



December 11, 2025

Mr. Zachary Bittner
KY Dept. for Environmental Protection
Division for Air Quality
Permit Review Branch
300 Sower Boulevard, 2nd Floor
Frankfort, KY 40601

Subject: Renewal Application for Permit F-21-050 R1
Dana Light Axle Manufacturing, LLC
Dry Ridge, Grant County, Kentucky
AI# 4255, Facility ID # 21-081-00019

Dear Mr. Bittner:

Project No.: 305-2520

Dana Light Axle Manufacturing, LLC (Dana) in Dry Ridge, Grant County, Kentucky, is submitting this renewal application as required by Section G.2 of permit F-21-050 R1. Dana is requesting to remain a Conditional Major Source and will continue to maintain actual emissions of volatile organic compounds (VOCs), particulate matter (PM), individual and combined hazardous air pollutants (HAPs) below the respective emission limits specified in the current permit.

If you have any questions or comments, please do not hesitate to contact Nicole Galavotti at (859) 294-5155 or Linley Belew at Dana at (859) 206-3297. Thank you.

Sincerely,
SHIELD ENVIRONMENTAL ASSOCIATES, INC.

A handwritten signature in blue ink that reads 'Nicole Galavotti'.

Nicole R. Galavotti, P.E.
Principal/Sr. Environmental Engineer
email: nicole_galavotti@shieldmw.com

A handwritten signature in blue ink that reads 'Daniel S. Porter'.

Daniel Porter, Ph.D., P.E.
Environmental Engineer
daniel_porter@shieldmw.com

cc: Linley Belew – Dana

Attachments
Appendix A – DEP7007 AI Form
Appendix B – Previous Administrative Submittals

Lexington
948 Floyd Drive
Lexington, KY 40505
Telephone 859.294.5155
Fax 859.294.5255
www.shieldenv.com

Louisville, KY

APPENDIX A

DEP7007 Form

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007AI**Administrative Information**

- ☒ Section AI.1: Source Information
☒ Section AI.2: Applicant Information
☒ Section AI.3: Owner Information
☒ Section AI.4: Type of Application
☒ Section AI.5: Other Required Information
☒ Section AI.6: Signature Block
☐ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

☒ Additional Documentation attached

Source Name: Dana Light Axle Manufacturing, LLC

KY EIS (AFS) #: 21- 081-00019

Permit #: F-21-050 R1

Agency Interest (AI) ID: 4255

Date: 12/11/2025

Section AI.1: Source Information

Physical Location Address:	Street:	<u>10000 Business Blvd.</u>		
	City:	<u>Dry Ridge</u>	County:	<u>Grant</u>
Mailing Address:	Street or P.O. Box:	<u>10000 Business Blvd.</u>		
	City:	<u>Dry Ridge</u>	State:	<u>Kentucky</u>
		Zip Code:	<u>41035</u>	

Standard Coordinates for Source Physical Location

Longitude: -84.5829 (decimal degrees) **Latitude:** 38.6819 (decimal degrees)

Primary (NAICS) Category: Motor Vehicle Transmission and Power Train Parts Manufacturing **Primary NAICS #:** 336350

Classification (SIC) Category:

Motor Vehicle Parts and Accessories

Primary SIC #: 3714

Briefly discuss the type of business conducted at this site:

Performs welding and coating of light vehicle axles used in vans, trucks, and sport utility vehicles.

Description of Area Surrounding Source:

☐ Rural Area☒ Industrial Park☐ Residential AreaIs any part of the source
located on federal land?☐ YesNumber of
Employees:

409

☐ Urban Area☐ Industrial Area☐ Commercial Area☒ NoApproximate distance to nearest residence or
commercial property:

300 feet

Property
Area:

30 Acres

Is this source portable? ☐ Yes ☒ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:

☒ Currently Hold☐ Need☐ N/A

Solid Waste:

☐ Currently Hold☐ Need☒ N/A

RCRA:

☒ Currently Hold☐ Need☐ N/A

UST:

☐ Currently Hold☐ Need☒ N/A

Type of Regulated Waste Activity:

☐ Mixed Waste Generator☒ Generator☐ Recycler☐ Other: _____☐ U.S. Importer of Hazardous Waste☐ Transporter☐ Treatment/Storage/Disposal Facility☐ N/A

Section AI.2: Applicant Information

Applicant Name: Dana Light Axle Manufacturing, LLC

Title: (if individual) _____

Mailing Address: **Street or P.O. Box:** 10000 Business Blvd.
City: Dry Ridge **State:** KY **Zip Code:** 41035

Email: (if individual) _____

Phone: _____

Technical Contact

Name: Linley Belew

Title: Environmental Occupational Health Safety & Security Mgr.

Mailing Address: **Street or P.O. Box:** 10000 Business Blvd.
City: Dry Ridge **State:** KY **Zip Code:** 41035

Email: linley.belew@dana.com

Phone: (859) 206-3297

Air Permit Contact for Source

Name: Nicole Galavotti, P.E.

Title: Principal/Sr. Environmental Engineer, Shield Environmental Assoc., Inc.

Mailing Address: **Street or P.O. Box:** 948 Floyd Dr.
City: Lexington **State:** KY **Zip Code:** 40505

Email: nicole_galavotti@shieldmw.com

Phone: (859) 294-5155

Section AI.3: Owner Information☒ **Owner same as applicant****Name:** _____**Title:** _____**Mailing Address:** **Street or P.O. Box:** _____
City: _____ **State:** _____ **Zip Code:** _____**Email:** _____**Phone:** _____**List names of owners and officers of the company who have an interest in the company of 5% or more.****Name****Position**

Section AI.4: Type of Application

Current Status:	☐ Title V	☒ Conditional Major	☐ State-Origin	☐ General Permit	☐ Registration	☐ None
	☐ Name Change	☐ Initial Registration	☐ Significant Revision	☐ Administrative Permit Amendment		
Requested Action: (check all that apply)	☒ Renewal Permit	☐ Revised Registration	☐ Minor Revision	☐ Initial Source-wide Operating Permit		
	☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice		
	☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities		
	☐ Ownership Change	☐ Closure				
Requested Status:	☐ Title V	☒ Conditional Major	☐ State-Origin	☐ PSD	☐ NSR	☐ Other: _____

Is the source requesting a limitation of potential emissions?				☒ Yes	☐ No
Pollutant:	Requested Limit:	Pollutant:	Requested Limit:		
☒ Particulate Matter	<u>90 tons</u>	☒ Single HAP	<u>9 tons</u>		
☒ Volatile Organic Compounds (VOC)	<u>90 tons</u>	☒ Combined HAPs	<u>22.5 tons</u>		
☐ Carbon Monoxide	_____	☐ Air Toxics (40 CFR 68, Subpart F)	_____		
☐ Nitrogen Oxides	_____	☐ Carbon Dioxide	_____		
☐ Sulfur Dioxide	_____	☐ Greenhouse Gases (GHG)	_____		
☐ Lead	_____	☐ Other	_____		

For New Construction:

Proposed Start Date of Construction:
(MM/YYYY)

N/A

Proposed Operation Start-Up Date: (MM/YYYY)

N/A

For Modifications:

Proposed Start Date of Modification:
(MM/YYYY)

N/A

Proposed Operation Start-Up Date: (MM/YYYY)

N/A

Applicant is seeking coverage under a permit shield.

