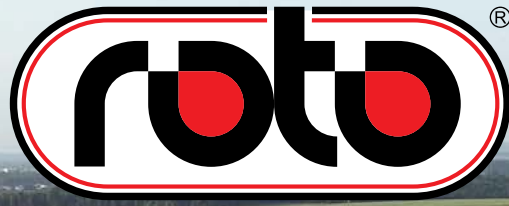


# COMPONENTS FOR AGRICULTURAL MACHINERY



**Tanks for sprayers | Fuel tanks | AdBlue Tanks | Mudguards  
Roofs | Hoppers for sprayers | Other components**



*Your* **CUSTOM ROTATIONAL MOULDING**



## ABOUT US

**ROTO** is a global producer of high-quality rotomoulded products from polyethylene, polypropylene, polyamide, XPE and ABS with production factories in four European countries.

**ROTO** is a family business company that is presented on the market as a successful manufacturer and reliable business partner for more than 45 years.

**ROTO** is a leading rotational moulder in Europe with over 4000 different products in range and size up to 70.000 l. These products are exported in more than 50 countries all over the world.

**ROTO** performs all stages of the business process, from product development, product analysing, in house tool production, prototype manufacturing, serial production, marketing & sales, distribution and after – sale service. High quality technical products are made of latest production technologies and strong R&D department.

### COMPANY MISSION

The company's mission is to provide and offer high-quality, multifunctional, environmentally safe products that are distinguished by modern design and greater added value. Partners achieve satisfaction with quality products and services, in short delivery times and competitive prices.

Roto certified and patented many innovative products. We have received numerous national and international awards, including:

- a sign of quality in construction, 2009 and 2010,
- regional recognition for the rapid development of the company, 2012,
- innovation award for wastewater treatment plant, 2011, 2012 and 2016,
- innovation award for sea kayak Buran 488, 2017,
- national innovation award for pontoon, 2018,
- award for quality from Chamber of Commerce and Industry of Slovenia, 2018.

### ROTO HAS THE FOLLOWING CERTIFICATIONS:

Certification of Quality ISO 9001:2015

Environmental Certificate ISO 14001:2015



# YOUR CUSTOM ROTATIONAL MOULDING



We offer you a complete  
*IN HOUSE SOLUTION,*  
from idea to serial  
production!

***"Roto – professionals for innovative technical solutions made of polymer to suit your needs!"***

**DEVELOPMENT PROCESS – from as little as 8 weeks!**

**01**

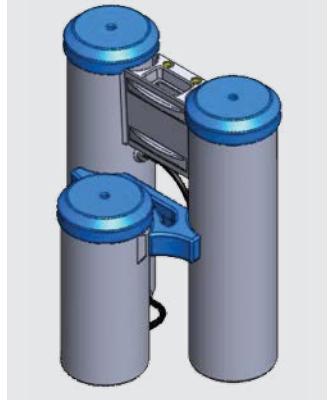
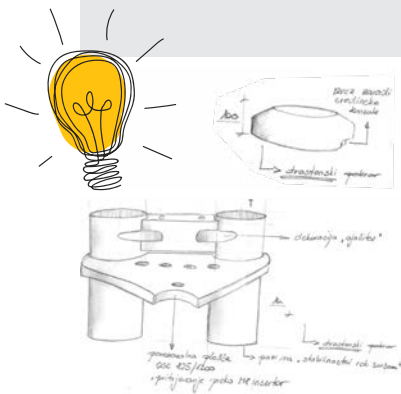
**Your  
IDEA**

