

R. Scheuchl GmbH

process engineering | environmental protection | custom machinery



Casting
Cooling
Decoring
Sawing
Deburring | Milling
Cleaning
Arc wire coating
Inorganic sand reclamation
Lostfoam



Your one source
foundry technology partner

www.scheuchl.de

COMPREHENSIVE
KNOW-HOW,
EXPERIENCE
OF MANY YEARS
AND LATEST
PRODUCTION
METHODS

FOR HIGHEST
PRODUCT QUALITY
AND CUSTOMER
SATISFACTION

R. Scheuchl GmbH



EXPERIENCE OF MORE
THAN FIVE DECADES

As a small and medium-sized enterprise we develop, plan and provide customized solutions for the foundry, the process and energy technology.

The corner stone for this was laid by Richard Scheuchl in the year 1962. A close symbiosis of engineering competence and production know-how has been built ever since.

We are your competent partner – from the individual consulting service over the phase of design up to the assembly at site and an intensive after-sales-service.

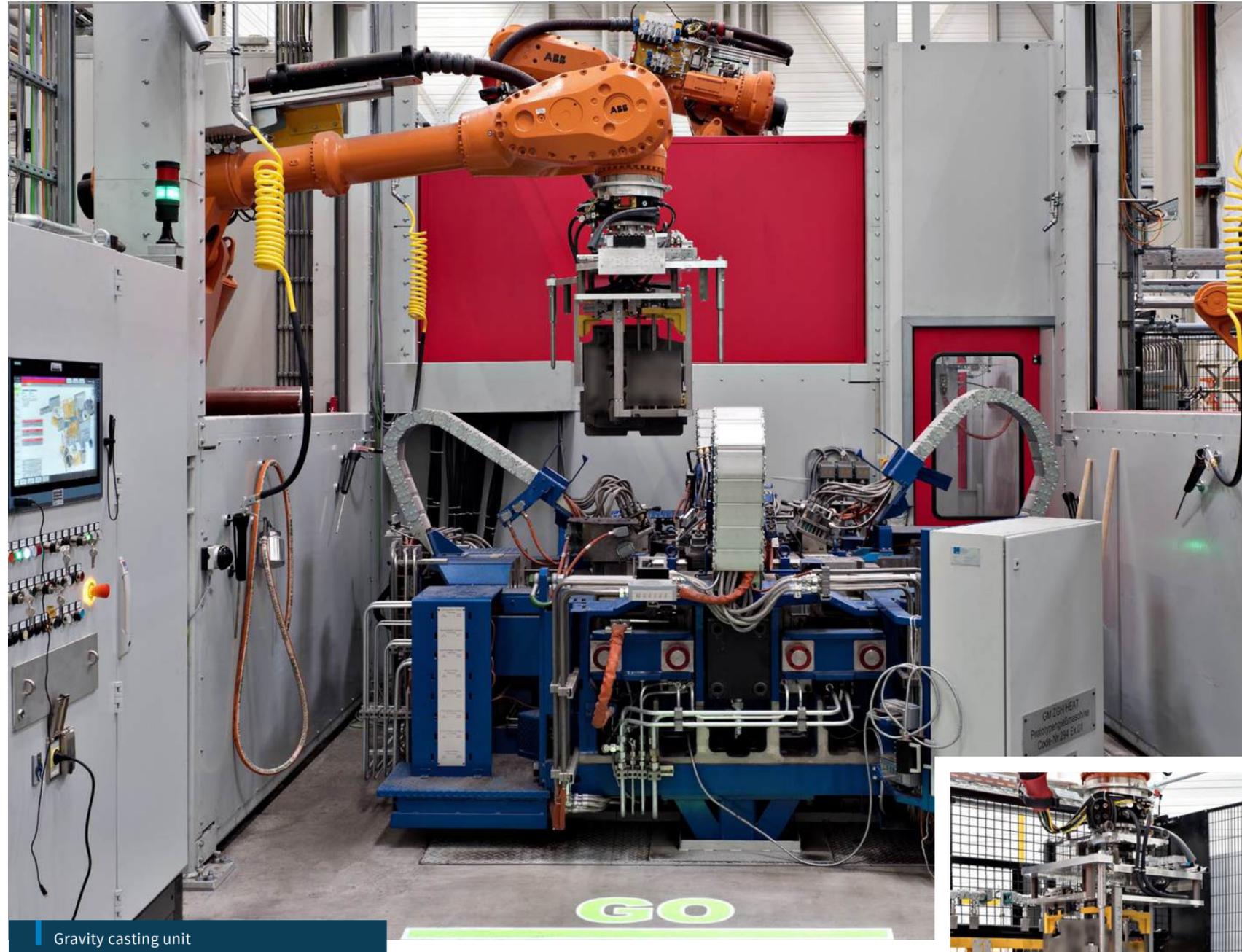
Our many years of experience, permanent enhancements and quality standards on top level guarantee highest customer satisfaction. Constant quality supervision of our products is self-evident.

