



SEPARATION

EASY AND EFFICIENT SLUDGE THICKENING

POWERDRUM (PDR) DRUM THICKENERS

ANDRITZ

ENGINEERED SUCCESS

With more than 30 years of experience in the development and manufacturing of drum thickeners, ANDRITZ Separation has acquired unmatched expertise in this technology. The PowerDrum (PDR) is considered to be an easy and efficient thickening solution prior to the dewatering process and can deal with biological sludge throughputs ranging from 15 to 180 m³/hr. With its simple design and small footprint, the PowerDrum is easy to install and requires little supervision and maintenance.



Drum thickeners for easy and efficient sludge thickening

PRINCIPLE

The PowerDrum thickeners ensure dynamic thickening by rotating sludge continuously. They are specially designed for pre-digestion treatment (for primary, secondary, or tertiary sludge) or when land liquid spreading is planned. The PowerDrum may also be used to lower the hydraulic capacity of the dewatering equipment installed in the downstream process. The sludge is conveyed inside the drum due to the drum inclination, as well as the combined action of the drum's rotating movement and its internal design. This drum has the special feature of having various filtration stages zone-by-zone along its length, with several polyester clothes with various mesh to achieve better separation efficiency.



Quick access to spray ramp

VENTURI MIXER

Upstream in the process, the Venturi mixer ensures efficient inline flocculation, without additional power consumption.

- Small footprint
- Low energy consumption
- Easy to install
- Lower polymer consumption

OPERATOR-FRIENDLY DESIGN

- Specific inlet and outlets hatches for process control (flocculation and infeed/outlet dryness)
- Sampling point with manual valve for filtrate quality control
- Sampling point (with manual half-pipe sampling collector) for thickened sludge checks
- Specific rotative washing ramp with specific hatches (for quick access and operator control without stopping the machine). A safety switch stops the water supply when opening
- Specific automatic flushing point for tank cleaning (avoiding manual maintenance, process issues, and clogging)
- Hatches on the main cover allow quick and easy access to perform drum washing or periodical checks



Venturi mixer, inline flocculation system

Benefits and applications at a glance

YOUR BENEFITS

- Durable technology (all stainless steel design) for very low wear, and plastic bearing housing to avoid corrosion
- Reduction in sludge volume (up to 90%) before storage or shipment
- Intermittent or continuous self-cleaning thanks to a stainless steel spraybar with PVDF nozzles
- Low power consumption and, consequently, low operating costs
- Entirely closed system to avoid odour pollution, with deaeration flange
- Low space requirement
- Easy maintenance and fast belt removal
- Easy to install (pre-wired); a skid design is available, making the equipment easier to install and move if necessary
- Efficient and reliable design
- Dedicated cover for washing ramp access, with automatic rotation of the ramp to give direct access to nozzles for inspection or cleaning
- Additional hatches for drum inspection and cleaning

TYPICAL APPLICATIONS

- Thickening of municipal or industrial wastewater sludge
- Thickening of sludge for landfill or other forms of disposal, suitable for small wastewater treatment plants
- Thickening before anaerobic digestion
- Thickening before a belt press or centrifuge – a combined system improves the mass load capacity of the dewatering machine
- Thickening before a filter press



PowerDrum

Range of ANDRITZ drum thickeners

The PowerDrum is designed to handle flow rates ranging from 15 to 180 m³/hr. Depending on the sludge type, input concentration and requested dryness, our separation specialists will recommend you the solution that best suits your process.

Model	Ø (mm)	L x W x H (mm)	Motor (kW)	Washwater flow (m ³ /hr)	Washwater pressure (barg)
PDR600L	600	3,300 x 800 x 1,350	0.37	6	8 minimum
PDR900M	900	2,980 x 1,179 x 1,733	1.10	4	8 minimum
PDR900L	900	3,950 x 1,179 x 1,733	1.50	6	8 minimum
PDR900XL	900	4,950 x 1,179 x 1,733	1.50	8	8 minimum
TwinPDR900L	900	6,300 x 2,170 x 2,228	2 x 1.5	12	8 minimum
TwinPDR900XL	900	7,300 x 2,170 x 2,228	2 x 1.5	16	8 minimum



Durable technology (all stainless steel design)



Put our 150 years of OEM experience to work for you

Need to optimize your process? Boost availability? Ensure non-stop productivity? When you work with ANDRITZ Separation, you gain access to one of the world's largest OEM manufacturers for solid/liquid separation. Put our in-depth knowledge of separation equipment and processing to work for you.

VAST EXPERIENCE THROUGH LARGE INSTALLED BASE

With an installed global base of more than 55,000 solid/liquid separation equipment and systems, you can imagine that we take service seriously. Wherever these customers are located, we work very closely with them to maximize uptime and boost efficiency.

WELL-KNOWN OEM BRANDS

Some customers know us as the people with ANDRITZ on our overalls. Others have come to understand that we are the OEM behind former brand names like 3Sys Technologies, Bird, Delkor Capital Equipment (Pty) Ltd., Escher Wyss dryers, Frautech, Guinard Centrifugation, KHD Humboldt Wedag, Krauss-Maffei centrifuges, dryers, and filters, Lenser, Netzsch Filtration, Rittershaus & Blecher, Royal GMF Gouda, Sprout Bauer, and Vandenbroek, companies who all have been acquired by ANDRITZ. But frankly, we are capable of servicing and supplying spare parts for nearly all brands of solid/liquid separation equipment on the market.

LOCAL SUPPORT BACKED BY GLOBAL EXPERTISE

Our service philosophy is simple: One phone call, one contact person, one dedicated team that speaks your language and knows your equipment and process. This is not an empty promise. It is backed by a network of 550 service specialists for separation equipment and systems as well as service centers all around the world.

A TRUE FULL-SERVICE PROVIDER

Whether you need spare parts, rentals, local service, repairs, upgrades, or modernization of your equipment, ANDRITZ Separation is your service specialist in all aspects of separation. From initial consulting through to service agreements, process optimization, and training programs, we are always looking for ways to minimize downtime and increase predictability in operations while raising your overall production efficiency. In short, we've got you covered.



LOCAL SUPPORT

Responsive local service centers and field service technicians



REPAIRS & UPGRADES

Optimization of machine and process performance, repair work, retrofitting, and modernization



SECOND-HAND & RENTALS

Certified second-hand and rental machines



TRAINING

Operator training and tailored seminars for operating and maintenance personnel



OEM SPARE PARTS

Filter cloths, spare and wear parts from OEMs or with OEM level quality, all readily available



SERVICE AGREEMENTS

Preventive maintenance, contracts for spare parts, maintenance, inspections, repairs, upgrades, operation, and equipment monitoring



PROCESS OPTIMIZATION

Automation tools and process expertise to boost your profit



LAB AND ON-SITE TESTS

Lab and testing capabilities for process optimization and machine upgrades





WHAT'S YOUR SEPARATION CHALLENGE?

ANDRITZ Separation is the world's leading separation specialist with the broadest technology portfolio and more than 2,000 specialists in 40 countries. For more than 150 years, we have been a driving force in the evolution of separation solutions and services for industries ranging from environment to food, chemicals, and mining & minerals. As the OEM for many of the world's leading brands, we have the solutions and services to transform your business to meet tomorrow's changing demands – wherever you are and whatever your separation challenge. **Ask your separation specialist!**

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