



CONTINUOUS MIXING SOLUTIONS

FOR THE CONCRETE, CONSTRUCTION
AND ENVIRONMENTAL INDUSTRIES

trakmix

The Rapid Trakmix is a track mounted, totally mobile and self-contained, fully weighed high volume mixing plant. Offering outputs of up to 250TPH, Trakmix is ideal for applications where all types of binders or neutralising powders are required in the mixing process, such as road construction, road paving, ground works/ civil engineering, environmental stabilisation projects, aggregate recycling and many more.

rapidmix

The Rapidmix is a fully mobile, high capacity continuous mixing plant for semi-dry mixes. Offering outputs of either 400 or 600 tonnes per hour, the Rapidmix is ideal for roller compacted concrete, concrete paving and soil stabilisation.

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Rapid mixer 1983



Aerial shot of the Rapid site



Craigavon Engineering Ltd.

▶ 1969

▶ 1983



▶ 1983

▶ 2013



HOME OF THE CONCRETE MIXER

Established in 1969, Northern Ireland based Rapid International delivers high quality, reliable equipment to the concrete, construction and environmental industries. Today, with a presence in more than twenty countries worldwide via an ever expanding international dealer network, Rapid is a trusted partner to a wide variety of customers ranging from multinational construction groups to small concrete producers.

RAPID IS A GLOBAL LEADER IN THE MANUFACTURING OF:

- ▶ Pan, Planetary and Twin Shaft Concrete Mixers
- ▶ Mobile Continuous Mixing Plant/Pugmills
- ▶ Specialised Mobile Continuous Mixing Plant
- ▶ Mobile/Fixed/Bespoke/Compact Batching Plants
- ▶ High Pressure Mixer Washout Systems
- ▶ Silos
- ▶ Spare Parts

Rapid's vast experience over the last four decades ensures the highest quality design and manufacture of all equipment. Quality, reliability, efficiency and technological advancement are the greatest aims of Rapid's workforce, based at its impressive 50,000 sq ft production facility and headquarters in County Armagh, Northern Ireland. Always innovating, Rapid's emphasis on product development is driven by the needs of its wide-reaching customer base, and the company's in-house technical team consistently strive to meet the demands of total quality while exceeding customers' expectations.



A WORLD CLASS PRODUCT RANGE



MIXER RANGE

The heart of any concrete plant, Rapid's quality, durable concrete mixer range includes Pan, Planetary and Twin Shaft options. Built as standard with chill cast tiles, Rapid delivers low maintenance costs across the entire range. Rapid's Planetary option is ideal for the pre-cast industry as well as mixing semi-dry coloured concrete. Planetary outputs range from 0.375m³ to 3m³.

The Rapid Pan (outputs 0.5m³-4m³) is the ultimate mixer for the ready mix industry due to its high outputs and Rapid is the sole UK manufacturer of 4m³ output Pan mixers.

Rapid's range of Twin Shaft concrete mixers (outputs 1.7m³-4.5m³) are ideal for the ready-mix industry due to its high outputs, fast mixing time and compact design. Rapid's Twin Shaft mixers have heavy duty extra thick chill cast tiles throughout, offering low maintenance costs.



BATCHING PLANTS

Rapid's fully mobile Rapidbatch 70 and 120 mobile batching plant offers super mobile batching with outputs from 70m³ to 120m³ per hour. Fast on-site set up within one day means less downtime and increased efficiency for large construction projects.

Rapid's Transbatch (outputs of 40, 60 and 100 m³ per hour) offers a more compact solution for mobile batching in a single load road towable unit, which folds and dismantles for transport. The Transbatch is perfect for remote location projects.



MOBILE/SPECIALISED CONTINUOUS MIXING PLANTS

Totally mobile and fully self contained with its own power source and self erecting system, the Rapidmix mixes up to 400 or 600 tonnes per hour depending on application. Rapidmix is fully operational within 2-3 hours and is typically used for RCC (roller compacted concrete), road sub base and a wide range of environmental applications including contaminated land treatment and soil stabilisation.

