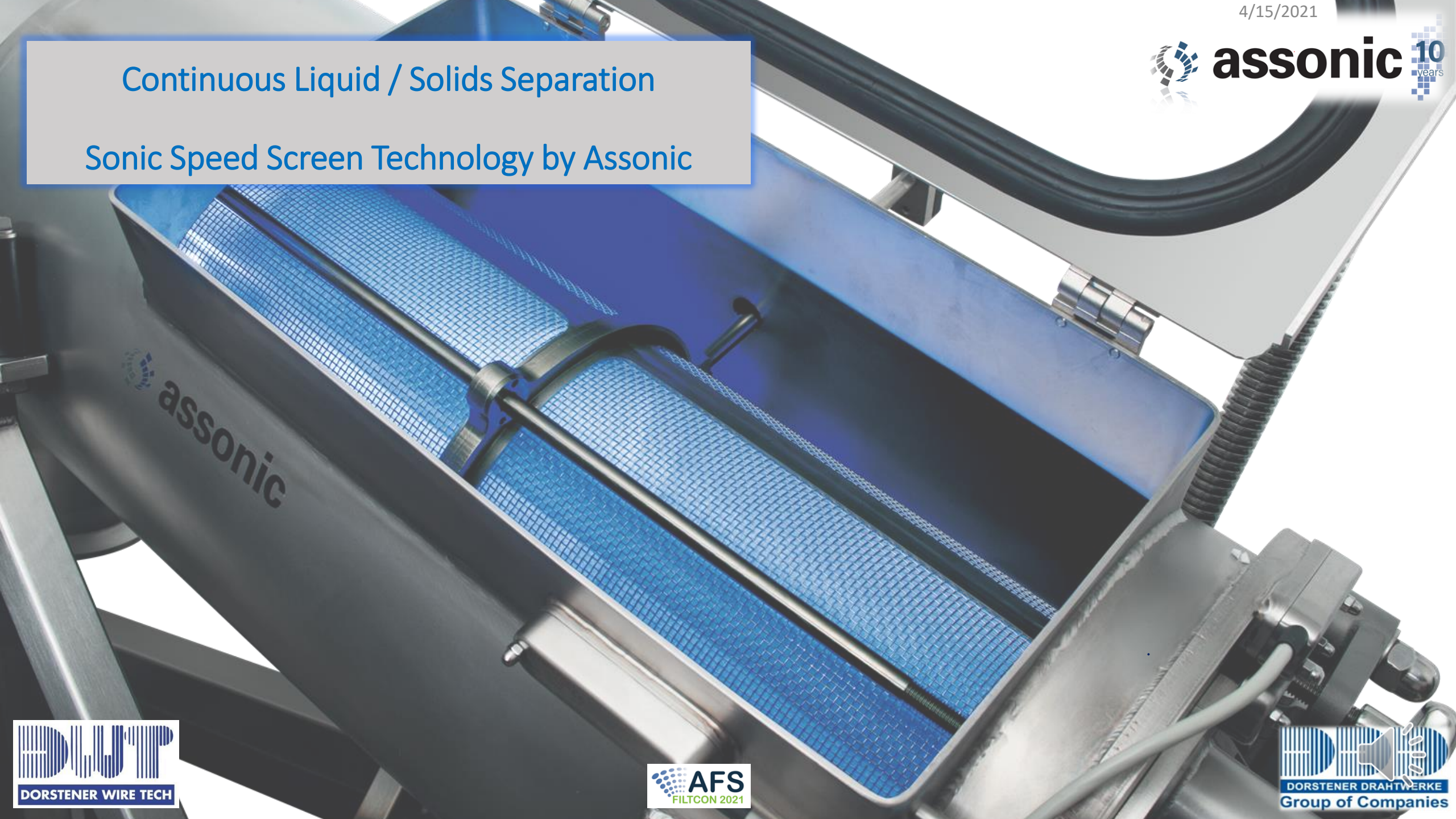




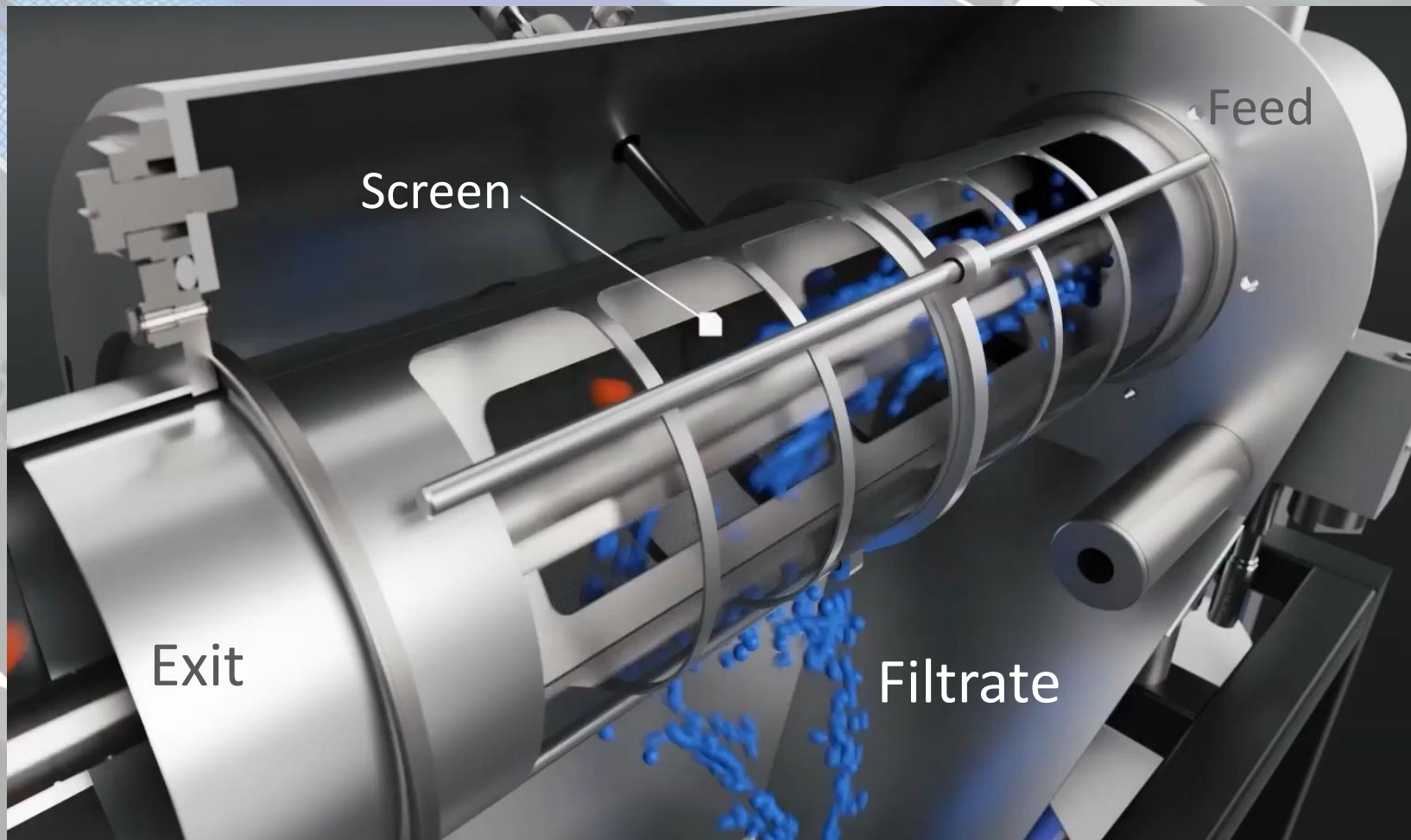
## Continuous Liquid / Solids Separation

### Sonic Speed Screen Technology by Assonic





Assonic has manufactured centrifugal separators supported by ultrasonic force since 2010. This technology has proven results for sifting of fine dry powders. **Liquid Filtration is our next endeavor.**



# The new RoSL 700

**Liquid filtration & separation *now from 5 –25 µm***  
made possible by **Sonic Speed Screen** technology (patented).

- *Centrifugal forces supported by **ultrasonic excitation** and our **special energy conducting metal filtraton media**.*
- *Continuous **Crossflow Filtration**.*
- ***Self- cleaning**.*



