



ZEVAC



## ZD3 M1 Product Manual

1:1 Differential Driven  
Drawdown Compressor



# Retain this Document

**Thank you for choosing ZEVAC instead of venting or flaring.**

This manual covers the operation and maintenance of ZEVAC equipment. The information and specifications included in this publication were in effect at the time of approval for printing. No part of this publication may be reproduced without written permission. Keep this owner's manual handy, so you can refer to it at any time. The illustrations and procedures may vary according to the type. If a problem should arise, or if you have any questions about the pump, consult your authorized dealer.

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**Last updated 10/31/25**

## LEGEND

	<p><b>WARNING</b></p> <p>The operator must be aware of safety precautions to prevent physical injury.</p> <p>Any pressure-containing device can explode, rupture, or discharge its contents if it is over-pressurized. Take all necessary measures to avoid over-pressurization.</p> <p>Operating, installing, or maintaining the unit in any way that is not covered in this manual could cause death, serious personal injury, or damage to the equipment. This includes any modification to the equipment or use of parts not provided by ZEVAC. If there is a question regarding the intended use of the equipment, please contact a ZEVAC representative before proceeding.</p> <p>Do not change the service application without the approval of an authorized ZEVAC representative.</p>
	<p><b>CAUTION</b></p> <p>You must observe the instructions contained in this manual. Failure to do so could result in physical injury, damage, or delays.</p> <p>It is extremely important that you read, understand, and follow the safety messages and regulations carefully before handling the product. They are published to help prevent these hazards:</p> <ul style="list-style-type: none"> <li>• Potential injury and/or property damage</li> <li>• Damage to the product</li> <li>• Product malfunction</li> </ul>

## Hazard Levels

	<p><b>DANGER</b></p> <p>A hazardous situation which, if not avoided, WILL result in significant injury or fatality.</p>
	<p><b>WARNING</b></p> <p>A hazardous situation which, if not avoided, MAY result in significant injury or fatality.</p>
	<p><b>CAUTION</b></p> <p>A situation where caution should be exercised to avoid introducing potential hazards.</p>
	<p><b>NOTICE</b></p> <p>Important information to be aware regarding the proper handling and use of ZEVAC technology.</p>

## User Safety

### These safety rules always apply:

- Always keep the work area clean.
- Pay attention to the risks presented by gas and vapors in the work area.
- Always bear in mind the risk of unplanned depressurization and release of energy.

Use safety equipment according to the company regulations. Additional Personal Protective Equipment (PPE) may be required.

### Always use this safety equipment within the work area:

- Hard hat
- Flame Retardant Clothing (FRC)
- Safety goggles, preferably with side shields
- Protective shoes
- Protective gloves
- Hearing protection
- First-aid kit



#### NOTICE

Never operate a ZEVAC unit unless safety protocols have been established, installed, and reviewed in accordance with this manual's proper use guidelines.

# INTRODUCTION

ZEVAC® ZD3 technology offers a reliable and efficient alternative to conventional compressors by creating a closed vent system (CVS) that can efficiently capture gas from blowdowns or venting, irrespective of its quantity or liquid content. The ZD3 M1 unit is a CVS for vent recompression using only differential pressure as the driving force to power linear reciprocating pistons. It can assist the end user in complying with EPA regulations such as 40 CFR 51 subpart OOOOb as it relates to emission requirements. In a typical application, high-pressure gas from a station's discharge header expands through the ZD3 unit, flowing to a lower pressure suction header. The unit's drive gas inlet is connected to a dedicated upstream tap. The drive gas outlet often is commingled with the high pressure return process gas, but may be separated in other applications as needed. When sufficient differential pressure is applied, the ZD3 M1 activates and compresses the process gas into a reinjection line at a higher-pressure. It deactivates when the drive gas supply stops or differential pressure falls below the pressure needed to move the pistons against the reinjection line pressure.

