



Classifying Centrifuges



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High Performance Classifying Centrifuge Type V 630 BK



Applications And Markets

Applications

HEINKEL Classifying centrifuges are used in quasi-continuous wet classifying processes where fine, ultra fine and nano-scale particles have to be classified within a slurry.

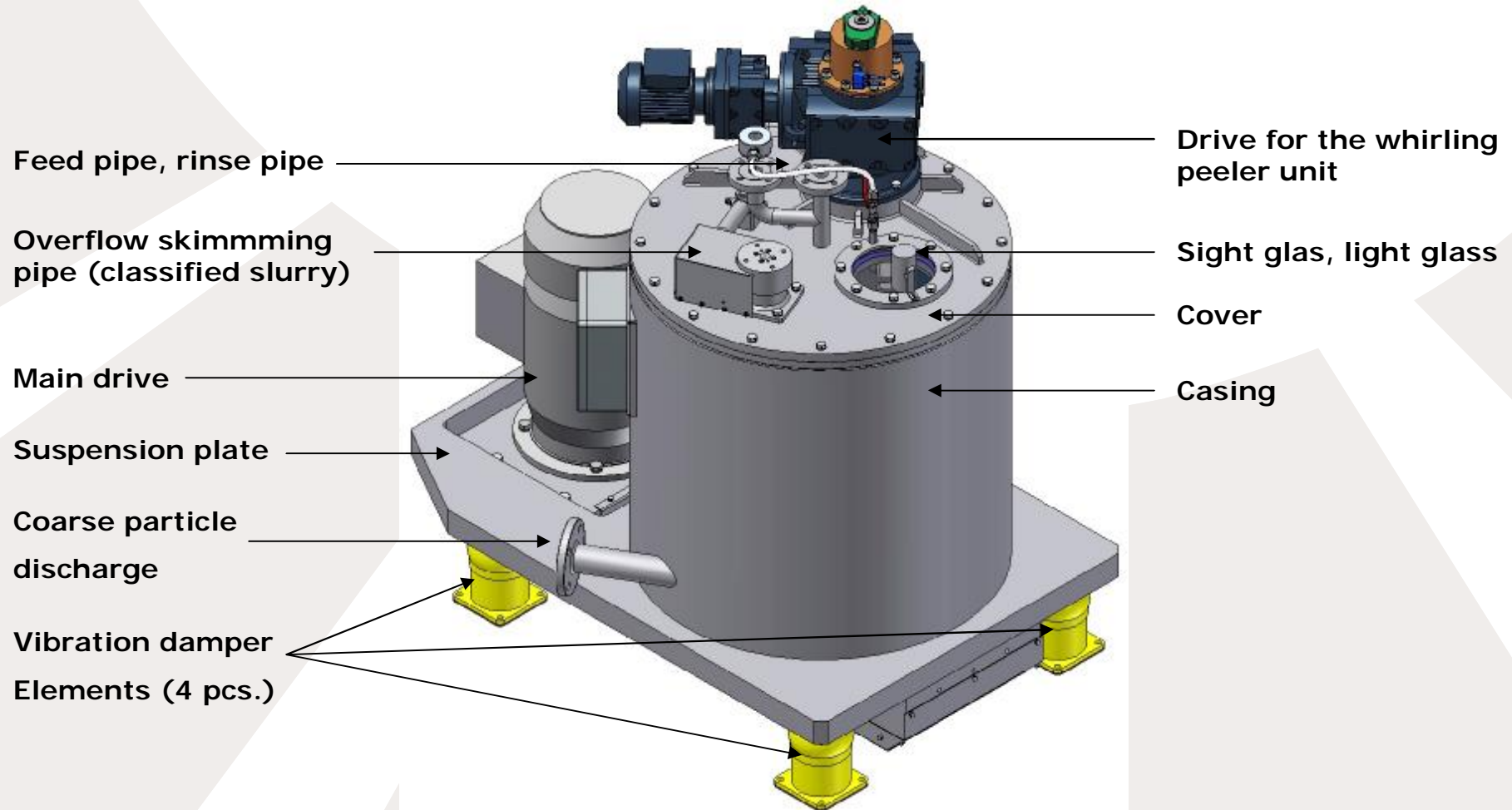
The most common applications are separation of TiO_2 , SiC , Zr , Al_2O_3 , CaCO_2 , Kaolin which is suspended in either water or ethylene glycole

