



## *Industrial Lifting Equipment*

- ☑ Safety
- ☑ Reliability
- ☑ Efficiency
- ☑ Expertise

Ingersoll Rand has been serving the material handling needs of the toughest industries around the globe for nearly a century. We apply R&D expertise to introduce new products and technologies which integrate the latest electronics and controls. By using Ingersoll Rand solutions you can expect improved productivity and operator performance as well as reduced downtime.

## MLK and HLK Series

0.25 to 6 metric ton lifting capacities

### Benefits

- 100 percent duty cycle enables continuous operation
- Dust, dirt, moisture, and corrosive gases kept out of the motor by air pressure – ideal for foundries and electro-plating applications
- Minimum chance of electrical shock makes air hoists ideal for highly flammable environments such as chemical plants and refineries; spark-resistant models also available

- Simple pull-chain speed and directional controls provide precise load-spotting capabilities; easy-to-operate pendent air valves provide a variable control signal with adjustable response by a variable orifice. For more precise control, MLKS slow-speed models are available
- Motor, brake, and throttle parts are interchangeable with all current Ingersoll Rand air chain hoists
- Ingersoll Rand air chain hoists are designed and constructed for trouble-free maintenance

### Top and bottom latch-type swivel hooks

meet OSHA requirements and are supported by anti-friction roller bearings (Bullard Burnham hooks are available for all models, except spark-resistant)

**Manual brake release kit** allows operators to safely lower a suspended load in a power failure

**Air-operated, non-asbestos, self-adjusting disc brake** balances effort to motor torque by sensing air pressure in the valve chest, providing precise control and eliminating back-drop encountered with some mechanical brakes; if air supply is interrupted, pressure release causes instantaneous, automatic braking

**Heat-treated planetary gearing system** provides high-torque capability by splitting the torque path, thereby dividing and balancing the load over more teeth, assuring longer life and reduced maintenance

A small amount of exhaust air flows over chain and drive wheel to help lubricate chain from spent in-line lubrication of motor

**Slack chain** is guided into drive wheels by a specially designed opening that prevents dangerous cross-linking

**Upper and lower limit stops** prevent dangerous over-travel of the hook in either direction, reducing possible damage to hoist or load

**Fabric or metal container** keeps slack chain out of the way

**Standard link load chain** is zinc-plated steel; stainless steel chain available for 0.25 ton through 1 ton spark-resistant models

**Two-piece, single-line hook block** entraps chain links and hook bearing without using small load-bearing pins or fasteners



**All bearings** are either ball- or roller-type to minimize friction

**An internal muffler** reduces sound levels to 85 dBA; woven to prevent corrosion and clogging

**Inlet swivel and strainer** are combined for easy hookup from any direction – swivel reduces hose fatigue, especially on hook-mounted units; strainer nipple provides extra assurance of clean air for maximum wear protection

**Precision throttle valves** for smooth operation and metering of air; valves are poppet-type for ease of maintenance

**High-strength aluminium housing** is strong yet lightweight for maximum portability and weather resistance

**Control adjustment screws** provide sensitivity and maximum speed control for pendent models

**100 percent duty-cycle multi-vane motor** with high torque, low maintenance design, and air porting under vanes for smooth operation, positive starting, and long life

**Pilot pendent control** provides a variable pressure signal to the valve chest, where flow to hoist is metered accordingly; air does not travel through pendent, thus pendent length does not affect performance; control hoses are small, flexible, and easily converted to different lengths

**One-piece, cast-aluminium guarded pendent handle** for maximum durability; guards on either side of levers are cast-in for protection against accidental operation; all functional parts are corrosion- and spark-resistant



Serving industry for over 25 years !

The rugged and reliable MLK & HLK series are the ideal choice when high speed, high-duty cycle, high precision & the ability to operate in harsh environment are the determining factors!



MLK & HLK series are particularly suitable for use in potentially explosive atmospheres. In their standard design, they are classified as equipment category 3 for applications in zone 2 as per ATEX 94/9/CE Directive (ATEX marking Ex II 3 GD c IIB 135°C X).

They are also available in spark resistant, version for use in explosive atmospheres Zone 1 (ATEX marking Ex II 2 GD c IIB 135°C X).

