



LoadMate® Electric Chain Hoists

Innovation . . . Performance . . . Reliability

www.rmhoist.com



**1/8 - 5 Ton
(125 - 5000 kg)**



LoadMate® Electric Chain Hoists —

LoadMate® hoists are designed to maximize productivity with fast installation, easy operation and built-in durability. The compact design provides low headroom and allows close trolley approaches. R&M's advanced design and manufacturing techniques ensure safe operation, consistent quality and longer component life. It adds up to exceptional value - hoist equipment that saves on maintenance, repair and downtime costs over its lifetime.

Flexibility to meet your exact requirements

R&M LoadMate® electric chain hoists offer a range of choices for a wide variety of applications.

- 1/8 to 5 ton capacities (125 - 5000 kg).
- Choice of 3 standard mounting configurations: fixed top hook, push trolley and motorized trolley (custom mounting configurations also available).
- 10, 15 and 20 ft. lifts standard; additional lifting heights available up to 150 ft. single fall, 75 ft. two fall.
- Lift speeds from 8 to 32 FPM single-speed, 12/3 to 64/16 FPM two-speed, 1 - 16 to 4 - 64 FPM variable speed inverter, 0.16 to 5.7 HP hoist motors.
- Variable speed, three phase models with hoist inverter control available for 1/2 - 2 ton capacity LM10 models and for 460/3/60 power supply only.
- Hoists available for single phase and three phase.
- Two speed, three phase hoist motors and controls available for all models and for 208, 230, 460, 575/3/60 or 380/3/50 power supply.
- Single speed, three phase hoist motors and controls available for LM05 and LM10 models and reconnectable for 208, 230 or 460/3/60 power supply.
- 115 volt single phase hoists - single speed only.
- Three phase hoist motors are class F insulated, 50% effective duty rated.
- Two-speed TMU trolley drive unit (trolley speed is 80/20 FPM). Trolley brake, drop lugs and bumpers are standard. Variable frequency drive option on TMU.
- Trolley control panel integrally mounted to the motor.



EASE OF OPERATION Innovative design enhances versatility and ease of use

- Premium-grade, AGMA rated * precision gearing contributes to the hoist's compact, low-headroom design, low noise level and smooth operation.
- Integral hoist control panel encloses all electrical components (hoist contactors, transformer, terminal strips, etc.) and is easily accessed for maintenance.
- Easy trolley mounting attachment meets various application requirements. Slot in top of hoist body allows easy changeover of top hook, push trolley or motorized trolley mountings.
- Crown tread wheels standard on push and motorized trolleys, for use on standard I-beams and wide flange beams.
- Plug-in push button pendant with E-stop for quick replacement is standard.

REDUCED MAINTENANCE Quality keeps your hoist on the job long past the pay-off point

LoadMate® hoists are designed to run cool and maximize the life of gears, brakes and motors. Longer component life means less maintenance, less downtime and lower repair costs.

- Sealed brake keeps out lubricants.
 - The hoist brake and load limiter are both adjustable and adjust independently of each other.
- * Hoist gearboxes: LM1: AGMA10, LM05 & LM10: AGMA 11 and LM16/25: AGMA 12. Traveling gearboxes: AGMA 10.

For the most current technical guides, drawings and other product information visit our website at

www.rmhoist.com

Best Clearance Dimensions in the

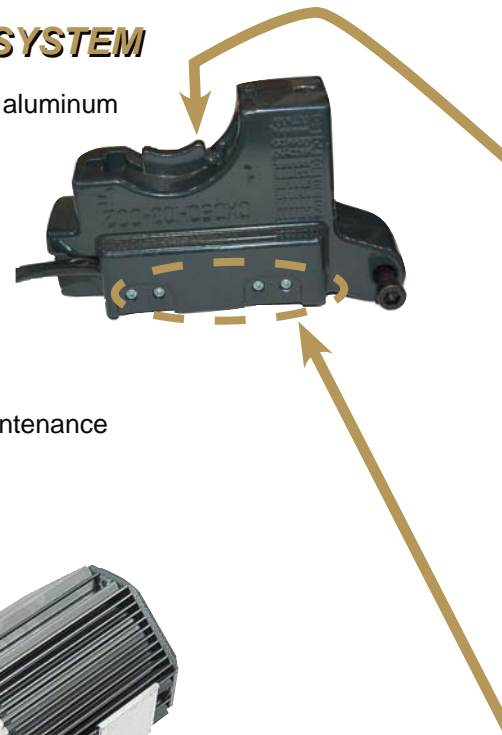
TOUGHEST GEARBOX IN THE BUSINESS!

