



RECODI
I Pavimenti Industriali



concrete floors

Recodi solutions
for the design
and production
of highly resistant
concrete floors





04. Recodi, innovative and high quality concrete floors

- Functions of a concrete industrial floor
- Guaranteed benefits



05. Our solutions

- RecoLess
- RecoCrete
- RecoProof
- RecoFree



08. Innovative design for the best solution

- Stresses in concrete floors
- Design phases



09. Properties of the materials used in industrial floors

- Concrete
- Reinforcement elements
- Outer layer of the surface

Recodi, innovative and high-quality concrete floors

Recodi's core business is concrete floors designed to meet the specific needs of each industry. Vast design experience, combined with years of on-field work and continuous and careful research allows Recodi to design and produce floors that are capable of sustaining loads, and that act as a viable surface on which traffic can flow safely, while guaranteeing resistance to wear and dusting over the years. The Recodi technicians design the floors with the use of appropriate calculations based on the actual conditions of rigid floors, providing customers with a tailor-made solution.



Laser-Screed technology

For installation of the concrete floors, Recodi uses the Laser-Screed technology, a computerised levelling and vibrating system for laying industrial floors with extreme precision. This innovative technology ensures excellent results and greater resistance and durability of the floors. The Laser Screed also allows achieving higher production volumes per day, with consequent reduction in the constructions joints and therefore less maintenance over time. Concrete with low consistency is used for this type of floor, which has a high inert content.

Laser Screed also guarantees the use of concrete with less water and additives in the mixture, which significantly increase the quality and performance of the final result.

The functions of a concrete industrial floor can be summarized in the following three points:

- Sustain loads by distributing the pressure applied, so as to reduce them to values compatible with the load capacity of the ground
- Create a viable surface on which traffic can flow safely
- Resist wear and not produce dust

Recodi guarantees these functions with the advantage of:

- Optimised quality/price ratio
- Durability, ensuring a high level of performance for the entire life of the floor
- Low maintenance costs



High quality over time and lower maintenance costs

Vast experience allows us to design and produce tailor-made floors according to customer's specification and requirements

1. our solutions

Recodi offers to companies the industrial floor that best suit their needs. A wide range of solutions, the result of extensive on-field experience and careful research of the design:

- **RecoLess**

Floors without contraction joints suitable for areas with high traffic of hard wheels, of various thicknesses and for any type of load.

Advantages: drastically reduces maintenance costs of the floor and forklifts.



Careful research allows our company to develop floors without joints or reinforcing elements, and waterproof floors installed directly on tiles and on slabs cast in place, and also allows us to improve the performance and quality of traditional floors

• RecoCrete

Traditional floors, reinforced with electro-welded mesh or fibres, with contraction joints and construction joints, suitable for any type of load. **Advantages:** excellent quality/price ratio if designed and produced correctly, ensuring all the required performances.



• RecoProof

Waterproof floor suitable for car parks on prefabricated slabs.

Advantages: eliminates the need for an integrative cast and waterproofing with consequent cost savings.



