RODGERS
Our Passion is Building®

Submittal Record

Rodgers Builders, Inc.
PO Box 18446 (28218)
5701 North Sharon Amity Road
Charlotte, NC 28215

rodgersbuilders.com
704 537 6044 TELEPHONE
704 535 0055 FAX

Architect: YCH Architects

Project: Coltrane-Webb - Beverly Hills Elem School **Rodgers Project #:** 2843

Form of Submittal

- [x] Product Data
- [x] Shop Drawings
- [ ] Mix Designs
- [ ] MSDS Sheets
- [ ] Physical Samples
- [ ] Manufacturer's Certification
- [ ] Test Reports
- [ ] Installation Instructions
- [ ] Letter of Affidavit / Compliance
- [ ] Welding Certificates
- [ ] Sample Warranty
- [ ] Other (Specify) - _____

Submittal No. 23 52 23 - 001.0

Item: Cast Iron Boilers, Burners & Flue

PD & SD

Drawing Number: _____

Spec. Section & Package No.: 23A

Manufacturer: _____

Brand: _____

Submitted By: Superior Mechanical Systems

Review Due Date: 01/23/2025

- [x] NO EXCEPTIONS TAKEN
- [ ] EXCEPTIONS INDICATED
- [ ] REVISE AND RESUBMIT
- [ ] REJECTED; RESUBMIT

REVIEWED ONLY FOR CONFORMANCE WITH DESIGN CONCEPT OF THE PROJECT AND COMPLIANCE WITH INFORMATION GIVEN IN THE CONTRACT DOCUMENTS. THE CONTRACTOR IS RESPONSIBLE FOR DIMENSIONS TO BE VERIFIED AND CORRELATED AT THE SITE; FOR QUANTITY VERIFICATION; FOR INFORMATION THAT PERTAINS SOLELY TO THE FABRICATION PROCESSES OR THE MEANS, METHODS, TECHNIQUES OR SEQUENCES AND PROCEDURES OF CONSTRUCTION; AND FOR COORDINATION OF THE WORK OF ALL TRADES.

YATES-CHREITZBERG-HUGHES ARCHITECTS
7035 NORTHWINDS DR. NW
CONCORD, NORTH CAROLINA 28027

BY: JRS DATE: 01/24/2025

Rodgers Stamp

Rodgers Builders, Inc.

___ No Exception Taken ___ Make Corrections Noted

___ Rejected ___ Revise and Resubmit

___ Submit Specified Item ✘ Reviewed

Corrections and comments are only for general conformance with the design concepts of the project and general compliance with the information given in the contract documents. Action shown is subject to the requirements of the plans and specifications. This review does not relieve the subcontractor/vendor from compliance with requirements of the drawings and specifications. Subcontractor /vendor is responsible for dimensions which shall be confirmed and correlated at the job site, fabrication process, and techniques of construction: coordination of their work with that of all other trades and the satisfactory performance of their work.

Colton Meyer — By

01/09/2025 — Date

No. 23 52 23 - 001.0

A/E Stamp

OPTIMA ENGINEERING, P.A.
SHOP DRAWING REVIEW

REVIEW IS FOR GENERAL COMPLIANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS. MECHANICAL CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR CORRECTNESS, DIMENSIONS, DETAILS, QUANTITIES AND ALL COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT, INCLUDING ELECTRICAL CHANGES, MAINTENANCE ACCESS, CLEARANCES, BUILDING ALTERATIONS, PIPING, REPLACEMENT OF OTHER SYSTEM COMPONENTS, ETC.

NO EXCEPTION TAKEN	X
APPROVED AS NOTED	
REVISE AND RESUBMIT	
REJECTED	

Reviewed By: Kelsey Sheehan Date: 01/15/2025

LETTER OF TRANSMITTAL

R.K. Hunter & Co. **712 West Lexington Ave. Suite 201** **High Point, NC 27262** **336-288-6222**	**DATE: 12/30/2024** **JOB: Coltrane-Webb/Beverly Hills E.S.**
	PO#:
	ATTN: Ben Wyke

TO: **Superior Mechanical**
600 Atando Avenue
Charlotte, NC 28206

WE ARE SENDING YOU ☒ ATTACHED ☐ UNDER SEPARATE COVER ☐ PRINTS

☐ SHOP DRAWINGS ☐ CHANGE ORDER ☐ SUBMITTAL DATA ☐ COPY OF LETTER

COPIES	DATE:	NO.	DESCRIPTION
1	12/30/2024	1	WEIL-MCLAIN BOILERS, WEBSTER BURNERS, VAN-PACKER STACK

THESE ARE TRANSMITTED AS CHECKED BELOW:

☒FOR APPROVAL ☐ APPROVED AS SUBMITTED ☐ RESUBMIT_____ COPIES FOR APPROVAL

☒FOR YOUR USE ☐ APPROVED AS SUBMITTED ☐ SUBMIT _____ COPIES FOR DISTRIBUTION

☒AS REQUESTED ☐ RETURNED FOR CORRECTIONS ☐ RETURN_____ CORRECTED PRINTS

☐FOR REVIEW AND COMMENT

Lead Times: Boilers are 12-16 weeks, burner 3-4 weeks, stack 7-10 days. All will be released according to schedule.

~~COPY TO FILE~~ ~~SIGNED ANDREW GILLIAM~~

WEIL-McLAIN

SIMPLIFIED SOLUTIONS FOR OUR COMPLEX WORLD.®

December 30, 2024

TO: RICHARD K HUNTER & COMPANY
712 WEST LEXINGTON AVENUE, SUITE 201
HIGH POINT, NC 27262

BOILER: TWO (2) H-588-WF

JOB: COLTRANE-WEBB/BEVERLY HILLS SCHOOL

RE: RICHARD K HUNTER & COMPANY
P.O. NO. W12247117

We transmit for information:

One (1) copy each:

Submittal Record No. S-39971-0

Your order is released for production.

WEIL-McLAIN

Shirley Howard

Shirley Howard
Commercial Order Services

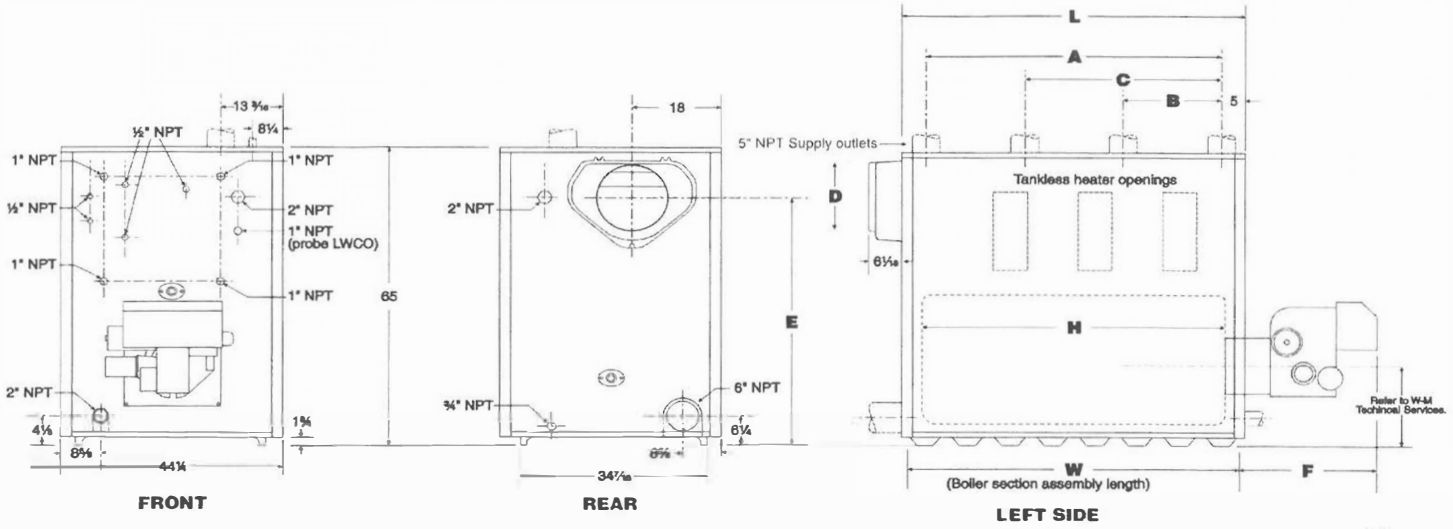
cc: M. Gentner
J. Farrell

500 Blaine Street
Michigan City, IN 46360
www.weil-mclain.com

88 SERIES 2 BOILER SUBMITTAL

BOILER: **H-588-WF**

JOB: **BEVERLY HILLS SCHOOL**



DIMENSIONS IN INCHES								
A	B	C	D	E	F	L	W	H
31	**--**	**--**	**10**	**54-3/4**	**#VALUE!**	**42-3/4**	**38**	**31-3/8**

AHRI CERTIFIED

Net ratings are approved by The Hydronics Institute

Built in accordance with the requirements of the ASME Boiler and Pressure Vessel Code

TYPE OF FUEL	AHRI BURNER CAPACITY			GROSS AHRI OUTPUT M.B.H	BOILER H.P.
	OIL G.P.H.	GAS INPUT M.B.H	GAS INPUT PRESSURE REQUIRED INCHES W.C.		
Natural Gas/and/ or Light Oil	**9.4**	**1,356.0**	**--**	**1,126.0**	**33.6**

NET I=B=R RATINGS		NET SQUARE FEET WATER	NET FIREBOX VOLUME CU.FT.	STACK GAS VOLUME C.F.M.	POSITIVE PRESSURE IN FIREBOX INCHES W.C.	I=B=R VENT DIA.
SQUARE FEET STEAM	**WATER** M.B.H.					
--	**979.0**	**6,527**	**14.45**	**507**	**0.63**	**10**

A.S.M.E. RELIEF VALVE P.S.I.G.	A.S.M.E. MAXIMUM WORKING PRESSURE P.S.I.G.	WATER LINE HEIGHT	SUPPLY OUTLETS NUMBER & SIZE	RETURN INLETS NUMBER & SIZE
50	**80**	**--**	**2 - 5"**	**1 - 6"**

WEIL-McLAIN

SUBMITTAL NO: **S-39971-O**

DATE: **December 30, 2024**

PAGE: **1 of 3**

	DESCRIPTION	QTY	MANUFACTURER	PART NO.
*	Front Section, Cast-Iron, 8823, HP	1	Weil-McLain	316-301-210
*	Back Section, Cast-Iron, 8828, HP	1	Weil-McLain	316-301-211
*	Intermediate Section, Cast-Iron, 8825, HP	3	Weil-McLain	316-301-212
*	A-1 Material Box:	1	Weil-McLain	386-400-006
	Flue Collar Assembly, 10" Dia.:	1	Weil-McLain	340-004-606
	Damper Quadrant	1	Weil-McLain	330-056-634
	Damper Blade	1	Weil-McLain	460-003-646
	Damper Locking Plate	1	Weil-McLain	563-530-784
	Observation Port Assembly:	2	Weil-McLain	340-004-605
	Sight Glass	2	Weil-McLain	591-419-199
	Insulation Washer	2	Weil-McLain	590-317-580
	Elastomer Sealing Ring, 9" Dia.	3	Weil-McLain	592-800-005
	Elastomer Sealing Ring, 6" Dia.	3	Weil-McLain	592-800-007
	Cleanout Plate	3	Weil-McLain	450-030-965
*	B-1 Material Box:	1	Weil-McLain	386-400-031
	Elastomer Sealing Ring, 9" Dia.	1	Weil-McLain	592-800-005
	Elastomer Sealing Ring, 6" Dia.	1	Weil-McLain	592-800-007
	Cleanout Plate	1	Weil-McLain	450-030-965
*	Jacket Complete, 80 PSI, 588	1	Weil-McLain	416-400-001
	Jacket Panels with 3" Thick, 1.26 Lb./CF Density Fiberglass Insulation	1	Weil-McLain	
	Flue Baffles		Weil-McLain	
*	Water Trim Carton:	1	Weil-McLain	386-400-046
	+++ASME Pressure Relief Valve, Set to Relieve at 50 PSIG, 1" X 1-1/4" N.P.T., 1,899 MBH Capacity	1	Watts	740
	+++Combination Pressure-Temperature-Altitude Gauge, 0-100 PSIG, 60-260 Degree F., 3-1/2" Dial, 1/2" N.P.T.	1	ENFM	4104
	Combination Operating and High Temperature Limit Control, Manual Reset, Microprocessor Based, With Control Well	1	Carlin	90000CEL
*	Low Water Cut-Off, Electrode Type, Manual Reset, with Test Light And Retard Circuit, 3/4" N.P.T., 50 PSIG Rated.	1	Xylam	751P-MT-120

Confirm cleanout plate is heavy gauge steel cleanout

* Shipping Level Item
++ Added Trim Item to Standard Carton
+++ Trim Item in Place of Standard

NOTES:

1. Start-up and service to be provided by installing contractor or local start-up firm employed by RK HUNTER & CO.
2. Trim controls shown in this submittal represent the quality and function only. Due to the release for manufacturing date, availability and manufacturing scheduling, controls of an alternate vender may be shipped.
3. Individual boiler sections to be hydrostatically pressure tested for 80 PSIG, ASME water working pressure.
4. Boiler to be furnished with ASME water relief valve set to relieve at 50 PSIG.
5. Operating control requires 120/60/1 power supply.
6. All wiring must be installed in accordance with the requirements of the National Electrical Code and any additional state or local code requirements having jurisdiction.
7. All safety circuit wiring must be N.E.C. Class 1.
8. Boiler unit and control system to comply with I=B=R requirements.
9. Burner and control accessories to be furnished by others.
10. Refer to burner manufacturer's specification and data sheet for ratings and dimensional data.
11. Selected burner must be capable of firing the boiler at published input without flame impingement. Any burner modifications and/or adjustments in the field to obtain proper operation is the responsibility of the installing contractor and/or start-up contractor.
12. Boiler to be forced draft fired. An induced draft fan, draft proving control and combustion chamber should not be necessary to assure proper operation.
13. Burner manufacturer must be consulted regarding boiler foundation height or any necessary "pitting" in front of the boiler to facilitate installation of the burner.
14. Burner mounting plate to be supplied by others.
15. Two (2) units to be furnished, quantities shown are for each unit.

DISTRIBUTOR/AGENT: RICHARD K HUNTER & COMPANY
CITY/STATE: HIGH POINT, NC

CONTRACTOR: SUPERIOR MECHANICAL

88™ Series 2 Commercial Boiler
Weil-McLain®

Gas, Oil & Gas/Oil
Water or Steam
MBH: 996-5,845
Combustion Eff.: Up to 87.5%

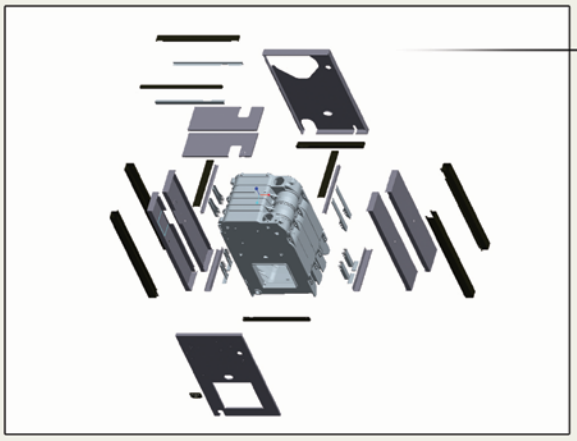
88™
SERIES 2 BOILER

- Up to 85.7% Thermal Efficiency
- Water or Steam
- Gas, Oil or Gas/Oil
- Complies to LEED
- Packaged or Knock-down

WEIL-McLAIN®
www.weil-mclain.com

MADE IN THE USA

RECYCLED CAST IRON



NEW Jacket design:

- Modular jacketing and toolless jacket panels for easy access
- 3 inches of insulation to minimize jacket losses, maximizing thermal efficiencies
- Modular side panels for ease of assembly
- High temperature site glass grommets
- Part number labels on all components for easy assembly

NEW Efficiencies!

- 85.7% Thermal Efficiencies (see ratings)
- HXT-bars optimize heat transfer

NEW clean-out plates:

- ¼ inch thick solid steel plates
- Coated Woven Fiberglass reusable gasket
- Reusable - cleaning after cleaning

Backwards Compatible:

- Can use up to 50% Series 2 iron on a Series 1 block without consulting Weil-McLain® – no need to stock both!

