Hobas Pipe USA, Inc.

Houston, Harris County, Texas
TCEQ Account No.: HG-1531-T
Regulated Entity No.: RN102540812
Customer Reference No.: CN600127757

STEERS Electronic Submittal Attachment
Amendment to PBR No. 165077 using 30 TAC §106.262
New Grinding Room and Restraint Joint Hand Grinders

March 2025

Prepared for:
Hobas Pipe USA, Inc.
1413 E Richey Road
Houston, TX 77073

Prepared by:
Tower Environmental, Inc.
P.O. Box 131162
The Woodlands, TX 77393
281-615-6594

HOBAS PIPE USA
STEERS ELECTRONIC SUBMITTAL ATTACHMENT
AMENDMENT TO PBR NO. 165077 USING 30 TAC §106.262
GRINDING ROOM AND RESTRAINT JOINT HAND GRINDERS

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INTRODUCTION

PERMIT BY RULE REGISTRATION
AMENDMENT TO PBR NO. 165077 USING 30 TAC §106.262
GRINDING ROOM AND RESTRAINT JOINT HAND GRINDERS

INTRODUCTION

Overall Hobas Process Description

Hobas Pipe USA (Hobas) operates a glass fiber reinforced, aggregate fortified, thermosetting resin tubular (FRP) manufacturing plant at 1413 E. Richey Road, in Houston. The main products produced onsite are centrifugally cast FRP that are circular in cross-section with diameter from 18 to 126 inches and lengths up to 20 feet.

Hobas operates the equipment necessary to make non-circular (NC) cross-sectional pipes. The NC pipe has various oval cross-sectional profiles that are ideal for relining old city sewers. The pipe profile has a lower, narrower section of the pipe ensuring good water flow and an upper, wider profile of the pipe allowing higher volume of flow when necessary.

Hobas is also authorized to manufacture glass reinforced plastic pipes and sleeves in the continuous filament winding pipe plant (FWP). The FWP uses an open molding resin application technique that wraps resin-saturated filament around a rotating mandrel to produce pipes with high corrosion resistance.

Additionally, Hobas manufactures various types of pipe couplings using open molding resin and fiberglass hand layup techniques.

Surface repair of pipes and couplings is performed using hand grinders. These grinders are equipped with a dust collection shroud that is connected to the Spencer vacuum system. The captured dust is routed by this vacuum system through a highly efficient cartridge filtration system prior to exhausting filtered conveyance air to the atmosphere.

Project Description and Purpose of the Permit-by-Rule (PBR)

Hobas plans to install a total of eight portable hand grinders with dust collection shrouds in the Fitting Grinding room and in the Restraint Joint work area. These eight hand grinders will be tied into the Spencer vacuum system using flexible ducting drops from the central vacuum duct that is connected to the existing Donaldson-Torit DFE 2-8 cartridge filter (EPN: DC-10). Each grinder will have a dedicated flexible ducting drop.

A TCEQ Table 11 and vendor information on the cartridge filter is provided in Section 5 of this document.

Purpose of the Permit-by-Rule (PBR)

These new hand grinders are emission facilities that are required by Texas air quality regulations [30 TAC §116.116(a)(4)] to obtain construction and operating permit authorizations. The purpose of this submittal is to provide TCEQ with the information needed to grant permit authorizations to install these new hand grinder emission facilities and vent them to the existing Spencer dust collector (DC-10).

The Spencer Dust collector (EPN: DC-10) is authorized to operate under Permit-by-Rule 30 TAC §106.262 (PBR No. 165077). The approach used in this air permit submittal package is to request an “amendment” of PBR No. 165077 to include these new emission facilities.

Emission Consequence

The emission estimates used in the current air permit for the Spencer dust collector is based on the established approach of using an outlet grainloading of 0.002 gr/dscf multiplied by the capacity vacuum air handling rated of the Spencer. There will not be a change to that capacity vacuum air handling rate or to the dust collector associated with this project. As a result, emissions will not increase over the rate currently authorized by PBR No. 165077.

The General Facilities workbook for 30 TAC §106.262 is used to authorize the addition of these eight new grinding stations. However, the workbook is not formatted for projects resulting in no emissions increase. The Project emission changes representation in the attached General Facilities workbook is arbitrarily set at 0.001 tn/yr for purposes of getting the General Facilities workbook to function.

Document Organization

This TCEQ Registration for Permits-by-Rule package is organized in five sections:

- Descriptions of the overall Hobas process, the proposed Project, purpose for this submittal and the emissions consequence of this permit action are in Section 1 of this document.
- Forms PI 7-CERT and 30 TAC §106.4 Permit-by-Rule Applicability Checklist are included in Section 2.
- The PI-7 (Certification and Registration for Permits by Rule workbook) is included in Section 3.
- Emission estimates and TCEQ Table 1(a) are included in Section 4.
- Vendor information on the Spencer dust collector and TCEQ Table 11 are included in Section 5 for reference.

SECTION 2

FORM PI-7-CERT
&
30 TAC §106.4 RULE APPLICABILITY CHECKLIST

Form PI-7-CERT – Certification & Registration for Permit by Rule

Certification and Registration for Permits by Rule
Form PI-7-CERT
Page 1
Texas Commission on Environmental Quality

I. Registrant Information
A. Company or Other Legal Customer Name: Hobas Pipe USA, Inc.
Company Official Contact Information (☒ Mr. ☐ Mrs. ☐ Ms. ☐ Other _____)
Name: Juan Gutierrez
Title: Director of Environmental, Health & Safety
Mailing Address: 1413 E. Richey Road
City: Houston
State: TX
ZIP Code: 77073
Phone: 832-528-4464
Fax:
Email Address: jgutierrez@hobaspipe.com
All PBR registration responses will be sent via email.
A. Technical Contact Information (☒ Mr. ☐ Mrs. ☐Ms. ☐ Other _____)
Name: Dennis McCormick
Title: Managing Consulting Engineer
Company Name: Tower Environmental, Inc.
Mailing Address: P.O. Box 131162
City: The Woodlands
State: TX
ZIP Code: 77393
Phone Number: 281-615-6594
Fax Number:
Email Address: dmccormick@towerenv.com

Certification and Registration for Permits by Rule
Form PI-7-CERT
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II. Facility and Site Information
A. Name and Type of Facility
Facility Name: Eight Hand Grinder Vacuum Drops
Facility Type: ☒ Permanent ☐ Temporary
For portable units, please provide the serial number of the equipment being authorized below.
Serial No(s):
B. Facility Location Information
Street Address: 1413 E. Richey Road
If there is no street address, provide written driving directions to the site and provide the closest city or town, county, and ZIP code for the site (attach description if additional space is needed).
City: Houston
County: Harris
ZIP Code: 77073
C. TCEQ Core Data Form
Is the Core Data Form (TCEQ Form Number 10400) attached? ☐ YES ☒ NO
If "NO," provide customer reference number (CN) and regulated entity number (RN) below.
Customer Reference Number (CN): CN600127757
Regulated Entity Number (RN): RN102540812
D. TCEQ Account Identification Number (if known): HG-1531-T
E. Type of Action
☒ Initial Application ☐ Change to Registration
For Change to Registration provide the Registration Number:
F. PBR number(s) claimed under 30 TAC Chapter 106
(List all the individual rule number(s) that are being claimed.)
106.262
106.
106.
106.

II. Facility and Site Information *(continued)*			
G. Historical Standard Exemption or PBR			
Are you claiming a historical standard exemption or PBR? ☐ YES ☒ NO			
If "YES," enter rule number(s) and associated effective date in the spaces provided below.			
Rule Number:		Effective Date:	
Rule Number:		Effective Date:	
H. Previous Standard Exemption or PBR Registration Number			
Is this authorization for a change to an existing facility previously authorized under a standard exemption or PBR? ☒ YES ☐ NO			
If "YES," enter previous standard exemption number(s) and PBR registration number(s) and associated effective dates in the spaces provided below.			
Standard Exemption and PBR Registration Number: 165077			
Effective Date: 06/04/2021			
I. Other Facilities at this Site Authorized by Standard Exemption, PBR, or Standard Permit			
Are there any other facilities at this site that are authorized by an Air Standard Exemption, PBR, or Standard Permit? ☒ YES ☐ NO			
If "YES," enter standard exemption number(s), PBR registration number(s), and Standard Permit registration number(s), and associated effective date in the spaces provided below.			
Standard Exemption, PBR Registration, and Standard Permit Registration Number(s) / Effective Date:			
74232 - §106.454 / 12/8/2004	80993 - §106.183 / 11/16/2007	86099 - §106.266 / 9/22/2008	86710 - §106.473 / 12/5/2008
91794 - §106.266 / 2/26/2010	76043 - §106.511 / 6/5/2018	152180 - §106.511 / 6/05/2018	162442 - §6001 / 10/02/2020
163329 - §106.262 / 12/9/2020	165077 - §106.262 / 6/4/2021	165428 – §6001 / 7/15/2021	167814 - §106.261 / 3/04/2022
167815 - §106.265 / 3/09/2022	169211 - §106.262 / 6/17/2022	166507 - §106.412/473/ 9/29/21	170922 - §106.433 / 12/02/2022
174376 - §6001 / 11/14/2023	174381 – §106.495 / 11/3/2023		
J. Other Air Preconstruction Permits			
Are there any other air preconstruction permits at this site? ☒ YES ☐ NO			
If "YES," enter permit number(s) in the spaces provided below.			
55013			
K. Affected Air Preconstruction Permits			
Does the PBR being claimed directly affect any permitted facility? ☐ YES ☒ NO			

