

**CM**<sup>®</sup>

**LODESTAR**<sup>®</sup> **VS**

VARIABLE SPEED ELECTRIC CHAIN HOIST



**The  
Drive  
Inside**<sup>™</sup>



C O L U M B U S M C K I N N O N C O R P O R A T I O N

**The Power of Intelligent Lifting.** Generations of users have relied on the Lodestar electric chain hoist for the durability and reliability it provides for lifting applications. With the Lodestar VS, Columbus McKinnon made this iconic hoist better than ever, combining the Lodestar's industry-leading design with the best-in-class features of Magnetek's premier variable frequency drives. The result – a one-of-a-kind, intelligent hoist that puts the power to monitor and adjust the hoist's performance right at your fingertips.

Equipped with the Magnetek IMPULSE® G+ Mini drive, the Lodestar VS features CM HI-Tech™ (Hoist Interface Technology) – one of the easiest to use computer interfaces on the market developed exclusively by Columbus McKinnon. CM HI-Tech gives operators the ability to quickly and easily adjust hoist speed and performance parameters to deliver the precision load control your application demands.





**CM**<sup>®</sup>

**LODESTAR**<sup>®</sup>  
**VS**

MAGNETEK  
The Drive Inside



# LODESTAR<sup>®</sup> VS

## VARIABLE SPEED ELECTRIC CHAIN HOIST

**CAPACITIES: 1/8 TO 3 TON**

**STANDARD LIFT: 10 FEET**

### STANDARD FEATURES

#### LESS MAINTENANCE & EASY INSPECTION

- Brake location allows for quick access and easy inspection.
- Lifetime grease-lubricated Gear Box means no oil change out is required. Precision gears provide better wear and longer life.
- Clutch located outside the Gear Box allows for easy access which eliminates the need for complete disassembly and reduces downtime.

#### IMPROVED SERVICEABILITY

Easy access to the Clutch, Motor, Electrical Control Panel and Brake Assembly.

#### LONG SERVICE LIFE

- Heavy-duty DC brake is designed for a long service life.
- Lifetime grease-lubricated Gear Box and helical gearing ensures better wear and smooth operation.
- Heavy-duty rated motor.

#### QUIET OPERATION

80% reduction in sound pressure as compared to the classic Lodestar.

#### IMPROVED LOAD SAFETY

Clutch is located outside the load path, preventing slipping of the load in an overload condition when the brake is not powered.

#### LONG CHAIN LIFE

5-Pocket Lift Wheel provides excellent chain and lift wheel engagement for smoother lifting and reduced vibration, equating to less wear and a longer chain life. Zinc plating protects chain from environmental conditions.

#### EASY ACCESS CONTROL PANEL

Finger-safe wiring and plug-and-play connectors on the Control Panel allow for easy access to the VFD.

#### ZINC-PLATED LOAD CHAIN

Designed and manufactured in the USA by Columbus McKinnon. Zinc-plated Star Grade load chain protects against corrosion.

#### EXCEEDS H4 REQUIREMENTS

Lodestar exceeds H4 requirements. Engineered for high duty cycles and the toughest applications.

#### ECO-FRIENDLY

Lifetime grease-lubricated Gear Box means no changing and disposing of hazardous oil. Documented RoHS compliance. Shipped in boxes made of recycled material.

#### METRIC RATED

#### LIFETIME WARRANTY

The industry's best warranty against manufacturing and material defects.

#### FABRIC CHAIN CONTAINER

Standard up to 20 ft. lift.

#### RIGID HOOK SUSPENSION

#### COMPACT, DURABLE PENDANT

2-step hoists furnished with CM Rocket pendant as standard. Push-button pendant is optional.

3-step hoists furnished with push-button pendant as standard. CM Rocket pendant not available for 3-step models.

Both pendants are designed for operator comfort, NEMA 4X (IP65) approved for indoor or outdoor industrial service and temperature rated for 0°C (32°F) to 70°C (158°F). Available with and without emergency stop button.

### OPTIONAL FEATURES

#### ADDITIONAL LOAD CHAIN OPTIONS

Black phosphate, burnished in oil, DIN grade and Ni clad (nickel) plated load chain also available.

#### METAL & STAINLESS STEEL CHAIN CONTAINERS

Push-Button >>  
Pendant



<< CM<sup>®</sup> Rocket™  
Pendant



<< Small Frame Model



>> Large Frame Model

# LOOK WHAT'S DRIVING YOUR HOIST

If you're looking unsurpassed VFD performance, look no further than the Lodestar VS featuring the Magnetek IMPULSE® G+ Mini drive. Modern in design, Magnetek drives provide reliable, user-friendly controls and come equipped with industry-leading safety features to keep you working safely. Paired with our user-friendly interface, operators can easily adjust and monitor hoist performance and conduct on-the-spot troubleshooting, increasing efficiency and reducing downtime.

