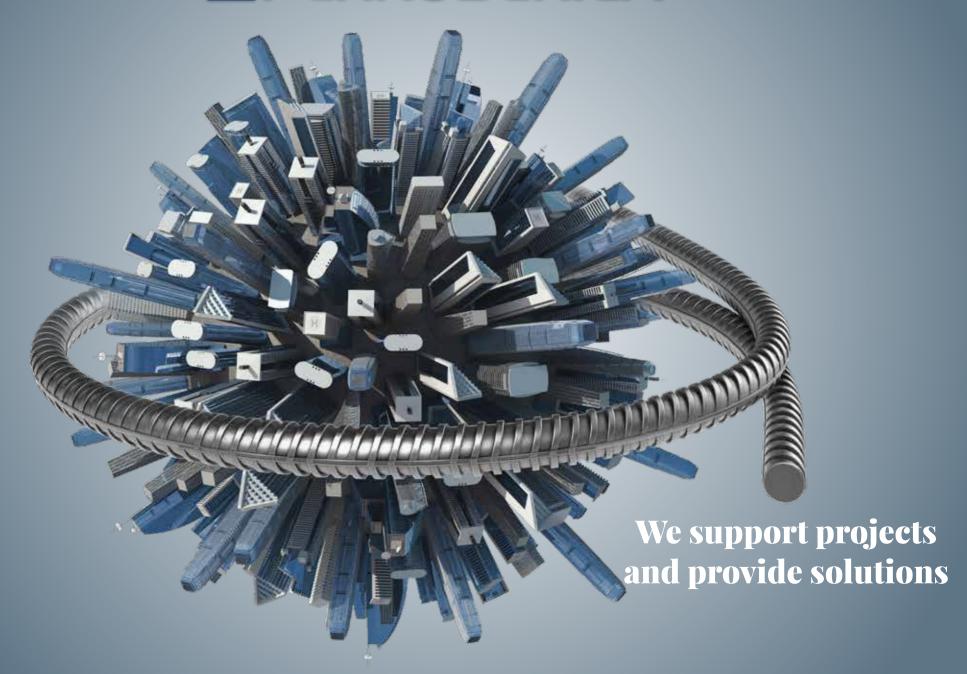
OFERROBERICA





Our identity has never been defined by a rigid model. We have always been able to meet various construction requirements regarding pre-shaping and assembly, and provide installation services if required.

Ferroberica was established in 1973, and since joining the Alfa Acciai Group in 1991, it has gradually built a solid position in an increasingly demanding market.

