



Feeding Technology for Aquaculture

A close-up photograph of a single water droplet suspended in mid-air above a pond. The droplet is perfectly spherical and reflects the surrounding environment. Below it, the pond's surface is disturbed by concentric ripples, with the water appearing dark blue and green. The background is a soft-focus view of the pond's surface.

Product catalogue 2018

Forever. Plus one day.



Since the foundation of our company in the spring of 1986, our focus has been on the feeding of fish. Our enthusiasm for feeding technology has allowed us to continually develop our automated feeders.

We create long-lasting products characterized by quality and simplicity. Small and large solutions for all kinds of systems are available in our program. Ideas become innovations Made in Germany.

Over the years, we have grown into a globally established company for aquaculture feeding systems.

Experience and knowledge are the foundation for everything we do. In this way, our customers benefit from our know-how that strengthens long-term as well as partnership-based cooperation. Mutual respect and open and honest communication form the basis of our corporate culture.



FFAZ – Feeding Systems GbR
Feeding Technology for Aquaculture –
Made in Germany

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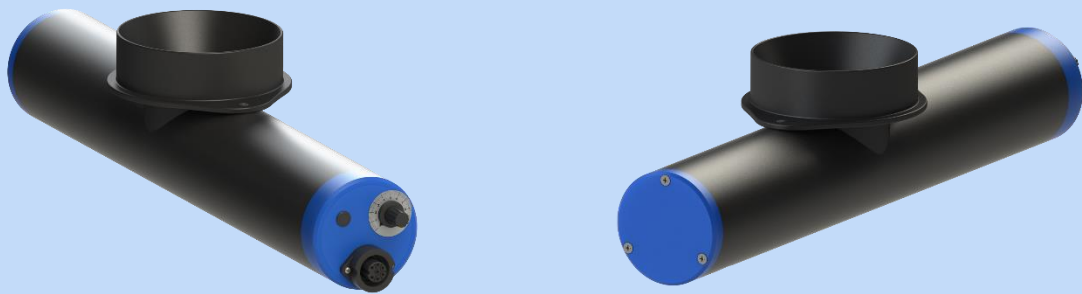
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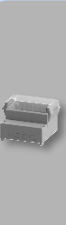


Automatic Feeder Classic



The automated feeding of fish is an integral part of aquaculture. Because of its solid design and sophisticated technology, our Automatic Feeder Classic has been used worldwide for many years. It covers a wide range of applications, from rearing to streamlined breeding tanks to individual test facilities, e. g. in universities.

The spiral screw conveyor inside the Automatic Feeder conveys reliably feed pellets of different sizes – up to 9 mm. It is possible to precisely and economically feed even smallest amounts during the day.

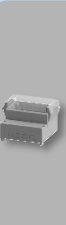


Automatic Feeder Classic

The Automatic Feeder Classic can be flexibly adapted to your requirements and can be combined with a variety of container sizes.

Special customer requirements can also be implemented, such as a Plexiglas container.

An individual adaption of the screw conveyor motor for very small feed amounts can be realized any time.



Version: Outdoor Plus

- Improved sealing
- Improved durability in difficult weather

Product advantages

- Precise and regular feed quantities
- Saving time by automatization

Technical data		
Name	Classic	Outdoor Plus
Article number	100100	100102
Pellet size	up to 9 mm (others on request)	
Operating voltage	12-30 V DC	
Hopper size	2-200 kg	
PE-Hopper color	blue or green	
Feed conveyance	Spiral screw conveyor	
Operable with control	ZK810 or ZK812	

