



GEORGIA
HEALTHCARE
GROUP

TBILISI/GEORGIA
SUNSTONE HOSPITAL

**STAIR PRESSURIZATION SYSTEM
INSTALLATION TECHNICAL SPECIFICATION
EVEX-SUNSTONE-KAR-SPC-010**

25th January 2021 – Rev.00

Employer

Evex Healthcare Group – TBILISI/GEORGIA

prepared by



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TECHNICAL SPECIFICATIONS

1. Genel Bilgiler

- 1.1. For the construction of the Stair Pressurization System of Evex Healthcare Group (hereinafter, the EMPLOYER), DEKA Hospital, which is available and in operation in Tbilisi, delivery work will be done the system design at least in accordance with the attached drawings and the supply, installation and operation of the materials with the following features.
- 1.2. This specification sets out the technical features and details that must be followed in order to do the work in question.
- 1.3. The construction for the delivery of the Stair Pressurization System in working condition is within the scope of the Contractor as a whole, including the material.

2. Purpose of Work

- 2.1. The systems to be delivered in working condition will work as a whole with other systems (Automatic Sprinkler System, Fire Hose System, Detection System, etc.) to prevent the spread of a possible fire and ensure the safety of people.
- 2.2. The purpose of the work is to ensure that the system is completely built in accordance with NFPA (National Fire Protection Association), FM (Factory Mutual Global) standards.

3. Scope of the Work

- 3.1. Including work, material and workmanship, it will be delivered as assembled, in accordance with the turnkey requirements. All kinds of materials, installations, workmanship required for the system to provide the desired fire protection and deliver it in working condition, whether or not specified in the projects or technical specifications, will belong to the Contractor.
- 3.2. Elements within the scope of the work are:
 - 3.2.1. For the building given in the attached drawings;
 - i) Providing all kinds of materials, installations, labor etc. services and equipment required for the delivery of the system in working condition,
 - ii) Installation of the Stair Pressurization System,
 - iii) Connecting the systems to existing Detection and Warning Systems,
 - iv) Hangers of ducts in the systems in accordance with the layouts and details in the drawings,
 - v) Performing all kinds of mechanical (cutting, welding, etc.) construction (breaking, drilling, etc.) works required for these operations,
 - vi) Repair of damaged places (roof, panel, wall, column, suspended ceiling, etc.) during operations,
 - vii) Tests of the system,
 - viii) Commissioning,
 - ix) Submission of documents,
 - x) Delivery of the system in working condition,
- 3.3. All works, materials to be used, system solutions, in accordance with the fact that the facility to be established is an industry with high standards, will be carried out at the highest level of technical quality, technical safety and reliability, so that these areas will be protected from fire.
- 3.4. All unit prices given will be material costs, including installation, and any future reductions or increases will be made by taking these costs into consideration. All kinds of complementary-assembly materials and workmanship that do not have a unit price will be considered as unit priced materials.
- 3.5. Work safety materials to be used during the construction of the work, and the supply of assembly or assembly auxiliary materials (ladder, stand, scaffold, platform, etc.) will be provided by the Contractor.
- 3.6. The system and system elements that will serve the specified purpose will be aimed to have an economic life of 20 (twenty) years, and all the necessary elements will be fulfilled completely.
- 3.7. The contractor will certify with the completion documents or business reference letters that they have successfully implemented the Stair Pressurization System installation before.

4. Related Standards

- 4.1. The work to be done will comply with international fire protection and fire safety protection rules and standards. In addition, all relevant standards referred to as reference in these standards will be based on the same validity. In this context, the standards that will be valid and based on design, installation (assembly), commissioning, test and acceptance processes are as follows:

- NFPA - National Fire Protection Association Standarts
- SMACNA - Sheet Metal and Air Conditioning Contractors National Association
- FM - Factory Mutual Global Standartları

and only for product approvals

- FM - Factory Mutual Global Standards

4.2. Current editions and versions of the relevant standards valid at the time of construction will be considered. The contractor is obliged to obtain the relevant standards and publications. When there are documents that are difficult to find, they can request this from the employer in parts, and benefit from the existing standards, these documents in parts within the boundaries of the facility.

