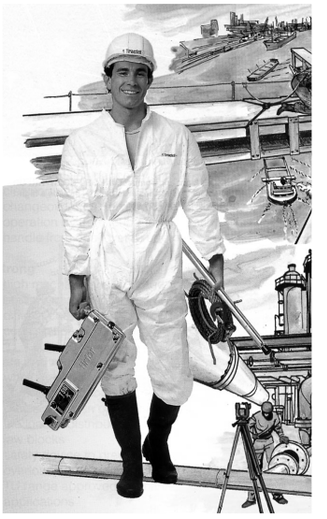
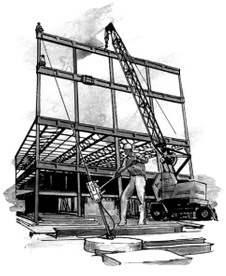
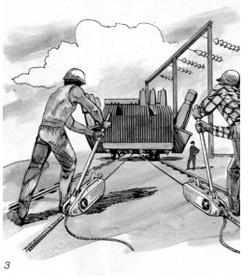
The TU and T-500 series of TIRFOR® lifting and pulling machines are safe, reliable and efficient. Suitable for many applications. TIRFOR® machines are lever operated hoists using a separate wire rope. One-man operated, using a telescopic handles, they work in any position and over any height of lift. They can replace conventional winches and other hoists for many applications.

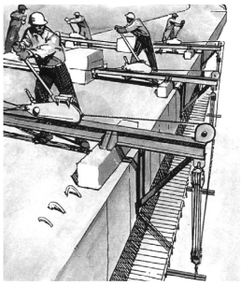




Positioning of steel structures and frames



Moving and installation of transformers

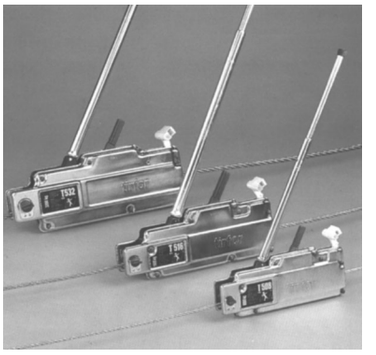


Moving and positioning formwork

T 500 Series

Light and compact, the TIRFOR® T-500 machines are easy to handle, provide a high mechanical advantage and are economical.

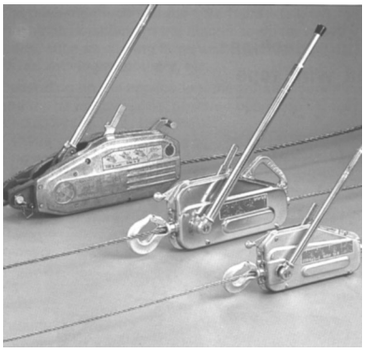
Model	Capacity for material handling lbs	Capacity for material handling kg	Weight lbs
T-508	2000	800	14.3
T-516	4000	1600	30.0
T-532	8000	3200	51.0



TU Series

TIRFOR® TU machines are in daily operation on construction sites around the world putting power where it is needed for lifting, pulling and handling a wide variety of loads.
Only the TU models are UL classified for man riding. Please refer to your local safety regulations.

Model	Lifting Capacity lbs	Capacity for man riding lbs	Lifting Capacity kg	Capacity for man riding kg	Weight lbs
TU-17	2000	1500	800	600	18.5
TU-28	4000	3000	1600	1200	41.0
TU-32	8000	6000	3200	2400	59.5



LEVER CHAIN HOIST

3/4 to 9 Metric Ton Capacity

FEATURES Safe and fool-proof operation with corrosion resistance features for long service life.

