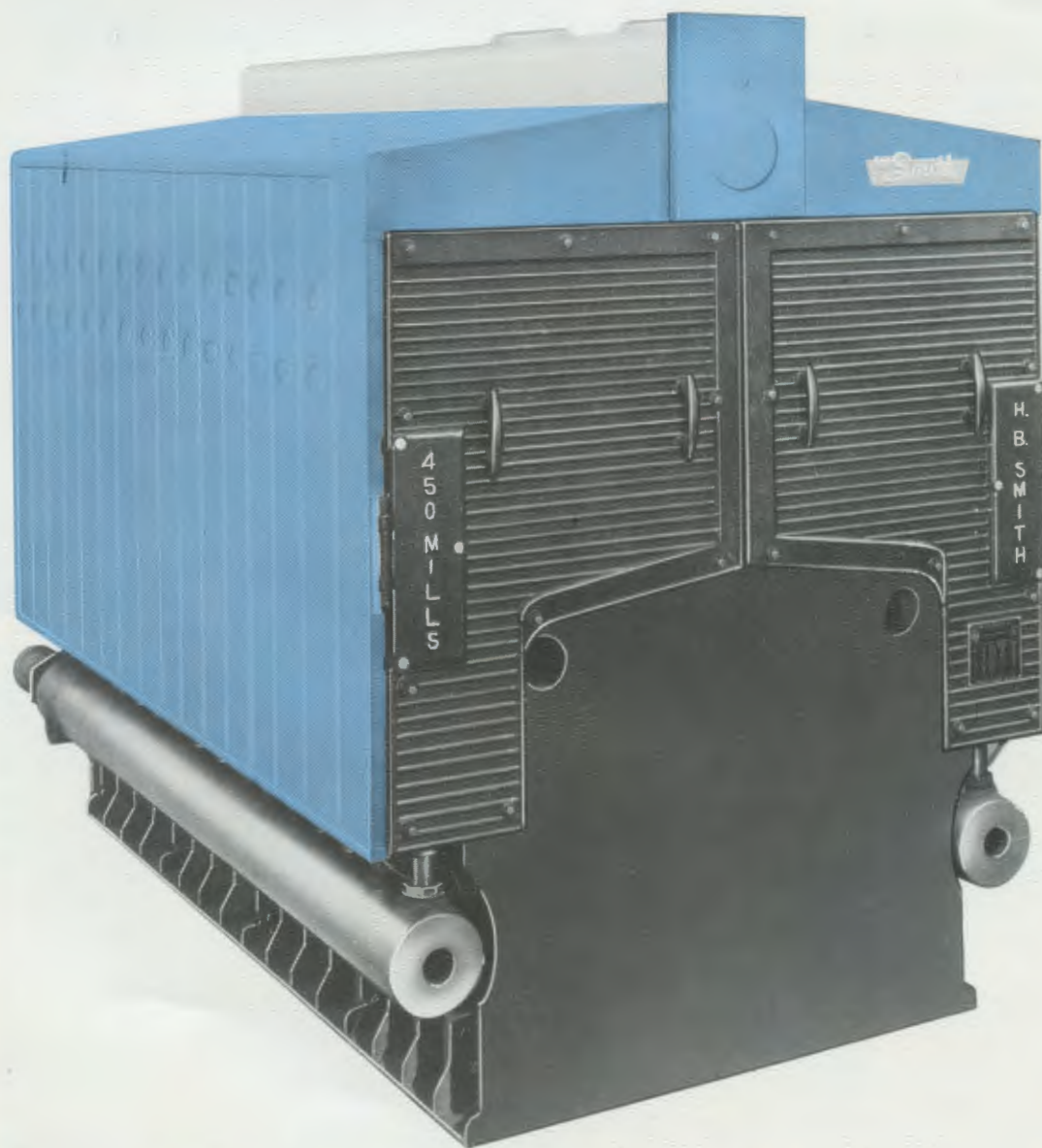


HB Smith

MILLS M450L

OIL- OR
GAS-FIRED
CAST IRON
BOILER

I=B=R GROSS OUTPUT RATINGS: 2,300 to 5,660 MBH

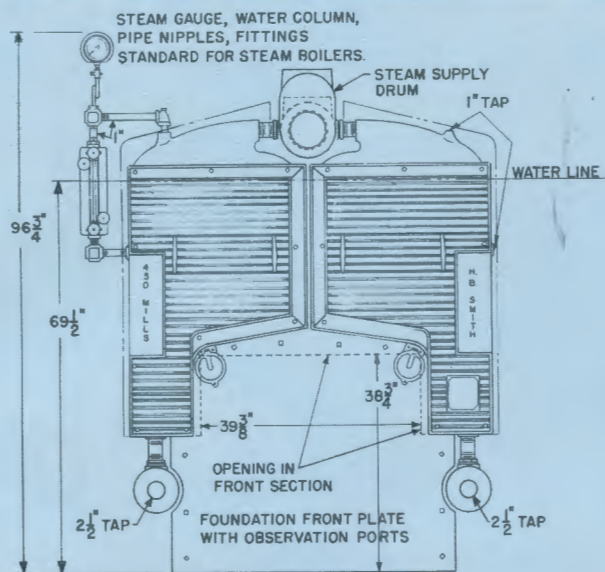


Warming America Since 1853

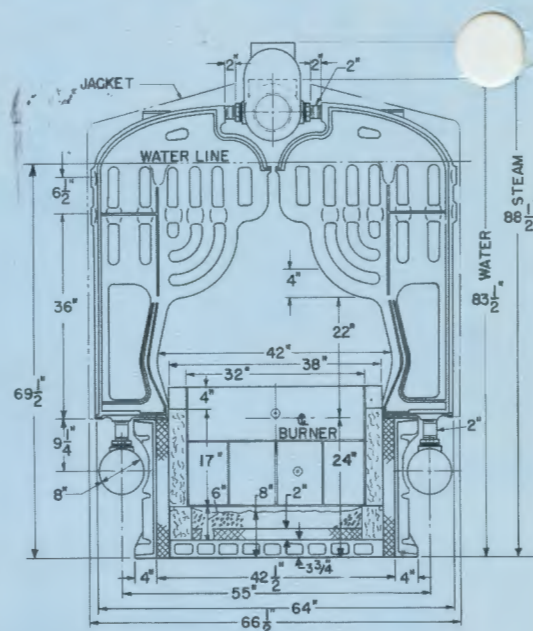
MILLS M450L CAST-IRON

**OIL-
or
GAS-FIRED**

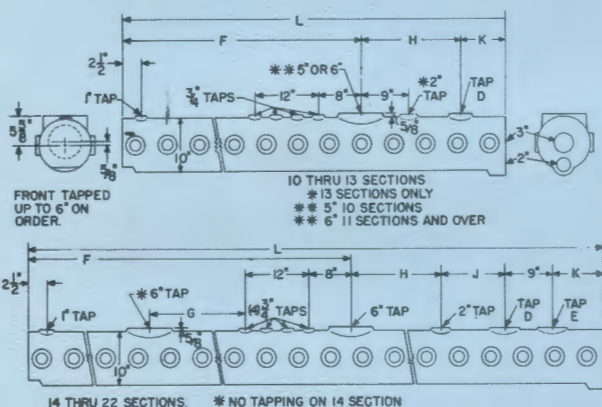
**I=B=R RATINGS:
GROSS OUTPUT
2,300 to 5,660 MBH**



