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Tesis USM TESIS de Pregrado de acceso ABIERTO

2018

DISEÑO Y CONSTRUCCIÓN DE UN BANCO DE PRUEBAS PARA LA CARACTERIZACIÓN DE QUEMADORES DE MEDIOS POROSOS INERTES BAJO LA NORMATIVA DE CERTIFICACIÓN CHILENA

PERALTA PEÑA, PAULA ANDREA

http://hdl.handle.net/11673/40195

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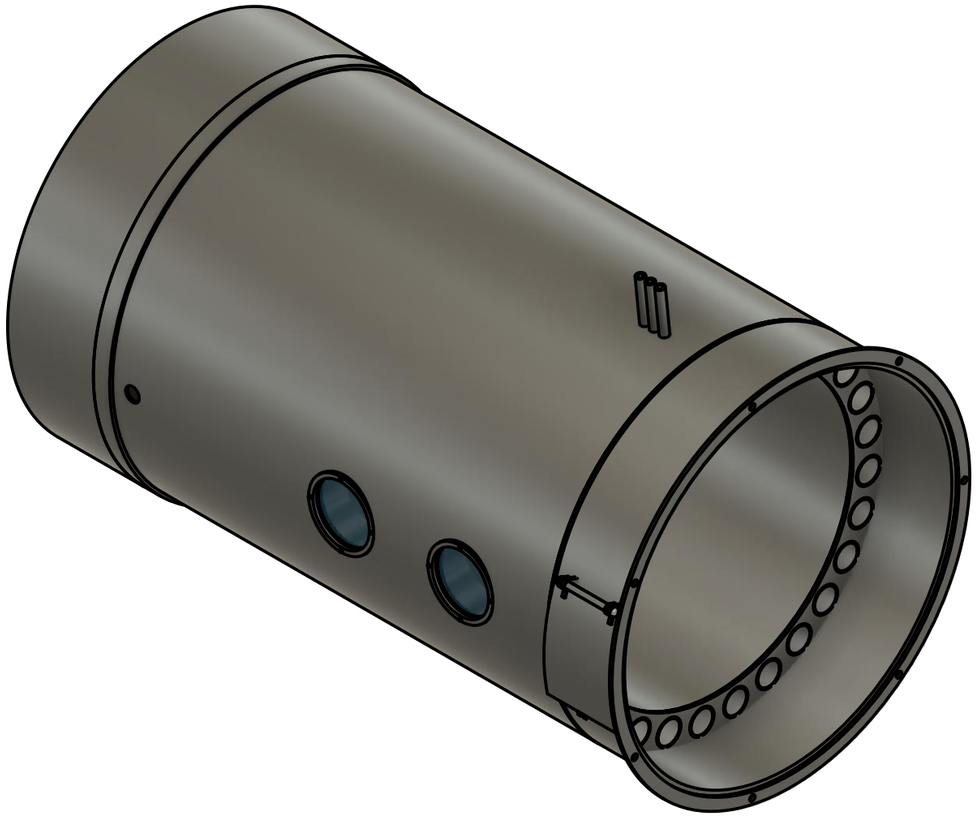

