



LEDING FILTER 核盛过滤 | 引领过滤科技 TECHNOLOGY

青岛核盛智能环保设备有限公司
QINGDAO HESHENG INTELLIGENT ENVIRONMENTAL PROTECTION EQUIPMENT CO., LTD.

烟台核盛过滤机械有限公司
YANTAI HESHENG FILTRATION MACHINERY CO., LTD.

青岛核盛智能环保设备有限公司
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官方网站

压滤机手册
FILTER PRESS MANUAL





COMPANY PROFILE

企业简介

青岛核盛智能环保设备有限公司是专业从事智能过滤设备的生产、研发和销售的高科技企业。公司聚集了中国从事过滤行业的顶尖人才，积累了二十多年的研发、生产、销售和服务经验，拥有先进的智能机加工设备。严格的质量控制、优质的售后服务、超前的创新意识和能力，使公司始终走在过滤行业的技术前沿。

公司的主要产品有：水平带式真空过滤机、陶瓷真空过滤机、叠式压滤机、智能压榨过滤机、水平带式加压过滤机、加压叠盘过滤机、带式真空震筛过滤机、离心机、管式过滤器等产品。广泛应用于化工、矿山、冶金、化肥、医药、食品、造纸、环保、污水处理、尾矿处理等行业。

公司秉承“为客户创造价值，让员工实现梦想，为社会创造财富”的经营理念，为用户提供高质量的产品和科学的过滤解决方案。

核盛环保，为您创造价值！

Qingdao Hesheng Intelligent Environmental Protection Equipment Co., Ltd. is a high-tech enterprise in production, R & D and sales for intelligent filters. We gathered the top talents in Chinese filtration field, they have more than 20 years' experience in R & D, production, sales and services. We have advanced intelligent machining equipment, the rigorous quality control system and high-class after-sales service system, the advanced innovation consciousness and ability to make us always walk at the forefront of the filter industry.

Our main products as follows: Horizontal Vacuum Belt Filter, Ceramic Disc Filter, Stacked Filter Press, Intelligent Horizontal Press Filter, Horizontal belt press filter, disc press filter, vacuum belt shaking filter, Centrifuge, Disc press filter, Belt vacuum vibrating stage dewatering machine, tubular filter, high efficiency thickener and so on. They are widely used in chemical industry, mining,

metallurgy, fertilizer, medicine, food, paper-making, environmental protection, waste water treatment and tailings dewatering industries.

We adhering to the "Creating value for clients, Realizing dreams for employees, Creating wealth for society " business philosophy, to provide high-quality equipment and scientific filtration proposal for users.

Hesheng Environmental Protection, Creat Value for You.



核心价值观 / CORE VALUE

厚德，聚力，创新，共赢。

VIRTUE, COHESION, INNOVATION, WIN-WIN.

核心竞争力 / CORE COMPETITIVENESS

团队协作，持续创新。

Team Work, Continuous Innovation.

企业精神 / ENTERPRISE SPIRIT

仁爱，坚韧，诚信，担当。

Benevolence, Tenacity, Honesty, Responsibility.

企业愿景 / ENTERPRISE VISION

员工幸福，团队一流，科技领先，全球品牌。

Happy Employees, First-class Team, Leading Technology, Global Brand.

经营理念 / BUSINESS PHILOSOPHY

为客户创造价值，为员工实现梦想，为社会创造财富。

Creating Value for Clients, Realizing Dreams for Employees,
Creating Wealth for Society.

企业使命 / ENTERPRISE MISSION

使过滤器更加智能高效，让核盛过滤走向世界。

To Make the Filter More Intelligent and Efficient, to Make Hesheng
Brand Filter to All Over the World.

安全理念 / SAFETY CONCEPT

岗位安全，环境安全，生产安全，出入安全。

Post Safety, Environment Safety, Production Safety, Access Safety

管理理念 / MANAGEMENT PHILOSOPHY

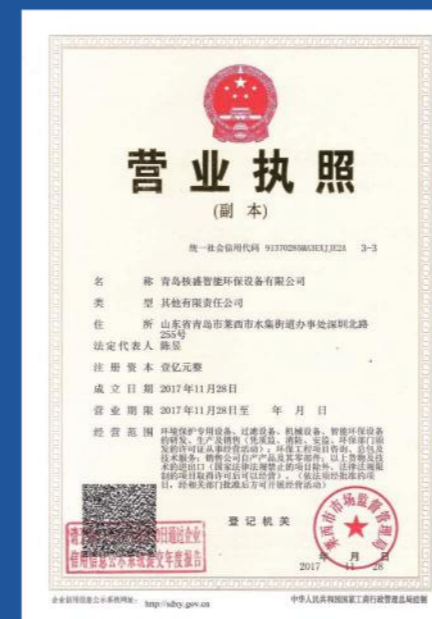
尊重融合，开放包容，科学决策，高效务实。

Respect Integration, Openness and Inclusiveness, Scientific Decision-making,
Efficiency and Pragmatism.

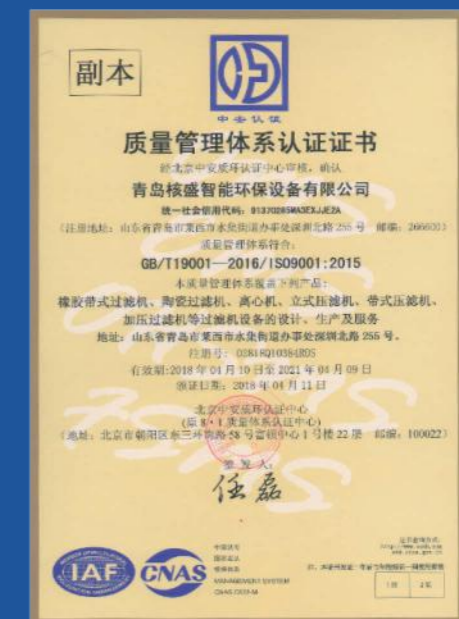
质量方针 / QUALITY POLICY

精益求精，用户满意，持续改进，追求卓越。

Make Perfection More Perfect, Customer Satisfaction, Continuous Improvement,
Pursuit of Excellence.



营业执照 / BUSINESS LICENSE



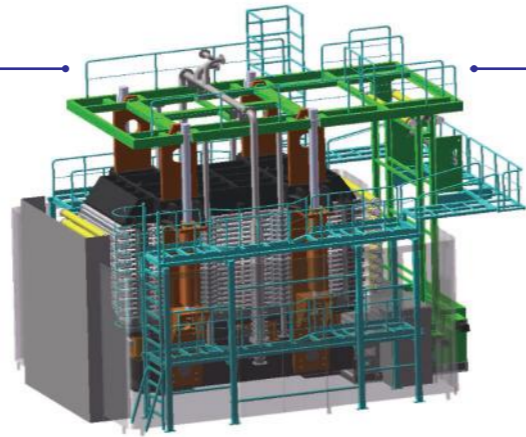
质量管理体系认证证书
QUALITY MANAGEMENT SYSTEM CERTIFICATION



简介 / BRIEF INTRODUCTION

SPF 是一种集高效、节能、智能化于一体的高效固液分离设备。充分利用进料泵的压力、物料的特性和隔膜挤压力的作用，以过滤布为介质将料浆进行固液分离的设备。

SPF stacked press filter is a kind of high-efficiency, energy-saving and intelligent solid-liquid separation equipment. It makes full use of the slurry feeding pump pressure, slurry properties and rubber diaphragm extrusion pressure, and use filter cloth as filter medium to separate the solid and liquid from slurry.



特点 / FEATURES

- ① 滤板层叠式结构，辅助导向装置，使运行更可靠；
 - ② 集过滤，挤压，洗涤，干燥，卸料，滤布再生整个流程高效于一体；
 - ③ 挤压压力可达1.6MPa，广泛适用于对滤饼含湿率有不同要求的场合；
 - ④ 采用液压驱动控制，运行稳定可靠，能耗低；
 - ⑤ 集PLC、触摸屏、自控仪表等智能化于一体，更高效，更简便；
 - ⑥ 采用高压水清洗装置，滤布清洗效果更好；
 - ⑦ 圆形腔体设计，结构更合理，效果更突出。
- ① Use stacked structure for the plates, use auxiliary guide device to make the operation become more stable.
 - ② Integrate filtering, extrusion, washing, air-drying, cake discharging and cloth washing together.
 - ③ The extrusion pressure up to 1.6MPa, it widely used in the field which has different requirements for cake moisture.
 - ④ Use hydraulic drive control system, make the operation stable and with low power consumption.
 - ⑤ Integrate PLC, HMI and instruments control system etc. intelligent together, it makes filter more efficient and easier.
 - ⑥ Use high pressure water cleaning device to make the cloth washing more effective.
 - ⑦ Design with circular chamber, the structure more rational, the efficiency more prominent.

过滤: 当板框组关闭后，料浆被泵入压滤机，通过分配软管同时进入每层料浆腔，滤液透过滤布汇集到滤液框排走，固体物质在滤布表面形成滤饼。

FILTERING: when the plates group closed, pump the slurry to filter, use distributed hose to feeding slurry to each slurry chamber, and filtrate pass through the cloth to filtrate frame and discharge out, the solid formed a cake on cloth surface.



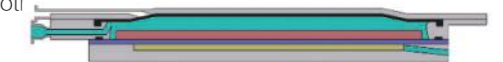
挤压: 高压水进入隔膜上腔，使隔膜膨胀向滤布侧挤压滤饼，将滤饼中的液体通过滤布挤出。

EXTRUSION: high pressure water fed into upper chamber of rubber diaphragm, make the diaphragm expand and extruding the cake and the liquid will be extruding out from cake.



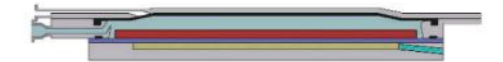
洗涤: 洗涤液经过分配软管进入料浆腔后完全覆盖在滤饼上，在压力作用下穿过滤饼和滤布后排出。

CAKE WASHING: washing water feeding into slurry chamber through distributed hose cover on the cake completely, under the pressure, the washing water pass through the cake and cloth.



