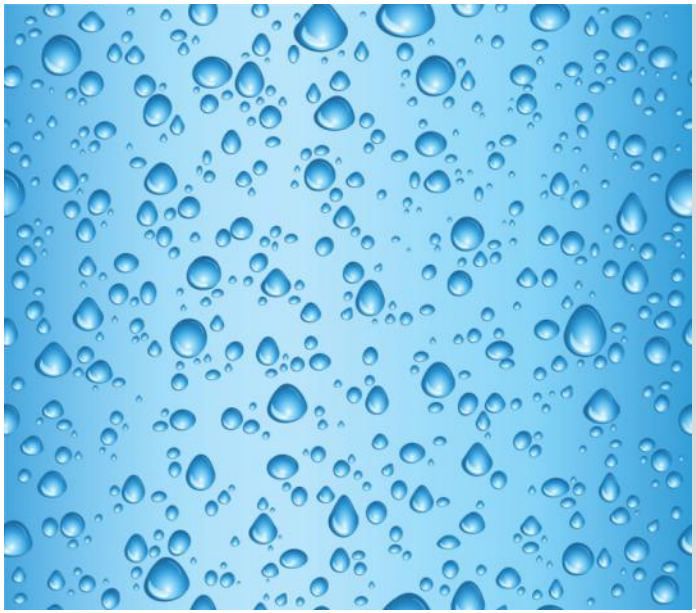
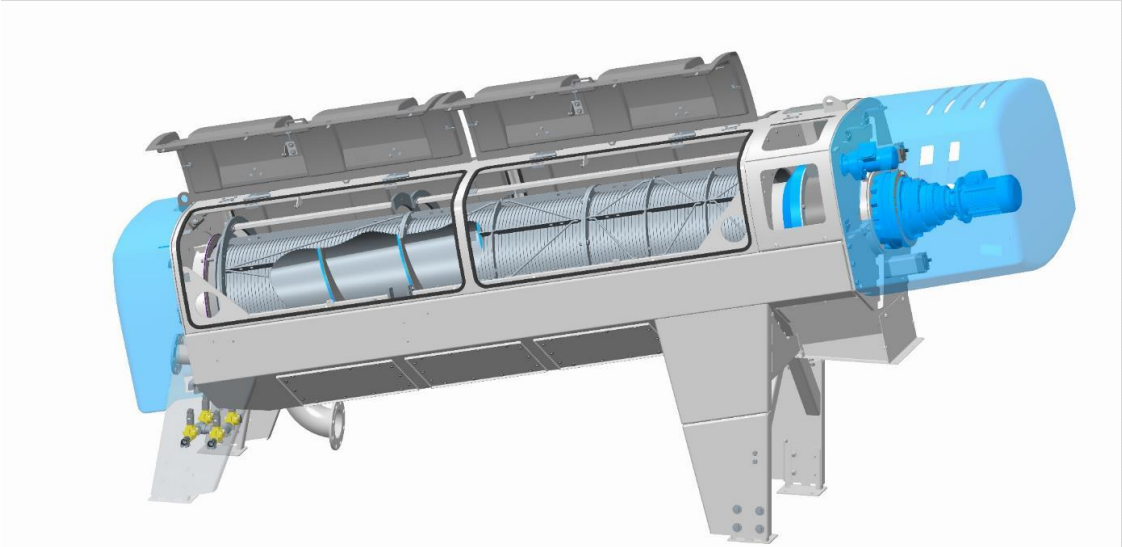


Seeing the big picture

Huber's New Q-Press

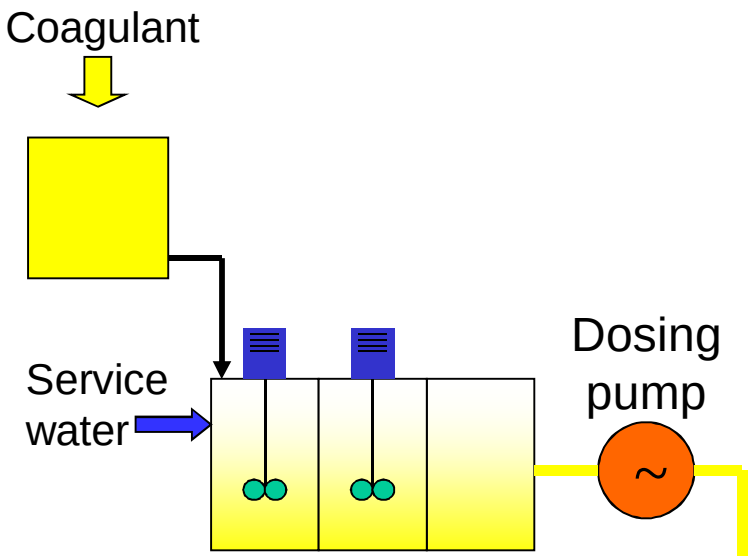
Presented by:
Steve Macomber
Huber Technology, Inc.



