



**STRONG PARTNERS.  
TOUGH TRUCKS.™**



## S80-120FT SERIES

SIT-DOWN, COUNTERBALANCED, IC, CUSHION TIRE

[WWW.HYSTER.COM](http://WWW.HYSTER.COM)





## A WORKHORSE FOR YOUR TOUCH APPLICATIONS

The S80-120FT lift truck series represents a transformation in how lift trucks are designed, built and acquired. Drawing on Hyster Company's legacy of strength, durability and toughness, the Fortis® concept simplifies lift truck purchases with a series of engine-transmission bundles. Fortis® means you maximize your purchasing power by buying only the features you need for your application. Using a truck from the S80-120FT series means low cost of operations, dependability and owning a unit that's still going strong long after the day's work is done.

## ➤ DECREASE DOWNTIME BY UP TO 30%



Industrial lift truck downtime results from problems with the powertrain, brakes, electrical system, cooling system or hydraulic system. Advanced design of the S80-120FT truck series has reduced downtime by up to 30%.

### RUGGED ENGINE DESIGN

Built off the rugged, heavy duty diesel design, the Kubota 3.8L LPG engine is robust in construction and components.

- Cast iron engine block, cylinder head and bores.
- Spark plugs are long life with extended change intervals
- Hardened exhaust and intake valve seat inserts are designed specifically for use with LPG and CNG fuels.
- The electronic ignition system uses four individual coil-over plug assemblies. The spark plugs are connected directly to the coil, eliminating spark plug wires and extending plug life.
- The LPG fuel system includes a 3-micron filter with magnetic strips to catch debris within the fuel supply, enabling heavy petroleum deposits such as polypropylene or "tar" to pass through the system easily.
- Engine timing is gear-driven, eliminating timing belts and chains.

### INDUSTRIAL STRENGTH ELECTRONICS

- CANbus communications network reduces wiring complexity, providing superior dependability.
- Non-mechanical, Hall-Effect sensors and switches are designed to last the life of the truck.
- Proven tough, Pacesetter VSM industrial on-board computer manages truck operation to maintain world-class dependability to maximize uptime.
- IP66 sealed electrical connectors keep out water and debris, during use or while power washing.
- Smart, one-way routing path for wire harnesses ensures consistent high-quality assembly while increasing durability and simplifying maintenance when needed.

## COOLING TECHNOLOGY

- A choice of 2 aluminum core radiators, each with significant design and component improvements, provides exceptional cooling capacity, increasing uptime.
- A superior counterweight tunnel design coupled with a “pusher” type fan and enhanced shroud design improves airflow and significantly reduces the recirculation of hot air.
- Combi-cooler radiator provides 4-row aluminum core for additional transmission oil cooling capacity for the most demanding and intensive applications.
- Soft rubber isolator mounted radiators increase reliability and durability to extend service life.
- Optional on-demand cooling system:
  - Reduces overheating.
  - Automatically reverses fan direction every 20 minutes to clear radiator of debris.
  - Extends overall truck service life by keeping major components running in their optimum temperature ranges.

## PROTECTED POWERTRAIN

- Pacesetter VSM industrial on-board computer monitors and protects the engine powertrain.
- Transmission gears and shafts are up to 15% stronger to handle demanding duty cycles.
- Electronically controlled powershift transmission has state-of-the-art clutch packs that are stronger and larger and provide up to 3 times the life.
- Standard wet disc brakes provide excellent stopping power and extremely long service life. Brakes are completely sealed from water and dirt making them ready for tough environments.

## HASSLE-FREE HYDRAULICS

- Leak-free O-ring face seal fittings reduce leaks for enhanced reliability.
- A 10-micron high-performance in-tank filtration system captures 99.5% of hydraulic system debris, significantly extending component life.
- Smart placement of the control valve and hydraulic lines away from heat sources reduces operating temperature, extending the life of seals and hoses for unbeatable reliability.
- Optional load-sensing on-demand hydraulic system delivers oil flow only when required, using less fuel and producing less heat while extending system life.