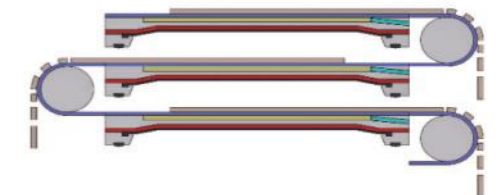
风干: 压缩气体经过分配软管进入料浆腔后抬起隔膜，使隔膜上的高压水排出压滤机，压缩气体通过滤饼带走液体，最大限度降低滤饼水份，同时排空滤液框。

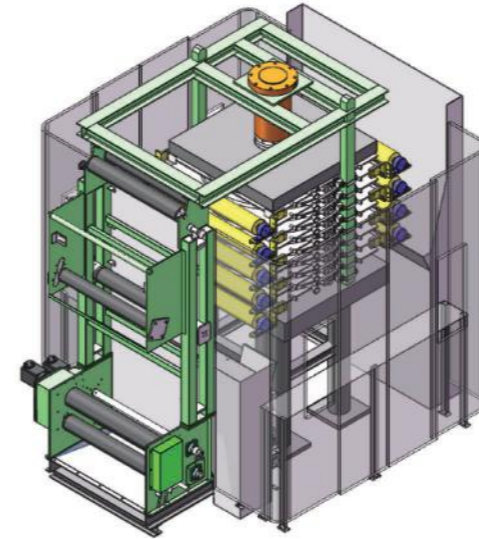
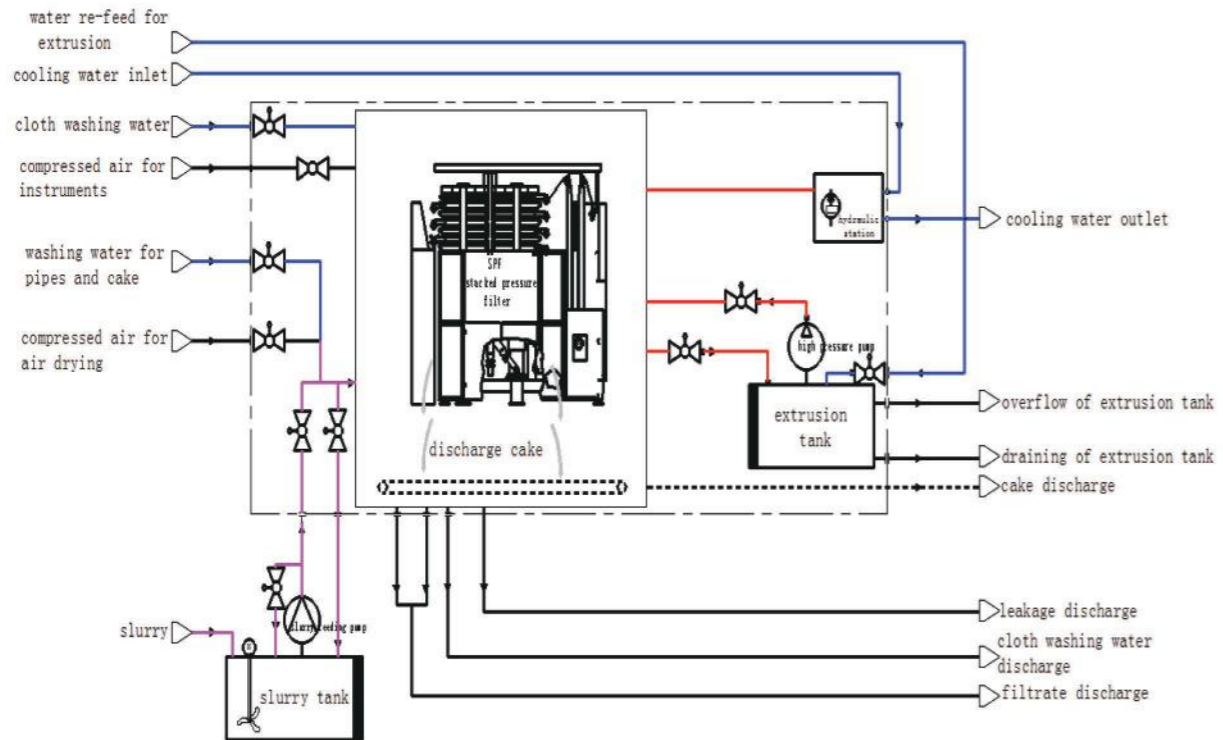
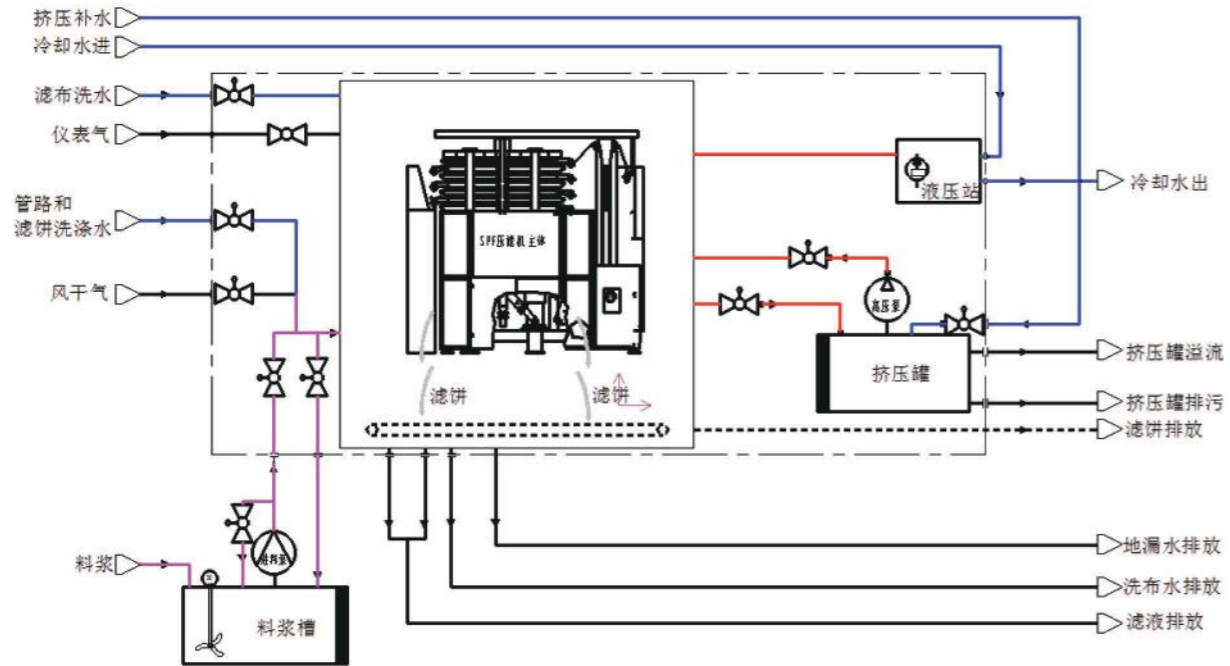
AIR DRYING: compressed air through distributed hose feeding into slurry chamber and pressing rubber diaphragm, make the high-pressure water in the rubber diaphragm to discharge out, and the compressed air pass through cake and take liquid out to decrease the cake moisture to the lowest level.



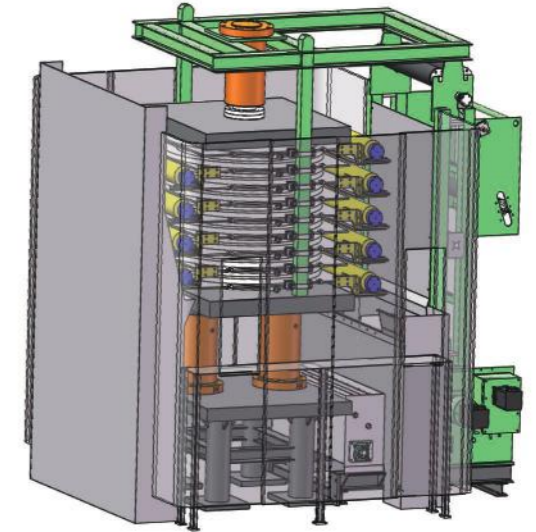
卸饼: 当风干过程完成后，板框组打开，驱动机构带动滤布运行，滤饼随滤布从压滤机两边卸出。

CAKE DISCHARGING: when finished the air-drying process, open the plates group, drive system makes the cloth running and the cake discharge out on the two sides of filter at the same time.

