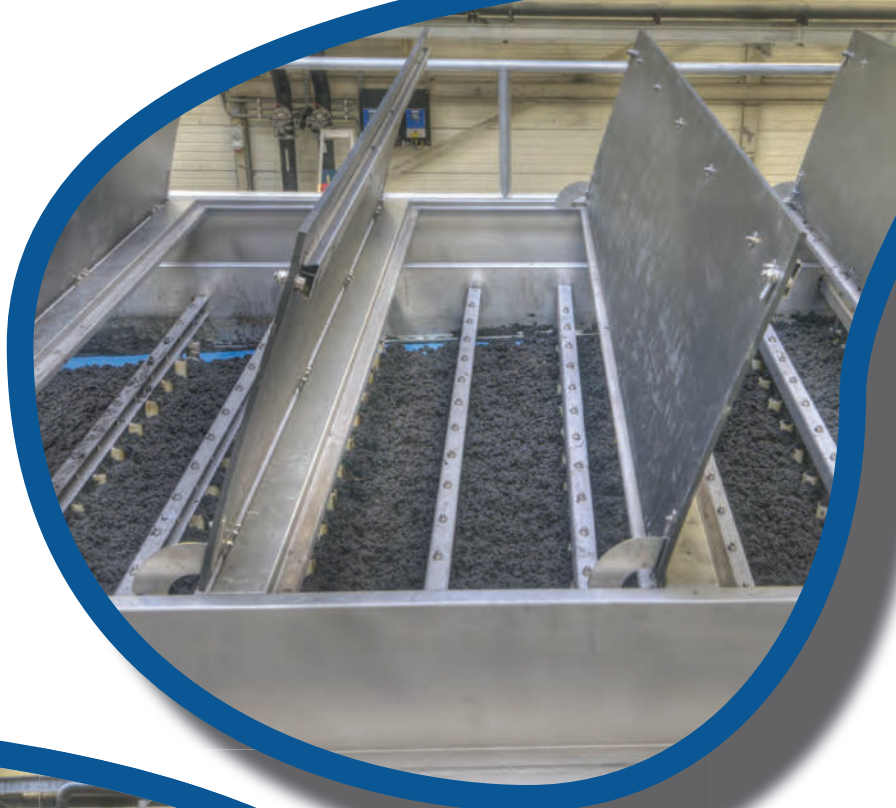


# WASTE WATER TREATMENT



# Product Range

## Gravity Belt Thickeners





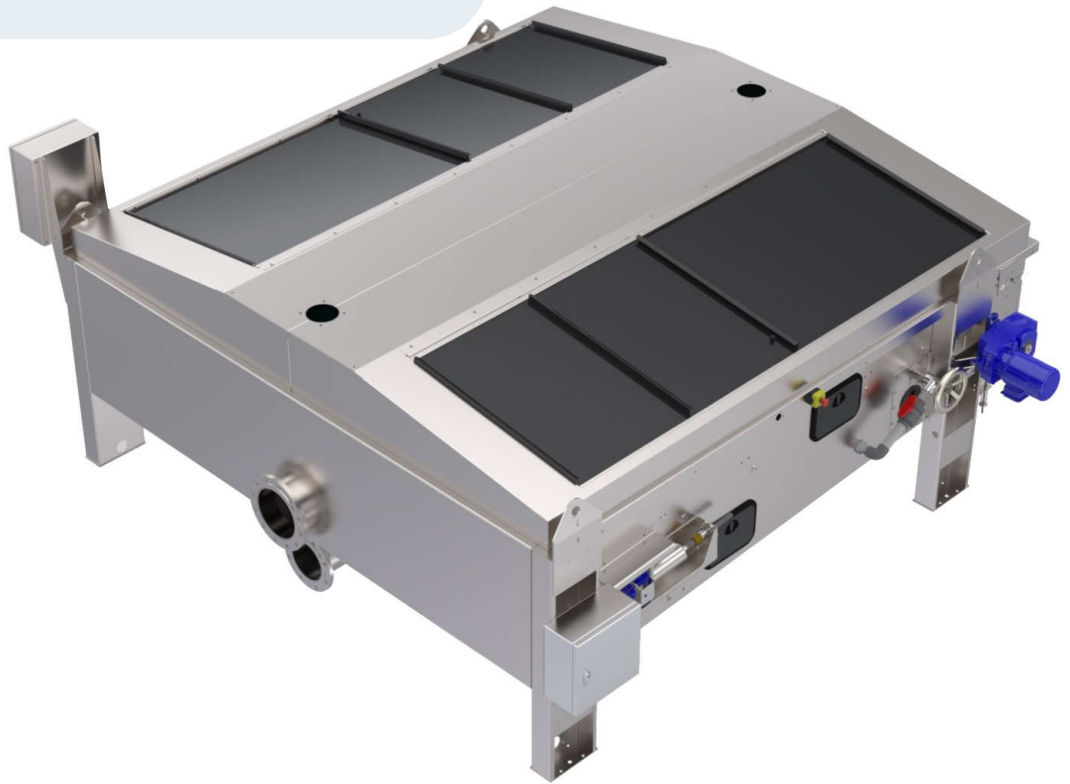
# GRAVITY BELT THICKENER

## TECHNICAL SPEC:

## 100 SERIES

The Unison range of Gravity Belt Thickeners make use of gravity and a porous belt to thicken sludge that has been conditioned with polymer. These units are typically used before the digestion stage, before mechanical dewatering or before transport of sludge to a treatment or disposal site.

