

■ 91cc Bore Up Kit (R-Stage / Super head+R) For Ape50 (carburetor model) / XR50 Motard

A bore up kit that allows you to increase a 50cc engine to 91cc with the stock crank shaft. Developed for installation on our R-Stage / Super Head+R cylinder heads, this component provides a significant boost in output from the stock 50cc. Compliant with under 100cc race regulations, this allows you to enjoy many races.



■ 91cc Bore Up Kit (R-Stage / Super head+R)

For Ape50 (carburetor model) / XR50 Motard

Previously there were two types of Ape 50 / XR50 Motard bore kits available: our S Stage 80cc lite bore up kit and the R Stage / Super Head +R bore & stroke up 124 cc kit. The economical light bore up kit was 80cc using stock heads so even if you changed the carburetor, the output was almost the same as the Ape 100cc stock engine.

Also, while the R Stage 124cc and Super head+R 124cc kits are high output, the stroke up specs mean changes to a special crank shaft, stud bolt, etc. are required, making the costs of kit parts rather high. This 91cc kit offers significant output increase that is greater than the stock 50cc or Ape100 stock engine for a reasonable price.

The 91cc kit comes in two cylinder head types: the "R-Stage", which offers superior cost performance and the "Superhead +R", which includes a roller locker arm, a newly designed cam shaft holder, and a dual-end bearing cam shaft for superior durability and cooling.



Cylinder



With stick sensor



Piston

■ Cylinder (Bore : 57mm)

Since the cylinder heads are complete with outlet to the oil cooler, you can purchase our optional oil cooler kit to cool engine temperature. When setting up as a large volume , high output engine, this is an effective preventative measure because engine temperature increases can result in oil film breaks. Also, since it is possible to install a temperature sensor on the cylinder, you can purchase our (separately sold) compact LCD thermometer or meter with temperate gauge, which will allow you to measure the cylinder temperature with Takegawa original sick temp sensor.

■ Piston

Compression ratio (R-Stage 11.0 : 1/Super head+R 11.7 : 1) Their piston skirt are molybdenum coated for better brake-in.

※Case boring is required on the crank case when installing this 91cc kit. We offer this service.

※The increase in output requires that the clutch, carburetor, and exhaust system must be changed.

※Only attached camshaft can be used. (R-Stage : SX-25 / Super head+R : SR-25)

※Each kit is configured with an optional cam shaft but only specified cam shafts can be installed together with this component. Simultaneous installation could result in interference from the valves and pistons, resulting in serious engine trouble.

■ Detailed specs of Cylinder head



R-Stage

■ R-Stage

Compared to the stock cylinder head, valve and port diameter are increased, providing engine performance and output characteristics not possible with the stock head. Not only is diameter increased, but we also factor intake efficiency into combustion chamber shape and port shape balance to achieve a cylinder head shape that maximizes the R Stage output performance.

- Port diameter Intake : 29mm/Exhaust : 19mm
- Valve diameter Intake : 27mm/Exhaust : : 23mm
- Valve stem shaft diameter : Both intake and exhaust 5mm
- Valve spring : Double springs (Inner spring and outer spring)
- Valve spring retainer : Steel
- Sports camshaft and rocker arm
- The sports camshaft and dedicated rocker arm work in significantly increase effect angle and valve lift to provide higher output performance for the R-Stage.



Super head+R

■ Super head+R

Following up with the large-diameter valve and smooth intake port providing higher output for the Superhead (Stage 3) , this high performance cylinder head uses the popular roller locker arm and newly constructed oil passage to achieve even greater output and durability.

- Port diameter Intake : 29mm/Exhaust : D shape design port
- Valve diameter Intake : 28.5mm/Exhaust : 23.5mm
- Valve stem shaft diameter : Both intake and exhaust 4.5mm
- Valve spring : Double springs (Inner spring and outer spring)
- Valve spring retainer : Steel

Optional parts : Titanium Valve spring retainer [01-12-084](#)

- M8 spark plug

The roller rocker arms will reduce the friction against the camshaft which the genuine shovel type rocker arms create. The built-in roller bearings of rocker arms act along the cam profile smoothly from low-to-high rev. The oil passage of camshaft holder will joint with oil passage of the head structurally. As the roller rocker arms are forged aluminum, the weight including the roller bearing is less than that of the stock one. so that the lubrication to the details has been achieved. The route to lead the oil to the hollow camshaft with oil jet is also bored to prompt the lubrication to camshaft or cam chain.

