



Select the "View / Download Options for All Reports" PDF for additional information.

The Varco Setup Sheet is launched exactly the same way as the Setup Sheets installed with Mastercam:

Setup Sheet	x
- General Informatio	n
Project	Sample Varco Setup Sheet 🗾 🗸
Customer	Varco Reporting 🗾 👻
Programmer	Jim Varco 👻 🔀
Drawing	
Revision	- 🔀
Note 1	
Note 2	
Note 3	
Use color The current gra screen image w captured as a dra reference when select OK. Clean Tool Sorting Default Report Templates	View of Operation Operation's WCS Operation's Tplane output Operation's Tplane Isometric relative to operation's WCS Isometric (WORLD) Graphics view Ascending Pescending None (Press F2 to reassign) Varco reporting setup sheet
	 ✓ X X Y Y

If the General Information field captions on the Setup Sheet dialog have been changed:

Setup Sheet		x
- General Informat	ion	
Project	Sample Varco Setup Sheet	- 🔀
Customer	Varco Reporting	- 🔀
Programmer	Jim Varco	- 🔀
Drawing		- 🔀
Revision		- 🔀
Note 1		- 🔀
Note 2		- 🔀
New Note	Test of new note field caption	- 🔀
	View of Operation	

The changes carry over to the Setup Sheet:



The following screenshots are from dialogs available from the Viewer Settings menu:



The "Setup Sheet" dialog provide options to configure the report to display the way the user wants it to. Numerous checkboxes allow the user to enable or disable all aspects of the displayed report. Options to limit the number of lines used by comment fields and Manual Entry operations are available. The buttons on the lower part of the dialog for tools and operations vary depending on the type of machine. Images can be set to display on the left, right, or not at all. Note that the customized General Information caption is displayed on the dialog:

🧝 Setup Sheet Display Settings			×
Report Sections Header Stock Data Operations List Work Offsets Custom Images General Information	 General Information Stock Image Tool List Special Instructions Footer 	 Screen Image CNC Code File Header Operations Using Tool List Screenshots 	Header Logo Barcode CNC Code File Header Full Path & Filename Cycle Time Barcode
 ✓ Date & Time ✓ Project ✓ Drawing ✓ Note 2 Units & Angles ✓ Display Units Symbol ✓ Display Degree Symbol ✓ Setup Sheet Format C Setup Sheet 1 C Setup Sh 	 Machine Group Customer Revision Note 3 Comment Fields No. of Lines to Display 5 • eet 2 • Program Proofing 	 ✓ Units ✓ Programmer ✓ Note 1 ✓ Mastercam Part File Manual Entry Operations Maximum Lines to Display 10 ▼ Tool & Operation Images ⊂ Left ⊂ None < Right 	Footer Page Number Note Select Page Break Before: Tool List Screenshots Special Instructions Custom Images
Mill Tools	👔 🎙 🛛 Tool Warnings	Operations	Operation Warnings

The following screenshot is of the dialog displayed if the "Tools..." button is clicked. Listed are all of the types of tools available. The list varies depending on the version of Mastercam, shown is for version X9:

1 Mill Tools		×
Milling Tools		
Flat End Mill	🔋 Bull End Mill	🔋 Ball End Mill
🗼 Face Mill	🌡 Radius Mill	🔰 Chamfer Mill
Slot Mill	🕴 Taper Mill	Dove Mill
Lollipop Mill	Engrave Tool	< Thread Mill
👃 Barrel Mill	💡 Custom	
Hole Tools		
🔋 Drill	🏮 Spot Drill	🤴 Center Drill
Reamer	💧 Countersink	Counterbore
👘 Тар	闄 Bradpoint Drill	🗌 Bore Bar
🖓 Custom		
L		
		× ×

This screenshot shows the current configuration of displayed fields for the selected tool type, in this case a "Flat End Mill", used on a Lathe w/Mill machine:

