



TORNADO KIT



GENESIS
RESCUE SYSTEMS

**TORNADO/R.I.S.K. KIT
USER GUIDE**

GENERAL INFORMATION

About the operating manual

This operating manual provides important information on using the GENESIS AIR STRUTS. Proper compliance with all specified safety instructions and guidelines is a prerequisite for safe work.

Furthermore, adhere to the local accident prevention guidelines and general safety regulations for the region in which the devices are used.

These operating instructions must be carefully read prior to starting any work! They are an inherent part of the product and must be kept in a place that is known and accessible to personnel at all times.

This documentation contains information for operating your equipment. However, you may also find information which may not directly apply to your specific equipment.

All information, technical data, graphics and diagrams contained in these operating instructions are based on the latest data available at the time of the document's creation.

We recommend that, in addition to carefully reading through the operating manual, you be trained on handling the rescue equipment (possible applications, application tactics, etc.) by our qualified trainers.

EXPLANATION OF SYMBOLS

Warnings

Warnings are marked by symbols in this operating manual. The individual instructions are introduced by signal words that express the severity of the hazard.

It is essential to comply with the instructions in order to prevent accidents, injuries and damage to property.



DANGER!

... indicates an imminently dangerous situation that can result in death or serious injury if not avoided.



WARNING!

... indicates a potentially dangerous situation that can result in death or serious injury if not avoided.



CAUTION!

... indicates a potentially dangerous situation that can result in minor or light injuries if not avoided.



ATTENTION!

... indicates a potentially dangerous situation that can result in material damage if not avoided.

**NOTE!**

... highlights useful tips and recommendations, as well as information for efficient, trouble-free operation.

LIMITATIONS OF LIABILITY

All information and instructions in this operating manual have been compiled in keeping with applicable standards and guidelines, the current state of technology, and our many years of knowledge and experience.

The manufacturer assumes no liability for damage due to:

- Failure to comply with the operating manual
- Unintended use
- Assignment of untrained personnel
- Unauthorized modifications
- Technical changes
- Use of non-approved replacement parts
- Use of non-original replacement parts

The actual scope of delivery can vary from the explanations and graphic representations provided in this manual in the case of special versions, or due to technical changes.

COPYRIGHT

All texts, diagrams, drawings and images in this operating manual may be used without restriction and without any prior approval.



NOTE!

Further information, images and drawings can be found on our website
www.genesisrescue.com

WARRANTY CONDITIONS

The warranty conditions can be found as a separate document in the sales documentation.

CUSTOMER SERVICE

Contact your local Genesis sales representative. If you are unsure you can contact Genesis Rescue Systems direct at.

American Rescue Technology
2780 Culver Ave.
Kettering, Ohio
45429

Tel: 1.937.293.6240
Fax: 1.937.293.7049
www.genesisrescue.com



NOTE!

When contacting customer service please state your equipment's designation, type and production year. These details can be found on the equipment type plate.

SAFETY

This section of the operating manual provides a comprehensive overview of all important safety aspects for optimal protecting operating personnel and for safe, trouble-free operation.

Significant hazards may occur if the handling and safety instructions in this manual are not complied with.

PRELIMINARY INSTRUCTIONS

Genesis Aistruts are made of high strength aluminum alloy and can be operated manually or pneumatically. A full line of attachments are available for every rescue situation. The attachments are also made of high strength aluminum alloy. Genesis Aistruts were developed for stabilizing in a verticle, horizontal and in angled positions; providing a safe base for all working situations.

Product Features

Genesis Aistruts are designed to be sturdy and very simple to use. They can be used under the most adverse conditions. Dirt, mud, sand and water are not a problem. Genesis Aistruts are designed to work, uneffected, by these elements.

Costly maintainence is not necessary. Genesis Aistruts can be maintained by regular cleaning with water. No high cost maintainence is necessary.

All Genesis Aistruts are made of high quality 6061-T6 aluminum alloy, galvanized and stainless steel.

All Genesis Aistruts can be manually or pneumatically operated.

Assembly and mounting of attachements requires no special tools. Component attachment is simple.

Versatile Application

Genesis Aistruts provide a reliable support system for all rescue operations. The extensive assortment of attachements allow the struts to be used for vehicle rescue, trench rescue, building collapse, building stabilization, just to name a few.

Test Safety

Tests confirm the following force resistance values for the following attachment lengths:

61,000 lbs. - up to a length of - 47 inches

49,000 lbs. - up to a length of - 95 inches

42,000 lbs. - up to a length of - 144 inches



WARNING!
Improper use can be dangerous!

Any improper or unintended use of the devices can be hazardous!

