

US Material Handler | F-Series



308 hp (230 kW) (Diesel) 200 kW (Electric)



max. 114,640 lbs



max. 59'



02

TECHNICAL DATA

OPERATING WEIGHT WITHOUT ATTACHMENTS 109,790-114,640 lbs

MHL370 F

DIESEL ENGINE

	U.S. Tier 4 / EU Stage V	U.S. Tier 3 / EU Stage IIIA *
Manufacturer and model	Deutz TCD 7.8 L6	Deutz TCD 7.8 L6
Design	6-cylinder in-line engine	6-cylinder in-line engine
Functionality	4-stroke engine, direct common-rain fuel injection, turbocharger with charge air intercooling, controlled exhaust gas recirculation, diesel par- ticle filter with a continuously regenerating system and SCR catalytic converter	4-stroke engine, direct common-rain fuel injection, turbocharger with charge air intercooling
Engine power	308 hp (230 kW)	308 hp (230 kW)
Rated speed	2,000 rpm	2,000 rpm
Displacement	476 cui	476 cui
Cooling system	Water and charge air cooling with temperature controlled fan speed	Water and charge air cooling with temperature controlled fan speed
Exhaust emision standard	U.S. Tier 4 / EU Stage V	U.S. Tier 3 / EU Stage IIIA *
Fuel tank	153.2 gal Diesel	153.2 gal Diesel
DEF / Urea tank	13.2 gal Ad Blue	

ELECTRIC MOTOR

Power	200 kW
Total connected load	250 kW
Motor start	Via soft start
Optional cable reel	Up to 164 ft (other lengths on request)

ELECTRICAL SYSTEM

Alternator	28 V / 100 A
Operating voltage	24 V
Battery	2 × 12 V / 110 Ah / 750 A
Lighting system	2 × LED floodlights at the front of the machine, rear parking lights and indicator lights
Optional equipment	20 kW or 30 kW DC generator with control and insulation monitoring

TRAVEL DRIVE

Hydrostatic drive through infinitely variable axial piston motor with directly mounted travel brake valves, 2-gear powershift transmission, all-wheel drive

Travel speed 1st Gear	max. 3 mph
Travel speed 2nd Gear	max. 9 mph
Gradeability	max. 30 %
Turning radius	26'3"

SLEWING DRIVE

Slewing ring	Double slewing ring with inner teeth
Drive	2-stage planetary gear with integrated multi-disk brake
Uppercarriage swing speed	0–6 rpm, infinitely variable
Slewing lock	Electronically activated

UNDERCARRIAGE

BRAKES	
Tires	Solid rubber 18.5" × 59" (SETCO)
Outrigger	4-point outrigger
Rear axle	Planetary drive axle with integrated drum brake, with self aligning bearing and switching oscillating lock
Front axle	Planetary drive axle with integrated drum brake, rigid bearing, max. steering angle 34°

Service brake	A hydraulically activated single-circuit brake system that works on all four pairs of wheels
Parking brake	Electronically activated transmission disc brake that works on the front and rear axles

HYDRAULIC SYSTEM

Max. flow rate	2 × 74 gal/min & 1 × 37 gal/min (for slewing)
Max. operating pressure	4641 / 5221 psi
Hydraulic oil tank	137.4 gal

OPERATOR'S CAB

Cab		height of 20'
Air conditioning	Automatic climate control. Infinitely variable water heating with 8-speed fans, 10 adjustable nozzles, 4 set into the roof lining and 3 defrosting nozzles	
Operator's seat	Air-sprung comfort seat with integrated headrest, safety belt, and lower lumbar support, optional heated seat. Allows for comfortable working by offering universal adjustment possibilities of the seat position, the seat incline, and the position of the seat cushion in relation to the armrests and joysticks	
Monitoring	Ergonomically-arranged, anti-glare controls, multi-functional display, automatic monitoring and storage of deviating operating conditions, (e.g. all hydraulic oil filters, hot/cold hydraulic oil tem- perature, coolant temperature and charge air temperature, diesel particle filter load), visual and acoustic warning up to the point of shutting feed forward control or reducing engine output. Individual sensor diagnosis using the multi-functional display, rear camera and side camera	
	U.S. Tier 4 / EU Stage V	U.S. Tier 3 / EU Stage IIIA *
Noise level	Sound power level (outdoor area) L_{wA} 102.3 dB(A) (measured) as per directive 2000/14/EC L_{wA} 104 dB(A) (guaranteed) as per directive 2000/14/EC	Sound power level (ambience) L _{wa} dB(A) (metered) acc. to directive 2000/14/EC L _{wa} dB(A) (guaranteed) acc. to directive 2000/14/EC
	Sound power level (inside the cab) as per the standard ISO 6396 L_{pA} 70 dB(A)	Sound pressure level (inside the cabin) acc. to directive ISO 6396 $L_{pA} \dots dB(A)$ to be determined
		to be determined
Vibrations	Weighted r.m.s. value of acceleration of upper limbs under 2.5 m/s ² (98 in/s ²) Weighted effective value of acceleration for the seat and feet under 0.5 m/s ² (20 in/s ²)	



