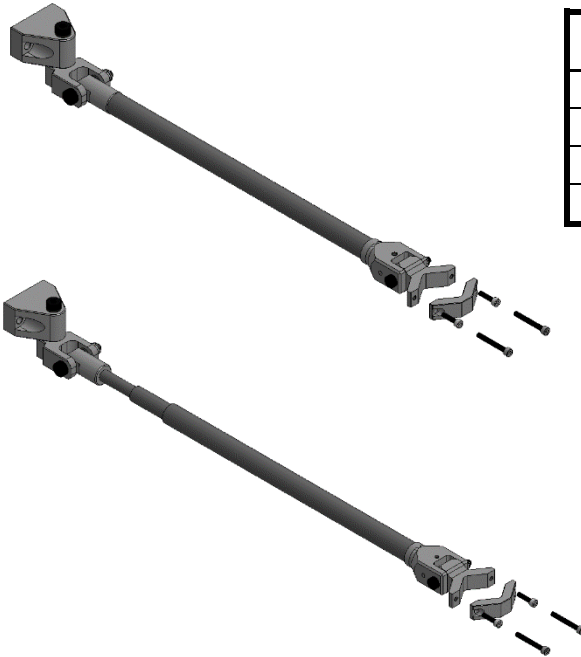


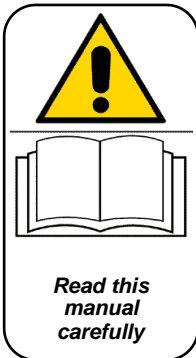
User's Manual

ERGO - Torque arms



<i>Model</i>	<i>Part Number</i>
ERGO 15 1000	025.0001.000
ERGO 15 1500	020.0002.000
ERGO 40 1000	020.0005.000
ERGO 40 1500	020.0006.000

Warning






We recommend reading this manual and included safety instructions in advance of any use or intervention on the product. The contents must be clearly understood by the final user.

Product characteristics maybe changed by DELTA REGIS without notice in advance.

Manufacturer data:


Manufacturer: DELTA REGIS TOOLS, Inc.
Address: 7370 Commercial Circle
 Fort Pierce FL 34951
 U.S.A.
Main phone: 772.465.4302 Toll Free: 888.500.2755
Fax: 772.465.4368 Toll Free: 866.500.7270
e-mail: sales@deltaregis.com
Service Contact: sales@deltaregis.com

Symbols used in this manual

	Care point note
	Warning sign. Maximum care required
	Individual protection is mandatory, e.g. protective gloves

