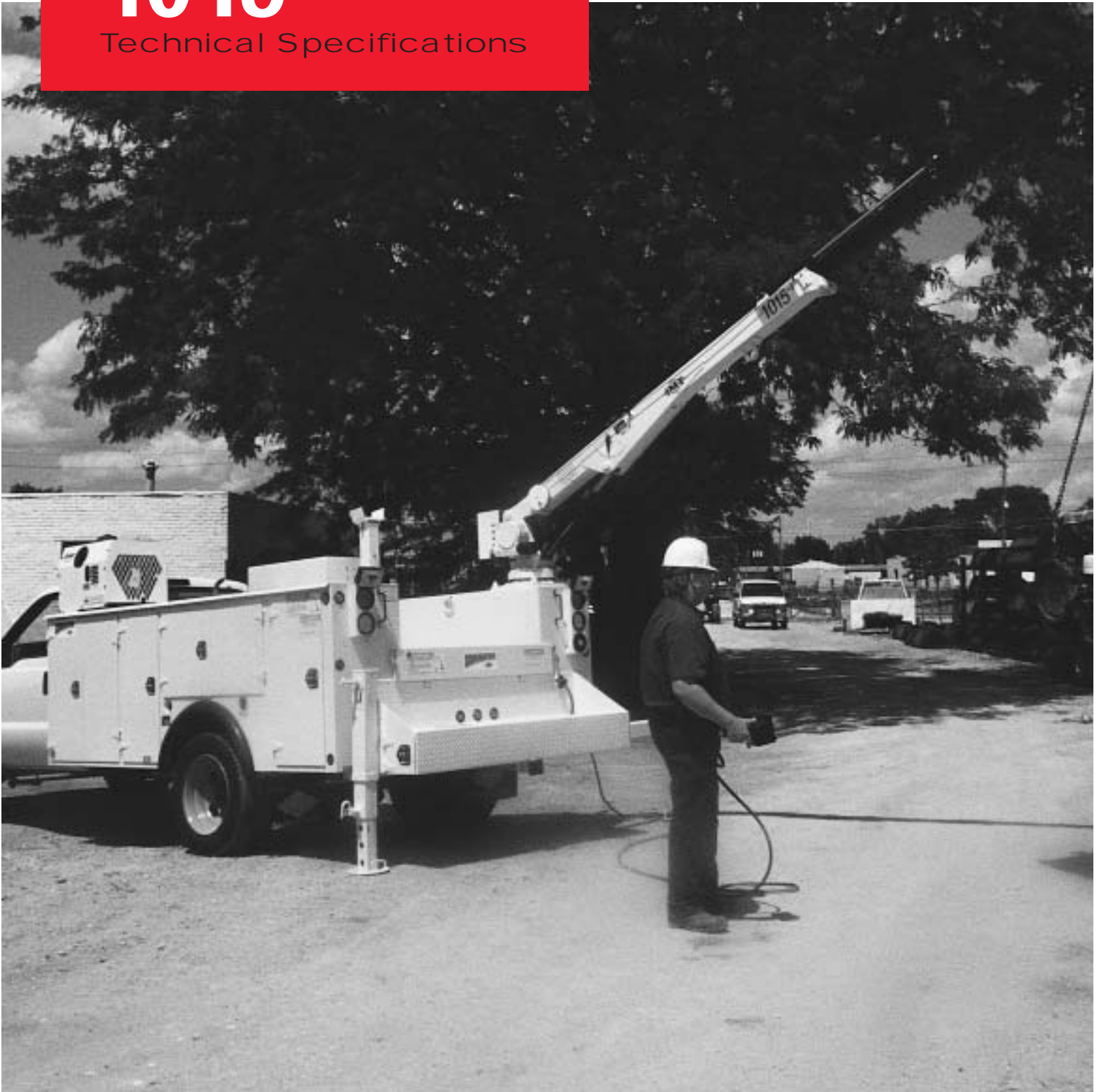


Telescopic Cranes

1015

Technical Specifications

Material Handling Systems



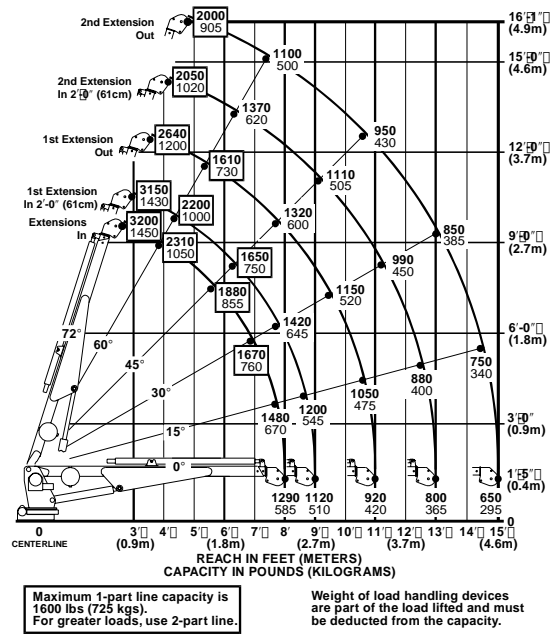


Specifications	1 Hydraulic 1 Manual
Crane Rating*	10,500 ft-lb (1.46 tm)
Horizontal Reach from centerline of rotation	15'0" (4.57 m)
Hydraulic Extension	36" (91.4 cm)
Manual Extension	48" (121.9 cm)
Lifting Height from base of crane	16'1" (4.9 m)
Crane Weight	660 lb (299 kg)
Crane Storage Height	26" (66.0 cm)
Mounting Space Required crane base	14-1/2" x 17" (36.8 cm x 43.2 cm)
Optimum Pump Capacity PTO-driven	5 U.S. GPM (18.9 L/min)
two-stage, electric** (slow speed/high speed)	1.5/3.5 U.S. GPM (5.7/13.2 L/min)
System Operating Pressure	2,250 PSI (155 bar)
Oil Reservoir Capacity two-stage, electric**	5 U.S. gallons (18.9 L)
Center of Gravity horizontal from centerline of rotation	15" (38.1 cm)
vertical from bottom of crane base	13" (33.0 cm)
Tie-Down Bolt Pattern on center	11-1/2" x 14-3/4" (29.2 cm x 37.5 cm)
Rotational Torque	1,500 ft-lb (0.2 tm)
Design Factors pins and hydraulics	4/1

*Crane rating (ft-lb) is the rated load (lb) x the respective distance (ft) from centerline of rotation with all extensions retracted and lower boom in horizontal position. This is the ANSI B30.5 standard.

** The two-stage pump delivers 1.5 U.S. GPM (5.7 liters/min) at low speed and 3.5 U.S. GPM (11.4 liters/min) at high speed. Normally when operating under load the pump will be operated as a single-stage pump. The pump will be operated as a 2-stage pump to save time during set up.

Capacity Chart



