



VOLCAN RS

language



MADE IN ITALY



RS SERIES

PLANNING EACH SITUATION



In order to be successful, a great project must include the greatest number of possible solutions: so for the VOLCAN series we created **the isodiametric version with steering wheels RS**, designed for the various needs that our customers motivate us to satisfy every day.

Performance, dimensions, manoeuvrability, comfort and safety are the qualities our technicians gave emphasis to in order to create this project, what really makes **the difference between a specialised BCS tractor and a competitor tractor.**

VOLCAN RS

Reversible isodiametric tractors, with steering wheels

The **VOLCAN RS** are isodiametric specialized tractors, particularly performing in row cultivations, vineyards, orchards, greenhouses and nurseries.

The structure of the machine together with its maneuverability makes **VOLCAN RS** extremely suitable for the greens maintenance and municipalities.

Maneuverability and reliability are the best qualities of these performing and versatile machines, thanks to their reversible driving position.

The engine power together with the constant grip of the tires to the ground allowing **VOLCAN RS** to work in complete safety both on flat and uneven, sloping grounds.

Designed and built for heavy duty under maximum stress conditions, the **VOLCAN RS** have got a comfortable and practical driving position.

Ergonomics, functionality and safety are also combined in an original and exclusive manner.



We are an **international company**, one of the most successful in the field of **farm machinery** and for **greens maintenance**.

Established in 1943 and certified ISO 9001 since 1994, we distinguish ourselves by the high quality of our products and the operational capability which embraces every stage of the process: design, production and distribution.

The **BCS dealers**, an integral part of our sales network, are expert professionals who are qualified to advise and assist every customer in choosing the most suitable machine for their own needs.



We carefully attend the **quality of our after-sales services**: authorized dealers and parts dealers, with technical and business support, are available to anyone who needs prompt and safe servicing.



The reasons for choosing us

And choosing them



At the time of purchase of a **RS SERIES** tractor, we issue a **two-year warranty** which is included in the price and also covers the engine. Because safety and satisfaction of our Customers are dear to our hearts.



RS SERIES: QUALITY CHOICES BRING YOU FARTHER

- **CUTTING-EDGE TECHNOLOGY**
because, since we have been manufacturing them, we are continuing to redefine the rules of the specialized tractor world.
- **EMISSIONS AND REDUCED CONSUMPTIONS**
thanks to the new technology of the cutting-edge engines.
- **TRANSMISSIONS** with "long-life" multidisc wet clutches and axles with epicyclical step-down gears for maximum power transmission.
- **MULTIDISC WET BRAKES**
assuring reliability and safety.
- **RECORD DIMENSIONS:** minimum width at 129 cm. and reduced pitch at 150 cm. only, the best in the category.
- **ADVANCED SYSTEMS TO IMPROVE THE RELIABILITY OF THE MACHINES:** the Self-Cleaning System® takes care of the cooling system.
- **HYDRAULIC SYSTEM WITH LARGE OIL OUTPUT**
to the many control valves with oversized hydraulic pumps which guarantee high pressures and maximum performance.
- **DRIVER'S SEAT THAT CAN BE REVERSED IN JUST A FEW SECONDS**
to make the machines more versatile and allow the driver to be able to easily operate both the front and rear equipment.
- **ACTIVE AND PASSIVE SAFETY** guaranteed by the perfect weight distribution on the axles, by the low centre of mass, by the efficient braking system and by the design logic of the controls and of the driving position.
- **COMPACT AND COMFORTABLE HOMOLOGATED CABINS**
which give a sensation of wellness and safety.



MINIMAL OVERALL DIMENSIONS

PERFORMANCE

GREATEST SOBRIETY

POWER

RELIABILITY



Engines: performance is the heart of evolution

The reduction of fuel consumption and emissions to a minimum and the maximization of engine performance are the results of the innovative technological approach that distinguishes the propellers supplied with the **VOLCAN RS**.

With the new **VM D754** the **VOLCAN RS** are equipped with an even larger and higher performance heart.

