

# DISACOOL

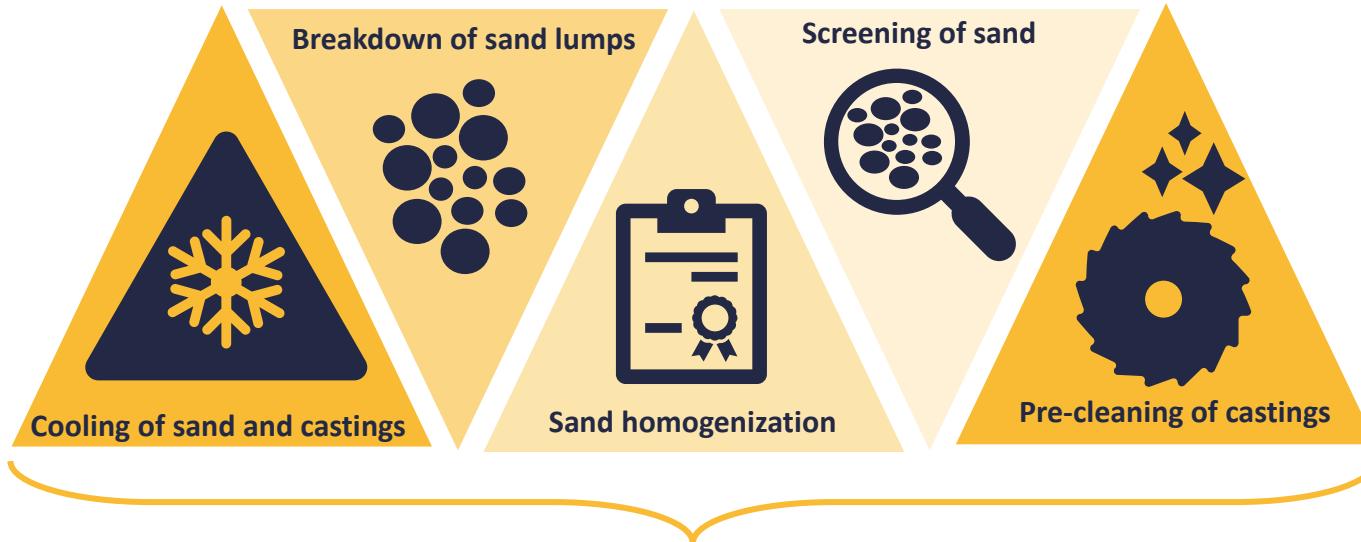
Clean and cool in one go

Norican Group  
Shaping Industry

**DISACOOL** is a compact and efficient sand and casting cooler

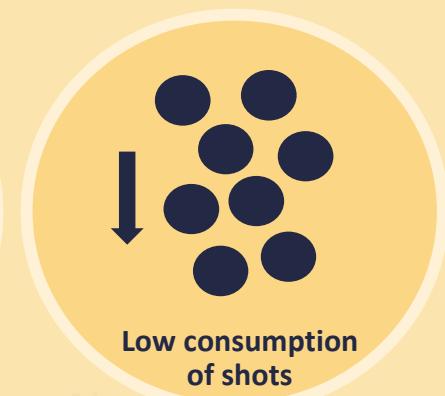
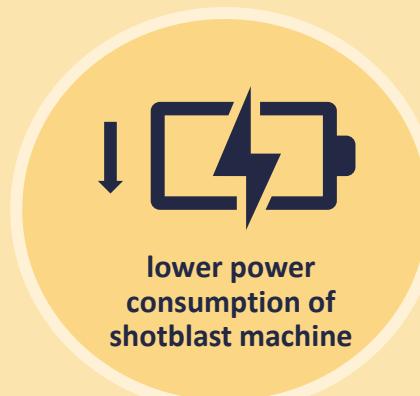
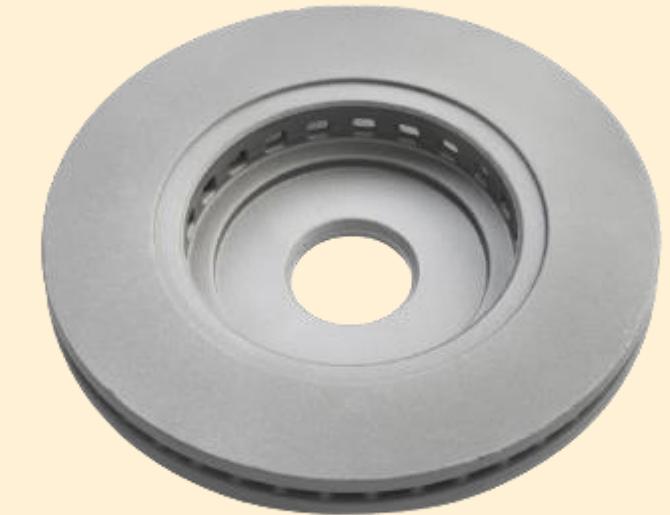
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## DISACOOL provides highly efficient



