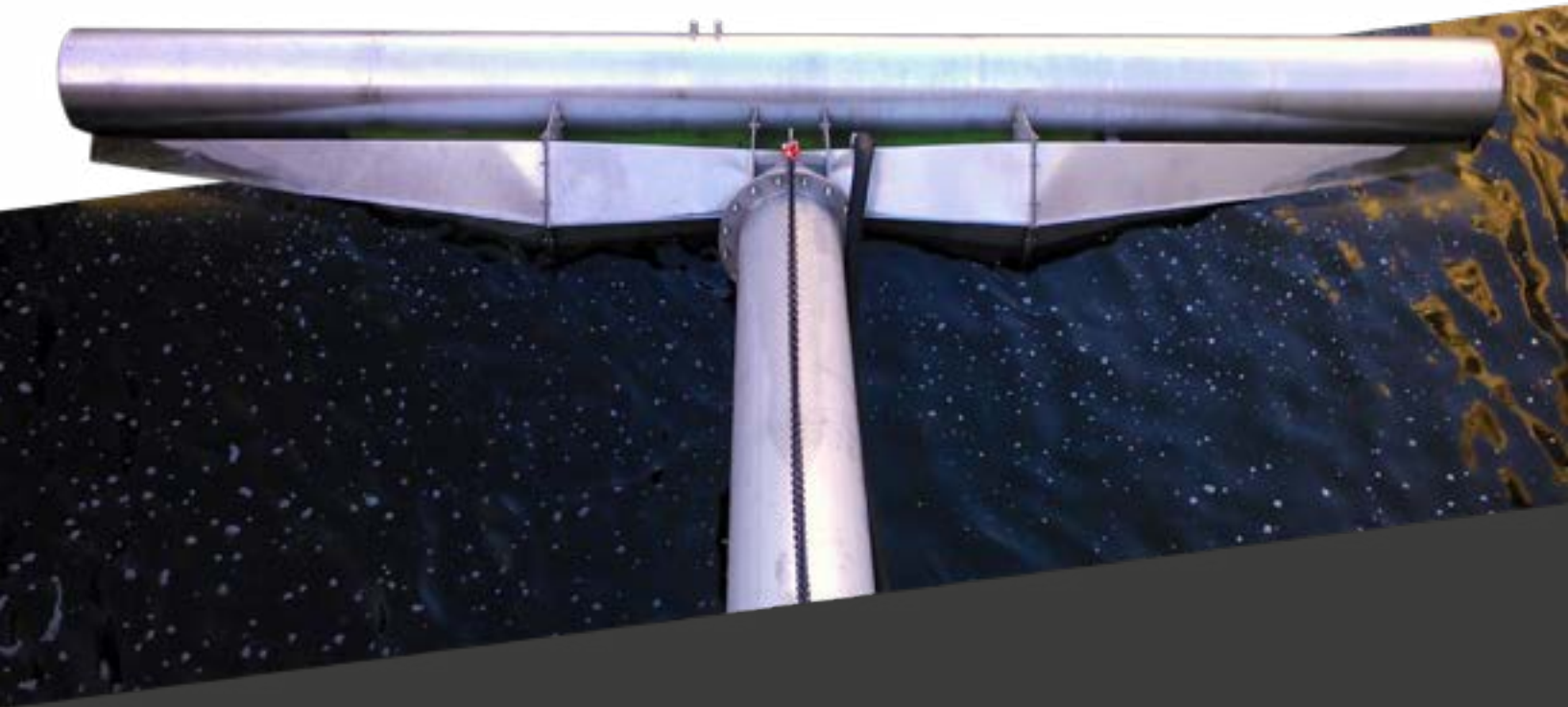




BIODEC

ADVANCED DECANTING SYSTEM





Biodec Decanter

*Ideal
with our
CYCLATOR
technology*



Click for more information

BIODEC™ decanters are employed in SBR/Cyclic wastewater processes to separate the sludge from clear effluent. After careful research and development, UTB have developed their BIODEC™ decanter, which is a scum/solids excluding floating type decanter. The BIODEC™ incorporates the advantages of a submerged weir decanter while retaining the operation simplicity and straightforward build of floating type decanters. This air powered decanter can be driven by the plants aeration system, thereby eliminating the need for any complex equipment's. BIODEC™ decanters boast of only one moving part which is a simple small diameter three-way motorized ball valve. BIODEC® being a floating type decanter, it



moves above and on top of the surface of water it has to decant. There are two main positions of the decanter: the "park" position and the "operate" position. In the "park" position, the decanter sits above the surface of water to ensure no water can enter the effluent discharge pipe. In the "operate" position, the decanter gently lowers itself to the surface of water so that water can exit through the effluent discharge pipe. The vertical movement of the decanter is done by injecting or releasing pressurized air into the body of the decanter. An additional "emergency" level fixes the max position as an emergency overflow level. BIODEC™ family of decanters come in two models and 7 sizes to deliver a capacity of 50 to 3650 m³/h in a single unit.

