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[www.ktm.com](http://www.ktm.com)

**XC** 150 XC 250 XC 300 XC 250 XC-F 350 XC-F  
**XC-W** 200 XC-W 250 XC-W 300 XC-W 250 XCF-W 350 XCF-W 450 XC-W 500 XC-W  
**EXC** 350 EXC 500 EXC

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200 XC-W



250 XC-W



MODEL RANGE 2-STROKE XC-W

300 XC-W



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READY TO RACE

250 XCF-W



350 XCF-W  
350 EXC-F



MODEL RANGE 4-STROKE XC-W & EXC

450 XC-W



500 XC-W  
500 EXC

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MY 1987: KTM 350 LC4

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MY 2012: KTM 350 XCF-W



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## Frame

- » Completely new frame design with PDS
- » New cast swing arm (.7lbs/300 g lighter)
- » More central shock mount
- » Higher torsional rigidity (triangle profiles 8 mm wider = 30% stiffer)
- » Reduced longitudinal stiffness
- » Isolated shock absorber forces



## Suspension

- » New WP PDS mono shock (7 mm longer)
- » New preload adjuster
- » Reworked front fork
  - New oil seal and dust seal by SKF
  - New bushings with improved Teflon coating for better sensitivity and durability
- » Fully adjustable suspension





## Fuel Tank

- » New 2.51gal/ 9.5 liter translucent fuel tanks for 4-stroke models
- » New 2.64gal/ 10 liter translucent fuel tanks for 2-stroke models
- » 3.43gal/ 13 liter tanks for all models available in PowerParts
  
- » Integrated fuel pump and regulator for 4-strokes





## Airbox

New design for all models, increased volume

- » Excellent protection of Twin-Air filter
- » No-tools air filter access
- » Quick change of filter
- » New intake boots for each model
- » Performance increase



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## Bodywork

- » New bodywork with perfect ergonomics and excellent contact points
- » New bodywork utilizes the same new re-inforced rear fender design like SX/XC
- » New white number plates
- » New handguard mount and flag design

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## Lighting

- » New competition headlight and taillight for 4-T XC-W models
- » New design taillight and license plate holder for EXC models
- » EXC models are equipped with DOT approved headlight, taillight and turn signal indicators





## Wheels XC-W

New EXCEL AL7 rims, silver anodized with stripes

- » Less damage
- » Lighter appearance

New zinc-/nickel coated spokes

- » Shiny coating
- » Improved corrosion resistance

CNC machined hubs

- » High-End quality

New high-strength aluminium nipples

- » Weight reduction: .44lbs/ 200 g per wheel

- » New Dunlop GEOMAX MX51 tires







## Wheels EXC

New Giant rims

- » Black with black spokes/ silver spoke nipples
- » Unique look for EXC models

CNC machined hubs

- » High-End quality

Metzler Six Days Extreme DOT offroad tires



## Silencers

New silencers for all 4-strokes

- » New profile
- » New end cap with new screen type spark arrestor
- » Larger volume
- » Lower noise level

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## Cooling System

Integrated routing integrated in the frame

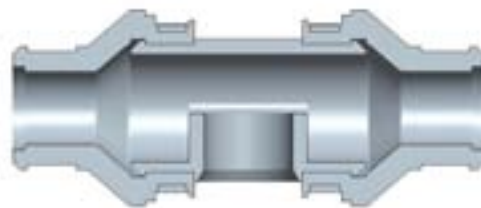
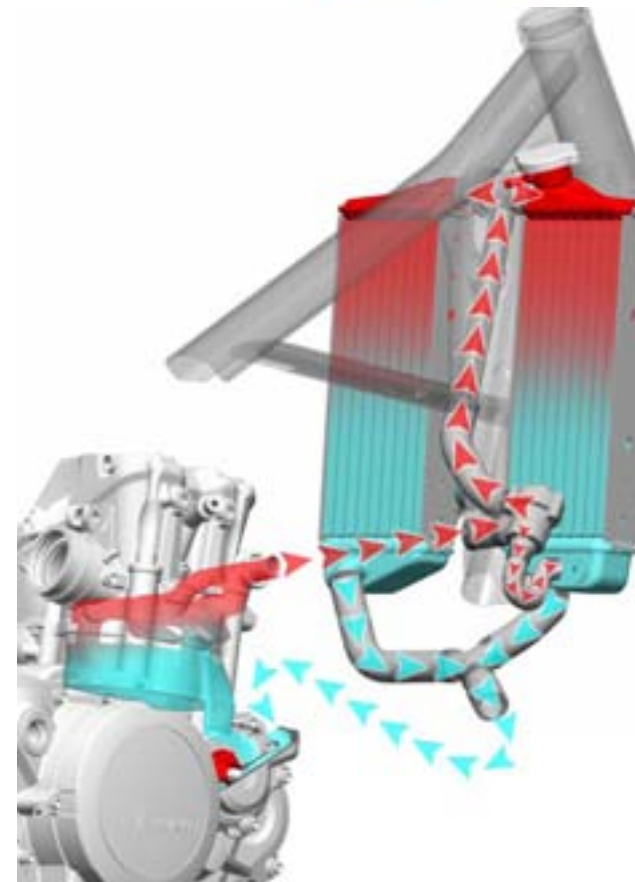
- » Simple mounting of radiators
- » No tubes behind the radiators = better airflow

