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The Caldwell Group, Inc.

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Distributed By:

The Caldwell Group

Strong-Bac®

Below Hook Lifters

Lifting Beams, Spreader Beams, Paper Roll Lifter, Coil Lifters & Upenders, Sheet Lifters, Pallet Lifters, Rotating Crane Hooks, Material Handling, Lifting Tongs

Mill Duty

Heavy & Severe Lifters

Coil Grabs, Ingot/Slab Handling, Lifting Beams, Motorized Rotating Crane Hooks, Sheet/Plate Handling

Posi-Turner®

Load Rotation Equipment

Posi-Turner®, Chassis Master™, Posi-Gantri™

Univac®

Vacuum Lifters

Nominal, Narrow, & Wide Applications, Upenders, Mechanical, Specialty Lifters, Uniclamp™, Vacuum Parts

Rig-Release®

Remote Releasing Lifters

Manual Control, Radio Control, Extended Capacity, Special Application

Rig-Master®

Rigging Attachments

Clamps, Grabs & Tongs, Pipe & Manhole Handling, Load Leveling Slings, Bent Bar Product, Lifting Magnets, Lifting & Spreader Beams, Special Applications, Synthetic Sling End Fittings

Lif-Truc™

Fork Lift Truck Attachments

Booms, Drum Handling, Fork Beams, Rams & Extensions, Battery Lifting Beams, Special Application

Krane-King®

Jib & Gantry Cranes

Gantries, Free Standing Jib Cranes, Tension & Cantilevered Jib Cranes, Hoists

Caldwell®

Slings & Tie Downs

Standard Web Slings, Special Application Web Slings, Roundslings, Wire Rope Slings, Alloy Chain Slings, Wire Mesh Slings, Cargo Tie Downs

2011-2013 Caldwell Lifting Solutions Catalog

STRONG-BAC®
Below Hook Lifters

MILL DUTY
Heavy & Severe Lifters

POSI-TURNER®
Load Rotation Equipment

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CALDWELL®
Slings & Tie Downs

Your Single Source For Quality Lifting Solutions

MC-4

The Caldwell Group Lifting Solutions Catalog 2011-2013





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We are pleased to bring you the 2011-2013 edition of our Lifting Solutions Catalog.

Caldwell was established in 1954 and is an employee owned company. This ownership translates into a high level of employee involvement and dedication to quality and service. As employee owners, we strive to provide you with the highest quality products and service in the industry making Caldwell the only place you need to look for all your Lifting Solutions.

This commitment to quality and service is a tradition at Caldwell. We led the way in incorporating the new ASME-BTH-1 standards and continue to provide our distributor partners with the information needed to communicate how this standard affects lifting equipment. To satisfy the service needs of our distributor partners, we developed new initiatives such as our **QUICKSHIP** and **INSTOCK** delivery programs.

Our commitment to product development shines through in our dedication to regularly introduce innovative material handling solutions. In this catalog, you will find the following new products:

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Caldwell's extensive new product releases are developed from the vast array of special application lifters we design and build everyday. While there are a large number of standard Caldwell Lifting Solutions available, we have the experience, knowledge and ability to develop a solution for almost any lifting challenge. Put our expertise to work for you.

The Caldwell Group, Inc.

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DISCLAIMER:

All product designs are subject to change without notice. Products pictures in this catalog are a representation of a specific design. The product you purchase will be designed for your specific application and may not look exactly like the picture in this catalog.

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Modifications or repairs performed on your lifting equipment without prior written approval from The Caldwell Group, Inc. voids your warranty. Refer to ASME standards for information regarding the liability of repaired or modified lifters.

STRONG-
BAC®

MILL DUTY

POST-
TURNER®

UNIVAC®

RIG-
RELEASE®

RIG-
MASTER®

LIF-TRUC™

KRANE-
KING®

CALDWELL®
SLINGS

MODEL
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Company Profile

The Caldwell Company was incorporated in 1954 designing, fabricating, and selling special lifting slings, one of which was the patented Adjust-A-Leg® load leveling wire rope sling. The product line offering continued to expand over the years along with the demand for space; in 1971 Caldwell moved to its current location.

