

MACH 4



Mach 4: excellent quadtrack

Antonio Carraro SPA produces special tractors for professionals wishing to experience



MACH 4



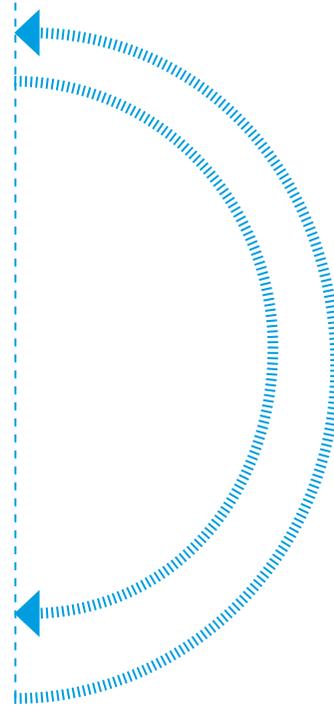
**MANY
TRACTORS
IN ONE**

RGS™: two sides of the same coin 0 0 18 Tw 10 0 0 10 22 1723854.722 m R

VERSATILITY

CREATIVITY

SAVING



MACH 4

The logo consists of the word "MACH" in a bold, italicized, sans-serif font, followed by the number "4". Below the "4" are two horizontal bars: a green one on the left and a red one on the right, positioned under the top and bottom strokes of the number respectively.

ACTIO™: the exclusive chassis designed by Antonio Carraro

TRADITIONAL TRACTOR



TRADITIONAL TRACKED VEHICLE



Mach 4

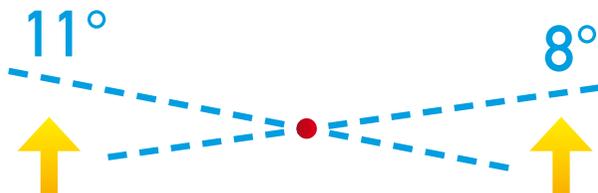
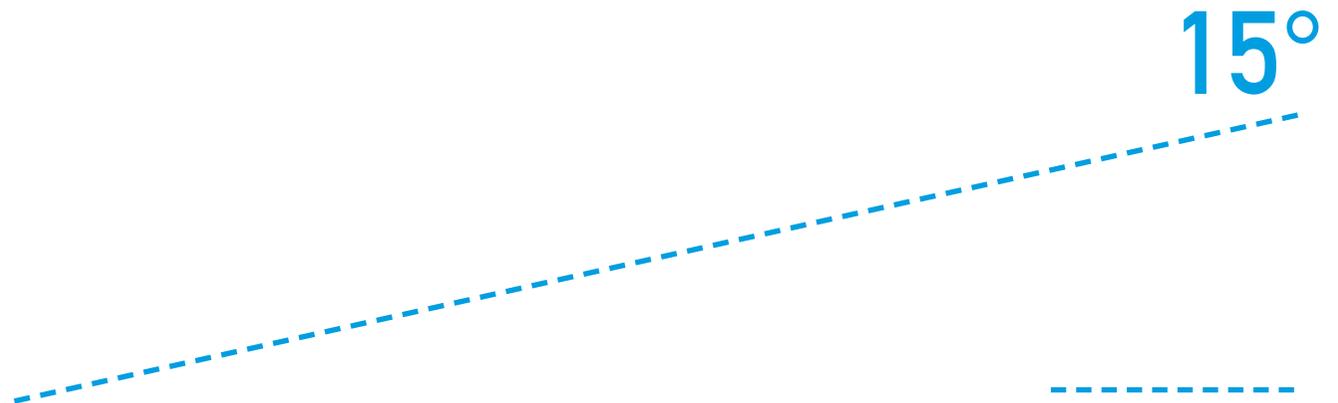


DESIGN TECHNOLOGY INNOVATION

ACTIO™, this Full Chassis with Oscillation is comprised of a solid cast-iron chassis fixed to the axles and housing the quadtrack transmission. It features a central joint with a longitudinal oscillation of up to 15°. The two oscillating ends follow the contour of the terrain independently, thus assuring stability and traction at all times.

The constant adherence of the rubber tracks to the ground allows engine power to be entirely transferred to the ground, thus increasing performance and safety. The ACTIO™ chassis requires a "projecting" engine configuration in order to assure a low centre of gravity and an equal division of the weight of the tractor: 60% on the front axle; 40% on the rear axle. This is an ideal balance with implements attached as it distributes 50% of the weight on each axle.

