

**Focus on the Outokumpu S.p.A.
Service Centre**

outokumpu 
stainless steel & high performance alloys

Our addresses

Outokumpu S.p.A.

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Why the Outokumpu S.p.A. Service Centre?

A wide range of stainless steels

Intended for general use or in specific fields such as the chemical or petrochemical industry, food-processing, pulp&paper, structural, thermal or mechanical applications, ship-building, furniture and household appliances.

We can provide the appropriate range of steels for all ordinary market request, and special grades for any particular demand.

Materials & Quality

Quality level is the key point for all subsequent operations. Our plants, technologically advanced, enable us to be considered as a trustful partner in terms of quality.

The materials are produced in conformity with the appropriate standards respecting the regulation related to the specific final use.

Complete engineering and plant design solutions

We can arrange solutions to cover the whole range of products needed by customers. In fact, they can refer to a single source supplier for flat, long, tubular and plasma cutting products avoiding to use several different suppliers. In this way we will optimize time research, time response and transport costs in order to economize all purchase phases.

Fast delivery times

Reliable partner carriers reinforce our reputation as stable and trustful supplier.



Flat products: technical specifications of machines and systems

2000 mm HR / CR coil-levelling machine

It is one of the most powerful coil leveller and cut-to-length line used in service centers. It allows to obtain a range of extra long sheets with very good flatness tolerances, even on the thickest material.

Weight of coil	Width	Length of sheets	Thickness
30000 kg	700 to 2050 mm	1500 to 13000 mm	HR 3 to 14 mm CR 4 to 8 mm

2000 mm CR coil-levelling machine

The machine is equipped with two levellers facilities and a double stacker performed with a vacuum-operated system which, avoiding mechanical contacts with the material, ensures a good quality surface.

Weight of coil	Width	Length of sheets	Thickness
30000 kg	900 to 2050 mm	600 to 8000 mm	0.5 to 3.0 mm

1500 mm CR coil-levelling and blanking line

Advanced technology cut-to-length line for narrow strips cut-to-size. The machine is equipped with two levellers facilities and a double stacker performed with a vacuum system which, avoiding mechanical contacts with the material, ensures a good quality surface.

Weight of coil	Width	Length of sheets	Thickness
	200 to 350 mm	350 to 3000 mm	
350 to 1550 mm	350 to 6000 mm		



1500 mm CR coil slitter

This longitudinal slitting line enables to obtain narrow coils with tight tolerances.

Weight of coil	Width of coil (ingoing)	Outside dia. of coil	Inside dia. of coil (outgoing)	Thicknesses	Min. width obtainable
30000 kg	from 100 to 1540 mm	2000 mm	500 mm	from 0.4 to 1.5 mm	20 mm
				from 2 to 3 mm	25 mm

1000mm HR/CR coil slitter

This is a dedicated machine for processing HR coils with thicknesses of up to 6 mm. Longitudinal slitting line used to process coil with thicknesses up to 6 mm.

Weight of coil	Width of coil (ingoing)	Outside dia. of coil	Inside dia. of coil (outgoing)	Thicknesses	Min. width obtainable
20000 kg	from 150 to 1040 mm	2000 mm	500 mm	from 0.5 to 1.5 mm	12 mm
				from >1.5 to 3.0 mm	25 mm
				from >3.0 to 6.0 mm	30 mm

Narrow coils automatic strapping lines

The line is used to pack coils coming from the longitudinal cutting lines: Slitter 1000 and Slitter 1500.

Weight of crate	Width of coil	Outside dia. of coil	Inside dia. of coil
5000 kg	from 20 to 400 mm	from 700 to 1850 mm	500 mm



Flat products: technical specifications of machines and systems

Polishing line for 2000 mm HR / CR sheets

This world class four cabins line works with grinding belts that guarantee a consistent roughness all over the sheet surface, on both sides. Sheets can be also protected with plastic film (in accordance with market standards).