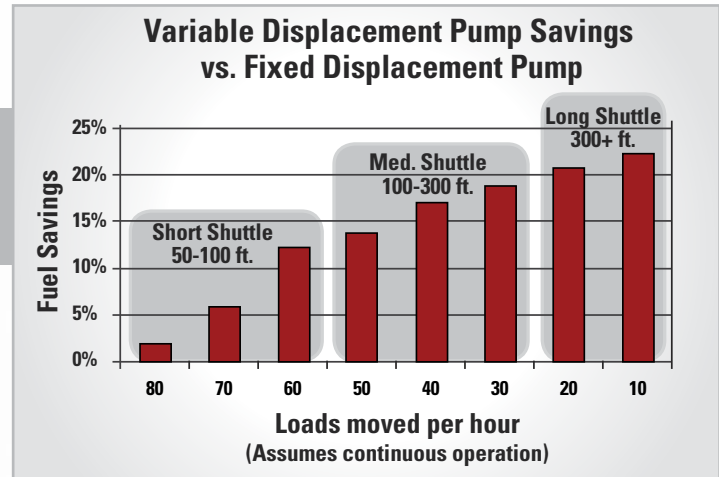


## SIGNIFICANT SAVINGS PER LIFT TRUCK – EACH YEAR.

Lowering operating costs in all types of applications is what the Fortis® series does best. With decreased downtime, this lift truck is an exceptionally smart choice. The S80-120FT series is configured to provide improved efficiency, while enhancing reliability and superior serviceability to reduce your operating costs.

### WORLD-CLASS EFFICIENCY

- The Kubota 3.8L spark ignited LPG engine significantly lowers the operating cost per load moved, yet delivers excellent productivity.
- Optional Hyster® Variable Power Technology™ provides adjustable performance modes that allow customers to maximize productivity or fuel economy to fit their specific application requirements.
- Auto Deceleration System extends brake life by up to 60% by automatically slowing the truck when the accelerator pedal is released. (DuraMatch™)
- Optional on-demand hydraulic system, featuring a variable displacement pump, manages oil flow, supplying the right amount of oil as needed, reducing fuel consumption by up to 22%.
- Controlled power reversal feature virtually eliminates tire spin, increasing tire life by up to 50%. This feature is programmable to match the needs from delicate to more aggressive settings for maximum productivity. (DuraMatch™)
- Extended transmission and hydraulic fluid change intervals.



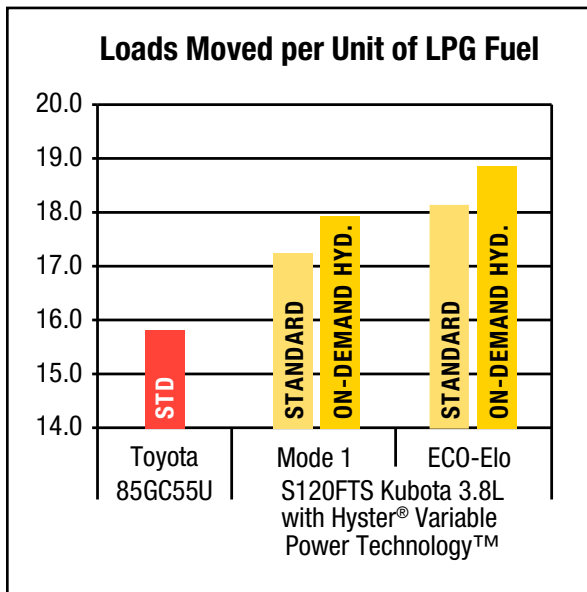
### ADVANCED DEPENDABILITY

- The Kubota 3.8L spark ignited LPG engine features diesel engine design attributes for extreme durability.
- Electronically controlled transmissions reduce shock loading; clutch packs with 3 times the life; 15% stronger gears and shafts; and Hyster® premium brakes all work to provide unmatched reliability.
- CANbus communications, non-mechanical sensors and switches and IP66 rated sealed connections mean electrical problems are a thing of the past.
- Leak-free O-ring face seal fittings at all high pressure connection points, superior filtration (10 micron) system and smart placement of valve and lines take the worry out of hydraulics.

