

CRANE

FLUID SYSTEMS

PcomPRO

INSTRUCTIONS FOR USE



For Windows
7 / 8 / 10
Computers

OUR GENIUS IS VALVES

CRANE

BUILDING SERVICES & UTILITIES

PcomPRO - Instructions for Use

For Windows 7 / 8 / 10 Computers

INTRODUCTION

PcomPRO Project Application Software is a computer-based system which allows a **ProComm** to be connected to a Windows 7 / 8 / 10 computer so that a PROJECT of up-to 9,000 valves can be created and stored in the meter prior to attending site.

Then, once the commissioning work has taken place, the saved data can be transferred from the **ProComm** to the computer for the purposes of creating commissioning reports.

FIRST-TIME LOADING OF PcomPRO

1. Place the PcomPRO disc into the CD drive of the computer.
2. The disc does not auto-run so view the files using Windows Explorer.
3. Double click on the Windows Driver Software_Install First folder and:
 - a. For a 32-bit* computer, double click on the x86 installer: CP210xVCPInstaller_x86.
 - b. For a 64-bit* computer, double click on the x64 installer: CP210xVCPInstaller_x64.
4. Follow the on-screen instructions to install the Windows Driver Software.
5. In Windows Explorer, double click on the PcomPRO folder and then double click on setup.
6. Follow the on-screen instructions to install **PcomPRO**.
7. Once **PcomPRO** has successfully installed, turn the **ProComm** 'ON' and connect it to the computer using the USB cable provided. The USB connection point is located in the meter's battery compartment.
8. Wait for the computer and **ProComm** to make a connection (this first connection may take a minute or so).
9. When a connection has been made, a message appears on the computer saying: "A valve reference file for your instrument (SNO-XXXX) needs to be created...". Click OK to proceed.
10. Once the valve file has been created, **PcomPRO** will be ready for use.

For Windows 7 PCs, click the **Start button, right-click **Computer**, and then click **Properties**.*

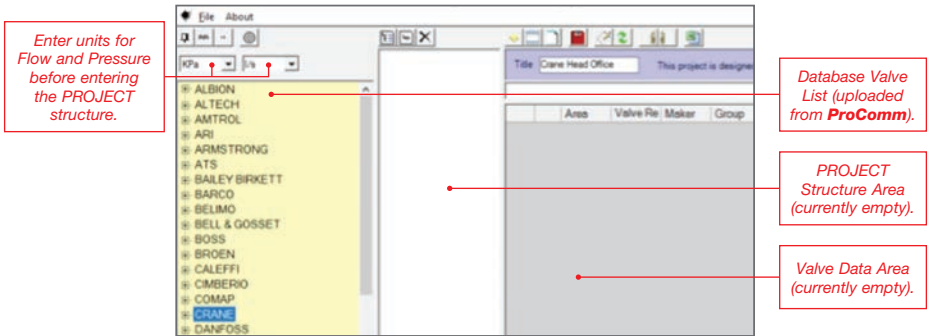
If "64-bit Operating System" is listed next to System type, the 64-bit version is being run.

BUILD A PROJECT

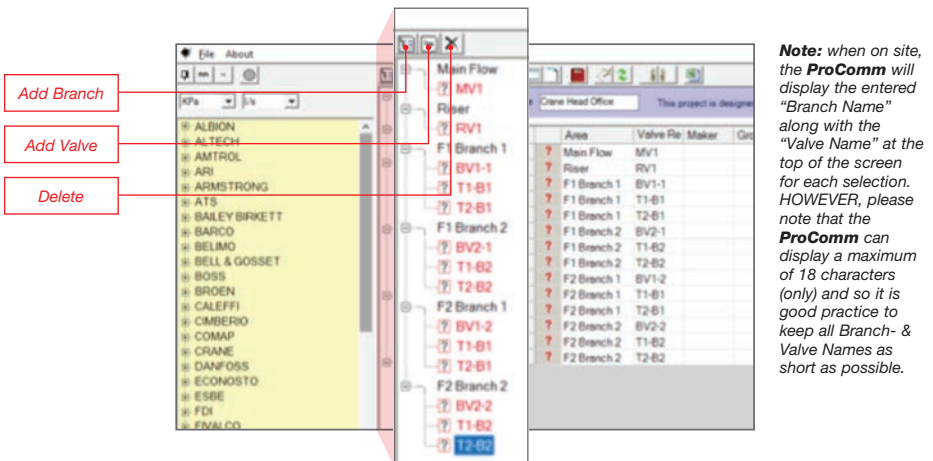
For the purposes of this example, the following PROJECT structure is going to be assumed:

Main Flow	Main Valve	MV1
Riser	Riser Valve	RV1
F1 Branch 1	Branch Valve Terminal 1 Terminal 2	BV1-1 T1-B1 T2-B1
F1 Branch 2	Branch Valve Terminal 1 Terminal 2	BV2-1 T1-B2 T2-B2

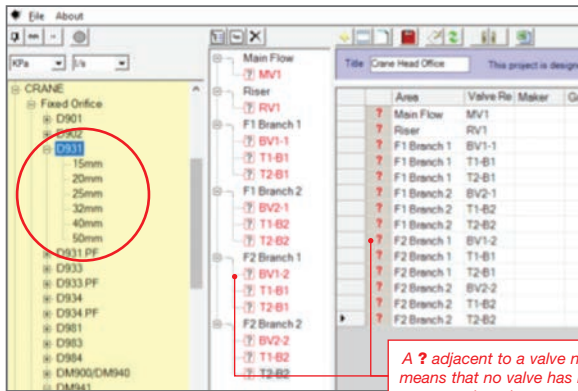
When **PcomPRO** has established a valve database, the user will be prompted to either create a new PROJECT or open an existing PROJECT. Any file name can be used for the PROJECT and, once accepted, the PROJECT Layout screen is displayed as follows:



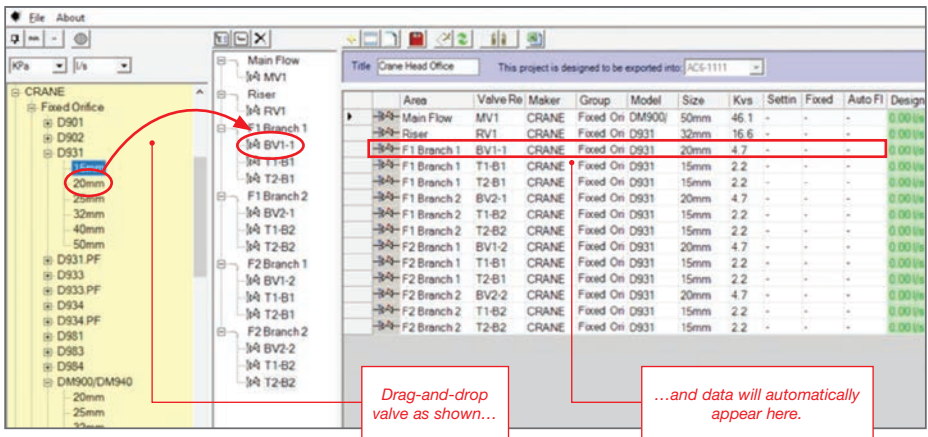
Next, populate the PROJECT Structure Area (enlarged below) by using the Add Branch and Add Valve buttons as shown.



Once the PROJECT structure has been entered, the next task is to drag-and-drop specific valves from the Database Valve List into the named locations. Click on a manufacturer's name to 'expand' and view the available valves.




The drag-and-drop process is illustrated in the following example, which shows a 20mm Crane D931 valve being added to the "F1 Branch 1 BV1-1" location.



Valves that are entered incorrectly can be overwritten or deleted as required. To add a new valve, simply highlight the area where it is to be inserted and press the **Add Valve** button.

Useful tip! Site conditions are rarely exactly the same as the system design and, sometimes, extra valves might be present on site which are not shown on the design schedule. To allow for this, it is recommended that two extra (i.e. spare) valve locations are added to each floor / section. Do not add any valve data – simply show the existence of the valves in the white PROJECT Structure Area. Then, if any 'extra' valves are found on site, it will be possible to record data for them for later upload to the computer.

Once all valves have been selected and entered, the Database Valve List (yellow background) and the PROJECT Structure Area (white background) can be closed using the  button, as these are no longer required.