Unison is a wastewater machinery brand of Solids Technology Ltd. and is a full subsidiary of Kent Stainless (Wexford) Ltd.



Machines are completely manufactured, including control panels, in our factory in Wexford.

Choose from a choice of grade 304, 316L or LDX2101 stainless steel materials.

- All equipment sits on flat floor with no need for concrete bund or special plinths.
- Stainless steel filtrate sump
- Can use final effluent or potable water as wash water
- Bearings, switches & controls all outside wetted area
- Various belt widths depending on the load capacity requirement



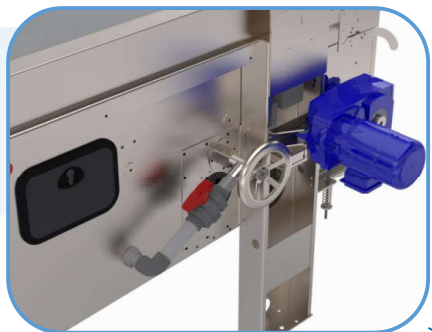
The Gravity Belt Thickener is fully enclosed with integrated odour extraction hood and filtrate sump.



Easy access via top sliding doors for process monitoring and maintenance



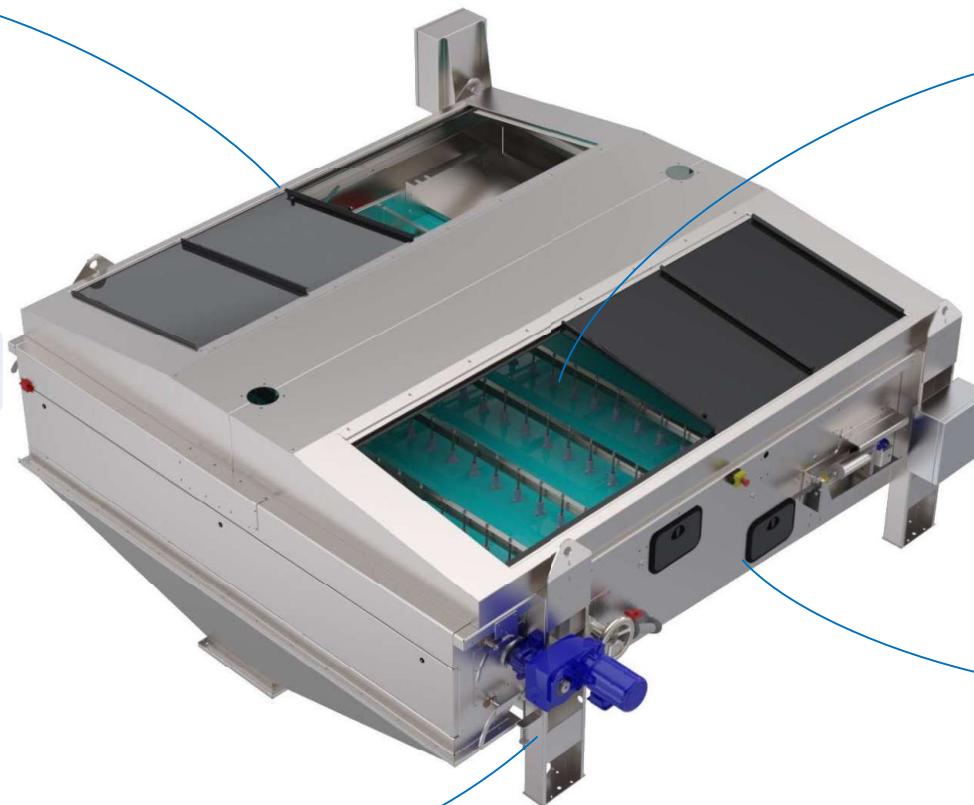
Sludge is spread across the full belt width. Sludge ploughs furrow the sludge as it is processed allowing free area on the belt for maximum filtrate drainage.

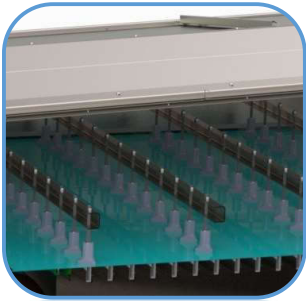


All moving parts are located outside the wetted area allowing for easier maintenance. GBT's are built from durable grade 304 stainless steel ensuring long life in excess of 20 years.



Access points are located throughout the machine. Vision panels allow the thickening process to be safely monitored during operation.