- Minimum AGMA 10 heat treated gearing
- Grease lubricant on LM01-LM10 models. Gear oil for LM16-LM25
- Quiet gear train – < 75 db



2 PART CHAIN GUIDING SYSTEM

- One piece heavy duty pressure cast aluminum chain guide at entry point
- One piece heavy duty ductile iron chain guide above load sprocket
- Main entry point chain guide can be easily removed (only 1 bolt and 4 limit switch wires) WITHOUT disassembling hoist
- Micro switches for hoist travel limit mounted in chain guide for easy maintenance



HIGH PERFORMANCE MOTOR

- Heavy duty type 40% to 50%+ ED rating (exceeds 30 min rating) on three phase motors
- IP55 protection
- Optimum cooling with ribbed aluminum construction motor for maximum surface area
Frames LM16, LM20 and LM25 include cooling fan
- Motor temperature protection with auto reset klixon bi-metal switch as standard



PRECISION MANUFACTURED, HARDENED LOAD SPROCKET

- 5 pockets on LM01, 05, 10, 20 & 25 and 6 pockets on LM16 for smoother load distribution
- 5 pocket load sprockets last 25% longer than the 4 pocket load sprockets provided by many other hoist manufacturers. Also chain wear from link to link is greatly reduced due to smaller shock factor
- High quality grade 80, zinc electro plated load chain from the LARGEST GLOBAL SUPPLIERS OF CHAIN



Industry — More Standard Features



INNOVATIVE TORQUE LIMITER & BRAKE

- **ADDITIONAL SAFETY** - In an overload situation, releasing the up or down buttons of the LM01, LM05 or LM10 automatically stops the load even if the load limiter is slipping
- DC brake for quiet operation
- Easy to check and easy to adjust brake air gap on LM01 - LM10 units. Self-adjusting brake on LM16 - LM25 units
- Brake can be replaced **WITHOUT** resetting torque limiter
- **EXTERNAL TORQUE LIMIT ADJUSTMENT** - Easy to adjust. Just remove rubber cover, insert socket and turn!
- **THE BEST TORQUE LIMITER / BRAKE DESIGN IN THE INDUSTRY!**



HOIST LIMIT NOW MOUNTED IN CHAIN GUIDE FOR EASY MAINTENANCE

- The chain guides on LoadMate hoists combine simple design with a high level of reliability - Up direction: spring and washer actuator on block contacts micro switch in chain guide - Down direction: spring and washer actuator near end of chain

and Cutting-edge Technology

Mounting Configurations



Fixed Top Hook



Push Trolley



Motorized Trolley

SAFETY

Meets and exceeds industry safety standards

All R&M hoists are statically and dynamically tested with a minimum of 125% rated load prior to shipping.

- All models are equipped with a torque-limiting device for hoist overload protection. The electro magnetic disc brake-clutch combination is designed for efficiency, safety, easy access and adjustment. The friction-type torque limiter is integrated with the brake (LM1, LM05, LM10) to ensure that the load is always stopped when the control button is released.
- Upper / lower limit switches stop the hoisting motion when the hook reaches the top or bottom limit of travel, providing safer operation and longer equipment life.
- Low-voltage controls enhance operator safety. 115-volt control voltage is standard; 48-volt control is an option (standard with 380 volt).
- Control panel and pushbutton enclosures both meet NEMA type 3R (IP-55) protection classification.
- Load hook is forged alloy steel for strength and durability and is provided with a spring return safety latch.
- Emergency stop button and built-in mainline contactor are standard. (Except LM1.)
- CSA certification on all models.



P/B Station with E-stop

LONG LIFE

Built for tough duty, lasting performance

Every feature of the LoadMate® hoist assembly includes rugged, high-performance materials and quality engineering for longer service life and less downtime.

- Thermal protection of hoisting motor prevents damage due to over heating. A 2-speed hoist motor is available, offering more precise load handling and longer motor life due to less wear on the brake and contactor.
- Hoist body is constructed of pressure-cast aluminum for light-weight and easy handling, epoxy-painted for corrosion resistance, and ribbed for better heat dissipation.
- 5-pocket chain sprocket (6-pocket on LM16) is heat-treated and machined to a high tolerance, providing exceptionally smooth lifting and reduced chain wear.
- Load chain is electro-zinc plated, heat-treated, and has a high tensile strength. Chain is also specially designed for chain hoist use.
- Chain guide ensures precise alignment of chain with load sprocket, reducing wear and prolonging chain life.
- Chain container is provided as standard with standard heights of lift.

