

Product training BIODOS

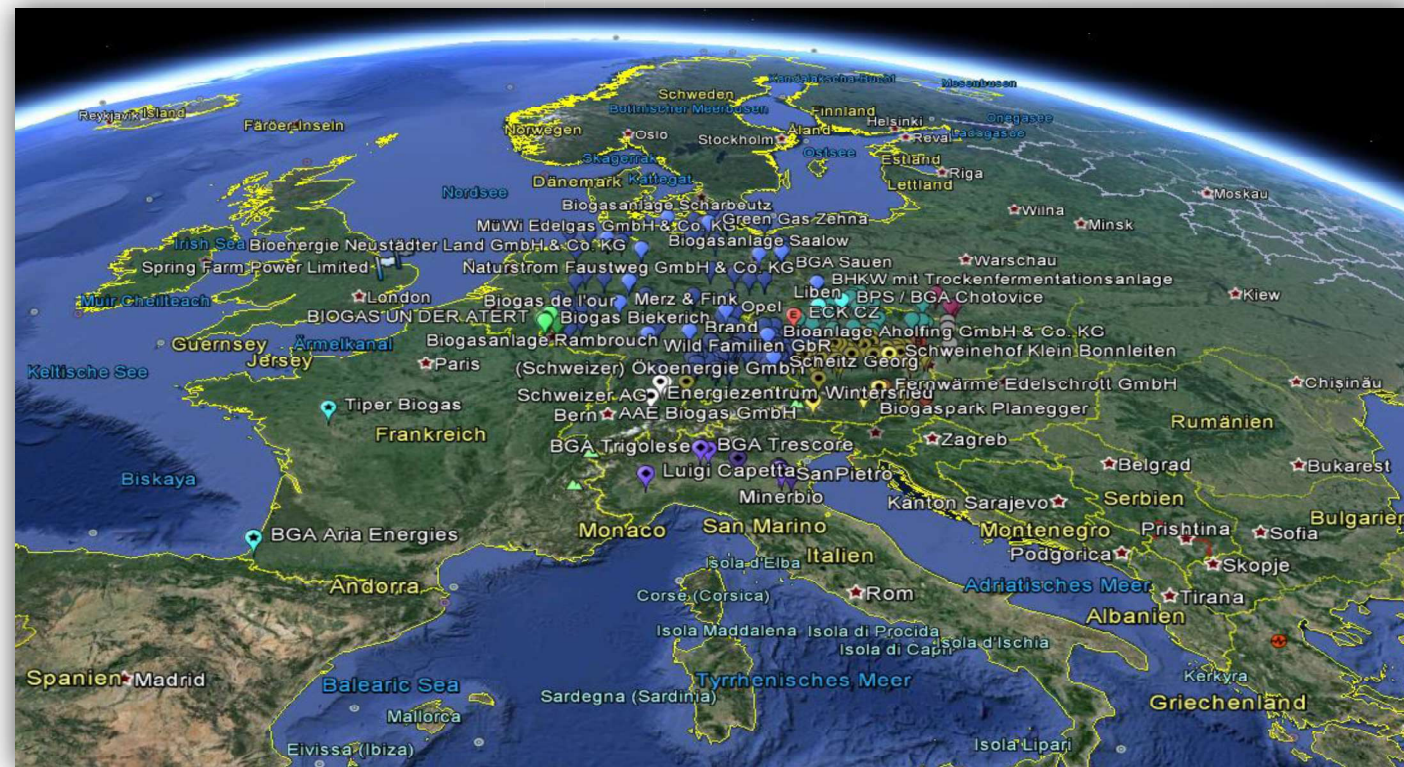
Loading Technology



1. Our references worldwide

About 400 plants worldwide

- Germany,
- Austria,
- Luxembourg,
- Czech Republic,
- Switzerland,
- Slovenia,
- Poland,
- Slovakia,
- England,
- Italy,
- France,
- Chile,
- Thailand,
- USA



