Ingersoll Rand®

Liftchain® Air Hoist

LC2A 1 to 25 Ton

Liftchain® Series Air Chain Hoists

Reliable, Safe, Versatile

Since 1924, Ingersoll Rand® has built extremely durable and reliable winches and hoists. Ingersoll Rand® Liftchain Hoists are the most versatile heavy-lifting hoists in the Ingersoll Rand® hoist line. They incorporate all the best features learned from decades of experience into a compact, modular frame. Available in a list of options, Ingersoll Rand® hoists are the gold standard. Whether working in the mines, food industries, with chemicals or at shipyards, our Liftchain hoists are trusted around the world for many industrial applications. You can count on Ingersoll Rand® Liftchain hoists to get the job done.

Reliable

- All steel construction for better durability
- Designed specifically for harsh environments, including resistance to dust and humidity and 100% duty cycle operation
- Grade 80 calibrated load chain resists corrosion
- High-starting torque gear-type air motor offers precise spotting capability
- Variable speed control through pilot pendent or pull chain control

Safe

- Spark resistant design ideal for potentially explosive atmosphere; classified as an equipment category 3 per ATEX Directive 2014/34/EU for zone 2 of Directive 1999/92/EC (optional zone 1 package available)
- Reduced maintenance, self-adjusting automatic disc brake fully enclosed for better protection
- CE-certified models include overload protection, emergency stop and built-in main air shut-off valve

Versatile

- Numerous application-specific options available, including chain containers (fabric or metallic) and rigid mounting trolleys (plain, geared or motorized)
- Low maintenance, self-adjusting automatic disc brake fully enclosed for better protection
- Upper and lower limit switch allows hoist to be used in a horizontal position

Reliable, Safe, Versatile.

If there was a need for lifting, pulling or positioning, chances are an Ingersoll Rand Liftchain® Hoist was there to do the job. Liftchain® hoists provide the right lifting package for your application. Available in both hook mount and trolley mount models, the LC2A Series is fully customized for a system perfectly matched to your load and lift requirements in any industrial application. Liftchain hoists stand up to high duty cycles in harsh environments, while providing precision spotting control. CE-certified models are ATEX zone 2 rating (zone 1 optional) to ensure safety. All Liftchain hoists are built to resist dust, humidity and corrosive gases for reliable operation.

Shipyard

- Private and military builds and reapair
- Moving & positioning large blades engines, etc.
- Salvage and recovery

Mining and Tunneling

- Underground copper, gold, phosphorous mines & tunneling
- Loading large parts on mining vehicles
- Maneuvering large machines

Power Plants

- Floating Production Storage & Offloading Vessels (FPSO)
- Maneuvering large machines & turbines in power plant
- General Maintenance

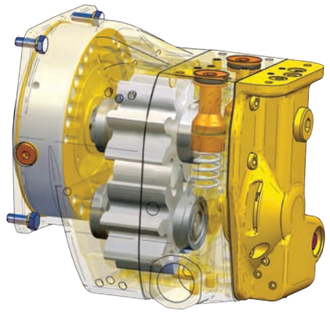
Manufacturing

- Various Manufacturing parts under constant lift & lower
- Various big applications - handling chemicals
- Aerospace build and repair
- Food production & processing

Gear Motor

Features:

- Reliable technology with a small amount of parts
- High efficiency at a range of speeds
- Needs very little air lubrication
- Few moving parts, virtually maintenance free



Pendent

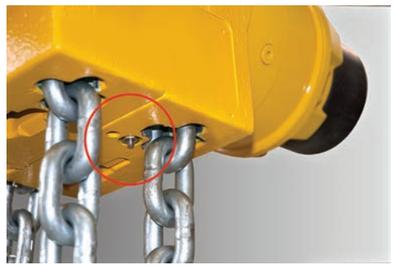
Features:

- Ergonomic design and Strong cast aluminum construction (cast iron optional)
- Fully variable speed control.
- Up to 20 meters of control length (more with additional accessories)
- Coated for long term use in harsh environment.
- Available in 2 or 4 directional buttons
- Optional Emergency Stop button (standard on CE models)

Limit Switch

Features:

