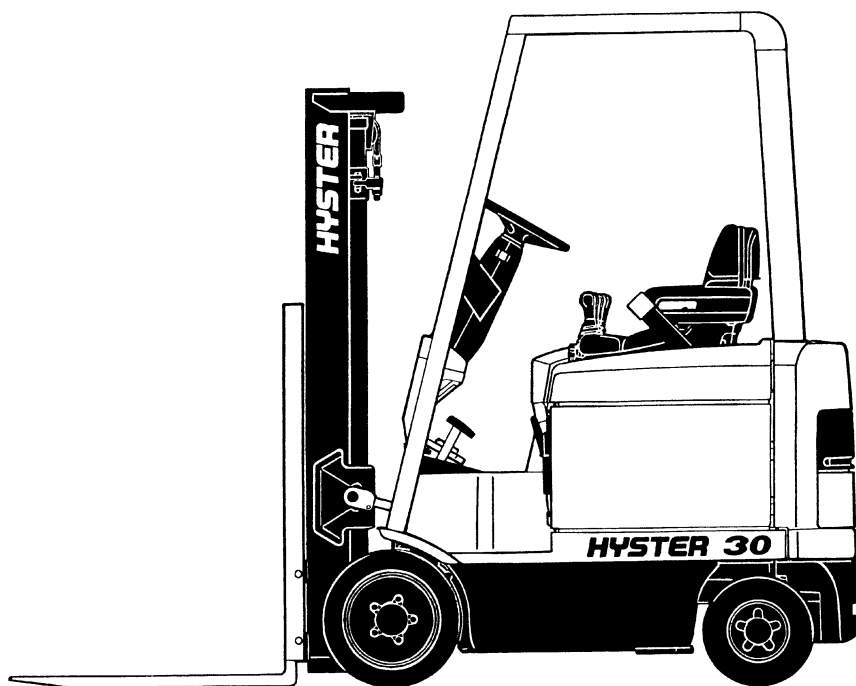


CAPACITIES AND SPECIFICATIONS

E1.50-1.75XM (E25-45XM, E25-45XM₂) [D114];
E2.00XMS (E40XMS, E40XM₂S) [D114]



HM210633

HYSTER

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This section is for the following models:

E1.50-1.75XM (E25-45XM, E25-45XM₂) [D114];
 E2.00XMS (E40XMS, E40XM₂S) [D114]

Wheels and Tires

Item	Specification
Torque Value of Drive Wheel Bolts	330 N•m (243 lbf ft)
Torque Value of Steer Wheel Nuts (Pneumatic)	155 N•m (114 lbf ft)
Torque Value of Spindle Nut for Steer Wheels	68 N•m (50 lbf ft), loosen, then 3 N•m (2 lbf ft)
Size of Standard Drive Tires	18 × 5 × 12-1/8*
Size of Optional Drive Tires	18 × 5 × 12-1/8*
Size of Standard Steer Tires	14 × 4-1/2 × 8*
Size of Optional Steer Tires	15 × 5 × 11-1/4*
*Electric Compound Tires are available in smooth or lug tread. Polyurethane and nonmarking compounds are only available on smooth tread. NEVER mix types of tread or tire compound on the same truck.	

Counterweights

Model	Weight +30 kg (66 lb) -0 kg (0 lb)
(E25XM, E25XM ₂)	337 kg (743 lb)
E1.50XM, (E30XM, E30XM ₂)	514 kg (1133 lb)
E1.75XM (E35XM, E35XM ₂)	626 kg (1380 lb)
E2.00XMS (E40XMS, E40XM ₂ S)	739 kg (1629 lb)

Hydraulic System

Item	Specification
Relief Pressure, Lift System	17.9 ±0.3 MPa (2600 ±45 psi)
Relief Pressure, Tilt System	15.75 ±0.3 MPa (2250 ±45 psi)
Relief Pressure, Auxiliary	15.75 ±0.3 MPa (2250 ±45 psi)
Relief Pressure, Steering System	5400 ±345 kPa (783 ±50 psi)
*Oil temperature 54 to 66°C (130 to 150°F).	