- Lightweight and durable all steel construction with powder coated finish and plated frame components to resist corrosion
- Grade 80 Zinc plated alloy load chain is manufactured in Germany, Austria or Japan
- Simple one hand set up and operation
- Horseshoe shape chain guide insures operation in any orientation
- Automatic inertia brake holds the load regardless of operator setting
- Hardened steel pocket wheel bearing sleeves for ease of service
- Short handle and stroke allows 360 degree operation for rigging in tight spaces
- Meets: ASME/ANSI B30.21, OSHA, NASA-STD-8719.9 and EU Directives: 98/37/EC
- ATEX rated Ⓔx II 3 GD IIA T4(X) for use in Hazardous Environments

OPTIONS

- Extended lifts
- Overload Protection (V) is slip clutch type
- Shipyard Hooks (S) are available on 1.5t and 3t models

SPECIFICATIONS and DIMENSIONS (inches and pounds, unless noted)

Model	Max. and *Min. Working Load Limit (WLL)	Falls	Pull@ Max. Load	Load Chain Size (mm)	Hook Opening w/ Latch	Min. Dist. Between Hooks	Lever Length	Weight per extra Ft of Lift	Weight Hoist 5 Ft Lift
L008	**Max** 3/4t (1650 lbs) ***Min** 44 lbs	1	51 lbs	6 x 18 mm	1.06"	12.1"	12.1"	0.54 lbs	13.6 lbs
L010	**Max** 1t (2200 lbs) ***Min** 66 lbs	1	63 lbs	6 x 18 mm	1.14"	12.1"	12.1"	0.54 lbs	14.4 lbs
L015	**Max** 1.5t (3300 lbs) ***Min** 66 lbs	1	65 lbs	7.1 x 21 mm	1.31"	15.2"	16.1"	0.74 lbs	20.9 lbs
L020	**Max** 2t (4400 lbs) ***Min** 77 lbs	1	71 lbs	8 x 24 mm	1.42"	17.5"	14.9"	0.92 lbs	32.2 lbs
L030	**Max** 3t (6600 lbs) ***Min** 88 lbs	1	86 lbs	10 x 30 mm	1.57"	18.1"	16.5"	1.48 lbs	44.4 lbs
L060	**Max** 6t (13200 lbs) ***Min** 110 lbs	2	88 lbs	10 x 30 mm	1.67"	23.6"	16.5"	2.96 lbs	70.4 lbs
L090	**Max** 9t (19800 lbs) ***Min** 198 lbs	3	94 lbs	10 x 28 mm	2.09"	30.3"	16.5"	4.44 lbs	99.2 lbs

*Minimum capacity is the minimum load required to set the automatic safety brake. **The brake will stop a load even if the operator leaves the unit in free chain mode and in neutral, in a similar way as a seat belt reacts.** Standard lift is 5 Ft. All hoist are load tested at 125% Capacity.

How to specify Model: Example **L015-20V** (1-1/2t Capacity, 20 Ft lift, with overload protection option)

Model	–	Lift	Option
L015	**–**	**20**	**V**

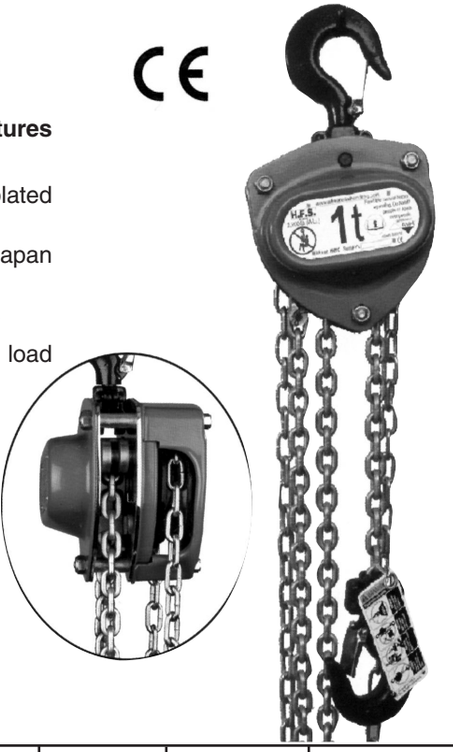
↑

V = With Overload protection
S = With Shipyard hooks (1.5 & 3t only)

Shipyard Hook for tip loading

MANUAL CHAIN HOIST

1/2 to 20 Metric Ton Capacity



FEATURES Safe and fool-proof operation with corrosion resistance features for long service life.