Width of sheets
800 to 2000 mm

Length of sheets
2000 to 12000 mm

Thickness
3 to 14 mm
or thicker on sheets made from flat blooms

Polishing line for 1600 mm CR sheets

This machine is very recently made and is equipped with state-of-the-art technical arrangements.

It works with three polishing /cabins.

Sheets can be also protected with plastic film (in accordance with market standards).

Width of sheets
700 to 1600 mm

Length of sheets
900 to 6000 mm

Thickness
0.6 to 4 mm



Coil to coil polishing lines H 2000 mm

Our service center is fitted with two polishing lines coil to coil, equipped with three polishing cabins, technologically advanced, enabling a high performing production capability, which guarantees the most accurate quality requirements.

Our continuous research and innovation process, has led us - in relationship with our partners and suppliers - to develop a wide range of surface finishes so to satisfy the most demanding customers.

In addition to the standard dry finishes (from grain 80, up to grain 400), Duplo finishing and Taylor made finishes, we have developed a scotch brite finishing carried out with special cork belts, representing nowadays the highest standard on the market both in terms of quality and production results.

Weight of coil	Inside diameter (outgoing)	Width of Coils for polishing	Thickness
30000 kg	500 and 600 mm	600 ÷ 900 mm	≥ 0.8 mm
		Polishing	
		> 900 ÷ 2000 mm	0.5 ÷ 3 mm
		Scotch Brite	0.5 ÷ 3 mm
		900 ÷ 2000 mm	



Cutting systems

Plasma cutting

Submerged cutting ensures less tapering of the cutting edge, a reduction of the heat affected zone and a better working environment, with no fumes, noise or dispersion of UV light.

1 submerged-cutting system (maximum Quarto Plate length in entrance: 15000 mm)

2 cutting tables, 3200x7500 mm

Maximum thickness: 60 mm

1 submerged-cutting system (maximum Quarto Plate length in entrance: 15000 mm)

2 cutting tables, 3200x7500 mm

Maximum thickness: 40 mm (submerged cut)

Maximum thickness: 120 mm (dry cut)

