

Re: I need someone's brain juice here?

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*Source:* <http://sci.tech-archive.net/Archive/sci.physics.relativity/2005-12/msg02608.html>

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- *From:* "PD" <[TheDraperFamily@xxxxxxxxxx](mailto:TheDraperFamily@xxxxxxxxxx)>
  - *Date:* 30 Dec 2005 14:37:51 -0800
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guskz@xxxxxxxxxxxx wrote:

- > Slightly off topic but the other newsgroups aren't as read....
- >
- > Here's two web links on two widely understood fluid pressure models:
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- > <http://hyperphysics.phy-astr.gsu.edu/hbase/pman.html#meac>
- >
- > <http://hyperphysics.phy-astr.gsu.edu/hbase/pasc.html#hpress>
- >
- >
- > Both are related to vertical pressure (or Force / Area = pressure) on a
- > fluid, yet both use 2 completely different equations to calculate the
- > fluid's vertical travel distance.
- >
- > One use's the fluid's density the other simply says  $Work1 = Work2$  thus
- >  $F1 * D1 = F2 * D2$
- > (or  $P1 * A1 * D1 = P2 * A2 * D2$ ) where as the other says  $P1 = \text{density} * H * \text{gravity} + P2$
- >
- > If you look at both models you'll notice that  $H = D1 + D2$
- >
- >
- > Anyone with enough brain juice to tell me why the difference, I can't
- > figure it out since both models simply practically the same????

The  $F1 * D1 = F2 * D2$  assumes no height difference in the two ends of the pipe and doesn't take into account the work done to lift the fluid, which is precisely what the other one does.

Use Bernoulli's equation. It contains both.

PD

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- *Follow-Ups:*
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◇ *From:* guskz

• **References:**

◆ ***I need someone's brain juice here?***

◇ *From:* guskz

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