- Lightweight and durable all steel construction with powder coated finish and plated frame components to resist corrosion
- Grade 80 Zinc plated alloy load chain is manufactured in Germany, Austria or Japan
- Hand chain opening is formed with a radius for smooth operation
- Sealed ball bearings on the chain wheel maximize efficiency and serviceability
- Self adjusting double pawl disc type mechanical load brake insures positive load control
- Double roller guide insures load chain tracking
- Meets ASME/ANSI B30.16, OSHA, NASA-STD-8719.9 and EU directives: 98/37/EC
- ATEX rated Ⓔx II 3 GD IIA T4(X) for use in Hazardous Environments

OPTIONS

- Extended lifts
- Overload Protection (V) is slip clutch type

SPECIFICATIONS and DIMENSIONS (inches and pounds, unless noted)

Model	Working Load Limit (WLL)	Falls	Pull@ Max. Load	Load Chain Size (mm)	Hook Opening w/Latch	Min. Dist. Between Hooks	Weight per extra Ft of Lift	Weight Hoist 5 Ft Lift
M005	1/2t (1100 lbs)	1	54 lbs	5 x 15 mm	0.91"	13.6"	0.74 lbs	24.3 lbs
M010	1t (2200 lbs)	1	56 lbs	6 x 18 mm	1.06"	14.8"	0.92 lbs	27.6 lbs
M015	1.5t (3300 lbs)	1	60 lbs	7.1 x 21 mm	1.30"	17.4"	1.12 lbs	39.2 lbs
M020	2t (4400 lbs)	1	75 lbs	8 x 24 mm	1.38"	18.5"	1.30 lbs	43.0 lbs
M030	3t (6600 lbs)	1	84 lbs	10 x 28 mm	1.57"	21.6"	1.88 lbs	77.2 lbs
M050	5t (11000 lbs)	2	81 lbs	9 x 27 mm	1.77"	27.1"	2.88 lbs	91.1 lbs
M075	7.5t (16500 lbs)	4	62 lbs	9 x 27 mm	2.13"	30.1"	5.38 lbs	173.1 lbs
M100	10t (22000 lbs)	4	82 lbs	9 x 27 mm	2.13"	30.1"	5.38 lbs	173.1 lbs
M150	15t (33000 lbs)	6	(2) 83 lbs	9 x 27 mm	2.80"	35.4"	8.26 lbs	297.0 lbs
M200	20t (44000 lbs)	8	(2) 84 lbs	9 x 27 mm	3.23"	37.4"	10.76 lbs	422.0 lbs

Standard lift is 10 feet. Hand chain drop is 2 feet less than lift (unless specified). All hoists tested at Min. 125% WLL.

How to specify Model: Example **M020-20-18V** (2t Capacity, 20 Ft lift, 18 Ft hand chain drop with overload protection)

Model	–	Lift	–	Drop	Option
M020	**–**	**20**	**–**	**18**	**V**

↑

V = With Overload protection

MINI CHAIN HOIST

1/4 & 1/2 Metric Ton Capacity

FEATURES

- Planetary gearing is used to minimize operator effort and to reduce stress on the brake components
- Small size and gearing allow operation and storage in tight places
- Lightweight and durable all steel construction with plated frame components and durable chrome exterior finish to resist corrosion
- Grade 80 Zinc plated alloy load chain is manufactured in Germany, Austria or Japan
- Sleeve bearings used to maximize serviceability and provide good efficiency
- Self adjusting pawl and disc type mechanical load brake insures positive load control
- Meets: ASME/ANSI B30, OSHA, NASA-STD-8719.9 and EU Directives: 98/37/EC
- ATEX rated Ⓔx II 3 GD IIA T4(X) for use in Hazardous Environments