**02**

**3D model  
design**

**03**

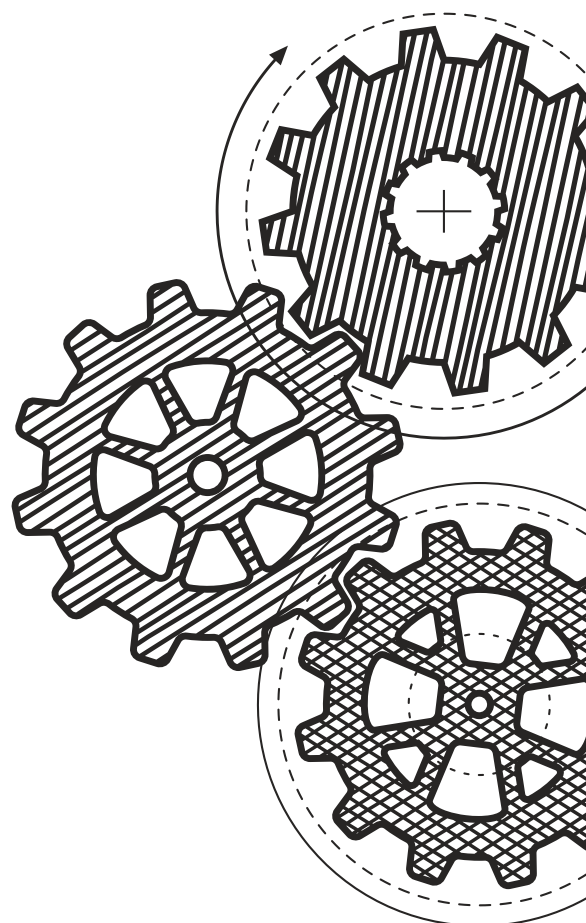
**Mould  
manufacturing  
process**



# WHAT IS IMPORTANT

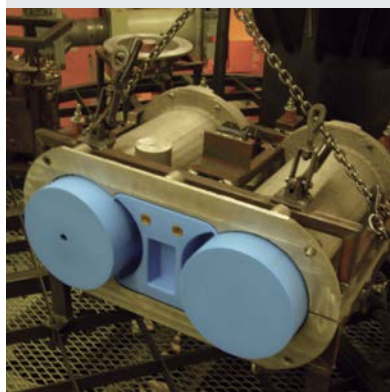
From your idea, with a sketch, the production of a 3D model, a prototype of the product (if needed) and tool manufacturing to a sample piece and then the serial production in just 8 weeks. Our advantage: the whole development process takes place in one location, the headquarters of our company.

Your CUSTOM moulding is Roto's key competence. Throughout the development process, we work closely together with our customers, giving them support with the design, technical solutions, and cost reduction, in this way we strive for our customers' goal: to have a product that is useful, technically perfect and fairly priced.



## 04

**First sample  
production**



## 05

**Serial  
production**

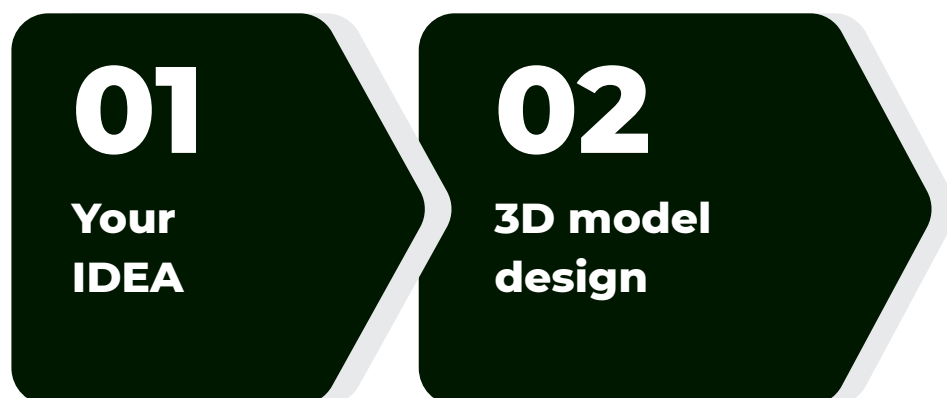


## 06

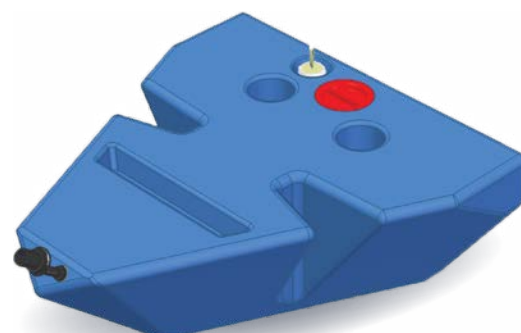
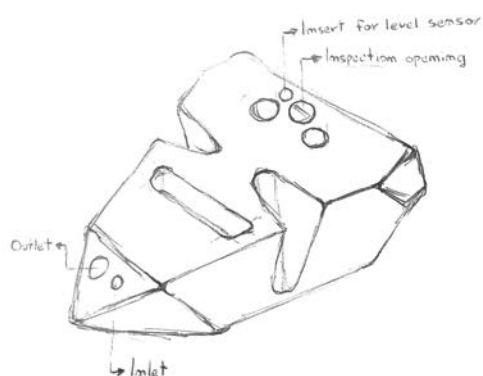
**Quality  
control**



# DEVELOPMENT PROCESS



***From your idea, sketch, 3D model, tool ... to the final product!  
Whole development process in 8 weeks!***



ROTO's advantage is certainly its own mould development and production. The benefit is that all the flow of information, together with the necessary and significant data is exchanged only between our customer and our development. Our staff, that is professionally qualified in technical areas, is always available to help you. If required, group meetings can be organised (it is possible to hold a videoconference), so that the desired goal is attained in the shortest time possible.