2. The base container



UNO **12m³ - 20m³**



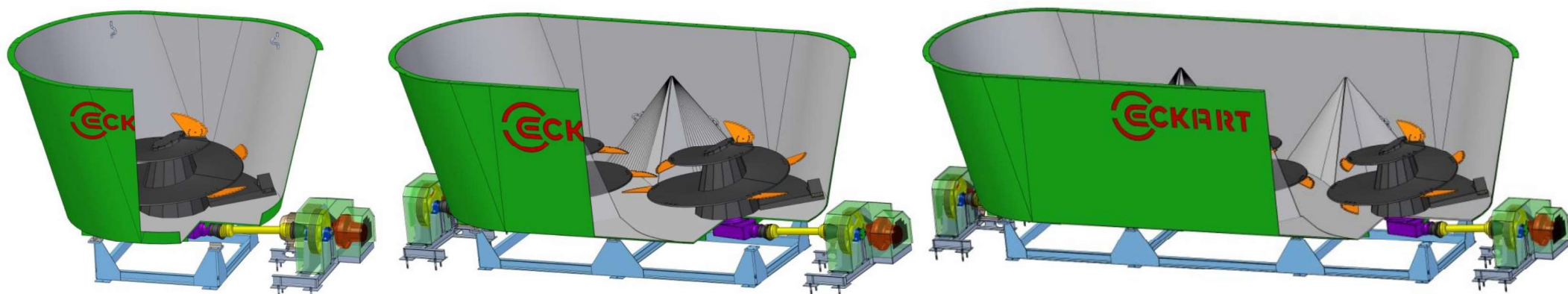
DUO **23m³ - 50m³**



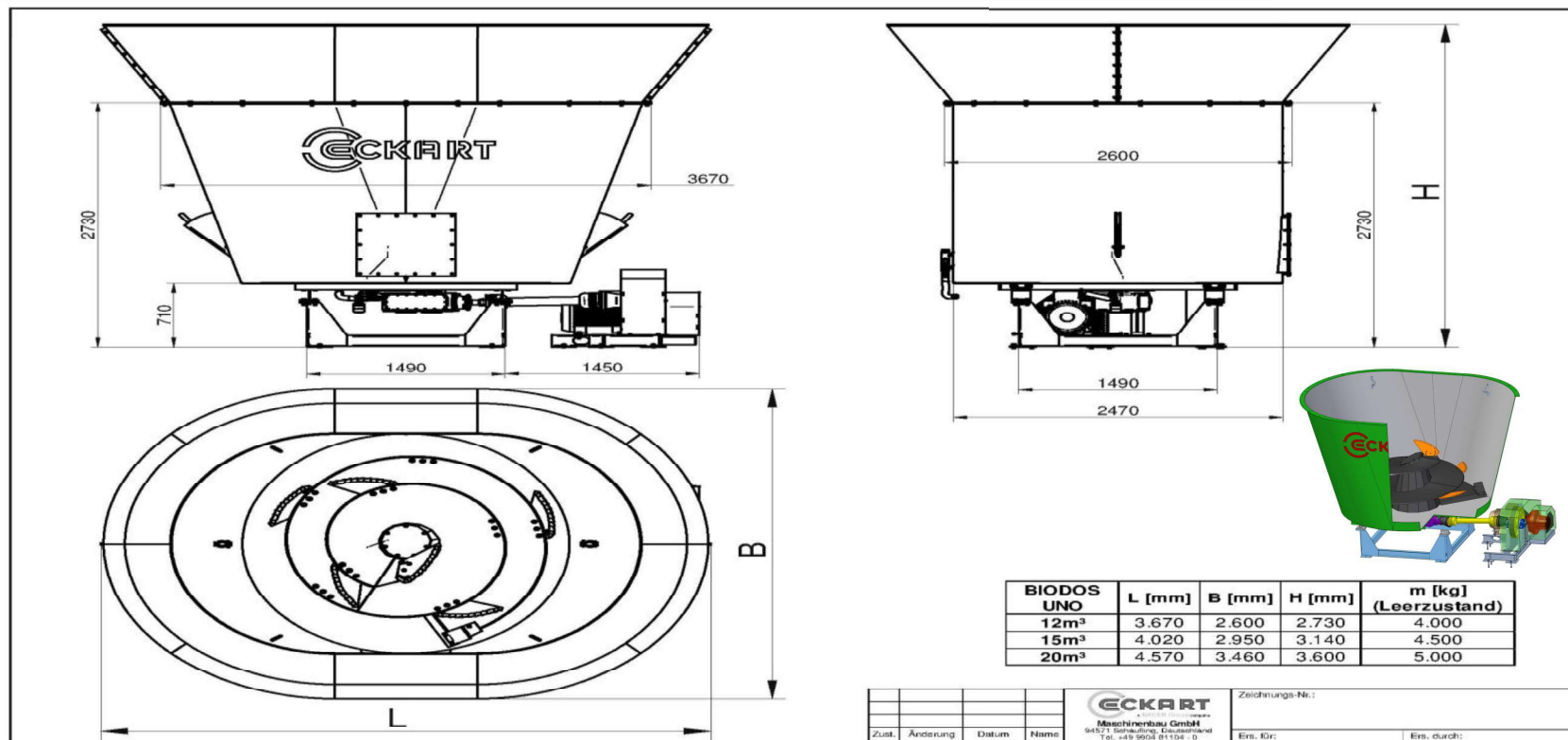
TRIO **33m³ - 100m³**

2.1. Dimensions and designs

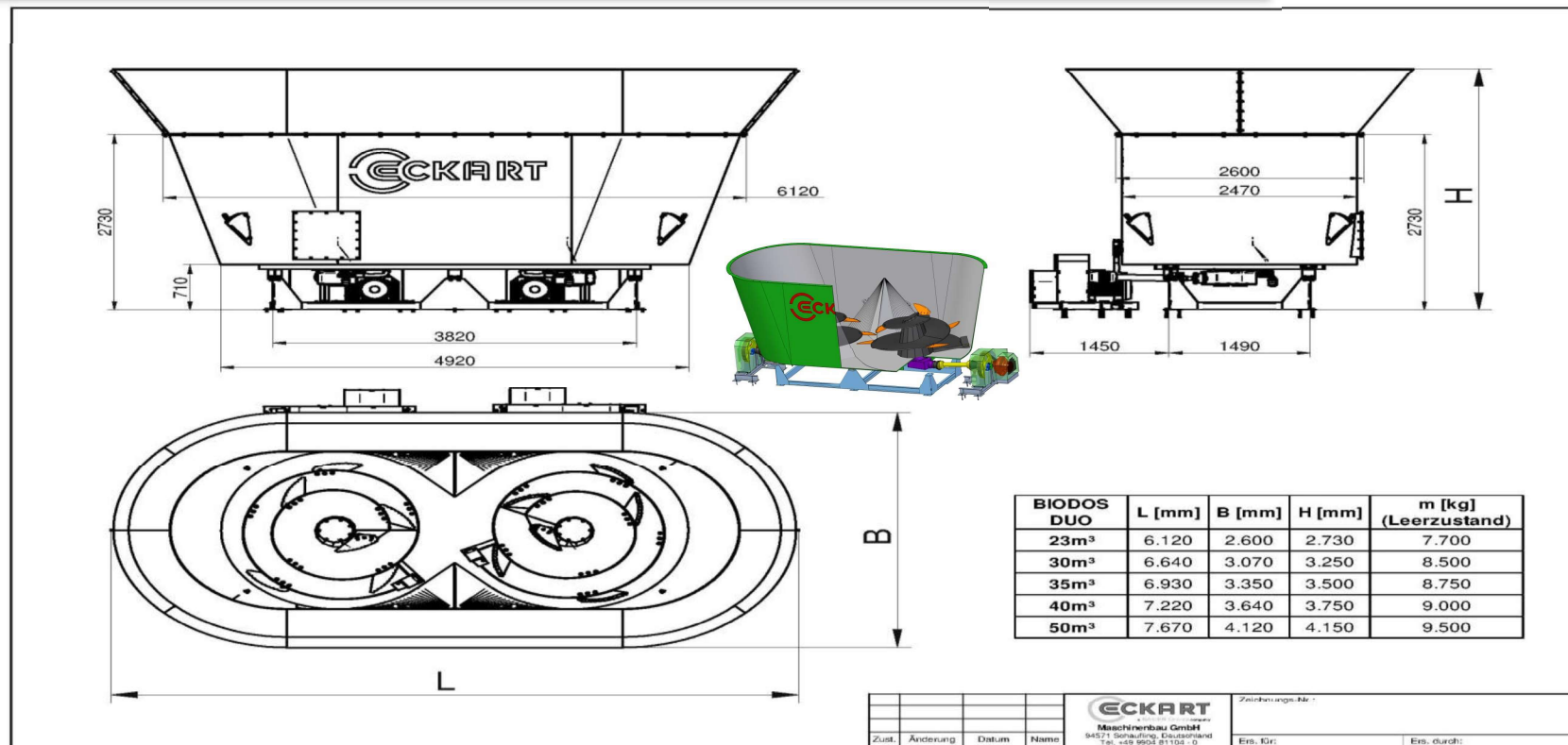
Type	Mixing augers	Base container capacity	Max. Capacity with top part	Electrical power request	<i>OPTION:</i> Weighing System number Load cells
UNO	1	12m ³	20m ³	18,5kW	4 each 10to
DUO	2	23m ³	50m ³	60kW	6 each 10to
TRIO	3	33m ³	100m ³	90kW	8 each 10to (15to)