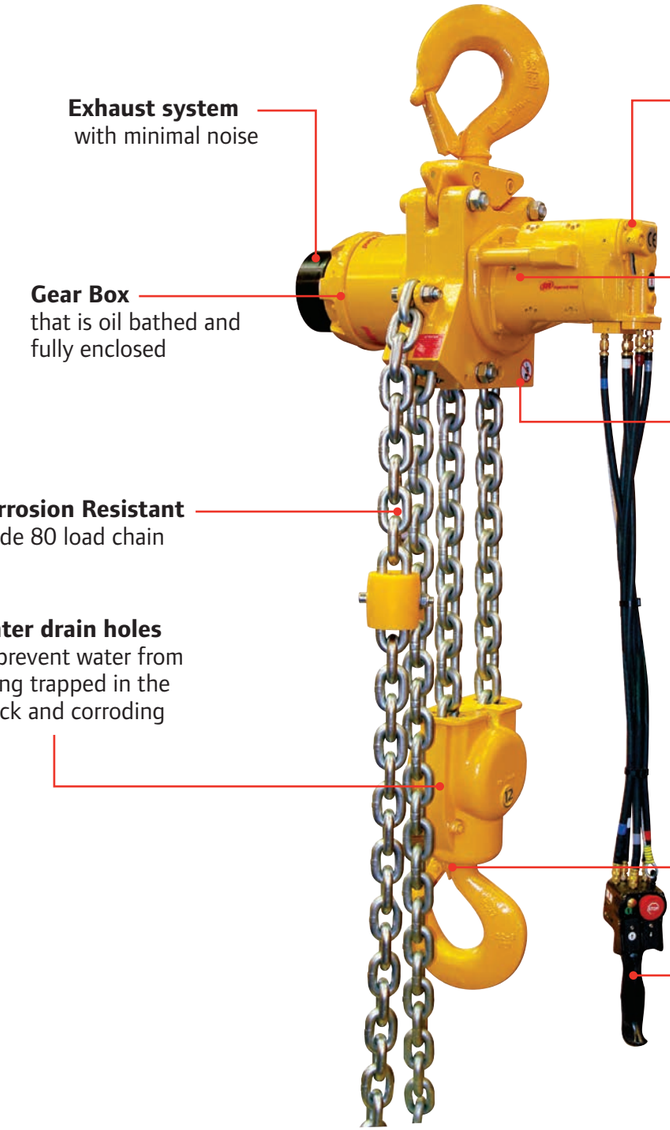
- Stops the hoist when reaching top or bottom stroke limit
- Integrated on the hoist body.
- Low exposure to external shocks
- Prevents excessive stress on load bearing components, extending lifetime.



Liftchain® Series Air Chain Hoists

The Liftchain® LC2A Series is the result of a long experience in heavy load lifting applications in the most difficult and extreme environments around the world. Setting new standards for safety and reliability, the LC2A Series is intended for tough industrial applications on shipyards, petrochemical, refineries, foundries, steels mills, mining, tunneling, etc.

Walk Around the Tool:



Hook Mounted Liftchain® Hoists

These standard hook-mount models can be customized with many options for effective adaptation to your application – type of control, chain bucket, suspension.

Features:

- We have a swivel top hook for enhanced maneuverability
- Ideal for maintenance purposes due to easy transport - More common when hoist is going to be used in multiple locations or on multiple levels (floors)
- Compact design making the hoist ideal for transport

Top Hook

Large opening with safety latch and ability to swivel

Chain Containers

Variety of chain container options to help with capturing the load change to prevent hoist interference

Pull Cord

Ideal for shipyard application

LC2A Standard Series (1 Ton to 25 Ton Range Scope)

