

# TCM

## FBJ 1.5 - 2.5 technical specifications



**STANDARD SPECIFICATIONS**

March 2014		Counterbalance trucks Designation according VDI 3586	Data sheet for materials handling equipment								VDI 2198 Registration note
		Manufacturers Data and Design Characteristics									
<b>CHARACTERISTICS</b>	1.1	Manufacturer	UniCarriers								
	1.2	Model name	FB15-J1	FB15-J1L	FB18-J1	FB18-J1L	FB20-J1	FB20-J1L	FB25-J1	FB25-J1L	
		Model variation	Std. battery	J1B1L15U	JG1B1L15U	J1B1L18U	JG1B1L18U	T1B2L20U	TG1B2L20U	T1B2L25U	TG1B2L25U
			Large battery	J1B1R15U		J1B1R18U		T1B2R20U		T1B2R25U	
		Std. battery + cold store			J1B1L18FU				T1B2L25FU		
	1.3	Power unit	Battery	Battery	Battery	Battery	Battery	Battery	Battery	Battery	
	1.4	Operation	Sit	Sit	Sit	Sit	Sit	Sit	Sit	Sit	
	1.5	Load capacity	Q (t)	1.5	1.5	1.75	1.75	2.0	2.0	2.5	2.5
	1.6	Load centre	c (mm)	500	500	500	500	500	500	500	500
1.8	Front overhang	x (mm)	390	390	390	390	425	425	425	425	
1.9	Wheel base	y (mm)	1270	1450	1270	1450	1450	1595	1450	1595	
<b>WEIGHTS</b>	2.1	Service weight	kg	2980	3205	3170	3205	3445	4065	3875	4065
	2.2	Axle load with load, front/rear	kg	3850/630	3855/850	4240/680	4260/695	4855/590	4955/1110	5650/725	5745/820
	2.3	Axle load without load, front/rear	kg	1280/1700	1420/1785	1245/1925	1420/1785	1560/1885	1775/2290	1535/2340	1775/2290
<b>WHEELS &amp; TIRES</b>	3.1	Tyres front/rear (C=Cushion,SE=Superelastic,P=Pneumatic)	P(SE)/P(SE)								
	3.2	Tyre size, front	21x8-9-10PR	21x8-9-10PR	21x8-9-10PR	21x8-9-10PR	23x9-10-16PR	23x9-10-16PR	23x9-10-16PR	23x9-10-16PR	
	3.3	Tyre size, rear	5.00-8-10PR	5.00-8-10PR	5.00-8-10PR	5.00-8-10PR	18x7-8-14	18x7-8-14	18x7-8-14	18x7-8-14	
	3.5	Wheels, number front/rear (x=powered)	2x/2	2x/2	2x/2	2x/2	2x/2	2x/2	2x/2	2x/2	
	3.6	Tread, front	b <sub>10</sub> (mm)	920	920	920	920	940	940	940	940
	3.7	Tread, rear	b <sub>11</sub> (mm)	900	900	900	900	930	930	930	930
	<b>DIMENSIONS</b>	4.1	Tilt Mast/carriage, forward/backward	a/b (°)	5/10	5/10	5/10	5/10	5/10	5/10	5/10
4.2		Height mast fully lowered	h <sub>1</sub> (mm)	1990	1990	1990	1990	1985	1985	1985	1985
4.3		Free lift	h <sub>2</sub> (mm)	120	120	120	120	120	120	120	120
4.4		Lift height	h <sub>3</sub> (mm)	3000	3000	3000	3000	3000	3000	3000	3000
4.5		Height mast fully extended	h <sub>4</sub> (mm)	3945	3945	3945	3945	4045	4045	4045	4045
4.7		Overhead guard height	h <sub>6</sub> (mm)	2120	2120	2120	2120	2120	2275	2120	2275
4.8		Seat height/Standing height	h <sub>7</sub> (mm)	1055	1055	1055	1055	1055	1165	1055	1165
4.19		Overall length	l <sub>1</sub> (mm)	3100	3290	3145	3290	3330	3515	3395	3515
4.20		Length to fork face	l <sub>2</sub> (mm)	2030	2220	2075	2220	2260	2445	2325	2445
4.21		Overall width <sup>1</sup>	b <sub>1</sub> (mm)	1120	1120	1120	1120	1165	1165	1165	1165
4.22		Fork dimensions	s,e,l (mm)	35x100x1070	35x100x1070	35x100x1070	35x100x1070	40x122x1070	40x122x1070	40x122x1070	40x122x1070
4.23		Carriage DIN 15173, Class / Form A,B		2A	2A	2A	2A	2A	2A	2A	2A
4.24		Carriage width	b <sub>3</sub> (mm)	920	920	920	920	1020	1020	1020	1020
4.31		Mast underclearance loaded	m <sub>1</sub> (mm)	110	110	110	110	105	105	105	105
4.32		Underclearance centre wheelbase	m <sub>2</sub> (mm)	110	110	110	110	110	110	110	110
4.33	Right angle stacking aisle with pallet 1000x1200 across forks	Ast (mm)	3340	3560	3370	3560	3585	3765	3625	3765	
4.34	Right angle stacking aisle with pallet 800x1200 across forks	Ast (mm)	3140	3360	3170	3360	3385	3565	3425	3565	
4.35	Turning radius	Wa (mm)	1750	1970	1780	1970	1960	2140	2000	2140	
<b>PERFORMANCE</b>	5.1	Travelling speed with/without load	km/h	16.0/18.0	16.0/17.5	16.0/18.0	16.0/17.5	16.0/17.5	15.0/17.0	15.0/17.5	15.0/17.0
	5.2	Lifting speed with/without load	mm/s	435/640	435/640	390/640	390/640	385/605	385/605	345/605	345/605
	5.3	Lowering speed with/without load	mm/s	500/500	500/500	500/500	500/500	500/500	500/500	500/500	500/500
	5.6	Drawbar pull, with/without load	kN	10.8/10.8	10.8/10.8	10.8/10.8	10.8/10.8	14.6/14.6	14.6/14.6	14.6/14.6	14.6/14.6
	5.8	Gradeability with/without load	%	22.0/34.0	20.0/30.5	19.0/32.0	19.0/30.0	24.0/40.0	21.0/33.0	20.0/35.0	19.0/33.0
	5.9	Acceleration with/without load	s	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
5.10	Service brake		Hydraulic/Electric								
<b>DRIVE</b>	6.1	Traction motor performance, S2 60min rating	kW	9.0X1	9.0X1	9.0X1	9.0X1	12.0X1	12.0X1	12.0X1	12.0X1
	6.2	Lift motor performance, S3 15% rating	kW	11.0	11.0	11.0	11.0	13.5	13.5	13.5	13.5
	6.3	Battery according DIN 43531/35/36 A,B,C,no		No							
	6.4	Battery voltage/rated capacity (5h) <sup>*)</sup>	V/Ah	48/485	48/600	48/485	48/600	48/450	48/865	48/565	48/865
	6.5	Battery weight (±5%)	kg	765	940	765	940	710	1370	885	1370
<b>OTHERS</b>	8.1	Type of drive control		UniCarriers AC TECH-MOS-FET inverter							
	8.2	Working pressure attachments	bar	127	127	127	127	127	127	127	127

