



# Configuration of hydraulic cylinders and components

Managing and automating the sales offer workflow along with CAD modeling and PDM classification.

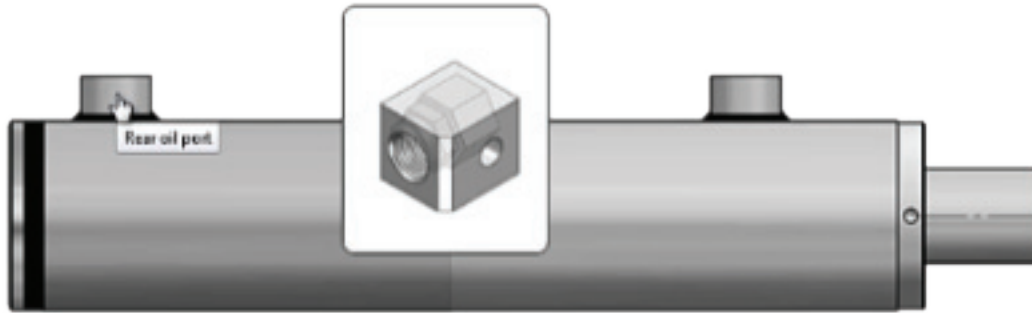
<http://configurator.ruledesigner.com>

IMPLEMENTATION PROJECT



**CONTARINI**<sup>®</sup>

Interpump Hydraulics International



## The Context.

Contarini operates in a highly dynamic environment in which services provided are levers for competitive advantage.

In order to better understand the needs and desires of its customers, the company started a process of analysis and development of new services. At the end of the process, Contarini considered that providing customers with a new service for configuring their desired product would have been a great opportunity for the business.

## Challenges.

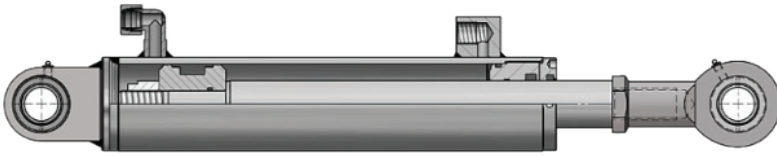
- Realize a value-added service while reducing product lifecycle lead times and optimizing costs.
- Develop the new service for managing and automating the pre-sales workflow, spanning from the identification of the customer's desired product to the order placement
- Integrate the new service into the product development process and support interdepartmental collaboration
- By providing the new service, actively involve each individual customer in the configuration process of their customized products.

Our servitization strategy allowed us to reduce time to respond to customer's requests by 80%. Today, we are able to provide customers with the quotation of their customized product and related drawings in 24 hours.

Andrea Mascellani  
Technical Manager at  
Contarini Leopoldo srl

## The Solution.

To achieve its goals, Contarini Leopoldo reconfirmed his confidence by choosing Engineering PLM Solutions team and RuleDesigner technology as a performing collaborative application and process automation solution, extending the use of RuleDesigner from PDM management to product configuration.



DOUBLE ACTING CYLINDER Ø 60 / 50 x 30 STROKE 200 CLOSED CENTRE 522 - WEIGHT 13.07 Kg

| Item                          | Code        | Description                                   | Material                                    | Kg    |
|-------------------------------|-------------|---|---|-------|
| TUBE                          | FT0000000   | POLISHED TUBE H9 Ø 60x050 ( 6.78)             | STEEL ST 52.3 DIN 2393 ISO H9               | 2.091 |
| FRONT OIL PORT1               | OB0000000   | OIL INLET SUPPORT 06-3/8 30x30xL-33           | COLD DRAWN SQUARE BAR S235JRC-C             | 0.002 |
| REAR OIL PORT1                | RO0941BLR0  | TR 94-18 LR 1/2 FITTING standard              | STEEL                                       | 0.17  |
| END-PLUG                      | CP0000000   | END-PLUG Ø 30-065                             | STEEL S355J0 ( F6810C )                     | 0.19  |
| ROD                           | FAC030L000  | CHROME PLATED ROD CAS Ø 030 20my 160h (05.56) | ACCIAIO UNI CAS SAE1045 CROMO 25 µ ±5 120h. | 2.118 |
| HEAD BUSH                     | CS00005030  | HEAD BUSH M250 Ø 050-030                      | (MESA OLEODINAMICA UNI 5007-025             | 0.39  |
| SEAL KIT FOR HEAD BUSH        | SK000050030 | SEAL KITS FOR "C0" HEAD BUSH Ø 050-030        | VEDI TABELLA KIT GUARNIZIONE                |       |
| PISTON                        | CT00000020  | PISTON M250 Ø 050-20                          | ACCIAIO S59K20                              | 0.31  |
| SEAL KIT FOR PISTON           | SK000050020 | SEAL KITS FOR "C1" PISTON Ø 050-020           | VEDI TABELLA KIT GUARNIZIONE                |       |
| LOCKNUT                       | CD00002015  | LOCKNUT M20x1.5 H.22                          | ACCIAIO UNI 7473-7474                       | 0.07  |
| FRONT FEATON                  | CST0002500  | BALL JOINT END TFS.25 PK(40DO)                | STEEL ISO 12240-4 SERIES E - TYPE F         | 0.64  |
| REAR FEATON                   | CST0000000  | BALL JOINT END T5.N 080                       | STEEL ISO 12240-1 SERIES E                  | 7.1   |
| FRONT CAP FOR THREADED HOLES1 | AP00000000  | CAP FOR THREADED HOLES 3/8" (Ø 16 )           | POLYETHYLENE L.D.                           |       |
| FRONT LOCKNUT                 | ADE0024200  | SHORT NUT M24x2 h.10 UNEN 28675               | STEEL                                       |       |
| MARKING                       |             |   |   |       |

