

# Ingersoll Rand

# LIFTCHAIN® Air & Hydraulic Hoists



# LIFTCHAIN® Hydraulic Chain Hoists



- The LIFTCHAIN® Hydraulic Chain Hoist series is an innovative alternative to our air driven chain hoists. Capacities from 6 to 100 metric ton.
- Very low noise level
- Extremely sensitive variable speed control of lifting and travelling motions
- Easy installation and operation
- Lower energy cost

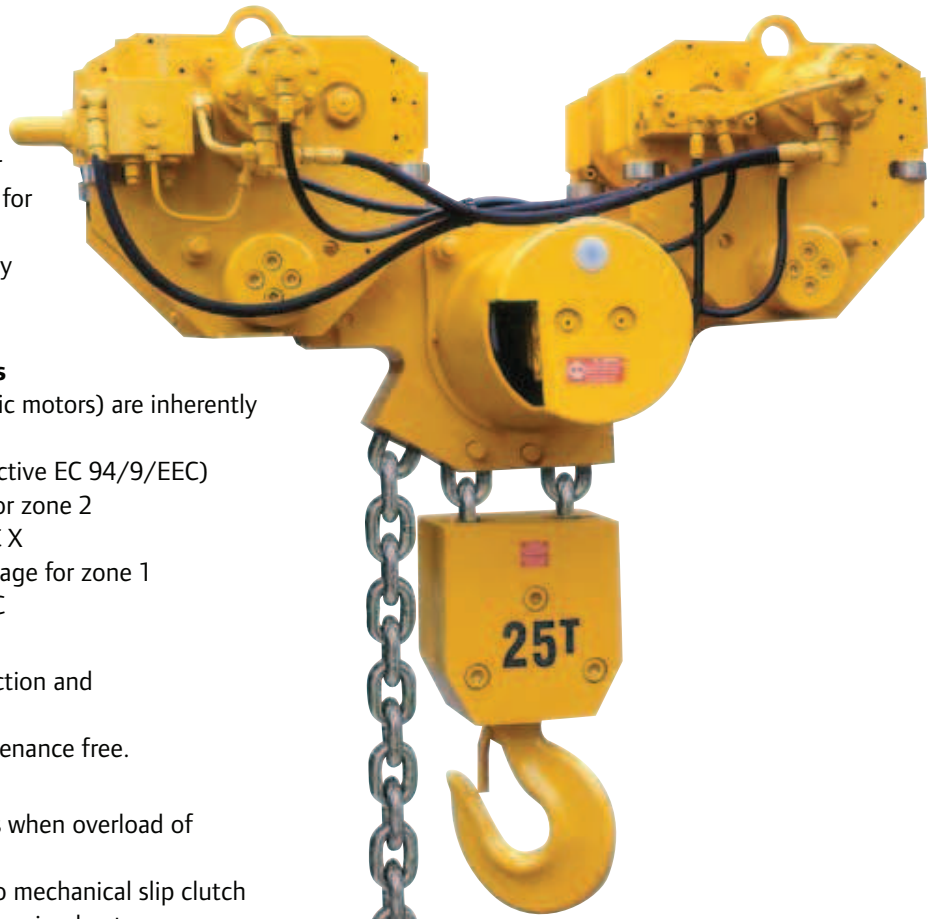


# LIFTCHAIN® Hydraulic Hoist Series: 6 to 100 ton

## Features and Options

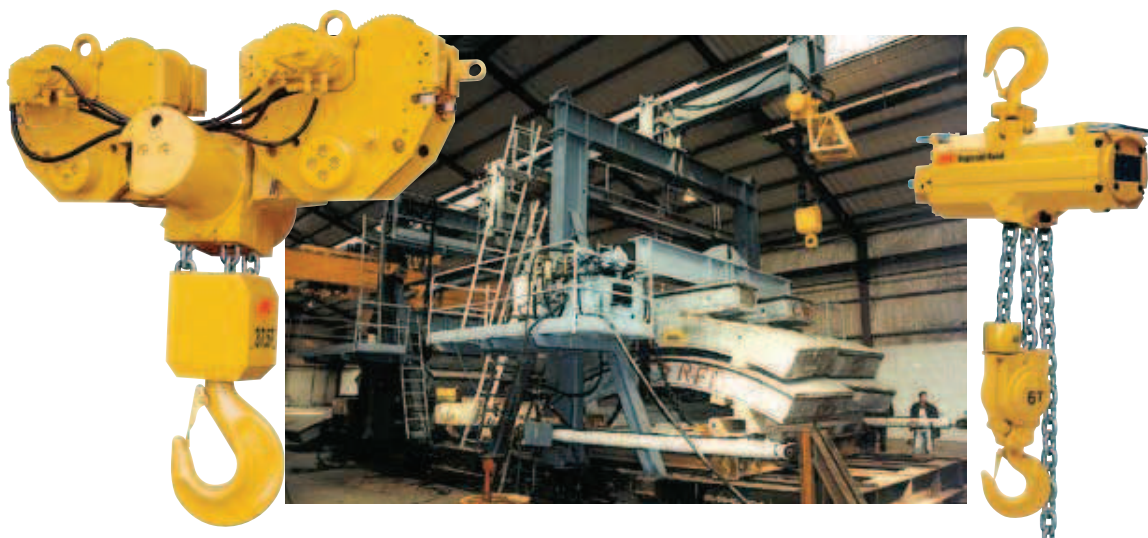
### LIFTCHAIN® Hydraulic Hoists Series Common Features