II. Facility and Site Information *(continued)*	
If "YES," enter the permit number(s) in the spaces provided below.	
L. Federal Operating Permit (FOP) Requirements (30 TAC Chapter 122 Applicability)	
1. Is this facility located at a site that is required to obtain an FOP pursuant to 30 TAC Chapter 122?	☒ YES ☐ NO ☐ To Be Determined
If the site currently has an existing FOP, enter the permit number: O2766	
Check the requirements of 30 TAC Chapter 122 that will be triggered if this certification is accepted. *(check all that apply)*	
☐ Initial Application for a FOP ☐ Significant Revision for an SOP	☐ Minor Revision for an SOP
☒ Operational Flexibility/Off Permit Notification for an SOP	☐ Revision for a GOP
☐ To be Determined ☐ None	
2. Identify the type(s) of FOP issued and/or FOP application(s) submitted/pending for the site. *(check all that apply)*	
☒ SOP ☐ GOP ☐ GOP application/revision (submitted or under APD review)	
☐ N/A ☐ SOP application/revision (submitted or under APD review)	
III. Fee Information (*See Section VII. for address to send fee or go to www.tceq.texas.gov/epay to pay online.)*	
A. Fee Requirements	
Is a fee required per Title 30 TAC § 106.50?	☒ YES ☐ NO
If "NO," specify the exception. There are three exceptions to paying a PBR fee. (*check all that apply*)	
1. Registration is solely to establish a federally enforceable emission limit.	☐
2. Registration is within six months of an initial PBR review, and it is addressing deficiencies, administrative changes, or other allowed changes.	☐
3. Registration is for a remediation project (30 TAC § 106.533).	☐
B. Fee Amount	
1. A $100 fee is required if *any* of the answers in III.B.1 are "YES."	
This business has less than 100 employees.	☐ YES ☒ NO
This business has less than $6 million dollars in annual gross receipts.	☐ YES ☒ NO
This registration is submitted by a governmental entity with a population of less than 10,000.	☐ YES ☒ NO
This registration is submitted by a non-profit organization.	☐ YES ☒ NO

III.	**Fee Information (***See Section VII. for address to send fee or go to www.tceq.texas.gov/epay to pay online.) (continued)*
2.	A $450 fee is required for all other registrations
A.	Payment Information
Check/money order/transaction or voucher number:	
Individual or company name on check:	
Fee Amount:	
Was the fee paid online?	☒ YES ☐ NO
IV.	**Technical Information Including State aAnd Federal Regulatory Requirements** **Check the appropriate box to indicate what is included in your submittal.** **NOTE:** *Any technical or essential information needed to confirm that facilities are meeting the requirements of the PBR must be provided. Not providing key information could result in a deficiency of the project.*
A.	PBR requirements (Checklists are optional; however, your review will go faster if you provide applicable checklists.)
Did you demonstrate that the general requirements in 30 TAC § 106.4 are met?	☒ YES ☐ NO
Did you demonstrate that the individual requirements of the specific PBR are met?	☒ YES ☐ NO
B	Confidential Information Included (If confidential information is submitted with this registration, all confidential pages must be properly marked “CONFIDENTIAL.”) ☐ YES ☒ NO
C.	Process Flow Diagram: ☐ YES ☒ NO
D.	Process Description: ☒ YES ☐ NO
E.	Maximum Emissions Data and Calculations: ☒ YES ☐ NO
Note: *If the facilities listed in this registration are subject to the Mass Emissions Cap & Trade program under* ***30 TAC Chapter 101, Subchapter H, Division 3,*** *the owner/operator of these facilities must possess NO_x allowances equivalent to the actual NO_x, emissions from these facilities.*	
F.	Is this certification being submitted to certify the emissions for the entire site? ☐ YES ☒ NO
If “NO,” include a summary of the specific facilities and emissions being certified.	
G.	Table 1(a) (Form 10153) Emission Point Summary: ☒ YES ☐ NO
H.	Distances from Property Line and Nearest Off-Property Structure
Distance from this facility’s emission release point to the nearest property line: 190	feet
Distance from this facility’s emission release point to the nearest off-property structure: 384	feet

IV. Technical Information Including State and Federal Regulatory Requirements **Check the appropriate box to indicate what is included in your submittal.** **NOTE:** *Any technical or essential information needed to confirm that facilities are meeting the requirements of the PBR must be provided. Not providing key information could result in a deficiency of the project.*
I. Project Status
Has the company implemented the project or waiting on a response from TCEQ? ☒ Implemented ☐ Waiting
J. Projected Start of Construction and Projected Start of Operation Dates:
Projected Start of Construction (provide date): 03/17/2025
Projected Start of Operation (provide date): 03/31/2025
V. Delinquent Fees
This form **will not be processed** until all delinquent fees and/or penalties owed to the TCEQ or the Office of the Attorney General on behalf of the TCEQ is paid in accordance with the Delinquent Fee and Penalty Protocol. For more information regarding Delinquent Fees and Penalties, go to the TCEQ website at: www.tceq.texas.gov/agency/financial/fees/delin/index.html.
VI. Signature For Registration and Certification
The signature below confirms that I have knowledge of the facts included in this application and that these facts are true and correct to the best of my knowledge and belief. I further state that to the best of my knowledge and belief, the project for which this application is made will not in any way violate any provision of the Texas Water Code (TWC), Chapter 7; the Texas Health and Safety Code, Chapter 382, the Texas Clean Air Act (TCAA); the air quality rules of the Texas Commission on Environmental Quality; or any local governmental ordinance or resolution enacted pursuant to the TCAA. I further state that I understand my signature indicates that this application meets all applicable nonattainment, prevention of significant deterioration, or major source of hazardous air pollutant permitting requirements. The signature further signifies awareness that intentionally or knowingly making or causing to be made false material statements or representations in the application is a criminal offense subject to criminal penalties.
Name (printed): Juan Gutierrez
Signature (original signature required): Juan Gutierrez
Date: March 2025

VII. Submitting Copies of the Certification and Registration

Copies must be sent as listed below.
Processing delays may occur if copies are not sent as noted.

Who	Where	What
Air Permits Initial Review Team (APIRT)	Regular, Certified, Priority Mail MC 161, P.O. Box 13087 Austin, Texas 78711-3087 Hand Delivery, Overnight Mail MC 161, 12100 Park 35 Circle, Building C, Third Floor Austin, Texas 78753	Originals Form PI-7-CERT, Core Data Form, and all attachments. Not required if using ePermits[1].
Revenue Section, TCEQ	Regular, Certified, Priority Mail MC 214, P.O. Box 13088 Austin, Texas 78711-3088 Hand Delivery, Overnight Mail MC 214, 12100 Park 35 Circle, Building A, Third Floor Austin, Texas 78753	Original Money Order or Check, Copy of Form PI-7-CERT, and Core Data Form. Not required if fee was paid using ePay[2].
Appropriate TCEQ Regional Office	To find your Regional Office address, go to the TCEQ website at www.tceq.texas.gov/agency/directory/region, or call (512) 239-1250.	Copy of Form PI-7-CERT, Core Data Form, and all attachments. Not required if using ePermits[1]
Appropriate Local Air Pollution Control Program(s)	To Find your local or Regional Air Pollution Control Programs go to the TCEQ, APD website at www.tceq.texas.gov/permitting/air/local_programs.html, or call (512)-239-1250	Copy of Form PI-7-CERT, Core Data Form, and all attachments.

[1] ePermits located at www3.tceq.texas.gov/steers/
[2] ePay located at www.tceq.texas.gov/epay

30 TAC §106.4 Rule Applicability Checklist

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

The following checklist was developed by the Texas Commission on Environmental Quality (TCEQ), **Air Permits Division**, to assist applicants in determining whether or not a facility meets all of the applicable requirements. Before claiming a specific Permit by Rule (PBR), a facility must first meet all of the requirements of **Title 30 Texas Administrative Code § 106.4** (30 TAC § 106.4), "Requirements for Permitting by Rule." Only then can the applicant proceed with addressing requirements of the specific Permit by Rule being claimed.

The use of this checklist is not mandatory; however, it is the responsibility of each applicant to show how a facility being claimed under a PBR meets the general requirements of 30 TAC § 106.4 and also the specific requirements of the PBR being claimed. If all PBR requirements cannot be met, a facility will not be allowed to operate under the PBR and an application for a construction permit may be required under 30 TAC § 116.110(a).