OPTIONS

- Extended lifts

MINI LEVER SPECIFICATIONS and DIMENSIONS (inches and pounds, unless noted)

Model	Max. and *Min. Working Load Limit (WLL)	Falls	Pull@ Max. Load	Load Chain Size (mm)	Hook Opening w/ Latch	Min. Dist. Between Hooks	Lever Length	Weight per Ft of Lift	Weight 5 Ft Lift
ML003	**Max** 1/4t (550 lbs) ***Min** 33 lbs	1	28 lbs	4 x 12 mm	.06"	8.5"	6.2"	0.25 lbs	4.4 lbs
ML005	**Max** 1/2t (1100 lbs) ***Min** 40 lbs	1	40 lbs	5 x 15 mm	.08"	10.0"	7.1"	0.36 lbs	7.7 lbs

MINI HAND CHAIN SPECIFICATIONS and DIMENSIONS (inches and pounds, unless noted)

Model	Max. and *Min. Working Load Limit (WLL)	Falls	Pull@ Max. Load	Load Chain Size (mm)	Hook Opening w/ Latch	Min. Dist. Between Hooks		Weight per Ft of Lift	Weight 8 Ft Lift
MM003	**Max** 1/4t (550 lbs)	1	26 lbs	4 x 12 mm	.06"	9.1"		0.44 lbs	7.7 lbs

*Lever Minimum capacity is the load required to set the automatic safety brake. The brake will stop a load even if the operator leaves the unit in free chain mode and in neutral, in a similar way as a seat belt reacts. Standard lift is 5 Ft for Lever and 8 Ft for Hand Chain models. All hoist are load tested at 125% WLL.

How to Specify Lever Model: Example **LM005-20**
(1/2t Capacity, 20 Ft lift)
Model – Lift
LM005 – 20

How to Specify Manual Chain Hoist Model: Example **MM003-08-06**
(1/4t Capacity, 8 Ft lift and 6 Ft and chain drop)
Model – Lift – Drop
MM003 – 08 – 06

P SERIES PULLER

1000 and 2000 lb Capacity

FEATURES / WIRE PULLER:

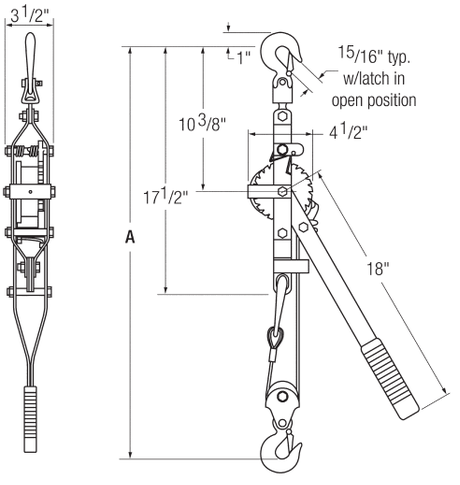
- 4:1 design factor. Meets ASME B30.21.
- Handle and frame are heavy gauge steel with rivet construction and slip-resistant grip. All steel parts are plated for years of useful life.
- Exclusive long life “buttress tooth” cast gear design has no laminated plates to separate or wear and provides maximum strength.
- Sturdy steel drive and holding pawls have long life, stainless steel springs. All pivot points are hardened steel.
- Safety latch hooks are drop forged steel, heat treated and plated for corrosion resistance. Top hook rotates 360º for easy operation.
- Cast-aluminum drum has a “through-the-drum” anchor, larger diameter and a drum guard. This means the wire rope won’t come loose, bends less so it lasts longer and spools evenly while rewinding.
- Galvanized aircraft quality wire rope is preformed to prevent kinks.
- One year warranty.

