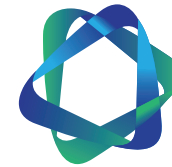
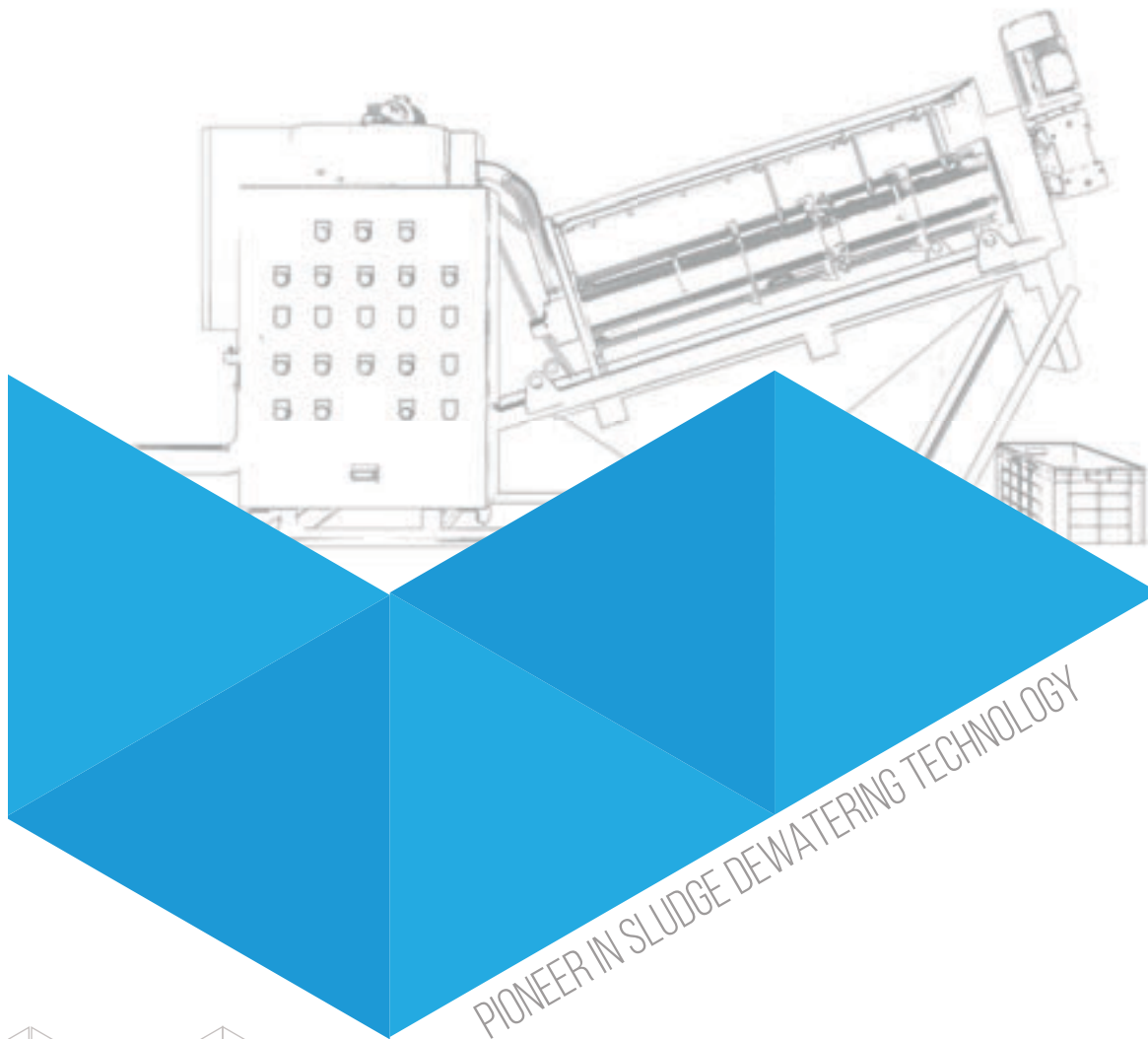


www.transcendcleantec.com

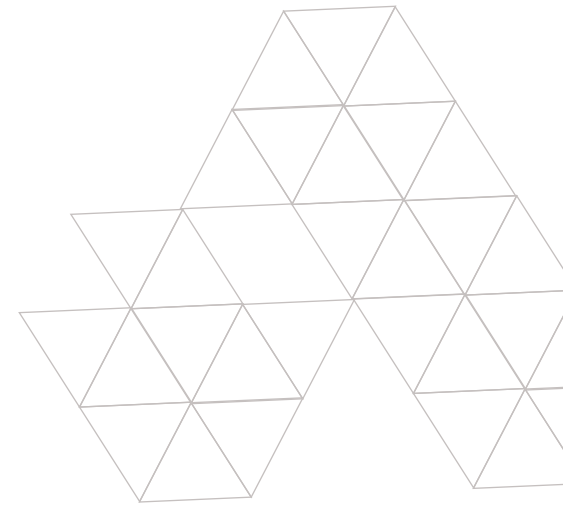


BEYOND CONVENTIONAL

Transcend Cleantec Pvt. Ltd.



