

# NEW



# MHR

MALOSSI HYPER RACING

## Cylinder Kit MHR TEAM Ø 52 for original crankshaft pin 12 (rod 42 mm)

### DRR Drx 90 2t LC

**3116919 € 367.50**

#### Technical Specifications Cylinder Kit:

- 7 port cylinder, H<sub>2</sub>O cooled, gravity-fed aluminium alloy casting, cermet coated cylinder sleeve diamond lapped
- 50 mm bore
- Domed shaped piston with single reinforced piston ring
- Ø 50 mm x 0.8 mm KDN5 cast iron piston ring
- Aluminium alloy modular head with calculated and oriented cooling circuit.



#### Technical features

CYLINDER KIT	COOLING	TIMING SYSTEM	MATERIAL	BORE mm	STROKE mm	CAPACITY mm	ADVANCE	PISTON RING CLEARANCE mm	SQUISH	COMPRESSION RATIO	SPARK PLUG
3116919	H <sub>2</sub> O	7 ports	Aluminium	52	42	89	16°	0,15	0,55	01:14.6	6314455.S0 IRIIDIUM IW 34

Cylinder spacer art. 0716344 as well as roller bearing for Ø 12mm pin art. 6611785B must be used in order to fit crankshaft art. 5316912.

## SPACER CYLINDER BASE 5 mm

**0716344 € 25.00**



**6611785B**  
**€ 9.95**



## MHR TEAM CRANKSHAFTS RHQ Rod 90 (stroke 42,3 mm)

**5316912 € 465.00**



Products to be used exclusively for racing in places specially designed for such activity according to the regulations of the competent sporting authorities. We accept no liability resulting from improper use.

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**MHR**  
MALOSI HYPER RACING

**Cylinder Kit Ø 52**  
**Big Bore Testa rossa 90 cc**  
**DRR Drx 90 2t LC**

**3116992 € 430.00**



**3116992 and 5316912**  
*(must be absolutely assembled together)*


**MHR TEAM CRANKSHAFTS RHQ**  
**Pin Ø 13 rod 90 (stroke 42,3 mm)**

**5316912 € 465.00**




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Use	Racing
Power range Ø 52	24-27 cv @13.000 rpm
Level of compatible elaboration	Shaft connecting rod 90 stroke 42,3




Carburettor  
Ø 28 mm



system trasmission  
**OVER RANGE MHR**  
furia rossa



Pump casing  
boring



**HARD**

### BIG BORE Testa Rossa 90 cc

*The new generation BIG BORE engine. Stud bolts, only for liquid-cooled scooters. (7 ports and exhaust crossbar - piston with 1 segment - modular head - required boring of original case or C-One Malossi case - engine shaft with connecting rod different from the original).*

Deriving directly from seven port technology, which animates the revolutionary Flanged Mount, BIG BORE Testa Rossa cylinders represent the latest success achieved thanks to the efforts and studies that Malossi has continued to devote to engines intended for original Piaggio and Yamaha cases and, with their unprecedented capacity of 90 cc, they allow the BIG BORE family to make a significant leap forward.

Externally almost indistinguishable from their flanged counterparts, BIG BORE Testa Rossa cylinders feature a stud bolt framework compatible both with original engines and with the C-One Malossi case. Even inside they are totally similar to Flanged Mounts, thanks to the renowned configuration with seven ports and dual exhaust port, with the only difference given by the limits set by the inner passage of the bolts that affects the size and development of the exhaust.

The head is once again modular, with new internal profiles specifically designed to increase the torque and feeling of the engine, now much brighter and even more progressive. The head cover is made of forged aluminium, red anodized and lathed in high precision CNC machines.

### Technical features

CYLINDER KIT	COOLING	TIMING SYSTEM	MATERIAL	BORE mm	STROKE mm	CAPACITY mm	ADVANCE	PISTON RING CLEARANCE mm	SQUISH	COMPRESSION RATIO	SPARK PLUG
3116992	H <sub>2</sub> O	7 ports	Aluminium	52	42,3	89,8	16°	0,15	0,55	01:14.6	6314455.S0 IRIIDIUM IW 34

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# OVER RANGE MHR ALUMINUM MALOSSI: THE RED FURY

Kit Over Range MHR Aluminum Malossi: High Performance *Scooter Transmission*

The transmission is one of the key components in a scooter. The kit Malossi MHR Aluminum Over Range is designed to improve efficiency and engine power, ensuring longevity and tuning flexibility.

The centrepiece of the new kit *Malossi variator* transmission remains the Multivar, in constant evolution, which is accompanied by two sets of rollers to adjust the operation of the transmission according to your needs. With the wide range of *variator rollers* available in our catalogue, the set-ups are virtually endless.

The variator's sliding roller ramps have been redesigned to maximize the transmission's performance. Malossi, always searching for perfection, has also revised the hub, in addition to chrome plating and grinding, it is subjected to a vibratory finishing process, one of the most recent and avant-garde techniques, resulting in a mirror like finish.

For the first time, the *variator Malossi* MHR Aluminum *Multivar* is supplied with the fixed half pulley - Ventilvar.

On the other side of the crankcase there is the new Torque Driver - Malossi Aluminium Rear Pulley System MHR Aluminum, now in aluminium for lightness and strength increase. The pulley is riveted to the hubs for maximum strength and to reduce the tolerance between the hub and the bushing. The surface roughness is just Ra 0.4.

