

**F500.RSV**

S E R I E S

**ENERGY  
SAVING**

**VALUE  
AT GLANCE**



**LADEN CONTAINER  
HANDLING REACHSTACKERS**



Utility is the usefulness that a customer can get from a product that he has purchased. Technically it is the profit that is generated by the investment made in that good. From today onwards for laden container yard operations there is no equipment capable to grant equal or better utility that the **new CVS FERRARI F500-RSV Reach Stacker range**. Designed and built to maximize the return on investment of mobile equipment based container terminals and generic full container storage and transfer yards, these machines have the lowest total cost of ownership of their capacity class, whilst reserving to the user top level productivity and reliability. Let us guide you through the fundamentals of unheralded value and nobility.



## THE RANGE

MODEL	CAPACITY (ton)				
	Lift Ability 1st Row	1st Row	2nd Row	3rd Row	Spreader Pile Slope
<b>F500.RS2-V</b>	5 x 9'6"	45	31	16	Mechanical
<b>F500.RS3-V</b>	5 x 9'6"	45	32	17	Mechanical
<b>F500.RS5-VPB</b>	5 x 9'6"	44	26	11	Hydraulic



# UNMATCHED UTILITY



The RSV range gives you all what you need to run your operations with the best possible efficiency. Such as maximum capacity under spreader, five high stacking of fully loaded high-cube containers in the first row and four high stacking in the second row. Benchmark level lift and drive speeds and excellent maneuverability are in-built characteristics; whilst redundant safety features and selectable **Energy Saving** drive mode are unique “plus” of the standard dotation. That is why these trucks have got the full set of essential tools to deliver top tier productivity to their users.

# UNCONSTRAINED PERFORMANCES



## OPERATIONAL SPEEDS

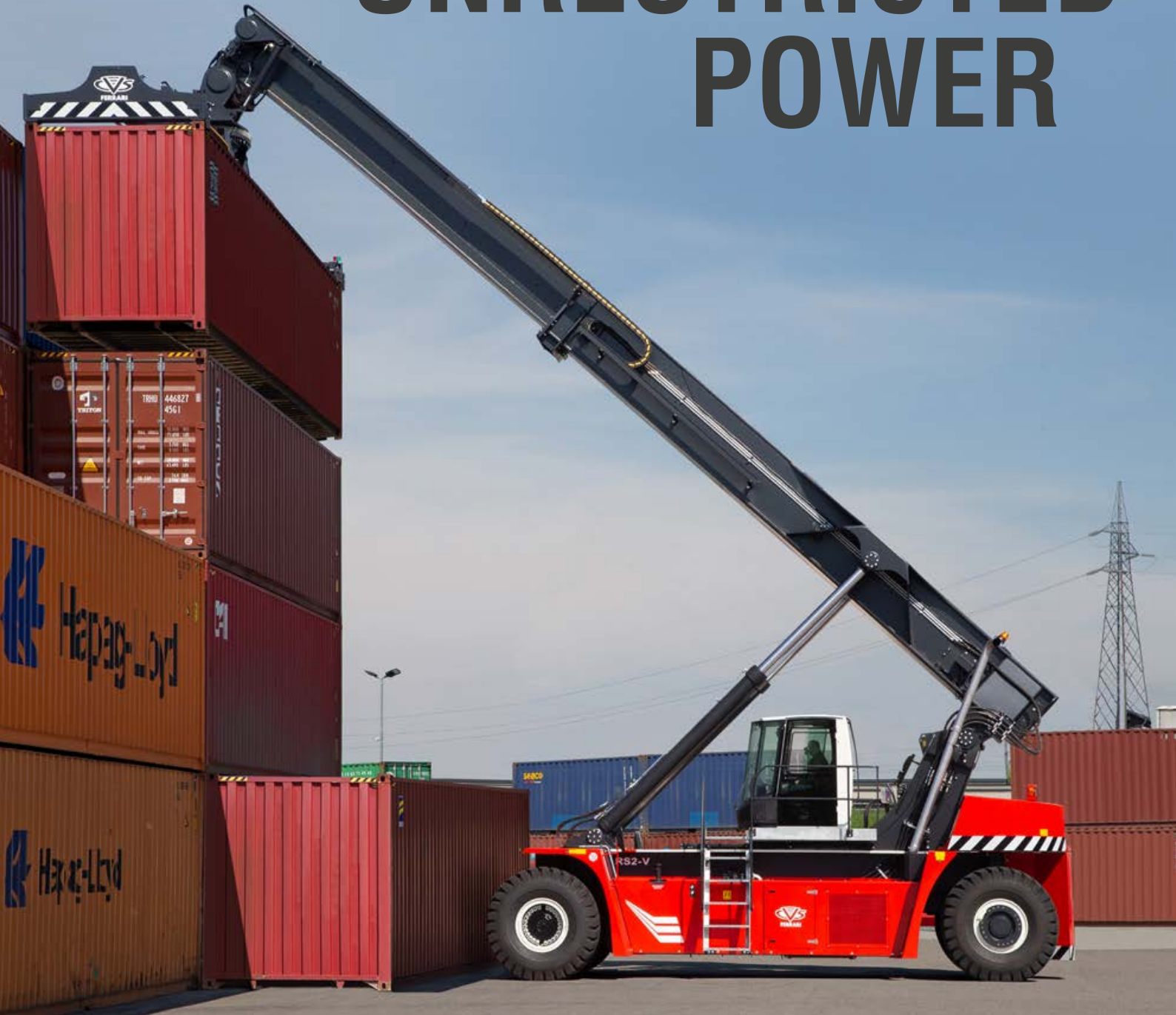
Max Lifting speed - Lifting and Extension - Laden (70% of rated load)	m/s	0.30
Max Lifting speed - Lifting and Extension - Unladen	m/s	0.40
Max Lowering speed - Lowering and Retraction - Laden (70% of rated load)	m/s	0.35
Max Lowering speed - Lowering and Retraction - Unladen	m/s	0.55
Travel speed - Laden	km/h	21
Travel speed - Unladen	km/h	22

