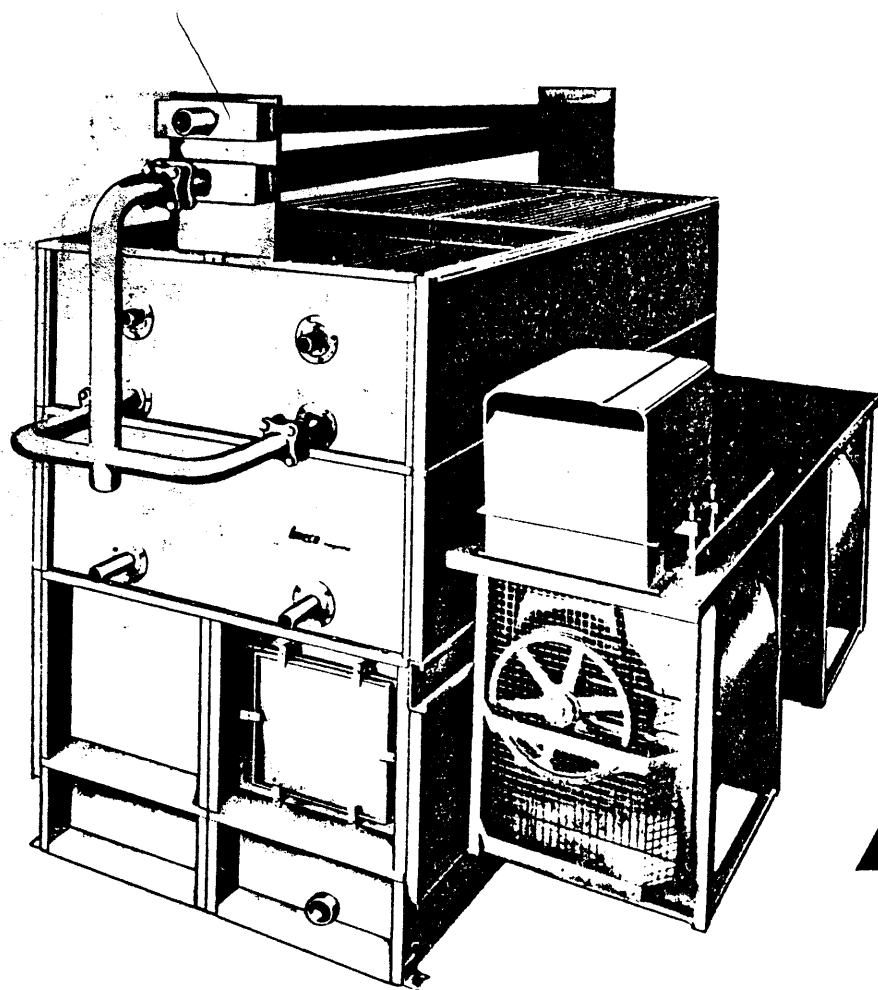


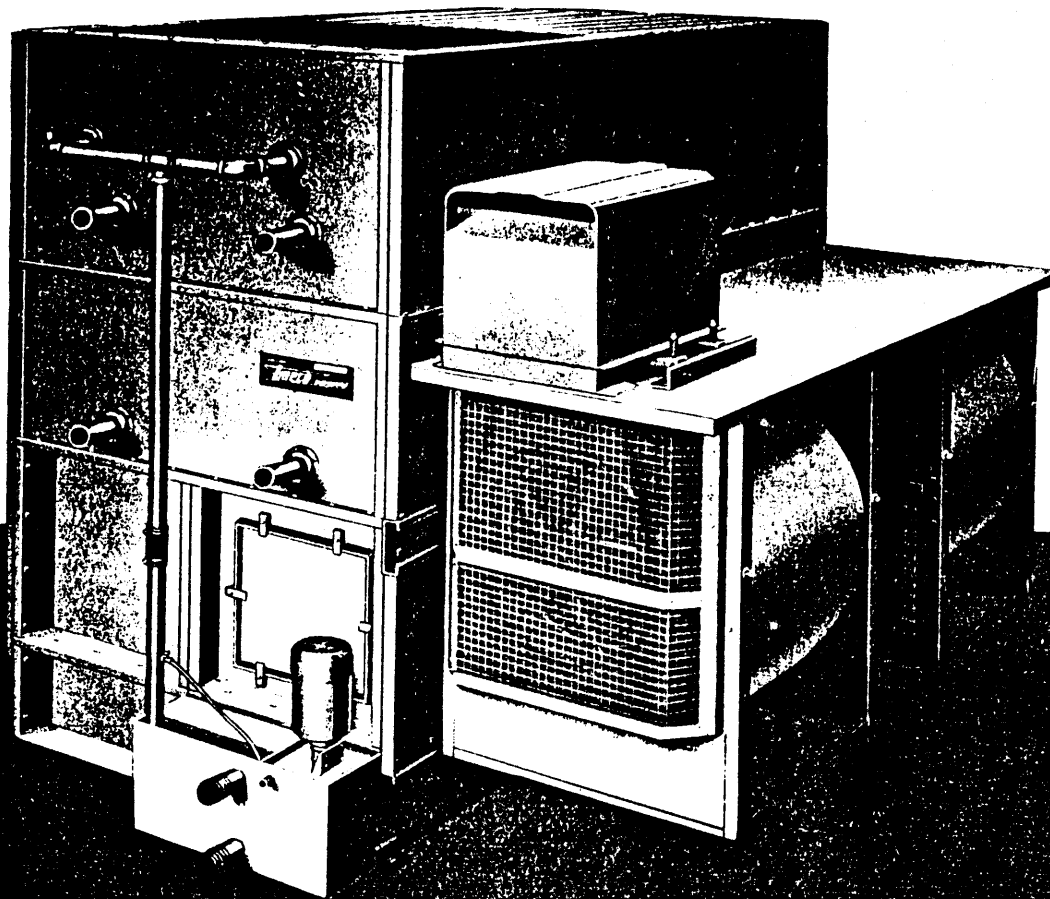
Bulletin  
No. 80B



**MODEL AJ**

**EVAPORATIVE  
CONDENSERS**

## IMECO MODEL AJ EVAPORATIVE CONDENSER



THE NEW IMECO AJ CONDENSER incorporates many new and improved features. Larger fans supply more air with less horse power, reducing power cost. Blow through design eliminates scaling of fan and minimizes corrosion, greatly increasing fan life. Ready accessibility of all parts makes maintenance easy and less costly.

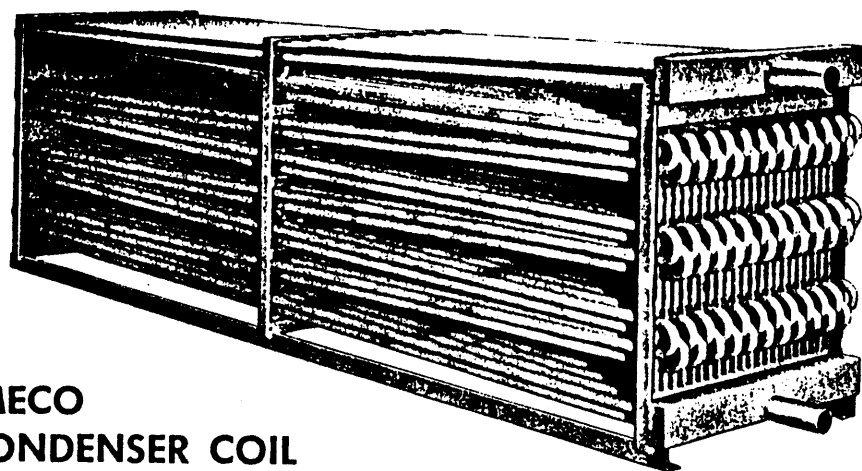
Increased pitch of pipes in condenser coil speeds drainage of liquid refrigerant, with a resultant greater coil capacity. New coil design has increased surface, also increasing capacity.

IMECO condensers are completely assembled and tested at the factory before shipping. The smaller models are shipped completely assembled, ready

to install. Where shipping limitations require it, fan sections are removed and shipped separately. They can quickly be bolted back into position in the field.

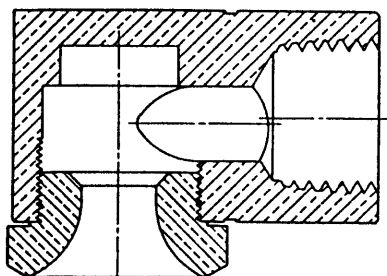
AJ condensers are made in a wide range of sizes, with and without desuperheat coils. Oil traps and interconnecting piping can be provided.

All units are constructed of heavy gauge steel and further reinforced with structural members. The standard AJ condenser has a galvanized sheet casing with all raw edges rust proofed. For increased life, the entire casing including fan wheels and housings can be hot dip galvanized after fabrication.



## IMECO CONDENSER COIL

IMECO condensing coils are made of  $\frac{3}{4}$ " specification A-53 steel pipe. The extra deep pitch insures rapid drainage of the liquid refrigerant so that a maximum of coil surface is available for condensing. The entire coil and its frame work is hot dip galvanized after fabrication. The completed coil is tested before and after galvanizing at 300 lbs. air pressure under water.