Reliable Long-term Performance

A Sample of the LoadMate® Offering

Frame	Cap. (Short) Tons	Lift* in Feet	Lift Speed (FPM)	SS or TS	No. of Falls	ASME Duty Class	Hoist Motor H.P.	Top Hook (TH) or Lug Mount (LM)		Push Trolley (PT)		Motorized Trolley** (MT)	
								H.R. (In.)	Wt. (Lbs.)	H.R. (In.)	Wt. (Lbs.)	H.R. (In.)	Wt. (Lbs.)
Single Speed, Single Phase Models 115 V - 1 Ph - 60 Hz													
LM1	1/8	10	16	S	1	H3	0.16	12 3/16	30	13 7/8	36	N.A.	N.A.
LM05	1/4	10	16	S	1	H3	0.64	16 1/2	60	15 5/8	74	N.A.	N.A.
LM05	1/2	10	16	S	1	H3	0.64	16 1/2	60	15 5/8	74	N.A.	N.A.
LM05	1	10	8	S	2	H3	0.64	18 1/2	67	18 7/8	89	N.A.	N.A.
Single Speed, Three Phase Models 208, 230, 460 V - 3 Ph - 60 Hz													
LM05	1/4	10	16	S	1	H4	0.64	16 1/2	60	19 1/4	74	17 3/4	177
LM05	1/4	10	32	S	1	H4	1.3	16 1/2	60	19 1/4	74	17 3/4	177
LM05	1/2	10	16	S	1	H4	0.64	16 1/2	60	19 1/4	74	17 3/4	177
LM05	1/2	10	32	S	1	H4	1.3	16 1/2	60	19 1/4	74	17 3/4	177
LM10	1	10	16	S	1	H4	1.5	20 1/4	122	22	144	21	239
LM10	1	10	32	S	1	H4	2.8	20 1/4	122	22	144	21	239
LM10	2	10	8	S	2	H4	1.5	22 1/2	133	25	218	23 1/2	250
LM10	2	10	16	S	2	H4	2.8	22 1/2	133	25	218	23 1/2	250
Two Speed, Three Phase Models 208, 230, 460 or 575 V - 3 Ph - 60 Hz													
LM1	1/8	10	32/8	T	1	H4	0.33 / 0.08	12 3/16	30	14 3/4	36	N.A.	N.A.
LM1	1/8	10	16/4	T	2	H4	0.33 / 0.08	13 1/16	33	14 3/4	39	N.A.	N.A.
LM1	1/4	10	16/4	T	2	H3	0.33 / 0.08	13 1/16	33	14 3/4	39	N.A.	N.A.
LM05	1/4	10	32/8	T	1	H4	1.3 / 0.3	16 1/2	60	19 1/4	74	17 3/4	177
LM05	1/2	10	16/4	T	2	H4	1.3 / 0.3	18 1/2	67	20 1/4	81	19 3/4	183
LM05	1/2	10	32/8	T	1	H4	1.3 / 0.3	16 1/2	60	19	74	18	177
LM05	1	10	16/4	T	2	H4	1.3 / 0.3	18 1/2	67	20 1/4	89	19 3/4	183
LM10	1/2	10	64/16	T	1	H4	2.8 / 0.75	20 1/4	121	22	143	21	240
LM10	1	10	32/8	T	1	H4	2.8 / 0.75	20 1/4	122	22	144	21	239
LM10	2	10	16/4	T	2	H4	2.8 / 0.75	22 1/2	133	25	218	23 1/2	250
LM16	1	10	64/16	T	1	H4	5.7 / 1.4	22	243	21 1/4	287	21 1/4	353
LM16	1 1/2	10	32/8	T	1	H4	5.7 / 1.4	22	243	21 1/4	287	21 1/4	353
LM16	3	10	16/4	T	2	H4	5.7 / 1.4	26	243	25 1/4	287	25 1/4	353
LM20	2	10	32/8	T	1	H4	5.7 / 1.4	27	243	27	321	27	365
LM20	4	10	16/4	T	2	H4	5.7 / 1.4	31	243	31	331	31	375
LM25	3	10	24/6	T	1	H4	5.7 / 1.4	26	243	27 1/2	331	27 1/2	375
LM25	5	10	12/3	T	2	H4	5.7 / 1.4	31	243	31	331	31	375
Variable Speed, Three Phase Models 460 V - 3 Ph - 60 Hz													
LM10	1/2	10	4 - 64	I	1	H4	2.8	20 1/4	137	22	159	21	254
LM10	1	10	2 - 32	I	1	H4	2.8	20 1/4	137	22	159	21	254
LM10	2	10	1 - 16	I	2	H4	2.8	22 1/2	148	25	233	23 1/2	265

