



**STRONG PARTNERS.  
TOUGH TRUCKS.™**



# **HIGH CAPACITY FORKLIFT TRUCKS**

**H8-12XM-6, H13-16XM-6**

**8 000 – 16 000 KG @ 600MM**



## > BUILT WITH EXPERIENCE AND THE LATEST TECHNOLOGY

The latest generation of the Hyster H8-16XM-6 Range of Heavy Duty Forklifts is a market leader, building on the unique experience and success Hyster has had of providing application focused solutions to customers in a wide range of heavy industries for over 50 years.



This latest model is the 9th generation machine, and applies this experience, together with the latest advancements in technology, to create a range of forklift trucks designed to achieve maximum productivity, through industry leading dependability, serviceability and ergonomics, thanks to:

- Nominal lifting capacities including side shift carriage.
- Full capacity up to 6200mm lift height.
- Fastest lifting, with a practical average of up to 0.35 m/sec.
- Class-leading ergonomics by Vista Cab.
- Rugged construction of mast, frame and drive train.
- 3-gear automatic transmission via the APC200 soft-shift system, featuring additionally protective lock-out on forward-reverse shifting.
- Engine and transmission protection systems as standard.
- O-Ring Face Seal fittings used to eliminate hydraulic leaks.
- Easy serviceability, with centralised, PC accessible diagnostics, superior, unobstructed access to key components thanks to the tilting cab and gull-wing hood.
- Oil-immersed brakes contribute to increased productivity and reduced ownership costs.



## > POWER & PERFORMANCE

The H8-16XM-6 range is available with Cummins Diesel engines. These engines meet the Stage IIIA and Stage IIIB emissions legislation.

### STAGE IIIA ENGINES:

This diesel engine conforms to Stage IIIA emission standards and will be supplied into markets where the NRMM (Non Road Mobile Machinery) Stage IIIB legislation does not apply.

#### The Stage IIIA Cummins QSB 6.7 diesel engine features:

- 6-cylinder in-line industrial engine, with 6.7 litre capacity and charge-air cooling and waste gate turbocharger.
- Max **116 kW** (155Hp) output at only 2500rpm, offering extra durability for long periods of peak power operation.
- Smooth torque of **597 Nm** at 1500 rpm provides excellent acceleration and lugging power.
- Engine protection system, acting on low oil pressure and high coolant temperature. The system initially derates the engine power and finally shuts down the engine. Includes an override function for emergency situations.

### STAGE IIIB ENGINE:

For use mainly within EU (European Union) countries, trucks with Stage IIIB diesel engines have significantly reduced exhaust gas emissions. Also by applying Hyster Intelligent Design criteria, these trucks are not only cleaner running but also more economical, achieving up to a 20% fuel saving.

#### The Stage IIIB Cummins QSB 4.5 diesel engine features:

4-cylinder-in-line industrial engine, with 4.5 litre capacity and charge-air cooling and waste gate turbocharger

- Max **122kW** (160 Hp) output at 2 200 rpm, offering extra durability for long periods of peak power operation.
- Smooth torque of **624 Nm** at 1500 rpm provides excellent acceleration and lugging power.

#### The Stage IIIB Cummins QSB 6.7 diesel engine features:

- 6-cylinder-in-line industrial engine, with 6.7 litre capacity and charge-air cooling and waste gate turbocharger
- Max **125 kW** (170 Hp) output at only 1900 rpm, offering extra durability for long periods of peak power operation.
- Smooth torque of **732 Nm** at 1500 rpm provides excellent acceleration and lugging power.

Engine protection system, acting on low oil pressure and high coolant temperature for both Stage IIB engines.

The system initially derates the engine power and finally shuts down the engine. Includes an override function for emergency situations.

**NOTE: A Stage IIIB engine must run on Ultra Low Sulphur Diesel (ULSD) fuel, with a maximum of 15 ppm sulphur content. Diesel fuel with a higher sulphur content than 15 ppm will compromise the emissions performance of the Stage IIIB engine and may result in damage to components.**

#### CCC of Stage IIIB engines.

The Tier 4i / Stage IIIB compatible Cummins QSB 6.7 and QSB 4.5 engines are equipped with EGR (Exhaust Gas Recirculation) to meet new emissions requirements. The EGR affects the combustion process by reducing the NO<sub>x</sub> percentage in the exhaust gas. The system also includes a CCC (Cummins Compact Catalyst). The CCC contains a Diesel Oxidation Catalyst in a stainless steel canister. The DOC will oxidize remaining hydrocarbons in the exhaust gasses to CO<sub>2</sub>





## DRIVELINE

### Autoshift Transmission

This powertrain is connected to the Z.F. 3WG161 3-speed autoshift transmission and the AxleTech PRC-425 (H8-12XM-6) or PRC-775 (H13-16XM-6) drive axle.

This 3 speed autoshift system features:

- Smooth inching characteristic for precise load handling while stacking.
- A column-mounted lever or a Monotrol Pedal for direction changes.
- A 'soft-shift' characteristic (through electronic 'throttle-back' function during gear change). In addition to providing improved driver comfort, the system also eliminates shifting-shocks on the driveline.
- An 'on the move' forward-reverse shifting lock-out function, which protects the transmission and drive-line against overloading, during abrupt direction changes.
- The transmission incorporates adjustable parameters for engine and travel speed, as well as featuring extremely smooth shifting and torque controlled inching for the best overall truck performance.
- Transmission protection system, acting on high oil temperature (warning light, buzzer and initial derate, followed by shut down).

