

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Engineering Laboratory Design 403 (LS)* at our website: *Click HERE*

WIND TUNNEL

STANDARD MODEL SPECIFICATIONS

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.

Designers and Manufacturers of Quality
Engineering Laboratory Equipment since 1962.

SPECIFICATIONS

6 INCH OPEN CIRCUIT WIND TUNNEL - MODEL 401

General: The wind tunnel system will be an Eiffel type. Air is drawn into the elliptical inlet, through a honeycomb and screen pack and is accelerated through the contraction into the test section. The system air regains static pressure passing through the diffuser. Flow continues through the fan and is discharged to the atmosphere.

System components include: flow ducts, flow straighteners, test section, fan, motor, motor controller and supporting frames.

Overall dimensions:	Bench Mount Version	Castered Frame Version
Length:	8'-2.5" (2.50m)	8'-3.625" (2.53m)
Height:	42.00" (1.07m)	69.44" (1.76m)
Maximum Width:	25.75" (65.4cm)	25.75" (65.4cm)
Test Section Centerline:	20.57" (52.25cm)	48.00" (1.22m)
Maximum Estimated Weight:	380 lbs (172.7 kg)	495 lbs (225.0 kg)

Flow Sections: The ducts bounding the air stream will be fabricated of fiberglass reinforced plastic molded over precision tooling. Interior surfaces will be glass smooth, white, gel-coat. Exterior surfaces will be spray finished with a medium blue, polyester, gel-coat enamel. The inlet and contraction duct sections will be one piece laminations. The geometry of the diffuser dictates a longitudinal joint. Face flanges, joining adjacent ducts sections, will be sealed with resilient, closed cell, urethane foam gaskets. The flanges will be bolt fastened. Careful attention will be paid to the fit and alignment of mating sections to insure that no leaks or discontinuities exist which would disturb the flow.

The contraction will have a 9:1 area ratio, with a symmetrical cross section and analytically developed contours. The primary diffusion section expands with a total included angle of 6°. A safety screen will be installed at the downstream end of the diffuser.

Test Section: 0.5" (12.7mm) thickness, clear, GM grade, acrylic plexiglass will be used to fabricate the top, sides and bottom of the test section. The interior dimensions of the test section will be: length, 12.00" (30.5cm); width, 6.00" (15.2cm); height, 6.00" (15.2cm). Plexiglass flanges will join the test section to the contraction and the diffuser ducts. The cover of the working section will be removable and fitted with quick release fasteners. The bottom can also be made detachable if desired. Wall ports, closed with flush fitting, flanged plexiglass plugs, can be provided in either or both side walls. The location and size of the ports should be specified prior to fabrication of the test section.

Speed, in a clear test section, will be continuously variable from 5.0 fps (1.5 m/s) to 50.0 fps (15.2 m/s), using a 1/2 HP motor, or 10.0 fps (3.0 m/s) to 150.0 fps (45.7 m/s), using a 3 HP motor. Velocity variation over the cross-sectional area (excluding the boundary layer displacement thickness) will be less than ± 1% from the mean, free stream, velocity, excluding the boundary layer. Longitudinal turbulence intensity level will be on the order of 0.25% of the maximum, mean freestream velocity.

Post Office Box 278 2021 South Highway 61 Lake City, Minnesota 55041 USA
651-345-4515 FAX: 651-345-5095 800-795-8536
www.eldinc.com eldinfo@eldinc.com

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Flow Straighteners: The settling length, upstream of the contraction, will be fitted with a precision, hexagonal cell, aluminum honeycomb section. Graduated mesh, high porosity (60%), stainless steel screens, mounted and tensioned in proprietary design, extruded aluminum frames will be furnished.

Supporting Frames: The wind tunnel will be supported by a frame fabricated of structural steel tubing joined by welding. The frame will be etched, prime coated and spray finished with acrylic enamel. The bench frame is fitted with adjustable leveling pads. The floor frame is fitted with leveling pads and swivel casters. Rubber-in-shear mounts and a flexible coupling will isolate the duct sections from room and fan vibrations.

Fan Assembly: An in-line, centrifugal fan assembly will be used. The fan will be powered by either a 1/2 HP or 3 HP, ODP, 208/230 VAC induction motor.

A transistor inverter type, variable frequency inverter will regulate the fan shaft RPM. The controller will be arranged for 208/230 VAC, single phase input electric service. A remote control station, located adjacent to the test section, will regulate test section velocity. The 0.5 HP configuration will be arranged with a boost transformer to operate from 115VAC/1ϕ/60Hz electric service. The larger motor will be arranged to operate from 208-230VAC/60Hz either single or three phase service.

A NEMA rated fusible disconnect will be furnished to protect both the motor and controller. The disconnect, inverter, and related components will be mounted in a NEMA Type 4 enclosure.

A 20`-0`` (6m) long, neoprene covered, service cable, fitted with a NEMA rated twist lock type cap and mating receptacle, will be furnished.

Miscellaneous: The wind tunnel will be shipped, fully assembled, via motor freight transport. Complete operating and maintenance instructions will be furnished with the equipment.

A one year limited warranty covers the equipment.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.
P.O. Box 278
Lake City, Minnesota 55041 USA
345-4515 FAX 345-5095

THIS DRAWING AND THE INFORMATION THAT IT CONTAINS ARE THE PROPERTY OF ENGINEERING LABORATORY DESIGN, INC. REPRODUCTION AND/OR TRANSMISSION WITHOUT EXPRESS WRITTEN AUTHORIZATION IS PROHIBITED.

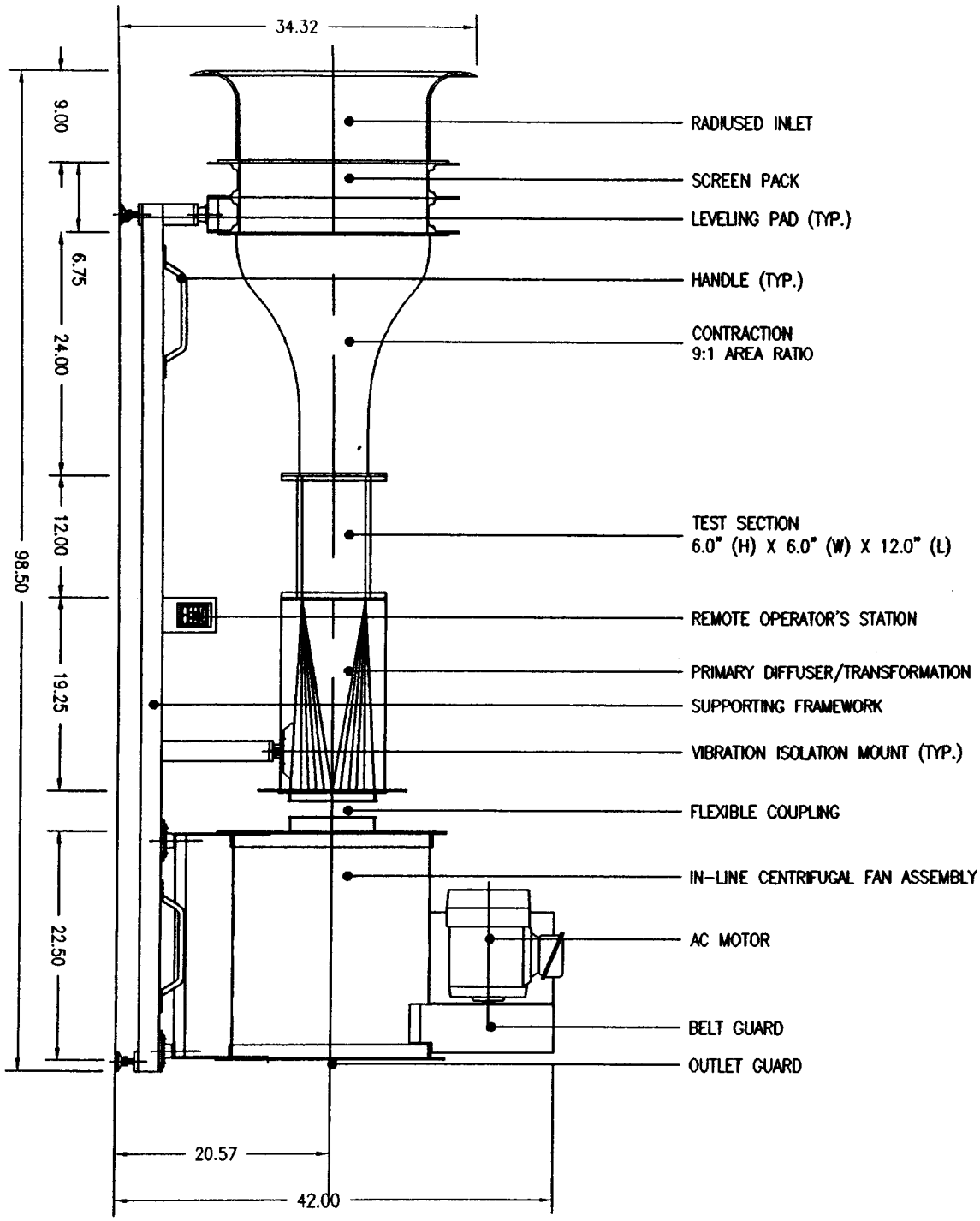
TITLE: OVERALL ELEVATION BENCH TOP VERSION

PROJECT: 6" EIFFEL TYPE, OPEN CIRCUIT, WIND TUNNEL

MODEL NO.: E15XX-B

DATE: 06/05/96

SCALE: 0.75" = 1'-0"



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.
P.O. Box 278
Lake City, Minnesota 55041 USA
345-4515 FAX -345-5095

THIS DRAWING AND THE INFORMATION THAT IT CONTAINS ARE THE PROPERTY OF ENGINEERING LABORATORY DESIGN, INC. REPRODUCTION AND/OR TRANSMISSION WITHOUT EXPRESS WRITTEN AUTHORIZATION IS PROHIBITED.