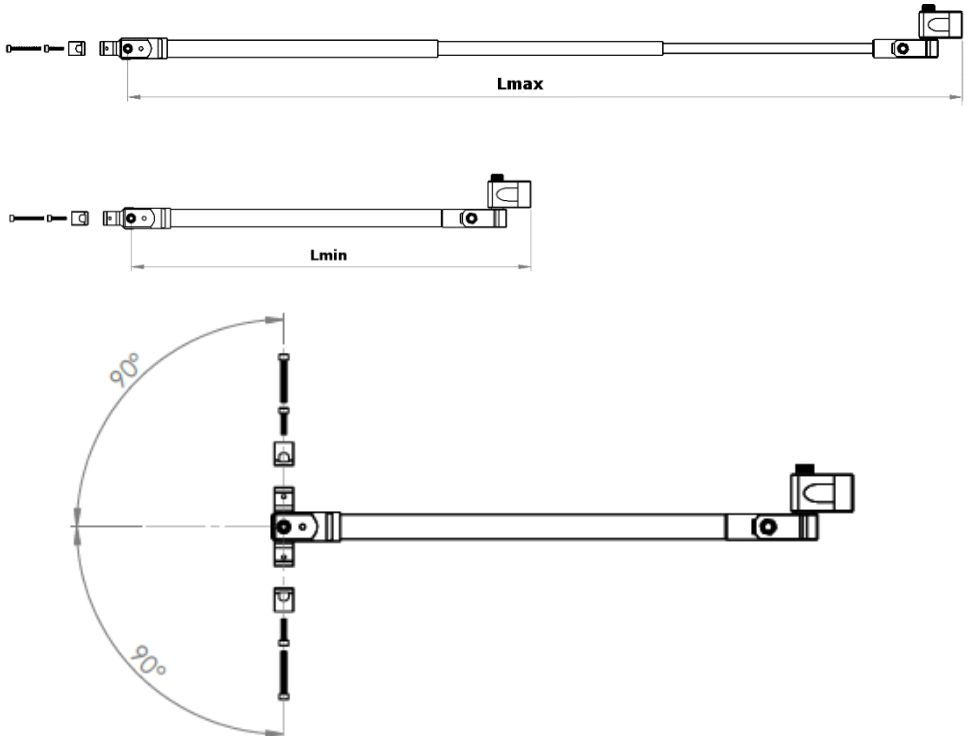
General warnings

All operations must be carried out either by Delta Regis personnel or by other company authorized by Delta Regis, but professionally trained and educated, under supervision of a responsible person.

 User is recommended to use personal protection equipment (PPE) according to current regulations, according to type of operation to be performed and should have adequate tooling

Missing compliance with following paragraphs, will relieve Delta Regis of any responsibility in case of accidents, damages or malfunctioning of the machinery.

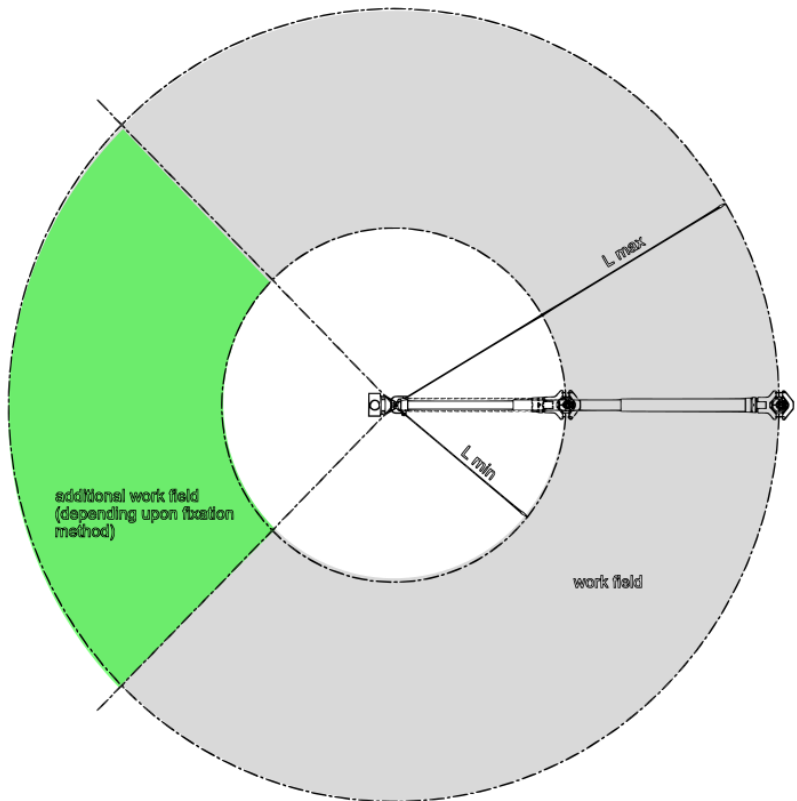
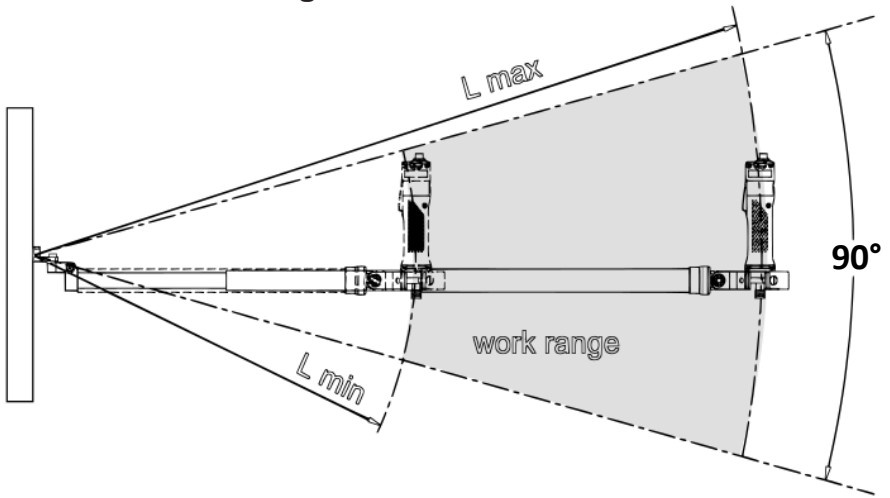
Product specifications