## DRIVE AXLE

The wide AxleTech drive axle offers:

- Excellent sideways stability.
- Long-term durability thanks to the fitment of strong end-reduction shafts and gears.
- Oil-immersed 'wet disc' brakes feature oil cooling for durability and are virtually maintenance free.
- Parking brake: Separate dry disc brake on the drive axle input shaft, spring applied and hydraulically released.

## STEER AXLE

The Hyster designed hydrostatic steer axle features:

- Double-acting, single steering cylinder with adjustable end stops. It is renowned for its long lifespan and low maintenance requirements.
- Load-sensing power steering to ensure low-effort operation under all operating conditions.

## > CLASS LEADING ERGONOMICS

The H8-16XM-6 series features the Hyster "Vista" cab, now common across the Hyster Big Truck range.

- The cab has been designed to offer an industry-leading ergonomic operator environment, and focuses on maximising driver comfort and visibility for maximum levels of productivity during the operating cycle.
- Access is easy, thanks to wide opening doors with low mounted running boards.
- The fully adjustable armrest adjusts with the seat height for minimized arm movement resulting in maximum driver comfort and reduced driver fatigue.
- The armrest houses the integrated controls for lift/tilt/sideshift and auxiliary functions. The controls are low effort to ensure smooth and effortless use of the joystick or lever controls.
- The truck features a fully adjustable full-suspension driver's seat with seat belt, "park brake off" warning buzzer and operator presence system.
- The fully adjustable steering column features load-sensing, power-assisted steering.
- The cab also features conveniently positioned lever controls and instruments and a push-button parking brake.



- Responsive, fully hydraulic brakes and an automotive style pedal layout further contribute to driver confidence and comfort.
- The Hyster Vista Cab is equipped with a side mounted dash display - 4 bright LED warning lights mounted on the steering column inform the driver when he needs to refer to the dash display, ensuring that his/her attention is never unnecessarily diverted from the job in hand.
- The multi-function CAN-bus controlled display panel consists of a comprehensive array of gauges and backlit warning lights, including an LCD screen and error code facility.
- The spacious uncluttered floor covered with a high density rubber mat contributes to a low noise level of 73 dB(A) at driver's ear.
- The Hyster Vista cab is mounted on elastomeric rubber mounts isolating and minimizing the effects of road-born shocks and vibrations.
- Optional sunshade screens can be fitted on the top and rear windows.
- Optional air-conditioning is integrated into the heating and ventilation system, with manual temperature control. It includes the sunshade screens on top and rear windows.
- Climate control air-conditioning is also available as an option.

## > SUPERIOR VISIBILITY

The Vista Cab also contributes to providing the driver with excellent all-round visibility, featuring:

- Large curved front window, fitted with tinted safety glass.
- Curved rear window with one-piece glass.
- Minimum use of steel parts, providing the maximum possible glazed area.
- Upward visibility is virtually free from obstruction, thanks to a clever overhead guard design: The overhead bars curve outwards to create a panoramic upward view.
- Wide-view rear view mirrors are fitted inside the cab.
- The dash display is mounted to the right hand side of the driver, so visibility through the windscreen is unobstructed.
- Front, rear and top wipers, washers and demisters, a fresh air inlet, sliding windows, an effective heater and defroster all combine to ensure that the driver has a clear view in all weather conditions.
- Excellent rearwards visibility is enhanced thanks to the sloping design of the hood and counterweight.
- A clear view to the front is optimized by using the Hyster Vista mast with:
  - Wide mast construction.
  - Rear-mounted lift cylinders (behind the mast channels), for minimum obstruction.



## > RUGGED FRONT-END CONSTRUCTION MATCHES APPLICATION REQUIREMENTS

All Hyster H8-16XM-6 forklift trucks are equipped with heavy duty Vista masts to handle all types of load.



- 3 different mast strengths, appropriate to the truck capacity, ensures the right mast for the job.
- Designed with the modern FEM (Finite Element Modelling) system.
- Equipped with rollers and side bearing blocks for excellent lateral rigidity.
- Generous overlap of the mast channels for maximum durability.
- Same channels are used for masts up to 7 metres, providing a tough mast for all lift heights.
- Proven design, with thousands of trucks built and operating today.
- Deliverable as two or three stage versions versions, with and without free lift.

The Hyster pin-type carriage is an integral piece of the rugged front-end construction. Its design benefits from Hyster's long experience, to ensure maximum performance combined with excellent visibility.

- A wide range of carriages is available to suit all applications including non-sideshift, sideshift and individual or simultaneous fork positioning.
- The sideshift carriage is equipped with top bronze bearings and bottom sliding blocks for minimum wear.
- The electro hydraulically controlled valves are mounted directly on the carriage and are supplied with only three hydraulic hoses and one electric harness.



## > FAST MACHINE FOR MAXIMUM PRODUCTIVITY

The hydraulic system is highly efficient, and features 'Power on Demand' by means of 'Variable Displacement Pump(s) (VDP).