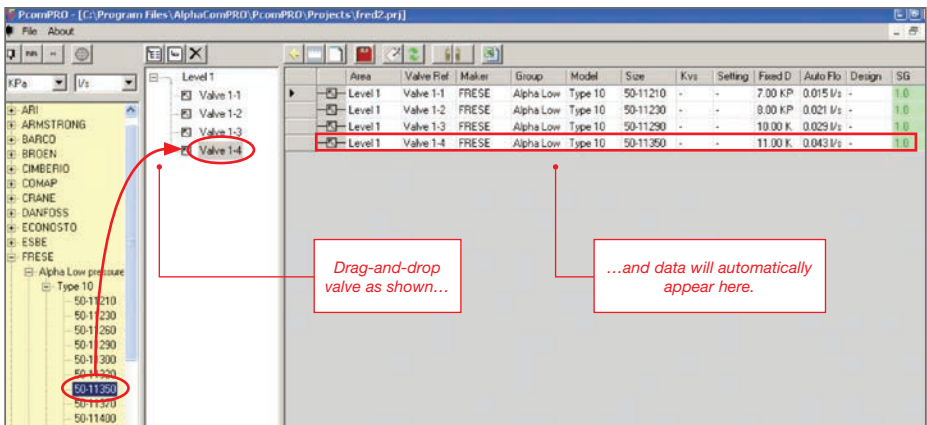
At this point, there will be columns highlighted in green (see below) which can be edited. Most importantly, Design Flows can now be added for each valve.

Area	Valve Ref	Maker	Group	Model	Size	Kvs	Setting	Fixed	Auto FI	Design	SG	Pipe	D.P.	Flow	Des %
Main Flo	MV1	CRANE	Fixed Ori	DM900	50mm	46.1	-	-	-	1.42 l/s	1.0	53 mm	1.23 K	Design	0%
Riser	RV1	CRANE	Fixed Ori	D931	32mm	16.6	-	-	-	0.71 l/s	1.0	36 mm	2.37 K	Design	0%
F1 Branc	BV1-1	CRANE	Fixed Ori	D931	20mm	4.7	-	-	-	0.190 l/s	1.0	21.6 m	2.12 K	Design	0%
F1 Branc	T1-B1	CRANE	Fixed Ori	D931	15mm	2.2	-	-	-	0.090 l/s	1.0	16.1 m	2.17 K	Design	0%
F1 Branc	T2-B1	CRANE	Fixed Ori	D931	15mm	2.2	-	-	-	0.100 l/s	1.0	16.1 m	2.68 K	Design	0%
F1 Branc	BV2-1	CRANE	Fixed Ori	D931	20mm	4.7	-	-	-	0.190 l/s	1.0	21.6 m	2.12 K	Design	0%
F1 Branc	T1-B2	CRANE	Fixed Ori	D931	15mm	2.2	-	-	-	0.090 l/s	1.0	16.1 m	2.17 K	Design	0%
F1 Branc	T2-B2	CRANE	Fixed Ori	D931	15mm	2.2	-	-	-	0.100 l/s	1.0	16.1 m	2.68 K	Design	0%
F2 Branc	BV1-2	CRANE	Fixed Ori	D931	20mm	4.7	-	-	-	0.165 l/s	1.0	21.6 m	1.60 K	Design	0%
F2 Branc	T1-B1	CRANE	Fixed Ori	D931	15mm	2.2	-	-	-	0.080 l/s	1.0	16.1 m	1.71 K	Design	0%
F2 Branc	T2-B1	CRANE	Fixed Ori	D931	15mm	2.2	-	-	-	0.085 l/s	1.0	16.1 m	1.93 K	Design	0%
F2 Branc	BV2-2	CRANE	Fixed Ori	D931	20mm	4.7	-	-	-	0.165 l/s	1.0	21.6 m	1.60 K	Design	0%
F2 Branc	T1-B2	CRANE	Fixed Ori	D931	15mm	2.2	-	-	-	0.080 l/s	1.0	16.1 m	1.71 K	Design	0%
F2 Branc	T2-B2	CRANE	Fixed Ori	D931	15mm	2.2	-	-	-	0.085 l/s	1.0	16.1 m	1.93 K	Design	0%

The three columns to the right of the green columns will be auto-filled when the live site data is recorded. If a Design Flow has been entered, the % Design Flow will also be displayed.

SELECTION OF AUTOMATIC BALANCING VALVES WITH A SINGLE CARTRIDGE

Whereas ‘traditional’ balancing valves are selected using figure number and size – with a Design Flow manually entered – the selection of single automatic balancing valve cartridge is based entirely on the Design Flow. It is normal for each cartridge to represent a single Design Flow and, as a result, there are usually a large number of cartridge options. Cartridges are normally designed such that they can fit into a variety of body sizes but, from a commissioning point of view, the body size is irrelevant.



