

From: [Shawn Auth](#)
To: [APC Permitting](#)
Subject: Additional Info for Gerdau Ameristeel US Inc. (57-0189) FW: Re: Operational Flexibility Letter for Lime Silo Bin Vent Permit Number 574449 - 231037
Date: Thursday, October 26, 2023 1:54:11 PM
Attachments: [image002.png](#)
[image003.png](#)
[Emissions Calculations For Bin Vent Op Flex 102623.pdf](#)

Greetings,

Can this additional info be uploaded to the Smoglog page for the mod log page 231037 (for Title V operating permit 574449)?

Thanks,
Shawn

From: Will Ownby <William.Ownby@gerdau.com>
Sent: Thursday, October 26, 2023 1:44 PM
To: Shawn Auth <Shawn.Auth@tn.gov>
Cc: Josh Wigger <Josh.Wigger@gerdau.com>; Steve Marquardt <Steve.Marquardt@erm.com>; Jeff.Twaddle@erm.com; Melanie Summarell <Melanie.Ragan@gerdau.com>
Subject: [EXTERNAL] RE: Re: Operational Flexibility Letter for Lime Silo Bin Vent Permit Number 574449

Good afternoon Shawn, hope you are doing well. Please find attached the emission calculation for the Bin Vent Operational Flexibility request dated October 9, 2023. If you have any questions please feel free to give me a call.

Thanks and have a great weekend,

Will Ownby
Environmental Manager
Gerdau – Jackson TN Mill
801 Gerdau Drive
Jackson, TN 38305
(731)423-5274 (Office)
(731)225-3797 (Cell)



[This content is Internal.](#)

From: Shawn Auth <Shawn.Auth@tn.gov>
Sent: Thursday, October 26, 2023 8:55 AM
To: Will Ownby <William.Ownby@gerdau.com>
Cc: Josh Wigger <Josh.Wigger@gerdau.com>
Subject: RE: Re: Operational Flexibility Letter for Lime Silo Bin Vent Permit Number 574449

AVISO: Mensagem de Remetente Externo (Não-Gerdau) - Cuidado com Links e Anexos.
ATENCIÓN: Mensaje de Remitente Externo (No-Gerdau) – Cuidado con los Enlaces y Archivos Adjuntos.
WARNING: External Sender Message (Non-Gerdau) - Beware of Links and Attachments.

No worries, I understand that everyone is busy. I just didn't want to lose track of it on my end.

[This content is Internal.](#)

From: Will Ownby <William.Ownby@gerdau.com>
Sent: Thursday, October 26, 2023 8:53 AM
To: Shawn Auth <Shawn.Auth@tn.gov>
Cc: Josh Wigger <Josh.Wigger@gerdau.com>
Subject: [EXTERNAL] RE: Re: Operational Flexibility Letter for Lime Silo Bin Vent Permit Number 574449

Sorry for the delay.

Will

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From: Shawn Auth <Shawn.Auth@tn.gov>
Sent: Thursday, October 26, 2023 8:52 AM
To: Will Ownby <William.Ownby@gerdau.com>

Cc: Josh Wigger <Josh.Wigger@gerdau.com>

Subject: RE: Re: Operational Flexibility Letter for Lime Silo Bin Vent Permit Number 574449

AVISO: Mensagem de Remetente Externo (Não-Gerdau) - Cuidado com Links e Anexos.
ATENCIÓN: Mensaje de Remitente Externo (No-Gerdau) – Cuidado con los Enlaces y Archivos Adjuntos.
WARNING: External Sender Message (Non-Gerdau) - Beware of Links and Attachments.

Thanks!

This content is Internal.

From: Will Ownby <William.Ownby@gerdau.com>

Sent: Thursday, October 26, 2023 8:40 AM

To: Shawn Auth <Shawn.Auth@tn.gov>

Cc: Josh Wigger <Josh.Wigger@gerdau.com>

Subject: [EXTERNAL] RE: Re: Operational Flexibility Letter for Lime Silo Bin Vent Permit Number 574449

*** This is an EXTERNAL email. Please exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email - STS-Security. ***

We will be getting that to you soon.