## PRECISION LOAD CONTROL FOR MICRO-POSITIONING

6:1 speed ratio allows for a wide range of hoist lifting speeds, giving the operator unsurpassed micro-positioning capabilities while decreasing load bounce.

## LONGER HOIST, BRAKE & MOTOR SERVICE LIFE

Electronically programmable upper and lower limit switches (EPLS) allow user to ramp down to stop, decreasing load bounce and increasing brake life. No jogging necessary. Limits can be easily set and modified with the user-friendly Lodestar VS interface.

Frequency drive offers built-in thermal overload and overcurrent protection for the hoist motor.

## INCREASED EFFICIENCY WITH SWIFTLIFT™

New SwiftLift™ feature increases operator efficiency, allowing the hook to move 200% faster when the hoist is not under load.

For example, if a hoist is programmed for 60 fpm, the hook will move at 120 fpm not under load (any load that is less than or equal to 20% of the hoist's capacity).

## OVERLOAD AND OVER-SPEED PROTECTION

When enabled, the Load Check II™ feature monitors capacity and prevents overloading if capacity is exceeded. Modified open-loop vector control with gearbox-mounted speed sensor protects against over-speed and speed deviation.

## EASILY ADJUST & MONITOR HOIST PERFORMANCE

With one of the easiest to use interfaces available, the Lodestar VS puts performance and status information you need right at your fingertips.

Simply plug the hoist into a computer or tablet to change or access performance data. The interface is designed for ease of use, allowing you to choose the control method of the hoist as well as the maximum, minimum and, if applicable, medium speed of the hoist. It also allows you to easily set upper and lower limits as well as SwiftLift parameters.

## HIGHER DUTY CYCLES

Heat sink and brake resistor (mounted inside of the hoist) allow for maximum heat dissipation and uninterrupted drive service at high-duty cycles. Hoists are not equipped with load brakes, reducing heat generation in high-duty-cycle applications.

## FLEXIBLE CONFIGURATIONS

Standard 2-step infinitely variable control with acceleration and deceleration control. Optional 3-step infinitely variable control as well as 2 and 3 speed multi-step controls. Multiple power supply options also available.

