



**JEBENS**  
MASSARBEIT IN STAHL

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PICTUREBOOK

**FLAME CUTTING**

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PICTUREBOOK  
**FLAME CUTTING**

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**1** **Weight / Dimensions**

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Large and heavy flame-cut parts are our speciality. Unit weights of up to 54 tons – with the aid of a mobile crane up to 80 tons – are no problem for us. We process heavy plates in widths of up to 5 m and thicknesses of up to 1,400 mm – in the case of materials like S690, up to 350 mm. We keep heavy plates in stock in thicknesses ranging from 8 to 650 mm.



**2** **Technology**

Page 8 – 15

Whatever the product – simple, highly complex or finished – Jebens always provides precision steelwork. We even flame cut multidimensional contours with tight radii in a wide range of different cutting heights, widths and depths, and in this way reduce the need for mechanical processing. Our high-performance machinery includes machines for plasma and oxygen cutting as well as chamfering robots. In the case of simple flame-cut parts, we also take on high-speed jobs with ultra-fast delivery.



## 3 Tolerances

Page 16–19

When it comes to precision, we never compromise. So the most stringent demands for flatness and tightest tolerances over the total length of a part are completely self-evident to us. The reproducible premium quality of our profiles is our guarantee for maximum reliability. We can cut with a precision that is tighter than the tolerances stipulated in the EN ISO 9013 standard.



## 4 Materials

Page 20–23

Our stock programme encompasses structural the steel types S235JR+N and S355J2+N as well as the pressure vessel steel types P355NL2 and SA516Gr70. In addition, we also stock the alloyed steel types C45, 16MnCr5 and 42CrMo4, the high-tensile steels S690 and S960, as well as ballast materials. All other grades are available as new production from Dillinger. We maintain a continuous stock of 30,000 tons of primary materials in widths of up to 3,500 mm – mostly sourced from Dillinger quality production.



1

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# WEIGHT / DIMENSIONS



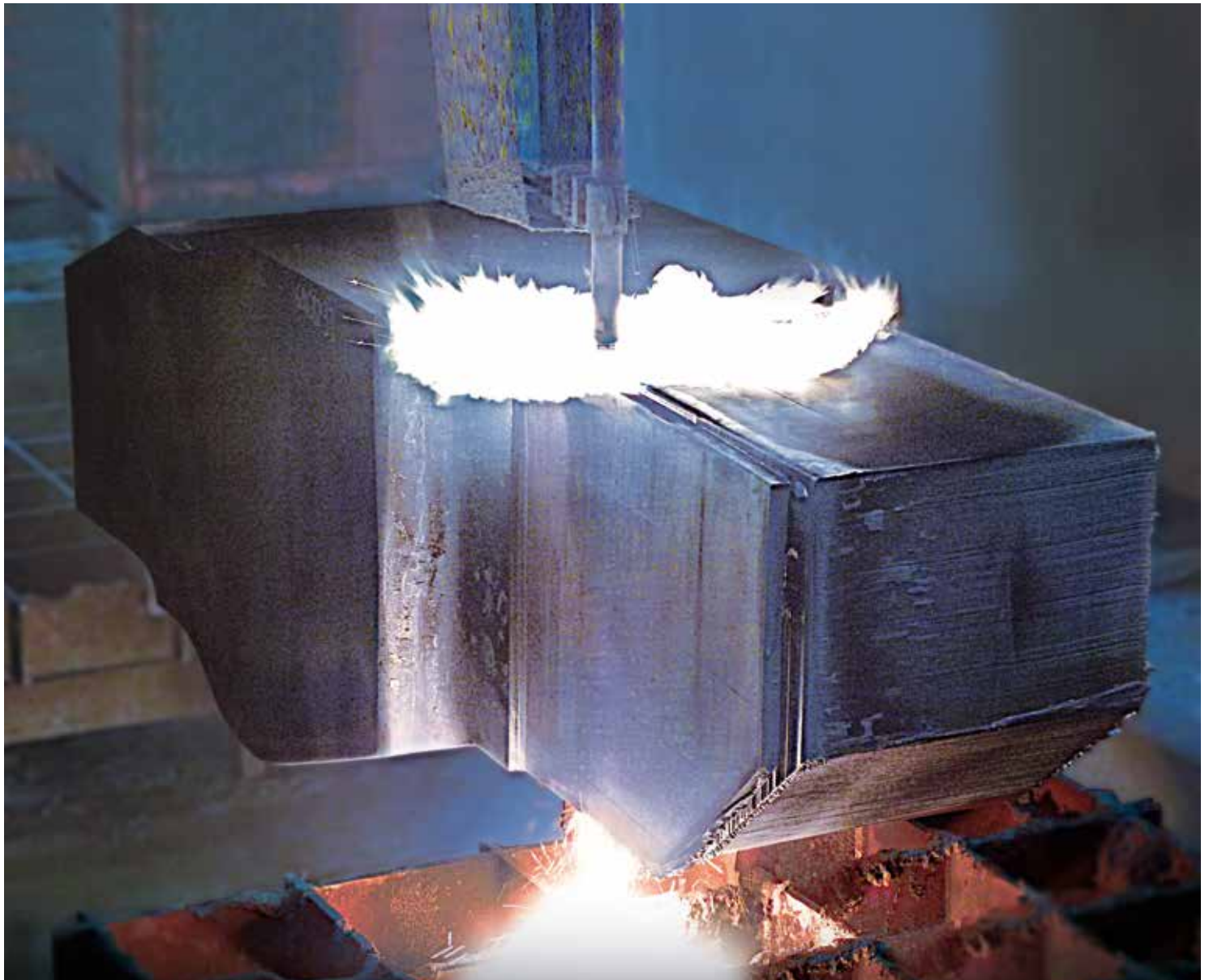
Deep cuts, large lengths, narrow bars or small holes – we can flame cut intricate geometries, even in the case of extreme weights and large widths and thicknesses.