Standard Equipment

All Boilers:

- ASME 80 PSI rated cast iron sections
- Insulated steel jacket
- Power burner for light oil, gas or gas/light oil (except H-XX88)
- Burner mounting plate with refractory (except H-XX88)
- Cast iron flue collar with built-in breaching damper
- Observation ports on front and back sections
- Cleanout plates with reusable gaskets
- Flue brush
- HXT-bars
- 3 inches of insulation (except front panel)

Water Boilers

- 30 PSI ASME relief valve
- Combination high limit and low limit with manual reset control
- Combination pressure/temperature gauge
- Nipple and 5" x 6" reducing coupling (1288 – 1888 boilers only)
- Built-in air eliminator

Steam Boilers

- 15 PSI ASME safety valve side outlet
- Low limit and high limit pressure controls
- Steam pressure gauge siphon
- Gauge cocks, glass and guards

Optional Equipment

- Factory assembled sections
- Burner mounting plate with refractory for "H" units
- Intermediates with tankless heater opening
- Tankless heaters for domestic hot water (water or steam boilers)
- Tankless heater opening cover plates
- Low water cutoffs
- Barometric dampers
- Side inspection tappings with plugs – 2 per section
- Dual-range manometer
- Optional burners and burner controls

Ratings

Model	I=B=R			I=B=R Net Rating				Flue Outlet (Dia)	Combustion Efficiency		Thermal Efficiency	
	Oil Input GPH	Gas Input MBH	Gross Output MBH	Steam MBH	Steam Sq. Ft.	Water MBH	Boiler H.P.		OIL	GAS	OIL	GAS
488R®	6.9	996	827	620	2,583	719	24.7	10 in.	87.5	84.8	85.6	83.1
488®	7.0	1,010	839	629	2,621	730	25.1	10 in.	87.5	84.8	85.6	83.1
588®	9.4	1,356	1,126	845	3,521	979	33.6	10 in.	87.0	84.4	85.6	83.1
688®	11.8	1,701	1,413	1,072	4,469	1,229	42.2	10 in.	86.7	84.1	85.6	83.1
788®	14.2	2,046	1,700	1,311	5,463	1,478	50.8	12 in.	86.5	83.9	85.6	83.1
888®	16.6	2,382	1,987	1,543	6,427	1,728	59.4	12 in.	86.3	83.7	85.6	83.1
988R®	17.2	2,482	2,062	1,601	6,671	1,793	61.6	14 in.	86.2	83.7	85.6	83.1
988®	18.8	2,737	2,274	1,766	7,358	1,977	67.9	14 in.	86.2	83.7	85.6	83.1
1088R®	20.0	2,887	2,399	1,863	7,763	2,086	71.7	14 in.	86.2	83.6	85.6	83.1
1088®	21.5	3,082	2,561	1,988	8,283	2,227	76.5	14 in.	86.2	83.6	85.6	83.1
1188®	23.5	3,428	2,848	2,211	9,213	2,477	85.1	14 in.	86.1	83.5	85.7	83.1
1288®	26.0	3,773	3,135	2,434	10,147	2,726	93.7	14 in.	86.0	83.5	85.7	83.1
1388®	28.5	4,119	3,422	2,657	11,071	2,976	102.2	14 in.	86.0	84.4	85.7	83.1
1488®	31.0	4,464	3,709	2,880	12,000	3,225	110.8	16 in.	86.0	83.4	85.7	83.1
1588	33.0	4,809	3,996	3,102	12,925	3,475	119.4	16 in.	85.9	83.3	85.7	83.1
1688R	34.5	4,979	4,137	3,212	13,383	3,597	123.6	16 in.	85.9	83.3	85.7	83.1
1688®	35.5	5,155	4,283	3,325	13,854	3,724	127.9	16 in.	85.9	83.3	85.7	83.1
1788®	38.0	5,494	4,570	3,548	14,783	3,974	136.5	18 in.*	85.9	83.3	85.7	83.1
1888®	40.5	5,845	4,857	3,771	15,713	4,123	145.1	18 in.*	85.9	83.3	85.7	83.1

- Burner input based on maximum of 2,000 ft. altitude - for higher altitudes consult Weil-McLain® representative.
- No.2 Fuel oil - Commercial Standard Spec. CS75-56. Heat value of oil - 140,000 BTU/G.
- Stack gas volume at outlet temperature
- With 0.10" WC positive pressure at flue collar.
- Consult Burner Specification Sheets for gas pressure required.
- Gross I=B=R ratings have been determined under the I=B=R provision governing forced draft boiler-burner units
- Net I-B-R ratings are based on net installed radiation of sufficient quantity for the requirements of the building and nothing need be added for normal piping and pick-up. Water ratings are based on a piping and pick-up allowance of 1.15. Steam ratings are based on the following allowances: 488 and 588 - 1.333; 688 - 1.323; 788 - 1.300; 888 - 1.289; and 988 through 1888 - 1.288. An additional allowance should be made for gravity hot water systems or for unusual piping and pick-up loads. Consult Weil-McLain® representative.
- *Flue collar connection is oval, 16 1/8" x 19 7/8"

MADE IN THE USA

Model 88™ ~Est. 1985~ Weil-McLain

RECYCLED CAST IRON

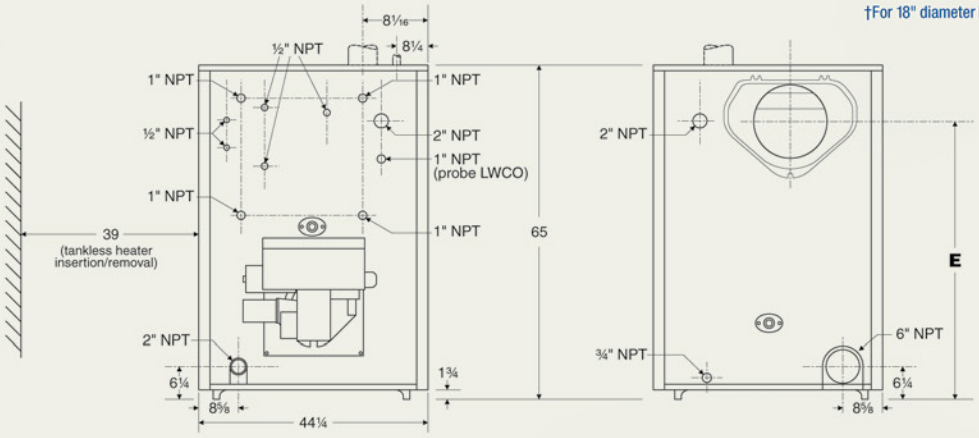
Dimensions

Dimensions (inches)								
Model	A	B	C	D	E	L	W	H
488®	23	—	—	10	54 ¾	34 ¾	30	23 ⅜
588®	31	—	—	10	54 ¾	42 ¾	38	31 ⅜
688®	39	—	—	10	54 ¾	50 ¾	46	39 ⅜
788®	47	—	—	12	53 ¾	58 ¾	54	47 ⅜
888®	55	—	—	12	53 ¾	66 ¾	62	55 ⅜
988®	63	—	—	14	52 ¾	74 ¾	70	63 ⅜
1088®	71	—	—	14	52 ¾	82 ¾	78	71 ⅜
1188®	79	—	—	14	52 ¾	90 ¾	86	79 ⅜
1288®	87	39 ½	—	14	52 ¾	98 ¾	94	87 ⅜
1388®	95	47 ½	—	14	52 ¾	106 ¾	102	95 ⅜
1488®	103	55 ½	—	16	51 ¾	114 ¾	110	103 ⅜
1588®	111	63 ½	—	16	51 ¾	122 ¾	118	111 ⅜
1688®	119	47 ½	—	16	51 ¾	130 ¾	126	119 ⅜
1788®	127	31 ½	79 ½	18†	51 ¾	138 ¾	134	127 ⅜
1888®	135	39 ½	87 ½	18†	51 ¾	146 ¾	142	135 ⅜

†For 18" diameter breaching, flue collar is oval (19 1/8 x 16 1/16")

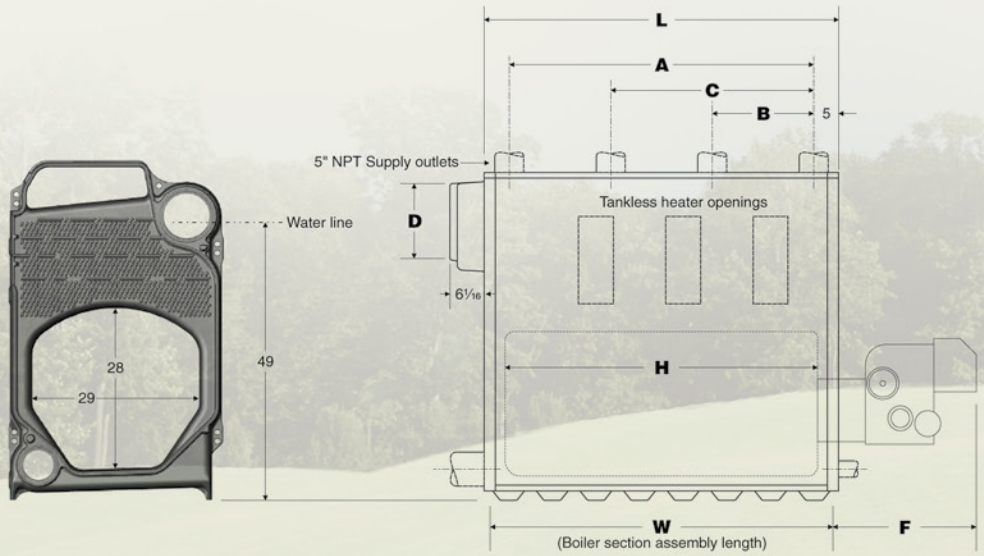
	Supply & return tappings				Dimension F
	Supply tappings (No. & size)*		Return tappings (No. & size)*		
Model	Steam	Water	Steam	Water	
488R®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	See Burner Specification & Data Sheets
488®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	
588®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	
688®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	
788®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	
888®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	
988R®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	
988®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	
1088R®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	
1088®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	
1188®	2 – 5"	2 – 5"	1 – 6"	1 – 6"	
1288®	3 – 5"	2 – 5"	1 – 6"	1 – 6"	
1388®	3 – 5"	2 – 5"	1 – 6"	1 – 6"	
1488®	3 – 5"	2 – 5"	1 – 6"	1 – 6"	
1588®	3 – 5"	2 – 5"	1 – 6"	1 – 6"	
1688R®	3 – 5"	2 – 5"	1 – 6"	1 – 6"	
1688®	3 – 5"	2 – 5"	1 – 6"	1 – 6"	
1788®	4 – 5"	2 – 5"	1 – 6"	1 – 6"	
1888®	4 – 5"	2 – 5"	1 – 6"	1 – 6"	

*Use recommended piping connections.
†For 18" diameter breaching, flue collar is oval (19 1/8 x 16 1/16")



FRONT **REAR**

	I=B=R Vent or Liner Dia (in)		Boiler Flue Collar Dimensions (in)
Model	Forced Draft	Balanced Draft	
488®	10	12	10 round
588®	10	15	10 round
688®	12	15	10 round
788®	12	18	12 round
888®	14	18	12 round
988®	14	18	14 round
1088®	14	21	14 round
1188®	16	21	14 round
1288®	16	21	14 round
1388®	16	24	14 round
1488®	18	24	16 round
1588®	18	24	16 round
1688®	18	24	16 round
1788®	18	24	16 1/8 x 19 7/8 oval
1888®	20	27	16 1/8 x 19 7/8 oval



INTERMEDIATE SECTION **LEFT SIDE**

8864

I.B.R.® ASME SETTING THE STANDARD 1880 2005 RECYCLED CAST IRON Model 88™ -Est. 1985- Weil-McLain

Weil-McLain® Branded Cast Iron Gas Boilers and Oil Boilers
Models 80, 88, and 94

Limited Warranty for Commercial Use

Please register your purchase of this Product at www.weil-mclain.com.
Retain proof of purchase and installation date.

To learn how to properly care for and maintain your Product, please review the printed information provided with your Product. You can also obtain this information at www.weil-mclain.com.

A. What Does This Limited Warranty Cover?

This Limited Warranty for Commercial Use covers any defects in material and workmanship in your Weil-McLain® Branded Cast Iron Gas or Oil Boiler Model 80, 88, or 94 (the "Product").

B. How Long Does The Coverage Last?

There are two separate coverage periods under this Limited Warranty: (1) the Heat Exchanger Limited Warranty Period, and (2) the Parts Limited Warranty Period. The Heat Exchanger Limited Warranty Period runs for ten years from the date your Product was installed. The Parts Limited Warranty Period runs for one year from the date your Product was installed and applies to all parts of your Product except the heat exchanger.

Item	Coverage
Heat Exchanger	10 years
All Other Parts	1 year

C. Who Can Make Claims Under This Limited Warranty?

This Limited Warranty is available to you if you are the original retail purchaser or a subsequent owner and the Product has been used at any time for business purposes. A Product used at all times solely for personal, family, or household purposes is covered by the Limited Warranty for Residential Use for the Weil-McLain® Branded Cast Iron Gas Boiler and Oil Boiler Models 80, 88, and 94.

D. What Will We[1] Do To Correct Problems?

If we determine during the Heat Exchanger Limited Warranty Period that a heat exchanger section is defective in material or workmanship, then we will provide a replacement heat exchanger section. If we determine during the Parts Limited Warranty Period that any part other than a heat exchanger section is defective in material or workmanship, then we will provide a replacement part.

We will provide replacement heat exchanger sections and other parts free of charge. We will furnish replacement heat exchanger sections from the closest comparable Weil-McLain® brand boiler model available at the time of the replacement.

If we provide a replacement heat exchanger section, then that replacement heat exchanger section will be covered under this Limited Warranty for the time remaining in the original Heat Exchanger Limited Warranty Period. If we provide a replacement for any part other than a heat exchanger section, then that replacement part will be covered under this Limited Warranty for the time remaining in the original Parts Limited Warranty Period.

E. What Will WM Technologies, LLC Not Do To Correct Problems?

We will not pay for the labor to remove any heat exchanger section or other part that is the subject of your warranty claim or to install replacements provided under this Limited Warranty. Additionally, we will not pay for the cost of any tools, repair materials, or travel necessary to perform the removal or installation.

F. What Is Not Covered Under This Limited Warranty?

This Limited Warranty does not cover any Product that has been moved from its original installation site; any components that are not supplied by us; and any burner supplied by us. (Burners supplied by us are covered by a separate manufacturer's warranty.) Additionally, this Limited Warranty does not cover claims you make if the failure, malfunction, unsatisfactory performance of, or damage to, your Product resulted from or is attributable to:

(1) Inaccurate or incomplete information or data supplied or approved by any other party;
(2) The failure to properly size the Product for its use;

[1] The terms "we," "us," "our(s)," and/or "WMT" as used at all times and interchangeably in this document and for the purposes of any claims related to this Limited Warranty refers to WM Technologies, LLC, a Delaware Limited Liability Company having a place of business located at 523 S New Street, Eden, NC 27288.

550-141-062 (0123~~217314~~)

(3) Installation not done in accordance with manufacturer's instructions;
(4) Services provided by and workmanship of the installer of the Product;
(5) Components that are not supplied by us;
(6) Improper or negligent operation, adjustment, control settings, repair, care, or maintenance of the Products, or the failure to adjust, set the controls of, repair, care for, or maintain the Products;
(7) Operation with combustion air contaminated by chemical vapors, with improper fuel additives, or with water conditions that have caused deterioration or unusual deposits in the heat exchanger;
(8) Freezing, accident, fire, flood, or other acts of God; abuse or misuse; unauthorized alteration; or power surges or failures; and
(9) Normal wear and tear.

OUR MAXIMUM LIABILITY SHALL NOT EXCEED THE ACTUAL PURCHASE PRICE PAID BY YOU FOR YOUR PRODUCT. IN NO EVENT SHALL WE BE RESPONSIBLE FOR INDIRECT, INCIDENTAL, CONSEQUENTIAL (INCLUDING WITHOUT LIMITATION DAMAGE TO OR LOSS OF OTHER PROPERTY), OR PUNITIVE DAMAGES, WHETHER SUCH CLAIM OR ACTION IS BASED ON CONTRACT, WARRANTY, NEGLIGENCE, STRICT LIABILITY, OR ANY OTHER LEGAL THEORY. ALL IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE DISCLAIMED IN THEIR ENTIRETY.

G. How Do You Make A Warranty Claim?

If you believe you have a claim under this Limited Warranty, please contact a qualified heating or plumbing contractor of your choice. Your contractor will perform a diagnosis and advise you as to whether you may have a claim covered by this Limited Warranty. If your contractor advises you that you may have a claim covered by this Limited Warranty, then the contractor will file the claim on your behalf. You must make all parts that are subject to a warranty claim available to your contractor for return to us. If you have questions about this process or the status of your claim, you may call the **Warranty Call Center at 1-800-654-2109**. In addition to the information provided here, you can find complete warranty details and procedures at www.weil-mclain.com.

H. How Can You Register Your Purchase?

Please register your purchase at www.weil-mclain.com. Registration is not required to activate your warranty, but you should retain proof of purchase and installation date.

* * *

If you have any questions about your coverage under this Limited Warranty, please contact us using the contact information provided above.

TECHNICAL SUBMITTAL

SUBMITTAL BY:
RICHARD K. HUNTER & COMPANY

WEBSTER SO # 153368
PO# W1224-7116

WEBSTER MODEL: JB1G-05-RM7897C-L.12-UL/CSD1

TAG ORDER:

JOB NAME: COLTRANE WEBB / BEVERLY HILLS SCI
LOCATION: CONCORD, NC

APPROVED_____
APPROVED AS NOTED _____
RESUBMIT AS NOTED_____
REJECTED_____
NAME_____
DATE_____

SALES REP:

CONTRACTOR:

MECHANICAL ENGINEER:

DATE SUBMITTED: 12/23/24

APPROVED BY:
PLEASE TYPE OR PRINT NAME. . . . . _____
SIGNATURE. . . . . _____
DATE. . . . . _____

Product Bulletin

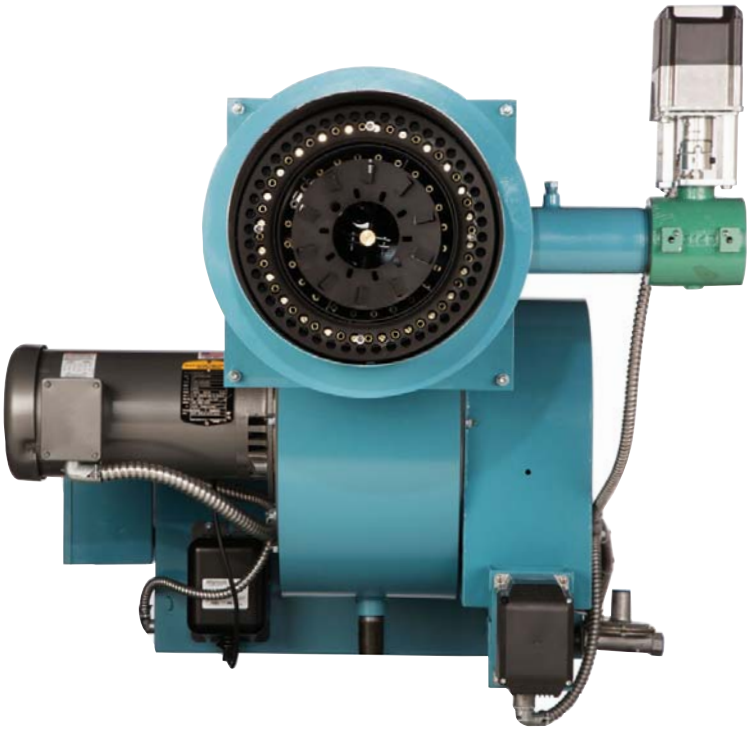
JB(X) Series Burners

Efficient, Reliable, Safe Solutions For Cast Iron, Firetube, Firebox, Watertube And Process Applications

10 BHP to 300 BHP Range

WEBSTER COMBUSTION
A Selas Heat Technology Company

Benefits Of The JB And JBX Series Burners



Webster JB(X) series burners offer years of dependable and efficient operation. Designed with ease of serviceability in mind, Webster burners are equipped with a wide variety of the latest control and technology options available. When combined with the patented Webster Temp A Trim control system, the JB(X) burner is by far the most efficient option in the industry.

