



VIRGINIA CRANE®

OVERHEAD & GANTRY CRANES

www.virginiacrane.com



225 Ton Overhead Cranes,
CMAA Class D

SPECIALIZING IN CUSTOM CRANES

Virginia Crane has built its reputation serving paper mills, railroads, shipyards and steel mills. Other customers include foundries, power companies, steel distribution centers, aerospace and defense contractors, municipalities and general manufacturing companies.

Our specialty is the custom crane for special applications and heavy service requirements. All cranes are designed in

accordance with C.M.A.A. specifications for service classifications "A" through "F". We offer our own complete built-up hoisting unit and also represent all major hoist manufacturers.

Virginia Crane's primary goal is to provide value for our customer. We design products to fulfill specific needs at a high level of quality and at a reasonable cost.

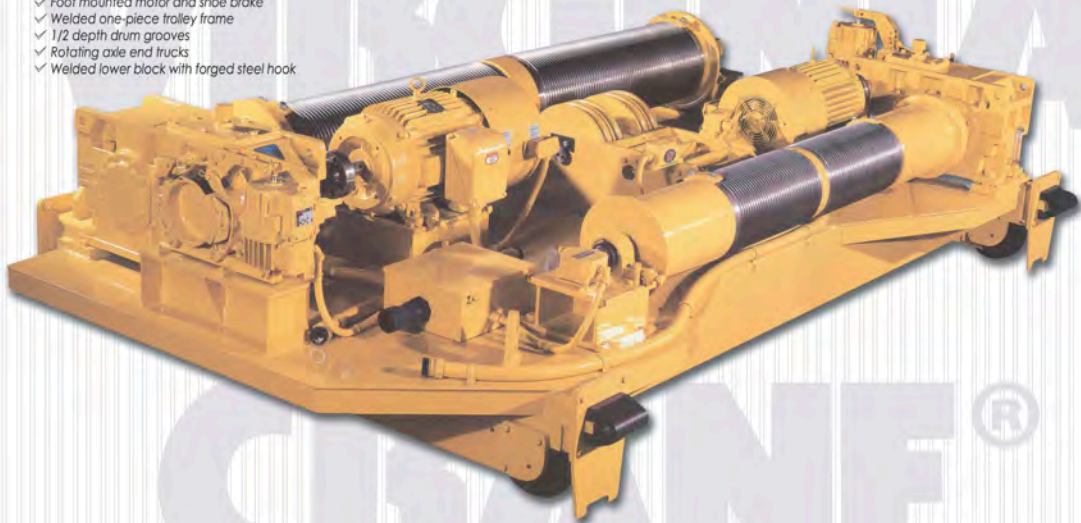
110 ton capacity, cab-operated crane features a 7 1/2 ton auxiliary monorail hoist mounted under the idler girder.
CMAA Class "D" Service.



**VIRGINIA
CRANE®**

35/7.5 ton built-up trolley hoist
Standard features include:

- ✓ Horizontally split gearbox
- ✓ Foot mounted motor and shoe brake
- ✓ Welded one-piece trolley frame
- ✓ 1/2 depth drum grooves
- ✓ Rotating axle end trucks
- ✓ Welded lower block with forged steel hook



20 ton capacity scrap yard magnet gantry crane has DC constant potential control and 70 foot span, 30' cantilever, 40' height, CMAA Class "E".



44 ton capacity paper mill reel crane, AC wound rotor control, CMAA Class "D".



HEAVY SERVICE APPLICATIONS

Virginia Crane built-up hoists are designed for heavy service applications. Our company size and structure, including in-house machining capabilities, allow us to respond to your material handling needs.

Working closely with you, our team of specialists will propose design solutions to satisfy your project requirements. Some of our specialty applications have included sludge handling, scrap handling, coil handling, and remote-controlled nuclear waste handling cranes.

Special project: furnace charging carousel with 8-charge buckets.

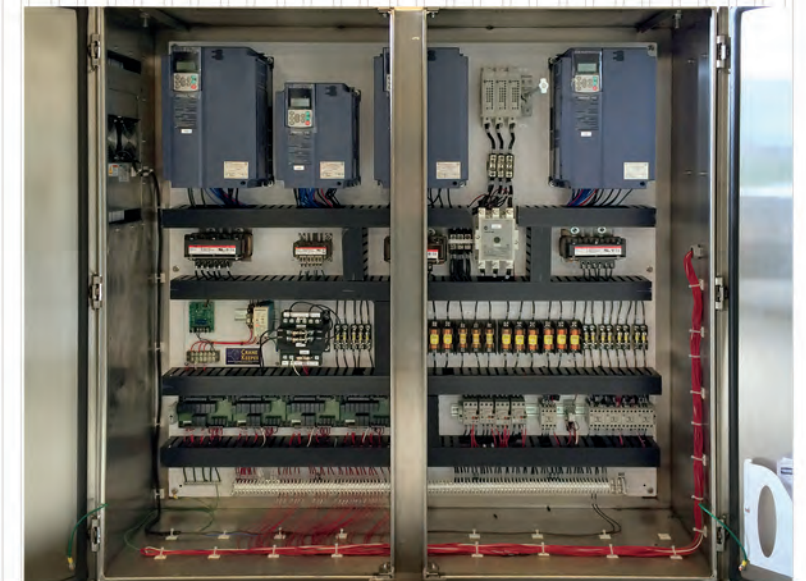


**VIRGINIA
CRANE®**

Virginia Crane's in-house machining capability allows us to produce drums up to 65" in diameter.



Four motion CMAA class E crane control panel.



In-house flame hardening capability for wheels, sheaves and drums.



A machinist uses a CNC lathe to manufacture drums, wheels, axles and sheaves.



State of the art engineering software, including AutoCAD®, SolidWorks® and Algor, enhance our in-house engineering department.



MANUFACTURING & ENGINEERING

Our engineers, customer service personnel and sales staff are efficient and committed to our business ethics. Their experience, combined with our state-of-the-art computer-aided design (CAD) system, enables us to meet the requirements of your specific applications.

At **Virginia Crane**, quality is never compromised. In fact, we have dedicated an entire department to quality assurance.

Every component is tested and inspected at each step of the manufacturing process.

All of our cranes are conservatively designed for reliability and maximum life.







Virginia Crane's service does not stop with the sale of a crane. Our factory service team is a resource for our customers, offering inspection and maintenance programs tailored to your needs.

**VIRGINIA
CRANE®**

Other PRODUCTS:

VIRGINIA CRANE®

Overhead
Gantry
Stacker

-  **FEATURE SERIES HOISTS**
-  **ENGINEERED SYSTEMS**
-  **TRANSFER CARS**
-  **TRANSFER TABLES**
-  **LOCOMOTIVE TURNTABLES**
-  **BELOW HOOK DEVICES**



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FMH customers include the finest foundries, paper mills, steel distribution centers, aerospace and defense contractors, municipalities and general manufacturing companies.



