YORK®

PRODUCT DRAWING

YORK INTERNATIONAL CORPORATION
P.O. Box 1592, York, PA 17405

Supersedes: 155.19-PA1 (395) FORM 155.19-PA1 (297)

ABSORPTION LIQUID CHILLING UNITS MODELS YPC-ST-19GL THRU YPC-ST-22G STEAM HEAT SOURCE

CONTRACTOR _____
ORDER NO. _____
YORK CONTRACT NO. _____
YORK ORDER NO. _____

PURCHASER _____
JOB NAME _____
LOCATION _____
ENGINEER _____

☐ REFERENCE DATE _____ ☐ APPROVAL DATE _____ ☐ CONSTRUCTION DATE _____

PERFORMANCE SPECIFICATIONS

		HEAT SOURCE	SIZE	ELEC. CODE	HTR.	TUBE	MOD.
MODEL	Y P C	S T			C		C

NO. OF UNITS _____

DESIGN LOAD CONDITIONS PER UNIT, _____ TONS. COOLING _____ GPM OF _____ FROM _____ °F TO _____ °F. CONDENSER WATER _____ GPM FROM _____ °F TO _____ °F.

HEAT INPUT _____ LBS/HR STEAM AT _____ PSIG DRY (MAX PRESS. 128 PSIG, MAX TEMP. 363°F)

EVAPORATOR – CHILLED LIQUID CIRCUIT, NO. PASSES _____, DWP _____ PSIG, FOULING FACTOR _____, PRESSURE DROP _____ FT.

ABSORBER/CONDENSER – CONDENSER WATER CIRCUIT, NO. PASSES – ABSORBER _____ CONDENSER – 1, DWP _____ PSIG, FOULING FACTOR _____.
OVER-ALL PRESSURE DROP _____ FT.

WATER BOX NOZZLE ARRANGEMENT – EVAP _____ ABS/COND _____

POWER REQUIREMENTS – UNIT PUMPS _____ VOLTS, 3-PHASE, _____ HERTZ, _____ TOTAL UNIT KW.

CONTROLS – 120V – 60HZ – 1P or 110V – 50HZ – 1P, 15 AMPERES CAPACITY INCLUDING VACUUM PURGE PUMP. NO EXTERNAL CONNECTIONS FOR CONTROL PANEL.

