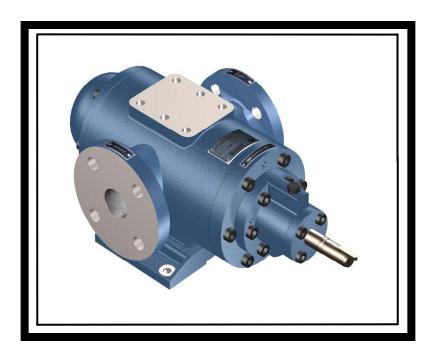


TRIPLE-SCREW PUMP OWNERS MANUAL

G12-427 05/26/04



SAFETY INSTRUCTIONS

This is an industrial component. Only a qualified systems integrator should be allowed to design it into a system. The integrator must determine proper plumbing, mounting, driveline and guard components.

Improper installation or use could lead to a serious, even fatal, accident. The system integrator must communicate all safe operation procedures to the end user(s).

Before operation, fully understand and follow the instructions shown in this manual and any instructions communicated by the system integrator. No one should be allowed to operate or maintain this pump who has not been fully trained to work safely according to the configuration of the pump system and in accordance with all applicable government and industry regulations.

Roper Pump Company P.O. Box 269 Commerce, GA 30529 USA

Telephone: (706) 335-5551 TeleFAX: (706) 335-5490 Email: sales@roperpumps.com www.roperpumps.com **NOTE:** Do not pump abrasive liquids. Pump is intended for clean liquids.

INSTALLATION

Handling:

To prevent damage or shifting due to an unbalanced load when moving the pump, use straps (i.e. slings) wrapped around the pump as shown in figure on the right. Make sure that the slings cross each other to prevent slipping. **Do not lift or move using the drive shaft.**

Ports and direction of Rotation:

Make sure the inlet and outlet ports have been correctly plumbed corresponding to the direction of rotation. To change inlet and outlet flow direction, move the foot to the opposite side of the pump. **Do not reverse direction of rotation.** It may damage the pump.



GOOD PRACTICE

NOTE: These are general guidelines and do not cover all possible situations. It is the responsibility of the system integrator to properly apply this product.

Plumbing

- 1. The inlet pipe should be as short and straight as possible to minimize suction pressure losses. Excessive restrictions at the inlet can cause cavitation resulting in poor performance, noise, vibration, or pump damage.
- 2. Slope the inlet plumbing appropriately to avoid air pockets.
- 3. Plumbing weight, misalignment with the ports or thermal expansion can exert excessive force on the pump. Plumbing must be properly supported and aligned with expansion joints, if required, to minimize these forces.
- 4. A relief valve is recommended, as close to the pump outlet as possible, to prevent over pressure situations. The relief valve should be before any shut-off valves.

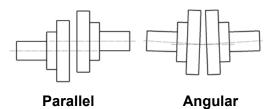
Separate Pump and Drive Assemblies

Driveline Guards

- 1. Assure adequate guards have been installed to prevent accidental contact of moving components.
- 2. Follow all OSHA, Federal, state and local codes.

Check Alignment of Pump to Driveline

Excessive misalignment can overload the pump input shaft and cause premature failure. The figures below show parallel and angular misalignments.





Over pressure may burst pump of system components. Always include a relief valve in installation. Do not over pressurize pump or block discharge line while running.



Mounting Base

Mount the unit on a rigid, heavy base to provide support and absorb shock. Bases should not only be designed for high rigidity but also for strength.

When mounting to cement or concrete use a steel base plate (supplied by others) to distribute the mounting stress over an area large enough to prevent the cement from failing. The base plate should be at least as thick as the pump feet, and grouted in place.

Roper Pumps' Close Coupled Drives

Motor driven units where the drive mounts directly to the pump

- Driveline is not exposed and does not require guards.
- Alignment between pump and drive line is maintained by the assembly.
- Because the assembly absorbs reaction forces of the driveline, the mounting base does not need to be as robust. The level of rigidity and strength is determined by the piping stresses from the system.

Routine Maintenance

Check the pump seals for leakage. Replace seals if needed by following the cartridge service procedure provided in this manual.

