

## INFORMATION REQUIRED FOR A PRELIMINARY QUOTATION FOR CLEAN ROOMS

### Contact data

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Unit/company name:

Address:

Contact person:

Phone:

Fax:

E-mail:

### Field of use

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- |   |   |   |                                   |
|---|---|---|-----------------------------------|
| <input type="checkbox"/> Pharmaceutical | <input type="checkbox"/> Microelectronics | <input type="checkbox"/> Fine mechanics | <input type="checkbox"/> Research |
| <input type="checkbox"/> Food industry  | <input type="checkbox"/> Bakery           |   |                                   |

#### Medical:

- |  |                                       |  |  |
|--|---------------------------------------|--|--|
| <input type="checkbox"/> Infectious diseases | <input type="checkbox"/> Stem cells   | <input type="checkbox"/> Therapy ward                    | <input type="checkbox"/> Patients ward |
| <input type="checkbox"/> IVF                 | <input type="checkbox"/> Surgery room | <input type="checkbox"/> Modified cells in the cell bank |  |

#### Surgery Room:

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> General surgery              | <input type="checkbox"/> Pediatric surgery      | <input type="checkbox"/> Thoracic surgery             |
| <input type="checkbox"/> Vascular surgery             | <input type="checkbox"/> Maxillo-facial surgery | <input type="checkbox"/> Cardiovascular surgery       |
| <input type="checkbox"/> Urology                      | <input type="checkbox"/> Obstetrics-Gynecology  | <input type="checkbox"/> Orthopedics and traumatology |
| <input type="checkbox"/> Neurosurgery                 | <input type="checkbox"/> Ophthalmology          | <input type="checkbox"/> Orinolaringology             |
| <input type="checkbox"/> Plastic surgery-microsurgery |   |   |

#### Others:

A brief description of the processes that take place in the premises:

**Availability of documentation/project for:**

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> Architecture                        | <input type="checkbox"/> Electrical installation  | <input type="checkbox"/> Plumbing                       |
| <input type="checkbox"/> Natural gas installation            | <input type="checkbox"/> Medical gas installation | <input type="checkbox"/> Technological gas installation |
| <input type="checkbox"/> HVAC                                |   |   |
| <input type="checkbox"/> Data/Voice telecommunication system |   |   |

**Clean room details**

	Room 1	Room 2	Room 3	Room 4
Cleanliness class required (ISO):				
Length (m):				
Width (m):				
Height (m):				
Operation time (h/day):				
Temperature tolerance over time (+/- °C):				
Maximal temperature:				
Minimal temperature:				
Room destination:				
Light intensity (LUX):				
Pressure difference (+/- Pa):				

**Others details**

	Room 1	Room 2	Room 3	Room 4
Relative Humidity (% RH):				
Humidity tolerance (% RH):				
Heat-generating machines (kw):				

**Number of persons**

Room 1

Room 2

Room 3

Room 4

In activity:

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Reduced activity:

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**Host construction/building status**

- In construction       Unfinished construction       Finished construction  
 Building in use

**Host construction/building partitioning**

- Brick       Autoclaved cellular concrete       Plasterboard  
 Metal panels       Masonry finished with plaster       Unpartitioned

**Host construction/building structure**

- Reinforced concrete       Self-supporting brick       Metal       Wood

**Host construction/building structure dimensions and space division**

Total space ..... (sqm)

Height built space ..... (m)

Total area allocated to clean rooms ..... (sqm)

Useful space height ..... (m)

Number of clean rooms ..... (pcs)

- Free access       Restricted access       Space allocated for storing materials

**Others:**

### Clean room walls

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- Self-supporting       Bulkheads (Mobile)       Fixed       Chemical agents resistant

### Clean room panels

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- Steel panels painted RAL in electrostatic field       Stainless steel panels  
 Plasterboard panels covered with steel sheet painted RAL in electrostatic field  
 Plasterboard panels covered with PVC       HPL panels  
 Plasterboard panels covered with HPL sheet

### Transfer passage (pass-box)

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Dimensions (L x w x h) cm	Number of pieces

- Electronic interlock       Mechanical interlock       With-out interlock

Dimensions (L x w x h) cm	Number of pieces

- Electronic interlock       Mechanical interlock       With-out interlock

Dimensions (L x w x h) cm	Number of pieces

- Electronic interlock       Mechanical interlock       With-out interlock

### Guillotine windows (counter)

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Dimensions (L x w x h) cm	Number of pieces

- Electronic interlock       Mechanical interlock       With-out interlock

Dimensions (L x w x h) cm	Number of pieces

- Electronic interlock       Mechanical interlock       With-out interlock

Dimensions (L x w x h) cm	Number of pieces

- Electronic interlock       Mechanical interlock       With-out interlock

## Doors

Dimension (h x w) cm	Number of pieces	Thickness (mm)	Material	Glazing	Glazing dimension (h x w)	Type	Drive	Opening way