Model	Rated capacity (T)	Falls of load chain	Motor size (HP)	Lifting speed at rated load (m/min)	Lowering speed at rated load (m/min)	Lowering speed at rated load (m/min)	Air cons. at rated load (m3/min)	Air inlet size (BSP)	Sound pressure (1) (dbA)	Hoist weight (2) (kg)	Chain size (mm)	Chain weight/ 1m extra lift (kg)	FEM / ISO Mechanical classifcation (3)
LC2A010SI	1	1	3.5	7.0	11.0	8.5	4	3/4''	78	38	8x24	1.4	1 Am / M4
LC2A015SI	1.5	1	3.5	6.2	11.0	8.5	4	3/4''	78	38	8x24	1.4	1 Bm / M3
LC2A020DI	2	2	3.5	3.3	05.5	4.0	4	3/4''	78	48	8x24	2.8	1 Am / M4
LC2A030DI	3	2	3.5	3.0	5.5	4	4	3/4''	78	48	8x24	2.8	1 Bm / M3
LC2A030SI	3	1	3.5	4.0	6.4	5.0	4	3/4''	76	84	13x36	3.8	1 Am / M4
LC2A040SI	4	1	6	3.9	7.0	4.5	5.2	1''	76	90	13x36	3.8	1 Bm / M3
LC2A060QI	6	4	3.5	1.5	2.5	2.0	4	3/4''	78	74	8x24	5.6	1 Bm / M3
LC2A060DI	6	2	3.5	1.9	3.2	2.5	4	3/4''	79	108	13x36	7.6	1 Am / M4
LC2A060SI	6	1	6	2.2	3.6	2.7	5.2	1''	79	125	16x45	5.7	1 Bm / M3
LC2A080DI	8	2	6	1.8	3.5	2.2	4.4	1''	76	118	13x36	7.6	1 Bm / M3
LC2A120DI	12	2	6	1.1	1.8	1.3	5	1''	79	170	16x45	11.4	1 Bm / M3
LC2A180TI	18	3	6	0.7	1.2	0.9	5	1''	79	277	16x45	17	1 Bm / M3
LC2A250QI	25	4	6	0.5	0.9	0.6	5	1''	79	324	16x45	22.8	1 Bm / M3

(1) Sound pressure levels are measured per European Standard EN 14492-2
(2) Weight with standard height of lift (3 m) and standard length of control (2 m).
(3) FEM/ISO Mechanical classification for LC2A010S & LC2A020D is only 1 Bm/M3 when selecting Stainless Steel chain option.

Trolley Mounted Liftchain® Hoists

These standard trolley-mount models can be customized with many options for effective adaptation to your application (type of control, chain bucket, suspension

Features:

- All steel construction with sealed bearings
- 5:1 safety factor
- Operates on a flat or tapered beam profiles
- Modular concept
- 3 drive options : plain, geared or motorized
- Adjustable to various beam width
- "W" Wide Beam option (up to 3T models)
- "T1" Spark resistant option

Plain (PUSH) Drive:
Simple and economic these trolleys are operated manually. Ideal for infrequent operation and light loads.

Geared Drive:
For occasional use with assistance where short traveling is needed. Offers more accurate load spotting.

Motorized Drive:
Safe, comfortable, and efficient all-purpose solution. Increase load handling efficiency with variable speed with the use of a pendant.

LC2A Standard Series - Trolley Mount (1 Ton to 25 Ton Range Scope)

Model number	Rated capacity (T)	Trolley flanage adjustment (mm)	Trolley flange adjustment with Wide Beam option (mm)	Minimum inside curve radius (mm)	Minimum headroom (mm)	Weight * with Plain Trolley (Kg)		Weight * with Geared Trolley (Kg)		Weight * with Motorized Trolley (Kg)		Motorized Trolley speed at rated load (m/min)	Trolley air cons. at rated load (m3/min)
						Option Code		Option Code		Option Code			
LC2A010SI	1	83 - 152	152 - 305	1067	450	PU	90	GU	98	HU	95	15	1
LC2A015SI	1.5	83 - 152	152 - 305	1067	450	PU	90	GU	98	HU	95	15	1
LC2A020DI	2	83 - 152	152 - 305	1067	540	PU	99	GU	107	HU	104	15	1
LC2A030DI	3	83 - 152	152 - 305	1067	540	PU	99	GU	107	HU	104	15	1
LC2A030SI	3	83 - 152	152 - 305	1067	525	PU	125	GU	133	HU	130	15	1
LC2A040SI	4	108 - 184	not applicable	1524	560	PU	183	GU	191	HU	188	12	1
LC2A060QI	6	108 - 184	not applicable	1524	628	PU	101	GU	109	HU	106	12	1
LC2A060DI	6	108 - 184	not applicable	1524	743	PU	211	GU	219	HU	216	12	1
LC2A060SI	6	100 - 310	not applicable	3000	730	PU	250	GU	257	VE or VN	267	15	1.3
LC2A080DI	8	100 - 310	not applicable	3000	815	PU	243	GU	250	VE or VN	260	12	1.3
LC2A120DI	12	130 - 310	not applicable	3000	995	PE or PN	335	GE or GN	343	VE or VN	352	12	1.5
LC2A180TI	18	140 - 310	not applicable	5000	1195	PE or PN	352	N/A	N/A	VE or VN	652	15	1.9
LC2A250QI	25	140 - 310	not applicable	5000	1240	PE or PN	700	N/A	N/A	VE or VN	700	15	1.9

(1) Sound pressure levels are measured per European Standard EN 14492-2
(2) Weight with standard height of lift (3 m) and standard length of control (2 m).
(3) FEM/ISO Mechanical classification for LC2A010S & LC2A020D is only 1 Bm/M3 when selecting Stainless Steel chain option.

