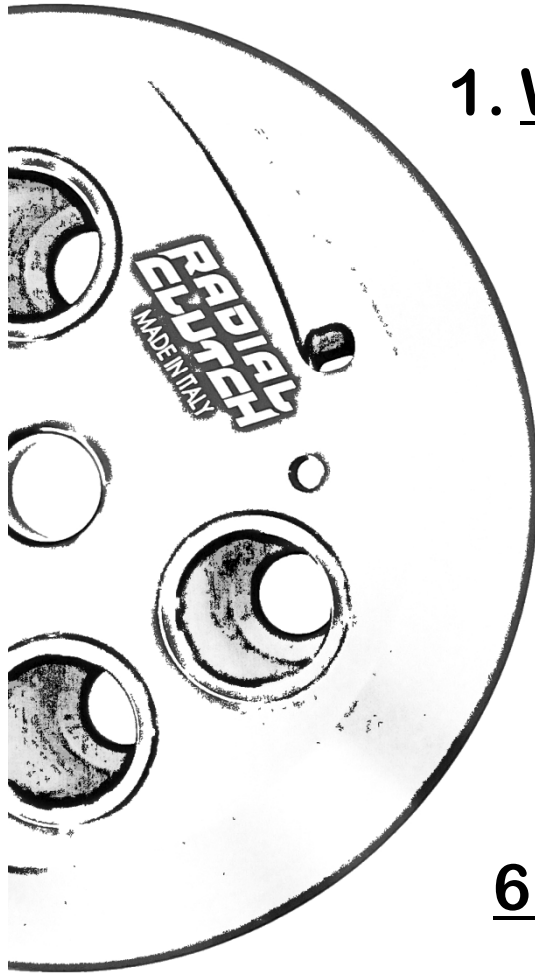


FRIZIONE **ANTI**SALTELLAMENTO





1. WHO WE ARE AND WHAT WE DO

2. PATENT INTRODUCTION

3. WORKING PRINCIPLES

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5. VERSATILITY

6. GALLERY

1. WHO WE ARE AND WHAT WE DO

It is difficult to present us in a few lines description or to tell about the years of development, studies and testing from 2015 up to now, that is when Radial Clutch made its first appearance.

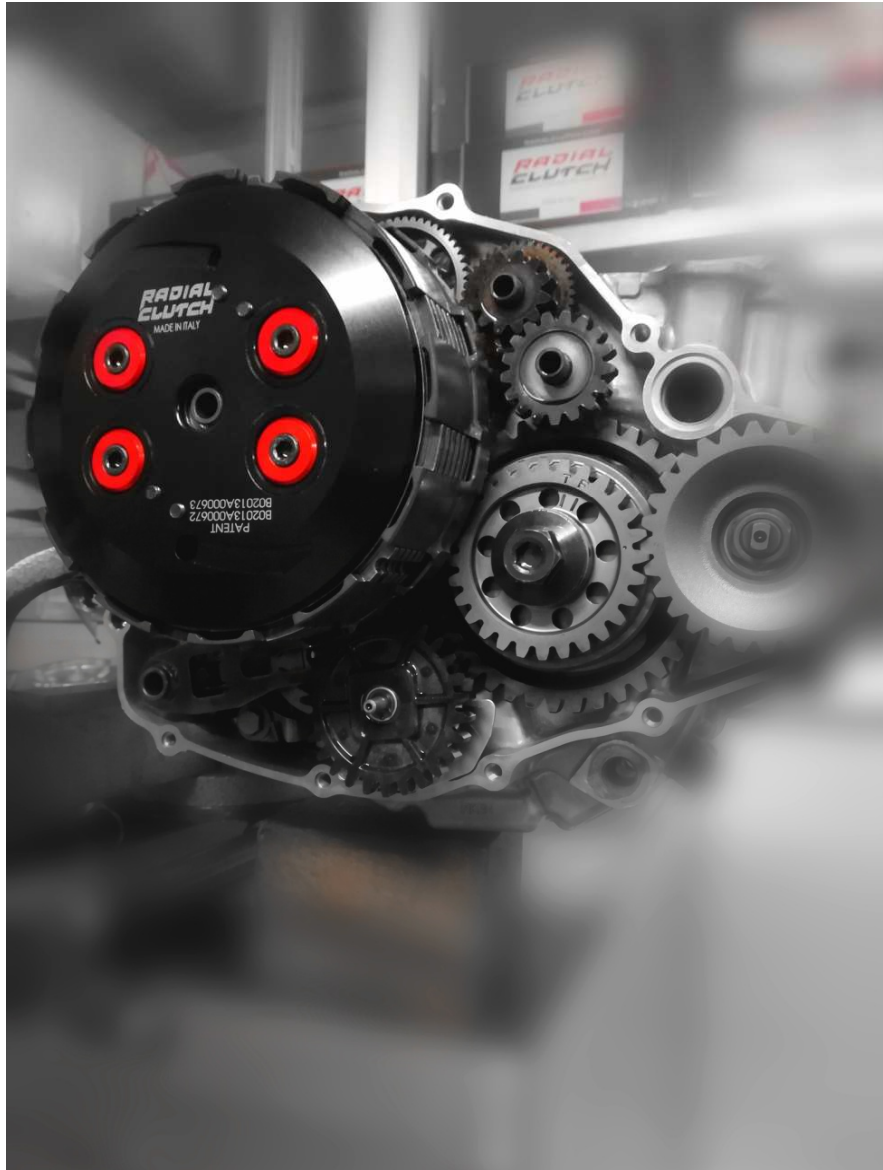
Radial Clutch device belongs to CM Engineering Srl which was founded in early 2021 by Fabio Buda and his son Mattia Buda.