Thanks

Will

This content is Internal.

From: Shawn Auth <Shawn.Auth@tn.gov>

Sent: Thursday, October 26, 2023 7:24 AM

To: Will Ownby <William.Ownby@gerdau.com>

Cc: Josh Wigger <Josh.Wigger@gerdau.com>

Subject: RE: Re: Operational Flexibility Letter for Lime Silo Bin Vent Permit Number 574449

AVISO: Mensagem de Remetente Externo (Não-Gerdau) - Cuidado com Links e Anexos.
ATENCIÓN: Mensaje de Remitente Externo (No-Gerdau) – Cuidado con los Enlaces y Archivos Adjuntos.
WARNING: External Sender Message (Non-Gerdau) - Beware of Links and Attachments.

Will,

Following up on this request, the Division still needs the request calculations to process this Operational Flexibility.

Regards,
Shawn

From: Shawn Auth
Sent: Monday, October 9, 2023 2:22 PM
To: Will Ownby <William.Ownby@gerdau.com>
Cc: Josh Wigger <Josh.Wigger@Gerdau.com>
Subject: Re: Operational Flexibility Letter for Lime Silo Bin Vent Permit Number 574449

Will,

Re: Replacement of Lime Silo Bin Vent (Small baghouse mentioned in E7-11 of Title V Permit# 574449)

Can you provide a before and after emissions calculations for this?

Thanks,
Shawn



Shawn Auth | EPS 3
Division of Air Pollution Control
William R. Snodgrass TN Tower, 15th Floor
312 Rosa L. Parks Avenue, Nashville, TN 37243
p. 615-532-6812
Shawn.Auth@tn.gov

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External Customers: Please complete our [customer satisfaction survey](#).

Internal Customers (TDEC): Please complete our [customer satisfaction survey](#).

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October 26, 2023

Attention: Shawn Auth
Tennessee Department of Environment and Conservation
Division of Air Pollution Control
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Avenue, 15th Floor
Nashville, TN 37243

**RE: Gerda U AmeriSteel U.S. Inc., Facility ID 57-0189
Jackson, TN Facility
Response to 10/09/2023 Shawn Auth Email Related to Lime Silo Op
Flex**

Dear Mr. Auth:

Gerda U AmeriSteel U.S. Inc. (Gerda U) Is in receipt of your email dated October 9, 2023 related to the replacement of the Lime Silo Bin Vent and requesting before and after emission calculations. As you know, Gerda U owns and operates a steel mill located at 801 Gerda U Drive in Jackson, Madison County, Tennessee. The facility currently operates under the authority granted by Title V Permit No. 574449 issued on December 11, 2019 by the Tennessee Department of Environment and Conservation (TDEC).

As part of the site operations, Gerda U operates Emission Source 02, One Electric Arc Furnace with Continuous Caster, EAF Dust Silo and Lime Storage Silos with Baghouse Controls. Because the existing control device had reached the end of its useful life Gerda U submitted an Operational Flexibility request on August 21, 2023, for the purpose of replacing the bin vent baghouse on the lime silo. The email submittal with the included Operational Flexibility request letter stated that the replacement would be a like-for-like changeout of the bin vent baghouse having an exhaust flow rate of 1,000 cfm.

