

# MesoFocus FAQ

## Questions

**Q: Does the MesoFocus high-voltage generator provides the same features as known from iVario based iXRS modules?**

**Q: What are the components needed to operate the MesoFocus X-ray source?**

**Q: What are the requirements for the MesoFocus tubes in terms of periodic maintenance?**

**Q: Can I switch from one focal spot size to another without turning off X-ray?**

**Q: What is the inherent filtration?**

**Q: What is the minimal FOD (Focal Spot to Object Distance) of the tube?**

**Q: Is there a cycling limitation on the MesoFocus tube?**

**Q: Does the unit still require a warm up like a mini focus tube?**

## Answers

A: The MesoFocus module is based on the iVario high-voltage generator platform and offers the same features for your system integration with the exception of the availability of the external iVario Controller (hardware).

A: The MesoFocus module can only be operated with the dedicated iVario MesoFocus high-voltage generator. The MesoFocus X-ray tube is not compatible with the regular iVario Mini Focus generators.

A: Comet offers the MesoFocus technology as a complete module, including the MesoFocus X-ray tube, a dedicated MesoFocus high voltage generator to control the tube, an optimized water-air cooler, a high voltage cable and all interconnection cables and cooling hoses that are required to operate the MesoFocus X-ray source.

A: The periodic maintenance is the same as for sealed mini focus X-ray tubes. Next to a periodically greasing of the high-voltage cables there is no further maintenance of the X-ray module required.

A: Yes, a focal spot and power rating change during operation is possible without turning off the high voltage. When changing the focal spot its center position remains unchanged. Therefore no adjustment of the object positioning is required to inspect the same section of the object.

A: The inherent filtration of the MesoFocus X-ray tube is 0.8mm Beryllium.

The minimal FOD is 36 mm, given by the distance from the focal spot to the window surface of the MesoFocus X-ray tube.

A: No, there is no limitation in cycling operations of the MesoFocus X-ray tube. The MesoFocus X-ray tube may be run continuously, but also in cycling mode without any restriction.

A: If the MesoFocus tube has not been in use for a long time, a warm-up, as known from the Minifocus, is required. No further conditioning or calibration is required.

**Q: What resolution is possible in lp/mm with the MesoFocus module?**

A: The MesoFocus module delivers resolution up to 20 lp/mm.

**Q: Is the heel effect reduced compared to a traditional X-ray tube with an 11 target?**

A: The MesoFocus tube is built with a 20° target angle, which makes the field of view larger and the heel effect less pronounced compared to a traditional High Power X-ray tube with an 11° target angle; however, a certain heel effect is also present with MesoFocus technology as it is in any X-ray tube with a reflection target.

**Q: What is the difference between the known Variofocus and the new MesoFocus module?**

A: The MesoFocus X-ray module is based on Comet's latest iVario high-voltage generator platform.

A: The resolution and focal spot range of the two modules varies significantly: The MesoFocus module allows a resolution down to 25 µm with focal spots between 50 and 200 µm according to ASTM E1165-12 whereas the focal spots of the VarioFocus module range between 250 to 800 µm according to EN 12543.

**Q: When will the MesoFocus X-ray module be commercially available?**

A: The MesoFocus 225 kV module will be fully available in June 2021.

A: Please contact us or your preferred OEM for more information. Our preferred OEM partners are ready to assist you in the evaluation process of a MesoFocus inspection system by performing MesoFocus image tests and comparisons.

**Q: Can the MesoFocus technology be used in conjunction with robots for part inspection and measurements?**

A: Yes, the MesoFocus tube can be used by robots or other moving devices for sample analysis

**If you have any other questions, please don't hesitate to contact us.**

You can find the contact information in the "Contact us" section on the Comet X-ray website: [www.comet-xray.com](http://www.comet-xray.com)