Erich Stallkamp ESTA GmbH
德国Stallkamp（斯多康）机械集团公司

斯多康（北京）科技有限公司

固液分离机系列

创新 | 用户友好 | 维护费用低

Innovative | User-friendly | Low-maintenance

www.stallkamp.de

MADE IN GERMANY

德国制造

不锈钢螺旋挤压式分离机

Press screw separators

固液分离的好处

功能：

螺旋挤压式固液分离机最适合将液体物料分离成固体和液体成分。待分离介质（原料）位于筛网中，液体部分通过筛网挤出，固体部分被筛网截留。

应用：

- 分离畜牧场的粪尿（牛、猪、禽类），或用于生产卧床垫料
- 沼气发酵液的分离（发酵前或者发酵后皆可）
- 食品行业中的固液分离。如分离废弃的蔬菜、土豆皮、西红柿酱等食品行业
- 屠宰场污水分离（胃内容物，粪污、清洗水等）
- 酿酒行业的酒糟分离
- 污水处理厂等
- 造纸厂：纸浆、浆渣的分离

Separation is profitable!

Functionality

Our press screw separators are best suited for separating a medium into its solid and liquid constituents. The medium to be separated is located in the screen basket. The liquid part goes through the screen, whereas the solid part is caught by the screen.
This screen is permanently cleaned by a plated stainless steel press screw, which conveys the solid material to the outlet building up a plot. In this process the adjustable counterpressure at the outlet controls the required dryness of the solid material.

Applications

- For the easy distribution of cattle and pig manure or for the production of bedding material in agriculture
- Separating solid and liquid matter before and after the digester process in biogas plants
- Separating vegetable waste, for example potato peelings in the food industry, rumen contents in meat packing plants, mash in distilleries, waste water treatment plants

优点

- 减少20-30%的液体储存体积*
- 降低原料中的有机营养物质
- 提高运输能力/效率
- 可作为奶牛的卧床垫料
- 减少存储池的浮渣
- 更容易搅拌混合
- 提高了施肥效果
- 分离出的固体干物质含量高，可直接做有机肥原料，无需添加其它物质，降低成本，提高肥效
- 更容易被植物吸收，意味着更少的腐蚀性和土壤污染
- 使用拖式软管施肥器施肥的时候，不会被堵塞
- 通过减少所需的液体储存量，更容易符合法定储存期限（欧盟规定）

* 取决于液体原料的含固率

Advantages

- Between 20-30 % burden eased on manure depots*
- Export of organic nutrient surpluses
- Improvement of transport capability/efficiency
- Production of bedding material for pens in cowsheds
- Reduced floating layers in the final storage site; less energy is required for stirring
- Improved fertilising effect
- The uptake to the plant is more quickly, meaning less corrosion and feed contamination
- No blockages when distributing separated effluent using drag hose spreaders
- Compliance with statutory storage durations becomes easier by reducing the liquid storage volume required

* depending on the liquid discharge

固液分离机类型 | Separator Portfolio

型号	分离机	移动式分离机 | Mobile unit	
PSS 2.2-400	PSS 2.2-400	PSS ComPress紧凑型移动式分离机	
PSS 4/5.5-550	PSS 4/5.5-550	PSS 移动式分离机 Small	PSS 移动式分离机 Large
PSG 3/4/5.5-600 PSG 5.5-750	PSG 3/4/5.5-600 PSG 5.5-750	PSG 移动式分离机 Small	PSG 移动式分离机 Large

PSS 2.2-400型不锈钢螺旋挤压分离机

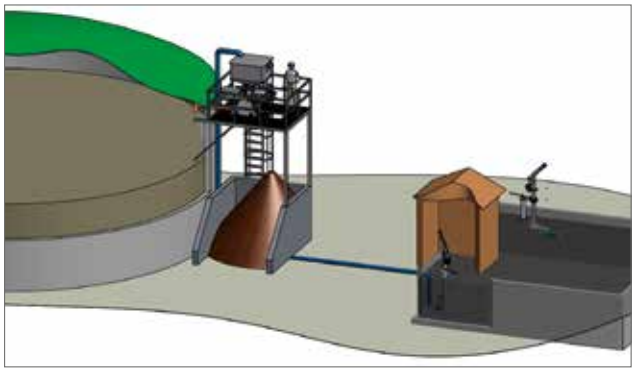
Stainless steel press screw separator

优势

· 紧凑型设计
· 适合小型牧场的物料分离
· 优良的性价比
· 优化设计的控制系统，保证分离机可用于最佳的分离效果
· 可按照客户特殊需求定制
· 分离机可轻松扩展功能（如叠放）

Advantages

- Compact design
- Specially designed for small separation quantities
- Very good price/performance ratio
- Thanks to the control system technology, the separator can be used at the optimum operating point
- The system can grow with the requirements; the separator can be extended effortlessly

