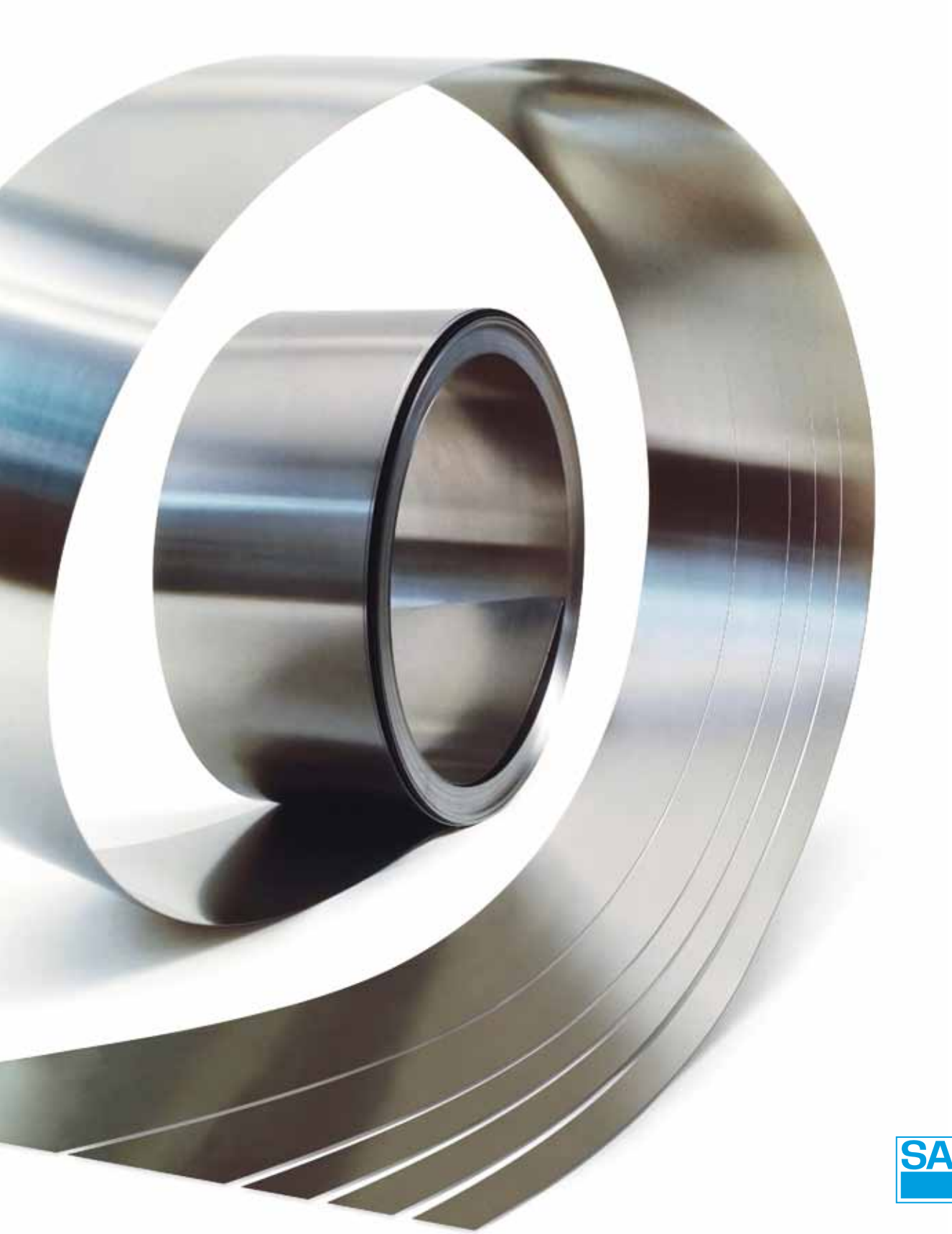
# Sandvik
# special strip steel



SANDVIK

## Sandvik – your productivity partner for special strip steel

*With Sandvik as a partner you will be able to increase your productivity in several areas.*

**Technical expertise**
Support and advice are always available from our technical specialists. If you have any questions about material selection, processing or our product program, please contact us through our sales units or via our website.

**Tailor-made products**
We have a wide range of material grades and sizes – many of which have been specially developed to meet particular demands and applications. Close cooperation with customers to meet individual needs has always been part of the Sandvik way of working.

**Consistent material properties**
Products with consistent and reliable quality in every delivery are the result of full quality assurance and control throughout the whole manufacturing process. Sandvik offers just that!

**Easy access for you to reach us**
It is easy for you to reach us via our worldwide local network of sales units and our website

**www.smt.sandvik.com/strip**

THE SANDVIK GROUP
The Sandvik Group is a global high technology enterprise with 39,000 employees in 130 countries. Sandvik's operations are concentrated on three core businesses: Sandvik Tooling, Sandvik Mining and Construction and Sandvik Materials Technology – areas in which the group holds leading global positions in selected niches.

SANDVIK MATERIALS TECHNOLOGY
Sandvik Materials Technology is a world-leading manufacturer of high value-added products in advanced stainless steels, special alloys, metallic and ceramic resistance materials, as well as process plants and sorting systems.

RESEARCH AND DEVELOPMENT
Sandvik has one of the largest steel research centers in Europe. New materials are constantly being developed and existing materials and production processes improved. In addition, we have a comprehensive program of liaison and cooperation with universities, research institutions and specialized companies that possess particular expertise.

QUALITY ASSURANCE
Sandvik Materials Technology has Quality Management Systems approved by internationally recognized organizations. We hold for example: the ASME Quality System Certificate as a Materials Organization; approval to ISO 9001, QS-9000 and PED 97/23/EC, as well as approvals from LRQA, JIS, TÜV and others as a materials manufacturer.

ENVIRONMENT
Environmental awareness is an integral part of our business and is at the forefront of all activities within our operation. We hold ISO 14001 approval.

# Spring applications

A spring has to meet many exacting requirements. First of all, it must provide the required spring force. It also has to function reliably during a long service life, even if its working environment is corrosive or demanding in other ways. Furthermore, it is an advantage if the spring is easy to manufacture. Therefore, formability of the material is very important.

