





# **Preinstallation requirements for AP-SMALDI<sup>5</sup> AF ion source on a Q Exactive<sup>TM</sup> or Orbitrap Exploris<sup>TM</sup> Mass Spectrometer**



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		<i>Note</i>
	<p><b><i>Important! – Read the instructions completely!</i></b></p>	

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## 1. Space requirements

### 1. AP-SMALDI<sup>5</sup> AF Ion source installed on Q Exactive family mass spectrometer

The instrument is installed on a Q Exactive mass spectrometer. The dimensions of the instrument including the mass spectrometer are:

Width:	ca. 950	mm
Depth:	ca. 1100	mm
Height (from table):	ca. 950	mm
Weight:	ca. 70	kg
Overall weight* (Ion source and computer without mass spectrometer):	ca. 85	kg

		<b>NOTE</b>
	<p><i>*For the overall weight and the installation also the values of the Q-Exactive<sup>TM</sup> mass spectrometer manual have to be taken into account.</i></p> <p><b>Physical damage or deadly and severe injuries may be the consequence, otherwise.</b></p> <p><i>Follow the instructions in the manuals.</i></p>	

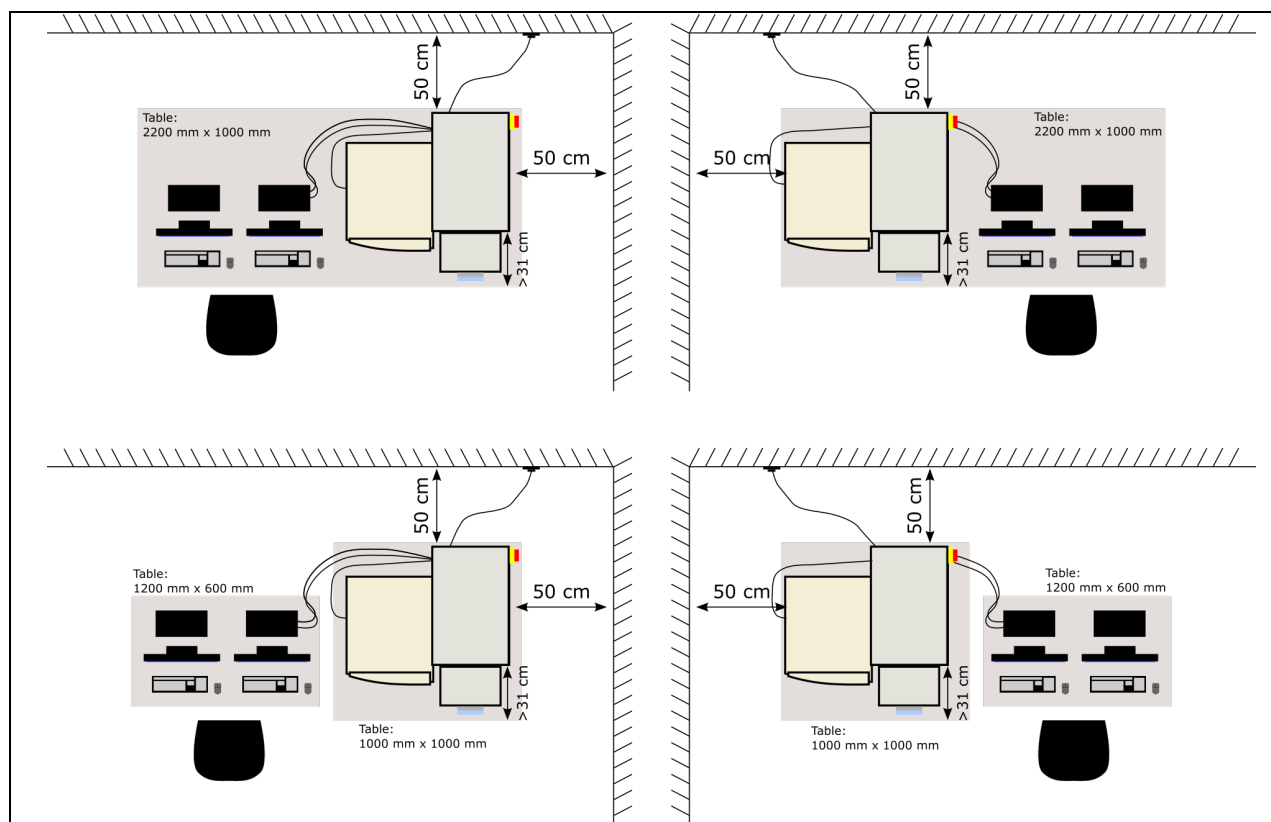


Fig. 1-1 *Overview of instrument on Q Exactive in different installation positions*