- A new 105 cm<sup>3</sup> dual piston hydraulic pump is fitted as standard for the H8-12XM-6 Stage IIIB models to achieve better performance.
- The H8-12XM-6 Stage IIIA models are equipped with 90 cm<sup>3</sup> single piston hydraulic pump as standard.
- The 120 cm<sup>3</sup> dual piston hydraulic pump is standard both H13-16XM-6 Stage IIIA and Stage IIIB models.
- The result is lifting speeds that are class leading:  
The practical 4-mode average lifting speed is a fantastic 0.40 m/sec to 0.52 m/sec. #)  
#) Average of four lifting modes:  
Unladen lift speed = 0.32 to 0.51 m/sec  
Laden lift speed = 0.28 to 0.49 m/sec  
Unladen lowering speed = 0.48 m/sec  
Laden lowering speed = 0.50 m/sec  
For full data see the specification tables on page 16 and 17.
- Travel speeds from 26.3 km/h up to 31.2 are possible. If these travel speeds need to be lower for your specific application, your Hyster dealer can adjust the maximum travel speed to suit your requirements.



## > STRENGTH & STABILITY

**Excellent stability boosts operator confidence and truck versatility, making the H8-16XM-6 series suitable for the harshest applications:**

- All nominal capacities are rated to include the sideshift carriage. This means that a Hyster vehicle with a standard non-sideshift carriage has an extra capacity from 400kg to 1000kg.
- The H8-16XM-6 series has been designed to handle loads to high lift heights. There is no reduced capacity up to and including 6200 mm. Even above 6200 mm lift height the de-ration has been kept to a minimum.
- Due to the short load distance ("x" measurement as per VDI table) and high residual rear axle loading on the Hyster steer axle, these Hyster trucks have excellent stability.

### **A SOLID FRAMEWORK**

The unitised box frame used in the H8-16XM-6 series is designed for maximum strength with:

- 3 different wheelbases, ensuring the narrowest possible turning radius for each truck.
- FEM (Finite Element Modelling) to ensure durability.
- All frames are based on the largest model - H16XM-6.



## > EASY SERVICEABILITY

The Hyster H8-16XM-6 series is renowned for its ease of maintenance. The truck is easily accessible with unobstructed access to the engine compartment and conveniently located service check points:



- Equipped as standard with either a manual or electric tilting cab, to ensure easy access to major components for service.
- Gas-spring assisted gull wing hoods for convenient access to engine compartment, reducing downtime.
- Low running boards, providing mechanics an excellent vantage point to work from.
- Window washer refill bottle located next to cab for quick, easy access.
- Clean electrical and hydraulic routings.
- Centralised diagnostics in the operator cab.
- 'CANbus' connections in the operator cab, for engine, transmission, hydraulics and instruments cluster.
- LCD display with diagnostics for engine, transmission and electrical systems to quickly identify service needs.
- Standard oil-immersed (wet) brakes are virtually maintenance free.
- 500 hour service interval.

## > OTHER FEATURES

### HYDRAULICS

Hyster's 'Variable Displacement Pump(s) (VDP) results in high lift speeds, in combination with a Hyster designed 2 stage mast.

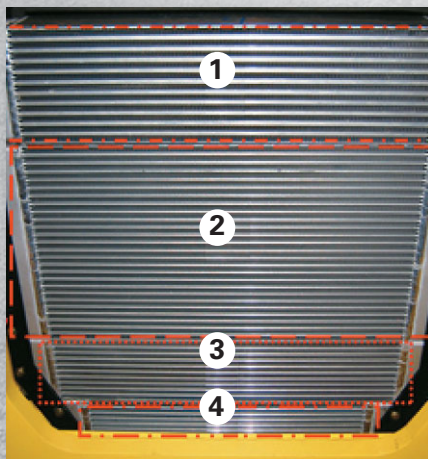
- Leak-free ORFS (O-ring) type fittings are used throughout the whole machine.
- The hydraulic oil tank is equipped with an external sight glass for oil level.
- Filtration: Full-flow return line filter with 10 micron cartridge on the main system.

### COOLING

The H8-16XM-6 is designed to operate in ambient temperatures of -18° C up to 50° C in normal applications, or up to 45° C for heavy duty operations.

Generously sized aluminium radiator block consists of four (individually exchangeable) sections:

1. Charge air cooler.
  2. Engine coolant.
  3. Brake and hydraulic oil.
  4. Transmission oil.
- The air-intake is now located at the top of the counterweight, to provide a cleaner air-flow.



### ELECTRICS

- 24 Volt system, 70 A alternator.
- 'CANbus' connection in the operator cab, for engine, transmission, hydraulics and instruments cluster.
- LCD display with diagnostics for engine, transmission and electrical systems to quickly identify service needs.

### LIGHTS

Standard are: 2 work lights on the rear of the operator compartment, 2 drive lights, 2 front marker and direction lights on the front fenders, and LED type direction indicators and stop, tail and reverse driving lights in the counterweight.

Optional are: 2 mast-mounted work lights or 4 work lights mounted on the operator compartment (halogen or Xenon), and an amber strobe light on the rear of the operator compartment.

### STAGE III B ENGINE MODELS ADDITIONAL FEATURES:

**Auto Rev-Up:** During lifting and tilting, the engine speed is automatically increased in relation to the joystick/ lever position. This feature is active when the transmission is in neutral and inching mode.



