

**PORTABLE DAVIT CRANE** 











(507) 454-2996

# **COMMANDER® 5PT20**

PORTABLE DAVIT CRANE

#### **HEAVY LIFTING POWER**

#### with Enhanced Flexibility and Portability

The 5PT20 Commander 2000 portable davit crane (up to 2,000 pounds) is one of Thern's largest capacity, portable davit cranes. A maximum hook height (with pedestal base) of 97 inches allows it to hoist large loads and reach over walls, rails, and obstacles. It is designed to lift, lower, and rotate loads 360 degrees, easily and smoothly. Add an optional rotation bearing and 12-position lock system to ease movement and stabilize unloading. Easy disassembly and reassembly with quick-release hardware and pins maximize portability. A variety of base options, manual or power operation, and telescoping boom with adjustable boom angles makes it perfect for water/wastewater, manufacturing, marine, construction, and oil and gas applications.



#### **Enhanced Portability**

- Disassembles and reassembles easily, using quick-release hardware and pins for quick transport to storage or bases at other work sites—no tools required
- Move your crane to another location while keeping the wire rope attached to the load using the quick-disconnect feature. Insert the swaged-ball end of the wire rope into the keyhole slot on the gusset of the pedestal base or into an optional wire rope keeper or cable spool



- Heavy-duty Nylatron® bushing at base enhances smooth, 360-degree rotation under load for precise load placement. Optional rotation bearing and lock ease movement and stabilize unloading
- Innovative rotation handle design does not interfere with boom angle adjustment for easier operation
- Telescoping boom and adjustable boom angles allow for precise reach and height positioning
- Choose from manual, drill-drive, or powered winch (electric, pneumatic, or hydraulic motors) operation to accommodate a variety of light or heavy loads and speeds. DC motors and various voltage AC motors available



#### STANDARD CONFIGURATIONS

|            | IMPERIAL/METRIC   |                       |
|------------|---|-----------------------|
| Series     | Description   | Up To<br>Capacity     |
| 5PT20-M1   | Powder-coat crane with M4312PB-K spur gear hand winch           | 2,000 lbs /<br>907 kg |
| 5PT20G-M1  | Galvanized crane with M4312PB-K spur gear hand winch            | 2,000 lbs /<br>907 kg |
| 5PT20-M2   | Powder-coat crane with 4WM2-K worm gear hand winch              | 2,000 lbs /<br>907 kg |
| 5PT20G-M2  | Galvanized crane with 4WM2-K worm gear hand winch               | 2,000 lbs /<br>907 kg |
| 5PT20S-M3  | Stainless-steel crane with M4312PBSS-K spur gear hand winch     | 2,000 lbs /<br>907 kg |
| 5PT20-E2   | Powder-coat crane with 4WP2-K electric winch                    | 2,000 lbs /<br>907 kg |
| 5PT20S-E2X | Stainless-steel crane with gray-epoxy 4WP2EGRA-K electric winch | 2,000 lbs /<br>907 kg |

## Durable Construction & Finish

- Heavy-duty, welded structural steel pipe and tubing limit deflection and meet/exceed ASTM standards
- Corrosion-resistant, powder-coated frame, mast cap, and stainless-steel fasteners resist the elements for long service life.
- Galvanized, epoxy, and 304 or 316 stainless-steel finishes are available for corrosive environments

#### Flexible Configurations

- A variety of base mounting options, including pedestal, flush, and wall-mount, as well as wheel-base, help meet unique lifting needs
- A quick-mount winch bracket is standard (no tools required) and accommodates several Thern winches
- Optional base extension provides additional height without affecting the crane's load rating. Ideal for wall- or flush-mount installations to increase crane height for obstacle clearance or other needs. Creates 15 inches (381 mm) of additional height



NOTICE: These products are not for lifing people or things over people.

Refer to technical pages for detailed performance information.