Capacities

Item	Specification
Hydraulic System (Full Mark On Dipstick)*	11.3 liter (3.0 gal)
Differential/Speed Reducer	2.9 liter (3.1 qt)
Brake Fluid	0.24 liter (0.5 pt)
Hydraulic Pump Capacities**	
Large Lift Pump	19 cc/rev. (1.16 in ³ /rev.)
Small Lift Pumps	12 cc/rev. (0.73 in ³ /rev.)
Steering Pump	4.23 cc/rev. (0.26 in ³ /rev.)
*Check after all air is removed from the system and with the mast fully lowered.	
**Oil temperature at 54 to 66°C (130 to 150°F).	

(More Content includes: Brake system, Capacities, and specifications, Frame, Hydraulic, System, Industrial battery, Main control, Valve, Mast repair, Fasteners, Schematics diagrams, Steering axle, Steering system, Wire harness repair And more)

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Battery Specifications

Model	Min. Compartment Size Length × Width	Battery Size Minimum/ Maximum*		Weight	
		Length	Width	Minimum	Maximum
(E25XM, E25XM ₂)	695 × 879 mm (27.4 × 34.6 in.)	784/876 mm (30.9/34.5 in.)	654/692 mm (25.8/ 27.2 in.)	794 kg (1750 lb)	1132 kg (2496 lb)
E1.50XM (E30XM, E30XM ₂)				839 kg (1850 lb)	
E1.75XM (E35XM, E35XM ₂)				917 kg (2022 lb)	
E2.00XM (E40XMS, E40XM ₂ S)				943 kg (2079 lb)	
(E25XM, E25XM ₂)	695 × 909 mm (27.4 × 35.8 in.)	784/876 mm (30.9/34.5 in.)		794 kg (1750 lb)	
E1.50XM (E30XM, E30XM ₂)				839 kg (1850 lb)	
E1.75XM (E35XM, E35XM ₂)				917 kg (2022 lb)	
E2.00XM (E40XMS, E40XM ₂ S)				943 kg (2079 lb)	

617 mm (24.3 in.) = maximum height for all batteries. This dimension is 31.75 mm (1.25 in.) less with optional battery rollers.

Tolerances of the battery compartment are +3 and -0 mm (+0.12 and -0 in.). The battery size column shows the size range that will permit the battery to still fit into a battery compartment.

Battery compartment length is front to back. Width is side to side. The length dimension of the battery must fit within the battery compartment side-to-side dimension with a clearance of 0 to 13 mm (0 to 0.5 in.) maximum. Battery width must fit within the battery compartment front-to-back dimension.



WARNING

The battery must fit the battery compartment so that the battery restraint system will operate correctly. Use only batteries with the correct length shown in this table. Adjust the spacer plate and side spacers to prevent the battery from moving more than 13 mm (0.5 in.) forward or backward.

BATTERY HEIGHT SPECIFICATIONS (HOODS AND BATTERY TYPES)

Model	Battery Type	Maximum Height - Standard Hood			
		With Battery Tray*	With Cell Cap**	Cell Connectors and Terminals	
				Electrically Insulated***	Not Electrically Insulated**
E1.50-2.00XMS (E25-40XMS, E25-40XM₂S)	I	607 mm (23.9 in.)	594 mm (23.4 in.)	594 mm (23.4 in.)	574 mm (22.6 in.)
E1.50-2.00XMS (E25-40XMS, E25-40XM₂S)	II, III		NA	NA	NA

NA = Not Applicable

BATTERY TYPES

TYPE I - Battery without a cover as part of the battery.

TYPE II - Battery with a cover that is flat and is fastened to case of battery. Cover opens from FRONT OR REAR when installed in lift truck.

TYPE III - Battery with a cover that is flat and is fastened to case of battery. Cover opens from SIDE when installed in lift truck.

*Battery Types II and III bottom of battery to highest point (top of cover or top of hinge).

