

**TIMKEN**

**SEAL SELECTION TOOL  
USER'S MANUAL**

**USER'S MANUAL: TABLE OF CONTENTS**

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## 1.1 Overview

The Seal Selection Tool is a web-based tool which provides an easy interface for finding seal(s) based on the requirements. The tool provides technical specifications for a seal for a given part number. This tool also helps find suitable Timken seal part numbers against competitor seals.

To select a seal using this application, choose one of the search criteria provided in the UI, i.e. Seal Specifications for each category (Oil Seal, VRing-Seal, O-Ring, Redi-Sleeve, Wear Sleeve, Oil Bath Seal, Oil Kit Seal, Felt Seal), Part number, Competitor Interchange. Pages relevant to the chosen search criteria will be presented to the user. Click the search button to view search results in a tabular format (Result Grid).

This tool also has options to further filter the Result Grid and refine it with subsequent selections from the options provided in the Result Grid.

The Result Grid provides an option to view (part number-based link label) complete specifications of a seal. Also, the drawings related to the particular seal can be accessed through the grid.

## 1.2 Where to Find the Seal Selection Tool

The Seal Selection Tool is available under the Engineering Tools section on [www.timken.com](http://www.timken.com) or by clicking a link from a seal product page.

### Steps to Access the Tool:

1. Open [www.timken.com](http://www.timken.com) using a web browser.

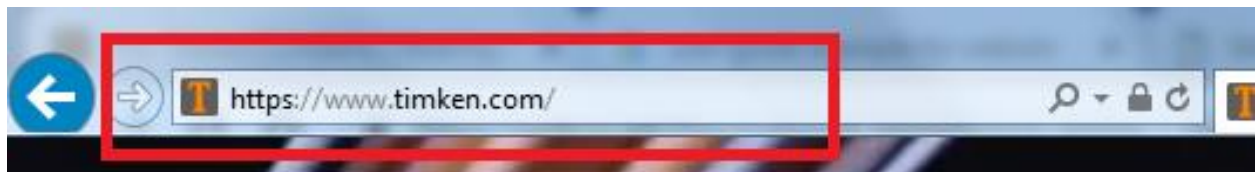


Fig 1: Timken URL

2. Click on "[ENGINEERING TOOLS & VIDEOS](#)" shown in Fig 2.

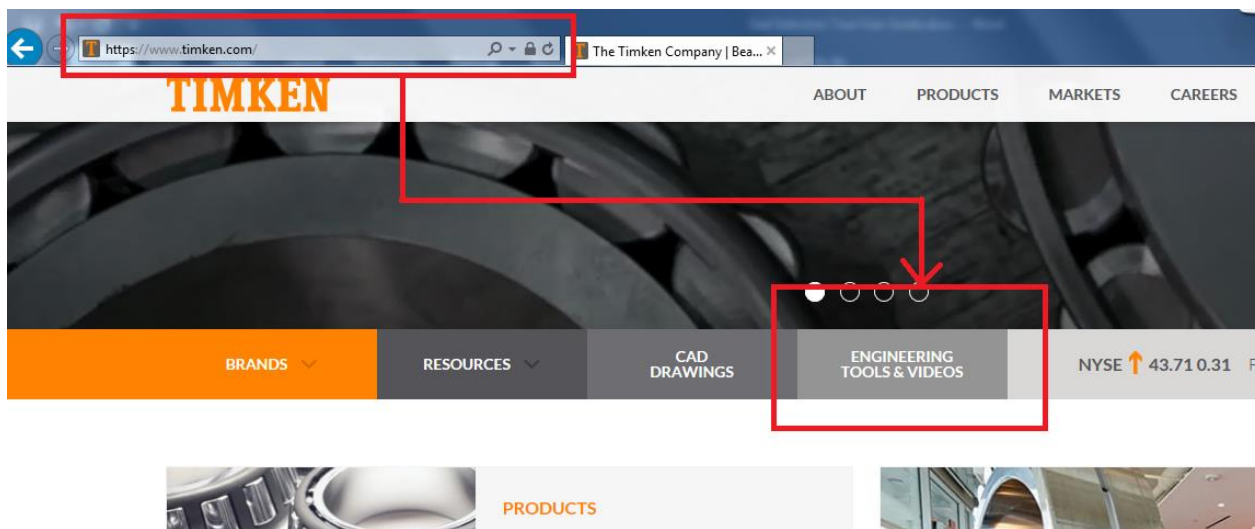


Fig 2: Timken Website

3. The Engineering Tools page lists buttons to open several engineering applications as in Fig 3, including the Seal Selection Tool. Click the “Seal Selection Tool” button to open this tool as a new page in the Timken website.

