

PowerLine™ Hoist

PowerLine is a line shaft hoist, re-imagined to reduce size, weight, and cost. PowerLine hoists offer a wide range of speeds and capacities, making them versatile performers and excellent choices for retrofits in older buildings. Among it's many uses are electric sets, scenery and curtains, and front-of-house lighting sets.

Features

- Customizable line shaft design that is strong, efficient and versatile
- Fixed or variable speed options to meet your performance needs
- Compact unit doesn't require wall or wing space and can be mounted upright or underhung on 10" (254 mm) spacing
- Simple construction places only vertical loads on the supporting structure without lateral loads
- Easy to install backbone can be continuous/discontinuous to meet your site conditions
- Universal joints in the drive shaft promote long life and reliability by allowing various building steel configurations
- Compact drum fits over standard 10" (254 mm) grid well
- Helical/worm or helical/bevel gear boxes can be oriented four ways for simple installation in any space
- Flexible installation — standard hoists can be mounted from beams with flanges from 4 - 11" (102 - 279 mm) wide and from 1/4 to 1" (6.3 to 25 mm) thick. Custom mounting hardware can be provided if needed
- 6 or 8" (152 or 203 mm) welded steel drums offer a wide range of speeds and capacity options to meet your performance requirements
- Versatile mounting clamps attach to steel that is parallel or perpendicular to the hoist for fast, easy installation without welding
- High-efficiency green motors meet IEC 60034-30 efficiency classes standard



Capability

- Speed: up to 240 fpm (1.2 m/s)
- Travel: up to 60' (18.3 m)
- Capacity: up to 2,500 lb (1184 kg)
- Max batten length: as required
- Custom speeds and capacities available

Dimensions

PowerLines are built to meet your requirements so dimensions will vary. Contact us for more details.

Safety

- Designed and manufactured by J.R. Clancy, a company with over 130 years of rigging expertise
- "Fail-safe" motor brakes are spring applied and electrically released
- Emergency-stop system meets NFPA 79 (Electrical Standard for Industrial Machinery) with ramped stops for high speed equipment to reduce mechanical shock loads
- Two levels of limit switches with normal travel and over travel switches using separate, redundant circuits for added safety
- Hold-to-run controls require an operator to be present when movement is taking place in conformance with NFPA 79
- Touch safe interior of all electrical enclosures guards to prevent contact with live components, per IEC 204-1 Protection

Options

- Cross groove and slack line detectors
- Load cells
- Position encoder
- Additional limit switches
- Overspeed or electric secondary brake

Control Options

- PowerLine works with the entire range of J.R. Clancy automation consoles or push button controls. It can also interface with any modern control system.

Batten Termination Options

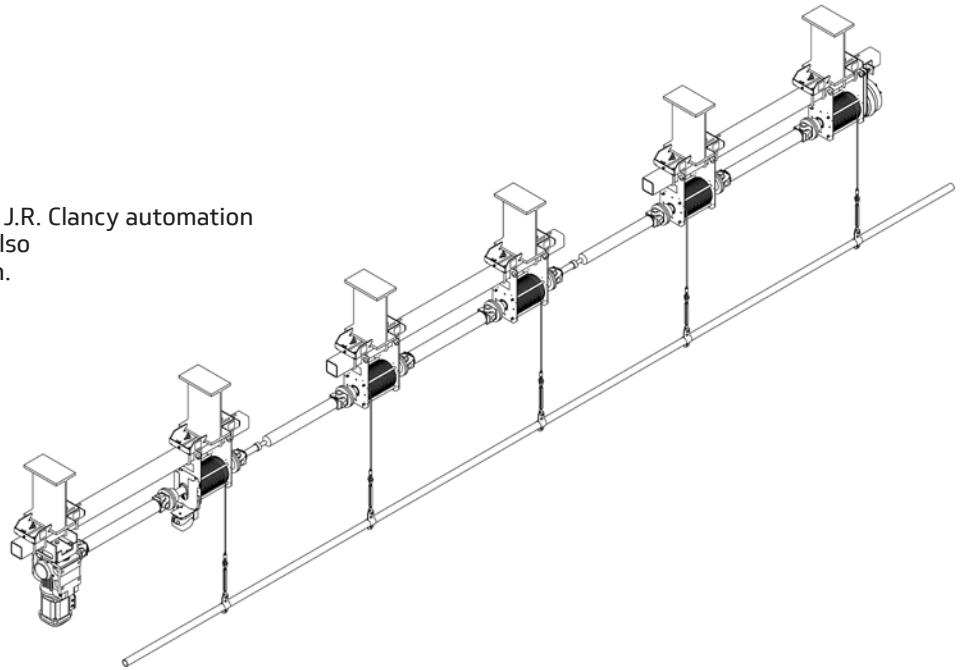
- Trim chain
- Pipe clamp and turnbuckle
- Batten trim plate
- Batten trim clamp