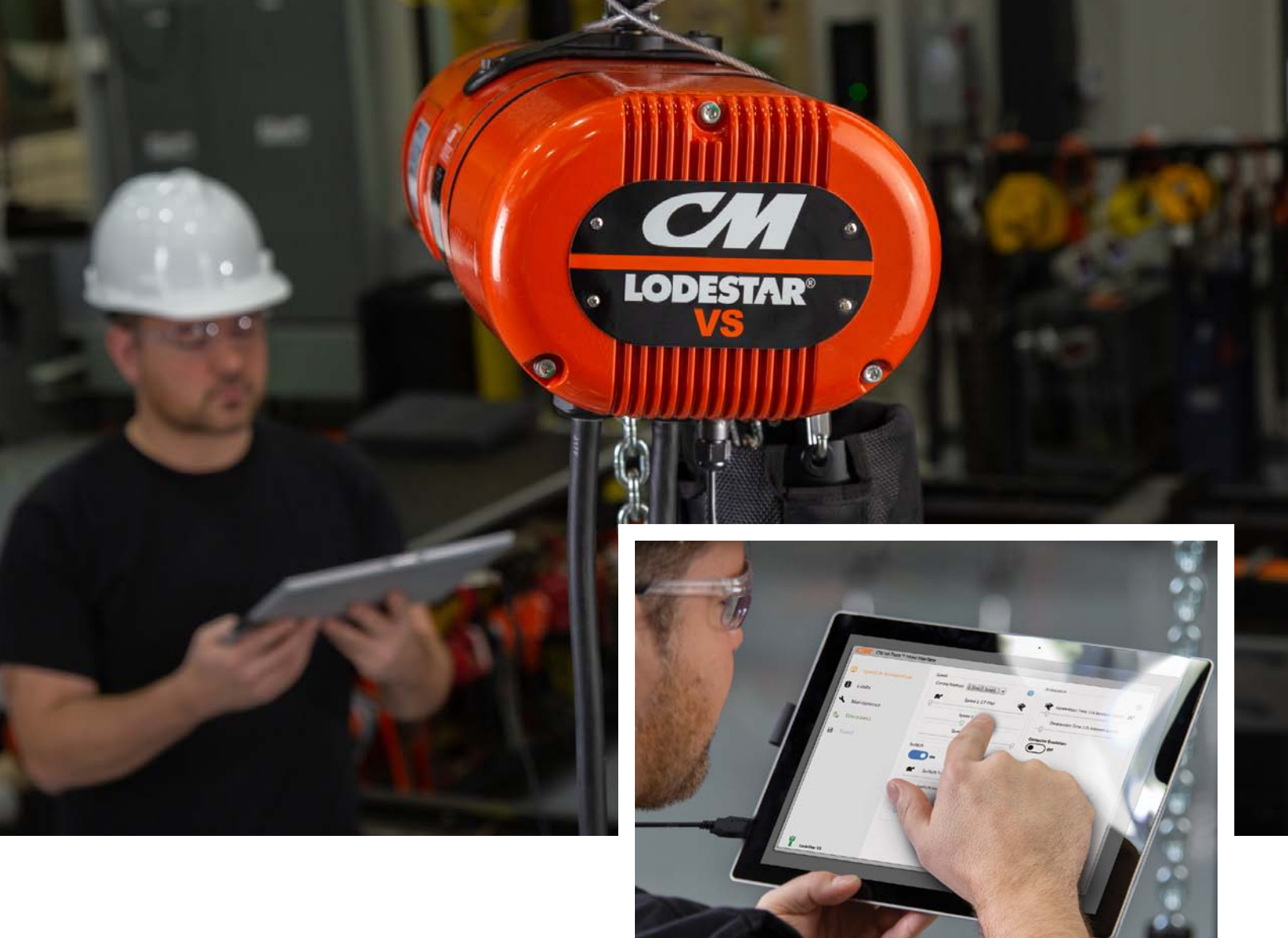


## THE **CM** ADVANTAGE

Only Columbus McKinnon can offer the legendary durability of the CM Lodestar together with Magnetek, the premier name in drive controls. For unsurpassed performance, look for "The Drive Inside" emblem on your next variable frequency drive hoist.



**The  
Drive  
Inside**

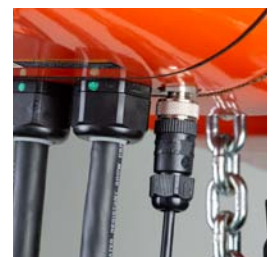


## ADJUST & MONITOR HOIST PERFORMANCE WITH EASY-TO-USE INTERFACE

Whether you need to adjust your hoist operating speeds or check motor run time and over-current events, the Lodestar VS puts the information you need at your fingertips. The convenient, easy-to-access port eliminates the need to remove hoist end cover to connect to the hoist. The operator can simply plug the hoist into a computer or tablet to program the hoist and change or access performance information.

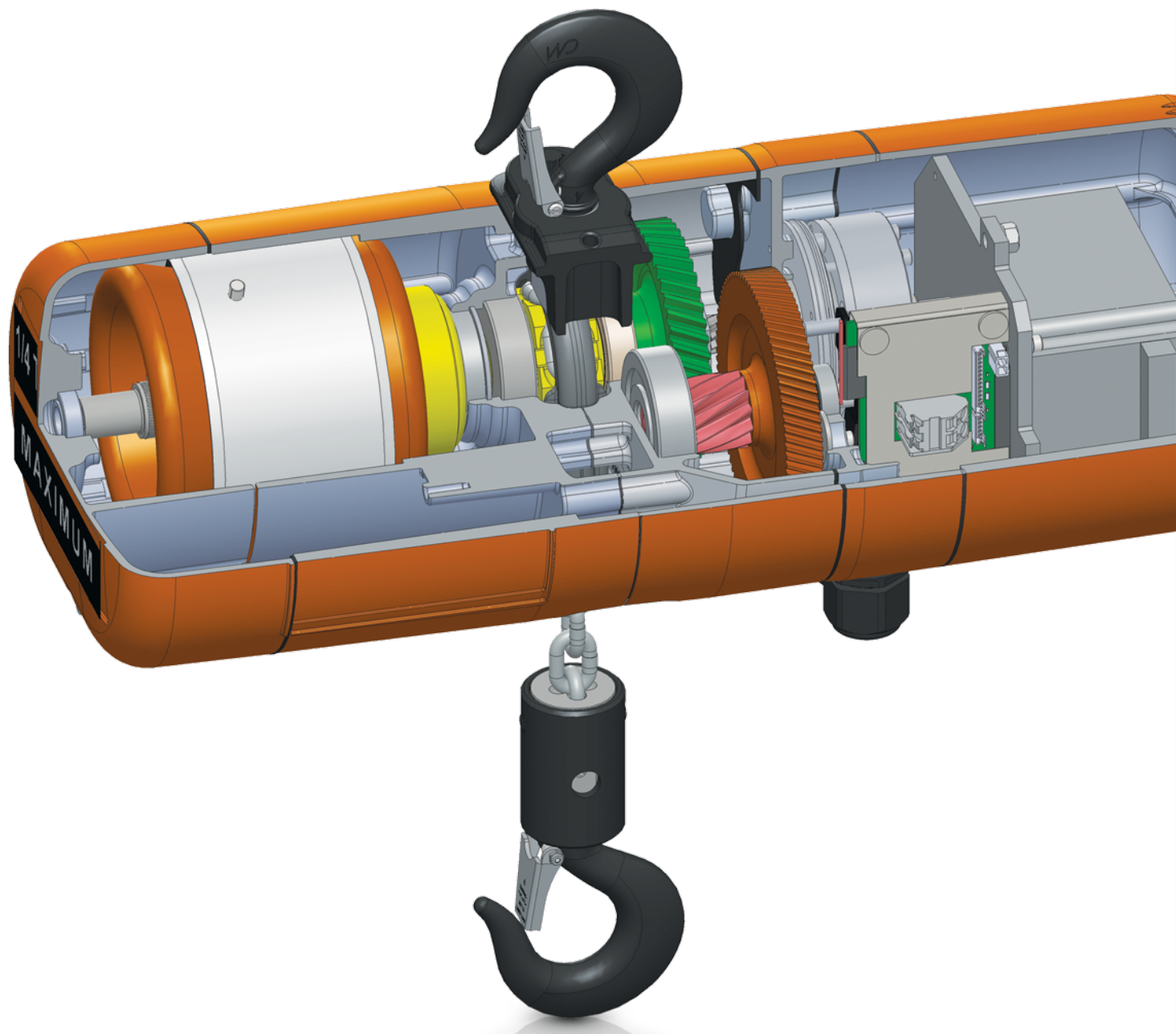
The Lodestar VS features CM HI-Tech™ (Hoist Interface Technology) – one of the easiest to use computer interfaces on the market developed exclusively by Columbus McKinnon. CM HI-Tech is designed for ease of use, allowing you to choose the control method of the hoist as well as the maximum, minimum and, if applicable, medium speed of the hoist. Compatible with Windows XP SP3, Windows Vista and Windows 7, 8 and 10, the Lodestar VS interface also provides:

- Built-in error prevention that ensures the hoist is programmed correctly, rejecting incorrect parameters and prompting the operator to make corrections before programming is complete.
- Acceleration and deceleration rates automatically calculated based on control methods and speed selections.
- Comprehensive hoist status information, including start/stop cycles, motor run time, DC bus voltage as well as over temp and over current events. Hoist fault information is also available.



Easy to access port 

# THE ANATOMY OF THE LODESTAR VS



## THE IDEAL WORKSTATION HOIST.

The CM Lodestar VS is ideal for applications in the automotive, heavy OEM, utility and energy industries. Choose this reliable hoist for assembly workstations that require high speed and precision control lifting with light rail or trolley systems.

In addition, the Lodestar VS is perfect for maintenance and repair applications demanding accurate load control or long lifts.



## KEY COMPONENTS

Working together, these key components provide best-in-class performance for any application in a wide variety of industries.



### Gear Box

Precision helical gearing is grease lubricated for quiet, smooth operation and long service life.



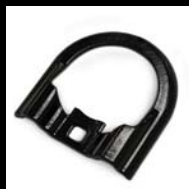
### Lift Wheel

5-pocket wheel increases engagement of the chain to provide smooth lifting with less vibration and reduced chain wear when properly maintained – extending the life of the chain.



### Clutch

Located outside the gear box for easy access, the clutch is designed to prevent lifting loads greater than rated capacity.



### Internal Chain Guide

The stamped steel chain guide, coated for corrosion resistance and quiet operation, keeps the load chain and liftwheel aligned during operation.



### Cast Aluminum Housing

Acid-resistant, powder-coated finish for superior durability and protection against elements. Sealed drive shaft and standard weather-proofing gasket and seals for an IP66 rating\* — suitable for outdoor use. Highly visible and recognizable CM orange color.

*\*NOTE: CM Rocket Pendant is IP65 rated*



### Hook Suspension

Rigid upper hook is standard on every Lodestar. Swivel hook, as well as push, hand-gear and motorized trolley suspensions are optional.



### Brake

Heavy-duty DC brake is standard.



### Load Chain & Hook

Hoistaloy™ load chain and forged steel hook are manufactured in the USA by CMCO – ensuring the highest quality standards are met at all times. Chain is zinc plated for protection against corrosion and is 100% proof tested.



### Fabric Chain Container

Standard on every Lodestar. Recommended for applications where slack chain would interfere with the load or drag on the floor. Fabric chain container standard on units with lifts up to 20 ft.



### Motor

Both heavy duty and efficient, the motor is designed to operate on power supplies worldwide. Standard Class F insulation and thermal motor protection.

## MAXIMUM CONTROL. MINIMAL EFFORT.

Compared to traditional straight grip and push-button configurations, the CM Rocket Pendant's comfort-fit design and responsive rocker switch give operators maximum control with minimal effort.