EQUIPMENT

ENGINE	Standard	Option
The intercooler and coolant radiator	•	
Direct electronic fuel injection / common rail	•	
Advanced automatic idle incl. engine shut-off function	•	
Engine preheating		•
Engine diagnosis interface	•	
Temperature-dependent fan drive	٠	
UNDERCARRIAGE		

All-wheel drive	•
Drum brakes	•
Rear oscillating axle lock	•
2-speed power shift gear	•
4-point outrigger	•
Support cylinder with integrated, double-sided shut-off valves	•
Piston rod protection on stabilizer cylinders	•
Tool box	•
Special coating	•
Solid rubber tires 18.5" × 59"	•

UPPERCARRIAGE

Separate cooling system for engine and hydraulic oil cooler	•	
Cooling system with temperature-dependent fan drive	•	
Reversible fan for combined water/charge air cooler and hydraulic oil cooler		٠
Automatic, central lubrication system	•	
Rear view camera	•	
Side view camera	•	
Travel warning device		٠
Electric refueling pump		•
Light protection		٠
Special coating		•
САВ		
Hydraulically adjustable cab	•	
Vertically and horizontally cab system		•
Safety glass	•	
Sliding window in cab door	•	

CAB	Standard	Option
Reinforced glass P5A (windscreen and roof panel)		٠
Windshield wiper and washer system (windscreen)	•	
Windshield wiper and washer system (skylight)		•
Air-sprung driver's seat with headrest, safety belt, and lower lumbar support	•	
Seat heating		•
Joystick steering	•	
Steering column, height and tilt adjustable		•
Automatic climate control	•	
Auxiliary heating		•
Multifunction display	•	
Document net	•	
FOPS Guard		•
Front and FOPS Guard		•
Voltage converter 12 V		•
Radio USB & Bluetooth		•
12 V socket		•
Fire extinguisher, dry powder		•
Travel warning device with rotating beacon		•

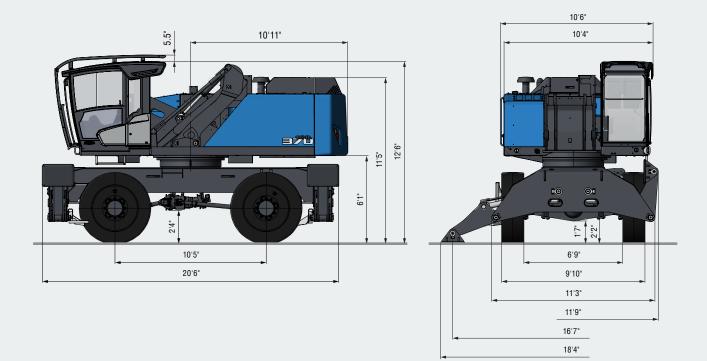
OTHER EQUIPMENT

20 kW DC generator with control		٠
30 kW DC generator with control		•
Close proximity range limiter for dipper stick	•	
Coolant and hydraulic oil level monitoring system	•	
Overload and working area control		٠
Filter system for attachments		٠
Hose rupture valves for boom cylinder	•	
Hose rupture valves for stick cylinder	•	
Overload warning device		•
Quick coupling on the dipperstick	•	
Dipperstick impact protection		•
Active cyclone pre-filter (TOP AIR)		•
Hydraulic oil preheating		•
Lubrication of grab suspension by central lubrication system	•	
LED front headlights	•	
LED lumen packages		٠
Float switch		٠
Fuchs Telematics System, incl. 5 years contract	•	