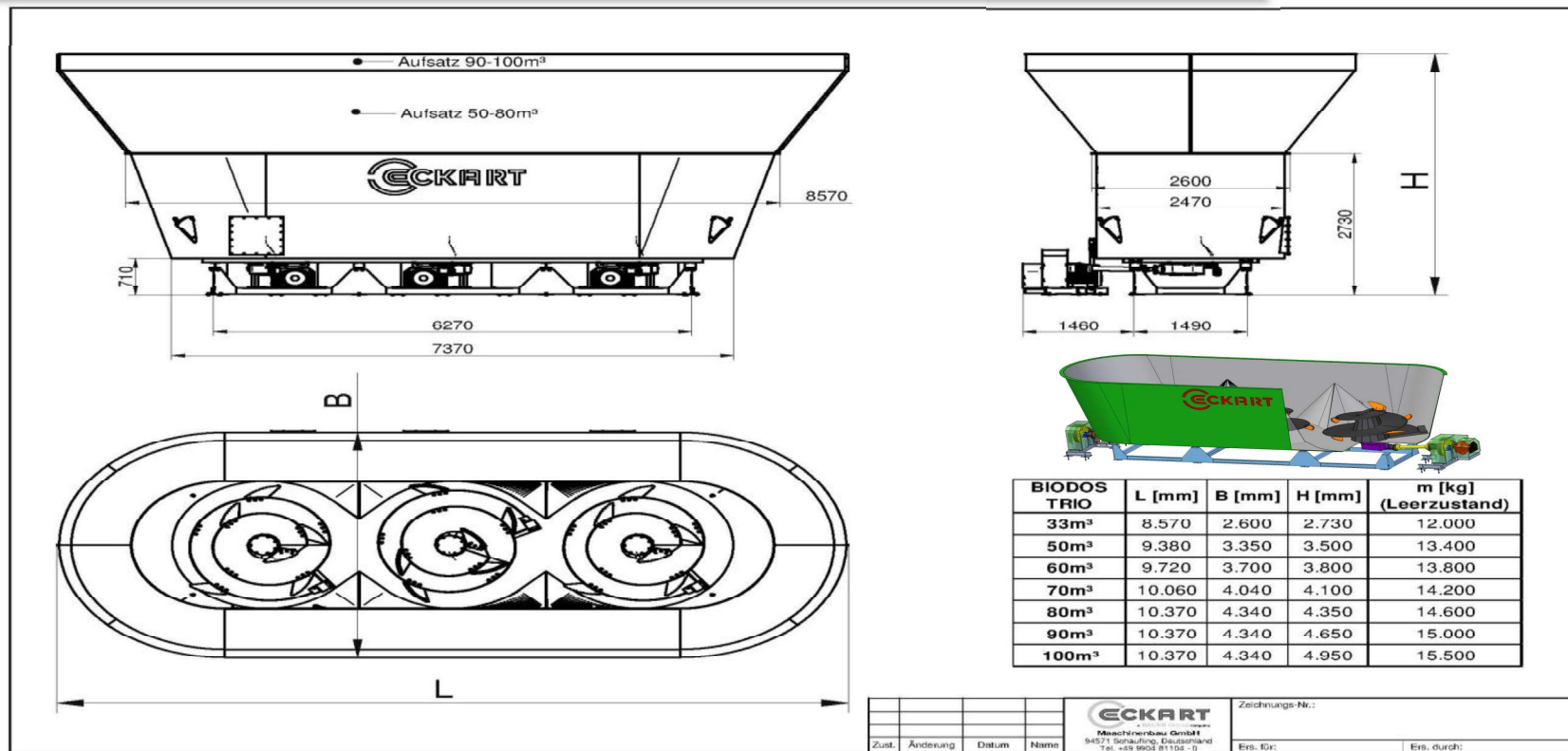
2.1. Dimensions and designs



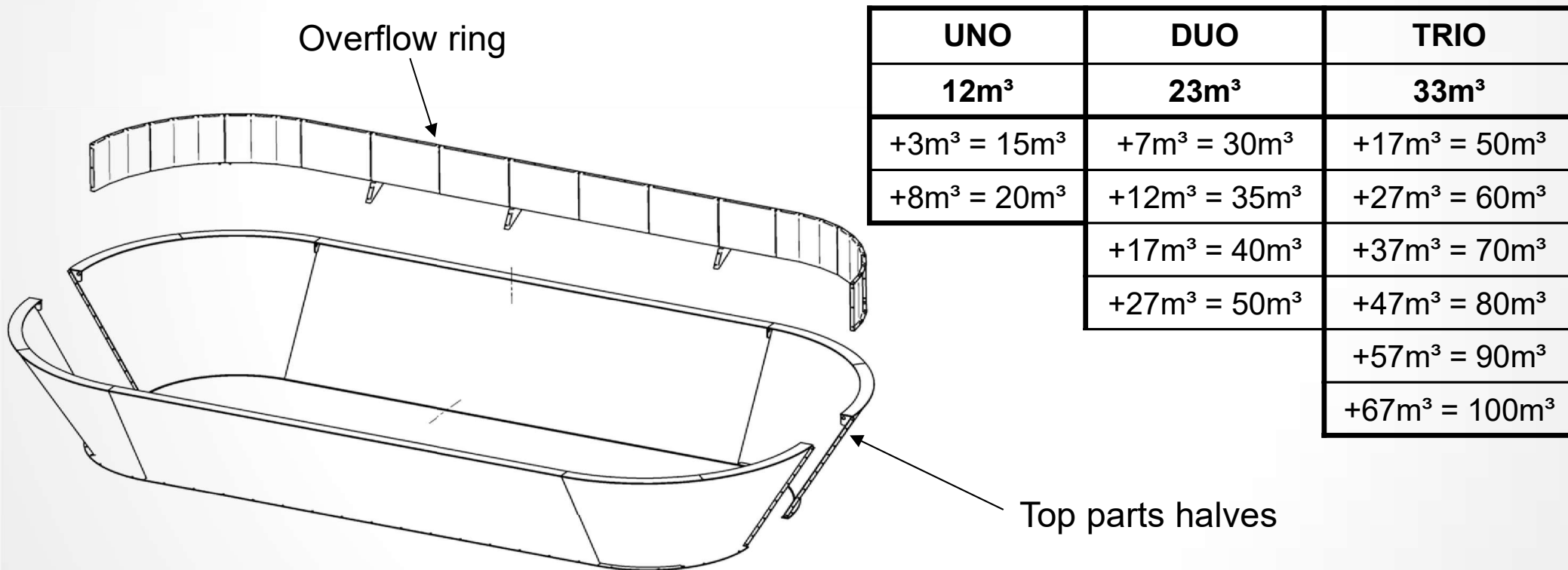
2.1. Dimensions and designs



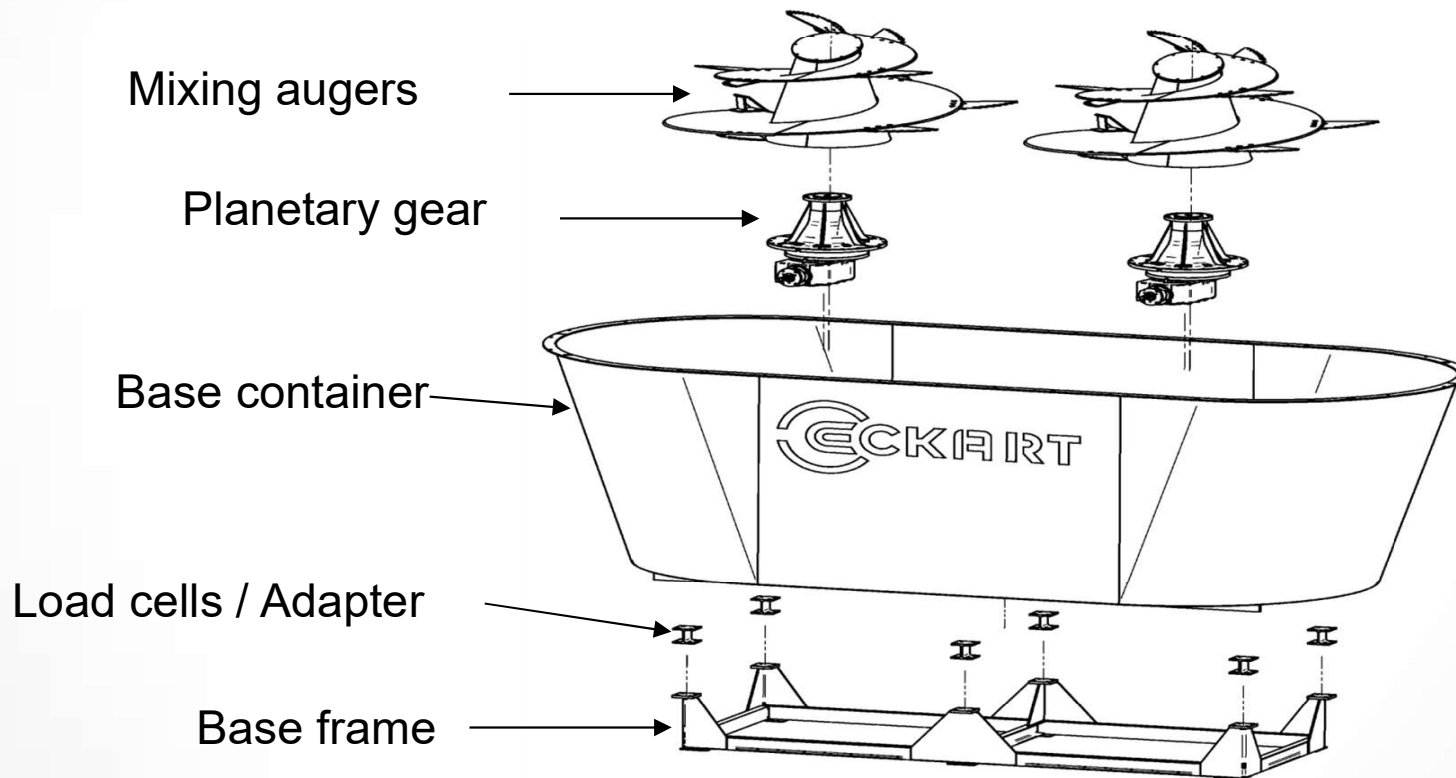
2.1. Dimensions and designs



2.2. Top parts and overflow ring

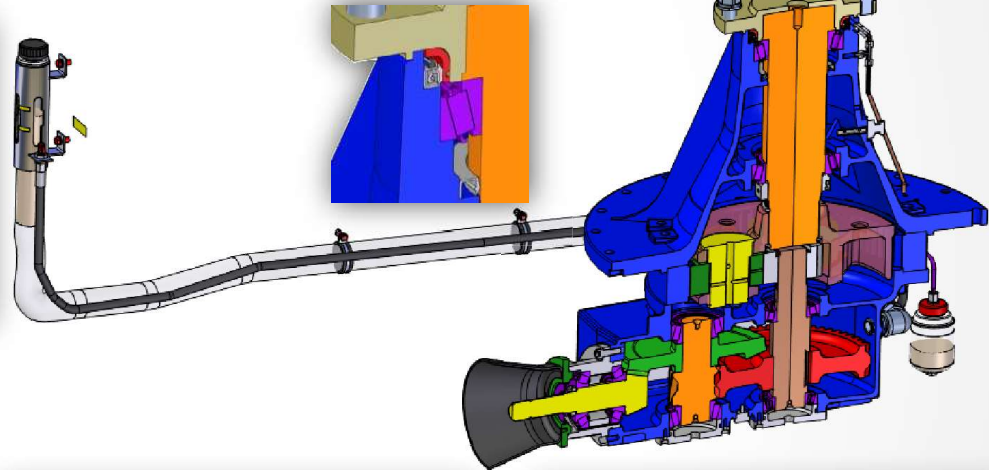


2.3. Structure of the base container



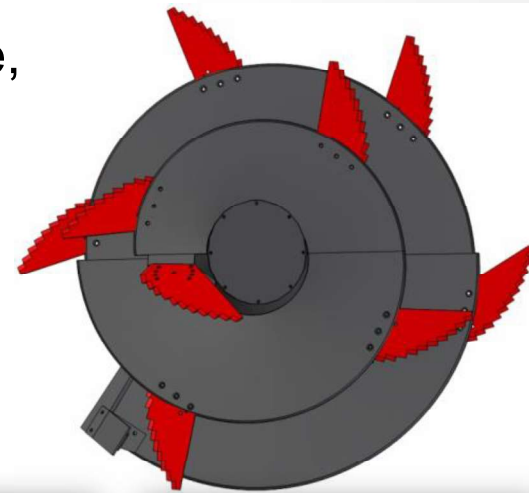
2.4. Planetary Gear

- Liquid-tight
- Stable cast casing
- Gear wheels diagonal geared
- High construction to protect the seals
- Ease of maintenance
- Can be easy retrofitted
(replacement of the mixing auger necessary)



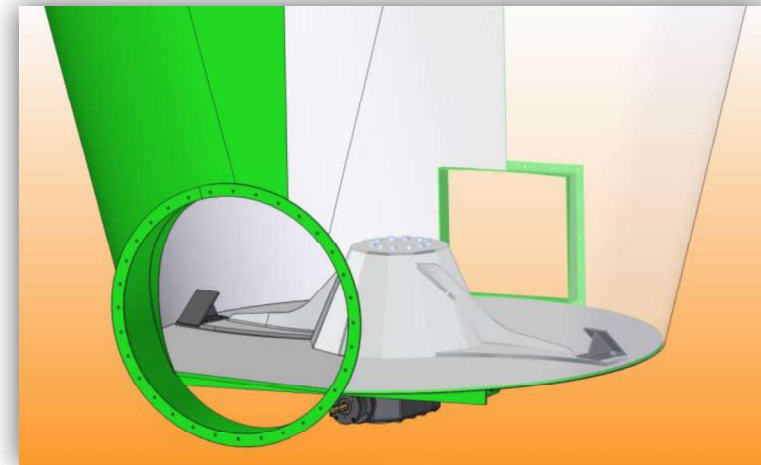
2.5. Mixing augers

- Allow processing of long-fibre material such as solid manure, grass and waste material, without obstruction
- Up to 9 adjustable cutting blades can also long-fibered substrates are cut and mixing
- The optimum auger shape ensures quick and homogenous mixing at a low power requirement
- UHMW-PE Coating possible