The new engines are distinguished by greater efficiency: more powerful thanks to the intercooler, cleaner and quieter thanks to the new technology in full compliance with the continually more restrictive regulations and even simpler in order to further enhance the choice of a **VOLCAN RS** tractor, able to give you fantastic response from the start.

For these models, VM has developed the new EGR System located inside the engine. The system provides for the recycling of the exhaust gases which, properly mixed, return to the combustion chamber, drastically reducing the nitrogen oxide (NOx) emissions and fuel consumption.



The decision to use a lower number of rpms, **2300 rpm/min** was conceived to reduce consumption, noise level and vibrations, with the benefit of savings and comfort.

There are two VM engines available for the RS series, dedicated to harnessing the power of each individual drop of fuel.

VOLCAN V850 ➔ **VM D754 TE3** 4 inline cylinder 3 liter Diesel turbo engine, 79 HP at 2300 rpm.

VOLCAN V950 ➔ **VM D754 IE3** 4 inline cylinder 3 liter Diesel turbo engine, 91 HP at 2300 rpm. thanks to the intercooler.

RS SERIES	Type	Power (kw/hp)	No. of cylinders	Displacement	Aspiration	Cooling system
VOLCAN V850	VM D754 TE3	58 / 79	4	2970	Turbo	Liquid
VOLCAN V950	VM D754 IE3	67 / 91	4	2970	Turbo Intercooler	Liquid

FEATURES:

- ➔ **THE TUNNEL BORE BASE**
allows great torsion and flexural rigidity.
- ➔ **ROTARY MECHANICAL INJECTION PUMPS**
that make these propellers perform in all conditions, increasing reliability and lifespan.
- ➔ **GEAR DISTRIBUTION WITH FORCED LUBRICATION,**
the maximum that you can ask for from a diesel.
- ➔ **HYDRAULIC TAPPETS**
to minimize noise and eliminate maintenance.
- ➔ **LOW-INERTIA TURBOCHARGERS**
for an immediate response when power is required.
- ➔ **BALANCING SHAFTS**
to eliminate vibrations.



Self Cleaning System[®]

Heat disposal, from both the engine and the hydraulic system, is essential to enable compact and powerful tractors to perform the demanding jobs for which they are intended without any problems.



Prevention is better than treatment

Heat disposal

Considering the primary uses for **VOLCAN RS** tractors, a special cooling system was designed to allow the engine and the entire hydraulic system to always operate with the maximum safety margin.

The engine is protected by a large radiator assisted by the patented **SCS (Self Cleaning System[®])**.

A heat exchanger stabilizes the hydraulic system temperature while a series of watertight grills on the engine hood also allows the propeller to breathe better and protects the radiator cores from clogs due to dust and debris raised by work equipment.

Always clean air

The special cooling system is assisted by the patented **SCS (Self Cleaning System[®])**, characterized by two fans with combined intermittent operation: an electromagnetically controlled intake and an electric blower.

The system prevents dangerous overheating of the engine and hydraulic system, keeping the radiators and ventilation grills always clean, thus preventing continuous stops in order to clean them.

Besides the **SCS (Self Cleaning System[®])** function, the cooling system allows, at the operator's discretion, to adjust the radiator fans in order to activate or deactivate them according to the climatic and operational needs.

The system is controlled by a three function button, which activates in order:

- **SCS** the double fan system
- **ECO** the single intake fan with intermittent function that activates/deactivates upon reaching a certain temperature
- **CMF** the single intake fan which functions constantly

The operator can thus select the most suitable function based on the various uses and needs.



Superior quality clutch

Transmission clutch

The **Long-Life clutches** designed for the **VOLCAN RS** are multiple-discs in oil bath and do not need adjusting and maintenance. Modular and progressive, they are inserted in the transmissions in order to reduce motor overhang and consequently the length of the unit. This technologically advanced solution, especially adopted on conventional, high-powered machinery, was preferred to the more economical and less reliable "dry mono-disc" one used by most of the **VOLCAN RS** series direct competitors.