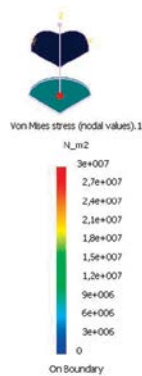
Licensed user of software:





**ROTO's research and development center:**

The goal of our research & development center is to enhance and fortify basic research. This is the place where we explore and develop innovative solutions across multiple fields.



**The scope of services of our development:**

- 3D product design,
- FEA analyses,
- FMEA – risk assessment,
- tooling feasibility study,
- assembling drawing,
- prototyping.

# TOOL WORKSHOP

## 03

**Mould  
manufacturing  
process**

## 04

**First sample  
production**

**Product quality** is highly dependent on the **mould quality**, therefore moulds are manufactured according to the latest technology and are periodically maintained in our workshop. ROTO can also apply changes to existing moulds (e.g. new revision of product required, changing inserts of the mould).

**We manufacture moulds suitable for rotomoulding with three different technologies:**

- sheet metal,
- cast aluminium, using 3D sand printed models,
- milled block aluminium.

Mould surfaces are finished according to the customers requirements (sand blasted or polished).



Examples of tool surfaces

ROTO is using latest modern technology to build the cast aluminium moulds, using 3D sand printer. This technology allows us to build the mould in the highest quality in shorter time.