It is Gerda U's belief that there will be no change in the hourly emission rate of the old Wheelabrator unit, and the new replacement NFM unit. See the attached vendor information. The two devices each have a nominal exhaust flow rate of 1,000 cfm and no other changes are being made to the silo, its operation, or the exhaust inlet loading to the control device. For purposes of providing a numerical emission rate, Gerda U has estimated the before and after emission rate (unchanged) using a conservative post-control exhaust concentration of 0.02 grains per dry standard cubic foot (dscfm). Based on the use of the exhaust temperature of 75 degrees Fahrenheit as contained in the

2018 Title V permit renewal application, the emission rate from the Lime Silo was calculated as follows:

$$1,000 \text{ acfm} \times (460+68) / (460+75) \times 0.02 \text{ gr/dscf} \times 60 \text{ min/hr} \times 1 \text{ lb/7000 gr} = 0.17 \text{ lbs/hr.}$$

Assuming continuous operation, (very conservative assumption), the annual emission rate before and after the change would be:

$$0.17 \text{ lbs/hr} \times 8760 \text{ hrs/hr} \times 1 \text{ ton/2000 lbs} = 0.75 \text{ tons per year.}$$

Again, Gerdau believes there is no change in the emissions following the replacement of the old silo bin vent baghouse and requests that the Division issue a formal determination of its concurrence with our understanding that the requested change meets the requirements for inclusion under the Title V Operational Flexibility provisions.

Should any further information be required, please do not hesitate to contact Will Ownby, our plant's Environmental Manager, at (731) 423-5274, or by email at William.Ownby@Gerdau.com.

Sincerely,

A handwritten signature in blue ink, reading "Josh P. Wigger". The signature is stylized with a large, flowing "J" and "W".

Josh Wigger, Vice President/General Manager

cc: Will Ownby, Gerdau
Jeff Twaddle, ERM
Steve Marquardt, ERM

REPLACEMENT NFM BAGHOUSE CUT SHEET

REMOVED WHEELABRATOR BAGHOUSE CUT SHEET

DRAWING LIST
7152

<u>DRAWING NO.</u>	<u>REVISION</u>	<u>DESCRIPTION</u>
207D2520	Ø	General Arrangement
92D8074	Ø	Internal Parts Assembly
83C8095	Ø	Recommended Air Piping
88C8225 - G	G	Magnehelic Gauge Assembly
76C8234	Ø	Schematic Diagram
85D9826	Ø	Wiring Diagram

ENLARGED DETAIL "A"

OPERATING CONDITIONS (PER UNIT)
COLLECTOR CONSTRUCTION: 12 GA. STEEL; $\pm 15^\circ$ W.G.
VOLUME (ACF/MIN): 1,000
TEMPERATURE: 50-100 °F
PULVERIZATION: SLO INVENT
PRODUCT COLLECTED: DOLomite & FERrILE LIME DUST
SLURRY LOADINGS: 2 OR 4/CF (ESTIMATED)
LOCATION: OUTDOORS
NUMBER OF CARTRIDGES: 4
VOLUME PER CARTRIDGE (CFM): 250
CARTRIDGES: MILL-BLEACHED SPUN BOND POLYESTER
MAX. 3/4" DIAMETER BY 36" LONG
MAX. OPERATING TEMP.: 200°F

GENERAL NOTES:

1. SEE DRAWING #8C8095 FOR RECOMMENDED PIPING LAYOUT.
2. DIMENSIONS NOT TO BE USED UNLESS CERTIFIED BY W.C.C. ENGINEERING DEPT.
3. THE FOLLOWING ITEMS ARE SHIPPED LOOSE FOR FIELD INSTALLATION BY OTHERS:

MAGNETIC GA + KIT
TIMER
CARTRIDGES (4)

4. POWER SUPPLY REQ'D: FURNISHED BY CUSTOMER
120/1/60 (CONTROLS)
480/3/60 (MOTORS)

CLEAN,
PAINT.

SURFACES ARE PREPARED TO SSPC-SP3 CLEANING PRIOR TO PAINTING. ALL EXTERIOR SURFACES SHALL BE PAINTED WITH ONE (1) COAT OF PRIMER AND ONE (1) FINISH COAT OF GREY ENAMEL.

ECORP, INC.