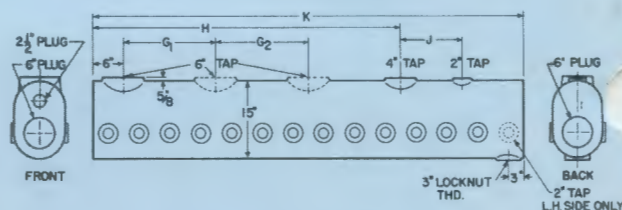
**FRONT VIEW
(STEAM BOILER)**



INTERMEDIATE SECTION



WATER SUPPLY DRUM DETAILS



STEAM SUPPLY DRUM DETAILS

**I=B=R RATINGS,
BURNER CAPACITIES, CHIMNEY SIZES**

MAXIMUM ALLOWABLE WORKING PRESSURE 15 PSI STEAM AND 40 PSI WATER. ALSO AVAILABLE AS A HI-TEMP BOILER, 80 PSI MAXIMUM ALLOWABLE WATER WORKING PRESSURE. ALL BOILERS HYDROSTATICALLY TESTED — A.S.M.E.

Boiler Number (Note 1)	Boiler Horse- power	I = B = R Gross Output MBH	NET I = B = R RATINGS			I = B = R Burner Capacity			I = B = R Chimney Size (Note 6)		Inside Dimensions Smoke Pipe To Fit Over Smokehood Outlet (Inches)
			Steam		Water						
			Sq. Ft.	MBH (Note 2)	MBH (Note 3)	OIL (GPH)		GAS (MBH)	Size (Inches)	Height (Feet)	
						Light (Note 4)	Heavy (Note 5)				
M450L-△-10	68.71	2,300	7,440	1,785.7	2,000.0	20.75	19.35	2,903	20 x 20	29	15 x 19
M450L-△-11	77.07	2,580	8,345	2,003.1	2,243.5	23.15	21.60	3,240	20 x 24	33	19 x 19
M450L-△-12	85.44	2,860	9,250	2,220.5	2,487.0	25.55	23.85	3,578	20 x 24	37	19 x 19
M450L-△-13	93.80	3,140	10,160	2,437.9	2,730.4	27.95	26.10	3,915	24 x 24	40	19 x 19
M450L-△-14	102.17	3,420	11,065	2,665.3	2,973.9	30.40	28.40	4,260	24 x 24	44	24 x 19
M450L-△-15	110.53	3,700	11,970	2,872.7	3,217.4	32.85	30.65	4,598	24 x 24	47	24 x 19
M450L-△-16	118.90	3,980	12,875	3,090.1	3,460.9	35.25	32.90	4,935	24 x 28	53	24 x 19
M450L-△-17	127.26	4,260	13,780	3,307.5	3,704.3	37.65	35.15	5,273	24 x 28	59	24 x 19
M450L-△-18	135.62	4,540	14,685	3,524.8	3,947.8	40.05	37.40	5,510	24 x 28	65	24 x 19
M450L-△-19	143.99	4,820	15,595	3,742.2	4,191.3	42.55	39.70	5,955	28 x 28	71	24 x 19
M450L-△-20	152.35	5,100	16,500	3,959.6	4,434.8	44.95	41.95	6,293	28 x 28	77	24 x 19
M450L-△-21	160.72	5,380	17,405	4,177.0	4,678.3	47.35	44.20	6,630	28 x 28	82	24 x 19
M450L-△-22	169.08	5,660	18,310	4,394.4	4,921.7	49.75	46.45	6,968	28 x 28	88	24 x 19

(Note 1) Important Ordering Information.

(△) Insert "S" for Steam, "W" for Water. Example, M450L-S-10 is a 10-section MILLS M450L boiler for steam.

(Note 2) The Net I = B = R Steam Ratings shown are based on piping and pickup allowance of 1.288.

(Note 3) The Net I = B = R Water Ratings shown are based on an allowance of 1.15.

(Note 4) Light oil having heat content of 140,000 BTU/Gal.

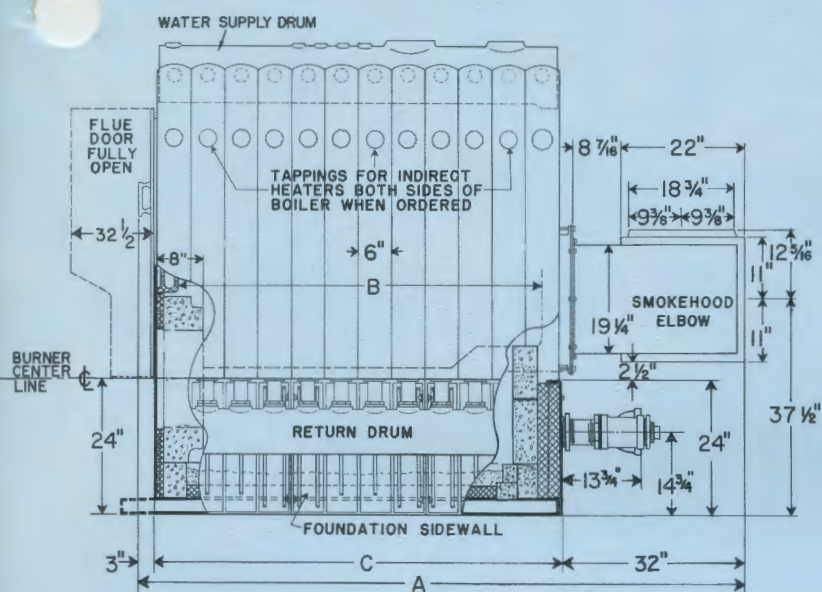
(Note 5) Heavy oil having heat content of 150,000 BTU/Gal.

(Note 6) If the oil burner being used requires a draft over the fire greater than .06", the chimney height should be adjusted accordingly.

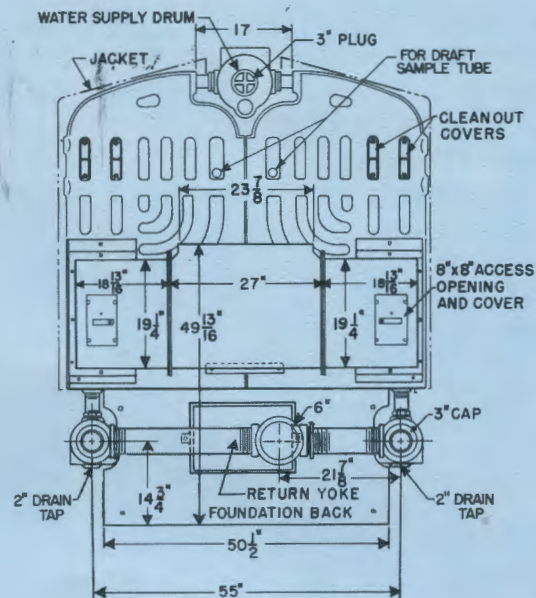
The manufacturer should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping, etc.

For forced hot water heating systems where the boiler and all piping are within the area to be heated, the boiler may be selected on the basis of its Gross Output.