SPRAY NOZZLE  
(ACTUAL SIZE)

**SPRAY ASSEMBLY** Non-clog type all brass spray nozzles have exceptionally large removable orifices which practically eliminate possibility of clogging. Nipples of spray trees are welded to headers — there are no weak threaded joints to corrode and fail.

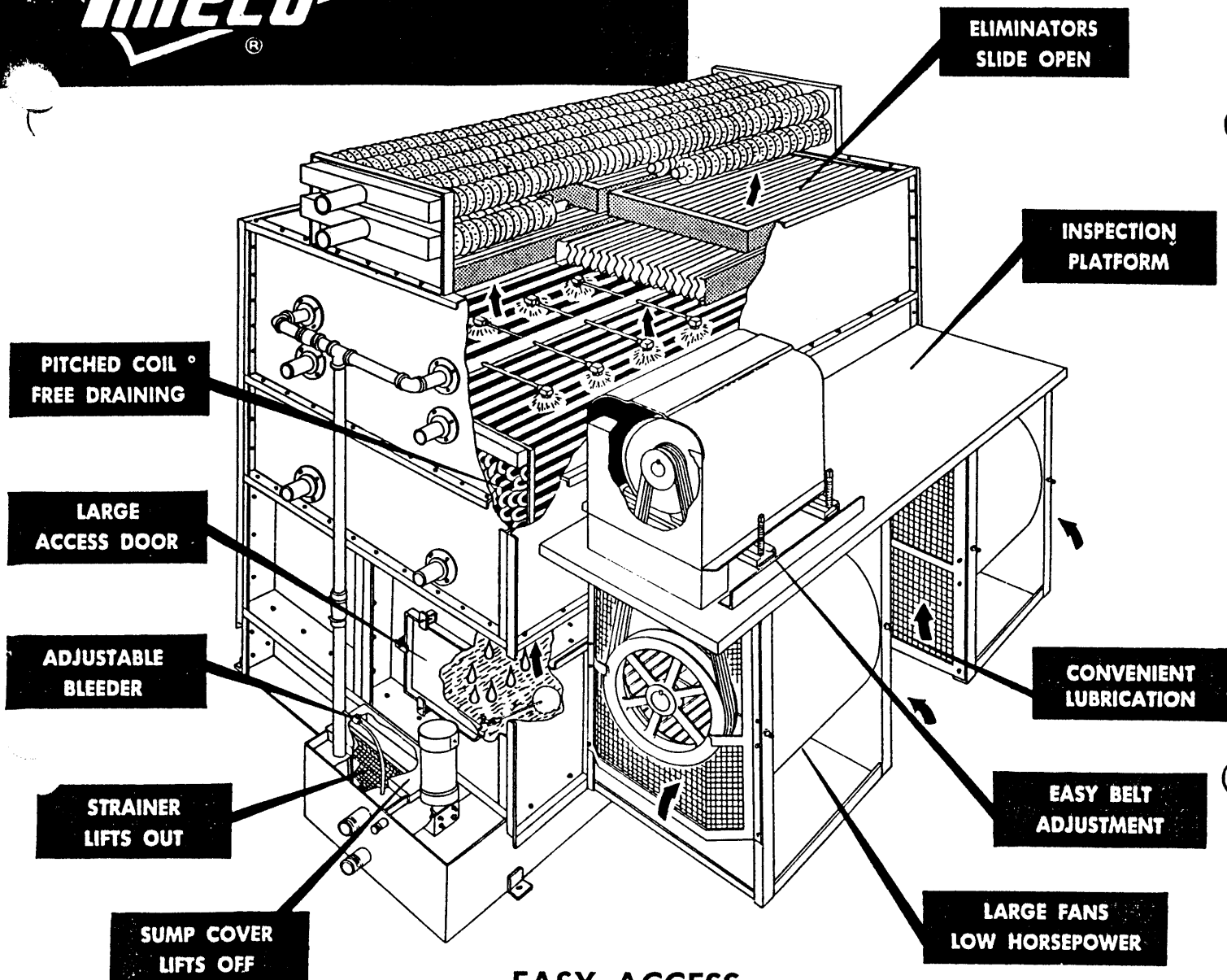
The entire spray tree is hot dip galvanized inside and out after fabrication and will outlive the ordinary spray tree many times.

**PUMP** The centrifugal water circulating pump is of vertical submerged type with a cast iron housing, bronze impeller, stainless steel shaft and totally enclosed motor. Since the pump is submerged under water it is self priming and self draining.

**FANS** Heavy duty, quiet operating, large size fans operate at slow speed, requiring a minimum of horse power. They are mounted on sturdy shafts with self aligning, heavy duty bearings. The fans are statically and dynamically balanced individually, and then the entire shaft and fan assembly is balanced as a unit. The shaft is treated with a rust resistant coating.