Sandvik Materials Technology offers a wide range of strip steel in both stainless and carbon steel grades for the manufacture of coiled and formed springs.

### Austenitic and duplex stainless steels

Our product program comprises many different grades, performance capabilities and dimensions for all types of demanding application with different requirements on strength, relaxation resistance, fatigue strength, corrosion resistance and ductility.

We specialize in the production of extremely thin strip (down to 0.015 mm, 0.0006 in.) with high strength (up to 2050 MPa, 297 ksi) and very close thickness tolerances (down to ±0.001 mm, 0.00004 in.).

For spring manufacturing involving severe forming and/or requirements with a low springback, we can deliver strip in a relatively soft condition to assist forming.

A simple tempering heat treatment increases strength by 50-800 MPa (7-116 ksi) depending on grade and the initial tensile strength.

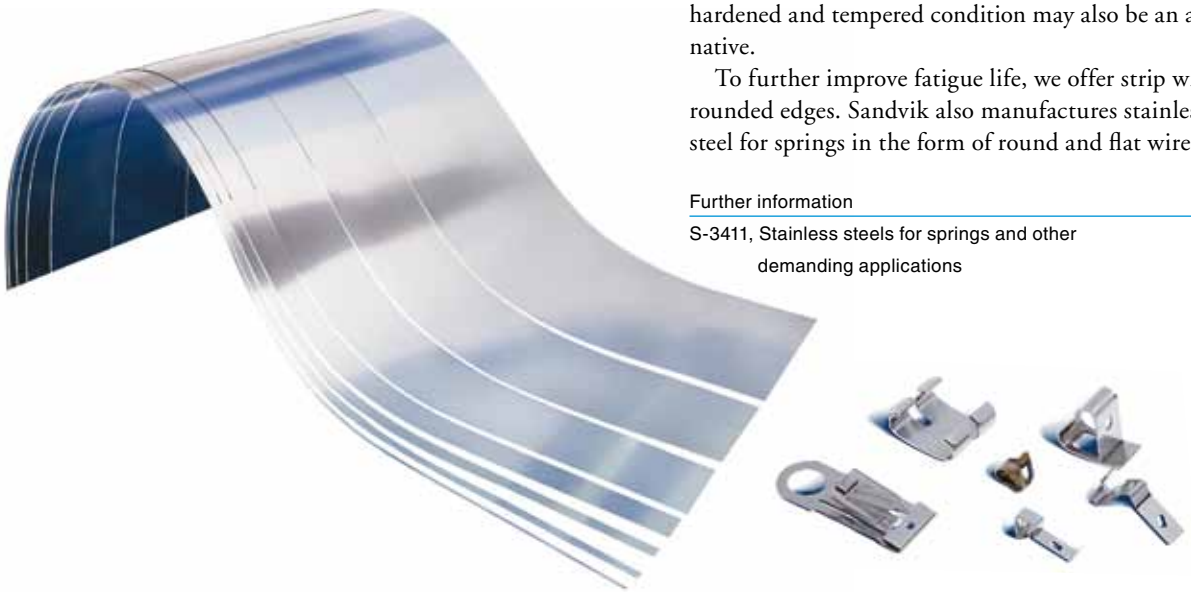
### Martensitic stainless chromium steel and carbon steels

Hardened and tempered stainless chromium steel is used mainly for springs for which a very high degree of flatness is required. For purposes where resistance to corrosion is not important, carbon steel strip in the hardened and tempered condition may also be an alternative.

To further improve fatigue life, we offer strip with rounded edges. Sandvik also manufactures stainless steel for springs in the form of round and flat wire.

Further information

S-3411, Stainless steels for springs and other demanding applications



| Sandvik grade | Tensile strength, MPa (ksi) | Width, mm (in.) | Thickness, mm (in.) |
|---|---|---|---|
| **Austenitic stainless steels** | | | |
| 12R11 | 800–1900 (116–276) | 2–345 (0.08–13.6) | 0.015–3 (.0006– .12) |
| 11R51 | 1700–2050 (247–297) | 2–345 (0.08–13.6) | 0.015–1.5 (.0006– .06) |
| 13RM19 | 850–1600 (123–232) | 2–345 (0.08–13.6) | 0.015–3 (.0006– .12) |
| 3R12 | 600–1300 ( 87–189) | 2–325 (0.08–12.8) | 0.015–2 (.0006– .08) |
| **Precipitation hardenable steels** | | | |
| 9RU10 | 1200–1700 (174–247) | 2–360 (0.08–14.2) | 0.015–3 (.0006– .12) |
| Nanoflex™ | 950–1850 (138–268) | 2–330 (0.08–13) | 0.015–2 (.0006– .08) |
| 1RK95HV | 1050–1750 (152–254) | 2–330 (0.08–13) | 0.015–3.5 (.0006– .14) |
| **Duplex stainless steels** | | | |
| SAF 2507 | 900–1600 (131–232) | 2–300 (0.08–11.8) | 0.015–3.5 (.0006– .14) |
| **Ni-base alloy** | | | |
| Sanicro 75X | 750–1350 (109–196) | 2–200 (0.08–7.9) | 0.015–4 (.0006– .16) |
| **Martensitic stainless chromium steel** | | | |
| Chromflex 7C27Mo2 | 1700 or 1800 (247 or 261) | 2–350 (0.08–13.8) | 0.08–3 (.002– .12) |
| **Carbon steels** | | | |
| 15LM | 1500–1950 (218–283) | 2–400 (0.08–15.75) | 0.076–4 (.003– .16) |
| 20C | 1600–2100 (232–305) | 2–400 (0.08–15.75) | 0.076–2 (.003– .08) |

# Saw applications

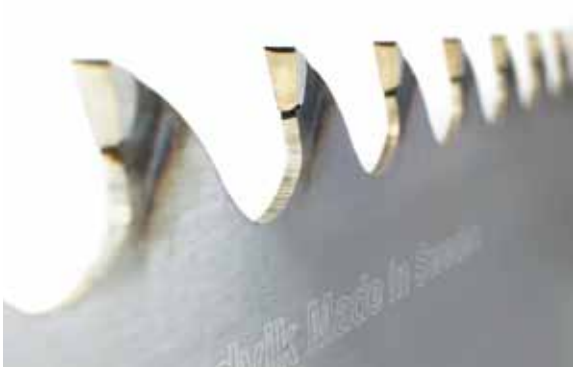
### Wood bandsaws

The bandsaw steel represents less than one percent of a sawmill's costs, but impacts on the whole company's profitability. Sawmill operators know that it pays to select bandsaws with minimum maintenance requirements and maximum run-times.

