

## VOCs 捕集设备

设备采用原装进口压缩机、自复叠制冷技术，制冷能力强，温度低（ $\leq -155^{\circ}\text{C}$ ），是捕集微量污染气体的能手，主要适用于光谱或质谱环境监测仪器，监测环境中 C2-C12 的分析，能捕集不少于 125 种挥发性有机物。配备相应分析仪器，提高仪器分析能力、精度，准确测定空气中污染组分成分。完全取代使用液氮制冷监测分析，解决了液氮冷阱捕集的运行费用高，操作繁琐、操作危险等不利因素，同时解决其他超低温或吸附捕集量少、分析精度低的缺点。

设备制造、技术、配件国产化；研发的制冷单元，气体流道采用特殊密闭式换热结构，承压高，流量大，换热快，制冷快，节能环保；  
该款设备具有运行稳定、低噪音、低功耗、便于移动等特点；打破国际同类设备的垄断。

我们设计智造的配套于环境监测的 VOCs 捕集机组，已经成功多次应用于大型国际会议现场的环境检测，列装环保部门 VOCs 检测设备，为中国赢得良好国际声誉；为中国的环保事业做出一份贡献；

VOCs 捕集机组是专业用于 VOCs 在线监测分析仪器之重要组成。是高校实验室、科研院所、环保监测等行业首选设备；

特殊需求请咨询本公司。本公司接受定制需求；

## 设备特点:

- 1: 采用本公司最新研发的自复叠制冷技术; 设备体积减少;
- 2: 采用本公司自主研发制冷单元, 制冷剂无泄漏, 延长设备使用年限;
- 3: 采用原装进口压缩机, 具有运行平稳, 噪音低, 寿命长。
- 4: 阱管长度、数量可任意组合;
- 5: 极低温度, 可快速降温至 $-155^{\circ}\text{C}$ , 降温平稳; 获得“液氮制冷终结者”, 极大节约社会能源;
- 6: 浓缩冷阱自行设计, 方便配合客户采集分析;
- 7; 可配置快速加热装置, 对冷阱内部残液进行吹扫;
- 8: 控制系统采用 Deepcold 自主研发控制系统, 新能稳定可靠, 误差小;



## 应用行业图谱:



## 型号定义:

DC/VT ① - ② ③ / ④ / ⑤ / ⑥ / ⑦

## 型号说明:

DC/VT: 蒂珀克 ® VOCs 捕集机组;

DC/VT	1	2	3	4	5	6	7	说明
蒂珀克								蒂珀克®VOCs捕集机组
制冷原理	1							单机自覆叠
	2							双级覆叠
	3							三级覆叠
	4							单机双级覆叠
用温度 (°C) :		150						150~-150°C; 依此类推;
机组名义功率 (HP):			03					03表示3P;依此类推;
冷阱管数量				2				2表示2路冷阱管;依此类推;
冷凝方式						W		水冷
						F		风冷
系统电压 (V)						2		系统电压220V
						3		系统电压380V
压缩机形式							S	半封闭压缩机
								T
DC/VT	1	2	3	4	5	6	7	说明

备注：①~③为基础型号，④~⑦为扩展型号；

例如：DC/VT1-150/03/2/W/2/S

## VOCs Trapping Equipment

This equipment applies the original imported compressor and auto-cascade refrigerating technology with a strong refrigerating capacity and low temperature ( $\cong -155^{\circ}\text{C}$ ). It is skillful for trapping the trace pollution gas, which is mainly applicable to the spectrum or mass spectrum environment monitoring equipment for monitoring the analysis of C2-C12 in environment, capable of trapping the volatile organic compounds of no less than 125. It is configured with corresponding analytical instrument so enhance its analytical capacity and precision, accurately measuring the polluting components in the air. It can completely replace the monitoring and analysis by using liquid nitrogen refrigeration, as well as resolve the unfavourable factors e.g. high operation cost, complex operation, high risk of operation etc. for liquid nitrogen cold trapping while compensating the shortages of other ultralow temperature or adsorption e.g. less trapping amount, low analytical precision etc.

Equipment manufacturing, technology and accessories are domestically produced; The developed refrigerating unit, gas channel apply special closed heat exchange structure with a high pressure-bearing, large flow, fast heat exchange, rapid refrigeration, energy saving and environmental protection;

This equipment is featured by stable operation, low noise, low power consumption and easy movement etc; Break through the monopoly of internationally similar equipment.

VOCs Trapping Unit of supporting the environment monitoring designed and manufactured by our company has been successfully applied to the site environment monitoring for large international conferences, and nominated as VOCs detection equipment of environmental protection department, winning a good international reputation for China and making a contribution to environmental protection cause for China;

VOCs Trapping Unit is an important component specialized for VOCs online monitoring and analytical instrument, it is also the prioritized equipment for university's laboratory, research institutes, and environment protection monitor etc.

Please consult our company for any special demand. We are willing to accept any of your customized requirement.