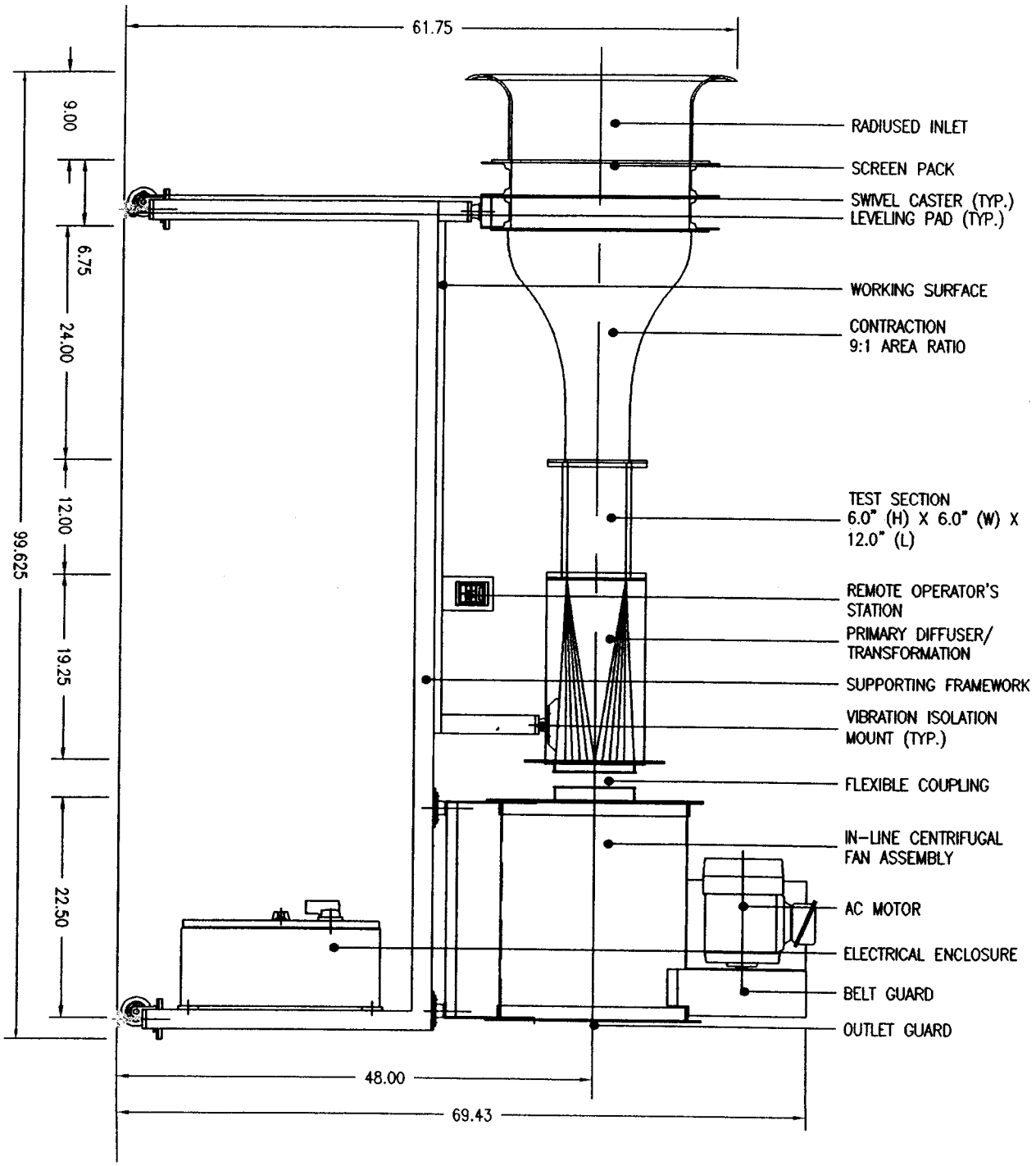
TITLE: OVERALL ELEVATION CASTERED FRAME VERSION

PROJECT: 6" EIFFEL TYPE, OPEN CIRCUIT, WIND TUNNEL

MODEL NO.: E15XX-F

DATE: 06/05/96

SCALE: 0.75" = 1'-0"



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.

Designers and Manufacturers of Quality
Engineering Laboratory Equipment since 1962.

SPECIFICATIONS

12" OPEN CIRCUIT WIND TUNNEL - MODEL 402

General Description: The unit is an Eiffel type, arranged in a horizontal configuration. Air is drawn from the room into a radiused inlet, passes through the flow straightening section, is accelerated through the contraction, passes through the test section, recovers static pressure in the diffuser and is discharged back to the room from the fan outlet or acoustic diffuser outlet at the downstream end of the system. The wind tunnel is supported by a castered frame for easy portability.

Overall dimensions of the system are: Length, 19'-6" (5.94m); width, 3'-8" (1.12m); height, 6'-3" (1.90m). The test section centerline height is 4'-6" (137.2cm). The total weight is approximately 1,300 lbs (589kg).

Flow Sections: The wind tunnel ducts are fabricated of fiberglass reinforced plastic laminated over precision molds. Interior surfaces are mold smooth white gel-coat. Exterior surfaces are finished with blue polyester gel-coat enamel. The inlet section is a smooth radius joined to a one diameter long settling length. Face flanges, joining adjacent duct sections are sealed with a resilent, closed cell, urethane, foam gasket. Careful attention is paid to the fitting and alignment of adjacent duct sections to assure that no discontinuities exist which would disturb the flow.

The contraction section is an analytically designed profile with a 6.25:1 area ratio. The diffuser section consists of a parabolic transition joining a 7° total included angle, transformation to a round cross section.

A 1" X 2" (2.54cm X 5.08cm) mesh safety grid is provided at the downstream end of the primary diffuser.

Flow Straighteners: A precision, hexagonal cell, aluminum honeycomb precedes three, graduated mesh, high porosity, screens. The screens are securely mounted in proprietary design, extruded aluminum, frames. A replaceable fiberglass air filter media prevents contamination of the screen pack.

Test Section: The working section is 12" (305 mm) by 12" (305 mm) in cross section by 24" (610 mm) in length and is fabricated of 3/4" (19 mm), thickness, clear plexiglass. Aluminum angle flanges, with threaded fasteners, will join the test section to the contraction and the diffuser ducts. The cover of the working section will be removable and fitted with quick release fasteners. The bottom can also be made detachable if desired. Wall ports, closed with flush fitting, flanged plexiglass plugs, can be provided in either or both side walls. The location and size of the ports should be specified prior to fabrication of the test section.

Speed, in a clear test section, will be continuously variable from either 100 fps (30.5 m/s), using a 5 HP motor, or 160 fps (48.8 m/s), using a 10 HP motor, down to approximately 10 fps (3 m/s). Velocity variation will be less than $\pm$ 1% variation from the mean, free stream, velocity over the area of the test section excluding the boundary layer. Turbulence level is estimated to be less than 0.25%.

Post Office Box 278 2021 South Highway 61 Lake City, Minnesota 55041 USA
651-345-4515 FAX: 651-345-5095 800-795-8536
www.eldinc.com eldinfo@eldinc.com
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Supporting Frames: Structural steel tubing, joined by welding, is used to fabricate the supporting frames for the tunnel assembly and the fan. The frame will be built in two sections which are easily joined using threaded fasteners at final assembly. The separable frame allows installation of the wind tunnel in laboratory rooms with otherwise restricted access. The frame assemblies are primed and finish painted with acrylic enamel. Rubber-in-shear mountings are used extensively to isolate the tunnel ducts from room and fan vibrations.

Fan Assembly: A centaxial type fan, belt driven by either a 5 HP or a 10 HP, AC induction motor, will be furnished.

A transistor inverter variable frequency speed controller will be employed to regulate the fan shaft RPM. The controller will be arranged for 208-230 VAC/3 phase/60 Hz electrical service. A fusible disconnect will be furnished to protect the control and motor. A separate branch electric service, with a capacity of at least 20 amps for 5HP and 40 amps for 10 HP, is required. A remote control operator station will be installed near the upstream end of the diffuser.

A 20' (6m) long neoprene covered service cable, fitted with a twist lock type cap and mating receptacle, will be furnished.

An acoustic diffuser, mounted to the fan discharge, is offered as an accessory to minimize fan sound levels. This device increases the overall length of the system and decreases the sound power level from 95 dBA to 85 dBA.

Miscellaneous: The wind tunnel will be shipped, partially assembled, via motor freight transport. Complete installation, operation, and maintenance instructions will be furnished with the equipment.

A one year limited warranty covers the equipment.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.
P.O. Box 278
Lake City, Minnesota 55041 USA
345-4515 FAX 345-5095

THIS DRAWING AND THE INFORMATION THAT IT CONTAINS ARE THE PROPERTY OF ENGINEERING LABORATORY DESIGN, INC. REPRODUCTION AND/OR TRANSMISSION WITHOUT EXPRESS WRITTEN AUTHORIZATION IS PROHIBITED.

PROJECT: OVERALL SIDE ELEVATION

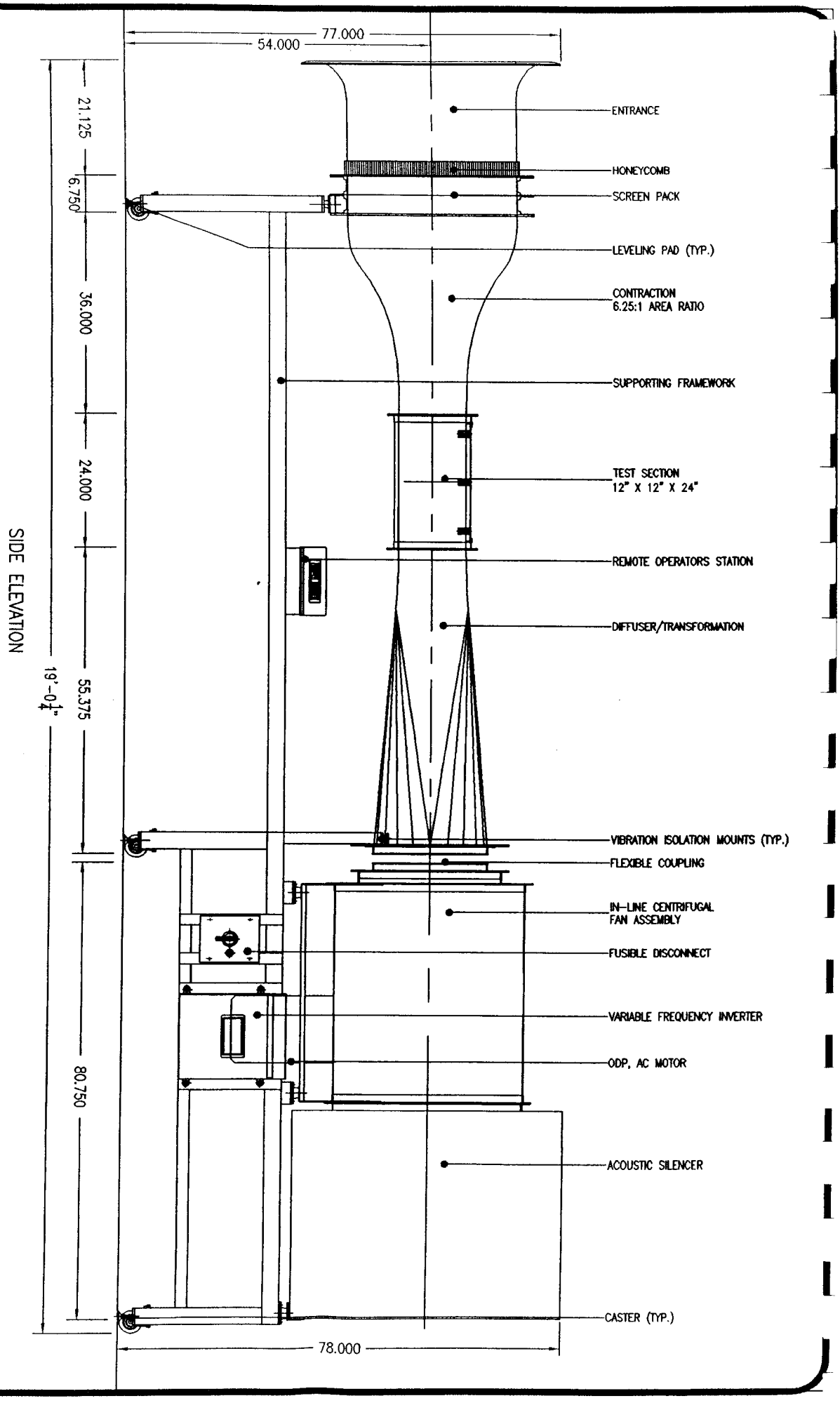
ORGANIZATION: 12" EIFFEL TYPE, OPEN CIRCUIT, WIND TUNNEL

MODEL NO.: E30XX

DATE: 04/25/97

SCALE: 0.5" = 1'-0"

SIDE ELEVATION



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.
P.O. Box 278
Lake City, Minnesota 55041 USA
345-4515 FAX 345-5095

THIS DRAWING AND THE INFORMATION THAT IT CONTAINS ARE THE PROPERTY OF ENGINEERING LABORATORY DESIGN, INC. REPRODUCTION AND/OR TRANSMISSION WITHOUT EXPRESS WRITTEN AUTHORIZATION IS PROHIBITED.