FEATURES / ROPE PULLER:

- Two models with either 25 or 75 foot rope length.
- Standard with oversized 5/8 inch diameter high strength polyester rope.
- Rope has less chance to mar surfaces or kink and is easier to manage than wire cable.
- Rope is non-conductive and can be stored or used separately.
- Rope pullers can handle long pulls or reaches limited only by the length of rope available.
- The Ingersoll-Rand rope puller is easy to pay out rope and will not bind the rope in the drum after pulling a load.

P Series Specifications and Dimensions							
Model no.	**No. of lines**	**Rated cap. lifting 4:1 lbs**	**Min. ‘A’ dist. btwn hooks in.**	**Lifting distance ft**	**Cable diameter in.**	**No. of hooks**	**Net weight lbs**
P15H	Single	1000	19-1/2	15	3/16	2	8
P15D3H	Single	1000	21	15	3/16	3	10
P15D3H	Double	2000	27-1/2	7-1/2	3/16	3	10
PR-25	Single	1100	24	23	5/8	2	10.8
PR-75	Single	1100	24	73	5/8	2	17.4

Note: Dimensions are subject to change



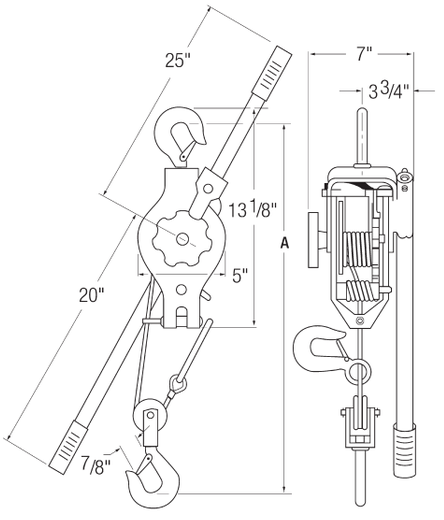
C SERIES PULLER
1700 – 4000 lb Capacity

FEATURES / CABLE PULLER:
- 4:1 design factor lifting, lowering and pulling. Meets ASME B30.21.
- Overload safety handle designed to noticeably bend.
- Lightweight aluminum frame.
- Alloy steel load hook with safety latches.
- One piece cast aluminum drum.
- Buttress tooth design improves load gear life.
- Solid steel drive and holding dog, not laminated plates.
- Galvanized aircraft quality wire rope.
- Ratchet and pawl system provides safe, “one notch at a time” lowering.
- Cable guide and shield protects wire rope and spools cable evenly on drum.
- Reversible handle changes position easily, so pull is always possible in the right direction against the load.
- Easy to repair, replacement parts available.
- Plated external parts for corrosion resistance.

FEATURES / STRAP PULLER:
An extension of our premium C Series, the C Series strap pullers offer the following unique features:
- Three hooks allow 2 ton capacity; 6 foot pull with double line and 1 ton capacity with 12 foot pull using single line.
- Non-conductive, corrosion resistant, high strength synthetic strap will not kink or bind.
- Easy pay out of strap for fast set-up.

C Series Specifications and Dimensions							
Model no.	**No. of lines**	**Rated cap. lifting 4:1 lbs**	**Min. ‘A’ dist. btwn hooks in.**	**Lifting distance ft**	**Cable diameter in.**	**No. of hooks**	**Net weight lbs**
C400H	Single	1700	17	20	1/4	2	16
C400H	Double	3400	22	10	1/4	3	16
C400S	Single	2000	17	12	3/32 x 1-7/8	2	16
C400S	Double	4000	22	6	3/32 x 1-7/8	3	16

Note: Dimensions are subject to change



Overload safety handle is designed to bend when an overload is detected. *Once the handle begins to bend, any additional force will result in additional bending limiting the hoist from lifting beyond it’s capacity.*

SL "SILVER" SERIES LEVER CHAIN HOIST

3/4 – 6 metric ton Line Pull Capacity

FEATURES:

Our value priced lever hoist with industrial rated performance. One hand operation with the best free chaining available. If a load is applied in the free chain mode, the brake will automatically engage, minimizing operator setup error.