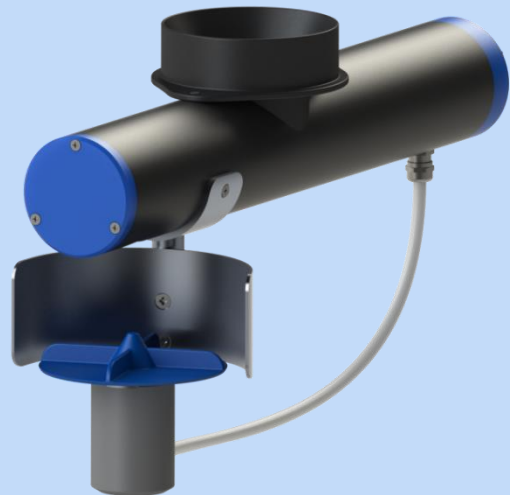
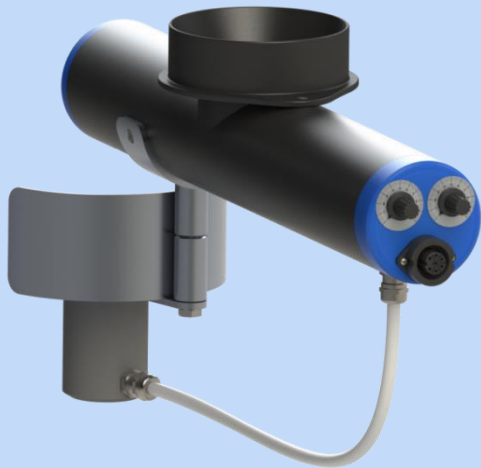
Properties

- Spiral screw conveyor continuously variable

Field of application

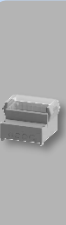
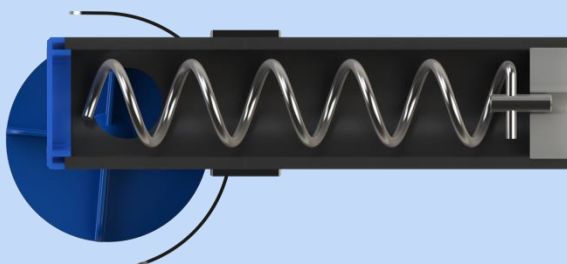
Small tanks (rearing tanks), pilot plants, streamlined breeding tanks, garden pond, interior conditioning

Automatic Feeder Classic with Spread Disc



The Automatic Feeder Classic with Spread Disc is an extension of our proven feeding system. Due to the scattering of the feed the field of application becomes more divers: Whether a pond of the fishing club, a modern recirculation system or intensive shrimp farming in tropical areas (version – Outdoor Plus).

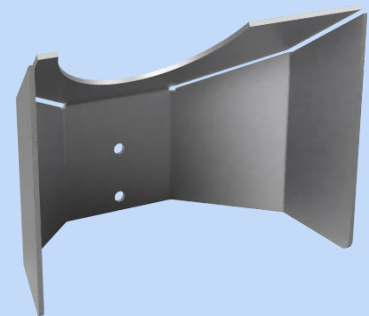
The spiral screw conveyor inside the Automatic Feeder conveys reliably feed pellets of different sizes – up to 9 mm. It is possible to precisely and economically feed even smallest amounts during the day.