*Reliable operations
Scum/Solids excluding*

Safety overflow function

Very low energy demand

Low operating costs

Easy maintenance

*Corrosion resistant,
stainless steel construction*

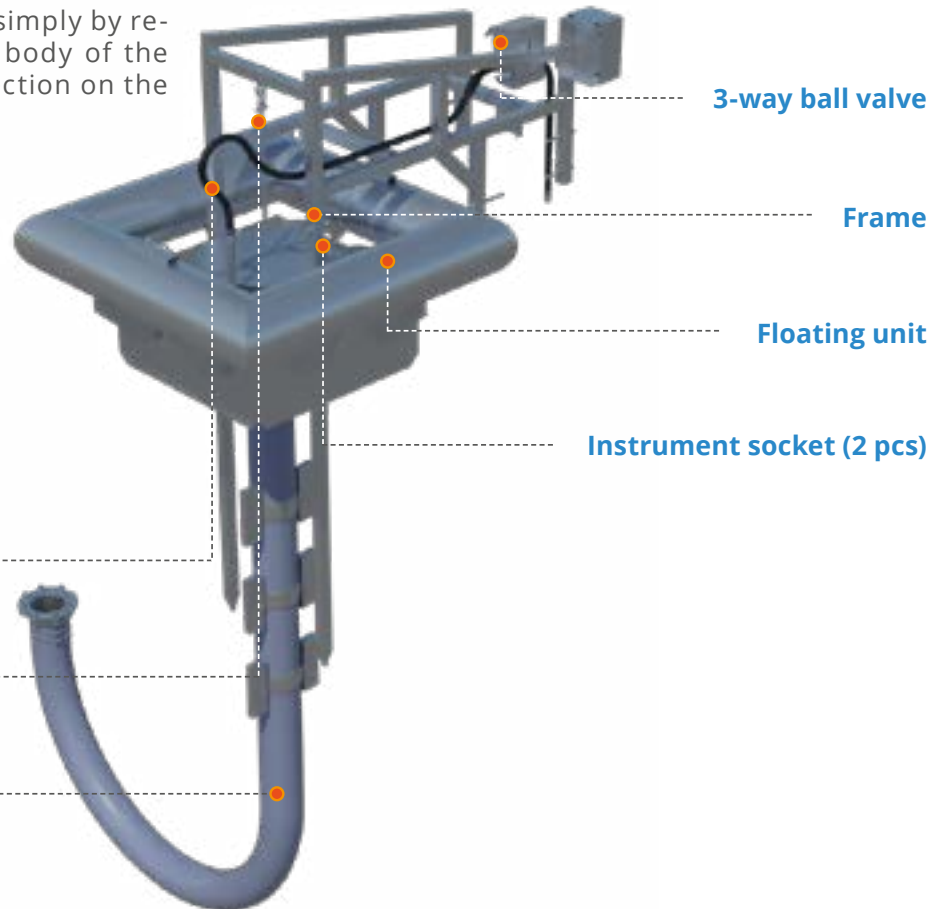


Biodec-S

100 150 200

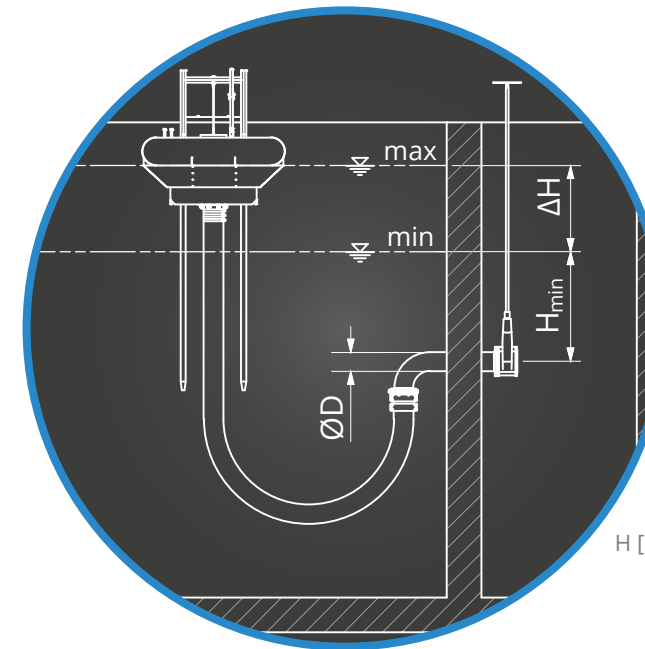
A compact unit built to decant safely and reliably, this decanter features a compact square shaped floating unit that moves up and down along a frame mounted on the tank edge. Decanted water flows into the floating body and exits through a reinforced plastic hose connected to the floating unit. As is common in all BIODEC-S™ decanters, low pressure air is the driver for moving the decanter up and down. When hovering above the liquid surface, pressurized air trapped in the body of the floating unit, keeps the decanter afloat. Lowering of the decanter is achieved simply by releasing the trapped air. The floating body of the decanter consists of a welded pipe section on the

