



Medtronic

DUET™

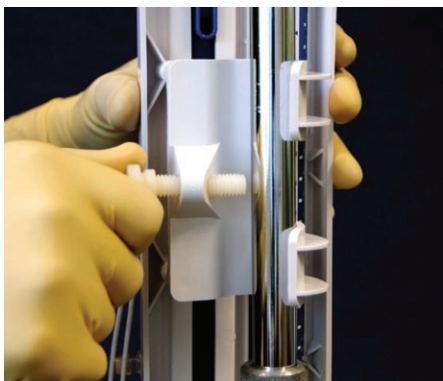
EXTERNAL DRAINAGE
AND MONITORING SYSTEM

Quick Reference Guide



Refer to product package insert for instructions,
warnings, precautions and complications.

Attach DUET™ System to IV Pole



Attach pole clamp to I.V. pole

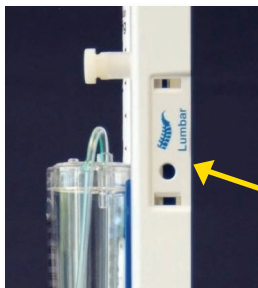
OR



Hang system from IV. pole using cord

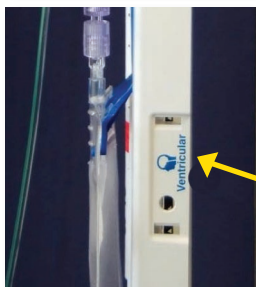
Refer to product package insert for instructions, warnings, precautions and complications.

Attach Main System Stopcock



Lumbar

Attach here for
lumbar drainage



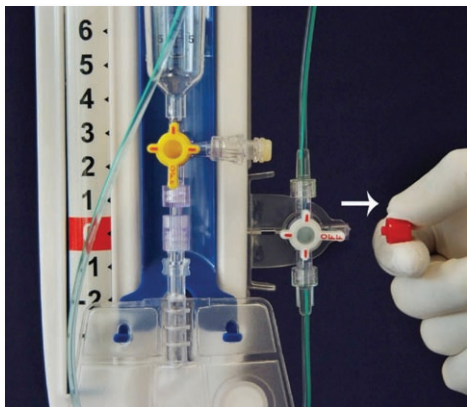
Ventricular

Attach here for
ventricular drainage



Refer to product package insert for instructions, warnings, precautions and complications.

Attach external pressure transducer to main system stopcock



Remove red cap

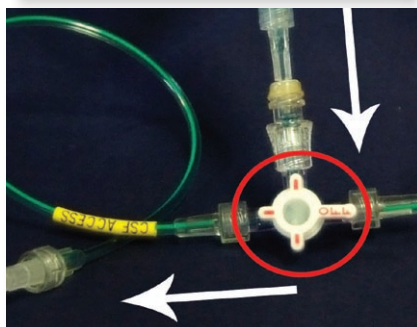
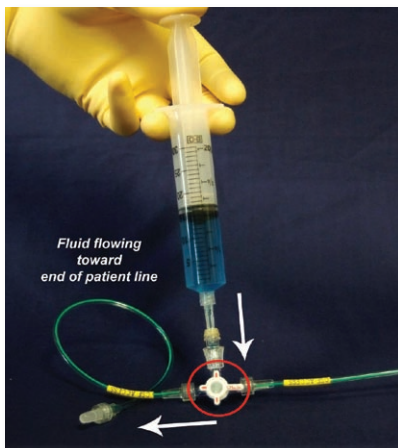