### MODEL DRIVER

Example: ML500KR-2R10R6U

<b>M</b>	<b>L</b>	<b>500K</b>	<b>R</b>	<b>- 2</b>	<b>R</b>	<b>10</b>	<b>- R</b>	<b>6</b>	<b>U</b>
<b>Series</b> M = Series H = Series	<b>Link chain type</b>	<b>Capacity</b> 500K = 500 kg = 1,100 lb 1000K = 1,000 kg = 2,200 lb 1500K = 1,500 kg = 3,300 lb 2000K = 2,000 kg = 4,400 lb 3000K = 3,000 kg = 6,600 lb 4500K = 4,500 kg = 10,000 lb 6000K = 6,000 kg = 13,200 lb		<b>Control</b> 0 = No controls 1 = Pull chain 2 = Pendent 3 = 2 Motor pendent <sup>(1)</sup> 4 = 3 Motor pendent <sup>(1)</sup>		<b>Lift (ft)</b> 10 = 10 ft (standard) XX = Specify length		<b>Length of pull/chain or pendent control hose (ft)</b> 6 = 10 ft (standard) XX = Specify length	
		<b>Spark-resistant</b> R = Add for spark-resistant (0.50 t MLKR and 1 t HLKR) S = Add for slow speed spotting (0.50, 1 t MLKS)		<b>Suspension</b> A = Fixed lug B = Bullard hook (self closing) R = Bronze snap hook C = Swivel top hook CP = Copper-plated top hook DA <sup>(3)</sup> = Plain rigid trolley (universal wheels "A" flange) DD <sup>(3)</sup> = Plain rigid trolley (universal wheels "D" flange) FXXA <sup>(2)(3)</sup> = Hand geared trolley (universal wheels "A" flange) FXXD <sup>(2)(3)</sup> = Hand geared trolley (universal wheels "D" flange) HA <sup>(3)</sup> = Vane mtr. powered trolley (universal wheels "A" flange) HD <sup>(3)</sup> = Vane mtr. powered trolley (universal wheels "D" flange)		<b>Lower hook</b> C = Steel snap hook CP = Copper-plated lower hook R = Bronze snap hook B = Bullard self-closing hook	<b>Options</b> CR = Copper-plated bottom block M = Manual brake release kit P = Piped away exhaust S = Steel chain container U = Fabric chain container		<b>NOTE:</b> (1) Required with "H" suspension. (2) XX = specify hand chain length if other than standard "08" (8 ft) required. (3) For solid bronze wheels on non-spark resistant models, add "R" to the end of the trolley suspension code. (See pages 20 and 21 for price.)

## Hoist accessories

Chain Capacity upto 80 (ft) for MLK and 85 (ft) for HLK series



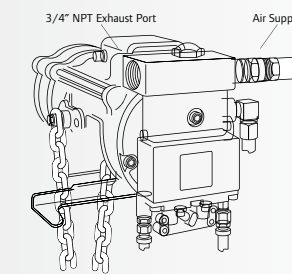
Fabric Container



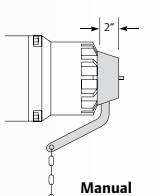
Metal Container



Bullard-Burnham Hook



**Piped-Away Exhaust Hose**  
This two-piece kit replaces swivel air inlet on hoist. Noise is reduced with addition of piped-away exhaust hose. Use 1" diameter exhaust hose to minimize reduction in lift speed.



Manual Brake Release Kit

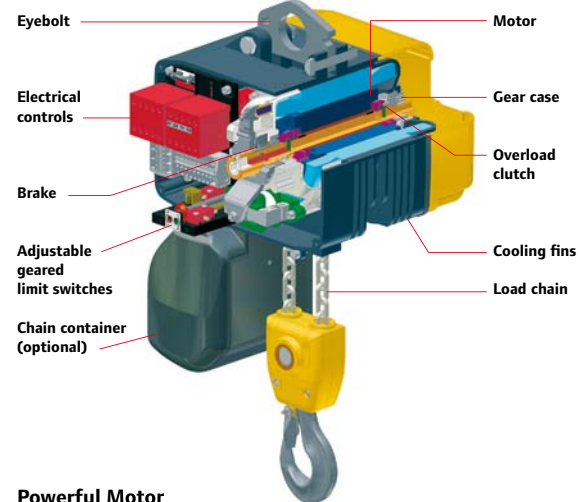
# Quantum Series

0.125 to 5 metric ton lifting capacities

## Benefits

### Reliable Brake System

- Maximum safety construction-brake after slipping clutch
- Self-adjusting disc brakes are guaranteed for life
- Easily accessible



### Powerful Motor

- Normal, fast and super fast models available
- Single and dual-speed options
- H3 duty cycle with class F insulation
- Special voltages available

### Ergonomic, Outdoor-duty Pendant

- Emergency stop feature is standard
- Two-button ergonomic design reduces operator fatigue
- NEMA 4X enclosure for outdoor use (standard) External strain relief is standard

### Rugged Chain, Chain Wheel & Gearing

- Load chain is zinc-plated(standard), surface-hardened and corrosion-resistant
- Chain wheel made from precision machined, hardened steel
- All helical gearing and five-pocket chain wheel design provide quiet operation, improved running properties and longer life

### Convenient Chain Guide

- Highly wear-resistant, reinforced composite material
- Two-part construction minimizes maintenance
- Easy access replaceable from underside of hoist

### Adjustable Slip Clutch

- Easy to service and adjust from electrical end of hoist
- Maintenance-free and highly wear-resistant
- Simple to adjust for precise operation

### Customizable Gearing Limit Switch (standard)

- Enables highly repetitive, precise positioning
- Lifting heights upto 250 feet
- Simple to adjust

### Compact, Durable Housing

- Long-lasting cast aluminium design
- NEMA 3R for outdoor use (standard)
- Compact design allows for lower headroom requirements



# Manual Chain Pully Block

0.5 to 5 metric ton lifting capacities

## SMB "Silver" Series Manual Chain Hoist Features

A NEW design for today's job site, 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.