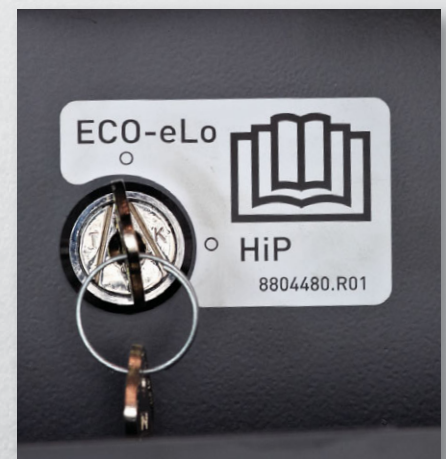
**Drive Over Lift (DOL):** Priority is given to driving and fitting at the same time. The hydraulic performance is reduced while driving. Hydraulic performance is automatically increased when engine speed (engine torque) increases. This feature ensures smooth truck operation under all conditions and assists in reducing operator fatigue.

### High performance Mode (HiP):

Selects the engine power mode. In the HiP mode the maximum power and torque is available for hydraulic and drive functions.

**Economy Mode (ECO-eLo):** With a key switch the ECO-eLo engine power mode is enabled. Throttle reaction is less aggressive which saves the fuel. The maximum RPM is reduced to 2000RPM, the duty cycle time is slightly impacted in this mode.

**Alternate idle mode:** The engine RPM is automatically reduced to stand-by mode if no functions are used for 30 seconds. Normal idle is 900RPM (QSB4.5 T4i), 850 (QSB6.7 T4i), in alternate idle mode 800RPM (QSB4.5 T4i), 750RPM (QSB6.7 T4i).





## > OPTIONAL EQUIPMENT



- On H8-12XM-6 models 120 cm<sup>3</sup> (2x 60cc) dual piston hydraulic pump are optional (standard on H13-16XM-6 models).
- Engine block heater.
- Powered tilting cab for more convenient service access.
- Lifting eyes (2 x on mast and 2 x on rear counterweight).
- Radial pneumatic tyres.
- Solid (pneumatic shaped) tyres.
- Air-conditioning, High output air-conditioning, Climate control air-conditioning.

- Open driver module.
- Various seat options
- Monotrol drive control.
- Joystick hydraulic control.
- 24/12 volt DC-DC converter.
- Various light kits.
- Application specific masts (2-Stage Limited Free Lift, 2-Stage Full Free Lift, 3-Stage Full Free Lift), carriages and forks.
- Hydraulic accumulator.
- Back-up alarm (self-adjustable to 5 dB above ambient).

- Special RAL colours.
- Reading light in the cab.
- Sun shade: sliding screen under top window of cab.
- Extra air re-circulation fan, inside the cab.
- Various attachments: Coil ram, paper roll clamp, etc.
- Raised cab position 500 mm.
- Base carriage for use of integral mounted attachments for various applications.





# H8-16XM-6

DISTINGUISHING MARKS	1.1	Manufacturer	
	1.2	Manufacturer's type designation	
	1.3	Drive: electric (battery or mains), diesel, petrol, LPG	
	1.4	Operator type: hand, pedestrian, standing, seated, order-picker	
	1.5	Rated capacity/rated load	Q (kg)
	1.6	Load centre distance	c (mm)
	1.8	Load distance, centre of drive axle to fork	x (mm)
	1.9	Wheelbase	y (mm)

HYSTER		HYSTER		HYSTER	
H8XM-6		H9XM-6		H10XMS-6	
Diesel		Diesel		Diesel	
Seat		Seat		Seat	
8000		9000		10000	
600		600		600	
785		785		819	
2700		2700		2700	

WEIGHTS	2.1	Service weight $\diamond$	
	2.2	Axle loading, laden front/rear $\diamond$	kg
	2.3	Axle loading, unladen front/rear $\diamond$	kg

12413		12748		15287	
19132	1881	20585	1720	23144	2107
6304	6109	6288	6460	7943	7344

TYRES & CHASSIS	3.1	Tyres: L=pneumatic, V=solid, SE=pneumatic-shaped solid	
	3.2	Tyre size, front	
	3.3	Tyre size, rear	
	3.5	Number of wheels, front / rear (x = driven wheels)	
	3.6	Track track, front	b <sub>10</sub> (mm)
	3.7	Track track, rear	b <sub>11</sub> (mm)

L		L		L	
9.00-20 14PR		9.00-20 14PR		10.00-20 16PR	
9.00-20 14PR		9.00-20 14PR		10.00-20 16PR	
4X	2	4X	2	4X	2
2190		2190		2190	
1930		1930		1930	