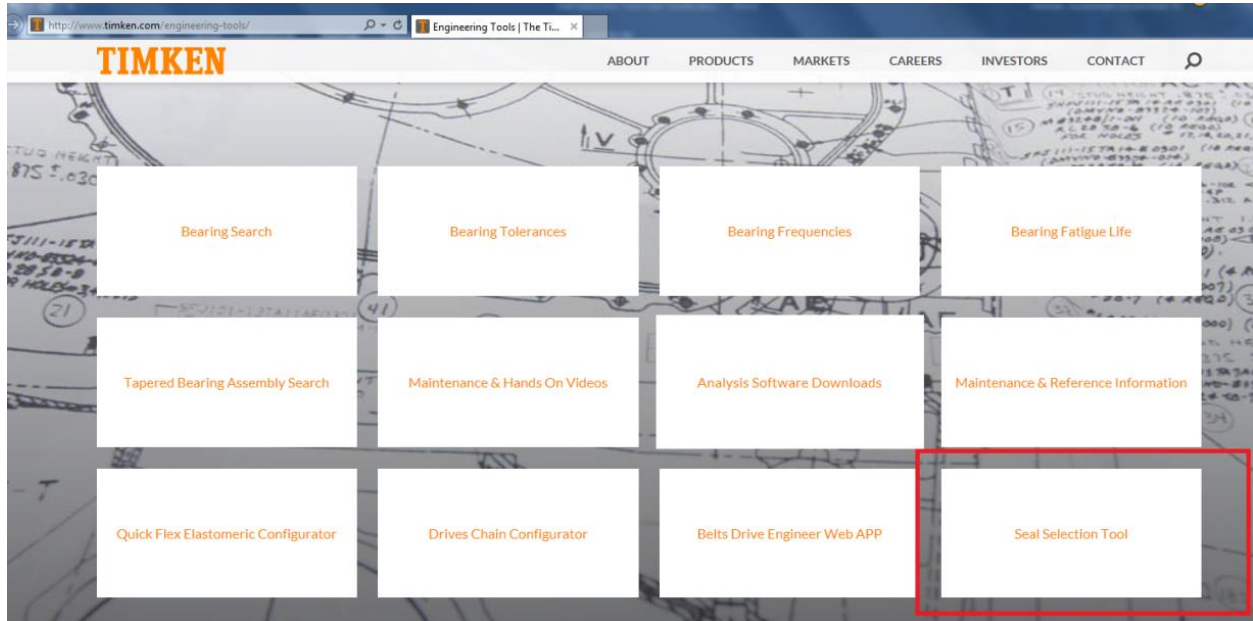


Fig 3: Engineering Tools Page

4. Opening the Seal Selection Tool displays the following page.

The screenshot shows a web browser window with the URL <http://www.timken.com/engineering-tools/seal-selection-tool/>. The page features the Timken logo and navigation links for ABOUT, PRODUCTS, and MARKETS. The main content area is a form titled "Seal Selection Tool" with three tabs: "Selection By Specifications" (active), "Selection By Part Number", and "Competitor Interchange".

Selection By Specifications	Selection By Part Number	Competitor Interchange
Seal Category *	Oil Seal	inch
Shaft Diameter (inch) *	Minimum	Maximum (optional)
Housing Bore (inch)		
Outside Diameter (inch)		
Width (inch)		
Material		
Type		
WHERE TO BUY	RESET	SEARCH

Fig 4: Seal Selection Tool

## 5. Opening the Seal Selection Tool from the product page.

The screenshot shows the Timken website's product page for Oil Seals. The browser address bar displays the URL: <https://www.timken.com/products/timken-mechanical-power-transmission-products/seal>. The page header includes the Timken logo and navigation links: ABOUT, PRODUCTS, MARKETS, CAREERS, INVESTORS. The main content area features a large image of various oil seals and the text: "Oil Seals are used wherever shafts rotate and bearings require lubrication. Available in inch and metric sizes, the Timken line of O-Ring Seal Kits have the coverage you need for the most popular applications." Below this, there is a navigation bar with links: BRANDS, RESOURCES, CAD DRAWINGS, ENGINEERING TOOLS & VIDEOS, and a stock market ticker showing NYSE 43.39 (0.25) on Thursday, 28 Feb 2019. The main content area has a sub-header "Oil Seals" and a description: "Oil seals – often called grease, fluid or dirt seals – close spaces between stationary and moving components in machinery, helping prevent lubricant escape. They also stop harmful contaminants from entering machinery, particularly in severe environments. Vital components of practically every type of machine and vehicle in operation, oil seals are precision-constructed, close-fitting ball, sleeve and roller bearings." A prominent orange button labeled "SEAL SELECTION AND INTERCHANGE TOOL" is located below the description.