Markets

- Applicatios with TiO_2
- Application in Nano- technology



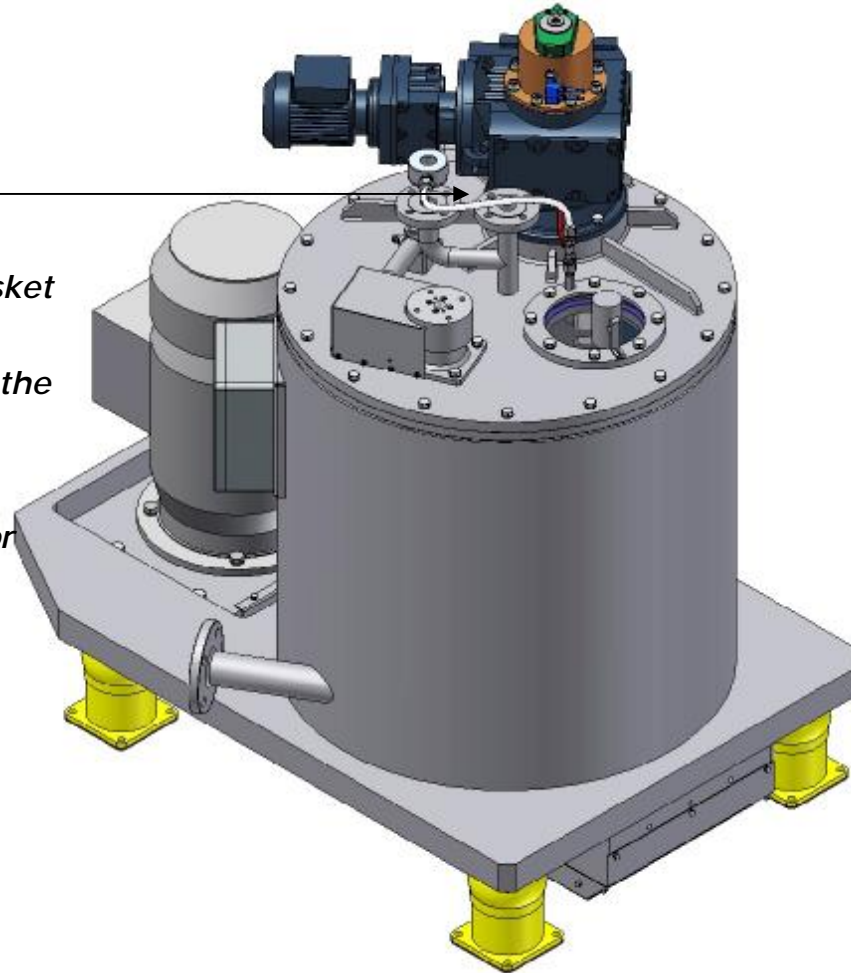
Overview Of The Centrifuge



Overview Of The Centrifuge And Specific Advantages

Feed pipe, rinse pipe

- *central feed into the basket*
- *optimum distribution of the slurry and rinse media*
- *only ONE central pipe for feed and rinse pipe*
- *easy-to-connect with process pipings and tubes*

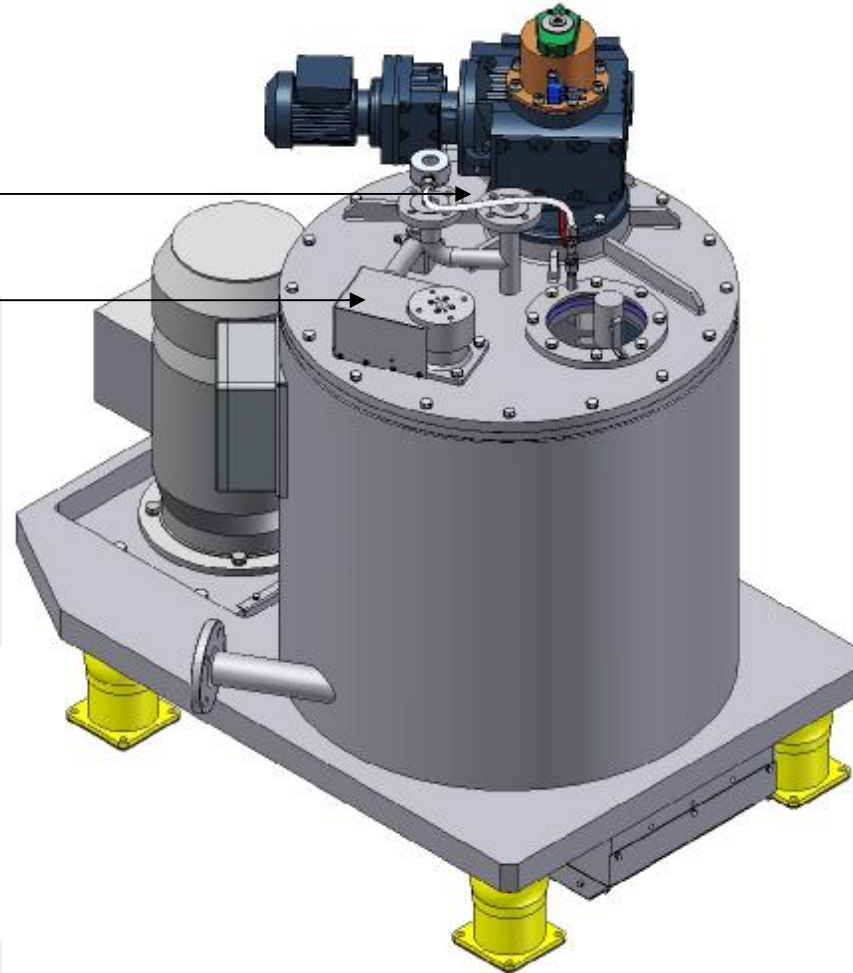


Overview Of The Centrifuge And Specific Advantages

Feed pipe, rinse pipe

Overflow skimming pipe (classified slurry)

- *defined skimming of classified slurry*
- *no contamination with redispersed sediment*
- *less valves and connections for the process*



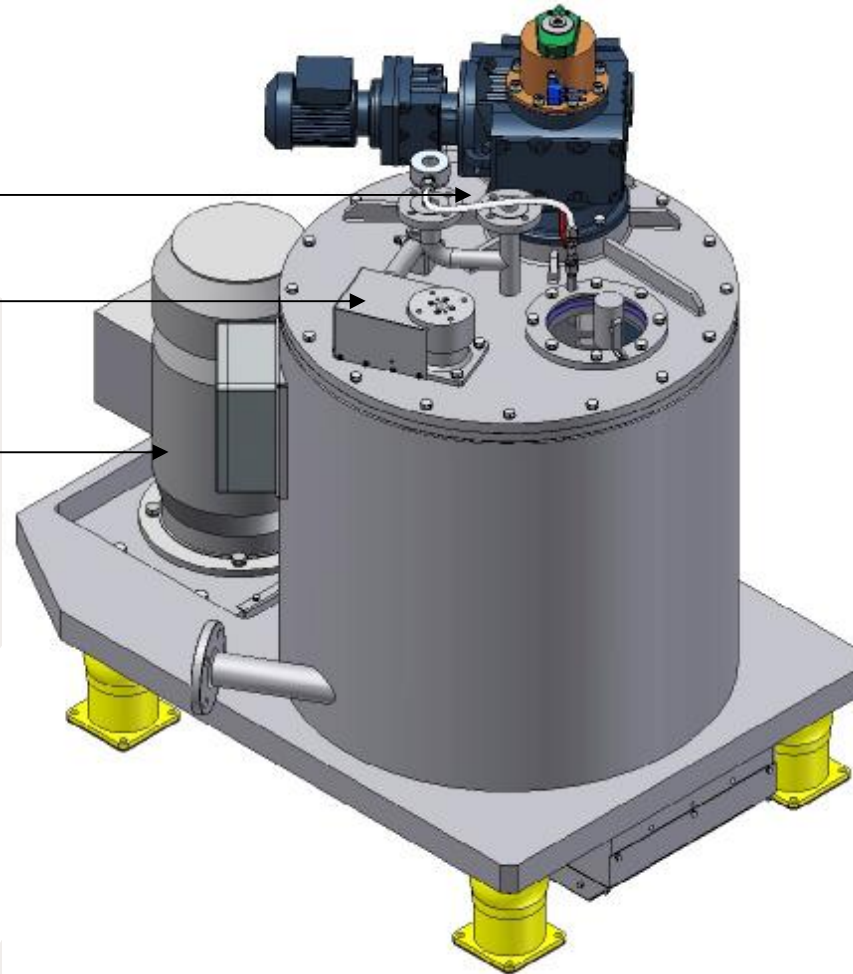
Overview Of The Centrifuge And Specific Advantages