■Bore Up Kit 91cc (R-Stage / Super head+R) For Ape50 (Carburetor) / XR50 Motard

■R-Stage Bore Up Kit 91cc (SX-25 Camshaft)



Name	R-Stage Bore Up Kit 91cc (SX-25 Camshaft)
Applicable model	Ape50 (AC16-1000001~1599999) XR50 Motard (AD14-1000001~)
Item number	01-05-0228

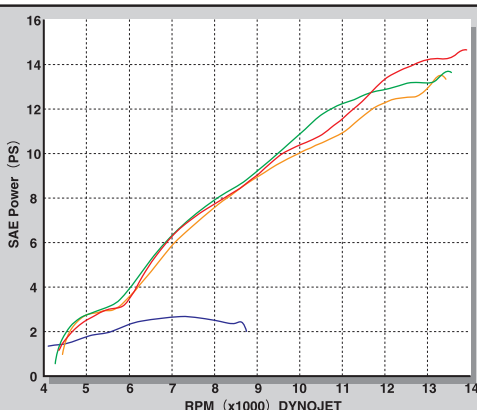
■Super head+R Bore Up Kit 91cc (SR-25 Camshaft)



Name	Super head+R Bore Up Kit 91cc (SR-25 Camshaft)
Applicable model	Ape50 (AC16-1000001~1599999) XR50 Motard (AD14-1000001~)
Item number	01-05-0230

■Note

- ※Case boring is required on the crank case when installing this 91cc kit. We offer this service.
- ※The increase in output requires that the clutch, carburetor, and exhaust system must be changed.
- ※Only attached camshaft can be used. (R-Stage : SX-25 / Super head+R : SR-25)
- ※Each kit is configured with an optional cam shaft but only specified cam shafts can be installed together with this component. Simultaneous installation could result in interference from the valves and pistons, resulting in serious engine trouble.



■Graph of power output

- ※To prevent the engine from getting damaged, keep specified rpm range.
- ※Tested at the condition of our test facility, actual power may vary.

- Super head+R Bore Up Kit 91cc+KEIHIN PE24 Carburetor Kit+BOMBER L exhaust system
- Super head+R Bore Up Kit 91cc+KEIHIN CR mini Carburetor Kit+BOMBER L exhaust system
- R-Stage Bore Up Kit 91cc+KEIHIN PE24 Carburetor Kit+BOMBER L exhaust system
- Stock engine+Stock exhaust system

■Carburetor Kit



03-05-0195



03-05-0194

Name	KEIHIN CR mini Racing Carburetor Kit
Note	Need racing throttle kit.
Item number	03-05-0195

Name	KEIHIN PE24 Carburetor Kit
Note	Air filter, connecting tube and throttle are included in this kit.
Item number	03-05-0194

■Clutch Kit

- **5-disc Heavy-duty Clutch Kit** : Prevent clutch slipping that sometimes occurs when bore kits are used to customize to a high output engine. Compatible with the stock clutch cover
- **Special Clutch Kit** : 5-disk heavyduty clutch kit includes a die-cast aluminum clutch cover. The die-cast aluminum clutch cover is complete with an oil outlet to the oil cooler.
This component also employs an oil line construction allowing you to operate thermostat functions. (Patented construction)
- Thermostat unit is optional. Paper cartridge oil filter
- **Dry Clutch Kit** : Since the clutch component is on the exterior, it provides superior cooling effect and is not subjected to resistance from the oil so clutch transitions are improved. Furthermore, deterioration due to clutch disk abrasion and heat are preventing and the impact on the engine is reduced. Paper cartridge oil filter
By using Kevlar friction disks and using a total of 5 friction disks, this component is also compatible with high-power engines.



02-01-0310



02-01-5031



02-02-0112

Name	5-disc Heavy-duty Clutch Kit
Item number	02-01-0310

Name	Special Clutch Kit (Die-cast Clutch cover)
Item number	02-01-5031

Name	Dry Clutch Kit (Sand cast Clutch cover)
Item number	For Stock Mission 02-02-0112 For TAKEGAWA 6-speed close ratio Mission 02-02-0132

■Exhaust system

- **Racing exhaust system for Ape**
: Research and development for racing performance with lightweight carbon canister. Great for racing and serious riding.
- **Racing exhaust system for XR50/100 Motard**
: Research and development for racing performance with lightweight carbon canister. Great for racing and serious riding.
Can be set O2 sensor and AF meter.



04-01-0016



04-01-0022

Name	Racing exhaust system for Ape
Item number	04-01-0016

Name	Racing exhaust system for XR50/100 Motard
Item number	04-01-0022

■Oil cooler Kit

- **Compact cool AW** : Compare to previous cooler units, this component is more compact and includes as standard the oil cooler plate and oil cooler guard. Available in two types (3 fin/5 oil line and 4 fin/ 5 oil line)
- **Attaching the oil cooler main unit** : The following kit is installed on the Ape · XR50/100 Motard with the cooler unit positioned vertically on the frame. For oil outlet, both our cylinder and the die-cast clutch cover oil outlet are compatible.
- Rubber hose type kit. ■ Ape has horizontal mount type oil cooler kit.



09-07-2154

Name	Compact cool AW Kit (Rubber hose) (3-Fin 4-Oil line)
Item number	09-07-2153

Name	Compact cool AW Kit (Rubber hose) (4-Fin 5-Oil line)
Item number	09-07-2154