Unique truck concept with forward-facing seat and side-mounted mast

Unobstructed visibility of the forks, load and travel route

warehouseNAVIGATION (optional) optimizes approach time and significantly increases productivity

High flexibility through modular design and (optional) RFID technology

Jungheinrich® proprietary 3-phase AC technology for dynamic movement

High level of efficiency: double benefit of energy regeneration and effective energy management

EFX 411-414

Turret Truck (Man-Down) (2,400 - 3,000 lbs.)

The EFX 411-414 series of turret trucks, featuring lift heights up to 29 feet and a maximum capacity up to 3,000 lbs., is designed to provide maximum versatility in very narrow aisle (VNA) warehouses. These turret trucks can be used with wire or rail guidance, increasing productivity and combining applications in very narrow aisles, wide aisles and staging areas.

Designed for operator comfort and productivity, the EFX turret trucks include a spacious and ergonomic compartment, featuring a comfortable footwell for easy entry and exit, a cushioned seat with height and weight adjustments and an automotive-style pedal layout.

Large storage areas and a functional ergonomic design, which includes centrally-positioned controls, help the operator work faster and more confidently with less physical demand.

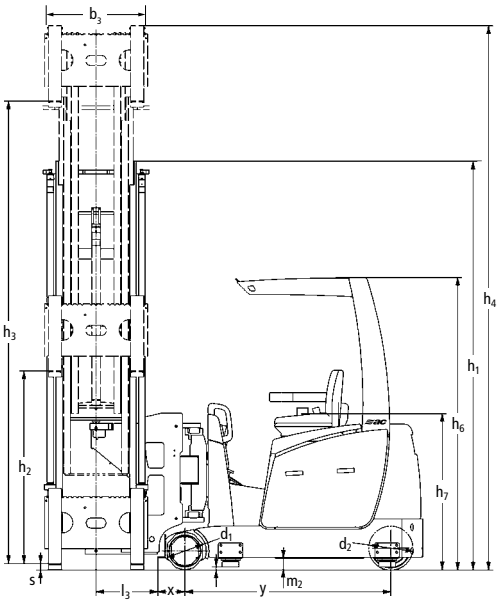
With its forward-facing seat and a side-mounted mast, the EFX series raises the bar on visibility by providing operators with an unobstructed view of the load, travel route and racking during operation. The premium operating console, with its adjustable height and angle and large display, is placed at the center of the truck for added visibility and easy and effective operation.

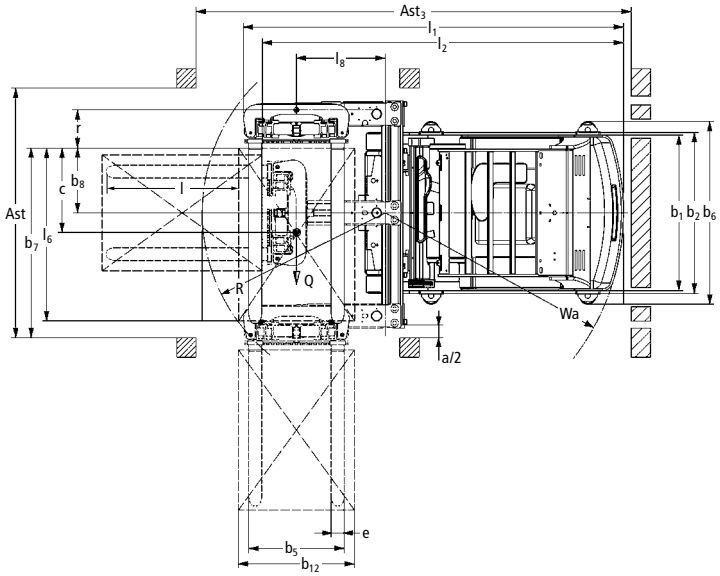
With its innovative features, the EFX defines state-of-the-art VNA technology:

- Ergonomic, thumb-activated control of hydraulic functions for lifting, lowering, swiveling and traversing.
- Electric power steering enables precise positioning.
- Important operating data is displayed in pictograms on the large, graphic display.
- A wide range of available options ensures the truck can be configured specifically for your application.