Planned Rebuild Cycle

The unit should be scheduled for cartridge service every 10,000 to 20,000 hours of operation. The exact period is based on the severity of service and is best determined through experience with the application. Cartridge service consists of replacing the mechanical seal, bearing, gaskets and O-rings (*Roper Pump Minor Repair Kit*). During the service examine the screws and cartridge bores for wear. Replace the cartridge assembly (*Roper Pump Major Repair Kit*) if wear is excessive or pump performance is deteriorating.



Operating without guards could result in serious injury or death. Machinery in operation can grab, crush, cut, mangle, and dismember. Do not operate without adequate guards in place.





Injection Hazard
Avoid close contact with fluid jets.
Escaping fluid can penetrate skin
Causing serious injury.

CARTRIDGE REMOVAL & REPLACEMENT

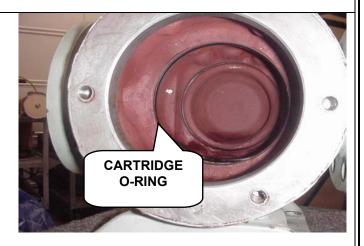




Removal

- 1. Remove 6 cartridge bolts.
- 2. Use 2 of the bolts as jacking screws to assist cartridge removal.
- 3. When free, slide the cartridge out of the body.

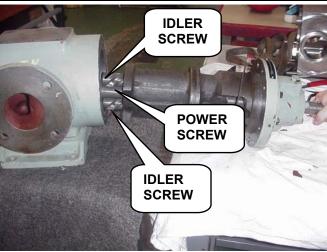




Replacement

1. Replace the cartridge gasket, cartridge O-ring and the far end gasket. Coat O-ring with a light film of grease for retention during assembly.





- 2. Orient the cartridge so that the 3 pump screws are positioned vertically.
- 3. Tighten 6 cartridge bolts and the bolts that hold the far end plate to a specified torque—see page 6 for maximum torque values.

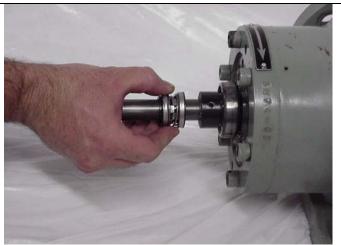
CARTRIDGE SERVICE



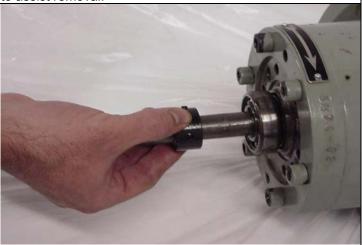
Remove the gland plate.



Remove the seal housing. Use 2 of the bolts as jackscrews to assist removal.



Remove the rotating part of the mechanical seal.



Loosen spacer setscrews and remove it.



Remove the circlip, using circlip pliers.



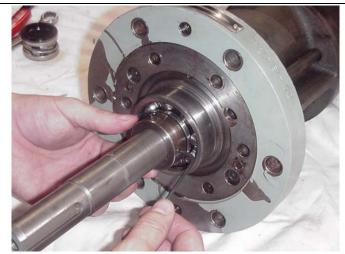
Use a puller to remove the bearing.

Be careful to not to damage the shaft, sealing surface.

Examine the screws and cartridge bores for wear. Replace the cartridge assembly if wear is excessive or pump performance has deteriorated



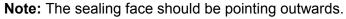
Slide **new** bearing on the shaft until it bottoms on the shoulder. Install a **new** circlip, using circlip pliers.



Push spacer on the shaft so that it is seated against the circlip and tighten setscrew to specified torque see page 7 for torque values.



Push the rotating half of the **new** mechanical seal down the shaft till it bottoms on the spacer.





Using a **new** gasket replace the seal housing. Tighten 4 seal housing bolts to a specified torque—see page 7 for maximum torque values.



Install the O-ring on the stationary half of the mechanical seal.



Push the stationary half into the gland plate with the sealing face pointing as shown.