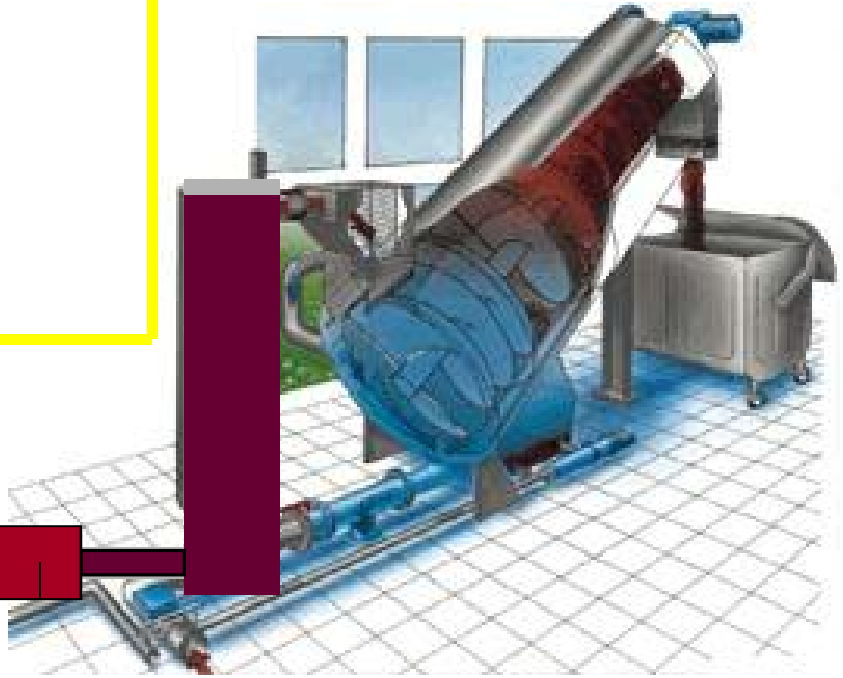
RoS3Q

Next Generation - Inclined Screw Dewatering Press

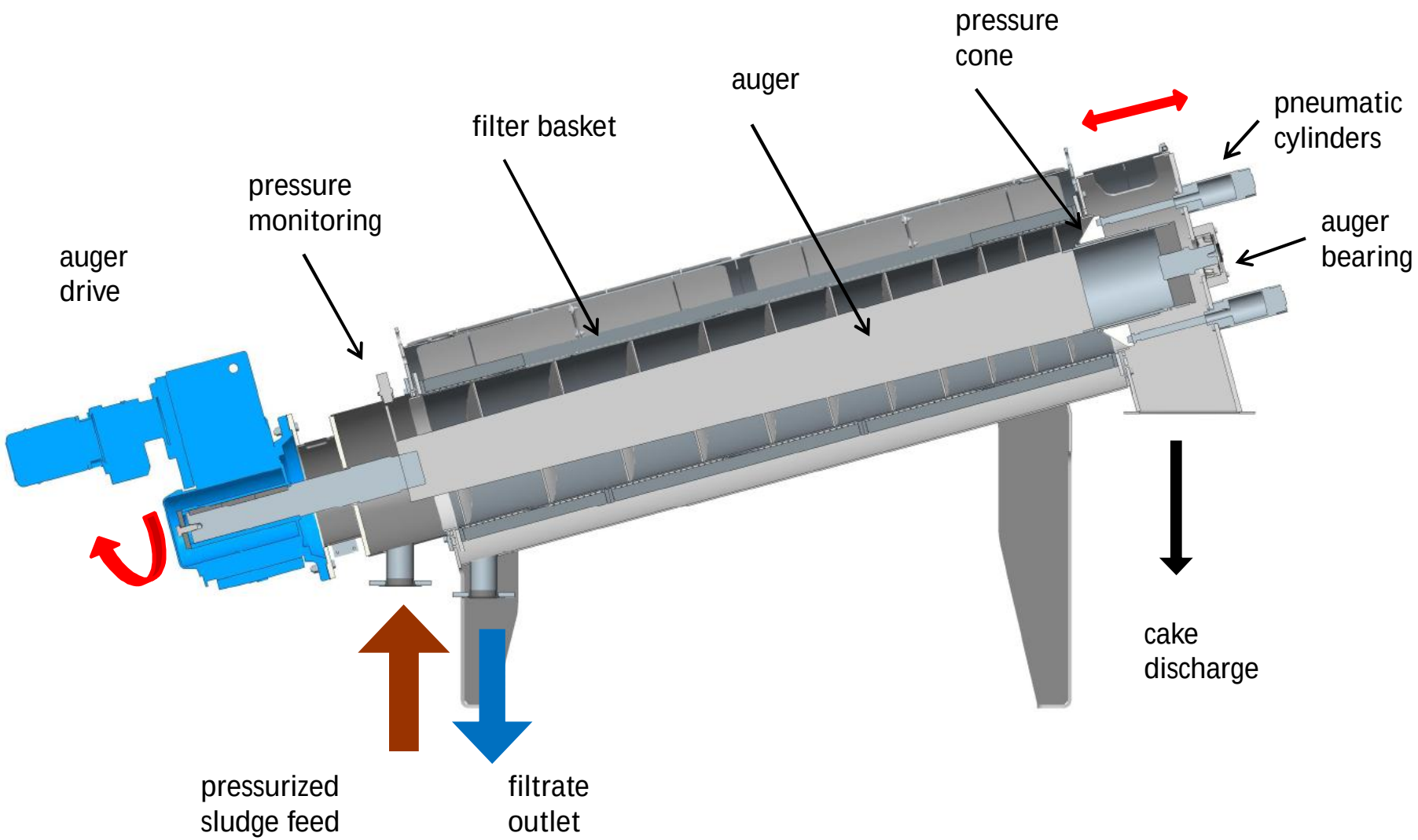
Traditional Process Schematic



Constant speed - RoS 3
Screw Press



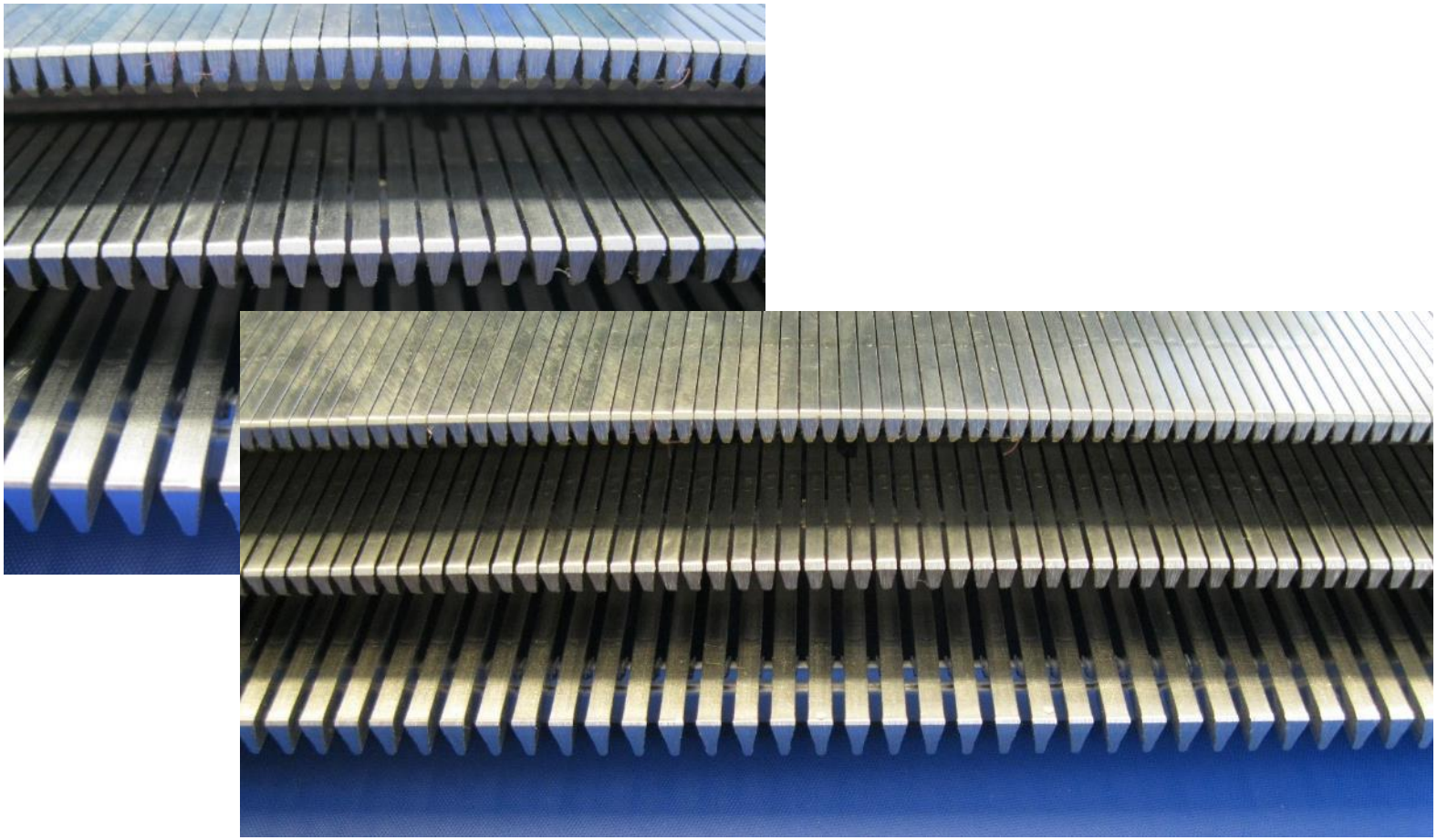
RoS3Q Design – Pressurized inlet and feedback



Q-PRESS unique features

Ø Wash cycle

Ø Dewatering mode



Ros3Q Design - The Wedgewire difference.