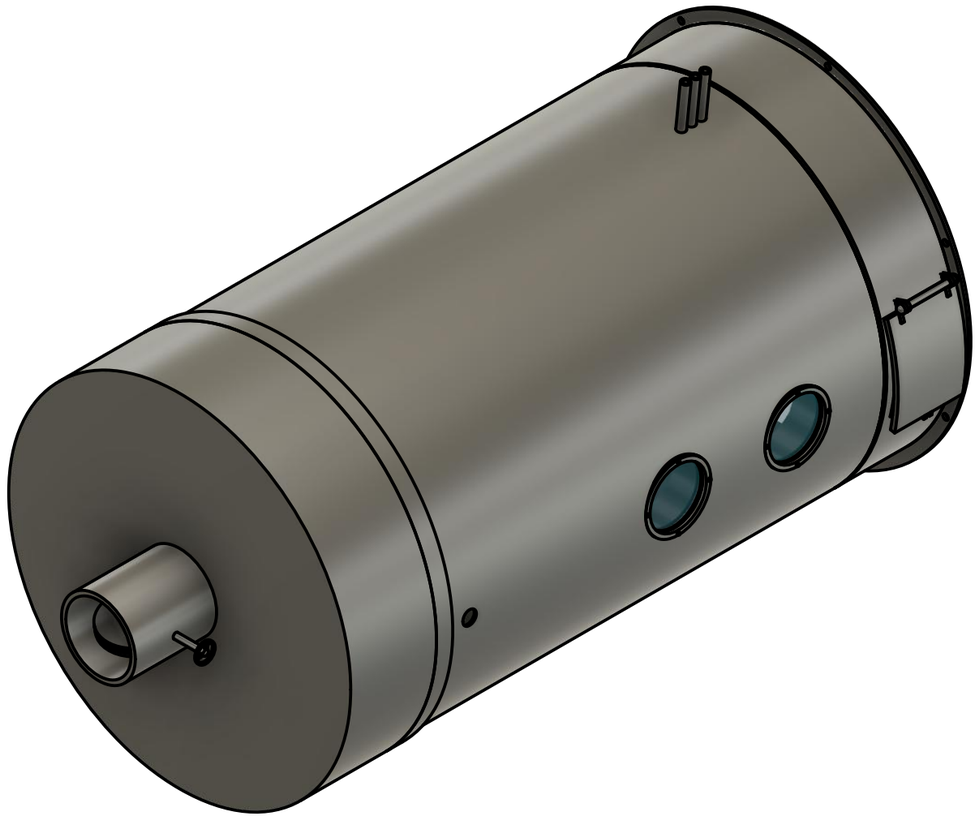

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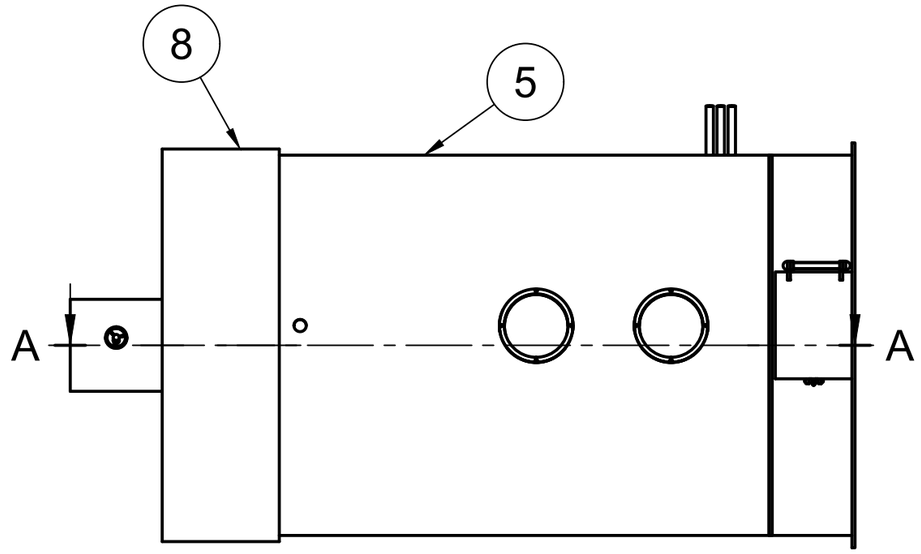
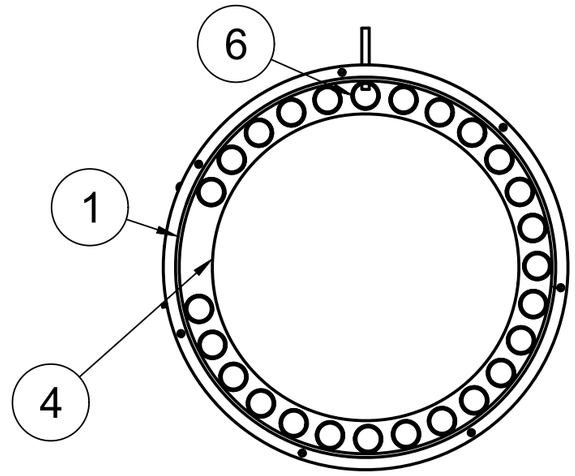
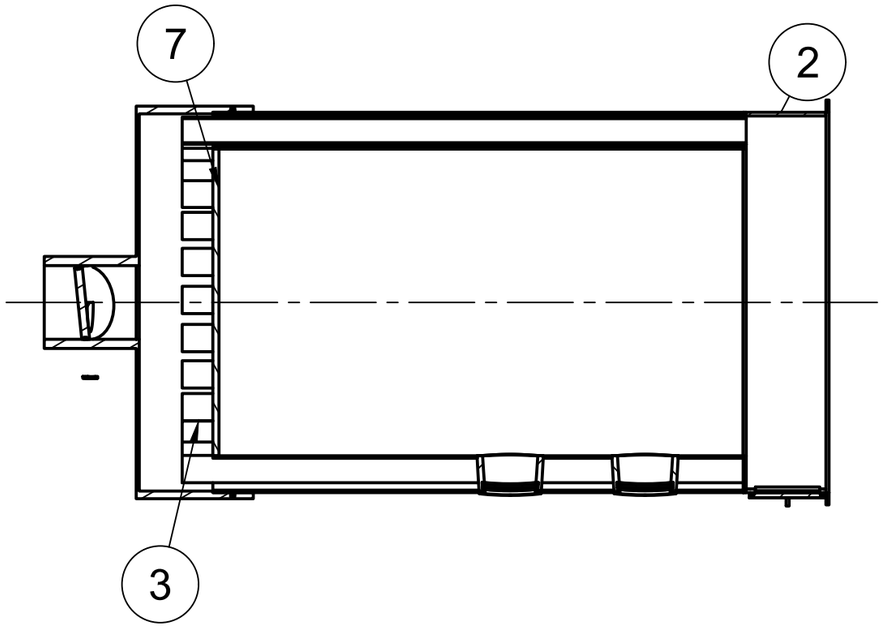
		Paula Peralta 12-12-17	
		Document type	Document status
		Title Perpectivas 3D	DWG No.
			Rev. / Date of issue / Sheet 1/9





Observación: Todos las empaquetaduras son a base Kevlar con diámetros especificados para cada caso.