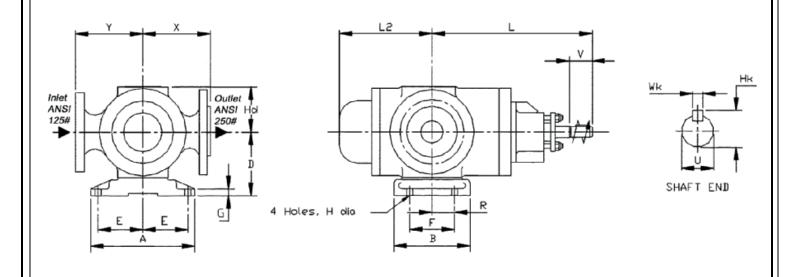




Tighten the gland plate to a specified torque—see below for maximum torque values.

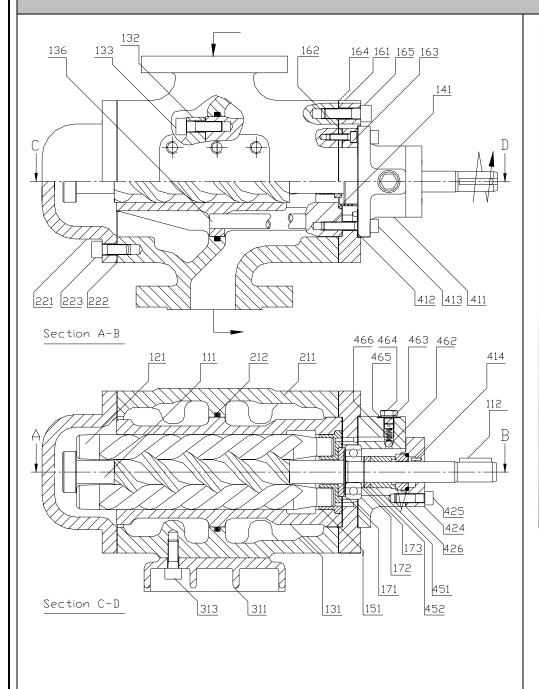
Fastener Size	Max Bolt Torque in Nm/Lb-ft
M3	0.38/0.28
M4	0.89/0.66
M5	1.80/1.33
M6	3.10/2.29
M8	7.40/5.46
M10	15.00/11.07
M12	26.00/19.19
M16	64.00/47.23
M20	120.00/88.56
M24	210.00/155.00
M30	430.00/317.34
M36	740.00/546.12

DIMENSIONAL DETAILS



	PUMP MODELS											
Symbol	D00185 D00369 D00492		D00608 D00757 D00811 D01014 D01059 D01077 D01211 D01513		D01967 D02155 D03147 D03934		D04618 D05773 D06053 D06488 D07264 D08110 D09685 D12106		D13789 D17237 D18916 D21280 D23644 D25177 D31471		D41563 D51904 D77478 D96848	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
А	130	5.12	185	7.28	210	8.27	320	12.60	420	16.54	540	21.26
В	75	2.95	135	5.31	190	7.48	300	11.81	425	16.73	660	25.98
D	100	3.94	112	4.41	160	6.30	225	8.86	280	11.02	400	15.75
E	57.5	2.26	80	3.15	90	3.54	135	5.31	180	7.09	225	8.86
F	50	1.97	80	3.15	140	5.51	210	8.27	300	11.81	520	20.47
G	10	0.39	12	0.47	16	0.63	20	0.79	25	0.98	36	1.42
H	7	0.28	11	0.43	14	0.55	22	0.87	26	1.02	36	1.42
Hd	71	2.80	80	3.15	112	4.41	160	6.30	200	7.87	280	11.02
Hk	16	0.63	21.5	0.85	31	1.22	41	1.61	59	2.32	85	3.35
L	210	8.27	285	11.22	355	13.98	490	19.29	650	25.59	900	35.43
L2	130	5.12	165	6.50	240	9.45	325	12.80	460	18.11	670	26.38
R	25	0.98	40	1.57	70	2.76	105	4.13	150	5.91	260	10.24
U	14	0.55	19	0.75	28	1.10	38	1.50	55	2.17	80	3.15
V	30	1.18	40	1.57	60	2.36	80	3.15	110	4.33	170	6.69
Wk	5	0.20	6	0.24	8	0.31	10	0.39	16	0.63	22	0.87
X	100	3.94	120	4.72	150	5.91	190	7.48	250	9.84	340	13.39
Y	100	3.94	120	4.72	150	5.91	190	7.48	250	9.84	340	13.39
Inlet	-	1.25	-	2.00	-	3.00	-	5.00	-	8.00	-	12.00
Outlet	-	1.00	-	1.50	-	2.50	-	4.00	-	6.00	-	10.00