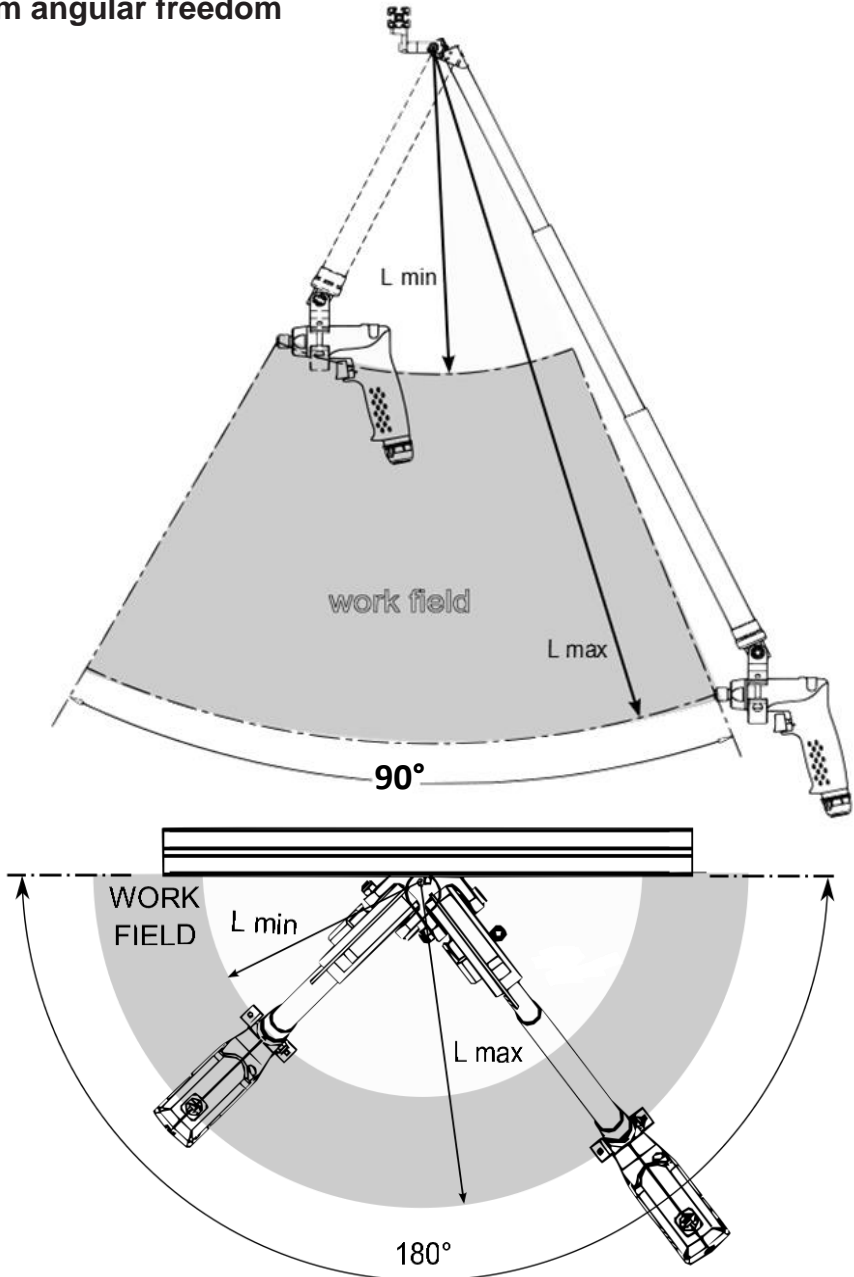
Model range

Model	Part no	Max torque		L min		L max	
		(Nm)	(ft.lb)	(mm)	(in)	(mm)	(in)
ERGO 15 1000	025.0001.000	15	11.06	531.5	20.93	1111.5	43.76
ERGO 15 1500	025.0002.000	15	11.06	691.5	27.22	1601.5	63.05
ERGO 40 1000	025.0005.000	40	29.50	535.5	21.08	1115.5	43.90
ERGO 40 1500	025.0006.000	40	29.50	695.5	27.38	1605.5	63.21

