

- A complete and efficient pelleting plant
- Install it yourself—easily assembled
- Produces pellets of all shapes and sizes
- Built around the famous CPM "Master" Model Pellet Mill

The California "Master" Model Plant is specifically designed to permit the small feed plant operator to produce pellets and crumbles from his own formulas with his own ingredients.

This plant is ideally suited for the operator with moderate capacity requirements. It's economical to install, easy to operate and efficiently produces the finest quality pellets in any shape or size.

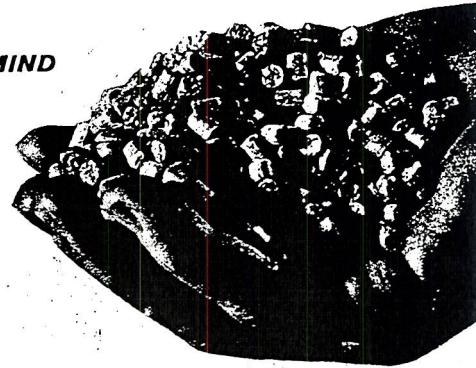
Give this unit your mixed mash formulated to your particular requirements and it will give you the highest quality thoroughly cooled and screened pellets or crumbles.

Designed for easy erection, two men can quickly assemble the complete plant at little cost. All components, bins and supports are furnished with the exception of supports for the pellet collecting cyclone. Usually the cyclone can be hung from the building itself. There are no complicated elevators to assemble or operate—pellets are handled by air, with one fan doing two jobs: elevating pellets and drawing air through the CPM cooler.



# CPM "MASTER" MODEL PELLET PLANT

DESIGNED... WITH THE SMALL FEED MANUFACTURER IN MIND



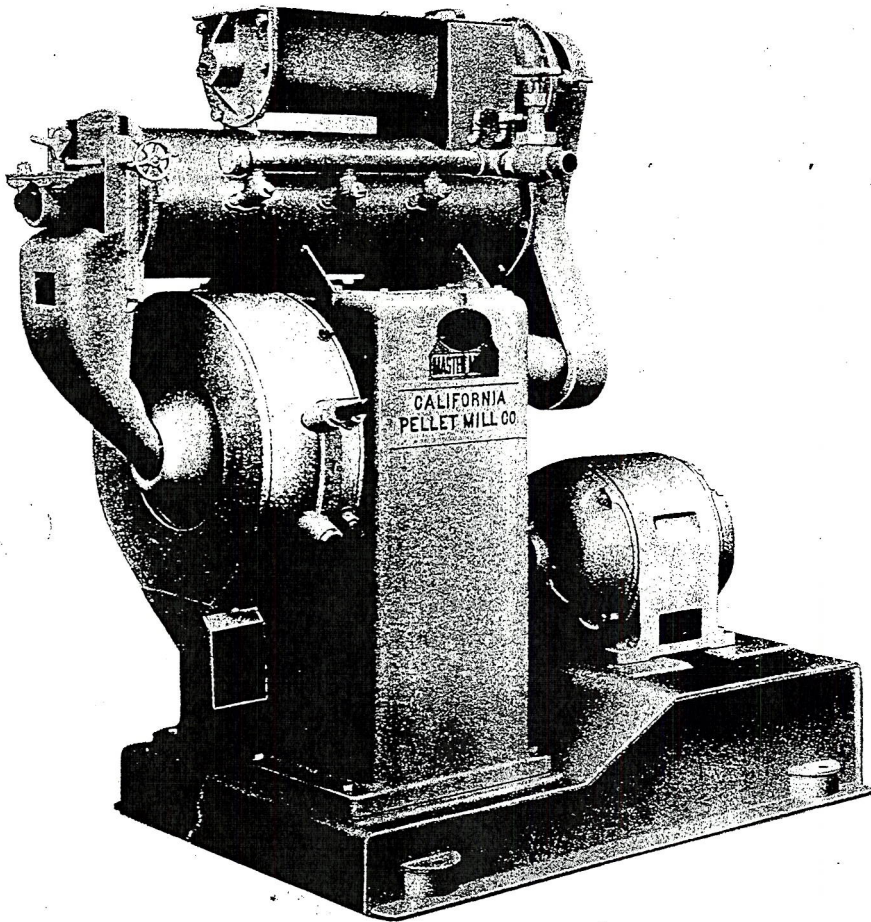
## CPM "MASTER MODEL" PELLET MILL

Is the outstanding pellet producer for small capacity requirements  Combines quality construction, simple operation and minimum maintenance  Designed to produce the highest quality pellet feeds at the lowest cost per ton.

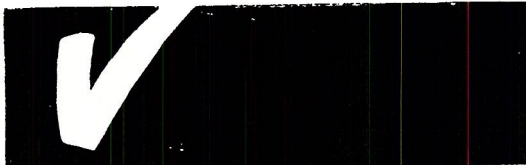
The CPM "Master Model" is specifically designed for small feed mills or custom-mix plants. Although it's the smallest size mill in the complete CALIFORNIA line, the "Master Model" is expertly engineered in every detail, meeting the high standard of quality long recognized in all products bearing the CPM trade-mark.

CALIFORNIA "Master Model" Pellet Mills are designed to produce quality pellets at high capacity and low operation cost. Four vital elements contributing to economical pelleting are:

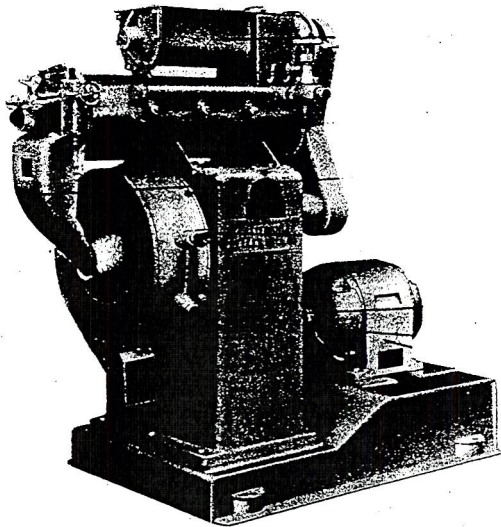
1. Low power consumption per ton of pellets.
2. High hourly capacities in all pellet sizes.
3. Low maintenance cost.
4. Simplicity of operation.



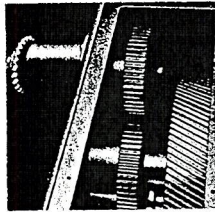
# CPM "MASTER MODEL"



## JUST CHECK THESE CPM FEATURES—

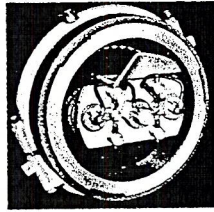


- Variable speed screw feeder, driven from mixer shaft, provides a uniform flow of material into the mixer.
- Separate mixer, driven from gear box power take-off, thoroughly and uniformly blends ingredients with proper amounts of steam, water, or both.
- Stainless steel feed chute and pellet chamber, secured by wing nuts, are easily and quickly removed for die changing.
- Carbide tipped cutting knives are adjusted by simple locknut arrangement.
- Shear pin protects mill and die from damage by large foreign objects in feed.
- Easy-access lubrication without stopping pellet production helps keep mill output high.
- Motor is direct coupled—no exposed belts or pulleys.
- Sturdy all welded steel base affords perfect alignment of flexible coupling and eliminates vibration.