OPTIONAL SALES EXTRAS _____

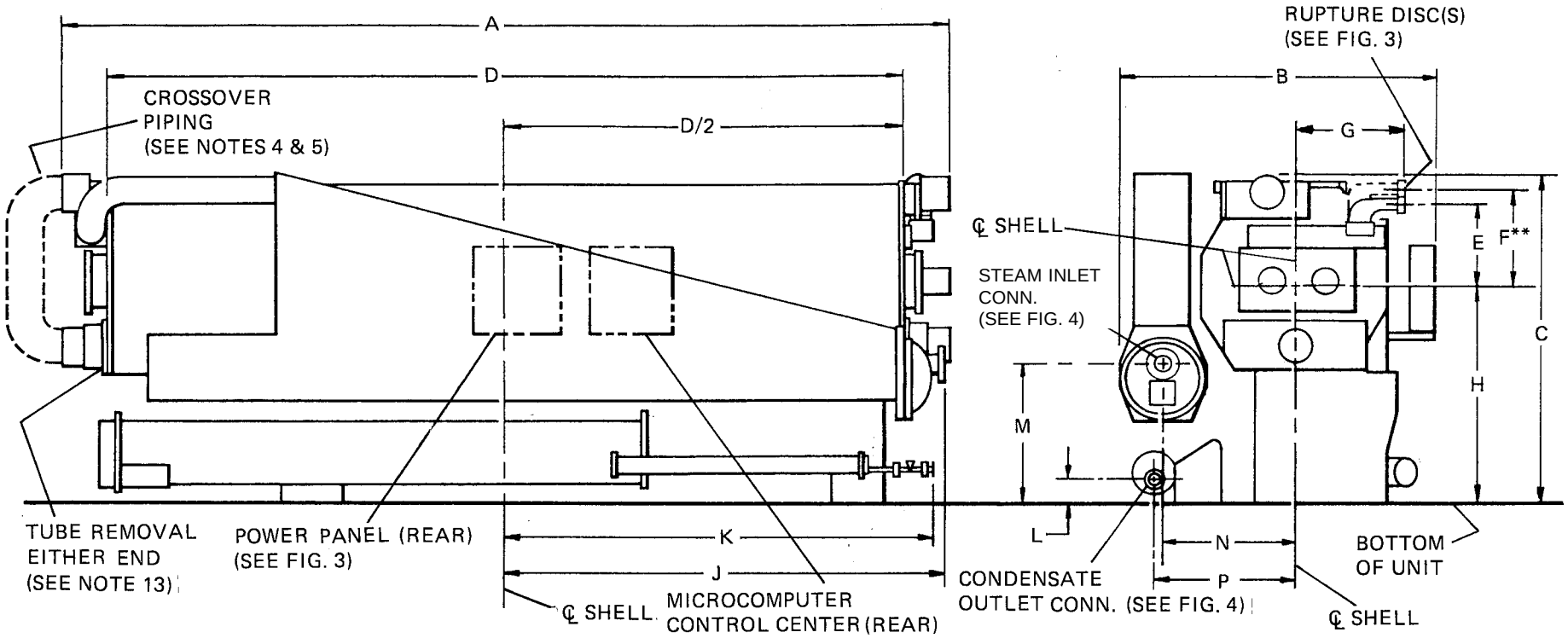
_____

REMARKS _____

_____

_____

_____

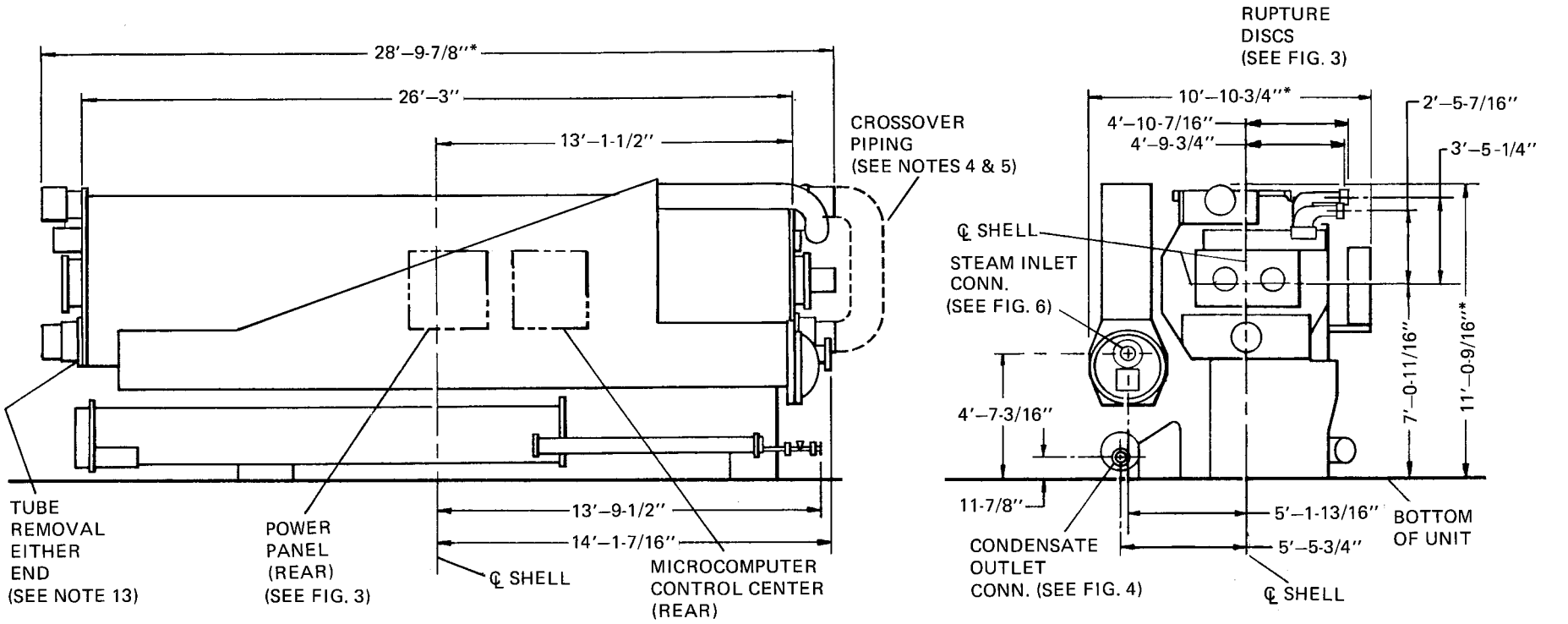


UNIT	DIMENSIONS													
	A*	B*	C*	D	E**	F**	G	H	J	K	L	M	N	P
19GL	28'–7-1/8"	8'–3-5/8"	9'–1-5/16"	26'–3"	2'–4-3/16"	—	2'–11-15/16"	5'–7-3/8"	14'–1-5/16"	14'–2-13/16"	9-7/8"	3'–7-3/16"	3'–7-5/16"	3'–2-1/2"
20G	28'–11-7/8"	8'–10-3/16"	9'–2-9/16"	26'–3"	2'–4-9/16"	—	3'–2-13/16"	5'–11-5/16"	14'–2-1/4"	6'–4-3/4"	9-7/8"	3'–7"	3'–11-1/4"	4'–2-3/8"
21G	28'–9-7/8"	9'–10-3/8"	11'–1-1/2"	26'–3"	2'–9-1/4"	3'–9-1/8"	3'–7-1/2"	6'–10-3/4"	14'–1-7/16"	8'–5-3/8"	9-7/8"	4'–0-7/8"	4'–9-1/16"	4'–3-5/8"

* Overall dimensions shown are for units with compact boxes and victaulic couplings.
- Flanges add 1/2 inch to each end on overall length.
- Marine Water Boxes extend the overall length. Additional length with Marine Boxes for: 19GL – 2-1/4", 20G – 1'–6-1/2", 21G – 2'–1-5/8".
- Flanges can increase the overall height of the unit. Additional height with flanges for: 19GL – 0", 20G – 3-1/8", 21G – 1-3/16".
- Marine Water Boxes and flanges can increase the overall width of the unit. Additional width with flanged Marine Boxes for: 19GL – 0", 20G – 1-15/16", 21G – 0".