## SUPERIOR SERVICEABILITY

- Pacesetter VSM continuously monitors fluid levels and powertrain, reducing daily service checks and helping prevent major repairs.
- Unmatched service access: rear-opening one-piece hood (opens up 85 degrees) and easy-to-remove one-piece floor plate (no tools required) provide industry's best cowl to counterweight service access.
- Daily checks are easily accessed and performed.
- State-of-the-art on-board diagnostics reduce repair time and minimize expensive parts swapping.
- Standard wet disc brakes virtually eliminate brake maintenance and can last the life of the truck.

<b>DOWNTIME IS COSTLY</b>	
<b>Estimated Costs per Downtime Event:</b>	
Repair Costs (parts & labor)	\$ 500
Idle Operator Costs	+ \$ 60
Truck Rental Costs	+ \$ 120
Administrative Costs	+ \$ 50
<b>TOTAL COST (per Downtime Event)</b>	<b>\$ 730</b>
<b>Additional Costs:</b>	<b>+ \$</b>
<b>Lost Productivity and Sales</b>	<b>\$ ???</b>
Assumptions: 1. Operator Cost = \$15.00/hr. 2. Average Length of Downtime Event = 4 hrs.	



*In standard performance mode, the Hyster® S120FT lift truck provides the lowest cost of operation compared to leading competitors when tested on a productivity course. The Hyster® Variable Power Technology™ option on the efficient Kubota 3.8L LPG engine allows the operator to choose which mode to use during operation: Mode 1 or ECO-eLo. This on-demand hydraulic system further reduces overall costs and reduces fuel consumption by pumping hydraulic oil only when needed.*



## SUPPORTING CUSTOMERS WITH WORLD-CLASS PARTS & SERVICE

Four Parts Distribution Centers strategically located around the world provide a full range of original equipment and aftermarket parts that help maintain our customers' uptime. In fact, our Guaranteed Availability Program ensures that parts that are normally required in the first 2 years of operation will be available from your Hyster® parts dealer within 24 hours or they are free.\*

We also take that commitment into the field with the Hyster CERTECH® Certification training program. This technical training program provides both systems level as well as product-specific education to ensure lift trucks are repaired right the first time.

\* Contact your local dealer for program details.

## > FATIGUE-REDUCING OPERATOR COMPARTMENT

The Fortis® S80-120FT series features an ergonomically designed operator compartment that plays a big role to enhance overall productivity. Superior ergonomic features like ample leg room, 2 choices of hydraulic controls, an infinitely adjustable steer column, integrated dashboard display, 12-inch steering wheel with spinner knob, Auto Deceleration System, 6 choices of seats and optional rear drive handle and EZXchange bracket enable your operator to maximize productivity.



### A COMFORTABLE OPERATOR IS A PRODUCTIVE OPERATOR

- Low noise level at operator ear lessens driver fatigue, improving driver satisfaction for an overall increase in productivity.
- Isolated drivetrain minimizes the effect of powertrain vibration and road-born shocks to increase operator comfort throughout the shift.
- Rear drive handle mounted on overhead guard leg (optional) provides an excellent hand hold for reverse driving while giving ready access to the auxiliary horn button for use when approaching cross-aisles and pedestrian traffic areas.
- An infinitely adjustable steer column and optional full suspension seat assures the right fit for any operator.
- Easy-to-use 3-point entry design of operator compartment uses a large molded hand grip and open non-slip step with a low step height to minimize muscle/joint strain during entry/exit.
- Swing-out bracket frees the LPG tank from over the counterweight to simplify changeout.
- Optional EZXchange bracket also lowers the tank on its stable platform to minimize arm and back strain for even easier changeouts.
- A choice of 6 different seats enables a more customizable level of operator comfort by its enhanced design and adjustable features.
- Increased shoulder clearance – a result of the redesigned overhead guard and more floor space – gives operators greater foot room.