### BEARINGS AND GEARS

CPM full-power gear drive provides the assurance of consistent, efficient power transmission at the best speed for the product being produced. No combination of sheaves and belts can hope to do this. This precision power train is compact and space-saving. With the entire unit mounted in a heavy cast-iron case, all bearings and gears operate in an oil bath, totally enclosed and protected from foreign material.



### DIE AND ROLLER ASSEMBLIES

CPM pellet dies and rolls are unequalled for quality. They are heat treated by exclusive processes that make them highly resistant to wear, even in heaviest service. Die is securely keyed to revolving die support and held in place with a split die clamp. Simplified design permits quick, easy die changes. Pressure of rollers against die is maintained by a simple, positive adjusting system.

The CALIFORNIA "Master Model" Pellet Mill is a completely quality-engineered, quality-constructed machine. Pinions are forged steel, hardened and ground. All shafts run on anti-friction bearings. All primary gearing is helical cut for quietness and strength. Heavy duty speed reducing gears, shafts and bearings operate in an enclosed oil bath.

The "Master Model" is normally furnished with a direct-coupled 30 HP motor. It can also be operated with a 20 HP, 25 HP or 40 HP motor, depending on the particular plant requirements and conditions. (Obtain factory recommendations.) Alternate types of power and drives may be used. CALIFORNIA "Master Model" Pellet Mills can be found operating with diesel engines, gas engines and even water wheels for power.

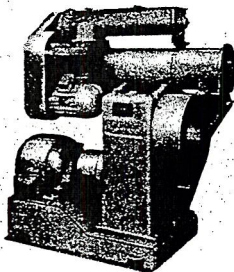
### OPERATION

The variable-speed screw feeder, driven from the mixer shaft is adjustable while the machine is in operation, all its moving parts are fully enclosed and operate in an oil bath.

The materials to be pelleted are conditioned with controlled amounts of steam or water, or both, in a separate mixer driven from the gear box power take-off.

From the mixer, conditioned mash is discharged through the feed chute into the pelleting chamber. Here the material is directed equally into the two wedge shaped areas formed by the rollers and the inside face of the die. Rotation of the die in contact with the rollers causes them to turn, and the material is thus compressed until, under extreme pressure, it is forced through the die holes. As pellets are extruded, cut-off knives shear pellets to desired length.

Where molasses feeds are to be pelleted, specify the "Master, Arrangement AMT." This is the basic "Master Model" equipped with the CPM Molasses Mixer Unit, available at moderate additional cost. Its high speed agitator mixer permits applying molasses directly to dry mixed feeds, eliminating the problems of binning high molasses feeds ahead of the pellet mill, as well as eliminating the need for a separate molasses mixer. Substantial savings are made in space, and high molasses content pellets are of the finest quality.



### CALIFORNIA PELLET MILL COMPANY

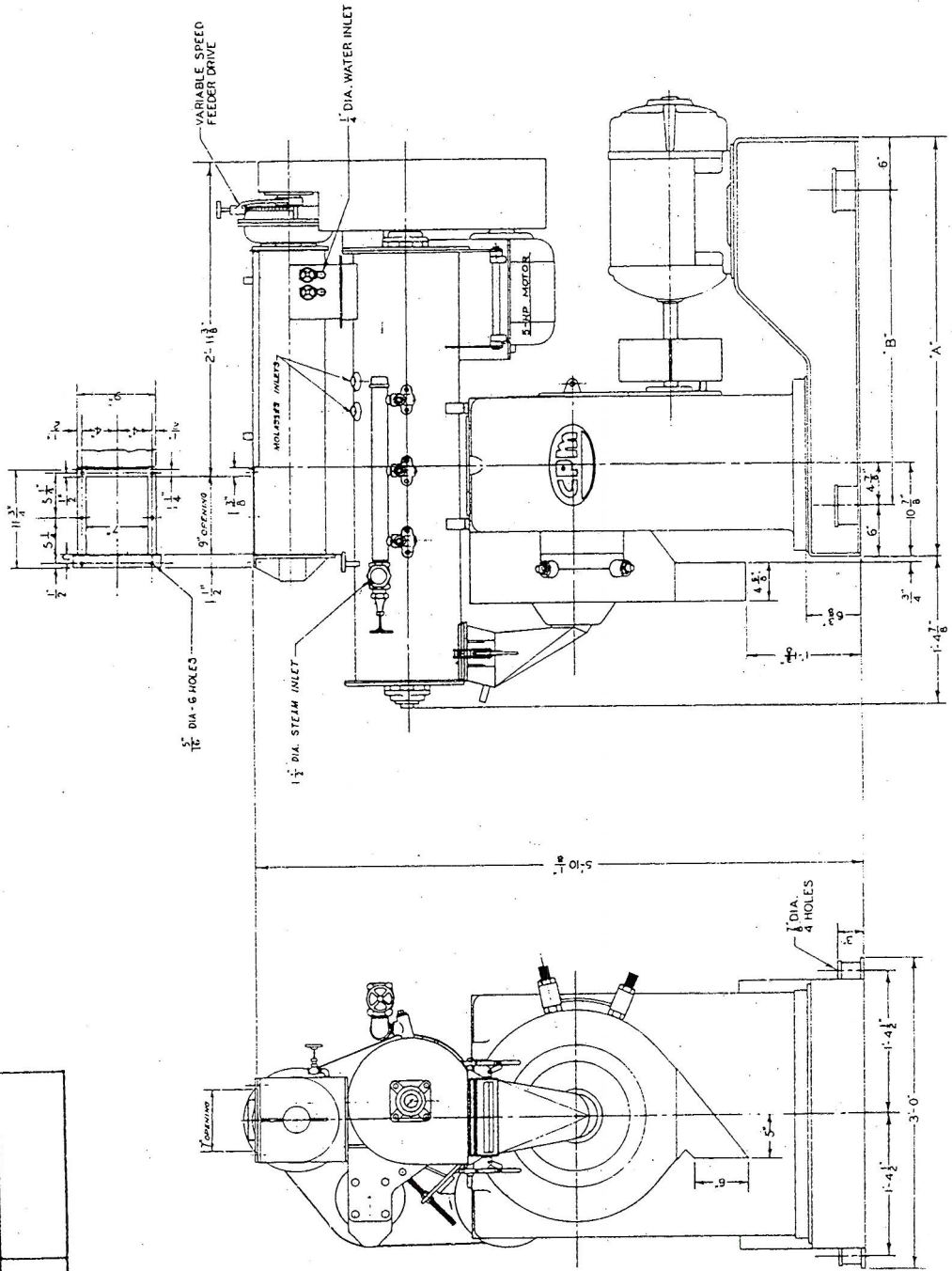
1800 Folsom Street, San Francisco, California 94103  
1114 E. Wabash Avenue, Crawfordsville, Indiana 47933  
101 E. 15th Avenue, North Kansas City, Missouri 64116

EUROPEAN PLANT:  
CPM/Europe N. V.  
Distelweg 89  
Amsterdam, Holland

Sales & Service Representatives also in: Albany, N. Y. • Atlanta, Ga. • Billings, Mont. • Bloomington, Ill. • Calgary, Alberta • Davenport, Ia. • Denver, Colo. • Fort Worth, Tex. • Ft. Wayne, Ind. • Los Angeles, Calif. • Mexico City • Minneapolis, Minn. • Hendersonville, Tenn. • Omaha, Neb. • Portland Ore. • Richmond, Va. • Kansas City, Mo. • Weston, Ontario • Tulsa, Okla. • Winnipeg, Manitoba



MOTOR FRAME	"A"	"B"
256 T (typ)	51"	39"



THIS DIMENSION SHEET IS FOR REFERENCE ONLY UNLESS PROPERLY ENDORSED.