In addition to remote locations, the ZD3 M1 is ideal for sensitive locations (i.e., urban areas), where venting is not permitted or obtaining work permits can be difficult. In most cases, a ZD3 M1 unit and all associated piping can be installed and commissioned in a single day without any disruption to the station's operation. ZD3 M1 equipment is highly reliable with its' simple and proven design minimizing the likelihood of failures or unplanned downtime. ZEVAC® ZD3 M1 systems can be easily retrofitted onto existing facilities and equipment with minimal construction requirements. They can also be deployed in modular, scalable configurations (skids) to address emissions across an entire site or multiple locations.

## CAUTIONS – SAFETY SECTION

The following are precautionary statements and safety recommendations that apply generally to ZD3 equipment and are not specific to a certain application.

Before using this equipment, read and understand these instructions. Never operate a ZEVAC® unit unless safety protocols have been established, installed, and reviewed in accordance with this manual's proper use guidelines.

Do not exceed the highest recommended pressure for either the drive gas supply or process gas supply.

Do not use any ZEVAC® equipment that appears to be in a leaking condition or has known leaks.

	<b>CAUTION</b> A situation where caution should be exercised to avoid introducing potential hazards.
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During normal operations, it is possible for pressure to build up in the head due to temperature increase of the grease used for head lubrication. This pressure can still be present after the unit has been blown down and removed from the piping system it services. **USE EXTREME CAUTION WHEN REMOVING THE GREASE ZERKS FROM THE HEAD AND DO NOT STAND IN THE LINE OF FIRE WHILE REMOVING THESE FITTINGS.** If any hissing noises or sounds of escaping pressure are heard while removing a grease zerk, let the pressure dissipate before completely removing the fitting.

The minimum personal protective equipment (PPE) required for work around this equipment is: hard hat, safety shoes, gloves, hearing protection, safety glasses and flame retardant clothing (FRC). Additional PPE may be required depending on the pipeline application where this equipment is used.

Keep the area clean around this equipment.

Pay attention to the risks presented by gas and vapors in the work area.

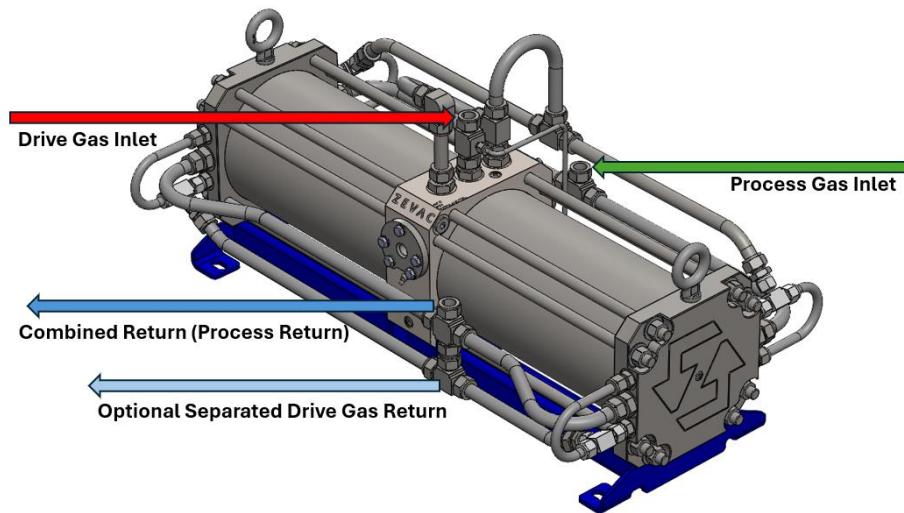
Always bear in mind the risk of unplanned depressurization and release of energy.

# INSTALLATION

The ZD3 M1 is equipped with  $\frac{1}{2}$ " slotted holes at the base of the mounting frame. Securely attach the ZD3 unit to a metal frame or concrete pad using threaded fasteners. Torque according to the fastener manufacturer's recommendations. The unit can operate in a variety of positions. However, ZEVAC® recommends mounting the ZD3 M1 unit in a level horizontal position. There is a lifting eye threaded into the end cap on each end of the unit. It is recommended to use the lifting eyes when lifting or moving a ZD3 M1 unit. Always follow the manufacturer's instructions when using shackles, hooks, slings, and other lifting equipment.

