

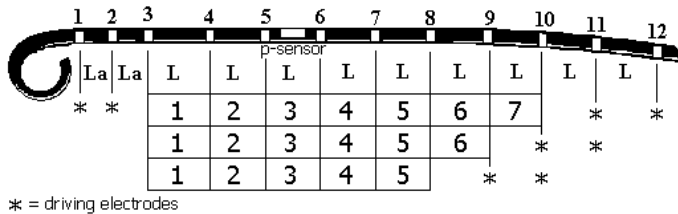
Introduction

Optimal pressure-volume recordings require that you use the right catheter. This infosheet presents information on which catheter to use for different ventricular sizes and how to optimize catheter settings.

For additional information about catheters and other products, please look at our website www.cdleycom.com. If you still have questions after reading this info-sheet, please contact us by phone +31 79 360 1780 or fax +31 79 362 1743 or E-mail support@cdleycom.com.

Select the best catheter

We made the pigtail as small as possible, so that the first electrode on the catheter is as close as possible to the tip of the catheter.



Optimally, the effective measuring catheter length should match the ventricular long axis (as measured e.g. by echocardiography):

- Minimum: $4 \times L + 2 \times La$ [+ 10.0 (pigtail)] (mm)
- Maximum: $7 \times L + 2 \times La$ [+ 10.0 (pigtail)] (mm)

L = Electrode spacing
La = Spacing (3mm) between the driving electrodes.

- Note**
- CD Leycom offers catheters with electrode spacing ranging from 6 to 12 mm
 - The proximal driving electrodes may be positioned above the aortic valve.

Catheter placement

After selecting a catheter with an appropriate electrode spacing, the catheter should be placed as straight as possible along the ventricular long axis with the tip in the ventricular apex. For optimal measurements, especially in dyssynchronous ventricles, it is mandatory to get a substantial number of segments into the ventricle in order to cover the entire ventricular long axis.

- Note**
- The pressure sensor is located in segment 3, so to get PV-loops you need at least 3 segments in the ventricle.
 - Quantification of ventricular mechanical dyssynchrony requires multiple segments, preferably 5 or more.

Optimize catheter settings

After catheter placement, excluding segments can optimize signals. Display the segmental volume signals and check how many segments cover the ventricle. Exclude the segments that are out of phase and adjust the driving electrodes.

- Note**
- Obviously the text above refers to a normal contracting ventricle. In the presence of marked ventricular dyssynchrony an extra basal segment should be recorded.

If less than 6 segments are in the ventricle it is recommended to change the driving electrodes to adapt the electric field. Default '12 electrodes' is selected, to use electrode 11 and 12 as the driving electrodes. If you exclude segment 6 and 7, change the number of electrodes to 11. If you also exclude segment 5, change the number of electrodes to 10.

In practice, Conduct NT

Go to section catheters in Conduct NT, select the catheter type you are using, or enter the electrode spacing for each segment manually. Select the number of electrodes to 10, 11 or 12, to optimize the electric field. Exclude basal segments which are definitely outside the ventricle. Select the dual field ratio. Use a higher ratio for large hearts and a lower ratio for small hearts.

CD Leycom catheters

CD Leycom offers a range of catheters with different electrode spacing to get the maximum results (see table).

4 French type without lumen	Electrode spacing	Long-Axis	Application
CA-41063-PN *	6 mm	46 ... 64mm	Children
CA-41103-PN	10 mm	56... 86 mm	Normal adults
7 French type without lumen			
CA-71083-PN	8 mm	48... 72 mm	Small adults
CA-71103-PN	10 mm	56... 86 mm	Normal adults
7 French type with lumen			
CA-71083-PL	8 mm	48 ... 72 mm	Small adults
CA-71103-PL	10 mm	56... 86 mm	Normal adults
CA-71123-PL	12 mm	64 ...100 mm	Large adults

*Segment 3 of this catheter measures 12mm to fit in the pressure-sensor.

