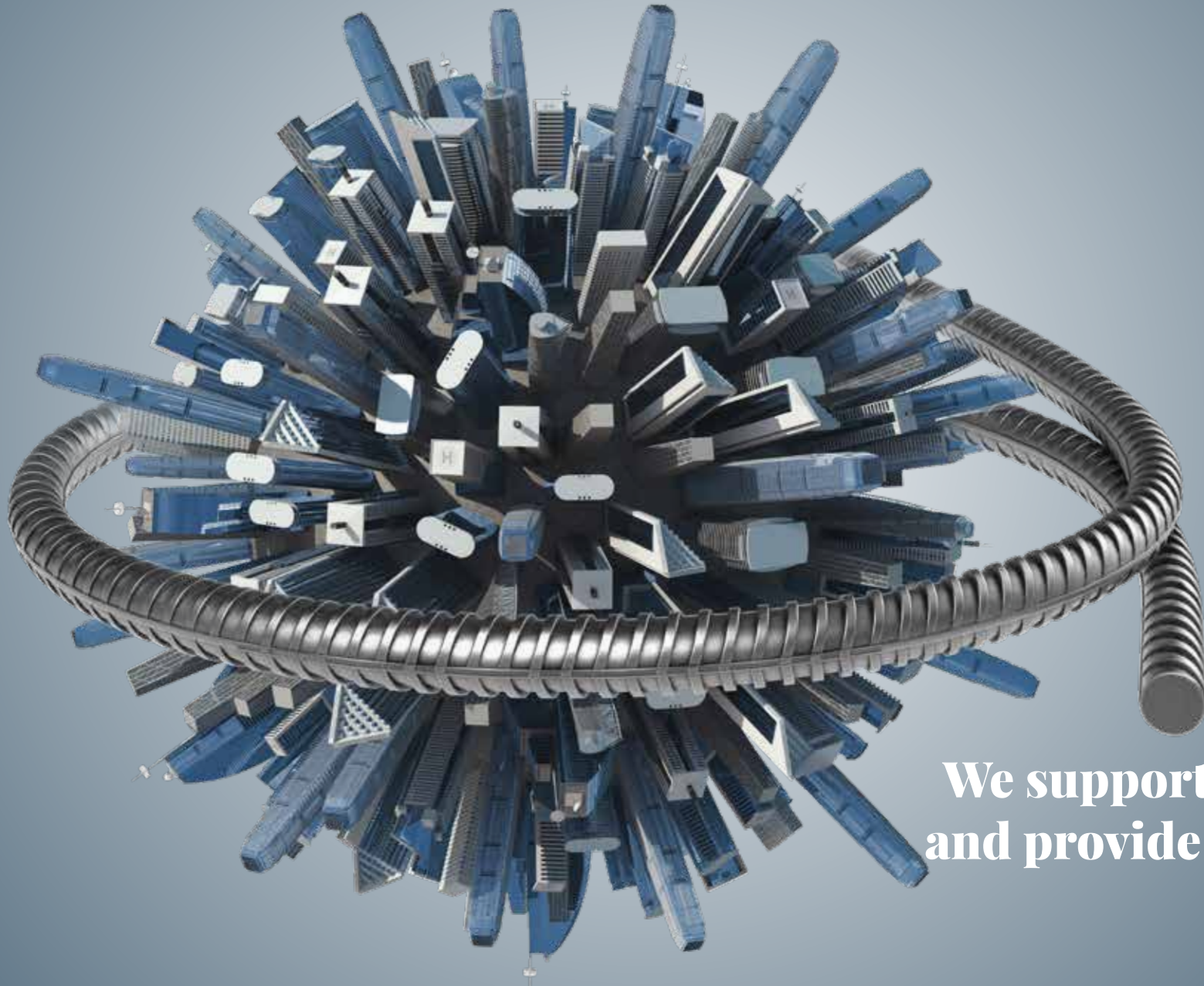


 **FERROBERICA**



**We support projects
and provide solutions**



The entire history
of Ferroberica
is based on

flexibility.