There are three or four off-unit piping connections (depending on whether the drive and process return lines are separate or comingled) that must be connected prior to operating the unit. All three connections are  $\frac{3}{4}$ " compression fittings. The lines that must be connected to the ZD3 M1 unit are:

- **Drive gas supply:** This will be the highest pressure line of the system.
- **Process gas supply:** This should be the lowest pressure line of the system.
- **Combined return:** A medium pressure line the unit returns gas into after compressing process gas supply.
  - The drive exhaust and processed gas return lines are connected before leaving the unit, and are collectively referred to as the "combined gas return".
- **Drive gas return (optional):** A medium pressure line the unit returns gas to after leaving the drive chamber
  - This option is only selected when the drive and the process flows are desired to be isolated (for example: valve gas capture/recycle).



The ZD3 M1 units are typically used on equipment skids or gas processing stations. The drive gas return is typically connected to the process return line so that drive gas exhaust is mixed with the high pressure processed gas entering the user's system. The drive gas exhaust and process return lines should have an isolated line option to direct gas to the main vent stack or muffler for the facility where the ZD3 M1 will be used. This would be used for blowdown operations only. If there is not an existing vent stack, then blowdown gases should be piped to a safe location away from the ZD3 M1 and personnel.

The ZD3 M1 units are designed to operate in indoor and outdoor environments. The units are sealed and protected against the elements. If the unit is expected to operate in corrosive environments, contact a ZEVAC® representative to determine if additional considerations are needed. If the unit is expected to operate in below freezing conditions, take precautions such as heat tracing or dryers on both the drive and process gas supplies to prevent liquids from freezing in the system.

#### Purge In Procedure (Consider putting this in the Operations Section)

1. Make all off unit piping connections, but leave all supply valves CLOSED.
2. Isolate the M1 return lines from any return system piping. The gases will be directed out of a vent during purging because the unit contains air (oxygen) in both the drive and process sides of the pistons until purged.
3. Set all drive gas supply valves to CLOSED so the drive side is isolated.
4. OPEN the vent valve that is downstream of the combined discharge line of the ZD3 M1 unit.
5. The process side of the core MUST always be purged prior to the drive portion of the unit.
6. Slowly open the process inlet valve to allow the process gas or purge gas to enter the unit.
  - a. The gas will begin to flow through the unit, through the check valves, and out to atmosphere via the vent piping.
7. Once sufficient gas purity has been reached, turn off purge gas source.
8. Slowly open the drive side valve to allow drive gas or purge gas into the unit.
  - a. The gas will begin to flow into the unit, causing it to stroke back and forth. As drive gas is exhausted, oxygen (air) will be purged from the drive side.
  - b. The process portion of the core will draw down to vacuum while the drive gas causes the unit to stroke. If this is undesirable, the process gas supply valve can be set to OPEN to allow gas into the process pistons.
9. Allow the unit to stroke until sufficient gas purity has been reached.
10. Set the drive gas supply valve to CLOSED.
  - a. Set the process gas supply valve to CLOSED (if used).

**The unit is now fully purged and ready for standard operations**

# OPERATION

The ZD3 M1 unit will automatically begin to stroke when applied drive gas pressure is higher than the process gas pressure. Gases should be reasonably free of liquids (oil or water) to drive or process through the unit. Completely dry gases are not required, but excessively wet gas can clog ports and reduce system efficiency. The only ON/OFF control for the M1 unit is the presence or absence of drive gas pressure that is supplied by the end user's equipment. The stroke rate will be dependent on the differential pressure between the drive and process gases. There is no way to control the unit stroke rate other than altering the pressure of the drive gas supplied to the unit. The stroke rate will increase with increased drive gas supply. The maximum optimal stroke rate is 45-60 strokes per minute. The stroke rate is dependent on the drive pressure differential, and sufficient return line sizing. The minimum return line size is 3/4" Tube. A higher return pressure will typically result in stroke rates at the lower end of the range; similarly minimum DP scenarios will do the same.