Attach external pressure transducer

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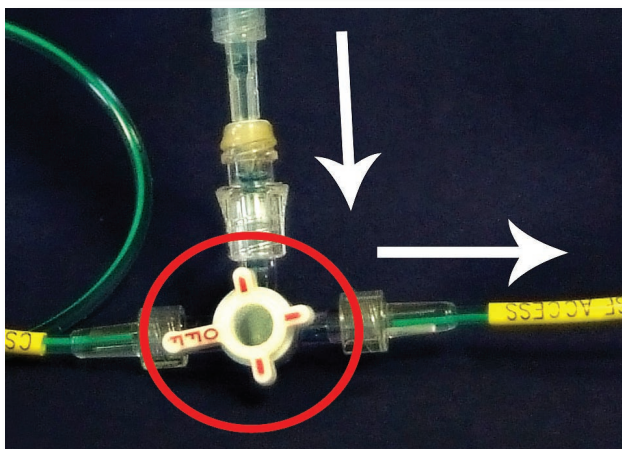
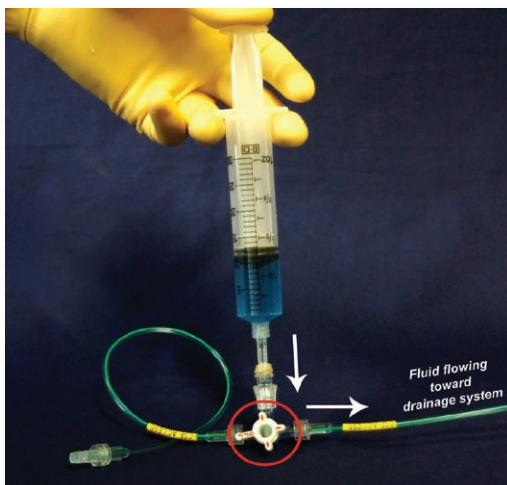
Priming Patient Line

- Using a 30 cc syringe and isotonic saline, access the patient line stopcock injection site and prime the patient line towards the short section of tubing (the end that connects to ventricular catheter)
- Be sure line is fully primed and all air bubbles are removed



Refer to product package insert for instructions, warnings, precautions and complications.

Prime Patient Line to Drip Chamber



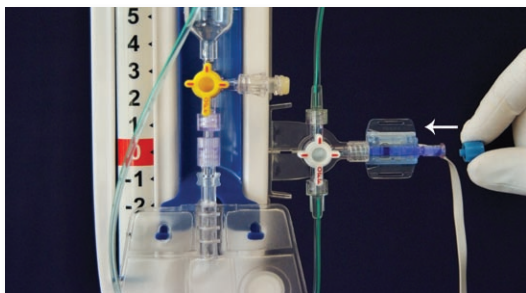
Refer to product package insert for instructions, warnings, precautions and complications.

Prime the External Pressure Transducer

- If using a pressure transducer, prime it at this time*
- Using sterile technique, loosen or remove the end-cap on transducer
- Rotate the main system stopcock as show in this image
- Push saline solution through the inner tubing of the transducer and insure that all air bubbles have been removed. *Note: Fluid is being injected from syringe connected to patient line stopcock*
- Reapply cap to transducer



Prime the transducer



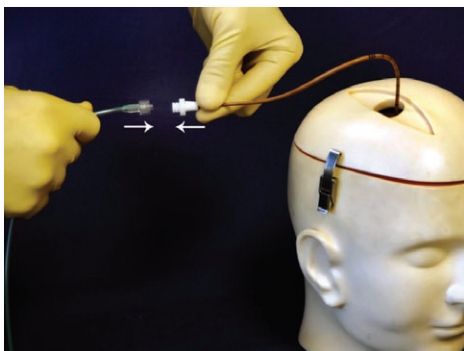
Replace end-cap

* Medtronic does not provide external pressure transducers.

Refer to product package insert for instructions, warnings, precautions and complications.

Connect Drainage System to Patient's Catheter

- Using sterile technique, connect the end of the patient line to the patient's catheter
- Use care to avoid introducing any air bubbles into the line
- Ensure that the patient line stopcock is oriented as in the picture below so that fluid will not drain through the line until the set-up is completely finished



Connect to patient's catheter

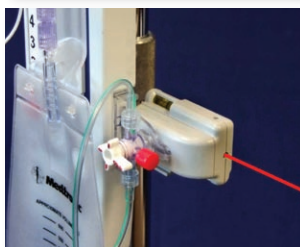
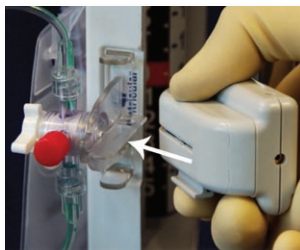


Stopcock "off" to fluid control

Refer to product package insert for instructions, warnings, precautions and complications.

