

**Jungheinrich proprietary 3-phase AC technology in drive, lift and steering motors**

**Super elastic tires and high ground clearance for indoor and outdoor use**

**Side-facing seat provides excellent visibility when transporting high loads**

**Smooth and sensitive operation with SOLO-PILOT hydraulic control**

**Jungheinrich Curve Control for advanced stability during cornering**

**All weather cabins for frequent outdoor applications (optional)**



## **ETV C16/ETV C20**

### **Electric Reach Truck (3500, 4400 lbs.\*)**

Super elastic tires, high ground clearance, a space-saving design, an ergonomic operator compartment and high performance figures: these are the exceptional strengths of the ETV C16/ETV C20 reach trucks.

**The key advantages:**

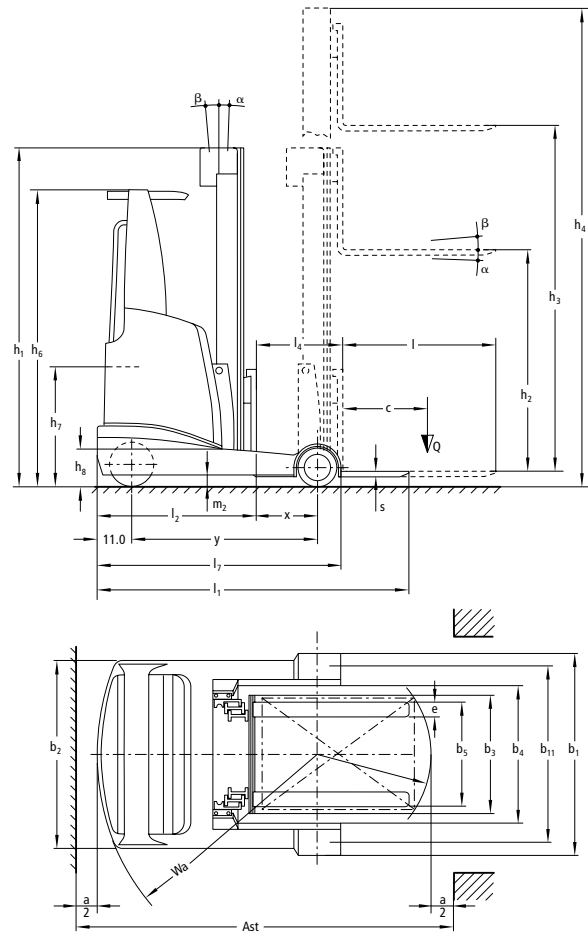
- Flexible for indoor and outdoor operation on different surfaces. Suitable for applications on smooth, concrete floors in the warehouse or for loading and unloading outside on bumpy, uneven asphalt surfaces.

- Space-saving design for narrow working aisle widths from 111 inches.
- Higher productivity and fewer maintenance requirements due to constant use of Jungheinrich proprietary 3-phase AC technology.
- Centrally-positioned display and controls are easy to operate. The design and layout of the controls contribute to excellent visibility and ergonomics.

The ETV C16/ETV C20 are excellent choices for cost-effective stacking and retrieval at high lift heights and in restricted spaces. Whether handling pallets, working in drive-in racking, operating in single or multi-shift applications, or frequently working outside with an optional weather-proof cabin – the ETV C16/ETV C20 reach trucks provide the ideal solution for every application.

**JUNGHEINRICH**

# ETV C16/ETV C20



**Mast Table ETV C16/ETV C20**

Designation	Collapsed mast height $h_1$ inches	Lift height $h_3$ inches	Free-lift $h_2^*$ inches	Extended mast height $h_4^*$ inches	Mast tilt forward/backward degrees
Two-stage mast ZT (ETV C16)	77	114	3.1	154	2/5
	81	122	3.1	162	2/5
	87	133	3.1	174	2/5
	91	141	3.1	182	2/5
	95	149	3.1	189	2/5
	99	157	3.1	197	2/5
Three-stage mast DZ (ETV C16)	107	173	3.1	213	2/5
	77	167	37	207	2/6
	81	179	41	219	2/5
	87	196	47	237	2/5
	90	206	50	246	2/4
	91	208	51	249	2/4
	95	220	55	260	2/4
	97	225	56	265	2/4
	98	228	57	269	2/4
	99	232	59	272	2/4
	103	244	62	284	2/4
Three-stage mast DZ (ETV C20)	107	255	66	296	2/4
	111	267	70	308	2/4
	115	279	74	319	2/4
	87	185	47	225	2/4
	91	196	51	237	2/4
	95	208	55	249	2/4
	98	218	58	259	2/4
	99	220	59	260	2/4
	103	232	62	272	2/4
	105	238	64	278	2/4
	107	244	66	284	2/4
115	267	74	308	2/4	
117	273	76	313	2/4	
123	291	82	331	2/4	

\* Includes standard load backrest with height of 39.4 inches.

