
An Introduction and How to Use Seal Quick Searcher™ (SQS) —Elastomer Version—

1. Introduction

We started our gasket version of Seal Quick Searcher™ (SQS) in April 2014 under the following concept: the user can freely select search keywords to obtain product information and specifications more easily and quickly through SQS, which can process a much wider vocabulary.

This SQS can not only retrieve product information such as Web catalogs but also includes Valqua's unique system of employing temperature- and pressure-selection figures and graphs in the output displays for assisting product selection (patent pending for "A system to select recommended sealing materials").

This report introduces the elastomer version of SQS, which we started in October 2014.

2. Characteristics of Seal Quick Searcher™

Seal Quick Searcher™ is designed to support diverse customers ranging from those who usually use our products to those who do not know what products to use under given conditions or whether their intended product is suitable for their objectives. This report introduces these features for assisting product selection.

2-1) Various approaches

The elastomer version of SQS enables a search to be made based on shape, application, and rubber material. This search mechanism was designed for product search assuming: that the customer has already determined the shape, but does not know the

part numbers of optimal products; that the customer has already determined a material based on performance, but does not know available options regarding the shape, or that the customer has already determined a usage condition, but does not know the optimal shape and material.

2-2) Selection of optimal material

Ten to 15 types of elastomer material can be used as sealants. However, even just one material has different physical, oil-resistance, and chemical-resistance characteristics depending on how it is used. One example of a marked difference in characteristics is as follows. Even for O-rings having the same shape, the material should be chosen depending on the purpose. For O-rings used under static conditions in which long-term reliability is a priority, materials offering good anti-compression set (settling resistance) are optimal; for O-rings used under dynamic conditions, not only anti-compression set but also resistance to damage caused by sliding, such as abrasion resistance, should be prioritized when selecting a material.

The elastomer version of SQS employs our expertise in material selection. In SQS, customers can select a product application and usage conditions, and then SQS automatically suggests the optimal material.

2-3) Links to technical information

As Figure 1 shows, SQS displays associated information as a search result on product characteristics and service conditions (the range of applicable conditions). SQS also shows links to technical and dimensional data of *VALQUA Handbook* to facilitate

understanding of more detailed product information and dimensional lineups.

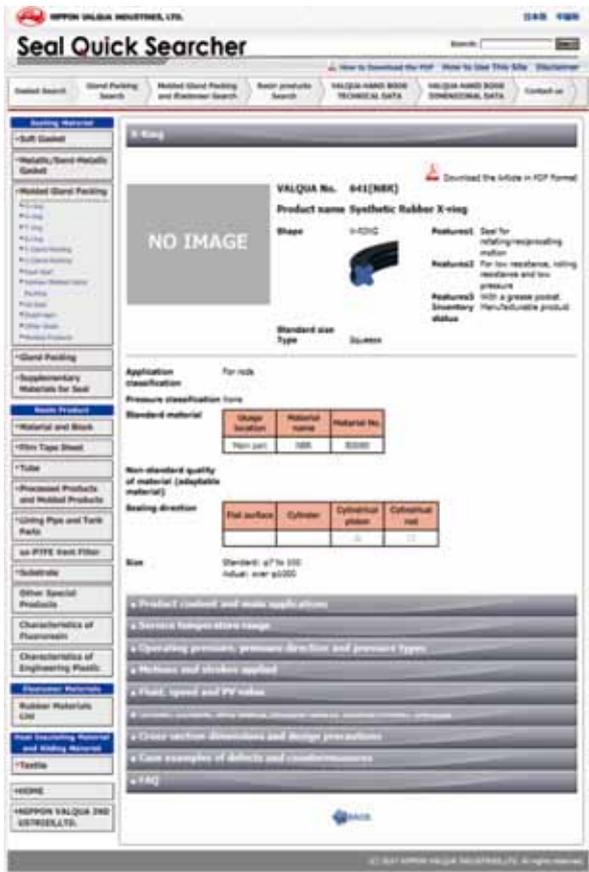


Figure1 An example of SQS search result

3. An Example of Searching Using SQS

Although most customers have already used SQS, this section introduces practical examples of using the elastomer version of SQS for searching, which was introduced in the above section, focusing on its main characteristics.

3-1) Searching approach

As Figure2 shows, the elastomer version of SQS enables searching based on the following variables:

- ① shape,
- ② product application and industrial field,
- ③ rubber material.

① Regarding the approach based on shape, customers choose one of the shapes shown in Figure3, and enter usage conditions. SQS then displays the primary output as shown in Figure6.

② Regarding the approach based on product application and industrial field, customers enter a field and then usage conditions. SQS then displays the primary output as shown in Figure4.

③ Regarding the approach based on rubber material, customers select the material/material No. as shown in Figure5, then SQS displays the primary output as shown in Figure6.



