

ENERGY SERIES

ELECTRIC 3 & 4 WHEEL COUNTERBALANCE FORKLIFTS
3000-6000 LB



The Energy Series of Cushion & Pneumatic Tire Forklifts from Stärke Material Handling Group





SIMPLIFIED OPERATION • FIRST-CLASS RELIABILITY • EX



FEATURES & BENEFITS

EXCEPTIONAL EFFICIENCY • ENHANCED ERGONOMICS • MAXIMIZED VISIBILITY



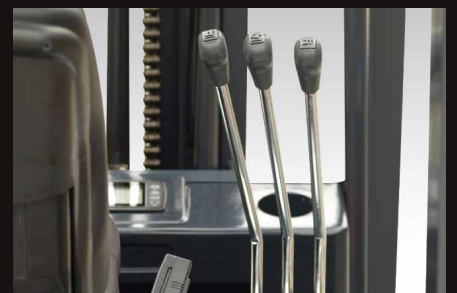
Tilt Steering Column

Tilt Steering provides flexibility and operator ergonomics, allowing for adjustments to create a comfortable ride for operators of all builds.



Hydraulic Steering System

The Energy Series Hydraulic Steer Axle enables very tight steering angles resulting in great maneuverability and responsiveness. With no mechanical parts between the steering column and the wheels this design delivers exceptional durability and reduced maintenance.



Hydraulic Control Levers

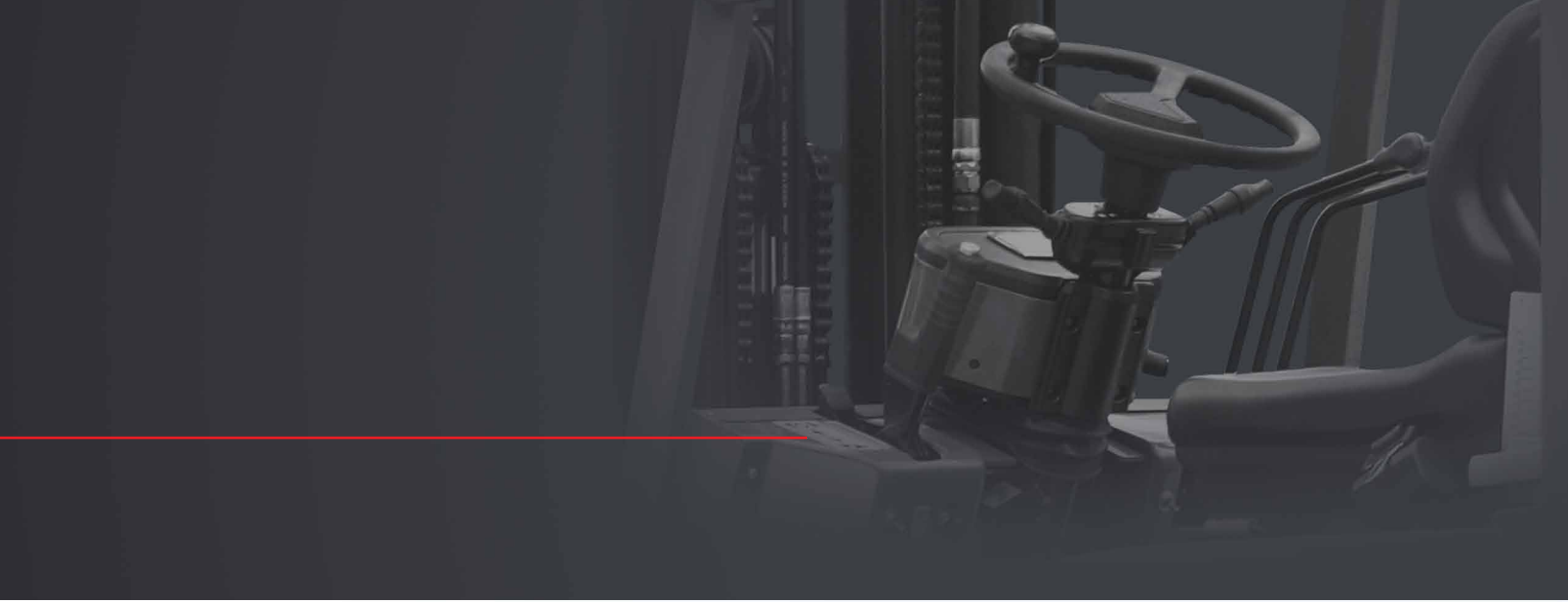
The control levers are ergonomically designed for simplified, accurate operation and comfort, reducing operator fatigue.



