

HR

系列卧式双级活塞推料离心机

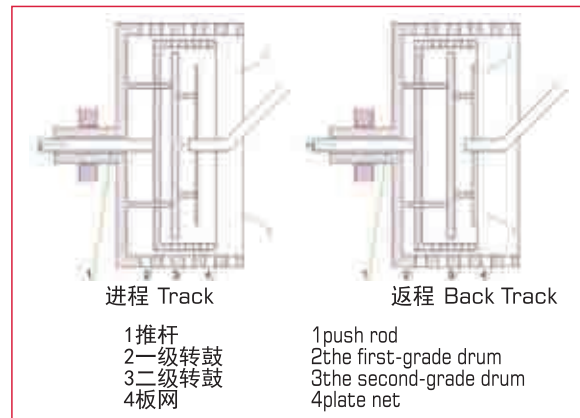
HR pistons pushing centrifuge

● 工作原理

HR系列双级活塞推料离心机主要由供油系统、推料机构、轴承座、主轴、推杆、内转鼓、外转鼓、筛网、集料槽、进料管、洗涤管、机壳等零件组成；主电机通过传动带使离心机转鼓全速运转后，混合物料由进料管连续引入至布料盘处，并在离心力的作用下均匀分布到一级转鼓内段滤网壁上，大部分液相穿过滤网和转鼓壁滤孔排出，经排液管排出机外，固相物截留在一级转鼓形成环形滤饼层。一级、二级转鼓同速旋转的同时，在活塞推动下，一级转鼓连续轴向往复运动，因而推料盘推动一级转鼓滤饼层间歇不断地向外移动排出一级转鼓，进入二级转鼓进一步分离并形成环形滤饼层，一级转鼓外端面则推动外转鼓滤饼层间歇不断地向外移动排出二级转鼓。滤液和洗涤液若有必要可分别排出。

● 双级活塞推料离心机工作示意图

Sketch map of pistons of two ends push material Centrifuge operation

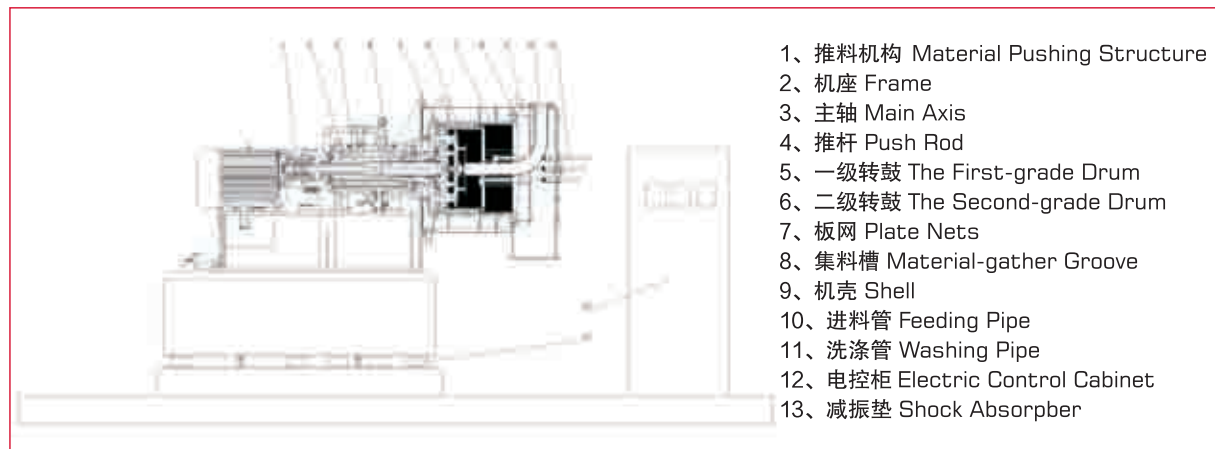


● Working principle

HR pistons pushing centrifuge consist of oil-supplying system, product-pushing structure, bearing seat, main shaft, pushing rod, inner drum, outer drum, sieving net, product gathering groove, feeding pipe, washing pipe, housing and other parts. When the drum runs on a full speed driven by the main motor and transmission belt, the suspension will be led to the product distributing plate through feeding pipeline continuously. Then the suspension will be distributed evenly on the filter net on the inner first-grade drum. Most of the liquid phase will be thrown out through the filter net and the filter holes on the drum wall and then drained outside through liquid outlet. The solid will be intercepted on the first-grade drum and form a cake ring. While the drums of the two grades are revolving together at a same speed, the drum of the first grade will move reciprocally continuously in axial by the pushing of the pistons, then the pushing plate will be able to push out the filter cake on the drum of the first grade. In the next step, the filter cake will be pushed into the drum of the second grade to further separate and form a new filter cake. Then, the outer edge of the first-grade drum will push the new filter cake out of the second grade drum continuously. The filtering and washing liquid can be drained out separately if necessary.