Short and fast decision making, non-bureaucratic processing – the efficiency in realizing projects – all this inspires. The speed and flexibility with which we respond to different requirements of our customers persuades.

Check it out yourself.

RS

CASTING



Gravity casting unit

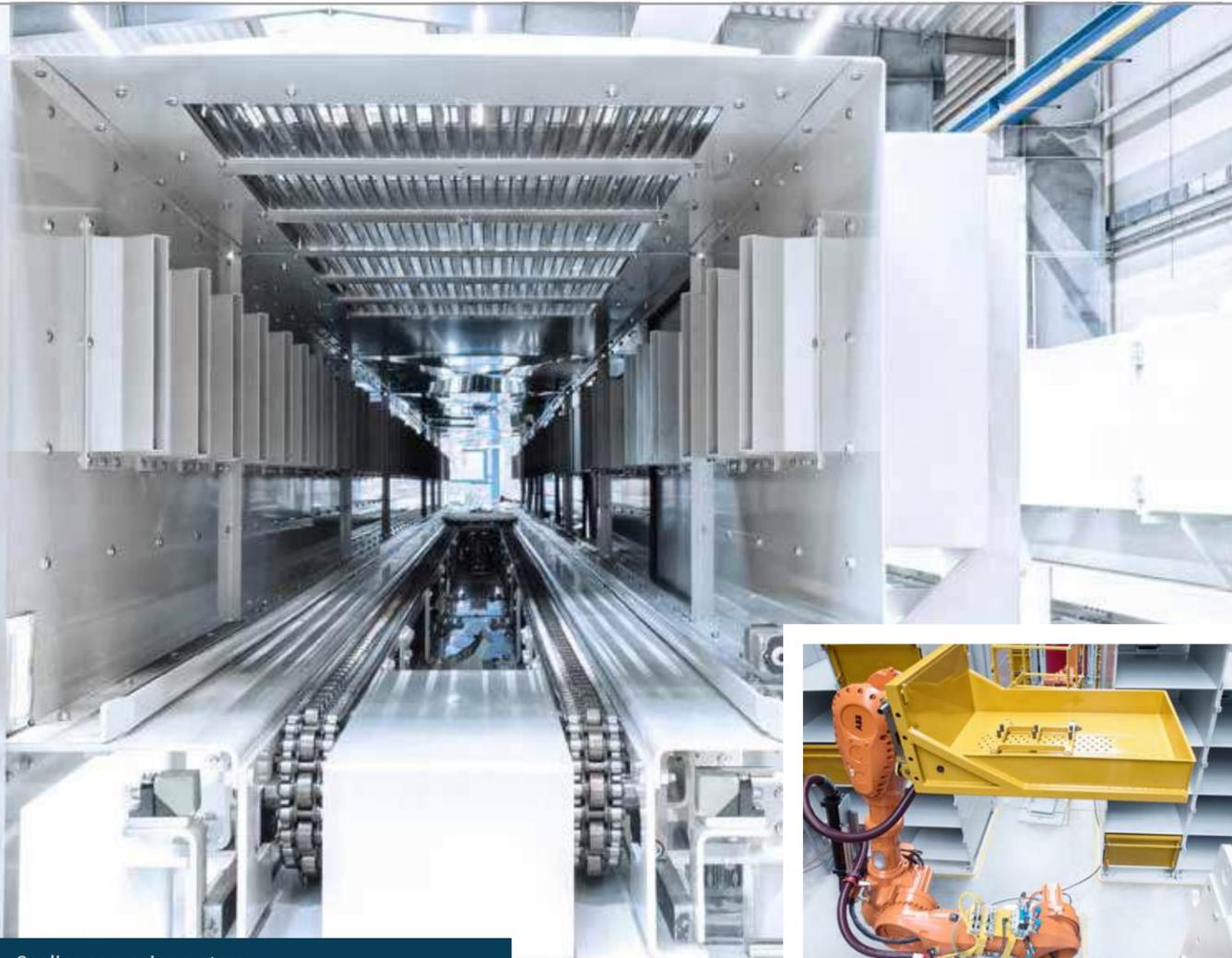
GRAVITY CASTING UNIT FOR DIFFERENT CASTINGS

Efficiency and flexibility are of utmost importance for Scheuchl casting units. A fully-automated ladle and gripper changing system ensures an efficient casting process and a smooth transport to further production steps for various and also different types of castings. The