PROJECT: OVERALL PLAN VIEW

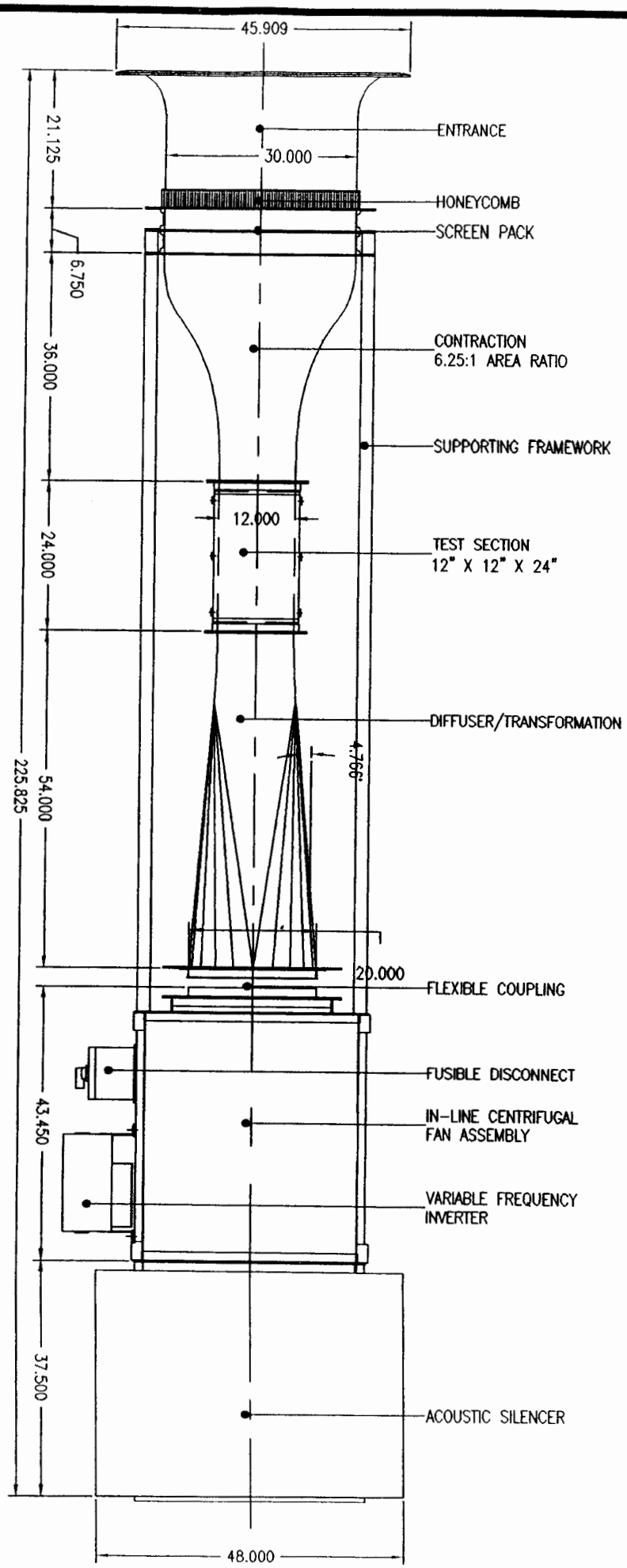
ORGANIZATION: 12" EIFFEL TYPE, OPEN CIRCUIT, WIND TUNNEL

MODEL NO.: E30XX

DATE: 04/25/97

SCALE: 0.5" = 1'-0"

PLAN VIEW



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.

Designers and Manufacturers of Quality
Engineering Laboratory Equipment since 1962.

SPECIFICATIONS

12" RECIRCULATING SUBSONIC WIND TUNNEL - MODEL 403

General: The system is a closed, recirculating design. The flow loop may be arranged in either a horizontal or vertical configuration.

System components include: flow ducts, test section, fan, motor with variable frequency speed controller, a heat exchanger and supporting frame(s).

Overall dimensions of the unit are: Horizontal configuration: length, 19'-2" (5.84m); height, 6'-4" (1.93m); width, 6'-5" (1.96m); horizontal interior dimension between test section side wall and fan shell, 1'-0" (30.5cm); test section centerline height, 4'-6" (137.2cm). Vertical configuration: length, 19'-2" (5.84m); height, 7'-3" (2.21m); width, 4'-10" (147.3cm); test section centerline height, 5'-5" (1.65m). The total weight is approximately 2,100 lbs (955kg).

Flow Sections: The ducts bounding the air stream are fabricated of fiberglass reinforced plastic molded over precision tooling. Interior surfaces are glass smooth , white, gel-coat. Exterior surfaces are spray finished with polyester gel-coat enamel. A medium blue color is standard. Miter flanges, fastened with stainless steel bolts and sealed with elastomeric sealant, join the longitudinal corners of the duct sections. Face flanges, joining adjacent ducts sections are sealed with a resilient, closed cell, urethane foam gasket. The flanges are bolt fastened. Careful attention is paid to the fit and alignment of mating sections to insure that no leaks or discontinuities exist which would disturb the flow.

The contraction has a 6.25:1 area ratio, with a symmetrical cross section and analytically developed contours. The primary diffusion section expands with a total included angle of 6°.

High efficiency, turning vane cascades, fabricated of galvanized steel or extruded aluminum, are installed in each of the four circuit elbows.

A 1" X 2" (2.54cm X 5.08cm) mesh safety grid is provided at the downstream end of the primary diffuser.

Test Section: 3/4" (19mm) thickness, clear, GM grade, acrylic plexiglass will be used to fabricate the top, sides and bottom of the test section. The interior dimensions of the test section will be: length, 24.00" (61.0cm); width, 12.00" (30.5cm); height, 12.00" (30.5cm). The section will be fitted with aluminum end flanges. The flanges will be bolt fastened to the contraction and the diffuser ducts. The cover of the working section will be removable and fitted with quick release fasteners. The bottom can also be made detachable if desired. Wall ports, closed with flush fitting, flanged plexiglass plugs, can be provided in either or both side walls. Location and size of the ports should be specified prior to fabrication of the test section.

Post Office Box 278 2021 South Highway 61 Lake City, Minnesota 55041 USA
651-345-4515 FAX: 651-345-5095 800-795-8536
www.eldinc.com eldinfo@eldinc.com

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Speed, in a clear test section, will be continuously variable from 300 fps (91.4 m/s), using a 40 HP motor, or 180 fps (55 m/s), using a 15 HP motor, down to approximately 10 fps (3 m/s). Velocity variation will be less than $\pm$ 1% variation from the mean, free stream, velocity. Turbulence level will be less than 0.25%.

Flow Straighteners: The setting length, upstream of the contraction, will be fitted with a precision, hexagonal cell, aluminum honeycomb section. Graduated mesh, high porosity (60%), stainless steel screens, mounted and tensioned in proprietary design, extruded aluminum frames will be furnished.

Heat Exchanger: A commercial quality, aluminum fin/copper tube, staggered row, heat exchanger will be installed between the third and fourth elbows. The heat exchanger is intended for use with either building water or chilled water on the liquid side at a rate of up to 10 GPM (37.85 Lpm). The buyer is responsible for providing a means of regulating the water supply (i.e. a modulating valve).

Supporting Frames: The individual duct sections will be supported by frame fabricated of structural steel tubing joined by welding. The frames will be etched, prime coated and spray finished with acrylic enamel. Each frame leg is fitted with an adjustable leveling pad (horizontal). A one-piece frame, fitted with swivel casters, supports the vertical configuration system. Rubber-in-shear mounts are used extensively to isolate the duct sections from room or fan vibration.

Fan Assembly: A centaxial fan will be furnished. The fan will be powered by either a 40 HP or a 15 HP, ODP, AC induction motor.

A transistor invertor type variable frequency controller will regulate fan shaft RPM. The controller will be arranged for either 208-230 or 460-480 VAC/3 phase/60 Hz electric service. A fusible disconnect will be furnished to protect the control and motor. A remote speed control station, located adjacent to the test section, will regulate test section velocity.

The buyer will be responsible for arranging for the installation of permanent wiring from the building mains to the disconnect.

Miscellaneous: The wind tunnel will be assembled and tested in the ELD plant facility prior to shipment. Interested members of the buyer's organization are invited to visit the plant during the testing period.

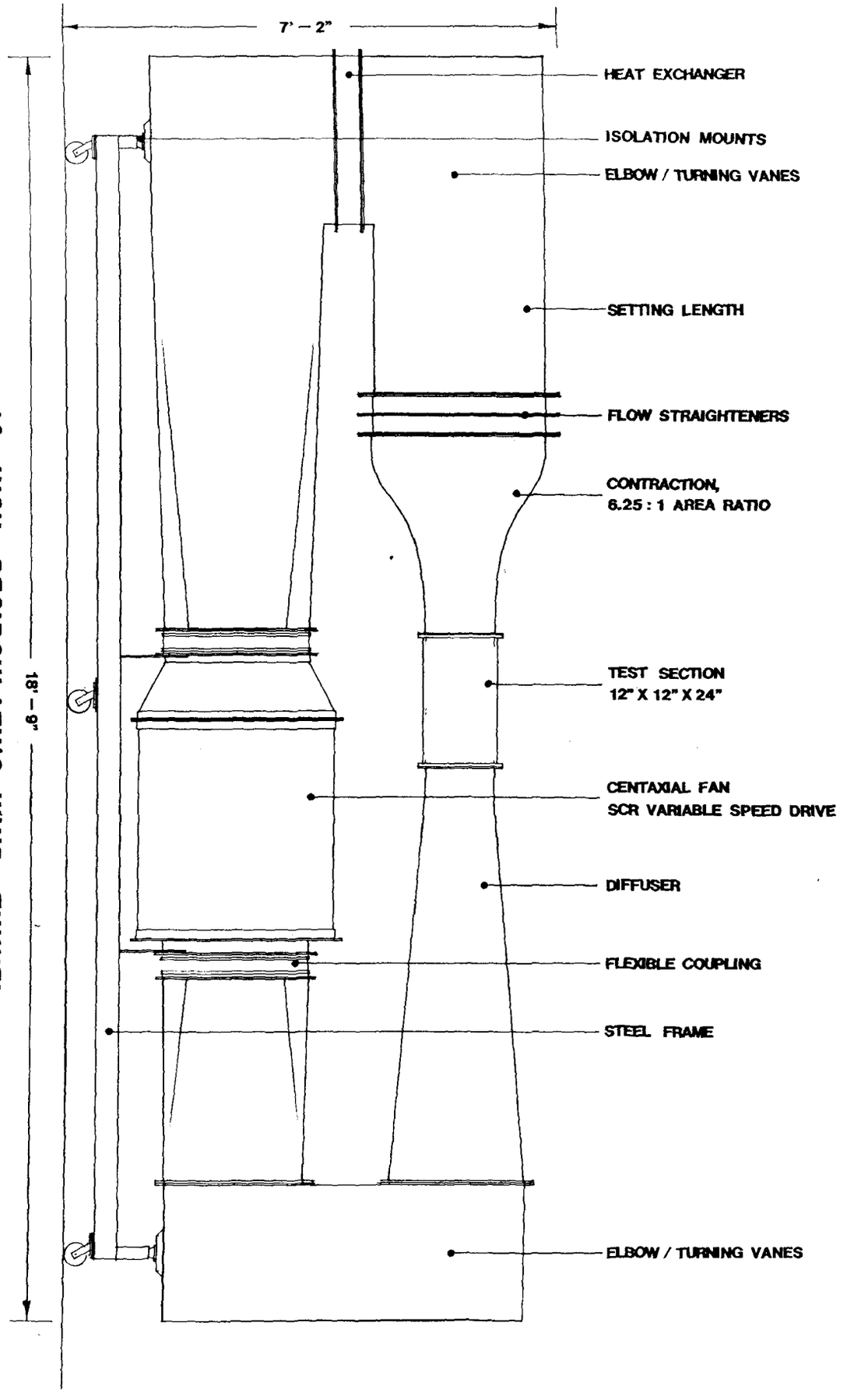
The wind tunnel will be disassembled and shipped via motor freight transport. Complete installation, operation, and maintenance instructions will be furnished with the equipment. Alternatively, an ELD representative can be contracted to supervise and participate in the unloading, placement, assembly, and start-up of the wind tunnel system.

