

FB/FTB 1.25 - 2.0 E2 Technical specifications



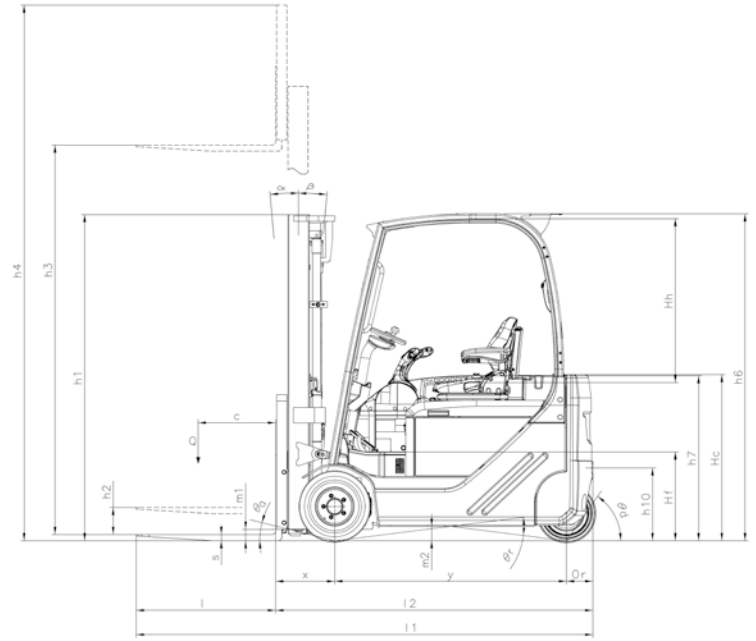
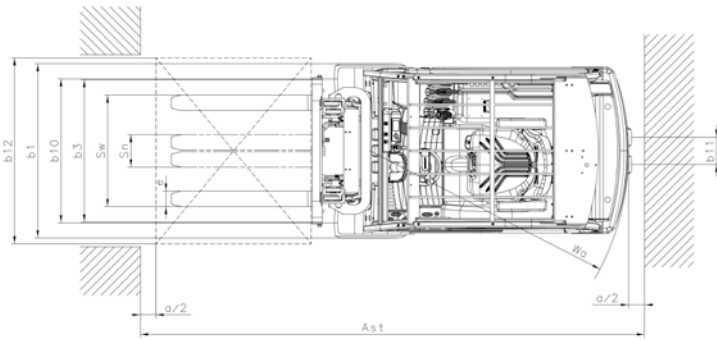