PARTS LIST



1 111 Power screw 1 112 Power screw key 2 121 Idler screw 1 131 Insert 1 132 Insert extension 4 133 Fastener 1 136 Balancing pipe 1 141 PS balancing bush 2 151 IS balancing bush 1 161 Front end plate	
2 121 Idler screw 1 131 Insert 1 132 Insert extension 4 133 Fastener 1 136 Balancing pipe 1 141 PS balancing bush 2 151 IS balancing bush 1 161 Front end plate	
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1 136 Balancing pipe 1 141 PS balancing bush 2 151 IS balancing bush 1 161 Front end plate	
1 141 PS balancing bush 2 151 IS balancing bush 1 161 Front end plate	
2 151 IS balancing bush 1 161 Front end plate	
1 161 Front end plate	
1 161 Front end plate	
1 162 Gasket	
2 163 Fastener	
1 164 Gasket	
6 165 Fastener	
1 171 Internal bearing	
1 172 Bearing seat	
1 173 Circlip	
1 211 Casing	
1 212 O-ring	
1 221 Far end cover / skirt b	ase
1 222 Gasket 6 223 Fastener	
6 223 Fastener	
1 311 Base	
6 313 Fastener	7
1 411 Seal housing	
1 412 Gasket 6 413 Fastener	
6 413 Fastener	
1 414 Anti-rotation pin	2
1 424 Gland plate	
4 425 Fastener	
1 426 Gasket	
1 451 Mechanical seal	1
1 452 Spacer	
1 462 PCV ball	
1 463 PCV adjuster	
1 464 PCV plug	
1 462 PCV ball 1 463 PCV adjuster 1 464 PCV plug 1 465 PCV washer	
1 466 PCV spring	

TERMS & CONDITIONS AND LIMITED WARRANTY

This agreement (this "Agreement"), consisting of these Terms and Conditions, and the associated Order Acknowledgement is binding upon Roper Pump Company, hereinafter "SELLER," and the customer, hereinafter "BUYER." By placing an order for a product with the Seller, the Buyer agrees to these Terms and Conditions of sale and acknowledges that the person placing the order has the authority to enter into the Order Acknowledgement on Buyer's behalf.

LEGAL EFFECT: Except as expressly otherwise agreed to in writing by an authorized representative of Seller, the following terms and conditions shall apply to and form a part of any Order Acknowledgement. Seller may suspend its performance of any Order Acknowledgement if Buyer defaults in the performance of its duties under the Order Acknowledgement or under any other agreement between the Buyer and Seller.

ACCEPTANCE: The sale of goods and services is expressly conditional on Buyer's acceptance of Seller's terms and conditions as stated herein. Provided that Seller's terms and conditions have not been previously accepted by Buyer, Buyer's receipt of goods or services shipped under this Agreement constitutes acceptance of these terms and conditions. No additional, different or conflicting provisions proposed by Buyer are acceptable to Seller and are hereby specifically rejected, Seller being unwilling to sell goods on any terms conflicting with, limiting or modifying the terms hereof. Buyer shall not sell, transfer or otherwise provide any goods to another for resale without the prior, written authorization of Seller. Seller reserves the right to sell and to authorize other entities to sell such goods through all means and channels of distribution and in competition with Buyer. Buyer acknowledges that it has no authority to bind or contract in the name or for the account of Seller, to create any liability against Seller or to exert any direction or control over Seller's personnel.

CHANGES: This Agreement and the associated Order Acknowledgement constitutes the entire agreement between Seller and Buyer with respect to the subject matter thereof, and supersedes all prior oral or written agreements. This Agreement and the associated Order Acknowledgement may not be amended or modified, except by a further written agreement signed by an authorized representative of Seller. Seller reserves the right to make reasonable changes to an Order Acknowledgement, including changes as to packaging, testing, specifications, designs and delivery schedules. The terms and conditions of any purchase order or other instrument issued by Buyer or its agent in connection with this Agreement and the associated Order Acknowledgement or any goods sold thereunder that is in addition to or inconsistent with the terms and conditions of this Agreement or the associated Order Acknowledgement are null and void and shall not be binding on Seller. Buyer's changes made after formation of this Agreement that affect the schedule or requirements for services or otherwise affect the scope of this Agreement shall be submitted in writing by Buyer and shall become binding only if approved in writing by Seller's cognizant representative. All charges and delays resulting from such changes shall be solely determined by Seller and shall be binding upon Buyer.