Feed pipe, rinse pipe

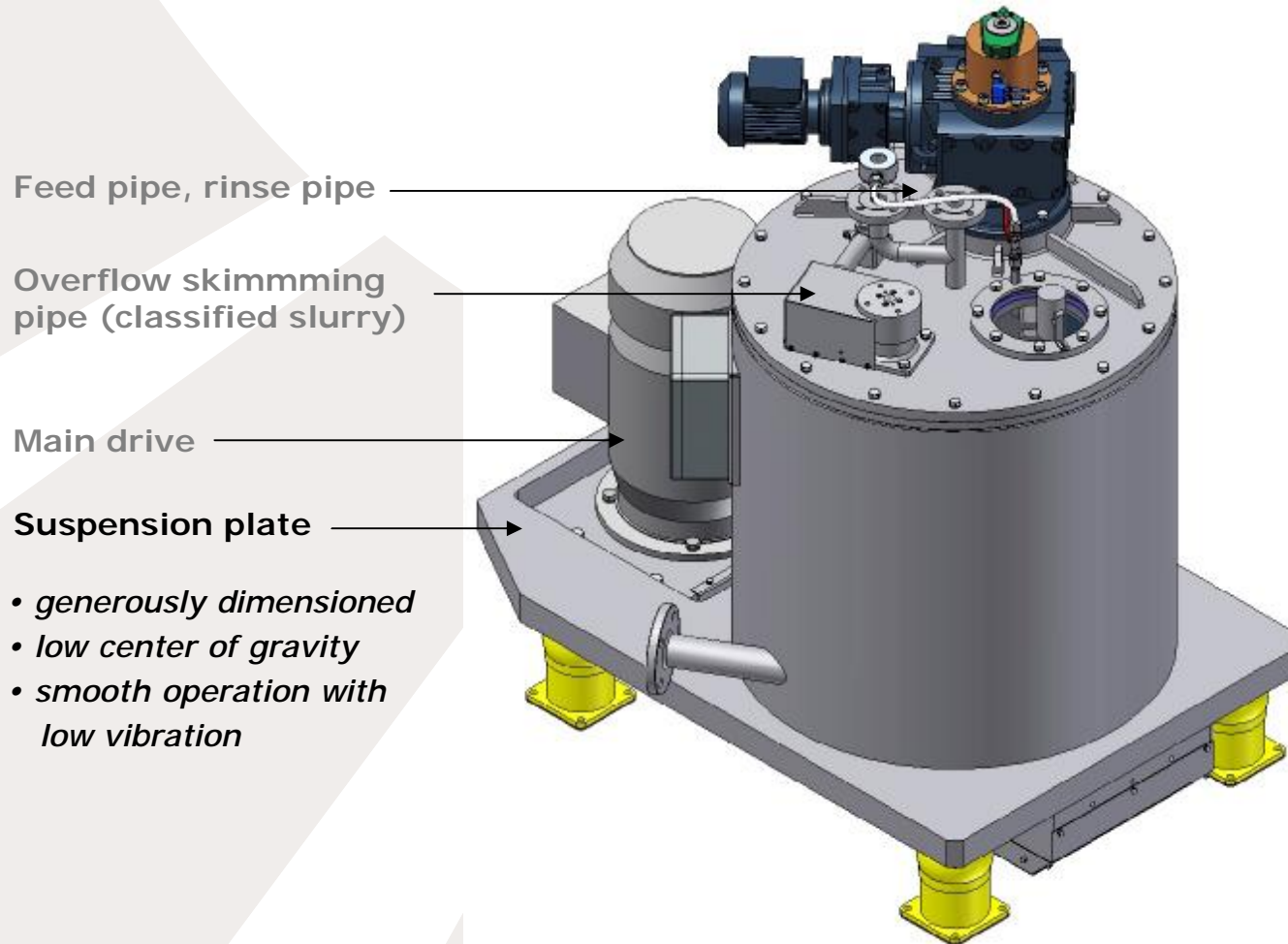
Overflow skimming pipe (classified slurry)