Sandvik's bandsaw steel has a higher tensile strength and is, therefore, able to tolerate higher blade strain, which gives a straighter cut and less waste. Together with high flatness, straightness, and surface finish, as well as a higher fatigue limit, we have reduced the risk of unplanned blade changes.

Our bandsaw steels can be run in up to two shifts without having to be re-tensioned. To get better service life between regrindings, the cutting edge is tipped with a cobalt alloy.

Choosing Sandvik bandsaw steel can mean increased productivity and profitability.



### Sandvik Multishift™ – Our best selling bandsaw steel

Sandvik Multishift is a steel that keeps blade tension longer and can work under high load. It has been developed to increase saw utilization and reduce bench work in the grinding workshop. Higher tensile strength enables the steel to work with 20% higher blade tensioning, which gives better stability and less vibration in the saw. Sawmill revenue can be increased with improved yield. Changing from a t=1.47mm blade to a t=1.4mm will contribute dramatically to sawmill profitability.

### Sandvik Durashift™ – The next generation bandsaw steel

Sandvik Durashift is our latest bandsaw steel, which has both a higher tensile strength and is very forgiving. At the same time, it has an extremely long run-time and can be swaged up to three times the blade thickness. The higher blade strain gives extra stability in the saw blade, which reduces vibrations and crack formation.

To further increase wear resistance, the cutting edge can be tipped with a cobalt alloy.

Further information

| | |
|---|---|
| S-336 | The handbook |
| S-339 | Sandvik wood bandsaw steels – Three ways to better productivity |

| Sandvik grade | Width, mm (in.) | Thickness, mm (in.) |
|---|---|---|
| **Wood bandsaw steel** | | |
| Bright | 12.5–412.8 (0.5–16.3) | 0.6–3.05 (0.024–0.12) |
| Multishift™ | 80–360 (3.15–14.17) | 0.8–2.1 (0.031–0.083) |
| Durashift™ | 60–311.2 (2.36–12.3) | 1.0–1.83 (0.039–0.072) |

# Steel grades

| Sandvik grade | Standard | Chemical composition[1] % | Tensile strength[2] MPa[3] | Distinguishing property | Examples of applications |
|---|---|---|---|---|---|
| **Alloyed non-stainless steels and carbon steels** | | | | | |
| **13C** | W.-Nr (1.0612) | C 0.61<br>Si 0.2<br>Mn 0.7 | H 1200–1700<br>(174–247)* | Widths up to 1200 mm (47.2 in.) | Conveyors, label dies, stamping plates and lapping carriers |
| **15LM** | ASTM 1074<br>W.-Nr 1.1248<br>SS 1770 | C 0.75<br>Si 0.2<br>Mn 0.7 | H 1350–1950<br>(196–283)* | | Wood bandsaws, blanked and formed parts, leather slitting knives, butcher bandsaws, springs |
| **15N2** | | C 0.75 | H 1350–1650<br>Si 0.3<br>Mn 0.4<br>Ni 2.0 | (196–239)* | Gang saws, wood bandsaws and stone saws |
| **20C** | ASTM 1095<br>W.-Nr. 1.1274<br>SS 1870 | C 1.00<br>Si 0.3<br>Mn 0.4 | H 1600–2100<br>(232–305)<br>C 600–800<br>(87–116) | Fatigue strength | Valves for compressors and shock absorbers, blanked and formed parts, springs, doctor blades, tannery knives, butcher bandsaws |
| **20C2** | SS 2258 | C 1.00<br>Si 0.3<br>Mn 0.3<br>Cr 1.4 | H 1600–2100<br>(232–305) | Fatigue strength<br>Wear resistance | Doctor blades |
| **Durashift™** | | C 0.47 | C 700–1100<br>Si 0.2<br>Mn 0.8<br>Cr 1.1<br>Ni 0.6<br>Mo 1.0<br>V 0.1 | (102–160) | Wood bandsaws |
| **Martensitic stainless chromium steel** | | | | | |
| **6C27** | ASTM 420<br>EN 1.4028<br>W.-Nr. 1.4007<br>SS 2304 | C 0.32<br>Cr 13.7 | C 600–1000<br>(87–145)<br>H 1500–1600<br>(218–232) | | Components in electric shavers, kitchen spatulas crêping blades |
| **7C27Mo2** | | C 0.38<br>Cr 13.5<br>Mo 1.0 | C 700–1000<br>(123–145)<br>H 1700–2000<br>(247–290) | Fatigue strength | Compressor valves, components in electric shavers, print belts, meat saws, doctor blades, springs, surgical cutting tools |
| **12C27M** | EN (1.4034) | C 0.52<br>Cr 14.5 | C 700–1000<br>(102–145) | | Kitchen knives, scissors |
| **12C27** | | C 0.60<br>Cr 13.5 | C 700–1000<br>(102–145)<br>H 1800–2100<br>(261–305) | | Knives, scissors, skate blades |
| **13C26** | | C 0.68<br>Cr 13 | C 700–1100<br>(102–145)<br>H 1800–2000<br>(261–290) | | Razor blades, scalpels, industrial knives<br>doctor blades |
| **19C27** | | C 0.95<br>Cr 13.5 | C 700–1100<br>(102–145) | | Industrial knives for plastic/ synthetic fibres, paper etc. |

*) Can also be supplied in the cold rolled condition

**Alloyed non-stainless steels and carbon steels**
These steels when cold rolled have very good properties in terms of forming, blanking and machining. Subsequent hardening and tempering makes the steel hard, tough, resistant to wear and suitable for use as springs and other high strength applications.

**Martensitic stainless chromium steels**
These steels have excellent properties for forming and grinding sharp edges and, after hardening and tempering, also good resistance to corrosion. Sandvik 6C27, 7C27Mo2, 12C27 and 13C26 in the hardened and tempered versions are supplied under the trade name Sandvik Chromflex. Their special characteristics include good resistance to wear, high fatigue strength and very good flatness, as well as uniform mechanical properties along and across the rolling direction (isotropic properties).