### **TECHNICAL DRAWINGS & SPECIFICATIONS**

# COMMANDER® 2000 PORTABLE DAVIT CRANE

#### **CONFIGURATIONS**

| Model        | Description  | Approx. | Ship Wt. |
|--------------|--|---------|----------|
|              |  | (lb)    | (kg)     |
| Popular Conf | igurations and the state of the |         |          |
| 5PT20-M1     | up to 2,000 lb capacity with M4312PB-K spur gear hand winch—powder-coat crane  | 241     | 109      |
| 5PT20G-M1    | up to 2,000 lb capacity with M4312PB-K spur gear hand winch—galvanized crane   | 241     | 109      |
| 5PT20-M2     | up to 2,000 lb capacity with 4WM2-K worm gear hand winch—powder-coat crane   | 255     | 116      |
| 5PT20G-M2    | up to 2,000 lb capacity with 4WM2-K worm gear hand winch—galvanized crane  | 255     | 116      |
| 5PT20S-M3    | up to 2,000 lb capacity with M4312PBSS-K spur gear hand winch—stainless-steel crane  | 241     | 109      |
| 5PT20-E2     | up to 2,000 lb capacity with 4WP2-K electric winch—powder-coat crane   | 298     | 135      |
| Crane Only   |  |         |          |
| 5PT20        | up to 2,000 lb capacity—base model—powder-coat finish  | 213     | 97       |
| 5PT20G       | up to 2,000 lb capacity—base model—galvanized finish   | 213     | 97       |
| 5PT20S       | up to 2,000 lb capacity—base model—304 stainless-steel finish  | 213     | 97       |
| 5PT20S316    | up to 2,000 lb capacity—base model—316 stainless-steel finish  | 213     | 97       |
| 5PT20X       | up to 2,000 lb capacity—base model—gray-epoxy finish   | 213     | 97       |
| Winch Only   |  |         |          |
| M1           | M4312PB-K—spur gear hand winch only—zinc plated  | 28      | 13       |
| M2           | 4WM2-K—worm gear hand winch only—powder coat   | 42      | 19       |
| M2X          | 4WM2EGRA-K—worm gear hand winch only—gray epoxy  | 42      | 19       |
| M3           | M4312PBSS-K—spur gear hand winch only—stainless steel  | 28      | 13       |
| E2           | 4WP2-K electric winch—115/1/60 VAC with 6 ft pendant control—enamel  | 85      | 39       |
| E2X          | 4WP2EGRA-K electric winch—115/1/60 VAC with 6 ft pendant control—gray epoxy  | 85      | 39       |
| E3X          | 3WG4B-KX electric winch - 115/1/60 VAC with 6 ft pendant control - gray-epoxy  | 85      | 39       |
| E4           | 4777-K electric winch—115/1/60 VAC with 6 ft pendant control—enamel  | 110     | 50       |
| E4X          | 4777EGRA-K electric winch—115/1/60 VAC with 6 ft pendant control—gray epoxy  | 110     | 50       |
| E4DC         | 4777DC-K electric winch—12 volt DC with 10 ft pendant control—enamel   | 105     | 48       |
| E4DCX        | 4777DC-K electric winch—12 volt DC with 10 ft pendant control—gray epoxy   | 105     | 48       |
|              |  |         |          |

#### Independent Bases—sold separately

#### Pedestal, socket, or wall-mount style.

Wheel base for floor crane operation. Base legs adjust in length and width.

**IMPORTANT:** Base installation is the customer's responsibility. Thern recommends consulting a civil engineer or other qualified professional. Contact Thern for installation guidelines.



| Finish                     | Pedestal          | Flush             | Wall              | Wheel               | Extension         |
|----------------------------|-------------------|-------------------|-------------------|---------------------|-------------------|
| Powder Coat Paint          | 5BP20             | 5BF20             | 5BW20             | 5BR20               | 5BE20-15          |
| Galvanized                 | 5BP20G            | 5BF20G            | 5BW20G            | _                   | 5BE20-15G         |
| 304 Stainless Steel        | 5BP20S            | 5BF20S            | 5BW20S            | _                   | 5BE20-15S         |
| 316 Stainless Steel        | 5BP20S316         | 5BF20S316         | 5BW20S316         | _                   | 5BE20-15S316      |
| Epoxy Paint                | 5BP20X            | 5BF20X            | 5BW20X            | 5BR20X              | 5BE20-15X         |
| Approximate<br>Ship Weight | 66 lbs<br>(30 kg) | 57 lbs<br>(26 kg) | 64 lbs<br>(30 kg) | 375 lbs<br>(171 kg) | 53 lbs<br>(25 kg) |

