



MP16-22

SPEC SHEET

1,600 - 2,200 kg

MP Series

Powered Pallet Truck

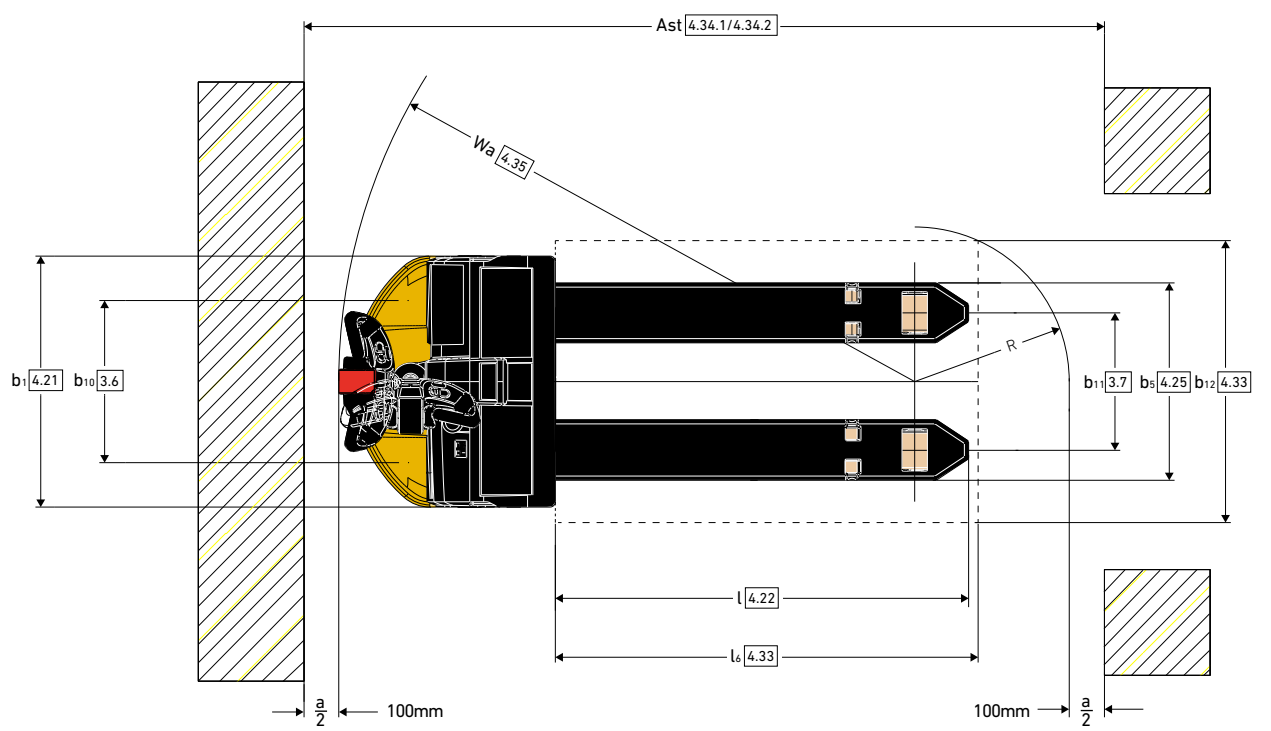
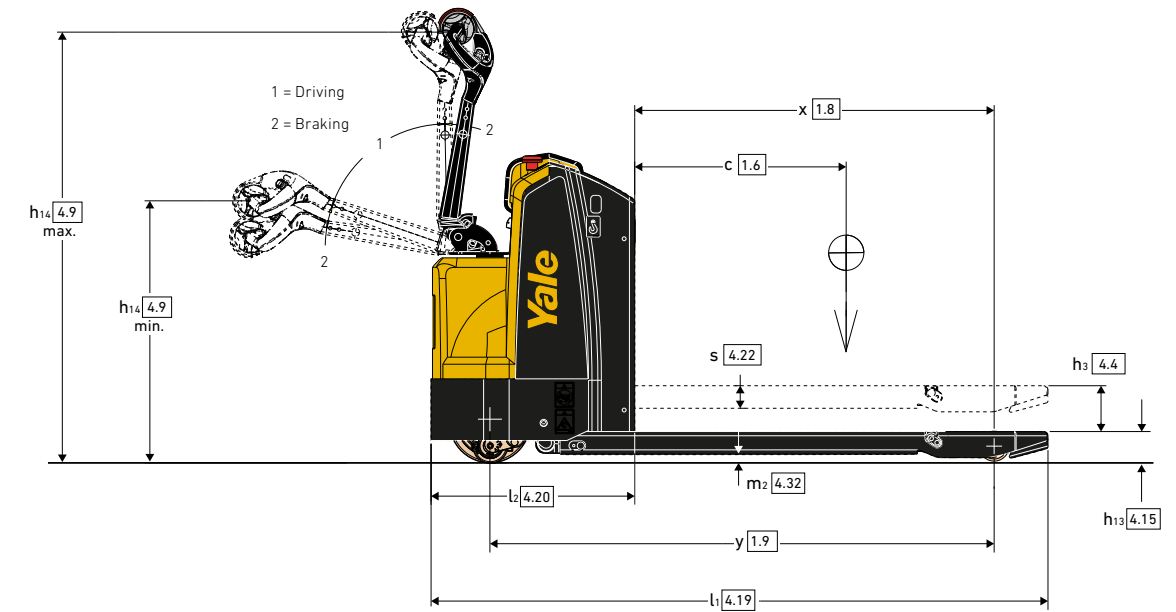