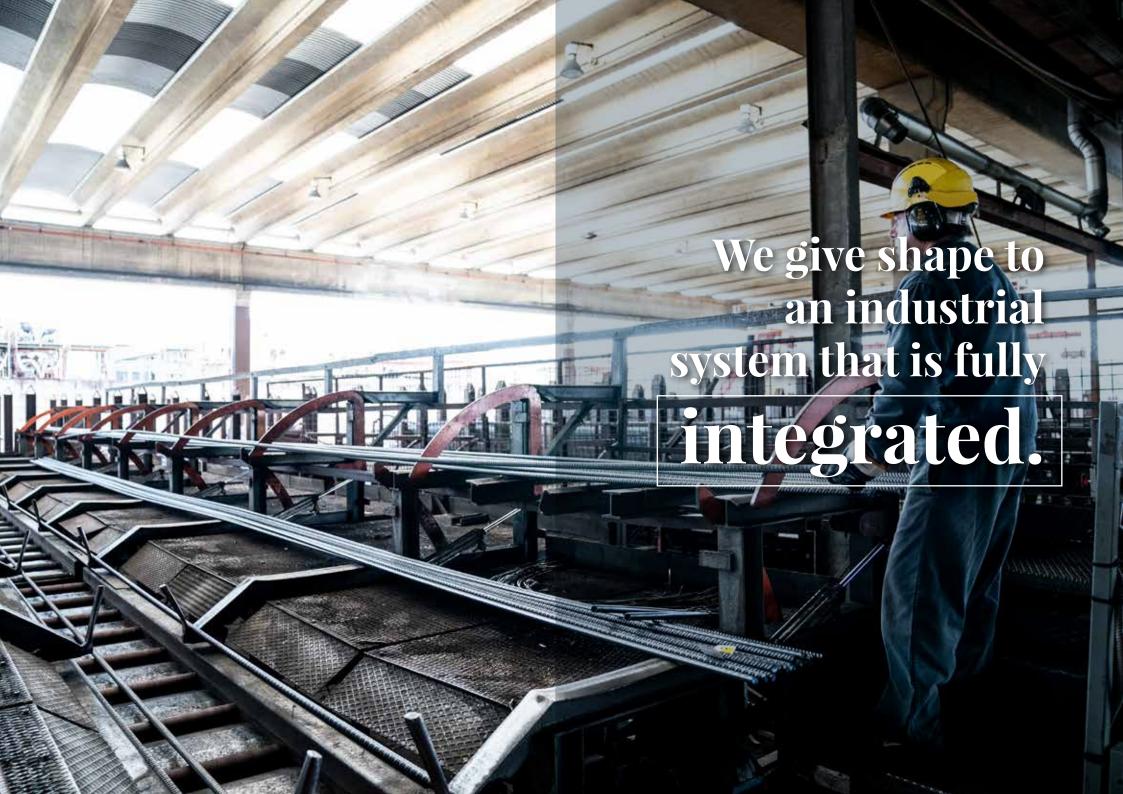
Ferroberica is now the leading operator in Italy and the second in Europe in the **pre-shaping and assembly** of reinforcing steel for all types of road, rail and maritime structures, and buildings for public, civic and industrial use.

The organisational setup currently includes:

- 1 production unit at the historic premises in Vicenza
- 1 production unit at the premises in Catania
- 1 production unit at the premises in Sedegliano (Udine)
- 1 production unit at the premises in Montirone (Brescia)
- various branches strategically distributed throughout Italy to ensure efficient product delivery and customer care.







Belonging to the Alfa Acciai Group, a European leader in the production of EAF steel destined for the construction industry, has enhanced Ferroberica's specialist offering, positioning the company within an integrated system which is highly reliable, efficient and competitive.

Thanks to its relationship with the Alfa Acciai Group, Ferroberica can guarantee complete supply chain control and the integrated management of the entire process, from the raw materials stage through to the production of welded wire mesh and the automated processing of rebar.

Plant production capacity exceeds **250,000 tonnes annually.**

Production power and belonging to the Group combine with an organisational structure that enables Ferroberica to meet **all customer requirements** in terms of quantity, quality and type of work requested in accordance with implementation timescales. This means the company is a reliable and competent partner in the project analysis and design phases and initial site planning.

Ferroberica's exclusive use of reinforcing steels from Alfa Acciai and Acciaierie di Sicilia ensures compliance with national and international standards, and provides customers with a guarantee of reliability and traceability, reducing costs for site acceptance checks in line with technical standards for constructions.







Quality has always featured in Ferrroberica's operations, and is demonstrated by the systematic approach to checks and the importance of the accreditation achieved.