Band-sawing machines

High-precision mechanical cutting with 90° angles

2 band-sawing machines

Length: 6250 mm

Width: 2000 mm

Thickness: 300 mm

1 band-sawing machine

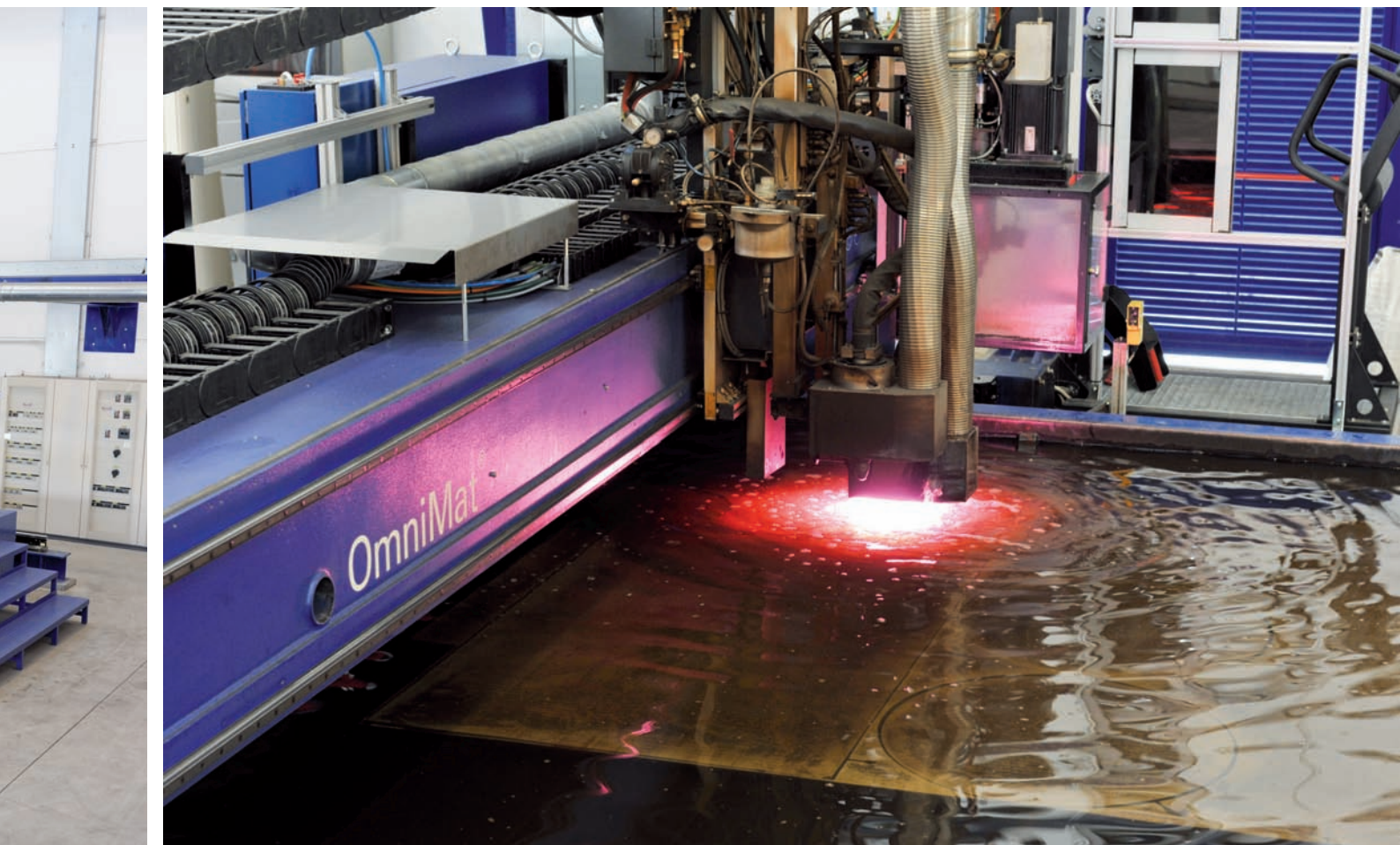
Width: 520 mm

Thickness: 520 mm

1 band-sawing machine

Length: 420 mm

Thickness: 520 mm



Range of qualities and thicknesses available for cutting

Standard grades

EN 1.4301/4307 - 304/L
 EN 1.4307 - 304L Prodec
 EN 1.4401/4404 - 316/L
 EN 1.4404 - 316L Prodec
 EN 1.4541 - 321
 EN 1.4571 - 316Ti

OUTOKUMPU Designation

CORE 304/L - 4301/4307
 PRODEC 304L/4307
 SUPRA 316/L - 4401/4404
 PRODEC 316L/4404
 CORE 321/4541
 FORTA 316Ti/4571

Thicknesses

3 - 100 mm
 15 - 50 mm
 3 - 100 mm
 15 - 80 mm
 3 - 60 mm
 3 - 50 mm

Duplex grades

EN 1.4162 - LDX 2101®
 EN 1.4362 - 2304
 EN 1.4662 - LDX 2404
 EN 1.4462 - 2205
 EN 1.4410 - 2507

OUTOKUMPU Designation

FORTA LDX 2101
 FORTA DX 2304
 FORTA LDX 2404
 FORTA DX 2205
 FORTA SDX 2507

Thicknesses

3 - 40 mm
 3 - 40 mm
 3 - 40 mm
 3 - 100 mm
 3 - 50 mm

Special grades

EN 1.4539 - 904L
 EN 1.4547 - 254 SMO®
 EN 1.4529
 EN 1.4835 - 253 MA®

OUTOKUMPU Designation

ULTRA 904L
 ULTRA 254 SMO
 ULTRA 6XN
 THERMA 253 MA

Thicknesses

3 - 50 mm
 3 - 15 mm
 20 - 50 mm
 3 - 40 mm



Outokumpu's additional services

- Certificates
- Testing (DNV - BUREAU VERITAS - LLOYD'S REGISTER - RINA)
- Chemical testing
- Norsok M-650
- Mechanical specifications
- Dimensional checks
- PMI (Positive Material Identification)
- Non-destructive testing (penetrant – X-ray and US inspection)
- Corrosion testing
- Test certificates
- Cutting to size
- Polishing
- Markings
- Packaging to specifications

