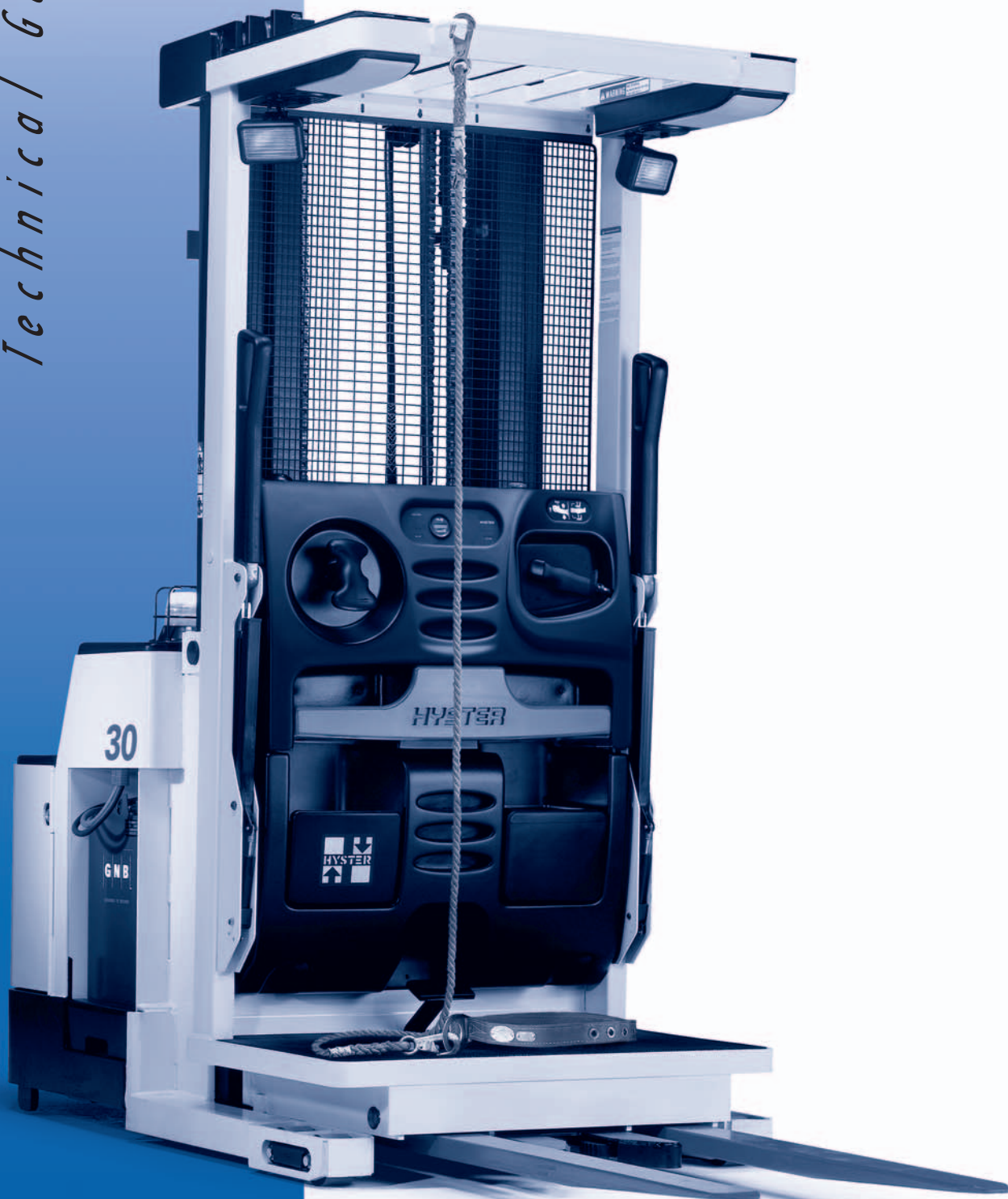
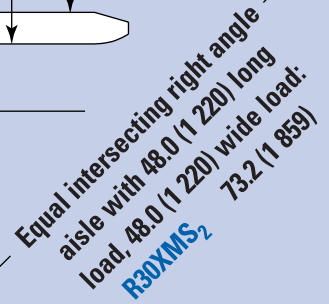




R30XMS₂ Order Picker

Technical Guide





Optional spring-assisted sidegates are shown on cover.



