

# Making strip steels work harder in HEVAC equipment

**Corus has developed an unrivalled range of strip steels and services to help manufacturers of heating, ventilating, air conditioning and refrigeration equipment meet their commercial, technical and production goals.**



## Products

Our specialist Strip Products Service Centres can supply a full range of materials for HEVAC applications, ex-stock or processed to order. This includes hot rolled and cold reduced strip, hot-dip zinc, zinc-iron alloy and aluminium-silicon alloy coated strip, as well as electro-galvanised material. These products are widely used in boiler, heating, ventilation and air conditioning units, as well as in trunking and ducting. In the case of the coated products, a wide variety of coating masses is available - the choice is dependant upon the operating environment in which the unit is expected to work. (Please note that galvanised steel with a spangle finish is becoming increasingly uncommon as the use of lead and antimony becomes more unacceptable from a health and environmental view-point). In addition, high strength hot-dip galvanized and cold reduced steels are available which offer significant opportunities for down-gauging or improving the load bearing capacity of a product.

Our Colors Service Centre can also supply pre-finished steels in a wide range of modern colours and finishes, including leathergrain, designed to perform well and look good. Pre-finished steels enable manufacturers to eliminate the costs of pre-treatment and post-painting, together with the risks associated with these processes. Hard wearing and easy to clean, pre-finished steels are ideal for applications such as refrigeration units, cold stores and boiler components and casings. Increasingly, they are also being used in insulated panels and radiators - where cold reduced steels are already widely used.

Our materials provide the consistent mechanical properties, and improved surface quality and flatness demanded by today's high-speed production

processes, and expected by the end-user. Thanks to an unparalleled combination of strength and flexibility they can easily be pressed or roll formed into complex shapes. Sustained investment in precision rolling and finishing technology, combined with stringent production and control processes, enables Corus to manufacture steels to extremely tight dimensional tolerances.

## Services

We are geared up to provide the highly responsive, flexible level of service which manufacturers need to succeed in today's competitive, fast-moving markets.

A wide selection of pre-cut standard sheet is available for immediate call-off and we also offer short lead times and a fast turnaround on orders for non-standard sizes of material.

Our processing facilities enable us to supply material to exact size and shape; helping customers to optimise material usage and reduce costs, whilst improving productivity and quality.

For the cost-effective production of precision blanks, to a standard maximum length of 4000mm and a width tolerance of  $\pm 0.25\text{mm}$ , we have a number of multi-strand blanking lines. Flatness to within 3mm per metre length is guaranteed, provided this requirement is stated at the time of enquiry and order. These are supported by decoiling and recoiling facilities, and the industry's most technologically advanced high-speed slitting lines. These are capable of processing coil up to 2000mm wide in a gauge range of 0.12mm to 8.0mm, to a width tolerance of  $\pm 0.127\text{mm}$ . We can also handle a wide range of secondary processing requirements for small, narrow blanks.

Our processing facilities are maintained to the highest standards to ensure that material quality, surface finish and flatness is assured from the mill, during processing, to delivery. Great care is also taken during handling, packaging and storage to ensure that products reach customers in prime condition.

These resources are supported by tailored EDI, IT and logistics systems that enable us to check order status or stock availability instantly, minimise order lead times and maintain a rapid, reliable delivery service.

### Technical support

Our technical experts work with customers from the development phase of projects to advise on material specification, processing and fabrication. This results in optimally-designed products that fulfil stringent quality, cost and performance parameters. We can draw on the world-class resources of Corus Research, Development and Technology, which offers practical testing and evaluation facilities and expertise in key areas including finite element analysis, fabrication, corrosion, welding, adhesives and mechanical fixings.

### Product guide

#### Cold reduced products:

EN 10130:1999 Cold-rolled low carbon steel flat products for cold forming.

Cold reduced high and ultra high strength steels. Branded grades with guaranteed minimum tensile properties, i.e. minimum yield strengths of 250 N/mm<sup>2</sup>, 280 N/mm<sup>2</sup>, 350 N/mm<sup>2</sup>, 420 N/mm<sup>2</sup>, 500 N/mm<sup>2</sup> and higher.

#### Electro-galvanised products:

EN 10152:1994 Specification for electrolytically zinc coated cold rolled steel sheet products.

All of the above products are supplied to tolerances as set down in EN 10131:1991

#### Hot-dip galvanised products:

EN 10142:2000 Continuously hot-dip zinc coated low carbon steel strip and sheet for cold forming.

EN 10147:2000 Continuously hot-dip zinc coated structural steel strip and sheet.

Branded extra and ultra high strength hot-dip galvanized steels are also available.

EN 10154:1996 Continuously hot-dip aluminium-silicon (AS) coated steel sheet and strip

EN 10214:1995 Continuously hot-dip zinc-aluminium (ZA) coated steel strip and sheet.

All of the hot-dip products are supplied to tolerances as set down in EN 10143:1993

**Hot rolled products to:**

EN 10111: 1998 Hot rolled low carbon steel sheet and strip for cold forming.

EN 10025:1993 Hot rolled products of non-alloy structural steels, including S275JR, S275JO and S355JR

Such materials can be supplied either as unpickled or pickled and oiled plates.

EN 10149-2:1996 Hot rolled flat products made of high yield strength steels for cold forming. These are HSLA steels: Corus's branded products Tenform and YMPRESS comply with this specification.

The tolerances which apply to these products are set down in EN 10151:1992.

Bespoke grades are also available.

**Pre-finished steels:**

Corus has developed three types of coating systems that can deliver a vast range of different colours, gloss levels, finishes, patterns and special effects, as well as specialised performance properties:

- Colorcoat is a liquid-applied paint system
- Stelvetite is a polymer-film laminate bonded to the steel substrate
- Colorstelve is a liquid-applied system, topped with a polymer-film laminate

The reverse sides of these products have a standard polyester coating. Additional coatings are available to meet a variety of performance requirements.

Formable substrates are available in metallic coated steels and in cold-reduced steels, which can now be used in a greater number of applications.

**Sound deadening products:**

Sontech sound deadening metal can reduce noise by up to 30 dB(A). Its composition of two metal skins bonded together with a visco-elastic polymer is proven to be highly effective at absorbing noise produced by impact and panel resonance.

- Available in wide range of steels or combinations of materials e.g

hot-dip/electro galvanised, stainless steel/aluminium, pre-painted/zinc-alloy coated

- A variety of colours and decorative finishes is available
- Wide range of composite gauge ranges from 1mm - 4mm
- Standard sheet size - 2500mm x 1250mm. Other sizes available on request.

**Processing capacity**

	Gauge (mm)	Width (mm)	Length (mm)
Multi-strand blanking	0.30 - 3.2	140 - 2000	200 - 4000
Slitting	0.12 - 8.0	12 - 2000	N/A
Decoiling	0.30 - 3.2	50 - 2000	100 - 9000
Shearing	0.40 - 6.0	25min	3000 max
Notching and piercing	Please consult Corus for details		
Polymer film coating	Please consult Corus for details		

For requirements outside of these dimensions please consult Corus.

[www.corus-servicecentres.com](http://www.corus-servicecentres.com)

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