

Industrial Silencer, Heat Recovery and Catalytic Specialists

Maxim Silencers 2021

Vent & Blowdown Silencers

Revision: M-VBS-002



MAXIM[®]
SILENCERS
MAXIM
a Powertherm company

Prices are subject to change without notice.
Prices are in U.S. dollars

Minimum order \$50, expedited fees minimum \$50
Custom orders may require payment in advance.
Custom items are non-returnable and non-refundable.

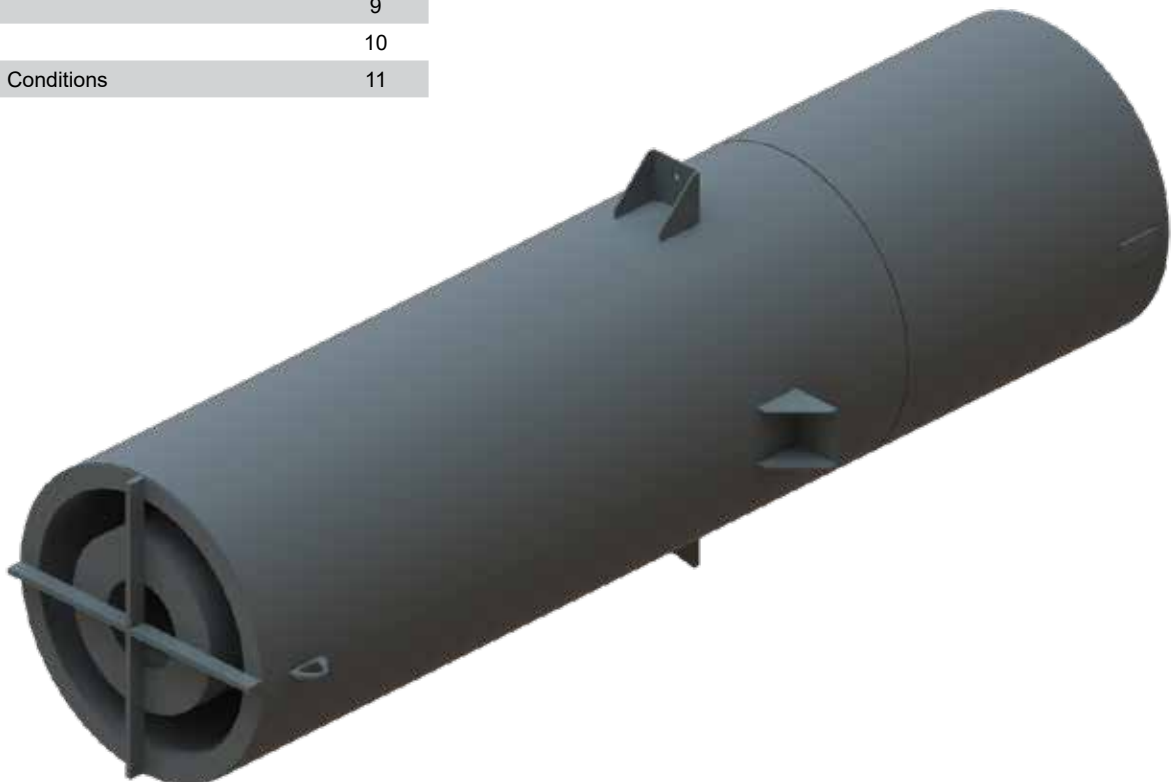
Returns must be approved by Maxim Silencers in advance. Upon approval an RMA will be issued.
Return shipments are prepaid by customer, unless otherwise authorized by Maxim Silencers.
Restocking charges may be applied.