Trakmix is a track mounted, totally mobile and self-contained, fully weighed high volume mixing plant. Offering outputs of up to 250TPH, Trakmix is ideal for applications where all types of binders or neutralising powders are required in the mixing process, such as road construction, road paving, ground works/civil engineering, environmental stabilisation projects, aggregate recycling and many more.



HIGH PRESSURE MIXER WASHOUT SYSTEMS

Proper mixer cleaning and maintenance is critical to prevent build up. The compact Rapid Jetwash High Pressure Mixer Washout System offers powerful concrete mixer cleaning in just 4 minutes using 2,000 PSI (140 BAR) water pressure, reducing mixer wear and increasing the potential lifespan of the mixer. Available in both 2, 3 and 4 pump models.

FAST-TRACK SPARES

Rapid's service doesn't stop the moment your plant is erected; our in-house spares department provides a wide range of spare parts for all mixer types, silos and plant. Rapid offers high inventory levels and a FAST-TRACK service, combined with highly competitive rates.



rapid

TMX 250

rapid

rapid

trakmix

TRAKMIX is a track mounted, totally mobile and self-contained, fully weighed high volume mixing plant.

HIGH OUTPUT CAPABILITY

- ▶ Up to 250TPH output
- ▶ High volume continuous twin-shaft mixer
- ▶ 12.0m³ aggregate hopper (inc division plate for 2no aggregates)



FULLY MOBILE, TRACK MOUNTED, SELF CONTAINED, FULLY WEIGHED HIGH VOLUME MIXING PLANT

The **Trakmix 250** has been designed to be totally mobile and completely self-contained with its own power source. Hydraulically operated track system enables the plant to self position and self erect in minutes. The Trakmix 250 is a continuous weighing and mixing system, mixing up to 250 tonnes per hour, depending on application. Feed rates are fully adjustable for the aggregate, cement and water systems.

- ▶ **Construction:** Fully welded profiled plate sides with brackets fitted for attaching bin, conveyors, mixer and all ancillary items which make up the plant.
- ▶ **Running Gear:** Tracks operated by hydraulic motors. A pendant control is fitted to operate the track system.
- ▶ **Access:** Walkways are provided on top of the chassis of the machine for maintenance access. Fold out ladders for access.
- ▶ **Hydraulic System:** Electro-hydraulic powerpack to operate the track system and the hydraulic rams for conveyor folding.
- ▶ **Capacity:** 7.5m³
- ▶ **Loading Width:** 1,400mm. The hopper can be loaded from either side of the machine.
- ▶ **Construction:** S275 plate with stiffening ribs. Steep sides for difficult materials.
- ▶ **Removable Division Plate:** The hopper has a removable division plate, allowing two materials to be used.
- ▶ **Lining:** To aid the discharge of the materials, the hopper surfaces are fitted with low friction high molecular polyethylene lining material 12mm thickness.
- ▶ **Adjustable Gates:** The outlet end of the hopper is fitted with adjustable level gates to enable the material height on the conveyor belt to be varied. These are adjusted manually.
- ▶ **Belt Feeder:** A conveyor belt feeder is fitted to the bottom of the hopper to provide feed from the hopper to the mixer. The conveyor is fitted with a heavy duty geared motor drive with automatic variable speed control and is fitted with adjustable rubber skirts and additional heavy duty support rollers. The belt width is 1,200mm and a heavy duty three ply belt is fitted.



AGGREGATE WEIGH BELT FEEDER

- ▶ **Feeder:** 1,400mm belt conveyor between aggregate hopper and continuous mixer.
- ▶ **Weighing:** Supported on loadcells – pivot arrangement; this measures the material weight allowing the feed rate of the aggregate to be determined.

GEN-SET

This unit provides electrical power for all machine functions. Diesel powered generating set rated at 160 kVA, 3 phase, 400 volts. Powered by a six cylinder, turbocharged diesel engine with directly coupled brushless alternator.