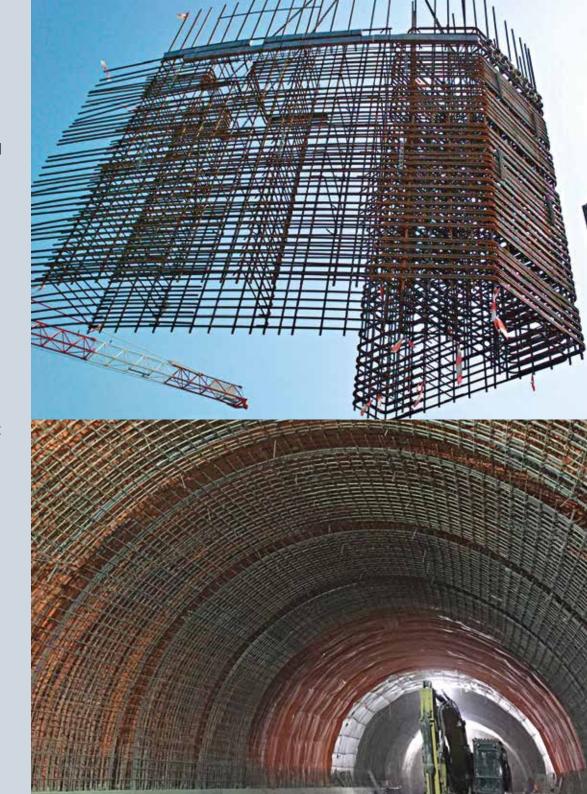
Processing steel produced within the Group is essential for ensuring ongoing quality, as is the use of cutting-edge technologies that value the material and offer considerable versatility in meeting market requirements.

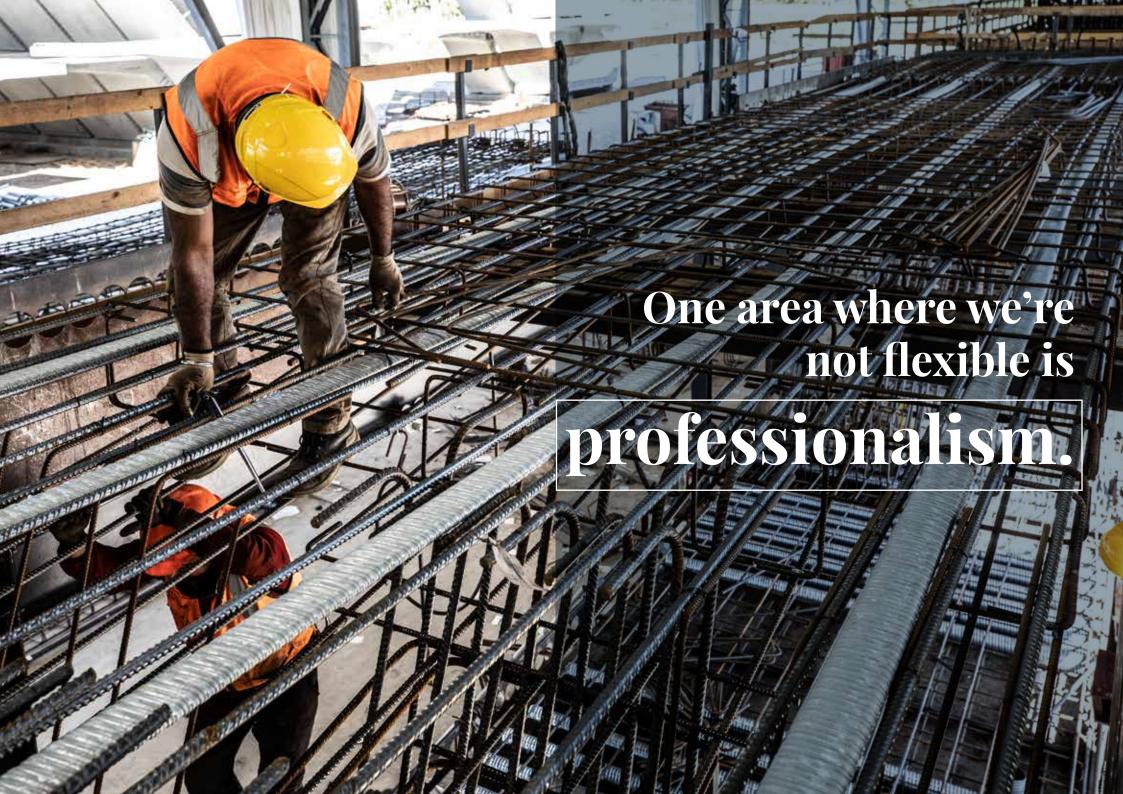
Ferroberica's dedication to customer care is in line with the philosophy of the Alfa Acciai Group, a national leader in the production of steel for reinforced concrete. This is demonstrated by the fact that Ferroberica operates on the basis of specific customer requirements that call for a versatile approach and targeted solutions, considering all items to be produced in detail.

