About the C-arm

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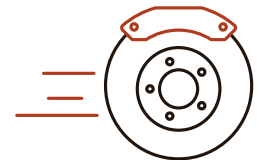
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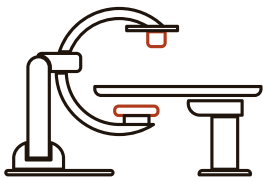
The original C-arm was developed as an image intensifier. Modern C-arm technology has evolved to a flat panel digital detector.

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

Most C-arms today are mobile and easy to maneuver. They used to be bulkier, and even had a bunch of external cables.

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