EXrmxPRESS

DELIVER MORE THAN CONCRETE

The End-to-End Software for the modern

Ready Mix Concrete Plant Operation and Distribution

freewillsolutions

Content   **Page**

What is *RMX Express* ?

rmx EXPRESS is a highly specialized software for the Ready Mix Concrete business. **RMX Express** allows you to handle the full **"Quotation-to-Cash"** cycle of RMX Concrete booking, planning, order distribution, truck allocation, batching and delivery, as well as invoicing. **RMX Express** is an integrated software working online with real-time and scheduled data management. To guarantee uninterrupted operation and prevent data loss, **RMX Express** can work offline in case of a network failure and supports post-network-failure data auto-synchronization.

No matter whether you manage one plant or hundreds of plants, **RMX Express** connects it all and provides the visibility and agility you need to run your business time and cost efficient from Order Taking throughout the process of Planning, Batching/Dispatching, Progress Monitoring, Reallocation of orders to different plants, or different trucks, Paperless Delivery Receipt, up to the final step of Electronic Invoicing. In addition, **RMX Express** supports Raw Material Monitoring and Replenishment Management.

Centralized or remote order taking, plant allocation and dispatch

If your plant(s) are operating independently, the plant staff can take orders directly at the plant and manage them in **RMX Express**. If you have a centralized order taking operation, then the staff at the Concrete Dispatch Center (CDC) will take the order from the customer and allocate it to the nearest plant. A centralized operation will plan the deliveries of all plants and has the ability to move an order from a plant whose production capacity is fully booked to a plant with free capacity. A centralized operation can also reallocate trucks from one plant to another when needed.

Split total order quantity into truck loads

Splitting the total order quantity into the necessary number of truck loads is done by **RMX Express** based on a few parameters such as the maximum load volume per truck. The operator then allocates the truck loads to available trucks and plans the delivery schedule based on distance from plant to site and expected unloading time. **RMX Express** displays all orders and their planned delivery schedules in an intuitive overview.

Show where order volumes exceed production and/or delivery capacity

Based on specific parameters of each plant, **RMX Express** is aware of the maximum production and delivery capacity of each individual plant. If the order volume of a given plant is exceeding its production capacity at any given time, the operator will see how much order volume will be above the plant's production capacity at what time. The operator then can take the necessary actions to defuse the risk of potential delivery delays and avoid all the other hassles that come with it by either renegotiating delivery times with a client, or by reallocating some orders to the next closest plant with free production capacity, or reallocating some trucks if the problem was just a delivery capacity shortage, not a production capacity issue.

Simulation of new delivery scenarios with Dynamic Scheduling (drag+drop)

In a complex business environment like Ready Mix Concrete, it is sometimes not easy to figure out whether moving one order to be delivered 90 minutes later will solve all the bottle necks or just one and create three others instead. The Dynamic Scheduling feature in **RMX Express** addresses this issue by allowing to simulate new delivery scenarios by simply dragging orders on the timeline and dropping them on a new time spot. **RMX Express** then rearranges subsequent deliveries and the operator can immediately see the new overall picture. If the move has resolved the issue, the operator can confirm the new scenario. If not, the operator can try something else.

Interface with batching equipment or existing batching software

RMX Express can be interfaced directly to your batching equipment. We call it *RMX Batch* and it includes 6 step admixture, automatic bin switching, automated batch compensation, automatic scale tolerance checking, over and under tolerance interlock, emergency mode with data recovery, integrated batching control and confirmation with real-time update to raw material inventory management system. If your batching equipment already came with a Programmable Logic Control (PLC) and you want to keep this, then **RMX Express** can integrate with your existing PLC (Koyo, Omron, Wago and Siemens are supported).

Electronic Proof of Delivery (EPOD) and E-Invoicing

Even though **RMX Express** lets you print out a delivery ticket right after the batching process, we encourage you to go for the paperless delivery. Not only does it eliminate the troubles of papers and printers, it above all, allows you to speed up the process of invoicing and thus getting paid faster. Rather than to wait for the truck driver to bring you back those pieces of papers with the signature from the site manager, which you then may forward to your accountant to combine them into a single invoice to your customer, just let the site manager sign the electronic ticket on a mobile screen.