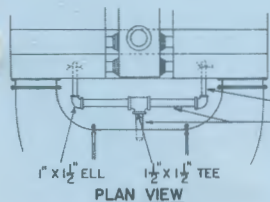
NATURAL DRAFT WATER TUBE BOILER



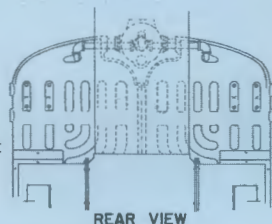
**SIDE VIEW
NATURAL DRAFT WATER BOILER**



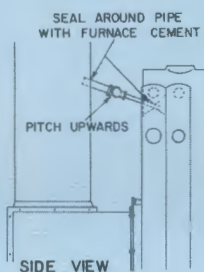
**REAR VIEW
NATURAL DRAFT WATER BOILER
(WITHOUT ACCESS DOOR)**



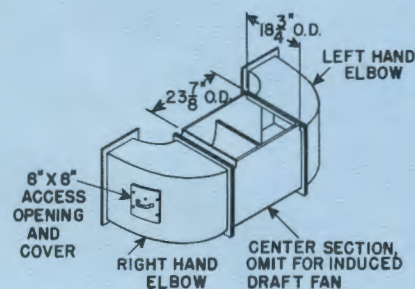
PLAN VIEW



REAR VIEW



SIDE VIEW



SMOKEHOOD DETAILS

REQUIRED AUXILIARY FLUE GAS VENT FOR GAS-FIRED BOILERS

DIMENSIONS — MILLS M450L

H.B. SMITH CO., INC.

Boiler Number (Note 1)	Heating Surface (Sq. Ft.)	Furnace Volume (Cu. Ft.)	Covering Surface Including Drums (Sq. Ft.)	Overall Length (Inches)			Furnace Length (Inches)	Foundation Length (Inches)	Tapping Size (Inches)		Water Supply Drum						Steam Supply Drum				
				Natura Draft	Wing Fan	Whitty Fan					Tapping Location (Inches)						Tapping Location (Inches)				
											A	A ₁	A ₂	B	C	D	E	F	G	H	J
M450L-△-10	358.3	37.64	84	97	100½	103¾	54	61	3	—	38½	—	14	—	7	59½	—	—	30½	—	67¾
M450L-△-11	395.0	41.75	91	103	106½	109¾	60	67	4	—	44½	—	12	—	9	65½	—	—	36½	—	73¾
M450L-△-12	431.0	45.86	98	109	112½	115¾	66	73	4	—	44½	—	18	—	9	71½	—	—	42½	—	79¾
M450L-△-13	467.7	49.96	105	115	118½	121¾	72	79	4	—	50½	—	18	—	9	77½	—	—	42½	—	85¾
M450L-△-14	502.7	54.07	112	121	124½	127¾	78	85	2	4	44½	—	12	9	9	83½	18	—	48½	—	91¾
M450L-△-15	540.3	58.18	119	127	130½	133¾	84	91	2	4	50½	7	12	9	9	89½	18	—	54½	—	97¾
M450L-△-16	576.3	62.28	126	133	136½	139¾	90	97	4	2	62½	10	9	9	6	95½	18	—	54½	—	103¾
M450L-△-17	613.0	66.39	133	139	142½	149	96	103	4	2	68½	16	9	9	6	101½	18	—	60½	—	109¾
M450L-△-18	649.0	70.50	140	145	148½	155	102	109	4	2	68½	16	12	12	6	107½	18	24	66½	—	115¾
M450L-△-19	685.0	74.60	147	151	154½	161	108	115	4	2	74½	22	12	12	6	113½	18	24	67½	12	121¾
M450L-△-20	721.0	78.71	154	157	160½	167	114	121	4	3	74½	22	17	12	7	119½	18	24	73½	12	127¾
M450L-△-21	757.7	82.82	161	163	166½	173	120	127	4	3	80½	28	17	12	7	125½	18	24	79½	12	133¾
M450L-△-22	794.4	86.92	168	169	172½	179	126	133	4	3	86½	34	17	12	7	131½	18	24	85½	12	139¾

EQUIPMENT for M450L MILLS BOILERS

STANDARD EQUIPMENT

ALL BOILERS

24-inch high foundation
Steel smokehood
Steel foundation front plate with observation ports (no burner opening)
Insulated metal jacket

STEAM

Prefabricated steam return yoke with flexible seals. See drawing below.
C.I. water column and piping
Steam pressure gauge and syphon.
Safety valve set at 15 psi

WATER

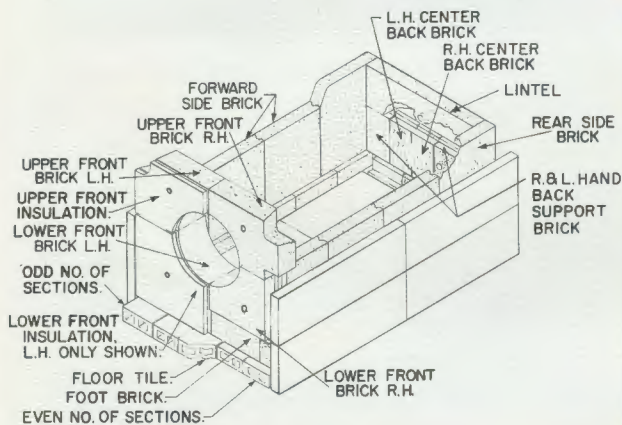
ASME 40# water relief valve

OPTIONAL EQUIPMENT

Combustion chamber with block insulation and hollow tile. See drawing below.
Prefabricated water return yoke with flexible seals. See drawing below.
Air elimination dip tube for water boilers
Foundation back plate with rear foundation access door and special return yoke
Combination pressure-altitude gauge

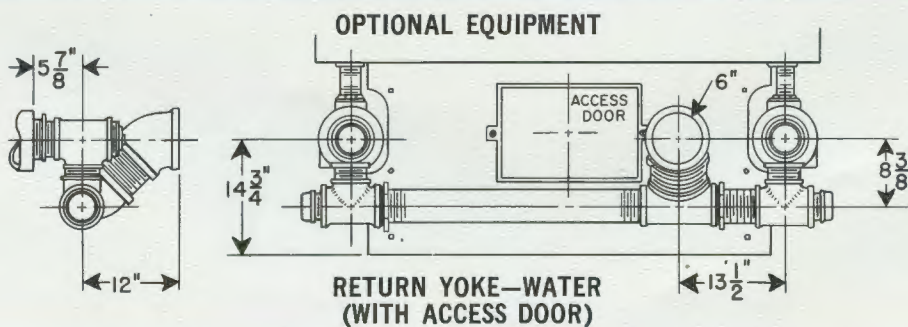
Low water cutoffs
Automatic water feeder
Cast-Iron manifolds and heaters for domestic hot water
80 psi, max. allowable water working pressure
Induced draft fans (Whitty and L. J. Wing)
— see following pages

OPTIONAL COMBUSTION CHAMBER DETAIL



NUMBER OF SECTIONS	WIDTH	HEIGHT (Floor to C/L Burner)	BRICK BURNER HOLES* (Inside Diam.)			LENGTH	VOLUME
			INCHES				
10	32	24	10¼	17½	20	46	12.67
11	32	24	10¼	17½	20	52	14.39
12	32	24	10¼	17½	20	58	16.11
13	32	24	10¼	17½	20	64	17.83
14	32	24	10¼	17½	20	70	19.55
15	32	24	10¼	17½	20	76	21.27
16	32	24	10¼	17½	20	82	23.00
17	32	24	10¼	17½	20	88	24.71
18	32	24	10¼	17½	20	94	26.43
19	32	24	10¼	17½	20	100	28.16
20	32	24	10¼	17½	20	106	29.87
21	32	24	10¼	17½	20	112	31.59
22	32	24	10¼	17½	20	118	33.32