** 21G has two rupture discs.

FIG. 1 – SYSTEM ARRANGEMENT DIMENSIONS – MODELS 19GL, 20G, & 21G (SEE NOTE 16)

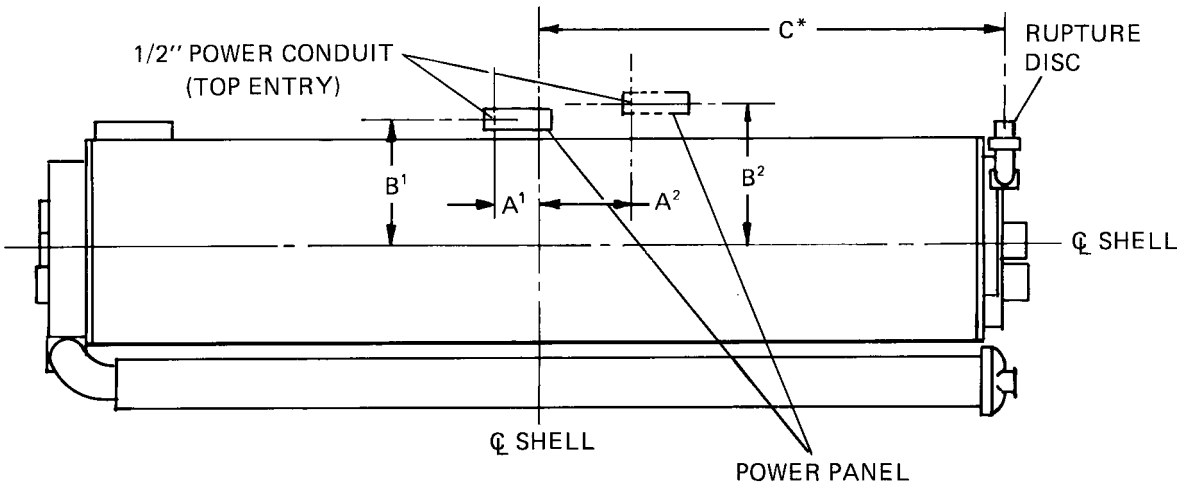


* Overall dimensions shown are for units with compact boxes and victaulic couplings.
- – Flanges add 1/2" to each end on overall length.
- – Marine Water Boxes add 2'–7-1/16" to the overall length.
- – Marine Water Boxes add 0'–5-11/16" to the overall width.
- – Marine Water Boxes and flanges add 9-7/16" to the overall width.

FIG. 2 – SYSTEM ARRANGEMENT DIMENSIONS – MODEL 22G (SEE NOTE 16)

UNIT WEIGHTS (LBS.)

UNIT	RIGGING WEIGHT UNCHARGED	RIGGING WEIGHT CHARGED	OPERATING WEIGHT
19GL	48,510	68,629	73,700
20G	59,400	N/A	87,340
21G	73,920	N/A	106,040
22G	99,330	N/A	143,000

