Kelvion

Customer:	Intermountain Hydronic Specialties					
Quote-No.:		**Inquiry-No.:**				
Contact:			**Item:**	30	**Alternative:**	0
Customer Item:	HX-3		**Date:**		09/19/2018	

Kelvion Brazed PHE GmbH:
GBS400H-90-XCR / 31bar

REVIEWED
Reviewed only as to the general conformity with the design concept. The Engineer does not warrant or represent that the information contained on this drawing is either accurate or complete. Sole responsibility for correct design, details and dimensions shall remain with the contractor submitting the drawing. The review of this shop drawing shall not, in any way, relieve the contractor from complying with all requirements of the contract.
BRENKMAN &COMPANY By: stephen.sadler Date: 10/31/2018

Thermal data for 1 unit(s) in parallel and 1 unit(s) in series

	Side A		Side B	
Media:	Water		Water	
Heat Exchanged:		718063		Btu/h
Mass flow:	23938		18929	lb/h
Volume flow:	48.7		38.1	US gpm
Temperature Inlet:	160.00		82.00	°F
Temperature Outlet:	130.00		120.00	°F
Calculated pressure drop:	3.29		1.80	PSI
Fill volume:	0.101		0.103	ft³
Working pressure inlet:	43.50		43.50	PSIg
Product properties				
Density:	61.29		61.98	lb/ft³
Heat Capacity:	1.00055		0.99891	Btu/lb°F
Thermal conductivity:	0.37760		0.36181	Btu/fth°F
Viscosity Inlet:	0.962		2.024	lb/fth
Viscosity Outlet:	1.229		1.347	lb/fth

Unit data

Heat transfer area (total / per unit):		33.15	33.15	ft²
Number of plates (total / per unit):		90	90	
LMTD:		43.88		R
k-value:		494	1289	Btu/ft²h°F
Surface margin:		161.1		%
Plate material:		254SMO		
Soldering material:		Copper		
Flow arrangement:		pure counter flow		
Internal flow (passes x channels):	1 x 44	1 x 45		
No. of units (par. / ser. / total):	1	1	1	
Material Front- and endplate:	Stainless steel			

The connection types and positions are defined in the attached dimension sheet.

Design code: PED WTT

Please check physical properties, input parameters and pressure drop.

Remarks:

Dimension Sheet Plate Heat Exchanger

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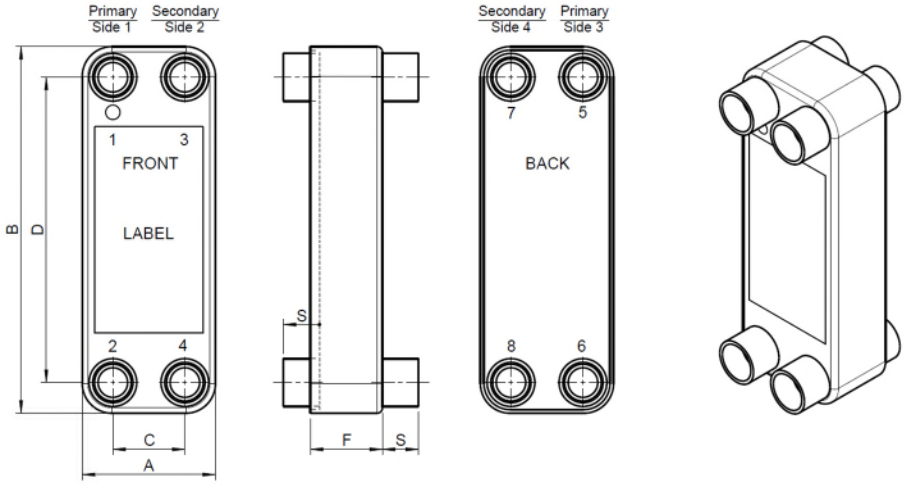
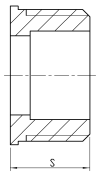
Quotation:	**2044201211**	**Item No.: 30**	**Alternative No.: 0**
Customer item:	HX-3		

Type: GBS400H-90-XCR / 31bar



A:	4.882 in	C:	2.874 in	F:	8.311 in	Weight:	30.42 lbs
B:	13.189 in	D:	11.063 in			Weight oper:	43.01 lbs

Pos	Size	Type	Name	Media	In	Out	Add.	S
3	NPT1	MPT NPT NPT1 1/4" 1.4301	FN	Water	-	x	-	0.787 in
1	NPT1	MPT NPT NPT1 1/4" 1.4301	FN	Water	x	-	-	0.787 in
2	NPT1	MPT NPT NPT1 1/4" 1.4301	FN	Water	-	x	-	0.787 in
4	NPT1	MPT NPT NPT1 1/4" 1.4301	FN	Water	x	-	-	0.787 in



MPT			
NPT			
3;1;2;4			

Technical Revisions reserved.
The design details are valid for phe manufactured by Kelvion Brazed PHE GmbH/Wilchwitz.