3D sand printer



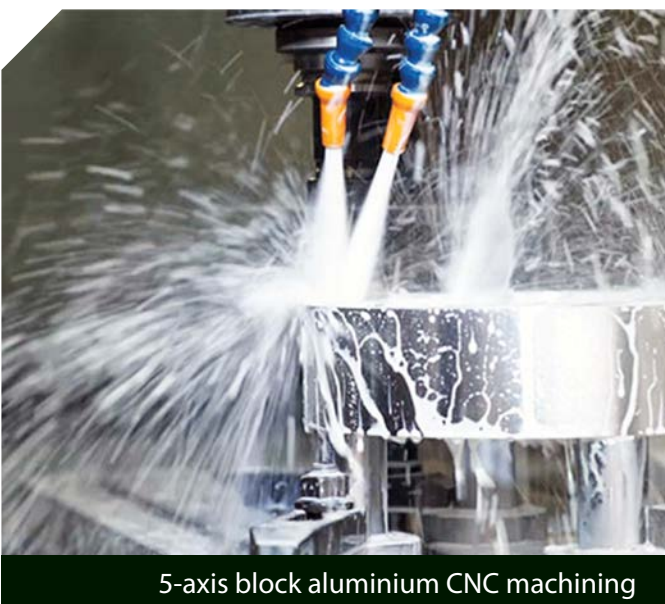
3D printed block assembling



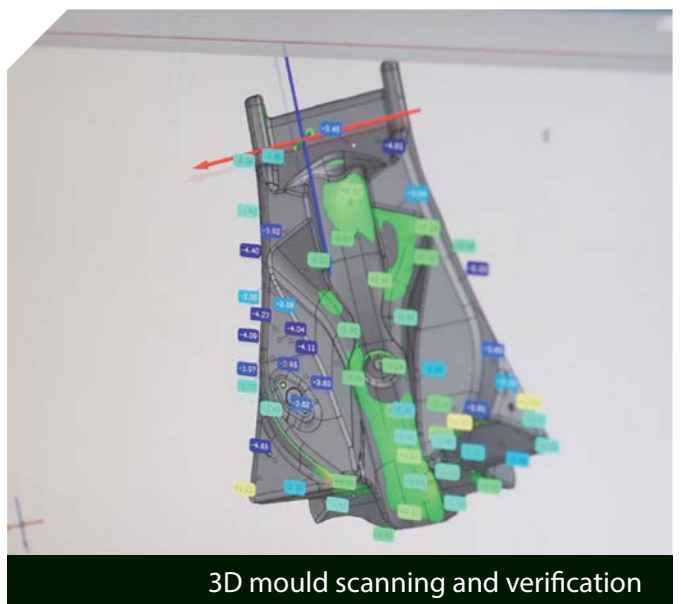
Aluminium casting



Tool assembly/finishing



5-axis block aluminium CNC machining



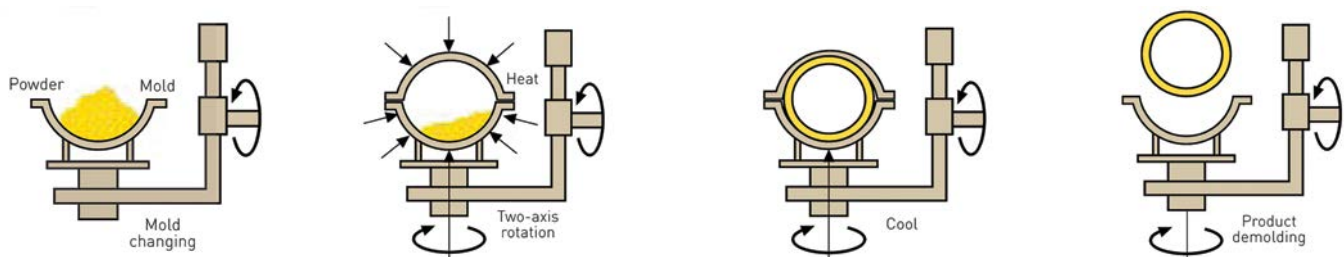
3D mould scanning and verification

# PRODUCTION PROCESS

## 05

### Serial production

## Rotational moulding



Rotational moulding involves a heated hollow mould which is filled with a charge or shot weight of material. It is then slowly rotated (usually biaxial), causing the melting material to disperse and stick to the walls of the mould. In order to maintain an even thickness throughout the part, the mould continues to rotate at all times during the heating phase to avoid sagging or deformation also during the cooling phase.

Each product that is manufactured within the rotomoulding process can be made from a wide range of colours or/ and materials. End products can be UV resistant, resistant to most chemicals (depending on material type), multi layer and also in-mould features (threads, metal inserts, mould in graphics (MIG) ...) can be added to this product.

At ROTO Company, besides rotational moulding, our principal manufacturing process, we also carry out the following manufacturing procedures: **Thermoforming, Welding / Manufacturing products of PE and PP boards, Filament winding of composites.**

We use the following materials for various applications: **Polyethylene (LLDPE, XPE), Polypropylene (PP), Polyamide (PA6, PA12).** All these materials are 100 % recyclable (except for XPE).



**We use various rotational moulding machinery:**

- Carrousel rotational moulding machinery
- Clam Shell rotational moulding machinery
- Electric heated rotational moulding machinery
- Rock & Roll rotational moulding machinery



**ROTO rotational moulding lab machine**

Our laboratory rotational moulding machine used to perform tests and product development.



# PRODUCT ASSEMBLING AND QUALITY CONTROL

## 06

### Quality control

#### Every product receives the following quality control:

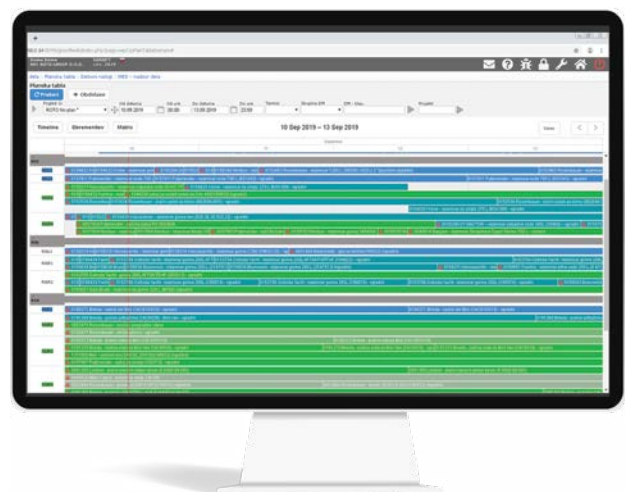
- control inspection as per customer requirements,
- dimensional control and reporting of critical characteristics,
- under water leakage testing and reporting,
- wall thickness control (ultrasonic and magnetic ball),
- functionality control.

Our customers prefer a product that can be easily installed into final machine, without spending extra assembly work (level gauges, connectors, heaters, reducing connectors, inserts, seals, brackets, covers).

After installing the built-in parts, we carry out 100% quality control, which includes pressure test in a pool under the water, inflated with air at 0.3 bar for 5 minutes.

#### All data is saved to MES system

Described control procedure is digitally recorded and saved to MES (manufacturing execution system). Our MES system connects, monitors and controls complex manufacturing systems and data flows on the factory floor. The main goal of an MES is to ensure effective execution of the manufacturing operations and improve production output.