## PRECISE, EFFORTLESS OPERATION

- Optional swing-out, drop-down EZXchange bracket frees the LPG tank from over the counterweight and lowers the tank on a stable platform to minimize arm and back strain for easy changeouts.
- Intuitive brake pedal layout and the minimal braking requirements of the Auto Deceleration System significantly reduce operator fatigue. (DuraMatch™)
- 12-inch steering wheel with spinner knob improves steering response, increasing control and efficiency. The low-effort system is easy to manage with only 4 turns lock-to-lock.
- Controlled rollback on ramps contributes to lower driver fatigue and significantly enhances truck and load control on ramps. (DuraMatch™)
- Adjustable armrest that accompanies the optional TouchPoint mini-lever electro-hydraulic controls moves with the seat and telescopes forward/vertical in one simple movement to provide greater flexibility in achieving a more custom position.

## PERFORMANCE AT-A-GLANCE

- Advanced dash display uses a non-reflective, backlit LCD screen and 21 indicator lights provide performance at-a-glance in all lighting conditions.
- Easy-to-use on-board diagnostics through the advanced dash display provide fast and accurate troubleshooting for first-time fixes.
- Optional electronic monitoring package reports air and hydraulic oil filter restrictions and low engine coolant levels.

ESTIMATED ANNUAL LIFT TRUCK OPERATOR COSTS	
Costs Related To Fatigue	Average Annual Cost Per Lift Truck Operator
Absenteeism <sup>1</sup> Turnover <sup>2</sup> Lift Truck and Property Damage <sup>3</sup> Workers Compensation <sup>4</sup> Productivity/Lost Sales	\$6,862
Potential Savings Level	Average Annual SAVINGS Per Lift Truck Operator
Savings at 10% - 20%	\$686 - \$1,372

- 1 Absentee cost based on national average as published in Facility Management safety study, 2003.
- 2 Average turnover cost according to U.S. Dept. of Labor 2002, 30% of income at \$15/hour for 2,000 hours per year.
- 3 Lift Truck and Property Damage based on data from Hyster-Yale Group Fleet Services.
- 4 Workers Compensation costs are average costs for high and low fatigue environments according to 2004 Shiftwork Practices Survey.



*TouchPoint mini-lever electro-hydraulic controls*



*Swing-out drop-down EZXchange bracket*



*Rear drive handle with horn button*



*Full suspension swivel seat in vinyl or cloth*

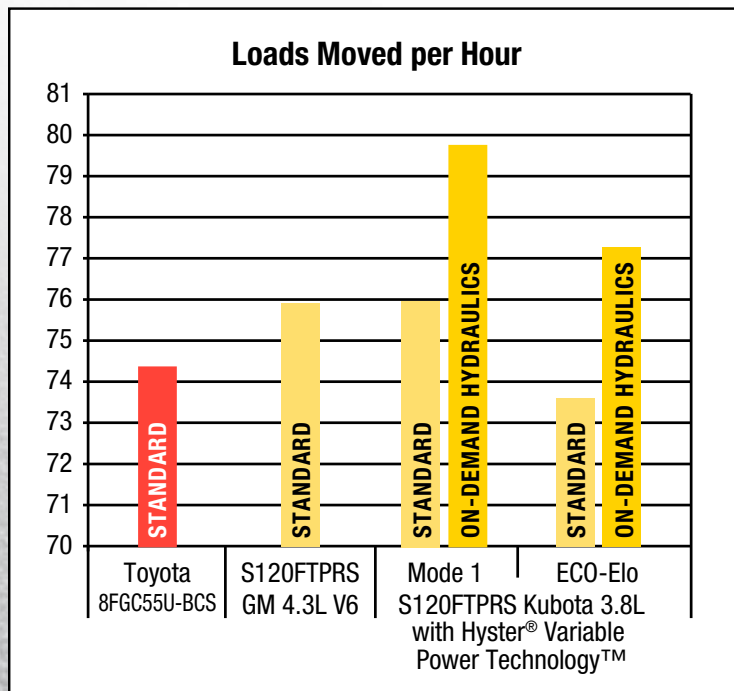
## ➤ ENHANCED PRODUCTIVITY

### INCREASE THROUGHPUT AND SALES VOLUME WHILE REDUCING OPERATING COSTS

Productivity means moving more loads in less time with less cost. The Hyster® S80-120FT series helps to increase productivity through performance, operator comfort and control, service time and dependability.

