



YOU ARE IN THE BUSINESS OF GETTING THE JOB DONE.

WE ARE HERE TO HELP YOU SUCCEED.

We manufacture a full line of 300 to 1,000 HP Cooper rigs at our state-of-the-art U.S. facility, keeping close control over every detail to ensure high quality. Our mobile rigs are purposefully engineered and built to be simple, safe, strong, and easy to operate. Our efforts to facilitate your success do not stop with the design. Every rig that comes from Dragon comes with extra support before, during, and after the sale to help keep your equipment and your business operating. Including 24/7 access to our skilled service teams and vast parts inventories. We are always here for you, because we know you do not want downtime. If you want quality, dependability and the support of a longstanding mobile rig expert backing you up.









Dragon rig parts; what you need to do the job – right.

Mobile rigs are so valuable because they're so versatile. The rig gets to the site and gets to work. Yet one worn out part can bring the whole system down. Having the right parts in the right place at the right time is essential to keeping your mobile rigs working and your operation running. This is where Dragon comes in.

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RIGHT ANGLE BOXES

HYDRAULIC CYLINDER



PARMAC HYDROMATIC BRAKES



MCKISSICK BLOCKS



BRAKE FLANGES



208 stands (10,400')—3/4" sucker rod 156 stands (7,800')-1" sucker rod

CAPACITY, TUBING BOARD: (31' long joints in single stands) 11,780 ft-2 3/8 EUE tubing 7,750 ft-2 7/8" EUE tubing

Maximum wind rate: 57 knots (66 mph)



Cooper SP300 **Mobile Servicing Rig**

Certifications..... API 4F

Mast capacity......150,000 lbs [4-lines]

Tubing/rods..... Single tubing/double rods

Drawworks

clutch

Sand Drum......38" dia x 8" wide with PO 124 clutch

Sand Drum Capacity......14,000' of 9/16" cable

Assist Brake.....Air cooled disc brake [optional]

Drawworks brake system......Conventional band brakes.

Drawworks brake system cooling...... Open circuit splash.

Engine HP rating......350-400

Power Flow

Trans to rear drive axles. 1710 Spice drive shaft.

Trans to RAD gear box...... 1710 Spicer drive shaft

RAD gear box to sand drum.....140-1 chain Sand drum to main drum......140-1 chain

Carrier..... 4 axle, 2 steer axles and 2 drive axles.

Maximum travel speed......55 mph

Workfloor..... Hydraulic fold and unfold.



23,188 ft - 2 3/8" EUE tubing 18,104 ft - 2 7/8" EUE tubing 9,920 ft - 3 1/2" EUE tubing

ROD BOARD CAPACITY: (25' joints in triple stands) 192 stands (14,400')-3/4" sucker rod 144 stands (10,800')-1" sucker rod

Maximum wind rate: 57 knots (66 mph)





Cooper SP400 **Mobile Servicing Rig**

Certifications..... API 4F

Mast height......96'

Tubing/rods..... Double tubing/triple rods

Drawworks [other options available]

P0224 clutch

Sand Drum Capacity......14,000' of 9/16" cable

Assist Brake..... Air cooled disc brake

Drawworks brake system........... Conventional band brakes.

Drawworks brake system cooling..... Open circuit splash.

Engine HP rating...... 400-450

Power Flow

Trans to rear drive axles......1710 Spice drive shaft. RAD gear box..... 1810 Spicer drive shaft

RAD gear box to sand drum..... 140-1 chain Sand drum to main drum..... 140-1 chain

Carrier......5 axle, 2 steer axles, 2 drive axles, one

tag axle.

Maximum travel speed...... 55 mph

Service Winch......12,000 lb capacity

Workfloor..... Hydraulic fold and unfold.



Cooper SP400CA Mobile Servicing Rig

Purple Permit Legal for use in California

Rated horsepower, engine 425 hp

Carrier 5 axle—Two steer and three drive axles.