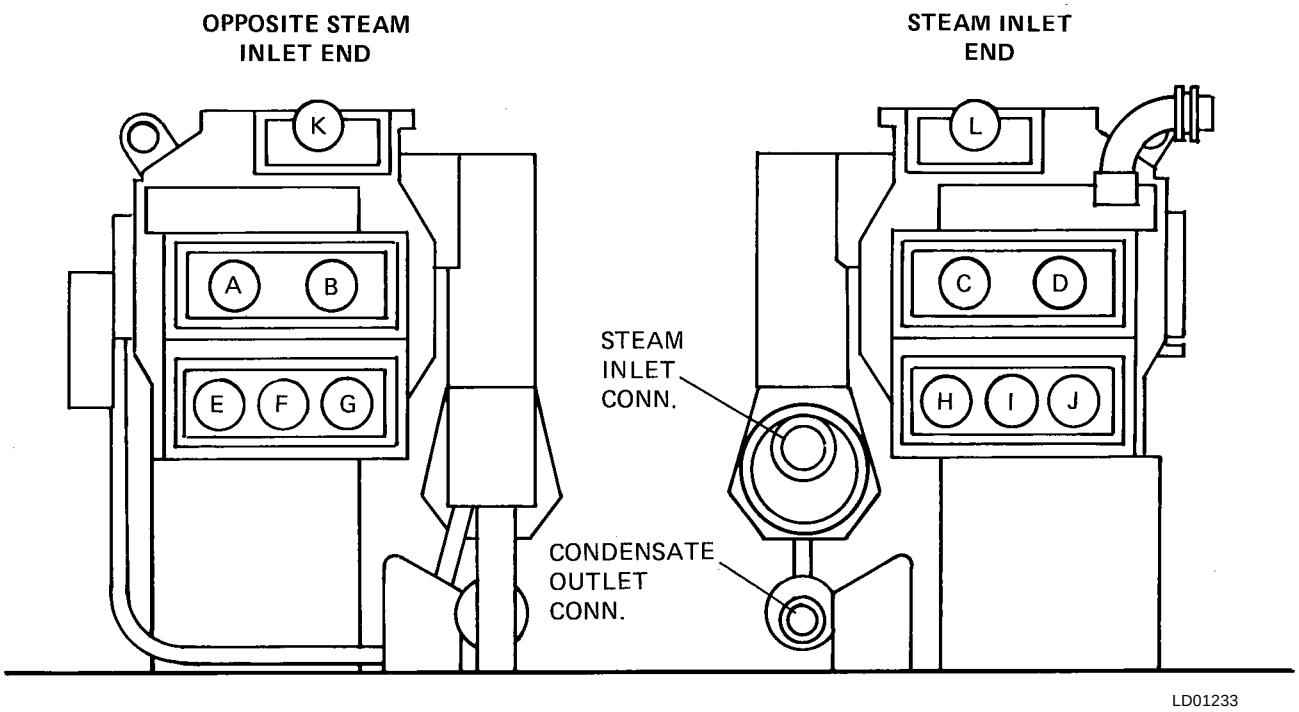


UNIT	POWER PANEL				RUPTURE DISC LOCATION**
	A^1	A^2	B^1	B^2	C
19GL	8-15/16"	—	3'–0-11/16"	—	13'–9-3/8"
20G	1'–4"	—	3'–6"	—	13'–8-15/16"
21G*	1'–4"	—	3'–7-3/16"	—	13'–8-11/16"
22G*	—	2'–9-1/8"	—	4'–2-5/8"	13'–10-1/4"

* 21G and 22G have two rupture discs. Both discs are located dimension C from the center line of the shell as shown above.

** 19GL and 20G rupture discs are 4" – 150 PSIG. All other discs are 6" – 150 PSIG.

FIG. 3 – POWER WIRING AND RUPTURE DISC LOCATION, SIZE, AND RATINGS



EVAPORATOR NOZZLE ARRANGEMENTS

NO. OF PASSES	NOZZLE ARRANGEMENT	IN	OUT
2,4	E1	B	A
	E2	C	D
3,5	E3	B	D
	E4	C	A

STEAM INLET & CONDENSATE OUTLET DIMENSIONS

UNIT	STEAM INLET**	CONDENSATE OUTLET**
19GL	6"	1-1/4"
20G	6"	1-1/4"
21G	6"	1-1/2"
22G	6"	1-1/2"

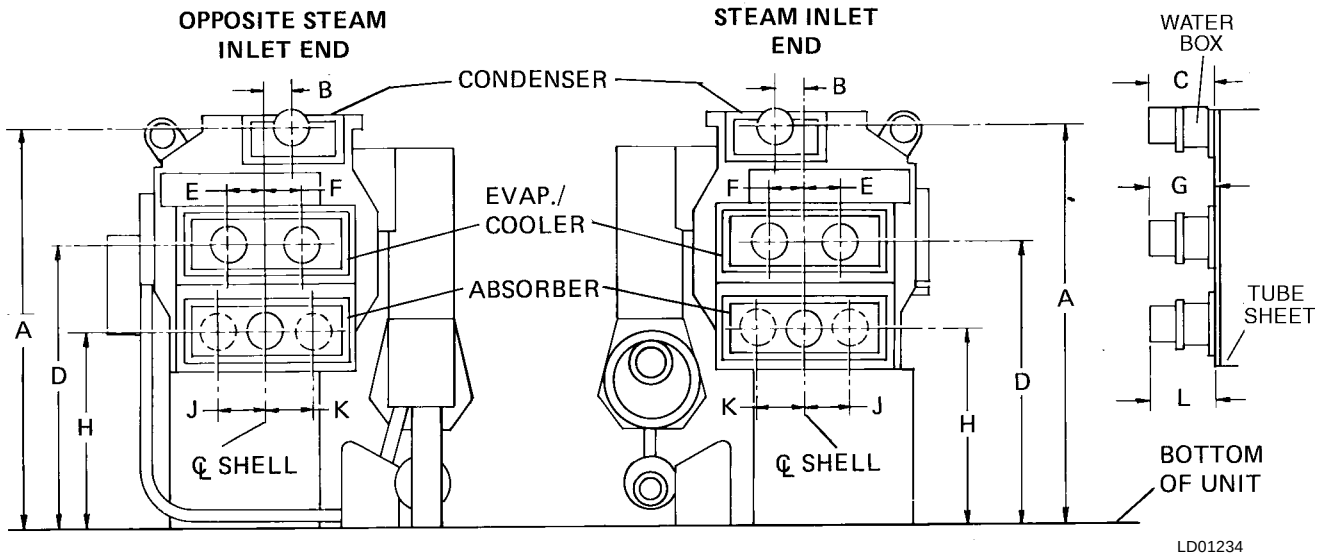
** Steam inlet and condensate outlet 150 PSIG raised face flanged.

ABSORBER/CONDENSER NOZZLE ARRANGEMENTS*

NO. ABSORBER PASSES	NOZZLE ARRANGEMENT	ABSORBER		CONDENSER	
		IN	OUT	IN	OUT
1	AC1*	F	I	L	K
	AC2	I	F	K	L
2	AC3	E	G	K	L
	AC4	G	E	K	L
	AC5	H	J	L	K
	AC6	J	H	L	K

* For Models 19GL and larger, only the AC1 arrangement may be used.