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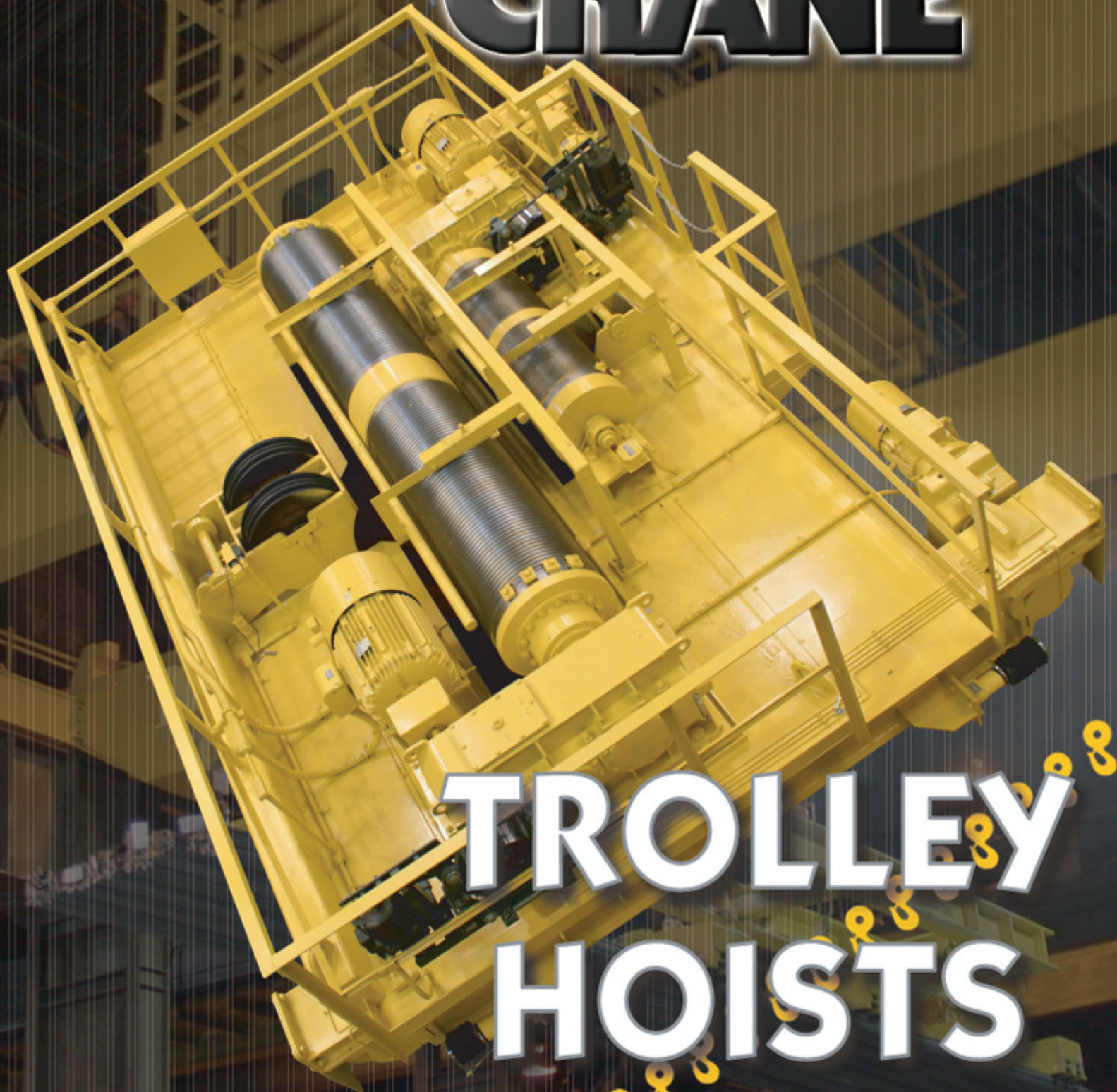
Foley Material Handling Co., Inc.

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(804) 798 1343 - Fax (804) 798 7843

VIRGINIA CRANE



TROLLEY HOISTS

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STANDARD DESIGN FEATURES

Trolley Frame: One-piece welded structure with load girts heavily ribbed and gusseted to resist vertical, lateral and torsional stresses. Deck plate is provided across the top of the trolley to carry hoisting machinery. Equipment is readily accessible from this upper deck. Lifting lugs are also provided.

Hoist Reducer: High quality cast iron gearcase is foot mounted and horizontally split. Helical gears are alloy steel, carburized to 60Rc then finished ground to meet AGMA class 12 standards. Shafting is heat treated, high-alloy steel mounted on spherical roller bearings. Splash lubricated and provided with dual-lip oil seals. Other features include oil level dipstick, inspection access cover, air breather, magnetic drain plug and lifting lugs.

Hoist Motor: Standard motor is foot-mounted Vector motor, TEFC, continuous duty, class "F" insulation, thermostats and encoder. Fully flexible geared coupling used at motor output shaft. Lifting eye and easily accessible junction box are also provided. Wound rotor and DC motors are available.

Hoist Brake: Shoe brake is a foot mounted AC thruster designed for 150% full motor torque. Brake shoes are made from non-asbestos materials and are self aligning. DC and AISE are also available.

Hoist Drum: Welded steel construction. Machined right and left hand grooving for true vertical lift. Drums are sized for a minimum 20:1 cable ratio and provided with half-depth grooving for improved wire rope life.

Upper Sheaves: Located above trolley deck for easy access with drop-in feature. Equipped with anti-friction bearings. Running sheaves offer a minimum 20:1 cable ratio. Idler sheave ratio is a minimum 12:1.

Wire Rope: 6 x 37 IWRC extra improved plow steel designed for hoisting service. Sized for a minimum 5:1 safety factor.

Lower Block: Heavy, one-piece steel weldment. Sheaves are enclosed and fully guarded for added operator safety. Forged alloy or carbon steel hook is mounted on a roller thrust bearing for 360 degree rotation. A spring-loaded safety latch is also provided.

Limit Switches: Each hoist is provided with a weight operated upper limit switch and a rotary upper and lower geared limit switch. Overload protection is standard on all Flux Vector applications.