Diameter, wireline......1" for 205,000 lb capacity

Road Traveling dimensions 60' long x 10' wide x 13'-5" high

Traveling weight 100,000 lbs estimated

(weights include drill line, tubing block,

sandline, standpipe, and fluids)

DRAWWORKS SYSTEM MAIN DRUM

Brake rim diameter x width 38" dia x 10" wide

Model, clutch WPT P0-224

SANDLINE DRUM

Sand drum capacity......14,000' of 9/16" cable

ASSIST BRAKE - AIR COOLED DISC BRAKE

Brake caliper model Kobelt 5026

Brake rotor measurements 40" dia x 7" braking surface x 4" thick



Certification: API 4F, 5th Editior Clear height: 105'

MAXIMUM STATIC LOAD: 250,000 lbs on 8-lines 225,000 lbs on 6-lines

CAPACITY, TUBING BOARD:
(31' long joints in double stands)
25,792 ft—2 3/8" EUE tubing

19,840 ft—2 7/8" EUE tubing 10,912 ft—3 1/2" EUE tubing

ROD BOARD CAPACITY:

(25' joints in triple stands)
208 stands (15,600')—3/4" sucker rod
156 stands (11,700')—1" sucker rod

Maximum wind rate: 57 knots (66 mph)



Cooper SP550 Mobile Servicing Rig

Certifications..... API 4F

Mast height......105

Tubing/rods..... Double tubing/triple rods

Drawworks

Sand Drum..... clutch

Sand Drum Capacity......42" dia x 8" wide with P0224 clutch

16,000' of 9/16" cable

Assist Brake—[three options]......Air cooled disc brake. [shaft mounted]

202 Hydromatic brake.

224 Water Cooled brake. [shaft mounted]

Drawworks brake system........... Conventional band brakes.

Drawworks brake system cooling...... Open circuit splash or optional water circu-

lating system.

Engine HP rating..... 550

Power Flow

Trans to RAD gear box......1810 Spicer drive shaft

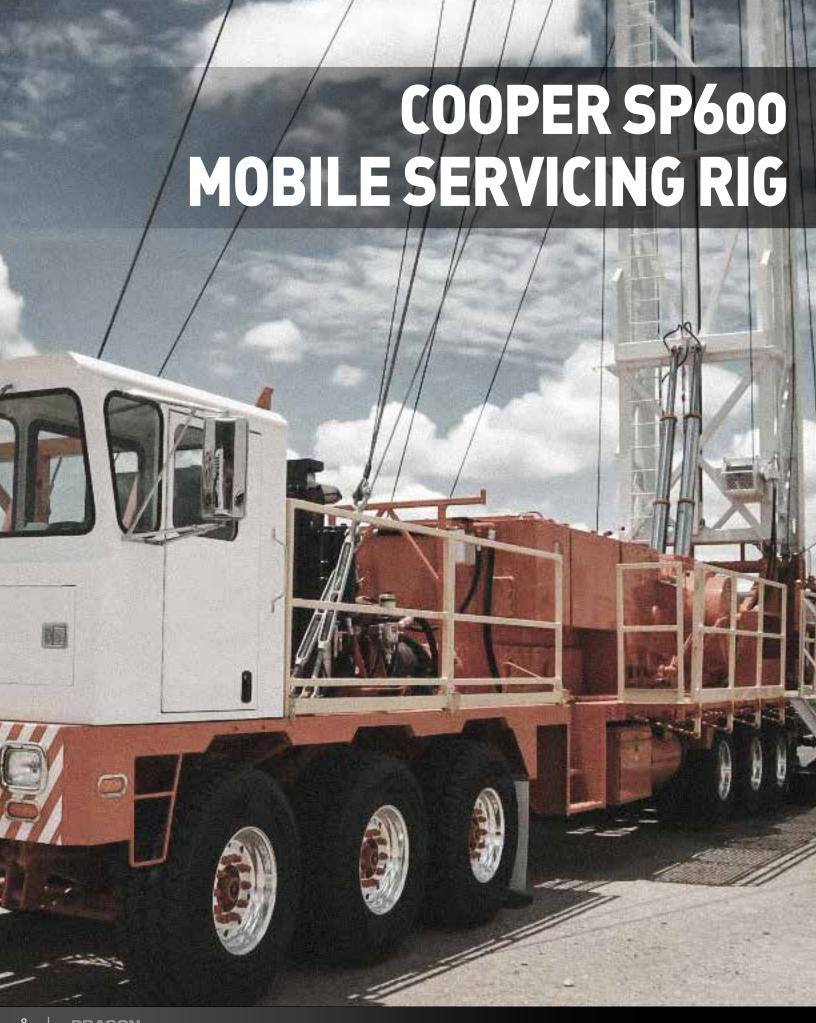
Carrier...... 5 axle, 2 steer axles, 2 drive axles, one tag

axle

Service Winch......12,000 lb capacity

Workfloor..... Hydraulic fold and unfold.

