

RY Series Electric Wire Rope Ultra-Low Headroom Trolley Hoists



5 Ton

Harrington's RY Series wire rope hoists are designed for safety, reliability and performance. These ultra-low headroom trolley hoists have an H4 duty rating for high demand applications and comes standard with VFD controls for ultimate lifting and lowering accuracy.

Features and Benefits

UL® Listed**

Certified and listed to UL 1340 "Standard for Hoists" and CSA 22.2 No. 33 "Construction and Test of Electric Cranes and Hoists."

VFD Control - Hoist and Trolley

Soft start/stop minimizes load swing. High and low speed adjustability. Max. ratio of 6:1.

No Load High Speed Function

Operates at 1.5 times the standard high speed with a load less than 25% of rated capacity.

Premium Wire Rope (IWRC, Plastic Coated Core)

Provides high resistance to fatigue and wear.

Full 360° Rope Guide

Made of a high strength polymer for durability, keeps the rope securely in the groove on the drum. Simple design makes replacement easy.

Rope Drum

Deep grooved, high strength drum for durability and long service life.

High Performance Motor Brakes

The Pull-Rotor motor brake on 3 and 5 Ton and Magnetic Disc Brake on 7.5 and 10 Ton provide reliable operation and exceptional durability. **5-year hoist brake warranty.**

Externally Adjustable Upper/Lower Limit Switches

Set the range of operation with easy adjustment.

Electronic Overload Limiter

Detects overload instantaneously and shuts off the circuit for lifting.

Standard Upper Emergency Paddle Limit

Secondary limit independent of drum rotation to comply with US Safety Standard ASME B30.

Heavy Duty - Fan Cooled Hoist Motor

Totally enclosed fan cooled (TEFC) motor with class F insulation and a ribbed frame for maximum cooling and durability. IP55 rating ensures a high level of protection from the entrance of dust and water.

Standard Rubber Trolley Bumpers

Provides protection from collisions.

Externally Adjustable Trolley Motor and Brake

IP55 totally enclosed non ventilated (TENV) motor with cooling fins ensures protection from dust and water and enhances motor life.

Electronic Thermal Motor Protection

Detects overheating and stops the motor.

Count Hour Meter

Records and displays the number of starts and hoist on time which is valuable for preventive maintenance. Integral to the VFD.

Standard Guide rollers

Reduced wheel friction and noise providing smooth travel and increased life of wheel and beam.

Built-In Drop Stops

Security for the operator and the equipment.

Trolley Wheels

Fit flat or tapered beam flange.

Standard Hoist/Trolley Specifications

Capacity Range

3 – 10 Ton

Standard Voltage

(208-230)-3-50/60
460-3-50/60

Control Voltage

110V

Duty Cycle*

60 min

Ratings

Hoist/Trolley – IP55

Classification

ASME H4
ISO M5 or M4
FEM 2M or 1Am

Conformance**

UL1340, 508, 508A, 1004
ASME B30.16, B30.17, HST-4
CMAA 74
CSA 22.2 (33, 14-13, 66), B167

Operating Conditions

Recommended for -4° to +104° F and humidity of 90% or less.

Mounting

Ultra-Low Headroom

Wheels

Will operate on a tapered or flat beam flange.

Pendant

Optional
IP65 (NEMA 3R) or NEMA 4 (both with emergency on/off)

Pendant Cord

Optional

Power Supply Cord

Optional

Flange Extension Kit – (Installed)

Optional

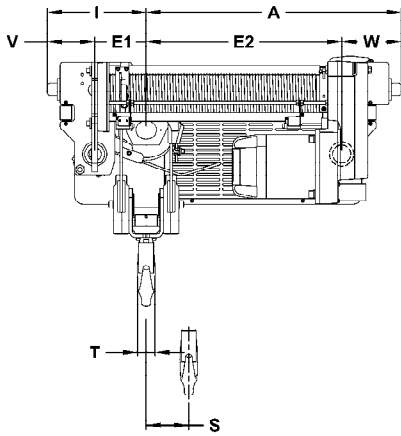
*See page 15 for additional information.