Therefore, make absolutely sure that:

» **The devices are used only for the applications stated above.**

PREPARING FOR OPERATION

1. Determine which type of support and which Genesis Airstrut length is required.
2. Select the required accessories and connect to the airstrut. Make sure the attachments are connected properly and securely. Make sure all pins are properly engaged and locked. If required, a Genesis Airstrut can be fitted with a maximum of one extension.
3. Make sure there are no Safety Pins in the Inside Tube and the Sleeve.
4. Bring the Genesis Airstrut into position.
5. Manual operation of the Genesis Airstruts.
Pull out Genesis Airstrut until the attachment and base make contact with the load to be supported and the ground. Insert the first pin into a free tube hole and turn the sleeve with the collar grip upwards until the pin is seated in the last possible latch. Secure the t-bolts and insert the second pin, offset by 90 degrees, through a free tube hole.
Attachments and base plates must be secured against movement. (nails or screws)
6. Pneumatic operation of the Genesis Airstrut
Genesis Airstruts can be used with compressed air. An air source, hoses and a controller are required. An air bottle with a regulator or air compressor can be used.
The recommended maximum operating pressure for trench shoring is 120 psi. The maximum input pressure to the controller is 150 psi.
The recommended maximum operating pressure for building shoring is 35 psi. The maximum input pressure for the controller is 60 psi.
Connect the appropriate controller (35 psi or 120 psi) and inflation hose to the airstrut. When inflating a high strength column or tripod, the tripod hose is required. This hose allows you to operate three struts at one time.
Operate the controller until the base and the attachment make contact with the surface to be supported and a solid surface. Insert the first pin through the tube hole and on the collar. Turn the sleeve with the collar grip upwards until the pin is seated in the last possible latch. Secure the t-bolts and insert the second pin, offset by 90 degrees, through a free tube hole.
7. Check that the strut is seated securely and in the proper position before proceeding further.

RESPONSIBILITY OF THE CUSTOMER

In addition to the health and safety instructions in this operating manual, one must adhere to the safety, accident prevention, and environmental protection guidelines for the region in which the equipment is used. Particularly applicable in this regard:

- The customer must be familiar with the applicable health and safety provisions and in a hazard analysis identify other hazards that may exist at the equipment's installation site due to the special working conditions.
- The customer must clearly regulate and specify responsibilities for installation, operation, maintenance and cleaning.
- The customer must ensure that all personnel who handle the equipment have fully read and understood the operating manual.
- In addition, at regular intervals, the operator must train personnel and inform them of the hazards of working with the equipment.

Moreover, the customer is responsible for ensuring that the equipment is always in technically faultless condition. Consequently, the following applies:

- After each use, and at least once a year, a visual inspection of the equipment must be carried out by a trained individual (according to GUV-G 9102 or country-specific guidelines).
- Every three years, or if you have doubts about the safety or reliability of the equipment, functional testing and stress testing must be carried out (according to GUV-G 9102 or country-specific guidelines).

OPERATING PERSONNEL

The following qualifications are cited in the operating instructions for the various activity areas:

- **Trained individual**
is informed through training offered by the customer about the tasks assigned to him and the possible dangers of improper conduct.
- **Specialist**
is someone who, due to specialized training, skills and experience, as well as knowledge of the applicable stipulations by the manufacturer, is capable of executing the tasks assigned to him or her and of independently recognizing possible hazards.



WARNING!

Inadequate training can result in injuries!
Improper handling of the equipment can lead to serious injury or material damage.

Therefore, make absolutely sure to:

- » allow particular tasks to be carried out only by the persons stated in the relevant chapter of this manual.
- » When in doubt, call in specialists immediately.



NOTE!

The equipment may not be used by personnel who have consumed alcohol, medication or drugs!

DISASSEMBLY

Manual

Loosen the T-bolts and move the sleeve to loosen the pins. Remove the pins and put the tube back into the strut. The parts can be stowed away after disassembly of the attachments, base plates and after cleaning.

Pneumatic

Re-inflate the strut with the proper air pressure. This will allow the pins to be easily removed. Loosen the T-bolts and move the sleeve to loosen the pins. Remove the pins and put the tube back into the strut. The parts can be stowed away after disassembly of the attachments, base plates and after cleaning.

Note

Securing for transport: Lock the sleeve with a pin. Put the pin through the hole in the sleeve, through the inside tube. This will lock the strut for storage and transport.

Safety Instructions

- Genesis Aistruts must only be used by qualified and trained personnel
- Bystanders should be removed from work area.
- Genesis aistruts must be used manually or with compressed air. Flammable or other dangerous gases should not be used.
- Observe all accident prevention and work safety regulations when using Genesis aistruts.
- Before operation, all Genesis Aistruts must be in proper working condition. Do not use the system if there are any signs of damage.
- Genesis Aistruts are designed to be used for trench shoring, shoring of buildings and shoring or stabilization of vehicles. Genesis Aistruts should only be used for the purposes they are designed for.