Arm usable work range



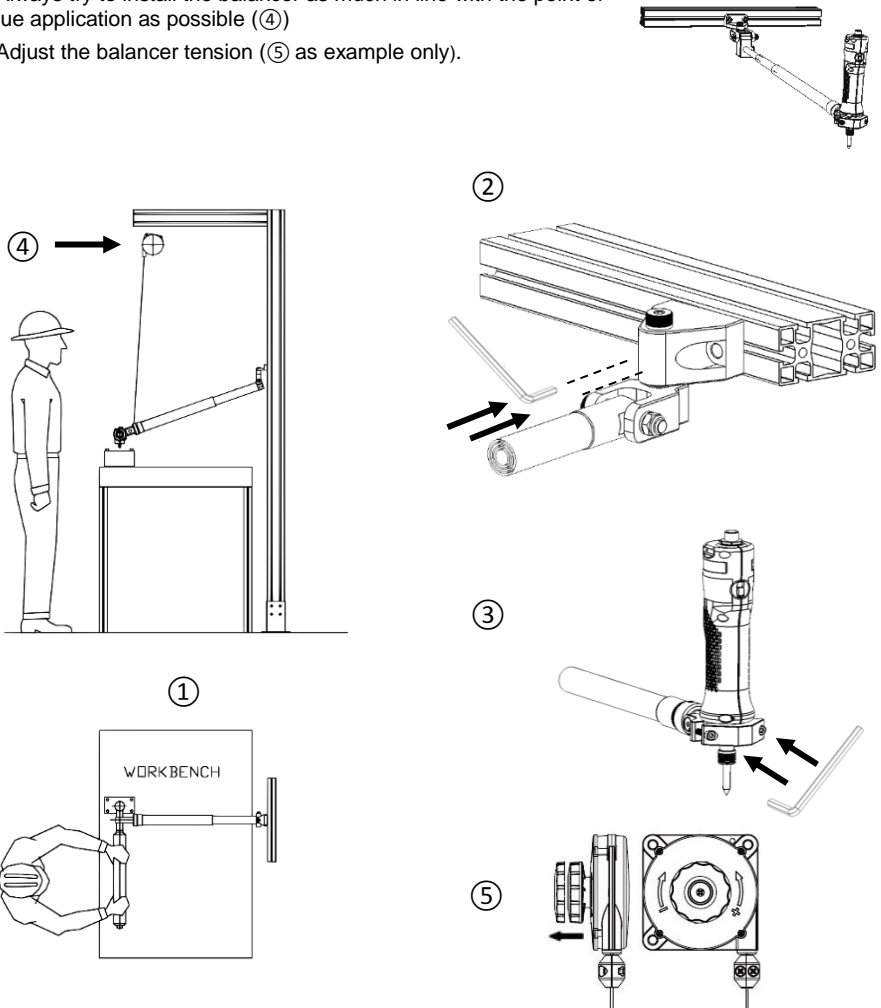
Arm angular freedom



Installation

Fixation of torque arm (horizontal installation)

