



Manufacturing Innovation. **Together.**

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Sub InsertDrainNozzlesIntoAssembly()  
    ' This code places the drain nozzles into our assembly, if applicable  
    ' Each drain nozzle consists of a pipe, and an end connection (i.e. flange, capped flange, or valve)  
    ' One drain nozzle can be placed on the front head dish plate, and another can be placed on the rear head dish plate  
    ' First, we set the size of the drain nozzles based on the OD of the tank  
    If TANK_OD <= 48 In Then  
        DRAIN_SIZE = 3 In  
    Else  
        DRAIN_SIZE = 4 In  
    End If  
  
    ' If they have selected to have a drain in front, then place it at the bottom of the tank on the front dish head plate  
    Dim strDrainValveName, strDrainPipeName As String  
    ' These strings represent the filenames (and paths) for the both the pipe and the end connection  
    strDrainValveName = LIBRARY_PATH & "Valves\Butterfly\" & DRAIN_SIZE & " Inch\Slip-On Welding to Threaded Valve - " & DRAIN_SIZE & ".iam"  
    strDrainPipeName = LIBRARY_PATH & "Flanges\ANSI B36.10 XS - " & DRAIN_SIZE & ".ipt"  
  
    ' This variable will represent the offset in the front based on the end connection type  
    Dim dblFrontHorOffset As Double  
    If DRAIN_F_FL_END = "Valve" Then  
        dblFrontHorOffset = 12  
    Else  
        dblFrontHorOffset = 9  
    End If  
  
    ' This variable will represent the offset in the rear based on the end connection type  
    Dim dblRearHorOffset As Double  
    If DRAIN_F_FL_END = "Valve" Then  
        dblRearHorOffset = 12  
    Else  
        dblRearHorOffset = 9  
    End If  
  
    ' This code will determine if a front drain is required, and then run code to place it if it is  
    If DRAIN_F Then  
        ' This uses the "GetFlangeFilename" function (near the bottom of this rule)  
        ' It will automatically determine the filename based on flange type, flange end connection, and drain size  
        Dim strFrontDrainFlangeName = GetFlangeFilename(DRAIN_F_FL_TYPE, DRAIN_F_FL_END, DRAIN_SIZE)  
        ' This uses the "GetFrontOrRearMatrix" function (near the bottom of this rule)  
        ' This will automatically determine the location matrix based on several factors  
        Dim matrixI = GetFrontOrRearMatrix(DRAIN_F_FL_TYPE, DRAIN_F_FL_END, DRAIN_SIZE, dblFrontHorOffset, DRAIN_SIZE, "Front", "Bottom")  
        ' This can be taken from an iLogic snippet, and is used to insert components into assemblies  
        ' This code inserts the selected end connection part or assembly into our master tank assembly file  
        ' Instead of placing at the origin, it places it based on our input matrix we created (matrixI)  
        ' Note that we are grounding all geometry, and we are not using any constraints to place the end connection  
        Dim componentI = Components.Add("Front Drain:1", strFrontDrainFlangeName, position := matrixI, grounded := True, visible := True, appearance := Nothing)  
        ' We create a location matrix and place the pipe, to complete the components needed for the front drain  
        Dim matrixJ = ThisDoc.Geometry.Matrix(-1, 0, 0, 0, 0, 1, 0, -TANK_OD / 2 + DRAIN_SIZE, 0, 0, -1, TANK_L / 2 + (DRAIN_SIZE / (TANK_OD / 2)) * DISH_DEPTH + 9 In, 0,  
0, 0, 1)  
        Dim componentJ = Components.Add("Front Drain Pipe:1", strDrainPipeName, position := matrixJ, grounded := True, visible := True, appearance := Nothing)  
    End If  
  
    ' This code will determine if a rear drain is required, and then run code to place it if it is  
    If DRAIN_R Then  
        ' This uses the "GetFlangeFilename" function (near the bottom of this rule)  
        ' It will automatically determine the filename based on flange type, flange end connection, and drain size
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Dim strRearDrainFlangeName = GetFlangeFilename(DRAIN_R_FL_TYPE, DRAIN_R_FL_END, DRAIN_SIZE)
' This uses the "GetFrontOrRearMatrix" function (near the bottom of this rule)
' This will automatically determine the location matrix based on several factors
Dim matrixK = GetFrontOrRearMatrix(DRAIN_R_FL_TYPE, DRAIN_R_FL_END, DRAIN_SIZE, dblRearHorOffset, DRAIN_SIZE, "Rear", "Bottom")
' This can be taken from an iLogic snippet, and is used to insert components into assemblies
' This code inserts the selected end connection part or assembly into our master tank assembly file
' Instead of placing at the origin, it places it based on our input matrix we created (matrixK)
' Note that we are grounding all geometry, and we are not using any constraints to place the end connection
Dim componentK = Components.Add("Rear Drain:1", strRearDrainFlangeName, position := matrixK, grounded := True, visible := True, appearance := Nothing)
' We create a location point and place the pipe, to complete the components needed for the rear drain
Dim pointL = ThisDoc.Geometry.Point(0, -TANK_OD / 2 + DRAIN_SIZE, -(TANK_L / 2 + (DRAIN_SIZE / (TANK_OD / 2)) * DISH_DEPTH + 9 in))
Dim componentL = Components.Add("Rear Drain Pipe:1", strDrainPipeName, position := pointL, grounded := True, visible := True, appearance := Nothing)

End If

End Sub
```