Hyster R30XMS₂ OrderPicker Truck Specifications

GENERAL	1	Manufacturer		Hyster Company
	2	Model		R30XMS ₂
	3	Capacity, rated	lb. (kg)	3,000 (1 360)
	4	Load center	in. (mm)	24.0 (610)
	5	Power type		24 Volt
	6	Operator type		Stand
	7	Tire type, front / rear	load / drive	Poly / Poly
	8	Wheels, front / rear (X=driven)	front / rear	4 / 1X
DIMENSIONS	10	2-Stage / 3-Stage VISTA (TOF)	in. (mm)	SEE CHART
	11	Operator Clearance height	in. (mm)	78.4 (1 991)
	12	Forks, width / thickness	in. (mm)	4.0 (102) / 1.75 (45)
	13	Fork spread, inside to inside minimum / maximum	in. (mm)	13.0 (330) / 20.0 (508)
		Fork spread, outside to outside - minimum / maximum	in. (mm)	21.0 (533) / 28.0 (711)
	14	Top of fork, mast lowered	in. (mm)	3.0 (76)
	15	Head length, length to face of forks 2-Stg. / 3-Stg. (std)	in. (mm)	72.0 (1 829) / 73.0 (1 854)
	16	Base width 41" / width across guide rollers	in. (mm)	41.3 (1 049) / 48.3 (1 227)
		Base width 48" / width across guide rollers	in. (mm)	48.0 (1 220) / 55.0 (1 395)
	17	Height, std. mast lowered (3-stage)	in. (mm)	89.0 (2 261)
	18	Height, std. mast extended (3-stage)	in. (mm)	221.4 (5 624)
	19	Operators platform size Length / Width	in. (mm)	40.0 (1 016) / 27.5 (699)
	20	Turning radius, minimum outside	in. (mm)	65.9 (1 674)
	21	Stacking aisle, zero clearance w/ 48" std. load 2-Stg/3-Stg	in. (mm)	121.4 (3 084) / 122.4 (3 109)
	22	Intersecting aisle, equal aisles 48" x 48" pallet	in. (mm)	73.2 (1 859)
PERF. † ^	23	Stability, comply with ANSI? ~ *		YES
	24	Travel speed std truck, NL / RL •	mph (km/h)	6.0 (9.7) / 5.5 (8.9)
	25	Lift speed, 2-Stage VISTA mast NL/RL	ft/min (m/s)	40.0 (0.20) / 25.0 (0.13)
		Lift speed, 3-stage VISTA mast NL / RL	ft/min (m/s)	42.0 (0.21) / 26.0 (0.13)
	26	Lowering, 2-Stage VISTA mast NL / RL	ft/min (m/s)	42.0 (0.21) / 42.0 (0.21)
		Lowering, 3-Stage VISTA mast NL / RL	ft/min (m/s)	52.0 (0.26) / 48.0 (0.24)
WT.	27	Total approximate weight w/o battery	lb. (kg)	4,600 (2 090)
	28	Axle loading, static, rated load front / rear (max. batt.)	lb. (kg)	7,100 (3 225) / 1,600 (727)
WHL & TIRES	29	Size of tires, front	in. (mm)	4.0 x 3.0 (102 x 76)
	30	Size of tire, rear (drive/steer)	in. (mm)	12.0 x 5.5 (305 x 140)
	31	Wheelbase	in. (mm)	55.1 (1 400)
	32	Ground clearance, no load, lowest point	in. (mm)	0.6 (14)
	33	Ground clearance, no load, center wheelbase.	in. (mm)	1.0 (25.4)
ELECTRIC	34	Brakes, method of control, service / parking		Foot
	35	Brakes, method of operation, service / parking		Spring Applied / Electric Release
	36	Battery, type		Lead-Acid
	37	Battery, volts / ampere hours (maximum)	V/ah	24 (1 100)
	38	Battery, minimum weight	lb. (kg)	1,025 (2 255)
	39	Traction motor control method		Curtis SepEx [®] Transistor
	40	Pump motor control method		Contactora
	41	Number of travel speeds		Infinitely Variable