#### Wire Rope Assemblies—sold separately

**Galvanized or stainless steel** wire rope assemblies with swaged-ball fitting to work with the quick-disconnect anchor on the winch. 316 stainless also available. Please contact Thern.

| Wire      |            | Galva<br>Aircraf      |                        | 304 Stainless Steel<br>Wire Rope |                        |  |  |
|-----------|------------|-----------------------|------------------------|----------------------------------|------------------------|--|--|
| Ro<br>Len | pe<br>igth | 1/4" Dia.<br>(6.4 mm) | 5/16" Dia.<br>(7.9 mm) | 1/4" Dia.<br>(6.4 mm)            | 5/16" Dia.<br>(7.9 mm) |  |  |
| (ft)      | (m)        | Model No.             | Model No.              | Model No.                        | Model No.              |  |  |
| 20        | 6.0        | WA25-20NS             | WA31-20DS              | WS25-20NS                        | WS31-20DS              |  |  |
| 28        | 8.5        | WA25-28NS             | WA31-28DS              | WS25-28NS                        | WS31-28DS              |  |  |
| 36        | 10.9       | WA25-36NS             | WA31-36DS              | WS25-36NS                        | WS31-36DS              |  |  |
| 45        | 13.7       | WA25-45NS             | WA31-45DS              | WS25-45NS                        | WS31-45DS              |  |  |
| 60        | 18.2       | WA25-60NS             | WA31-60DS              | WS25-60NS                        | WS31-60DS              |  |  |
| 75        | 22.8       | WA25-75NS             | _                      | WS25-75NS                        | _                      |  |  |

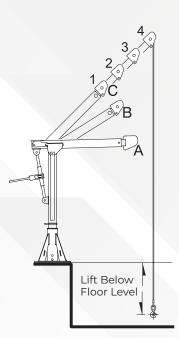




#### **PERFORMANCE**

#### Commander 2000 **Lift Below Floor<sup>2</sup> Level**

| Lift Below Wire Rope<br>Floor <sup>1</sup> Diameter |         |       |         |       | re Rope Winch Configurations<br>ength³ Maximum Winch Rating |      |      |        |      |       |      |       |      |       |      |       |      |
|---|---------|-------|---------|-------|---|------|------|--------|------|-------|------|-------|------|-------|------|-------|------|
| Minimu  | um (C4) | Maxim | um (C1) |       |   |      |      | $\sim$ | 17   | М     | 2    | М     | 3    | E     | 2    | E.    | 4    |
| (ft)  | (m)     | (ft)  | (m)     | (in)  | (mm)  | (ft) | (m)  | (lbs)  | (kg) | (lbs) | (kg) | (lbs) | (kg) | (lbs) | (kg) | (lbs) | (kg) |
| 0   | 0.0     | 5     | 1.5     | 1/4"  | 6   | 20   | 6.0  | 2,000  | 907  | 2,000 | 907  | 2,000 | 907  | 2,000 | 907  | 2,000 | 907  |
| 8   | 2.4     | 13    | 3.9     | 1/4"  | 6   | 28   | 8.5  | 1,800  | 816  | 1,700 | 771  | 1,800 | 816  | 1,700 | 771  | 1,800 | 816  |
| 16  | 4.8     | 21    | 6.4     | 1/4"  | 6   | 36   | 10.9 | 1,800  | 816  | 1,700 | 771  | 1,800 | 816  | 1,700 | 771  | 1,600 | 725  |
| 25  | 7.6     | 30    | 9.1     | 7/4"  | 6   | 45   | 13.7 | 1,600  | 725  | 1,500 | 680  | 1,600 | 725  | 1,500 | 680  | 1,600 | 725  |
| 40  | 12.1    | 45    | 13.7    | 1/4"  | 6   | 60   | 18.2 | 1,400  | 635  | 1,300 | 589  | 1,400 | 635  | 1,300 | 589  | 1,400 | 635  |
| 55  | 16.7    | 60    | 18.2    | 7/4"  | 6   | 75   | 22.8 | _      | _    | 1,300 | 589  | _     | _    | 1,300 | 589  | 1,300 | 589  |
| 70  | 21.3    | 75    | 22.8    | 1/4"  | 6   | 90   | 27.4 | _      | _    | _     | _    | _     | _    | _     | _    | 1,300 | 589  |
| 100   | 30.4    | 105   | 32.0    | 1/4"  | 6   | 120  | 36.5 | _      | _    | _     | _    | _     | _    | _     | _    | _     | _    |
| 0   | 0.0     | 5     | 1.5     | 5/16" | 8   | 20   | 6.0  | 1,900  | 861  | 1,900 | 861  | 1,900 | 861  | 1,900 | 861  | 1,900 | 861  |
| 8   | 2.4     | 13    | 3.9     | 5/16" | 8   | 28   | 8.5  | 1,600  | 725  | 1,600 | 725  | 1,600 | 725  | 1,600 | 725  | 1,700 | 771  |
| 16  | 4.8     | 21    | 6.4     | 5/16" | 8   | 36   | 10.9 | 1,400  | 635  | 1,400 | 635  | 1,400 | 635  | 1,400 | 635  | 1,500 | 680  |
| 25  | 7.6     | 30    | 9.1     | 5/16" | 8   | 45   | 13.7 | 1,300  | 589  | 1,400 | 635  | 1,300 | 589  | 1,400 | 635  | 1,500 | 680  |
| 40  | 12.1    | 45    | 13.7    | 5/16" | 8   | 60   | 18.2 | _      | _    | _     | _    | _     | _    | _     | _    | 1,300 | 589  |
| 55  | 16.7    | 60    | 18.2    | 5/16" | 8   | 75   | 22.8 | _      | _    | _     | _    | _     | _    | _     | _    | _     | _    |
| 70  | 21.3    | 75    | 22.8    | 5/16" | 8   | 90   | 27.4 | _      | _    | _ \   | _    | _     | _    | _     | _    | _     | _    |
| 100   | 30.4    | 105   | 32.0    | 5/16" | 8   | 120  | 36.5 | _      | _    | _     | _    | _     | _    | _     | _    | _     | _    |
|   |         |       |         |       |   |      |      |        |      |       |      |       |      |       |      |       |      |