New T-connector

- » Improved fluid flow
- » Better heat dissipation

450/500 XC-W and 500 EXC fitted with radiator fan

- » improved cooling at low speeds



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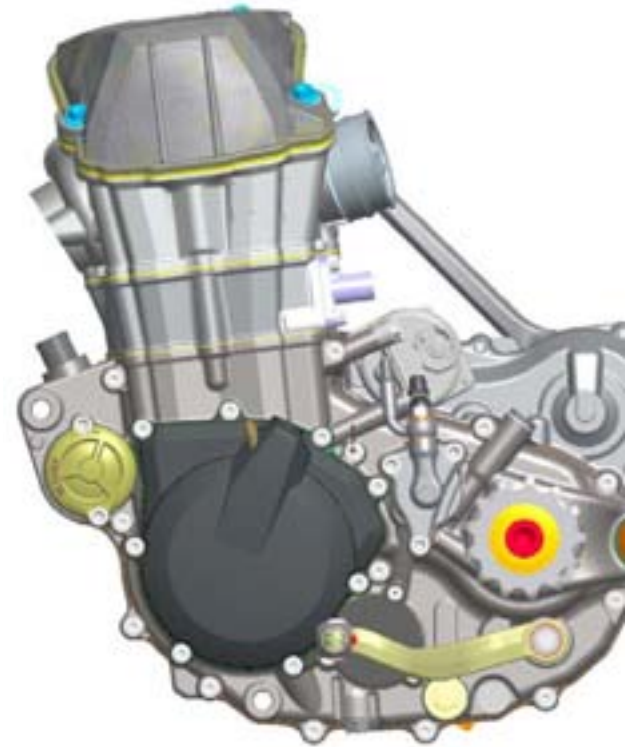
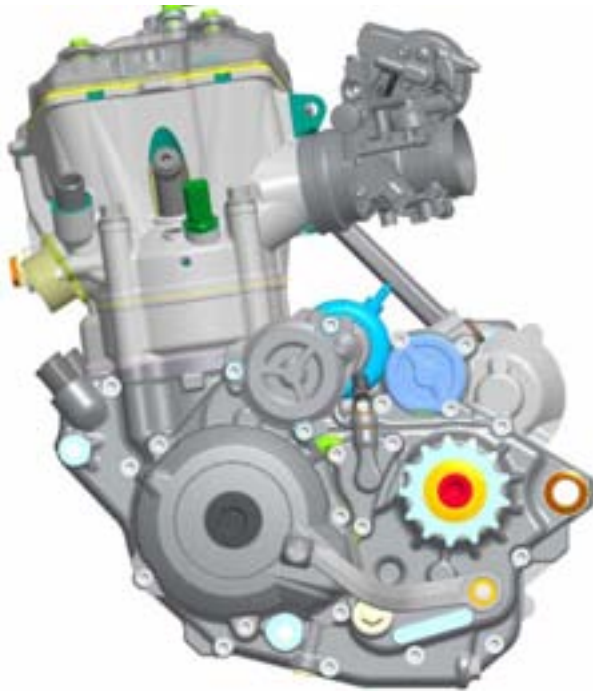
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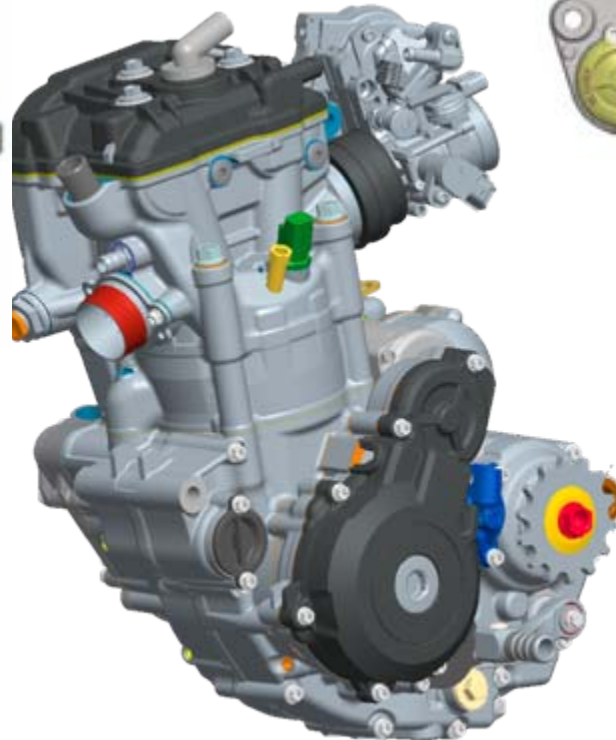


# NEW 4-Stroke Engines XC-W & EXC

250 XCF-W



450/500 XC-W  
500 EXC



350 XCF-W & EXC-F

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## Engine Management (EFI)

- » All 4-strokes have the latest Keihin EFI
- » 42 mm throttle body
- » Automatic temperature & altitude compensation
- » Spontaneous power delivery

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## 250 XCF-W Engine

- » New engine case left side
- » New electric starter system
- » Stronger stator and new cover
- » New cylinder head with optimized intake ports
- » Electronic Fuel Injection
- » Significantly improved power delivery

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## 350 XCF-W Engine 350 EXC-F Engine