*STATE SIZE WHEN ORDERING



OPTIONAL SMOKEHOOD ASSEMBLIES for INDUCED DRAFT INSTALLATIONS with WHITTY FAN

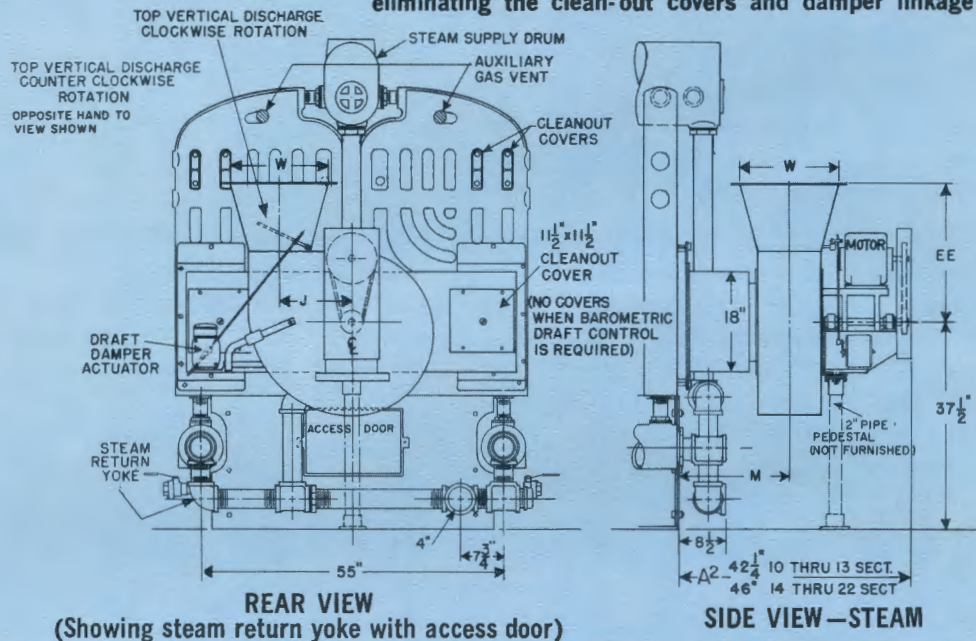
The M450L Mills Boiler may be furnished for induced draft operation.

A special smokehood to accommodate the Whitty induced draft fan is supplied.

The combinations of fan and draft control dampers, including the damper linkage as shown, can be furnished by the H. B. Smith Co. The motor operator and the connection to the damper linkage should be specified as part of the Burner Control System.

WHITTY INDUCED DRAFT FAN INSTALLATION

Special Field Barometric Type Dampers can be supplied, eliminating the clean-out covers and damper linkage shown.



WHITTY FAN DIMENSIONS (Inches)

Boiler No.	J	L	M	S	T	W	EE
M450L-10 & 11	11 1/4	42 1/4	20	23	7	16	21
M450L-12 & 13	11 1/4	42 1/4	20	23	7	16	21
M450L-14-16	11 1/4	42 1/4	20	23	7	16	21
M450L-17 & 18	13 1/4	46.0	21	27	8 1/2	18 1/2	25
M450L-19 & 20	13 1/4	46.0	21	27	8 1/2	18	25
M450L-21 & 22	13 1/4	46.0	21	27	8 1/2	18	25

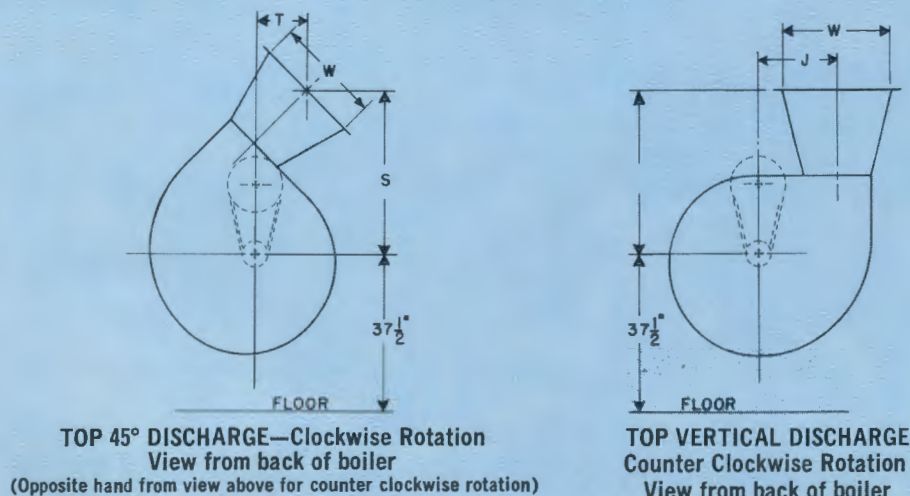
WHITTY FAN SIZES AND MOTOR HP

Boiler Size	Fan No.	Motor HP*
M450L-10 & 11	12H50	1/2
M450L-12 & 13	12H75	3/4
M450L-14-16	12H100	1
M450L-17 & 18	14H100	1
M450L-19 & 20	14H150	1 1/2
M450L-21 & 22	14H200	2

Chimney height shall be sufficient to avoid creating a nuisance. See chart, page 6, for inside dimensions of chimney for induced draft.

*Note: Whitty fans are available with either single-phase 115/230 volt or three-phase 208 or 230/460 volt motors.

OPTIONAL DISCHARGE POSITIONS — WHITTY INDUCED DRAFT FAN

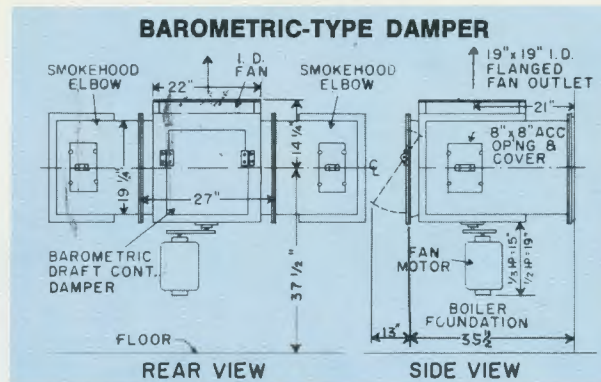


OPTIONAL SMOKEHOOD ASSEMBLIES for INDUCED DRAFT INSTALLATION with L. J. WING FAN

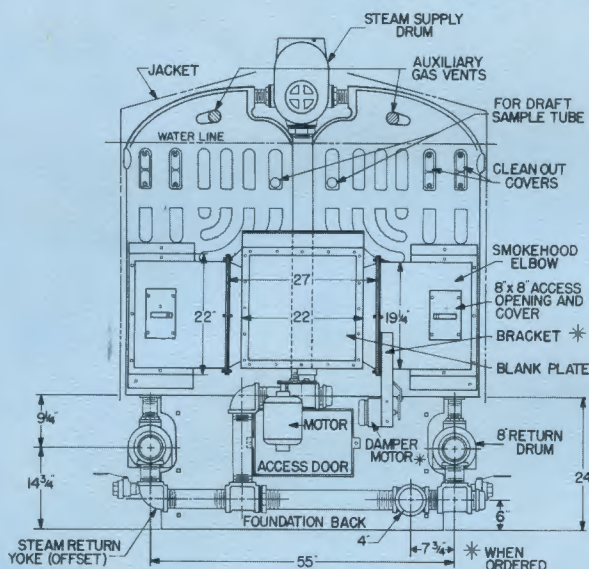
The M450L Mills Boiler may be furnished for induced draft operation.