☐ Yes

☒ No

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

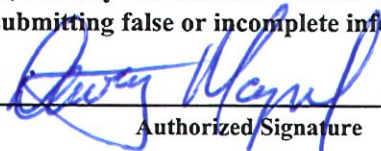
Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- | | |
|--|--|
| ☐ DEP7007A Indirect Heat Exchangers and Turbines | ☐ DEP7007CC Compliance Certification |
| ☐ DEP7007B Manufacturing or Processing Operations | ☐ DEP7007DD Insignificant Activities |
| ☐ DEP7007C Incinerators and Waste Burners | ☐ DEP7007EE Internal Combustion Engines |
| ☐ DEP7007F Episode Standby Plan | ☐ DEP7007FF Secondary Aluminum Processing |
| ☐ DEP7007J Volatile Liquid Storage | ☐ DEP7007GG Control Equipment |
| ☐ DEP7007K Surface Coating or Printing Operations | ☐ DEP7007HH Haul Roads |
| ☐ DEP7007L Mineral Processes | ☐ Confidentiality Claim |
| ☐ DEP7007M Metal Cleaning Degreasers | ☐ Ownership Change Form |
| ☐ DEP7007N Source Emissions Profile | ☐ Secretary of State Certificate |
| ☐ DEP7007P Perchloroethylene Dry Cleaning Systems | ☐ Flowcharts or diagrams depicting process |
| ☐ DEP7007R Emission Offset Credit | ☐ Digital Line Graphs (DLG) files of buildings, roads, etc. |
| ☐ DEP7007S Service Stations | ☐ Site Map |
| ☐ DEP7007T Metal Plating and Surface Treatment Operations | ☐ Map or drawing depicting location of facility |
| ☐ DEP7007V Applicable Requirements and Compliance Activities | ☐ Safety Data Sheet (SDS) |
| ☐ DEP7007Y Good Engineering Practice and Stack Height Determination | ☐ Emergency Response Plan |
| ☐ DEP7007AA Compliance Schedule for Non-complying Emission Units | ☐ Other: |
| ☐ DEP7007BB Certified Progress Report | |

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.



 Authorized Signature

Dewey Maynard

Type or Printed Name of Signatory



 Date

Plant Manager

Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

APPENDIX B

Previous Administrative Submittals



May 9, 2025

Mr. Zachary Bittner
KY Dept. for Environmental Protection
Division for Air Quality
Permit Review Branch
300 Sower Boulevard, 2nd Floor
Frankfort, KY 40601

Subject: Administrative Amendment Application for Permit F-21-050 R1
Dana Light Axle Manufacturing, LLC, Grant County, Kentucky
AI# 4255, Facility ID # 21-081-00019

Dear Mr. Bittner:

Project No.: 305-2520

Dana Light Axle Manufacturing, LLC (Dana) in Dry Ridge, Grant County, Kentucky, is submitting an Administrative Amendment Application to replace the Second Floor Boiler (IA9). This is an in-like-kind replacement and does not impact source-wide emissions (see Appendix B). Equipment specifications for the replacement boiler are attached (see Appendix C). Should there be any questions, please do not hesitate to contact Nicole Galavotti at Shield Environmental Associates, Inc. at (859) 294-5155 or Linley Belew at Dana at (859) 206-3297.

Sincerely,
SHIELD ENVIRONMENTAL ASSOCIATES, INC.

A handwritten signature in black ink that reads 'Nicole Galavotti'.

Nicole R. Galavotti, P.E.
Principal/Sr. Environmental Engineer
email: nicole_galavotti@shieldmw.com

A handwritten signature in black ink that reads 'Isabella G. Coleman'.

Isabella Coleman
Project Engineer
email: isabella_coleman@shieldmw.com

cc: Linley Belew – Dana

Attachments
Appendix A – DEP7007 Forms
Appendix B – Potential To Emit Calculations
Appendix C – Equipment Specifications

Lexington
948 Floyd Drive
Lexington, KY 40505
Telephone 859.294.5155
Fax 859.294.5255
www.shieldenv.com

Louisville, KY

APPENDIX A

DEP7007 Forms

Division for Air Quality

300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007AI

Administrative Information

- ☒ Section AI.1: Source Information
☒ Section AI.2: Applicant Information
☒ Section AI.3: Owner Information
☒ Section AI.4: Type of Application
☒ Section AI.5: Other Required Information
☒ Section AI.6: Signature Block
☐ Section AI.7: Notes, Comments, and Explanations

Additional Documentation

☒ Additional Documentation attached

Source Name: Dana Light Axle Manufacturing, LLC

KY EIS (AFS) #: 21- 081-00019

Permit #: F-21-050 R1

Agency Interest (AI) ID: 4255

Date: 5/9/2025

Section AI.1: Source Information

Physical Location Address:	Street:	10000 Business Blvd.			
	City:	Dry Ridge	County:	Grant	Zip Code:
Mailing Address:	Street or P.O. Box:	10000 Business Blvd.			
	City:	Dry Ridge	State:	Kentucky	Zip Code:

Standard Coordinates for Source Physical Location

Longitude: -84.5829 (decimal degrees) Latitude: 38.6819 (decimal degrees)

Primary (NAICS) Category: Motor Vehicle Transmission and Power Train Parts Manufacturing Primary NAICS #: 336350

Classification (SIC) Category:

Motor Vehicle Parts and Accessories

Primary SIC #: 3714

Briefly discuss the type of business conducted at this site:

Performs welding and coating of light vehicle axles used in vans, trucks, and sport utility vehicles.

Description of Area Surrounding Source:

☐ Rural Area

☒ Industrial Park

☐ Residential Area

☐ Urban Area

☐ Industrial Area

☐ Commercial Area

Is any part of the source
located on federal land?

☐ Yes

☒ No

Number of
Employees:

409

Approximate distance to nearest residence or
commercial property:

300 feet

Property
Area:

30 Acres

Is this source portable?

☐ Yes

☒ No

What other environmental permits or registrations does this source currently hold or need to obtain in Kentucky?

