LINDE H70D 15,000 LB

Hydrostatic Drive Diesel Trucks

H50D-11,000 lbs. H60D-13,000 lbs.
H70D-15,000 lbs. H80D-17,500 lbs.

INTRODUCTION

This truck series offers the following outstanding features:

Design
Designed with the aid of the latest methods - FEM (Finite Element Modeling) and CAD (Computer Assisted Design).

Performance
High productivity at minimal fuel consumption achieved by utilizing high-torque engines in combination with Linde-built hydrostatic drive system.

Maintenance
Dramatically reduced maintenance expense due to high-tech components and long service intervals.

Ergonomics
Full-time, shock-mounted cab featuring Linde twin pedal directional control system, standard adjustable suspension seat, ample footroom and sound abatement package.

Earth-friendly
Linde's exclusive automatic engine speed control system ensures that the engine and hydrostatic drive system are constantly operating at the lowest possible rpm. This results in substantial fuel savings, reduced emissions, reduced ambient noise and extended service intervals (500 hours service for engine oil and filter). The long engine service intervals reduce the accumulation of waste oil.

OPERATOR CONTROLS

Linde's patented vehicle control system combines the truck's travel and hydraulic systems in an operator-friendly design that eliminates the need for an accelerator pedal. Vehicle travel, lift, tilt and auxiliary speeds plus steering effort are automatically selected by the operator during day-to-day operation.

ENGINES

Liquid - cooled KHD/Deutz Turbo-Diesel engines featuring forged industrial components deliver high torque at low rpm. These engines have been designed to operate at peak efficiency with long service intervals, while featuring extremely low emissions.

HYDROSTATIC DRIVE

Linde's exclusive hydrostatic drive is proven reliable, smooth and efficient. An engine-direct-driven axial piston swash plate pump displaces oil to two axial piston wheel motors attached directly to individual planetary drive units. Hydraulic differential eliminates the need for ring and pinion gear reduction and a conventional drive axle. The hydrostatic drive system also eliminates the following additional wear items: mechanical transmission, torque converter, universal joints, drive shafts, and clutch packs.

BRAKES

Multiple brake systems ensure maximum safety. The Linde hydrostatic drive system features wear-free dynamic braking through the drive line. Additional oil disc brakes provide for high speed emergency stopping and secure parking.

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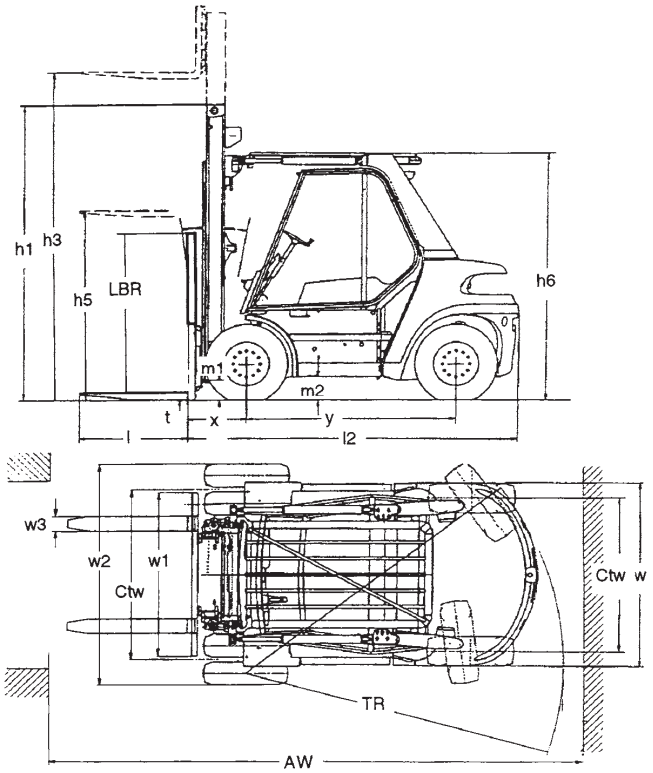