Batten Options

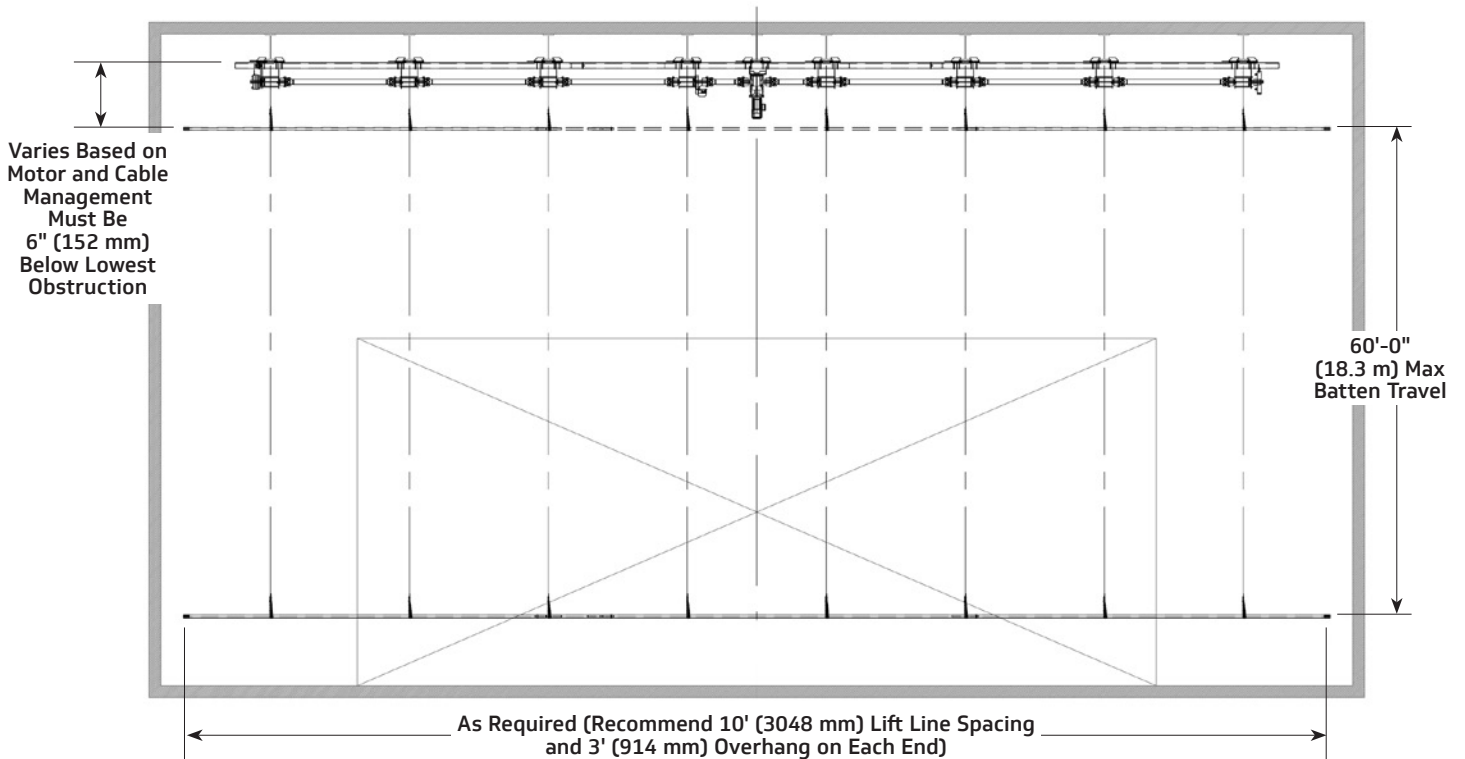
- 1.5" (48 mm) schedule 40 batton
- 1.5" (48 mm) schedule 80 batton
- 1.5" (48 mm) schedule 40 truss batton

