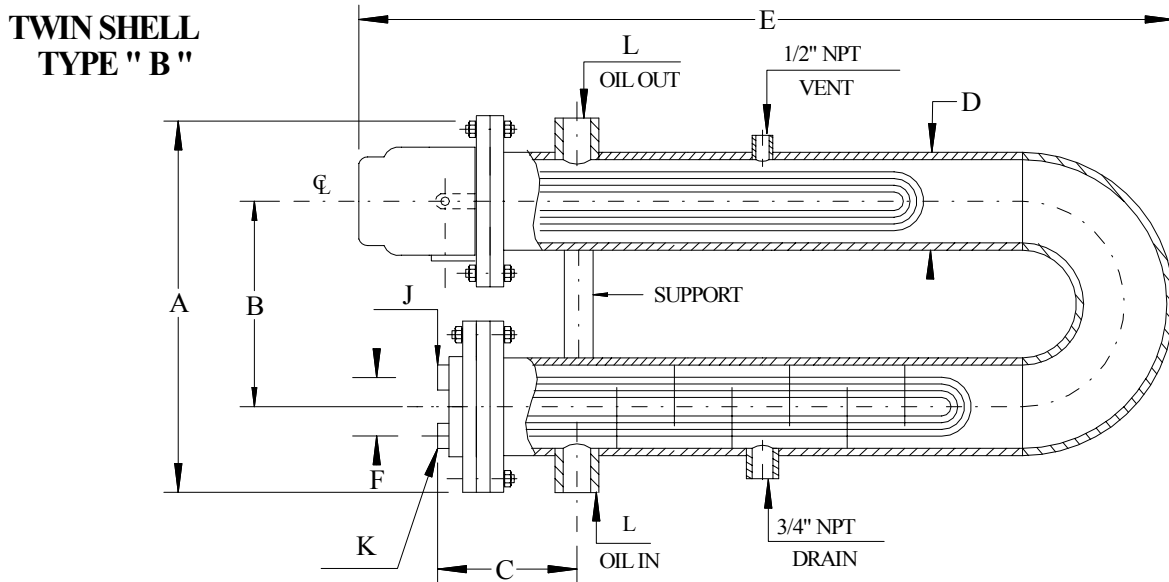
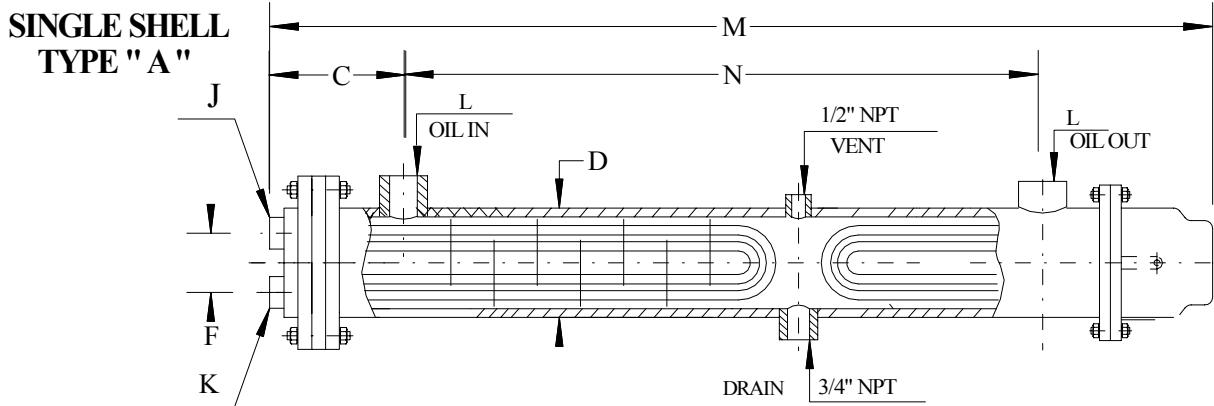