upper side to which a vertical covered plate section is joined. While submerged, this section becomes the air holding tank. During decanting, as the BIODEC-S™ is lowered, the welded pipe section and the top of the vertical body approach the water level gently. The welded pipe section first reaches the water surface to displace any scum/solids on the water surface. Then the top of the vertical plate reaches the water surface to ensure only clear solids and scum free water is allowed to decant.

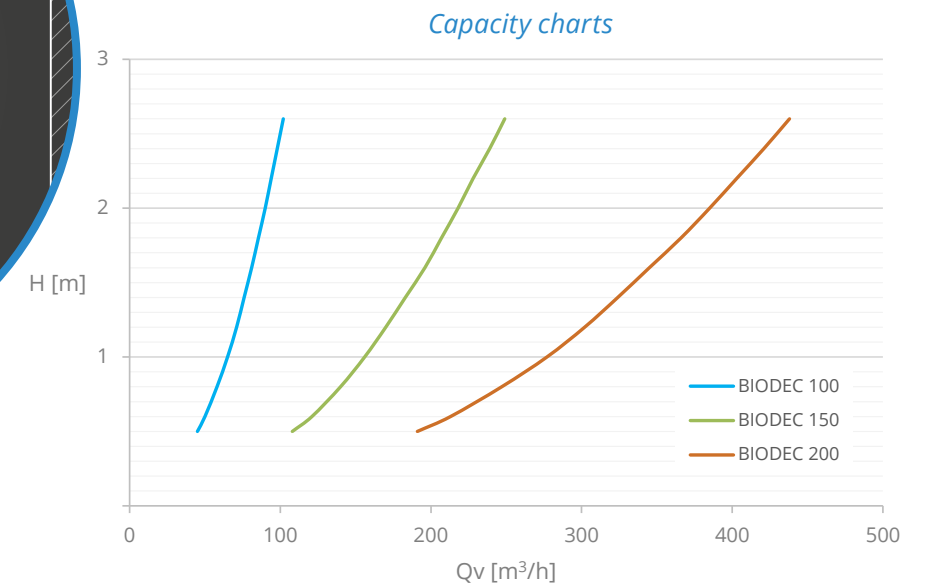


Specifications

		BIODEC 100	BIODEC 150	BIODEC 200
Decanting flow at H = 2,5 m	Qv [m³/h]	100	240	420
Decanting flow at H = 1 m	Qv [m³/h]	60	160	270
Effluent pipe	ØD	DN 100	DN 150	DN 200
Three way ball valve - GF+	[size]	DN 25	DN 25	DN 25
Electric actuator - GF+	Type	EA11	EA11	EA11
Compressed air needs	[liter/min]	300	300	300
Pressure of compressed air	[bar]	0,03	0,03	0,03



- ▶ **ΔH** ▶ The difference between the minimum and maximum water level
- ▶ **H_{min}** ▶ The difference between the minimum water level and effluent (H_{min} ≥ 0,5 m)
- ▶ **H = ΔH + H_{min} ≤ 2,5**



