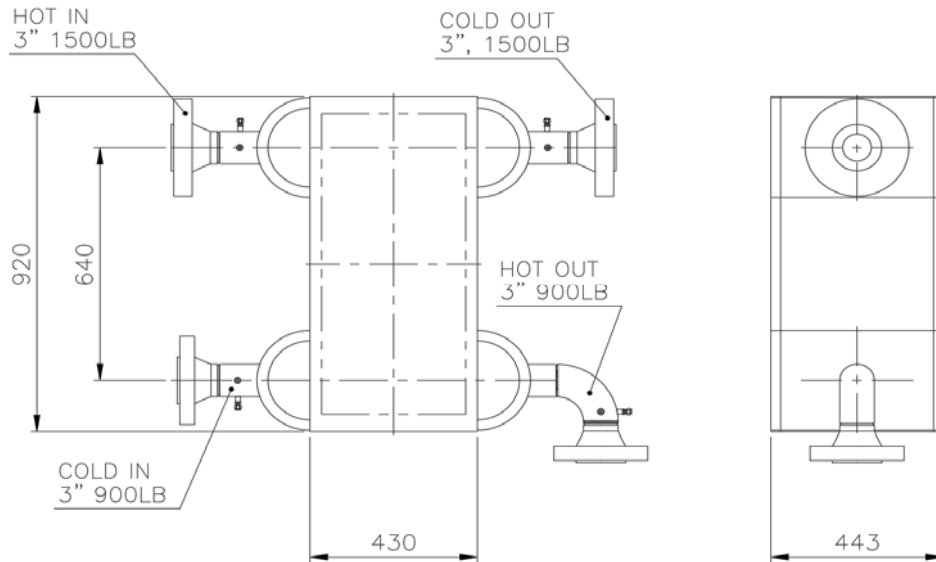


	PCHE DATA SHEET	Sheet 1 of 1
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Operator	KAERI 핵융합연구원	Project	Helium Recuperator PCHE
Contractor	-	Required Amount	1
Equipment	Cooler		

		Dim	SIDE A		SIDE B		Rev
1	FLUID CONDITIONS		In	Out	In	Out	
2	Fluid		Helium		Helium		
3	Flow rate	kg/s	1.5		1.5		
4	Temperature	°C	450	55.44	25	419.53	
6	Pressure	Bar,a	80		80		
7	Pressure Drop : Calc/Req	Bar	0.5	0.5	0.5	0.5	
8	Design Temperature : Max/min	degC	550		550		
9	Design Pressure	Bar,a	100		100		
10	FLUID PROPERTIES						
11	Viscosity	Pa-s	3.68E-05	2.15E-05	2.01E-05	3.57E-05	
12	Density	kg/m3	5.254	11.335	12.446	5.481	
13	Thermal conductivity	W/m-K	0.292	0.171	0.160	0.283	
14	Specific Heat	kJ/kg-K	5.189	5.194	5.196	5.189	
15	CONNECTIONS						
16	No. of nozzles	EA	1	1	1	1	
17	Nozzle OD size	inch	3"	3"	3"	3"	
18	Flange class		1500LB	900LB	900LB	1500LB	
19	Max strainer aperture	mm	0.5		0.5		
20	MATERIALS						
21	Nozzle material		SA-240, 316				
22	Header material		SA-240, 316				
23	Core material		SA-240, 316				
24	THERMAL DESIGN VALUE						
25	Heat duty	kW	3071.400				
26	Total area provided	M²	77.84		77.84		
27	Fouling allowance	%	10				
28	Over Sizing	%	10				
29	MASS & SIZE						
30	Dry mass	kg	1210				
31	Core dimension	mm	430 X 920 X 443				

32 Design description



#### Notes

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- 1.Weight and dimensions are approximate. Do not use for construction, Core length excludes support brackets.
  - 2.All Properties are obtained by NIST Standard Reference Database 23, Version 9.1

Rev	Details	Date	Prepared by	Approved by
1	Initial design	30-Sep-21	Kihoon Yang/Gandae Choi	