TRUCK DIMENSIONS – MP SERIES

$$Ast = Wa + R + a$$

$$Ast = Wa + \sqrt{(l_6 - x)^2 + (b_{12} / 2)^2} + a$$

$$a = 200$$



VDI 2198 – GENERAL SPECIFICATIONS – MP SERIES

GENERAL	1-1	Manufacturer		Yale			
	1-2	Model designation		MP16	MP18	MP20	MP22
	1-3	Drive		Electric (battery)			
	1-4	Operator type		Pedestrian			
	1-5	Rated capacity/Rated load	Q (t)	1.6	1.8	2.0	2.2
	1-6	Load centre distance ⁽¹⁾	c (mm)	600			
	1-8	Load distance, centre of drive axle to fork ⁽¹⁾	x (mm)	955			
	1-9	Wheelbase ⁽¹⁾	y (mm)	1368		1440	
	WEIGHT	2-1	Service weight ⁽¹⁾⁽²⁾	kg	545		632
2-2		Axle loading, laden front/rear ⁽¹⁾	kg	841 / 1304		983 / 1649	
2-3		Axle loading, unladen front/rear ⁽¹⁾	kg	425 / 120		489 / 143	
TYRES	3-1	Tyres front/rear		Polyurethane			
	3-2	Tyre size, front	ø (mm x mm)	250 x 75			
	3-3	Tyre size, rear	ø (mm x mm)	85 x 110			
	3-4	Additional wheels (dimensions)	ø (mm x mm)	100 x 40			
	3-5	Wheels, number front/rear (x = driven wheels)		1x + 2 / 2			
	3-6	Tread, front	b ₁₀ (mm)	461			
	3-7	Tread, rear	b ₁₁ (mm)	390			
DIMENSIONS	4-4	Lift	h ₃ (mm)	130			
	4-9	Height drawbar in driving position min./max.	h ₁₄ (mm)	744 / 1221			
	4-15	Height, lowered	h ₁₃ (mm)	85			
	4-19	Overall length ⁽¹⁾	l ₁ (mm)	1734		1806	
	4-20	Length to face of forks ⁽¹⁾	l ₂ (mm)	578		650	
	4-21	Overall width	b ₁ / b ₂ (mm)	712			
	4-22	Fork dimensions ⁽¹⁾	s/e/l (mm)	64 / 172 / 1156			
	4-25	Forks spread	b ₅ (mm)	560			
	4-32	Ground clearance, centre of wheelbase	m ₂ (mm)	21			
	4-33	Load dimension b ₁₂ × l ₆	b ₁₂ × l ₆	-			
	4-34-1	Aisle width for pallets 1000mm x 1200mm crossways ⁽¹⁾	Ast (mm)	2337		2409	
4-34-2	Aisle width for pallets 800mm x 1200mm lengthwise ⁽¹⁾	Ast (mm)	2204		2276		
4-35	Turning radius ⁽¹⁾	Wa (mm)	1535		1607		
PERFORMANCE	5-1	Travel speed, laden/unladen	km/h	6 / 6			
	5-1-1	Travel speed, laden/unladen, backwards	km/h	6 / 6			
	5-2	Lift speed, laden/unladen	m/s	0.04 / 0.05			
	5-3	Lowering speed, laden/unladen	m/s	0.09 / 0.04			
	5-7	Gradeability, laden/unladen	%	5.5 / 15	5 / 15	4.5 / 15	4 / 15
	5-8	Max. gradeability, laden/unladen ⁽³⁾	%	10 / 20 (12 / 24)	9 / 20 (10.8 / 24)	8 / 20 (9.6 / 24)	7.5 / 20 (9 / 24)
	5-10	Service brake		Electro Magnetic			
ELECTRIC	6-1	Drive motor S2 60 minute rating	kW	1.25			
	6-2	Lift motor, S3 15% rating	kW	1.2			
	6-3	Battery according to DIN 43531/35/36 A,B,C, no		B			
	6-4	Battery voltage/nominal capacity K5 ⁽¹⁾	(V)/(Ah)	24 / 250 ⁽⁴⁾	24 / 250 ⁽⁴⁾	24 / 375 ⁽⁵⁾	24 / 375 ⁽⁶⁾
	6-5	Battery weight ⁽¹⁾⁽²⁾	kg	212		288	
	6-6	Energy consumption according to DIN EN 16796	kWh/h	0.32		0.36	0.41
	6-7	Turnover output according to VDI 2198	l/h	89		110	120
	6-8	Turnover efficiency according to VDI 2198	t/kWh	112		117	119
	8-1	Type of drive unit		AC-Controller			
	10-7	Sound pressure level at the driver's seat	dB (A)	< 70			