PLANT CONTROL SYSTEM

- ▶ System uses an Allen Bradley Micrologix Processor to control all of the plant functions for automatic control with manual control backup via the touchscreen.
- ▶ Control Panel: The operator control panel has push buttons and selectors to activate the genset and compressor etc. All automatic and manual control is provided by the HMI on the panel.
- ▶ **Automatic Control:** A 15" touch screen HMI operator interface is used for operator inputs and display of all parameters. This interfaces with the processor to control the plant. A backup laptop PC is provided to enable the plant to be operated remotely (via WiFi connection).
- ▶ **Software Features:** Storage of up to 50 Recipes: each recipe contains the details of a specific mix, which is the ratio of cementations product to aggregate.
- ▶ **Stock Control:** cement stock and usage are stored in memory and may be displayed or printed out.
- ▶ Printer: the printer will record batches produced and a print will be given after each batch with details of material produced. Plant Alarms: an alarm message will be displayed on the HMI and a print-out given of the alarm fault together with date and time. (an audible and visual alarm is available where operator may be away from the panel and is still made aware of it.)
- ▶ **Remote Access:** a WiFi system is fitted allowing the control system to communicate locally to the backup pc etc. Also fitted is the facility to allow remote access via the 3G mobile phone network, allowing client's management to get production reports etc and for our technical staff to assist with fault finding and download software updates. A 3G service for the suitable phone network should be provided by the client.
- ▶ **Starter Panels:** The starter panels, house the starters for all of the drive motors on the plant and variable speed drives for the drives that adjust in operation.
- ▶ **Weighing:** Compression loadcells monitor the weights of cement and aggregate.
- ▶ **Water Meter:** Litre counter to measure the flow rate of water into the mixer.



TWIN SHAFT CONTINUOUS MIXER

- ▶ Chill cast specially phased paddles offer a high velocity, aggressive mixing action.
- ▶ Cleaning and maintenance access.
- ▶ Drive.
- ▶ Mixing chamber.
- ▶ Water addition.
- ▶ Clean-out conveyor.

- ▶ **Pumps:** One positive displacement pump is fitted to supply two water spray bars within the mixer.
- ▶ **Spray Bars:** Each mixer spray bar has a ball valve to allow addition of water early in the mix, later in the mix or both together. A calibration point for accurate water weighing is also included.

FULL WEIGHING CAPABILITY

- ▶ Integral fully automated control system.
- ▶ Variable speed belt feeder to aggregate weigh-belt.
- ▶ Twin-hopper system and twin-screw for powder weighing and discharging.
- ▶ Water controlled through a flow meter with a 600 litre on-board water tank.
- ▶ Adjustable feeder gates from aggregate bin.
- ▶ Admixture addition (optional).

OUT-LOADING CONVEYOR

- ▶ **Function:** Transporting the mixed material from the twin shaft mixer to the truck. The conveyor is designed to handle the maximum feed rate from the mixer
- ▶ **Construction:** S275 folded plate construction with mounting brackets for rollers and pivoting mechanism. The head section of the conveyor folds for transportation.
- ▶ **Belt:** 800mm³ ply belt with heavy duty top cover and vulcanised joint.
- ▶ **Drive:** Motorised drum with rubber lagging.
- ▶ **Belt Scraper:** Polyurethane blade pre-cleaner scraper mounted on the face of the head drum.

WATER SYSTEM

- ▶ **Water Tank:** A 600 litre tank is fitted complete with galvanised steel pipework. The water level is controlled via a level probe and piston shut-off valve.





OPTIONS

Admixture System

litre counter and additive pump to measure the flow rate of additive into the mixer.

Bolt on Gob Hopper

Hopper fitted to the top end of the conveyor with pneumatic discharge doors. Constructed from S275 plate.

Silo

Silo options are available to accompany the Trakmix, preferred options are horizontal, however vertical silos are available in multiple sizes.

