



川源(中国)机械有限公司  
GSD (China) Co., Ltd.

A photograph showing several large, white, rectangular industrial units, likely heat pump sludge dryers, arranged in a factory or warehouse. The units are connected by blue pipes and have various valves and gauges. The background shows a large industrial building with a high ceiling and structural beams.

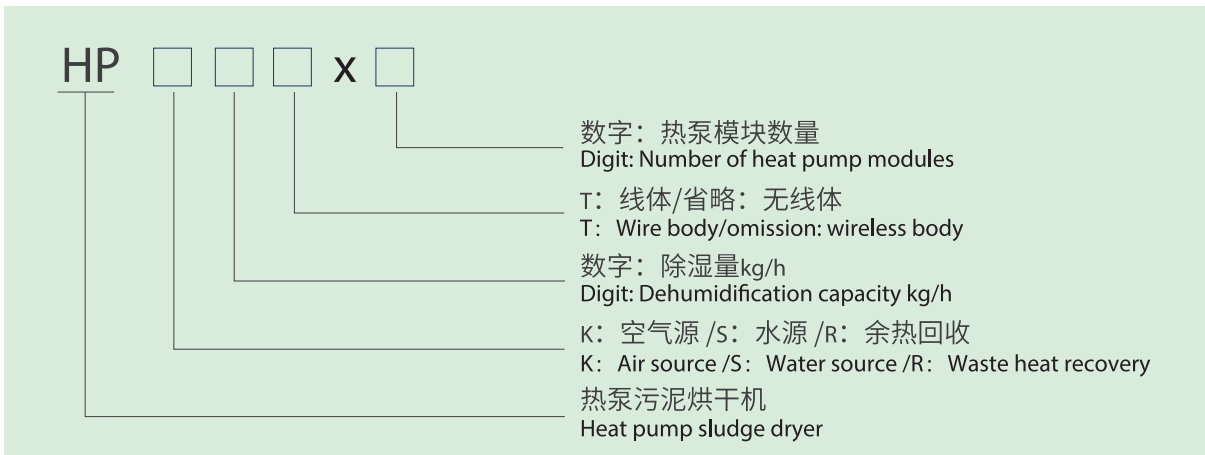
# HP 热泵污泥烘干机

HP Heat pump sludge dryer

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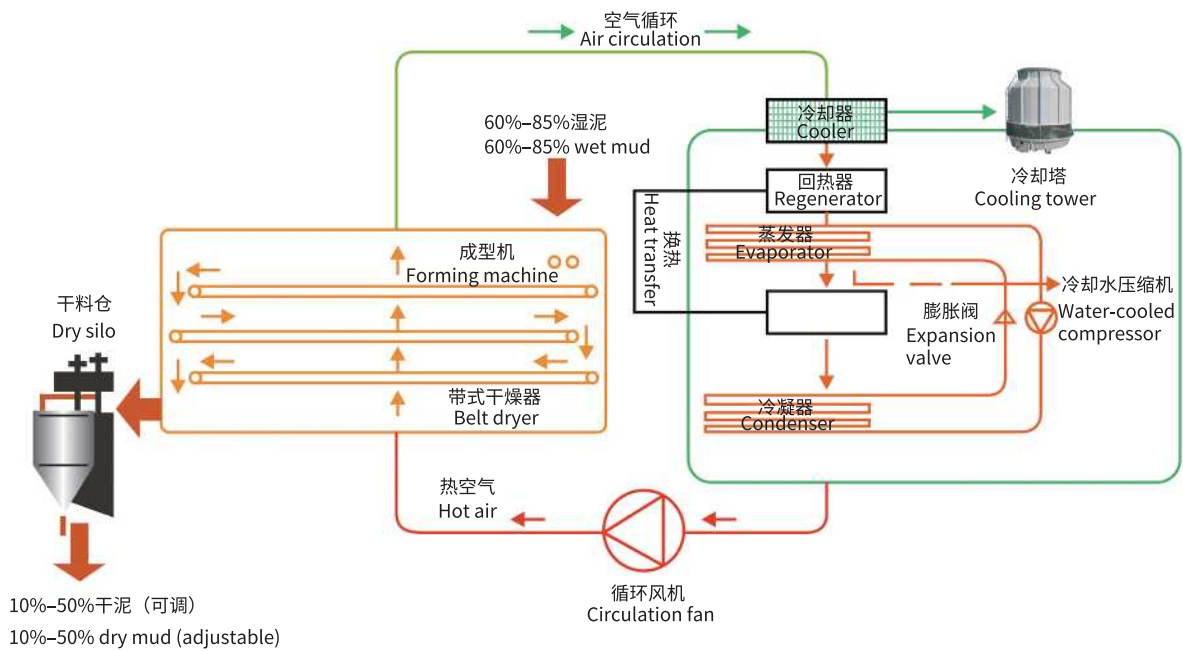
## HP Heat pump sludge dryer