STANDARD SPECIFICATIONS

		Main Truck Specifications	Data sheet for materials handling equipment							VDI 2198 Registration note
		Manufacturers Data and Design Characteristics								
CHARACTERISTICS	1.1	Manufacturer / Brand	UniCarriers / TCM							
		Model name	FTB13-E2S	FTB15-E2S	FTB16-E2	FTB16-E2L	FTB18-E2	FTB18-E2L	FTB20-E2L	
	1.2	Manufacturer's type designation	AS2N1L13Q	AS2N1L15Q	A2N1L16Q	AG2N1L16Q	A2N1L18Q	AG2N1L18Q	AG2N1L20Q	
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas	Electric							
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker	Driver seated							
	1.5	Rated capacity/rated load	Q (t)	1,25	1,50	1,60	1,60	1,80	1,80	2,00
	1.6	Load centre distance	c (mm)	500	500	500	500	500	500	500
	1.8	Load distance, centre of drive axle to fork	x (mm)	375	375	375	375	380	380	380
	1.9	Wheelbase	y (mm)	1280	1280	1385	1495	1385	1495	1495
WEIGHTS	2.1	Service weight	kg	2880	3105	3120	3220	3375	3465	3500
	2.2	Axle loading, laden front/rear	kg	3610/520	4035/570	4190/530	4200/620	4555/620	4545/720	4870/630
	2.3	Axle loading unladen front/rear	kg	1510/1370	1510/1595	1580/1540	1665/1555	1610/1765	1685/1780	1690/1810
WHEELS & TIRES	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane	SE/SE	SE/SE	SE/SE	SE/SE	SE/SE	SE/SE	SE/SE	SE/SE
	3.2	Tyre size, front	18x7-8	18x7-8	18x7-8	18x7-8	200/50-10	200/50-10	200/50-10	
	3.3	Tyre size, rear	15x4.5-8	15x4.5-8	15x4.5-8	15x4.5-8	140/55-9	140/55-9	140/55-9	
	3.5	Wheels, number front/rear (x = driven wheels)	2x/2	2x/2	2x/2	2x/2	2x/2	2x/2	2x/2	
	3.6	Tread, front	b ₁₀ (mm)	913	913	913	933	930	930	930
	3.7	Tread, rear	b ₁₁ (mm)	176	176	176	176	176	176	176
	4.1	Tilt of mast/fork carriage forward/backward	α/β (°)	5/5	5/5	5/5	5/5	5/5	5/5	5/5
DIMENSIONS	4.2	Height, mast lowered	h ₁ (mm)	2105	2105	2105	2105	2105	2105	2105
	4.3	Free lift	h ₂ (mm)	95	95	95	95	100	100	100
	4.4	Lift	h ₃ (mm)	3300	3300	3300	3300	3300	3300	3300
	4.5	Height, mast extended	h ₄ (mm)	4245	4245	4245	4245	4245	4245	4245
	4.7	Height of overhead guard (Optional low overhead guard)	h ₆ (mm)	2110 (1995)	2110 (1995)	2110 (1995)	2110 (1995)	2110 (1995)	2110 (1995)	2110 (1995)
	4.8	Seat height/stand height	h ₇ (mm)	1065	1065	1065	1065	1065	1065	1065
	4.12	Coupling height	h ₁₀ (mm)	470	470	470	470	470	470	470
	4.19	Overall length	l ₁ (mm)	2730	2730	2835	2945	2835	2945	2945
	4.20	Length to face of fork	l ₂ (mm)	1830	1830	1935	2045	1935	2045	2045
	4.21	Overall width	b ₁ (mm)	1075	1075	1075	1075	1125	1125	1125
	4.22	Fork dimensions ISO 2331	s/e/l (mm)	35/100/900	35/100/900	35/100/900	35/100/900	40/100/900	40/100/900	40/100/900
	4.23	Fork carriage ISO 2328, class/type A,B		2A	2A	2A	2A	2A	2A	2A
	4.24	Fork-carriage width	b ₃ (mm)	920	920	920	920	920	920	920
	4.31	Ground clearance, laden, below mast	m ₁ (mm)	75	75	75	75	75	75	75
	4.32	Ground clearance, centre of wheel base	m ₂ (mm)	95	95	95	95	95	95	95
	4.33	Right angle stacking aisle with pallet 1000x1200 crossways ¹⁾	Ast (mm)	3150	3150	3255	3365	3260	3370	3370
	4.34	Right angle stacking aisle with pallet 800x1200 lengthways ¹⁾	Ast (mm)	3275	3275	3380	3490	3385	3495	3495
	4.35	Turning radius	Wa (mm)	1450	1450	1555	1665	1555	1665	1665
	4.36	Internal turning radius	b ₁₃ (mm)	-	-	-	-	-	-	-
PERFORMANCE	5.1	Travel speed, load/without load	km/h	16.0/16.0	16.0/16.0	16.0/16.0	16.0/16.0	16.0/16.0	16.0/16.0	16.0/16.0
	5.2	Lift speed, load/without load	m/s	0.47/0.58	0.44/0.58	0.43/0.58	0.43/0.58	0.41/0.58	0.41/0.58	0.38/0.58
	5.3	Lowering speed, load/without load	m/s	0.53/0.53	0.53/0.53	0.53/0.53	0.53/0.53	0.53/0.53	0.53/0.53	0.53/0.53
	5.5	Drawbar pull, load/without load	N	5731/5707	5643/5668	5621/5664	5604/5646	5371/5531	5358/5515	5315/5511
	5.6	Max. drawbar pull, load/without load	N	11250/11000	11165/10960	11140/10955	11125/10940	10675/10670	10660/10655	10620/10650
	5.7	Gradeability, load/without load	%	18.4/25.7	16.4/23.7	16.0/23.6	15.7/22.8	14.0/21.0	13.7/20.5	13.2/20.3
	5.8	Max. gradeability, load/without load	%	31.1/44.7	27.6/40.9	26.9/40.7	26.3/39.2	23.4/35.9	22.9/34.8	21.9/34.5
	5.9	Acceleration time, load/without load	s	4.2/3.9	4.4/3.9	4.4/3.9	4.4/4.0	4.5/4.0	4.6/4.0	4.6/4.0
	5.10	Service brake	Electric							
	6.1	Drive motor rating S2 60 min	kW	5.5 x2	5.5 x2	5.5 x2	5.5 x2	5.5 x2	5.5 x2	5.5 x2
DRIVE	6.2	Lift motor rating at S3 15%	kW	9.3	9.3	9.3	9.3	9.3	9.3	9.3
	6.3	Battery according to DIN 43531/35/36 A, B, C, no	DIN 43531 A	DIN 43531 A	DIN 43531 A	DIN 43531 A	DIN 43531 A	DIN 43531 A	DIN 43531 A	DIN 43531 A
	6.4	Battery voltage/nominal capacity K _s	V/Ah	48/500	48/500	48/625	48/750	48/625	48/750	48/750
	6.5	Battery weight	kg	673-743	673-743	813-899	962-1064	813-899	962-1064	962-1064
	6.6	Energy consumption according to VDI cycle ²⁾	kWh/h	3.7	4.0	4.2	4.4	4.7	4.9	5.0
OTHERS	8.1	Type of drive unit	VCM TECH - MOS FET Inverter							
	10.1	Operating pressure for attachments	bar	245	245	245	245	245	245	245
	10.2	Oil volume for attachments	l/min	25	25	25	25	25	25	25
	10.7	Sound pressure level at the driver's seat	dB(A)	67	67	67	67	67	67	67