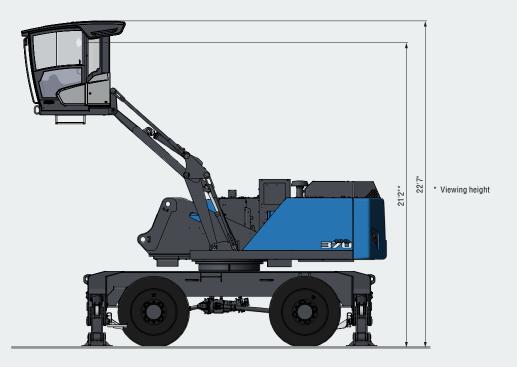


DIMENSIONS

With vertically adjustable cabin All dimensions in ft and inch

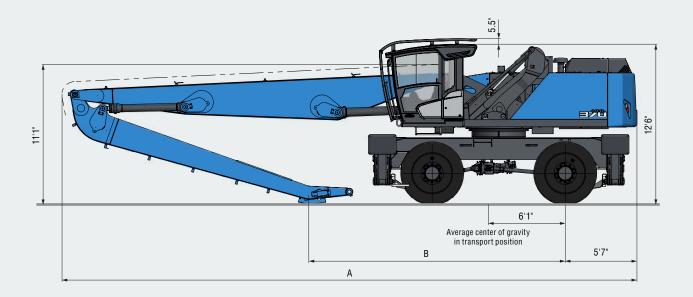


With vertically and horizontally adjustable cabin



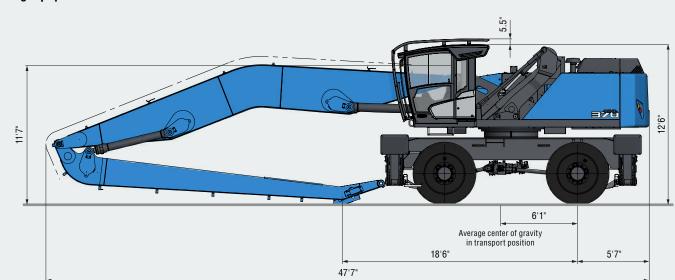
TRANSPORT DIMENSIONS

All dimensions in ft and inch



	54'1"	(2) 59'
A	45'4"	48'1"
В	20'3"	20'4"

6 59'

