

# ICEM Mesh Creation

## 3D Horizontal Structures

### Geometric parameters

GEOMETRIC PARAMETERS			SUPPORTED VARIANT
X-COORD	$H$	Total domain size	All
	$h_i$	Size of film inlet	All
	$h_d$	Size of distributor	All
	$d_{gr}$	Size of grooves	All
Y-COORD	$L$	Size of film wall	All
	$l_s$	Size of structures	All
	$l_{gr}$	Size of grooves between structures	All
	$l_i$	Size of unstructured wall at inlet	All
	$l_o$	Size of unstructured wall at outlet	All
	$l_{ag}$	Size of additional gas space	Inlet Variant 2
Z-COORD	$W$	Total domain size	All
	$w_c$	Size of central section for meshing	All
	$w_{s1/2}$	Size of side sections 1 & 2	All
STRUCTURES	$n_s$	Number of structures	All

### Meshing Zones

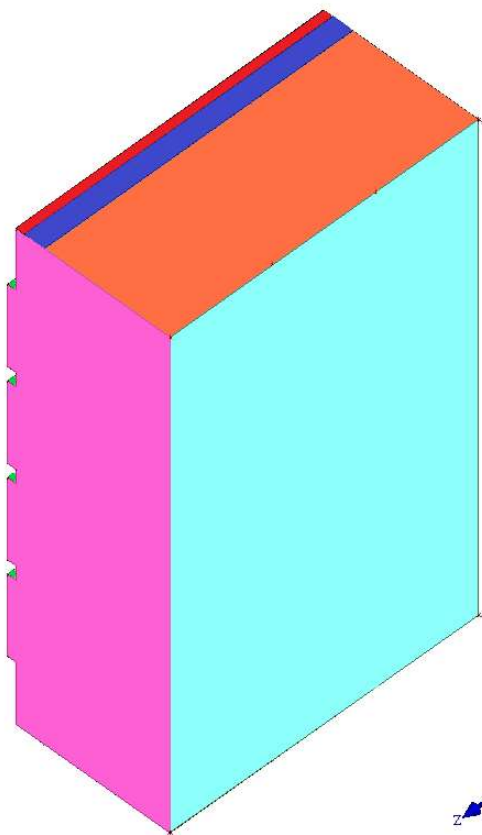
MESHING ZONES		COMMENT	SUPPORTED VARIANT
X-COORD	$h_i$	Film inlet	All
	$h_d$	Distributor	All
	$h_g$	Gas space	All
	$d_{gr}$	Grooves	All
Y-COORD	$l_s$	Structures	All
	$l_{gr}$	Grooves	All
	$l_i$	Unstructured wall, inlet	All
	$l_o$	Unstructured wall, outlet	All
	$l_{ag}$	Add. gas space	Inlet Variant 2
Z-COORD	$w_{s1}$	Side section 1	All
	$w_c$	Central section	All
	$w_{s2}$	Side section 2	All

### Parts/Boundaries

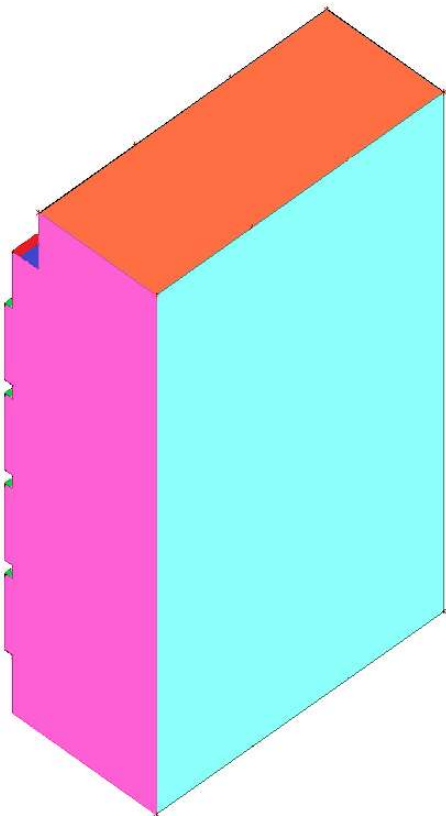
PARTS/BOUNDARIES	COLOR
FILMINLET	RED
FILMWALL	GREEN
FILMOUTLET	VIOLET
GASWALL	LIGHT BLUE
GASTOP	ORANGE
DISTRIBUTOR	DARK BLUE
SIDES	PINK

Available geometric variants

VARIANT	INLET TYPE	OUTLET TYPE
3D-HORIZONTAL-1	1: simple inlet	1: simple outlet
3D-HORIZONTAL-2	2: additional gas space	1: simple outlet