- **Rugged, Compact Design and Light Weight**
  - All steel construction for better durability. Particularly adapted for difficult environments.
  - Insensitive to dust and humidity
  - 100% duty cycle
- **Suitable for Hazardous Explosion Proof Environments**
  - Hydraulic motors (unlike electric motors) are inherently explosion proof
  - ATEX classification (as per directive EC 94/9/EEC)
  - Standard models are suitable for zone 2
  - Marking Ex II 3 GD c IIB 135°C X
  - Optional spark protection package for zone 1
  - Marking EX II 2 GD c IIB 135°C
- **Automatic Multi Disc Brake**
  - Fully enclosed for better protection and corrosion resistance
  - No adjustment required. Maintenance free.
- **Overload Protection Device**
  - Hoist is shut off and brake sets when overload of 125 – 130% is detected
  - Superior durability compared to mechanical slip clutch which wears and generates damaging heat
  - Prevents high forces being applied to the hoist and the customer support structure
- **Upper and Lower Limit Switches**
  - Integrated in the hoist body for better protection
  - No adjustment required
- **Reduced Maintenance**
  - Innovative modular concept allowing easy inspections and maintenance for major components
- **Corrosion Resistant Load Chain**
  - Grade 80 calibrated load chain
  - Corrosion resistant treated for better protection and longer life
  - 5:1 design factor for safety and durability
- **Smart Design Bottom Blocks**
  - Bottom hook mounted on ball bearing for easier, smoother turning under load
  - Water drain hole to drain water from block
  - External lubrication point for better durability and ease of maintenance
- **Options and Accessories**
  - Plain, geared and motorized trolleys
  - Chain containers (canvas or metal)
  - Marine paint systems
  - Spark resistant package for ATEX Zone 1
  - Rack & pinion trolley drive configuration
  - 3.1b & 2.2 Material traceability certificates
  - Festooning systems



# LIFTCHAIN® - Hydraulic: 6 to 100 ton

## Hook Mount & Trolley Mount Specifications & Performance



### Selection Guide - Hydraulic Chain Hoists

Model #	Capacity metric tons	# Falls	Lifting Speed @ Rated Load		Hook Mount Headroom		Trolley Mount Headroom	
			m/min	ft/min	mm	in	mm	in
LCH060S	6	1	5.6	18.4	735	28.9	792	30.0
LCH120D	12	2	2.8	9.2	991	39.0	999	39.3
LC2H125S	12.5	1	4.6	15.1	865	34.1	1,000	39.4
LCH180T	18	3	1.9	6.2	1,083	42.6	1,241	48.9
LCH250Q	25	4	1.4	4.6	1,180	46.5	1,290	50.8
LC2H250D	25	2	2.3	7.5	1,235	48.6	990	39.0
LC2H375T	37.5	3	1.5	4.9	1,484	58.4	1,134	44.6
LC2H500Q	50	4	1.1	3.6	1,590	62.6	1,182	46.5
LCH750T	75	3	0.5	1.6	2,338	92.0	1,845	72.6
LCH1000Q	100	4	0.4	1.3	2,455	96.7	1,901	74.8

### Controls

Control systems, hoses and fittings are delivered as separate accessories. The LCH Series can be provided with control systems such as:

- Hydraulic control console for hoist only, hoist / trolley combination, or for complete lifting system (e.g. systems with 2 or 4 hoist / trolley combination).
- Electro-hydraulic control console, also available for all types of configurations
- Hydraulic pendent control from 6 ton models with motorized trolley.

All these control systems can be delivered with emergency stop device on request.