On MP16 / MP18 available batteries 150Ah, 210Ah.

(1) See "Batteries table"

(2) These values may vary of +/- 5%

(3) Values in bracket are Optional

(4) Available batteries 150Ah, 210Ah and 60Ah, 100Ah, 120Ah Li-Ion

(5) Available batteries 150Ah, 210Ah, 250Ah, 315Ah and 60Ah, 100Ah, 120Ah, 200Ah Li-Ion

(6) Available batteries 210Ah, 250Ah, 315Ah and 100Ah, 200Ah Li-Ion

BATTERY DIMENSIONS – MP SERIES

bs = 520MM - 560MM - 670MM													
Battery 375 / 315 AH													
GENERAL	1-6	Load centre distance	c (mm)	400	500	600	700	800	400	500	600	700	800
	1-8	Load distance, centre of drive axle to fork	x (mm)	599	805	955	1199	1399	599	805	955	1199	1399
	1-9	Wheelbase	y (mm)	1084	1290	1440	1684	1884	1084	1290	1440	1684	1884
WEIGHT	2-1	Service weight ⁽¹⁾	kg	612	623	632	646	657	456	467	476	490	501
	2-2	Axle loading, laden ⁽²⁾	kg (front)	809	944	983	1106	1166	753	756	759	763	767
			kg (rear)	1803	1679	1649	1540	1491	1703	1711	1717	1727	1734
	2-3	Axle loading, unladen	kg (front)	441	471	489	513	529	140	143	146	150	154
kg (rear)			171	152	143	133	128	316	324	330	340	347	
DIMENSIONS	4-19	Overall length (pedestrian)	l ₁ (mm)	1450	1656	1806	2050	2250	1450	1656	1806	2050	2250
	4-20	Length to face of forks (pedestrian)	l ₂ (mm)	650	650	650	650	650	650	650	650	650	650
	4-22	Fork length	l (mm)	800	1006	1156	1400	1600	800	1006	1156	1400	1600
	4-34-1	Aisle width for pallets 1000mm x 1200mm wide (pedestrian)	Ast (mm)	2173	2288	2409	2683	2972	2173	2288	2409	2683	2972
	4-34-2	Aisle width for pallets 800mm x 1200mm long (pedestrian)	Ast (mm)	2173	2219	2276	2451	2698	2173	2219	2276	2451	2698
	4-35	Turning radius (pedestrian)	Wa (mm)	1251	1457	1607	1851	2051	1251	1457	1607	1851	2051
ELECTRIC	6-3	Battery according to DIN 43531/35/36 A,B,C, no		B					No				
	6-4	Battery voltage / capacity at 5 hours rate	(V) / (Ah)	24 / 375 - 315					24 / 200 ⁽³⁾				
	6-5	Battery weight ⁽¹⁾	kg	288					132				