DIMENSIONS	4.1	Tilt of mast/fork carriage, forward $\alpha$ / backward $\beta$	Degrees
	4.2	Height, mast lowered	h <sub>1</sub> (mm)
	4.3	Free lift $\uparrow$	h <sub>2</sub> (mm)
	4.4	Lift $\uparrow$	h <sub>3</sub> (mm)
	4.5	Height of mast, extended $\uparrow$	h <sub>4</sub> (mm)
	4.7	Height of overhead guard (cabin) $\blacksquare$	h <sub>5</sub> (mm)
	4.8	Seat height/stand height $\odot$	h <sub>7</sub> (mm)
	4.12	Coupling height	h <sub>8</sub> (mm)
	4.17	Overhang	l <sub>5</sub> (mm)
	4.19	Overall length	l <sub>1</sub> (mm)
	4.20	Length to face of forks	l <sub>2</sub> (mm)
	4.21	Overall width	b <sub>2</sub> (mm)
	4.22	Fork dimensions	s/e/l (mm)
	4.23	Fork carriage ISO 2328, class/type A, B	
	4.24	Fork carriage width $\bullet$	b <sub>3</sub> (mm)
	4.25	Distance between fork-arms	b <sub>5</sub> (mm)
	4.30	Reach, lateral from vehicle centerline $\checkmark$	b <sub>8</sub> (mm)
	4.31	Ground clearance, laden, below mast $\checkmark$	m <sub>1</sub> (mm)
	4.32	Ground clearance, centre of wheelbase	m <sub>2</sub> (mm)
	4.34.1	Aisle width with pallets 1 200 long x 1 200 crossways $\blacklozenge$	Ast (mm)
4.35	Turning radius (outer)	Wa (mm)	
4.36	Internal turning radius	b <sub>13</sub> (mm)	

15	12	15	12	15	12
4155		4155		4455	
0		0		0	
5339		5339		5346	
6822		6822		7118	
3015		3015		3035	
1742		1742		1762	
635		635		655	
809		809		809	
5514		5514		5548	
4294		4294		4328	
2425		2425		2448	
65/200/1220		65/200/1220		75/200/1220	
75 mm pin type		75 mm pin type		75 mm pin type	
2350		2350		2350	
520 - 2230		520 - 2230		520 - 2230	
150		150		150	
248		248		225	
274		274		292	
6099		6099		6133	
3914		3914		3914	
1433		1433		1432	

PERFORMANCE DATA	5.1	Travel speed, laden / unladen Stage IIIA engine	km/h
	5.1	Travel speed, laden / unladen Stage IIIB engine	km/h
	5.2	Lifting speed, laden / unladen Stage IIIA engine $\uparrow$	m/sec
	5.2	Lifting speed, laden / unladen Stage IIIB engine $\uparrow\uparrow$	m/sec
	5.2.1	Lifting speed, laden / unladen (120 ccm) Stage IIIA engine $\square$	m/sec
	5.2.1	Lifting speed, laden / unladen (120 ccm) Stage IIIB engine $\square$	m/sec
	5.3	Lowering speed, laden / unladen Stage IIIA engine	m/sec
	5.3	Lowering speed, laden / unladen Stage IIIB engine	m/sec
	5.5	Drawbar pull, laden / unladen Stage IIIA engine	kN
	5.5	Drawbar pull, laden / unladen Stage IIIB engine	kN
	5.7	Gradeability, laden / unladen @ 1.6 km/h km/hr - Stage IIIA engine $\uparrow$	%
	5.7	Gradeability, laden / unladen @ 1.6 km/h km/hr - Stage IIIB engine $\uparrow$	%
	5.9	Acceleration time, laden / unladen Stage IIIA engine	s
5.9	Acceleration time, laden / unladen Stage IIIB engine	s	
5.10	Service brake		

30.2	31	30.2	31	30.6	31.2
30.2	31	30.2	31	30.6	31.2
0.47	0.52	0.47	0.52	0.36	0.40
0.52	0.61	0.52	0.61	0.40	0.47
0.57	0.70	0.57	0.70	0.43	0.53
0.57	0.70	0.57	0.70	0.43	0.53
0.50	0.48	0.50	0.48	0.50	0.48
0.50	0.48	0.50	0.48	0.50	0.48
104.6	36	104.4	36.5	99.8	41.4
104.6	36	104.4	36.5	99.8	41.4
63	32	57	31	46	31
63	32	57	31	46	31
5.5	4.7	5.6	4.8	6.2	5.3
5.3	4.6	5.4	4.7	6	5.1
oil-immersed / wet disc		oil-immersed / wet disc		oil-immersed / wet disc	

ADDITIONAL DATA	10.1	Operating pressure for attachments	bar
	10.2	Oil volume for attachments	l/min
	10.3	Hydraulic oil tank capacity	l
	10.4	Fuel tank, capacity	l
	10.5	Steering design	
	10.6	Number of steering rotation	
	10.7	Sound pressure level at the driver's seat	dB(A)
	10.7.1	Sound power level during the workcycle	dB(A)
	10.8	Towing coupling, type DIN	

193	193	193
100	100	100
100	100	100
128	128	128
hydrostatic	hydrostatic	hydrostatic
3.7	3.7	3.7
73	73	73
108	108	107
yes / Pin	yes / Pin	yes / Pin

Specification data is based on VDI 2198

## EQUIPMENT AND WEIGHT:

Weights and axle loadings (lines 2.1, 2.2, 2.3) are based on the following specifications:

H8-9XM-6: Complete truck with fully equipped cab, with 5336 mm BOF (5401 mm TOF) 2-stage lfl mast, 2350 mm wide Integral Sideshift carriage and 1220 mm long forks.

H10-12XM-6: Complete truck with fully equipped cab, with 5336 mm BOF (5411 mm TOF) 2-stage lfl mast, 2350 mm wide Integral Sideshift carriage and 1220 mm long forks.