Versatility and flexibility are prime considerations in the Webster JB(X) series design. JB(X) series units can be adapted to fire in most any furnace configuration or combustion environment, and Webster has years of proven experience firing a multitude of fuels including: Natural, LP, and Digester gas, No.2 through No. 6 oil, and other more exotic fuels.

Webster JB(X) burners are completely factory wired, assembled, and tested so they come to you ready for installation and connection to fuel and electrical supplies. Typical JB(X) series burners are installed and ready for start-up in a minimal amount of time, saving valuable time and money at your installation.

When it comes to low emission requirements, Webster should be your choice. The JB(X) series burner offers optional low NOx configurations. Depending on the application, the JB(X) is available with and without Induced Flue Gas Recirculation for 30ppm requirements. Webster has been providing low emission units for more than 25 years and understands what it takes to meet your compliance requirements.

JB and JBX Features

Versatile

- Available in multiple housing and control panel configurations
- Fires multiple fuels
- Designed for all types of boilers, heaters and furnaces
- Proven performance in all types of applications

Reliable

- Outstanding flame stability
- High combustion efficiency
- Designed for ease of service
- Quiet operation
- UL & ULC Listed

Adaptable

- Standard or inverted housing
- Burner mounted or remote control panels
- Standard or low NOx designs available

Efficient

- Linkageless control options
- Add Temp A Trim for most efficient operation and quick payback

Webster Combustion has the best lead times in the industry. To configure the perfect JB(X) burner for your application and obtain current scheduling information, contact Webster or visit www.webstercombustion.com to locate a sales office in your area.

JB(X) Series Maximum Input Capacity Ratings

Burner Model	Min Req'd Gas Press	Std Gas Train Size	Max Firing Rate (MBH) Std	Max Firing Rate (MBH) w/FGR	Fan Motor HP
JB(X)1*-02	6"wc	1"	1000	800	1/4
JB(X)1*-03	8"wc	1-1/4"	1500	1200	1/3
JB(X)1*-05	8"wc	1-1/2"	2100	1680	1/2
JB(X)1*-07	11"wc	1-1/2"	2500	2000	3/4
JB(X)2*-07	13"wc	1-1/2"	2800	2240	3/4
JB(X)2*-10	14"wc	2"	3500	2800	1
JB(X)2*-15	14"wc	2"	3500	2800	1-1/2
JB(X)2*-20	14"wc	2"	4200	3360	2
JB(X)2*-30	14"wc	2-1/2"	5300	4240	3
JB(X)2*-50	18"wc	2-1/2"	6000	4800	5
JB(X)3*-30	1 psig	2-1/2"	6300	5040	3
JB(X)3*-50	1 psig	3"	8300	6640	5
JB(X)3*-75	1 psig	3"	10,500	8400	7-1/2
JB(X)3*-100	1.5 psig	3"	12,600	10,080	10

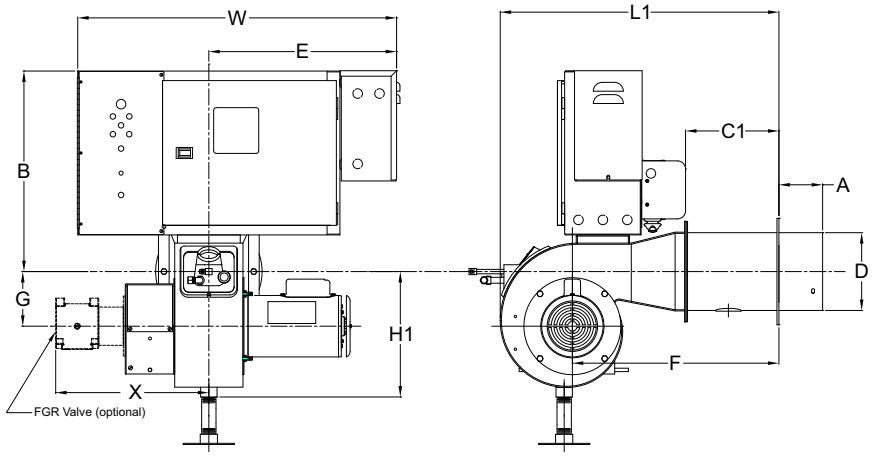
* Can be "G" (Gas), "O" (Oil) or "C" (Combination Gas/Oil)

JB(X) Series Typical Dimensions (Inches)

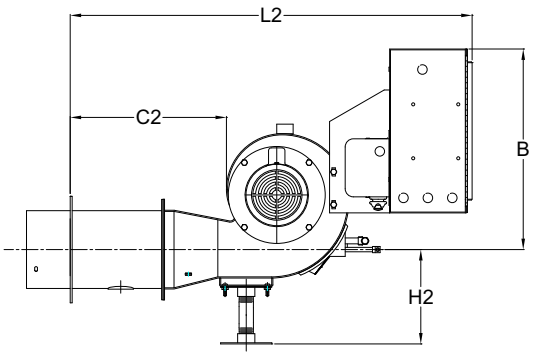
Model	A	B1	B2	C1	C2	D	E	F**	G**	H1***	H2***	L1*	L2	W***	X**
JB(X)1	4	18 3/8	18 3/8	8 1/4	14 3/8	7 1/4	11 7/16	18 15/16	5	15 11/16	11 3/8	26 5/8	36 15/16	21 7/8	13 3/4
JB(X)2	4	19 1/16	18 1/2	9 1/2	14	9 1/8	17 3/4	20	6 5/8	19	12 1/8	28 5/8	39 1/4	30 11/16	24 1/4
JB(X)3	4	19 15/16	19 9/16	15 5/16	19 1/4	11 1/4	23 1/4	26 15/16	8 5/16	22 1/2	14 3/4	38 1/4	48	36 3/4	29 1/2

* Add 1/4 " to Dimension L1 for heavy oil burners. Use Dimension L2 for alternate control cabinet location.
** On units with FGR for NOx reduction, FGR valve will emerge from side of burner opposite blower motor.
*** Extra ground clearance & width may be required for the addition of FGR. Consult factory for details.

JB(X) STANDARD ARRANGEMENT



JB(X) INVERTED ARRANGEMENT (OPTIONAL)



WEBSTER COMBUSTION
A Selas Heat Technology Company

The *Better* Boiler Burner.

Represented By

619 Industrial Road, Winfield, KS 67156 / Phone: 620-221-7464 / Fax: 620-221-9447
www.webstercombustion.com / sales@webstercombustion.com

Bulletin #950094

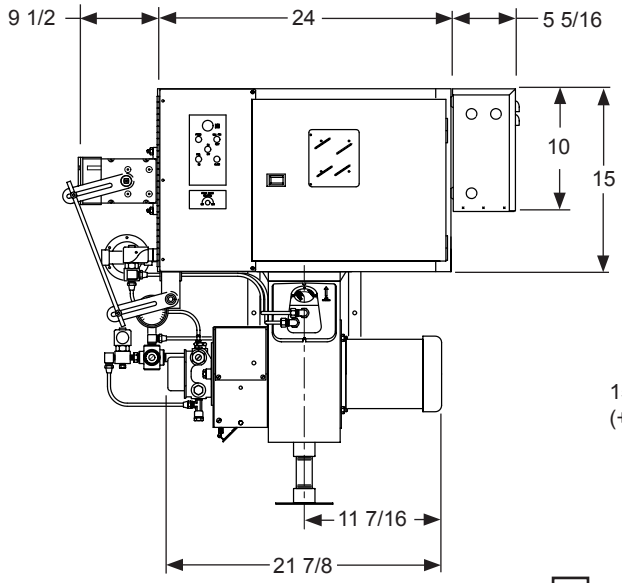
Model JB1 Forced Draft Burners

Specification & Dimensional Data
(400 - 2500 MBH Input)

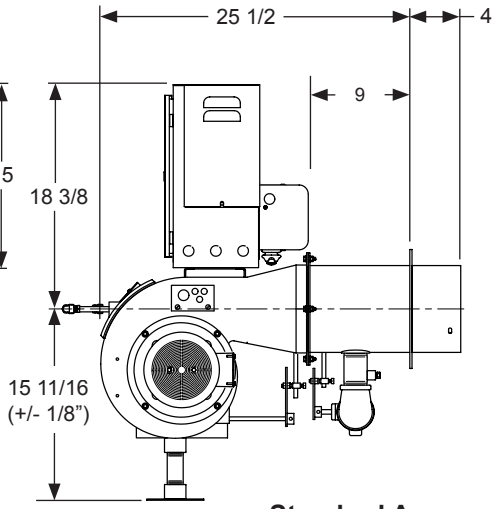
Fuels Burned and Control Systems

- **Natural Gas, Propane, Digester or Mixed Gases**
- **Light #2 Oil, Mechanical Pressure**
- **On-Off, Low Fire Start, Low-High-Low, Modulating or Linkageless**
- **Control Circuit Requires 120 vac, 60 Hz, Single Phase Voltage Supply**

Check appropriate box to indicated selected version.

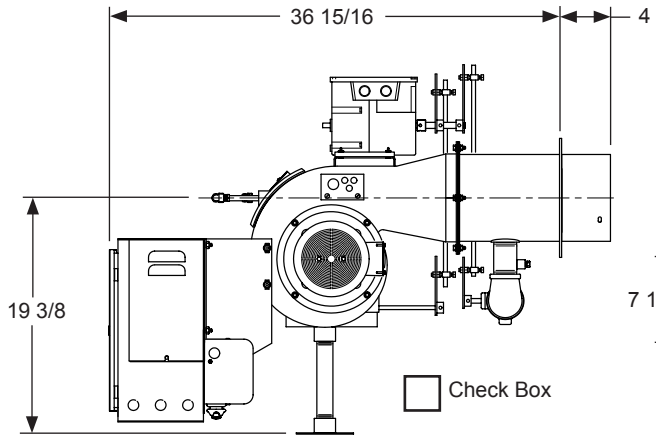


Standard Arrangement
End View



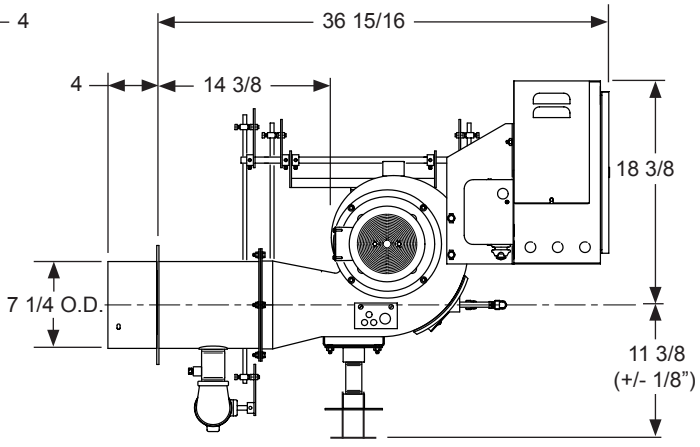
Standard Arrangement
Elevation
Side View

Check Box



Check Box

Standard Burner Arrangement
Elevation
W/ Optional Back Mount Control Cabinet
Side View



Check Box

Inverted Burner Arrangement
Elevation
Side View

Model JB1 burners are listed by Underwriters Laboratories, Inc. (UL). Also by the State of Massachusetts Fire Marshal, City of New York Board of Standards and Appeals, State of Minnesota and can be packaged to meet specific requirements of IRI, FM, GE GAP, NFPA, MIL spec. or other special insurance or local code requirements.

Model JB1 - Specification Data (400 - 2500 MBH Input)

	(1) STANDARD UL EQUIPMENT AND IMPORTANT OPTIONS	Fuel Burned: Gas	Fuel Burned: No. 2 Oil pressure atomized
General	Motor, Fan and Air Inlet Control	X	X
	Air Flow Switch (also with oil systems using remote pump)	X	
	(2)(3) Burner Mounted Control Panel, Switch and Indicator Lights	X	X
	Flame Safety Control	X	X
	Ultra Violet Scanner	X	X
	Motor Controller (single phase voltage)	X	X
	Fuel Selector Switch	Dual Fuel Burners Only	
Ignition	Proven Gas Pilot Ignition	X	
	Pilot Solenoid Gas Valve	X	
	Pilot Gas Regulator & Manual Valve	X	
	Pilot Gas Ignition Transformer	X	
	Direct Spark Oil Ignition		X
	Direct Spark Oil Ignition Transformer		X
Optional	Inverted Housing	X	X
	Alternate Control Cabinet Positioning	X	X
	Remote Control Panel	X	X
	Fuel Metering CAM-NETIC II	X	X
	Linkageless	X	X

	STANDARD UL EQUIPMENT AND IMPORTANT OPTIONS	Fuel Burned: Gas	Fuel Burned: No. 2 Oil pressure atomized
Gas Fuel	Main Manual Shutoff Valve	X	
	Main Safety Shutoff Valve	X	
	Second Safety Shutoff Valve	X	
	Main Gas Regulator	X	
	Gas Checking Valve	X	
	High and Low Gas Pressure Switches (st'd over 2500 MBH)	Opt.	
	Metering Valve (modulation only)	X	
Oil Fuel	Oil Drawer Assembly with Diffuser		X
	Oil Nozzle(s)		X
	Integral Oil Pump		X
	Main Safety Shutoff Valve		X
	Second Safety Shutoff Valve		X
	Low Oil Pressure Switch STD (when using remote oil pump)		Opt.
	Oil Pressure Gauge		X
	Oil Metering Valve (modulating systems)		X
	Future Gas Combustion Head-OPT		Opt.

1. The configuration of each unit will vary with specific job requirements such as input rating, electrical specification and special agency approval codes. The above chart shows those items standard to a basic burner plus a few options that may be added. **2.** Indicator lights are "Power On", "Call for Heat", "Fuel On" and "Alarm" for hard wired panels. "Alarm", "Low Water", "Power", "Call for Heat", "Ignition On", and "Fuel On" for circuit board light panels. **3.** Straight Oil burners supplied with an R7284 control will not include a control panel, lights, or switches as standard equipment.

Model JB1 - Sizing and Application Data (contact Webster for complete information)

Model Number	Maximum Furnace Pressure	Burner Firing Capability Range		Burner Motor HP		Gas Train			Oil Pump Motor HP
				Gas Only HP	**(1)** Oil or Combination	Pipe Size	**(2)** Inlet Pressure		
		Gas scfh	#2 Oil gph				On-Off, LFS	Modulation	
JB1-02	1.25	400 / 1000	3.0 / 7.1	1/4	1/3	1"	6 / 14"	7 /14"	Integral
JB1-03	1.25	600 / 1500	4.0 / 10.7	1/3	1/2	1 1/4"	8 / 14"	9 / 14"	Integral
JB1-05	1.25	800 / 2100	6.0 / 14.8	1/2	1/2	1 1/2"	7 / 14"	8 / 14"	Integral
JB1-07	1.25	900 / 2500	7.0 / 17.8	3/4	3/4	1 1/2"	9 / 14"	11 / 14"	Integral

1. Larger motors may be required for single phase or 208 volts **2.** Contact Webster for more complete details

The above maximum ratings are based on 0 furnace pressure, an altitude of 1000 feet, 90^{O}F air temperature and 60 HZ electrical supply. Use the following corrections for higher temperatures and altitude. Capacity decreases by 17% for 50 Hertz.

Capacity decreases by 4% for each 1000 feet above 1000 foot altitude.
Capacity decreases by 6% for each 1 inch of furnace pressure.
Capacity decreases by 2% for each 10^{o}F increase in air temperature over 90^{o}F.

Gas input ratings based on 1000 BTU/cu ft. and 0.64 specific gravity. Sizes and pressure will vary with gas.
Oil input ratings are based on 140,000 BTU/gal for ASTM #2 fuel oil.

Essential Ordering Information and Data:

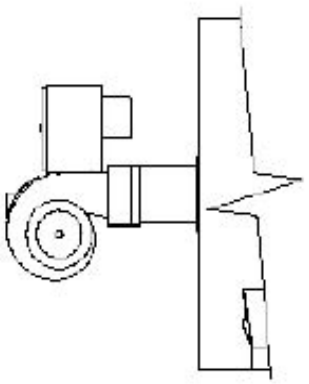
Power Supply - Confirm 120-60-1 for control circuit and electrical supply for burner motor(s) (voltage, frequency and phase).
Describe Boiler or Heater to be Fired - Including the manufacturer, model number, furnace pressure and furnace size.
Firing Rate - Define firing rates in MBH for gas and GPH for oil.
Fuel to be Burned - Type of gas and/or oil, including the BTU value.
Approval Agency - UL, FM, IRI (GE GAP), CSD-1, NFPA, Mil spec and local codes, if applicable.
Flame Safety Control Preferred - Honeywell or Fireye controls.
Gas Train Components Preferred - ASCO, Honeywell or Siemens
Control System - ON-OFF, Low Fire Start, Low-High-Low, Modulation, Linkageless
Required Options - Mounting plate, limit controls, etc.