# Standard features of the new Assonic RoSL 700

- *High throughput with a filtration range from 5 - 2000  $\mu\text{m}$ .*
- *No backflushing or change of screens or media is required.*
- *Low energy consumption – small footprint.*
- *Long lasting filter media.*
- *Filter screen and housing are made of stainless steel.*
- *Corrosion resistant filter medias are available.*
- *Wide range of filter media designs & weave patterns are available.*

# Our Technology: Sonic Speed Screen™



- *Our unique design reduces the need for extra support and energy transfer layers in the screening media.*  
→ *increased flow rate by 30%*
- *Self-cleaning of the screen*  
→ *less clogging of the screen*
- *Breaking up of agglomerates*



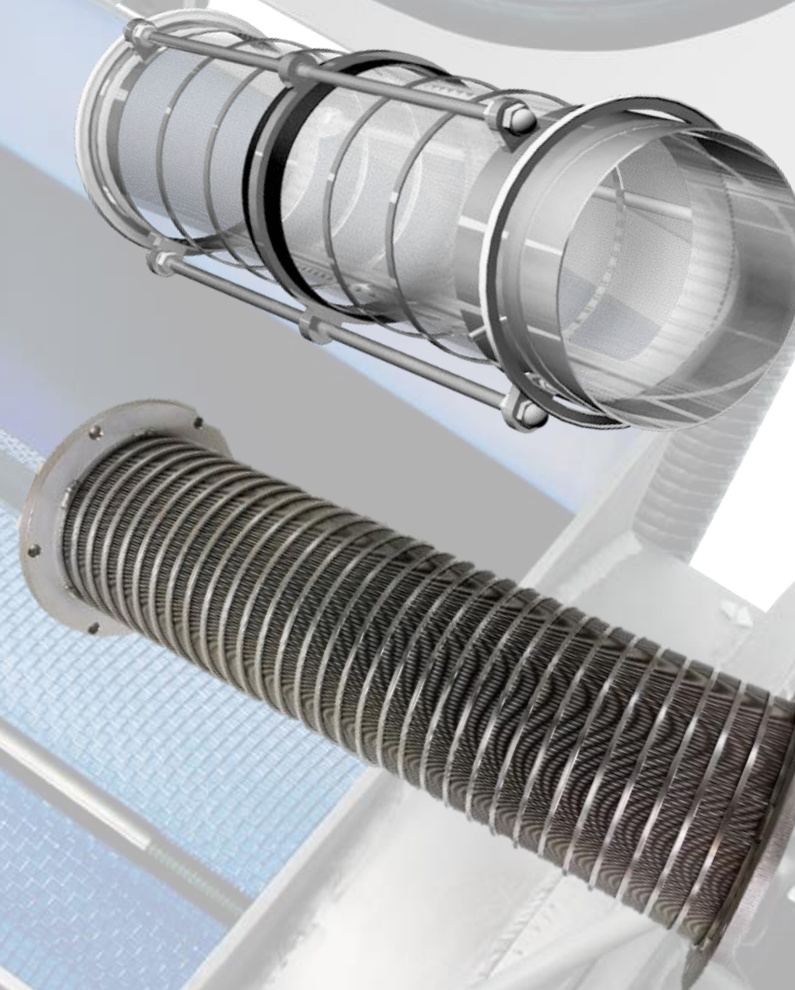
# Our Sweet Spot for Liquid Solids Filtration!

- **Clarification of fluids** (Example: Removing suspended solids).
  - *Continuous filtration starting at 5  $\mu\text{m}$ .*
- **Thickening or dewatering of a slurry.**
  - *Strongly increasing the solid content of sludge.*
- **Dehydration of solids, fibers and pellets.**
  - *Remove of liquid from solid materials.*



# Filter Basket Options to Maximize Performance & Filter Life

- Fine & Medium Separation 5 – 500  $\mu\text{m}$ 
  - **Woven-mesh baskets**
    - *Sintered woven wire cloth media*
    - *Dutch weave & high flow stainless steel cloth (corrosion resistant alloys available)*
- Heavier Separation
  - **Wedge wire screen baskets**
    - *often used for thickening and above 100  $\mu\text{m}$*
    - *different stainless alloys available*