**CVS FERRARI**

**F500.RSV**



# UNRESTRICTED POWER



## DIESEL ENGINE

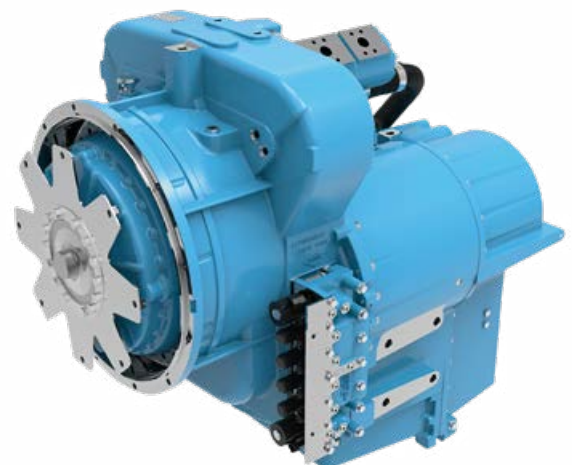
Engine Make and Model	CUMMINS X12	
Engine Emission Standard of Compliance	EU Stage IIIA EPA TIER 3	EU Stage V EPA TIER 4F
Rated Power	kW	250 (at 2100 rpm)
Maximum Power	kW	276 (at 1800 rpm)
Rated Torque	Nm	1674   1693
	@ rpm	1400
Cylinders	6	
Displacement	cu. cm	11.800

The CVS FERRARI new RS-V Reach Stacker range is made off the best components. The standard **Cummins X12** engine has an exceptionally low specific fuel consumption and very high maximum power and torque output. Coupled with the powerful, heavy duty and best in class for fuel efficiency **DANA TE30** transmission that connects to the sturdy and industry benchmark **KESSLER D102** drive axle, this assembly forms the best driveline in the market for power, durability, serviceability and economy of run. As productivity is the amount of work performed in time, it directly depends from the available **power**. The CVS FERRARI RS-V Reach Stackers are equipped with a power unit that is second to none for performance and that also enjoys the widest, most professional and reactive OEM warranty coverage at the 4 corners of the world. This is the CVS FERRARI way of guaranteeing its customers maximized reliability, minimized maintenance and optimized cost per lift.