Main drive

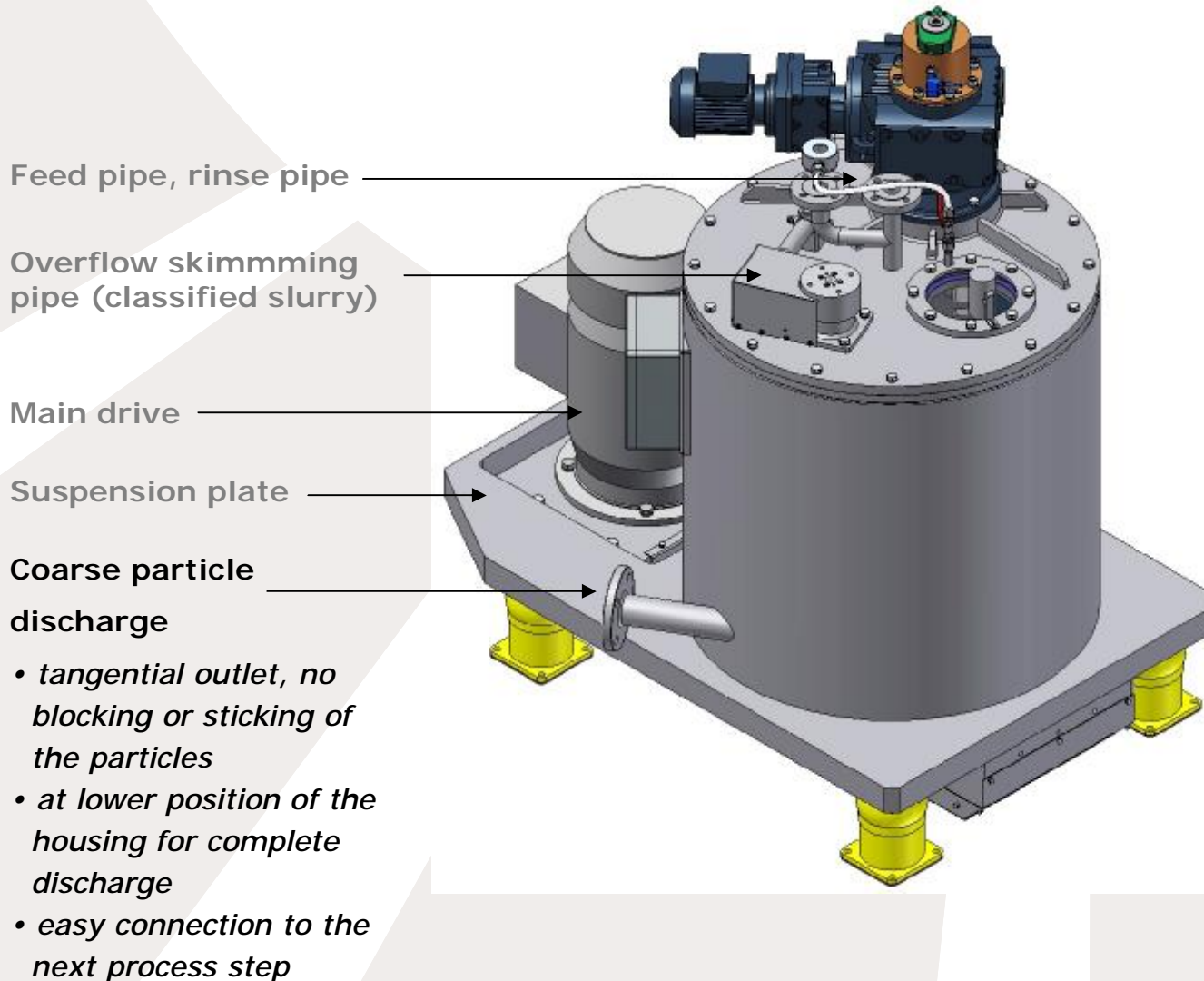
- *V-belt drive for optimum power transmission*
- *Motor next to the housing easy to maintain*
- *easy access to v-belts and tensioning plate*