MAST AND CAPACITY INFORMATION H50D, H60D *inch (mm)*

Mast	Collapsed Height	Maximum* Fork Height	Free Lift *With LBR*	Free Lift *Without LBR*	Capacity @ 24" Load Center - lb. (kg)		Tilt**	
Type	h1	h3	h5	h5	H50D	H60D	Fwd.	Back
Simple	107 (2,718)	142 (3,606)	5.9 (150)	5.9 (150)	11,000 (5,000)	13,000 (6,000)	7°	9°
	8.5 (3,010)	166 (4,216)	5.9 (150)	5.9 (150)	11,000 (5,000)	13,000 (6,000)	6°	10°
	126 (3,200)	181 (4,597)	5.9 (150)	5.9 (150)	11,000 (5,000)	13,000 (6,000)	6°	10°
	140 (3,556)	209 (5,314)	5.9 (150)	5.9 (150)	11,000 (5,000)	13,000 (6,000)	6°	10°
	148 (3,759)	225 (5,714)	5.9 (150)	5.9 (150)	11,000 (5,000)	13,000 (6,000)	6°	10°
	156 (3,962)	240 (6,114)	5.9 (150)	5.9 (150)	11,000 (5,000)	13,000 (6,000)	6°	10°
	164 (4,165)	256.5 (6,514)	5.9 (150)	5.9 (150)	11,000 (5,000)	13,000 (6,000)	6°	10°

MAST AND CAPACITY INFORMATION H70D, H80D *inch (mm)*

Mast	Collapsed Height	Maximum* Fork Height	Free Lift *With LBR*	Free Lift *Without LBR*	Capacity @ 24" Load Center - lb (kg)		Tilt**	
Type	h1	h3	h5		H70D	H80D	Fwd.	Back
Simple	107 (2,718)	126 (3,200)	5.9 (150)	5.9 (150)	15,000 (7,000)	17,500 (8,000)	6°	7.5°
	118.5 (3,010)	150 (3,810)	5.9 (150)	5.9 (150)	15,000 (7,000)	17,500 (8,000)	6°	10°
	126 (3,200)	166 (4,616)	5.9 (150)	5.9 (150)	15,000 (7,000)	17,500 (8,000)	6°	10°
	140 (3,556)	194 (4,920)	5.9 (150)	5.9 (150)	15,000 (7,000)	17,500 (8,000)	6°	10°
	148 (3,759)	209 (5,320)	5.9 (150)	5.9 (150)	15,000 (7,000)	17,500 (8,000)	6°	10°
	156 (3,962)	225 (5,720)	5.9 (150)	5.9 (150)	15,000 (7,000)	17,500 (8,000)	6°	10°
	164 (4,165)	241 (6,120)	5.9 (150)	5.9 (150)	15,000 (7,000)	16,665 (7,559)	6°	10°

For Dual and Triple Mast Capacity information Contact Factory

* For overall raised height with LBR add 55 in (1,400 mm).

** Tilt requirements may change depending on options added.

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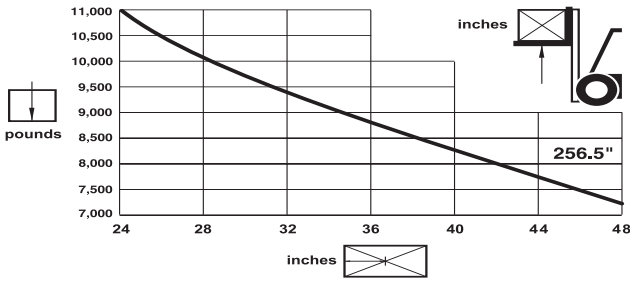
Downrating Charts