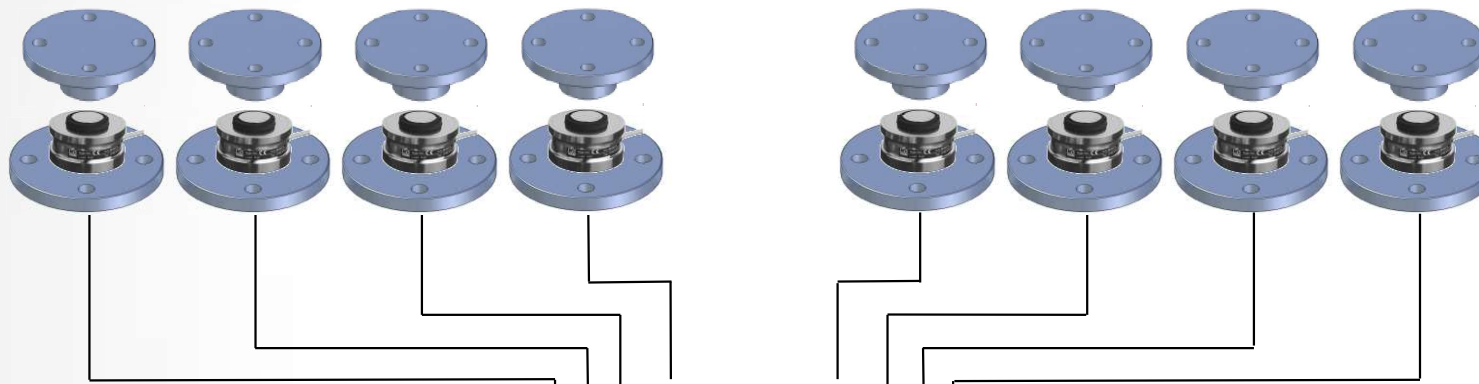


2.6. OPTIONAL Rotary Discharger

- Appropriate especially for pourable material such as corn
- The low construction with two swords ensures a good dosification
- Energy saving and efficient dosing
- Inexpensive
- UHMW-PE Coating possible

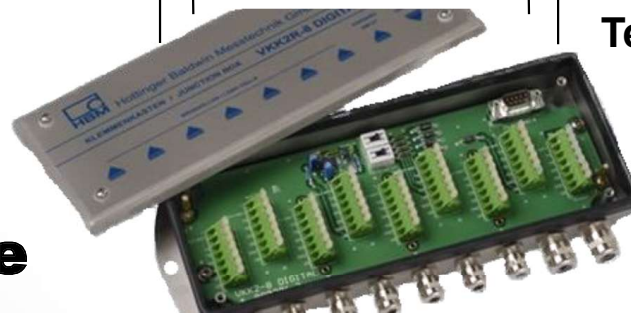


2.7. Weighing System



**Weighing electronics
(WE2110)**

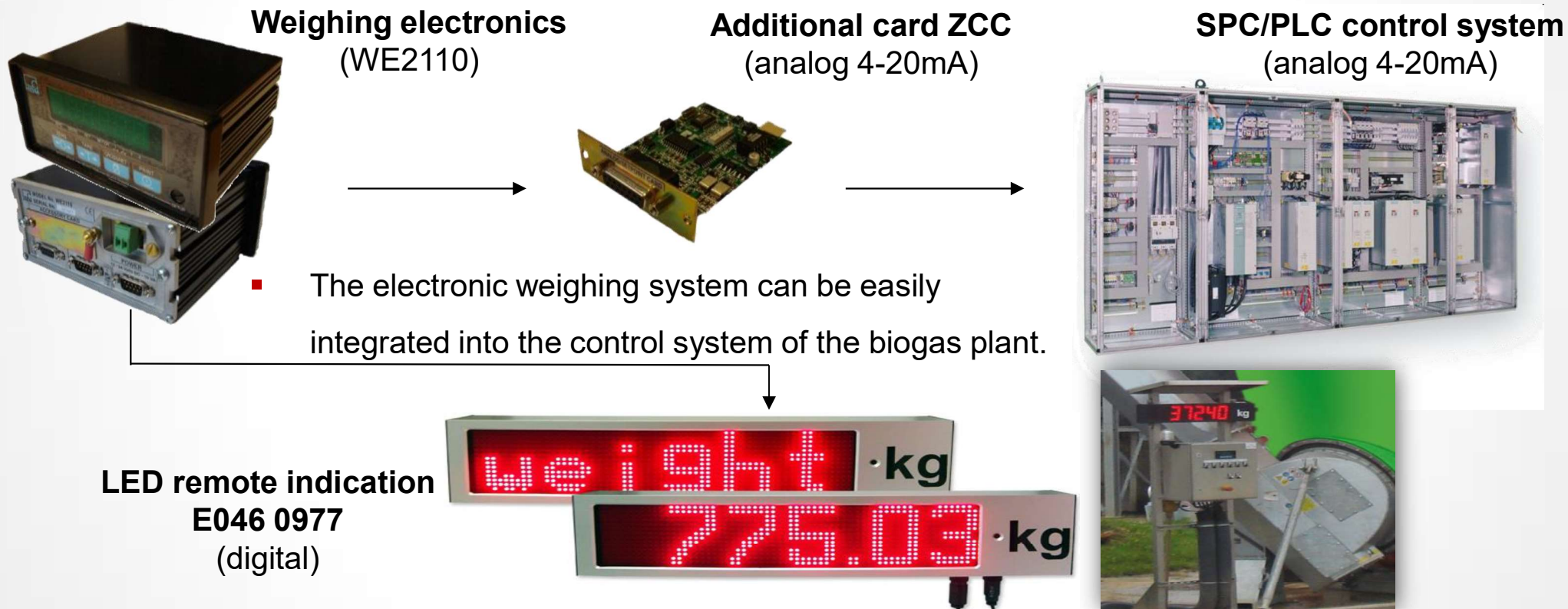
**Terminal board
(VKK2-8)**



Base package

* Cables not included in scope of supply

2.8. LED - remote indication



2.9. Hydraulic Lid

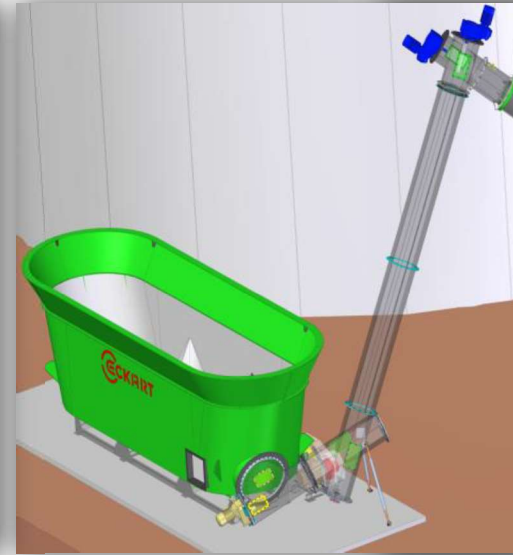
- Solid base frame
- Including of hydraulic power unit
- Manual switching valve
- Simple and safe operation
- Covered with a stable weather protector foil
- Minimizes smell emissions and prevents rain from entering the container