Maxim Silencers products are warranted for one year from date of purchase by the consumer against defects due to materials and workmanship only. In case of a defective product, Maxim Silencers shall be the sole judge in determining the nature of the defect. Maxim Silencers sole obligation shall be to repair, or at Maxim Silencers option, to replace said products providing the originals are returned to Maxim Silencers. All returned items must be pre-approved by Maxim Silencers. All return shipments must be prepaid by the consumer. Defects or failures due to improper or careless installation, storage, handling, or application shall be excluded from this warranty. Failure to comply or contrary usage to Maxim Silencers directions, specifications or design, of which Maxim Silencers shall be sole judge, voids this warranty and all said products are specifically excluded from this warranty. No liability for damage or loss of any nature arising from or out of the use of this product, whether or not defective, is assumed. No liability is accepted for return transportation charges, following the repair or replacement, as previously mentioned, or for reinstallation costs. No other expressed or implied warranties exist in the absence of special written agreement between the consumer and Maxim Silencers.

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VENT & BLOWDOWN SILENCERS

OVERVIEW

Maxim Silencers custom engineers and manufactures Vent Silencers for a wide variety of compressed gases ranging from air to superheated steam, reducing the noise associated with venting high pressure steam or gas to atmospheric pressure. With more than 125 years of experience in acoustical engineering for the oil & gas and chemical industries, our vent and blowdown silencers are designed to meet the requirements and stringent performance parameters of your application.

Typical Applications: Natural Gas Pipeline Compressor Station Blowdown, Natural Gas Pipeline Maintenance Blowdown, Compressed Gas Vents, High Pressure Superheated Steam Vents, Constant Flow Safety Relief Valve and Boiler Systems

FEATURES & OPTIONS

- Variable sound attenuation
- Stainless steel construction; internals and/or shell
- Horizontal or vertical support arrangements
- Custom mounting options
- Multiple inlet options
- High heat silicone black or aluminum finish, special paints and finishes available
- NPT drain coupling
- Weatherhood or birdscreen available
- AMSE Section VIII, Div. 1 code diffuser
- Complete range of complimentary accessories available



VARIABLE FLOW BLOWDOWN VENT SILENCERS

Large Blowdown Silencer used at natural gas compression stations to blow-down gas to atmosphere for maintenance or emergency pressure relief for residential and noise sensitive areas.

VENT & BLOWDOWN SILENCERS

Vent or Blowdown Silencer

Type of Gas

- Air Natural Gas
 Steam Other

Molecular Weight:

Specific Gravity:

Specific Heat Ratio:

Constant/Continuous Flow Vent

Gas Temperature: ° F

Gas Temperature: PSIG

Continuous Vent Flow: lb/hr

Varying/Intermittent Blowdown Vent

Initial Starting Pressure: PSIG

Final Ending Pressure: PSIG

Volume Vented: cu. ft.

Blowdown time: minutes

Sound Requirements

Silenced Level: dBA

Distance from outlet: ft.

Construction

Silencer Inlet Size: in.

- Flanged
 Stub

Rating:

Supports / Mounting

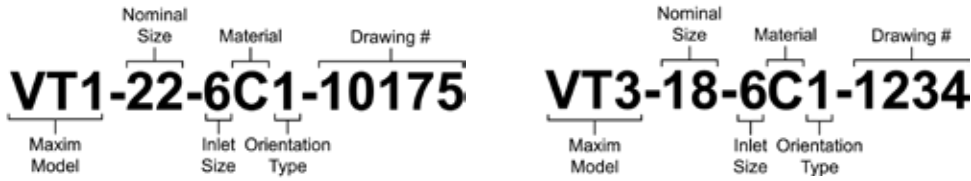
- Legs Skirt & Base Ring
 Body Brackets

COMPRESSOR MOUNTED BLOWDOWN SILENCERS

Small Blowdown Vent Silencers used on natural gas compressor packages to release gas from pressurized vessels and piping for maintenance and repair.