PIONEER IN SLUDGE DEWATERING TECHNOLOGY



MULTI DISC SCREW PRESS



MULTI DISC SCREW PRESS





We believe that **waste is an unmanaged resource**. We are committed to **design, engineer and manufacture** systems that are **reliable, consistent** in performance, energy efficient and yet **cost-effective**.

Our story



Transcend Cleantec Pvt. Ltd. is a leading supplier of sustainable, energy efficient and cost-effective solutions in the field of managing waste. We deliver products that are designed and engineered for reliability and efficient performance. Based out of Pune, India, we have been delivering systems that help in converting waste into reuseable, recyclable and valuable resource. We have built an unmatched reputation as a specialist in design, development, engineering and manufacture of systems for waste management and related applications.

Our products and systems are not only easy to operate, but also power efficient and engineered to perform under rigorous operating conditions. We

have always strived to push technological boundaries by designing machines that set standards for sludge reduction and disposal. Over the last 6 years, we have executed a number of projects for sludge dewatering systems that are delivering consistent results to the satisfaction of our customers.

Our strong design and engineering capabilities headed by a team of experts are well supported by a team skilled and experienced specialist in manufacturing and assembly of various systems designed by us. We have an efficient team to deliver after sales support to ensure every system is working to its full potential.

ABOUT US

OUR STORY | DRIVEN BY PASSION

WHY US?

We have considerable experience and expertise in waste management and recycling sphere. Our well researched and robust engineering and manufacturing processes ensures our equipments are designed and tested to perform optimally under rigorous environments. Our systems are easy to operate and come with lower operational costs. We have a team of service engineers for timely support.

KEY PARTS & FEATURES



OVERFLOW PIPE

Tank level is maintained as additional sludge overflows into the overflow pipe back to the feed tank



FLOW TRANSMITTER

Flow transmitter to measure the feed inlet flow.



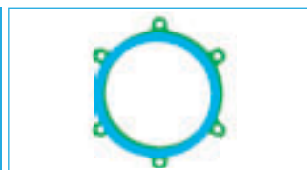
UNDERPASS LINE

The underpass line is provided to ensure removal of all non-flocculating heavy particles.



AGITATOR DRIVE

Geared agitator motor with agitator for homogeneous mixing of the flocculant for effective flocculation



FIXED & ROTATING RINGS

A series of fixed and rotating rings allow effective and clog-free filtration of water that is squeezed out from the sludge



SPRAY NOZZLES

Spray nozzles for efficient and automated cleaning of the rings



POWERFUL GEARED MOTOR

Powerful geared motor that drives the screw shaft controlled by the VFD for optimal efficiency