** Standard models shipped with UL listing – Contact Customer Service

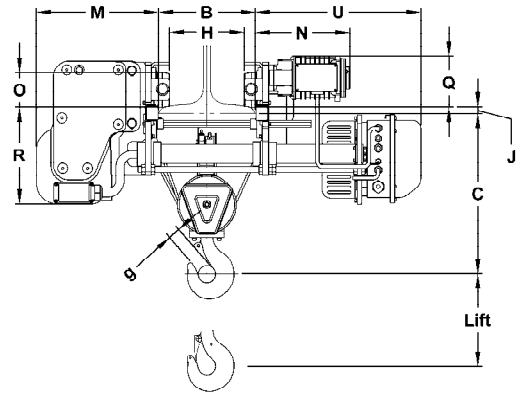
HARRINGTON RY SERIES ELECTRIC WIRE ROPE HOISTS



5 Ton



5 Ton



ULTRA-LOW HEADROOM TROLLEY HOISTS — SPECIFICATIONS

Capacity (Tons)	Product Code	Lift (ft)	Flange Range B (in)	Reeving (parts/reeving)	Rope (mm)	Lifting Motor 3 Phase - 50/60Hz						Traversing Motor 3 Phase - 50/60Hz						Net Weight (lbs.)
						Lifting Speed ¹ (ft/min)		Output (Hp)	Rated Current ² (amps)			Traversing Speed ² (ft/min)	Output (Hp)	Rated Current (amps) ²				
						Initial High/Low Speed	No Load High Speed		@208V/60Hz	@230V/60Hz	@460V/60Hz			Initial High/Low Speed	@208V/60Hz	@230V/60Hz	@380V/50Hz	
3	RYU030A25HDD ^①	25	4.92-13.78	4/1	9	26/4.3	39	6.7	24.7	22.9	12.1	66/11	0.54	1.5	2.1	1.7	1.4	960
			13.79-19.68															971
	RYU030A33HDD ^①	33	4.92-13.78															1048
			13.79-19.68															1059
5	RYU050B25HDD ^①	25	4.92-13.78	4/1	9	26/4.3	39	10.7	36.5	34.0	18.3	66/11	0.54	1.5	2.1	1.7	1.4	993
			13.79-19.68															1004
	RYU050B33HDD ^①	33	4.92-13.78															1092
			13.79-19.68															1103
7.5	RYU075C30HDD ^①	30	5.9-13.78	4/1	13	20/3.3	30	17.7	43.4	39.6	19.0	66/11	1.0	3.9	4.4	2.5	2.6	2227
			13.79-20.00															2258
	RYU075C40HDD ^①	40	5.9-13.78															2397
			13.79-20.00															2428
10	RYU100C30HDD ^①	30	5.9-13.78	4/1	13	20/3.3	30	17.7	56.1	51.4	24.8	66/11	1.0	3.9	4.4	2.5	2.6	2227
			13.79-20.00															2258
	RYU100C40HDD ^①	40	5.9-13.78															2397
			13.79-20.00															2428

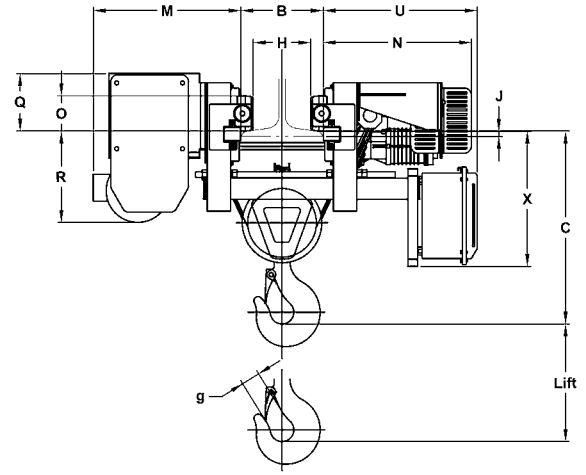
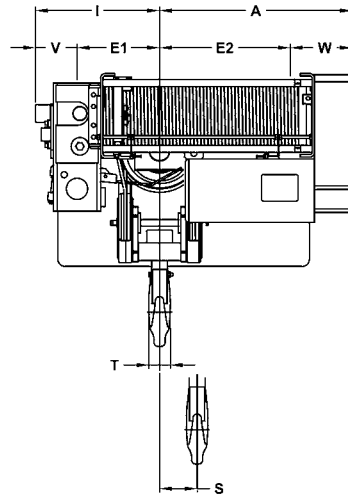
① 2 = 208V-230V - 3ph - 50/60Hz
4 = 460V - 3ph - 50/60Hz

1) Low and high speeds are adjustable
2) Current values based on 250 kVA power supply