Figure2 Search approach

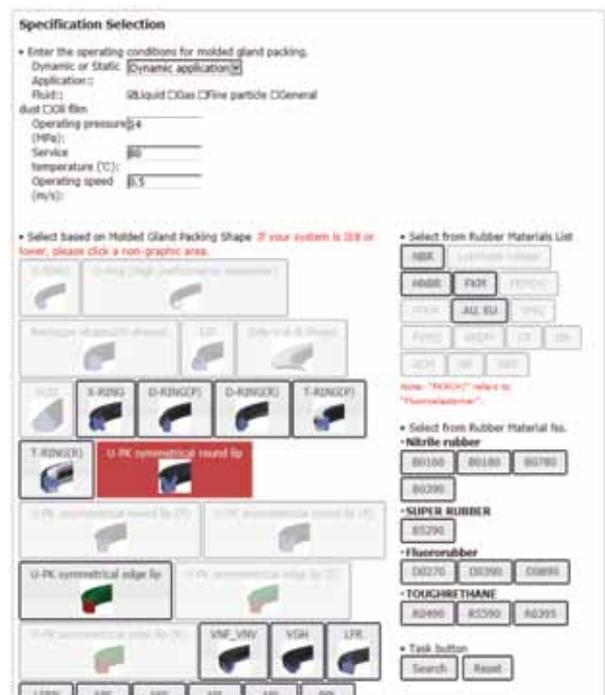


Figure3 ① Input for searching based on shape



Figure4 ② Input for searching based on field

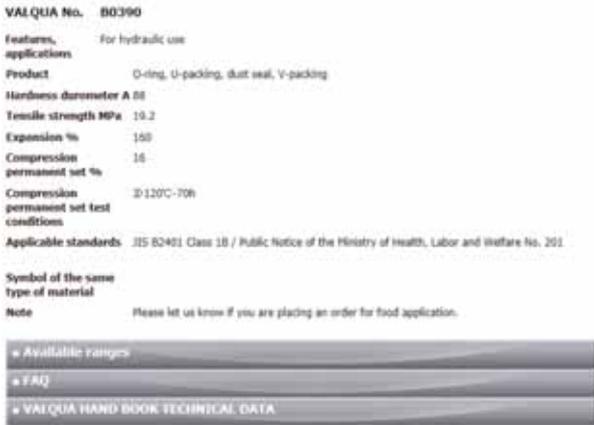


Figure5 ③ Input for searching based on material

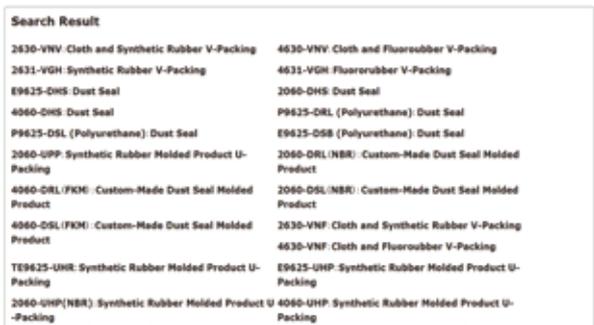


Figure6 Primary output

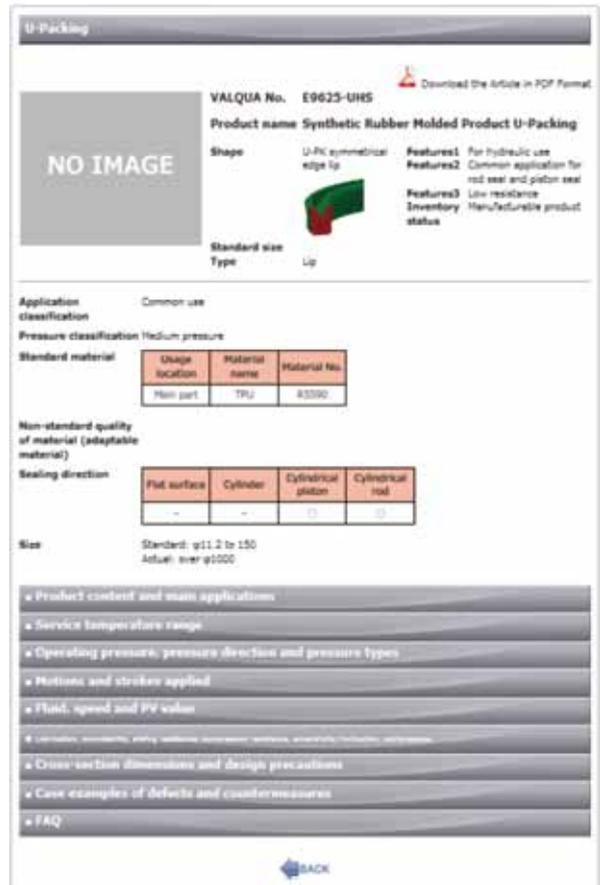


Figure7 Secondary output

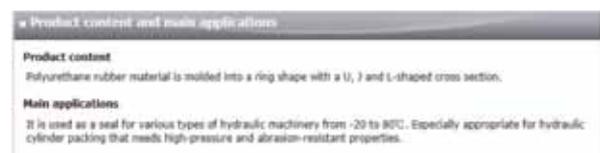


Figure8 Tertiary output: product contents and main applications

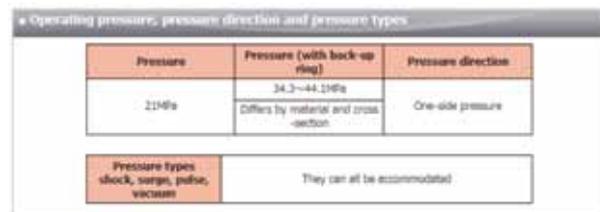


Figure9 Tertiary output: operating pressure, pressure direction, and pressure type

3-2) Search Results

Part numbers and products shown as the primary output are a list of applicable products which correspond to the input variables. When a given part number or product is selected, detailed product information is shown as the secondary output as shown in Figure7. After selecting a given variable from the secondary output (tabs on the bottom section of the display), more detailed information including the information shown in Figures8 and 9 (product information and operating-pressure information) is provided (the information shown is an example).

4. Conclusion

The elastomer version of Seal Quick Searcher™ is a search system programmed to use information which customers select from a Web product catalog, to suggest seal options which meet the customer's usage conditions and equipment, more quickly and robustly,

without making mistakes in product selection. Please use SQS, which will help you to find the ideal sealant for your needs.

Looking ahead, we will make SQS even more user-friendly, easier to understand the output, and more technologically informative, thus supporting customers further.



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