PLUS

The clutch also has a **proportional hydraulic control** that perfectly modulates coupling and uncoupling, much more powerful than the traditional hydraulic controls that operate dry mechanical clutches.

Operational comfort is also ensured by the **PRO-ACT System**, a system that allows the drive to operate the clutch in a convenient and efficient manner using a parallelogram-shaped progressive action pedal with adjustable backlash.



Absolutely unique transmissions

OS-FRAME

Engine performance would be nothing if it weren't supported by the excellence of the transmissions. The **VOLCAN RS** are provided with **OS-Frame transmissions** awarding lots of advantages:

- The double-mass flywheel with long-travel torsional damper is highly capable to eliminate the engine cyclic irregularities and also to give more torque to the engine itself.
- A unique transmission shaft through the central assy moves both the gearbox main clutch and the PTO independent clutch, while assuring the best mechanical output and the highest tractor maneuverability.
- It is a "monolithic" structure in a single cast iron casting. The joint in the middle of the machine lets the front axle oscillate up to 15° with respect to the rear axle (maximum slewing angle), stabilizing the machines on steep terrain. This assures the highest stability and constant traction, as the four wheels are always stuck on the ground.

4WD for maximum traction in total safety

The **4-wheel drive** has got an electro-hydraulically controlled disengagement of the front one, which allows you to move efficiently on steep slopes as well as on uneven grounds, while improving the transfer of loads on the road.

The electro-hydraulically controlled front and rear differential lock, simultaneously or rear only, assures the best traction on any type of grounds.



Gearboxes with the best speed range

The new 32-speed **Sincro** gearboxes of the **VOLCAN RS** with synchronized reverser and helical gears offer the best performance in drivability and comfort.

The logical speed sequence, without overlapping for all ranges, allows you to always select the right gear ratio for the requested use, allowing an efficient use of the machines: fuel savings, less stress on the mechanical components, less engine fatigue and, above all, better quality of work.

Graph of the speeds in km/h with 320/70R20 tyres for VOLCAN RS tractors. Engine speed: 2300 rpm





PTO with maximum power to be transmitted

The rear PTO is electro-hydraulically controlled, independent from the gearbox and synchronized with all forward speeds. It can be engaged under load, it has the brake in the released position and a safety mechanism that prevents accidental engagement. The independent PTO is serial at **540/750 rpm**. Optional **540/1000 rpm**.



Enhance performance



Superior quality axles

The decision to employ axles with epicyclic reduction gears is determined by the need to keep the wheelbase of the tractor units to a minimum while increasing maneuverability, besides increasing the prestige and reliability of the machine. In comparison to older and more economical axles with "cascading" gears used by the competition, the fundamental characteristics of epicyclic step-down gears are their nearly unlimited duration and greater transmission of power (they have three gears always engaged in comparison to only one in the more economical version).

Brakes that always rise to the occasion

The efficiency of the braking system, with **the 4 latest generation multiple disc wet brakes**, ensure completely safe braking in **VOLCAN RS** tractors.

The brakes are assisted by an hydrostatic control acting as braking distributor which intervenes constantly and simultaneously on the 4 wheels when acting on the pedal. The pedal is split in order to intervene simultaneously or independently on the rear brakes of the tractor.

Exclusive to this category of machines is the **independent BRAKE-OFF parking brake** that is automatically inserted when the engine is off. When the unit is operating, on the other hand, it is controlled with a practical button, electro-hydraulically controlled on the dashboard and equipped with a safety catch.



Hydraulic system: never so efficient

The hydraulic system of the **VOLCAN RS** is a **double circuit one with independent pumps and dedicated heat exchanger**. The hydroguide pump has a flow rate of 28,5 lt/min, like the one for the lift and distributors. As optional, an oversized pump of 49 lt/min can be also supplied. Hydraulic operating pressure is 180 bar.

For the **VOLCAN RS**, in the version without joystick, there are up to a maximum of 8 rear hydraulic control valves with oil recovery system which allow you to use equipment that requires a large hydraulic flow rate.