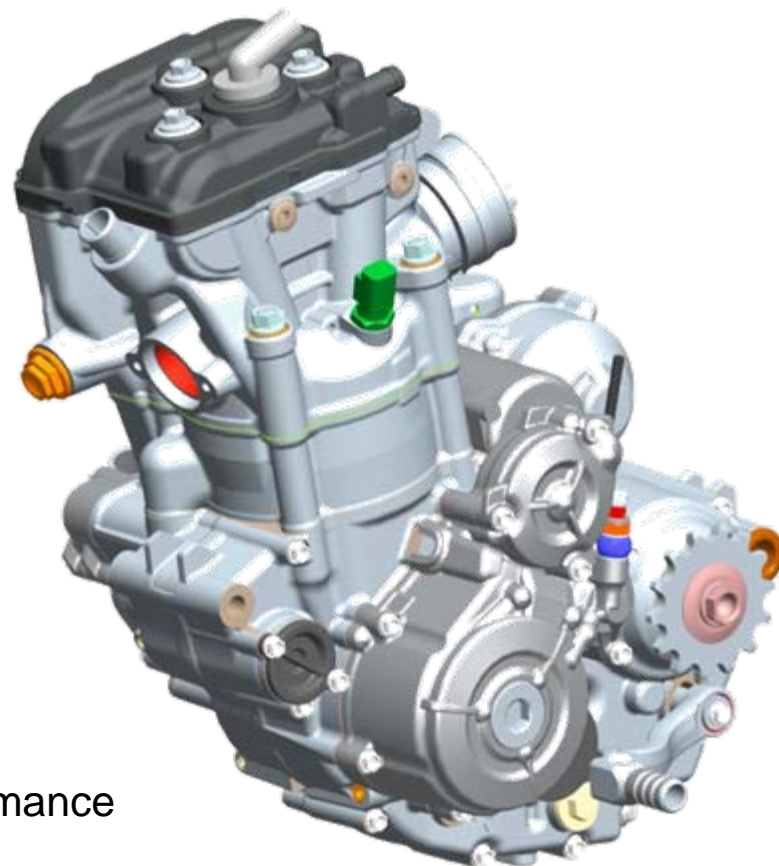
### Development targets

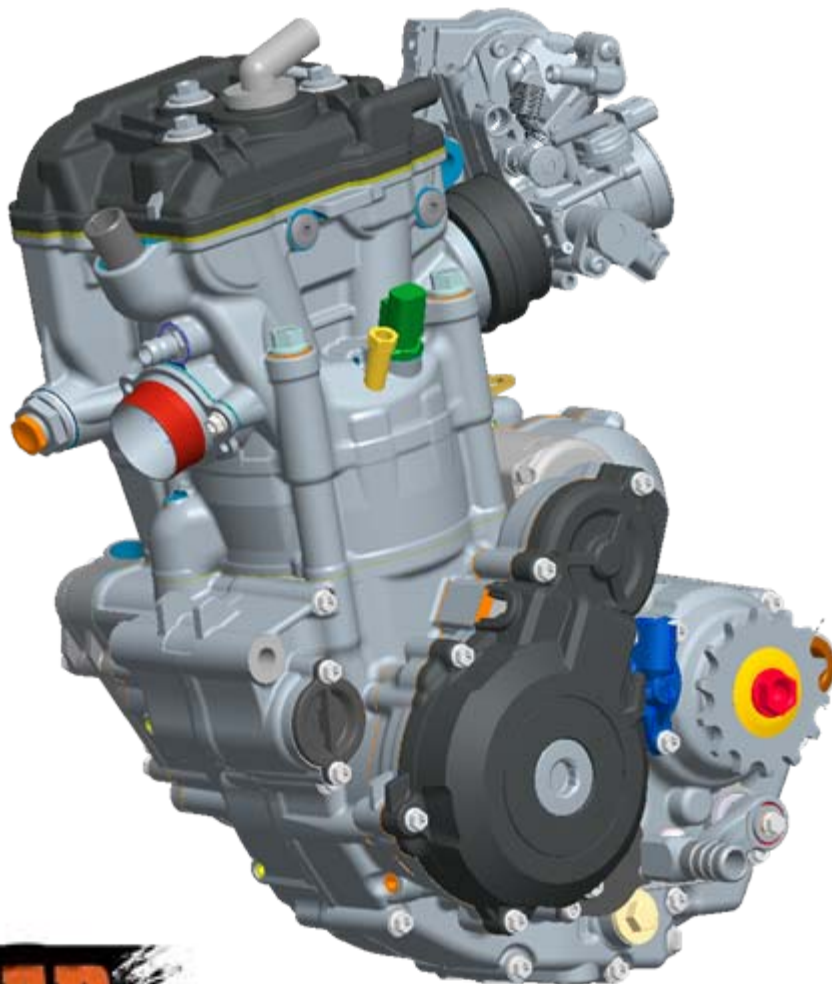
#### 350 SX-F

- » Low weight
- » Compactness
- » Performance
- » Rideability

#### 350 XCF-W / EXC-F

- » Preserve advantages of 350 SX-F
- » Best package of rideability and performance for Enduro use





## Weight

- » Total weight 62.8lbs / 28.5 kg including
  - Electric starter
  - Kickstart internals
  - Exhaust flange
  - No oil

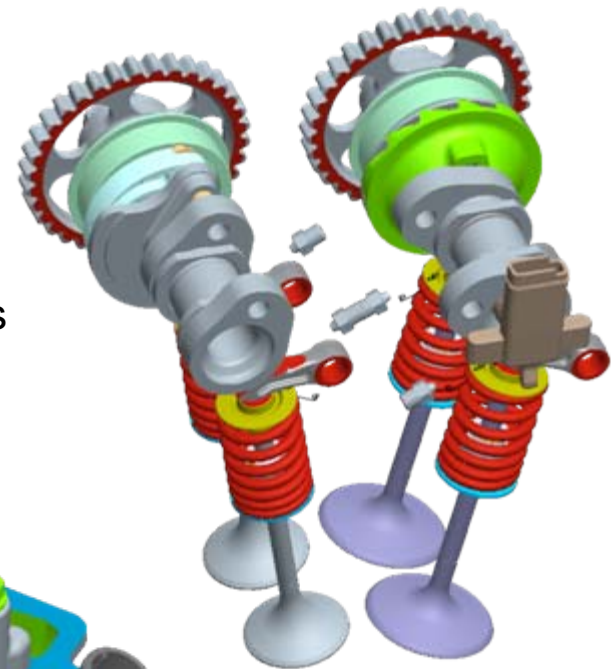
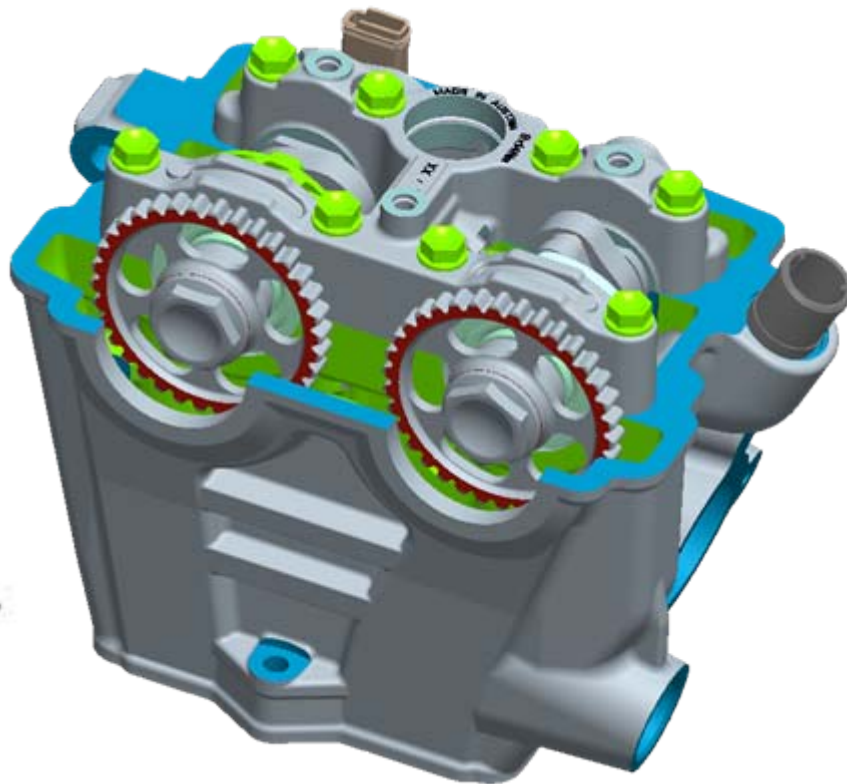
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## DOHC Cylinder head