### 型号说明 Type description



### 热泵型带式污泥干化系统运行工艺流程图

### Operation process flow chart of heat pump belt sludge drying system



## 热泵型闭式污泥干化系统原理

### Heat Pump Closed Sludge Drying System Principle

利用热泵系统，将来自干化腔体内的湿空气经过蒸发器进行降温脱湿处理，同时通过冷凝器进行升温再热，加热成干燥的热空气送入干化腔内，如此反复循环，将污泥中的水份通过冷凝水排放到污水池中。

The humid air from the drying chamber is cooled and dehumidified by the heat pump system through the evaporator, heated and reheated through the condenser at the same time, and the heated dry air is sent into the drying chamber. The cycle is repeated, and the water in the sludge is discharged into the sewage tank through the condensate.

## 热泵型带式污泥干化系统技术参数

### Heat Pump Belt Sludge Drying System Technical Parameters

产品型号 Product Model		HP-K20T	HP-S25T	HP-K40T	HP-S50T	HP-K80T	HP-S100T	HP-S100T×2	HP-S100T×3
标准去水量 Standard Water Removal	kg/24h	480	600	960	1200	1920	2400	4800	7200
除水能力 Water Removal Capacity	kg/h	20	25	40	50	80	100	200	300
运行功率 Operating Power	kW	10	10	18	18	36	36	67	98
装机功率 Installed Power	kW	16	16	24	24	42	42	79	116
热泵模块数 Number of Heat Pump Modules	台	1	1	1	1	1	1	2	3
压缩机台数 Number of Compressors	台	1	1	1	1	4	4	8	12
冷却方式 Cooling Method		风冷 Air cooling	水冷 Water cooling	风冷 Air cooling	水冷 Water cooling	风冷 Air cooling	水冷（可选风冷） Water cooling (air cooling optional)		
冷却水流量（温差10°C） Cooling Water Flow Rate (temperature difference 15°C)	m <sup>3</sup> /h	-	0.75	-	1.4	-	2.7	5.3	8
冷媒名称 Refrigerant Name		R134a							
额定电压/频率 Rated Voltage/Frequency	V/Hz	380V 3N~50Hz							
干燥温度 Drying Temperature	°C	48~56°C（回风 Return air）/65~80°C（送风 supply air）							
湿泥使用范围 Use Range of Wet Mud	%	含水率Moisture content(40%~82%) (不同含水率适应性不同 different moisture content with different adaptability)							
干料含水 Moisture Content of Dry Material	%	变频调节，含水率（10%~60%）（进泥含水率不同干料含水率调整范围不同） Variable frequency regulation, moisture content (different moisture content adjustment ranges of dry materials for incoming sludge with different moisture contents)							
成型方式 Forming Method		切条、挤条（不同含水率、泥性应适合选用） Barcutting and extruding (selected based on different moisture contents and sludge properties)							
热泵外形尺寸（长） Heat Pump Dimensions (length)	mm	2100	2100	2600	2600	2700	2700	5400	8100
热泵外形尺寸（宽） Heat Pump Dimensions (width)	mm	1600	1600	1860	1860	1200	1200	1200	1200
热泵外形尺寸（高） Heat Pump Dimensions (height)	mm	1800	1800	2200	2200	2420	1800	1800	1800
整体外形尺寸（长） Overall Dimensions (length)	mm	2700	2700	3310	3310	3800	3800	6500	9200
整体外形尺寸（宽） Overall Dimensions (width)	mm	1600	1600	1860	1860	2300	2300	2300	2300
整体外形尺寸（高） Overall Dimensions (height)	mm	2200	1900	2586	2286	3100	2800	2800	2800
结构形式 Structure Form		整装/组装 Packaged/ assembly	整装 Packaged	整装/组装 Packaged/ assembly	整装 Packaged	整装/组装 Packaged/ assembly	整装 Packaged	组装 assembly	组装 assembly
机组重量 Unit Weight	kg	1500	1500	2200	2200	3300	3300	6000	8000