4.3. In this context, the main applicable standards and regulations are as follows, without limitation:

NFPA 92-2012	Standard for Smoke Control Systems
SMACNA	Seismic Restraint Manual Guidelines For Mechanical Systems

5. Related Product Approvals

5.1. All system elements to be provided, except for the installation elements specified below,

The equipment shall be CE marked and the conformity of such equipment with the relative EN standard shall be certificated by a third party laboratory or institution.

- Galvanized Sheet Metal
- Duct Hangers and Consoles (Profile, Rod, Clamp etc, not as a whole, but separately)
- Grills and Dampers
- Water-based paint
- Duct Sealing and Joining Elements

5.2. Regardless of the above-mentioned approvals, all products will be submitted for material approval, regardless of the approval they have, their suitability for the place of use will be questioned by the employer. However, material supply and assembly will be allowed after the material approval is given.

6. Projects and Drawings

6.1. This specification forms an integral whole with design and application drawings. The drawings that will be the basis for manufacturing within the scope of this work are attached. The contractor should study all drawings in detail before preparing his proposal. The fact that the offer is submitted indicates that the specifications and drawings are also accepted.

6.2. Shop Drawings and As Built drawings required for the application will be made by the Contractor. The Contractor shall submit the Manufacturing Drawings prepared for each material to be used, together with the catalogs containing the brand-model and approval information of the material, to the approval of the Employer and will only be able to supply and apply the material after the approval. The Employer may request a Manufacturing Drawing other than what has been submitted by the Contractor. At least the following introductory information will be included in the manufactured case drawings:

- 6.2.1. Types and information of grilles used
- 6.2.2. Building Architecture Dimensions (length x width x height),
- 6.2.3. Ceiling height, Distance between grill and ceiling,
- 6.2.4. Suspension (carrier console) installation detail of Ducts
- 6.2.5. Seismic Suspension installation detail of Ducts

6.3. The application can only be started after the Manufacturing Drawings and the materials specified in the specification are fully approved, the assembly and application details are finalized and the technical information is presented. The employer has the authority to refuse to apply any material, which it understands does not comply with the technical requirements, at any time, regardless of whether it was previously found appropriate. Modifications that may provide ease of installation or ease of operation and maintenance to the employer may be suggested, after the technical suitability of such suggestions is checked and approved, they are reflected in the application and shown in the fabricated state drawings.

6.4. After the contractor completes his work, before the Provisional Acceptance, he will prepare the drawings containing the "As-built" information showing the final status of the work. Manufactured condition drawings will be prepared to include all kinds of manufacturing details such as the entire route and assembly details. "Fabricated Condition" drawings will be delivered in printed form on CD in tracing output and computer output format (plt, pdf, etc.) and also in .dwg (Autocad) format. The extraction, drawing and reproduction of the "Manufactured Condition" drawings information is entirely owned by the Contractor.

7. Work Program and Duration

7.1. The Contractor will make the necessary work planning in order to do the work on time and submit the Work Program to the Employer's approval within the period specified in the administrative specification from the date of contract signature. In the work schedule to be presented, the project, material supply times, pier times, site discharge, power outage, hot work times, etc. It will be indicated in days and each separately and on the basis of priority and sequence, with actual calendar dates.

7.2. Since the work will be done in an existing and working facility, site delivery, making the environment suitable for work, etc. The work will be counted within the construction period. Work will be allowed on weekdays and weekends, as long as job security and working conditions allow.

7.3. The Contractor is obliged to provide the necessary manpower and installation team to complete the work within the Construction Period specified in the proposal.

- 7.4. The Work Program to be prepared at the beginning of the work will be updated every week during the construction of the work and submitted to the Employer.
- 7.5. After the approval of the Work Program, the place cannot be delivered due to reasons arising from the Employer, the decision cannot be made, the approvals are delayed, etc. In cases where the Contractor is not able to do another job at that time, the delays caused by the said Employer are added to the Duration of Work.
- 7.6. The Duration of the Work will be taken as the time after the work order is received until it is ready for Commissioning.
- 7.7. The contractor shall clearly indicate the time required for the completion of the entire work in his proposal.
- 7.8. The employer may request the content, durations and order of the Work Program to be reviewed or changed.