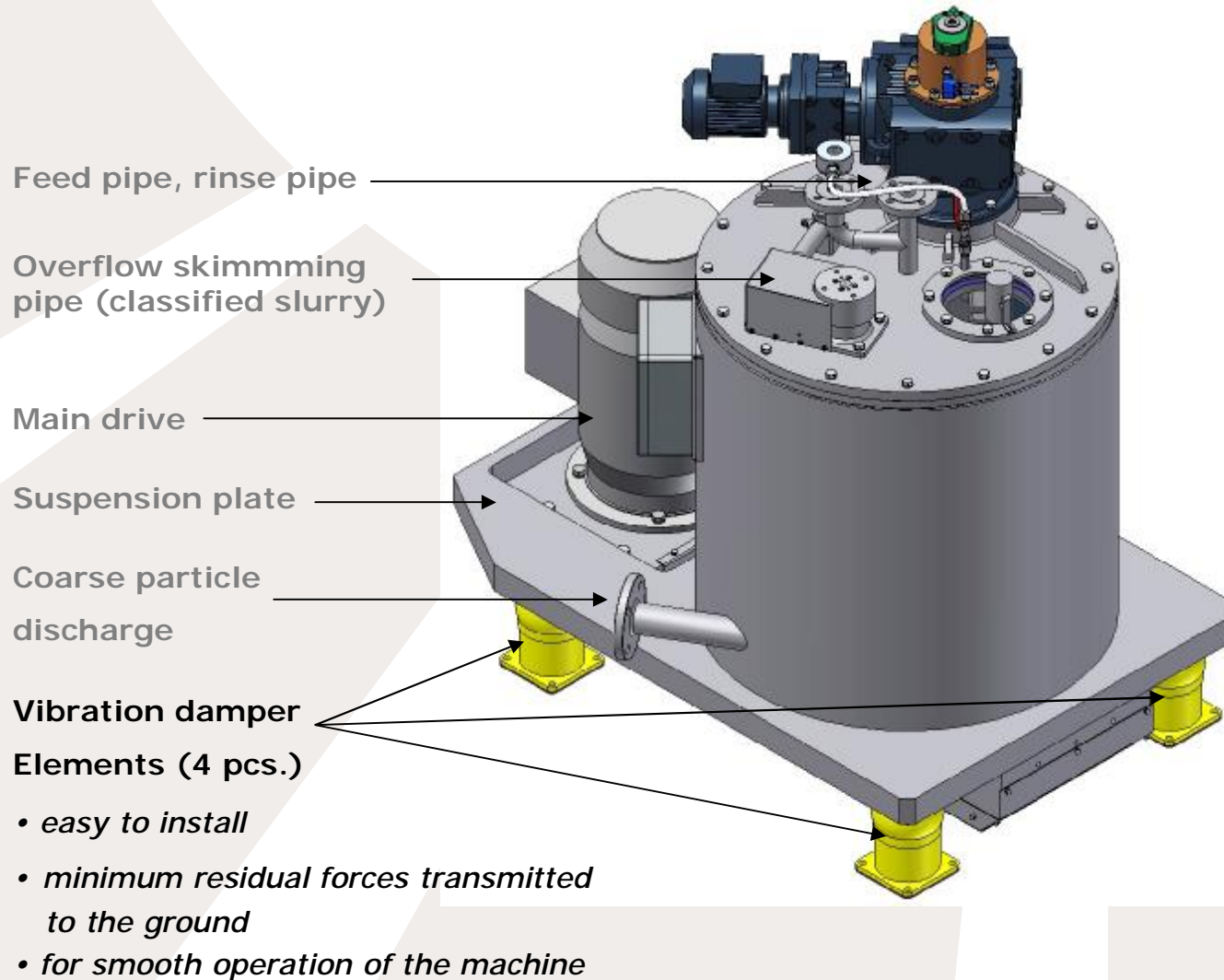
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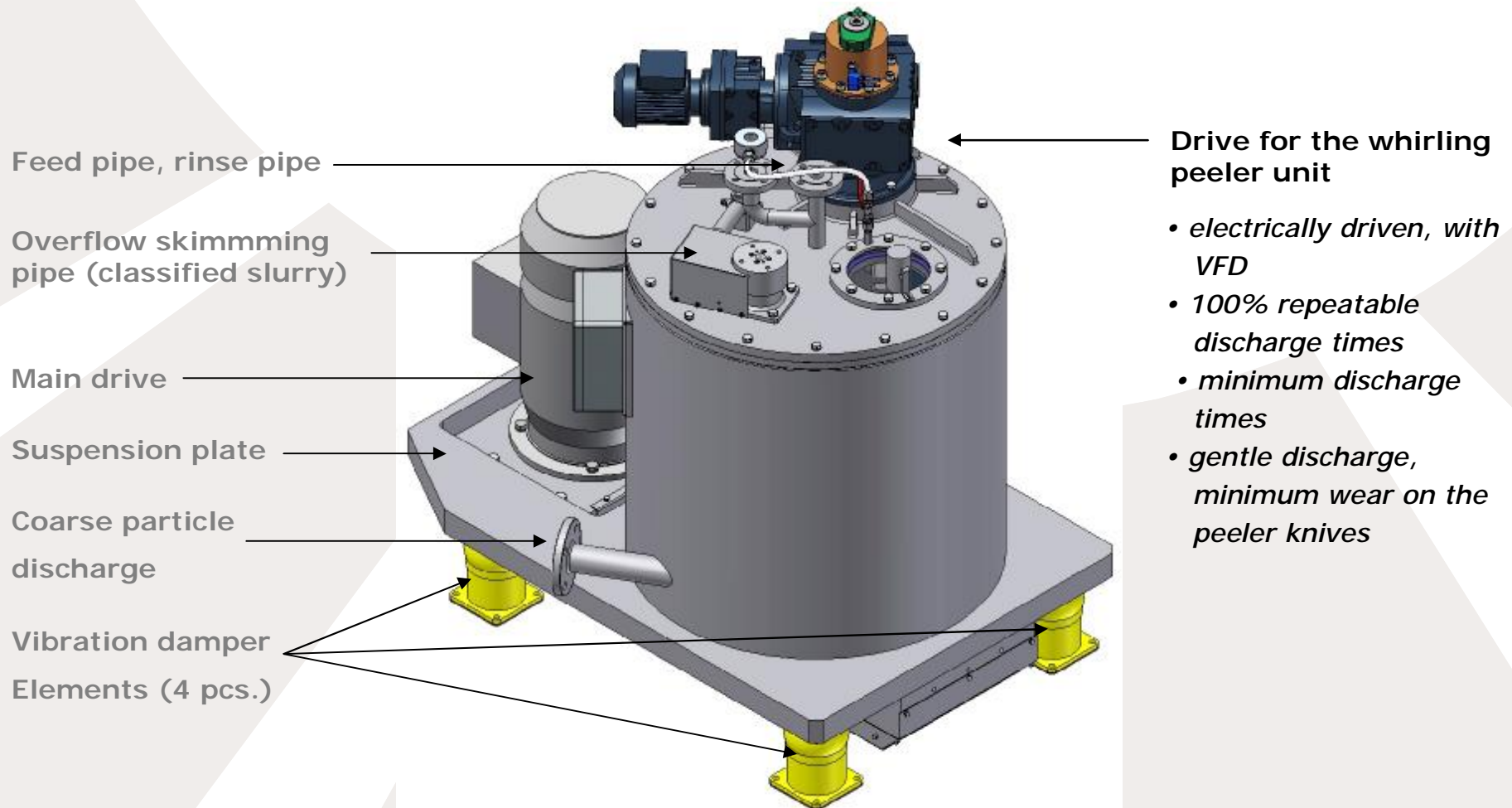
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