Drillers console positions..... Deck level to 30'.





114-300-8-T MAST: Certification: API 4F, 5th Edition Clear height: 114'

MAXIMUM STATIC LOAD: 300,000 lbs on 8-lines 265,000 lbs on 6-lines

CAPACITY, TUBING BOARD: 22,320 ft-2 7/8" EUE tubing (3.668 dia) 13,392 ft—3 1/2" EUE tubing (4.50 dia) 7812 ft—4 1/2" EUE tubing (5.536 dia)

ROD BOARD CAPACITY: (25' joints in triple stands) 208 stands (15,600')—3/4" sucker rod 156 stands (11,700')—1" sucker rod

Maximum wind rate: 57 knots (66 mph)



Cooper SP600 **Mobile Servicing Rig**

Certifications..... API 4F

Mast height.....114'

Tubing/rods..... Double tubing/triple rods

Drawworks: [single drum version available]

P0324 clutch

Assist Brake—[two options]......202 Hydromatic brake.

224 Water Cooled brake. [shaft mount-

ed]

Assist Brake—[two options].....202 Hydromatic brake.

224 Water Cooled brake. [shaft mount-

Drawworks brake system. Conventional band brakes.

Drawworks brake system cooling. Open circuit splash or optional water

circulating system. Engine HP rating.....₅₅₀

Power Flow:

Trans to rear drive axles. 1810 Spice drive shaft Trans to RAD gear box. 1810 Spicer drive shaft

RAD gear box to sand drum. 140-2 chain Sand drum to main drum..... 140-2 chain Main drum to hydromatic [if equipped]. . 100-3 chain

tag axle.

Fuel Capacity..... 180 gallons Maximum travel speed..... 55 mph

Service Winch.....12,000 lb capacity Workfloor..... Hydraulic fold and unfold.

Drillers console positions..... Deck level to 30'.



117-350-8-U MAST: Certification: API 4F, 5th Edition Clear height: 117

MAXIMUM STATIC LOAD: 350,000 lbs on 8-lines

CAPACITY, TUBING BOARD: 24,552 ft—2 7/8" EUE tubing 14,508 ft—3 1/2" EUE tubing 8,928 ft—4 1/2" EUE tubing

ROD BOARD CAPACITY:
(25' joints in triple stands)
208 stands (15,600')—3/4" sucker rod
156 stands (11,700')—1" sucker rod

Maximum wind rate 57 knots (66 mph)



Cooper SP650 Mobile Servicing Rig

Certifications.....API 4F

Mast capacity......350,000 lbs [8-lines]

Tubing/rods......Double tubing/triple rods

Drawworks: [single drum version available]

Main Drum......42" dia x 12" wide x 1 1/8" grooving with

P0324 clutch

Sand Drum......42" dia x 8" wide with P0224 clutch

Sand Drum Capacity......16,000' of 9/16" cable

Assist Brake—[two options]..... 202 Hydromatic brake.

224 Water Cooled brake. [shaft mounted]

Drawworks brake system............ Conventional band brakes. Drawworks brake system cooling........Water circulating system.

Engine HP rating......550

Power Flow:

Main drum to hydromatic [if equipped]. . . .100-3 chain

Carrier...... 6 axle, 3 steer axles, 2 drive axles, one tag

axle.

Workfloor.....Hydraulic fold and unfold.

Drillers console positions..... Deck level to 30'.



MAXIMUM STATIC LOAD: 350,000 lbs on 8-lines

CAPACITY, TUBING BOARD: 24,552 ft—2 7/8" EUE tubing 14,508 ft—3 1/2" EUE tubing 8,928 ft—4 1/2" EUE tubing

Maximum wind rate: 57 knots (66 mph)

SUBSTRUCTURE:

Working height: 17'
Clearance under rotary beams: 13'-3"
Maximum Setback Capacity: 300,000 lbs
Maximum Rotary Capacity: 425,000 lbs
Maximum Simultaneous
Capacity: 725,000 lbs
Rotary Table Size: 27 ½"



Cooper TR750 Mobile Drilling Rig

DRAWWORKS SYSTEM

MAIN DRUM

ASSIST BRAKE (other options available)

