



# MAGNOS - Applications

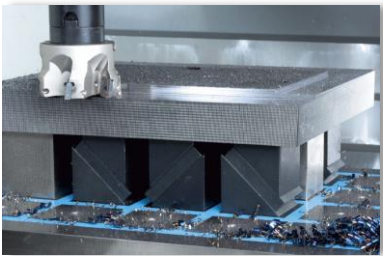
Wide variety of Magnetic Clamping Technology

Superior Clamping and Gripping



# MAGNOS - Applications

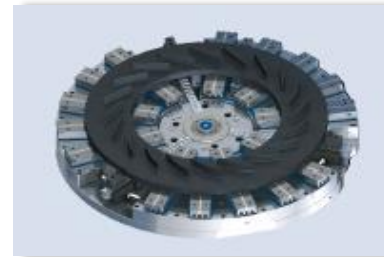
## Milling



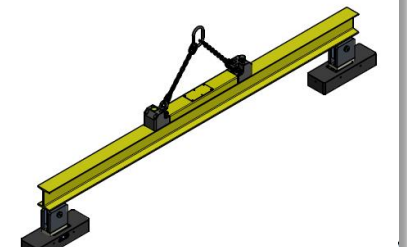
## Grinding



## Turning



## Lifting

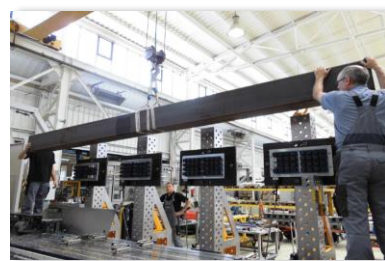


# MAGNOS - Applications

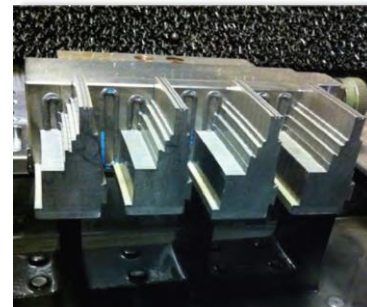
## Rails



## Profiles



## EDM machines

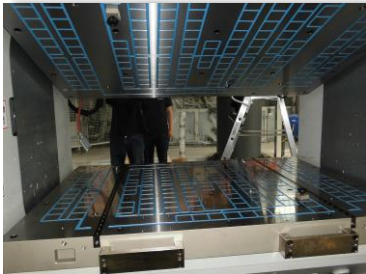


## EGM Grippers

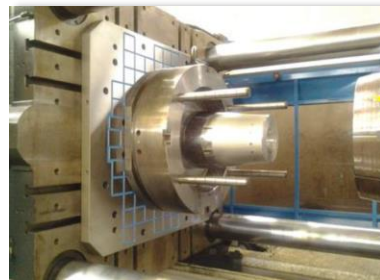
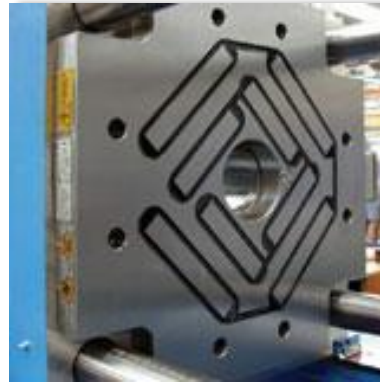


# MAGNOS - Applications

## Presses



## Moulding



## Heavy Lifting



# MAGNOS - Applications

## Classification of materials

Structural steels	> very good magnetic properties
Construction steels	> very good magnetic properties
Heat treatable steel	> good magnetic properties
Nitrided steels	> good magnetic properties
Tool and die steels	> good magnetic properties
Cast iron steels	> limited good magnetic properties
Corrosion resistant steels	> limited good magnetic properties

\* The base of all material is in soft condition

# MAGNOS - Applications

## Classification of materials

### Influencing factors on magnetic performance

- Chemical composition: Increasing presence of main alloying elements (C, Cr, Mn, Ni, W etc) reduces the holding force, up to a point where material can be non-magnetic (see AISI 304, 316 and similar)
- Heat treatments: hardening reduces the holding force and increases residual
- Production processes: hot or cold rolling, moulding, sintering etc.
- Please be careful about materials which are marked with „X“ like (X102CrMo17)

# MAGNOS - Applications

## Overview Workpieces

Plates	Page 8-26
Molds / housings	Page 27-41
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Welding racks / frames	Page 61-64
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Rings	Page 74-84
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Others	Page 90-92

# MAGNOS - Applications

## Plates



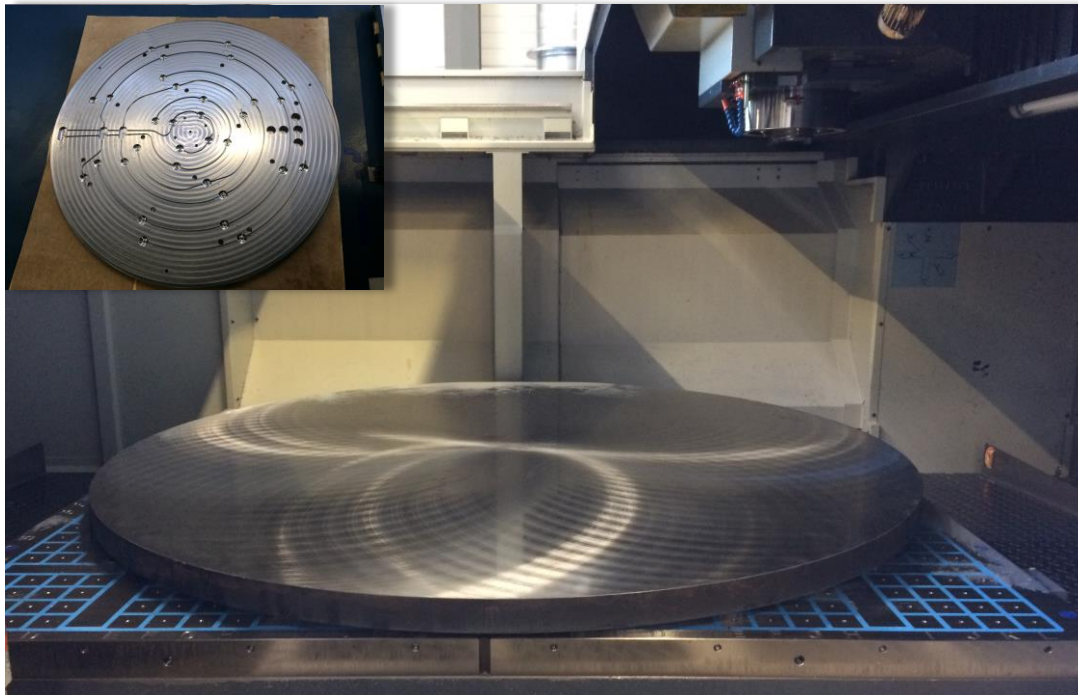
**Workpiece size**  
600 x 350 x 55 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



**Workpiece size**  
Ø 1900 x 80 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



### **Workpiece size**

450 x 350 x 36 mm

### **Type of material**

Tool and die steel

### **Machining operations**

Drilling

Face milling

Form milling

# MAGNOS - Applications

## Plates



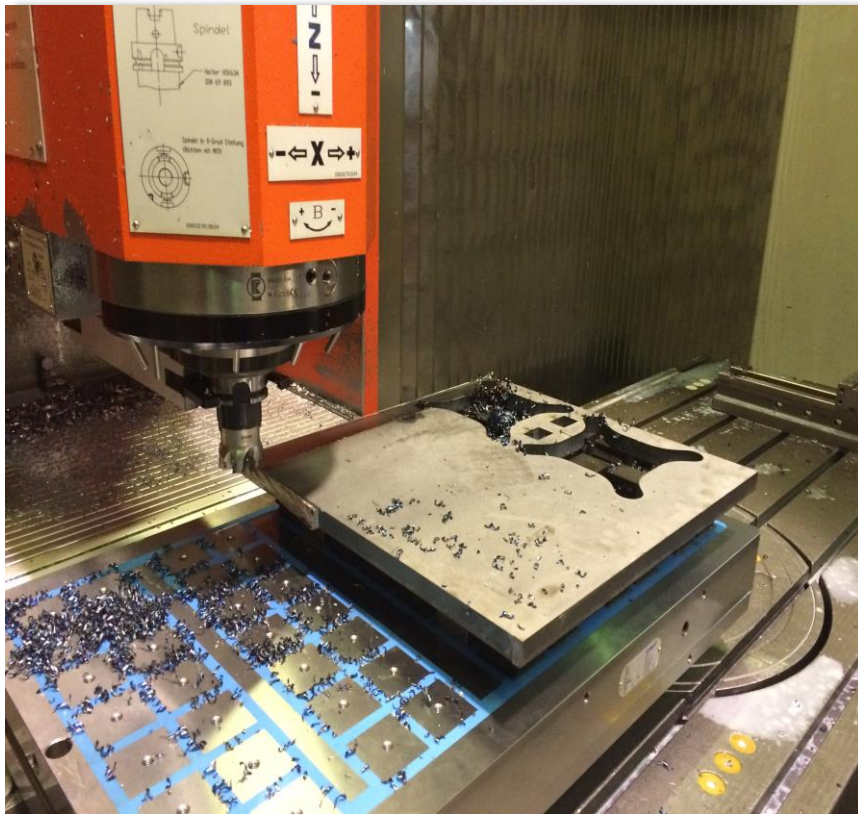
**Workpiece size**  
400 x 400 x 25 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



