



**CONSULTING ENGINEERS**



**ACME PROCESS EQUIPMENT CO.**  
formerly ACME COPPERSMITHING & MACHINE CO.  
**ORELAND, PENNSYLVANIA, U.S.A.**

**CATALOG N° 60**

# COMPLETE BREWERY EQUIPMENT

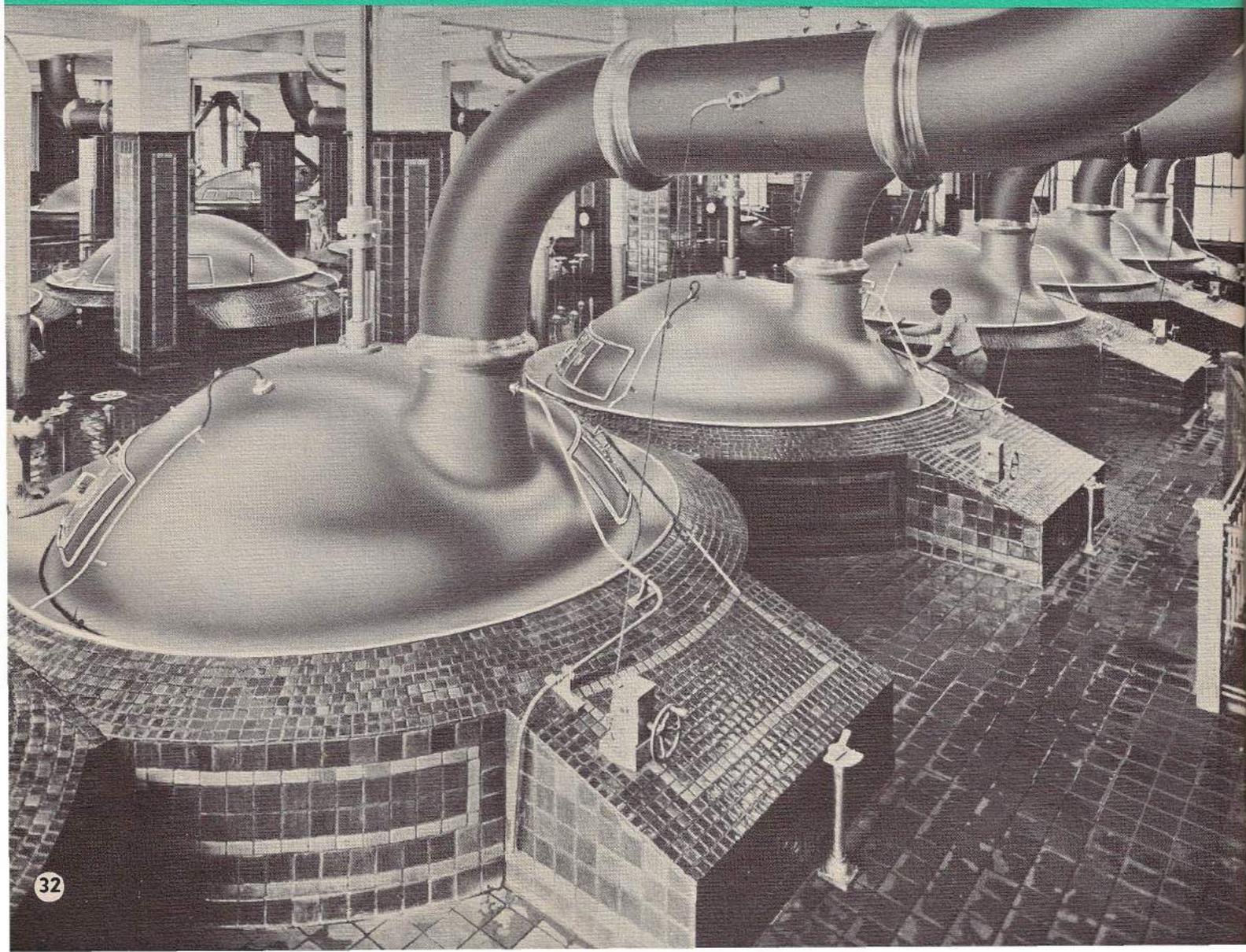


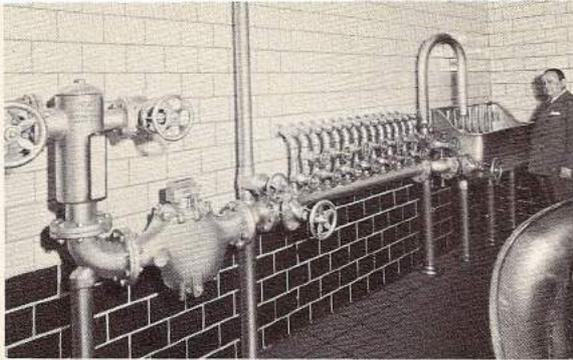
- BREW KETTLES • WORT AND CELLAR COOLERS • HOT WATER TANKS
- LAUTER TUBS • MASH TUBS • CEREAL COOKERS
- SPENT GRAIN AND YEAST DRYERS • YEAST CULTURE APPARATUS
- MALT SYRUP EVAPORATORS

Acme brewhouse equipment is designed for more economical operation in producing high yields of quality products. Fabricated of copper, stainless steel, stainless clad, nickel, and all other ferrous and non-ferrous metals and alloys, every installation is individually engineered to best meet specific require-

ments and local conditions. Acme has been privileged to participate in the expansion programs of many leading breweries—in one instance more than doubling the capacity of an outstanding brewery. Acme engineers are available for planning a complete brewhouse or designing any piece of equipment.