## 热泵型带式污泥干化系统技术参数 Technical parameters of heat pump belt sludge drying system

产品型号 Product Model		HP-S200T×2	HP-S200T×3	HP-S200T×4	HP-S200T×5
标准去水量 Standard Water Removal	kg/24h	9600	14400	19200	24000
除水能力 Water Removal Capacity	kg/h	400	600	800	1000
运行功率 Operating Power	kW	120	175	234	290
装机功率 Installed Power	kW	144	211	282	350
热泵模块数 Number of Heat Pump Modules	台	2	3	4	5
压缩机台数 Number of Compressors	台	8	12	16	20
冷却方式 Cooling Method		水冷 Water cooling			
冷却水流量 (温差10°C) Cooling Water Flow Rate (temperature difference 15°C)	m³/h	9.5	14.3	19.1	23.9
冷媒名称 Refrigerant Name		R134a			
额定电压/频率 Rated Voltage/Frequency	V/Hz	380V 3N~50Hz			
干燥温度 Drying Temperature	°C	48~56°C (回风 Return air) /65~80°C (送风 supply air)			
湿泥使用范围 Use Range of Wet Mud	%	含水率Moisture content(40%~82%) (不同含水率适应性不同 different moisture content with different adaptability)			
干料含水 Moisture Content of Dry Material	%	变频调节, 含水率 (10%~60%) (进泥含水率不同干料含水率调整范围不同) Variable frequency regulation, moisture content (different moisture content adjustment ranges of dry materials for incoming sludge with different moisture contents)			
成型方式 Forming Method		切条、挤条 (不同含水率、泥性应适合选用) Barcutting and extruding (selected based on different moisture contents and sludge properties)			
热泵外形尺寸 (长) Heat Pump Dimensions (length)	mm	6500	9750	13000	16250
热泵外形尺寸 (宽) Heat Pump Dimensions (width)	mm	1400	1400	1400	1400
热泵外形尺寸 (高) Heat Pump Dimensions (height)	mm	2200	2200	2200	2200
整体外形尺寸 (长) Overall Dimensions (length)	mm	8100	11350	14600	17850
整体外形尺寸 (宽) Overall Dimensions (width)	mm	3110	3110	3110	3110
整体外形尺寸 (高) Overall Dimensions (height)	mm	3200	3200	3200	3200
结构形式 Structure Form		组装 assembly	组装 assembly	组装 assembly	组装 assembly
机组重量 Unit Weight	kg	9200	12500	16000	18000



## 热泵型带式污泥干化系统技术参数

### Technical parameters of heat pump belt sludge drying system

产品型号 Product Model		HP-S200T×6	HP-S200T×7	HP-S200T×8	HP-S200T×9	HP-S200T×10
标准去水量 Standard Water Removal	kg/24h	28800	33600	38400	43200	48000
除水能力 Water Removal Capacity	kg/h	1200	1400	1600	1800	2000
运行功率 Operating Power	kW	345	404	460	515	571
装机功率 Installed Power	kW	417	488	556	623	691
热泵模块数 Number of Heat Pump Modules	台	6	7	8	9	10
压缩机台数 Number of Compressors	台	24	28	32	36	40
冷却方式 Cooling Method		水冷 Water cooling				
冷却水流量 (温差10°C) Cooling Water Flow Rate (temperature difference 15°C)	m <sup>3</sup> /h	28.6	33.4	38.2	42.9	47.7
冷媒名称 Refrigerant Name		R134a				
额定电压/频率 Rated Voltage/Frequency	V/Hz	380V 3N~50Hz				
干燥温度 Drying Temperature	°C	48~56°C (回风 Return air) /65~80°C (送风 supply air)				
湿泥使用范围 Use Range of Wet Mud	%	含水率Moisture content(40%~82%) (不同含水率适应性不同 different moisture content with different adaptability)				
干料含水 Moisture Content of Dry Material	%	变频调节, 含水率 (10%~60%) (进泥含水率不同干料含水率调整范围不同) Variable frequency regulation, moisture content (different moisture content adjustment ranges of dry materials for incoming sludge with different moisture contents)				
成型方式 Forming Method		切条、挤条 (不同含水率、泥性应适合选用) Barcutting and extruding (selected based on different moisture contents and sludge properties)				
热泵外形尺寸 (长) Heat Pump Dimensions (length)	mm	19500	22750	26000	29250	32500
热泵外形尺寸 (宽) Heat Pump Dimensions (width)	mm	1400	1400	1400	1400	1400
热泵外形尺寸 (高) Heat Pump Dimensions (height)	mm	2200	2200	2200	2200	2200
整体外形尺寸 (长) Overall Dimensions (length)	mm	21100	24350	27600	30850	34100
整体外形尺寸 (宽) Overall Dimensions (width)	mm	3110	3110	3110	3110	3110
整体外形尺寸 (高) Overall Dimensions (height)	mm	3200	3200	3200	3200	3200
结构形式 Structure Form		组装 assembly	组装 assembly	组装 assembly	组装 assembly	组装 assembly
机组重量 Unit Weight	kg	22000	25000	28000	31000	34000