TERMINATION, **SUSPENSION**, **AND CANCELED ORDERS**: Provided that Seller receives adequate written notice from Buyer, Buyer may terminate or suspend performance at Buyer's convenience subject to all reasonable charges, which charges shall be solely determined by Seller. Buyer cannot cancel or alter Orders without the Seller's written consent. If Seller grants such consent, Buyer will reimburse Seller for all of Seller's losses and expense caused by such cancellation or alteration, including without limitation all of Sellers additional costs caused by changes in design or specifications, or by product revisions, and all incidental and consequential damages incurred by Seller as a result of such cancellation or alteration. No goods may be returned to Seller except with Seller's written consent. Title in a returned good will pass when Seller takes possession of the returned goods.

CREDIT: The amount of credit offered by Seller to Buyer is contingent upon Seller's opinion of Buyer's capacity, ability, and willingness to promptly pay for goods and services received under the terms of this Agreement. Provided that, in Seller's opinion, there is a material adverse change in Buyer's financial condition and/or Buyer has not, within the agreed time, fully paid for goods and services previously supplied under this and/or another Agreement(s) with Seller, Seller reserves the right to revoke Buyer's credit and/or suspend performance on this and/or other orders for goods and services.

PAYMENTS: Standard terms for customers who qualify for credit net 30. A monthly service charge of 1.5% may be charged on amounts owed by Buyer to Seller that have not been paid within by the due date, subject to the maximum amount permitted by law.

TAXES. Buyer assumes exclusive liability for any and all taxes, tariffs, fees, duties, withholdings or like charges, whether domestic or foreign, now imposed or hereafter becoming effective ("Taxes") related to the goods and its purchases from Seller, including without limitation, federal, provincial, state and local taxes, value-added taxes, goods and services taxes, stamp, documentary, excise or property taxes, duties and other governmental charges.

TITLE AND LIEN RIGHTS: The equipment will remain personal property, regardless of how it is installed or affixed to any realty or structure. After delivery to Buyer, Seller will have all such rights, including security interests and liens, in the equipment as lawfully may be conferred upon Seller by contract under any applicable provision of law. Buyer agrees to cooperate fully with Seller in the filing of any financing statements, including Uniform Commercial Code (UCC) filings or other documents necessary to perfect such interests and liens. If Buyer defaults in its obligations under the Order Acknowledgement before the price (including any notes given therefore) of the equipment has been fully paid in cash, Seller may take any and all actions permitted by law to protect its interests including, where permissible, repossession of such equipment.

SHIPMENTS: All sales are Ex-Works Factory (as such term is defined by the International Chamber of Commerce as of the date hereof). Shipping contracts made by Seller shall be to Buyer's account. All claims for loss or damage after risk of loss has passed to Buyer shall be filed by Buyer with the carrier. Buyer shall be liable to Seller for the full price of the goods, irrespective of loss or damage in transit. Seller shall not be required to provide freight cost receipts to Buyer at the time of invoice. Buyer shall bear all risk and expense for delivery of goods, including without limitation, shipping, loading, unloading, storage, freight, and insurance. Goods may be shipped to Buyer in whole or in part. Title to goods shall pass to Buyer when delivered to the carrier or the Buyer, whichever occurs first, even if the goods are shipped freight prepaid. Among other things, a signed delivery receipt or bill of lading will constitute proof of delivery. The choice of carrier is made solely at the discretion of Seller, and Seller makes no representation as to the acceptability of a particular carrier. Except when Seller expressly agrees in writing, Seller does not guarantee shipment or delivery by a certain date or time, although Seller will strive to deliver goods by the date that it may communicate to Buyer. Seller shall not be liable to Buyer, or not such delay was caused by Seller or otherwise. Seller reserves the right to backorder any goods and to ship from backorder in such order as Seller determines.