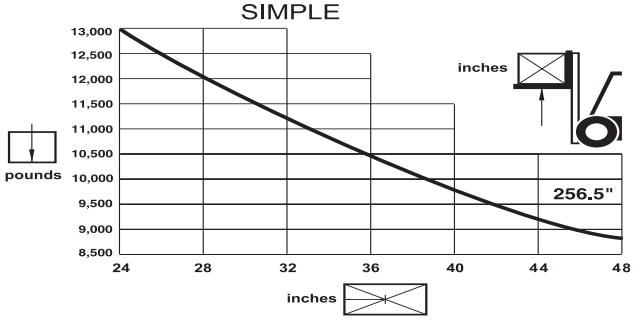
Downrating Chart H50

SIMPLE



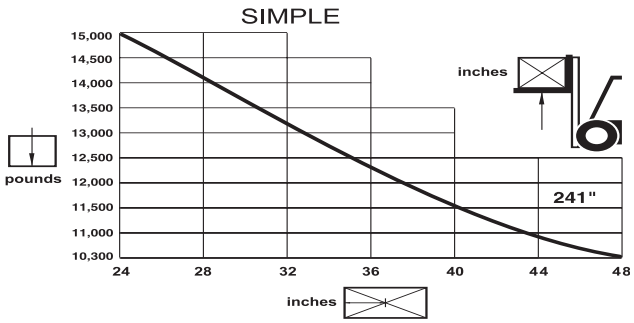
Downrating Chart H60

SIMPLE



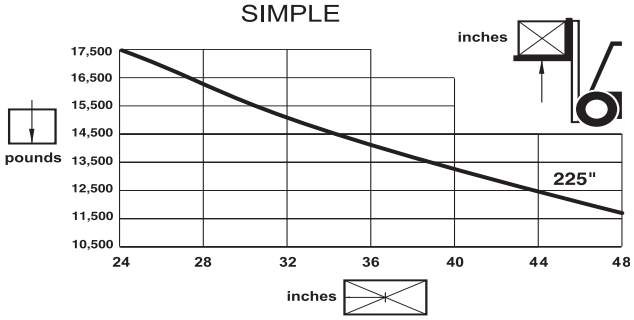
Downrating Chart H70

SIMPLE



Downrating Chart H80

SIMPLE



Contact manufacturer for additional downrating information.

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Manufacturer's Data and Design Characteristics
August 2003

Characteristics	1.1	Model Designation		H50D	
	1.2	Load Capacity	lb (kg)	11,000	(5,000)
	1.3	Load Center	Lc in (mm)	24	(600)
	1.4	Power Unit, Electric, Diesel, LP, Other		Diesel	
	1.5	Operator Position, Rider/Stand, Rider/Sitdown		Rider/Sitdown	
	1.6	Tires F/R, CSE=Cushion Super Elastic; P=Pneumatic		P/P	
	1.7	Wheels, Front/Rear, (x = driven)		2x(4x)/2	
	1.8	Steering, Power/Manual		Power	
Dimensions	2.1	Simple Mast	in (mm)	See Mast Table	
	2.2	Dual Mast	in (mm)	See Mast Table	
	2.3	Triple Mast	in (mm)	See Mast Table	
	2.4	Fork Carriage, Class/Width	in (mm)	IV/70.9	(IV/1,800)
	2.5	Fork Dimensions	t x l x w3 in (mm)	2.5x48x6	(64x1,219x152)
	2.6	Load Backrest Height[3]	LBR in (mm)	55	(1,400)
	2.7	Tilt, Forward/Backward	degrees	See Mast Table	
	2.8	Total Length to Forkface	l2 in (mm)	133.5	(3,390)
	2.9	Overall Width, Front	w/w2 in (mm)	73.4/87.8[2]	(1,864/2,230[2])
	2.10	Front Overhang	x in (mm)	23.2	(590)
	2.11	Truck Height Including Overhead Guard	h6 in (mm)	106.9	(2,714)
	2.12	Seat Height	h7 in (mm)	56.4	(1,432)
	2.13	Turning Radius	TR in (mm)	120.5	(3,060)
	2.14	Aisle Width[1]	AW in (mm)	143.5	(3,645)
Performance	3.1	Travel Speed, With/Without Load	mph (kmh)	13.7/13.7	(22.0/22.0)
	3.2	Lifting Speed, With/Without Load	fpm (mps)	104.3/104.3	(0.53/0.53)
	3.3	Lowering Speed, With/Without Load	fpm (mph)	98.4/98.4	(0.50/0.50)
	3.4	Drawbar Pull, With/Without Load	lb (N)	13,737/6,938	(61,000/31,000)
	3.5	Gradeability, With/Without Load	%	45/28	
Weight	4.1	Weight	lb (kg)	20,503	(9,300)
	4.2	Axle Loading, With Load, Front/Rear	lb (kg)	26,896/4,630	(12,200/2,100)
	4.3	Axle Loading, Without Load, Front/Rear	lb (kg)	9,888/10,692	(4,485/4,850)
Chassis	5.1	Tire Size, Front	in (mm)	300-15/22PR	
	5.2	Tire Size, Rear	in (mm)	8.25-15/18PR	
	5.3	Wheel Base	y in (mm)	85	(2,160)
	5.4	Track Width Center Line of Tires, F/R	Ctw in (mm)	61.6/63	(1,564/1,600)
	5.5	Ground Clearance, With Load (Mast)	m1 in (mm)	8	(202)
	5.6	Ground Clearance, With Load (Chassis)	m2 in (mm)	9.7	(245)
	5.7	Brake System		Dynamic/Hydraulic	
	5.8	Parking Brake		Foot	
Drive	6.1	Voltage	v	12	
	6.2	Engine Manufacturer/Type		KHD/BF6M1012E	
	6.3	Engine Rating	hp (kw)	100	(75)
	6.4	Engine RPM	max. rpm	2,200	
	6.5	Engine Displacement	cu. in (cc)	292.8	(4,800)
	6.6	Transmission		Hydrostatic	
	6.7	Noise Level	dBa	78	
	6.8	Speed Control		Infinitely Variable	
	6.9	Hydraulic System Operating Pressure	psi (bar)	3,771	(260)

