

# Technical Description Crawler Tractor

**PR 742 B**  
Litronic®

**Engine output 172 kW/234 HP**  
**Operating weight 23.0 – 27.6 t/50,700 – 60,900 lb**  
**Hydrostatic travel drive with electronic steering control**



# LIEBHERR

The Better Machine.



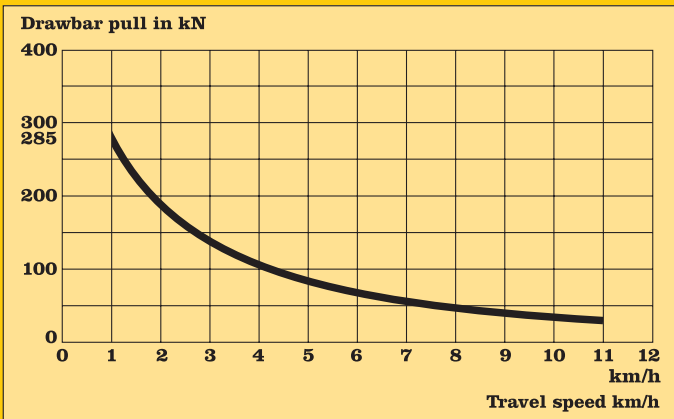
## Diesel Engine

Liebherr-Diesel Engine	D 926 TI-E
Rating per ISO 9249	234 HP (172 kW) at 1800 RPM
Displacement	10 l (610 cu.in.)
Bore/stroke	122/142 mm (4.8/5.6 in.)
Design	6 cylinder in-line engine, water-cooled, turbocharged, intercooled
Injection	direct fuel injection with in-line injection pump, mechanical governor
Fuel filter	pre-cleaner with water separator and microfilters
Lubrication	pressurized lube system with full flow filter and integrated oil cooler, deep oil pan for inclinations, engine lubrication to an inclination of up to 45° to each side
Operating voltage	24 V
Alternator	55 Amp.
Starter	6.6 kW (9.0 HP)
Batterie	143 Ah



## Travel Drive

Design	closed-loop hydrostatic drive, each track is driven by one variable flow swash plate-type pump and one variable displacement motor
Pump flow	max. 272 l/min (72 gpm)
Max. pressure	adjusted to 420 bar (6090 PSI)
Travel speed	0 - 11 km/h (0 to 6.8 mph) infinitely variable, forward and reverse
Steering	hydrostatic
Service brake	hydrostatic
Parking/emergency brake	automatic multi disc brake in final drives
Cooling system	hydraulic oil cooler with separate cooling circuit with gear pump and front mounted cooler
Filter system	cartridge microfilters in the cooling circuit
Final drive	2-stage planetary reduction gear



## Track Frame

Design	maintenance-free standard, long (L) or low ground pressure (M) tractor-type track frames
Mount	elastic components at a separate pivot shaft and an oscillating equalizer bar, oscillation $\pm 3^\circ$
Chains	lubricated, track chain tension via grease tensioner and hydraulic cylinders, single grouser pads
Chain links	40 (43 on PR 742 B-L and B-M)
Sprockets	5 replaceable segments
Track rollers	7 (8 on PR 742 B-L and B-M)
Carrier rollers	2



## Travel Control

1 Joystick lever	with electronic control for all travel functions: travel direction, speed, steering and counter-rotation
Speed range 1	0 - 4 km/h (0 to 2.5 mph)
Speed range 2	0 - 6.5 km/h (0 to 4 mph)
Speed range 3	0 - 11 km/h (0 to 6.8 mph)
Electronic engine speed sensing control	electronic regulation assures a constant balance between travel speed and necessary drawbar pull through engine speed sensing avoiding engine overload, even in partial load range
Straight line travel	electronically controlled
Parking/emergency brake	automatically applied after the joystick lever is put in neutral position
Safety lever	inactivates complete travel and working hydraulic circuit and automatically activates parking brake
Emergency shut off	push button on instrument panel immediately activates parking and emergency brake



## Implement Hydraulic

Hydraulic system	load sensing proportional pump flow control, variable flow swash plate piston pump and pressure compensation
Pump flow	max. 292 l/min. (77 gpm)
Pressure limitation	max. 160 bar (2320 PSI)
Control valve	2 spool control block, can be expanded to 4 circuits
Filter system	return filter with magnetic rod in hydraulic tank
Control	single servo-assisted joystick lever for blade hoist and tilt functions, electrically controlled blade float and quick drop