# Steel grades

| Sandvik grade | Standard<br>% | Chemical composition[1]<br>MPa[3] | Tensile strength[2] | Distinguishing property | Examples of applications |
|---|---|---|---|---|---|
| **Austenitic stainless steels** | | | | | |
| **12R11** | ASTM (301)<br>EN 1.4310<br>W.-Nr. 1.4310<br>SS 2331 | C 0.10<br>Si 1.2<br>Cr 16.5<br>Ni 7 | C 800–1900<br>(116–276) | | Springs and other formed parts for e.g. diaphragms and electrical connectors |
| **11R51** | ASTM (301)<br>EN 1.4310<br>W.-Nr. 1.4310<br>SS 2331 | C 0.09<br>Si 1.2<br>Cr 16.5<br>Ni 7.5<br>Mo 0.7 | C 1700–2050<br>(247–297) | Fatigue strength<br>Relaxation resistance | Springs and other formed parts for e.g. hinges, thermostats and gaskets for electromagnetic shielding |
| **13RM19** | EN 1.4369 | C 0.11<br>Mn 6.0<br>Cr 18.5<br>Ni 7<br>N 0.25 | C 850–1600<br>(123–232) | Non-magnetic | Springs and other formed parts for non-magnetic applications |
| **3R12** | ASTM 304L<br>EN 1.4306<br>W.-Nr. 1.4306<br>SS 2352 | C ≤0.030<br>Cr 18.5<br>Ni 10 | C 600–1300<br>(87–189) | Formability | Deep drawn parts |
| **Bioline 316LVM** | ASTM 316LVM<br>ASTM F139<br>ISO 5832-1 | C ≤0.025<br>Si 0.6<br>Mn 1.7<br>Cr 17.5<br>Ni 14<br>Mo 2.8 | C 650–1300<br>(95–189) | Corrosion resistance<br>Cleanliness of non metallic inclusions | Medical implants |
| **Precipitation hardenable steels** | | | | | |
| **9RU10** | ASTM 631<br>EN 1.4568<br>W.-Nr. 1.4568<br>SS 2388 | C 0.08<br>Cr 16.5<br>Ni 7.5<br>Al 1.0 | C 1200–1700<br>(174–247) | Tempering effect<br>Relaxation resistance at elevated temperatures | Springs and parts with very complicated forms for e.g. hinges, couplings, washers and thermostats |
| **Nanoflex™** | | C ≤0.02<br>Cr 12<br>Ni 9<br>Mo 4<br>Ti 0.9<br>Cu 2.0<br>Al 0.4 | C 950–1850<br>(138–268) | Tempering effect<br>Relaxation resistance at elevated temperatures<br>Formability | Parts with very complicated forms for e.g. components in electric shavers |
| **1RK95HV** | | C 0.01<br>Cr 11.5<br>Ni 8.5<br>Cu 2.2<br>Ti 1.2 | (1050–1750)<br>(152–254) | Aging effect<br>Very high strength | Disc Springs |
| **Duplex stainless steels (austenitic-ferritic)** | | | | | |
| **SAF 2507** | UNS S32750<br>EN 1.4410 | C ≤0.030<br>Cr 25<br>Ni 7<br>Mo 4<br>N 0.3 | C 900–1600<br>(131–232) | Very high strength and stress corrosion cracking resistance in chloride containing environments | Springs e.g. in seawater service, marine environments, pulp and paper industry.<br>Strip for welded tubes, cable insulation and flexible tubing |
| **Nickel-base alloy** | | | | | |
| **Sanicro 75X** | UNS N07750 | C ≤0.020<br>Ni 72<br>Cr 16<br>Ti 2.5<br>Al 0.7<br>Nb 0.8 | C 750–1350<br>(109–196) | Mechanical properties at elevated temperatures up to 800°C.<br>Resistance to gas corrosion at high temperatures.<br>Spring properties up to 600°C. | Positioner devices in nuclear power fuel assemblies. Springs and other parts exposed to high temperatures and/or a very corrosive environment.<br>Low cobalt composition makes it especially suitable for nuclear applications |

[1] Nominal value for main alloying elements.
[2] C= cold rolled
H = hardened and tempered

[3] $R_m$
1 MPa = 1 N/mm²



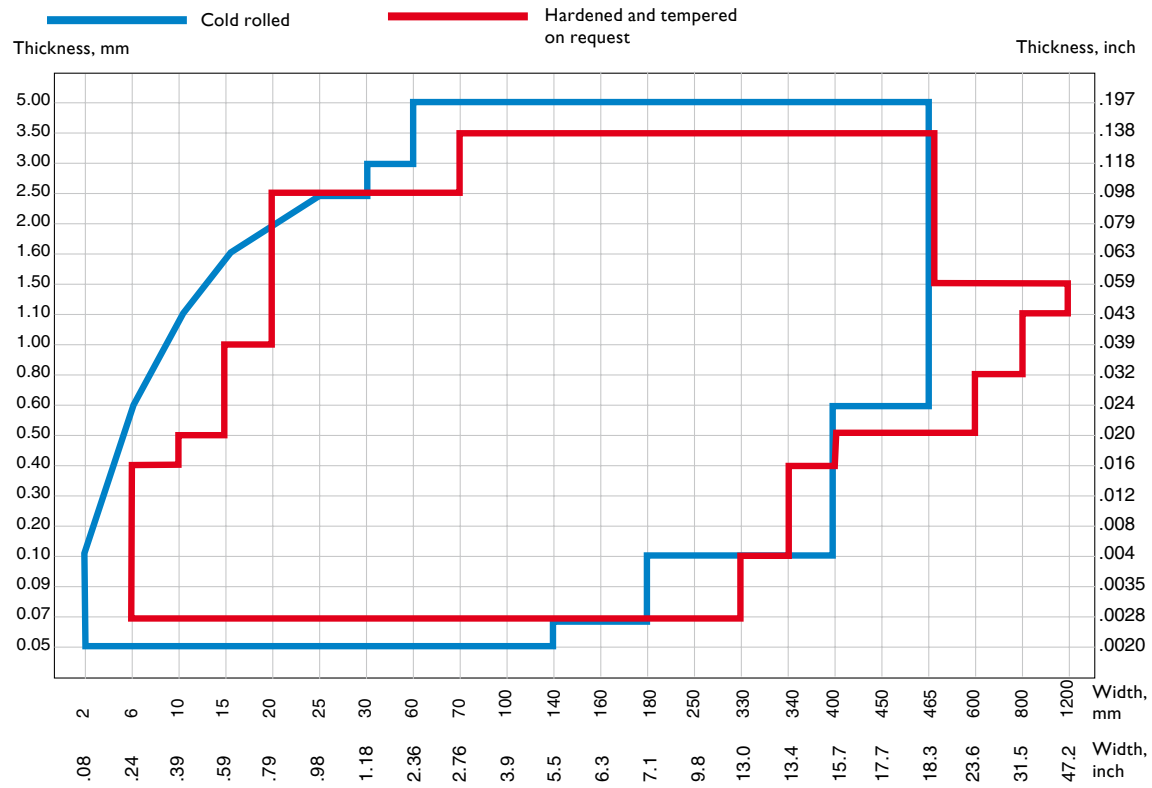
**Austenitic stainless steels**
These steels have superior qualities in respect of resistance to corrosion combined with very good spring properties, low relaxation and high fatigue strength. The strength in these grades is achieved by cold rolling, which makes them available in a wide range of dimensions and mechanical properties. A further increase in strength can be obtained by a simple heat treatment in the temperature range 350-480°C depending on grade.