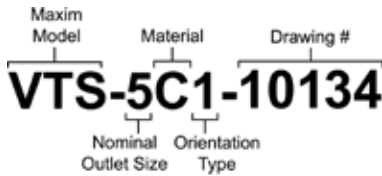


Guides - Nomenclature



VT1, VT2, and VT3 Silencer Nomenclature

Model	-Nominal Outlet Size	-Inlet Size	Material	Orientation Type	- #
VT1	-Nominal Outlet Size	-Inlet Size	C Carbon Steel	1 End in, End out	-Drawing Number
VT2			S Stainless Steel 304	2 Side in, End out	
VT3			T Stainless Steel 316	Custom orientation, multiple inlets and mounting options available.	
			L Stainless Steel 316L		
			A Aluminized Steel		
			W Aluminum		



VTS Nomenclature

Model	-Nominal Outlet Size	Material	Orientation Type	- #
VTS	-Nominal Outlet Size	C Carbon Steel	1 End in, End out	-Drawing Number
		S Stainless Steel 304	Custom orientation and mounting options available.	
		T Stainless Steel 316		
		L Stainless Steel 316L		
		A Aluminized Steel		

Vent & Blowdown Silencer Orientation Types

Orientation: Orientation and mounting arrangements are viewed horizontally from Left (inlet) to Right (outlet) for nomenclature purpose. Can be mounted vertically, examples below. Custom orientation, multiple inlets and mounting options available.



Type 1 - EIEO
End In, End Out

Type 2 - SIEO
Side In, End Out



ATMOSPHERIC VENT SILENCER

35 to 40 dBA Noise Reduction

OVERVIEW

The VT1 is good for vent silencing of high frequency noise associated with steam or gas vents. The VT1 has a very high performance to cost ratio. Installation of the VT1 on a high pressure safety valve discharge will satisfy most concerns regarding worker safety or OSHA noise compliance. The VT series can be engineered and designed to your specific project or end user requirements and specifications.

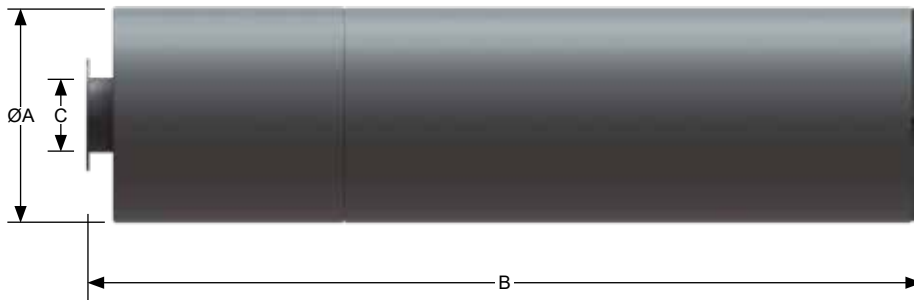
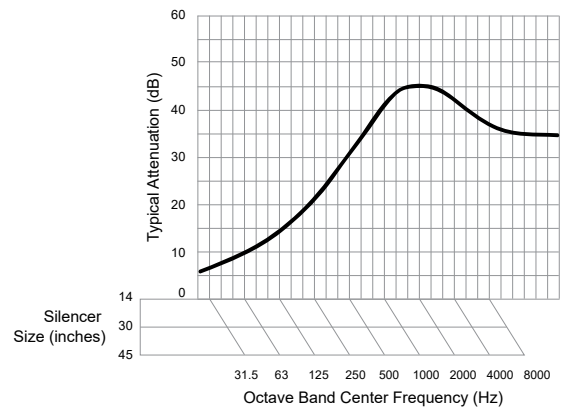
Typical Applications: Process vents, safety and relief valve discharge, small process vents, as well as compressor and gas transmission line blowdown

FEATURES

- Advanced acoustical design
- Heavy duty, all welded construction and long service life
- Long strand fiberglass acoustical packing
- Flanged inlet nozzle with diffuser
- High heat silicone black or aluminum finish
- NPT drain coupling
- Custom sizes available

OPTIONS / ACCESSORIES

- AMSE Section VIII, Div. 1 code diffuser
- Side inlet connection
- Multiple flanges and classes available
- Multiple inlets
- Horizontal or vertical support arrangements
- Stainless steel construction
- Custom surface prep and coating
- Weatherhood and birdscreen
- Metallic wool packing available
- Complete range of complimentary accessories



