

## R 70 Technical Data.

Diesel and LP Gas Trucks

R 70-16 compact

R 70-18 compact

R 70-20 compact

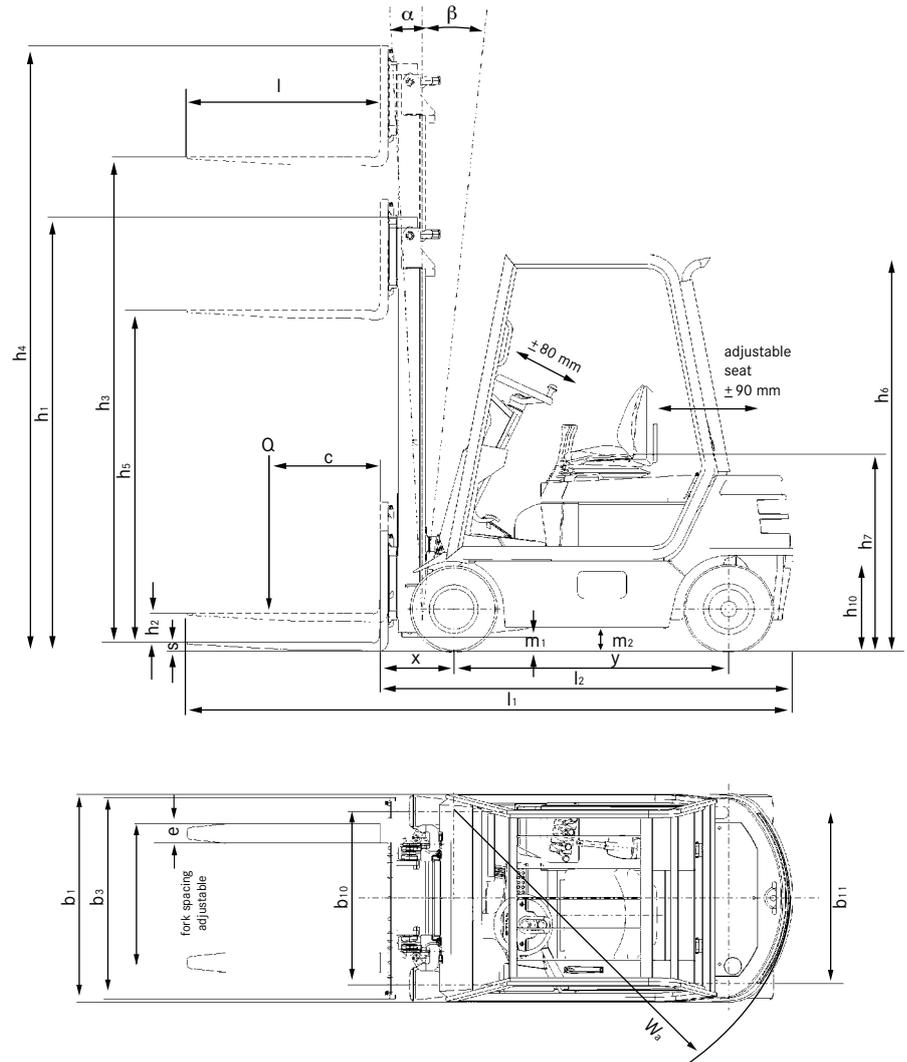


# R 70 Technical Data.

In accordance with VDI guidelines 2198, this specification applies to the standard model only.  
Alternative tyres, mast types, ancillary equipment, etc. could result in different values.

