

## Equipment and Components

# Quality, service, innovation

And customization. These are the salient characteristics that have led to the success of Metax® products around the world

As one can glean from historical facts about Cima S.P.A., Metax® is a brand behind which there is a production company that has its roots deep in the past, drawing on experience that is almost unique in manufacturing components, such as motor pumps, injectors and silos, as well as complete mixing and injection plants. Today, Metax® is a division of the Cima S.P.A. Company that is specialised in designing and manufacturing high pressure pumps for jet grouting operations, for pumping muds produced by drilling operations, and for conveying liquids in general, as well as for applications in mixing plants, storage silos and special pumps for injection, used for civil and geotechnical engineering works. Metax® products are distributed around the world, along with a technical services that does not only include assistance and general support, but also consultancy on choosing the most suitable injection and drilling systems, on site management, and on training personnel involved. Quality, productivity and customization go ahead with innovation - a winning mixture for building the future. However, this starts with an established range of products. First of all there are the motor pumps, which include the models for jet grouting (MP4, MP5, MP5-550S, MP7, MP7-610, MP7-800ST and MP7-1000HD), muds (MP7M and MP9M), and water (MP7W and MP7W-1000HD). In practice, these products differ greatly, beginning, as we have said, from jet grouting and going on to include operations in the geothermal sector, directional drilling, micro tunneling, creation of water pits, large diameter and deep depth drilling, and creating wells for search and exploitation of gas and hydrocarbons. Each motor pump is made up of a thermal diesel engine, a manual / automatic gearbox, a transmis-



sion system with a cardan shaft and a pump unit, made up of a triplex pump, all fitted out inside a 20 foot container. Depending on the clients' needs, there is the choice of whether or not installing one of more of the following optional extras: carriage-mounted supercharger centrifugal pumps, complete with electrical panel and remote control via cable or radio controls. Another range of products is made up of mixing and injection plants, designed to combine the components required to mix and pump the cementitious mixture in a good dimensional compactness state, into a single machine. Within Metax® production range, one finds two types of plants: those that use triplex pumps with engines that can get as powerful as 405 kW, with high pressures and flow rates, assembled in 20 and 30 foot containers, and plants set up with (low pressure) screw pumps, or (low / high pressure) single-piston pumps, assembled in 10 foot containers, or on simple skids, which ensures limited bulk. Both these types of plants are fitted with a mixing tank, stirring tank,

and, in some cases, a tank for storing water. Metax® also supplies simple mixing plants, fitted with automatic devices for managing weight batches, controlled by specific instruments that are able to manage up to 3 liquid components and 3 powder components, classified according to their production capacity, which is calculated for a cementitious water and cement powder mixture ratio of 1:1. Moving on to other products, there are the injection pumps that Metax® offers for applications such as drilling micro piling, and TBM applications. These are single-piston, double effect pumps that can handle mixtures with a cementitious density of 1 to 2,5 kg/dm<sup>3</sup> depending on the model, while the pressure and flow rate can be regulated as required. All the pumps are available mounted on skids, along with a control panel and hydraulic unit, or unmounted to be fitted on other drilling rigs. The parade of Metax® products ends with their horizontal silos the company recommends for storing cement, filler and bentonite, with a capacity range from 25 to 48 cubic metres.