CERTIFIED FOR \_\_\_\_\_

CUSTOMER'S ORDER NO. \_\_\_\_\_ CPM'S ORDER NO. \_\_\_\_\_

CERTIFIED BY \_\_\_\_\_ DATE \_\_\_\_\_



**General Dimension Drawing**

MASTER MODEL PELLET MILL  
ARRANGEMENT 'AMT'

CALIFORNIA PELLET MILL CO.      eng. form 0697

Curtis A. Adams

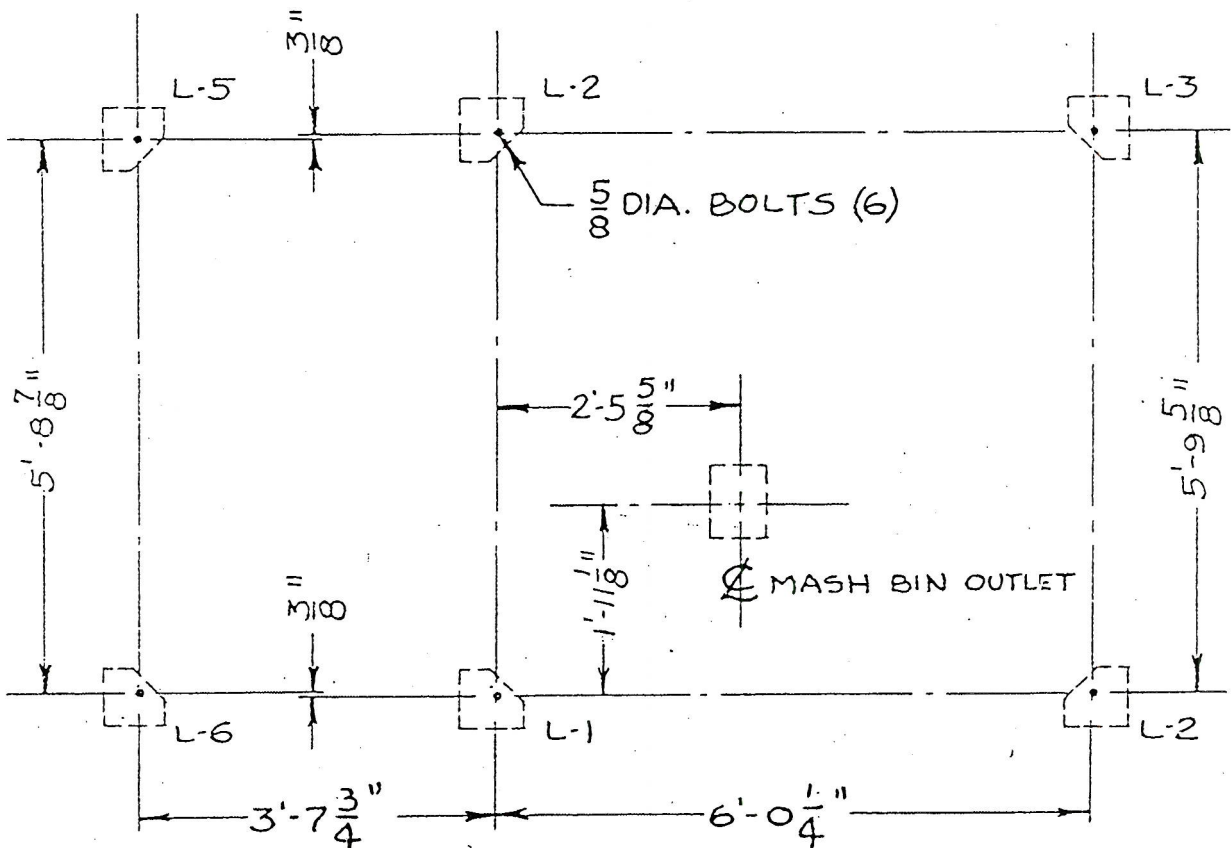
**CPM**

Part of worldwide Ingersoll-Rand

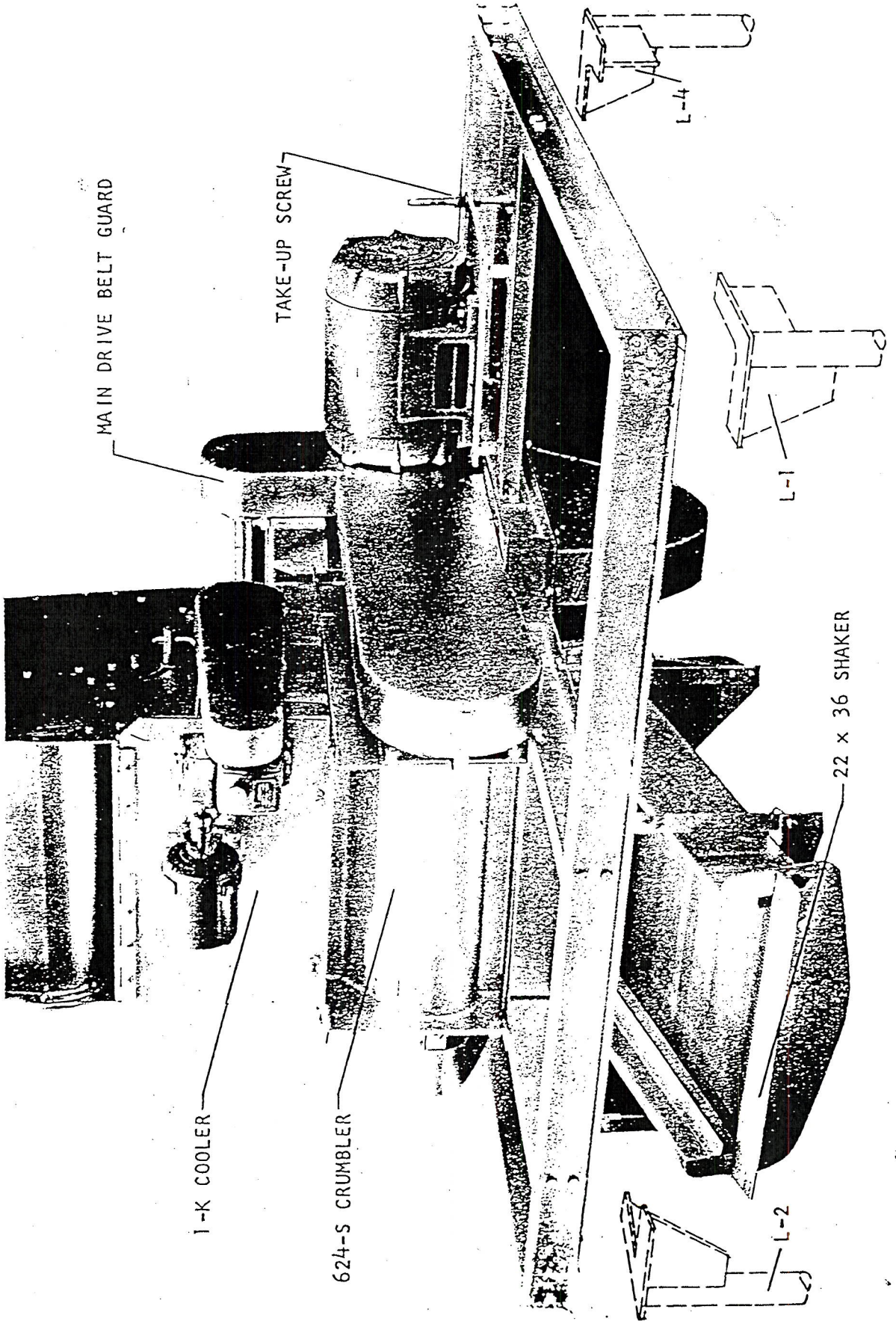
Manager  
Service & Customer Quoting

California Pellet Mill Company  
1114 East Wabash Avenue  
Crawfordsville, IN 47933  
(317) 362-2600

Identification of Parts for Assembly  
CALIFORNIA MASTER MODEL PELLET PLANT



CALIFORNIA PELLET MILL COMPANY  
1800 Folsom St., San Francisco 3, Calif.  
1114 East Wabash Ave., Crawfordsville, Ind.  
101 East 15th Ave., No. Kansas City 16, Missouri



MAIN DRIVE BELT GUARD

TAKE-UP SCREW

1-K COOLER

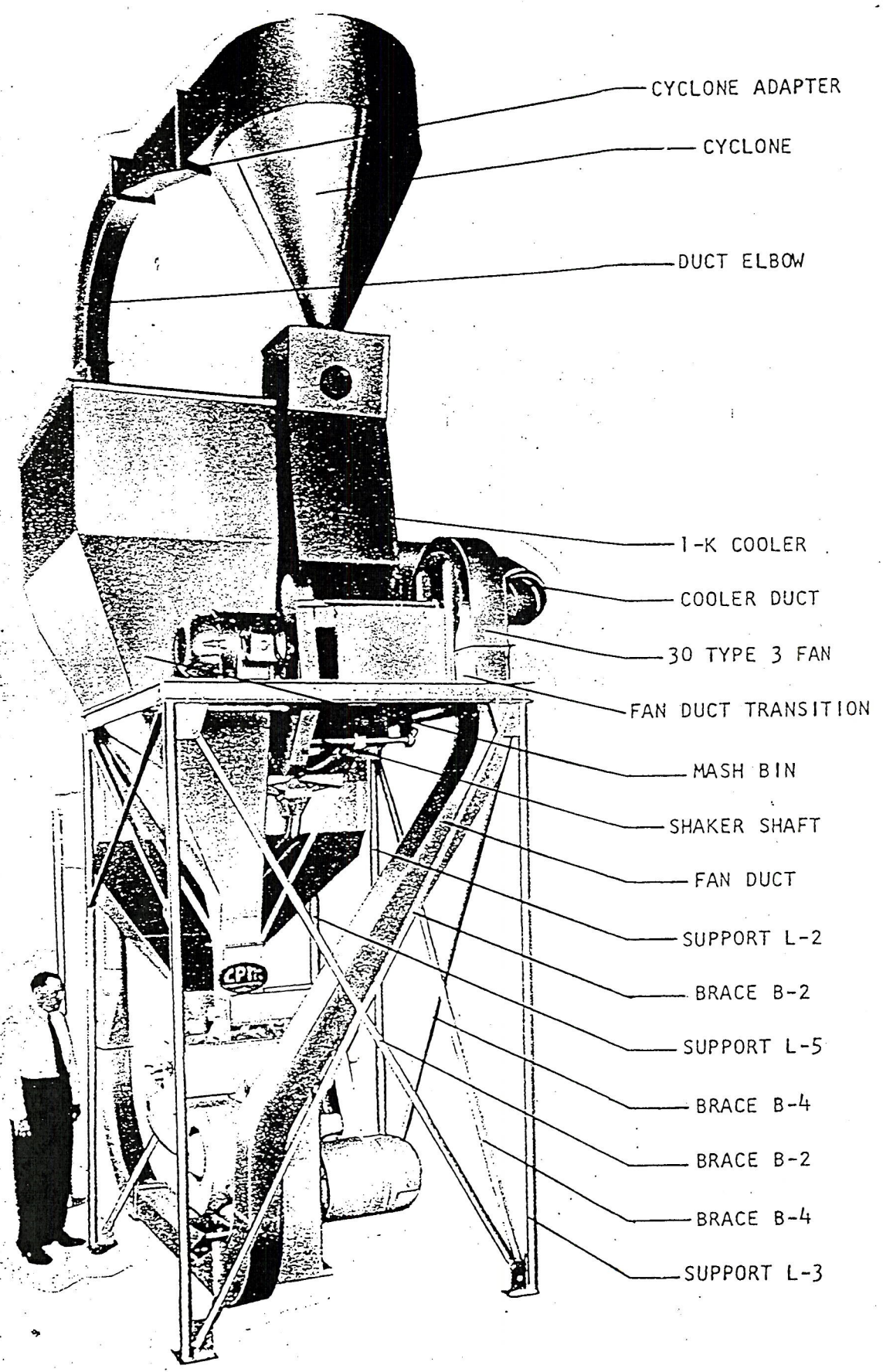
624-S CRUMBLER

22 x 36 SHAKER

L-4

L-1

L-2



CYCLONE ADAPTER

CYCLONE

DUCT ELBOW

1-K COOLER

COOLER DUCT

30 TYPE 3 FAN

FAN DUCT TRANSITION

MASH BIN

SHAKER SHAFT

FAN DUCT

SUPPORT L-2

BRACE B-2

SUPPORT L-5

BRACE B-4

BRACE B-2

BRACE B-4

SUPPORT L-3



## CALIFORNIA PELLET COOLER & AIR LIFT UNIT

### - PRINCIPLE OF OPERATION & METHOD OF ADJUSTING -

The conveying system used with the California Pellet Cooler and Air Lift utilizes the principle of the venturi nozzle, and in general, the only adjustment is the proper regulation of the venturi slide gate. The raising of this gate reduces the difference in pressure across the inlet and discharge ends of the venturi and permits greater air flow through the system. It is, however, necessary to maintain a negative pressure at the material inlet in order that the pellets may be drawn into the pipe. If the slide gate is opened too much this condition may not exist and the venturi will "blow back."

There are three conditions under which the fan operates in this unit, each of them having some different effect on the system characteristics. When the system is allowed to run empty, with no pellets in either the ducts or the cooler, the volume of air delivered by the fan, and consequently the velocity of air in the ducts, will be of maximum value. At this time, a preliminary adjustment of the venturi slide gate should be made. Starting with the gate in a full closed position, throw a handful of mash or other dusty material into the pellet inlet. Gradually open the gate and repeat this process until such time as the venturi starts to blow this material out of the hopper rather than through the system. When this point is reached, close the gate another  $\frac{1}{2}$ " and lock in position. If no blow-back is experienced, leave the gate full open for the first trial.

