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## REACHSTACKER CONTAINER HANDLER PRODUCT BROCHURE

CUTION 9'6" IGH

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• CONTAINERSHIP

# **RS46 SERIES**

2100

16

100

# **ENGINEERED TO EXCEL**

### **STRONG TO THE CORE**

The durable 2-stage boom design is constructed from T-1 steel, with two plane welding for additional strength. The one-piece frame features reinforced welding of the main sections with heavy duty rear supports and incorporates widely spaced boom towers providing superior torsional rigidity and excellent rear visibility.

The engine protection system is standard, designed to prevent damage due to low oil pressure and high coolant temperatures. A transmission protection system, triggered by excessive oil temperature, is also standard equipment. In order to minimise damage to the truck, these systems will initially decrease the engine power if a problem is detected and will derate the engine to creep mode if immediate action is not taken.

### **HEAVY DUTY STEER AND DRIVE AXLES**

The steer axle is engineered for long life and outstanding steering capability. An adjustable outside turning radius is available, helping to reduce stress on the axle and improve tyre life by reducing tyre scrubbing.

Bolted to the frame, the rugged drive axles are equipped with oil immersed wet disc brakes. The axles are also designed for extended differential fluid change intervals.

### **HYSTER PATENTED STABILISER**

Hyster developed a unique and patented stabiliser technology for ReachStackers. When operating in second rail and barge handling applications, you're lifting a high capacity at a long load centre. Without the right stabiliser design, you could experience high ground loading, low side stability, and tyres might be off the ground.

The Hyster stabiliser utilises dynamic pressure, meaning approximately 24% of the front loading will remain on the front axle, giving extra side stability and lower ground loading. With the Hyster patented system, four tonnes less weight is required in the counterweight, thereby reducing tyre wear on the rear axle.





The heavy duty, innovative stabiliser has rapid deployment, increases lateral stability and reduces tyre wear on the rear axle.



### **STAGE V**

- Mercedes-Benz OM470 10.7L 240 kW (326 hp)
- High performing engine with high torque values at low RPM ranges
- Common rail injection system
- Long oil service interval of 1000 hours
- Low fuel and AdBlue consumption
- Large fuel tank / DEF tank capacity
- Cooling on demand by hydraulically driven fan for lower fuel consumption and less noise
- Selective Catalytic Reduction (SCR) and DEF like AdBlue
- Diesel Particle Filter (DPF)
- Both after-treatment units are packed in one box positioned outside of the truck
- Easy access and improved heat rejection
- Contact surface areas remain low temperature due to extra heat shields
- Extra protection against impact integrated in running board

- Rugged Spicer Off-Highway Model TE-30 powershift transmission from Dana with proven field experience and reliability
- On-demand cooling with a variable speed fan that only operates when needed, reducing fuel consumption and lowering noise levels.

### STAGE IIIA (IN SELECTED MARKETS)

- Cummins X12 12L 250 kW (335 hp) engine with 120 amp alternator
- Spicer Model TE-30 transmission
- Water-cooled wastegate turbocharge available with a delayed engine shutdown feature that reduces potential damage to the turbocharger by allowing it to cool
- On-demand cooling with a variable speed fan that only operates when needed, reducing fuel consumption and lowering noise levels.

# **TECHNOLOGY THAT KEEPS YOUR COSTS DOWN**

### **HYSTER TRACKER™**

Hyster Tracker<sup>™</sup> is the remote automated communications platform from Hyster enabling wireless asset management for your fleet of trucks. Hyster Tracker<sup>™</sup> provides the ability to effectively monitor Key Performance Indicators (KPIs) that eliminate waste and enhance operational efficiency such as number of loads moved, idle times, fault logs, preventative maintenance logs and impact monitoring among others.

Our Hyster Tracker<sup>™</sup> programme also enables advanced capabilities such as integration into NAVIS or other Terminal, Port, and Warehouse Management Systems. Advanced vehicle monitoring systems including Tyre Pressure Monitoring Systems (TPMS) are also available as well as remote fuel consumption tracking. Location positioning features are available as well so you know exactly where your equipment is located at all times to drive maximum productivity.

### DIGITALISATION

Hyster is a participant in the iTerminals 4.0 Project, which helps progress the integration of technologies in container terminal operations. The project has also resulted in the creation of the Terminal Industry Committee, also known as TIC 4.0, of which Hyster is a founder member.

As part of the iTerminals 4.0 project, Hyster is running pilot programmes around digitalisation, including those looking at the smart maintenance of port equipment and new approaches for the digital exchange of telemetry data.

### **RELIABLE AND DURABLE ENGINE DESIGN**

- Fuelling system allows precise matching of engine RPM to load demands for optimal performance
- Mercedes-Benz stage V engine
- Torque at low RPM offering power on demand
- Flat torque offering predictable behaviour

An automatic engine shutdown with timer option reduces fuel consumption by shutting the truck down when the operator is out of the seat for extended periods, thus limiting idle hours on the truck.