# DISACOOL Quality

**DiSA**  
A Norican Technology





**DISACOOL** substitutes sand cooler and casting cooler



Only

1

simple machine to maintain



Little need of labour



Higher profit

The **optional Monitizer | CIM** process interface connects the DISAMATIC or MATCH line with the DISACOOL control systems



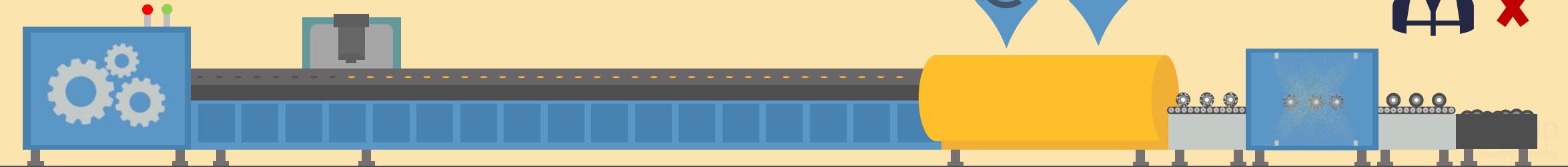
For each mould produced, **information** is sent to the **DISACOOL Water Dosing Panel (CWD)**



The CWD uses the moulding line data to ensure the **correct amount of water** is added in the cooling drum



