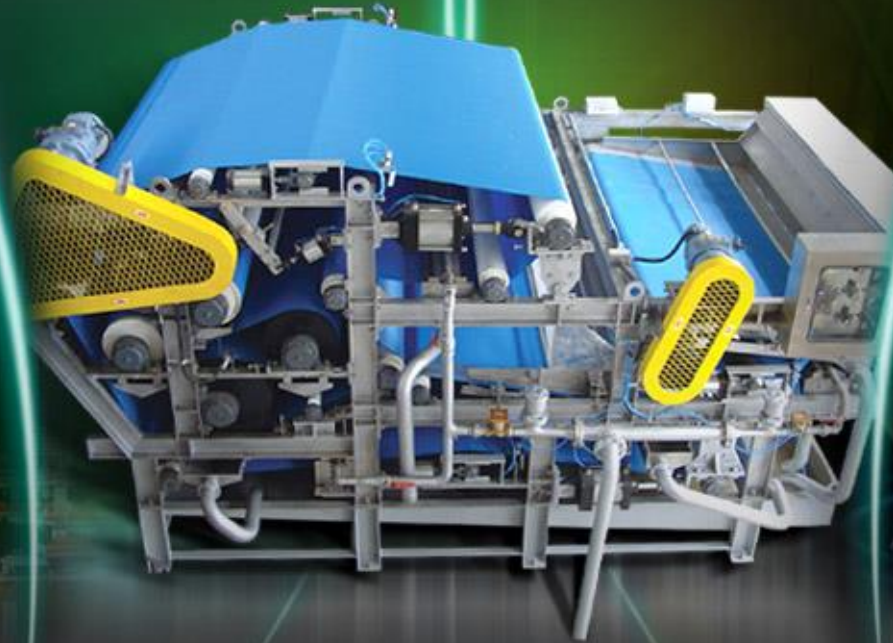


EFFICIENT SLUDGE DEWATERING
CAKE SOLID UP TO 50% DEPENDS ON
SLUDGE CONDITIONS

LOW INVESTMENT AND OPERATING COSTS
AUTO WASHING AND CLEANING
NOZZLE SYSTEM



➤ ***Diamond Quality***

➤ ***Gold Service***

➤ ***Silver Price~***

SINCE 1984

What are different AKI-Beltpress?

**Pre-section+ 6~12 stage Roller
Main Section+ After Section**

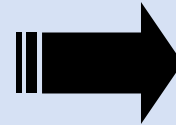
Component parts of Pre-Section, Drum Screen, Auto-Feeder, Belt Thickener + Dynamic Work Frame and Various kinds of S-Shape Roller Stages arrangement in Main Body + Ending composed of Add High Pressure Zone dewatering device gives High dewatering effects for all different types of wastewater sludge.

Why AKI-Beltpress?

The “Sufficiency Dewatering” available equipment

SMG-Conventional Dewatering Devices

- ▶ Dynamic Frame Work
- ▶ High Drainage Zone
- ▶ Wedge Zone
- ▶ Squeeze Zone
- ▶ High Pressure Zone



Extract the free water contained in the liquid sludge, limited to ~20%DS in sludge cake.

SMG-BELTPRESS

- Extract both “Free & Absorbed” water
- Cuts typical waste volume higher than others
- Efficiently achieves >20% dry solid
- Low energy, Long Durability, High Effect against others

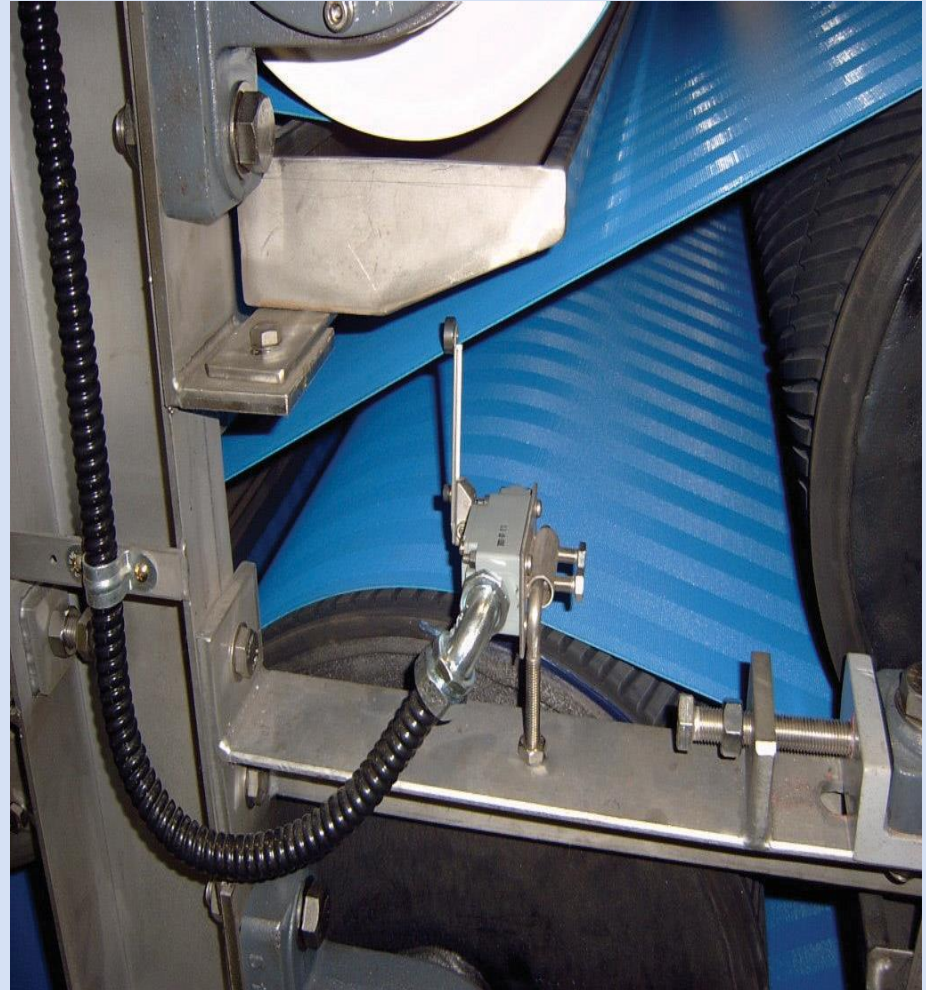
LONG DURABILITY, DYNAMIC FRAME WORK

**The well Conditioned
Sludge fed on the
upper Belt=>
Distributes evenly by
Dynamic Frame,
Good arrangement
Rollers, good
attachments =>
Belt Thickener, Drum
Screen, Auto-Feeder
etc.**