**MOTOR** Drip proof, ball bearing motors and motor hood are standard equipment. Motors are mounted on hinged slide rails, making belt adjustment rapid and simple. The fan drive is selected with large excess capacity to insure long life under adverse operating conditions.

**FLOAT VALVE** Water make-up is controlled by heavy duty brass float valve with a seamless copper float ball, inside the condenser. It is conveniently located adjacent to the access door for ready inspection.



### EASY ACCESS

As with all mechanical equipment, regular care will retain efficiency and prolong the life of condensers. An outstanding feature of IMECO condensers is the accessibility of all parts requiring care.

**ADJUSTABLE BLEEDER** The petcock on the bleeder line permits easy adjustment for minimum amount of waste water flow to suit local water conditions.

**INSPECTION PLATFORM** Sturdy platform provides for convenient inspection and maintenance of eliminators, spray nozzles and condensing coil.

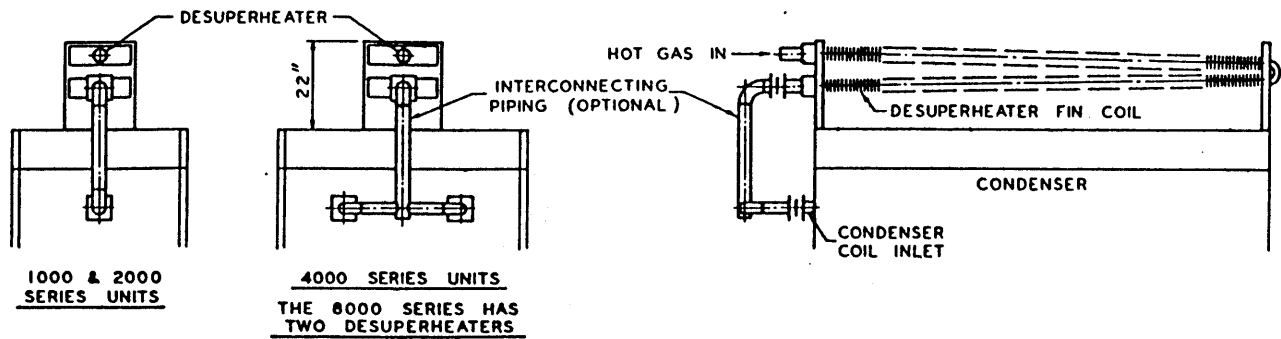
**ELIMINATORS** Slide easily to either end of the condenser, exposing the complete spray system and condensing coil. The eliminators are all hot dip galvanized after fabrication.

**ACCESS DOOR** Access panel sized for convenient entry into pan for periodic inspection and cleaning and can be quickly opened and closed.

**SUMP AND STRAINER** The sump cover lifts off, giving ready access to large area strainer which slides out and can be cleaned and replaced in a few minutes, without interrupting condenser operation.

**LUBRICATION** Convenient lubrication is provided by bringing all grease fittings outside of unit, to easy to reach locations.

# DESUPERHEATER



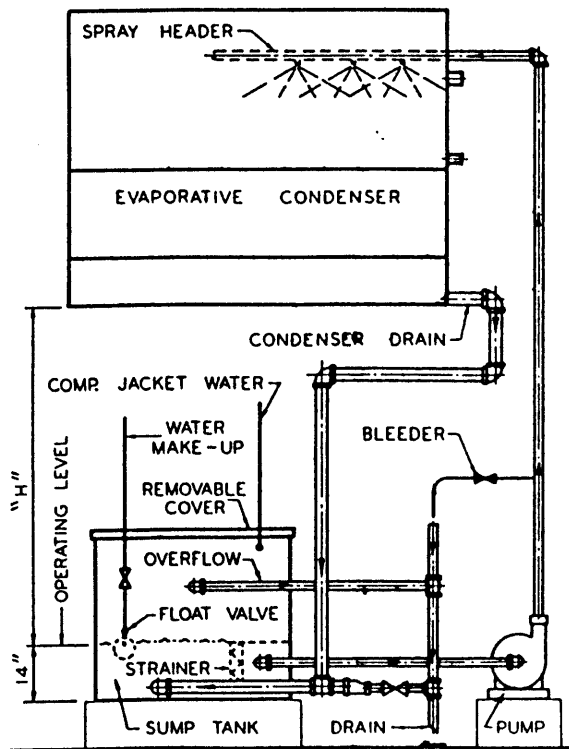
**DESUPERHEATER** The desuperheater increases the efficiency and capacity of the condenser by removing the superheat of the refrigerant gas before it enters the condensing coil.

With the superheat removed, the entire condensing coil is available for condensing the refrigerant, thereby increasing the condenser capacity.