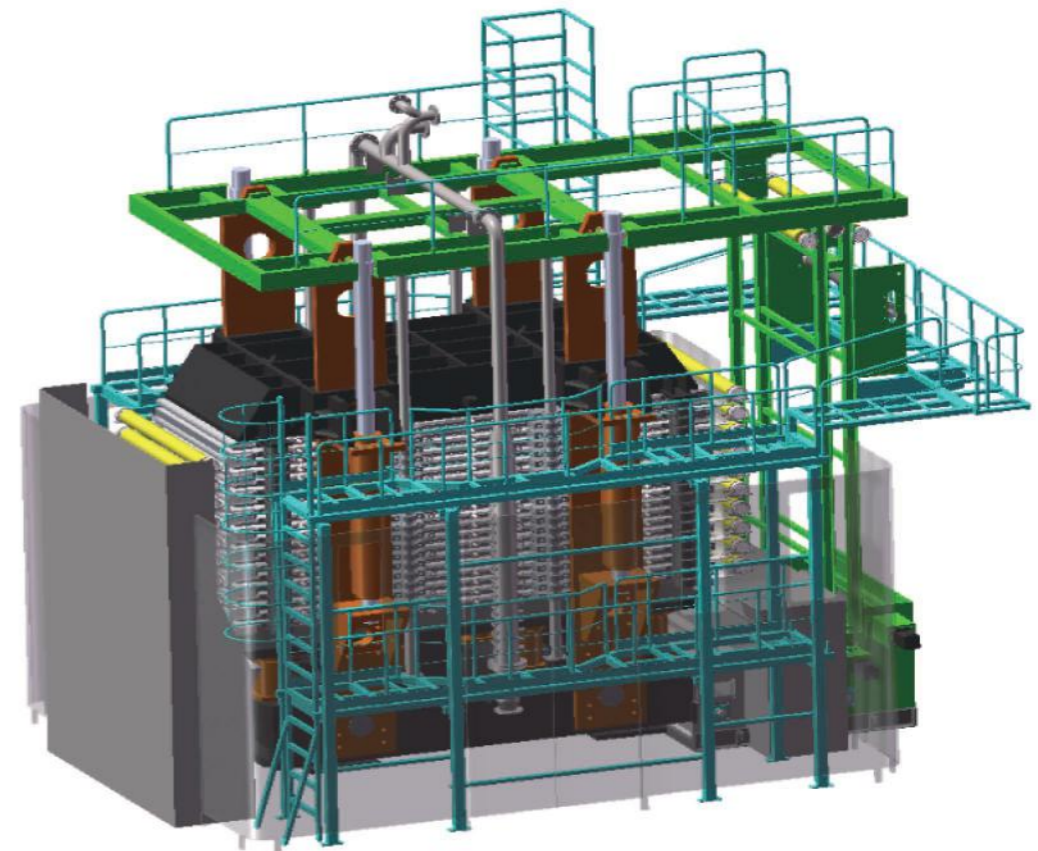




SPF II 系列/SERIES



SPF III 系列/SERIES



SPF IV 系列/SERIES

型号 Model	SPF I	SPF I -1	SPF I -2	SPF I -3
过滤面积 filter area	m ²	1	2	3
滤板规格 plate size	mm	0.5m ² /层layer		
滤层数量 plate Qty.	层layer	2	4	6
长度 length	m	2.5		
宽度 width	m	1.5		
高度 height	m	2.0	2.2	2.5
重量 weight	T	8	9	10
液压站功率 Hydraulic station power	KW	7.5		
挤压泵扬程 Extrusion pump head	m	167		
挤压泵流量 Extrusion pump flowrate	m ³ /h	8		
挤压泵功率 Extrusion pump power	KW	7.5		
以下为辅助设备参数 Auxiliary Equipment Data				
管路洗涤泵扬程 Pipe washing pump head	m	70		
管路洗涤泵流量 Pipe washing pump flowrate	m ³ /h	10		
滤布洗涤泵扬程 Cloth washing pump head	m	70		
滤布洗涤泵流量 Cloth washing pump flowrate	m ³ /h	10		
进料泵扬程 Slurry feeding pump head	m	70		
进料泵流量 Slurry feeding pump flowrate	m ³ /h	根据物料特性选型According to slurry data to choose		
风干气压力 Air drying pressure	Mpa	0.8		
风干空压机流量 Air compressor flowrate for air drying	m ³ /min	0.5	1	1.5
风干气罐容积 Air drying tank volume	m ³	1	2	3
仪表风压力 Air pressure for instruments	Mpa	0.7		
仪表空压机流量 Air compressor flowrate for instruments	m ³ /min	0.3		
仪表气罐容积 Instruments air tank volume	m	0.5		

说明: 设备外形尺寸为基本尺寸，不是具体尺寸，仅供参考。滤板的材质影响设备高度和重量，会随之改变。辅助设备参数供参考，与物料过滤性能相关。

Remark: the equipment outline dimension is basic size, but not details size, so this size just for reference. Different material of plate, the filter will have different height and weight. Auxiliary equipment data just for reference, it will change by filter performance in different slurry.

型号 Model	SPF II	SPF II -3	SPF II -6	SPF II -9	SPF II -12	SPF II -15	SPF II -18	SPF II -21	SPF II -24
过滤面积 filter area	m ²	3	6	9	12	15	18	21	24
滤板规格 plate size	mm	1.5m ² /层layer							
滤层数量 plate Qty.	层layer	2	4	6	8	10	12	14	16
长度 length	m	3.7							
宽度 width	m	4.1							
高度 height	m	2.6	2.8	3.2	3.7	4.2	4.6	5.1	5.5
重量 weight	T	12	13	14	15	16	17	18	19
液压站功率 Hydraulic station power	KW	11							
挤压泵扬程 Extrusion pump head	m	136	注意:挤压压力超过1.3MPa时为164 Note: if extrusion pressure more than 1.3MPa, this data is 164						
挤压泵流量 Extrusion pump flowrate	m ³ /h	28							
挤压泵功率 Extrusion pump power	KW	11	注意:挤压压力超过1.3MPa时为15 Note: if extrusion pressure more than 1.3MPa, this data is 15						
以下为辅助设备参数 Auxiliary Equipment Data									
管路洗涤泵扬程 Pipe washing pump head	m	68							
管路洗涤泵流量 Pipe washing pump flowrate	m ³ /h	20							
滤布洗涤泵扬程 Cloth washing pump head	m	70							
滤布洗涤泵流量 Cloth washing pump flowrate	m ³ /h	12							
进料泵扬程 Slurry feeding pump head	m	70							
进料泵流量 Slurry feeding pump flowrate	m ³ /h	根据物料特性选型According to slurry data to choose							
风干气压力 Air drying pressure	Mpa	0.8							
风干空压机流量 Air compressor flowrate for air drying	m ³ /min	根据物料特性选型According to slurry data to choose							
风干气罐容积 Air drying tank volume	m ³	3	4	5	6	7	8	8	10
仪表风压力 Air pressure for instruments	Mpa	0.7							
仪表空压机流量 Air compressor flowrate for instruments	m ³ /min	0.5							
仪表气罐容积 Instruments air tank volume	m ³	1							

说明: 设备外形尺寸为基本尺寸，不是具体尺寸，仅供参考。滤板的材质影响设备高度和重量，会随之改变。辅助设备参数供参考，与物料过滤性能相关。

Remark: the equipment outline dimension is basic size, but not details size, so this size just for reference. Different material of plate, the filter will have different height and weight. Auxiliary equipment data just for reference, it will change by filter performance in different slurry.

型号 Model	SPF III	SPF III -18	SPF III -24	SPF III -30	SPF III -36	SPF III -42	SPF III -48	SPF III -54	SPF III -60	SPF III -66	
过滤面积 filter area	m ²	18	24	30	36	42	48	54	60	66	
滤板规格 plate size	mm	3.0m ² /层layer									
滤层数量 plate Qty.	层layer	6	8	10	12	14	16	18	20	22	
长度 length	m	5.1									
宽度 width	m	5.5									
高度 height	m	4.3	4.5	4.9	5.4	5.8	6.3	6.8	7.2	7.7	
重量 weight	T	31	33	35	37	39	41	43	45	47	
液压站功率 Hydraulic station power	KW	22									
挤压泵扬程 Extrusion pump head	m	136 <small>注意:挤压压力超过1.3MPa时为162 Note: if extrusion pressure more than 1.3MPa, this data is 162</small>				135 <small>注意:挤压压力超过1.3MPa时为166 Note: if extrusion pressure more than 1.3MPa, this data is 166</small>					
挤压泵流量 Extrusion pump flowrate	m ³ /h	40				55					
挤压泵功率 Extrusion pump power	KW	15 <small>注意:挤压压力超过1.3MPa时为18.5 Note: if extrusion pressure more than 1.3MPa, this data is 18.5</small>				22 <small>注意:挤压压力超过1.3MPa时为30 Note: if extrusion pressure more than 1.3MPa, this data is 30</small>					
以下为辅助设备参数 Auxiliary Equipment Data											
管路洗涤泵扬程 Pipe washing pump head	m	65									
管路洗涤泵流量 Pipe washing pump flowrate	m ³ /h	26									
滤布洗涤泵扬程 Cloth washing pump head	m	70									
滤布洗涤泵流量 Cloth washing pump flowrate	m ³ /h	16									
进料泵扬程 Slurry feeding pump head	m	70									
进料泵流量 Slurry feeding pump flowrate	m ³ /h	根据物料特性选型According to slurry data to choose									
风干气压力 Air drying pressure	Mpa	0.8									
风干空压机流量 Air compressor flowrate for air drying	m ³ /min	根据物料特性选型According to slurry data to choose									
风干气罐容积 Air drying tank volume	m ³	8	10	10	12	12	15	15	20	20	
仪表风压力 Air pressure for instruments	Mpa	0.7									
仪表空压机流量 Air compressor flowrate for instruments	m ³ /min	0.5									
仪表气罐容积 Instruments air tank volume	m	1									

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型号 Model	SPF IV	SPF IV -60	SPF IV -72	SPF IV -84	SPF IV -96	SPF IV -108	SPF IV -120	SPF IV -132	SPF IV -144	SPF IV -156	SPF IV -168	
过滤面积 filter area	m ²	60	72	84	96	108	120	132	144	156	168	
滤板规格 plate size	mm	6m ² /层layer										
滤层数量 plate Qty.	层layer	10	12	14	16	18	20	22	24	26	28	
长度 length	m	7.1										
宽度 width	m	5.5										
高度 height	m	5.4	5.8	6.2	6.6	6.9	7.2	7.6	7.9	8.3	8.6	
重量 weight	T	92	96	100	104	108	112	116	120	124	128	
液压站功率 Hydraulic station power	KW	30					37					
挤压泵扬程 Extrusion pump head	m	126 <small>注意:挤压压力超过1.3MPa时为168 Note: if extrusion pressure more than 1.3MPa, this data is 168</small>					128 <small>注意:挤压压力超过1.3MPa时为162.5 Note: if extrusion pressure more than 1.3MPa, this data is 162.5</small>					
挤压泵流量 Extrusion pump flowrate	m ³ /h	110					150					
挤压泵功率 Extrusion pump power	KW	37 <small>注意:挤压压力超过1.3MPa时为45 Note: if extrusion pressure more than 1.3MPa, this data is 45</small>					55 <small>注意:挤压压力超过1.3MPa时为75 Note: if extrusion pressure more than 1.3MPa, this data is 75</small>					
以下为辅助设备参数 Auxiliary Equipment Data												
管路洗涤泵扬程 Pipe washing pump head	m	72										
管路洗涤泵流量 Pipe washing pump flowrate	m ³ /h	36										
滤布洗涤泵扬程 Cloth washing pump head	m	70										
滤布洗涤泵流量 Cloth washing pump flowrate	m ³ /h	20										
进料泵扬程 Slurry feeding pump head	m	70										
进料泵流量 Slurry feeding pump flowrate	m ³ /h	根据物料特性选型According to slurry data to choose										
风干气压力 Air drying pressure	Mpa	0.8										
风干空压机流量 Air compressor flowrate for air drying	m ³ /min	根据物料特性选型According to slurry data to choose										
风干气罐容积 Air drying tank volume	m ³	20	20	25	30	35	35	40	40	45	45	
仪表风压力 Air pressure for instruments	Mpa	0.7										
仪表空压机流量 Air compressor flowrate for instruments	m ³ /min	1										
仪表气罐容积 Instruments air tank volume	m ³	2										

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可广泛应用于城市生活污水、纺织印染、电镀、造纸、皮革、酿造、食品加工、洗煤、石油化工、化学、冶金、选矿、制药、陶瓷等行业的污泥脱水处理，也适用于工业生产的固液分离或液体浸出工序。

It is widely used in urban sewage, textile printing and dyeing, electroplate, papermaking, leather, brewing, food processing, coal washing, petrochemical industry, chemistry, metallurgy, mineral separation, pharmacy, ceramic industry sludge dewatering and so on, also use in industry production solid-liquid separation or liquid leaching process.

