

ALFURN

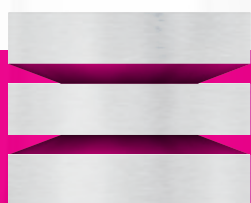
CATALOGUE



ALUMINIUM



STEEL



STAINLESS

About company

ALFUN a.s. is a company that operates a modern European centre which offers its customers a wide range of sheets and strips made from aluminium, steel, galvanised steel, stainless steel and copper.

The important part of the wide offer for the customers from all branches of industry are aluminium plates, profiles and also stainless steel bars and profiles since 2014.

The headquarters of the company is in Bruntál, Czech Republic. Here it has its main storage area and service centre which is equipped with production lines for longitudinal and transverse cutting of sheets and strips, as well as saws for cutting aluminium plates. ALFUN a.s. is focused on meeting all of the requirements

from small or large customers, regardless of the required quantities.

To support the sales and improve further the service activities are available our Service Centers in Radonice in Prague, České Budějovice and Sereď in Slovakia. The company also has sales offices in Austria, Hungary and Poland.

After having been in the market for a long time, ALFUN a.s. today represents a company that not only serves its customers in Bohemia, Moravia and Silesia but has also become an important European player in its trade.

The company has introduced the quality management system in compliance with ISO 9001:2015 which is applied strictly in the management of the company.

Our service centre can provide the following services just like you require:

- delivery of materials in standard and non-standard dimensions
- longitudinal and transverse cutting of materials on the cutting lines
- cutting of materials with power saws
- protection with adhesive foil against scratches
- immediate and long-term deliveries (frame contracts)
- logistic services
- material consultancy
- material and other certificates



Splitting specification



We provide the material division in the specifications as follows:

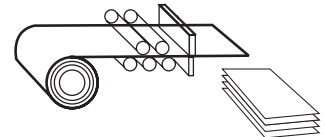
Cut-to-lengths into standard sheets and non-standard sizes dimensions

Dimensions in mm:

Thickness: 0,3 - 5,0

Width: 100 - 2 000

Length: 100 - 6 000



Dimensions tolerances acc. ČSN EN, other tolerances are possible upon agreement. It is possible to provide protection against scratching by adhesive foil or interleave with paper on demand.

Longitudinal slitting into strips

Dimensions in mm:

Thickness: 0,2 - 3,5

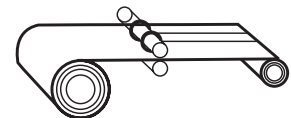
Width: 20 - 1 650

Inside roll diameter: 250/300/508/610

Outside roll diameter: max. 2 200

Packing of coils: horizontal or vertical axis

Weight of the output coil: max. 30 000 kg



Tolerance of dimensions acc. ČSN EN, other tolerances are possible on demand. As agreed upon, it is possible to provide protection against scratching by adhesive foil.



Sawing Aluminium plates

Dimensions in mm:

Thickness: 5 - 300

Width: 20 - 4 300

Length: 40 - 4 300

Other thickness and dimensions only on request



Tolerances of cuts:

- up to thickness 170 mm: +/- 0,3 mm
- over 170 mm: -0/+5 mm

It is possible to provide protection against scratching by adhesive foil on demand.



Water-jet parts

Dimensions in mm:

Thickness: 0,1 - 250

Maximum dimension of semi-finished product:

- sawing 2D - 2000 x 6000
- sawing 3D - 1000 x 5000
- 3D cuts are performed up to 55 degrees



Grinding and brushing of rolls

Dimensions in mm:

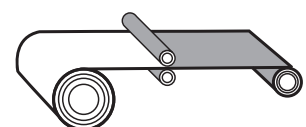
Thickness: 0,4 - 3,0

Width: 800 - 1 560

Length: 100 - 1000

Grinding grain: 80 - 400

Brushing: „Scotch-Brite“



By agreement, surface protection with types of foil or paper interlining.

Sheets and strips

Designation and characteristics

Designation acc. EN	Metallurgical designation	ČSN	DIN	Corrosion resistance	Suitable for the anodising process	Weldability
EN AW 1050	Al99,5	424005	3.0255	very good	yes	very good
EN AW 3003	AlMn1Cu		3.0517	very good	no	very good
EN AW 3103	AlMn1	424432	3.0515	very good	no	very good
EN AW 3004	AlMn1Mg1		3.0526	very good	no	very good
EN AW 3005	AlMn1Mg0,5		3.0525	very good	no	very good
EN AW 3105	AlMn0,5Mg0,5		3.0505	very good	no	very good
EN AW 5005	AlMg1		3.3315	especially to sea water	yes	very good
EN AW 5049	AlMg2Mn0,8		3.3527	especially to sea water	yes	very good
EN AW 5052	AlMg2,5		3.3523	especially to sea water	yes	very good
EN AW 5251	AlMg2Mn0,3	424412	3.3525	especially to sea water	yes	very good
EN AW 5754	AlMg3	424413	3.3535	especially to sea water	yes	very good
EN AW 5083	AlMg4,5Mn0,7	424415	3.3547	especially to sea water	no	very good
EN AW 6082	AlMgSi1Mn	424400	3.2315	especially to sea water	yes	very good
EN AW 7020	AlZn4,5Mg1	424441	3.4335	low	no	not suitable
EN AW 7022	AlZn5Mg3Cu		3.4345	low	no	not suitable
EN AW 7075	AlZn5,5MgCu	424222	3.4365	low	no	not suitable
EN AW 2017	AlCu4MgSi	424201	3.1325	low	no	low
EN AW 2024	AlCu4Mg1	424203	3.1355	low	no	low

Note:

1. This is only an approximate comparison acc. to the chemical composition or the mechanical values.
2. This must be specified in the order if the material should undergo the anodising process.
3. Statement about suitable for anodising process in for information only

Mechanical properties

Material	State		Rm (Mpa)		Rp 0,2 MPa
			min.	max.	
Al99,5 EN AW 1050	0/H111	soft	65	95	20
	H12/H22	1/4 hard	85	125	65
	H14/H24	1/2 hard	105	145	85
	H16/H26	3/4 hard	120	160	100
	H18/H28	hard	140		120
AlMnCu EN AW 3003	0/H111	soft	95	135	35
	H14/H24	1/2 hard	145	185	125
	H18/H28	hard	185		165
AlMn1 EN AW 3103	0/H111	soft	90	130	35
	H14/H24	1/2 hard	140	180	120
	H16/H26	3/4 hard	160	200	145
	H18/H28	hard	185		165
AlMn1Mg1 EN AW 3004	0/H111	soft	155	200	60
	H12/H22	1/4 hard	190	240	155
	H14/H24	1/2 hard	220	265	180
	H16/H26	3/4 hard	245	285	200
AlMn1Mg0,5 EN AW 3005	0/H111	soft	115	165	45
	H12/H22	1/4 hard	145	195	125
	H14/H24	1/2 hard	170	215	150
	H16/H26	3/4 hard	195	240	175
	H18/H28	hard	220		200

Table of elongation and informative bending radii for individual states and the range of material thicknesses.

EN AW-1050A [99,5] Alloy					
State	Nominal Thickness mm		Elongation min. %	Bending Radius 1)	
	over	up to	A50 mm	180°	90°
0/H111	0.2	0.5	20	0 t	0 t
	0.5	1.5	22	0 t	0 t
	1.5	3.0	26	0 t	0 t
	3.0	6.0	29	0.5 t	0.5 t
H12	0.2	0.5	2	0.5 t	0 t
	0.5	1.5	4	0.5 t	0 t
	1.5	3.0	5	0.5 t	0.5 t
	3.0	6.0	7	1.0 t	1.0 t
H14	0.2	0.5	2	1.0 t	0 t
	0.5	1.5	3	1.0 t	0.5 t
	1.5	3.0	4	1.0 t	1.0 t
	3.0	6.0	5		1.5 t
H16	0.2	0.5	1		0.5 t
	0.5	1.5	2		1.0 t
	1.5	4.0	3		1.5 t
H18	0.2	0.5	1		1.0 t
	0.5	1.5	2		2.0 t
	1.5	3.0	2		3.0 t
H22	0.2	0.5	4	0.5 t	0 t
	0.5	1.5	5	0.5 t	0 t
	1.5	3.0	6	0.5 t	0.5 t
	3.0	6.0	7	1.0 t	1.0 t

1) ONLY INFORMATIVE, t=Thickness of the material.

Continued on the following page.