Mounting Configurations

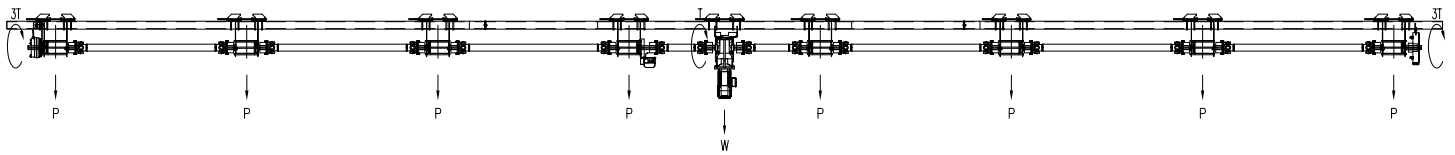
- Motor on one end, brake on the opposite
- Motor in the middle, brake on each end
- Motor on each end



Loading Diagram



Rigging Loads



Loading notes:

P (drum line load) = 0 to 500 lb (225 kg)

T (hoist torque) = see table 1

(Stalling torque) = see table 1

W (hoist weight) = motor assembly (see table 1)
 + backbone (12.5 lb/ft [1.73 kg/m])
 + drive shaft (see table 1)
 + drum assembly (75 lb [34 kg] each)
 + brake (100 lb [45 kg] ea)

1. Set capacity = see table 1
2. Total line load on all drums not to exceed the set capacity
3. Line load on each drum not to exceed drum capacity (p)

TABLE 1 (Based on 3/16" cable)

Part Number	Speed (fpm [m/s])	Set Capacity (lb [kg])	Motor Assembly Weight (lb [kg])	Drive Shaft Wt (lb/ft [kg/m])	Hoist Torque (lb-in [n-m])	Stalling Torque* (lb-in [n-m])
018-PL0210	20 [0.1]	1000 [454]	113 [51]	16 [24]	1408 [159]	7348 [830]
018-PL0213	20 [0.1]	1250 [567]	151 [69]	16 [24]	1760 [199]	17440 [1970]
018-PL0216	20 [0.1]	1600 [726]	162 [74]	28 [42]	2252 [254]	26080 [2947]
018-PL0222	20 [0.1]	2150 [975]	197 [89]	28 [42]	3027 [342]	27160 [3069]
018-PL0225	20 [0.1]	2500 [1184]	187 [85]	30 [45]	3379 [382]	30640 [3462]
018-PL1113	0-110 [0-0.56]	1300 [590]	188 [85]	28 [42]	1830 [207]	17996 [2033]
018-PL1420	0-140 [0-0.71]	1950 [885]	312 [142]	28 [42]	2745 [310]	22533 [2546]
018-PL2423	0-240 [0-1.2]	2300 [1043]	538 [244]	28 [42]	3238 [366]	29374 [3319]