Thanks to its 45° offset of the front and rear axle reducers, Mach 4 has a long wheelbase and a reduced "projection" of the engine: features which guarantee greater stability in all work phases to operate with maximum safety levels and driving comfort. The **longitudinal oscillation** of each track (+8°-11°) together with the **oscillation of the ACTIO™ chassis** ensure the quadtrack constantly adheres to the ground, even on the roughest terrain.



DRIVE: like a multi-wheeled tractor

The four alternate-grip rubber tracks (w: 35 mm / 1,37 in), similar to “ground pro le” tyres, assure **constant adherence** during all manoeuvres, even on slippery ground.

This special **traction** is enhanced by the finely-tuned engine and the “projecting” engine configuration of the vehicle. These cutting edge technical solutions ensure the traction is **equal to that of a multi-wheeled vehicle of the same size**.



- + *Greater stability and safety*
- + *Increased capacity of carrying loads uphill*
- + *Ground recovery work no longer necessary*
- + *Reduction in working times*
- + *Lower fuel consumption*

TRACTION ON ROUGH TERRAIN

No skidding

The traction remains constant even while changing trim during work on extremely uneven ground, thanks to the superior **weight distribution** area on the two front axles compared to a traditional tracked vehicle.

This prevents the tracks from skidding on slippery terrain and damaging the topsoil and headlands.

TRACTION UPHILL

4 independent tracks

Unlike a traditional 2-track tracked vehicle, Mach 4 features 4 independent rubber tracks each of which independently **follows the contour of the ground.**

The traction remains constant even uphill as the mass is also distributed on the front axle.

**ADHERENCE
TRACTION
SAVING**



NO SKIDDING



LOWER FUEL COSTS



TIME SAVINGS



SAVING IN GROUND DAMAGE REPAIRS



MONEY SAVINGS

SPEED

Dual road approval:

- 30km/h (19mph) when loaded
- 40km/h (25mph) optional

This allows for greater speed during journeys to and from the fields, thus reducing working times and costs.

The driving position is comfortable, stable and safe thanks to the **4 tracks which constantly adhere to the ground**, even at maximum speed.



- + *Can travel on roads*
- + *Reduced journey times*
- + *Maximum operator comfort*



- + *Respect for plant roots*
- + *Observance of spraying deadlines*
- + *Higher productivity*

FLOATATION: minimum compaction

CONSISTENCY
RESPECT
INGENIOUS

The "floatation" of the vehicle on the ground surface allows for excellent use of Mach 4 **all year long**, making it possible to work on wet, muddy, marshy, crumbly, snowy and sandy terrains.

The perfect weight distribution on the rubber track treads makes for minimum compaction, **inferior to that of footprint.**

STABILITY: anywhere, constant

TECHNOLOGY
SECURITY
COMFORT

The stability of Mach 4, a byword for **operating safety**, is assured first of all by the **low centre of gravity**, determined by the distribution of the mass.

The **ground clearance** (mm 325 / in 12.8) allows for comfortable work even if the tracks sink into particularly crumbly or wet terrain.

The **driving comfort**, comparable to that of a traditional tractor, does not feature the discomfort typical of traditional tracked vehicles: the constant ground adherence of the rubber tracks makes it possible to cross bumps **without excessive jolting or jerking for the operator**. The rubber tracks move forward independently in proportional synergy, gently following the contour of the terrain.



- + *Low centre of gravity*
- + *Safety up or along slopes*
- + *Greater operator comfort*
- + *Enhanced performance*

Low centre of gravity, constant contact, stability, efficient braking and protected driving position are just some of the “active” safety features not to mention the “passive” features, such as quality of components, design, and eco-friendly engines. The braking system is comprised of 4 hydraulically controlled, self-adjusting disk brakes in an oil bath that guarantee emergency braking modularity and reliability even when the front drive is disengaged.

The rear three-point lift features controlled position and force of the implement that optimise the adherence of the tractor, such that it always stays “glued to the ground”. The vehicle and its equipment follow the contour of the terrain without lifting, thus assuring maximum efficiency.

The electrohydraulically controlled differentials lock either at the rear only or at the front and rear together in order to prevent slippage and assure that the tracks always have traction. The driving position is located at the centre of the vehicle and features a roll-bar or cab approved to safety standards to ensure **maximum operator protection**.



SAFETY: active and passive



The lighting equipment, integrated into the mudguards, is comprised of reflecting parabolic optical assemblies, which offer a wide range of illumination covering the roadway, the equipment, and the surrounding field. Maintenance is practical and fast thanks to the fact that the bonnet can be fully opened and the side panels and battery cover can be easily removed.