Chemical composition of the main stainless steels Outokumpu

	International designation		OUTOKUMPU designation	Typical chemical composition, %					
	EN	ASTM/UNS		C	N	Cr	Ni	Mo	Other
Ferritic	1.4512	409	MODA 409/4512	0.02	-	11.5	0.2	-	Ti
	1.4016	430	MODA 430/4016	0.04	-	16.2	-	-	-
	1.4509	S43932/40	CORE 441/4509	0.02	-	17.6	-	-	NbTi
	1.4521	444	SUPRA 444/4521	0.02	-	18	-	2.0	Ti
Duplex	1.4162	S32101	FORTA LDX 2101	0.03	0.22	21.5	1.5	0.3	5Mn
	1.4362	S32304	FORTA DX 2304	0.02	0.10	23	4.8	0.3	Cu
	1.4462	S32205	FORTA DX 2205	0.02	0.17	22.4	5.7	3.1	-
	1.4410	S32750	FORTA SDX 2507	0.02	0.27	25	7	4	-
	1.4662	S82441	FORTA LDX 2404	0.02	0.27	24	3.6	1.6	3MnCu
Austenitic	1.4301	304	CORE 304/4301	0.04	-	18.1	8.1	-	-
	1.4307	304L	CORE 304L/4307	0.02	-	18.1	8.1	-	-
	1.4541	321	CORE 321/4541	0.04	-	17.3	9.1	-	Ti
	1.4401	316	SUPRA 316/4401	0.04	-	17.2	10.1	2.1	-
	1.4404	316L	SUPRA 316L/4404	0.02	-	17.2	10.1	2.1	-
	1.4571	316Ti	SUPRA 316Ti/4571	0.04	-	16.8	10.9	2.1	Ti
	1.4539	904L	ULTRA 904L	0.01	-	19.8	24.2	4.3	1.4Cu
	1.4529	N08926	ULTRA 6XN	0.01	0.20	20.5	24.8	6.5	Cu
	1.4547	S31254	ULTRA 254SMO	0.01	0.20	20	18	6.1	Cu
	1.4833	309S	THERMA 309S/4833	0.06	-	22.3	12.3	-	-
1.4835	S30815	THERMA 253MA	0.09	0.17	21	11	-	Si, Ce	
1.4845	310S	THERMA 310S/4845	0.05	-	25.5	19.1	-	-	



Total Area: 67.000 m²
Covered Area: 32.200 m²

Quality

Our Quality Management System is certified according to ISO 9001 Standard.

Safety

Our Safety Management System is certified according to BS OHSAS 18001 Standard.

Environment

Our Environment Management System is certified according to ISO 14001 Standard.

Standards for flat products

EN 10088

EN 10028

ASTM/ASME A/SA 240 - 480

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Disclaimer

The information provided in this publication is subject to change without notice. Great attention has been paid to ensuring that its contents are correct, however Outokumpu and its subsidiary companies do not accept liability for any errors or any information found to be incorrect. Any suggestions or descriptions regarding end uses or applications of the products or processing methods are understood to be provided for information only and Outokumpu and its affiliated companies do not accept any liability in this respect. Customers should investigate the suitability of products supplied or manufactured by this company before using them.

Outokumpu is a global leader in the field of stainless steel. Our goal is to be the undisputed number one in stainless steel, basing our success on operational excellence. Customers in a wide range of industries use our stainless steel and our services world-wide. Thanks to the fact that stainless steel it can be completely recycled and requires no maintenance, and that it is a very tough and durable material, it is one of the keystones to a sustainable future.

What makes Outokumpu special is its total attention to customers – along the whole way, from R&D right through to delivery. You have the idea, we offer the best stainless steel in the world, the technical know-how and support, We put your ideas into practice..