### FOCUSED ON PRODUCTIVITY

This series offers a variety of productivity options, all featuring the Kubota 3.8L engine. Two transmission selections are available: Electronic Powershift and DuraMatch™. The Electronic Powershift features electronic shift control, electronic inching (requires no adjustment), and heavy duty clutch packs. The DuraMatch™ transmission also features Auto Deceleration System—bringing the unit to a complete stop when the accelerator pedal is released, and controlled power reversals—reducing tire spin by precisely regulating engine speed. Controlled ramp descent limits roll to three inches per second. Both Electronic Powershift and DuraMatch™ transmissions are also available with two forward speeds for additional speed and gradeability.



*Even in standard operating mode, the Hyster® S120FTPRS lift truck moves more loads per hour than leading competitors. The optional on-demand hydraulics featuring Hyster® Variable Power Technology™ on the efficient Kubota 3.8L LPG engine boosts productivity even further by allowing more engine power to be applied to the transmission rather than pumping unnecessary hydraulic oil.*





## HYSTER STABILITY SYSTEM

Our patented Hyster Stability System (HSS®) is built into the fundamental design of every truck—it's not "added on" like other manufacturers—to allow for articulation on uneven surfaces and to minimize truck lean for enhanced lateral stability. And unlike some competitors, the HSS® is virtually maintenance-free.

## HYSTER® VARIABLE POWER TECHNOLOGY™

Hyster® Variable Power Technology™ provides adjustable performance modes that allow customers to maximize productivity or fuel economy to fit their specific application requirements. With two selectable performance modes, the S80-120FT series can be tailored to achieve a balance of enhanced performance and superior fuel economy, or to maximize productivity during peak business periods when moving more loads is integral to the success of your operation.

## ON-DEMAND HYDRAULIC SYSTEM

The optional load-sensing on-demand hydraulic system introduces a more efficient and intelligent way to meet the truck's hydraulic load demands. Featuring Variable Displacement Pump (VDP) technology, the pump produces oil flow only when needed. The system minimizes the amount of engine power required, resulting in up to 22% greater fuel economy and reduced system temperatures. The on-demand hydraulic system is included with optional TouchPoint mini-lever electro-hydraulic controls.

## PACESETTER VSM

The computer "brain" of the Fortis® line of lift trucks manages all vehicle systems to optimize performance and significantly increase overall reliability and enhance diagnostic capabilities for maximum uptime.

## ➤ PERFORMANCE CUSTOMIZED FOR YOUR APPLICATION

The S80-120FT series can be configured to provide the right lift truck for your application. Hyster provides multiple powertrain combinations to choose from, assuring your cost of operations will be lowered. Each configuration offers improved efficiency, advanced dependability and simple serviceability.

### ON-DEMAND COOLING SYSTEM

The on-demand cooling system controls the speed and rotational direction of the fan. During normal operation, the fan reverses direction automatically for 20 seconds every 20 minutes. When necessary, a manual control button allows the operator to initiate a reversal manually.

- Reduces overheating
- Reduces debris vacuuming that can clog the radiator
- Increases fuel efficiency
- Maintains optimum powertrain temperatures
- Lowers fan speeds, reducing noise levels
- Can eliminate downtime spent cleaning debris from the radiator

### ON-DEMAND HYDRAULIC SYSTEM

The optional on-demand hydraulic system introduces a more efficient and intelligent way to meet the truck's hydraulic load demands. The variable displacement pump produces hydraulic oil flow only as needed. The system minimizes the amount of engine power required, resulting in greater fuel economy and reduced system temperatures. The on-demand hydraulic system is included with optional TouchPoint mini-lever electro-hydraulic controls.

### FULL VENTING PACKAGE

The full venting package features additional vented panels. Increased air flow is drawn into the engine compartment from a higher position on the truck where the air is cleaner, resulting in reduced ingestion of dirt and debris into the engine compartment and radiator.

