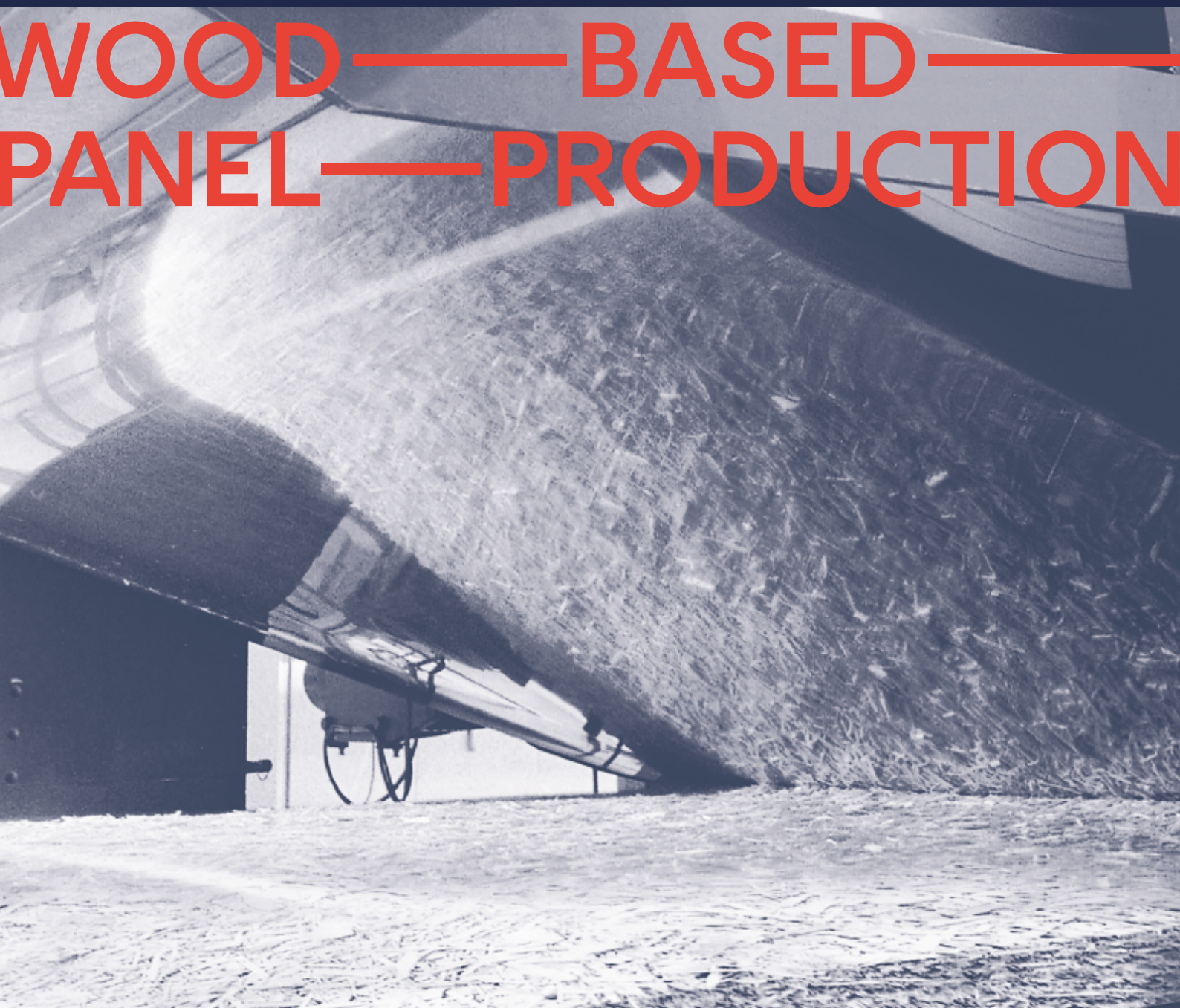




We are world leaders in the supply of premium quality steel belts for the high productivity manufacture of WBP products including particle board, MDF and OSB. Our global service network provides responsive local support to ensure maximum press uptime.

[ipco.com](http://ipco.com)

# —STEEL—PRESS— —BELTS—FOR— WOOD—BASED— PANEL—PRODUCTION



# — STEEL BELTS PLUS – TOTAL SERVICE FOR THE WBP INDUSTRY

IPCO is one of the world's leading manufacturers and suppliers of premium quality steel press belts used in the production of particle board, MDF, OSB and coated boards.

Our experience of working with the wood industry extends back more than 100 years to 1901 when the world's first steel belt was used to transport waste from a Swedish sawmill. Since then, our business has been responsible for a series of industry firsts, including the first stainless steel belt, the first endless steel belt, the first 3 mm thick steel belt, and the largest WBP steel belt ever produced.