A-A (1:10)



Parts List

Item	Qty	Part Number	Material	Obs
1	1	Flange	Acero estructural A 36	
2	1	Parte inferior cámara + conjunto puerta	Subconjunto; detalle de materiales en hoja 4	
3	25	Tubos de humo	Acero estructural A 36	L= 920 mm
4	1	Base tubos de humo	Acero estructural A 36	
5	1	Manto cámara	Acero estructural A 36	
6	1	Tubos de humo Muestra	Acero estructural A 36	Idem 3, con perforaciones
7	1	Tapa cámara	Acero inoxidable 304L	
8	1	Tapa chimenea	Subconjunto, detalles hoja 9	

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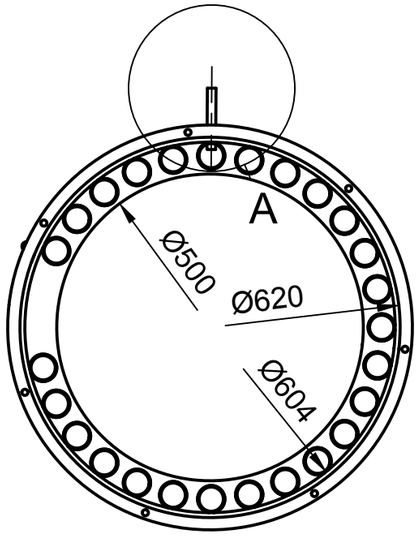
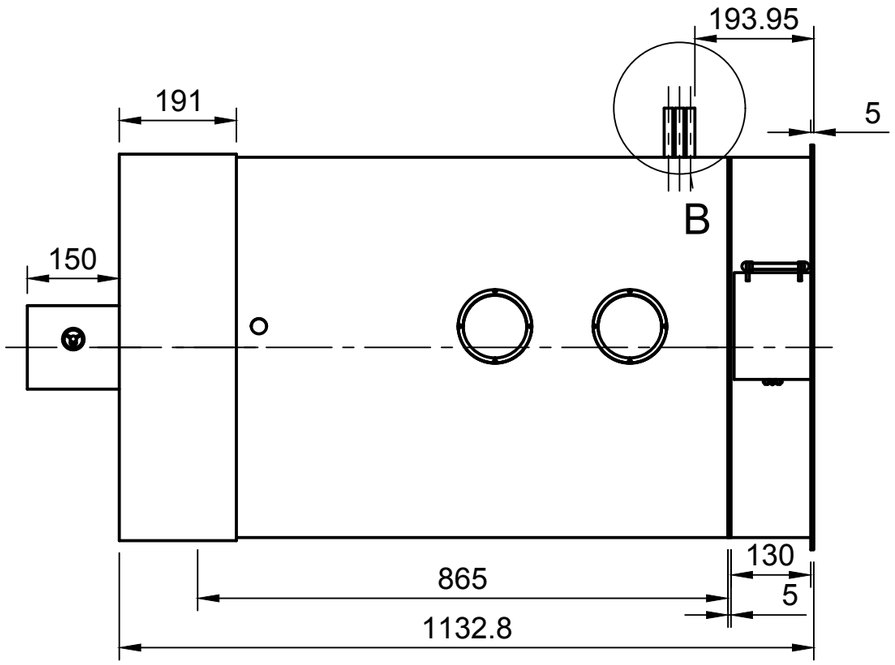
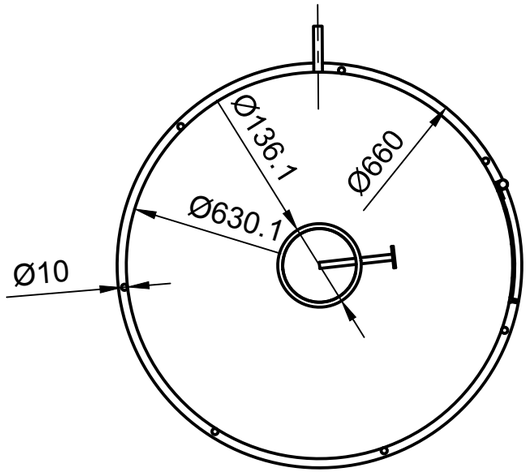
		Document type	Document status
		Title: Listado de piezas y sub sistemas	DWG No.
			Rev. / Date of issue / Sheet 2/8



26 tubos de humodisanciados por 12.8º de centro a centro





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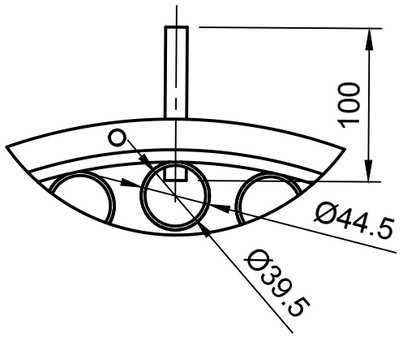
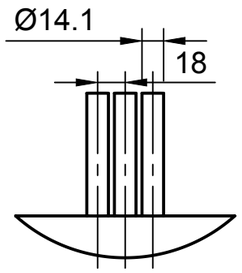