The main focus of its expanding business is the continuous development and commercialization of the device.

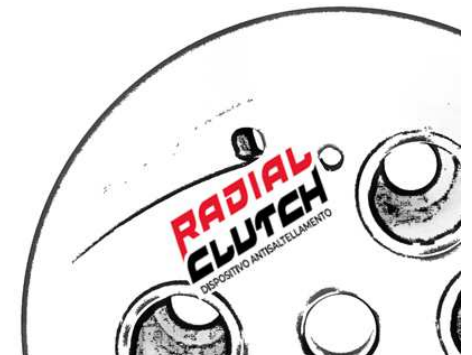
CM Engineering's hallmark is innovation and progress in the mechanical field thanks to Fabio's 30 years of experience first as a professional driver, then as a test driver and technician, and to Mattia's renewed passion



1. WHO WE ARE AND WHAT WE DO

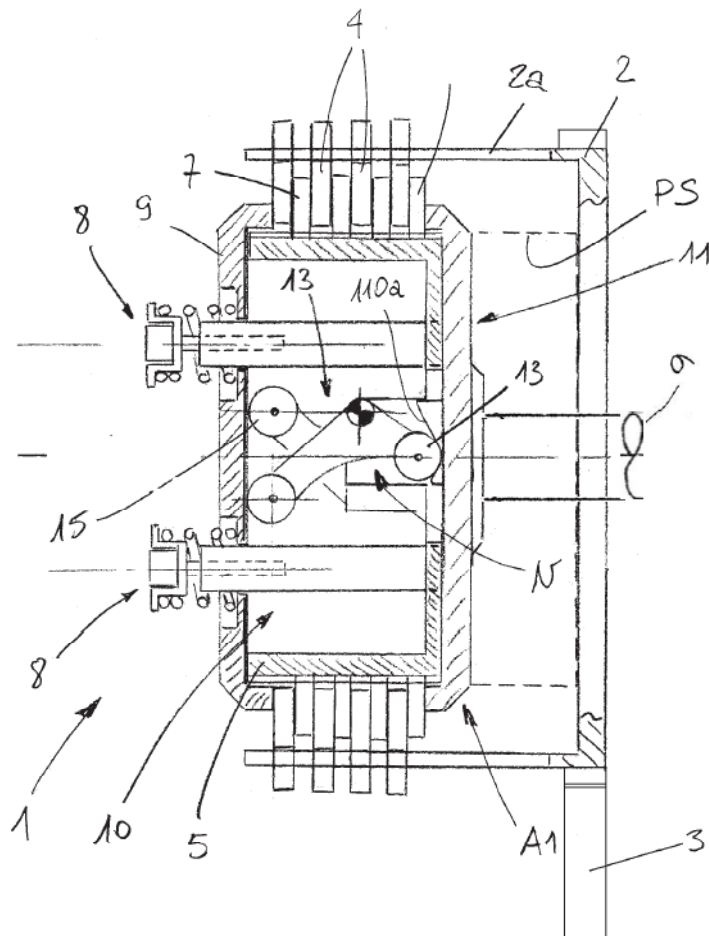


In this short presentation we will explain how Radial Clutch is different from traditional clutches on the market.

