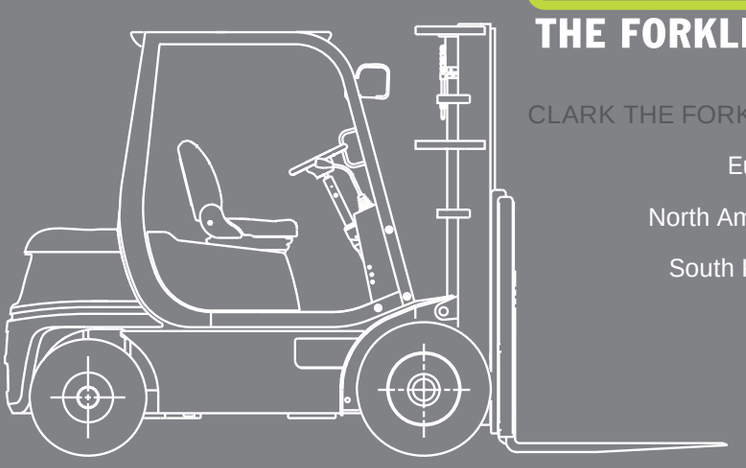
IC-PNEUMATIC

Diesel or LPG engine
Pneumatic Tires

CQ20	2000 kg
CQ25	2500 kg
CQ30	3000 kg

CQ 20/25/30



CLARK THE FORKLIFT

Europe

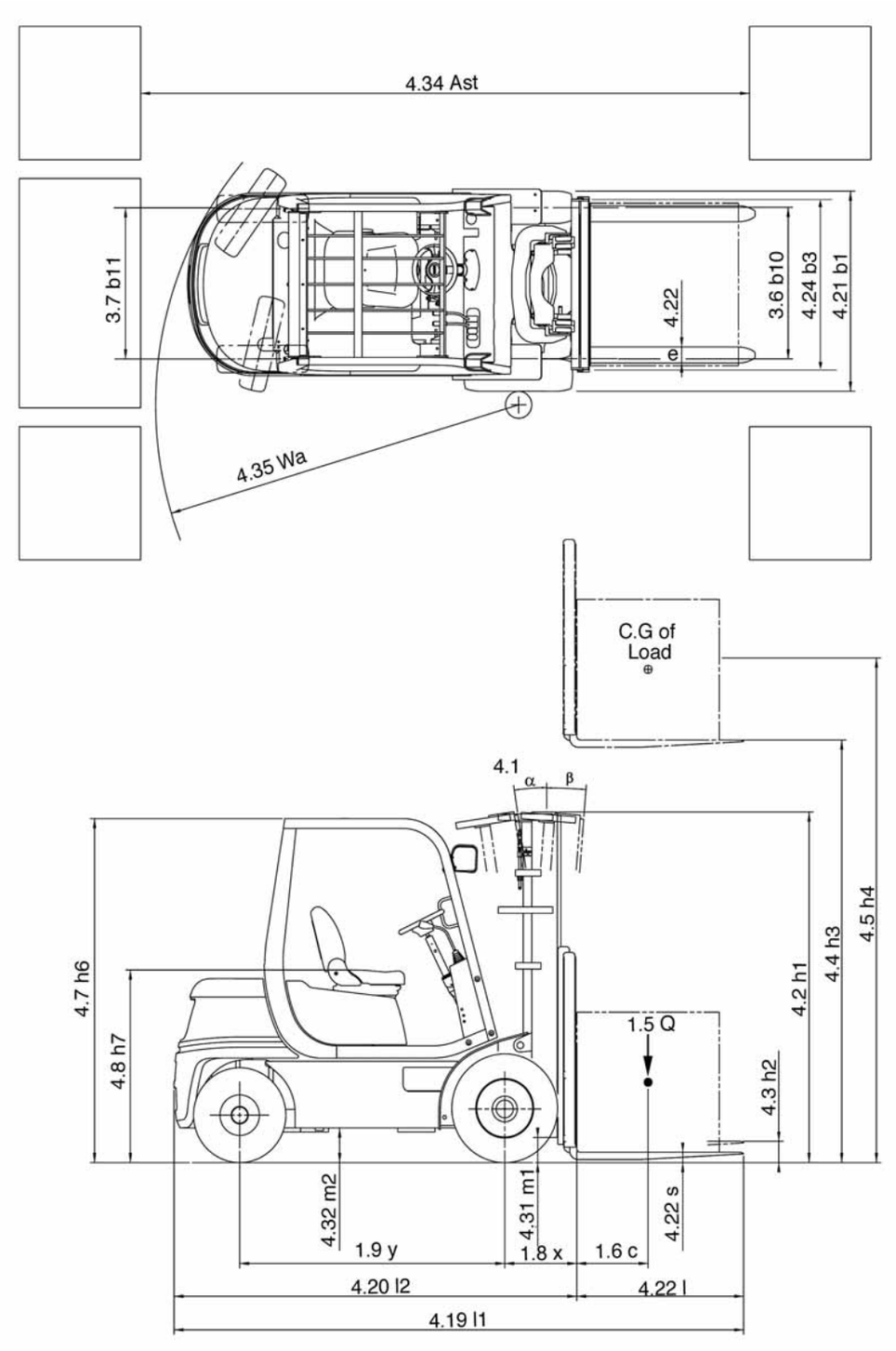
North America

South Korea

www.clarkmheu.com

CQ 20/25/30

DIMENSIONS



$A_{st} = W_a + x + b + a$

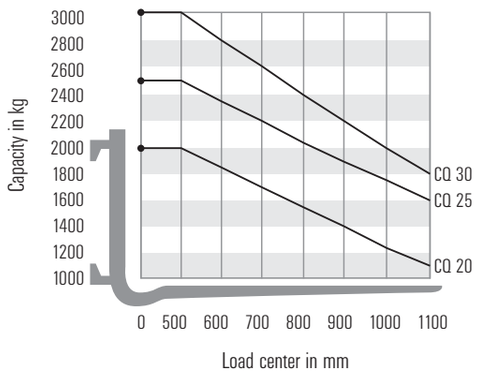
a = 200 mm (safety distance)

For data see corresponding number in chart "Product Specifications".

Performance may vary +5% and -10% due to motor and system efficiency tolerance. The performance shown represents nominal values which may be obtained under typical operating conditions of a machine. CLARK products and specifications are subject to change without notice.

Truck Capacities

Capacity at different load centres



Note:
The listed capacities are valid only for the standard upright in vertical position with standard fork carriage and standard forks, up to max. lifting height of 3300 mm CQ 20-30s. The centre of gravity of the load may be displaced by max. 100 mm against the longitudinal centre line of the truck. Load centre is determined from top and front face of forks. The values are based on a 1000 mm cube load configuration with the centre of gravity at the true centre of the cube. With upright tilted forward lower capacity values are valid. Attachments, longer forks, exceptional load dimensions and higher lifting heights may reduce the capacity. Please contact your CLARK dealer if you require further information.