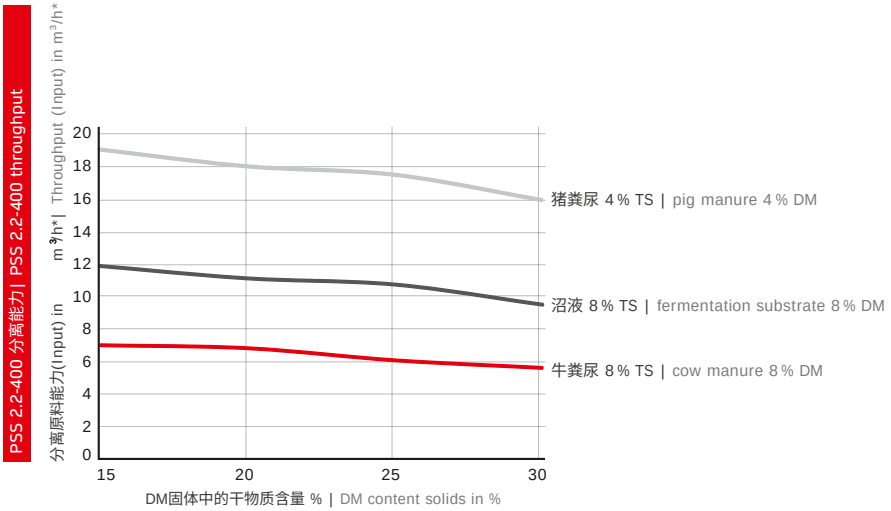


从集污池泵送液体至暂存料箱直接分离（无溢流）
Separation from reception pit. Elevated tank for liquid phase.

配备有溢流管道混凝土平台上的分离机
Separator on a concrete platform with overflow system.

使用中的分离机 | Separator in use.

使用中的分离机 | Separator in use.



以上是配备0.5mm筛网的处理能力，如配备1.0mm筛网则增加约+20% | Throughput with 0.5 mm screen; with 1.0 mm screen + approx. 20%
粪尿的性状不同，分离能力也不同 | Throughput may differ depending on the nature of the manure

紧凑型移动式固液分离机

Stainless steel press screw separator

配置

组成部分

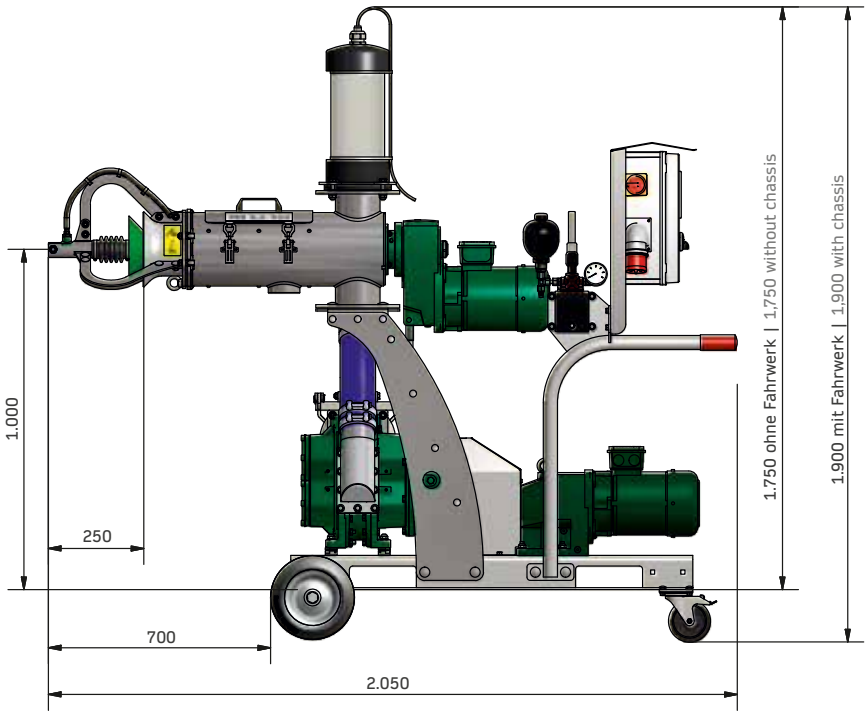
- 2.2kw驱动电机PSS2.2-400
- 2.2KW转子泵
- 压力监测单元
- 电控系统
- 可只选则底盘或者底盘+脚轮系统
-

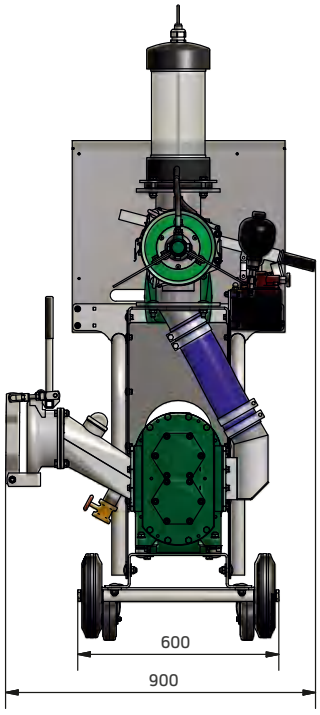
Our little powerhouse!

Structure

- Press screw separator PSS 2.2-400 with 2.2 kW drive motor
- Rotary lobe pump with 2.2 kW drive motor
- Pressure measuring unit
- Electronic control system
- Optional chassis, consisting of axle with wheels and two castors

Separator ComPress PSS 2.2-400





分离机 Separator	驱动电机: 2,2 kW | Drive motor: 2.2 kW 转速: 50 U/min | Rotational speed: 50 rpm 筛网规格: Ø 150 mm, L = 400 mm | Screen basket: Ø 150 mm, L = 400 mm 筛网孔径: 0,35 / 0,50 / 0,75 / 1,00 mm (可定制其它规格) Gap widths: 0,35 / 0,50 / 0,75 / 1,00 mm (other widths upon request) 分离能力: 2–12 m³/h | Throughput: 2–12 m³/h
供料泵 Supply pump	转子泵型号: D-SW 70 | Rotary lobe pump: D-SW 70 电机功率: 2,2 kW | Drive motor: 2.2 kW 转速: 123 U/min | Rotational speed: 123 rpm
电控系统 Control system	SPS工程塑料支撑的电控箱（带显示） | SPS supported control system with display 自动控制泵和分离机 | Automatic control of pump and separator 高等级工业插头: 32 A | CEE-Stecker: 32 A
外形尺寸 L x B x H Dimensions L x W x H	2.050 x 900 x 1.900 mm
重量 Weight	约 450 kg