- Ü 95 – 99% Capture Ratio
- Ü Improved performance when compared to perforated plate.

RoS3Q Design – Process

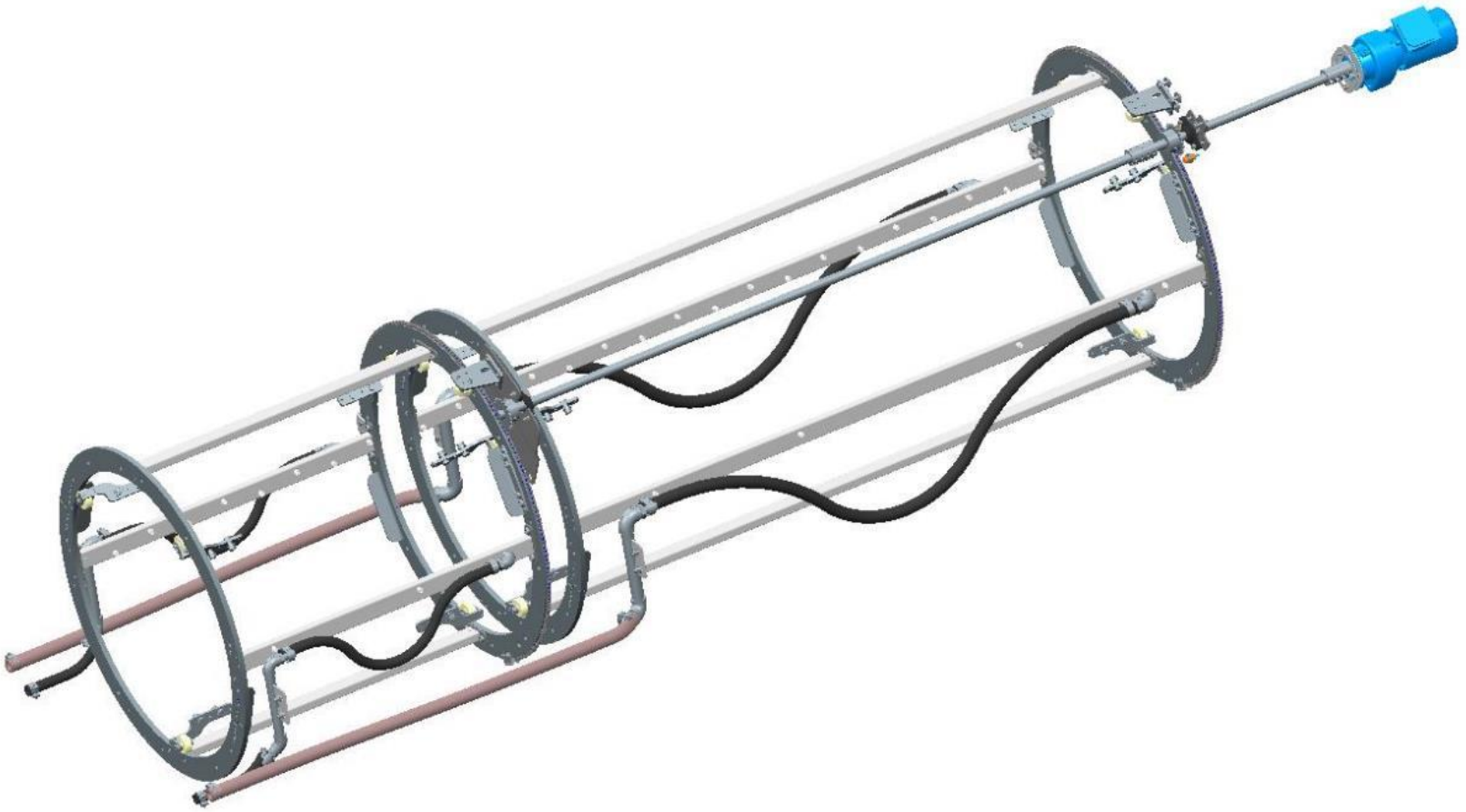
Artificial plug formation, three basket sections, Auto start/Stop