- Maximum one-part line capacity is 1,600 lb (725.8 kg). For greater loads, use two-part line.
- Weights of load-handling devices are part of the load lifted and must be deducted from the capacity.

Performance Characteristics

	PTO	*Power Unit
Rotation 400°	35 seconds	50 seconds
Lower Boom Elevation 0° to +72°	6 seconds	9 seconds
Extension Cylinder 36" (91.4 cm)	8 seconds	12 seconds
Winch		
single part line	25 ft/min (7.6 m/min)	12 ft/min (3.7 m/min)
two part line	12 ft/min (3.7 m/min)	6 ft/min (1.8 m/min)

** All times based on 5 GPM (18.9 liters/min) PTO delivery rate
 *** All times based on 3.5 GPM (13.2 liters/min) pump delivery rate

Cylinders

	Bore	Stroke
Lower Boom Cylinder	2-1/2" (6.4cm)	18" (45.7cm)
Extension Boom Cylinder	2" (5.1cm)	36" (91.4cm)

1015 Telescopic Crane

Power Source

PTO-Driven

Integral mounted hydraulic pump and PTO application. Other standard power sources may be used. Minimum power required is 8 horsepower based on 5 GPM at 2,250 PSI.

Electric Motor

Power is supplied to the electric motor by a solenoid connected to the 12-VDC truck battery. The chassis must be equipped with a 4,000 watt Delco Freedom battery (or equivalent) connected in parallel to the chassis' standard heavy-duty battery. The chassis must be equipped with a heavy-duty alternator (63 amp for GM vehicles and 60 amp for Ford vehicles). For best results, a 130-amp alternator is desirable.