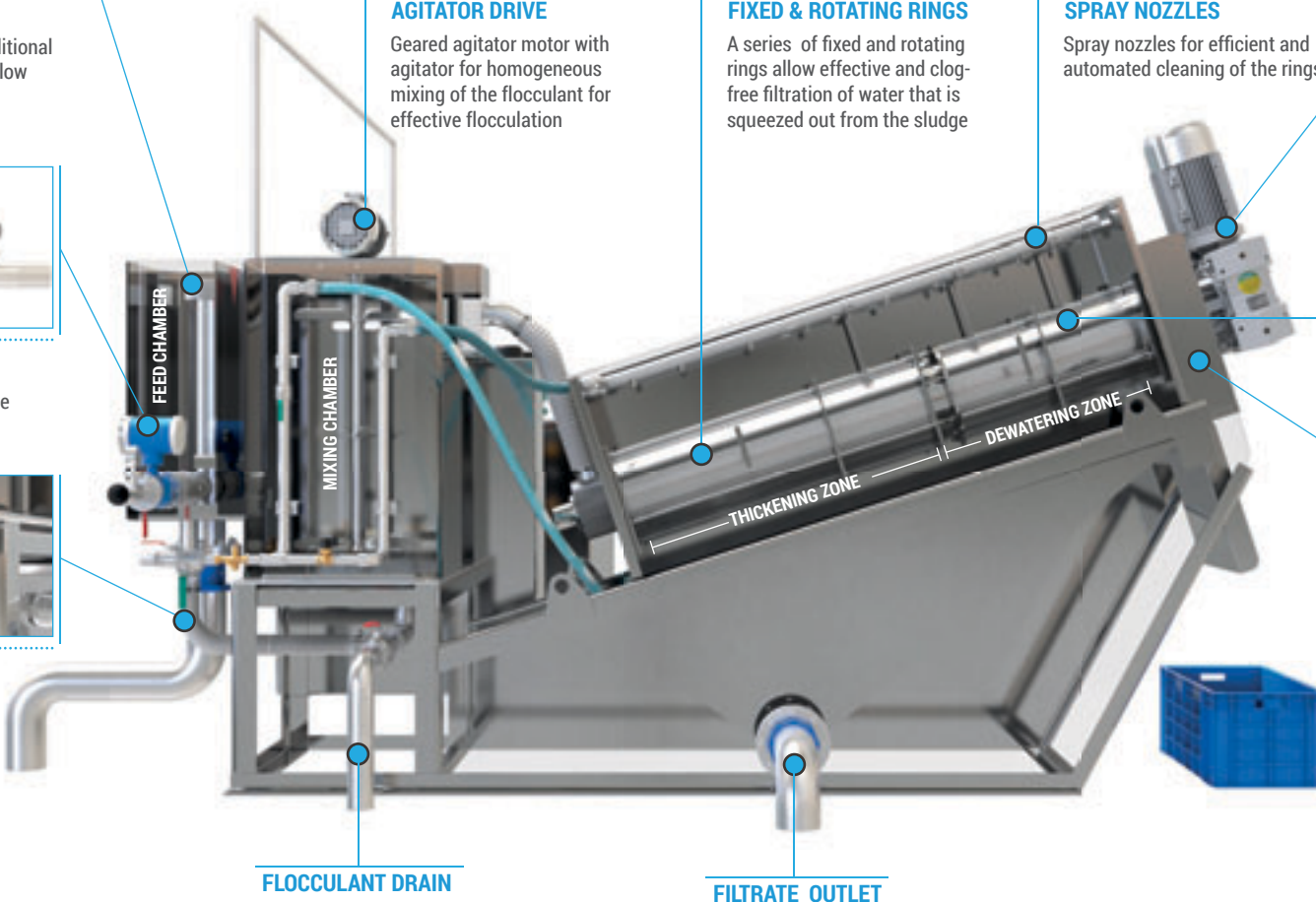
SPIRAL SCREW

Specially designed screw conveyor with reducing screw pitch for effective dewatering