VT1					VT1				
Part No.*	Size / ØA	B	C	Est Wt	Part No.*	Size / ØA	B	C	Est Wt
VT1-14	14	44	4	175	VT1-72	72	114	18	4700
VT1-18	18	53	6	265	VT1-78	78	115	18	5300
VT1-22	22	63	6	465	VT1-86	86	116	20	6250
VT1-26	26	71	8	575	VT1-96	96	115	20	7550
VT1-30	30	83	10	945	VT1-104	104	132	24	9400
VT1-36	36	99	12	1415	VT1-112	112	134	24	10350
VT1-40	40	110	14	1840	VT1-120	120	133	24	11350
VT1-45	45	127	16	2525	VT1-128	128	149	24	13950
VT1-54	54	112	16	3200	VT1-136	136	150	24	15500
VT1-64	64	113	16	4050	VT1-144	144	151	24	16400

• All dimensions are in inches. All weights are in pounds. Weights are approximate.
 • Listed sound data is based on typical performance and should not be considered absolute.
 • *See nomenclature guide for additional information on part number creation.



ATMOSPHERIC VENT SILENCER

42 to 45 dBA Noise Reduction

OVERVIEW

The VT2 is better for vent silencing of high frequency noise associated with steam or gas vents. The VT2 is shorter and more economical than the VT3. The VT series can be engineered and designed to your specific project or end user requirements and specifications.

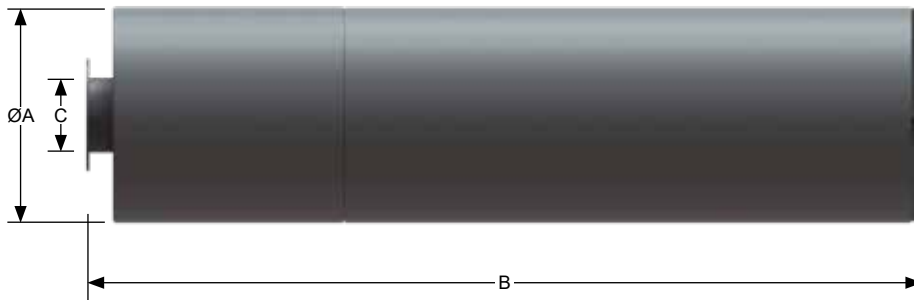
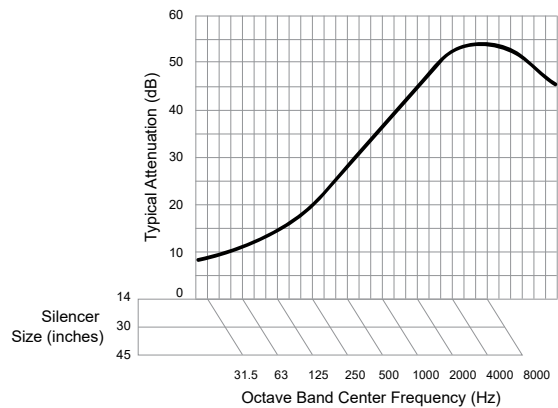
Typical Applications: Process vents, safety and relief valve discharge, small process vents, as well as compressor and gas transmission line blowdown

FEATURES

- Advanced acoustical design
- Heavy duty, all welded construction and long service life
- Long strand fiberglass acoustical packing
- Flanged inlet nozzle with diffuser
- High heat silicone black or aluminum finish
- NPT drain coupling
- Custom sizes available

OPTIONS / ACCESSORIES

- AMSE Section VIII, Div. 1 code diffuser
- Side inlet connection
- Multiple flanges and classes available
- Multiple inlets
- Horizontal or vertical support arrangements
- Stainless steel construction
- Custom surface prep and coating
- Weatherhood and birdscreen
- Metallic wool packing available
- Complete range of complimentary accessories