Level Drainage System to the Patient

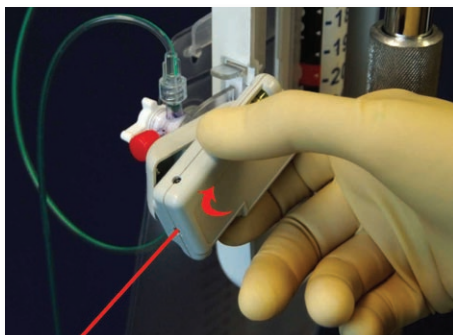
- If supplied, the Clear-Site™ Laser Level can be used to level the drainage system to the patient's head or back
- Clip the laser level onto to main system stopcock bracket
- Turn on laser by pressing and releasing black power button (Green LED indicates the laser is turned on)



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Level Drainage System to the Patient

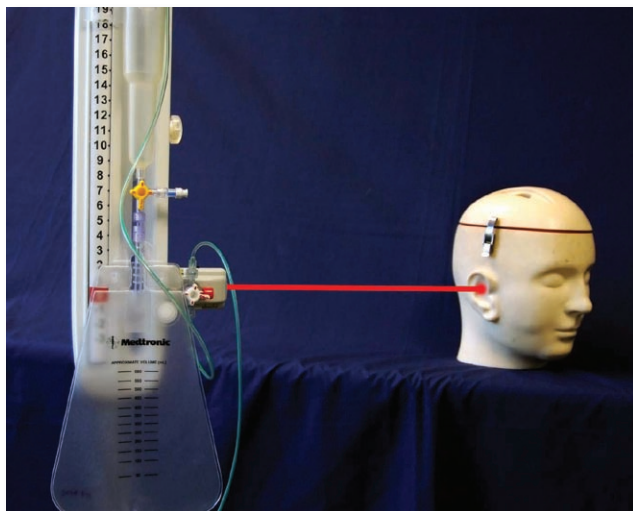
- Rotate laser so it generally points towards the patient's head or back
- Insure the laser is horizontally level by using the yellow bubble level on the top of the laser
- When the laser is level, the bubble should rest evenly between the two black lines



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Level Drainage System to the Patient

- Once the laser is horizontally level, raise or lower the Duet drainage system using the cord or the pole clamp, to a height such that the laser points to the correct landmark on the patient's head
- If the Duet System is being used for lumbar drainage, level the system to the exit point of the catheter on the patient's back.
- Commonly Used Landmark for ventricular drainage is:
-External Auditory Canal



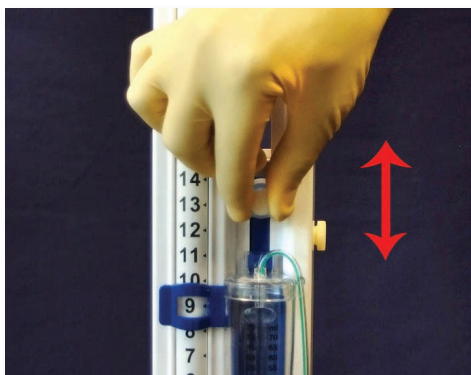
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Rotate Pressure Scale and Set Pressure Level

- Using the blue knob at the top of the pressure scale, rotate the pressure scale to the desired setting
- Raise or lower the drip chamber to the desired pressure level indicated by the physician.