Order Number	153368

JB Burner Configuration and Panel Location

[X] Upright Burner and Top Mount Panel

#N/A
#N/A
#N/A
#N/A



[X]

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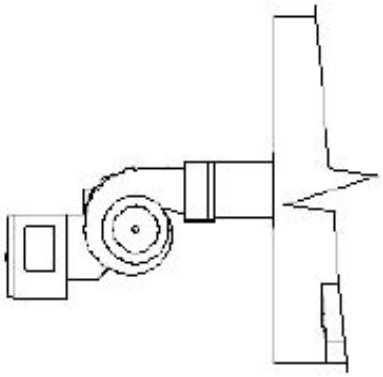

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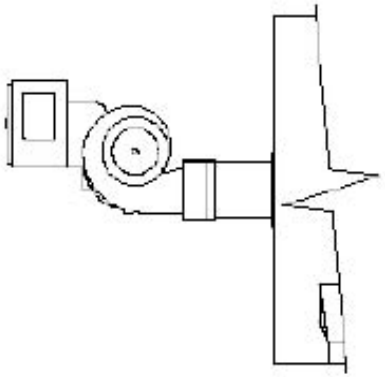

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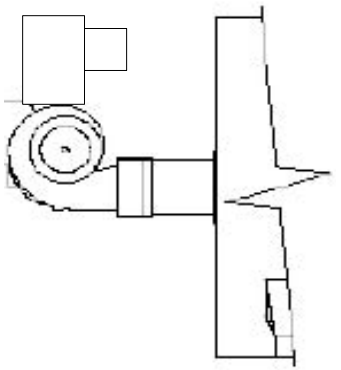

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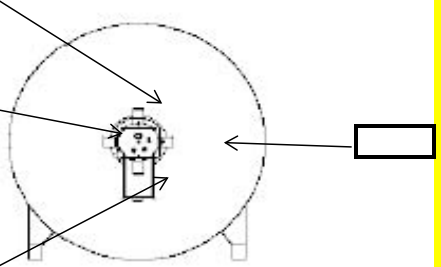
Gas Piping Connection

[ ]



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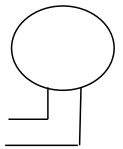
[X] Downward Gas Pipe

[X]



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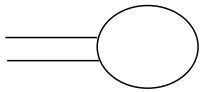

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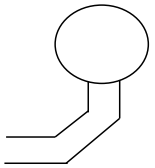

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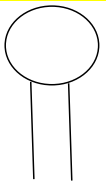

6 o'clock & to the left

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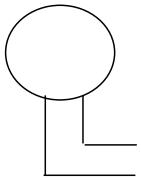

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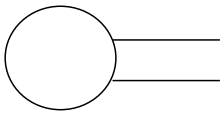

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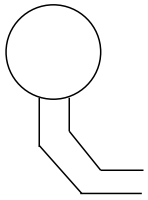

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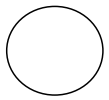

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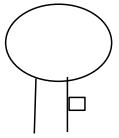


Job Operation Listing Report

12/23/2024 12:38:59 PM

Job:	497926-0000	**Job Date:**	12/20/2024	**Status:**	F **Firm**
Co-product Mix:					
Item:	JB1G-WO153368			**Qty Released:**	2.000
	JB1G-05-RM7897C-L.12-UL/CSD-1				
Revision:					
Customer:	196			**Sales Order:**	O 153368 1
	RICHARD K. HUNTER & COMPANY				

Location: ***STOCK***

SERIAL NO: U153368A-01, U153368A-02
MODEL: JB1G-05-RM7897C-L.12-UL/CSD-1
*****
BOILER: WEIL MCLAIN 588 SERIES-2
*****
Boiler Type: CAST IRON
FUEL: NATURAL INPUT: 1357 MBH
INLET GAS PRESS: 2 PSIG
HIGH FIRE MANIFOLD PRESS: 2.8 "WC
(INCLUDES FURNACE PRESSURE)
BOILER FURNACE PRESSURE AT HIGH FIRE: 0.6" WC
*****
ALTITUDE: 1000 FT
OPERATION: Low Fire Start (L)
VOLTAGE: 120V / 60 / 1 PH.
AGENCY: UL, CSD-1
*****
CONFIGURATION: UPRIGHT
CONTROL CABINET LOCATION: TOP MOUNT
JUNCTION BOX LOCATION: #N/A
*****
ORDER CONTACT: DAVE ORDER WRITER: MICHAEL
*****
JOB NAME: COLTRANE WEBB ES / BEVERLY HILLS ES
LOCATION: CONCORD, NC
*****
DIAGRAMS WIRING: 752379
GAS TRAIN PIPING: 722001
FRONTPLATE: 730003
*****
NOTES:
GAS TRAIN = 6 O'CLOCK & TO THE LEFT
SPRING = 3-6"WC (DEFAULT)
LINKAGE PACKAGE = 9
ADS: 167A
INNER FIRE CYLINDER N/A
BLADE OPENING ON DIFFUSER 3/16"

Oper	WC	Description	Start	End
10	STK1	STOCK ROOM		

Qty	GT	Item/Description	
1		010005	PLATE,JB1 MOTOR MOUNTING
1		010056-BL	PLATE,OIL PUMP MOUNTING COVER F/JB
1		010652-BL	PLATE,GAS/OIL IGN TRANS OPEN CVR JB1
1		011517	PLATE,RETENTION-W.A. JB1 RAPID SPIN,2.12

Job Operation Listing Report

12/23/2024 12:38:59 PM

Job: 497926-0000 **Job Date:** 12/20/2024 **Status:** F **Firm**

Co-product Mix:

Item: JB1G-WO153368 **Qty Released:** 2.000

JB1G-05-RM7897C-L.12-UL/CSD-1

Revision:

Customer: 196 **Sales Order:** O 153368 1

RICHARD K. HUNTER & COMPANY

Location: ***STOCK***

10	STK1		STOCK ROOM	
1			014964	PLATE,PEDESTAL-W.A. F/JB 2" COUPLING
1			050035	CONE,AIR INLET F/JB1 F/6.1 X 4" FAN
1			050333	CONE,BURNER NOSE CHOKE- F/JB1 W/6.00
5			090054	ORIFICE,BLK 5/16"-24 BRASS SECONDARY
1			090137	PIPE,1-1/2" X 4"TEE NIPPLE
10			090193-147	ORIFICE,GAS HD&JB #26 HOLE
1			090282	ROD, LINKAGE, 5/16", CUT TO FIT
10			090318	ORIFICE,PRIMARY GAS SCOTCH BOILER
1			091029-005	PIPE,NIPPLE-TEE 1-1/4" X 6" W/1/4" HALF
1			160057-PL	ARM,W.A.5/16" POSITIONER PLATED
1			211073-032	WIRE,IGNITION & CLIP JB1,2,3 TOP MNT&HD
1		4	321001	VALVE,BALL,1/4",MAN,BRASS,T-HANDLE
1		1	321009	VALVE,BALL,1-1/4",MAN,BRASS,LVR HANDLE
1			331155	VALVE, ASCO 158, 1.25, LFS/LHL
1			332035	ACTUATOR, ASCO 159, LFS, SLOW
1			400017-BL	BOX,LOUVER JB1 AIR INLET CONTROL C.A.
1			430309-BL	BLOWER HOUSING-W.A.F/ JB1 HVY DTY
1			510370-BL	HEAD,COMB-W.A. JB1 G/GO LO-FIRE W/ NO
1			520002	WHEEL,BLOWER 7" X 4" X 5/8"BORE
1			775203	MTR,.50HP,3600 115/230 1PH,56C,OD,BA
1			793011	SCANNER,C7027A1049 F/EXT OR INT MTG.
2			903013	PLUG,1/4 PIPE
1			GH-1144	BALL JOINT, 5/16 ROD 5/16 BOLT
1			GH-1144A	BALL JOINT, 5/16 ROD 1/4 BOLT

20	STK1		STOCK ROOM	
Qty	**GT**		**Item/Description**	
1			420098	DWR ASY,JB1G,PGP,RAPID SPIN

30	STK1		STOCK ROOM	
Qty	**GT**		**Item/Description**	
1			040538	BRACKET,TERMINAL STRIP F/15X24 C.C. 12"
1			200240	PANEL,INSERT F/15 X 24 X 7 CONTROL CABIN
1			200241	PANEL,LIGHT INSERT,15X24,STD
1			470003	SUBASY,GAS PILOT,325-3,SINGLE VALVE,10LB

Job Operation Listing Report

12/23/2024 12:38:59 PM

1		490429	CABINET CONTROL-WA F/UL LABEL 15X24X7 WA
1		770001	SWITCH,AIR FLOW
1		772015	TRANS,IGN GAS, MUST HAVE GRND LEADWIRE
1		772035	HOLDER, FUSE HPG, FACE MOUNT, 600V, 20A
1		772407	FUSE, XFMR 5 AMP 600 VAC CLASS CC
1		773004	LIGHT,1050QA1 120 VOLT NEON RED
2		773005	LIGHT,1050QA3 120 VOLT NEON AMBER
1		773006	LIGHT,1052QA5 120 VOLT NEON GREEN
1		776001	CONTACTOR 20AMP MTR
1		779001	SWITCH,7500K14 SPST TOGGLE
1		791076	CONTROL,RM7897C2000 FLAME SAFETY
1		792025	BASE Q7800A2005 7800 SERIES WIRING OPEN
1		794007	TIMER,ST7800A1054 60S FLAME SAFETY CNTL
1		795012	AMP R7849A1023 ULTRAVIOLET
5		930007	JUMPER,F/TS+TSKK
35		930008	KANT KUT CONNECTOR F/DIN 3 RAIL MOUNT
2		930009	END SECTION F/DIN 3 RAIL MOUNT, MARATHON
2		930010	BRACKET,END F/DIN 3 RAIL MOUNT MARATHON

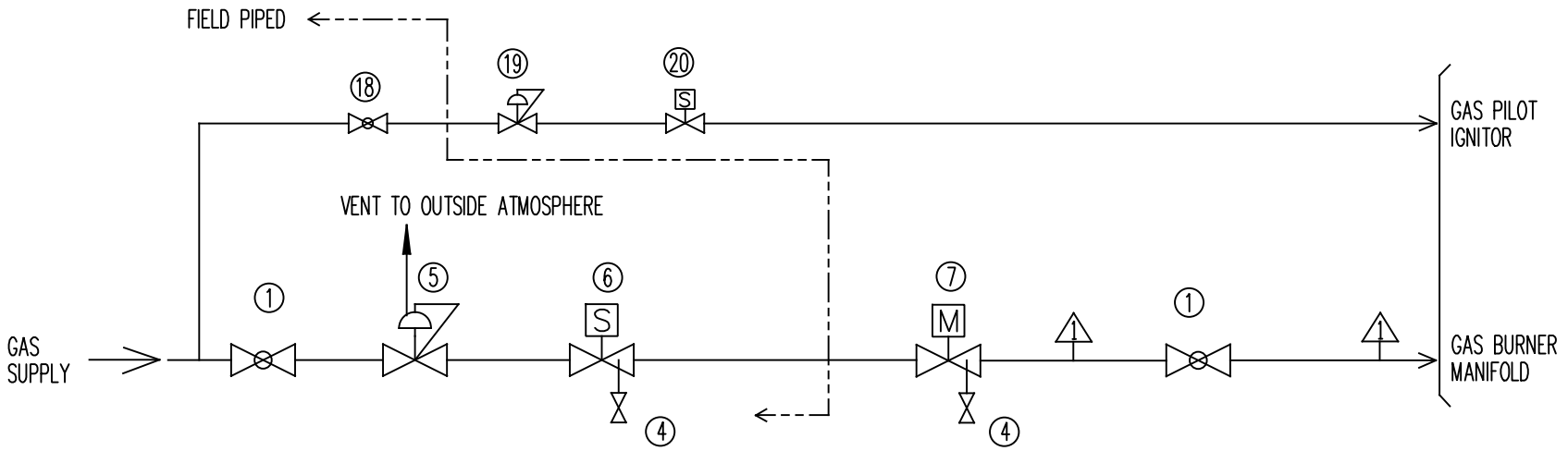
40	STK1	STOCK ROOM

50	STK1	STOCK ROOM

Qty	GT	Item/Description	
1		081105-3	DOOR CC-UL-15X24, RM-7800/E-100, SL C.A.
4		170002-PL	CLAMP,BURNER HEAD MTG LUG PLATED
1	4	321001	VALVE,BALL,1/4",MAN,BRASS,T-HANDLE
1	18	321005	VALVE,BALL,3/8",MAN,BRASS,LVR HANDLE
1	1	321009	VALVE,BALL,1-1/4",MAN,BRASS,LVR HANDLE
1	6	330113	VALVE,1-1/4" NC GAS SOL JB8214265 HF
1	5	335019	REGULATOR 1 1/4" 210D-1010-0006 GPR
1		730003	FP,REFRACTORY JB1 F/WM 86 OR 88 SERIES

60	ASSY 2	PANEL SHOP
80	ASSY 3	SUB ASSY
82	P/C/F	PUMPSET, COMP, FGR
90	JB	BURNER ASSEMBLY
100	CO1	BURNER CHECK OUT

722001



#	DESCRIPTION
1	MANUAL BALL VALVE
2	
3	
4	MANUAL TEST VALVE
5	GAS PRESSURE REGULATOR
6	MAIN SOLENOID GAS VALVE
7	MAIN MOTORIZED GAS VALVE
8	
9	
10	
11	

#	DESCRIPTION
12	
13	
14	
15	
16	
17	
18	PILOT MANUAL BALL VALVE
19	PILOT GAS PRESSURE REGULATOR
20	PILOT SOLENOID VALVE
21	
22	

#	DESCRIPTION
23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	

NOTES & OPTIONS

1. TEST CONNECTION
2. REFER TO BILL OF MATERIAL FOR PART NUMBERS OF ABOVE ITEMS.
3. FOR WIRING OF GAS VALVES, MAIN GAS VALVE IS LOCATED CLOSEST TO BURNER HEAD, SAFETY GAS VALVE IS LOCATED FARTHEST FROM BURNER HEAD.
4. VALVE BODY AND VALVE ACTUATOR MUST BE ASSEMBLED.

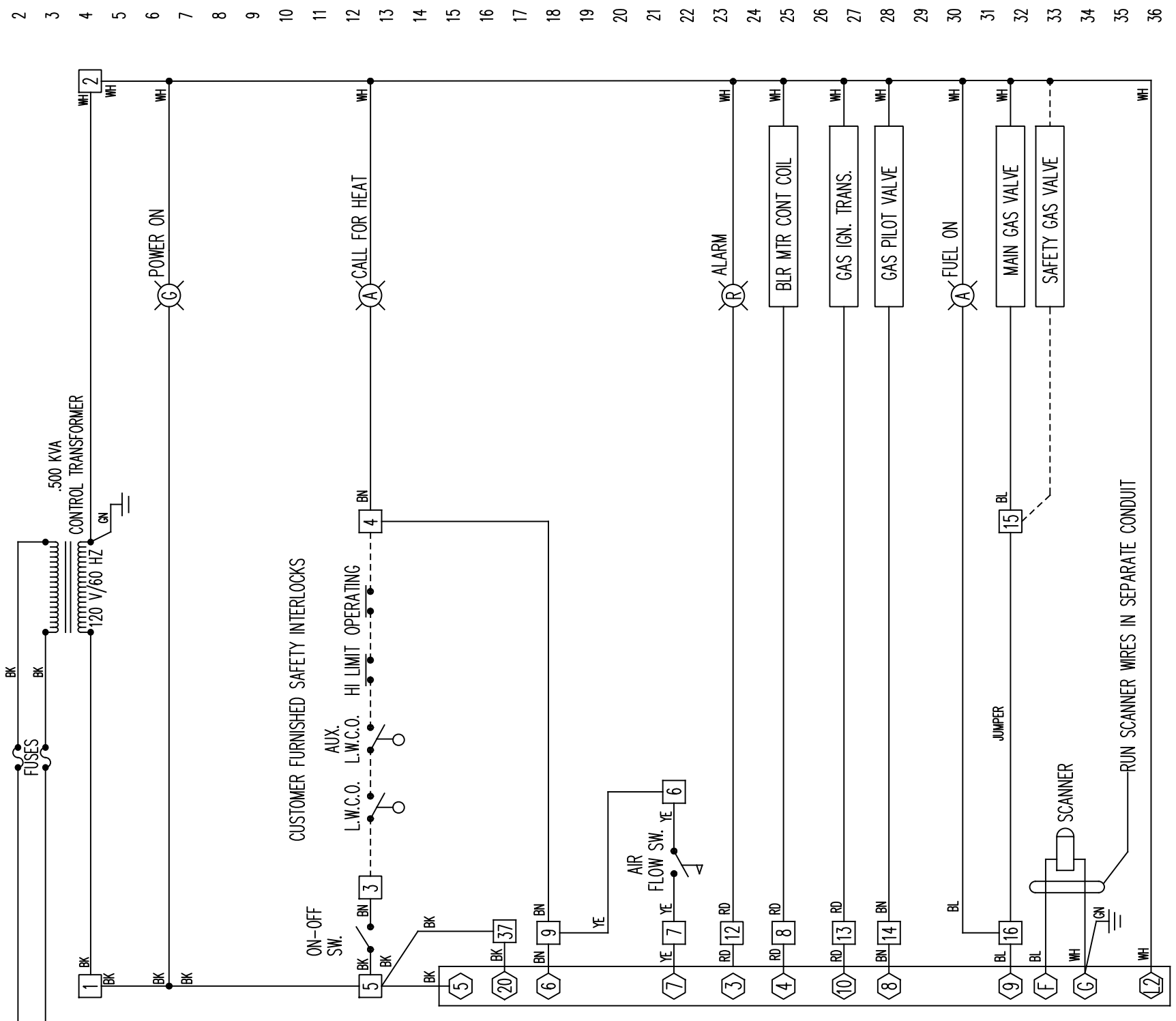
REV.	DATE	ECN. NO.	CHK.
F			
E			
D			
C	1/25/22		
B	9/10/20		
A	5/25/5		

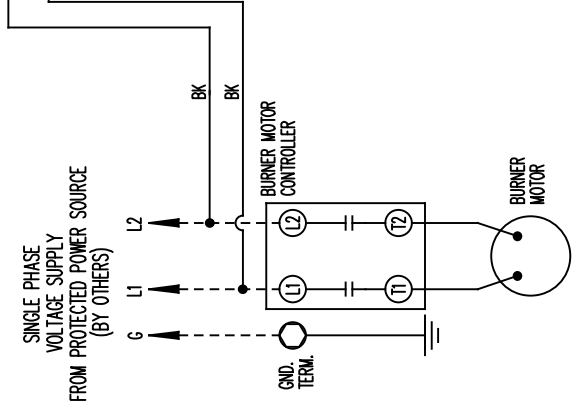
DR.	KK
CK.	
APP.	