VT2					VT2				
Part No.*	Size / ØA	B	C	Est Wt	Part No.*	Size / ØA	B	C	Est Wt
VT2-14	14	62	4	260	VT2-72	72	150	18	6400
VT2-18	18	71	6	345	VT2-78	78	151	18	7250
VT2-22	22	87	6	480	VT2-86	86	152	20	8450
VT2-26	26	101	8	985	VT2-96	96	151	20	10300
VT2-30	30	119	10	1380	VT2-104	104	168	24	12550
VT2-36	36	141	12	1835	VT2-112	112	170	24	13900
VT2-40	40	159	14	2665	VT2-120	120	169	24	15350
VT2-45	45	175	16	3380	VT2-128	128	185	24	18450
VT2-54	54	148	16	4250	VT2-136	136	186	24	20200
VT2-64	64	149	16	5450	VT2-144	144	187	24	21950

- All dimensions are in inches. All weights are in pounds. Weights are approximate.
- Listed sound data is based on typical performance and should not be considered absolute.
- *See nomenclature guide for additional information on part number creation.



ABSORPTIVE VENT AND BLOWDOWN SILENCER

50 to 55 dBA Noise Reduction

OVERVIEW

The VT3 is the best silencing option for high frequency noise associated with venting pressurized gas to the atmosphere. The VT3 provides the maximum noise reduction that can be practically obtained. The VT series can be engineered and designed to your specific project or end user requirements and specifications.

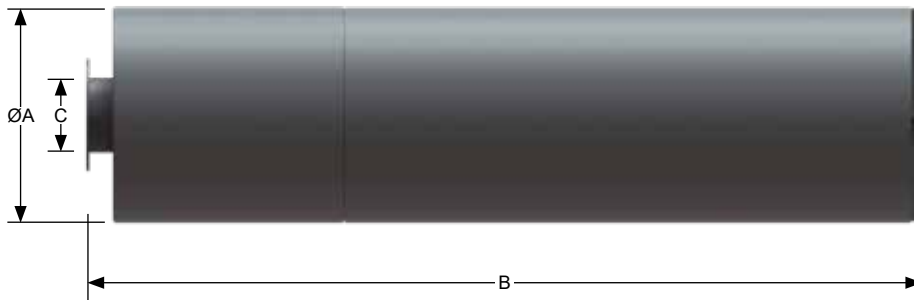
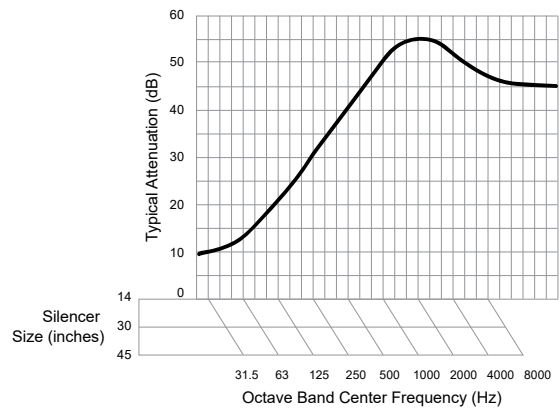
Typical Applications: Process plants for gas, fluids and steam, Safety and relief valve discharge, Compressor and gas transmission line blowdown plus Pipeline and petrochemical industries

FEATURES

- Advanced acoustical design
- Heavy duty, all welded construction and long service life
- Long strand fiberglass acoustical packing
- Flanged inlet nozzle with diffuser
- High heat silicone black or aluminum finish
- NPT drain coupling
- Custom sizes available

OPTIONS / ACCESSORIES

- AMSE Section VIII, Div. 1 code diffuser
- Side inlet connection
- Multiple flanges and classes available
- Multiple inlets
- Horizontal or vertical support arrangements
- Stainless steel construction
- Custom surface prep and coating
- Weatherhood and birdscreen
- Metallic wool packing available
- Complete range of complimentary accessories



