



FLOW BENCH SNAKE OIL The Myth Over Head Flow Numbers Dispelled

Flow numbers of a cylinder head are a standard measurement of performance in the industry, however, the numbers really don't mean diddly when it comes to comparing one head to the next, unless you are actually flowing the same head on the same flow bench.

You simply can not take flow numbers from two different ads in the paper and compare the performance of a cylinder head. There are far too many variables to be considered. Companies with flow benches (wet or dry) have developed methods that work for them but by no means are up to any standard in the industry. General practices that are generally used can have a dramatic effect on flow numbers and are as follow.

1. Were the heads flowed at 25 or 28 inches of water?
2. What was the thickness of the intake entry plate?
3. Were exhaust flow tubes used?
4. Did the head have the bowls blended when flowed?
5. What size was the chamber when flowed?
6. What valve style was used (Pro Flo, tulip or nail head)?

It's a terrible game that our industry has to put up with but unfortunately, it is what it is, and all we can pass on to you as a cylinder head manufacturer is the old saying of "BUYER BEWARE" and simply tell you how our numbers were achieved. To start off, WORLD PRODUCTS has a SuperFlow 1020 computerized flow bench calibrated to SAE standards. We flow everything at 28" of water, we use a 1" entry plate purchased from Brezynski products on the intake side and use no exhaust tubes at all. Most importantly, we flow all of our aluminum heads with a basic bowl blend since every one of our valve jobbed heads leaves the door with bowl blending done already.

Hopefully we have given you some insight to use when shopping for cylinder heads and can now understand why you will never see a flow number in any of our print ads. We chose a long time ago to not participate in this game of misinformation. We simply rely on the word of mouth of our satisfied customers.
Remember: We don't race flow benches!

See the Next Page for what our customers say...

FROM ONE OF OUR CUSTOMERS (via email)

World Products Sportsman II heads have been around for a long time, there have been many different combinations built from street to all out racing use.

Many people look at "airflow" numbers only. Im gonna give an example of "Brand A" that flows big amounts of air on the flow bench at 28" of water.

"Brand A" will usually flow to .600"-.700" valve lift then choke. Remember now this is at 28" on the flow bench. Now on a running engine we can pull as high as 130"-150" so if the head chokes at 28" on the flow bench at .700" lift where do you think its gonna choke on the running engine? The answer is much sooner !

Some people test Sportsman II heads against "Brand A" and with the camshaft lift being low "Brand A" shines, Now if the camshaft was a more race type grind im sure the results would be for the Sportsman II and not "Brand A"

I can give you an example of a 1970 Chevy Nova that went 11.90's to 12.0's with 10:1 and Sportsman II's and a solid flat tappet cam that is similar to the one World uses in small block Chevy engines.

Then he stepped up to a more serious program and went to 383 cubic inch engine and went 11.20's all day long with a very mild solid roller camshaft. He did get the flow bench salesman selling him a set of "Brand A" heads only to loose .6 in the 1/4 mile. It was tuned and played with and only found .2 so they were still .4 slower than the Sportsman II. He then switched back to the Sportsman II and 11.20's again so we tuned the engine for max performance with the Sportsman II heads and got the Nova in the 10.90 ET range*

If you look at some of the best heads in the industry, World included, The chamber shapes are similar in design. Take a look at "Brand P" and they are pretty much identical & "Brand B" is the same shape but enlarged for larger bore engines.

In the Sportsman II's we have found a 2.055" valve works better in them when the bowl is matched at 90%. My suggestion to people using the Sportsman II head is to clean up the exhaust runners, exhaust bowls and "go race" and make serious power !

If the head "chokes" its not what I would want on my engine. Some of the heads I consider "good" heads dont flow a big cfm number but they do get down the track. World Products is included in there. I would like to try the new Vortec Aluminum heads World has out as they look very promising

Also to note, The Sportsman II heads can hold bigger springs. I would like to note that the Sportsman II has the stepped spring pockets which I beleive are needed with any hydraulic roller camshaft.

What the step does is allow you to run the Manley 1.255" H-11 valve spring which is perfect for a hydraulic roller 2.02" headed engine. For high rpm performance I would use the Manley Titanium retainers. The Sportsman II stepped spring pocket allows you to gain the installed height needed so you dont hit coil bind with a shorter valve because the spring is sitting down in the pocket verse flat across the outer step. The .030" can make a difference.