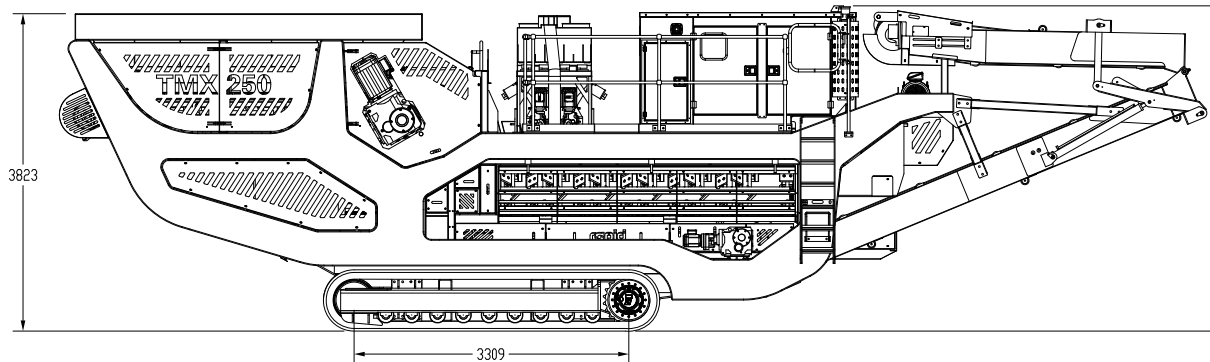
Vibrating Aggregate Grid

Vibrating / hydraulic grid for aggregate hopper. Grid fitted to avoid oversized materials from entering the hopper.

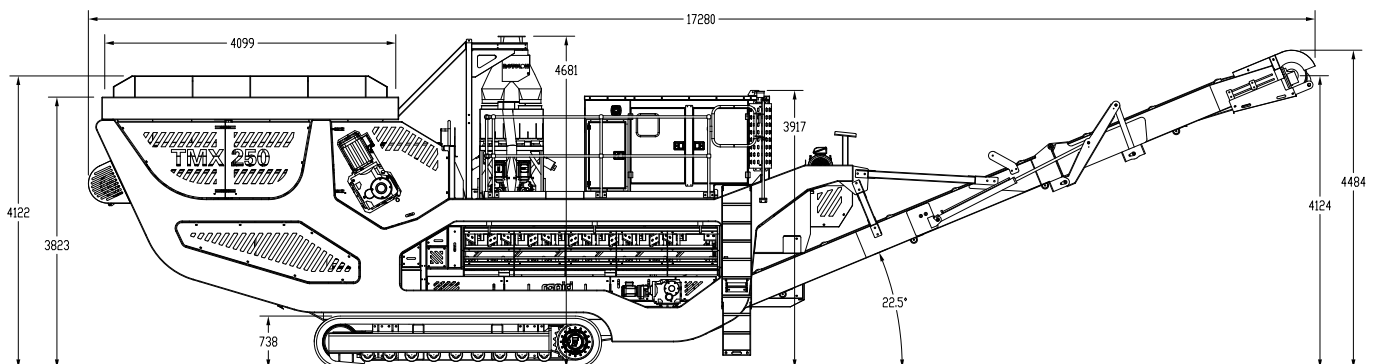
SPECIFICATIONS

Transport Dimensions

MODEL	OUTPUT CAPACITY (per hour)	AGGREGATE HOPPER CAPACITY	LENGTH	WIDTH	HEIGHT	WEIGHT
TRAKMIX 250	250T	7.5m ³	13,820mm	2,530mm	3,917mm	26,250kg



Trakmix in transit



Trakmix in situ

APPLICATIONS

TRAKMIX is ideal for applications where all types of binders or neutralising powders are required in the mixing process, including road construction, road paving, ground works/civil engineering, environmental stabilisation projects, aggregate recycling and many more:

- ▶ Lean Mix Based Concretes
- ▶ Soil Stabilisation / Soil Recycling
- ▶ Recycling Asphalts and Concrete
- ▶ Pavement Quality Concrete (PQ)
- ▶ Bitumen Based Emulsion Mixes
- ▶ Bentonite Enriched Soils (BES)
- ▶ All Types of Contaminated Land Treatment
- ▶ Specialist Mixing Applications





rapidmix

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CEMENT / BINDER SILO

- ▶ Capable of storing 40 tonnes (44 US tons).
- ▶ Shut off slide plate closes silo, allowing maintenance to the hopper below.
- ▶ Fully galvanised folding access ladder with safety cage.
- ▶ Access hatch.
- ▶ 24m² reverse jet fan assisted filter.
- ▶ Pressure relief valve.