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**1.1**

**Weight /  
Dimensions**  
FLAME CUTTING

**Application:** Part of an aluminium injection mould machine  
**Steelgrade:** S355J2+N  
**Weight / Dimensions:** 37 to / 665 x 2,510 x 3,023 mm  
**Particularity:** Very deep conical inner out-cut with a length of 630 mm



**Application:** Lever  
**Steelgrade:** S355J2G3  
**Weight / Dimensions:** 15 to / 960 x 1,100 x 3,300 mm  
**Particularity:** Very important cutting length (960 mm) with small holes (diameter 180 mm) and narrow remaining bars (80 mm)

1.2

**Weight /  
Dimensions**  
FLAME CUTTING





# 2

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## TECHNOLOGY



Enormous weights, intricate geometries, multidimensional cuts and varying bevel angles – thanks to sophisticated flame and temperature control, we can often make the impossible possible.

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2.1

**Technology**  
FLAME CUTTING

**Application:** Part for a plastic injection mould machine

**Steelgrade:** S355JR+AR

**Weight / Dimensions:** 28,456 kg / 622 x 2,367 x 2,536 mm

**Particularity:** Conical cut-out oxycut with a diameter of 250 mm and depth of 580 mm



**Application:** Part for an offshore-crane  
**Steelgrade:** E40  
**Weight / Dimensions:** 1,800 kg per piece  
**Particularity:** Very flat chamfer top and bottom with a length of 370mm

**2.2**

**Technology**  
FLAME CUTTING



2.3

**Technology**  
FLAME CUTTING

**Application:** Spare part for a steel mill  
**Steelgrade:** S355JR+AR  
**Weight / Dimensions:** 6,318 kg / 450 x 1,300 x 1,350 mm  
**Particularity:** Extreme chamfer with a length of 710 mm



**Application:** Spare part of a steel converter  
**Steelgrade:** P355NH  
**Weight / Dimensions:** 218 kg per piece / 120 x 245 x 928 mm  
**Particularity:** The chamfering angle is changing constantly over the total length of the piece

2.4

**Technology**  
FLAME CUTTING



2.5

**Technology**  
FLAME CUTTING

**Application:** Work of Art

**Steelgrade:** S355J2+N

**Weight / Dimensions:** Thickness: 140 mm / Length: 1,800 mm

**Particularity:** Chamfer angle pivots from +45° to -45° and back



**Application:** Press part  
**Steelgrade:** S235  
**Weight / Dimensions:** 3,1 to / 600 x 700 x 1,200 mm  
**Particularity:** Cut in 3 dimensions, very narrow holes and remaining

2.6

**Technology**  
FLAME CUTTING







3

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# TOLERANCES



Exceptional flatness over the whole surface  
with score-free cut quality in spite of  
enormous widths and lengths – absolute  
precision is part of our daily routine.

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3.1

Tolerances  
FLAME CUTTING

**Application:** Part of a press  
**Steelgrade:** S355J2+N  
**Weight / Dimensions:** 3,100 kg per piece / 85 x 1,050 x 12,445 mm  
**Particularity:** Extreme precision requirements flatness of 3 mm on total length and the cutting quality, edges had to be reworked to keep the notch factor for the component as low as possible



**Application:** Press frame  
**Steelgrade:** S355J2+N  
**Weight / Dimensions:** 11 to / 80 x 4,070 x 7,550 mm  
**Particularity:** Very large frame plates with extreme flatness requirements (3 mm on total surface)

3.2

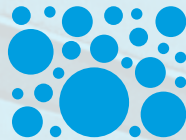
**Tolerances**  
FLAME CUTTING



# 4

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## MATERIALS



We have one of Europe's largest stocks of steel plate over 200 mm thick, also in high-strength materials, and we have access to Dillinger quality products – in other words the best preconditions for high-speed order processing.

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4.1

**Materials**  
FLAME CUTTING

**Application:** Parts of huge sun umbrellas

**Steelgrade:** S960QL+Z25

**Weight / Dimensions:** 238 kg per piece / 70 x 172 x 3,434 mm – 2,000 pieces

**Particularity:** High flatness requirements, machining of this high strength steel to achieve length tolerance of +/- 0,1 mm



**Application:** Hydraulic component  
**Steelgrade:** 34CrNiMo6+QT  
**Weight / Dimensions:** 1,074 kg / 680 x 460 x 660mm  
**Particularity:** Cut in 4 dimensions

4.2

**Materials**  
FLAME CUTTING

# JEBENS

MASSARBEIT IN STAHL

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**DILLINGER**  Gruppe