SPECIAL HAND-MADE RUBBER ROLLER

- **The Special Flute Helical gives fast High drain & dewatering effect**
- **Filtrate flow through both Belts without Rewetting the Cake**
- **Dynamic S-Shape roller arrangement gives High Effect dewatering**



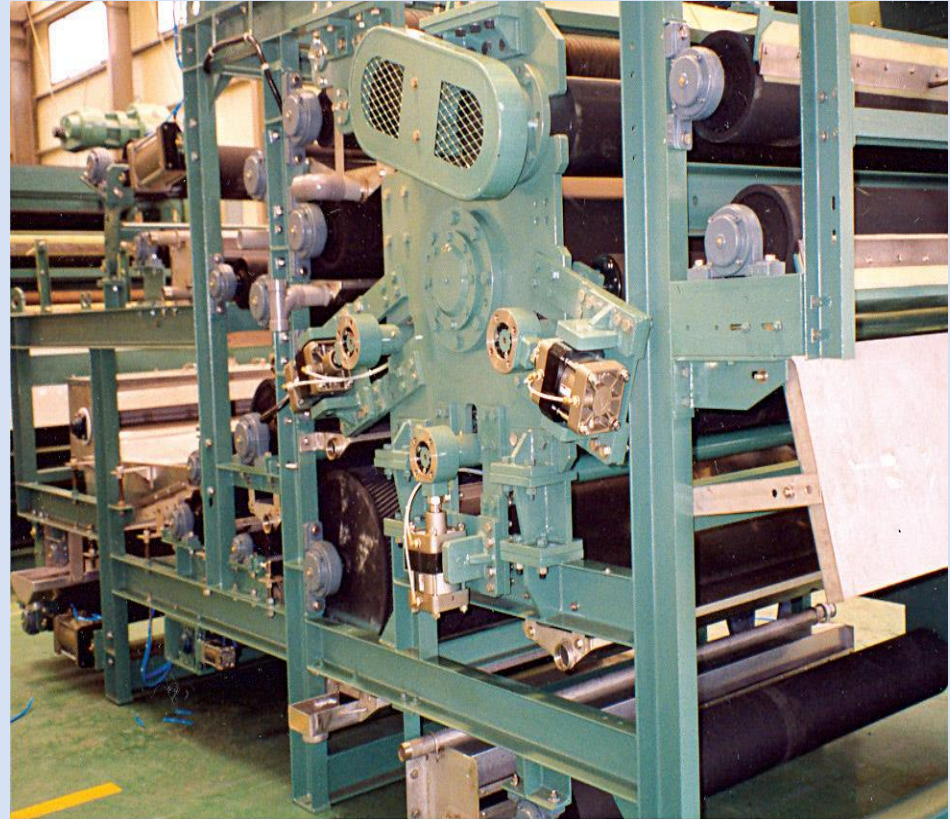
DYNAMIC STRUCTURER ROLLER ARRANGEMENT

- **Polyamide coated Roller gives high effect squeezing, Belts travel around rollers of smaller Diameter, The pressure increases gets more water squeezed out.**



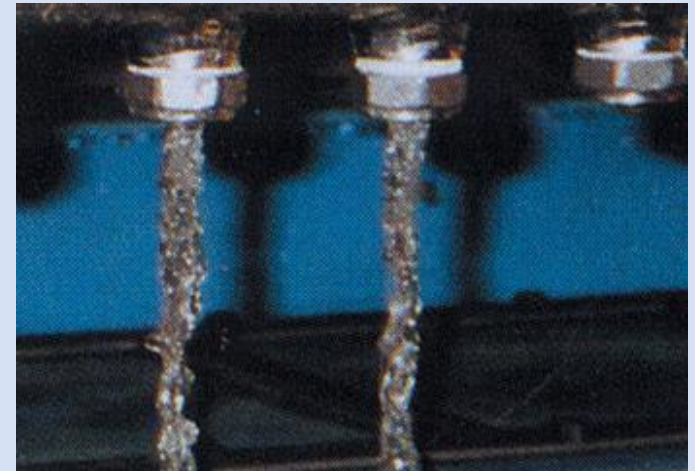
HIGH PRESSURE ZONE (Option)

- **Satellite type High Pressure Zone applies for lower moisture content in Cake.**
- **The Higher tension created by tensioning a PE mesh belt hydraulically.**
- **Less 80%wt guarantee in most kinds of Sludge.**



SELF-CLEANING NOZZLE SYSTEM

- **No need cleaning work**
- **Timer, Sensor operates by Full Automatic Washing System**
- **Long Durability Nozzle Tip**
- **High Pressure but Low water Consumption**
- **Recycle Water reuse**



MADE TO MEASURE OPTION

Various Optional depends on Sludge Conditions and Dewatering target:

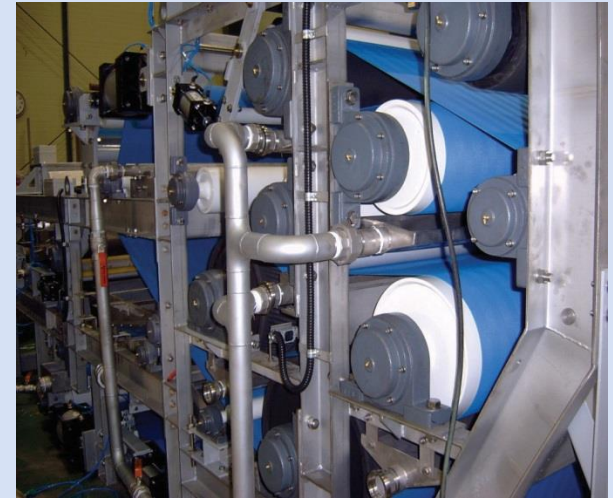
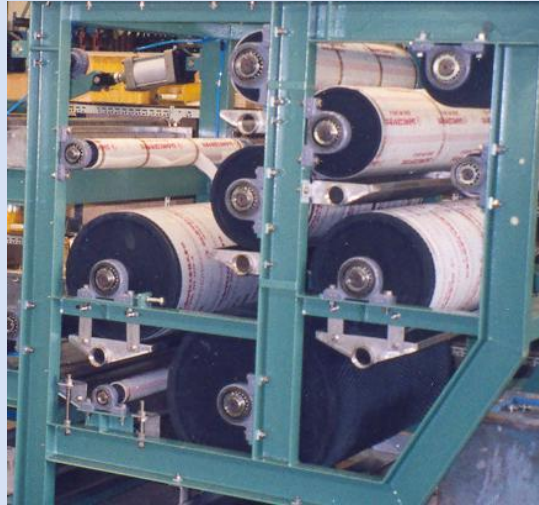


AUTO-FEEDER

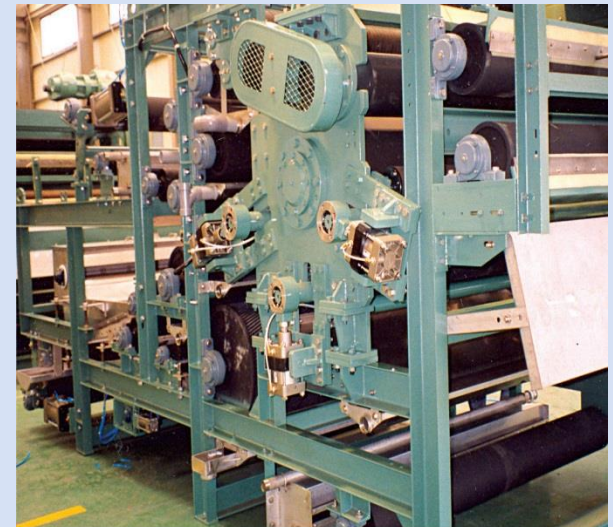


DRUM SCREEN

MADE TO MEASURE OPTION



- **BELT-THICKENER**
- **LOW PRESSURE ROLLER**
- **MEDIUM PRESSURE ROLLER**
- **HIGH PRESSURE ROLLER**



ATTACHEMENTS DEVICES



AIR CONTROL PANEL

Depending on the thickness of the sludge inlet, the most appropriate pneumatic tension control is automatically adjusted to ensure optimum dehydration.



AUTO-FEEDER DEVICE

Auto Feeder is the best device to do enough pre-dewatering before inputting sludge to main roller. It is a device that raises the dehydration efficiency by natural dehydration of free-water formed by FLOC as much as possible.



BELT THICKENER

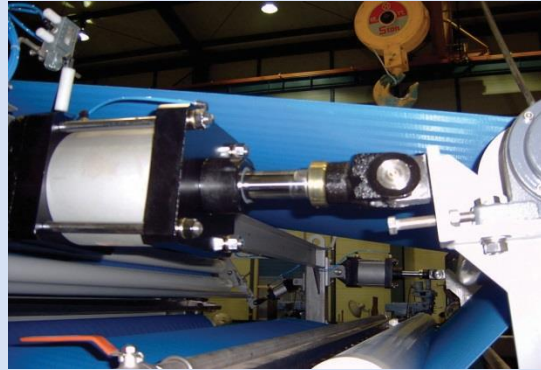
The gravity dehydrator Belt-Thickener is designed to obtain the optimal conditions for natural dehydration, the sludge should be designed and checked carefully for its properties, speed, tilt angle, and belt conditions as well.

ATTACHEMENTS DEVICES



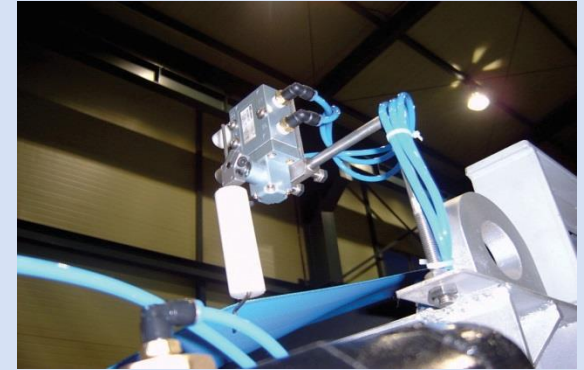
ADD-PRESSURE ROLLER

*The final add-pressure roller is helps to peeled off the final cake with linear pressure and to help dehydrate the filtrate.
(Option)*



AIR-CYLINDER TENSION DEVICE

The reason for using Air Cylinder (without Bellows) and Limit Switch are that, The Air Cylinder & Limit Switch is attached to the left & right sides or Upper & Lower position to find the optimum balance point to prevent belt tilt and help to travel in the correct position.



LIMIT SWITCH

ATTACHEMENTS SYSTEM



BELT JIG

The Belt Jig is provided to the customer for ease in replacing or mounting the Belt.



AUTO SELF-CLEANING WASHING NOZZLE SYSTEM

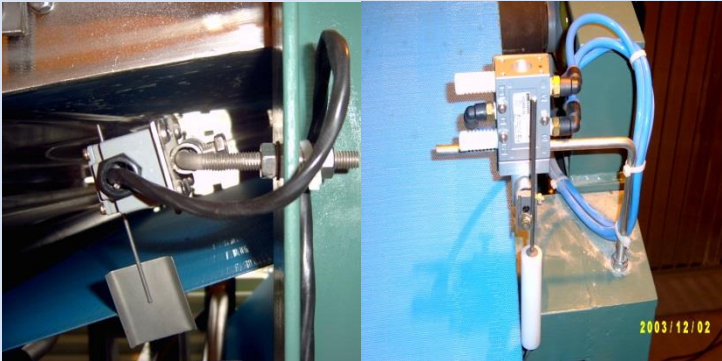
The automatic cleaning nozzle device system is not the conventional manual cleaning method, that Sludge deposits in the nozzle are discharged instantaneously and Nozzle clogging is eliminated by the automatic timer. Nozzle clogging prevents sludge from entering the belt and shortens the life of the nozzle.



