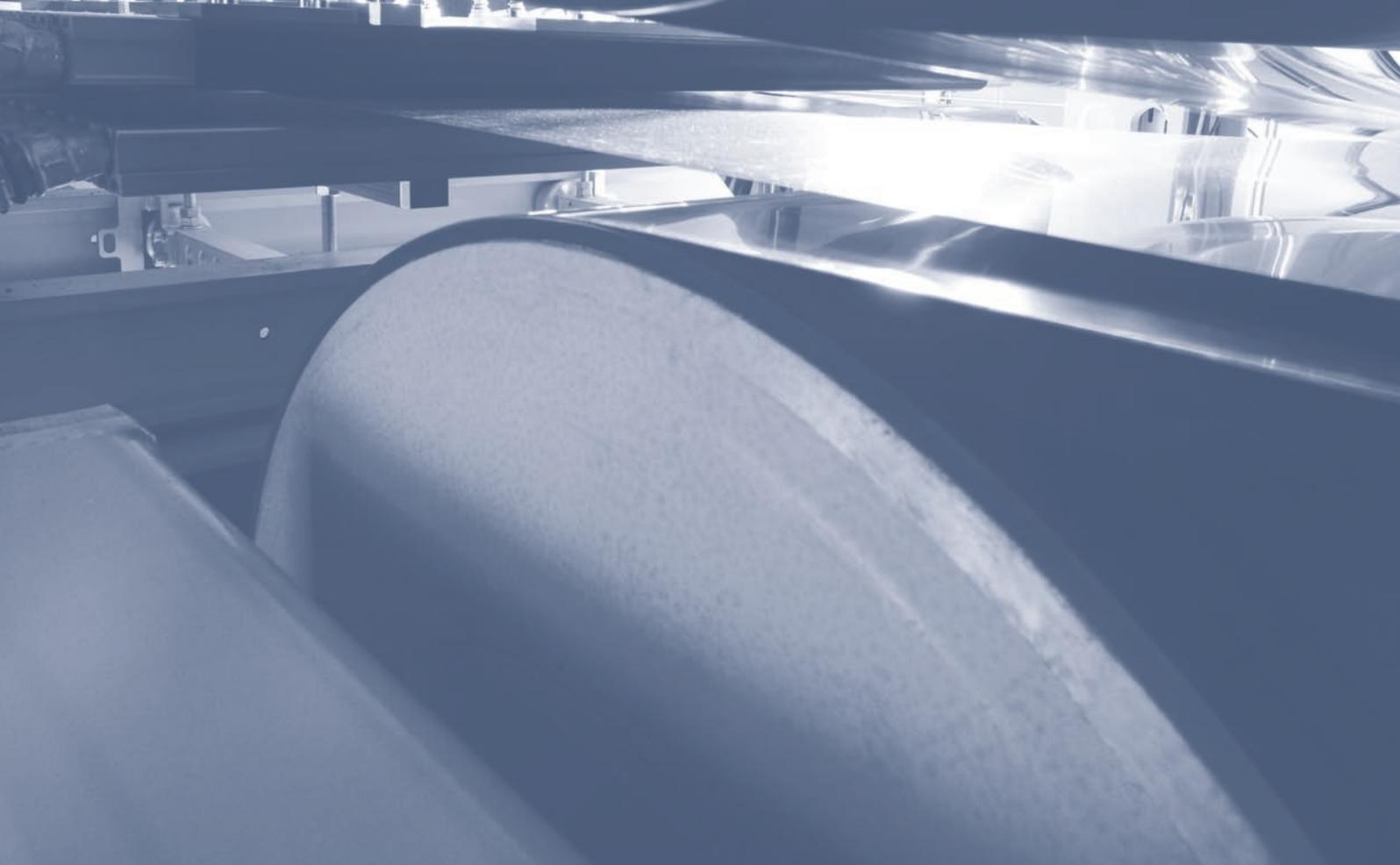




We have the skills and technology to manufacture, install, commission and repair steel belts of all specifications. So whatever belt type you need – wide or narrow, thick or thin, carbon or stainless steel, solid or perforated, endless or open – you can rely on IPCO to deliver.