MACHINE AND EQUIPMENT: an integrated technological system

The integrated lifting - hydraulic system - PTO assembly can mount a large variety of implements at both the front and rear. The lift is a single group with vertical cylinders, featuring a 3-point hitch, a pump and an independent hydraulic system.

The large and rear lift, featuring a great lifting capacity, is fitted with extendible bars and width-adjustable snap-on hooks (Cat. 1 - Cat. 2).

MACHINE AND EQUIPMENT

The front* lift optimises combined processes such as, for example, a front vine trimmer with a rear shredder or a side-shoot remover; a front shredder with a rear between row mower.

The clutch of the PTO with an electro-hydraulic progressive engagement command features a safety button for preventing involuntary starting and stopping the engine with the PTO engaged.



- + **Practicality:** engagement facilitated by the cardan shaft
- + **2 Speed PTO:** fuel saving
- + **Comfort:** the PTO can be engaged while the tractor is moving
- + **Efficiency:** less heat build-up
- + **Multifunctionality:** hydraulic engines run at a constant speed
- + **Functionality:** engagement without stalling the engine
- + **Lifetime:** safeguard of PTO shaft

Joystick-controlled* vertical hydraulic tie-rod for practical adjustments from the driving position.

Height-adjustable tow hook.

Hydraulic system with 2 double-acting manifolds, 1 single-acting + oil return tap.

11 rear quick-couplers, 6 of which replicated at the front (opt).

Two speed PTO: 540 rpm, 540 E (750 rpm) and synchronised with gear speeds. The PTO shaft of the ASAE 1 3/8 type is the same for all speeds.

The front lift* optimises work combined with rear tools.

The front PTO* (1000 rpm) with electrohydraulic controls and progressive engagement with safety button is maintenance free.

The rear differential lock prevents slipping and optimises traction. The front traction disengagement is useful when travelling along roads and prevents damage from being done to delicate grounds.

*optional

CAB: StarLight

**COMFORT
VISIBILITY
SAFETY**

This original and approved AC product features a spherically curved, simple and essential design. The airtight seals and recessed hinges allow the "StarLight"* cabin to enter the narrowest rows without damaging lowering plants or fruit. The front and rear windows offer full visibility of equipment and the roadway. The ventilation system features a rapid front windscreen defogging system.

The acoustic comfort on board the "StarLight" is similar to that of a car due to the internal layer of sound-absorbing material on the cabin walls. "StarLight" features a car radio*, a removable license-plate holder, and adjustable rear-view mirrors.



ELECTRO-HYDRAULIC JOYSTICK: all functions at your fingertips

The **JPM PROPORTIONAL JOYSTICK™*** allows practical operation of the lift and the front and rear hydraulic quick couplers. It also adjusts the oil flow towards the hydraulic connectors and lift, thus assuring total control of speed and movements of the attached implement. Through the joystick it is possible to engage the pto and the rear rotating lift.



- + **Ergonomic:** *handy to use*
- + **Comfort:** *stress-free operation*
- + **Saving:** *reduction in cycle times*

A hydraulic quick coupler constant flow adjuster controls the operation and speed of the hydraulic motors and at the same time, controls implement hydraulic movements.

A descent adjuster controls the implement lowering speed without interfering with lifting speed. The JPM™ joystick can also be used to manage an electrical socket for operating electrical equipment.

Many different functions, always within easy reach, are easy to use thanks to the coloured buttons arranged in a logical sequence on the joystick.

**HARMONY
TECHNOLOGY
PROGRESS**

*optional

ESC (Electronic Speed Control)

Electronic and automatic speed and engine rev control device.

CLEAN FIX™

Reverse flow fan that assures the constant cleaning and efficiency of the radiator and of the front grille of the bonnet.

PNEUMATIC SEAT

Latest generation air suspension seat.

BULLBAR

Tubular steel guard protecting the bodywork; integrates the third-point for the front lift.

HEADLIGHT GRILLES

Protecting the light assemblies, they also make the bodywork look more appealing.

FRONT LIFT

Used together with the bullbar, it allows all the frontal equipment to be used with multiple hydraulic connectors.

FRONT PTO

The front PTO (1000 rpm) with electro-hydraulic controls and progressive engagement with safety button is maintenance free.

VERTICAL TIE-ROD

Optimises the positioning and inclination of the equipment.

RAPID REAR COUPLINGS

Standard > 6 rear couplings. JPM joystick (with vertical hydraulic tie-rod) > 11 quick couplers.

QUICK COUPLERS

Front lift > 6 rear couplings.