## HYDRODYNAMIC TRANSMISSION

Transmission Make and Model			Dana Spicer TE30		
designed for Reach Stackers and HD Fork Lift Trucks					
Input Power			220 to 300 kW		
			300 to 400 hp		
Torque Capacity			1100 + 825 Nm		
Forward (FWD) - Backward (BWD) Gears			5 FWD - 3 BWD		
Gear Ratio	1st	2nd	3rd	4th	5th
FWD	4.776	2.495	1.643	1.090	0.718
BWD	4.776	2.495	1.090	-	-



# CVS FERRARI



The roomiest driver's environment in the industry, the most adaptable controls ever and a full option cab, receive the operator that boards the CVS FERRARI new RSV Reach Stackers. Fitted with a "all in one hand" Hall Effect type, capacitive joystick and with a 7-inch color and graphic dashboard display, the cab of the RSV reach stackers surprises for its excellent comfort and rationale lay-out. Falling object proof top screen and laminated front glass, shield a solid structure designed to maximize all-around visibility and sun glare. Pantograph and multi speed wipers for front and top screen are standard features. A wide and comfortable access stair and walkway complete a prime machine-human interface package.



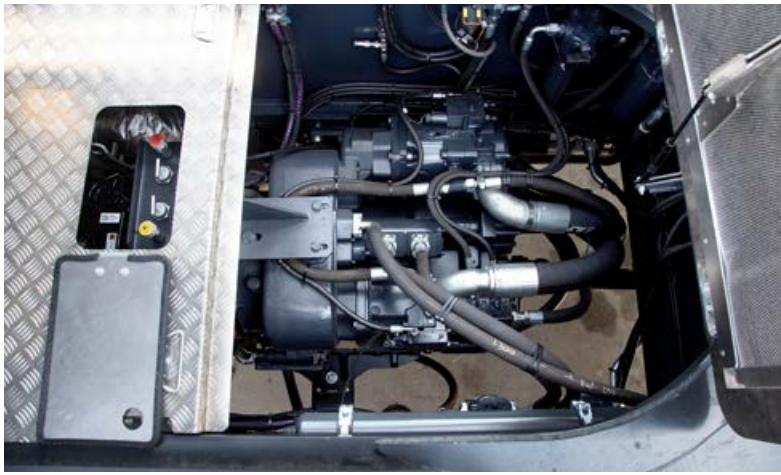


# UNCOMMON COMFORT



## SLIDING CAB

Manually sliding cab to allow full access to engine bay, is a standard feature. Hydraulic powering of cab sliding is an available option.



The CVS FERRARI new RSV Reach Stackers come with the most advanced hydraulics and the best quality electrics and electronics. Electrics are all contained in IP67 boxes, often enclosed in sealed compartments. Wiring runs in sealed conduits and features IP67 connectors. Standard mechanical sliding cab or optional hydraulic sliding cab facilitate maintenance operations in the engine and transmission bay. Main electric system compartment and Main hydraulic system compartment are easily reachable from the side of the truck.



# UNCOMPROMISED QUALITY

Remoted engine and transmission oil deep-sticks and refill hoses are also provided in a reach overall dotation, professionally installed and slickly finished. These trucks are nothing short of being the best value for money in their class.

The F500.RS-V range are fitted with top tier Bosh-Rexroth electronically controlled variable displacement pumps and load sensing distribution valves.





## ON BOARD COMPUTER

The automotive grade on-board computer optimizes performances and fuel efficiency, enhances safety and eases diagnostics and maintenance.