NPDES/KPDES:

☒ Currently Hold

☐ Need

☐ N/A

Solid Waste:

☐ Currently Hold

☐ Need

☒ N/A

RCRA:

☒ Currently Hold

☐ Need

☐ N/A

UST:

☐ Currently Hold

☐ Need

☒ N/A

Type of Regulated Waste Activity:

☐ Mixed Waste Generator

☒ Generator

☐ Recycler

☐ Other: _____

☐ U.S. Importer of Hazardous Waste

☐ Transporter

☐ Treatment/Storage/Disposal Facility

☐ N/A

Section AI.2: Applicant Information

Applicant Name:	<u>Dana Light Axle Manufacturing, LLC</u>			
Title: (if individual)	<u></u>			
Mailing Address:	Street or P.O. Box:	<u>10000 Business Blvd.</u>		
	City:	<u>Dry Ridge</u>	State:	<u>KY</u>
			Zip Code:	<u>41035</u>
Email: (if individual)	<u></u>			
Phone:	<u></u>			

Technical Contact

Name:	<u>Linley Belew</u>			
Title:	<u>Environmental, Health, Safety & Security Mgr.</u>			
Mailing Address:	Street or P.O. Box:	<u>10000 Business Blvd.</u>		
	City:	<u>Dry Ridge</u>	State:	<u>KY</u>
			Zip Code:	<u>41035</u>
Email:	<u>Linley.Belew@dana.com</u>			
Phone:	<u>859-206-3297</u>			

Air Permit Contact for Source

Name:	<u>Nicole Galavotti, P.E.</u>			
Title:	<u>Principal/Sr. Environmental Engineer, Shield Environmental Assoc., Inc.</u>			
Mailing Address:	Street or P.O. Box:	<u>948 Floyd Dr.</u>		
	City:	<u>Lexington</u>	State:	<u>KY</u>
			Zip Code:	<u>40505</u>
Email:	<u>nicole_galavotti@shieldmw.com</u>			
Phone:	<u>(859) 294-5155</u>			

Section AI.3: Owner Information

☒ **Owner same as applicant**

Name: _____

Title: _____

Mailing Address: **Street or P.O. Box:** _____
City: _____ **State:** _____ **Zip Code:** _____

Email: _____

Phone: _____

List names of owners and officers of the company who have an interest in the company of 5% or more.

Name	Position
------	----------

_____	_____
_____	_____
_____	_____

Section AI.4: Type of Application

Current Status:	☐ Title V	☒ Conditional Major	☐ State-Origin	☐ General Permit	☐ Registration	☐ None
	☐ Name Change	☐ Initial Registration	☐ Significant Revision	☒ Administrative Permit Amendment		
Requested Action: (check all that apply)	☐ Renewal Permit	☐ Revised Registration	☐ Minor Revision	☐ Initial Source-wide Operating Permit		
	☐ 502(b)(10)Change	☐ Extension Request	☐ Addition of New Facility	☐ Portable Plant Relocation Notice		
	☐ Revision	☐ Off Permit Change	☐ Landfill Alternate Compliance Submittal	☐ Modification of Existing Facilities		
	☐ Ownership Change	☐ Closure				
Requested Status:	☐ Title V	☒ Conditional Major	☐ State-Origin	☐ PSD	☐ NSR	☐ Other: _____

Is the source requesting a limitation of potential emissions?

☐ Yes☐ No

Pollutant:	Requested Limit:	Pollutant:	Requested Limit:
☐ Particulate Matter	_____	☐ Single HAP	9 tons
☐ Volatile Organic Compounds (VOC)	_____	☐ Combined HAPs	_____
☐ Carbon Monoxide	_____	☐ Air Toxics (40 CFR 68, Subpart F)	_____
☐ Nitrogen Oxides	_____	☐ Carbon Dioxide	_____
☐ Sulfur Dioxide	_____	☐ Greenhouse Gases (GHG)	_____
☐ Lead	_____	☐ Other	_____

For New Construction:

Proposed Start Date of Construction:
(MM/YYYY)

N/A

Proposed Operation Start-Up Date: (MM/YYYY)

N/A

For Modifications:

Proposed Start Date of Modification:
(MM/YYYY)

Installed

Proposed Operation Start-Up Date: (MM/YYYY)

Installed

Applicant is seeking coverage under a permit shield.

☐ Yes☒ No

Identify any non-applicable requirements for which permit shield is sought on a separate attachment to the application.

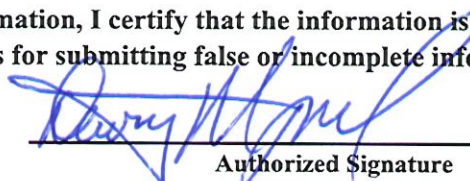
Section AI.5 Other Required Information

Indicate the documents attached as part of this application:

- | | |
|--|--|
| ☐ DEP7007A Indirect Heat Exchangers and Turbines | ☐ DEP7007CC Compliance Certification |
| ☐ DEP7007B Manufacturing or Processing Operations | ☒ DEP7007DD Insignificant Activities |
| ☐ DEP7007C Incinerators and Waste Burners | ☐ DEP7007EE Internal Combustion Engines |
| ☐ DEP7007F Episode Standby Plan | ☐ DEP7007FF Secondary Aluminum Processing |
| ☐ DEP7007J Volatile Liquid Storage | ☐ DEP7007GG Control Equipment |
| ☐ DEP7007K Surface Coating or Printing Operations | ☐ DEP7007HH Haul Roads |
| ☐ DEP7007L Mineral Processes | ☐ Confidentiality Claim |
| ☐ DEP7007M Metal Cleaning Degreasers | ☐ Ownership Change Form |
| ☐ DEP7007N Source Emissions Profile | ☐ Secretary of State Certificate |
| ☐ DEP7007P Perchloroethylene Dry Cleaning Systems | ☐ Flowcharts or diagrams depicting process |
| ☐ DEP7007R Emission Offset Credit | ☐ Digital Line Graphs (DLG) files of buildings, roads, etc. |
| ☐ DEP7007S Service Stations | ☐ Site Map |
| ☐ DEP7007T Metal Plating and Surface Treatment Operations | ☐ Map or drawing depicting location of facility |
| ☐ DEP7007V Applicable Requirements and Compliance Activities | ☐ Safety Data Sheet (SDS) |
| ☐ DEP7007Y Good Engineering Practice and Stack Height Determination | ☐ Emergency Response Plan |
| ☐ DEP7007AA Compliance Schedule for Non-complying Emission Units | ☒ Other: Potential to Emit Calculations, Equipment Specs |
| ☐ DEP7007BB Certified Progress Report | |

Section AI.6: Signature Block

I, the undersigned, hereby certify under penalty of law, that I am a responsible official*, and that I have personally examined, and am familiar with, the information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the information is on knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false or incomplete information, including the possibility of fine or imprisonment.



 Authorized Signature

Dewey Maynard

Type or Printed Name of Signatory

5/20/25

 Date

Plant Manager

Title of Signatory

*Responsible official as defined by 401 KAR 52:001.