The smokehood is designed to receive and support the L. J. Wing induced draft fan without the addition of supplemental bracing.

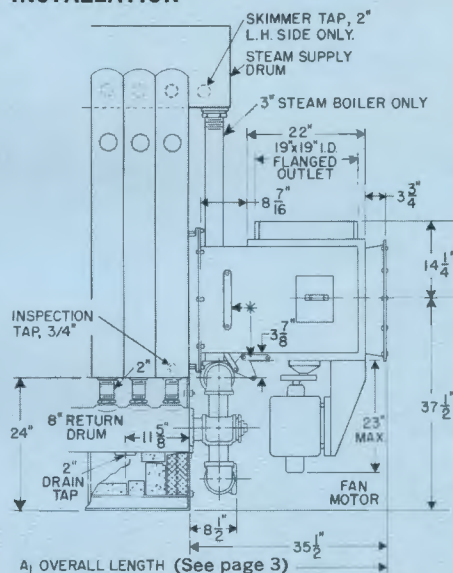
The combinations of fan and draft control dampers, including the damper linkage as shown, can be furnished by the H. B. Smith Co. The motor operator and the connection to the damper linkage should be specified as part of the Burner Control System.



L. J. WING INDUCED DRAFT FAN INSTALLATION



REAR VIEW—STEAM



SIDE VIEW (INDUCED DRAFT)—STEAM

† Shutter dampers and linkage supplied when ordered.

Boiler Number	Draft Loss Thru Boiler Ins. W.C.	Overfire Draft Ins. W.C. (Note 1)	Total Draft at Smokehood Outlet Ins. W.C.	I.D. Fan Capacity CFM (Note 2)	Numbers of Wing I.D. Fan to Fit Smokehood with Corresponding Smith Numbers		Inside Dimensions (Inches) of Lined Chimney with Induced Draft (Note 3)			
							Round		Rectangular	
					Wing	H. B. Smith	Min.	Opt.	Min.	Opt.
M450L-10	0.06	0.06	0.12	1,560	19D-1/3C	45-13/45-33	16	18	14 x 14	16 x 17
M450L-11	0.08	0.06	0.14	1,730			17	19	15 x 16	17 x 18
M450L-12	0.10	0.06	0.16	1,910			17	20	15 x 16	18 x 19
M450L-13	0.11	0.06	0.17	2,090	19D-1/2C	45-15/45-35	17	20	15 x 16	18 x 19
M450L-14	0.13	0.06	0.19	2,270			18	21	16 x 17	19 x 19
M450L-15	0.15	0.06	0.21	2,450	19D-3/4C	45-175/45-375	19	22	17 x 18	20 x 22
M450L-16	0.17	0.07	0.24	2,630			19	23	17 x 18	20 x 22
M450L-17	0.18	0.07	0.25	2,810			19	23	17 x 18	20 x 22
M450L-18	0.20	0.08	0.28	2,990	19D-1C	45-3100	19	24	17 x 18	20 x 22
M450L-19	0.22	0.08	0.30	3,175			20	24	18 x 19	22 x 22
M450L-20	0.24	0.09	0.33	3,355			21	25	19 x 19	22 x 24
M450L-21	0.25	0.10	0.35	3,535	19D-1 1/2C	45-3150	21	25	19 x 19	22 x 24
M450L-22	0.27	0.10	0.37	3,715			21	25	19 x 19	22 x 24

(Note 1) Average figure. Check exact requirements for the particular burner to be installed.

(Note 2) Based on 80 cfm per gallon of oil to provide safety factor for average maintenance and operating conditions.

(Note 3) Lined with standard clay chimney tile. Use these columns for smooth sheet metal, smooth transite or other similar types of material.

In all cases chimney height shall be sufficient to avoid creating a nuisance.

Breeching size shall in no case be smaller than the corresponding chimney size given.

L. J. Wing fans are available with constant speed motor with adjustable sheaves; single phase 110/220, or three phase 208/220/240 volts.