Registration of a facility under a PBR can be performed by completing **Form PI-7** (Registration for Permits by Rule) or **Form PI-7-CERT** (Certification and Registration for Permits by Rule). The appropriate checklist should accompany the registration form. Check the most appropriate answer and include any additional information in the spaces provided. If additional space is needed, please include an extra page and reference the question number. The PBR forms, tables, checklists, and guidance documents are available from the TCEQ, Air Permits Division website at: www.tceq.texas.gov/permitting/air/nav/air_pbr.html.

1. 30 TAC § 106.4(a)(1) and (4): Emission Limits	**Answer**
List emissions in tpy for **each** facility (add additional pages or table if needed):	
Are the SO_2, PM_{10}, VOC, or other air contaminant emissions claimed for **each** facility in this PBR submittal less than 25 tpy?	☒ YES ☐ NO
Are the NO_x and CO emissions claimed for each facility in this PBR submittal less than 250 tpy?	☒ YES ☐ NO
*If the answer to both is "Yes," continue to the question below. If the answer to either question is "No," a **PBR cannot be claimed**.*	
Has any facility at the property had public notice and opportunity for comment under 30 TAC Section 116 for a regular permit or permit renewal? (This does not include public notice for voluntary emission reduction permits, grandfathered existing facility permits, or federal operating permits.)	☒ YES ☐ NO
If "Yes," skip to Section 2. If "No," continue to the questions below.	
If the site has had no public notice, please answer the following:	
Are the SO_2, PM_{10}, VOC, or other emissions claimed for **all** facilities in this PBR submittal less than 25 tpy?	☐ YES ☐ NO
Are the NO_x and CO emissions claimed for all facilities in this PBR submittal less than 250 tpy?	☐ YES ☐ NO
If the answer to both questions is "Yes," continue to Section 2.	
*If the answer to either question is "No," **a PBR cannot be claimed**. A permit will be required under Chapter 116.*	

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

2. 30 TAC § 106.4(a)(2): Nonattainment Check	Answer
Are the facilities to be claimed under this PBR located in a designated ozone nonattainment county?	☒ YES ☐ NO
If "Yes," please indicate which county by checking the appropriate box to the right.	
(Moderate) - Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller counties:	☒ HGB
(Moderate) - Collin, Dallas, Denton, Ellis, Johnson, Kaufman, Parker, Rockwall, Tarrant, and Wise counties:	☐ DFW
If "Yes," to any of the above, continue to the next question. If "No," continue to Section 3.	
Does this project trigger a nonattainment review?	☐ YES ☒ NO
Is the project's potential to emit (PTE) for emissions of VOC or NO_x increasing by 100 tpy or more?	☐ YES ☒ NO
PTE is the maximum capacity of a stationary source to emit any air pollutant under its worst-case physical and operational design unless limited by a permit, rules, or made federally enforceable by a certification.	
Is the site an existing major nonattainment site and are the emissions of VOC or NO_x increasing by 40 tpy or more?	☐ YES ☒ NO
If needed, attach contemporaneous netting calculations per nonattainment guidance.	
Additional information can be found at: www.tceq.texas.gov/permitting/air/forms/newsourcereview/tables/nsr_table8.html and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html	
*If "Yes," to any of the above, the project is a major source or a major modification and **a PBR may not be used**. A Nonattainment Permit review must be completed to authorize this project. If "No," continue to Section 3.*	
3. 30 TAC § 106.4(a)(3): Prevention of Significant Deterioration (PSD) check	
Does this project trigger a review under PSD rules?	
To determine the answer, review the information below:	
Are emissions of any regulated criteria pollutant increasing by 100 tpy of any criteria pollutant at a named source?	☐ YES ☒ NO
Are emissions of any criteria pollutant increasing by 250 tpy of any criteria pollutant at an unnamed source?	☐ YES ☒ NO
Are emissions increasing above significance levels at an existing major site?	☐ YES ☒ NO
PSD information can be found at: www.tceq.texas.gov/assets/public/permitting/air/Forms/NewSourceReview/Tables/10173tbl.pdf and www.tceq.texas.gov/permitting/air/nav/air_docs_newsource.html	
*If "Yes," to any of the above, **a PBR may not be used**. A PSD Permit review must be completed to authorize the project.*	
If "No," continue to Section 4.	

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

4. 30 TAC § 106.4(a)(6): Federal Requirements	Answer
Will all facilities under this PBR meet applicable requirements of Title 40 Code of Federal Regulations (40 CFR) Part 60, New Source Performance Standards (NSPS)?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable? *(answer below.)*	
Will all facilities under this PBR meet applicable requirements of 40 CFR Part 63, Hazardous Air Pollutants Maximum Achievable Control Technology (MACT) standards?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable? *(answer below.)*	
Will all facilities under this PBR meet applicable requirements of 40 CFR Part 61, National Emissions Standards for Hazardous Air Pollutants (NESHAPs)?	☐ YES ☐ NO ☒ NA
If "Yes," which Subparts are applicable? *(answer below.)*	
If "Yes" to any of the above, please attach a discussion of how the facilities will meet any applicable standards.	
5. 30 TAC § 106.4(a)(7): PBR prohibition check	
Are there any air permits at the site containing conditions which prohibit or restrict the use of PBRs?	☐ YES ☒ NO
If "Yes," PBRs may not be used or their use must meet the restrictions of the permit. A new permit or permit amendment may be required.	
List permit number(s):	
6. 30 TAC § 106.4(a)(8): NO_x Cap and Trade	
Is the facility located in Harris, Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?	☒ YES ☐ NO
If "Yes," answer the question below.	
If "No," continue to Section 7.	
Will the proposed facility or group of facilities obtain required allowances for NO_x if they are subject to 30 TAC Chapter 101, Subchapter H, Division 3 (relating to the Mass Emissions Cap and Trade Program)?	☐ YES ☒ NO

Texas Commission on Environmental Quality
Permit by Rule Applicability Checklist
Title 30 Texas Administrative Code § 106.4

7. Highly Reactive Volatile Organic Compounds (HRVOC) check		
Is the facility located in Harris County?		☒ YES ☐ NO
If "Yes," answer the next question. If "No," skip to the box below.		
Will the project be constructed after June 1, 2006?		☒ YES ☐ NO
If "Yes," answer the next question.		
If "No," skip to the box below.		
Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☒ NO
If "Yes," complete the information below:		
Information	**lb/hr**	**tpy**
► 1,3-butadiene		
► all isomers of butene (e.g., isobutene [2-methylpropene or isobutylene])		
► alpha-butylene (ethylethylene)		
► beta-butylene (dimethylethylene, including both cis- and trans-isomers)		
► ethylene		
► propylene		
Is the facility located in Brazoria, Chambers, Fort Bend, Galveston, Liberty, Montgomery, or Waller County?		☐ YES ☒ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
Will the project be constructed after June 1, 2006?		☐ YES ☐ NO
If "Yes," answer the next question. If "No," the checklist is complete.		
Will one or more of the following HRVOC be emitted as a part of this project?		☐ YES ☐ NO
If "Yes," complete the information below:		
Information	**lb//hr**	**tpy**
► ethylene		
► propylene		

SECTION 3

PERMITS BY RULE
GENERAL FACILITIES WORKBOOK

General Information

This sheet provides general rule information for both General Facility PBRs.

Instructions:
Please fill out all input / yellow cells unless marked optional. Attach the federal applicability review to the application for each project.
An optional supplemental information field has been provided at the end of this worksheet. This field should be used for demonstration of rule or policy compliance.

I. Project Information

Requested Information	Response
Company Name	Hobas Pipe USA, Inc.
Site Description	At the site, Hobas operates a glass fiber reinforced, aggregate fortified, thermosetting resin tubular product manufacturing plant. The tubular products range in diameter from 18 inches to 126 inches.
General Project Description	Hobas is installing eight hand grinder stations that will be used to finish the surface of fiberglass reinforced pipe and couplings. Each grinder will be equipped with a dust shroud that will be used to capture and route grinding particulate matter to an existing Donaldson-Torit DFE 2-8 cartridge filter for removal.
I acknowledge that I am submitting an authorized TCEQ workbook and any necessary attachments. Except for inputting the requested data and adjusting row height, I have not changed the TCEQ application workbook in any way, including but not limited to changing formulas, formatting, content, or protections.	I agree
Please indicate which rule, or both, are applicable to this project:	§106.262
Does this project authorize a new facility, modify a New Source Review (NSR) Case-by-Case existing permitted facility, or both?	New Facility
Is this site only authorized under Permits by Rule?	No
Is this located at a federal NSR major source (PSD or NNSR)?	No
Is there an associated NSR Case-by-Case permit?	No

II. General Rule Requirements for §106.261 and/or §106.262

Requested Information	Response
Has a §106.4 checklist or compliance demonstration been included in the documentation submitted to TCEQ?	Yes
Is this registration for construction of a facility authorized in another section of this chapter or for which a standard permit is in effect?	No
Is this registration for any change to any facility authorized under another section of this chapter or authorized under a standard permit?	No
Are facilities or changes located at least 100 feet from any recreational area or residence or other structure not occupied or used solely by the owner or operator of the facilities or the owner of the property upon which the facilities are located?	Yes
Are there any changes to or additions of any existing air pollution abatement equipment?	No
Will there be any visible emissions, except uncombined water, emitted to the atmosphere from any point or fugitive source in amounts greater than 5.0% opacity in any six-minute period?	No
Please include the following information for any pollution control equipment related to this registration: how the equipment operates, and the control efficiency achieved.	Information enclosed in Section 5 of this submittal.