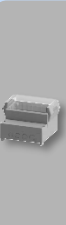
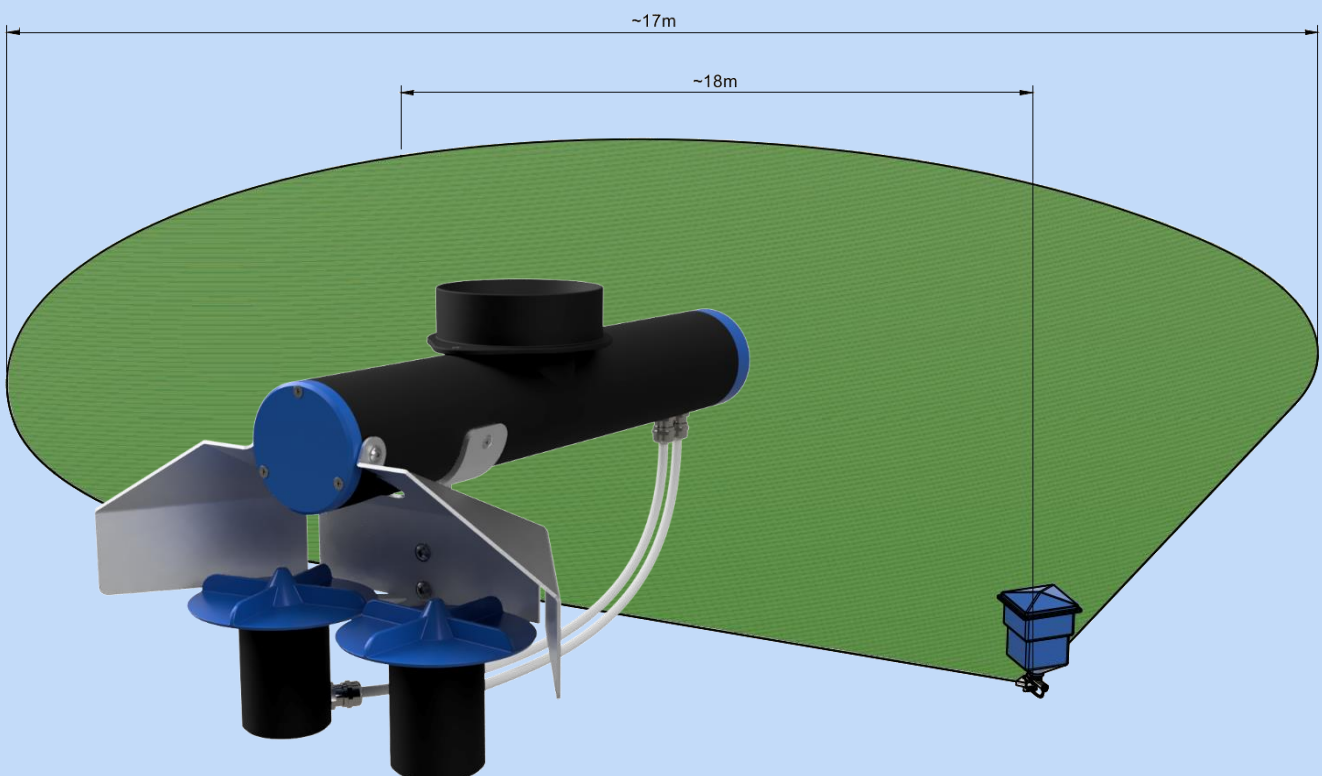
Automatic Feeder Classic with Spread Disc

Due to the continuously variable speed of the scattering motor the scattering radius can be adapted to your specific requirements, which favors a uniform growth of your fish. The possible scatter radius between 2 and 12 m is also depending on the shape, size and weight of your pellets.

Optionally, the automatic feeder classic with spread disc can be equipped with an upward closed spread guard. This prevents the feed from being thrown backwards.



The Outdoor Plus with double spreading ensures a very large spreading area. Here a spreading width of 18 m long and 17 m wide can be achieved. The green colored surface shows the feed distribution which extends evenly over the whole area.



Automatic Feeder Classic with Spread Disc



Version: Outdoor Plus

- ☑ Improved sealing
- ☑ Improved durability in difficult weather

Properties

- ☑ Spiral screw conveyor and scattering continuously variable

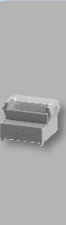
Product advantages

- ☑ Precise and regular feed quantities
- ☑ Optimal feed distribution due to powerful motor for scattering
- ☑ Ensures uniform growth
- ☑ Saving of time by automatization

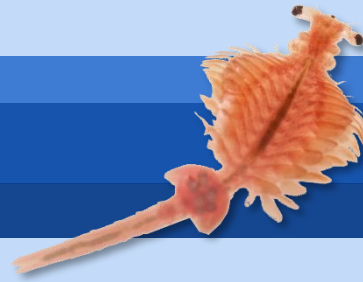
Fields of application

small hobby pond, modern recirculation systems or intensive shrimp farming

Technical data			
Name	Classic	Outdoor Plus	Outdoor Plus with double spread disc
Article number	100101	100103	100109
Streubereich	2-12 m		2-18 m
Pellet size	up to 9 mm (others on request)		
Operating voltage	12-30 V DC		
Hopper size	2-200 kg		
PE-Hopper color	blue or green		
Feed conveyance	Spiral screw conveyor		
Operable with control	ZK810 or ZK812		



Automatic Feeder Artemia



The feeding of Artemia Salina is wide spread in the rearing of young fish. We offer you the possibility to automate the time-intensive feeding process.