- Unique 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).



Model	Capacity metric tons	Pull to Lift Rated Load lbs	No. of Chain Falls	Load Chain Size mm
SMB005	1/2	55	1	5 x 15
SMB010	1	64	1	6 x 18
SMB015	1 1/2	69	1	7.1 x 21
SMB020	2	77	1	8 x 24.6
SMB030	3	100	1	10 x 30
SMB050	5	83	2	9 x 27.2

Note: Standard lift 10 feet

### MODEL DRIVER

Example: Base Model - Lift - Hand Chain Drop Option  
SMB050- - 20 - 18 VB

Bullard bottom hook = B (available up to 2 ton only)  
Overload clutch (V) = Standard  
S\*COR\*E hand chain = Standard

Note: S\*COR\*E options provide improved protection, durability and performance for hoist operating in corrosive or harsh environments or where additional spark resistance is desirable.

# Lever Chain Hoist

0.75 to 6 metric ton line pull capacities

## SLB "Silver" Series Lever Chain Hoist 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.



Model	Capacity metric tons	Pull to Lift Rated Load lbs	No. of Chain Falls	Load Chain Size mm
SMB150	3/4	41	1	5 x 18
SMB200	1	60	1	6 x 18
SMB300	1 1/2	53	1	7.1 x 21.2
SMB600	3	53	1	10 x 30
SMB1200	6	57	2	10 x 30

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

### MODEL DRIVER

Example: Base Model - Lift Option  
SMB050- - 20 B

Bullard bottom hook = B (available upto 1.5 ton only)  
Shipyards hooks (top and bottom) = S  
1.50 and 3 ton units only

### MODEL DRIVER

Example: QCH100-2NS200M1-21-17B4C

Base model	Suspension type	Lift (feet)	Pendent drop (feet)	Flange width (See catalogue for specifications)	Voltage	Options
QCH100-2NS200	M1	21	17	B	4	C
3 phase single speed QCH50-1NS12 QCH50-1NS25 QCH50-1NS50 QCH50-2NS100 QCH100-1NS100 QCH100-2NS200 QCH300-1NS200 QCH200-2NS300 QCH300-2NS400 QCH500-2NS500	E = Eye bolt H = Hook P = Plain trolley ("PT" Series) M1 = Motorized trolley (normal speed 48 fpm) M2 = Motorized trolley (normal/dual speed 48/16 fpm) M4 = Motorized trolley (high/dual speed 96/24 fpm)	10 = Standard 15 = Standard 20 = Standard XX = Specify length	6 = Standard 11 = Standard 16 = Standard XX = Specify length	- = Eye bolt or hook mount A = See flange width chart B = See flange width chart C = See flange width chart D = See flange width chart	3 = 230/3/60 4 = 460/4/60 5 = 575/3/60 6 = 380/3/50* (* = these units have extended lead times and are not UL or C-UL (Canadian UL) listed)	B = Trolley brake C = Chain container E = External strain relief F = XX, specify power cord length (standard is 15 ft on E, H, and P, and 3 ft on M1-M4 suspensions) H = Handy Handle (QCH50 single fall only) K = 110 volt control (3 phase models only) P = Pendent with vertical aligned buttons P2 = Pendent with 2 extra vertical aligned buttons P4 = Pendent with 4 extra vertical aligned buttons Y = Bullard top hook Z = Bullard bottom hook
3 phase dual-speed QCH50-1ND12 QCH50-1ND25 QCH50-1HD25 QCH50-1ND50 QCH50-2ND100 QCH100-1ND100 QCH100-2ND200 QCH300-1ND200 QCH200-2ND300 QCH300-2ND400 QCH500-2ND500						

### Handy Handle control — QCH50 models only

- Ergonomically designed control enabling precise operation at hook.
- Load can be positioned and controlled with one hand.
- Available with single- or dual-speed thumb control lever switches and emergency stop button.
- Can be ordered separately or as an option in new hoist.
- Socket connection at bottom allowing standard hook to be easily replaced by custom end effectors or grabs.



# VL2 Premium Series manual chain hoists

0.50 to 20 metric ton lifting capacities

## Features

The high-quality VL2 Series features an exclusive hand chain guide for smooth, even operation that helps eliminate jamming when operated away from the load area. Ideal for "pick and drift" applications. Perfect for the construction, maintenance, rigging and shipbuilding industries.

- Accu-Feed™ hand chain guide articulates for smooth operation from either side, away from the load being lifted
- All-steel construction for external impact resistance
- Forged steel alloy load hooks with non-slip design have extra-wide throat openings for easy rigging
- Premium alloy steel-grade 100 load chain
- Thrust-bearing bottom block on 3-ton and above helps prevent chain twisting or kinking
- Chain anchor prevents jamming at the hook's lowest position
- Needle bearings reduce friction and provide low hand-chain pull
- CE certified; hoists meet or exceed regional requirements including ASME B30.16, HST-2M
- Overload protection: Clutches slip in the lifting direction only



Nylon-bushed VL2 hoist hand chain guide features zinc-plated hand chain.