The second condition under which the fan operates will be with material being carried in the duct, but with the cooler not yet filled with pellets. At this stage the difference in pressure will begin to drop and will continue to do so as the quantity of pellets entering the system is increased. If any blow-back should occur, before maximum capacity is reached, the slide gate should be further closed to eliminate this condition.

The final, and most important condition under which the fan will operate is when the cooler is full, and the full capacity of pellets is being conveyed in the system. At this period the overall system resistance is at its greatest value and the velocity in the air ducts will be at its lowest point. The ultimate setting of the venturi must be made so that operation is correct when this condition is in effect. If plugging should occur here, the venturi gate was not opened enough. If blow-back occurs, the gate was opened too much.

It is highly desirable, when handling pellets that are soft and easily broken, to maintain velocities in the air system that are not greatly in excess of those needed for conveying the product. When the venturi slide gate is closed as much as possible without allowing the system to plug when operating at full capacity, this condition will exist.

The volume of air to be used in the system is dictated by the requirement of the air lift rather than by that of the cooler, and in some instances the air velocity through the cooler screens may be too high to permit free flow of the pellets in the cooling columns. When this condition occurs it is necessary to use a small amount of secondary air for the lift. This is accomplished by raising the removable door on all "B" and "G" series coolers and allowing air to flow through the ensuing gap. ("K" series coolers are provided with an adjustable damper for this purpose.) Sometimes there may be a second reason for using some secondary air in the system. This would be when the resistance to flow created by the air passing through the pellets is considerably greater than normal. Such a condition could raise the overall resistance of the system to such

a high value that the velocity of air in the ducts would be too low to convey the pellets satisfactorily. Lifting the removable door slightly will alleviate this condition. As any air used in the system that is not passed directly through the pellet columns in the coolers will reduce the amount of cooling, it is desirable not to use this secondary air unless it is necessary.

If, for some reason, it is not possible to prevent plugging or venturi blow-back after this procedure outline has been followed, a system re-evaluation should be made by the California Pellet Mill Co. engineering department. The following information would be required before this analysis could be started:

1. Plant Voltage.
2. Ammeter reading on fan motor when system is running empty & when cooler is empty.
3. Ammeter reading on fan motor when system is conveying full capacity of pellets but cooler is not yet full.
4. Ammeter reading on fan motor when system is conveying full capacity of pellets and cooler is completely full.
5. Size of pellets conveyed.
6. Approximate maximum capacity to be conveyed.
7. Any departure made from the drawing of this system as issued by the California Pellet Mill Co.

CALIFORNIA PELLETT MILL COMPANY

CALIFORNIA MASTER PELLET PLANT MODEL 2288--A

ERECTION PLAN

PARTS LIST FOR DRAWING D-2288-PG

PARTS LIST NUMBER A-2288-PG-2

<u>PART</u>	<u>NUMBER</u>	<u>PART</u>
222-XX	0-1261-01	CHANNEL MK C-3
224-00	0-1262-01	CHANNEL MK C-4
225-01	0-1263-01	CHANNEL MK C-5
1226-01	0-1265-00	SUPPORT MK L-1
1230-00	0-1266-00	SUPPORT MK L-2
1231-00	0-1267-00	SUPPORT MK L-3
1253-00	0-1268-00	SUPPORT MK L-4
1254-00	0-1269-00	SACKING BIN SUPPORT MK L-5
1255-00	0-1270-00	SACKING BIN SUPPORT MK L-6
1256-00	0-1620-00	ADAPTER - BELT TENSIONER
1257-00	0-1621-00	SHAKER SHAFT BEARING SUPPORT
1258-00	0-1632-00	CHANNEL MK C-6
1259-01	3-0609-00	SET COLLAR
1259-02	3-1578-00	DRIVE TENSIONER

LECT MOTOR BASE FROM ENG. FORM NO. 1023  
 EQUIRES MOTOR FRAME NUMBER, HP AND RPM)



CALIFORNIA MASTER PELLET PLANT  
 MODEL 2288-A  
 PARTS LIST FOR DRAWING D-7546  
 PARTS LIST NUMBER A-7546-1

<u>PART NUMBER</u>	<u>PART</u>	<u>PART NUMBER</u>	<u>PART</u>
0-1233-00	LADDER	0-1241-00	FEED HOPPER INSERT (MASTER EQUIPPED WITH PART 5-0518-00 FEEDER SHELL)
0-1234-00	MASH BIN - UPPER SECTION	0-1243-00	VENTURI GATE
0-1235-00	MASH BIN - LOWER SECTION	0-1244-00	FAN DUCT
0-1235-01	MASH BIN - LOWER SECTION (MASTER ARR. AMT ONLY)	0-1246-00	COOLER DUCT
0-1236-00	MASH BIN EXTENSION	0-1247-00	DUCT ELBOW
0-1237-00	SACKING BIN	0-1248-00	DUCT TRANSITION
0-1238-00	FEED HOPPER EXTENSION (STANDARD MASTER MILL)	0-1249-00	CYCLONE
0-1239-00	FEED HOPPER EXTENSION (STD. MASTER ON MOTOR BASE)	0-1250-00	CYCLONE ADAPTER
0-1240-00	FEED HOPPER EXTENSION (MASTER ARR. AMT OR BMT)	0-1251-00	FINES DUCT
		0-1252-00	VERTICAL DUCT
		0-1607-00	HOPPER
		0-1657-00	FAN DUCT ADAPTER
		0-1661-00	VENTURI DUCT