In 1976, the Caldwell line continued to grow with the addition of fabricated metal products. The goal from this point forward was to offer the fullest line of below-the-hook lifters from one source. By the end of 1994 the company had, through numerous acquisitions and internal development, grown into six separate and distinct product lines. With the separate product lines, it seemed fitting to rename the company to THE CALDWELL GROUP, INC. and this was done in 1994.

Since 1994 The Caldwell Group has continued down the path of product line expansion and we now offer the most complete line of lifters in the industry.

- **Strong-Bac®** - Below the Hook Lifters
- **Mill Duty** - Heavy & Severe Lifters
- **Posi-Turner®** - Load Rotation Equipment
- **Univac®** - Vacuum Lifters
- **Rig-Release®** - Remote Releasing Lifters
- **Rig-Master®** - Rigging Attachments
- **Lif-Truc™** - Fork Lift Truck Attachments
- **Krane-King®** - Jib and Gantry Cranes
- **Caldwell®** - Web Slings and Tie-Downs

It is our goal to continually enhance and expand all of our product lines to provide our customers with a complete line of lifting products from one source.

CALDWELL DELIVERY PROGRAMS

The Caldwell Group offers two quick delivery programs, INSTOCK and QUICKSHIP.



Look for the **green INSTOCK** logo on our standard products. The specific **INSTOCK** model number is shown in **green**. **INSTOCK** products ship in 48 hours.*



Look for the **red QUICKSHIP** logo on our standard products. The specific **QUICKSHIP** model number is shown in **red**. **QUICKSHIP** products ship in 7 to 10 days.*

* Excluding weekends and holidays.

WEBSITE & TRAINING AIDS

WEBSITE

The primary website, www.caldwellinc.com contains all of the same information you can find in the catalog along with interactive application forms, video (where available), and the most recent product releases. The site is constantly updated with new information so check back regularly to stay up to date on the latest Lifting Solutions from Caldwell

TRAINING AIDS

Caldwell provides instruction manuals and other information with our product shipments. For more detailed training aids, please contact our service team to discuss a customized training solution.



Quality & Engineering In Every Lift

The Caldwell Group has been manufacturing engineered material handling equipment since 1954. It is our goal to design and manufacture high quality, long lasting lifting products that will safely increase productivity and reduce operating costs.

Caldwell offers the largest range of standard products available to satisfy many different lifting applications. We also have the engineers available to create a custom designed solution to meet your lifting challenge.

Benefits your company will receive with a Caldwell Lifter:

- Increased productivity.
- Reliability.
- Low cost maintenance.
- The increased safety of an engineered product.
- Durability for long lasting service.
- Metal tags with serial number attached to each lifter for traceability.
- Rated capacities and safety warnings.

All Caldwell lifters have:

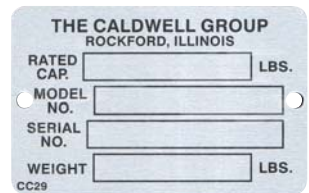
- Identification nameplate.
- Rated capacities.
- Product Safety Labels.

Industry Standards

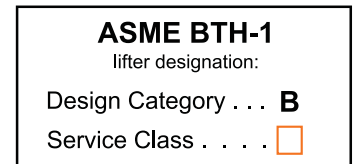
The American Society of Mechanical Engineers (ASME) has developed standards that apply specifically to the devices Caldwell designs. ASME B30.20 provides detailed information on the classifications, marking, construction, installation, inspection, testing, maintenance and operation of below the hook lifting devices. ASME BTH-1 provides detailed information on the design criteria of below the hook lifting devices. ASME B30.9 provides detailed information on the fabrication, markings, usage, inspection and maintenance of lifting slings. These standards serve as a guide to government authorities, manufacturers, purchasers and users of lifting devices. For a summary of these standards, please see pages 7 - 10 of this section or please visit our web site at www.caldwellinc.com/standards.