## 热泵型厢式污泥干化机技术参数 Heat Pump Chamber Sludge Dryer Technical Parameters

产品型号 Product Model		HP-K10	HP-K18	HP-K33	HP-K38
标准去水量 Standard Water Removal	kg/24h	200	400	800	900
运行功率 Operating Power	kW	3.5	6	12	14
装机功率 Installed Power	kW	6.5	10.5	21	23
能耗 Energy Consumption	kg.h2O/kw.h	2.0~4.0			
压缩机台数 Number of Compressors	台	1	1	1	1
料斗外形尺寸 External Dimensions of Hopper	mm	800×800×750	900×860×1000	1250×1250×1250	1250×1250×1250
冷却方式 Cooling Method		风冷（可选水冷） Air cooling(water cooling optional)			
冷媒名称 Refrigerant Name		R134a			
额定电压/频率 Rated Voltage/Frequency	V/Hz	380V 3N~50Hz			
干燥温度 Drying Temperature	°C	45~50°C（回风）/60~80°C（送风）			
干料含水率 Dry Material Moisture Content	%	10%~40%			
外形尺寸（长×宽×高） Dimensions (length X width X height)	mm	1700×1500×1700	2118×1622×2000	2800×1900×2300	2800×1900×2300
结构形式 Structure Form		组装（采用水冷方式时，机组整装） Assembly (packaged unit when water cooling is adopted)			
机组重量 Unit Weight	kg	650	1000	1550	1650