8. Material Supply

- 8.1. All kinds of materials to be used in the system will be provided by the Contractor.
- 8.2. All materials to be used will be new, unused, produced with first class workmanship, in accordance with the technical specifications specified in the Technical Specification, and will provide the desired performance.
- 8.3. All materials to be used will be submitted to the approval of the Employer. Specifying any brand or model during the offer does not mean that it can be used even if it complies with the Technical Specification. In addition, since the installation of the materials will be carried out under the responsibility of the Contractor, it will be essential to purchase the material installed and running, and the device that does not fulfill its function, even if it is installed, will not be accepted.
- 8.4. The contractor will provide an aggregate Bill of Materials for all materials to be used before starting work. After the Bill of Materials, all materials will be submitted for approval along with the Manufacturing Drawing, in order of priority in accordance with the order and installation (assembly) program. Material ordering and application can only begin after the materials submitted for approval are fully approved and the assembly and application details are finalized. The employer will respond to material approval applications by evaluating them in the Approval / Conditional Approval / Rejection form within a maximum of one week. The employer may request more detailed information about the materials submitted for approval at the approval stage, see a sample of the material and request that they be tested.
- 8.5. The employer has the right to refuse the application of any material that it determines does not comply with the technical demands and the performance it should provide, at any stage and instantly, regardless of whether it was previously found appropriate.
- 8.6. General installation materials that are not fire specific (sheet metal, flange, fittings, cable, etc.) shall have a respectable foreign approval or at least EN certificate.
- 8.7. Interconnection parts (reducer, etc.) to be used in the duct installation and to be provided by the Contractor will be EN certified and quality manufacturer product; In case of foreigner, it will have the quality certificate with a certain source.
- 8.8. In the materials that are not written as "or Equivalent" in the material brand section, the manufacturer will not be accepted except those specified or specified.
- 8.9. In case the material (duct, damper, vent, etc.) dimensions given in the bill of quantities cannot be provided exactly, it must be offered as an upper dimension.
- 8.10. Reducer (reduction), converter (con), collar etc. to Black Sheet material item. fasteners are also included. No additional item will be opened and no payment will be made for these materials..

9. Installation (Assembly)

General

- 9.1. Installation (assembly) of the devices is an integral part of the work and will be carried out by the Contractor.
- 9.2. The whole of the Ladder Pressurization System that will be exposed to heat directly (duct, damper, vent, etc.) will not come into contact with flammable materials, and there will be at least 50 cm distance from flammable materials.
- 9.3. The bearing and / or fixing elements of the Stair Pressurization System will not directly contact the ducts, and heat insulation will be provided with a fireproof gasket placed between them.
- 9.4. The Contractor can also do the installation work or have it done by another Subcontractor company. However, if the Subcontractor is to be used, the Contractor will clearly indicate what will be the work to be done by the Sub-Contractor during the bidding phase. The Contractor shall add the letter of undertaking from the Sub-Contractor (stating that the Sub-Contractor agrees to work with him if the Contractor receives the job) to his proposal.
- 9.5. The Contractor will specify with which Sub-Contractor it will perform the installation during bidding and will not change the Sub-Contractor specified without the request and approval of the Employer; will do the work with the Subcontractor that it has notified The Contractor may declare more than one Sub-Contractor at the bidding stage. In all cases, the Contractor is responsible for the works to be done by the Subcontractor. If the Employer deems it necessary, he may request the Subcontractor to be changed.
- 9.6. All installations and materials will be installed, installed and applied by knowledgeable, trained and experienced people in accordance with the manufacturer's knowledge and technique, with first-class workmanship. Installation works will be carried out by certified and qualified personnel, in full compliance with the requirements of the technique and assembly rules of the work. The names and certificates of the personnel who will manufacture will be submitted to the

approval of the Employer Project Engineer before starting work. The works will be carried out by persons whose names are approved personally, and assistants and apprentices will not take part in production.