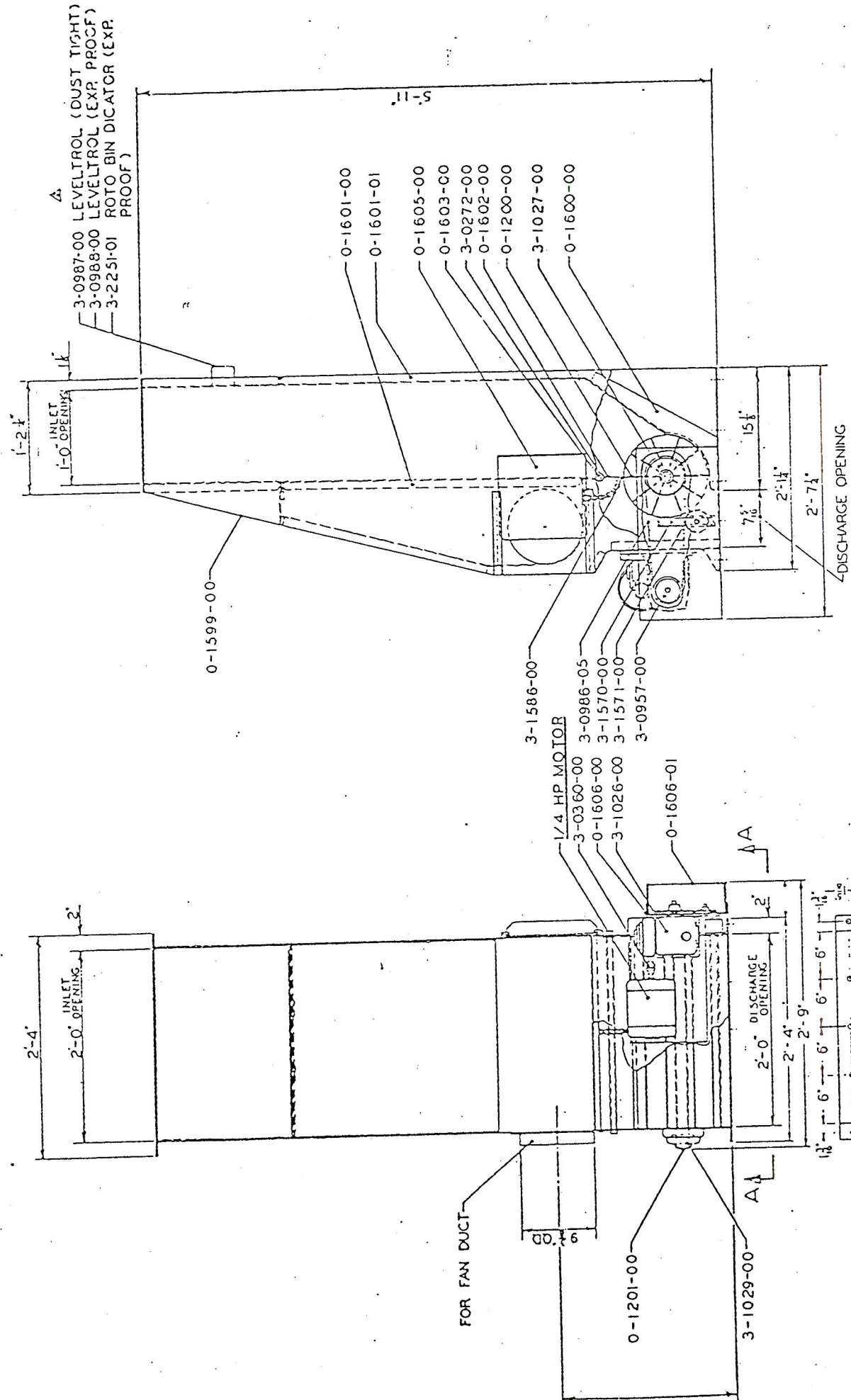
CALIFORNIA MASTER PELLET PLANT MODEL 2288-A & R

1-KA PELLET COOLER

PARTS LIST FOR DRAWING C-2288-PD

PARTS LIST NUMBER A-2288-PD-1..

<u>PART NUMBER</u>	<u>PART</u>	<u>PART NUMBER</u>	<u>PART</u>
0-1200-00	DISCHARGE GATE	3-0957-00	DRIVE SPROCKET
0-1201-00	DISCHARGE GATE SHAFT	3-0986-05	DRIVE CHAIN
0-1599-00	MAIN COOLER BODY	3-0987-00	LEVELTROL - DUST TIGHT
0-1600-00	DISCHARGE GATE HOUSING	OR	
0-1601-00	AIR INTAKE PANEL	3-0988-00	LEVELTROL - EXPLOSION PROOF
0-1602-00	ADJUSTMENT GATE	OR	
0-1603-00	ADJUSTMENT GATE SHAFT	3-2251-01	ROTO-BIN-DICATOR - EXPLOSION PROOF
0-1605-00	EXCESS AIR OPENING PLATE	3-1026-00	REDUCER
0-1606-00	CHAIN GUARD BACKING PLATE	3-1027-00	DRIVEN SPROCKET
0-1606-01	CHAIN GUARD SHELL	3-1029-00	BEARING
3-0272-00	SET COLLAR	3-1570-00	DRIVE TENSIONER
3-0360-00	COUPLING	3-1571-00	TENSIONER SPROCKET
		3-1586-00	COMPRESSION SPRING



UNLESS OTHERWISE NOTED  
 ALL DIMENSIONS IN INCHES  
 BREAK ALL SHARP EDGES 1/32" X 45° (APPROX.)

REV.	DATE	BY	CHKD.	REVISION
1	1-18-72	H.D.	J.S.22	
2	3-23-72	EM		

DRAWING RELEASE

CALIFORNIA PELLET MILL CO.  
 SAN FRANCISCO, CALIF. 94103

CALIFORNIA MASTER PELLET PLANT  
 MODEL NO. 2293-A  
 1-KA PELLET COOLER  
 PART 5 DRAWING

DATE: 9-30-76  
 C-2289-PD



CALIFORNIA PELLET MILL COMPANY

DATE 12-18-43

TO

W. W. Bennett

COPIES TO

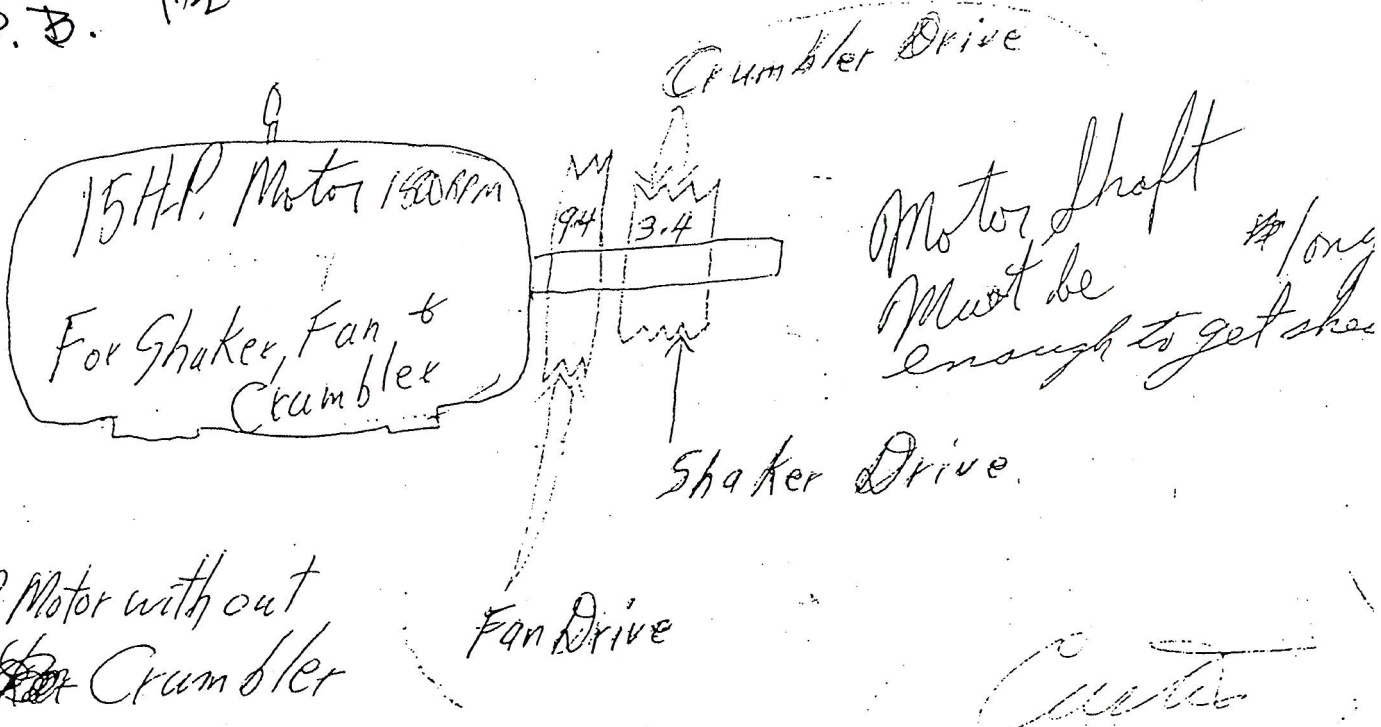
SUBJECT

Package Plant Shaves

REFER YOURS

Motor = 25AT

- 3 Groove 3.4, Motor Shave to Drive Crumbler Shaker ~~5/8~~ 1 1/2"
- 2 Groove 9.4, Motor Shave to Drive Fan ~~5/8~~ 1 1/2"
- 2 Groove 6.4, Fan Shave 17/16"
- 2 Groove 10.6, Crumbler Shave have this 17/16"
- 1 Groove 12.0, Shaker Shave 17/16"
- 2 Groove 6.8, Jackshaft to motor 2 req'd.  
1 = 1 1/2" 1 = 1 5/8"
- 2 P.B. 1 1/2"