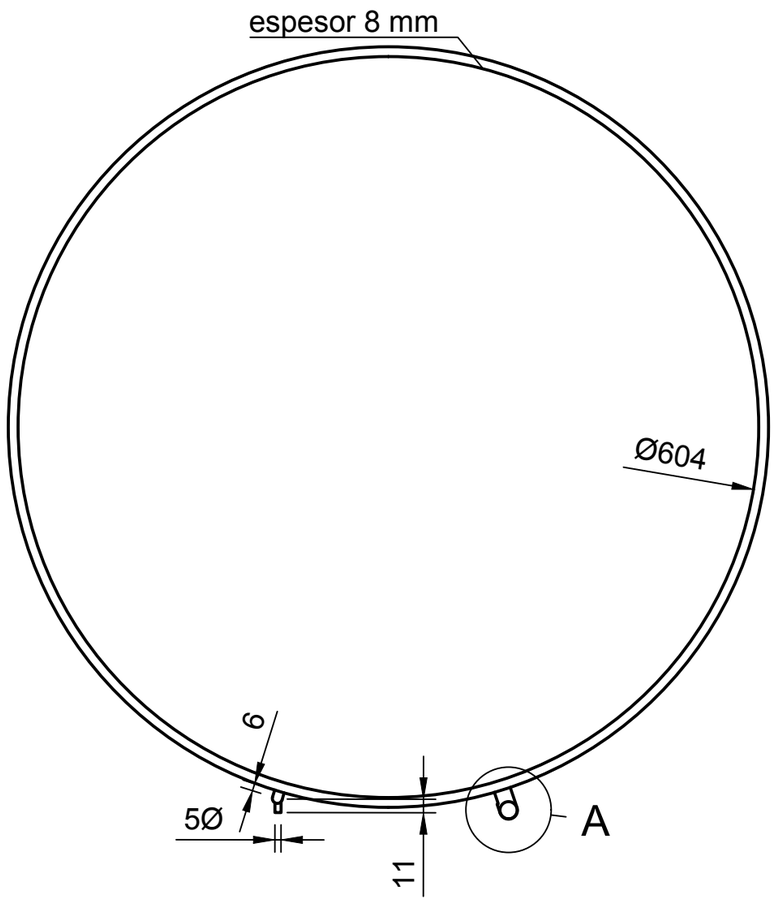
Tubo de medición sobresale80 mm a partir de la superficie exterior del manto de la cámara

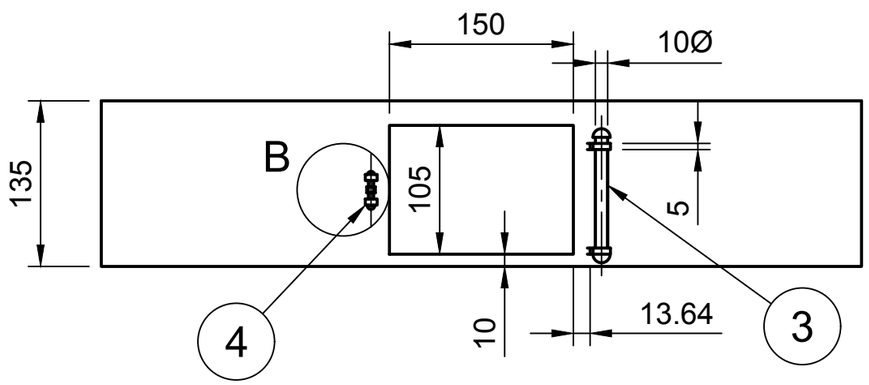


3 tubos idénticos equidistados de diámetro interno 8.1 mm

B (1:4)

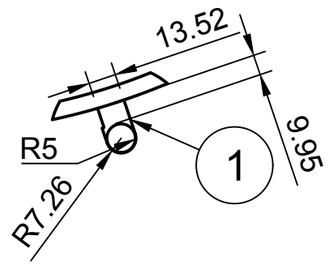
Dept.	Technical reference	Created by	Approved by
		Paula Peralta 12-12-17	
		Document type	Document status
		Title: Vistas principales en detalle	DWG No.
			Rev. / Date of issue / Sheet 3/9





Observaciones

- Puerta fue suprimida de esta vista para mejorar la visualización de los elementos de ensamble del manto, detalles en la puerta en hoja 5.
- "Perno cierre puerta" (Elemento 6) corresponde a un vástago roscado que se une al "Pasador port tuerca" (Elemento 5) mediante un anillo que se ensambla en él. El perno se cierra mediante una rosca para fijar el a su vez el cierra de la puerta.
- Material manto de la cámara: Acero inoxidable 304L



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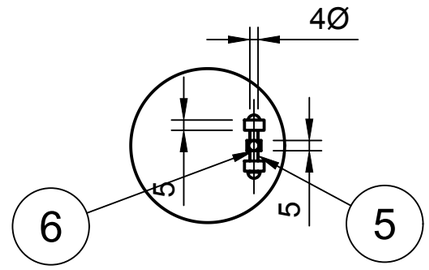

B (1:3)

Parts List

Item	Qty	Part Number		
1	2	Oreja puerta		
2	1	Puerta		
3	1	Pasador		
4	2	Oreja cierre puerta		
5	1	Pasador porta tuerca		
6	1	Perno cierre puerta		