- 9.7. Sheet metal welding will only be done by welders who have welding certificates. The certificates will be given by Bureau Veritas or a similar accredited institution, stating that the person can do sheet metal welding by electric arc welding method.
- 9.8. The works to be carried out in the field will only be on-site assembly, installation (assembly), device connection and finishing works; fabrication, cutting, boiling, sandblasting, painting, etc. work will be done entirely in the workshop, using standard production techniques and machines.

Duct Setup

- 9.9. The joining of the ducts will be made with a fireproof gasket-silicon flange or welding. For both cases, assembly details will be given in shop drawings.
- 9.10. In the Ducts that need to be welded, welded manufacturing will be carried out in the workshop, in a place to be shown outside the building, on the condition that it is obtained in writing from the Employer in advance, and there will be no welding work inside the building.
- 9.11. All kinds of welding operations will be carried out in accordance with the "Hot Works Work Permit" procedure of the Employer.
- 9.12. Fireproof gasket and fireproof silicone will be used together in flanged connection of ducts.
- 9.13. Between the duct and the carrier console, a non-combustible gasket of at least 1 cm thickness will be used to prevent contact.
- 9.14. All black steel Ducts will be painted red with water-based paint in accordance with employer standards.
- 9.15. All Ducts will be marked in accordance with the standards at every 10 m intervals, indicating that they belong to the Stair Pressurization System. In addition, all dampers and devices will be labeled in accordance with the numbers in the manufacturing drawings prepared by the Contractor.
- 9.16. In the wall passages of the Ducts, a transition will be provided so that there is a gap between the wall and the Duct. The filling material will be determined according to the feature of the wall to which it is passed. In case the duct passes through a firewall, the filling will be made with firestop materials in accordance with the durability period of the wall. Fireproof mastic filler can be used in wall transitions that do not have a fire resistance class.
- 9.17. In the sheet metal cutting process, only sheet metal shears will be used. Oxygen source will not be used. After the cutting process, stone correction and necessary protection will be provided.

Installation of Vents

- 9.18. The grilles will be installed flush with the suspended ceiling surface, and there will be no gaps between the ceiling and the ceiling.
- 9.19. The culverts will be installed parallel to the suspended ceiling surface.
- 9.20. Grilles that have been disassembled as a result of improper installation or previously used will not be reused.
- 9.21. Grilles will not be painted, marked, and will be installed without damaging them.
- 9.22. A sample of the Grilles before installation will be shown to the Employer's officials.
- 9.23. During the installation, grilles will be installed considering the obstacles created by the installation elements, whether they are specified in the drawings or not. Barrier rules are to be applied as specified in the relevant installation standard.

Hangers and Supports

- 9.24. Channel hangers and supports will be standard fabricated products and the use of field hangers will not be allowed under any circumstances. However, auxiliary elements to be used to attach the hangers to the building carriers can be used provided that the Employer's approval is obtained in advance.
- 9.25. All hangers and supports, including the above mentioned auxiliary elements, will be galvanized (coated with hot dip method).
- 9.26. The hangers and supports will be made without damaging the building bearing elements (welding, etc. directly to the carrier elements will not be allowed).
- 9.27. Hangers and supports shall be made in the places shown in the drawings, as given in the relevant details. The Contractor may propose a more practical or more appropriate suspension method, but before applying it, prepare detailed drawings of the assembly to be made and submit it to the Employer's approval. If deemed appropriate by the employer, it will be able to manufacture.

Sismic Protection

- 9.28. The materials to be used in earthquake protection will be standard fabricated products, and the use of field manufactured materials will not be allowed under any circumstances. However, auxiliary elements to be used to attach the hangers to the building carriers can be used provided that the Employer's approval is obtained in advance.
- 9.29. Earthquake protection shall be made at the locations shown in the drawings, as given in the relevant details. The Contractor will be able to propose a more practical or more appropriate method, but will prepare detailed drawings of



STAIR PRESSURIZATION SYSTEM INSTALLATION

the assembly to be made before applying it and submit it to the Employer's approval. If deemed appropriate by the employer, relevant manufacturing can be made.