<sup>\*)</sup> Larger capacity batteries on request



**MAST SPECIFICATIONS & RATED CAPACITIES: FBJ: 1.5 -1.8 TONNE: PNEUMATIC TYRES**

Mast type	Mast name	Maximum fork height	Overall height				Free lift			Tilt angle Forward/backward	Load capacity Load centre 500 mm	
			Fully lowered	Fully extended			FB15-J1	FB18-J1	Std. backrest		1.5 tonne	1.75 tonne
				FB15-J1	FB18-J1	Std. backrest						
				Without backrest	Without backrest	Without backrest						
mm <sup>1</sup>	mm <sup>1</sup>	mm <sup>1</sup>	mm <sup>1</sup>	mm <sup>1</sup>	mm <sup>1</sup>	mm <sup>1</sup>	degrees	kg <sup>1</sup>	kg <sup>1</sup>			
TWO STAGE WIDE VIEW	2W270	2700	1840	3225	3330	3645	120	120	120	5-10	1500	1750
	2W300	3000	1990	3525	3630	3945	120	120	120	5-10	1500	1750
	2W330	3300	2140	3825	3930	4245	120	120	120	5-10	1500	1750
	2W350	3500	2275	4025	4130	4445	120	120	120	5-10	1500	1750
	2W370	3700	2400	4225	4330	4645	120	120	120	5-10	1500	1750
	2W400	4000	2590	4525	4630	4945	120	120	120	5-10	1500	1650
	2W450	4500	2840	5025	5130	5445	120	120	120	5-5	1350	1400
	2W500	5000	3090	5525	5630	5945	120	120	120	5-5	1150	1200
TWO STAGE FULL FREE	2F270	2700	1840	3225	3330	3645	1315	1210	895	5-10	1500	1750
	2F300	3000	1990	3525	3630	3945	1465	1360	1045	5-10	1500	1750
	2F330	3300	2140	3825	3930	4245	1615	1510	1195	5-10	1500	1750
	2F350	3500	2275	4025	4130	4445	1750	1645	1330	5-10	1500	1750
	2F370	3700	2400	4225	4330	4645	1875	1770	1455	5-10	1500	1750
	2F400	4000	2590	4525	4630	4945	2065	1960	1645	5-10	1500	1650
THREE STAGE FULL FREE	3F385	3850	1840	4380	4480	4795	1310	1210	895	5-5	1500	1650
	3F430	4300	1990	4830	4930	5245	1460	1360	1045	5-5	1400	1550
	3F475	4750	2140	5280	5380	5695	1610	1510	1195	5-5	1300	1350
	3F515	5150	2275	5685	5785	6100	1745	1645	1330	5-5	1050	1100
	3F550	5500	2400	6030	6130	6445	1870	1770	1455	5-5	850	850
	3F600	6000	2590	6530	6630	6945	2060	1960	1645	5-5	650	650