## Attachments

Front side	straight blade, semi-U-blade or angle blade with hydraulic tilt device
Rear side	ripper, hydraulic winch or swinging drawbar
Pivot points	maintenance-free, with hardened and polished pins and bushings



## Operator's Compartment

Cab	resiliently mounted, with integrated ROPS (Roll Over Protective Structure, SAE J 1040/ISO 3471) and FOPS (Falling Objects Protective Structure, SAE J 231/ISO 3449), can be tilted with hand pump to 40h to the rear for accessibility to machine components, diagonally arranged doors, all around safety glass
Operator's seat	fully adjustable, suspended swing seat, adjustable to operator weight
Instrument panel	comprehensive instrument panel on the right side of the operator's seat
Ventilation	pressurized filtered air ventilation, 3 stage blower, 8 air nozzles, sliding windows on both sides and in the rear
Heater	hot water heater
Noise level	82 dB(A) on job location, conforms to EG standard 86/662/EWG

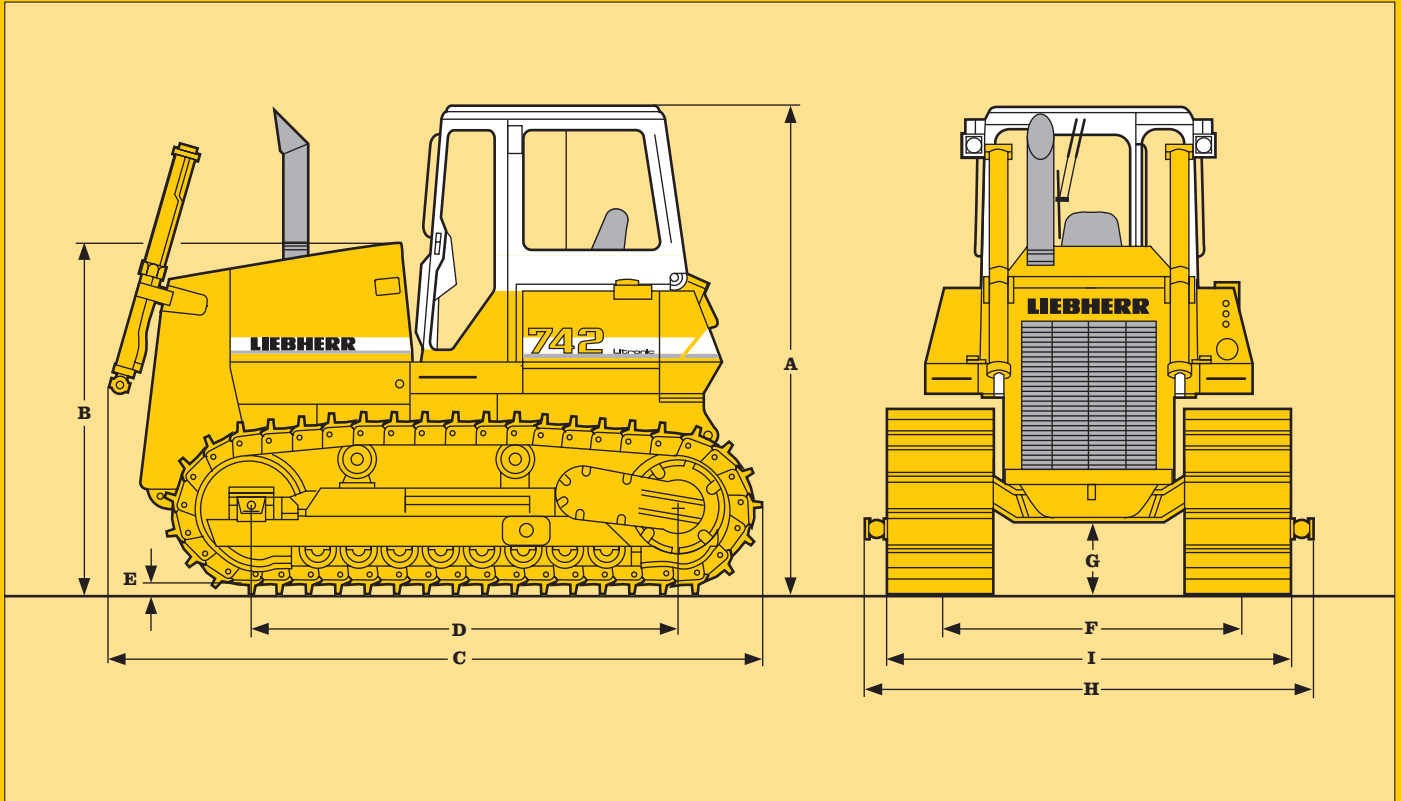


## Refill Capacities

Fuel tank	450 l (119 gal)
Cooling system	62 l (16.4 gal)
Engine oil	22 l (5.8 gal)
Splitterbox	3 l (0.8 gal)
Hydraulic tank	189 l (50 gal)
Final drive, each	23 l (6 gal)