#### Table for ion source and mass spectrometer

Width:	$\geq 1000$ mm
Depth:	$\geq 1000$ mm
Height (from table):	ca. 720 mm

The table has to be able to handle the weight of the instrumentation (Q-Exactive and AP-SMALDI source). The Q-Exactive has to be accessible from all sides.

**There have to be 31 cm or more on the table in front of the Q Exactive instrument. It has to be one continuous table for Q Exactive and AP-SMALDI source.**

A table for the computer (separate or the same as for the Q Exactive PC) is needed.

#### Table for computer


Width:	$\geq 1200$ mm
Depth:	$\geq 600$ mm
Height (from table):	ca. 720 mm



## 2. AP-SMALDI<sup>5</sup> AF Ion source installed on Orbitrap Exploris family instrument

The instrument is installed on an Orbitrap Exploris mass spectrometer. The dimensions of the instrument including the mass spectrometer are:

Width:	ca. 700	mm
Depth:	ca. 1250	mm
Height (from table):	ca. 950	mm
Weight:	ca. 80	kg
Overall weight* (Ion source and computer without mass spectrometer):	ca. 95	kg



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**NOTE**

*\*For the overall weight and the installation also the values of the Orbitrap Exploris™ mass spectrometer manual have to be taken into account.*

***Physical damage or deadly and severe injuries may be the consequence, otherwise.***

*Follow the instructions in the manuals.*

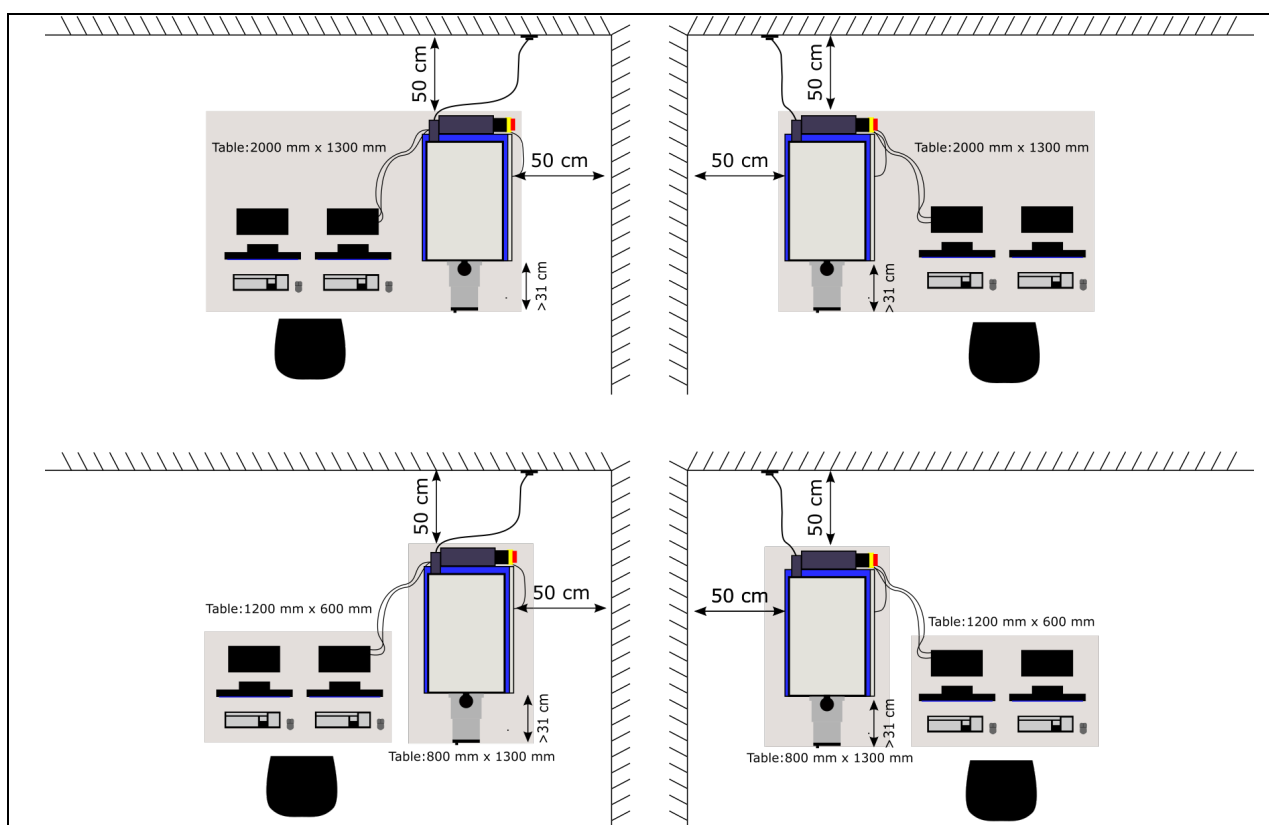


Fig. 1-2 *Overview of instrument on Orbitrap Exploris in different installation positions*

#### Table for ion source and mass spectrometer

Width:	≥ 800 mm
Depth:	≥ 1300 mm
Height (from table):	ca. 720 mm

The table has to be able to handle the weight of the instrumentation (Orbitrap Exploris and AP-SMALDI source). The Orbitrap Exploris instrument has to be accessible from all sides. **There have to be 31 cm or more on the table in front of Exploris instrument. It has to be one continuous table for Orbitrap Exploris and AP-SMALDI source.**

A table for the computer (separate or the same as for the Exploris PC) is needed.