A one year limited warranty is provided with the equipment.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC. · BOX 278 · LAKE CITY, MN 55041

12 INCH RECIRCULATING WIND TUNNEL



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Engineering Laboratory Design, Inc.
Box 278 Lake City, MN 55041 -345-4515

This drawing and the information it contains are the property of Engineering Laboratory Design, Inc. Reproduction by any means and/or transmission to others without authorization is prohibited.

Reference

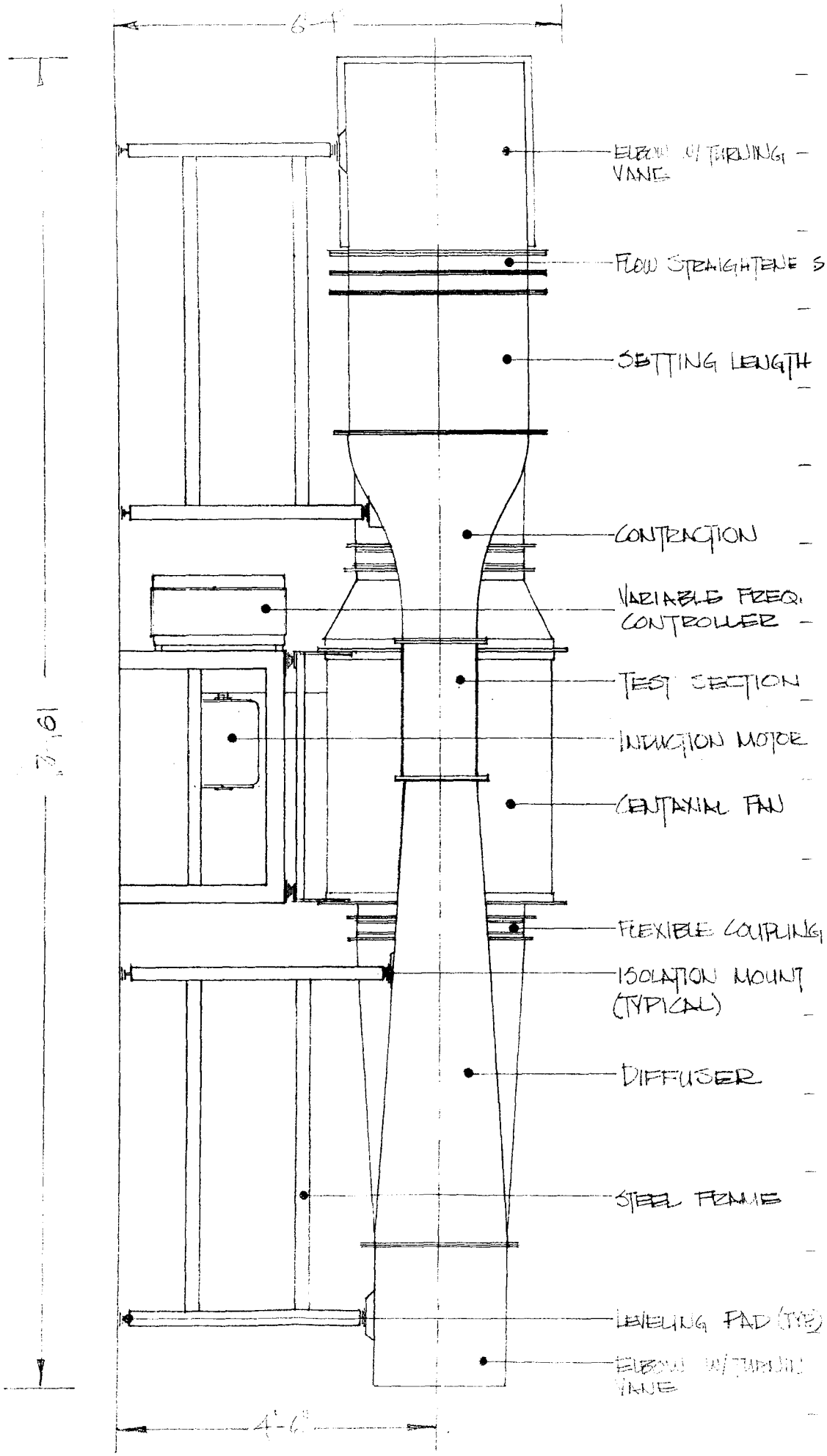
Date 1/12/93

Scale 1/2"=1'-0"

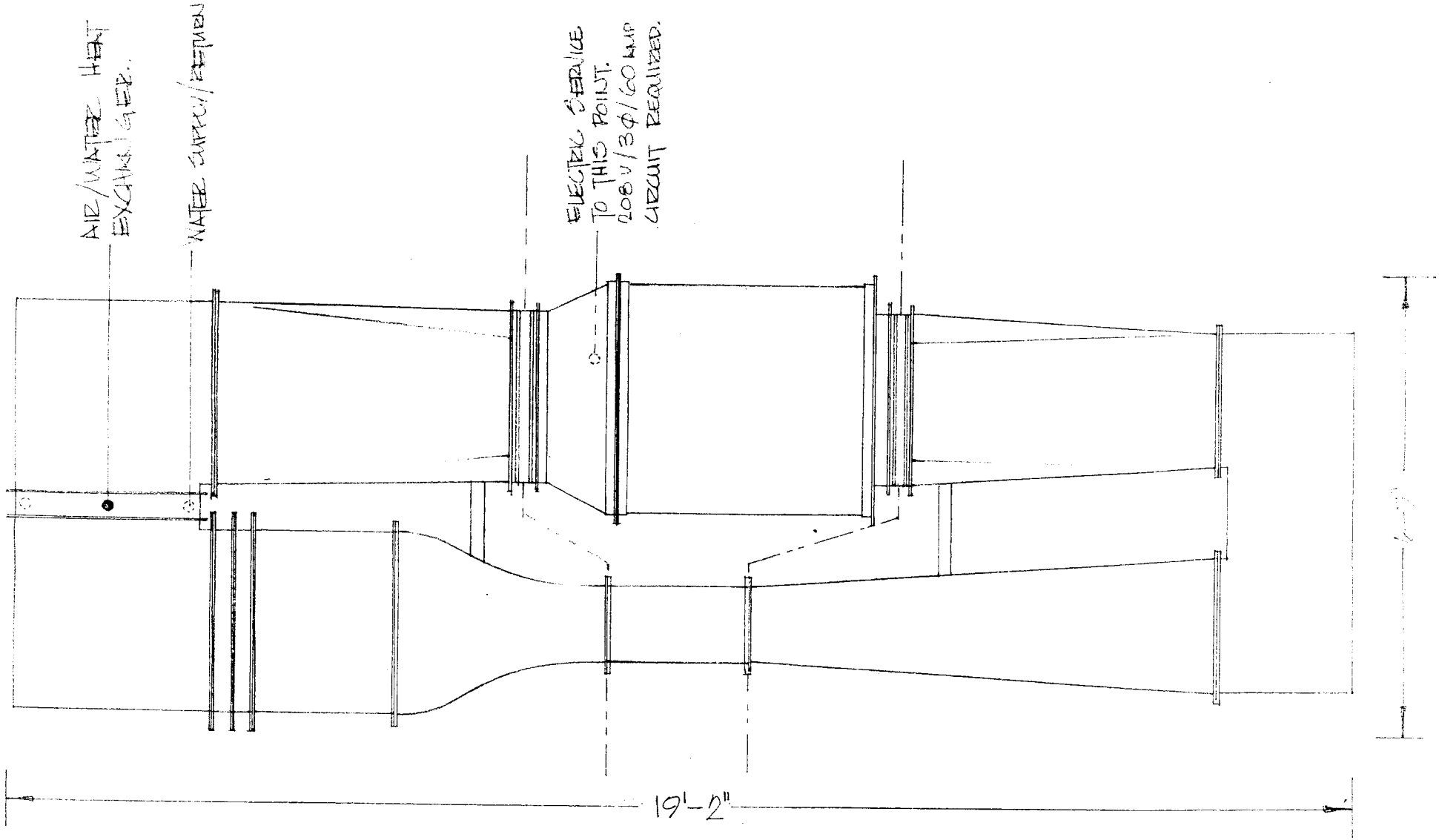
Drawn by JL

12" DIAMETER

ELEVATION



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com



PLAN

NOTE: THE WING JOINTS MAY BE CONVENIENTLY DISASSEMBLED AT THE PLACES INDICATED BY THE BROKEN LINES.

Engineering Laboratory Design, Inc.
Box 278 Lake City, MN 55041 345-4515

This drawing and the information it contains are the property of Engineering Laboratory Design, Inc. Reproduction by any means and/or transmission to others without authorization is prohibited.

Reference

Scale 1/2" = 1'-0"

12' [illegible] WING JOINTS

Date 4-12-85

Drawn By

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.

Designers and Manufacturers of Quality
Engineering Laboratory Equipment since 1962.

SPECIFICATIONS

18" OPEN CIRCUIT WIND TUNNEL - MODEL 404

General: The wind tunnel system is an Eiffel type. Air is drawn into the radiused inlet, through a honeycomb and screen pack and is accelerated through the contraction into the test section. The system air regains static pressure passing through the diffuser. Flow continues through the in-line centrifugal fan and the acoustic diffuser and is discharged to the atmosphere.

System components include: flow ducts, test section, fan, motor , variable frequency inverter, and supporting frames.

Overall dimensions of the unit are: length, 25'-9" (7.85m); height, 7'-7" (2.31m); width, 6'-2" (1.88m). The test section centerline height is 4'-6" (137.2cm). The total weight is approximately 1,900 lbs (864kg).