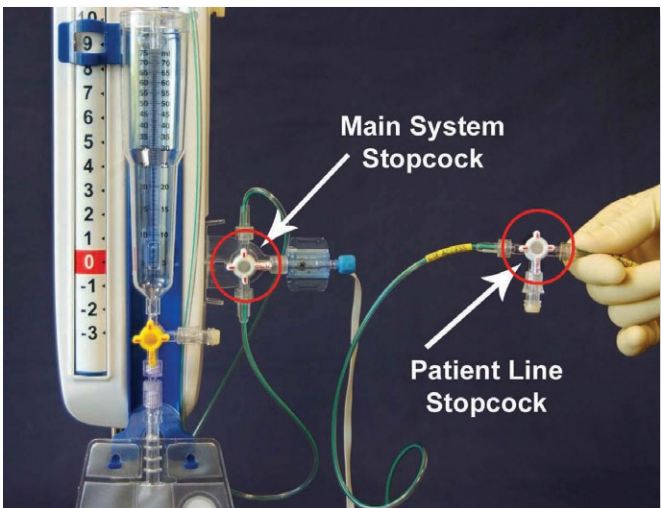
For Example: In the image below, the pressure is set at "9"



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Open the System for Drainage

- Once the system has been completely set up, the stopcocks can be opened to allow drainage of CSF
- The main system stopcock and patient line stopcock should be set as shown in this photo to allow fluid drainage into the drip chamber

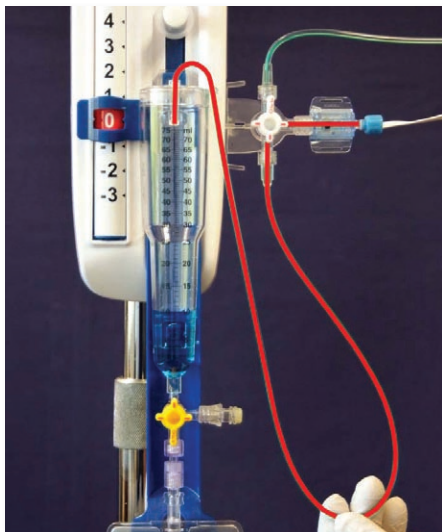


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“Zeroing” the Pressure Transducer to Atmospheric Pressure

Important Note!

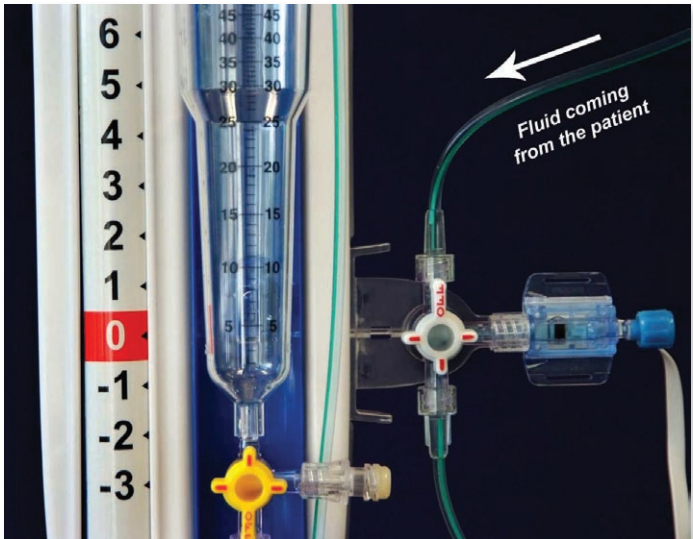
- Please follow transducer manufacture instructions for use for guidance on the proper use of their product
- The section of tubing located between the drip chamber and the transducer, must be completely filled with fluid from end to end
- **This section of tubing is highlighted in bright red in this photo**
- If the tubing is not completely filled with fluid, you will not accurately “zero” the transducer to atmospheric pressure



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“Zeroing” the Pressure Transducer to Atmospheric Pressure