UL–FM LOW FIRE START GAS PIPING DIAGRAM
UP TO 2,500 MBH FIRING RATE

SCALE	DATE	DWG. NO.
NONE	08/05/02	722001

WEBSTER™ COMBUSTION TECHNOLOGY, LLC
619 INDUSTRIAL ROAD ■ DRAWER 748 ■ WINFIELD, KANSAS 67156 ■ PHONE(620)221–7464





LEGEND

- FACTORY WIRING
- FIELD WIRING
- SAFEGUARD TERMINALS
- CONTROL CABINET TERMINALS
- JUNCTION BOX TERMINALS
- SPLICE
- NOTES & OPTIONS
- GAS TRAIN TERMINALS

COLOR CODES

BK-BLACK	PK-PINK
WH-WHITE	OR-ORANGE
BL-BLUE	RD-RED
BN-BROWN	TA-TAN
PL-PURPLE	GN-GREEN
YE-YELLOW	GY-GRAY

REV.	DATE	ECN. NO.	CHK.
F			
E			
D			
C			
B			
A			

DR.	CLT
CK.	
APP.	

WIRING DIAGRAM
FG-RM7897C-L-MC-CT-PG-UL

SCALE	DATE	DWG. NO.
NONE	9/27/23	752379CT

WEBSTER™ COMBUSTION TECHNOLOGY, LLC.
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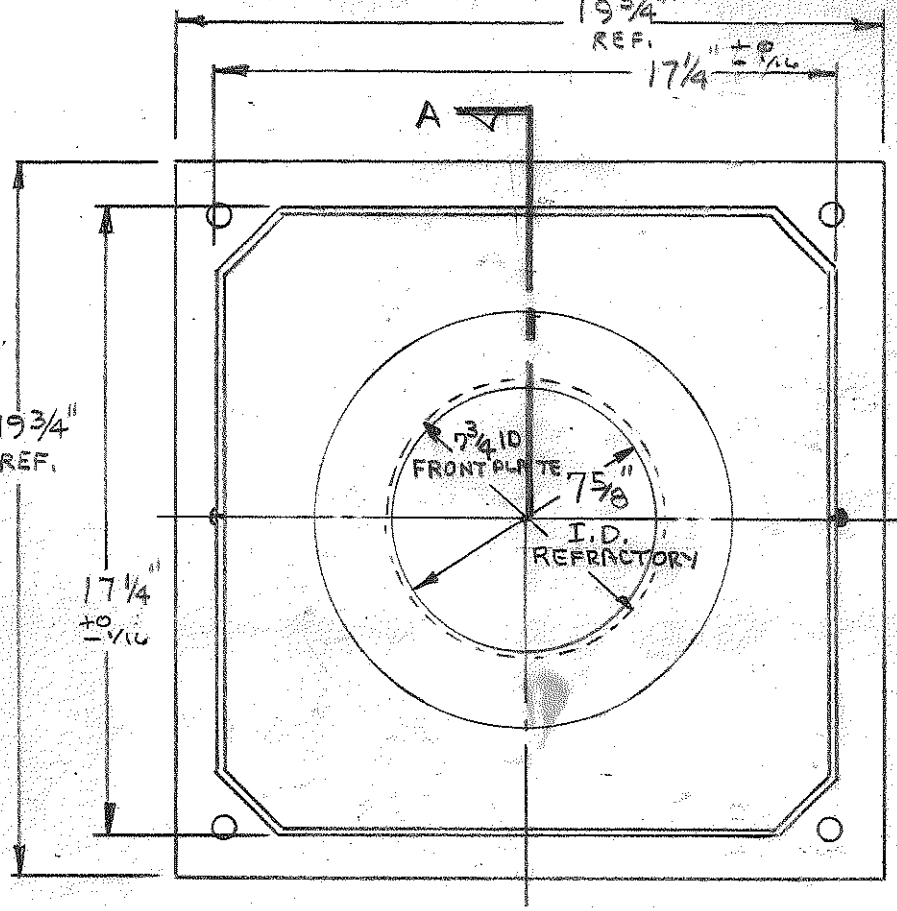
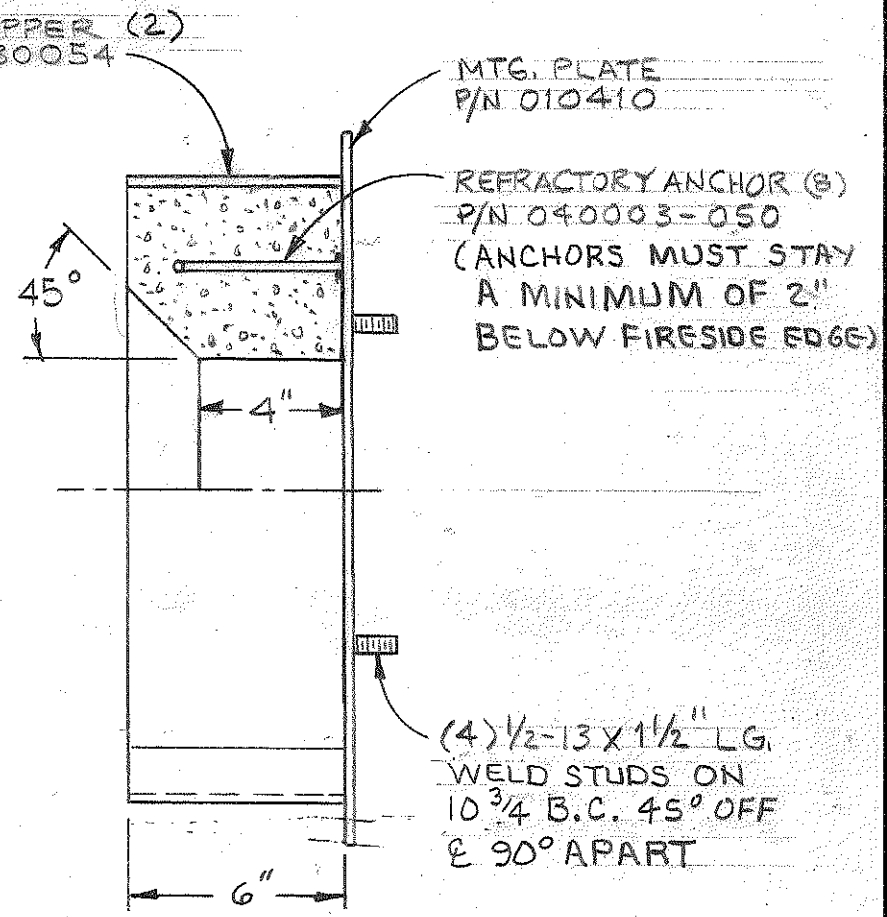
730003





APPROX. 1 1/4 SACKS OF LIGHT WEIGHT REFRACTORY REQ'D. (50 lb. SACKS)

NOTE:

1. WELD COMPLETE, REMOVE EXCESS WELD, FLUX & SHARP EDGES.

TOLERANCE: FRACTION ± 1 / 32 • DECIMAL ± .005

REV.	ECN. NO.	CHK.			
F			DR.	LC	REFRACTORY FRONT PLATE - W.A. F/JB1 BURNER W/4" NOSE IN WEIL-McLAIN MODEL NO. 88 & 88 BOILER
E			CK.		
D	RCD 1786	DM	APP	[illegible]	
C	1215	[illegible]			
B	0464	SMC			
A	0048	—			

Webster ENGINEERING & MANUFACTURING CO., INC.
619 INDUSTRIAL ROAD ■ DRAWER 748 ■ WINFIELD, KANSAS 67156 ■ PHONE (316) 221-7464

SCALE	DATE	DWG. NO.
NONE	8-8-86	730003

WEBSTER COMBUSTION TECHNOLOGY LLC.
STANDARD TERMS AND CONDITIONS

EXCLUSION OF OTHER TERMS

This constitutes an offer on behalf of Webster Combustion Technology LLC. (the Company) to sell the goods described in the quotation/acknowledgment (the Equipment) exclusively on the terms and conditions stated in the body of the quotation/acknowledgment and in these Standard Terms and Conditions. Acceptance of this proposal by the buyer (the Buyer) is hereby limited to these Terms and Conditions, whether stated in the Buyer's purchase order form or elsewhere shall be applicable to the transaction unless specifically agreed to in a separately written and signed letter by an officer of the Company at its headquarters in Winfield, Kansas, USA.

LIMITATIONS ON QUOTATION

Unless otherwise stated in the quotation, the quotation will remain open for acceptance for a period of thirty days after the date hereof, at which time it will automatically expire unless extended by a signed, written letter issued by the Company from its headquarters in Winfield, Kansas, USA.

EQUIPMENT SELECTION

The selection of sizes, types, capacities, and specifications of Equipment purchased by the Buyer's specific application shall be the sole responsibility of the Buyer and/or the Buyer's representative or consultant.

PRICES

Unless otherwise stated in the quotation/acknowledgment, prices are F.O.B. Winfield, Kansas, USA, exclusive of freight, storage, installation, and local delivery charges, if any.

TAXES

In addition to the purchase price, Buyer shall be liable for all government taxes and/or charges in respect to the purchase and/or sale contemplated herein or hereunder (except taxes on or measured by net income on the Company) including those which the Company may be required to pay.

Buyer agrees to pay, indemnify, and hold harmless the Company for and against all liabilities, expenses, and damages in respect of any claim, action, or suit, proceeding, assessment, demand, and/or judgment arising in any manner from Buyer's failure or refusal to pay any government taxes and/or charges that are the responsibility of Buyer (whether pursuant to these Standard Terms and Conditions or otherwise).

Buyer further agrees that the Company may, in good faith, compromise and settle any claim, action, suit, proceeding, assessment, and/or demand upon the Company on account or by reason or refusal of Buyer to pay any government taxes and/or charges that are the responsibility of Buyer (whether pursuant to these Standard Terms and Conditions or otherwise).

PAYMENT

Unless otherwise stated in the quotation/acknowledgment, Buyer shall pay the full purchase price within thirty-days after the date of shipment as evidenced by the Company's invoice. Beginning thirty-days after the date of shipment, Buyer shall pay a late payment charge equal to the lesser of (a) One and One-half (1.5%) percent per month, which is an annual rate of eighteen (18%) percent and (b) the maximum amount allowable under applicable law, on any unpaid portion of the purchase price.

DELINQUENT ACCOUNT COLLECTION EXPENSES

In the event that Buyer fails to timely make any or all payments due to the Company, and in the event the Company incurs any expenses arising from the collection of Buyer's delinquent account, Buyer hereby agrees to pay, in addition to all other fees and charges, any collection expenses incurred by the Company. Collection expenses shall include the Company's fees for independent collections agencies, reasonable attorney's fees, costs of court, and other charges directly related to the collection of Buyer's account.

RETENTION OF TITLE; SECURITY INTEREST

The Company shall retain title to the Equipment, any replacements thereof, and any additions thereto, for purpose of security and title shall not pass to Buyer until the purchase price of all sums due under any order resulting from this quotation are fully paid. Buyer shall execute a financing statement (if requested by the Company) and other documents necessary to enable the Company to perfect its security interest in the Equipment. When Buyer has made all the payments called for herein including taxes and has fully complied with the other provisions of this quotation/acknowledgment, the Company shall immediately deliver to the buyer appropriate document evidencing the transfer of title and terminating the security interest.

SERVICE

Where the Company has agreed to provide a factory trained technician, the technician will assist the Buyer in the initial start-up of Equipment and the initial instruction of the Buyer's employees in the operation of the Equipment, and such services shall be supplied Monday through Friday, legal holidays excepted, 8 a.m. through 5 p.m. inclusive. Starting and/or field service shall not be supplied by the Company on days or at times other than those provided herein unless the Company agrees to do so in writing on Buyer's request, in which case the Buyer shall pay the Company the applicable overtime rate for the services. The Company shall not be responsible for any delays in start-up due to Buyer's failure to have Equipment completely installed and ready for operation, and provided with fuel, power, exhaust, vent, and other necessary connections, or failure to provide Seller with sufficient advance notice to meet Buyer's schedule. Buyer agrees to pay the Company for any added expenses it incurs as a result of Buyer's failure to have Equipment ready for start-up. Prices which include starting service of multi-unit installations are based upon this service being completed in a single service call. Return trips to start Equipment which was not ready during the initial trip shall be invoiced to the Buyer at the current rate.

SHIPMENT

Any shipping date shown in the body of the quotation/acknowledgment represents the Company's reasonable estimate as the date hereof, and is not binding. The Company shall not incur any liability of any kind for failure to ship on any particular date unless a firm shipping date has been expressly agreed to by an officer of the Company in a separately signed written letter. Risk of all loss passes to Buyer when the Equipment is placed in possession of a common carrier. Claims against the carrier shall be the responsibility of the Buyer. Claims against the Company for patent defects, errors, or shortages must be made in writing to the Company within thirty days of receipt of the Equipment or such claims shall be deemed to have been waived.

CANCELLATION AND DELAYS

Subsequent to the date an order from Buyer has been acknowledged by the Company, Buyer may not change or cancel the order in whole or part, without the Company's written approval. When equipment has not yet become work in progress, the Company may condition its approval or a change upon a price change to reflect the Company's prevailing prices at the time of such change. If Buyer requests a delay in shipment after the Equipment has become work in progress, the Company may place the Equipment in storage at Buyer's risk and expense, and transfer to storage shall be deemed delivery for all purposes, including invoicing and payments. Cancellations approved by the Company may be conditioned on Buyer's payment of cost incurred by the Company prior to such approval, including engineering,testing, material, labor, burden, profit, and commission and similar expense in connection with the order cancelled.

WARRANTY MATTERS AND EXCLUSION OF IMPLIED WARRANTIES

The following warranty applies: All Products manufactured by the Company are warranted to be free from defects in material and workmanship under normal use and service for a period of eighteen months from the date of shipment or twelve months from the date of start-up; whichever should occur first. Products which are purchased by the Company and resold without further processing by the Company are not covered by the Company's warranty. The Company shall pass to the Buyer whatever warranty the Company receives on such products. The Company will repair or replace, at its option, its products which prove to be defective within the warranty period, F.O.B. the factory. The Company's warranty shall be voided by any abuse, misuse, or neglect of the products by use not in accordance with the Company's published instructions. The remedies for any failureof the Company's product to meet warranty specified herein shall be those remedies herein and no others; these remedies being exclusive remedies as a condition of sale irrespective of the theory upon which any claim might be based, including negligence, breach of contract or strict liability. **IN ALL EVENTS, THE COMPANY WILL NOT BE LIABLE FOR AND WILL NOT REIMBURSE ANY LABOR, MATERIAL, OR OTHER REPAIR CHARGES INCURRED BY ANYONE OTHER THAN THE COMPANY ON ANY WARRANTY EQUIPMENT, UNLESS SUCH CHARGES HAVE BEEN SPECIFICALLY AUTHORIZED IN ADVANCE IN WRITING, BY THE COMPANY. THIS PARAGRAPH CONTAINS THE COMPANY'S SOLE WARRANTY.THE COMPANY MAKES NO IMPLIED WARRANTY, AND THERE IS NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.**

DAMAGE LIMITATION

Under no circumstances shall the Company be liable for any loss of profits, down time, or any incidental, consequential, special, punitive, exemplary, enhanced, or indirect damages of any kind with respect to its products or the transaction by which its products are sold. **IN NO EVENT SHALL THE COMPANY'S AGGREGATE LIABILITY ARISING OUT OF OR RELATED TO THE EQUIPMENT OR THE TRANSACTION BY WHICH THE EQUIPMENT IS SOLD, WHETHER ARISING OUT OF OR RELATED TO BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), OR OTHERWISE, EXCEED THE TOTAL OF THE AMOUNTS PAID TO THE COMPANY WITH RESPECT TO SUCH EQUIPMENT.**

EXCUSE

In no event shall the Company be liable for any loss or damage resulting from any delay or failure in shipment or other failure, loss or damage that is the proximate result of any act of government authority, revolution, riot, civil disorder or disturbance, act of enemies, delay or default in transportation, inability to obtain materials or facilities from normal sources of fire, flood, act of God, or any cause not within the reasonable control of the Company, whether of the class of causes enumerated or otherwise. Without limiting the generality of the foregoing, the Company may, without causing a breach or incurring liability, allocate goods which are in short supply irrespective of the reasons therefore among customers in any manner which the Company in its sole discretion deems advisable. If an event occurs that is beyond the control of the Company's performance and causes its cost of production to increase because of the delay, the Company may pass such increase on to the Buyer.

WEBSTER COMBUSTION
A Selas Heat Technology Company

619 Industrial Road
Winfield, KS 67156
Phone: 620-221-7464, Fax: 620-221-9447
Web: www.webstercombustion.com
Email: info@webstercombustion.com

Model DW and DWplus

Submittal Record

VAN-PACKER® CO., INC.

SUBMITTAL INFORMATION

Factory Authorized Representative: RK Hunter & Co.

Submitted By: Andrew Gilliam

Job Name: Coltrane-Webb/Beverly Hills E.S.

Location: Concord, NC

Contractor: Superior Mechanical

Architect/Engineer Firm: Optima

Job Number: _____ Drawing Number: _____

APPROVALS

Contractor: _____ Date: _____

Architect/Engineer: _____ Date: _____

Representative: Andrew Gilliam Date: 12/30/24

Van-Packer Terms and Conditions of Sale

1. All orders are non-cancelable and non-returnable. Additions to orders may result in rescheduling or partial shipment.

2. All freight on orders will be shipped prepaid and billed unless prior arrangements have been made. Unless specified, Van-Packer will determine the methods of transportation. If special handling results in additional costs, these costs will be billed.