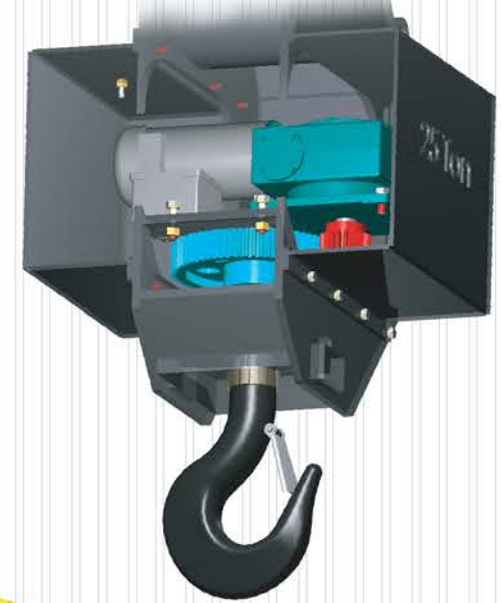
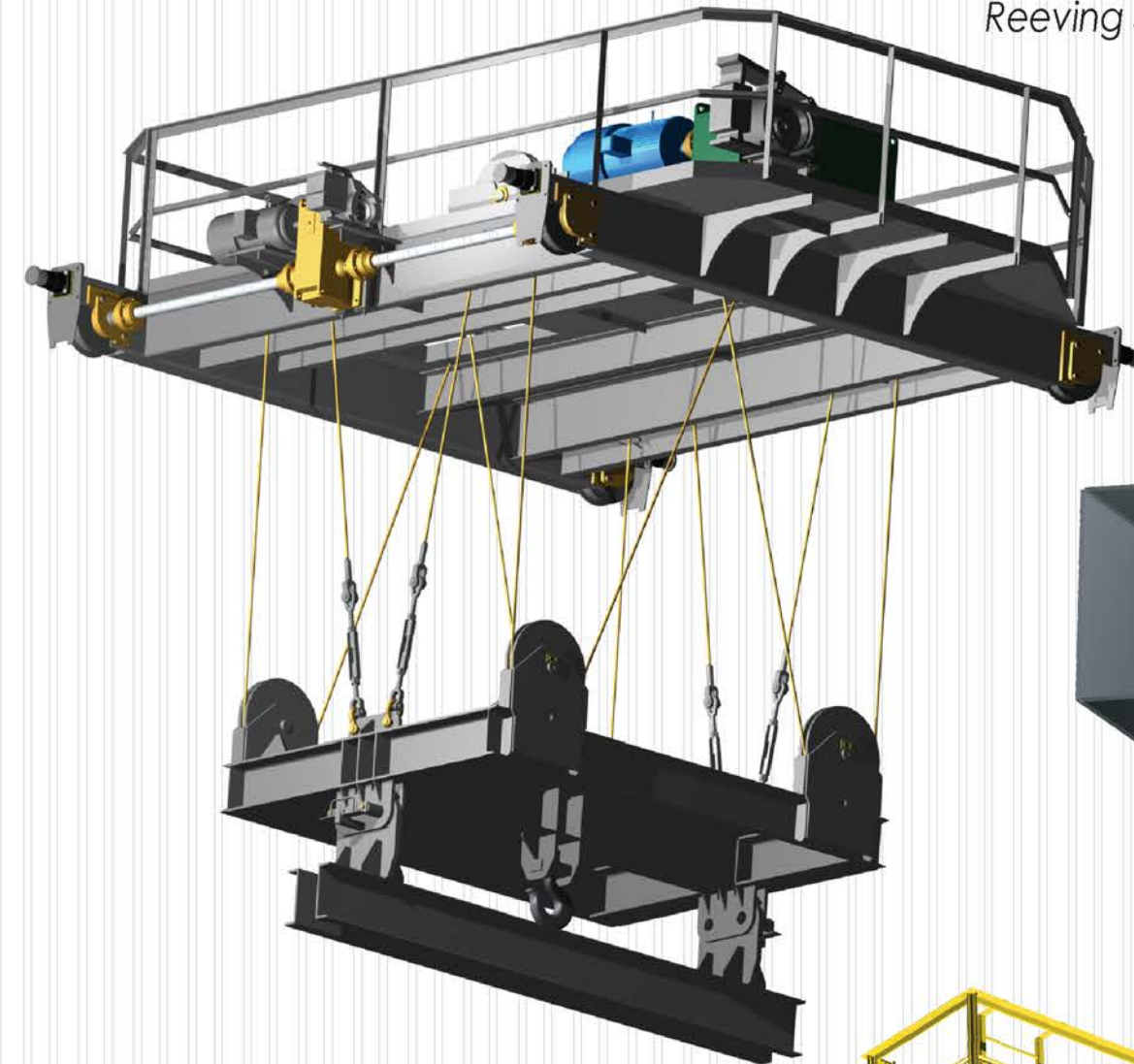
Trolley Trucks: Rotating axle wheels are supported by double row spherical roller bearings mounted in modified MCB type housings. Fabricated from structural tubing or welded box sections and accurately machined for trouble free operation. Double flanged wheels are made from C1045 steel and flame hardened to 425 BHN. Lubrication fittings, rail sweeps and bumpers are provided.

Trolley Drive: The drive consists of an integral brakemotor mounted to a helical reducer. The drive unit is shaft mounted on the drive axles and is splash lubricated in an oil-tight gearcase. Standard features include continuous duty, class "F" insulation, motor thermostats and DC disc brake.

Options & Accessories: Auxiliary hoists, flame hardened drums and sheaves, centralized lube systems, outdoor and hazardous locations, weigh systems, power limit switches, base-mount design, stainless wire rope, rotating lower blocks, anti-sway reeving, operator cabs, mill duty brakes, hook rotation locks, hydraulic bumpers, custom forged hooks, hand railings, coupling guards and below hook devices such as grabs, buckets, spreaders and magnets.

