

572 Series Specifications



Section 11000 – Equipment (or 14600 – Hoists and Cranes)

Part 1 – General

Experience: manufacturer shall have a minimum of 5 years experience producing substantially similar equipment.

Quality Assurance: manufacturer shall be registered ISO 9001:2000 compliant with an independent certification agency approved by the International Organization for Standardization.

Part 2 – Products

2.1 Davit Crane

Manufacturer: davit crane shall be as manufactured by Thern, Inc., Series 572.

Design Factor: designed with an ultimate design factor greater than 3:1 for all components including the lifting winch and base.

Lift Capacity: davit crane shall have a variable lift capacity based on boom position, to vary between 1700 pounds with the boom horizontal and 2200 pounds with the boom at 45 degrees from vertical.

Hook Reach: boom shall have a maximum hook reach of at least 106 inches measured from mast center to hook center when the boom is horizontal.

Hook Height: hook height shall be adjustable by moving the boom up or down between horizontal and 45 degrees from vertical, with a minimum of 76 inches between the lowest position and the highest position.

Boom Angle: boom angle shall be fixed or adjustable with a hand operated screw jack acting to raise or lower the boom between horizontal and 45 degrees from vertical.

Boom Sheave: wire rope shall pass over a sheave at the end of the boom. Sheave shall have a needle bearing.

Clearance: minimum height of the boom shall be 68 inches between mounting surface and the underside of the boom.

Rotation: mast and boom shall rotate 360 degrees in the base on roller and tapered roller bearings, with a rotational handle attached to mast to facilitate rotation.

Fastening Pins: crane components shall be fastened together using solid steel pins.

Winch Location: lifting winches shall be located such that the center point of the drive shaft is no more than 18 inches in front of the centerline of the mast.

Nametag: davit crane shall be labeled with a non-corrosive metal identification plate labeled or imprinted with the manufacturer's name, model number, serial number, capacity rating, and other essential information.

2.2 Crane Finish

FOR STANDARD MODELS

Material: crane boom, mast and base shall be fabricated from steel meeting ASTM standards.

Finish: crane boom, mast and base shall have a corrosion resistant finish.

FOR EPOXY FINISH

Finish: crane shall have a 3 step epoxy finish consisting of a primer, an epoxy coat, and a top coat of polyurethane.

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2.3 Lifting Winch

FOR M452B-K OR CRANE MODELS ENDING IN M1

Lifting Winch: winch shall have machine cut gears, an adjustable handle that mounts securely to the drive shaft, bronze and radial ball bearings, and a positive load holding Weston style brake able to stop and hold the load automatically if the winch handle is released.

FOR 4771-K FOR CRANE MODELS ENDING IN E3

Lifting Winch: winch shall have machine cut worm gearing operating in an enclosed oil bath, cast aluminum gear case and drum construction, radial ball bearings, pressure plate, and a positive load holding mechanical brake able to stop and hold the load automatically if winch operation is halted.

Motor: motor shall be totally enclosed non-ventilated or fan cooled, with anti-friction bearings and Class B insulation minimum. Motor shall be reversible with torque characteristics suitable for the hoist service and capable of operating at specified loads. Motor at rated frequency shall be capable of operating within 10% of rated motor voltage.

Cable Anchor: lifting winch shall include the Thern Quick Disconnect feature allowing quick attachment and detachment of wire rope equipped with a swaged end fitting.

FOR 4WS3M6-K FOR CRANE MODELS ENDING IN E5

Lifting Winch: winch shall have worm gearing operating in an enclosed oil bath, spur gearing, and a positive load holding spring set electrically released motor brake able to stop and hold the load automatically if winch operation is halted.

Motor: motor shall be totally enclosed non-ventilated or fan cooled, with anti-friction bearings and Class B insulation minimum. Motor shall be reversible with torque characteristics suitable for the hoist service and capable of operating at specified loads. Motor at rated frequency shall be capable of operating within 10% of rated motor voltage.

2.4 Wire Rope

Wire Rope: wire rope construction shall be 7 x 19 type 304 stainless steel cable.

Hooks: latch type hooks shall be used and shall be either non-rotating eye type or swivel type to allow 360 degree rotation under all load conditions. Hooks shall be heat treated drop forged type 304/316 stainless steel.