**Duplex stainless steels (austenitic-ferritic)**
The modern duplex steels have excellent corrosion properties. They are not as sensitive to stress corrosion cracking as austenitic steels. Thermal expansion is lower than for austenitic steels, which can offer design advantages in certain cases.

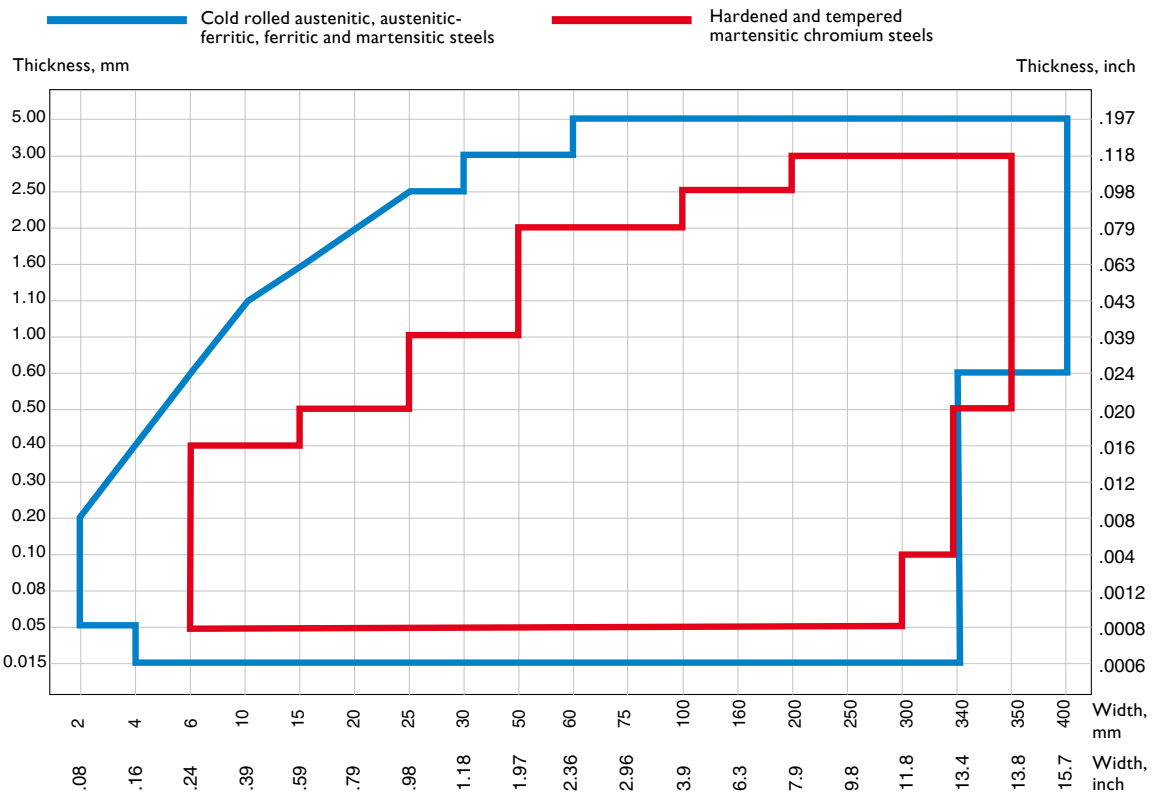
# Sizes

We offer strip steel in the following size ranges.

### Alloyed non-stainless steels and carbon steels




### Stainless steel



# Size tolerances

In the standard finish, the tolerance is symmetrical, half above and half below the nominal size. Other tolerance dispositions can be discussed. The normal width tolerance class is B1, but slit strip can be supplied with B2 or B3 tolerances on request. Closer tolerances require special edge treatment. For austenitic and duplex stainless steels other width tolerances are applicable according to EN 10258, see brochure S-3411.