 $^1$ Lift below floor level varies depending on boom position and base configuration. For longer lifts, please contact factory.  $^2$ Performance characteristics are for standard products referred to in this manual. Non-standard products may vary

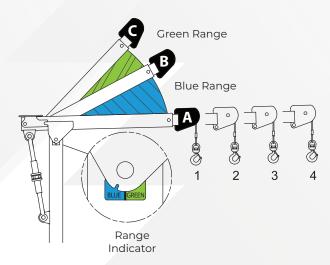
from the original design. Contact Thern, Inc. for this information.

<sup>3</sup> Wire rope assemblies include a hook and a swaged-ball fitting to work with quick-disconnect anchor on winches, and 316SS wire rope is also available. Please contact the factory.



#### **Commander 2000** Performance Ratings<sup>2</sup>

| _           |          |       |        |
|-------------|----------|-------|--------|
|             | Boom     | Load  | Rating |
|             | Position | (lb)  | (kg)   |
| Щ           | A-1      | 2,000 | 907    |
| RANGE       | A-2      | 1,600 | 725    |
| 2           | A-3      | 1,300 | 589    |
| LUE         | A-4      | 1,100 | 498    |
| 面           | B-1      | 2,000 | 907    |
|             | B-2      | 1,900 | 861    |
| S           | B-3      | 1,500 | 680    |
| GREEN RANGE | B-4      | 1,300 | 589    |
| Z           | C-1      | 2,000 | 907    |
| Ä           | C-2      | 1,900 | 861    |
| R           | C-3      | 1,500 | 680    |
|             | C-4      | 1,300 | 589    |

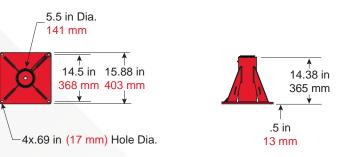


#### **Commander 2000 with Pedestal Base** Reach & Height Above Floor<sup>1</sup>

| Boom Position | Hook | Reach | Hook | Height |
|---------------|------|-------|------|--------|
|               | (in) | (mm)  | (in) | (mm)   |
| A-1           | 46   | 1,168 | 43   | 1,092  |
| A-2           | 58   | 1,473 | 43   | 1,092  |
| A-3           | 70   | 1,778 | 43   | 1,092  |
| A-4           | 82   | 2,082 | 43   | 1,092  |
| B-1           | 37   | 939   | 61   | 1,549  |
| B-2           | 48   | 1,219 | 67   | 1,701  |
| B-3           | 58   | 1,473 | 72   | 1,828  |
| B-4           | 69   | 1,752 | 78   | 1,981  |
| C-1           | 28   | 711   | 71   | 1,803  |
| C-2           | 36   | 914   | 80   | 2,032  |
| C-3           | 45   | 1,143 | 88   | 2,235  |
| C-4           | 53   | 1,346 | 97   | 2,463  |
|               |      |       |      |        |