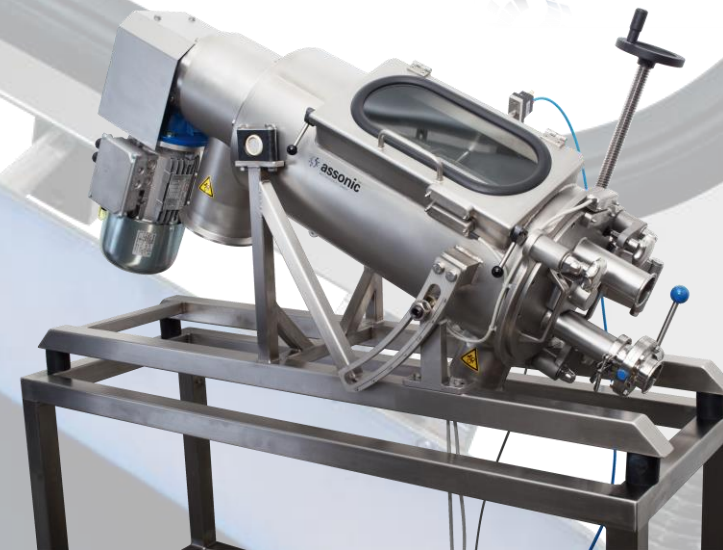




# Filtration Models

## • RoSL 700

- Fully equipped with **Sonic Speed Screen**.
- Mainly used for clarification and dehydration.
- Can utilize a wide range of screens.



## • RoSL 710

- Heavier, more robust design. Primarily used for thickening and dehydration of fluids.
- Can be used without ultrasonic support.

**Both versions are equipped with the following:**

- Rotating paddle up to 1000 RPM – variable in shape and speed
- Adjustable incline up to 30°
- Automated controls are available





# Current limitations

- There are many possible applications, as long as solids and liquids need to be separated. Testing is the key indicator of performance and capacity.
- Upscaling: Our current machines cannot handle massive quantities, but have the option of connecting multiple units in series, to achieve higher throughputs.
- Testing: Often, the testing performance of our unit is limited by our pump and piping capacities.





# Application

- **Aluminium hydroxide**
- **Security / Protective Filtration**
  - RoSL 700
  - 25  $\mu\text{m}$
  - 6,5  $\text{m}^3/\text{h}$  (limited by pump)
- **Calcium hydroxide suspension**
- **Large particle removal**
  - RoSL 700
  - 45  $\mu\text{m}$
  - 10  $\text{m}^3/\text{h}$