# Technical Data

as of: 01/2010

			Jungheinrich	Jungheinrich			
Characteristics	1.1	Manufacturer (abbreviation)	Jungheinrich	Jungheinrich	1.1		
	1.2	Manufacturer's type designation	<b>ETV C16 DZ*</b>	<b>ETV C20 DZ*</b>	1.2		
		G = fork; E = integrated sideshift	GE	GE			
	1.3	Drive	electric	electric	1.3		
	1.4	Type of operation	seated	seated	1.4		
	1.5	Load capacity / rated load	Q (lbs)	3500	4400	1.5	
	1.6	Load center distance	c (inches)	24	24	1.6	
	1.8	Load distance, center of load axle to fork face	x (inches)	16 <sup>1)</sup>	17 <sup>1)</sup>	1.8	
		Mast pushed forward	x <sub>1</sub> (inches)	11	11		
1.9	Wheelbase	y (inches)	57	60	1.9		
Weights	2.1	Service weight incl. battery (see line 6.5)	lbs	8025	8841	2.1	
	2.3	Axle loading, unloaded front / rear	lbs	4916 / 3109	5313 / 3527	2.3	
	2.4	Axle loading, forks extended, loaded front / rear	lbs	1477 / 10075	1124 / 12125	2.4	
	2.5	Axle loading, forks retracted, loaded front / rear	lbs	4332 / 7220	4731 / 8519	2.5	
	3.1	Tires		SE	SE	3.1	
Wheels/Chassis	3.2	Tire size, front	inches	17.8 / 6.3-9.7	17.8 / 6.3-9.7	3.2	
	3.3	Tire size, rear	inches	17.8 / 6.3-9.7	17.8 / 7.8-9.7	3.3	
	3.5	Wheels, number front / rear (x = driven wheels)		1x / 2	1x / 2	3.5	
	3.7	Track width, rear	b <sub>11</sub> (inches)	48	49	3.7	
	Dimensions	4.1	Mast / fork carriage tilt, forward / backward	degrees	2 / 4 <sup>2)</sup>	2 / 4 <sup>2)</sup>	4.1
		4.2	Collapsed mast height	h <sub>1</sub> (inches)	91	94	4.2
		4.3	Free-lift	h <sub>2</sub> (inches)	51 <sup>5)</sup>	55 <sup>5)</sup>	4.3
4.4		Lift height	h <sub>3</sub> (inches)	209	209	4.4	
4.5		Extended mast height	h <sub>4</sub> (inches)	249 <sup>5)</sup>	249 <sup>5)</sup>	4.5	
4.7		Overhead guard height	h <sub>6</sub> (inches)	89	89	4.7	
4.8		Seat height / platform height	h <sub>7</sub> (inches)	42	42	4.8	
4.10		Height of outriggers	h <sub>8</sub> (inches)	18	18	4.10	
4.19		Overall length	l <sub>1</sub> (inches)	98 <sup>1)</sup>	99 <sup>1)</sup>	4.19	
4.20		Length to fork face (headlength)	l <sub>2</sub> (inches)	53 <sup>1)</sup>	54 <sup>1)</sup>	4.20	
4.21		Overall width	b <sub>1</sub> / b <sub>2</sub> (inches)	54 / 50	55 / 50	4.21	
4.22		Fork dimensions	s / e / l (inches)	1.5 / 4.7 / 45	2.0 / 5.5 / 45	4.22	
4.23		Fork carriage ISO 2328, class / type A, B		2 / B	2 / B	4.23	
4.24		Fork carriage width	b <sub>3</sub> (inches)	31.5	31.5	4.24	
4.25		Overall fork width	b <sub>5</sub> (inches)	14 / 27	14 / 28	4.25	
4.26		Width between outriggers	b <sub>4</sub> (inches)	37	37	4.26	
4.28		Reach distance	l <sub>4</sub> (inches)	27 <sup>1)</sup>	28 <sup>1)</sup>	4.28	
4.32		Ground clearance, center of wheelbase	m <sub>2</sub> (inches)	3.1 <sup>3)</sup>	3.1 <sup>3)</sup>	4.32	
4.33		Aisle width for pallets 40 x 48 (L x W)	Ast (inches)	109.6 <sup>1)</sup>	111.4 <sup>1)</sup>	4.33	
4.34		Aisle width for pallets 48 x 48 (L x W)	Ast (inches)	111.4 <sup>1)</sup>	113.0 <sup>1)</sup>	4.34	
Performance		Truck diagonal	D (inches)	87	89		
	4.35	Turning radius	Wa (inches)	68	71	4.35	
	4.37	Length to tip of outrigger	l <sub>7</sub> (inches)	78	81	4.37	
	5.1	Travel speed, loaded / unloaded	mph	7 / 8 <sup>4)</sup>	7 / 8 <sup>4)</sup>	5.1	
	5.2	Lift speed, loaded / unloaded	ft/min	79 / 138	63 / 118	5.2	
	5.3	Lowering speed, loaded / unloaded	ft/min	98	98	5.3	
	5.4	Reaching speed, loaded / unloaded	ft/min	39 <sup>2)</sup>	30 <sup>2)</sup>	5.4	
	5.7	Gradeability, loaded / unloaded	%	7 / 10	6 / 10	5.7	
	5.8	Max. gradeability, loaded / unloaded	%	10 / 15	10 / 15	5.8	
	5.9	Acceleration time, loaded / unloaded	sec	5.2 / 4.8	5.4 / 4.6	5.9	
5.10	Service brake		electric	electric	5.10		
Motors	6.1	Drive motor rating S <sub>2</sub> 60 min	kW/HP	6.9 / 9.3	6.9 / 9.3	6.1	
	6.2	Lift motor rating at S <sub>3</sub> 15 %	kW/HP	10 / 13.4	10 / 13.4	6.2	
	6.4	Battery voltage, nominal capacity (at 6 hour rate)	V/Ah	48 / 560	48 / 560	6.4	
	6.5	Battery weight (minimum)	lbs	1653	1653	6.5	
		Battery dimensions	l/w/h (inches)	40.75 / 17.44 / 30.87	40.75 / 17.44 / 30.87		
Other Details	8.1	Type of drive control		MOSFET Control AC	MOSFET Control AC	8.1	
	8.2	Operating pressure for attachments	psi	2176	2176	8.2	
	8.3	Flowrate for attachments	gpm	5	5	8.3	
	8.4	Sound level at the driver's ear	dB(A)	70	70	8.4	
1) other battery sizes change these values      2) depending on mast      5) includes load backrest with height of 39.4 inches 3) with nom. load center wheelbase      4) 7/7 mph in fork direction							
* DZ = three-stage mast; also known as 3 stage full free-lift							