**Minimum height below top of battery tray is 4 mm (0.16 in.).

***Minimum height below top of battery tray is 0.5 mm (0.02 in.).



WARNING

The battery must fit the battery compartment so that the battery restraint system will operate correctly. Use only batteries with the correct length shown in the table above. Adjust the spacer plate and side spacers to prevent the battery from moving more than 13 mm (0.5 in.) forward, backward, or to the side.

Model	Battery Type	Maximum Height - Raised Hood			
		With Battery Tray*	With Cell Cap**	Cell Connectors and Terminals	
				Electrically Insulated***	Not Electrically Insulated**
E1.50-2.00XMS (E25-40XMS, E25-40XM ₂ S)	I	640 mm (25.2 in.)	625 mm (24.6 in.)	627 mm (24.7 in.)	607 mm (23.9 in.)
E1.50-2.00XMS (E25-40XMS, E25-40XM ₂ S)	II, III		NA	NA	NA

NA = Not Applicable

BATTERY TYPES

TYPE I - Battery without a cover as part of the battery.

TYPE II - Battery with a cover that is flat and is fastened to case of battery. Cover opens from FRONT OR REAR when installed in lift truck.

TYPE III - Battery with a cover that is flat and is fastened to case of battery. Cover opens from SIDE when installed in lift truck.

*Battery Types II and III bottom of battery to highest point (top of cover or top of hinge).

**Minimum height below top of battery tray is 4 mm (0.16 in.).

***Minimum height below top of battery tray is 0.5 mm (0.02 in.).



WARNING

The battery must fit the battery compartment so that the battery restraint system will operate correctly. Use only batteries with the correct length shown in the table above. Adjust the spacer plate and side spacers to prevent the battery from moving more than 13 mm (0.5 in.) forward, backward, or to the side.

Maximum Carriage and Tilt Creep Rates

Hydraulic Oil Temperature	Vertical Creep at Carriage		Tilt Creep at Cylinder Rod		
	mm/Min	in./Min	°/Min	mm/Min	in./Min
20°C (68°F)	2.2 mm	0.09 in.	0.10°	0.63 mm	0.03 in.
30°C (86°F)	3.3 mm	0.13 in.	0.15°	0.95 mm	0.04 in.
40°C (104°F)	6.3 mm	0.25 in.	0.29°	1.83 mm	0.07 in.
50°C (122°F)	10.0 mm	0.39 in.	0.47°	2.97 mm	0.12 in.
60°C (140°F)	14.6 mm	0.57 in.	0.68°	4.30 mm	0.17 in.

Mast Speeds

E25-40XM MAST SPEEDS (36 AND 48 VOLT) AMERICAS

Contactor Controlled 184 mm (7.25 in.) Motor and 19 cc (1.16 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E25XM	Two-Stage LFL	36	0.396	78	0.544	107	0.508	100	0.472	93
		48	0.508	100	0.681	134				
	Two-Stage FFL	36	0.396	78	0.538	106	0.462	91	0.371	73
48		0.508	100	0.671	132					
E30XM	Two-Stage LFL	36	0.381	75	0.544	107	0.508	100	0.472	93
		48	0.488	96	0.681	134				
	Two-Stage FFL	36	0.376	74	0.538	106	0.462	91	0.371	73
48		0.483	95	0.671	132					
E35XM	Two-Stage LFL	36	0.361	71	0.544	107	0.508	100	0.472	93
		48	0.467	92	0.681	134				
	Two-Stage FFL	36	0.356	70	0.538	106	0.462	91	0.371	73
48		0.467	92	0.671	132					
E35XM	Three-Stage FFL	36	0.366	72	0.518	102	0.478	94	0.411	81
		48	0.478	94	0.650	128				
	Three-Stage FFL	36	0.351	69	0.518	102	0.478	94	0.411	81
48		0.457	90	0.650	128					

LFL = Limited Free Lift
 FFL = Full Free Lift
 *Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

Contactor Controlled 184 mm (7.25 in.) Motor and 19 cc (1.16 in.³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E40XMS	Two-Stage LFL	36 48	0.340 0.447	67 88	0.544 0.681	107 134	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.335 0.447	66 88	0.538 0.671	106 132	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.330 0.437	65 86	0.518 0.650	102 128	0.478	94	0.411	81