**Gravity Dewatering Zone**

- **Sludge distributor** ensures the conditioned sludge is uniformly distributed over the full belt width.
- **Sludge ploughs** furrow the sludge.
- UHMWPE sections under belt **prevent sagging**
- **Ploughs rotate** when debris are encountered

**Odour Extraction** connections on the top canopy to integrate with an odour control system.

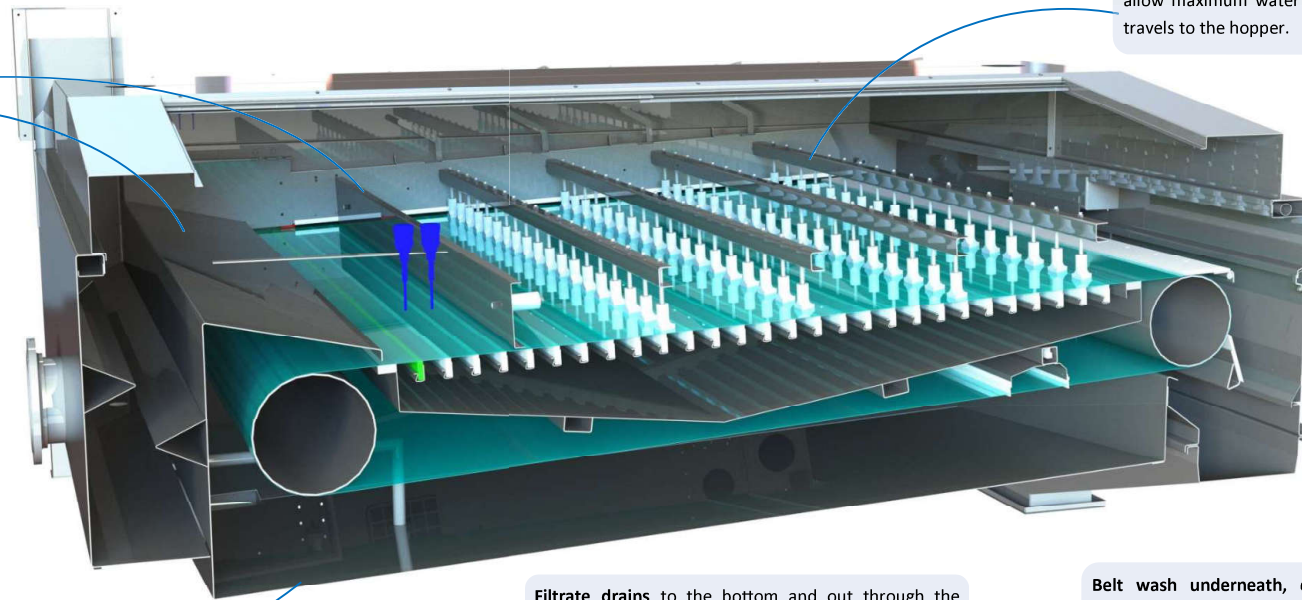
Machines are typically supplied with **Continuous Spiral Type Belt**.

**Another ramp** to hold back the sludge so that it rolls to allow maximum water to drain off before the sludge travels to the hopper.

**Low Ramp** to ensure flocs are not broken up before arriving on the belt. The **Gate** ensures the sludge is spread across the full width of the belt.



All machines are supplied with a **spring pack tension system** for optimal belt alignment on the rollers. There is no steering but there are guides within the machine to track the belt.



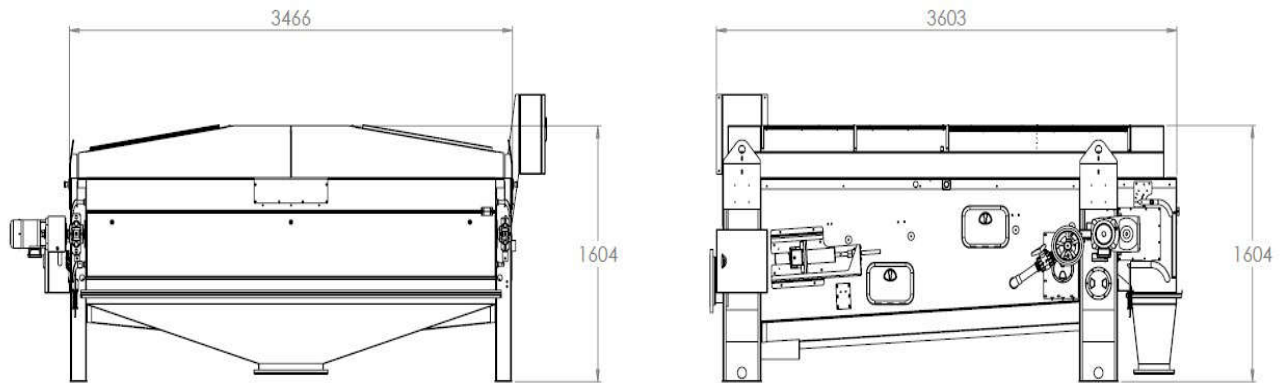
**Filtrate drains** to the bottom and out through the filtrate outlet.

**Belt wash underneath, coupled with scraper**, to ensure the belt is cleaned on returning to the beginning of the process.