OPTIMAL ERGONOMICS AND VISIBILITY

The Energy Series cabin design has been developed with the operator in mind, offering better visibility, enhanced comfort, and simplified operation. The high end features focus on safety and operator ergonomics and provide maximum operating efficiency.





Deluxe Suspension Seat (Optional)

The Grammer Deluxe Suspension seat delivers exceptional operator comfort and flexibility. Ergonomically designed, the seat can be adjusted to accommodate a wide range of operator weights and heights with both suspension adjustment, and generous forward and backward adjustability. The seat belt and backrest are fully adjustable, and the 2-piece design allows for weather drain.



Easy Entry and Exit

The easily accessible step with non-slip surface and operator entry handles allow for safe entry and exit from the truck.



Spacious Footwell

An ample footwell, wide floor space, and plenty of headroom give the operator full freedom of movement while driving.



Wide Front Vision

Intelligent design and effective chain and hose placement allows for wider forward visibility from the operator seat.



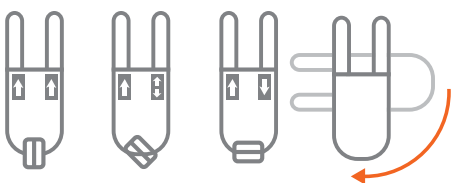
Cup Holder

Ergonomically positioned, the cup holder is a small attention to detail for added operator comfort.



EXCEPTIONAL PERFORMANCE

Built with efficient motors and reliable hydraulic systems, all Energy Series trucks provide an abundance of standard features to operate with outstanding efficiency and protect your operators and working environment.



Front Dual Drive Motor System

Designed for optimal efficiency and maneuverability, the right and left drive wheels are operated by separate motors allowing them to rotate in opposite directions for the tightest possible turn radius.



Choose from 3 Different Operating Modes: Economy, Standard and High.

Intelligent Multi-Function Display

The compact Multifunction Display Panel is easy to read and conveniently positioned on the operator dash. The display indicates driving speed, battery charge, total hours, and critical safety and maintenance information.



Hydraulic Pump Motor

The AC powered Hydraulic Pump Motor (15kW) can be adjusted to lower output providing sufficient power for turning and other hydraulic functions, while increasing efficiency and overall battery life.



Hydraulic Control Valve Switch

Equipped with a 4 sensor system, the control valve switch reliably controls motor speed with maximum efficiency.



AC Controller

The Italian SME AC Controller delivers sensitive response, low maintenance, reduced noise, and accurate speed control. Additionally, Intelligent Torque Control uses regenerative braking in both forward and reverse directions.

Main Controller Functions:

- Anti-Roll Back with Adjustable Ramp Stop Time
- Regenerative Braking
- Management of Static Return to Function
- Acceleration/Deceleration
- Electrically Assisted Braking
- Overheating Protection for Inverters and Motors
- Full Short Circuit/Open Circuit Protection

Rear Combination Lighting

Safety lights are positioned high on the overhead guard for maximum visibility and are protected within the frame to reduce damage.

Mast Lock System (Optional)

For added safety and prevention of accidents involving the mast and forks, the optional Mast Lock System locks all lifting and tilting features as soon as the operator leaves the seat.

Neutral Safety Start System

The Neutral Safety Start System requires the electronic F/R lever has to be in the neutral (N) position before the engine can be started. This provides protection from accidents or damage caused by starting the truck in gear.

AC Drive System

An AC motor provides smoother, quicker response with acceleration control and less maintenance than DC counterparts. AC systems produce more efficiently and extend service life of the motor.

Dual Rear Wheels

Dual rear wheels are standard in three wheel models and provide superior safety and stability when lifting and turning.





Wet Disk Brakes

Standard on 3-wheel models, Wet Disk Brake Systems are a low maintenance solution that is power assisted for ease of use, and stands up to even the toughest applications.