**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.**

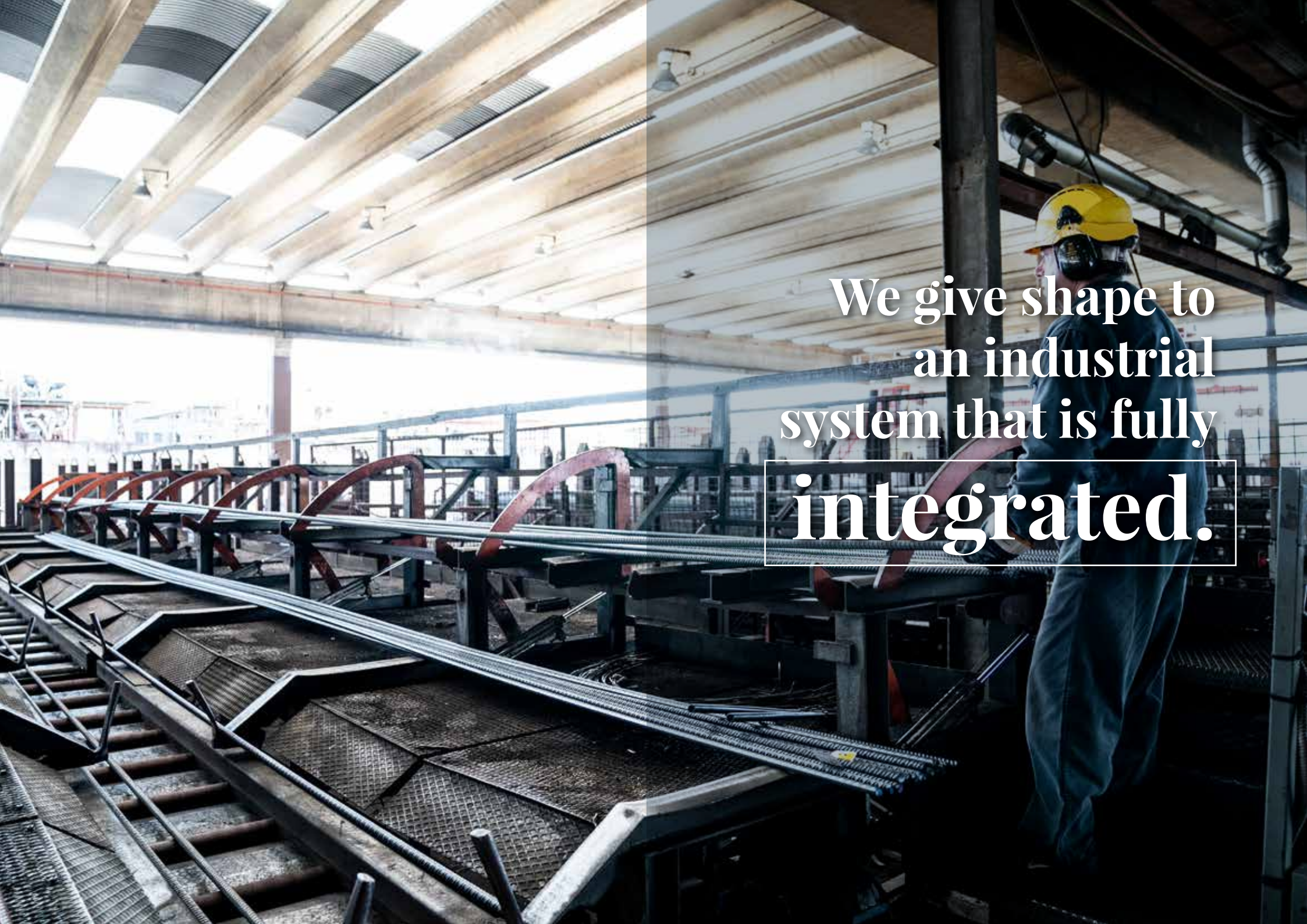
Ferrobérica was established in 1973, and since joining the Alfa Acciai Group in 1991, it has gradually built a solid position in an increasingly demanding market.

Ferrobérica 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.





We give shape to
an industrial
system that is fully
integrated.

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.

 **FERROBERICA**





Solid principles
and versatile
solutions.