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

# — STEEL — BELTS — — FOR — CONVEYING — — AND — — PROCESSING —



# —VERSATILE, RELIABLE AND DURABLE — THE UNIQUE QUALITIES OF A STEEL BELT

IPCO steel belts have been used for conveying and processing operations for well over 100 years. They are used in furnaces and freezers, in chemical works and candy manufacturing, and in print works and presses. They are a uniquely versatile conveying medium, with applications running into the hundreds if not thousands, and new applications continuing to be discovered to this day.

An IPCO steel belt is capable of operating in temperatures as low as -80 °C or as high +450 °C. It is both extremely strong and resistant to damage, and at the same time incredible flexible, undergoing constant changes in stress as it passes around the drums of a conveyor thousands of times a day, week after week, for 20 years or more.

These incredible properties are also reflected in the fact that the steel belt is far less susceptible to damage than other conveyor materials, which in turn means considerably less downtime lost to repair work or the installation of replacement belts.

If problems do occur, a steel belt can be returned to perfect working order. Small areas can be cut out and replaced, edge cracks

welded and repaired, deformations flattened, and welds ground to a perfect finish.

This longevity leads to a highly attractive return on investment, one that has helped secure the continuing popularity of the IPCO steel belt as a processing medium in the face of competition from other technologies with a lower initial investment cost.

#### **IPCO – world leaders in steel belt technology**

Our business is steel belts. We have unparalleled experience in the production of high quality belts for high performance applications. So whatever belt specifications you need – wide or narrow, thick or thin, carbon or stainless steel, solid or perforated, endless or open – you can rely on IPCO to deliver.





# Steel belts and service to meet your precise needs

We supply belts for use across wide range of industries including wood-based panels, food, chemicals, oil & gas, composites, paper & pulp, and many more. We supply OEMs and end users, and we also offer a range of conveying and processing units of our own.

This ability to meet the needs of a diverse range of markets is built on a combination of manufacturing expertise and a steel belt grade programme that allows us to specify the best possible material for any given application.

## **Manufacturing expertise**

As a world leader in our field, we have invested heavily in the technology required to be able to manufacture, install, commission and repair steel belts of all specifications.

In order to run straight, flat and true, a steel belt has to undergo a dozen or more exacting, time-consuming processes, each dependent

on the knowledge and experience of a skilled team of engineers. And unless every stage is carried out to the highest standard, the performance and reliability of the belt will be severely compromised.

For wide belts the challenge is even greater as two or more belts must be welded together along their length, while still ensuring absolute flatness, straightness and consistency of thickness.

All this requires substantial investment – we are the only company in the world capable of grinding belts up to 4,500 mm wide – and levels of expertise that cannot be acquired overnight.

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

Grinding a steel belt that will be used on a double belt press for the production of wood-based panels. Consistent thickness is a critical requirement of a press belt as this ensures even application of heat and pressure.



### Steel belt grade programme

We use a simple and easy to understand designation system for our steel belt grades, where the number roughly equates to the tensile strength in MPa\* and the letters designate the type of steel and microstructure.

C	Carbon steel
S	Stainless steel
A	Austenitic microstructure
M	Martensitic microstructure
F	Ferritic

\* 1 MPa = 1 N/mm<sup>2</sup>

IPCO Designation	Element (typical)			
	C	Cr	Ni	Others
1100C	0.65	0.20	-	Si, Mn
1320C	0.15	-	-	Si, Mn, Al, Nb
1000SA	0.03	17.0	10.5	Si, Mn, Mo
1200SA	0.10	17.0	7.0	Si, Mn
1150SM	0.04	14.0	7.0	Si, Mn, Cu, Ti, Mo
1600SM	0.01	9.5	9.5	Si, Mn, Mo
1650SM	0.04	14.0	7.0	Si, Mn, Cu, Ti, Mo
1400SAF	0.02	22.0	5.0	Si, Mn, Mo, N
1500SAF	0.02	25.0	7.0	Si, Mn, Mo, N

Separate data sheets providing more detailed information and recommendations for each steel grade are available.