Biodec-S

300 400 500 600

Built for larger capacities, BIODEC-S™ 300-600 series delivers the same simplicity, reliability and endurance found in the compact units. Designed to handle large flows, this series of BIODEC-S™ decanters is unique in its construction. Two parallel welded tubes, known as floats, make the bulk of the floating body wherein the upper and lower floats have remarkably different functions. During decanting the upper float gently floats on the water surface whereas during „park” operation, this portion of the decanter is lifted and rests completely out of water. In the „park”

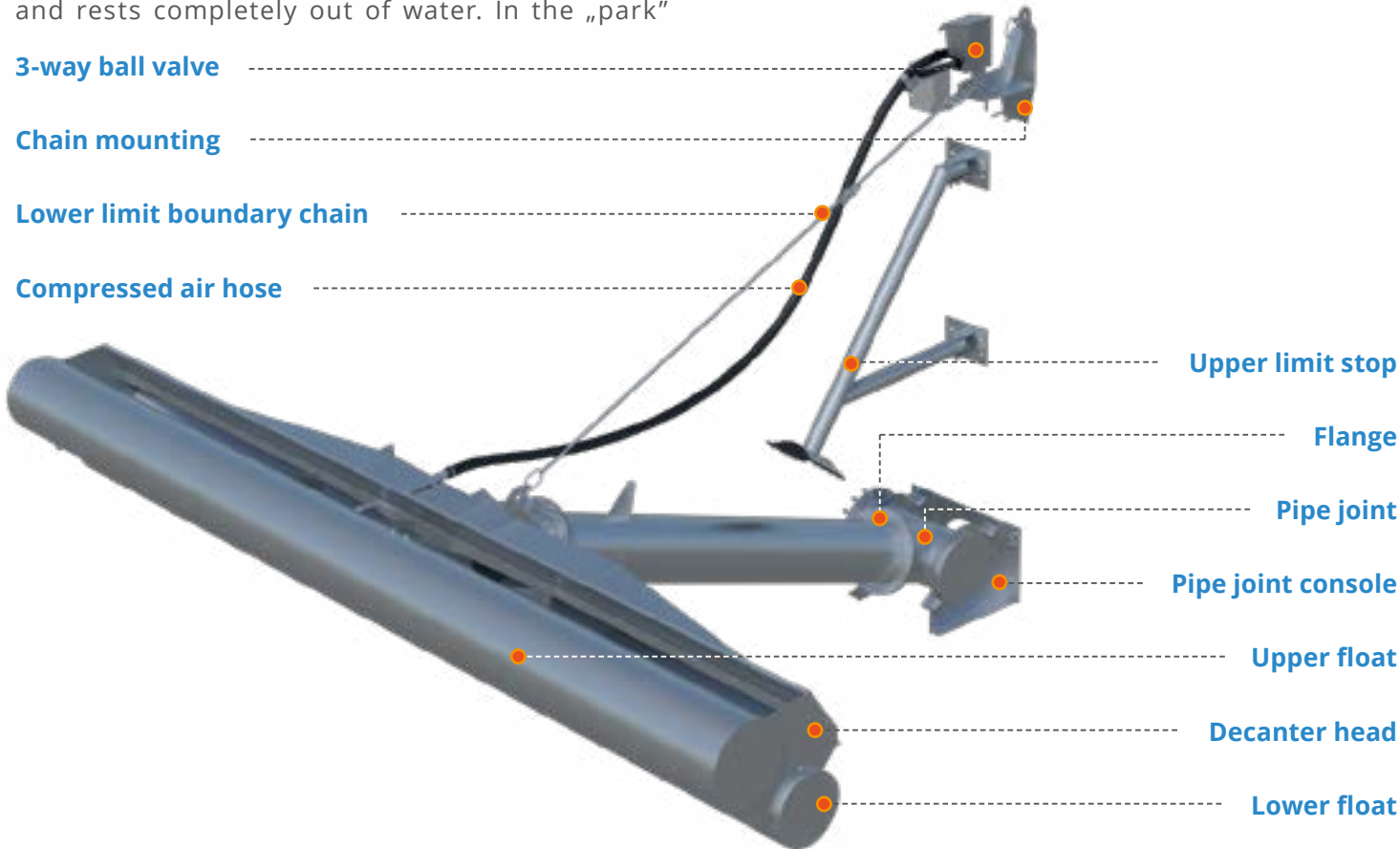
position, the lower float aids in keeping the BIODEC-S™ body afloat while it is totally submerged during the “operate” position. A decanter head unit, welded in between the upper and lower float provides the access way for the decanting water by means of a straight length weir. As is common in our BIODEC-S™ units, the upper and lower limit of the decanter are fixed by adjustable limit chain and limit stop units ensuring trouble and maintenance free operation for years to come.