The result is **fully automatic control** with no need for manual intervention



# Benefits of DISACOOL



All-in-one → **Less space requirement**

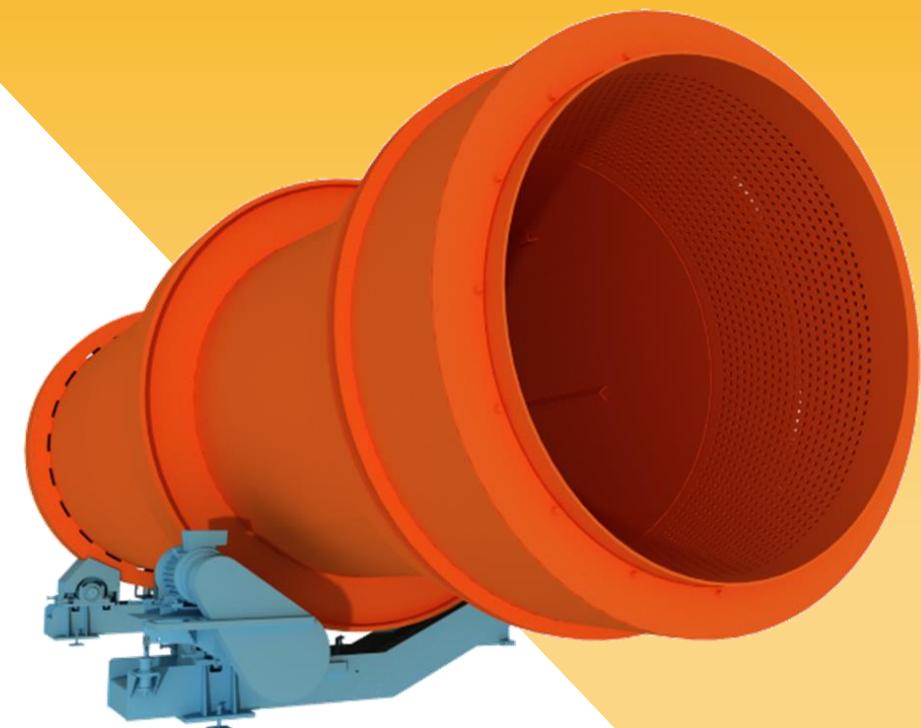


Low need of manpower → **Low cost**



Good working environment → **Operators are not being exposed to vibrations, dust or noise**