The ZD3 M1 contains seals separating the drive and process sides of the cylinders. However, it is possible there could be some small amounts of gases bypassing the seals on the pistons. If the user application requires constant and complete separation between the drive and process gas systems, a different model such as the ZD3 M2 or ZD3 M4 should be utilized. Contact a ZEVAC® representative for additional information on product offerings and applications. For ZD3 M1 usage, ZEVAC® recommends using the same gas type for drive and processing, or gases that are acceptable to mix.

During standard operation, the gas return lines will be cooled due to expanding gases. Depending on the environmental humidity, these lines may begin to form condensation and/or build up a layer of frost. This does not harm the system and will not affect the equipment's performance.

## Lubrication:

During assembly, the moving components of the drive section are lubricated with grease. The recommended grease for the ZD3 M1 units is Mobilgrease XHP™ 222 Special. All moving parts and seals receive grease lubrication. The seals between the drive portion and process portion of the units are dry and do not require constant lubrication. All of the lubricated components are located inside the drive head. During normal operations, the grease will breakdown and/or become consumed. Periodic greasing of the drive head will be required. See the maintenance section for the head greasing procedure.

	<p><b>WARNING</b></p> <p>Use extreme caution when removing grease zerks from the drive head and stay out of the line of fire. It is possible for pressure to build up in the head due to temperature increases of the grease during operations. This pressure can be present even when the unit is blowdown and removed from the system.</p>
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**WARNING**

Use caution when working near the running unit. External metal components are hot and can cause burns. The area immediately around the ZD3 M1 should be kept clear with no contact with other equipment in the direct vicinity.

**Recommended Operating Conditions:**

Line Type	TEMP (°F)
<b>Max Drive Inlet Temp</b>	250
<b>Max Process Inlet Temp</b>	200

**Maximum Drive Inlet pressure: 1500 PSI**

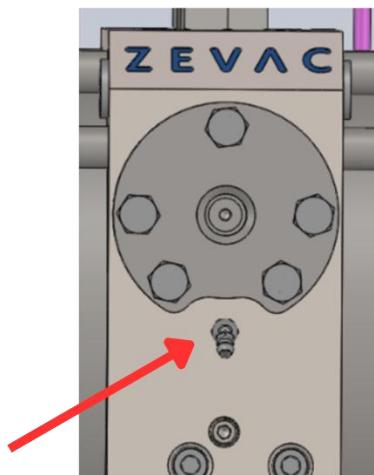
ZEVAC® uses a variety of elastomers for sealing inside the ZD3 M1 units. Sealing element types consist of: FKM, NBR, Urethane, and optionally AFLAS. The unit has proven to perform well in a variety of environmental temperatures as long as the gas inlet temperatures stay below the recommended values. The unit produces heat while performing work that allows the sealing elements to still perform well in low environmental temperature conditions.

For sour gas service, please contact ZEVAC.

# MAINTENANCE

- All ZD3 M1 series units should receive a full visual inspection at least once per quarter. Look for signs of leakage or corrosion.
- If drawdown performance is diminished, confirm operational parameters and contact ZEVAC if issues persist.
- Grease all ZD3 M1 heads at least once per quarter with Mobilgrease XHP™ 222 Special grease or a compatible alternative. Grease cores when the unit is out of service and properly isolated from energy sources. There are two grease fittings on the machined center head block that are located on the lower portion of the blocks and spaced 180° apart (shown below in Figure X). Locate and remove one of the two grease fittings. Apply grease through the grease fitting on the other side of the block until fresh, clean grease exits the hole where the first grease fitting was removed. Wipe up extra grease and re-install the fitting from the first side.

	<p><b><u>WARNING</u></b></p> <p>DO NOT apply grease with both fittings installed. Rod seal damage could be caused by excessive pressure on the inner cavity of the machine block.</p>
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**Figure X:** Grease fitting locations on mid-block. Fittings are 180° apart.