PLUS

Everything in one handful

For our most demanding customers we designed an **electronically controlled joystick** which allows you to keep the entire hydraulic system under control with a single device.

The **joystick** controls not only the hydraulic system, powering 11 rear hydraulic control valves, but also the lifts, making every maneuver involving the machine's hydraulics practical and secure. To get the best performance, the joystick is always supplied with the oversized pump 49 lt/min.

The **joystick** is positioned on the right of the driver, is fixed on the seat arm and rotates with the driving position when setting the tractor in reversed position.

Lifting Equipment

The **VOLCAN RS** are often used with performance equipment set on the lift. The **robust rear lifts** that are supplied with the machine rely on practical and versatile multipurpose attachments, designed to easily and quickly adapt to all equipment on the market. On demand, they can be also supplied with position and draft control for all those attachments requiring it. The lifting arms are available with: standard couplers, quick couplers and L-shaped quick couplers. It is also foreseen a hydraulically controlled upper link and tie rod for right link arm, which allows adjusting the attachments from the driver's position simply acting on the control valves lever.

In addition to the **rear lift**, it is also available a performing front lift with 4 hydraulic control valves, which is necessary when using combined attachments.



When the cabs for the **VOLCAN RS** were designed, we decided to set our expectations higher than anyone else had ever done. The cabs, in fact, available in the **Luxus and Comfort versions** were carefully designed in every detail to guarantee interior comfort.

Equipped with fabulous, spacious and ergonomic interiors, they have large windows that optimize the driver's view when driving either in the normal position or in reverse. The structure is mounted on silent-blocks completely independent from the tractor chassis, to cushion noise and vibrations. Air conditioning and heating are guaranteed by a reliable and efficient system.



Driver's seat



Reserved for the driver

The pleasure in driving a BCS tractor doesn't come only from the performance of the machine but also from the area reserved for the driver. The **VOLCAN RS driving area** was designed to guarantee comfort, ergonomics, functionality and safety in an absolutely original manner. The **driving position with platform mounted on shock absorbers** assures the best comfort to the driver. An **instrument console** with anti-reflective screen gathers all the function in a logical manner in a central display and ensures control over the machinery status.

Instrumentation is available in digital version and provides for simultaneous reading of the engine rpms, drive speed and PFD rotation speed. The **steering wheel**, adjustable according to the operator's physical structure, is assisted by an interactive hydroguide, controls a steering system which assures extremely low turning radii. This, in addition to the machine's structural characteristics, ensures maximum maneuverability in any use conditions.

PLUS

Reversible driving position

The **VOLCAN RS** are equipped with reversible driving position that allows for practical and efficient operation with both rear and frontal equipment. Reverse is achieved in just a few seconds thanks to the rotating console which allows the driving position consisting of steering wheel-instrument panel and brakes-clutch pedals, to rotate by 180°.





The **VOLCAN RS** series tractors are specialized like few others. Built for those who want only the best. Its large range of options and original accessories makes it even more unique.



Front Lift:

with 4 hydraulic couplers, allows to use front and combined attachments.



Tow Hitches:

approved according to the current rules in various countries. The towing hitches can also be supported by the frames that quickly adjust their height in order to optimize the use of the various towed equipment.



Weights:

available for 18" and 20" wheels (50 kg. each) or front (120 kg.) positioned on the engine cover side not to modify the tractor length.



Prefilter Range:

cyclone prefilter with external air intake to better filter the air in particularly dusty work conditions.



Three-Point Hitch:

available with standard couplers, quick couplers and L-shaped quick couplers with side adjustment of the hooks.



Three-Point Tie Bar:

allows to adjust the attachments directly from the driving position.



Seat Range:

Bostrom seats or pneumatic to allow the best comfort to the operator.



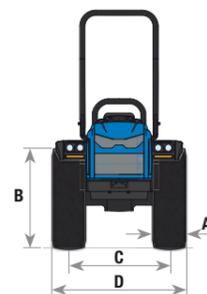
Wheel Range:

the width and height, the degree of ground compaction, the more or less aggressive "GRIP" are only some of the aspects that give the wheels on specialized tractors a fundamentally important role.