Sheets and strips

Mechanical properties

Material	State		Rm [Mpa]		Rp0,2 MPa
			min.	max.	
AlMn0,5Mg0,5 EN AW 3105	0/H111	soft	100	155	40
	H12/H22	1/4 hard	130	180	105
	H14/H24	1/2 hard	150	200	130
	H16/H26	3/4 hard	175	225	160
	H18/H28	hard	195		180
AlMg1 EN AW 5005	0/H111	soft	100	145	35
	H22/H32	1/4 hard	125	165	80
	H24/H34	1/2 hard	145	185	110
AlMg2 EN AW 5251	0/H111	soft	160	200	60
	H22/H32	1/4 hard	190	230	120
	H24/H34	1/2 hard	210	250	140
AlMg2Mn0,8 EN AW 5049	0/H111	soft	190	240	80
	H22/H32	1/4 hard	220	270	130
	H24/H34	1/2 hard	240	280	160
	H26/H36	3/4 hard	265	305	190
AlMg2,5 EN AW 5052	0/H111	soft	170	215	65
	H22/H32	1/4 hard	210	260	130
	H24/H34	1/2 hard	230	280	150
	H26/H36	3/4 hard	250	300	180
AlMg3 EN AW 5754	0/H111	soft	190	240	80
	H22/H32	1/4 hard	220	270	130
	H24/H34	1/2 hard	240	280	160
	H26/H36	3/4 hard	265	305	190
	H114	antiskid	190	260	80
AlMg4,5Mn0,7 EN AW 5083	0/H111	soft	275	350	125
	H22/H32	1/4 hard	305	380	215
	H24/H34	1/2 hard	340	400	250
AlMg1SiCu EN AW 6061	0	soft	unavailable	150	max. 85
	T4/T451	naturally weathered	205	unavailable	110
AlSiMgMn EN AW 6082	T6/T651	naturally weathered	290	unavailable	240
	0	soft	unavailable	15	max. 85
	T4/T451	naturally weathered	205	unavailable	110
AlCu4MgSi EN AW 2017A	T6/T651	naturally weathered	310	unavailable	260
	0	soft	unavailable	225	145
	T4/T451	naturally weathered	390	unavailable	245
AlCu4Mg1 EN AW 2024	0	soft	unavailable	220	140
	T3/T351	naturally weathered	420	unavailable	290
AlZn5Mg3Cu EN AW 7022	T6/T651	naturally weathered	450	unavailable	370
AlZn5,5MgCu EN AW 7075	0	soft	275	unavailable	145
	T651	naturally weathered	525	unavailable	440

Table of elongation and informative bending radii for individual states and the range of material thicknesses.

EN AW-1050A [99,5] Alloy					
State	Nominal Thickness mm		Elongation min. % A50 mm	Bending Radius 1)	
	over	up to		180°	90°
H24	0.2	0.5	3	1.0 t	0 t
	0.5	1.5	4	1.0 t	0.5 t
	1.5	3.0	5	1.0 t	1.0 t
	3.0	6.0	6	1.5 t	1.5 t
H26	0.2	0.5	2		0.5 t
	0.5	1.5	3		1.0 t
	1.5	3.0	4		1.5 t
H28	0.2	0.5	2		1.0 t
	0.5	1.5	2		2.0 t
	1.5	3.0	3		3.0 t

1) ONLY INFORMATIVE, t= Material Thickness.

Table of elongation and informative bending radii for individual states and the range of material thicknesses.

EN AW-5754 [AlMg3]					
State	Nominal Thickness mm		Elongation min. % A50 mm	Bending Radius 1)	
	over	up to		180°	90°
0/H111	0.2	0.5	12	0.5 t	0 t
	0.5	1.5	14	0.5 t	0.5 t
	1.5	3.0	16	1.0 t	1.0 t
	3.0	6.0	18	1.0 t	1.0 t
H12	0.2	0.5	4		
	0.5	1.5	5		
	1.5	3.0	6		
	3.0	6.0	7		
H14	0.2	0.5	3		
	0.5	1.5	3		
	1.5	3.0	4		
	3.0	6.0	4		
H16	0.2	0.5	2		
	0.5	1.5	3		
	1.5	3.0	3		
	3.0	6.0	3		
H18	0.2	0.5	1		
	0.5	1.5	2		
	1.5	3.0	2		
H22/32	0.2	0.5	7	1.5 t	0.5 t
	0.5	1.5	8	1.5 t	1.0 t
	1.5	3.0	10	2.0 t	1.5 t
	3.0	6.0	11		1.5 t
H24/34	0.2	0.5	6	2.5 t	1.0 t
	0.5	1.5	6	2.5 t	1.5 t
	1.5	3.0	7	2.5 t	2.0 t
	3.0	6.0	8		2.5 t
H26/36	0.2	0.5	4		1.5 t
	0.5	1.5	4		2.0 t
	1.5	3.0	5		3.0 t
	3.0	6.0	6		3.5 t
H28/38	0.2	0.5	3		
	0.5	1.5	3		
	1.5	3.0	4		

1) ONLY INFORMATIVE, t= Material Thickness.

Sheets and strips

Sheets and strips - from Aluminium and its alloys

For detailed information see the **ALUMINIUM** catalogue – sheets, strips, profiles and bars.

Standards:

Technical terms of deliveries EN 485-1
 Limit dimensional deviations and shape tolerances EN 485-4

Dimensions in mm	Sheet / trimming	Coil / strip
Thickness	0,3 - 5,0	0,3 - 3,5
Width	50 - 2 000	20 - 1 650
Length	100 - 6 000	-
Inner roll diameter	-	250/300/508/610
Outer roll diameter	-	max. 2 200

Tread plates

Standards:

Technical terms of deliveries EN 1386
 Limit dimensional deviations and shape tolerances EN 1386

Dimensions in mm	Sheet
Thickness	1,5/2,0 - 5,0/6,5
Width	1 000 - 1 500
Length	2 000 - 3 000



Sheets and strips - varnished

Standards:

Technical terms of deliveries EN 485-1
 Limit dimensional deviations and shape tolerances EN 485-4

Dimensions in mm	Sheet / trimming	Coil / strip
Thickness	0,5 - 1,5	0,5 - 2,0
Width	50 - 2 000	20 - 1 650
Length	100 - 6 000	-
Inner roll diameter	-	250 / 300 / 508 / 610
Outer roll diameter	-	max. 2 200

Standard RAL colours



RAL 3016



RAL 7016



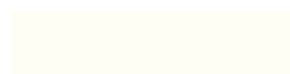
RAL 8011



RAL 8017



RAL 8019



RAL 9010

Sampler of colours is only informative. Exact shade has to be consulted. Other colours on demand.

Sheets and strips

Sheets - Anodised

Properties:

Anodised sheets are characterized by higher resistance to the influence of external environment, humidity, UV radiation and scratching; they are used for interior applications (appliances, lining) with anodised layer up to 5 micrometers as well as for exterior applications in civil engineering, with anodised layer above 10 micrometers.

Anodising process:

This is a controlled process of chemical deposition of the protection layer with glass-like hardness in thicknesses of 2 to 20 micrometers to the surface of an Aluminium sheet.

Standards:

Technical terms of deliveries EN 485-1
Limit dimensional deviations and shape tolerances EN 485-4

Alloys suitable for the anodising process:

The alloy most suitable for the anodising process is ENAW5005 H14/24 which, especially in designing, assures the repeatability of manufacture with an identical appearance of individual production batches. Nevertheless, it is possible to perform anodising process for almost all the alloys of ENAW1xxx and ENAW5xxx series.

More detailed information can be obtained at the company's Sales Department.

Dimensions in mm:	Sheet	Coil
Thickness	1,0 - 3,0	0,8 - 3,0
Width	1 000 - 1 500	20 - 1500
Length	2 000 - 3 000	according customer's request, max. 6000

Sheets - polished

Anodised and nonanodised qualities

Polished materials, nonanodised, with protective foil

COILS:	Thickness: 0,20 – 1,00 mm / roll width: 20 – 1250 mm
	ID: 250 / 508 mm
	Overall reflective capacity of the material*: 75 – 80 %
SHEETS:	Thickness: 0,30 – 1,00 mm / plate width: 1250 mm
	Max. plate length: 6000 mm
	Overall reflective capacity of the material *: 75 – 80 %

Polished materials, anodised, with protective foil

COILS:	Thickness: 0,30 – 1,00 mm / roll width: 20 – 1250 mm
	ID: 250 / 508 mm
	Overall reflective capacity of the material *: from 86 %
SHEETS:	Thickness: 0,30 – 1,00 mm / max. plate width: 1250 mm
	Max. plate length: 6000 mm
	Overall reflective capacity of the material *: from 86 %

* - other parameters of reflective capacity and iridescence are available on request at the company's Sales Department

** - the company ALFUN, a.s. offers also matt anodised materials, tree-profiled, hammer polished anodised, polished anodised varnished and others – the whole assortment is available at the company's Sales Department

SSL - STAINLESS STEEL LOOK

Aluminium Alloy ENAW 5005 H14

A combination of excellent Aluminium properties with the optic appearance of a brushed stainless steel provides completely new possibilities

The abbreviation SSL stands for „Stainless Steel Look“

Decorative appearance of a brushed stainless steel is perfectly imitated. The anodised layer with thickness of 10 µm provides high and permanent protection of the surface. The aesthetic feature of stainless steel is complemented ideally by the advantages of the Aluminium material.