			STILL		STILL		STILL			
			R 70-16	R 70-16 T	R 70-18	R 70-18 T	R 70-20 C	R 70-20 C		
Characteristics	1.1	Manufacturer								
	1.2	Manufacturer's model designation								
	1.3	Power supply – electric, diesel, petrol, gas, mains electric		diesel	LPG	diesel	LPG	diesel	LPG	
	1.4	Type of control – hand, pedestrian, stand-on, rider seated		rider seated		rider seated		rider seated		
	1.5	Carrying capacity / load	Q	kg	1600	1800	2000			
	1.6	Load centre	c	mm	500	500	500			
	1.8	Load distance	x	mm	368	368	379			
	1.9	Wheelbase	y	mm	1450	1450	1495			
	Weight	2.1	Weight		kg	2640	2800	3090		
2.2		Axle loadings laden front		kg	3780	4065	4464			
2.2.1		Axle loadings laden rear		kg	460	505	626			
2.3		Axle loadings unladen front		kg	1220	1220	1292			
2.3.1		Axle loadings unladen rear		kg	1420	1580	1798			
Wheels   Tyres		3.1	Tyres – rubber (V), superelastic (SE), pneumatic (L), polyurethane (PE)			SE/L	SE/L	SE		
	3.2	Tyre size – front			18 x 7-8 (16 PR)	18 x 7-8 (16 PR)	200/50-10			
	3.3	Tyre size – rear			18 x 7-8 (16 PR)	18 x 7-8 (16 PR)	18 x 7-8			
	3.5	Wheels – number front (x = drive wheel)			2x	2x	2x			
	3.5.1	Wheels – number rear (x = drive wheel)			2	2	2			
	3.6	Track width – front	b <sub>10</sub>	mm	927	927	903			
	3.7	Track width – rear	b <sub>11</sub>	mm	895	895	895			
Dimensions	4.1	Tilt angle, mast / fork carriage forwards		degrees	3	3	3			
	4.1.1	Tilt angle, mast / fork carriage backwards		degrees	9	9	9			
	4.2	Closed height	h <sub>1</sub>	mm	2210	2210	2260			
	4.3	Free lift	h <sub>2</sub>	mm	150	150	150			
	4.4	Lift height	h <sub>3</sub>	mm	3330	3330	3350			
	4.5	Height, mast raised	h <sub>4</sub>	mm	3980	3980	4000			
	4.7	Height to top of overhead guard (cabin)	h <sub>6</sub>	mm	2070	2070	2070			
	4.8	Seat height	h <sub>7</sub>	mm	980	980	980			
	4.12	Coupling height	h <sub>10</sub>	mm	465	465	465			
	4.19	Overall length	l <sub>1</sub>	mm	2948	2988	3075			
	4.20	Length to front face of forks	l <sub>2</sub>	mm	2148	2188	2275			
	4.21	Overall width	b <sub>1</sub>	mm	1048	1048	1098			
	4.22	Fork thickness	s	mm	40	40	40			
	4.22.1	Fork width	e	mm	80	80	80			
	4.22.2	Fork length	l	mm	800	800	800			
	4.23	Fork carriage to DIN 15173 – class / form A or B			ISO II B	ISO II B	ISO II B			
	4.24	Fork carriage width	b <sub>3</sub>	mm	1040	1040	1040			
	4.31	Ground clearance beneath mast, laden	m <sub>1</sub>	mm	84	82	94			
	4.32	Ground clearance at centre of wheelbase	m <sub>2</sub>	mm	120	120	120			
	4.33	Aisle width for pallets 1000 x 1200 wide	A <sub>st</sub>	mm	3495	3530	3617			
4.34	Aisle width for pallets 800 x 1200 long	A <sub>st</sub>	mm	3695	3730	3817				
4.35	Outer turning radius	W <sub>a</sub>	mm	1927	1962	2038				
4.36	Inner turning radius	b <sub>13</sub>	mm							
Performance	5.1	Speed laden		km/h	22	22	22			
	5.1.1	Speed unladen		km/h	22	22	22			
	5.2	Lift speed laden		m/s	0.54	0.54	0.51			
	5.2.1	Lift speed unladen		m/s	0.58	0.58	0.57			
	5.3	Lowering speed laden		m/s	0.6	0.6	0.6			
	5.3.1	Lowering speed unladen		m/s	0.45	0.45	0.47			
	5.5	Rated drawbar pull laden		N	12000	12000	12000			
	5.5.1	Rated drawbar pull unladen		N	7180	7180	7180			
	5.7	Gradeability laden		%	27	27	27			
	5.7.1	Gradeability unladen		%	25	25	25			
	5.9	Acceleration time laden		s	4.5	4.6	4.7			
5.9.1	Acceleration time unladen		s	4	4.1	4.2				
5.10	Brakes			electric / hydraulic	electric / hydraulic	electric / hydraulic				
Engine	7.1	Engine manufacturer			Volkswagen	Volkswagen	Volkswagen			
	7.1.1	Type			ADG	ADF	ADG	ADF		
	7.2	Engine rated power to ISO 1585		kW	30	31	30	31	33	34
	7.3	Rated rpm		1/min	2400	2400	2400	2400	2600	
	7.4	No. of cylinders			4	4	4	4	4	
	7.4.1	Displacement		cm <sup>3</sup>	1896	1800	1896	1800	1896	1800
7.5	Fuel consumption		l/h							
Other	8.1	Drive control			Stilltronic	Stilltronic	Stilltronic			
	8.2	Operating pressure for attachments		bar	230	250	230			
	8.3	Oil flow for attachments		l/min						
	8.4	Average noise peak at operator's ears		dB(A)	76	76	76			
	8.5	Trailer coupling, type / DIN			pin	pin	pin			