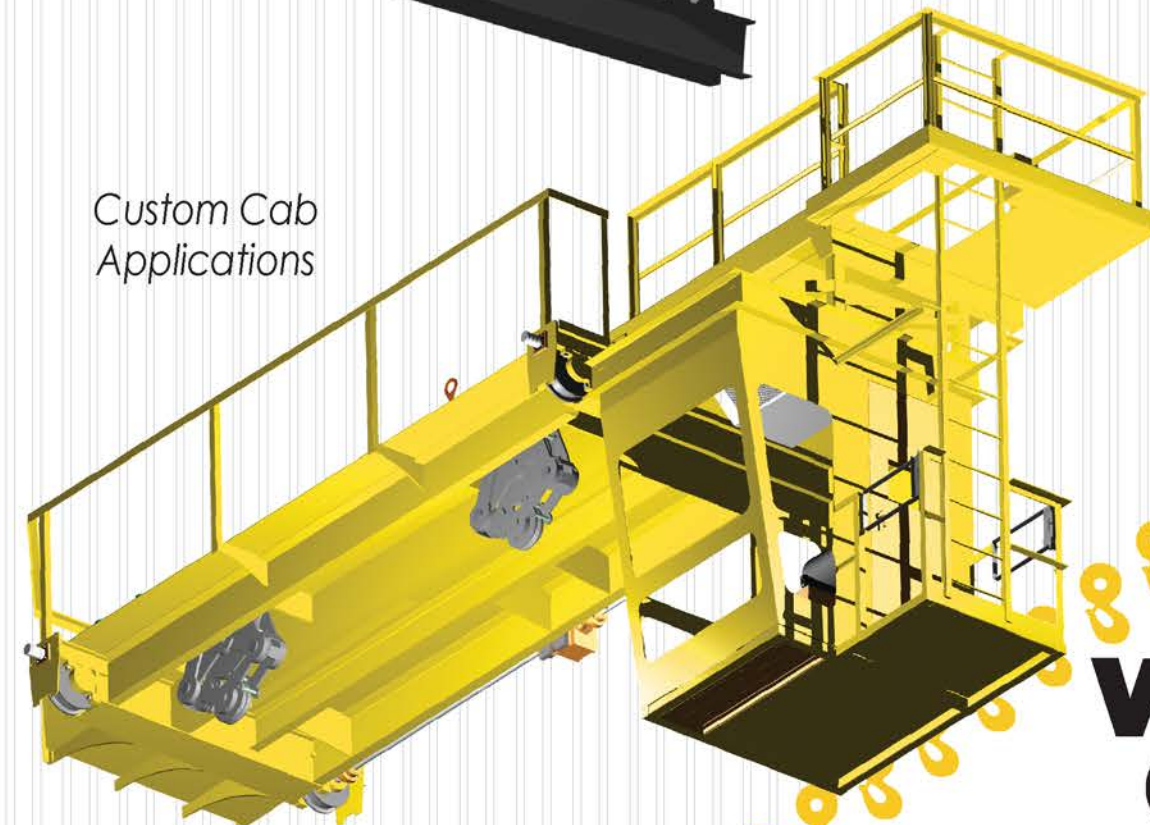
CUSTOM FEATURES

Anti-Sway
Reeving Systems



Rotating Lower
Hook Blocks

Custom Cab
Applications



**VIRGINIA
CRANE**

STANDARD TROLLEY HOISTS

HOIST REDUCER:

- Foot Mounted
- Horizontally Split
- Class 12 Helical Gearing

HOIST BRAKE

- AC Thruster Type

HOIST MOTOR:

- Foot Mounted Vector Motor
- Continuous Duty, Class **F**
- Thermostats & Encoder

MOTOR COUPLING

- Flex Gear Type

HOIST DRUM

- Half Depth Grooving

UPPER SHEAVES

- Full Depth Grooves

DRUM COUPLING

- Half Flex Gear

UPPER LIMIT SWITCH

TROLLEY FRAME

- One Piece Weldment

TROLLEY TRUCKS:

- Modified MCB Bearing Assembly
- 425 BHN Wheels

GEARED LIMIT SWITCH

- Upper & Lower Positions

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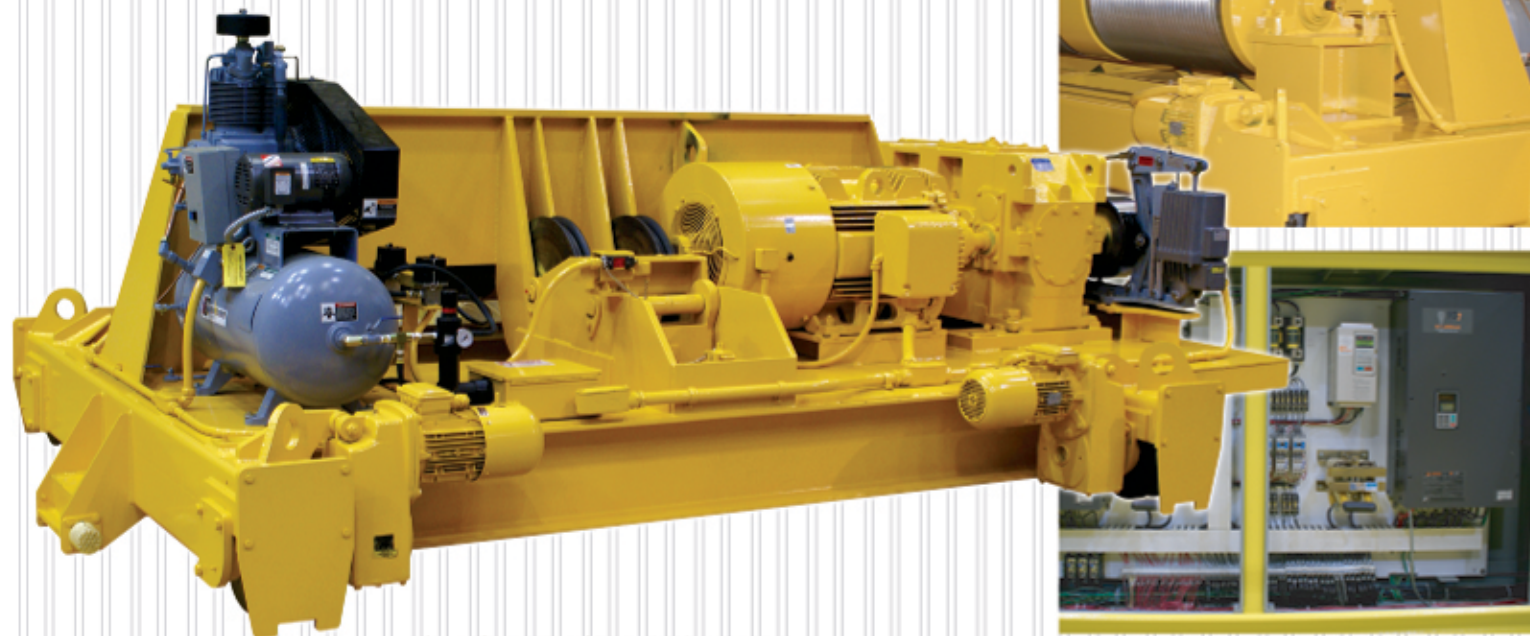
Product Line:

- ✓ Capacities to 300 tons
- ✓ CMAA Service Class **A** through **F**
- ✓ Flux Vector hoisting and inverter traverse are standard
- ✓ Wound Rotor, AC Static Stepless and DC controls also available.