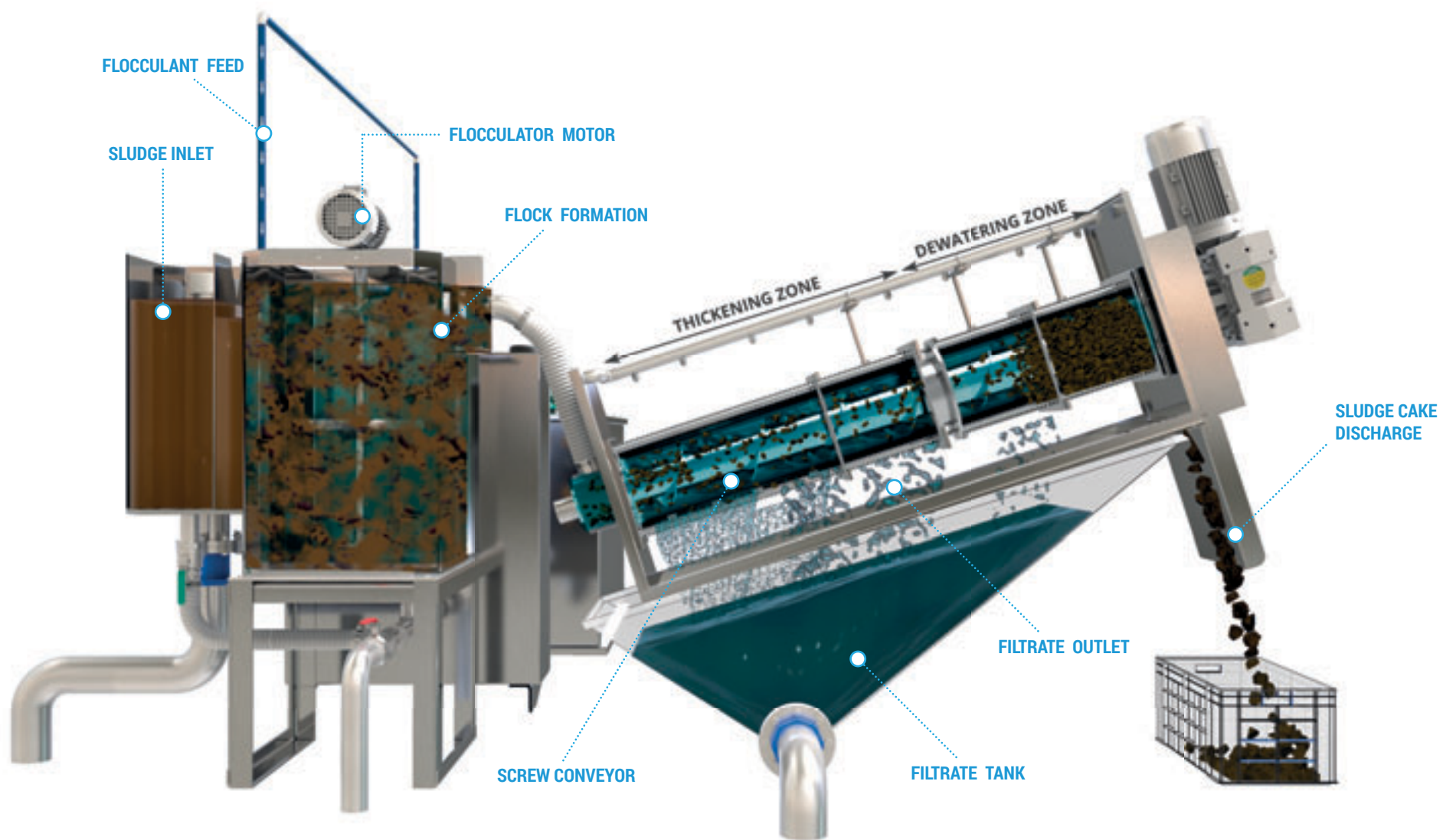


ADJUSTABLE BACKPLATE

The adjustable backplate is provided to adjust the sludge quality and the discharge rate



KEY PARTS & FEATURES



THE DEWATERING PROCESS

FLOCCULATION | THICKENING | DEWATERING | FILTRATION



FLOCCULANT PREPARATION

Flocculant solution is prepared and mixed homogeneously at the required concentration and dosed into the 'Multi-Disc Screw Press' feed inlet to be mixed with the sludge.



SLUDGE THICKENING

The sludge is passed through the 'thickening zone' inside a series of alternate fixed and rotating rings which filters the water and clear water flows down into the filtrate tank.



ADJUSTABLE BACK PLATE

The sludge discharge rate and the dryness can be easily adjusted with by adjusting the back plate.

1

2

3

4

5

6



FLOCCULATION

The sludge is fed into the feed chamber along with the flocculant solution. The sludge is homogeneously mixed with the flocculant solution to form large flocks that can be separated



DEWATERING

As the sludge moves up the screw cavity conveyor to the 'dewatering zone' the sludge is pressed hard against the base plate (adjustable) to squeeze the water content.



RECYCLE FILTERED WATER

The clear filtered water can be recycled and reused. Upto 99.8% solid capture rate can be achieved.

THE DEWATERING PROCESS

FLOCCULATION | THICKENING | DEWATERING | FILTRATION

CONVENTIONAL SYSTEMS VS. MULTI-DISC SCREW PRESS

The **Multi-Disc Screw Press** is a robust machine designed for reliability, consistency and continuous operation. The machine can be fed with sludge directly from the dewatering and oxidation pit eliminating the thickening tank and the sludge storage tank. The machine incorporates multiple processes all in one single continuous operation. The brief process is as below;

1. FLOCCULANT PREPARATION

The flocculant is prepared in the flocculant preparation tanks at the recommended concentration.