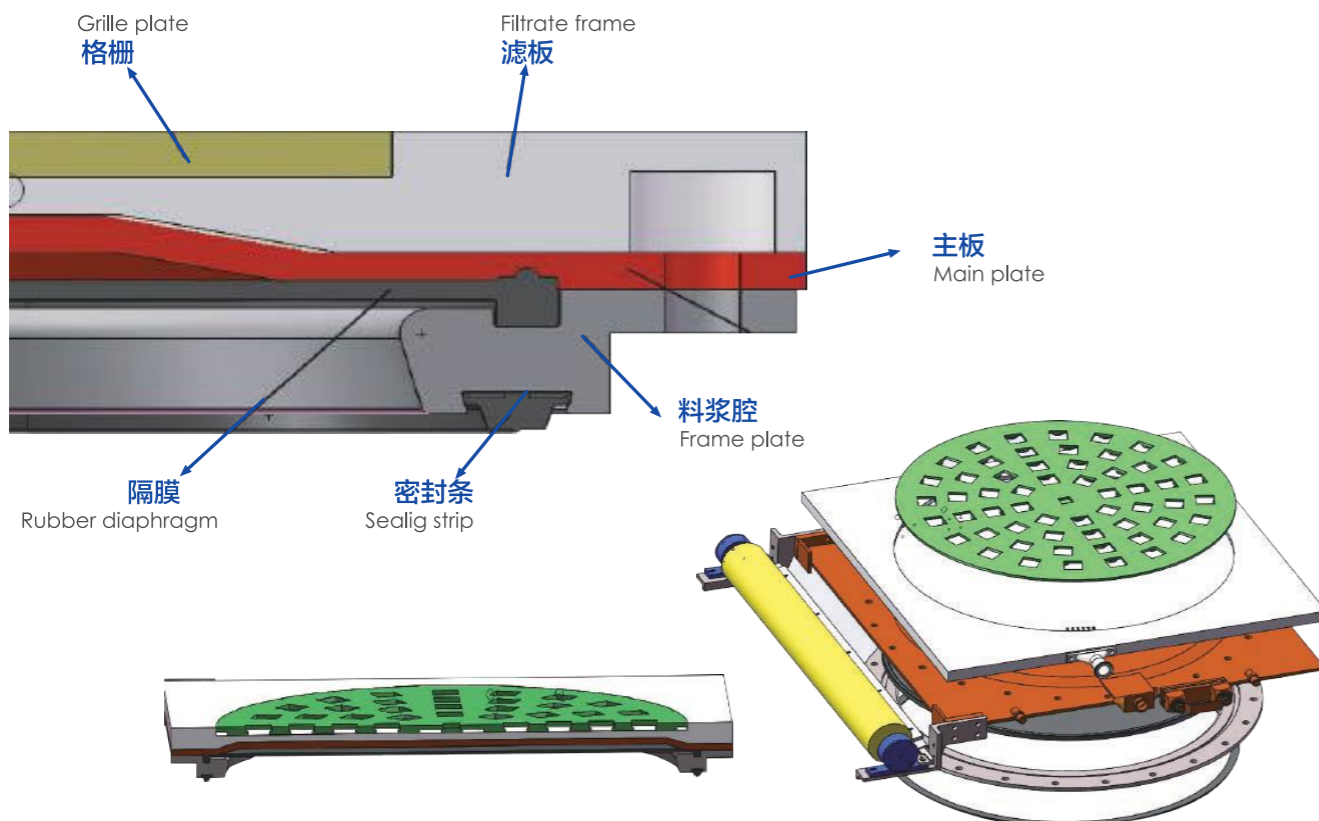


序号 NO.	物料名称 Material name	入料浓度 Feed solidity(g/l)	挤压水压力 extrusion water ressure (MPa)	滤饼厚度 Cake thickness (mm)	滤饼水份 Cake moisture (%)	产能 capacity kg/m2.h
1	4A沸石 4A-zeolite	150~295	1.4	35	19~22	190~200
2	硫化物 sulfuret	约50	1.2	30	30	120
3	铅化物 lead	约50	1.2	30	15~20	35
4	铜渣 copper slag	600	1.6	40	8~9	310
5	废水硫酸钙 waste water sulphate	80	1.6	45	28~35	120~175
6	焙烧金尾矿 calcination gold tailings	300	1.6	35	14~18	300~340
7	超细氢氧化铝 superfine aluminum hydroxide	15~20%	1.6	20	29.5~32	65
8	铜镍精矿 Cu-Ni concentration	66.7	1.6	30	9.78	257
9	铜精矿 copper concentration	45~50	1.6	35	7.6	360
10	镍精矿 Ni concentration	45~50	1.6	30	8	300~400
11	钽铌冶炼 tantalum-niobium smelt		1.6		20~25	200
12	煤泥 coal slime	30~35%	1.6	30	16~17	300
13	炉渣铁 slag iron	40%	1.6	28	≤9	280
14	浮选金尾矿 gold tailings after flotation	20~30%	1.6	35	12~18	300
15	甘露醇 mannitol		1.5		12	35
16	氧化锌选粉 zinc oxide powder	57%	1.6	18	20	90
17	氧化锌浸出渣 leaching residue of zinc oxide	50%	1.6	10	18~20	70
18	硫精矿 Sulphur concentrate	10%	1.6	20	25~35	200

EQUIPMENT STRUCTURE STYLE / 设备结构形式



PLATE GROUP STRUCTURE / 板框组结构



MAIN PARTS / 主要部件

液压系统 / HYDRAULIC SYSTEM

采用国内一线品牌或客户指定品牌保证系统稳定运行，达到设备使用要求。与行业知名配套厂家合作，保证产品质量。

Use domestic top brand or client point brand to ensure system operaton stable and reach equipment use requirements.

Cooperate with well-know manufacturer of auxiliary equipment to ensure the whole sytem quality.



控制系统 / CONTROL SYSTEM

采用国际及国内知名品牌的元器件，例如：SIEMENS PLC，昆仑通态 触摸屏，施耐德低压电器元件等。

设备实现自动控制，并可通过通讯接口与上位机或DCS系统连接，实现远程控制。

Use international and domestic well-know brand components, such as: SIEMENS PLC, MCGS HMI, SCHNEIDER low-voltage electrical components etc.

It reach automatical control, and use communication interface to connect with host computer or DCS system to reach remote control.



板框层导辊 / GUIDE ROLLER OF PLATE

采用自主研发的塑料合金辊筒，在保证强度的前提下，可适应各种场合要求。外置轴承形式，调节方便，维修简单，运行可靠。

Use self-developed plastic alloy roller, in ensure the strength condition, it can reach different fields requirements.

Outboard bearing, easy for adjust and maintenance, reliable for operation.

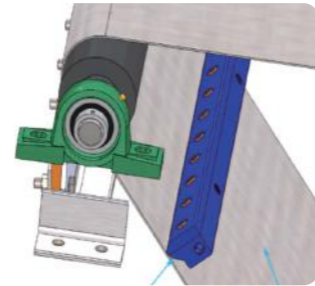


高压水清洗装置

HIGH PRESSURE WATER WASHING DEVICE

高压水自动清洗滤布，保证了滤布再生，滤布使用寿命更长，过滤效率更高，同时节约了设备的用水耗量。

High pressure water washing cloth automatically to ensure the cloth recycle and prolong the cloth life time, reach higher filtering efficiency, and save water consumption of the equipment.



橡胶隔膜

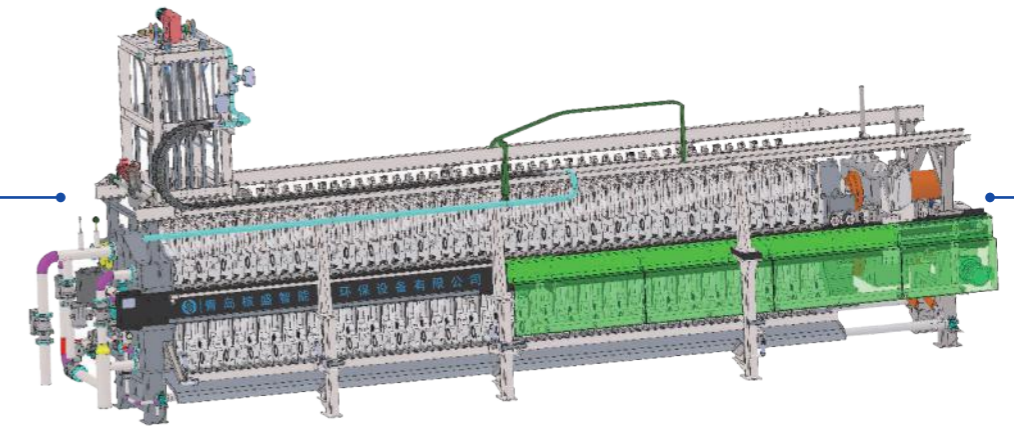
RUBBER DIAPHRAGM

橡胶行业知名配套厂家，专业的生产设备，根据压滤机使用环境及特性配料，保证使用效果。

Well-known manufacturer in rubber industry, equipped with professional manufacture machine. They can according to the real using condition to prepare the raw material for these parts, so as to ensure the goods quality.