	<p><b><u>WARNING</u></b></p> <p>DO NOT stand in front of the grease zerks while removing. It is possible for pressure to be trapped in the head due to grease temperature increases during operation. Consider placing a shield in front of the grease zerks while removing to prevent them from becoming a projectile.</p>
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# WARRANTY AND MAINTENENCE

## Warranty

ZEVAC® equipment is warranted to be free from defects in materials and workmanship for a period of one (1) year from the original date of purchase. During this one-year warranty period, the Seller agrees, at its option, to repair or replace any defective part or product without charge. This warranty covers parts and labor necessary to correct defects in materials or workmanship under normal use.

This warranty does not cover damages caused by misuse, accident, abuse, unauthorized modification, or failure to follow installation and maintenance instructions. The customer is responsible for any shipping and handling fees associated with returning the defective product to the manufacturer.

## Maintenance, Compliance and Overhaul Services Plan ("MCO")

If the buyer has a valid MCO Services Plan Contract in effect, Seller shall provide to buyer (the "Company") MCO services related to the equipment ("MCO Services") for such time as the MCO Services are in effect as specified in a Purchase Order. MCO Services are classified as follows:

- Preventative Maintenance. In accordance with the usage and time criteria established by Seller, Seller will perform routine maintenance according to its maintenance schedule, as may be updated from time-to-time. MCO Services will include cleaning, adjustments, and replacement of maintenance parts deemed necessary by Seller due to normal usage. Depending on wear & tear observed, seller will determine the best preventative maintenance schedule. The preventative maintenance events are coordinated with the site operators to minimize inconvenience.
- Troubleshooting. Upon discovery of any equipment issues, Company will promptly call the troubleshooting hotline at the phone number provided by Seller to Company. Seller will provide advice by telephone, email or via Seller's or its designated third-party website following receipt of a request from Company to diagnose faults in the equipment and advice to rectify such faults. Such support may be provided remotely or in the manner determined by Seller.
- Repair-on-Site. If troubleshooting is unable to resolve the equipment issue, Seller will initiate a repair of the equipment. Upon detection of a leak or defect in the closed vent system, on site investigation within 5 days, subsequent repair/replacement within 30 days. A technician designated by Seller will be dispatched to the location of the Company's equipment. The technician will perform the necessary repairs at such a location or arrange for a loaner machine to replace.

- Repair-off-Site. If necessary, to resolve the equipment issue, Seller will initiate a repair but may instead elect to perform the repair off-site. In that case, a technician designated by Seller will be dispatched to the location of the Company's equipment and will retrieve the equipment. Temporary stand-in equipment will immediately be issued to the Company, which shall be subject to the same terms and conditions as the original equipment. If more than one customer of Seller is in need of the temporary stand-in equipment at the same time, the Company shall nonetheless be the first customer to which Seller will provide such equipment to the extent needed by the Company.
- Overhaul. From time to time, Seller may elect to overhaul the equipment. In the event the equipment becomes unserviceable as a result of normal usage, replacement parts will be furnished and installed on an exchange basis and will be the new Original Equipment Manufacturer ("OEM"); provided, however, if such OEM part is not available and in order to restore the functionality of the equipment, Seller shall be permitted to use a reconditioned or used part until such time as the new OEM part becomes available and is installed in the equipment. Seller shall at its discretion undertake such modifications, changes, or enhancements to the equipment and/or implement any practice, procedure or measure, which is deemed by Seller to be necessary or advisable and/or to prevent or minimize damage to the equipment. If available, temporary stand-in equipment may be issued to the Company, which shall be subject to the same terms and conditions as the original equipment.

In addition to any exclusions or conditions stated in the limited warranty provided by Seller to Company, the MCO Services provided by Seller will not include the following:

- Repairs and/or service calls related to attachments or accessories not acquired from Seller;
- Any Work external to the equipment.
- Charges for installation of the equipment or de-installation and/or movement of the equipment from one location to another; or any loss, damage, or cost arising from equipment that is modified, damaged, altered or serviced by personnel other than those employed by Seller or that are authorized by Seller to provide the MCO Services.