- » New camshafts for improved low end torque
- » 4 ultra-light titanium valves (intake 36.3 mm, exhaust 29.1 mm) in combination with small 8 gram DLC coated finger followers
- » Valve springs with reduced spring force
- » New spring retainers and spring seating washers
- » 12,000 RPM rev limiter





## Cylinder & Piston

Reduced compression ratio from SX-F – 13.5 to 12.3

- » New piston with reduced dome height and lighter weight
- » Longer cylinder
- » Smooth engine characteristics for enduro



## Crank Shaft

New crank webs

» heavier crank webs provide more inertia for smoother power delivery and better traction.



## Counter Balancer Shaft

Lateral, multi-functional balancer shaft

- » Works as the counter balancer, water pump, intermediate gear and drive pinion gear for the camshaft
- » Efficient reduction of vibrations
- » No tungsten inserts because of the lighter weight piston and lower RPM
- » Allows for a compact engine design

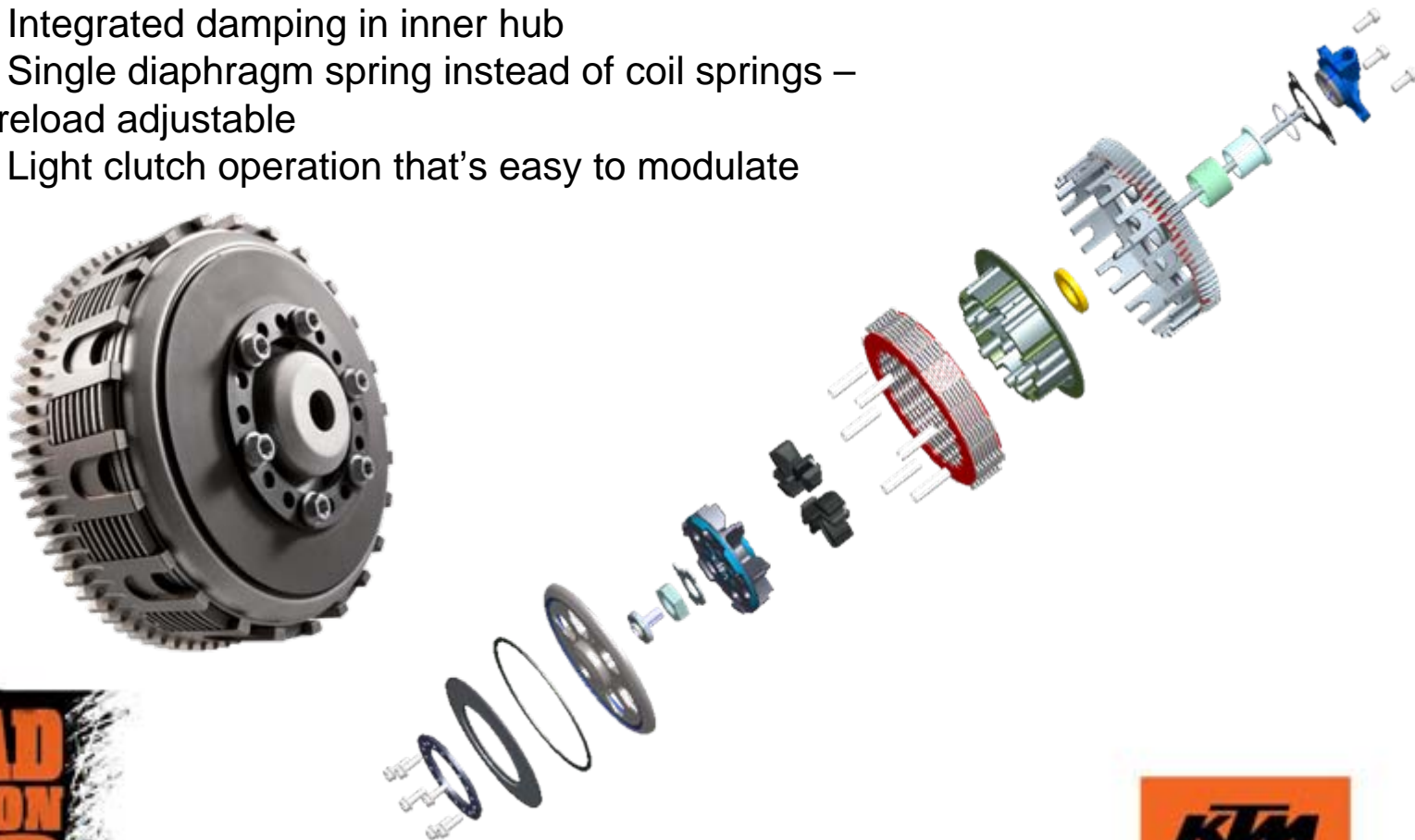




## Clutch

Newly developed clutch unit

- » Steel billet basket for unbeatable reliability
- » New design allows for thinner steel discs and thinner overall design
- » Integrated damping in inner hub
- » Single diaphragm spring instead of coil springs – preload adjustable
- » Light clutch operation that's easy to modulate