- 9.30. In case the channel route is changed for any reason, the Contractor will submit the required earthquake protection locations according to the requirements of "SMACNA - SEISMIC RESTRAINT MANUAL" for the approval of the Employer.
- 9.31. The rules written in "SMACNA - SEISMIC RESTRAINT MANUAL" shall be valid for all kinds of issues concerning earthquake protection and not specified in the drawings and specifications. The contractor is obliged to obtain the current version of the relevant standard.
- 9.32. Earthquake protection will generally consist of two-sided and four-sided hangers and gaps to be left in wall penetrations.
- 9.33. Rigid elements that can carry both compression and tensile forces will be used in transverse, longitudinal and 4-way earthquake fixings. Unless otherwise stated, the use of elements (steel ropes, etc.) that can only carry tension (tension only members) will not be allowed.

10. Test Procedures

- 10.1. The system will undergo detailed Test Processes during and after manufacturing and assembly.
- 10.2. After the independent tests consisting of the tests of each element, the Contractor will make at least two total performance tests on its own, and the problems encountered during these tests will be eliminated. Any problem seen in the subsystem will be considered as if it were seen in all subsystems, and will be examined in all of them; After elimination, tests will be made again.
- 10.3. The Contractor will make a written application to the Employer in order to make the tests of the systems that are made working flawlessly under the supervision of the Employer. In this report;
- a) description of the test to be made,
 - b) the purpose of the experiment,
 - c) events whose performance will be observed,
 - d) the acceptable values of events whose performance is to be observed,
 - e) methods and devices to be used for measurement,
 - f) the way the test was recorded,
- will be stated clearly and in detail. Tests in which the Employer will participate as an observer will be made after this report is approved.

- 10.4. It will submit a "Test Results Report" on the test made after the test under the supervision of the employer.

In this report,

- a) events whose performance is observed,
 - b) measured values of events whose performance is observed,
- will be found.
- 10.5. Test Procedures are not a part of the temporary acceptance process, but an integral part of the direct commitment work.
- 10.6. All tests will be made within the framework of a form and procedure to be approved by the Contractor to the Employer.
- 10.7. Tests will be carried out according to SMACNA, NFPA and material manufacturer requirements.
- 10.8. All kinds of test materials, labor, test and measurement devices, engineering services, etc. required for the delivery of all fire protection systems in working condition. It will be provided by the contractor.
- 10.9. The Contractor will deliver a copy (electronically or in print) of the NFPA 92 standard with the latest updated version to the Employer after tests.

11. Commissioning Process

- 11.1. Systems with completed tests will be deemed ready for commissioning.
- 11.2. After the successful completion of the Tests, the system will be left running as per the Commissioning procedure.
- 11.3. Commissioning is not a part of the temporary acceptance process, but an integral part of the direct commitment work.
- 11.4. The commissioning work will be carried out within the framework of a form and procedure to be approved by the Contractor to the Employer.
- 11.5. The Contractor will prepare the transactions, observations and read values during commissioning, together with their comments, in a "Commissioning Report" and submit it to the Employer.
- 11.6. All kinds of commissioning materials, labor, test and measurement devices, engineering services, etc. required for the delivery of all fire protection systems in working condition. It will be provided by the contractor.
- 11.7. Commissioning will be done according to NFPA and material manufacturer requirements.

12. Documentation

- 12.1. All kinds of drawings, documents, engineering calculations, suggestion reports etc. prepared as a result of the contractor design process. will submit the documents for the approval of the Employer.
- 12.2. In order to obtain approval for the materials to be used while the works continue, the Contractor will submit the following documents in three sets to the approval of the Employer.
 - Catalog pages of the products to be used (English or Georgian)
 - Product and Material List (Brand, Model, Description, Manufacturer, Supplier Information)
 - Product Catalogue
 - Technical Data Sheet
- 12.3. With the completion of all works and processes, detailed and complete documentation for each material used will be provided for maintenance and use, so that the operation and maintenance of each material and element used can be carried out in a healthy manner. The document package will include the following in both English and Turkish.
 - Manufactured-state information
 - Warranty documents of the products used (obtained from the manufacturer)
 - Warranty documents for the whole system (issued by the contractor)
- 12.4. The documentation package will be bound in bulk and delivered in 3 sets. In case the information is in a computer file, it will be provided in 2 sets of hardcover and 1 set of CD in hard copy.