Transmission

The PMP transmission, standard on 3-wheel models, delivers:

- Reduced Operating Noise
- Great Reliability
- Mechanical and Thermal Efficiency
- Excellent Safety Features

Hydraulic Lift Cylinder Safety Check Valve

The added Hydraulic Lift Cylinder Safety Check Valve prevents hydraulic pressure drops and assists the mast in controlling drop speed, avoiding crashes, preventing damaged goods, and minimizing excessive noise.



STANDARD MODEL SPECIFICATIONS

				CUSHION TIRE MODELS					
Model				FBT15C	FBT18C	FB15C	FB18C	FB20C	FB25C
Type				Three Wheel		Four Wheel		Four Wheel	
Capacity		Q	lbs	3000	3500	3000	3500	4000	5000
Load Center		C	in	24		24		24	
2-Stage Mast	Lift/Maximum Fork Height	h3	in	118.1		118.1		118.1	
	Standard Free Lift	h2	in	5.5		5.5		5.7	
Mast Tilting Angle	Forward/Back	α/β	deg	5/6		6/6		6/6	
Length to Face of Forks		L2	in	76.4	77.2	74.8	76.4	80.9	83.7
Overall Width		B	in	42.4		38.0		41.9	
Overhead Guard Height		h6	in	81.5		86.6		87.4	
Mast Height	Lowered	h1	in	78.0		78.1		78.1	
	Extended	h4	in	166.1		166.1		166.1	
Seat Height		h7	in	40.0		46.1		47.8	
Load Backrest	Height of Load Bracket	h8	in	48.0		48.0		48.0	
Turning Radius		R	in	61.8	62.6	65.4	66.9	72.4	75.2
Load Distance	From Center of Front Axle	X	in	14.6	14.6	14.8	14.8	16.3	16.3
Aisle Width	Load 31.5x47.25/39.37x47.25	Ast	in	114.6/123.6	116.5/124.4	111.6/119.5	113.2/121.1	128.1/136.0	130.9/139.8
Ground Clearance	Lowest Point	m1	in	3.9		4.1		4.1	
	Center of Wheelbase	m2	in	3.9		3.9		4.3	
Travel Speed	Laden/Unladen		mph	8.4/8.7	8.1/8.7	8.4/8.7	8.1/8.7	8.1/9.0	7.5/8.7
Lifting Speed	Laden/Unladen		in/s	12.6/18.5	11.8/18.5	12.6/18.5	11.8/18.5	12.2/19.7	11.4/19.7
Lowering Speed	Laden/Unladen		in/s	18.5/19.7	18.5/21.7	18.5/21.7	18.5/21.7	18.9/19.7	18.9/21.3
Maximum Drawbar Pull		N		14000	13000	7170	7170	9820	9820
Gradeability	Laden/Unladen	%		18/21	17/20	18/21	17/20	16/21	14/19
Service Weight	Including Battery Weight	lbs		6644	6996	6864	7370	8976	9504
Axle Loading	Laden (Front/Rear)	lbs		8675/1269	9605/1241	8712/1452	9724/1496	11264/2112	12936/2068
	Unladen (Front/Rear)	lbs		3249/3395	3274/3720	2992/3872	3036/4334	3718/5258	3498/6006
Tire Type				Cushion		Cushion		Cushion	
Tire Size	Front			18x6x12 1/8		18x6x12 1/8		21x7x15	
	Rear			15x4 1/2-8		14x4 1/2x8		16 1/4x5x11 1/4	
Wheelbase	Y	in		53.1		46.7		50.4	
Tread	Center of Tires Front/Rear	in		36.6/7.5	36.6/7.5	32.1/32.5	32.1/32.5	34.6/36.0	34.6/37.2
Battery Voltage	Battery Voltage	V		48		48		48	
Battery Box Size	LxWxH	in		39.5x21.2x25.5		35.8x26.7x23.2*		38.7x28.0x23.0	
Minimum Battery Weight		lbs		1672		1936		2299	
Drive Motor		kw		6.5x2		8		8	
Pump Motor		kw		15		15		15	