# LIFTCHAIN® - Hydraulic: 6 to 100 ton

## Specifications & Performance

### Hook Mount

Model #	Capacity		Minimum Headroom		Lifting Speed				Lowering Speed		Nominal Flow		Working Pressure		Chain Size	Chain Weight (per mtr of lift)		Net Weight w/3m of Lift	
	metric tons	#Falls	mm	in	Rated Load	No Load	Rated Load	No Load	Rated Load	No Load	L/min	g/min	bar	psi		kg	lbs	kg	lbs
LCH060S	6	1	735	28.9	5.6	18.4	5.6	18.4	5.6	18.4	48	12.68	140	2,030	16x45	5.8	12.7	93	204.6
LCH120D <sup>(1)</sup>	12	2	991	39.0	2.8	9.2	2.8	9.2	2.8	9.2	48	12.68	140	2,030	16x45	11.5	25.3	175	385.0
LC2H125S	12.5	1	865	34.1	4.6	15.1	4.6	15.1	4.6	15.1	50	13.21	180	2,610	22x66	10.7	23.5	500	1,100.0
LCH180T <sup>(2)</sup>	18	3	1,083	42.6	1.9	6.2	1.9	6.2	1.9	6.2	48	12.68	140	2,030	16x45	17.2	37.8	200	440.0
LCH250Q <sup>(3)</sup>	25	4	1,180	46.5	1.4	4.6	1.4	4.6	1.4	4.6	48	12.68	140	2,030	16x45	23.0	50.6	430	946.0
LC2H250D	25	2	1,235	48.6	2.3	7.5	2.3	7.5	2.3	7.5	50	13.21	180	2,610	22x66	21.4	47.1	670	1,474.0
LC2H375T	37.5	3	1,484	58.4	1.5	4.9	1.5	4.9	1.5	4.9	50	13.21	180	2,610	22x66	32.1	70.6	875	1,925.0
LC2H500Q	50	4	1,590	62.6	1.1	3.6	1.1	3.6	1.1	3.6	50	13.21	180	2,610	22x66	42.8	94.2	950	2,090.0
LCH750T	75	3	2,338	92.0	0.5	1.6	0.5	1.6	0.5	1.6	40	10.57	150	2,175	32x90	73.5	161.7	2,800	6,160.0
LCH1000Q	100	4	2,455	96.7	0.4	1.3	0.4	1.3	0.4	1.3	40	10.57	150	2,175	32x90	98.0	215.6	3,245	7,139.0

(1) Maximum allowed height of lift is 20 m

(2) Maximum allowed height of lift is 13 m

(3) Maximum allowed height of lift is 10 m



### Units Featured:

- 4 hydraulic trolley hoist units, 37.5 metric ton each, used on an offshore rig.



# LIFTCHAIN® - Hydraulic: 6 to 100 ton

## Specifications & Performance - Standard Headroom <sup>(1)</sup>

### Trolley Mount

Model #	Trolley Type	Capacity metric tons	Minimum Headroom		Trolley Speed @ Rated Load <sup>(2)</sup>		Trolley Nominal Flow		Trolley Flange Adjustment		Minimum Curve Radius		Net Weight w/3m of Lift	
			mm	in	m/min	ft/min	L/min	g/min	mm	in	m	ft	kg	lbs
LCH060S	Plain	6	762	30.0	-	-	-	-	98-310	3.9-12.2	3	9.8	270	594
LCH060S	Geared	6	762	30.0	-	-	-	-	98-310	3.9-12.2	3	9.8	270	594
LCH060S	Motorized	6	762	30.0	15	49.2	10	2.64	98-310	3.9-12.2	3	9.8	292	642
LCH120D	Plain	12	999	39.3	-	-	-	-	131-310	5.2-12.2	3	9.8	335	737
LCH120D	Geared	12	999	39.3	-	-	-	-	131-310	5.2-12.2	3	9.8	335	737
LCH120D	Motorized	12	999	39.3	15	49.2	10	2.64	131-310	5.2-12.2	3	9.8	351	772
LC2H125S	Motorized	12.5	1,000	39.4	15	49.2	10	2.64	131-310	5.2-12.2	3	9.8	420	924
LCH180T	Plain	18	1,241	48.9	-	-	-	-	143-310	5.6-12.2	3	9.8	420	924
LCH180T	Motorized	18	1,241	48.9	15	49.2	10	2.64	143-310	5.6-12.2	3	9.8	435	957
LCH250Q	Plain	25	1,290	50.8	-	-	-	-	143-310	5.6-12.2	3	9.8	440	968
LCH250Q	Motorized	25	1,290	50.8	15	49.2	10	2.64	143-310	5.6-12.2	3	9.8	450	990
LC2H250D	Motorized	25	990	39.0	15	49.2	10	2.64	160-310	6.3-12.2	25	82.0	1,000	2,200
LC2H375T	Motorized	37.5	1,134	44.6	15	49.2	10	2.64	160-310	6.3-12.2	25	82.0	1,600	3,520
LC2H500Q	Motorized	50	1,182	46.5	15	49.2	10	2.64	160-310	6.3-12.2	25	82.0	1,600	3,520
LCH750T	Motorized	75	1,845	72.6	15	49.2	20	5.28	160-310	6.3-12.2	130	426.4	4,720	10,384
LCH1000Q	Motorized	100	1,901	74.8	15	49.2	20	5.28	160-310	6.3-12.2	130	426.4	5,900	12,980