¹⁾ With 200mm clearance ²⁾ According VDI 60 cycles

DIMENSIONS



MAST SPECIFICATIONS & RATED CAPACITIES: FB/FTB 1.3-1.6 TONNE

Mast type	Mast name	Max. fork height (h3)	Overall height			Free lift (h2/h5)		Tilt angle For- ward/ back- ward	Front overhang (x)				Load Capacities on forks With STD Carriage @ 500mm load center				
			Fully lowered (h1)	Fully extended (h4)					With STD Carriage	With Hook-on Side-shift	With Integral Side-shift	With Integral Fork- positioner	FTB13-E2S	FTB15-E2S	FTB16-E2	FTB16-E2L	FB16-E2
				Without backrest	WithSTD backrest	Without backrest	WithSTD backrest										
TWO STAGE WIDE VIEW	2W300	3.000	1.955	3.635	3.945	95	95	5/5	375	435	415	490	1.250	1.500	1.600	1.600	1.600
	2W330	3.300	2.105	3.935	4.245	95	95	5/5					1.250	1.500	1.600	1.600	1.600
	2W350	3.500	2.240	4.135	4.445	95	95	5/5					1.250	1.500	1.600	1.600	1.600
	2W370	3.700	2.365	4.335	4.645	95	95	5/5					1.250	1.500	1.600	1.600	1.600
	2W400	4.000	2.555	4.635	4.945	95	95	5/5					1.250	1.500	1.600	1.600	1.600
	2W450	4.500	2.805	5.135	5.445	95	95	5/5					1.200	1.450	1.550	1.600	1.600
	2W500	5.000	3.055	5.635	5.945	95	95	5/5					1.150	1.400	1.500	1.600	1.600
TWO STAGE FULL FREE	2F300	3.000	1.955	3.635	3.945	1.355	1.045	5/5	375	435	415	490	1.250	1.500	1.600	1.600	1.600
	2F330	3.300	2.105	3.935	4.245	1.505	1.195	5/5					1.250	1.500	1.600	1.600	1.600
	2F350	3.500	2.240	4.135	4.445	1.640	1.330	5/5					1.250	1.500	1.600	1.600	1.600
	2F370	3.700	2.365	4.335	4.645	1.765	1.455	5/5					1.250	1.500	1.600	1.600	1.600
	2F400	4.000	2.555	4.635	4.945	1.955	1.645	5/5					1.250	1.500	1.600	1.600	1.600
THREE STAGE FULL FREE	3F385	3.850	1.805	4.485	4.795	1.205	895	5/5	395	460	435	510	1.250	1.500	1.600	1.600	1.600
	3F430	4.300	1.955	4.935	5.245	1.355	1.045	5/5					1.200	1.450	1.550	1.600	1.600
	3F475	4.750	2.105	5.385	5.695	1.505	1.195	5/5					1.150	1.400	1.500	1.600	1.600
	3F515	5.150	2.240	5.785	6.100	1.640	1.330	5/5					1.100	1.350	1.450	1.550	1.550
	3F550	5.500	2.365	6.135	6.445	1.765	1.455	5/5					1.050	1.250	1.400	1.500	1.500
	3F600	6.000	2.555	6.635	6.945	1.955	1.645	5/5					1.000	1.200	1.350	1.450	1.450
	3F650	6.500	2.805	7.135	7.445	2.205	1.895	5/5					900	1.000	1.050	1.150	1.150
	3F700	7.000	3.055	7.635	7.945	2.455	2.145	5/5					700	700	750	850	850