## Application

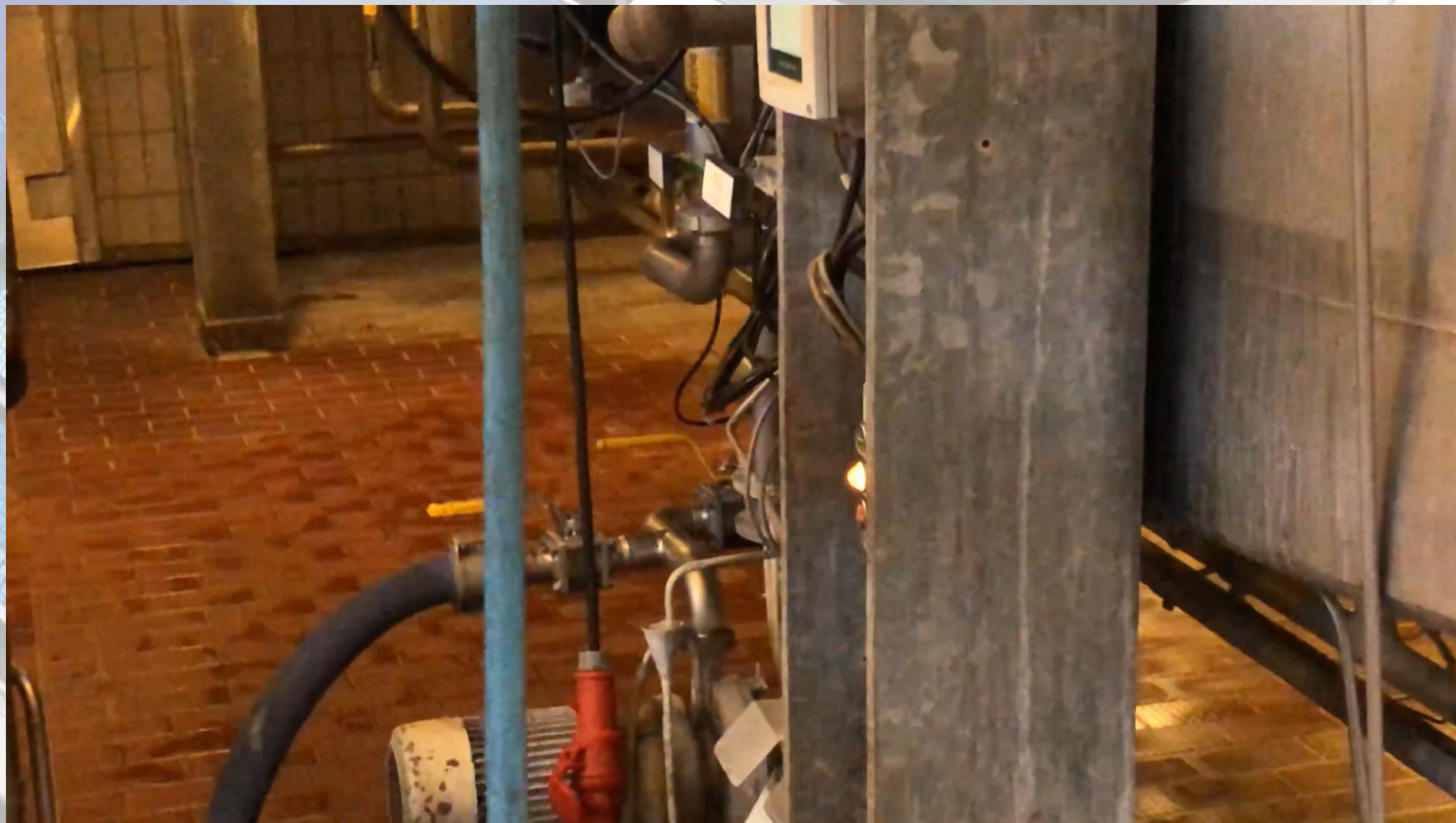
- **Chocolate, highly viscous**
- **Safety / Protective Filtration**
  - *RoSL 700*
  - *500  $\mu\text{m}$*
  - *1,5  $\text{m}^3/\text{h}$*
- **Coffee- glucose suspension**
- **Dewatering**
  - *RoSL 700*
  - *25  $\mu\text{m}$*
  - *1  $\text{m}^3/\text{h}$*





# Application

- **Gelatine**
- Large particle removal
  - RoSL 700
  - 154  $\mu\text{m}$
  - Ca. 12  $\text{m}^3/\text{h}$
- **Wire drawing coolant**
- Solids removal
  - RoSI 700
  - 20  $\mu\text{m}$
  - Ca. 350  $\text{l/h}$





## Application

- **Biogas plants- press water**
- Solids removal
  - RoSL 710
  - 100  $\mu\text{m}$
  - 7  $\text{m}^3/\text{h}$
- **Fish Farm pond water**
- Clarification
  - RoSI 700
  - 45  $\mu\text{m}$
  - 4  $\text{m}^3/\text{h}$  (limited to pump capacity)





# Application

- **Paper fiber**
- **Thickening**
  - *RoSL 700*
  - *200  $\mu\text{m}$*
  - *7  $\text{m}^3/\text{h}$*
- **Plastic extrusion / pelletizing**
- **Pellet drying**
  - *RoSI 700/710*
  - *various sizes*
  - *> 10  $\text{m}^3/\text{h}$  (water)*





# Outlook

- Filtration with **5-25  $\mu\text{m}$  is new** for continuous centrifugal machines.
- We are currently testing 5  $\mu\text{m}$  and finer filter cut points.
- Ultrasonically supported crossflow filtration provides a **safe and economical** solution for batch and medium flow filtration requirements.
- Clarifying, pre-filtration, and dehydration. Please provide details of your separation needs to propose the right **Assonic RoSL solution**.



# We separate solids from liquids!

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## Thank you for your attention!

Please visit us @ 13th World Filtration Congress