(1) These values may vary of +/- 5%

(2) Axle loading with LOAD = 2000Kg

(3) Li-Ion battery

BATTERY DIMENSIONS – MP SERIES

bs = 520MM - 560MM - 670MM													
Battery 250 / 210 AH													
GENERAL	1-6	Load centre distance	c (mm)	400	500	600	700	800	400	500	600	700	800
	1-8	Load distance, centre of drive axle to fork	x (mm)	599	805	955	1199	1399	599	805	955	1199	1399
	1-9	Wheelbase	y (mm)	1012	1218	1368	1612	1812	1012	1218	1368	1612	1812
WEIGHT	2-1	Service weight ⁽¹⁾	kg	525	536	545	559	570	499 ⁽³⁾	510 ⁽³⁾	519 ⁽³⁾	533 ⁽³⁾	544 ⁽³⁾
	2-2	Axle loading, laden ⁽²⁾	kg (front)	776	910	945	1066	1123	768	771	774	909	945
			kg (rear)	1749	1626	1600	1493	1447	1731	1739	1745	1624	1599
	2-3	Axle loading, unladen	kg (front)	382	409	425	447	461	363	371	378	407	424
kg (rear)			143	127	120	112	109	136	139	141	126	120	
DIMENSIONS	4-19	Overall length (pedestrian)	l ₁ (mm)	1378	1584	1734	1978	2178	1378	1584	1734	1978	2178
	4-20	Length to face of forks (pedestrian)	l ₂ (mm)	578	578	578	578	578	578	578	578	578	578
	4-22	Fork length	l (mm)	800	1006	1156	1400	1600	800	1006	1156	1400	1600
	4-34-1	Aisle width for pallets 1000mm x 1200mm wide (pedestrian)	Ast (mm)	2101	2216	2337	2611	2900	2101	2216	2337	2611	2900
	4-34-2	Aisle width for pallets 800mm x 1200mm long (pedestrian)	Ast (mm)	2101	2147	2204	2379	2626	2101	2147	2204	2379	2626
	4-35	Turning radius (pedestrian)	Wa (mm)	1179	1385	1535	1779	1979	1179	1385	1535	1779	1979
ELECTRIC	6-3	Battery according to DIN 43531/35/36 A,B,C, no		B					No				
	6-4	Battery voltage / capacity at 5 hours rate	(V) / (Ah)	24 / 250 - 210					24 / 250 ⁽⁴⁾				
	6-5	Battery weight ⁽¹⁾	kg	212					180				

(1) These values may vary of +/- 5%

(2) Axle loading with LOAD = 2000Kg

(3) Includes ballast 6kg

(4) Polypropylene case version

All values are nominal values and they are subject to tolerances.

BATTERY DIMENSIONS – MP SERIES

bs = 520MM - 560MM - 670MM													
Battery 150 AH													
GENERAL	1-6	Load centre distance	c (mm)	400	500	600	700	800	400	500	600	700	800
	1-8	Load distance, centre of drive axle to fork	x (mm)	599	805	955	1199	1399	599	805	955	1199	1399
	1-9	Wheelbase	y (mm)	950	1156	1306	1550	1750	950	1156	1306	1550	1750
WEIGHT	2-1	Service weight ⁽¹⁾	kg	449	460	469	483	494	430	441	450	464	475
	2-2	Axle loading, laden ⁽²⁾	kg (front)	748	881	912	1032	1086	729	862	893	1013	1067
			kg (rear)	1701	1579	1557	1451	1408	1701	1579	1557	1451	1408
	2-3	Axle loading, unladen	kg (front)	328	352	367	387	400	314	337	352	371	384
			kg (rear)	121	108	102	96	94	116	104	98	93	91
DIMENSIONS	4-19	Overall length (pedestrian)	l ₁ (mm)	1316	1522	1672	1916	2116	1316	1522	1672	1916	2116
	4-20	Length to face of forks (pedestrian)	l ₂ (mm)	516	516	516	516	516	516	516	516	516	516
	4-22	Fork length	l (mm)	800	1006	1156	1400	1600	800	1006	1156	1400	1600
	4-34-1	Aisle width for pallets 1000mm x 1200mm wide (pedestrian)	Ast (mm)	2039	2154	2275	2549	2838	2039	2154	2275	2549	2838
	4-34-2	Aisle width for pallets 800mm x 1200mm long (pedestrian)	Ast (mm)	2039	2085	2142	2317	2564	2039	2085	2142	2317	2564
	4-35	Turning radius (pedestrian)	Wa (mm)	1117	1323	1473	1717	1917	1117	1323	1473	1717	1917
ELECTRIC	6-3	Battery according to DIN 43531/35/36 A,B,C, no		No				No					
	6-4	Battery voltage / capacity at 5 hours rate	(V) / (Ah)	24 / 150				24 / 150 ⁽³⁾					
	6-5	Battery weight ⁽¹⁾	kg	144				125					

(1) These values may vary of +/- 5%
(2) Axle loading with LOAD = 2000Kg
(3) Polypropylene case version