CALIFORNIA PELLET MILL COMPANY

DATE

8-29-75

COPIES TO

REFER YOURS

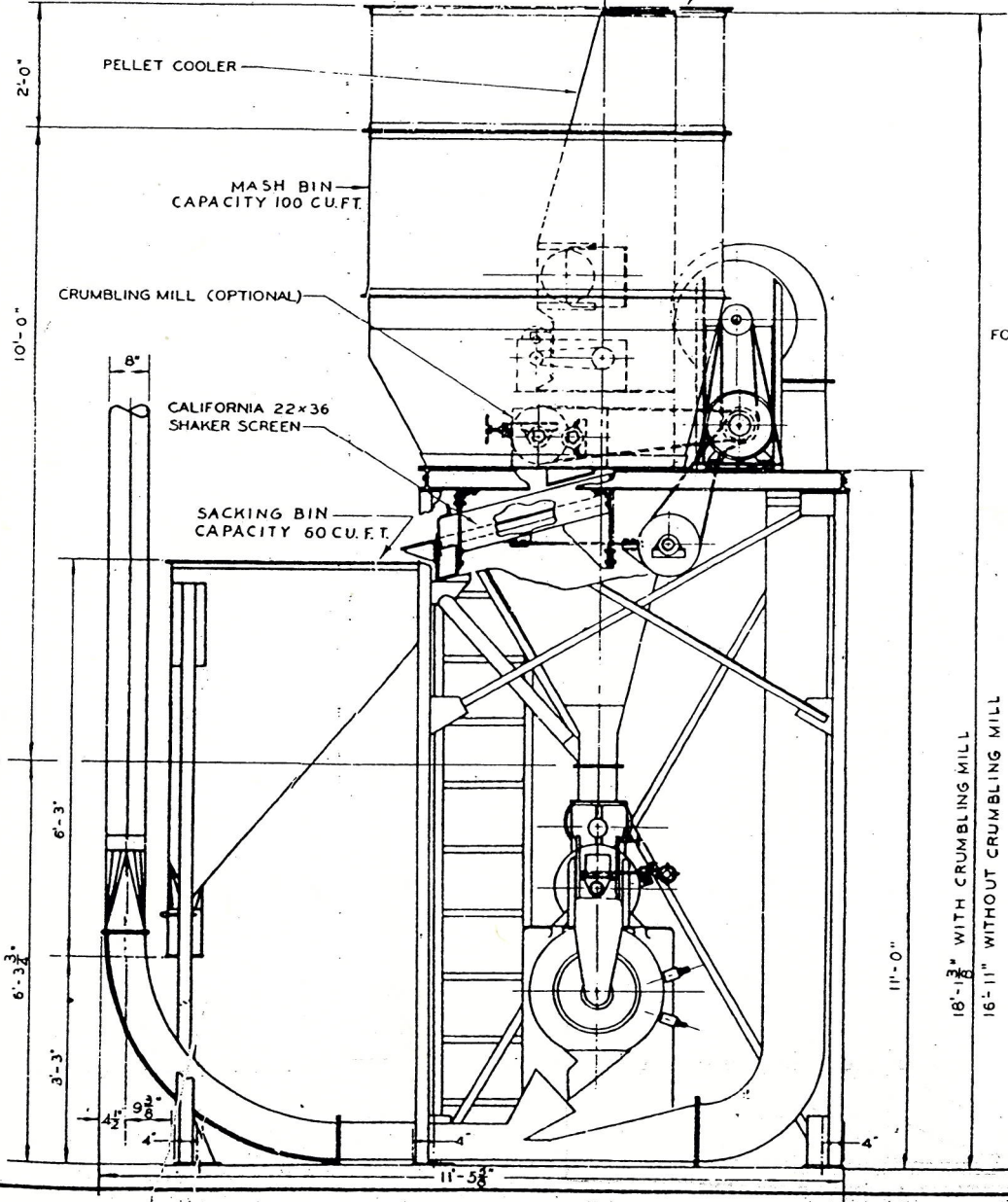
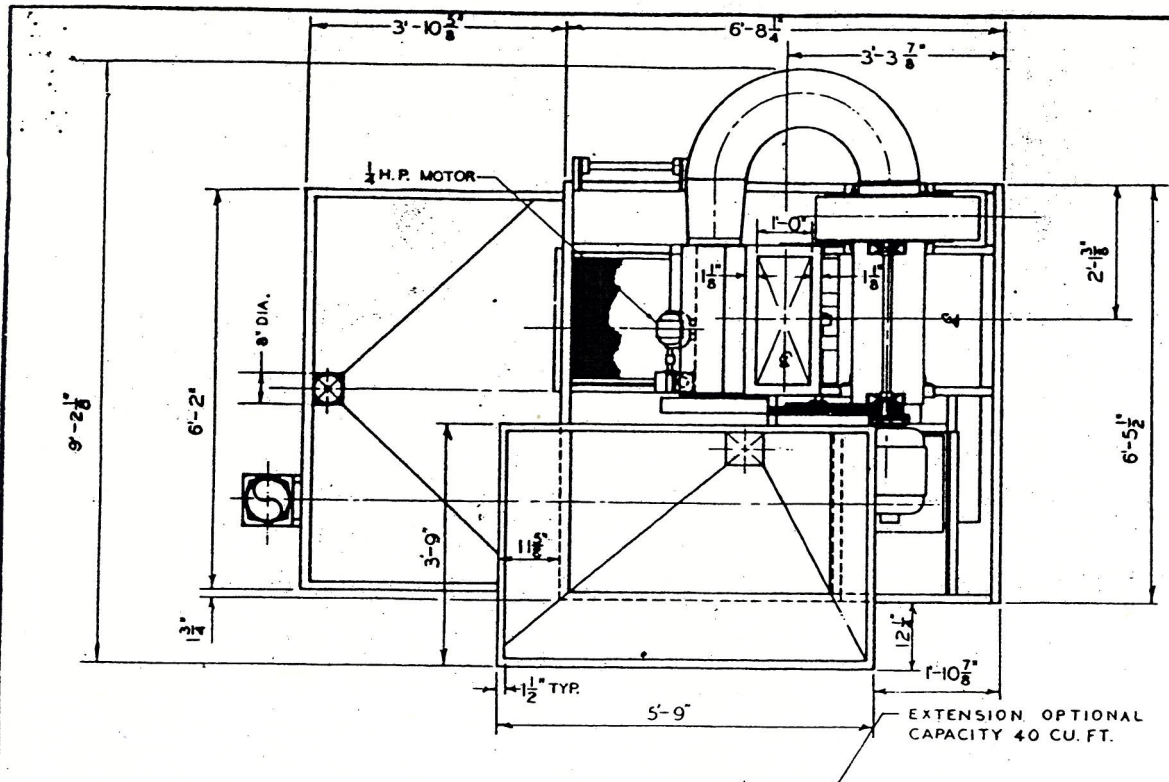
SUBJECT

