PIPELINEMAN

PMG70
PIPELAYER

Cummins NTA855-C360	239 kW/325hp
Max lifting capacity	70000 kg/154000lb
Operating weight	49000 kg/107800lb

SAFETY DEVICES:

- **Emergency Free Fall System**
  When the button is engaged,the load free-falls and then immediately stops when the button is released.
- **Automatic Boom Kick-Out**
  This system will ensure you will never bend another boom.
- **Anti Two Block**
  Sets a minimum distance between the top block and the hook block,preventing collisions between them.
- **Anti Tipping System**
  Prevents tipping by calculating the maximum load that can be lifted.

MAIN FEATURES

CABIN

Good visibility to work area and top of the boom with a sky window on the roof, ROPS can be installed as the optional equipment.

ENGINE

The Cummins, NTA855-C360 direct injection and turbocharged engine gives sustained power and high torque rise that is required for the more tough jobs.

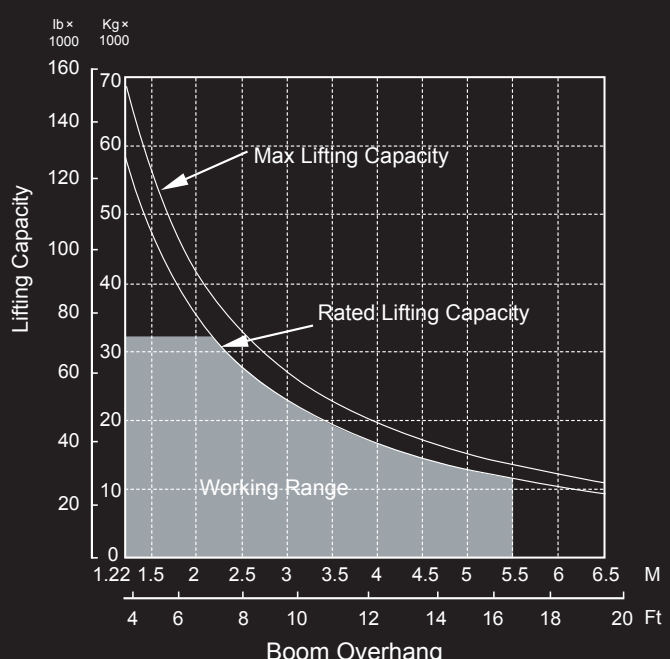
BOOM

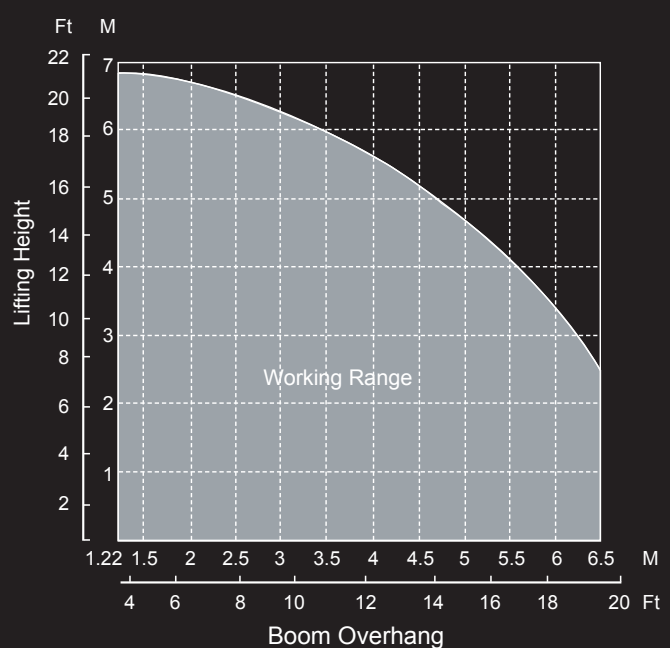
Squared A-frame section boom built for adequate support fro the most demanding lifting stress, quick release hinge pin for easy boom detachment and maintenance.

CONTROL

Hydraulic joystick operation provides simultaneous, precise control of the load and boom functions with one hand.single lever control for the counter weight in and out.

PMG70 LOADING CHART





- Boom overhang indicated in the table is the distance between hook center to same side track wheel outer edge.
- The lifting capacity in the table includes hook weight which is 0.5 t.
- The lifting capacity of the equipment is the one when the equipment stop on the rigid level ground.