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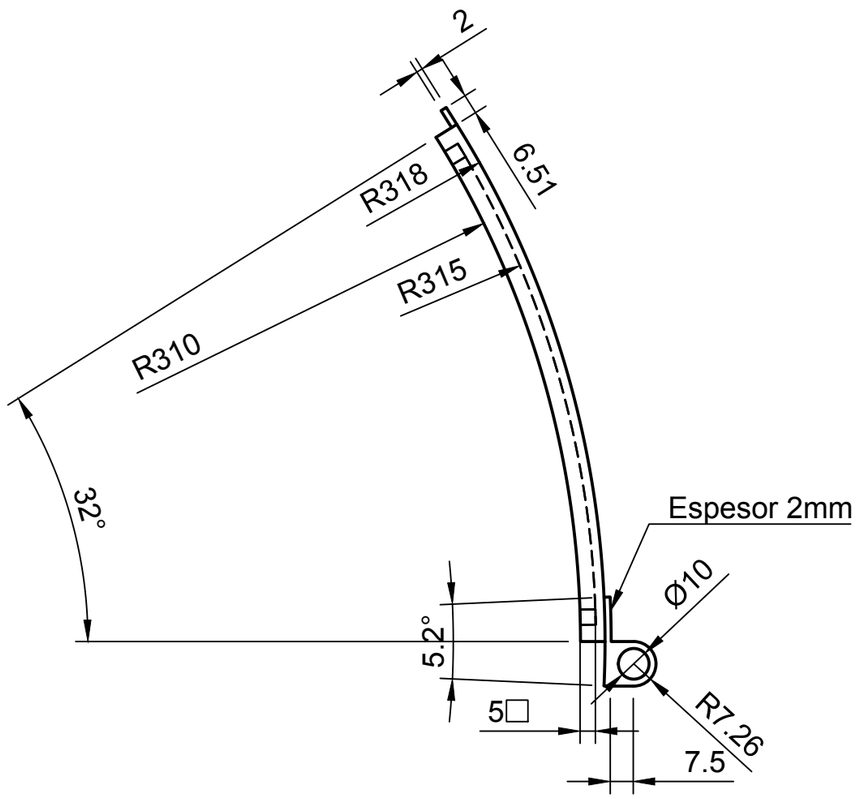
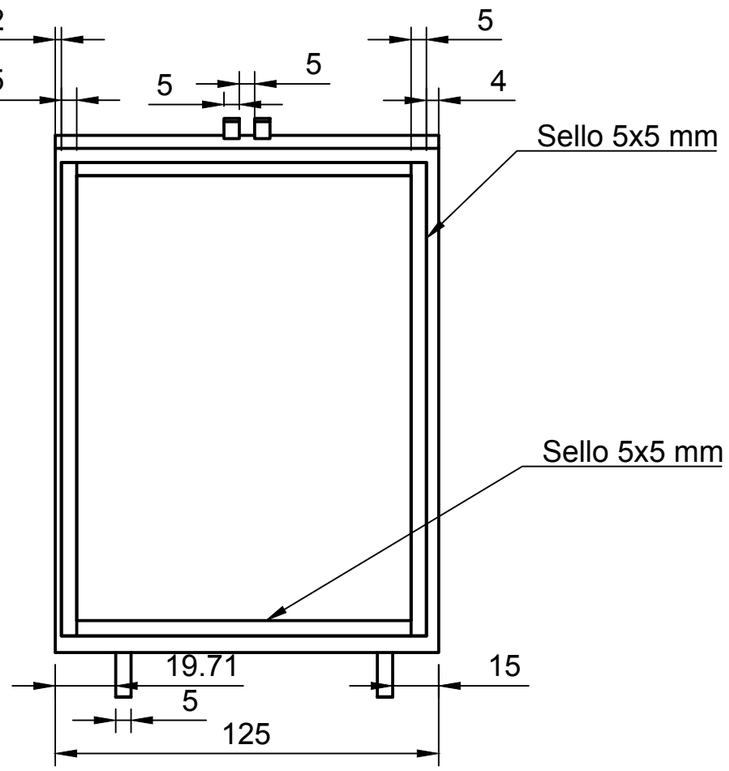
		Document type	Document status
		Title Parte inferior cámara	DWG No.
			Rev. / Date of issue / Sheet 4/9