HEAVY SERVICE APPLICATIONS

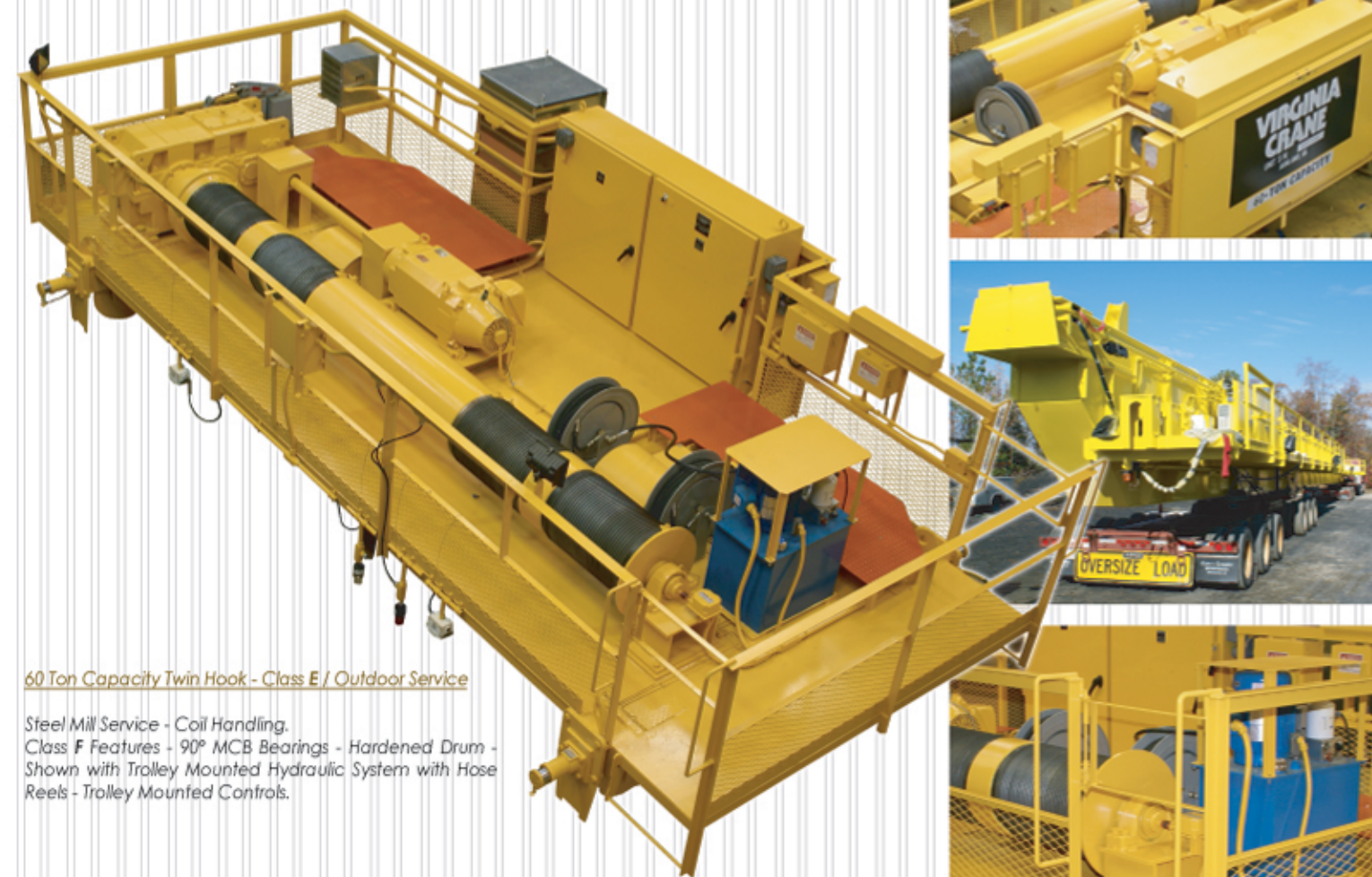
**VIRGINIA
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CUSTOM DESIGNS



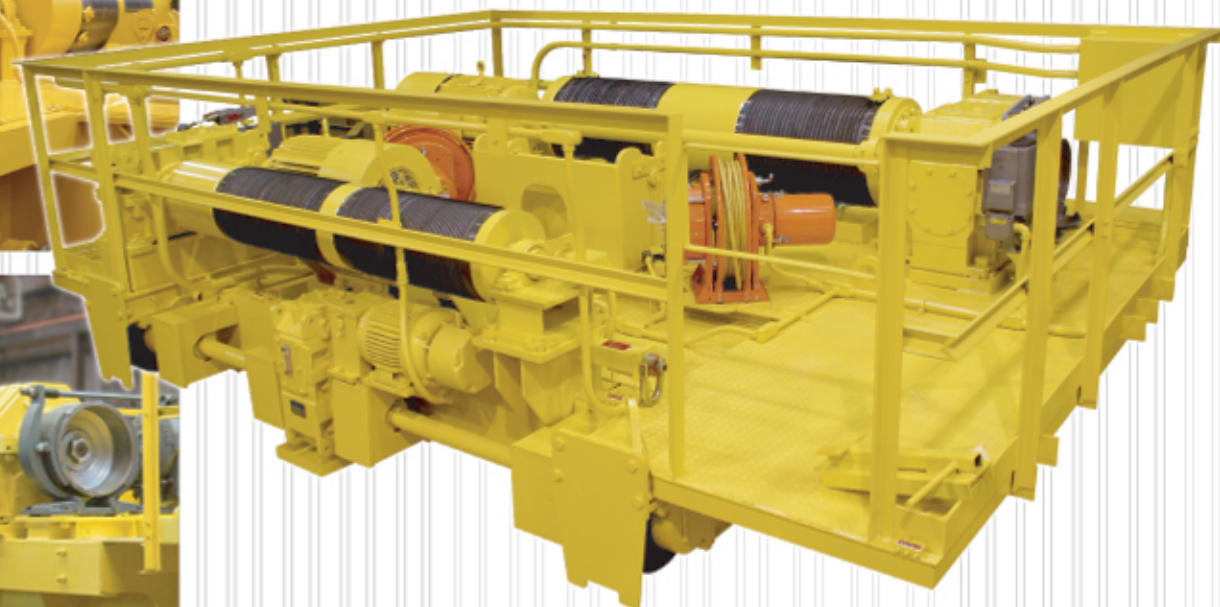
40 Ton Capacity - Class E / Indoor Service

Concrete Specialty Products Production - High Hook Design with Top Load Girt - Shown with Trolley Mounted Compressor.



60 Ton Capacity Twin Hook - Class E / Outdoor Service

Steel Mill Service - Coil Handling.
Class F Features - 90° MCB Bearings - Hardened Drum - Shown with Trolley Mounted Hydraulic System with Hose Reels - Trolley Mounted Controls.

