

GENERAL
The information on this drawing pertains only to the Armbruster 72' wide Wind Version Tension Tent, a Future Tents® Design by Todd Datsand of F.T.L. Associates, New York, manufactured exclusively by Armbruster Manufacturing Company, Springfield, Mass. If used for review or approval of a particular Armbruster 72' wide Wind Version Tension Tent application or installation, this F.T.L. Associates drawing should be accompanied by the manufacturer's engineer's assurance that the materials, sizes and specification requirements on this drawing will be met or exceeded, and the installer's engineer's assurance that the anchoring requirements and the installation and maintenance recommendations will be met or exceeded. The following criteria, resulting design loads and typical material sizes are considered appropriate for many applications and installations of this standardized structure. The adequacy and appropriateness of the engineering criteria selected for the structure should be reviewed for each installation and site based on local climate wind conditions, geographical location, exposure, duration of installation, occupancy, and building code requirements.

RECOMMENDED SAFETY FACTOR
A Factor of Safety of 2.0 times the design load is recommended for ground anchors for temporary structures.

ANCHORING
A wide variety of ground anchoring devices are commonly used. Soil conditions and resulting ground anchor holding capacities vary from site to site, and can vary within a particular site. The Owner and/or Installer of the Armbruster 72' wide Wind Version Tension Tent is fully responsible for assuring that the selection and installation of the anchoring devices is adequate and appropriate to resist the pull-out loads on the drawing, for typical installations.

INSTALLATION
Among other considerations, the Factor of Safety for the anchoring device has to do with the possibility of reduced anchor performance under wet soil conditions. Care should be taken that water is not allowed to drain or collect near anchors.

ANCHORING DEVICE HOLDING CAPACITY
Anchoring device holding capacity can be developed using a single larger device, or by using multiple smaller devices.

ENGINEERING CRITERIA
The engineering criteria selected for the Armbruster 72' wide Wind Version Tension Tent is as follows:

Design Wind Pressure: 15 psf.
Uniform Download: 5 psf.

PERIMETER CATENARY WEBBING BELTS
Perimeter catenary with greatest design load.

Webbing belt design load (tension): 2,750 lb.

USE: Polyester webbing with minimum break strength of 11,000 lbs. (with maximum elongation of 12% to 15% at break).

Every webbing belt shall be individually terminated at each end and fitted and sewn back onto itself for a distance 12 times as long as the belt is wide (i.e. for a 2" wide belt, the sew back length should be 24" for a 4" wide belt 96" per inch width). Belts should be 4:1.

INSTALLATION TIPS

- All anchor locations must be laid out accurately as shown on the attached diagram (in advance of laying out the fabric) to a tolerance of +/- 6" in any direction (right or left, forward or back, up or down, etc.) All column base locations must be laid out accurately to a tolerance of +/- 3" in any direction.
- Anchor and column locations shown on the diagram assume a perfectly flat site. If the actual site has variations in elevation that prevent all the anchors and column bases from being at the same level, new anchor locations and/or column lengths must be accurately calculated to preserve original design geometry and vectors.
- Make sure that the anchors installed are adequate to resist the pull out loads shown on the diagram. Actual testing of some individual anchors to 75% of the anchor pull out load is recommended for seasonal installations and for each anchor which are to be permanently installed for repeated use in one location.
- Make sure adequate tension to pull the fabric tight (pre-stress load) is applied to the guying cables before installation. Pre-stress loads for each guy are shown on the diagram.
- Measuring the angle of the main and side poles offers a very good check on the geometrical accuracy of the installation. This can easily be done with an Angle-meas. As illustrated in this drawing, each and every sidepole should be inclined from front to back 58.5° above the horizontal ground plane and from side to side, to be in a plane perpendicular to the horizontal ground plane. The center poles should be perpendicular to the horizontal ground plane.

NOTE: All the above considerations must be carefully met in order for the structure to obtain proper geometry, pre-stress, and anchor holding power, all of which are necessary to achieve full design load capability.