The special feature of our Automatic Feeder Artemia is the active ventilation of the container. This results in a homogeneous distribution of the Artemia in the water.

The Automatic Feeder Artemia is available in a 2-Liter or 5-Liter version and is equipped with an electrically controlled stop valve which allows the Artemia to flow out during feeding. The stop valve is "normally closed". This means: The feeder cannot drain without connected power source or in event of a power failure!

For juvenile fish Artemia are an ideal feed. Due to their high energy content Artemia are becoming more and more important in rearing.



Product advantages

- ☑ Saving of time by automatization
- ☑ Mixing of Artemia
- ☑ Feeding in milliliter range
- ☑ Easy cleaning of the container

Properties & field of application

- ☑ Optimal rearing feed
- ☑ Stop valve (normally closed)
- ☑ Rearing of small fish
- ☑ Easy fixing – directly at the tank/aquarium
- ☑ Indoor



Technical data		
Article number	100104	100105
Container size	2 L	5 L
Operating voltage	9-30 V AC	
	9-30 V DC	
Feed conveyance	Stop valve	
Feed amount	min. 26 mL per sec	
Field of application	indoor	
Operable with control	ZK822 or ZK812	

Controls

ZK812

With our control system ZK812 you have the possibility to control each feeder individually. Within the daily feeding period the separately controlled feeders can cover different feeding times and duration.

The easy operation and the proven working principle enable a fast change of individual feed amounts.

The respective daily feeding number is not limited. Cable lengths of more than 100 m can be realized. Nevertheless, each feeder works equally, whether 2 m or more than 100 m away from the control. The also possible 12-24-Volt version can be operated with a commercially available car battery. No additional technique is necessary to change the settings.

Product advantages

- ☑ Easy handling and operation
- ☑ Unlimited number of feedings
- ☑ Precise and regular feed amounts
- ☑ Low energy consumption
- ☑ Cable lengths of more than 100 m can be realized

Properties

- ☑ Feeding periods adjustable with timer
- ☑ Separate control of each feeder

Technical data	
Article number	200106
Operating voltage	230 V AC
	110 V AC
	12-24 V DC
Max. number of feeders	12
Feeding duration	1-99 sec
Feeding interval	1-99 min
Feed amount	5 g-250 kg per day



Controls

ZK812

Connection information for eight Automatic Feeders Classic with Spread Disc – Control ZK812 | 230 V AC

Control ZK812 with 8 modules

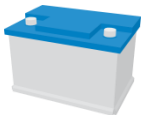


Each feeder is controlled by a module.



Connection information for four Automatic Feeders Classic with Spread Disc – Control ZK812 | 12-24 V DC

Control ZK812 with 4 modules



Each feeder is controlled by a module.



Connection information for four Automatic Feeders Artemia – Control ZK812 | 230 V AC

Control ZK812 with 4 modules



Each feeder is controlled by a module.



Controls

ZK810 / ZK822

Our easily programmable control is set with regard to time and ensures precise and regular feed amounts. The number of feedings is not limited. The respective cable connected to the feeder can have a length of more than 100 m. Additionally, each feeder works equally, 2 m or more than 100 m away from the control.

All connected feeders feed at the same time, but the feed amount can be adjusted individually. Due to the low energy consumption the control ZK810 facilitates your power management – no standby mode.

A timer is integrated in the 12-24-Volt version. It can be directly operated with a commercially available car battery. There is no additional technology necessary to change the settings of all versions of the control.