7152

Wheelabrator
AIR POLLUTION CONTROL

GENERAL ARRANGEMENT

#22 WCC MODEL 36" BIN VENT DUST COLLECTOR

[illegible]

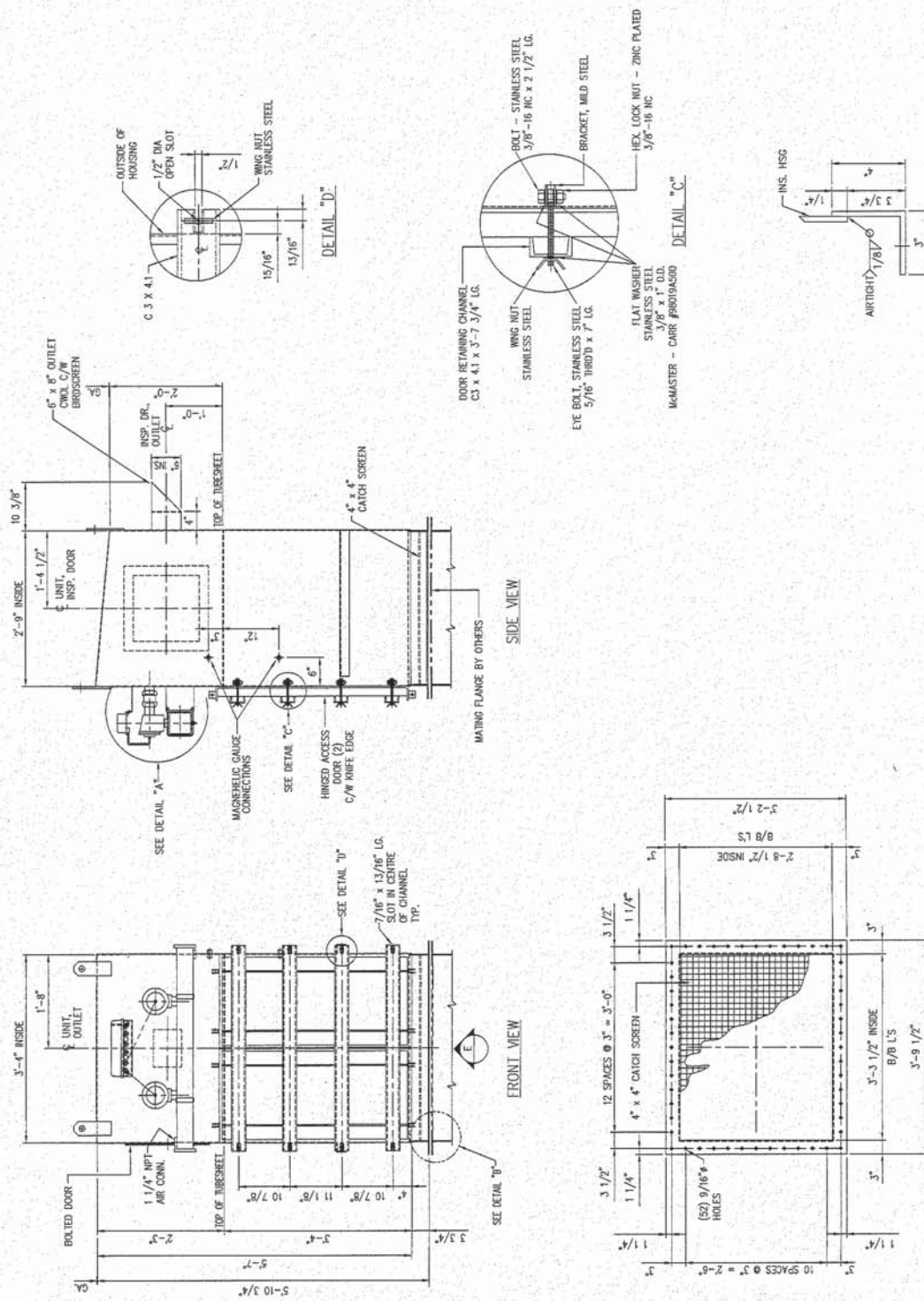
207D2502

CERTIFIED
02 JAN 08

UNIT DEAD LOAD: 1,100 LBS

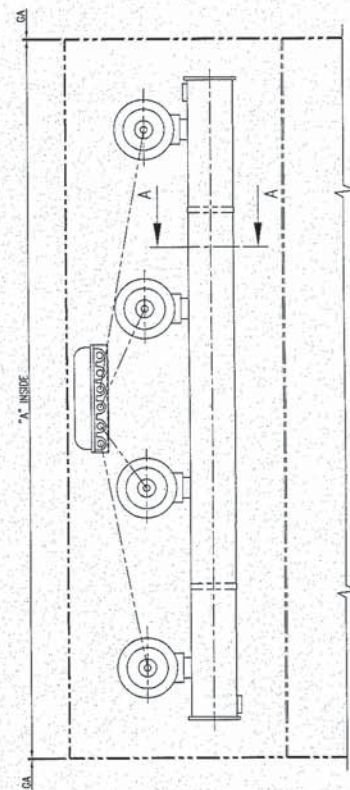
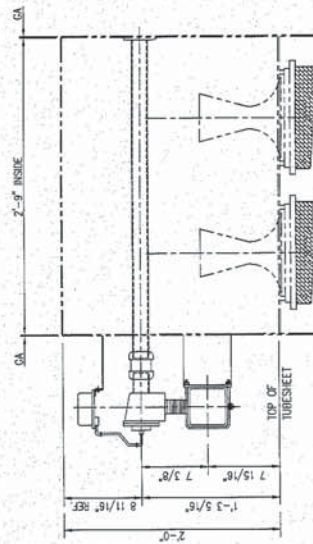
DETAIL "B"

VIEW ON ARROW "E"
BASE PERIMETER FLANGE





UNIT	A
#22	3'-4"
#23	5'-0"
#24	6'-8"



SIDE VIEW
SECTION "A-A"

STANDARD

Wheelabrator
AIR POLLUTION CONTROL



INTERNAL PARTS ASS'Y - #2 SERIES
MODEL 36" DUST COLLECTOR

92D8074

TOLERANCES ON DIMENSIONS UNLESS OTHERWISE NOTED ARE: (PLUS OR MINUS)
MACHINED .010" -- STRUCTURAL OVERALL 1/16" -- ALL OTHERS 1/32" NON ACCUMULATIVE
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SHUT OFF VALVE