Upright table

Capacity at different load centres

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2h5*
Standard CQ 20, 25 (2 Stage Mast, standard free lift)			
V	2120	1575	110
V	2680	1855	110
V	2980	2005	110
V	3300	2165	110
V	3725	2455	110
V	3860	2530	110
V	4165	2800	110
V	4380	3000	110
V	4620	3230	110
V	5170	3495	110

* without LBR

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2h5*
Triple CQ 20, 25 (3 Stage Mast, full free lift)			
M	3860	1855	1189
M	4320	2005	1339
M	4800	2165	1499
M	5210	2305	1639
M	5520	2455	1789
M	5740	2530	1864
M	6100	2690	2024
M	6370	2800	2134
M	6830	3000	2334
M	7315	3230	2564

* without LBR

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2h5*
Hi-Lo CQ 20, 25 (2 Stage Mast, full free lift)			
H	2935	2005	1382
H	3255	2165	1542
H	3530	2305	1682
H	3760	2455	1832
H	3910	2530	1907

* without LBR

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2h5*
Standard CQ 30 (2 Stage Mast, standard free lift)			
V	2120	1590	110
V	2680	1870	110
V	2980	2020	110
V	3300	2180	110
V	3725	2470	110
V	3860	2545	110
V	4165	2815	110
V	4380	3015	110
V	4620	3245	110
V	5170	3510	110

* without LBR

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2h5*
Triple CQ 30 (3 Stage Mast, full free lift)			
M	3860	1870	1182
M	4320	2020	1332
M	4800	2180	1492
M	5210	2320	1632
M	5520	2470	1782
M	5740	2545	1857
M	6100	2705	2017
M	6370	2815	2127
M	6830	3015	2327
M	7315	3245	2557