- 3/4 - 6 ton capacities.
- All steel construction.
- 360 degree handle rotation.
- Rubber handle grip in all sizes.
- Reliable disc brake.
- Premium grade 100 alloy load chain.
- Hardened swivel–latch hooks.
- Light weight.
- Low handle force.
- Short handle stroke.
- Standard lifts of 5, 10, 15, and 20 feet. Longer lifts available.

OPTIONS:

- Bullard bottom hooks for single fall models only.
- Non-standard lifts.

SL Series Specifications

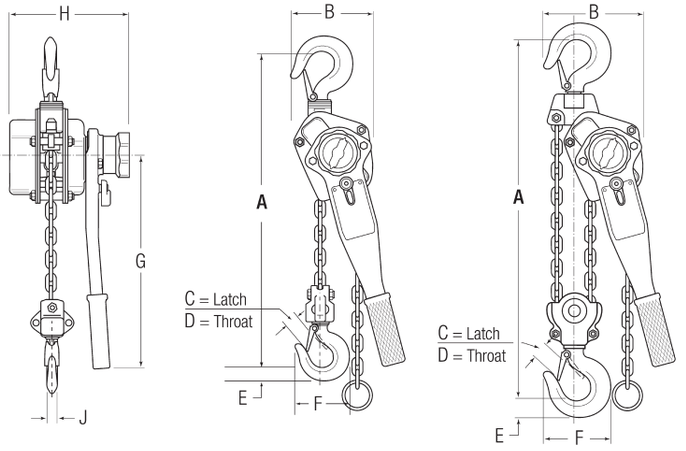
Model no.	Capacity metric tons	Capacity lbs	Pull to lift rated load lbs	Net wt of chain per ft of lift lbs	No. of chain falls	Load chain size mm	Ship wt w/5 ft of lift lbs
SL150	3/4	1650	68	0.53	1	6.0 x 18.0	15.5
SL200	1	2200	64	0.53	1	6.0 x 18.0	15.4
SL300	1-1/2	3300	73	11.73	1	7.1 x 21.2	24.3
SL600	3	6600	75	1.48	1	10.0 x 30.0	44.1
SL1200	6	13200	81	2.95	2	10.0 x 30.0	67.1

Note: Standard lift 5, 10, 15, and 20 ft.

SL Series Dimensions (in.)

Model	A (Min)	B	C	D	E	F	G	H	J
SL150	12.6	5.5	0.95	1.10	0.86	3.5	10.6	6.3	0.62
SL200	13	4.3	1.05	1.20	1.04	3.7	11.2	6.3	0.63
SL300	14.8	7.1	1.20	1.30	1.10	4.2	15.4	7.7	0.80
SL600	18.7	8.7	1.55	1.70	1.50	5.5	15.4	8.7	1.10
SL1200	24.0	10.2	1.60	1.90	1.80	6.3	15.4	8.7	1.30

Note: Dimensions are subject to change.



SMA "SILVER" SERIES MANUAL CHAIN HOIST

1/2 – 5 metric ton Lifting Capacity

FEATURES:

A NEW design for the year 2000 workplace with safety and performance in mind. Meets or exceeds world specifications including ASME B30.16. A value line product with premium features at a Great Price.

- Overload Protection to deter and reduce downtime and repair costs resulting from abuse.
- All steel, low headroom, light weight construction.
- Self-adjusting disc type double pawl mechanical load brake.
- Hardened roller bearings for maximum efficiency and durability.
- Improved 4 layer finish of nickel, copper, nickel, and chrome complementing our Silver Series lever hoist companion product.
- Ideally suited for the Rental and Construction markets.
- Standard lift (L) is 10 feet, Hand chain drop (D) is 2 feet less than lift (unless specified).

OPTIONS:

- Bullard bottom hooks for single fall models only.