## Transmission

Newly developed 6-speed Enduro gearbox

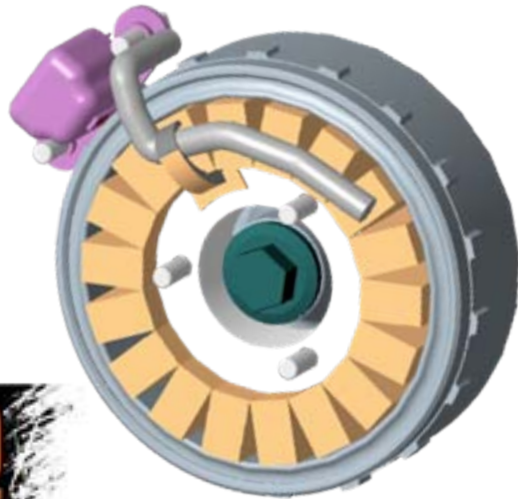
- » Precise shifting
- » Same gear ratios as the 250/300 XC-W

1 <sup>st</sup> gear	14:32
2 <sup>nd</sup> gear	16:26
3 <sup>rd</sup> gear	20:25
4 <sup>th</sup> gear	22:23
5 <sup>th</sup> gear	25:22
6 <sup>th</sup> gear	26:20



## Electrical

- » 196W EFI stator (increased from 130W) for EFI and lighting
- » Oil jet for generator cooling
- » Higher mass of inertia than SX-F stator
- » One-way clutch mounted in rotor
- » New cover for the increased size of the stator







## Starter

- » Proven electric starter plus Kickstarter

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## 450/500 XC-W Engine 500 EXC Engine

### Development Targets

- » **Lowest possible weight**
- » **Smallest possible packaging**
- » Easy maintenance and general simplification
- » Maximum performance and rideability
- » Improved durability and quality
- » Takeover of proven parts from predecessor

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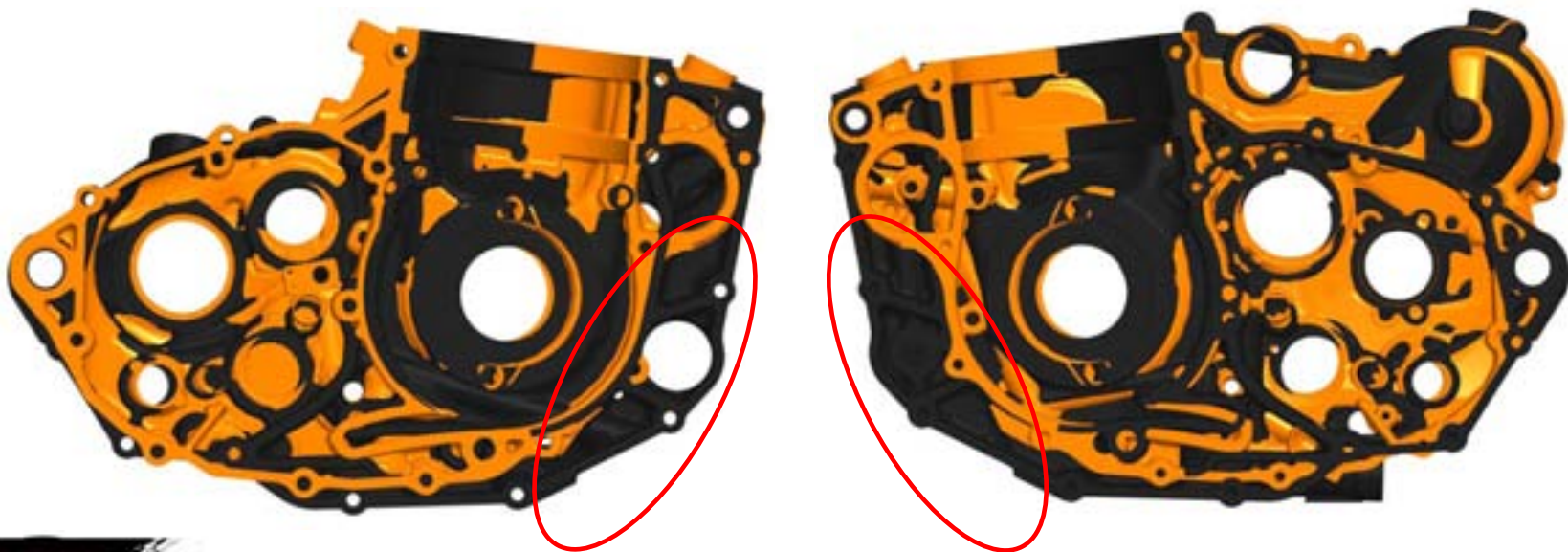
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## Packaging / Weight Savings

Engine case

- » New die-cast instead of sand-cast – increases precision in the casting for quality and light-weight
- » Special aluminum alloy with high ductility (ability to deform) to help with impacts from debris while riding
- » Only one oil circuit instead of two separated circuits
- » Weight reduction: 4lbs/ 1.8kg to engine case MY11



Orange = MY2012 Design  
Black = MY2011 Design

The KTM logo is displayed in white on a black background.

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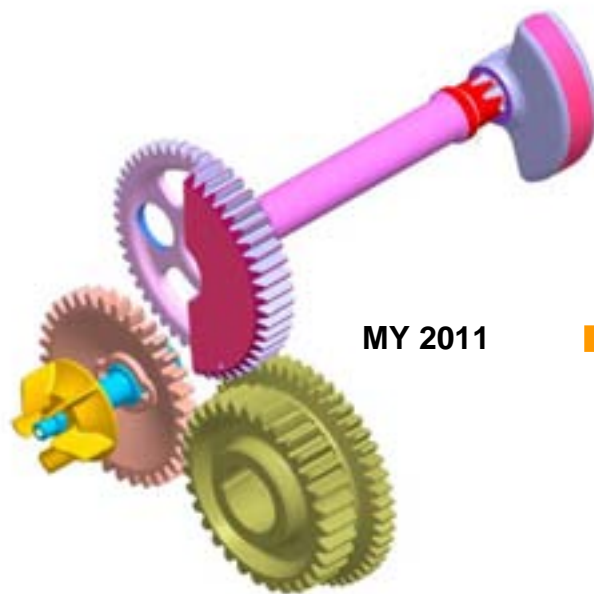
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## Packaging / Weight Saving

Balancer shaft / crank shaft and piston

- » Reduction of oscillating masses (450 XC-W → 15% / 500 XC-W/EXC → 20%)
- » Lateral balancer shaft with integrated water pump
- » Big packaging advantage and simplification!
- » Weight reduction: 1.1lbs/ .5kg to MY11



MY 2011



MY 2012

## Benefits

- » Engine weight reduction of 5.5lbs/ 2.5kg
- » Due to the engine size reduction the frame as been reduced in size as well.
- » Better ground clearance
- » Class leading handling and rideability
  
- » Benchmark in this category!