Product advantages

- ☑ Precise and regular feed amounts
- ☑ Unlimited number of feedings
- ☑ Low energy consumption
- ☑ Cable lengths of more than 100 m can be realized

Properties

- ☑ Temporal control of all connected feeders
- ☑ Simultaneous control of connected feeders



Technical data ZK810			
Article number	200100	200101	200102
Operating voltage	230 V AC	110 V AC	12-24 V DC
Feeding duration	1-99 sec		
Feeding interval	1-99 min		
Feed amount	5 g-250 kg per day		
Connections for feeders	4		

Technical data ZK822 Artemia			
Article number	200130	200131	200132
Operating voltage	230 V AC	110 V AC	12-24 V DC
Feeding duration	1-99 sec		
Feeding interval	1-99 min		
Feed amount	ca. 26 mL per sec		
Connections for feeders	8		



Controls

ZK810 / ZK822

Connection information for four Automatic Feeders Classic with Spread Disc – Control ZK810 | 230 V AC

The duration of feeding and pause is the same for each connected feeder with variable feed amounts.



Connection information for four Automatic Feeders Classic with Spread Disc – Control ZK810 | 12-24 V DC

The duration of feeding and pause is the same for each connected feeder with variable feed amounts.



Connection information for four Automatic Feeders Artemia 2 L – Control ZK822 | 230 V AC

The duration of feeding and pause is the same for each connected feeder with variable feed amounts.



Controls

Transformer Distributor

Transformer Distributor – 8 Automatic Feeders | 230 V AC

The Transformer Distributor is an extension for the ZK810 – 230 V. It is possible to connect up to 8 additional Automatic Feeders Classic to one control.

Technical data

Article number	200103	200136
Operating voltage	230 V AC	
Max. number of feeders	8	4



Connection information for eleven Automatic Feeders Classic with Spread Disc – Control ZK810 | 230 V AC

The duration of feeding and pause is the same for each connected feeder with variable feed amounts.



Controls

Distributor

Distributor – 4 or 8 Automatic Feeders | 12-24 V

The Distributor is an extension for the ZK810 - 12-24 V. It is possible to add 4 or 8 additional Automatic Feeders to one control.

Technical data		
Article number	200104	200105
Operating voltage	12-24 V DC	
Max. number of feeders	4	8



Connection information for seven Automatic Feeders Classic with Spread Disc – Control ZK810 | 12-24 V DC

The duration of feeding and pause is the same for each connected feeder with variable feed amounts.



Controls

Distributor / Series Connection Box

Distributor – 10 Automatic Feeder Artemia for 230 V AC and 12-24 V DC

With the 10-way Distributor you have the possibility to expand the ZK822 by max. 10 Automatic Feeders Artemia.
The connected feeders feed simultaneously.

Technical data	
Article number	200133
Operating voltage	230 V AC 12-24 V DC
Max. number of feeders	10



Series Connection Box – Automatic Feeder Artemia

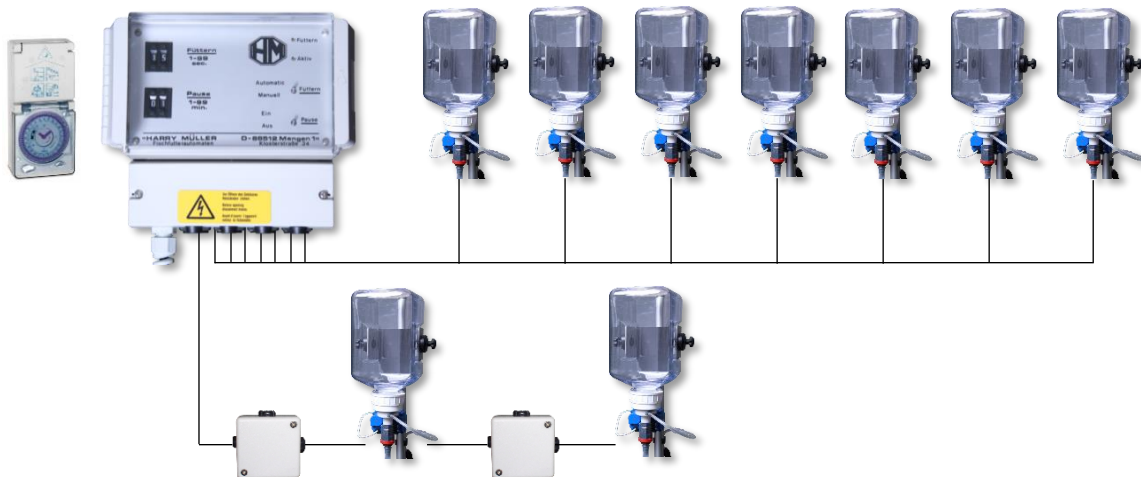
The ZK822 or ZK812 can control further Automatic Feeders Artemia with the aid of a Series Connection Box.
The connected feeders feed simultaneously.

