

HT4 0KX BID SPECIFICATIONS



GENERAL DESCRIPTION

The crane shall be a telescopic mounted service crane with a moment rating of 40,000 ft. lbs. maximum capacity shall be 6,000 lbs. with a two part winch line at 6.25' reach.

DESIGN AND TESTING

The crane shall comply with ANSI B30.5 safety standards and OSHA regulations concerning crawler locomotives and truck cranes (OSHA 29, Part 1910.180).

HYDRAULIC REQUIREMENTS

The shall operate from a hydraulic P.T.O. and pump. The crane shall have an open center system that operates on 2.5 GPM (non-proportional) or 12 GPM (proportional) at 3000 psi. The hydraulic reservoir shall have a 8 gallon (non-proportional) or 25 gallon (proportional) capacity with a 100 mesh suction filter. The hydraulic system shall include a 10 micron return filter.

The valve block shall include valve coils with manual overrides for each function.

TELESCOPIC HEXAGONAL BOOM

The boom shall be fabricated of 1/4" plate steel in a hexagonal shape to minimize boom flex and side to side movement. The boom shall telescope to provide a horizontal reach range of 10ft 0 in. to 20ft 0in. using a hydraulic power extension cylinder with a 10ft. stroke.

POWER EXTENSION

The boom shall be extended by a double-acting hydraulic cylinder with an integral counterbalance valve to prevent the boom from retracting should a loss of hydraulic pressure occur.

The cylinder shall be mounted inside of the boom.

The extension boom shall have bearing pads on 4sides made from UHMW polyethylene to provide low friction and wear rate without the use of lubricants.

The extension speed shall be 24 ft./min. at 2.5 GPM (proportional).

The extension speed shall be 12 ft./min. at 1.25 GPM (non-proportional).

The retract speed shall be controlled by a priority flow control valve (1.25 GPM) to maintain a speed of 10 ft./min.

BOOM ELEVATION

The boom elevation angle range shall extend from 8 degrees below horizontal to 75 degrees above horizontal.

The boom shall be elevated by a double-acting hydraulic cylinder with an integral counterbalance valve to prevent the boom from lowering should a loss of hydraulic pressure occur.

The lowering rate shall be controlled by a priority flow control valve (1.75 GPM) to govern the rate of descent (75 to -8 degrees in 37 seconds).



TITLE	DATE	SECTION
HT40KX BID SPECS	1-15-09	1 OF 3
	SUPERCEDES 6-07-05	27599

SHEAVES

The boom end load hoisting sheave shall be made of polymer composite material and have a pitch diameter of at least 18 times the 3/8 wire rope diameter per ANSI B30.5. Sheave bearings shall be made of maintenance free composite material.

CAPACITY CHARTS

Easy to read capacity charts with indicator arrows showing boom angles and capacities for various reaches shall be located on each side of the boom.

See drawing 22341 (attached) for complete capacity specifications.

HYDRAULIC WINCH

The winch shall have a high efficiency planetary gear reduction with an oil-immersed automatic load holding multi-disk brake and a sprag and shall be driven by an orbital hydraulic motor with a counterbalance valve.

The winch line capacity shall be 3000 lbs. minimum on all layers.

WINCH PERFORMANCE

The nominal winch performance shall be as follows.

Load (lbs.)	Part Line	Lifting Speed at 2.5 gpm (ft/min)	Lifting Speed at 12.0 gpm (ft/min)
0	1	18	60
1500	1	18	60
3000	1	18	60
3000	2	9	30
6000	2	9	30

WINCH DRUM

Winch drum first layer wire rope pitch diameter shall be at least 18 times the 3/8 wire rope diameter per ANSI B30.5.

The winch drum shall be at least 6 in. wide between flanges. The winch drum shall have sufficient capacity to allow 100 ft. of wire rope to be used.

WIRE ROPE

The standard 3/8 in. diameter 7 x 19 galvanized aircraft wire rope shall be 100 ft. long and fitted with a G414-3/8 (or comparable) thimble.

The wire rope shall have a minimum breaking strength of 14,400 lbs. or more than 3-1/2 times the 3000 lb. rated single line capacity per ANSI B30.5. The wire rope shall be outside of the boom so that the wire rope and winch drum are visible to the operator.

SNATCH BLOCK/OVERHAUL WEIGHT

The crane shall be supplied with a snatch block for two part line operation. The snatch block shall allow for quick conversion to an overhaul weight for single part line operation. The snatch block shall

be provided with a 4-1/2 ton carbon steel swivel hook with safety latch. The sheave shall be made of polymer composite material and have a pitch diameter of at least 16 times the 3/8 wire rope diameter per ANSI B30.5. Sheave bearings shall be made of maintenance free composite material.

ROTATION

The hydraulic powered rotation system shall have positive mechanical stops to limit the rotation to a maximum of 400 degrees with a rotation speed 2 RPM.

The rotation drive line shall be self-locking.

The crane housing shall rotate on a sealed turntable style bearing.

REMOTE CONTROL

The crane shall have a remote control pendant with environmentally sealed switches, a switch bat guard, a hook for hanging the pendant, and a 25 ft. cord. The cord shall have a plug so that it can be unplugged from the crane when not in use. The socket that receives the plug shall have the option of being mounted in the service body compartment, the mounting pedestal below the crane or the crane housing. The pendant shall be convenient to hold and operate with one hand.

OVERLOAD SENSING SYSTEM

The crane shall have an overload sensing system that shuts off the winch up, boom down, and boom out functions to prevent excessive overloads when the crane capacity is exceeded. The winch down, boom up, boom in, and rotation function shall remain in operation to get the crane out of the overload condition.

ANTI-TWO BLOCKING

An anti-two-blocking feature shall be provided to prevent damage to the wire rope by disabling the winch up, boom down, and boom out functions (three function shut down).

CRANE BASE

The crane base shall be 16 in. square and provided with 8 holes for 1 in. diameter bolts to spread the load and make it unnecessary to use special high strength bolts.

PAINT SPECIFICATIONS

The crane shall be painted with Imron® 333M/42P High Solids Polyurethane Enamel (Venturo Gray).

WARRANTY

The manufacturer shall warranty the crane for one year from the date of original installation.

Specifications Subject to Change Without Notice



TITLE	HT40KX BID SPECS	DATE	1-15-09	SECTION	3 OF 3
	-	SUPERCEDES	6-7-05		27599