👔 Mill Tool Fields (Milling Tools- Flat End Mill)			
Tool Type		Cycle Time	
Mfg	. Code	% of Prg. Cycle	
N	ame	Max. Stock Top	
Asm.	Name	Min. Z Depth	
Aggregate	Material	Coolant- Tool	
Units	Diameter	Spindle Dir.	Image
Holder Name	Overall Lng.	BPM	
Holder Lng.	Shoulder Lng.	SFM	
Lng. Offset	Flute Lng.	Feedrate	
Dia. Offset	Flutes	Feed/Tooth	
		Plunge Feed	
		Retract Feed	
0			×

Here is how these fields look on the report:

T287: 3/8 FLAT ENDMILL

Ha Ha L	Tool Type: Mfg. Code: Name: Asm. Name: Aggregate: Units: older Name: Holder Lng.: Lng. Offset: Dia. Offset:	Flat Endmill 3/8 FLAT ENDMILL No Inch DEFAULT HOLDER 1.0" 0	Material: Diameter: Overall Lng.: ; Shoulder Lng.: Flute Lng.: Flutes: •	HSS 0.375" 2.5" 0.8" 0.75" 4	Cycle Time: % of Prg. Cycle: Max. Stock Top: Min. Z Depth: Coolant: Spindle Dir.: RPM: SFM: Feedrate: Feed/Tooth: Plunge Feed:	00h, 00m, 54s 3.72% 0" -0.4" Off CW 1426 140 6.332 inch/min 0.0011 inch/rev 6.332 inch/min	2.500	3.500
					Plunge Feed: Retract Feed:	6.332 inch/min 6.332 inch/min		

Clicking on any of the buttons displays a dialog where a different field can be selected for display on the Setup Sheet. All of the data from Mastercam that is available to be displayed can be selected. Only fields available in the version of Mastercam being used are available:

👔 Fie	Field Select (85 available)				
	Field $ riangleq$	Description			
	Threads/Pitch	Threads per inch or pitch (if tap)			
	Threads/Pitch	Threads per inch or pitch (if tap)			
	Tip Angle	Tip angle of tool (in degrees)			
	Tip Angle	Tip angle of tool (in degrees)			
	Tip Diameter	Tip diameter (Chamfer/Face/Engrave)			
	Tool Geo. File	Tool geometry file			
	Tool Type	Tool type (Drill/Tap/Etc)			
	Tool Type	Tool type (Drill/Tap/Etc), formatted for readability			
	Tool Type	Tool type (Drill/Tap/Etc), formatted for readabiity			
	Turret	Active turret (Left/Right)			
	Units	Metric tool (y/n)			
Fi	eld Types				
œ	Tool C OTI				
Thi Ma dis will	is field changes the in stercam tool type "Er played to the left.This be left empty to clea	nternal Mastercam tool type to a more readable format, as an example the admill2 Sphere" is displayed as "Ball Endmill", and a small image of the tool type is s is a wide field that spans two columns, the row position in the column to the right ir it. It is not recommended that this field be used in the rightmost column, if it is it			
		× ×			

From the "Setup Sheet" dialog tests can be selected to warn the programmer of possible problems that may need to be addressed before the code is sent to the CNC machine. Shown is the dialog for Mill Tool Warnings:

🧝 Mill Tool Warnings	
Disable All Warnings	
Coolant Off	Min. Z Depth Not Calc.
Tool Length Short	 Thread Pitch Not Set Tool & Operation Coolant Differ
Cutter Comp Used, No Dia. Offset	
Spindle Speed	Tool Numbers Range: 1 to 999
Feedrate Range: .0001 to 10000	Length Offset Numbers Image: 1 to 999 Image: 1 to 999 Image: 1
Plunge Feedrate Range: .0001 to 10000	Diameter Offset Numbers Image: 1 to 999 Image: 1
Retract Feedrate Range: .0001 to 10000	
	× ×

From the "Setup Sheet" dialog Operations can be configured much the same as Tools are. Shown is the dialog for Mill operations:

X	Mill Ope	erations			
	Milling	2D HST Surface	Surface Rough Surface Finish	Surface 3D HST Circle	Wireframe C-Axis
		Contour	🗗 Drill	D Pocket	E Face
	ď	Engraving	of Multiaxis	of Multiaxis Link	📴 Transform
	ΣB	Nesting	🔍 Manual Entry	• Point	Trim
		Import NCI			
					✓ ×