## HYDRAULIC SYSTEM

Electronically controlled Bosh-Rexroth main hydraulics managed by the CVS FERRARI "Sixth Sense" trade-mark software ensure benchmark fuel efficiency both in "Dynamic" and "Energy Saving" selectable modes. Tropicalized and thermostatically controlled fan assisted radiators keep hydraulic, brakes and transmission oil cool at all times.



## ELECTRIC SYSTEM

Thoroughly protected electronics, in IP67 grade encasings, aluminum military specs connectors and cold weather resistant wiring are the making of a reliable electric system whose elements are easily and safely accessible. Wiring loom is minimized due to the extensive use of CAN-BUS interfaceable components.



# UNIQUE SOLUTIONS

**ENERGY  
SAVING**

**\*SAVE UP TO 25%  
FUEL CONSUMPTION**

**T**he CVS FERRARI way towards fuel efficiency it is all about elimination of unnecessary and inefficient usage of energy and nothing about power reduction. Reach Stackers are production machines and their productivity is what determines the revenue of the user. At CVS FERRARI productivity is sacred and as there is no productivity if there is no power, our Reach Stackers are fitted with the most powerful, yet most fuel efficient in class, engine and transmission. That will ensure that our machines turn over the most possible business volume in time. Yet we have made them as fuel efficient as they can possibly be, by developing and adopting a number of \*Energy Saving Solutions that cut fuel consumption up to 25%, depending from the application, in comparison to not fuel consumption optimized equipment.

**ECOLOGY'S FRIEND  
ECONOMY'S BOOSTER  
EARNINGS' MACHINE**

**F500.RSV**



This is achieved when the machine is operated in **Energy Saving drive mode** which field test prove having 95% to 100% the same operational productivity of the dynamic drive, with the sole appreciable difference between the two being the peak lifting speed. The Energy Saving solutions implemented in the F500.RS-V Reach Stackers range is a mix of hardware and software devices and programs that reading the actual utilization pattern of the machine, prevent and limit driver's and equipment inefficient behaviors. Soundy fuel expenditure savings are guaranteed and not traded for less revenue produced or less engine and transmission longevity or higher life time maintenance costs.



# CVS FERRARI

STANDARD ENERGY SAVING SYSTEMS PACKAGE	ENERGY SAVING ACTION
<b>SIXTH SENSE HYDRAULICS</b>	The on-board computer manages power delivery such that only right amount of energy is used to lift a load at the required speed.
<b>REGENERATIVE HYDRAULICS</b>	Empty and light weight containers are lifted at high speed with minimized energy use thanks to the regenerative hydraulics.
<b>EASY BOOM RETRACTION SYSTEM</b>	Boom retraction is one of teh most energy demanding functuions that has been sensibly reduced with the adoption of an advanced and intelligent computer controlled hydraulic valve.
<b>AUTO DRVE POSITION OPTIMIZER</b>	The on-board computer sets the boom position for driving at the most safe position with the most fuel efficient maneuver.
<b>BOOM LOWERING THROTTLE KILL</b>	With boom lowering and machine not in motion, throttle is inactive, thus avoiding any unnecessary fuel wastage, as lowering speed is maximized through gravity action.
<b>OPTIMIZED IDLING RPM REGIME</b>	Idling regime is minimized based on the actual power requirement.
<b>THERMOSTATIC FLUIDS COOLING FANS</b>	Cooling a cold fluid is a waste of energy. All the cooling systems are thermostatically controlled. Only the required amount of energy for the actual cooling needs is provided.
<b>A/C OFF WITH CAB DOORS OPEN</b>	Why ask the A/C to cool off the globe and waste unnecessary energy? With doors open A/C shuts off.
<b>RPM LIMITATION TO EFFICIENT RANGE</b>	Engine reving is limited to the range where fuel efficiency is maximized, such that productivity is optimized along with fuel saving. No compromise allowed.
OPTIONAL ENERGY SAVING SYSTEMS PACKAGE	ENERGY SAVING ACTION
<b>TRANMISSION LOCK-UP FUNCTION</b>	The Lock up system connects the impeller with the turbine, <b>transforming the torque converter into an absolute mechanical coupling</b> . The result of an implanted lock up mechanism includes improvement in gliding transmission power and less waste heat.