Drag-and-drop valve as shown...

...and data will automatically appear here.

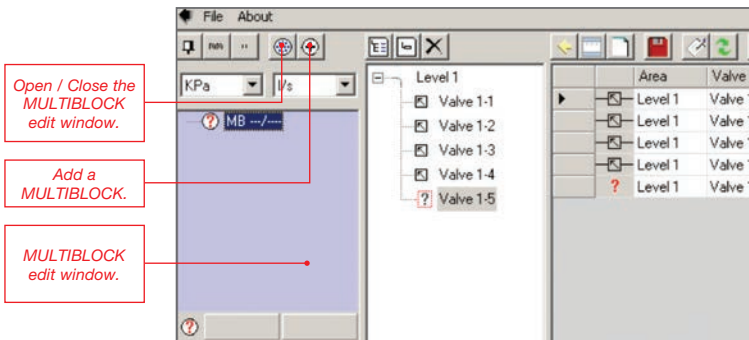
Area	Valve Ref	Maker	Group	Model	Size	Kvs	Setting	Fixed	Auto FI	Design	SG	
Level 1	Valve 1-1	FRESE	Alpha Low	Type 10	50-11210	-	-	-	7.00 KP	0.015 l/s	-	1.0
Level 1	Valve 1-2	FRESE	Alpha Low	Type 10	50-11230	-	-	-	8.00 KP	0.021 l/s	-	1.0
Level 1	Valve 1-3	FRESE	Alpha Low	Type 10	50-11290	-	-	-	10.00 K	0.029 l/s	-	1.0
Level 1	Valve 1-4	FRESE	Alpha Low	Type 10	50-11350	-	-	-	11.00 K	0.043 l/s	-	1.0

Cartridges are dragged-and-dropped to the PROJECT as previously described for conventional valves. But, the data that is entered to the PROJECT will differ slightly in that the Design Flow has already been determined by the selection of the cartridge and will be automatically entered.

SELECTION OF AUTOMATIC BALANCING VALVES WITH MULTIPLE CARTRIDGES

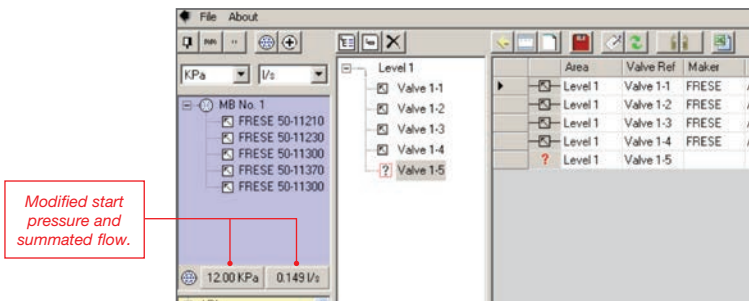
For systems that use automatic balancing valves in sizes 65mm and above, it is normal for the valve to be designed in 'wafer' format such that the valve is fitted with multiple cartridges, which effectively 'summate' to give the desired flow. This combination of cartridges is referred to in **PcomPRO** as a MULTIBLOCK.

A MULTIBLOCK can be defined in the MULTIBLOCK Editing Area using the buttons highlighted below:



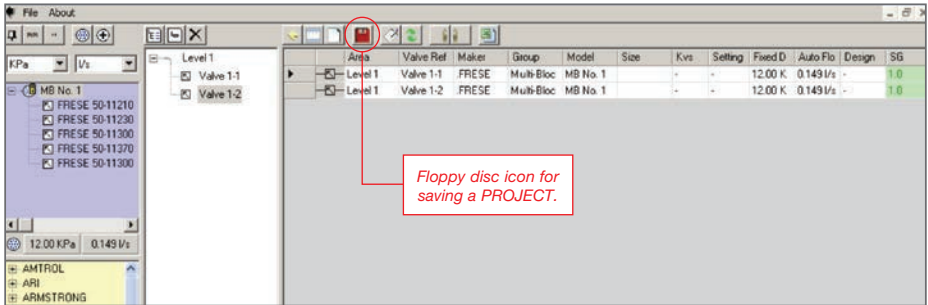
Any number of individual cartridges can be dragged-and-dropped into the MULTIBLOCK. The drag-and-drop process continues until the valve conforms to the design data.