## Configuration of hydraulic cylinders and components

# Implementation.

By using RuleDesigner Configurator, Contarini Leopoldo srl was able to realize and make available on the corporate web site a process for configuring hydraulic cylinders and components manufactured by the company itself.

Different groups of users have been configured, including customers, salesmen and internal technical staff. Access to the configuration environment is restricted to these users which are authorized to interact and consult information on the basis of their account access rights.

Thanks to an intuitive step by step interface, the customer is driven all along the configuration of the desired product.

From the configurations run on the web, the system, retrieving information from the corporate knowledge base and driving Solid Edge, automatically generate both the CAD model and the offer document. The sales offer is issued on the corporate institutional paper and it is complete of detailed information, explanatory images and quotation.

Configurations are notified to the appointed internal references and are submitted to the expected approval workflow.

Specifically, salesmen have access to product configurations directly from the customer file within the CRM system, in order to verify, control and, eventually, edit configurations.

The technical office benefits from the configuration process to perform design automation tasks, generate drafts, classify PDM part-numbers, generate bill of materials, define processing details and final costs.

At the end of the internal approval workflow, the system sends the final offer to the customer enclosing the technical draft of the configured product both in PDF and 3D step format.

- Sales Offer Configuration
- Design Automation with Solid Edge
- Automatic generation of PDM part-numbers and BOMs
- Multilingual management
- Integration with the corporate CRM

## Configuration of hydraulic cylinders and components

# Results

RuleDesigner supports and automates the pre-sales workflow, facilitating and speeding up the tasks of different corporate functions such as the design office, the estimating and sales department.

Moreover, it has contributed to:

Improve the company's performances in terms of number of quotation managed and speed the time to issue them.

Save time from designers daily tasks, including design activities, PDM part-numbers classification and BOMs production.

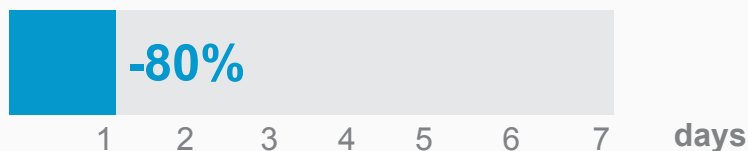
By using RuleDesigner, the company provide a high-quality service to its customers that actively participate in the configuration process of their desired products, getting back comprehensive and correct informative documents.



\*DATA REFER ONLY TO THE FIRST QUARTER OF USE, WHICH INVOLVED 30 AMONG CONTARINI LEOPOLDO SRL MAJOR CUSTOMERS.

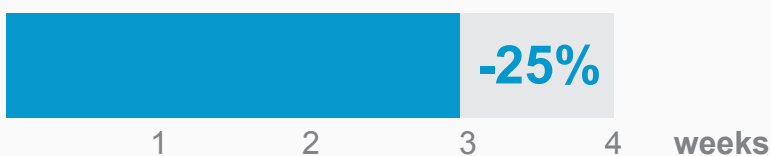
### Impact on the time to issue a quotation:

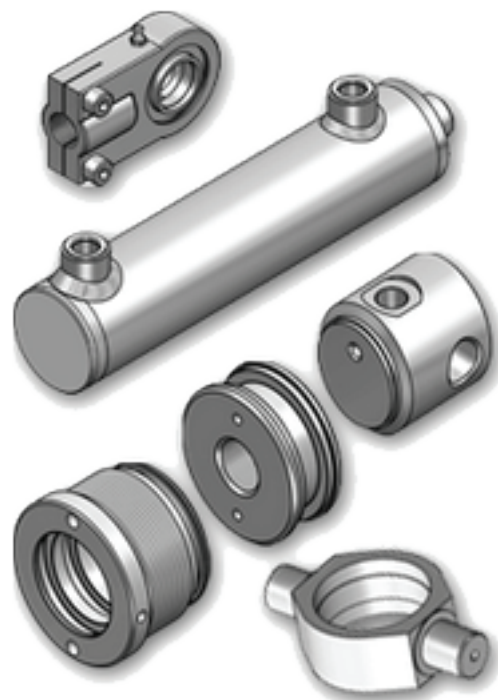
Lead time from the Offer Request to Quotation  
Expressed in days



### Impact on the product flow:

Lead time from the Offer Request to the Delivery to Customers  
Expressed in weeks





## Company

The company Contarini Leopoldo Srl with over 60 years of experience in hydraulics is a leading manufacturer of hydraulic cylinders and components.