**Workpiece size**  
460 x 450 x 20 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



**Workpiece size**  
255 x 130 x 6,2 mm

**Type of material**  
Structural steel

**Machining operations**  
Grinding

# MAGNOS - Applications

## Plates



### **Workpiece size**

1600 x 1100 x 40 mm

### **Type of material**

Structural steel

### **Machining operations**

Drilling

Face milling

Form milling

# MAGNOS - Applications

## Plates



**Workpiece size**  
800 x 800 x 45 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



### **Workpiece size**

3200 x 2800 x 40 mm

### **Type of material**

Structural steel

### **Machining operations**

Drilling

Face milling

Form milling

# MAGNOS - Applications

## Plates



**Workpiece size**  
3200 x 2800 x 40 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



### **Workpiece size**

800 x 550 x 160 mm

### **Type of material**

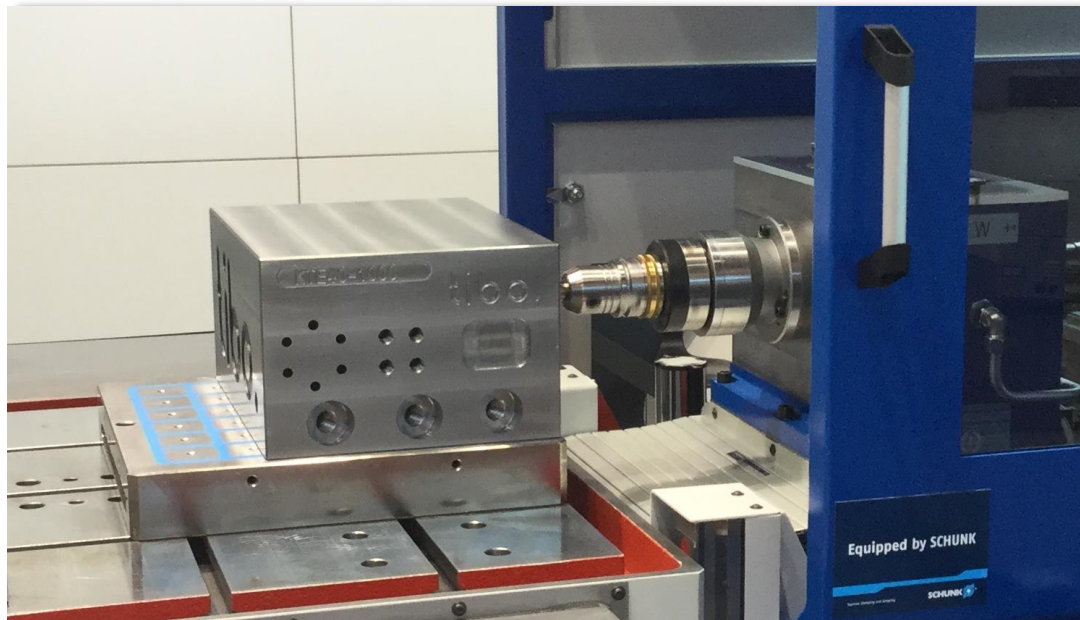
Corrosion resistant steel

### **Machining operations**

deep hole drilling

# MAGNOS - Applications

## Plates



### **Workpiece size**

300 x 300 x 220 mm

### **Type of material**

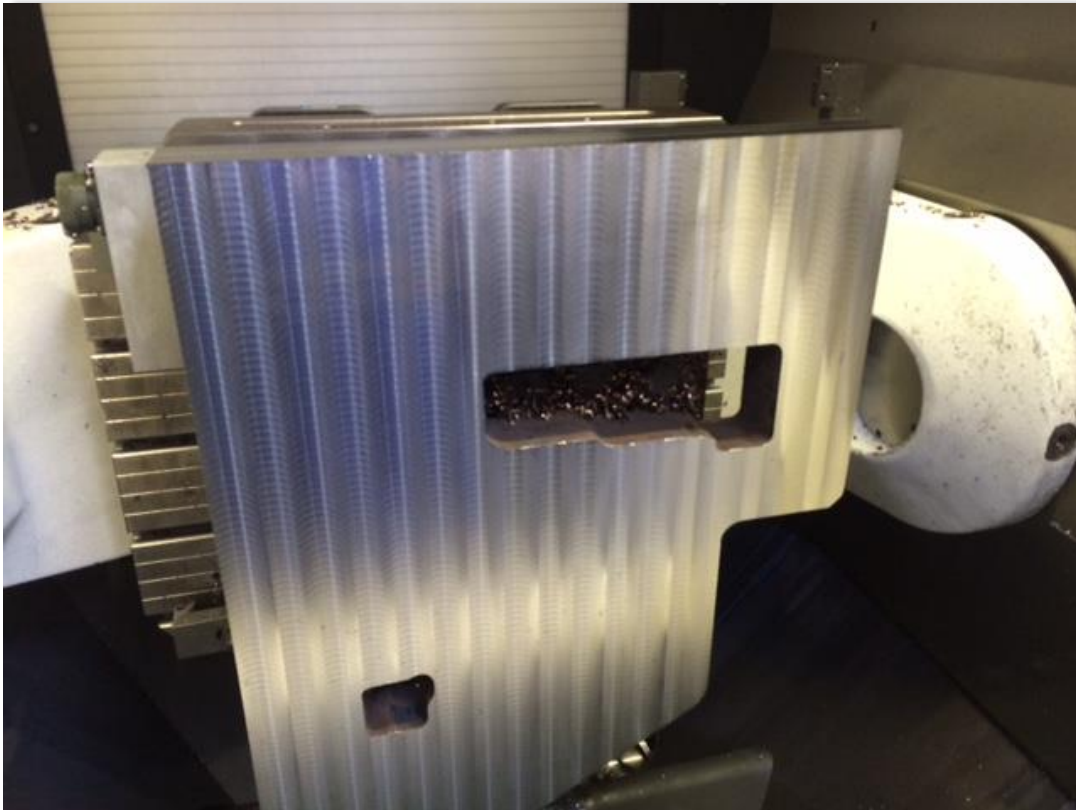
Corrosion resistant steel

### **Machining operations**

deep hole drilling

# MAGNOS - Applications

## Plates



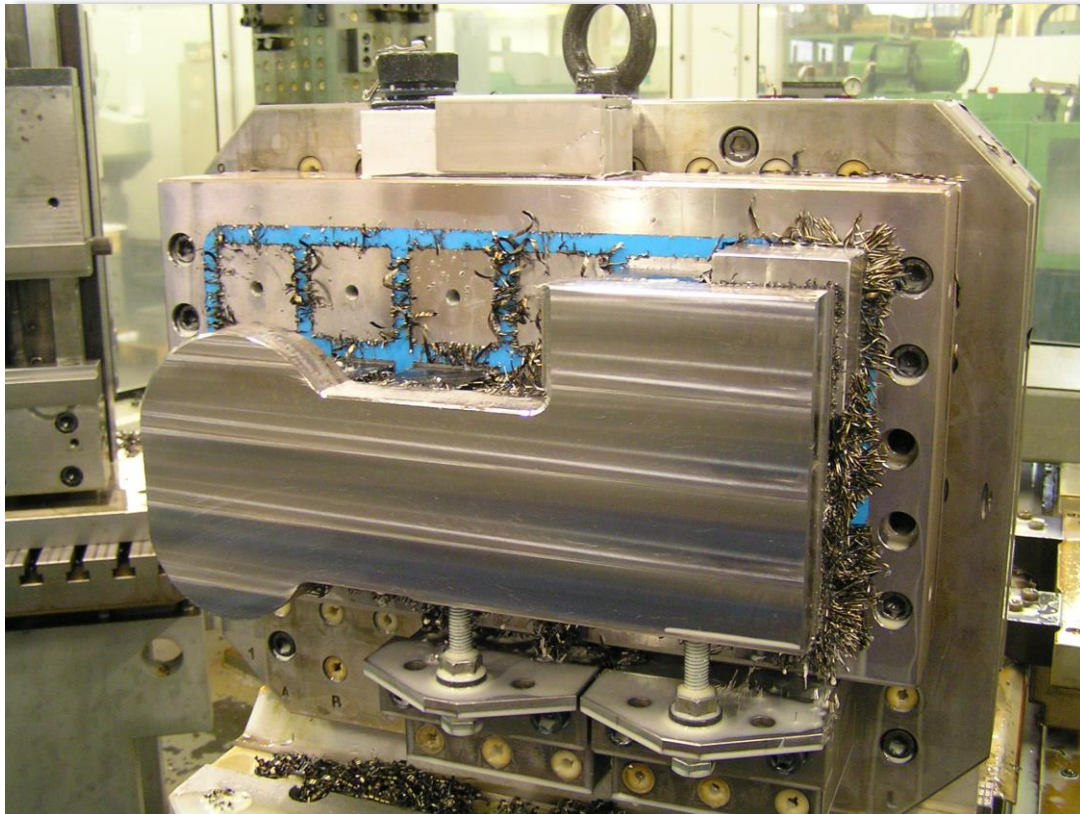
**Workpiece size**  
630 x 590 x 60 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



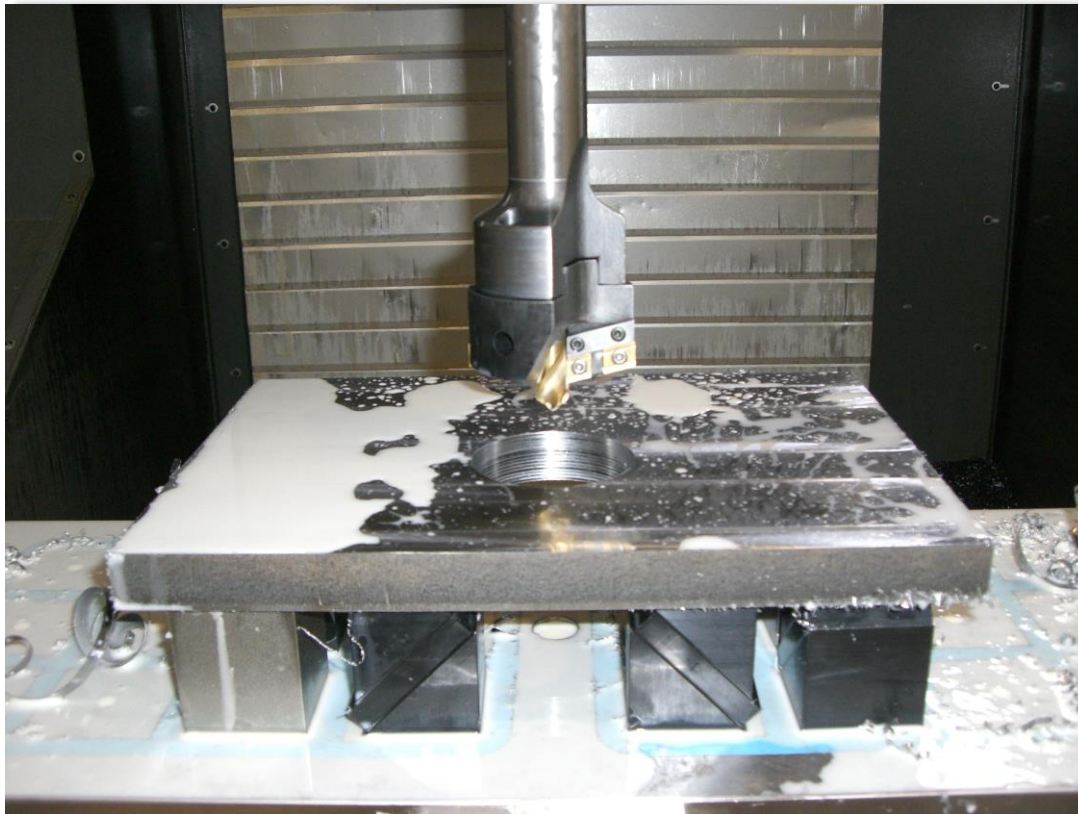
**Workpiece size**  
400 x 300 x 30 mm

**Type of material**  
Heat treatable steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



### **Workpiece size**

300 x 200 x 25 mm

### **Type of material**

Heat treatable steel

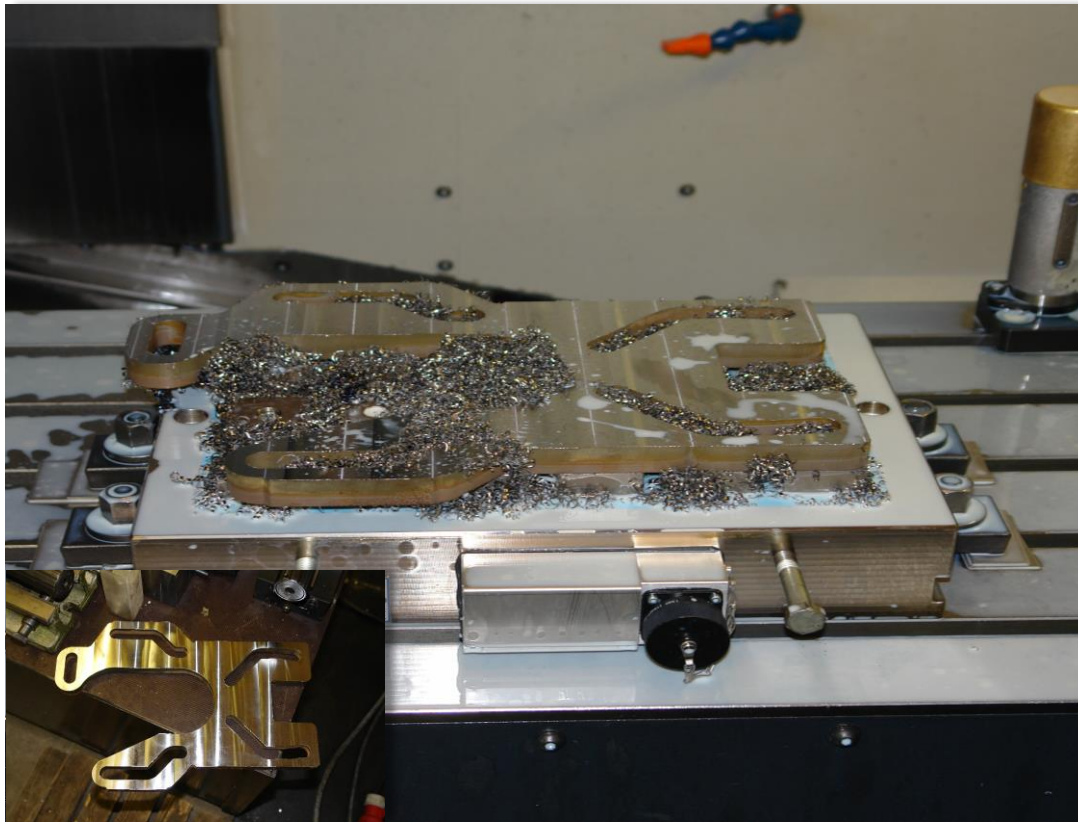
### **Machining operations**

Drilling

Face milling

# MAGNOS - Applications

## Plates



**Workpiece size**  
500 x 380 x 20 mm

**Type of material**  
Tool and die steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



**Workpiece size**  
375 x 315 x 35 mm

**Type of material**  
Tool and die steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



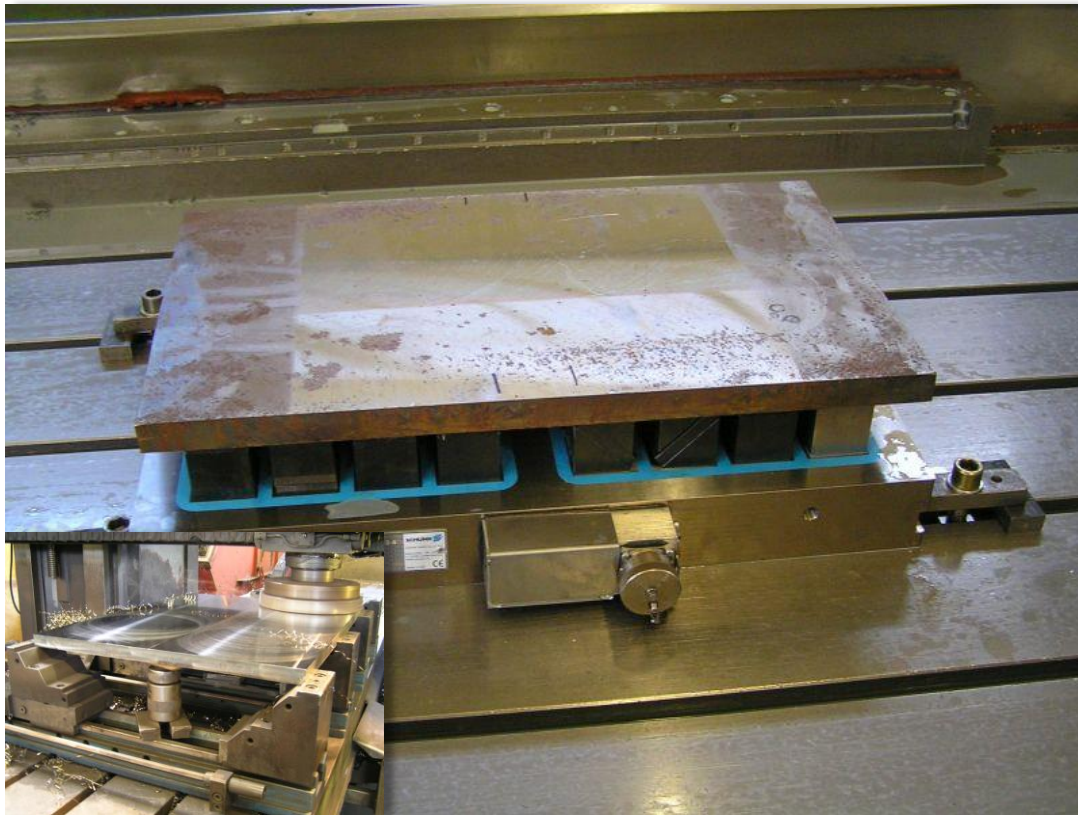
**Workpiece size**  
1400 x 800 x 25 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Plates