Note: some MULTIBLOCK valves can have many cartridges of differing flowrates and differing start-pressures. The edit window automatically summates the individual Design Flows and also selects the largest of the start-pressures. It is good practice to select cartridges with similar start-pressures.



In the above example, the MULTIBLOCK consists of five cartridges.

When the MULTIBLOCK has been defined, it is a simple process to drag-and-drop it to the relevant valve location in the same manner as for conventional valves.



The MULTIBLOCK valve will be ‘remembered’ by **PcomPRO** and cannot be deleted if it has been used by a PROJECT. If it is necessary to delete a MULTIBLOCK, it must first be ‘UNLOCKED’ and this can be carried out by right clicking on the MULTIBLOCK.

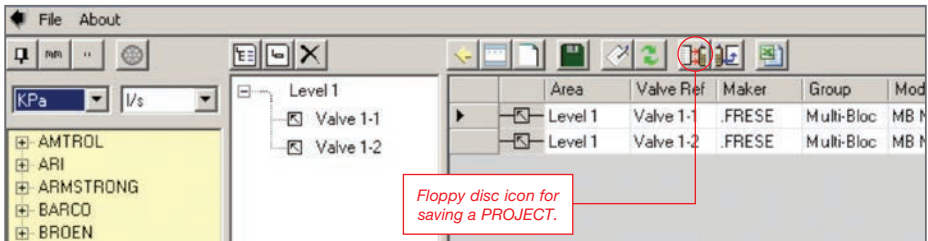
SAVING PROJECTS

During the process of building a PROJECT, the floppy disc icon (shown above) will be displayed in red. This colour signifies that the file has not been saved as yet. Click on the floppy disc icon and the PROJECT will be saved. Using the ‘File Save As’ feature in the File menu will allow the PROJECT to be saved under a different name.

TRANSFERRING THE DATA TO THE **PROCOMM**

With the PROJECT complete in **PcomPRO** and the appropriate **ProComm** connected, the data can be transferred. With the **ProComm** switched ‘ON’, click the transfer data button (as shown below) to start the transfer of data from the computer to the **ProComm**.*


**With a capacity of 9,000 valves, this process can take several minutes to complete and it is possible that the ProComm’s Auto-Off Timer will activate prior to completion. To avoid this, it is recommended that an Auto-Off Timer setting of “Always On” should be selected before the transfer is started.*





The user will be prompted when the transfer is complete and the **ProComm** can then be safely disconnected from the computer

TAKING READINGS ON SITE

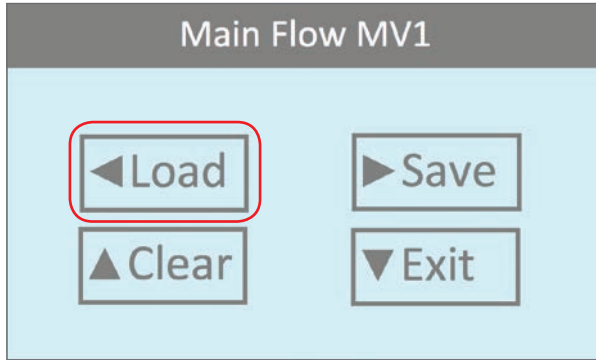
It is recommended that the Multi Display screen is used as this will show the % of Design Flow being measured. Initially, the valve details shown will be those of the last selection made (in this case, a Crane DM931 65mm).

8.00		0.00 KPa	
		0.000 l / s	
85.00 Kvs			
◀	DESIGN 0%	▶	TARGET ---%
Crane Variable DM931 65mm			


Connect the **ProComm** to the Main Flow valve which, in this example, is a Crane D931 50mm. Then, to retrieve the stored data for the Main Flow valve, press the  button and the following screen will appear:

Main Flow MV1			
Crane Fixed Orifice D931 50mm			
0.00 KPa		0.000 l/s	
	DESIGN 0%	TARGET ---%	
	DESIGN FLOW 2.86	TARGET FLOW ---%	

Pressing the **MENU** button will display the following options:




Press the ◀ button to LOAD the stored valve data so that it becomes the currently selected valve of the **ProComm** (i.e. taking the place of the Crane DM931 65mm).