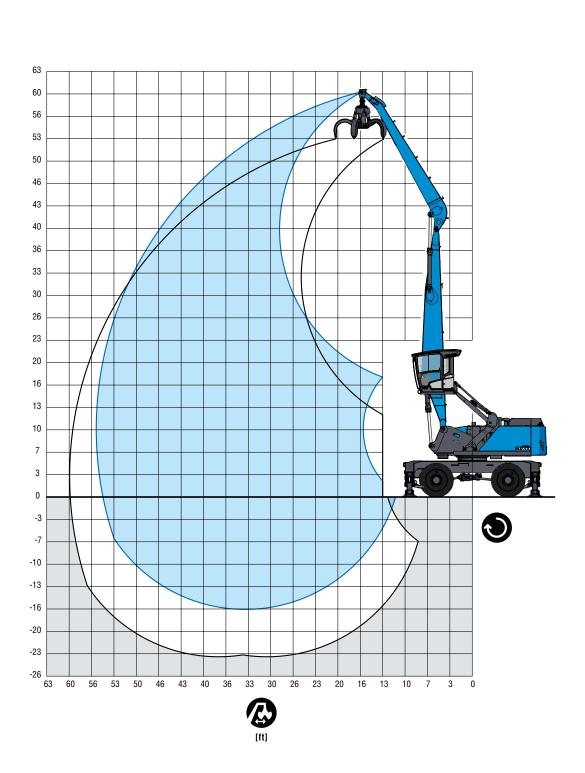


Loading equipment banana boom









LOADING EQUIPMENT

Boom	29'1"
Dipper stick	22'9"
Cactus grab	1.05 yd ³

RECOMMENDED ATTACHMENTS

Recommended attachments upon request

LIFTING CAPACITY

	6					3			
•	-	20 ft	25 ft	30 ft	35 ft	40 ft	45 ft	50 ft	55 ft
55 ft	ര=്റ		19,400° (19,400°)	13,500° (13,500°)					
50 ft	ത്ത			19,600° (19,600°)	15,000° (15,000°)				
45 ft	ത്ത			22,100° (22,100°)	19,300° (19,300°)	14,500° (14,500°)			
40 ft	ത്ത			23,100° (23,100°)	20,900° (20,900°)	18,600° (18,600°)	12,700° (12,700°)		
35 ft	ത്ത			23,300° (23,300°)	21,000° (21,000°)	19,100° (19,100°)	16,900° (16,900°)		
30 ft	ര=ന			24,000° (24,000°)	21,400° (21,400°)	19,300° (19,300°)	17,500° (17,500°)	13,400° (13,400°)	
25 ft	ര=്റ		29,100° (29,100°)	25,000° (25,000°)	22,000° (22,000°)	19,600° (19,600°)	17,600° (17,600°)	15,500 (15,800°)	
20 ft	ത്ത	35,700° (35,700°)	31,400° (31,400°)	26,300° (26,300°)	22,700° (22,700°)	20,000° (20,000°)	17,700° (17,700°)	15,400 (15,700°)	8,900° (8,900°)
15 ft	ര=ത	44,100° (44,100°)	33,900° (33,900°)	27,700° (27,700°)	23,500° (23,500°)	20,300° (20,300°)	17,800° (17,800°)	15,200 (15,600°)	11,100° (11,100°)
10 ft	ത്ത	44,100 (44,100)	35,700° (35,700°)	28,700° (28,700°)	23,900° (23,900°)	20,500° (20,500°)	17,400 (17,700°)	14,900 (15,300°)	12,100° (12,100°)
5 ft	ത്ത	24,300° (24,300°)	36,200° (36,200°)	28,900° (28,900°)	23,900° (23,900°)	20,200 (20,300°)	17,100 (17,300°)	14,700° (14,700°)	11,600° (11,600°)
0 ft	10 01	19,900° (19,900°)	34,900° (34,900°)	28,100° (28,100°)	23.300° (23.300°)	19,600° (19,600°)	16,500° (16,500°)	13,700° (13,700°)	(,000)
–5 ft	ര=്റ	20,300° (20,300°)	32,000° (32,000°)	26,200° (26,200°)	21,700° (21,700°)	18,200° (18,200°)	15,100° (15,100°)	12,000° (12,000°)	
–10 ft	ത്ത	22,000° (22,000°)	27,600° (27,600°)	23,100° (23,100°)	19,300° (19,300°)	16,000° (16,000°)	12,900° (12,900°)	(,)	
–15 ft	ര=്റ	, //		18,700° (18,700°)	15,700° (15,700°)	12,700° (12,700°)			
									max. reach
10 ft	ത്ത								8,900° (8,900°)

Important notes regarding the load capacities

The lift capacity values are stated in imperial pounds (lbs). The pump pressure is 5,221 psi. In accordance with ISO 10567 the lift capacity values represents 75% of the static tipping loads or 87% of the hydraulic lifting force (marked °). On solid and level ground the values apply to a swing range of 360°. The (...) values apply in the longitudinal direction of the undercarriage. The values for "not supported" only apply via the steering axle or the locked oscillating axle. The weights of the attached load hoisting equipment (grab, load hock, etc.) must be deducted from the lift capacity values. The working load of the boom and stick cylinders, an overload warning device and the lift capacity table in the cab are required. For object handling application the machine has to be supported on a level ground.