In case of e-Invoicing, **RMX Express** will receive the invoice data from your ERP system, "attach" an electronic copy of all tickets to the file received from ERP and then send this document to the customer via email. Whether you invoice your customers daily, weekly, monthly or by any other parameters depends on the set-up in the ERP system.

Raw Material Replenishment Management

RMX Express can be connected to raw material storage sensors or weight bridge application. Based on the real time information from these sensors about available stock and the planned orders in the system, **RMX Express** knows at any time how much raw material needs to be ordered respectively how long the stock on hand will last. In case of a centralized operation, the raw material requirements of several plants can be consolidated, allowing you to place larger orders with your suppliers, giving you a price negotiation advantage.

Recipes Management

Your RMX recipes are stored in **RMX Express** and used for batching and raw material management. In a centralized **RMX Express** environment, you can select which recipes should be available for sale at which plants.
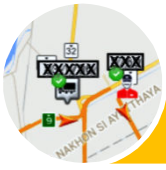
RMX Near Real Time Dashboard

RMX Express dashboards allow you to monitor your business operation at a glance at any time and from anywhere. Our proprietary RMX Business Intelligence Suite is called *RMX Insights* and provides you with *Executive* and *Management & Operational* dashboards updated every 15 minutes, so you can monitor your plant's operational performance.

Integration with existing ERP systems

RMX Express can be integrated with your existing ERP system to ensure a seamless process flow between your RMX business and your background operations.

Integration with GPS Truck Tracking System

Managing your plant operation and distribution is good and *RMX Express* makes it a lot easier, but to do a really efficient planning and follow up you also need to know not only where your trucks are at any time, but also what they are doing. *RMX Express* is ready to connect to your existing GPS Truck Tracking system, or to our in house developed truck tracking software TERMINUS Fleet Management System which includes not only truck location tracking, but also truck activity monitoring, driver safety features, anomaly alerts and much more, especially designed for the Ready Mix Concrete truck business.

Plant Maintenance System

You may not like it, but sometimes a plant has to shut down for a few hours for maintenance work or repair. Especially in a centralized order taking and allocation set-up it is important for the operator at the center to know when a specific plant won't be available. *RMX Express* supports planned plant maintenance as well as emergency shut-downs. Upcoming maintenance dates and times can be entered in the system by the plant and *RMX Express* will automatically block orders to be allocated to that plant for the specified maintenance time. In case of an unexpected plant shut-down, the plant can input the expected time of the shut-down and the operator at the center of order taking and distribution can react accordingly by redistributing and rescheduling the orders.

Concrete Precast Management System

If you are also in the **Concrete Precast Management (CPM)** business, you'll love *RMX Express* even more as it includes a CPM Management solution (RMX-CPM). RMX-CPM supports all process steps from the sales quotation, sales order, delivery planning, actual delivery and invoicing. It also includes truck load optimization and truck scheduling as well as goods receive and goods issue at the Warehouse.
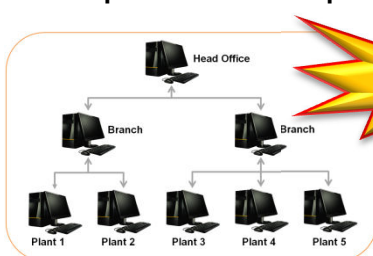
RMX Express Suites

To accommodate different business sizes, we offer **RMX Express** in 4 different suites; Basic, Link, Lite and Enterprise, using 3 different concepts in regards to the technical set-up.

RMX Express Basic – for 1 plant

This package includes **RMX Express** for one plant. All you need, aside your plant of course, is one PC with **RMX Express** installed on it and you are ready to operate your plant efficiently using all the features **RMX Express** offers you in this Basic package.

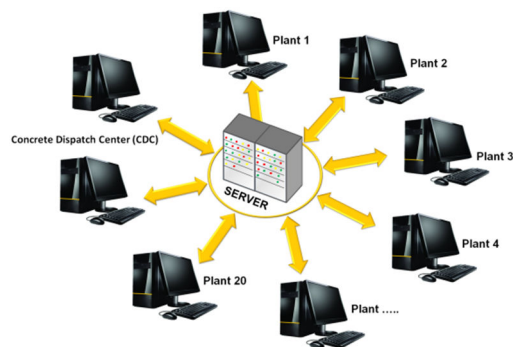### RMX Express Link – for up to 5 plants

RMX Express Link is designed to operate up to 5 plants without the need to invest into a Server. The 5 plants as well as branch offices (depends on your business set-up) and/or a head office belong to the same Work Group and are interconnected through a Virtual Private Network (VPN) whereas every PC has its own Database.