Caldwell's Standard Quality Assurance

To have your new Caldwell lifter proof tested and a certificate issued, please specify (there is a nominal charge).



I.D. Nameplate



BTH-1 Tag



Product Safety Label



Product Safety Labels

Caldwell Service

Our team of experienced engineers and technicians provide first-class service to keep your equipment running at peak performance. From training and maintenance consultations to inspections, modernizations and repairs, Caldwell is committed to helping you prolong the life of your lifting equipment and accessories. Working with us will save you time and money, improve safety and productivity, and reduce downtime.

Caldwell Services At-A-Glance

- **Training & Maintenance Consultations**

- Train operators on equipment use
- Maintenance development plan
- Training on maintenance plan

- **Inspections**

- In-house
- On-site
- Implement latest inspection technology
- Ensure ASME compliance

- **Repairs**

- General maintenance
- Complete overhauls
- Major repairs
- Compliance repairs/maintenance

- **Modernizations**

- Refresh older equipment
- Convert old equipment to meet new/existing needs
- Upgrade, modify, or refurbish equipment

Caldwell offers in-house and on-site services. Our team utilizes the latest technologies and adheres to all American Society of Mechanical Engineers (ASME) standards, keeping you and your equipment safe.

Training & Maintenance Consultations

A Caldwell Service Team member works with your operators on-site to ensure proper use of equipment and can create a customized maintenance plan around key wear points and trouble spots to keep your lifter running at peak performance.

Our custom maintenance programs minimize costly downtime, increase safety, and dramatically extend the life of your lifting equipment, protecting your investment. Maintenance is extremely important because identifying small repair issues early can prevent major damage and failure later in the life of your equipment.

Inspections

Once the Caldwell Service Team has completed an inspection, we will provide a complete report describing the extent of damages and repairs required, including a firm quote, for your review before any repairs are made to the equipment.

We can also send an experienced technician to your site to inspect your equipment through operational tests and visual examination. Minor repairs, once identified and approved, can often be performed on-site to help minimize downtime.

Repairs

Once the major repairs are complete, the equipment is tested, repainted, and new capacity and safety labels are applied. Our commitment to quality and service holds true for our repairs, as each piece of Caldwell equipment repaired by our team carries with it the same new product warranty that accompanies all of our products.

Modernizations

Our team uses the latest design technologies to determine if your lifter can be upgraded, modified or refurbished to help you tackle bigger loads, severe duty cycles, extreme weather, correct recurring issues, improve performance, and more. After modernization, equipment is tested, repainted, labeled, and covered by the same new product warranty that accompanies all of our products.

Standards Information

B30.20, B30.9 & OTHER STANDARDS

Various industry standards govern the design and use of Caldwell lifting equipment. Caldwell lifting equipment is designed in accordance with these standards. Specifically, the following standards apply to Caldwell's product lines:

Product Line	Industry Standard
Strong-Bac®	ASME B30.9, B30.20, BTH-1
Mill Duty	ASME B30.20, BTH-1
Posi-Turner®	ASME B30.9, B30.20, BTH-1
Univac®	ASME B30.20, BTH-1
Rig-Release®	ASME B30.9, B30.20, BTH-1
Rig-Master®	ASME B30.9, B30.20, BTH-1
Lif-Truc™	ASME B56.1, B56.11.4, OSHA 1910.178(4)
Krane-King®	AISC CMAA 70, OSHA 1910
Caldwell®	ASME B30.9, OSHA 1910.184

The information provided on the following pages is a summary interpretation of the applicable ASME standards. Should you need additional clarification as to how the ASME standards affect your specific application and your lifting device, contact our application specialists or visit the ASME website at www.ASME.org.