RY Series Electric Wire Rope Ultra-Low Headroom Trolley Hoists



10 Ton



10 Ton

ULTRA-LOW HEADROOM TROLLEY HOISTS — DIMENSIONS

Capacity (Tons)	Product Code	Lift (ft)	Flange Range B (in)	Dimensions (in)																															
				A	C	E1	E2	g	H	I	J	M	N	O	Q	R	S	T	U	V	W	X													
3	RYU030A25HDD①	25	4.92-13.78	36.3	25.0	7.3	27.8	1.7	B-3.1	14.1	1.3 or less	17.4	13.5	4.92	7.3	13.7	6.1	2.1	32.4-23.6	6.7	8.5	13.7													
			13.79-19.68														29.5-23.6																		
	RYU030A33HDD①	33	4.92-13.78														44.7		36.1				1.8	B-3.1	14.1	1.6 or less	17.4	13.5	4.92	7.3	13.7	6.1	2.5	32.4-23.6	
			13.79-19.68																															29.5-23.6	
5	RYU050B25HDD①	25	4.92-13.78	36.3	25.6	7.3	27.8	1.8	B-3.1	14.1	1.3 or less	17.4	13.5	4.92	7.3	13.7		6.1		2.5	32.4-23.6	6.7												8.5	13.7
			13.79-19.68															29.5-23.6																	
	RYU050B33HDD①	33	4.92-13.78														44.7	36.1	1.8		B-3.1		14.1	1.6 or less	17.4	13.5	4.92	7.3	13.7	6.1	2.5	32.4-23.6			
			13.79-19.68																													29.5-23.6			
7.5	RYU075C30HDD①	30	5.9-13.78	32.3	32.3	13.4	21.6	2.8	B-4.1	20.8	1.6 or less	24.7	24.8	5.9	9.6	15.3				6.3		3.5										33.6-25.8	7.4	10.7	22.6
			13.79-20.00																	31.7-25.8															
	RYU075C40HDD①	40	5.9-13.78														40.8	30.0	2.8	B-4.1	20.8		1.6 or less	24.7	24.8	5.9	9.6	15.3	6.3	3.5	33.6-25.8				
			13.79-20.00																												31.7-25.8				
10	RYU100C30HDD①	30	5.9-13.78	32.3	32.3	13.4	21.6	2.8	B-4.1	20.8	1.6 or less	24.7	24.8	5.9	9.6	15.3						6.3									3.5	33.6-25.8	7.4	10.7	22.6
			13.79-20.00																			31.7-25.8													
	RYU100C40HDD①	40	5.9-13.78														40.8	30.0	2.8	B-4.1	20.8	1.6 or less	24.7	24.8	5.9	9.6	15.3	6.3	3.5	33.6-25.8					
			13.79-20.00																											31.7-25.8					

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RY Series Plug and Play Crane Kit Packages

TROLLEY HOIST



- H4 rated hoist, 60 minute duty rating for the most demanding applications
- The Pull-Rotor Motor Brake on 3 and 5 Ton and Magnetic Disc Brake on 7.5 and 10 Ton provide reliable operation and exceptional durability with a **5-year hoist brake warranty**
- High and low speed adjustability via under-the-cover variable frequency control. Max. ratio of 6:1
- No load high speed hoist function for operation at 1.5 times the standard high speed when the load is less than 25% of rated capacity
- Standard upper emergency paddle limit is a secondary limit independent of drum rotation
- Premium wire rope (IWRC coated core) provides high resistance to fatigue and wear

END TRUCKS

Top Running



Underhung



- Totally enclosed non-ventilated (TENV) motors with adjustable DC brakes
- Helical gear reducers
- Externally adjustable DC brakes allow controlled deceleration
- Thermal motor protection
- Rubber bumpers
- Rail sweeps
- Machined steel wheels with side guide rollers that reduce wheel friction

BRIDGE CONTROL PANEL



- Field adjustable UL listed Power Electronics® variable frequency drive on bridge motors
- Completely pre-wired and tested
- Through-the-door fused disconnect switch
- Control transformer with primary and secondary fusing
- Mainline contactor
- Thermal overload relay

FLAT CABLE FESTOONING



- Flat cable power festoon for smooth trolley travel
- Flat cable roving pendant provides safe and effective handling without close proximity to the load
- Completely pre-wired and tested
- Modular design for easy packaging and installation

RY SERIES PLUG AND PLAY CRANE KIT PACKAGES:

End Trucks

40 FPM or 80 FPM with VFD control

Hoist Capacity

3–10 Ton

Hoist and Trolley

Dual speed VFD controlled
High and low speed adjustability
Max. ratio of 6:1

Lift

25' or 33' (3–5 Ton)
30' or 40' (7.5–10 Ton)

Beam Accessory Kit

Includes all braces, mounting plates, guide wire brackets, end stops, control panel extension brackets when applicable, hardware and instructions

Bridge Control Panel

UL listed Power Electronics® VFD Control Panel with plug and play connections

Crane Wiring

Complete package

Flat Cable Festooning

Complete Package for power and roving pendant

Pendant

8-button with on/off

Voltage

460-3-60 (Consult Customer Service for alternate voltages)

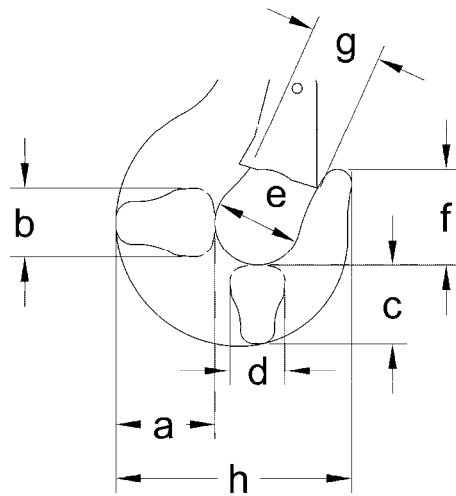
Bridge Beam NOT Included

Options and Technical Data

BOTTOM HOOK—DIMENSIONS

Capacity (Tons)	Product Code	a (in)	b (in)	c (in)	d (in)	e (in)	f (in)	g (in)	h (in)
3	RYU030A25HDD ^①	2.6	2.1	2.3	1.8	2.5	2.8	1.7	6.7
	RYU030A33HDD ^①								
5	RYU050B25HDD ^①	3.2	2.5	2.6	2.1	2.8	3.2	1.8	7.6
	RYU050B33HDD ^①								
7.5	RYU075C30HDD ^①	4.4	3.5	3.7	3.0	3.9	4.5	2.8	10.9
	RYU075C40HDD ^①								
10	RYU100C30HDD ^①	4.4	3.5	3.7	3.0	3.9	4.5	2.8	10.9
	RYU100C40HDD ^①								

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4 = 460V - 3ph - 50/60Hz

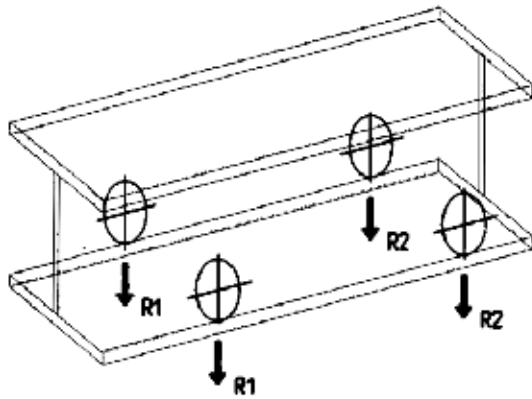


Options and Technical Data

REACTION FORCES AT RATED LOAD

Capacity (Tons)	Ultra-Low Headroom Trolley Hoists Wheel Reaction Forces			
	Product Code	Flange Range B (in)	R1 (lb)	R2 (lb)
3	RYU030A25HDD ^①	4.92-13.78	2994	789
		13.82-19.68	2999	790
	RYU030A33HDD ^①	4.92-13.78	3182	645
		13.82-19.68	3187	646
5	RYU050B25HDD ^①	4.92-13.78	4751	1252
		13.82-19.68	4755	1253
	RYU050B33HDD ^①	4.92-13.78	5032	1020
		13.82-19.68	5037	1021
7.5	RYU075C30HDD ^①	5.9-13.78	5797	3586
		13.79-20.00	5806	3592
	RYU075C40HDD ^①	5.9-13.78	6555	2913
		13.79-20.00	6566	2917
10	RYU100C30HDD ^①	5.9-13.78	7500	4639
		13.79-20.00	7509	4645
	RYU100C40HDD ^①	5.9-13.78	8463	3760
		13.79-20.00	8474	3765