casting machines are accessible without steps. Thus and also by a spaciouly steel construction, a user- and maintenance-friendly work environment is enabled.

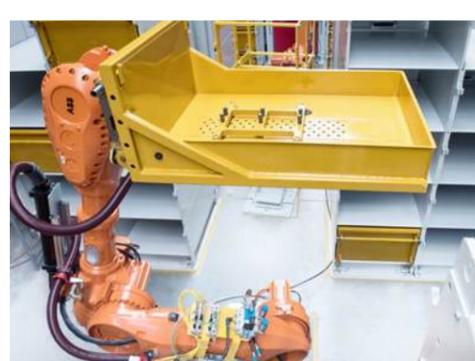
- Robot-guided core insertion, casting process and removal of castings
- Modern and open concept for comfortable working conditions
- Robust and compact guiding system for the robot linear axis
- Assembly of core package directly at the casting unit or processing of completely assembled core packages



COOLING



Cooling conveying system



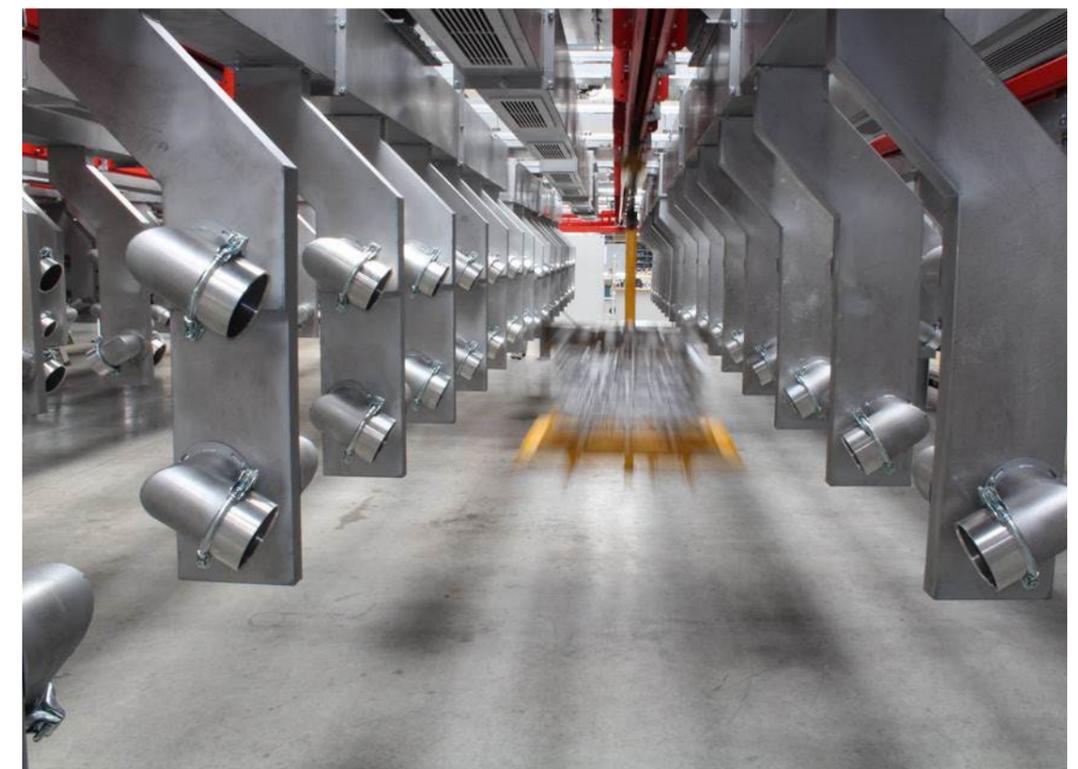
FOR THE DIMENSIONING, THE FOLLOWING FACTS ARE CONSIDERED:

- Specific matching with the casting and existing temperatures
- Dimensioning of the cooler in terms of minimum cooling times and casting gently cooling behavior
- Choice between manual and automatic loading
- Reliable treatment technology for cooling air or cooling water
- Integrated sand supply technology for sand carry-over within the cooler

EFFICIENT COOLING OF CASTINGS DUE TO OPTIMIZED PROCESS

Scheuchl units for the cooling of castings are especially characterized by customer specific dimensioning of the cooling component. It can be chosen between different cooling types and cooler set-up types:

- Free cooling or forced cooling
- Cooling air supply by nozzles or by tunnel stream
- Cooling by air or water supply
- Rack system or tunnel system



DECORING



Decoring unit for crankcases

right side: post-decoring

DECORING OF CASTINGS
ON TOP LEVEL

It does not matter if you are looking for a decoring machine for small, medium or large series, for aluminum or grey iron. We will work out the ideal concept together with you: from a manually-operated unit up to a fully-automated decoring machine – we can provide what you are looking for. We are able to offer innovative customized solutions for your task.

Scheuchl decoring units can be operated as stand-alone solution but also in combination with more than one machine. Following technologies are available:

- Mechanical decoring with compressed air hammers (pre-decoring)
- Oscillation decoring with vertical oscillation movement with and without turning function (main decoring)
- Decoring by eigenfrequency oscillation (post-decoring)
- Combined methods

Test facilities for determining the ideal decoring process parameter are available. The flexible ability to respond to changing requests of customers with your own production is most important for foundries. Thus, fast retooling and the compliance with low cycle times are self-evident for us.

SAWING



Automatic band saw with robot loading

right side: circular saw

SAWING OF CASTINGS WITH HIGHEST PRECISION

Scheuchl provides different sawing possibilities for castings. Coordinated with the process and adjusted to the part and cut geometry following saws can be delivered:

- Band saws
- Circular saws
- Robot led sawing at band or circular saws

SCHEUCHL SAWING AGGREGATES – THE ADVANTAGES AT ONE GLANCE:

- High cutting capacity
- Reliable cutting methods
- Part specific tensioning concepts
- High endurance of saw bands and blades
- Integrated chip slides, removal of chips and cutting-offs

DEBURRING MILLING

R. Scheuchl GmbH



CASTING FINISHING WITH ECONOMICAL FINISHING CONCEPT

Also for the deburring and milling of castings it is our utmost goal to offer economic finishing concepts.

Deburring done by hand is often time-consuming and costly. The robot milling is a cost-efficient and especially flexible alternative for serial parts with complex outlines. The invest breaks even within shortest time.

Different methods for the deburring and milling of castings are available. The according system is going to be chosen casting specifically together with our customer:

- Robot deburring
- Press punching
- Milling with stationary or moveable spindles

Deburring / Milling of castings



CLEANING



Cleaning of cooling plates

REMOVAL OF CHIPS, GRIT AND RESIDUAL DIRT

The principle of the cleaning unit is based on a shaking process.

The casting is turned and charged with impulse air at the same time. A chip conveyor and a casting transportation system can be integrated into the unit.



LDS UNIT (ARC WIRE COATING)

R. Scheuchl GmbH



Supplied unit for arc coating of bores in aluminium blocks

TECHNICAL PROCESS DATA:

- Coating of 1- to 6- and V6/V8-cylinder blocks
- Used power sources: up to 800 Amp
- Exhaust system for overspray removal
- Blank quality: high pressure water blast or mechanical preparation
- Adjustable coating parameters