Electronic interlock

Mechanical interlock

With-out interlock

Dimension (h x w) cm	Number of pieces	Thickness (mm)	Material	Glazing	Glazing dimension (h x w)	Type	Drive	Opening way

Electronic interlock

Mechanical interlock

With-out interlock

Dimension (h x w) cm	Number of pieces	Thickness (mm)	Material	Glazing	Glazing dimension (h x w)	Type	Drive	Opening way

Electronic interlock

Mechanical interlock

With-out interlock

## Glazed surfaces

Dimension (h x w) cm	Number of pieces	Color/Texture

Mechanical blinds incorporated between glass sheets

Glass sheet applied

Electric blinds incorporated between glass sheets

Dimension (h x w) cm	Number of pieces	Color/Texture

Mechanical blinds incorporated between glass sheets

Glass sheet applied

Electric blinds incorporated between glass sheets

Dimension (h x w) cm	Number of pieces	Color/Texture

Mechanical blinds incorporated between glass sheets

Glass sheet applied

Electric blinds incorporated between glass sheets

### Light lamps

Dimensions (L x w x h) cm	Number of pieces	Light color temperature

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> LED                     | <input type="checkbox"/> Neon tube                  | <input type="checkbox"/> Emergency KIT 3h             |
| <input type="checkbox"/> Clear glass             | <input type="checkbox"/> Opaque glass               | <input type="checkbox"/> EXIT Lamp                    |
| <input type="checkbox"/> Maintenance from inside | <input type="checkbox"/> Maintenance from grey area | <input type="checkbox"/> Continuous workflow lighting |

Dimensions (L x w x h) cm	Number of pieces	Light color temperature

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> LED                     | <input type="checkbox"/> Neon tube                  | <input type="checkbox"/> Emergency KIT 3h             |
| <input type="checkbox"/> Clear glass             | <input type="checkbox"/> Opaque glass               | <input type="checkbox"/> EXIT Lamp                    |
| <input type="checkbox"/> Maintenance from inside | <input type="checkbox"/> Maintenance from grey area | <input type="checkbox"/> Continuous workflow lighting |

Dimensions (L x w x h) cm	Number of pieces	Light color temperature

- |  |   |   |
|--|---|---|
| <input type="checkbox"/> LED                     | <input type="checkbox"/> Neon tube                  | <input type="checkbox"/> Emergency KIT 3h             |
| <input type="checkbox"/> Clear glass             | <input type="checkbox"/> Opaque glass               | <input type="checkbox"/> EXIT Lamp                    |
| <input type="checkbox"/> Maintenance from inside | <input type="checkbox"/> Maintenance from grey area | <input type="checkbox"/> Continuous workflow lighting |

### Bactericidal lamps

Dimensions (L x w x h) cm	Number of pieces	Light color temperature

- |                              |                                    |
|------------------------------|------------------------------------|
| <input type="checkbox"/> LED | <input type="checkbox"/> Neon tube |
|------------------------------|------------------------------------|

### Clean room ceiling

- |  |   |
|--|---|
| <input type="checkbox"/> Panel type              | <input type="checkbox"/> Cassettes type             |
| <input type="checkbox"/> Suspended               | <input type="checkbox"/> Self-supporting            |
| <input type="checkbox"/> Walkable                | <input type="checkbox"/> Not-walkable               |
| <input type="checkbox"/> Maintenance from inside | <input type="checkbox"/> Maintenance from grey area |

Available space/Height available above the clean room ceiling ..... cm

## Floor

- Base (Fixed) floor  Floating floor

### Floor cover:

- PVC  Epoxy paint  Acrylic paint  
 Existent PVC cover  Covering existing epoxy paint  
 Covering existing acrylic paint  Matte  
 Glossy  Against sliding

### Requirements:

- Antistatic  Disipative  Conductive

### Plinth:

- Applied of PVC  Applied of aluminium  
 PVC carpet raised in scuff/soffit  Acrylic paint raised in scuff/soffit  
 Epoxy panit raised in scuff/soffit

### Design:

- Square surface Length ..... m Width ..... m  
 Round surface Diameter ..... m

### Base layer for flooring:

- Reinforced concrete  Concrete  Cement-based screed  Raw  
 Smooth  Contaminated (Oil, Dust, Chemical Solutions)  
 Resistant to compression ..... N/mm<sup>2</sup>  
 With joints in construction  With expansion joints

### Floor subjected to thermal stress:

- Interior  Exterior  Exposed to the weather  
 Maximum temperature for a short time ..... °C  
 Cyclic temperature variation min. .... °C max. .... °C

### Intensity:

- Permanent  Frequent  Medium  Rare

### Floor subjected to mechanical stress:

- Pedestrian  Manual pallet-truck  Forklift  
 Cars/Machines  Impact stress  Metal wheels