Flow Sections: The ducts bounding the air stream are fabricated of a composite lamination of fiberglass reinforced plastic and a rigid, PVC, foam core material molded over precision tooling. The incorporation of the foam core material produces a stiff, lightweight structure, with a natural frequency higher than that of the fan RPM, thereby avoiding vibration induced turbulence in the airstream. This composite material also has good acoustic attenuation properties and easily withstands the atmospheric pressure loads encountered at maximum running speeds. Interior surfaces are glass smooth , white, gel-coat. Exterior surfaces are spray finished with polyester gel-coat enamel. A medium blue color is standard. Miter flanges, fastened with stainless steel bolts and sealed with elastomeric sealant, join the longitudinal corners of the duct sections. Face flanges, joining adjacent ducts sections are sealed with resilient, closed cell, PCV foam gasket. The flanges are bolt fastened. Careful attention is paid to the fit and alignment of mating sections to insure that no leaks or discontinuities exist which would disturb the flow. The duct components are site assembled to form the completed flow circuit.

The contraction has a 6.25:1 area ratio, with a symmetrical cross section and analytically developed contours. The primary diffuser section expands with a total included angle of 6.0°.

A 1" X 2" (2.54cm X 5.08cm) mesh safety grid is provided at the downstream end of the primary diffuser.

Test Section: 0.75" (19mm) thick, clear, GM grade, acrylic plexiglass will be used to fabricate the top, sides and bottom of the test section. The interior dimensions of the test section will be: length, 36.00" (91.44cm); width, 18.00" (45.72cm); height, 18.00" (45.72cm). Aluminum angle flanges, with threaded fasteners, will join the test section to the contraction and the diffuser ducts. Both sidewalls (30.0" in length, centered on the test section) of the working section will be removable and fitted with quick release fasteners. The cover of the working section will be removable and fitted with quick release fasteners. The floor can also be made detachable, if desired. Wall port(s), closed with flush fitting, flanged plexiglass plug(s), can be provided in the either or both sidewall(s). The size and location of the port(s) must be specified prior to fabrication of the test section.

Speed, in a clear test section, will be continuously variable from either 100 fps (30.5 m/s), using a 15 HP motor, or 150 fps (45.7 m/s), using a 25 HP motor down, to approximately 10 fps (3.0 m/s). Velocity variation over the cross sectional area (excluding the boundary layer displacement thickness) will be less than ± 1% from the mean, free stream, velocity. Longitudinal turbulence intensity level will be on the order of 0.25% when measured at the maximum, mean, freestream velocity.

Flow Straighteners: The setting length, upstream of the contraction, will be fitted with a precision, hexagonal cell, aluminum honeycomb section. Graduated mesh, high porosity (60%), stainless steel and/or polyester screens, mounted and tensioned in proprietary design, extruded aluminum frames will be furnished. Two additional extruded aluminum frames will be provided.

Post Office Box 278 2021 South Highway 61 Lake City, Minnesota 55041 USA
651-345-4515 FAX: 651-345-5095 800-795-8536
www.eldinc.com eldinfo@eldinc.com

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Supporting Frames: The individual duct sections will be supported by frames fabricated of structural steel tubing joined by welding. The frames will be etched, prime coated and spray finished with acrylic enamel. Each frame leg is fitted with an adjustable leveling pad and a swivel caster. Rubber-in-shear mounts will isolate the duct sections from room or fan vibration.

Fan Assembly: An in-line centrifugal type fan will be used. The fan will be powered by either a 15 HP or a 25 HP, ODP, variable speed, AC induction motor.

A transistor inverter type variable frequency controller will regulate fan speed. The controller will be arranged for 208-230VAC or 460-480 VAC/3ϕ/60 Hz electrical service. A fusible disconnect, mounted in a NEMA I enclosure will be serve as primary protection for the inverter/motor combination. A remote speed control station, located adjacent to the test section, will regulate test section velocity.

The buyer will be responsible for arranging for the installation of permanent wiring from the building mains to the motor starter.

An acoustic diffuser can be furnished as an option.

Miscellaneous: The wind tunnel system will be assembled and tested in the **ELD** plant facility prior to shipment. Interested members of the buyer's organization are invited to visit the plant during the testing period.

The wind tunnel will be disassembled and shipped via motor freight transport to the installation site. Complete installation, operation, and maintenance instructions will be furnished with the equipment.

A one year limited warranty is provided with the equipment.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.
P.O. Box 278
Lake City, Minnesota 55041 USA
-345-4515 FAX -345-5095

THIS DRAWING AND THE INFORMATION THAT IT CONTAINS ARE THE PROPERTY OF ENGINEERING LABORATORY DESIGN, INC. REPRODUCTION AND/OR TRANSMISSION WITHOUT EXPRESS WRITTEN AUTHORIZATION IS PROHIBITED.

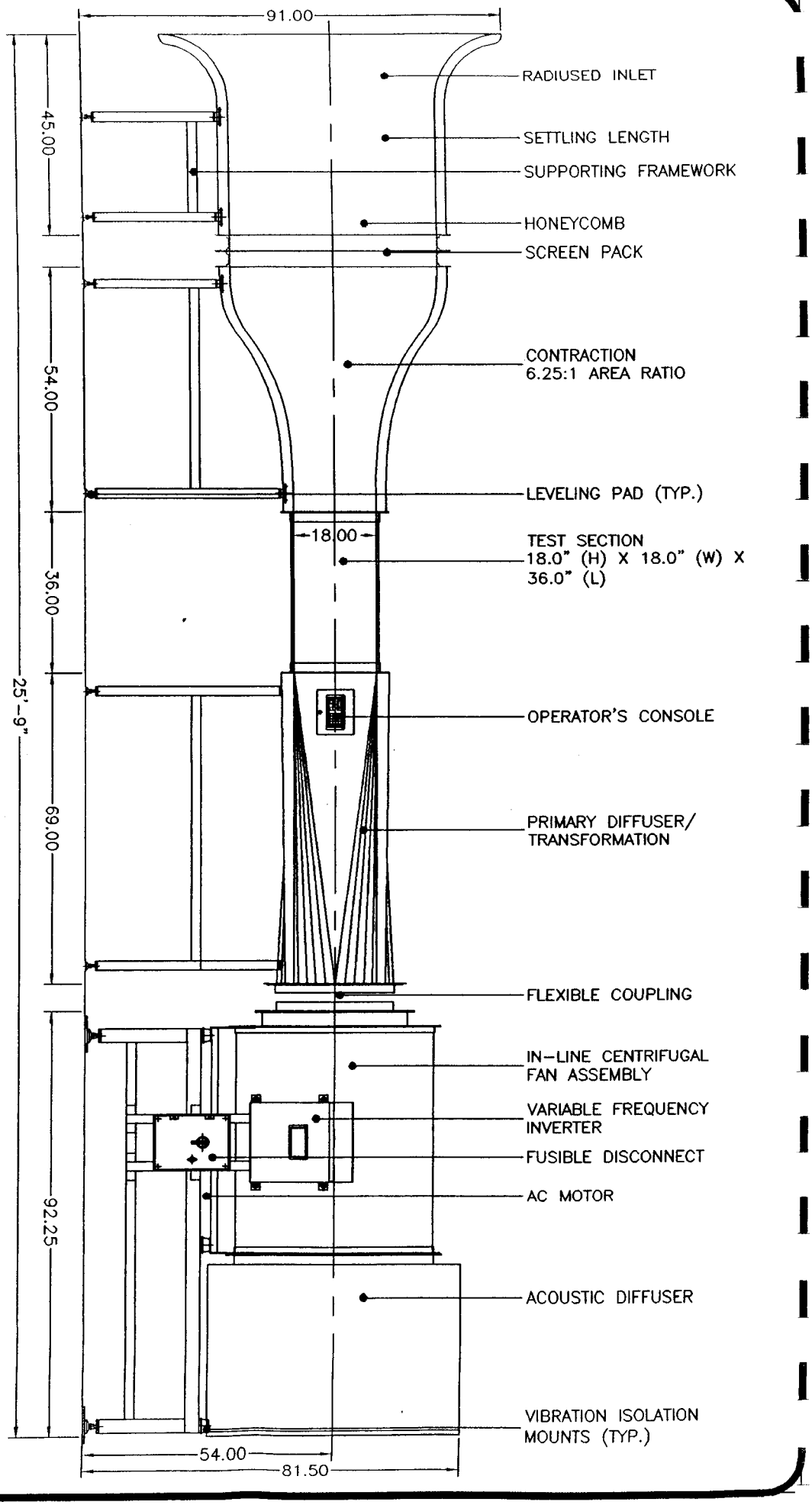
TITLE: OVERALL ELEVATION

PROJECT: 18" OPEN CIRCUIT WIND TUNNEL

MODEL NO.: 404

DATE: 10/15/97

SCALE: 0.375" = 1'-0" 0.1875" = 1'-0"



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.
P.O. Box 278
Lake City, Minnesota 55041 USA
-345-4515 FAX 612-345-5095

THIS DRAWING AND THE INFORMATION THAT IT CONTAINS ARE THE PROPERTY OF ENGINEERING LABORATORY DESIGN, INC. REPRODUCTION AND/OR TRANSMISSION WITHOUT EXPRESS WRITTEN AUTHORIZATION IS PROHIBITED.

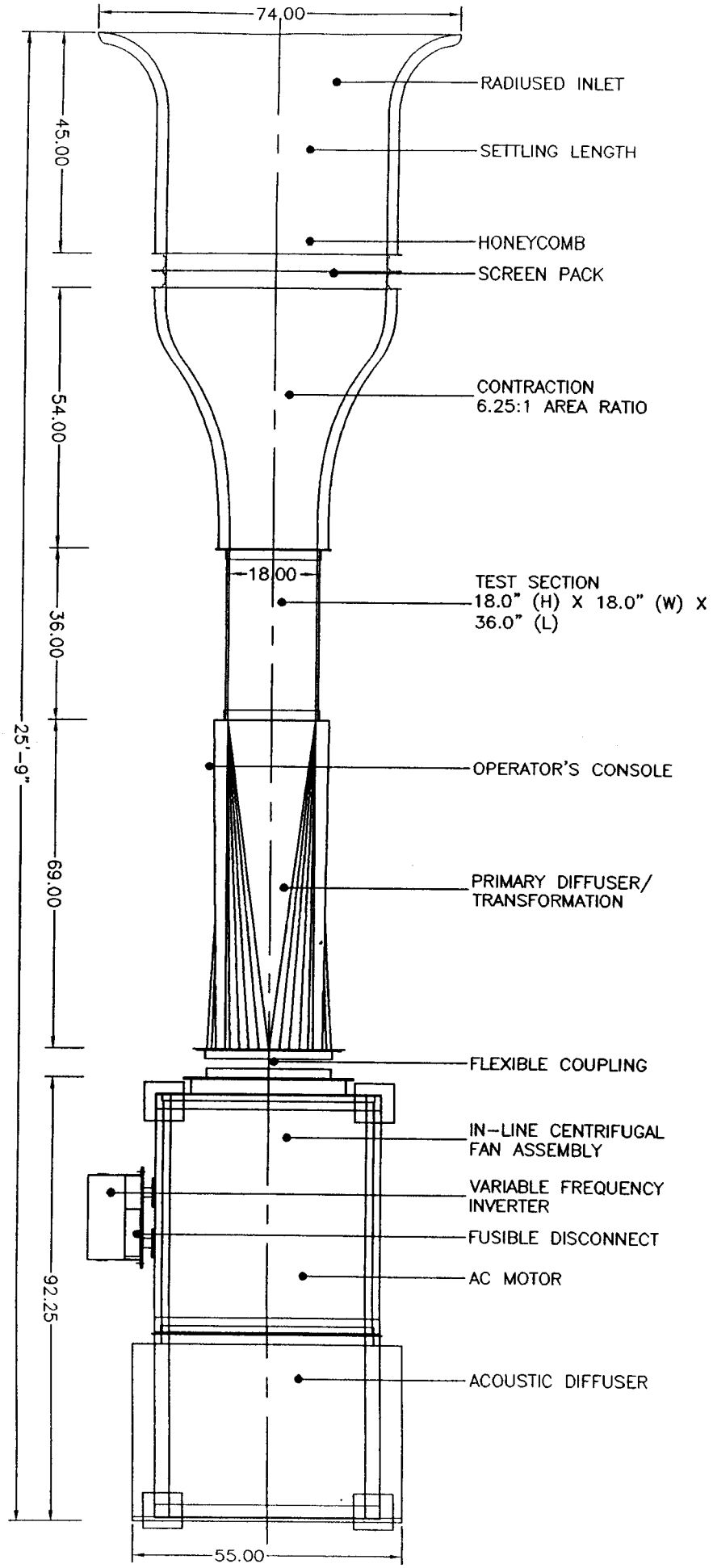
TITLE: OVERALL PLAN VIEW

PROJECT: 18" OPEN CIRCUIT WIND TUNNEL

MODEL NO.: 404

DATE: 10/15/97

SCALE: 0.375" = 1'-0" ~~0.1875" = 1'-0"~~



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.