Mechanical properties

Material	Rm (MPa) – strength limit	Rp 0,2 (MPa) – min. yield limit	Elongation A50 (%)	Min. radius R/t at 90°
ENAW 5005 H14	145 - 185	120	2 - 5	1,0

The aesthetic of stainless steel unites with the lightness of Aluminium here

Material	EN AW-5005A H14 (AlMg1)					
Surface	SSL treatment at one side					
Anodised layer	Anodised coil, 10µm at SSL side					
Dimension (Thickness)	0,8	1,0	1,5	2,0	2,5	3,0
1000 x 2000 mm	X	X	X	X	X	X
1250 x 2500 mm	X	X	X	X	X	X
1500 x 3000 mm	X	X	X	X	X	X
Protective foil	Laserguard 3100H5, 100µm - possible to cut with laser					
Acc. to standards	EN 485-1, 2, 4 a 573-3					

ADVANTAGES:

- „Anti finger-print“ – the surface is protected against fingerprints
- Resistance to neutral cleaning agents, dirt and corrosion
- High abrasion resistance and resistance to UV radiation
- Antistatics, electrically nonconductive
- Noticeable reduction in weight as compared with stainless steel (3x)
- Easier workability and homogeneous topography of surface

X - normally on stock, orders for the whole sheet size (possible to cut into smaller pieces)

X - delivery period on request to dealer, orders for min. volumes of 3-5t depending on thickness

Plates

Plates - from Aluminium and its alloys

Standards:

Technical terms of deliveries EN 485-1
 Limit dimensional deviations and shape tolerances EN 485-3

Dimensions in mm:

	Plate / trimming
Thickness	5 - 300
Width	20 - 4 300
Length	40 - 4 300

Other alloys, thickness and dimensions only on request.

Tolerances for cutting:

- up to the thickness of 170 mm: +/- 0,3 mm
 - over 170 mm: -0/+5 mm



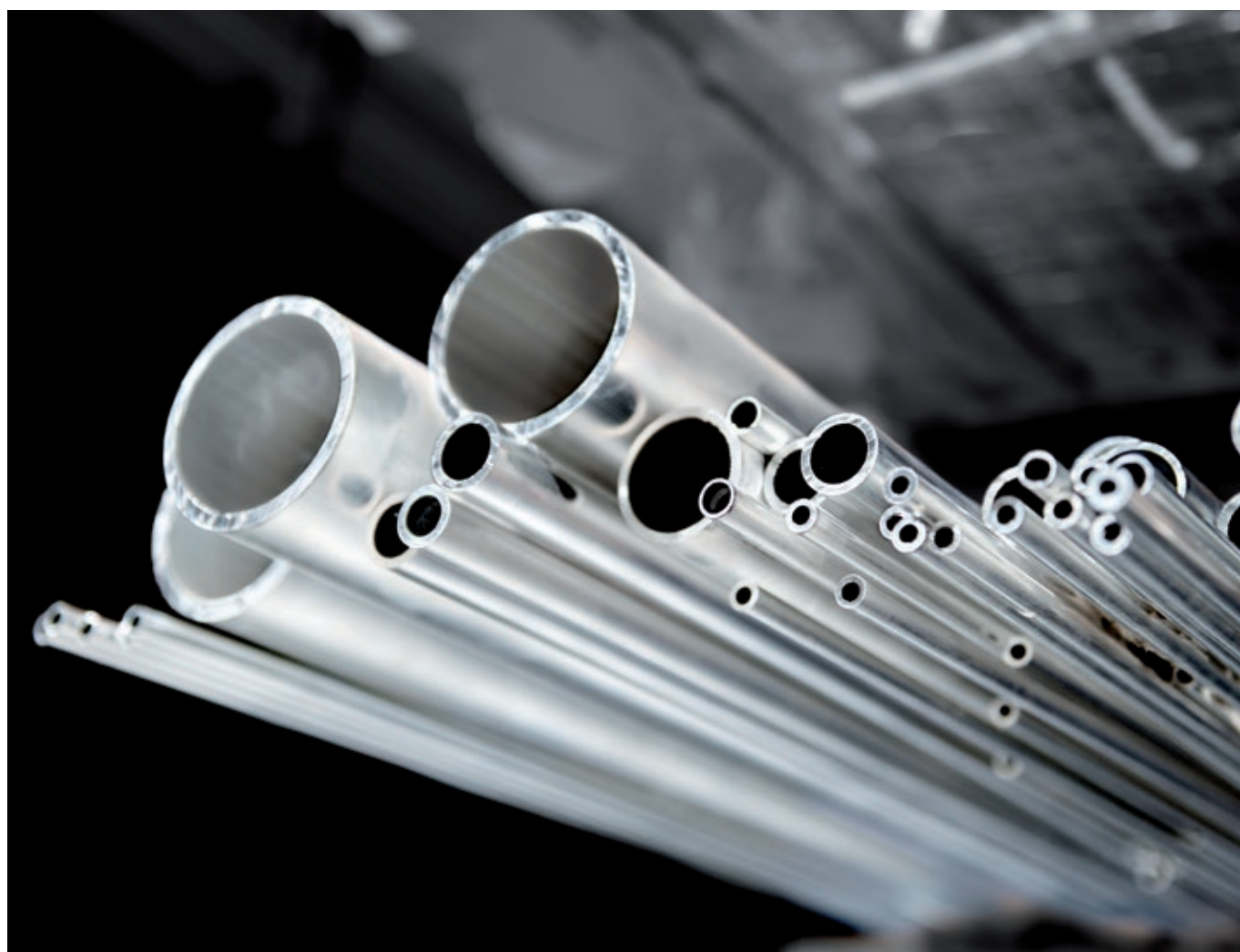
Specification of selected alloys

Type of plate	Alloy designation				Availability (mm)	Mech. properties				Other characteristics 1-5, 1 - best				
	Acc. EN	Acc. DIN	Acc. PN	Chemical		State	Rm min. (MPa)	Rp0,2 (MPa)	Hardness (HR)	Machining	Welding	Anodised	Corrosion resistance	Hardability
Cast cut plates (rough surface intended for machining)	5754	3.3835	PA11	AlMg3	10-250 mm	Soft	190	80	50	3	1	2	1	No
	5083	3.3547	PA13	AlMg4,5Mn0,7	10-300 mm	Soft	250	120	75	2	1	3	1	No
	7021	--	--	AlZn5,5Mg1,5	10-200 mm	Hardened	390	340	125	2	2	3	2	Yes
Milled plates (machined surface, foil on both sides)	5754	3.3835	PA11	AlMg3	5-100 mm	Soft	190	80	50	3	1	2	1	No
	5083	3.3547	PA13	AlMg4,5Mn0,7	5-100 mm	Soft	250	120	75	2	1	3	1	No
	7021	--	--	AlZn5,5Mg1,5	8-100 mm	Hardened	390	340	125	2	2	3	2	Yes
Rolled plates (common rolled surface)	ENAW5754	3.3535	PA11	AlMg3	5-120 mm	Soft	190	80	50	3	1	2	1	No
	ENAW5083	3.3547	PA13	AlMg4,5Mn0,7	5-150 mm	Soft	250	120	75	2	1	3	1	No
	ENAW6061	3.3211	PA45	AlMg1SiCu	6-140 mm	Hardened	290	240	105	1	1	3	2	Yes
	ENAW6082	3.2315	PA4	AlSiMgMn	5-180 mm	Hardened	300	240	95	1	1	3	2	Yes
	ENAW2017	3.1325	PA6	AlCuMg1	5-150 mm	Hardened	380	240	105	1	5	5	4	Yes
	ENAW2024	3.1355	--	AlCuMg2	5-90 mm	Hardened	390	250	110	1	5	5	4	Yes
	WELDURAL	--	--	AlCu6,5Mn0,3	Upon request 90-150 mm	--	430	330	130	1	2	4	4	Yes
	ENAW7122	--	--	--	150-300 mm	--	490	430	140	1	4	5	5	Yes
	ENAW7022	3.4345	--	AlZn5Mg3Cu	5-150 mm	Hardened	550	470	165	1	4	5	5	Yes
ENAW7075	3.4365	PA9	AlZn5,5MgCu	5-200 mm	Hardened	550	450	170	1	4	5	5	Yes	
Rolled milled plates (machined surface, foil on both sides)	ENAW5083	3.3547	PA13	AlMg4,5Mn0,7	5-100 mm	Soft	250	120	75	2	1	3	1	No
	ENAW6082	3.2315	PA4	AlSiMgMn	8-100 mm	Hardened	300	240	95	1	1	3	2	Yes
	ENAW2017	3.1325	PA6	AlCuMg1	5-150 mm	Hardened	380	240	105	1	5	5	4	Yes
	ENAW7019 UNIDAL	--	--	AlZn4Mg2Mn	8-60 mm	Hardened	420	365	130	1	1	3	3	Yes
	ENAW7075	3.4365	PA9	AlZn5,5MgCu	6-100 mm	Hardened	550	450	170	1	4	5	5	Yes