Brake model...... WPT 324 water cooled brake



CAPACITY, TUBING BOARD:

12,000 ft- 5" DP (6.5 dia)
Tubing board finger position
Parallel to mast face (side rack)

Maximum wind rate: 57 knots (66 mph)

SUBSTRUCTURE:

Working height: 21'

Clearance under rotary beams: 17'-6"

Design: Cantilever

Maximum Setback Capacity: 300,000 lbs

Maximum Rotary Capacity: 425,000 lbs

Maximum Simultaneous Capacity: 725,000 lbs

Rotary Table Size: 27 1/2"



Cooper TR1000 Drilling Rig

Rated horsepower, engine (Two) 550 hp / 2,100 rpm x Two

Trailer.....Four axle

Diameter, wireline.....11/8"

Road Traveling dimensions for

Trailers and Mast

wide x 15'-9" high

DRAWWORKS SYSTEM

MAIN DRUM

ASSIST BRAKE (other options available)

Brake model......WPT 324 water cooled brake



Dragon Rig Sales and Services, LTD. offers base beams specifically designed for its Cooper SP Series of mobile workover rigs.

Dragon Rig Sales and Services does not offer base beams for other OEM mobile workover rigs.

Operation on a base beam will derate the hook load and wind capacity of the mast.

Dimensions 40' long x 5' wide x

15" tall

Weight......17,000 lbs





Package Dmensions	25' long x 8'-3" wide x 7'-10" high
i ackage Differisions	25 long x 0 5 wide x / 10 ingi

Transmission Allison HT750DR

Rated input horsepower to pump 440 hp Fuel tank capacity 100 gal

Charge pump Dragon Products 5x4x14

centrifugal, belt drive

MUD PUMP SPECIFICATIONS

Model Dragon Products W-440

Input horsepower rating..... 440 hp

Pump speed rating 320 cycles per minute (960 SPM)

Stroke length 6"

Fluid end working pressure 5000 psi

Discharge connection size2"

Suction connection size 6"

Accessory connection size 2" NPT

Maximum piston and liner size 4 ½"

Valve size API-4

Piston rod end SA-4

Internal gear ratio 4.578:1

Pump weight 8940 lbs

W-440			HP SPM	260 510	320 660	380 810	440 960
LINER SIZE	MAX PSI	GPS	GPM			0_0	
3	5000	.184		94	121	149	204
3 1/2	4045	.25		127	165	202	240
3 3/4	3523	.287		146	189	232	275
4	3130	.326		167	215	264	313
4 1/4	1917	.368		188	243	299	354
4 1/2	1710	.413		211	273	335	397

Also available:

360 Triplex Mud Pump



Dimensions:

41' long x 9'-4" wide x 10' high

Capacity: 225 bbl

- 35 bbl slug compartment
- 140 bbl suction compartment
- 50 bbl shale shaker compartment

Weight: 30,000 lbs

Engine: New John Deere 4045—140 hp

Equipped with PTO

Centrifugal pump:

Dragon Products-8 x 6 x 11—250 series

with mechanical seal.

Hopper: Dragon Products—6"

Shaker:

Hydraulic drive—4'x5'—single screen

Mud guns: Dragon Products mud guns

3" dual nozzle . One is slug compartment. Two in suction compartment

Fuel tank: 150 gal

Hydraulic tank: 40 gal



225BBL Premix Mud System

Active Capacity - 225BBL (This includes a 35BBL slug compartment) Dimensions - 41' long x 8' 6" wide.

Construction- Three runner 8" I-beam skid. 3/8" Plate floors. 1/4" Heavy crimp walls. Handrail, walkway and stairs. 5" square tubing top runner.

Equipment - The 6 x 8 centrifugal pump is powered by a new John Deere 4.5 liter electric engine. It is also equipped with a 6" hopper, 3 mud guns, hydraulic shale shaker, and all necessary internal piping and manifolds.

OILFIELD ACCESSORIES Authorized Distributor of McKissick Block & Parts



We are strong in Well Servicing & Drilling Drawworks Brake Blocks

Indutex SA, a Peruvian Company founded in 1980, is a major manufacturer of industrial textiles and friction materials and is a member of the FRENOSA group, one of the largest friction product makers in South America.

Their Oilfield Brake Block and Woven Brake Linings are manufactured in one piece with uniform surfaces and densities. Each are woven in Fletcher special looms under proper tension to insure a tightly woven and superior quality product. The woven blocks and linings are manufactured in natural fibers.

