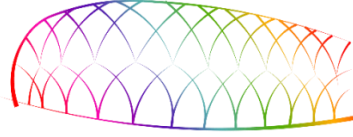




نادي الصليبيخات الرياضي  
Sulibikhat Sports Club



الهيئة العامة للرياضة  
Public Authority of Sport



استاد جابر مبارك الصباح  
Jaber Mubarak Al-Sabah Stadium

مناقصة رقم (15/2016/2017)  
إنشاء و إنجاز وصيانة مشروع استاد جابر مبارك الحمد الصباح  
بمنطقة الصليبيخات - نادي الصليبيخات الرياضي



المواصفات الخاصة للأعمال الكهربائية - المستند رقم ( III-2 )

DOC (III-2) - ELECTRICAL SPECIFICATION



دار الدبوس للاستشارات الهندسية  
Dar AL-DABBOUS ENGINEERING CONSULTANTS  
معماريون - مخططون - مهندسون  
ARCHITECTS - PLANNERS - ENGINEERS



## **SECTION 16500**

### **LIGHTING**

#### **PART 1 - GENERAL**

##### **1.1 RELATED DOCUMENTS.**

- A. Drawing and general provisions of the contract, including General and Supplementary Conditions

And Division 1 Specification Sections, apply to this section.

##### **1.2 SUMMARY**

- A. This Section includes lighting fixtures, lamps, ballasts, emergency lighting units, and accessories.

##### **1.3 SUBMITTALS:**

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data describing fixtures, Control Gear, and emergency lighting units. Arrange product data for fixtures in order of fixture designation. Include data on features and accessories and the following information:
- C. Outline drawings of fixtures indicating dimensions and principal features.
- D. The Contractor shall coordinate all his lighting fitting drawings with the drawings and details to the Architectural, Structural, Electrical, Mechanical, and other related trades to assure a correct and efficient installation.
- E. Catalogue cuts lacking sufficient detail to indicate compliance with contract documents will not be acceptable.
- F. Review of shop drawings or samples does not waive contract requirements.
- G. Photometric Data: Where indicated on the fitting schedule and contract drawings, supply complete photometric data for the fitting, including optical performance rendered by independent testing laboratory developed according to methods of VDE or IEC as follows.

##### **1.4 QUALITY ASSURANCE**

- B. Quality Standard for Fixtures in Hazardous Locations: FM Global.
- C. Quality Standard for Emergency Fluorescent Power Units: UL 924.
- D. BS EN 60598-1 Luminaires, General Requirements and Tests
- E. BS EN 60598-2 Luminaires, Particular Requirements for Emergency Lighting.





## SPARE PARTS

For light Fixtures provide the following spare parts:

1. 2 % of total quantity of each type of lighting fixture. This quantity shall not be less than one fixture of each type.
2. 10 % spare of each control gear different type.

## LIGHTING APPROVED MANUFACTURER LIST

### A- Indoor Lighting:

- Intra-lighting – Slovenia
- Leds-C4 – Spain
- Moltoluce – Austria
- StudioItaliaDesign – Italy
- Viso – Canada
- Relco – Italy
- **Elmark – Bulgaria**
- Fabbian – Italy

### B- Outdoor Lighting:

- PUK – Italy
- Relco – Italy
- **Elmark – Bulgaria**
- Disano – Italy
- Leds-C4 – Spain

### C- Façade Lighting:

- Diamante – Italy
- Leds – C4 – Italy

### D- Arena Lighting:

- Siteco – Germany
- Musco – USA
- Relco - Italy

### E- Exit and Emergency Lighting:

- Orbik – UK
- Ventilux – UK
- Emergilite - UK



## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Setting and Securing: Set units plumb, square, and level with ceiling and walls, and secure according to manufacturer's printed instructions and approved shop drawings. Install support clips for recessed fixtures, securely fastened to ceiling grid members, at or near each fixture corners.

Support for Suspended Fixtures: Brace pendants and rods that are 4-feet long or longer to limit swinging. Support stem mounted single-unit suspended fluorescent fixtures with twin-stem hangers. For continuous rows, use tubing or stem for wiring at one point and tubing or rod for suspension for each unit length of chassis, including one at each end.

Lamping: Lamp units according to manufacturer's instructions.

### 3.2 FIELD QUALITY CONTROL

- A. All light fittings shall be covered and protected against Damages, & dust upon completion of installation.
- B. Inspect each installed fixture for damage. Replace damaged fixtures and components.

### 3.3 ADJUSTING AND CLEANING

- A. Clean fixtures upon completion of installation. Use methods and materials recommended by manufacturer.
- B. Adjust amiable fixtures to provide required light intensities.

### 3.4 WARANTEE

- A. The contractor to include in his price for international warrantee to facilitate access to spare parts required for future maintenance.
- B. The contractor shall be fully responsible for the satisfactory operation of the System .during the maintenance & guarantee period.
- C. Contractor should prepare log-books listing full details of maintenance works, and spare parts, each of log-book entry shall be counter signed by the owner representative and engineer.

**END OF SECTION - 16500**