RoS3Q Design – Automatic basket washing system

Close spraybar, 360 degree washing, no extra moving parts

Washwater System – A messy alternative

Q-PRESS unique features



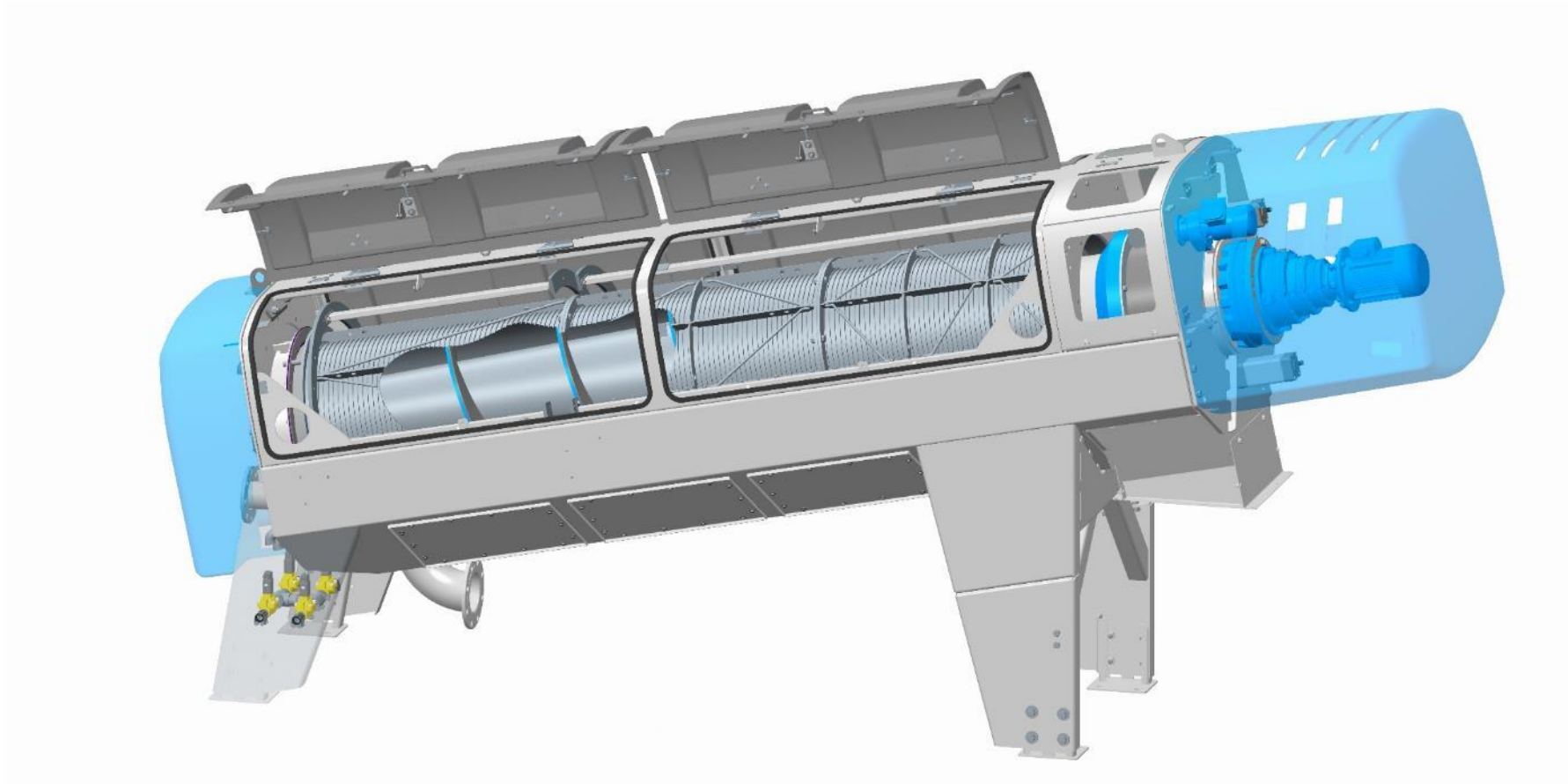
RoS3Q Design – Automatic process feedback

Pressure monitoring, Process upset recovery

RoS3Q Design – Plugging recovery

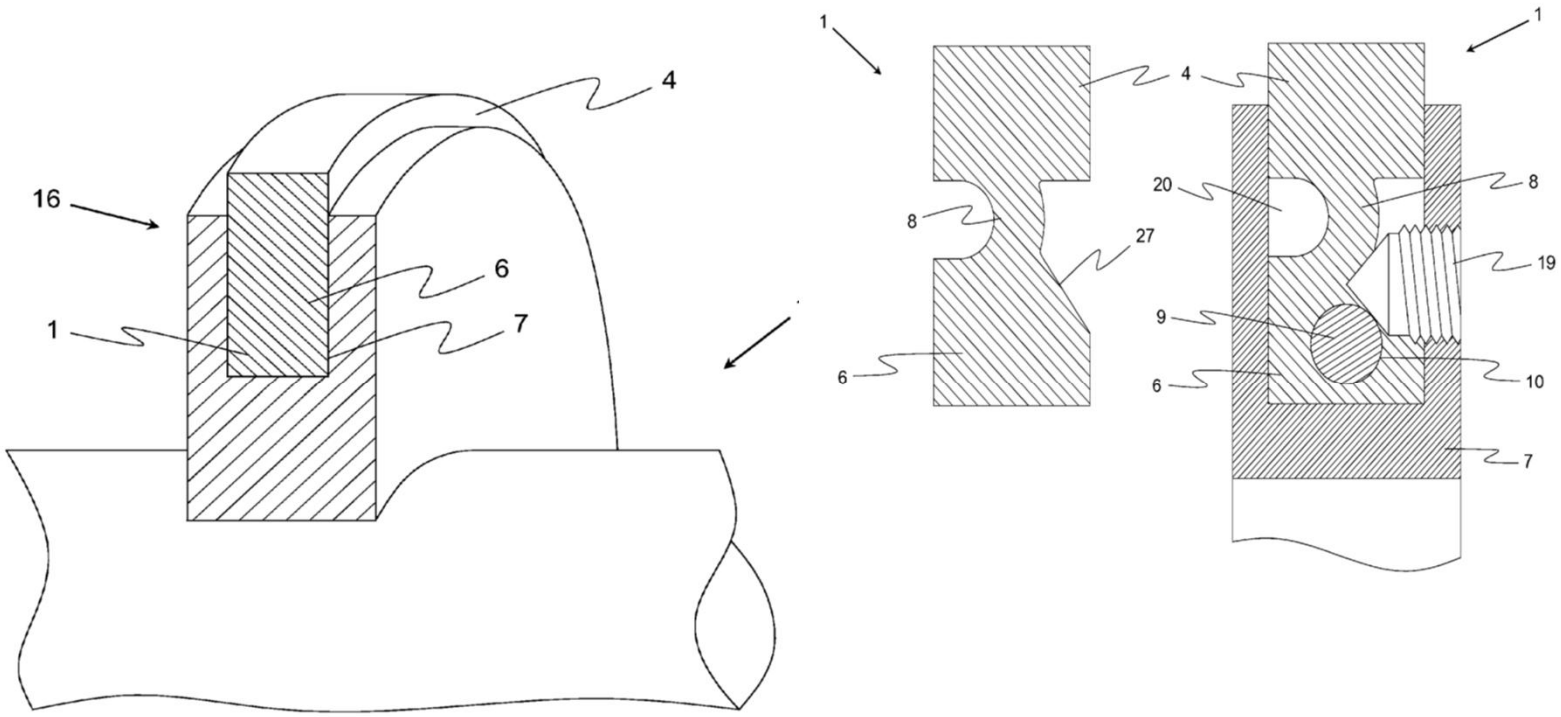
Power Monitoring, process upset recovery

