

THE SPANISH AFFAIR



A NMOPYC, the Spanish Manufacturers' Association of Construction, Public Works and Mining Equipment, was founded in 1982 and currently has 95 member companies. The equipment manufactured by the Association's member companies can be classified into the following groups: road equipment; concrete; construction lifting, transport and handling equipment; quarries, mining and recycling; earthmoving; temporary works equipment; and auxiliary equipment for construction.

ANMOPYC's primary aim is to represent the interest of its members and help strengthen their presence in foreign markets. Spanish equipment meets the European standards and has been used in a wide range of projects around the world.

For the past few years, ANMOPYC has intensified its global marketing activities, with the collaboration and support of ICEX, the Spanish Institute for Foreign Trade. Many ANMOPYC members have also reinforced their commitments in the Asian market, some of which recently talked to Southeast Asia Construction. These companies and their innovations are featured in the next pages (from 82 to 93). ■

Website: www.anmopyc.com

AUSA



Above: AUSA dumper (left) and Taurulift all-terrain telescopic telehandler working on a project.



Left: AUSA forklift at the company's factory in Barcelona, Spain.

Right: AUSA mobile concrete mixer.



AUSA was established in 1956, initially producing a microcar (PTV brand) for the automotive industry. The company's first dumper was introduced in 1961, followed by its compact rough terrain forklift in 1967. Two years later, AUSA expanded overseas with a subsidiary in Perpignan, France.

During 1980s, AUSA produced the DV 17, a multitask vehicle designed for municipalities and the 750 l self-loading concrete mixer. The company also consolidated its presence worldwide and opened three subsidiaries - in Madrid (Spain), in Brazil and in Mexico. By late 1990s, AUSA already established a new representative office in China and entered the US market.

The company launched its CH130/150 forklift trucks in 2000, and Taurulift T204 H and T 276 H telehandlers in 2008. In 2006, the company rolled out its 100,000th machine.

Now specialising in compact industrial vehicles, AUSA operates from its headquarters in Barcelona, Spain and exports to over 100 countries through its worldwide network of dealers.

Construction machines

AUSA manufactures compact equipment, some of which are designed for load transportation, material handling and concrete production in

the construction sector. These machines are suitable for applications where a narrow access or rough terrain capability is required.

The company's rigid and articulated dumpers feature capacities ranging from 850 to 10,000 kg. There are 4WD, 2WD, mechanical, hydrostatic and torque converter transmissions available in combination with front, height and swivel unloading hoppers. The company's rough-terrain and semi industrial forklifts have capacities between 1,300 and 5,000 kg. They can handle heavy loads and large volumes on rough and sloping terrains.

AUSA's Taurulift all-terrain telescopic telehandlers, with capacities from 1,350 to 3,000 kg, offer a range of models that can be used in open spaces under very extreme conditions as well as very narrow semi-enclosed spaces with difficult access. The versatility of the telescopic arm allows positioning both at height and to the front, and the light weight makes them suitable for working in limited access areas with fragile soils, preventing soil erosion.

In addition, AUSA's self-loading mobile concrete mixers feature a compact and simple design, with 0.5 and 1.1 cu m capacities. Its rough-terrain multitask vehicles have capacities ranging from 1,500 to 3,500 kg, which can be used in various environments. ■

Website: www.ausa.com

ALSINA



All images: Alsina offers various formwork systems for a wide range of applications such as tunnels, buildings, bridges, dams, water treatment plants, reservoirs, power plants and maritime works, among others.



Alsina started as a wood workshop business in 1950, supplying wood to the neighbourhood carpenters. After some time, the company offered pinewood for building works - the old system used by operators inspired the need for innovation in the formwork systems that would characterise Alsina from then on. Soon new wood related products were created, and Alsina grew and began to experiment in order to provide better solutions for the shuttering process in the workplace.

Since then, Alsina has put a lot of effort to maintain innovation, research and development as a priority, constantly creating new formwork systems, both recoverable and non-recoverable. These formwork systems have also become the star products of the company, such as Alisply, Mecanoflex, Multiform or Alumecano, used in construction projects worldwide.

Today, Alsina is a global company specialising in the design, manufacture, sale and rental of formwork systems for a wide range of applications. Based in Barcelona, Spain, the company has presence in Europe, North Africa, Latin America, Middle East and Asia.