● 活塞推料离心机结构示意图 Sketch of the HR series horizontal pistons of the two ends push material centrifuge



● 主要特点

HR系列活塞推料离心机是一种连续进料，分离后的滤饼间歇排出的过滤式离心机；该离心机能在全速运转下，连续进行进料、分离、洗涤、卸料等工序。

具有下述显著特点：

- 1.连续操作、生产能力大、运转平稳；
- 2.分离因素高，物料在一级、二级转鼓内可充分脱水，滤饼的含湿量很低；
- 3.对固体产品的纯度有要求时，可以进行有效的洗涤，洗涤液与母液可以分别排出；
- 4.功率消耗低且均匀。

● 应用范围

适合分离含固相物粒度大于0.1mm，浓度大于30%的悬浮液；适用于化工、轻工、制药、食品等行业，适用于氯化钠、氯化铵、碳酸氢铵、硫酸钠、尿素、咖啡因、聚乙烯、聚苯乙烯、乙二酸、硝铵等生产。

● 卧式活塞推料离心机的选择

- 1.对滤饼含湿量、洗涤要求较高，要求产量较大时；
- 2.悬浮液浓度存30%—80%（质量百分比），物料晶体颗粒平均粒径大于0.1mm，且物料粘度小于10—1Pa·S。符合上述条件时可选用卧式活塞推料离心机。

● 其它选择

- 1.材质选择：物料接触部分材质可为普通不锈钢、特殊不锈钢、铜合金或钛合金等。
- 2.电机型式：可采用普通型或防爆型单速电机等。
- 3.排液方式：母液与洗涤液可采取混合排放或分流排放。
- 4.滤网间隙宽度选择范围：0.08—0.40mm。
- 5.可按GMP规范设计、制造。
- 6.其它要求。

● Main characteristics

HR pistons pushing centrifuge is a kind of filter centrifuge that adopts continuously feeding and intermittently pushing out. It can carry all procedures as feeding, separating, washing, discharging and etc on a full speed.

It has the following distinctive features:

1. It can be operated continuously and steadily, which capacity is great.
2. Because of its high separating factor, it can be dehydrated fully in the two drums. So, the filter cake will contain less moist.
3. While there is a high demand to the purity of the products, the centrifuge can wash them and drain out the washing liquid and the mother liquid separately.
4. Low and even consumption of the power.

● Using scope

This type of centrifuge is well used to separate suspension with its solid size is over 0.1mm and density is over 30%. It can be used in chemical, light, pharmacy and food industry to produce sodium chloride ammonium fluoride ammonium bicarbonate, sodium Sulphate, urea, caffeine, polyethylene, polystyrene, oxalate, nitrate

● The choice of HR pistons pushing centrifuge

1. If the customer has high requirements on moisture content of filter cake, washing effect and working capacity.
2. The density of the suspension should be within 30%-80% (weight percentage); ten even product particle size is over 0.1mm and its viscosity should be less than 10-1pa.s. You can choose HR pistons pushing centrifuge concerning above Conditions.

● Other configuration choices

1. Material: product contact parts can be common stainless steel special stainless steel, copper alloy, titanium and etc.
2. Motor: you can choose common motor or explosive-proof motor
3. Draining means: you can choose to drain the mother liquid and the washing liquid separately or together.
4. Clearance of the filter net: 0.08-0.40mm
5. Can be designed and manufactured according to GMP requirements.
6. Other requirements.

● HR系列离心机主要技术参数 HR Model and Main Parameters

项目Item	型号Model	HR400-N	HR500-N	HR630-N	HR800-N	HR1000-N
直径 Diameter(mm)	内/外转鼓 Inner/ Outsider basket	337/400	410/500	560/630	720/800	920/1000
过滤区长度 Length of filtering(mm)		160/160	180/180	240/240	300/300	240/320
转速 Speed(r/min)		1500-2200	1200-2000	1000/1800	800-1600	650-1250
分离因素 separating factor		503-1083	402-1118	352-1140	286-1145	236-875
推料进程 Length stroke(mm)		40	50	50	50	50
推料次数 Frequency of stroke(mm)		30-80	50-70	30-80	30-80	20-70
主电机功率 Main motor power (Kw)		11	30-45	37-55	55-75	75-90
油泵电机功率 Oil pump motor Power (Kw)		5.5	22	30	45	45
生产能力 Production capacity (t/h)		1-8	5-15	8-25	15-40	18-50
外形尺寸 长×宽×高 Overall dimensions L×W×H(mm)		2460×1286×1030	3590×1430×1642	3500×1760×1265	3700×1800×1450	4200×1900×1900
机器重量 Weight(Kg)		2480	3500	4000	6000	12000

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