Technical data	
Article number	200135



Connection information for eleven Automatic Feeders Artemia – Control ZK822 | 230 V AC

The duration of feeding and pause is the same for each connected feeder with variable feed amounts.



Controls

SENECT

The decentralised SENECT control technology that intelligently controls and regulates processes.

The wifi networked island principle enable not only to measure oxygen, pH value, water level, conductivity and temperature, but also to process it directly in order to react to it in a targeted or automatic manner.

For example, by controlling valves for changing the oxygen supply, ventilation, regulating pumps and filters, controlling light and of course our automatic feeders. You decide which tasks are to be completed and can change or extend the complete structure at any time.



Use the SENECT App to directly access the current measured values, settings or recorded data.

Track states and actions live on smartphone, tablet or PC. Receive alarm messages, e. g. when falling below threshold values and intervene directly via remote access.



Controls

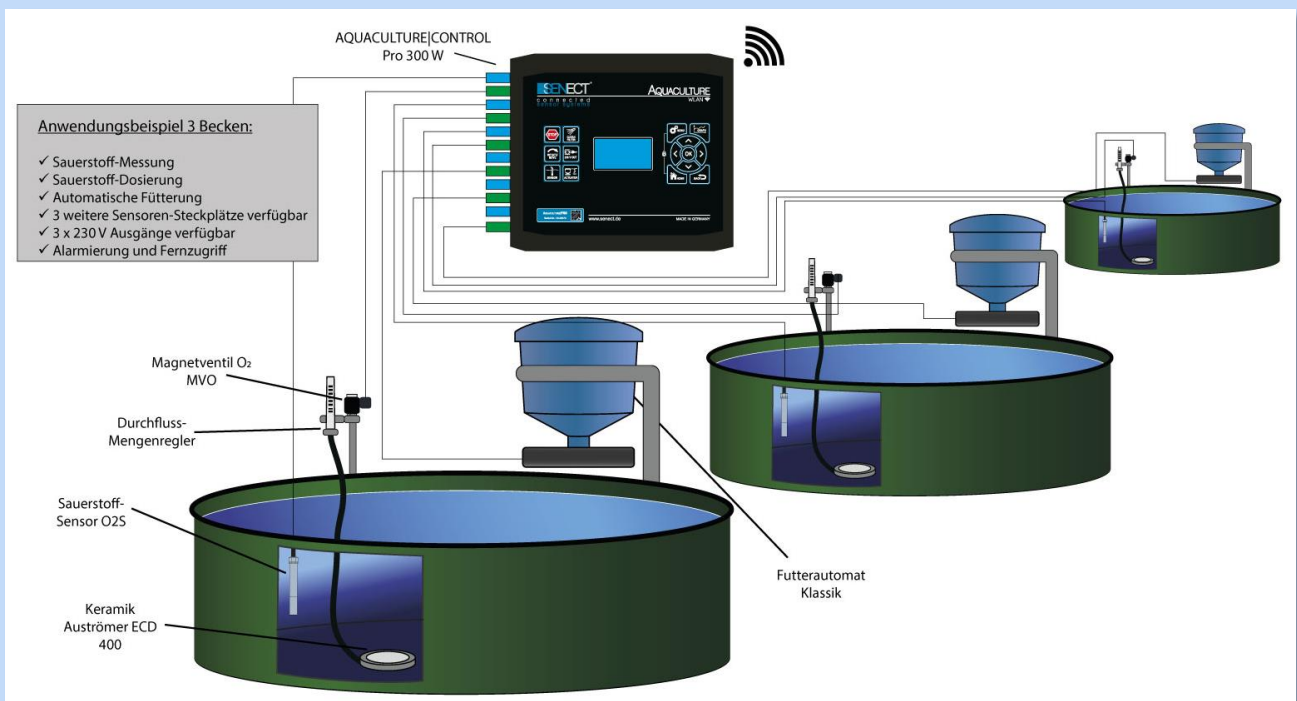
SENECT

- ☑ Feeding can be controlled variably, for example at fixed times or intervals.
- ☑ Possible suspension of feeding if the oxygen content is too low
- ☑ Increase the oxygen content before feeding, control stimulation light or valves
- ☑ Temperature-dependent feed quantity control
- ☑ Timer control can also be programmed with a start ramp, e. g. light
- ☑ Switch outputs as a function of other outputs

AQUACULTURE | CONTROL - Pro

The all-rounder for (almost) all functions

Control filters and pumps. Control water quality. Ventilate. Feeding. Alert.



In order to display complex systems clearly, several controllers can be recorded in one program.

Hopper

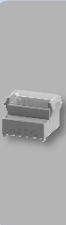
Hopper – round (PE)

Technical data				
Article number	300110	300111	300112	300113
With pipe	300111	300111	300111	300111
Volume	10 L	25 L	50 L	100 L
Feed weight	6 kg	15 kg	30 kg	60 kg



Hopper – square (PE)

Technical data		
Article number	300132	300133
Volume	180 L	300 L
Feed weight	120 kg	200 kg