At the heart of the CM Rocket is a unique rocker switch that is ergonomically designed to reduce thumb strain while allowing for ultimate micro-positioning load control – all for increased safety and efficiency.

The Rocket's curved and ribbed design helps ensure a secure and comfortable grip.

Available in single- and 2-speed configurations, with or without an emergency stop button.

The Rocket pendant is not available for CM Lodestar VS hoists with 3-step controls or for units configured with motorized trolleys.



# CM LODESTAR VS SPECIFICATIONS & DIMENSIONS | STANDARD LIFT: 10 FT

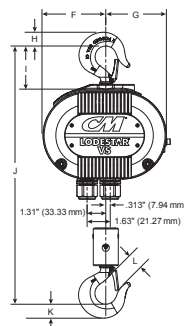
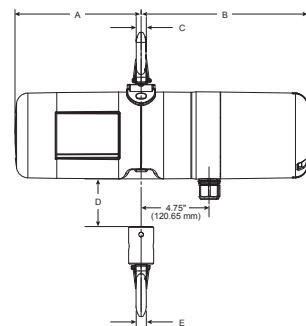
Capacity (tons)	Model	Product Code	Hoist Lifting Speed (FPM)	Motor HP	Reversing	Control Type	Power Supply	Dimensions (Latch-Type Upper and Lower Hooks) inches (mm)										Weight with Hook Susp. (lbs.)			
								A	B	C	D	E	F	G	H	I	J		K	L	
								1/8	A	LV01321D102MA LV01321D103VA LV01321B102MA LV01321B103VA LV01321A102MA LV01321A103VA	32	1/4	1	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60					3 (76.2)	
1/8	AA	LV01601D102MA LV01601D103VA LV01601A102MA LV01601A103VA LV01601B102MA LV01601B103VA	60	1/2	1	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60				6 (152.4)										75
1/4	B	LV02161D102MA LV02161D103VA LV02161A102MA LV02161A103VA LV02161B102MA LV02161B103VA	16	1/4	1	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60				3 (76.2)										75
1/4	C	LV02321D102MA LV02321D103VA LV02321A102MA LV02321A103VA LV02321B102MA LV02321B103VA	32	1/2	1	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60				3 (76.2)										75
1/2	E	LV05082D102MA LV05082D103VA LV05082A102MA LV05082A103VA LV05082B102MA LV05082B103VA	8	1/4	2	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60	8.82 (223.84)	11.69 (296.86)	.69 (17.46)	1.5 (38.1)	.81 (20.64)	3.44 (87.31)	5.25 (133.35)	1.13 (28.58)	-	19.56 (496.89)	1.13 (28.58)	1.25 (31.75)		90
1/2	F	LV05161D102MA LV05161D103VA LV05161E102MA LV05161E103VA LV05161A102MA LV05161A103VA LV05161B102MA LV05161B103VA	16	1/2	1	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60	8.82 (223.84)	11.69 (296.86)	.69 (17.46)	3 (76.2)	.69 (17.46)	4.44 (112.71)	4.25 (107.95)	.94 (23.81)	3.00 (76.20)	17.63 (447.68)	1 (25.4)	1.13 (28.58)		75
1/2	J	LV05321D102MA LV05321D103VA LV05321A102MA LV05321A103VA LV05321B102MA LV05321B103VA	32	1	1	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60	10 (254)	12.94 (328.68)	.81 (20.57)	3 (76.2)	.81 (20.57)	6.94 (176.28)	5.69 (144.53)	1.13 (28.7)	4.29 (108.9)	18.13 (460.5)	1.13 (28.7)	1.25 (31.75)		135
1	H	LV10082D102MA LV10082D103VA LV10082A102MA LV10082A103VA LV10082B102MA LV10082B103VA	8	1/2	2	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60	8.82 (223.84)	11.69 (296.86)	.81 (20.64)	1.5 (38.1)	.81 (20.64)	3.44 (87.31)	5.25 (133.35)	1.13 (28.58)	-	19.56 (496.89)	1.13 (28.58)	1.25 (31.75)		90
1	L	LV10161D102MA LV10161D103VA LV10161E102MA LV10161E103VA LV10161A102MA LV10161A103VA LV10161B102MA LV10161B103VA	16	1	1	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60	10 (254)	12.94 (328.68)	.81 (20.57)	1.5 (38.1)	.81 (20.57)	6.94 (176.28)	5.69 (144.53)	1.13 (28.7)	3.48 (88.41)	18.13 (460.5)	1.13 (28.7)	1.25 (31.75)		135
2	R	LV20082D102MA LV20082D103VA LV20082A102MA LV20082A103VA LV20082B102MA LV20082B103VA	8	1	2	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60	10 (254)	12.94 (328.68)	1.13 (28.7)	1.5 (38.1)	1.13 (28.7)	5.69 (144.53)	6.94 (176.28)	1.5 (38.1)	4.29 (108.9)	25.81 (655.57)	1.5 (38.1)	1.5 (38.1)		155
3	RT	LV30053D102MA LV30053D103VA LV30053A102MA LV30053A103VA LV30053B102MA LV30053B103VA	5.5	1	3	2-Step, Multi-Step 3-Step Inf Variable	115-1-60 115-1-60	10 (254)	12.94 (328.68)	1.13 (28.7)	1 (25.4)	1.13 (28.7)	5.31 (134.87)	7.31 (185.67)	1.5 (38.1)	4.92 (124.9)	29.31 (744.47)	1.5 (38.1)	1.37 (34.8)		180