Bars and profiles

Designation and properties

Designation acc. EN	Metallurgical designation	ČSN	DIN	Corrosion resistance	Suitability for anodising process	Weldability	Workability
EN AW 2011	AlCuBiPb		3.1655	low	no	no	very good
EN AW 2007	AlCu4PbMgMn		3.1645	low	no	no	good
EN AW 2030	AlCu4PbMg	424254		low	no	no	good
EN AW 2017	AlCuMg1Si	424201	3.1325	low	no	poor	good
EN AW 2024	AlCu4Mg1	424203	3.1355	low	no	poor	good
EN AW 5083	AlMg4,5Mn0,7		3.3547	good	no	very good	good
EN AW 6005	AlSiMg		3.3210	very good	yes	very good	sufficient
EN AW 6012	AlMgSiPb		3.0615	very good	yes	good	very good
EN AW 6026	AlSiMgMn			good	yes	good	good
EN AW 6060	AlMgSi0,5	424401	3.3206	very good	yes	very good	low
EN AW 6063	AlMgSi0,7	424401		very good	yes	very good	sufficient
EN AW 6061	AlMg1SiCu		3.3211	very good	yes	good	good
EN AW 6082	AlMgSi1Mn	424400	3.2315	very good	yes	good	good
EN AW 6262	AlMg1SiPb			good	good	good	good
EN AW 6064	AlFeSiMg			good	good	good	good
EN AW 7003	AlZn6Mg0,8Zr			low	yes	very good	good
EN AW 7022	AlZn5Mg3Cu		3.4345	low	no	no	good
EN AW 7075	AlZn5,5MgCu		3.4365	low	no	no	good



Bars and profiles

Mechanical properties

Material	State	Rm (MPa)		Rp0,2 MPa	Elongation [%] A 50 mm
		min.	max.		
AlCu6BiPb EN AW 2011	T3	320		270	8
	T4	275		125	12
	T6	310		230	6
	T8	380		270	6
AlCu4PbMgMn EN AW 2007	T3	370		250	5
	T4	370		250	6
AlCu4PbMg EN AW 2030	T3	370		250	5
	T4	370		250	6
AlCu4MgSi EN AW 2017	0/H111		250	max. 135	10
	T3	400		250	8
	T4	380		240	8
AlCu4Mg1 EN AW 2024	0/H111		250	max. 150	10
	T3	440		300	8
	T6	425		315	4
AlMg4,5Mn0,7 EN AW 5083	0	270		110	10
	H112	270		125	10
AlSiMg EN AW 6005	T4	180		90	13
	T6	260		215	8
AlMgSiPb EN AW 6012	T4	200		100	10
	T6	310		260	8
AlSiMgMn EN AW 6026	T6	310		260	8
	T8	345		315	4
AlMgSi EN AW 6060	T9	360		330	4
	T4	120		60	14
AlMg0,7Si EN AW 6063	T5	140		100	6
	T6	170		140	6
	T66	195		150	6
AlMg1SiCu EN AW 6061	T4	150		75	13
	T6	220		190	8
	T66	230		195	8
AlSi1MgMn EN AW 6082	T4	180		110	14
	T6	260		240	6
	T6	260		240	10
AlMg1SiPb EN AW 6262	T4	205		110	12
	T6	290		250	6
	T6	260		240	10
AlFeSiMg EN AW 6064	T8	345		315	4
	T9	360		330	4
	T6	260		240	10
AlZn6Mg0,8Zr EN AW 7003	T8	345		315	4
	T9	360		330	4
AlZn5Mg3Cu EN AW 7022	T6	260		240	10
	T8	345		315	4
AlZn5,5MgCu EN AW 7075	T9	360		330	4
	T6	260		240	10
AlZn6Mg0,8Zr EN AW 7003	T1	320		210	12
	T5	340		280	10
AlZn5Mg3Cu EN AW 7022	0		275	max. 150	10
	T6	470		400	7
AlZn5,5MgCu EN AW 7075	0		275	max. 165	10
	T6	530		480	6

Applied alloys

	Bars	Profiles
Standard alloys	EN AW 2030	EN AW 6060
	EN AW 2007 (Flat Bars, 4HR)	
	EN AW 6082 (Flat Bars, 4HR)	
	EN AW 7075	
Alloys to order	EN AW 2011	
	EN AW 2017A	EN AW 6082
	EN AW 2024	
	EN AW 5083	
	EN AW 6005	
	EN AW 6060 (Flat Bars, 4HR)	
	EN AW 6012	
	EN AW 6026	
	EN AW 6061	
	EN AW 6262	
	EN AW 6064	
	EN AW 7003	

Alloys with low content of Pb: EN AW 2011, EN AW 6064, EN AW 6026
(Pb=max.0,4%)

Alloys without Pb: EN AW 2017A, EN AW 2024, EN AW 5083, EN AW 6060, EN AW 6005, EN AW 6061, EN AW 6082, EN AW 7003, EN AW 7022, EN AW 1050
(or only with traces of Pb)

Dimensions in mm:	Bars	Profiles
Diameter	6 - 350	-
Length	2 500 - 4 000	6 000

Bars

Standards:

Technical terms of deliveries
EN 755-1, EN 755-2, EN 754-2, EN 754-1, EN 573-4, EN 573-3

Limit dimensional deviations and shape tolerances
EN 755-3, EN 754-3

Profiles

Standards:

Technical terms of delivery
EN 573-3, EN 573-4, EN 755-1, EN 755-2

Limit dimensional deviations and shape tolerances
EN 755-5, EN 755-8, EN 755-9, EN 755-4

Bars and profiles

For detailed information, please see the catalogue ALUMINIUM - Sheets, Strips, Profiles and Bars

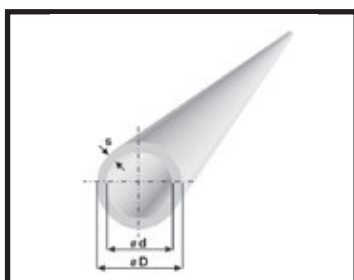
Delivery:

- as a semi-finished product
- with surface treatment (anodised or varnished)
- or machined with surface treatment as a finished part.

Round Tube

Dimensions in mm:

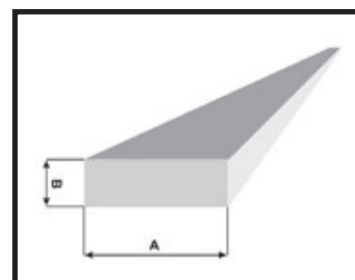
D	6 - 280
s	1 - 22
d	3 - 150



Square- a 4HR- Bars

Dimensions in mm:

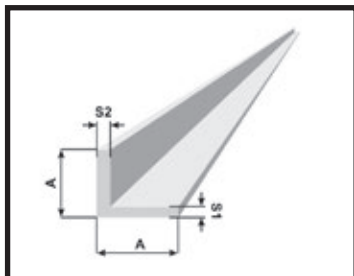
A	8 - 300
B	2 - 250



L Profile symmetric

Dimensions in mm:

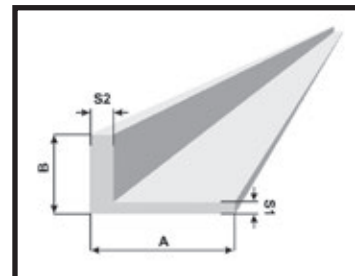
A	10 - 120
S	1,5 - 10



L Profile asymetric

Dimensions in mm:

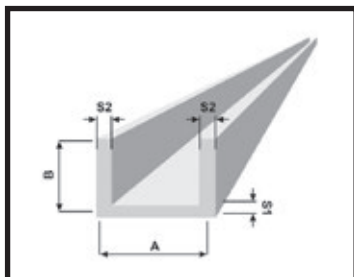
A	10 - 220
B	10 - 100
S	1,5 - 20



U Profile

Dimensions in mm:

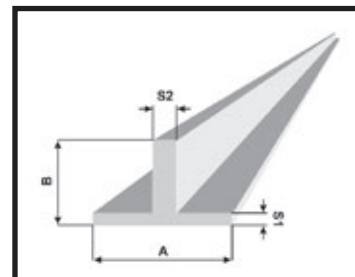
A	8 - 200
B	8 - 127
S	1 - 12



T Profile

Dimensions in mm:

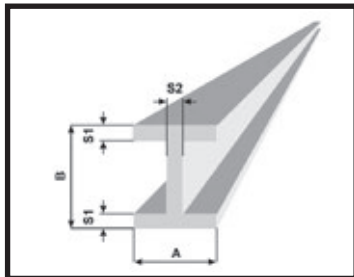
A	6 - 180
B	13 - 100
S1	1,5 - 8



I Profiles

Dimensions in mm:

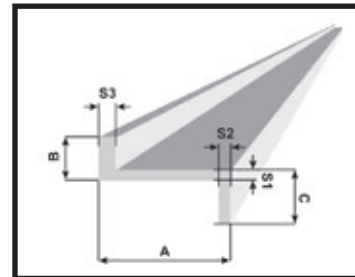
A	8 - 160
B	14 - 125
S	1,5 - 9



Z Profiles

Dimensions in mm:

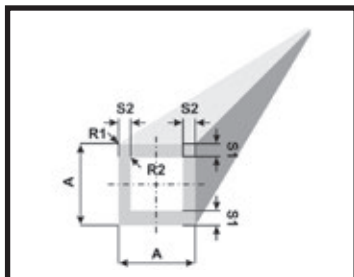
A	5 - 80
B, C	12 - 50
S	1,5 - 6



Square Tube

Dimensions in mm:

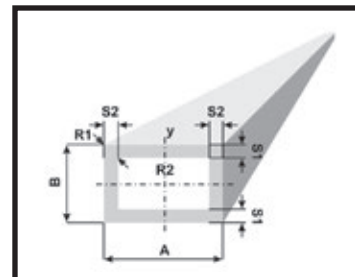
A	10 - 150
S	1 - 10



Rectangular Tube

Dimensions in mm:

A	15 - 210
B	10 - 120
S	1,5 - 10



Profiles to the drawing and special profiles

Aluminium Profiles acc. to an individual design /drawing/.

Steel sheets and strips, cold rolled

Drawing Steels DC01 - DC05

Steel sheets and strips from low carbon steel are produced by cold rolling. We deliver the thickness from 0,4 up to 3,0 mm. The sheets up to thickness 3,0 mm may be delivered split longitudinally or transversally, in various dimensions.

Standards:

Technical terms of deliveries EN 10130
Limit dimensional deviations and shape tolerances EN 10131

Application: The products are suitable for cold moulding and for the products which surface is to be treated (varnishing, galvanising).

Mechanical properties:

Mark of Steel acc. EN	Mechanical properties:		
	Yield limit - Re max. MPa	Strength limit - Rm min. / max. MPa	Elongation - A80 min. %
DC01	280	270 - 410	28
DC03	240	270 - 370	34
DC04	210	270 - 350	38
DC05	180	270 - 330	40

High Strength Low Alloy Steels for cold forming

The high-strength steel sheets and strips are produced by cold rolling in thicknesses from 0.4 to 3.0 mm. The sheets up to thickness 3.0 mm may be delivered split longitudinally or transversally, in various dimensions.

Standards:

Technical terms of deliveries EN 10268
Limit dimensional deviations and shape tolerances EN 10131

Application: For the parts of cars that are stressed dynamically; those are distinguished by an increased cold mouldability.

Mechanical properties:

Steel symbol acc. EN EN 10268	Mechanical properties:		
	Contractual Yield Limit Rp 0,2 [MPa] min. / max.	Strength limit - Rm min. / max. MPa	Elongation - A80 min. %
HC260LA	260 - 330	350 - 430	26
HC300LA	300 - 380	380 - 480	23
HC340LA	340 - 420	410 - 510	21
HC380LA	380 - 480	440 - 580	19
HC420LA	420 - 520	470 - 600	17

Dimensions in mm:

	Sheet / trimming	Coil / strip
Thickness	0,4 - 3,0	0,4 - 3,0
Width	20 - 1 700	20 - 1 550
Length	100 - 6 000	-
Inner Roll Diameter	-	508 / 610
Outer Roll Diameter	-	max. 1 800

Steel sheets and strips, hot rolled

Drawing qualities DD11 – DD 14

Steel sheets, strips and plates from low carbon steel (sheets) are made by hot rolling. They are delivered in thickness from 1,5 to 12,5 mm. The sheets up to thickness 3,0 mm may be split longitudinally, thickness up to 5,0 mm may be delivered split longitudinally or transversally, in various dimensions.

Standards:

Technical terms of deliveries EN 10111
 Limit dimensional deviations and shape tolerances EN 10131

Application: For the parts of cars that are stressed dynamically; there are distinguished by an increased cold mouldability.

Mechanical properties ^{a)}

Steel designation	Mechanical properties ^{b)}					
	ReL ^{d)}		Rm max. MPa	Elongation - minimal		
	1,0 mm ≤ e e < 2 mm MPa	2 mm ≤ e e ≤ 11 mm MPa		Lo = 80 mm		
			1,0 mm ≤ e e < 1,5 mm %	1,5 mm ≤ e e < 2 mm %	2 mm ≤ e e < 3 mm %	
DD11 d)	170 - 360	170 - 340	440	22	23	24
DD12	170 - 340	170 - 320	420	24	25	26
DD13	170 - 330	170 - 310	400	27	28	29
DD14	170 - 310	170 - 290	380	30	31	32

- a) The given mechanical properties are valid only for the hot rolled products, without descaling or descaled chemically and oiled, cold re-rolled or not cold re-rolled.
- b) If the product width allows, test samples are taken for the tension test, which is performed crosswise to the rolling direction.
- c) If the product does not show a substantial Yield Limit ReL, the contractual Yield Limit Rp0,2- must be used.
- d) It is recommended that the products made of material mark DD11 are formed within 6 weeks from the time of their availability.

Common structural qualities – S235 – S355

Steel sheets, strips and plates are made by hot rolling. They are delivered in thickness from 1,5 up to 12,5 mm. In the thickness of up to 3,0 mm they may be split longitudinally while thicknesses of up to 5,0 mm may be delivered split longitudinally or transversally, in various dimensions..

Standards:

Technical terms of deliveries EN 10025-2
 Limit dimensional deviations and shape tolerances EN 10051

Application: The sheets are suitable for design purposes, production of bent sections , parts of heating and power generating equipment, the plates have a good mouldability.

Mechanical properties at ambient temperatures for flat and long products from steel and quality grades for which the impact energy needs to be specified

Designation acc. EN 10027-1 and CR 10260	Minimum Yield limit ReH, ^{a)} MPa ^{b)}		Tensile strength Rm, ^{a)} MPa ^{b)}	
	Nominal Thickness mm		Nominal Thickness mm	
	≤ 16	> 16	< 3	≥ 3 < 100
S235JR	235	235	360 - 510	360 - 510
S235J0	235	235	360 - 510	360 - 510
S235J2	235	235	360 - 510	360 - 510
S355JR	355	355	510 - 680	470 - 630
S355J0	355	355	510 - 680	470 - 630
S355J2	355	355	510 - 680	470 - 630
S355K2	355	355	510 - 680	470 - 630

- a) Values given in the table refer to cross test specimens (t) for plates and wide steel with width > 600 mm. In all the other products they refer to the longitudinal test specimens (l).
- b) 1 MPa = 1 N/mm².

Steel sheets and strips, hot rolled

Micro-alloyed qualities of structural steels S315 MC - S560 MC

Hot rolled sheets from structural steels, micro-alloyed with fine granular structure, intended for cold moulding, with a higher yield limit for the cold moulding. Steel sheets, strips and plates are made by hot rolling. They are delivered in thickness from 1,5 up to 12,5 mm. In the thickness of up to 3,0 mm they may be split longitudinally while thicknesses up to 5,0 mm may be delivered split longitudinally or transversally, in various dimensions.

Standards:

Technical terms of deliveries EN 10149-2
Limit dimensional deviations and shape tolerances EN 10051

Application: The plates are suitable for design purposes, production of bent sections, parts of heating and power generating equipment, the plates have a good mouldability.

Mechanical properties of the thermo-mechanical rolled steels

Steel designation	ReH MPa ¹⁾	Strength limit MPa ¹⁾ min. / max.	Minimum Ductility A ¹⁾ %	
			For nominal thickness in mm	
			< 3 Lo = 80 mm	≥ 3 Lo = 5,65 √So
S315MC	315	390 - 510	20	24
S355MC	355	430 - 550	19	23
S420MC	420	480 - 620	16	19
S460MC	460	520 - 670	14	17
S500MC	500	550 - 700	12	14
S550MC	550	600 - 760	12	14
S600MC	600	650 - 820	11	13
S650MC	650 ²⁾	700 - 880	10	12
S700MC	700 ²⁾	750 - 950	10	12

1) The values obtained by the tensile test are valid for longitudinal test specimens

2) For thicknesses above 8 mm the maximum value of Yield Limit may be lower by 20N/mm².

Dimensions in mm:

	Sheet / trimming	Coil / strip
Thickness	1,5 - 5,0	1,5 - 3,0
Width	200 - 1 750	20 - 1 550
Length	100 - 6 000	-
Inner roll diameter	-	508 / 610
Outer roll diameter	-	max. 1 800

Steel sheets and strips, cold rolled, hot dipped, galvanised

Owing to the fact that carbon steel is highly prone to corrosion, the steel plates and strips are protected by a continual hot dip galvanising process, using Zinc (Z), Zinc-Iron alloy (ZF), Zinc-Aluminium alloy (ZA), Aluminium-Zinc alloy (AZ) or Aluminium-Silicium alloy (AS).