ONE PER HEADER

VALVE DE FERMETURE

CHECK VALVE

TYPICAL TO OTHER
MODULE AIR HEADERS
AS REQUIRED.

PRESSURE REDUCING VALVE
C/W PRESSURE GAUGE
(SET AT 90 PSIG)

VALVE REDUCTRICE DE PRESSION
AVEC JAUGE DE PRESSION

AIR DRYER
(SECHEUR D'AIR)

COMPRESSED AIR PIPING
(MINIMUM 1" DIA. PIPE)

TUYAU AIR COMPRISE
(PIPE 1" MINIMUM)

COMPRESSOR TO SUPPLY 90 PSIG

DRAIN LEG

RECOMMENDED SIZE FOR

-CHECK VALVES 1 1/4" / 32 mm
-PIPING 1 1/4" / 32 mm
-SHUT OFF VALVES 1 1/4" / 32mm

TAGGING INSTRUCTION

EQUIPMENT DESCRIPTION: LIME STORAGE SILO DUST COLLECTOR

EQUIPMENT NUMBER: NOO-RL18-001

FOR REFERENCE ONLY

WAPC PROJECT NAME: JACKSONVILLE ELECTRIC AUTHORITY
WAPC CONTRACT NUMBER: 06-3847
WAPC P.O. NUMBER: 6128-000 OP
WAPC EQUIPMENT NUMBER: N00-RL18-001