The Torque Driver is made of aluminium, a material with exceptional heat dissipation, and was subjected to a micro perforation process to increase transmission belt grip and to keep it clean and efficient, expelling from the holes any heat created contaminants.

The drive belt - Malossi X K Belt, based on the technology developed for the maxi-scooter belts, has an extremely small cross section and intended for two-stroke scooter racing, guaranteeing grip and consistent performance.

The revolutionary *scooter transmission kit* - Over Range Malossi MHR Aluminum will soon be available at all Malossi dealers and online at Malossi Store.

**6116249 € 365.00**



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MALOSSI HYPER RACING

## MHR TEAM INNER ROTOR IGNITION

### 5515002 € 350,00

#### MHR Team ignition is a great innovation!!!

Manages multiple maps simultaneously without having to resort to a hand-held device, with just a simple click. Ability to shift the selected map by moving the OFFSET ( $\pm 2^\circ$ ).

The inner rotor ignition systems designed by Malossi are based on the state-of-the-art technology applied to racing. Such a new system resulted from the need to overcome the technical limitations imposed by conventional flywheel ignition, which cannot ensure consistent performance over 10,000 rpm and causes severe setting-up problems for racing vehicles.

We dramatically modified the control unit to create two new Inner Rotor Ignitions: MHR and MHR Team.

We made the control unit even more immune to interferences developing an uP STM8 - 8 bit microprocessor with processing speed of 20MIPS, guaranteeing spark timing with greater accuracy than prior versions!

The MHR version includes a control unit with variable spark advance timing, not adjustable.

The MHR Team includes a control unit with variable spark advance timing and with 3 trimmers:

- the first trimmer (MAPS) is for selecting the spark advance timing map
- the second trimmer (OFFSET) allows you to shift the selected map  $\pm 2^\circ$
- the third trimmer (LIM) used especially for 4-stroke engines, permits you to vary the rev limit between 11.500 RPM to 14.300 RPM and also allows you to disable the rev limiter

It also features 8 preset maps described as follows:

- 2 variable spark advance maps for 4 stroke engines
- 5 variable spark advance maps for 2 stroke engines
- 1 fixed spark advance map

The installation instructions graphically illustrate the best spark advance setup for different engines.



#### Technical features

##### CDI

Control unit with variable spark advance timing and with 3 trimmers:

- trimmer MAPS: selects the spark advance timing map
- trimmer OFFSET: shifts the selected map  $\pm 2^\circ$
- trimmer LIM: selects the rev limit (16 possible settings)

8 preset maps:

- 2 variable spark advance maps for 4 stroke engines
- 5 variable spark advance maps for 2 stroke engines
- 1 fixed spark advance map

- System based on a uP STM8 - 8 bit microprocessor with a processing speed of 20MIPS (Million Instructions Per Second).
- Reduced processing time, improved spark advance precision and stability.
- Hardware architecture with improved immunity to interferences.
- Temperature class 105°C cable.
- Compensation for flywheel fitting error of  $\pm 2^\circ$  with 0.5° increments via an external trimmer
- 8 spark advance tables selectable via an external trimmer
- Vector spark advance tables comprised of 24 breakpoints with linear interpolation.
- Adjustable rev limit via an external trimmer with 16 settings.
- Soft cut feature insures a gradual rev limit cut-off.
- 15 settings to adjust the rev limit between 11,500 RPM and 14,300 RPM with 200 RPM increments plus a setting to disable the rev limiter.

##### High voltage coil

- Capacitive discharge
- Ultra high efficiency
- Constant 30,000 V discharge voltage up to 20,000 rpm

##### Rotor-stator unit

- Small ( $\varnothing$  58 mm) and light inner rotor
- Permanent magnet rotor ensuring excellent performance
- Unprecedented efficiency with minimum weight

**WARNING :** with this kind of ignition the lighting set is disconnected.



**ATTENTION :** The control unit has an adjustable RPM limit function to prevent engine damage. Rotating the trimmer with a screwdriver will adjust the rpm limit between a range of 11,500 to 14,300, or exclude the limit function altogether. Every click corresponds to 200 RPMs.

Arrow position	RPM
0	11.500
E	14.300
F	Limiter switched off

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## QUAD Racing MHR Big Bore exhaust system

QUAD RACING EXHAUST SYSTEM "The Racing Exhaust developed on the racetrack for the racetrack".

It is one of the essential components intended for trophies, studied especially to increase the power of the engine at medium and high regimes. The Malossi Trophies are raced in all the world according to precise rules that require different Special Malossi Racing products for each category. This insures an optimum and homogeneous result for the various participants while utilizing the most advanced technologies. With the QUAD RACING exhaust systems Malossi expands its range of trophy exhaust systems, that represents the highest performances in the sector. Another Malossi' initiative which provides an opportunity for the young to participate in a two-wheeled sport and become the riders of the future.



## DRR Drx 90 2t LC

**3214764 € 398.82**

### Technical features

#### EXHAUST

- in special sheet steel (0.8/0.10 mm thickness) manufactured using robotic T.I.G. and M.I.G. welding and manual torch welding with oxy-acetaline, artiginally peened. Clear coat finish.

#### SILENCER

- in aluminum with satin finish.



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