**Workpiece size**  
600 x 500 x 20 mm

**Type of material**  
Structural steel

**Machining operations**  
Face milling

# MAGNOS - Applications

## Molds / housings



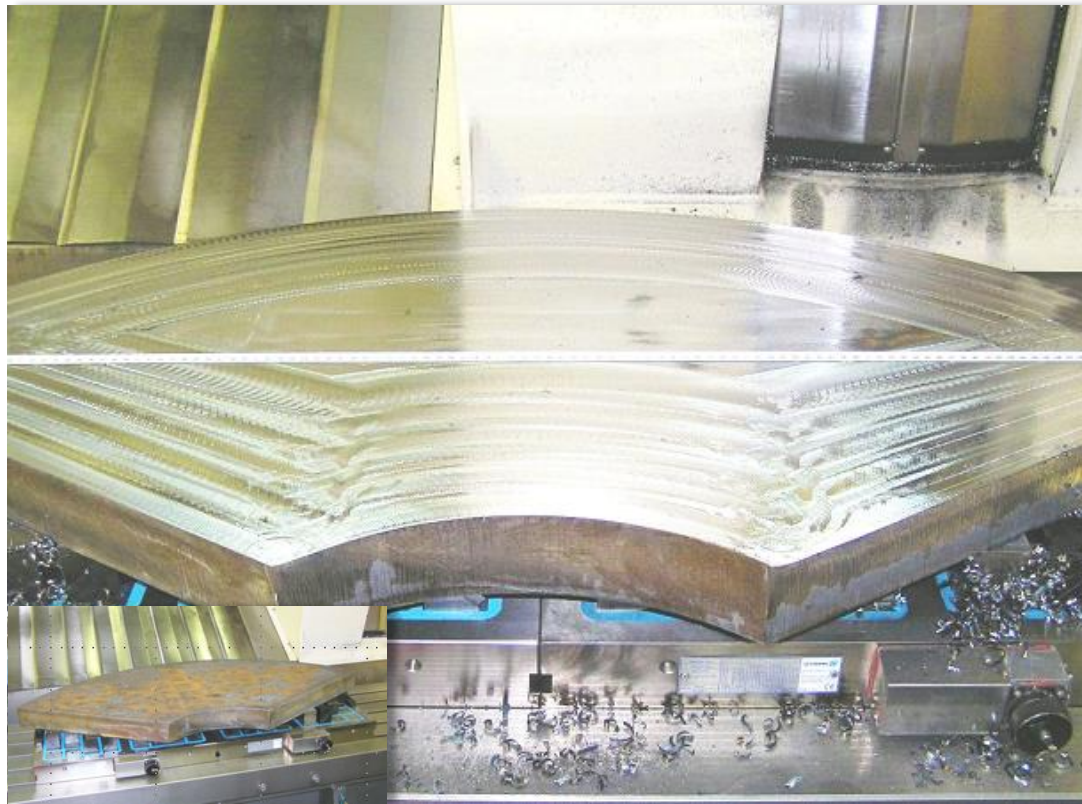
**Workpiece size**  
200 x 200 x 200 mm

**Type of material**  
Tool and die steel

**Machining operations**  
Face milling  
Form milling

# MAGNOS - Applications

## Molds / housings



**Workpiece size**  
1300 x 600 x 80 mm

**Type of material**  
Tool and die steel

**Machining operations**  
Face milling  
Form milling

# MAGNOS - Applications

## Molds / housings



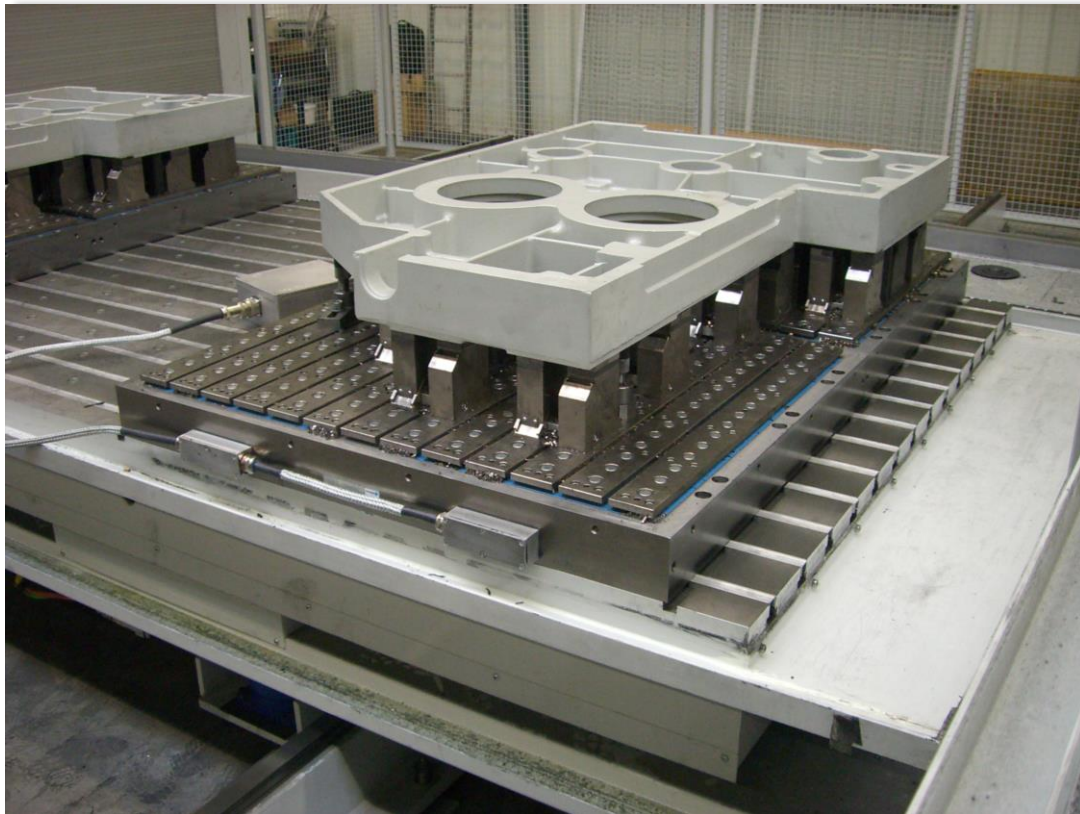
**Workpiece size**  
204 x 204 x 68 mm

**Type of material**  
Tool and die steel

**Machining operations**  
Face milling  
Form milling

# MAGNOS - Applications

## Molds / housings



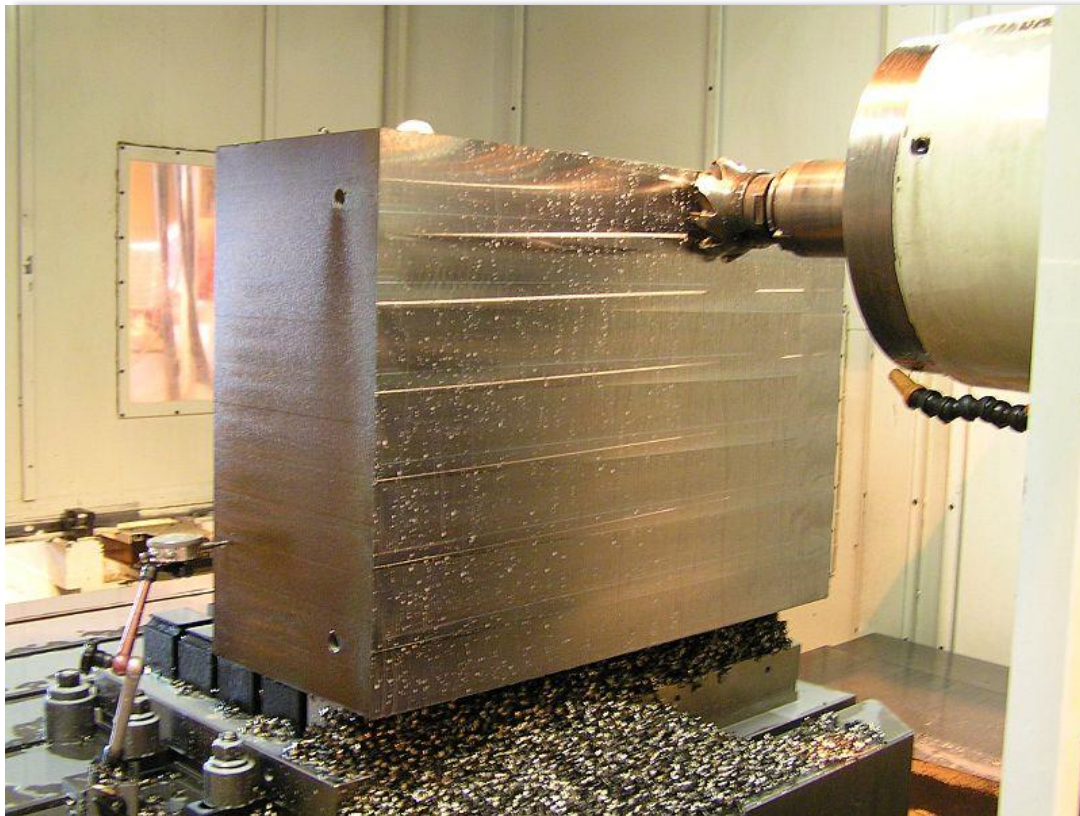
**Workpiece size**  
2300 x 900 x 100 mm

**Type of material**  
Cast iron steels

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

Molds / housings



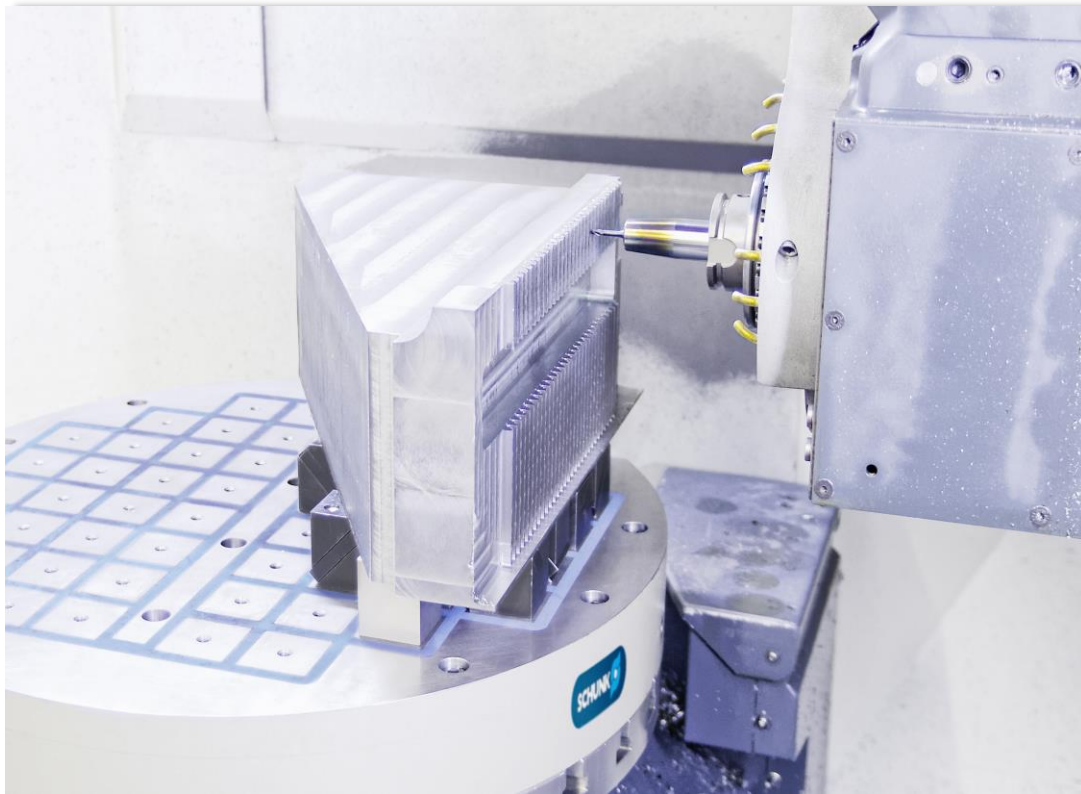
**Workpiece size**  
800 x 980 x 285 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Molds / housings



**Workpiece size**  
400 x 200 x 250 mm

**Type of material**  
Heat treatable steel

**Machining operations**  
Face milling  
Form milling

# MAGNOS - Applications

## Molds / housings



**Workpiece size**  
3150 x 1000 x 430 mm

**Type of material**  
Cast iron steel

**Machining operations**  
Face milling

# MAGNOS - Applications

## Molds / housings



**Workpiece size**  
550 x 550 x 380 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Molds / housings



**Workpiece size**  
800 x 500 x 209 mm

**Type of material**  
Nitrided steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Molds / housings



### **Workpiece size**

640 x 473 x 400 mm

### **Type of material**

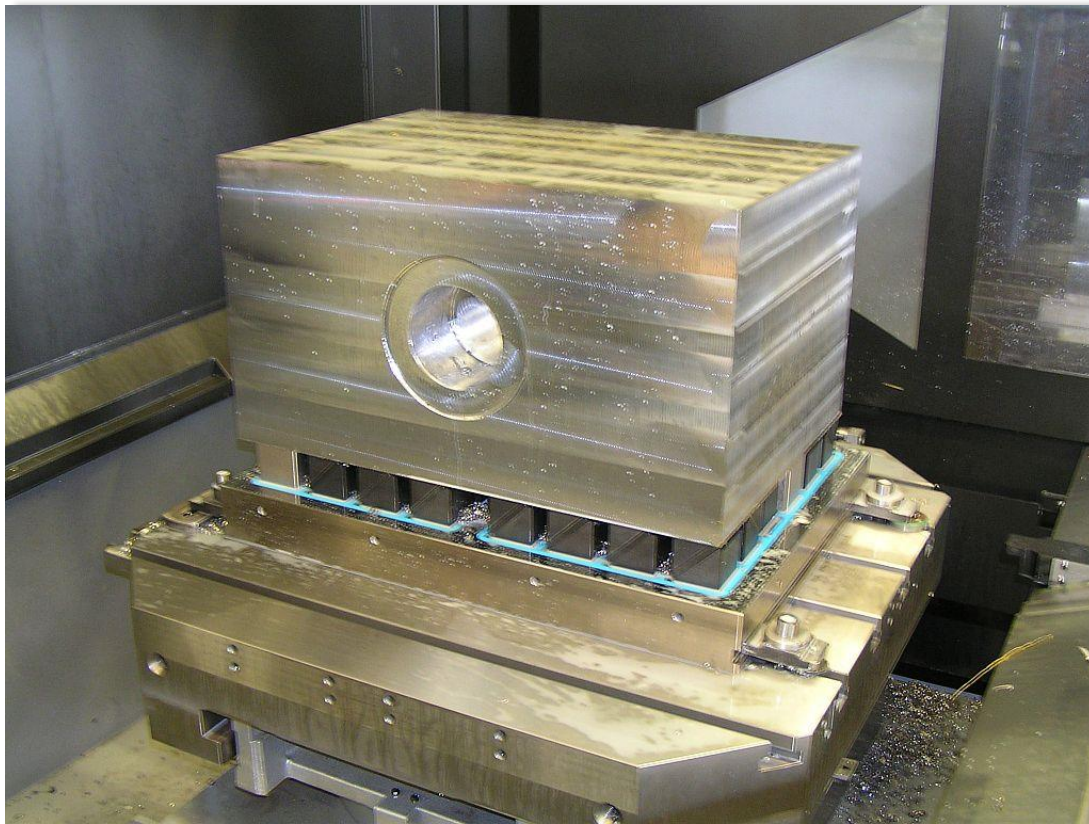
Cast iron steel

### **Machining operations**

Face milling

# MAGNOS - Applications

## Molds / housings



### Workpiece size

600 x 400 x 380 mm

### Type of material

Structural steel

### Machining operations

Drilling

Face milling

Form milling

# MAGNOS - Applications

## Molds / housings



**Workpiece size**  
2000 x 450 x 60 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Molds / housings



**Workpiece size**  
800 x 120 x 25 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Molds / housings



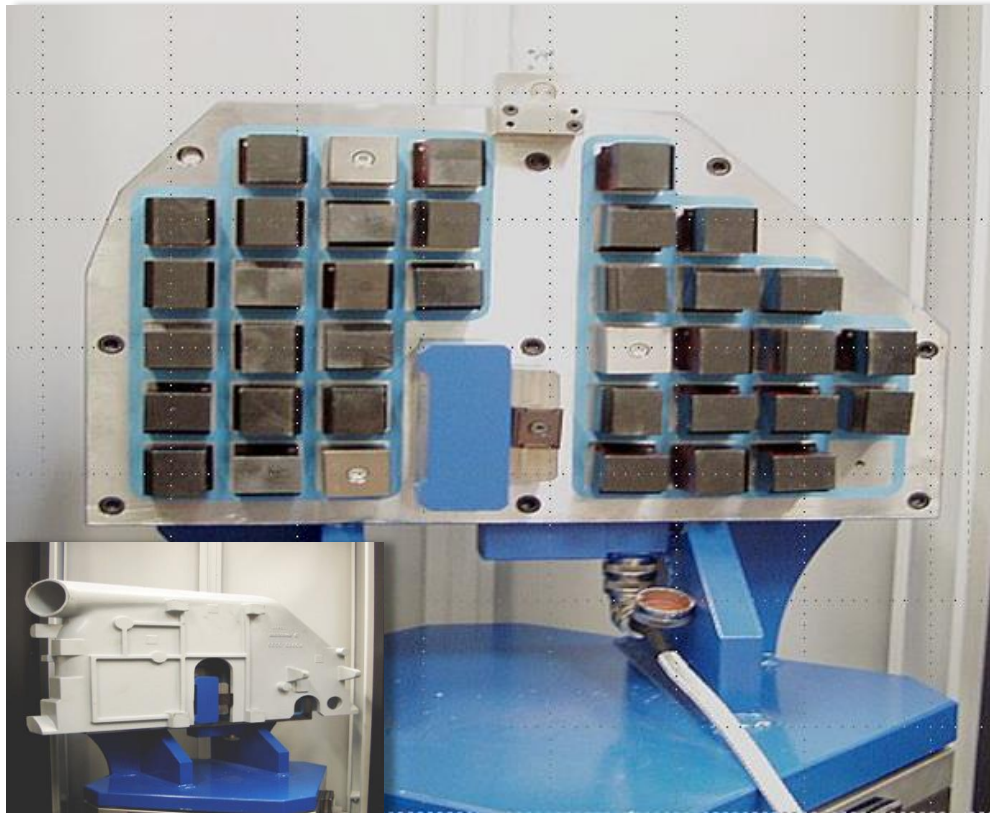
**Workpiece size**  
660 x 400 x 65 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Molds / housings