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FOR REFERENCE ONLY



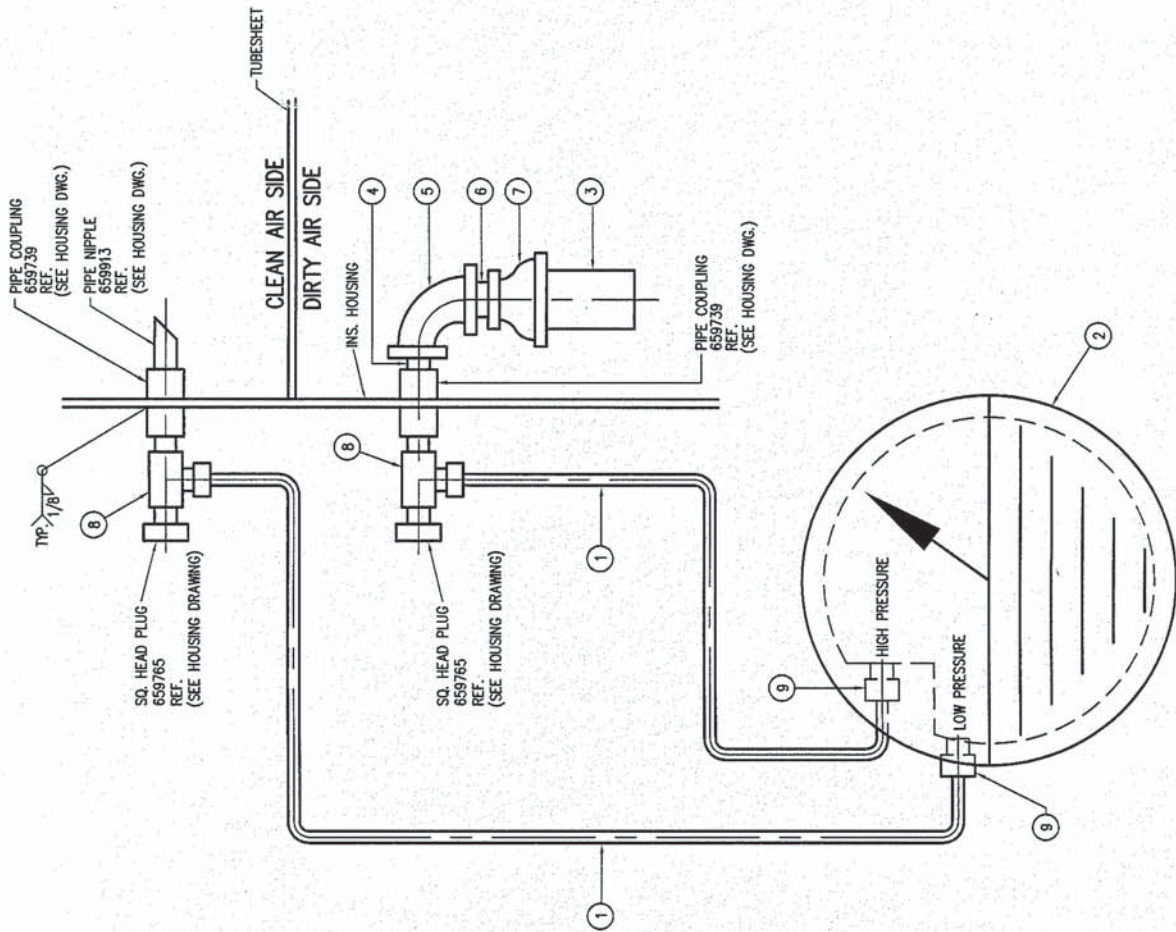
Wheelabrator
Air Pollution Control

RECOMMENDED AIR PIPING HOOK UP
RECOMM. PIPES D'AIR (INSTALLATION)