KEY ASME STANDARDS

Design of Below-the-Hook Lifting Devices (BTH-1)

ASME BTH-1 designates design criteria for below-the-hook lifting devices (ASME B30.20) and serves as a guide to designers, manufacturers, purchasers, and users of these types of lifters.

All below-the-hook lifting devices shall be designed for specific rated loads and load stresses as they affect the components of the lifting device.

A design category and service class shall be designated and marked on the lifters and all quotations, drawings, and other documents relating to the lifter.

Design Category B should be designated when the conditions of the lift are not always defined or predictable, or when load conditions could be severe.

Design factors for Design Category B lifting devices shall not be less than 3.00 for limit states of yielding or buckling.

Service Class is the specified fatigue life of the lifter.

- Service Class 0 is 0 – 20,000 load cycles
- Service Class 1 is 20,001 – 100,000 load cycles
- Service Class 2 is 100,001 – 500,000 load cycles
- Service Class 3 is 500,001 to 2,000,000 load cycles
- Service Class 4 is over 2,000,000 load cycles

Cycles per Day	Desired Life (Years)				
	1	5	10	20	30
5	0	0	0	1	1
10	0	0	1	1	2
25	0	1	1	2	2
50	0	1	2	2	3
100	1	2	2	3	3
200	1	2	3	3	4
300	2	3	3	4	4
750	2	3	4	4	4
1000	2	3	4	4	4

*Definitions: Should = a recommended procedure
Shall = a required procedure*

Standards Information

Lifting Slings (B30.9)

Design Factor:

Lifting Slings shall be designed in accordance with the specific chapter in ASME B30.9 pertaining to that style sling.

Construction:

Synthetic Slings shall be manufactured to comply with WSTDA WB1 and (when applicable) with fittings that are at least equal in strength to that of the synthetic sling.

Wire Rope Slings shall only be constructed out of new wire rope that complies with ASTM A 1023-02 and ASTM A 586.

Alloy steel chain slings shall be manufactured to comply with ASTM A906/A906M standards.

Metal Mesh slings shall be manufactured to comply with ASME B30.9 with fittings that are at least equal in strength to that of the metal mesh.

Sharp edges shall be removed from all sling and fitting surfaces.

Marking:

Caldwell lifting slings shall be marked with, at a minimum, the following information:

- ✓ name or trademark of manufacturer
- ✓ manufacturer's model or identification number
- ✓ rated loads for the sling, including information on various hitch configurations and the corresponding angle.
- ✓ type or size of material

Load Test:

Before use, all repaired or reworked synthetic web slings shall be load tested and inspected. Proof testing of new synthetic web slings is not required.

Before use, all repaired or refurbished wire rope slings shall be tested. Testing requirements of new slings are based off the sling construction; consult the sling manufacturer or ASME B30.9 for details.

Before use, all new and repaired chain and components of an alloy steel chain sling, either individually or as an assembly, shall be proof tested.

Before use, all new and repaired metal mesh slings shall be proof tested.

*Definitions: Should = a recommended procedure
Shall = a required procedure*

Standards Information

Structural and Mechanical Lifting Devices (B30.20)

Design Factor:

Structural and mechanical lifting devices shall be designed according to ASME BTH-1, Design Category B, taking into consideration the load, including the weight of the lifting device. The design service class is determined by the expected fatigue life of a lifter based on the number of load cycles.

Fabrication:

- All welding shall comply with ANSI / AWS D14.1 and ASME BTH-1.
- Guards should be provided for exposed moving parts.
- Electrical equipment and wiring shall comply with ANSI / NFPA 70 and ASME BTH-1.
- Contact The Caldwell Group for information on modifications or repairs to maintain compliance with ASME standards.