# TERMS AND CONDITIONS

1. **ACCEPTANCE.** Buyer's execution and delivery of the Purchase Agreement shall constitute Buyer's assent to these Terms and Conditions. No terms or conditions stated by Buyer in its purchase order, order confirmation, or otherwise, shall be binding upon Seller if in conflict or at variance with the Purchase Agreement or these Terms and Conditions unless expressly agreed to in writing by Seller, and all such other terms and conditions are hereby rejected. In the event of any conflict between these Terms and Conditions and any terms and conditions set forth by Buyer in its purchase order, order confirmation, or otherwise, the provisions of the Purchase Agreement and these Terms and Conditions shall govern and control.
2. **MODIFICATIONS AND SUBSTITUTIONS.** Seller reserves the right, as it may deem necessary or appropriate, after consultation with Buyer, to modify or change the specifications of the Equipment prior to delivery, provided that such modifications or changes shall not adversely affect the performance or reliability of the Equipment.
3. **PAYMENT AND TAXES.** Buyer agrees to pay all amounts payable to Seller when due, **TIME BEING OF THE ESSENCE**, including, without limitation, any such amounts payable as provided for herein, and shall pay freight and any applicable state or county use taxes applicable to purchase of the Equipment.
4. **FORCE MAJEURE.** Seller shall not be liable for any failure to perform or delay in performance of its obligations hereunder caused by circumstances beyond its reasonable control including, but not limited to, fire, storm, flood, earthquake, explosion, accident, acts of public enemy, war, rebellion, insurrection, riot, sabotage, epidemic, transportation restrictions, acts of God, acts of any government or any agency thereof, judicial action, inability to obtain or delays in obtaining machinery, parts, materials, or sufficient qualified labor, or any other causes beyond Seller's reasonable control, whether similar or dissimilar to the foregoing. In the event of such a delay, delivery date of Equipment shall be appropriately adjusted to accommodate for such delay.
5. **PAYMENT TERMS.** Unless otherwise agreed by Buyer and Seller in writing, payment terms for the purchase of the Equipment are as set forth in the Purchase Agreement. When the Equipment is ready for delivery to Buyer, if without good cause Buyer fails to provide shipping instructions or otherwise improperly withholds direction for the delivery thereof, the Products will be shipped to Buyer's facility, shipment will be considered accomplished, and the balance of the Purchase Price will be due immediately.