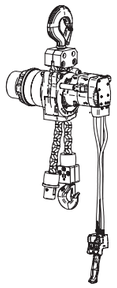
Miner Series Liftchain® Hoists

The Mining models are designed for the heavy duty conditions found in the underground mining and tunneling industries.
Their construction is based on the standard LC2A models.

Features:

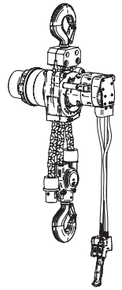
- Suitable to operate at 4 bar
- D Top hook mounted on chain links for increased flexibility. 1 extra bottom hook (optional) for alternate pulling operation.
- Top and bottom limit switches through resistant buffer stops which comes against the hoist central part.
- Cast iron pendent control

1 Simple Hook



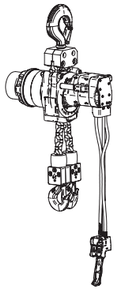
LC2A015SM
LC2A040SM
LC2A060SM

1 Hook Block



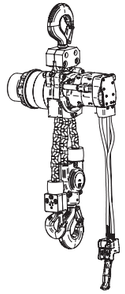
LC2A030DM
LC2A080DM
LC2A0120DM

2 Simple Hooks



LC2A015SSM
LC2A040SSM
LC2A060SSM

1 Simple Hook 1 Hook Block



LC2A030DSM
LC2A080DSM
LC2A0120DSM

LC2A Mining Series (1 Ton to 25 Ton Range Scope)

Model	Number of load hooks	Rated Capavity on each hook		Min. Headroom (mm)	Pulling speed at rated load (m/min)	Speed no load (m/min)	Air cons at rated load (m3/min)	Pulling speed at rated load (m/min)	Speed no load (m/min)	Air cons. at rated load (m3/min)	Sound level (dBa)	Hoist weight(2) (kg)	Chain size (mm)	Chain weight/1m extra lift (kg)
LC2A015SM	1	1.5	Simple Hook	608	3.2	9	2.2	6.2	11	4	79	41	8x24	1.4
LC2A015SSM	2	1.5	Simple Hook	608	3.2	9	2.2	6.2	11	4	79	42	8x24	1.4
		1.5		608										
LC2A030DM	1	3	Double Hook	675	1.5	4.5	2.2	3	5.5	4	79	48	8x24	2.8
LC2A030DSM	2	1.5	Simple Hook	608	3.2	9	2.2	6.2	11	4	79	50	8x24	2.8
		3	Double Hook	675	1.5	4.5		3	5.5					
LC2A040SM	1	4	Simple Hook	757	1.7	4	3	3.9	7	4.5	76	90	13x36	3.8
LC2A040SSM	2	4	Simple Hook	757	1.7	4	3	3.9	7	4.5	76	92	13x36	3.8
				757										
LC2A060SM	1	6	Simple Hook	952	1.4	2	2.5	2.2	3.6	5.2	79	125	16x45	5.7
LC2A060SSM	2	6	Simple Hook	952	1.4	2	2.5	2.2	3.6	5.2	79	127	16x45	5.7
				952										
LC2A080DM	1	8	Double Hook	940	0.9	2	3	1.8	3.5	4.5	76	118	13x36	7.6
LC2A080DSM	2	4	Simple Hook	757	1.7	4	3	3.9	7	4.5	76	120	13x36	7.6
		8	Double Hook	940	0.9	2		1.8	3.5					
LC2A120DM	1	12	Double Hook	1148	0.7	1	2.5	1.1	1.8	5.2	79	171	16x45	11.4
LC2A120DSM	2	6	Simple Hook	952	1.4	2	2.5	2.2	3.6	5.2	79	179	16x45	11.4
		12	Double Hook	1148	0.7	1		1.1	1.8					

(1) Sound pressure levels are measured per European Standard EN 14492-2
(2) Weight with standard height of lift (3 m) and standard length of control (2 m).
(3) FEM/ISO Mechanical classification for LC2A010S & LC2A020D is only 1 Bm/M3 when selecting Stainless Steel chain option.