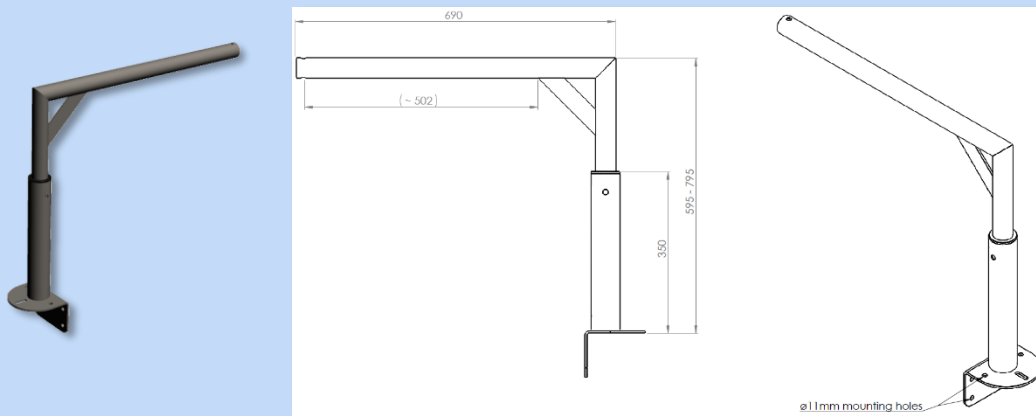


Supports for Feeder

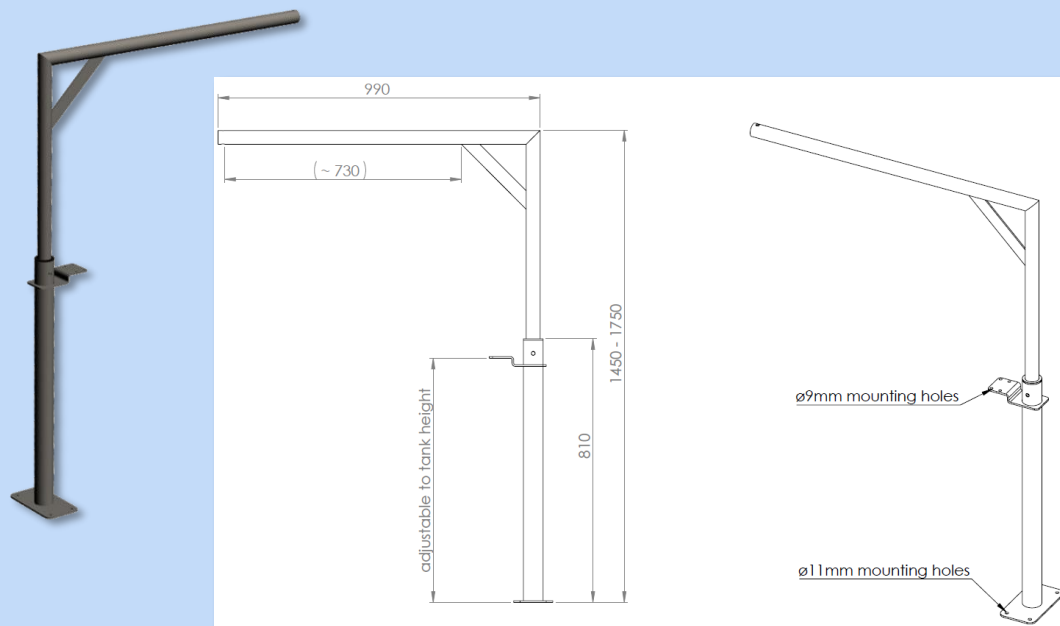
Every automatic feeder requires a fixture, so we are happy to offer you a standard fixture or provide you with an individual solution tailored directly to your needs. All our holders are made of stainless steel and therefore insensitive to environmental influences.

Here you can find two of our standard versions:

Holder 300139 can be used up to a container size of 25 L / 15 kg.



Holder 300140 can be used up to a container size of 25 L / 15 kg.



Contract manufacturing

CNC milling

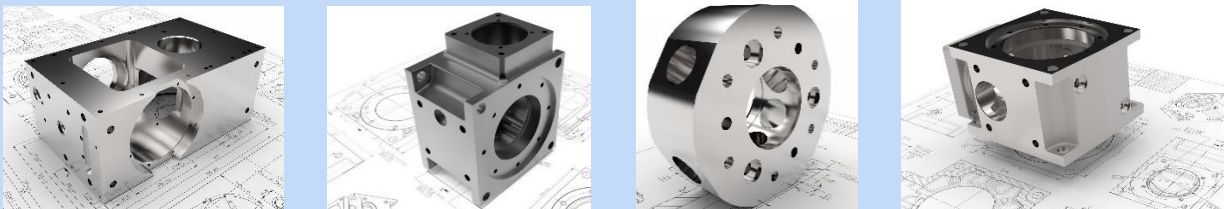
Outstanding quality is our claim - customer satisfaction is our goal.
The toll manufacturer is more than just a cost-effective alternative.

Various reasons speak in favour of outsourced production:

- **Strategic, economic or procedural reasons**
- **bottlenecks in product capacity**
- **Risk reduction**
- **Cost savings (more competitive through outsourcing)**

We manufacture your parts with a wide range of modern milling strategies, such as high-feed milling, high performance cutting (HPC) and our **5-axis simultaneous** milling process, which results in the economic machining of complex components. Simple workpieces as well as parts with high precision and complex shapes such as 3D contours are possible in many designs.

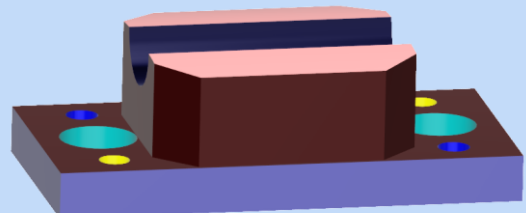
As a strong partner, we offer you our "workbench" including our know-how.



Beginning with series production from batch size 1 piece, also contracts / call-off orders incl. stock keeping with a guaranteed minimum stock can be realized.

On the basis of structured data, such as a color table, together we reduce your construction hours.

With our internal design we manufacture Devices for optimizing the running time of your articles or work out solutions for you for different requirements.



We provide you with service of the highest quality and absolute adherence to deadlines, communication and modern flexibility. We look forward to receiving your enquiries and looking forward to a long-standing and cooperative cooperation with you and your company.



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