(1) For Low Headroom version, please contact Customer Services

(2) In Rack & Pinion configuration, the trolley speed is reduced to 9 m/min (29.5 ft/min) and the oil flow is increased to 30 L/min (7.92 g/min)

Ingersoll Rand has a global network of authorized service centers which can provide inspection, testing, repair, and a variety of other maintenance services.

### Tip:

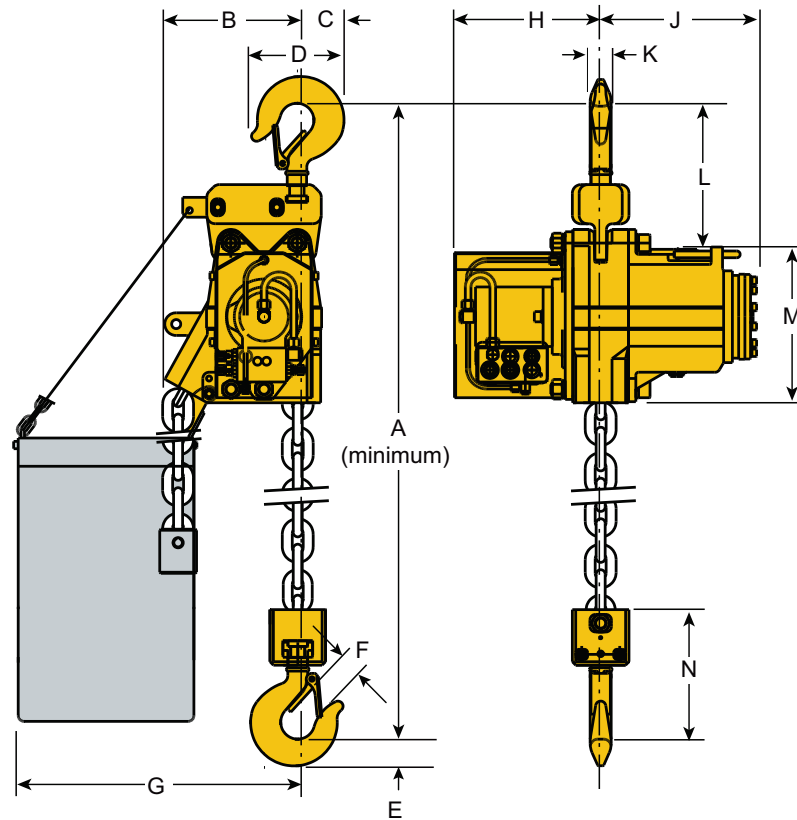
American National Standards Institute / American Society of Mechanical Engineers (ANSI/ASME) and Ingersoll Rand recommends that a hoist or winch (or any component of said) that has been repaired should be tested prior to being placed into service.



## Dimension Drawings - Hydraulic: 6 to 25 ton (4 falls)

### Hook Mount

See page 28 for  
chainbucket  
dimension  
information



Hook Mount	A		B		C		D		E		F		G		H		J	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
LCH060S	735	28.9	175	6.9	101	4.0	203	8.0	46	1.8	43	1.7	435	17.1	275	10.8	258	10.2
LCH120D	991	39.0	175	6.9	101	4.0	203	8.0	67	2.6	58	2.3	435	17.1	275	10.8	258	10.2
LCH180T	1,083	42.6	175	6.9	101	4.0	203	8.0	78	3.1	78	3.1	435	17.1	352	13.9	298	11.7
LCH250Q	1,180	46.5	175	6.9	101	4.0	203	8.0	99	3.9	87	3.4	435	17.1	333	13.1	316	12.4