* **CERTIFICATION:** These Hyster lift trucks meet design specifications of Part II ANSI B56.1-1969, as required by OSHA Section 1910.178 (a) (2) and also comply with Part III ANSI B56.1-revision in effect at time of manufacture. Certification of compliance with the applicable ANSI standards appears on the lift truck.

† **NOTE:** Performance specifications are for truck equipped as described under **Standard Equipment** in the Technical Guide. Performance 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 applications should be discussed with your dealer.

~ **Important:** In rail or wire guided applications, floor flatness and condition are critical to the operation of this vehicle.
Contact your Hyster lift truck dealer for wire guidance specifications.

^ Rated Load figures are based on 3,000 lb (1 361 kg) load.

• Travel speeds up to 60.0" (1 524 mm).



Hyster R30XMS₂ OrderPicker Truck Specifications

MAST DIMENSIONS		in (mm)	
Maximum Fork Height (Top of Forks)	Overall Lowered Height	Overall Extended Height	Total Truck Weight (Excluding battery) lb. (kg)
2-STAGE VISTA			
135.0 (3 429)	89.0 (2 261)	221.4 (5 624)	4,100 (1 865)
147.0 (3 734)	95.0 (2 413)	233.4 (5 928)	4,200 (1 910)
165.0 (4 191)	105.0 (2 667)	251.4 (6 386)	4,300 (1 955)
3-STAGE VISTA			
195.0 (4 953)	89.0 (2 261)	281.4 (7 148)	4,500 (2 045)
213.0 (5 410)	95.0 (2 413)	299.4 (7 605)	4,600 (2 090)
240.0 (6 095)	105.0 (2 667)	326.4 (8 291)	4,700 (2 136)

TRAVEL SPEEDS		NL / RL
	STEER ANGLE FROM CENTER LINE OF TRUCK	
Fork Height	Less than 10°	Greater than 10°
0"	5.5 / 6.0 MPH	5.5 / 6.0 MPH
24"	5.5 / 6.0 MPH	3.0 / 3.3 MPH
60"	5.5 / 6.0 MPH	NO TRAVEL
116"	3.0 / 3.3 MPH	NO TRAVEL
150"	2.0 / 2.2 MPH	NO TRAVEL
195"	* 1.0 / 1.1 MPH	NO TRAVEL
212"	* 1.0 / 1.1 MPH	NO TRAVEL
OVER 212"	NO TRAVEL	NO TRAVEL
NOTE: Speed limits are for loaded/unloaded trucks at operating temperature with fully charged battery. • For lift heights between 24.0" (610 mm) and 60.0" (1 524 mm), traction speed is reduced when steering angle exceeds 10 degrees. • TOLERANCE: RL SPEEDS +0 / - 0.5 MPH NL SPEEDS ARE REF. * Travel above 150" (3 810 mm) fork height requires a High-level traction option. Capacity reduction required. Contact your local Hyster lift truck dealer for additional information.		



Specifications, Standard Features and Options

BATTERY SPECIFICATIONS							in.		mm		BATTERY	
Compartment Size				Battery Maximum Size*			Electrical Specifications				lb. kg	lb. kg
MODEL	Length	Width	Height	Length	Width	Height	Volt	Plates	Capacity-6 HR. Rate			
									Max AH	Max KWH	Minimum	Maximum
R30XMS ₂	36.0	13.5	24.7	35.9	13.3	23.3	24	15	770	17.8	1,025	1,210
	914	343	627	912	338	592					465	549
SB 175 Connector - 16.0" (405 mm), maximum 1/0 gauge cable, B position, red.												
* Length, Width, and Height (Length installed side to side of truck, Width installed front to back of truck).												