LFL = Limited Free Lift
 FFL = Full Free Lift
 *Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

Tran. or SCR Controlled 184 mm (7.25 in.) Motor and 19 cc (1.16 in.³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E25XM	Two-Stage LFL	36 48	0.361 0.483	71 95	0.513 0.655	101 129	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.361 0.483	71 95	0.508 0.650	100 128	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.351 0.472	69 93	0.488 0.625	96 123	0.478	94	0.411	81

LFL = Limited Free Lift
 FFL = Full Free Lift
 *Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

Tran. or SCR Controlled 184 mm (7.25 in.) Motor and 19 cc (1.16 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E30XM	Two-Stage LFL	36 48	0.345 0.462	68 91	0.513 0.655	101 129	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.340 0.462	67 91	0.508 0.650	100 128	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.335 0.452	66 89	0.488 0.625	96 123	0.478	94	0.411	81
E35XM	Two-Stage LFL	36 48	0.325 0.442	64 87	0.513 0.655	101 129	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.325 0.442	64 87	0.508 0.650	100 128	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.315 0.432	62 85	0.488 0.625	96 123	0.478	94	0.411	81
E40XMS	Two-Stage LFL	36 48	0.305 0.422	60 83	0.513 0.655	101 129	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.300 0.422	59 83	0.508 0.650	100 128	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.295 0.411	58 81	0.488 0.625	96 123	0.478	94	0.411	81

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

Contactor Controlled 184 mm (7.25 in.) Motor and 12 cc (0.73 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E25XM	Two-Stage LFL	36 48	0.213 0.295	42 58	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.213 0.295	42 58	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.208 0.290	41 57	0.284 0.376	56 74	0.478	94	0.411	81
E30XM	Two-Stage LFL	36 48	0.203 0.284	40 56	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.203 0.284	40 56	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.198 0.279	39 55	0.284 0.376	56 74	0.478	94	0.411	81
E35XM	Two-Stage LFL	36 48	0.193 0.274	38 54	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.193 0.269	38 53	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.188 0.264	37 52	0.284 0.376	56 74	0.478	94	0.411	81
E40XMS	Two-Stage LFL	36 48	0.183 0.259	36 51	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.183 0.259	36 51	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.178 0.254	35 50	0.284 0.376	56 74	0.478	94	0.411	81

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

Contactor Controlled 169 mm (6.65 in.) Motor and 12 cc (0.73 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E25XM	Two-Stage LFL	36 48	0.259 0.361	51 71	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.254 0.356	50 70	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.249 0.351	49 69	0.284 0.376	56 74	0.478	94	0.411	81
E30XM	Two-Stage LFL	36 48	0.244 0.340	48 67	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.244 0.340	48 67	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.239 0.335	47 66	0.284 0.376	56 74	0.478	94	0.411	81
E35XM	Two-Stage LFL	36 48	0.229 0.325	45 64	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.229 0.325	45 64	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.224 0.320	44 63	0.284 0.376	56 74	0.478	94	0.411	81

LFL = Limited Free Lift

FFL = Full Free Lift

*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

Contactor Controlled 169 mm (6.65 in.) Motor and 12 cc (0.73 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E40XMS	Two-Stage LFL	36 48	0.218 0.310	43 61	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.218 0.310	43 61	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.213 0.300	42 59	0.284 0.376	56 74	0.478	94	0.411	81

LFL = Limited Free Lift
 FFL = Full Free Lift
 *Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

E1.50-2.00XM MAST SPEEDS (48 VOLT) EUROPE

Contactor Controlled 184 mm (7.2 in.) Motor and 19 cc (1.16 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E1.50XM	Two-Stage LFL	48	0.472	93	0.681	134	0.508	100	0.472	93
	Two-Stage FFL	48	0.472	93	0.671	132	0.462	91	0.371	73
	Three-Stage FFL	48	0.462	91	0.650	128	0.478	94	0.411	81

LFL = Limited Free Lift
 FFL = Full Free Lift
 *Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 500 mm (19.7 in.).