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Service weight without attachments



Height



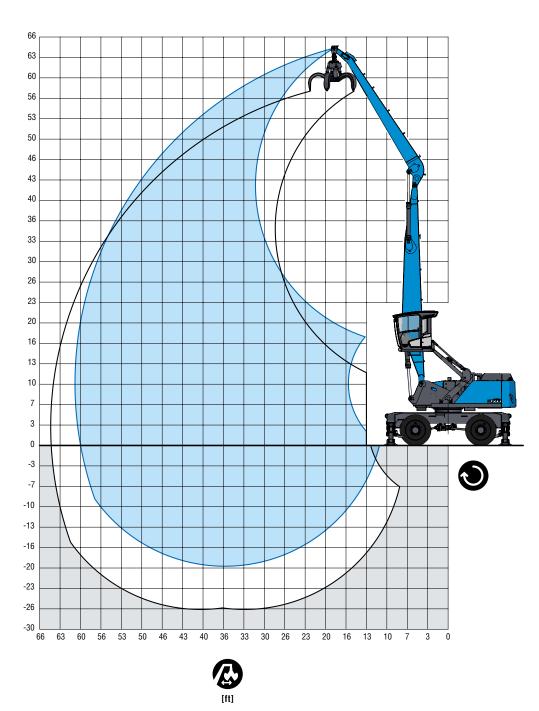
4-point supported

(i)









LOADING EQUIPMENT

Boom	31'8"
Dipper stick	25'6"
Cactus grab	1.05 yd3

RECOMMENDED ATTACHMENTS

Recommended attachments upon request

LIFTING CAPACITY

	6									
-	-	20 ft	25 ft	30 ft	35 ft	40 ft	45 ft	50 ft	55 ft	60 ft
60 ft	ത്ത		18,300° (18,300°)	14,200° (14,200°)						
55 ft	10 = 01			18,300° (18,300°)	15,100° (15,100°)					
50 ft	10 - 01				18,000° (18,000°)	14,900° (14,900°)				
45 ft	ര= ത				19,500° (19,500°)	17,600° (17,600°)	14,100° (14,100°)			
40 ft	10 - 01				19,500° (19,500°)	17,700° (17,700°)	16,100° (16,100°)	12,400° (12,400°)		
35 ft	10 - 01				19,700° (19,700°)	17,800° (17,800°)	16,100° (16,100°)	14,700° (14,700°)	8,800° (8,800°)	
30 ft	10 - 01			22,800° (22,800°)	20,100° (20,100°)	18,000°(18,000°)	16,300° (16,300°)	14,700° (14,700°)	12,300° (12,300°)	
25 ft	ro - oı		26,900°(26,900°)	23,800° (23,800°)	20,800° (20,800°)	18,400° (18,400°)	16,400° (16,400°)	14,800° (14,800°)	13,100 (13,200°)	
20 ft	ര്ത	31,200° (31,200°)	30,200° (30,200°)	25,100° (25,100°)	21,500° (21,500°)	18,800° (18,800°)	16,600° (16,600°)	14,900° (14,900°)	12,800 (13,000°)	8,400° (8,400°)
15 ft	ര്ത	42,400° (42,400°)	32,400° (32,400°)	26,300° (26,300°)	22,200° (22,200°)	19,100° (19,100°)	16,800° (16,800°)	14,800° (14,800°)	12,700 (13,000°)	10,000° (10,000°
10 ft	ര്ത	44,100° (44,100°)	33,900° (33,900°)	27,100° (27,100°)	22,600° (22,600°)	19,300° (19,300°)	16,700° (16,700°)	14,400 (14,600°)	12,500 (12,700°)	10,500° (10,500°
5 ft	ത്ത	18,400° (18,400°)	34,300° (34,300°)	27,300° (27,300°)	22,600° (22,600°)	19,200° (19,200°)	16,500° (16,500°)	14,200° (14,200°)	12,100° (12,100°)	9,700° (9,700°)
0 ft	ര‴ത	15,300° (15,300°)	33,100° (33,100°)	26,600° (26,600°)	22,100° (22,100°)	18,600° (18,600°)	15,900° (15,900°)	13,600° (13,600°)	11,300° (11,300°)	
-5 ft	ര - റ	15,700° (15,700°)	28,000° (28,000°)	25,000° (25,000°)	20,800° (20,800°)	17,600° (17,600°)	14,900° (14,900°)	12,500° (12,500°)	10,000° (10,000°)	
–10 ft	ro - oı	17,200° (17,200°)	26,600° (26,600°)	22,300° (22,300°)	18,800° (18,800°)	15,900° (15,900°)	13,300° (13,300°)	10,900° (10,900°)	8,000° (8,000°)	
–15 ft	ര=റ		21,600° (21,600°)	18,700° (18,700°)	16,000° (16,000°)	13,500°(13,500°)	11,000° (11,000°)	8,500° (8,500°)		
										max. reach 59'9
10 ft	ര്ത									8,500° (8,500°)