◆ INSTALLATION OF NINE BREW KETTLES AND TEN MASH KETTLES 13'2" DIAMETER, COPPER CONSTRUCTION





WATER MIXER AND METER WITH PFAFF AND GRANDT

## BREW KETTLES

Of great influence on the character and stability of beer is the nature of the kettle procedure. To best suit the requirements of the individual brewhouse or the preference of the brewmaster, Acme has designed and built kettles of virtually every type, including straight side, pear-shaped and apple-shaped.

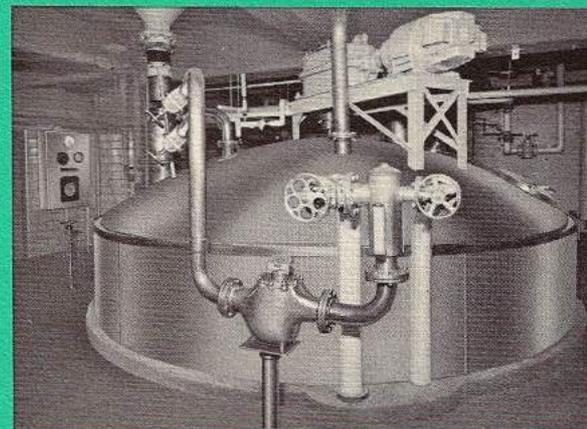
Fabricated of copper or stainless steel, Acme kettles have likewise been designed for every method of heat transfer: steam jacket, percolator and coil, steam jacket and percolator combination, and direct fire.

In recommending method of boiling, careful consideration is given to the advantages of each method in relation to the cycle required and environmental factors. Great care is always taken to determine optimum amount of heating surface for most efficient operation of the kettle. Where the percolator type is recommended, simplicity of design allows for maximum efficiency of steam and ease of cleaning.

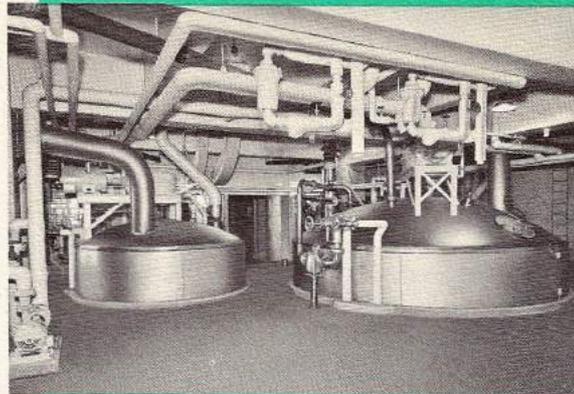
In all Acme kettles, regardless of type, proper correlation of evaporation rate, temperature and movement of the wort during boiling, achieves the most favorable calculated hourly evaporation rate, resulting in improved hop extraction and protein coagulation.

## MASH COOKERS

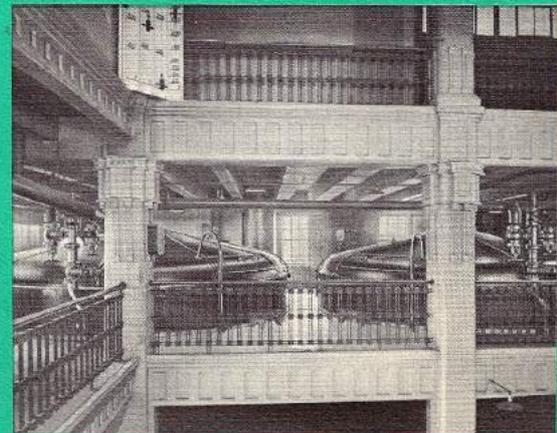
Acme Mash Cookers are designed to achieve maximum stirring of the mash during the cooking process so as to equalize the temperature throughout the mash, without destroying in any way the physical character of the malt. Through more efficient design, these cookers will operate most economically. Steam-jacketed or fired by direct steam, they can be designed for either atmospheric or pressure operation.