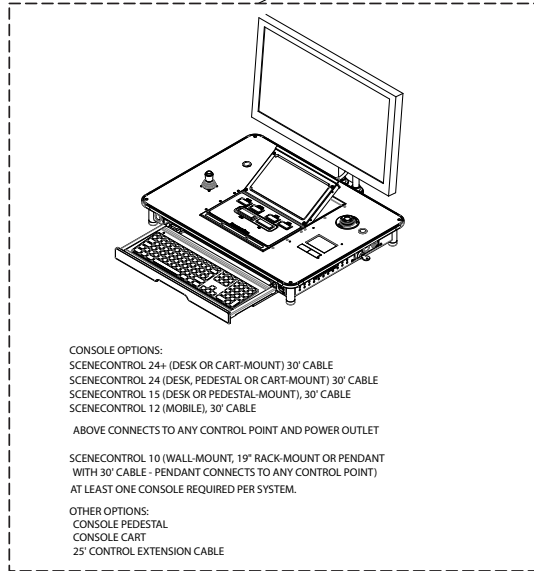
The values in this table are for the configuration shown. For other configurations the values may be different. Please contact a J.R. Clancy representative for more information on your configuration.

*Note: Stalling Torque values are only valid for 208V and 480V. Call for 380V data.

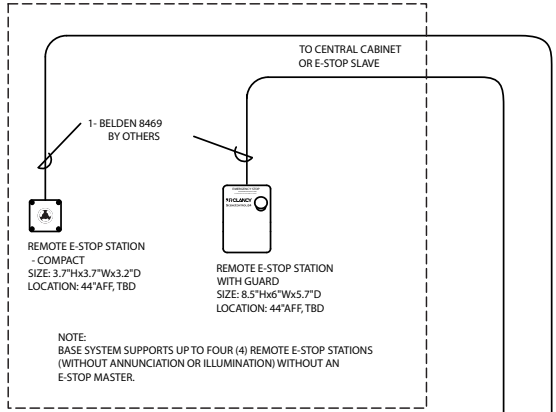
PowerLine Riser — Typical

Power and Wiring Information: PowerLine is available for virtually any 3-phase voltage worldwide. Control wiring is dependent on your control system.