Precise production planning



Quality control



Wall thickness control



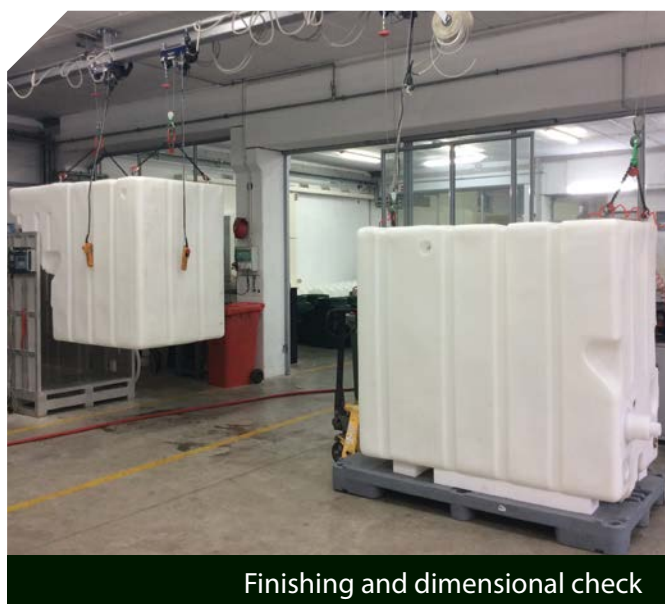
Assembling process



5 axis CNC routing



Leaking testing process



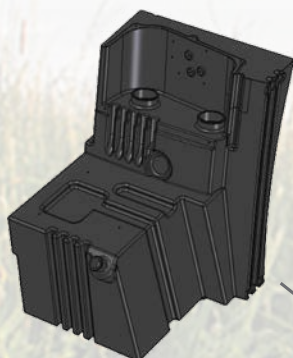
Finishing and dimensional check

# CUSTOM MADE **TANKS** FOR AGRICULTURE

DIESEL TANK



AdBlue TANK



SILAGE TANK



# & COMPONENTS MACHINERY



MUD GUARD



LAMP HOLDER

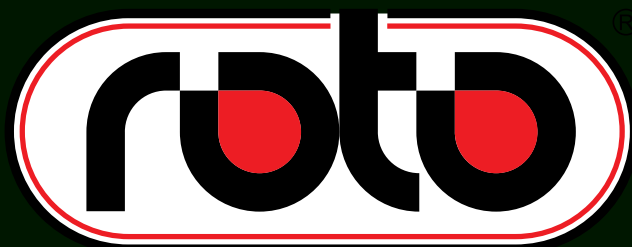


MUD FLAP







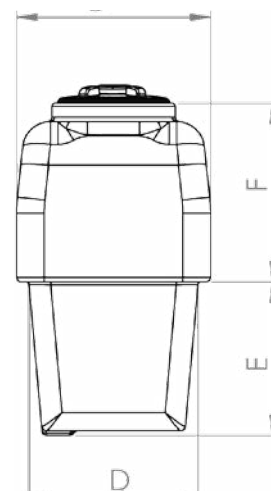
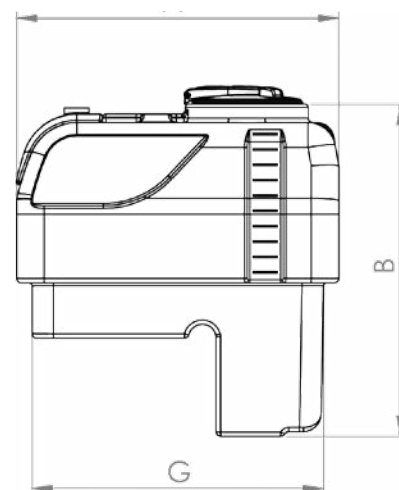