2. FLOCCULATION

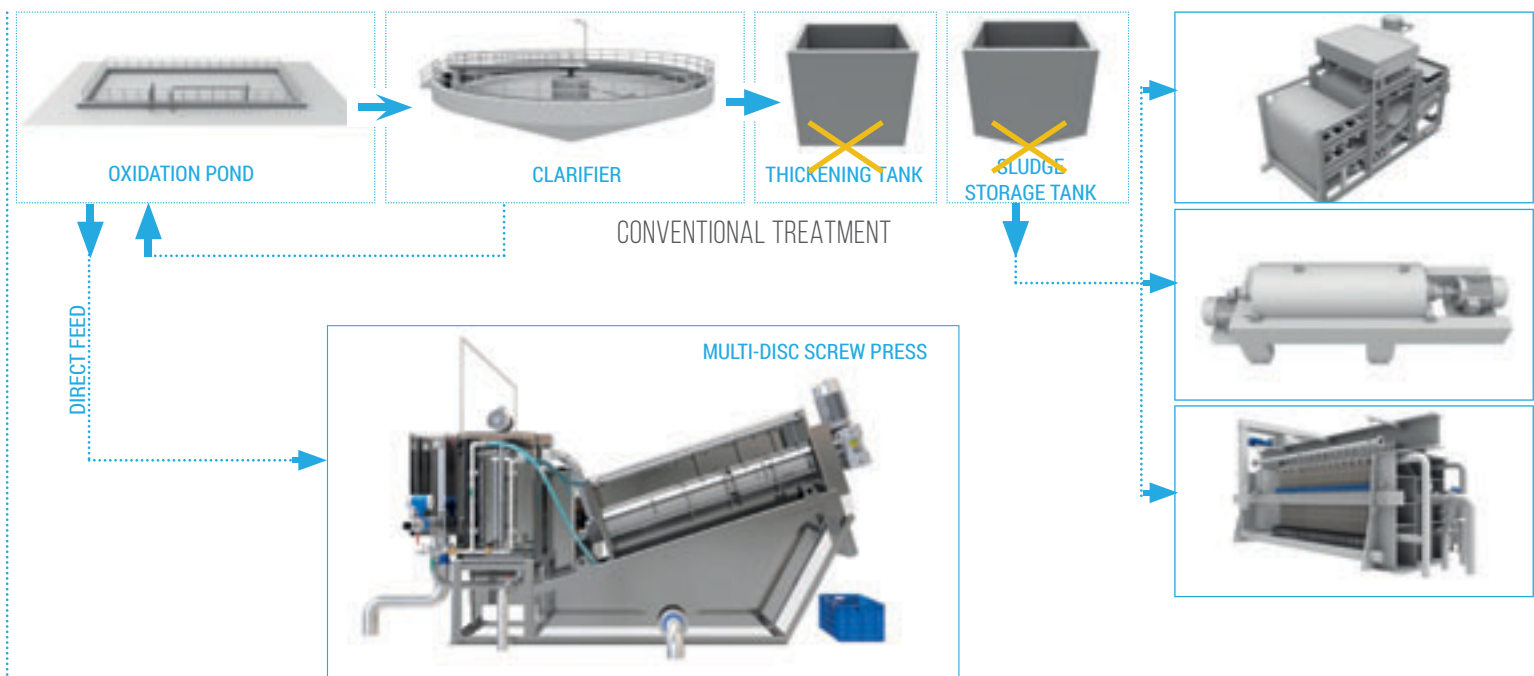
Polymer flocculant is added in the flocculation tank filled with sludge. Efficient agitation ensures fast agglomeration and flocculation of the suspended particles into large flocks that can be separated.

3. SLUDGE THICKENING

The flocks are transported through the thickening zone onto the dewatering zone. A series of fixed and moving rings filters the water as the sludge moves to the dewatering zone. The filtered water flows down through the rings to the filtered water tank below.

4. DEWATERING

The sludge is transported from the thickening zone to the dewatering zone by the screw conveyor. The spiral conveyor in the screw cylinder



is specially designed to move the sludge forward efficiently while gradually compressing them by pushing the sludge against the **back plate**. As the sludge is compressed, most of the water is squeezed out of the sludge. The squeezed out water from the sludge is filtered by the series of fixed and moving rings. Clear water flows to the filtered water tank below. The dewatered sludge exits from the outlet at the top and falls down. The constant rotation of the screw ensures the sludge is pushed forward, thickened, dewatered and exited while filtering the water, all at the same time.

5. DRYNESS & DISCHARGE CONTROL

The sludge cake dryness can be adjusted by the adjustable end plate. The end plate adjustment enables control of the cake dryness and the rate of output from the sludge exit port. This is provided to handle sludge with varying viscosities.

TECHNOLOGY COMPARISON

THE TRANSCEND CLEANTEC ADVANTAGE

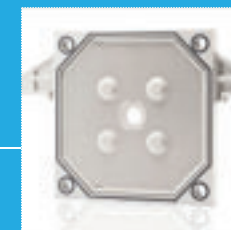
| Process | Transcend Cleantec Multi-Disc Screw Press | Centrifuge | Belt Press | Filter Press |
|-------------------------------------|---|------------|------------|--------------|
| DIRECT FEED FROM 'AERATION TANK' | ✓ | ✗ | ✗ | ✗ |
| ELIMINATES THICKENER | ✓ | ✗ | ✗ | ✗ |
| HANDLES LOW SLUDGE CONCENTRATION | ✓ | ✗ | ✗ | ✗ |
| CONTINUOUS OPERATION | ✓ | ✗ | ✗ | ✗ |
| AREA REQUIREMENT | □ | □ □ | □ □ □ | □ □ □ |
| LABOR REQUIREMENT | □ | □ | □ □ | □ □ □ |
| NOISE | □ | □ □ □ □ | □ □ □ | □ □ |
| POWER CONSUMPTION | □ | □ □ □ □ | □ □ □ | □ □ □ |
| BREAKDOWN MAINTENANCE | □ | □ □ □ | □ □ □ | □ □ |
| OPEX | □ | □ □ □ □ | □ □ □ | □ □ □ |