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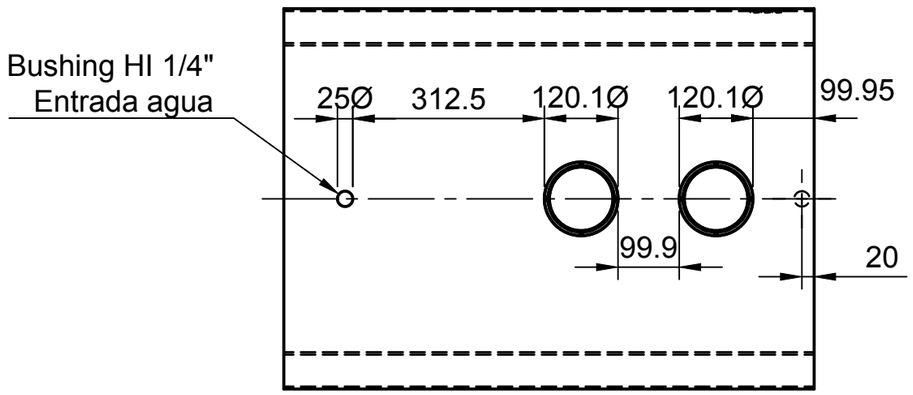
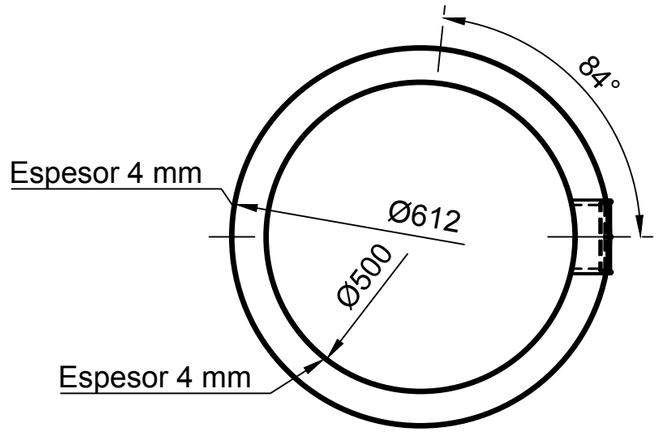
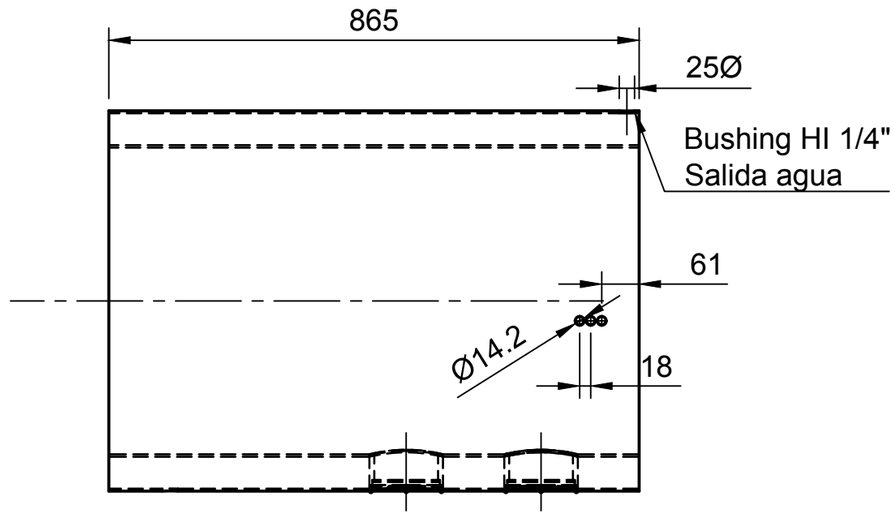
		Paula Peralta 12-12-17	
		Document type	Document status
		Title: Puerta	DWG No.
			Rev. / Date of issue / Sheet 5/9





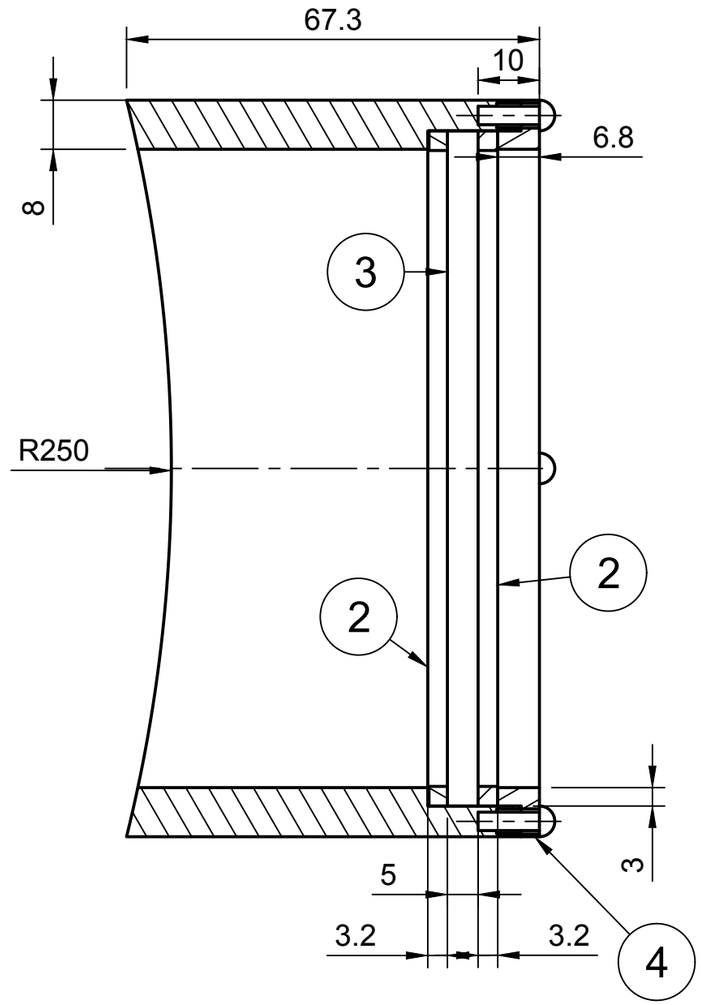
84º corresponde a la distancia angular entre línea central tubos de medición y línea central mirilla



IMPORTANTE

Manto de la cámara en conjunto con Base de tubos de humo forman un volumen a rellenar con líquido refrigerante (Agua), por lo tanto es importante la estanquidad en su soldadura.