The resulting lower temperature of the condensing coil minimizes scale formation thus maintaining continued full capacity of the coil.

**INTERCONNECTING PIPING** The desuperheater can be supplied with interconnecting piping. The piping is provided with flanges and is factory fitted for easy installation in the field.

## INDOOR PUMP AND SUMP



TYPICAL PIPING DIAGRAM

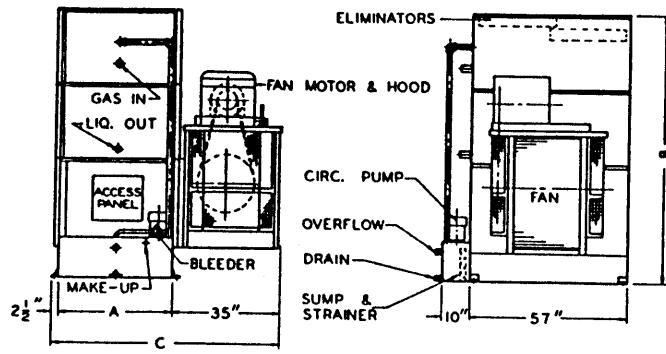
**PURPOSE** On installations, where below freezing temperatures prevail, it is often advisable to install a condenser arranged so that all water drains into an indoor sump. With this arrangement, the sump, pump, float and strainer are located indoors.

**SPECIFICATIONS** Indoor sumps are furnished in several sizes and are provided with removable access cover, pump suction strainer and water make-up float valve. The sump is made of heavy gauge galvanized steel sheet.

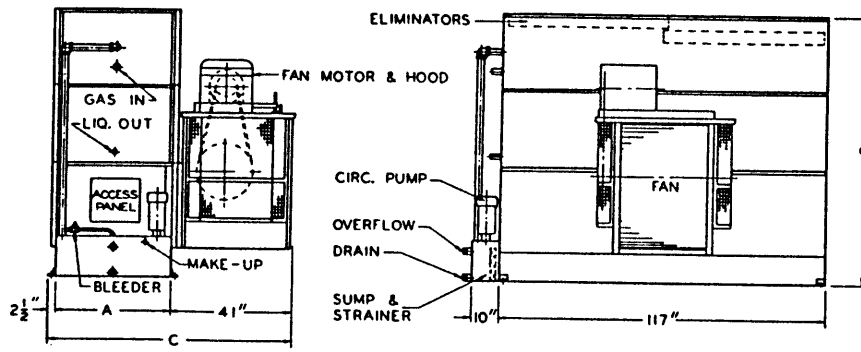
Pumps can also be furnished to specifications.

**PUMP SELECTION** To determine the size pump required for indoor sump application, consult table "A" showing GPM for the desired condenser. To determine the pump head add 25 feet to dimension "H".