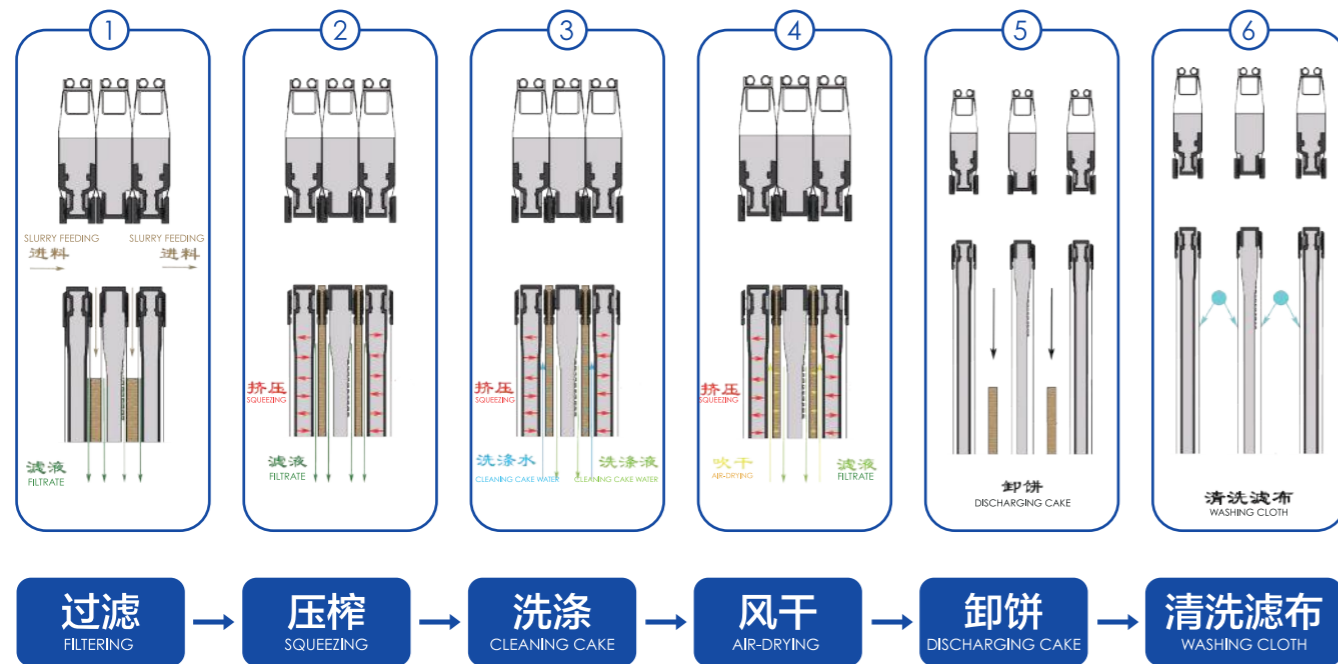
简介 / BRIEF INTRODUCTION



HPF 智能压榨过滤机 是一种全自动高效环保的固液分离设备，它可一次性拉板合板，可以自动完成给料、过滤、压榨、洗涤、风干、卸饼等一系列工艺过程。设备主要由主机、自动清洗系统、电气控制系统、液压控制系统组成。设备工作时先由机械传动机构牵引液压缸并带动滤板闭合，到达指定位置，由锁定装置将液压缸锁定后，活塞杆伸出，压滤机滤板相互压紧，使相邻滤板间形成滤室，周边密封。浆料经给料泵以一定的入料压力打入到各滤室，固相颗粒被滤布截留，形成过滤饼层，液相透过滤布经滤液通道排出机体。然后对隔膜腔通入高压气使隔膜膨胀变形，对滤饼进行机械压榨，再通入高压风对饼层吹干，最后设备传动机构打开滤室，在重力的作用下卸除滤饼。设备具有结构简单、自动化程度高、开合板时间短、维修方便等优点。

HPF Intelligent Filter Press is an automatic and high-efficient environmental protection solid-liquid separation equipment. It can open and close all plates together at one time, and finish slurry feeding, filtering, extrusion, washing, air-drying, cake discharging etc. process automatically. The filter contains main machine, automatic washing system, electric and pneumatic control system, hydraulic system. When start the filter use mechanical drive device to pull the hydraulic cylinder first, and drive the plates close to setting position, after locking device locking the hydraulic cylinder, piston rod reaching out, filter press plates mutual compression to form chamber between each two plates and sealing around. Use slurry feeding pump to feed slurry with a certain pressure to each chamber, solids will be accumulated by cloth to form a cake, liquid will pass through cloth and flow out by filtrate pipes. Feeding high-pressure compressed air to diaphragm and squeezing the cake, then use high-pressure compressed air to air-drying the cake. At last, use drive device to open the chamber, and discharge the cake with gravity. This filter press has the advantages of simple structure, high automatic level, open & close plates with short time and easy maintenance.

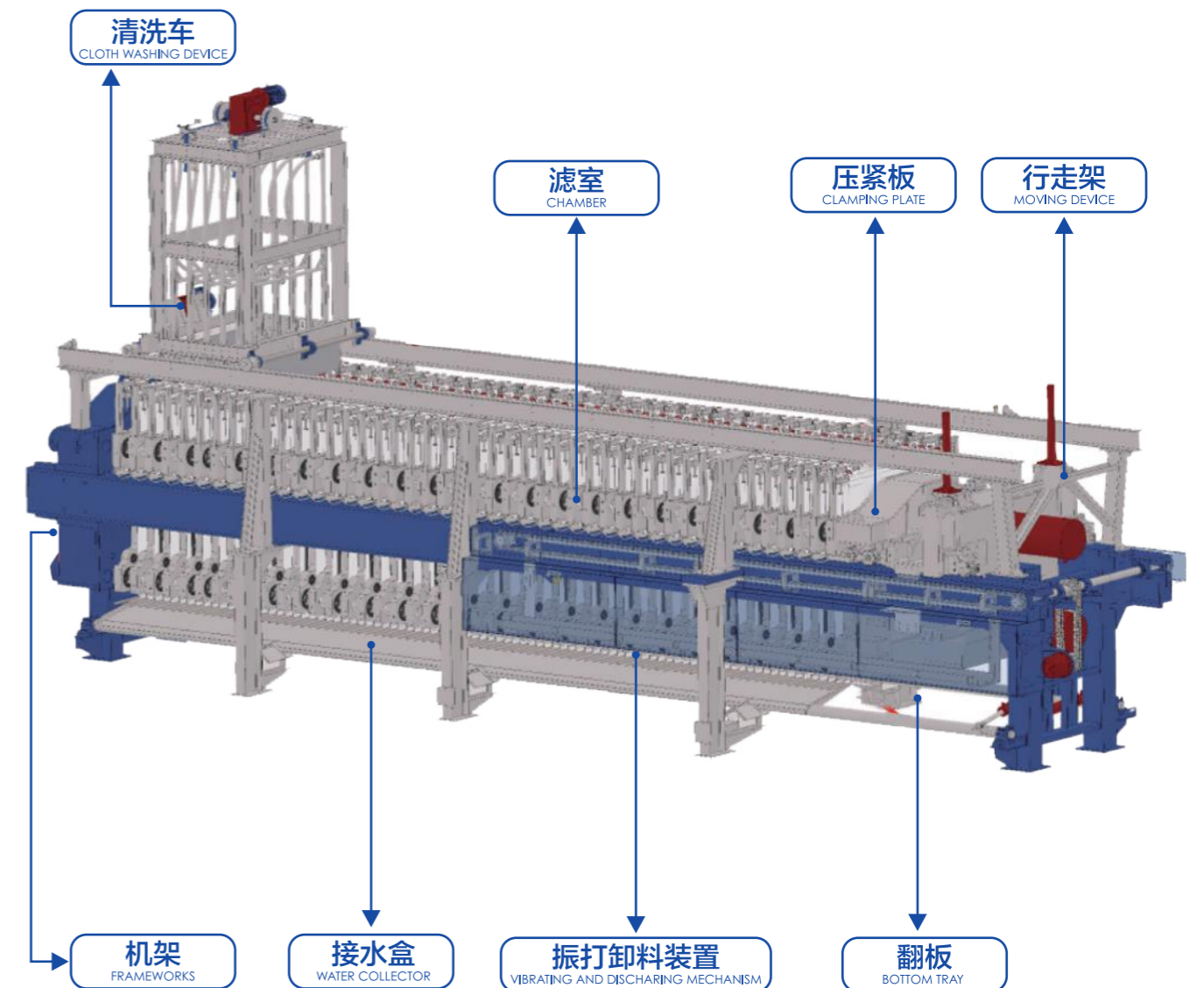
OPERATING PRINCIPLE / 工作原理



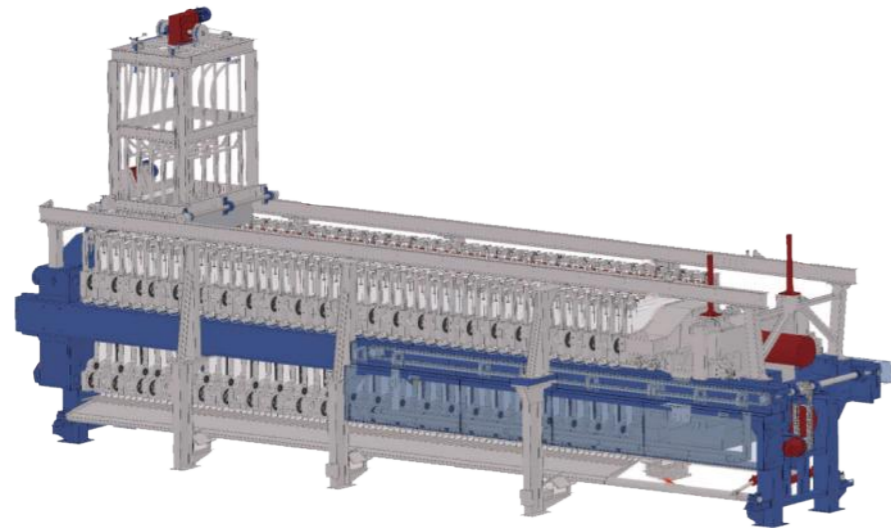
HPF智能压榨过滤机的过滤单元由交替排列的隔膜滤板和厢式滤板以及夹在其间的过滤介质构成的多组滤室，每组滤室容积可在一定范围内改变。工作时，由供料泵将浆料压入滤室形成流体压力，滤液穿过滤布并沿滤板的导流间隙至滤板边角通道，集中排出，固体颗粒被截留在滤布上形成滤饼，直至积满滤室，过滤完毕。之后压榨介质（水或气）由压榨通道进入隔膜腔并形成压力，将滤饼中残液挤出经导流间隙至边角通道。随后通入高压空气至滤饼一侧，在压力的作用下，气流穿过滤饼并带走残液。最后滤板整体拉开卸除滤渣，清洗滤布，重新压紧滤板，开始下一工作循环。

The filtration unit of HPF Intelligent Filter Press is formed by alternate arranged diaphragm and chamber type filter plates and filter medium between them to form groups of chambers, the volume of each chamber can be changed in a certain range. During operation, press the slurry by the feeding pump into the filter chamber to form fluid pressure, filtrate through the cloth and flow along the diversion gap to corner channel of plates, discharge filtrate concentrated. Solids will be accumulated on the cloth to form cake until full of the chamber, that's finish the filtering. After that, the squeezing medium (water or compressed air) will enter into the diaphragm cavity through squeezing channel and form pressure to squeezing the liquid out from cake to corner channel. Then feeding high-pressure compressed air to one side of cake to air-drying the cake. Finally, open all the plates and discharge cake, washing cloth, redose plates and enter into next cycle.

