Efficient production of Beams and Profiles

WITH ESAB YOU GET MORE THAN JUST MACHINES FOR YOUR PRODUCTION
There is more to welding beams and profiles than just welding machines.

ESAB has more than 25 years of experience in the field of beam and profile welding. The ESAB beam and profile welding machines have earlier been marketed under the name of Gränges but always included the well-proven ESAB welding equipment.

ESAB gives you the complete and efficient way to weld beams and profiles. Whether you weld I-, T- or L-beams, wide flange beams, columns, tapered beams, or non-symmetrical beams, ESAB has the know-how and the welding equipment to suit your requirements on efficiency, quality, precision, versatility, productivity and overall welding economy.

Whatever your needs, ESAB has the welding equipment to suit your requirements. This brochure contains a selection of our machines for efficient beam production. The machines are of two types: The IT-machines where the beams are welded with the web unit in vertical position and the BW type machines where the beams are produced in a horizontal position.

The ESAB machine programme gives you the possibility to choose the right type of equipment for your particular type of production.

The main advantage for both types, besides high production capacity, is that the welding operation takes place when the flange and the web have been pressed together under pressure to completely eliminate the gap between the surfaces. This ensures perfect weld quality. The IT machines have a built-in straightening device which compensates the pull-back of the flanges.

Heating equipment – Gas or induction
ESAB IT beam welding machines can be provided with heating equipment to achieve straight beams. This is essential when welding of T-profiles. Heating equipment can be quoted on request.

**IT 258 BA**

**The Automatic Production Beam Welding Machine**

This is the basic IT-model, especially suited for production of I- and T-beams, girders and tapered beams. The welding method used is SAW, Submerged-Arc Welding. Both sides are welded simultaneously, using single or tandem wire.

When manufacturing I-beams the web plate is welded to the first flange, the welded T is turned 180° and the second flange is welded at the next pass.

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**Dimensions of beams that can be welded:**

| Web unit height: | 200 - 2500 mm |
| Web unit thickness: | 6 - 25 mm |
| Flange width: | 100 - 800 mm |
| Flange thickness: | 10 - 50 mm |

Total height IT-258 6 m
IT-100 and IT-3200 Beam Welding Machines

These are variations of the basic model. They are designed to handle smaller (IT-100) and larger (IT-3200) beams than the IT 258.

IT-100 total height ≈ 4.5 m
IT-3200 total height ≈ 6.2 m

Dimensions of beams that can be welded

<table>
<thead>
<tr>
<th></th>
<th>IT 100</th>
<th>IT 3200</th>
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<tbody>
<tr>
<td>Web unit height</td>
<td>200 - 1000 mm</td>
<td>300 - 3200 mm</td>
</tr>
<tr>
<td>Web unit thickness</td>
<td>5 - 25 mm</td>
<td>5 - 30 mm</td>
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<tr>
<td>Flange width</td>
<td>100 - 700 mm</td>
<td>100 - 1600 mm</td>
</tr>
<tr>
<td>Flange thickness</td>
<td>10 - 50 mm</td>
<td>10 - 100 mm</td>
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</table>
**I-2000**

**Beam Welding Machines**

This is a high productivity machine for Single Arc Tandem SA-welding of I- and H-beams. It has four welding heads as standard.

The web unit is located horizontally and both flanges are welded simultaneously on one side. Two machines can be placed in a flow line and served by mechanized conveyors and handling equipment to achieve maximum production capacity and efficiency.

All the ESAB beam welding-machines and feeding conveyors can be:

- placed straight on an even concrete flooring without special foundations which cuts installation time and costs.
- placed straight into the production in existing plants
- utilized where space is limited
- operated with minimum of man-power

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**Dimensions of beams that can be welded:**

- Beam min web height: 230 mm
- Flange size: 100 - 700 mm
- Flange thickness: 8 - 100 mm
- Beam min height: 246 mm
- Beam max height: 2200 mm
- Machine max opening: 2300 mm
- Web max thickness: 50 mm
- Max beam weight: 2 ton/m
- Frame tilting (motorised): ± 20°
- Welding speed: 0.3 - 2 m/min
- Transport speed: 4 m/min
- Allowed web taper 8 degrees, one side

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**With ESAB you get more than just machines for your production**

The low investment costs and high productivity give you a fast return on investment. Our engineers have the know-how and experience needed to give you advice and help in all aspects of welding technology and economy for a successful beam and profile production.

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ESAB reserves the right to alter specifications without prior notice.
ESAB is approved according to ISO 9001:2000.