| Thick-ness | Width | Thickness tolerance, mm ± Tolerance class | | | |
|---|---|---|---|---|---|
| mm | mm | T1 | T2 | T3 | T4 |
| <0.025 | –250 | 0.003 | 0.002 | 0.0015 | 0.001 |
| | >250–400 | 0.004 | 0.003 | 0.002 | 0.0015 |
| 0.025– | –250 | 0.004 | 0.003 | 0.002 | 0.0015 |
| <0.04 | >250–400 | 0.005 | 0.004 | 0.003 | 0.002 |
| 0.04– | –250 | 0.005 | 0.004 | 0.003 | 0.002 |
| <0.063 | >250–400 | 0.006 | 0.005 | 0.004 | 0.003 |
| 0.063– | –250 | 0.006 | 0.005 | 0.004 | 0.003 |
| <0.1 | >250–400 | 0.007 | 0.006 | 0.005 | 0.004 |
| 0.1– | –250 | 0.007 | 0.005 | 0.004 | 0.003 |
| <0.125 | >250–400 | 0.008 | 0.006 | 0.005 | 0.004 |
| 0.125– | –250 | 0.009 | 0.006 | 0.005 | 0.004 |
| <0.16 | >250–400 | 0.01 | 0.007 | 0.006 | 0.005 |
| 0.16– | –250 | 0.01 | 0.007 | 0.005 | 0.004 |
| <0.2 | >250–400 | 0.011 | 0.008 | 0.006 | 0.005 |
| 0.2– | –250 | 0.011 | 0.008 | 0.006 | 0.004 |
| <0.25 | >250–400 | 0.013 | 0.009 | 0.007 | 0.006 |
| | >400–600 | 0.014 | 0.010 | 0.008 | 0.007 |
| 0.25– | –250 | 0.013 | 0.009 | 0.007 | 0.005 |
| <0.315 | >250–400 | 0.015 | 0.011 | 0.008 | 0.006 |
| | >400–600 | 0.017 | 0.012 | 0.009 | 0.007 |
| 0.315– | –250 | 0.015 | 0.011 | 0.008 | 0.006 |
| <0.4 | >250–400 | 0.017 | 0.012 | 0.009 | 0.006 |
| | >400–600 | 0.020 | 0.014 | 0.010 | 0.008 |
| 0.4– | –250 | 0.017 | 0.012 | 0.009 | 0.006 |
| <0.5 | >250–400 | 0.020 | 0.014 | 0.010 | 0.007 |
| | >400–600 | 0.023 | 0.017 | 0.012 | 0.009 |
| 0.5– | –250 | 0.020 | 0.014 | 0.010 | 0.007 |
| <0.63 | >250–400 | 0.024 | 0.017 | 0.012 | 0.009 |
| | >400–600 | 0.028 | 0.020 | 0.014 | 0.010 |
| 0.63– | –250 | 0.023 | 0.017 | 0.012 | 0.008 |
| <0.8 | >250–400 | 0.027 | 0.020 | 0.014 | 0.010 |
| | >400–600 | 0.032 | 0.023 | 0.016 | 0.012 |
| 0.8– | –250 | 0.027 | 0.019 | 0.013 | 0.009 |
| <1 | >250–400 | 0.032 | 0.023 | 0.016 | 0.012 |
| | >400–600 | 0.037 | 0.027 | 0.019 | 0.014 |
| 1– | –250 | 0.034 | 0.024 | 0.017 | 0.012 |
| <1.25 | >250–400 | 0.036 | 0.026 | 0.018 | 0.013 |
| | >400–600 | 0.042 | 0.029 | 0.021 | 0.015 |
| 1.25– | –250 | 0.039 | 0.028 | 0.020 | 0.014 |
| <1.6 | >250–400 | 0.044 | 0.032 | 0.022 | 0.016 |
| | >400–600 | 0.050 | 0.038 | 0.026 | 0.019 |
| 1.6– | –250 | 0.046 | 0.033 | 0.023 | 0.017 |
| <2 | >250–400 | 0.050 | 0.038 | 0.026 | 0.019 |
| | >400–600 | 0.060 | 0.042 | 0.029 | 0.021 |
| 2– | –250 | 0.050 | 0.035 | 0.025 | 0.017 |
| <2.5 | >250–400 | 0.055 | 0.040 | 0.028 | 0.020 |
| | >400–600 | 0.065 | 0.050 | 0.033 | 0.024 |
| 2.5– | –250 | 0.056 | 0.040 | 0.028 | 0.020 |
| <3.15 | >250–400 | 0.060 | 0.043 | 0.030 | 0.022 |
| | >400–600 | 0.070 | 0.050 | 0.035 | 0.025 |
| 3.15– | –250 | 0.063 | 0.045 | 0.032 | 0.022 |
| 5>250–400 | | 0.065 | 0.050 | 0.034 | 0.024 |
| | >400–600 | 0.080 | 0.060 | 0.040 | 0.029 |

| Thick-ness | Width | Width tolerance, mm ± Tolerance class | | | |
|---|---|---|---|---|---|
| mm | mm | B1 | B2 | B3 | B4 |
| <0.25 | –< 20 | 0.07 | 0.05 | 0.03 | 0.02 |
| 20–< | 50 0.10 | 0.07 | 0.05 | 0.035 | |
| 50–< | 125 0.15 | 0.11 | 0.07 | 0.05 | |
| 125–< | 250 0.20 | 0.15 | 0.10 | 0.07 | |
| 250–< | 400 0.30 | 0.20 | 0.15 | 0.10 | |
| 400–< | 600 0.40 | 0.30 | 0.20 | – | |
| 600–< | 800 0.60 | 0.40 | 0.30 | – | |
| 0.25– | –< 20 | 0.10 | 0.07 | 0.05 | 0.03 |
| <0.50 | 20–< 50 | 0.15 | 0.11 | 0.07 | 0.05 |
| 50–< | 125 0.20 | 0.15 | 0.10 | 0.07 | |
| 125–< | 250 0.25 | 0.20 | 0.15 | 0.10 | |
| 250–< | 400 0.35 | 0.30 | 0.20 | 0.15 | |
| 400–< | 600 0.50 | 0.35 | 0.25 | – | |
| 600–< | 800 0.70 | 0.50 | 0.35 | – | |
| 0.50– | –< 20 | 0.15 | 0.11 | 0.07 | 0.05 |
| <1.00 | 20–< 50 | 0.20 | 0.15 | 0.10 | 0.07 |
| 50–< | 125 0.25 | 0.20 | 0.15 | 0.10 | |
| 125–< | 250 0.30 | 0.25 | 0.15 | 0.10 | |
| 250–< | 400 0.40 | 0.30 | 0.20 | 0.15 | |
| 400–< | 600 0.60 | 0.40 | 0.30 | – | |
| 600–< | 800 0.80 | 0.60 | 0.40 | – | |
| 1.00– | –< 20 | 0.20 | 0.15 | 0.10 | 0.07 |
| <1.60 | 20–< 50 | 0.25 | 0.20 | 0.15 | 0.10 |
| 50–< | 125 0.30 | 0.25 | 0.15 | 0.10 | |
| 125–< | 250 0.35 | 0.25 | 0.20 | 0.15 | |
| 250–< | 400 0.45 | 0.35 | 0.25 | 0.20 | |
| 400–< | 600 0.70 | 0.50 | 0.35 | – | |
| 600–< | 800 0.90 | 0.60 | 0.40 | – | |
| 1.60– | –< 20 | 0.25 | 0.20 | 0.15 | 0.10 |
| <2.00 | 20–< 50 | 0.30 | 0.20 | 0.15 | 0.10 |
| 50–< | 125 0.35 | 0.30 | 0.20 | 0.15 | |
| 125–< | 250 0.40 | 0.30 | 0.20 | 0.15 | |
| 250–< | 400 0.50 | 0.35 | 0.25 | 0.20 | |
| 400–< | 600 0.70 | 0.50 | 0.35 | – | |
| 600–< | 800 0.90 | 0.60 | 0.40 | – | |
| 2.00– | –< 20 | 0.35 | 0.25 | 0.20 | 0.15 |
| <2.50 | 20–< 50 | 0.35 | 0.25 | 0.20 | 0.15 |
| 50–< | 125 0.40 | 0.30 | 0.20 | 0.15 | |
| 125–< | 250 0.45 | 0.35 | 0.25 | 0.20 | |
| 250–< | 400 0.55 | 0.40 | 0.30 | 0.25 | |
| 400–< | 600 0.80 | 0.60 | 0.40 | – | |
| 600–< | 800 1.00 | 0.70 | 0.50 | – | |
| 2.50– | –< 20 | – | – | – | – |
| <4.00 | 20–< 50 | 0.40 | 0.30 | 0.20 | 0.15 |
| 50–< | 125 0.45 | 0.30 | 0.20 | 0.15 | |
| 125–< | 250 0.50 | 0.35 | 0.25 | 0.20 | |
| 250–< | 400 0.60 | 0.40 | 0.30 | 0.25 | |
| 400–< | 600 0.80 | 0.60 | 0.40 | – | |
| 600–< | 800 1.00 | 0.70 | 0.50 | – | |