III. Associated Emission Increases

Any upstream and/or downstream actual emission increases that result from a project for which this PBR is claimed need to be authorized appropriately. Any associated upstream and/or downstream emissions authorized as part of the PBR claim will need to be included as part of the total new or increased emissions, unless: 1) these emissions stay below current authorized emission thresholds; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT, health and environmental impacts, or other representations (i.e. construction plans, operating procedures, throughputs, maximum emission rates, etc.); and 3) this claim is certified via PI-7 CERT or APD-CERT. Notwithstanding the exclusion of any upstream and/or downstream emissions under this PBR claim, the total of all emission increases, including upstream and/or downstream actual emission increases, are required to be part of the PBR registration to determine major new source review applicability under Title 30 TAC Chapter 116. The emission increases associated with the PBR claim and all upstream and/or downstream actual emission increases may not circumvent major new source review requirements under 30 TAC Chapter 116.

Requested Information	Response
Is this project related to physical or operational changes to facilities authorized under an NSR Case-by-Case permit?	No

IV. Hours of Operation

Project emission increases associated with a change to a facility that only result in an annual emissions increase can be authorized as part of the PBR claim if the following information is met: 1) the hourly emissions stay at or below current authorized emission thresholds; 2) there is not a change to any underlying air authorizations for the applicable units associated with BACT or health and environmental impacts; and 3) this claim is certified via PI-7- CERT. The annual emission increases associated with the PBR claim may not circumvent major new source review requirements under 30 TAC Chapter 116.

Requested Information	Response
Does this project include only annual increases for permitted facilities?	No

V. Federal Applicability

Complete separate federal permitting application materials to determine applicability of Nonattainment (NA) and Prevention of Significant Deterioration (PSD) applicability, including netting if applicable. Include this analysis in your permit application.

Requested Information	Response
Please select the county that this project is located in.	Harris
County attainment status as of November 4, 2022:	This county has a nonattainment designation for ozone
If applicable, is this facility located within the portion of the county that is in nonattainment?	Yes

PSD Applicability Summary

Requested Information	Response
Is this a named source?	No
Is netting required for the PSD Analysis for this project?	No

Pollutant	Project Increase (TPY)	Threshold (TPY)	PSD Review Required?
CO			
NO_X			
PM	0	250	No
PM_{10}	0	250	No
$PM_{2.5}$	0	250	No
SO_2			
Ozone (as VOC)			
Ozone (as NO_X)			
Pb			
H_2S			
TRS			
Reduced sulfur compounds (including H_2S)			
H_2SO_4			
Fluoride (excluding HF)			
CO_2e			
Determination:			

Nonattainment Applicability Summary

Is netting required for the nonattainment analysis for this project?	No		
Pollutant	**Project Increase (TPY)**	**Threshold (TPY)**	**NA Review Required?**
Ozone (as VOC)	0	25	No
Ozone (as NO_X)	0	25	No
Determination:			

Supplemental Information (Optional)

30 TAC §106.262 Checklist

This sheet provides compliance demonstration and emission thresholds for 30 TAC §106.262.

Instructions:
Please fill out all input / yellow cells unless marked optional. For multiple K values, please submit additional copies of this worksheet, or submit the multiple projects version. For the same chemical, the worst-case distance shall be used.

I. §106.262(a)(2)

New or increased emissions, including fugitives, of chemicals shall not be emitted in a quantity greater than five tons per year nor in a quantity greater than E as determined using the equation E = L/K.

Are the chemicals being registered included in Table 262 of 30 TAC §106.262(a)(2)?	N/A
Distance to nearest off-plant receptor (feet):	384
K value:	109.6

Chemicals listed in the 1997 Edition of the ACGIH TLV and BEI Guide are available in this worksheet beginning on Row 36.

Please select applicable chemicals from dropdown and enter emission rates:

Are the chemicals being registered not listed in Table 262, but have a published TLV in the 1997 Edition of the ACGIH TLV and BEI Guide?	Yes

Please select applicable chemicals from dropdown and enter emission rates:

Chemical	Criteria Pollutant Designation	CAS No.	L Value (mg/m^3)	E, maximum Hourly Emission Threshold (lb/hr)	Annual Emission Threshold (tpy)	Actual Hourly Increases (lb/hr)	Actual Annual Increase (tpy)	Meets Threshold?
Particulates Not Otherwise Classified - Inhalable	PM		10	0.09	0.40	0	1.00E-03	Yes
Particulates Not Otherwise Classified - Respirable	PM		3	0.03	0.12	0	1.00E-03	Yes

NOTE: The time weighted average (TWA) Threshold Limit Value (TLV) published by the American Conference of Governmental Industrial Hygienists (ACGIH), in its TLVs and BEIs (Biological Exposure Indices) guide **(1997 Edition)** shall be used for compounds not included in the table. The Short Term Exposure Level (STEL) or Ceiling Limit (annotated with a "C") published by the ACGIH shall be used for compounds that do not have a published TWA TLV. This section cannot be used if the compound is not listed in the table or does not have a published TWA TLV, STEL, or Ceiling Limit in the ACGIH TLVs and BEIs guide.

Emission thresholds specified in this table may be displayed as rounded values. Actual emission rates for each chemical should not exceed the emission threshold as calculated using the corresponding distance and L value.

II. §106.262(a)(3)-(a)(4)

Notification must be provided using Form PI-7 within ten days following the installation or modification of the facilities.	I agree
*Does this registration handle any of the following chemicals?	No

*Chemical List: acrolein, allyl chloride, ammonia (anhydrous), arsine, boron trifluoride, bromine, carbon disulfide, chlorine, chlorine dioxide, chlorine trifluoride, chloroacetaldehyde, chloropicrin, chloroprene, diazomethane, diborane, diglycidyl ether, dimethylhydrazine, ethyleneimine, ethyl mercaptan, fluorine, formaldehyde (anhydrous), hydrogen bromide, hydrogen chloride, hydrogen cyanide, hydrogen fluoride, hydrogen selenide, hydrogen sulfide, ketene, methylamine, methyl bromide, methyl hydrazine, methyl isocyanate, methyl mercaptan, nickel carbonyl, nitric acid, nitric oxide, nitrogen dioxide, oxygen difluoride, ozone, pentaborane, perchloromethyl mercaptan, perchloryl fluoride, phosgene, phosphine, phosphorus trichloride, selenium hexafluoride, stibine, liquified sulfur dioxide, sulfur pentafluoride, and tellurium hexafluoride.

**These chemicals shall be handled at least 300 feet from the nearest property line and 600 feet from any off-plant receptor, and the cumulative amount of any of these chemicals resulting from one or more authorizations under this section (but not including permit authorizations) shall not exceed 500 pounds on the plant property and all listed chemicals shall be handled only in unheated containers operated in compliance with the United States Department of Transportation regulations (49 Code of Federal Regulations, Parts 171-178).

This sheet provides the emissions summary from chemicals authorized under §106.261 and/or §106.262.

Instructions:
If the company is representing a different method to demonstrate compliance, please include a note next to the applicable chemical and attach additional sheets to the application.

§106.261(a)(3)				
Chemical	**Actual lb/hr**	**Actual tpy**	**Meets Threshold?**	**Notes**

§106.262(a)(2) 1997 ACGIH Guide				
Chemical	**Actual lb/hr**	**Actual tpy**	**Meets Threshold?**	**Notes**
Particulates Not	0	1.00E-03	Yes	
Particulates Not	0	1.00E-03	Yes	

Emission Point Summary Table

The emission point summary table provided here is optional.

Instructions:
Please fill out the Emission Point Summary Table for the project emissions, including all emissions and rules being registered. Additional rows can be added if needed.