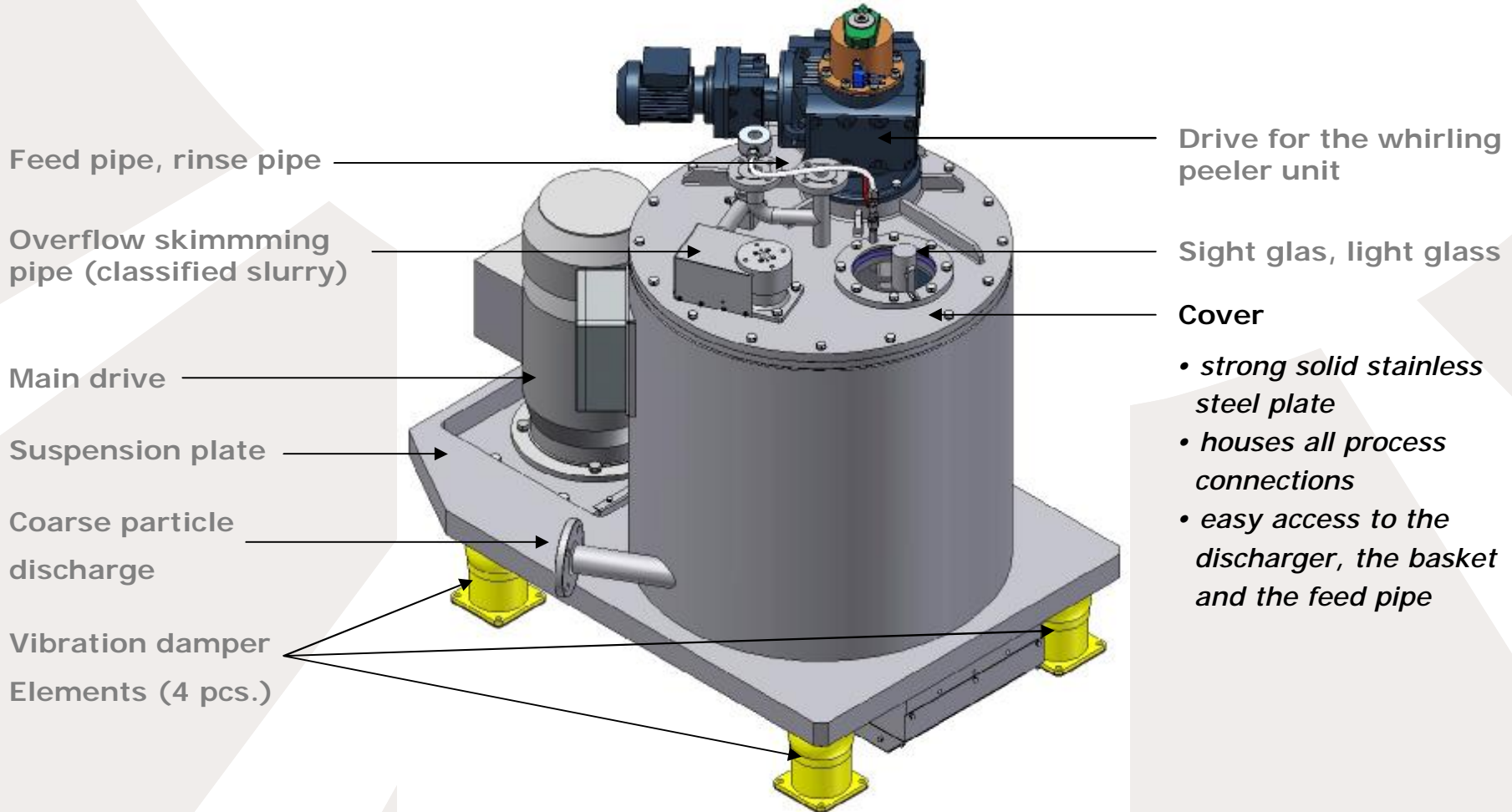
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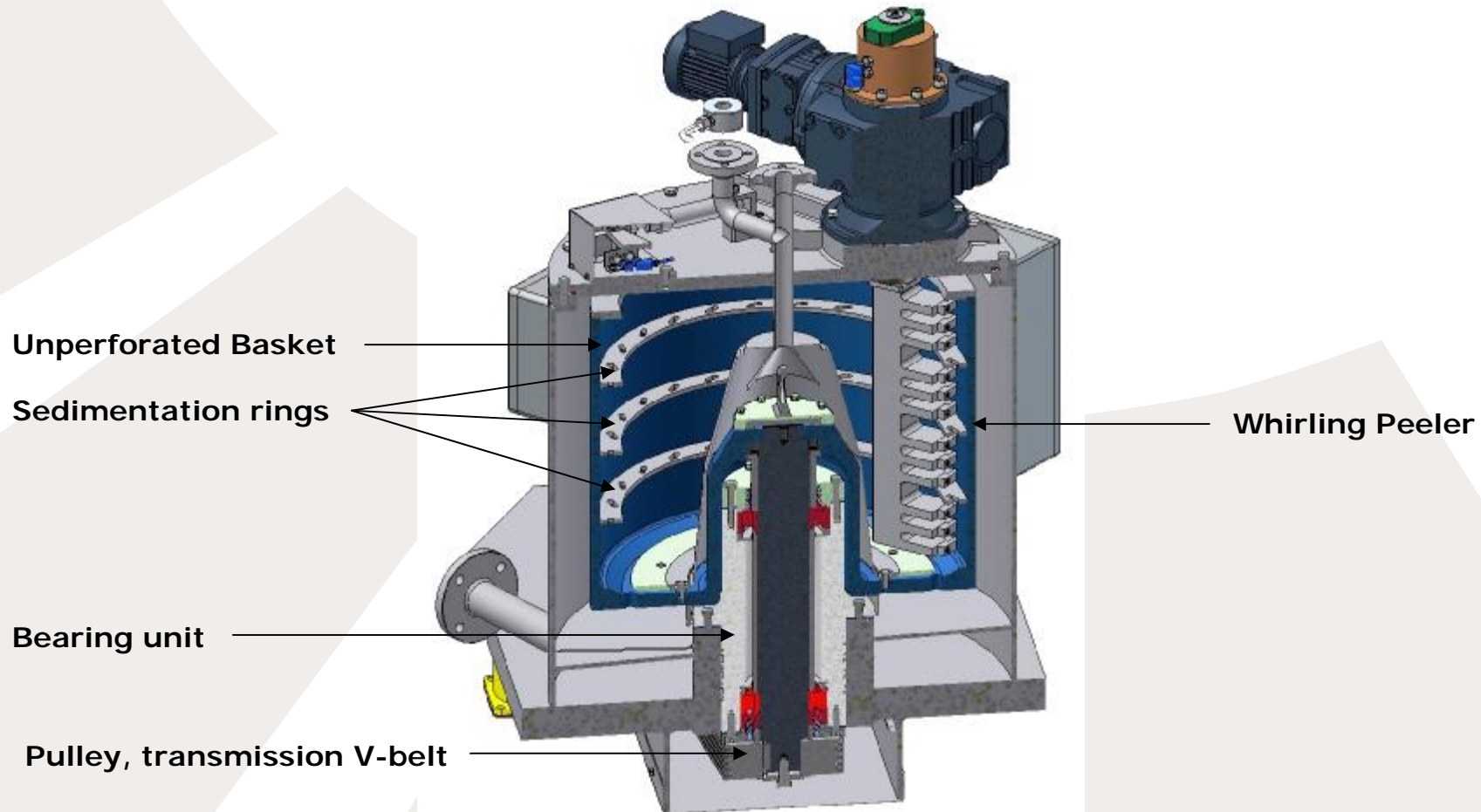
Overview Of The Centrifuge And Specific Advantages