3. Payment terms are net 30 days. Orders to be charged to accounts 60 days past due will require management approval. Orders will not be accepted on accounts 90 days past due. Cash discounts will apply as noted on the invoice. Discounts are not applicable for freight charges.

4. All jobs will be shipped FOB Buda, Illinois.

5. Items not appearing in Van-Packer catalogs will be quoted as "Specials." Pricing for "Specials" are valid for a period of 90 days from date of quote, or as specified.

6. Orders will be invoiced at the prices in effect on the date of shipment. In the event a price change occurs, you will be given sufficient notice to identify all outstanding quotes in your territory.

VAN-PACKER® CO., INC.

P.O. Box 307
Buda, Illinois 61314
Phone 309-895-2311 or 888-VPSTACK (877-8225)
Fax 309-895-3891

Model DW & DWplus Product Information Chart

Commercial/Industrial Exhaust & Chimney Systems

Description:	Double wall air insulated or fiber insulated pressure systems
Applications:	For venting boilers, kilns, incinerators, grease ducts, emergency generators, caustic air, and fumes
Fuel Types:	LP gas, natural gas, #2, #4*, #5*, or #6* fuel oils, wood*, coal*, grease vapors, caustic fumes, and particles (*It is recommended that 316 Stainless Steel be specified when using these types of fuels)
Exhaust Pressure:	Neutral, Negative, or Positive
Exhaust Temperatures:	1000° F Continuous, 1400° F Intermittent 1400° F Continuous, 1800° F Intermittent Grease Duct 500° F Continuous, 2000° F Intermittent
Diameters Available:	6″ through 48″ in two-inch increments are standard
Materials:	Diameters 6″ through 36″ -- Liner is 20-gauge 304 Stainless Steel, shell is 24-gauge Aluminized Diameters 38″ through 48″ -- Liner is 18-gauge 304 Stainless Steel, shell is 20-gauge Aluminized Steel. Optional materials include 316 Stainless Steel. Other optional materials and thicknesses are also available upon request.
Insulation:	DW - 1″ air space between shell and liner DWplus - 1″, 2″, 3″, or 4″ fiber insulated
Clearance to Combustibles:	DW - 1000° F applications = 4″ / 1400° F applications = 6″ DWplus - 1000° F applications = 2″ / 1400° F applications = 4″ For DW and DWplus - Grease Duct Applications, see separate chart
Clearance to Non-Combustibles:	● DW - 1000° F and 1400° F applications = 2″ clearance for internal diameters of 18″ or less. For diameters greater than 18″, clearance requirements are 4″. ● DWplus - 1000° F and 1400° F = 2″ clearance for internal diameters of 18″ or less. For 1400° F applications = 4″ clearance required for internal diameters greater than 18″. ● Clearance in a non-combustible interior chase shall be as necessary for installation and access.
Underwriters Laboratories:	● Van-Packer Model DW series products are "Listed" by UL (under file number MH 11435, UL 103) as a "1400° Fahrenheit Chimney" for continuous operation at 1400° F (760° C) and intermittent operation at 1800° F (983° C). The Model DW series is also suitable for use as a "Building Heating Appliance Chimney" for continuous operation at 1000° F (538° C) and intermittent operation at 1400° F (760° C). For Grease Laden Vapors (UL 1978) 500° F (260° C) continuous to 2000° F (1093° C) intermittent operation.

Van-Packer Model DW, DWplus Submittal Information

Application:

- [x] Building Heating Appliances
- [ ] 1400 Degree F. Factory Built Chimney
- [ ] Engine Exhaust
- [ ] Grease Duct

Materials to be Fabricated of:

Interior of Building:

Liner 304 S.S Shell Alzd. Steel Shell

Exterior of Building:

Liner 304 S.S Shell Alzd Steel Shell

Insulation:

One Inch Air ✓ One Inch Fiber_____ Two Inch Fiber_____

Three Inch Fiber_____ Four Inch Fiber_____

Van-Packer Co., Inc. shall not be liable for any incidental or consequential damages or those prohibited by law. Under no circumstance shall Van-Packer Co., Inc. be liable for costs of installations, removal or reinstallation.

No Agent is authorized to make any modifications, additions or deletions to this warranty either written or oral binding on Van-Packer Co., Inc.

Installation of Model DW, DWplus must be in accordance with Van-Packer Company's installation instructions. If not, Agency Listings and Manufacturer's warranties may be void.

Part Numbers

Each part is assigned a part number based on the following code:

D	**Model Code**
06	**Section ID**
STR	**Part Code**
A	**Shell/Liner Code**
42	**Qualifier Code**

Model	**Code**
DW	D
DWplus	+
DWplus2	+2
DWplus3	+3
DWplus4	+4

Shell/Liner	**Code**
Aluminized steel shell/304 SS liner	A
Aluminized steel shell/316 SS liner	B
316 SS shell/316 SS liner	C
304 SS shell/304 SS liner	D
304 SS shell/316 SS liner	E
316 SS shell/304 SS liner	F

The Part Code is shown with each part in the Component Parts section of this brochure. The Qualifier Code denotes section length on straight sections, projection ID on tees and the larger ID on increasers.

Limitations

These limitations are offered as guidelines only. Please refer to installation instruction sheets, or ask your area representative or Van-Packer technical services for further details.

Support Spacing

The maximum distance between lateral supports, guys and breeching supports for all models is:

Maximum Height Above The Top Lateral Brace or Guy Point
6″ I.D. thru 12″ I.D. = 10′-0″
14″ I.D. thru 48″ I.D. = 15′-0″

Maximum Spacing Between Lateral Braces or Guy Points
6″ I.D. thru 48″ I.D. = 30′-0″

Maximum Spacing Between Breeching Supports
6″ I.D. thru 12″ I.D. = 10′-0″
14″ I.D. thru 48″ I.D. = 15′-0″
The maximum allowable height above Straight Sections (all lengths) and Tee Sections (90T and 45T) are shown below:

Allowable Height (feet)										
Chimney	**DW**		**DW+**		**DW+2**		**DW+3**		**DW+4**	
ID	**Strt**	**90T**	**Strt**	**90T**	**Strt**	**90T**	**Strt**	**90T**	**Strt**	**90T**
06″	225	89	189	76	152	62	125	52	105	44
08″	225	89	189	76	152	62	125	52	105	44
10″	225	89	189	76	152	62	125	52	105	44
12″	225	89	189	76	152	62	125	52	105	44
14″	213	89	179	76	145	62	121	52	102	44
16″	201	89	169	76	138	62	115	52	98	44
18″	189	82	159	70	131	57	110	48	93	41
20″	177	75	148	64	122	53	103	44	88	38
22″	165	68	138	57	114	47	97	40	83	34
24″	153	60	128	51	106	42	90	36	78	31
26″	150	53	126	45	105	37	89	32	77	27
28″	147	46	123	39	103	33	87	28	76	24
30″	144	39	120	33	100	28	86	24	75	21
32″	141	31	118	27	99	23	86	20	66	15
34″	138	24	115	20	97	17	73	13	64	11
36″	135	17	113	14	83	10	72	9	63	8
38″	102	15	88	13	77	11	68	10	60	9
40″	101	15	86	13	75	11	66	10	59	9
42″	101	15	84	13	73	11	64	10	57	9
44″	101	15	82	13	72	11	63	10	56	9
46″	100	15	81	13	71	11	63	10	56	9
48″	100	15	79	13	69	11	61	10	55	9

The following chart shows the allowable lengths supported by the Wall Support Assembly (WSA), the Ventilated Roof Support Assembly (VRS) and the Plate Support Assembly (PLS):

Allowable Height (feet)															
Chm	DW			DW+			DW+2			DW+3			DW+4		
ID	WSA	VRS	PLS	WSA	VRS	PLS	WSA	VRS	PLS	WSA	VRS	PLS	WSA	VRS	PLS
06"	201	103	284	174	89	235	145	74	189	119	61	156	99	50	130
08"	170	88	284	149	77	235	122	64	189	101	53	156	85	44	130
10"	152	81	284	131	69	235	107	57	189	89	47	156	75	40	130
12"	142	76	284	123	66	235	97	52	189	81	43	156	68	36	130
14"	107	59	272	91	50	225	77	42	183	65	36	152	56	31	128
16"	102	57	260	88	48	215	73	40	176	61	34	147	53	29	124
18"	91	52	247	78	44	205	65	37	168	55	31	141	48	27	120
20"	85	49	235	72	41	195	61	35	161	51	29	136	44	25	116
22"	76	44	223	65	38	185	54	32	153	47	27	130	40	23	111
24"	70	41	211	60	35	175	50	30	145	43	25	123	37	22	106
26"	67	40	198	57	34	165	48	29	137	41	25	117	35	21	101
28"	64	39	186	54	32	155	45	27	129	39	23	107	33	20	95
30"	60	37	174	51	31	145	43	26	121	36	22	104	32	19	91
32"	57	38	162	48	32	135	40	27	113	34	23	98	27	18	75
34"	50	32	149	42	27	125	36	23	105	27	17	79	24	15	70
36"	42	28	137	36	24	115	27	18	85	24	16	73	21	14	65
38"	37	25	125	32	21	105	25	17	84	22	15	73	19	13	65
40"	32	22	113	27	19	95	23	16	83	20	14	73	18	12	65
42"	26	19	101	23	17	85	20	14	74	17	13	65	15	11	58
44"	21	16	89	19	14	75	16	12	66	15	11	58	13	10	52
46"	17	13	76	16	12	65	14	11	57	12	10	50	11	9	45
48"	15	12	64	13	11	55	12	9	48	11	8	43	10	8	38

***Notes:**

1. The 350° and 500° temperatures were calculated with 17 fps flue gas velocity.
2. The 1000° and 1400° temperatures were calculated with 25 fps flue gas velocity.
3. All were calculated with 70° F ambient and 5 fps air velocity.

Installation Recommendation:
One prime coat and one finish coat of paint is recommended on exterior installations when outer shells are constructed of aluminized steel. Specifying stainless steel outer shells is an economical alternative.

Approximate Weight Per Foot (lbs)					
ID	DW	DW+	DW+2	DW+3	DW+4
06"	6.5	7.5	9	11	13.2
08"	7.7	8.8	10.7	12.9	15.4
10"	8.6	10	12.2	14.6	17.3
12"	9.2	10.6	13.4	16.1	19.1
14"	12.2	14.4	16.9	19.9	23.1
16"	12.8	14.9	17.9	21.2	24.7
18"	14.3	16.8	20	23.5	27.3
20"	15.3	18	21.5	25.3	27.3
22"	17.1	20.1	23.9	27.9	32.3
24"	18.5	21.7	25.8	30.1	34.6
26"	19.3	22.9	27.1	31.6	36.5
28"	20.4	24.2	28.7	33.5	38.6
30"	21.6	25.6	30.4	35.5	40.8
32"	22.8	27.1	32.1	37.5	48.4
34"	25.1	29.6	35	45.9	52
36"	28.1	32.9	43.8	49.9	56.3
38"	31	36.1	44.9	51.3	58.7
40"	34.4	39.7	46.1	52.8	59.7
42"	39.3	45	51.6	58.5	65.7
44"	46.5	52.3	60.2	66.5	73.8
46"	53.3	59.2	66.6	74	81.7
48"	59.6	66	73.4	81.1	89.1

Engineering Data*

Comparative Surface Temperatures					
		Flue Temperature °F			
ID	MODEL	350	500	1000	1400
		Surface Temperature °F			
6"	DW	170	220	397	520
	DW+	119	145	251	352
	DW+2	104	122	196	267
	DW+3	97	111	169	224
	DW+4	91	103	149	194
12"	DW	180	234	421	554
	DW+	119	145	260	369
	DW+2	102	119	198	274
	DW+3	95	108	169	228
	DW+4	90	101	150	197
18"	DW	187	245	445	588
	DW+	121	148	268	386
	DW+2	103	120	200	280
	DW+3	95	108	169	231
	DW+4	90	101	150	201
24"	DW	192	253	469	622
	DW+	124	153	277	403
	DW+2	104	122	202	287
	DW+3	95	109	169	235
	DW+4	90	102	151	204
30"	DW	196	260	481	638
	DW+	127	156	286	417
	DW+2	105	124	207	296
	DW+3	96	110	173	241
	DW+4	91	102	154	209
36"	DW	200	265	492	655
	DW+	129	160	295	430
	DW+2	106	125	212	305
	DW+3	97	111	176	247
	DW+4	91	103	175	214
42"	DW	203	270	504	671
	DW+	131	163	303	444
	DW+2	108	127	217	313
	DW+3	98	112	180	254
	DW+4	92	104	160	218
48"	DW	206	274	515	687
	DW+	133	166	312	457
	DW+2	109	129	222	322
	DW+3	98	114	183	260
	DW+4	93	105	163	223

Van-Packer - Easy to assemble

Note: To prevent exhaust leakage. All metal surfaces must be cleaned and free of all contaminates before sealants are applied.

Fast, on site assembly. No need for welding or special tools!

Components are joined together with a Vee Band which is fitted over the flanges of the adjoining inner liner and bolted in place. A Draw Band is then fitted over the outer shell. Supports and other accessories are just as easy to install. No welding or special tools are ever required.

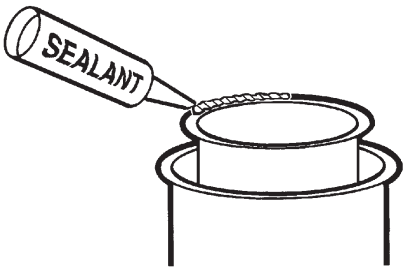


Illustration 1

1. Apply a continuous bead of the proper sealant to one of the flanges to be joined.*

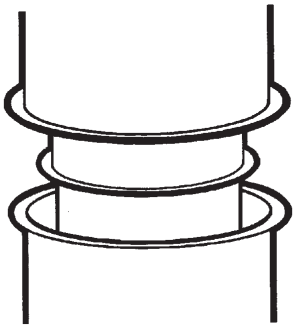


Illustration 2

2. Join the two flanged ends of the pipe sections together.

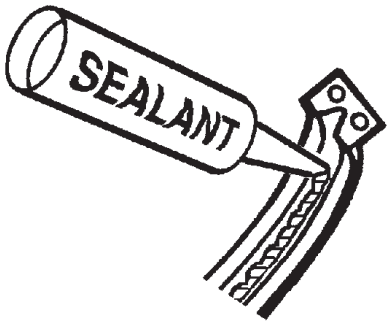


Illustration 3

3. Fill the channel of the Vee Band with proper sealant.

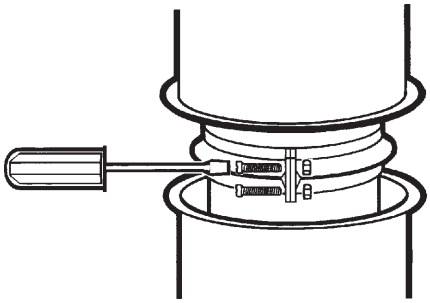


Illustration 4

4. Install Vee Band around flanges. On large diameters it may be necessary to tap the band while tightening; this will ensure a snug fit.

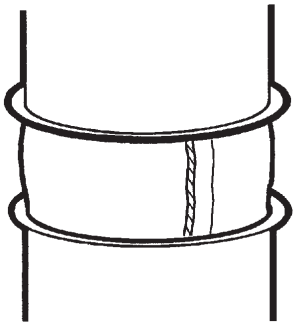


Illustration 5

5. Install insulation strips to ensure all air gaps are filled, if installing Model DWplus.

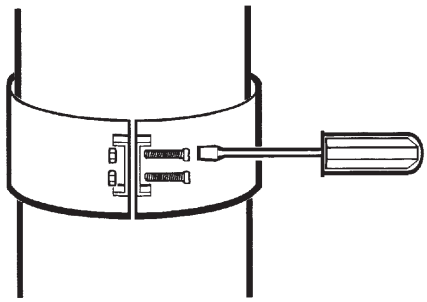


Illustration 6

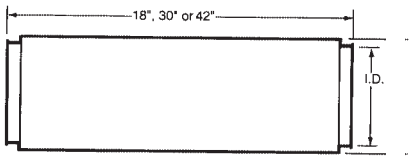
6. Secure the outer shell with the Draw Band. It is recommended that silicone sealant be applied around the top of the draw band to prevent moisture from entering between the chimney walls. This should be done on all components exposed to the atmosphere.

*If your application calls for moisture protection, such as grease duct, it is recommended that Van-Packer's 600° sealant (Part #101087A) be applied on the flanges.

A special heat resistant sealant must be used when assembling. Van-Packer's Sealant Part #101087A is used for flue temperatures up to 600° F. Sealant Part #101091F is to be used when temperatures exceed 600° F and for high positive pressure applications.

VAN-PACKER COMPONENTS

Double Wall Piping - Part No.__STR__18, __STR__30,__ STR__42



Straight section features flanges for ease of installation in both vertical and horizontal runs.

Parts include:
1-18", 30" or 42" length section
1-Vee Band
1-Draw Band
Inside diameters: 6" - 48"
Outer wall diameter=inner wall + specified insulation thickness.

Standard pipe is 18", 30" or 42" lengths. Pipe can be supplied in special lengths upon request. 42" length only available through 44" O.D.

Flow resistance factor for I.D. < 18": K=.40 L/D

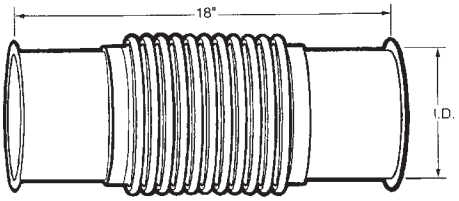
Flow resistance factor for I.D. > 18": K=.30 L/D

Flow resistance factor for diesel/turbine exhausts and grease duct: K=.25 L/D

L=pipe length in feet
D=pipe diameter in inches

Quantity (10) 42"
Insulation Thickness 1" Air Space
Pipe ID 10"
Material Configuration 304/Alzd

Bellows Expansion Joint (Lined) - Part No.__LBJ



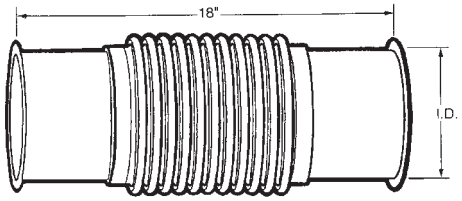
Used as an expansion joint designed to compensate for thermal expansion for high pressure applications. Maximum compressive travel is 3" for diameters 6" - 18", 3 1/2" for diameters 20" - 48".