Q-PRESS

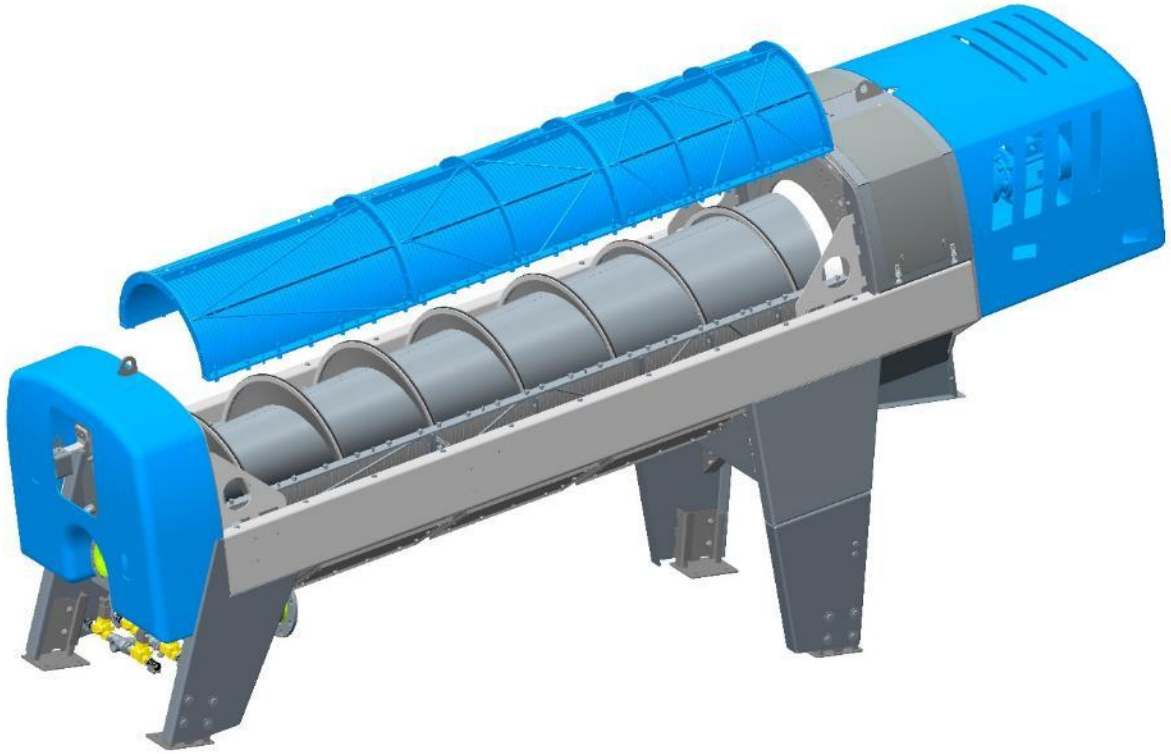


Q-PRESS unique features

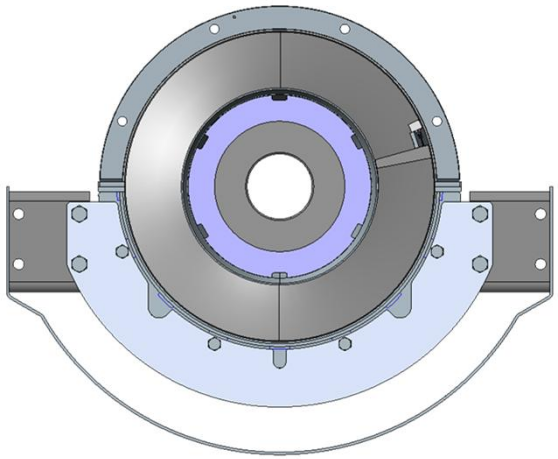
Ø patented wiper

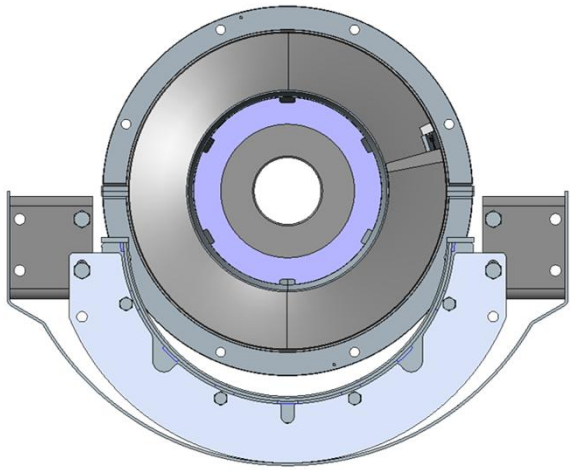


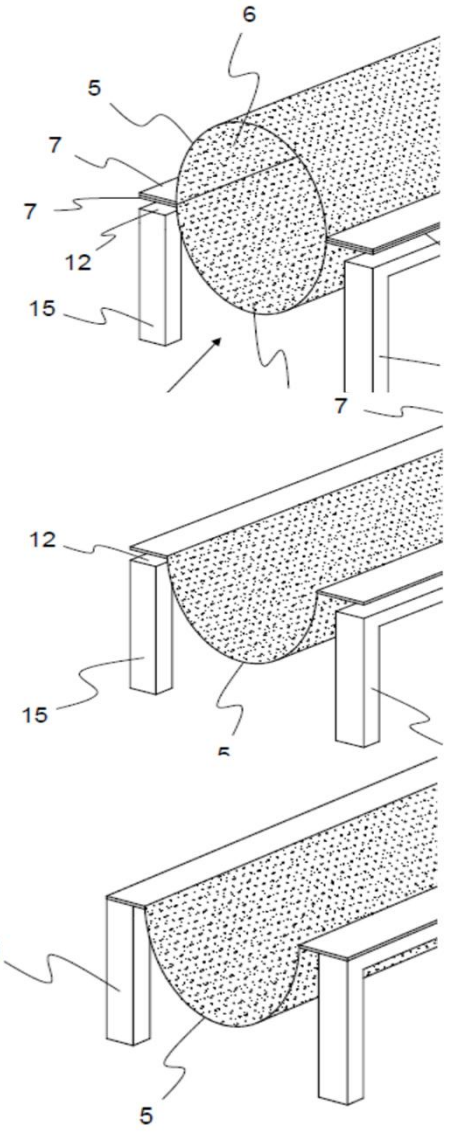
Q-PRESS unique features



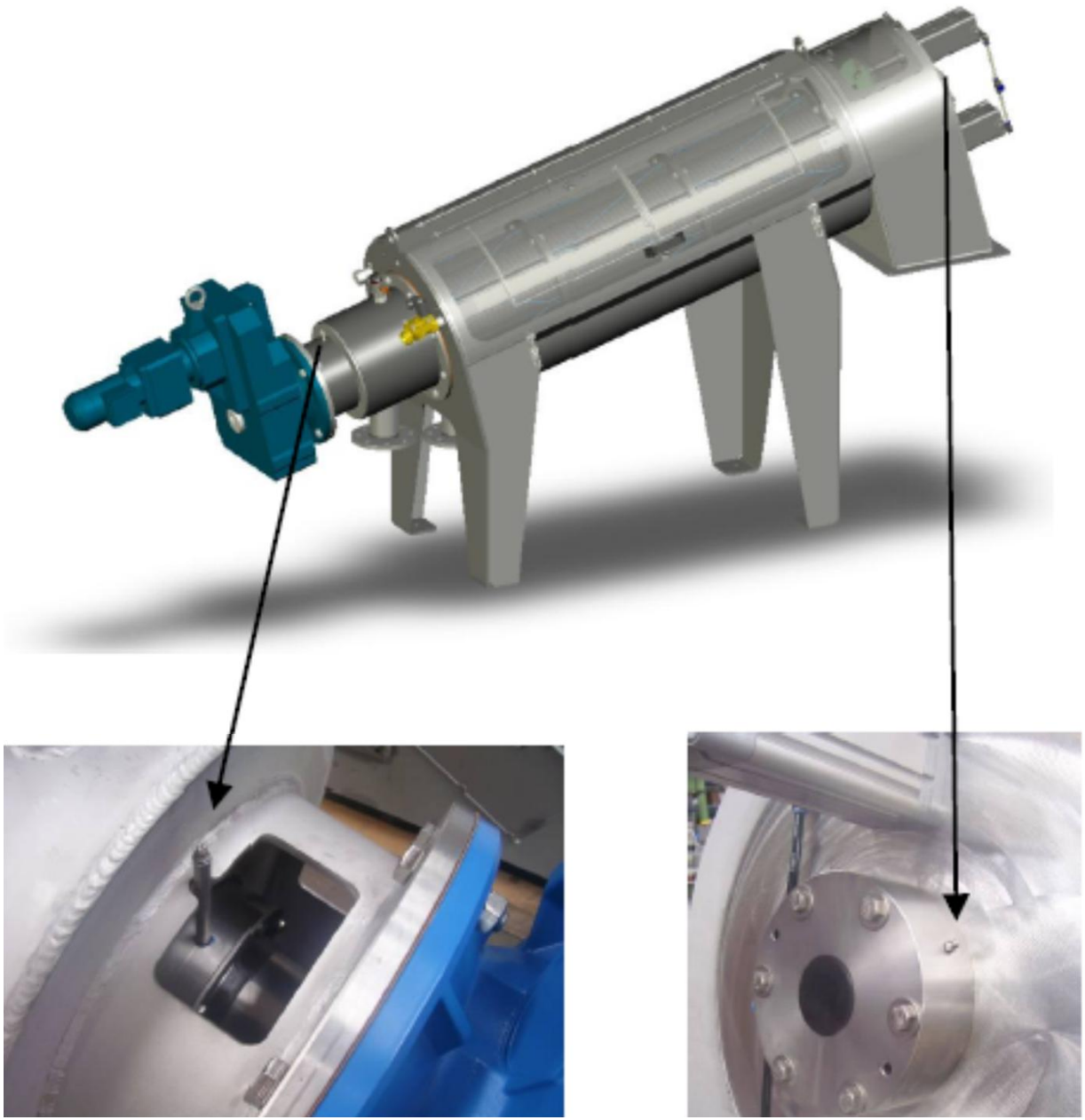
Q-PRESS unique features







Maintenance



- Grease bearing 500 hrs
- Weekly spraydown of the machine

FKC – Maintenance

- **FKC**
- Lower clamshell is the sacrificial part
- Periodic measuring of the gap is required
- Shims to be removed to take up gap

- **Huber**
- Basket is not a wear item
- Brush to be replaced 3-4 years

RoS3Q Design

Design Benefits

