**Going With The Flow** 

BY SCOTT SEIR

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Flow numbers seem to be the way to advertise cylinder heads in today's performance market but it is not always flow numbers one should be concerned with when choosing a cylinder head. Port and chamber size and volume, head material and velocities are all parts of the equation. Good flow numbers will create good horsepower, but good flow numbers in conjunction with good velocity create better volumetric efficiency, more horsepower and better throttle response. I have noticed that many owner engineered engines that come in that are self-engineered have more cylinder head than the engine can use. This results in an engine that is sluggish in the lower RPM range and strong running in the upper RPMs. Most street hot rod engines don't get into the upper RPM range very often just because of the nature of the application and performance suffers as the result.

Big displacement engines and smaller displacement engines used in the higher RPM range will benefit from a larger port design. For smaller displacement and lower RPM applications a smaller port design is the answer. Combustion chamber volume must match the piston design and engine displacement to achieve the desired static compression ratio for the fuel used. Chamber shape is also important so the valves are unshrouded to allow more of the intake charge into the cylinder. Valve size and design also play an important role. Valve size must not be larger that the head ports can support or velocity drops off and performance goes with it.

Bowl blending and port matching the correct cylinder head for an engine application can radically increase efficiency for better power, torque and throttle response. Aluminum heads dissipate heat faster than iron and allow more compression and with the proper chamber size and shape will create more efficient combustion.

Proper performance can be achieved only when cylinder head design, material, engine use, camshaft design, displacement, induction, pistons and exhaust system are all taken into account. Skip any of these considerations and performance will be lacking.

Here ar Sehr Performance our years of experience and continuing study in engine design and machining, along with a willingness to embrace new methods and technology, make it possible for us to provide our customers with a product that will take them The Extra Mile.







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