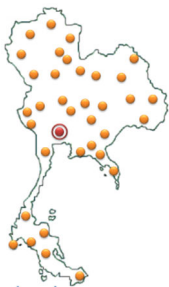### RMX Express Lite – for up to 20 plants

If your business has somewhere between 5 and 20 plants without an immediate plan to expand beyond the threshold of 20, **RMX Express Lite** is the right package for you. In **RMX Express Lite** all plants and the Concrete Dispatch Center, if you have one, are connected to a central server located on your premise. In this set-up the entire operation is permanently online and all data real time.

RMX Express Enterprise – for more than 20 plants

In **RMX Express Enterprise** we are talking really big business with more than 20 plants and virtually no upper limit. Technically the set-up is the same as in RMX Lite with a central server on your premise, it's just that in the Enterprise package that server is much more powerful in order to run smoothly and fast even with hundreds of RMX Concrete plants.

What's included in the different *RMX Express* suites?

On the following pages you will find more details about the features included in each of the four *RMX Express* suites, where a green tick mark ✔ means the feature is included in the package whereas a grey tick mark ✔ means the feature is optional.

RMX EXPRESS	Enterprise	Lite	Link	Basic
GENERAL INFORMATION				
Number of plants	>20	up to 20	up to 5	1
Raw Material Inventory Management	✔ + interface with ERP	✔ + interface with ERP	✔	✔
Master Data Management	✔ or interface with ERP	✔ or interface with ERP	✔	✔
Reports included (see separate report list for details)	38	34	23	20
MODULES (more details of each module in the tables on the following pages)				
Booking and Delivery Management	✔	✔	✔ limited features	✔ limited features
RMX Dispatch	✔	✔	✔ limited features	-
Smart Delivery and E-Invoice	✔	✔	✔	-
RMX Quality Management	✔	✔	-	-
RMX Batch	✔	✔	✔	✔
RMX Insight	✔	✔	-	-
RMX Web Portal	✔	✔	✔	-
TECHNICAL INFORMATION				
RMX Batching and possible integration to 3rd party batching software	✔	-	-	-
Supports real time and scheduled integration with ERP	✔	✔	-	-
Supports real time and scheduled integration with 3rd party GPS system	✔	✔	✔	-
Real time data synchronization (in case of a communication interruption system will auto sync when connection is restored)	✔	✔	-	-
Scheduled data synchronization	-	-	✔	-

RMX EXPRESS	Enterprise	Lite	Link	Basic
BOOKING AND DELIVERY MANAGEMENT				
Quotation Management	✔ or interface with ERP	✔ or interface with ERP	-	-
Sales Order Management	Distance and plant cost calculation selection	Distance based calculation	Distance based calculation	Quantity based calculation
Booking/Reservation	✔	✔	✔	-
Credit Checking	✔ or interface with ERP	✔ or interface with ERP	✔	-
Smart Plant Allocation	✔	✔	-	-
Billing and Invoice Management	✔ or interface with ERP	✔ or interface with ERP	✔	-
Ticket Design Toolkit	✔	✔	✔	✔
Scheduling Management (Load and Truck Assignment)	✔ Display up to 16 plants	✔ Display up to 5 plants	✔ Display 1 plant at a time	✔ Display 1 plant
Plant Work Load Monitoring	✔	✔	✔	-
Automatic backup of Sales Orders (Business Continuity Plan - BCP)	✔	-	-	-
Ticket information interface to 3rd party Quality Management System	✔	-	-	-
RMX DISPATCH				
Fleet Optimization and Truck/Load Scheduling	✔ Display up to 16 plants	✔ Display up to 5 plants	✔ Display 1 plant at a time	✔ Display 1 plant
Plant Operations (Multi-plant management)	✔ Display up to 16 plants	✔ Display up to 5 plants	✔ Display 1 plant at a time	✔ Display 1 plant
Dynamic Scheduling (drag & drop)	✔ Display up to 6 plants	✔ Display up to 6 plants	✔ Display 1 plant at a time	-
Plant Capacity Planning	✔ Display up to 6 plants	✔ Display up to 6 plants	✔ Display 1 plant at a time	-

