



SERVICE BULLETIN

Title: Tube Expanding, Swaging
Models Affected: All Centrifugal Water Chillers

Number: C9513A
Date: 3/18/96
Supersedes: C9513
Date: 12/31/95

1.0 Purpose:

The information in this bulletin is to provide the field with reference information about how Carrier chillers were built. It may also be helpful when tubes are Eddy Current tested. Whenever the machines are retubed, the tubes should be expanded as per original factory specifications.

File: Cooler-Condenser-Economizer

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2.0 Swaging of Tubes into Tube Support Sheets:

Where swaging of tubes into support sheets is specified, the expansion process shall result in at least 60% circumferential contact between the tube (or land) and the tube support sheet hole.

2.1 Swaging of tubes at cooler support sheets is to be done per the following table:

Series Chiller	Cooler Swaging Requirement
17 C_, D_, E_, F_, Q 19 C_, DA, DG, DR, E_, F_, Q	All support sheets
17/19DK/DM	None
23XL Frame 1 and 2	None
23XL Frame 4	Center Support Sheet only
19XL (XB)	Center Support Sheet only *
19XT	Center Support Sheet only *

*Stretch versions of 19XL & 19XT have 4 supports so expand at two center sheets.

2.2 Swaging of tubes at condenser support sheets is to be done per the following table:

Series Chiller	Condenser Swaging Requirement
17 C_, D_, F_, Q	None
17EA	Contact Syracuse
19 C_, D_, E_, F_, Q	None
19XL (XB) /EX	Condenser to flasc boundary (see fig 1 , fig 3 & fig 4) and top ten rows of condenser at all support sheets.
19XT	Top ten rows of condenser at all support sheets.
23XL	Condenser to flasc boundary (see fig. 2)

Note: All coolers and condensers using steel or titanium tubing do not have to be swaged at the support sheets.

Note: Dimensions are reference only. All Support Sheet locating dimensions must be confirmed by electronic location, by eddy current or (with tubes removed) by direct measurement.