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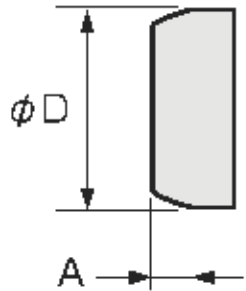
Trolley Hoist Wheel Reaction Forces

Options and Technical Data

TROLLEY WHEEL—DIMENSIONS

Capacity (Tons)	Product Code	A (in)	φD (in)
3	RYU030A25HDD ^①	0.79	3.86
	RYU030A33HDD ^①		
5	RYU050B25HDD ^①	0.79	3.86
	RYU050B33HDD ^①		
7.5	RYU075C30HDD ^①	1.42	5.91
	RYU075C40HDD ^①		
10	RYU100C30HDD ^①	1.42	5.91
	RYU100C40HDD ^①		

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Options and Technical Data

DUTY CLASSIFICATIONS

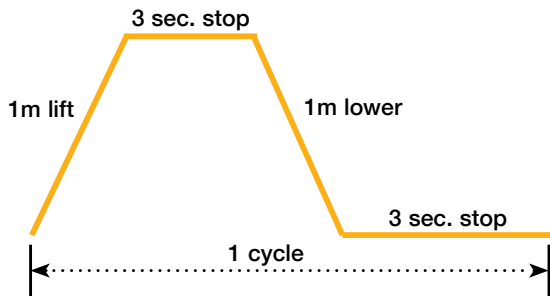
Hoist Duty Class	Typical Areas of Application	Operation Time Ratings at K = 0.65*			
		Uniformly Distributed Work Periods		Infrequent Work Periods	
		Max. Time (min/hr)	Max. No. of Starts/hr	Max. Time From Cold Start (min)	Max. No. of starts
H2	Light machine shop fabricating, service and maintenance; loads and utilization randomly distributed; rated loads infrequently handled	7.5 (12.5%)	75	15	100
H3	General machine shop fabricating, assembly, storage, and warehousing; loads and utilization randomly distributed	7.5 (25%)	150	30	200
H4	High volume handling in steel warehouses, machine shops, fabricating plants and mills, and foundries; manual or automatic cycling operations in heat treating and plating; loads at or near rated load frequently handled	30 (50%)	300	30	300

*K = Mean effective load factor.

LIFTING MOTOR RATINGS

Short Time Rating

This rating indicates how long the hoist can be operated continuously at the rated capacity on the cycle below, assuming continued

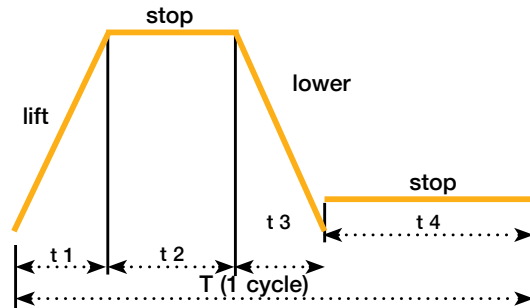


operation for a short time span.
 • Dual speed: 30/10 min

Intermittent Rating (Percent ED)

Max. Number of Starts Per Hour

This rating indicates the allowable ratio of motor ON time to motor OFF time, and starts per hour for a hoist operated continuously at 63% of rated capacity on the cycle below, assuming continued operation or repeated starting over a long time span.



Example (single speed): $\%ED = \frac{\text{Motor ON time } (t1 + t3)}{T (1 \text{ cycle})} \times 100$

(Where T = 1 cycle (t1 + t2 + t3 + t4) and is not more than 10 minutes.)