FIG. 4 – NOZZLE ARRANGEMENTS (SEE NOTES 1, 3, 11, 12 & 13)



CONDENSER NOZZLES

UNIT	NOZZLE SIZE SINGLE PASS	DIMENSIONS		
		A	B	C
19GL	12"	8'–1-3/16"	0'–8-3/16"	1'–2-1/16"
20G	12"	8'–5-1/16"	1'–1-9/16"	1'–4-7/16"
21G	14"	10'–3"	1'–6-15/16"	1'–3-7/16"
22G	16"	10'–3-3/16"	0'–0"	1'–3-7/16"

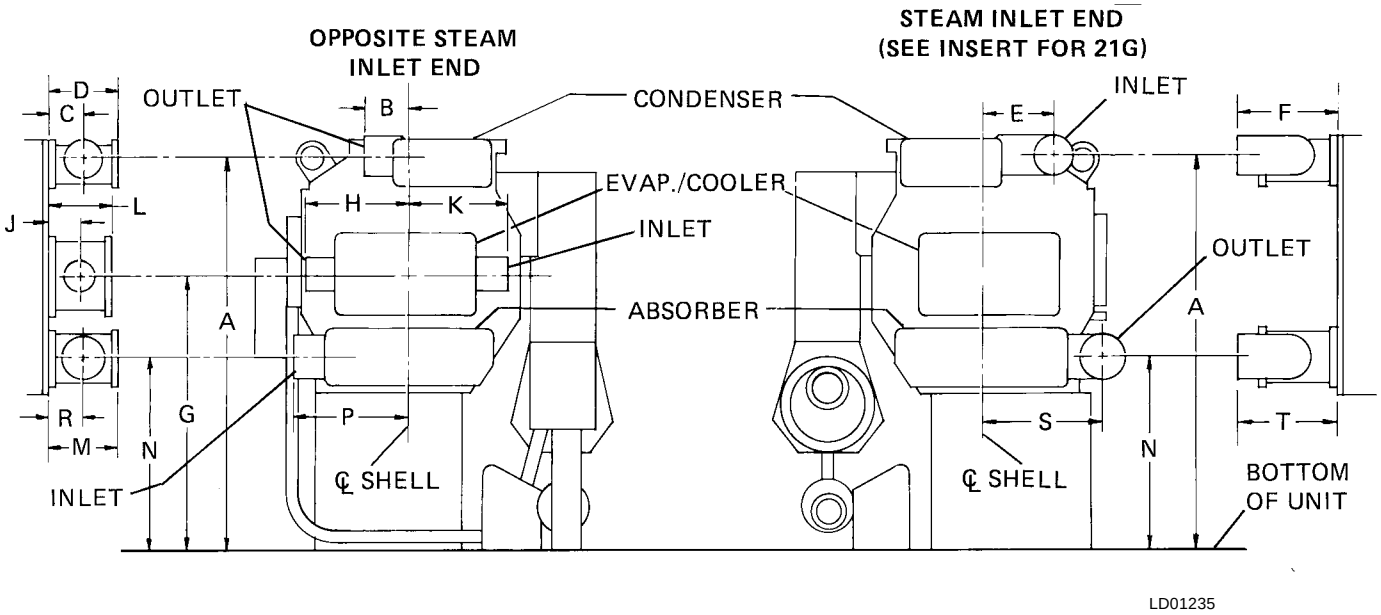
EVAPORATOR/COOLER NOZZLES

UNIT	NOZZLE SIZE NO. OF PASSES		DIMENSIONS			
	2	3	D	E	F	G
19GL	8"	—	5'–9-1/16"	0'–8-15/16"	0'–6-15/16"	1'–2-1/16"
	—	6"	5'–9-1/16"	0'–11-1/2"	0'–9-1/2"	1'–2-1/16"
20G	10"	—	5'–11-5/16"	0'–11-3/16"	0'–9-9/16"	1'–3-7/16"
	—	8"	5'–11-5/16"	1'–2-1/16"	1'–0-7/16"	1'–3-7/16"
21G	10"	—	6'–10-3/8"	0'–10-13/16"	0'–10-3/16"	1'–3-7/16"
	—	8"	6'–10-3/8"	1'–1-5/16"	1'–0-11/16"	1'–3-7/16"
22G	10"	—	6'–11-15/16"	1'–8"	1'–8"	1'–3-7/16"
	—	8"	6'–11-15/16"	1'–11-1/2"	1'–11-1/2"	1'–3-7/16"

ABSORBER NOZZLES

UNIT	NOZZLE SIZE NO. OF PASSES	DIMENSIONS	
	1	H	L
19GL	12"	4'–0-5/8"	1'–2-1/16"
20G	12"	4'–2-5/16"	1'–3-7/16"
21G	14"	4'–6-9/16"	1'–3-7/16"
22G	16"	4'–6-5/16"	1'–3-7/16"

FIG. 5 – COMPACT WATER BOXES – NOZZLE DIMENSIONS (SEE NOTES 1, 3, 11, 12 & 13)

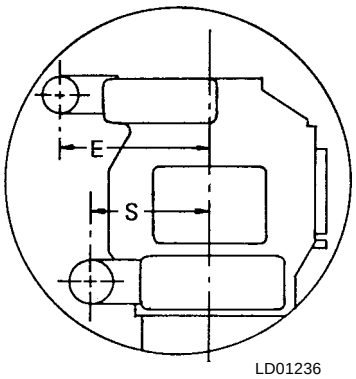


CONDENSER NOZZLES

UNIT	NOZZLE SIZE	DIMENSIONS					
		A	B	C	D	E	F
19GL	12"	8'–2-1/16"	1'–0-1/32"	0'–9-1/8"	1'–11-7/8"	1'–4-21/32"	1'–11-7/16"
20G	12"	8'–5-7/8"	0'–10-1/2"	0'–9-13/16"	2'–1-7/16"	3'–7-3/4"	2'–1-3/4"
21G	14"	10'–3-1/2"	0'–11"	0'–10-11/16"	2'–3"	4'–8-15/16"	2'–4-15/16"
22G	16"	10'–3-11/16"	1'–11-15/16"	0'–11-11/16"	2'–5"	2'–10-9/16"	2'–7-15/16"