VT3					VT3				
Part No.*	Size / ØA	B	C	Est Wt	Part No.*	Size / ØA	B	C	Est Wt
VT3-14	14	80	4	315	VT3-72	72	186	18	7900
VT3-18	18	95	6	458	VT3-78	78	187	18	9000
VT3-22	22	123	6	732	VT3-86	86	188	20	10600
VT3-26	26	137	8	1034	VT3-96	96	187	20	12750
VT3-30	30	161	10	1768	VT3-104	104	204	24	15350
VT3-36	36	190	12	2656	VT3-112	112	206	24	17050
VT3-40	40	213	14	3467	VT3-120	120	205	24	18950
VT3-45	45	241	16	4487	VT3-128	128	221	24	22550
VT3-54	54	185	16	5250	VT3-136	136	222	24	24700
VT3-64	64	185	16	6700	VT3-144	144	223	24	26900

• All dimensions are in inches. All weights are in pounds. Weights are approximate.
 • Listed sound data is based on typical performance and should not be considered absolute.
 • *See nomenclature guide for additional information on part number creation.



ATMOSPHERIC VENT SILENCER

35 to 40 dBA Noise Reduction

VTS OVERVIEW

For relatively small vent applications, the VTS offers impressive silencing of the noise associated with steam or gas vents. The VTS has a very high performance to cost ratio.

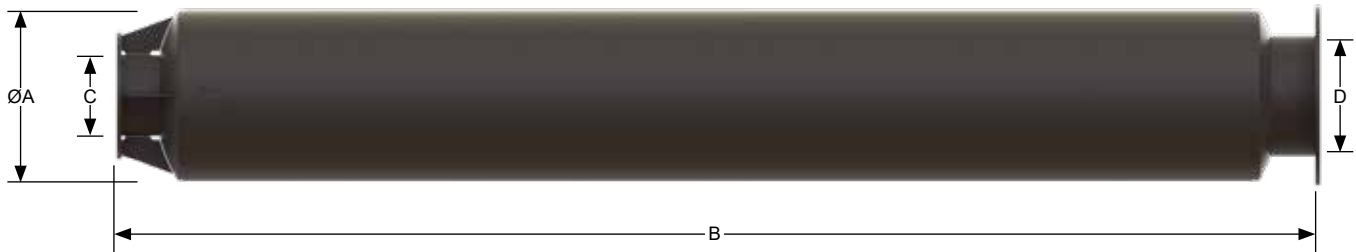
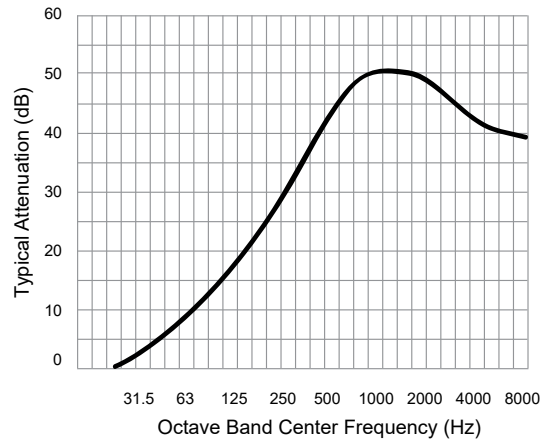
Typical Applications: Steam ejectors, small steam or gas vents, small process vents, turbine and compressor bypass as well as small safety and relief valves

FEATURES

- Advanced acoustical design
- Heavy duty, all welded construction and long service life
- Long strand fiberglass acoustical packing
- Flanged inlet nozzle with conical diffuser and flanged outlet
- High heat silicone black or aluminum finish
- Custom sizes available

OPTIONS / ACCESSORIES

- AMSE Section VIII, Div. 1 code diffuser
- Multiple flanges and classes available
- Multiple inlet options
- Horizontal or vertical support arrangements
- Stainless steel construction
- Custom surface prep and coatings available
- Weatherhood and birdscreen
- Metallic wool packing available
- Complete range of complimentary accessories



VTS						
Part No.*	Size	ØA	B	C	D	Est Wt
VTS-5	5	12	66	2	5	98
VTS-6	6	12	78	3	6	112
VTS-8	8	14	86	4	8	152
VTS-10	10	16	106	6	10	250
VTS-12	12	18	127	8	12	340

- All dimensions are in inches. All weights are in pounds. Weights are approximate.
- Listed sound data is based on typical performance and should not be considered absolute.
- *See nomenclature guide for additional information on part number creation.