HYSTER		HYSTER		HYSTER		HYSTER		HYSTER		1.1
H10XM-6		H12XM-6		H13XM-6		H14XM-6		H16XM-6		1.2
Diesel		Diesel		Diesel		Diesel		Diesel		1.3
Seat		Seat		Seat		Seat		Seat		1.4
10000		12000		13000		14000		16000		1.5
600		600		600		600		600		1.6
819		819		896		896		896		1.8
2900		2900		3300		3300		3300		1.9

DISTINGUISHING MARKS

15180		16034		18429		19064		20119		2.1
22808	2336	25706	2301	29391	2121	30768	2336	33613	2517	2.2
7969	7211	7875	8159	10376	8053	10364	8700	10343	9776	2.3

WEIGHTS

L		L		L		L		L		3.1
10.00-20 16PR		10.00-20 16PR		12.00-20 16PR		12.00-20 16PR		12.00-20 16PR		3.2
10.00-20 16PR		10.00-20 16PR		12.00-20 16PR		12.00-20 16PR		12.00-20 16PR		3.3
4X	2	4X	2	4X	2	4X	2	4X	2	3.5
2 190		2 190		2 276		2 276		2 276		3.6
1 930		1 930		2 000		2 000		2 000		3.7

TYRES & CHASSIS

15		12		15		12		15		12		4.1
4455		4455		4466		4466		4466		4466		4.2
0		0		0		0		0		0		4.3
5346		5346		5310		5310		5310		5310		4.4
7118		7118		7120		7120		7120		7120		4.5
3035		3035		3064		3064		3064		3064		4.7
1762		1762		1791		1791		1791		1791		4.8
653		653		684		684		684		684		4.12
809		809		809		809		809		809		4.17
5748		5748		6225		6225		6225		6225		4.19
4528		4528		5005		5005		5005		5005		4.20
2448		2448		2607		2607		2607		2607		4.21
75/200/1220		75/200/1220		90/200/1220		90/200/1220		90/200/1220		90/200/1220		4.22
75 mm pin type		75 mm pin type		85 mm pin type		85 mm pin type		85 mm pin type		85 mm pin type		4.23
2350		2350		2500		2500		2500		2500		4.24
520 - 2230		520 - 2230		520 - 2380		520 - 2380		520 - 2380		520 - 2380		4.25
150		150		200		200		200		200		4.30
225		225		178		178		178		178		4.31
292		292		346		346		346		346		4.32
6333		6333		6880		6880		6880		6880		4.34.1
4111		4111		4584		4584		4584		4584		4.35
1475		1475		1754		1754		1754		1754		4.36

DIMENSIONS

30.6	31.2	30.5	31.1	26.6	28	26.6	28	26.3	27.3	5.1
30.6	31.2	30.5	31.1	26.6	28	26.6	28	26.3	27.9	5.1
0.36	0.40	0.36	0.40	-	-	-	-	-	-	5.2
0.40	0.47	0.40	0.47	-	-	-	-	-	-	5.2
0.43	0.53	0.43	0.53	0.34	0.42	0.34	0.42	0.34	0.42	5.2.1
0.43	0.53	0.43	0.53	0.36	0.42	0.36	0.42	0.36	0.42	5.2.1
0.50	0.48	0.50	0.48	0.50	0.48	0.50	0.48	0.50	0.48	5.3
0.50	0.48	0.50	0.48	0.50	0.48	0.50	0.48	0.50	0.48	5.3
99.8	41.4	99.2	44.9	118.6	51.4	113.4	52.9	113	53.8	5.5
99.8	41.4	99.2	44.9	118.6	51.4	113.4	52.9	113	53.8	5.5
46	31	38	30	45	33	38	33	35	31	5.7
46	31	38	30	45	33	38	33	35	31	5.7
6.2	5.3	6.2	5.3	6.3	5.4	6.4	5.5	6.5	5.6	5.9
6	5.1	6.1	5.2	6.1	5.3	6.2	5.4	6.3	5.5	5.9
oil-immersed / wet disc		oil-immersed / wet disc		oil-immersed / wet disc		oil-immersed / wet disc		oil-immersed / wet disc		5.10

PERFORMANCE DATA

193	193	193	193	193	193	193	193	193	193	10.1
100	100	100	100	100	100	100	100	100	100	10.2
100	100	100	100	140	140	140	140	140	140	10.3
128	128	128	128	128	128	128	128	128	128	10.4
hydrostatic	hydrostatic	hydrostatic	hydrostatic	hydrostatic	hydrostatic	hydrostatic	hydrostatic	hydrostatic	hydrostatic	10.5
3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	10.6
73	73	73	73	73	73	73	73	73	73	10.7
107	107	107	107	107	107	107	107	107	107	10.7.1
yes / Pin	yes / Pin	yes / Pin	yes / Pin	yes / Pin	yes / Pin	yes / Pin	yes / Pin	yes / Pin	yes / Pin	10.8

ADDITIONAL DATA

H13-16XM-6: Complete truck with fully equipped cab, with 5310 mm BOF (5400 mm TOF) 2-stage lift mast, 2500 mm wide Integral Sideshift carriage and 1220 mm long forks.

(Note: Truck weight with open operator module instead of fully equipped cab is 400 kg less. For axle loadings with open operator module: Deduct 50 kg from the rear axle

loadings and deduct 350 kg from the front axle loadings.)