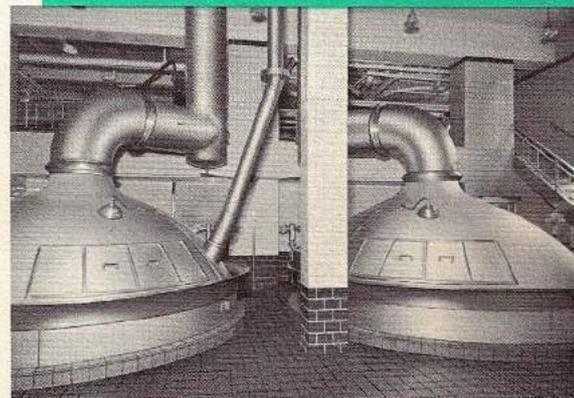
17'6" DIA. MASH TUB OF STEEL CONSTRUCTION, 500 BARREL CAPACITY, JACKETED BOTTOM



CEREAL COOKER AND MASH TUB



TWO RADIAL VALLEY BOTTOM LAUTER TUBS, 21'6" DIA. X 8' HIGH, WROUGHT IRON SHELL WITH COPPER DOMES.



TWO 16'0" DIA. STRAIGHT SIDE BREW KETTLES, COPPER CONSTRUCTION

▶ VALUABLE TECHNICAL BREWERY DATA  
AVAILABLE UPON REQUEST  
Write to the attention of  
BREWERY DIVISION

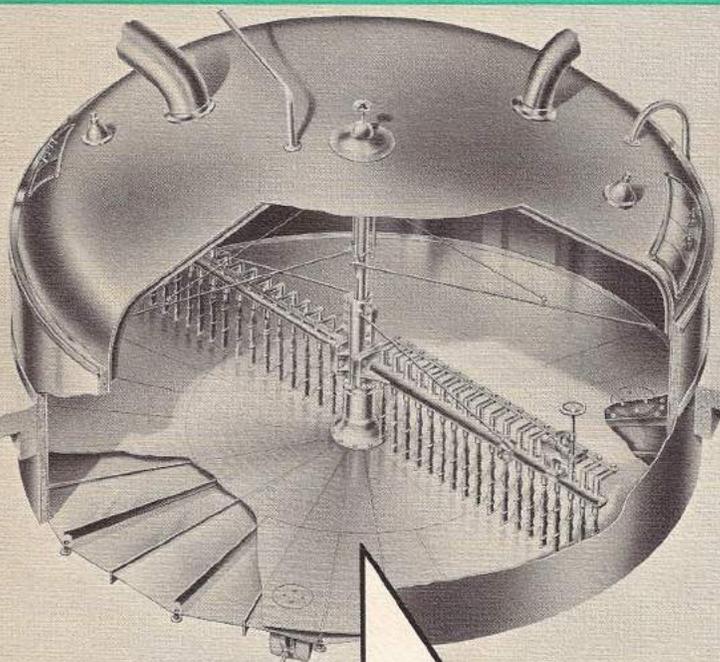
# ACME

## Radial Valley Bottom

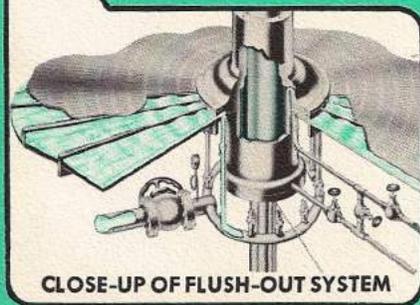
# LAUTER TUBS

### offer 3

## PATENTED FEATURES



COMPLETE INFORMATION  
DESCRIBING THE SPECIAL  
PATENTED FEATURES  
FURNISHED IN DETAIL  
ON REQUEST



CLOSE-UP OF FLUSH-OUT SYSTEM

It has been definitely established that the use of a valley bottom lauter tub gives substantially bigger yields than those of the conventional flat bottom tub. Through quicker drainage, the sloping valleys remove the accumulation of under dough. The valley bottom is also more easily cleaned and much time is saved in its periodic flushing. In addition to these general advantages, the Acme Radial Valley Bottom offers three exclusive features, leading to quicker clarification, faster run-off time and more efficient flushing.

### 1 PATENTED RADIAL VALLEY BOTTOM

Exclusive 3-way flow produces quicker clarification, faster run-off time. The draining valleys run radially from the center of the tub, sloping down to the periphery. In addition, each valley drains from crest to trough, on both sides, the full length of the segment. This creates greater flow velocity on every square inch of the bottom area, preventing sediment deposits and increasing yield. It also makes possible the flushing of the bottom in the quickest possible time.