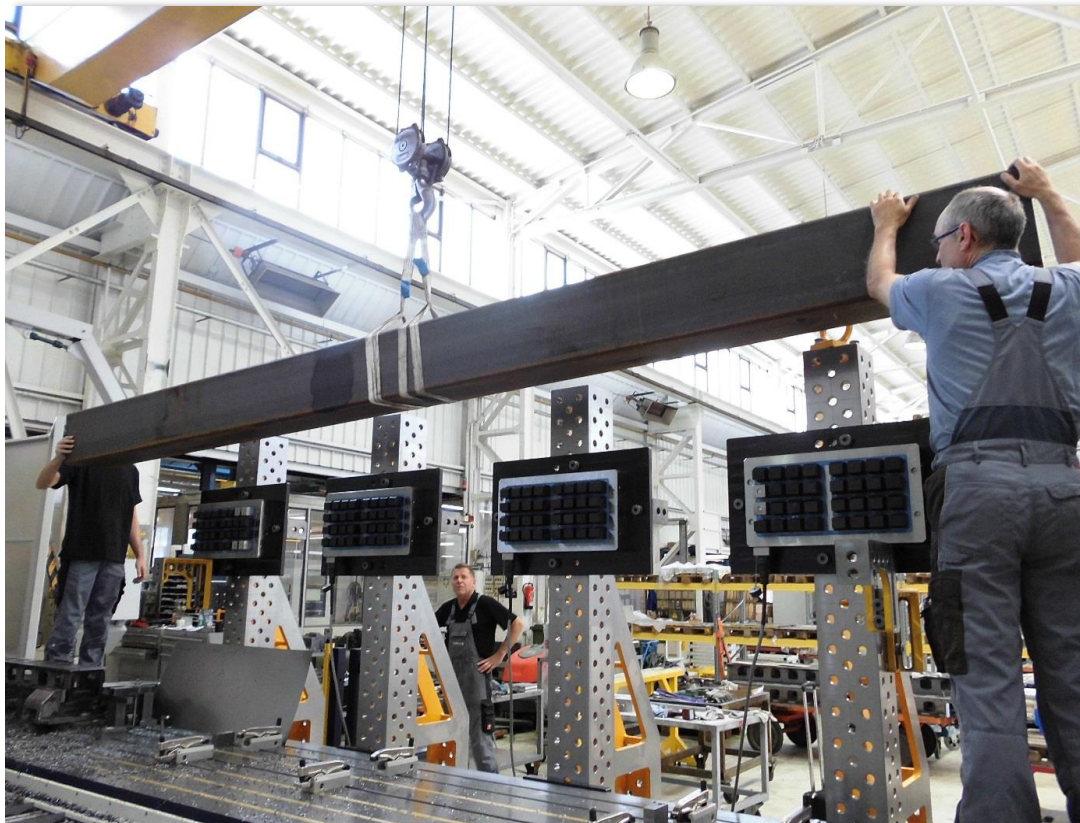
**Workpiece size**  
900 x 550 x 120 mm

**Type of material**  
Cast iron steel

**Machining operations**  
Drilling  
Face milling

# MAGNOS - Applications

Pipes / profiles / strips



## Workpiece size

300 x 300 x 12 mm

Profile up to 6500 mm

## Type of material

Structural steel

## Machining operations

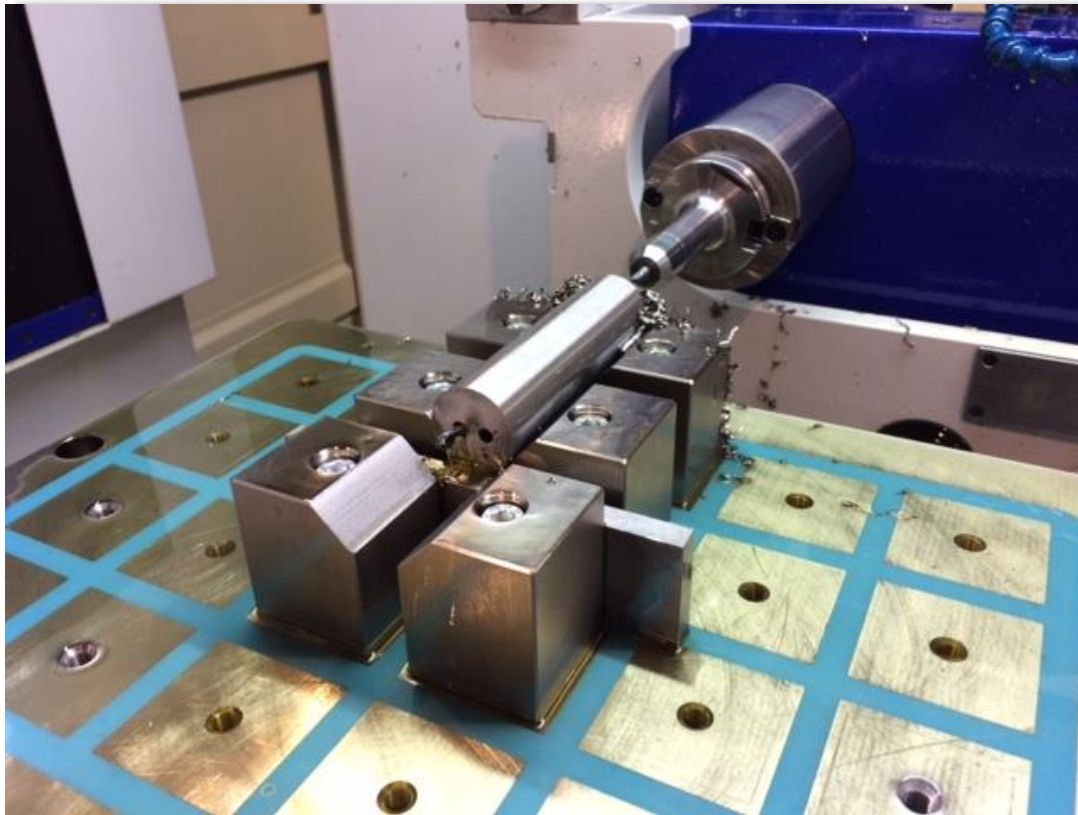
Drilling

Face milling

Form milling

# MAGNOS - Applications

Pipes / profiles / strips



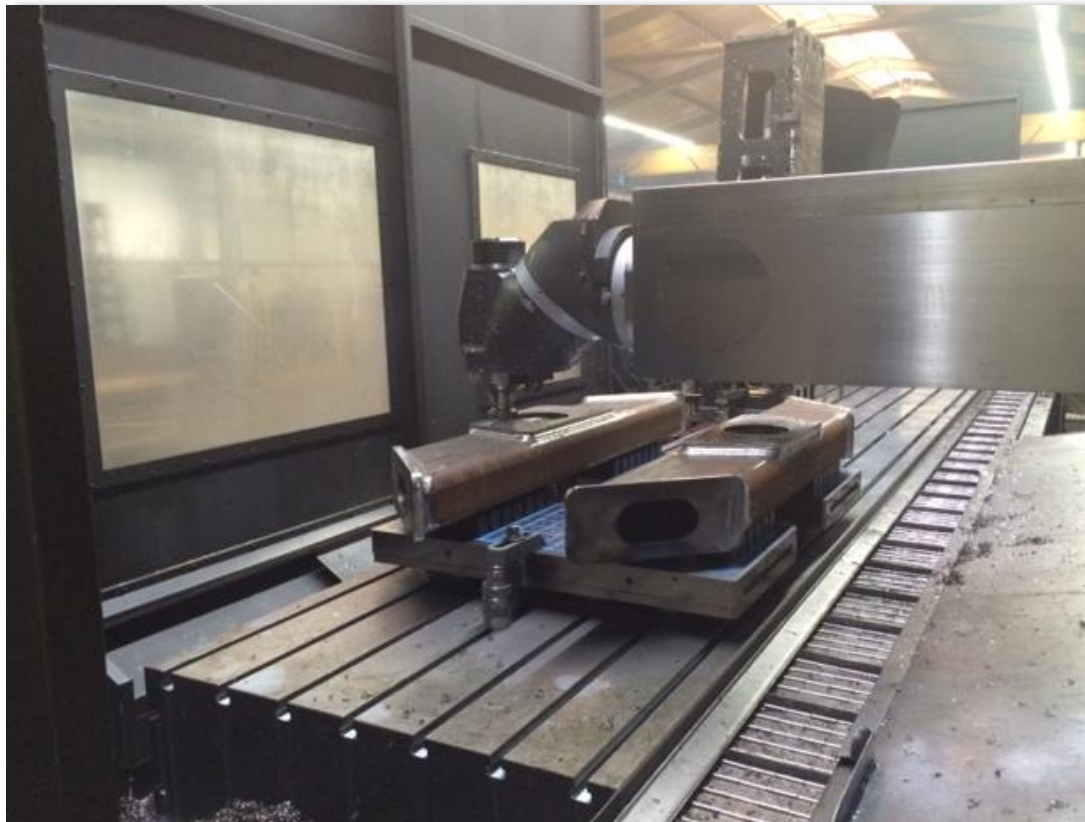
**Workpiece size**  
Ø 32 x 120 mm

**Type of material**  
Tool and die steel

**Machining operations**  
Drilling

# MAGNOS - Applications

Pipes / profiles / strips



## **Workpiece size**

300 x 200 x 10 mm

Profile up to 1700 mm

## **Type of material**

Structural steel

## **Machining operations**

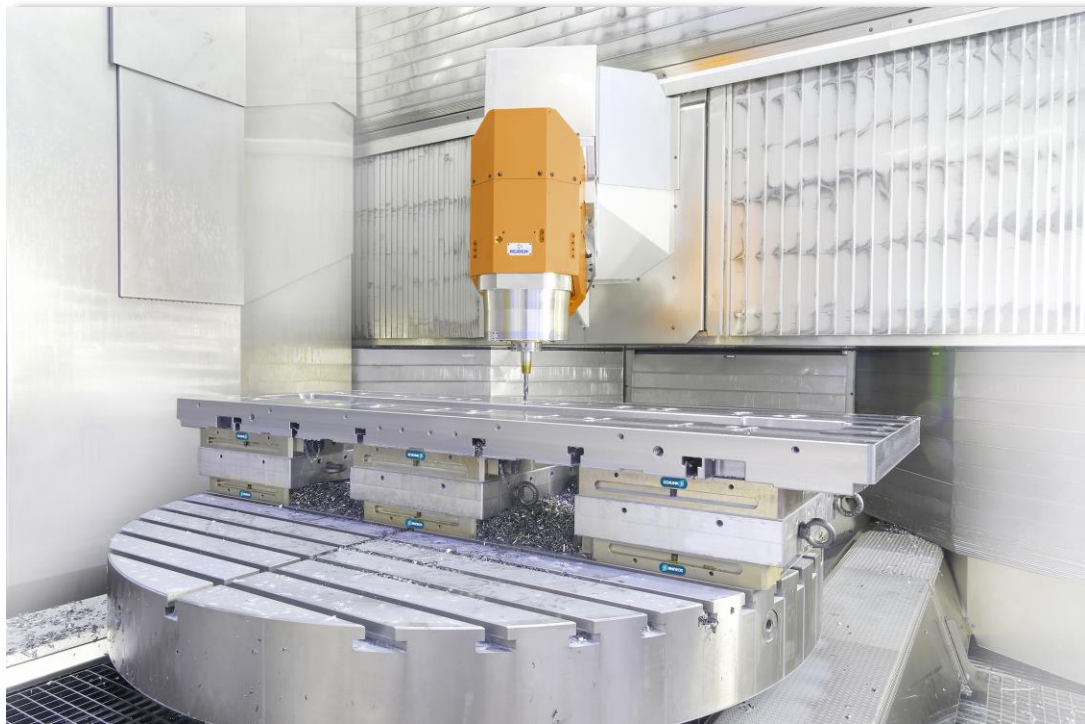
Drilling

Face milling

Form milling

# MAGNOS - Applications

Pipes / profiles / strips



## **Workpiece size**

400 x 60 mm

Profile up to 2000 mm

## **Type of material**

Tool and die steel

## **Machining operations**

Drilling

Face milling

Form milling

# MAGNOS - Applications

Pipes / profiles / strips



## **Workpiece size**

290 x 195 x 5 mm

Profile up to 730 mm

## **Type of material**

Structural steel

## **Machining operations**

Drilling

Face milling

Form milling

# MAGNOS - Applications

Pipes / profiles / strips



## **Workpiece size**

80 x 80 x 4 mm

Profile up to 700 mm

## **Type of material**

Structural steel

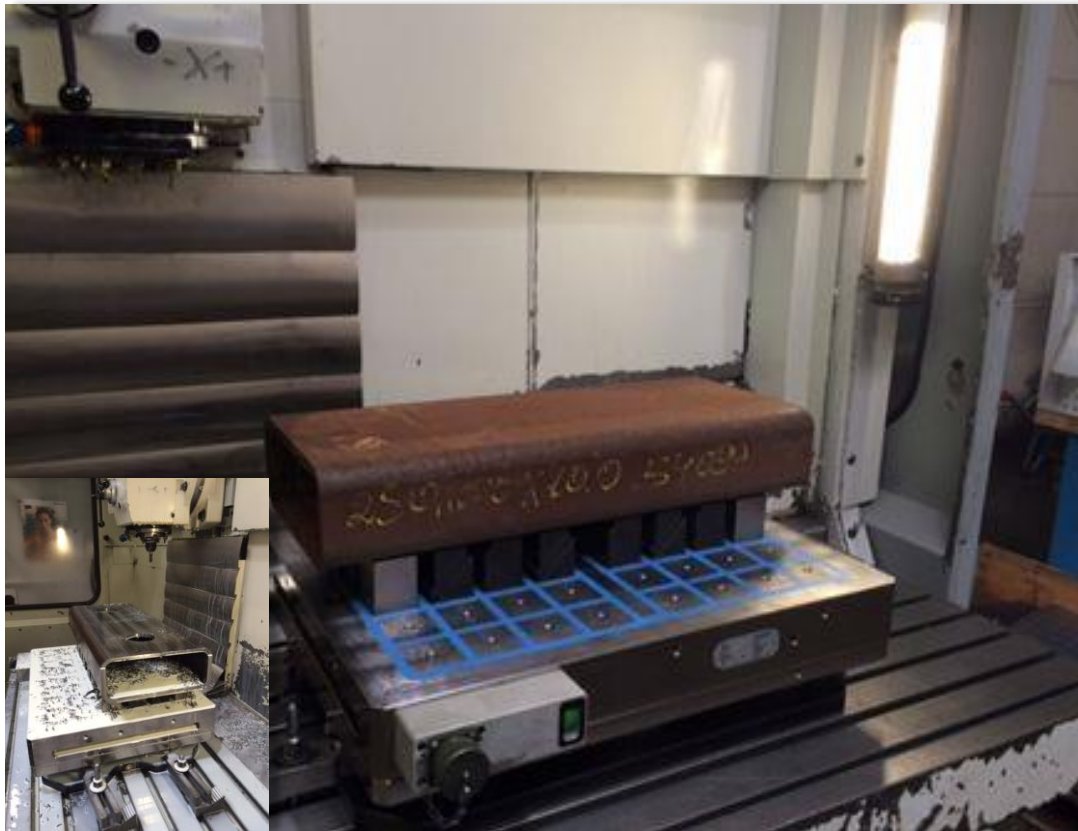
## **Machining operations**

Drilling

Face milling

# MAGNOS - Applications

Pipes / profiles / strips