### **Equipment Feature:**

- 1: Apply the newly developed auto-cascade refrigerating technology of our company; Equipment dimension is reduced;
- 2: Apply the refrigerating unit of independent research and development for ARC with no leakage of refrigerant and extension of service life for equipment;
- 3: Adopting the original imported compressor with features of a smooth operation, low noise, low power, low energy

consumption and long life.

4: Free combination for length and quantity of trapping pipe;

5: Ultralow temperature, capable of rapidly reducing temperature to  $-155^{\circ}\text{C}$  with a stable temperature reduction; Praised as the “terminator of liquid nitrogen refrigeration”, greatly save social energy;

6: Independent design of cold trap condensation, facilitating the collection and analysis of customers;

7; Capable of configuring the rapid heating device, blowing the residual liquid in cold trap;

8: Controlling system applies Deepcold’s independently developed controlling system with a stable and reliable new energy, and minor error;

### **Applicable Industry Guide:**

### **Model Definition:**

DC/VT① - ② ③ / ④ / ⑤ / ⑥ / ⑦



Model Instruction:

DC/VT:Deepcold<sup>®</sup>VOCs Trapping Equipment

DC/VT	1	2	3	4	5	6	7	Remarks
Deepcold								Deepcold <sup>®</sup> VOCs Trapping Equipment
Ref. Prin.	1							ARC
	2							Double-Stage Cascade
	3							Three-Stage Cascade
	4							Single-Machine Double-Stage Cascade
Temp. (°C) :		080						For example:080~ -80°C; and so on;
Unit Nom. Power (HP) :			03					For example: 03 indicates 3HP; and so on;
Number of Cold Trap Pipe				2				For example: 2-2 Channel Cold Trap and so on;
Condensation Mode					W			Water Cooling
					F			Forced-air Cooling
System Voltage (V)						2		220Vac
						3		380Vac
Compressor Mode							S	Semi-Hermetic Compressor
							T	Total-Hermetic Compressor
DC/VT	1	2	3	4	5	6	7	Remarks

Remarks: ①~③ are basic models, ④~⑦ are expanding model;

For example: DC/VT1-150/03/2/W/2/S



## 配置说明： Configuration Table

型号规格 Model	DC/VT1-150/00	DC/VT1-150/01	DC/VT1-150/02	DC/VT1-150/03	DC/VT1-05
冷阱数量 Number of Cold Trap	2	2	3	4	6
冷阱最大内径直径 (mm) Max. Inner Diameter of Cold Trap	6	8	10	12	14
单支冷阱长度 (mm) Single Cold Trap Length (mm)	250	300	350	400	400
温度 (°C) Temp.	-150°C~-160°C, (≦-160°C请咨询厂商, 本表以-150°C标准编写)				
压缩机名义功率 (HP) Compressor power	3/4	1	2	3	5
压缩机品牌 Compressor brand	泰康/恩布拉科 Tecumseh/Embraco			泰康 Tecumseh	
冷凝方式 Condensation Mode	风冷/水冷 Forced-air Cooling/Water Cooling				
制冷剂 Refrigerants	制冷剂均为DEEPCOLD环保混合型制冷剂 DC/GDI refrigerants are all DEEPCOLD environment-friendly compound refrigerants				
温度精度 Temp. Precision	±5°C				
控制方式 Control system	简易控制 (标配); Deepcold自开发系统+5寸/7寸/10寸HMI (选配) (Standard configuration) Simple control; (Optional) Deepcold independently developed system +5 inch/7 inch/10 inch HMI.				
数据记录 Data record	选配项目: 温度历史曲线记录、报警记录、设备运行状态记录; 远程控制、配方设置; Optional :Temperature historical curve record, parameter setting, alarm record, equipment operation state record; Remote control, formula setting;				
安全防护 Safety Protection	相序错相断相保护、压缩机内保护、过载保护; 压力保护, 过热保护装置、传感器故障保护等多种安全保障功能 Configured with various safety protection functions e.g. phase sequence, phase dislocation, open-phase protection, electric leakage protection, compressor inner protection, overload protection, overheat protection device, sensor failure protection etc.; Configured with various safety protection functions e.g.				
总功率Total Power(KW)	1.0(220/380V)	1.5(220/380V)	2.0(220/380V)	2.5(380V)	4(380V)
框架 Framework	标准: 冷轧板钣金喷塑; 选配: SUS304钣金; Standard: Cold-Rolled Sheet Metal Plate Spraying Plastics; Optional: SUS304 Metal Plate				
外形尺寸 (MM) (L*W*H) External Dimension	650*750*1000	650*750*1000	650*850*1000	700*850*1150	800*900*1200
	尺寸仅供参考, 尺寸大小与制冷机组布置方式有关; Dimension shall be for reference only, dimension is relating to arrangement form of refrigerating unit;				
其他选配Other Options	其他按照客户需求定制配置; Other customized configurations according to customer requirements;				