

The History of C-arms

A mobile C-arm is a medical imaging device that is based on X-ray technology and can be used flexibly in various operating rooms within a hospital or clinic. The name is derived from the C-shaped arm used to connect the X-ray source and X-ray detector to one another.

Since the introduction of the first C-arm in 1955, the technology has advanced rapidly. Today, mobile imaging C-arm systems are an essential part of everyday hospital life:

- Specialists in fields such as surgery, orthopedics, vascular surgery and cardiology use C-arms for intraoperative imaging.
- The devices provide high-resolution X-ray images in real time, allowing the physician to monitor progress at any point during the operation and immediately make any corrections that may be required.
- Treatment results are better and patients recover more quickly.
- Hospitals benefit from cost savings through fewer follow-up operations and from minimized installation efforts.

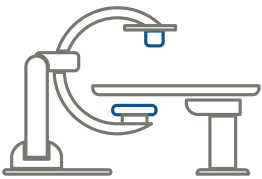


How does a mobile C-arm work?

A C-arm comprises a generator (X-ray source) and an image intensifier or flat-panel detector. The C-shaped connecting element allows movement horizontally, vertically and around the swivel axes, so that X-ray images of the patient can be produced from almost any angle.

The generator emits X-rays that penetrate the patient's body. The image intensifier or detector converts the X-rays into a visible image that is displayed on the C-arm monitor. A physician can identify and check anatomical details on the image such as blood vessels, bones, kidney stones and the position of implants and instruments at any time.

Fun Facts



The original C-arm was developed as an image intensifier. Modern C-arm technology has evolved to a flat panel digital detector.



Before Image Intensifiers were developed, doctors would spend 15 minutes in the dark trying to see what the X-ray produced.



Robotic 2D and 3D C-arms are now accessible and have the potential to address operational challenges related to intraoperative imaging caused by staff shortages and overloaded surgical teams.

