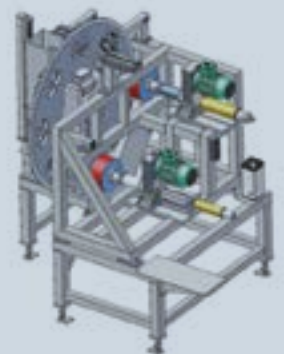


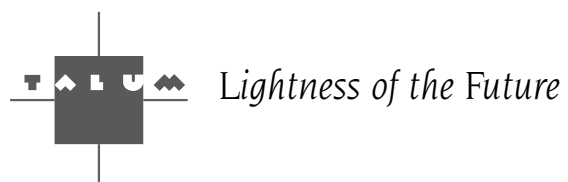
CASTINGS TREATMENT AND CASTING

AUTOMATION



DEBURRING AND MECHANICAL TREATMENT OF
CASTINGS, CASTING MACHINE, CASTING CELL

TALUM • BU SERVICE AND ENGINEERING



CASTINGS DEBURRING - AUTOMATION



Material (Castings)

- Gray cast iron
- Aluminium

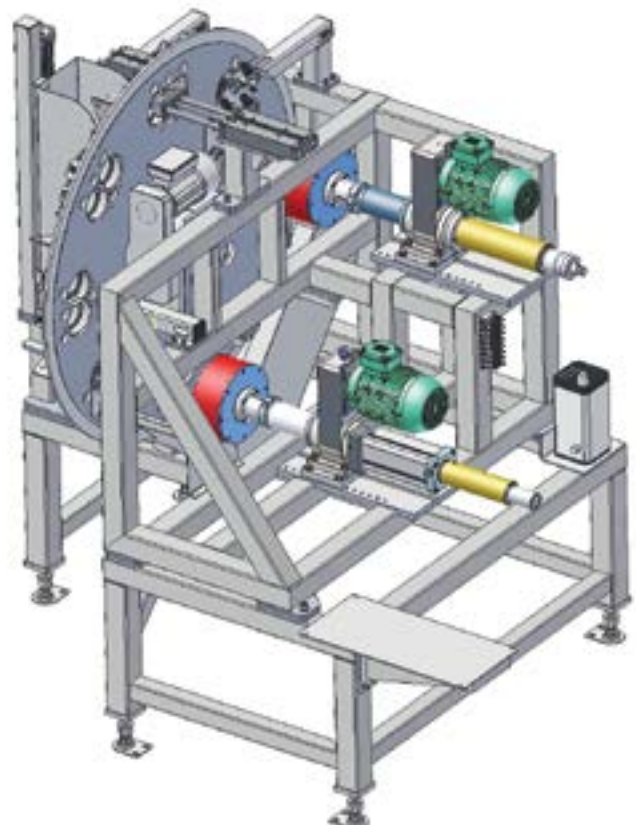
Mechanical Treatment

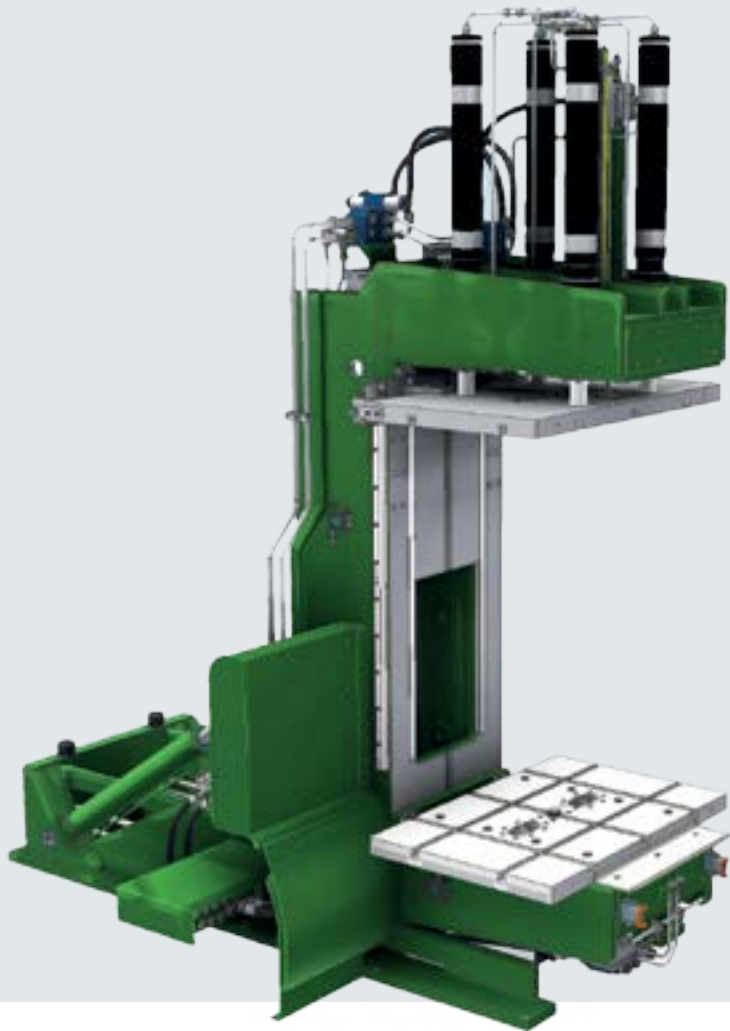
- Sawing
- Milling
- Grinding
- Drilling



AUTOMATION - MECHANICAL TREATMENT OF CASTINGS

- High efficiency - short cycles
- Large volumes (ca. 500.000 pcs/ year - depends on the complexity of the treatment)
- Cost efficiency
- 100 % inspection of the treatment





ADVANTAGES

Machine tilting control across the whole path (angle $90^\circ + 10^\circ$). Speed adjustment for each movement separately.

Casting cycle easy programmable.

Easy mould changing.

Totally integrated automation control including parameters, process visualization and fault detection.



TILTABLE GRAVITY CASTING MACHINE

Controlled machine tilt:

- Incline angle - $10^\circ + 90^\circ$ (100°)
- Machine tilting control across the whole path (angle $90^\circ + 10^\circ$)
- Proportional hydraulic (Rexroth, Parker)

Easy programming:

- Fully open cycle programming - the sequence of steps can be determined freely
- Unlimited number of programs
- Archiving programs
- Transfer of programs between machines
- Siemens OP - TP 1200

Rapid changing of moulds:

- Monitoring mould position with linear sensor