### 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.

### Surface finishes

We have developed special techniques and equipment to be able to supply steel belts with surface finishes appropriate to the application. Our stainless steel belts are, as standard, delivered in cold rolled (mill finish) condition with a range of ground finishes. Special surfaces, such as mirror polished, chrome plated, or coated with fluoropolymers (PTFE/FEP), can be provided on request.

### Perforated belts

We can supply perforated steel belts in a choice of patterns to suit most requirements. Bespoke patterns, spacing and hole diameters (min. 0.8 mm / 0.03 in) are available on request.



### Conveyors and accessories

Our expertise in steel belt design and manufacture has led to the development of a range of conveyors and associated components for conveying food products, bulk goods, and other materials. We can also work in partnership with system designers to provide conveyor solutions suitable for processes such as cooling, freezing, drying, baking and pressing.

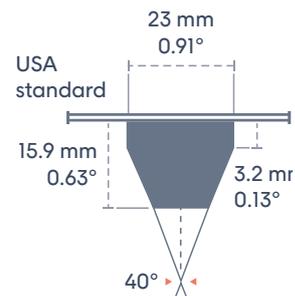
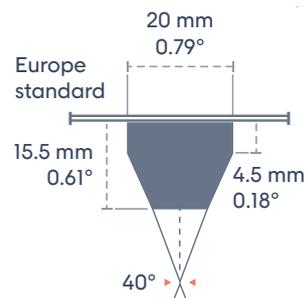
Our range of conveyor components and accessories includes:

- Conveyor end stations (bearings, break points, shafts and sheaves).
- Conveyor skid bars (graphite stations and skid bars).
- Conveyor tracking solutions (tracking devices, belt edge detectors and guide rollers).

### Tracking and retaining strips

In order to ensure exact tracking, we can supply steel belts with true-tracking strips, either in rubber (different grades are available) or in the form of a specially designed steel spiral strip. We can also fit side retaining strips to keep low viscosity materials on the belt.

### Rubber V-rope



# Standard belt grade specifications

## IPCO 1000SA

Belt width									
mm	600	800	1 000	1 200	1 400	1 500	1 560	3 000*	4 500**
inches	24	32	40	48	55	59	61	118	177
Thickness mm (inches)									
1.0 (0.040)	•	•	•	•	•	•	•	•	•
1.2 (0.048)				•	•	•	•		

\* max. width with one longitudinal weld. \*\* max. width with two longitudinal welds.

## IPCO 1200SA

Belt width														
mm	200	300	400	500	600	800	1 000	1 200	1 400	1 500	1 560	2 000	3 000*	4 500**
inches	8	12	16	20	24	32	40	48	55	59	61	79	118	177
Thickness mm (inches)														
0.4 (0.016)	•													
0.6 (0.024)	•	•	•	•	•									
0.8 (0.032)		•	•	•	•	•	•	•	•	•	•	•		
1.0 (0.040)	•	•	•	•	•	•	•	•	•	•	•	•	•	•
1.2 (0.048)						•	•	•	•	•	•	•	•	•

Stock standard dimensions indicated with darker blue colour. \* max. width with one longitudinal weld. \*\* max. width with two longitudinal welds.

## IPCO 1100C

Belt thickness 0.6 mm available up to 850 mm wide; belt thickness 1.0 mm available up to 1 250 mm wide; belt thickness 1.2 and 1.4 mm available up to 1 530 mm wide.

## IPCO 1320C

Stock standard dimensions: 400×0.6 and 500×0.8 mm. Other dimensions: Belt width 1250 mm, thicknesses of 0.6, 0.8 and 1.2 mm.

## IPCO 1400SAF

Belt thickness 1.0 mm available in single belt widths 200 – 1 500m; belt thickness 1.2 mm available in single belt widths 200 – 1 980m.

## IPCO 1500SAF

Single belt widths 1 200–1 500 mm, thickness 1.0 mm.