UNDERCARRIAGE

With high stability and low ground pressure, the rigid and boxed frame undercarriage meet the requirement of all type of terrains, giving a dependable and longevity of service in all harsh conditions.

ELECTRONIC OVER HYDRAULIC

- Freefall system, boom kick-out system and anti-two block plus,
- Anti-tipping system
  Prevents tipping by calculating the maximum load that can be lifted.

GENERAL SPECIFICATIONS

ENGINE

Type	Cummins
Model	NTA855-C360
Rated power	239 kW
Rated speed	2000 rpm
Bore	139.7 mm
Stroke	152.4 mm
Displacement	14.1 l
Design	6-cylinder in-line
Electric system	24 V
Starter	11 kW / 15 hp
Batteries	2 x 155 ah / 12 V
Cooling system	water and air combi radiator
Water cooled,turbo-charged,	
Air-to-air intercooler	

SERVICE CAPACITIES

Fuel tank	640 L
Crankcase and filter	47 L
Final drive (each side)	55 L
Cooling system	121 L
Hydraulic tank	560 L
Power train	185 L
Roller frames (each)	0.45 L

WEIGHTS(APPROXIMATE)

Shipping weight (tractor)	36t
Boom	2.2t
Pipelayer attachment	3.5t
CWT leaves	4.4t
CWT frame & rack	2.9t
Total weight	49t

UNDERCARRIAGE

Shoe type	super extreme
Width of standard shoes	760 mm
Number of shoes (each side)	45
Grouser height	80mm
Pitch	228 mm
Ground clearance	550 mm
Track gauge	2380 mm
Length of track on ground	3620 mm
Ground contact area with 760 mm shoes	5.5 m²
Number of track rollers (each side)	9
Number of carrier rollers	2 per side
Ground pressure	87.3 kpa

TRANSMISSION

Planetary type gearbox, to be shifted under load, with clutches operating in oil and having high capability of transmitting the torque, providing three forward gears and three reverse ones. As per design, it is connected with a matching reducing gear and the main drive forming a single power unit to be mounted in a rear axle housing.

Three element one-stage torque converter with a pump drive reducing gear, is connected with a gearbox by a spline clutch and is mounted at the front wall of the rear axle. The torque converter is connected with an engine by drive line and an elastic clutch mounted on the engine.

TRAVEL SPEEDS

Gear	Forward	Reverse
1	3.6km/h	4.4 km/h
2	6.6 km/h	7.8 km/h
3	11.5 km/h	13.5 km/h

TRACTION FORCE

1f – drawbar pull	310 kN
2f – drawbar pull	295 kN

HYDRAULIC SYSTEM

Pump type	gear-type, high pressure fixed displacement
Temperature	-40--+60
Pump output – max	400 L/min
Relief valve setting –counterweight	14000 Kpa
Relief valve setting –winches	21000 Kpa
Pump output –counterweight	80 L/min

PIPELAYING EQUIPMENT

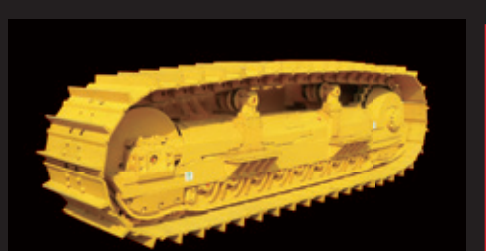
Planetary hydraulic winches

Winch brakes multiple-disk, hydraulic released

	HOOK	BOOM
Drum diameter	470 mm	470 mm
Flange diameter	640 mm	640 mm
Drum length	510 mm	510 mm
Capacity – 22 mm	95 m	75 m
Wire rope installed		
– 22 mm…	85 m	75 m
Wire rope min breaking strength		322kN
Hook speed with 8 part line		7.0 m/min
Luffing time		32 s (0-86)
Boom – square section standard		8.6 m
Removable counterweight		2 segments

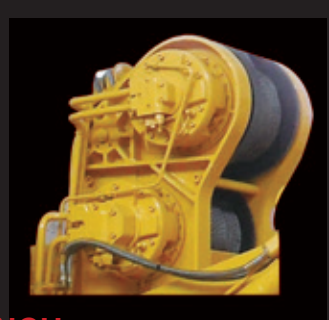
COUNTERWEIGHT

Hydraulically retracted and extended, four bar linkage structure counterweight adds more stability and balance during the lifting work, low compact design provides excellent right side visibility.