3-way ball valve

Chain mounting

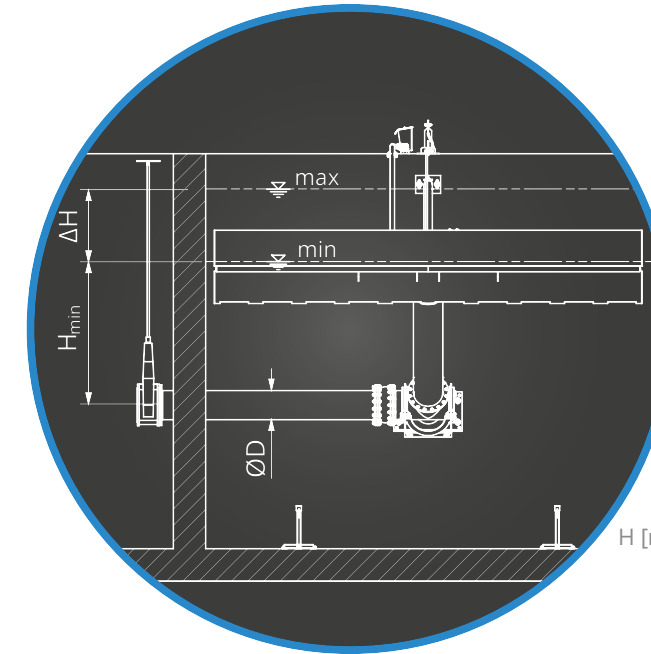
Lower limit boundary chain

Compressed air hose



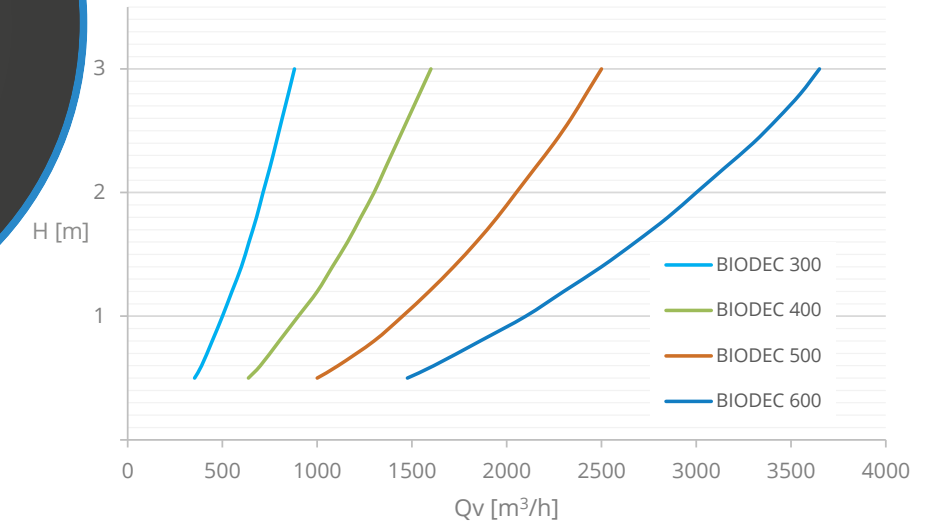
Specifications

		BIODEC 300	BIODEC 400	BIODEC 500	BIODEC 600
Decanting flow at H = 3 m	Qv [m³/h]	880	1600	2500	3650
Decanting flow at H = 1 m	Qv [m³/h]	500	900	1450	2100
Effluent pipe	ØD	DN 300	DN 400	DN 500	DN 600
Three way ball valve - GF+	[size]	DN 40	DN 40	DN 50	DN 50
Electric actuator - GF+	Type	EA11	EA11	EA11	EA11
Compressed air needs	[liter/min]	800	800	2500	3000
Pressure of compressed air	[bar]	0,05	0,05	0,05	0,05



- ▶ ΔH ▶ The difference between the minimum and maximum water level
- ▶ H_{min} ▶ The difference between the minimum water level and effluent ($H_{min} \geq 0,5 \text{ m}$)
- ▶ $H = \Delta H + H_{min} \leq 3 \text{ m}$

