

# Creating Interface Control Document tables

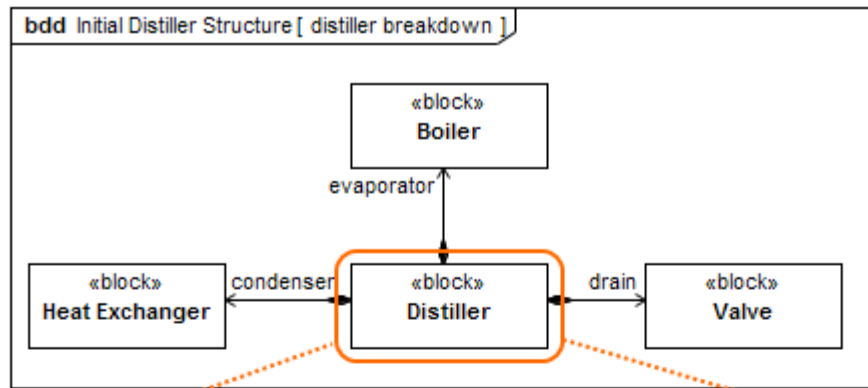
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## Introduction

An Interface Control Document (ICD) table describes interfaces between systems or/and subsystems. That helps to ensure a compatibility between system components. The ICD tables can describe the following:

- The inputs and outputs of a single system.
- The interface between two systems or subsystems.
- The complete interface protocol from the lowest physical elements (e.g., the mating plugs, the electrical signal voltage levels) to the highest logical levels (e.g., the level 7 application layer of the OSI model), or some subset thereof.



**Distiller Blackbox ICD Table**

Criteria						
Element Type:		Port	Block:		Distiller	Filter: Q
#	~ ^	Name	Type	Type Features	Direction	Documentation
1		dirty water	H2O	latent heat : cal/gm mass flow rate : gm/sec specific heat : cal/(gm*°C) water press : Pa water temp : °C	in	
2		q in	Heat	dQ/dt : cal/sec	in	
3		bypass	H2O	latent heat : cal/gm mass flow rate : gm/sec specific heat : cal/(gm*°C) water press : Pa water temp : °C	out	
4		purified	H2O	latent heat : cal/gm mass flow rate : gm/sec specific heat : cal/(gm*°C) water press : Pa water temp : °C	out	
5		sludge	Residue	sludge press : Pa sludge temp : °C	out	

The Blackbox ICD table of the Distiller Block.