MODEL DRIVER							
VL2 -	080	CP	10	8V	NH	- E	
Series	Capacity	Spark resistance	Height of lift	Hand chain length	Options	EC compliance	
VL2	005 0.5 t 010 1 t 015 1.5 t 020 2 t 030 3 t	050 5 t 080 8 t 100 10 t 150 15 t 200 20 t	- Standard CP Copper plated SB Solid bronze	10 10 ft (3 m) 15 15 ft (4.5 m) 20 20 ft (6 m) XX Specify length in ft	8V 8 ft (2.4 m) XXV Specify length in ft	N Corrosion & spark resistant load chain H Corrosion & spark resistant hand chain P Marine paint S Fabric chain bucket	E Compliance with the European machinery directive

# Trolley selection guide

0.50 to 20 metric ton lifting capacities

The chart below cross-references all air chain hoist models and sizes with recommended trolleys. Always follow safe installation and operating procedures with any overhead system. Please call an authorized Ingersoll Rand distributor or representative for assistance with application and selection.



Model	Plain Hook-on	Plain Rigid	Geared Hook-on	Geared Rigid	Motorized Rigid
<b>STANDARD TROLLEYS (SUSPENSION CODE)*</b>					
500K / KS	PT005-8	RT010S-P00AN	GT010-8-10	RT010S-G08AN	RT010S-307AN
ML1000K / S	PT010-8	RT010S-P00AM	GT010-8-10	RT010S-G08AM	RT010S-307AM
ML500KR	PT005-8SB	RT010B-P00AM	GT010-8-10SB	RT010S-G08AM	RT010S-307AM
HL1000K	PT010-8	TIR6600S-P00AJ	GT010-8-10	TIR6600S-G08AJ	TIR6600S-307AJ
HL1000KR	PT010-8SB	TIR6600B-P00AJ	GT010-8-10SB	TIR6600B-G08AJ	TIR6600B-307AJ
HL1500K	PT020-8	TIR6600S-P00AJ	GT020-8-10	TIR6600S-G08AJ	TIR6600S-307AJ
HL2000K	PT020-8	TIR6600S-P00AK	GT020-8-10	TIR6600S-G08AK	TIR6600S-307AK
HL3000K	PT030-8	TIR6600S-P00AK	GT030-8-10	TIR6600S-G08AK	TIR6600S-307AK
HL4500K	PT050-8	TIR132S-P00AP	GT050-8-10	TIR132S-G08AP	TIR132S-307AP
HL6000K	TIR132S-P00H	TIR132S-P00AP	GT050-8-10	TIR132S-G08AP	TIR132S-307AP
Quantum QCH50-1	PT005-8	N/A	GT010-8-10	N/A	QMT50
Quantum QCH50-2	PT010-8	N/A	GT010-8-10	N/A	QMT50
Quantum QCH100-1	PT010-8	N/A	GT010-8-10	N/A	QMT150
Quantum QCH100-2	PT020-8	N/A	GT020-8-10	N/A	QMT150
Quantum QCH200-2	PT030-8	N/A	GT030-8-10	N/A	QMT300
Quantum QCH300-1	PT020-8	N/A	GT020-8-10	N/A	QMT300
Quantum QCH300-2	PT050-8	N/A	GT050-8-10	N/A	QMT300
Quantum QCH500-2	PT050-8	N/A	GT050-8-10	N/A	QMT300

# Liftstar® & Pullstar® Series Air Winches

0.15 - 10 t Load Capacity



Designed to work in difficult environments, these winches feature a low maintenance, highly reliable gear motor with high torque output that translates into smooth starts and stops. Their rugged and compact design makes them ready to take on your most challenging applications.

- ▶ LIFTSTAR® (LS) models are designed for lifting applications with a 5:1 design factor at rated capacity.
- ▶ PULLSTAR® (PS) models are designed for pulling applications with a 3.5:1 design factor. They come standard with a drum disengaging clutch for free spooling unloaded wire rope.

## Reliable gear motor

- Only two moving parts makes it ideal for severe applications in hot, cold, dusty, dirty, explosive and wet conditions.
- Virtually maintenance free and reduced downtimes.

## Rugged construction

- Originally designed for the mining industry, the LS and PS winches are very robust and durable.
- Cast iron and steel construction.

## Meets worldwide standards

- European standards FEM 9.511 and FEM 1001 for lifting.
- U.S. standard ASME/ANSI B30.7.
- Duty rating FEM 1Bm / ISO M3.

## Features

- Light weight and compact design. Easy to carry.
- High efficiency planetary gear box.
- Flameproof by nature.
- Variable speed and precise positioning through direct control lever with "lift & shift" system with automatic return to neutral position or through progressive remote pendent.
- Individually load tested before shipment – Delivered with manufacturer's test certificate.