## 热泵型污泥干化系统 技术特点 Technical Characteristics of Heat Pump Sludge Drying System

- 深度脱水 减量无限**  
 多级能量综合处理，强大的干化减量能力，减量高度80%以上。颠覆传统干化方式存在的干泥含水率高、减量能力弱的技术瓶颈。
- 高效除湿 费用无忧**  
 创新设计，高效节能，每千瓦功率每小时脱水可达4kg以上，减量费用更节省。比传统低温干化设备节约50%以上。
- 闭式循环 环境友好**  
 采用密闭式烘干设计，无臭气排放，无需二次增加成本安装昂贵的除臭系统，可直接安装在厂区,进行污泥集中处置，冷凝水COD低，处理简单。
- 冷热平衡 节能降耗**  
 采用能量综合应用技术，冷热平衡处理利用，无热量损失，系统工作能效更出色区别于持续排湿散热，持续高温供热的开式干化设备。
- 热泵干化 无尘无爆**  
 热泵全密闭低温干化运行，安全环保，无扬尘与爆炸隐患，出料温度低于48°C，无需二次冷却，可直接储存。
- 品种齐全 烘干灵活**  
 精确，解决传统干化时间不确定和干化程度不精确等难点。产品的烘干量从每小时3kg-1000kg，满足不同场所的烘干要求。同时产品进行全面防腐设计，保证产品的质量，使用年限更长。
- 自由设定 干度可调**  
 可以自由设定烘干时间和烘干温度，满足不同干化含水率要求，控制干化程度更精确，解决传统干化时间不确定和干化程度不精确等难点。
- Deep Dehydration, Unlimited Reduction**  
 Multi-level energy comprehensive processing, powerful drying reduction capacity, with reduction by more than 80%. Game-changer to the technical bottlenecks of high moisture content and weak reduction capacity of traditional drying methods.
- Efficient Dehumidification, Cost-effective and Worry-free**  
 Innovative design with multiple invention patents, high efficiency, and energy-saving, with dehydration/kw-h up to 4kg, reducing the quantity and saving cost. Save more than 50% compared with traditional low-temperature drying equipment.
- Closed-loop and Environment-friendly**  
 Closed drying design, no odor emission, no need to install an expensive deodorizing system with secondary cost increase; directly installed in the plant area for centralized disposal of sludge, with a low COD of condensate and simple treatment.
- Cooling and Heating Balance, Saving Energy and Reducing Consumption**  
 Comprehensive energy application technology, cooling and heating balance treatment and utilization without heat loss, better energy efficiency of the system, different from the open-type drying equipment with continuous dehumidification, heat dissipation, and high-temperature heating.
- Heat Pump Drying, Dust-free and Explosion-proof**  
 Fully closed, low-temperature drying operation of the heat pump, safe and environment-friendly, free of dust and explosion hazard, with the discharging temperature below 48°C, secondary cooling not required, direct storage allowed.
- Full Range for Flexible Drying**  
 Precision, solving traditional difficulties such as uncertain drying time and imprecise drying degree. Drying capacity of the product ranging from 3kg to 1000kg per hour to meet the drying requirements of different places, with a comprehensive anti-corrosion design to ensure product quality and longer service life at the same time.
- Free Setting with Adjustable Dryness Degree**  
 Free setting of the drying time and temperature to meet the different drying moisture content requirements, obtain more accurate control of the drying degree, and solve the difficulties of traditional methods such as uncertain drying time and imprecise drying degree.



## 余热型闭式污泥干化系统技术参数

### Waste Heat Closed Sludge Drying System Technical Parameters

产品型号 Product Model		HP-R100T	HP-R100T×2	HP-R100T×3	HP-R200T×2	HP-R200T×3
标准去水量 Standard Water Removal	kg/24h	2500	5000	7500	10000	15000
除水能力 Water Removal Capacity	kg/h	104	208	312	416	624
运行功率 Operating Power	kW	13	19	25	38	52
装机功率 Installed Power	kW	15	21	28	42	58
标准供热量 Standard Heat Supply	kW	100	200	300	400	600
热水流量 Hot Water Flow Rate	m <sup>3</sup> /h	4	9	13	17	26
标准冷却量 Standard Cooling Capacity	kW	90	180	270	360	540
冷却水流量 (温差12°C) Cooling Water Flow Rate (temperature difference 12°C)	m <sup>3</sup> /h	6.5	13	19.5	26	39
模块数量 Number of modules		1	2	3	2	3
标准供热工况 Standard Heating Condition	°C	90°C/70°C (热水Hot water)				
冷却工况 Cooling Condition	°C	33°C/45°C (冷却水Cooling water)				
额定电压/频率 Rated Voltage/Frequency	V/Hz	380V 3N~50Hz				
干燥温度 Drying Temperature	°C	48~56°C (回风Return air) /65~80°C (送风supply air)				
湿泥使用范围 Use Range of Wet Mud	%	含水率Moisture content(40%~82%) (不同含水率适应性不同 different moisture content with different adaptability)				
干料含水 Moisture Content of Dry Material	%	变频调节, 含水率 (10%~60%) (进泥含水率不同干料含水率调整范围不同) Variable frequency regulation, moisture content (different moisture content adjustment ranges of dry materials for incoming sludge with different moisture contents)				
成型方式 Forming Method		切条、挤条 (不同含水率、泥性应适合选用) Barcutting and extruding (selected based on different moisture contents and sludge properties)				
热泵外形尺寸 (长) Heat Pump Dimensions (length)	mm	2700	5400	8100	6500	9750
热泵外形尺寸 (宽) Heat Pump Dimensions (width)	mm	1200	1200	1200	1400	1400
热泵外形尺寸 (高) Heat Pump Dimensions (height)	mm	1800	1800	1800	2200	2200
整体外形尺寸 (长) Overall Dimensions (length)	mm	3800	6500	9200	8100	11350
整体外形尺寸 (宽) Overall Dimensions (width)	mm	2300	2300	2300	3110	3110
整体外形尺寸 (高) Overall Dimensions (height)	mm	2800	2800	2800	3200	3200
结构形式 Structure Form		整装 Packaged	组装 assembly	组装 assembly	组装 assembly	组装 assembly
机组重量 Unit Weight	kg	3300	6000	8000	9200	12500