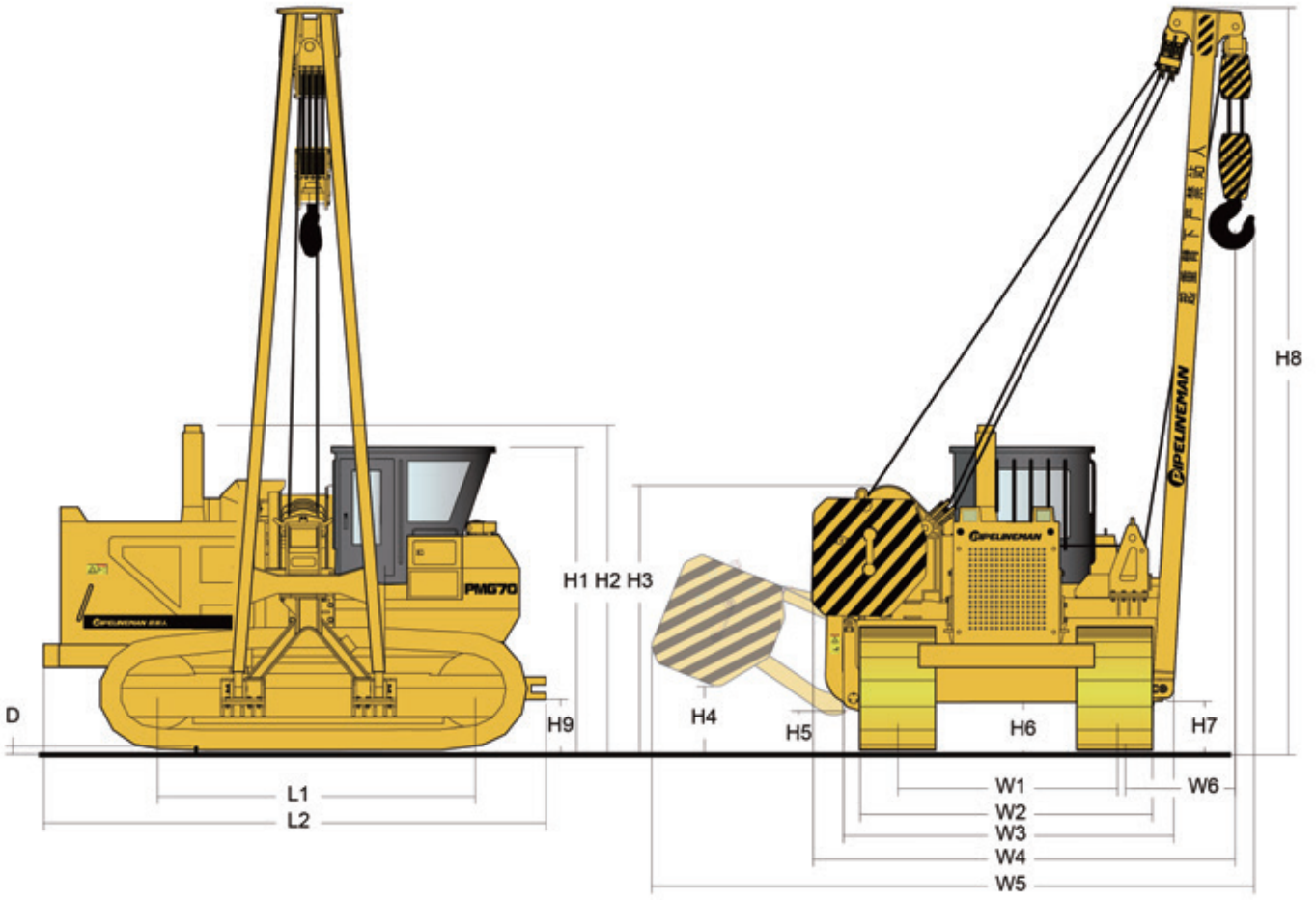
STEERING SYSTEM

Pivotal steering system comes with the advantage of higher maneuverability and enhanced slope capabilities. Hydraulic power assisted steering makes operating the machine comfortable for the operator.



WINCH

Two independently controlled hydraulic winches drive the boom and hook systems, brake are applied automatically when control lever returned to neutral position.