* without LBR

Upright table metrics in mm

CLARK Ref.	max. fork height h3	overall height lowered h1	free lift h2h5*
Hi-Lo CQ 30 (2 Stage Mast, full free lift)			
H	2935	2020	1332
H	3255	2180	1492
H	3530	2320	1632
H	3760	2470	1782
H	3910	2545	1857

* without LBR

CLARK
THE FORKLIFT

Diesel engine

according to VDI 2198

	1.1 Manufacture (Abbreviation)		CLARK	CLARK	CLARK
Characteristics	1.2 Manufacture's designation		**CQ 20 D**	**CQ 25 D**	**CQ 30 D**
	1.3 Drive Unit Diesel, L.P. Gas		Diesel	Diesel	Diesel
	1.4 Operator type stand on/driver seated		driver seated	driver seated	driver seated
	1.5 Load Capacity/rated load	Q (t)	2	2,5	3,0
	1.6 Load Center distance	c (mm)	500	500	500
	1.8 Load Center distance, centre of drive axle to fork face	x (mm)	452	452	462
	1.9 Wheelbase	y (mm)	1620	1620	1700
Weight	2.1 Service weight	kg	3504	3799	4174
	2.2 Axle loading, laden front/rear	kg	4824/690	5603/696	6417/757
	2.3 Axle loading, unladen front/rear	kg	1652/1852	1639/2160	1714/2460
Tires, Chassis	3.1 Tire type, P = pneumatic, SE = superelastic, C = cushion 1)		P	P	P
	3.2 Tire size, front		7.00x12-14PR	7.00x12-14PR	8.15x15-14PR
	3.3 Tire size, rear		6.50x10-10PR	6.50x10-10PR	6.50x10-10PR
	3.5 Wheels, number front/rear (x = drive wheels)		2x/2	2x/2	2x/2
	3.6 Tread, front	b_{10} (mm)	1005	1005	1030
	3.7 Tread, rear	b_{11} (mm)	940	940	940
Dimensions	4.1 Tilt of upright/fork carriage, α/β	deg	10/8	10/8	10/8
	4.2 Height, upright lowered	h_1 (mm)	2165	2165	2180
	4.3 Freelift	h_2 (mm)	110	110	110
	4.4 Lift height 2)	h_3 (mm)	3300	3300	3300
	4.5 Height upright extended	h_4 (mm)	3896	3896	3896
	4.7 Height overheadguard (cab): Std/Container	h_6 (mm)	2130	2130	2130
	4.8 Seat hight	h_7 (mm)	1090	1090	1090
	4.19 Overall length	l_1 (mm)	3630	3630	3730
	4.20 Length to face of forks	l_2 (mm)	2560	2560	2660
	4.21 Width	b_1/b_2 (mm)	1210	1210	1250
	4.22 Fork dimensions	s/e/l (mm)	45x100x1070	45x100x1070	45x122x1070
	4.23 Fork carriage ISO		IIA	IIA	IIIA
	4.24 Fork carriage width	b_3 (mm)	1041	1041	1041
	4.31 Ground clearance minimum, unladen	m_1 (mm)	135	135	150
	4.32 Ground clearance center of wheelbase	m_2 (mm)	175	175	175
	4.34 Stacking aisle for pallets 800x1200 (l_6-b_{12})		4000	4000	4120
	4.35 Turning radius	W_a (mm)	2331	2331	2359
Performance	5.1 Travel speed laden/unladen	km/h	19.5/19.8	19.4/19.8	20.0/20.5
	5.2 Lift speed laden/unladen	m/s	0.55/0.58	0.54/0.58	0.53/0.58
	5.3 Lowering speed laden/unladen	m/s	0.46/0.43	0.46/0.43	0.46/0.43
	5.5 Drawbar pull laden/unladen 3)	kg	1953	1964	1861
	5.6 Max. drawbar pull laden/unladen 4)	kg	2089/991	2102/983	1993/1028
	5.7 Gradeability laden/unladen 3)	%	37,9	32,8	25,3
	5.8 Max. gradeability laden/unladen 4)	%	40.9/24.2	35.4/22.1	28.9/21.0
	5.9 Acceleration time laden/unladen (0 - 15 m)	sec	4.5/4.1	4.8/4.3	5.0/4.3
	5.10 Service brake		hydraulic	hydraulic	hydraulic
Drive Line	7.1 Manufacturer/Type		Yanmar/4TNE98	Yanmar/4TNE98	Yanmar/4TNE98
	7.2 Rated output acc. DIN 70 020	kW	43,6	43,6	43,6
	7.3 Rated speed acc. DIN 70 020	min^{-1}	2300	2300	2300
	7.4 No. of cylinders/displacement	$/cm^3$	4/3319	4/3319	4/3319
Miscellaneous	8.1 Type of control		hydrodyn.	hydrodyn.	hydrodyn.
	8.2 Operating pressure for attachments	bar	140	140	140
	8.4 Sound level, driver's ear 5)	dB (A)	83	83	83

