

NEW PRODUCT

BIG BORE RACING KIT

YAMAHA - MINARELLI HORIZONTAL ENGINE



ARE YOU READY TO TURN YOUR YAMAHA-MINARELLI HORIZONTAL ENGINE INTO A **RACING MONSTER**?

Here is the definitive solution for the iconic scooters such as **Aprilia Rally**, **Malaguti F10**, **F12** and **F15** and **Yamaha Jog**: the Athena race kit is composed of the innovative cylinder kit with all the necessary accessories to deliver the horsepower!

The innovative cylinder kit is riddled with necessary components designed for the intake such as, **three air filters** – all different shapes, **Race ready carburetors** (one $\varnothing 24$ mm with Power jet system and one $\varnothing 28$ mm) and a **Big Valve Kit** to supercharge your engine.

This package is made complete with new ignition kit, two selectable engine mapping and the artisanal exhaust, to unleash the power of this incredible machine on the asphalt.

Everything you need to transform your scooter, going from ordinary transportation to a very fast racing scooter!

TECH SPECS

	KIT ATHENA BIG BORE 070200	NEW ATHENA BIG BORE KIT P400485100098 / -99
CAPACITY	69,8 cm3	69,8 cm3
BORE	47,6 mm	47,6 mm
STROKE	39,2 mm	39,2 mm
COMPRESSION RATIO	13,5:1	13,8:1
POWER*	14-15 CV	17-19 CV

*this data may vary according to the different possible combinations of the parts used in the engine tuning

CYLINDER KIT

The Cylinder Kit incorporates the revolutionary technical ideas already implemented by Athena on the Minarelli Vertical Engine: the **new cylinder and its peculiar fixing system**, a set up originally reserved for engines designed with higher performance, such as the 2T Racing GP. The exclusion of the constraint of the studs has allowed the sophisticated **increase of the exhaust port with side boosters**, bringing a **significant increase in terms of power and torque**.



IGNITION KIT

From the **partnership between Athena and Selettra**, a historic Italian brand, who is recognized worldwide, a **new variable advance ignition kit** has been developed. Two racing mappings were created in the test room, one ideal for speed race testing and the other for acceleration tests. The **control unit with high calculation capacity** allows **perfect management of the advance at all engine revs**.



EXHAUST KIT

The exhaust system has been designed to ensure the right pressure within the expansion and the **optimization of the gas expulsion flow**. The sturdy **0.8 mm thick stainless steel sections** are TIG welded. All the details are carefully taken care of, from the fixing flange in laser-cut AISI316 stainless steel up to the very **light carbon terminal**.



CRANKSHAFT

The crankshaft included in this project has **lightened counterweights with aluminum inserts** for **improved balance** at every RPM. **Vibrations are almost eliminated**, in favor of greater longevity of the main bearings, washers and of the top end components. The **connecting rod is forged in 18NiCrMo5 steel** and has an **H profile**, two essential details to raise the level of **resistance and flexibility**. The Athena racing crankshaft is available in both Ø10 mm and Ø12 mm piston pins.



BIG VALVE KIT

This kit allows you to bring a **greater flow of incoming mixture** in order to **supercharge the powerful big bore cylinder**. The intake manifold allows application on a wider **reed valve with high resistance fiberglass petals (GRP)** and a **double flow guide** of Ø26 mm and Ø28 mm. This way **the flow stays homogeneous and stable**, to the advantage of a **regularity over the entire delivery curve**.



SPARE PARTS LIST

ITEM	DESCRIPTION	PRICE (VAT Excl.)
P400485100098	BIG BORE CYLINDER KIT Ø 47,6 mm PISTON PIN Ø 10 mm	€ 259,70
P400485160201	GASKET KIT	€ 11,80
S410485308037	CYLINDER HEAD	€ 40,07
S4C04760009A, -B, -C	FLAT HEAD PISTON Ø 47,54 / 47,55 / 47,56 mm, PIN Ø 10 mm	€ 60,86
MNB100140125	NEEDLE BEARING Ø 10 mm	€ 4,15
P400485100099	BIG BORE CYLINDER KIT Ø 47,6 mm PISTON PIN Ø 12 mm	€ 259,70
P400485160201	GASKET KIT	€ 11,80
S410485308037	CYLINDER HEAD	€ 40,07
S4C04760010A, -B, -C	FLAT HEAD PISTON Ø 47,54 / 47,55 / 47,56 mm, PIN Ø 12 mm	€ 60,86
MNB120170150A	NEEDLE BEARING Ø 12 mm	€ 8,83
P400485120012	RACING EXHAUST SYSTEM	€ 416,00
P400485175001	INTERNAL ROTOR IGNITION KIT	€ 336,81
S410000200009	AIR FILTER, FLANGE INSIDE Ø 50 mm OVAL	€ 27,04
S410000200010	AIR FILTER, FLANGE INSIDE Ø 50 mm CONE-SHAPED	€ 27,04
S410000200011	AIR FILTER, FLANGE INSIDE Ø 50 mm ROUND	€ 27,04
P400485135003	BIG VALVE SYSTEM WITH REED VALVE	€ 100,00
P400000680017	24 mm PWK CARBURETOR WITH POWERJET	€ 115,57
P400000680016	28 mm PWK CARBURETOR	€ 110,31
S410485320006	RACING CRANKSHAFT PISTON PIN Ø 10 mm	€ 139,05
S410485320007	RACING CRANKSHAFT PISTON PIN Ø 12 mm	€ 139,05

Find the complete application list on athena.eu