- ▶ Storage vessel for receiving cement/ binder material from road tankers.
- ▶ Level probes control and monitor silo filling and emptying.
- ▶ Volumetric version fitted with a large rotary valve capable of up to 60 tonnes/hr.
- ▶ Weighed version fitted with dual rotary valves and load cell suspended screw conveyors.

OUTLOADING CONVEYOR

Transports the mixed material from the mixing chamber to the truck:

- ▶ Fitted with gob hopper allowing truck changeover and preventing filling segregation:
 - 800mm (31.5") - 400 model
 - 1,000mm (40") - 600 model
- ▶ Polyurethane blade belt cleaner scraper mounted on the face of the head drum.
- ▶ Rubber lagged motorised drive drum.



Outloading conveyer



Rapidmix gob hopper



Mixing chamber

AGGREGATE HOPPER WITH VARIABLE SPEED BELT FEEDER

Hopper receives the aggregates into the plant from a standard loading shovel:

- ▶ Capacity of 12.0m³ (15.6 yds³) and loading width of 4,330mm (14ft 2 1/2 ins).
- ▶ Hopper can be loaded from either side of the machine.
- ▶ Steep sides for difficult materials (end slopes of 60 degrees).
- ▶ Removable division plate allows two materials to be used.
- ▶ Adjustable level gates enable the material height on the conveyor belt to be varied.
- ▶ Belt feeder provides feed from the hopper to the mixer.
- ▶ Belt width is 1,200mm (4ft) and a heavy duty three ply belt is fitted.
- ▶ Conveyor fitted with heavy duty geared motor drive, adjustable rubber skirts and heavy duty support rollers.
- ▶ Weighed version is fitted with an additional weigh belt, weighing material from the aggregate hopper to the mixing chamber.

TWIN SHAFT CONTINUOUS MIXER

Twin shafted, pugmill mixer features 72 specially phased paddles to give a high velocity, aggressive mixing action:

- ▶ All mixing tools are manufactured using chill cast, hard wearing steel

paddles.

- ▶ Total access to the mixer via the top and the sides for cleaning and maintenance.
- ▶ Dual spraybars for water dosing.
- ▶ Floor conveyor for mixer cleanout.



Rapidmix in transit



Road project - typical layout with 3 bin feeder

PLANT CONTROL SYSTEM

The system uses a Siemens S71200 PLC (Windows based PC) to control all of the plant functions for automatic control with manual backup:

- ▶ System uses an Allen Bradley Micrologix Processor to control all of the plant functions for automatic control with manual control backup via the touchscreen.
- ▶ **Control Panel:** The operator control panel has push buttons and selectors to activate the genset and compressor etc. All automatic and manual control is provided by the HMI on the panel.
- ▶ **Automatic Control:** A 15" touch screen HMI operator interface is used for operator inputs and display of all parameters. This interfaces with the processor to control the plant. A backup laptop PC is provided to enable the plant to be operated remotely (via WiFi connection).
- ▶ **Software Features:** Storage of up to 50 Recipes: each recipe contains the details of a specific mix, which is the ratio of cementitious product to aggregate.
- ▶ **Stock Control:** cement stock and usage are stored in memory and may be displayed or printed out.
- ▶ **Printer:** the printer will record batches produced and a print will be given after each batch with details of material produced. Plant Alarms: an alarm message will be displayed on the HMI and a print-out given of the alarm fault together with date and time. (an audible and visual alarm is available where operator may be away from the panel and is still made aware of it.)