Designers and Manufacturers of Quality
Engineering Laboratory Equipment since 1962.

SPECIFICATIONS

18" RECIRCULATING WIND TUNNEL MODEL - 405

General: The system is a closed, recirculating design with the flow loop arranged in a horizontal configuration.

System components include: flow ducts, test section, fan, motor, variable frequency inverter, and supporting frames.

Overall dimensions of the unit are: length, 25'-5.5" (7.76m); height, 6'-11.5" (2.12m); width, 9'-0" (2.74m); horizontal interior dimension between test section side wall and fan shell, 2'-2" (66.0cm), test section centerline, 4'-6" (137.2cm). The total weight is approximately 3,750 lbs (1,705kg).

Flow Sections: The ducts bounding the air stream are fabricated of a composite lamination of fiberglass reinforced plastic and a rigid, PVC, foam core material molded over precision tooling. The incorporation of the foam core material produces a stiff, lightweight structure, with a natural frequency higher than that of the fan RPM, thereby avoiding vibration induced turbulence in the airstream. This composite material also has good acoustic attenuation properties and easily withstands the atmospheric pressure loads encountered at maximum running speeds. Interior surfaces are glass smooth, white, gel-coat. Exterior surfaces are spray finished with medium blue, polyester gel-coat enamel. Miter flanges, fastened with stainless steel bolts and sealed with elastomeric sealant, join the longitudinal corners of the duct sections. Face flanges, joining adjacent ducts sections are sealed with a resilient, closed cell, urethane foam gasket. The flanges are bolt fastened. Careful attention is paid to the fit and alignment of mating sections to insure that no leaks or discontinuities exist which would disturb the flow. The duct components will be site assembled to form the completed flow circuit.

The contraction has a 6.25:1 area ratio, with a symmetrical cross section and analytically developed contours. The primary diffusion section expands with a total included angle of 5°.

High efficiency, turning vane cascades, fabricated of extruded aluminum, are installed in each of the four circuit elbows. A 1" X 2" (2.54cm X 5.08cm) mesh safety grid is provided at the downstream end of the primary diffuser.

Test Section: 0.75" (19.05mm) thickness, clear, GM grade, acrylic plexiglass will be used to fabricate the top, sides and bottom of the test section. The interior dimensions of the test section will be: length, 36.00" (91.44cm); width, 18.00" (45.72cm); height, 18.00" (45.72cm). Aluminum angle flanges, with threaded fasteners, will join the test section to the contraction and the diffuser ducts. The cover of the working section will be removable and fitted with quick release fasteners. The floor can also be made detachable, if desired. Wall port(s), closed with flush fitting, flanged plexiglass plug(s), can be provided in the either or both sidewall(s). The size and location of the port(s) must be specified prior to fabrication of the test section.

Speed, in a clear test section, will be continuously variable from 185.0 fps (56.4 m/s) down to approximately 10 fps (3.0 m/s) using a 30 HP motor. Velocity variation over the cross sectional area (excluding the boundary layer displacement thickness) will be less than ± 1% from the mean, free stream, velocity. Longitudinal turbulence intensity level will be on the order of 0.25% when measured at the maximum, mean, freestream velocity.

Post Office Box 278 2021 South Highway 61 Lake City, Minnesota 55041 USA
651-345-4515 FAX: 651-345-5095 800-795-8536
www.eldinc.com eldinfo@eldinc.com
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Flow Straighteners: The setting length, upstream of the contraction, will be fitted with a precision, hexagonal cell, aluminum honeycomb section. Graduated mesh, high porosity (60%), stainless steel screens, mounted and tensioned in proprietary design, extruded aluminum frames will be furnished.

Heat Exchanger: A commercial quality, aluminum fin/copper tube, staggered row, heat exchanger will be installed between the third and fourth elbows. The heat exchanger is intended for use with either building water or chilled water on the liquid side at a rate of up to 25 GPM (94.6 Lpm). The buyer is responsible for providing the source of chilled water and a means of regulating the water supply (i.e., either a hand operated or a remote controlled modulating valve).

Supporting Frames: The individual duct sections will be supported by frames fabricated of structural steel tubing joined by welding. The frames will be etched, prime coated and spray finished with a water based, acrylic enamel. Each frame leg is fitted with an adjustable leveling pad. Rubber-in-shear mounts will isolate the duct sections from room or fan vibration.

Fan Assembly: An adjustable pitch, axial flow, fan assembly will be used. The fan pitch is adjustable when the fan is **not** operating. The fan will be powered by a 30 HP, TEAO, variable speed, AC induction motor.

A transistor invertor type variable frequency controller will regulate fan speed. The controller will be arranged for 208-230 or 460VAC/3f/60Hz electric service. A fusible disconnect, mounted in a NEMA 1 enclosure, will serve as primary protection for the inverter/motor combination. A remote speed control station, located adjacent to the test section, will regulate test section velocity.

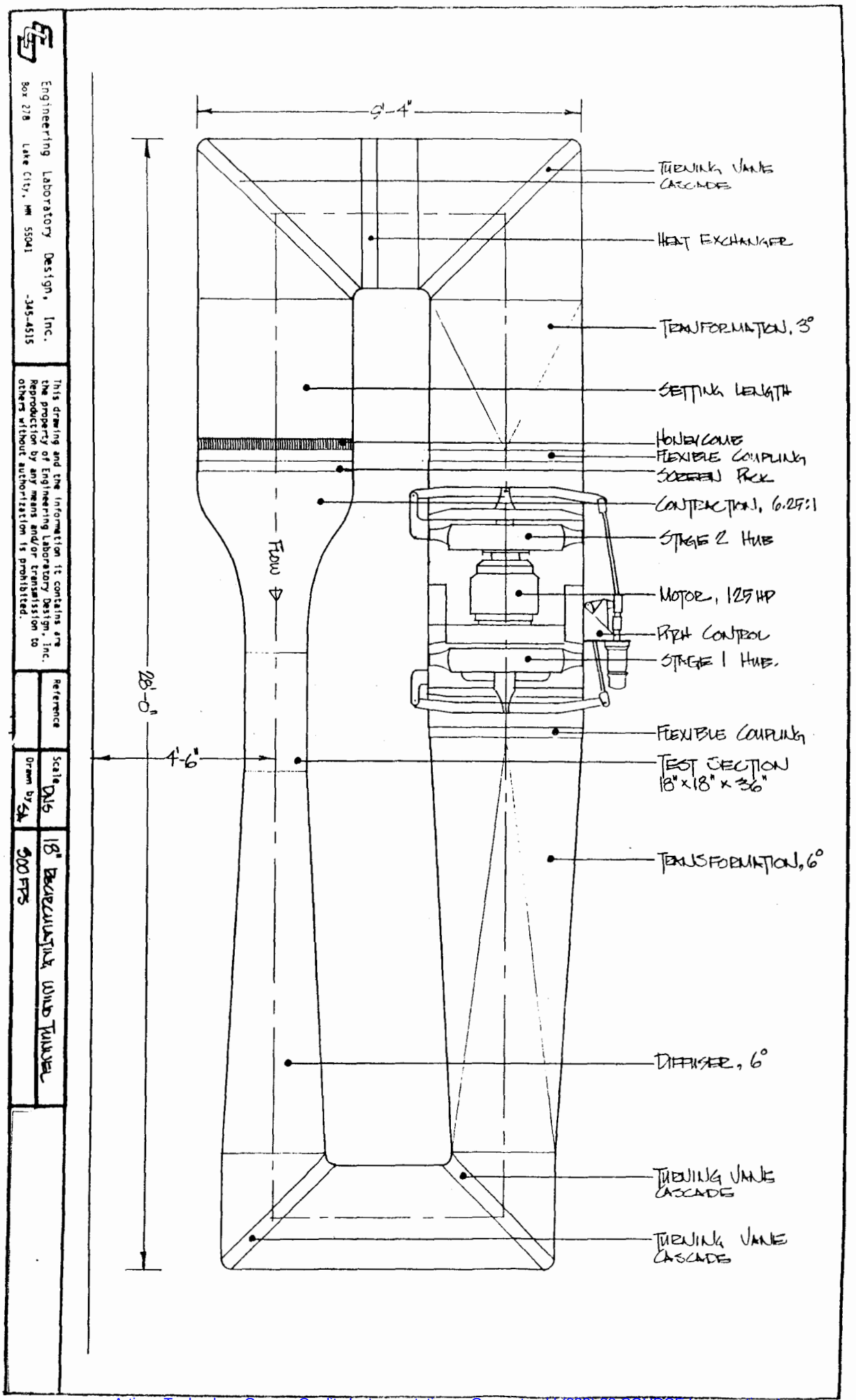
The buyer will be responsible for arranging for the installation of permanent wiring from the building mains to the fusible disconnect.

Miscellaneous: The wind tunnel system will be assembled and tested in the **ELD** plant facility prior to shipment. Interested members of the buyer's organization are invited to visit the plant during the testing period.

The wind tunnel will be disassembled and shipped via specialized motor freight transport. Complete installation, operation, and maintenance instructions will be furnished with the equipment. Alternatively, an **ELD** representative can be contracted to supervise and participate in the unloading, placement, assembly, and start-up of the wind tunnel system.

A one year limited warranty is provided with the equipment.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com



Engineering Laboratory Design, Inc.
Box 278 Lake City, MN 55041 -345-4515

This drawing and the information it contains are the property of Engineering Laboratory Design, Inc. Reproduction by any means and/or transmission to others without authorization is prohibited.

Reference

Scale DNS

Drawn by SA

18" RECIRCULATING WIND TUNNEL
400 FPS

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.

Designers and Manufacturers of Quality
Engineering Laboratory Equipment since 1962.

SPECIFICATIONS

24" OPEN CIRCUIT WIND TUNNEL - MODEL 406

General: The wind tunnel system is an Eiffel type. Air is drawn into the radiused inlet, through a honeycomb and screen pack and is accelerated through the contraction into the test section. The system air regains static pressure passing through the diffuser. Flow continues through the axial fan and the acoustic diffuser and is discharged to the atmosphere.

System components include: flow ducts, test section, fan, motor and combination starter and supporting frames.

Overall dimensions of the unit are: length, 31'-3" (9.53m); height, 8'-0" (2.44m); width, 7'-0". The 2.13m); test section centerline height, 4'-6" (137.2cm). The total weight is approximately 2,900 lbs (1,318kg).