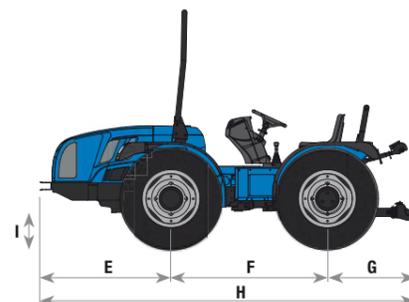
Technical features VOLCAN RS



	340/65R18	280/70R18	320/65R18	250/85R20	300/70R20
	WITH ADJUSTABLE RIM				
A Tyre width mm.	343	282	320	245	286
B Tyre height mm.	899	849	873	937	947
C Wheel track min/max mm.	1170/1466	1064/1572	1170/1466	1046/1588	1134/1618
D Width min/max mm.	1513/1809	1346/1854	1490/1786	1291/1833	1420/1904

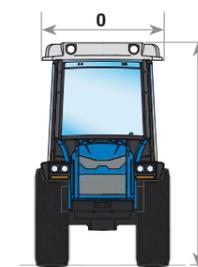


	320/70R20	340/65R20	31x15.50-15 XTC	31x15.50-15 STG	13.6-16 Garden
	WITH ADJUSTABLE RIM	WITH ADJUSTABLE RIM	WITH FIXED RIM	WITH FIXED RIM	WITH FIXED RIM
A Tyre width mm.	318	343	370	390	390
B Tyre height mm.	975	958	790	790	968
C Wheel track min/max mm.	1134/1618	1134/1618	1260/1374	1260/1374	1240/1400
D Width min/max mm.	1452/1936	1477/1961	1630/1744	1650/1764	1630/1790



VOLCAN RS DIMENSIONS (mm)

	E	F	G	H	I min-max	L min-max	M	N min-max	O
VOLCAN V850 RS	1260	1495	850	3605	248/328	2155/2255	740	2039/2131	1207
VOLCAN V950 RS									



STEERING RADIUS VOLCAN RS WITH THE FORESEEN WHEEL

Type of tyre	340/65R18	280/70R18	320/65R18	250/85R20	300/70R20	320/70R20	340/65R20	31x15.50-15	13.6-16
mm	3280	3240	3260	3150	3200	3250	3280	3280	3600