# MAST AND CAPACITY INFORMATION

## H8-10XMS-6 RATED CAPACITY KG @ 600 MM LOAD CENTRE

	Lift height (top of forks) h <sub>3</sub> (mm)	Lowered height h <sub>1</sub> (mm)	Free lift height (top of forks) h <sub>2</sub> (mm)	Overall extended height h <sub>4</sub> (mm)	Without Sideshift (kg)			With Sideshift (kg)		
					H8XM-6	H9XM-6	H10XMS-6	H8XM-6	H9XM-6	H10XMS-6
2-Stage standard	3750	3329 ★	0	5172 ★	8 600	9 500	10 600	8 000	9 000	10 000
	4650	3779 ★	0	6072 ★	8 600	9 500	10 600	8 000	9 000	10 000
	5400	4155 ★	0	6822 ★	8 600	9 500	10 600	8 000	9 000	10 000
3-Stage Full free lift	5600	3021 ★	1401	7006 ★	7 300	8 200	9740	7080	7980	9180
	6000	3154 ★	1534	7406 ★	7 160	8 060	9680	6940	7820	9140
	6500	3321 ★	1701	7906 ★	6 980	7 860	9440	6760	7640	8900
	7000	3487 ★	1867	8406 ★	6 780	7 640	9180	6580	7420	8700

## H10-12XM-6 RATED CAPACITY KG @ 600 MM LOAD CENTRE

	Lift height h <sub>3</sub> (mm)	Lowered height h <sub>1</sub> (mm)	Free lift height h <sub>2</sub> (mm)	Overall extended height h <sub>4</sub> (mm)	Without Sideshift (kg)		With Sideshift (kg)	
					H10XM-6	H12XM-6	H10XM-6	H12XM-6
2-Stage standard	3750	3630	-	5470	10 450	12 700	10 000	12 000
	4650	4080	-	6370	10 450	12 700	10 000	12 000
	5400	4455	-	7120	10 450	12 700	10 000	12 000
	6200	4855	-	7920	10 450	12 700	10 000	12 000
	6700	5105	-	8420	10 300	12 400	9 700	11 700
3-Stage Full free lift	5600	3046	1436	7030	10 060	11 240	9 440	10 720
	6000	3179	1570	7430	9 900	11 240	9 280	10 560
	6500	3346	1735	7930	9 680	11 020	9 080	10 360
	7000	3512	1900	8430	9 640	10 780	8 860	10 140

## H13-16XM-6 RATED CAPACITY KG @ 600 MM LOAD CENTRE

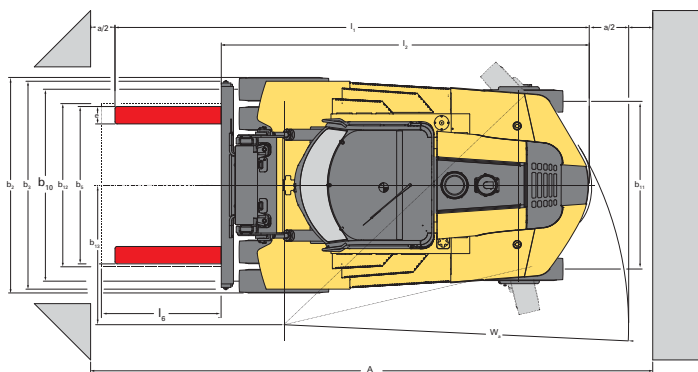
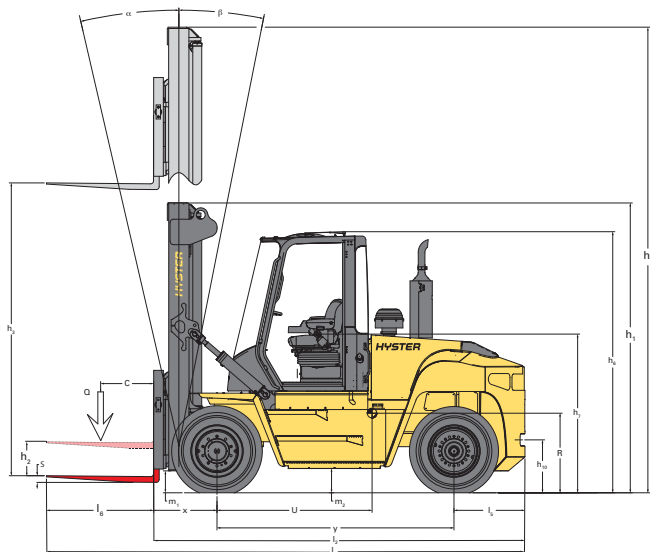
	Lift height (top of forks) h <sub>3</sub> (mm)	Lowered height h <sub>1</sub> (mm)	Free lift height (top of forks) h <sub>2</sub> (mm)	Overall extended height h <sub>4</sub> (mm)	Without Sideshift (kg)			With Sideshift (kg)		
					H13XM-6	H14XM-6	H16XMS-6	H13XM-6	H14XM-6	H16XMS-6
2-Stage standard	3750	3640	0	5470	13 600	15 000	16 400	13 000	14 000	16 000
	4650	4090	0	6370	13 600	15 000	16 400	13 000	14 000	16 000
	5400	4466	0	7120	13 600	15 000	16 400	13 000	14 000	16 000
	6200	4860	0	7920	13 600	15 000	16 400	13 000	14 000	16 000
	6700	5110	0	8420	13 450	14 800	16 200	12 700	13 800	15 800
3-Stage Full free lift	4400	3070	1300	6080	12 800	13 720	15 600	11 940	12 820	14 620
	5000	3270	1500	6680	12 740	13 260	15 540	11 880	12 760	14 560
	6000	3600	1830	7680	12 340	13 260	15 120	11 520	12 380	14 160
	7000	3940	2160	8680	11 760	12 680	14 520	10 980	11 840	13 600