LS2000R



LS1500RGC

PS21000R

Model	Application	Top Layer Capacity lbs (kg)	Mid Layer Capacity lbs (kg)	First Layer Capacity lbs (kg)	Line Speed fpm (m/min)	Average Air Consumption cfm(m <sup>3</sup> /min)	Stall Pull lbs (kg)	Shipping Weight lbs (kg)
LS2-300R	Lifting	660 (300)	740 (336)	840 (382)	69 (21)	78 (2.2)	1,118 (508)	60 (27)
LS2-600R	Lifting	1,325 (600)	1,480 (673)	1,680 (764)	34 (10.5)	78 (2.2)	2,201 (1,000)	60 (27)
LS1500R	Lifting	3,300 (1,500)	3,600 (1,636)	4,000 (1,818)	23 (7)	125 (3.6)	5,698 (2,590)	143 (65)
LS2000R	Lifting	4,400 (2,000)	5,150 (2,341)	6,200 (2,818)	66 (20)	354 (10)	8,716 (3,962)	506 (230)
LS5000R	Lifting	11,000 (5,000)	12,900 (5,864)	15,600 (7,091)	33 (10)	354 (10)	26,386 (11,994)	1,408 (640)
PS2-1000R	Pulling	1,700 (791)	1,950 (886)	2,200 (1,000)	15 (5)	78 (2.2)	2,376 (1,080)	62 (28)
PS2400R	Pulling	4,370 (1,986)	4,800 (2,182)	5,280 (2,400)	12 (4)	125 (3.6)	6,172 (2,805)	143 (66)
PS4000R	Pulling	6,200 (2,818)	7,300 (3,318)	8,800 (4,000)	13 (4)	354 (10)	9,265 (4,211)	506 (230)
PS10000R	Pulling	15,600 (7,091)	18,300 (8,318)	22,000 (10,000)	8 (2)	354 (10)	24,695 (11,225)	1,650 (750)

Specifications at 6.3 bar dynamic pressure (when winch is running) — Working pressure range 5 to 7 bar.



Liftstar® and Pullstar® winches are, by design, particularly suitable for use in potentially explosive atmospheres, unlike electric winches. They are classified as standard as equipment category 2 for applications in zone 1 and 2 (as per ATEX 94/9/CE directive for surface industry). ATEX marking: Ex II 2 GD c IIB 135 °C X. For the mining industry they can be fitted with an optional package to comply with requirements of equipment category M2 (consult us).

For more customized options meeting your specific needs, please contact your Ingersoll Rand sales representative. You can also visit [www.ingersollrandproducts.com](http://www.ingersollrandproducts.com)

# FA Infinity™ Series Air Winches

0.15 - 10 t Load Capacity

Setting the standards in winch technology with time savings, and enhanced safety, Ingersoll Rand FA Infinity™ air winches are known throughout the world for their rugged dependability and quality in the harsh environments.

Featuring heavy duty piston motors, internal gear boxes and fabricated steel frames, FA Infinity™ winches can be made in a variety of configurations to suit particular applications.

## Features

### Rugged and compact design

- 5:1 design factor at rated load.
- Minimum 18:1 drum diameter to wire rope diameter ratio reduces wire rope wear.
- Group of mechanism as per FEM: 5m.
- Standard design temperature range is 0°C through 60°C.

### Powerful radial piston air motor

- Positive starting torque.
- Variable speed control. Precision spotting control at slow speeds.
- Superior reliability in harsh environments.
- Internal splash lubrication.

### Multiple brake configurations

- Manual drum brake standard (FA10i auto disc is standard).
- Optional auto drum brake and /or auto disc available.
- Enclosed automatic oil bath "wet" disc brake is fully sealed against salt spray, dirt or moisture and provides trouble-free operation over thousands of lifting cycles.

Note: Ingersoll Rand recommends automatic brakes when winches are used for lifting.

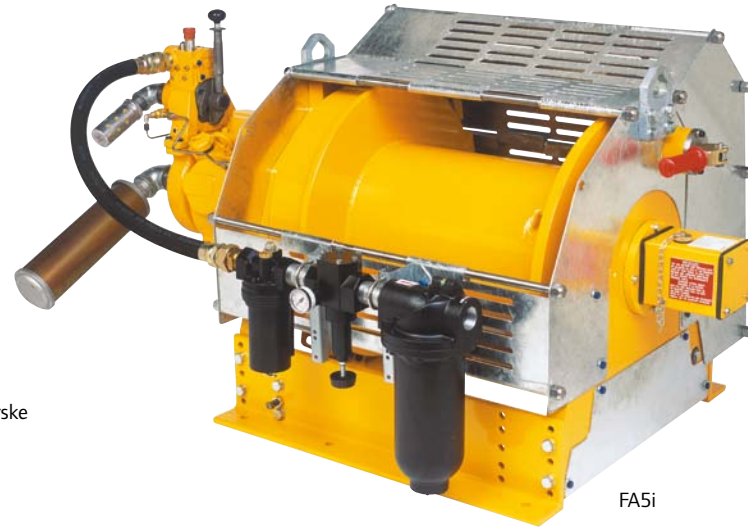
### Meets worldwide standards

- European standards FEM 5M for lifting.
- U.S. standard ANSI / ASME B30.7
- Duty rating FEM 1Bm / ISO M3.

Most models either carry or have pending Design Approval by Det Norske Veritas (DNV) and/or the American Bureau of Shipping (ABS).