## Workpiece size

250 x 80 x 10 mm

Profile up to 640 mm

## Type of material

Structural steel

## Machining operations

Drilling

Face milling

Form milling

# MAGNOS - Applications

Pipes / profiles / strips



## **Workpiece size**

300 x 200 x 6 mm

Profile up to 1120 mm

## **Type of material**

Structural steel

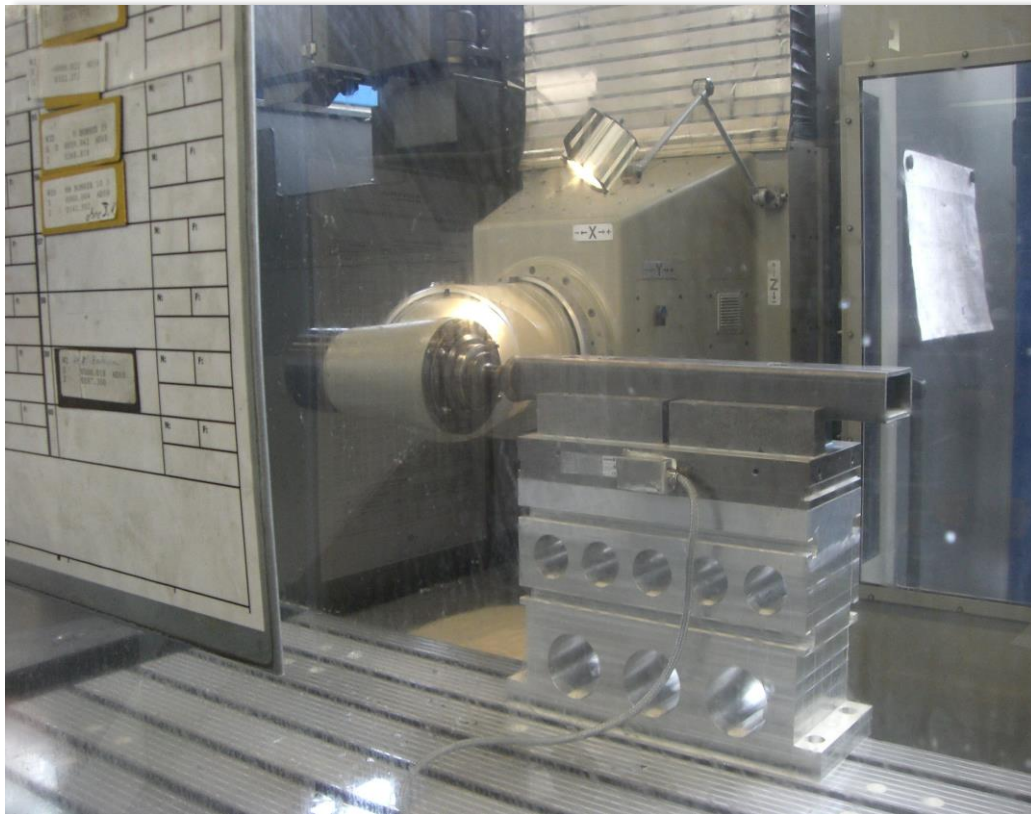
## **Machining operations**

Drilling

Face milling

# MAGNOS - Applications

Pipes / profiles / strips



## **Workpiece size**

300 x 200 x 5 mm

Profile up to 1200 mm

## **Type of material**

Structural steel

## **Machining operations**

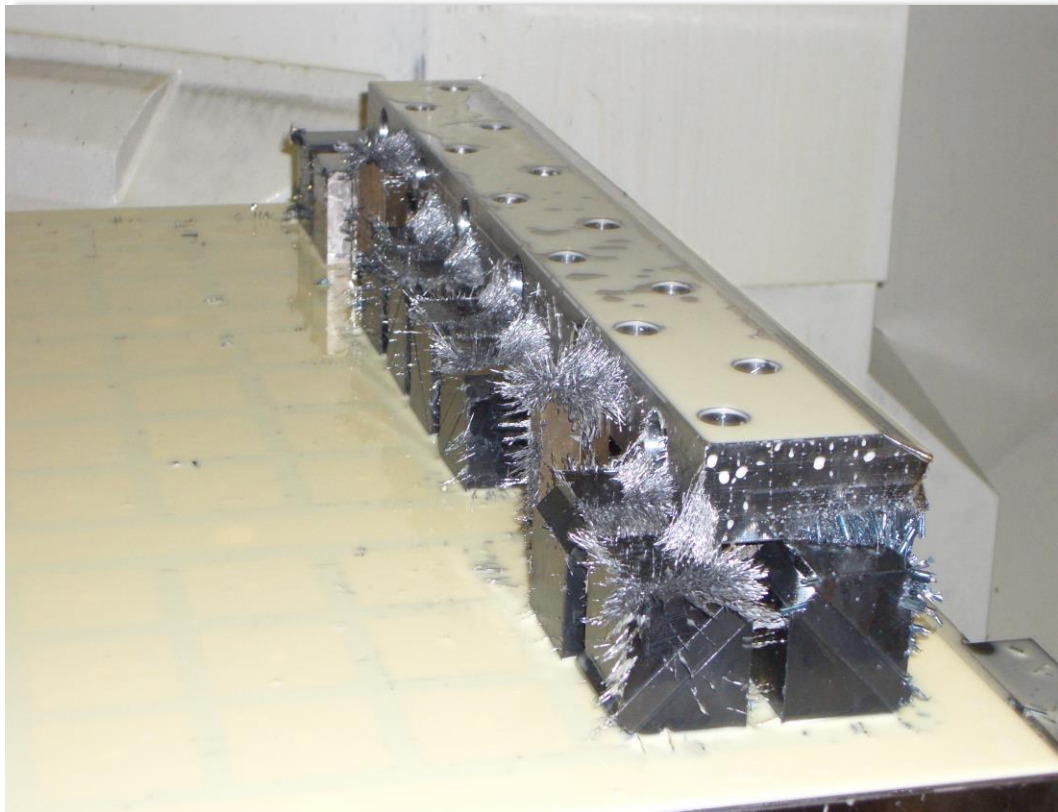
Drilling

Face milling

Form milling

# MAGNOS - Applications

Pipes / profiles / strips



## Workpiece size

580 x 100 x 35 mm

## Type of material

Heat treatable steel

## Machining operations

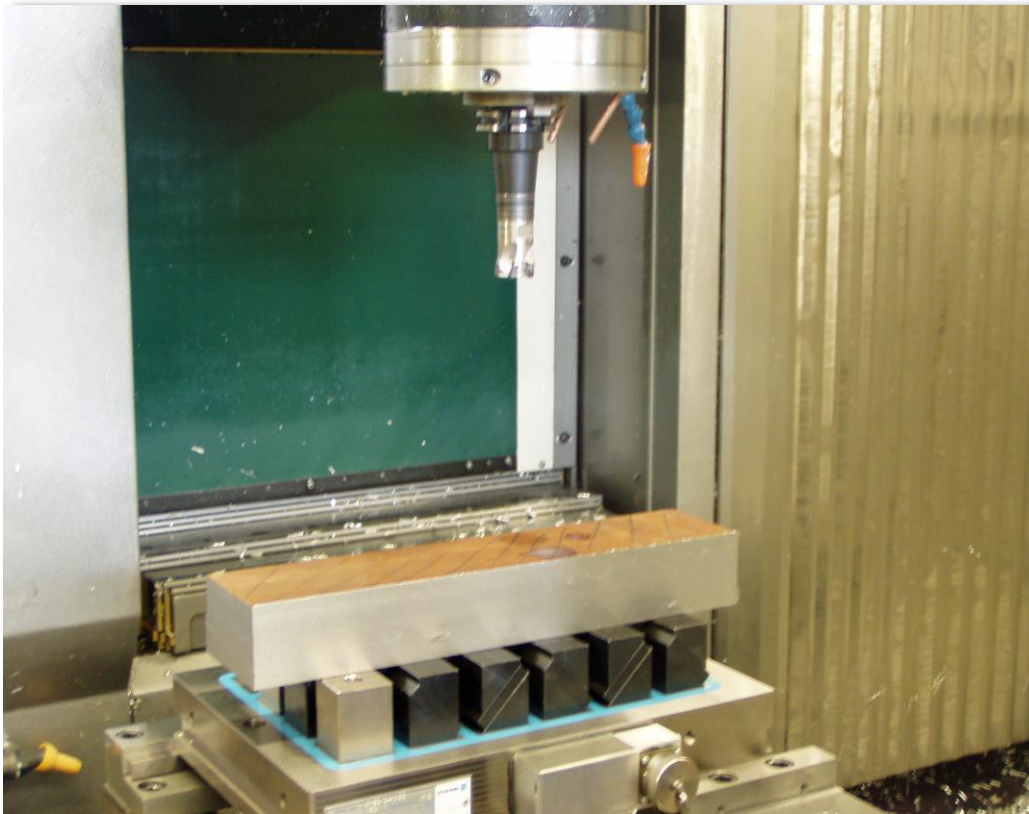
Drilling

Face milling

Form milling

# MAGNOS - Applications

Pipes / profiles / strips



## **Workpiece size**

400 x 90 x 50 mm

## **Type of material**

Unlegierter Baustähle

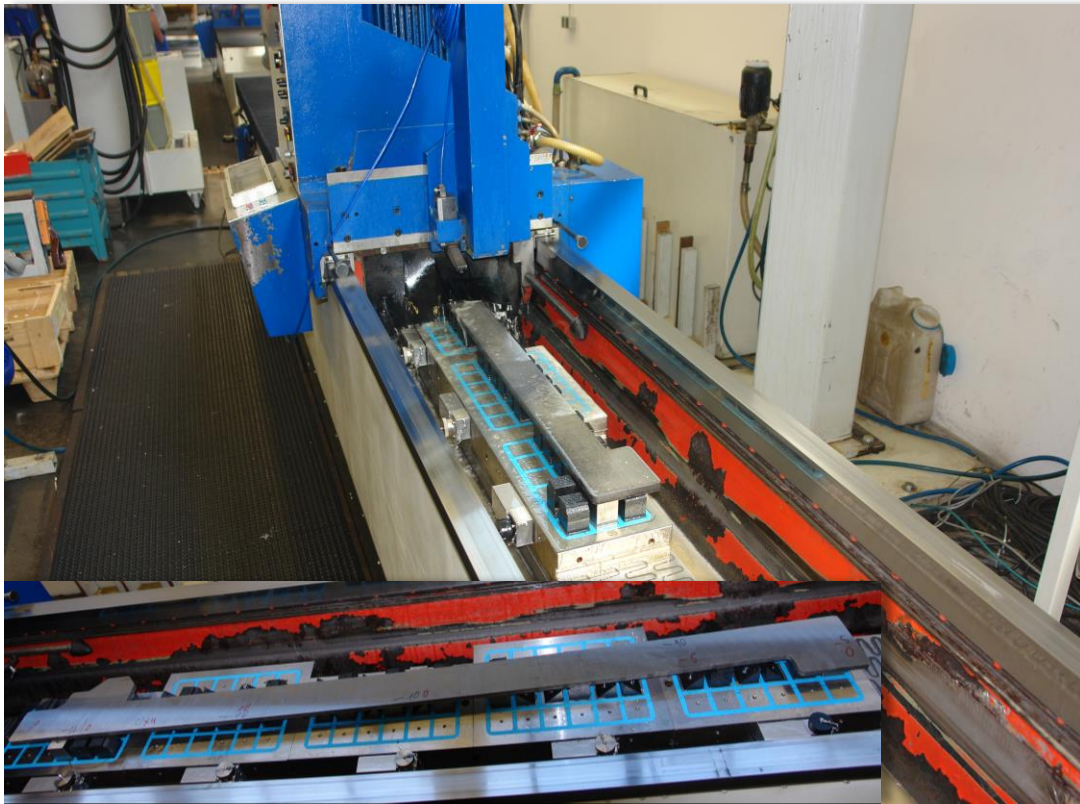
## **Machining operations**

Face milling

Form milling

# MAGNOS - Applications

Pipes / profiles / strips



**Workpiece size**  
2350 x 150 x 15 mm

**Type of material**  
Structural steel

**Machining operations**  
Grinding

# MAGNOS - Applications

## Cast iron parts



### **Workpiece size**

350 x 250 x 250 mm

### **Type of material**

Cast iron steels

### **Machining operations**

Face milling

Form milling

# MAGNOS - Applications

## Cast iron parts



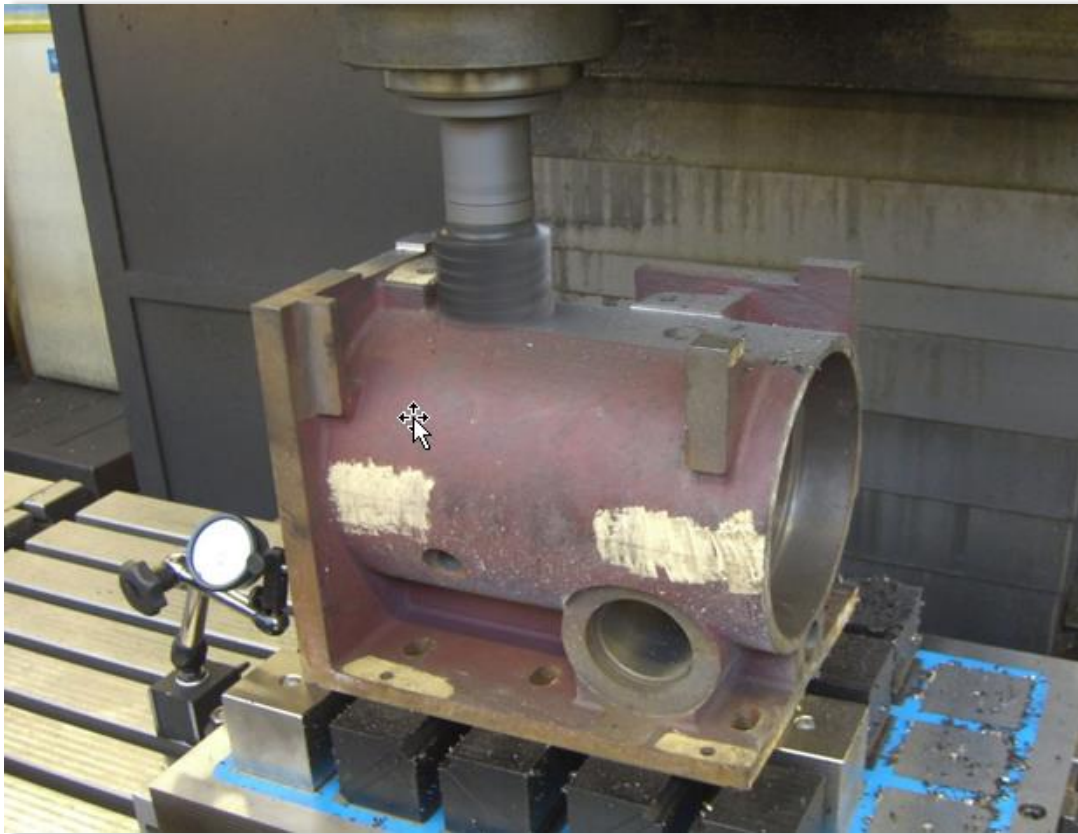
**Workpiece size**  
1000 x  $\varnothing$  400 mm