How to Buy: *LIFTCHAIN® Series Ordering Menu*

To order your hoist, specify complete model number code as shown below. For hoists with trolley, specify beam size, type and flange width. Note that 0 (zero) is a number, not a letter in model part numbers. LC2A in CE version are fitted as standard with built-in overload protection and emergency stop button on pendent and built-in main air shut-off valve.

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: *LC2A030DIP3VU3M2AJ12-E*

LC2

Series
LC2 = LIFTCHAIN® series 2nd Generation

A

Power type
A = Air

010S

Capacity & falls of chain
010S = 1t single fall
015S = 1.5t single fall
020D = 2t double falls
030D = 3t double falls
030S = 3t single fall
040S = 4t single fall
060Q = 6t quadruple fall
060D = 6t double falls
060S = 6t single falls
080D = 8t double falls
120D = 12t double falls
180T = 18t triple falls
250Q = 25t quadruple falls

For Mining models with 2 load hooks, add the letter "S" e.g. LC2A030DS
(Valid up to LC2A120D)

I

Range type
I = Industrial
M = Mining (mining models available upon request)

P3

Control type
1 = Pull Chain
2 = 1 motor pendant
3 = 2 motor pendant

HU

Suspension
A = fixed lug
C = Swivel top hook
*PU = Plain rigid universal trolley (flat or tapered beam) 1T to 8T
PE = Plain rigid trolley (flat beam) 12T to 25T
PN = Plain rigid trolley (tapered beam) 12T to 25T
*GU = Geared rigid universal trolley (flat or tapered beam) 1T to 8T
GE = Geared rigid trolley (flat beam) 12T only
GN = Geared rigid trolley (tapered beam) 12T only
*__HU__ = Vane Motorized Industrial rigid universal Trolley 1T to 6T
*VU = Vane motorized rigid universal trolley (flat or tapered beam) 1T to 8T
*VE = Vane motorized rigid trolley (flat beam) 12T to 25T
*VN = Vane motorized rigid trolley (tapered beam) 12T to 25T
*RU = Gear motorized rigid universal trolley (flat or tapered beam) 6T and 8T
*RE = Gear motorized rigid trolley (flat beam) 12T to 25T
*RN = Gear motorized rigid trolley (tapered beam) 12T to 25T

* Add the letter "L" for low headroom trolley (eg: LVU or LRU)
* Add the letter "R" for rack & pinion configuration (e.g. RER)
* Add the letter "W" for Wide beam flange only available on PU, GU and HU from 1T to 3T (eg: PUW, GUW, HUW)

3M

Lift
3M = 3 m standard
XX = Specify length in meter

2

Control
2 = 2 m standard
XX = Specify length in meter

AJ12

Options
A = Standard chain bucket
B = Large chain bucket
C = Extra large chain bucket
D = XXL chain bucket
J = Air Line Accessories** Specify J1: Filter; J2: Lubricator J3: Regulator or numerical combination
K = Cast iron pendant
M = Material traceability certificate as per EN 10204 3.1 on main load bearing part
P = Marine paint 150µ
QZ = Offshore paint 290µ incl. sandblasting
S = Stainless Steel Chain only available on LC2A010S & LC2A020D
T1 = Spark Resistance*** Package (ATEX Zone 1)
W = Witness test. Specify W1 for ABS, W2 for DNV or W3 for LRS or W4 for Client witness of load test

- E

CE package
-E = Compliance with the European Machinery Directive

Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a $13 billion global business committed to a world of sustainable progress and enduring results.

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Ingersoll Rand

Liftchain Air and Hydraulic Hoists

1.5-100 tons

When Tough Just Isn't Enough

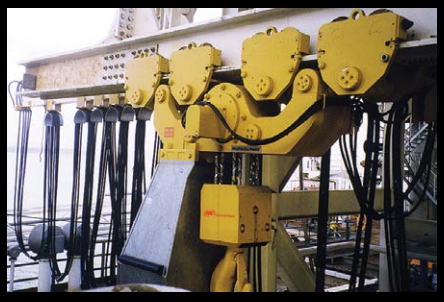
Liftchain Air Hoists

Since 1924, Ingersoll Rand has built extremely durable and reliable winches and hoists. Designed with premium features and built using rugged cast iron and steel, Ingersoll Rand doesn't take shortcuts and never uses inferior components. Ingersoll Rand Liftchain Hoists are the most versatile heavy-lifting hoists in the Ingersoll Rand hoist line. They incorporate all the best features learned from decades of experience into a compact, modular frame. Available with 4 different suspension options in either air or hydraulic models, Ingersoll Rand hoists are the gold standard. They are often copied but never equaled. Trusted by oilmen, shore workers, miners and heavy construction crews around the globe, you can count on Ingersoll Rand Liftchain hoists to get the job done.