Customer supply requirements are managed from the preliminary analysis phase onwards by **Ferroberica engineers and technicians** in accordance with the latest industry 4.0 criteria, using digitally-controlled processes.

All Ferroberica production sites have obtained quality system accreditation in accordance with standard UNI EN ISO 9001:2015 from the Italian Institute of Quality (certificate no. 9934) and IQNet (certificate IT-5439 / IGQ 9934). Ferroberica has also obtained accreditation for each site as a processing centre, as required by existing technical construction standards.







When it comes to company ethics we don't compromise. Ferroberica has always considered environmental protection and health and safety in the workplace as distinguishing factors in company business operations.

Ferroberica fully shares the policy of the Alfa Acciai Group on environmental issues and the sustainability of its production cycle. In particular, pre-shaping operations (cold working) are not subject to environmental management systems because the Ferroberica production processes do not release pollutants into the atmosphere, soil or ground water. Furthermore, scrap from processing the original material is returned to the initial casting process in the Group's steel mills.

Ferroberica also complies with the strict principles on employee health and safety supported by the Alfa Acciai Group. These are implemented through a Health & Safety Management System aimed at continually identifying, assessing, reducing, eliminating and controlling company risk factors, and since 2012 a Governance Model has been in place in relation to health and safety in the workplace, in accordance with the requirements of Italian legislative decree 231/2001.

Within this scope of activity the company delivers ongoing safety training for all employees working on site and in production, who are kept up-to-date with regard to new technologies.