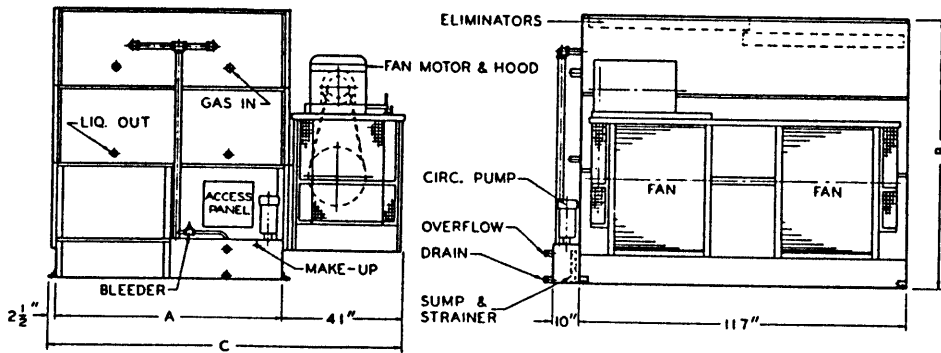
# IMECO MODEL AJ EVAPORATIVE



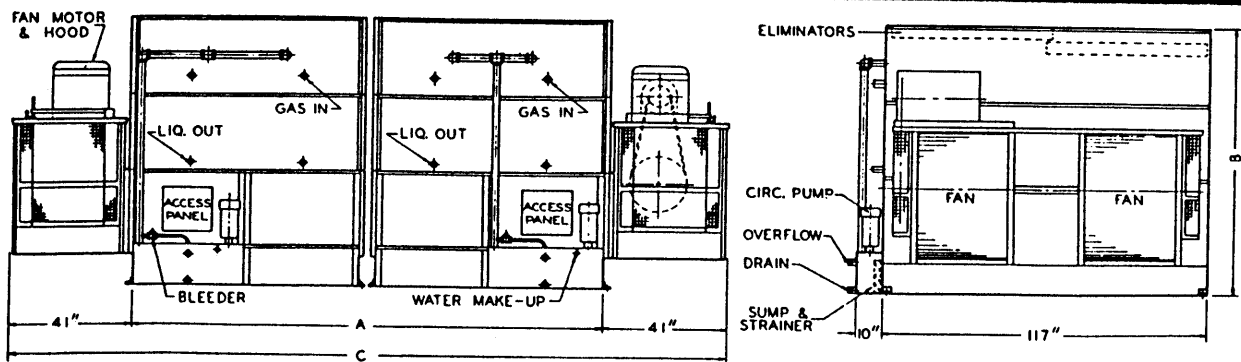
SERIES 1000



SERIES 2000



SERIES 4000



SERIES 8000

# CONDENSER DATA & DIMENSIONS

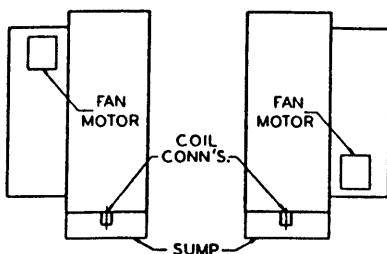
Table "A"

MODEL NO.	FANS		PUMP		REFRIG.		A	B	C	SHPG. WT. †
	C.F.M.	H.P.	G.P.M.	H.P.	IN	OUT				
AJ 1241	5,750	1	23	1/3	2	1 1/2	30	89	67 1/2	3,420
AJ 1252	6,250	1 1/2	23	1/3	2	1 1/2	30	95 1/2	67 1/2	3,780
AJ 1343	8,250	2	29	1/2	2 1/2	2	41 1/2	89	79	4,130
AJ 1354	8,750	3	29	1/2	2 1/2	2	41 1/2	95 1/2	79	4,620
AJ 2244	13,000	3	47	1/2	2 1/2	2	30	89	73 1/2	5,820
AJ 2254	13,000	3	47	1/2	2 1/2	2	30	95 1/2	73 1/2	6,520
AJ 2345	16,500	5	66	3/4	3	2 1/2	41 1/2	89	85	7,160
AJ 2355	16,500	5	66	3/4	3	2 1/2	41 1/2	95 1/2	85	8,110
AJ 2356	18,000	7 1/2	66	3/4	3	2 1/2	41 1/2	95 1/2	85	8,210
AJ 4245	24,000	5	87	1	2 1/2	2	60	89	103 1/2	10,140
AJ 4246	26,500	7 1/2	87	1	2 1/2	2	60	89	103 1/2	10,240
AJ 4255	24,000	5	87	1	2 1/2	2	60	95 1/2	103 1/2	11,540
AJ 4256	26,500	7 1/2	87	1	2 1/2	2	60	95 1/2	103 1/2	11,650
AJ 4346	29,000	7 1/2	132	1 1/2	3	2 1/2	83	89	126 1/2	12,850
AJ 4347	33,000	10	132	1 1/2	3	2 1/2	83	89	126 1/2	12,930
AJ 4357	33,000	10	132	1 1/2	3	2 1/2	83	95 1/2	126 1/2	14,750
AJ 4358	37,000	15	132	1 1/2	3	2 1/2	83	95 1/2	126 1/2	14,820
AJ 8245	48,000	2 - 5	174	2 - 1	2 1/2	2	126	89	208	20,280
AJ 8246	53,000	2 - 7 1/2	174	2 - 1	2 1/2	2	126	89	208	20,480
AJ 8255	48,000	2 - 5	174	2 - 1	2 1/2	2	126	95 1/2	208	23,080
AJ 8256	53,000	2 - 7 1/2	174	2 - 1	2 1/2	2	126	95 1/2	208	23,300
AJ 8346	58,000	2 - 7 1/2	264	2 - 1 1/2	3	2 1/2	172	89	254	25,700
AJ 8347	66,000	2 - 10	264	2 - 1 1/2	3	2 1/2	172	89	254	25,860
AJ 8357	66,000	2 - 10	264	2 - 1 1/2	3	2 1/2	172	95 1/2	254	29,500
AJ 8358	74,000	2 - 15	264	2 - 1 1/2	3	2 1/2	172	95 1/2	254	29,640

All dimensions are in inches

Data and dimensions are subject to change without notice and are not to be used for construction purposes. Certified dimension prints are available.

† Add approximately 8% to the shipping weight for models with a desuperheater.