[1] Plus load lenght plus clearance for 90° stack.
[2] (w2) = Chassis width with dual drive tires.
[3] With simple masts

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H60D	H70D	H80D	
13,000 (6,000)	15,000 (7,000)	17,500 (8,000)	1.1
24 (600)	24 (600)	24 (600)	1.2
Diesel	Diesel	Diesel	1.3
Rider/Sitdown	Rider/Sitdown	Rider/Sitdown	1.4
P/P	P/P	P/P	1.5
2x(4x)/2	4x(2x)/2	4x/2	1.6
Power	Power	Power	1.7
See Mast Table	See Mast Table	See Mast Table	1.8
See Mast Table	See Mast Table	See Mast Table	2.1
See Mast Table	See Mast Table	See Mast Table	2.2
IV/70.9 (IV/1,800)	IV/85.8 (IV/2,180)	IV/85.8 (IV/2,180)	2.3
2.5x48x6 (64x1,219x152)	2.75x48x6 (70x1,219x152)	2.75x48x8 (70X1,219x203)	2.4
55 (1,400)	55 (1,400)	55 (1,400)	2.5
See Mast Table	See Mast Table	See Mast Table	2.6
133.5 (3,390)	133.9 (3,400)	133.9 (3,400)	2.7
75.5/87.8² (1,918/2,230²)	87.8 (2,230)	87.8 (2,230)	2.8
23.2 (590)	23.6 (600)	23.6 (600)	2.9
106.9 (2,714)	106.9 (2,714)	106.9 (2,714)	2.10
56.4 (1,432)	56.4 (1,432)	56.4 (1,432)	2.11
120.5 (3,060)	120.5 (3,060)	120.5 (3,060)	2.12
143.5 (3,645)	143.7 (3,650)	143.9 (3,650)	2.13
13.7/13.7 (22.0/22.0)	13.7/13.7 (22.0/22.0)	13.7/13.7 (22.0/22.0)	2.14
104.3/104.3 (0.53/0.53)	82.6/82.6 (0.42/0.42)	82.6/82.6 (0.42/0.42)	3.1
98.4/98.4 (0.50/0.50)	82.6/82.6 (0.42/0.42)	82.6/82.6 (0.42/0.42)	3.2
12,836/7,500 (57,000/33,000)	13,062/7,955 (58,000/35,000)	13,062/7,955 (58,000/35,000)	3.3
35/27	29/28	26/27	3.4
21,054 (9,550)	23,722 (10,760)	25,463 (11,550)	3.5
30,357/3,924 (13,770/1,780)	34,510/4,652 (15,650/2,110)	37,831/5,159 (17,160/2,340)	4.1
9,855/11,200 (4,470/5,080)	10,516/13,206 (4,770/5,990)	10,428/14,925 (4,730/6,770)	4.2
355/65-15/24PR	8.25-15/18PR	8.25-15/18PR	4.3
8.25-15/18PR	300-15/18PR	300-15/18PR	5.1
85 (2,160)	85 (2,160)	85 (2,160)	5.2
61.6/63 (1,564/1,600)	67.6/63 (1,718/1,600)	67.6/63(1,718/1,550)	5.3
8 (202)	8 (202)	8 (202)	5.4
9.7 (245)	9.7 (245)	9.7 (245)	5.5
Dynamic/Hydraulic	Dynamic/Hydraulic	Dynamic/Hydraulic	5.6
Foot	Foot	Foot	5.7
12	12	12	5.8
KHD/BF6M1012E	KHD/BF6M1012E	KHD/BF6M1012E	6.1
100 (75)	100 (75)	100 (75)	6.2
2,200	2,200	2,200	6.3
292.8 (4,800)	292.8 (4,800)	292.8 (4,800)	6.4
Hydrostatic	Hydrostatic	Hydrostatic	6.5
78	78	78	6.6
Infinitely Variable	Infinitely Variable	Infinitely Variable	6.7
3,771 (260)	3,771 (260)	3,771 (260)	6.8
			6.9