Various formwork systems

Alsina's slab formwork systems are suitable for all types of solid

slabs, lightened slabs and hanging beams. The company also offers shoring elements for slab formwork systems. The variety of props covers a height range from 1.5 to 6 m.

Alsina's climbing systems include one-sided wall, interior climbing platform and two-sided climbing platform with or without movement of the annexed formwork. The systems are compatible with the company's range of wall formworks.

Alsina's Multiform system for civil works consists of double UPN steel beams and wooden beams. The company can make slabs, formwork tables, columns and pillars of all geometries, straight walls, curved walls, one sided walls, bridge decks and climbing elements.

Alsina's column formwork systems are designed for all kinds of pillars: light, with crane and metallic. Furthermore, the systems developed by Rubrica Engineering, Alsina's partner, comprise design solutions for any type of formwork section and situation adapted to the needs of the project and its changing demands.

A wide range of accessories are also available for the entire range of Alsina's systems - from shuttering boards, phenolic plywood, shoring systems and systems for moving material on the job site to consumables used to implement walls, one sided walls and climbing platform walls. ■

Website: www.alsina.com

SERVIPLEM



Above (left and right): Serviplem manufactures concrete mixers on trucks and semi trailers, dry bulk tanks for transporting cement and powdery materials, and batching plants.

Below (left and right): Serviplem's headquarters is located in Zaragoza, Spain, along with its main factory.



Serviplem manufactures concrete mixers on trucks and semi trailers, dry bulk tanks for transporting cement and powdery materials, and batching plants. The company's headquarters is located in Zaragoza, Spain, along with its main factory. Serviplem also has assembly and manufacturing partnerships in Cuba, Russia, Saudi Arabia and the UAE.

In April 2012, Serviplem was acquired by Tata-Hitachi Construction Machinery Limited (THCM), a joint venture between Hitachi Construction Machinery Co (Japan) and Tata Motors Limited (India). THCM involves in the design, manufacture, sales and service of a wide variety of construction equipment including hydraulic excavators, wheel loaders, dumpers, backhoe loaders, etc.

Serviplem manufactures its products under the brand name Baryval. Its concrete mixers range from 4 to 12 cu m mounted on trucks, and from 7 to 15 cu m mounted on semi trailers. The concrete mixers are made of Domex steel, which is highly resistant to wear and tear and features high elastic limit. Serviplem offers a new design of Baryval semi trailer with a capacity of 12 cu m, three axles, pneumatic suspension and an 800 l pressurised water tank.

This lightweight unit is also produced with Domex anti-wearing steel and has a low centre of gravity. Optional safety features include emergency stop, drum brakes, anti-jumping, constant speed drive (CSD), anti-trap, aluminium or plastic mudguards, sliding ladder and plastic prolongation foldaway.

Serviplem's batching plants are available from 30 to 160 cu m. They comprise ready mix concrete plants (CHTM), dry batch concrete plants (CTHD), precast concrete plants (CTP), mobile concrete plants (CHM1-50), tower plants and dry mortar plants.

Serviplem's dry bulk tanks are offered in aluminium and steel, with capacities of 32, 36 and 38 cu m. They are designed for good stability and manoeuvrability when loaded, as well as excellent load distribution between axles and kingpin, thereby avoiding excessive load on certain parts of the tank.

Serviplem can also customise its products based on customer needs. Some special applications include mixers in concrete plants, multi lift (special multi-chassis system), blender for concrete manufacturing and fastening for container system, to name a few. ■

Website: www.baryval.es

RESIMART



Resimart specialises in the design and manufacture of facilities, machinery and accessories for precast concrete. The company employs both the vibro-compression and extrusion technology.

The vibro-compression technology is used for manufacturing all kinds of prestressed products by means of a continuous process (beams, hollow core slabs, hollow beams, panels, seating products, etc). The extrusion technology is used for continuous production of hollow core slabs up to 500 mm in the standard model and up to 600 mm in the special version.

According to Resimart, the main advantage of vibro-compression technology is the possibility of manufacturing a lot of different products with one machine, and the mould can be changed within five minutes. The extrusion technology's main advantage is that it is capable of manufacturing hollow core slabs with great heights using less concrete (reducing costs), achieving lighter and stronger products.

Resimart also offers turnkey services, providing its customers with a complete solution on factory building, assembly of the installation, performing the start up and teaching the workers who manage the production in the future.

