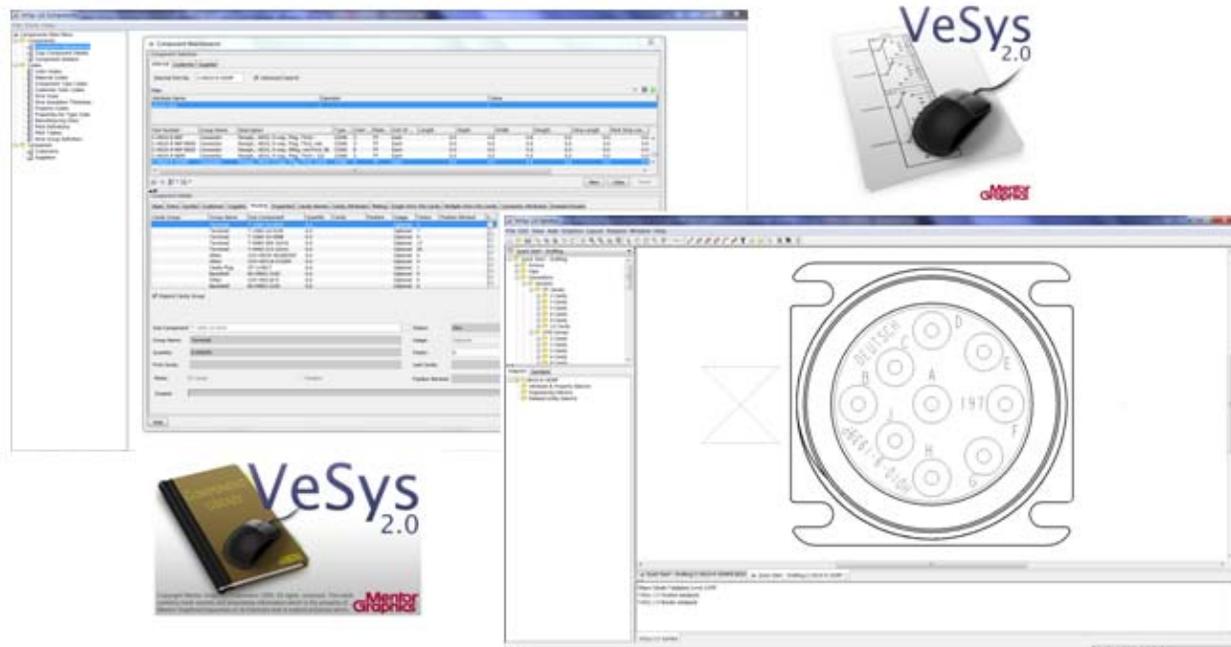


Mentor Graphics CHS™ and VeSys® Library Development and Maintenance Service

Use our custom library development service to quickly build a solid foundation for your Mentor Graphics CHS™ and VeSys® design tools. Your custom Symbol and Component libraries will be developed from our growing selection of popular wiring connector systems used in today's increasingly complex automotive and aerospace electrical system designs. Our XML based files can easily be added to your existing Component and Symbol libraries.

Utilization of our component and symbol library services will allow your valuable engineering resources to remain focused on design projects, not library building.



Component Library

Based on your specifications, we will develop a custom library of component parts (for example, wires, connectors, terminals, boots, tubing, clips, etc.) that can be used in designs created in VeSys 2.0 and within the CHS design tools. The library will contain all of the wire and cable that you specify. Connectors are configured to include mandatory and optional “Housing” parts such as terminals, cavity plugs, boots, seals, and mounting hardware. Cavity names, cavity attributes and mating information is also provided. The following library design features and default specifications are used.