BATTERY DIMENSIONS – MP SERIES

bs = 520MM - 560MM - 670MM													
Battery 150 AH													
GENERAL	1-6	Load centre distance	c (mm)	400	500	600	700	800	400	500	600	700	800
	1-8	Load distance, centre of drive axle to fork	x (mm)	599	805	955	1199	1399	599	805	955	1199	1399
	1-9	Wheelbase	y (mm)	950	1156	1306	1550	1750	950	1156	1306	1550	1750
WEIGHT	2-1	Service weight ⁽¹⁾	kg	367	378	387	401	412	350	361	370	384	395
	2-2	Axle loading, laden ⁽²⁾	kg (front)	723	726	729	734	737	718	721	724	728	732
			kg (rear)	1644	1652	1658	1667	1675	1632	1640	1646	1656	1663
	2-3	Axle loading, unladen	kg (front)	112	115	118	123	126	107	110	113	117	121
			kg (rear)	255	263	269	278	286	243	251	257	267	274
DIMENSIONS	4-19	Overall length (pedestrian)	l ₁ (mm)	1316	1522	1672	1916	2116	1316	1522	1672	1916	2116
	4-20	Length to face of forks (pedestrian)	l ₂ (mm)	516	516	516	516	516	516	516	516	516	516
	4-22	Fork length	l (mm)	800	1006	1156	1400	1600	800	1006	1156	1400	1600
	4-34-1	Aisle width for pallets 1000mm x 1200mm wide (pedestrian)	Ast (mm)	2039	2154	2275	2549	2838	2039	2154	2275	2549	2838
	4-34-2	Aisle width for pallets 800mm x 1200mm long (pedestrian)	Ast (mm)	2039	2085	2142	2317	2564	2039	2085	2142	2317	2564
	4-35	Turning radius (pedestrian)	Wa (mm)	1117	1323	1473	1717	1917	1117	1323	1473	1717	1917
ELECTRIC	6-3	Battery according to DIN 43531/35/36 A,B,C, no		No				No					
	6-4	Battery voltage / capacity at 5 hours rate	(V) / (Ah)	24 / 50 ⁽³⁾				24 / 60 ⁽³⁾					
	6-5	Battery weight ⁽¹⁾	kg	62				45					

(1) These values may vary of +/- 5%
(2) Axle loading with LOAD = 2000Kg
(3) Li-Ion battery

BATTERY DIMENSIONS – MP SERIES

bs = 520MM - 560MM - 670MM									
Battery 150 AH									
GENERAL	1-6	Load centre distance	c (mm)	400	500	600	700	800	
	1-8	Load distance, centre of drive axle to fork	x (mm)	599	805	955	1199	1399	
	1-9	Wheelbase	y (mm)	950	1156	1306	1550	1750	
WEIGHT	2-1	Service weight ⁽¹⁾	kg	380	391	400	414	425	
	2-2	Axle loading, laden ⁽²⁾	kg (front)	727.1	730.5	733.2	737.5	740.8	
			kg (rear)	1653	1661	1667	1677	1684	
	2-3	Axle loading, unladen	kg (front)	116.1	119.5	122.2	126.5	129.8	
			kg (rear)	263.9	271.5	277.8	287.5	295.2	
DIMENSIONS	4-19	Overall length (pedestrian)	l ₁ (mm)	1316	1522	1672	1916	2116	
	4-20	Length to face of forks (pedestrian)	l ₂ (mm)	516	516	516	516	516	
	4-22	Fork length	l (mm)	800	1006	1156	1400	1600	
	4-34-1	Aisle width for pallets 1000mm x 1200mm wide (pedestrian)	Ast (mm)	2039	2154	2275	2549	2838	
	4-34-2	Aisle width for pallets 800mm x 1200mm long (pedestrian)	Ast (mm)	2039	2085	2142	2317	2564	
	4-35	Turning radius (pedestrian)	Wa (mm)	1117	1323	1473	1717	1917	
ELECTRIC	6-3	Battery according to DIN 43531/35/36 A,B,C, no		No					
	6-4	Battery voltage / capacity at 5 hours rate	(V) / (Ah)	24 / 120 ⁽³⁾					
	6-5	Battery weight ⁽¹⁾	kg	75					

(1) These values may vary of +/- 5%
(2) Axle loading with LOAD = 2000Kg
(3) Li-Ion battery

All values are nominal values and they are subject to tolerances.



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Notice: Care must be exercised when handling elevated loads. Operators must be trained and must read, understand and follow the instructions contained in the Operating Manual. Consult your Yale® Dealer if any of the information shown is critical to your application.

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