## Combination Steam-Electric Fuel Oil Heaters Series "ASE"

Alstrom Combination Steam-Electric Fuel Oil Preheater Series "ASE" combines a highly efficient steam heated tube bundle with an electrical element, resulting into one simple, compact, labor-saving package. This unit is highly recommended for installations which require minimal space and installation costs. The purpose of this heater is to preheat fuel oil with an electrical element for the start-up. When a boiler generates sufficient steam pressure, the heating is taken over by the steam heated tube bundle and then the electrical element assumes a stand-by function. Fuel oil flows through the baffled tube bundle and then reaches the electrical element. The removable steam heated tube bundle and electrical element have "U"- bend construction to provide the expansion of tubing due to its heating.

Two models are available: single shell type "A" and twin shell type "B". The correct selection depends on the actual design of a boiler room. Indeed, all sizes and performance data may be changed from standard, often at little or no extra cost.



### STEAM HEATED TUBE BUNDLE

Design Pressure	Shell Side Tube Side	Standard: 150 psi at 400 deg. F Maximal: 300 psi at 400 deg. F
Head (steam unit)		Fabricated Carbon Steel
Tubing: 1/2", 5/8", 3/4" O.D.		Copper, Stainless Steel,
Shell		Carbon Steel SA 53 B
Tubesheet		Carbon Steel SA 516 Gr. 70

### ELECTRICAL ELEMENT

PHASE	VOLTAGE (VOLTS)	ELEMENT SHEATH
Single Phase	120, 208, 240, 440, 550	Carbon Steel Stainless Steel
3 Phase	208, 240, 440, 550	



# Combination Steam-Electric Fuel Oil Heaters Series "ASE"

ASE-A	ASE-A-*-S					ASE-A-*-L		
	C in	D in	M in	N in	WGT. lbs	M in	N in	WGT. lbs
4	7	4-1/2	81	66	240	153	138	390
5	7	5-9/16	81	66	260	153	138	700
6	7	6-5/8	81	66	500	153	138	720
8	8	8-5/8	82	65	840	154	137	1300
10	9	10-3/4	82	65	1080	154	137	1500
12	9	12-3/4	82	65	1420	154	137	1800
14	10	14	83	64	2020	155	136	2800
16	10	16	83	64	2500	155	136	3400
18	12	18	84	63	3300	156	135	4500
20	12	20	84	63	4000	156	135	5600
24	12	24	85	62	4500	157	134	6100

↑ Customized Heater

ASE-B	ASE-B-*-S					ASE-B-*-L		
	A in	B in	C in	D in	E in	WGT. lbs	E in	WGT. lbs
4	22	12	7	4-1/2	86	240	158	390
5	26	15	7	5-9/16	88	260	160	700
6	30-1/2	18	7	6-5/8	92	500	164	720
8	39	24	8	8-5/8	96	840	168	1300
10	47-1/2	30	9	10-3/4	100	1080	172	1500
12	56-1/2	36	9	12-3/4	104	1420	176	1800
14	65	42	10	14	108	2020	180	2800
16	73-1/2	48	10	16	112	2500	184	3400
18	82	54	12	18	116	3300	188	4500
20	90-1/2	60	12	20	120	4000	192	5600
24	108	72	12	24	128	4500	200	6100

↑ Customized Heater

**Recommended Connections Sizes (Inches) And Param**

**eters For Electrical Element**

F	J	K	L	KW	VOLTS	PHASE	NO. OF CIRCUITS

- \* - Various materials and working conditions can be provided.
- Legs can be supplied when specified.
- Space equal to or greater than dimension "B" should be provided for removal of tube bundle.
- \* - All Heat Exchangers are designed and manufactured according to ASME Code, Section VIII, Div.1. ASME U-1 Form, Stamp, and N.B. Number are provided upon request for an additional cost.
- \* - All heaters have a one year guarantee against failure caused by materials or workmanship, but not against gasket failure or damage caused by corrosion, water hammer, fouling, sealing, excessive pressure or temperature, incorrect installation or other factor beyond the manufacturer's control.

**Complete model number as per the following example:**