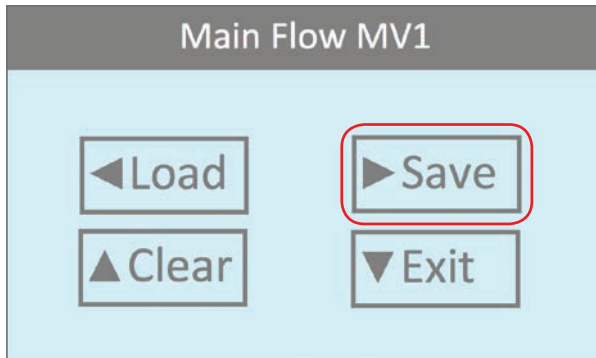
			
		4.77 KPa	
46.1 Kvs		2.80 l / s	
DESIGN	98%	TARGET	-- -%
Crane Fixed Orifice D931 50mm			

The Multi Display will now be shown once again but, this time, with the D931 as the current selection.

Once the readings have settled, press the ✓ button...


Main Flow MV1		
Crane Fixed Orifice D931 50mm		
0.00 KPa		0.000 l/s
	DESIGN 0%	TARGET - - %
	DESIGN FLOW 2.86	TARGET FLOW - - %

...followed by the **MENU** button...



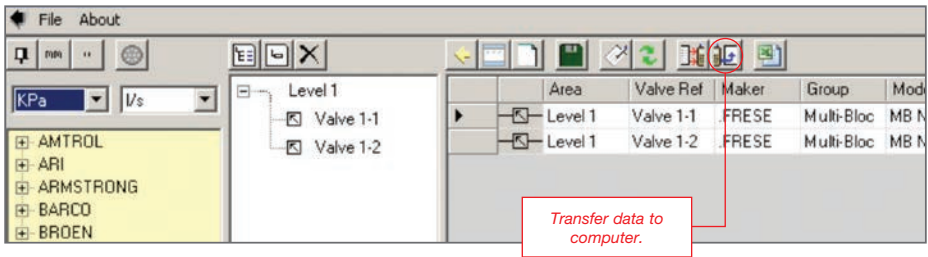
...followed by the ▶ button to **SAVE** (overwrite!) the data currently stored in the Main Flow MV1 location (with no commissioning data) with the current meter reading (including commissioning data).

After the SAVE operation, the storage location will contain the actual commissioning data as shown below.

Main Flow MV1		
Crane Fixed Orifice D931 50mm		
4.77 KPa		2.80 l/s
	DESIGN 98%	TARGET - - %
	DESIGN FLOW 2.86	TARGET FLOW - - - %

Now use the ▲▼ buttons and the ◀▶ buttons, as necessary, to select the next valve for which readings will be taken and repeat until all readings have been taken and stored.

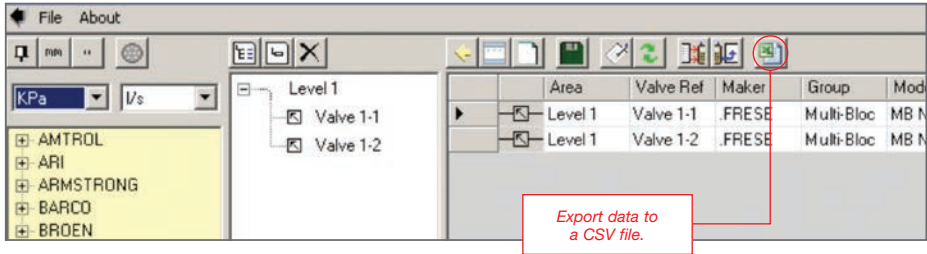
On completion of the site work, the commissioning data can be transferred to the computer using the upload button.



When transferring the site data to the computer, it will be necessary to save the PROJECT with a different file name to the original. This will enable the design- and site-conditions to be kept separate.

EXPORT THE PROJECT TO A CSV FILE

To export the PROJECT to a CSV file, click on the Export Data button (shown below) and define the file name and location in the normal way. The resulting file can then be opened in spreadsheet format using Microsoft™ Excel™.



FM311 ISO 9001

CRANE HOUSE, EPSILON TERRACE,
WEST ROAD, IPSWICH,
SUFFOLK IP3 9FJ
TELEPHONE: +44 (0)1473 277300
FAX: +44 (0)1473 277301
EMAIL: enquiries@cranefs.com

www.cranefs.com

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