## 1.3 How to Use the Seal Selection Tool

Summary: The Seal Selection Tool offers the following options to search/select a seal of your choice.

- Selection by Specifications
- Selection by Part Number
- Competitor Interchange

### 1.3.1 Selection by Specifications

Use the 'Selection by Specifications' option to search seals based on Seal Category and Seal Envelope Specifications.

Selection By Specifications	Selection By Part Number	Competitor Interchange
Seal Category *	<input type="text" value="Oil Seal"/>	<input type="text" value="inch"/>
	Minimum	Maximum (optional)
Shaft Diameter (inch) *	<input type="text"/>	<input type="text"/>
Housing Bore (inch)	<input type="text"/>	<input type="text"/>
Outside Diameter (inch)	<input type="text"/>	<input type="text"/>
Width (inch)	<input type="text"/>	<input type="text"/>
Material	<input type="text"/>	
Type	<input type="text" value="Select Material"/>	
<input type="button" value="WHERE TO BUY"/>		<input type="button" value="RESET"/> <input type="button" value="SEARCH"/>

Fig 5: Selection by Specifications



Selection By Specifications	Selection By Part Number	Competitor Interchange
<b>Seal Category *</b>  <b>Shaft Diameter (inch) *</b>  <b>Housing Bore (inch)</b>	<div style="border: 2px solid red; padding: 5px;"> <ul style="list-style-type: none"> <li>Oil Seal</li> <li>V-Ring Seal</li> <li>O-Ring</li> <li>Redi-Sleeve</li> <li>Wear Sleeve</li> <li>Oil Bath Seal</li> <li>Oil Seal Kit</li> <li>Felt Seal</li> </ul> </div>	<input type="text" value="inch"/>  <b>Maximum (optional)</b> <input type="text"/>  <input type="text"/>

Fig 6: Selection by Specifications – Seal Category

Choose the Seal Category from the dropdown list. Specify the Shaft Diameter, Housing Bore, Outside Diameter, Width, Material and Type. Please note that Seal Category and Shaft Diameter are mandatory fields while the rest are optional. Mandatory fields are indicated by the asterisk (\*) symbol. You can specify the minimum and maximum values or just the minimum value for the shaft diameter.

Selection By Specifications	Selection By Part Number	Competitor Interchange
<b>Seal Category *</b>  <b>Shaft Diameter (inch) *</b>	<input type="text" value="Oil Seal"/>  <b>Minimum</b> <input type="text"/>	<div style="border: 2px solid red; padding: 5px;"> <input type="text" value="inch"/>   <input type="text" value="mm"/>   <b>Maximum (optional)</b> <small>Select Unit of Dimension</small>  <input type="text"/> </div>

Fig 7: Selection by Specifications Category – Unit Selections

After specifying the search constraints, click the Search button in the bottom right corner to perform the search. Search results are displayed in a table format within the Result Grid.

Selection By Specifications	Selection By Part Number	Competitor Interchange
Seal Category*	<input type="text" value="Oil Seal"/>	<input type="text" value="inch"/>
	<b>Minimum</b>	<b>Maximum (optional)</b>
Shaft Diameter (inch)*	<input type="text" value="3"/>	<input type="text" value="3.1"/>
	<small>Enter Minimum Shaft Diameter</small>	
Housing Bore (inch)	<input type="text"/>	<input type="text"/>
Outside Diameter (inch)	<input type="text"/>	<input type="text"/>
Width (inch)	<input type="text"/>	<input type="text"/>
Material	<input type="text"/>	
Type	<input type="text"/>	
<input type="button" value="WHERE TO BUY"/>		<input type="button" value="RESET"/> <input type="button" value="SEARCH"/>