LIMITED WARRANTY: Seller warrants, to its original Buyer, that goods manufactured by Seller are free from defects in material and workmanship for 12 months from date of shipment (except for specified products with warranties that supercede this limited warranty. Please consult factory for these products). The Buyer hereby acknowledges and agrees, though free from defects in material and workmanship at the time of shipment, that the useful life of goods manufactured by Seller will vary depending upon the Buyer's frequency of use, application, and other factors, with regard to such goods. In that respect, notwithstanding any other provision to the contrary in the Agreement, these Terms and Conditions, or the Order Acknowledgement, the Seller specifically does not warrant the useful life of any product. If a failure to conform to specifications or a defect in materials or workmanship is discovered within this period, Seller must promptly be notified in writing within thirty (30) days, which notification, in any event must be received no later than 12 months from the date of shipment. Within a reasonable time after such notification, Seller will correct any failure to conform to specifications or any defect in materials or workmanship, or in lieu of such repair, and at its sole option, shall replace the equipment. THE ABOVE ARE THE BUYER'S EXCLUSIVE REMEDIES FOR BREACH OF WARRANTY. Seller does not warrant: (a) defects caused by failure to provide suitable installation environment for the product, (b) damage caused by use of the product for purposes other than those for which it was purchased, (c) damage caused by

disasters such as fire, flood, wind, and lightning, (d) damage caused by unauthorized attachments, or modification, (e) any other abuse or misuse by the Buyer, including improper installation; or (f) goods which have been damaged or altered by Buyer or its customers.

Each good sold by Seller to Buyer shall be deemed to be without defect and in conformity with its specifications and the terms of this Agreement and the associated Order Acknowledgement even though reasonable variances may exist. As a result, Seller cannot and does not guarantee that goods sold hereunder, whether in whole or in part, will exactly match in specification or otherwise, and Buyer acknowledges that reasonable variance is permissible. Additionally, Seller shall have no liability if a good does not conform to any applicable state, county or local ordinance, as the conformity of a good to each state, county and local ordinance is the sole responsibility of the Buyer. Seller reserves the right to change its goods and the components of its goods without prior notice to Buyer, although in circumstances where an order from Buyer has been accepted by Seller, Seller will use commercially reasonable efforts to ensure that such change will not affect performance of the good in a materially adverse manner.

EXCEPT AS SET FORTH ABOVE AND TO THE MAXIMUM EXTENT PERMITTED BY LAW, SELLER MAKES NO OTHER WARRANTIES FOR A PRODUCT OR UNDER THIS AGREEMENT OR ANY ORDER ACKNOWLEDGEMENT AND HEREBY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR USE, AND INCLUDING THE WARRANTY OF MERCHANTABILITY. IN NO CASE SHALL SELLER BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES BASED UPON ANY LEGAL THEORY, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF SAVINGS OR REVENUE, LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT, COST OF CAPITAL, COST OF ANY SUBSTITUTE EQUIPMENT, FACILITIES OR SERVICES, DOWNTIME, THE CLAIMS OF THIRD PARTIES INCLUDING CUSTOMERS, INJURY TO PROPERTY AND, UNLESS PRECLUDED UNDER APPLICABLE STATE LAW, BODILY AND PERSONAL INJURY.

INDEMNITY; LIABILITY LIMITATION: Buyer hereby agrees to indemnify, reimburse in full, defend and hold harmless Seller, its subsidiaries, affiliates, officers, directors, personnel and agents from and against any and all liability, claims, suits, actions, losses, costs or expenses including (without limitation) reasonable attorneys' fees relating to or arising out of any claim or demand (a) for any Taxes or related penalties and interest, (b) due to Buyer's breach of the Order Acknowledgement; (c) that Buyer's customers or a third party may make against Seller based upon or arising from damage due to the acts and/or omissions of Buyer or due to the installation of the goods; (d) for infringement or misappropriation of a third party's intellectual property rights based upon Seller's incorporation of any designs, formulas or specifications in any goods where such designs, formulas or specifications have been specifically ordered or requested by Buyer. To the maximum extent allowable under applicable law and excluding those liabilities that by law Seller cannot limit or disclaim, (i) Seller's aggregate liability arising from or relating to this Order Acknowledgement or goods, regardless of the cause of action asserted, is limited to the amount paid by Buyer to Seller for the applicable goods and (ii) Seller shall not be liable for any special, incidental, consequential, indirect, or punitive damages, including without limitation, lost revenues, loss of use of the goods, loss resulting from improper storage, processing, padding/cushion, delay in delivery or shipment or errors in shipment or labeling, loss of data, or the cost of any substitute goods or related equipment, even if Seller has been advised of the possibility of such damages.