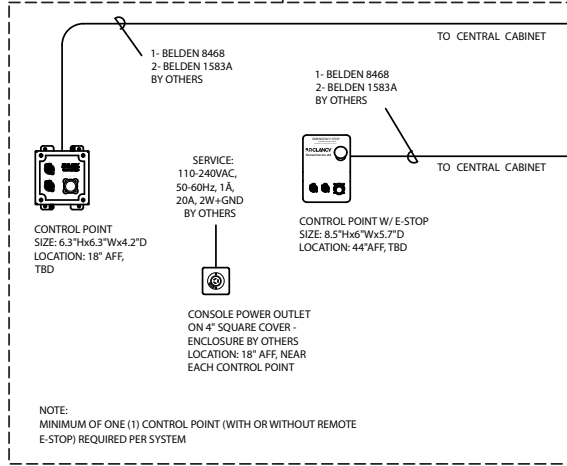
CONTROL CONSOLE OPTIONS



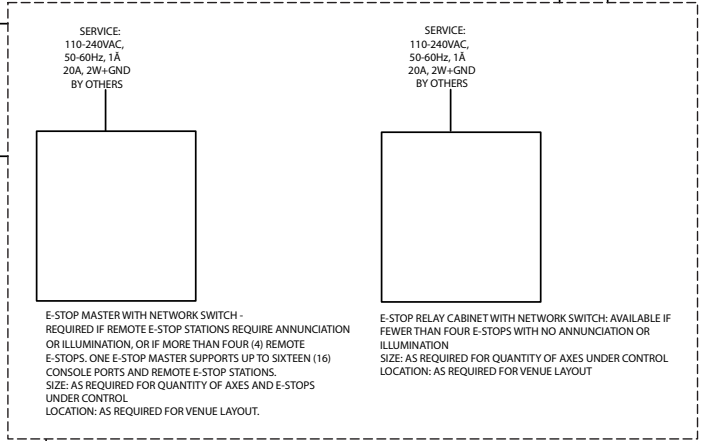
E-STOP STATIONS



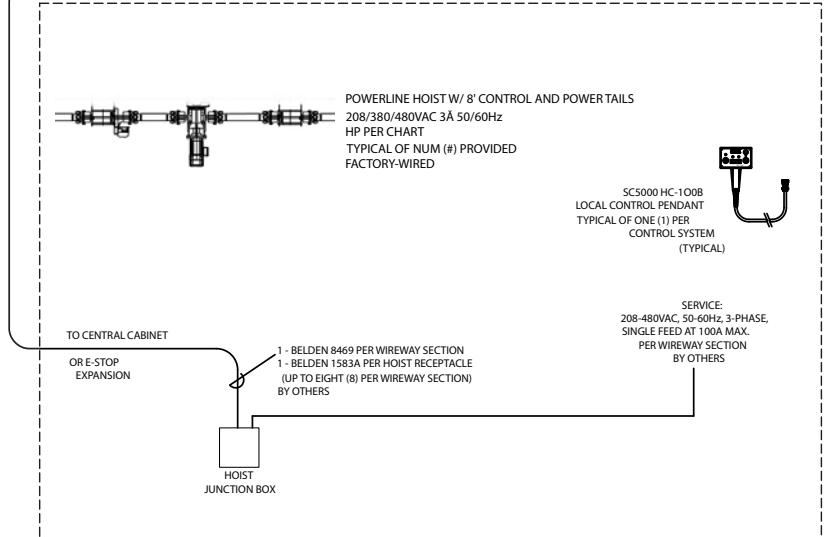
CONTROL POINT(S)



CENTRAL CABINET OPTIONS: ONE (1) REQUIRED



POWERLINE HOIST SYSTEM



PowerLine Electrical Requirements				
Model	HP	Current Draw		
		280 - 240 V	440 - 480 V	380 V 21 fpm (0.107 m/s)
018-PL0210	0.75 (.55 kW)	3.5 A	1.8 A	1.5 A
018-PL0213	1.5 (1.12 kW)	6.6 A	3.5 A	2.9 A
018-PL0216	1.5 (1.12 kW)	6.6 A	3.5 A	2.9 A
018-PL0222	2 (1.5 kW)	7.5 A	3.9 A	3.3 A
018-PL0224	2 (1.5 kW)	7.5 A	3.9 A	3.3 A
018-PL1113	5 (3.73 kW)	16.7 A	8.7 A	7.3 A
018-PL1420	10 (7.5 kW)	30.8 A	16 A	13.4 A
018-PL2423	20 (15 kW)	59.4 A	30.9 A	25.8 A

Warranty and Support

Three-Year Warranty against defects in materials or workmanship is provided on all J.R. Clancy equipment. Our warranty is contingent on operation by trained personnel and an annual equipment inspection of a J.R. Clancy authorized technician. 24/7 factory technical support with additional service and assistance provided by a worldwide network of J.R. Clancy authorized dealers.

Inspection and maintenance are available through J.R. Clancy's T.I.M.[®] (Training, Inspection, Maintenance) Program.

Ordering Information

PowerLine is available in several standard configurations or can be customized to your needs. Contact J.R. Clancy to discuss optimal configurations or custom solutions.

Models

Model Number	Hoist Speed	Hoist Capacity
018-PL0210	20 fpm (0.1 m/s)	1,000 lb (454 kg)
018-PL0213	20 fpm (0.1 m/s)	1,250 lb (567 kg)
018-PL0216	20 fpm (0.1 m/s)	1,600 lb (726 kg)
018-PL0222	20 fpm (0.1 m/s)	2,150 lb (975 kg)
018-PL0225	20 fpm (0.1 m/s)	2,500 lb (1184 kg)
018-PL1113	0–110 fpm (0–0.56 m/s)	1,300 lb (590 kg)
018-PL1420	0–140 fpm (0–0.71 m/s)	1,950 lb (885 kg)
018-PL2423	0–240 fpm (0–1.2 m/s)	2,300 lb (1043 kg)

Custom speeds, capacities and options available.

Cable and Drum Options

Options	Lift Line	Drum Diameter	Max. Load/Line
Option 1	1/4" (6.3vmm)	7-1/2" (190 mm)	750 lb (341 kg)
Option 2	3/16" (4.8vmm)	5-1/2" (140 mm)	500 lb (227 kg)

Additional Information

For more information on PowerLine, visit jrclancy.com to access:

- Detailed structural loading
- Specifications
- Electrical risers diagrams



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