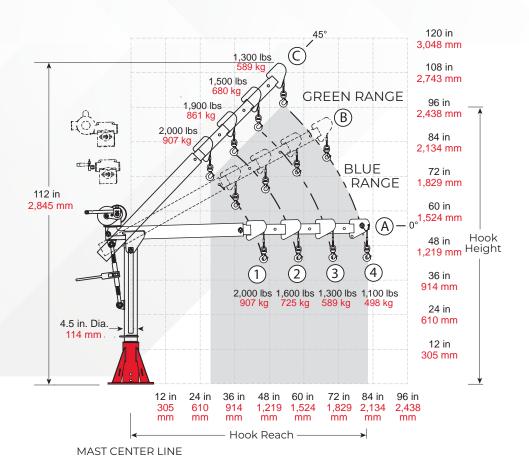
<sup>1</sup>Performance characteristics are for standard products. Non-standard products may vary from the original design. Contact Thern, Inc. for this

Dimensions are for reference only and subject to change without notice.



#### **Commander 2000 Pedestal Base**

5BP20S 5BP20G 5BP20S316

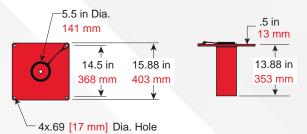


#### Commander 2000 with Flush- or Wall-Mount Base Reach & Height Above Floor<sup>1</sup>

| Boom Position | Hook | Reach | Hook | Height |
|---------------|------|-------|------|--------|
|               | (in) | (mm)  | (in) | (mm)   |
| A-1           | 46   | 1,168 | 29   | 736    |
| A-2           | 58   | 1,473 | 29   | 736    |
| A-3           | 70   | 1,778 | 29   | 736    |
| A-4           | 82   | 2,082 | 29   | 736    |
| B-1           | 37   | 939   | 47   | 1,193  |
| B-2           | 48   | 1,219 | 53   | 1,346  |
| B-3           | 58   | 1,473 | 58   | 1,473  |
| B-4           | 69   | 1,752 | 64   | 1,625  |
| C-1           | 28   | 711   | 57   | 1,447  |
| C-2           | 36   | 914   | 66   | 1,676  |
| C-3           | 45   | 1,143 | 74   | 1,879  |
| C-4           | 53   | 1,346 | 83   | 2,108  |
|               |      |       |      |        |

<sup>1</sup>Performance characteristics are for standard products. Non-standard products may vary from the original design. Contact Thern, Inc. for this information.

Dimensions are for reference only and subject to change without notice.



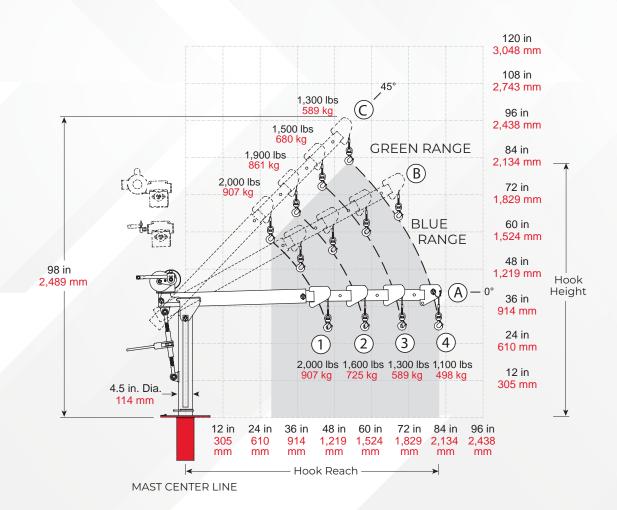
#### **Commander 2000 Flush-Mount Base**