"Other" Criteria Pollutant (Optional)	

EPN / Source Name	Rule(s)	VOC (lb/hr)	VOC (tpy)	NO_x (lb/hr)	NO_x (tpy)	CO (lb/hr)	CO (tpy)	SO_2 (lb/hr)	SO_2 (tpy)	PM (lb/hr)	PM (tpy)	PM_{10} (lb/hr)	PM_{10} (tpy)	$PM_{2.5}$ (lb/hr)	$PM_{2.5}$ (tpy)	Other (lb/hr)	Other (tpy)
DC-10	§106.262									0.00	< 0.01	0.00	< 0.01	0.00	< 0.01		
Total Emissions (tpy)			0.00		0.00		0.00		0.00		< 0.01		< 0.01		< 0.01		0.00

Maximum Operating Schedule	Hours/Day	24	Days/Week	7	Weeks/Year	52	Hours/Year	8760
Notes								

Click here to go to List of 106.261 Chemical sheet

SECTION 4

AIR EMISSION ESTIMATES & TCEQ TABLE 1(A)

Air Emission Estimates

Spencer Vacuum Unit Dust Collector
FIN: SPEN-DROPS, EPN: DC-10

CURRENTLY AUTHORIZED EMISSION LEVELS

Basis:

Air Handling Rate	2,250 cf/min
Outlet Grain Loading Expectation (BACT)	0.002 gr/cf

Hourly PM/PM10/PM2.5 Emissions

$$\frac{2{,}250\ \text{cf}}{\text{min}} \left| \frac{0.002\ \text{gr}}{\text{cf}} \right| \frac{\text{lb}}{7000\ \text{gr}} \left| \frac{60\ \text{min}}{\text{hr}} \right| = \frac{0.039\ \text{lb}}{\text{hr}}$$

Annual PM/PM10/PM2.5 Emissions

$$\frac{0.039\ \text{lb}}{\text{hr}} \left| \frac{8760\ \text{hr}}{\text{yr}} \right| \frac{\text{tn}}{2{,}000\ \text{lb}} = \frac{0.169\ \text{tn}}{\text{yr}}$$

TCEQ Table 1(a) – Emission Point Summary

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
Table 1(a) Emission Point Summary
Air Contaminant Data (Page 1)

Date:	March 1, 2025
Permit No.:	
Regulated Entity No.:	RN102540812
Area Name:	Hobas Pipe USA
Customer Reference No.:	CN600127757

Review of applications and issuance of permits will be expedited by supplying all necessary information requested on the Table

EPN	FIN	Name	Component or Air Contaminant Name	Air Contaminant Emission Rate lb/hr	Air Contaminant Emission Rate TPY
DC-10	SPEN-DROPS	Spencer Grinder Drops	PM / PM_{10} / $PM_{2.5}$	0.04	0.17

EPN = Emission Point
FIN = Facility Identification Number

SECTION 5

TCEQ TABLE 11 & DUST COLLECTOR INFORMATION

TCEQ Table 11

Texas Commission on Environmental Quality
Table 11
Fabric Filters

Tables, checklists, and guidance documents pertaining to air quality permits are available from the Texas Commission on Environmental Quality (TCEQ) Air Permits Division (APD) website at www.tceq.texas.gov/permitting/air.

A. Emission Point Number (EPN) and Emission Point Name	
EPN: DC-10	Emission Point Name: Spencer Vacuum Unit Dust Collector
B. Manufacturer and Model Numbers (No.)	
Manufacturer: Donaldson Torit	Model No.: DFE 2-8

C Name of Source(s) or Equipment Being Controlled

Name	EPN	FIN
Spencer Vacuum Unit	DC-10	SPEN-DROPS

D. Type of Particulate Controlled

Grinding Dust		

E. Gas Stream Characteristics

Design Maximum	Average Expected Flow Rate (acfm)	Gas Stream Temperature (°F)	Particulate Grain Loading (grain/scf)	
			Inlet:	Outlet:
Pressure Drop (inches of H_2O)	**Water Vapor Content of Effluent Stream (lb water/lb dry air)**		**Fan Requirements**	
2 to 5 " wc			hp: 100	ft^3/min.: 2250

F. Particulate Distribution (By Weight)

Micron Range	Inlet %	Outlet %
0.0-0.5		
0.5-1.0		
1.0-5.0		
5-10		
10-20		
over 20		

G. Filter Characteristics

Filtering Velocity (acfm/ft^2 of Cloth)	Bag Diameter (inches)	Bag Length (feet)	Total Number of Bags
1.1			

Texas Commission on Environmental Quality
Table 11
Fabric Filters

H. Bag Rows	
Indicate the arrangement of the baghouse bag filter rows.	☐ Staggered ☐ Straight
I. Walkways	
Will walkways be provided between banks of bags?	☐ YES ☐ NO
J. Filtering Material	
Identify the filtering media: Triagonal Ultra-Web® cartridge filters.	
Any additional coating or treatment of the baghouse material: N/A	
K. Cleaning of the Filter(s)	
Describe Bag Cleaning Method and Cycle:	
Pulse air cleaning system	
L. Cost	
Capital Installed Cost: $135,000	
Annual Operating Cost:	

Note: Attach the details regarding the principle of operation and an assembly drawing (front and top view) of the abatement device drawn to scale clearly showing the design, size and shape.
If the device has bypasses, safety valves, etc., include in the drawing and specify when such bypasses are to be used and under what conditions.

Dust Collector Information

Donaldson
Torit®

DOWNFLO® EVOLUTION DUST COLLECTORS

EVOLUTIONARY DESIGN

THE ORIGINATORS OF THE CARTRIDGE COLLECTOR

The breakthrough performance of the Downflo® Evolution (DFE) family of cartridge dust collectors is the result of Donaldson Torit's relentless drive to improve its products and exceed customer expectations. Donaldson Torit put decades of industry experience to work to produce a new, best-in-class dust collector capable of reducing equipment size and number of required filters by up to 40% compared to a typical cartridge collector. A smaller collector helps lower the initial purchase price, reduces filter replacement costs, and opens up valuable manufacturing floor space.

This state of the art collector, coupled with Donaldson's industry-leading Ultra-Web® fine fiber filtration technology, is truly an intelligent design.

REVOLUTIONARY AIRFLOW MANAGEMENT

Directs incoming air to an intelligent dropout zone for reduced filter loading

BREAKTHROUGH FILTER CLEANING

MaxPulse™ Cleaning System delivers 27% more cleaning energy to filtration media

INDUSTRY-LEADING FILTRATION DESIGN

Positions more filtration media in beneficial locations and ensures easy, leak-free installation with Ultra-Web MERV15 media as standard

RESULTS

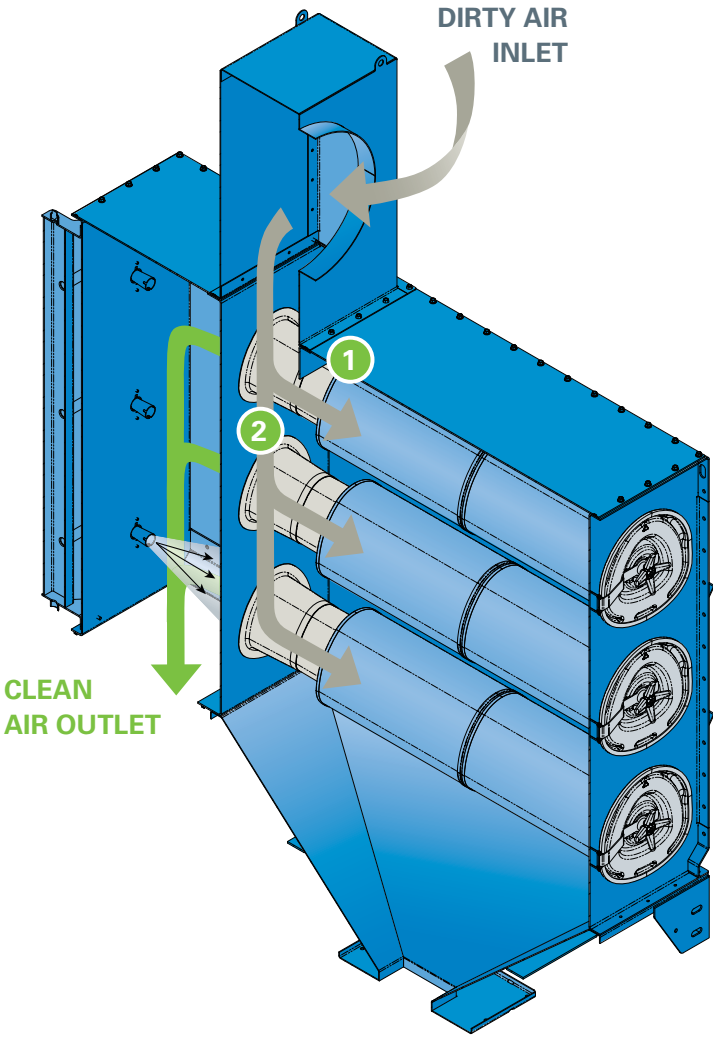
A smaller cartridge collector with fewer filters and the lowest cost of ownership

iCUE™ CONNECTED FILTRATION SERVICE

Now available with the option of Donaldson's iCue connected filtration service, an IoT enabled service designed to prompt timely maintenance, helping improve production uptime and reduce operating costs.

ENGINEERED AIRFLOW MANAGEMENT

The DFE's game-changing dust collection performance is achieved through a combination of design features that result in significant customer benefits.