Resimart is headquartered in Valencia, Spain. Its machinery and



All images: Resimart specialises in the design and manufacture of facilities, machinery and accessories for precast concrete.

equipment are present in more than 300 factories around the world. The company is currently working on several projects in Russia, Kazakhstan, Senegal and Mexico. ■

Website: www.resimart.com

LINDEN COMANSA



Above: Linden Comansa luffing-jib cranes being used on the National Art Gallery project in Singapore.

Below: Linden Comansa luffing jib cranes offer various capacities ranging from 8 to 30 t.



Linden Comansa started its activities in the early 1960s as jig and tool makers - the company was then known as 'Imausa' - supplying mainly to the larger subcontractors in the automotive industry. Due to Spain's strong industrial expansion during this period, Imausa further produced, in addition to more sophisticated jigs and tools, machine tools both for internal and external use, along with prefabricated steel structures for industrial buildings.

The birth of the Spanish tourist industry - soon to become the world's largest - with its parallel demand for housing, schools, hospitals, etc, made Imausa's entry into the crane market a natural progression. The first cranes produced were simple, saddle-jib cranes ideally suited to the building methods of that time, featuring capacities ranging from 12 to 42 tm. By 1970s, Imausa had produced saddle-jib cranes with a 200 tm capacity.

In 1983, Imausa acquired the Swedish crane company Linden - which at that time was part of Linden-Alimak Group - and Linden Comansa was born. The Linden 8000 modular system crane, which was manufactured in 1977, was added to the Linden Comansa range of cranes offered to customers around the world. After the acquisition, Linden Comansa developed its 1100 and 2100 modular system cranes, along with the LC 500 modular system 'flat-top' design cranes with capacities ranging from 35 to 56 tm.



Above: The 30LC1450 flat top crane (on the right) is Linden Comansa's largest tower crane to date.



Right: Linden Comansa cranes are designed based on the modular system.

According to Linden Comansa, the modular system is one of the company's main advantages over its competitors. It allows customers to modify their crane without adding new parts, to meet the different needs of their projects. As such, overall manufacturing process can be reduced resulting in lowered costs and simplified supply lines.

In 2006, Linden Comansa formed a joint venture in China with Jie Holding Group to establish Comansa Jie. Earlier this year, the joint venture came to an end and Comansa Jie was changed to Comansa Construction Machinery (Hangzhou) Co Ltd - known as Comansa CM - with Linden Comansa being the sole owner of the company. The cranes manufactured by Comansa CM are mainly sold in China, India and Southeast Asia.

Speaking about the impact of financial crisis in 2008, Ralf Hagedstedt, Linden Comansa's area manager for Asia and northern Europe, said that "although Linden Comansa's local market dropped significantly during the crisis, the strong growth of the Chinese JV in the Asian market helped to lift the company's overall revenue."

Mr Hagedstedt also mentioned that the Spanish market has shown signs of recovery in the past year. As for the global market, he said, "The Asian market is generally still good - it has been quite consistent throughout the years - and so are the Scandinavian countries. The US market is coming back, while the UK market is starting to grow again."

Largest flat top crane

The 30LC1450 is Linden Comansa's largest tower crane to date, which is manufactured at the company's headquarters in Huarte, Spain. It is

one of the models in the company's LC3000 series; the other model is the 30LC1100. "Bigger cranes are now in high demand, especially in Asia," said Mr Hagedstedt.

The 30LC1450 comes with three different versions: 32 t, 48 t and 64 t. The crane is designed mainly for heavy-duty construction works and the mining industry. It can be erected with jib lengths from 40 to 80 m and with jib sections every 10 m. The maximum freestanding height is 88.8 m, but it can reach greater heights with tie frames, for example, 198.3 m with just two tie frames.

A 5.5 m wide tower section also helps to reach higher freestanding heights. In addition, the tower sections of the LC3000 series can be combined with the tower sections of other Linden Comansa cranes, such as the 21LC750, in order to reach major freestanding heights.

The 30LC1450 can be erected with fixing angles or over a 10 m wide 'H' base. The crane also features a hoist mechanism of 200 kW with frequency control, drum with a capacity for 1,450 m of wire and Linden Comansa's double trolley system with automatic reeving change.

Luffing-jib cranes

Linden Comansa's Huarte factory also manufactures luffing-jib cranes, the LCL series. They include the LCL 310, LCL 280, LCL 190, LCL 165 and LCL 500, with capacities ranging from 8 to 30 t. Most jib sections are interchangeable between these models. The tower sections are interchangeable not only with the cranes in the same series, but also with the cranes in the flat-top series.