CONNECTING HARDWARE
All connecting hardware such as shackles, turnbuckles, pear-shaped rings, and fabricated plates or assemblies shall be rated or tested to 2.0 times the maximum design load of the vectors acting on the connectors under maximum design load.

INSPECTION
Each component of each Armbruster 72' wide Wind Version Tension Tent should be inspected at the beginning and the end of each installation for visual signs of damage by the installer. All damaged materials should be replaced immediately.

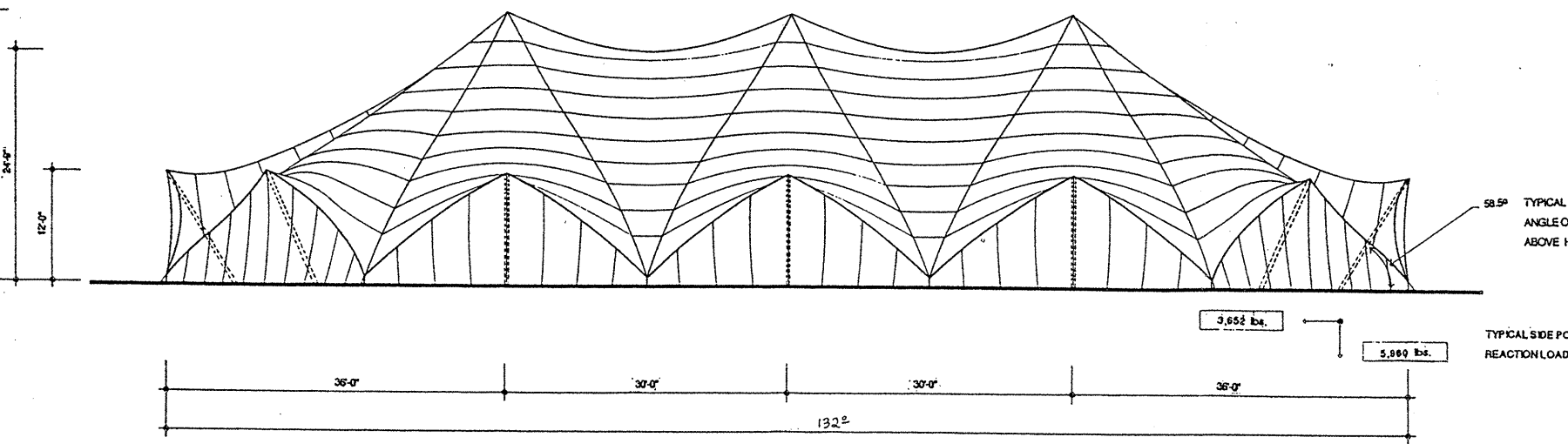
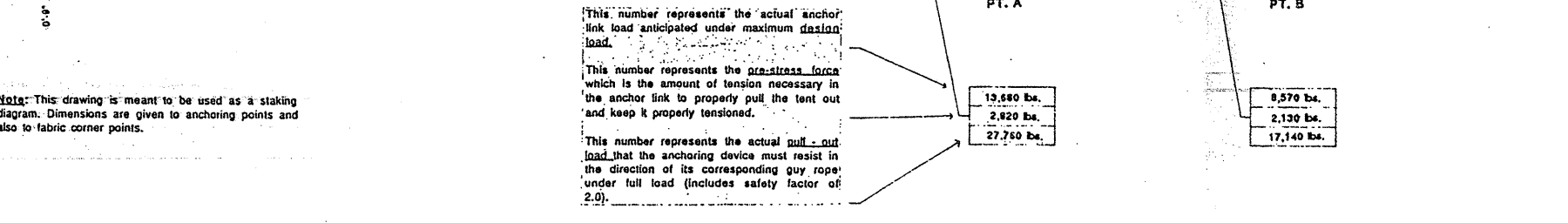
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ARMBRUSTER 72' WIDE WIND VERSION TENSION TENT

F.T.L. ASSOCIATES
TENSILE STRUCTURE DESIGN

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