



## **Sprinkler Systems: much more than a hose and water**

*By Nerida Kelton (November 2005)*

We see them everyday. They are in parks, on football fields, golf courses and farms and yet we are oblivious to the complexity of what they do and the strategic planning that is undertaken to ensure that they are efficient solutions for irrigation.

Not in your wildest dreams would you realise that a sprinkler system can in fact be made up of eight different components that are pre-determined by things like the type of crop, soil type, wind velocity and application rate for water spray. Nozzle sizes are selected depending on the performance levels required for the application, the degrees in which a sprinkler spraylet plate rotates is chosen subject to what is being watered, and volume capacity and pressure of the jet of water is determined by the amount of coverage needed specific to that application.

For leading irrigation manufacturer Nelson Irrigation all of this is second nature and knowing what nozzle goes with what spraylet plate is as easy as ABC. Nelson Irrigation specialise in agricultural irrigation equipment that helps save water, save energy and do a better job of irrigation. Nelson Irrigation plans, designs, manufactures and sells a full range of proprietary irrigation products that are sought after by farmers, residential users, councils, hotels, and landscapers alike. Renowned for their water saving abilities, Nelson Irrigation products are leading the revolution in sprinkler technology.

### **The problems with their Product Configuration**

With over 20 product ranges that each has over 200 options for resale, it is imperative that Nelson Irrigation has an automatic database system that can match this technical knowledge and be capable of configuring every product as an individual line item each and every time to suit the exact requirement of the customer.

The problem with their previous software was that it did not have the ability to individually itemise each and every product configuration on their Invoices and this was becoming a major problem for their resellers. Invoices were being sent out and resellers were finding them difficult to understand. With only one available line listed per Invoice the individual components that made up the total product were not listed or even identified. Whilst Nelson Irrigation had an extensive and efficient resellers book their Invoicing capabilities were less than impressive.

### **The Objective**

According to Danny MacQueen, Nelson Irrigation were looking for product configuration software that could be easily adapted and customised to suit their ever-changing needs. One that had the flexibility to provide three and four line items per Invoice and that could clearly and easily identify the series of configurations that made up each final product.

### **Key Points for the Solution**

Nelson Irrigation wanted a product configuration solution that would resemble their resellers book and have the ability to link the data to their Invoicing, Inventory, Manufacturing, Accounting and tracking systems. They sought a flexible system that could clearly itemise each product configuration on an Invoice and have the ability to customise orders accordingly. Nelson were also looking for a system that could easily be maintained in-house and would therefore constantly match the current sales book for resellers.

“We have an extremely efficient resellers book that has recently grown to 400 pages in size and lists all available options, variations and possible configurations for our full irrigation product range. We wanted an Invoicing system that would resemble this and we found it in SYSPRO Product Configurator.” Mr MacQueen said.

### **What is SYSPRO Product Configurator?**

The objective of SYSPRO Product Configurator is to facilitate rapid product configuration, within sales-orders, by non-technical people and allow easy customisation of products to meet specific customer requirements.

The value of SYSPRO Product Configurator is that it has been developed as a rules-based configuration system to ensure viable products and improve order entry by being able to configure complex products on the fly. The system provides an option to configure a standard inventory item and has the ability to maintain a library of common configurations to easily repeat orders without having to store and retrieve hundreds or thousands of different bills of materials.

With SYSPRO Product Configurator quotations and orders can easily be configured by non-technical staff, freeing up qualified staff, engineers and designers. Proven engineering data can be saved and re-used, to eliminate errors from quotations and ensuring that each order is profitable.

Linking directly into SYSPRO's production module, the Product Configurator can directly generate work orders. Order management is integrated with purchasing and financial data in a single system.

Nelson Irrigation also wanted the ability to allocate stock from the SYSPRO Product Configurator database directly and automatically to sales orders and hence be able to match inventory levels at all times from the same system.

According to MacQueen "Our old system was extremely confusing and inconvenient and it was not familiar with all of our product configurations and did not have the capability of customising individual sales."

"We investigated quite a number of solutions and one of the main reasons that we chose SYSPRO Product Configurator was due to the service providers behind the product, ProActive Integrators (PI). We really wanted a local company that we could rely on and access for training and implementation planning," Mr MacQueen said.

"The knowledge that the ProActive Integrators (PI) staff have of the SYSPRO Product Configurator is outstanding and they even sent two of their senior principals to work with us every step of the way. One was an expert in the financial modules and the other was extremely efficient in inventory modules and between them they

The team at PI helped Nelson Irrigation transfer from a DOS based system with extremely different parameters, which saved valuable time and dramatically reduced operator errors. The PI team helped Nelson Irrigation configure SYSPRO's product and option selection to resemble the resellers book and adapted the modules so that they could have the flexibility to modify the parameters at any stage in the future should they wish.

**Benefits for Nelson Irrigation:**

SYSPRO Product Configurator helps controls Nelson's inventory by automatically allocating components from the inventory to make the non-stocked items configured within the customer sales orders. Once the components are moved into a sales item and then transferred onto an Invoice, they are taken out of the inventory and stock levels are real time and accurate.

SYSPRO also has the ability to trigger alerts for inventory levels, stock-outs, delivery times and dates and much more. It has an accurate reporting function which can develop and identify inventory levels, sales levels and orders ready for processing.

**Benefits for Nelson Irrigation:**

- SYSPRO Product Configurator is ideal as it has been developed to suit 'configure to order' companies that require top level assembly in order entry
- Defines selection criteria to determine the number of options presented for configuration
- Allows the selection made at one level to determine the available selections at other levels
- Ensures that the Invoice has individually itemised each component in the total sale configuration
- Resembles the reseller book for Nelson Irrigation
- Provides flexibility to modify and adapt configurations
- Over 4000 product configurations within the system
- Stores and recalls commonly used configurations
- Easy to use and non-technical people can configure orders and Invoices
- Frees up technical designers and engineers
- Creates component dependencies based on options

- Checks availability of critical items before processing
- Optionally, generates a standard inventory part and BOM from the configured selections
- Links to SYSPRO's production modules providing the ability to generate work orders from the configuration
- Links the options to stock codes and operations
- Checks the gross profit on the configured items to ensure profit remains within acceptable limits
- Tests the configurations to verify that all the available options are dealt with accurately
- Defines invalid selections to verify that each configuration complies with technical requirements
- Checks the availability dates for resale products
- Integrates with SYSPRO Inventory Control, Sales Orders and Invoicing, Quotations & Estimating, Bill of Materials and Work in Progress modules.
- Generates labour requirements based on configuration selections

“SYSPRO Product Configurator is easy to use and has been trouble-free. Nelson Irrigation can now provide accurate and detailed Invoices that match the configuration of the sale and we have a system that resembles our resellers book. ProActive Integrators taught us how to look after ourselves and we know that the local support and backup is there if we ever need it in the future.” Mr MacQueen said.

What is most amazing is that every crop, soil and surface vary and only irrigation experts like Nelson Irrigation would even realise that Apples have a 15 degree trajectory, grapes 9 degrees, some crops don't need regular moisture, whilst other can't be watered on their leaves. Makes you realise that a sprinkler system is not as simple to put together after all doesn't it?

**...ENDS...**

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