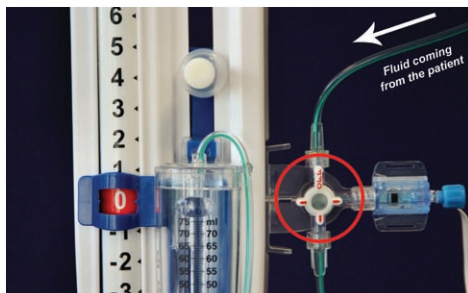
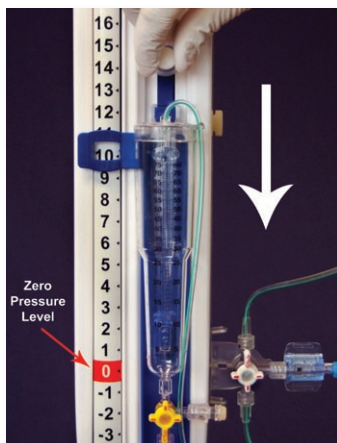
- It is also very important that the “0” pressure level on the pressure scale be level with the patient’s head, prior to zeroing the transducer.
- Rotate the knob on the main system stopcock so that it is turned off to fluid coming from the patient (*see photo*)



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“Zeroing” the Pressure Transducer to Atmospheric Pressure

- Lower the drip chamber until the pressure indicator window is centered over the “0” position on the pressure scale.



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“Zeroing” the Pressure Transducer to Atmospheric Pressure

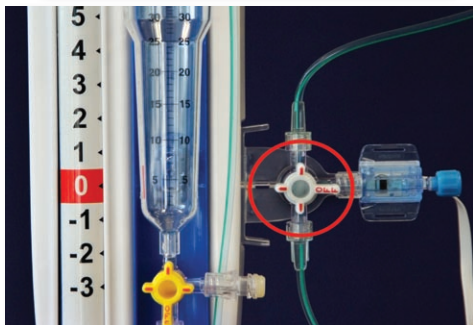
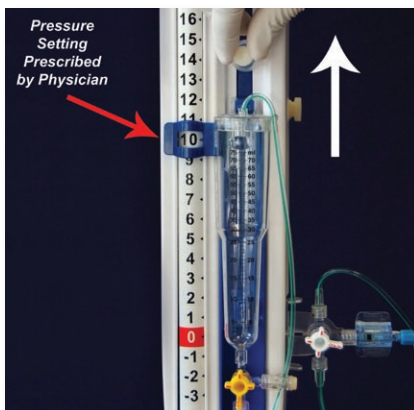
- The Clinician then pushes the zero button on the bedside monitor and the transducer is now “zeroed” to atmospheric pressure



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“Zeroing” the Pressure Transducer to Atmospheric Pressure

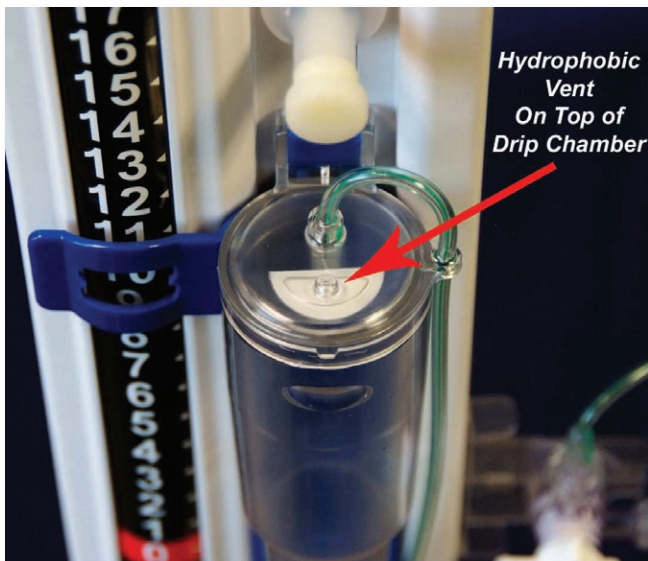
- Once the pressure transducer has been “zeroed”, the drip chamber needs to be raised back to its original setting. Also adjust the main-system-stopcock so it is turned “off” to the transducer, thus allowing fluid flow from the patient into the drip chamber.



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Duet System's Hydrophobic Vent

- The Duet External Drainage and Monitoring System is designed with a hydrophobic microbial barrier air vent on the top of the drip chamber to help prevent system clogging



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Caution: Federal (USA) law restricts this device to sale by or on the order of a physician. Refer to product package insert for instructions, warnings, precautions and complications.

For further information, please contact your
Neurologic Technologies representative, or refer
to **www.Medtronic.com**.

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