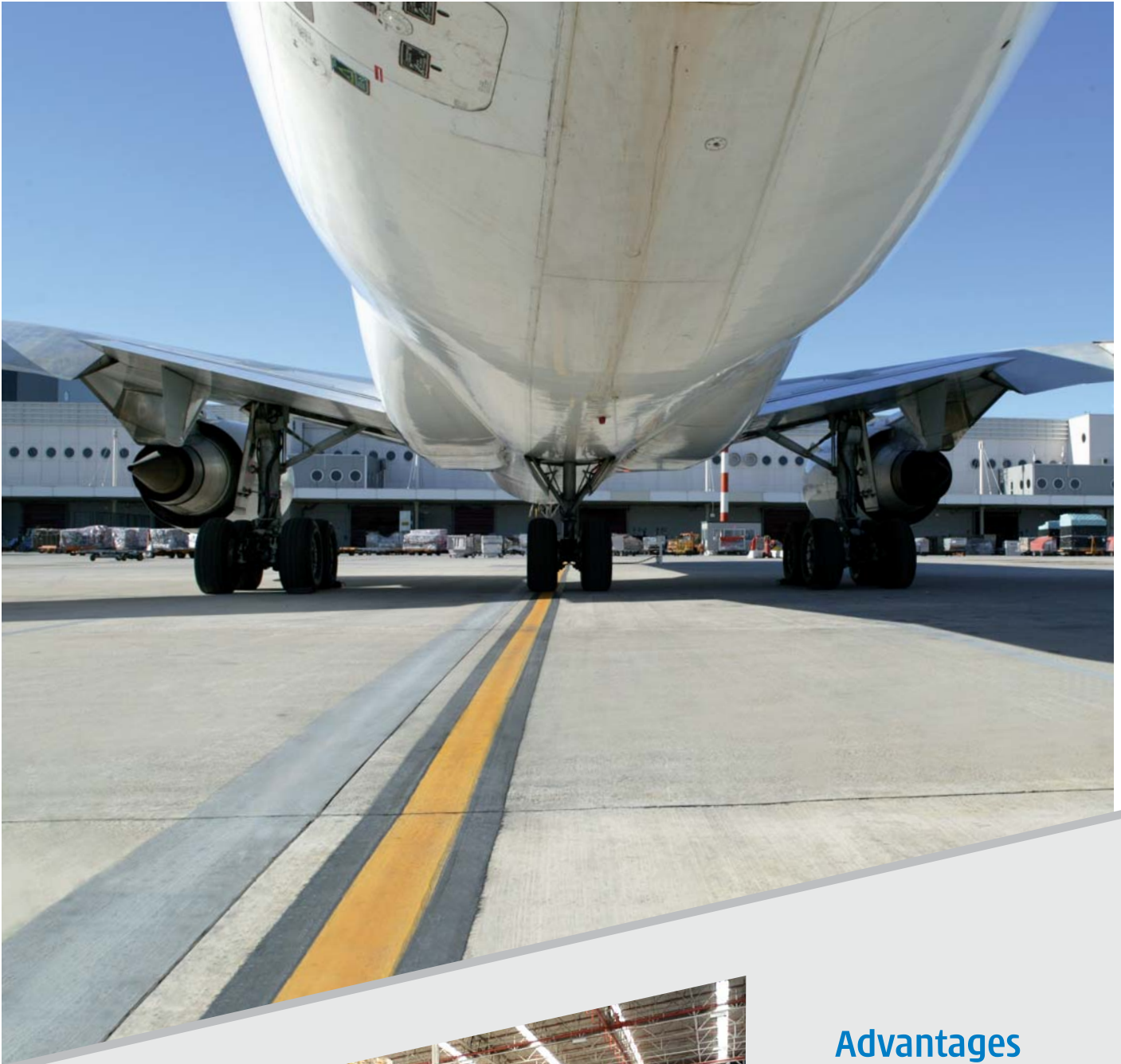
Optimisation of the
quality/price ratio

The Recodi technicians design
the floors with the use of special
calculations based on the actual
operating conditions of rigid floors

• RecoFree

Floors without reinforcements, with contraction joints and construction joints, suitable for any type of load.

Advantages: excellent quality/price ratio.



Advantages of Recodi concrete floors:

- Resistance over time, ensuring a high level of quality for the entire life of the floor
- Low maintenance costs
- Optimisation of quality/price ratio

2. Cutting-edge design for the best solution

The constant study of problems associated with the floors and the knowledge of the materials allow Recodi to offer innovative designs.

Recodi analyses the needs of the company and designs the best solution to meet those needs through appropriate calculation models.

Customers can rely on a single point of contact capable of offering "turnkey" floors.

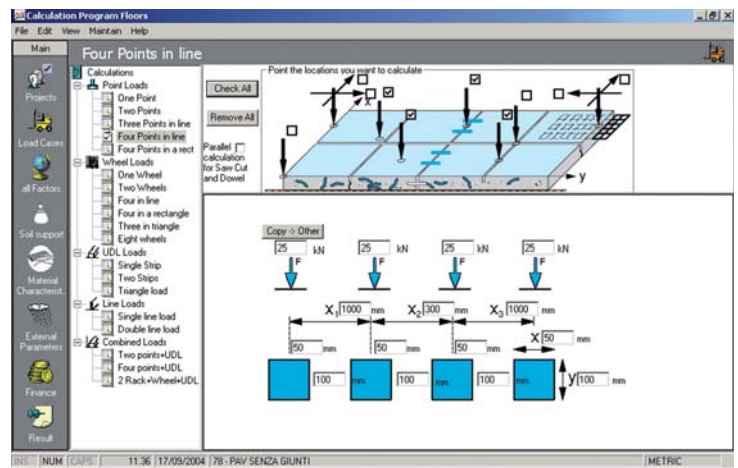


Stresses in concrete floors

The analysis of the state of rigid floors is rather complex since the floors do not have a simple geometry and uniform thicknesses, and are generally subjected to numerous overlapping actions of a random nature.