The conventional sludge dewatering systems like centrifuges, Belt press, Filter press (Plate & Frame type) have many draw backs. The drawbacks include;

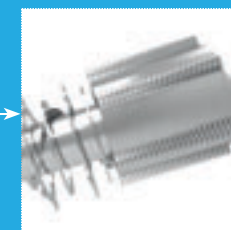
- Large foot print
- High power consumption
- High Operational cost / consumables
- Frequent breakdown
- Non-continuous (batch) operation
- High maintenance requirement
- Multiple Pretreatment
- High labor

As the Multi-Disc Screw Press can take the load directly from the oxidation ditch, considerable capital cost, construction costs and maintenance cost can be avoided.

THE CLOG FREE FILTRATION ADVANTAGE



The filter cloth and plates are replaced by high grade stainless steel rings that is maintenance free



KEY FEATURES & ADVANTAGES

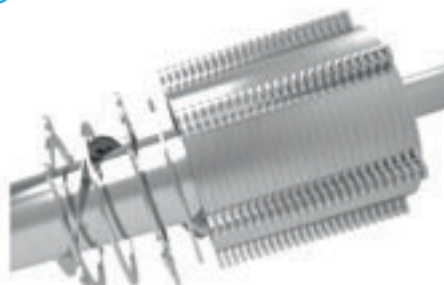
VALUE ENGINEERING THAT DELIVERS HIGHEST LIFECYCLE VALUE

1 DIRECT DEWATERING FROM OXIDATION DITCH



Feed sludge directly from the oxidation ditch / aeration tank. This eliminates the need to construct settling tanks, sludge thickener or sludge feed tanks. This advantage leads to a good reduction in CAPEX as well as OPEX.

2 CLOG FREE DESIGN



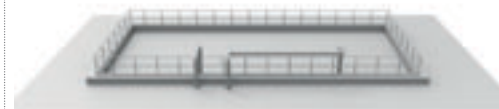
The series of heavy duty finely machined fixed and rotating rings placed alternately provides efficient filtration that remains clog free due to the continuous movement of the rings. This eliminates the need for consumables like filter cloth etc.

3 FULLY AUTOMATIC



The system can be fully automatic with PLC controls. Option of variable frequency drive (VFD) is available to control the dosing and the screw speed to automatically adjust to the varying loads of the effluent. The system can run continuously, unmanned.

4 LOW CAPEX



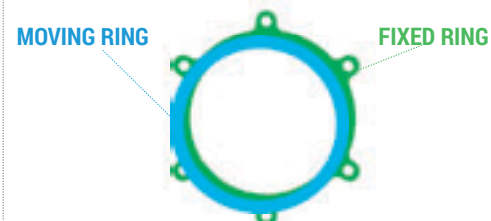
The system can take sludge directly. This eliminates the need to build sludge thickening tank and sludge storage tank, thereby saving on space and civil construction costs.

5 ODOURLESS PROCESS



Since both the sludge thickening tank and the sludge storage tank is eliminated and as sludge is not stored for long periods of time, there is no anaerobic process happening. This eliminates the possibility of unpleasant odour.

6 HANDLES OILY SLUDGE



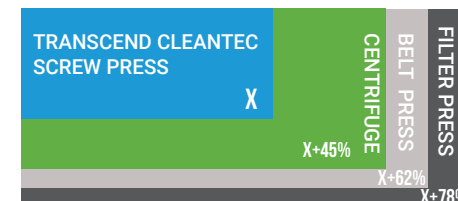
Due to the rotation of the helical axis, the moving rings detach from the fixed rings while continuously cleaning itself. As a result clogging is avoided. Therefore it can easily handle oily sludge.

7 LOW OPEX



The system works on its internal pressure. It saves energy due to its low running speeds (2-4 rpm). The average power consumption is only 0.01 - 0.1 kw/h which is 12% of a belt press and 5% of a centrifuge.

8 SMALLEST FOOTPRINT

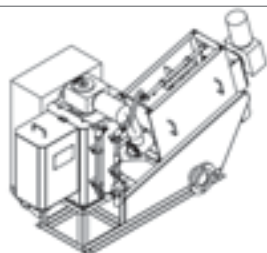


The Transcend Cleantec Screw Press takes the least space among other technologies. Its approximately 45% less space than Centrifuge, 62% less space than Belt Press and 78% less space than Filter Press of conventional design.