Parts include:
1-Corrugated Bellows with Liner
1-Vee Band

Flow resistance factor:
K= Same as pipe

Quantity
Insulation Thickness
Pipe ID
Material Configuration
Projection I.D.

Bellows Expansion Joint (Unlined) - Part No.__BEJ



Used as an expansion joint designed to compensate for thermal expansion for high pressure applications. Maximum compressive travel is 3" for diameters 6" - 18", 3 1/2" for diameters 20" - 48".

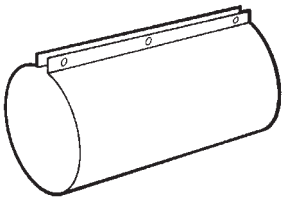
Parts include:
1-Corrugated Bellows without Liner
1-Vee Band

Flow resistance factor:
< 18" I.D. K=.44 18/D

> 18" I.D. K=.33 18/D

Quantity
Insulation Thickness
Pipe ID
Material Configuration

Bellows Expansion Cover (Optional) Part No.__BEC_

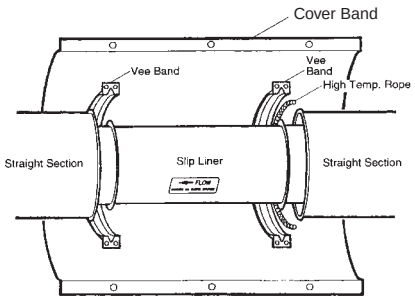


The optional bellows expansion cover is used to shield lined and unlined Bellows Joints.

Parts include:
1-One piece cover band
Insulation provided for DW+ models.

Quantity
Insulation Thickness
Pipe ID
Material Configuration

Adjustable Expansion Section - Part No.__ADJ_



Used for thermal expansion between two fixed points. A minimum penetration of one half the pipe diameter is required. Refer to installation instructions for proper assembly procedure. Maximum installation length is 20 1/2". Not applicable for high pressure applications.

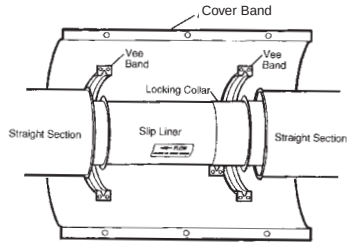
Parts include:
1-Slip Liner, flanged on one end (may be trimmed to fit)
1-One Piece Cover Band (may be field trimmed)
1-High Temp. Rope Gasket
1-Vee Band

Insulation provided for DW+ models

Flow resistance factor:
K=Same as pipe

Quantity
Insulation Thickness
Pipe ID
Material Configuration

Variable Length Section - Part No.__VLS_



Used to provide special lengths from 4 1/2" to 20 1/2".
Not used to compensate for thermal expansion.

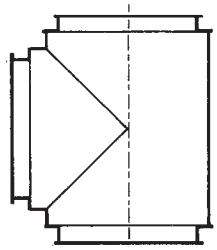
Parts include:
1-Slip Liner, flanged on one end (may be trimmed to fit length)
1-One Piece Cover Band (may be field trimmed if necessary.)
1-Vee Band
1-Locking Collar

Insulation provided for DW+ models

Flow resistance factor:
K=Same as pipe.

Quantity 2
Insulation Thickness 1" Air Space
Pipe ID 10"
Material Configuration 304/Alzd

90° Centered Tee - Part No.__90T_



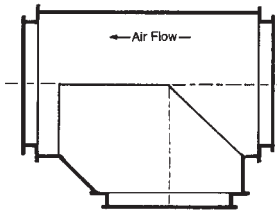
This component is used to make 90° turns. Please specify projection diameter if different than main body diameter.

Parts include:
1-90° Tee
2-Vee Bands
2-Draw Bands

Flow resistance factor:
K=1.25

Quantity 2
Insulation Thickness 1" Air Space
Pipe ID 10"
Projection I.D.
Material Configuration 304/Alzd

90° Boot Tee - Part No. __BTT_



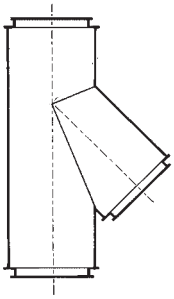
This component is used to make Low Resistance 90° turns. In some applications this 90° Boot Tee can replace 45° Tees and 45° Elbows. Please specify projection diameter if different than main body diameter.

Parts include:
1-90° Boot Tee
2-Vee Bands
2-Draw Bands

Flow resistance factor:
K=.65

Quantity
Insulation Thickness
Pipe ID
Projection I.D.
Material Configuration

45° Tee - Part No. __45T_



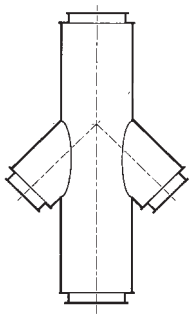
This part is used for low resistance 45° direction changes. Must specify projection diameter if different than main body diameter.

Parts include:
1-45° Tee
2-Vee Bands
2-Draw Bands

Flow resistance factor:
K=.40

Quantity
Insulation Thickness
Pipe ID
Projection I.D.
Material Configuration

Double 45° Tee - Part No.___45T__ __ /__ *see note



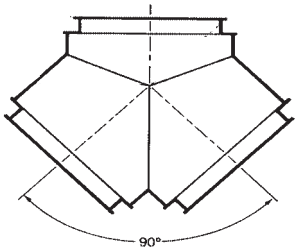
Used for joining two exhaust systems together with a minimum resistance to flow. Double Tee is non-load bearing.
***NOTE:** Projection I.D. Required.

Parts include:
1-Double 45° Tee
3-Vee Bands
3-Draw Bands

Flow resistance factor:
K=.50 per projection

Quantity
Insulation Thickness
Pipe ID
Projection I.D.#1
Projection I.D.#2
Material Configuration

90° Wye Section - Part No. __WYE_



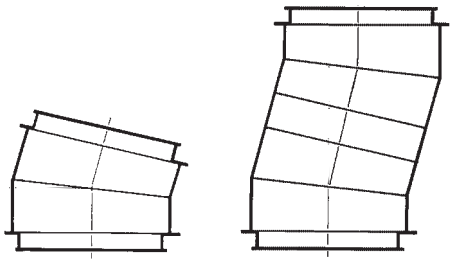
Used for joining two systems together or to provide clean outs at 90° turns for grease duct and other applications with a minimum resistance to flow.
Note: All three legs must be the same diameter.

Parts include:
1-90° Wye
2-Vee Bands
2-Draw Bands

Flow resistance factor:
K=0.6

Quantity_____
Insulation Thickness_____
Pipe ID_____
Material Configuration_____

15° Elbow - Part No. __15E_



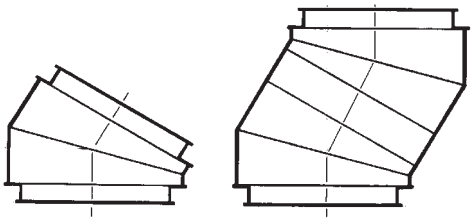
This component is used to change direction by 15 degrees. Offsets are non-load bearing.

Parts include:
1-15° Elbow
1-Vee Band
1-Draw Band

Flow resistance factor:
K=.06

Quantity_____
Insulation Thickness_____
Pipe ID_____
Material Configuration_____

30° Elbow - Part No. ___30E_



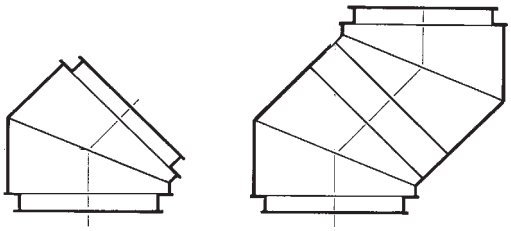
This part is used to change direction by 30 degrees. Offsets are non-load bearing.

Parts include:
1-30° Elbow
1-Vee Band
1-Draw Band

Flow resistance factor:
K=.12

Quantity_____
Insulation Thickness_____
Pipe ID_____
Material Configuration_____

45° Elbow - Part No. __45E_



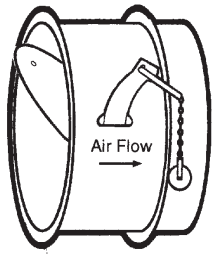
This part is used to change direction by 45 degrees. Offsets are non-load bearing.

Parts include:
1-45° Elbow
1-Vee Band
1-Draw Band

Flow resistance factor:
K=.15

Quantity_____
Insulation Thickness_____
Pipe ID_____
Material Configuration_____

Barometric Damper - Part No. ___BMD



Used to regulate excess draft.
Attatches to tee projection.

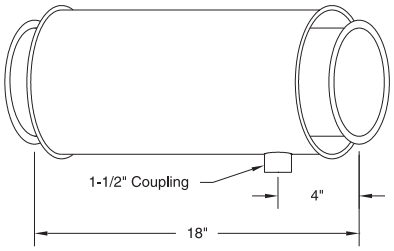
Atmospheric type draft regulator used to balance chimney draft requirements. Easily adaptable to Model DW and DWplus breeching.

Parts include:
1-Barometric Damper

Flow resistance factor:
K = .50

Quantity_____
Insulation Thickness_____
Pipe ID_____

Duct Coupling Section - Part No. __DCS__



Used for exhaust sampling. On grease duct applications allows access for automatic wash down, fire detection and fire prevention equipment. Please specify Nipple requirements if other than standard. Additional costs will be incurred.

Parts include:
1-Duct Coupling Section
1-Vee Band
1-Draw Band

Flow resistance factor:
K=.40 L/D
L=pipe length in feet
D=pipe diameter in inches

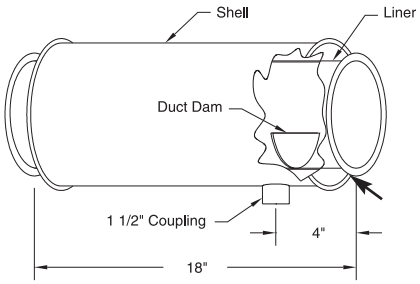
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

Duct Drain Section - Part No. __DDS_



Used to trap grease or condensate in a horizontal grease duct application.

Flow resistance:
K=.25

Parts include:
1-Duct Drain Section
1-Vee Band
1-Draw Band

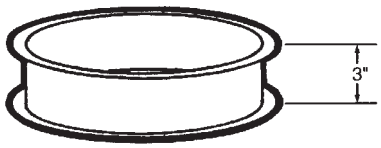
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

Fan and Hood Transition - Part No. __FHT_



Used to connect grease duct to fans and hoods.

Parts include:
1-Fan/Hood Transition
1-Vee Band

Flow resistance:
Same as pipe

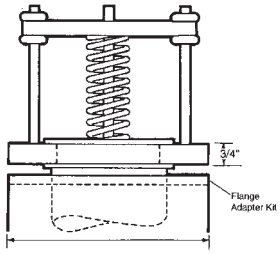
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

Pressure Relief Value - Part No. ___ERV_



Used to relieve exhaust pressures.
To be used in accordance with NFPA 37.

CAUTION!
Extreme care must be used when determining the location of this valve. If this valve is activated hot gases, flames and toxicants will be released into the atmosphere.

NOTE: Actual part may appear different than illustration depending upon required diameter.

Parts include:
1-Pressure Relief Valve
1-FAK (Flange Adapter Kit)
1-Vee Band
Bolts and Lock Washers

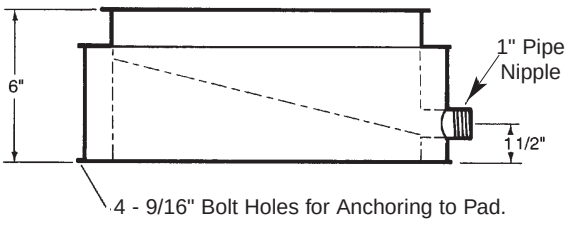
Conforms to NFPA 37

Quantity_____

Insulation Thickness_____

Pipe ID_____

Base Drain Section - Part No. __BDS__



Used at bottom of stack to permit drainage of rain or condensation.
Completely closes stack. Supplied with 1" N.P.T. nipple.
Supplied in I.D. sizes 6" to 48". Used only at base of stack.

Parts include:
1-Base Drain Section
1-Vee Band
1-Draw Band

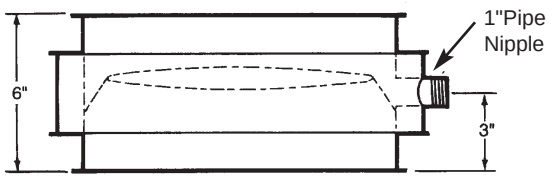
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

In-Line Drain Section - Part No. __D/S_



Used in instances where rain or condensate removal is critical. Should be located below the roof line, preferably as close to the appliance as possible, to prevent freezing.

Part is supplied in I.D. sizes 6" to 48".

Parts include:
1-In-Line Drain Section
1-Vee Band
1-Draw Band

Flow resistance factor:
K=.25

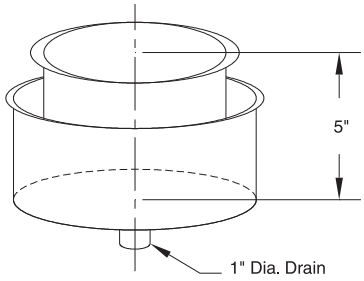
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

End Cap with Drain - Part No. __C/D_



Used as a drain in a vertical tee section.

Parts include:
1-End Cap w/Drain
1-Vee Band
1-Draw Band

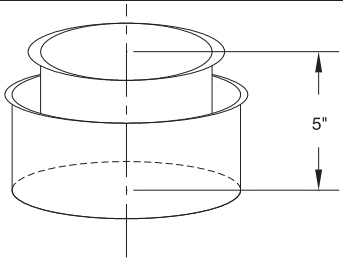
Quantity 2

Insulation Thickness 1" Air Space

Pipe ID 10"

Material Configuration 304/Alzd

End Cap - Part No. __CAP_



Used on closed end to provide a clean out and inspection access port.

Parts include:
1-End Cap
1-Vee Band
1-Draw Band

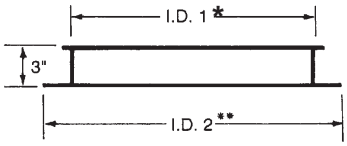
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

Abrupt Transition Section - Part No. ___*ATS_**



*=Smaller Diameter **=Larger Diameter
Maximum of 4 diameter changes are available.

This part is used when a change in pipe diameter is required in limited space.

Parts include:
1-Abrupt Transition with Outer Jacket
1-Vee Band-Large Diameter
1-Vee Band-Small Diameter
1-Draw Band-Large Diameter

Quantity_____

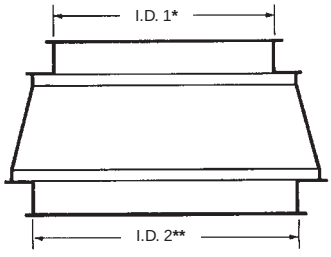
Insulation Thickness_____

Pipe I.D.#1_____

Pipe I.D.#2_____

Material Configuration_____

Increaser - Part No. __*INC_**



*=Smaller Diameter **=Larger Diameter
Maximum of 4 diameter changes are available.

This part is used to provide a low resistance increase when diameter changes are required.

Parts include:
1-Section Increaser
1-Vee Band-Large Diameter
1-Vee Band-Small Diameter
1-Draw Band-Large Diameter
1-Draw Band-Small Diameter

Overall Length:
=7.75" for One diameter size increase
=11.50" for Two diameter size increase
=15.25" for Three diameter size increase
=19.00" for Four diameter size increase

Quantity_____

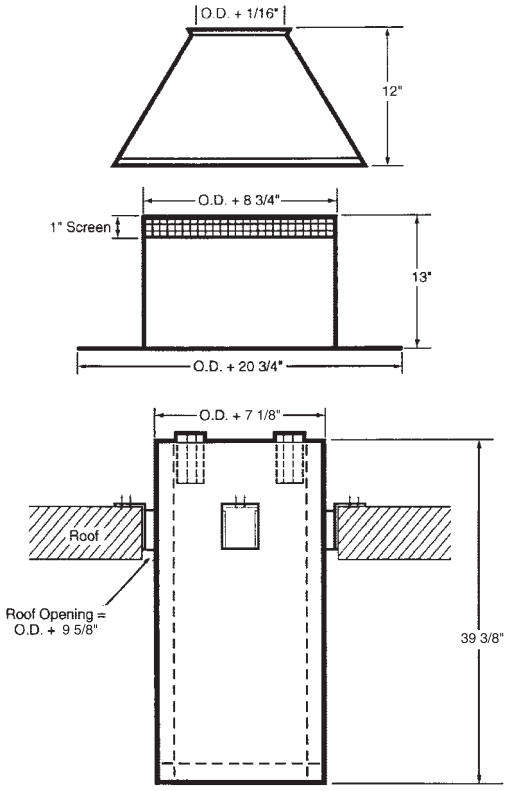
Insulation Thickness_____

Pipe I.D.#1_____

Pipe I.D.#2_____

Material Configuration_____

Roof Penetration Assembly - Part No. __RPA_



Used where stack passes through a combustible roof surface.
Non-load bearing.
Available for I.D. sizes from 6" to 48".