Standard Terms and Conditions

QUOTATIONS: All quotations are made subject to the following Standard Terms and Conditions, unless otherwise specified within the body of the formal quotation, in which case that section or paragraph only would be superseded. (In the case of a catalytic silencer, all Standard Terms and Conditions apply except that the LIMITED WARRANTY provision is superseded by the provisions contained in the document entitled "LIMITED WARRANTY AS APPLIED TO CATALYTIC SILENCER.") No deviations from or changes to these Terms and Conditions will be honored or recognized without prior negotiation and written agreement between the Seller and Purchaser.

PRICING: All quotations are made for immediate acceptance and are subject to change without notice, unless otherwise noted. Prices quoted are based on the current costs of material and labor and are subject to escalation. Said escalation shall be determined by the cost of material to Seller on the date of shipment of said material from Supplier, and the costs of labor during the fabrication cycle. Prices do not include handling charges, transportation or related costs. Buyer agrees to pay the prices quoted by Seller, and is responsible for freight and handling charges, special packaging beyond the Sellers' standard packaging, taxes and duties. Handling, prepaid freight and special packing costs will be added to the purchase price and invoiced separately.

ORDER ACCEPTANCE, DELIVERY: No order is binding on Seller until accepted and acknowledged in writing by Seller by mail or electronic communication. All delivery dates are approximate and is the date goods leave Sellers dock. The time period for delivery begins when all documentation and release required to fill the order are present, and not before clarification of all details. All delivery promises are subject to prior commitment of shop capacity before the receipt of a firm purchase order by Seller. If shipment is delayed by Purchaser, payment shall become due when Purchaser is notified that equipment is ready for shipment and equipment will henceforth be held at Purchaser's risk and expense.

SHIPMENT, RISK OF LOSS: Buyer's purchase order must specify preferred carrier or goods will ship best way, prepaid and added to the invoice. Shipment is Free Carrier, FCA Sellers facility or origin of shipment, Incoterms 2010, unless otherwise agreed in writing. Risk of loss and title to goods shall pass to the Purchaser as soon as goods are deposited with the carrier for shipment. Buyer assumes both risk of loss and damage to the goods as well as title to the goods on Sellers dock; and Buyer is responsible for all freight, sales and other taxes, customs duties, insurance costs and other expenses relating to the shipment of goods. Buyer is responsible for all costs, reporting, and compliance with export control laws related to the goods' export.

CREDIT and PAYMENT: Credit accounts will be opened only with firms or individuals approved by the Seller's Credit Department. Purchaser with approved payment terms agrees to pay invoiced amount to Seller on or before thirty (30) days from date of invoice unless otherwise specified and/or agreed upon in writing. All past due accounts are subject to interest at the rate of one percent (1 %) per month on the unpaid balance. Seller reserves the right at any time upon notice to purchaser, to alter or suspend credit, when in its sole opinion the financial condition of the Purchaser so warrants. In such cases, cash payment or satisfactory security from the Purchaser may be required by the Seller before credit is restored or Seller continues performance.

CANCELLATION: Cancellation shall be affected only by a written agreement and Purchaser will assume full liability for payment of any and all cancellation charges.

RETURNED GOODS: A RMA packing slip must be received and included with any returns. No material will be accepted for replacement or credit without Seller's written consent and then only under the terms of such consent. Returns for credit will include a restocking fee, unless otherwise specified and/or agreed upon in writing.