## IPCO 1600SM

Belt width							
mm	100	200	300	400	500	600	
inches	4	8	12	16	20	24	
Thickness mm (inches)							
0.4 (0.016)	•	•	•	•	•	•	
0.6 (0.024)		•	•	•	•	•	

## IPCO 1150SM / 1650SM†

Belt width							
mm	1 000	1 200	1 400	1 500	1 560	3 000*	4 500**
inches	40	48	55	59	61	118	177
Thickness mm (inches)							
0.6 (0.024)	•	•	•	•	•	•	•
0.8 (0.032)	•	•	•	•	•	•	•
1.0 (0.040)	•	•	•	•	•	•	•
1.2 (0.048)	•	•	•	•	•	•	•
1.6 (0.063)	•	•	•	•	•	•	•
1.8 (0.071)	•	•	•	•	•	•	•
2.0 (0.079)	•	•	•	•	•	•	•
2.3 (0.091)	•	•	•	•	•	•	•
2.7 (0.106)	•	•	•	•	•	•	•
3.0 (0.118)	•	•	•	•	•	•	•
3.5 (0.138)	•	•	•	•	•	•	•

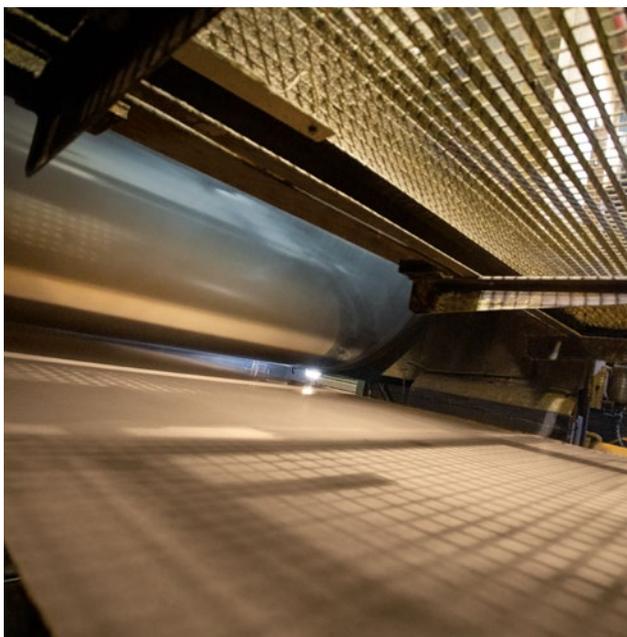
† IPCO 1650SM is a precipitation hardened version of 1150SM, delivering greater strength and wear resistance.

\* max. width with one longitudinal weld. \*\* max. width with two longitudinal welds.

# Applications and belt properties

Steel belt installation type		Important steel belt properties										Possible steel belt selection			
		Strength-ambient temperature	Strength-high temperature	Strength-low temperature	Stability against temperature diff.	Corrosion resistance	Wear resistance	Hygienic	Flatness	Straightness	Surface finish	Carbon (C)	Austenitic (SA)	Martenic (SM)	High strength martensitic (SM)
Material handling	Conveyors, general	•		○		○	•					x	x	x	x
	Sorting systems	•				○	•	•			x				
	Work tables, general					○	○		○		x	x	x		
Food industry	Meat cutting tables					•		•	○			x			
	Steel belt dryers		○		○	•		•	○			x			
	Bake ovens		○		○		•	•	•	○	○	x			
	Contact freezers			•		•		•	○			x			
	Belt coolers/food				○	○		•	○			x	x		
Industrial process applications	Belt coolers/chemicals				○	○		○	○			x	x		
	Steel belt dryers		○		○	○		○	○	○		x	x	x	
	Flow-through belt unit		○		○	○		○			x	x	x	x	
	Double belt presses	•	○		•	○		•		○		x	x	x	
	Belt skimmers					•			○			x			
Particle board industry	Single opening presses				•	○	•	•	•		x				x
	Multi opening presses				•	○	•	•			x		x		
	Rotation presses	•			•	○	•	•	•	•		x			x
	Double belt presses	•			•		•	•	•	•					x
Plastic rubber	Rotation presses	•			•	•	•	•	•		x				x

- Property always of importance
- Property sometimes of importance



Steel belt press.



Steel belt bake oven.



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