

S80-120FT SERIES



**STRONG PARTNERS.
TOUGH TRUCKS.™**

SIT-DOWN, COUNTERBALANCED, IC, CUSHION TIRE



S80-120FT SERIES



The S80-120FT is more than a lift truck series. It 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.





■ **DEPENDABILITY**

- Electronically controlled powershift transmission
- Industrial strength electronics
- Exceptional cooling
- Hassle-free hydraulics

■ **LOW COST OF OWNERSHIP**

- Auto Deceleration System
- Controlled power reversal
- CANbus communication system
- Dual hydraulic tanks

■ **SERVICEABILITY**

- Pacesetter VSM
- Easy access for daily checks
- State-of-the-art onboard diagnostics
- Complete cowl-to-counterweight access

■ **SUPERIOR ERGONOMICS**

- Low noise level
- Rear drive handle
- Infinitely adjustable steering column
- 3-Point entry design

■ **ENHANCED PRODUCTIVITY**

- DuraMatch™ transmissions
- Standard wet disc brakes
- Superior operator control

DEPENDABILITY

DECREASE DOWNTIME BY UP TO 30%

Approximately 70% of industrial lift truck downtime results from problems with the powertrain, electrical system, cooling system or hydraulic system. With the S80-120FT, many of these mechanical issues become a thing of the past as design advances have reduced downtime by up to 30%.

■ TOUGHEST POWERTRAIN

- Pacesetter VSM industrial onboard computer monitors and protects the engine powertrain to maximize the S80-120FT series uptime.
- Transmission gears and shafts are up to 15% stronger to handle even the most demanding duty cycle.
- Electronic 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 harsh environments.
- Premium wet disc brakes circulate oil through the brake and back out for additional cooling capacity for the toughest applications with heavy brake usage as part of the typical work cycle. (Standard on S100-120FT)



■ INDUSTRIAL STRENGTH ELECTRONICS

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

■ EXCEPTIONAL COOLING

- A choice of 2 aluminum core radiators, each with significant design and component improvements, provides exceptional cooling capacity – a key factor to increasing uptime and the economic life of your trucks.
- Soft rubber isolator mounted radiators increase reliability and durability to significantly extend service life.
- 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 to maximize cooling capabilities.
- Combi-cooler radiator provides 4-row aluminum core for additional transmission oil cooling capacity for the most demanding and intensive applications.

■ 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.
- Dual hydraulic tanks provide additional cooling of the hydraulic system, therefore extending the life of the components.



LOW COST OF OWNERSHIP

SAVE OVER \$2,400 IN OPERATING COSTS PER LIFT TRUCK – EACH YEAR

Lowering operating costs in all types of applications is what the Fortis™ series does best. In head-to-head comparisons with the leading competitors' comparable trucks, the S80-120FT series was shown to save you over \$2,400 per year in operating consumable costs. This, combined with up to a 30% decrease in downtime, makes the Fortis™ series an exceptionally smart choice. The S80-120FT series features 3 truck packages with multiple powertrain configurations that provide improved efficiency, while enhancing reliability and superior serviceability to reduce your operating costs.

■ WORLD-CLASS EFFICIENCY

- Auto Deceleration System extends brake life by up to 60% by automatically slowing the truck when the accelerator pedal is released.
- 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.
- Dual hydraulic tanks provide additional cooling of the hydraulic system, extending the life of the components and eliminating the need for external fan-driven cooling systems.
- Extended transmission and hydraulic fluid change intervals.
- Improved engine options provide excellent performance with advanced combustion technology that enhances fuel economy.

■ ADVANCED DEPENDABILITY

- Toughest Powertrain: Electronic 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.
- Industrial Strength Electronics: CANbus communications, non-mechanical sensors and switches and IP66 rated sealed connections mean electrical problems are a thing of the past.
- Industry's Best Cooling: The S80-120FT series' superior airflow and choice of heavy duty cooling systems keep heat in check, while providing world-class dependability in even the harshest of environments.
- Hassle-free Hydraulics: 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 preventing 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 onboard diagnostics reduce repair time and minimize expensive parts swapping.
- Standard and optional wet disc brakes virtually eliminate brake maintenance.

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



■ 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 for all lift trucks within two years of age are available within 24 hours, 100% of the time.*



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.

SUPERIOR ERGONOMICS

FATIGUE-REDUCING OPERATOR COMPARTMENT

The Fortis S80-120FT series features an ergonomically designed 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.

■ SUPERIOR OPERATOR COMFORT

- 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.
- Adjustable armrest that accompanies the TouchPoint E-hydraulic optional configurations moves with the seat and telescopes forward/vertical in one simple movement to provide greater flexibility in achieving a more custom position.
- Swingout bracket frees the LP 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

- Improved 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 while minimizing shoulder strain 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™)
- Optional swingout dropdown EZXchange bracket frees the LP tank from over the counterweight and lowers the tank on a stable platform to minimize arm and back strain for even easier changeouts.
- Adjustable armrest that accompanies the optional TouchPoint E-hydraulic control moves with the seat and telescopes forward/vertical in one simple movement to provide greater flexibility in achieving a more custom position.