Fig 8: Selection by Specifications – Search

Show 10 entries

Part Number	Part Description	Design Unit	Shaft Diameter (inch)	Housing Bore (inch)	Outside Diameter (inch)	Width (inch)	Material	Type	Drawing No.
100263	Oil Seal	Inch	3.003	4.937	4.948	0.788	Fluoro-Elastomer	08	-
100495	Oil Seal	Inch	3.003	3.751	3.761	0.420	Fluoro-Elastomer	08	-
200133	Oil Seal	Inch	3.000	4.524	4.600	0.433	Nitrile	200E	-
3143N	Oil Seal	Inch	3.000	5.500	5.506	0.531	Polyacrylate	74	-
355669	Oil Seal	Inch	3.040	3.937	3.946	0.250	Nitrile	35	-
3592	Oil Seal	Inch	3.000	5.501	5.506	1.266	Polyacrylate	90	-
3905	Oil Seal	Inch	3.000	4.938	4.943	0.303	Polyacrylate	76	-
415013	Oil Seal	Inch	3.000	4.003	4.008	0.468	Nitrile	41	BM-605403
415013N	Oil Seal	Inch	3.000	4.003	4.008	0.468	Polyacrylate	41	-
415086N	Oil Seal	Inch	3.000	4.249	4.254	0.468	Polyacrylate	41	-

Showing 1 to 10 of 49 entries

Previous 1 2 3 4 5 Next

Fig 9: Selection by Specifications – Result Grid

## Additional Functions:

**Reset:** Use the Reset button to clear the search constraints and Result Grid.

**Where to Buy:** The Where by Buy button redirects users to the distributors page <http://www.timken.com/en-in/contact-distributors/> to help them locate distributors.

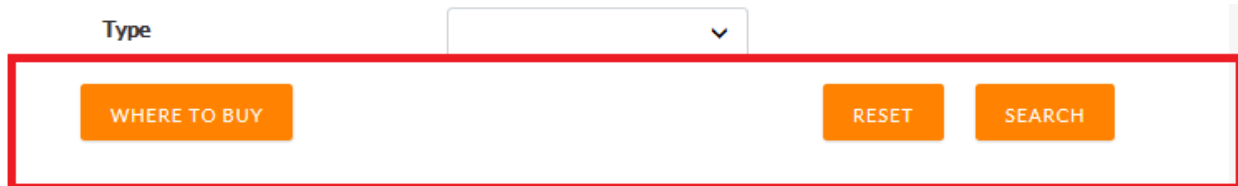


Fig 10: Selection by Specifications – Buttons

## 1.3.2 Selection by Part Number

Use this option to search specifications for a known Part Number. Search using wildcard is enabled for this option. Use the asterisk (\*) symbol for the wild card search. Please note that a minimum of three characters is mandatory before applying the wildcard symbol.

Selection By Specifications | **Selection By Part Number** | Competitor Interchange

Part Number \*

Use asterisk (\*) as an optional wildcard; e.g., 100X1\*

WHERE TO BUY | RESET | SEARCH

Fig 11: Selection by Part Number

Selection By Specifications | **Selection By Part Number** | Competitor Interchange

Part Number \*

Use asterisk (\*) as an optional wildcard; e.g., 100X1\*

WHERE TO BUY | RESET | SEARCH

Show 10 entries

Part Number ↑↓	Brand ↑↓	Part Description ↑↓	Shaft Diameter (inch) ↑↓	Shaft Diame
470045	National® Oil Seal	Oil Seal	1.125	

Search Part Number | Search Brand | Search Part Description | Search Shaft Diameter (inch) | Search Shaft Di

Fig 12: Selection by Part Number – Example

For example, if we need to find the part numbers that start from 400, then 400\* has to be entered in the input box to display all the seals starting with 400 in the Result Grid.

Selection By Specifications
Selection By Part Number
Competitor Interchange

Part Number \*

Use asterisk (\*) as Enter Seal Part Number wildcard, e.g., 100X1\*

WHERE TO BUY
RESET
SEARCH

Show 10 entries Search...

Part Number ↑↓	Brand ↑↓	Part Description ↑↓	Shaft Diameter (inch) ↑↓	Shaft Dia
40027S	National® Oil Seal	Oil Seal	0.750	
40059S	National® Oil Seal	Oil Seal	1.500	
40063S	National® Oil Seal	Oil Seal	1.500	
40071S	National® Oil Seal	Oil Seal	1.875	

Fig 13: Selection by Part Number – Example of Wild Card

## 1.3.3 Competitor Interchange

Competitor Interchange options allow users to find Timken equivalent part numbers against competitor part numbers.

Fig 14: Competitor Interchange

Select the Brand type from dropdown list, enter a competitor part number and click the search button. The Result Grid listing the Timken equivalent part numbers for the entered competitor part number will be displayed on the page.