Standards:

Technical terms of deliveries EN 10346
Limit dimensional deviations and shape tolerances EN 10143

Application: Each of this alloy type is used for a different application depending on the properties of coating; e.g. they are used in structural engineering for the production of metal structures, traffic signs or industrial furnaces, heating equipment and firebreak doors. As far as the home appliances are concerned, they are applied for the manufacture of washing machines, dryers, fridges and microwave ovens.

Classification by the type of coating:

Products with Zinc coating - Z
Products with Zinc-Iron alloy coating - ZF
Products with Zinc- Aluminium coating - ZA
Products with Aluminium-Zinc coating - AZ
Products with Aluminium-Silicium coating - AS

Deep Drawing Steels

- DX51D for bending and profiling
- DX52D for drawing
- DX53D for deep drawing
- DX54D for extra deep drawing
- DX55D for extra deep drawing
- DX56D for especially deep drawing
- DX57D for super deep drawing

Mechanical properties:

Steel symbol acc. EN 10346	Mechanical properties		
	Yield limit - Re min. / max. MPa	Strength limit - Rm min. / max. MPa	Elongation - A80 min. %
DX51D+Z	-	270 - 500	22
DX52D+Z	140 - 300	270 - 420	26
DX53D+Z	140 - 260	270 - 380	30
DX54D+Z	120 - 220	260 - 350	36
DX56D+Z	120 - 180	260 - 350	39

Structural Steels – S220GD – S550GD

They are classified according increasing minimum value of the contractual yield Limit Rp0,2

Mechanical properties:

Steel symbol acc. EN 10346	Mechanical properties		
	Yield limit - Rp0,2 max. MPa	Strength limit - Rm min. MPa	Elongation - A80 min. %
S220GD+Z	220	300	20
S250GD+Z	250	330	19
S280GD+Z	280	360	18
S320GD+Z	320	390	17
S350GD+Z	350	420	16

High Strength Low Alloy Steels for cold forming

They are classified according increasing minimum value of the contractual yield Limit Rp0,2

Mechanical properties:

Steel symbol acc. EN 10346	Mechanical properties		
	Yield limit - Rp0,2 min. / max. MPa	Strength limit - Rm min. / max. MPa	Elongation - A80 min. %
HX260LAD+Z	260 - 330	350 - 430	26
HX300LAD+Z	300 - 380	380 - 480	23
HX340LAD+Z	340 - 420	410 - 510	21
HX380LAD+Z	380 - 480	440 - 560	19
HX420LAD+Z	420 - 520	470 - 590	17

Thickness of coating:

- Z100, Z140, Z200, Z275 - Z600
- ZF100, ZF120
- ZA095, ZA130, ZA185, ZA200, ZA255
- AZ100, AZ150, AZ180
- AS120, AS150

Surface treatment:

Chemical passivation	C
Oiling	O
Chemical passivation and oiling	CO
Phosphatizing	P
Phosphatizing and oiling	PO
Surface enclosure	S

Surface quality:

- A - standard surface with the part of allowable surface defects
- B - improved
- C - the best quality

Spangle appearance:

- Only products with coating Z
- N - not suppressed spangle
- M - suppressed spangle

Dimensions in mm:

	Sheet / trimming	Coil / strip
Thickness	0,4 - 5,0	0,3 - 3,0
Width	100 - 1 750	20 - 1 550
Length	100 - 6 000	-
Inner roll diameter	-	508 / 610
Outer roll diameter	-	max. 1 800

Steel sheets and strips cold rolled, electrogalvanised

Drawing Steels DC01 – DC06 + ZE25/25, ZE50/50, ZE75/75

Manufactured by cold-rolling at ambient temperature which is followed by hot dip galvanising in Zinc bath. We supply them in plates of 0,6 to 3,0 mm in thickness when we cut them longitudinally or transversally, in various dimensions.

Standards:

Technical terms of deliveries EN 10152
Limit dimensional deviations and shape tolerances EN 10131

Use : Thank to its corrosion resistance, these multi-purpose materials are used especially for the manufacture of machinery parts, industrial equipment, bodyworks at cars, roofing, the household appliances as, for example, washing machines, fridges, etc. They have good formability and high strength. Owing to very thin Zinc layer, the surface of those parts is treated additionally by varnishing. The electrolytically zinc-plated steel provides a high chemical purity of the coating layer and even, controllable coat thickness (deviation +/- 0.1 µm).

Mechanical properties:

Steel symbol acc. EN 10152	Mechanical properties		
	Yield limit Re max. MPa	Strength limit - Rm min. / max. MPa	Elongation - A80 min. %
DC01+ZE/ZV	280	270 - 410	28
DC03+ZE /ZV	240	270 - 370	34
DC04+ZE /ZV	220	270 - 350	37
DC05+ZE/ZV	200	270 - 330	39

Surface quality:

A = standard surface with the part of allowable surface defects
B = improved

Thickness of the coating:

ZE/ZV 25/25
ZE/ZV 50/50
ZE/ZV 75/75

Surface treatment :

Phosphatizing P
Phosphatizing and chemical treatment PC
Chemical passivation C
Phosphatizing, chem.treatment and oiling PCO
Chemical passivation and oiling CO
Phosphatizing and oiling PO
Oiling O
Only coating without surf. treatment U

Dimensions in mm:

	Sheet / trimming	Coil / strip
Thickness	0,4 - 3,0	0,4 - 3,0
Width	100 - 1 750	20 - 1 550
Length	100 - 6 000	-
Inner roll diameter	-	508 / 610
Outer roll diameter	-	max. 1 800



Steel sheets and strips cold rolled and organic coated

Steel sheets with organic coats are suitable for that type of use where the corrosion resistance is of paramount importance.

Standards:

Technical terms of deliveries EN 10346
Limit dimensional deviations and shape tolerances EN 10143

Application: In civil engineering for the production of membrane roofing, bent sections, building envelope components and architectural elements.

Materials for varnishing: The basic materials for the varnished strips are steel plates treated by zinc dipping, of ductile as well as structural quality, or cold rolled plates without surface treatment.

Steel symbol acc. EN 10346	Mechanical properties		
	Yield limit - Rp0,2 min. / max. MPa	Strength limit - Rm min. / max. MPa	Elongation - A80 min. %
DX51D+Z	-	270 - 500	22
DX52D+Z	140 - 300	270 - 420	26
DX53D+Z	140 - 260	270 - 380	30

Steel symbol acc. EN 10346	Mechanical properties		
	Yield limit - Rp0,2 max. MPa	Strength limit - Rm min. MPa	Elongation - A80 min. %
S220GD+Z	220	300	20
S250GD+Z	250	330	19
S280GD+Z	280	360	18
S320GD+Z	320	390	17

Dimensions in mm:	Sheet / trimming	Coil / strip
Thickness	0,4 - 2,0	0,4 - 2,0
Width	100 - 1 750	20 - 1 550
Length	100 - 6 000	-
Inner roll diameter	-	508 / 650
Outer roll diameter	-	max. 1 800

Varnish surface layer:

Front side: 18 - 25 microns

Back side: protective coat 5-12 microns

Zinc surface layer:

Z100 / Z140 / Z200 / Z275

Coating materials:

- polyester
- PVDF (polyvinylidenfluorid)

Types of coating:

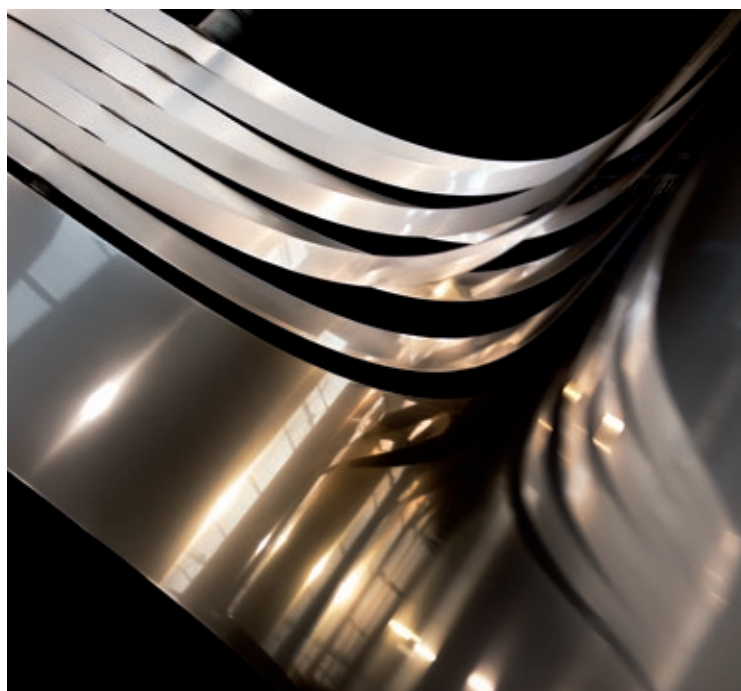
- one side
- both sides

Colour shades:

Shades according to RAL scale with correction in compliance with the manufacturer's scale of colour shades, execution:

- Gloss
- Semi-matt
- Matt

We deliver them in strips and plates in a thickness from 0,4 to 2,0 mm when we can cut them longitudinally or transversally, in various dimensions.