# Technical Data

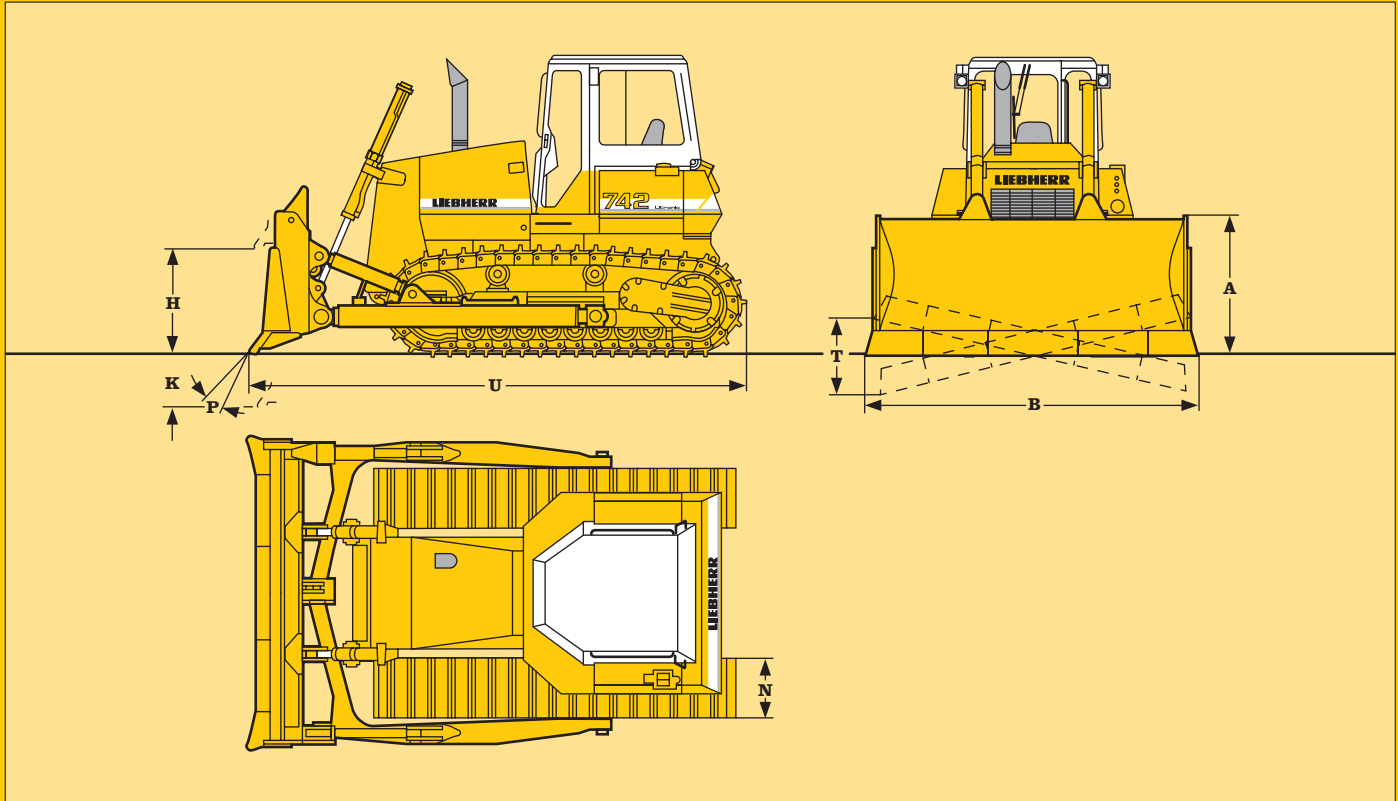
## Basic Machine



	PR 742 B	PR 742 B-L	PR 742 B-M
<b>Dimensions</b>	<b>ft-in/mm</b>	<b>ft-in/mm</b>	<b>ft-in/mm</b>
A Height over cab	10'10"/3305	10'10"/3305	10'10"/3305
B Height over engine cover	7'10"/2386	7'10"/2386	7'10"/2386
C Overall length without attachments	14'1"/4300	14'1"/4300	14'1"/4300
D Distance idler/sprocket center	9'9"/2960	10'9"/3275	10'9"/3275
E Height of grouser	2 1/2"/72	2 1/2"/72	2 1/2"/72
F Track gauge	6'6"/1980	6'6"/1980	7'2"/2180
G Ground clearance	1'7"/482	1'7"/482	1'7"/482
H Width over frame mounting trunions	9'9"/2974	9'9"/2974	11'1"/3374
I Overall width with			
pad size: 20"/508 mm	8'9"/2680	8'9"/2680	-
24"/610 mm	8'9"/2680	8'9"/2680	-
28"/710 mm	8'10"/2690	8'10"/2690	-
32"/812 mm	-	-	9'10"/2992
36"/914 mm	-	-	10'2"/3094
Ground contact area with			
pad size: 20"/508 mm	4650 sq.in./3.0 m <sup>2</sup>	5115 sq.in./3.3 m <sup>2</sup>	-
24"/610 mm	5580 sq.in./3.6 m <sup>2</sup>	6200 sq.in./4.0 m <sup>2</sup>	-
28"/710 mm	6510 sq.in./4.2 m <sup>2</sup>	7130 sq.in./4.6 m <sup>2</sup>	-
32"/812 mm	-	-	8215 sq.in./5.3 m <sup>2</sup>
36"/914 mm	-	-	9300 sq.in./6.0 m <sup>2</sup>