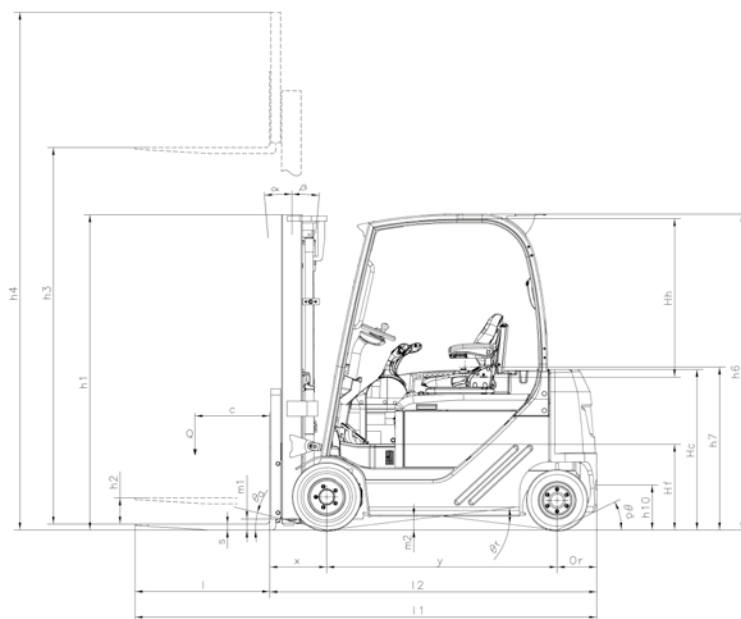
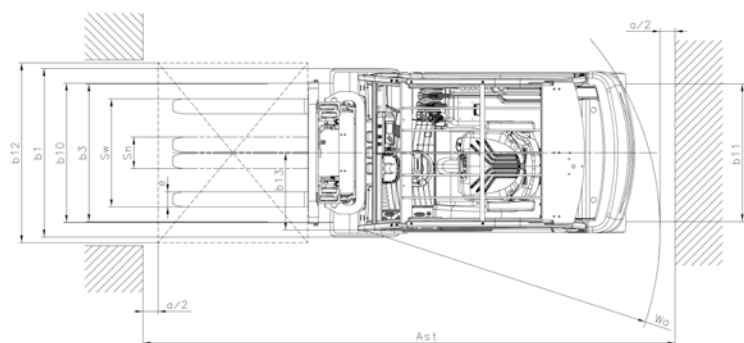