## 余热型闭式污泥干化系统技术参数 Technical parameters of heat pump belt sludge drying system

产品型号 Product Model		HP-R200T×4	HP-R200T×5	HP-R200T×6	HP-R200T×7	HP-R200T×8	HP-R200T×9	HP-R200T×10
标准去水量 Standard Water Removal	kg/24h	20000	25000	30000	35000	40000	45000	50000
除水能力 Water Removal Capacity	kg/h	832	1040	1248	1456	1664	1872	2080
运行功率 Operating Power	kW	70	84	98	116	130	145	159
装机功率 Installed Power	kW	77	93	108	128	143	160	175
标准供热量 Standard Heat Supply	kW	800	1000	1200	1400	1600	1800	2000
热水流量 Hot Water Flow Rate	m <sup>3</sup> /h	34	43	52	60	69	77	86
标准冷却量 Standard Cooling Capacity	kW	720	900	1080	1260	1440	1620	1800
冷却水流量 (温差12℃) Cooling Water Flow Rate (temperature difference 12℃)	m <sup>3</sup> /h	52	65	78	91	104	117	130
模块数量 Number of modules		4	5	6	7	8	9	10
标准供热工况 Standard Heating Condition	°C	90°C/70°C (热水Hot water)						
冷却工况 Cooling Condition	°C	33°C/45°C (冷却水Cooling water)						
额定电压/频率 Rated Voltage/Frequency	V/Hz	380V 3N~50Hz						
干燥温度 Drying Temperature	°C	48~56°C (回风Return air) /65~80°C (送风supply air)						
湿泥使用范围 Use Range of Wet Mud	%	含水率Moisture content(40%~82%) (不同含水率适应性不同 different moisture content with different adaptability)						
干料含水 Moisture Content of Dry Material	%	变频调节, 含水率 (10%~60%) (进泥含水率不同干料含水率调整范围不同) Variable frequency regulation, moisture content (different moisture content adjustment ranges of dry materials for incoming sludge with different moisture contents)						
成型方式 Forming Method		切条、挤条 (不同含水率、泥性应适合选用) Barcutting and extruding (selected based on different moisture contents and sludge properties)						
热泵外形尺寸 (长) Heat Pump Dimensions (length)	mm	13000	16250	19500	22750	26000	29250	32500
热泵外形尺寸 (宽) Heat Pump Dimensions (width)	mm	1400	1400	1400	1400	1400	1400	1400
热泵外形尺寸 (高) Heat Pump Dimensions (height)	mm	2200	2200	2200	2200	2200	2200	2200
整体外形尺寸 (长) Overall Dimensions (length)	mm	14600	17850	21100	24350	27600	30850	34100
整体外形尺寸 (宽) Overall Dimensions (width)	mm	3110	3110	3110	3110	3110	3110	3110
整体外形尺寸 (高) Overall Dimensions (height)	mm	3200	3200	3200	3200	3200	3200	3200
结构形式 Structure Form		组装 assembly	组装 assembly	组装 assembly	组装 assembly	组装 assembly	组装 assembly	组装 assembly
机组重量 Unit Weight	kg	16000	18000	22000	25000	28000	31000	34000