Liftchain Hoist features:

- Rugged, all steel construction in a compact design for durability in all environments.
- Grade 80, corrosion resistant load chain with a 5:1 design factor
- Designed for Explosive environments. ATEX Zone 2 standard (ATEX Zone 1 package optional)
- Gear type air motor with minimal moving parts is virtually maintenance free
- Hydraulic motor offers high torque and high efficiency at low motor speed
- Fully enclosed automatic multi disc brake for corrosion protection
- Overload protection device ensures safe operation
- Upper and lower limit switches integrated in the hoist body for better protection
- Ball bearing mounted bottom hook for åeasier and smoother turning under load

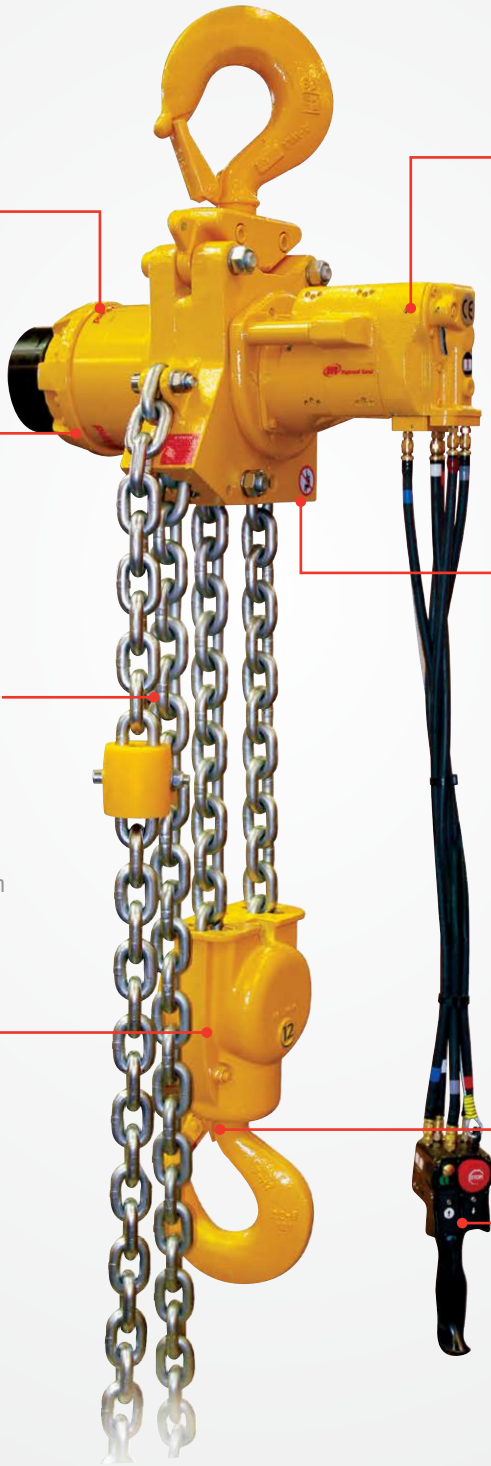
Ship Building | Metals | Heavy Construction | Marine | Offshore | Onshore



Liftchain Air Hoists

1.5-100 tons

Ingersoll Rand Liftchain Hoists are the most advanced heavy-lifting hoists in the Ingersoll Rand hoist line. They incorporate all the best features we've developed from our decades of experience into a compact, modular frame. Hook Mount versions offer maximum versatility to place them where you need them. Count on Liftchain hook mount hoists to get the job done.



