# Ai - TRACTOR

## ARTIFICIAL INTELLIGENCE


language

BCS GROUP

# AI-TRACTOR

*ARTIFICIAL INTELLIGENCE*

# THE INTELLIGENT TRACTOR

**BCS Group introduces artificial intelligence in its range of specialised tractors and presents the AI-Tractor: the intelligent tractor.**

The artificial intelligence, through the advanced control of numerous functions of the tractor, optimises the vehicle's performance and improves the operator's driving comfort, guaranteeing maximum safety in the various conditions of use and, at the same time, reducing fuel consumption and wear and tear of the machine.

The system, entirely designed and developed by BCS Group, intelligently optimises the use of the tractor's electro-hydraulic reverser, clutch and brakes. By means of a series of electronic sensors, the system continuously analyses the tractor's operating status, the environment surrounding it (for example, if it is on flat ground or on a slope) and interprets the manoeuvre being performed by the operator on the clutch pedal. The artificial intelligence intervenes by automatically selecting the most appropriate rule of engagement for the situation and supports the operator in completing the manoeuvre.

The benefits are numerous:

- engagement times are reduced and the work performance is high and constant throughout the day.
- the operator concentrates more on the work in the field, rather than on driving the vehicle.
- fuel consumption, emissions and wear and tear of parts of the clutch are reduced.

# 4 SELECTABLE DRIVING MODES

## FORKLIFT TRUCK

In this driving mode, the tractor works like an electric or hydrostatic forklift truck. The operator can gradually and with due precision move up to the load to be lifted by only pressing the accelerator or, alternatively, a specific button.

The artificial intelligence manages the clutch, brakes, accelerator and also the reverse gear smoothly, without jerks, giving the operator the option to select different travel speeds. This driving method is also ideal for work that requires stable engine rpm, such as use of the shredder or sprayer.

***Main advantages:*** *Greater operator driving comfort and maximum operation precision when manoeuvring.*

## BRAKE AND GO

In this driving mode, the tractor can be controlled by only using the brake pedal. This method is particularly useful, for example, for activities where the power take-off is used and it is required to keep the engine's rpm stable. When the operator presses the brake pedal, the clutch opens immediately, allowing the tractor to approach with precision by using the same amount of tractor movement energy, which is thereby not wasted.

By releasing the brake pedal, the tractor, without recoiling, resumes its previous speed, also on a slope and with a load. The artificial intelligence manages the clutch, brakes, accelerator and also the reverse gear, giving the operator the option to select different degrees of machine responsiveness when starting and braking.

***Main advantages:*** *Greater operator driving comfort, operation precision in manoeuvres, savings in fuel and on wear and tear of machine parts, operation safety.*


## RAPID REVERSE

In this mode, it is possible to rapidly invert the tractor's driving direction by only using the practical level situated under the steering wheel. This reversing method is very useful with work related to haymaking, maintenance of the greenery and removing snow. The artificial intelligence manages the clutch, brake, and accelerator by considering the tractor's operating status (for example, slope or flat ground and which gear is engaged).

The operator can select different degrees of machine responsiveness when starting and braking. It must be pointed out that when reversing, the torque transmitted is not zero, which determines prompt, rapid reversing, as can be achieved with more bulky and complex dual clutch systems.

***Main advantages:*** *Greater operator driving comfort, fast and efficient manoeuvring, less wear and tear of machine parts.*

## SLOW REVERSE

Also in this mode, it is possible to invert the tractor's driving direction by only using the practical level situated under the steering wheel. Compared to the rapid reverse, this method makes the machine stop for a few seconds and restarts with a torque that rises progressively from zero until reaching the value determined by complete engagement of the clutch, thereby enabling the operator to coordinate the reverse with manoeuvres on the steering wheel.

This reversing method is very useful in manoeuvres when exiting a row, for cutting grass in the presence of obstacles or when handling heavy loads. The artificial intelligence manages the clutch, brake, and accelerator and the operator has the option to select different degrees of machine responsiveness when starting and braking.

***Main advantages:*** *Greater operator driving comfort, operation efficiency in manoeuvres, even after several hours of work, less risk of accidental impacts with the crops, less wear and tear of machine parts.*

# ALL AI-TRACTOR VEHICLES ARE ALSO EQUIPPED WITH ADVANCED FEATURES THAT ASSIST THE DRIVING OPTIONS AND ARE AVAILABLE TO THE OPERATOR, REGARDLESS OF THE METHOD SELECTED AT THE TIME.

## EASY PLUS CLUTCH™

**The system assists the operator in using the clutch pedal, always ensuring smooth, gradual engagement without jerks, regardless of the tractor's operating status (for example, on flat ground or on a slope, with a full load or unloaded, and also in reverse).**

**The system, which doesn't need any adjustments by the operator, engages the clutch in a very short time, with the added advantage of minimising wear and tear of the clutch parts.**

**It is remarkable that the clutch pedal can also be quickly released on a slope and with a load while still achieving a smooth start with a fast clutch engagement.**

## ASSISTED HILL START

**The system locks the tractor on a slope for a pre-set time after releasing the brake pedal.**

**This function enables the operator to safely manage starting by using the clutch pedal and accelerator to adjust the progression and power required.**

**The tractor starts smoothly and without any recoil only after the clutch has been released, even if the operator releases the pedal abruptly.**

## THE SERVICES

**SPARE PARTS**

A complete range of original spare parts, guaranteeddirectly by the manufacturer.

**ASSISTANCE**

A team of specialists, well prepared and available to assure an efficient and resolving service.

**LUBRICANTS**

We recommend to use the original PowerLube lubricants.

**FINANCIAL SERVICES**

Financial solutions to meet the credit requirements.


90100937GB
10/21
MZ

BCS GROUP

MADE IN ITALY



**BCS S.p.A.** Viale Mazzini, 161 - 20081 Abbiategrasso (Milano) Tel. +39 02 94821 E-mail: info@bcs-ferrari.it www.bcsagri.com