PERFORMANCE		NOTE: Performance specifications are for truck described under Standard Equipment on back of Technical Guide. Performance 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.				
LIFTING-LOWERING						
	MAST TYPE	VOLT	NO LOAD		RATED LOAD	
			ft./min.	m/s	ft./min.	m/s
LIFTING	2-Stage VISTA	24	40.0	0.20	25.0	0.13
	3-Stage VISTA	24	42.0	0.21	26.0	0.13
LOWERING	2-Stage VISTA	24	42.0	0.21	42.0	0.21
	3-Stage VISTA	24	52.0	0.26	48.0	0.24

CAPACITY:

Model R30XMS₂ OrderPicker :

3,000 lbs (1 361 kg) at 24.0" (610 mm) load center

Rated capacity is for truck equipped with:

- 3-stage VISTA® mast with a maximum fork height of 213.0" (5 410 mm).
- Base width is 48" (1 219 mm) or 41" (1 041mm) depending on fork height.
- Minimum battery weight is 1,025 lbs. (465 kg).

STANDARD EQUIPMENT:

Complete R30XMS₂ comes standard with: 24 volt electrical system • Curtis SepEx® transistor control with Auto Deceleration

System (ADS) and automatic field control • Controller Area Network (CAN) communications • HySense™ continuous height sensing • 213.0" 3-stage VISTA mast • 42.0" forks • return-to-center electric power steering • single speed lift/lower • battery compartment rollers • pallet clamp • polyurethane drive tire (12" x 5.5")(80 Durometer) • articulating tandem polyurethane load wheels • adjustable fork widths • fixed hoop side rails • amber strobe light • power fuses • electronic power disconnect with key reset • backlit hour meter display includes alphanumeric messaging and battery discharge indicator with lift interrupt • slack chain indicator • cantilever operator's overhead guard • spacious operator's platform (27.5" deep by 40.0" wide) • anti-fatigue floormat

- operator amenities: storage pockets, removable trash bin & cupholder • wire mesh screen • operator tether line and belt • static discharge strap • SB 175 (red) battery connector • electronic horn
- U.L. Classification type E

Optional items include:

- 2- and 3-Stage VISTA masts • variable fork lengths • 6" vertical adjustment of operator control panel • 2-speed upper body ventilation fan • multi-turn steering w/ LED direction Indicator • base arm guide rollers
- retractable side gates with traction cutout interlocks • overhead light and fan packages • Hyster wire guidance • mast lift limit • High-level traction package
- battery stand • battery puller • fire extinguisher

MASTS

VISTA 2- or 3-stage masts are available. Masts feature a nested channel design and full-face, straight load rollers. Brass side wear plugs allow easy mast adjustment during periodic maintenance without removal or disassembly of mast. Leaf-type chains used for strength and compact size.

CARRIAGE / PLATFORM

R30XMS₂ has a 40.0" (1 016 mm) operator platform; a pallet clamp that grips and centers pallets automatically.

Fork spacing: minimum inside-to-inside is 13.0" (330 mm); maximum outside-to-outside is 28.0" (711 mm).

FORKS

1.75" x 4.0" x 36.0", 42.0", or 48.0" (45 x 100 x 915, 1 065, or 1 220 mm)

ELECTRICAL SYSTEM

Curtis SepEx® transistor control system benefits include:



Standard Features and Options

- Long battery shift life
- Smooth, adjustable, time-controlled acceleration
- Adjustable plugging and Auto Deceleration System (ADS)

Controller Area Network (CANbus) technology, an electrical system, has improved reliability and reduced wire complexity. Electrical system mast wiring has been reduced in number to provide improved durability. The CANbus controller has been sealed for protection from moisture and dirt.

Single point diagnostics provides the steering system, traction system and optional wire guidance information on an easy viewing backlit dash display. Diagnostics program permits the service technician to view information codes without use of handset or laptop computer.

By using the Hall effect sensor for traction speed, it reduces maintenance, increases life span, and increases its reliability.

STEERING SYSTEM

Brushless DC steering system has eliminated maintenance requirements. Utilizing a solid-state encoder, durability has been increased. Hence return-to-center (RTC) steering and our optional multi-turn steering systems require less maintenance.