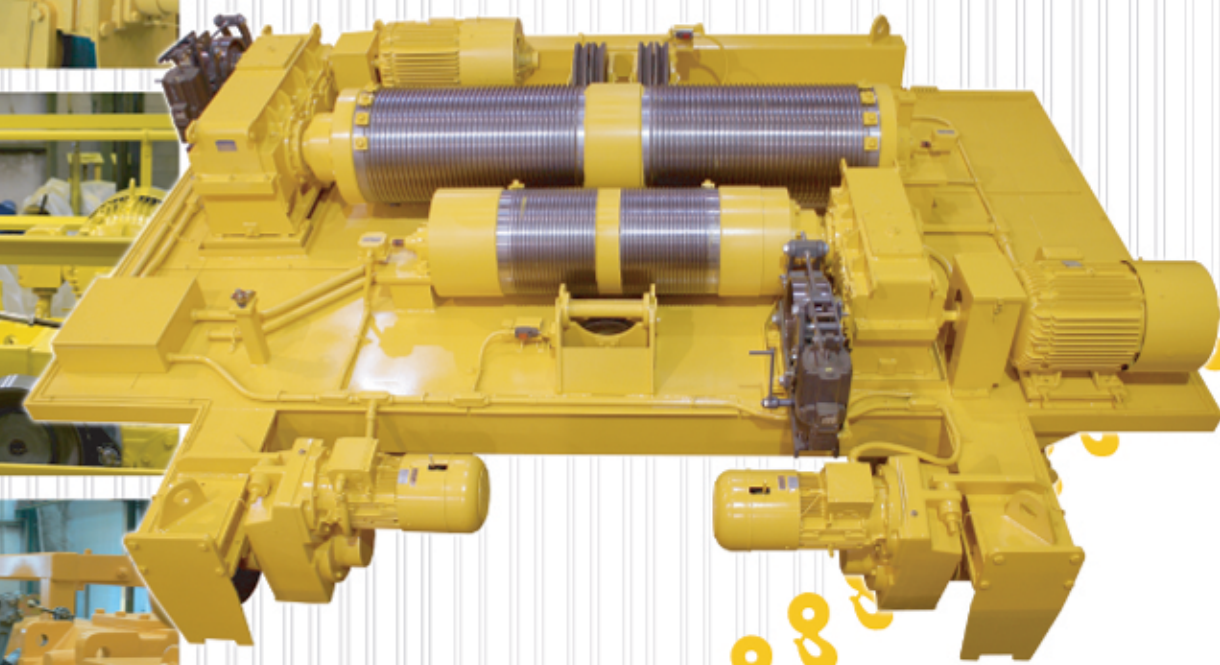


50/20 Ton Capacity - Class E / Indoor Service

Heavy Machine Shop Application.
Class F Features - 90° MCB Bearings - Hardened Drum - Central Lubrication - Trolley Mounted Reels.

50/10 Ton Capacity - Class E / Indoor Service

Shipyards Application Handling Ship Segments.
Class F Features - 90° MCB Bearings - Hardened Drum.



**VIRGINIA
CRANE**

Our VIRGINIA CRANE PRODUCTS:



CRANES

Overhead
Gantry
Stacker



HOISTS



ENGINEERED SYSTEMS



CRANETROL



CRANETRUX



BELOW HOOK DEVICES



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VIRGINIA CRANE

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VIRGINIA CRANE®



SAVAGIE

CLASS D HOIST

Capacities to 70 Tons
www.virginiacrane.com

Savage Series Hoists

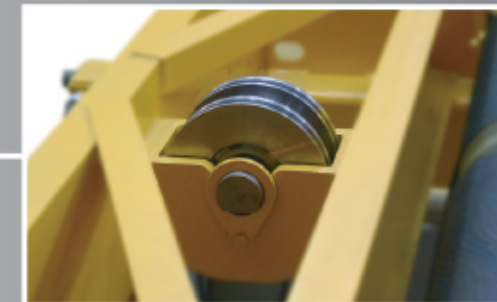
Model Availability and Construction Features

All ratings in accordance with CMAA Class D Service requirements

Models in **5 TON** through **70 TON** capacity.

Four standard frame sizes.

Model configurations in TR and UH Trolley, and Deck Mounted Styles.



UPPER SHEAVE NEST:

Upper sheaves are all steel and interchangeable with the load block sheaves. Upper sheaves utilize an readily serviceable, lift out design that is easily accessed from above.

HOIST MOTOR & BRAKE:

Standard motors are continuous duty, TEFC, vector motors that meet NEMA MG-1 standards. Standard brakes are DC, direct acting, disk brakes rated a minimum of 200% of motor full load. Class H motor insulation and a brake answer back switch are included.

HOIST GEAR REDUCER:

Gear reducers utilize a rigid, one piece, precision machined, iron housing for durability. Gears are helical, hardened, and finished up to AGMA class 13 standards for a long, quiet life. Seals have multiple nitrile rubber lips for a long, leak free life.

TROLLEY WHEEL ASSEMBLY:

Wheel treads and flanges are hardened to 400 – 450 Bhn for long life. Wheels are supported on direct drive, rotating axles that are supported by two double row spherical roller bearings per wheel. Truck frames are precision line bored to ensure proper wheel alignment.

TROLLEY HOIST FRAME:

Substantial frames are of all welded construction. Frames are braced and gusseted to provide permanent alignment of mechanical components.

CONTROLS (optional):

Standard flux vector hoist and variable frequency drives are supplied in a NEMA 4/12 enclosure. Controls can be trolley mounted or shipped loose for installation on the crane bridge. When controls are shipped loose the trolley components will be prewired to a terminal box.

WIRE ROPE:

All models are fitted with a 6x37 class IWRC rope exceeding a 5:1 design factor. Standard wire ropes have plain ends and rope drums have reusable clips for easy wire rope replacement.

LOAD BLOCK ASSEMBLY:

Standard load hooks are forged steel with a 5:1 design factor and supported on a roller thrust bearing. Swinging trunnions are included to ease hook engagement with lifting bails, load rings, etc. Steel sheaves with machined, contoured rope grooves are supplied with lifetime lubricated bearings with thrust collars to maintain sheave positions on center, preventing contact with adjacent sheaves or the block frame.

TROLLEY DRIVE:

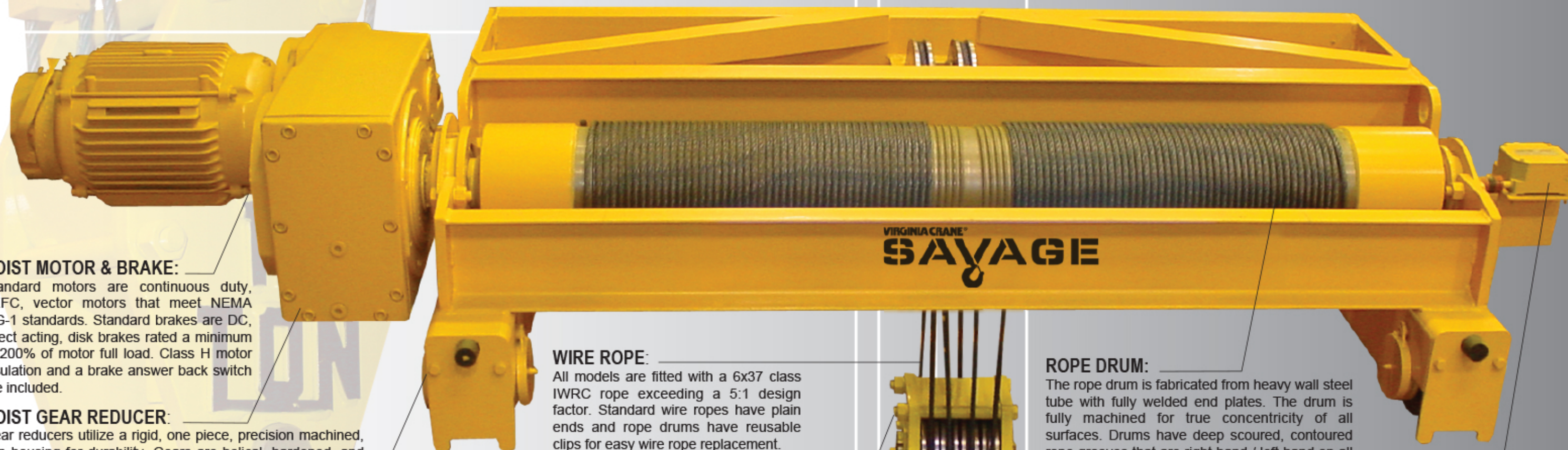
Dual motor, direct drive is standard. Gear reducers utilize a rigid, one piece, precision machined, iron housing for durability. Gears are helical, hardened, and finished up to AGMA class 13 standards for a long, quiet life. Seals have multiple nitrile rubber lips for a long, leak free life.