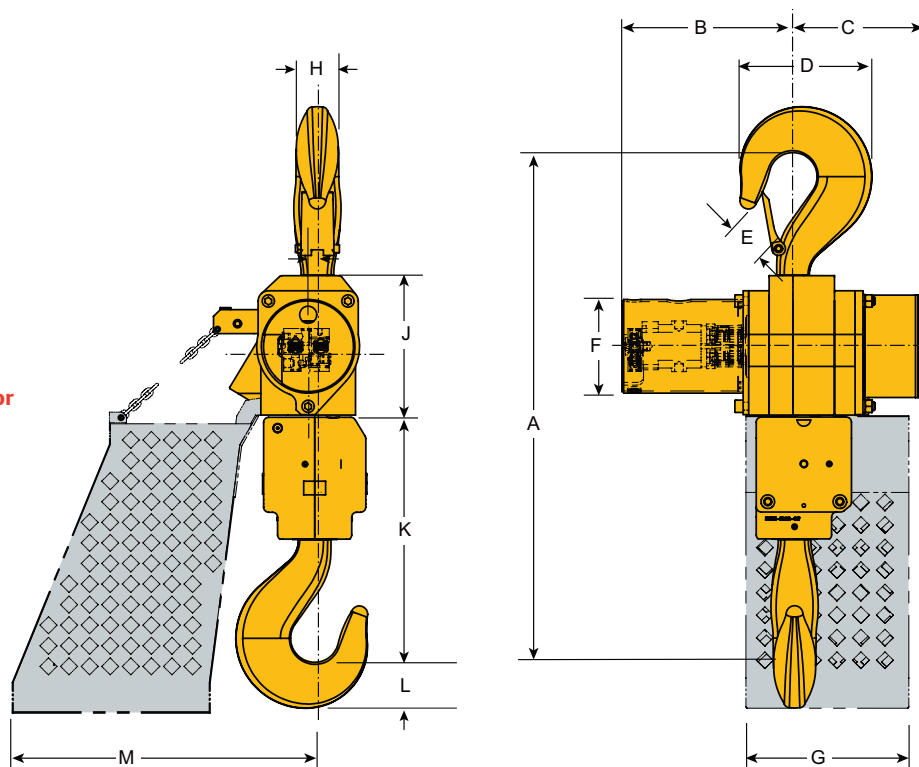
Hook Mount	K		L		M		N	
	mm	in	mm	in	mm	in	mm	in
LCH060S	35	1.4	241	9.5	218	8.6	223	8.8
LCH120D	50	2.0	280	11.0	282	11.1	423	16.7
LCH180T	62	2.4	320	12.6	282	11.1	478	18.8
LCH250Q	87	3.4	368	14.5	282	11.1	527	20.7

Dimensions are subject to change, contact Customer Services for certified prints.

## Dimension Drawings - Hydraulic: 12.5 to 100 ton

### Hook Mount

See page 28 for  
chainbucket  
dimension  
information



Hook Mount	A		B		C		D		E		F		G		H		J	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
LC2H125S	865	34.1	446	17.6	265	10.4	222	8.7	58	2.3	273	10.7	475	18.7	57	2.2	391	15.4
LC2H250D	1,235	48.6	446	17.6	265	10.4	340	13.4	87	3.4	273	10.7	475	18.7	80	3.1	391	15.4
LC2H375T	1,484	58.4	500	19.7	373	14.7	390	15.4	103	4.1	273	10.7	475	18.7	125	4.9	407	16.0
LC2H500Q	1,590	62.6	527	20.7	346	13.6	440	17.3	118	4.6	273	10.7	475	18.7	140	5.5	416	16.4
LCH750T	2,338	92.0	560	22.0	688	27.1	574	22.6	156	6.1	273	10.7	912	35.9	180	7.1	774	30.5
LCH1000Q	2,455	96.7	597	23.5	652	25.7	610	24.0	180	7.1	273	10.7	1,102	43.4	200	7.9	774	30.5