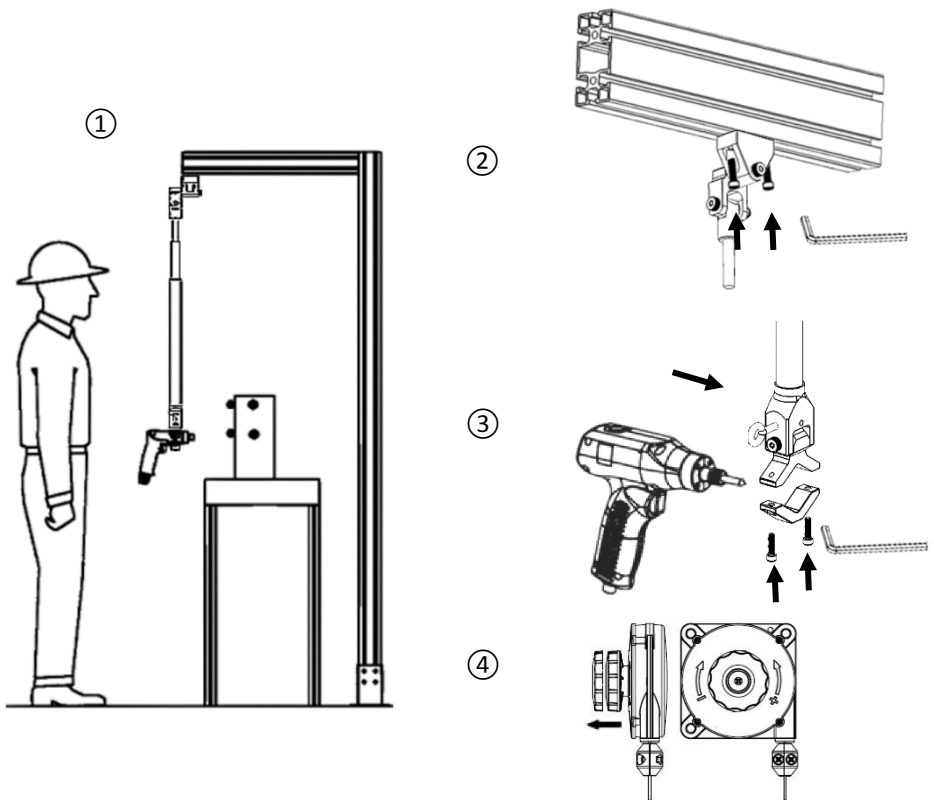
- The reaction arm should be always installed in front of the operator (considering his preferred hand) (①)
- Fix arm to workstation support through wall attachment with appropriate screws (②).
- Fix the power tool in the tool holder (③).
- Always try to install the balancer as much in line with the point of torque application as possible (④)
- Adjust the balancer tension (⑤ as example only).



Installation

Fixation of reaction arm (vertical/ceiling position installation)

- In case of ceiling installation, fixation point should be as much as possible straight above the point of torque application (●).
- Check that work field of the arm is free from obstacles.
- Fix the arm through the pre-drilled holes on wall attachment (②)
- Fix the power tool in the tool holder (③)
- Adjust the balancer tension (④) as example only).
- Last, make a functional check over the whole work field.



Maintenance

Maintenance must be performed only from qualified personnel.

- In advance of any intervention: disconnect the tool from power source.

In the next page find maintenance guidelines.

Ordinary maintenance instructions

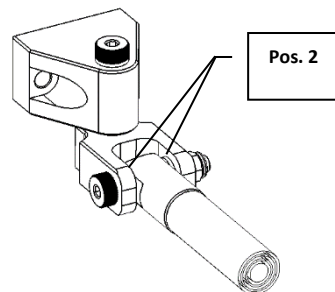
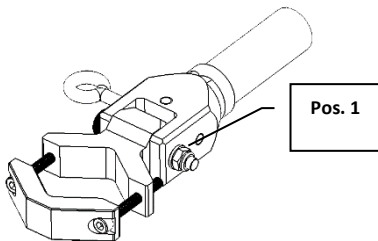
In the table here below find ordinary maintenance guidelines, including time intervals, tools, values and description of intervention

Note: 1 Cycle = 1 single screw tightening

Pos.	Description	Intervention timing (Cycles)		
		500.000	1.000.000	ogni 1.500.000
1	Check play of tool holder hinge	X	X	X
2	Check play of wall attachment hinge	X	X	X

●● Carbon fiber tubes lubrication IS FORBIDDEN. We recommend to regularly rub the tubes surface with a clean and dry cloth, in order to avoid dust accumulation which might reduce the sliding performances of tubes.

Pos.	Check	Intervention timing (Cycles)		
		Tool	Values	Remedy
1	Check play of tool holder hinge	Thickness gauge	Max. admitted play = 0.15mm	> Over max play: Tighten hinge bolt
2	Check play of wall attachment hinge	Thickness gauge	Max. admitted play = 1mm	> Over max play. Tighten hinge bolt > Plastic washer wear: replace washers and self-locking nut



DISPOSAL



Dispose components and parts in compliance with the country laws and safety procedures.

Safety

This product is designed to fit power tools having the maximum torque equal or lower than those indicated for each arm model. No other use is permitted. This device is intended only for professional use.

General safety rules

In order to reduce risk of injuries, any person which should use, install, repair, make servicing, install accessories and even works nearby this device should read and clearly understand this manual in advance of making any kind of activity. Our target is to make torque reaction arms which can increase work safety and efficiency. Please remember that USER is the most important safety device for this product and related tools. In fact, user's attention and care to his work is a fundamental contribute for injuries and damages prevention. Our torque reaction arms must be installed by tined and qualified personnel. In case of doubt, we suggest contacting the reference dealer or DELTA REGIS technical support.