MODEL OPTIONS

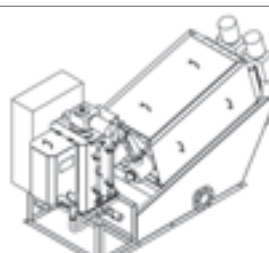
1 SERIES | 2 SERIES | 3 SERIES | 4 SERIES

1 SERIES



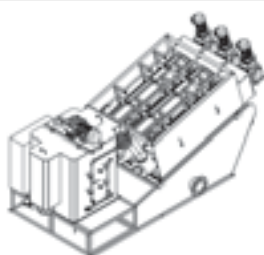
MDSP - 051, 071, 101, 131, 201, 301, 351, 401, 501, 601

2 SERIES



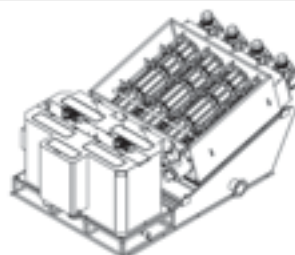
MDSP - 132, 202, 302, 352, 402, 502, 602

3 SERIES



MDSP - 203, 303, 353, 403, 503, 603

4 SERIES



MDSP - 304, 354, 404, 504, 604

CAPACITY & SCALABILITY

Transcend Cleantec Multi Disc Screw Press is designed to cater to various capacities. Systems are available from 0.2 m³/hr - 133.5 m³/hr (@0.2% sludge conc.) Due to its modular design and compact construction, the capacities can be easily scaled up by running systems in parallel to cater to almost any capacity as required and as and when required. We can also optimize the design for cost and efficiency based on your custom requirement using the standard models.

INSTALLATION, SERVICE SUPPORT & TRAINING

Our experienced and trained team of engineers help you with the installation and operator training.

Our systems are designed to be a work horse and run for years without needing any service. But there are odd chances that you may need service support. Our trained technicians are an email or call away. With adequate training and spares at their disposal, they will ensure the system is up and running in a very short time.



SPECIFICATION AND MODELS

| MODELS | Machine size (mm) L x W x H | Machine output capacity (Kg.DS/h) (For sludge concentration from 0.2%-5% respectively) | Machine Total Power (kW) |
|------------|--------------------------------|---|-----------------------------|
| MDSP - 101 | 1850 X 740 X 1040 | 5 - 10 | 0.24 |
| MDSP - 131 | 2000 X 785 X 1080 | 20 - 25 | 0.24 |
| MDSP - 132 | 2150 X 1100 X 1100 | 25 - 40 | 0.42 |
| MDSP - 201 | 2510 X 900 X 1300 | 20 - 30 | 0.36 |
| MDSP - 202 | 2560 X 1050 X 1300 | 40 - 60 | 0.61 |
| MDSP - 203 | 2610 X 1500 X 1500 | 60 - 80 | 0.91 |
| MDSP - 301 | 3330 X 1005 X 1760 | 80 - 100 | 0.92 |
| MDSP - 302 | 3530 X 1290 X 1760 | 160 - 200 | 1.47 |
| MDSP - 303 | 3680 X 1620 X 1760 | 240 - 300 | 2.2 |
| MDSP - 304 | 3830 X 2010 X 1760 | 320 - 400 | 2.75 |
| MDSP - 351 | 4040 X 1160 X 2130 | 158 - 165 | 1.3 |
| MDSP - 352 | 4390 X 1650 X 2130 | 316 - 330 | 2.25 |
| MDSP - 353 | 4530 X 1980 X 2130 | 474 - 495 | 3.35 |
| MDSP - 354 | 4750 X 2715 X 2130 | 632 - 660 | 4.5 |
| MDSP - 401 | 4680 X 1345 X 2100 | 150 - 180 | 2.2 |
| MDSP - 402 | 4960 X 1760 X 2100 | 300 - 360 | 3.7 |
| MDSP - 403 | 5010 X 2460 X 2100 | 450 - 540 | 5.5 |
| MDSP - 404 | 5160 X 3160 X 2100 | 600 - 720 | 7.4 |
| MDSP - 501 | 5800 X 1600 X 2600 | 300 - 320 | 4.05 |
| MDSP - 502 | 6200 X 2200 X 2600 | 600 - 640 | 6.6 |
| MDSP - 503 | 6200 X 3100 X 2600 | 900 - 960 | 10.3 |
| MDSP - 504 | 6500 X 4000 X 2600 | 1200 - 1320 | 13.2 |

Note : All specifications are subject to change and can be amended without notice as a result of continuous innovation.