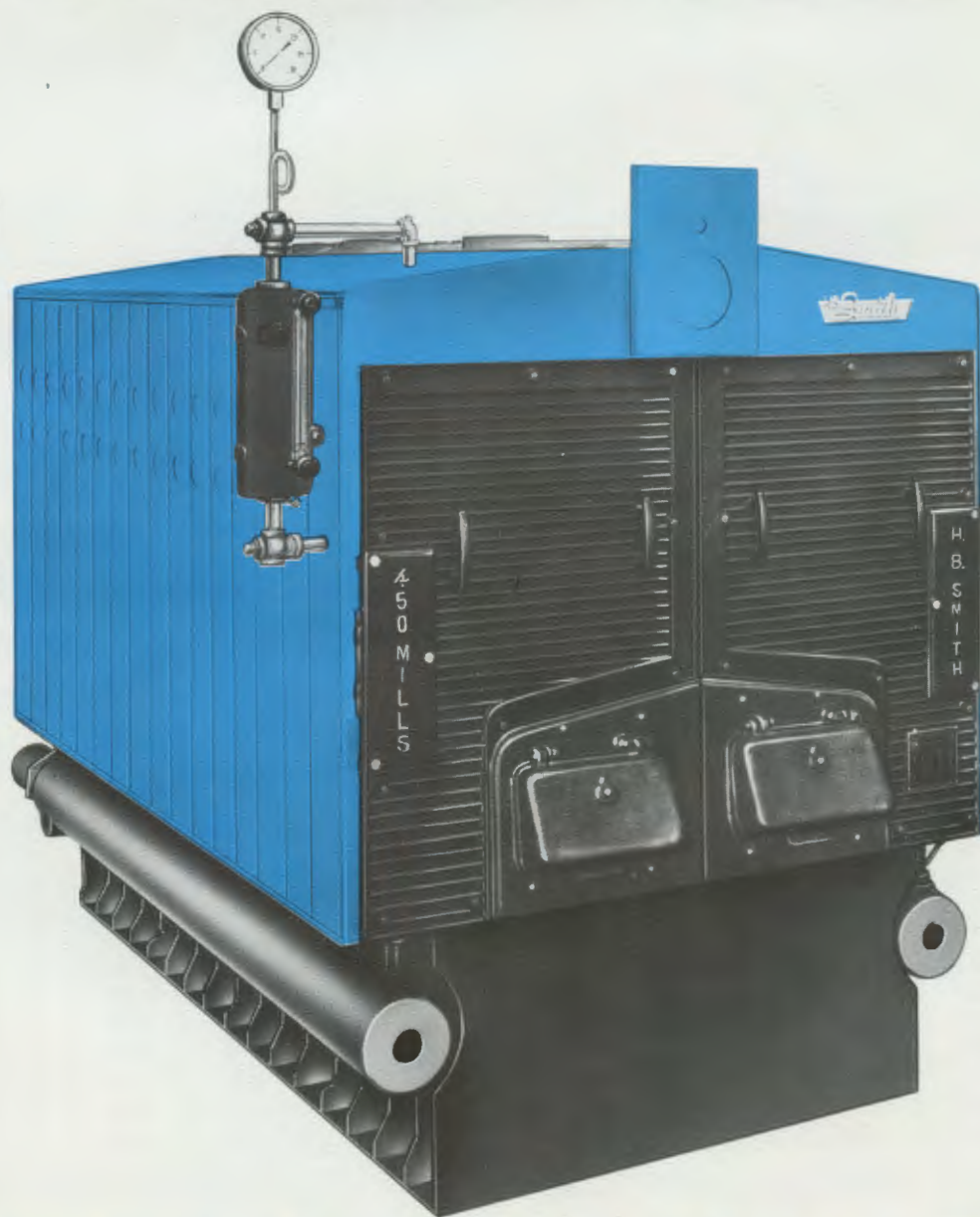


HB Smith

MILLS 450

ALL FUELS BOILER

SMITH CERTIFIED RATINGS: GROSS OUTPUT 1,584 to 4,540 MBH

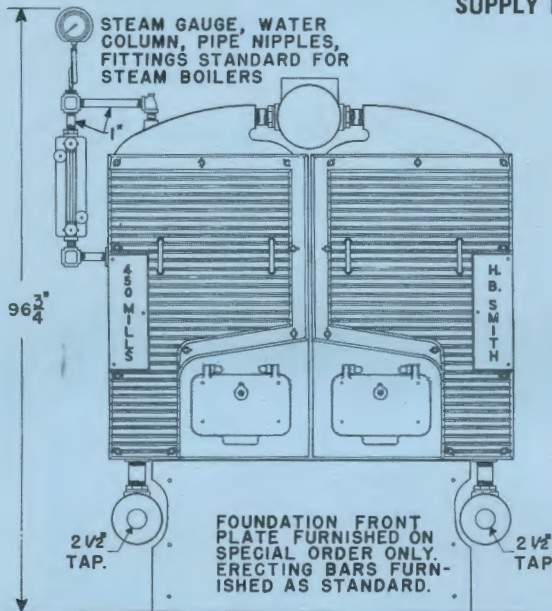
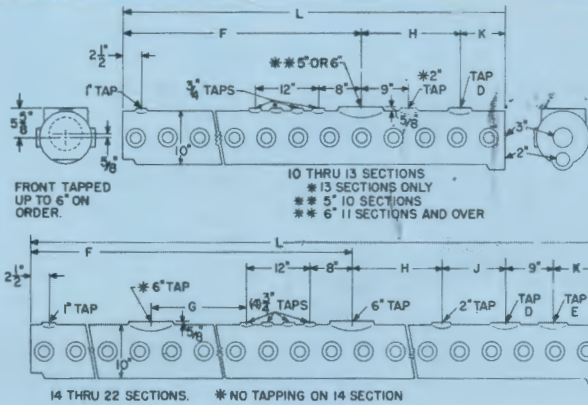


Warming America Since 1853

MILLS 450 CAST-IRON

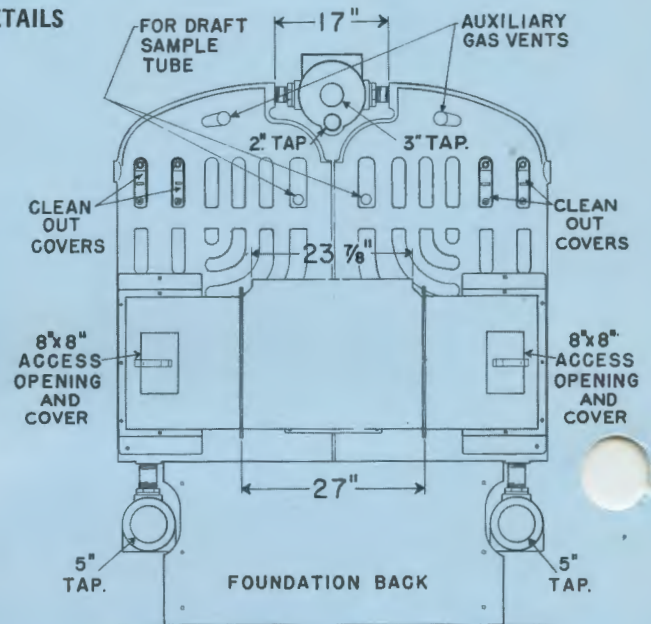
ALL FUELS BOILER

**SMITH CERTIFIED
RATINGS: GROSS OUTPUT
1,584 to 4,540 MBH**



FRONT VIEW

SUPPLY DRUM DETAILS



REAR VIEW

SMITH CERTIFIED RATINGS, BURNER CAPACITIES, CHIMNEY SIZES

MAXIMUM ALLOWABLE WORKING PRESSURE 15 PSI STEAM AND 40 PSI WATER. ALSO AVAILABLE AS A HI-TEMP BOILER, 80 PSI MAXIMUM ALLOWABLE WATER WORKING PRESSURE. ALL BOILERS HYDROSTATICALLY TESTED — A.S.M.E. STANDARDS.

Boiler Number (Note 1)	Boiler Horse-power	SMITH CERTIFIED Gross Output MBH	SMITH CERTIFIED NET RATINGS			SMITH CERTIFIED Burner Capacity			SMITH CERTIFIED Chimney Size (Note 5) for Heavy Oil		Inside Dimensions Smoke Pipe To Fit Over Smokehood Outlet (Inches)
			Steam		Water	Heavy Oil GPH (Note 4)	Light Oil GPH (Note 4)	Gas MBH	Size (Inches)	Height (Feet)	
			Sq. Ft.	MBH (Note 2)	MBH (Note 3)						
450-△-8	47.3	1,584	5,060	1,214.7	1,377.4	13.20	14.15	1,980	16 x 20	25	15 x 19
450-△-9	53.7	1,796	5,795	1,391.2	1,561.7	14.90	16.00	2,238	16 x 20	26	15 x 19
450-△-10	60.0	2,008	6,495	1,559.0	1,746.1	16.65	17.85	2,496	20 x 20	27	15 x 19
450-△-11	66.3	2,220	7,180	1,723.6	1,930.4	18.35	19.70	2,753	20 x 20	28	15 x 19
450-△-12	72.6	2,428	7,855	1,885.1	2,111.3	20.10	21.50	3,011	20 x 20	29	15 x 19
450-△-13	78.9	2,640	8,540	2,049.7	2,295.7	21.80	23.35	3,269	20 x 24	30	19 x 19
450-△-14	85.2	2,852	9,225	2,214.3	2,480.0	23.50	25.20	3,527	20 x 24	31	19 x 19
450-△-15	91.5	3,064	9,910	2,378.9	2,664.3	25.25	27.05	3,785	20 x 24	32	19 x 19
450-△-16	97.7	3,270	10,580	2,538.8	2,843.5	26.95	28.90	4,043	24 x 24	33	19 x 19
450-△-17	104.0	3,490	11,290	2,709.6	3,034.8	28.70	30.70	4,300	24 x 24	34	24 x 19
450-△-18	110.2	3,700	11,970	2,872.7	3,217.4	30.40	32.55	4,558	24 x 24	35	24 x 19
450-△-19	116.8	3,910	12,650	3,035.7	3,400.0	32.10	34.40	4,816	24 x 24	36	24 x 19
450-△-20	123.1	4,120	13,330	3,198.8	3,582.6	33.85	36.25	5,074	24 x 28	37	24 x 19
450-△-21	129.4	4,330	14,010	3,361.8	3,765.2	35.55	38.05	5,332	24 x 28	38	24 x 19
450-△-22	135.6	4,540	14,685	3,524.8	3,947.8	37.25	39.85	5,588	24 x 28	39	24 x 19

(Note 1) Important Ordering Information.