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

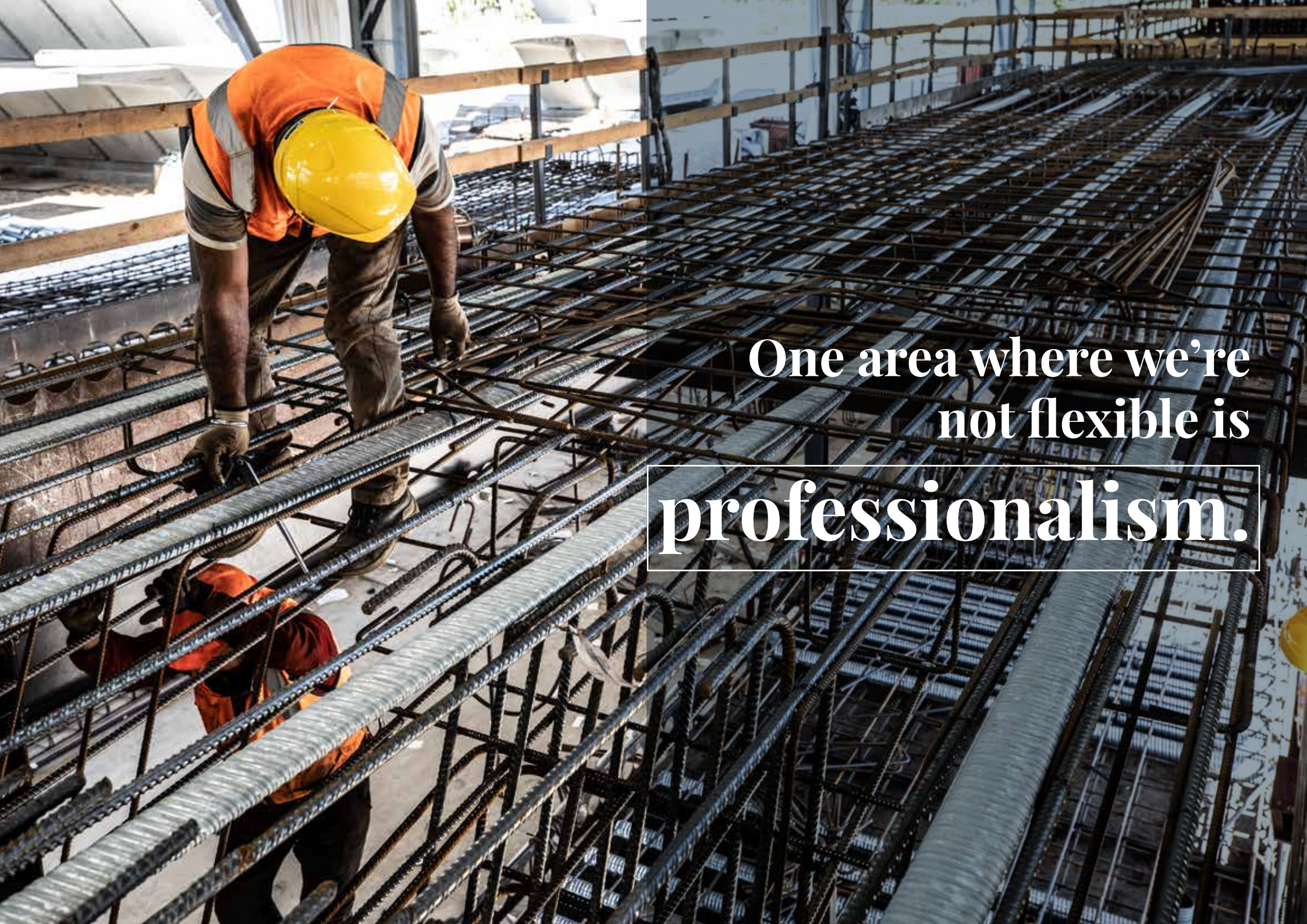
Processing steel produced within the Group is essential for ensuring ongoing quality, as is the use of cutting-edge technologies that value the material and offer considerable versatility in meeting market requirements.

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.





One area where we're
not flexible is

professionalism.

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.



A construction worker wearing a blue cap and a light blue shirt is working on a complex rebar structure. The scene is dimly lit, with a strong light source from the left creating highlights on the metal and the worker's face. The background is dark and out of focus, suggesting an industrial or construction site.

An expert team
with flexible
organisation.

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.





We shape solutions
with competitive
efficiency.

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**.



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 A1 MOTORWAY - 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 |



* "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 |

Why choose us?

**Reliability
throughout
the entire
process**

**Strategic
distribution**

**Large production capacity
and consistent quality**

**Service
efficiency and
consultation**

**Collaborative
expertise**

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