Marking:

- The rated capacity shall be marked on the lifting device.
- Caldwell lifting devices shall be marked with the following information:
 - ✓ manufacturer's name and address
 - ✓ serial number
 - ✓ lifter weight, if over 100 lbs. (45 kg)
 - ✓ cold current (amps) (when applicable)
 - ✓ rated voltage (when applicable)
 - ✓ rated load
 - ✓ ASME BTH-1 Design Category
 - ✓ ASME BTH-1 Service Class
- Product Safety Labels.
 - ✓ Where possible, all lifting devices shall have labels that include the appropriate signal word, according to ANSI Z535, including the proper cautionary notice to operators against improper use.
 - ✓ When it is not possible to include the above, a label shall be affixed, referring user to the manufacturer's instruction manual for product safety information.

Load test:

Before use, a new, altered, modified or repaired lifting device should be load tested and inspected. Contact the manufacturer for information regarding the appropriate test load for the lifting device.

*Definitions: Should = a recommended procedure
Shall = a required procedure*

Standards Information

Vacuum Lifting Devices (B30.20)

Construction:

- Vacuum Pad Rating. The ultimate pad capacity (UPC) shall be determined by the following formulas:
Inch-Pound Method $UPC = A (Hg / 2)$

where

A = effective area of the vacuum pad, expressed in square inches, enclosed between the pad and the material when the pad is fully compressed against the material surface to be lifted.
Hg = system vacuum expressed in inches of mercury. Reductions for altitude, efficiency, consistency, and wear of vacuum source shall be considered.

2 = constant divisor

- Electrical equipment and wiring shall comply with ANSI / NFPA 70 and ASME BTH-1.
- The UPC / rated load shall be a minimum of 2 to 1 for horizontal surface lifts.
- The UPC / rated load shall be a minimum of 4 to 1 for vertical surface lifts.
- These requirements are for clean, flat, dry, non-porous material. Contact the manufacturer for other surface types.
- There shall be a vacuum reserve of sufficient size to prevent the vacuum level from decreasing more than 10% in 4 minutes without power to the vacuum generator.
- Vacuum lifting devices shall be designed according to ASME BTH-1, Design Category B, taking into consideration the load, including the weight of the lifting device. The Service Class of the lifter shall be determined by the number of load cycles required.
- All welding shall comply with ANSI / AWS D14.1 and ASME BTH-1.

Marking:

- The rated capacity, maximum width, maximum length, and minimum thickness of the load shall be marked on the lifting device. If the vacuum lifting device has shutoff valves on individual pads or groups of pads, the rated load of each pad shall also be marked. The rated capacity of pads or groups of pads with isolation valves shall be labeled individually.
- Caldwell vacuum lifting devices shall be marked with the following information:
 - ✓ manufacturer's name and address
 - ✓ model number
 - ✓ serial number
 - ✓ vacuum lifting device weight
 - ✓ electrical power requirements (when applicable)
 - ✓ pressure and volume of compressed air (when applicable)
 - ✓ rated load
 - ✓ ASME BTH-1 Design Category
 - ✓ ASME BTH-1 Service Class
- Product Safety Labels.
 - ✓ Where possible, all lifting devices shall have labels that include the appropriate signal word, according to ANSI Z535, including the proper cautionary notice to operators against improper use.
 - ✓ When it is not possible to include the above, a label shall be affixed, referring user to the manufacturer's instruction manual for product safety information.
 - ✓ Isolation valves shall be marked to show proper operating positions.

Load Test:

Before use, a new, altered, modified or repaired vacuum lifting device shall be load tested and inspected. Contact the manufacturer for information regarding the appropriate test load for the lifting device.