**Type of material**  
Cast iron steels

**Machining operations**  
Drilling  
Face milling

# MAGNOS - Applications

## Cast iron parts



### Workpiece size

350 x 250 x 250 mm

### Type of material

Cast iron steels

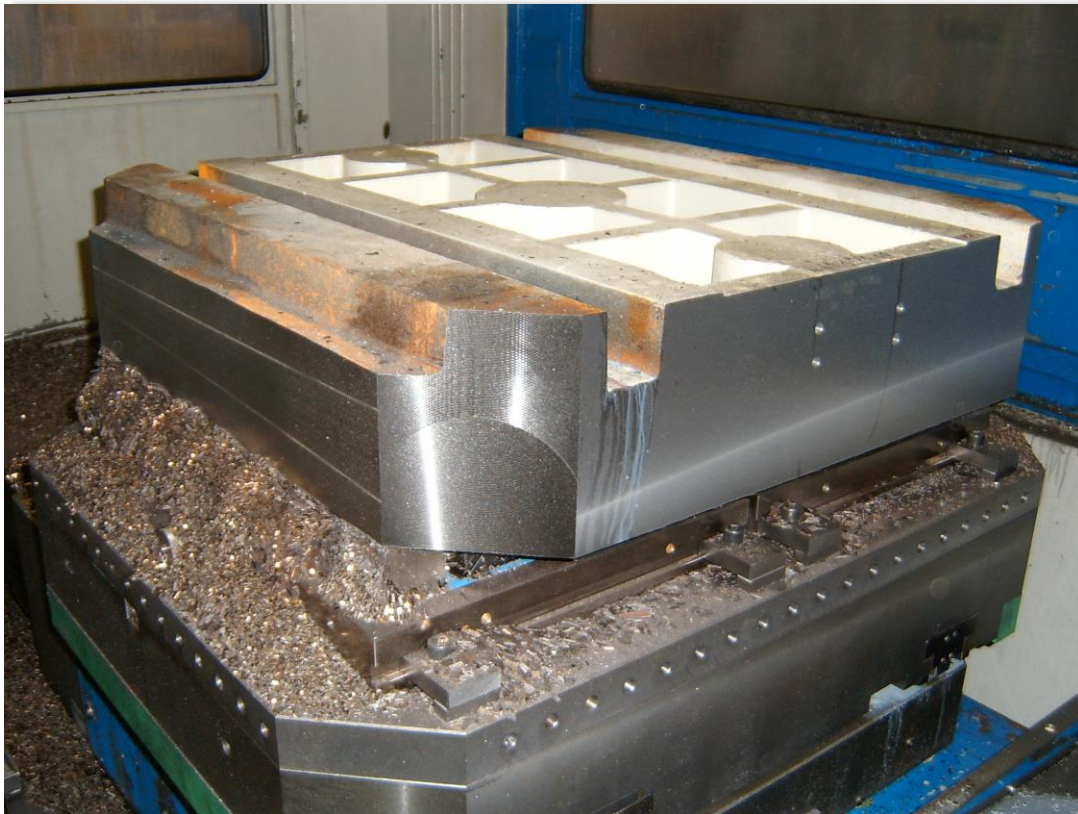
### Machining operations

Face milling

Form milling

# MAGNOS - Applications

## Cast iron parts



### Workpiece size

1000 x 800 x 190 mm

### Type of material

Cast iron steels

### Machining operations

Drilling

Face milling

Form milling

# MAGNOS - Applications

## Cast iron parts



### Workpiece size

1000 x 500 x 300 mm

### Type of material

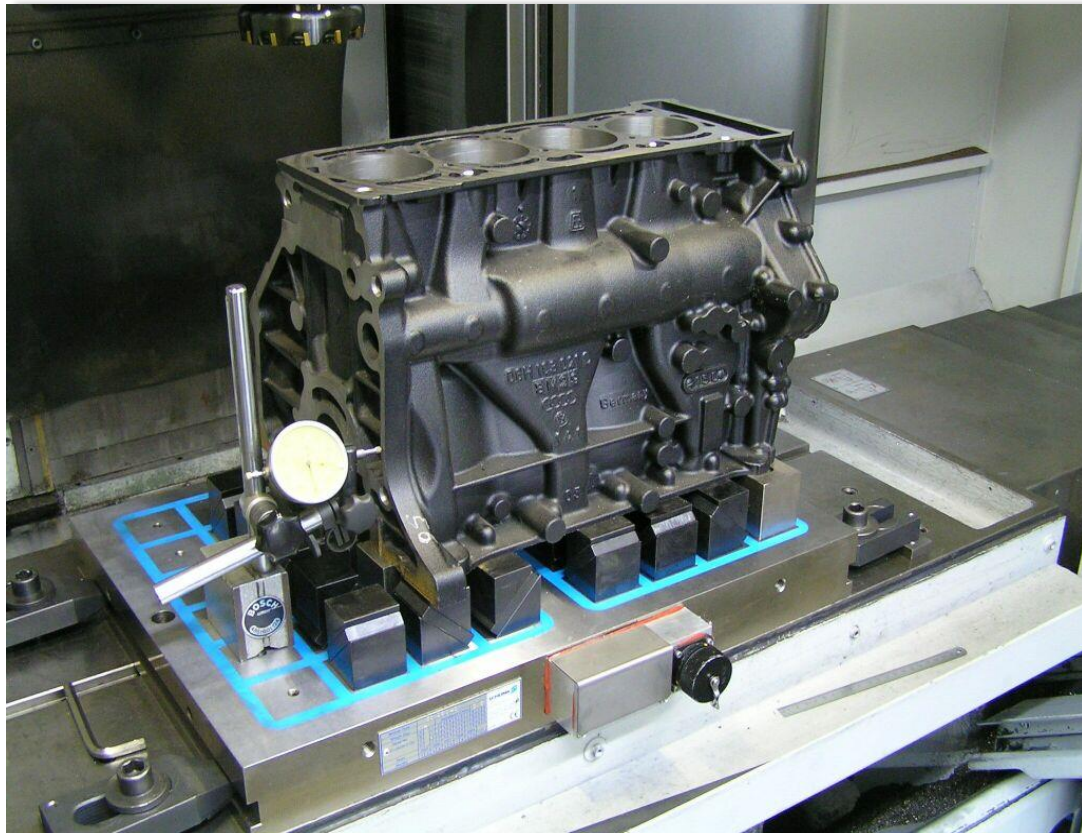
Cast iron steels

### Machining operations

Face milling

# MAGNOS - Applications

## Cast iron parts



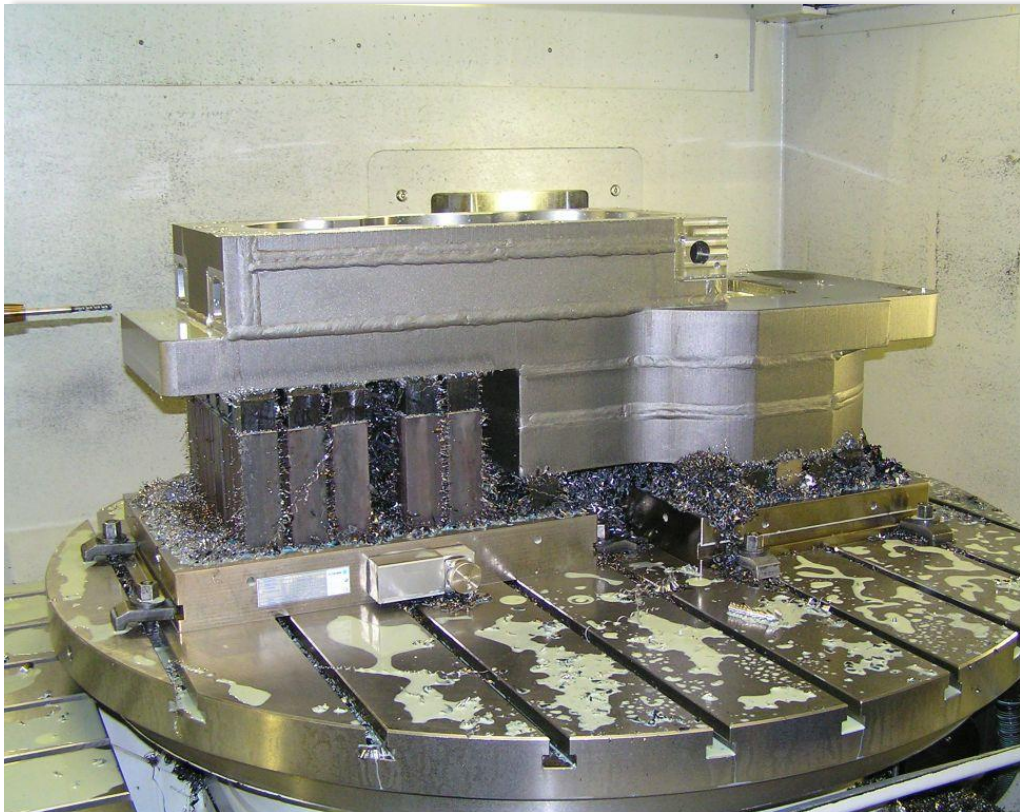
**Workpiece size**  
400 x 200 x 500 mm

**Type of material**  
Cast iron steels

**Machining operations**  
Face milling

# MAGNOS - Applications

## Cast iron parts



### **Workpiece size**

1200 x 450 x 400 mm

### **Type of material**

Cast iron steels

### **Machining operations**

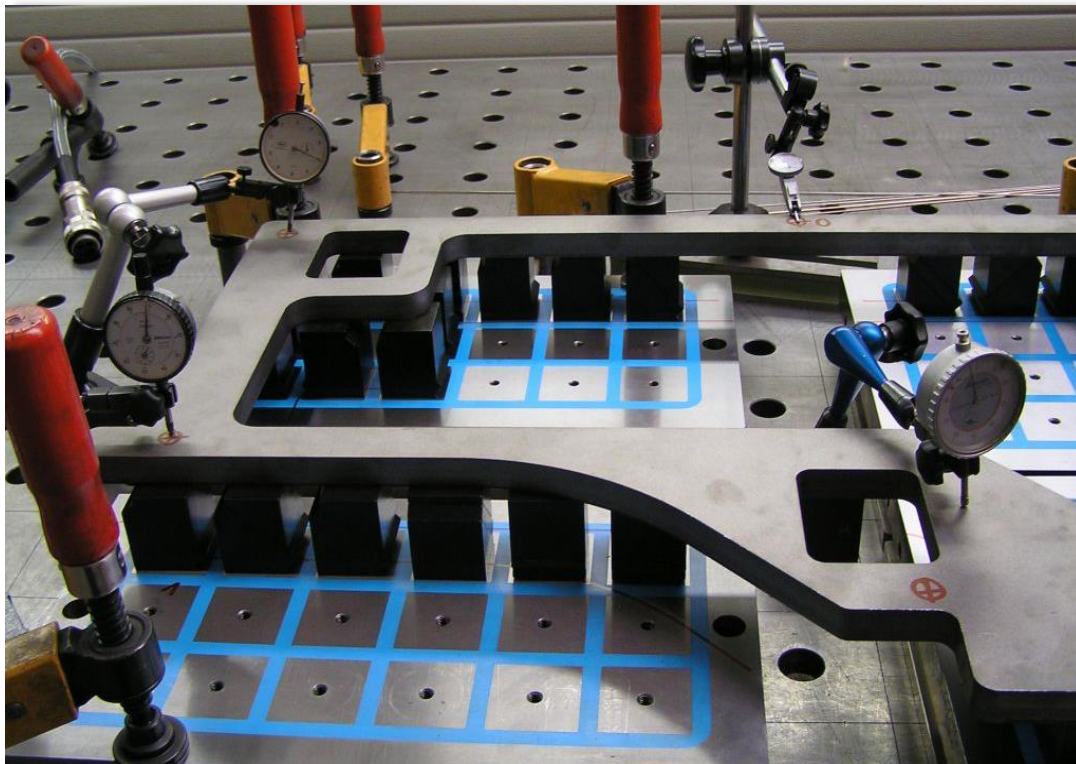
Face milling

Form milling

Bohren

# MAGNOS - Applications

## Welding racks / frames



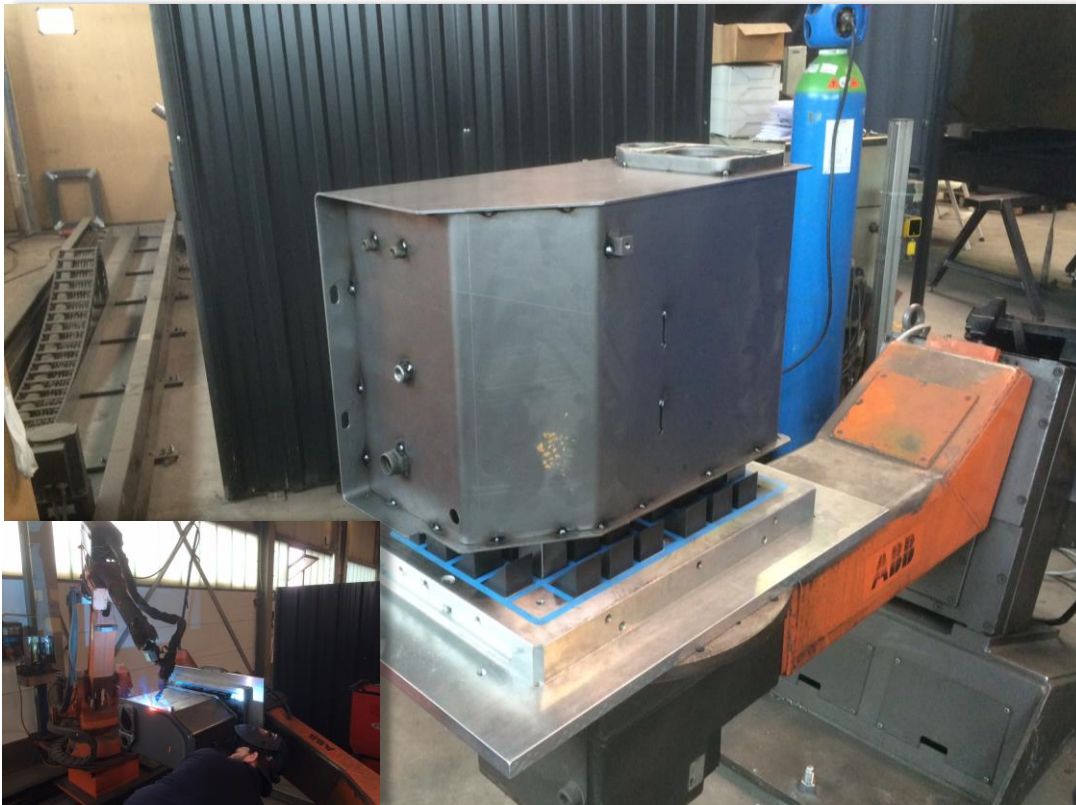
**Workpiece size**  
950 x 530 x 20mm

**Type of material**  
Structural steel

**Machining operations**  
Face milling

# MAGNOS - Applications

## Welding racks / frames



**Workpiece size**  
600 x 450 x 3 mm

**Type of material**  
Structural steel

**Machining operations**  
Welding

# MAGNOS - Applications

## Welding racks / frames



### **Workpiece size**

1600 x 800 x 35 mm

### **Type of material**

Structural steel

### **Machining operations**

Drilling

Face milling

Form milling