To maximize resistance and conductivity the brake blocks are woven with yarns strengthened by brass or copper wires which allows high temperatures at friction points to dissipate. These metallic inserts can be incorporated throughout the block thickness or only in the backing, leaving the friction surface free of them.

Brake Block Technical Specifications

Available sizes: Width 1" - 13" Thickness 3/16" - 1 1/2"

PHYSICAL PROPERTIES	BRAKE BLOCK
SPEC GRAVITY (gr x cc)	1.25
APPARENT DENSITY (lb/in³)	0.044
HARDNESS, GROGAN	20-23
COMPRESS, psi x 5% deflect	550-850

COEFFICIENT OF FRICTION	BRAKE BLOCK
NORMAL	.51
НОТ	.34
WEAR RATE (in³/HP-hr)	.008
FRICTION CODE	FE
MAX UNIT PRESSURE PSI	250
TEMPERATURE DEGREES F	
MAX (INTERMITTENT)	600° F
MAX (CONTINUOS)	550° F
MAX RUBBING SPEED	5000 f x m

The woven textiles are impregnated with special saturates and treated in ovens under strict controls to achieve a complete and uniform curing of the impregnate. The curing process creates a continuous and stable friction coefficient in extreme temperatures.

Brake blocks are arced to the correct rim diameter, easy to install, and are recommended for the deepest digging under the most severe conditions. Engineered for security, friction capacity and longer life - Indutex manufactures some of the best brake block on the market today.



Drawworks System

Our long term maintenance and upkeep is one of the most economical in the industry.

The draw works consists of a right angle drive gear box, draw works frame and shield, main drum and brake system, sand drum and brake system (if equipped), crown saver, etc. All draw works clutches are placed outboard for easy clutch maintenance. The brake rims of main drum and sand drum are one-piece forged by alloy steel with proper hardness, anti-wear, and heat-resistant performance. All rotating components at deck level are covered with heavy-duty protective guards that include access panels for necessary maintenance.

Drawworks Frame Features:

Utilization of square/rectangular tubing for the base of the frame.

One piece drawworks side plates.

Increases the rigidity and strength of the drawworks.

Creates better seal area for chain guards.

Allows for removal of each drum independently without having to remove upper side walls as on a conventional Cooper.

Centralized lubrication point located on each side of the drawworks frame.

Allows for application of grease to all bearings and brake system components from the outside.

All guards use the same diameter bolts.

Allows removal of every guard on the drawworks with a 34" wrench or socket.

Clutches are mounted outside the drawworks walls for easier maintenance.

Right Angle Drive Gearbox:

The right angle drive gear box mainly consists of input shaft, output shaft, ring and pinion spiral taper gears, output, bearing seat, box body, support, flange, sprocket and various bearings. The input and output shafts are machined from premium alloy steel. Double row tapered roller bearings and single row radial cylindrical bearings are used for high strength and good performance. It is designed with group seals and oil bath splash lubrication to ensure sealing performance and reliable lubrication. The sprocket teeth are flame hardened and quenched to provide long lasting and reliable performance.

Right Angle Drive Features:

Integrated torque tube.

Creates a stronger assembly with better torque transfer than a conventional Cooper chain coupling.

Main Drum and Sand Drum (if equipped):

The main drum assembly is complete with split grooving and double fast line provisions (if requested). Both the main drum and sand drum shafts are machined from premium alloy steel for strength and durability. The main drum and sand drum brake systems are a mechanical band brake configuration. After finish machining and assembly, the main drum is dynamically balanced and the sand drum (if equipped) is static balanced to ensure smooth operation.

Brake System Features:

Brake rollers are used to roll the band in place for engagement and disengagement of brakes.

Makes for smoother brake action and easier adjustment.

Easier removal of brake bands.