**STANDARD**  
**SPRAYER TANKS**  
**& OTHER**  
**AGRI PRODUCTS**

# MOUNTED TANKS



**type eol** – 220 l, 330 l, 440 l, 550 l, 660 l – all on the same frame



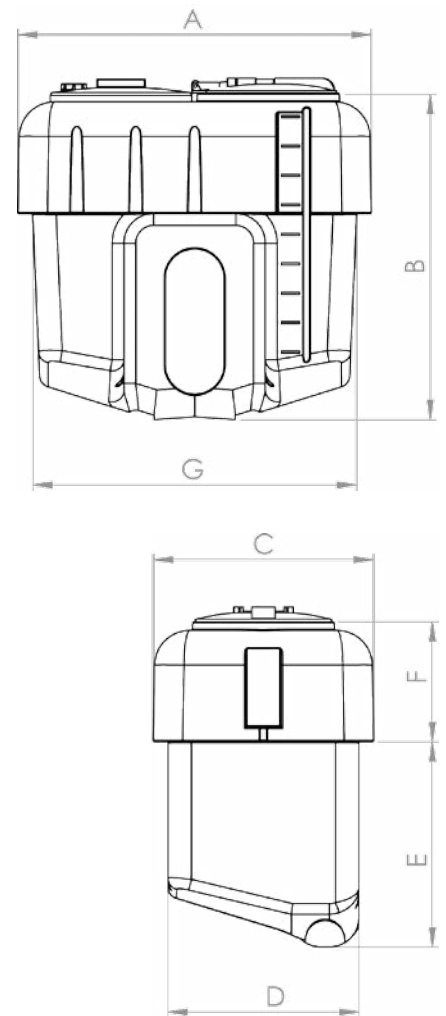
Capacity [l]	Art. Nr.	A	B	C	D	E	F	G
220	7101	1050	830	630	550	500	330	950
330	7102	1050	900	630	550	500	400	950
440	7103	1050	1050	630	550	500	550	950
550	7106	1050	1230	630	550	500	730	950
660	7107	1250	1230	630	550	500	730	950
15	7139	Built-in hand washing tank						
40	7109	Circuit washing tank (optional)						

A, B, C, D, E, F & G – size in millimeters

# MOUNTED TANKS



## type *synergy* – 400/40 l, 600/60 l



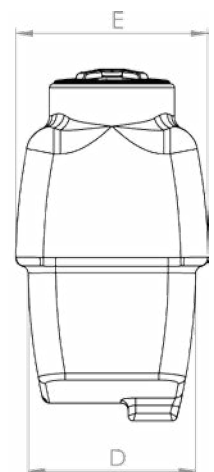
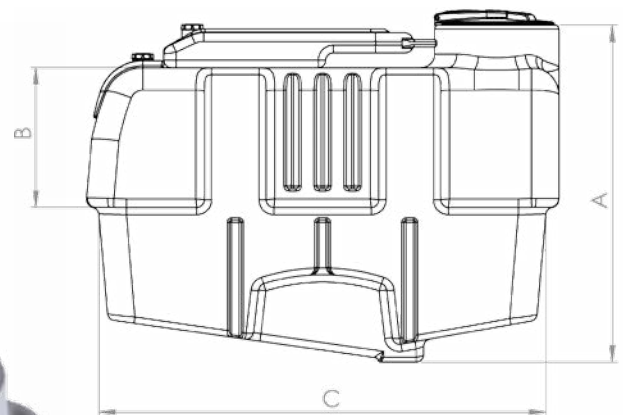
Capacity [l]	Art. Nr.	A	B	C	D	E	F	G
400/40	9351	1200	1090	750	650	700	390	1100
600/60	9352	1200	1280	750	650	700	580	1100
15	9350	Built-in hand washing tank						

A, B, C, D, E, F & G – size in millimeters

# MOUNTED TANKS



## type **mantra** – 600 l, 800 l, 1000 l



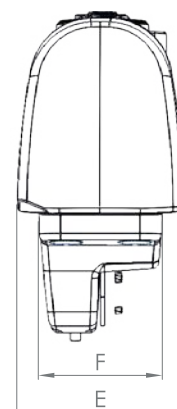
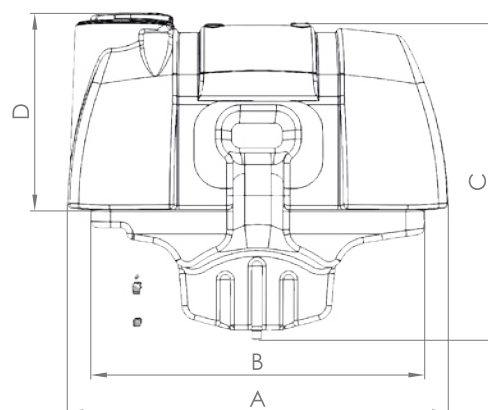
Capacity [l]	Art. Nr.	A	B	C	D	E
600	7509	1120	620	1380	490	570
800	7502	1250	320	1800	660	770
1000	7052	1350	420	1800	660	770
15	7139	Built-in hand washing tank				
60	7584	Circuit washing tank				
80	7582	Circuit washing tank				

