

Continuous Rotary pressure Filter

Self-contained system/Process versatility/Continuous processes/Clean-in-place

Features

1. Operation with enclosed system

Processes with enclosed system, ensures the cleanness of producing environment and sanitary requirement of processed materials; therefore, processes with combustible, explosive or toxic ingredient can be safe and reliable with CRF.

2. Automation with high process versatility

The CRF provides several process options during one drum revolution according to customer requirement, such as filtration, washing(single or multi-stage cake washing) and drying; pollution possibilities during process transfer can be avoided; and all process steps are automatic controlled; we also provide operation training for our customers.

3. Clean-in-place

After cake discharging, filtration media can be refreshed by spray device or backblowing in place for next loop; this step is optional and is highly recommended for high viscosity material, which maintains high filtration capability.

4. Alternative materials

The equipment and filtration media can be manufactured by various material to satisfy customer individual application; polished surface is possible.

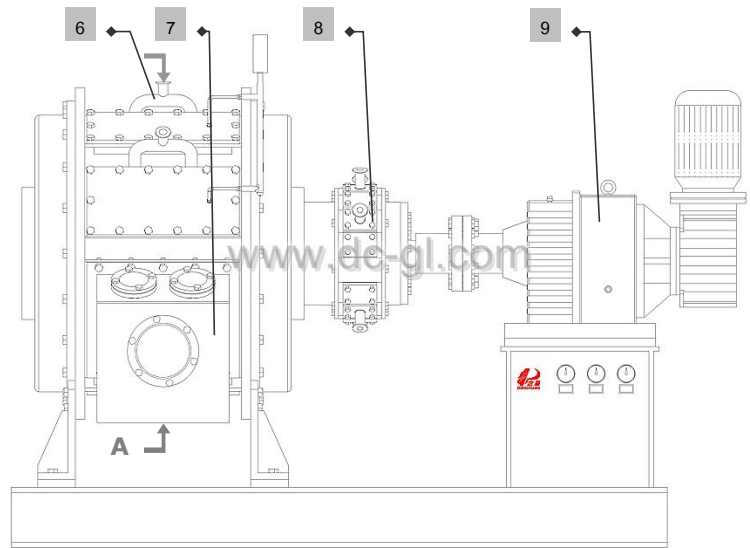
5. Process tests

Test equipment is available in our test center for customer specific tests; test reports are offered as reliable basis for product selection



Structures and Process steps

CRF structures



① Inner drum

The rotation drum is evenly divided into blocks by ledges; each block is filled with filtration media; filtration cake is formed in the block during filtration chamber; the thickness of the cake can be adjusted according to filtration requirement.

② Diversion channels

The filtrate from different process steps is drained via the channels.

③ Filtration media

The filtration media is fixed into the blocks on the drum; there are different materials for individual application requirement.

④ Sealing segment

Sealing segments work along with separating ledges on the drum to maintain independent environment for each process chamber.

⑤ Assistant discharge

Optional configuration which can be applied for sticky cake;

⑥ Inlets

Inlets for different process media, such as filtration suspensions, washing media, drying media and so on.

⑦ Enclosed discharging chamber

The chamber can be connected with transfer lines after discharging, without exposing the cake to environment; observation glasses are configured for discharging monitoring.

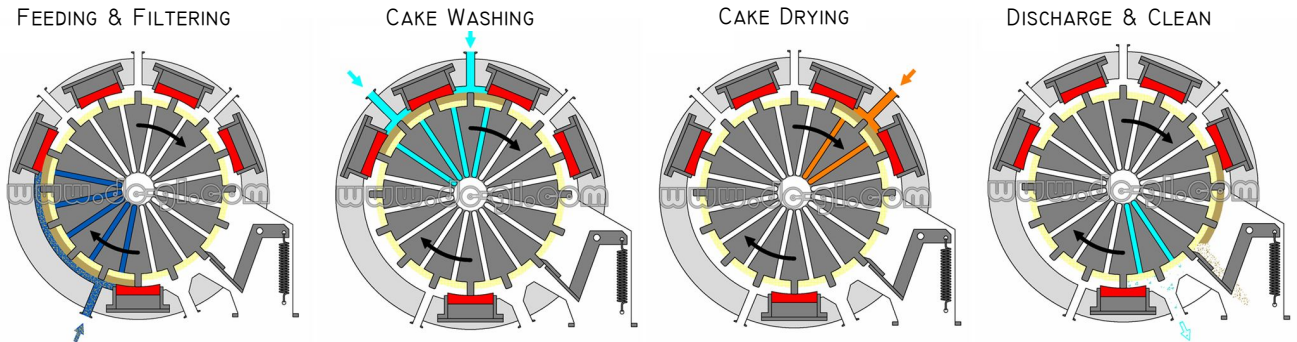
⑧ Distribution head

Filtration from different process steps is drained independently, and the backblowing for cake discharging and filtration media clean can be also controlled.

⑨ Transmission structure

Transmission segment and central control cabinet, dash boards are configured for process monitoring.

CRF Process steps



a. Feeding and Filtering

The suspension/slurry is continuously fed via the inlet pipe with certain pressure into the filtration chamber; cake forms on the filtration media in the drum blocks when filtrate drains out via the diversion channel.

b. Cake Washing

With the rotation of the inner drum, the filter cake is taken to the washing chamber(if washing is required); single or multi-stage washing can be defined; washing media can thoroughly displace the liquor from the cake; for multi-stage washing filtrate from each stage is drained independently via the diversion channels while the final stage filtrate can be recycled for next washing process.

c. Cake drying

Compressed air/nitrogen or steam can be the drying media for cake drying.

d. Discharging and Clean

Dried cake is discharged under environmental pressure; scarper is optional for discharging; and finally backblowing or washing spray is taken place for filtration media clean.

Applications

Pharmaceuticals/Food/Chemicals/Organic chemicals/Agrochemicals/Dyes/Textiles/Metallurgy/Ceramics and so on.

Performance data and dimensions

TYPES	CRF-0.2	CRF-0.5	CRF-0.8	CRF-1.5	CRF-2.2	CRF-2.9	CRF-5.8	CRF-8.6
ITEMS								
Active filtration area [m ²]	0.2	0.5	0.8	1.5	2.2	2.9	5.8	8.6
Filtration type	Pressure filtration							
Material	A broad range of different high-alloyed steel							
Dimensions Cylinder Diameter x Hight [m]	2x1.2x2	2.1x1.2x2	2.2x2.1x2.2	2.5x2.1x2.2	2.7x2.3x2.2	3.3x2.4x2.5	3.9x3.1x3.2	4.6x3.3x3.6
Weight [t]	2.1	3.2	4.8	5.9	7.8	8.8	17.8	38.8
Remarks	Depends on the requirement, equipment with unmentioned specifications is possible; Dimensions and weights are for customer reference, data may varies according to design updates.							

DING CHANG products:

- Cylinder cone filtering&washing&drying equipment
- Cylinder cone press filter
- Bi-conical spiral mixing dryer
- Continuous press filter with composite rotary plate
- Horizontal crystallizing&washing&filtering&drying equipment
- Multi-tube continuous filtration concentrator
- Multi-plate continuous filtration concentrator
- Spiral mixing continuous crystallization reactor



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