JUNGHEINRICH®

EFX 411–414





Standard Values For Working Aisle Widths

Pallet Size		Stacking-in Depth		Clear Aisle Width (AST)*		Transfer Aisle (AST_3) Theoretical		Transfer Aisle (AST_3) Practical**	
With Rail Guidance									
in	*mm*	in	*mm*	in	*mm*	in	*mm*	in	*mm*
48 x 48	*1,219 x 1,219*	48.0	*1,219*	69.3	*1,759*	138.0	*3,505*	+20.0	*+500*
48 x 40	*1,219 x 1,016*	48.0	*1,219*	69.3	*1,759*	131.1	*3,329*	+20.0	*+500*
With Wire Guidance									
in	*mm*	in	*mm*	in	*mm*	in	*mm*	in	*mm*
48 x 48	*1,2,19 x 1,219*	48.0	*1,219*	72.0	*1,829*	138.0	*3,505*	+40.0	*+1,000*
48 x 40	*1,219 x 1,016*	48.0	*1,219*	72.0	*1,829*	131.1	*3,329*	+40.0	*+1,000*

* for h3 = 157.5 inches - 236.2 inches; +0.8 inches, for h3 > 236.2; +2.8 inches
** The practical transfer aisle width is a reference value

Mast Table EFX 411 - 414 – Standard Mast Types

	Lift Height h_3		Collapsed Mast Height h_1		Free Lift h_2*		Extended Mast Height h_4*	
	in	*mm*	in	*mm*	in	*mm*	in	*mm*
Two-stage simplex mast ZT	118	*3,000*	91	*2,305*	2.6	*66*	149	*3,772*
	128	*3,250*	96	*2,430*	2.6	*66*	158	*4,022*
	138	*3,500*	101	*2,555*	2.6	*66*	168	*4,272*
	148	*3,750*	106	*2,680*	2.6	*66*	178	*4,522*
	157	*4,000*	110	*2,805*	2.6	*66*	188	*4,772*
	167	*4,250*	115	*2,930*	2.6	*66*	198	*5,022*
	177	*4,500*	120	*3,055*	2.6	*66*	208	*5,272*
	187	*4,750*	128	*3,250*	2.6	*66*	220	*5,592*
	197	*5,000*	133	*3,375*	2.6	*66*	230	*5,842*
	207	*5,250*	138	*3,500*	2.6	*66*	240	*6,092*
	217	*5,500*	143	*3,625*	2.6	*66*	250	*6,342*
	226	*5,750*	148	*3,750*	2.6	*66*	260	*6,592*
	236	*6,000*	153	*3,875*	2.6	*66*	269	*6,842*
Three-stage simplex mast DT	157	*4,000*	83	*2,100*	-	-	188	*4,767*
	177	*4,500*	90	*2,280*	-	-	208	*5,280*
	197	*5,000*	97	*2,460*	-	-	228	*5,793*
	217	*5,500*	104	*2,640*	-	-	248	*6,307*
	236	*6,000*	111	*2,820*	-	-	269	*6,820*
	256	*6,500*	118	*3,000*	-	-	289	*7,333*
	276	*7,000*	125	*3,180*	-	-	309	*7,847*
	295	*7,500*	132	*3,360*	-	-	340	*8,630*
	315	*8,000*	139	*3,540*	-	-	349	*8,873*
	335	*8,500*	146	*3,720*	-	-	370	*9,387*
	354	*9,000*	154	*3,900*	-	-	390	*9,900*
Three-stage triplex mast DZ (Full free-lift)	157	*4,000*	83	*2,100*	55.5	*1,410*	185	*4,690*
	167	*4,250*	86	*2,190*	59.1	*1,500*	194	*4,940*
	177	*4,500*	90	*2,280*	62.6	*1,590*	204	*5,190*
	187	*4,750*	93	*2,370*	66.1	*1,680*	214	*5,440*
	197	*5,000*	97	*2,460*	69.7	*1,770*	224	*5,690*
	207	*5,250*	100	*2,550*	73.2	*1,860*	234	*5,940*
	217	*5,500*	104	*2,640*	76.8	*1,950*	244	*6,190*
	226	*5,750*	107	*2,730*	80.3	*2,040*	254	*6,440*
	236	*6,000*	111	*2,820*	83.9	*2,130*	263	*6,690*
	246	*6,250*	115	*2,910*	87.4	*2,220*	273	*6,940*
	256	*6,500*	118	*3,000*	90.9	*2,310*	283	*7,190*
	266	*6,750*	122	*3,090*	94.5	*2,400*	293	*7,440*
	276	*7,000*	125	*3,180*	98.0	*2,490*	303	*7,690*