NOTE: Fabric chain containers included on all models for up to 20 ft. lift.

When ordering, specify code number(s), model, capacity, beam size, power supply, suspension, lift, extra control cord or power cord, (if required) and type of electrification (if required). For a full list of dimensions (including for hoists configured with bullard hooks, Latchlok hooks, or trolleys), see CM Lodestar VS Dimension Drawing Book.

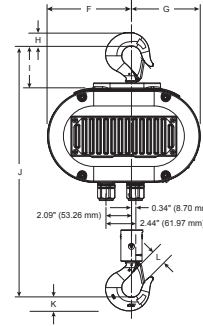
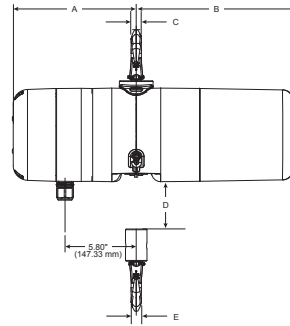
## SMALL FRAME (MODELS A, AA, B, C, E, F, H)

For hoists with latch-type upper and lower hooks



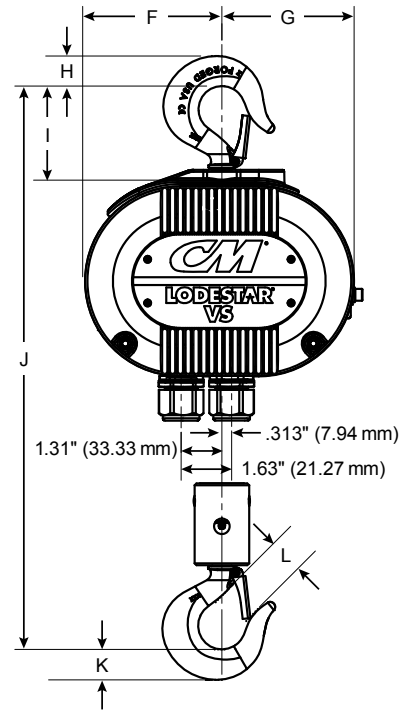
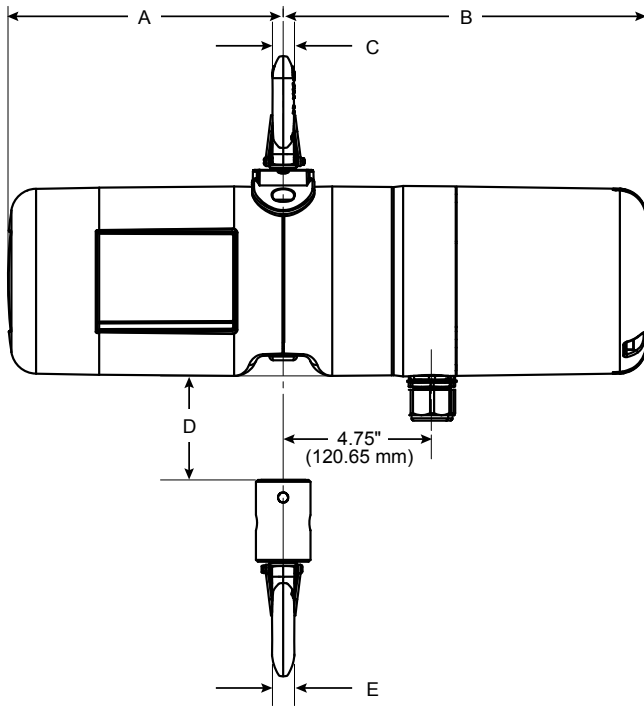
## LARGE FRAME (MODELS J, L, R, RT)