# Dimensions

## Straight Blade / Semi-U-Blade

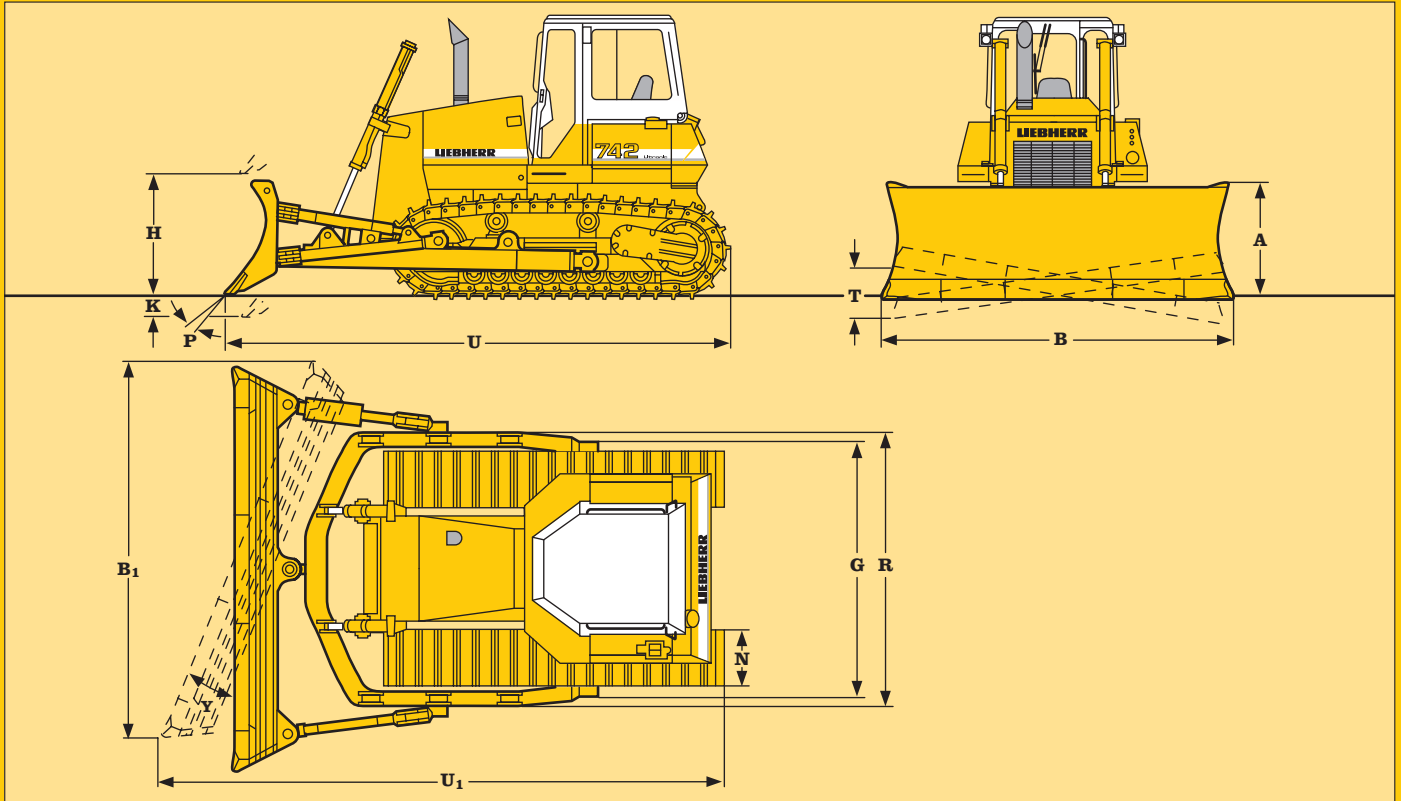


	Straight Blade			Semi-U-Blade	
	PR 742 B	PR 742 B-L	PR 742 B-M	PR 742 B	PR 742 B-L
Blade capacity (ISO 9246)	8.33 cu.yd./6.37 m <sup>3</sup>	8.33 cu.yd./6.37 m <sup>3</sup>	8.20 cu.yd./6.27 m <sup>3</sup>	9.7 cu.yd./7.42 m <sup>3</sup>	9.7 cu.yd./7.42 m <sup>3</sup>
<b>Dimensions</b>	ft-in/mm	ft-in/mm	ft-in/mm	ft-in/mm	ft-in/mm
A Blade height	4'9"/1450	4'9"/1450	4'5"/1350	4'11"/1500	4'11"/1500
B Blade width	13'1"/3990	13'1"/3990	14'9"/4500	12'2"/3700	12'2"/3700
H Blade lifting height	3'9"/1155	3'10"/1175	3'10"/1175	3'9"/1145	3'10"/1165
K Blade drop below ground	1'9"/525	2'/605	2'0"/600	1'8"/520	2'/600
P Max. blade pitch	10°	10°	10°	10°	10°
T Max. blade tilt	3'3"/980	3'3"/980	3'0"/910	3'/910	3'/910
U Overall length	17'11"/5460	18'11"/5775	18'11"/5770	18'6"/5645	19'7"/5960