Hibernate idle is a feature that reduces the engine idle speed to 700 RPM during extended idle periods to further conserve fuel.

### **AUTOMATIC THROTTLE-UP**

Automatic throttle-up enables automatic response to lift inputs from an operator when the lift lever is activated. A single touch lever or joystick controlled rev-up function keeps the engine in the most efficient band to deliver good fuel economy. This helps enhance productivity while providing improved ergonomics. The function only applies when the truck is in neutral.





### **AUTOMATIC GREASING**

An optional automatic greasing system is available. Automatic greasing will significantly lower total cost of ownership by eliminating the maintenance costs of manually greasing each component. Completing the greasing process helps to extend the component service life. Hyster ReachStackers can include up to 29 greasing points.

### **ON-DEMAND COOLING SYSTEM**

- The cooling fan draws power only when cooling is required, unlike direct drive fans which draw high levels of power at all times
- Reduces accessory loads on powertrain
- Consumes less fuel and lowers noise level compared to Stage IIIA

### **ON-DEMAND HYDRAULICS**

- Load-sensing on-demand hydraulic system delivers oil flow only when required
- Capable of more oil displacement even at low engine speeds
- Less heat is produced, therefore oil and filters last longer. Hoses, seals and components also wear less and last longer
- Uses less fuel (up to 5–10% fuel reduction solely from on-demand hydraulics)
- Less speed means lower fuel consumption

### **HVO FUEL**

Hyster ReachStackers are able to run on HVO100 according to EN15940. HVO (Hydrotreated Vegetable Oil) is a cleaner fuel that offers up to 90% reduction in CO2 emissions. HVO 100 can be used as a diesel alternative in the short term until equipment is replaced with a Hyster Zero-Emission fleet.

# **DESIGNED FOR OPERATOR COMFORT**

Hyster is known for tough lift trucks, but we're also recognised for ergonomically advanced lift trucks. A spacious, comfortable operator environment and an operator interface with ergonomically designed controls helps elevate productivity while minimising operator fatigue.

The RS46 series operator cab provides a spacious cockpit style cabin that keeps all truck information and controls within reach.

A variety of seat configurations are offered to suit operator preference including mechanical or air suspension, cloth, or vinyl cover, lumbar support and ventilated or heated seats. The air conditioning system can be pre-set for automatic climate control and the high and rear louvres provide direct air flow toward the operator. Non-slip anodised aluminium brake and inching pedal also supports comfortable operation. An optional rearview camera is also available.

The ergonomically designed, seat-mounted control arm is fully adjustable and includes a wrist cushion and redesigned joystick to help reduce fatigue when operating the hydraulics. The intuitive joystick, integrated in the armrest, is designed for simplicity to provide easy, precise operation of the boom and spreader. Directional control on joystick available as an option. The modular design of the control arm makes it possible to cover almost any possible truck configuration while being easily serviceable. The reliable CANBUS controls all main components. The infinity adjustable steering column also supports reliability and ergonomics.

The 7" full colour, touchscreen Integrated Performance Display shows all truck activity, allows for easy access to change or calibrate truck settings and is integrated with Hyster Tracker<sup>™</sup> telemetry system.















### **POWERED SLIDING CAB (OPTIONAL)**

- The cab is positioned behind the lift cylinders near the centre of the machine. This configuration is often preferred by operators, because it offers the most comfortable viewing angle when stacking containers.
- The cab can be moved to various positions by a convenient switch inside the cab while driving or lifting. The feature accommodates operator preference and provides optimum visibility in a variety of operating conditions.

### **ALL-AROUND VISIBILITY**

- Curved, scratch resistant, tempered glass front and rear windshields, armoured glass top window and one piece steel-framed glass doors provide operators with excellent all-around visibility.
- Sloping counterweight enhances rearward visibility
- Length of counterweight extension from rear of the machine kept to a minimum

 Unique boom overhang design behind the boom mount offers maximum rear visibility even when the boom is at maximum raised height. The pivot points for the boom are positioned at the back of the frame to minimize the boom overhang, resulting in a relatively compact machine.