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Important notes regarding the load capacities

The lift capacity values are stated in imperial pounds (lbs). The pump pressure is 5,221 psi. In accordance with ISO 10567 the lift capacity values represents 75% of the static tipping loads or 87% of the hydraulic lifting force (marked °). On solid and level ground the values apply to a swing range of 360°. The (...) values apply in the longitudinal direction of the undercarriage. The values for "not supported only apply via the steering axie or the locked oscillating axie. The weights of the attached lock doscillating axie. The attached lock doscillating axie. The weights of the attached lock doscillating axie. The attached





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Service weight without attachments



Height

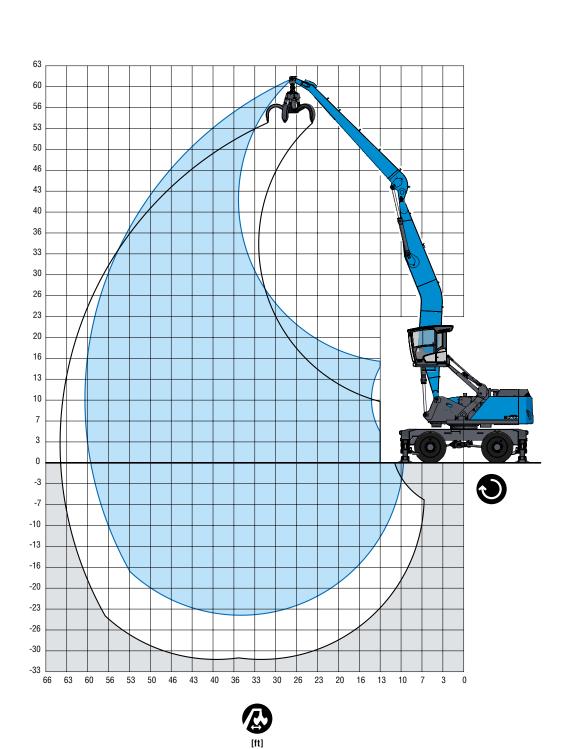


4-point supported









LOADING EQUIPMENT

Boom	31'8"
Dipper stick	25'5"
Cactus grab	1.05 yd ³

RECOMMENDED ATTACHMENTS

Recommended attachments upon request

LIFTING CAPACITY

				9						S	
60 ft	55 ft	50 ft	45 ft	40 ft	35 ft	30 ft	25 ft	20 ft	15 ft		
						11,900° (11,900°)				ര്ത	60 ft
					13,200° (13,200°)					ത്ത	55 ft
				13,300° (13,300°)	16,700° (16,700°)					ത്ത	50 ft
			12,600° (12,600°)	15,500° (15,500°)						ര=റ	45 ft
		10,800° (10,800°)	14,400° (14,400°)	15,400° (15,400°)						10 - 01	40 ft
		13,400° (13,400°)	14,400° (14,400°)	15,500° (15,500°)	16,800° (16,800°)					ര = ത	35 ft
	10,800° (10,800°)	13,500° (13,500°)	14,600° (14,600°)	15,800° (15,800°)	17,400° (17,400°)					ര = ത	30 ft
	12,500° (12,500°)	13,600° (13,600°)	14,900° (14,900°)	16,300° (16,300°)	18,100° (18,100°)	20,400° (20,400°)				10 - 01	25 ft
	12,600° (12,600°)	13,800° (13,800°)	15,200° (15,200°)	16,900° (16,900°)	19,100° (19,100°)	21,900° (21,900°)	26,000° (26,000°)			ര=്റ	20 ft
8,300° (8,300°)	12,600° (12,600°)	14,000° (14,000°)	15,600 (15,600°)	17,500° (17,500°)	20,100° (20,100°)	23,500° (23,500°)	28,700° (28,700°)	37,400° (37,400°)	44,100 (44,100)	ര = ത	15 ft
9,000° (9,000°)	12,500 (12,600°)	14,100° (14,100°)	15,900° (15,900°)	18,000° (18,000°)	20,900° (20,900°)	25,000° (25,000°)	31,100° (31,100°)	41,700° (41,700°)	11,800° (11,800°)	ത്ത	10 ft