(△) Insert "S" for Steam, "W" for Water. Example: 450-S-8 is a 8-section MILLS 450 boiler for steam.

(Note 2) The Net Smith Certified Steam Ratings shown are based on piping and pickup allowance of 1.288 except 8-section (1.304), and 9-section (1.291).

(Note 3) The Net Smith Certified Water Ratings shown are based on an allowance of 1.15.

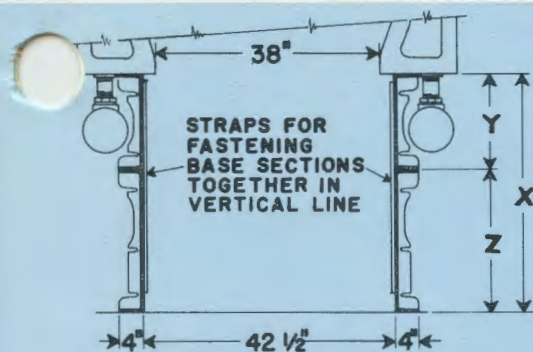
(Note 4) Heavy oil having heat content of 150,000 BTU/Gal.
Light oil having heat content of 140,000 BTU/Gal.

(Note 5) If the oil burner being used requires a draft over the fire greater than .06 the chimney height should be adjusted accordingly.

The manufacturer should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping, etc.

For forced hot water heating systems where the boiler and all piping are within the area to be heated, the boiler may be selected on the basis of its Gross Output.

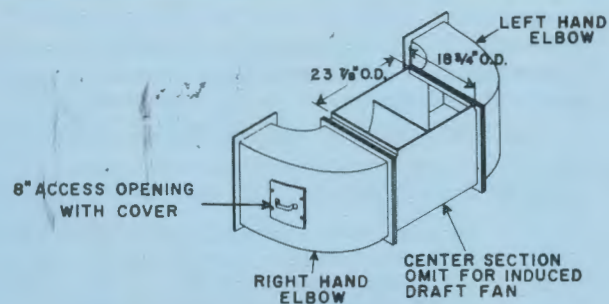
WATER TUBE BOILER



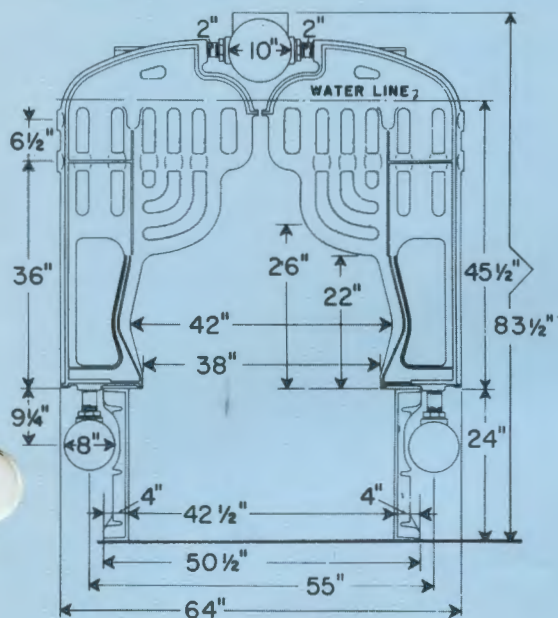
SPECIAL CAST IRON BASE DETAILS

OPTIONAL C.I.
BASE HEIGHTS
AVAILABLE ON
SPECIAL ORDER

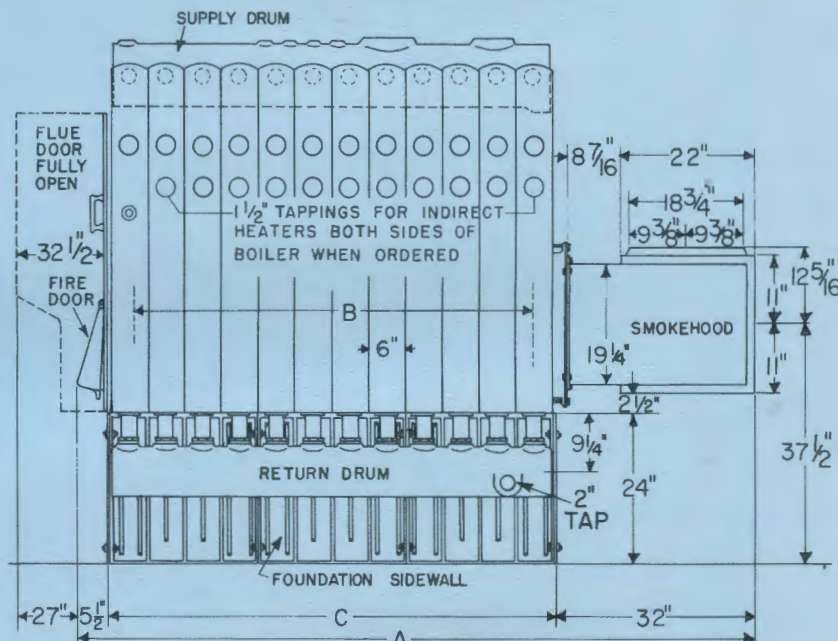
X	Y	Z
16"	16"	—
24"	STANDARD	
32"	16"	16"
40"	16"	24"



SMOKEHOOD DETAILS



INTERMEDIATE SECTION



SIDE VIEW

DIMENSIONS — MILLS 450

H.B. SMITH CO., INC.