3. Conveying technology



Top feeding



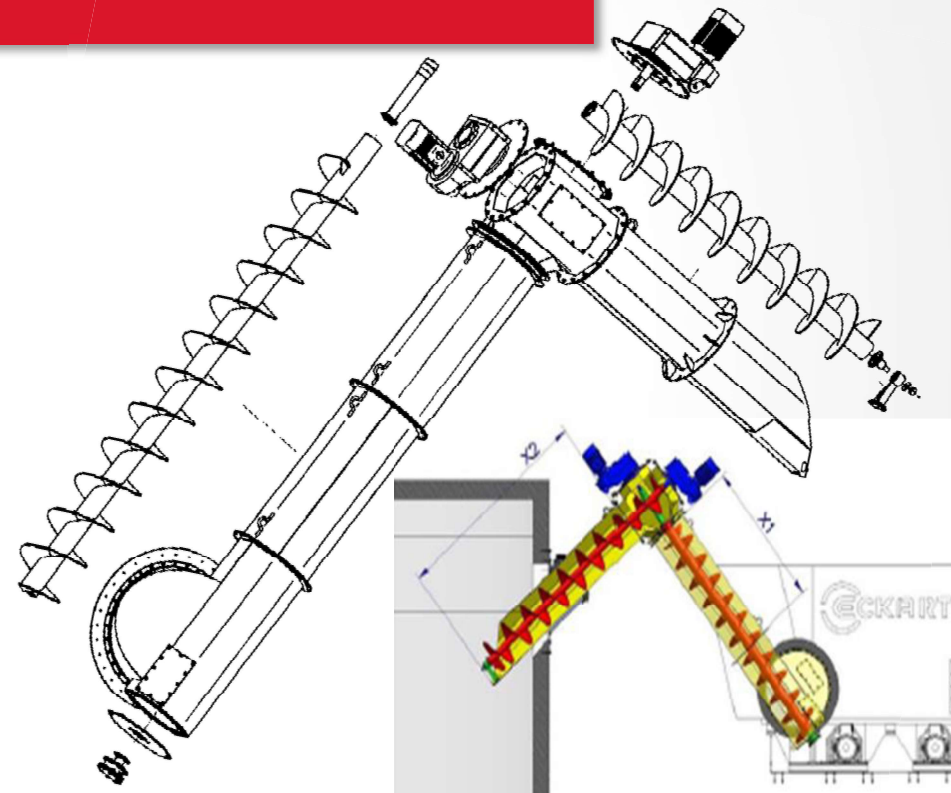
High-Rise top feeding



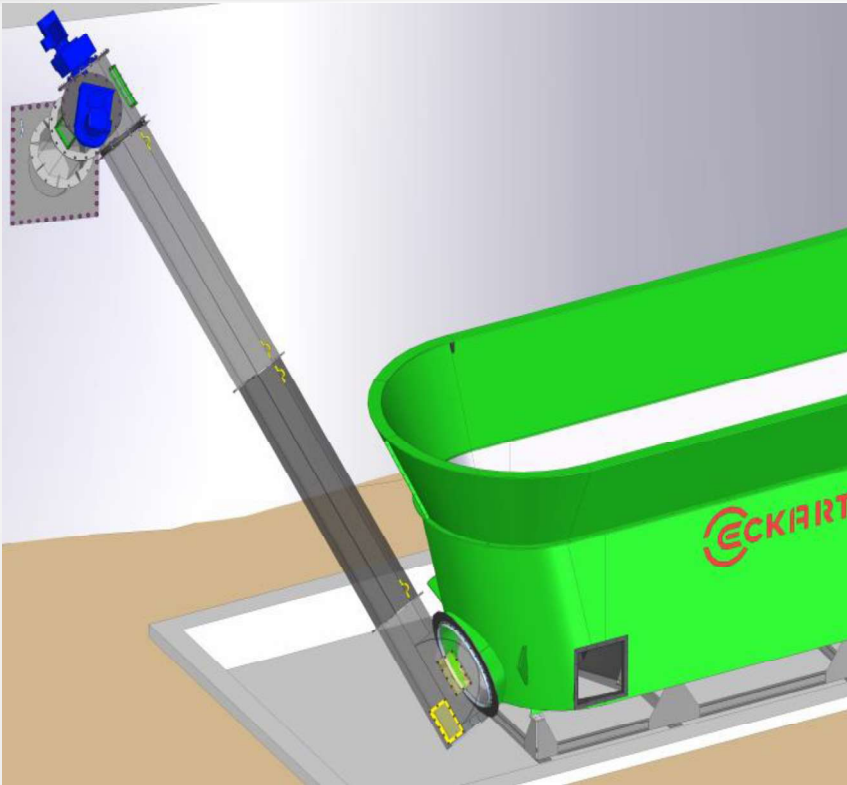
3.1. Top feeding E400 0040

- Conveyor screw DM500mm
- Direct connection to the container
- Closed transfer between top screw and digester screw
- Directly through the fermenter ceiling into the fermentation substrate
- Two 7,5 kW drive unit for EX zone II
- Customized manufacturing of screw
1,5m + __ + __ m
- Conveying capacity up to 500kg/min*)

*) Depending on material to be conveyed (kind, cutting length, dry matter content,...)

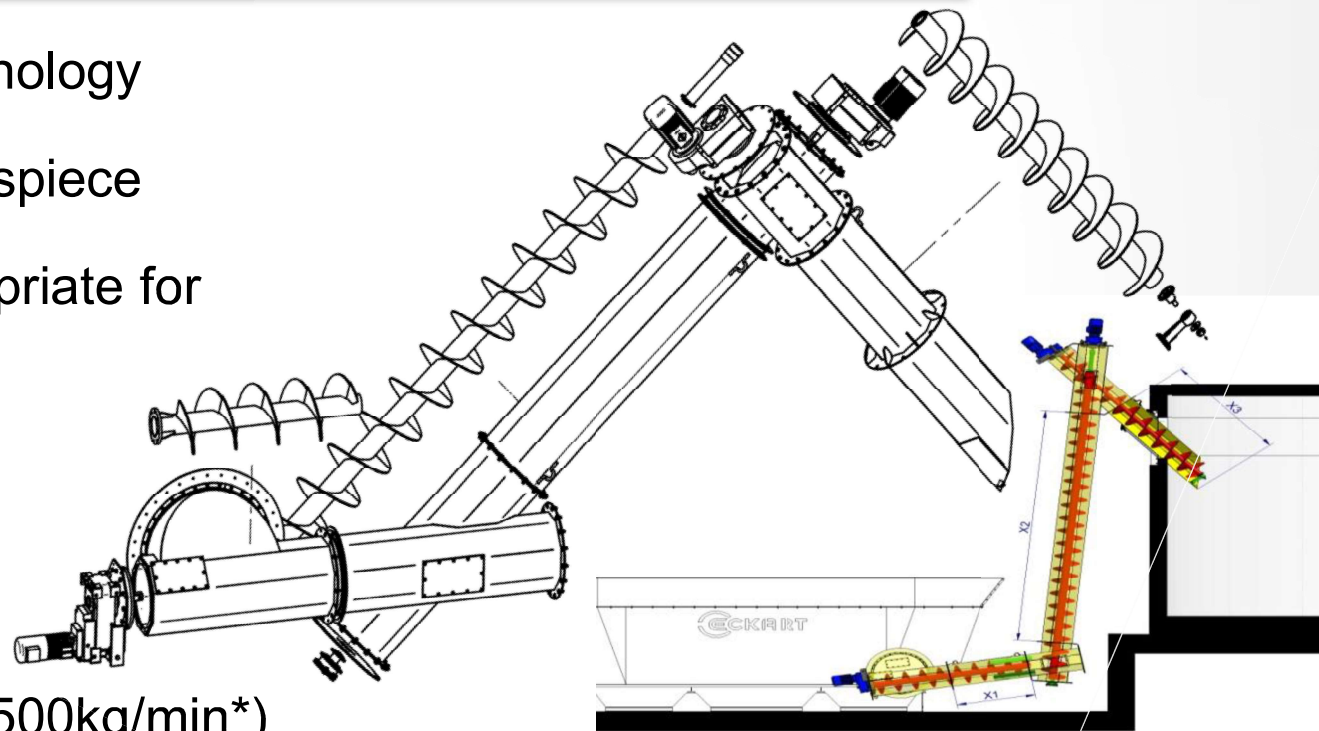


3.1. Top feeding E400 0040



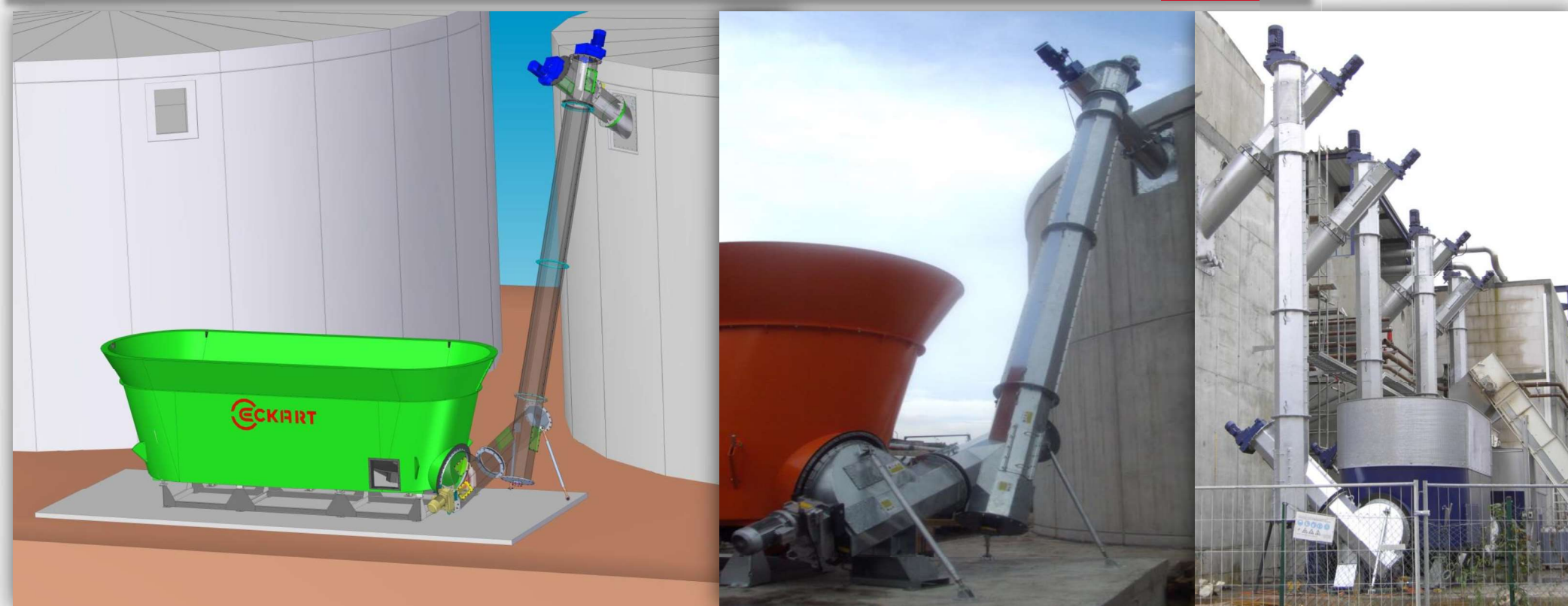
3.2. High-Rise top feeding E400 0040 +

- Standard top feeding technology
- Additional screw with crosspiece
- Additional drive unit appropriate for EX zone II (3,0 or 7,5kW)
- Customized production
1,5m + __ + __ m
- Conveying capacity up to 500kg/min*)



*) Depending on material to be conveyed (kind, cutting length, dry matter content,...)