Cylinder Holding Valves

The base ends (extend sides) of the lower boom and extension cylinders are equipped with integral mounted counterbalance valves to prevent sudden cylinder collapse in case of hose or other hydraulic failure. The counterbalance valve serves several functions. First, it is a holding valve. Second, it is designed to control the speed at which the lowering function operates and allow that motion to be metered under load. Finally, it prevents the loss of an excess amount of oil in the event of a hose failure. Only the oil in the hose at the time of the failure will be lost.

Rotation System

Turntable bearing with external worm gear powered with a high-torque hydraulic motor through a self-locking worm. Total gear reduction is 63 to 1.

Hydraulic System — PTO-Driven

Open-centered, full-pressure system that requires 5 GPM (18.9 liters/min) optimum oil flow at 2,250 PSI (155 bar). The control valve bank is a four-spool, stack-type, 12-VDC valve bank. The hydraulic system includes a 100-mesh suction-line strainer, a return-line filter and the control valve bank. An optional hydraulic reservoir is available.

Excessive Load Limit System (ELLS)

Overloading of the crane is limited by the ELLS. This is done by disarming the crane functions which make possible the application of greater than allowable stress to the crane structure and components. Functions controlled by ELLS are: winch up, extension out and lower boom down. To relieve the situation, the operator may set the load down (winch down) or retract the extension boom (extension in).

Electro-Hydraulic System — Two Speed/Auto-Shift

Open-centered, full-pressure system that features a two-stage hydraulic pump, with the first stage delivering 1.5 GPM (5.7 liters/min) and the second stage delivering 3.5 GPM (13.2 liters/min) at 2250 PSI (155 bar). The control valve bank is a four-spool, stack type, 12-VDC valve system. The system includes a 5-gallon hydraulic reservoir, a hydraulic pump driven by a totally enclosed fan-cooled 12-VDC motor and all necessary hoses and fittings.

Winch

The winch is powered by a hydraulic motor through a 38:1 ratio worm-gear drive which also functions as a brake. Line speed is 25 ft/min at optimum oil flow for 1-part line and 12 ft/min (3.8 ml/min) for 2-part line. The winch is equipped with 65 ft (19.81m). of 7/32 in (.56cm). 7x19 class aircraft cable having a lifting capacity of 1,600 lb for 1-part line and 3,200 lb for 2-part line. A nylon sheave riding on a lubricated needle bearing is located at the tip of the extension boom. The ratio of winch drum and sheave pitch diameter to wire rope diameter is 20:1. An anti two-block device is included to prevent the lower block or hook assembly from coming in contact with the boom sheave assembly.

Controls

Remote control with a 25 ft. (7.62m) control cable.

Minimum Chassis Specifications

Body Style	Conventional Cab
Wheelbase	137" – 161"
Cab-To-Axle	60" – 84"
Frame Section Modulus	5.91 in ³
*Resistance To Bending Moment	212,760 in-lb
Front Axle Rating	4,000 lb
Rear Axle Rating	7,500 lb

*Based on a 36,000 PSI yield frame material (A-36).

In addition to these specifications, a heavy-duty battery and alternator are required. It is recommended that the vehicle have power steering and dual rear wheels.