5BF20 5BF20G 5BF20S 5BF20S316 5BF20X



#### Commander 2000 Wall-Mount Base

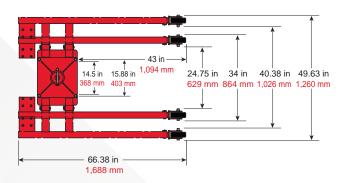
5BW20 5BW20G 5BW20S 5BW20S316 5BW20X



## Commander 2000 on Wheel Base Reach & Height Above Floor

| Boom Position | Hook | Reach | Hook | Height |
|---------------|------|-------|------|--------|
|               | (in) | (mm)  | (in) | (mm)   |
| A-1           | 46   | 1,168 | 50   | 1,270  |
| A-2           | 58   | 1,473 | 50   | 1,270  |
| A-3           | 70   | 1,778 | 50   | 1,270  |
| A-4           | 82   | 2,082 | 50   | 1,270  |
| B-1           | 37   | 939   | 68   | 1,727  |
| B-2           | 48   | 1,219 | 74   | 1,879  |
| B-3           | 58   | 1,473 | 79   | 2,006  |
| B-4           | 69   | 1,752 | 85   | 2,159  |
| C-1           | 28   | 711   | 78   | 1,981  |
| C-2           | 36   | 914   | 87   | 2,209  |
| C-3           | 45   | 1,143 | 95   | 2,413  |
| C-4           | 53   | 1,346 | 104  | 2,641  |
|               |      |       |      |        |

Dimensions are for reference only and subject to change without notice.

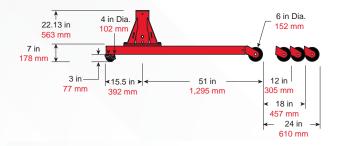


#### **Commander 2000 Wheel Base**

5BR20 5BR20X

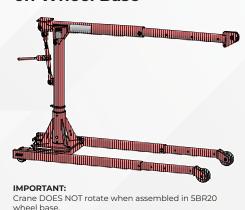
| Boom Position | Leg Pos. 1 |            | Leg Pos. 2 |         | Leg Pos. 3 |        | Leg Pos. 4 |      |
|---------------|------------|------------|------------|---------|------------|--------|------------|------|
|               | (lb)       | (kg)       | (lb)       | (kg)    | (lb)       | (kg)   | (lb)       | (kg) |
| A/B/C-1       |            |            |            |         |            |        |            |      |
| A/B/C-2       | DO NO      | OT USE     |            | SEE LOA | D RATII    | NGS ON | CRANE      |      |
| A/B/C-3       | DO NO      | DO NOT USE |            |         |            |        |            |      |
| A/B/C-4       | DO NO      | OT USE     | DO NO      | OT USE  |            |        |            |      |
|               |            |            |            |         |            |        |            |      |

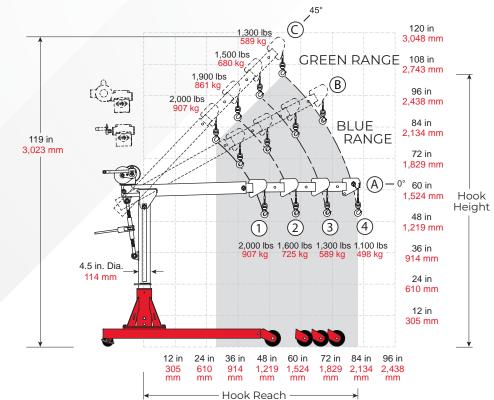
**Commander 2000 Wheel Base Load Ratings** 



Dimensions are for reference only and subject to change without notice.

## Commander 2000 on Wheel Base





MAST CENTER LINE

## CRANE **OPTIONS & ACCESSORIES**







|        | Rotational Lock   |
|--------|---|
| Model  | Description   |
| 5P5LCK | For pedestal, wall, and flush-mount bases, 316 stainless steal—available for use 5PA5, 5PF5, and 5PT5 |