**+300** globally installed DISACOOL

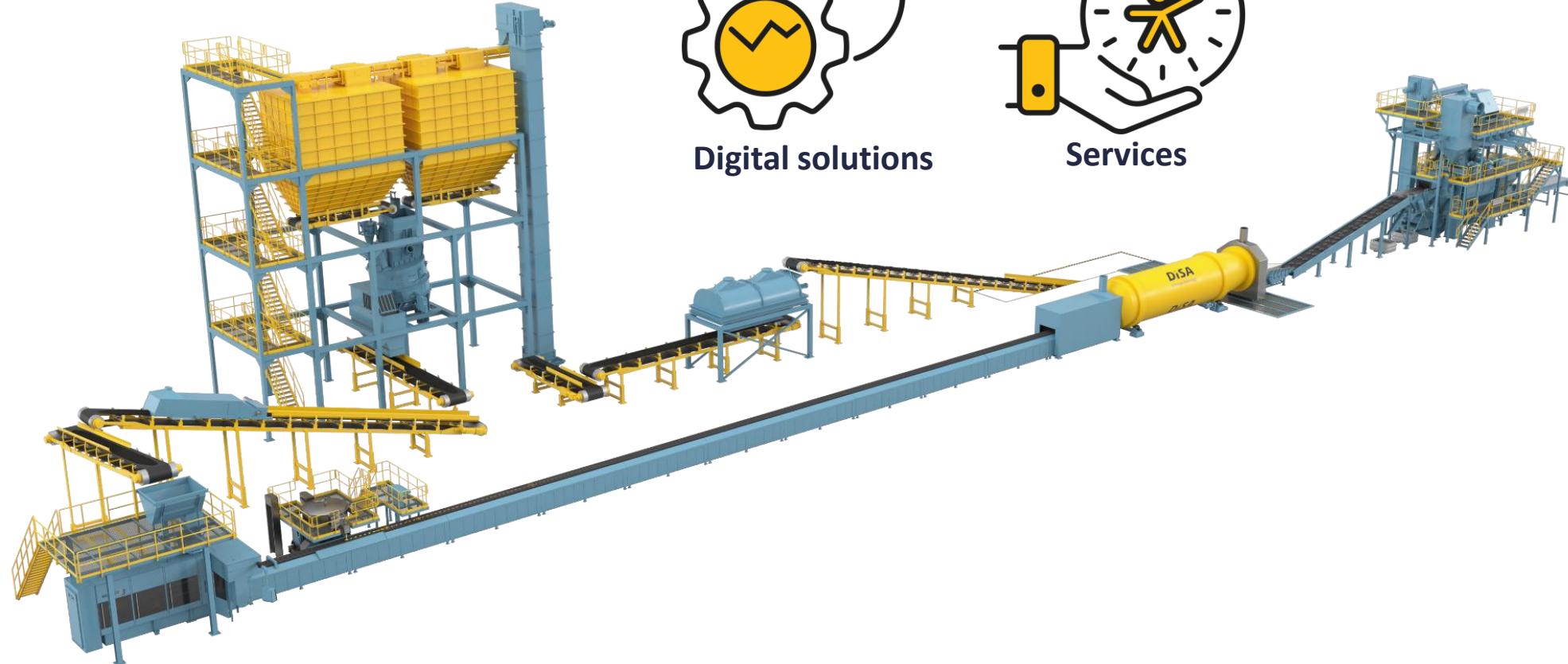


Thank you

# Appendix

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# The complete foundry



- Moulding machine
- Cooling line
- Sand plant
- Sand mixer
- Cooling drum
- Shot blast
- Pouring Unit
- Aluminium
- Digital solutions
- Services



## DISACOOL complete package

Complete DISA delivery

## DISACOOL parts package

Drum body manufacturing by  
customer

## DISACOOL license package

Drawing packages + critical  
parts by DISA

## Everything is managed by DISA

- All components including drum body are supplied by DISA

## Customer benefits

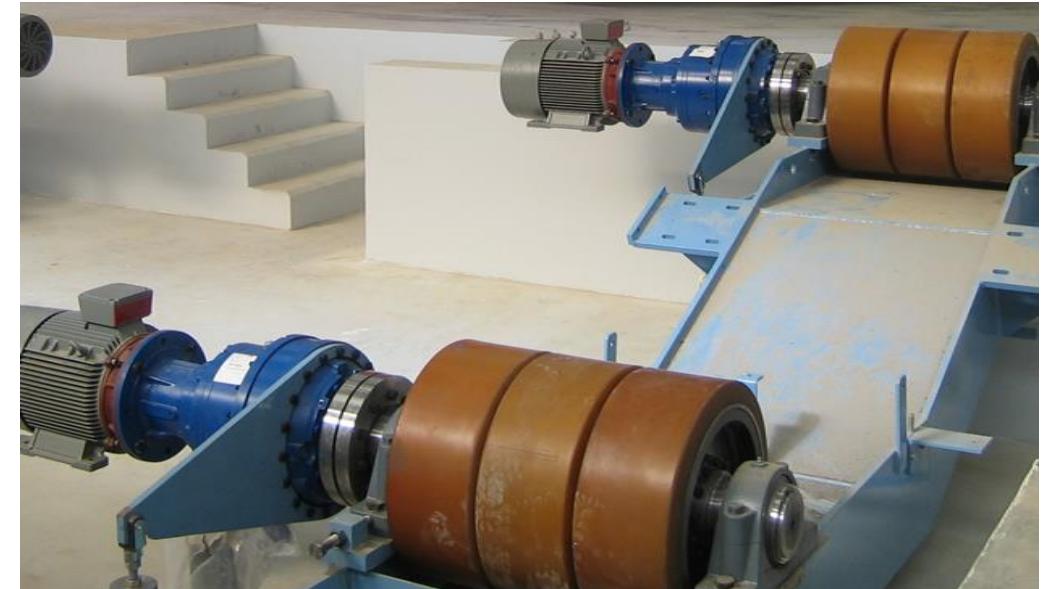
- All work and risk are managed by DISA
- DISA quality proven suppliers with years of manufacturing experience
- DISA expertise and know-how
- Project management and quality control by DISA
- Fast and smooth installation and start-up



**Full packages of components and frames except the drum body itself**

### **Customer benefits:**

- DiSA supply all components and frames
- Local supply of drum body due to costs and/or logistics
- DiSA specialist support



**For customers who want to manufacture based on DISA knowledge and expertise**

- Drawings and critical parts supplied by DISA
- DISA specialist support
- Standard components, steel frames and drum body manufacturing by customers

## **Customer benefits**

- Drawings provide technical expertise from DISA
- Lower local manufacturing costs
- Low transportation costs through local supply
- Less logistics issues through local supply





## Installation

Fast installation with assistance  
from a DiSA supervisor,  
takes 1-2 weeks

## Training

Training of operators and  
maintenance staff is executed  
within the installation period