Stainless steel

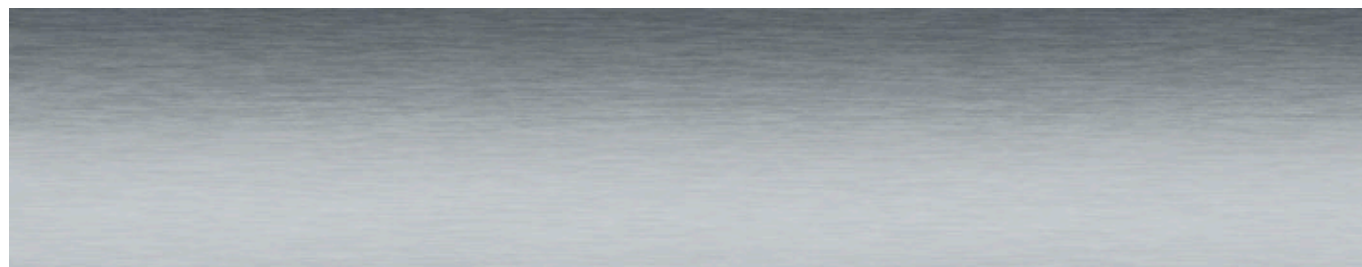
The main and most important feature of stainless steel is its resistant to corrosion. It is an alloy of chromium, nickel and iron, containing 10,5 to 30 % of chromium, up to 30 % of nickel or up to 2,5 % of manganese. Those steels may contain also other additional austenite-building elements, e.g. carbon, molybdenum, nitrogen and copper.

Standards:

Oveview of corrosion resistance steel	EN 10088-1
Technical terms of deliveries	EN 10088
Limit dimensional deviations and shape tolerances	EN 9445

Stainless steel qualities and equivalents:

	USA	Germany	Czech Republic
DIN W. Nr.	ASTM ASME AISI	DIN 17 440 DIN 17 441	ČSN
1.4016	430	X6Cr17	17 040
1.4301	304	X5CrNi18-10	17 240
1.4305	303	X8CrNiS18-9	17 243
1.4306	304L	X2CrNi19-11	17 249
1.4307	304L	X2CrNi18-9	
1.4404	316L	X2CrNiMo17-13-2	17 349
1.4509	441	X2CrTiNb18	
1.4512	409	X6CrTi12	
1.4541	321	X6CrNiTi18-11	17 248
1.4571	316Ti	X6CrNiMoTi17-12-2	17 348
1.4845	310S	X12CrNi25-21	17 255



Chemical composition in % at selected steels:

Quality		C max.	Cr	Ni	Mn max.	Mo	Ti	Si max.	S
DIN 1.4016	ČSN 17 040	0,08	16,0 - 18,0		1,0			1,0	
DIN 1.4301	ČSN 17 240	0,07	17,5 - 19,5	8,0 - 10,5	2,0			1,0	
DIN 1.4305	ČSN 17 243	0,10	17,0 - 19,0	8,0 - 10,0	2,0			1,0	0,15 - 0,35
DIN 1.4306	ČSN 17 249	0,03	18,0 - 20,0	10,0 - 12,0	2,0			1,0	
DIN 1.4307		0,03	17,5 - 19,5	8,0 - 10,5	2,0			1,0	
DIN 1.4401	ČSN 17 346	0,07	16,5 - 18,5	10,0 - 13,0	2,0	2,0 - 2,5		1,0	
DIN 1.4404	ČSN 17 349	0,03	16,5 - 18,5	10,0 - 13,0	2,0	2,0 - 2,5		1,0	
DIN 1.4435	ČSN 17 350	0,03	17,0 - 19,0	12,5 - 15,0	2,0	2,5 - 3,0		1,0	
DIN 1.4509		0,03	17,5 - 18,5		1,0		0,1 - 0,6	1,0	
DIN 1.4512		0,03	10,5 - 12,5	< 0,5	1,0		6xC - 0,5	1,0	
DIN 1.4541	ČSN 17 248	0,08	17,0 - 19,0	9,0 - 12,0	2,0		5xC - 0,7		
DIN 1.4571	ČSN 17 348	0,08	16,5 - 18,5	10,5 - 13,5	2,0	2,0 - 2,5	5xC - 0,8	1,0	
DIN 1.4828	ČSN 17 251	0,02	19,0 - 21,0	11,0 - 13,0	2,0				1,5 - 2,5
DIN 1.4833		0,15	22,0 - 24,0	12,0 - 14,0	2,0			1,0	
DIN 1.4845	ČSN 17 255	0,10	24,0 - 26,0	19,0 - 22,0	2,0				1,5

Surface quality:

EN	DIN	AISI	ČSN	Appearance
1D	IIa	1D	xx xxx.2	Metal-like, pure
2D	IIIb	2D	xx xxx.3	Matt
2B	IIIc	2B	xx xxx.4	Matt gloss
2R	IIId	BA	xx xxx.5	Mirror gloss
2G	IV	K 80-400		Grinded, standard is K240
2J	V	SB		Brushed
2G + 2J				Grinded, K 80-400 + SB

Rolled: 1 - hot; 2 - cold. Delivering both-sided grinded and brushed.

Mechanical properties:

Steel symbol acc. EN	Strength limit	Yield limit		Elongation	Welding	Elongation Formation	Corrosion resistance	Temperature of use - max.
	Rm (Mpa)	Rp0,1 (MPa)	Rp0,2 (MPa)	A50 (min. %)				
1.4016	450-600		280	20	2	2	2	100°C
1.4301	540-750	260	230	45	3	5	3	400°C
1.4305	500-700		190	35	1	2	2	400°C
1.4306	520-670	250	220	45	5	4	4	650°C
1.4307	520-700	250	220	45	3	5	3	400°C
1.4401	530-680	270	240	40	4	3	5	500°C
1.4404	530-680	270	240	40	5	4	5	400°C
1.4435	550-700	270	240	40	5	4	5	400°C
1.4509	430-630	250	230	18	3	3	3	120°C
1.4512	380-560		220	25	3	3	3	100°C
1.4541	520-720	250	220	40	5	3	4	400°C
1.4571	540-690	270	240	40	5	3	5	450°C
1.4828	500-750		230	22	4	2	4	1000°C
1.4833	500-750		210	26	4	2	4	1050°C
1.4845	500-750		210	26	4	2	4	1100°C

1 - unsuitable, 2 - sufficient, 3 - good, 4 - verry good, 5 - excellent

Dimensions in mm:

	Sheet / trimming	Coil / strip
Thickness	0,3 - 5,0	0,3 - 3,0
Width	100 - 2 000	20 - 1 650
Length	100 - 6 000	-
Inner roll diameter	-	250 / 300 / 508 / 610
Outer roll diameter	-	max. 2 200

Dimensions in mm:

	Sheet / trimming	Coil / strip
Thickness	0,4 - 3,0	0,4 - 3,0
Width	100 - 1 560	20 - 1 560
Length	100 - 6 000	-
Inner roll diameter	-	508 / 610
Outer roll diameter	-	max. 2 000
Grinding grain	80 - 400	80 - 400
Brushing	Scotch-Brite	Scotch-Brite

Can be grinded and brushed on both sides. Grades of series 200-300-400.

Classification of stainless steels:

There are many types of stainless steels which differ from each other in the corrosion resistance which is provided by a specific factor. According to the chemical composition, the stainless steels are classified into ferritic, martensitic, austenitic and austenitic-ferritic.

Ferritic

Those steels are magnetic and have sufficient ductility. A higher content of chromium increases their corrosion resistance, which is better in oxidising chemicals when compared to martensitic steels. They are used in chemical industry, in contact with nitric acid, in traffic, air ventilation systems and architecture. They are not suitable for welded structures..

Martensitic

Their corrosion resistance is low, and the resistance decreases with increased temperature. Their resistance to atmospheric corrosion is good only in a very clean atmosphere.

Austenitic

These have the highest corrosion resistance among all stainless steel types. The resistance may be increased by the addition of molybdenum and copper. An important characteristic is their ductility and toughness.

Austenitic-ferritic (Duplex)

Austenitic-ferritic stainless steels are derived from standard austenitic steels by addition of chromium content and reduction of nickel content. Such steels have some specific characteristics. Welding is more demanding.

Stainless bars and profile steel

Standards:

Dimensions and tolerances of bright steel products of glossy steel products CSN EN 10278.

