

The throttle slide is fitted in the main barrel and fuel is delivered by the various circuits during the different operating periods.

It is very important that the carburettor supplies a fuel-air mixture which remains constant during the changes in throttle opening and under the different load conditions of the motorcycle engine.

Passage of fuel from the float chamber to the main barrel is brought about by the pressure difference existing between the float chamber and in the barrel itself; this fuel movement takes place because the float chamber is at atmospheric pressure while, as previously mentioned, the pressure is lower in the choke (figure 7).



3.1.1 Selection of the correct carburettor choke size

In the tapered-needle type carburettor, the choke size is the diameter of the section immediately upstream or downstream of the throttle valve and its size is cast on the nameplate together with the model type of carburettor eg PHBE 36BS signifies a 36 mm venturi carburettor.

An initial selection of the optimum choke size can be made with the help of the graph in figure 8, where a range of possible carburettor sizes in relation to the anticipated power output per cylinder of the engine is suggested.

For example, for a two-cylinder 60 HP engine ie., $60/2 = 30$ HP per cylinder, the suggested size range is between 32 and 38 mm.

- a larger-size carburettor generally allows more power at high rpm ie. a higher maximum speed. However, simply fitting just a larger carburettor may not bring about the desired increase in power output as this often only follows from several additional engine modifications, each designed to improve some other aspect of the engine's performance.
- a smaller carburettor will give better pickup and therefore in selecting a choke size, you should always balance your power and acceleration requirements.