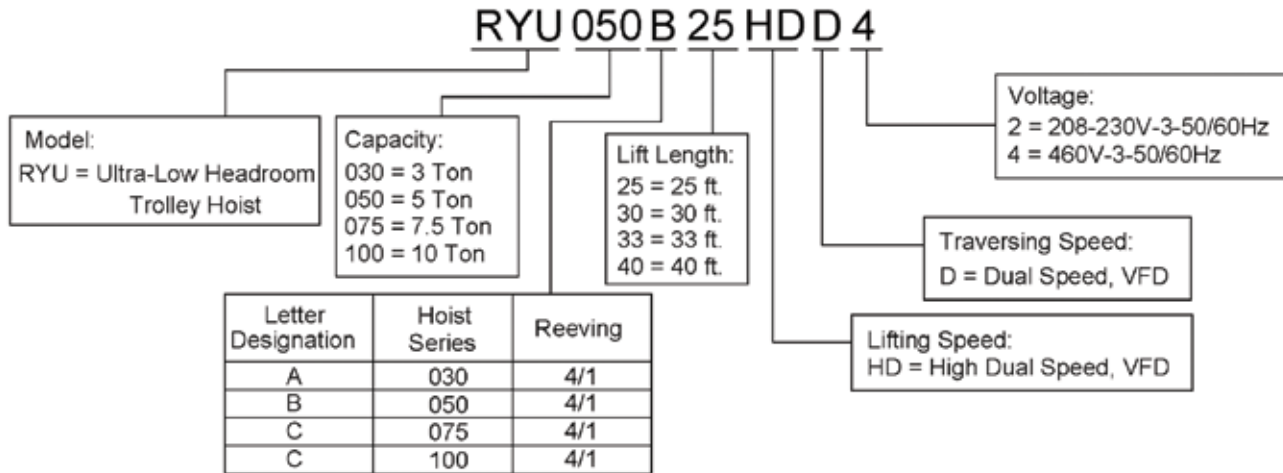
Options and Technical Data

COMPLIANCE

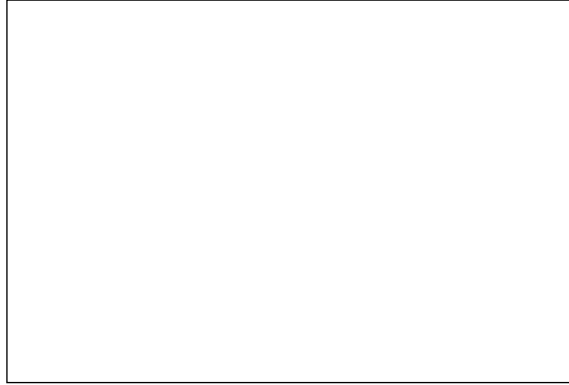
Harrington's RY Hoists are produced to comply with the following standards:

- NFPA 70 "National Electric Code"
- ASME B30.16, "Safety Standard – Overhead Hoists (Underhung)"
- ASME HST-4, "Performance Standard for Overhead Electric Wire Rope Hoists"
- RY hoists in standard configurations (including certain options) are certified to UL 1340 "Standard for Hoist", CSA 22.2 No. 33

PRODUCT CODE



**CONTACT YOUR NEARBY
HARRINGTON DISTRIBUTOR**



Warranty

All products sold by Harrington Hoists, Inc. are warranted to be free from defects in material and workmanship from date of shipment by Harrington for the following periods:

- 1 year – Electric and Air Powered Hoists (excluding (N)ER2 Hoists and EQ/SEQ Hoists), Powered Trolleys, Powered Tiger Track Jibs and Gantries, Crane Components, Below the Hook Devices, Spare/Replacement Parts
- 2 years – Manual Hoists & Trolleys, Beam Clamps
- 3 years – (N)ER2 Hoists, EQ/SEQ Hoists, (T)EM/(T)SEM hoists, and RY Hoists
- 5 years – Manual Tiger Track Jibs and Gantries, Hoist Motor Brakes for TNER, EQ/SEQ, (T)EM/(T)SEM, and RY
- 10 years – (N)ER2 Brake, Tiger Track Workstation Cranes, and Monorails

The product must be used in accordance with manufacturer’s recommendations and must not have been subject to abuse, lack of maintenance, misuse, negligence, or unauthorized repairs or alterations.

Should any defect in material or workmanship occur during the above time period in any product, as determined by Harrington Hoist’s inspection of the product, Harrington Hoists, Inc. agrees, at its discretion, either to replace (not including installation) or repair the part or product free of charge and deliver said item F.O.B. Harrington Hoists, Inc. place of business to customer.

Customer must obtain a Return Goods Authorization as directed by Harrington or Harrington’s published repair center prior to shipping product for warranty evaluation. An explanation of the complaint must accompany the product. Product must be returned freight prepaid. Upon repair, the product will be covered for the remainder of the original warranty period. Replacement parts installed after the original warranty period will only be eligible for replacement (not including installation) for a period of one year from the installation date. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Harrington’s warranty, the customer will be responsible for the costs of returning the product.

Harrington Hoists, Inc. disclaims any and all other warranties of any kind expressed or implied as to the product’s merchantability or fitness for a particular application. Harrington will not be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages, loss or expense arising in connection with the use or inability whatever, regardless of whether damage, loss or expense results from any act or failure to act by Harrington, whether negligent or willful, or from any other reason.

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