A	60 PSIG	AUG.7/85	WH	SCALE NTS	DRAWN HRBB	TRACED ---
CIG	WAS	DATE	BY CHD	DATE AUG.19/85	CHECK INI	APPR. ---
83C8095						

88C8225-G

ITEM	QTY	PART NO.	DESCRIPTION
1	25 FT	437704	TUBING - NYLON, 1/4" DIA, BLACK (FIELD INSTALLED TO CONNECT GAUGE)
2	1	653333	MAGNEHELIC GAUGE - 15" W.G.
3	1	662455	PIPE NIPPLE, 3/4" DIA. x 4" LG. T.O.E.
4	1	662516	CLOSE NIPPLE, 1/8" NPT (TBE)
5	1	662517	ELBOW - 90° REDUCING, 1/4" NPT x 1/8" NPT
6	1	662518	CLOSE NIPPLE, 1/4" NPT (TBE)
7	1	662519	COUPLING - REDUCING, 3/4" x 1/4"
8	2	668535	COMPRESSION FITTING, TEE, 1/8" NPT(M) x 1/4" O.D. TUBE x 1/8" NPT(F) BRASS
9	2	668576	COMPRESSION FITTING, CONNECTOR, 1/8" NPT x 1/4" O.D. TUBE (BRASS)



NOTES.

- SEE GEN. ARRGT. FOR LOCATION
- GAUGE MAY BE MOUNTED ON COLLECTOR SUPPORT OR ON EQUIPMENT PANEL.

STANDARD

Wheelabrator
AIR POLLUTION CONTROL

REVISED	30.007.07	EC	1000
PORTS	MAR 14/07	J.	
ITEM #	SEP 23/05	NP	
ITEM #	JAN 7/02	NP	
GENERAL	JUNE 13/06	NP	
GENERAL	BAPR99	JS	
GENERAL	4 JUN 99	NP	
CHG REVISION	DATE	BY	CHK

MAGNEHELIC GAUGE ASSEMBLY

C/W FITTINGS

88C8225-G

TOLERANCES ON DIMENSIONS UNLESS OTHERWISE NOTED ARE: (PLUS OR MINUS)
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DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
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NOTES

1. DISCONNECT SWITCHES DS1A & DS2A TO BE LOCATED AT MOTOR LOCATIONS IF REQUIRED (BY CUSTOMER)
2. ITEMS MARKED ■ SUPPLIED BY WHEELABRATOR, ALL OTHER EQUIPMENT TO BE SUPPLIED BY CUSTOMER.

TOLERANCES ON DIMENSIONS UNLESS OTHERWISE NOTED ARE: (PLUS OR MINUS)
MACHINING .010"----STRUCTURAL OVERALL 1/16"---ALL OTHERS 1/32" NON ACCUMULATIVE



Wheelabrator Canada Inc.
MILTON - ONTARIO

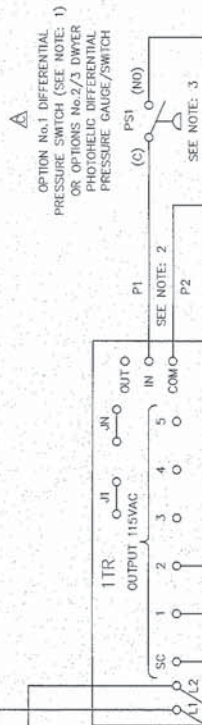
SCHEMATIC DIAGRAM FOR PULSE
TYPE DUST COLLECTOR

CHG	WAS	DATE	BY	CHD	DATE II/10/87	CHECK	RM	TRACED	76C8234
A	REASON	12/1/87	TA	RM	SCALE	NONE	DRAWN	TA	

5 CIRCUIT SOLID STATE TIMER
WHEELABRATOR P/N 949075
POWER CONSUMPTION 100 VA 
DIMENSIONS INCLUDING EEMAC/NEMA 4
ENCLOSURE 10"Hx 8"Wx 4"D
(SUPPLIED BY WHEELABRATOR)

TO DWYER PHOTOHELIC
DIFFERENTIAL PRESSURE
GAUGE / SWITCH

COMMON WIRE TO BE WHITE 14 GA.
ALL OTHERS TO BE RED 14 GA.