Shown are the currently configured fields to display for a Mill Contour operation:

👔 Mill Operation Fields (Milling- Contour)			
Name		Cycle Time	
Prg. No.	WCS Plane Name	% of Prg. Cycle	
Stk. to Leave XY	Comp. Type	Top of Stock	
Stk. to Leave Z	Comp. Dir.	Min. Z Depth	
		Coolant- Opr. (Wide)	
	Tool Caption w/Line		Image
Mfg.	Code	RPM	
		SFM	
		Feedrate	
Con	nment	Feed/Tooth	
		Plunge Feed	
		Retract Feed	
Dia. Offset	Flutes		
0			× ×

Here is how these fields look on the report:

OP# 7:

Name: Contour (2D) Prg. No.: 0 Stk. to Leave XY: 0.0" Stk. to Leave Z: 0.0"	WCS Plane Name: Top Comp. Type: Wear Comp. Dir.: Left	Cycle Time: 00h, 00m, 54s % of Prg. Cycle: 3.72% Top of Stock: 0.0" Min. Z Depth: -0.4" Coolant: Off	
Mfg. Code: Comment: 3/8 FLAT ENDM Asm. Name: Tool Type: Flat Endmill Aggregate: No Lng. Offset: 0 Dia. Offset: 0	IILL Number: 287 Diameter: 0.375" Flute Lng.: 0.75" Flutes: 4	RPM: 1426 SFM: 139.9869 Feedrate: 6.332 inch/min Feed/Tooth: 0.0011 inch/rev Plunge Feed: 6.332 inch/min Retract Feed: 6.332 inch/min	

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And a complete list of fields available for display for operations is available:

👔 Fi	Field Select (103 available)			
	Field 🔺	Description		
	Name	Operation name, formatted for readability		
	Number	Operation number based on Tool Manager order		
	Rapid Retraact	Rapid up from bottom depth		
	Retract Plane	Z coordinate of retraction plane		
	Retract Plane Act.	Retraction plane is active		
	Seq. No. Inc.	Sequence number increment		
	Seq. Start No.	Starting sequence number		
	Spindle Speed	Spindle speed (value & units (RPM))		
	Stk. to Leave	Amount of stock to leave		
	Tolerance	Cutting tolerance		
	Tool Caption	Caption for separating Operation & Tool fields		
F G	Field Types © Operation © Tool © 0TI			
Th im in rig	This field changes the internal Mastercam operation name to remove the operation number, and a small image of the tool type is displayed to the left. This is a wide field that spans two columns, the row position in the column to the right will be left empty to clear it. It is not recommended that this field be used in the rightmost column, if it is it will be shortened to fit the report.			
		× ×		

The "Setup Sheet" dialog has an option for the user to set text to be displayed in the footer of each report page, and to align the text. This is very useful for shops that have controlled documents:

👔 Setup Sheet Footer Note	x
Alignment C Left © Center C Right	
Text can entered here that will be displayed in the footer of each page, very useful for controlled documents	
· 	×

All of the settings from the Setup Sheet dialog are saved per machine type and name. This allows for options to be configured specifically for each machine.

Once any settings changes are made, the currently displayed report is refreshed using those settings.

If a CSV (Comma Separated Values) text field exists in the folder with the Mastercam part file, additional options become available:

G|1|Mill Setup Sheet Demo G|2|Varco Reporting G|3|Jim Varco G|4|N/A G|5|N/A I|Spindle.jpg|Spindle with toolholder I|Toolsetter.JPG|Toolsetter & Table I|Tailstock.JPG|Tailstock

Lines the start with "G" will override any values entered in the General Information section of the Mastercam Setup Sheet dialog. This ensures that each time the report is printed it will have the same settings in place for the part file and Machine Group. Lines that start with "I" are for user image files such as photographs. The image file must be in the same folder as the part file, and the line in the CSV file holds the image filename and a caption to be displayed with the image. Most of the standard graphics formats are supported.