6. **TITLE; SECURITY AGREEMENT.** Title to the Equipment will pass to Buyer when delivered to the Buyer at the location specified in this Purchase Agreement. Until the Purchase Price is paid by Buyer in full, Seller shall retain a first priority lien and purchase money security interest in the Equipment purchased herein by Buyer, including any replacements, additions and improvements to the Equipment or proceeds resulting from any disposition thereof and any insurance proceeds resulting from any damage or destruction thereof. Buyer hereby authorizes Seller to execute on its behalf and file a UCC-1 to evidence its retention of a security interest in the Equipment until payment in full, whereupon Seller shall release the UCC-1.
7. **RISK OF LOSS; INSURANCE.** All risk of loss or damage to the Equipment shall pass and be assumed by the Buyer upon Seller's delivery of the Equipment to the Buyer at the location specified in this Purchase Agreement. Upon receipt, Buyer shall insure the Equipment in an amount equal to at least the unpaid portion of its purchase price against all risks subject to normal exclusions from the time the risk of loss passes to the Buyer, and continuously thereafter until the Equipment is paid for in full. Upon request, Buyer will provide Seller with evidence of such insurance and if Buyer has failed to procure the required insurance, Seller may at its option obtain the insurance and Buyer shall promptly reimburse Seller for the costs thereof.
8. **REPRESENTATIONS AND WARRANTIES.** Buyer represents and warrants to Seller:
  - a. Buyer has full power and authority to enter into and perform the obligations contemplated by the Purchase Agreement.
  - b. Buyer's execution, delivery and performance of the Purchase Agreement has been duly authorized, and constitutes Buyer's valid and binding obligations and is enforceable in accordance with its terms.
  - c. Buyer will comply with all laws, ordinances or governmental rules or regulations to which to which is subject and obtain and maintain in effect all licenses, certificates, permits, franchises and other governmental authorizations pertaining to or in connection with its use of the Equipment.
9. **CONFIDENTIALITY.** Except as otherwise required by applicable law, Buyer shall keep confidential and not disclose to any third party the contents of this Purchase Agreement, including, but not limited to, pricing and payment terms herein, all documents and information in Seller's possession or control relating to this Purchase Agreement or the transactions contemplated by this Purchase Agreement or by such other documents, except that Buyer may disclose such information (1) to its counsel, employees, accountants and auditors, Seller approved vendors, parties required to service the Equipment or to a prospective purchaser pursuant to paragraph 11 below in any case as to the extent necessary to enable them to perform their respective services, so long as such person is informed by the Buyer of the confidential nature of the information so disclosed and such person agrees to maintain the confidentiality as required hereunder, except as otherwise required by applicable law and (2) any governmental body or regulatory agency to the extent required by applicable law, rule or regulation; provided, that prior to such disclosure the Buyer to the extent permitted by law will inform Seller and permit Seller at its expense to take available measures to protect the confidentiality of such disclosed information and/or limit such disclosure within ten days of notice provided by Seller.

**10. INTELLECTUAL PROPERTY; NO REVERSE ENGINEERING.**

- a. Seller Marks. Buyer shall maintain and respect the branding, copyright and any other proprietary notices on the Equipment. Any use by Buyer of any trade names, trademarks, logos, service marks, product designations of Seller or that are otherwise used in connection with the Equipment (collectively, the "Company Marks") shall be in accordance with Seller's policies regarding trademark usage as established from time to time by Seller. Buyer shall not make use of any Company Marks except as specifically provided for in the Purchase Agreement or as authorized in writing by Seller. Seller understands and agrees that its use of Company Marks in connection with this Agreement shall not create any right, title or interest in or to such Company Marks and that all such use and goodwill associated with such trademarks shall inure to the benefit of Seller. Seller hereby grants to Buyer a limited, nontransferable, nonsublicensable, limited license to use Seller's Company Marks solely in connection with its use of the Equipment. Such license may be terminated upon immediate notice at any time by Seller in the event of Buyer's default which is not cured within ten (10) days after Seller delivers written notice thereof. Buyer further agrees not to remove or make or permit any alterations in any of the tags, labels or other identifying markings placed by Seller on any of the Equipment.
- b. Intellectual Property Ownership. Buyer agrees that in addition to Company's Marks, Seller owns all right, title, and interest in the Equipment and in all of Seller's (and any embedded third-party) patents, trademarks, trade names, inventions, copyrights, know-how, trade secrets and other intellectual property relating to the design, manufacture, operation or service of the Equipment. The Purchase Agreement does not and will not be deemed to confer upon Buyer any right, interest or license in any patents or patent applications, or copyrights or other proprietary rights that Seller or any third party may have in the Equipment or otherwise and shall not confer on Buyer any right to manufacture or have manufactured, duplicated or otherwise copied or reproduced any of the Equipment or any part or component thereof. Seller shall retain exclusive ownership of all proprietary rights in and to all documentation and other data and materials pertaining to any Equipment. All rights not expressly granted to Buyer in this Purchase Agreement are reserved by Seller.
- c. Reverse Engineering. Except where and to the extent such restriction is expressly prohibited by law, Buyer will not reverse engineer or otherwise attempt to derive or obtain information about the functioning, manufacture or operation of the Equipment, including any software therein.