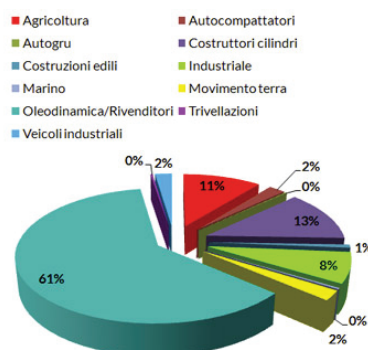
The wide range of standard products in stock and the competence to support its customers by manufacturing custom-made cylinders make the company a versatile and reliable partner.

In 2008, CONTARINI joined Interpump Group SPA, world's largest manufacturer of professional high-pressure piston pumps and one of the main groups operating on the international markets in the hydraulic field.

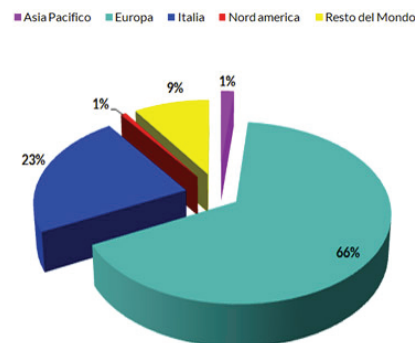
## Industry

Founded in 1958, the company CONTARINI LEOPOLDO SRL is specialized in the manufacturing and in the sale of hydraulic cylinders and components. Furthermore, CONTARINI is a reliable partner for all the hydraulic parts within the hydraulic system. CONTARINI combines its industrial size with an artisan accuracy, assuring a remarkable quality. Thanks to its selected staff, always up to date with a constant training, the company can supply solutions for hydraulic system, helping the customer with the consulting, the design and the development. CONTARINI was the first company in the market to supply a series of cylinder components to assemble welded cylinders. At the present time it is the only company to have standardized a complete series in both millimeters and inches.

Settori di vendita (%)



Suddivisione fatturato per aree geografiche (%)



CONTARINI LEOPOLDO SRL

Via A. Volta, 34  
48022 Lugo di Romagna (RA) - Italy  
T. +39 0545 281111 -  
F. +39 0545 281114 / 30342  
Email: mbox@contarini.net





## Company

ENGINEERING PLM Solutions was founded as a spin-off of the R&D division of the well-established ENGINEERING SpA, a system integrator in the CAD/PLM business since 1986.

ENGINEERING PLM Solutions, leading player in the PLM industry, developed RuleDesigner, the integrated suite of PLM applications.

RuleDesigner Fusion project started in 2004 in order to merge all the offering of the company in one single enterprise platform, innovative and focused on a rule-based methodological approach. Fusion was launched in 2010.

Today, RuleDesigner is an innovative collaborative platform and process automation solution for the extended enterprise.

ENGINEERING PLM SOLUTIONS SRL  
Via Dismano 773  
RAVENNA (RA) - Italy  
T. +39 0544 554949  
Email: [marketing@ruledesigner.com](mailto:marketing@ruledesigner.com)  
Web: [www.ruledesigner.com](http://www.ruledesigner.com)



## Solutions

Extended PLM for an enterprise-level management

RuleDesigner merges the PLM and CRM world in a modern web enterprise platform. It is able to support the development of daily activities, track and develop the network of relationships both inner and outer the company and manage the product lifecycle progress, since the concept phase. Also, RuleDesigner makes the relationship between business departments smooth and efficient in a collaborative perspective aimed at increasing efficiency and information sharing across business processes. Finally, it allows to track information, documents and communication exchanged with customers at all stages, till the service. It supports and strengthens the relationships between the company and its stakeholders such as customers, suppliers, co-designers, retailers and partners by providing them with web services.

Product configuration enabling automation across corporate processes.

RuleDesigner Configurator allows to automate most of the activities involved in the process of product development, since the offer-stage. It is a technical and sales Configurator that, on a rule-driven base, permits to describe rules for product and document configuration and process automation. A flexible and transversal tool aimed at achieving the maximum efficiency all along the PLM processes: sales configuration supports the sales dept.; product technical configuration backs the design team and, finally, automatic generation of data or documentation and automation in workflows promote the progress of inter-departmental activities.