# MAGNOS - Applications

## Welding racks / frames



### Workpiece size

3200 x 1400 x 1000 x 8 mm

### Type of material

Structural steel

### Machining operations

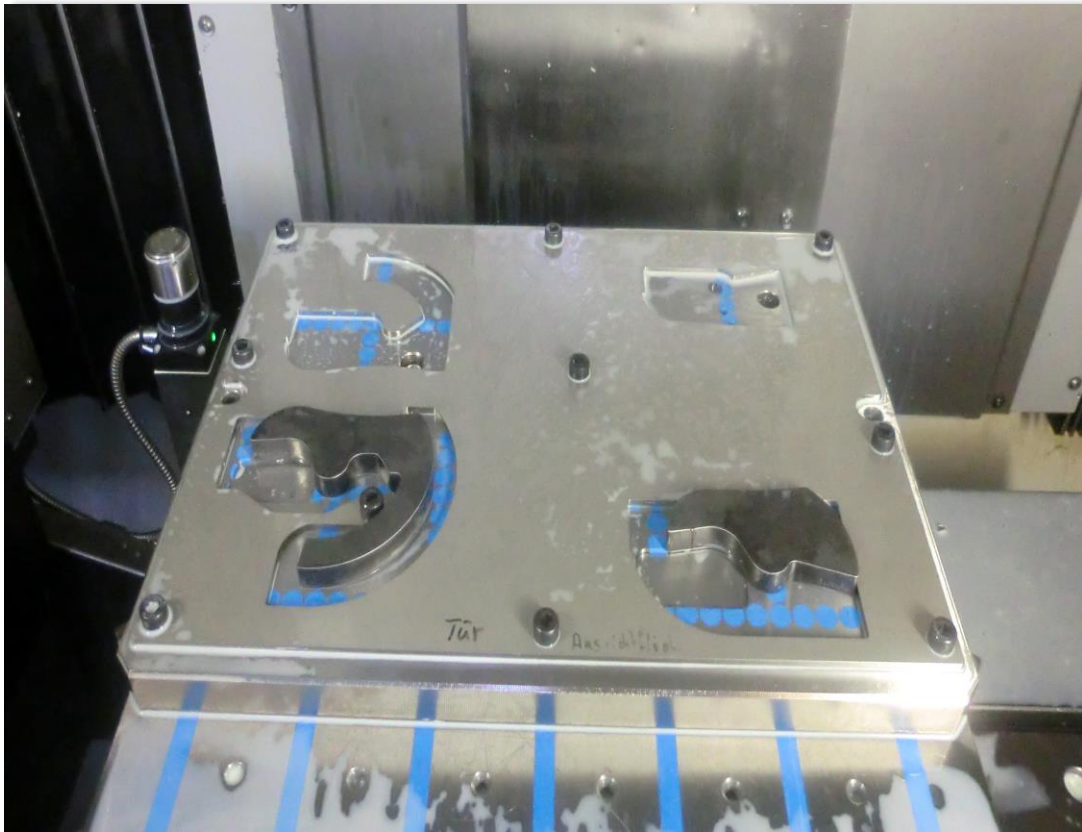
Drilling

Face milling

Form milling

# MAGNOS - Applications

Thin walled / small parts



**Workpiece size**  
100 x 60 x 8 mm

**Type of material**  
Heat treatable steel

**Machining operations**  
Face milling

# MAGNOS - Applications

Thin walled / small parts



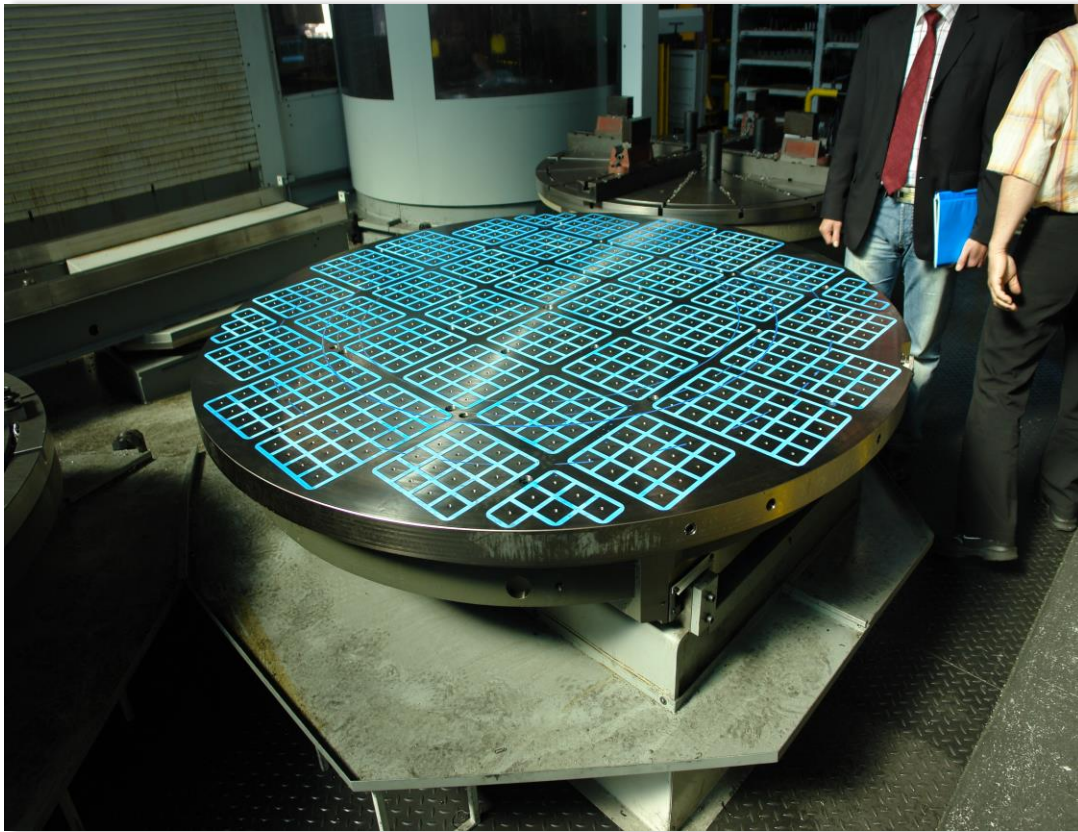
**Workpiece size**  
100 x 100 x 8 mm

**Type of material**  
Nitrided steels

**Machining operations**  
Face milling

# MAGNOS - Applications

## Machine tables / pallets



**Size**

Ø2000 mm

**Typ**

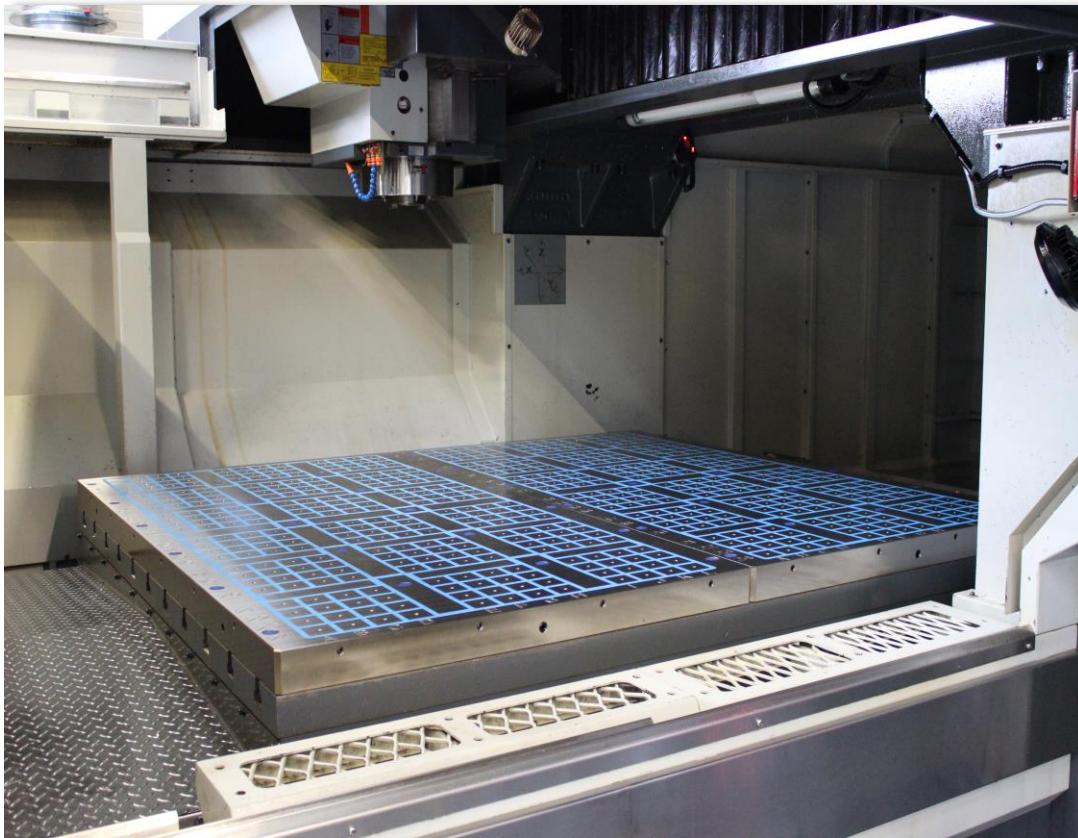
MFR-A1-050

**Machining operations**

Milling

# MAGNOS - Applications

## Machine tables / pallets



### Size

2000 x 1800 mm

### Typ

MFR-A1-050

### Machining operations

Milling

# MAGNOS - Applications

## Machine tables / pallets



### Size

800 x 800 x 1200 mm

### Typ

MFR-A1-032

### Machining operations

Milling

# MAGNOS - Applications

## Machine tables / pallets



### Size

3200 x 1500 mm

### Typ

MSC-PM60-D

### Machining operations

Milling

# MAGNOS - Applications

## Machine tables / pallets



### Size

1600 x 1400 mm

### Typ

MFR-A1-050

### Machining operations

Milling

# MAGNOS - Applications

## Machine tables / pallets



### Size

3000 x 1800 mm

### Typ

MFR-A1-050

### Machining operations

Milling

# MAGNOS - Applications

## Machine tables / pallets



### Size

3500 x 2500 mm

### Typ

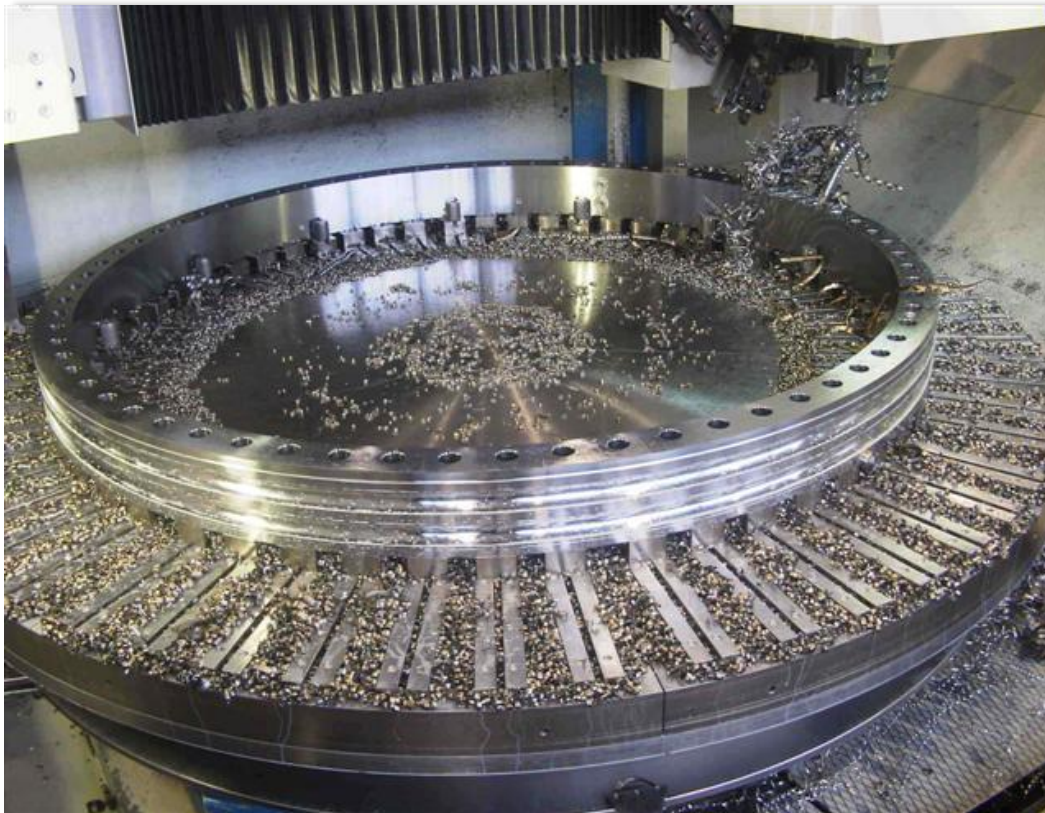
MFR-A1-050

### Machining operations

Milling

# MAGNOS - Applications

## Rings



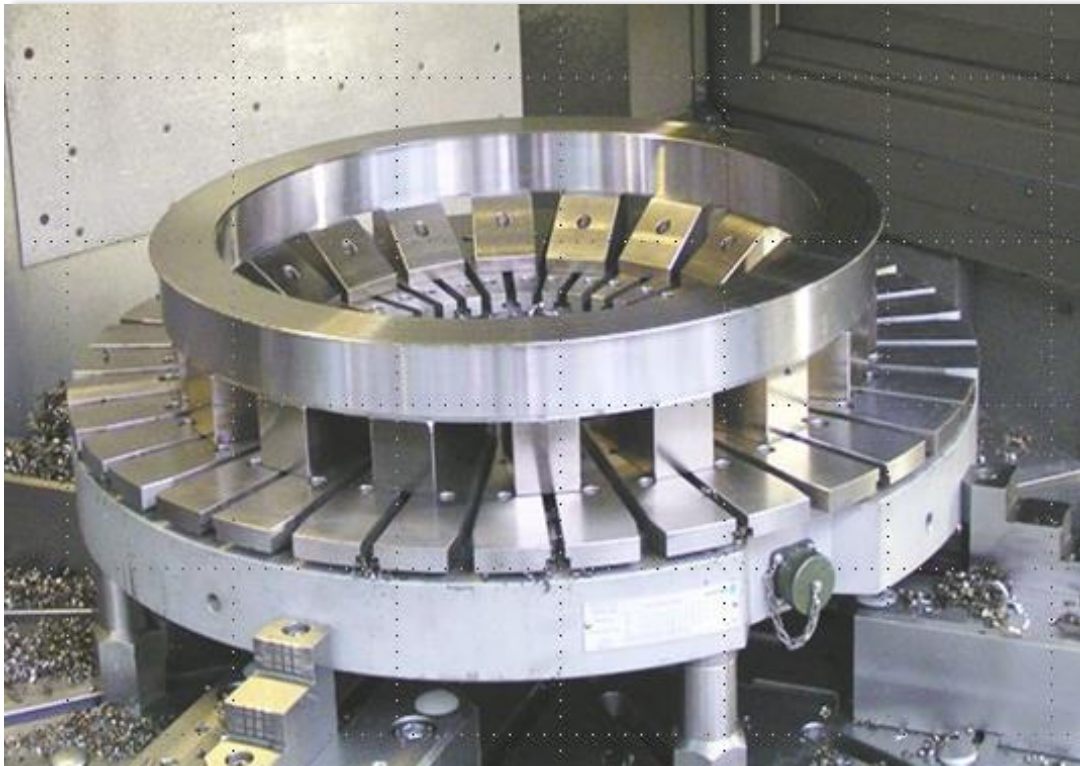
**Workpiece size**  
Ø 800 x Ø 750 x 80 mm