All steel construction for better durability

Fully enclosed, automatic multi disc brake for corrosion resistance

Pneumatic gear motor

Integrated upper and lower limit switches for better protection

Corrosion resistant grade 80 load chain

Water drain holes to prevent water from being trapped in the block and corroding

Ball bearing mounted bottom hook for easier, smoother turning under load

Ergonomic pendant control

Ideal for:

Shipbuilding

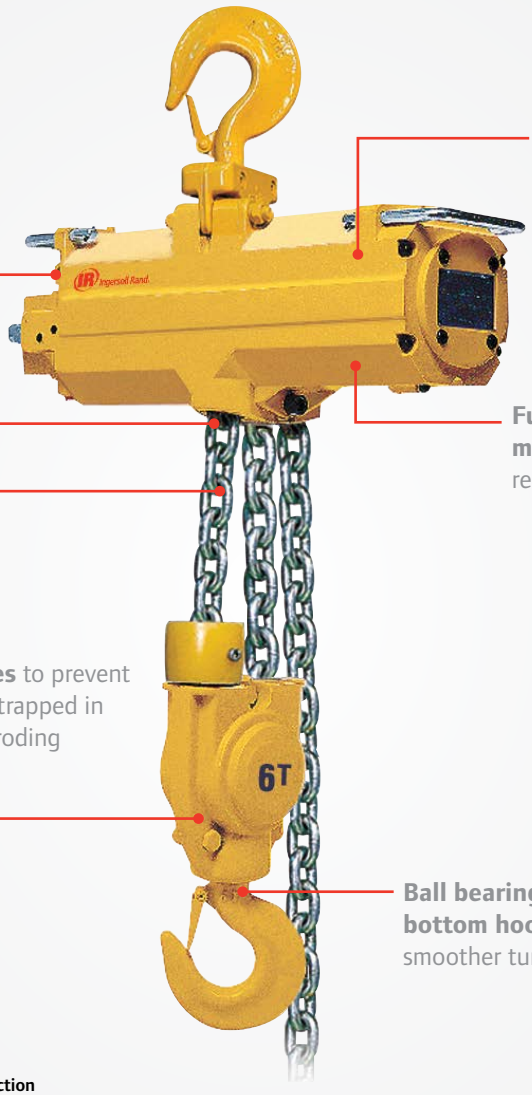
Metals

Heavy Construction

Liftchain Hydraulic Hoists

6-100 ton

Ingersoll Rand Liftchain Hoists are the most advanced heavy-lifting hoists in the Ingersoll Rand hoist line. They incorporate all the best features we've developed from our decades of experience into a compact, modular frame. Hook Mount versions offer maximum versatility to place them where you need them. Count on Liftchain hook mount hoists to get the job done.



Hydraulic motor offers high torque and high efficiency at low motor speed

Integrated upper and lower limit switches for better protection

Corrosion resistant grade 80 load chain

Water drain holes to prevent water from being trapped in the block and corroding

All steel construction for better durability

Fully enclosed, automatic multi disc brake for corrosion resistance

Ball bearing mounted bottom hook for easier, smoother turning under load

Ideal for:

Marine | Onshore | Heavy Construction

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 joystick control from 6 ton models with motorized trolley.
- Ergonomic pendant control

Liftchain Suspension Options

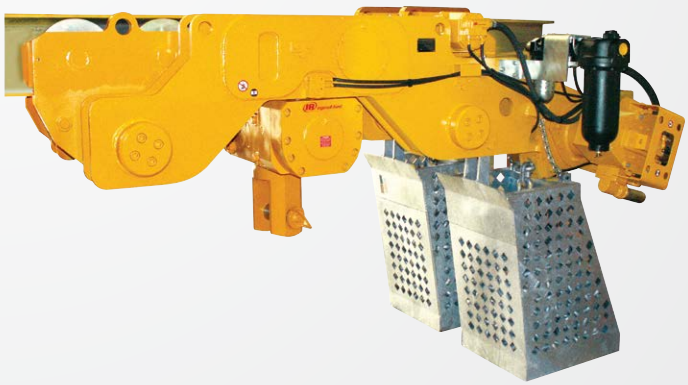
Ingersoll Rand Liftchain Hoists are available with 4 different suspensions and include plain, geared or motororized trolley options for maximum flexibility. With a modular design and compact frame, there is an Ingersoll Rand Liftchain hoist to help you get your job done.

Hook Mounted

Standard Trolley Mounted

Low Headroom Trolley

Ultra-Low Headroom Trolley



A Variety of Options

Galvanized Steel Chain Container

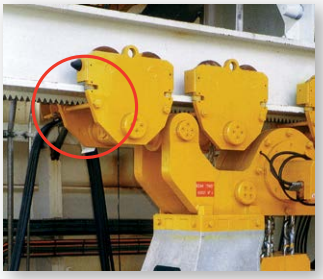
Capture load chain and prevent it from interfering with the load, control cords, or other objects. Available in canvas or zinc plated steel.

