

HOW TO PICK YOUR CATH LAB

- A guide to your next system

LBN Medical
A DirectMed Company



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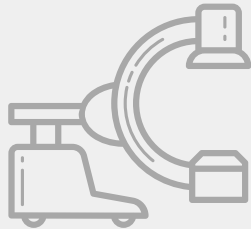
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What is a Cath Lab?

Cath lab, short for catheterization laboratory, is an examination room in a hospital or clinic with diagnostic imaging equipment. It is similar to a C-arm except that it is not a mobile but a mounted system with a table and more power.

In a cath lab, physicians perform minimally invasive tests and procedures that can assist in diagnosing patients and help doctors understand if surgery, treatment, or discharge is the next step in care.



The procedures performed in a cath lab often include small, flexible tubes, called catheters that are used instead of open surgery, to access the heart and blood vessels.

Most top providers of medical imaging equipment also manufacture cath labs. You can find cath labs from GE, Philips, Siemens as well as Canon Medical (former Toshiba).

In general, Cath labs consist of:

1. Patient table
2. Flat panel detector
3. Viewing monitors
4. Injector pump
5. X-ray tube



What Procedures Are Done in a Cath Lab?

In catheterization laboratory you can perform various procedures. To get a simple overview you can check the tables below.

Cardiac Cath Lab
Angioplasty
Biopsy
Repair of heart defects
Stent replacement
Valve replacement
Electrophysiology study
Pacemaker insertion

Angio Cath Lab
Venogram
Thrombolysis
Embolization
Neurovascular procedures

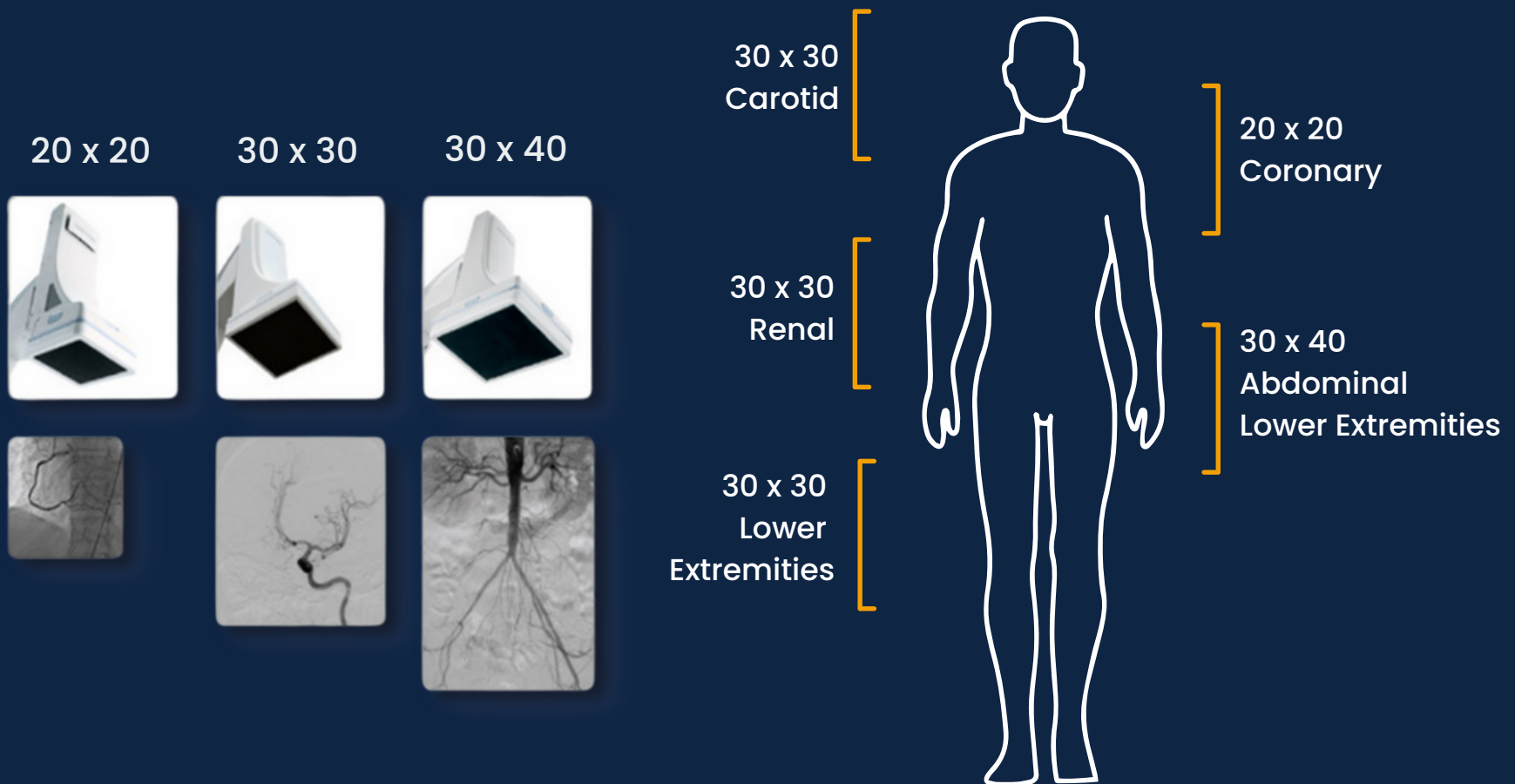
Since the different types of interventional work require different characteristics of the cath lab, we can help you find the right system tailored to your specific needs and your budget.