The floors are, in geometrical terms, like a series of plates separated by joints, resting on a layer of semi-space and capable of transferring loads that are different and variable over time.

The numeric techniques adopted by Recodi to resolve these problems have allowed perfecting the calculation models according to the actual operating conditions of rigid floors.



Design phases

a) Load-bearing capacity of the ground

This is calculated through plate testing after the formulation of a hypothetical minimum load capacity value.

b) Calculation of load induced stresses

The tensile stresses are calculated by flexion induced by the most severe dynamic, static, thermal and hygro-thermal loads to which the floor is subjected.

c) Dimensioning

Dimensions are calculated according to load induced stresses, to the ground's load capacity, the properties and characteristics of the materials used, the location of the construction and contraction joints and finally, the capacity to build the floor with special installation and finishing equipment.

Recodi performs the dimensioning for each type of stress, allowing to optimise the quality/price ratio.

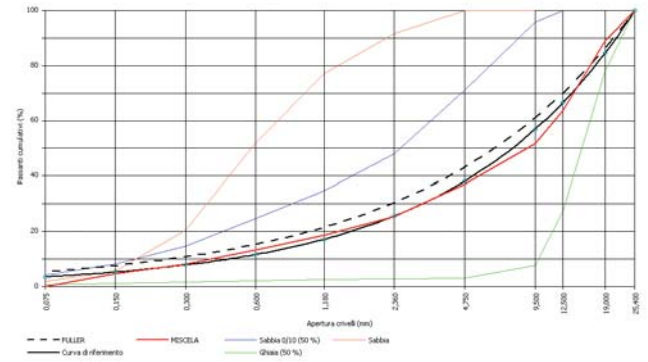


Recodi acts as a single
point of contact for all
customer needs, offering
"turnkey" solutions

Recodi satisfy
the customer with
tailor-made solutions

3. Properties of the materials used in industrial floors

Recodi's careful attention to the choice of high-quality raw materials and their correct proportion and performance levels in the execution phase guarantees high resistance and durability, which leads to a lower maintenance costs.



The characteristics and properties of Recodi materials

Concrete:

The concrete used to make the floors must have excellent mechanical properties and high surface characteristics (resistance to wear, knocks, frost and de-icing salts, waterproof, etc.)

These characteristics can be obtained by choosing the best materials (aggregates, cement, water, additives) and the best concrete mix ratio.

a) Properties of the concrete

The concrete used to make the floors undergoes deformations, due to the effect of its own weight and of the loads applied. These deformations must be taken into account when calculating the correct proportions of the concrete mix. It is not enough to use concrete by only setting the characteristics of resistance and consistency.

b) Preparation of the mix

Once the proportions of the aggregates and the type of cement to be used are identified, the concrete mix must be optimised to drastically reduce the most common problems found in floors, such as: cracking, deformations, low resistance of the surfaces and joints. The best mix is the one that allows small variations in the amount of each ingredient, without causing major changes to the characteristics of wet and hardened concrete.

Reinforcement elements:

The reinforcement elements needed are selected based on the operating conditions and on whether or not contraction joints are present.