Division for Air Quality
300 Sower Boulevard
Frankfort, KY 40601
(502) 564-3999

DEP7007DD**Insignificant Activities**

- ☒ Section DD.1: Table of Insignificant Activities
☒ Section DD.2: Signature Block
☐ Section DD.3: Notes, Comments, and Explanations

Source Name: Dana Light Axle Manufacturing, LLC
 KY EIS (AFS): 21- 081-00019
 Permit #: F-21-050 R1
 Agency Interest (AI) ID: 4255
 Date: 5/9/2025

Section DD.1: Table of Insignificant Activities

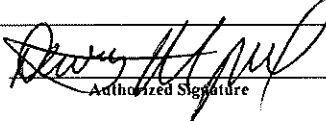
*Identify each activity with a unique Insignificant Activity number (IA #); for example: 1, 2, 3... etc.

Insignificant Activity #	Description of Activity including Rated Capacity	Serial Number or Other Unique Identifier	Applicable Regulation(s)	Calculated Emissions
9	Second floor boiler #2 (0.42MMBtu/hr) - Replacement	Precision Boiler 24333	N/A	See Appendix B

Section DD.2: Signature Block

I, THE UNDERSIGNED, HEREBY CERTIFY UNDER PENALTY OF LAW, THAT I AM A RESPONSIBLE OFFICIAL, AND THAT I HAVE PERSONALLY EXAMINED, AND AM FAMILIAR WITH, THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ALL ITS ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS WITH PRIMARY RESPONSIBILITY FOR OBTAINING THE INFORMATION, I CERTIFY THAT THE INFORMATION IS ON KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR INCOMPLETE INFORMATION, INCLUDING THE POSSIBILITY OF FINE OR IMPRISONMENT.

By:


 Authorized Signature
 Dewey Maynard
 Type/Print Name of Signatory

5/20/25
 Date

Plant Manager
 Title of Signatory

APPENDIX B

Potential to Emit (PTE) Calculations

Table 2
Hourly Emission Rates (lbs/hr)
Dana Light Axle Manufacturing, LLC
Dry Ridge, Kentucky

		Uncontrolled	Controlled										Uncontrolled	Uncontrolled	Controlled					Methyl	Methylene	Perchloro-	1,1,1-	Uncontrolled	Controlled		
EP	EU	Facility Area/Process Description	PM/PM10 (lbs/hr)	PM/PM10 (lbs/hr)	SO2 (lbs/hr)	N2O (lbs/hr)	NOx (lbs/hr)	CO2 (lbs/hr)	CO (lbs/hr)	CH4 (lbs/hr)	VOCs (lbs/hr)	Lead (lbs/hr)	Manganese (lbs/hr)	Compounds (lbs/hr)	Compound (lbs/hr)	Ethyl benzene (lbs/hr)	Xylene (lbs/hr)	Hexane (lbs/hr)	Methanol (lbs/hr)	Ketone (lbs/hr)	Chloride (lbs/hr)	ethylene (lbs/hr)	ethane (lbs/hr)	Total HAPs (lbs/hr)	Total HAPs (lbs/hr)		
Coatings																											
3	08	Line 300 Manual Spray Booth	9.44	0.024							20.84			0.03	6.59E-05	1.75	7.44							9.21	9.18		
		Spray Booth Solvent (Line 300)									1.38									0.17	4.57E-03	4.71E-03	4.57E-03	0.18	0.18		
39	55	Line 200 Manual Touch-Up Booth	9.44	0.024							20.84			0.03	6.59E-05	1.75	7.44							9.21	9.18		
		Spray Booth Solvent (Line 200)									1.38									0.17	4.57E-03	4.71E-03	4.57E-03	0.18	0.18		
9	45	Spray Paint Cans - Wilko	0.083	0.083							0.63			2.33E-04	2.33E-04	0.01	0.05							0.067	0.067		
10	46	Spray Adhesive Cans	0.026	0.026							0.52							0.010						0.01	0.01		
11	47	Spray Varnish Remover Cans									1.73						0.17	1.04		0.087				1.30	1.30		
		Parts Washers & Surface Cleaning									0.14																
Welding Operations																											
		Line 100 - 4 Robotic Welders	2.10	2.10E-03									0.105											0.105	1.05E-04		
		Line 200 - 2 Robotic Welders	1.05	1.05E-03									0.052											0.052	5.24E-05		
		Line 250 - 4 Robotic Welders	2.10	2.10E-03									0.105											0.105	1.05E-04		
		Line 300 - 2 Manual Welders	1.05	5.24E-02									0.052											0.052	2.62E-03		
		Line 400 - 4 Robotic Welders	2.10	2.10E-03									0.105											0.105	1.05E-04		
		Line 550 - 4 Robotic Welders	2.10	2.10E-03									0.105											0.105	1.05E-04		
Combustion Sources																											
		Second Floor Boiler (1) (0.42 MMBtu/hr)	3.13E-03	3.13E-03	2.47E-04	9.06E-04	4.12E-02	4.94E+01	3.46E-02	9.47E-04	2.26E-03	2.06E-07												2.06E-07	2.06E-07		