Overview Of The Centrifuge And Specific Advantages



Sectional View Of The Centrifuge And Specific Advantages



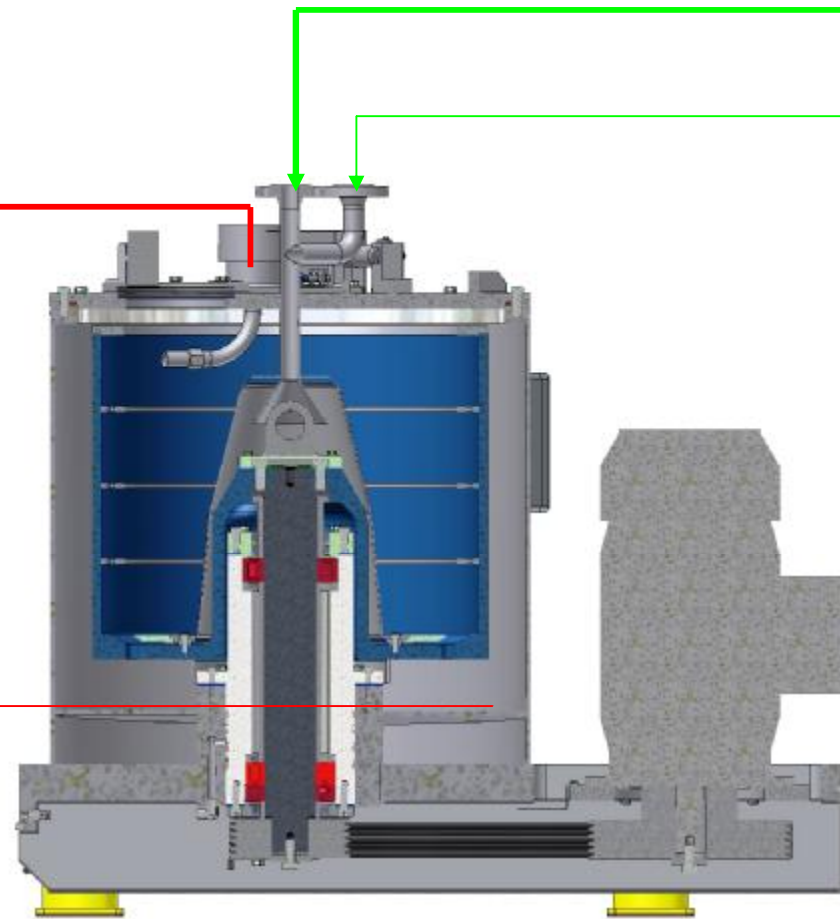
Connections

**Classified slurry
DN 50**

**Slurry-Feed
DN 25**

**EG or Water
DN 50**

**Redispersed Sediment
DN 50**



Process Description

Step 1, Acceleration to Feeding Speed

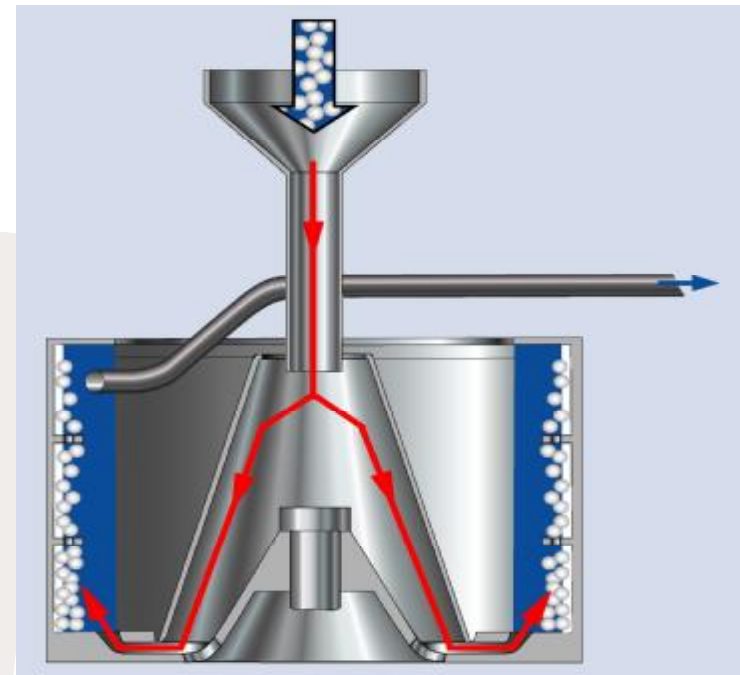
The basket is accelerated to approx.
2,000 – 2,500 rpm

Step 2, Feeding

The unclassified slurry is introduced into the basket through a feed pipe and an acceleration feed system

Step 3, Classifying

Depending on the feed flow rate the size of the classified particles can vary.
The coarse particles are kept in the basket while the classified slurry is discharged via overflow skimming pipe.
The clasifiying time is 1-3 hours



Process Description

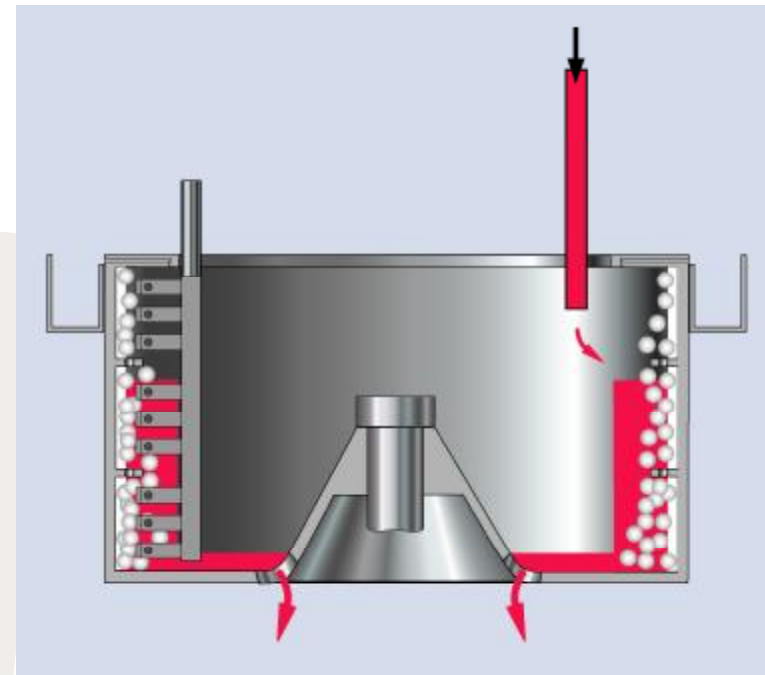
Step 4, Discharge

If the basket is filled with sediment for approx. 70% the discharge starts

The basket is discharged to 400 – 500 rpm

The sediment is discharged with the whirling peeler by adding EG or water

The resdispersed sediment is discharged through holes in the bottom of the basket