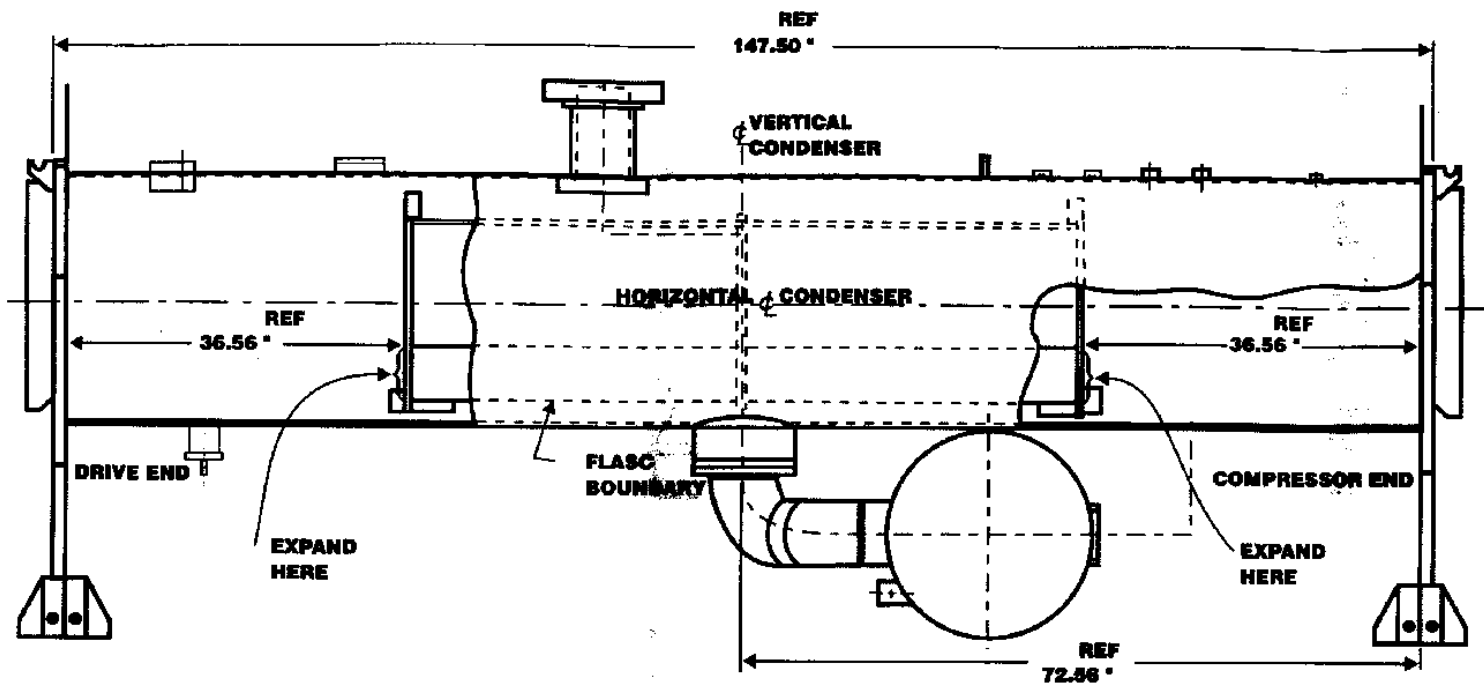


FIG. 1
19XL
CONDENSER