Onboard control panel



Cement feeding system



Rapidmix 400CW control screen layout



Gen set



On board hydraulic system for erection



Optional operator control room



Erection of mobile plant - no crane required



Three bin feeder loading

- ▶ **Remote Access:** a WiFi system is fitted allowing the control system to communicate locally to the backup pc etc. Also fitted is the facility to allow remote access via the 3G mobile phone network, allowing client's management to get production reports etc and for our technical staff to assist with fault finding and download software updates. A 3G service for the suitable phone network should be provided by the client.
- ▶ **Starter Panels:** The starter panels, house the starters for all of the drive motors on the plant and variable speed drives for the drives that adjust in operation.
- ▶ **Weighing:** Compression loadcells monitor the weights of cement and aggregate.
- ▶ **Water Meter:** Litre counter to measure the flow rate of water into the mixer.



Three bin feeder continuous operation

GEN SET

This unit provides electrical power for all machine functions:

- ▶ Powered by a six cylinder, turbocharged diesel engine with directly coupled brushless alternator.
- ▶ Heavy duty steel skid type base frame with anti-vibration mounting pads.
- ▶ Electric starting system.
- ▶ Automatic engine shutdown protection equipment.
- ▶ On board 380 litre fuel tank.

OPTIONS

Our vast experience over the last 40 years has led us to the understanding that every project has unique requirements. As such, Rapid can offer a selection of optional extras to accompany our entire range of plant. Available optional extras for Rapidmix include:

- ▶ **Blending bins:** 3 or 4 bins available in a fully mobile unit allowing for additional aggregates to be used.
- ▶ **Auxiliary silo:** The option for a second silo allows further application options, again the silo can be mobile for ease of transportation.
- ▶ **Additional chemical admixtures:** Additional chemical admixtures can be fitted to broaden the range of applications the plant is suitable for.
- ▶ **Steering axles:** Steering axles can be fitted to the plant to comply with specific road regulations in certain countries.
- ▶ **Paint colour:** The plant can be painted in any colour. Our standard colours will be applied if no colour is specified however for branding purposes customer colours can be used.
- ▶ **Vibrating / hydraulic grid for aggregate hopper:** Grid fitted to avoid oversized materials from entering the hopper.