OVERALL DIMENSIONS

W1 Track gauge	2380 mm	93.8 in
W2 Width to outside of track	3140 mm	123.6 in
W3 Shipping width(boom and counterweight removed)	3641 mm	143 in
W4 Width(counterweight retracted)	4820 mm	189.8 in
W5 Width(counterweight extended)	6855 mm	269.2 in
W6 Distance(outer edge of chain link to hook)	1220 mm	48 in
D Grouser height	80 mm	3.1 in
L1 Lenght of tracks on ground(Distance idler/sprocket center)	3620 mm	142.5 in
L2 Operating length	5630 mm	221.7 in
H1 Height over cab	3540 mm	139.4 in
H2 Height (top of stack)	3710 mm	146.1 in
H3 Height (top of winch)	3028 mm	119 in
H4 Height to bottom of counterweight(extended)	814 mm	32 in
H5 Ground clearance of console	428 mm	16.9 in
H6 Ground clearance	550 mm	21.5 in
H7 Ground clearance of boom	565 mm	22.2 in
H8 Total height	9489 mm	373.6 in
H9 Drawbar height	660 mm	26 in

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PIPELAYER

STANDARD EQUIPMENT

Undercarriage
Suspended track frame,closed,non-oscillating type •
Track chain,sealed with split master link,41 links •
Track frame, rigid •
Pivot shaft, separate •
Sprocket segments, bolted •
Track roller 9,each side •
Carrier roller 2,each side •
Idler 01, each side •
Hydraulic track adjuster •
Track and rollers lifespan lubricated •
860 mm serviceable plate •
Track guide centre part •
Track guiding guard,front •

Power train
Cummins NTA855-C360 engine •
Antifreeze, -37 0C (-34 F) •
Fan, suction •
Water separator fuel system •
Air cleaner, dry type w/exhaust •
Aspirated primary and safety elements and service indicator •
Fuel priming pump •
Fuel tank and filter •
Torque converter, single stage •
Final drives, planetary type •
Muffler •
Radiator •
Transmission, power shift •
3 speed forward, 3 reverse.•
Parking brake, automatic •

Hydraulic system
Variable flow pump, load sensing •
Pipe and valves •
Hydraulic control counterweight •
Hydraulic control winch and boom •
Emergency free fall device •
Control valve for 1 circuit •
Hydraulic servo control •
Hydraulic tank and oil level control •
Oil filter with strainer in hydraulic tank •

Operator's cab
Cabin, isolation mounted, full vision
With lockable door •
Operator's seat, adjustable •
Seat belt •
Foot operator, inching break paddle •
Dual steering control •
Monitoring system/service indicator •
Key, start •
Fire extinguisher in cabin •
Coat hook •
Rear mirror, inside •
Safety glass, tinted •
Windshield wipers front, rear •
Dome window •
Control, single joystick •
Safety lever •
Emergency stop •

Electrical
Starter motor •
Batteries, 2 units maintenance free •
On-board system 24 V •
Alternator 50 A •
Back-up alarm, horn •
Beacon •
Working lights, front 2 ,rear 2 , side 2 ,boom 1 ,winch, 1 •
Dome light •
Instrument warning lights •
Battery charging •
Hourmeter •
Speed range •
Engine oil pressure •
Water temperature •
Fuel level •
Parking brake •
Hydraulic oil temperature •
Pump replenishing pressure •
Oil return filter •
Air filter •
Main warning light •

Pipe laying equipment
Boom welded type box-section structure•
Boom kickout,uppermost position •
Boom load limit sensor •
Counterweight,adjustable,hydraulically controlled,4-block and 2-counterweight frames •
Hydraulic draw works with independent driver motors for boom and hook winches •
Brakes ,wet multiple disc,closed type,spring applied and hydraulically released •
Blocks and hook with latch •
Ropes •

Basic machine
Bumper front •
Towing lug front •
Towing hitch rear •
Battery compartment, lockable •
Refuelling pump, electric •
Belly pans, heavy-duty,hinged •
Radiator, wide-meshed •
Engine cover, perforated •
Engine doors, perforated •
Engine doors, hinged, lockable •
Lugs for crane lifting •
Toolkit •
Exhaust pipe,insulated •

OPTIONAL EQUIPMENT

Air conditioner	Rear winch for pulling	Lengthened boom.
Arktic package	ROPS or FOPS	Enlarged radiator

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