The models depicted in this brochure may contain special parts or attachments which are not supplied as standard.

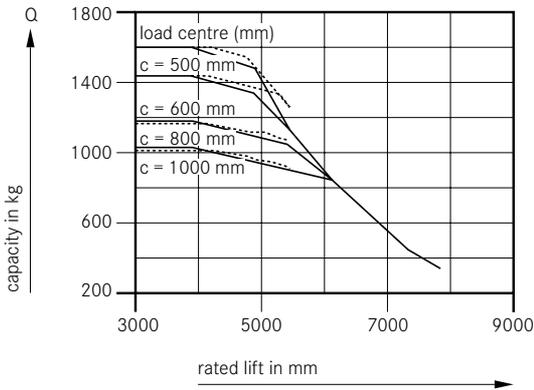


## Mast types.

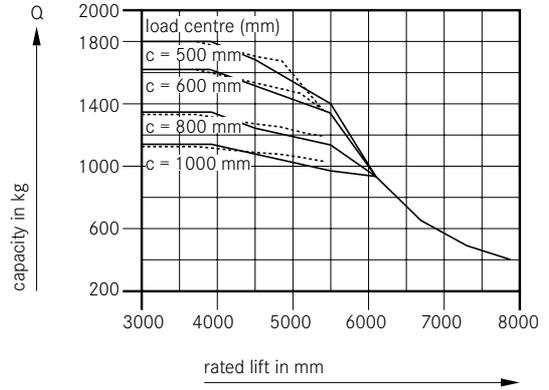
		Telescopic mast				HiLo mast		Triple mast		
R 70-16 (T)	Rated lift	h <sub>3</sub>	2630-2830	2930-3930	4030-4330	4430-5430	2775-2875	2975-4075	4020-8020	
	Closed mast height	h <sub>1</sub>	1860-1960	2010-2510	2560-2710	2760-3260	1860-1910	1960-2510	1860-3260	
	Free lift	h <sub>2</sub> /h <sub>5</sub>	150				1230-1280	1330-1880	1230-2630	
	Raised mast height	h <sub>4</sub>	3280-3480	3580-4580	4680-4980	5080-6080	3425-3525	3625-4725	4670-8670	
	Angle of tilt	v/h	3/6	3/9*	3/6	3/6	3/6	3/9*	3/6	
	Overall width	b <sub>1</sub>	1084			1164	1084		1164	
	Track width, front	b <sub>10</sub>	927			1007	927		1007	
	Overall length	l <sub>2</sub>	2148				2148		2169	
	Load distance	x	368				368		389	
	Working aisle width	A <sub>rit</sub>	3495/3695				3495/3695		3516/3716	
R 70-18 (T)	Rated lift	h <sub>3</sub>	2630-2830	2930-3930	4030-4330	4430-5430	2675-2775	2875-3975	3870-7870	
	Closed mast height	h <sub>1</sub>	1860-1960	2010-2510	2560-2710	2760-3260	1860-1910	1960-2510	1860-3260	
	Free lift	h <sub>2</sub> /h <sub>5</sub>	150				1212-1262	1312-1862	1230-2630	
	Raised mast height	h <sub>4</sub>	3280-3480	3580-4580	4680-4980	5080-6080	3343-3443	3543-4643	4670-8670	
	Angle of tilt	v/h	3/6	3/9*	3/6	3/6	3/6	3/9*	3/6	
	Overall width	b <sub>1</sub>	1084			1164	1084		1164	
	Track width, front	b <sub>10</sub>	927			1007	927		1007	
	Overall length	l <sub>2</sub>	2188				2188		2209	
	Load distance	x	368				368		389	
	Working aisle width	A <sub>rit</sub>	3530/3730				3530/3730		3551/3751	
R 70-20 compact	Rated lift	h <sub>3</sub>	2550-2750	2850-3850	3950-4150	4250-5350	2670-2770	2870-3870	3970-4370	3865-8065
	Closed mast height	h <sub>1</sub>		2010-2510	2560-2660	2710-3260	1860-1910	1960-2460	2510-2710	1860-3260
	Free lift	h <sub>2</sub> /h <sub>5</sub>	150				1230-1280	1330-1830	1880-2080	1230-2630
	Raised mast height	h <sub>4</sub>	3200-3400	3500-4500	4600-4800	4900-6000	3320-3420	3520-4520	4620-5020	4530-8730
	Angle of tilt	v/h	3/6	3/9*	3/6	3/6	3/6	3/9*	3/6	3/6
	Overall width	b <sub>1</sub>	1098			1178	1098		1178	
	Track width, front	b <sub>10</sub>	903			990	903		990	
	Overall length	l <sub>2</sub>	2275				2275		2298	
	Load distance	x	379				379		401	
	Working aisle width	A <sub>rit</sub>	3617/3817				3617/3817		3639/3839	