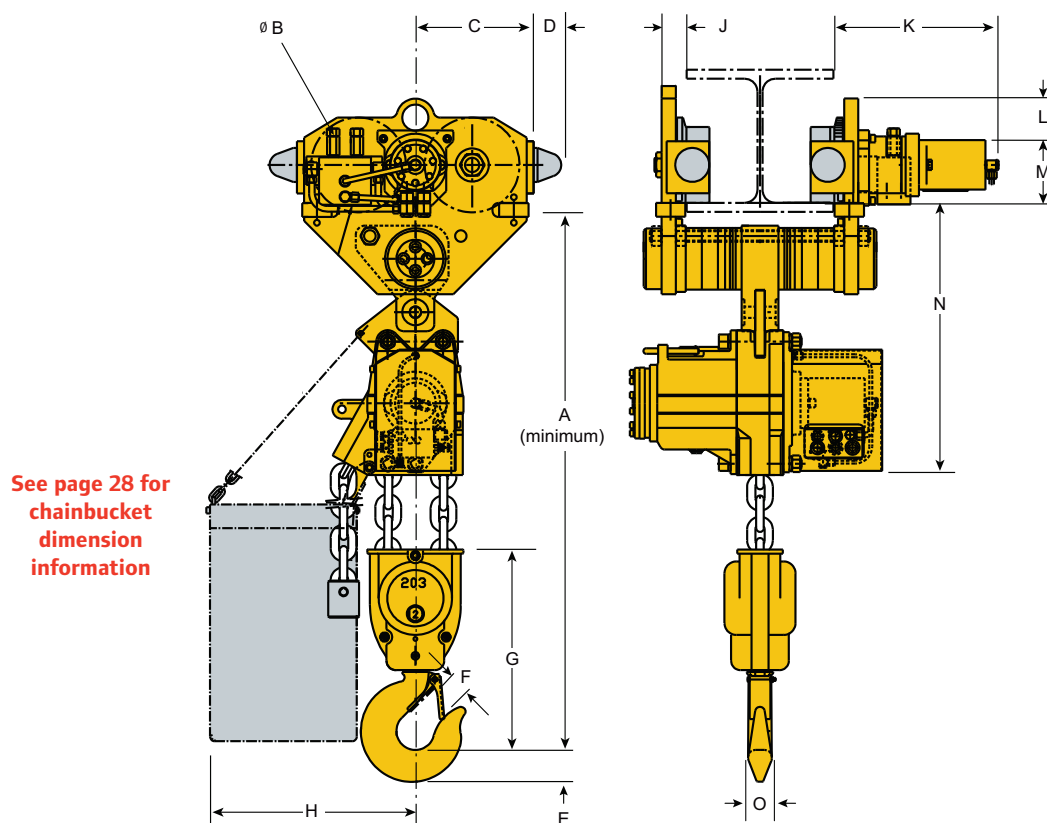
Hook Mount	K		L		M	
	mm	in	mm	in	mm	in
LC2H125S	296	11.7	67	2.6	836	32.9
LC2H250D	573	22.6	94	3.7	836	32.9
LC2H375T	714	28.1	132	5.2	836	32.9
LC2H500Q	763	30.0	150	5.9	836	32.9
LCH750T	1,055	41.5	190	7.5	1,165	45.9
LCH1000Q	1,111	43.7	250	9.8	1,365	53.7

Dimensions are subject to change, contact Customer Services for certified prints.



## Dimension Drawings - Hydraulic: 6 to 25 ton (4 falls)

### Trolley Mount - Standard Headroom



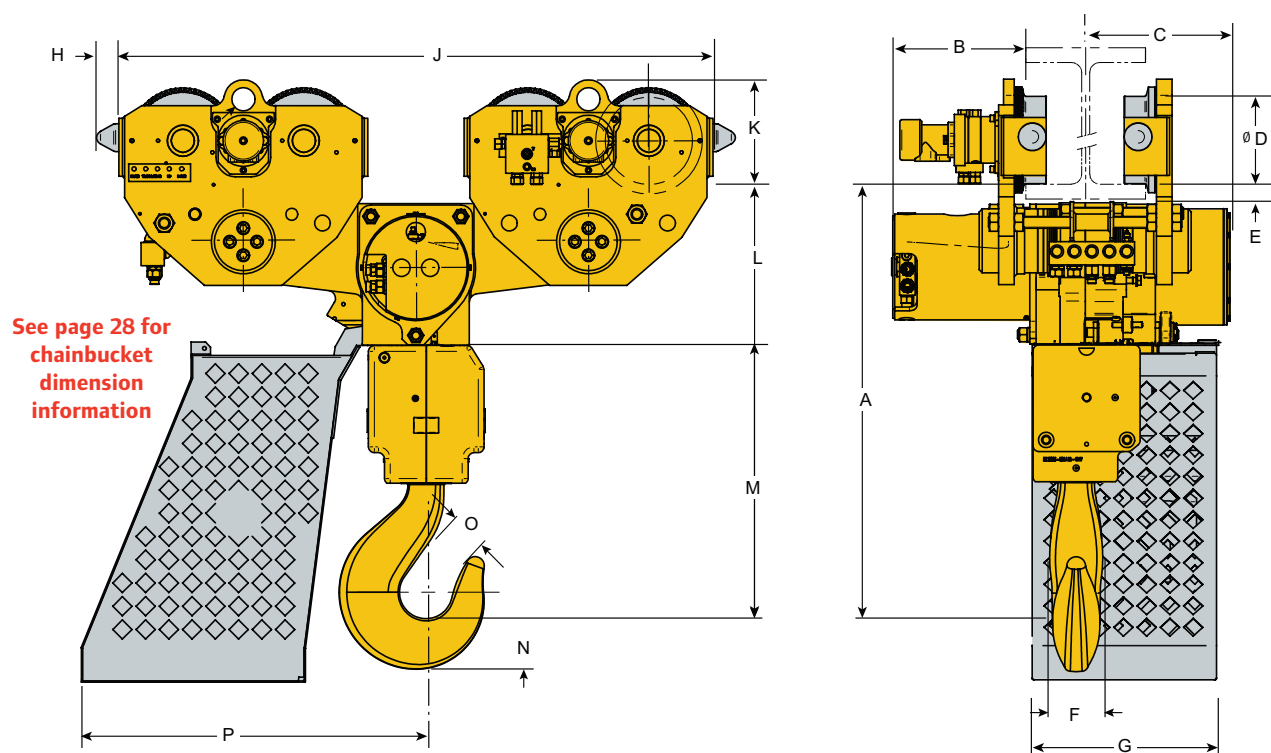
Trolley Mount	A		B		C		D		E		F		G		H		J	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
LCH060S	762	30.0	160	6.3	270	10.6	50	2.0	49	1.9	43	1.7	228.5	9.0	494	19.4	42	1.7
LCH120D	999	39.3	160	6.3	253	10.0	58	2.3	67	2.6	58	2.3	423.5	16.7	435	17.1	52	2.0
LC2H125S	1,000	39.4	160	6.3	253	10.0	58	2.3	67	2.6	58	2.3	296	11.7	916	36.1	86	3.4
LCH180T	1,241	48.9	225	8.9	337	13.3	58	2.3	80	3.1	78	3.1	484	19.1	454	17.9	69	2.7
LCH250Q	1,290	50.8	225	8.9	337	13.3	58	2.3	94	3.7	87	3.4	533	21.0	435	17.1	69	2.7