**11. CANCELLATION OR DEFAULT.** In the event Buyer seeks to cancel any order for the Equipment sold or to be sold hereunder, or defaults by refusal to accept shipment, Seller shall have the right, at Seller's option and in addition to any other remedies provided by law, to retain all monies paid by Buyer to Seller for the Equipment as Seller's liquidated damages, and not as a penalty or forfeiture, Seller and Buyer expressly acknowledging that the amount of damages incurred by Seller are uncertain and incapable of measurement, and the down payment represents a fair and reasonable measurement of Seller's damages.

12. LIMITED RIGHTS TO CONVEY. Due to the highly technical and specialized nature of the use of the Equipment, and as a material inducement for Seller to enter into this Purchase Agreement for the sale of the Equipment, except as provided herein, and in addition to Section 16 (Assignment) of this Purchase Agreement, Buyer covenants and agrees that if it, directly or indirectly, sells, leases, licenses, assigns, conveys, grants, pledges, disposes of, permits or otherwise allows the Equipment to be used in any manner (collectively, "Convey" or "Conveyance") to or by a third-party ("Transferee") Buyer shall first give at least (10) days prior written notice to Seller and prior to such Conveyance, the Transferee must agree in writing to be bound by, for the benefit of Seller, the applicable portions of the Purchase Agreement, the Terms and Conditions, and the MRO Terms, which shall NOT release, novate, or diminish Buyer's obligations to Seller under such agreements and Seller remains fully responsible for the performance of the Transferee's compliance with the terms of such agreements.
13. ADDITIONAL OBLIGATIONS OF BUYER. Buyer covenants and agrees that in partial consideration of the Purchase Price for the Equipment being sold in the Purchase Agreement: Buyer will permit Seller to utilize Buyer's name, general information and data from the Log Book in Seller's marketing and promotional materials with respect to future sales of Equipment including, without limitation, use in brochures, websites, trade advertisements and video presentations in such form and content as the parties shall mutually agree upon, such consent not to be unreasonably withheld.
14. LIMITATION OF LIABILITY. IN NO EVENT SHALL SELLER OR ANY PARENT OR AFFILIATED COMPANY OF SELLER BE LIABLE TO BUYER OR ANY OTHER PARTY, FOR SPECIAL, PUNITIVE, INDIRECT, EXEMPLARY, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF REVENUE OR PROFITS, DOWN TIME, LOST-PRODUCTION, LOSS OF USE OF EQUIPMENT OR ANY ASSOCIATED PARTS, AND/OR DEFECTS IN BUYER'S OUTPUT, MATERIALS, WORK PRODUCT OR WORKMANSHIP, ARISING DIRECTLY OR INDIRECTLY FROM THE USE OF THE EQUIPMENT OR OTHERWISE RELATING TO THIS PURCHASE AGREEMENT (INCLUDING THE TERMS AND CONDITIONS, AND THE MRO TERMS), ANY SERVICE PROVIDED OR THE RELATIONSHIP OF THE PARTIES, WHETHER ARISING OUT OF WARRANTY, CONTRACT, EQUITY, STRICT LIABILITY OR TORT, INCLUDING NEGLIGENCE, OR OTHERWISE, REGARDLESS OF ANY CLAIM THAT A REMEDY HAS FAILED OF ITS ESSENTIAL PURPOSE. IN NO EVENT MAY EITHER PARTY ASSERT THAT THE REMEDIES PROVIDED HEREIN ARE INADEQUATE OR HAVE FAILED OF THEIR ESSENTIAL PURPOSE. IN NO EVENT SHALL THE TOTAL AGGREGATE LIABILITY OF SELLER OR ANY PARENT OR AFFILIATED COMPANY OF SELLER TO BUYER EXCEED THE PRICE PAID BY BUYER TO SELLER, OR ONE-HUNDRED THOUSAND DOLLARS, WHICHEVER IS LOWER. SUCH AGGREGATE LIABILITY SHALL APPLY AND WILL NOT INCREASE BY THE NUMBER OF EQUIPMENT UNITS PURCHASED OR THE NUMBER OF PURCHASE AGREEMENTS ENTERED INTO BETWEEN SELLER.