STANDARD SPECIFICATIONS

		Main Truck Specifications		Data sheet for materials handling equipment		VDI 2198 Registration note
		Manufacturers	Data and Design	Characteristics		
CHARACTERISTICS	1.1	Manufacturer / Brand		UniCarriers / TCM		
		Model name		FB16-E2	FB18-E2L	FB20-E2L
	1.2	Manufacturer's type designation		JA2N1L16Q	JAG2N1L18Q	JAG2N1L20Q
	1.3	Drive: electric (battery or mains), diesel, petrol, fuel gas		Electric		
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker		Driver seated		
	1.5	Rated capacity/rated load		Q (t)	1,60	1,80
	1.6	Load centre distance		c (mm)	500	500
	1.8	Load distance, centre of drive axle to fork		x (mm)	375	380
	1.9	Wheelbase		y (mm)	1430	1540
WEIGHTS	2.1	Service weight		kg	3160	3355
	2.2	Axle loading, laden front/rear		kg	4150/610	4490/665
	2.3	Axle loading unladen front/rear		kg	1575/1585	1660/1695
WHEELS & TIRES	3.1	Tyres: solid rubber, superelastic, pneumatic, polyurethane		SE/SE	SE/SE	SE/SE
	3.2	Tyre size, front		18x7-8	200/50-10	200/50-10
	3.3	Tyre size, rear		16x6-8	16x6-8	16x6-8
	3.5	Wheels, number front/rear (x = driven wheels)		2x/2	2x/2	2x/2
	3.6	Tread, front		b ₁₀ (mm)	933	930
	3.7	Tread, rear		b ₁₁ (mm)	918	918
	4.1	Tilt of mast/fork carriage forward/backward		α/β (°)	5/5	5/5
DIMENSIONS	4.2	Height, mast lowered		h ₁ (mm)	2105	2105
	4.3	Free lift		h ₂ (mm)	100	100
	4.4	Lift		h ₃ (mm)	3300	3300
	4.5	Height, mast extended		h ₄ (mm)	4245	4245
	4.7	Height of overhead guard (Optional low overhead guard)		h ₆ (mm)	2110 (1995)	2110 (1995)
	4.8	Seat height/stand height		h ₇ (mm)	1065	1065
	4.12	Coupling height		h ₁₀ (mm)	300	300
	4.19	Overall length		l ₁ (mm)	2975	3085
	4.20	Length to face of fork		l ₂ (mm)	2075	2185
	4.21	Overall width		b ₁ (mm)	1075	1125
	4.22	Fork dimensions ISO 2331		s/e/l (mm)	35/100/900	40/100/900
	4.23	Fork carriage ISO 2328, class/type A,B			2A	2A
	4.24	Fork-carriage width		b ₃ (mm)	920	920
	4.31	Ground clearance, laden, below mast		m ₁ (mm)	75	75
	4.32	Ground clearance, centre of wheel base		m ₂ (mm)	95	95
	4.33	Right angle stacking aisle with pallet 1000x1200 crossways ¹		Ast (mm)	3440	3560
	4.34	Right angle stacking aisle with pallet 800x1200 lengthways ¹		Ast (mm)	3640	3760
	4.35	Turning radius		Wa (mm)	1860	1975
	4.36	Internal turning radius		b ₁₃ (mm)	480	515
PERFORMANCE	5.1	Travel speed, load/without load		km/h	17.0/17.0	17.0/17.0
	5.2	Lift speed, load/without load		m/s	0.43/0.58	0.41/0.58
	5.3	Lowering speed, load/without load		m/s	0.53/0.53	0.53/0.53
	5.5	Drawbar pull, load/without load		N	5662/5653	5339/5437
	5.6	Max. drawbar pull, load/without load		N	11180/10945	10645/10575
	5.7	Gradeability, load/without load		%	15.9/23.3	14.0/21.2
	5.8	Max. gradeability, load/without load		%	26.6/40.1	23.5/36.1
	5.9	Acceleration time, load/without load		s	4.4/3.9	4.5/4.0
	5.10	Service brake		Electric		
DRIVE	6.1	Drive motor rating S2 60 min		kW	5.5 x2	5.5 x2
	6.2	Lift motor rating at S3 15%		kW	9.3	9.3
	6.3	Battery according to DIN 43531/35/36 A, B, C, no		DIN 43531 A	DIN 43531 A	DIN 43531 A
	6.4	Battery voltage/nominal capacity K _s		V/Ah	48/625	48/750
	6.5	Battery weight		kg	813-899	962-1064
	6.6	Energy consumption according to VDI cycle ²		kWh/h	4.4	4.7
OTHERS	8.1	Type of drive unit		VCM TECH - MOS FET Inverter		
	10.1	Operating pressure for attachments		bar	245	245
	10.2	Oil volume for attachments		l/min	25	25
	10.7	Sound pressure level at the driver's seat		dB(A)	67	67