* Other lifts available

** Motorized Trolley Speed: 80/20 FPM; Trolley bumpers, drop lugs and motor brake are included.

Versatility

LoadMate® Options

Patented Track Trolley Option

Trolleys feature hardened steel flat tread wheels designed for maximum bearing surface contact with your patented track section running surface. Wheel tread surface hardness is 425 BHN. Will fit: 2", 3.25", 3.33", 4" and 4.5" patented track section flange widths.

Swiveling Motor Driven Trolley Option

Allows for shorter curve radius tolerances on custom monorail applications. LM05, LM10 and LM16 hoist swiveling trolleys can negotiate a radius as small as 2'-8". LM20 and LM25 hoist swiveling trolleys can negotiate a radius as small as 4'. Gear motors can also be removed for outfitting of R&M swivel trolley with user provided rubber tire tractor drive units.

Special Low Headroom Trolley Configuration

Using a special trolley frame with an offset hoist, lifting heights can be optimized. This configuration allows for maximum hook height in tight clearance applications.

Outdoor Weather Protection Options

Available with a range of outdoor protection options including: stainless steel chain, hoist and trolley weather proof covers, NEMA 4 type enclosures, low voltage 48 VAC control system, and panel heaters.

Special Hoist Control Options

Several special control options for the LoadMate® include:

- Variable frequency drive hoist control provides precision hook positioning.
- Tandem control for simultaneous control of two hoists.
- Hour counter for scheduled preventive maintenance as well as hoist SWP (Safe Working Period) calculations.

Food Grade Hoist Options

Stainless steel load chain, stainless steel lower hooks, stainless steel bottom block, and food grade lubricant can be provided for food handling and pharmaceutical applications.

ADDED VERSATILITY

Variable Frequency Drive option enhances motorized trolley operation

TMU's Variable Frequency Drive offers:

- 2-step multi-speed or stepless control method
- Flexibility in speed settings
- Dynamic braking



Minimum and maximum speed settings can be defined to provide easy and precise load placement, reduced load swings and less wear on equipment.

The sealed brake is incorporated into the motor design. The dynamic braking provided by the variable frequency drive allows for smooth stops and extended brake life.

Swivel Trolley Option



Low Headroom Trolley



Stainless Steel Chain, Block & Hook Options





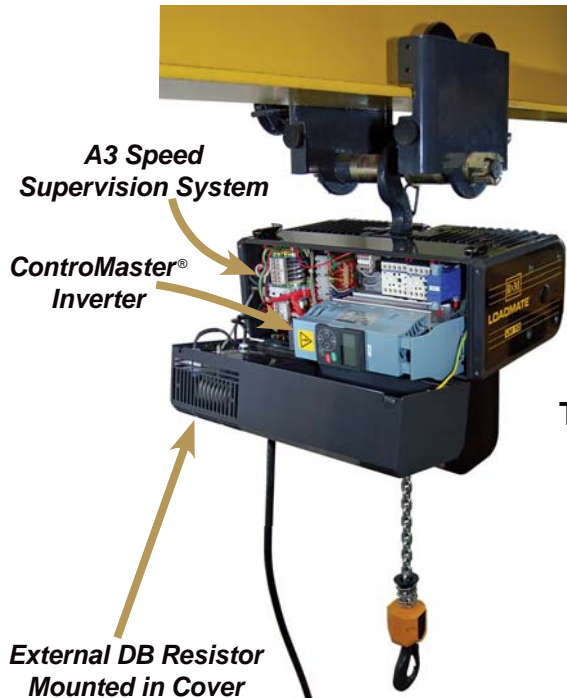
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Variable Speed LoadMate®

- LM10 frame size only
- Capacities 1/2 to 2 ton
- All controls under the cover
- Features ControlMaster® inverter
- A3 speed supervision module using feedback from motor sensor bearing

Three Speed Control Variations:

1. EP - stepless using 2-step controller
2. MS - 2-step using digital input
3. AU - automation controls with 0 - 10 vdc analog input

Digichain® Ergonomic Controls

An ergonomically designed handle control allowing the hoist to be used as an extension of the operator's arm.

- Available on LM1 and LM05 models.
- 1/8 to 1/2 ton capacities
- Single fall models only
- Standard E-stop button
- NEMA type 3R (IP-55) protection rating



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