INTELLIGENT DROPOUT ZONE

1. **Metal venturis**
2. **Dropout zone ensures**
   - Pre-separation of heavy dust particles
   - Lower pressure loss than baffle design used by competitors
   - Minimal filter element abrasion

DOWNFLO EVOLUTION
INTELLIGENT DESIGN

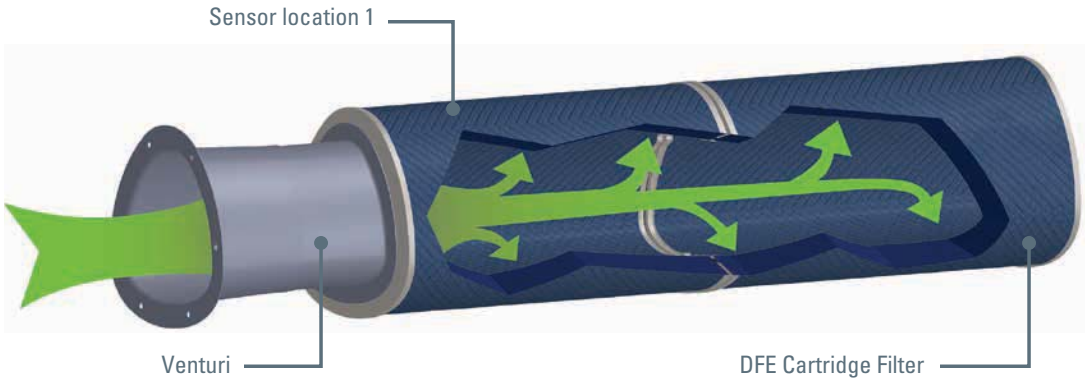
MAXPULSE™ CLEANING SYSTEM

SUPERIOR CLEANING PERFORMANCE

The DFE provides breakthrough cleaning performance resulting in improved filtration capacity without sacrificing filter life or taxing compressed air consumption. Typical pulse-jet cleaned dust collectors deliver only a fraction of the compressed air energy to clean the filtration media. The DFE's proprietary, MaxPulse Cleaning System minimizes energy losses by focusing on the cleaning air's exact path and delivers uniform cleaning energy to all effective filtration media.

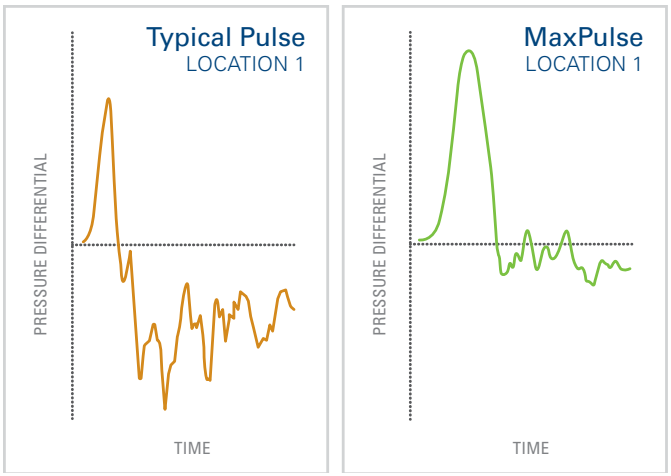
The cleaning action starts with the release of compressed air from the diaphragm valve through a unique, double-diverging pulse nozzle. The nozzle precisely controls the initial pulse expansion to minimize energy losses associated with uncontrolled compressed air expansion. Donaldson Torit's proprietary, pulse-shaping design distributes the cleaning energy evenly to match the unique shape of the filter.

After exiting the pulse nozzle, the cleaning air flows through smooth, easy transitions into the filter interior ensuring the compressed air expands naturally without abrupt, energy-wasting restrictions, sharp edges, or volume changes. More effective filtration media results in increased airflow capacities through Donaldson Torit dust collection equipment.



PROVEN IN PULSE TEST BENCH ANALYSIS

Significantly higher pulse pressures are recorded and sustained at critical locations along the filtration media profile. More uniform cleaning results in more effective filtration media over the life of the filter.

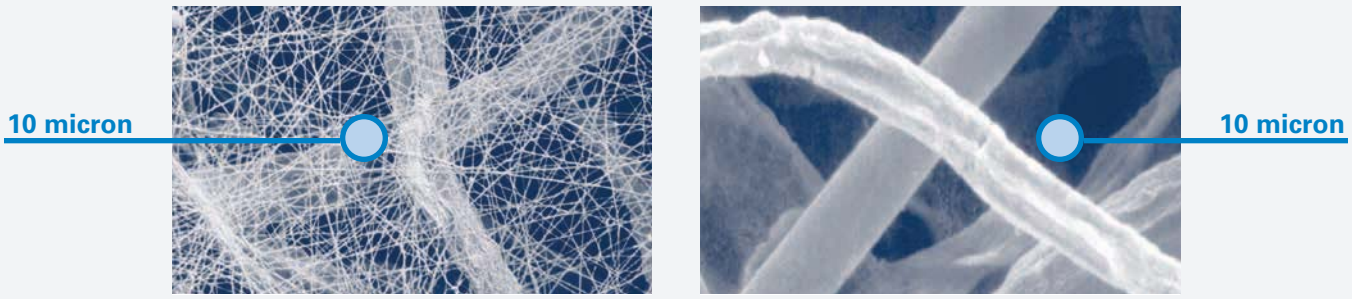


27% HIGHER
IMPULSE CLEANING ENERGY DELIVERED

CARTRIDGE FILTER TECHNOLOGY

HIGH PERFORMANCE FILTERS

The DFE filter design is another indication of Donaldson Torit's commitment to technical research and development. The distinguishing factor in our filters is Ultra-Web filtration technology. Ultra-Web fine fiber media uses a layer of fibers 0.2 to 0.3 microns in diameter to capture contaminants on the surface of the media less than one micron in size. The resulting dust cake is easily cleaned off during the automated collector cleaning cycles providing cleaner air longer, with a minimum MERV* 15 efficiency rating based on ASHRAE 52.2 - 2007 test standards.

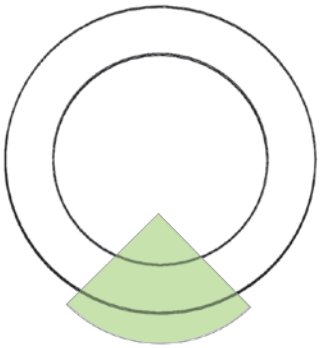


Fine Fiber Media
(600x)
Fine fiber surface loading technology is available in all Ultra-Web and Fibra-Web filter cartridges.

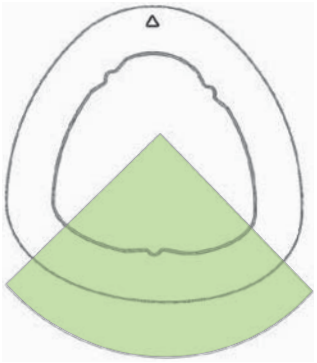
Commodity Filter Media
(600x)
Conventional media has spaces of up to 60 µm between fibers, allowing dust to become deeply embedded.

TRIAGONAL FILTER SHAPE

The ultimate goal of any pulse-cleaned dust collector is to remove the contaminant from the airstream and get the contaminant into a containment vessel under the equipment's hopper. The DFE's unique shape positions more filter media at the bottom of the cartridge element so pulse-cleaning energy directs the ejected dust toward its ultimate destination – the containment vessel!



25%
ROUND FILTER



27%
DFE TRIAGONAL FILTER
The DFE triagonal filter features more filter media at the bottom of the cartridge element than any other cartridge on the market.

QUICK FILTER CHANGEOUT

The interior of the metal filter element endcaps features a specific profile that engages with the collection equipment's support yoke. The asymmetrical yoke design ensures proper filter installation, seal, and cleaning alignment.

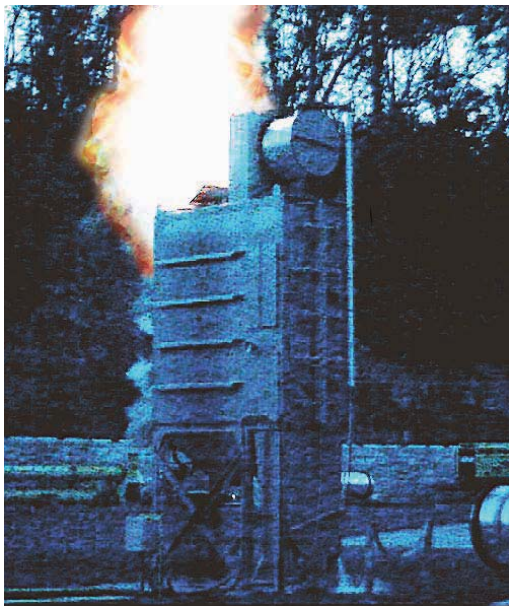
1. Loosen cover with 4-lobe knob. Knob has center lug enabling power tool operation.
2. Open hinged filter access cover.
3. Filter supported by asymmetrical suspension yoke ensure proper installation for worry-free operation.

✱ No special tools are required, and you never have to enter a confined space or dirty air plenum to do the job.