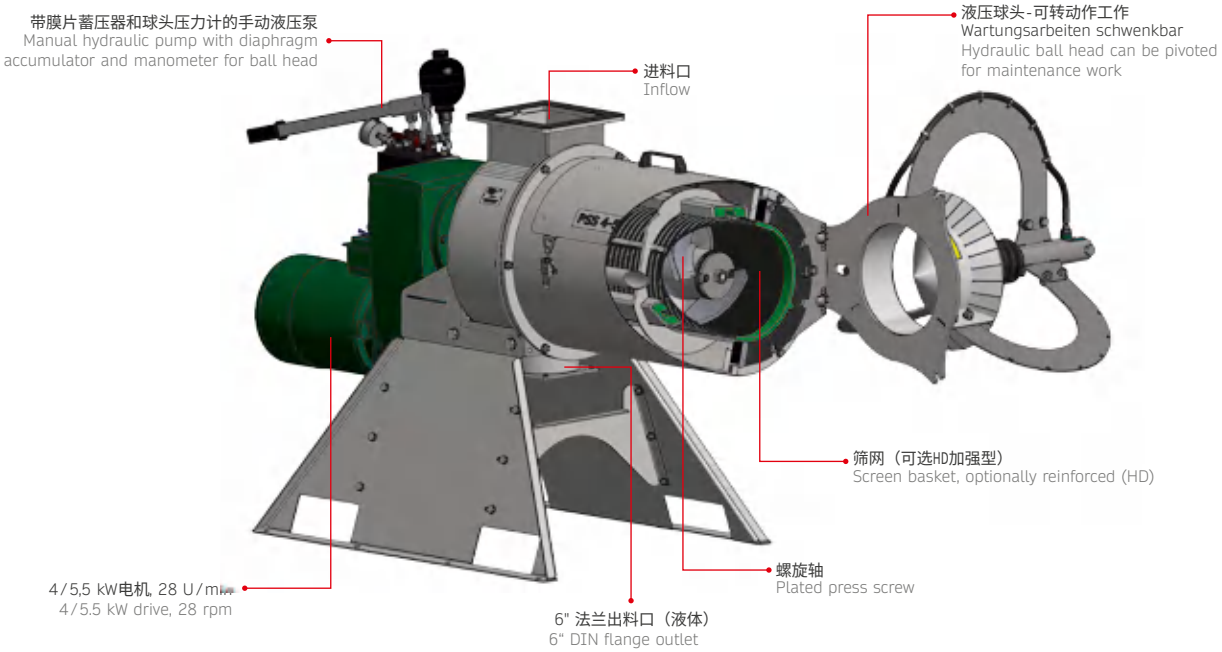
Technische Daten | Technical data

紧凑型移动式分离机 | ComPress Mobile Separator

紧凑型移动式分离机 | Mobile separation in hoppers

PSS 4/5.5-550不锈钢螺旋挤压式分离机

Stainless steel press screw separator



PSS 4/5,5-500 分离机外形（带液压球头） | PSS 4/5,5-500 separator design with hydraulic ball head

液压球头

新一代分离机

用户对新一代Stallkamp分离机的反馈信息特别好，特别是其使用方便和维护费用低的优点。

优点

- 更好的干物质含量
- 快速清洁/维修工作
- 更短的操作准备时间
- 由于球头的力量分布均匀，分离机的操作和运行更加平稳
- 运行过程中所需的干物质含量DM可以随时方便的改变，并且有压力显示，易于观察

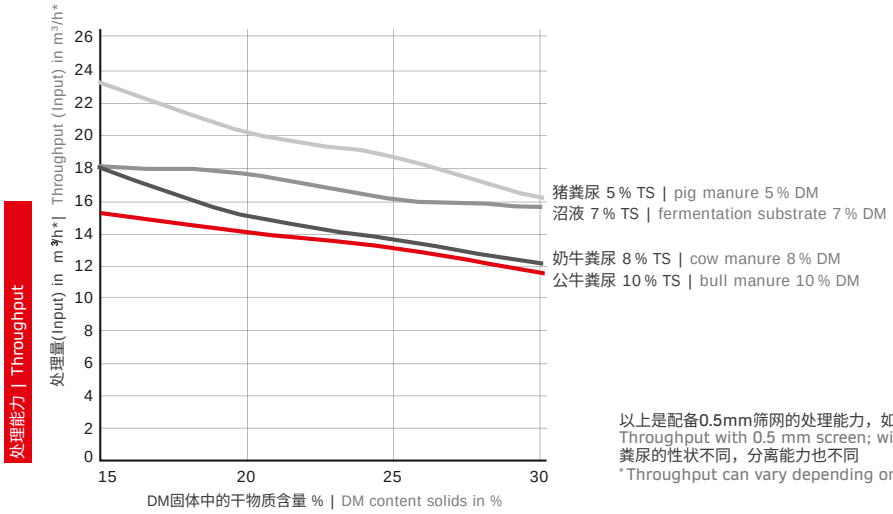
Hydraulic ball head

The new generation of separators

The new generation of Stallkamp separators impresses due to its user-friendliness and is especially low-maintenance due to its pivoting ball head.