Dept.	Technical reference	Created by Paula Peralta 13-12-17	Approved by
		Document type	Document status
		Title: Manto cámara	DWG No.
			Rev. / Date of issue / Sheet 6/9



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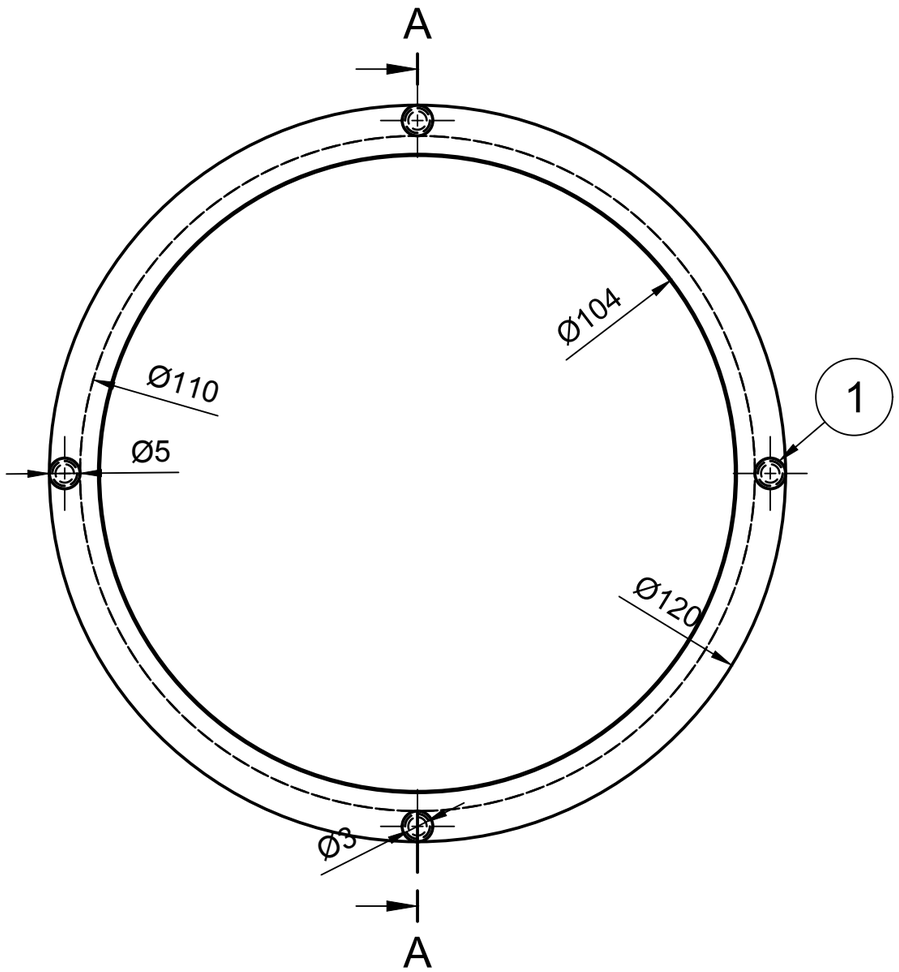

Parts List

Item	Qty	Part Number	Material	Obs
1	4	Perno	Resistencia media 3x10 mm	
2	2	Sello mirilla	Cordón Kevlar 3.2 mm x 3.2 mm	
3	1	Vidrio	Vidrio Templado	
4	1	Tapa mirilla	Acero estructural A36	

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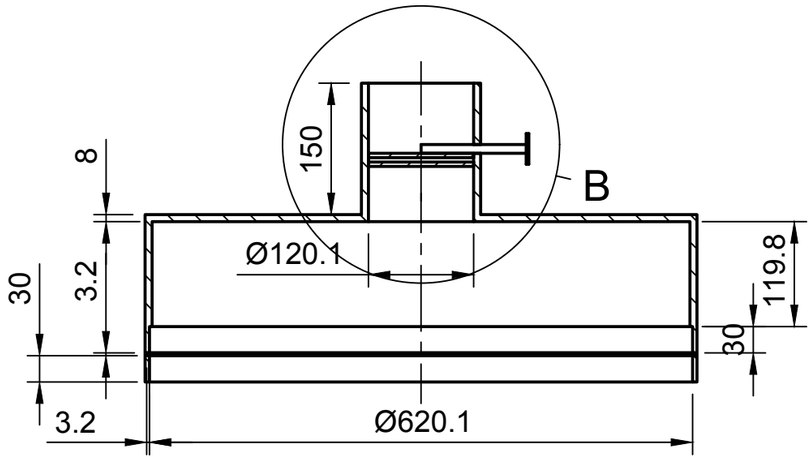
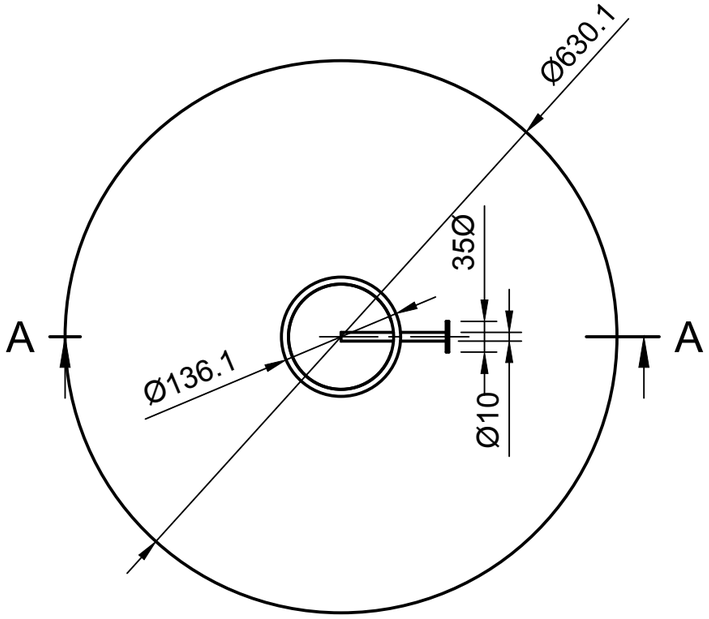
		Document type	Document status
		Title Mirilla	DWG No.
			Rev. / Date of issue / Sheet 7/9