### 2 PATENTED FLUSHING SYSTEM BETWEEN BOTTOMS

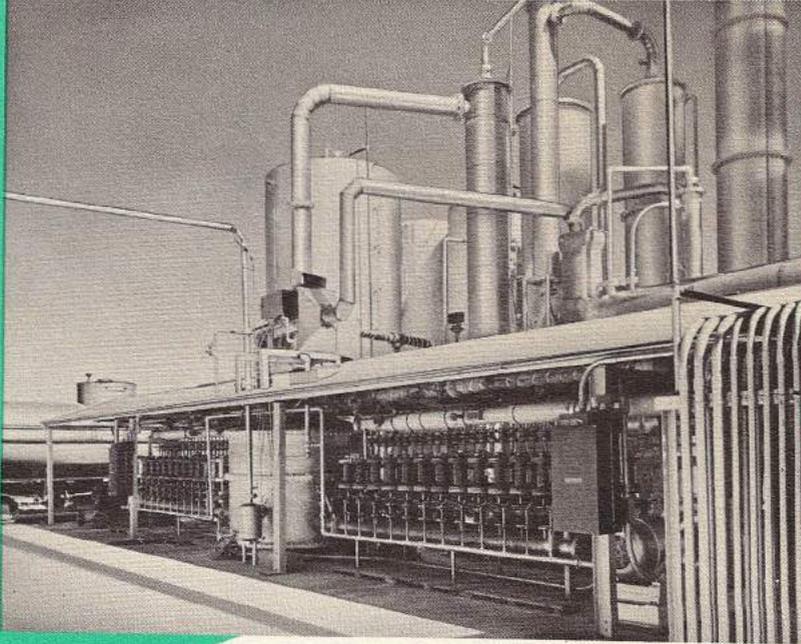
A special device controlled by a single valve flushes each section of the lauter tub simultaneously between the true and false bottoms, without the necessity of lifting the false bottom.

#### FLUSHING SYSTEM OF HYDRAULIC CYLINDER

A separate unit is provided for the periodical flushing of the hydraulic cylinder to wash out accumulated sugar, grits or other sedimentation that interferes with efficient operation. This flushing can be accomplished while the tub is in operation or between brews, assuring a clean hydraulic cylinder at all times.

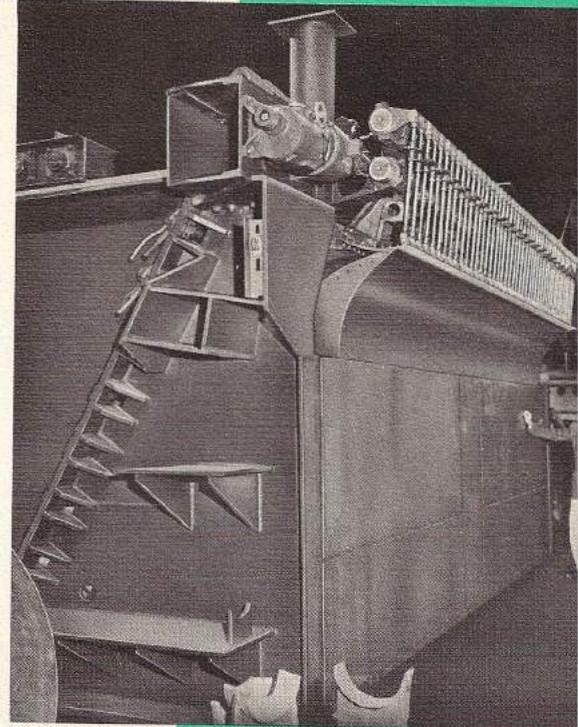
### 3 PATENTED GRAIN DISCHARGE VALVE

The discharge valve is designed with a special grid top to permit filtering and drainage over the entire bottom area and also in the location where the discharge valve is placed. Because of this, the entire inside surface of the false bottom is completely effective.