1) Optional with super-elastic tires 2) Further lift heights see upright table 3) Laden with 1,6 km/h 4) Without load at friction coefficient $\mu = 0,6$
5) Equivalent permanent sound-pressure level L pAeq,T in accordance with DIN EN 12053

SPECIFICATIONS

SPECIFICATIONS

All values shown are for standard lift truck with standard equipment. If the truck is supplied with options, values may change. All values given may vary +5% and -10% due the motor and system tolerances and represent nominal values obtained under typical operating conditions. Specifications for Non-emission limited truck.

LPG engine

according to VDI 2198

	1.1 Manufacture (Abbreviation)		CLARK	CLARK	CLARK
Characteristics	1.2 Manufacture's designation		**CQ 20 L**	**CQ 25 L**	**CQ 30 L**
	1.3 Drive Unit Diesel, L.P. Gas		LPG	LPG	LPG
	1.4 Operator type stand on/driver seated		driver seated	driver seated	driver seated
	1.5 Load Capacity/rated load	Q (t)	2	2,5	3,0
	1.6 Load Center distance	c (mm)	500	500	500
	1.8 Load Center distance, centre of drive axle to fork face	x (mm)	452	452	462
	1.9 Wheelbase	y (mm)	1620	1620	1700
Weight	2.1 Service weight	kg	3504	3734	4134
	2.2 Axle loading, laden front/rear	kg	4824/690	5569/665	6348/786
	2.3 Axle loading, unladen front/rear	kg	1652/1852	1604/2130	1644/2490
Tires, Chassis	3.1 Tire type, P = pneumatic, SE = superelastic, C = cushion 1)		P	P	P
	3.2 Tire size, front		7.00x12-14PR	7.00x12-14PR	8.15x15-14PR
	3.3 Tire size, rear		6.50x10-10PR	6.50x10-10PR	6.50x10-10PR
	3.5 Wheels, number front/rear (x = drive wheels)		2x/2	2x/2	2x/2
	3.6 Tread, front	b_{10} (mm)	1005	1005	1030
	3.7 Tread, rear	b_{11} (mm)	940	940	940
Dimensions	4.1 Tilt of upright/fork carriage, α/β	deg	10/8	10/8	10/8
	4.2 Height, upright lowered	h_1 (mm)	2165	2165	2180
	4.3 Freelift	h_2 (mm)	110	110	110
	4.4 Lift height 2)	h_3 (mm)	3300	3300	3300
	4.5 Height upright extended	h_4 (mm)	3896	3896	3896
	4.7 Height overheadguard (cab): Std/Container	h_6 (mm)	2130	2130	2130
	4.8 Seat hight	h_7 (mm)	1090	1090	1090
	4.19 Overall length	l_1 (mm)	3630	3630	3730
	4.20 Length to face of forks	l_2 (mm)	2560	2560	2660
	4.21 Width	b_1/b_2 (mm)	1210	1210	1250
	4.22 Fork dimensions	s/e/l (mm)	45x100x1070	45x100x1070	45x122x1070
	4.23 Fork carriage ISO		IIA	IIA	IIIA
	4.24 Fork carriage width	b_3 (mm)	1041	1041	1041
	4.31 Ground clearance minimum, unladen	m_1 (mm)	135	135	150
	4.32 Ground clearance center of wheelbase	m_2 (mm)	175	175	175
	4.34 Stacking aisle for pallets 800x1200 ($l_6 \cdot b_{12}$)		4000	4000	4120
	4.35 Turning radius	W_a (mm)	2331	2331	2359
Performance	5.1 Travel speed laden/unladen	km/h	20.2/20.6	20.1/20.6	20.8/21.3
	5.2 Lift speed laden/unladen	m/s	0.51/0.54	0.50/0.54	0.49/0.54
	5.3 Lowering speed laden/unladen	m/s	0.46/0.43	0.46/0.43	0.46/0.43
	5.5 Drawbar pull laden/unladen 3)	kg	1614	1618	1537
	5.6 Max. drawbar pull laden/unladen 4)	kg	1764/991	1773/962	1676/986
	5.7 Gradeability laden/unladen 3)	%	30,6	26,9	22,1
	5.8 Max. gradeability laden/unladen 4)	%	33.8/25.9	29.7/22.0	24.2/20.5
	5.9 Acceleration time laden/unladen (0 - 15 m)	sec	4.9/4.3	5.1/4.4	5.5/4.6
	5.10 Service brake		hydraulic	hydraulic	hydraulic
Drive Line	7.1 Manufacturer/Type		Mitsubishi 4G64	Mitsubishi 4G64	Mitsubishi 4G64
	7.2 Rated output acc. DIN 70 020	kW	41	41	41
	7.3 Rated speed acc. DIN 70 020	min^{-1}	2500	2500	2500
	7.4 No. of cylinders/displacement	$/cm^3$	4/2350	4/2350	4/2350
Miscellaneous	8.1 Type of control		hydrodyn.	hydrodyn.	hydrodyn.
	8.2 Operating pressure for attachments	bar	140	140	140
	8.4 Sound level, driver's ear 5)	dB (A)	83	83	83