INDIVIDUAL SLUDGE MIXING SYSTEM

It is designed to form Floc to be an optimal Dewatering with Polymer and sludge mixed well.

ATTACHEMENTS SYSTEM



UPPER & LOWER BELT MEANDERING S/W

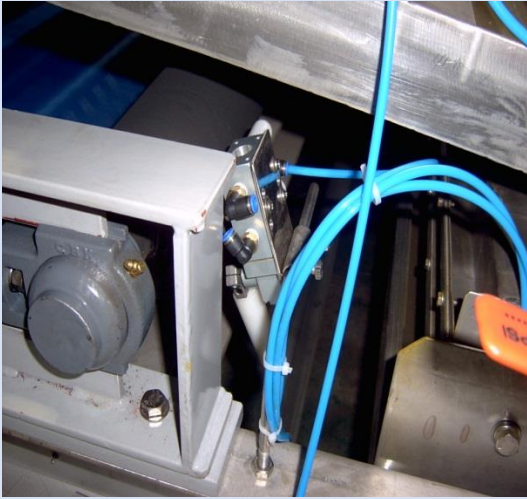
Upper and lower BELT Meandering adjustment Switch is always helps to allows the belt to continue to travel at the correct position. In particular, It is also designed to be safe to shut down the equipment while ringing an alarm when the Belt is out of range.



PLC CONTROL PANEL

It can work with several unit Beltpress and other devices through PLC Program and also Can check and adjust real-time equipment via the Internet in the central control room.

ATTACHEMENTS SYSTEM



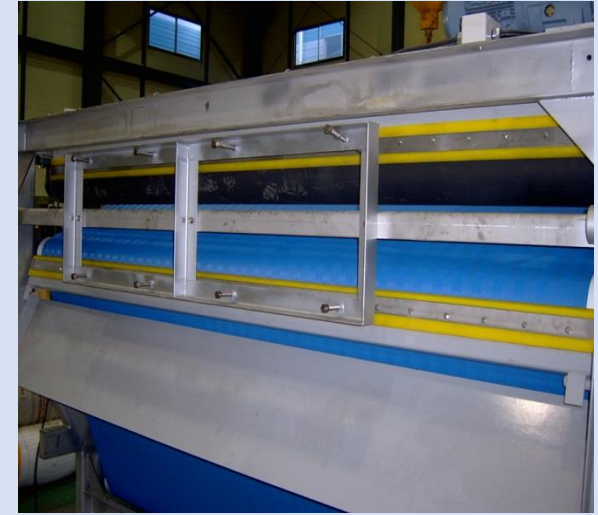
ROLLER ALIGNMENT

It is a function to prevent derailment of Roller in advance.



AUTO POLYMER MIXING SYSTEM

Find out the most economical amount of polymer and set-up, It is automatically supplied to help form optimal floc.



CAKE CHUTE

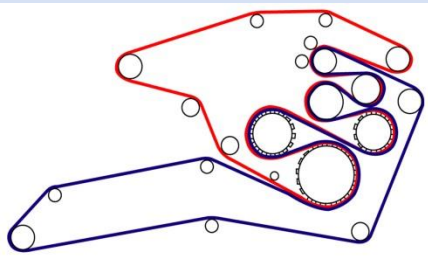
It is designed to get as clean as possible from the belt of the tear cake finally.

BASIC MODEL

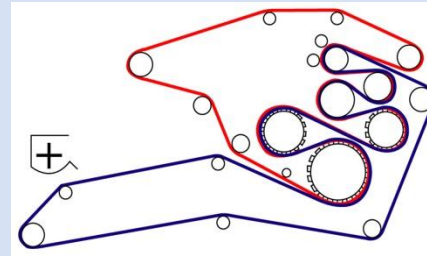


6 STAGE MEDIUM PRESSURE

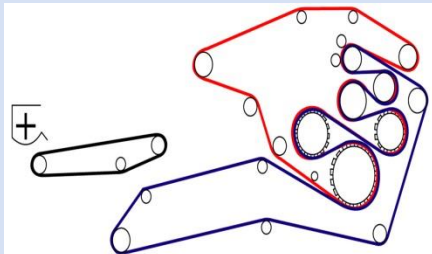
- 6 Stage Roller pressure
- Can be mounted with DRUM/BELT Thickener, AUTO-Feeder accordingly.
- Use for General type Sludge
- +15% DS



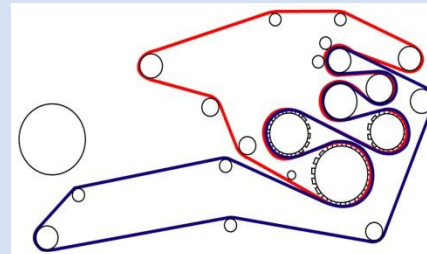
STANDARD (A) TYPE
6 Medium pressure
Roller+Gravity
Zone



AUTO-FEEDER
Mounted+A (B)



Auto-Feeder+Belt
Thickener
Mounted+A (C)



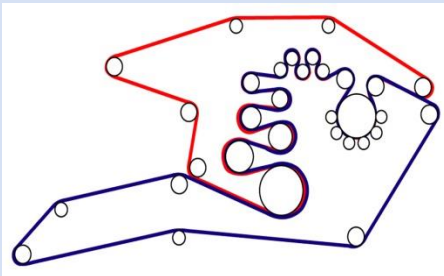
DRUM SCREEN
Mounted+A (D)