Contactor Controlled 184 mm (7.2 in.) Motor and 19 cc (1.16 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E1.75XM	Two-Stage LFL	48	0.452	89	0.681	134	0.508	100	0.472	93
	Two-Stage FFL	48	0.447	88	0.671	132	0.462	91	0.371	73
	Three-Stage FFL	48	0.437	86	0.650	128	0.478	94	0.411	81
E2.00XMS	Two-Stage LFL	48	0.427	84	0.681	134	0.508	100	0.472	93
	Two-Stage FFL	48	0.427	84	0.671	132	0.462	91	0.371	73
	Three-Stage FFL	48	0.417	82	0.650	128	0.478	94	0.411	81

LFL = Limited Free Lift
 FFL = Full Free Lift
 *Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 500 mm (19.7 in.).

Contactor Controlled 169 mm (6.7 in.) Motor and 12 cc (0.73 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E1.50XM	Two-Stage LFL	48	0.330	65	0.503	99	0.508	100	0.472	93
	Two-Stage FFL	48	0.330	65	0.493	97	0.462	91	0.371	73
	Three-Stage FFL	48	0.325	64	0.472	93	0.478	94	0.411	81
E1.75XM	Two-Stage LFL	48	0.315	62	0.503	99	0.508	100	0.472	93
	Two-Stage FFL	48	0.310	61	0.493	97	0.462	91	0.371	73
	Three-Stage FFL	48	0.305	60	0.472	93	0.478	94	0.411	81
E2.00XMS	Two-Stage LFL	48	0.295	58	0.503	99	0.508	100	0.472	93
	Two-Stage FFL	48	0.295	58	0.493	97	0.462	91	0.371	73
	Three-Stage FFL	48	0.284	56	0.472	93	0.478	94	0.411	81

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 500 mm (19.7 in.).

Transistor Controlled 184 mm (7.2 in.) Motor and 19 cc (1.16 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E1.50XM	Two-Stage LFL	48	0.447	88	0.655	129	0.508	100	0.472	93
	Two-Stage FFL	48	0.447	88	0.650	128	0.462	91	0.371	73
	Three-Stage FFL	48	0.437	86	0.625	123	0.478	94	0.411	81
E1.75XM	Two-Stage LFL	48	0.427	84	0.655	129	0.508	100	0.472	93
	Two-Stage FFL	48	0.422	83	0.650	128	0.462	91	0.371	73
	Three-Stage FFL	48	0.417	82	0.625	123	0.478	94	0.411	81
E2.00XMS	Two-Stage LFL	48	0.406	80	0.655	129	0.508	100	0.472	93
	Two-Stage FFL	48	0.401	79	0.650	128	0.462	91	0.371	73
	Three-Stage FFL	48	0.396	78	0.625	123	0.478	94	0.411	81

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 500 mm (19.7 in.).

Transistor Controlled 169 mm (6.7 in.)m Motor and 12 cc (0.73 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E1.50XM	Two-Stage LFL	48	0.315	62	0.478	94	0.508	100	0.472	93
	Two-Stage FFL	48	0.315	62	0.472	93	0.462	91	0.371	73
	Three-Stage FFL	48	0.305	60	0.447	88	0.478	94	0.411	81
E1.75XM	Two-Stage LFL	48	0.300	59	0.478	94	0.508	100	0.472	93
	Two-Stage FFL	48	0.295	58	0.472	93	0.462	91	0.371	73
	Three-Stage FFL	48	0.290	57	0.447	88	0.478	94	0.411	81
E2.00XMS	Two-Stage LFL	48	0.279	55	0.478	94	0.508	100	0.472	93
	Two-Stage FFL	48	0.279	55	0.472	93	0.462	91	0.371	73
	Three-Stage FFL	48	0.274	54	0.447	88	0.478	94	0.411	81

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 500 mm (19.7 in.).