LEFT HAND

RIGHT HAND

RIGHT HAND UNIT IS STANDARD and will be furnished unless otherwise specified

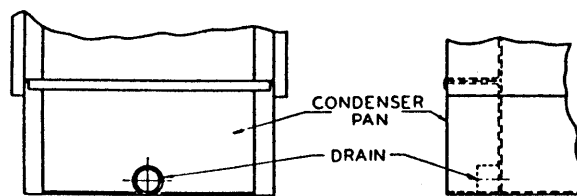


Table "B"

## CONDENSER PAN ARRANGED FOR INDOOR SUMP

UNIT SERIES	1000	2000	4000	8000
PAN DRAIN	3"	4"	4"	2-4"

Condensers arranged for indoor sump and pump operation are provided with a larger drain connection. Omitted are the pump and sump assembly and make-up float valve.

# AMMONIA CAPACITY DATA

Table "C"

MODEL NO.	BASE TONS		MODEL NO.	BASE TONS		MODEL NO.	BASE TONS	
	WITH DESUPER-HEATER	LESS DESUPER-HEATER		WITH DESUPER-HEATER	LESS DESUPER-HEATER		WITH DESUPER-HEATER	LESS DESUPER-HEATER
AJ 1241	29	25	AJ 4245	122	107	AJ 8245	244	214
AJ 1252	34	30	AJ 4246	129	113	AJ 8246	258	226
AJ 1343	41	36	AJ 4255	143	125	AJ 8255	286	250
AJ 1354	49	43	AJ 4256	153	134	AJ 8256	306	268
AJ 2244	63	55	AJ 4346	157	138	AJ 8346	314	276
AJ 2254	74	65	AJ 4347	168	147	AJ 8347	336	294
AJ 2345	84	74	AJ 4357	197	173	AJ 8357	394	346
AJ 2355	97	85	AJ 4358	212	186	AJ 8358	424	372
AJ 2356	102	90						

For R-12 and R-22 ratings contact IMECO for further data

Table "D"

AMMONIA CAPACITY FACTORS									
COND. PRESS.	COND. TEMP. °F	ENTERING AIR WET BULB TEMP. °F							
		60	65	68	70	72	75	78	80
165.9	90	1.10	.93	.82	.75	.69	.58	.48	.41
181.1	95	1.27	1.11	1.01	.94	.87	.77	.67	.60
185.1	96.3	1.31	1.15	1.05	.99	.92	.82	.71	.65
197.2	100	1.44	1.27	1.18	1.11	1.05	.95	.85	.78
214.2	105	1.60	1.44	1.35	1.28	1.22	1.13	1.03	.97

Table "E"

SUCTION TEMP. CAPACITY FACTORS									
SUCTION TEMP. °F	-30	-20	-10	0	10	20	30	40	
SUCTION PRESS. PSIG.	*1.6"	3.6	9.0	15.7	23.8	33.5	45.0	58.6	
WITH DESUPERHEATER	.95	.96	.97	.98	.99	1.00	1.01	1.02	
LESS DESUPERHEATER	.85	.88	.91	.94	.97	1.00	1.03	1.06	

\* Vacuum, inches of mercury

### SELECTION PROCEDURE

To determine the model condenser, divide the required tons by the capacity factors obtained from tables "D" and "E", which will give you the base tons. From capacity table "C" select the model number.

Note the suction capacity factors are listed for models with and without a desuperheater and should only be applied to a corresponding model.

### EXAMPLE

Required — 210 tons at 78° wet bulb, 96.3° condensing temperature and -10° suction temperature.

From table "D" factor for 78° W. B. and 96.3° C. T. = .71

From table "E" for -10° suction  $\left\{ \begin{array}{l} \text{less desuperheater} = .91 \\ \text{with desuperheater} = .97 \end{array} \right.$