Technical data

as of: 05/2023

Characteristics	1.1	Manufacturer				Jungheinrich		Jungheinrich	
	1.2	Model				**EFX 411**		**EFX 414**	
	1.3	Drive				electric		electric	
	1.4	Type of operation				turret truck		turret truck	
	1.5	Load capacity / rated load	Q	lb	*kg*	2,400	*1,100*	3,000	*1,360*
	1.6	Load center distance	c	in	*mm*	24.0	*600*	24.0	*600*
	1.8	Load distance, center of drive axle to load handler	x	in	*mm*	6.6	*168*	6.6	*168*
	1.9	Wheelbase	y	in	*mm*	61.9	*1,572*	61.9	*1,572*
Weights	2.1	Service weight including battery (see line 6.5)		lb	*kg*	10,604	*4,810*	11,354	*5,150*
	2.2	Axle loading – loaded, drive / load		lb	*kg*	10,781 / 2,425	*4,890 / 1,100*	11,861 / 2,668	*5,380 / 1,210*
	2.3	Axle loading – unloaded, drive / load		lb	*kg*	6,889 / 3,616	*3,170 / 1,640*	7,187 / 4,167	*3,260 / 1,890*
Wheels, Chassis	3.1	Tires				Vulkollan®		Vulkollan®	
	3.2	Tire size, load		in	*mm*	1.6 x 5.7	*295 x 144*	11.6 x 5.7	*295 x 144*
	3.3	Tire size, drive		in	*mm*	13.5 x 4.3	*343 x 110*	13.5 x 4.3	*343 x 110*
	3.5	Wheels – number, load / drive (x = driven wheels)				2 / 1x		2 / 1x	
	3.6	Track width, load side	b_{10}	in	*mm*	55.4	*1,406*	55.4	*1,406*
Dimensions	4.2	Collapsed mast height	h_1	in	*mm*	82.7	*2,100*	82.7	*2,100*
	4.3	Free-lift	h_2	in	*mm*	55.5	*1,410*	55.5	*1,410*
	4.4	Maximum fork height (MFH)	h_3	in	*mm*	157.5	*4,000*	157.5	*4,000*
	4.5	Overall extended height (OAE)	h_4	in	*mm*	184.6	*4,690*	184.6	*4,690*
	4.7	Overhead load guard (cab) height	h_6	in	*mm*	89.5	*2,273*	89.5	*2,273*
	4.8	Seat height	h_7	in	*mm*	47.4	*1,205*	47.4	*1,205*
	4.19	Overall length (without load)	l_1	in	*mm*	123.4	*3,134*	123.4	*3,134*
	4.20	Length to fork face, head length	l_2	in	*mm*	116.4	*2,956*	116.4	*2,956*
	4.21	Overall width	b_1 / b_2	in	*mm*	47.6 / 61.0	*1,210 / 1,550*	47.6 / 61.0	*1,210 / 1,550*
	4.22	Fork dimensions, (thick / width / length)	s / e / l	in	*mm*	1.6 x 3.9 x 47.2	*40 x 100 x 1,200*	1.6 x 3.9 x 47.2	*40 x 100 x 1,200*
	4.23	Fork carriage ISO 2328, class / type A,B				2B		2B	
	4.24	Fork carriage width	b_3	in	*mm*	35.0	*890*	35.0	*890*
	4.25	Overall fork width	b_5	in	*mm*	33.5	*850*	33.5	*850*
	4.29	Insert dimension from nested	b_7	in	*mm*	53.9	*1,370*	53.9	*1,370*
	4.30	Insert dimension from vehicle centerline	b_8	in	*mm*	16.5	*420*	16.5	*420*
	4.31	Ground clearance, under mast	m_1	in	*mm*	4.7	*120*	4.7	*120*
	4.32	Ground clearance, center of wheelbase	m_2	in	*mm*	3.4	*87*	3.4	*87*
	4.33	Aisle width, rail / wire (for 48 x 40 pallets)	Ast	in	*mm*	69.3 / 72.0	*1,759 / 1,829*	69.3 / 72.0	*1,759 / 1,829*
	4.35	Turning radius	Wa	in	*mm*	72.7	*1,847*	72.7	*1,847*
	4.38	Distance to swivel-forks' pivot point	l_8	in	*mm*	33.1	*842*	33.1	*842*
	4.42	Pallet width	b_{12}	in	*mm*	40.0	*1,016*	40.0	*1,016*
	4.43	Pallet length	l_6	in	*mm*	48.0	*1,219*	48.0	*1,219*
	4.49	Distance – swivel-forks' pivot point to fork face	R	in	*mm*	10.5	*267*	10.5	*267*
		Distance – floor to top of battery roller		in	*mm*	13.0	*329*	13.0	*329*
Performance	5.1	Travel speed, loaded / unloaded		mph	*km/h*	5.6 / 5.6	*9.0 / 9.0*	5.6 / 5.6	*9.0 / 9.0*
	5.2	Lift speed, loaded / unloaded		ft / min	*m / s*	89 / 89 [1]	*0.45 / 0.45* [1]	89 / 89 [1]	*0.45 / 0.45* [1]
	5.3	Lowering speed, loaded / unloaded		ft / min	*m / s*	87 / 87	*0.44 / 0.44*	87 / 87	*0.44 / 0.44*
	5.4	Reach speed, loaded / unloaded		ft / min	*m / s*	69 / 69 [2]	*0.35 / 0.35* [2]	69 / 69 [2]	*0.35 / 0.35* [2]
	5.10	Service brake				regenerative		regenerative	
	5.11	Parking brake				electric spring-loaded		electric spring-loaded	
Electrical	6.1	Drive motor (rating S_2 60 minutes)		HP	*kW*	8.7	*6.5*	8.7	*6.5*
	6.2	Lift motor rating at S_3 15%		HP	*kW*	16.1	*12.0*	16.1	*12.0*
	6.4	Battery voltage / nominal capacity		V		48 / 595		48 / 595	
	6.5	Battery weight		lb	*kg*	2,090 - 2,310	*948 - 1,048*	2,090 - 2,310	*948 - 1,048*
Other	8.1	Type of drive control				3-phase AC drive control		3-phase AC drive control	
	8.4	Sound level as per ITSDF B56.11.5, operator's ear		dB (A)		67		67	
	8.6	Steering				electric		electric	