Advantages

- Increases dry matter
- Accelerates cleaning/service work
- Quicker operational readiness since the plug does not have to be established from foreign material
- Due to the even force distribution of the ball head on the fixed material, reliable separator operation occurs
- Required degree of dry matter during running operations effortlessly modifiable and, thanks to the manometer display, effortlessly reproducible



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Throughput with 0.5 mm screen; with 1.0 mm screen + approx. 20%
粪尿的性状不同，分离能力也不同
*Throughput can vary depending on the nature of the manure

PSS-mES移动式固液分离机

PSS-mEL移动式固液分离机

Stainless steel press screw separator, small and large mobile units

移动式固液分离设备的优点

- 可以在任何地方方便的使用
- 完整的成套设备，包含了泵和控制系统
- 完全相匹配的组件
- 适合各种畜禽场、沼气项目、屠宰场、餐厨垃圾或者污水处理等项目

Advantages of mobile units

- Can be used anywhere
- Complete unit, including control system and pump(s)
- Harmonised components
- Can be used in different plants

功能
借助我们的移动式分离机，可以很快的组成一套分离系统，使用一台或两台转子泵来泵送分离物料。 在这个过程中，转子泵将原液从储液池（或者储存罐）中抽出，泵送至分离机，固液分离完成后，液体有两种方式排出：1）PSS-mES系列通过管道直接自流至终端液体储存塘（或暂存池）；2）PSS-mEL系列是自流到暂存罐，然后另一台转子泵负责把液体泵送到终端储存塘（或暂存池）。

Functionality

Thanks to our mobile unit, moving the separator with one or two rotary lobe pumps in no time is now possible. In this process, the rotary lobe pump sucks the raw liquid out of a tank. Once the solid matter has been separated, the liquid flows off under no pressure with the PPS-mES. The PSS-mEL collects the liquid in a hopper and pumps it into a final storage site.

PSS-mES

PSS-mEL

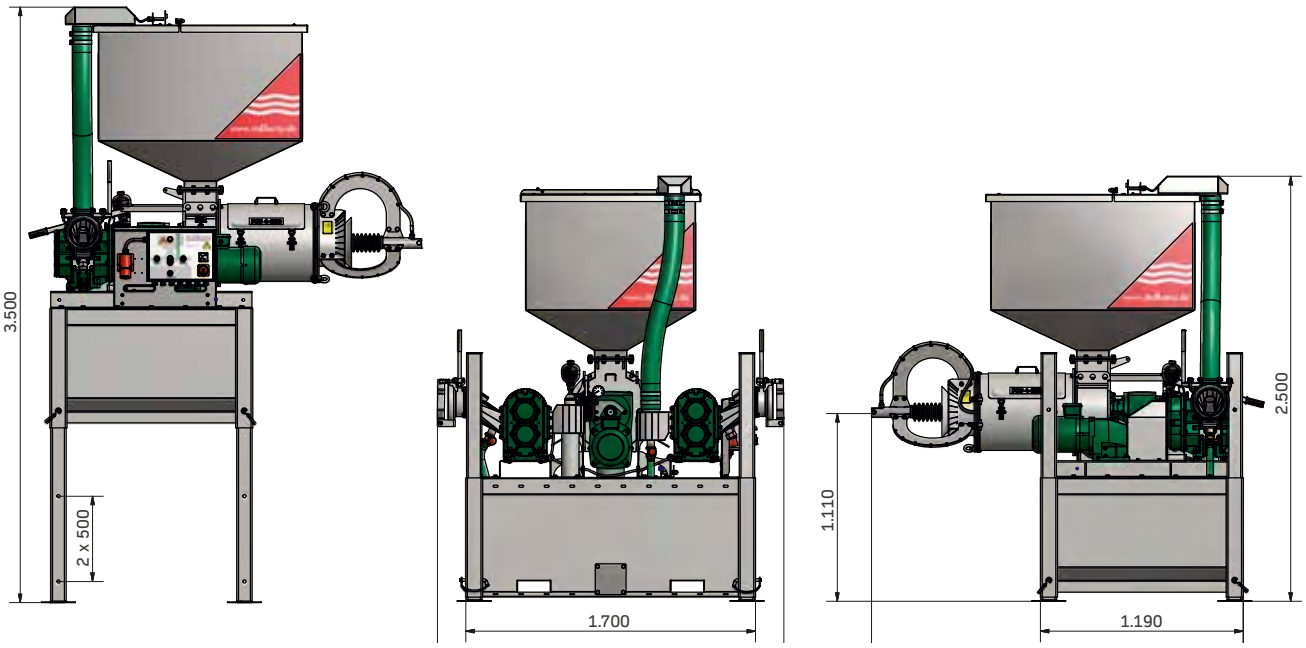
15分钟准备，即可分离！
Ready for operation in 15 minutes!