For hoists with latch-type upper and lower hooks



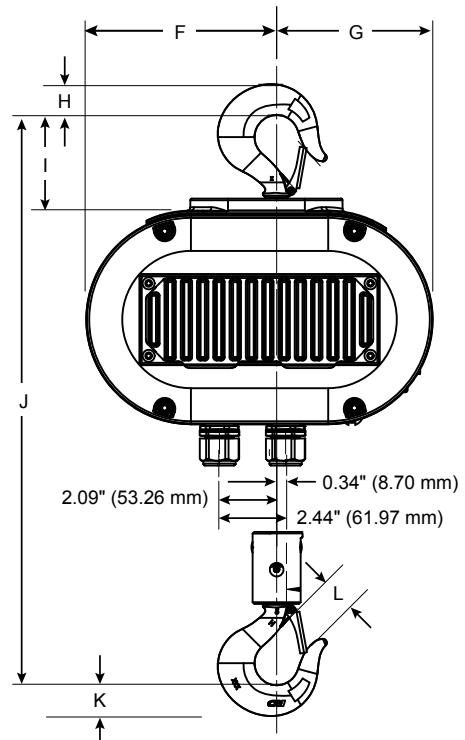
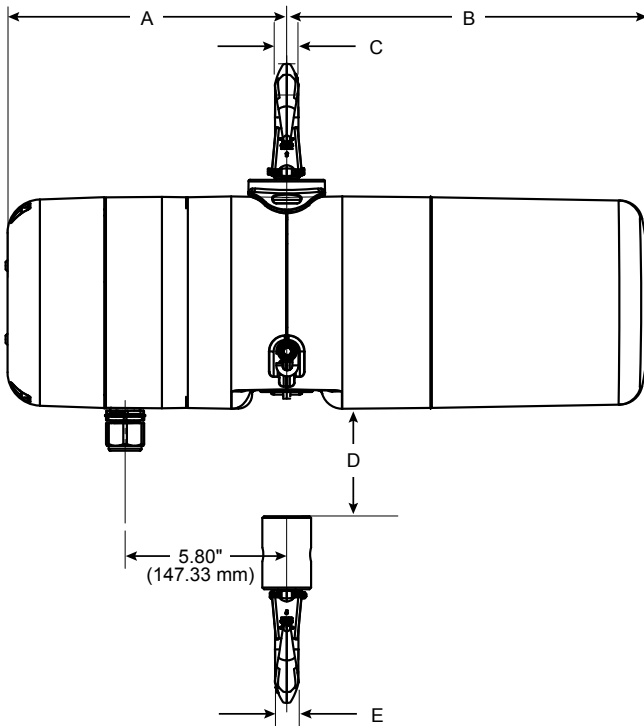
## SMALL FRAME (MODELS A, AA, B, C, E, F, H)

For hoists with latch-type upper and lower hooks



## LARGE FRAME (MODELS J, L, R, RT)

For hoists with latch-type upper and lower hooks



For a full list of dimensions (including for hoists configured with bullard hooks, Latchlok hooks, or trolleys), see CM Lodestar VS Dimension Drawing Book.



CM  
UNIVERSAL TROLLEY  
MODEL: UT1  
CAPACITY: 1t  
MAX  
CE

⏏ CM Lodestar VS with 1-Ton push-type CM Universal Trolley

CM  
LODESTAR®  
VS

THE  
BEST  
MOTOR

CM UNIVERSAL TROLLEY MODEL: UT1 CAPACITY: 1t MAX CE  
CM UNIVERSAL TROLLEY MODEL: UT1 CAPACITY: 1t MAX CE  
CM UNIVERSAL TROLLEY MODEL: UT1 CAPACITY: 1t MAX CE

# RECOMMENDED TROLLEYS

To provide versatility and flexibility for your application, the CM Lodestar VS can be used in tandem with a variety of Columbus McKinnon trolleys. Whether your Lodestar has a hook-mount or lug-mount suspension, there's a trolley perfect for your lifting and positioning needs. Below is a list of a few of the most popular trolleys for the Lodestar VS.

## CM UNIVERSAL TROLLEY

(LUG MOUNT)

The UT is competitively priced and boasts a long service life with low maintenance. The UT easily adjusts to fit beams with maximum flange widths up to 8.6 inches and features steel wrap around side plates, drop lugs and lifetime lubricated shielded ball bearings. Available in push-type, geared or motorized configurations. Lifetime warranty.



Push-Type CM Universal Trolley



Geared CM Universal Trolley



Motorized CM Universal Trolley

## CM 635 TROLLEY

(LUG MOUNT)

Designed for versatility and strength, the CM Series 635 trolley fits a wide range of beam sizes for maximum versatility. The Series 635 features durable steel side plates and frames as well as steel spur gearing for optimum strength and smooth operation. The trolley's lifetime-lubricated double row ball bearings provide high efficiency with low maintenance. Available in push-type, geared or motorized configurations. Lifetime warranty.

## CM 633 TROLLEY

(HOOK MOUNT)

The CM Series 633 push-type trolley features a simple, rugged design built for trouble-free service and ease of operation across a wide range of beam applications. The Series 633 is designed for easy rolling on American standard shapes, wide flange shapes or patented rail and features hardened wheels and axles for added strength and durability. One-year warranty.