1) Equipped with optional performance module (Standard: 81 ft/min loaded and 81 ft/min unloaded)
2) Equipped with optional performance module (Standard: 39 ft/min loaded and 39 ft/min unloaded)

This specification sheet only provides technical values for the standard truck with 400 DT mast. Non-standard tires, different masts, additional equipment, etc., could produce other values. Rights reserved for technical changes and improvements.

Note: Equipping this model (these models) with a power source (e.g. Lithium-ion, Hydrogen Fuel cell, etc.) that has not been previously approved by the factory is considered a modification. Per OSHA 1910.178 and ANSI/ITSDF B56.1, please consult with your factory representative prior to installing any non-OEM power source that has not been previously approved.

The Jungheinrich Advantage

Longer operating times

Pioneering 3-phase technology

There are hundreds of thousands of Jungheinrich trucks with 3-phase AC technology in use worldwide today. The EFX uses constant application of this technology for drive, lift and steering. The advantages are:

- Lower energy consumption due to excellent efficiency in all motors.
- Stepless speed control of hydraulic motor.
- Optimal heat management allows for cooler operating temperatures.
- High torque for dynamic movement.
- Reduced maintenance resulting from the omission of wear-susceptible components (carbon brushes, commutator, contacts, etc.).

Ergonomics and comfort

- Large footwell for easy entry and exit.
- Unobstructed view of the load and travel route.
- Cushioned comfort seat absorbs vibrations.
- Operating console with adjustable height and distance from the operator.
- Soft keys with numeric keypad.
- Ergonomic, single-handed operating lever controls hydraulic functions.

Control and CAN-Bus system

- 70% fewer cables and plugs.
- All performance parameters can be adjusted.

Economic energy management

- Doubled energy reclamation through regenerative braking and lowering.
- Longer operating times on a single battery charge (up to two shifts).
- Shorter charge times resulting in prolonged battery life.
- Run up to 16 hours on 1 charge.

RFID transponder technology (optional)

- Continuous location identification for precise positioning and recognition of all defined traffic warehouse areas.
- High flexibility regarding programming of truck performance limits based on location (end of aisle control, lift/travel cut-outs, travel speed reductions).
- Optimization of travel speed relative to floor conditions.

Jungheinrich warehouseNAVIGATION (optional)

- The EFX can be linked to a Warehouse Management System (WMS) by a radio data terminal or scanner.
- Direct loading of each destination through the truck computer.
- Automatic vertical and horizontal positioning.
- RFID location detection ensures accuracy in reaching correct destinations.
- High level of flexibility in the warehouse with adaptation to existing WMS.
- Gain up to 25% higher throughput.
- Significantly increase productivity and throughput by eliminating pick-errors.

Commissioning and maintenance

- Quick and reliable commissioning using “teach-in” process.
- Up to 1,000 operating hour service intervals.
- Electronic system with wear-free sensors.

Integrated Jungheinrich Personnel Protection System (PPS)

- An available option that is factory-installed and integrated into the lift truck’s electronic control system/ CAN-Bus.
- Senses presence of pedestrians in working aisle and alerts operator; slows and/or stops the truck as programmed.

Optimal mast selections

- DT 3-stage simplex mast for large lifting heights.
- ZT 2-stage simplex mast for medium lifting heights.
- DZ triplex mast for medium lifting heights with free lift.

Additional optional equipment

- Mechanical rail guidance.
- Wire guidance for precise control in the aisles without any mechanical wear of components.
- Synchronized rotation of forks.
- Modular system for lift/drive cut-outs and travel speed reduction.
- Jungheinrich radio data terminals with mechanical and electrical support for material flow management systems.

Parts when you need them

Jungheinrich’s Parts Fast or Parts Free Guarantee ensures next-business-day delivery by 5:00 PM of all Jungheinrich parts in the United States, or they’re free, including freight. For customers in Canada and Mexico, the guarantee ensures shipping of parts within 24 hours from the time the order was placed by the dealer. See your local Jungheinrich dealer for program details.

* Programs may be subject to change without notice and may vary by region. Please ask your local Jungheinrich dealer for complete terms and conditions.

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