Version	Dimensional deviations bars in state of delivery						
	h6	h7	h8	h9	h10	h11	h12
Drawned				R	R	R,S,H	R,S,H
Peel turned				R	R	R	R
Grinded	R	R	R	R	R	R	R
Polished	R	R	R	R	R	R	R

R – round bars, S – square bars, H – hex bars

At the order, the customer must specified limit dimensional deviations of the dimensions according to the standard ISO 286-2

ROUND BARS

Quality: DIN 1.4301, 1.4307, 1.4305, 1.4401, 1.4404, 1.4571

Application: structural element in all of industry field, where it is used stainless steel.

TOLERANCES – cold drawn round bars

Glossy steel, drawn – glossy, EN 10278

Cold drawn bar (+0/- tol.)				
Dimension mm	h11	h9	h8	h6
1 do ≤ 3	-0,060	-0,025	-0,014	-0,006
3 do ≤ 6	-0,075	-0,030	-0,018	-0,008
6 do ≤ 10	-0,090	-0,036	-0,022	-0,009
10 do ≤ 18	-0,110	-0,043	-0,027	-0,011
18 do ≤ 30	-0,130	-0,052	-0,033	-0,013
30 do ≤ 50	-0,160	-0,062	-0,039	-0,016
50 do ≤ 80	-0,190	-0,074	-0,046	-0,019
80 do ≤ 120	-0,220	-0,087	-0,054	-0,022

TOLERANCE – hot rolled round bars

Peeled, EN10088-3 (DIN 1013)

Hot rolled bar – peeled		Hot rolled bar – peeled (-0/+ tol.)			
Dimension	DIN 1013	Dimension	k13	k12	k11
8-15	±0,4	>1 do ≤ 3			
15-25	±0,5	>3 do ≤ 6			0,08
26-35	±0,6	>6 do ≤ 10	0,22	0,15	0,09
36-50	±0,8	>10 do ≤ 18	0,27	0,18	0,11
51-80	±1,0	>18 do ≤ 30	0,33	0,21	0,13
81-100	±1,3	>30 do ≤ 50	0,39	0,25	0,16
101-120	±1,5	>50 do ≤ 80	0,46	0,30	0,19
121-160	±2,0	>80 do ≤ 120	0,54	0,35	0,22
161-200	±2,5	>120 do ≤ 180	0,63	0,40	0,25
201-220	±3,0	>180 do ≤ 250	0,72	0,48	0,29
		>250 do ≤ 315	0,81	0,52	0,32
		>315 do ≤ 400	0,89		

Tolerances are specified in mm.

Quality: DIN 1.4301, 1.4307, 1.4305, 1.4401, 1.4404, 1.4571

Application: as structural element in all of industry field, where it is used stainless steel.

Delivery conditions: Square bar: DIN 178 - h11,
Hexagon bar: DIN 176 - h11

Sheets, strips, bars and rectangular profiles

Mechanical and physical properties

Material	State	Rm (Mpa)		Rp0,2 (Mpa)	Elongation (%) A50 mm	Hardness HV		Electric conductivity	
		min.	max.			min.	max.	MS/m min.	% IACS min.
Cu-DHP	R 220 soft	220	260	max. 140	min. 33	40	65		70 - 90
Cu-DHP	R 240 semi-hard	240	300	min. 180	8	65	95		
SF-Cu	F 24 semi-hard	240	300	min. 180	8	65	90		
OF-OK	R 220 soft	220	260	max. 140	min. 33	40	65	58	100 - 102
Cu-ETP	R 240 semi-hard	240	300	min. 180	8	65	95	57	98,3

SHEETS AND STRIPS

Standards:

EN 1652, EN 13599, DIN 1787, DIN 17670

Dimensions in mm:

	Sheet / trimming	Coil / strip
Thickness	0,55 - 12,0	0,55 - 2,0
Width	100 - 1 500	20 - 1 500
Length	100 - 6 000	-
Inner roll diameter	-	508 / 650
Outer roll diameter	-	max. 1 800

BARS AND RECTANGULAR PROFILES

Standards:

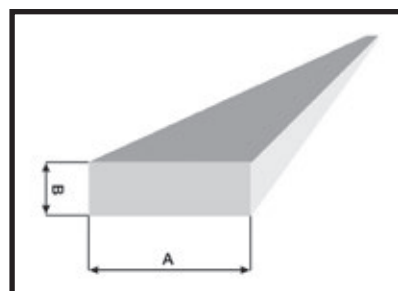
Product	Charakteristics	International standards	
Bars	Tolerance	EN 13601	DIN 1756
	Mechanical properties	ASTM B 187	DIN 40500
	Material	JIS H 3250	DIN 1787
Rectangular profiles	Tolerance	EN 13601	DIN 1759, DIN 46433
	Mechanical properties	ASTM B 187	DIN 40500
	Material	JIS H 3240	DIN 1787

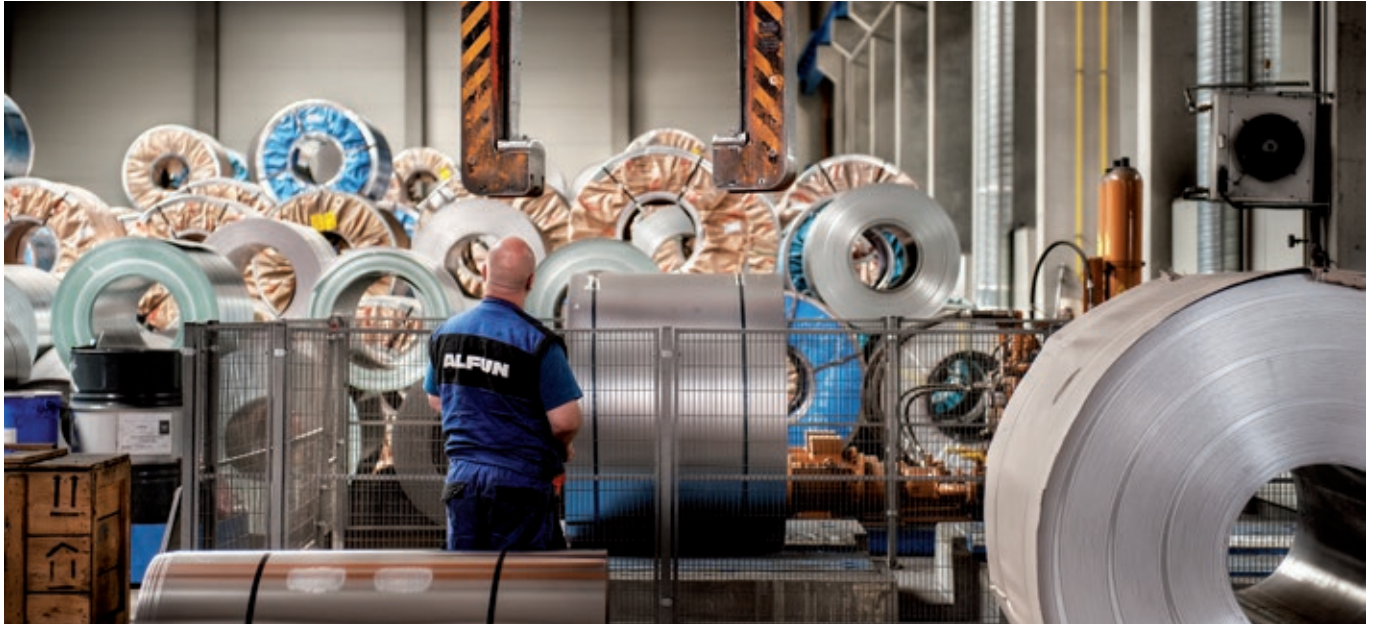
Bars - dimensions in mm:

	Round bars	Square Bars
Diameter	5 - 60	-
Dimension	-	5 - 50
Length	3 000 - 5 000	3 000 - 5 000

Rectangular profile – dimensions in mm:

- A 10 - 150
- B 3 - 20





Detailed information can be found on www.alfun.cz. Specification of materials which are not specified in this catalogue may be solved by agreement. All technical changes reserved. The catalogue has only informative character.

ALFUN a.s.

Zahradní 1610/40
792 01 Bruntál
cell: +420 552 350 205
fax: +420 552 350 200
e-mail: obchod@alfun.cz

Branch PRAHA

Počernická 274
250 73 Radonice
cell: +420 210 321 402
fax: +420 210 321 400
e-mail: obchod@alfun.cz

Branch ČESKÉ BUDĚJOVICE

Slévárenská 710
370 01 České Budějovice
cell: +420 380 432 508
fax: +420 380 432 500
e-mail: obchod@alfun.cz

ALFUN SK, s.r.o.

Priemyselná 4435/8
926 01 Sered'
cell: +421 312 902 616
fax: +421 312 902 623
e-mail: obchod@alfun.sk
www.alfun.sk

ALFUN HU Kft.

Amerikai Faszor 7
8000 Székesfehérvár
cell: +36 705 402 206
fax: +36 703 855 844
e-mail: office@alfun.eu
www.alfun.co.hu



ALFUN