RTC steering increases productivity and reduces operator fatigue by enabling operator to steer truck with minimal wrist movements. The RTC handle allows the operator to comfortably grip and operate the truck in either fork-first or chassis-first direction. The redesigned cover provides a comfortable rest for forearm comfort while driving in the fork-first direction.

Optional wire guidance system can operate on the line frequency of either a 6.25 or 5.2 kHz setting.

Steer tire position is monitored by the encoder. Our RTC and optional multi-turn steering systems feature this auto-centering of the steer tire at power start-up.

HYDRAULIC SYSTEM

A twenty-five micron return line filter inside the 3.75 gallon (14.25 L) hydraulic tank reduces foaming of returning hydraulic fluid. Filter is easily replaced without need to drain tank.

A sight gauge allows quick checking of oil level without removing hydraulic tank cover.

Five inch diameter pump motor is coupled to pressure-balanced pump for efficiency. In-line accumulator provides smooth hoist starting and stopping.

DRIVE TRAIN / TRACTION SYSTEM

HySense is a standard feature which allows travel speed to be reduced linearly at platform heights between 60.0" (1 524 mm) and 150.0" (3 810 mm) to optimize stepless travel speed at various fork heights. The control system will also reduce travel speed when the drive unit has been turned more than 10 degrees in either direction and when the platform is above 24.0" (610 mm). Mast height is monitored by a solid-state optical encoder which requires little maintenance.

SEM traction motor is fan cooled and uses Class H insulation for durability. Non-rotating motor mounting eliminates power lead twisting. Drive unit incorporates roller bearing system and oil bath gear lubrication for efficient operation and long life. 180 degree steering angle offers excellent maneuverability.

The R30XMS₂ comes equipped with the GK series drive unit with gear drive steering. Less maintenance is required because the steering chain adjustment has been eliminated, there are less parts to maintain and the turntable bearing is replaceable. All of these factors lead to an increase in the service life of the unit.

Tandem polyurethane load wheels articulate to share load evenly and diminish truck reaction to floor irregularities. All welded box section load wheel hangers provide exceptional protection against bending and shield wheels from impacts. Double sealed bearings and single bolt installation simplify each load wheel replacement. No shimmiing or additional lubrication required.

PARK BRAKE

Non-asbestos disk-type park brake is spring-applied and electrically released. Park brake is mounted on top of traction motor to take full advantage of drive train reduction.

Brakes are controlled by foot switch in operator's platform. Release of foot switch plugs the truck to a stop and then applies

the brake. Plugging is reduced at elevated heights for smoother braking performance and increased operator comfort.

OPERATOR AREA

The operator area of the R30XMS₂ truck has been designed for operator comfort and operating ease. Features include removable trash bin, cup holder, and storage for items such as clipboards, bar code scanners, and other amenities.

The optional overhead light illuminates the operator compartment, fork area, and bins for better visibility within the operator area. The optional overhead 2-speed fan allows the operator to adequately ventilate ones upper body by positioning the adjustable louvers to direct airflow.

RTC soft touch steering handle allows the operator to comfortably operate fork-first or chassis-first.

For added comfort, the operator is able to adjust the console height within a 6.0" (152 mm) vertical range and lock the console into place once a comfortable driving height has been reached (optional). The floormat offers supportive comfort.

The foot switch has been positioned to allow the operator to stand in a comfortable, natural stance on the platform.

Optional retractable side gates are gas spring assisted and operated with minimum effort.

Automatic interrupt deactivates lowering and traction functions if forks are hung up.

The new ergonomic multifunction handle is thumb-actuated for single speed lift and lower functions, trigger style horn, and possess a comfortable grip for either chassis- or fork-first driving. The multifunction handle can be adjusted to one of three positions for comfortable operation.

Special attachments, equipment or accessories not listed above may be available through Applications Engineering for specific requirements.



Hyster Company

P.O. Box 7006
Greenville, North Carolina
27835-7006

Part No. R30XMS2/TG

6/2002 Litho in U.S.A.

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