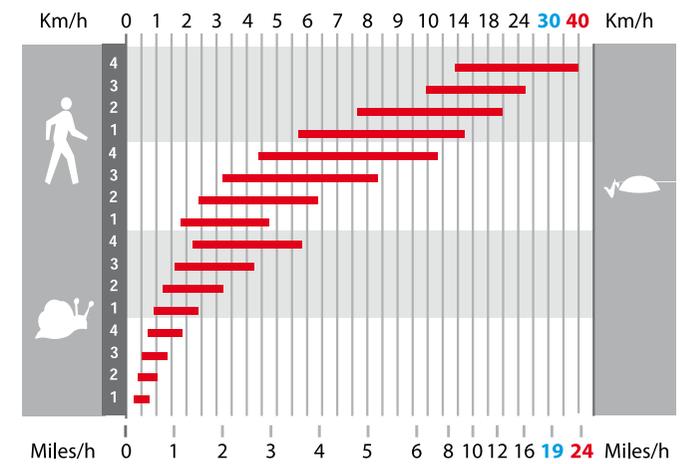
FRONT BALLAST

Perfectly integrated into the bodywork of the tractor; it does not alter the wheelbase or dimensions of the tractor.

BALANCING BALLAST

Supplementary ballast for optimising vehicle balance.

PLUS



MACH 4

ENGINE: powerful and quiet

The engines selected by Antonio Carraro are at the top of their category and offer unbeatable torque and power performance as well as lower fuel consumption, lower noise, and lower carbon emissions.

Mach 4 features a water-cooled, 87 HP, turbo diesel engine with 4 cylinders and 16 valves, and with electronically-controlled injection system and EGR.



- + **Reliability:** *quality of components*
- + **Performance:** *maximum efficiency*
- + **Comfort:** *minimum vibrations, noise, and emissions*
- + **Saving:**
 - € *less maintenance costs*
 - € *rapid amortisation*
 - € *lower fuel consumption*

SAT: Customer Service Team

RICAMBI ORIGINALI
GENUINE SPARE PARTS

Antonio Carraro® Original Spare Parts and Assistance

The AC-dealer network utilizes modern equipment and instruments that have been especially designed and built for maintenance work on AC tractors. The technicians at every authorised dealership periodically attend technical training courses at the Parent Company's facilities. Each authorised workshop employs highly qualified staff and provides an extensive range of services in order to offer its Customers maximum peace of mind and total protection. AC dealers can give their Customers information on all the services related to the care of AC tractors.



24 months of warranty

The experience gained during the years and the investments made in terms of materials and human resources have allowed Antonio Carraro to design and market the Ergit 100 Series with a standard 24 month warranty for the end customer. Customer satisfaction and safety is what counts most for Antonio Carraro. 24 months means giving Customers greater trust in what they have purchased and the certainty that they can count on a constantly available and highly qualified assistance service. A network of authorised dealers assures efficient and professional maintenance on tractors.

After-sales service

Thanks to the capillary network of dealers and the competence of the Service Managers, the Parent Company can assure all-around skills. With the right maintenance work, every AC tractor will continue to provide excellent performance throughout its operating lifetime.

Original Antonio Carraro Spare Parts

Original Antonio Carraro Spare Parts is a registered trademark. The elevated standards of design and the stringent tests carried out during the entire production process assure maximum quality levels. With Original AC Spare Parts, Customers can be certain of maintaining tractor performance unaltered over time, thus preserving the safety and the value of the tractor.

TECHNICAL DATA: Mach 4

Model	Mach 4
Chassis	"ACTIO™" – Full chassis with oscillation • Articulated • 4WD quadtrack • Reversibility RGST™
Engine Type	Diesel direct injection with counter rotating weight system
Emissions Regulations	Stage 3A
N° Cylinders	4 - 16 Valves • Turbo
Displacement (CC)	3319
Power kW/HP (97/68/CE)	64/87
Maximum engine revs	2500
Torque max (Nm/revs)	286,7/1850
Cooling	Water
Tank Capacity (litres/gal):	50/13.2
Transmission	Synchronised 32 speed gear box: 16 forward and 16 reverse with synchronised inverter Road approval up to 30Km/h (19mph)
PTO	Rear, independent and synchronised at 540/540E rpm with progressive electrohydraulic engagement
Shaft	Pro le 1" 3/8 with 6 splines with facilitated engagement
Transmission clutch	Hydraulic control
Drive disengagement	Electrohydraulic control on the front
Rear hydraulic lift	3 point hitch with adjustable quick release couplings and extensible arms
Operating Pressure (bar/psi)	160/2320
Capacity (Kg/lbs)	2400/5291
Steering	Hydraulic with 2 pistons
Brakes	Standard: hydraulic front and rear disk brakes in oil bath Independent emergency and parking brake: band type on transmission
Platform	Suspended on Silent Block
Weight in order of speed:	
With roll bar (Kg/lbs)	3050/6725
With cab (Kg/lbs)	3200/7055