A-A (1:7)

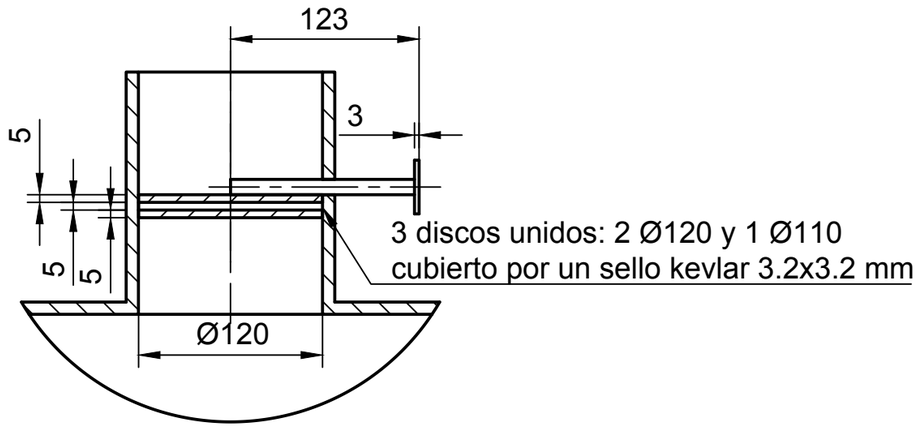


Sistema de obturación utilizado para variar la presión dentro de la cámara. Sistema constituido por clapeta manejada por una llave circular unida mediante un eje.

Clapeta debe ser capaz de girar en 90º con respecto al plano de la hoja



B (1:4)



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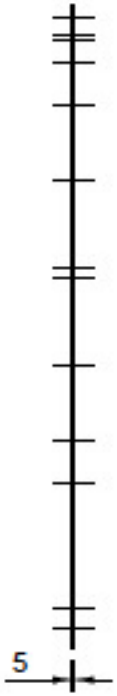
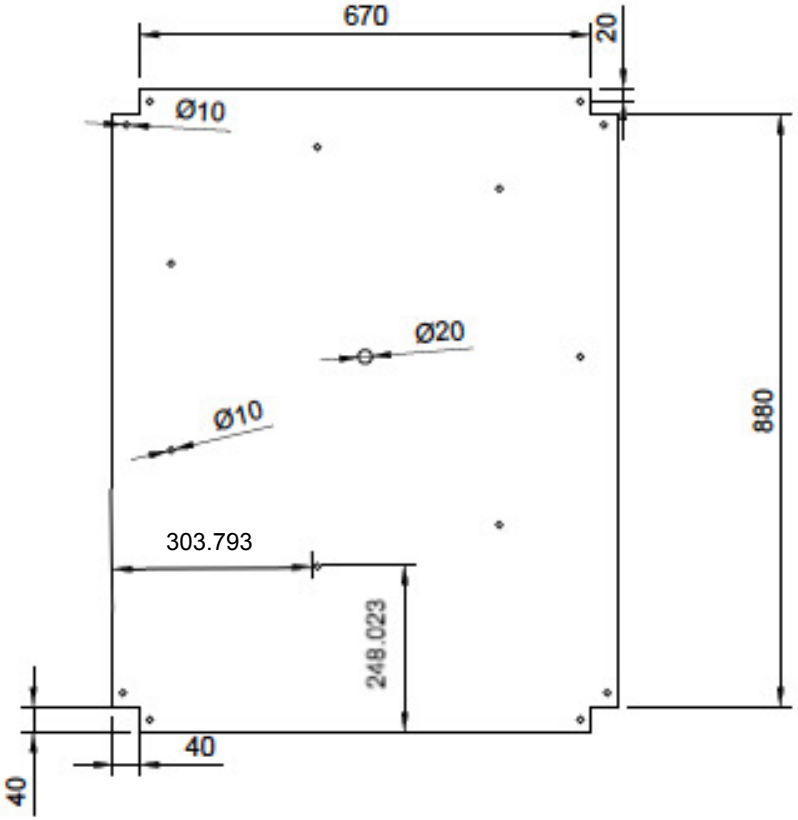
		Document type	Document status	
		Title Chimenea	DWG No.	
			Rev. / Date of issue	Sheet 8/9





7 agujeros distanciados de centro a centro por 62º

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		Paula Peralta 06-02-18	
		Document type	Document status
		Title: Placa porta hogar	DWG No.
			Rev. / Date of issue / Sheet 9/9