Boiler Number (Note 1)	Heating Surface (Sq. Ft.)	Furnace Volume (Cu. Ft.)	Covering Surface Including Drums (Sq. Ft.)	Overall Length (Inches)			Furnace Length (Inches)	Founda- tion Length (Inches)	Supply Drum									
				Natural Draft	Wing Fan	Whitty Fan			Tapping Size (Inches)	Tapping Location (Inches)								
										A	A1	A2	B	C	D	E	F	G
450-△-8	288.7	29.43	70	86½	90	94⅞	42	49	3	—	32½	—	8	—	7	—	47½	
450-△-9	325.3	33.54	77	92½	96	100⅞	48	55	3	—	32½	—	14	—	7	—	53½	
450-△-10	361.3	37.64	84	98½	102	106⅞	54	61	3	—	38½	—	14	—	7	—	59½	
450-△-11	398.0	41.75	91	104½	108	112⅞	60	67	4	—	44½	—	12	—	9	—	65½	
450-△-12	434.0	45.86	98	110½	114	118⅞	66	73	4	—	44½	—	18	—	9	—	71½	
450-△-13	470.7	49.96	105	116½	120	124⅞	72	79	4	—	50½	—	18	—	9	—	77½	
450-△-14	506.7	54.07	112	122½	126	130⅞	78	85	2	4	44½	—	12	9	9	—	83½	
450-△-15	543.3	58.18	119	128½	132	138⅞	84	91	2	4	50½	7	12	9	9	—	89½	
450-△-16	579.3	62.28	126	134½	138	144⅞	90	97	4	2	62½	10	9	9	6	—	95½	
450-△-17	616.0	66.39	133	140½	144	150⅞	96	103	4	2	68½	16	9	9	6	—	101½	
450-△-18	652.0	70.50	140	146½	150	156⅞	102	109	4	2	68½	16	12	12	6	—	107½	
450-△-19	688.7	74.60	147	152½	156	162⅞	108	115	4	2	74½	22	12	12	6	—	113½	
450-△-20	724.7	78.71	154	158½	162	168⅞	114	121	4	3	74½	22	17	12	7	—	119½	
450-△-21	760.7	82.81	161	164½	168	174⅞	120	127	4	3	80½	28	17	12	7	—	125½	
450-△-22	796.7	86.92	168	170½	174	180⅞	126	133	4	3	86½	34	17	12	7	—	131½	

EQUIPMENT for MILLS 450 BOILERS

STANDARD EQUIPMENT

ALL BOILERS

24-inch high foundation
Steel smokehood
Steel erecting bars
Insulated metal jacket

STEAM BOILERS

C.I. water column and piping
Steam gauge with syphon
Safety valve set at 15 psi, side outlet

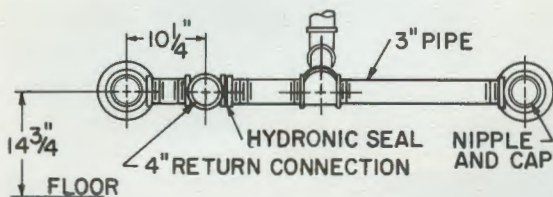
WATER BOILERS

ASME 40 psi water relief valve

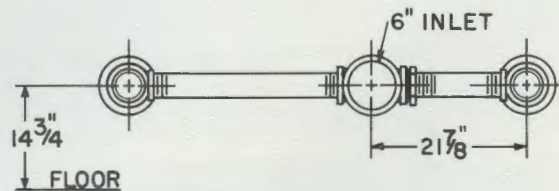
OPTIONAL EQUIPMENT

Prefabricated return yoke with flexible seals
Air elimination dip tube for water boilers
Foundation back plate with opening
Combination pressure-altitude gauge
MA. pop safety valves
4½" remote-reading dial thermometer

Low water cutoffs
Automatic water feeder
Cast iron manifolds for domestic hot water
Hi-Temp boiler—80 psi, maximum allowable
water working pressure
Induced draft fans (see pages 4 and 5)



RETURN YOKE—STEAM
(WITHOUT ACCESS DOOR)



RETURN YOKE—WATER
(WITHOUT ACCESS DOOR)



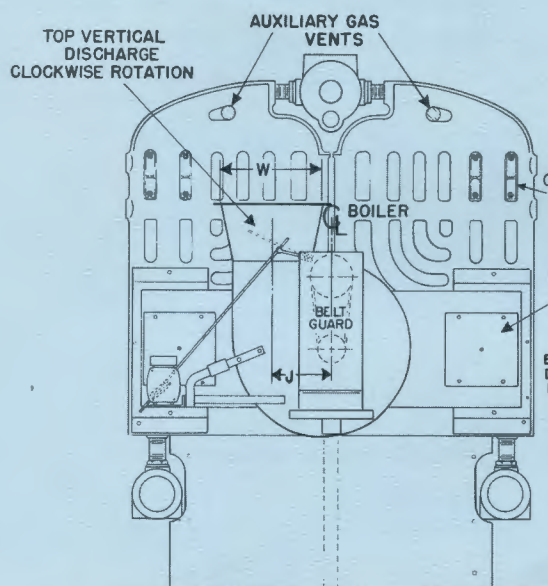
OPTIONAL SMOKEHOOD ASSEMBLIES for INDUCED DRAFT INSTALLATIONS with WHITTY FAN

The Mills 450 Boiler may be furnished for induced draft operation where chimney height is insufficient for natural draft operation.

A special smokehood to accommodate the Whitty induced draft fan is supplied.

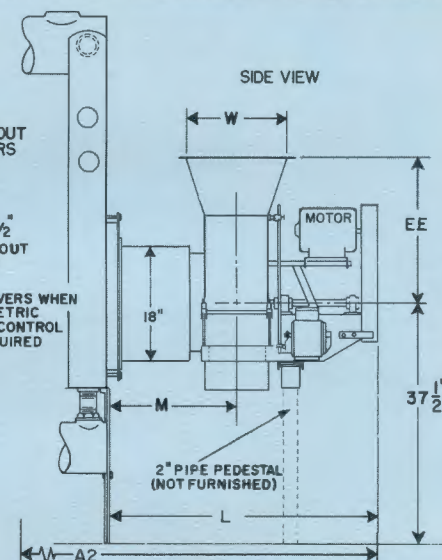
The combinations of fan and draft control dampers, including the damper linkage as shown, can be furnished by The H. B. Smith Co. The motor operator and the connection to the damper linkage should be specified as part of the Burner Control System.

WHITTY INDUCED DRAFT FAN INSTALLATION



REAR VIEW

Special Field Barometric Type Dampers can be supplied, eliminating the clean-out covers and damper linkage shown.



(See Page 3) SIDE VIEW

WHITTY FAN DIMENSIONS (Inches)

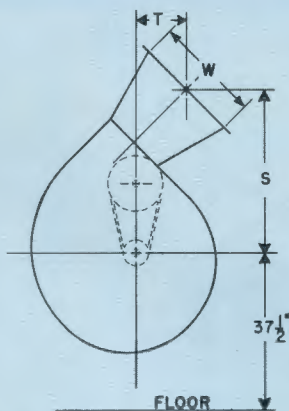
No. of Sections	J	L	M	S	T	W	EE
8-14	9 3/8	40 3/8	19	19	5 3/8	14	17 1/2
15-22	11 1/4	42 1/4	20	22 3/8	7	16	21

WHITTY FAN SIZES and MOTOR HP

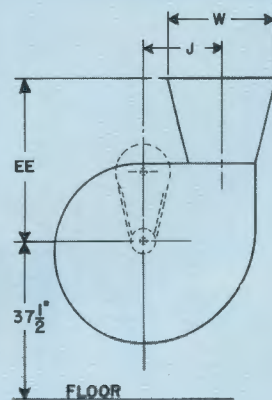
No. of Sections	Whitty Fan No.	Motor HP*
8-11	10H33	1/3
12-14	10H50	1/2
15-17	12H50	1/2
18-20	12H75	3/4
21-22	12H100	1

*Note: Whitty fans are available with either single-phase 115/230 volt or 3-phase 208 or 230/460 volt motors.

OPTIONAL DISCHARGE POSITIONS—WHITTY INDUCED DRAFT FAN



TOP 45° DISCHARGE—Clockwise Rotation
View from back of boiler
(Opposite hand from view above for counter clockwise rotation)



TOP VERTICAL DISCHARGE—Counter Clockwise Rotation
View from back of boiler