13. Training

- 13.1. The Contractor will provide technical training for the user and maintenance staff of the Employer regarding the works done and the systems installed.
- 13.2. Training will take place directly at the facility.
- 13.3. The training will be given to at least two groups, and a written training note will be distributed to the user during the training. At the end of all training, the Contractor will deliver a list (Training Program Form) of those who attended the training and the training they attended. In addition, the training given will be recorded as audio-visual (using video cameras, etc.) and delivered to the Employer for the future use of the personnel.
- 13.4. In case of problems related to the quality of the education, inadequacy of the educator, inadequacy of the education level attained, or the insufficiency of the training documents, the Employer may request that the training be renewed partially or for all the missing parts of the training.

14. Warranty Commitment

- 14.1. The system will be under the Contractor's Warranty Commitment for 2 (two) years after the date of Provisional Acceptance. During the warranty period, any workmanship, material, spare parts, etc. that may be required. It will be covered by the contractor without any charge.
- 14.2. The Contractor will ensure that the system operates normally by sending its authorized and expert personnel with the necessary materials and equipment within the Warranty Period, within 24 (twenty-four) hours after the written call is sent by the Employer in case of any problem. In case of failure to intervene in the specified time, the delay time will be added to the warranty period.
- 14.3. The materials provided by the Contractor, one by one and the system as a whole, will be under the warranty of the Contractor and the material producer and supplier firms against manufacturing and installation faults during the Warranty Period. In all guarantee transactions, the Employer will accept the Contractor as the addressee.
- 14.4. The Contractor is not responsible for the Maintenance and Warranty related to the materials provided by the employer.

15. Application Rules

- 15.1. The contractor is obliged to work and manufacture in a manner that does not pose any danger to the facility security in all kinds of work and manufacturing.
- 15.2. During the installation and field work, a "Responsible Engineer" will be kept on site at all times. The Responsible Engineer will be in charge of controlling the work and environment, and providing all necessary work safety and fire protection measures in the working environment. The Responsible Engineer, who will be constantly involved in the works, will communicate with the relevant units of the Employer and provide coordination.
- 15.3. The Contractor shall obtain the opinion and approval of the Employer in all kinds of manufacturing, device placement.
- 15.4. During the construction of the contractor work existing pipes, cables, structures, etc. will not damage the hardware and installation, if it damages, any material supply, manufacturing, installation, etc. It will perform the works of making the damaged hardware or installation work for the Contractor at no time.
- 15.5. During the works to be carried out within the scope of the project, it is essential to keep the entire facility under continuous and reliable protection. The principle of "Continuity of Fire Safety" will not be ignored at any stage of the work.