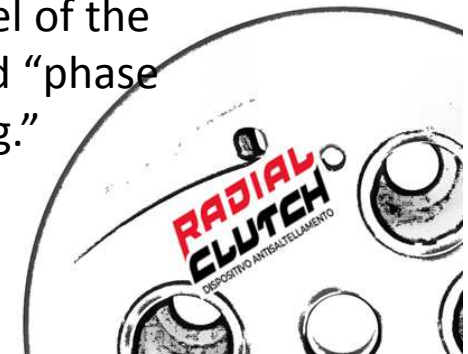


2. PATENT INTRODUCTION

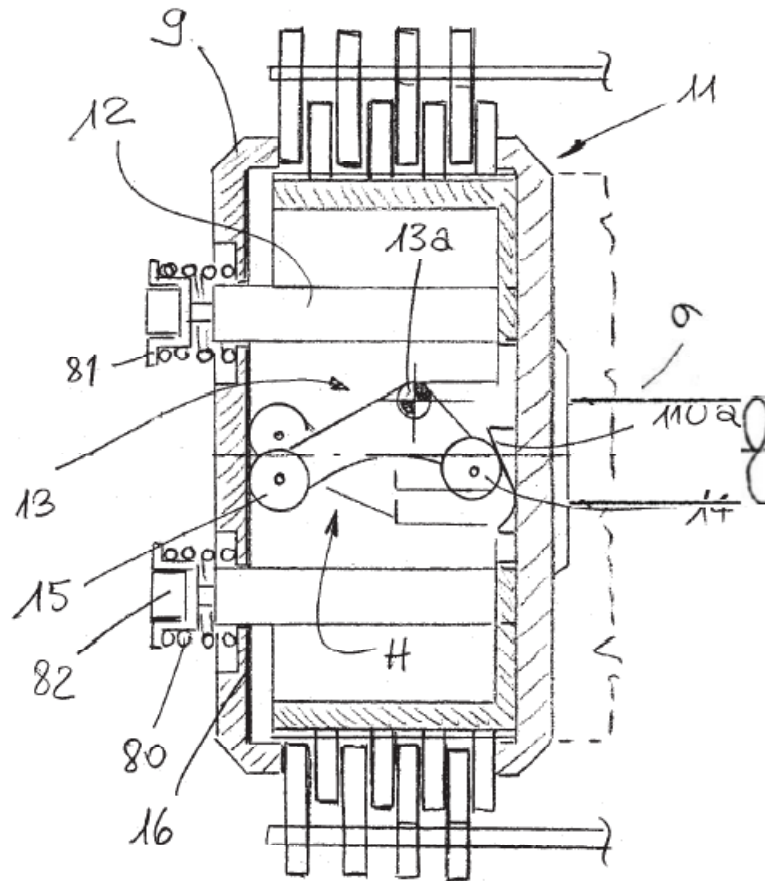
The Radial Clutch device is entirely made in Italy with the highest quality materials and is covered by two international patents.



“The device (10) is associated with a multi-plate clutch (1) for motorbikes and enables its automatic release in the first phase of deceleration and/or braking, before the driver operating the clutch lever to downshift. In the device (10) there is a ramp plate (11) connected to the transmission, which bears front cam profiles (110) designed to actuate oscillating rocker arms (13), which are inside a drum (5) provided with the abovementioned clutch (1), in the presence of retrograde torque generated by the driving wheel of the motorbike during the so called “phase of deceleration and/or braking.”



2. PATENT INTRODUCTION



“The rocker arms (13) rotate from their inoperative position (N) to an operative position (H), which causes the pressure plate (9) to move away from the pressure plate and it reduces the pressure on the friction ring pack (4, 7), which can then slip against each other.

This prevents abnormal locking of the rear wheel and improves the motorbike's handling and cornering.”



3. WORKING PRINCIPLES

MATERIALS MADE IN ITALY:

The device is manufactured entirely of solid Ergal 7075 material with surface hardening treatment. The tolerances between the elements composing this device make it as precise and smooth as possible.