**Light Orange = MY2012 Engine Design**  
**Black = MY2011 Engine Design**



**Dark Orange = MY2012 Frame design**  
**Grey = MY2011 Frame design**

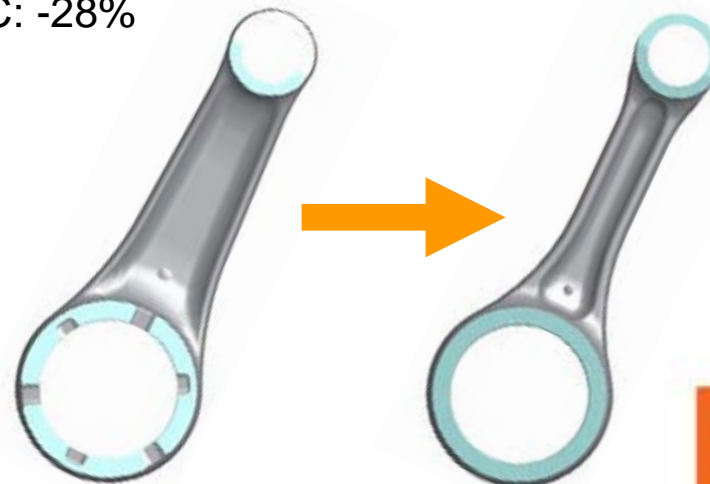


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## Crank Shaft & Piston

- » Displacements: 449.3 / 510.4 cc
- » Bore: 95.0 mm
- » Stroke: 63.4 mm (450 XC-W),  
72.0 mm (500 XC-W, EXC)
  
- » New weight optimized pistons:  
450 XC-W: - 14%; 500 XC-W/EXC: -19%
- » New high performance piston rings for  
reduced oil consumption
  
- » New ultra light conrod made by PANKL  
450 XC-W: - 20%; 500 XC-W/EXC: -28%  
oscillating masses!



MY 2011

MY 2012



## Valve Train

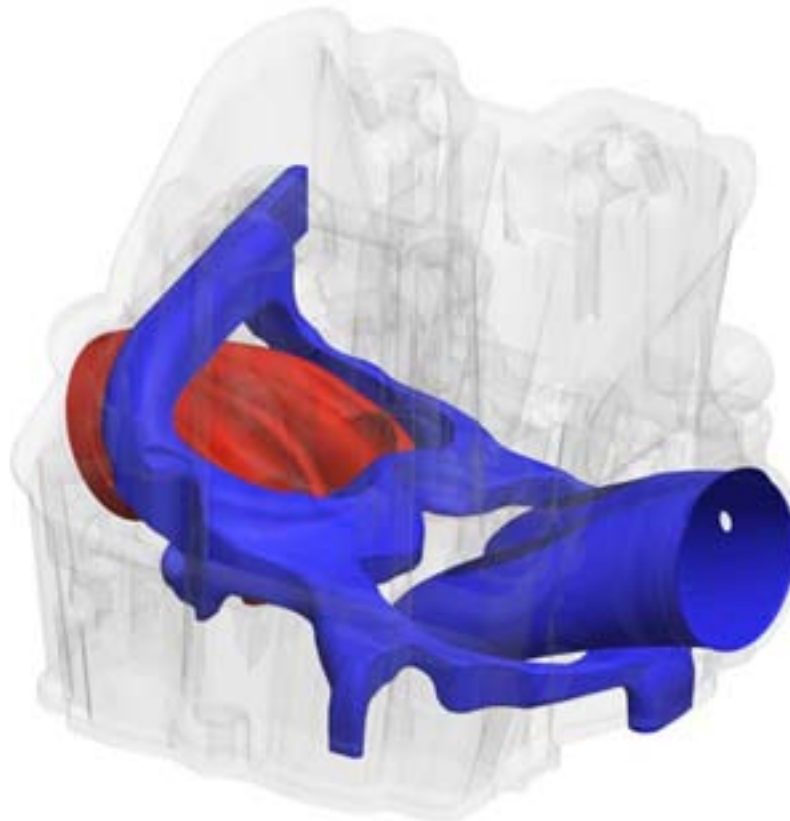
Valve drive carried over from the predecessor except:

- » New chain guides
- » New spring loaded mechanical chain tensioner with a ratchet stop instead of hydraulic chain tensioner – simpler and lighter weight design



## Cylinder Head

- » New inlet and exhaust port design
- » New design of combustion chamber
- » New water jacket