Trolley Mount	K		L		M		N		O	
	mm	in	mm	in	mm	in	mm	in	mm	in
LCH060S	339	13.3	43	1.7	177	7.0	502	19.8	39	1.5
LCH120D	350	13.8	64	2.5	157	6.2	655	25.8	57	2.2
LC2H125S	347	13.7	88	3.5	133	5.2	700	27.6	57	2.2
LCH180T	360	14.2	81	3.2	189	7.4	710	28.0	67	2.6
LCH250Q	360	14.2	81	3.2	189	7.4	710	28.0	85	3.3

Dimensions are subject to change, contact Customer Services for certified prints.

## Dimension Drawings - Hydraulic: 25 (2 falls) to 100 ton

### Trolley Mount - Standard Headroom



Trolley Mount	A		B		C		D		E		F		G		H		J	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
LC2H250D	990	39.0	343	13.5	265	10.4	160	6.3	40	1.6	84	3.3	475	18.7	58	2.3	1,246	49.1
LC2H375T	1,134	44.6	372	14.6	373	14.7	225	8.9	40	1.6	125	4.9	475	18.7	58	2.3	1,556	61.3
LC2H500Q	1,182	46.5	372	14.6	346	13.6	225	8.9	40	1.6	140	5.5	475	18.7	58	2.3	1,556	61.3
LCH750T	1,845	72.6	376	14.8	684	26.9	225	8.9	70	2.8	180	7.1	1,102	43.4	58	2.3	3,254	128.1
LCH1000Q	1,901	74.8	376	14.8	652	25.7	225	8.9	70	2.8	200	7.9	1,021	40.2	58	2.3	3,254	128.1

Trolley Mount	K		L		M		N		O		P	
	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
LC2H250D	220	8.7	411	16.2	572	22.5	94	3.7	87	3.4	836	32.9
LC2H375T	270	10.6	416	16.4	714	28.1	132	5.2	103	4.1	836	32.9
LC2H500Q	270	10.6	416	16.4	763	30.0	150	5.9	118	4.6	836	32.9
LCH750T	270	10.6	790	31.1	1,055	41.5	190	7.5	152	6.0	1,402	55.2
LCH1000Q	270	10.6	790	31.1	1,111	43.7	212	8.3	180	7.1	1,366	53.8

Dimensions are subject to change, contact Customer Services for certified prints.

# How To Order

## Model identification Codes

### How to order standard equipment

Specify the complete model number as shown. Specify beam size, type and flange width. Note that 0 (zero) is a number, not a letter in model part numbers.