Brand Name	Brand Part Number	Timken Part Number	Seal Category
SKF	40040	370015A	Oil Bath Seal
SKF	40040	370066A	Oil Bath Seal

Fig 15: Competitor Interchange – Example

Brand Name \*  
Saab

Brand Part Number \*  
12\*

*Use asterisk (\*) as an optional wildcard; e.g., 400\**

WHERE TO BUY      RESET      SEARCH

Show 10 entries

Search...

Brand Name ↑↓	Brand Part Number ↑↓	Timken Part Number ↑↓	Seal Category ↑↓
Saab	12 58 5671	100085	Oil Seal
Saab	12 58 5673	100470	Oil Seal
Saab	12755013	3543	Oil Seal
Saab	12565949	710674	Oil Seal
Saab	12592355	710674	Oil Seal
Saab	12608750	710674	Oil Seal

Fig 16: Competitor Interchange – Example for Wild Card

## 1.3.4 The Result Grid

For all three search categories explained above, the results are displayed in a grid. A few user-friendly features are provided for the Result Grid. The part number column in the grid is a link. Clicking the part number column in each row opens a pop-up screen displaying more details about the selected seal part number.

Show: 10 entries

Part Number	Part Description	Design Unit	Shaft Diameter (inch)	Housing Bore (inch)	Outside Diameter (inch)	Width (inch)	Material	Type	Drawing No.
<a href="#">100263</a>	Oil Seal	Inch	3.003	4.937	4.948	0.788	Fluoro-Elastomer	08	-
<a href="#">100495</a>	Oil Seal	Inch	3.003	3.751	3.761	0.420	Fluoro-Elastomer	08	-
<a href="#">127591</a>	Oil Seal	Inch	2.913	4.561	4.567	1.004	Polycrylate	-	-
<a href="#">200133</a>	Oil Seal	Inch	3.000	4.524	4.600	0.433	Nitrile	200E	-
<a href="#">3143N</a>	Oil Seal	Inch	3.000	5.500	5.506	0.531	Polycrylate	74	-
<a href="#">355669</a>	Oil Seal	Inch	3.040	3.937	3.946	0.250	Nitrile	35	-
<a href="#">3592</a>	Oil Seal	Inch	3.000	5.501	5.506	1.266	Polycrylate	90	-
<a href="#">35949N</a>	Oil Seal	Inch	2.937	3.937	3.942	0.500	Polycrylate	41	BM-605602
<a href="#">3698</a>	Oil Seal	Inch	2.888	3.740	3.748	0.374	Fluoro-Elastomer	32	-
<a href="#">3905</a>	Oil Seal	Inch	3.000	4.938	4.943	0.303	Polycrylate	76	-

Showing 1 to 10 of 69 entries Previous 1 2 3 4 5 6 7 Next

Fig 17: Result Grid

Seal Description ×

**Brand Name:** National® Oil Seal  
**Part Number:** 100263

Description	Value (inch)	(mm)
Part Description	Oil Seal	
Design Unit	Inch	
Shaft Diameter	3.003	76.276
Housing Bore	4.937	125.400
Outside Diameter	4.948	125.679
Width	0.788	20.015
Material	Fluoro-Elastomer	
Type	08	
Series	100000	
Redicoat	No	
Installation Tool	RD2338	

[PRINT](#) [WHERE TO BUY](#) [CLOSE](#)

Fig 18: Part Number – Seal Description Pop-Up



Use the Print button to export and print the seal description in PDF format. Users are also provided an option to download the seal drawings. Use the Drawing No. column link in the individual row to download the 2D drawing for the selected seal.

Outside Diameter (inch)	Width (inch)	Material	Type	Drawing No.
4.948	0.788	Fluoro-Elastomer	08	-
3.761	0.420	Fluoro-Elastomer	08	-
4.567	1.004	Polyacrylate	-	-
4.600	0.433	Nitrile	200E	-
5.506	0.531	Polyacrylate	74	-
3.946	0.250	Nitrile	35	-
5.506	1.266	Polyacrylate	90	-
3.942	0.500	Polyacrylate	41	<a href="#">BM-605402</a>
3.748	0.374	Fluoro-Elastomer	32	-
4.943	0.303	Polyacrylate	76	-