EXPORT RESTRICTIONS: Buyer shall not export or re-export goods in violation of any applicable laws or regulations of the United States or the country in which Buyer obtained them.

CÓNFIDENTIAL INFORMATION. During the term of this Agreement and the associated Order Acknowledgement and for the longer of (a) three (3) years following its termination and (b) for such Confidential Information of Seller that is a Trade Secret of Seller as defined by applicable law, for the life of such Seller Trade Secret, Buyer agrees to receive and hold Confidential Information of Seller in trust and in strictest confidence and shall not use, reproduce, distribute, disclose or otherwise disseminate any Confidential Information except as necessary to perform its obligations hereunder. Disclosures of the Confidential Information may be made only to Buyer's employees and agents who have a specific need to know and are subject to confidentiality restrictions at least as restrictive as those contained herein. "Confidential Information" means confidential information relating to the business, products and services of Seller which is or has been disclosed to Buyer, and which has value to Seller and is not generally known to Seller's competitors, including (without limitation), information regarding the specifications provided to Buyer by Seller and Seller's product plans, designs, costs, prices, finances, marketing plans, business opportunities, personnel, R&D activities and know-how.

CONTROLLING LAW: This Agreement and the associated Order Acknowledgement entered into hereunder shall be governed and construed in accordance with the laws of the State of Georgia and of the United States of America without reference to any conflicts of law principles; the parties submit themselves to the jurisdiction of the federal and state courts located in Jackson County, Georgia, which shall have exclusive jurisdiction of any disputes arising hereunder, and the parties waive any objection to venue therein. The United Nations Convention on Contracts for the International Sale of Goods, the Uniform Law on the Formation of Contracts for the International Sale of Goods, and any applicable international discovery and service of process conventions shall not be applicable. In the event legal action is undertaken by Seller to collect any amounts due to Seller by Buyer hereunder and if Seller prevails in such action, then Buyer shall reimburse Seller for its reasonable attorney fees and costs incurred in conjunction with such action, which amount shall not exceed the maximum amount allowed by law of the forum in which such action is brought.

ASSIGNMENT: Neither this Agreement nor any associated Order Acknowledgement may be assigned by the Buyer, or its contents publicized by the Buyer, without the written consent of Seller. Seller shall have the right to assign, transfer or sublicense all or any part of this Agreement or any associated Order Acknowledgement to another at any time and without the consent of Buyer.

MISCELLANEOUS: The various provisions of this Agreement and any associated Order Acknowledgement are severable, and any determination of invalidity or unenforceability of any one provision hereof shall no bearing on the continuing force and effect of the remaining provisions hereof. This Agreement and any associated Order Acknowledgement and the terms and conditions contained herein constitute the entire understanding of the parties with respect to the purchase and sale of the goods, and any prior agreements, with respect thereto, whether written or oral, are superseded hereby. This Agreement and any associated Order Acknowledgement shall be binding on the parties and their respective successors and any permitted assigns.

ELECTRONIC DATA INTERCHANGE. The parties may execute a Order Acknowledgement by transmitting and receiving the data contained in the Order Acknowledgement electronically rather than in paper form. To provide the legal validity and enforceability of such Order Acknowledgement, the parties further agree that the data transmitted herein will be considered "in writing" and to have been "signed." The parties agree not to contest the validity or enforceability of a Order Acknowledgement because of the electronic origination, transmission, storage or handling of such Order Acknowledgement. Any computer printout of the data contained in the Order Acknowledgement will be considered an "original" when maintained in the ordinary course of business and will be admissible as between the parties to the same extent and under the same conditions as other business records maintained in documentary form. The parties agree to properly use those security procedures which are reasonably sufficient to ensure that a transmission of the data contained in a Order Acknowledgement is authorized and to protect its business records and data from improper sources.