### Intensity:

- Permanent  Frequent  Medium  Rare

## Electrical installation (wiring)

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Electrical voltage availability  230V  380V

Electrical availability in the existing electric panel ..... kw

Free fuses in the existing electric panel dashboard  One-phased  Three-phased  
 16A  32A  64A

Distance to the crossing point ..... lm (linear meters)

Existing electrical circuits  Lighting  Sockets 230V  Sockets 380V  
 HVAC force (high currents)  Low currents

Others:

## Warning installations PEF (Prevention and Extinction of Fire)

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Alarm system with sensors existing  YES  NO

Fire alarm installation  YES  NO

Sensors number ..... PCS

Fire alarm central unit existing  YES  NO

Distance to the crossing point ..... lm (linear meters)

Others:

## Telecommunications system

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Data/Voice network  Existing data/Voice network

Availability for plugging in the existing central

Distance to the crossing point ..... lm (linear meters)

Optic fiber  Cable  
 Voice/Data central unit  Voice/Data central unit existing

Others:



## Natural gas installation

Gas availability ..... m<sup>3</sup>/h

Pressure ..... bar

Authorized installation  YES  NO

Existing free bridging  YES  NO

Distance to the crossing point ..... ml

Others:

## Gas installation medical technological

Medical or technological gas station  Gas tanks of medical or technological gases

Oxygen  CO<sub>2</sub>  Nitrogen

Nitrous oxide  Vacuum  Compressed air

AGSS – Active Gas Scavenging Systems

Existing installation  Oxygen  CO<sub>2</sub>  Nitrogen

Nitrous oxide  Vacuum  Compressed air

AGSS – active gas scavenging systems

Pipeline route  Stainless Steel  Copper

Distance to the crossing point ..... lm (linear meters)

Others:

## Plumbing

Plumbing  Existing plumbing

Sink ..... pcs  Emergency ..... pcs

PPR pipe  Copper pipe

Water filter installation  Steel pipe

Water softener  Water purification plant

Sewerage  Sweat

Distance to the crossing point ..... lm (linear meters)

Others:

## Connection for cold / warm water for the HVAC installation

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Water availability  Cold  Hot ..... °C  
Water pressure  Cold ..... bar  Hot ..... bar  
 Sewerage  Sweat

Distance to the crossing point ..... lm (linear meters)

Others:

## HVAC Installation

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Existing air conditioning system:  Functional  Nonfunctional  Flow ..... m<sup>3</sup>/h  
Piping:  ALP  Spiro sheet  Rectangular sheet

## Validation/Qualification

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Clean rooms validation  YES  DQ  IQ  OQ  NO  
Parameters measurements  YES  NO  
Software validation  YES  NO  
Process validation  YES  NO

Indication on the Architectural design of measuring points (sensor installation points):

Parameters measured for each point:

- |  |  |   |  |
|--|--|---|--|
| <input type="checkbox"/> Temperature   | <input type="checkbox"/> pH              | <input type="checkbox"/> CO <sub>2</sub>                            | <input type="checkbox"/> O <sub>2</sub>        |
| <input type="checkbox"/> VOC   | <input type="checkbox"/> Microparticules | <input type="checkbox"/> Humidity                                   | <input type="checkbox"/> Differential pressure |
| <input type="checkbox"/> Speed airflow test  |  | <input type="checkbox"/> Air flow uniformity test                   |  |
| <input type="checkbox"/> Leak test for filters   |  | <input type="checkbox"/> Regeneration test (Refresh rate)           |  |
| <input type="checkbox"/> The air suspension particle counting test   |  |   |  |
| <input type="checkbox"/> Particulate deposition test   |  | <input type="checkbox"/> Test for the tightness of the construction |  |
| <input type="checkbox"/> Overpressure test   |  | <input type="checkbox"/> Light level test and its uniformity        |  |
| <input type="checkbox"/> Reserve capacity test of the air supply system (ventilation) - the volume of air introduced |  |   |  |
| <input type="checkbox"/> The noise level test  |  | <input type="checkbox"/> Vibration level test                       |  |
| <input type="checkbox"/> Temperature uniformity test   |  | <input type="checkbox"/> Humidity uniformity test                   |  |

Others:

Alarm levels:

Alarm filters:

Monitoring range(s):

Reporting range(s):

List of equipment for which monitoring is intended and their type:

- |  |                              |                             |
|--|------------------------------|-----------------------------|
| The monitored equipment has slots for mounting external sensors? | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| The electrical network is appropriately sized?                   | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| Sufficient power outlets (for each communication HUB)?           | <input type="checkbox"/> YES | <input type="checkbox"/> NO |
| Appropriately installed power?                                   | <input type="checkbox"/> YES | <input type="checkbox"/> NO |