We also developed the world's first continually operating double belt press, establishing the principle that remains the basis of modern day WBP presses.

Today we are a trusted and experienced supplier to all major press manufacturers and to end users in every corner of the world.

As well as supplying high-quality press belts, we help manufacturers achieve optimum product quality – an important differentiating factor in what is an increasingly competitive market – through high quality service, while at the same time maximizing press productivity:

- Engineering expertise
- Research & development
- Unique steel grades/properties
- World's widest steel belts
- Patented service tools

#### **World-class manufacturing capability**

We supply belts in three main steel grades to suit different requirements – 1100C, 1500SM and 1650SM – and can produce belts in thicknesses from 1.2 to 3.5 mm, and in widths of up to 4 620 mm.



Specialised machinery and production techniques are used in the manufacture of steel belts for WBP double belt presses in order to meet the fine tolerances required by this industry.

Our range of belt materials enables us to supply products delivering the optimum combination of tensile strength; elasticity and thermal conductivity; and resistance to corrosion and general wear and tear.

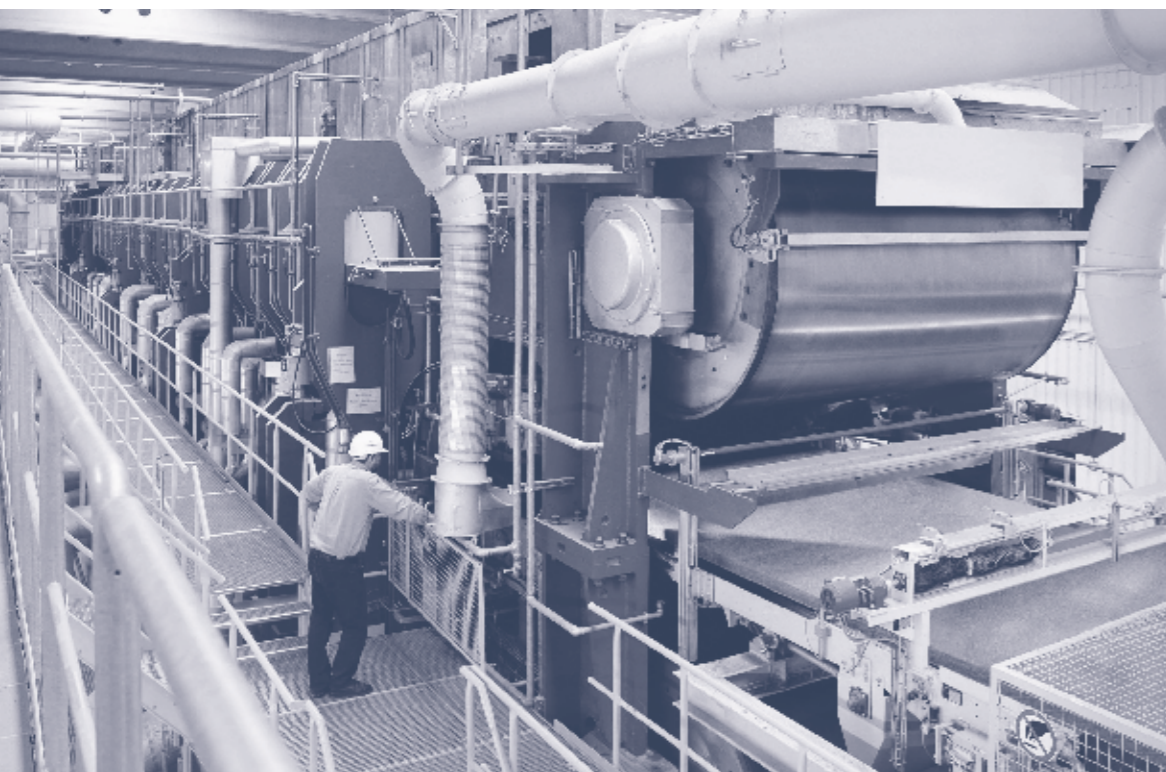
With the market moving towards ever thinner boards – produced at speeds up to 2 000 mm/sec – the need for near perfection in belt quality is intensifying, and we continue to invest in the precision technologies necessary to deliver to the highest standards.

IPCO press belts are ground to a thickness tolerance of just 50 microns (0.05 mm) over the entire belt. For press belts wider than 1 500 mm, two or even three single belts are welded together longitudinally to create a belt of the required width.

We continually work to improve the tolerances we can offer – thickness deviation, flatness and straightness – and our ability to meet demanding delivery schedules.

#### **Quality and environmental management**

We aim to meet customer expectations and requirements for all products and services, and to minimize our impact on the environment. We do this by implementing stringent quality controls throughout the manufacturing process, from selection of raw materials, through production systems and technologies, to rigorous checking of the final product. We are certified to ISO 9001, ISO 14001 and OHSAS 18001.