\* with front screen max. backwards tilt 6° \* with spotlight on top 1° less backwards tilt

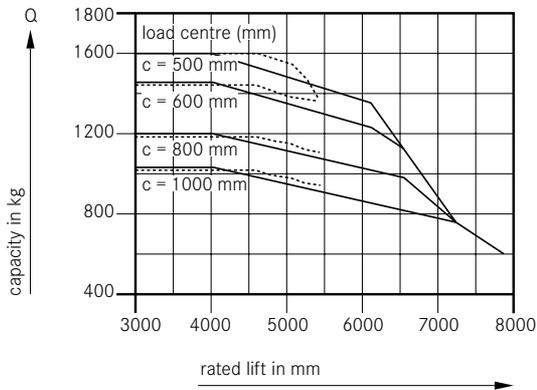
Capacity Chart R 70-16 Tele and Triple mast – pneumatic



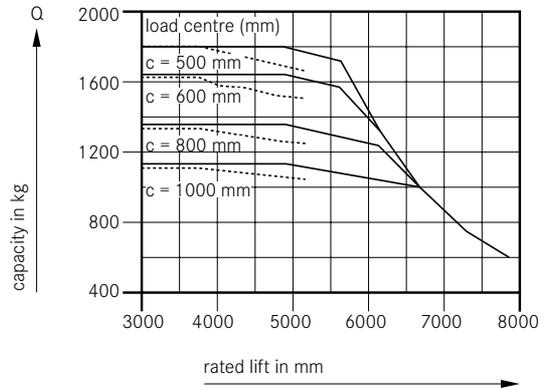
Capacity Chart R 70-18 Tele and Triple mast – pneumatic



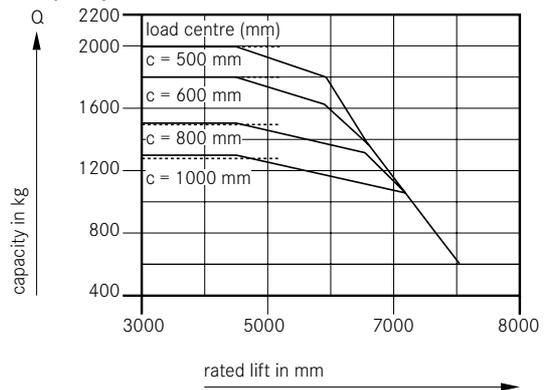
Capacity Chart R 70-16 Tele and Triple mast – SE tyres



Capacity Chart R 70-18 Tele and Triple mast – SE tyres



Capacity Chart R 70-20c Tele and Triple mast – SE tyres



— Triple mast  
 ..... Telescopic mast

## Drive.

The engine powers a generator which in turn provides current to the drive motor via an electronic speed and power regulator. This electric drive has the following advantages:

- The truck holds the speed set by the foot pedal. It makes no difference whether it is travelling up hill or down. This makes for safe driving and simplifies operation.
- Because the travel speed is controlled independently of the lift speed, fast hoisting and slow driving (inching) can take place at the same time without special equipment. This is completely free of wear, saves on operating costs and simplifies operation.
- Wear free braking down to a standstill and holding the truck in position when at rest is achieved through the drive. Even when the floor is far from level, the R 70 will remain stationary until the drive pedal is depressed. Holding the truck with the brake pedal is not necessary. This simplicity of operation reduces strain on the driver, who can concentrate fully on positioning the fork tips or the load.
- A higher turn round of goods and greater safety are benefits of the STILL drive unit with electronic speed and

acceleration control. At any time the driver can adjust the driving characteristics to suit changing load or application conditions, or to satisfy safety requirements, e.g. for the transport of pallets of drinks.