The capacities quoted are in conformance with the ISO 1074 standard for stacking and travelling

## POWERTRAINS

1.3	Drive: electric (battery or mains), diesel, petrol, LPG	Diesel	Diesel	Diesel	
POWER UNIT	7.1	Engine manufacturer/type	Cummins QSB 6.7 Stage IIIA	Cummins QSB 4.5 Stage IIIB	Cummins QSB 6.7 Stage IIIB
	7.2	Engine power according ISO 1585 (nominal)	116 @ 2300	119 @ 2300	122 @ 2300
	7.2.1	Engine power according ISO 1585 (maximum)	116 @ 2300	122 @ 2200	125 @ 2200
	7.3	Rated speed	2300	2300	2300
	7.3.1	Torque (maximum)	597 @ 1500	624 @ 1500	732 @ 1500
	7.4	Number of cylinders/displacement	6 / 6700	4 / 4500	6/6700
7.5	Fuel consumption according VDI cycle	☞	☞	☞	
DRIVE TRAIN	8.1	Type of drive unit	hydrodynamic 3 speed	hydrodynamic 3 speed	hydrodynamic 3 speed
	8.2	Transmission manufacturer/type	ZF / WG161	ZF / WG161	ZF / WG161
	8.6	Wheel drive/drive axle manufacturer/type	Axle Tech / PRC 425	Axle Tech / PRC 425	Axle Tech / PRC 425
	8.11	Service brake	oil-immersed / wet disc	oil-immersed / wet disc	oil-immersed / wet disc
	8.12	Parking brake	dry disc on drive axle	dry disc on drive axle	dry disc on drive axle

# TRUCK DIMENSIONS



= Centre of gravity of unladen truck

$$A_{ST} = W_a + x + l_6 + a \text{ (if } b_{12}/2 < b_{13}\text{)}$$

$$A_{ST} = W_a + (l_6 - x)^2 + (b_{12} - b_{13})^2 + a \text{ (if } b_{12}/2 > b_{13}\text{)}$$

a = Minimum operating clearance  
(VDI standard = 200 mm BITA recommendation = 300 mm)

l<sub>6</sub> = load lengths

b<sub>12</sub> = load width

## NOTE:

Specifications are affected by the condition of the vehicle and how it is equipped, as well as the nature and condition of the operating area. If these specifications are critical, the proposed application should be discussed with your dealer.

- ¶ Bottom of forks
- ✦ Without load backrest
- h<sub>6</sub> +/- 3% tolerance depend on tyre inflated pressure / or tyre brand
- Full suspension seat in depressed position
- Add 50mm with load backrest
- ◆ Stacking aisle width is based on the VDI standard calculation as shown on illustration. The British Industrial Truck Association recommends the addition of 100 mm to the total clearance (dimension a) for extra operating margin at the rear of truck.
- † Gradeability figures (lines 5.7) are provided for comparison of tractive performance, but are not intended to endorse the operation of vehicle on the stated inclines. Follow instructions in the operating manual regarding operation on inclines.
- ✓ Optional equipment
- ‡ 90 cm<sup>3</sup> single hydraulic variable displacement pump
- ‡‡ 105 cm<sup>3</sup> dual hydraulic variable displacement pumps
- Optional on models H8-12XM-6 in XM version, standard on H13-16XM-6 in XM version.
- ◇ Measured according to the test cycles and based on the weighting values contained in EN12053.
- ☎ Data available on request, as values are dependent on application

## MAST TABLES:

- ★ Add 25 mm if optional 10.00 x 20 tyres are fitted

## NOTICE:

Care must be exercised when handling elevated loads. When the carriage and/or load is elevated, truck stability is reduced. It is important that mast tilt in either direction be kept to a minimum when loads are elevated. Operators must be trained and adhere to the instructions contained in the Operating Manual.

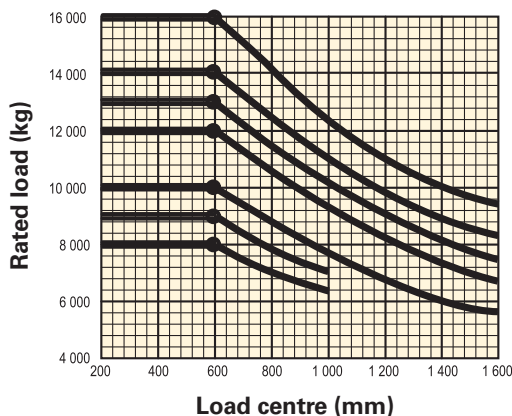
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Lift trucks illustrated may feature optional equipment.

## CE Safety:

This truck conforms to the current EU requirements.

# RATED CAPACITIES



## Load centre

Distance from front of forks to centre of gravity of load.

## Rated load

Based on vertical mast.

**H16XM-6**

**H14XM-6**

**H13XM-6**

**H12XM-6**

**H10XM-6**

**H9XM-6**

**H8XM-6**

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