Common Unit of Measurement

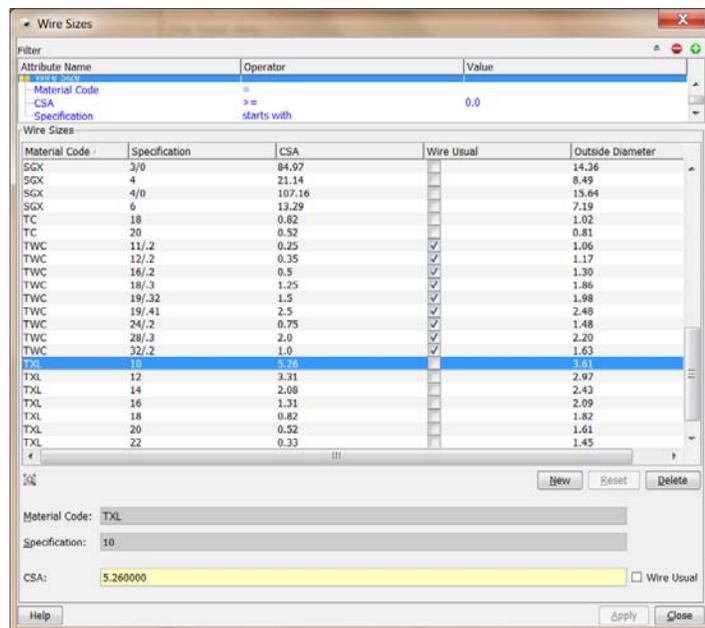
The common unit of measurement is metric (mm).

Codes

Codes are pre-configured lists of reusable component attributes (such as color, wire size, material) that can be selected when creating components.

Color Codes: Up to 4 characters ¹

Wire Groups: Used to define groups of wires that meet terminal and seal constraint specifications ²



The screenshot shows a 'Wire Sizes' dialog box with a table of wire specifications and a filter section. The table has columns for Material Code, Specification, CSA, Wire Usual, and Outside Diameter. The filter section has a table with columns for Attribute Name, Operator, and Value.

Material Code	Specification	CSA	Wire Usual	Outside Diameter
SGX	3/0	84.97		14.36
SGX	4	21.14		8.49
SGX	4/0	107.16		35.64
SGX	6	13.29		7.19
TC	18	0.82		1.02
TC	20	0.52		0.81
TWC	11/2	0.25	<input checked="" type="checkbox"/>	1.06
TWC	12/2	0.35	<input checked="" type="checkbox"/>	1.17
TWC	14/2	0.5	<input checked="" type="checkbox"/>	1.30
TWC	18/3	1.25	<input checked="" type="checkbox"/>	1.86
TWC	19/32	1.5	<input checked="" type="checkbox"/>	1.98
TWC	19/41	2.5	<input checked="" type="checkbox"/>	2.48
TWC	24/2	0.75	<input checked="" type="checkbox"/>	1.48
TWC	28/3	2.0	<input checked="" type="checkbox"/>	2.20
TWC	32/2	1.0	<input checked="" type="checkbox"/>	1.63
TXL	10	5.26		3.61
TXL	12	3.31		2.97
TXL	14	2.08		2.43
TXL	16	1.31		2.09
TXL	18	0.82		1.62
TXL	20	0.52		1.61
TXL	22	0.33		1.45

Attribute Name	Operator	Value
Material Code	=	
CSA	>=	0.0
Specification	starts with	

Material Code: TXL
 Specification: 10
 CSA: 5.260000 Wire Usual

Component Part Numbers

Components are typically identified by multiple part numbers. VeSys 2.0 and CHS design tools have powerful search and reporting capabilities that support the following strategy for assigning component part numbers.

Internal Part Number: The component “manufacturer’s” part number with a “category” prefix ^{2,3}

Customer Part Number(s): The customer’s part number assigned to the component ⁴

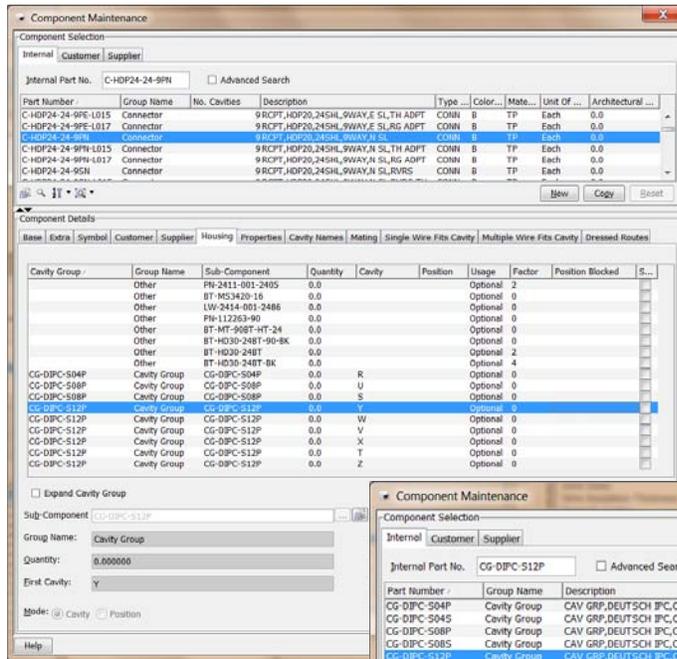
Supplier Part Number(s): Manufacturer’s and/or distributor part numbers assigned to the component ^{2,5}

Status

The “status” of all components is “New”.

Notes:

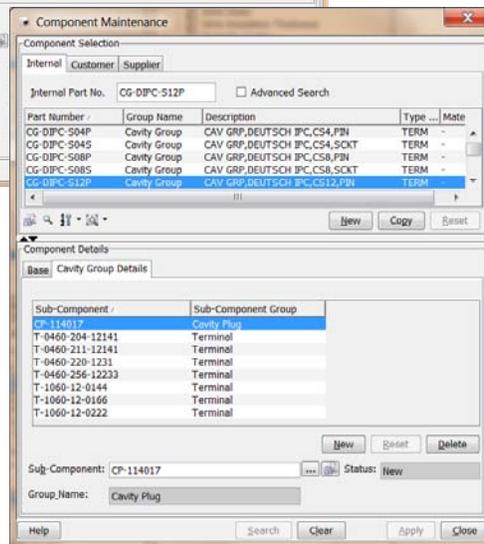
1. Color code preferences are specified by customer before the custom library is configured.
2. Can be modified by the end user.
3. Can be modified by the end user (VeSys 2.0 version 2010.2 and later).
4. Preloaded if provided by the customer.
5. Manufacturer’s part number is listed as the “Preferred” supplier (can be modified by the end user).



Cavity Groups

Cavity Groups are utilized to manage multiple housing component options for connectors. A Cavity Group serves as a “Container Part” for a set of cavity components (for example; terminals, cavity seals and cavity plugs).

Future maintenance is simplified because it is easier to update a few cavity groups than many connector part numbers.

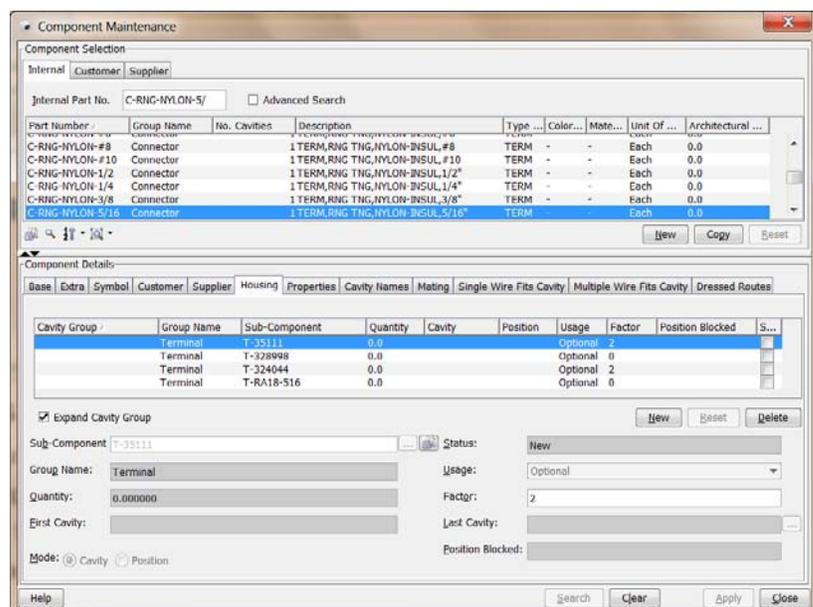


Phantom Connectors

Families of individual wire and cable terminals (ring, hook, slide, etc.) are contained in phantom connectors.

The technique facilitates automatic terminal selection based on the design application (wire size, material selection, and environmental requirements).

The “container” connector does not appear on the BOM.



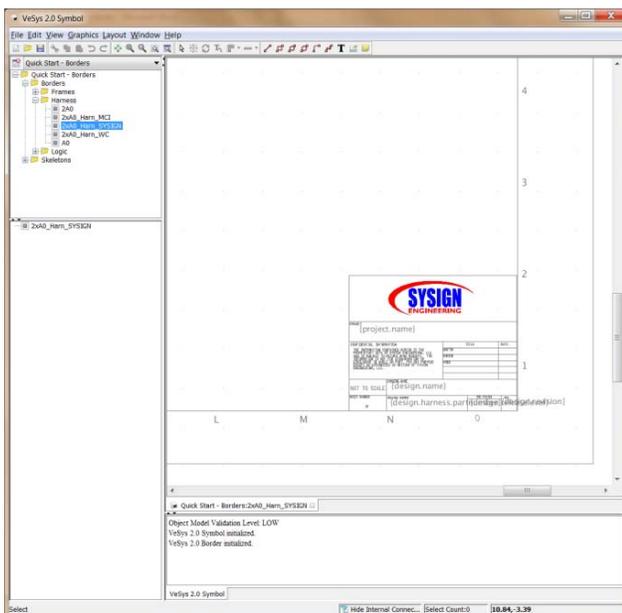
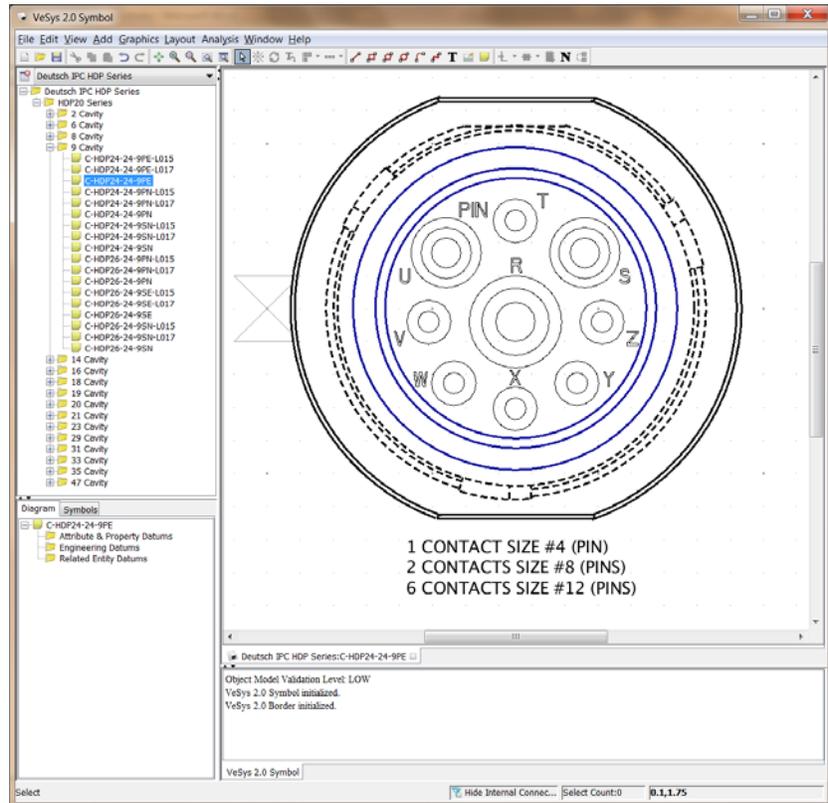
Symbol Libraries

Our connector and border symbol libraries can be purchased to compliment your existing Component Library or be used in conjunction with a purchased custom Component Library.