E25-40XM, E25-40XM₂ MAST SPEEDS AMERICAS

184 mm (7.25 in.) Motor and 19 cc (1.16 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E25XM E25XM₂	Two-Stage LFL	36 48	0.396 0.508	78 100	0.544 0.681	107 134	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.396 0.508	78 100	0.538 0.671	106 132	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.386 0.498	76 98	0.518 0.650	102 128	0.478	94	0.411	81
E30XM E30XM₂	Two-Stage LFL	36 48	0.381 0.488	75 96	0.544 0.681	107 134	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.376 0.483	74 95	0.538 0.671	106 132	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.366 0.478	72 94	0.518 0.650	102 128	0.478	94	0.411	81
E35XM E35XM₂	Two-Stage LFL	36 48	0.361 0.467	71 92	0.544 0.681	107 134	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.356 0.467	70 92	0.538 0.671	106 132	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.351 0.457	69 90	0.518 0.650	102 128	0.478	94	0.411	81

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

184 mm (7.25 in.) Motor and 19 cc (1.16 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E40XM E40XM ₂	Two-Stage LFL	36	0.340	67	0.544	107	0.508	100	0.472	93
		48	0.447	88	0.681	134				
	Two-Stage FFL	36	0.335	66	0.538	106	0.462	91	0.371	73
48		0.447	88	0.671	132					
Three-Stage FFL	36	0.330	65	0.518	102	0.478	94	0.411	81	
	48	0.432	85	0.650	128					

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

184 mm (7.25 in.) Motor and 12 cc (0.73 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E25XM E25XM ₂	Two-Stage LFL	36	0.213	42	0.305	60	0.508	100	0.472	93
		48	0.295	58	0.396	78				
	Two-Stage FFL	36	0.213	42	0.300	59	0.462	91	0.371	73
48		0.295	58	0.391	77					
Three-Stage FFL	36	0.208	41	0.284	56	0.478	94	0.411	81	
	48	0.290	57	0.376	74					

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

184 mm (7.25 in.) Motor and 12 cc (0.73 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E30XM E30XM₂	Two-Stage LFL	36 48	0.203 0.284	40 56	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.203 0.284	40 56	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.198 0.279	39 55	0.284 0.376	56 74	0.478	94	0.411	81
E35XM E35XM₂	Two-Stage LFL	36 48	0.193 0.274	38 54	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.193 0.269	38 53	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.188 0.264	37 52	0.284 0.376	56 74	0.478	94	0.411	81
E40XM E40XM₂	Two-Stage LFL	36 48	0.183 0.259	36 51	0.305 0.396	60 78	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.183 0.259	36 51	0.300 0.391	59 77	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.178 0.254	35 50	0.284 0.376	56 74	0.478	94	0.411	81

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

169 mm (6.65 in.) Motor and 12 cc (0.73 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E25XM E25XM₂	Two-Stage LFL	36 48	0.259 0.361	51 71	0.396 0.503	78 99	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.254 0.356	50 70	0.386 0.493	76 97	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.249 0.351	49 69	0.366 0.472	72 93	0.478	94	0.411	81
E30XM E30XM₂	Two-Stage LFL	36 48	0.244 0.340	48 67	0.396 0.503	78 99	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.244 0.340	48 67	0.386 0.493	76 97	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.239 0.335	47 66	0.478 0.472	72 93	0.478	94	0.411	81
E35XM E35XM₂	Two-Stage LFL	36 48	0.229 0.325	45 64	0.396 0.503	78 99	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.229 0.325	45 64	0.386 0.493	76 97	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.224 0.320	44 63	0.478 0.472	72 93	0.478	94	0.411	81

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

169 mm (6.65 in.) Motor and 12 cc (0.73 in. ³) Lift Pump*										
Model	Mast	V	Lifting				Lowering			
			Rated Load		No Load		Rated Load		No Load	
			m/sec	ft/min	m/sec	ft/min	m/sec	ft/min	m/sec	ft/min
E40XM E40XM₂	Two-Stage LFL	36 48	0.218 0.310	43 61	0.396 0.503	78 99	0.508	100	0.472	93
	Two-Stage FFL	36 48	0.218 0.310	43 61	0.386 0.493	76 97	0.462	91	0.371	73
	Three-Stage FFL	36 48	0.213 0.300	42 59	0.478 0.472	72 93	0.478	94	0.411	81