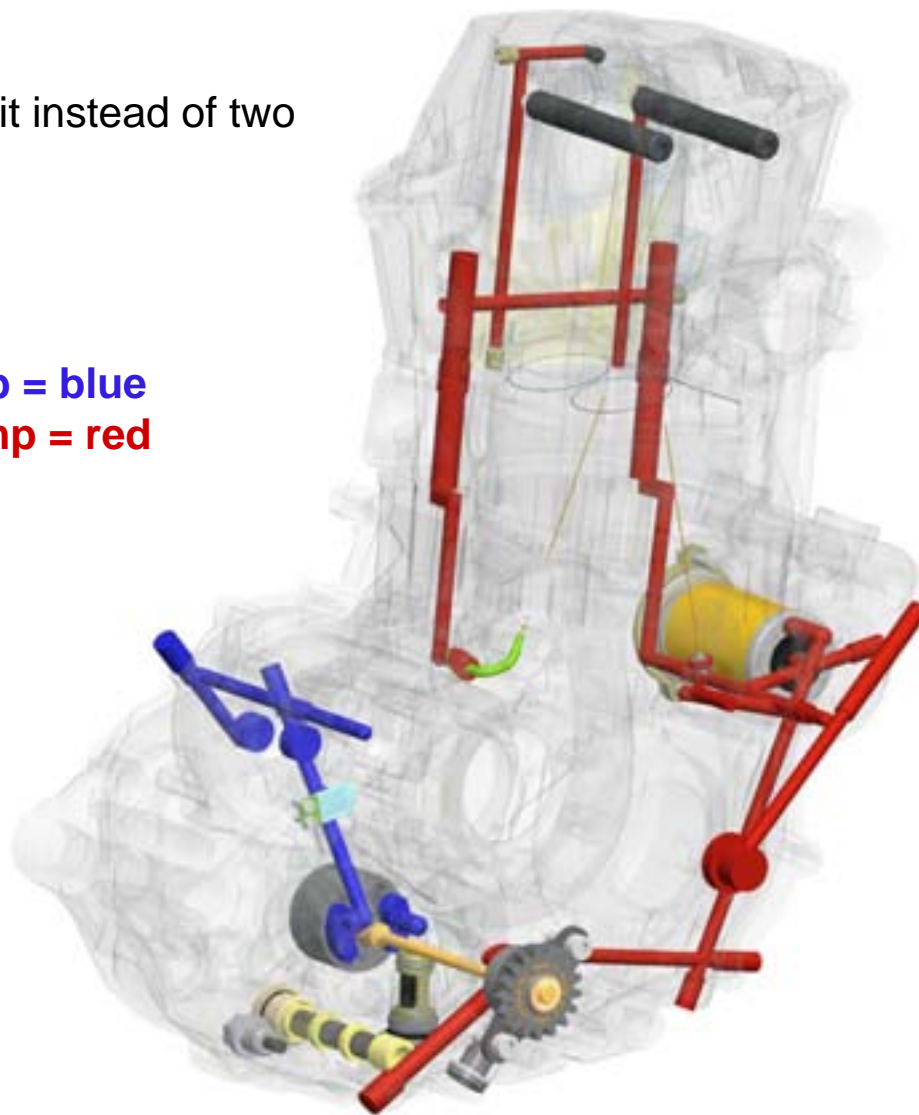


## Oil Circuit

» One oil circuit instead of two

Suction pump = blue

Pressure pump = red





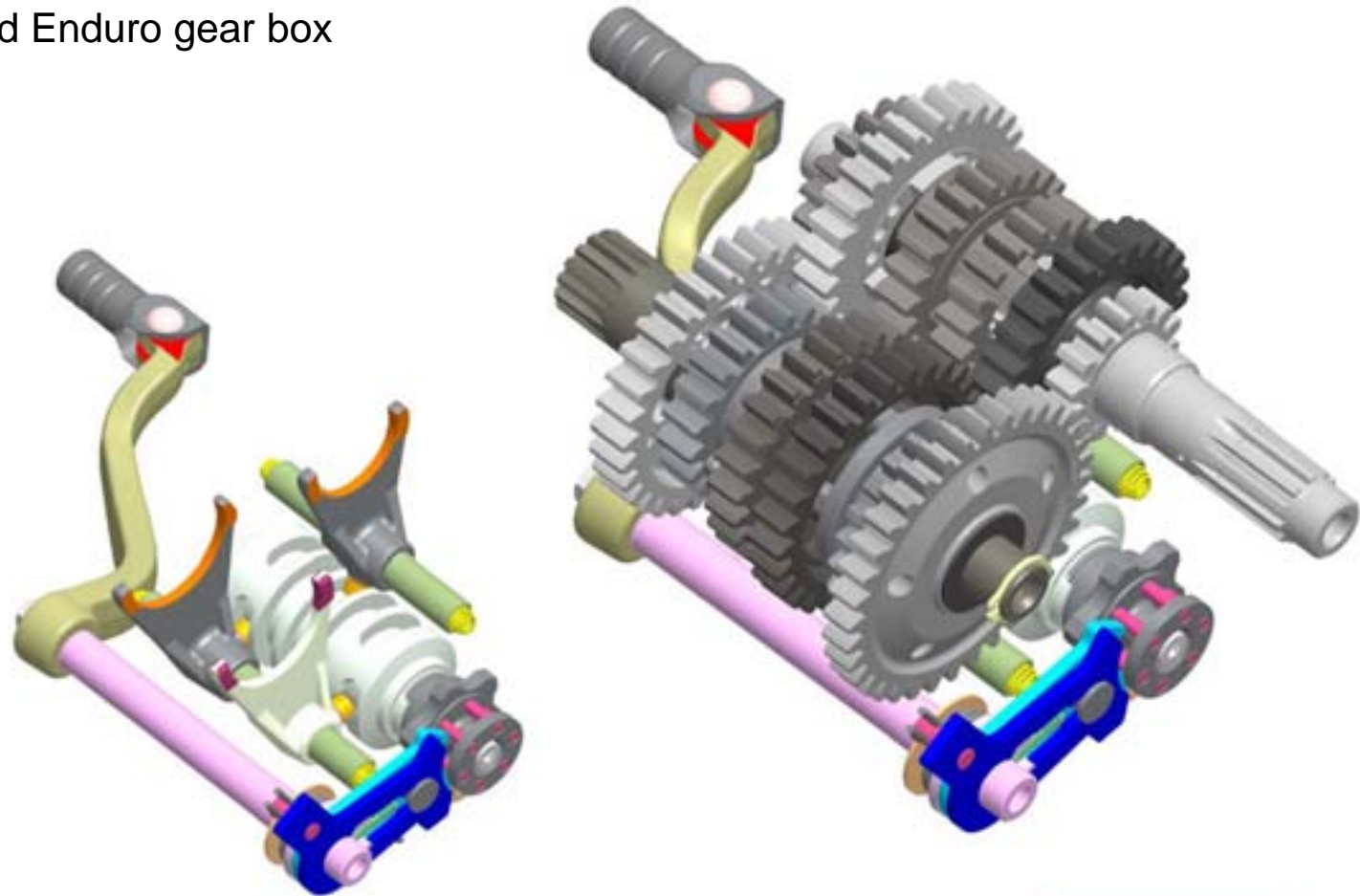


## Clutch

- » Smaller packaging (6.5 mm less width)
- » Steel billet basket for unbeatable reliability
- » Integrated damping system
- » Single diaphragm spring instead of 4 coil springs – preload adjustable
- » 8 friction plates – 9 intermediate discs
- » Less hand force on the clutch lever
- » Less weight