FA7i



FA5i

Model	Top Layer Capacity lbs (kg)	Mid Layer Capacity lbs (kg)	First Layer Capacity lbs (kg)	Line Speed fpm (m/min)	Average Air Consumption cfm (m³/min)	Stall Pull lbs (kg)	Shipping Weight lbs (kg)
FA2i	4,400 (2,000)	5,200 (2,364)	6,600 (3,000)	47 (14)	280 (7.9)	9,139 (4,154)	825 (374)
FA2.5i	5,000 (2,273)	5,800 (2,636)	7,000 (3,182)	132 (40)	700 (19.8)	10,277 (4,671)	1,061 (481)
FA5i	11,000 (5,000)	12,500 (5,682)	12,500 (5,682)	54 (16)	700 (20)	23,594 (10,725)	1,872 (849)
FA5Ti	8,400 (3,818)	11,300 (5,136)	12,500 (5,682)	70 (21)	700 (19.8)	23,594 (10,725)	2,153 (977)
FA7i	15,400 (7,000)	18,800 (8,545)	18,800 (8,545)	40 (12)	750 (21)	36,000 (16,364)	2,205 (1,000)
FA7Ti	12,600 (5,727)	16,700 (7,591)	18,800 (8,545)	48 (15)	750 (21)	36,000 (16,364)	2,335 (1,059)
FA7Ti-GL	3,400 (1,545)	4,850 (2,205)	7,800 (3,545)	152 (46)	750 (21)	10,000 (4,545)	1,352 (2,981)
FA7Ti-PL	10,200 (4,636)	14,300 (6,500)	22,800 (10,364)	60 (18)	750 (21)	36,000 (16,364)	2,850 (1,293)
FA10i	22,000 (10,000)	27,100 (12,318)	27,200 (12,364)	23 (7)	800 (23)	38,000 (17,273)	3,200 (1,451)

Specifications at 6.3 bar dynamic pressure (when winch is running) — Working pressure range 5 to 7 bar.



FA Infinity™ winches are, by design, particularly suitable for use in potentially explosive atmospheres, unlike electric winches. They are classified as standard as equipment category 2 for applications in zone 1 and 2 (as per ATEX 94/9/CE directive for surface industry). ATEX marking: **Ex II 2 GD c IIB 135 °C X.**

For more customized options meeting your specific needs, please contact your Ingersoll Rand sales representative. You can also visit [www.ingersollrandproducts.com](http://www.ingersollrandproducts.com)

# ManRider™ - Offshore Winch Series

330 lbs (150 kg) to 6,875 lbs (3,125 kg) Capacity

Ingersoll Rand's offering of dedicated and dual purpose (utility & personal lifting) ManRider™ winches are known worldwide as the standard for meeting the toughest personnel lifting requirements in the industry.

These rugged, oil-field tough winches have Type Approval or Independent Review certificates issued by the classification societies of ABS and DNV. Meet NP, NMD and UK HSE regulations for personnel lifting operations.

## Features

### Lifting and Lowering People on Offshore Drilling Rigs and Platforms

- Whether it is a dedicated ManRider™ for lifting people in harnesses or boatswain's chairs, or lifting people and then lifting material, Ingersoll Rand has a winch for the application.

### Meeting world standards. Certified to those standards.

- Drilling rigs and platforms are used all over the world and come under numerous and diverse regulations. Ingersoll Rand builds to regional and global specifications and our winches are certified so by Det Norske Veritas, DNV, and the American Bureau of Shipping, ABS.

### Type Approval

- A comprehensive design review by a third party addresses intended service, applications, ratings, design calculations, load bearing components, product specifications and service restrictions or limitations. Plant surveys verify quality control procedures. A Type Approval certificate is then issued.

### What makes a winch a ManRider™

- Minimum design factors of 8:1 or 10:1
- Dual brakes
- Drum guards
- Type approval certs and data books upon request when requested at time of order.
- And, depending on where in the world it will be used, - CE certifications, over load devices, slack wire detectors, limit switches, emergency shut off, emergency lowering devices and spooling devices.



FA150KGi



LS2-150RLP-L-E

Model	Top Layer Capacity lbs (kg)	Line Speed fpm (m/min)	Average Air Consumption cfm (m³/min)	Stall Pull lbs (kg)	Shipping Weight lbs (kg)
LS2-150RLP	330 (150)	95 (29)	-	-	250 (114)
FA150KGi-MR	330 (150)	87 (26)	50 (1.4)	-	750 (340)
FA2BMR	2,500 (1,136)	168 (51)	380 (10.8)	6,800 (3,084)	786 (357)
FA2.5AMR	3,125 (1,420)	173 (53)	560 (15.9)	10,400 (4,727)	905 (411)
FA5AMR	6,250 (2,841)	102 (31)	600 (17.0)	17,000 (7,727)	1,842 (837)
FA2i-MR	3,180 (1,445)	75 (23)	335 (9.5)	9,000 (4,090)	906 (411)
FA2.5i-MR	3,180 (1,445)	159 (48)	700 (19.9)	10,000 (4,545)	1,178 (534)
FA5i-MR	6,870 (3,123)	69 (21)	700 (19.9)	24,000 (10,909)	2,020 (916)

Specifications for manriding applications at 6.3 bar dynamic pressure — Working pressure range 5 to 7 bar.