SMA Series Specifications

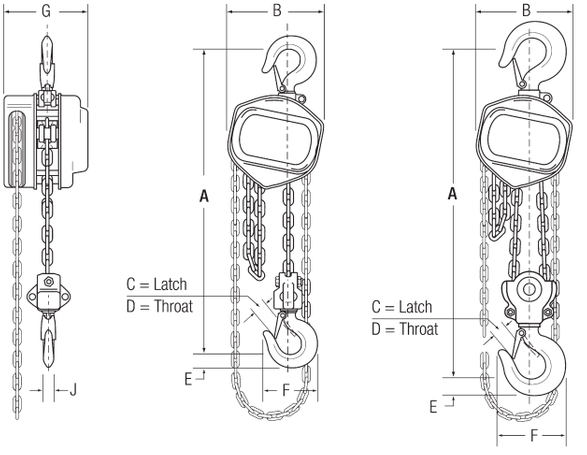
Model no.	Capacity metric tons	Capacity lbs	Pull to lift rated load lbs	Chain o'hauled to lift load 1 ft	Net wt of chain per ft of lift lbs	No. of chain falls	Load chain size mm	Ship wt w/10 ft of lift lbs
SMA005	1/2	1100	48	25	.55	1	6.3 x 18	18
SMA010	1	2200	75	39	.55	1	6.3 x 18	26
SMA015	1-1/2	3300	84	58	.80	1	8.0 x 24	39
SMA020	2	4400	81	75	1.10	2	6.3 x 19	35
SMA030	3	6600	90	116	1.60	2	8.0 x 24	55
SMA050	5	11000	97	187	1.40	2	10.0 x 30	86

Note: Standard lift 10

SMA Series Dimensions (in.)

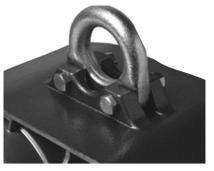
Model	A (min)	B	C	D	E	F	G	J
SMA005	11.6	5.3	.82	.85	.60	2.8	4.2	.59
SMA010	13.0	5.7	1.0	1.1	.78	3.6	5.1	.75
SMA015	16.1	7.6	1.1	1.2	.97	4.1	5.8	.87
SMA020	17.7	5.7	1.2	1.3	1.1	4.5	5.1	.98
SMA030	20.7	7.6	1.4	1.5	1.4	5.1	5.8	1.1
SMA050	24.0	8.3	1.5	1.7	1.7	5.9	6.6	1.3

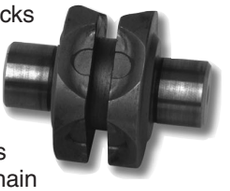
Note: Dimensions are subject to change.



QUANTUM SERIES ELECTRIC CHAIN HOIST

1/8 – 5 metric ton Lifting Capacity





FEATURES:

1. **Eyebolt suspension:**
   An eyebolt suspension is standard with motorized and plain trolleys. Unlike rigid suspensions, the eyebolt suspension allows the hoist to pivot and align itself to the direction of load pull, reducing stress and wear. (Hook suspension can be substituted).
2. **Overload clutch for asset protection:**
   The overload clutch is factory set to limit Quantum from lifting loads in excess of 150% of rated hoisting capacity.
3. **Gear case:**
   Smooth and compact design with a helical/spur gear combination providing “grab free” movement and quiet, reliable operation. Optimum lubrication – Gears are lubricated with a semiliquid grease instead of oil, which is less likely to leak, eliminates oil level checks and clings to the gears even after long idle periods. Quantum will even work upside down.
4. **Chain guide and wheel:**
   A “floating” chain guide precisely feeds chain onto a machined-matched five-pocket chain wheel. This system insures smooth, jam resistant operation, and extends load chain, and chain wheel life.
5. **Optimized load chain:**
   Quantum load chain is precision formed from alloy steel, case hardened and zinc plated. The plating is an IR proprietary process, which resists corrosion better than any standard plating offered for load chain. Controlled elongation: Quantum chain is engineered to elongate a minimum of 10%. This ability to stretch reduces the possibility of catastrophic failure under sudden loading.
6. **Motors:**
   High starting torque – Quantum motors are a totally enclosed non-ventilated (TENV) squirrel cage design. The H4 duty classification of the three phase models allows for 300 starts and 30 minutes “on time” per hour. Class F insulation allows a total thermal rating of 145° C at a 1.0 service factor, instead of the more common Class B insulation of 120° C. Quantum motors can take the heat! Phased to your needs – Single phase motors are available as 115 or 230 volt. Because single-phase motors are subject to low voltages that create higher motor temperatures, these Quantum hoists are equipped with “klixons,” bimetal heat switches that prevent motor burnout. Three phase motors – are available in 230, 380, 460, and 575 volts, single and dual speeds. The 230/460 volt, single speed motors are field reconnectable. Dual speed motors – feature 4, 5, or 6 to 1 high to low speed ratios instead of the typical 3 to 1 ratios. The advantages are unsurpassed load control, reduced cycle time and improved productivity. The overload clutch and Class F insulation eliminate the cost of “klixons.”
7. **Brake:**
   Metal discs stack up against wear – Quantum has a state-of-the-art AC motor brake employing all-steel discs. Multiple stacking significantly increases braking surface area, reducing wear and extending life. This system eliminates the breakage common with fiber discs and the heavier steel springs and DC solenoids they require. Quantum brake discs are guaranteed for the life of the hoist.

8. **Electrical controls:**
   Safety-first pendent – Quantum’s safety-first pendent control handles are comfortable and fit securely in the operator’s hand. Each low voltage (42 volt) control handle integrates a large, red emergency stop button. Operating buttons are clearly marked with high contrast arrows, feature soft push action, and are horizontally aligned for easier operation. Emergency shut-off – Activated from the pendent handle, the mainline contactor disconnects the power to the hoist and trolley motor providing “shutoff protection” in an emergency situation. Easy accessibility – Quantum enclosures are weatherproof, NEMA 3R rated. The removal of just four fasteners (slot-head on the electrical parts cover and allen-head on the mechanical parts cover) allows access to components. Since electrical and mechanical components can be accessed separately, service is quick and clean.
9. **Limit switches:**
   Fail-safe limits – Quantum limit levers are recessed in the hoist enclosure. This clean, obstruction-free assembly virtually eliminates accidental activation of switches. Upper and lower switches are activated by the hook and end stop, eliminating time-consuming adjustments.

QUANTUM SERIES ELECTRIC CHAIN HOIST

1/8 – 5 metric ton Lifting Capacity

DESIGN FEATURES:

- UL and C-UL listed (except 380 volt units). Complete unit listed number is 5D48.
- Meets I-R's interpretation of ANSI B30.16 and pertinent European FEM standards.
- Small compact light weight, high tensile strength, die cast aluminum housing.
- NEMA 3R hoist enclosure and NEMA 4X pendent enclosure can be used outdoors.
- Universal tread trolley wheels fit tapered or flat flange beams.
- Hook, eyebolt, push trolley or motorized trolley suspensions.
- Safety lugs on all trolleys.
- Anti-tip lugs on motorized trolleys.
- Well balanced, modular design.

Optional pendent handle with additional buttons

OPTIONS:

- Trolley brake.
- Chain container.
- External strain relief.
- Power cord lengths.
- Geared limits.
- Handy Handle.
- 110 Volt controls.
- Inertia type mechanical load brake.
- Pendent with vertical aligned buttons.
- Pendent with additional 2 or 4 aligned buttons.
- Bullard top and bottom hooks.
- Inertia type mechanical load brake. This option specifies a bolt-on inertia mechanical load brake. The inertia type brake responds to overspeed of the load. It's similar in function to many safety devices including elevator safety brakes and automotive seat belts. If a dual brake is required this option is ideal as it does not reduce duty cycle, from heat created by drag, or require adjustment to compensate for wear.