Compact unit

Complete enclosure

Passivated stainless steel

Operational Benefits

Full-automatic continuous operation

Minimal operator attendance

Fast start-up and shut-down

Few wear parts

Easy maintenance

No need for hosing-down

No noise or vibrations

Cost Benefits

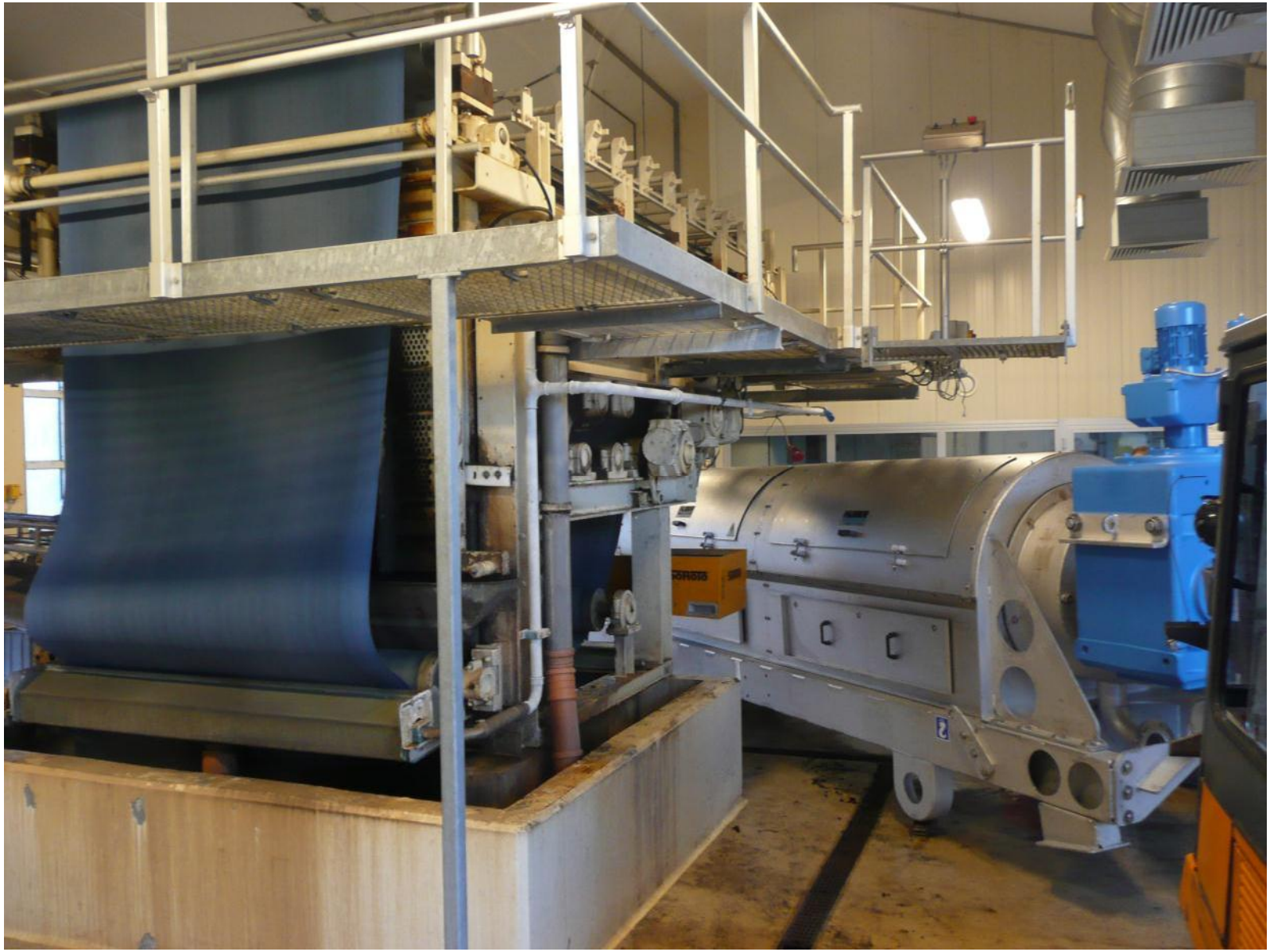
Very low wash water consumption

Low power consumption

Little operator attendance

Very low maintenance costs

competition – belt filter presses



RoS 3Q – advantages compared to belt filter presses

HUBER TECHNOLOGY
WASTE WATER Solutions

Ü better cake solids

Ü 60 – 70 % less energy consumption (if wash water booster pump inc.)