The LCL series' hoist mechanism is located at the front, under the jib and near the cabin. The luffing mechanism, with its emergency second brake, and the electrical cabinet for the control of the crane are placed on the counterjib. Such design allows the reduction of the installation weights and the slewing radius of the counterjib. Furthermore, hoisting and luffing cables come preinstalled from the factory for faster installation of the crane.

The LCL series can be erected with either a 6 m wide cross base or an 8 m wide cross base, which can be folded for easy transportation in a truck or container. The 8 m base can also be used with other models



Linden Comansa flat-top cranes at work on the Nhat Tan Bridge project in Hanoi, Vietnam.

of Linden Comansa cranes to increase the heights up to 30 percent. ■

Website: www.lindencomansa.com



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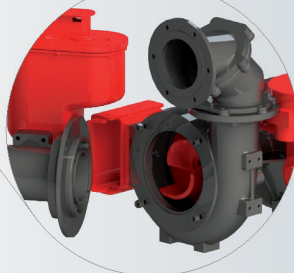
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ENARCO



Above (left and right): Enarco manufactures various types of concrete vibrators, concrete screeds and light compaction equipment. The company's products have been used on a wide range of projects around the world.

Below (left and right): Enarco positions itself as a specialist in concrete vibration equipment.



Founded in 1964, Enarco manufactured pneumatic tools with its own technology. The company concentrated on the domestic market and the UK, and soon became a major supplier in the national metallurgical industry with customers such as Mercedes, Seat, Ford, Renault, Fagor, Teka, Otsein and Astilleros Españoles.

The growth achieved by Enarco was very significant until, in 1978, due to the economic instability in Spain, an organisational restructuring was carried out to face a new stage in its development. Then pneumatic, pendulum and motor-in-head concrete vibrators were added to the company's product range, as well as vibrating screeds for paving surfaces.

Enarco's new activity was focused on the market of vibration applied to construction technology and more specifically, to vibration of concrete. Meanwhile, as the product range was being expanded and the company was achieving growth within the new market, the

production of pneumatic tools gradually decreased, and by 1992 was merely residual. In 1994, a range of light compaction units was developed by Enarco - it was believed to be the first Spanish company with its own production of tamping rammers and reversible compacting plates.

Today, Enarco manufactures various types of concrete vibrators, concrete screeds and light compaction equipment. The company's headquarters is located in Zaragoza, Spain, which also includes a 10,000 sq m manufacturing plant inaugurated in 2009. In addition, the company has developed global networks in five continents and subsidiaries in France, Mexico, Poland and China.

Since the financial crisis in 2008, Enarco has put a lot of emphasis on the export markets. According to J.Luis del Prim, CEO of Enarco, the company's main markets are currently Europe, South America, Southeast Asia and the Middle East. It also recently

entered Africa. "Developing countries offer good prospects for us in the future, so we are always open and keen on collaborating with relevant companies in these countries," he said.

In the Southeast Asia region, Malaysia, Singapore, Indonesia and the Philippines are highly potential markets for Enarco, said Mateo Barbot, Enarco's export sales manager in charge of Southeast Asia. "Our growth in the Southeast Asian market is about 10 to 20 percent every year now."

Concrete vibrator specialist

Enarco has positioned itself as a specialist in concrete vibration equipment. Two of the company's most popular models in Asia include the Dingo and TNR/ANR.

The Dingo portable electric vibrators feature a frequency of 50-60 Hz, weigh 5.8 kg and can compact up to 35 cu m per hour of concrete. They have an oversized motor with double insulation; shock proof handle to protect the motor; high resistance housing; filter in air inlet that is easy to replace; belt for hanging from shoulder; and self disconnecting brushes. Moreover, the Dingo series has vibrating heads with five different diameters, ranging from 25 to 58 m. The shaft is available from 0.6 to 6 m long.

The TNR and ANR pendulum vibrators produce a 12,000 rpm frequency from a rotation at 3,000 rpm in input. They feature high vibration amplitude and are powered by electric motors or petrol/diesel engines. The hose has a diameter of 36 m, except for ANR25, which is 25 m. ■

Website: www.enar.es



Enarco's headquarters is located in Zaragoza, Spain, which also includes a 10,000 sq m manufacturing plant inaugurated in 2009.



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