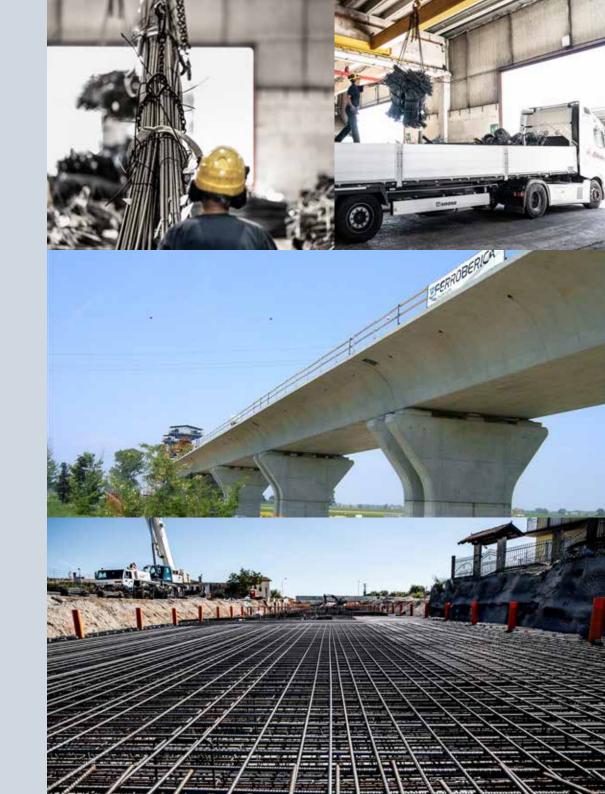


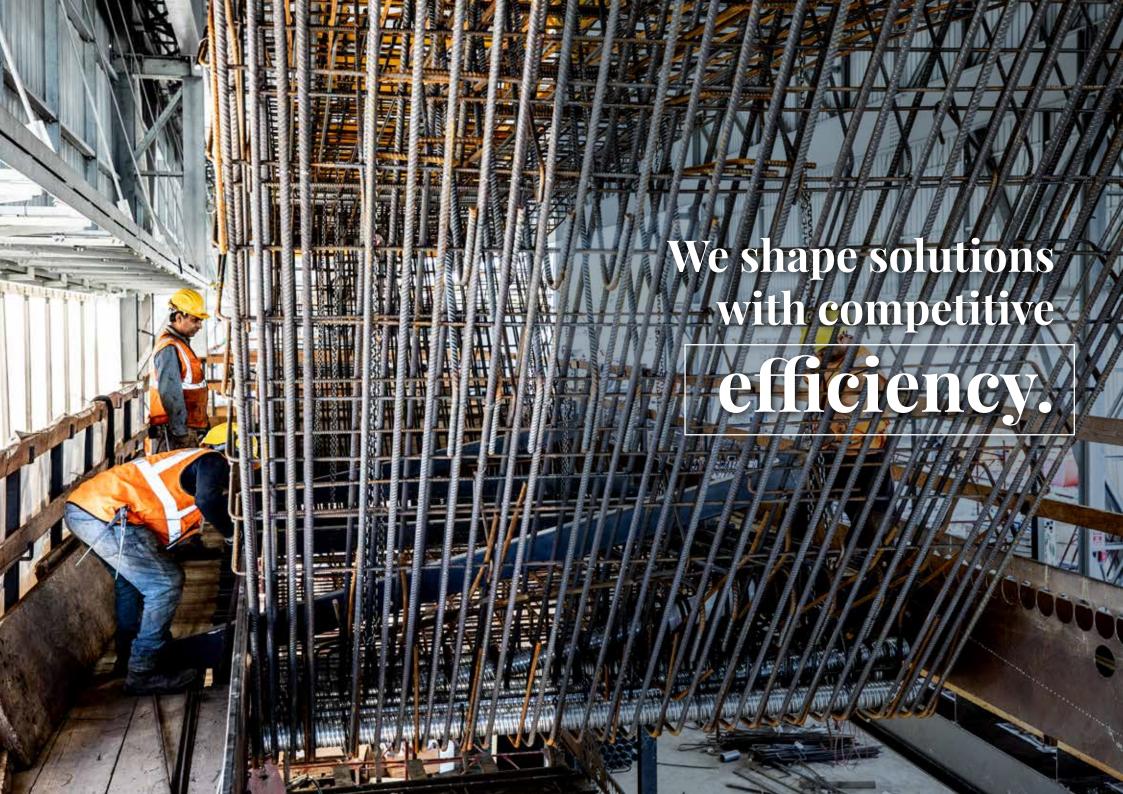
The ability to respond positively to each order is the result of internal personnel taking ownership of their role, and external resources who scrupulously comply with the methods, procedures and protocols set out by Ferroberica. The company has also invested heavily in training, in line with the technical and engineering developments that characterise the sector in the context of a smart manufacturing approach.

Ferroberica firmly believes that personnel are the company's most precious resource, and as such symbolise the company's identity and basis for future growth. As a result the company involves and empowers their staff from the outset, engaging with them through specific examples and clearly identifiable models to provide a reference point for every employee.

This concrete approach also characterises the focus on human resources. This is why all company departments are systematically involved in meetings with the aim of continually improving internal dynamics and relationships between colleagues. Suggestions to improve productivity or methods for carrying out job roles are drawn up and discussed, and Ferroberica embraces a culture of ongoing skills training with courses and specific skills update programmes.







Ferroberica's proven streamlined business structure enables rapid production and delivery times, with the aim of continually improving customer service levels. This efficiency is a strategic plus for all market players, making Ferroberica a reliable partner from the engineering consultation stage through to the management of site operations.

Ferroberica engineers ensure the efficiency of the entire process directly, by supervising all operational phases, and **coordinating and monitoring** the activities of internal personnel and partner companies selected by Ferroberica on the basis of reliable established relationships.