If you want more in depth overview of other factors to be considered when picking the right cath lab, we would recommend you a dedicated [blog post on this subject](#).

Cath lab Detector Sizes

You should choose the detector size based on the type of work you will perform with the system the most. Cath labs with smaller detectors (20 cm) are preferred for cardiac and pure neurological procedures.

30 cm detectors are considered a "combo" and can perform both cardio and vascular studies. Finally, 40 cm detectors are recommended for angio, as the field of view provides better abdominal and lower body vascular studies.



Single Plane vs Bi-Plane

Therefore, it requires more space, time and work to have the site ready, as it is necessary to install both the floor mount and the ceiling support. And the biplane cath lab has a larger overall footprint.

Lastly, the price of the bi-plane system is higher, since it comes with more components. The construction and operation costs can be double that of a single-plane system, while service costs are 25% to 30% higher.

Bi-plane systems acquire 3D images faster because they capture image data from detectors on two axes instead of just one. This 3D software comes as a standard, while it must be added to the single-plane systems.

Even though single plane is also capable of 3D imaging, it takes longer for the C-arm to move. And thus, the software's reconstruction process can cause delays. Regarding the site preparation, a bi-plane is basically a double C-arm.

In general, bi-plane cath labs give you the flexibility of simultaneous visualisation from two planes. And thus, you can see more during the procedure.

However, they are not so common, because overall you can get similar performance from single plane cath labs at a lower price.

	Advantages	Disadvantages
Single Plane	<ul style="list-style-type: none"> • Smaller footprint • Less space and preparation • Lower price • Lower operation and service costs 	<ul style="list-style-type: none"> • Slower 3D Imaging • 3D software not a standard
Bi-Plane	<ul style="list-style-type: none"> • Faster 3D Imaging • 3D software as a standard • Two plane visualisation 	<ul style="list-style-type: none"> • Bigger footprint • More space and preparation • Higher price • Higher operation and service costs

Floor or Ceiling Mounted?

There are different factors determining the decision whether to get a floor or ceiling mounted cath lab, such as your workflow, room space as well as the procedures you are planning to do with your cath lab.



What is the difference?

Firstly, ceiling-mounted systems suspend the gantry or "C" from the ceiling and require a much more robust structure to hold its considerable weight. These systems require rooms with higher ceilings, in order to provide floor clearance for the gantry in its lowest position.

Therefore, when installing the cath lab in an existing building, the choice of mounting method may be affected by your current ceilings and floors.

Hospitals and other practices considering a ceiling-mounted cath lab should allocate higher budget for this project. That is due to the reinforced suspension the system will require, which can cost around 10,000 euros.

Lastly, keep in mind that not all manufacturers offer a ceiling-mounted option for single-plane systems.

Both floor and ceiling-mounted cath labs require some form of ceiling structure to hang the overhead monitor's suspension.

For instance, all GE single plane cath labs are floor-mounted. An example could be the GE Innova 3100 IQ and Innova 2100 IQ.



How Much Does a Cath Lab **Cost**?

Cath labs are in general rather pricey. It is a larger piece of equipment with many different components. New cath labs start at around 400 – 500.000 euros.

Therefore, a pre-owned, fully tested and installed cath lab at half the price of new can be a cost-effective solution. Furthermore, it allows you to buy a system from the top brands on the market at a better price.

Cath Labs Available on the **Used Market**

See an overview of the different cath lab models accessible within each top brand on the secondhand market.

GE Cath labs

INNOVA 2100

INNOVA 3100

INNOVA IGS 520/530

Philips Cath labs

ALLURA XPER FD10

ALLURA XPER FD20

ALLURA CENTRON FD15

Siemens Cath labs

AXIOM ARTIS

AXIOM ARTIS ZEE

AXIOM ARTIS ZEEGO

Canon Cath labs

INFINIX - i

INFINIX VC - i

INFINIX 8000c/8000v

Sum Up

How to pick the right Cath lab?

We hope you have gained valuable insights from this guide.

Let us do a quick recap of the decision process when purchasing a cath lab:

What procedures are done in a cath lab?

Most often you would use a cath lab for cardiac, vascular, angiography, and neurology interventional procedures.

What cath lab detector to use for different types of procedures?

Cath lab detector of 20 cm is preferred for cardiac and pure neurological procedures.

30 cm detectors can perform both cardiac and vascular studies, while 40 cm detectors are used for angio.

What is the difference between a single and bi-plane cath lab?

Single plane cath labs have a single X-ray generator source and X-ray image intensifier while bi-plane cath labs have a dual X-ray source and a dual detector.

Furthermore, bi-plane cath labs acquire 3D images faster and come with a 3D software as a standard. However, since a bi-plane cath lab is basically a double C-arm, it requires more space and time to be installed and has a bigger footprint.

Bi-plane cath labs are more expensive and have higher operations costs. They are not very common since single plane cath labs offer similar performance at a lower price.

Why purchase a used cath lab?

At LBN Medical, we test and check all incoming systems before they are put up for sale. When buying used, the price is lower than for new and for refurbished.

And if you buy a quality system, you will get good value for money.

Thank you for reading this far.

If you still have any doubts about how to move forward, feel free to contact us or subscribe to our newsletter for more information.

You can email us at sales@lbnmedical.com.

Or visit our website lbnmedical.com



“It has been a pleasure to work with LBN Medical. Quick response, good communication, and very patient and helpful staff with an excellent understanding of the problems that arose during the purchase process. What is more LBN Medical took care of the safe transport of the CT scanner from Denmark to Poland.”

Rental Business of Mobile CTs in Europe