### KUBOTA 3.8L LPG ENGINE

Trucks equipped with the Kubota 3.8L spark-ignited LPG engine will deliver top notch productivity and do so with the lowest operating cost per load moved. The unit has the unique capability to adjust productivity levels to meet varying productivity requirements with optimum fuel economy. The engine is designed and built for extreme durability with minimal service requirements. Drivers will enjoy operating the truck with low vibration and engine noise levels.

- Hyster® Variable Power Technology™
- 500 hour service intervals
- Individual coil-over-plug ignition
- Deep skirt engine block
- Gear driven engine timing
- Cast iron block and cylinder head
- 13 quart oil pan with oil cooler
- 80 amp alternator
- Diesel conversion design featuring a 10:1 compression ratio

## PAPER ROLL SPECIAL

Paper Roll Special is an exclusive truck configuration designed especially for paper roll applications to reduce costs. The greater capacity of the 120PRS means you can handle loads that would require a 13,500 pound capacity truck from some manufacturers. Built exclusively for heavy attachment operations, the special counterweight is designed to offset the weight of a large capacity roll clamp. The hydraulic system is optimized for clamp applications to reduce wasted energy and the heat buildup that destroys components. The standard accumulator aids in protecting your rolls against costly product damage.

- Special lead-filled counterweight to enhance capacity while maintaining maneuverability
- Attachment carriage with side-thrust rollers
- Hydra Smooth accumulator
- Hydraulic flow designed to match attachment applications
- Maximum capacity of 9000 pounds for a 60" diameter paper roll with an Auramo ARC90 roll clamp

## PAPER APPLICATION KIT

The Paper Application Kit is recommended for any truck used in a paper application where substantial loose paper material is present. This configuration reduces the accumulation of paper debris in the engine compartment, thereby reducing the potential for fire.

The optional kit includes:

- Full venting package
- High-temperature hydraulic oil
- Reduced displacement hydraulic pump
- Exhaust wraps
- On-demand cooling system (recommended)





**HYSTER 120**  
FORTIS

# INNOVATIVE TRUCKS ENGINEERED TO MEET THE MOST DEMANDING APPLICATIONS

For more than 80 years, Hyster has been conquering the world's most demanding applications. In the 1920's Hyster started as a manufacturer of lifting machines used in the rigorous logging industry of the United States' Pacific Northwest. A few years later the first forklift trucks were invented and the Hyster brand quickly gained its reputation for rugged quality. Hyster® lift trucks are designed to lower your cost of operations. Every truck we make — gasoline, LPG, diesel and electric — is purpose-built to excel in its application. Every truck is also backed by an unmatched network of specialists.



**Dealer Network** — Our Dealer Network can offer the expertise of fleet managers, parts suppliers, capital procurement specialists and trainers. Carefully chosen dealers fully understand customer applications, assist in selecting the right lift truck and provide fast, reliable support.



**Hyster Fleet Services** — Even if you operate other brands, we can manage your maintenance and replacement plan. We can offer complete fleet analysis, fleet history summary and a cost-effective proposal for replacement and scheduled maintenance.



**Parts** — With genuine Hyster® replacement parts and UNISOURCE™ parts for all makes of lift trucks, we are your one-stop source for lift truck parts. In fact, we offer more than 7 million part number crosses for most brands of materials handling and other in-plant mobile equipment.



**Rental Products** — When leasing or buying isn't a practical option, we have access to more than 14,000 units for short- and long-term rental. We'll help you maintain output in a cost-effective manner.



**Hyster Capital** — We can arrange solutions for special financing requirements, taking the difficulties out of buying the equipment you need. Whether you purchase or lease a new or used lift truck, Hyster Capital offers superior service and competitive rates.



**Special Products Engineering Department (SPED)** — Different materials require different handling. That's why we can work with you to customize your lift trucks. From strobe lights to specially made forks, SPED has the tools to help you get the job done right.



**Operator Training** — Proper education in operating lift trucks minimizes the risk of injuries due to accidents while increasing productivity. Hyster offers OSHA-compliant materials that support the training of qualified operators.




**Service** — Your local Hyster® dealer offers a flexible, customized and comprehensive maintenance plan based on each lift truck's operation environment. Hyster service programs offer scheduled inspections and maintenance, along with quick, responsive service dispatched to your location.



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