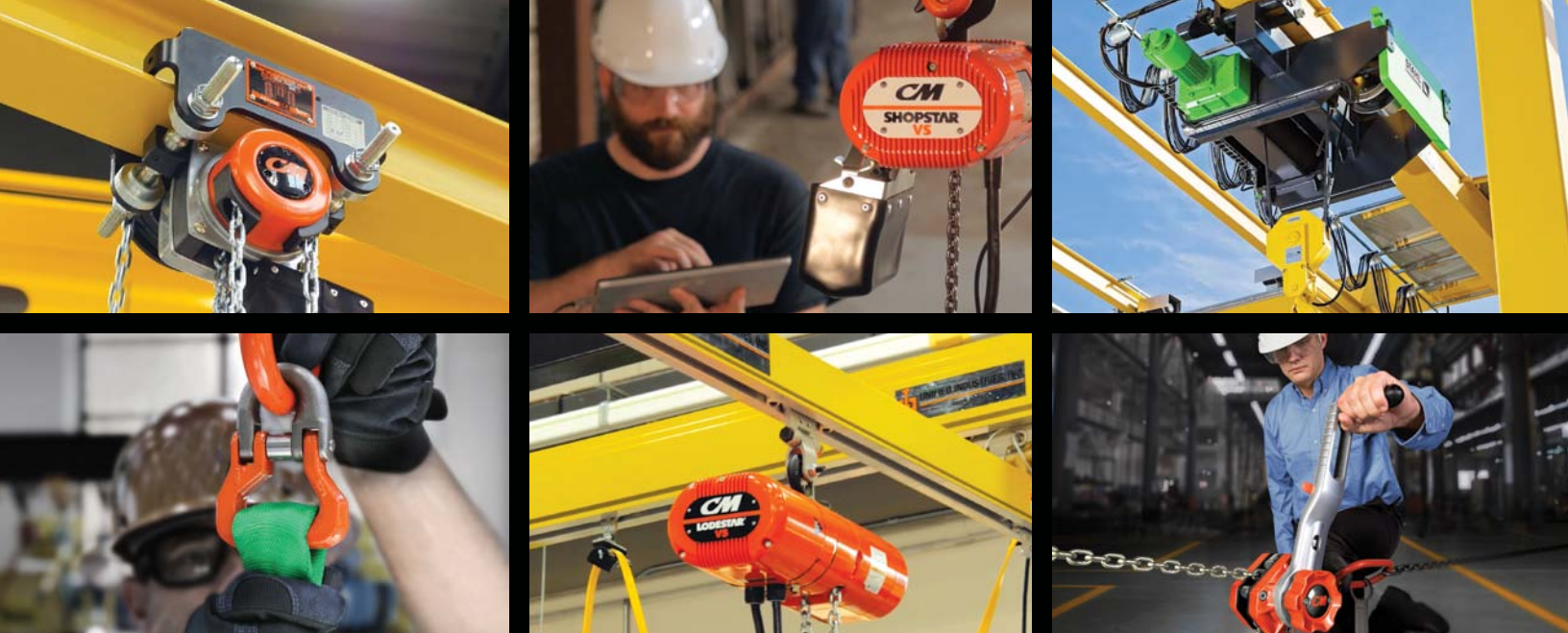




**CM**<sup>®</sup>

**LODESTAR**<sup>®</sup>  
**VS**

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## PARTNERS IN MOTION CONTROL.

Columbus McKinnon is focused on becoming the leading industrial technology company in safe and productive motion control. Together, with our network of value-add Channel Partners, we are uniquely positioned to offer solutions to solve our customer's high-value problems. From variable speed electric chain hoists featuring CM HI-Tech™, our exclusive performance interface platform, to the CM Tornado 360™ and its revolutionary Sidewinder™ lever handle, Columbus McKinnon is engineering motion control solutions for tomorrow's workforce.

## BE SAFE. GET TRAINED.

Columbus McKinnon is committed to providing expert safety training on the proper use and inspection of rigging and overhead lifting equipment. Our company offers comprehensive programs at our national training centers as well as on-site at your facility. Courses include hoist and rigging safety and inspection; crane operation and safety; and load securement.

Columbus McKinnon's corporate headquarters in Getzville, New York, is home to our state-of-the-art **Niagara Training Center**. The 3,000-square-foot facility is dedicated to training Channel Partners and end users on the safe and proper use of hoist and rigging products. The Center offers a one-of-a-kind training experience on chain and rigging equipment with more than 75 manual and powered hoists, enclosed track systems and our 50-foot-wide crane system with 3-ton Yale Global King wire rope hoist.

## CMCO UNIVERSITY™

Win in the marketplace with CMCO University. This intense program is designed to give Channel Partners intimate product and application knowledge that they can use to advise their end-user customers during the product selection and sales processes.



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