BASIC MODEL

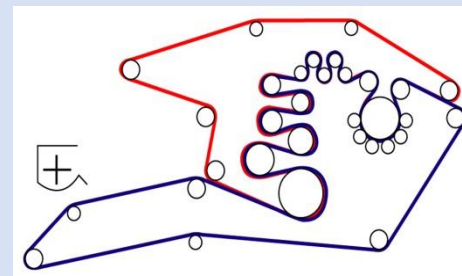


12 STAGE HIGH PRESSURE

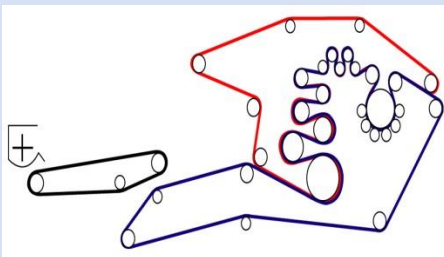
- 12 Stage Roller pressure
- Can be mounted with DRUM/BELT Thickener, AUTO-Feeder accordingly.
- Use for High Dry Solid required
- +20% DS



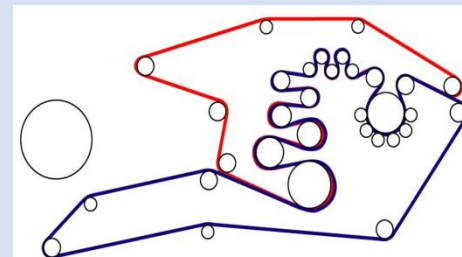
STANDARD (A) TYPE
12 High Pressure
Roller+Gravity
Zone



AUTO-FEEDER
Mounted+A (B)



Auto-Feeder+Belt
Thickener
Mounted+A (C)

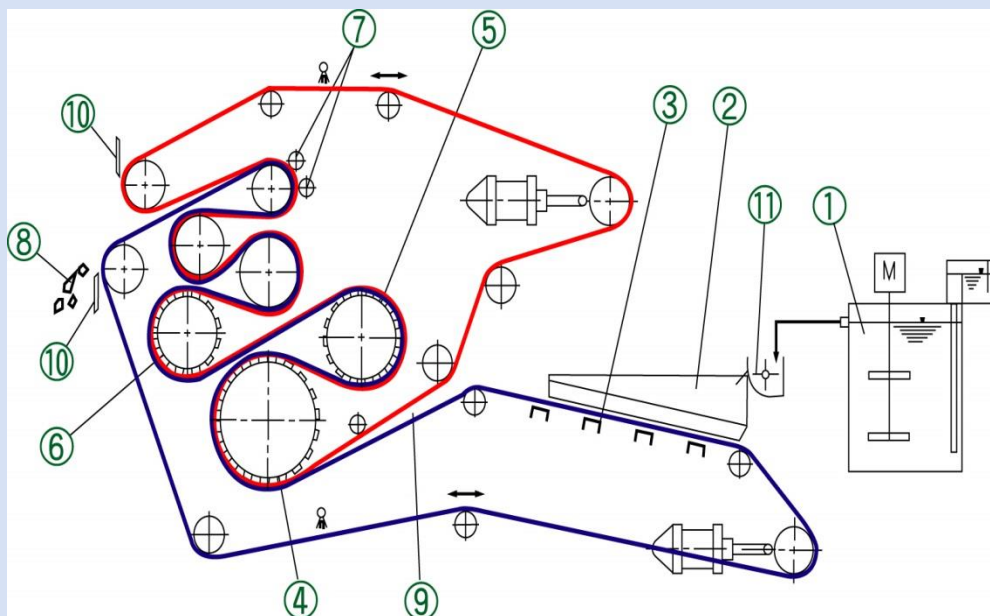


DRUM SCREEN
Mounted+A (D)

MAIN SPECIFICATION MEDIUM PRESSURE

Specification

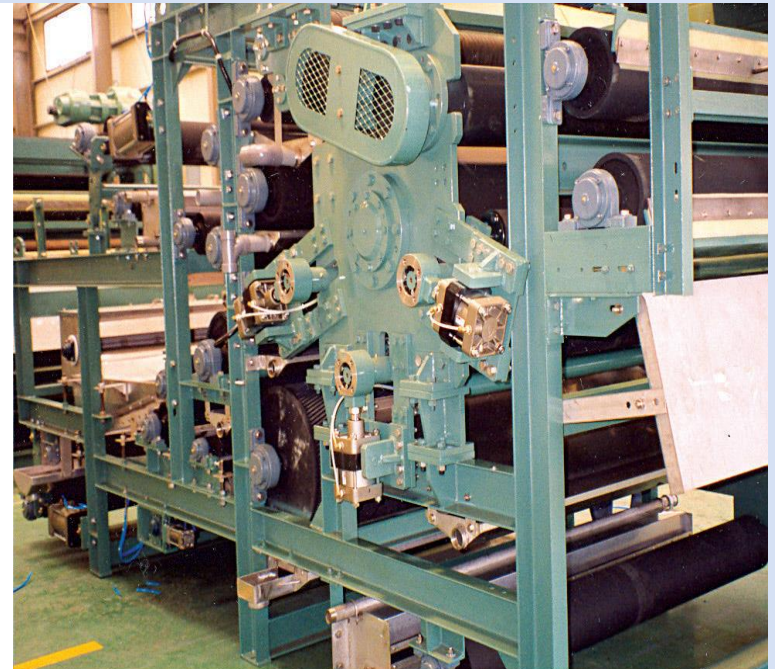
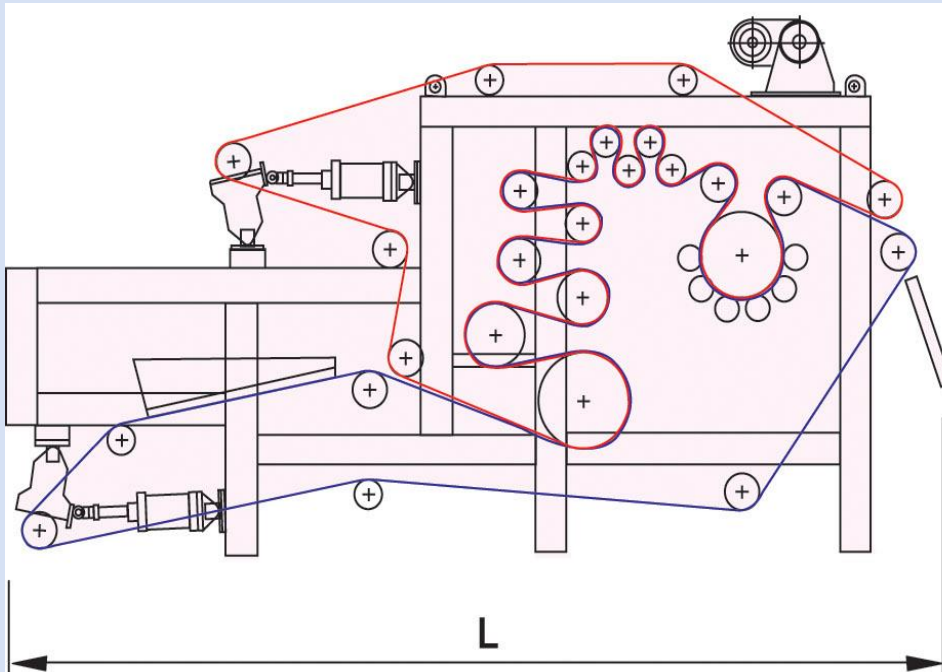
Dimension (m) L x W x H	Model	Belt With (mm)	Weight (kg)	Energy Consumption (kw/h)
4.2 x 1.6 x 2.3	BFS-100W	1,000	2,900	0.75
4.6 x 2.8 x 2.5	BFS-200W	2,000	5,300	1.5
4.6 x 3.8 x 2.6	BFS-300W	3,000	10,000	2.6