8,700° (8,700°)	12300 (12,400°)	14,100° (14,100°)	16,000° (16,000°)	18,400° (18,400°)	21,500° (21,500°)	25,900° (25,900°)	32,600° (32,600°)	21,200° (21,200°)	8,300° (8,300°)	ത്ത	5 ft
	12,000° (12,000°)	13,800° (13,800°)	15,900° (15,900°)	18,400° (18,400°)	21,700° (21,700°)	26,200 (26,200°)	32,800 (32,800°)	17,200° (17,200°)	9,300° (9,300°)	ര = ത	0 ft
	11,300° (11,300°)	13,300° (13,300°)	15,500° (15,500°)	18,100° (18,100°)	21,300° (21,300°)	25,600° (25,600°)	29,500° (29,500°)	17,000° (17,000°)	11,100° (11,100°)	ത്ത	–5 ft
	10,000° (10,000°)	12,400° (12,400°)	14,700° (14,700°)	17,200° (17,200°)	20,300° (20,300°)	24,300° (24,300°)	28,000° (28,000°)	18,100° (18,100°)	13,100° (13,100°)	ര=റ	–10 ft
		10,900° (10,900°)	13,300° (13,300°)	15,800° (15,800°)	18,600° (18,600°)	22,100° (22,100°)	26,500° (26,500°)	19,500° (19,500°)		ത്ത	–15 ft
			11,100° (11,100°)	13,500° (13,500°)	16,100° (16,100°)	19,000° (19,000°)	22,300° (22,300°)			ര=റ	–20 ft
ax. reach 59'5	m										
7,900° (7,900°)										ເຈື້ອງ	10 ft

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Important notes regarding the load capacities

The lift capacity values are stated in imperial pounds (lbs). The pump pressure is 5,221 psi. In accordance with ISO 10567 the lift capacity values represents 75% of the static tipping loads or 87% of the hydraulic lifting force (marked °). On solid and level ground the values apply to a swing range of 360°. The (...) values apply in the longitudinal direction of the undercarriage. The values for "not supported" only apply via the steering axle or the locked oscillating axle. The weights of the attached load hoisting equipment (grab, load hock, etc.) must be deducted from the lift capacity values. The working load of the boom and stick cylinders, an overload warning device and the lift capacity table in the cab are required. For object handling application the machine has to be supported on a level ground.





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Service weight without attachments

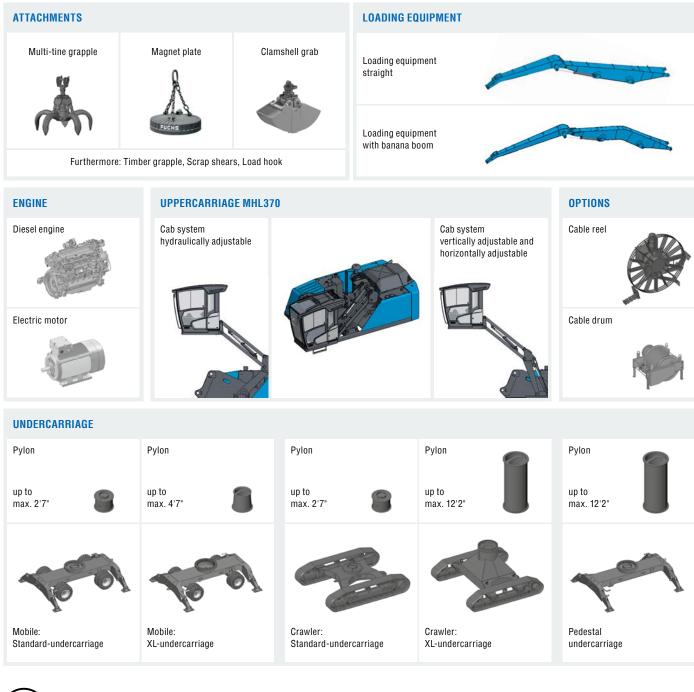


Height



4-point supported

MODULAR SYSTEM





WORKS FOR YOU."

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