EQUIPMENT STRUCTURE / 设备结构



EQUIPMENT FEATURES / 设备特点



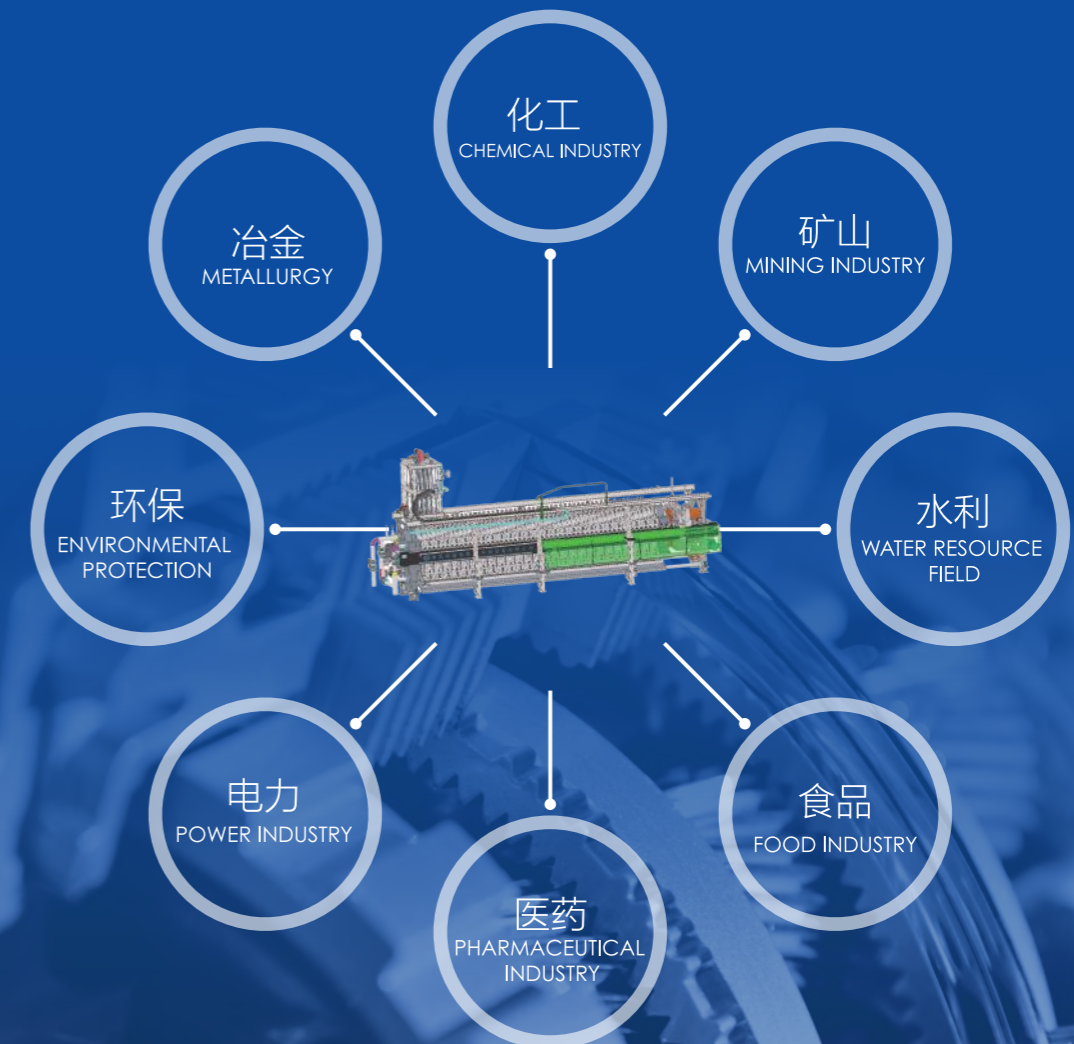
- ① 液压顶紧装置可实现机械行走，使滤板快速拉开与合拢；
- ② 隔膜压榨滤饼1.6MPa，滤饼水分低；
- ③ 高压自动行走滤布清洗装置，对滤布进行全面彻底清洗，保证了滤布再生；
- ④ 下振打卸饼装置，滤饼更易从滤布上脱落，不需人工参与；
- ⑤ 滤布可从上部直接拆装，滤布更换方便快捷；
- ⑥ 自动开合翻板装置分流集液，保证了滤饼与滤液互不侵扰；
- ⑦ 智能控制，设备运行安全可靠。

- ① Hydraulic hold-down device which can realize mechanical moving to make the plates open and close quickly.
- ② Diaphragm squeezing the cake with 1.6MPa pressure, it can reach low cake moisture.
- ③ High-pressure automatic cloth washing device can washing the cloth thoroughly and ensure the cloth recycle.
- ④ Vibrator cake discharging device can make the cake discharge easily and do not need humans.
- ⑤ The cloth can be disassembled and assembled directly on the top, change cloth becomes more easily and quickly.
- ⑥ Automatic open & close tray device can collect liquid separately to ensure the cake and liquid will not mix together.
- ⑦ Intelligent control system to make the equipment operation safe and reliable.

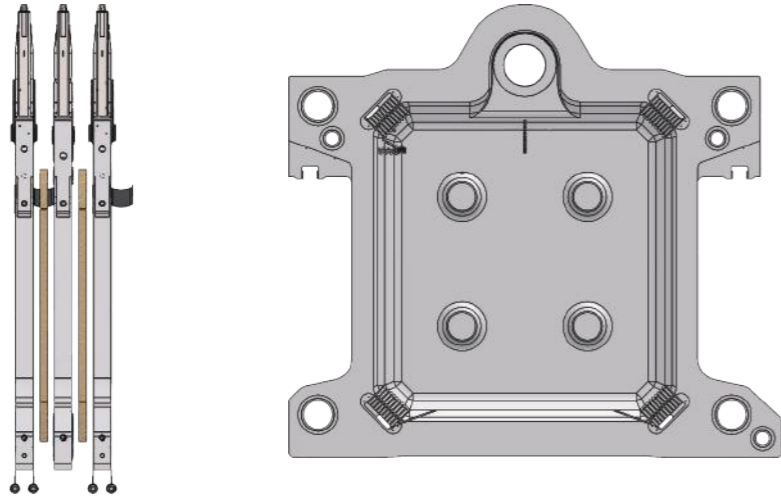
APPLICATION FIELDS / 应用领域

可广泛应用于化工，冶金，矿山，水利，食品，医药，电力，环保等行业，由于该设备具有极强的适应性，其应用几乎涵盖所有工业生产中涉及的固液分离。

Chemical industry, metallurgy industry, mining, water resource field, food industry, pharmaceutical industry, power industry, environmental protection industry and so on. Base on the strong adaptability of this equipment, it almost can be used in solid-liquid separation of all the industries.



MAIN PARTS / 主要部件



滤板
PLATE
材质有增强聚丙烯和橡塑
material: FRPP/rubber)

密封件
SEALINGS



橡胶隔膜
RUBBER DIAPHRAGM



端板进料口密封套
SLURRY INLET SEALING OF END PLATE



夹层板进料口耐磨套
SLURRY INLET WEAR-PROOF CASING OF CHAMBER PLATES



滤布进料口密封套
CLAMP CLOTH SEALING



加压板进料口橡胶套
SLURRY INLET RUBBER SEALING OF DIAPHRAGM PLATE



滤液口密封套
FILTRATE OUTLET SEALING



压榨口橡胶密封套
SQUEEZE NOZZLE RUBBER SEALING



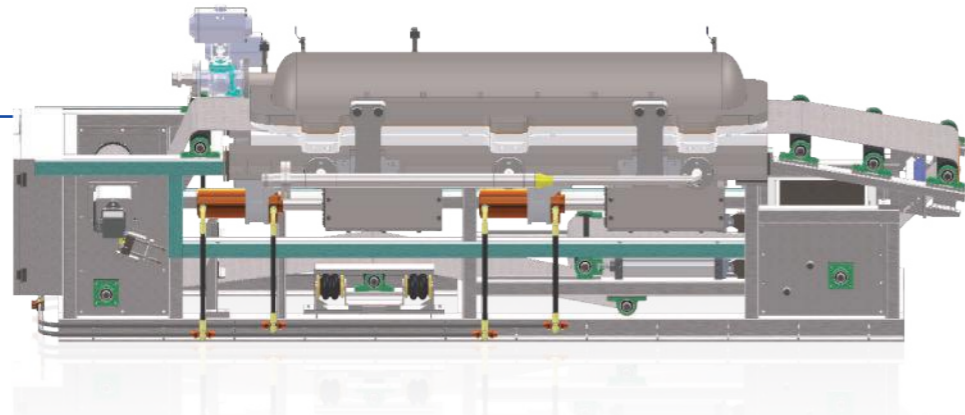
上滤液口压块
SEALING BLOCK OF UP FILTRATE OUTLET



下滤液口压块
SEALING BLOCK OF BOTTOM FILTRATE OUTLET

使用现场
USING SITE





简介 / BRIEF INTRODUCTION

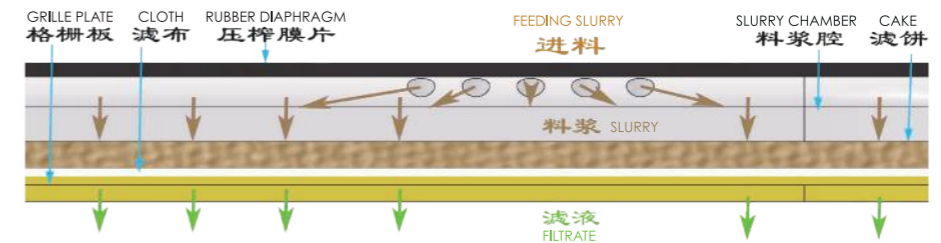
SSY水平带式加压过滤机是一种新型过滤设备，主要由主机、电气控制系统、液压控制系统、风干系统及给料系统组成。设备工作时先闭合过滤室，物料经入料泵以一定压力从入料孔进入过滤室，借助入料泵的给料压力在过滤介质两侧形成的压力差实现固液分离，物料被截留在滤层内，滤液透过滤布排出机外，经过一段时间后，滤液不再流出，过滤脱水过程完成，停止入料。然后进行高压压榨并用压缩空气吹干滤饼；最后打开设备，驱动辊带动过滤布行走，卸掉滤饼，高压风瀑清洗滤布后进入下一个过滤循环。

设备具有结构简单、自动化程度高、故障率低、维修方便等优点。

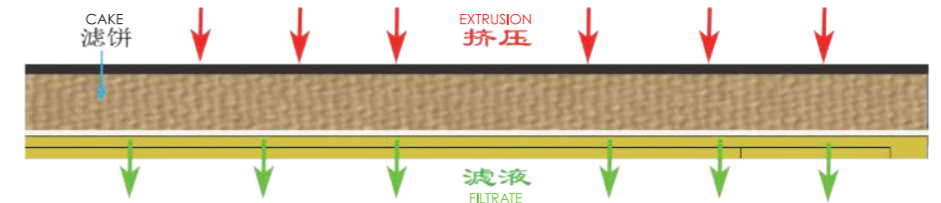
SSY Horizontal Belt Press Filter is a new type filter, it consists of main body, electric & pneumatic control system, hydraulic control system, air-drying system and slurry feeding system. During filter working, close the filter chamber first, then feed slurry to chamber by feeding pump with certain pressure. With the help of slurry feeding pump pressure and pressure difference between two sides of filter medium to reach solid-liquid separation, the solids hold in the filter chamber, the filtrate pass through cloth and discharge out. After a certain time, the filtrate can't flow out, the filtering process finished and stop slurry feeding. Then squeeze by high pressure and use compressed air for drying the cake. Open the filter chamber, drive roller driving the cloth to running forward and discharge the cake with scraper. Use high pressure storm to wash cloth and enter into next filtering cycle.