# GRAVITY BELT THICKENER

TECHNICAL SPEC:

100 SERIES



Model	110	115	120	125	130 (shown)
Belt width (mm)	1000	1500	2000	2500	3000
Total Filtration Area m <sup>2</sup>	4.8	7.2	9.6	12	14.4
Length	3603	3603	3603	3603	3603
Width	1466	1966	2466	2966	3466
Height	1604	1604	1604	1604	1604

## Features Unison Gravity Belt Thickener

- Stainless Steel construction with optional grades 304, 316 & LDX2101 Duplex Stainless Steel.
- Adjustable Sludge deflection unit and/or dual mode system for optimum dry solid results.
- Fully Enclosed machine with easy access for operations and maintenance.
- All components outside the enclosed area ensuring much longer life.
- Low Energy Cost
- Easy installation on a flat floor– no special civil requirements.
- Wide range available to suit all applications.
- All equipment CE marked

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# Product Range

## Filter Belt Presses



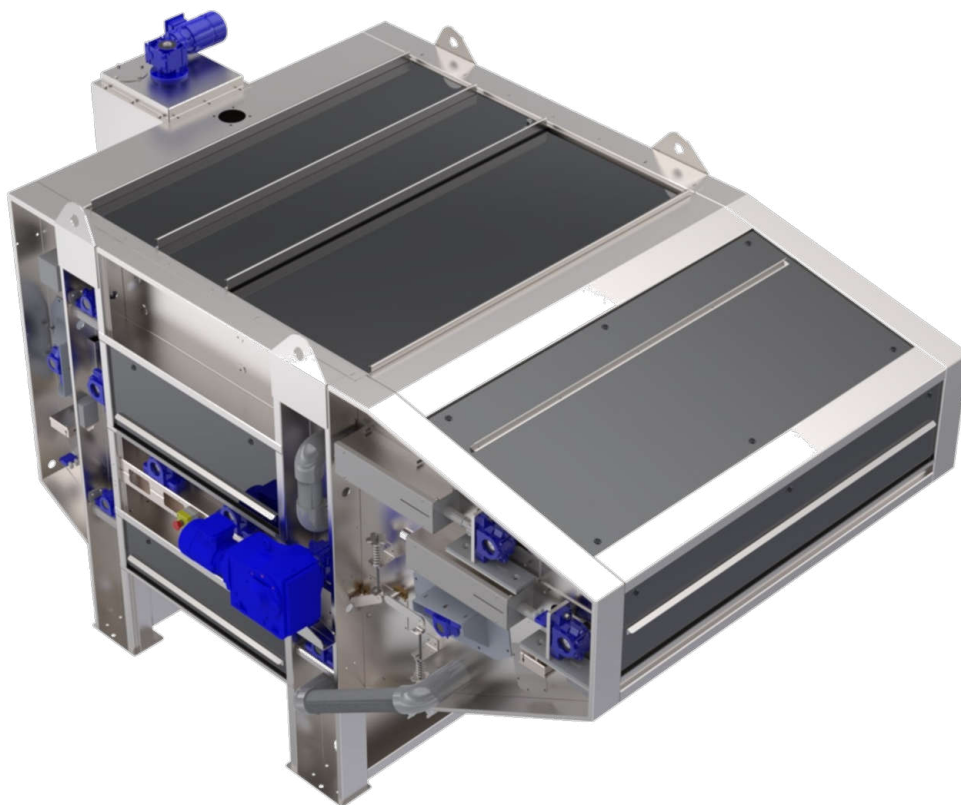
# FILTER BELT PRESSES

## TECHNICAL SPEC:

## 200 SERIES

The Unison range of Filter Belt Press is suitable for dewatering municipal wastewater sludge and all different types of industrial sludge. It has been used in various settings including alcohol and grape industry, pulp and paper industry, food and dairy industry, potato and sugar industry and also the oil and pharmaceutical industries.

Unison is a brand of Solids Technology Ltd. and is a full subsidiary of Kent Stainless (Wexford) Ltd.



Rollers from grade 304 stainless steel

Shafts 416 stainless steel

100,000 hour bearing life

Polyester monofilament belt with easy cake removal







Made fully from grade 304L and Duplex LDX2101 stainless steel in a dedicated stainless steel factory ensuring extra long life

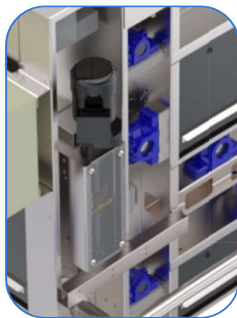
Machines are **totally enclosed** and suitable for connection to an odour extraction system.

Easy access via top sliding doors for process monitoring and maintenance



Optional **Hydraulic Tension System** to allow for constant tension on the filter belts irrespective of sludge loading

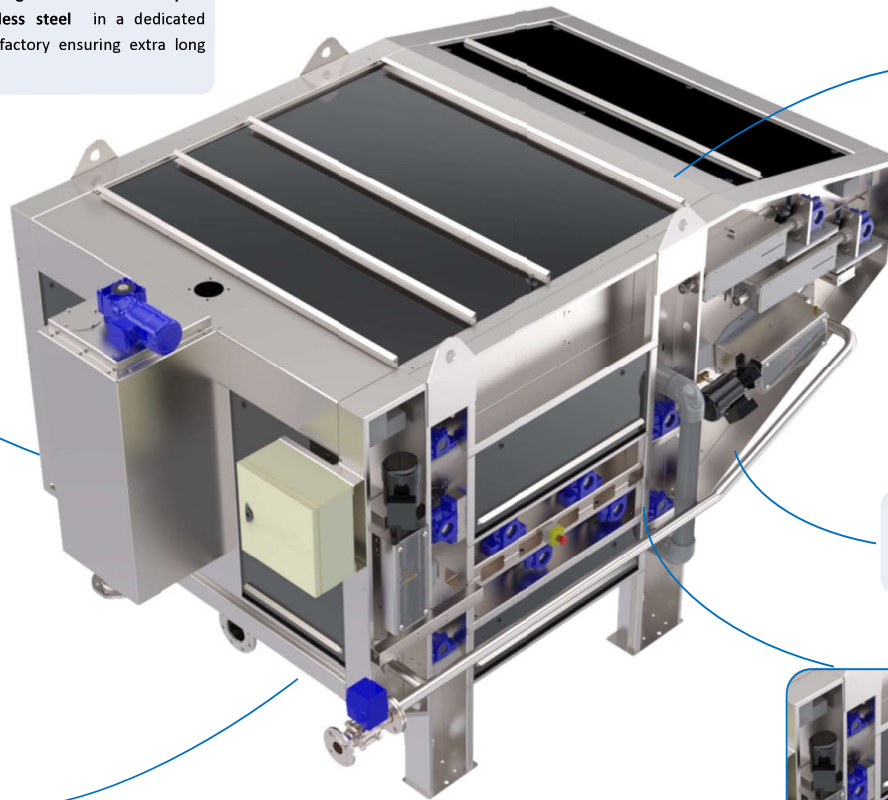
**Belt Wash System**  
Options to use either potable or final effluent water