It is designed to work with the OEM original conductor disks and baskets, while the steel disks are manufactured and supplied according to our specifications.

INNOVATIVE MECHANISM :

All moving parts are mounted inside the hub in which it sticks to the rear plate, it transfers movement to the primary shaft of the gearbox thus making its assembly extremely simple

Steel bearings and/or washers are located at all thrust points, which make friction of negligible magnitude for smooth operation even after periods of long stress thus limiting wear and tear.



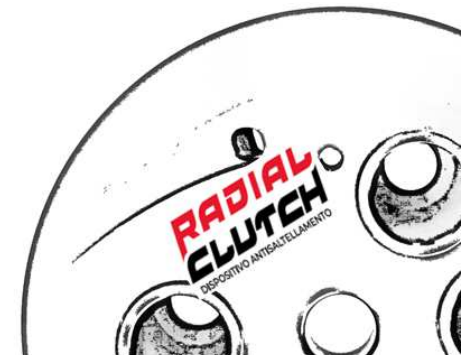
3. WORKING PRINCIPLES

The thrust is triggered by means of steel ramps that can be removed and easily replaced by others of the same design but with distinct inclinations. These inclinations allow the triggering time to be managed.

The innovative and decisive element of the device is a pair of rocker arms that fits as a dynamic third creating a dynamic filter on the retrograde torque management.

Their work promotes distribution over a (variable) time, retrograde torque, causing the peaks (WHEEL BLOCKING) to become progressive curves.

The engine will no longer rise toward maximum rpm, but will rise steadily, turning this force into deceleration. This behavior is particularly appreciated in driving, even in downshifts of several gears, where the speed of the used gear would not be adequate for the number of engine revolutions.



3. WORKING PRINCIPLES

SPRINGS :

The device is also easily adjusted by variable preloading of the primary springs.

Why do we have more load on the springs?

Less wear and tear on the disk pack

Recovery of dissipated power

Accuracy and consistency in the device setting

Management and performance in standing start

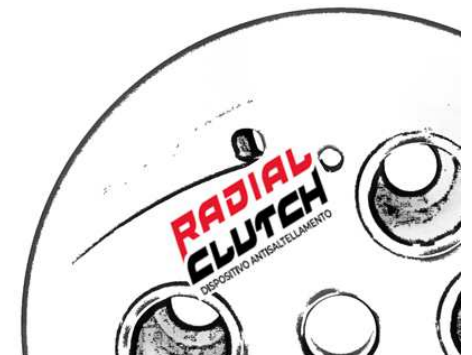
LUBRICATION :

The device is designed to have steadiness and precision of the discs by means of a forced lubrication system.



3. WORKING PRINCIPLES

The dynamics arising from this device allow the rider to manage and customize the “bike feeling” according to his or her riding style and on the route to be taken.



4. ADVANTAGES

Why should you choose Radial Clutch?

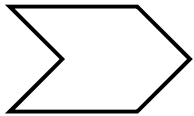
- ✓ Prevent rear wheel lock-up on braking and loss of grip
- ✓ Facilitate braking and eases corner entry
- ✓ Allow simultaneous downshifting of multiple gears without using the clutch lever
- ✓ Adjust the incidence of engine brake in 4-strokes at will
- ✓ Constant and precise lubrication of clutch plates
- ✓ Extend clutch plate and oil maintenance schedules
- ✓ Customization and setting of the Radial Clutch
- ✓ Make the start from stop phase easy
- ✓ Simple installation