For additional safety information, please check:

- Any other document and information included with this product.
- Your company management, union and/or category association.
- The "Safety Code for Portable Air Tools" (ANSIB186.1), which latest release can be found at Global Engineering Documents, by accessing <http://global.ihs.com/>, or calling 1 800 854 7179. In case of problems for finding ANSI regulation copies, it is possible to contact them directly, through the site <http://www.ansi.org/>

Additional information about work safety and health can be found in the following web sites:

- <http://www.osha.gov> (USA)
- <http://europe.osha.eu.int> (Europe)

Installation related risks

Firmly install the reaction arm either to the existing structure or to specifically made structure in the workplace. Verify that the reaction arm support has a safety factor of minimum five times the value obtained by the sum of maximum sustained load plus the reaction arm weight.

Example of calculation:

! **Optimal Safety Factor = (Max support load + torque arm weight + tool weight) x 5**

The reaction arm will have to be fixed through the pre-drilled wall attachment interface, as shown in the Installation instructions.

When using an external balancer with the reaction arm:

- Verify that the balancer suspension support has a safety factor of minimum five times the value obtained by the sum of maximum sustained load plus the balancer weight. Example of calculation:

! **Optimal Safety Factor = (Max support load + balancer weight + torque arm weight + tool weight) x 5**

- Install and fix an additional cable or chain to a separate support which is independent from those supporting the balancer.
- Verify that suspension hooks, cable and chain do not show signs of wear. If so, replace the worn parts before installation.
- Check that tool holder is firmly tightened before using the reaction arm.

Use related risks.

- Do not exceed the recommended load or torque capacity ranges indicated for the torque arm model in use.
- Operators must be physically able to maneuver the torque arm. If you are unfamiliar with the torque arm, adjust the tool to a low torque setting the first time you operate it.
- Daily verify the torque arm attachment and all structural parts for wear or cracks. Replace the entire arm if extensive wear, damage or cracks are detected.
- Do not operate the torque arm if damaged or malfunctioning. Examine balancer suspension hooks, cables, cable stops and chains daily for wear. Replace worn parts before further use.
- Daily check that there are no loosen screws or nuts. Replace worn nuts or washers before further use.
- Regularly perform a complete functionality check, including fully extending and retracting the torque arm throughout its complete range of movements. In case high friction is detected, check whether one or more tubes is deformed or damaged or look for presence of any dust or deposits over the tubes. In case of tubes contamination, clean as described previously and try the functionality again. In case any tubes deformation is detected the entire torque arm must be replaced.
- This product and its accessories must not be modified.

Work area related risks

- Slip/Trip/Fall is a major cause of serious injury or death. Be aware of excess hose left on the walking or work surface.
- Proceed with care in unfamiliar surroundings. Be aware of potential hazards created by your work activity.
- Torque arms are not insulated from coming into contact with electric power sources and are not intended for use in areas with potentially explosive atmospheres.

Limited warranty

1. This product is product is warranted against defective workmanship or materials, for a maximum period of 12 (twelve) months or 1.000.000 cycles (whichever condition occurs first) following the date of purchase from DELTA REGIS or its agents, provided that its usage is conform to prescriptions described in this manual.
2. During the validity of warranty period, should the product show any material or functional defect, it must be returned to DELTA REGIS or its agents, together with a short description of the alleged defect. DELTA REGIS shall, at its sole discretion, arrange to repair or replace free of charge such items as are deemed faulty by reason of defective workmanship or materials.
3. This warranty ceases to apply to products which have been abused, misused or modified, or which have been repaired using other than genuine or authorized DELTA REGIS spare parts or by someone other than DELTA REGIS or its authorized service agents.
4. Should DELTA REGIS incur any expense correcting a defect resulting from abuse, misuse, accidental damage or unauthorized modification, they will require that such expense shall be reimbursed in full.
5. DELTA REGIS will not accept claims either for labor or other expenditure made upon defective products.
6. Any direct, incidental or consequential damages whatsoever arising from any defect are expressly excluded.
7. This warranty is given in lieu of all other warranties, or conditions, expressed or implied, as to the quality, merchantability or fitness for any particular purpose.
8. No one, whether an agent or employee of DELTA REGIS, is authorized to add to or modify the terms of this limited warranty in any way.