And by equipping a customer's technicians with the skills and tools to complete repairs without having to call out an IPCO engineer, we can help deliver significant savings in both time and cost.

**QuickTools for fast, high quality repairs**

All our engineers are equipped with a range of specialist IPCO QuickTools that have been purpose designed to enable fast repairs to the highest possible quality.

**QuickDisc family**

The IPCO QuickTool family has been developed over the years to meet the changing needs of the WBP industry, and includes the QuickDisc, a tool used for removing the damaged area of a belt and cutting out a replacement disc from the spare section supplied with every IPCO belt.

**QuickDisc Plus 500**

The most advanced model in this range is the QuickDisc Plus 500, a self-contained cutting, welding and grinding system that can be used to replace damaged areas up to 480 mm in diameter.

The first stage in the process is to remove the damaged area – and create the replacement disc – using the automatic carbide cutter. The cutter is then replaced in the jig by a track-welding unit that ensures accurate, semi-automatic replacement of the disc. Once welding has been completed, the weld area is ground down and the repair is complete.

**QuickAnnealer**

The benefits of the QuickDisc are enhanced by the QuickAnnealer, a tool that applies a concentrated heat of up to 600 °C to the weld area. This improves the hardness of the weld by as much as 30%, making it much closer to that of the press belt itself. This in turn ensures a premium quality repair, significantly reducing the risk of the faint white rings that may otherwise be visible on end products following a disc repair, particularly on thin boards.

**QuickCutter**

The QuickCutter enables efficient and precise on-site cutting and end preparation of belts up to 4 mm thick, and can be tailored to almost any belt cutting need.

**QuickPeener**

The QuickPeener is used to repair deformities that can appear in a press belt over time, and can be employed without stopping production or dismantling the belt.

**QuickGrinder**

The IPCO QuickGrinder is used for smoothing out cross welds with minimal thickness deviation.

## Global service network for premium productivity

The supply of press belts is just the beginning of a relationship; we also help our customers maximize belt lifetime, product quality and plant productivity through a global service operation manned by specialist service teams.

Press downtime can be extremely costly so we are geared up to providing a rapid and efficient response to any belt related issues.

As well as carrying out repairs, our engineers can ensure maximum return on investment through planned maintenance and preventative work:

- Service line for 24/7 support.
- Easy access to specialist service technicians worldwide.
- Local presence in over 130 countries.
- Steel belt inspection, repair and replacement.
- Spare parts, consumables and tools for in-house teams.
- Customer seminars and in-house training.

**Training for in-house teams**

We also support customers through on-going programmes of technician training. By passing on the knowledge and expertise to carry out preventative maintenance in-house, the risk of unnecessary downtime is immediately reduced. As well as delivering practical training on specific issues such as maintenance, troubleshooting and repair methods, we also aim to build an understanding of the importance of planned service routines.



## Belt grades and technical data

We supply three main steel grades to the wood based panel market: one carbon grade, used for single opening presses, and two stainless grades, used on double belt presses.

### IPCO 1100C

IPCO 1100C belt grade is a hardened and tempered carbon steel that offers:

- Very good static strength
- Very good fatigue strength
- Very good thermal properties
- Excellent wear resistance
- Good repairability

### Size range

#### IPCO 1100C

Belt thickness 1.2 and 1.4 mm

Belt width up to (mm)

|       |                |
|-------|----------------|
| 1 240 | Single width   |
| 2 380 | One long weld  |
| 3 500 | Two long welds |

### IPCO 1500SM and IPCO 1650SM

IPCO 1500SM and IPCO 1650SM are made from low carbon, martensitic, precipitation hardened stainless steel.

Both grades offer:

- Excellent static strength
- Excellent fatigue strength
- Good corrosion resistance
- Very good wear resistance
- Very good repairability

### Size range

#### IPCO 1500SM and 1650SM

Belt thickness 1.8 up to 3.5 mm

Belt width up to (mm)