A, B, C, D & E – size in millimeters

# MOUNTED TANKS



## type *adria* – 800 l, 1000 l, 1200 l



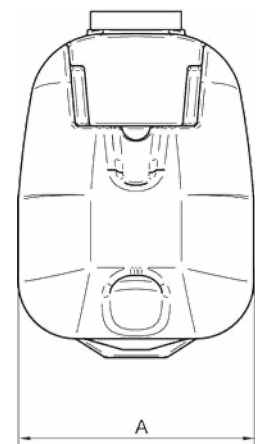
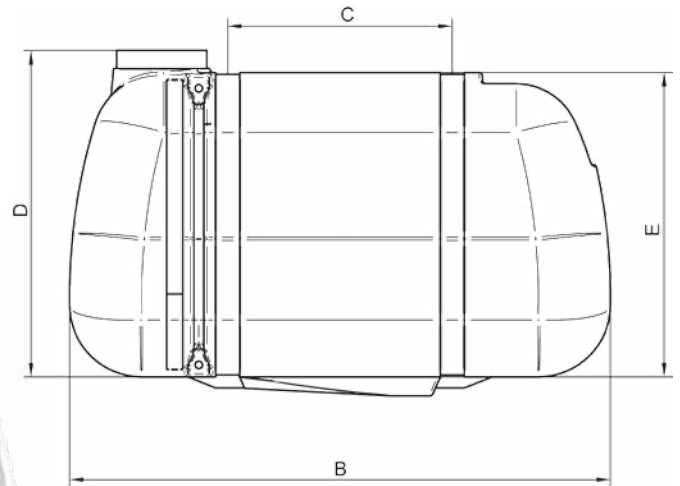
Capacity [l]	Art. Nr.	A	B	C	D	E	F
800	9362	1900	1650	1365	750	785	560
1000	9363	1900	1650	1535	920	785	560
1200	9364	1900	1650	1735	1150	785	560
15	9365	Built-in hand washing tank					
30	9360	Mixer Adria					
120	9361	Circuit washing tank					
-	9366	Cover Adria					

A, B, C, D, E & F – size in millimeters

# MOUNTED TANKS



## type **eco** – 350 l, 450 l, 660 l



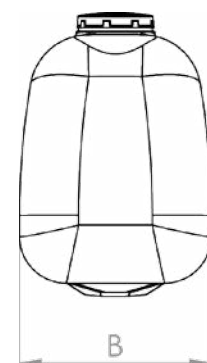
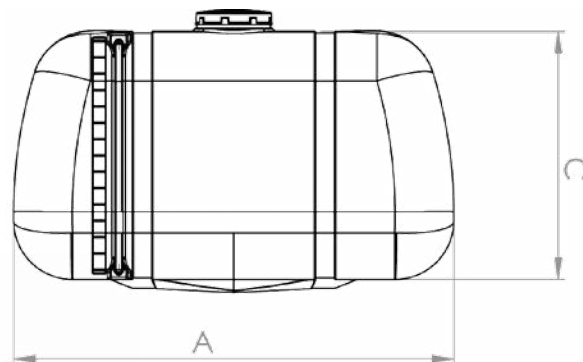
Capacity [l]	Art. Nr.	A	B	C	D	E
350	8901	585	1350	560	655	600
450	8900	585	1350	560	815	760
660	8920	585	1600	560	977	900
15	8903	Built-in hand washing tank				
40	8902	Circuit washing tank for 350 and 450 l				
60	8902	Circuit washing tank for 660 l				

A, B, C, D & E – size in millimeters

# MOUNTED TANKS



## type **metalna** – 220 l, 330 l, 440 l, 660 l



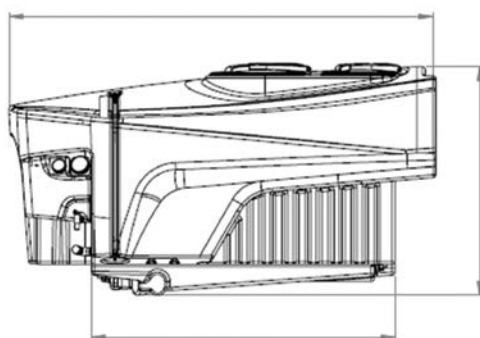
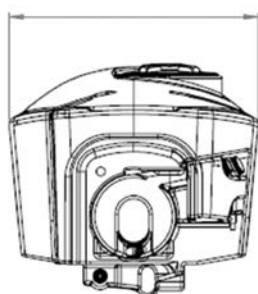
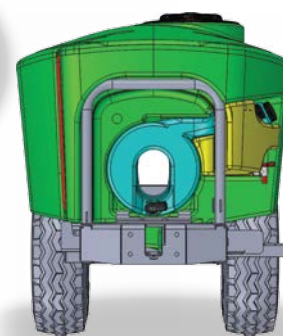
Capacity [l]	Art. Nr.	A	B	C
220	7508	1000	500	600
330	9300	1200	600	600
440	7104	1200	600	700
660	7683	1500	600	830