Cooper 250 HP

Double Drum Model	
Main Drum	
Brake rim diameter x width	.38" dia x 10" wide
Barrel diameter x width	.16" dia x 38" wide
	(excluding lebus)
Model, clutch	.WPT P0-224
	(two plate clutch)
Grooving	.7/8" or 1"
SANDLINE DRUM	
Brake rim diameter x width	.38" dia x 8" wide
Barrel diameter x width	.12 3/4" dia x 43" wide
Model, clutch	.WPT P0-124
	(single plate clutch)
Sand drum capacity	.14,000' of 9/16" cable
Brake Rim Cooling	
Assist brake	
Brake caliper model	.Kobelt 5026
Brake rotor measurements	.40" dia x 7" braking
	surface x 4" thick

Cooper 400 HP

Double and Single Drum Models Availab Main Drum	le
Brake rim diameter x width	.42" dia x 10" wide
Barrel diameter x width	
Model, clutch	
	(two plate clutch)
Grooving	.1"
SANDLINE DRUM	
Brake rim diameter x width	.42" dia x 8" wide
Barrel diameter x width	.16" dia x 43" wide
Model, clutch	
	(single plate clutch)
Sand drum capacity	.16,000' of 9/16" cable
Brake Rim Cooling	
Assist brake	
Brake caliper model	
Brake rotor measurements	=
	surface x //" thick

Cooper 550 HP

cooper 330 m
Double and Single Drum Models Available Main Drum
Brake rim diameter x width
Barrel diameter x width
[excluding lebus] or
18" dia x 38" wide
[excluding lebus]
Model, clutch
(three plate clutch)
Grooving
SANDLINE DRUM
Brake rim diameter x width
Barrel diameter x width
Model, clutchWPT P0-224
•
(two plate clutch)
Sand drum capacity
Brake Rim CoolingSplash
Assist brake—Option AAir cooled disc brake
Brake caliper model Kobelt 5028
Brake rotor measurements
face x 4" thick
Assist brake—Option BHydromatic
Model
Clutch
(two plate clutch)
Assist brake—Option CShaft Mounted Water
Cooled Brake
Model

Cooper 600 HP

Double and Single Drum Models Availab Main Drum	ole
Brake rim diameter x width	.42" dia x 12" wide
Barrel diameter x width	.18" dia x 38" wide
	(excluding lebus)
Model, clutch	•
,	(three plate clutch)
Grooving	.1" or 1 1/8"
SANDLINE DRUM	
Brake rim diameter x width	.42" dia x 8" wide
Barrel diameter x width	.16" dia x 43" wide
Model, clutch	.WPT P0-224
	(two plate clutch)
Sand drum capacity	.16,000' of 9/16" cable
Brake Rim Cooling	
Ž	Circulating
Assist brake—Option A	.Hvdromatic
Model	
Clutch	
	(two plate clutch)
Assist brake—Option B	
	Cooled Brake
Model	
	224 (tho plate)

Cooper 600 HP

Main Drum	
!	grooving with P0324 clutch
Sand Drum	42" dia x 8" wide with P0224
	clutch
Sand Drum Capacity	16,000' of 9/16" cable
Assist Brake—[two options] :	202 Hydromatic brake.
:	224 Water Cooled brake. [shaft
	mounted]
Drawworks brake system	Conventional band brakes.
Drawworks brake system '	Water circulating system
cooling	.

Cooper 750/1000 HP

•	
Single Drum Model Available Main Drum	
Brake rim diameter x width	46" dia x 12" wide
Barrel diameter x width	
	(excluding lebus)
Model, clutch	WPT P0-330
	(three plate clutch)
Grooving	1 1/8"
Brake Rim Cooling	
Assist brake	-
	Cooled Brake
Model	WPT 32/ (three plate)

DRAGON MAST

71-150-4-T MAST Certification: API 4F, Clear height: 71' Maximum static load: 150,000 lbs on 4-lines

96-205-6-T MAST Certification: API 4F, Clear height: 96' Maximum static load: 205,000 lbs on 6-lines 180,000 lbs on 4-lines

97-205-6-FS MAST Certification: API 4F, Clear height: 97' Maximum static load: 205,000 lbs on 6-lines 180,000 lbs on 4-lines

105-250-8-T MAST Certification: API 4F, 5th Edition Clear height: 105' Maximum static load: 250,000 lbs on 8-lines 225,000 lbs on 6-lines 114-300-8-T MAST: Certification: API 4F, 5th Edition Clear height: 114' Maximum Static Load: 300,000 lbs on 8-lines 265,000 lbs on 6-lines

117-350-8-U MAST Certification: API 4F, 5th Edition Clear height: 117' Maximum hook load: 350,000 lbs on 8-lines

124-450-10-T MAST Certification: API 4F, Clear height: 124' Maximum hook load: 450,000 lbs on 10-lines











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