Parts include:
1-Ventilated Thimble
1-Flashing
1-Counter Flashing

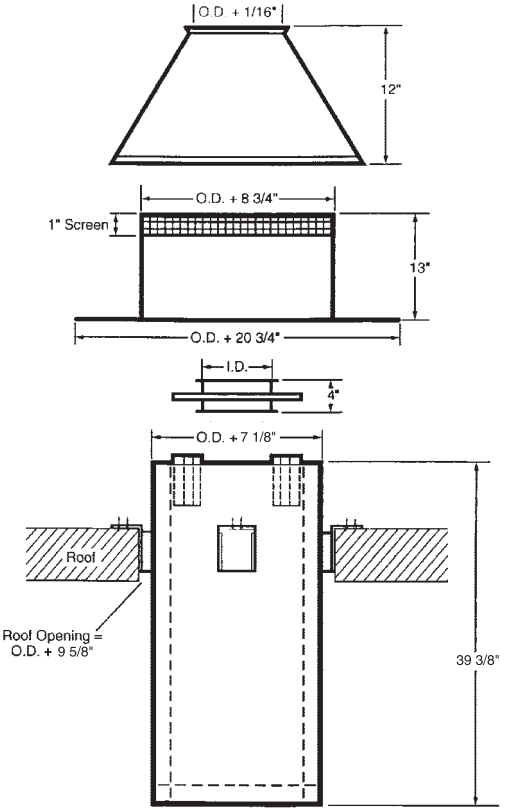
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

Ventilated Roof Support Assembly. - Part No. __VRS_



This component is used to penetrate roof structure and to provide support for the exhaust system. Available for sizes from 6" to 48" I.D.

Parts include:
1-Ventilated Roof Thimble
1-Flashing
1-Counter Flashing
1-Flange Support Assembly

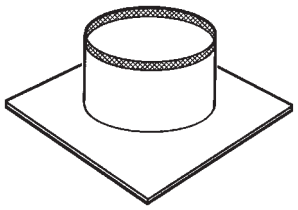
Quantity 2

Insulation Thickness 1" Air Space

Pipe ID 10"

Material Configuration 304/Alzd

Flashing - Part No. __FLS_



Can be used when the exhaust system is penetrating a non-combustible roof.

Parts include:
-24 ga. Galvanized Flashing
-Stainless Steel Optional

See Ventilated Roof Support Assembly for dimensions.

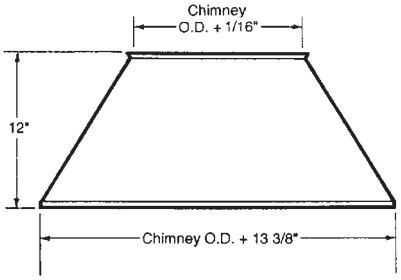
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

Counter Flashing - Part No. ___CFL_



A counter flashing is installed above the flashing to provide rain protection. Sealant should be applied to prevent leakage.

Parts Include:
-24 ga. Galvanized Counter Flashing
-Stainless Steel Optional

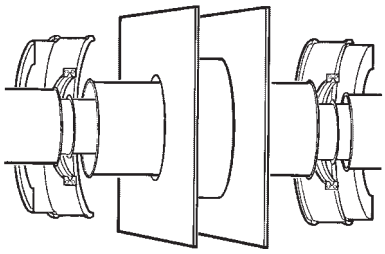
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

Wall Penetration Assembly. - Part No. __WPA_



This component is used when breeching passes through a non-fire rated interior wall. Non-load bearing. For interior walls only.

Parts include:
2-Wall Plates with a sleeve.
1-30" length of DW+ 2" insulation with adapters
1-Vee Band

Flow resistance factor:
Same as pipe.

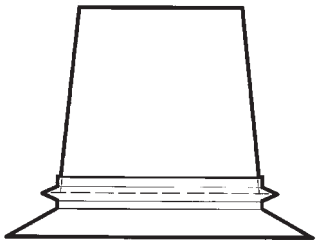
Quantity_____

Insulation Thickness Type text here

Pipe ID_____

Material Configuration_____

Velocity Cone - Part No. __CON_



This component is used to increase velocity of exiting flue gases.

Parts include:
1-Velocity Cone
1-Vee Band
1-Rain Skirt

Flow resistance factor:
K=1.25

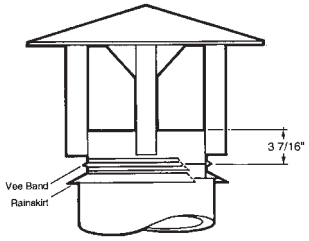
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

Double Cone Rain Cap - Part No. __DCR_



Used for rain protection at the termination of a stack. Available with or without bird screen. (Part number for Double Cone Rain cap with Bird Screen is __RCS__.)

Parts include:
1-Double Cone Rain Cap
1-Vee Band
1-Rain Skirt

K Factor: .50

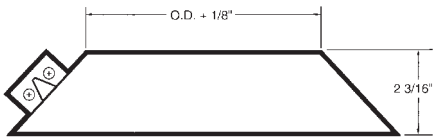
Quantity 2

Insulation Thickness N/a

Pipe ID 10"

Material Configuration 304/Alzd

Open Top Closure - Part No. ___OTC_



Use when a Rain Cap is not desired.

Parts include:
1-Open Top Closure

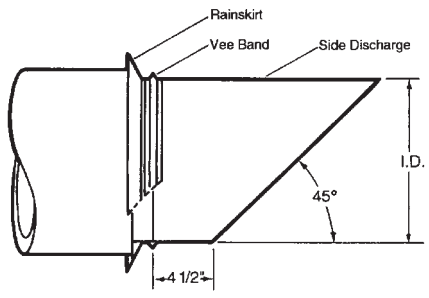
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

Engine Exhaust Side Discharge - Part No. __ESD_



Used to horizontally terminate engine/turbine exhaust systems.

Parts include:
1-Side Discharge Section
1-Vee Band
1-Rain Skirt
Also available with a bird screen upon request. Part number for this is ___SDS___.

Flow resistance factor:
Same as Pipe.

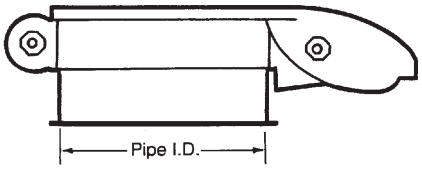
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

Flip Top Cap - Part No. __FTC_



This component is used to prevent rain from entering generator exhaust pipe.

Opens with internal pressure.

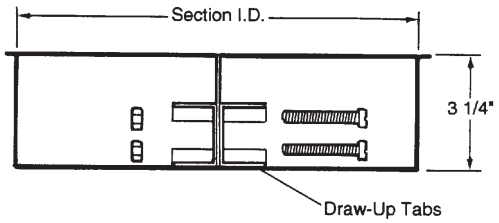
Parts include:
1-Counter balanced Flip Top Cap
1-Vee Band
1-Rain Skirt

Quantity_____

Insulation Thickness_____

Pipe ID_____

Flangeless Outlet Adapter - Part No. __FOA_



Used to connect to an appliance with a flangeless exhaust outlet.

Parts include:
1-Flangeless Outlet Adapter
1-Vee Band
1-Draw Band

Flow resistance factor:
K=Same as pipe

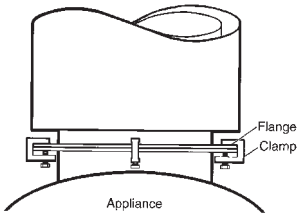
Quantity 2

Insulation Thickness 1" Air Space

Pipe ID 10"

Material Configuration 304/Alzd

Boiler Adapter Flange - Part No. __BAF_



Used to connect to an appliance which has a flanged outlet.

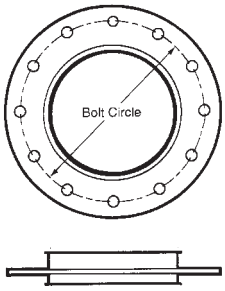
Parts include:
1-Two piece ring.
"C"-Clamps

Quantity_____

Insulation Thickness_____

Pipe ID_____

Flange Adapter Kit - Part No. __FAK_



Used for connections to engines/turbines with American Standard Class 125 Cast Iron Pipe Flanges. Typical Engine Exhaust Adapters.

Parts include:
3/8" Thick Vanstone Type Flange
(Nuts/Bolts not included)

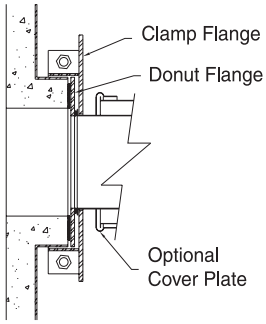
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

HT to DW Adapter - Part No. ___H/D_



Used to adapt DW Breeching to a Van-Packer HT Stack. When ordering specify both the I.D. and O.D. of the HT and DW sections.

Parts include:
1-Adapter Section
1-CVR
1-HDB

Quantity_____

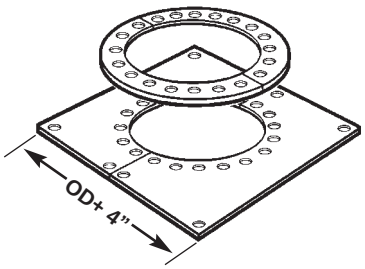
DW Insulation Thickness_____

DW Pipe I.D._____

HT Pipe I.D._____

Material Configuration_____

Plate Support Assembly - Part No. __PLS



Used as the main load bearing member and movement prevention Assembly. The Split Plate and Split Clamp Flange are assembled in two half sections aligned 90 degrees apart, above and below mating inner pipe joints. The matching holes allow the use of 3/8" bolts and nuts to clamp the inner wall flanges forming a sandwich type assembly.

Parts include:
1-Two Piece Support Plate
1-Two Piece Clamp Flange
2-Half Draw Bands
(Nuts and bolts included)

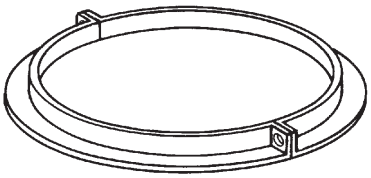
Quantity 2

Insulation Thickness 1" Air Space

Pipe ID 10"

Material is Carbon Steel, Prime Painted

Full Angle Ring - Part No. __FAR



Used for lateral support. Required for supporting diameters of 26" I.D. and larger. Also required for supporting horizontal engine exhaust systems of all diameters.

Parts include:
1-Two Piece Angle Ring
(Nuts and bolts included)

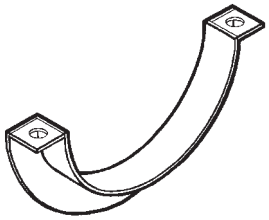
Quantity

Insulation Thickness

Pipe ID

Material is Carbon Steel, Prime Painted

Half Angle Ring - Part No. __HAR



Used to support horizontal runs of DW+ 2", 3" and 4" insulated section sizes 24" I.D. and smaller. Not for use with engine exhaust systems.

Parts include:
1-Half Angle Ring

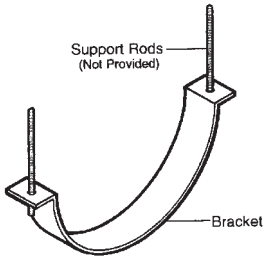
Quantity

Insulation Thickness

Pipe ID

Material is Carbon Steel, Prime Painted

Breeching Hanger Band - Part No. __BHB



Used as a support saddle for short horizontal runs of Model DW and Model DW+ section sizes 24" I.D. and smaller. Not for use with engine exhaust systems.

Parts include:
1-Hanger Band

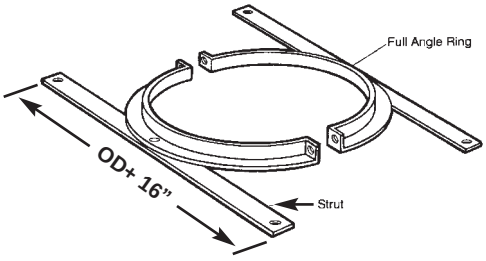
Quantity

Insulation Thickness

Pipe ID

Material is Carbon Steel, Prime Painted

Floor Guide - Part No. __FGA



Used to allow correct vertical guiding and free expansion of the stack system through each floor. Straps and Angle Struts allow for appropriate spacing and as a means of securing the Floor Alignment Guide.

Parts include:
1-Two Piece Angle Ring with welded struts attached.

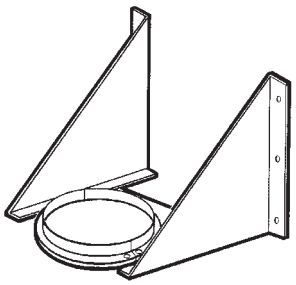
Quantity

Insulation Thickness

Pipe ID

Material is Carbon Steel, Prime Painted

Wall Guide Assembly - Part No. __WGA



Used as a means of maintaining vertical alignment of system. Maintains 6" clearance from the wall.

Parts include:
1-Two Piece Angle Ring
2-Wall Brackets

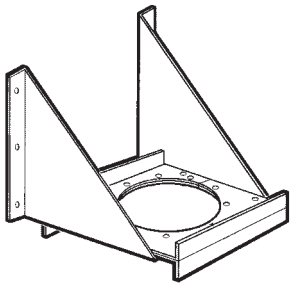
Quantity_____

Insulation Thickness_____

Pipe ID_____

Angle Ring is Carbon Steel, Prime Painted. Brackets are Galvanized.

Wall Support Assy. - Part No. __WSA



Used as a means of supporting vertical stack. Maintains 6" clearance from the wall.

Parts include:
2-Wall Brackets
2-Two Piece Supports
2-Half Draw Bands

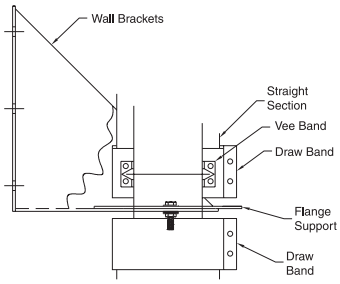
Quantity_____

Insulation Thickness_____

Pipe ID_____

Brackets and Supports are Galvanized.

Wall Flange Assy. - Part No. __WFA



Used to support vertical lengths of chiney along a wall or chase.

Parts include:
2-Wall Brackets
2-Two Half Angle Rings
1-Vee Band
1-Draw Band
(Nuts and bolts included)

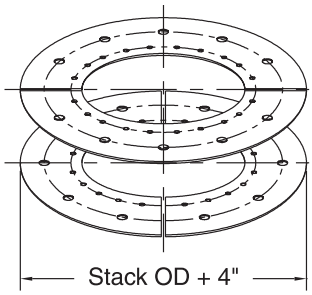
Quantity_____

Insulation Thickness_____

Pipe ID_____

Brackets and Supports are Galvanized.

Guy Attachment Ring - Part No. __GAR



Used for lateral support. Material is galvanized steel.

Parts include:
4-Half Clamp Rings
2-Half Draw Bands
(Nuts and bolts included)

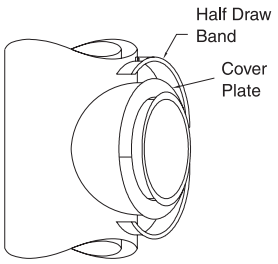
Quantity_____

Insulation Thickness_____

Pipe ID_____

Material is Galvanized Steel.

Cover Plate - Part No. __CVR



Used as an optional component. Closes off the space between the liner and the shell.

Quantity_____

Insulation Thickness_____

Pipe ID_____

Material Configuration_____

NOTES

Cut Here And Fax To:

Fax To:

Van-Packer® Co., Inc.

1-309-895-3891

1" Air Space

Date:_____ **P.O. #:**_____ **Job Name:**_____

Bill to:_____ **Ship to:**_____

Representative Firm/Location:_____

Submitted By:_____ Shipping Method:_____

Diameter:_____

Liner/Shell Code: **Check one**

( ) 304 Liner/Alzd. Shell ( ) 304 Liner/316 Shell
( ) 316 Liner/Alzd. Shell ( ) 316 Liner/304 Shell
( ) 304 Liner/304 Shell ( ) 316 Liner/316 Shell

Model Type: **Check one**

( ) Model DW ( ) Model DWplus3
( ) Model DWplus ( ) Model DWplus4
( ) Model DWplus2 ( ) Model SW

I.D.	Qty.	Part No.	Description	I.D.	Qty.	Part No.	Description
		STR*18	18″ Length			BMD	Barometric Damper
		STR*30	30″ Length			RPA*	Roof Penetration Assembly
		STR*42	42″ Length			VRS*	Roof Support Assembly
		BEJ	Bellows Expansion Joint (Unlined)			WPA*	Wall Penetration Assembly
						CFL*	Counter Flashing
		LBJ	Lined Bellows Expansion Joint			FLS*	Flashing
						THM	Insulated Thimble
		BEC*	Bellows Expansion Cover			OTC*	Open Top Closure
						DCR*	Double Cone Rain Cap
		ADJ*	Adjustable Expansion Section			RCS*	Rain Cap w/Bird Screen
						FTCB	Flip Top Cap
		VLS*	Variable Length Section			CON*	Velocity Cone
						ESD*	Engine Exhaust Side Discharge
		BTT*	Boot Tee			SDS*	Side Discharge w/Screen
		90T*	90 Deg. Centered Tee			BAFA	Boiler Adapter Flange
		45T*	45 Deg. Tee			FOAB-1	Flangeless Outlet Adapter
		WYE*	90 Deg. Wye (3 Equal Dia Legs)			FAKB	Flange Adapter Kit
						H/D-6	HT/DW Adapter
		30E*	30 Deg. Elbow			WSA	Wall Support Assembly
		45E*	45 Deg. Elbow			PLS	Plate Support Assembly
		90E*	90 Deg. Elbow			GAR	Guy Attachment Ring
		DCS*	Duct Coupling Section			FAR	Full Angle Ring
		DDS*	Duct Drain Section (Grease Duct)			HAR	Half Angle Ring
						WGA	Wall Guide Assembly
		FHTB	Fan/Hood Transition			FGA	Floor Guide Assembly
		ERVB	Pressure Relief Valve			BHB	Breeching Hanger Band
		D/S*	Drain Section (In Line)			WFA	Wall Flange Assembly
		BDS*	Base Drain Section			CVR	Cover Plate
		CAP*	End Cap			ECC*	Eccentric Increaser
		C/D*	End Cap w/Drain				
		INC*	Increaser				
		ATS*	Abrupt Transition				

Special Components/Instructions:_____

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