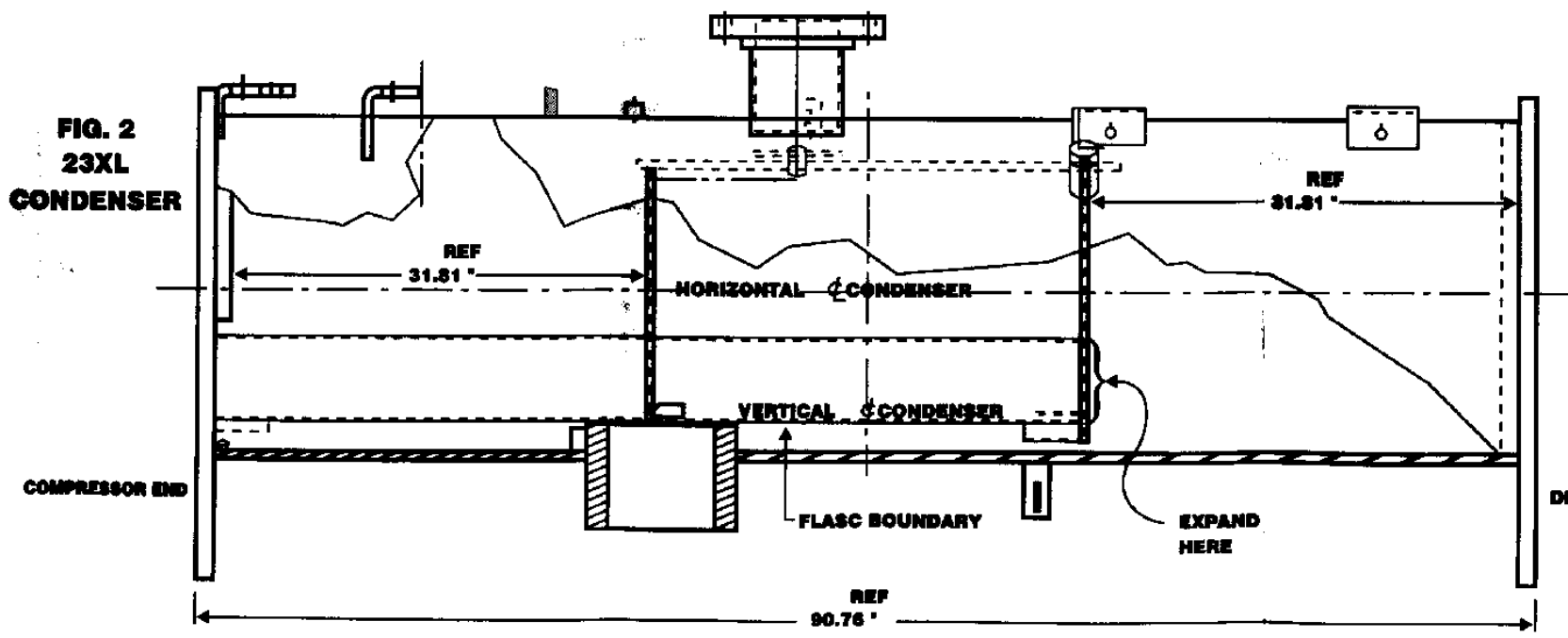
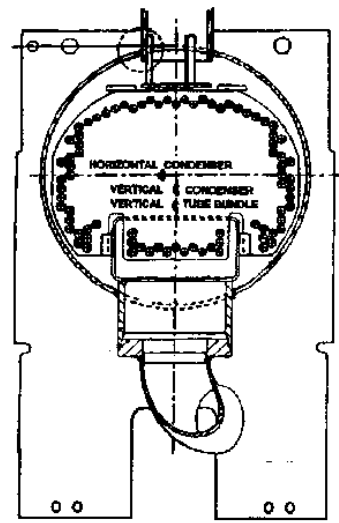