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

E1.50-1.75XM E2.00XMS MAST SPEEDS EUROPE

184 mm (7.2 in.) Motor and 19 cc (1.16 in. ³) Lift Pump*						
Model	Mast	V	Lifting		Lowering	
			Rated Load	No Load	Rated Load	No Load
			m/sec	m/sec	m/sec	m/sec
E1.50XM	Two-Stage LFL	48	0.472	0.681	0.508	0.472
	Two-Stage FFL	48	0.472	0.665	0.462	0.371
	Three-Stage FFL	48	0.462	0.650	0.478	0.411
E1.75XM	Two-Stage LFL	48	0.452	0.681	0.508	0.472
	Two-Stage FFL	48	0.447	0.665	0.462	0.371
	Three-Stage FFL	48	0.437	0.650	0.478	0.411
E2.00XMS	Two-Stage LFL	48	0.427	0.681	0.508	0.472
	Two-Stage FFL	48	0.427	0.665	0.462	0.371
	Three-Stage FFL	48	0.417	0.650	0.478	0.411

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

169 mm (6.7 in.) Motor and 12 cc (0.73 in. ³) Lift Pump*						
Model	Mast	V	Lifting		Lowering	
			Rated Load	No Load	Rated Load	No Load
			m/sec	m/sec	m/sec	m/sec
E1.50XM	Two-Stage LFL	48	0.330	0.503	0.508	0.472
	Two-Stage FFL	48	0.330	0.493	0.462	0.371
	Three-Stage FFL	48	0.340	0.472	0.478	0.411
E1.75XM	Two-Stage LFL	48	0.325	0.503	0.508	0.472
	Two-Stage FFL	48	0.320	0.493	0.462	0.371
	Three-Stage FFL	48	0.315	0.472	0.478	0.411
E2.00XMS	Two-Stage LFL	48	0.295	0.503	0.508	0.472
	Two-Stage FFL	48	0.295	0.493	0.462	0.371
	Three-Stage FFL	48	0.284	0.472	0.478	0.411

LFL = Limited Free Lift
FFL = Full Free Lift
*Oil temperature 54 to 66°C (130 to 150°F). Lifting speeds (valve fully open) ±10% acceptable. No Load lowering speeds are minimum values. Rated Load lowering speeds are maximum values. Load center is 610 mm (24 in.).

Torque Specifications

FRAME

Overhead Guard

- Front leg M12 x 1.75 x 40 or 50 capscrews
66 N•m (49 lbf ft)
- Rear leg M12 x 1.75 x 60 capscrews with
nuts 72 N•m (53 lbf ft)

Counterweight Capscrews

- upper 380 N•m (260 lbf ft)
- lower (tow pin area) 66 N•m (50 lbf ft)

Traction Motor to Speed Reducer Housing

- M12 x 1.75 x 35 hex head screws (7)
71 to 83 N•m (52 to 61 lbf ft)

MAST

Capscrews for Mast Assembly Mounts at Drive Axle

- 90 N•m (66 lbf ft)

Capscrews for Sideshift Carriage Mount

- 435 N•m (320 lbf ft)

Bolts for Lift Cylinder Mounts

- 53 N•m (39 lbf ft)

Nuts for Lowering Control Valve

- 18 N•m (13 lbf ft)

Setscrews for Chain Sheave

- 8 N•m (71 lbf in)

Nuts for Free-Lift Cylinder Brackets

- 38 N•m (28 lbf ft)

Bolts for Free-Lift Cylinder Brackets

- 53 N•m (39 lbf ft)

Capscrew for Free-Lift Cylinder Hose Sheave

- 41 N•m (30 lbf ft)