技术参数 | Technical data

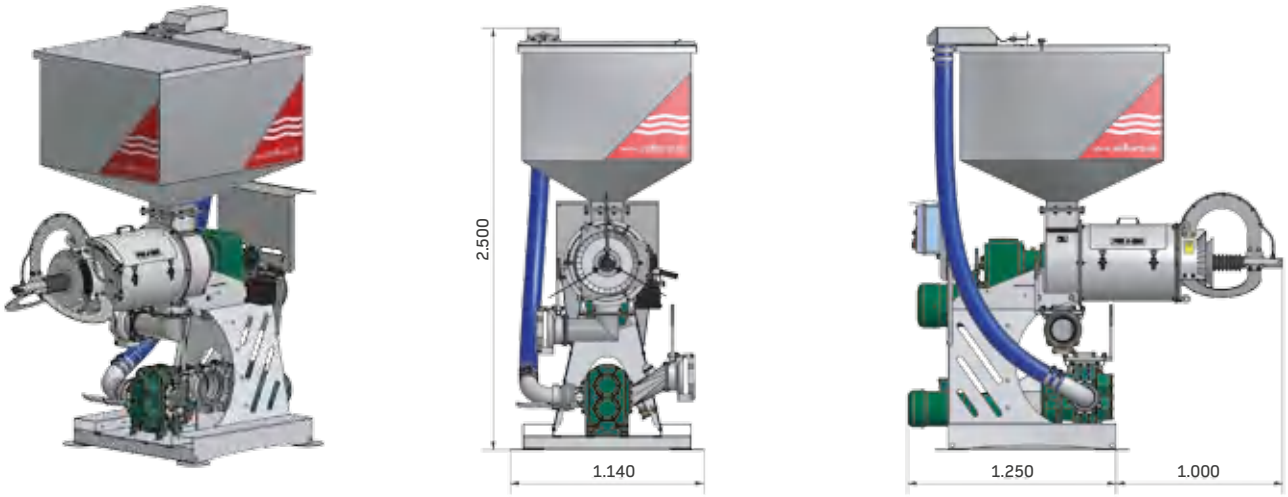
	单泵移动式分离机 **Small mobile unit**	双泵移动式分离机 **Large mobile unit**
分离机 Separator	PSS 4/5,5-500 电机功率: 4/5,5 kW | Drive motor: 4/5.5 kW 转速: 26/28 U/min | Rotational speed: 26/28 rpm 筛网规格: Ø 260 mm, L = 550 mm Screen basket: Ø 260 mm, L = 550 mm 筛网孔径: 0,20 / 0,35 / 0,50 / 0,75 / 1,00 mm (可根据客户需求定制) Gap widths: 0.20 / 0.35 / 0.50 / 0.75 / 1.00 mm (other widths upon request) 分离能力: 5–25 m³/h | Throughput: 5–25 m³/h	PSS 4/5,5-500 电机功率: 4/5,5 kW | Drive motor: 4/5.5 kW 转速: 26/28 U/min | Rotational speed: 26/28 rpm 筛网规格: Ø 260 mm, L = 550 mm Screen basket: Ø 260 mm, L = 550 mm 筛网孔径: 0,20 / 0,35 / 0,50 / 0,75 / 1,00 mm (可根据客户需求定制) Gap widths: 0.20 / 0.35 / 0.50 / 0.75 / 1.00 mm (other widths upon request) 分离能力: 5–25 m³/h | Throughput: 5–25 m³/h
上料箱 Hopper	容积: 0,85 m³ | Volume: 0.85 m³ 带浮球开关 | With float switch	容积: 0,85 m³ | Volume: 0.85 m³ 带浮球开关 | With float switch
供料泵 Supply pump	转子泵: D-SW 70S | Rotary lobe pump: D-SW 70S 电机功率: 4 kw | Drive motor: 4 kw 转速: 382 U/min | Rotational speed: 382 rpm 流量: 28 m³/h | Throughput: 28 m³/h 阴阳快捷连接头 Perrot male connector connection system	转子泵: D-SW 70S | Rotary lobe pump: D-SW 70S 电机功率: 4 kw | Drive motor: 4 kw 转速: 382 U/min | Rotational speed: 382 rpm 流量: 28 m³/h | Throughput: 28 m³/h 阴阳快捷连接头 Perrot male connector connection system
暂存料箱 Hopper	–	容积: 0,85 m³ | Volume: 0.85 m³ 带浮球开关 | With float switch
排水泵 Discharge pump	–	转子泵: D-SW 70S | Rotary lobe pump: D-SW 70S 电机功率: 4 kw | Drive motor: 4 kw 转速: 382 U/min | Rotational speed: 382 rpm 流量: 28 m³/h | Throughput: 28 m³/h 阴阳快捷连接头 Perrot male connector connection system
控制系统 Control system	防爆开关 | Rupture safeguard 电流指示表 | Amperemeter 高等级工业插头: 32 A | CEE connector: 32 A 外部信号接口: 输入/输出 | External signals: Input/output	防爆开关 | Rupture safeguard 电流指示表 | Amperemeter 高等级工业插头: 32 A | CEE connector: 32 A 外部信号接口: 输入/输出 | External signals: Input/output
外形尺寸 L x B x H (mm) Dimensions L x W x H (mm)	2.250 x 1.140 x 2.500	2.200 x 2.000 x 2.500
重量 (kg) Weight (kg)	800	1.350

外形尺寸
Details of the mobile units

PSS-mEL



PSS-mES



PSS-mEL和PSS-mES的区别：PSS-mEL配备有暂存料箱和排空转子泵，并具有高中低三个支撑位.

The PSS-mEL differs from the PSS-mES with respect to the hopper withtelescopic supports and the rotary lobe pump for emptying the container.