### EASE OF INGRESS AND EGRESS

- Large running boards are designed for a high level of slip-resistance and provide easy snow and dirt removal on either side of the truck
- Guard rails with convenient grip handles are strategically placed to guide 3-point contact during truck entry and exit
- Large doors tapered along the front structure of the cab frame with ergonomic locations of grab handles and broad steps further enhance ease of entry and exit
- Optional lights on the left side stairs provide illumination on all four steps as well as the top platform. The lights can be switched on and off at the operator access and inside the cab

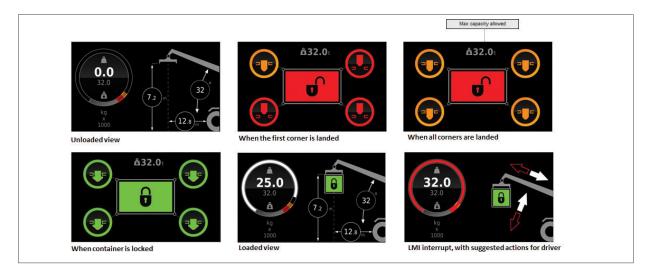
# **MORE LOADS MOVED PER HOUR**

### **COMPETITIVE LIFT SPEEDS**

Hyster<sup>®</sup> RS46 trucks deliver high productivity with competitive average speeds for lifting and lowering under laden and unladen conditions of 0.52 m/sec (lift) and 0.29 m/sec (lowering). Vertical lift is activated by pressing a button/switch on the joystick synchronising the boom derricking and telescoping functions to keep the bottom of the container parallel with the ground.

### **REACHSTACKER SPREADERS**

- Hyster<sup>®</sup> ReachStackers feature the Elme 818 Spreader with vertical twistlocks and strengthened structural parts. as well as an option for the Elme 857 Intermodal Innovation spreader.
- Spreaders provide easy maintenance access and troubleshooting as well as long service intervals that can lead to less downtime and lower cost of operations.
- The Innovation spreader offers enhancements such as additional and larger wear pads on extension beams, added structural reinforcement to the interface between the extension beam and end beam, relocated sideshift and extension cylinders on the top of the frame for improved service access and lubrication-free twistlocks.
- Automatic locking occurs when the spreader is correctly positioned on the container. Unlocking is only
  possible by pushing a button in the cab.
- Mechanical twistlock interlock helps to fully engage the twistlocks on all 4 corners prior to lifting a container
- A second performance display, mounted in the center of the cab provides twistlock engagement and displays the load moment indicator which aids the operator by sensing the percentage of capacity at which the equipment is working and offers interrupt feature with suggested actions for the driver.
- Optional automated one-touch spreader extend/retract feature available to automatically extend the spreader to 20 or 40 feet with one touch of the button.
- An optional powered pile slope (PPS) feature enables mechanical sideways articulation to handle containers from or onto a sloping surface
- Optional lifting eyes available on spreaders allow for manoeuvring larger loads, such as wind blades



Twistlock and LMI Display

# SIMPLER SERVICEABILITY

### **EASY ACCESS TO COMPONENTS**

- The hydraulic oil tank features a sight glass for the oil level, as well as magnetic drain plugs
- The sliding cab, in combination with lightweight aluminium floor plate sections, provides quick access for service work
- Easy access to electrical components, oil, and air filters
- Access steps to the cab from the left-hand side of the truck are standard. Access steps from the righthand side are optional

### **ON-BOARD DIAGNOSTICS**

CANbus on-board diagnostics with fuse relay board, controllers, and other electrical components centrally located on the rear cabin wall make for easy servicing and troubleshooting. Fault codes and system notifications are provided through the Integrated Performance Display for quick and effective identification of service items while enabling rapid implementation of remedies, helping reduce downtime and reducing the mean time for repairs.

### LONG SERVICE INTERVALS

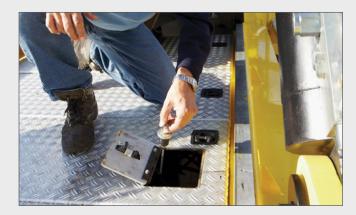
Major engine and drivetrain components are engineered to operate on 500-hour for the Stage IIIA engine and 1000 hours for the Mercedes-Benz stage V engine service intervals. Extended hydraulic oil change intervals can allow the truck to remain in operation for longer periods between oil changes or servicing.



Lightweight aluminium floor plates enable quick removal for easy service access.



**Battery maintenance** 



**Oil maintenance** 

## **VERSATILITY IN APPLICATION**

The innovative Hyster ReachStacker is available in a wide range of configurations and options providing unprecedented flexibility to perform tasks in many different applications and industries. With the Special Products Engineering Department (SPED), Hyster can create solutions for unusual needs or special applications where custom ReachStackers are required. From six high stacking capability, to a radar object detection system, a special paint colour, or pilot digital technologies as part of the iTerminals project.





- 1. Windmill blades
- 2. Intermodal Handling (IH)
- 3. Barge handling
- 4. Towers handling
- 5. Elevating cab
- 6. 2nd rail handling









CONTACT YOUR DEALER TO FIND OUT HOW HYSTER CAN CUSTOMISE Your reachstacker for your operation's needs A Hyster ReachStacker can be equipped with a tool changer attachment giving the operator the ability to more easily and quickly switch between different tools and enable a leaner, more productive fleet for steel operations.





- 1. Tool changer
- 2. Container dumping/ side tilt spreader
- 3. Magnet
- 4. Grabber
- 5. Direct mounted C-Hook
- 6. Toolchanger with C-Hook

STEEL HANDLING













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