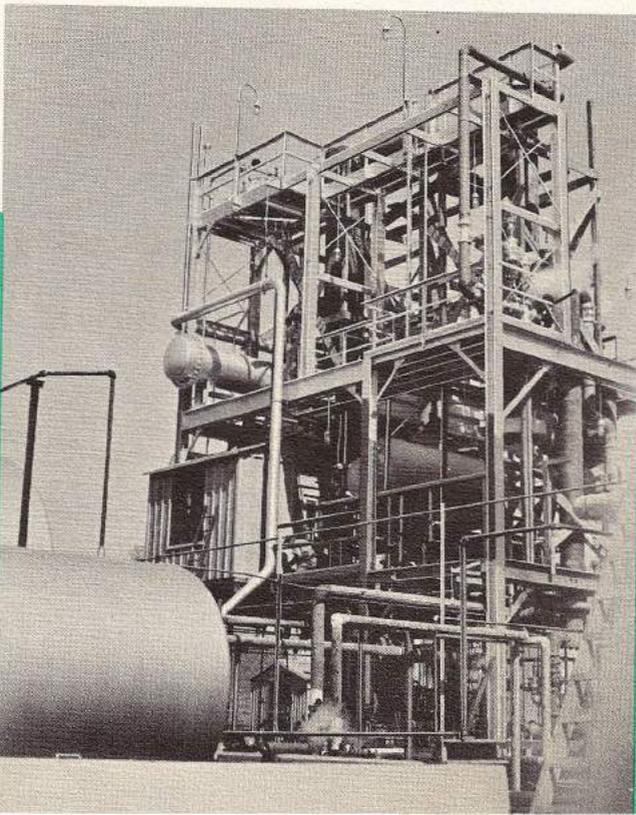


FORMALDEHYDE  
PLANTS

*... more of the* **DIVERSE**  
**INDUSTRIES**  
**SERVED BY**  
**ACME EQUIPMENT**



EQUIPMENT  
FOR THE  
PAPER  
INDUSTRY



TAR DEHYDRATION  
EQUIPMENT

**ACME LAUTER TUB DESIGNS ON HAND  
Hand Drawn**

**12'0"**

**14'6"**

**17'5"**

**18'0"**

**20'0"**

**21'0" (Coulter), also available in PDF**

**21'0"**

**24'0"**

**25'0"**

**26'0"**

**27'0"**

**28'0"**

**30'0"**

**34'0"**

**In most cases, matching Brewhouse equipment such as Brewkettle, Mash Tub, Cereal Cooker are also available.**

**Selection of Lauter Tubs can be done by using the following charts.**

**TABLE FOR SIZING LAUTER TUBS**

**DATA TABLE # 2**

ACME PROCESS EQUIPMENT CO.

12'-0" - 108

100% MALT		
POUNDS OF MALT	BED CU. FT.	DEPTH OF BED
5,000	150	15"
5,000	150	17½"
5,000	150	21"
5,000	150	23"
6,000	180	15"
6,000	180	18"
6,000	180	21"
6,000	180	25"
7,000	210	15½"
7,000	210	17½"
7,000	210	21"
7,000	210	24"
8,000	240	15"
8,000	240	18"
8,000	240	21"
8,000	240	24½"
9,000	270	14½"
9,000	270	17"
9,000	270	20"
9,000	270	22½"
10,000	300	15"
10,000	300	18"
10,000	300	20"
10,000	300	24"
11,000	330	15"
11,000	330	17½"
11,000	330	21"
11,000	330	24"
12,000	360	14½"
12,000	360	18"
12,000	360	20"
12,000	360	23"
13,000	390	15"
13,000	390	17½"
13,000	390	21"
13,000	390	24"
14,000	420	14½"
14,000	420	18"
14,000	420	21"
14,000	420	24"
15,000	450	15"
15,000	450	17"
15,000	450	20"
15,000	450	24"

70% MALT/30% ADJUNCT			
POUNDS OF MALT	POUNDS OF ADJUNCT	BED CU. FT.	DEPTH OF BED
3,500	1,500	128	12½"
3,500	1,500	128	15"
3,500	1,500	128	18"
3,500	1,500	128	20"
4,200	1,800	153	13"
4,200	1,800	153	15"
4,200	1,800	153	17½"
4,200	1,800	153	21"
4,900	2,100	178.5	13"
4,900	2,100	178.5	15"
4,900	2,100	178.5	18"
4,900	2,100	178.5	20½"
5,600	2,400	204	12½"
5,600	2,400	204	15"
5,600	2,400	204	17½"
5,600	2,400	204	20"
6,300	2,700	230	12"
6,300	2,700	230	14½"
6,300	2,700	230	16½"
6,300	2,700	230	19½"
7,000	3,000	255	13"
7,000	3,000	255	15"
7,000	3,000	255	17"
7,000	3,000	255	20"
7,700	3,300	281	12½"
7,700	3,300	281	15"
7,700	3,300	281	18"
7,700	3,300	281	21"
8,400	3,600	306	12½"
8,400	3,600	306	15"
8,400	3,600	306	17"
8,400	3,600	306	20"
9,100	3,900	332	13"
9,100	3,900	332	15"
9,100	3,900	332	17½"
9,100	3,900	332	20"
9,800	4,200	357	12½"
9,800	4,200	357	15"
9,800	4,200	357	18"
9,800	4,200	357	20"
10,500	4,500	383	12½"
10,500	4,500	383	15"
10,500	4,500	383	17"
10,500	4,500	383	20½"

60% MALT/40% ADJUNCT			
POUNDS OF MALT	POUNDS OF ADJUNCT	BED CU. FT.	DEPTH OF BED
3,000	2,000	120	11½"
3,000	2,000	120	14"
3,000	2,000	120	16½"
3,000	2,000	120	18½"
3,600	2,400	144	12"
3,600	2,400	144	14"
3,600	2,400	144	16½"
3,600	2,400	144	20"
4,200	2,800	168	12"
4,200	2,800	168	14"
4,200	2,800	168	16½"
4,200	2,800	168	19½"
4,800	3,200	192	11½"
4,800	3,200	192	14"
4,800	3,200	192	16"
4,800	3,200	192	18½"
5,400	3,600	216	11½"
5,400	3,600	216	14"
5,400	3,600	216	16"
5,400	3,600	216	18"
6,000	4,000	240	12"
6,000	4,000	240	14"
6,000	4,000	240	16"
6,000	4,000	240	18½"
6,600	4,400	264	12"
6,600	4,400	264	14"
6,600	4,400	264	16½"
6,600	4,400	264	19"
7,200	4,800	288	12"
7,200	4,800	288	14½"
7,200	4,800	288	16"
7,200	4,800	288	18"
7,800	5,200	312	12"
7,800	5,200	312	14"
7,800	5,200	312	16½"
7,800	5,200	312	18½"
8,400	5,600	336	12"
8,400	5,600	336	14"
8,400	5,600	336	16½"
8,400	5,600	336	19"
9,000	6,000	360	12"
9,000	6,000	360	14"
9,000	6,000	360	16"
9,000	6,000	360	19"