A, B & C – size in millimeters

# TRAILED TANKS



## type *evolution* – 1000 l, 1500 l, 2000 l



Capacity [l]	Art. Nr.	A	B	C	D
1000	69050	1190	2040	1090	1450
1500	7500	1282	2368	1089	1781
2000	17507	1400	2450	1210	-

A, B, C & D – size in millimeters



# FOR SPREADERS

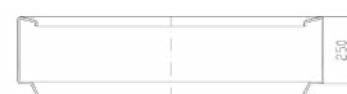


## *hoppers* – 180 l, 300 l + 200 l + 100 l, 450 l, 500 l

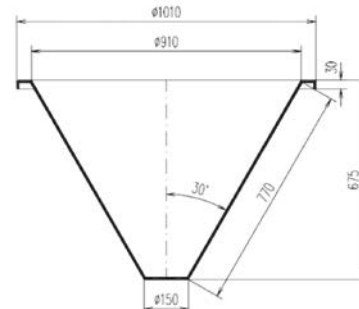
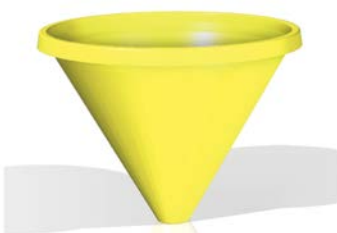
Art. Nr.	Type
7291	Extension 100 l



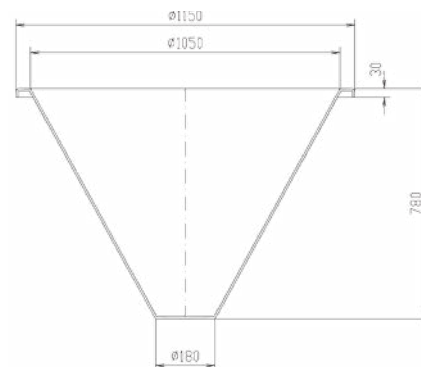
Art. Nr.	Type
7293	Extension 200 l



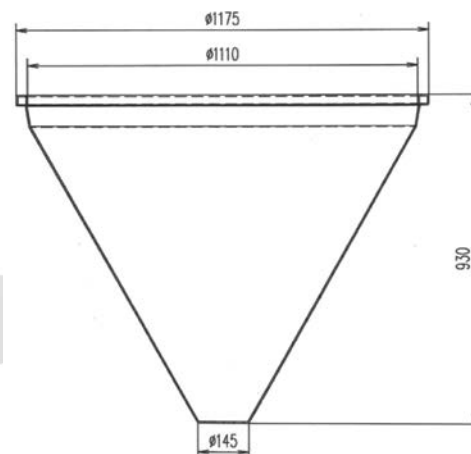
Art. Nr.	Type
7712	180 l



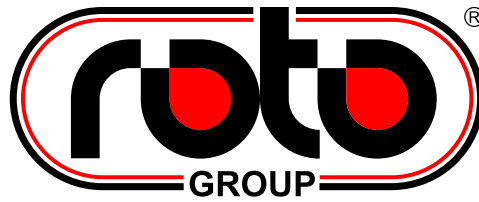
Art. Nr.	Type
7296	300 l



Art. Nr.	Type
7713	500 l



# OUR **FACTORIES**



**Slovenija – Černelavci | Slovenia**



**Slovenija – Puconci | Slovenia**



**Hrvaška – Pregrada | Croatia**



**Hrvaška – Ivanić-Grad | Croatia**



**Srbija | Serbia**



**Makedonija | Macedonia**



*Your* **CUSTOM ROTATIONAL MOULDING**



**HEADQUARTERS:**

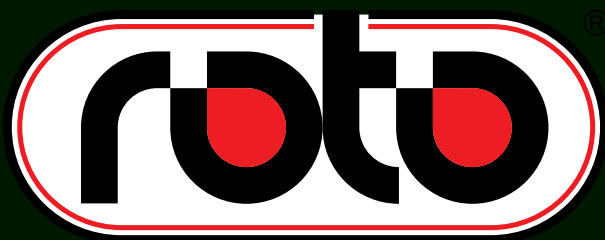
**ROTO d.o.o.**, Gorička 150, Črnelavci

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