2288

2288 A

Screen Size

2288 - 23½ X 36 0-1218-XX  
2288A - 23½ X 33 0-1723-X

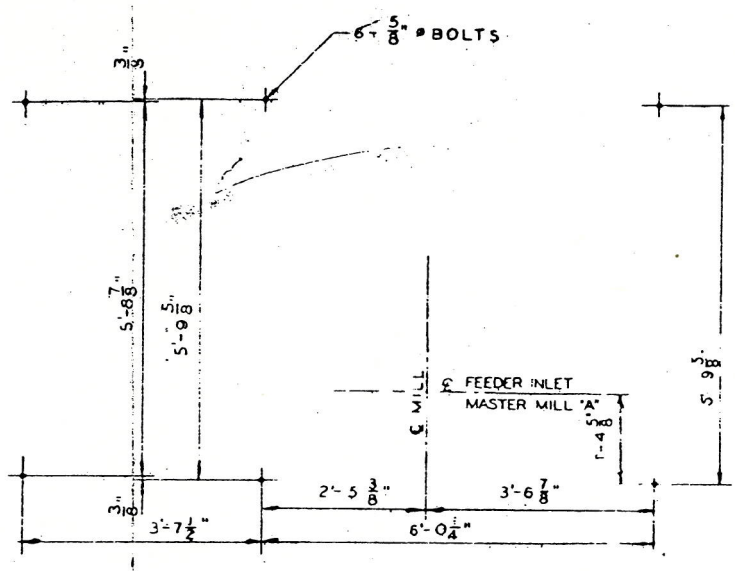
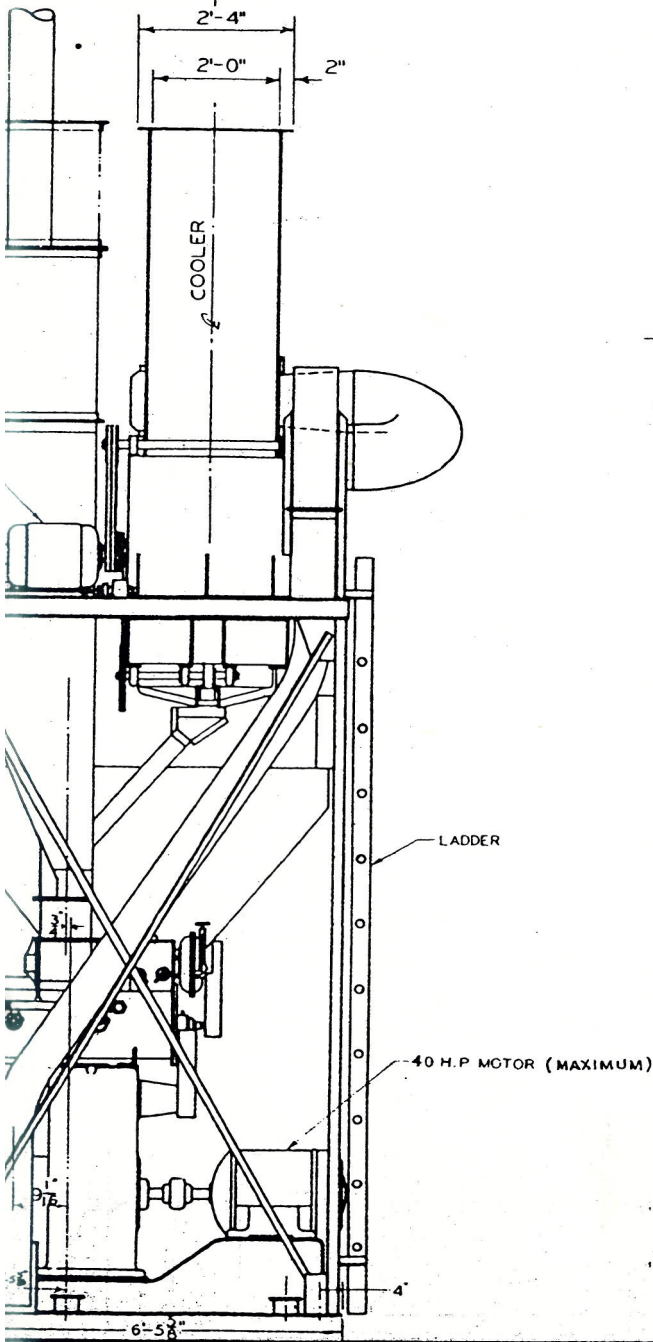
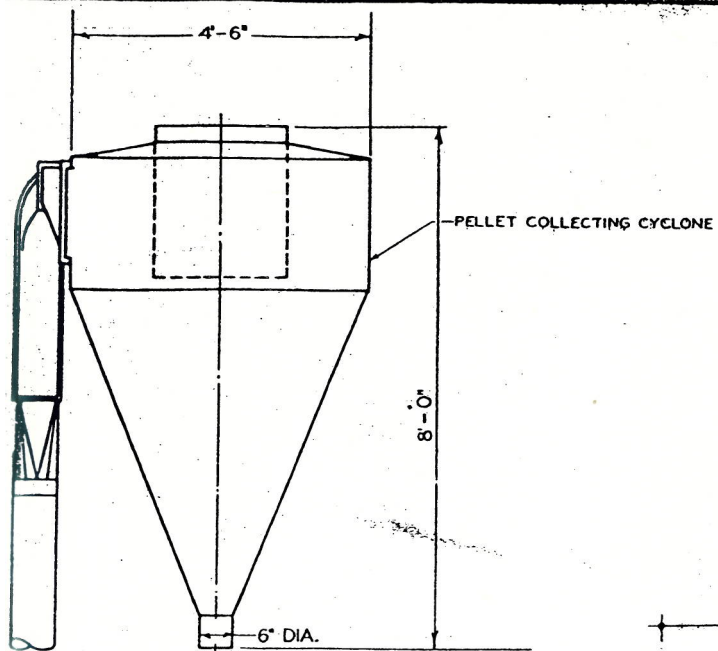


15 H.P. - 1800 RPM MOTOR  
 FOR UNIT WITH CRUMBLING MILL  
 10 H.P. - 1800 RPM MOTOR  
 FOR UNIT WITHOUT CRUMBLING MILL

CALIFORNIA MASTER MODEL  
 PELLET MILL

A

A



ANCHOR BOLTS PLAN AT A-A

CALIFORNIA PELLET MILL CO.			
SAN FRANCISCO, CALIF. • CRAWFORDSVILLE, IND.			
CALIFORNIA MASTER PELLET PLANT			
MODEL - 2288-A			
DIMENSION DRAWING			
DATE	9-14-66	D-2788-5	
ATL			