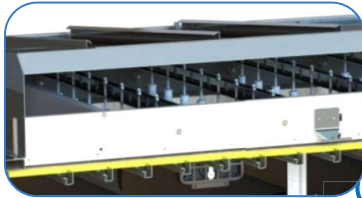


**Belt Alignment** is controlled by means of slewing guide rollers and electrical linear actuators



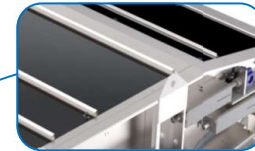
All moving parts are located outside the wetted area allowing for easier maintenance.





#### Gravity Dewatering Zone

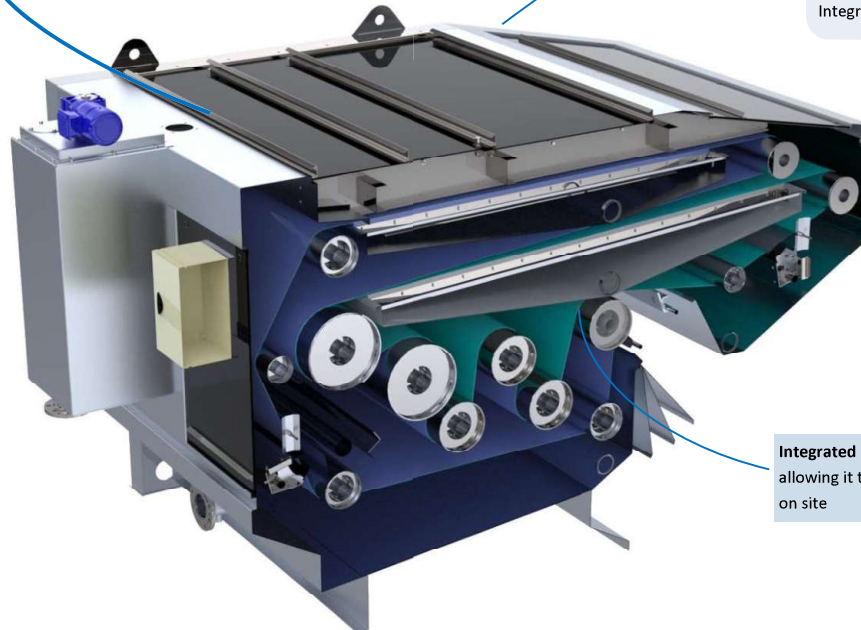
- **Sludge distributor** ensures the conditioned sludge is uniformly distributed over the full belt width.
- **Sludge ploughs** furrow the sludge.
- UHMWPE sections under belt **prevent sagging**
- **Ploughs rotate** when debris are encountered



**Sliding Top Panels** allow access for inspection and maintenance when required.

**Odour Extraction** connections on top canopy to integrate with an odour control system

**Integrated Floc Tank** as standard to allow for adequate mixing of polymer



**Integrated Filtrate Sump** collects all filtrate produced allowing it to be piped directly to appropriate location on site

Typically supplied with **Continuous Spiral Type Belt** which can be repaired should the case arise

All moving parts are located outside the wetted area allowing for easier maintenance. Filter belt presses are built from durable grade 304 stainless steel ensuring long life in excess of 20 years.