- Resilient engine mountings mean that no vibrations are transmitted to the truck.
- The inherent qualities of electric drive: high reliability, long life and low maintenance costs.

# R 70 Technical Data.



Service brake.

## Service brake.

- The service brake is a maintenance-free, multiple disc brake which runs in an oil bath and is thus free of wear. The truck is silent in operation and will never need new brake linings.
- The multiple disc brake is encapsulated to protect it from dirt and water.
- Re-adjustment is a thing of the past.
- Thanks to the maintenance-free, silent, multiple disc brake, the normal servicing costs for brakes are done away with. This means that overall maintenance costs on the R 70-20 compact are reduced by up to 30%.

## Electrics.

The modern electrical system works digitally. The exchange of information between electrical assemblies, e.g. between the drive controller and the cockpit, is achieved using the CAN bus system already used successfully in road vehicles. The number of cables and plug connectors is reduced in comparison with the previous system and the reliability increased. In addition to this, the ease with which additional electrical equipment can be fitted is greatly enhanced.

## Driver's compartment.

Constant research and development have decisively improved the driver's compartment in the R 70:

- The cockpit has an LCD display plus a pre-selection facility for the drive characteristics. The driver can select the most suitable acceleration or braking and travel speeds from five pre-set options. Simple changes to the software allow the drive parameters to be adjusted to suit the application conditions and the turnover of goods.
- Foot pedals arranged as they are in a car.\* No familiarisation needed.
- The driving characteristics of the R 70 allow the truck to be held on a gradient or on uneven roadways without touching the hand or foot brakes. This means, for example, less damage when loading or unloading lorries.
- Roomy foot well with inclined floor plate and non-slip rubber matting.
- Automotive style hand brake is fitted to the right of the driver's seat.
- Operation is made simpler and easier for the driver because driving and braking are regulated with just the drive pedal.
- Adjustable steering column plus longitudinal and rake adjustment of the seat provide an extremely comfortable



Driver's compartment.

working position for any physique.

- The driver is protected from vibrations which could damage his health by the
  - resiliently mounted drive unit
  - rubber mounting for driver's compartment
  - damped seat, adjustable to the driver's weight.

## Mast.

STILL clear view masts in Telescopic, HiLo and Triplex designs for every application:

- Telescopic: The mast suitable for most applications. Economical mast design. The hoist chains are run in protective guide rails. This prevents noise and increases chain life.
- HiLo: For high stacking under low ceilings. Utilises the space right up to the roof.
- Triplex: For applications with low doorways and greater stacking heights. Utilises the space right up to the roof.
- Fork carriage: Completely redesigned for this truck, gives a clear view onto the load being picked up, thanks to its optimised profiles. The hydraulic hoses for attachments are run in the dead visibility area of the mast sections - with no hose reels - for wear-free operation.

## Steering.

The free moving, fully hydraulic power steering provides great manoeuvrability and thus a high turn round of goods.

## Overhead guard.

The overhead guard is available in different designs so that the R 70 is adaptable to the widest variety of applications and driver requirements. A cab can be easily retro-fitted to the version of the R 70 with a roof cover.

## Safety.

The STILL clear view mast and good all round visibility give the driver the best security against running into objects. The new R 70 complies with all applicable EC safety requirements and regulations. It thus carries the "CE" symbol.

## Quality.

All forklift trucks from STILL comply with the ISO 9001 quality standard. They are carefully constructed and manufactured. The materials used are checked to stringent standards.

\* available with twin pedal control if required.



Further information on the R 70 is available  
on our website: [www.still.de/R70](http://www.still.de/R70)

STILL GmbH  
Berzeliusstrasse 10  
D-22113 Hamburg  
Telephone: +49 (0)40 / 73 39-0  
Telefax: +49 (0)40 / 73 39-16 22  
[info@still.de](mailto:info@still.de)  
[www.still.de](http://www.still.de)

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