EVAPORATOR/COOLER NOZZLES

UNIT	NOZZLE SIZE	DIMENSIONS				
		G	H	J	K	L
19GL	8"	5'–9-1/16"	2'–0-11/16"	8-1/8"	2'–2-11/16"	1'–9-7/8"
20G	10"	5'–11-5/16"	2'–10-7/16"	9-1/8"	2'–6-1/4"	1'–11-7/8"
21G	10"	6'–10-3/8"	2'–5-7/8"	9-1/4"	2'–5-1/4"	2'–0-1/8"
22G	10"	6'–11-3/4"	3'–4-3/4"	9-1/4"	3'–4-3/4"	2'–0-1/8"



ABSORBER NOZZLES

UNIT	NOZZLE SIZE	DIMENSIONS					
		M	N	P	R	S	T
19GL	12"	1'–11-7/8"	4'–0-5/8"	2'–5-1/8"	0'–9-1/8"	2'–9-3/4"	1'–11-7/16"
20G	12"	2'–1-1/8"	4'–3-5/16"	2'–10-7/16"	0'–9-3/4"	3'–4-9/16"	2'–1-15/16"
21G	14"	2'–3-3/8"	4'–8-9/16"	2'–11-3/4"	0'–10-7/8"	3'–7-13/16"	2'–5-1/8"
22G	16"	2'–5-5/8"	4'–6-5/16"	3'–7"	1'–0"	4'–5-5/8"	2'–8-5/16"

FIG. 6 – MARINE WATER BOXES* – NOZZLE DIMENSIONS
(SEE NOTES 1, 3, 12, & 13)

* Standard Marine Boxes arrangement is E1, AC1. Contact YORK Marketing for availability of other nozzle arrangements.

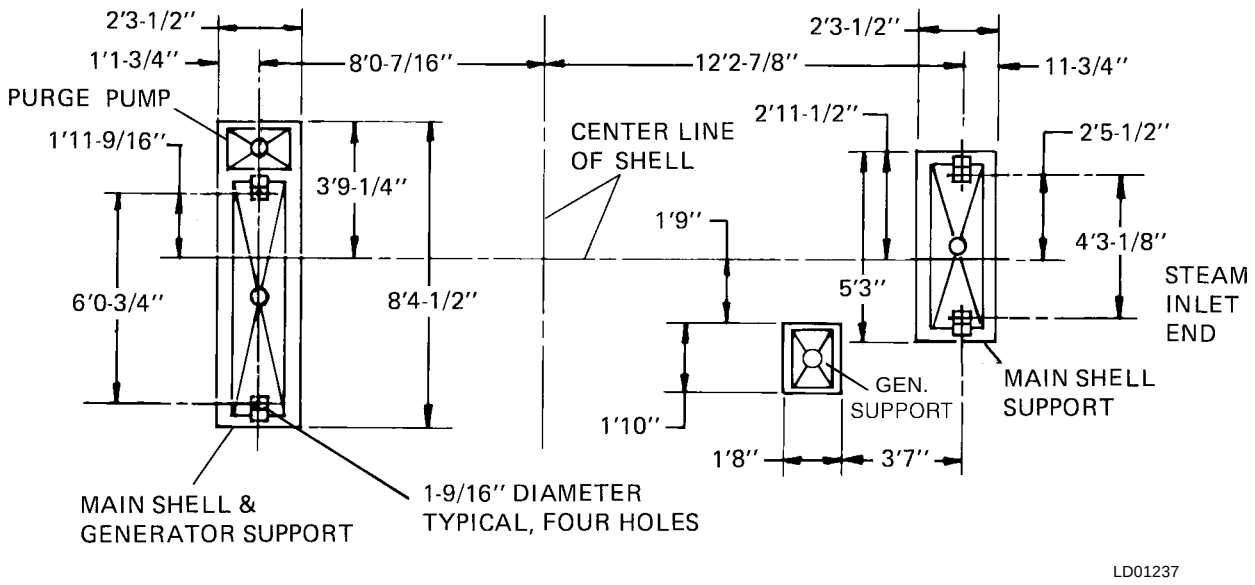


FIG. 7 – FLOOR LAYOUT DIMENSIONS – MODEL 19GL (SEE NOTES 2, 7, 8, 9, & 10)