Liftstar® and FA Infinity™ winches are, by design, particularly suitable for use in potentially explosive atmospheres, unlike electric winches. They are classified as standard as equipment category 2 for applications in zone 1 and 2 (as per ATEX 94/9/CE directive for surface industry). ATEX marking: **Ex II 2 GD c IIB 135 °C X.**

For more customized options meeting your specific needs, please contact your Ingersoll Rand sales representative. You can also visit [www.ingersollrandproducts.com](http://www.ingersollrandproducts.com)

# Liftchain® Chain Hoist Series

1.5 to 100 metric ton Lifting Capacity

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 offshore oil rigs, shipyards, petrochemical, refineries, foundries, steels mills, mining, tunneling, etc...

## Features

- Rugged, compact design and light weight
- Suitable for hazardous explosion proof environments
- Exclusive gear type air motor and automatic multi disc brake
- Infinitely variable speed control and overload protection device (available for non-ce models)
- Main air emergency stop (available for non-ce models)

Model	Capacity lbs (kg)	Chain falls	Speed at rated load UP fpm (m/min)	Speed at rated load DOWN fpm (m/min)	Air Consumption cfm (m³/min)	Headroom (Hook Mount) in (mm)	Shipping Weight lbs (kg)
LC2A015S	3,307 (1,500)	1	20.3 (6.2)	27.9 (8.5)	141 (4)	16.1 (409)	84 (38)
LC2A030D	6,614 (3,000)	2	9.8 (3.0)	13.1 (4.5)	141 (4)	21.6 (549)	106 (48)
LC2A040S	8,818 (4,000)	1	12.8 (3.9)	14.8 (4.5)	159 (4.5)	22.8 (580)	198 (90)
LC2A060S	13,228 (6,000)	1	7.2 (2.2)	8.9 (2.7)	184 (5.2)	28.2 (717)	275 (125)
LC2A060Q	13,228 (6,000)	4	4.9 (1.5)	6.6 (2)	141 (4)	25.7 (653)	163 (74)
LC2A080D	17,637 (8,000)	2	5.9 (1.8)	7.2 (2.2)	155 (4.4)	31.8 (807)	260 (118)
LC2A120D	26,455 (12,000)	2	3.6 (1.1)	4.3 (1.3)	177 (5)	37.2 (945)	374 (170)
LC2A125S	27,558 (12,500)	1	10.5 (3.2)	16.4 (5)	424 (12)	34.1 (865)	609 (277)
LC2A180T	39,683 (18,000)	3	2.3 (0.7)	3.0 (0.9)	177 (5)	41.9 (1,063)	609 (277)
LC2A250Q	55,116 (25,000)	4	1.6 (0.5)	2.0 (0.6)	177 (5)	45.5 (1,156)	713 (324)
LC2A250D	55,116 (25,000)	2	4.9 (1.5)	8.2 (2.5)	424 (12)	48.6 (1,235)	1,034 (470)
LC2A375T	82,673 (37,500)	3	3.3 (1.0)	5.6 (1.7)	424 (12)	58.4 (1,484)	1,804 (2,200)
LC2A500Q	110,231 (50,000)	4	2.3 (0.7)	3.9 (1.2)	424 (12)	62.6 (1,590)	2,024 (920)
LCA750T	165,347 (75,000)	3	1.3 (0.4)	2.3 (0.7)	424 (12)	92.0 (2,338)	3,740 (1,700)
LCA1000Q	220,462 (100,000)	4	1.0 (0.3)	1.6 (0.5)	424 (12)	92.0 (2,338)	4,840 (2,200)

Specifications at 6.3 bar dynamic pressure (when hoist is running) — Working pressure range 5 to 7 bar.



**Ex**

Liftchain® and Hercu-Link™ air hoists are particularly suitable for use in potentially explosive atmospheres, unlike electric hoists. In their standard design, they are classified as equipment category 3 for applications in zone 2 as per ATEX 94/9/CE Directive (ATEX marking Ex II 3 GD c IIB 135°C X). For more hazardous areas such as zone 1, they are offered with a special spark resistant package (ATEX marking Ex II 2 GD c IIB 135°C X). Special mining models are classified as equipment category M2. ATEX marking EX IM 2 CX.

# Hercu-Link™ Chain Hoist Series

Capacities from 12.5 tons 100 metric tons

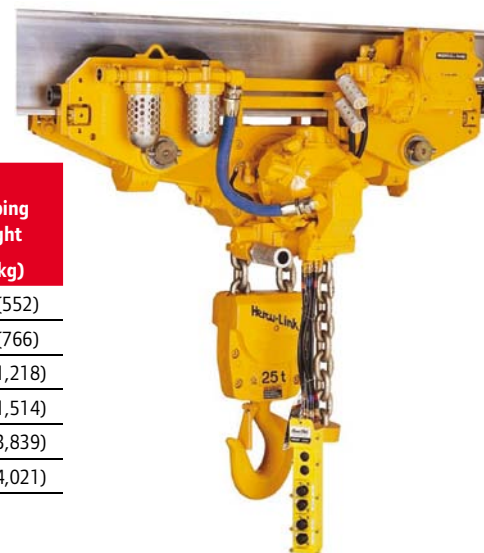
Utilizing a modular, versatile, and compact design Hercu-Link™ air chain hoists deliver enhanced safety, strength, and rugged durability to applications that are as demanding as the Hercu-Link™ is tough. Whether it's a shipyard, nuclear or conventional power generation, construction, or offshore there is a Hercu-Link™ model to perform the job on time, every time and at a cost efficient price.