¹⁾ With 200mm clearance ²⁾ According VDI 60 cycles

DIMENSIONS



MAST SPECIFICATIONS & RATED CAPACITIES: FB/FTB 1.8-2.0 TONNE

Mast type	Mast name	Max. fork height (h3) mm	Overall height			Free lift (h2/h5)		Tilt angle Forward/backward degrees	Front overhang (x)				Load Capacities on forks With STD Carriage @ 500mm load center				
			Fully lowered (h1) mm	Fully extended (h4)		Without backrest mm	WithSTD backrest mm		With STD Carriage mm	With Hook-on Side-shift mm	With Integral Side-shift mm	With Integral Fork-positioner mm	FTB18-E2 kg	FTB18-E2L kg	FTB20-E2L kg	FB18-E2L kg	FB20-E2L kg
				Without backrest mm	WithSTD backrest mm												
TWO STAGE WIDE VIEW	2W300	3.000	1.955	3.635	3.945	100	100	5/5	380	440	420	495	1.800	1.800	2.000	1.800	2.000
	2W330	3.300	2.105	3.935	4.245	100	100	5/5					1.800	1.800	2.000	1.800	2.000
	2W350	3.500	2.240	4.135	4.445	100	100	5/5					1.800	1.800	2.000	1.800	2.000
	2W370	3.700	2.365	4.335	4.645	100	100	5/5					1.800	1.800	2.000	1.800	2.000
	2W400	4.000	2.555	4.635	4.945	100	100	5/5					1.800	1.800	2.000	1.800	2.000
	2W450	4.500	2.805	5.135	5.445	100	100	5/5					1.750	1.800	1.950	1.800	2.000
	2W500	5.000	3.055	5.635	5.945	100	100	5/5					1.700	1.800	1.900	1.800	1.950
TWO STAGE FULL FREE	2F300	3.000	1.955	3.635	3.945	1.360	1.050	5/5	380	440	420	495	1.800	1.800	2.000	1.800	2.000
	2F330	3.300	2.105	3.935	4.245	1.510	1.200	5/5					1.800	1.800	2.000	1.800	2.000
	2F350	3.500	2.240	4.135	4.445	1.645	1.335	5/5					1.800	1.800	2.000	1.800	2.000
	2F370	3.700	2.365	4.335	4.645	1.770	1.460	5/5					1.800	1.800	2.000	1.800	2.000
	2F400	4.000	2.555	4.635	4.945	1.960	1.650	5/5					1.800	1.800	2.000	1.800	2.000
THREE STAGE FULL FREE	3F385	3.850	1.805	4.485	4.795	1.210	900	5/5	400	465	440	515	1.800	1.800	2.000	1.800	2.000
	3F430	4.300	1.955	4.935	5.245	1.360	1.050	5/5					1.750	1.800	1.950	1.800	2.000
	3F475	4.750	2.105	5.385	5.695	1.510	1.200	5/5					1.700	1.800	1.900	1.800	1.900
	3F515	5.150	2.240	5.785	6.100	1.645	1.335	5/5					1.650	1.750	1.850	1.750	1.850
	3F550	5.500	2.365	6.135	6.445	1.770	1.460	5/5					1.600	1.650	1.800	1.650	1.800
	3F600	6.000	2.555	6.635	6.945	1.960	1.650	5/5					1.400	1.500	1.700	1.500	1.700
	3F650	6.500	2.805	7.135	7.445	2.210	1.900	5/5					1.100	1.200	1.500	1.200	1.500
	3F700	7.000	3.055	7.635	7.945	2.460	2.150	5/5					900	900	1.200	900	1.200



It's all about
the price.
But what
price?

Reduce your Total Cost of Operation with TCM

We agree. Price is everything. Or to be more specific: your Total Cost of Operation (TCO). That's why we're so focused on cutting costs and improving your material handling. The truck and its performance play an important role, but this is even more about how we can support you in optimising your warehouse operations to give you the best value for your money. Which – in the long run – is what creates a winner.

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