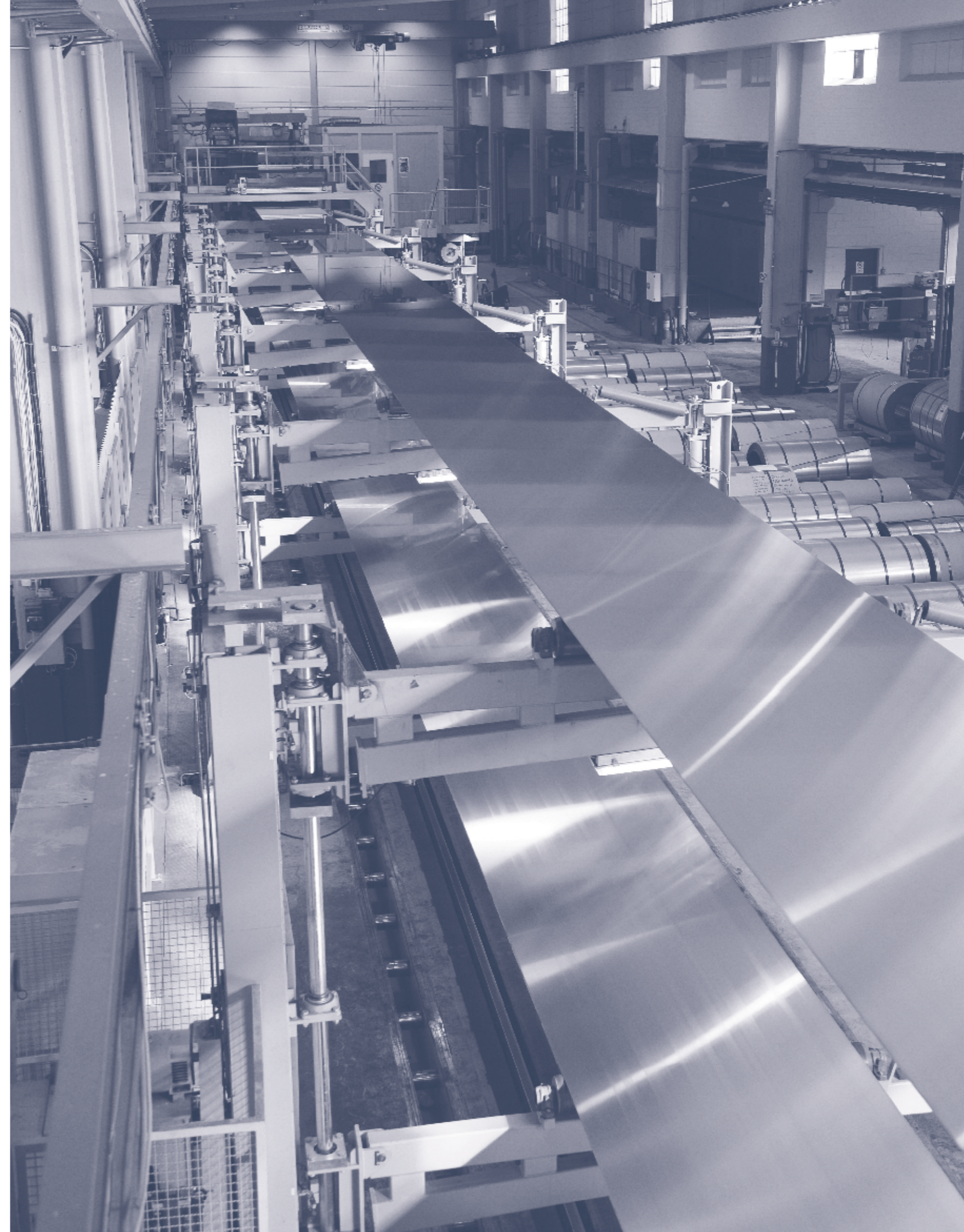
|        |                  |
|--------|------------------|
| 1 560  | Single width     |
| 2 790* | One long weld    |
| 4 400  | Two long welds   |
| 4 620  | Three long welds |

\* For central weld 3 030 mm

### Mechanical and physical properties at room temperature – approx values

|  | IPCO 1100C    | IPCO 1500SM   | IPCO 1650SM   |
|--|---------------|---------------|---------------|
| Proof strength, MPa (ksi)  | 1 100 (159)   | 1 420 (206)   | 1 580 (229)   |
| Tensile strength, MPa (ksi)  | 1 200 (174)   | 1 500 (218)   | 1 600 (232)   |
| Density, kg/m <sup>3</sup> (lb/in <sup>3</sup> )                           | 7 850 (0.284) | 7 800 (0.282) | 7 740 (0.280) |
| Modulus of elasticity, MPa (ksi) x 10 <sup>5</sup>                         | 196 (28.38)   | 197 (28.6)    | 197 (28.6)    |
| Thermal expansion, 1/°C (1/°F) x 10 <sup>6</sup> , 20 – 100°C (68 – 212°F) | 10.4 (5.8)    | 10.8 (6.0)    | 10.9 (6.1)    |
| Thermal conductivity, W/(m·°C) (Btu/(ft·h·°F))                             | 39 (22)       | 16 (9.2)      | 15 (8.7)      |
| Specific heat capacity, kJ/(kg·°C) (Btu/(lb·°F))                           | 0.46 (0.11)   | 0.46 (0.11)   | 0.50 (0.12)   |

For further information, contact your local IPCO office or visit our website [ipco.com](http://ipco.com)





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