## Customer service

A world wide service and support  
team is available for fast delivery  
of spare parts and guidance

# Benefits of DISACOOL



All-in-one unit → **Less space requirement, cleaner foundry and lower running costs**



**Good working environment** → Operators are not being exposed to vibrations, dust or noise



**Less Equipment** with all-in-one → **Easy installation and less maintenance** requirement



All-in-one unit → **Less power consumption**



**High capacity** (up to 200 ton/h) & **short casting production time** (1 hour incl. shot blast)



**Less manpower** → **Less equipment to operate and maintain**



All-in-one unit → **Lower capital investment** with highly **efficient** all-in-one solution

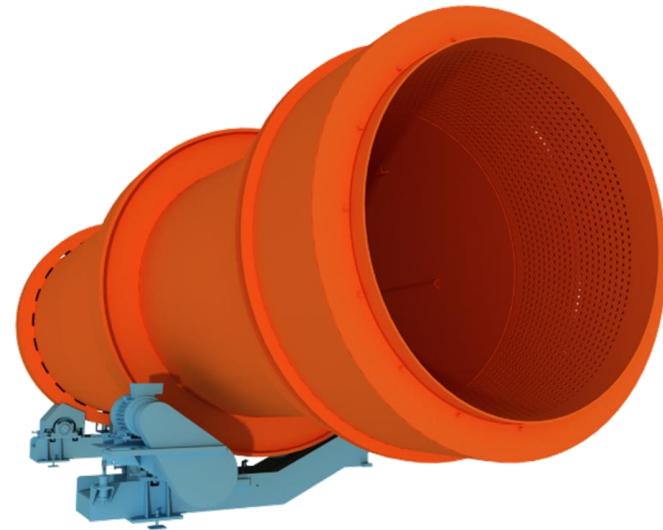


Compact design → Requires only **simple foundation** and has **fast installation** (1-2 weeks)

+300 globally installed DISACOOL

# Technical process and specifications

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## DISACOOL 2400 - 3600

- High quality polyurethane tyres
- Designed to reduce pressure and wear on run rings
- Drum rotation by friction drive
- Affordable wear parts such as polyurethane tyres
- Directly driven wheels by planetary gears and motors