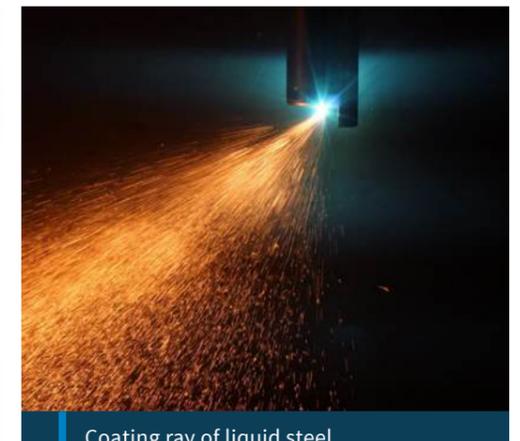
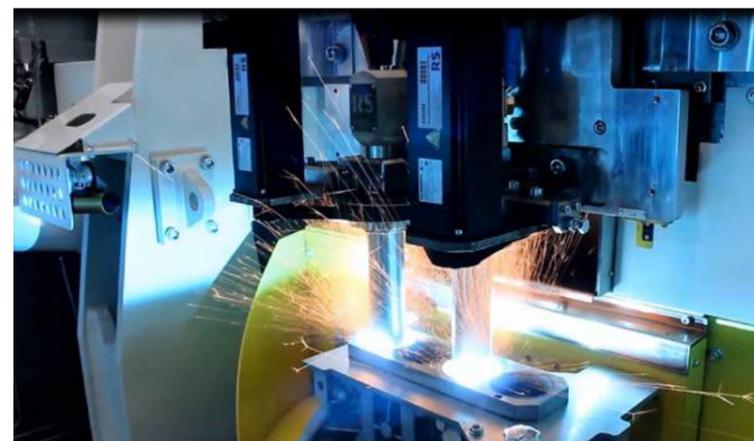
REDUCTION OF WEIGHT AND CONSUMPTION THROUGH THIN STEEL COATING

With the arc wire coating process a thin steel coating is applied directly to the aluminum running surface of crankcases. This coating is clearly lighter than the used steel bushing. Thus, weight is reduced and a more efficient fuel consumption is enabled.

A test unit for customer casting and coating process development is available at Scheuchl company.

SCHEUCHL LDS UNITS - YOUR ADVANTAGES AT ONE GLANCE:

- Scheuchl coating experience: over 30 million coated bores of BMW crankcases worldwide
- Significant reduction of weight
- Increased heat conduction and improved cooling conditions due to thin layer
- High micro-porosity of layer
- Wear-resistant because of enormous hardness
- Minimum of process time because of high power 2-wire-process and multi-lance units
- 300 kg barrels of wire
- Fully-automated and manual solutions are available



Coating ray of liquid steel

INORGANIC SAND RECLAMATION

R. Scheuchl GmbH

RECLAMATION OF INORGANIC CORE SAND

Inorganic core sands cannot be reclaimed effectively and efficiently with the same methods that are established and approved for organic core sands. From ecological point of view it is necessary and consequent to reclaim and re-use the inorganic sand. The change to inorganic core sand can only be economically successful if an effective and efficient reclamation process is available.

Due to our longtime experience in the fields of mechanical and process engineering, we supported a well-known Bavarian automobile manufacturer at its change to inorganic binders. An effective and economical sand reclamation process was developed together. Since then we have also worked for other nameable automobile manufacturers.

Depending on your requirements, the modular units consist of the following single components:

- Sand conveying technology
- Multi-level Scheuchl reclamation process
- Cooling
- De-dusting
- Integrated energy recovery
- Control technology
- Sand classification
- Conditioning of cooling water
- Integrated sand pre-warming
- Steel construction

When using Scheuchl core sand reclamation units the required amount of new sand is reduced considerably. New sand is then only needed for loss compensation. This leads to a significant reduction of procurement-, transport- and waste disposal costs.

SCHEUCHL CORE SAND RECLAMATION UNITS – THE ADVANTAGES AT ONE GLANCE:

- Reduction of waste disposal costs, decline of waste amount
- Considerable reduction of new sand amount
- Less transport costs
- High plant reliability



Sand cooler of reclamation unit

LOSTFOAM

STATE-OF-THE-ART PROCESSING LINES FOR HIGHEST QUALITY STANDARDS

Also in the field of lost foam the R. Scheuchl GmbH offers complete innovative processing lines for cooling, decoring, sawing, deburring/milling and cleaning of castings. A handling system for cooling plates, including cleaning, cooling of the cooling plates and storage logistics can be found in our product portfolio.

Also here, the product range comprises engineering, unit conception, high-grade production, start-up and intensive after-sales-service.

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