Welding procedures feature highly in the focus on qualified procedures, and personnel are qualified in accordance with standard **UNI EN ISO 9606-1:2017**, which testifies to a high level of professional expertise. Furthermore, personnel responsible for checking the welding process have obtained certification issued by the Italian Welding Institute for visual weld inspections, in accordance with standard **UNI EN ISO 9712:2012 - Level 2**.





Areas of operation and service offering:

Feasibility studies



The technical department analyzes the economic and technical aspects of the project, suggesting adaptations that enable the **economic and/or technical streamlining** of shaping, prefabrication and installation processes. The main objective is customer satisfaction in terms of

compliance with implementation timescales and production costs while ensuring maximum safety.

Operations are split as follows:

- **Feasibility study** of the reinforcements in the detailed designs, during the proposal creation phase;
- Presentation of any suggestions aimed at improving the shaping, assembly or installation process;
- **Preparation of summary specifications** for reinforcements, split by construction and structural elements;
- Production plan on the basis of schedules agreed with customer.

Ferroberica starts from the initial design analysis phase and, through scheduled meetings and communication with site points of contact, **defines delivery plans** on the basis of work schedules thanks to partnerships with external companies, enabling rapid, reliable operations throughout national territory.



Cutting & Shaping

Ferroberica produces steel reinforcements for concrete on the basis of the design produced by the customer and the detailing resulting from the internal technical analysis. Development progresses by cutting and shaping **rebar, coils and welded mesh**.

Shaped steel is produced through a structured organisation supported by the use of specific technical programmes that follow the development of the process - the preparation of specifications and ID labels for templates of the material to be produced, the management of traceability of the heats used, and the functionality of cuts with subsequent shaping.

The exclusive use of reinforcing steel from Alfa Acciai and Acciaierie di Sicilia enables compliance with standards and **ensures process reliability and repeatability**. This advantage also results in lower costs for customers for site checks.











Assembly

Material is assembled on customer request and in line with certified welding processes carried out by trained, qualified personnel using cutting-edge technology.

The range of pre-assembled products includes:

- Steel framework for voussoirs in tunnel boring operations;
- Framework for slurry walls complete with inserts, space-saving elements and all types of intake systems;
- Framework for large elements and mixed structures;
- Reinforcement framework for masts of any diameter, bulkheads and prefabricated structural elements

Only rebars, coils and welded mesh manufactured by Alfa Acciai and Acciaierie di Sicilia are used to produce pre-assembled items.

A particular advantage during the assembly phase is the use of mechanical couplers with LENTON taper-threaded design to join rebar.

These methods are used as an alternative to welding or overlaying bars, providing concrete benefits in terms of eliminating error and overcoming risk. The use of mechanical joints is especially suited to large complex structures such as bridges, viaducts, beams and large industrial constructions.





On-site installation

In accordance with customer requirements, Ferroberica can deliver materials that have been cut, shaped and assembled and, if stipulated contractually, install reinforcements on site.

A special, flexible and lattice structure enables optimal conditions of process efficiency to be achieved through partnerships with trusted companies, both on company premises during assembly, and on individual sites for installation purposes where contractually agreed.

The efficiency of the entire process is ensured by technical personnel directly, who supervise installation and coordinate testing and acceptance in collaboration with the customer before each installation phase.



Customer care

The Ferroberica after-sales service testifies to the company's commitment to customer satisfaction.

With a dedicated team who continually communicate with production and the technical department, Ferroberica can structure supplies in accordance with individual site requirements.

Specific focus is placed on process management to ensure service quality, from loading methods through to site transport and the optimisation of delivery times. Ferroberica continually monitors customer satisfaction and engages constructively with engineers to offer solutions and technical improvements.

The results of assessments are applied to the production environment and all phases that contribute to achieving excellent customer service.