Capscrews for Chain Guards on Crosshead Assembly

66 N•m (49 lbf ft)

Capscrews for Hose Guards on Crosshead Assembly

66 N•m (49 lbf ft)

Capscrews for Stub Shaft

53 N•m (39 lbf ft)

Capscrews for Hose Brackets and Clamps

8 N•m (71 lbf in)

Capscrews for Hose Guides at Lower Crossmember

33 N•m (24 lbf ft)

Nut for Piston Rod on Tilt Cylinder

163 to 190 N•m (120 to 140 lbf ft)

Retainer for Piston and Rod Assembly on Tilt Cylinder

163 to 176 N•m (120 to 130 lbf ft)

DRIVE AXLE, SPEED REDUCER, AND DIFFERENTIAL**Capscrews for Axle Trunnion Caps**

71 to 83 N•m (52 to 61 lbf ft)

Traction Motor Mount Capscrews

71 to 83 N•m (52 to 61 lbf ft)

Speed Reducer Support Capscrews

216 N•m (159 lbf ft)

Speed Reducer-to-Axle Capscrews

41 to 49 N•m (30 to 36 lbf ft)

Speed Reducer Cover Capscrews

21 to 25 N•m (15 to 18 lbf ft)

Pinion Lock Nut (Rotating Torque)

5.4 to 5.9 N•m (4 to 4.6 lbf ft)

Differential Bearing Nuts (Rotating Torque)

2.9 to 3.4 N•m (2.2 to 2.5 lbf ft)

Bearing Cap Capscrews 263 to 315 N•m
(194 to 233 lbf ft)**Ring Gear Capscrews**

152 to 167 N•m (112 to 123 lbf ft)

Mount Bolts for Brake Assembly (Back Plate)

152 to 167 N•m (112 to 123 lbf ft)

Hub Castle NutsInitial: 200 N•m (148 lbf ft) while rotating hub
Final: 3.4 N•m (30 lbf in)**Wheel Bolts**

330 N•m (244 lbf ft)

STEERING AXLE**Plate Bolts of Rubber Mounts**

41 to 49 N•m (30 to 36 lbf ft)

Mount Bolts of Steering Cylinder

41 to 49 N•m (30 to 36 lbf ft)

Wheel Castle NutInitial: 68 N•m (50 lbf ft) while rotating
wheel. Loosen, then
3 N•m (2 lbf ft)**Wheel Nut (Pneumatic)**

155 N•m (114 lbf ft)

Cylinder Guides

117.7 ±15 N•m (86.8 ±11 lbf ft)

BRAKE**Back Plate to Axle Mount Bolts**

152 to 167 N•m (112 to 123 lbf ft)

Seat BrakeBrake Assembly Capscrew (at Motor
Armature) 66 N•m (49 lbf ft)
Pivot Nut for Brake Lever 40 N•m (30 lbf ft)

Adhesives and Sealants

Hyster Part No.	Loctite® Part No.	Description	Size
360387	222	Small Screw Threadlock (Purple)	50 ml (1.7 oz)
318702*	242	Removable Threadlock (Blue)	10 ml (0.34 oz)
226414*	271	High Strength Threadlock (Red)	10 ml (0.34 oz)
318996	277	High Viscosity Threadlock (Red)	50 ml (1.7 oz)
318650	290	Low Viscosity Threadlock (Green)	0.6 ml (0.02 oz)
251099	290	Low Viscosity Threadlock (Green)	50 ml (1.7 oz)
355844*	422	SuperBonder® Adhesive	3 ml (0.1 oz)
350830	515	Gasket Eliminator (Purple)	6 ml (0.2 oz)
313022*	515	Gasket Eliminator (Purple)	50 ml (1.7 oz)
273338*	567	Pipe Sealant with Teflon® (White)	50 ml (1.7 oz)
318705	595	Super Flex® Silicone	100 ml (3.4 oz)
318701	609	Retaining Compound	10 ml (0.34 oz)
341959	680	Retaining Compound	50 ml (1.7 oz)
226415		Primer T - Aerosol	177 ml (6 oz)
316865		Antiseize Compound	476 ml (16 oz)
360053		Chisel Gasket Remover (10 Aerosol cans per case)	536 ml (18 oz)
318700*		Adhesive & Sealant Kit (Contains one each of * items)	

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