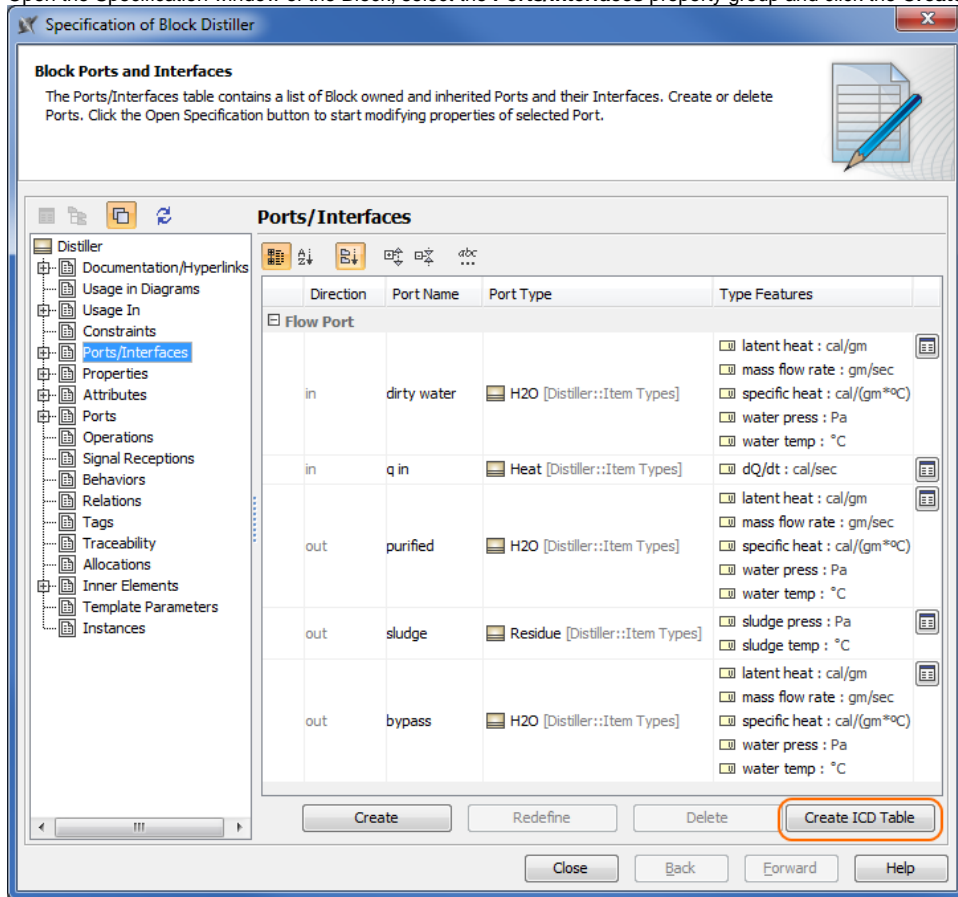
The views for system components interface are generated automatically from the system model. This provides up to date, efficiently managed, and fully featured model-based ICDs. The true model-based document-free approach is supported, along with all the capabilities of table export to document (images, *html*, *.xls*, *.csv* files). You can create the [Blackbox ICD table](#) and/or [Whitebox ICD table](#) directly from the [SysML Block Definition Diagram](#) and [SysML Internal Block Diagram](#).

## Creating Blackbox ICD Table

To create a Blackbox ICD Table

1. In the Containment tree or on the diagram pane, select the **Block** which ports/ interfaces you want to represent in the **Blackbox ICD Table**.
2. Do one of the following:
  - From the main menu, select **Diagrams > Create Diagram**. Type "bla" and press **Enter**.
  - On the main toolbar, click the **Create Diagram** button. Type "bla" and press **Enter**.
  - Press **Ctrl+N**. Type "bla" and press **Enter**.

- Right-click the Block and select **Create Diagram > Blackbox ICD Table**.
- Open the Specification window of the Block, select the **Ports/Interfaces** property group and click the **Create ICD Table** button.



The Blackbox ICD Table is created. All external Ports/interfaces of the selected Block are represented in the table automatically. [Learn more about Blackbox ICD Table >>](#)

3. Type a table name and press Enter.

## Creating Whitebox ICD Table

To create a Whitebox ICD Table

1. In the Containment tree or on the diagram pane, select the **Block** which assembly you want to represent in the **Whitebox ICD Table**.
2. Do one of the following:
  - From the main menu, select **Diagrams > Create Diagram**. Type "wh" and press **Enter**.
  - On the main toolbar, click the **Create Diagram** button. Type "wh" and press **Enter**.
  - Press **Ctrl+N**. Type "wh" and press **Enter**.
  - Right-click the Block and select **Create Diagram > Whitebox ICD Table**.

The Whitebox ICD Table is created. All Parts, their Ports/interfaces and flows are represented in the table automatically. [Learn more about Whitebox ICD Table >>](#)

Criteria							
Element Type: Connector		Context: Distiller		Filter: Q~			
#	Part A	Port A	Port A Features	Item Flow	Port B	Port B Features	Part B
1	heat & valve : Controller	b : Boiler Signals	<input type="checkbox"/> in status : Signals <input type="checkbox"/> out control : Signals	<input type="checkbox"/> Br Sig <input type="checkbox"/> Br Sig	c : ~Boiler Signals	<input type="checkbox"/> out status : Signals <input type="checkbox"/> in control : Signals	evaporator : Boiler
2	heat & valve : Controller	out bp : Elec Power		Elec Power	in p in : Elec Power		evaporator : Boiler

3. Type a table name and press Enter.

## Customizing the representation of the ICD table

You can customize the representation of the ICD table by using the [table toolbar](#) and [table Criteria area](#).