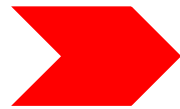
4. ADVANTAGES



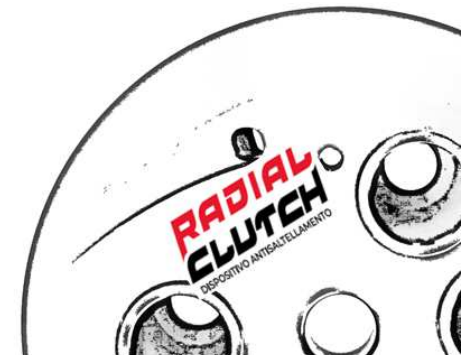
VEHICLE STABILITY



LESS WEAR AND TEAR ON ENGINE COMPONENTS



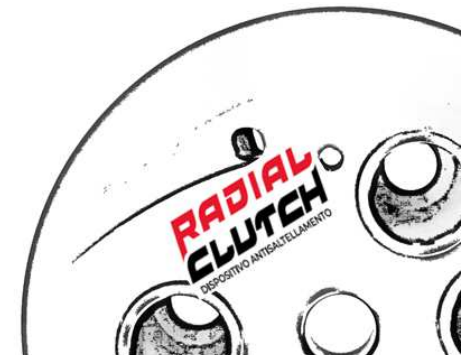
EASY AND QUICK DRIVING



5. VERSATILITY



Radial Clutch has been present since 2015 in road competitions, used from the start in various national and international championships spanning all categories: from the smallest pit-bikes to the highest displacement SBK 1000.



5. VERSATILITY

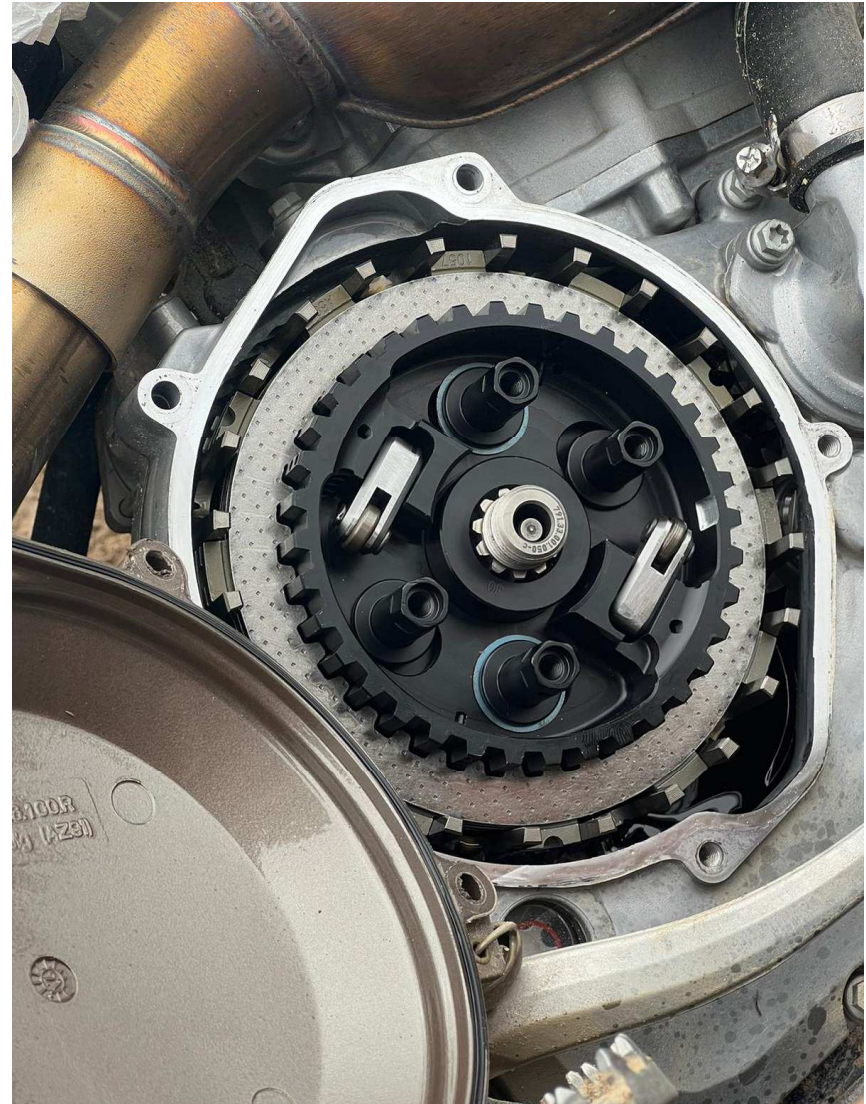
After several years of testing, the device has become not only adaptable but also very performant in all **offroad disciplines**, such as motocross, enduro, supermotard and flat track.



6. GALLERY



Variable spring preload



6. GALLERY



Clutch Cover for offroad bikes



6. GALLERY



6. GALLERY



Removable ramp

RADIAL
CLUTCH
DISPOSITIVO ANTISALTELLAMENTO

Thanks for your attention