Ü 80 – 90 % less wash water consumption

	22 GPM		52 GPM	
	RoS 3Q 440	belt press	RoS 3Q 800	belt press
nominal power	1.5 kW	1.1 + 3 3.1 kW	3.0 kW	2.2 + 5 7.2 kW
real power consumption	< 1.0 kW	~ 0.8 + 2.5 3.3 kW	< 2.0 kW	~ 1.5 + 4 5.5 kW
wash water consumption	1.76 GPM	17.6 GPM	3.52 GPM	35.2 GPM

Ü unattended operation possible, even with slightly varying feed solids

Ü typical daily operator attention <= 30 min

Ü no leakage, odors or spray due to completely enclosed housing

Ü reduced danger of corrosion

competition - centrifuges

RoS 3Q – advantages compared to centrifuges

Ü compareable cake solids

Ü 80 – 90 % less energy consumption

	22 GPM		52 GPM	
	RoS 3Q 440	centrifuge	RoS 3Q 800	centrifuge
nominal power	1.5 kW	7.5 + 3 10.5 kW	3.0 kW	11 + 4 15 kW
real power consumption	< 1.0 kW	~ 6 + 2 8 kW	< 2.0 kW	~ 9 + 3 12 kW

Ü unattended operation possible, even with slightly varying feed solids

Ü less operator skills required, easy to adjust

Ü < 1 rpm compared to >> 3000 rpm causes less wear and less noise

Ü noise level <= 70 dBA

RoS3Q Design

RoS3Q 280

RoS3Q Design

RoS3Q 440 (2 units with option for pressure or gravity feed)

RoS3Q Design

Not Every Sludge Is The Same!

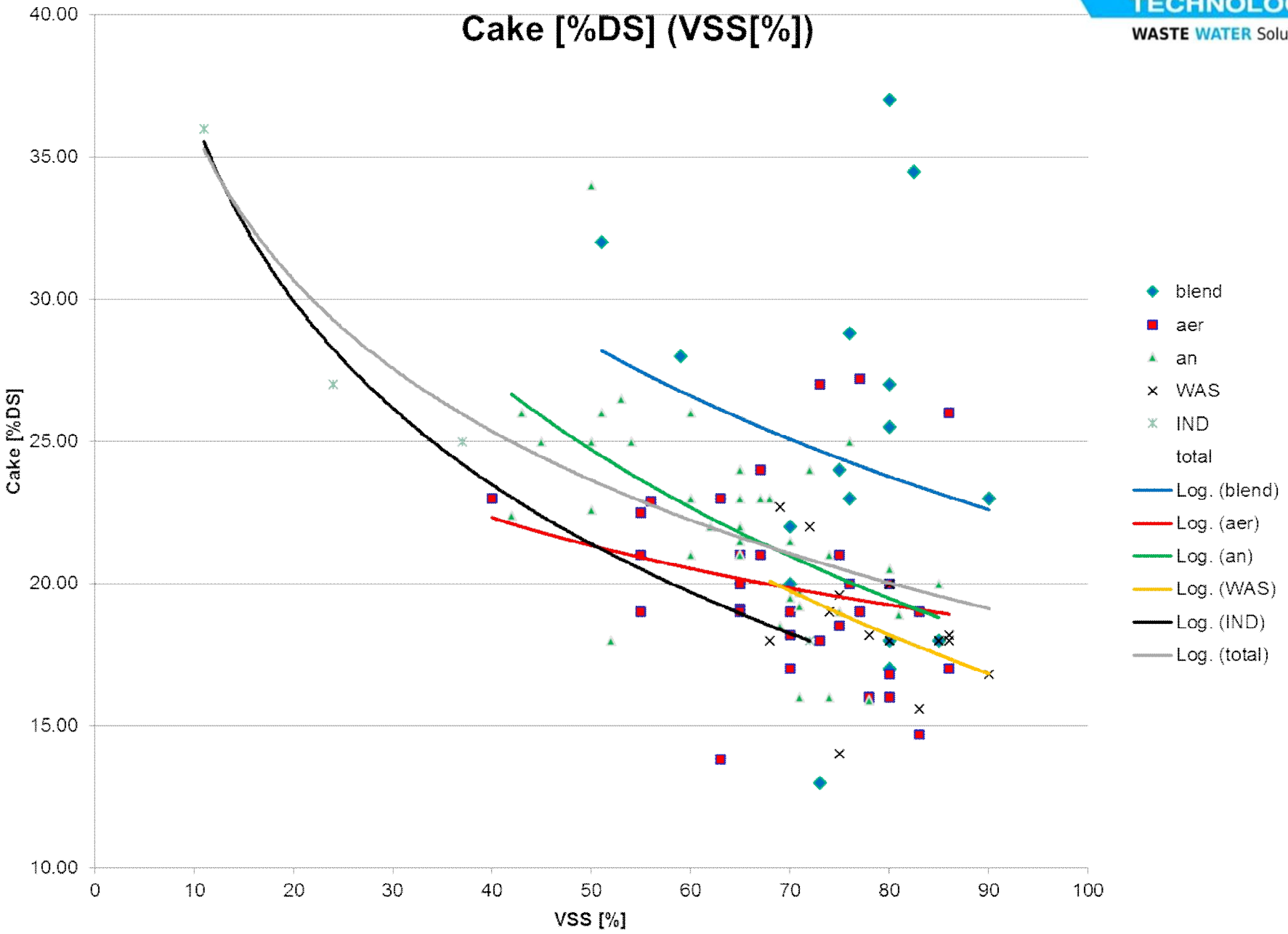
- Primary Sludge - high portion of organic matters, as feces, vegetables, fruits, textiles, paper ect.
- Secondary Sludge – waste activated sludge that discharges from reactors or clarifiers.
- Digested Sludge - Anaerobic vs. Aerobic
- Digestion Process – Break down of organic material (i.e proteins, sugars) into organic acids which are converted into methane or carbon dioxide gases.


Screw Press RoS3Q
DEMONSTRATION
www.huber-technology.com


HUBER
TECHNOLOGY
WASTE WATER Solutions
Screw Press RoS3Q
DEMONSTRATION
www.huber-technology.com

Let's test!