LAUTER TUB SIZE	
DIA.	FILTER AREA SQ. FT.
12'-6"	118
11'-6"	99
10'-6"	82
10'-0"	74
13'-6"	138
12'-6"	118
11'-6"	99
10'-6"	82
14'-6"	160
13'-6"	138
12'-6"	118
11'-6"	99
16'-0"	196
14'-6"	160
13'-6"	138
12'-6"	118
17'-0"	222
15'-6"	184
14'-6"	160
13'-6"	138
17'-6"	236
16'-0"	196
15'-0"	172
14'-0"	149
18'-6"	263
17'-0"	222
15'-6"	184
14'-6"	160
19'-6"	293
17'-6"	236
16'-6"	209
15'-6"	184
20'-0"	310
18'-6"	264
17'-0"	222
16'-0"	196
21'-0"	342
19'-0"	278
17'-6"	236
16'-6"	210
21'-6"	358
20'-0"	310
18'-6"	264
17'-0"	222

30" tubs

30" tubs

ACME PROCESS EQUIPMENT CO.

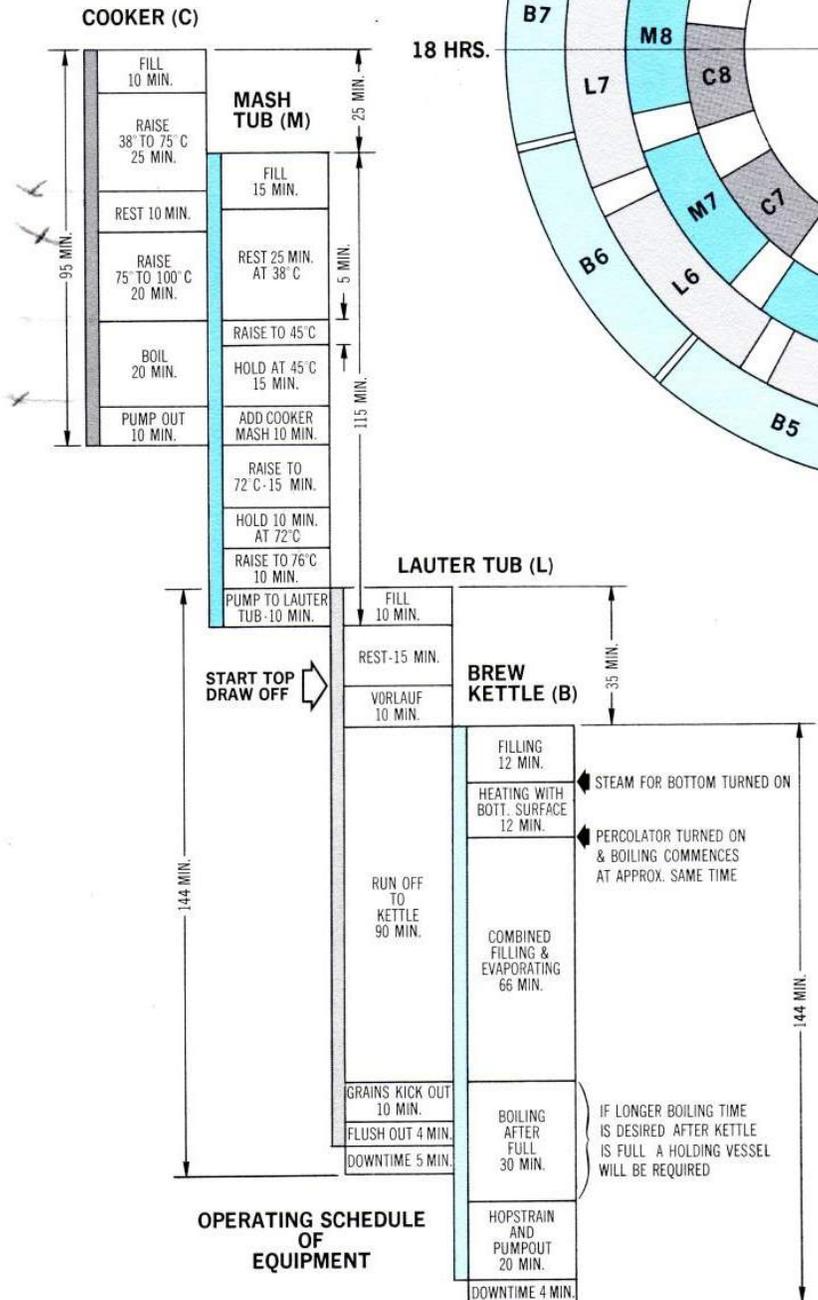
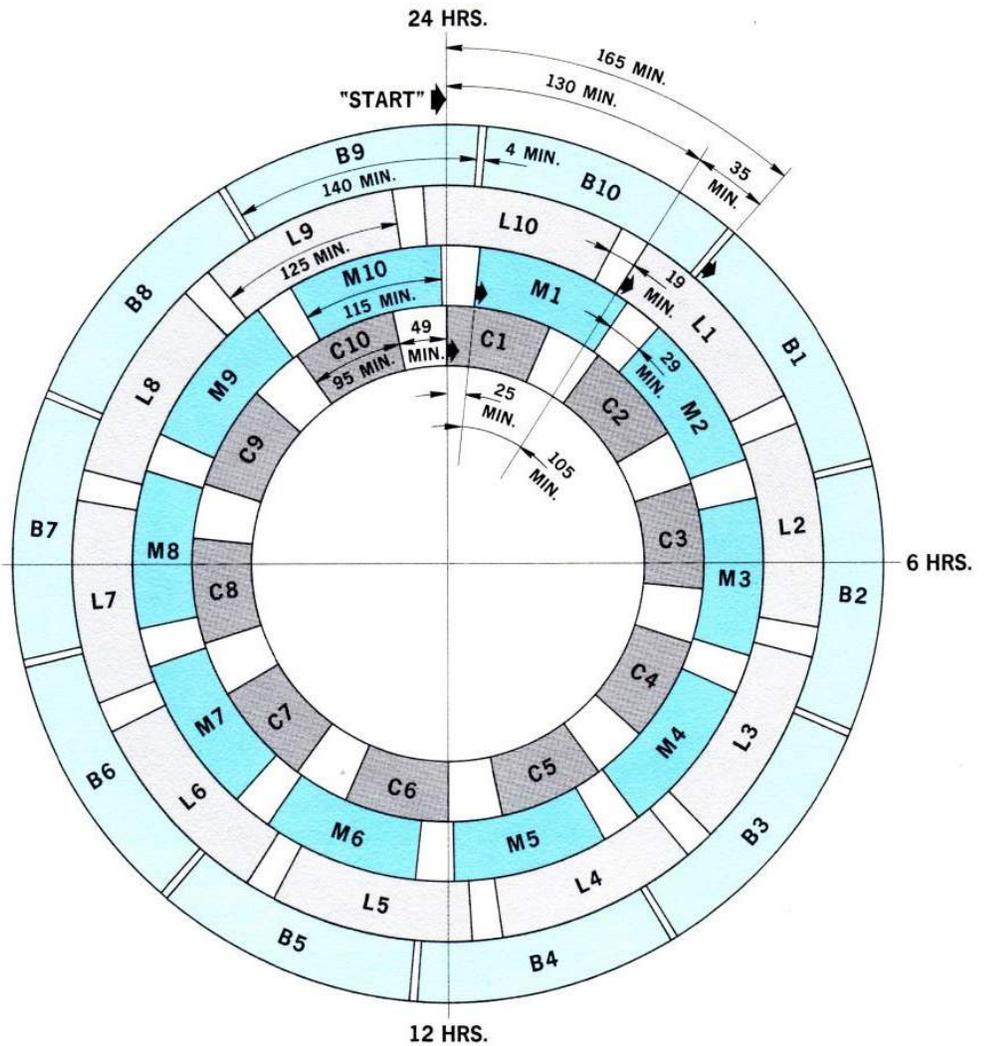
100% MALT			70% MALT/30% ADJUNCT				60% MALT/40% ADJUNCT				LAUTER TUB SIZE	
POUNDS OF MALT	BED CU. FT.	DEPTH OF BED	POUNDS OF MALT	POUNDS OF ADJUNCT	BED CU. FT.	DEPTH OF BED	POUNDS OF MALT	POUNDS OF ADJUNCT	BED CU. FT.	DEPTH OF BED	DIA.	FILTER AREA SQ. FT.
16,000	480	14½"	11,200	4,800	408	12½"	9,600	6,400	384	11½"	22'-6"	392
16,000	480	17½"	11,200	4,800	408	15"	9,600	6,400	384	14"	20'-6"	324
16,000	480	20½"	11,200	4,800	408	17½"	9,600	6,400	384	16½"	19'-0"	278
16,000	480	24"	11,200	4,800	408	20½"	9,600	6,400	384	17½"	17'-6"	236
17,000	510	14½"	11,900	5,100	434	12½"	10,200	6,800	408	12"	23'-0"	406
17,000	510	18"	11,900	5,100	434	15"	10,200	6,800	408	14"	21'-0"	342
17,000	510	20½"	11,900	5,100	434	17½"	10,200	6,800	408	16½"	19'-6"	294
17,000	510	23"	11,900	5,100	434	20"	10,200	6,800	408	18"	18'-6"	263
18,000	540	15"	12,600	5,400	459	13"	10,800	7,200	432	12"	23'-6"	428
18,000	540	18"	12,600	5,400	459	15"	10,800	7,200	432	14½"	21'-6"	358
18,000	540	20½"	12,600	5,400	459	18"	10,800	7,200	432	16½"	20'-0"	310