**Type of material**  
Structural steel

**Machining operations**  
Turning

# MAGNOS - Applications

## Rings



**Workpiece size**  
 $\varnothing 500 \times \varnothing 460 \times 50$  mm

**Type of material**  
Structural steel

**Machining operations**  
Turning

# MAGNOS - Applications

## Rings



**Workpiece size**  
Ø 400 x Ø 320 x 40 mm

**Type of material**  
Structural steel

**Machining operations**  
Turning

# MAGNOS - Applications

## Rings



**Workpiece size**  
Ø 320 x Ø 300 x 28 mm

**Type of material**  
Tool and die steel

**Machining operations**  
Face milling

# MAGNOS - Applications

## Rings



### Workpiece size

$\varnothing 874 \times \varnothing 820 \times 22,5 \text{ mm}$

### Type of material

Structural steel

### Machining operations

Turning

# MAGNOS - Applications

## Rings



### Workpiece size

Ø 1000 x Ø 960 x 60 mm

### Type of material

Structural steel

### Machining operations

Turning

# MAGNOS - Applications

## Rings



### Workpiece size

Ø 420 x Ø 325 x 17 mm

### Type of material

Unlegierter Baustähle

### Machining operations

Drehen

# MAGNOS - Applications

## Rings



**Workpiece size**  
 $\varnothing 754 \times \varnothing 590 \times 25 \text{ mm}$

**Type of material**  
Structural steel

**Machining operations**  
Turning

# MAGNOS - Applications

## Rings



**Workpiece size**  
 $\varnothing 400 \times \varnothing 300 \times 25 \text{ mm}$

**Type of material**  
Structural steel

**Machining operations**  
Face milling  
Form milling

# MAGNOS - Applications

## Rings



**Workpiece size**  
 $\varnothing 700 \times \varnothing 300 \times 60 \text{ mm}$

**Type of material**  
Structural steel

**Machining operations**  
Turning

# MAGNOS - Applications

## Rings



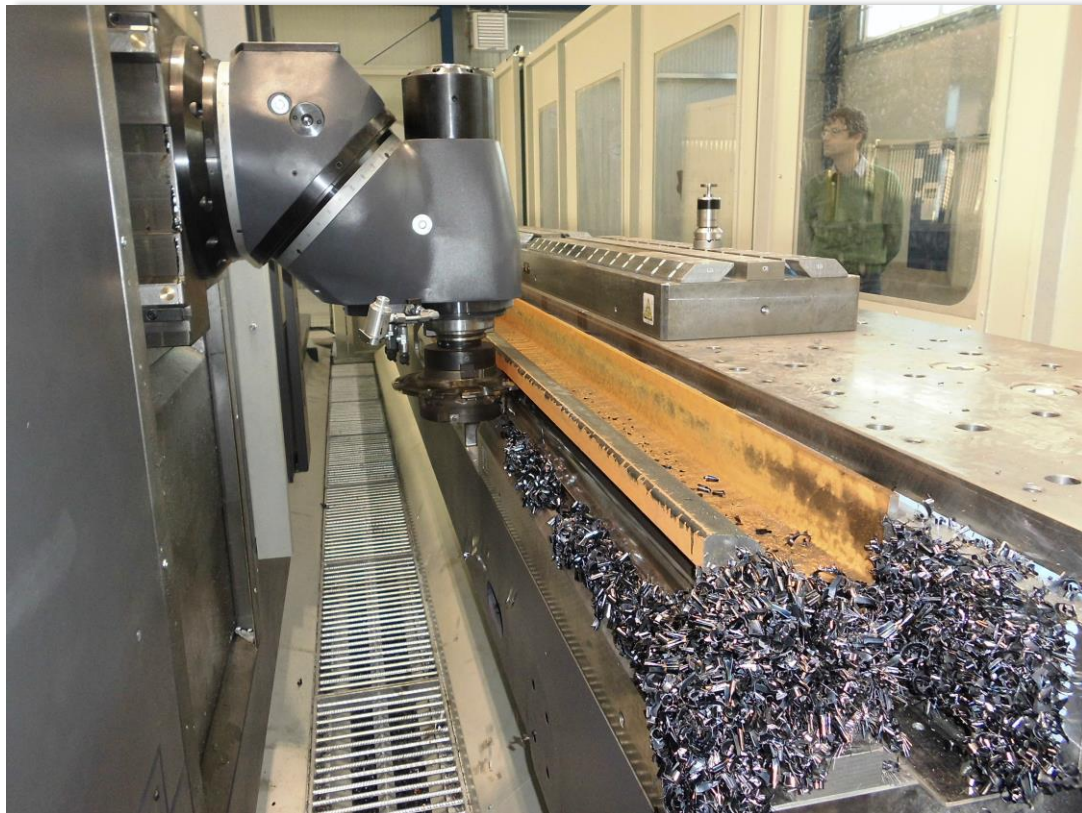
**Workpiece size**  
 $\varnothing 1170 / \varnothing 1125 \times 93,5 \text{ mm}$

**Type of material**  
Nitrided steels

**Machining operations**  
Turning

# MAGNOS - Applications

## Rail



**Workpiece size**  
Profile up to 8000 mm

**Type of material**  
Structural steel  
Construction steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Rail



### **Workpiece size**

Profile up to 8000 mm

### **Type of material**

Structural steel

Construction steel

### **Machining operations**

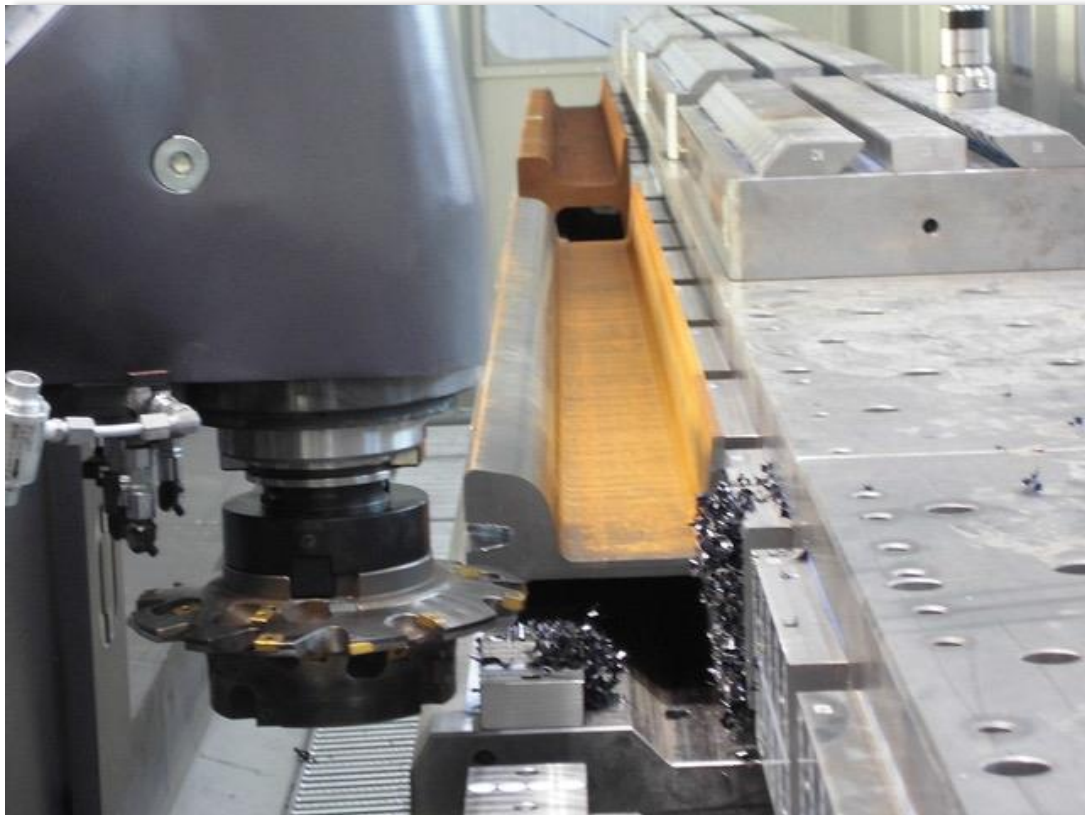
Drilling

Face milling

Form milling

# MAGNOS - Applications

## Rail



**Workpiece size**  
Profile up to 8000 mm

**Type of material**  
Structural steel  
Construction steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Rail



### **Workpiece size**

Profile up to 14000 mm

### **Type of material**

Structural steel

Construction steel

### **Machining operations**

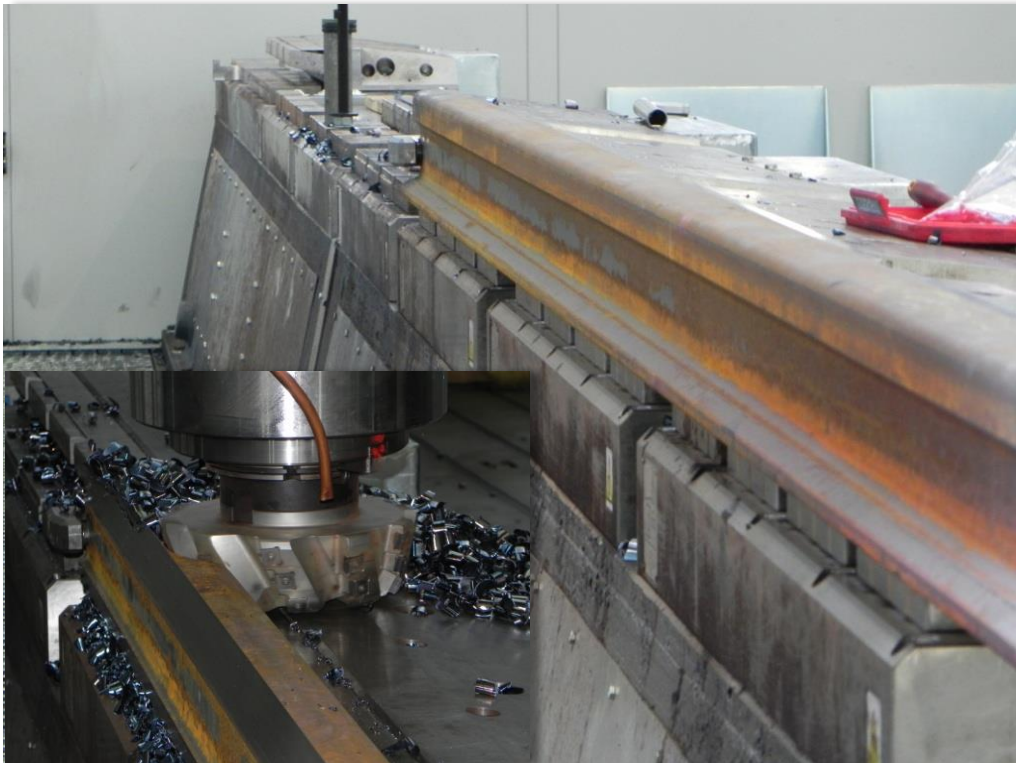
Drilling

Face milling

Form milling

# MAGNOS - Applications

## Rail



### **Workpiece size**

Profile up to 14000 mm

### **Type of material**

Structural steel

Construction steel

### **Machining operations**

Drilling

Face milling

Form milling

# MAGNOS - Applications

## Others



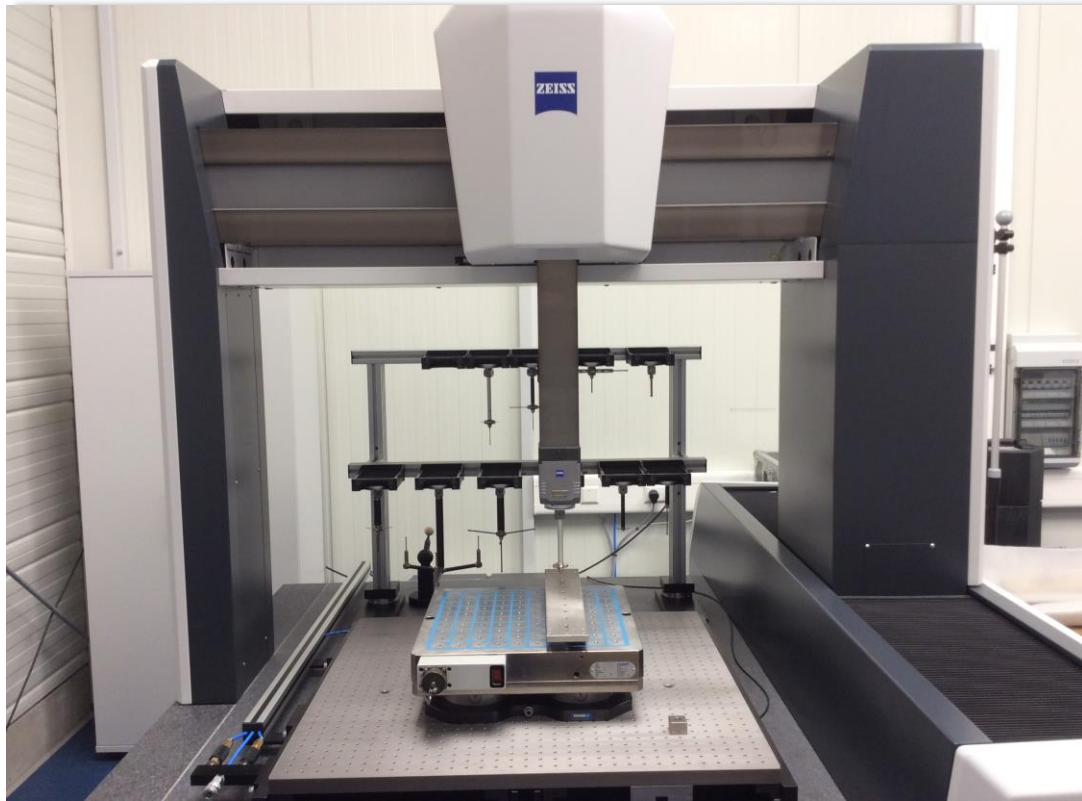
**Workpiece size**  
Ø 1600 x 240 mm

**Type of material**  
Structural steel

**Machining operations**  
Drilling  
Face milling  
Form milling

# MAGNOS - Applications

## Others



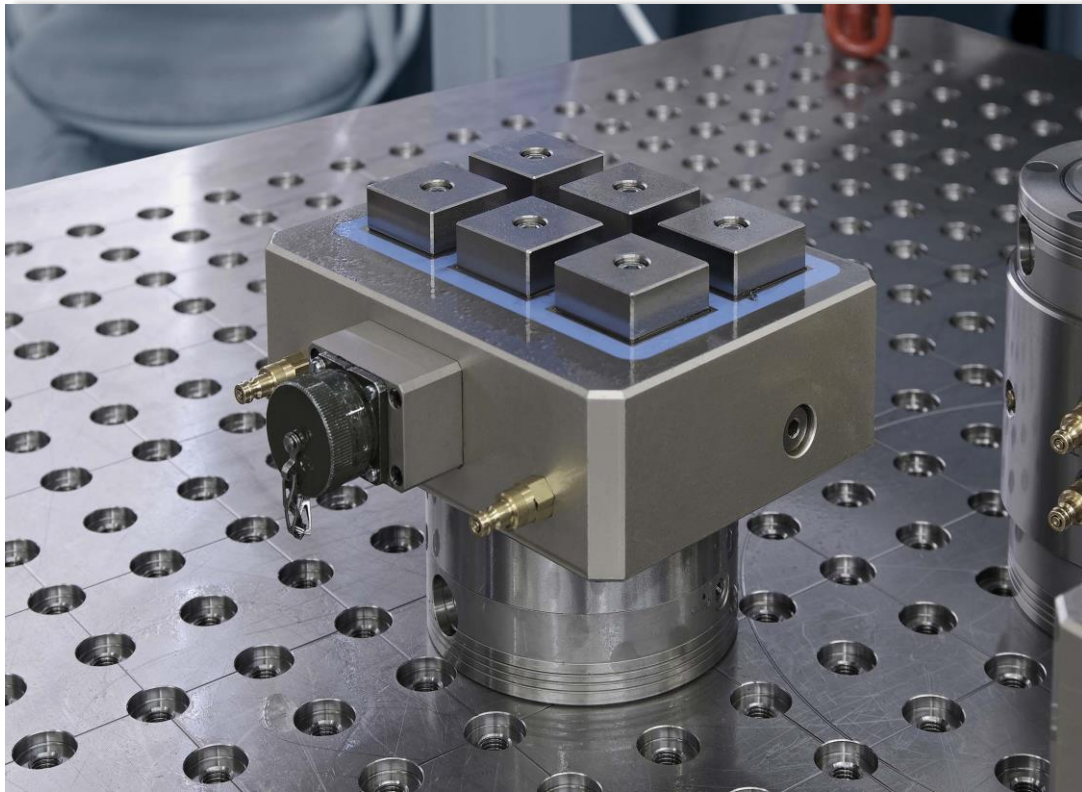
**Workpiece size**  
460 x 77 x 10 mm

**Type of material**  
Structural steel

**Machining operations**  
Measuring

# MAGNOS - Applications

## Others



### Size

250 x 200 x 161 mm

NSE plus 138