RMX EXPRESS	Enterprise	Lite	Link	Basic
Vehicle Fleet Management interface with 3rd party GPS system	✓	✓	✓ (Each plant needs connection to GPS Server)	-
SMART DELIVERY AND E-INVOICE				
Electronic Proof of Delivery (e-POD)	✓	✓	✓ (requires EPOD Server)	-
E-Invoicing	✓	✓	-	-
RMX QUALITY MANAGEMENT				
Raw material error tolerance setting by plant and customer site	✓	✓	-	-
Work flow email notification	✓	✓	-	-
RMX BATCH				
Batching Operation Management	✓ OMRON KOYO WAGO SIEMENS	✓ OMRON KOYO WAGO SIEMENS	✓ OMRON KOYO WAGO SIEMENS	✓ OMRON KOYO WAGO SIEMENS
Modbus and TCP Protocol	✓	✓	✓	✓
6 step additive control	✓	✓	✓	✓
Automated batch compensation	✓	✓	✓	✓
Automatic scale tolerance checking	✓	✓	✓	✓
Automatic bin switching	✓	✓	✓	✓
Over and under tolerance interlock	✓	✓	✓	✓
Emergency mode with data recovery	✓	✓	✓	✓
Mixer gate control by mix design	✓	✓	✓	✓
Maintenance spare part counter and warning by quantity and date	✓	✓	✓	✓
RMX INSIGHTS				
RMX Express Dashboard with 10 KPIs	✓	✓	-	-

RMX EXPRESS	Enterprise	Lite	Link	Basic
RMX WEB PORTAL				
Product and Mix Design Management	✔ or interface with ERP	✔ or interface with ERP	✔	✔
Price Management	✔ or interface with ERP	✔ or interface with ERP	✔	-
User Management and Authorization	✔	✔	✔	✔
Interface Data Traffic Log Viewer	✔	✔	-	-
Daily sales report auto emailed to users (single or multiple users)	✔ (Release Q4 2018)	✔ (Release Q4 2018)	✔ (Release Q4 2018)	-

RMX EXPRESS Reports

No	Report Group	Report Name	Enterprise	Lite	Link	Basic
1	Storage Inventory	Material before usage	✔	✔	✔	✔
2	Storage Inventory	Material usage	✔	✔	✔	✔
3	Storage Inventory	Material inventory	✔	✔	✔	✔
4	Storage Inventory	Inventory movement	✔	-	-	-
5	Storage Inventory	Stock balance report	✔	✔	✔	✔
6	Storage Inventory	Material stock report	✔	✔	✔	✔
7	Sales and Delivery	Sales order report	✔	✔	✔	✔
8	Sales and Delivery	Not POD report	✔	-	-	-
9	Sales and Delivery	Record production and distribution	✔	✔	✔	✔
10	Sales and Delivery	Goods and material	✔	✔	✔	✔
11	Sales and Delivery	Sales order completed	✔	✔	✔	✔

No	Report Group	Report Name	Enterprise	Lite	Link	Basic
12	Sales and Delivery	Sales order completed by mix design	✔	✔	✔	✔
13	Sales and Delivery	Action track report	✔	✔	-	-
14	Sales and Delivery	Sales order and ticket information	✔	✔	-	-
15	Sales and Delivery	Ticket history information	✔	✔	✔	-
16	Sales and Delivery	Design report sales order and ticket/ticket history report	✔	✔	✔	-
17	Sales and Delivery	Volume by period report	✔	✔	-	-
18	Sales and Delivery	Specimen for LAB	✔	-	-	-
19	Sales and Delivery	Specimen for sales admin	✔	-	-	-
20	Sales and Delivery	Canceled sales order	✔	✔	-	-
21	Performance	Travel duration	✔	✔	-	-
22	Performance	Truck utilization	✔	✔	✔	-
23	Performance	Work order	✔	✔	-	-
24	Performance	Maintenance	✔	✔	-	-
25	Performance	Spare part plant maintenance	✔	✔	✔	✔
26	Production	Actual batch weight (Load)	✔	✔	✔	✔
27	Production	Actual batch weight (Batch)	✔	✔	✔	✔
28	Production	Production report by ticket and date	✔	✔	✔	✔
29	Production	Production by sales order	✔	✔	✔	✔
30	Production	Swap remix Report	✔	✔	✔	✔
31	Production	Manual report	✔	✔	✔	✔
32	Production	Batch cycle time report	✔	✔	✔	✔
33	Production	Production report for specific ticket	✔	✔	✔	✔
34	Production	Abortion report	✔	✔	✔	✔