Capacity charts

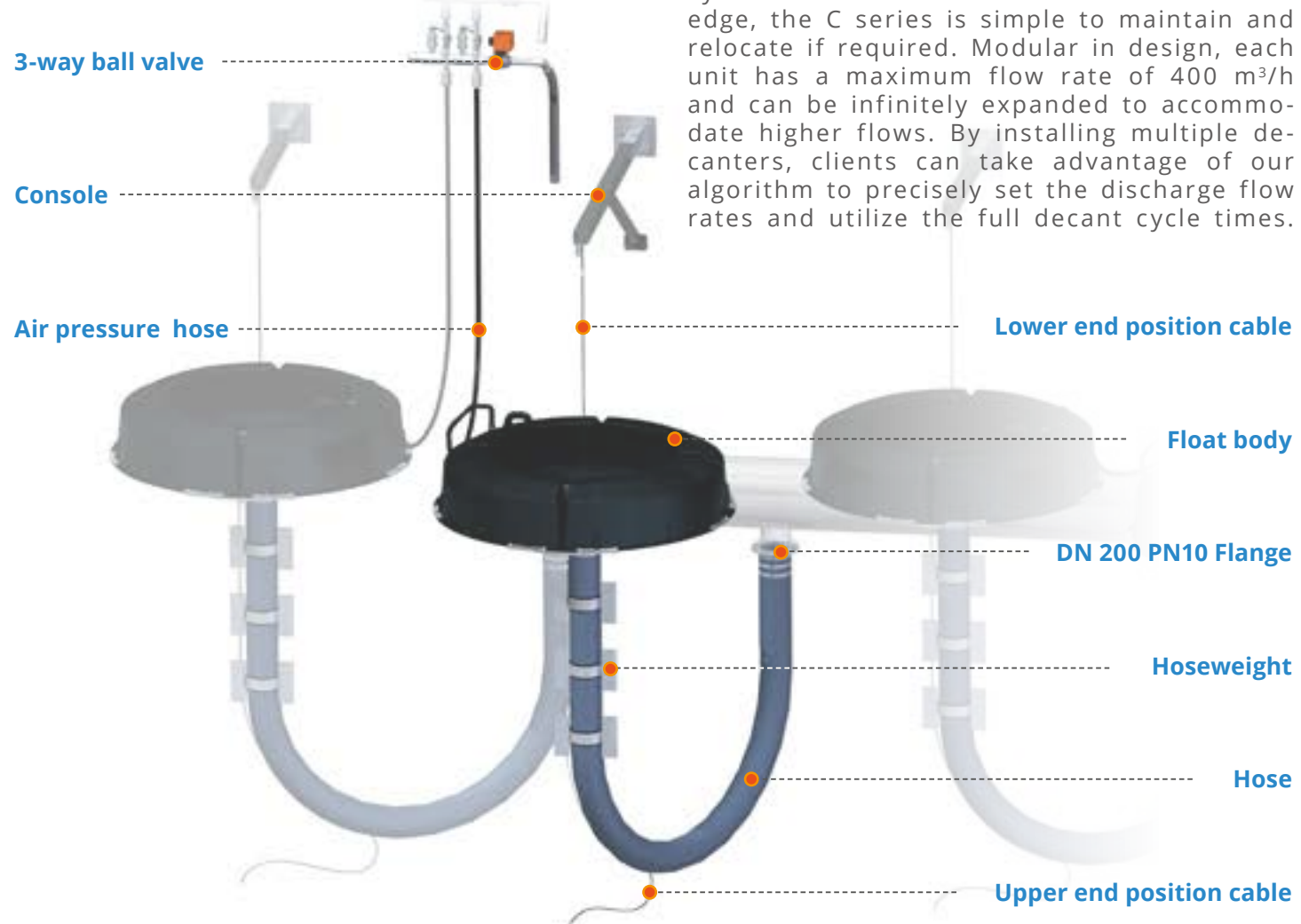


Biodec-C

Modular design - unlimited capacity

C series is our newest addition to the BIO-DEC™ family of decanters. This model is made of composite and has the obvious advantages over its stainless-steel counterpart (the BIODEC-S™ series) i.e. total resistance to corrosion, lower shipping costs and ease in installation due to its

low weight. The BIODEC-C™ series is a circular decanter operating on the same air float principle as the S series and achieves nearly constant flow using a submerged weir design. The series also features our unique solids excluding arrangement and emergency overflow functions. Installed at the tank edge, the C series is simple to maintain and relocate if required. Modular in design, each unit has a maximum flow rate of 400 m³/h and can be infinitely expanded to accommodate higher flows. By installing multiple decanters, clients can take advantage of our algorithm to precisely set the discharge flow rates and utilize the full decant cycle times.