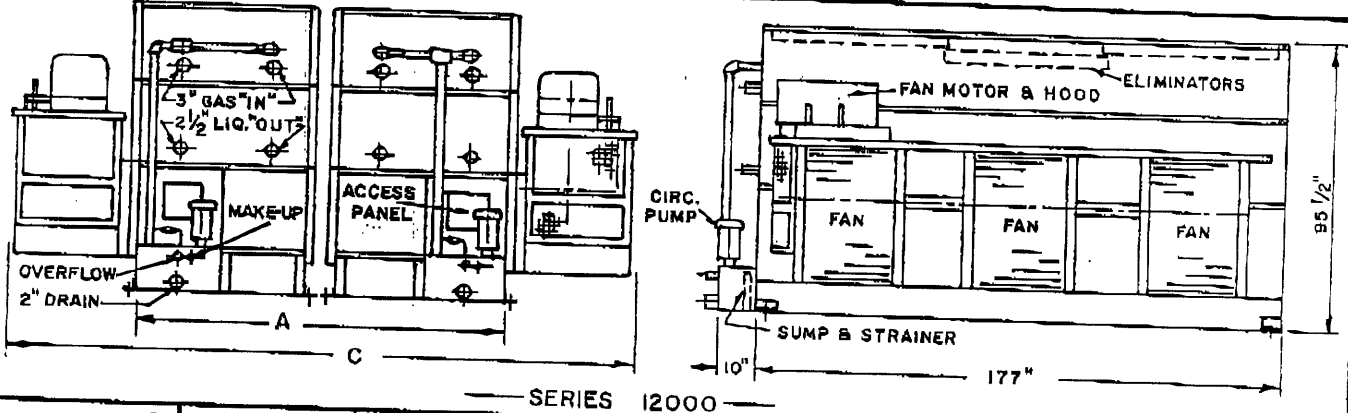
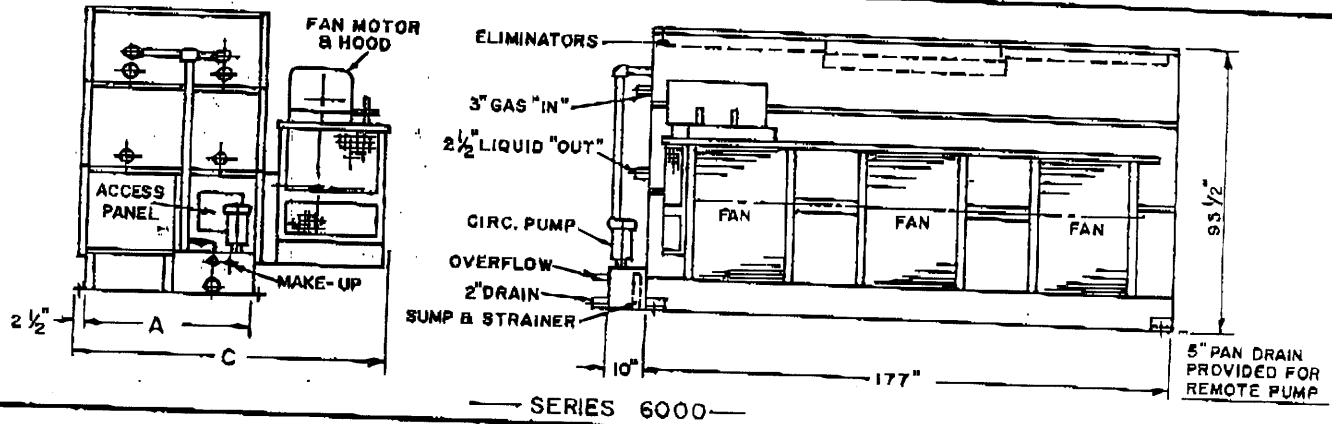
Less desuperheater  $\frac{210}{.71 \times .91} = 325$  tons; select AJ - 8357

With desuperheater  $\frac{210}{.71 \times .97} = 305$  tons; select AJ - 8256



# MODEL AJ-6000 & 12000 EVAPORATIVE CONDENSERS

80-5



MODEL NO. ①	BASE TONS ②		FANS		PUMP		A	C	SHIPPING WEIGHT ③	
	DESUPERHEATER		CFM	HP	GPM	HP				
	WITH	LESS								
AJ-6246	185	162	36,000	7 1/2	145	1 1/2	60"	103 1/2"	14,710	
AJ-6247	194	170	39,000	10						
AJ-6256	216	189	36,000	7 1/2						
AJ-6257	228	200	39,000	10						
AJ-6347	237	208	43,000	10	196	2	83"	126 1/2"	16,580	
AJ-6348	257	225	50,000	15						
AJ-6358	300	263	50,000	15						
AJ-6359	320	280	55,000	20						
AJ-12246	370	324	72,000	(2) 7 1/2	290	(2) 1 1/2	126"	206"	21,170	
AJ-12247	388	340	78,000	(2) 10						
AJ-12256	432	378	72,000	(2) 7 1/2						
AJ-12257	456	400	78,000	(2) 10						
AJ-12347	474	416	86,000	(2) 10	392	(2) 2	172"	254"	21,220	
AJ-12348	514	450	100,000	(2) 15						
AJ-12358	600	526	100,000	(2) 15						
AJ-12359	640	560	110,000	(2) 20						
										29,420
										29,480
										33,100
										33,160
										36,880
										37,000
										42,340
										42,440

1. BASIC INFORMATION CONTAINED IN BULLETIN NO 80B APPLIES.
2. USE SAME CAPACITY FACTORS SHOWN IN BULLETIN 80B.
3. SHIPPING WEIGHT SHOWN IS FOR A STANDARD UNIT WITH PUMP ARRANGEMENT, LESS DESUPERHEATER. WITH DESUPERHEATER ADD 7 1/2 % TO WEIGHT SHOWN.

**IMECO INCORPORATED**  
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