# UNAPOLOGETICALLY PRODUCTIVE

**R**each Stackers are operating capital equipment that must handle containers in the shortest possible time as each and every paying container move they complete, they generate value. Therefore **there is no compromise for productivity** of these machines and fuel efficiency as every other reduction of running costs cannot be achieved at the expense of reducing the ability of the truck machines to turn over containers as rapidly as it gets. That is why the CVS FERRARI Reach Stackers are powerful and solid. That is why the fuel efficiency they offer is true and the money they save are for real and so is their contribution to the global environmental footprint. Because they effectively and sensibly reduce the emissions per each handled container, without reducing the number of containers handled in time. **The CVS FERRARI Reach stacker are proudly claiming the world leadership for the greener trucks in the game and they do it without having to apologize for their production output**, that remains unchanged and atop any competing alternative product.

## CVS FERRARI

*POWERFUL  
PERFORMANT  
PRODUCTIVE*



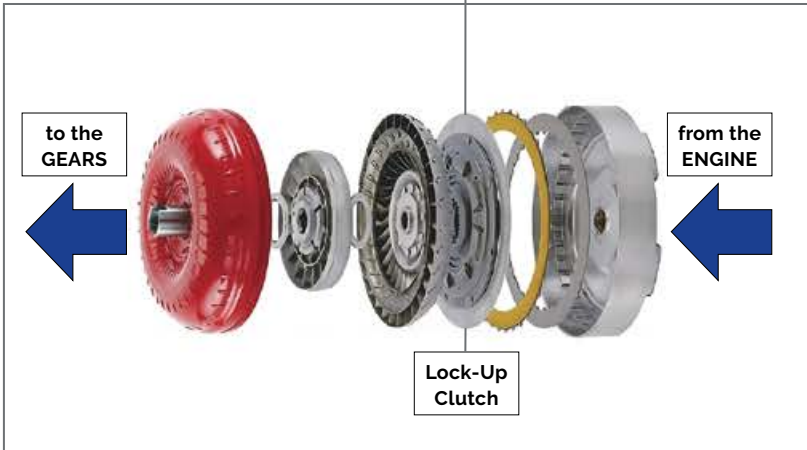
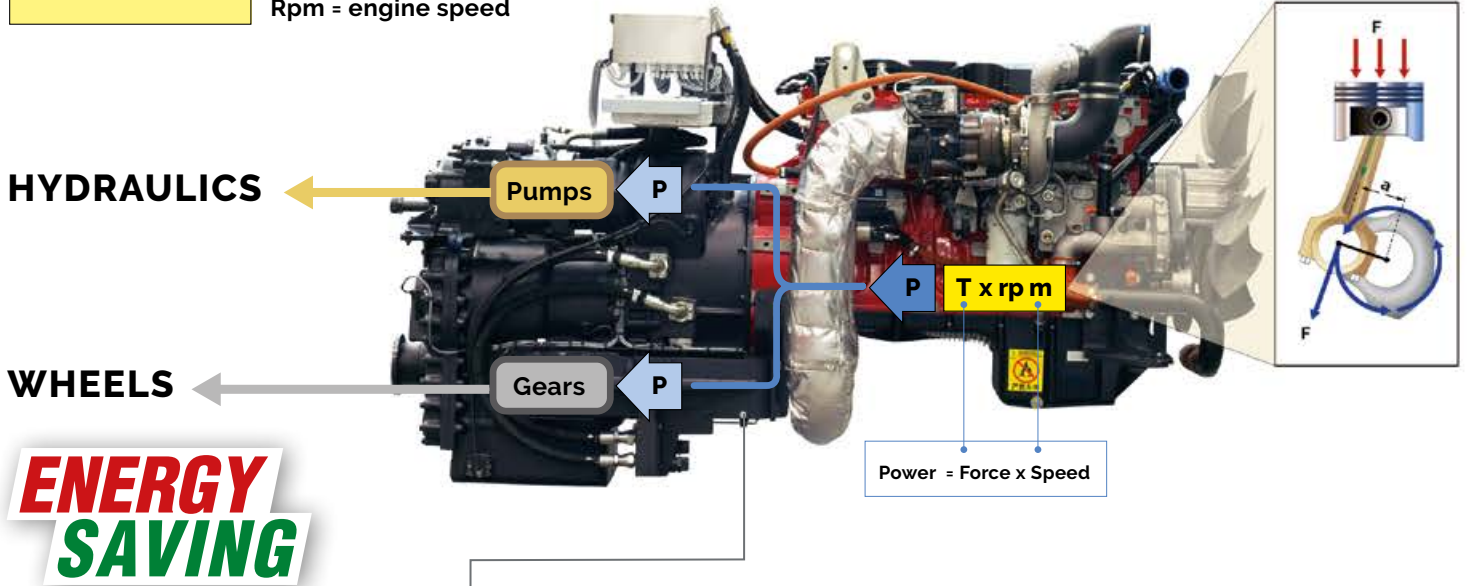
The rotating moment or **Torque**, is the mother of the **Engine Power**, which is ultimately what sets the potential productivity of the equipment that such engine powers. Power is also a function of the the speed at which the engine spins (rpm). Engine fuel efficiency (Specific Fuel Consumption) is at its best when the Engine Torque is at is highest, that is why equipment fuel efficiency is first of all about having an engine that has high torque at low rpm. Then it is about how efficiently the power generated by the engine is used and there is no Reach Stacker on the market that is more efficient than CVS FERRARI in the utilization of power for hydraulics thanks to its standard Energy Saving Solutions package.