If required thicknesses 4 mm and above can be discussed.

| Thick-ness inch | Width inch | Thickness tolerance, inch ± Tolerance class T1 | T2 | T3 | T4 |
|---|---|---|---|---|---|
| –<.0010 | –9.8 | .00012 | .00008 | .00006 | .00004 |
| | >9.8–15.7 | .00016 | .00012 | .00008 | .00006 |
| .0010–<.0016 | –9.8 | .00016 | .00012 | .00008 | .00006 |
| | >9.8–15.7 | .00020 | .00016 | .00012 | .00008 |
| .0016–<.0025 | –9.8 | .00020 | .00016 | .00012 | .00008 |
| | >9.8–15.7 | .00024 | .00020 | .00016 | .00012 |
| .0025–<.0039 | –9.8 | .00024 | .00020 | .00016 | .0001 |
| | >9.8–15.7 | .00028 | .00024 | .00020 | .00016 |
| .0039–<.0049 | –9.8 | .00028 | .00020 | .00016 | .00012 |
| | >9.8–15.7 | .00031 | .00024 | .00020 | .00016 |
| .0049–<.0063 | –9.8 | .00035 | .00024 | .00020 | .00016 |
| | >9.8–15.7 | .00039 | .00028 | .00024 | .00020 |
| .0063–<.0079 | –9.8 | .00039 | .00028 | .00020 | .00016 |
| | >9.8–15.7 | .00043 | .00031 | .00024 | .00020 |
| .0079–<.0098 | –9.8 | .00043 | .00031 | .00024 | .00016 |
| | >9.8–15.7 | .00051 | .00035 | .00028 | .00024 |
| | >15.7–23.6 | .00055 | .00039 | .00031 | .00028 |
| .0098–<.0124 | –9.8 | .00051 | .00035 | .00028 | .00020 |
| | >9.8–15.7 | .00059 | .00043 | .00031 | .00024 |
| | >15.7–23.6 | .00067 | .00047 | .00035 | .00028 |
| .0124–<.0157 | –9.8 | .00059 | .00043 | .00031 | .00024 |
| | >9.8–15.7 | .00067 | .00047 | .00035 | .00024 |
| | >15.7–23.6 | .00079 | .00055 | .00039 | .00031 |
| .0157–<.0197 | –9.8 | .00067 | .00047 | .00035 | .00024 |
| | >9.8–15.7 | .00079 | .00055 | .00039 | .00028 |
| | >15.7–23.6 | .00091 | .00067 | .00047 | .00035 |
| .0197–<.0248 | –9.8 | .00079 | .00055 | .00039 | .00028 |
| | >9.8–15.7 | .00094 | .00067 | .00047 | .00035 |
| | >15.7–23.6 | .00110 | .00079 | .00055 | .00039 |
| .0248–<.0315 | –9.8 | .00091 | .00067 | .00047 | .00031 |
| | >9.8–15.7 | .00106 | .00079 | .00055 | .00039 |
| | >15.7–23.6 | .00126 | .00091 | .00063 | .00047 |
| .0315–<.0394 | –9.8 | .00106 | .00075 | .00051 | .00035 |
| | >9.8–15.7 | .00126 | .00091 | .00063 | .00047 |
| | >15.7–23.6 | .00146 | .00106 | .00075 | .00055 |
| .0394–<.0492 | –9.8 | .00134 | .00094 | .00067 | .00047 |
| | >9.8–15.7 | .00142 | .00102 | .00071 | .00051 |
| | >15.7–23.6 | .00165 | .00114 | .00083 | .00059 |
| .0492–<.0630 | –9.8 | .00153 | .00110 | .00079 | .00055 |
| | >9.8–15.7 | .00173 | .00126 | .00087 | .00063 |
| | >15.7–23.6 | .00197 | .00150 | .00102 | .00075 |
| .0630–<.0787 | –9.8 | .00181 | .00130 | .00091 | .00067 |
| | >9.8–15.7 | .00197 | .00150 | .00102 | .00075 |
| | >15.7–23.6 | .00236 | .00165 | .00114 | .00083 |
| .0787–<.0984 | –9.8 | .00197 | .00138 | .00098 | .00067 |
| | >9.8–15.7 | .00216 | .00157 | .00110 | .00079 |
| | >15.7–23.6 | .00256 | .00197 | .00130 | .00094 |
| .0984–<.1240 | –9.8 | .00220 | .00157 | .00110 | .00079 |
| | >9.8–15.7 | .00236 | .00169 | .00018 | .00087 |
| | >15.7–23.6 | .00276 | .00197 | .00138 | .00098 |
| .1240–<.1969 | –9.8 | .00248 | .00177 | .00126 | .00087 |
| | >9.8–15.7 | .00256 | .00197 | .00134 | .00094 |
| | >15.7–23.6 | .00315 | .00236 | .00157 | .00114 |