Flow Sections: The ducts bounding the air stream are fabricated of a composite lamination of fiberglass reinforced plastic and a rigid, PVC, foam core material molded over precision tooling. The incorporation of the foam core material produces a stiff, lightweight structure, with a natural frequency higher than that of the fan RPM, thereby avoiding vibration induced turbulence in the airstream. This composite material also has good acoustic attenuation properties and easily withstands the atmospheric pressure loads encountered at maximum running speeds. Interior surfaces are glass smooth, white, gel-coat. Exterior surfaces are spray finished with polyester gel-coat enamel. A medium blue color is standard. Miter flanges, fastened with stainless steel bolts and sealed with elastomeric sealant, join the longitudinal corners of the duct sections. Face flanges, joining adjacent ducts sections are sealed with resilient, closed cell, urethane foam gasket. The flanges are bolt fastened. Careful attention is paid to the fit and alignment of mating sections to insure that no leaks or discontinuities exist which would disturb the flow. The duct components are site assembled to form the completed flow circuit.

The contraction has a 6.25:1 area ratio, with a symmetrical cross section and analytically developed contours. The primary diffusion section expands with a total included angle of 6°.

A 1" X 2" (2.54cm X 5.08cm) mesh safety grid is provided at the downstream end of the primary diffuser.

Test Section: 3/4" (19mm) thickness, clear, GM grade, acrylic plexiglass will be used to fabricate the top, sides and bottom of the test section. The interior dimensions of the test section will be: length, 48.00" (121.9cm); width, 24.00" (61.0cm); height, 24.00" (61.0cm). Aluminum angle flanges, with threaded fasteners, will join the test section to the contraction and the diffuser ducts. The cover of the working section will be removable and fitted with quick release fasteners. The bottom can also be made detachable if desired. Wall ports, closed with flush fitting, flanged plexiglass plugs, can be provided in either or both side walls. The location and size of the ports should be specified prior to fabrication of the test section.

Post Office Box 278 2021 South Highway 61 Lake City, Minnesota 55041 USA
651-345-4515 FAX: 651-345-5095 800-795-8536
www.eldinc.com eldinfo@eldinc.com
Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Speed, in a clear test section, will be continuously variable from either 100 fps (30.5 m/s), using a 20 HP motor, or 150 fps (45.7 m/s), using a 40 HP motor, down to approximately 10 fps (3.0 m/s). Velocity variation will be less than $\pm$ 1% variation from the mean, free stream, velocity. Turbulence level will be less than 0.25%.

Flow Straighteners: The setting length, upstream of the contraction, will be fitted with a precision, hexagonal cell, aluminum honeycomb section. Graduated mesh, high porosity (60%), stainless steel and/or polyester screens, mounted and tensioned in proprietary design, extruded aluminum frames will be furnished.

Supporting Frames: The individual duct sections will be supported by frames fabricated of structural steel tubing joined by welding. The frames will be etched, prime coated and spray finished with acrylic enamel. Each frame leg is fitted with an adjustable leveling pad and a swivel caster. Rubber-in-shear mounts will isolate the duct sections from room or fan vibration.

Fan Assembly: An axial flow, variable pitch, will be used. Fan pitch will be adjustable in flight. The fan will be powered by either a 20 HP or a 40 HP, TEAO, constant speed (1750 RPM), AC induction motor.

A NEMA rated, full voltage, non-reversing combination magnetic starter with fusible disconnect will be furnished. The starter can be arranged for either 208/230 volt or 460-480 volt/3 phase/60 Hz electric service and will be mounted in a NEMA I enclosure. A remote push-button start/stop station will be furnished for installation near the test section as an operator control. The control circuit will be arranged for 120 volt/1 phase operation.

The buyer will be responsible for arranging for the installation of permanent wiring from the building mains to the motor starter.

The fan pitch control mechanism is operated by compressed air. 0.65 scfm, clean shop air, at 30 psig (minimum), is required for operation. A, minimum, 3/8" air supply line should be furnished to the vicinity of the control mechanism at the fan. A remote fan pitch control will be located near the test section. (An optional, remotely controlled pressure regulator, which may be arranged to respond to either a 4 to 20 mA or a 0 to +9 VDC control signal is available for close-coupling to the pitch control diaphragm.)

Miscellaneous: The wind tunnel system will be assembled and tested in the ELD plant facility prior to shipment. Interested members of the buyer's organization are invited to visit the plant during the testing period.

The wind tunnel will be disassembled and shipped via specialized motor freight transport to the installation site. If contracted for, an ELD representative will supervise and participate in the unloading, placement, assembly and start-up of the wind tunnel system.

Options:

Extended Test Section: An extended test section can be furnished with dimensions: length, 96.00" (2.44m); height, 24.00" (61.0cm); width, 24.00" (61.0cm). The top can be arranged with two removable covers fitted with quick release fasteners. Portions of the bottoms can also be made detachable. A castered steel frame, fitted with leveling pads, will support the test section.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.
P.O. Box 278
Lake City, Minnesota 55041 USA
651-345-4515 FAX 651-345-5095

THIS DRAWING AND THE INFORMATION THAT IT CONTAINS ARE THE PROPERTY OF ENGINEERING LABORATORY DESIGN, INC. REPRODUCTION AND/OR TRANSMISSION WITHOUT EXPRESS WRITTEN AUTHORIZATION IS PROHIBITED.

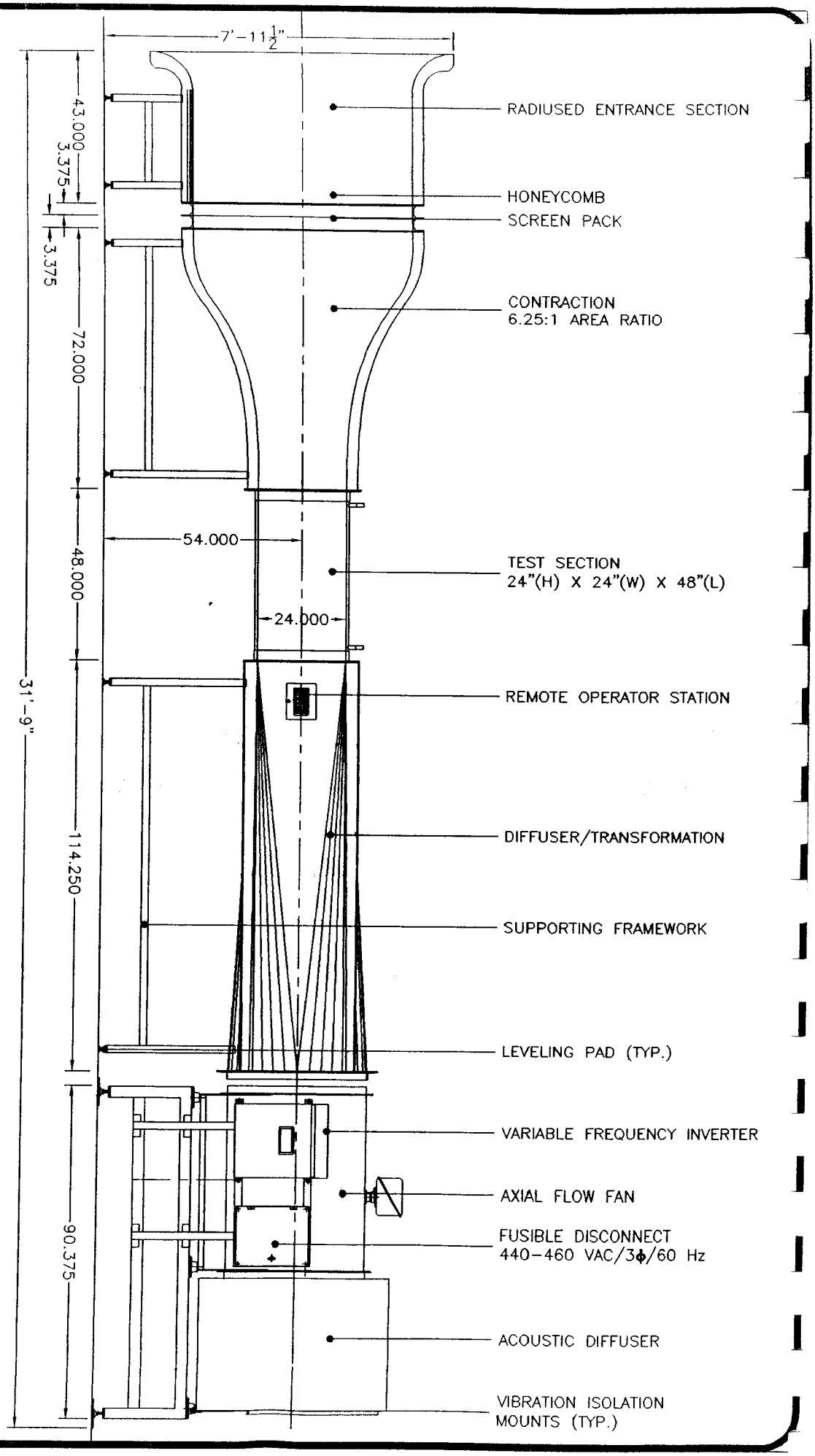
TITLE: OVERALL ELEVATION

PROJECT: 24" OPEN CIRCUIT WIND TUNNEL

REFERENCE: MODEL NO. 406

DATE: 08/12/99

SCALE: 5/16" = 1'-0"



Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.

Designers and Manufacturers of Quality
Engineering Laboratory Equipment since 1962.

SPECIFICATIONS

24" RECIRCULATING WIND TUNNEL - MODEL 407

General: The system is a closed, recirculating design with the flow loop arranged in a horizontal configuration.

System components include: flow ducts, test section, fan, motor and combination starter, a heat exchanger and supporting frames.

Overall dimensions of the unit are: length, 34'-10" (10.62m); height, 7'-9" (2.36m); width, 11'-6" (3.50m), 13'-6" (4.11m) with 24" (61.0cm) spacer ducts; horizontal interior dimension between test section side wall and fan shell, 2'-6" (76.2cm), 4'-6" (137.2cm) with 24" (61.0cm) spacer ducts; test section centerline, 4'-6" (137.2cm). The total weight is approximately 4,000 lbs (1,818.2kg).

Flow Sections: The ducts bounding the air stream are fabricated of a composite lamination of fiberglass reinforced plastic and a rigid, PVC, foam core material molded over precision tooling. The incorporation of the foam core material produces a stiff, lightweight structure, with a natural frequency higher than that of the fan RPM, thereby avoiding vibration induced turbulence in the airstream. This composite material also has good acoustic attenuation properties and easily withstands the atmospheric pressure loads encountered at maximum running speeds. Interior surfaces are glass smooth , white, gel-coat. Exterior surfaces are spray finished with polyester gel-coat enamel. A medium blue color is standard. Miter flanges, fastened with stainless steel bolts and sealed with elastomeric sealant, join the longitudinal corners of the duct sections. Face flanges, joining adjacent ducts sections are sealed with a resilient, closed cell, urethane foam gasket. The flanges are bolt fastened. Careful attention is paid to the fit and alignment of mating sections to insure that no leaks or discontinuities exist which would disturb the flow. The duct components will be site assembled to form the completed flow circuit.

The contraction has a 6.25:1 area ratio, with a symmetrical cross section and analytically developed contours. The primary diffusion section expands with a total included angle of 6°.