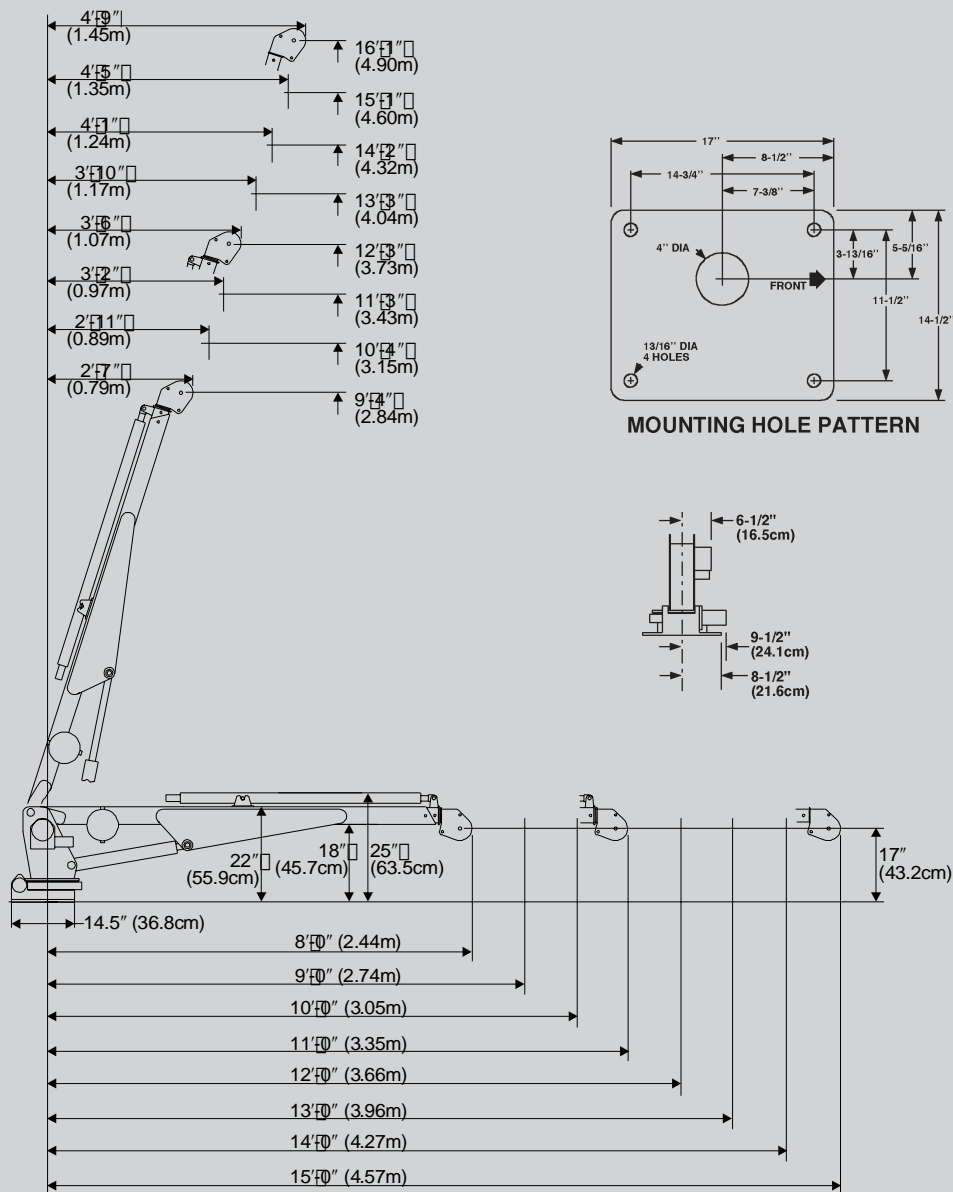
NOTES

1. Minimum axle requirements may increase with use of diesel engines, longer wheelbase or service bodies. Contact the factory for further information.
2. Weight distribution calculations are required to determine final axle loading.
3. All chassis, crane and body combinations must be stability-tested to ensure stability per ANSI B30.5.



1015 Telescopic Crane

Geometric Configuration



Iowa Mold Tooling Co., Inc.

500 Highway 18 West
 P.O. Box 189
 Garner, Iowa 50438-0189
 (641) 923-3711
 Fax: (641) 923-6063
 www.imt.com

(800) 247-5958

IMT and the IMT LOGO are registered trademarks or trademarks of Iowa Mold Tooling Co., Inc.

Copyright © 2003 Iowa Mold Tooling Co., Inc.
 All Rights Reserved

Manufacturer's Limited Warranty Coverage

Products manufactured by IMT are warranted to be free from defects in material and workmanship, under proper use, application and maintenance in accordance with IMT's written recommendations, instructions and specifications as follows:

1. One (1) year: labor on IMT workmanship.
2. One (1) year: original IMT parts.
3. Three (3) years: crane structural.

For policy details please refer to the IMT warranty policy.

IMT reserves the right to change specifications and design without notice.