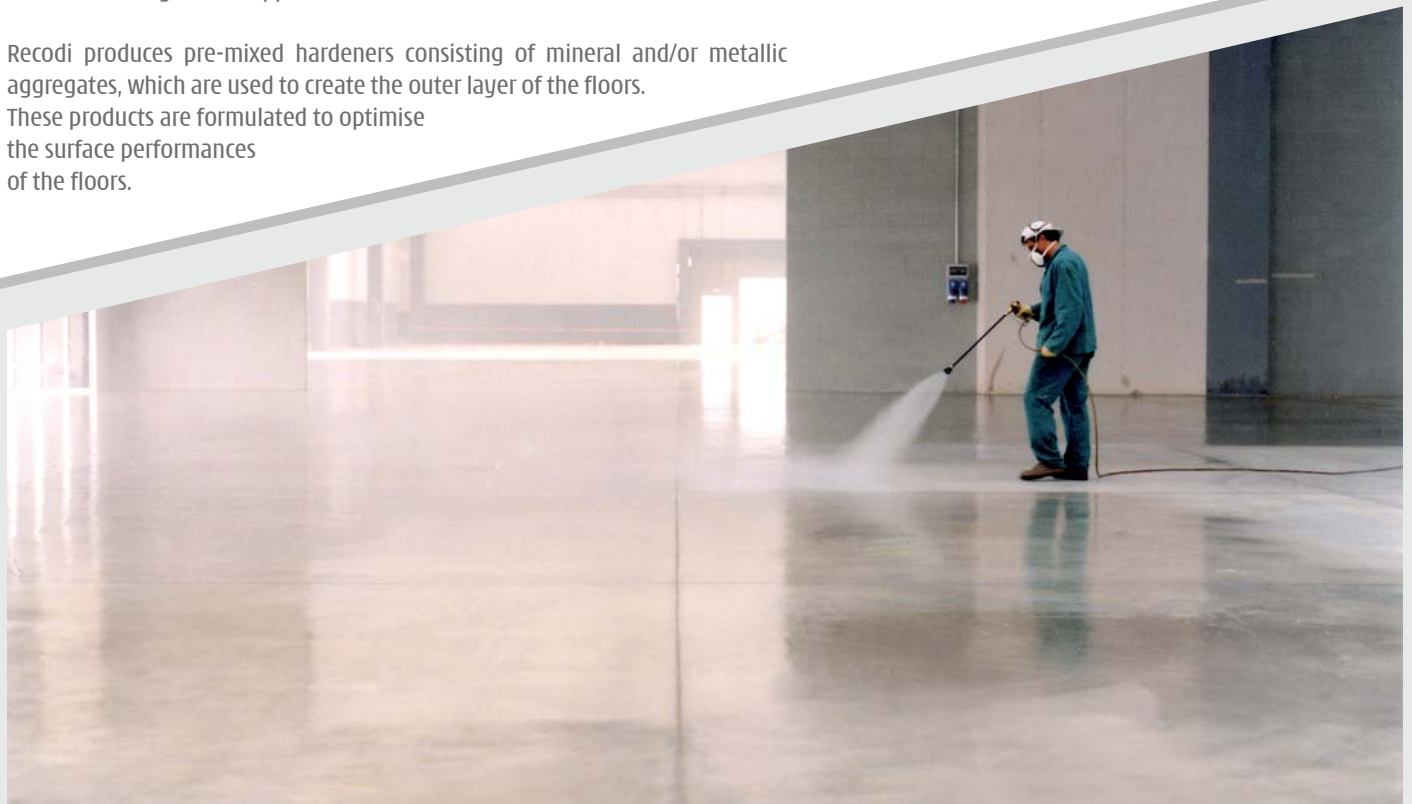
Outer layer of the surface:

Two types of outer layers are used:

- a pre-mixed hardening powder applied wet on wet
- a hardening mortar applied wet on wet

Recodi produces pre-mixed hardeners consisting of mineral and/or metallic aggregates, which are used to create the outer layer of the floors.

These products are formulated to optimise the surface performances of the floors.



Recodi, a leader in industrial floors

Quality, innovation, maximum efficiency.

These are the cornerstones of the Recodi philosophy, a company with over forty years of experience in the production of hi-tech industrial floors. The company offers specialised solutions in concrete and resin which can meet a variety of different requirements in industries such as: food, pharmaceutical, logistics/large-scale distribution, manufacturing, chemicals, automotive, electronics and commercial areas.



Why choose Recodi?

Because we are on the customer's side and offer ourselves as a single point of contact to address all the specific problems relating to floor systems: innovative design, use of special materials, high quality products and maintenance. With a special design department made up of highly skilled technicians and a customer care service that accompanies the customer in the post-production, Recodi is ready to meet every need in the field of industrial floors. This makes Recodi an ideal partner with proven reliability in the production of industrial floors for new production facilities, and in the upgrading and renewal of existing floors, including damaged and worn ones.



Specific solutions
for all production
and commercial
industries



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