TECHNICAL FEATURES	VOLCAN V850 RS	VOLCAN V950 RS
CHASSIS	Swinging integral chassis OS-FRAME with steering wheels	
DRIVE	Four-wheel drive. Front-wheel drive disengagement with electro-hydraulic control	
ENGINE		
Manufacturer	VM	
Model	D754 TE3	D754 IE3
Number of cylinders	4	4
Displacement cm ³	2970	2970
Suction	Turbo	Turbo Intercooler
Emission level	Tier 3	
Power KW/HP	58 / 79	67 / 91
Nominal speed (rpm)	2300	2300
Maximum tractor torque (Nm/rpm)	274 / 1800	420 / 1000
Cooling	Water	
Tank capacity (lt.)	54 lt	
TRANSMISSION	Synchronized gearbox: 32 speeds (16 FWD and 16 REV) with synchronized reverser	
Main clutch	With multiple discs in oil bath with hydraulic control PRO-ACT SYSTEM	
DIFFERENTIAL	Front and rear. Differential lock: front and rear simultaneously or only rear with electro-hydraulic control	
AXLES	Front and rear with epicycloidal reduction gear	
POWER TAKE-OFF	Rear, independent from gear and synchronized with forward speed. Engageable under load with brake in disengaged position	
PTO clutch	With multiple discs in oil bath	
Engagement control	Electro-hydraulic	
Independent PTO rotation speed (rpm)	Standard: 540/750 - Optional: 540/1000	
HYDRAULIC SYSTEM	Double circuit with independent pumps and heat exchanger	
Flow rate to hydraulic pump which controls the hydroguide and electro-hydraulic control (lt/min.)	28,5	
Flow rate to the lift and the distributors (lt/min.)	28,5 (optional oversized pump of 49 lt/min, standard with joystick)	
Maximum hydraulic pressure (bar)	180	
DISTRIBUTORS	Mechanical control to max 8 hydraulic couplers	
Rear (standard)	2 double acting	
Rear (optional)	1 single acting and 1 double acting or 1 double acting and 1 double acting with float	
Joystick (optional)	With electronic control of the distributors consisting of: 1 single acting with adjustable flow rate and free return, 5 double acting and oversize pump of 49 lt/min	
ELECTRIC SYSTEM		
Battery (Ah)	100	
Alternator (A)	55	
REAR LIFT	Standard: by two external rams - Optional: draft and position control	
Three-point hitches	Standard: standard couplers cat. 1 and 2. Optional: quick couplings cat. 1 and 2 and lift rods adjustable in length or quick couplings cat. 1 and 2, L-shaped lift arms, lift rods adjustable in length and hooks adjustable in width	
Three-point tie bar	Standard: with manual adjustment - Optional: hydraulically controlled upper link and tie rod link arm	
Lifting capacity at the end of the arms (kg)	2300	
FRONT LIFT (optional)	By two external rams with front guard and 2 double acting control valves	
Three-point hitches	Rigid with quick couplings cat. 1	
Lifting capacity (kg)	800	
DRIVING UNIT	With suspended platform on "Silent block"	
Driving platform	Reversible with rotating platform, suspended brake and clutch pedals mounted on revolving control column	
Steering wheel	Adjustable in height	
Gas spring SEAT with easy adjustment and seat belt	Standard: comfortable sprung seat, adjustable according to the driver's weight - Optional: "Bostrom" seat or pneumatic seat	
SERVICE BRAKES	Oil immersed, multidisc brakes, acting on the 4 wheels with hydrostatic control	
Parking brake	Automatic and independent with BRAKE-OFF SYSTEM	
STEERING	With hydrostatic steering by two rams, acting on the front wheels	
SAFETY		
Roll-bar frame (standard)	Front, homologated	
Cabin (optional)	Sound-proof, mounted on 'Silent block'. Versions: Luxus (with heating and ventilation systems) or Comfort (with air conditioning)	
CONSOLE		
Digital type (optional)	With chrono-tacho-gyrometer, water thermometer, control warning lights, simultaneous reading of rpm, forward speed and rotation speed of pto	
TYRES		
Standard	280/70R18	
Optional	340/65R18 * 320/65R18 * 250/85R20 * 300/70R20 * 320/70R20 * 340/65R20 * 31x15.50-15 XTC or STG * 13.6-16 Garden	
TOW HOOKS		
Standard	Rear CUNA and front tow hook	
Optional	Rear rotating or rear adjustable in height (Slider type) tow hooks, both EC approved or CUNA rear adjustable in height (Slider type)	
WEIGHT OPERATIONAL		
With chassis (kg)	2170	
With Luxus cabin (kg)	2370	
With Comfort cabin (kg)	2370	
OPTIONAL	Self Cleaning System, oil filter protection, muffler protection, flash light, cyclone prefilter with external air intake, front weight and weights for wheels	

BCS guarantees:



PROJECT

The design criteria have the support of very modern programs that work in 3D.



CHECK

All the components of our machines are tested before going into production. This guarantees the quality and reliability of our products.



COMFORT

Designing for comfort is one of the essential components of our technical staff's Mission.



SPARE PARTS

Tested and guaranteed original spare parts
E-parts is the on-line support for fast and easy service.



ASSISTANCE

Efficient and valid assistance service with the support of friendly and competent technical staff: E-service is the on-line tool supporting the service.



SALES FORCE

An extensive and efficient sales force guaranteeing service and assistance.



LUBRIFICANTS

BCS recommends to use the original **PowerLube** lubricants.

You can pay a visit to your local BCS dealer or visit our website www.bcsagri.it to discover which novelties are waiting for you!