**Example: LC2A250QIP3RE10M15J12-E**

LC2	A	250Q	IP	3	RE	10M	15	J12	-E
<b>Series</b> <b>LC</b> = LIFTCHAIN® Series <b>LC2</b> = LIFTCHAIN® Series, 2nd generation	<b>Power type</b> <b>A</b> = Air <b>H</b> = Hydraulic		<b>Body type</b> <b>IP</b> = Industrial range, pendent control <b>IC</b> = Industrial range, pull cord <b>IF</b> = Industrial range, full flow control (Hydraulic models only)	<b>Control type</b> Only with IC models <b>1</b> = Pull cord Only with IP models <b>2</b> = 1 motor pendent <b>3</b> = 2 motor pendent <sup>(3)</sup> <b>0</b> = No pendent or no control valve		<b>Height of lift</b> <b>3M</b> = 3 meter standard lift <b>XXM</b> = Specified length in meters	<b>Control length</b> <b>0</b> = no control hose <b>XX</b> = Specified length in meters		<b>CE package</b> <b>-E</b> = Compliance with the European Machinery Directives
<b>Load capacity / falls of chain</b> 015S = 1.5 ton / single fall 030D = 3 ton / two falls 040S = 4 ton / single fall 060S = 6 ton / single fall 080D = 8 ton / two falls 120D = 12 ton / two falls 125S = 12.5 ton / single fall 180T = 18 ton / three falls 250D = 25 ton / two falls 250Q = 25 ton / four falls 375T = 37.5 ton / three falls <b>500Q</b> = 50 ton / four falls 750T = 75 ton / three falls 1000Q = 100 ton / four falls			<b>Suspension</b> <b>A</b> = Fixed lug <b>C</b> = Swivel top hook <b>PU</b> <sup>(1)</sup> = Plain rigid universal trolley (flat or tapered beam / 1.5 to 8 ton) <b>PE</b> <sup>(1)</sup> = Plain rigid trolley (flat beam / 12 to 25 ton) <b>PN</b> <sup>(1)</sup> = Plain rigid trolley (tapered beam / 12 to 25 ton) <b>GU</b> <sup>(1)</sup> = Geared rigid universal trolley (flat or tapered beam / 1.5 to 8 ton) <b>GE</b> <sup>(1)</sup> = Geared rigid trolley (flat beam / 12 ton only) <b>GN</b> <sup>(1)</sup> = Geared rigid trolley (tapered beam / 12 ton only) <b>VU</b> <sup>(1)(2)</sup> = Vane motorized rigid universal trolley (flat or tapered beam / 1.5 to 8 ton) <b>VE</b> <sup>(1)(2)</sup> = Vane motorized rigid trolley (flat beam / 12 to 50 ton) <b>VN</b> <sup>(1)(2)</sup> = Vane motorized rigid trolley (tapered beam / 12 to 50 ton) <b>RU</b> = Gear motorized rigid universal trolley (flat or tapered beam) 6,000 and 8,000 kg <b>RE</b> = Gear motorized rigid trolley (flat beam) 12 to 100 ton <b>RN</b> = Gear motorized rigid trolley (tapered beam) 12 to 100 ton				<b>Options</b> <b>A</b> = Standard chain bucket <b>B</b> = Large chain bucket <b>C</b> = Extra large chain bucket <b>J</b> = Air Line Accessories.* (Air only) Specify J1: Filter, J2: Lubricator, J3: Regulator or any numerical combination <b>K</b> = Cast iron pendent (Air only) <b>L</b> = Low Temperature (-20°C) Certified (includes 3.1b material traceability certificates) <b>P</b> = Marine paint 150µ <b>QZ</b> = Offshore paint 290µ including sandblasting <b>T1</b> = Spark resistant package (ATEX zone 1**)		

(1) Add “L” for low headroom trolley, e.g. LVU or LRU.

(2) Add the letter “R” for rack & pinion configuration (e.g. RER) - on flat beam only.

(1) Add "L" for low headroom trolley, e.g. LVU or LRU.

(2) Add the letter "R" for rack & pinion configuration (e.g. RER) - on flat beam only.

(3) For hydraulic trolley hoists, pendent configuration is joystick-style.

\* For protection during shipment and due to the wide range of installation variables the air line accessories are not installed on the units at the factory. All accessories are shipped loose for client installation.

\*\* Option T1 (ATEX Zone 1) includes the following:

**For the hoist:** - Cast iron pendent - Bronze coated bottom hook assy

**For the trolley:** - Solid bronze wheels - Pinion drive in solid bronze or stainless steel - Cast iron pendent - Bronze coated hand wheel for geared trolley - Brass hand chain guide for geared trolley



Compliance with the European Machinery Directives:

### LCA/LC2A and LCH

The LIFTCHAIN® air and hydraulic models can be CE marked and fitted as standard with all the safety devices for compliance with the European Machinery Directives 89/392/EEC, 91/368/EEC, 93/44/EEC and 93/68/EEC. In this case, they are delivered with the CE mark and an EC declaration of conformity.

### LCA/LC2A and LCH delivered without control

These models are considered as part machines intended for incorporation into assemblies, therefore they are not CE marked but are delivered with a declaration of incorporation. However they are fitted as standard with safety options to allow their incorporation into systems which have to be in compliance with the CE Directives (89/392/EEC, 91/368/EEC, 93/44/EEC, 93/68/EEC).