrigeration system, overload protection of pump, overload protection of compressor, high and low liquid level alarm, phase sequence / leakage protector, power-off protection and shutdown protection of circulating pipeline. Abnormal conditions in the operation can be timely alarm and displayed on the operation screen.

In summer, when the ambient temperature is high, it also has superior cooling effect. All air-cooled instruments and equipment of refrigeration heating temperature control system below - 45 °C are equipped with opposite water-cooled auxiliary heat exchanger.

## 导热介质

### HEAT CONDUCTING MEDIUM

选择合适的导热介质对于制冷加热动态控温系统安全、稳定、可靠的工作至关重要。需要根据设备应用温度范围选择合适的导热介质，并且配置合适的连接导管。

导热介质包括规格有10L、25L、30L、200L。确认订购介质时，要包括恒温系统需求导热介质、管路需求导热介质和外循环设备需求导热介质。

It is very important to select the appropriate heat conduction medium for the safe, stable and reliable operation of the dynamic temperature control system . According to the application temperature range of the equipment, it is necessary to select the appropriate heat conduction medium and configure the appropriate connecting pipe.

The thermal conductivity medium includes 10L, 25L, 30L and 200L. When ordering the medium, it should include the heat conduction medium required by constant temperature system & pipeline & external circulating equipments.

## 技术参数

### TECHNICAL PARAMETER

规格型号 Model	容积 (L) Volume	空载温度 (°C) No-load-temp	制冷量 Cooling capacity	流量 (L/min) Flow	扬程H(m) Lift	电压 (V) Voltage	制冷电流 Cooling current	加热电流 Heating current	加热功率 Heating power	制冷功率 (W) Cooling power	冷槽尺寸 (mm) Tank
GDX-10/30	7L	-30~200°C	2010-650W	20	8	220V	5.2A	13.6	3kW	1000	160*310
GDX-10/40	7L	-40~200°C	2800-550W	20	8	220V	5.8A	13.6	3kW	1300	160*310
GDX-10/80	7L	-80~200°C	3650-950W	35	12	220V	10A	13.6	3kW	2500	160*310
GDX-20/30	7L	-30~200°C	2800-600W	20	8	220V	6.3A	13.6	3kW	1300	160*310
GDX-20/40	7L	-40~200°C	7300-1200W	20	8	380V	7A	9	4.5kW	3200	160*310
GDX-20/80	7L	-80~200°C	8760-950W	35	12	380V	12A	9	4.5kW	6000	160*310
GDX-30/30	10L	-30~200°C	4600-600W	35	12	220V	11A	20	4.5kW	2100	200*350
GDX-30/40	10L	-40~200°C	7300-900W	35	12	380V	7A	9	4.5kW	3200	200*350
GDX-30/80	10L	-80~200°C	8760-950W	35	12	380V	12A	9	4.5kW	6000	200*350
GDX-50/30	17L	-30~200°C	10500-900W	35	12	380V	8A	12	6kW	4000	250*370
GDX-50/40	17L	-40~200°C	12775-650W	35	12	380V	11A	12	6kW	5500	250*370
GDX-50/80	17L	-80~200°C	15330-550W	35	12	380V	20A	12	6kW	10800	250*370
GDX-100/30	35L	-30~200°C	15750-1600W	43	20	380V	11A	18	9kW	5600	300*500
GDX-100/40	35L	-40~200°C	15750-550W	43	20	380V	11A	18	9kW	5600	300*500
GDX-100/80	35L	-80~200°C	15750-450W	43	20	380V	20A	18	9kW	11000	300*500