<sup>1)</sup> 1 inch = 24.4 mm 1kg = 0.4536 lb

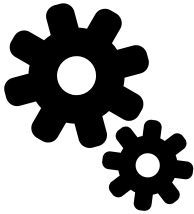
**MAST SPECIFICATIONS & RATED CAPACITIES: FBJ: 2.0 - 2.5 TONNE: PNEUMATIC TYRES**

Mast type	Mast name	Maximum fork height	Overall height			Free lift		Tilt angle Forward/backward	Load capacity Load centre 500 mm	
			Fully lowered	Fully extended		Without backrest	Std. backrest		2.0 tonne	2.5 tonne
				Without backrest	Std. backrest					
				Without backrest	Without backrest					
mm <sup>1</sup>	mm <sup>1</sup>	mm <sup>1</sup>	mm <sup>1</sup>	mm <sup>1</sup>	mm <sup>1</sup>	degrees	kg <sup>1</sup>	kg <sup>1</sup>		
TWO STAGE WIDE VIEW	2W270	2700	1835	3320	3745	120	120	5-10	2000	2500
	2W300	3000	1985	3620	4045	120	120	5-10	2000	2500
	2W330	3300	2135	3920	4345	120	120	5-10	2000	2500
	2W350	3500	2270	4120	4545	120	120	5-10	2000	2500
	2W370	3700	2395	4320	4745	120	120	5-10	2000	2500
	2W400	4000	2585	4620	5045	120	120	5-10	2000	2500
	2W450	4500	2835	5120	5545	120	120	5-5	1800	2150
	2W500	5000	3085	5620	6045	120	120	5-5	1500	1800
TWO STAGE FULL FREE	2F270	2700	1835	3320	3745	1190	790	5-10	2000	2500
	2F300	3000	1985	3620	4045	1340	940	5-10	2000	2500
	2F330	3300	2135	3920	4345	1490	1090	5-10	2000	2500
	2F350	3500	2270	4120	4545	1625	1225	5-10	2000	2500
	2F370	3700	2395	4320	4745	1750	1350	5-10	2000	2500
	2F400	4000	2585	4620	5045	1940	1540	5-10	2000	2500
THREE STAGE FULL FREE	3F385	3850	1835	4505	4895	1190	790	5-5	2000	2500
	3F430	4300	1985	4955	5345	1340	940	5-5	1900	2400
	3F475	4750	2135	5405	5795	1490	1090	5-5	1750	2150
	3F515	5150	2270	5810	6200	1625	1225	5-5	1500	1600
	3F550	5500	2395	6155	6545	1750	1350	5-5	1100	1250
	3F600	6000	2585	6655	7045	1940	1540	5-5	700	900

<sup>1)</sup> 1 inch = 24.4 mm 1kg = 0.4536 lb



Especially developed to provide our customers with the most reliable and efficient technology in daily operation, TCM's counterbalanced trucks have been designed to meet the most challenging requirements even in the most demanding environments.



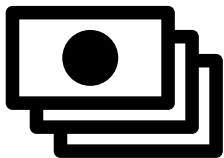
## RELIABLE

Proven technology paired with practical features: TCM stands for a unique mixture of customer-oriented solutions you can count on.



## DURABLE

Harsh conditions can be a challenge. For TCM trucks, it's their natural habitat. 24 hours a day, 7 days a week.



## ECONOMICAL

Balancing economy and environmentally friendly performance in TCM trucks has always been a top priority, facilitating a profitable and energy-efficient deployment of our high-end material handling solutions.

**TCM - A BRAND OF UNICARRIERS CORPORATION**  
**T-FBJ1.5-2.5.S.EN/TCM-2015-10**

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