#### Table for computer

Width:	≥ 1200 mm
Depth:	≥ 600 mm
Height (from table):	ca. 720 mm

## 2. Electrical energy supply

<b>Operating voltage:</b>	230 VAC; + 6%, -10%
	110 VAC; + 6%, -10%
<b>Phases:</b>	1 Phase
<b>Frequency:</b>	50 Hz ± 1 %
	60 Hz ± 1 %

#### Input

Line fuses:	max. 1 x 10 A
Cable cross section:	max. 3 x 1,5 mm <sup>2</sup> Cu
Max. connection length:	max. 10 m
Nominal current:	max. 2 A
Power:	max. 240 VA

#### Sockets:

- 1 Socket for AP-SMALDI ion source
- 2 Socket for control computer

## 3. General information

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#### Temperature range:

Instrument:	+15 °C ... +30 °C
Electronic box:	+ 15 °C... + 30 °C
Relative humidity:	max. 85 %, not condensing
Max. altitude:	≤1.000 m above SL

#### Storage conditions:

Lower temperature limit:	- 10 °C
Upper temperature limit:	+ 40 °C
Relative humidity:	max. 85 %, not condensing

#### Noise level:

Acoustic pressure level (2006/42/EG):	$L_{PA} < 70 \text{ dB(A)}$
Uncertainty of measurement ( $L_{PA}$ )	3 dB

## 4. Data analysis software requirements

The software MIRION is part of the delivery. It is used for data analysis and image generation. Parts of the software are protected and need a license dongle. One dongle is included per instrument.

## 5. Other software requirements

The Tune software of the mass spectrometer is used for generation of mass spectrometric data. For the AP-SMALDI<sup>5</sup> AF ion source special settings are necessary. Therefore, in case of Q Exactive instruments a **Leveraged License key** has to be acquired from Thermo Scientific.

## 6. Mass Spectrometer requirements

The mass spectrometer has to be installed completely. Otherwise the installation of the AP-SMALDI<sup>5</sup> AF ion source can not be started.

## 7. Installation requirements

For the installation of the instrument by a service engineer, a computer-controlled microscope with camera and reflection mode geometry (illumination and observation from top) is required.