**DIFFERENTIAL
PRESSURE SWITCH CLOSES
ON HIGH DIFFERENTIAL
PRESSURE ACROSS DUST
COLLECTOR FILTERS**



FRONT VIEW

PS1/PS2 DWYER PHOTOHELIC

DIFFERENTIAL PRESSURE GAUGE / SWITCH

(0-10" W.C.)
OPTION No.3 - (CAT.#A3010-LT-WP)
(EEMAC/NEMA 4 ENCLOSURE)



REAR VIEW

PS1/PS2 DWYER PHOTOHELIC

DIFFERENTIAL PRESSURE GAUGE / SWITCH

(SEE NOTE: 3) (0-10" W.C.)

OPTION No.2 - (CAT.#A3010-LT)
OPTION No.3 - (CAT.#A3010-LT-W)
(SUPPLIED BY WHEELABRATOR)

TIMER 17R
FIRING ORDER

1. V1
2. V2
3. PUT ON BYPASS
4. PUT ON BYPASS
5. PUT ON BYPASS

A NOTES

ASSEMBLY

1. OPTION No.1 DIFFERENTIAL PRESSURE SWITCH (PS1) IS DWYER CAT. # 1950-10 (3" TO 11" WG) C/W DUSTIGHT/WEATHERPROOF ENCLOSURE.
2. IF THE OPTION No.1 DIFFERENTIAL PRESSURE SWITCH PS1 (OR THE OPTIONS No.2 OR 3 PHOTOCELL DIFFERENTIAL PRESSURE SWITCH/GAUGE/PS1/PS2) IS USED, THEN THE JUMPER BETWEEN COMMON AND IN MUST BE REMOVED BEFORE WIRING, OTHERWISE, IT MUST REMAIN IN PLACE.
3. THE LOW PRESSURE PORT OF THE OPTION No.1 DIFFERENTIAL PRESSURE SWITCH PS1 (OR THE OPTIONS No.2 OR 3 PHOTOCELL DIFFERENTIAL PRESSURE SWITCH/GAUGE/PS1/PS2) IS CONNECTED TO THE CLEAN SIDE OF THE FILTER AND THE HIGH PRESSURE PORT TO THE DIRTY SIDE. DWYER PHOTOCELL DIFFERENTIAL PRESSURE GAUGE/SWITCH (PS1/PS2)-OPTIONS No.2 OR 3 (IN DUSTIGHT/WEATHERPROOF ENCLOSURE) MUST BE MOUNTED WITH DIAPHRAGM IN VERTICAL POSITION.
4. BEFORE OPERATING THE DUST COLLECTOR, ENSURE THAT THE VALVES PIPED TO THE DIAPHRAGM VALVES ARE THE VALVES THAT ARE WIRED TO THE PULSE TIMER.
5. COMMON WIRE "15C" IS TO BE CONNECTED TO THE COMMONS OF THE SOLENOID VALVES CONTROLLED BY THE OUTPUTS ON THE TIMER BOARD.

TOLERANCES ON DIMENSIONS (UNLESS OTHERWISE NOTED ARE: (PLUS OR MINUS)

ALL DIMENSIONS UNLESS OTHERWISE NOTED ARE: (+)US OR (MINUS) MACHINING .010"---STRUCTURAL OVERALL 1/16"---ALL OTHERS 1/32" NOM. ACCUMULATIVE

[illegible]

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[illegible]

Canada Inc.

WIRING DIAGRAM FOR SIZE 12,

22. 32. AND 42 WCC DUST COLLECTOR

SALE NO	DRAWN TO	TRACED
22, 32, AND 42 WCC DUST COLLECTION		

85D9826