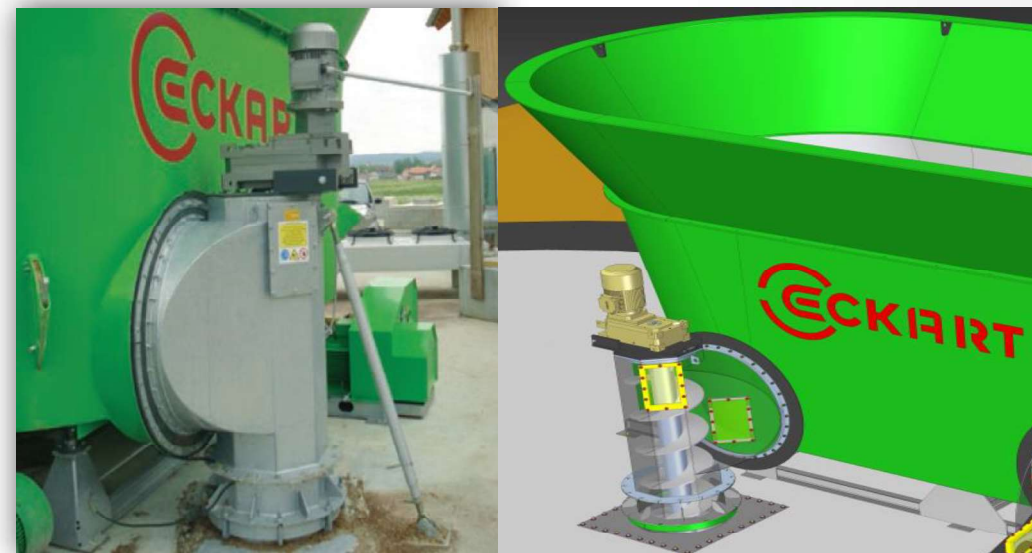
3.2. High-Rise top feeding E400 0040 +



3.3. Conveying technology



Transverse feeding

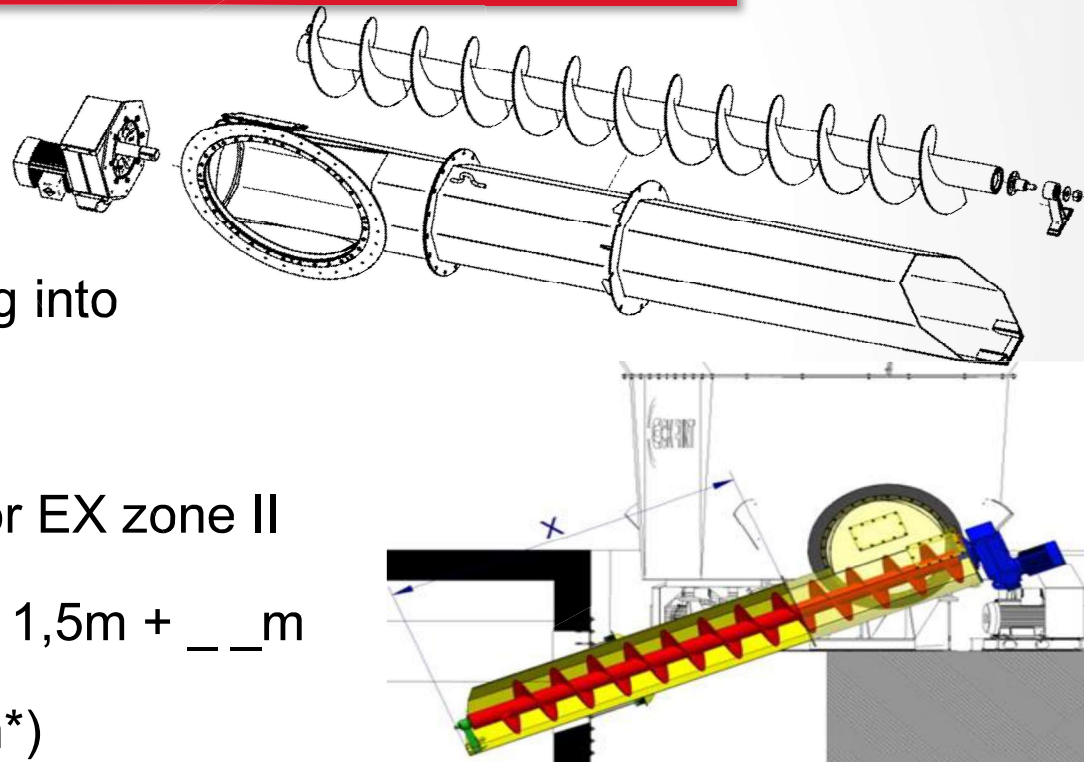


Vertical feeding

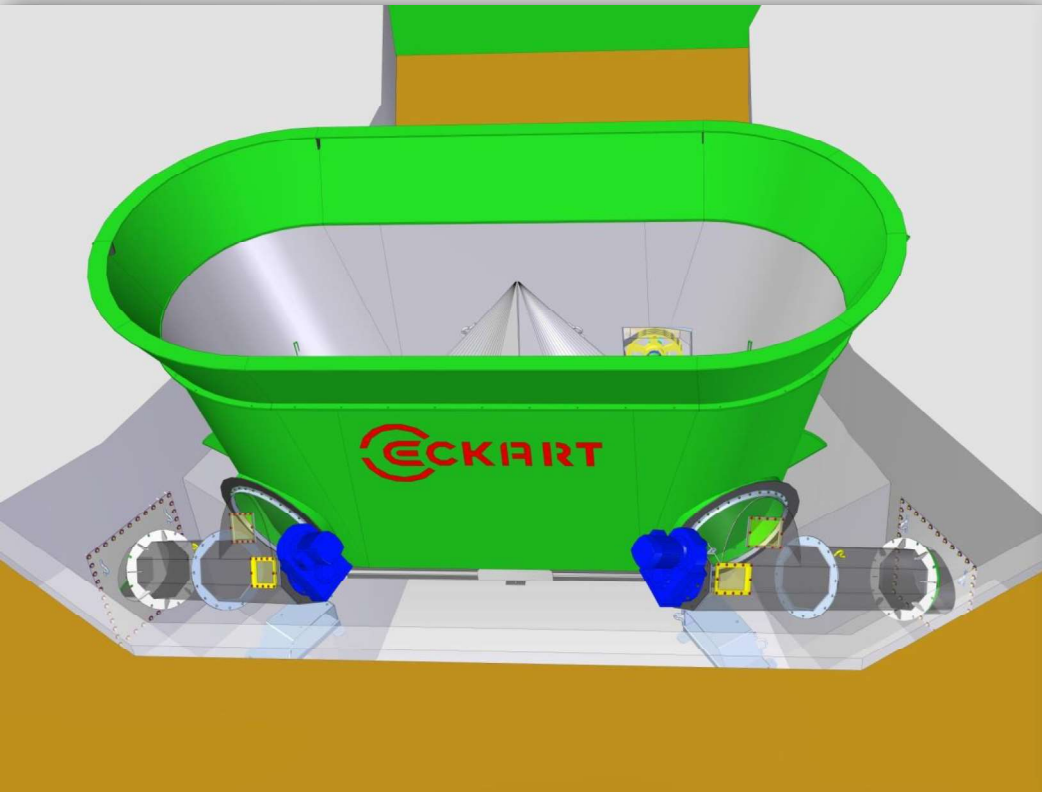
3.3. Transverse feeding E400 0039

- Conveyor screw DM500mm
- Direct connection to the container
- Directly through the fermenter ceiling into the fermentation substrate
- One 7,5 kW drive unit appropriate for EX zone II
- Customized manufacturing of screw 1,5m + __m
- Conveying capacity up to 800kg/min*)

*) Depending on material to be conveyed (kind, cutting length, dry matter content,...)