LIMITED WARRANTY: Seller warrants only goods of its own manufacture and then only to the extent that they are free from defects in material and workmanship under normal use and service for the purpose for which they were manufactured and when correctly installed and maintained within one (1) year from the date of shipment. This warranty is limited to repair or replacement of the goods FCA point of manufacture at the Seller's option. Seller does not warrant secondhand material. THESE WARRANTIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING THE WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Purchaser waives any warranties of any kind whatsoever including but not limited to a waiver of any warranties of fitness, any warranties as to the suitability of the product for its intended use, and any warranties as to the return of the purchase price. It is further understood and agreed that this is Purchaser's only remedy for all claims arising or relating to the goods purchased hereunder for breach of contract and tort including negligence and strict liability and any other legal theory. Seller shall not be responsible for deterioration of any part or parts of the equipment due to corrosion, erosion or any other causes, regardless of when such deterioration occurs, after leaving the manufacturer's premises. No allowance will be granted for repairs or alterations made by Purchaser or at Purchaser's direction without Seller's written consent. Seller shall not be liable for consequential, incidental or any damages other than repair or replacement of defective goods at Seller's option. It is understood that Seller makes no warranty except as expressly stipulated herein and Seller's liability is limited as above set forth. **NOT WARRANTED:** Maxim Silencers offers no paint guarantees other than preparation and application in accordance with manufacturer's instructions. The primary purpose of "factory black" standard coating is not aesthetic but for corrosion resistance and shipping protection. No heat curing is available. If required, curing must be done in service at the direction of others.

No representative has the authority to make any representation, promise or agreement except as stated herein.

TAXES: The Purchaser shall pay to the Seller in addition to the purchase price, the amount of any excise, sales, privilege, or use tax, local, state or federal, which is payable by the Seller because of the execution of this contract or sale or delivery of the apparatus covered hereby. Seller shall collect applicable taxes in states where Seller has nexus, unless Buyer submits a valid tax exemption certificate.

PATENTS: Notwithstanding any language to the contrary in specifications, purchase orders or elsewhere, Seller shall not be responsible for any patent infringement, or claim of patent infringement with respect to products furnished in accordance with the Purchaser's specifications or design requirements, and Purchaser shall indemnify and save Seller harmless from all claims, demands or suits growing out of or based on any patent infringement or claim thereof, arising there from.

FORCE MAJEURE: Seller shall not be liable for any delay in delivery or for non-delivery, in whole or in part caused by the occurrence of any contingency beyond the control either of Seller or suppliers to the Seller, including but not limited to war (whether an actual declaration thereof is made or not), sabotage, insurrection, rebellion, riot or other act of civil disobedience, act of a public enemy, failure or delay in transportation, act of any government or any agency or subdivision thereof, judicial action, labor dispute, fire, accident explosion, epidemic, quarantine, restrictions, storm, flood, earthquake, or other act of God, shortage of labor, fuel, raw material or machinery or technical failure, where Seller has exercised ordinary care in the prevention thereof. If any contingency occurs, Seller may allocate production and deliveries among Seller's customers.

CONFIDENTIAL INFORMATION: All drawings, diagrams, specifications and other materials furnished by Seller and identified as confidential relating to the use and service of articles furnished hereunder and the information therein are proprietary to Seller. Such materials have been developed at great expense and they contain trade secrets of the Seller. Buyer may not reproduce or distribute such materials except to Buyer's employees who may use the articles as part of their duties. All such materials relating to the article supplied directly by Seller (except information as may be established to be in the public domain or disclosed pursuant to judicial government action) shall be received in confidence and Buyer shall exercise reasonable care to hold such information in confidence.

TECHNICAL ASSISTANCE: Seller's warranty shall not be enlarged and no obligation or liability shall arise out of Seller's rendering of technical advice, facilities or services in connection with Buyer's order for the goods furnished.

DISPUTES: This agreement is deemed to be entered into in Texas and to be a Texas contract and shall be governed and construed in accordance with the laws of the State of Texas. Except as otherwise specifically provided for herein Seller and Buyer specifically agree that any legal action brought relating to goods purchased or relating to this contract will be brought and tried in Texas. All objections to venue are hereby waived by the Buyer, and the Buyer consents to service of process by certified mail addressed to the same address as that address designated for delivery of the goods purchased hereunder. In the event of any suit for the collection of funds instituted by the Seller, the prevailing party with respect to such collection matter shall be entitled to reasonable attorney's fees as determined by the court to prevail in Texas.

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