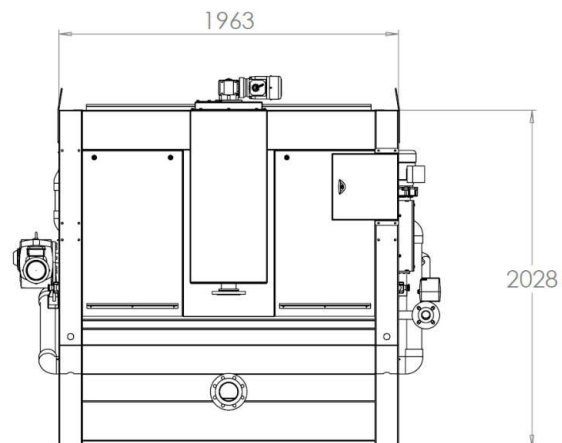
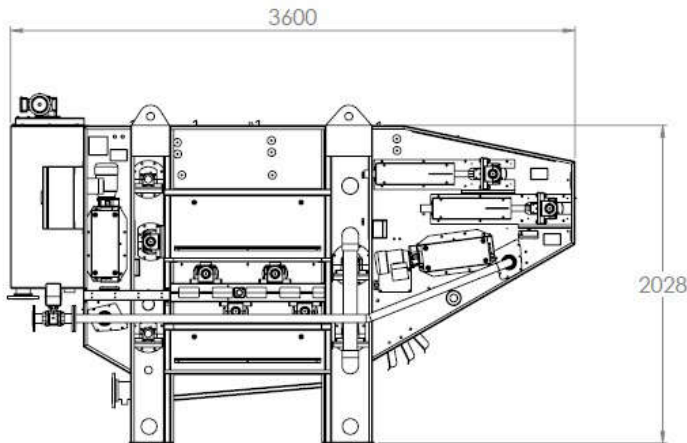
The Unison Belt Filter Press is **fully enclosed**. This ensures all odours are captured by an odour extraction system.



# FILTER BELT PRESSES

## TECHNICAL SPEC:

## 200 SERIES



Model	P210 (shown)	P215 (shown)
Belt width (mm)	1000	1500
Sludge capacity m <sup>3</sup> /h	1-10	5-15
Sludge capacity kg D.S./hr.	20-300	30-450
Total Filtration Area m <sup>2</sup>	7,2	10,9
Length	3600	3600
Width	1963	2463
Height	2028	2028

Belt widths vary from 1m to 1.5m and the machine widths change correspondingly.

Filtrate Sump & Instrumentation on Belt Press Included

Optional:

Wash Water Booster Pump

Wash Water Actuated Valve

Polymer Injection Mixing Valve

Sludge Cake Discharge System

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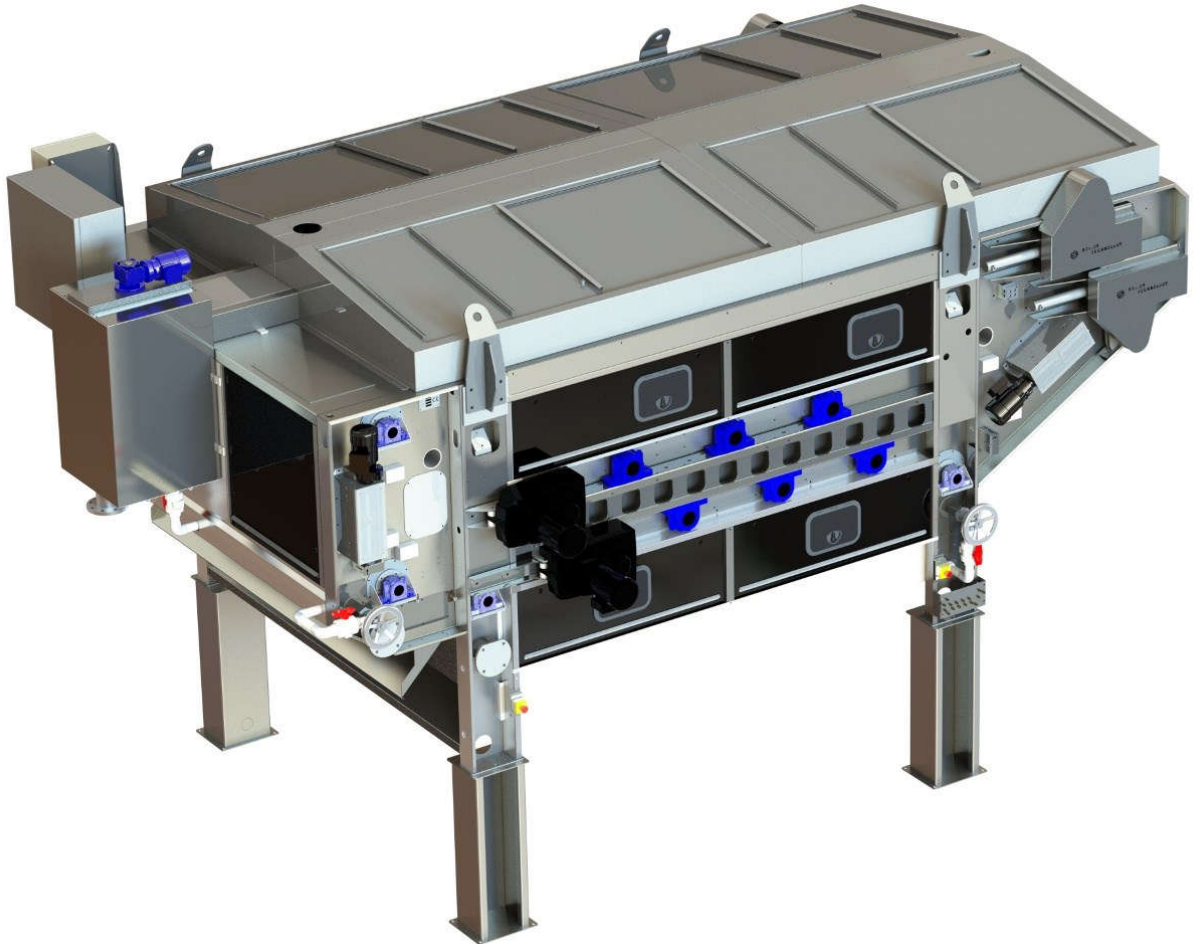
# FILTER BELT PRESSES

## TECHNICAL SPEC:

## 500 SERIES

The **Unison** range of Filter Belt Press is suitable for dewatering municipal wastewater sludge and all different types of industrial sludge. It has been used in various settings including alcohol and grape industry, pulp and paper industry, food and dairy industry, potato and sugar industry and also the oil and pharmaceutical industries.