18,000	540	23"	12,600	5,400	459	20"	10,800	7,200	432	18"	19'-0"	278
19,000	570	15"	13,300	5,700	485	12½"	11,400	7,600	456	11½"	24'-6"	462
19,000	570	17½"	13,300	5,700	485	14½"	11,400	7,600	456	14"	22'-6"	392
19,000	570	21"	13,300	5,700	485	18"	11,400	7,600	456	17"	20'-6"	324
19,000	570	23"	13,300	5,700	485	20"	11,400	7,600	456	18½"	19'-6"	294
20,000	600	15"	14,000	6,000	510	12½"	12,000	8,000	480	11½"	25'-0"	482
20,000	600	17½"	14,000	6,000	510	15"	12,000	8,000	480	14"	23'-0"	406
20,000	600	21"	14,000	6,000	510	18"	12,000	8,000	480	17"	21'-0"	342
20,000	600	23"	14,000	6,000	510	19½"	12,000	8,000	480	18"	20'-0"	310
21,000	630	15"	14,700	6,300	536	13"	12,600	8,400	504	12"	25'-6"	504
21,000	630	18"	14,700	6,300	536	15"	12,600	8,400	504	14"	23'-6"	428
21,000	630	21"	14,700	6,300	536	18"	12,600	8,400	504	17"	21'-6"	358
21,000	630	24"	14,700	6,300	536	21"	12,600	8,400	504	19½"	20'-0"	310
22,000	660	15"	15,400	6,600	561	13"	13,200	8,800	528	12"	26'-0"	524
22,000	660	17½"	15,400	6,600	561	15"	13,200	8,800	528	14"	24'-0"	445
22,000	660	21"	15,400	6,600	561	18"	13,200	8,800	528	17"	22'-0"	374
22,000	660	24"	15,400	6,600	561	20½"	13,200	8,800	528	19"	20'-6"	324
23,000	690	15"	16,100	6,900	587	13"	13,800	9,200	552	12"	26'-6"	544
23,000	690	18"	16,100	6,900	587	15"	13,800	9,200	552	14"	24'-6"	464
23,000	690	21"	16,100	6,900	587	18"	13,800	9,200	552	17"	22'-6"	392
23,000	690	23"	16,100	6,900	587	20½"	13,800	9,200	552	19"	21'-0"	342
24,000	720	15"	16,800	7,200	612	13"	14,400	9,600	576	12"	27'-0"	565
24,000	720	18"	16,800	7,200	612	15"	14,400	9,600	576	14"	25'-0"	482
24,000	720	21"	16,800	7,200	612	18"	14,400	9,600	576	17"	23'-0"	406