This filter has the advantages of simple structure, high level automation degree, low failure rate, easy maintenance and so on.

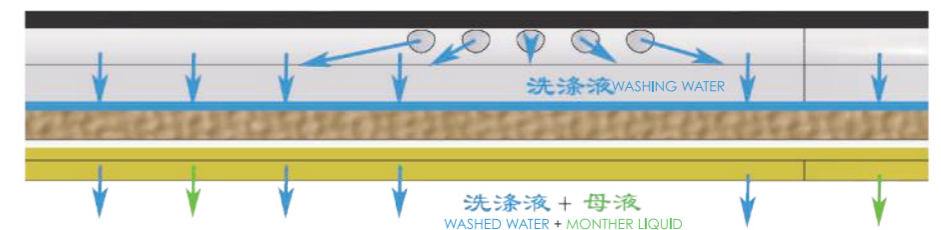
① 进料过滤 / SLURRY FEEDING & FILTERING



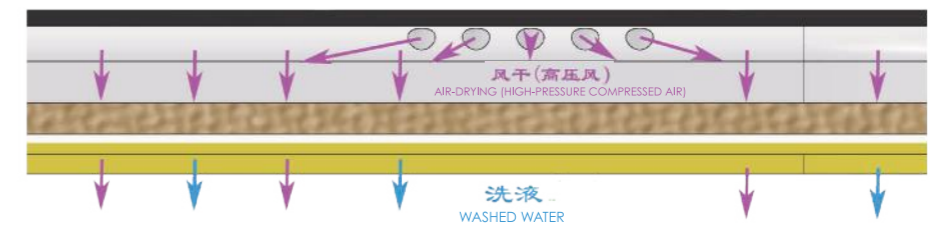
② 膜片压榨 / DIAPHRAGM EXTRUSION



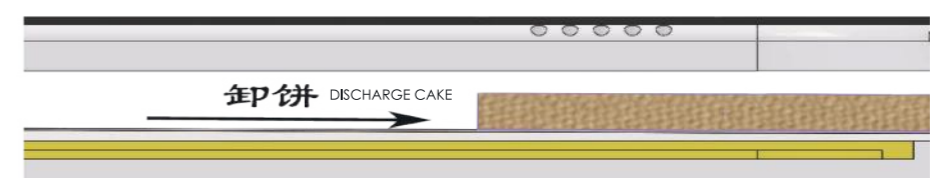
③ 滤饼洗涤 / CAKE WASHING



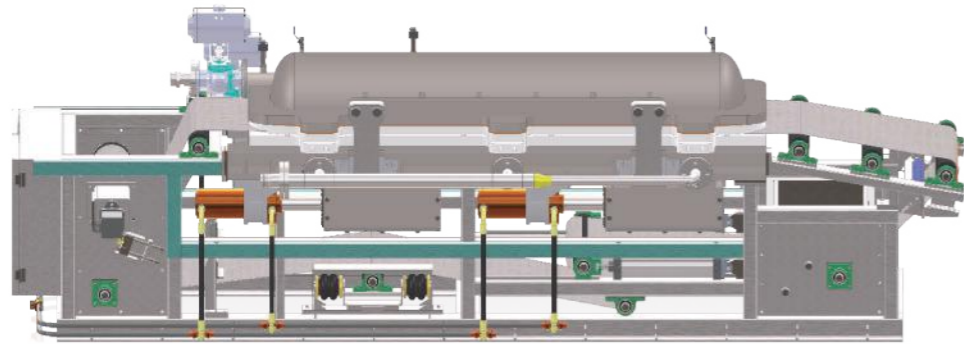
④ 滤饼吹干 / AIR-DRYING



⑤ 滤饼卸除 / CAKE DISCHARGING



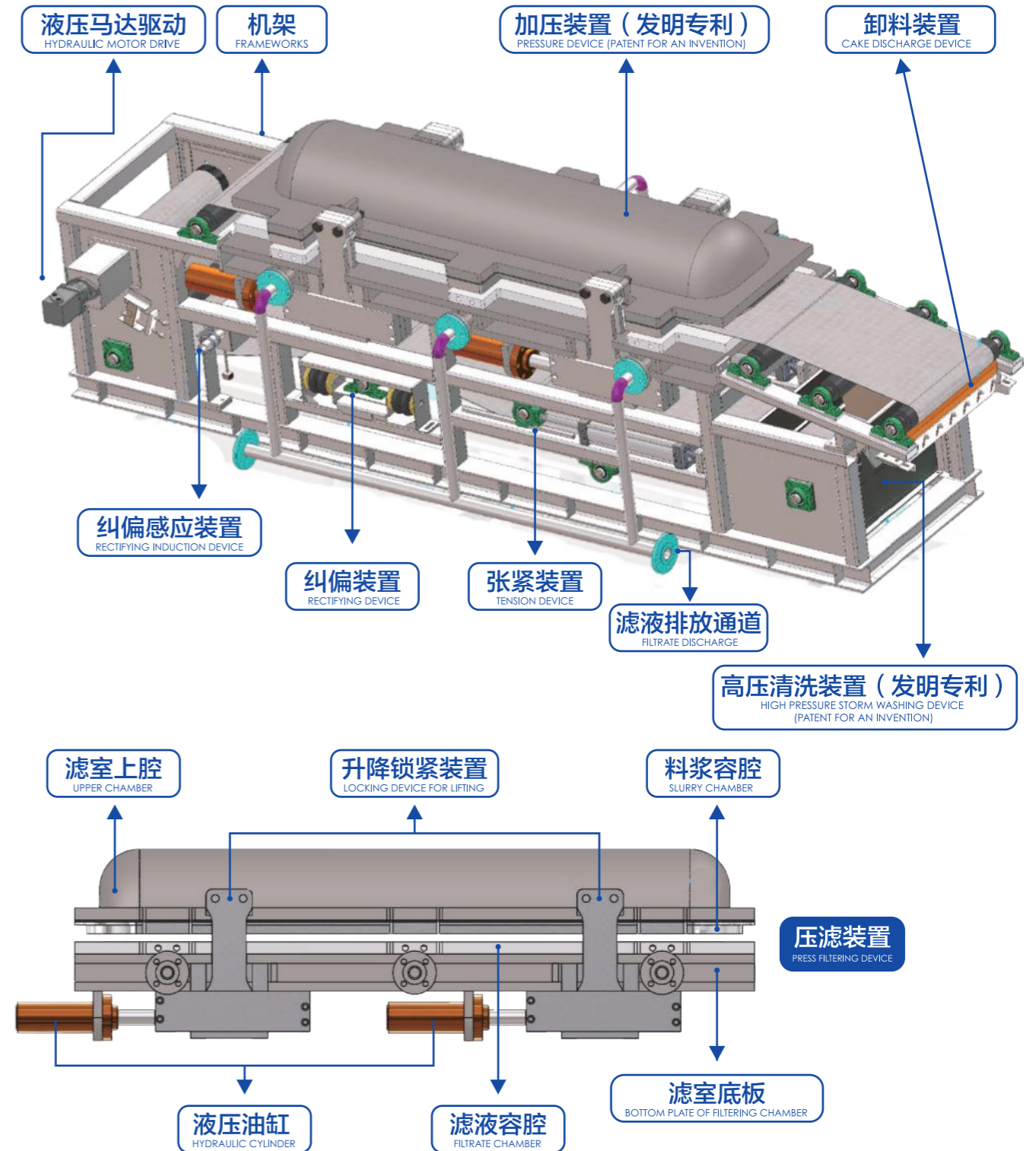
EQUIPMENT FEATURES / 设备特点



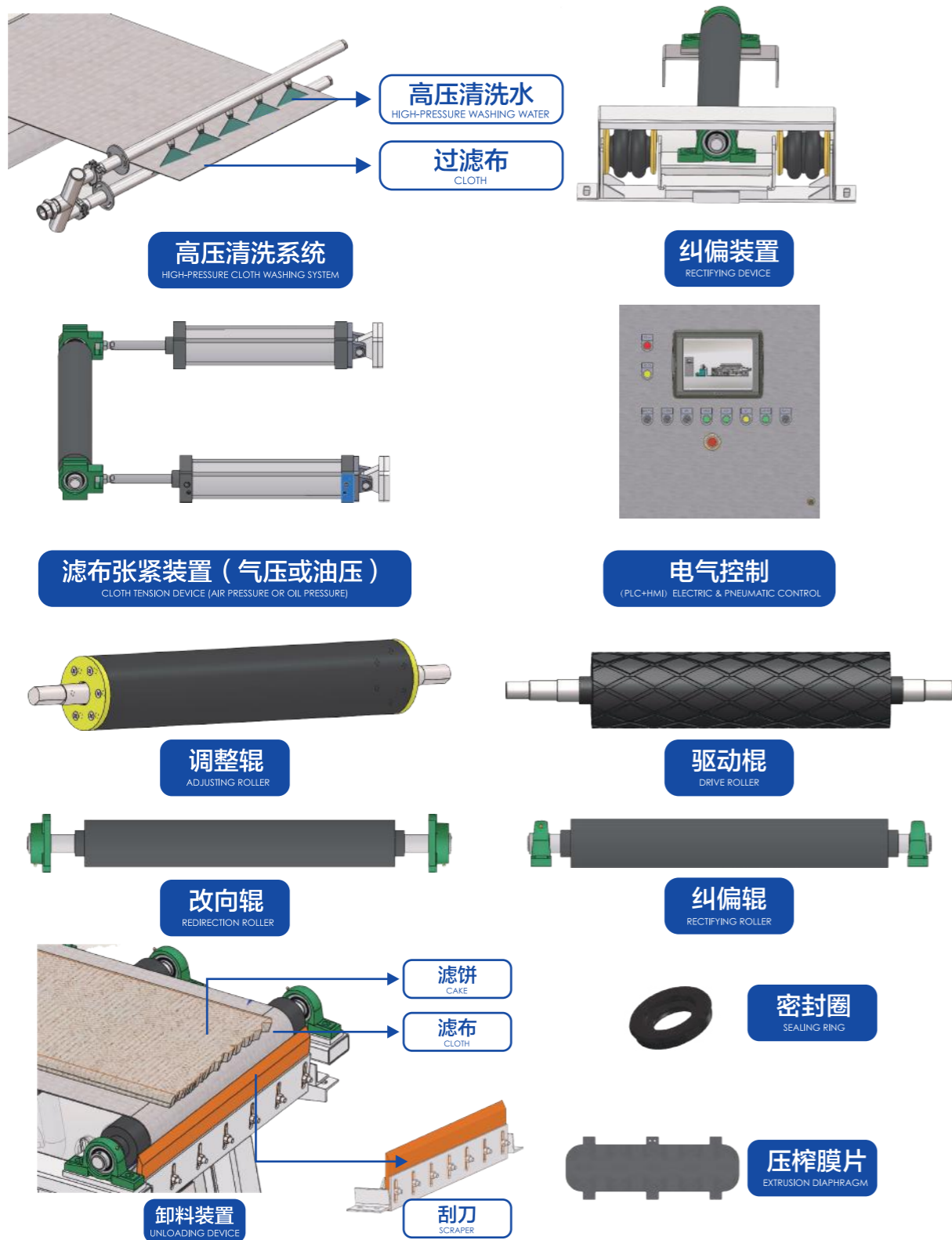
- ① 自动高压压榨滤饼，压榨压力最高可达2.0MPa，并采用高压风吹滤饼，使滤饼中水分尽可能的降低；
- ② 高压自动清洗滤布，保证了滤布再生，滤布使用寿命更长，过滤效率更高，同时节约了设备的用水量；
- ③ 滤室开合装置，行程短，能够快速打开、闭合滤室，缩短过滤周期；液压驱动滤布高速行走；每个循环最小时间4MIN，工作效率高；
- ④ 滤室锁紧装置能够实现自锁功能，全程自动智能化运行、监控，安全可靠；
- ⑤ 设备结构简单，故障率低，维修方便。