Rapidmix in white



Blending bin unit



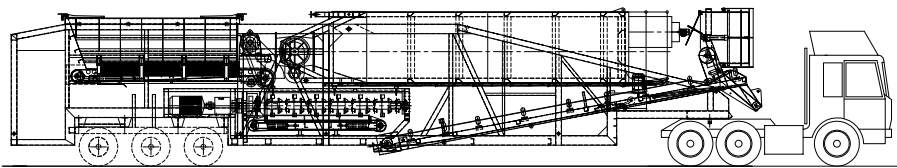
Auxiliary silo



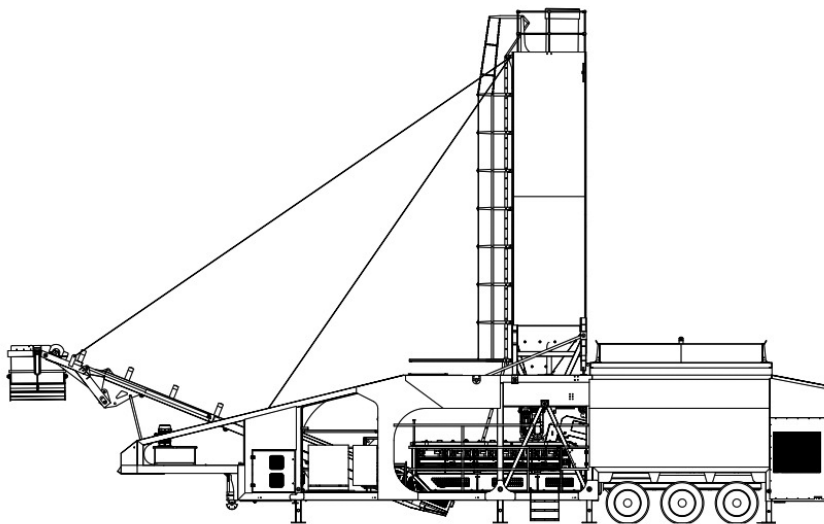
Hydraulic grid for aggregate hopper

SPECIFICATIONS

MODEL (Transport dimensions)	TOTAL WEIGHT	WEIGHT ON REAR TRI-AXLES	WEIGHT ON FRONT PIN	LENGTH	WIDTH	HEIGHT	HEIGHT when erected
RAPIDMIX 400	33,420kgs	22,170kgs	11,250kgs	18.5m	3m	4m	13m
RAPIDMIX 600	35,860kgs	24,360kgs	11,500kgs	18.5m	3m	4m	13m



Rapidmix in transit



Rapidmix erected

SUITABLE FOR FOLLOWING PROJECTS AND APPLICATIONS:

- ▶ Mixing roller compacted concrete (RCC).
- ▶ Bentonite land fill sealing.
- ▶ Airport runways.
- ▶ Contaminated land treatment.
- ▶ Mine backfill.
- ▶ Cement treated base (CTB).
- ▶ Environmental remediation.
- ▶ Soil stabilisation.
- ▶ Dam construction.
- ▶ Paving quality concrete.
- ▶ Soil cement.
- ▶ Coldmix - foamed Bitumen/ Bitumen Emulsion.



Rapidmix CBGM application in Wales

CASE STUDIES

Rapid International products have successfully been deployed on numerous different projects around the world, some examples of which are below:



HBM (hydraulically Bound Material)
South Wales, UK



CBM (Cement Bound Material)
Galway, Ireland



Airport runway
Russia



Dam building
Mexico



RCC
Canada



RCC
South Carolina



Soil stabilisation
California



Road base
Australia



RCC Paving
UK



Road project
Australia

WE ARE PROUD TO BE SUPPLIERS TO THE FOLLOWING LEADING GLOBAL COMPANIES:

CEMEX, LAFARGE
HOLCIM, HEIDELBERG,
TARMAC, ODENBRECHT
& MORE...



Large spares inventory

BENEFITS OF CHOOSING RAPID INTERNATIONAL



IN HOUSE DESIGN

All Rapid products are designed by our team of highly qualified engineers, using the latest 3D design software.

MANUFACTURING FACILITY

Everything is produced in our 50,000 square foot factory. We take pride in our manufacturing capabilities and have the latest equipment, including:

- ▶ Kaltfenbach KBS620 DG/T Drill & Saw Line
- ▶ Esab Suprarex SXE-P 3500 Plasma
- ▶ Ermaksan HGD3100X13 Guillotine
- ▶ LVD PPEB 220 Press
- ▶ Excel AHS30/04 Plate Rolls
- ▶ Akyapak APK100 Section Rolls
- ▶ Colchester Combi K2 Lathe
- ▶ Colchester Combi 4000 Lathe
- ▶ Richmond VMC1020 Mill
- ▶ Hodge Clemo shot-blasting room and Dalby paint booth

We also incorporate lean manufacturing, which starts at the design stage of our products and is implemented throughout the process to reduce waste.

SMART SOURCING

We only use components of the highest quality, all of which are sourced from internationally recognised brands. This not only ensures that we have the highest quality components but we have a strong network of distributors throughout the world reducing lead times and offering superior customer support.

SPARE PARTS

We carry a large stock of all our Rapid genuine spare parts. In order to reduce plant down time Rapid can offer a same day dispatch on most items.



AFTER SALES SUPPORT

With a Service and Support team of highly qualified technical operatives and service engineers, Rapid will ensure that all your after sales requirements are met with total professionalism and quality.

ENVIRONMENTAL CONSIDERATIONS

We take our environmental responsibility seriously. Our facility is powered by eco electric using our own 500kW wind turbine.





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