- Quick couplers for air and gas integrated in the machine

Advanced control:

- Mould temperature control - gas regulation
- Melt temperature control - furnace regulation
- Cooling regulation

Energy efficiency

- Stand by function - the pump is idle during solidification

Technical data of the machine:

Machine height 3500 mm
 Machine length 3850 mm
 Machine width 1650 mm

Table size: 1200×800 mm
 Opening height: 800 mm
 Operation pressure: 140 bar
 Electro motor 17 - 22 kW
 Siemens OP - TP 1200
 Mould closing force: 300 kN



ROBOTIC CASTING CELL

Automation of the tiltable gravity and gravity casting:

- One robot
- Two Casting machines
- Automated melt and castings handling

THE CASTING CELL CONSTRUCTION PROCESS:

Design and modelling

- Risk assessment
- 3D production model
- Project documentation
- Technological solutions

Machine manufacturing

- Manufacturing of mechanical components
- Hydraulics and pneumatics
- Special hold of the robotic arm
- Electrical cabinets
- Automation and robotization

Machine installation and start-up

- Casting machine installation
- Robot installation
- Energy supply connection
- Safety elements
- Commissioning and start-up
- Integration with other production operations

TALUM • BU SERVICE AND ENGINEERING

TALUM d.d. Kidričevo BU SERVICE AND ENGINEERING

Tovarniška cesta 10
2325 Kidričevo
Slovenia, EU
Phone: +386 2 7995 701
servis.inzeniring@talum.si

SALES

Domen Kordež
Phone: +386 2 7995 147
Mobile: +386 51 677 755
domen.kordez@talum.si