Some important references

CUSTOMER	TYPE	LOCATION					
CAMPUS BOCCONI S.C.A.R.L. CIVIL		BOCCONI UNIVERSITY CAMPUS - MILAN					
C.M.B. SOC. COOPERATIVA	CIVIL	TOWN HOSPITAL - PORDENONE					
CO.VAR. S.C.A R.L.	CIVIL	"LE VARESINE" BUSINESS CENTRE - MILAN					
ICM S.P.A.	CIVIL	M9 - MUSEUM OF THE 20th-CENTURY - MESTRE (VE)					
ITINERA SPA	CIVIL	SAN RAFFAELE HOSPITAL - MILAN					
SANGECO S.C.A R.L.	CIVIL	SAN GERARDO HOSPITAL - MONZA					
C.M.B. SOC. COOPERATIVA	INDUSTRIAL	HADID CITYLIFE TOWER - MILAN					
C.M.B. SOC. COOPERATIVA	INDUSTRIAL	LIBESKIND CITYLIFE TOWER - MILAN					
COBAR S.P.A.	INDUSTRIAL	BASENTO-BRANDANO WATER SCHEME, 3RD LOT - POTENZA					
COOP. MURATORI & CEMENTISTI - C.M.C	INDUSTRIAL	RENOVATION OF CASSA DEPOSITI E PRESTITI BANK - ROME					
ING. E. MANTOVANI S.P.A.	INDUSTRIAL	EXPO 2015 DISPLAY PLATFORM - MILAN					
ITINERA S.P.A.	INDUSTRIAL	VOUSSOIRS FOR TUNNEL BORING OPERATIONS - SALBERTRAND-TURIN					
PIZZAROTTI & C. S.P.A.	INDUSTRIAL	MULTI - PURPOSE CENTRE - BAGANZOLA - PARMA					
BOLOGNETTA S.C.P.A.	ROAD	PALERMO-LERCARA FRIDDI S.P.77 ROAD SECTION - PALERMO					
CO.SI.GE. S.C.A R.L.	ROAD	SIRACUSA-GELA-SIRACUSA MOTORWAY					
EMPEDOCLE 2 S.C.P.A.	ROAD	SS640 "DI PORTO EMPEDOCLE" MAIN ROAD - CALTANISSETTA					
FIP INDUSTRIALE S.P.A.	ROAD	CALTAGIRONE-CATANIA S.S.683 ROAD VARIANT					
INTERCANTIERI VITTADELLO	ROAD	SS 534 (MEGALOT 4 MAIN ROAD) - COSENZA					
ITALSARC SOC.CONS.PER AZIONI	ROAD	A1 MOTORWAY, MACROLOT 3 - SALERNO					
ITINERA S.A. TORTONA SUCURSALA	ROAD	SATU MARE BYPASS ROAD (ROMANIA)					
MARCALLO S.C.A R.L.	ROAD	TURIN-MILAN MOTORWAY, BERNATE TICINO - MILAN SECTION					
PADERNO S.C.A R.L.	ROAD	NEW S.P. 46 - RHO-MONZA-MILAN ROAD					
PAVIMENTAL S.P.A.	ROAD	MILAN-NAPLES A1MOTORWAY - LOT 1 - FLORENCE					
SEGRATE-LAMBRATE SCARL	ROAD	A51 EAST LAMBRATE - MILAN BYPASS JUNCTION					
SERENISSIMA COSTRUZIONI S.P.A.	ROAD	A31 MOTOWAY - VALDASTICO SUD-VICENZA					
SIS CONSORZIO STABILE S.C.P.A.	ROAD	PEDEMONTANA VENETA FREEWAY - VICENZA					
TILIAVENTUM S.C.A R.L.	ROAD	MESTRE-TRIESTE A4 MOTORWAY					
BRENNERO TUNNEL CONSTRUCTION S.C.A R.L.	RAIL	BRENNER BASIC TUNNEL - BOLZANO					
CONSORZIO COCIV	RAIL	MILAN-GENOA HST/HCT RAILWAY LINE, THIRD DEI GIOVI PASS - ALESSANDRIA					
COOP. MURATORI & CEMENTISTI - C.M.C	RAIL	1ST FUNCTIONAL UNDERGROUND LOT - CATANIA					
ITINERA S.P.A.	RAIL	TURIN-VENICE HST/HCT RAILWAY LINE - TREVIGLIO-BRESCIA LOT					
METRO BLU S.C.A R.L.	RAIL	MILAN LINE 4 UNDERGROUND					
RODANO CONSORTILE S.C.A R.L.	RAIL	MILAN-BOLOGNA-REGGIO EMILIA HST RAILWAY LINE					
SIS CONSORZIO STABILE S.C.P.A.	RAIL	PALERMO-CARINI-PALERMO RAILWAY LINE DOUBLING					
TECNIS S.P.A.	RAIL	RAILWAY RING 1ST LOT - PALERMO					
IMPRESA CIDONIO PIETRO S.P.A.	MARITIME	HARBOUR DAM - 3RD LOT - CIVITAVECCHIA					
GRANDI LAVORI FINCOSIT S.P.A.	MARITIME	MO.S.E. SYSTEM - VENICE*					
ING. E. MANTOVANI S.P.A.	MARITIME	MO.S.E. SYSTEM - VENICE*					
I.CO.P. S.P.A.	MARITIME	HUB PORTUALE - TRIESTE					