PSG 3/4/5.5-600 螺旋挤压式分离机

PSG 5.5-750 螺旋挤压式分离机 (垫料分离机)

Cast iron press screw separator

注：Stallkamp收购了德国NOCK公司分离机部门

PSG

优势:

- 分离效率高能
- 控制简便
- 双边安装压力调节螺杆
- 运行平稳
- 性价比高/铸铁箱体
- 能耗低

应用:

- 沼气：沼液的分离
- 农业和畜牧业：粪尿分离
- 可用做牛卧床垫料（PSG5.5-750）
- 屠宰场：瘤胃和肠道内容物、污水等的分离
- 食品工业和肉类加工业：蔬菜废物的分离等
- 酿酒厂和啤酒厂：脱泥和酒糟的分离
- 造纸厂：纸浆、浆渣的分离

Advantages:

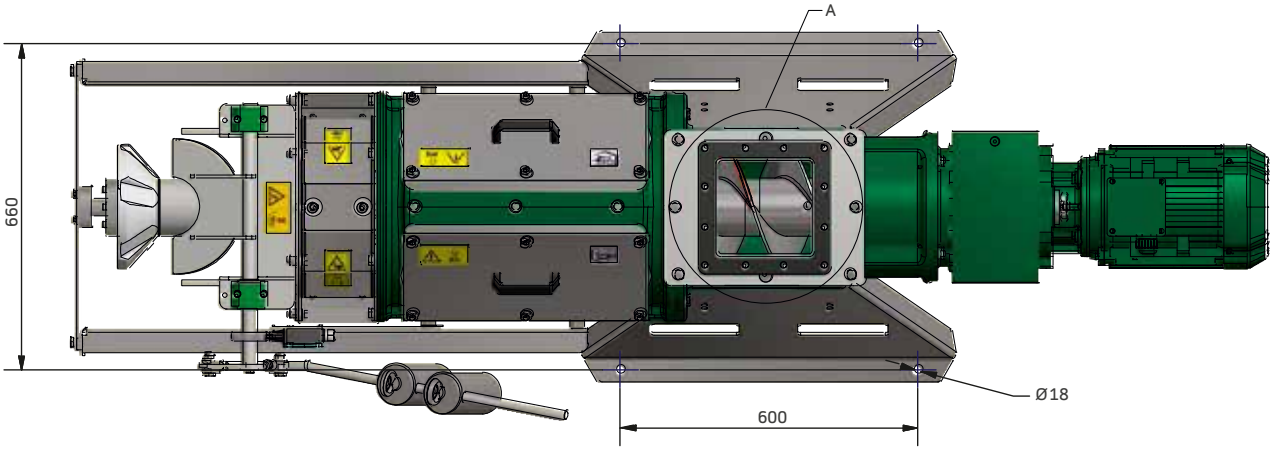
- Efficient separation performance with high throughput
- Simple separator control
- Bilaterally mounted press screw
- Continuous process
- Excellent price/performance ratio due to cast iron housing
- Low energy consumption

Applications:

- Biogas plants: Separation of fermentation residues
- Agriculture and animal husbandry: Separation of manure
- Green bedding
- Abattoirs: e.g. separation of rumen and and intestinal contents
- food industry and meat packing industry: e.g. separation of vegetable waste
- Distilleries and breweries: Dehydrating mash and distiller's grains

技术参数 | Technical data

分离机 Separator	电机功率: 3/4/5,5 kW | Drive motor: 3/4/5.5 kW 转速: 30 U/min | Rotational speed: 30 rpm 筛网规格: Ø 254 mm, L = 600/750 mm Screen basket: Ø 254 mm, L = 600/750 mm 筛网孔径: 0,35/0,50/0,75/1,00 mm (可根据客户需求定制) Gap widths: 0.35/0.50/0.75/1.00 mm (other widths upon request) 分离能力: 5–30 m³/h | Throughput: 5–30 m³/h
外形尺寸 L x B x H Dimensions L x W x H	PSG 3.0-600: 2.240 x 1.130 x 950 mm PSG 4.0-600: 2.240 x 1.130 x 950 mm PSG 5.5-600: 2.310 x 1.130 x 950 mm PSG 5.5-750: 2.410 x 1.130 x 950 mm
重量 Weight	ca.约. 600 kg