ROPE DRUM:

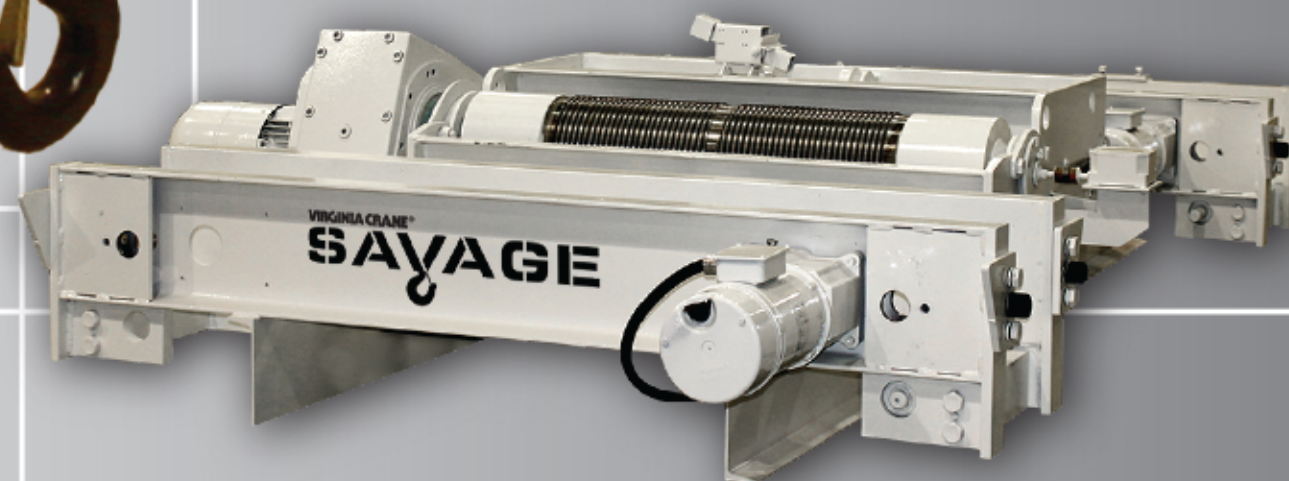
The rope drum is fabricated from heavy wall steel tube with fully welded end plates. The drum is fully machined for true concentricity of all surfaces. Drums have deep scoured, contoured rope grooves that are right hand / left hand on all models to provide true vertical lift.

LIMIT SWITCHES:

All models are equipped with a final upper, weighted, hoist limit switch and a rope drum actuated rotary upper and lower limit switch. Trolley travel limit switches are available as options.



VIRGINIA CRANE®
SAVAGE



VIRGINIA CRANE®
SAVAGE

Other PRODUCTS:

VIRGINIA CRANE®

Overhead
Gantry
Stacker

-  **FEATURE SERIES HOISTS**
-  **ENGINEERED SYSTEMS**
-  **TRANSFER CARS**
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-  **BELOW HOOK DEVICES**



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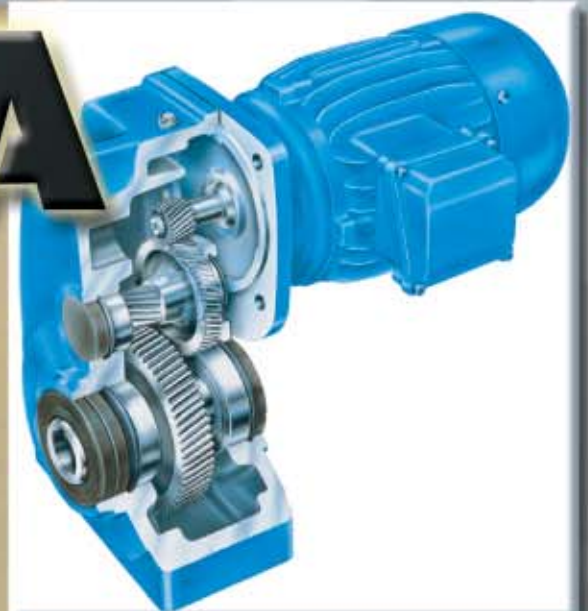
Foley Material Handling Co., Inc.

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VIRGINIA CRANE



**CRANEtrux
& DRIVE MACHINERY**

Standard Truck

Construction Features

Larger Models available through 36" dia. wheels - Consult factory for details.

CMAA Class D duty service rated.

Standard travel speeds of 60, 120, or 180 FPM.

Suitable for **Single Girder** and **Double Girder crane construction**

RAIL SWEEPS:

Supplied as standard to displace any loose obstructions along rails in crane travel path.

RUBBER BUMPERS:

Supplied as standard in accordance with CMAA 70-4.14.1

TUBULAR FRAME:

All welded construction, gusseted to insure proper permanent alignment of mechanical components.

TRUCK DRIVE:

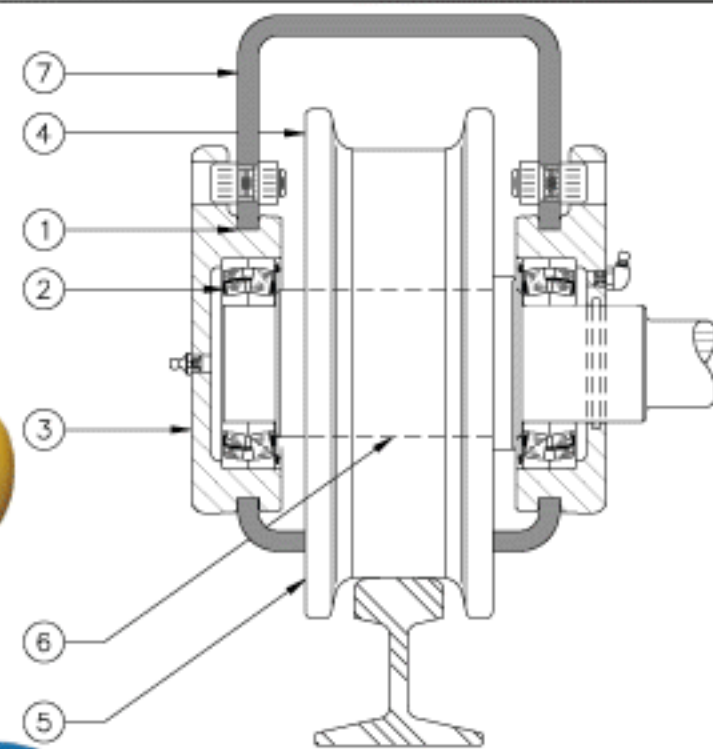
Dual motor, direct drive is standard. All gearing is helical type, parallel shaft, hardened & finished up to AGMA class 13 standards. All gearing is enclosed in a one piece oil-tight housing with multiple lip seals to insure against oil leakage. All drives are equipped with direct acting DC disc brakes as standard.