^{🖈 &}quot;Ministero delle Infrastrutture e dei Trasporti - Provveditorato Interregionale per le Opere Pubbliche del Veneto - Trentino Alto Adige - Friuli Venezia Giulia già Magistrato alle Acque di Venezia "- tramite il Concessionario Consorzio Venezia Nuova



Quick-reference table

TOTAL REBAR CROSS-SECTION IN RELATION TO NUMBER AND DIAMETER

ø mm	WEIGHT kg/m	NUMBER OF WIRES & SECTION in mm ²									
		1	2	3	4	5	6	7	8	9	10
5	0.154	20	39	59	79	98	118	137	157	177	196
6	0.222	28	57	85	113	141	170	198	226	254	283
7	0.302	38	77	115	154	192	231	269	308	346	385
8	0.395	50	101	151	201	251	302	352	402	452	503
9	0.499	64	127	191	254	318	382	445	509	573	636
10	0.617	79	157	236	314	393	471	550	628	707	785
11	0.746	95	190	285	380	475	570	665	760	855	950
12	0.888	113	226	339	452	565	679	792	905	1018	1131
14	1.208	154	308	462	616	770	924	1078	1232	1385	1539
16	1.578	201	402	603	804	1005	1206	1407	1608	1810	2011
18	1.998	254	509	763	1018	1272	1527	1781	2036	2290	2545
20	2.466	314	628	942	1257	1571	1885	2199	2513	2827	3142
22	2.984	380	760	1140	1521	1901	2281	2661	3041	3421	3801
24	3.551	452	905	1357	1810	2262	2714	3167	3619	4072	4524
25	3.853	491	982	1473	1963	2454	2945	3436	3927	4418	4909
26	4.168	531	1062	1593	2124	2655	3186	3717	4247	4778	5309
28	4.834	616	1232	1847	2463	3079	3695	4310	4926	5542	6158
30	5.549	707	1414	2121	2827	3534	4241	4948	5655	6362	7069
32	6.313	804	1608	2413	3217	4021	4825	5630	6434	7238	8042
34	7.127	908	1816	2724	3632	4540	5448	6355	7263	8171	9079
36	7.990	1018	2036	3054	4072	5089	6107	7125	8143	9161	10179
38	8.903	1134	2268	3402	4536	5671	6805	7939	9073	10207	11341
40	9.865	1257	2513	3770	5027	6283	7540	8796	10053	11310	12566







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