High efficiency, turning vane cascades, fabricated of extruded aluminum, are installed in each of the four circuit elbows. A 1" X 2" (2.54cm X 5.08cm) mesh safety grid is provided at the downstream end of the primary diffuser.

Test Section: 1" (25.4mm) thickness, clear, GM grade, acrylic plexiglass will be used to fabricate the top, sides and bottom of the test section. The interior dimensions of the test section will be: length, 48.00" (1.22m); width, 24.00" (61.0cm); height, 24.00" (61.0cm). Aluminum angle flanges, with threaded fasteners, will join the test section to the contraction and the diffuser ducts. The cover of the working section will be removable and fitted with quick release fasteners. The bottom can also be made detachable if desired. Wall ports, closed with flush fitting, flanged plexiglass plugs, can be provided in either or both side walls. The location and size of the ports should be specified prior to fabrication of the test section.

Post Office Box 278 2021 South Highway 61 Lake City, Minnesota 55041 USA
651-345-4515 FAX: 651-345-5095 800-795-8536
www.eldinc.com eldinfo@eldinc.com

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Speed, in a clear test section, will be continuously variable from 300 fps (91.4 m/s), using a 200 HP motor, or 180 fps (54.9 m/s), using a 50 HP motor, down to approximately 10 fps (3.0 m/s). Velocity variation will be less than ± 1% variation from the mean, free stream, velocity. Turbulence level will be less than 0.25%.

Flow Straighteners: The setting length, upstream of the contraction, will be fitted with a precision, hexagonal cell, aluminum honeycomb section. Graduated mesh, high porosity (60%), stainless steel screens, mounted and tensioned in proprietary design, extruded aluminum frames will be furnished.

Heat Exchanger: A commercial quality, aluminum fin/copper tube, staggered row, heat exchanger will be installed between the third and fourth elbows. The heat exchanger is intended for use with either building water or chilled water on the liquid side at a rate of up to 30 GPM (114 Lpm). The buyer is responsible for providing a means of regulating the water supply (i.e., either a hand operated or a remote controlled modulating valve).

Supporting Frames: The individual duct sections will be supported by frames fabricated of structural steel tubing joined by welding. The frames will be etched, prime coated and spray finished with acrylic enamel. Each frame leg is fitted with an adjustable leveling pad and a swivel caster. Rubber-in-shear mounts will isolate the duct sections from room or fan vibration.

Fan Assembly: An axial flow, variable pitch, single stage (low speed) or two stage (high speed) fan will be used. Fan pitch will be adjustable in flight. The fan will be powered by either a 200 HP or 50 HP, TEAO, constant speed (1750 RPM), AC induction motor.

A NEMA rated, full voltage, non-reversing combination magnetic starter with fusible disconnect will be furnished. The starter will be arranged for 460-480 volt/3 phase/60 Hz electric service and will be mounted in a NEMA I enclosure. A remote push-button start/stop station will be furnished for installation near the test section as an operator control. The control circuit will be arranged for 120 volt/1 phase operation.

The buyer will be responsible for arranging for the installation of permanent wiring from the building mains to the motor starter.

The fan pitch control mechanism is operated by compressed air. 0.65 scfm, clean shop air, at 60 psig (minimum), is required for operation. A, minimum, 3/8" air supply line should be furnished to the vicinity of the control mechanism at the fan. A remote fan pitch control will be located near the test section. (An optional, remotely controlled pressure regulator, which may be arranged to respond to either a 4 to 20 mA or a 0 to +9 VDC control signal is available for close-coupling to the pitch control diaphragm.)

Miscellaneous: The wind tunnel system will be assembled and tested in the **ELD** plant facility prior to shipment. Interested members of the buyer's organization are invited to visit the plant during the testing period.

The wind tunnel will be disassembled and shipped via specialized motor freight transport to the installation site. An **ELD** representative will be available to supervise and participate in the unloading, placement, assembly and start-up of the wind tunnel system.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Optional:

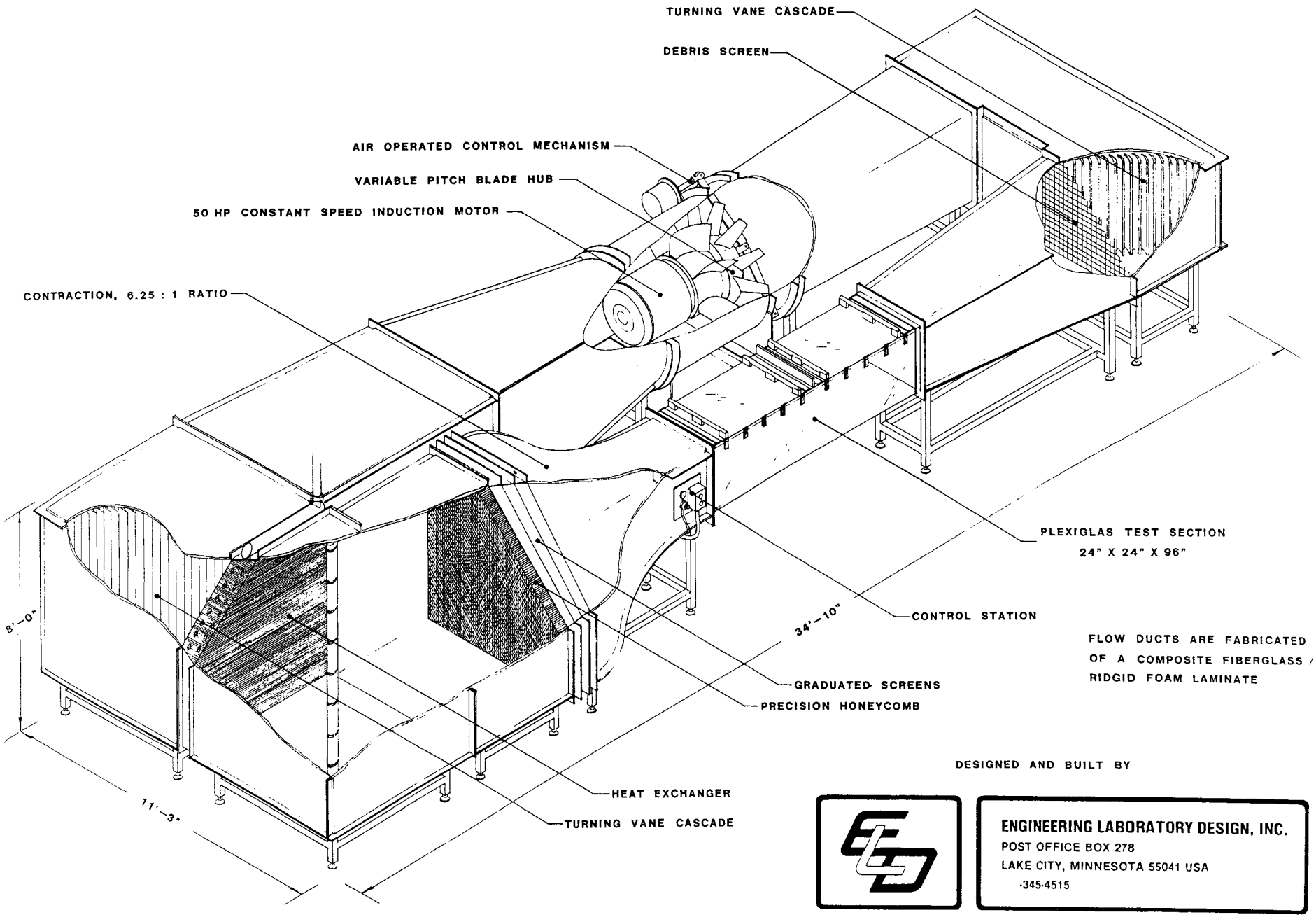
Extended Test Section: An extended test section can be furnished with dimensions: length, 96.00" (2.44m); height, 24.00" (61.0cm); width, 24.00" (61.0cm). The ceiling can be arranged with two removable covers fitted with quick release fasteners. Portions of the bottoms can also be made detachable.

Diverging Test Section: The ceiling of the test section will be arranged for divergence along the axis of flow. A manually operated adjusting device, with a friction lock, will position the down stream end of the ceiling. A flexible seal at the inlet and an interlocking "false" ceiling in the primary diffuser will convey the flow smoothly into and out of the test section. Only the bottom of the test section can be made detachable with this configuration.

Spacer Ducts: Fiberglass duct assemblies, 24.00" (61.0cm) in length, are available for insertion between the first/second and third/forth elbows. The ducts increase the transverse interior dimension between the inside test section wall and the fan shell to 4'-6" (137.2cm) for convenient operation of laser anemometers and other equipment requiring "backside" test section access.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

24 INCH RECIRCULATING WIND TUNNEL



FLOW DUCTS ARE FABRICATED OF A COMPOSITE FIBERGLASS / RIDGID FOAM LAMINATE

DESIGNED AND BUILT BY

ENGINEERING LABORATORY DESIGN, INC.
POST OFFICE BOX 278
LAKE CITY, MINNESOTA 55041 USA
·345·4515

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

ENGINEERING LABORATORY DESIGN, INC.

Designers and Manufacturers of Quality
Engineering Laboratory Equipment since 1962.

SPECIFICATIONS

WIND TUNNEL INSTRUMENTATION SYSTEM

The standard **ELD** Wind Tunnel Instrumentation System is designed as an accessory for **ELD** wind tunnels (and tunnels with similar working sections) and is intended for use by laboratory students. The system includes a balance, a traversing probe, a pressure transducer and a control/readout device.

Balance A two component dynamometer (lift/drag), using restrained cantilever beams whose deflection, under load, is measured by precision Linear Variable Differential Transformers. The unit is fabricated of aluminum and is fitted with a sting shroud. Two, interchangeable, stings are furnished.

Traversing Probe A two axis probe, arranged to traverse approximately 75% of the vertical centerline plane of the test section. An interchangeable boundary layer probe and miniature pitot static tube are furnished for use with the probe. Precision potentiometers report the "X" and "Y" locations of the probe. The probe is positioned using manually operated hand wheels.

Pressure Transducer A high quality electronic/pressure diaphragm transducer, coupled to a 9 position manual selector valve, is incorporated in the system. Standard range is 0 to $\pm$ 10" WG.

Control/Readout Assembly An attractive, bench mount meter cabinet contains the power, signal conditioning, calibration and control functions of the system. A custom designed printed circuit board, incorporating state-of-the-art solid state electronic components, is used. The five operating modes are switch selectable. Sensings are presented, in either English or SI engineering units, on a 3 3/4 place LED digital display. An analog output terminal, allowing simultaneous access to all sensing modes, is located on the back panel of the cabinet. The equipment is ruggedly built and is designed so that all components can be easily calibrated by the using students.

A standard, **ELD**, model set is offered. The set includes:

Airfoil, NACA 0012, with pressure taps.

Airfoil, NACA 4412, with pressure taps.

Airfoil, NACA 0012, with sting for dynamometer.

Airfoil, NACA 4412, with sting for dynamometer.

Boundary Layer Plate

Cylinder model with pressure tap.

Drag body set: smooth and rough spheres, disk, cup and hemisphere.

Post Office Box 278 2021 South Highway 61 Lake City, Minnesota 55041 USA
651-345-4515 FAX: 651-345-5095 800-795-8536
www.eldinc.com eldinfo@eldinc.com

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Calibration set:

Precision air/water U-tube manometer.

Weight set and dynamometer calibration stand.

Linear scale.

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP