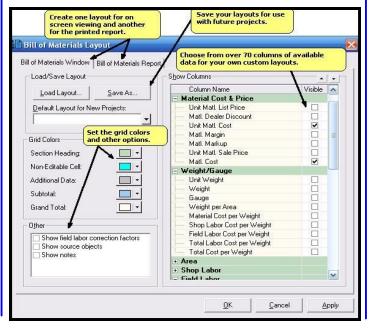## BILL OF MATERIALS OVERVIEW

The Elite Software Bill of Materials (BOM) is an option within Rhvac for Windows that allows you to create a list of all the material and labor items needed to complete an HVAC project. An accurate list of all the items required, along with their associated costs, allows you to know your exact total cost of a project so that you can set a price to win the job with the profit you want. A major feature of BOM is the automatic ductwork takeoff that it does from a duct system you draw using the Drawing Board and the Graphic Manual D Ductsize options within Rhvac. Duct sections of different materials and sizes, fittings, registers, and grilles are all automatically detected, categorized, and counted for you. BOM can work in full graphic mode or with a simple manual entry take-off mode to quickly account for all the material and labor items in your project

DEMONSTRATION VERSION

A functional demonstration version of Bill of Materials can be downloaded free of charge from **www.elitesoft.com**. BOM is an application program contained within Elite's Rhvac program. Downloading the RHVAC demo program also provides demos of Drawing Board, Proposal Maker, and Bill of Materials.

BILL OF MATERIALS FEATURES

- *Provides a Bill of Materials and Labor Estimate*
- Automatically takes off ducts, fittings and registers from ductwork drawn with Drawing Board
- Allows manual entry of custom parts either as one-time parts for the current project or for the master material database
- Provided with a Database of Over 10,000 Parts
- *Can Import Parts Data from Virtually Any Parts List*
- Provides default ductwork prices based on duct material, gauge, and weight or area
- Use unit hours of shop labor and field labor for each item.
- *Estimates Both Conventional & High Velocity 2" Duct*
- Allows part assemblies and even nested assemblies
- Sales taxes on material and/or labor on a part by part basis.

CALCULATION METHOD

The Bill of Materials program simply counts occurrences of each unique item it finds on a drawing done with Elite's Drawing Board and Graphic Manual D Ductsize software. The counts can be overridden by the user so that a reserve of certain items can be assured. For example, if Bill of Materials counted exactly 53 sheet metal screws of a certain size, the user could override that with a count of 100 to cover losses and waste. Bill of Materials maintains a database of parts with your actual cost and retail prices. These costs and prices can be maintained on a per item basis or on a per weight basis, or a per unit length basis. Prices can be overridden as needed for any given project.

PROGRAM INPUT

Over 12,000 parts are provided in the parts database that comes with Bill of Materials (BOM). You can edit and delete the existing parts and add thousands more if you like. You can also create part assemblies and even nested assemblies that reference other part assemblies. Besides many thousands of duct items, the parts database comes with a wide diversity of items including copper tubing, ball valves, mixing valves, electric motors, filters, drain pans, condensing unit pads, HVAC equipment, and much more. In its most minimal form, BOM can be used just with Elite's Rhvac program. At this level, the software requires you to manually select material items and enter the desired quantities. In its most powerful form, you would use BOM in conjunction with Rhvac, Drawing Board, and Graphic Manual D Ductsize. In this way you would have a drawing of a floor plan with a complete duct system. BOM would then be able to automatically recognize and count all the duct components and registers. You would only need to manually enter a few other non-graphic items like maybe a special thermostat that doesn't show on the drawing. So when used with Rhvac, Drawing Board, and Graphic Manual D Ductsize, the BOM window will already be filled out with all the ducts, fittings and registers including material and labor costs with suggested retail pricing. Then all you have to do is edit any of the cost and price data that you want to change for individual parts, and add any additional parts you want to include. You can select your additional parts from your user-defined database of parts or you can enter a one-time part for the current bill of materials without having to add the new part to the database.

SYSTEM REQUIREMENTS

Bill of Materials will run on any computer with Windows XP or higher, including Windows 11.

Sample DB MJ8.rhv - Rhvac - [Bill of Materials]

File   Edit | Bill of Materials - General   Bill of Materials - Current | Project   Room   Action   Tools   Window   Help

Parts Database   Layout | Refresh   Section   Part   Source   Outline

Bill of Materials   Project Defaults

This layout shows just 11 of the over 70 columns of data you can choose from.

Quantity Override column lets you enter the actual quantity you will have to order.

Part No.	Description	Req. Qty.	Qty. Override	Qty. Unit	Unit Matl. Cost	Matl. Cost	Unit Shop Labor Hours	Unit Field Labor Hours	Total Labor Cost	Total Cost
	Ducts									
	Duct, Rectangular, Galvanized Steel, 15x11 in	17	20	ft	$2.57	$51.35	0.256	0.256	$113.92	$165.27
	Duct, Round, Flexible Duct, 7 in	16.03	20	ft	$0.89	$17.87	0.037	0.037	$16.47	$34.33
	Duct, Round, Flexible Duct, 8 in	34.86	40	ft	$1.02	$40.84	0.042	0.042	$37.38	$78.22
	Duct, Rectangular, Galvanized Steel, 13x9 in	17	20	ft	$2.17	$43.45	0.216	0.216	$96.12	$139.57
	Duct, Rectangular, Galvanized Steel, 12x9 in	17	20	ft	$2.07	$41.48	0.206	0.206	$91.67	$133.15
	Duct, Rectangular, Galvanized Steel, 10x7 in	17	20	ft	$1.64	$32.73	0.17	0.17	$75.65	$108.38
	Subtotal - Ducts					$227.71			$431.21	$658.91
	Fittings									
	Fitting, Rectangular takeoff at 90 degrees, Duct Material = Galvanized Steel, 15x11 in	1	0	ea	$4.34	$4.34	0.806	0.806	$17.93	$22.28
	Fitting, Round angled floor boot with transition, Duct Material = Flexible Duct, 7 in	2	0	ea	$1.79	$3.57	0.073	0.073	$3.25	$6.82
	Fitting, Junction box for flex duct, Duct Material = Flexible Duct, 7 in	1	0	ea	$1.79	$1.79	0.073	0.073	$1.62	$3.41
	Fitting, Round angled floor boot with transition, Duct Material = Flexible Duct, 8 in	4	0	ea	$2.04	$8.17	0.084	0.084	$7.48	$15.64
	Fitting, Junction box for flex duct, Duct Ma... Duct, 8 in		0	a	$2.04	$6.13	0.084	0.084	$5.61	$11.73
	Subtotal - Fittings					$24.00			$35.89	$59.89
	Grilles and Registers									
	Supply register, 12x4 in	6	0	ea	7.50	$43.04	0	0.191	$13.47	$56.50
	Subtotal - Grilles and Registers					$43.04			$13.47	$56.50
	Grand Total					$294.74			$480.56	$775.30

In-place editing of costs, labor hours, etc.

Bill of Materials

T:\Work\RhvacMJ8\Projects\Ship\Sample DB MJ8.rhv   Modified

Description	Req. Qty.	Qty. Unit
Ducts		
Duct, Rectangular, Galvanized Steel,	17	ft
Duct, Round, Flexible Duct, 7 in	16.03	ft
Duct, Round, Flexible Duct, 8 in	34.86	ft
Duct, Rectangular, Galvanized Ste...	17	ft
Duct, Rectangular, Galvanized Ste...	17	ft
Duct, Rectangular, Galvanized Ste...	17	ft
Subtotal - Ducts		
Fittings		
Fitting, Rectangular takeoff at 90 d...	1	ea
Fitting, Round angled floor boot wi...	2	ea
Fitting, Junction box for flex duct, Duct Material = Flexible Duct, 7 in	1	ea
Fitting, Round angled floor boot with transition, Duct Material = Flexit...	4	ea
Fitting, Junction box for flex duct, Duct Material = Flexible Duct, 8 in	3	ea

The "Go to Source Object" menu lets you zoom to any of the ducts on the drawing that the part is based on. Also works for fittings, registers and grilles.

- Edit Database
- Layout
- Refresh
- Section ▶
- Part ▶
- Go to Source Object ▶
  - Duct SR-120
  - Duct SR-140
  - Duct SR-160
  - Duct SR-170
- Outline ▶