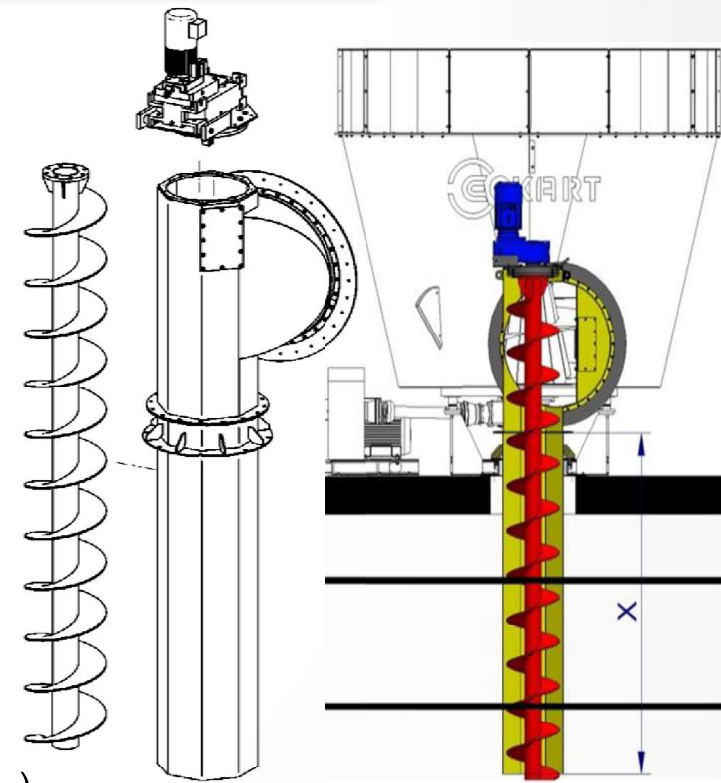
3.3. Transverse feeding E400 0039



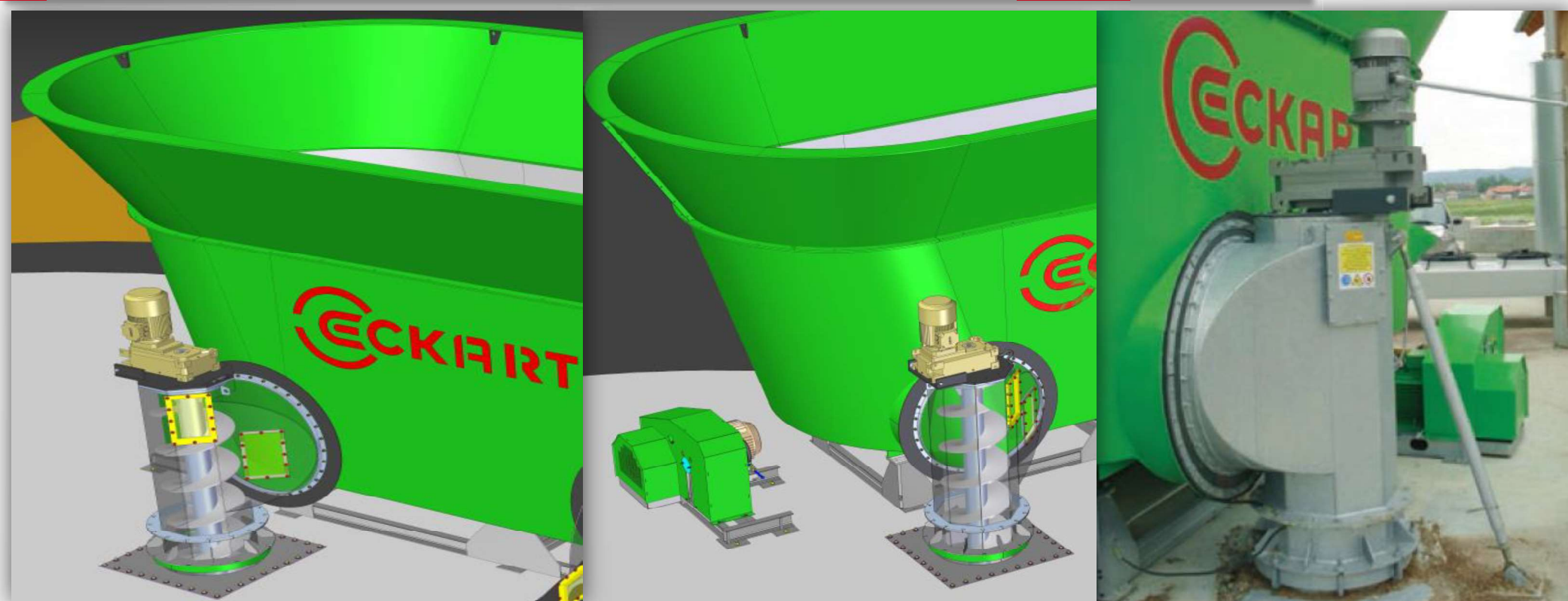
3.4. Vertical feeding E400 0038

- Conveyor screw DM500mm
- Direct connection to the container
- Directly from the top through the fermenter ceiling into the fermentation substrate
- One 7,5 kW drive unit appropriate for EX zone II
- Standard length 1,5m + 2,5m = 4m
- Conveying capacity up to 800kg/min*)

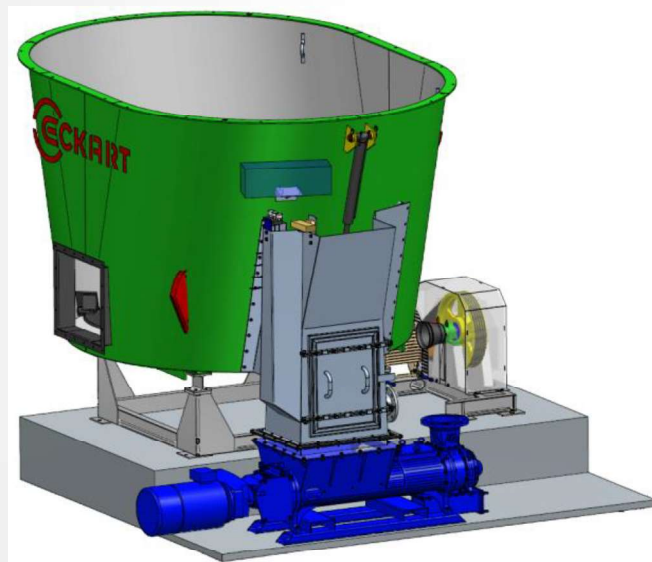
*) Depending on material to be conveyed (kind, cutting length, dry matter content,...)



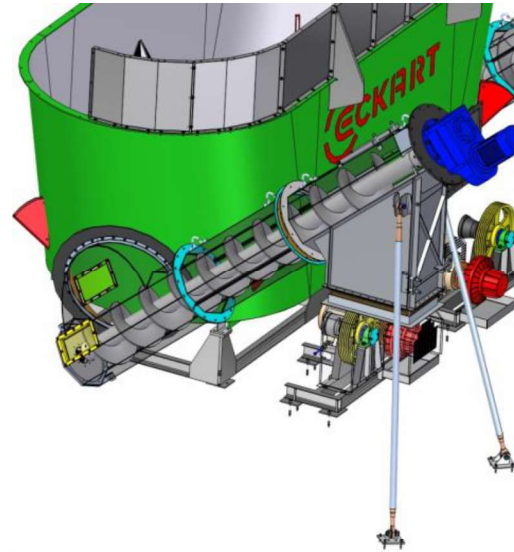
3.4. Vertical feeding E400 0038



3.5. OPTIONAL Conveying technology



Combination with pump



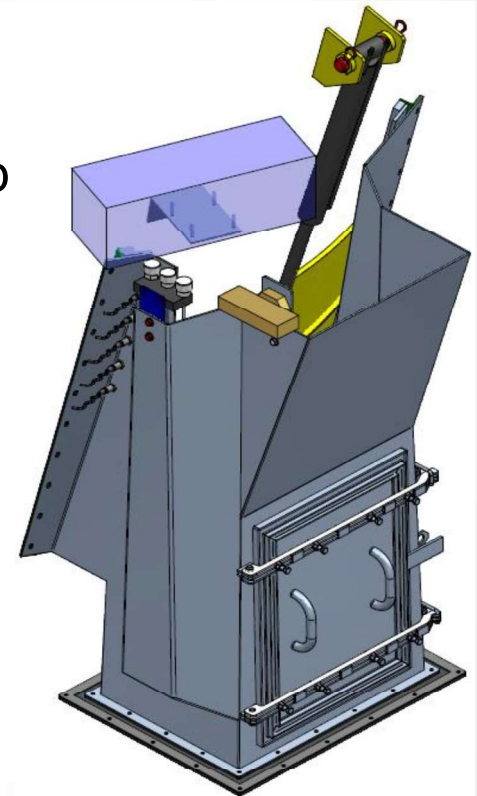
Combination with macerator



3.6. Combination with pump

- Direct connection to the container
- The feeding technology can be adapted to numerous pump systems, e.g. eccentric screw pumps and mixing pumps.
- Wide opening for service works
- Appropriate for a weighing system
- Including hydraulic gate valves, hydraulic generator and control valve for electrical connection to a SPC/PLC. *)

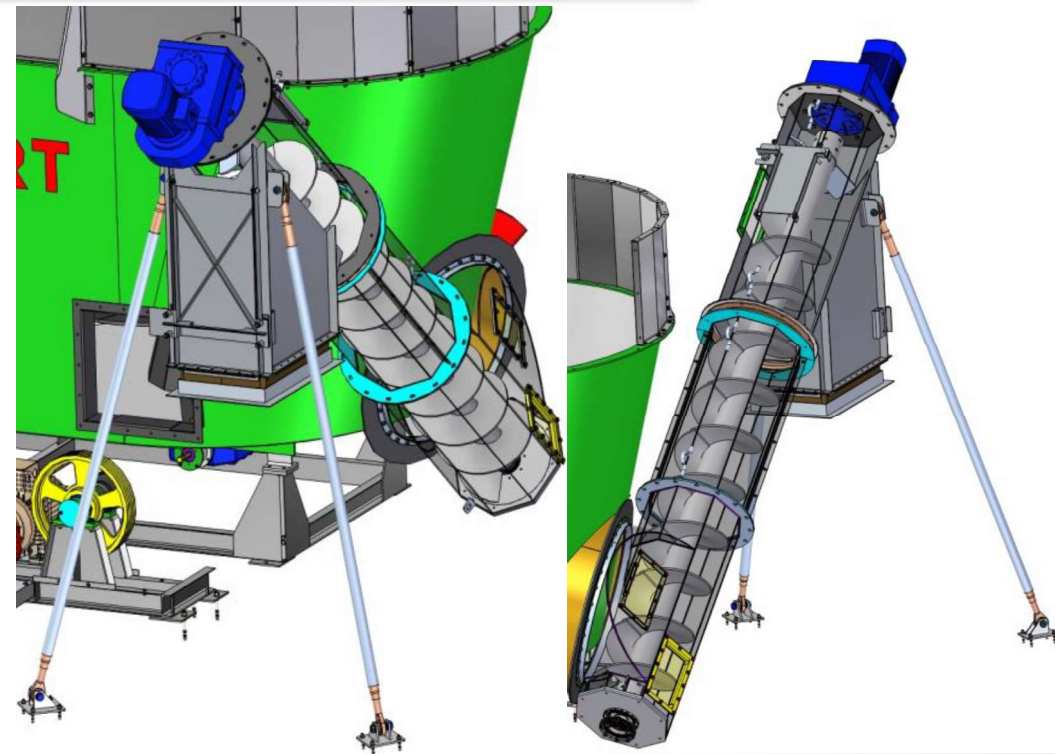
*) without electric cables and integration to SPC/PLC



