

CMS MODEL:	BKU48/68-120H6-2S
ALL STEEL CONSTRUCTION	

Technical drawing of a spherical tank showing the shell and head views.

Shell View (Left): A sphere with a diameter of $42 \frac{3}{4}$ inches. The top view is labeled (E), (K), and (D). The bottom view is labeled (F) 180 and (J) 180. The side view is labeled (L2), (L1), (P), and (C) 90.

Head View (Right): A cross-section of the head with a diameter of $42 \frac{3}{4}$ inches. The top view is labeled (A) and the bottom view is labeled (B).

HEAD(S)

FRONT VIEW

SHELL SUPPORTS
(SLOT REAR SUPPT ONLY 2" LG)

Technical drawing showing the front and rear views of a cylindrical bundle with various dimensions and labels.

Front View Dimensions:

- 53 FLANGE FACE TO END
- 167 3/4 Flange Face to End
- 143
- 132
- 120
- 96
- 23
- 7 1/4 (REF)
- 8
- 36 (REF)
- 14 1/2
- 34 1/4 C.G.
- 61
- 80
- 120
- 134 1/2
- 136 3/8 OAL OF BUNDLE

Rear View Dimensions:

- 24
- 47 1/2 BUNDLE HEIGHT

Labels and Callouts:

- A, B, C, D, E, F, G, J, K, L1, L2, P
- NAME PLT
- CL. HOLE
- CL. SLOT

FRONT

REAR

Nozzle A (TUBE IN)	16	100	600 # ANSI W.N.RF Flg SA-105 With SA-106 Gr B Sml Steel Pipe w/ 1"x4 1/2" RE-PAD
Nozzle B (TUBE OUT)	16	100	600 # ANSI W.N.RF Flg SA-105 With SA-106 Gr B Sml Steel Pipe w/ 1"x4 1/2" RE-PAD & SA-234 90° S.R.Elbow
Nozzle C (SHELL IN)	6	120	150 # ANSI W.N.RF Flg SA-350LF2 CL1 With SA-336 Gr 6 Sml Steel Pipe
Nozzle D (SHELL VAPOR)	12	100	150 # ANSI W.N.RF Flg SA-350LF2 CL1 With SA-336 Gr 6 Sml Steel Pipe
Nozzle E	4	160	150 # ANSI W.N.RF Flg SA-350LF2 CL1 With SA-336 Gr 6 Sml Steel Pipe
Nozzle F	2	XXS	300 # ANSI W.N.RF Flg SA-350LF2 CL1 With SA-336 Gr 6 Sml Steel Pipe
Nozzle G	1 1/2	XXS	600 # ANSI W.N.RF Flg SA-105 With SA-106 Gr B Sml Steel Pipe
Coupling J, L	1		6000# FPT Full Coupling SA-350 LF2 C Steel Forging
Coupling P	1 1/2		6000# FPT Full Coupling SA-350 LF2 C Steel Forging
Eccentric Cylinder	49.375X69.5	0.75	SA-516 Gr 70N Steel Plate
Kettle Cylinder	69.5	0.75	SA-516 Gr 70N Steel Plate
Front Head Cylinder	50.0	1.25	SA-516 Gr 70N Steel Plate
Front Head Cover	50.0	1.25	SA-516 Gr 70N Steel Plate Ellipsoidal Cover (1.139 MIN)
Kettle Cover	69.5	0.75	SA-516 Gr 70N Steel Plate Ellipsoidal Cover (.6086 MIN)
Front Tubesheet	53.0	7.0	SA-350 LF2 CL.1 Carbon Seel Forging
Front Head Flange at Ts	61.25	8.0	SA-350 LF2 CL.1 Carbon Steel Forging HUB Flange (1.875" Lg Hub)
Front Shell Flange	61.25	8.5	SA-350 LF2 CL.1 Carbon Steel Forging HUB Flange (1.25" Lg Hub)
Front Head Gasket at Ts	50.75	0.125	Kammprofile <304SS Core/Graphite Facing> Periph. width 1.25 in w/ C.L. Rib (CG TYPE)
Front Shell Gasket	50.75	0.125	Kammprofile <304SS Core/Graphite Facing> Periph. width 1.25 in (CG TYPE)
Front Hd Bolting at Ts	1.625		SA-193 B7 Steel Bolting 52 Bolts on 58.0 in B.C. (ZINC{YELLOW} COATED)
Tubes	0.75	0.065	SA-214 Wld C Steel Tube Bare tubes
Baffles			SA-36 Steel Plate
Pass Partition		0.5	SA-516 Gr 70 Steel Plate
Shell Supports		0.5	SA-36 Steel Plate w/ 5/8" Tk Base Plate

CERTIFIED

BY CMS HEAT TRANSFER

_____ DATE _____

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DESIGN CONDITIONS		SHELL SIDE	TUBE SIDE
DESIGN PRESSURE	(psig)	Full Vac/270	878
TEST PRESSURE	(psig)	351	1142
DESIGN TEMPERATURE	/ MIN (°F)	150 / -50	150 / -20
NUMBER OF PASSES		1	2
CORROS ALLOW, C STL ONLY	(in)	0.0625	0.0625
RADIOGRAPHY		Spot	Full
PWHT		NONE	NONE
TEMA TYPE BKU		SIZE 48/68-120	SURFACE AREA 3503 ft ²
TUBE TYPE	Bare	NO.OF HOLES 1640	NOM BDL LG 120 in
LAYOUT	1.0 in Square	TUBE-TUBESHT JT	Expanded
BAFFLE TYPE	Full Support		
BAFFLE SPACING (in)	37.0		
IMPINGEMENT PLATE	Inlet Diverter @ Nozzle C		
CODE: ASME SECT VIII, DIV 1,	2013	TEMA CLASS C	
WEIGHT: EMPTY 29929	FLOODED 51693	BUNDLE	12527lb
DATE: 10-20-14	DRAWN: CM	CHKD:	APPD: <i>CM</i>
 C M S Heat Transfer Division, Inc. 273 Knickerbocker Ave. Bohemia, NY 11716			

NOTES: ASME STAMP, NATIONAL BOARD INSPECTION & REGISTRATION ARE REQUIRED
PAINT C STL ONLY ONE SHOP COAT KEM HI-TEMP HEAT FLEX II 450 (GREY)
IMPACT TEST NOT REQD PER SECT VIII, DIV I, PARA UG 20(F) UCS-66
ALL SA-516 Gr 70 PLATE IS NORMALIZED

CUSTOMER : EXTERRAN ENERGY SOLUTIONS, L.P.
P.O. NO. : 5662567 QTY : FOUR(4)
EQUIP NO.: US-107303 E-1223, E-2223, E-3223, E-4223

NO.	DATE	BY	REVISIONS
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JOB NO.	2442	DWG NO.10.2442.00	REV
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