Work Instruction: Costing in SmartSpec

1. Audience

This work instruction provides guidance to the SmartSpec/Configurator Engineering Team

2. Objective:

Calculating costs in SmartSpec

3. Revision and Approval

Rev.	Date	Nature of Changes	Approved By
N	06/24/2022	Original issue.	Parashar

4. Scope

This instruction is related to the product costing process.

5. Prerequisites

- DriveWorks Training
- Solidworks

6. Records

- Electronic

7. Associated Documents

None

8. Evaluative Factors

None

9. Responsibility

The Configurator Engineer is responsible for maintaining this work instruction.

10. Instructions

Query Details and Definitions:

Labor Cost:

QueryData("M1",@"SELECT SUM([TotalLabor]) FROM [UVW_SmartSpecOps] WHERE [imoOperationType] = @(1) AND [imrUniversalProductCode] = '@(StdModelvariablename)'","dw","Caldwell4080")

Overhead Cost :

QueryData("M1",@"SELECT sum([TotalOHCost]) FROM [UVW_SmartSpecOps] WHERE [imrUniversalProductCode] = '@(StdModelvariablename)' AND [imoOperationType] = @(1) ","dw","Caldwell4080")

***Outside cost**:*

If(QueryData("M1",@"SELECT SUM([TotalOutsideCost]) FROM [UVW_SmartSpecOps] WHERE [imrUniversalProductCode] = '@(StdModelvariablename)' ,"dw","Caldwell4080")="",0,QueryData("M1",@"SELECT SUM([TotalOutsideCost]) FROM [UVW_SmartSpecOps] WHERE [imrUniversalProductCode] = '@(StdModelvariablename)' ","dw","Caldwell4080"))

Material Cost:

QueryData("M1",@"SELECT SUM([MaterialCost]) FROM [UVW_SmartSpecMaterials] WHERE [imrUniversalProductCode] = '@(StdModelvariablename)' ","dw","Caldwell4080")

Markup:

QueryData("M1",@"SELECT ([imuQMOverHeadMarkup]) FROM [UVW_SmartSpecMarkUps] WHERE [imuPartGroupID] = '@(GroupName)' ","dw","Caldwell4080")

GroupName is the product's code for ex: Model 20 has LB, Model 19 has ELB.

Calculation Examples:

To calculate all the above cost with **markup** use the following formula:
LaborCost/(1-(QueryData("M1",@"SELECT ([imuQMLaborMarkup]) FROM [UVW_SmartSpecMarkUps] WHERE [imuPartGroupID] = '@(GroupName)' ","dw","Caldwell4080")/100))

Cost calculation with Markup / Total cost: The sum of all the above costs with markup: **Total Net**
Total List: TotalNet /(1-Discount)

Discount formula: QueryData("M1",@"SELECT ([ucmoSmartSpecDiscount]) FROM [UVW_SmartSpecContactDiscount] WHERE [cmcEmailAddress] = '@(emailReturn)' ","dw","Caldwell4080")/100

Determine if a model is a standard or not

Create the group name and the standard model name and the next model name . This can be done by using Vlookups in driveworks table.

If the model is a standard then grab its list price by using the formula.

QueryData("M1",@"SELECT ([imhUnitSalePrice]) FROM [UVW_SmartSpecPartUnitSalesPrices] WHERE [imrUniversalProductCode] = '@(DWVariableStdModel)' ","dw","Caldwell4080")

Then calculate the **net** by using the formula
(ListPrice-(ListPrice*Discount))

If the model is a special, find out the special markup using the formula:
QueryData("M1",@"SELECT ([uimuSpecialMarkup]) FROM [UVW_SmartSpecMarkUps] WHERE [imuPartGroupID] = '@(GroupName)' ","dw","Caldwell4080")

Compare the cost i.e. the grabbed M1 cost and the calculated cost, use the higher cost

If the model is a special, then use the following formula to get the special model price. (model formula provided below, change accordingly to suit requirements)
Text(If(DWVariableSTDorNot=1,If(DWVariable18NetPrice>DWVariable18CalcNet,DWVariable18NetPrice,DWVariable18CalcNet),If(DWVariable18NetPrice>DWVariable18CalcNet,(DWVariable18NetPrice/(1-(DWVariable18SpecialMarkUp/100))),(DWVariable18CalcNet/(1-(DWVariable18SpecialMarkUp/100))))),"#.00")

Do the same for list

Identifying Lead Time

The lead time can be found out by using the formula:
QueryData("M1",@"SELECT DISTINCT([MfgultDescription]) FROM [UVW_SmartSpecLeadTimes] WHERE [imrUniversalProductCode] = '@(StdModelname)' ","dw","Caldwell4080")

Find out if the return values in the above string has “InStock” by using the below formula
IsMatch(LeadTime,"InStock")

If so then display the lead time of the next standard model by using the lead time formula for query data but use the next std model for UPC.