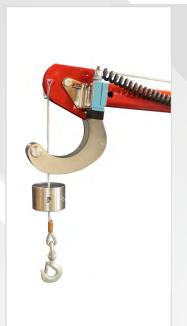




|  | Roller Ball Bearing for 5PT10 Series Crane  |  |  |  |  |  |  |
|--|---|--|--|--|--|--|--|
| Model  | Description   |  |  |  |  |  |  |
| 5PT10BRG<br>5PT10BRG-S<br>5PT10BRG-S316<br>5PT10BRG-SS<br>5PT10BRG-SS316 | Red electrostatic, powder-coat paint finish 304 stainless-steel, electro-polished finish for added protection against corrosion Stainless-steel, electro-polished finish for maximum protection against corrosion 304 stainless steel, for use with stainless-steel base only 316 stainless steel, for use with stainless-steel base only |  |  |  |  |  |  |



|                | Roller Ball Bearing for 5P120 Series Crane  |
|----------------|---|
| Model          | Description   |
| 5PT20BRG       | Red electrostatic, powder-coat paint finish   |
| 5PT20BRG-S     | 304 stainless-steel, electro-polished finish for added protection against corrosion |
| 5PT20BRG-S316  | Stainless-steel, electro-polished finish for maximum protection against corrosion   |
| 5PT20BRG-SS    | 304 stainless steel, for use with stainless-steel base only                         |
| 5PT20BRG-SS316 | 316 stainless steel, for use with stainless-steel base only                         |



## **Limit Switch Ready Winch Options**

Model Description

NOTE: Limit switch winch option requires purchase of Limit Switch and Headache Ball (sold separately) For 5PF5, 5PA5, 5PA10, 5PT5, 5PT10, 5PT20 Series Cranes (sold separately)

E2L (5PA5, 5PA10) 4WP2V-KL electric winch – 115/1/60 VAC with 6 ft pendant control – enamel E2LX (5PA5, 5PA10) 4WP2VEGRA-KL electric winch - 115/1/60 VAC with 6 ft pendant control - epoxy gray E4L 4777-KL electric winch - 115/1/60 VAC with 6 ft pendant control - enamel

E4LX 4777EGRA-KL electric winch – 115/1/60 VAC with 6 ft pendant control – epoxy gray E4DCL 4777DC-KL electric winch – 12 volt DC with 10 ft pendant control – enamel 4777DCEGRA-KL electric winch - 12 volt DC with 10 ft pendant control - epoxy gray E4DCLX

For 5FT20 Series Crane Only (sold separately)

4WP2-KL electric winch – 115/1/60 VAC with 6 ft pendant control – enamel E2L E2LX 4WP2EGRA-KL electric winch - 115/1/60 VAC with 6 ft pendant control - epoxy gray E4L 4771-KL electric winch – 115/1/60 VAC with 6 ft pendant control – enamel finish E4LX 4771EGRA-KL electric winch – 115/1/60 VAC with 6 ft pendant control – gray-epoxy finish E4DCL E4DCL 4771DC-KL electric winch – 12 volt DC with 10 ft pendant control – enamel finish E4DCLX 4771DCEGRA-KL electric winch - 12 volt DC with 10 ft pendant control - gray-epoxy finish

For 5PT30, 5FT25, 5FT40 Series Crane Only (sold separately)

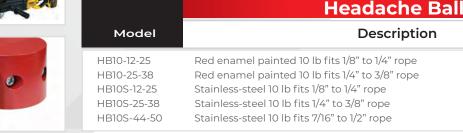
E2L 3WG4B-KL electric winch - 115/1/160 VAC with 6 ft pendant control – enamel finish E2LX 3WG4BEGRA-KL electric winch - 115/1/160 VAC with 6 ft pendant control - epoxy gray finish E2TL 3WG4BMT-K electric winch - 115/1/160 VAC with 6 ft pendant control - enamel finish (Unavailable for use with 5FT40)

3WG4MTX-KL electric winch - 115/1/160 VAC with 6 ft pendant control – epoxy gray finish E2TLX











|                                 | Base Extension  |
|---------------------------------|---|
| Model                           | Description   |
| 5BE5-15<br>5BE10-15<br>5BE20-15 | Available on 5PF5, 5PT5, 5PT10, and 5PT20 with powder-coat, galvanized, 304 & 316 stainless-steel, and epoxy finishes |



Winona, MN USA | (507) 454-2996 | THERN.COM





## **Thern, Incorporated**World Headquarters

5712 Industrial Park Road Winona, MN USA Toll Free: 1-800-843-7648 Phone: 1-507-454-2996 www.thern.com

**Thern Europe** Bedrijvenpark Twente 454e 7602 KM Almelo The Netherlands Phone: +31-546-898-380 europe@thern.com