| Thick-ness inch | Width inch | Width tolerance, inch ± Tolerance class B1 | B2 | B3 | B4 |
|---|---|---|---|---|---|
| –<.0098 | –< .79 | .0028 | .0020 | .0012 | .0008 |
| | .79–< 1.97 | .0039 | .0028 | .0020 | .0014 |
| | 1.97–< 4.9 | .0059 | .0043 | .0028 | .0020 |
| | 4.9 –< 9.8 | .0079 | .0059 | .0039 | .0028 |
| | 9.8 –<15.7 | .0118 | .0079 | .0059 | .0039 |
| | 15.7 –<23.6 | .0157 | .0118 | .0079 | – |
| | 23.6 –<31.5 | .0236 | .0157 | .0118 | – |
| .0098–<.0197 | –< .79 | .0039 | .0028 | .0020 | .0012 |
| | .79–< 1.97 | .0059 | .0043 | .0028 | .0020 |
| | 1.97–< 4.9 | .0079 | .0059 | .0039 | .0028 |
| | 4.9 –< 9.8 | .0098 | .0079 | .0059 | .0039 |
| | 9.8 –<15.7 | .0138 | .0118 | .0079 | .0059 |
| | 15.7 –<23.6 | .0197 | .0138 | .0098 | – |
| | 23.6 –<31.5 | .0276 | .0197 | .0138 | – |
| .0197–<.0394 | –< .79 | .0059 | .0043 | .0028 | .0020 |
| | .79–< 1.97 | .0079 | .0059 | .0039 | .0028 |
| | 1.97–< 4.9 | .0098 | .0079 | .0059 | .0039 |
| | 4.9 –< 9.8 | .0118 | .0098 | .0059 | .0039 |
| | 9.8 –<15.7 | .0157 | .0118 | .0079 | .0059 |
| | 15.7 –<23.6 | .0236 | .0157 | .0118 | – |
| | 23.6 –<31.5 | .0315 | .0236 | .0157 | – |
| .0394–<.0630 | –< .79 | .0079 | .0059 | .0039 | .0028 |
| | .79–< 1.97 | .0098 | .0079 | .0059 | .0039 |
| | 1.97–< 4.9 | .0118 | .0098 | .0059 | .0039 |
| | 4.9 –< 9.8 | .0138 | .0098 | .0079 | .0059 |
| | 9.8 –<15.7 | .0177 | .0138 | .0098 | .0079 |
| | 15.7 –<23.6 | .0276 | .0197 | .0138 | – |
| | 23.6 –<31.5 | .0354 | .0236 | .0157 | – |
| .0630– <.0787 | –< .79 | .0098 | .0079 | .0059 | .0039 |
| | .79–< 1.97 | .0118 | .0079 | .0059 | .0039 |
| | 1.97–< 4.9 | .0138 | .0118 | .0079 | .0059 |
| | 4.9 –< 9.8 | .0157 | .0118 | .0079 | .0059 |
| | 9.8 –<15.7 | .0197 | .0138 | .0098 | .0079 |
| | 15.7 –<23.6 | .0276 | .0197 | .0138 | – |
| | 23.6 –<31.5 | .0354 | .0236 | .0157 | – |
| .0787– <.0984 | –< .79 | .0138 | .0098 | .0079 | .0059 |
| | .79–< 1.97 | .0138 | .0098 | .0079 | .0059 |
| | 1.97–< 4.9 | .0157 | .0118 | .0079 | .0059 |
| | 4.9 –< 9.8 | .0177 | .0138 | .0098 | .0079 |
| | 9.8 –<15.7 | .0217 | .0157 | .0118 | .0098 |
| | 15.7 –<23.6 | .0315 | .0236 | .0157 | – |
| | 23.6 –<31.5 | .0394 | .0276 | .0197 | – |
| .0984– <.1575 | –< .79 | – | – | – | – |
| | .79–< 1.97 | .0157 | .0118 | .0079 | .0059 |
| | 1.97–< 4.9 | .0177 | .0118 | .0079 | .0059 |
| | 4.9 –< 9.8 | .0197 | .0138 | .0098 | .0079 |
| | 9.8 –<15.7 | .0236 | .0157 | .0118 | .0098 |
| | 15.7 –<23.6 | .0315 | .0236 | .0157 | – |
| | 23.6 –<31.5 | .0394 | .0276 | .0197 | |

## Forms of supply

Strip steel can be delivered in the following forms:

- Coils: Widths 12 mm and wider
- Pancake coils: Less than 12 mm wide
- Bundles oscillated with welded strands
- Plastic spools oscillated with welded strands
- Lengths

Materials with very high quality surfaces are protected with interleaving paper and especially thin strip is supplied on a plastic or cardboard core. Anti-corrosive paper is used for packing to protect the steel from rust. For further details about packing, please refer to our "Packing guide" on our website
**www.smt.sandvik.com/strip**

## We are where you need us to be

An important measure of our capability in worldwide sales and distribution is global availability. Prompt and efficient communications make Sandvik Materials Technology an effective partner to do business with. Around the clock, an advanced, global network of IT systems links our salesmen, order clerks, stock controllers, marketing support personnel and distributors.

Our distribution is geared to a variety of customer needs. Top delivery performance is our goal regardless of where our customers are located. Product availability is being improved continuously by shortening manufacturing lead times and we can offer immediate delivery of some orders from a number of different stock locations.

The world is our home market but at the same time the workplace of our 8000 employees in five continents. We all work to serve you and we are where you need us to be.