WHEEL ASSEMBLY:

Wheel tread & flanges hardened to BHN 400-450. Direct drive rotating axle style, fitted with double row spherical roller bearings. Tubular truck frames line bored to insure proper wheel alignment.

OPTIONS AVAILABLE

- Trolley wheel configurations in lieu of bridge wheels.
- Girder mounting kits.
- Optional travel speeds.
- Poly or hydraulic bumpers.
- Control Packages.



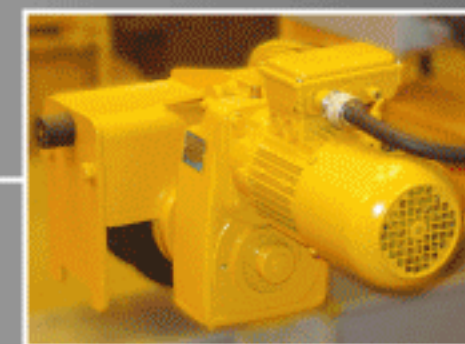
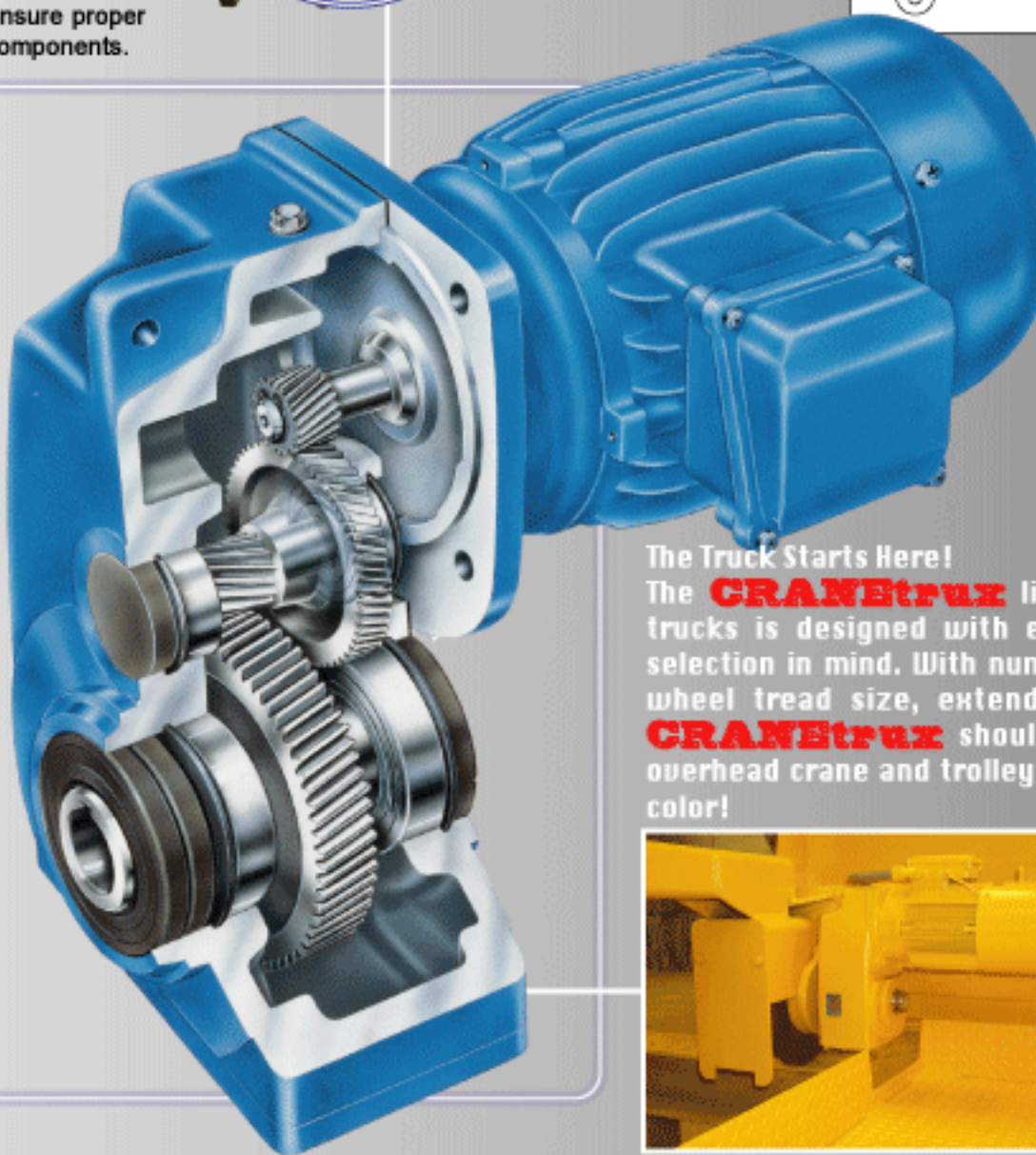
1. Line bored bearing cap seats
2. Double row spherical roller bearings
3. Ductile Iron bearing housings
4. Flame hardened wheel tread and flanges - BHN 400-450
5. Tapered tread drive wheels on bridge trucks. Straight tread wheels on trolley trucks
6. Rotating axle design
7. Tubular frame

The Truck Starts Here!

The **CRANETRUX** line of overhead crane and trolley end trucks is designed with ease of installation, maintenance, and selection in mind. With numerous options available, such as varied wheel tread size, extended speed ranges, and mounting kits, **CRANETRUX** should be your first stop when purchasing overhead crane and trolley components. We'll even let you pick the color!

WHEEL TREAD DIAMETER	RAIL SIZE / MAXIMUM WHEEL LOAD [^]					WHEELBASE RANGES AVAILABLE													
	30lb	40lb	60lb	85lb	105lb ^{^^}	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'
6"	11200	13200																	
8"	14900	17600	18600																
10"		22000	30800																
12"		26400	37000	37800															
15"			46200	49500															

[^] Based on KwI value = .85 (ref. CMAA 4.13.3.4)
^{^^} Crane rail classification, all others ref. ASCE listing



Other VIRGINIA CRANE PRODUCTS:



CRANES

Overhead
Gantry
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FEATURE SERIES HOISTS



VALUE SERIES HOISTS



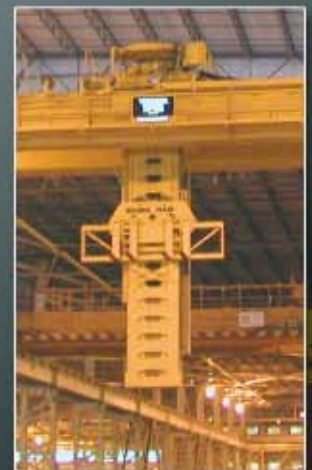
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