- 15.6. Since the principle of "Continuity of Fire Safety" is an integral part of the work, the Contractor is obliged to take into account the changes to be made in the work schedule due to this principle and the delays that may arise therefrom. For this reason, no additional time or fee can be requested.
- 15.7. Temporary or partial work cannot be done in areas other than the work areas determined by the Employer for the realization of the defined work. Prior permission is obtained for areas to be used. Without written permission, studies are not carried out, even if they are described in detail in the projects and specifications.
- 15.8. Contractor or subcontractors cannot go outside the work areas described without permission and cannot use any image recording device (camera, video camera, etc.).
- 15.9. Smoking, lighter, and carrying matches are prohibited throughout the facility. However, smoking is allowed in the rest areas or in the marked areas where smoking is allowed during the break times.
- 15.10. The Contractor will realize the connections to be made, the infrastructure to be used, with the continuous coordination and cooperation of the Employer's authorized engineer.
- 15.11. Installation and commissioning of all elements will be carried out in accordance with NFPA, FM Standards and manufacturer company requirements. Any missing or closed subject or information in the tender documents (specification, material list and technical specifications, projects, etc.) does not cause the work to be done to be contrary to NFPA.
- 15.12. The contractor is responsible for any "hot work" in the building such as cutting, grinding, drilling, welding, etc. will not perform any action that will create fire hazards, and only make assembly inside the building after manufacturing in a workshop or in safe areas.
- 15.13. Contractor, Employer's quality control, work and worker safety, environmental protection, work permit, etc. It will fully comply with the general rules and procedures and will not request any additional fees for this.
- 15.14. The Contractor will do the work as specified in the implementation project approved by the Employer. It will be able to make suggestions to make the job better, easier and more reliable, but for whatever reason, it will not be able to ask for an additional price to the bid price.
- 15.15. Companies that will bid for the construction of the work will examine the location of the work and the current conditions on site before bidding.
- 15.16. The works will start after the Site Delivery to the Contractor.
- 15.17. All kinds of workmanship required for the installation, assembly and delivery of the system in working condition, including the construction cost of the work, will be provided by the Contractor without any privileges.
- 15.18. Connections to be made will be made by the Contractor, the permanent coordination and cooperation of the Employer project engineer. Electricity will not be interrupted in the facility and necessary measures will be taken for this. If the deduction is mandatory, the Employer will be informed in advance.
- 15.19. The Contractor is obliged to comply with the "Hygiene and Cleaning" rules of the Employer during the manufacturing works to be carried out. It will take the opinion of the Employer about equipment cleaning, equipment that is not allowed to be used, etc. prior to manufacturing and apply them.

16. Occupational Health and Safety Rules

- 16.1. "Occupational Safety" is an integral part of the work, and the Contractor is obliged to take into account the changes to be made in the work schedule due to this principle and the delays that may arise therefrom. Therefore, no additional time or fee can be requested.
- 16.2. Within the framework of "Occupational Safety", "Hot Work", "Working at Height", "Working in Closed Area" are subject to permission, and the Contractor is obliged to take into account the changes to be made in the work schedule due to the permits and the delays that may arise therefrom. Therefore, no additional time or fee can be requested.
- 16.3. Those who will work in the facility are required to take "Occupational Safety Compliance Training". The duration of the training to be given by the employer is approximately 2.5 hours; The Contractor is obliged to take into account the changes in the work schedule due to the permits and the delays that may arise from this. Therefore, no additional time or fee can be requested.

17. Insurance

- 17.1. The contractor is obliged to insure against all kinds of risks in order to cover the material damages that may be caused during the manufacturing works. While the insurance coverage amount is at least 2 times the total cost of the work, the final insurance coverage will be determined by the EMPLOYER.

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MATERIAL LIST & TECHNICAL SPECIFICATION

1) Stair Pressurization Fan

4 Ea.



GEORGIA
HEALTHCARE
GROUP

Tbilisi / Georgia

STAIR PRESSURIZATION SYSTEM INSTALLATION

KARINA
KARINA Design,
Consultancy and Training
Services Ltd.Co.

Fan type	: Axial	
Airflow	: 41.000 m ³ /h	
Operating pressure	: 600 Pa	
Frequency	: 50 Hz	
Protection Class	: IP54	
Casing	: Galvanized Steel	
Accessories	: Inlet Guard Grill, Mounting foot	
Approval	: CE	
2) Relief Damper		4 Ea.
Air leakage	: With back pressure to EN 1751, class 4	
Differential pressure	: Can be adjusted from 50 – 1000 Pa	
Material	: Blades made of aluminium, casing made of galvanised steel	
Accessories	: Blade locking with permanent magnet	
Approval	: CE	
3) Motorized Damper		4 Ea.
Air leakage	: With back pressure to EN 1751, class 4	
Differential pressure	: Can be adjusted from 50 – 1000 Pa	
Material	: Blades made of aluminium, casing made of galvanised steel	
Approval	: CE	
4) Ducts		160 m ² .
Size	: 1200 x 800 (mm)	
Thickness	: Min. 0.8 mm	
Material	: Galvanised steel	
Work condition	: Max. 600 Pa	
Including	: with all support, Flanges, Connection and Sealing materials,	
All Duct Works will be manufactured as described in the SMACNA Standards.		