## Transmission

» 6-speed Enduro gear box



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## Starter

- » New electric starter motor
- » New kickstarter



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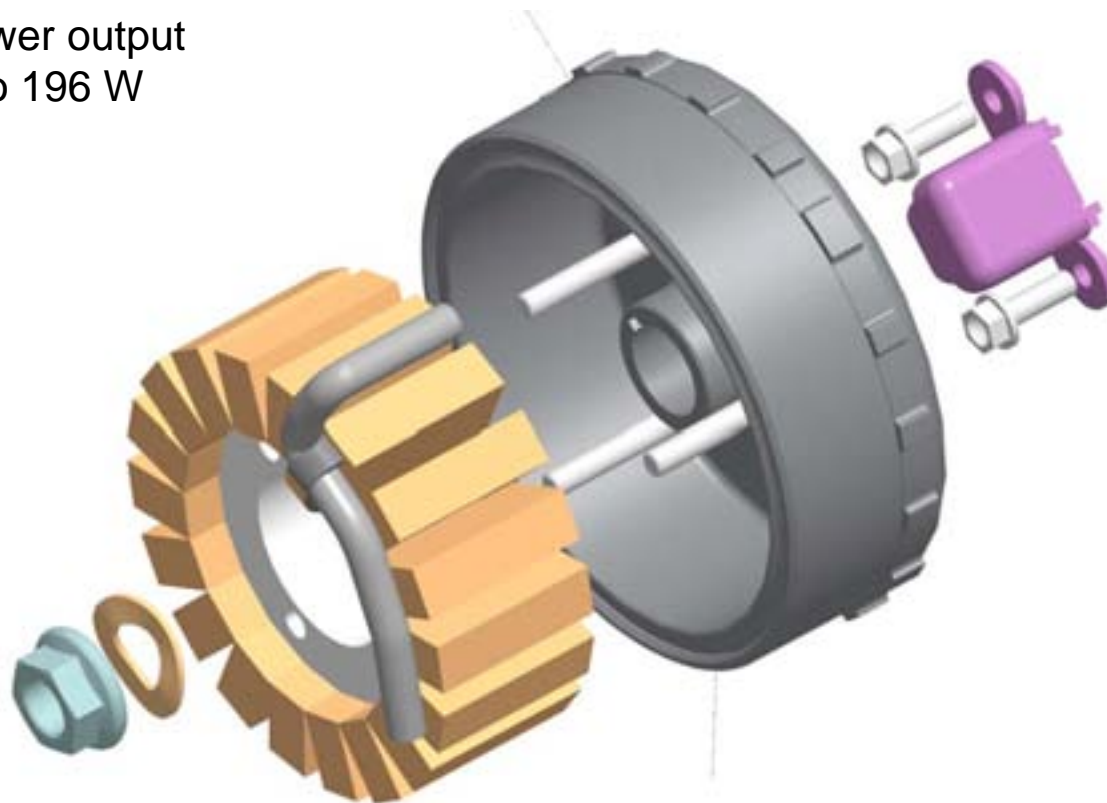
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## Alternator

- » Increased power output from 140 W to 196 W



## 200 XC-W

- » New frame and swingarm (PDS)
- » New PDS shock
- » New Excel wheels
- » New bodywork
- » New airbox and intake boot
- » New ignition curve for smoother  
ridability
- » New handguard mount and flag  
design
- » New kickstarter (-80 g, better ergo)



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## 250/300 XC-W

- » New frame and swingarm (PDS)
- » New PDS shock
- » New Excel wheels
- » New bodywork
- » New airbox and intake boot
- » New reed valve block
- » New cylinder for 300 XC-W



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## 250 XCF-W

- » New DOHC EFI engine tuned for enduro
- » New cylinder head with optimized intake ports
- » New electric start system (plus kickstart) and stronger stator - 196W
- » New frame and swingarm (PDS)
- » New PDS shock
- » New Excel wheels
- » New bodywork
- » New airbox and intake boot
- » New silencer and sparky
- » New translucent fuel tank
- » New handguard mount and flag design



## 350 XCF-W & 350 EXC-F

- » New DOHC EFI engine tuned for enduro
- » New cams, valve springs, piston, crank, balancer shaft
- » New single diaphragm spring clutch
- » New electric start system (plus kickstart) and stronger stator - 196W
- » New frame and swingarm (PDS)
- » New PDS shock
- » New Excel wheels (XCF-W)
- » New Giant wheels (EXC-F)
- » New bodywork
- » New airbox and intake boot
- » New silencer and sparky
- » New translucent fuel tank
- » New handguard mount and flag design
- » New more durable taillight / license plate holder (EXC-F)



350 XCF-W

## 450/500 XC-W & 500 EXC

- » New SOHC EFI engine tuned for enduro 5.5lbs lighter
- » New die-cast cases – one oil circuit
- » New multi-function balancer shaft
- » New lighter piston and PANKL con rod
- » New single diaphragm spring clutch
- » New electric start system (plus kickstart) and stronger stator - 196W
- » New frame and swingarm (PDS)
- » New PDS shock
- » New Excel wheels (XCF-W)
- » New Giant wheels (EXC)
- » New bodywork
- » New airbox and intake boot
- » New silencer and sparky
- » New translucent fuel tank
- » New handguard mount and flag design
- » New more durable taillight / license plate holder (EXC)



500 XC-W

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