*Definitions: Should = a recommended procedure
Shall = a required procedure*

Care & Use

Caldwell Lifting Equipment has been designed for specific tasks to withstand the particular forces imposed. Guidelines for installation, inspection, maintenance and repair, safe operation and operator training of these lifters follow (product specific information will be sent with each product):

INSTALLATION

Lifting equipment shall be assembled and installed in accordance with the manufacturer's instructions, unless other specific arrangements have been approved in writing by manufacturer. When lifter/auxiliary power supply is required, user inspection shall ensure that the power source complies with ANSI/NFPA 70, National Electrical Code and shall include a power disconnect switch as required in accordance with ANSI/NFPA 70 based on the lifters requirements. If electrical connections are made, the power supply and corresponding power disconnects shall be connected to the line side (power supply side) of the crane disconnect or to an independent circuit as specified in the manufacturer's operating instructions.

Check for correct rotation of all pumps and power units, lubrication of moving parts, and filling of reservoirs, all in accordance with manufacturer's instructions.

OPERATOR TRAINING

Lifters shall be operated in accordance with manufacturer's instruction manual, and by personnel who have received instructions described in the "Operating Practices" section of these guidelines. Training shall also include instruction regarding:

1. Details of the lifting cycle.
2. Application of the lifter to the load including (according to the manufacturer's instructions) adjustments to the lifter, if any, to adapt it to various sizes and kinds of loads.
3. Instruction in any special operations or precautions that may be required.
4. Recognition of proper load configuration. For example, preferred operation requires an orderly pattern of stacking.
5. Before assuming responsibility for using the lifter, an operator shall demonstrate his understanding of the lifting procedure to the instructor. The instructor should record notes of operator's demonstrated ability.

INSPECTION

The lifter shall be visually inspected by or under the direction of an appointed person on a daily or weekly schedule depending on the nature of the lifter and the severity of the service.

Details to look for include but are not limited to:

1. Structural deformation.
2. Cracks in the structural frame, welds, hoist hook attachment points, mechanically operating parts, any attached slings, clevises and hooks.
3. Malfunctions during operation of a mechanically operating lifter.
4. Loose covers, fasteners and stops.
5. Faulty operation of automatic hold and release mechanisms.
6. Wear of hoist hooking points, load supporting clevises, pins, slings, linkages and mechanical parts.
7. Missing nameplates and markings. Contact Caldwell for replacements.

MAINTENANCE AND REPAIRS

1. A preventive maintenance program should be established for each lifter by a qualified person based on recommendations made by its manufacturer.
2. A qualified person shall have responsibility for repairs. Dated records and details of repairs and parts replacement should be carefully maintained by a qualified person, and copies kept in your possession.
3. Replacement parts shall be at least equivalent to the original manufacturer's specifications.

OPERATING PRACTICES

DO'S

1. The operator shall receive, read and understand the manufacturer's instruction manual.
2. The operator shall watch carefully that the lifter is performing properly during the lifting procedure.
3. The operator shall know the standard crane hand signals.
4. The operator shall only respond to signals from an appointed person. However, stop signals from anyone shall be obeyed.
5. The operator shall notify a designated person when he considers a load to be unsafe.
6. The operator shall observe the lifter before using. A defect observed shall be examined by a qualified person to determine if it is a hazard.

DON'TS

1. The operator shall not operate a malfunctioning lifter or one with an "out of service" tag attached.
2. The operator shall not use the lifter for any purpose(s) other than those designated by the manufacturer's instruction manual.
3. The operator shall not use a lifter when the capacity, weight or product safety labels are missing or are no longer legible.
4. No one shall make alterations or modifications to lifters without consulting the manufacturer.
5. No one shall obscure or paint over the manufacturer's capacity, weight, or product safety labels.
6. Loads shall not be lifted higher than necessary nor be left suspended unattended.
7. The lifter shall not lift a load that is not properly balanced for safe lifting.