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POWER STEERING:
Full-time hydrostatic power steering provides-low effort steering response under all operating conditions.

FRAME:
Truck frames feature complete seam- welded belly pans for maximum component protection as standard equipment.

STEER AXLE:
Rugged single piece cast steer axles provide 82° interior wheel turning for maximum maneuverability. Large diameter, specially-formulated synthetic rubber mounting blocks guarantee excellent shock absorption and a wear- free lifetime mounting. Tapered roller bearings in the kingpin assemblies, grease zerks, a large diameter double-acting steering cylinder and forged compact steering arms result in a highly durable axle design.

TRU-VIEW MASTS:
A wide selection of Linde-built Simple masts featuring rolled alloy I-beam construction for maximum strength are available. H50D/H60D mast assemblies feature heavy-duty six roller carriage construction. H70D/H80D utilize eight roller carriages.

HYDRAULIC SYSTEM:
Linde's exclusive sealed and pressurized hydraulic system eliminates potential hydraulic oil contamination. Even in the most severe applications abrasives are stopped from entering the system due to the elimination of an oil reservoir breather. Dual full flow micronic filters are provided as standard equipment.

INSTRUMENTATION:
An easy-to-read combination instrument cluster displays vehicle systems status at a glance. Standard status indicators include: engine oil pressure, hydraulic oil temperature, engine coolant temperature, alternator charging, low fuel and air filter restriction. Combi instrument also features integral hourmeter.

OPERATOR COMPARTMENT:
A four-point elastic mounting secures the operator compartment to the truck frame. A separate service compartment in the right staircase houses the truck's starter battery.

TILT CYLINDERS & OVERHEAD GUARD:
Dual overhead chrome-plated tilt cylinders provide maximum load support and stability. The patented Linde LTS (Linde Torsion Support) System incorporates a moving overhead guard for unmatched operator protection.

FUEL TANK CAPACITY:
18.5 gallons

SAFETY SYSTEM:
- Standard dynamic braking
- Automatic brake engagement when engine is shut off
- Starter lock out-truck won't start unless parking brake is depressed.

STANDARD EQUIPMENT:
- Hydrostatic drive with dual pedal control
- 12-Volt electrical system
- Cold weather start system
- Single pneumatic drive tires (H50D/H60D)
- Dual pneumatic drive tires (H70D/H80D)
- Combination instrument
- Horn
- Electric ignition/shut down
- Stacked exhaust
- 3-function hydraulic valve
- Parking brake
- Hydrostatic power steering
- Load backrest and 48" forks
- Towing pin
- Weight adjustable suspension seat
- Overhead guard
- Air pre-cleaner and two-stage air filter
- Sound abatement package (78dBa)

OPTIONAL EQUIPMENT:
- Dual and Triple masts (contact factory)
- Additional hydraulic functions
- Enclosed cab with heater, defroster and wipers
- Air conditioning
- Working lights
- Dual drive tires
- CSE tires
- Backup alarm
- Catalytic muffler
- Particle filter
- Special paint

Check with dealer/factory for additional equipment availability.

**** NOTES ****

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ANSI CLASSIFICATION:
Standard truck meets all applicable mandatory requirements of ANSI/ASME B56.1 standards for powered industrial trucks.
NOTE: Performance data may vary due to motor and system efficiency tolerances. The performance depicted represents nominal values obtained under typical operating conditions. Metric dimensions are in millimeters unless otherwise specified. All metric dimensions are not direct equivalents due to rounding data. The descriptions and specifications included on this data sheet were in effect at the time of printing. Linde Lift Truck Corporation reserves the right to make improvements and changes in specification or design without notice and without incurring obligation. Please check with your authorized Linde dealer for information on possible updates or revisions.

8.2003/5M