MAINTENANCE

Genesis Aistruts and accessories shall be checked for completeness and damage after each operation. A visual and functional inspection shall be made at least once a year on all struts and accessories.

1. Remove the inside tube, complete with sleeve, out of the strut tube. When cleaning or making a visual inspection, insert the pin through the hole in the sleeve and you will be able to remove the sleeve and inside tube together.

2. Clean all Genesis Aistruts and accessories with a soft brush and soap and water. A pressure washer can be used if there are large amounts of dirt or other debris.

3. Check the strut and accessories for any signs of damage, missing parts and proper function.

Connection nipple and locking cap - check for damage.

Overflow openings - free of dirt and debris. They must be functional.

Sleeve with Collar Grips - proper function and ease of movement. Check t-bolt threads.

Piston cup - no damage and smooth operation.

4. Piston cup should only be cleaned with soap and water. Other cleansing agents could cause damage to the piston cup.

5. Assemble the strut tubes and sleeve. Check for function and ease of movement.

6. Accessories: All attachments, bases, hoses and controllers need to be inspected at regular intervals. Check that all adjustment screws, pins and latches are in place and work properly.

GUARANTEE

American Rescue Technology, Inc. guarantee all Genesis Aistrut products against material and manufacturing defects for 5 years from the date of purchase. Genesis Aistrut products falling under this guarantee will be repaired or replaced after inspection. Any damage caused by incorrect or improper handling is not covered by this guarantee.

TECHNICAL DATA

VERSION PCT.5.28.14

ART.520.100.1



GENESIS

RESCUE SYSTEMS

WWW.GENESISRESCUE.COM

RISK/TORNADO KIT

THE TORNADO KIT CONTAINS ESSENTIAL TOOLS NEEDED TO SECURE STRUCTURAL COLLAPSE. OUR STRUT SYSTEM IS A SURE ADDITION TO YOU SEARCH AND RESCUE TOOLBOX.

CONTENTS

- A-(2) STRUT 54/84
- B-(2) STRUTS 26/37
- C-(2) 4" CHANNEL ATTACHMENT
- D-(2) 6" CHANNEL ATTACHMENT
- E-(2) 3" ANGLE ATTACHMENT
- F-(2) 23 DEGREE SWIVEL
- G-(2) GRIZZLY HEAD
- H-(2) 60 DEGREE CLEVIS
- I-(4) RATCHET STRAPS
- J-(2) 12" BASE PLATE
- K-(1) 5' RAKER RAIL
- L-(1) DEAD MAN CONTROLLER
- M-(4) FLAT BASE
- N-(2) 18 INCH EXTENTIONS



*SPECIFICATIONS ON PAGE 2

THE TORNADO KIT COMES EQUIP WITH TWO BAGS. BAG #1 CONTAINS HEADS AND EXTENSIONS. BAG #2 CONTAINS HOSES AND CONTROLLERS.

SPECIFICATIONS

You Tube LOOKING FOR TRAINING

PARTS DATA

Level	Item Number	Revision Level	Item Description Location ID:	Qty Used Qty Scrap
BOM Number: ART.520.100.1			Revision Level:	Description: TORNADO KIT
0				1.000
.1	ART.AS.E457		54" - 84" AIRSTRUT SIZE E ONSITE	2.000 0.000
.1	ART.AS.B		26" - 37" AIRSTRUT SIZE B ONSITE	2.000 0.000
.1	ART.AS.18EXT		AIRSTRUT 18" EXTENSION ONSITE	2.000 0.000
.1	ART.AS.FB		FLAT BASE ONSITE	4.000 0.000
.1	ART.AS.23SW		23 DEGREE SWIVEL ONSITE	2.000 0.000
.1	ART.AS.4C		4" CHANNEL ATTACHMENT ONSITE	2.000 0.000
.1	ART.AS.6C		6" CHANNEL ATTACHMENT ONSITE	2.000 0.000
.1	ART.AS.3AC		3" ANGLE ATTACHMENT ONSITE	2.000 0.000
.1	ART.AS.RR5		5' LIGHT DUTY RAKER RAIL ONSITE	1.000 0.000
.1	ART.AS.12BP		12" BASE PLATE ONSITE	2.000 0.000
.1	ART.AS.60C		AIRSTRUT 60 DEGREE ONSITE	2.000 0.000
.1	ART.GS104		GRIZZLY END ONSITE	2.000 0.000
.1	ART.GS.110		GRIZZLY RATCHET STRAP ONSITE	4.000 0.000
.1	ART.AS.AK2T		AIRSTRUT DUAL CONTROL ONSITE	1.000 0.000
.1	ART.520.110.1		BAG, TORNADO KIT AIR ONSITE	1.000 0.000
.1	ART.520.110.2		BAG, TORNADO KIT HEADS ONSITE	1.000 0.000

GENESIS

RESCUE SYSTEMS

GENESIS RESCUE SYSTEMS

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