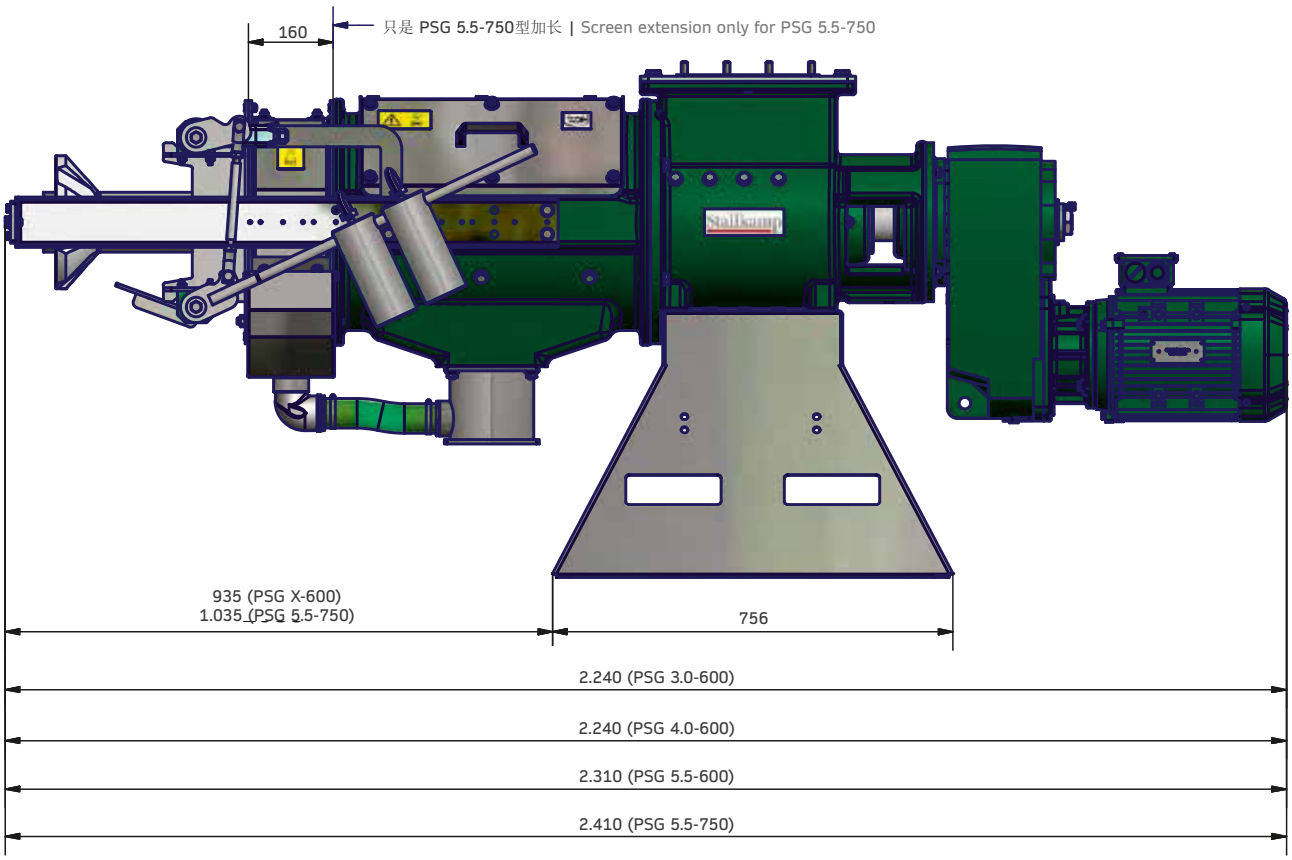


PSG系列分离机结构

- 外壳由铸铁制成，带进料口和2个独立的清洁孔
- 更大的进料入口
- 方形法兰出料口
- 加强型不锈钢筛网
- 表面硬化的双叶螺旋轴，与筛网精密配合
- 驱动电机
- 固体出口不锈钢材质， 配重块调节固体含水率DM
- 不锈钢框架/支架

PSG structure

- Heavy machine housing made from cast iron with inlet chamber and 2 separate cleaning holes
- Inlet for the fluid to be separated
- Outlet ports with square flange for the filtered fluid
- Robust, fine-mesh screen cylinder made from stainless steel
- Plated, two-way press screw made from stainless steel with precision fit for the screen
- Drive motor
- Solids outlet made from stainless steel; flaps steplessly adjustable via counterweight for controlling the residual moisture content
- Subframe/fastening frame made from stainless steel



PSG系列分离机（原NOCK）的功能

螺旋挤压分离机以完全自动化的方式连续地从液体中分离出固体物料。 将要分离的混合物从上方泵入进料口，并通过压力螺旋轴将其推送到水平筛网中。 压力区位于筛网的最后一个子区域，即使是最小的颗粒物也会从液体中分离出来。 持续挤压固体物料，在干燥状态下被推出机器的固体出料口。 固体物质很容易被收集。分离后的液体经过分离机铸铁外壳下方的出口排出。 由于筛网和螺旋轴之间的公差控制严格，筛网在分离机内部具有自清洁功能。

反推力轴承的特殊设计

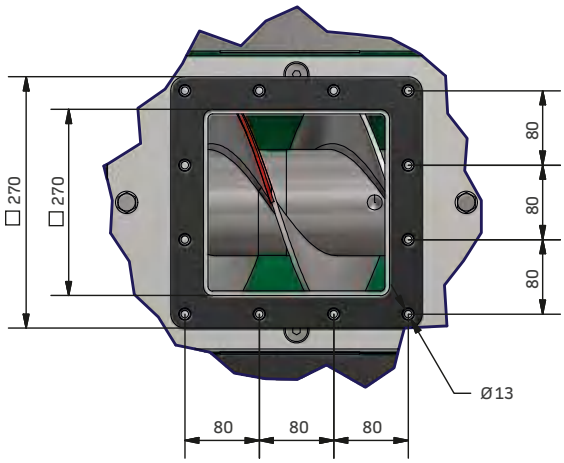
为了减少筛网和螺旋轴的磨损，特别是在需要分离干物质含水率低的要求情况下（如奶牛卧床垫料），分离机螺旋轴在末端设计有特殊的反推力轴承，保证设备运行平稳和得到尽可能干燥的固体。