## PRODUCTIVITY IS ALL ABOUT TORQUE AND POWER

$$P = T \times \text{rpm}$$

P = Power  
T = Torque  
Rpm = engine speed

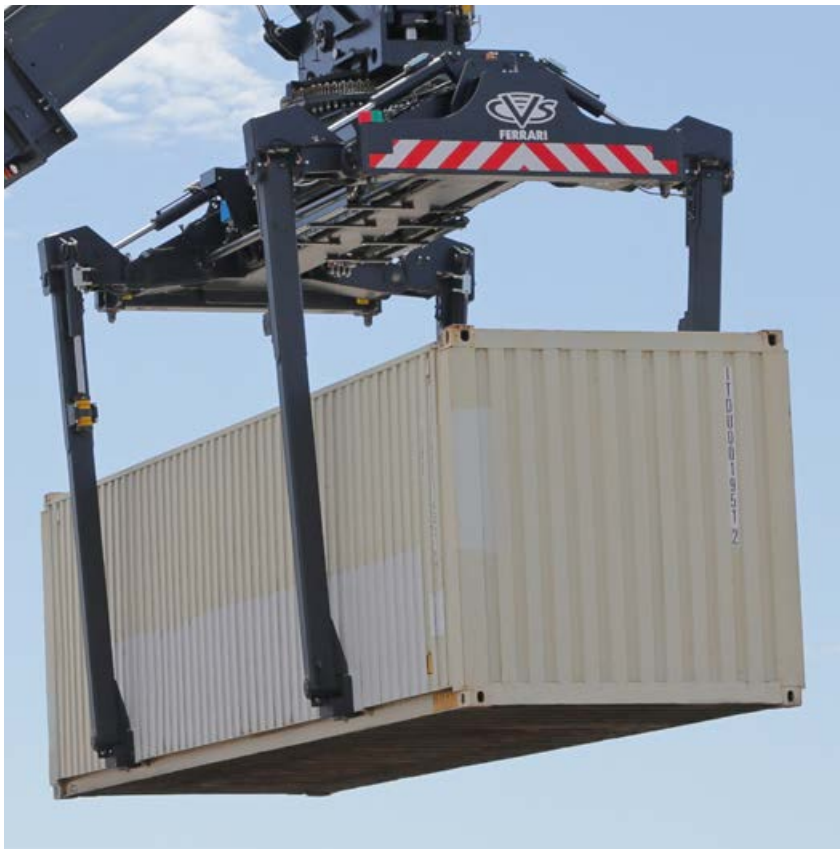


The DANA TE30 transmission, with its 5 forward gears is already the smoothest and most energy efficient gearbox in class. CVS FERRARI now also offers this modern, powerful and **fuel saving transmission** with the optional **Torque Converter Lock-Up** function that further boosts the CVS FERRARI fuel efficiency as it directly connects the engine to the wheels, thus saving on the torque converter energy absorption.

**C**VS FERRARI offers its Reach Stackers with the choice of ELME 817 INNOVATION or its own designed and manufactured spreader, depending from the application. Both attachments are featuring the maintenance friendly externally mounted telescopic extension and retraction cylinders. Mechanical Pile Slope is a standard feature, whilst Hydraulic Powered Pile Slope is an option. Power dampening is also an available optional feature. All our spreaders are coming with standard 30' stop, lifting eyes at the 4 corners, twist-lock lights and twin rotation motor, that represents a major safety and spreader durability feature.



## CVS FERRARI



### ELME 817

Telescopic Spreader

Capacity: 46 Ton

Rotation Ability: +195° / -95°

Side Shift: +/- 800 mm

Full Floating Twist-Locks

CVS FERRARI also offers its RS-V reach stackers with a Spreader with integrated piggy back attachment, that comes with standard hydraulic powered pile slope. The on board computer of the machine manages the operational sequences and the very many safeties with which we have equipped this attachment, thus outrightly making it the safest in the market. It also visualizes to the driver the status of each individual leg to ease and speed up his work.

### CVS FERRARI

Telescopic Spreader

Integrated Piggy Back Attachment

Capacity: 46 Ton

Rotation Ability: +195° / -95°

Side Shift: +/- 800 mm

Mechanical Pile Slope: +/- 3°

Hydraulic Pile Slope: +/- 6°

Full Floating Twist-Locks



The RS-V range is among the most versatile Reach Stackers ever built. Their very compact design and high maneuverability, coupled with an extensive range of attachment options, makes it ideal for many unconventional applications. Tight intermodal yards, overpass divided terminals, congested multipurpose docks or narrow aisles industrial operations are all actual brilliantly solved cases by these top utility machines. Available spreader options range from conventional telescopic type, with or without Hydraulic Pile Slope, to the unit with integrated Piggy Back Legs or integrated foldable Over-height Legs, to the Container Tilting Spreader. There also is a wide choice of non-container handling attachments like the Coil Rotating "C" Hook, the Steel Slab Clamp and the Magnet, for which a compact and full maintenance access machine lay-outing has been developed. Ask us for a solution to your handling problem and RS-V would most likely have one for you.



# UTTERLY TOP VERSATILITY

CVS FERRARI

Rotating Coil "C-Hook"

Capacity: 35 ton or 40 ton

Rotation Ability: + 195° / - 95°

Powered Dumping: + 15° / - 15°



# UNMISTAKABLY CVS FERRARI



**W**ell built, high quality content, fully performant, exceptionally safe, relentlessly reliable, superbly finished. The CVS FERRARI blood pervades every vein of the new RSV range reach stackers, bumper to bumper. As value creation is a pivotal concept in the CVS FERRARI business philosophy, this new breed of CVS reach stackers sublimates and materialize the essence and meaning of such words. That is why anybody driving it for the first time, immediately knows he is riding a very special horse, a true and unmistakable CVS FERRARI DNA machinery.





**FERRARI**

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