24,000	720	24"	16,800	7,200	612	20½"	14,400	9,600	576	19"	21'-6"	358
25,000	750	15"	17,500	7,500	638	13"	15,000	10,000	600	12"	27'-6"	587
25,000	750	18"	17,500	7,500	638	15"	15,000	10,000	600	14"	25'-6"	504
25,000	750	21"	17,500	7,500	638	18"	15,000	10,000	600	17"	23'-6"	428
25,000	750	25"	17,500	7,500	638	21"	15,000	10,000	600	20"	21'-6"	358
26,000	780	15"	18,200	7,800	663	13"	15,600	10,400	624	12"	28'-0"	608
26,000	780	18"	18,200	7,800	663	15"	15,600	10,400	624	14"	26'-0"	524
26,000	780	21"	18,200	7,800	663	18"	15,600	10,400	624	17"	24'-0"	445
26,000	780	24"	18,200	7,800	663	21"	15,600	10,400	624	20"	22'-0"	374



# MORE BREWS PER DAY WITH AN ACME INTEGRATED SYSTEM

**24 Hr. BREWING CYCLE,**  
based on  
**10 BREWS PER DAY**

**C = COOKER**  
**M = MASH TUB**  
**L = LAUTER TUB**  
**B = BREW KETTLE**



## COMPLETE LAUTER TUB TIME CYCLE APPROXIMATELY 2 HRS and 24 MIN.

Because of the time saved through the special features of the Acme BruMor Lauter Tub with Radial Valley Bottom, total required time, including lauter tub down time, can be held to 2 hours and 24 minutes per complete cycle. This operating schedule results in ten brews a day, instead of the usual five or six brews per day.

## INTEGRATION OF COMPLETE CYCLE

To achieve the results outlined above, all brew-house equipment must be properly integrated. Only in this way can a production flow be established, to and from the lauter tub, that will meet the brewmaster's production requirements. This calls for a planning program by the Brewmaster.

Accomplishment of the cycle program must be achieved by consultation of the management with the brewery equipment manufacturer and the architect, working as a team.