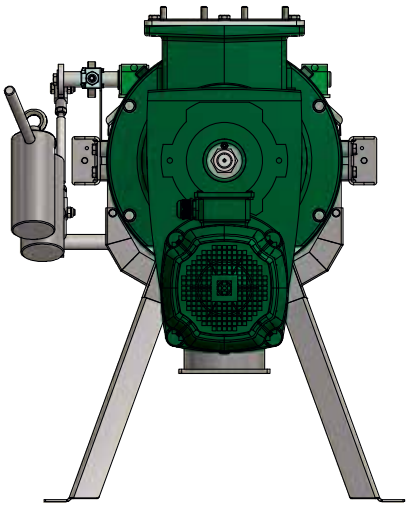
Functionality of the PSG

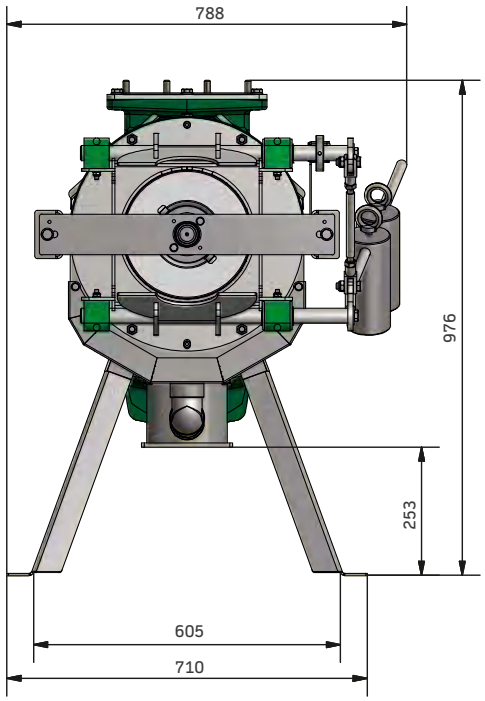
The press screw separator continuously separates solid materials from liquids in a fully automated manner. The mixture to be separated is pumped into the inlet chamber from above and conveyed into the horizontal screen by the press screw. The pressing zone is located in the final sub-section of the screen, where even the tiniest particles are separated from the liquid. A permanently regenerating, compact solid cake emerges, which is pushed out of the solids outlet of the machine in a dry state. This can be collected effortlessly in simple tanks. The separate liquid flows through the outlet below on the machine housing. Due to the tight tolerances, the screen is kept permanently clean on the inside of the press screw.

Functionality of the counter bearing

To reduce wear on the screen and press screw, especially in the case of high volumes of dry matter content, the press screw is additionally supported by a counter bearing on the outlet side.







PSG-mES移动式固液分离机

PSG-mEL移动式固液分离机

Cast iron press screw separator, small and large mobile units

移动式固液分离设备的优点

- 可以在任何地方方便的使用
- 完整的成套设备，包含了泵和控制系统
- 完全相匹配的组件
- 适合各种畜禽场、沼气项目、屠宰场、餐厨垃圾或者污水处理等项目

Advantages of mobile units

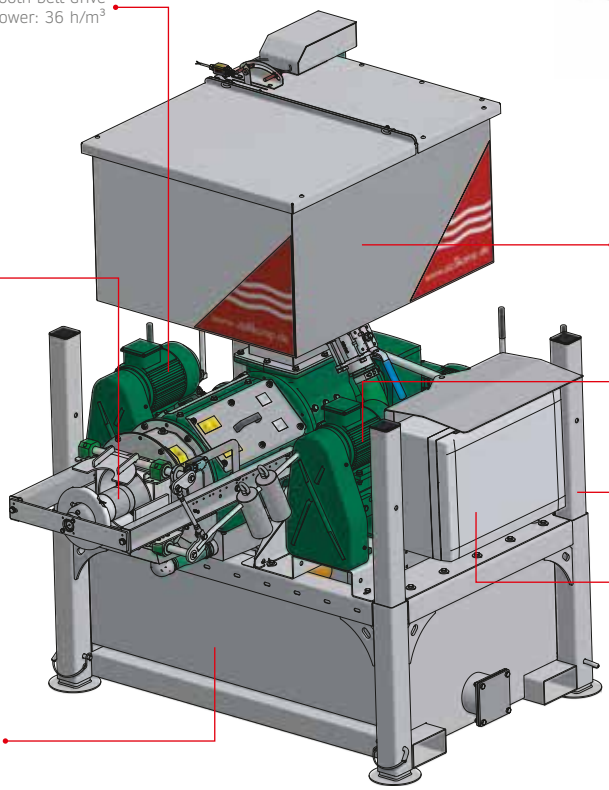
- Can be used anywhere
- Complete unit, including control system and pump(s)
- Harmonised components
- Can be used in different plants

PSG-mES

泵的型号可选择多样:
- 供料泵 HEX，出料泵 HEX
- 供料泵 HEX， 出料泵 DKP
- 供料泵 DKP， 出料泵 DKP

The following pump combinations are possible:
- Supply pump HEX und discharge pump HEX
- Supply pump HEX und discharge pump DKP
- Supply pump DKP und discharge pump DKP

PSG-mEL



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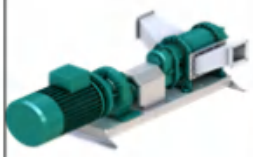
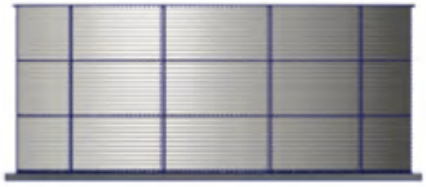
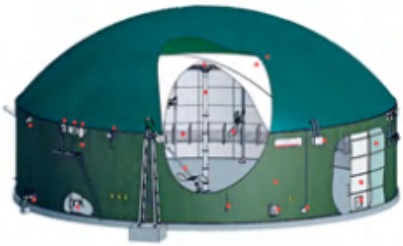
分离机						
搅拌器						
泵						
罐体						

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