MAIN SPECIFICATION HIGH PRESSURE

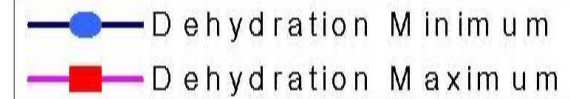
Specification

Dimension (m) L x W x H	Model	Belt With (mm)	Weight (kg)	Energy Consumption (kw/h)
4.9 x 1.6 x 2.8	BFSH-100W	1,000	4,500	1.5
5.5 x 2.8 x 3.0	BFSH-200W	2,000	8,000	2.2
6.1 x 3.8 x 3.2	BFSH-300W	3,000	14,000	3.7

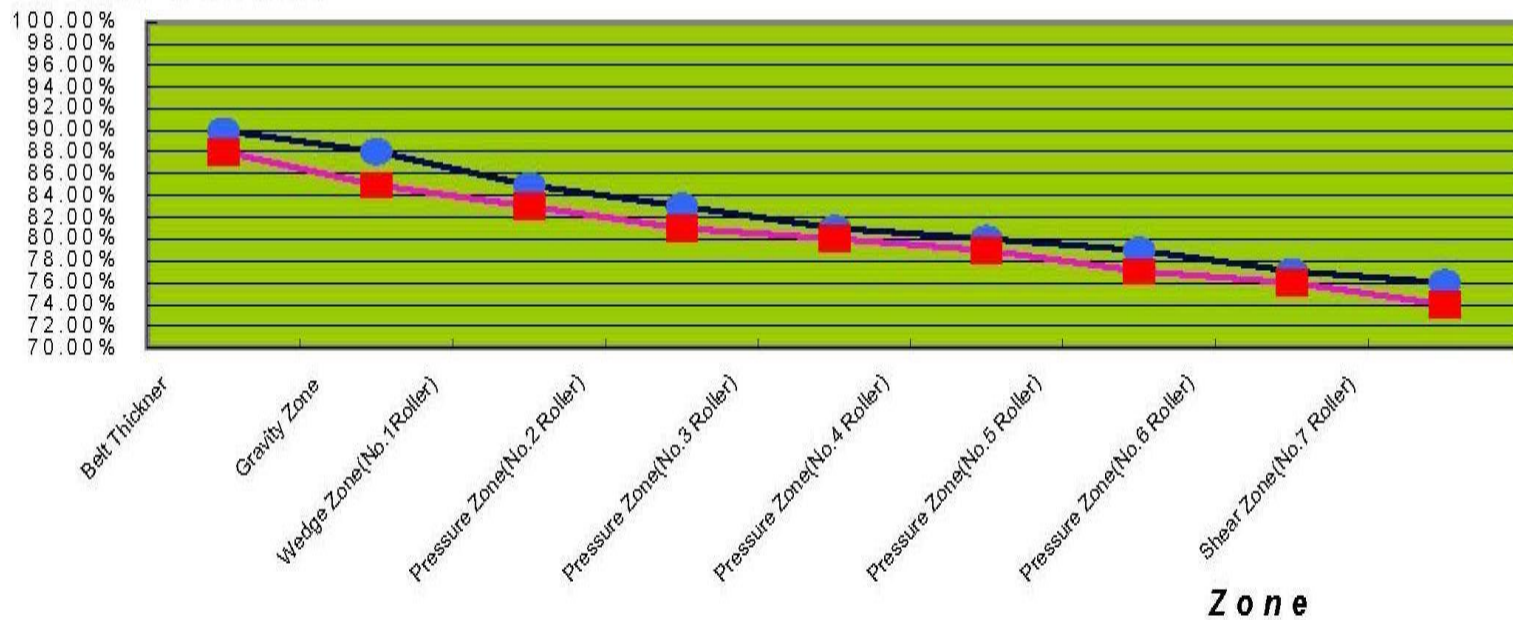


DEWATERING RATIO for each section of 9 stage Roller & 12 stage Roller

Dehydration Ratio

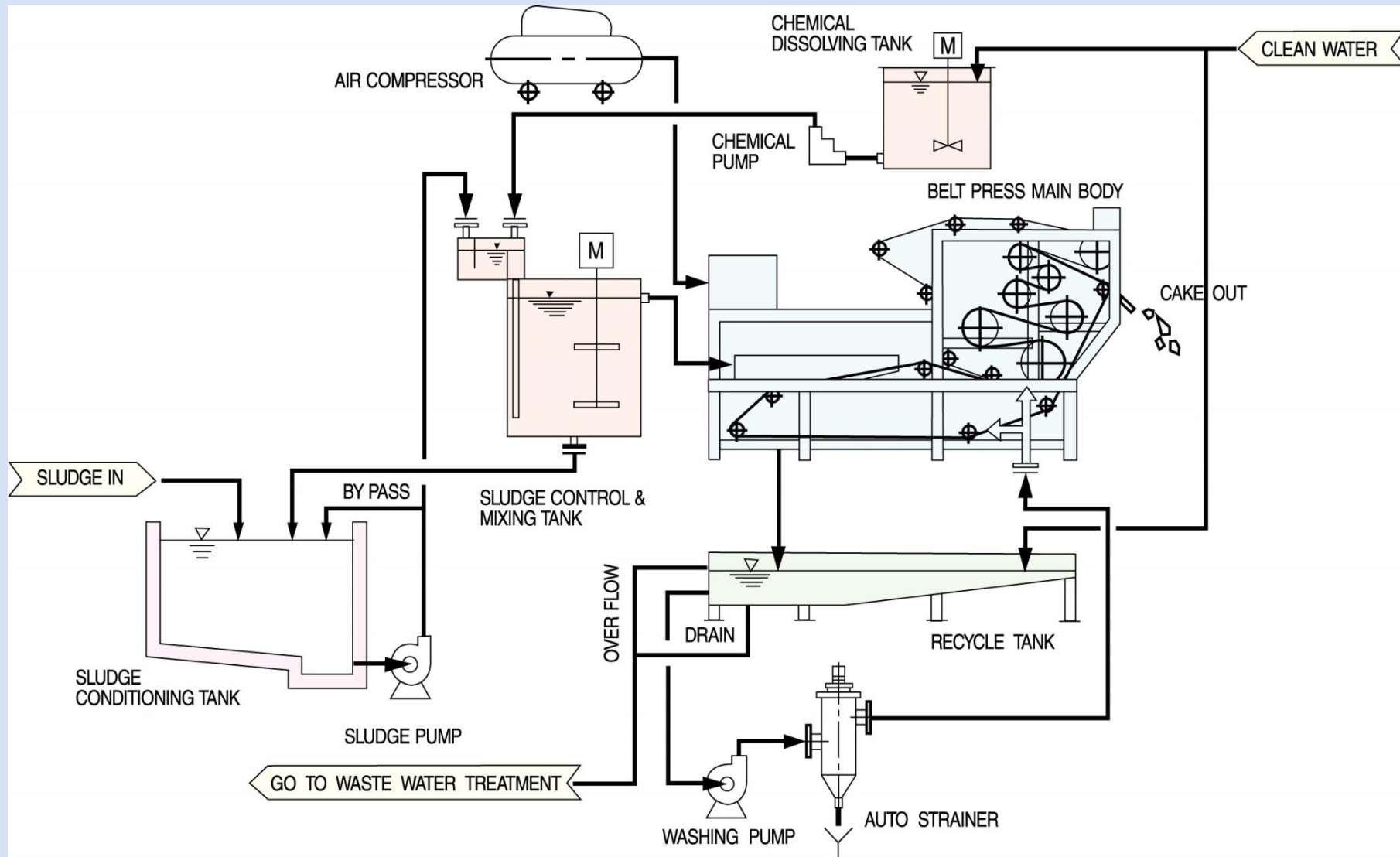


Water Content



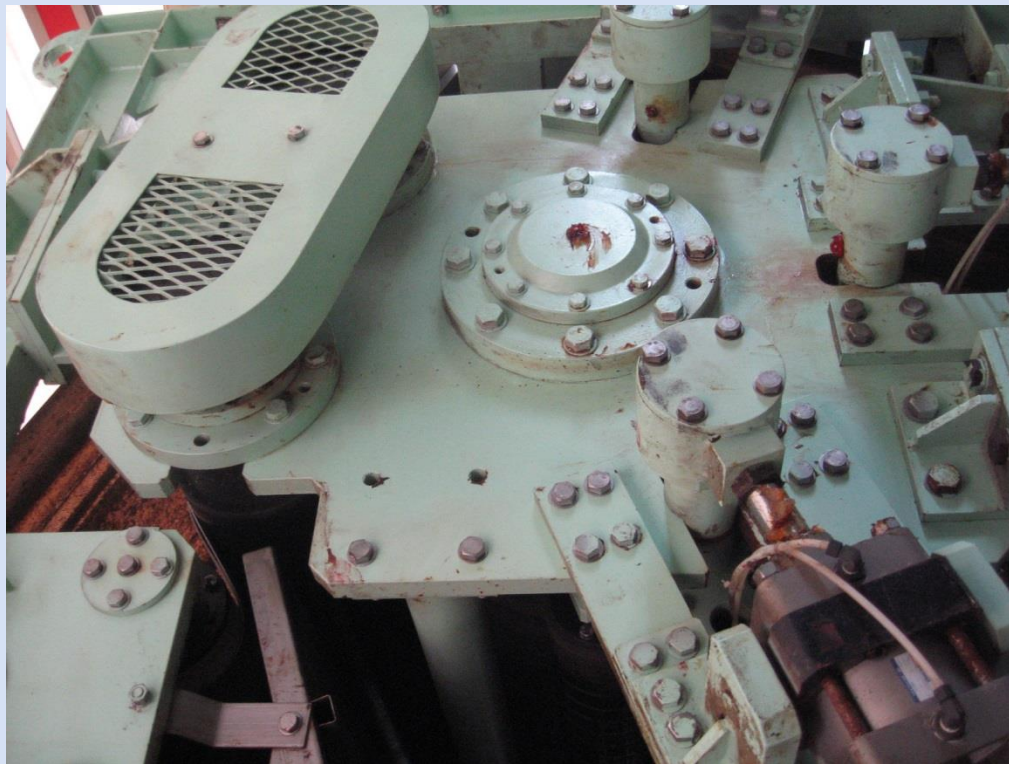
● Note: Dehydration Ratio depends on Circumstance of Sludge condition

