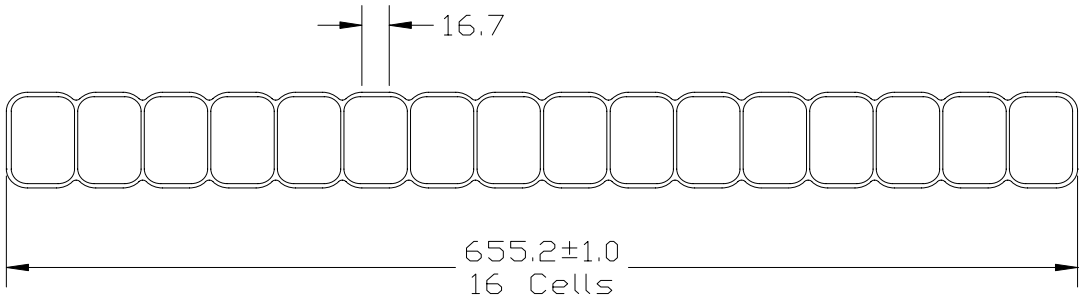
Calculation of adhesive volume for FD

Adhesive will be applied with a roll coater that will coat only the flat part of the scallops with adhesive.

$N := 1674$	Number of Adhesive Layers
$Nb := 30$	Number of Adhesive Layers per Block
$L := 15.8m$	Length of Extrusions
$w := 16.8mm$	Width of flat per cell
$cell := 32$	Number of cells per extrusion
$Ext := 12$	Number of Extrusions per Plane
$t := 0.01in$	Thickness of adhesive
$Waste := 10\%$	Expected Wastage
$VolumePlane := L \cdot w \cdot cell \cdot Ext \cdot t$	Adhesive volume per plane
$VolumePlane = 6.839\,gal$	
$TotalVolume := VolumePlane \cdot N \cdot (1 + Waste)$	Adhesive volumume for the FD
$TotalVolume = 12594\,gal$	
$VolumeBlock := Nb \cdot (1 + Waste) \cdot VolumePlane$	
$VolumeBlock = 225.7\,gal$	



Calculation of adhesive volume for IPND

Adhesive will be applied with a roll coater that will coat only the flat part of the scallops with adhesive.

$N := 196$ Number of Adhesive Layers

$L := 3.98m$ Length of Vertical Extrusions

$w := 16.8mm$ Width of flat per cell

$cell := 16$ Number of cells per extrusion

$Ext := 4$ Number of Vertical Extrusions per Plane

$t := 0.01in$ Thickness of adhesive

$Waste := 10\%$ Expected Wastage

$VolumePlane := L \cdot w \cdot cell \cdot Ext \cdot t$ Adhesive volume per plane

$VolumePlane = 0.287\,gal$

$TotalVolume := VolumePlane \cdot N \cdot (1 + Waste)$ Adhesive volumume for the IPFD

$TotalVolume = 62\,gal$