		Second Floor Boiler (2) (0.42 MMBtu/hr)	3.13E-03	3.13E-03	2.47E-04	9.06E-04	4.12E-02	4.94E+01	3.46E-02	9.47E-04	2.26E-03	2.06E-07												2.06E-07	2.06E-07		
		Dock Door 30 NG Heater TF-150 (0.150 MMBtu/hr)	1.12E-03	1.12E-03	8.82E-05	3.24E-04	1.47E-02	1.76E+01	1.24E-02	3.38E-04	8.09E-04	7.35E-08												7.35E-08	7.35E-08		
		Dock Door 27 NG Heater TF-150 (0.150 MMBtu/hr)	1.12E-03	1.12E-03	8.82E-05	3.24E-04	1.47E-02	1.76E+01	1.24E-02	3.38E-04	8.09E-04	7.35E-08												7.35E-08	7.35E-08		
		Roll-up Door / Shipping NG Heater TF-150 (0.150 MMBtu/hr)	1.12E-03	1.12E-03	8.82E-05	3.24E-04	1.47E-02	1.76E+01	1.24E-02	3.38E-04	8.09E-04	7.35E-08												7.35E-08	7.35E-08		
		Oil tank Area NG heater QVF-45 (0.045 MMBtu/hr)	3.35E-04	3.35E-04	2.65E-05	9.71E-05	4.41E-03	5.29E+00	3.71E-03	1.01E-04	2.43E-04	2.21E-08												2.21E-08	2.21E-08		
		Compactor Roll-up Door NG Heater K175QSAN (0.175 MMBtu/hr)	1.30E-03	1.30E-03	1.03E-04	3.77E-04	1.72E-02	2.06E+01	1.44E-02	3.95E-04	9.44E-04	8.58E-08												8.58E-08	8.58E-08		
		Dock Door 14 NG Heater K175QSAN (0.175 MMBtu/hr)	1.30E-03	1.30E-03	1.03E-04	3.77E-04	1.72E-02	2.06E+01	1.44E-02	3.95E-04	9.44E-04	8.58E-08												8.58E-08	8.58E-08		
		Dock Door 13 NG Heater K175QSAN (0.175 MMBtu/hr)	1.30E-03	1.30E-03	1.03E-04	3.77E-04	1.72E-02	2.06E+01	1.44E-02	3.95E-04	9.44E-04	8.58E-08												8.58E-08	8.58E-08		
		WW NG Heater K175QSAN (0.175 MMBtu/hr)	1.30E-03	1.30E-03	1.03E-04	3.77E-04	1.72E-02	2.06E+01	1.44E-02	3.95E-04	9.44E-04	8.58E-08												8.58E-08	8.58E-08		
		WW Door NG Heater K175QSAN (0.175 MMBtu/hr)	1.30E-03	1.30E-03	1.03E-04	3.77E-04	1.72E-02	2.06E+01	1.44E-02	3.95E-04	9.44E-04	8.58E-08												8.58E-08	8.58E-08		
		#1 NG Tube Heater 7D849 (0.150 MMBtu/hr)	1.12E-03	1.12E-03	8.82E-05	3.24E-04	1.47E-02	1.76E+01	1.24E-02	3.38E-04	8.09E-04	7.35E-08												7.35E-08	7.35E-08		
		#2 NG Tube Heater 7D849 (0.150 MMBtu/hr)	1.12E-03	1.12E-03	8.82E-05	3.24E-04	1.47E-02	1.76E+01	1.24E-02	3.38E-04	8.09E-04	7.35E-08												7.35E-08	7.35E-08		
		#3 NG Tube Heater 7D849 (0.150 MMBtu/hr)	1.12E-03	1.12E-03	8.82E-05	3.24E-04	1.47E-02	1.76E+01	1.24E-02	3.38E-04	8.09E-04	7.35E-08												7.35E-08	7.35E-08		
		#4 NG Tube Heater 7D849 (0.150 MMBtu/hr)	1.12E-03	1.12E-03	8.82E-05	3.24E-04	1.47E-02	1.76E+01	1.24E-02	3.38E-04	8.09E-04	7.35E-08												7.35E-08	7.35E-08		
		#1 MAU BMR-233-HTL (6.0 MMBtu/hr)	4.47E-02	4.47E-02	3.53E-03	1.29E-02	5.88E-01	7.06E+02	4.94E-01	1.35E-02	3.24E-02	2.94E-06												2.94E-06	2.94E-06		
		#2 MAU BMR-233-HTL (6.0 MMBtu/hr)	4.47E-02	4.47E-02	3.53E-03	1.29E-02	5.88E-01	7.06E+02	4.94E-01	1.35E-02	3.24E-02	2.94E-06												2.94E-06	2.94E-06		
		#3 MAU BMR-233-HTL (6.0 MMBtu/hr)	4.47E-02	4.47E-02	3.53E-03	1.29E-02	5.88E-01	7.06E+02	4.94E-01	1.35E-02	3.24E-02	2.94E-06												2.94E-06	2.94E-06		
		#4 MAU BMR-233-HTL (6.0 MMBtu/hr)	4.47E-02	4.47E-02	3.53E-03	1.29E-02	5.88E-01	7.06E+02	4.94E-01	1.35E-02	3.24E-02	2.94E-06												2.94E-06	2.94E-06		
		ARU GTDM400-275AC (3.4375 Mmbtu/hr)	2.56E-02	2.56E-02	2.02E-03	7.41E-03	3.37E-01	4.04E+02	2.83E-01	7.75E-03	1.85E-02	1.69E-06												1.69E-06	1.69E-06		
		RTU YCV090A4LOPA (0.2 MMBtu/hr)	1.49E-03	1.49E-03	1.18E-04	4.31E-04	1.96E-02	2.35E+01	1.65E-02	4.51E-04	1.08E-03	9.80E-08												9.80E-08	9.80E-08		
		RTU YCD060A4LOAA (0.12 MMBtu/hr)	8.94E-04	8.94E-04	7.06E-05	2.59E-04	1.18E-02	1.41E+01	9.88E-03	2.71E-04	6.47E-04	5.88E-08												5.88E-08	5.88E-08		
		Second Floor Hot Water Heater (0.038 MMBtu/hr)	2.83E-04	2.83E-04	2.24E-05	8.20E-05	3.73E-03	4.47E+00	3.13E-03	8.57E-05	2.05E-04	1.86E-08												1.86E-08	1.86E-08		