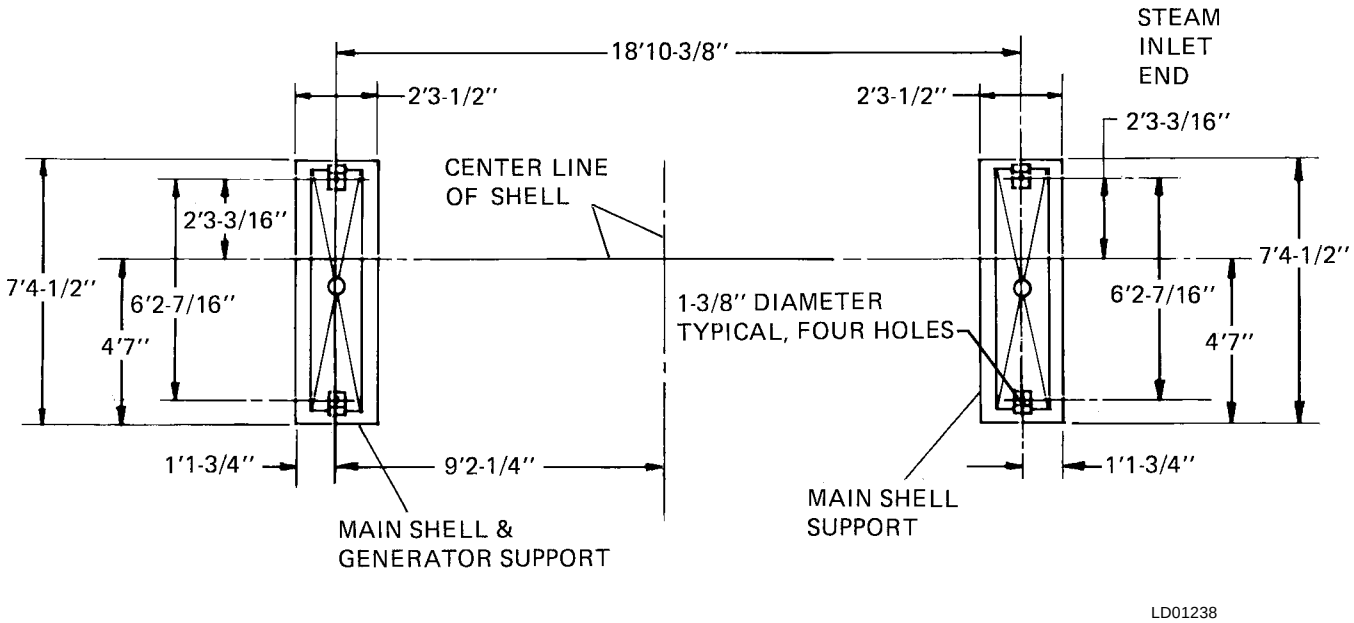


FIG. 8 – FLOOR LAYOUT DIMENSIONS – MODEL 20G (SEE NOTES 2, 7, 8, 9, & 10)

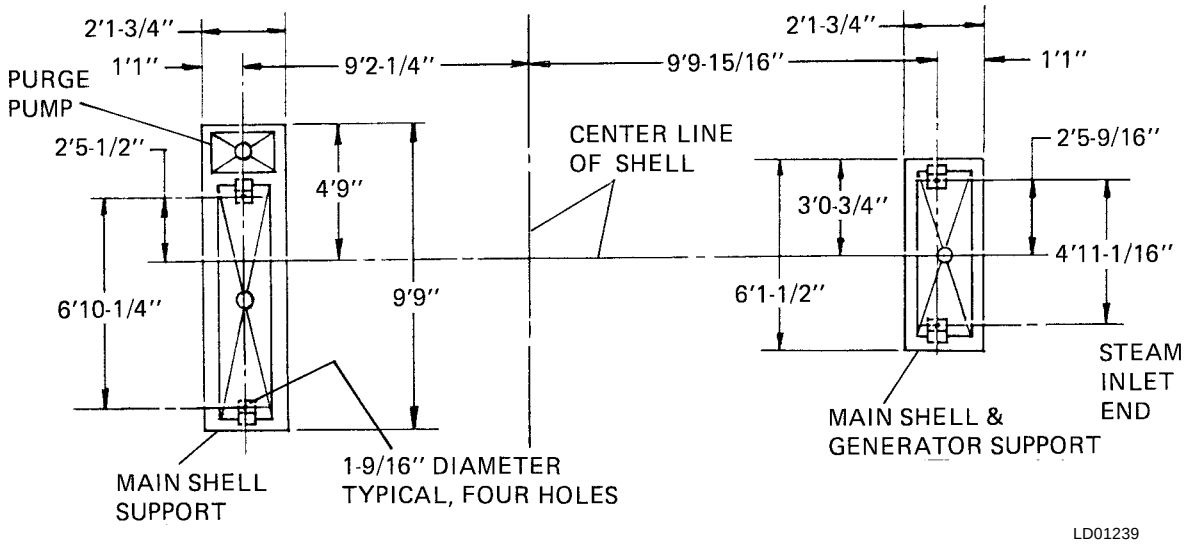


FIG. 9 – FLOOR LAYOUT DIMENSIONS – MODEL 21G (SEE NOTES 2, 7, 8, 9, & 10)