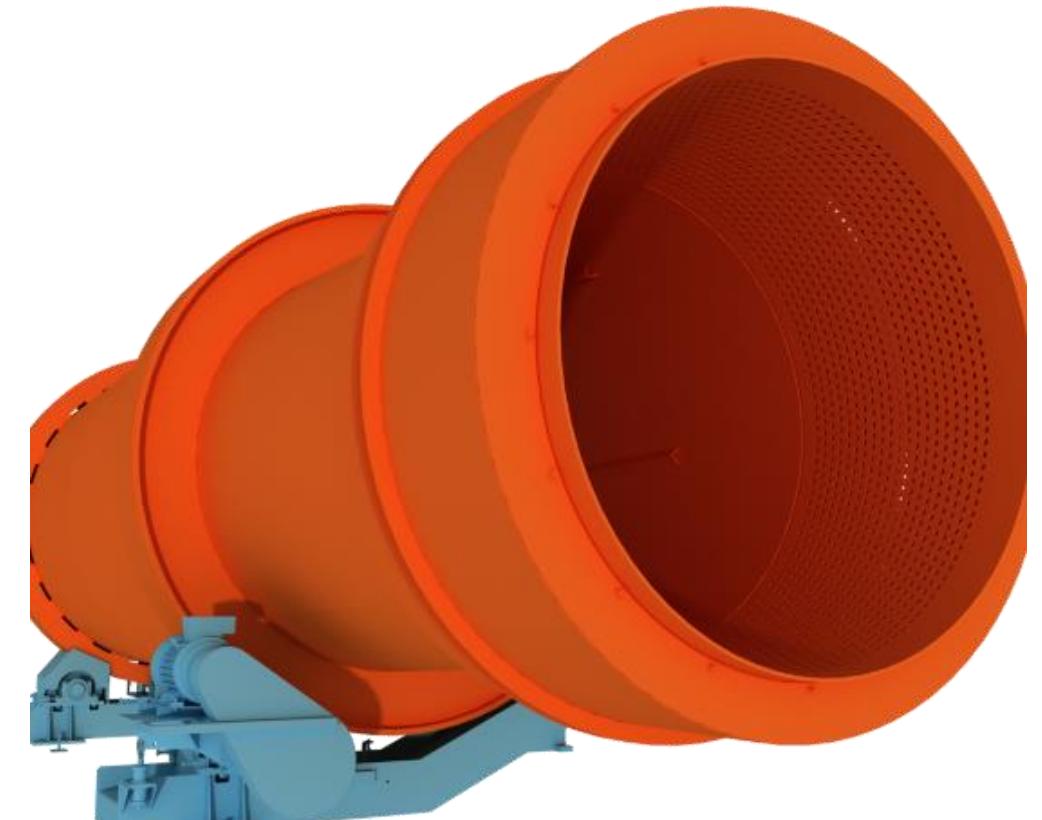
## DISACOOL 3800 - 4300

- High durability with steel wheel rollers
- Drum driven by girth ring drive
- Automatic lubrication of the girth rings
- V-belt pulley between gears and motors

# Technical data

Type	Metric	2400	2700	2900	3200	3400	3600	3800	4300
Sand/Metal capacity max	Tonnes/hr	25	35	50	60	90	110	140	200
Rated speed	rpm	3.8	3.3	3.0	2.7	2.5	2.3	2.5	2.2
Drive system: Friction Rollers		X	X	X	X	X	X		
Drive system: Girth Drive								X	X
<b>Average power consumption</b>									
Installed power	kW	22	30	44	60	88	120	160	250
<b>Process water requirements</b>									
Water pressure min	bar	2	2	2	2	2	2	2	2
Water consumption	litres/min	28	40	56	68	100	120	160	225
<b>Compressed air requirements</b>									
Air pressure min	bar	6	6	6	6	6	6	6	6
Air consumption	Nm <sup>3</sup> /min	0.1	0.1	0.1	0.1	0.1	0.1	0.5	0.5
<b>Mixer dimensions</b>									
Diameter	mm	25400	2700	2900	3200	3400	3600	3800	4300
Length	mm	9400	10460	12500	12500	15250	16150	19180	22400
Distance centreline-floor	mm	1660	2029	2280	2425	2560	2638	3120	3375
<b>Net weight</b>	tonnes	11	20	26	26	40	45	58	70

- Casting discharge temperatures typically 70 – 90°C
- Sand discharge temperatures typically 45 - 55°C
- Sand moisture content of approximately 1.2 – 1.8%
- Water added to the cooling drum: 0.2 – 0.4 litres/kilo of poured iron
- Air exhaust requirements approx.: 5,300 m<sup>3</sup>/ton poured iron
- Noise level less than 85 dB(A)



# Secondary cooling and remoistening

The **optional** Secondary Cooling and Remoistening System (SCR) is used to give additional cooling and remoistening of the return sand after the DISACOOL.

- The SCR sprays water on the sand on the return sand belt conveyors
- The sand cools down to approx. 40 - 50°C
- Cooling by evaporation of residual water is done in the polygon screen
- The extra moist sand allows reactivation of the bentonite in the storage bin
- Dust from return sand belt is reduced



# DISACOOL control system – control system for start/stop of the cooling drum and the water dosing

As **standard**, the DISACOOL water dosing control system is included in the DISACOOL delivery

- An **optional** control cabinet can be provided. It includes:
  - a soft starter for the DISACOOL controlled
  - a HMI PC for controlling and monitoring
  - interlock and interface signals to the surrounding equipment (e.g. the existing or new sand plant)
  - all needed electrical field equipment for the DISACOOL (el-boxes, sensors, warning siren etc.)