Table 3
Potential to Emit (tons/yr)
Dana Light Axle Manufacturing, LLC
Dry Ridge, Kentucky

		Uncontrolled	Controlled										Uncontrolled	Uncontrolled	Controlled					Methyl		Perchloro-	1,1,1-	Uncontrolled	Controlled
EP	EU	PM/PM10 (tons/yr)	PM/PM10 (tons/yr)	SO2 (tons/yr)	N2O (tons/yr)	NOx (tons/yr)	CO2 (tons/yr)	CO (tons/yr)	CH4 (tons/yr)	VOCs (tons/yr)	Lead (tons/yr)	Manganese (tons/yr)	Cobalt Compounds (tons/yr)	Cobalt Compound (tons/yr)	Ethyl benzene (tons/yr)	Xylene (tons/yr)	Hexane (tons/yr)	Methanol (tons/yr)	Ketone (tons/yr)	Methylene Chloride (tons/yr)	ethylene (tons/yr)	ethane (tons/yr)	Total HAPs (tons/yr)	Total HAPs (tons/yr)	
Coatings																									
3	08	Line 300 Manual Spray Booth	41.35	0.10						91.28			0.12	2.89E-04	7.64	32.57								40.33	40.22
		Spray Booth Solvent (Line 300)								6.06										0.73	0.020	0.021	0.020	0.79	0.79
39	55	Line 200 Manual Touch-Up Booth	41.35	0.10						91.28			0.12	2.89E-04	7.64	32.57								40.33	40.22
		Spray Booth Solvent (Line 200)								6.06										0.73	0.020	0.021	0.020	0.79	0.79
9	45	Spray Paint Cans - Wilko	0.36	0.36						2.75			1.02E-03	1.02E-03	0.05	0.24								0.29	0.294
10	46	Spray Adhesive Cans	0.11	0.11						2.29														0.05	0.05
11	47	Spray Varnish Remover Cans								7.60							0.05							5.70	5.70
		Parts Washers & Surface Cleaning								0.61								0.38							
Welding Operations																									
		Line 100 - 4 Robotic Welders	9.19	9.19E-03								0.46												0.46	4.59E-04
		Line 200 - 2 Robotic Welders	4.59	4.59E-03								0.23												0.23	2.30E-04
		Line 250 - 4 Robotic Welders	9.19	9.19E-03								0.46												0.46	4.59E-04
		Line 300 - 2 Manual Welders	4.59	2.30E-01								0.23												0.23	1.15E-02
		Line 400 - 4 Robotic Welders	9.19	9.19E-03								0.46												0.46	4.59E-04
		Line 550 - 4 Robotic Welders	9.19	9.19E-03								0.46												0.46	4.59E-04
Combustion Sources																									
		Second Floor Boiler (1) (0.42 MMBtu/hr)	0.01	0.01	0.00	0.00	0.18	216.42	0.15	0.00	0.01	9.02E-07												9.02E-07	9.02E-07
		Second Floor Boiler (2) (0.42 MMBtu/hr)	0.01	0.01	0.00	0.00	0.18	216.42	0.15	0.00	0.01	9.02E-07												9.02E-07	9.02E-07
		Dock Door 30 NG Heater TF-150 (0.150 MMBtu/hr)	0.00	0.00	0.00	0.00	0.06	77.29	0.05	0.00	0.00	3.22E-07												3.22E-07	3.22E-07
		Dock Door 27 NG Heater TF-150 (0.150 MMBtu/hr)	0.00	0.00	0.00	0.00	0.06	77.29	0.05	0.00	0.00	3.22E-07												3.22E-07	3.22E-07
		Roll-up Door / Shipping NG Heater TF-150 (0.150 MMBtu/hr)	0.00	0.00	0.00	0.00	0.06	77.29	0.05	0.00	0.00	3.22E-07												3.22E-07	3.22E-07
		Oil tank Area NG heater QVF-45 (0.045 MMBtu/hr)	0.00	0.00	0.00	0.00	0.02	23.19	0.02	0.00	0.00	9.66E-08												9.66E-08	9.66E-08
		Compactor Roll-up Door NG Heater K175QSAN (0.175 MMBtu/hr)	0.01	0.01	0.00	0.00	0.08	90.18	0.06	0.00	0.00	3.76E-07												3.76E-07	3.76E-07
		Dock Door 14 NG Heater K175QSAN (0.175 MMBtu/hr)	0.01	0.01	0.00	0.00	0.08	90.18	0.06	0.00	0.00	3.76E-07												3.76E-07	3.76E-07
		Dock Door 13 NG Heater K175QSAN (0.175 MMBtu/hr)	0.01	0.01	0.00	0.00	0.08	90.18	0.06	0.00	0.00	3.76E-07												3.76E-07	3.76E-07
		WW NG Heater K175QSAN (0.175 MMBtu/hr)	0.01	0.01	0.00	0.00	0.08	90.18	0.06	0.00	0.00	3.76E-07												3.76E-07	3.76E-07
		WW Door NG Heater K175QSAN (0.175 MMBtu/hr)	0.01	0.01	0.00	0.00	0.08	90.18	0.06	0.00	0.00	3.76E-07												3.76E-07	3.76E-07
		#1 NG Tube Heater 7D849 (0.150 MMBtu/hr)	0.00	0.00	0.00	0.00	0.06	77.29	0.05	0.00	0.00	3.22E-07												3.22E-07	3.22E-07
		#2 NG Tube Heater 7D849 (0.150 MMBtu/hr)	0.00	0.00	0.00	0.00	0.06	77.29	0.05	0.00	0.00	3.22E-07												3.22E-07	3.22E-07
		#3 NG Tube Heater 7D849 (0.150 MMBtu/hr)	0.00	0.00	0.00	0.00	0.06	77.29	0.05	0.00	0.00	3.22E-07												3.22E-07	3.22E-07
		#4 NG Tube Heater 7D849 (0.150 MMBtu/hr)	0.00	0.00	0.00	0.00	0.06	77.29	0.05	0.00	0.00	3.22E-07												3.22E-07	3.22E-07
		#1 MAU BMR-233-HTL (6.0 MMBtu/hr)	0.20	0.20	0.02	0.06	2.58	3091.76	2.16	0.06	0.14	1.29E-05												1.29E-05	1.29E-05
		#2 MAU BMR-233-HTL (6.0 MMBtu/hr)	0.20	0.20	0.02	0.06	2.58	3091.76	2.16	0.06	0.14	1.29E-05												1.29E-05	1.29E-05
		#3 MAU BMR-233-HTL (6.0 MMBtu/hr)	0.20	0.20	0.02	0.06	2.58	3091.76	2.16	0.06	0.14	1.29E-05												1.29E-05	1.29E-05
		#4 MAU BMR-233-HTL (6.0 MMBtu/hr)	0.20	0.20	0.02	0.06	2.58	3091.76	2.16	0.06	0.14	1.29E-05												1.29E-05	1.29E-05
		ARU GTDM400-275AC (3.4375 Mmbtu/hr)	0.11	0.11	0.01	0.03	1.48	1771.32	1.24	0.03	0.08	7.38E-06												7.38E-06	7.38E-06
		RTU YCD090A4LOPA (0.2 MMBtu/hr)	0.01	0.01	0.00	0.00	0.09	103.06	0.07	0.00	0.00	4.29E-07												4.29E-07	4.29E-07
		RTU YCD060A4LOAA (0.12 MMBtu/hr)	0.00	0.00	0.00	0.00	0.05	61.84	0.04	0.00	0.00	2.58E-07												2.58E-07	2.58E-07
		Second Floor Hot Water Heater (0.038 MMBtu/hr)	0.00	0.00	0.00	0.00	0.02	19.58	0.01	0.00	0.00	8.16E-08												8.16E-08	8.16E-08
TOTAL			130.11	1.95	0.08	0.29	13.14	15770.83	11.04	0.30	208.66	6.57E-05	2.30	0.23	1.60E-03	16.10	69.94	0.05	0.38	1.45	0.04	0.04	0.04	90.57	88.06

APPENDIX C

Equipment Specifications



PRECISION BOILERS



OPTIONAL EQUIPMENT AND ACCESSORIES

- Wide Choice of Burners
- Motorized Gas Valve(s)
- Low-High-Low or Modulating Control
- FM or IRI Compliance
- Fireeye Combustion Control
- Outside Air Intake Adapter
- Side or Rear Flue Connection
- Low Temperature Switch/Alarm
- Low Pressure Switch/Alarm
- Auxiliary Float-type Low Water Cutoff
- Flow Switch (Installed)
- Stainless Steel Construction (210°F max)
- Outdoor Reset Control
- Remote Reset of Setpoint
- Audible Alarm w/Silence PB (High Temp & Low Water)
- Low NOx Burner with or without FGR
- Local/Remote Switch

FPH VERTICAL FIRETUBE WATER BOILER

DESIGN ADVANTAGES

The PRECISION Model FPH Vertical Firetube Hot Water Boiler features the traditional firetube design in the vertical configuration with an underfired power burner. In addition to the simplicity of the 4-piece design, the Model FPH includes many advantages over other vertical configured boilers such as a larger water volume which results in both a low pressure drop thru the unit and reduced cycling, thus improving overall efficiency. The model FPH also features standard "off-the-shelf" burners and the proven firetube reliability.