OUR MACHINES ARE TRUSTED BY,

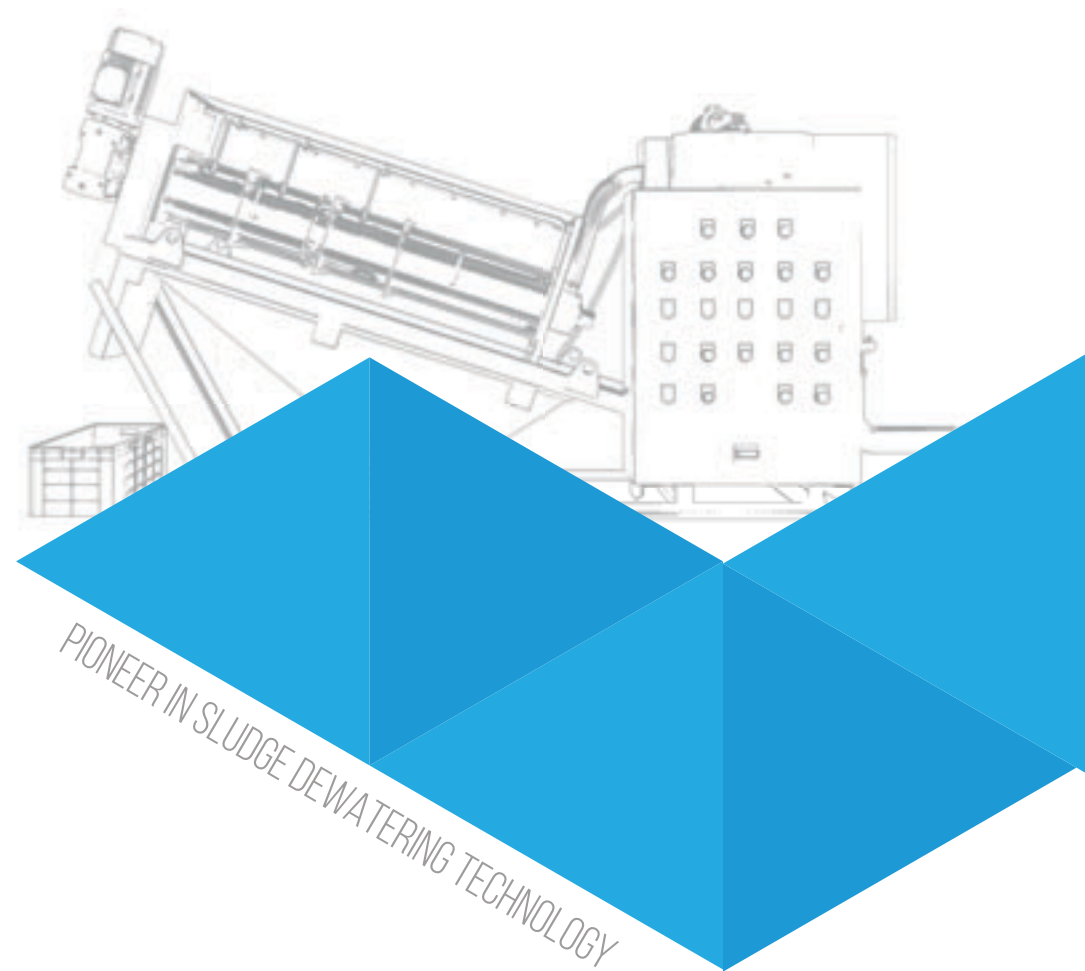
MSM Poultry SKM Engg Products
Thermax Warangal MC **Ceat** **Amul** Drytech Processes
Saint Gobain **Kohler** **DLF** **Dalmia Ipca Labs** **HIKAL**
Symbiotec Pharma Panchshil Realty Piramal Life Science **SCM Textiles**
Candor **Titan** **Dr.Reddy's** **Sun Pharma** **Teva Pharma**
Mujkuva Dudh Utpadak Mandal **GVK** **Ludhiana STP** **BDR Pharma**
Atul Satyadeepa Pharma **Grasim** **Cummins** **Hershey** **Cipla**
Kuppana Poultry **Brookfield Realty** **CETP Sachin** **Janaki Ltd**
Vadodara MC **Smcc** **Jammu MC** **EIL-HPCL BARMER** **Concord Biotech**
Wai MC **Emerald Jewel** **Soufflet Malt** **Kanchan Ltd** **Titan Watches**
Kohima MC **Narsapur MC** **Adler woods** **Sastha Paper Mills** **Bec Chemicals**
Premium Medical **Corteco** **Asai Tennant Colour** **Tokai Rika Minda**
Sprint Exports **Sarigam Cetp** **Reliance Life Sciences**

Transcend Cleantec Pvt. Ltd.

S No: 37/2, Shed no: 463/1,
Narhe, Taluka Haveli, Pune - 411041

✉ enquiry@transcendcleantec.com

☎ +91 7767050300



www.transcendcleantec.com