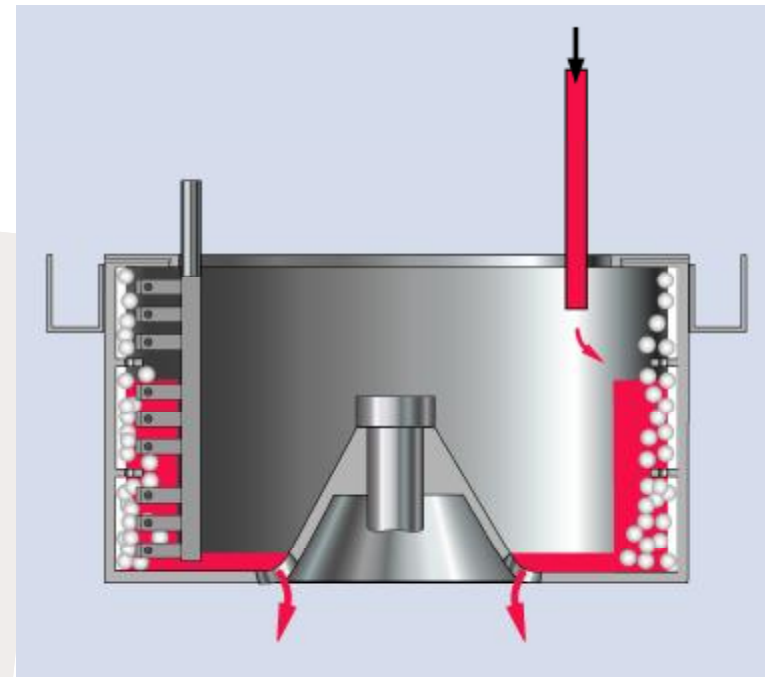


Process Description

Step 5, Rinsing

If the discharger reaches the end position at the rinsing process is started.

The basket is decelerated to standstill. During this time the basket is rinsed with EG or water.



Whirling discharger



Basket filled with sediment



Basket after discharge process

Machine Data



Description/Size	V 630 I BK	V 630 II BK	V 630 III BK
Basket Diameter	630 mm	630 mm	630 mm
Basket Height	400 mm	400 mm	500 mm
Sedimentation Area	0.79 m ²	0.79 m ²	1.0 m ²
Basket Volume	30 l	30 l	37 l
Max. Load	62 kg	62 kg	78 kg
Basket Speed	3,000 rpm	3,000 rpm	3,000 rpm
G-Foce	3,170	3,170	3,170
		- Electrically driven discharger - Overflow skimming pipe	

Customer's benefit

The process-related advantages of this Centrifuge are:

- § precise web cut of the classified particles,
- § no mixture of almost classified particles with the slurry,
- § recycling of coarse particles e.g. in a ball mill,
- § the suspension is of high quality, which means an equal distribution of ultra fine particles, therefore
- § minimal downtime during production.
- § The centrifuge is able to deal with different flow rates.

The advantages for the user of the classifying centrifuge are:

- § easy installation of the system by extensive pre-assembled piping and wiring of the centrifuge,
- § due to years of experience GFT HEINKEL can also calculate and offer peripheral components.
- § The web cut of the classified particles can be easily adjusted.
- § The system works fully automatic, with low vibration and highly reliable, and
- § It can be easily integrated into a superordinated process control system.

Referenzen

Customer	Year	Type	QTY	Basket (DXH)	Application
Hangzhou Win-WIN Hangzhou, CN	2010	HEINKEL V 630 III BK	4	630 x 500	Polyester plant in China
Zimmer AG Frankfurt, D	2010	HEINKEL V 630 III BK	1	630 x 500	Polyester plant in Brasil
Zimmer AG Frankfurt, D	2008	HEINKEL D 630 II	1	630 x 400	Polyester plant in China
Hangzhou Win-WIN Hangzhou, CN	2008	HEINKEL D 630 I	1	630 x 400	Mingyang China
Hangzhou Win-WIN Hangzhou, CN	2006	HEINKEL D 630 I	1	630 x 400	Mingyang China
Zimmer AG Frankfurt, D	2006	HEINKEL D 630 I	1	630 x 400	Polyester plant in China
Zimmer AG Frankfurt, D	2005	HEINKEL D 630 I	2	630 x 400	Polyester plant in India

Referenzen

Customer	Year	Type	QTY	Basket (DXH)	Application
Zimmer AG Frankfurt, D	2004	GFT D63	1	630 x 400	Polyester plant in India
Hoyosung Ulsan, KR	2004	GFT D63	1	630 x 400	
Huvis , KR	2003	GFT D63	1	630 x 400	
Zimmer AG Frankfurt, D	2003	GFT D63	2	630 x 400	Polyester plant in China
Zimmer AG Frankfurt, D	2003	GFT D63	1	630 x 400	Polyester plant in China
Zimmer AG Frankfurt, D	2003	GFT D63	1	630 x 400	Polyester plant in China
Noyvallesina , I	2002	GFT D63	2	630 x 400	Polyester plant in Iran
Zimmer AG Frankfurt, D	2001	GFT D63	1	630 x 400	Polyester plant in China
Zimmer AG Frankfurt, D	2001	GFT D63	2	630 x 400	Polyester plant in Pakistan

Referenzen

Customer	Year	Type	QTY	Basket (DXH)	Application
Hoyosung Ulsan, KR	2000	GFT D63	1	630 x 400	
Kolon Industries, KR	2000	GFT D63	1	630 x 400	
EMS Inventa, CH	1997	GFT D63	1	630 x 400	Polyesterplant in Pakistan
Formosa Plastics Corp. Tennessee, USA	1996	GFT D63	4	630 x 400	
Polysindo, ID	1996	GFT D63	1	630 x 400	
Kohap, KR	1996	GFT D63	1	630 x 400	
	1981 -1996	HEINE 334 und 336	Ca. 60		