Standard Features

- Reversible control tower • Rear or front/rear differential lock with electrohydraulic control • Hydraulic system with 2 separate hydraulic pumps • Adjustable steering wheel • Adjustable lifting arms with quick release laterally moving couplings • Adjustable, suspension seat with safety belt • Foldable rear protection roll bar • 3 lever ancillary rear hydraulic system • Rear adjustable height tow hitch • Front tow hitch • Multifunctional digital instrument Km/h and PTO • Battery • Battery isolation switch • Electrical power point • Safety starting device on the inverter and PTO • Predisposition for rear balancing ballast • Couple of pads for rear tracks

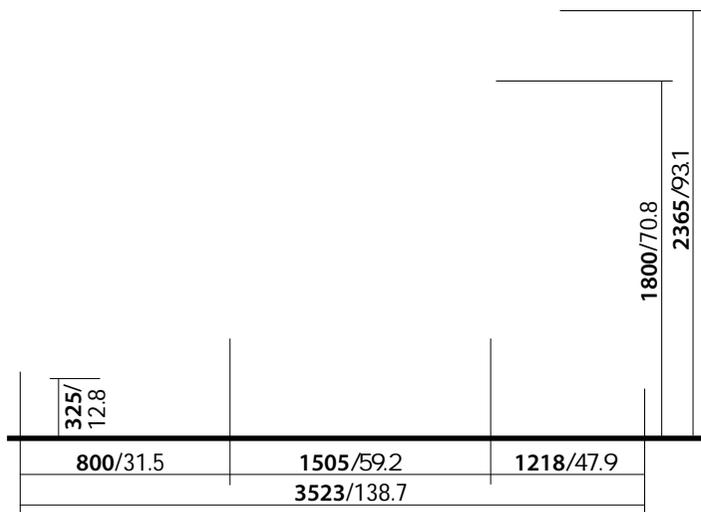
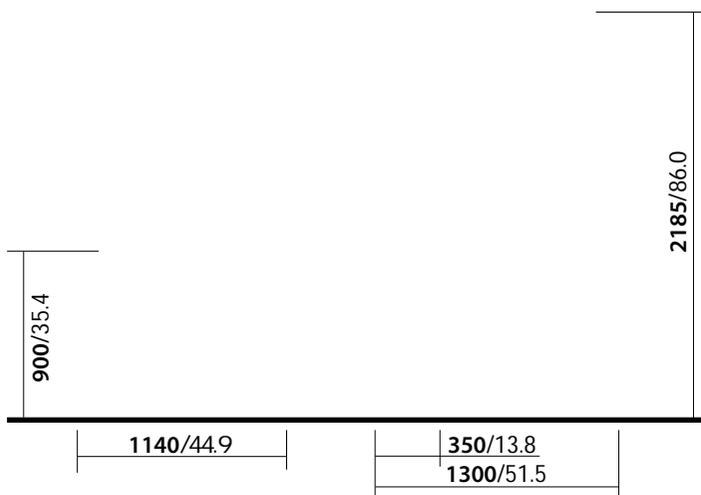
Optional Features

- StarLight cab with air conditioning system and window on the roof, suspended on Silent Blocks; activated carbon filter on request • Hydraulic system controlled by "JPM" Proportional Joystick with 11 hydraulic outlets with quick couplers • Six hydraulic outlets replicated at the front with controlled continuous flow • Support with six front ballast weights • Hydraulic vertical tie-rod with electrohydraulic control • Front power lift • Front PTO 1000rpm with electrohydraulic control • Pneumatic seat • Front bullbar • Front lamp guards • Clean FIX™ > reverse flow fan for constant cleaning of the radiator and of the front grille of the bonnet • ESC > Electronic Speed Control: electronic and automatic speed and engine rev control device • Grammer seat • Rear balancing ballast • Couple of pads for rear and front tracks • Road approval up to 40 Km/h (25 mp/h)

**REVERSIBLE
ARTICULATED
QUADTRACK**



DIMENSIONS (mm/in)



DEALER

ANTONIO CARRARO SPA
Via Caltana, 24
35011 Campodarsego Padova ITALY
info@antoniocarraro.it
antoniocarraro.com

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