COMBUSTIBLE DUST MANAGEMENT

DEFLAGRATION ISOLATION

Donaldson Torit's DFE assists operators' combustible dust management. A DFE collector was tested to determine if the collector could isolate a deflagration and stop flames or sparks from passing into the clean air plenum. When applied in conjunction with effective explosion protection strategies including inlet isolation and explosion venting, the performance results support conformance to Chapter 5 Performance-Based Design Option requirements of both NFPA 654 - to prevent the "extension of the flame front outside the compartment or equipment of origin except where intentionally vented to a safe location" [5.2.5 (2)] and NFPA 69 - to "limit the risk of flame spread from vessel to vessel via interconnecting ducts." [5.5.3.4]



TEST RESULTS[1]

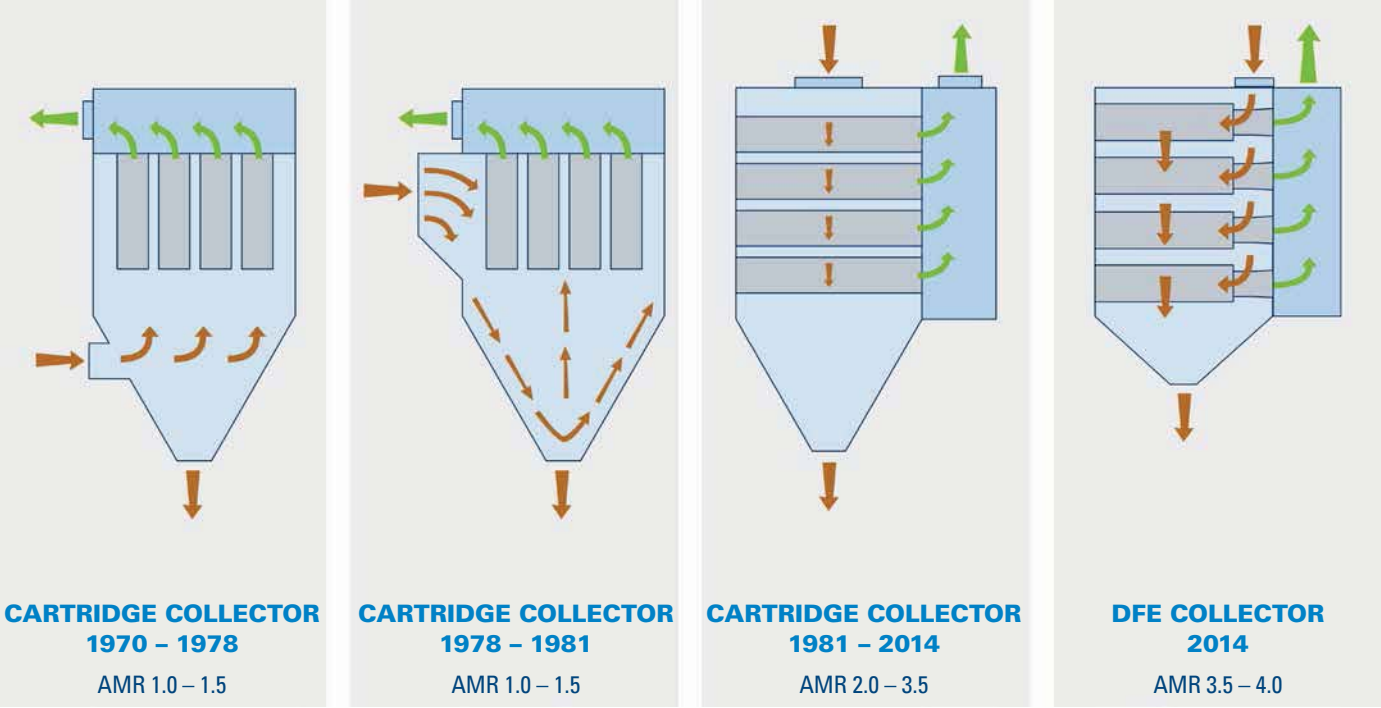
- In all tests, the filters successfully isolated the deflagration and allowed no flame or sparks to pass into the clean air plenum.
- The filter media and support frames were found to be free from any plastic deformation due to deflagration loads at dirty air plenum pressures up to and including 8.3 psig.

[1] Tests conducted on a Downflo Evolution (DFE) cartridge collector with standard FR Cartridge filter elements, top-mounted explosion vents, and without secondary filtration. Tests performed with airflow through the collector at typical air volumes. Tests repeated with no airflow through the unit. Tests used clean filters and were repeated with 'dirty' filters loaded with enough dust (cornstarch) to generate a 4-inch differential pressure across the filters and tubesheet. (Cornstarch dried to less than 2% moisture by weight was used as the dust / fuel for all tests.) Optical detectors sensitive in the IR band were mounted in multiple locations within the clean air plenum to determine flame transmission through the filter media.

THE CONTINUING EVOLUTION OF CARTRIDGE COLLECTION

Donaldson Torit has been at the forefront of cartridge collection for over 40 years, and has developed game-changing solutions others can only attempt to imitate. Now, the game is changing again! With the DFE's airflow design, MaxPulse cleaning system, triangonal filter shape, and industry-leading Ultra-Web filtration media, customers benefit from a smaller collector containing fewer filters.

AIR-TO-MEDIA (AMR) RATIO EVOLUTION – WELD FUME



CARTRIDGE COLLECTOR 1970 – 1978
AMR 1.0 – 1.5

CARTRIDGE COLLECTOR 1978 – 1981
AMR 1.0 – 1.5

CARTRIDGE COLLECTOR 1981 – 2014
AMR 2.0 – 3.5

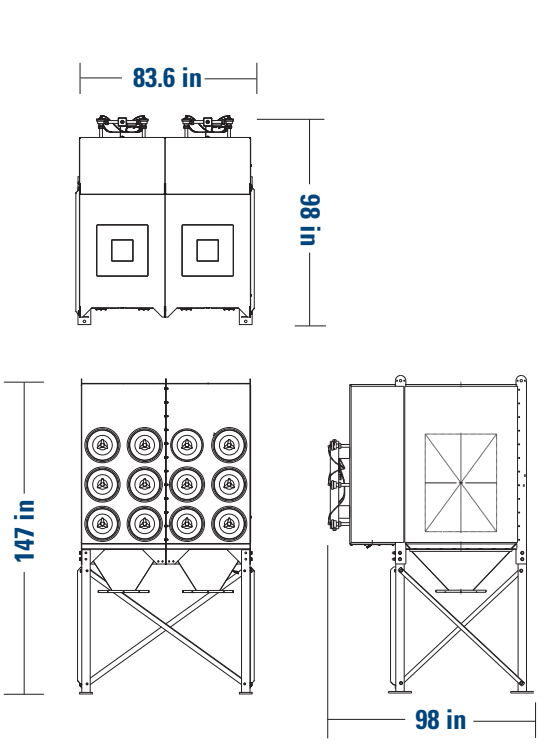
DFE COLLECTOR 2014
AMR 3.5 – 4.0

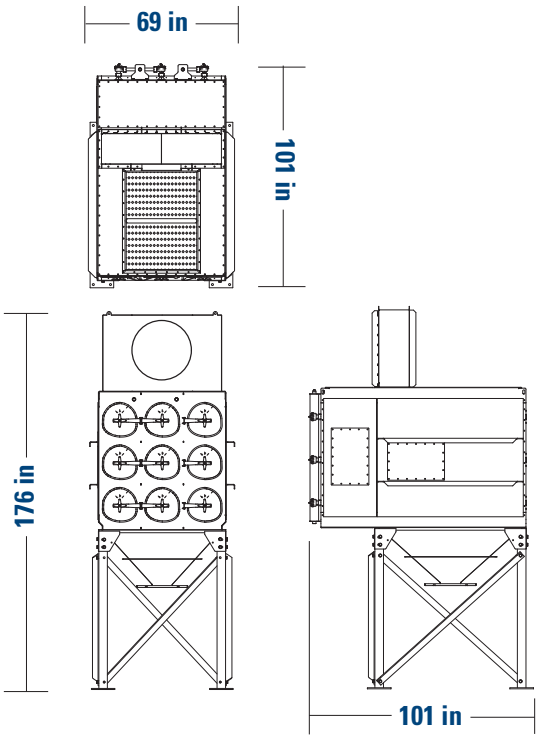
The graphic above shows an example of the Air-to-Media ratios for a typical weld fume application. The DFE features higher AMRs, smaller footprint, fewer filters, superior performance, and lowest cost of ownership!

UP TO 40%
FEWER FILTERS & SMALLER FOOTPRINT

EQUIPMENT COMPARISON

The DFE dust collector has increased filtration capacity compared to traditional cartridge collectors. This advantage reduces required collector footprint, with fewer filters, and lowers the total cost of ownership.