TouchPoint E-hydraulic mini-lever controls



Swingout drop-down EZXchange bracket

■ 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 onboard 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.



Rear drive handle with horn button



Full suspension swivel seat in vinyl or cloth

ESTIMATED ANNUAL LIFT TRUCK OPERATOR COSTS

Costs Related To Fatigue	Average Annual Cost Per Lift Truck Operator
Absenteeism ¹	\$6,862
Turnover ²	
Lift Truck and Property Damage ³	
Workers Compensation ⁴	
Productivity/Lost Sales	
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 NMHG Fleet Services.

⁴ Workers Compensation costs are average costs for high and low fatigue environments according to 2004 Shiftwork Practices Survey.

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 Fortis™ series increases productivity through performance, ergonomics (operator comfort and control), service time and dependability.

■ PERFORMANCE CUSTOMIZED FOR YOUR APPLICATION

The S80-120FT series is configured to provide the right lift truck for your application.

Our truck packages with multiple powertrain combinations to choose from assure your cost of operations will be lowered. Each configuration offers improved efficiency, advanced dependability and simple serviceability.

- GM 4.3L, LP, V6 engine
- S80-120FT series choice of performance transmissions, hydraulic controls and cooling system options allows you to customize your truck to optimize the productivity in your application.
- Pacesetter VSM industrial onboard computer enables you to adjust and optimize the performance of your S80-120FT trucks.
- Patented DuraMatch™ transmissions provide breakthrough features that include the Auto Deceleration System, controlled rollback on ramps, controlled power reversals and auto-speed hydraulics with automatic inching control to move loads more efficiently with less operator fatigue and product damage.



Various truck configurations



Controlled ramp descent

■ FOCUSED ON PRODUCTIVITY

This series offers a variety of productivity options, all featuring the GM 4.3L V6 engine. Four Hyster® transmission selections are available: the one and two-speed Electronic Powershift, DuraMatch™ and the DuraMatch™2. All transmissions feature smooth electronic inching, electronic shift, neutral start/brake interlock. The DuraMatch™ transmissions also feature controlled ramp descent, limiting roll to three inches per second. The DuraMatch™ transmission also features the Auto Deceleration System, bringing the unit to a complete stop when the accelerator pedal is released. The two-speed electronic powershift and DuraMatch™2 transmissions add two-speed functionality for improved power and higher travel speeds.

The Hyster Stability System (HSS®) enhances the truck's lateral stability with a simple, maintenance-free design that does not compromise uneven surface travel.

■ SUPERIOR OPERATOR CONTROL

Superior ergonomic features like more foot and leg room, 2 choices of hydraulic controls, infinitely adjustable steer column, integrated dashboard display, 12-inch steering wheel with spinner knob, Auto Deceleration System, EZXchange tank bracket (optional), 6 choices of seats and the reverse drive handle (optional) enable your operator to maximize productivity.



APPLICATION-MATCHED PERFORMANCE

■ HEAVY DUTY GM 4.3L V6 LPG ENGINE OPTION

The standard GM 4.3L V6 engine is well suited for trucks that perform extreme duty cycles. For tough applications, the S80-120FT truck can be specially fitted with components to provide exceptional performance and durability, including:

- Cast iron block and cylinder heads
- Cast iron camshaft with hydraulic roller lifters
- Cast iron exhaust manifolds
- Induction-hardened intake valve seats
- Replaceable hardened exhaust valve seat inserts
- Reduced-force intake and exhaust valve springs

To further extend engine life and improve serviceability under high engine temperature conditions, Hyster has designed a heavy duty LPG engine option which takes the engine described above and adds:

- Replaceable hardened intake valve seat inserts
- Heavy duty ductile iron exhaust manifolds

The heavy duty LPG engine accessory option is required for workloads or duty cycle applications where high engine temperatures and/or near-continuous truck operation are encountered. Engine life is significantly extended, even in tough applications. If the cylinder heads ever require service, the replaceable valve seats simplify the process and further extend the life of the rebuild.



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. The special counterweight is designed to offset the weight of a large capacity roll clamp. The 120PRS is built exclusively for heavy attachment operations. The hydraulic system is optimized for clamp applications to reduce wasted energy and the heat buildup that destroys components. The standard accumulator protects your rolls against costly product damage.

- Maximum capacity of 9000 pounds for a 60" diameter paper roll with a Cascade 90FX clamp
- Designed especially for paper roll handling applications
- Special lead-filled counterweight
- Attachment carriage with side-thrust rollers
- Hydra Smooth accumulator
- Hydraulic flow designed to match attachment applications

PAPER APPLICATIONS 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:

- Vented hood, high-temperature hydraulic oil and exhaust wraps
- Reduced displacement hydraulic pump
- Heavy duty engine modification for GM 4.3L LPG engines
- A radiator lint screen option is recommended
- Exhaust wraps

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 fork lift 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. Hyster's 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 2 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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