- ① Use automatic high pressure to squeezing the cake, squeeze pressure up to Max. 2.0MPa, use high pressure compressed air to blowing the cake and make the cake moisture as low as possible.
- ② Use automatic high-pressure storm washing the cloth to ensure the cloth reuse and make the cloth life more longer, filtering efficiency much higher, and saving the water consumption for filter.
- ③ Open & close filter chamber device with short stroke, so it can open and close filter chamber quickly, and shorten the filtering cycle time. Besides, hydraulic system driving cloth running with high speed, so the minimum time for each cycle only need 4 minutes, so this filter can reach a high working efficiency.
- ④ The locking device for filter chamber can reach self-locking function. It with full automatic intelligent operation, monitoring, safe and reliable.
- ⑤ This filter has simple structure, low failure rate and convenient maintenance.

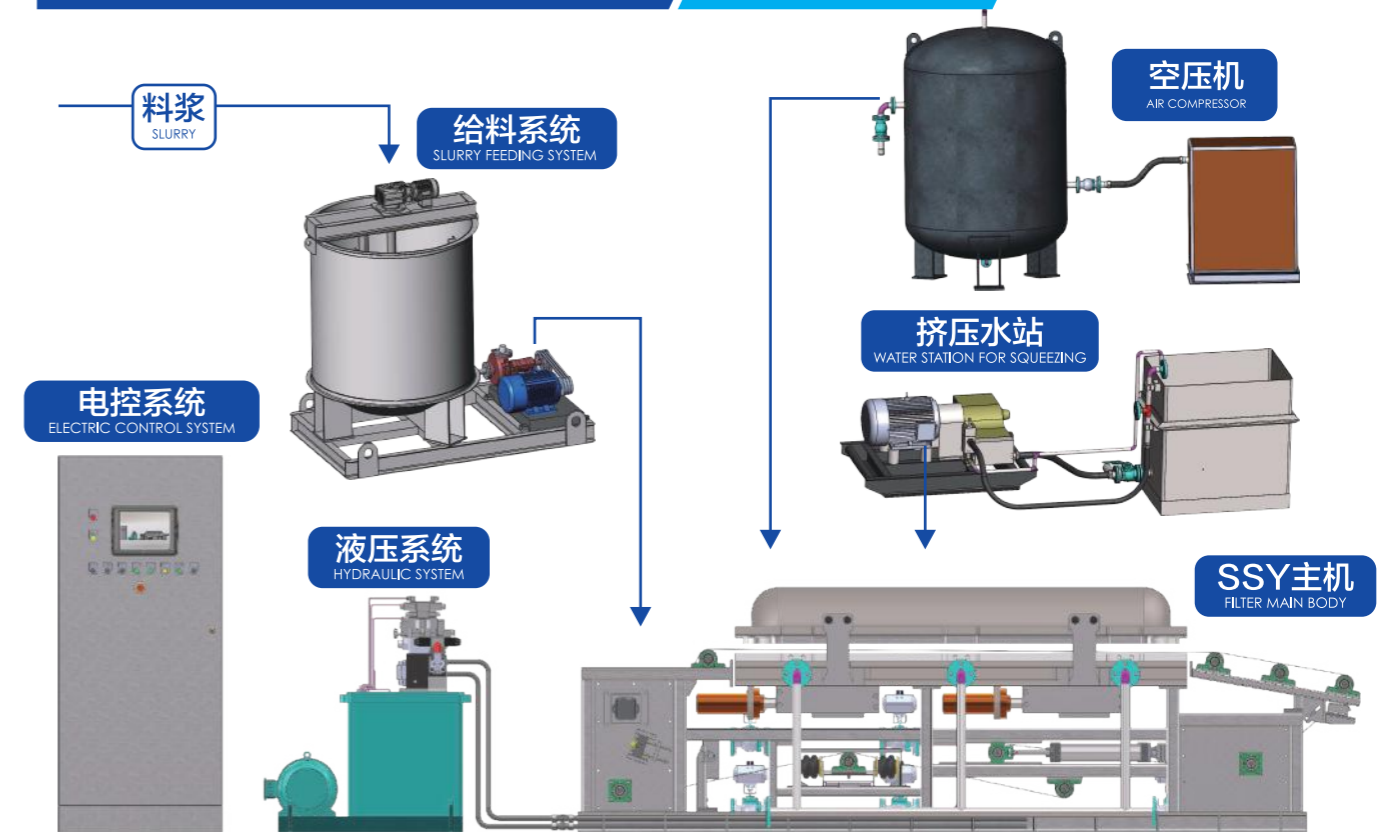
EQUIPMENT STRUCTURE / 设备结构



COMPONENT STRUCTURE / 部件结构

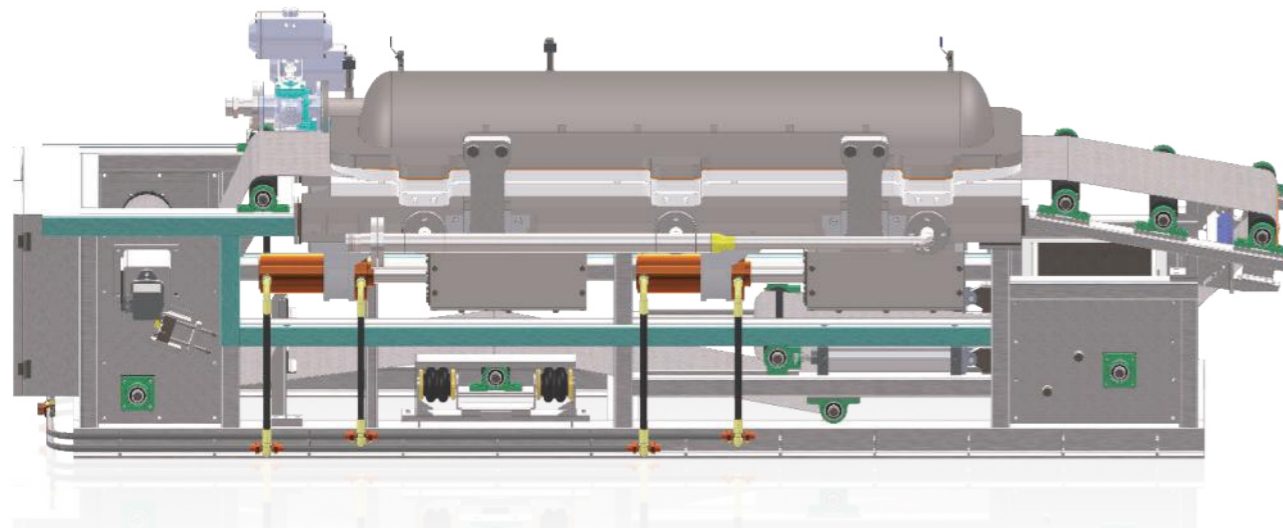


PROCESS FLOW DIAGRAM / 工艺流程图



设备操作时序 / OPERATION SEQUENCE AND TIME

- ◎ 滤腔打开 OPEN CHAMBER: 20S
- ◎ 滤布张紧 TENSION CLOTH: 5S
- ◎ 马达驱动滤布行走, 卸饼、清洗: 30S
DRIVE CLOTH MOVING, DISCHARGE CAKE AND CLOTH WASHING: 30S
- ◎ 滤布松弛 LOOSE CLOTH: 5S
- ◎ 滤腔闭合 CLOSE CHAMBER: 20S
- ◎ 给料过滤 SLURRY FEEDING FILTERING: 120S
- ◎ 膜片压榨 DIAPHRAGM SQUEEZING: 40S
- ◎ 风干滤饼 AIR-DRYING THE CAKE: 20S
- ◎ 滤腔泄压 CHAMBER PRESSURE RELIEF: 10S
- ◎ 循环用时 EACH CYCLE TIME: 270S



型号 Model	过滤面积 Material name m ²	滤室体积 Chamber volume m ³	进料压力 Feeding pressure Mpa	压榨压力 Squeezing pressure Mpa	主机功率 Drive power KW	整机重量 Total weight T	外形尺寸 Outline dimension m
SSY-1000	5	0.25	0.5-0.8	1.0	11	11.2	6×1.9×2.1
	10	0.5	0.5-0.8	1.0	15	21.5	11.5×1.9×2.1
	15	0.75	0.5-0.8	1.0	18.5	32	17×1.9×2.1
	20	1.0	0.5-0.8	1.0	18.5	42.3	22.5×1.9×2.1
SSY-2000	10	0.5	0.5-0.8	1.0	15	16.8	6.5×2.9×2.2
	20	1.0	0.5-0.8	1.0	22	32.5	12×2.9×2.2
	30	1.5	0.5-0.8	1.0	25	48.5	17×2.9×2.2
	40	2.0	0.5-0.8	1.0	30	63.2	23×2.9×2.2

煤化工气化炉灰水过滤，尾矿干排，冶金行业，矿山行业，化工行业，食品行业，洗煤行业 环保行业，
电力行业，制药行业

Coal chemical gasification furnace ash water filtration, tailings dewatering, metallurgy industry, mining industry, chemical industry, food industry, coal washing industry, environmental protection industry, power industry, pharmaceutical industry