Clevis & Shackle Attachment

Provides secure attachment for rope, slings or other types of equipment with built-in attachment points.

Airline Accessories

High air quality is essential for reliable operation and full service life of air hoists. Airline accessories designed for Liftchain hoists include filters, regulators and lubricators.



Rack And Pinion Drives

These drives are often used on floating installations or vessels. The positive drive design prevents sliding on the beam and provides precise travel positioning during operation.

Atex Zone 1 Package

Construction materials are selected to match ATEX requirements. ATEX Zone 1 Spark Resistant models will have the ATEX marking EX II 2 GD c IIB 135°C.

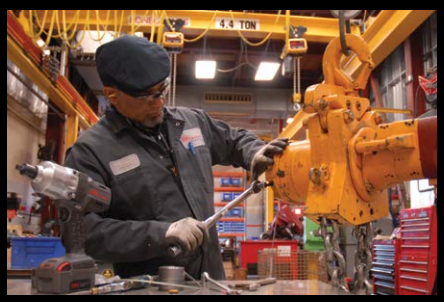
Traceablility Packages

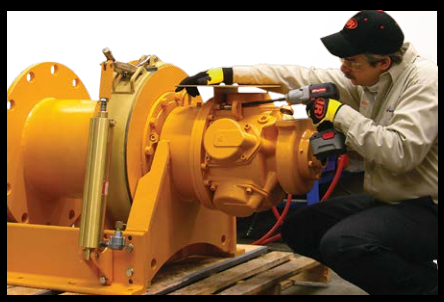
Traceability packages are available to comply with local regulations and standards. Packages available in hard copy or electronic format.

Global Parts and Services

Ingersoll Rand winches are built to last in even the harshest conditions. We are committed to helping you keep your operation running, no matter where your facility is located. We offer a full range of parts and accessories. Plus Ingersoll Rand's global network of factory trained and authorized technicians can install, repair, test and maintain any winch. Service capabilities include:

- Load test and recertifications
- Installation and start-up assistance
- System inspections
- Inspector and operator training
- Equipment refurbishments
- Service and repair

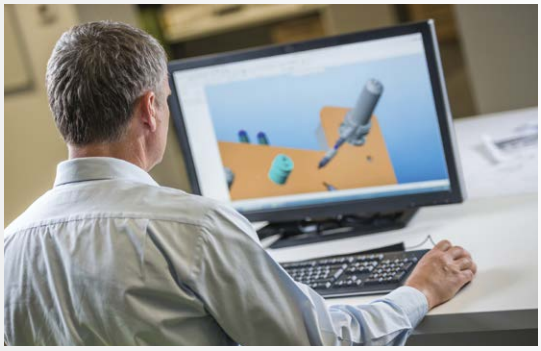




A Tradition of Proven Reliability, Efficiency and Productivity

No matter where you are located, Ingersoll Rand is committed to serving and providing you with the necessary information with regard to our products and services. Our world-wide network of distributors, certified technicians and engineers are a telephone call away — ready to support you with innovative and cost-effective solutions that will keep your business running at peak performance.

Special Orders



A significant portion of our business is providing customized solutions for specific applications. We recognize that not all jobs are created equal and that the most cost-effective solutions may not be in an off-the-shelf item. We've designed and manufactured winches and hoists for applications as simple as moving bags of lettuce, to as intricate as installing critical payloads on space vehicles, including high capacity loads 100 tons and above.

- Design for custom capacities
- Custom control systems
- Custom product modifications
- Witness testing and complete certification to most global standards
- Full data package with CAD drawings
- Dedicated project management for your project from conception to delivery
- Onsite services available including presale and evaluation

Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a $12 billion global business committed to a world of sustainable progress and enduring results.

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Unless otherwise noted this equipment is not designed for transporting people or lifting loads over people. It is the user's responsibility to determine the suitability of this product for any particular use and to check compliance with applicable regulations. Before installation, see maintenance and operations manual for additional warnings and precautions.

Nothing contained on these pages is intended to extend any warranty or representation, expressed or implied, regarding the product described herein. Any such warranties or other terms and conditions of sale of products shall be in accordance with Ingersoll Rand's standard terms and conditions of sale for such products, which are available upon request.

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