3D-horizontal-1

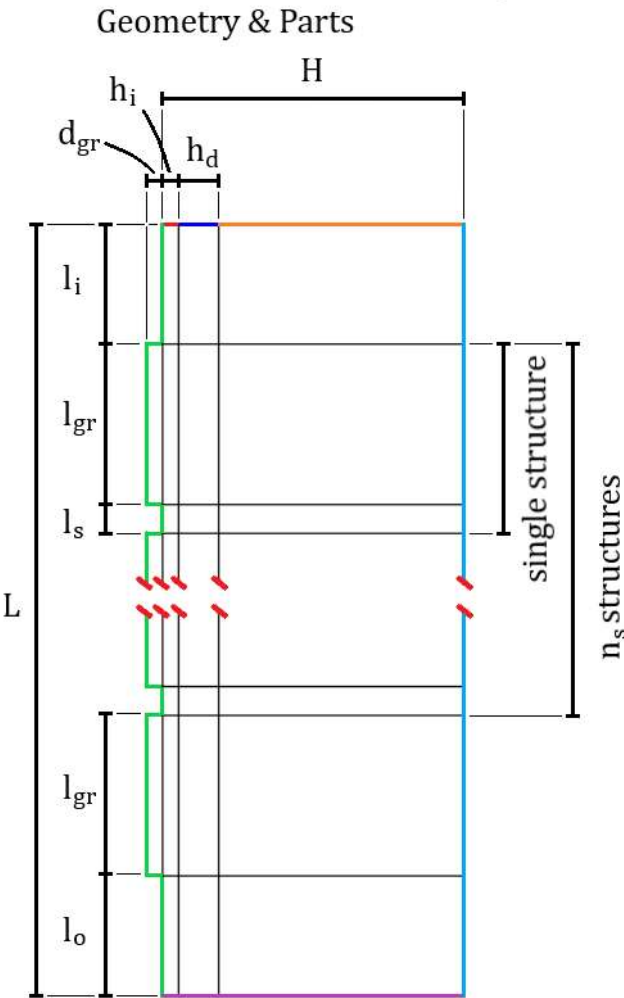


3D-horizontal-2

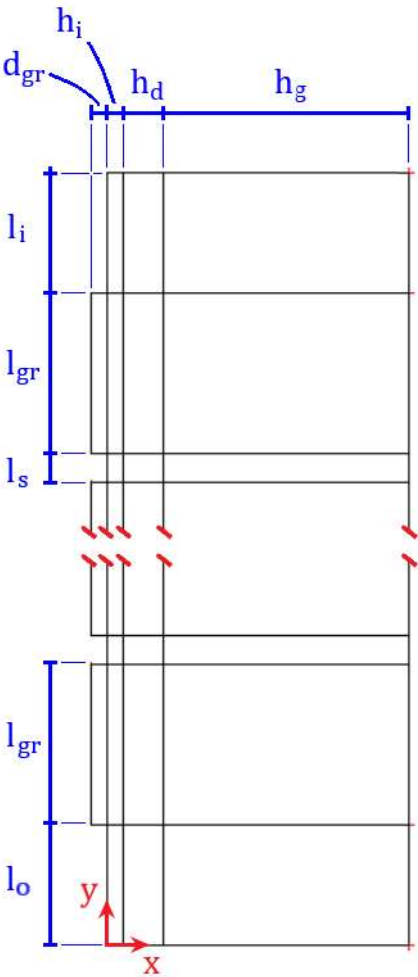
**3D-horizontal-1:** inlet can be configured for periodic boundary conditions. The boundary “FILMINLET” then additionally extends across the boundaries “DISTRIBUTOR” and “GASTOP”.