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

# The Jungheinrich Advantage

## High-performance mast

Jungheinrich masts provide excellent capacity and space utilization at high lift heights.

- Excellent visibility towards the load.
- Integrated sideshift.
- Low collapsed heights combined with high lift heights.
- Smooth mast tilt.
- Extremely long lifespan due to high-quality mast profiles.
- High residual capacity at high lift heights.
- Lift heights up to 24.3 feet.
- Integrated hose routing for auxiliary hydraulics (no hose reel).

## Ergonomic operator compartment

The operator compartment provides ideal working conditions for high performance and ease of operation.



Ergonomic operator compartment

- Entry/exit step plate can be seen from above.
- Horizontally and vertically adjustable steering wheel.
- Comfortable seat with adjustment options (seat position, backrest, body weight) for every operator.
- Side-facing seat offers outstanding visibility when transporting heavy loads.
- Several storage areas.
- Important operating controls are easily accessible.

- Generous space available in compartment.
- Electric 180° steering and optimally-positioned steering wheel.
- Automatic centering of sideshift at the push of a button (optional).



SOLO-PILOT

## Easy control with SOLO-PILOT

Multiple control levers are used to activate all hydraulic functions, including lifting/lowering, travel direction, sideshift and the horn.

- All operating controls are visible and have a designated function. Mast reach and mast tilt are controlled by two separate levers.
- SOLO-PILOT also controls auxiliary equipment, such as the fork positioner (optional).
- Precise control as a result of smooth activation of all functions.
- Adjustable armrest allows the operator to relax.

## Easy-to-read operator display

High-quality control panel displaying the most important operating data.

- Travel direction and wheel position display.
- Battery discharge indicator.
- Three adjustable travel programs to suit every application.
- Operating hours and clock.
- Lift height and load weight (optional).

## Greater efficiency with Jungheinrich's proprietary 3-phase AC technology

Powerful 3-phase AC technology in drive, lift and steering motors offers several advantages over traditional DC motors.

- Powerful acceleration.
- Quick directional changes without delay.
- Greater operational availability due to maintenance-free motors without carbon brushes, brush springs or commutators.
- Longer operating times due to energy reclamation during braking.

## All weather cabins (optional)

Weather-proof cabins are available in three designs (Economy, Comfort 1, Comfort 2) and provide excellent protection during frequent outdoor use.

- Economy offers a roof and front screen.
- Comfort 1 offers a roof and front and side screens for protection against frequent use in rainy conditions.
- Comfort 2 offers a roof, front and side screens and a door for complete protection.



Comfort 2 weather-proof cabin



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Well worthwhile