HANDLING THE LOAD

1. The lifter shall not be loaded in excess of its rated load.
2. Ensure the load can withstand forces applied by the lifter.
3. The combined weight of the lifter and load shall not exceed the rated load of the crane or hoist.
4. The lifter shall be applied to the load in accordance with the manufacturer's recommended operating procedure.
5. Lifter ropes and chains shall not be kinked, and multiple part lines shall not be twisted about each other.
6. The lifter shall not touch obstructions during load movement.
7. The lifter shall not be loaded with loose material that might fall during movement.
8. The load or the lifter shall not be slid on the floor or other surface.
9. The operator or other personnel shall not place themselves or any part of their bodies beneath suspended loads.
10. The lifter shall not be used for loads for which it is not designed.
11. If suspended loads are moved manually, they shall be pushed, not pulled.
12. A preliminary lift of a few inches shall be made to establish that the load is stable.
13. All loads shall be accelerated and decelerated smoothly and slowly.

Limited Warranty

The Caldwell Group, Inc., an Illinois corporation with principal offices at 5055 26th Avenue, Rockford, IL 61109, hereinafter referred to as "Warrantor", warrants that its workmanship in the fabrication and assembly of its products shall be free from defects for a period of one year (1) from date of this delivery. The warranty extends to the workmanship and labor performed by Warrantor used in the fabrication and/or assembling of the finished product.

A. The warranty created herein is subject to strict compliance with each of the following CONDITIONS.

1. This warranty covers defects in workmanship and labor in the fabrication and assembly of the product: it includes materials, parts or items manufactured by any other person or entity and used in assembling the finished product.
2. Any defect must become apparent within one year (1) from date of this delivery.
3. The Purchaser must give Warrantor written notice of any defect within the one year (1) period via certified mail, return receipt requested.
4. Purchaser should deliver the assembled product to the premises of the Warrantor for repair at Warrantor's sole expense after contacting Warrantor for a return authorization number.
5. The returned unit must have the original nameplate attached to the unit for positive identification
6. Warranty is non-transferable.

B. If each of the above CONDITIONS are met, Warrantor will make all necessary repairs to cure any defective workmanship or labor in said assembled product or at Warrantor's sole discretion replace said product or refund the purchase price. These repairs shall be made as soon as is reasonably possible. No allowance shall be made to Purchaser for loss of use during the time necessary for repairs. In no event shall the warranty be held to include or cover any incidental, indirect, special or consequential damages.

C. The following EXCLUSIONS are not covered by this warranty:

1. Damages due to neglect by Purchaser.
2. Damages due to lack of proper maintenance or to misuse by Purchaser. This warranty shall be voided due to unauthorized repairs or replacement parts.
3. Damages due to act of God or other unforeseen accident or cause beyond the control of Warrantor.
4. Any incidental, indirect, special or consequential damages.

D. Warrantor warrants any product which it fabricates and/or assembles to be free from defects in workmanship and labor for a period of one year (1) from date of this delivery, provided that the above CONDITIONS and EXCLUSIONS shall apply to this warranty for the services rendered in fabrication and/or assembling the finished product.

E. THERE ARE NO FURTHER WARRANTIES, EXPRESSED OR IMPLIED, AND ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED.

F. LIMITATION OF LIABILITY. PURCHASER'S SOLE REMEDY FOR LIABILITY OF ANY KIND WITH RESPECT TO THE PRODUCTS FURNISHED BY WARRANTOR TO PURCHASER AND ANY OTHER PERFORMANCE BY WARRANTOR, OR WITH RESPECT TO PURCHASER'S USE THEREOF, INCLUDING NEGLIGENCE, SHALL BE LIMITED TO THE REMEDY PROVIDED IN THIS LIMITED WARRANTY AND SHALL IN NO EVENT INCLUDE ANY INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OR LOSS OF USE, REVENUE OR PROFIT. IN NO EVENT SHALL WARRANTOR'S LIABILITY FOR DAMAGES WITH RESPECT TO ANY OF THE PRODUCTS OR SERVICES FURNISHED EXCEED THE CHARGES PREVIOUSLY PAID BY PURCHASER TO WARRANTOR FOR SUCH PRODUCTS OR SERVICES.