Connector Symbols

Connector (comment) symbols are based on graphic files provided by the connector manufacturer (when available). The symbols depict the connector outline and each cavity from the wire insertion perspective (minimum). Cavities are labeled per the manufacturer's specifications.

Each connector is identified by the manufacturer's part number with a "C" prefix and arranged in a hierarchical tree format. A separate library file is created for each connector manufacturer for ease of maintenance.



Border Symbols

Custom drawing frame and title block (border) symbols can be developed to meet your corporate documentation requirements. Property value placeholders are utilized to automate the addition of project and drawing specific information on your designs.

Your Unique Requirements

[CHS™](#) and [VeSys®](#) design tools are used in a wide variety of applications. Accordingly, each custom library implementation is unique. Custom Symbol and Component libraries are developed from our growing **master library** of popular wiring connector systems and components.

Manufacturer	Series**	Manufacturer	Series**
	DRB		97
	DRC		MIL-DTL-5015
	DT	MIL-5015	
	DTHD		3 334
	DTM		
	DTMH		
	DTP		TRIDENT
	DTV		
	HD10		
	HD30		
	HDB30		SB50
	HDP20		
	JS		
	METRI-PACK 150		KK
	METRI-PACK 280		MINI-FIT JR
	56		
	PACK-CON		
	WEATHER-PACK		
	CPC		
	MCP		
	METRIMATE		

** Contact us for a complete listing of available part numbers.

The scope and size of your customized starter or supplemental library is entirely up to you. Answers to the questions below will help establish a clear understanding of your unique application environment and requirements.

- 1) **Color Code Specifications**
 - a) What are your color code specifications?
- 2) **Wire and Cable Requirements**
 - a) What wire and cable sizes are required?
 - b) What insulation types are required?
 - c) What are your supplier's part numbers?
 - d) What are your part numbers?
- 3) **Connector Requirements**
 - a) What are your supplier's part numbers?
 - b) What are your part numbers?
- 4) **Terminal and Seal Requirements**
 - a) What are your supplier's part numbers?
 - b) What are your part numbers?
- 5) **"Other" Component Requirements**
 - a) What are your supplier's part numbers?
 - b) What are your part numbers?
- 6) **Symbol Requirements**
 - a) Default "wire insertion" view is acceptable?
 - b) Additional or alternate views required?
- 7) **Additional Requirements**
 - a) Define any additional requirements.

Samples

Sample Symbol and Component Library XML files are available for your review. Contact us for more information.

Library Maintenance Service

We offer a flexible library maintenance service that will help keep your design resources focused on project completion. Simply provide us with a periodic listing of your library requirements and we will provide the updates necessary to help keep your design process flowing at peak efficiency.

Custom Report Programming Service

We develop custom Java based Plug-in software to extend the “Out of Box” reporting capabilities of VeSys 2.0. Custom programming can be used to add BOM fields or interface with wire processing equipment. Source code is provided.

Consulting and Training Services

Ask about our consulting and training services. We can help insure your return on investment with library and style set configuration assistance, library management tips, and best practice advice.

Utilization of our component and symbol library services will allow your valuable engineering resources to remain focused on design projects, not library building. Ultimately, our library management expertise will get you started on the road to a successful and productive [CHS™](#) and [VeSys®](#) implementation. Contact us today or visit our web site for a more information about our services.

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Consult the latest *VeSys 2.0 Components User Guide* for a complete understanding of the process before importing component parts and codes into an existing VeSys library.

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