STANDARD FEATURES AND ACCESSORIES

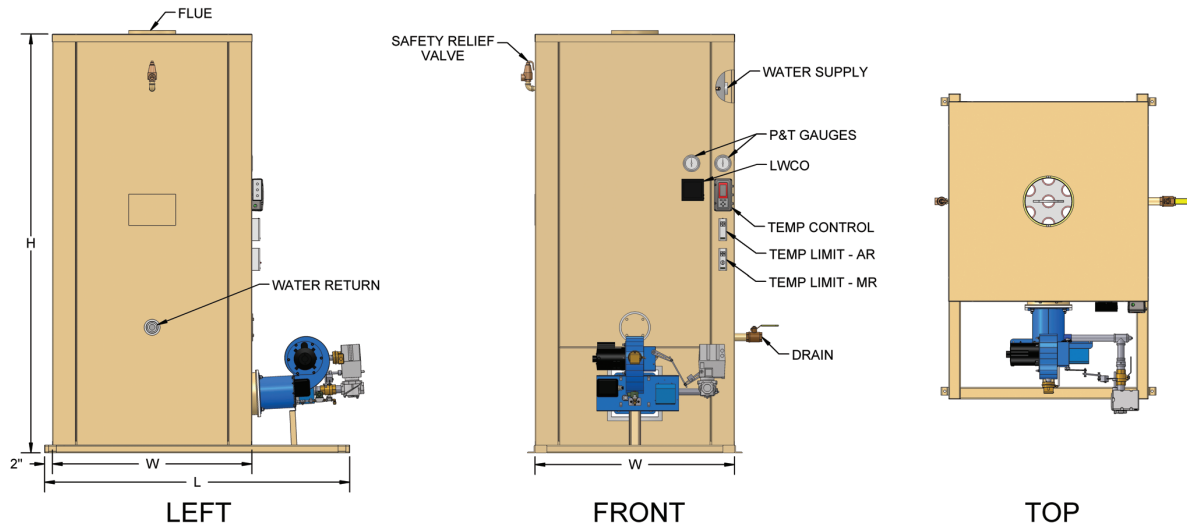
- ISO Certified Quality System
- UL Listing of Complete Assembly
- ASME Pressure Vessel w/National Board Registration
 - Section IV "H" Code (150 psi / 250°F)
 - Section I "S" Code (units > 160 psi / 250°F)
- Standard SA178-A Steel Firetubes
- Turbulators for maximum heat transfer
- 16 Gauge Steel Jacket (square jacket standard)
- High Density Insulation
- High efficiency UL Listed Power Flame power gas, light oil or combination burners
- CSD-1 Compliance (units > 400,000 BTU)
- Heat transfer area sized at approximately 4 sq ft per BHP to obtain up to 84% efficiency
- Main & Auxiliary Solenoid Gas / Oil Valves
- Honeywell Combustion Controls
- Main Gas Regulator and Cock and / or Oil Pump
- Air Proving Switch (gas only))
- Flame Inspection Port
- Tank Inspection / Cleanout Openings (2)
- Standard mechanical trim to include:
 - Temperature Control (Off-On)
 - Temperature Limit (Manual Reset)
 - ASME Safety Relief Valve
 - Pressure Gauge with Gauge Cock
 - Temperature Gauge
 - Bottom Blowdown/Drain Valve
 - Manual Reset Probe-type Low Water Cutoff w/ Light



PRECISION BOILERS

FPH VERTICAL FIRETUBE WATER BOILER

DIMENSIONAL DATA



NOTE: MINIMUM OF 18" CLEARANCE AROUND BOILER.

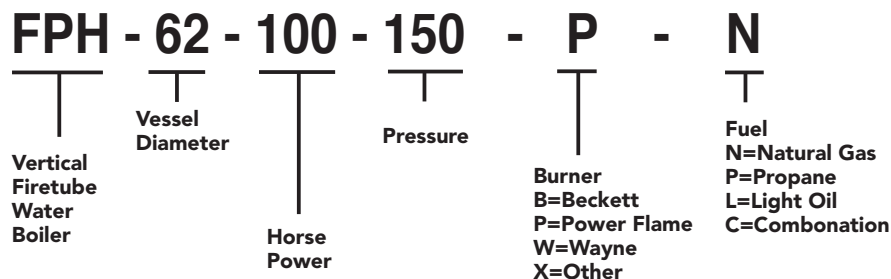
PHYSICAL DATA

MODEL NUMBER	NOM BOILER HP	RATED INPUT MBTU	NOM OUTPUT MBTU	VESSEL DIMS (IN.)		WATER VOL (GAL)	OVERALL DIMENSIONS (IN.)			CONNECTION SIZES (NPT)			FLUE SIZE	BURNER BLOWER HP (GAS)
				DIA	HEIGHT		W	L	H	SUPPLY/ RETURN	DRAIN	GAS SUPPLY		
FPH-24-09	9.5	400	330	24	45	72	28	50	82	3"	1"	3/4"	6"	1/4
FPH-24-10	10	420	340	24	48	77	28	50	85	3"	1"	3/4"	6"	1/4
FPH-31-15	15	630	520	31	45	119	35	57	82	3"	1"	1"	6"	1/4
FPH-31-20	20	840	690	31	48	122	35	57	85	3"	1"	1"	8"	1/3
FPH-39-25	25	1050	860	39	45	185	43	65	82	3"	1"	1-1/4"	8"	1/3
FPH-39-30	30	1260	1030	39	48	192	43	65	85	3"	1"	1-1/4"	10"	1/3
FPH-39-35	35	1470	1210	39	54	217	43	65	91	3"	1"	1-1/2"	10"	1/3
FPH-46-40	40	1674	1370	46	48	283	50	76	85	3"	1-1/4"	1-1/2"	12"	1/3
FPH-46-45	45	1870	1530	46	54	320	50	76	91	3"	1-1/4"	1-1/2"	12"	1/3
FPH-58-50	50	2110	1730	58	48	383	62	88	85	4" F*	1-1/2"	1-1/2"	12"	1/3
FPH-58-60	60	2500	2050	58	54	421	62	98	91	4" F	1-1/2"	2"	14"	1
FPH-58-72	72	3000	2460	58	60	454	62	98	97	4" F	1-1/2"	2"	14"	1
FPH-58-84	84	3500	2870	58	70	532	62	98	107	4" F	1-1/2"	2"	16"	1-1/2 †
FPH-62-84	84	3500	2870	62	60	512	66	106	97	4" F	1-1/2"	2"	16"	1-1/2 †
FPH-62-100	100	4200	3440	62	60	464	66	106	97	4" F	1-1/2"	2-1/2"	16"	1-1/2 †
FPH-69-120	120	5000	4100	69	66	706	73	113	103	4" F	1-1/2"	2-1/2"	18"	3 †