Unison is a brand of Solids Technology Ltd. and is a full subsidiary of Kent Stainless (Wexford) Ltd.



Duplex Stainless Steel construction which has a 20-40% higher tensile strength than 304 or 316 stainless steel.

Duplex Stainless also has corrosion resistance on a par with grade 316 stainless steel and is perfect for the harsh environment encountered in wastewater applications, as well as being ideal for outdoor use.



## TECHNICAL SPEC:

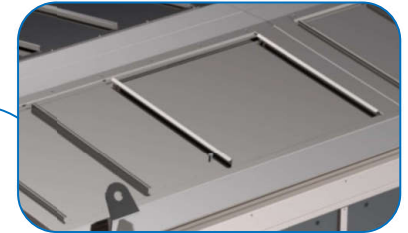
## 500 SERIES



Made fully from **grade 304L and Duplex LDX2101 stainless steel** in a dedicated stainless steel factory ensuring extra long life.

Machines are **totally enclosed** and suitable for connection to an odour extraction system.

Easy access via top sliding doors for process monitoring and maintenance



Optional **Hydraulic Tension System** to allow for constant tension on the filter belts irrespective of sludge loading

### Belt Wash System

Options to use either potable or final effluent water



**Belt Alignment** is controlled by means of slewing guide rollers and electrical linear actuators



All moving parts are located outside the wetted area allowing for easier maintenance.





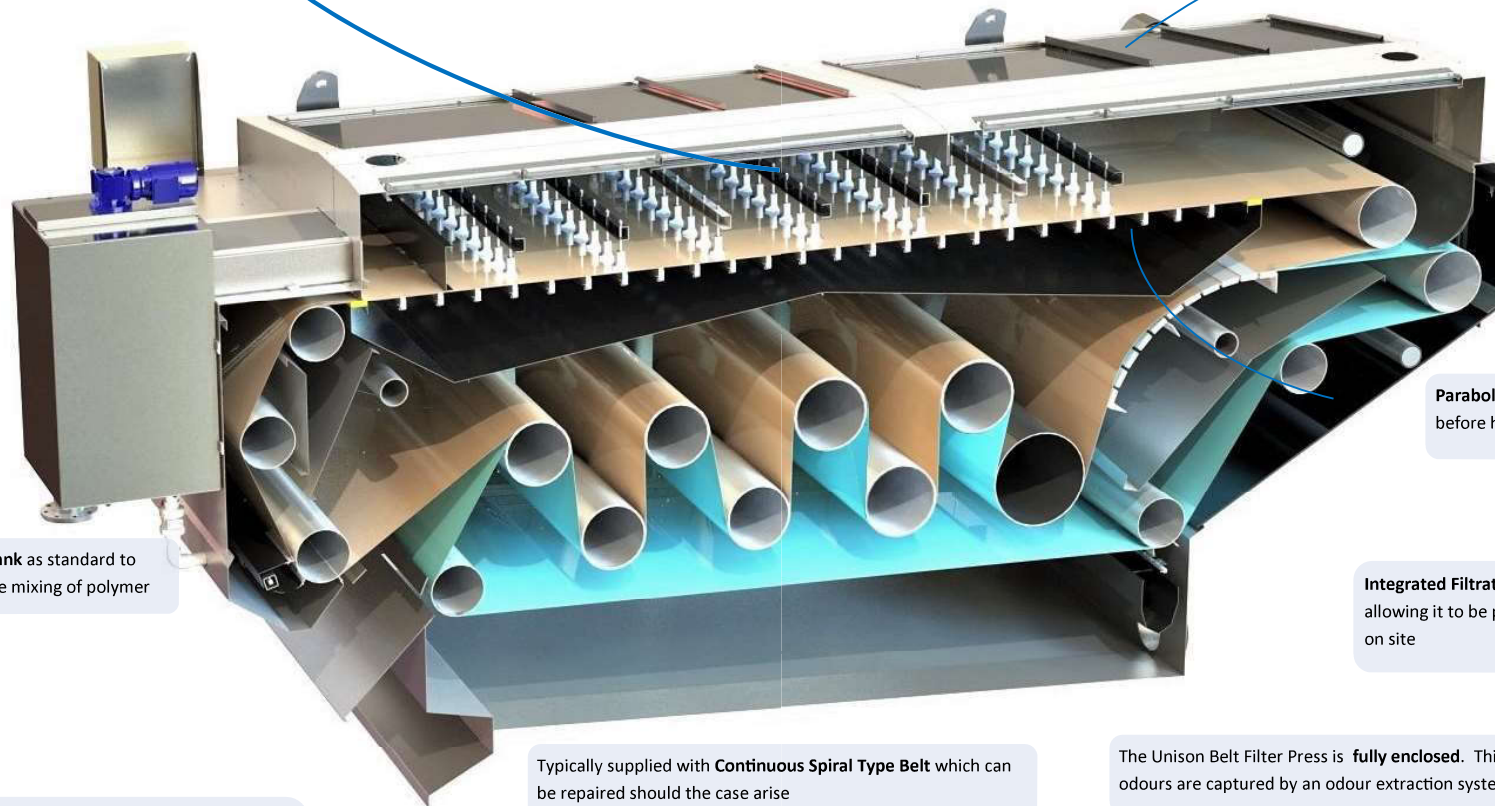
**Gravity Dewatering Zone**

- **Sludge distributor** ensures the conditioned sludge is uniformly distributed over the full belt width.
- **Sludge ploughs** furrow the sludge.
- UHWMPE sections under belt **prevent sagging**
- **Ploughs rotate** when debris are encountered