## Features

- Rugged, durable, and versatile design
- Powerful radial piston motor
- Suitable for hazardous explosion proof environments

Model	Capacity lbs (kg)	Chain falls	Speed at rated load UP fpm (m/min)	Speed at rated load DOWN fpm (m/min)	Air Consumption cfm (m³/min)	Headroom (Hook Mount) in (mm)	Shipping Weight lbs (kg)
HA2-012	27,500 (12,500)	1	8 (2.4)	12 (3.7)	280 (8)	38.50 (978)	1,215 (552)
HA2-025	55,000 (25,000)	2	4 (1.2)	6 (1.8)	280 (8)	51.13 (1,299)	1,685 (766)
HA2-037	82,500 (37,500)	3	2.5 (0.76)	3.75 (1.1)	280 (8)	66.50 (1,689)	2,680 (1,218)
HA2-050	110,000 (50,000)	4	2 (0.61)	3 (0.9)	280 (8)	75.06 (1,907)	3,330 (1,514)
HA3-075	165,000 (75,000)	3	2 (0.61)	2.5 (0.76)	500 (14.3)	83 (2,108)	8,450 (3,839)
HA3-100	220,000 (100,000)	4	1.5 (0.46)	2 (0.61)	500 (14.3)	96 (2,432)	8,850 (4,021)

Specifications at 6.3 bar dynamic pressure (when hoist is running) — Working pressure range 5 to 7 bar.



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# Ingersoll Rand's Other Products Solutions

## Tools

Service technicians and industry crew workers around the globe reach for the power and reliability of Ingersoll Rand tools. Advanced engineering and innovation make our tools the benchmark for productivity, durability, safety and award-winning design.



### Services Tools

- Complete line of Impactools™, ratchets, drills/drivers and surface preparation tools to meet all needs
- Complete offering of professional-grade cordless tools and kits for use in a variety of applications including garages and the Vehicle Service industry



### Industrial Tools

- Wide range of Impactools™, surface finishing and construction tools for product and maintenance applications
- Ergonomically designed for increased productivity and safety
- Most advanced tools of their type in the world for the size, weight and power output



### Assembly Tools

- Air and electric screwdrivers, nut runners, drills and accessories for all types of assembly
- Products deliver the best torque accuracy in the industry, with award-winning ergonomic design
- Full range of torque verification and calibration equipment to ensure accurate performance



### Precision Fastening

- Precision air and electric assembly equipment and fastening control systems for consistent and precise tool performance
- Superior user-oriented ergonomics and process control for reliability
- Custom configurations and engineering available to meet unique needs

## ARO Fluid Products

Our fluid products provide the industry-leading ARO brand air operated diaphragm and piston pumps for a broad spectrum of fluid transfer applications. Also count on us for high quality pneumatic valves, cylinders, motion control components and FRLs. The focus is on reducing downtime and increasing return on investment by extending the life of your equipment and improving productivity.

### ARO Diaphragm Pumps

- Patented “uninstallable” air valve and “quick-dump” exhaust valves allow for ice-free operation and maximum operating efficiency
- Multiple materials of construction for chemical compatibility and flow rates ranging from 17.4-1,041 L/min (4.6-275 gpm)



### ARO Piston Pumps & Packages

- Pumps for fluid viscosities ranging from 500-1,000,000 cPs including oils, paints, inks, sealants, caulking & more
- Multiple package seal options, including leather, UHMW-PE and PTFE for chemical compatibility
- Optional Ultra-Coating for tubes and plungers reduces abrasion and scoring



### ARO Lubrication Equipment

- Piston and diaphragm pumps and packages specifically designed to handle all types of oil, grease, and specialty-type fluid applications
- Specialty pumps for antifreeze/water mixing, solvents transfer, calcium chloride tire fill and high-pressure wash
- Diaphragm pumps meet U.L. 79 specification code for fuel related applications



### ARO Filters, Regulators & Lubricators (FRL's)

- Best-in-class air flow with flow rates from 0.9-50 m³/min (32-1,770 scfm)
- Modular design for 1000 – 3000 series facilitates easy installation and maintenance
- Positive thumb-locking switch on polycarbonate bowls for enhanced safety



### ARO Pneumatic Valves & Cylinders

- Valves with flow rates up to 7.8 Cv (280 scfm) and cylinders with stroke lengths up to 250 mm (99")
- 2-, 3- and 4-way valves with electrical, manual, mechanical & pneumatic actuators and various body styles to fit all applications
- NFPA interchangeable, round repairable and disposable, square and round compact cylinders to accommodate different environments



Quality and performance on the toughest jobs.

ARO – Three letters. 80 years. One goal.



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