No	Report Group	Report Name	Enterprise	Lite	Link	Basic
35	Production	Batch result listing	✔	✔	-	-
36	Master data	Plant master report	✔	✔	-	-
37	Master data	Truck transfer history	✔	✔	-	-
38	Master data	Item proposal report	✔	✔	-	-
		Total	**38**	**34**	**23**	**20**

RMX EXPRESS System Prerequisites

Components	Enterprise	Lite	Link	Basic
Operating system	Production environment: Windows Server 2012 R2 Client PC: Windows 7 Professional or higher		PC workgroup Windows 7 Professional or higher connected through Virtual Private Network (VPN)	Standalone PC: Windows 7 Professional or higher
Database	Server centralized database: SQL 2014 standard PC application: SQL 2014 Express		Distributed SQL Express PC application: SQL 2014 Express	SQL Express PC application: SQL 2014 Express
Integration mode	Online & offline mode (in case of a communication interruption system will auto sync when connection is restored)		Scheduled data base replication	-
E-POD	Android 5.0 or later. Best viewed on tablet with 7 inch screen or larger. Supports online & offline mode (in case of a communication interruption system will auto sync when connection is restored)			-

Important Note:

All hardware (PC, Server, Tablet, Mobile Phone, Network Infrastructure) and software licenses (Windows, Microsoft SQL, Virtual Private Network) are not part of *RMX Express* and need to be purchased separately from a third party vendor.

RMX Concrete Precast Management Suites

RMX-CPM	Enterprise	Lite
RMX-CPM Order Management		
Quotation Management	✔	✔
Sales Order Management (include order reserve management and smart ordering),	✔	✔
Service Order Management (Pumping truck, etc)	Full	Partial
Pricing Management	✔ or interface with ERP	✔
Credit Checking	✔ or interface with ERP	✔
Fleet Optimization and Truck/Load Scheduling	Multi Drop	Single Drop
Service Team Assignment and Status	✔	✔
Inventory and Barcode Management	✔	✔
Ticket Management	✔	✔
Quality Management (Micropile)	✔	✔
RMX-CPM Dispatch		
Vehicle Fleet Management interface with 3rd party GPS system	✔	✔
Dynamic Scheduling	✔	✔
RMX-CPM WEB PORTAL		
Master Data Management	✔ or interface with ERP	✔ or interface with ERP
Product and Service Management	✔ or interface with ERP	✔ or interface with ERP
Price Management	✔ or interface with ERP	✔ or interface with ERP
Sales and Delivery Report	✔	✔

RMX-CPM	Enterprise	Lite
User Management and Authorization	✔	✔
Daily sales report auto emailed to users (single or multiple users).	✔	✔
RMX-CPM Mobile Application		
Inventory GR/GI handling	✔	✔
Service Work Order Management and Report	✔	✔
E-ticket and Report	✔	-
Order Management using LINE App.	✔	-
RMX-CPM Insights		
Operation Dashboard	✔	-
Management Dashboard	✔	-

RMX Express is a product of:

Freewill Solutions Co., Ltd.
29th Floor, Lumpini Tower,
1168/86-88 Rama 4 Road, Tungmahamek,
Sathorn, Bangkok 10120 Thailand

Tel. : +662 679 8556
Fax : +662 679 8988
Email: products@freewillsolutions.com

www.freewillsolutions.com
www.freewillsolutionsproducts.com

© **2018 All rights reserved**

Printed in Thailand