3.7. Combination with macerator

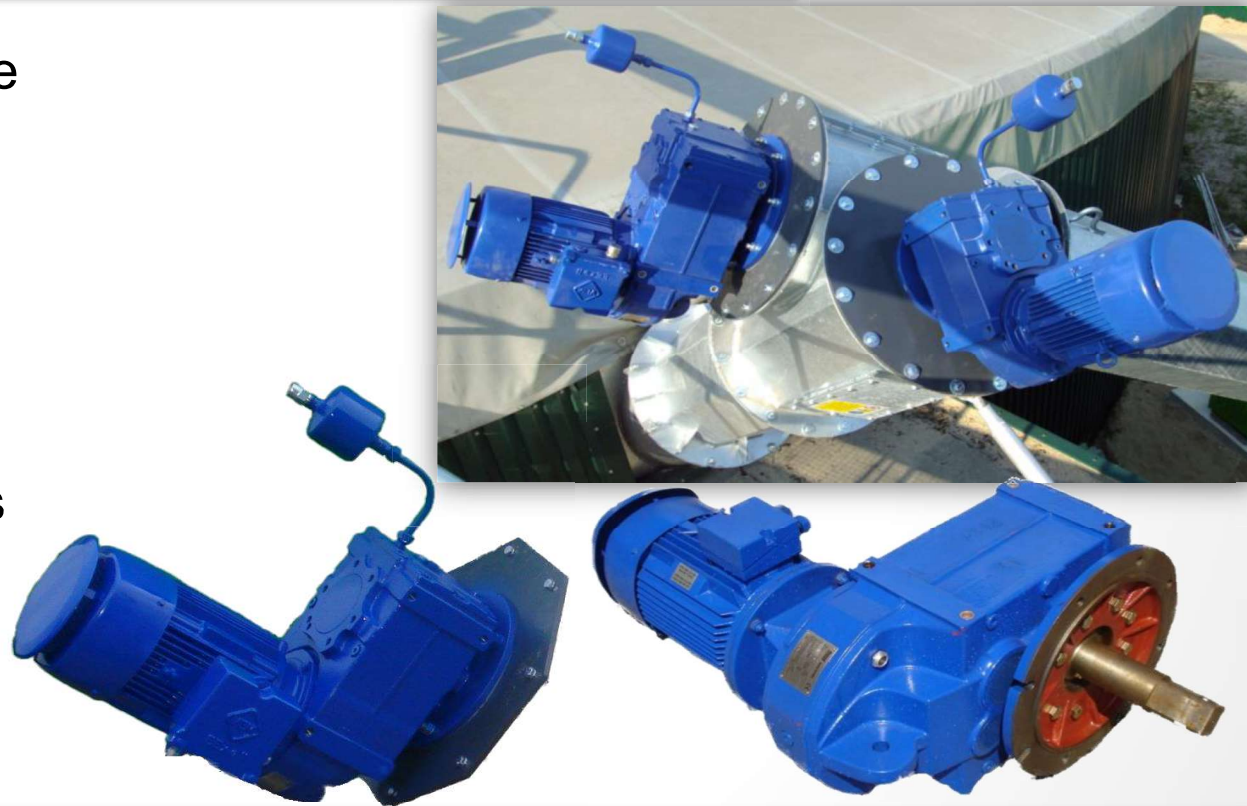
- Conveyor screw DM500mm
- Direct connection to the container
- One 7,5 kW drive unit appropriate for EX zone II
- Customized production of the conveyor system 1,5m + __m
- Conveying capacity up to 500kg/min*)

*) Depending on material to be conveyed (kind, cutting length, dry matter content,...)



3.8. Drive units

- Long elastic shaft with square
- Sufficiently dimensioned
- No additional lubrication line
- Ease of maintenance
- Different speed combinations
- ATEX Ex-Zone II
- Motor cover



3.9. Advantages our Conveying technology

- The large auger diameter (Ø500mm) enables quick transport of the silage and prevents unnecessary long running time. The result is a very low overall power
- We fit powerful drive motors providing an operational reserve to cope with tougher difficult materials
- OPTIONAL - UHMW-PE screw conveyors
 - Excellent chemical resistance to acids and alkalis
 - Excellent slide and wear characteristics
 - Weight saving of up to 50 %



5. High performance polyethylene linings

- No corrosion – high chemical resistance
- High wear resistance – incredibly long service life
- Material being conveyed does not stick
- Warranty on execution and service life of wear plates
- Extremely low-friction – energy saving
- No freezing in winter – easy to clean
- No extensive pretreatment required on the container



6. Material thickness Base container

Component	Material	Thickness	Note
Container bottom	S355J2G3	20mm	(standard)
Container side wall	S355J2G3	8mm	(standard)
Top part	S235JRG2	6mm	(standard)
Mixing augers	S355J2G3	15mm	(standard)
Polyethylene lining	high-performance polyethylene on UHMW-PE basis produced	12mm	(surcharge)

7. Material thickness Conveying technology

Component	Material	Thickness	Note
Octagon tube	S235JRG2	5mm	(standard)
Transfer point	S235JRG2	5mm	(standard)
Auger blade	S355J2G3	12mm	(standard)
Inner tube	S235JRG2	10mm	(standard)
Octagon tube	S355J2G3	8mm	(surcharge)
Transfer point	S355J2G3	8mm	(surcharge)
Polyethylene lining	high-performance polyethylene on UHMW-PE basis produced	12mm	(surcharge)

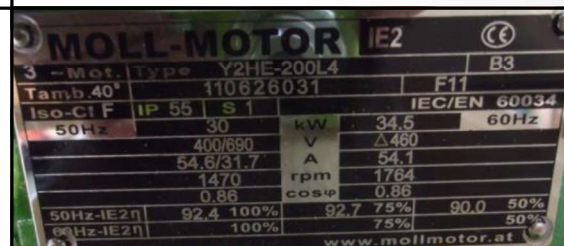
8. Technical Data

BIODOS UNO	Top part m ³		Standard equipment of base container			
	Base container	3	8	Base container of wear-resistant steel, 6 chopping blades per taper screw, sturdy, hot-galvanized base frame, one 30 kW driving unit for each taper screw with power reserves, mechanical counter-blades.		
Filling volume m ³	12	15	20			
Length m	3.70	4.05	4.55			
Width m	2.60	2.95	3.50			
Height m	2.75	3.15	3.60			
Weight empty kg	3 400	3 800	4 200			
Counter-blades	2	2	2			
Driving power kW	1 x 30	1 x 30	1 x 30			

BIODOS DUO	Top part m ³				
	Base container	7	12	17	27
Filling volume m ³	23	30	35	40	50
Length m	6.15	6.65	6.95	7.25	7.70
Width m	2.60	3.10	3.35	3.65	4.15
Height m	2.75	3.25	3.50	3.75	4.15
Weight empty kg	6 300	7 100	7 400	7 700	8 200
Counter-blades	4	4	4	4	4
Driving power kW	2 x 30	2 x 30	2 x 30	2 x 30	2 x 30

BIODOS TRIO	Top part m ³						
	Base container	17	27	37	47	57	67
Filling volume m ³	33	50	60	70	80	90	100
Length m	8.60	9.40	9.75	10.10	10.40	10.40	10.40
Width m	2.60	3.35	3.70	4.05	4.35	4.35	4.35
Height m	2.75	3.50	3.80	4.10	4.35	4.65	4.95
Weight empty kg	9 500	10 600	11 100	11 600	12 000	12 500	13 000
Counter-blades	4	4	4	4	4	4	4
Driving power kW	3 x 30	3 x 30	3 x 30	3 x 30	3 x 30	3 x 30	3 x 30

9. Electrical power request

Component / Unit	Electrical power	Electronics	Type plate
BIODOS Base container UNO DUO TRIO	<u>1</u> x 18,5kW <u>2</u> x 30kW <u>3</u> x 30kW	Control with soft starter minimum CLASS20	
Top conveyor screw	1 x 7,5kW from L=9m 1 x 11kW	Control with soft starter minimum CLASS20	
Digester conveyor screw	1 x 7,5kW	Control with soft starter minimum CLASS20	
Weighing System	12 - 24V	Output signal for SPC 4...20mA (0 - 80.000kg)	See operating instructions WE2110