* Indicates Flanged Connection (150# w/3" stick-out)

† 3-Phase

HOW TO SELECT A MODEL NUMBER





PRECISION BOILERS

FPH VERTICAL FIRETUBE WATER BOILER

CONVERSIONS/EQUATIONS

$$KW = \frac{GPH \times \Delta T (^{\circ}F)}{410} = \frac{LPH \times \Delta T (^{\circ}C)}{862}$$

$$KW = GPM \times \Delta T (^{\circ}F) \times .146$$

$$10KW = 1.02 BHP = 34 \text{ Lbs Steam/H} = 34,120 \text{ BTU/H}$$

$$GPH = \frac{KW \times 410}{\Delta T (^{\circ}F)} \quad \text{Amps (3 phase)} = \frac{KW \times 1000}{\text{Volts} \times 1.732}$$

$$GPH = \frac{BTU/H}{8.33 \times \Delta T (^{\circ}F)} \quad \text{Amps (1 phase)} = \frac{KW \times 1000}{\text{Volts}}$$

$$BTU/H = KW \times 3412$$

$$BTU/H = \Delta T \times 500 \times GPM$$

$$1 \text{ gal water at } 62^{\circ}F = 8.34 \text{ Lbs} \quad 1 \text{ cu ft} = 7.48 \text{ gallons}$$

$$1 \text{ cu ft water at } 62^{\circ}F = 62.4 \text{ Lbs} \quad 1 \text{ ft water} = 0.435 \text{ psi}$$

$$\text{Enthalpy of water} = \text{Temp } (^{\circ}F) - 32 \text{ BTU/LB}$$

SATURATED STEAM: PRESSURE vs. TEMPERATURE

0 psig = 0 KPa = 212°F	150 psig = 1034 KPa = 366°F
8 psig = 55 KPa = 235°F	175 psig = 1207 KPa = 377°F
15 psig = 103 KPa = 250°F	200 psig = 1379 KPa = 388°F
30 psig = 207 KPa = 274°F	225 psig = 1551 KPa = 397°F
50 psig = 345 KPa = 298°F	250 psig = 1724 KPa = 406°F
80 psig = 552 KPa = 324°F	300 psig = 2068 KPa = 422°F
100 psig = 690 KPa = 338°F	350 psig = 2413 KPa = 436°F
125 psig = 862 KPa = 353°F	400 psig = 2758 KPa = 448°F

BURNER OPTIONS

As with all power-fired boilers, the burner is the heart of the unit. PRECISION has chosen as its standard the Power Flame burner for the majority of applications, and either Wayne or Beckett burners as economical choices for low Hp boilers, with other burners available as options. The Power Flame burner is one of the industry's leading burners and is well suited for this application. The FPH boiler's large combustion chamber and generous heat release area have been carefully matched to the burner size to obtain up to 84% efficiency on natural gas, and up to 86% on light oil. The proven Honeywell combustion control system is provided as standard for gas/oil burners, with other systems available as options.

CONTROL OPTIONS

Off-On control is standard and is quite sufficient for boilers up to 45 Hp. However, boilers rated 50 to 100 Hp may have better operation with either low-high-low burner controls, or a modulating control system.

CONTACT US FOR THESE QUALITY PRODUCTS

- Electric Storage Heaters 125 to 5500 Gallons
- Electrode High Voltage Boilers
- Thermal Storage Systems Space Heating & Domestic or Process Water; Electric, Gas or Steam Fired
- Boiler Feedwater Systems
- Pressure Vessels Water Storage Tanks Flash Tanks Blowdown Tanks
- Unfired Hot Water and Steam Generators
- Deaerators and Surge Tanks
- Steam Superheaters-Electric
- Circulation Heaters-Electric
- Gas or Oil-Fired Vertical Firetube Boilers and Water Heaters
- Gas or Oil-Fired WaterTube Boilers (Flextube Type)
- Chemical Bypass Feeders and Automatic Chemical Feed Systems

NOTE: In pursuing our policy of continuous development of products, PRECISION reserves the right to vary any detail in this bulletin without notice.



PRECISION BOILERS

FPH VERTICAL FIRETUBE WATER BOILER

SPECIFICATIONS

Note: Items shown in parentheses () are options

1. GENERAL

Furnish and install as shown on the plans a PRECISION Vertical Firetube Water Boiler Model FPH _____ which shall be a complete pretested, packaged unit consisting of a (gas) (oil) power burner with integral vessel, complete with all required operating and safety controls. The Boiler shall include a pressure vessel built to the requirements of ASME Section IV, designed for (125) (150) PSIG, and National Board registered. Units greater than 400,000 BTU shall also comply with CSD-1. A copy of the Manufacturer's Data Report shall be provided to the owner.

2. RATINGS

Boiler(s) shall each be PRECISION Vertical Firetube Model No. FPH rated _____ BHp. The Boiler(s) shall be designed for _____ GPM with a discharge temperature of _____ ° F. Inlet and Outlet connection sizes shall be _____ " (NPT) (FLG).

3. POWER BURNER (SELECT ONE)

A. Gas-Fired Burner rated _____ BHp with an input of _____ BTU/H (natural gas) (propane).

B. Oil-Fired Burner rated _____ BHp with an input of _____ GPH / _____ BTU/H (#1) (#2) fuel oil.

C. Gas-Oil Combination Burner rated _____ BHP with an input of _____ BTU/H (natural gas) (propane) and GPH (#1) (#2) fuel oil.

Burner shall be designed for _____ V, _____ PH, _____ HZ, electrical supply.

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4. CONTROLS AND SAFETY DEVICES

Each Boiler shall be equipped with an ASME pressure relief valve(s), separate pressure and temperature gauges, temperature control, upper temperature limit (auto reset), upper temperature limit (manual reset), low water cutoff (manual reset w/test button and pilot light), and drain valve.

5. BURNER CONTROLS

A. Natural or Propane Gas

120V control power with 24V combustion control, redundant gas valves, flame rod sensor with 4 sec safety shutdown, 30 sec prepurge, combustion air proving switch, direct spark ignition with 7300V ignition, 3200 RPM blower motor. Burner to have primary air adjustment (with) (without) optional outside air intake adapter.

B. Oil

120V control power with 3500 RPM fuel pump, cadmium sulfide cell and relay control, 10,000V constant duty ignition, solenoid oil valve(s). Burner to have primary air adjustment (with) (without) optional outside air intake adapter.

6. ENCLOSURE

The pressure vessel shall be insulated with a minimum of 4 inches of 3/4 pound density fiberglass insulation and shall be enclosed in an enameled 16 gauge sheet steel enclosure.

7. MANUFACTURER

Boiler(s) shall be PRECISION Model FPH-_____ or approved equivalent. Alternate bids shall indicate any deviations from these specifications, and shall state price deductions for substitution of said alternates.

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PRECISION
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