**Sliding Top Panels** allow access for inspection and maintenance when required.

**Odour Extraction** connections on top canopy to integrate with an odour control system



**Integrated Floc Tank** as standard to allow for adequate mixing of polymer

**Parabolic Wedge** is low pressure dewatering zone before high pressured dewatering zone.

**Integrated Filtrate Sump** collects all filtrate produced allowing it to be piped directly to appropriate location on site

All moving parts are located outside the wetted area allowing for easier maintenance. Filter belt presses are built from durable grade 304 stainless steel ensuring long life in excess of 20 years.

Typically supplied with **Continuous Spiral Type Belt** which can be repaired should the case arise

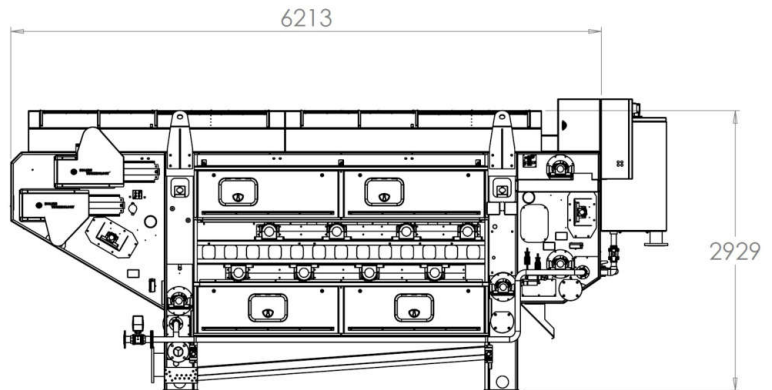
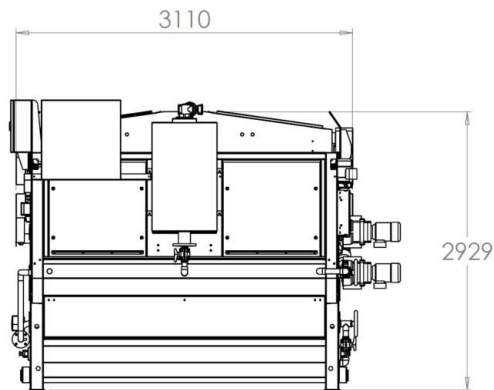
The Unison Belt Filter Press is **fully enclosed**. This ensures all odours are captured by an odour extraction system.



# FILTER BELT PRESSES

## TECHNICAL SPEC:

## 500 SERIES



Model	P510	P515	<b>P520</b> (shown)	P525
Belt width (mm)	1000	1500	<b>2000</b>	2500
Sludge capacity m <sup>3</sup> /h	5-15	7-25	<b>10-55</b>	10-65
Sludge capacity kg D.S./hr.	50-500	100-750	<b>100-1000</b>	100-1250
Total Filtration Area m <sup>2</sup>	13,4	20,1	<b>26,8</b>	33,5
Length	6213	6213	<b>6213</b>	6213
Width	2110	2610	<b>3110</b>	3610
Height	2929	2929	<b>2929</b>	2929

Typical dimensions above show the footprint of the **P520 machine**—with '20' indicating a 2m wide belt. Belt widths vary from 1m to 2.5m and the machine widths change correspondingly.

### Filtrate Sump & Instrumentation on Belt Press Included

#### Optional:

- Wash Water Booster Pump
- Wash Water Actuated Valve
- Polymer Injection Mixing Valve
- Sludge Cake Discharge System
- Local Control Panels

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# STI Polymer Preparation System

Solids Technology Polymer Preparation are tailored to clients' exact requirements. Polymer is a critical element of the belt filter dewatering process. The range of Solids Polymer Preparation Systems are for use with emulsion or powder polymers and usually consists 1 to 3 compartments.

- In the first tank the powder is diluted with water using a unique mixing system. Low speed stirrers have installed to keep the solution moving all the time.
- The second compartment is the ageing tank.
- From the third storage compartment the polymer is pumped further with a polymer dosing pump.

Our Polymer Prepare Systems are designed to suit a wide range of capacities and needs of the customer. The polymer can be manually or automatically loaded, depending on the specification requirements. The Polymer Preparation Systems come complete with various features and instrumentation to give immediate feedback for troubleshooting.



## Benefits Solids Polymer Preparation System

- Solids Polymer Preparation Systems are tailored to clients' exact requirements
- Maximum results at minimum polymer dose rate
- Low maintenance costs
- Short delivery times are achievable
- Easy installation
- CE marking

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