



A steel cylinder becomes a desmodromic-shaft for gears of 125 B/02KZ engines. Turning and milling are fundamental operations for making grooves in which the gear forks run.

Using the accuracy instruments you control the standard quality of the production process. Talking about the desmodromic-shaft, for example, at that particular point, allowance according to the project is 0.1mm. Any variation from the nominal value is just 0.973 mm (just over 7 hundredths).

hand-side, 53.99x54.50 diameter and stroke, 5 transfer ports. It stands out for its pentagonal "plan" head and cylinder. The reed induction 250 double-cylinder engine, with horizontal pack, has using all their industrial know-how, the same head and cylinder fusion (next to each other on the long base), but, as we were saying, the casing is absolutely new, made up of 3 elements. The first two are joined by a long a long vertical flat surface that passes in the middle of the two cylinders, but they are not closed at the top.

The third component sees to this, an upper half casing that joins according to a horizontal flat surface that passes through the centre of the bearings and shuts off the driving shaft, which among other things is very easy to mount. On the top there's a rest plate for the cylinders. Despite this type of machining, the casing envelopes round the connecting rod perfectly, in accordance with the latest tendency. There is also a driving shaft, with crank at 180° that rests on 4 main bearings, and for this reason a balancing countershaft has been added to cancel the momentum of the first order inertial force, which are generated by the same inertial forces (equal and opposite to the dead centres) for distance between the two cylinders

VM also makes engines for Sidecar-cross and other fields of application too, and in any case, in the end, they are all tested in a well set-up test room, with the latest software and instruments, on the site.

MECHANICAL MACHINING

Going round VM Motor enables you to actually watch a complete production cycle of an engine (as we said, even the actual casting), which is even more refined if you think that they also make a beautiful 250 cm₃ parallel two-cylinder engine for the Superkart series

Therefore, they have all the machinery required to make the parts according to the established standard regulations, as requested by the market, but obviously, like any serious manufacturer should have. So we have computerised numerically controlled pluri-axis work centres that can easily and rapidly change tools, with very flexible pallets to house raw parts of any shape that have to be machine finished. The machining is the latest and most updated and we think that it is really as good as any available on the market.

STANDARD ROOM

You just cannot do without a standard room. Even if it is not entirely air-conditioned, you find everything you need for testing allowance and surface hardness that has been stamped on by thermal treatment. For example, you have Mitutoyo accuracy gauge that measures to a micron (a thousandths of a millimetre). The test is carried out according to the project, including tolerance allowed or, according to the specific part and the reference plane.

PRODUCTION

Obviously, the 125 KZ are most popular engines made by VM, but we were really awestruck

When we saw the 250 double-cylinder engine. Perhaps, because we don't know much about this here in Italy, a bit because of its manufacturing characteristics. Just think, the half-casings are made from aluminium solid for mechanical machining, such as milling, boring, tapping ... The 125 B/02 layout, the last of a solid family, quite young, of gear-engines are quite normal. Dry clutch on the right