## 余热型闭式污泥干化系统 技术特点

### Technical parameters of heat pump belt sludge drying system

- **余热式热源设计**  
可利用现有的烟气、发电机余热、蒸汽冷凝水、厌氧消化（燃气制热水）、太阳能等制热水为设备热源。
- **深度脱水减量无限**  
多级能量综合处理，强大的干化减量能力，减量高达80%以上。颠覆传统干化方式存在的干泥含水率高、减量能力弱的技术瓶颈。
- **高效除湿费用无忧**  
多个创新设计，高效节能，每吨80%含水率的湿泥干化至10%含水率的干泥，综合电耗低至50kW·h。
- **闭式循环环境友好**  
采用密闭式烘干设计，无臭气排放，无需二次增加成本安装昂贵的除臭系统，可直接安装在厂区，进行污泥集中处置，冷凝水COD低，处理简单。
- **冷热平衡 节能降耗**  
采用能量综合应用技术，冷热平衡处理利用，区别于持续排湿散热，持续高温供热的开式干化设备。系统工作能效更出色。
- **余热干化无尘无爆**  
余热全密闭干化运行，安全环保，无扬尘与爆炸隐患，出料温度低于48℃，无需二次冷却，可直接储存。
- **品种齐全烘干灵活**  
产品的烘干装置湿料进料范围每小时3kg-1000kg，满足不同场所的烘干要求。同时产品进行全面防腐设计，保证产品的质量，使用年限更长。
- **自由设定 干度可调**  
可以自由设定烘干时间和烘干温度，满足不同干化含水率要求，控制干化程度更精确，解决传统干化时间不确定和干化程度不精确等难点。
- **Waste Heat Closed Sludge Drying System Technical Characteristics**  
Existing flue gas, generator waste heat, steam condensate, anaerobic digestion (gas-fired hot water), solar energy, and other hot water used as equipment heat sources.
- **Deep Dehydration, Unlimited Reduction**  
Multi-level energy comprehensive processing, powerful drying reduction capacity, with reduction by more than 80%. Game-changer to the technical bottlenecks of high moisture content and weak reduction capacity of traditional drying methods.
- **Efficient Dehumidification, Cost-effective and Worry-free**  
Innovative design with multiple invention patents, high efficiency, and energy-saving, with the comprehensive power consumption as low as 50 kW·h for drying wet sludge with a moisture content of 80% to 10%.
- **Closed-loop and Environment-friendly**  
Closed drying design, no odor emission, no need to install an expensive deodorizing system with secondary cost increase; directly installed in the plant area for centralized disposal of sludge, with a low COD of condensate and simple treatment.
- **Cooling and Heating Balance, Saving Energy and Reducing Consumption**  
Comprehensive energy application technology, cooling and heating balance treatment and utilization, different from the open-type drying equipment with continuous dehumidification, heat dissipation, and high-temperature heating, better energy efficiency of the system.
- **Waste Heat Drying Operation, Dust-free and Explosion-proof**  
Fully closed drying operation of waste heat, safe and environment-friendly, free of dust and explosion hazard, with the discharging temperature below 48°C, secondary cooling not required, and direct storage allowed.
- **Full Range for Flexible Drying**  
Drying capacity of the product ranging from 3kg to 1000kg per hour to meet the drying requirements of different places, with a comprehensive anti-corrosion design to ensure product quality and longer service life at the same time.
- **Free Setting with Adjustable Dryness Degree**  
Free setting of the drying time and temperature to meet the different drying moisture content requirements, obtain more accurate control of the drying degree, and solve the difficulties of traditional methods such as uncertain drying time and imprecise drying degree.



欢迎索取以下产品型录



泵系列

潜水泵系列 | 陆上泵系列 | 特种泵系列



搅拌推流系列

搅拌机系列 | 推流器系列



供氧曝气系列

曝气机系列 | 曝气盘系列 | 曝气管系列



风机系列

磁悬浮鼓风机 | 空气悬浮鼓风机 | 三叶罗茨鼓风机系列



污泥处理设备

带式脱水机 | 厢式压滤机 | 叠螺式脱水机 | 污泥干化设备 | 浅层高效气浮设备



智能化系列

智能设备 | 水务设备健康管理 | 水务系统工艺优化智联管理



反应器及套装设备

芬顿反应系统 | MBR生物膜反应器 | 预制泵站 | 一体化污水处理设备



耗材药剂及相关设备

生物绳 | PAC 聚合氯化铝 | PAM 聚丙烯酰胺 | 泡药设备

GSD 的经营理念

G-Green 绿色 S-Safe 安全 D-Development 永续经营



川源

水处理系统专业合作伙伴

免费咨询电话

400-657-9066

数据来源：公司实验室数据及客户实际使用数据，具体使用环境不同，数据可能存在差异。

The data on the brochure is based on the laboratory testing data and customers' actual operation data in the past. The actual data may be different in different application conditions.

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