FIG. 2
23XL
CONDENSER

NOTE: " = INCHES

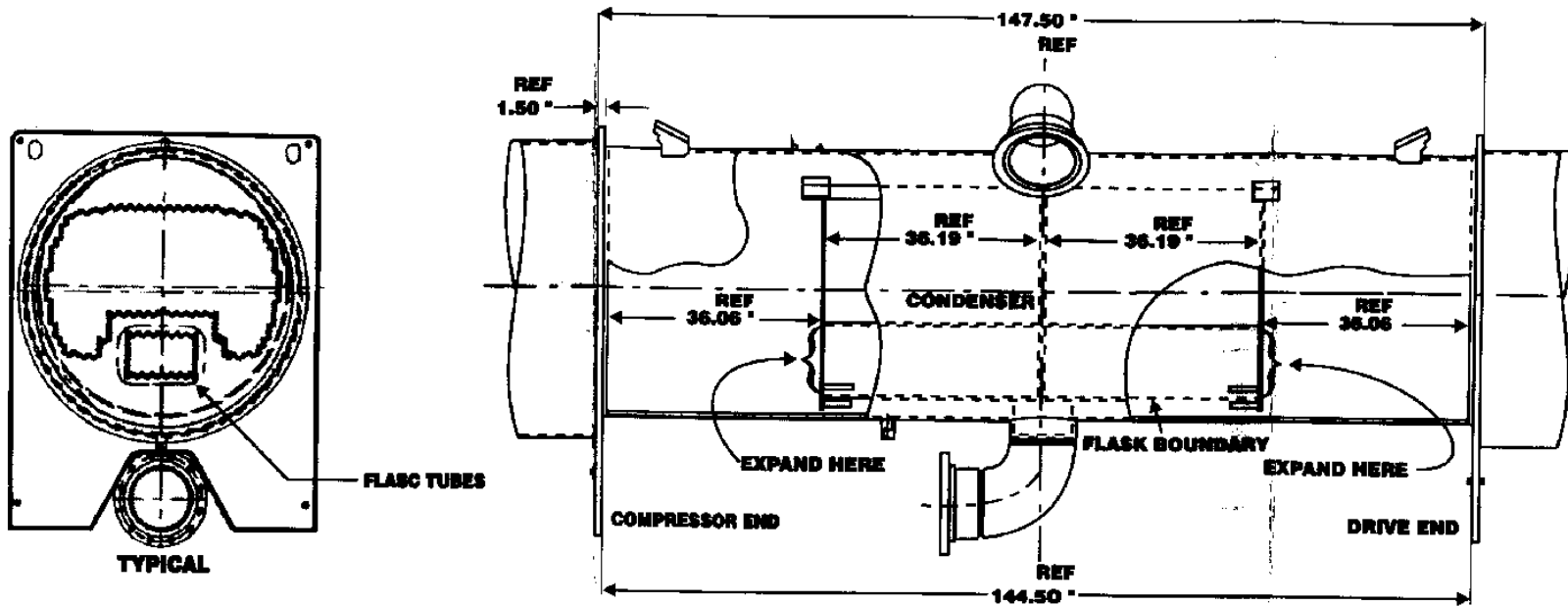


FIG. 3
12' 19EX
CONDENSER

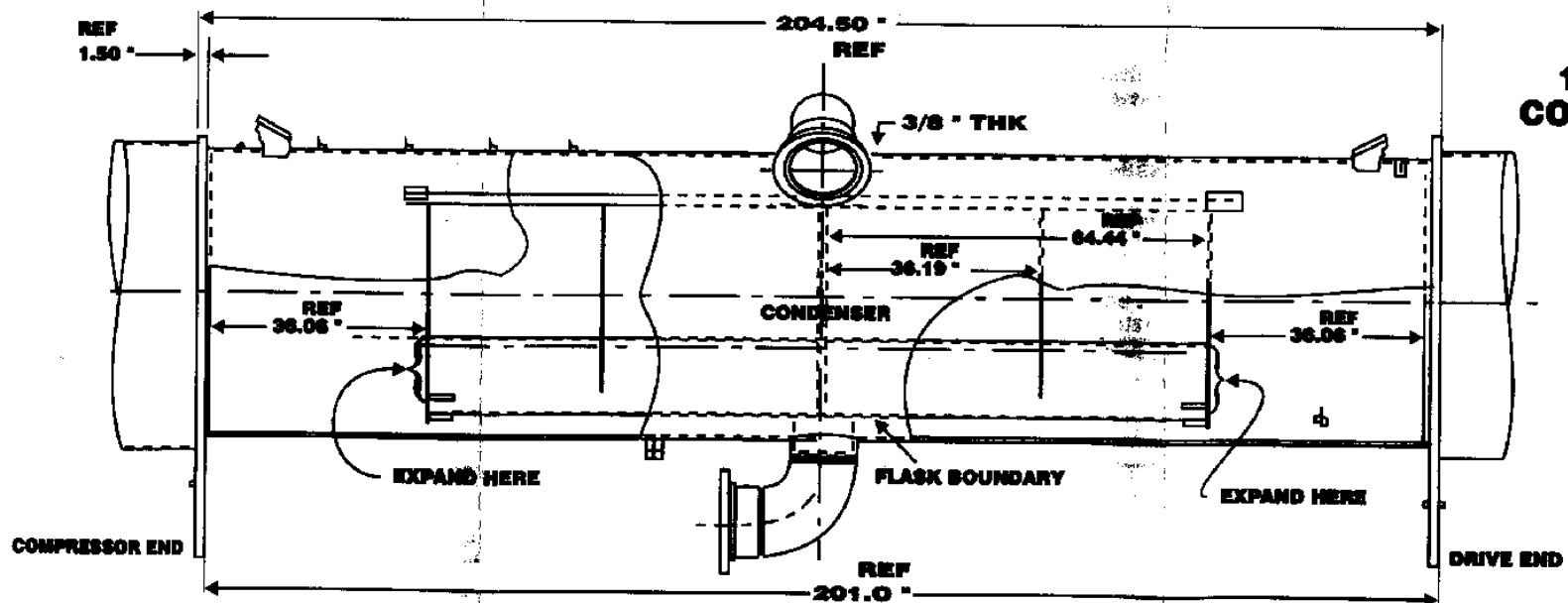


FIG. 4
17' 19EX
CONDENSER

NOTE: " = INCHES