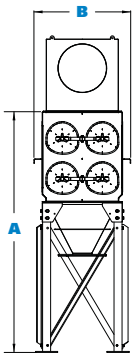


TRADITIONAL CARTRIDGE 3-24		DOWNFLO EVOLUTION 3-18
Automatic Shot Blast	Application	Automatic Shot Blast
10,500 cfm	Airflow	10,500 cfm
56.9 ft²	Footprint	50.3 ft²
147 in	Height	176 in
24	Filter Count	18
2	Hopper Outlets	1
13 scfm	Compressed Air	10 scfm

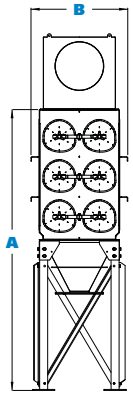
OPERATING CONDITIONS FOR DFE COLLECTORS

Seismic Spectral Acceleration	S_s = 1.5 g S_1 = 0.6 g per IBC 2009 FIG 1613.5
Basic Wind Speed and Exposure (mph/kph)	90/145 Exposure C per IBC 2009
Housing Rating (inches of H_2O/millimeters of H_2O)	-25 – +10 / -635 – +254
Compressed Air Required (psi/bar)	90-100/6.2-6.9
Operating Temperature	150°F/66°C
Housing Construction	3/16" (4.8mm) - 10-gauge steel
Control Voltage	120 VAC -or- 24 VDC

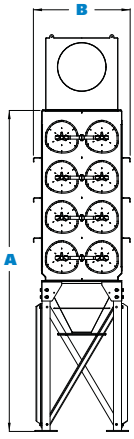
DIMENSIONS & SPECIFICATIONS



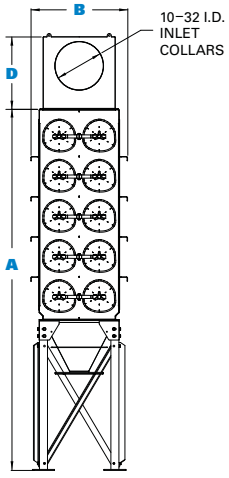
DFE 2-8



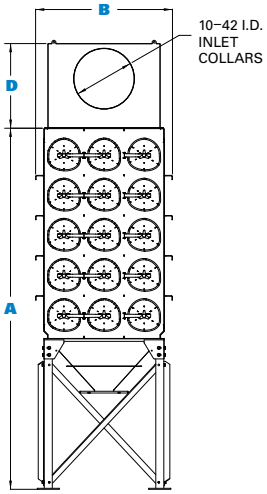
DFE 3-12



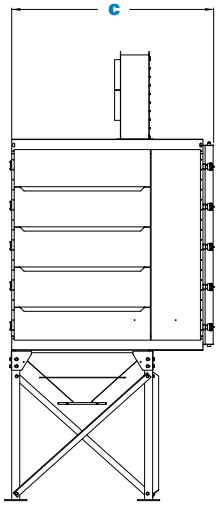
DFE 4-16



DFE 5-20



DFE 5-30



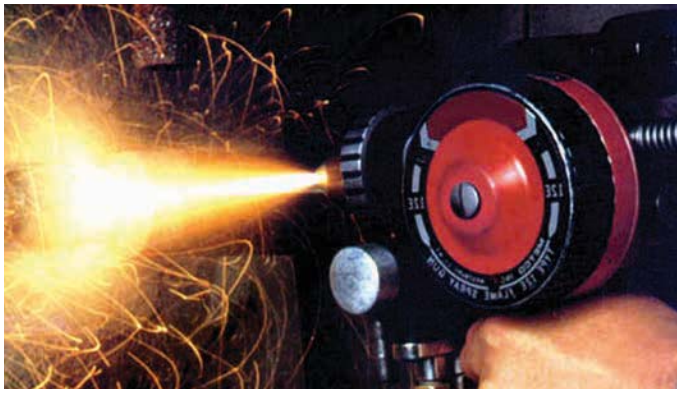
SIDE VIEW

DFE Model*	No. of Filters	Ultra-Web Filter Area		No. of Valves	Approx. Shipping Weight*		Dimensions					
							A		B		C	
		ft²	m²		lb	kg	in	mm	in	mm	in	mm
DFE 2-4	4	1,016	94.4	4	1,890	857	110	2,794	48	1,219	75	1,905
DFE 3-6	6	1,524	141.6	6	2,300	1,043	130	3,302	48	1,219	75	1,905
DFE 2-8	8	2,032	188.8	4	2,300	1,043	120	3,048	48	1,219	101	2,565
DFE 2-12	12	3,048	283.2	6	2,900	1,316	120	3,048	68	1,727	101	2,565
DFE 3-12	12	3,048	283.2	6	2,800	1,270	140	3,556	48	1,219	101	2,565
DFE 4-16	16	4,064	377.6	8	3,300	1,497	160	4,064	48	1,219	101	2,565
DFE 3-18	18	4,572	424.8	9	3,500	1,588	140	3,556	68	1,727	101	2,565
DFE 5-20	20	5,080	471.9	10	3,850	1,746	180	4,572	48	1,219	101	2,565
DFE 3-24	24	6,096	566.3	12	4,500	2,041	140	3,556	88	2,235	101	2,565
DFE 4-24	24	6,096	566.3	12	4,090	1,855	160	4,064	68	1,727	101	2,565
DFE 5-30	30	7,620	707.9	15	4,800	2,177	180	4,572	68	1,727	101	2,565
DFE 4-32	32	8,128	755.1	16	5,200	2,359	160	4,064	88	2,235	101	2,565
DFE 3-36	36	9,144	849.5	18	5,700	2,585	140	3,556	128	3,251	101	2,565
DFE 5-40	40	10,160	943.9	20	6,200	2,812	180	4,572	88	2,235	101	2,565
DFE 3-48	48	12,192	1,132.7	24	8,200	3,719	140	3,556	168	4,267	101	2,565
DFE 4-48	48	12,192	1,132.7	24	6,700	3,039	160	4,064	128	3,251	101	2,565
DFE 3-60	60	15,240	1,415.8	30	9,900	4,490	140	3,556	208	5,283	101	2,565
DFE 5-60	60	15,240	1,415.8	30	7,700	3,493	180	4,572	128	3,251	101	2,565
DFE 4-64	64	16,256	1,510.2	32	9,500	4,309	160	4,064	168	4,267	101	2,565
DFE 3-72	72	18,288	1,699.0	36	11,600	5,262	140	3,556	248	6,299	101	2,565
DFE 4-80	80	20,320	1,887.8	40	11,500	5,216	160	4,064	208	5,283	101	2,565
DFE 5-80	80	20,320	1,887.8	40	11,000	4,990	180	4,572	168	4,267	101	2,565

Inlet Size	D	
	in	mm
10 – 16	24.0	610
17 – 24	36.0	915
26, 28, 30, 32	42.0	1,067
34, 36, 38, 40, 42	48.0	1,219

* Without accessories or optional equipment.

DFE SERIES APPLICATIONS



METAL GRINDING

PLASMA CUTTING

DRY BULK

PHARMACEUTICAL

THERMAL SPRAY

WELDING

METAL MANUFACTURING

GLASS

FOOD PROCESSING

STANDARD FEATURES & AVAILABLE OPTIONS

DFE 2-4 TO 5-80

Collector Design †	Std	Opt
Mild Steel Construction	X	
MaxPulse™ Filter Cleaning System	X	
Quick-Removal Access Covers	X	
Inlets	X	
Ledge-Free Hopper	X	
Sprinkler Taps	X	
Stainless Steel Construction		X
High Temperature Construction		X
Explosion Protected Models		X
Direct Drive Fans		X
Chamber and Exhaust Silencers		X
High-Flow Inlet		X
Air Management Modules		X
Extended Dirty Air Plenum		X
Steep-Sided Hopper		X
2-Mod Hopper		X
Sprinkler Heads		X
Service Platform (OSHA compliant)		X
Damper Pack		X
Drum Sentry™ Drum-Full Indicator		X
Lined Clean Air Plenum		X
Bag-Out Kit (Filter & Discharge)		X
Bag-In/Bag-Out Kit (Filter & Discharge)		X
Cartridge Filters		
Ultra-Web® (MERV* 15)	X	
Ultra-Web® FR (MERV* 15); Ultra-Web® SB (MERV* 15); Ultra-Web® AS (MERV* 15); Fibra-Web® (MERV 14); Thermo-Web™ (MERV 14); Torit-Tex™ (MERV 16); High Temp (MERV 13)		X
HEPA/ASHRAE Afterfilters		X

Paint System	Std	Opt
Prime Coated Interior	X	
Textured Multi-Coat Paint Finish with 2,000-Hour Salt Spray Performance	X	
Custom Color		X
Premium Duty Finish		X
Epoxy Coating		X
Hopper Discharge		
Drum Cover and Hose		X
Slide Gates		X
Rotary Valves and Transitions		X
Screw Conveyors		X
Electrical Controls, Gauges & Enclosures		
Control Box w/Timer in NEMA 4 Enclosure	X	
Magnehelic®** Gauge Controls	X	
Delta P Control, Delta P Plus Control		X
Dustronix™ Control Assembly		X
Custom Panels		X
Photohelic®** Gauge Standard and Weatherproof		X
Basic Cold Climate Kit		X
Heavy-Duty Cold Climate Kit		X
Solenoid Enclosure (NEMA 7 & 9)		X
iCue™ Connected Filtration Service		X
Warranty		
10-Year Warranty	X	

† Donaldson Torit equipment is designed to IBC guidelines for specific wind speed exposure and seismic spectral acceleration at grade level. Contact your Donaldson Torit representative for detailed information available on the equipment's Spec Control drawings. Equipment may be customized to meet unique, customer-specified site requirements.

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