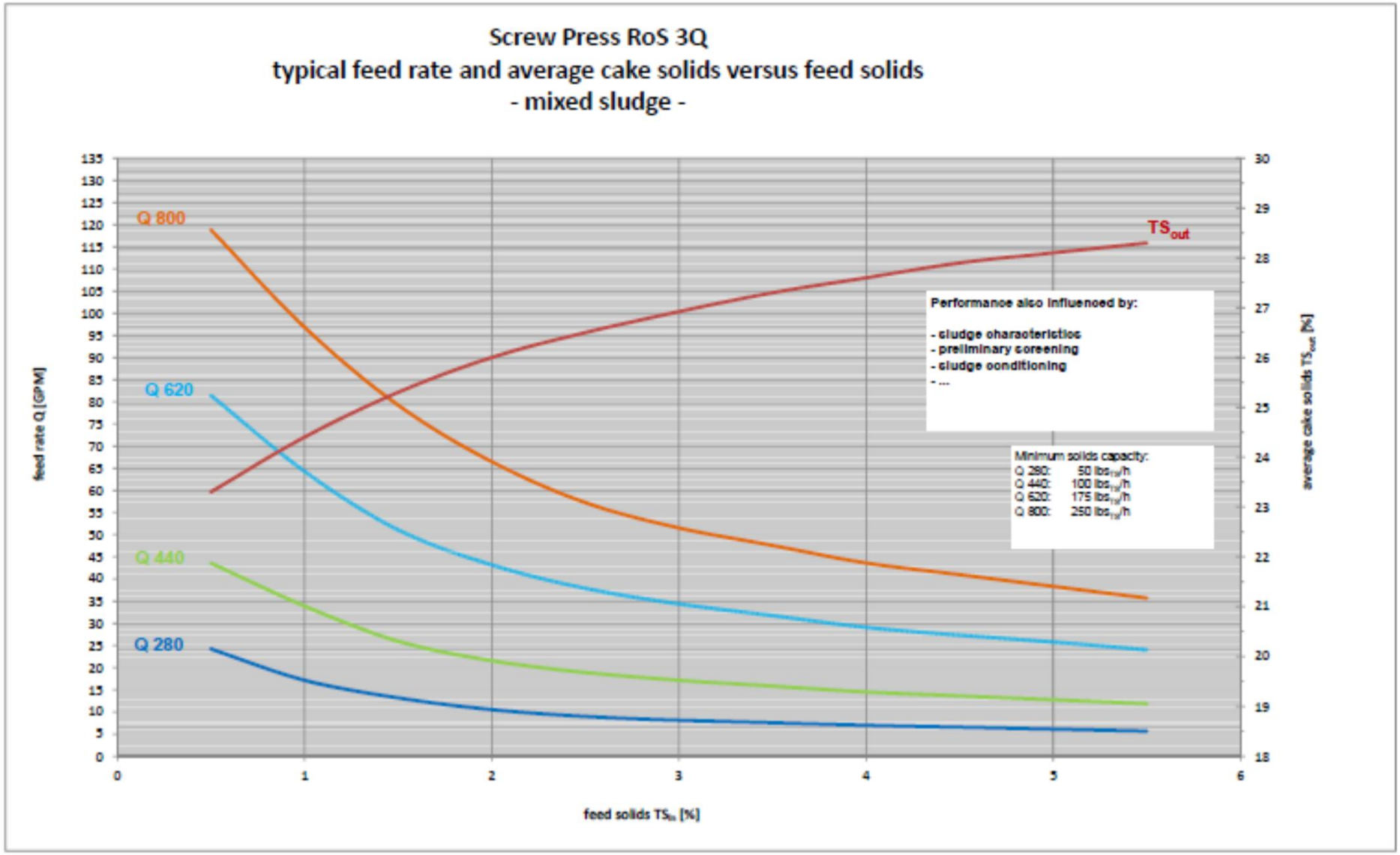
Effect of Volatile Solids % on Dewatering Performance



Polymer Use, Cake Solids - Sludge Type

	Blend	WAS	Aerobically digested	Anaerobically digested	Industrial
number of plants	29	25	53	50	16
polymer consumption [lbs active / ton DS]					
average	18.9	23.3	25.9	36.0	35.1
cake solids [% DS]					
average	27.4	18.2	19.9	22.5	25.3

RoS3Q – Screwpress sizing



Installation Examples

Automated load out conveyor 4 point discharge.

Local installation at Newberg, OR

HUBER TECHNOLOGY
WASTE WATER Solutions

Producing 19% Cake from WAS

Huber Technology - Capability

ECUA, Pensicola, FL

Huber Screwpress Experience

Ros3

30.07.1993	P	Lissabon	Portugal	3	2	057616
29.07.1993	CZ	Versuchsanlage RoS 3	Czech Republic	1	2	58050
25.05.1993	E	Navalcarnero	Spain	1	2	56301
10.05.1993	H	Da Maia, Portugal	Portugal	1	2	55954
03.05.1993	CZ	Prerov	Czech Republic	1	2	55956
07.04.1993	I	Concast (I)	Italy	1		55312
31.03.1993	D-01824	Leupoldishain	Germany	1	2	55078
12.02.1993	CZ	Nachod	Czech Republic	1	2	54242
11.01.1993	CZ	Bridlicna	Czech Republic	1	2	53563

pieces: 785

Ros3Q

nz

12.05.2006	CH	Marthalen, Weinland; CH	Switzerland	1	Q280	286084
31.01.2006	UK	G's Fresh Beetroot, GB	Great Britain	1	Q280	285814
11.10.2005	D-73635	Rudersberg KA	Germany	1	Q800	211773
30.11.2004	F	Politex, F	France	1	Q280	284683
30.09.2004	S	Skinnskatteberg ARV, S	Sweden	1	Q440	284518
18.08.2003	D-04509	Zschortau	Germany	1	1	210901
06.12.2002	S	Stora Enso Jönköping	Sweden	1	1	282995

pieces: 402

Welcome user hus-jl

Now over 1500 screwpresses worldwide!

After Market Sales & Service HUS

HUBER TECHNOLOGY
WASTE WATER Solutions

Award winning After Market Sales & Service

You are our priority. Your satisfaction is our bottom line.

Huber Technology, Inc. Service Leadership Award

After Market Sales & Service HUS

Spare and wear parts

- Spare parts located in Huntersville NC
- Dedicated weekly shipments between parent company and Huber Technology US
- We are available with advice and support in the selection of the best original spare or wear parts for your machine.

After Market Sales & Service HUS

Manufacturing Services

Full service repair and manufacturing facility (15,000 sq. ft.) at our headquarters in Huntersville NC.

This will allow us to provide local based manufacturing and machine rebuild services

Conclusions

- Ü Significant Reduction in Energy Usage
- Ü Minimal Operator Attention
- Ü No Pre-Thickening Required
- Ü Extremely High Capture Rates
- Ü Minimal Water Consumption (20 gpm @ 60 psi)
- Ü Higher Cake Solids compared to BFP, RDP and other ISP’s

Heritage of commitment & quality

Five generation owned company founded 1867

Worldwide presence

Steady pattern of growth

Original source manufacturer

ISO 9001 & 14001 rated

Our Approach.

We are Huber Technology. We believe that water is the most valuable resource on the planet. We are committed to reserving this resource.

We also believe that our customers deserve the highest return on their investment in the equipment that accomplishes this goal. This is why we use only the highest quality of materials and craftsmanship and offer unparalleled service and support in everything we do.

We are Huber Technology and we manufacturer Wastewater treatment equipment that will solve your specific need in this specific way.

Thank you

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