FLOW-SHEET & SUPPLY SCOPE



12 STAGE HIGH PRESSURE In Action..

**Installed since 1999' at KOREA PLANT
DAMYANG WWTP : Still running at 72%wt**



Features & Benefits of SMG BELT PRESS

1. High dryness (reduce water level > 20%)

- ① **Reduce final cake Volume**
- ② **Significant reduction in disposal cost**
- ③ **Facilitates storage**
- ④ **Transportation using standard vehicles**
- ⑤ **Reduce costs of incineration**
- ⑥ **Landfill disposal**
- ⑦ **Enable energy recovery**

2. Low consumption compared to Others

- ① **Minimum operating cost**
- ② **Low maintenance cost**
- ③ **Long-run Warranty**

Features & Benefits

3. Int'l Standard



**ISO9001, 14001, KS Standard
Superior Quality & Long durability guarantee**

4. Various Type Choice



**4, 6, 8, 12 Roller Stages choice according to
client's require or Sludge conditions**

5. 20 years Over References



**700 units + Installed into World Market with
Much experienced Engineering
commissioning service**

6. Competitive Price



- ✓ **Small Investment**
- ✓ **Minimum operating cost**
- ✓ **Quick Recovery of Investment**
- ✓ **Less operation supervision**
- ✓ **Easy parts accessibility for maintenance**

The Developing History of SMG-BELT PRESS

1985~1989



- ▶ **Vertical Type BELT PRESS Developed**
- ▶ **Total 120 sets Installed in Korea Fields.**

1990~1995



- ▶ **Horizontal Type BELT PRESS Developed**
- ▶ **Total 86 sets Installed in Korea & Overseas Fields.**

1996~2000



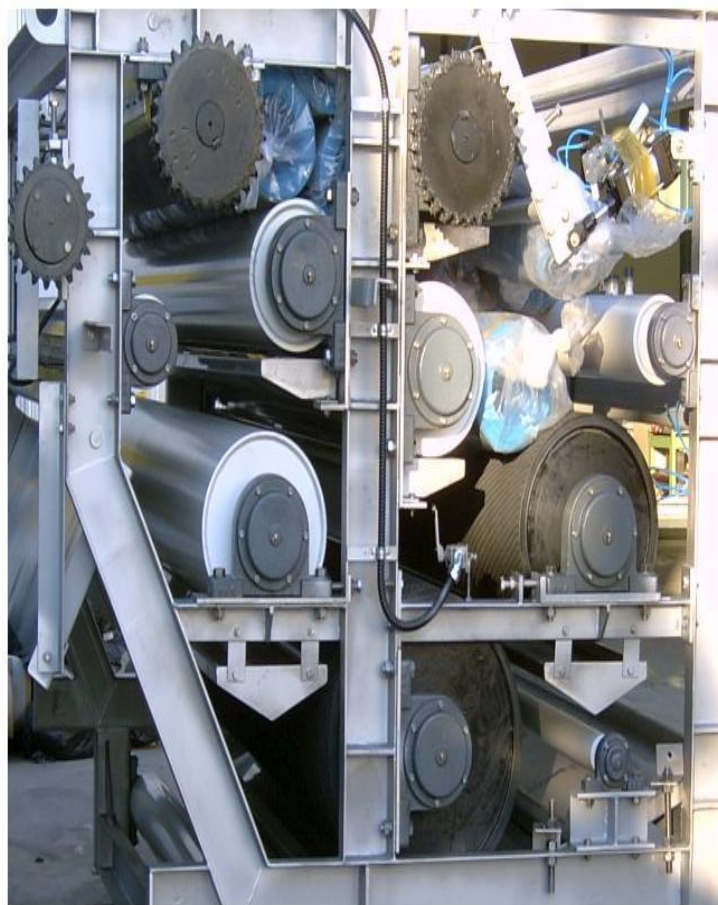
- ▶ **Registered design patent for "Auto-Self Cleaning Nozzle System"**
- ▶ **Registered design patent for "Crown Radial Roller"**
- ▶ **Acquired "New Technology" in Korea for its "Technology of Environment Friendly Dehydration by pressure roller for wastewater sludge"**
- ▶ **Total 186 sets Installed in Korea & Overseas Fields.**

The Developing History of SMG-BELT PRESS

2001~2008



- ▶ **Acquired ISO14001 & ISO9001**
- ▶ **Acquired “Innovation Goods Certificate” in Korea**
- ▶ **Appointed Sole Agent in UK, Ireland, Hungary, Serbia, Romania, Russia, Ukraine, Austria, Germany, USA, Canada, China, Hong Kong, Macau & Chile**



Certificate of Delivery Result

- Customer name : Gorodetzstroyservis City
- Model : AKI-BFS-200W (2meter width) full scope.
- Frame Material : Carbon Steel with double epoxy Coated.
- Date of Shipment : October, 17, 2002'
- Date of Installation : December, 03~10, 2003'
- Plant place : Gorodets City of RUSSIA.
- **Circumstance of Sludge condition :**
 - ◆ urban waste water + human excrement
- **Sludge Dehydration Ratio :**
 - ◆ Minimum 79% ~ Maximum 74% Water contents.

Upside all substances certify that is truth.

Issued by

- Gorodetzstroyservis City.
- Address : 30, Proletarskaya ploshad, Gorodetz, Nizhegorodskaya obl.,
- Country : Russia.
- Person in Charge : Mr. Vladimir Migunov.
- Tel. +7 83161 92202 (91581).

Reference List

Client's Certificate

AWARD WINNER

- ◆ **The Presidential Citation**
- ◆ **The Presidential Medal & Prize**
- ◆ **1 & 3 Million USD Export Monument**
- ◆ **Management Reformer MVP**
- ◆ **ISO 9001 & ISO 14001**
- ◆ **PATENT**
- ◆ **OTHERS**

THANK YOU

Contact Point

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WhatsApp ID : 010-9140-9967



The END ~