Fig 19: Result Grid – Drawing Number

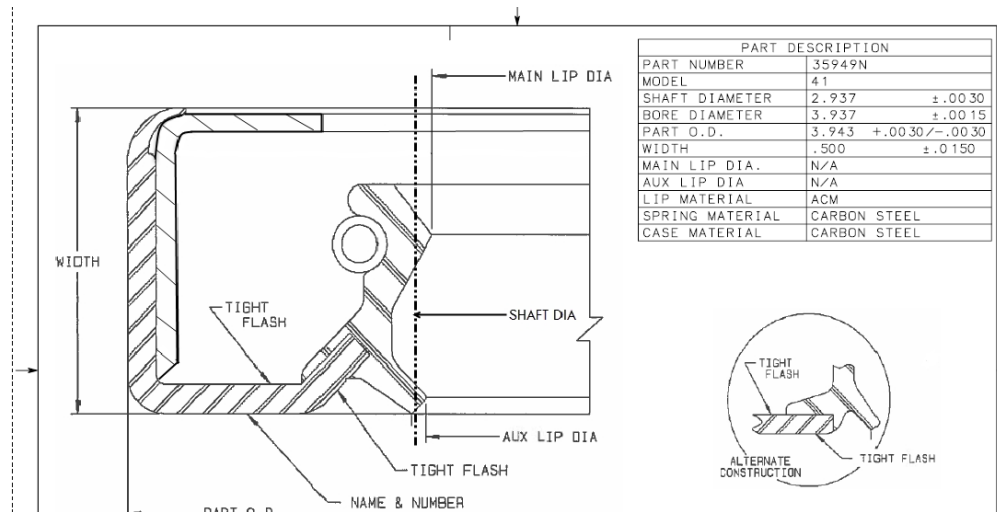


Fig 20: Result Grid – Drawing PDF

The Result Grid also provides options to further filter search results within the grid. Enter the filter criteria in the text box provided for the individual column (at the bottom of the grid) to apply additional filters for the Result Grid.

200133	Oil Seal	Inch	3.000	4.524	4.600	0.433	Nitrile	200E	-
3143N	Oil Seal	Inch	3.000	5.500	5.506	0.531	Polyacrylate	74	-
355669	Oil Seal	Inch	3.040	3.937	3.946	0.250	Nitrile	35	-
3592	Oil Seal	Inch	3.000	5.501	5.506	1.266	Polyacrylate	90	-
35949N	Oil Seal	Inch	2.937	3.937	3.942	0.500	Polyacrylate	41	BM-605402
3698	Oil Seal	Inch	2.988	3.740	3.748	0.374	Fluoro-Elastomer	32	-
3905	Oil Seal	Inch	3.000	4.938	4.943	0.303	Polyacrylate	76	-

Showing 1 to 10 of 69 entries Previous **1** 2 3 4 5 6 7 Next

Fig 21: Multilevel filter

For example, in the Selection By specification, a search has been made with a minimum shaft diameter of 2.9 inches and maximum of 3.1 inches. The Result Grid is populated with multiple rows. In the grid, we can filter shaft diameter to populate only the seals with a shaft diameter of 3.0 inches by entering the value in the input box below the shaft diameter column.

Part Number	Part Description	Design Unit	Shaft Diameter (inch)	Housing Bore (inch)	Outside Diameter (inch)	Width (inch)	Material	Type	Drawing No.
200133	Oil Seal	Inch	3.000	4.524	4.600	0.433	Nitrile	200E	-
3143N	Oil Seal	Inch	3.000	5.500	5.506	0.531	Polyacrylate	74	-
3592	Oil Seal	Inch	3.000	5.501	5.506	1.266	Polyacrylate	90	-
3905	Oil Seal	Inch	3.000	4.938	4.943	0.303	Polyacrylate	76	-
415013	Oil Seal	Inch	3.000	4.003	4.008	0.468	Nitrile	41	BM-605403
415013N	Oil Seal	Inch	3.000	4.003	4.008	0.468	Polyacrylate	41	-
415086N	Oil Seal	Inch	3.000	4.249	4.254	0.468	Polyacrylate	41	-
415088	Oil Seal	Inch	3.000	4.499	4.504	0.468	Nitrile	41	BM-605404
415281N	Oil Seal	Inch	3.000	3.751	3.756	0.500	Polyacrylate	41	-
415479	Oil Seal	Inch	3.000	3.876	3.881	0.468	Nitrile	41	-

Showing 1 to 10 of 44 entries (filtered from 69 total entries) Previous **1** 2 3 4 5

Fig 22: Example for multilevel filter