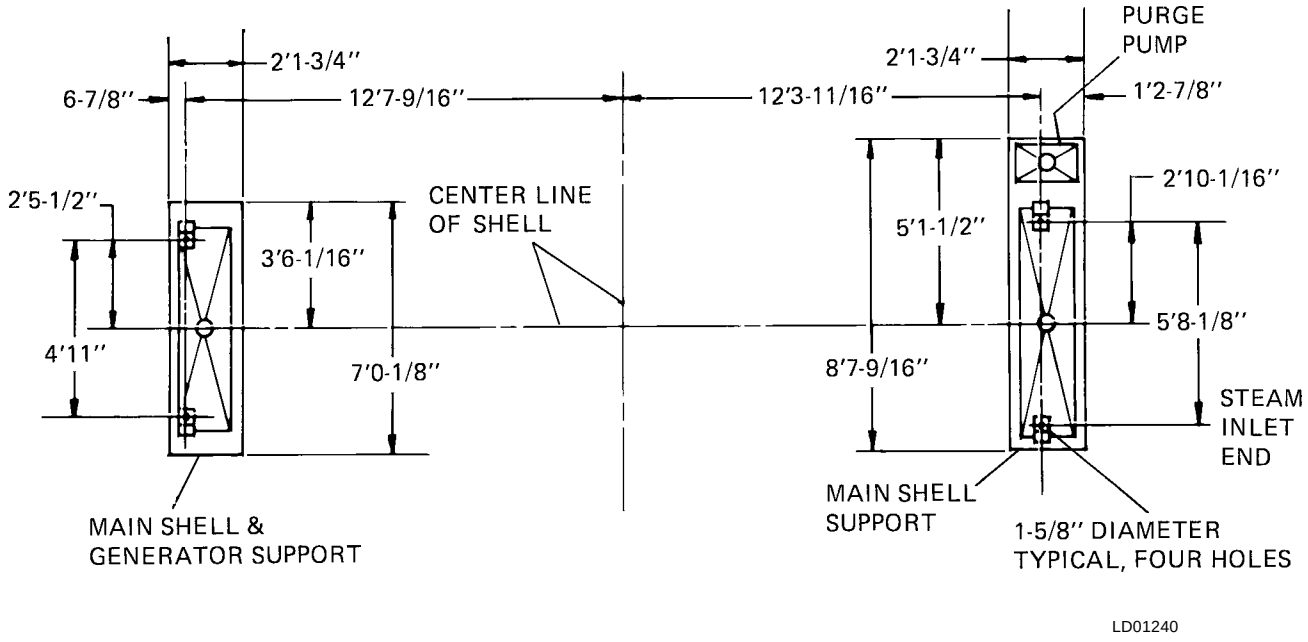
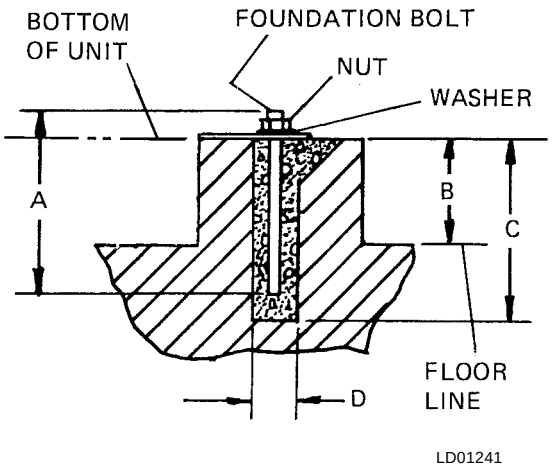


FIG. 10 – FLOOR LAYOUT DIMENSIONS – MODEL 22G (SEE NOTES 2, 7, 8, 9, & 10)



UNIT	DIMENSIONS			
	A	B	C	D
19GL	1'–7-1/2"	5"	1'–7-1/2"	6" Sq.
20G	1'–7-1/2"	5"	1'–7-1/2"	6" Sq.
21G	1'–7-1/2"	5"	1'–7-1/2"	4" Sq.
22G	1'–7"	5"	1'–7"	6" Sq.

FIG. 11 – ANCHOR BOLT (IF REQUIRED) (SEE NOTE 9)

NOTES:

1. Units must be installed in an area protected from the weather. Room ambient temperature conditions: 104°F max., 35°F min.
2. A floor drain next to the machine is recommended.
3. All connecting piping to be supported external to the machine.
4. Crossover pipe (by others) connected from the absorber outlet to the condenser inlet at a size consistent with absorber/condenser nozzle sizes.
5. Tower water must enter the absorber first for proper performance.
6. Steam valve is shipped separately and should be installed by others.
7. Purge pump is shipped loose with the chiller and should be installed by others.
8. The concrete foundation is to be furnished smooth and level. Machine should be leveled to withing 0.1% (1"/1000").
9. Foundation bolts (anchor bolts), nuts and washers (if required) to be furnished by others.
10. Concrete foundation to be no less that 5" high off floor. This height raises enough space for service access.
11. Nozzle arrangements are limited to those specified in applicable tables and must be specified since water boxes are not reversible in the field.
12. Standard water nozzles are furnished as welding stubouts with Victaulic grooves, allowing the option of welding, flanges or use of Victaulic couplings. Factory installed, class 150 (ANSI B16.5, round slip-on, forged carbon steel with 1/16" raised face), water flanged nozzles are optional. Companion flanges, nuts, bolts and gaskets are not furnished.
13. Connected piping should allow for removal of compact water box for tube access and cleaning. Tube removal space must be provided at either end of the unit. This dimension shall be at minimum equal to the overall shell length. Leave 46 - 60 inches around the machine for service clearance.
14. Due to manufacturing tolerances, dimensions may vary from those shown. If piping is installed prior to receipt of the unit, provision must be made for adjustment of the piping to accommodate all connections at the time of the installation.
15. Condensate system should be designed to provide 15 PSIG back pressure at the condensate outlet.
16. All dimensions are approximate. Certified dimensions are available on request.

P.O. Box 1592, York, Pennsylvania USA 17405-1592

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