				PNEUMATIC TIRE MODELS													
Model				FBT15P		FBT18P		FB15P		FB18P		FB20P		FB25P		FB30P	
Type				Three Wheel				Four Wheel				Four Wheel					
Capacity				3000		3500		3000		3500		4000		5000		6000	
Load Center				C		in		24		24		24					
2-Stage Mast		Lift/Maximum Fork Height		h3		in		118.1		118.1				118.1			
		Standard Free Lift		h2		in		5.3		5.5		5.7				5.9	
Mast Tilting Angle		Forward/Back		α/β		deg		5/6		6/12		6/12				6/12	
Length to Face of Forks				L2		in		76.4		77.2		82.5		82.5		91.7	
Overall Width				B		in		42.4		43.9		47.2		91.7		96.5	
Overhead Guard Height				h6		in		81.5		80.3				84.6			
Mast Height		Lowered		h1		in		78.0		78.1				78.1			
		Extended		h4		in		166.1		166.1				166.1			
Seat Height				h7		in		40.0		40.6				45.3			
Load Backrest		Height of Load Bracket		h8		in		48.0		48.0				48.0			
Turning Radius				R		in		61.8		62.6		73.2		73.2		81.7	
Load Distance		From Center of Front Axle		X		in		14.6		14.6		15.7		15.7		17.7	
Aisle Width		Load 31.5x47.25/39.37x47.25		Ast		in		115.7/123.6		116.5/124.4		128.3/136.2		128.3/136.2		138.8/146.7	
Ground Clearance		Lowest Point		m1		in		3.9				4.1				4.1	
		Center of Wheelbase		m2		in		3.9				4.1				4.7	
Travel Speed		Laden/Unladen				mph		8.4/8.7		8.1/8.7		8.4/8.7		8.1/8.7		7.8/8.7	
Lifting Speed		Laden/Unladen				in/s		12.6/18.5		11.8/18.5		12.6/18.5		11.8/18.5		12.2/19.7	
Lowering Speed		Laden/Unladen				in/s		18.5/21.7		18.5/21.7		18.5/21.7		18.5/21.7		18.9/19.7	
Maximum Drawbar Pull				N				14000		13000		10500		10000		10200	
Gradeability		Laden/Unladen				%		18/21		17/20		18/21		17/20		16/21	
Service Weight		Including Battery Weight		lbs				6644		6996		6556		6996		8228	
Axle Loading		Laden (Front/Rear)		lbs				8675/1269		9605/1240		8657/1199		9746/1320		11242/1386	
		Unladen (Front/Rear)		lbs				3249/3395		3274/3720		3157/3399		3111/3885		4136/4092	
Tire Type				Solid				Pneumatic				Pneumatic					
Tire Size		Front						18x7-8		21x8x9-14PR		23x9-10-20PR					
		Rear						15x4 1/2-8		5.0-8-8PR		18x7-8-14PR					
Wheelbase				Y		in		53.1		54.3		60.6				64.6	
Tread		Center of Tires Front/Rear				in		36.6/7.5		35.8/35.2		38.4/39.0				40.7/39.0	
Battery Voltage				V				48		48		48		36 or 48		80	
Battery Box Size				LxWxH		in		39.2x21.0x25.0		38.4x18.3x29.9*		40.5x20.9x31.1*				44.3x24.0x31.5*	
Minimum Battery Weight				lbs				1672		1628		2464				3256	
Drive Motor				kw				6.5x2		8		8				9	
Pump Motor				kw				15		15		15				22	

* Confirm Maximum Battery Size with your Stärke authorized dealer prior to purchase.

All lifts are AC electric power, sit operated with hydraulic foot brakes and mechanical hand brakes.

Due to continuous technical improvements, all information and specifications provided in this publication are subject to change without prior notice. For additional assistance please contact your local Stärke Professional Dealer, visit us online at www.starkeforklift.com, or contact Stärke Material Handling Group at 1-877-435-4352.

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Stärke Material Handling Group is committed to providing a broad selection of the toughest trucks for even the most challenging applications. Each model is designed to deliver optimal efficiency, comprehensive operator ergonomics and safety, and unsurpassed reliability at an unbeatable value for your dollar.

Our family of products provides a solution for every material handling situation. From manual and electric pallet trucks and stackers, three and four wheel electric forklifts, and up to 22,000 lb internal combustion engine forklifts - every piece of equipment we sell is backed by a first class warranty, fully stocked parts department, and a dealer network with factory trained technicians.

Stärke is German for 'strength' and it perfectly describes how we deliver in design, customer service and value. It describes our commitment to worker safety and to our products themselves, each built for years of trouble free service.



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CERTIFIED B56.1-2009

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