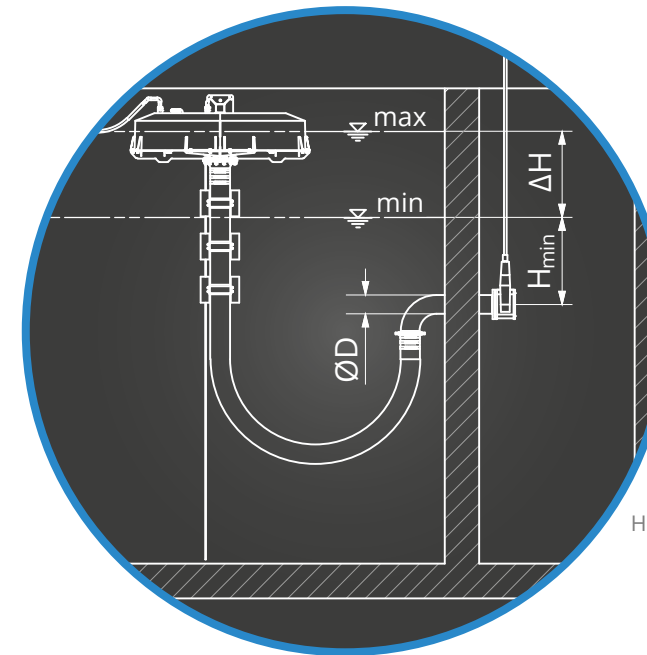


Advantages

- Constant flow
- Composite construction
- 20+ years life span
- Simple installation
- Submerged weir design
- Emergency overflow
- Scum/solids exclusion

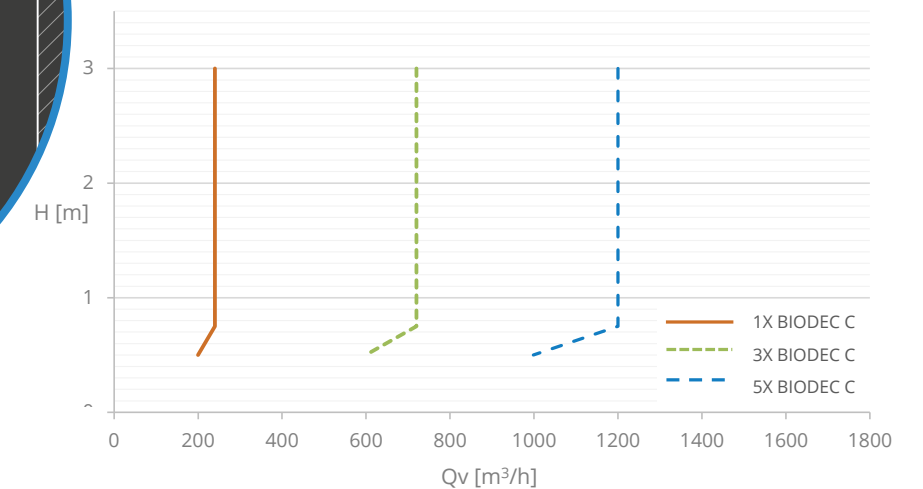
Specifications

		BIODEC C
Decanting flow at H = 3 m	Qv [m³/h]	470
Decanting flow at H = 1 m	Qv [m³/h]	280
Effluent pipe	ØD	DN 200
Three way ball valve – GF+	[size]	DN 25
Electric actuator – GF+	Type	EA11
Compressed air needs	[liter/min]	300
Pressure of compressed air	[bar]	0,03



- ▶ **ΔH** ▶ The difference between the minimum and maximum water level
- ▶ **H_{min}** ▶ The difference between the minimum water level and effluent
- ▶ **H = ΔH + H_{min} ≤ 3 m**

Capacity charts





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UTB Envirotec is a Budapest based cleantech company providing consulting, engineering, contracting and operations services to its municipal and industrial clients worldwide. We provide solutions that allow our clients to renew their wastewater and organic solids to clean water, renewable energy and valuable nutrients.