1) Optional with super-elastic tires 2) Further lift heights see upright table 3) Laden with 1,6 km/h 4) Without load at friction coefficient $\mu = 0,6$
5) Equivalent permanent sound-pressure level L pAeq,T in accordance with DIN EN 12053

PRODUCT DESCRIPTION

Driver's seat
- Comfortable, easily adjusable seat with waist belt, optionally with full suspension which is adapted to the driver's weight
- Low noise, reduced vibration and improved driver comfort by thick, shaped floor mat
- Adjustable steering column adapts to the driver and allows easy entry and exit
- Ergonomically designed workplace for 92,5% of all drivers

Motoren
- **3,1 L Diesel engine 4TNE98,** Yanmar 4TNE98, 4-cylinder industrial engine with indirect injection reduces soot and noise emission and meets Tier3, with extraordinary economical fuel consumption. The engine operates reliably with optimum use of fuel under the most extreme conditions. The electrical installations are operated with 12 Volts and a 50 A dynamo with integrated regulator. The low-maintenance battery supplies 100 Ah at 12 V. The engine air filter is easy to maintain.

- **2,4 L Otto engine Mitsubishi 4G64**, Mitsubishi 4G64, 4-cylinder industrial engine with internal mass compensation system and overhead cam. A hoof speed governor, Hydraulic valve tappet and electronic ignition optimise the emissions. Cylinders in transverse flow design contribute to a high power yield and excellent consumption values. The electrical installations are operated with 12 Volts and a 50 A dynamo with integrated regulator. The low-maintenance battery supplies 60 Ah at 12 V.

Brake system
- Hydraulically operated brakes act self-adjusting on brake drums and brake shoes
- Brakes can be operated both with the left and right pedal
- Parking brake is activated by the adjustable hand brake lever

Steering system
- The robust designed steering axle is equipped with an integrated double action steering cylinder which ensures even steering transmission
- The completely hydrostatic system reduces the number of mechanical connection parts and prevents recoil of the steering wheel
- The axle is mounted on "silent block" rubber buffers which absorb shock, increase driving comfort and are maintenance-free.

Drive axle and gearbox
- Due to the compact drive unit there are no unprotected gaskets or rive shafts which could be worn or soiled
- Hydraulic modulations and damping systems which ensure smooth enagement and protect the inner parts
- Drive axle and gearbox lubricating oil can be cooled by simple sump

Hydraulic system
- Load measuring flow valve to educe energy loss and heat development
- Optimum performance of add-on devices by adjustable flow regulator
- Modular design allows easy installation of other functions and simplifies service
- Lowering valve attached to the lifting frame ensures controlled lowering independent of the engine power

Lifting Frame
- CLARK standard-, Hi-Lo and Triplex-free view lifting frames
- Double-T girder lifting frame rails are 55% more stable than conventional rails and provide greater stability for increased loading
- Interleaved profile leaves room for cylinders, hoses and chains and excellent all-round vision
- Even distribution of the loading weight by six fork carrier rollers

Additional equipment
- Side slide
- Tine adjuster
- Mirror
- Additional valves
- Lighting variants
- Heated driver cab
- Reversing signal
- Hydraulic control options
- Hose guides
- Full suspension seat vinyl and fabric
- Choice of tyre types
- Diesel
- Speed limiter

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En. 09/2008