**Variant 3D-horizontal-1**

xy-Plane

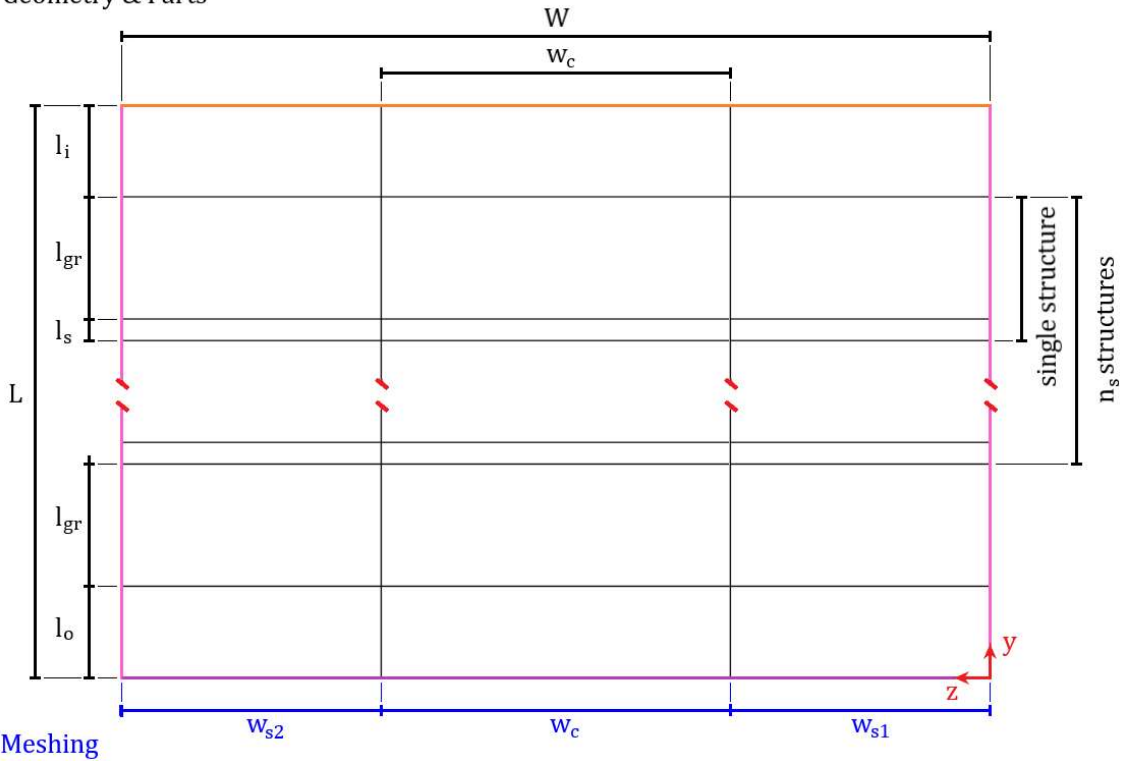


Meshing

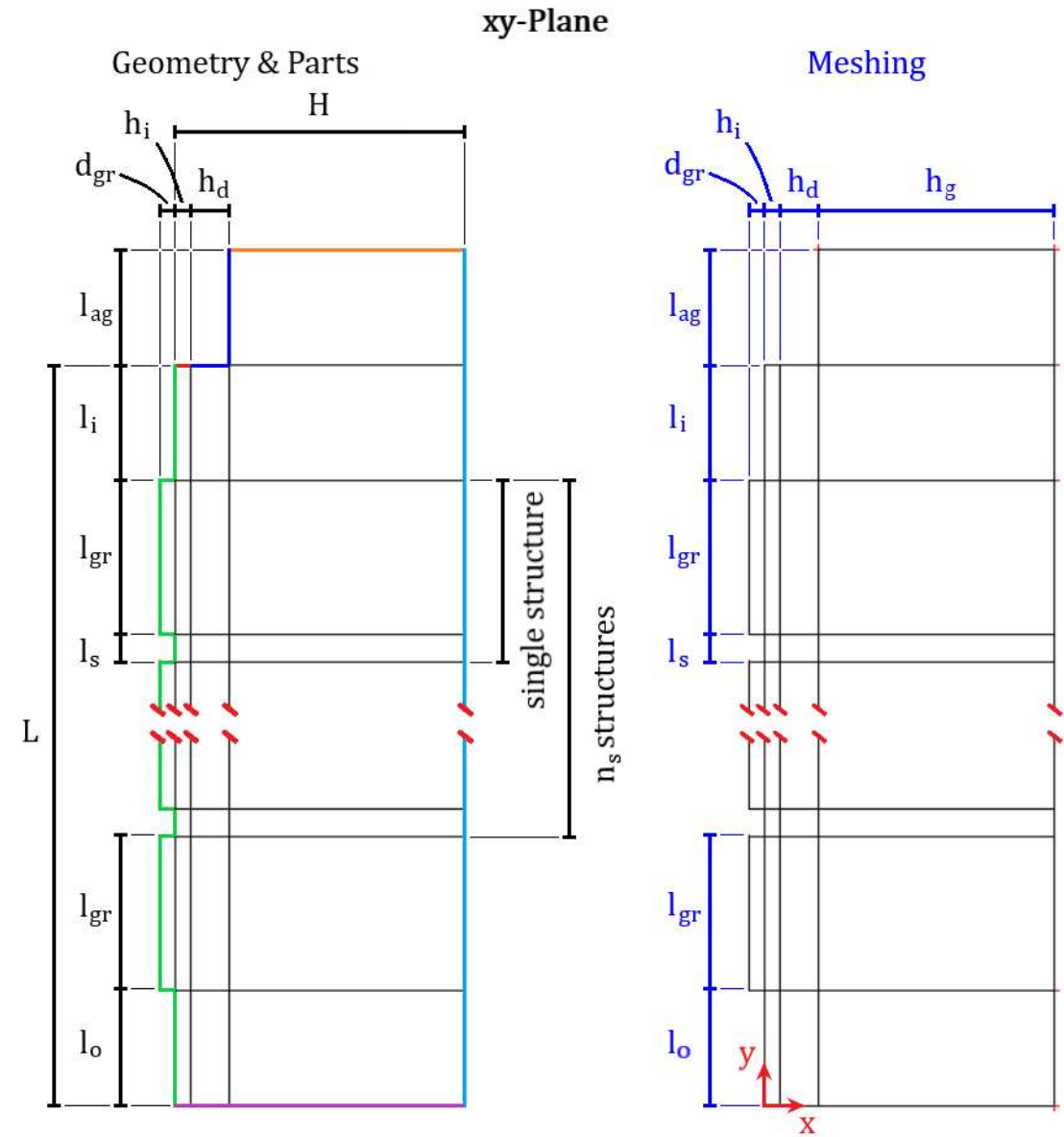


yz-Plane

Geometry & Parts



**Variant 3D-horizontal-2**



yz-Plane

Geometry & Parts