N Track pad width	20"/24"/28"/508/610/710	20"/24"/28"/508/610/710	32"/36"/812/914	20"/24"/508/610	20"/24"/508/610
<b>Operating Weights *</b>	lb/kg	lb/kg	lb/kg	lb/kg	lb/kg
Basic machine with blade and track pad width of: 20"/508 mm	50,600/22,950	52,250/23,700	-	50,600/22,950	52,300/23,700
24"/610 mm	51,500/23,350	52,250/23,700	-	51,800/23,350	53,100/24,100
28"/710 mm	52,400/23,750	53,900/24,450	-	-	-
32"/812 mm	-	-	54,200/24,600	-	-
36"/914 mm	-	-	55,000/24,950	-	-
<b>Ground Pressures</b>	PSI/kg/cm <sup>2</sup>	PSI/kg/cm <sup>2</sup>	PSI/kg/cm <sup>2</sup>	PSI/kg/cm <sup>2</sup>	PSI/kg/cm <sup>2</sup>
Basic machine with blade and track pad width of: 20"/508 mm	10.81/0.76	10.24/0.72	-	10.81/0.76	10.1/0.71
24"/610 mm	9.25/0.65	8.39/0.59	-	9.25/0.65	8.53/0.60
28"/710 mm	8.11/0.57	7.54/0.53	-	-	-
32"/812 mm	-	-	6.54/0.46	-	-
36"/914 mm	-	-	5.97/0.42	-	-

## Attachments

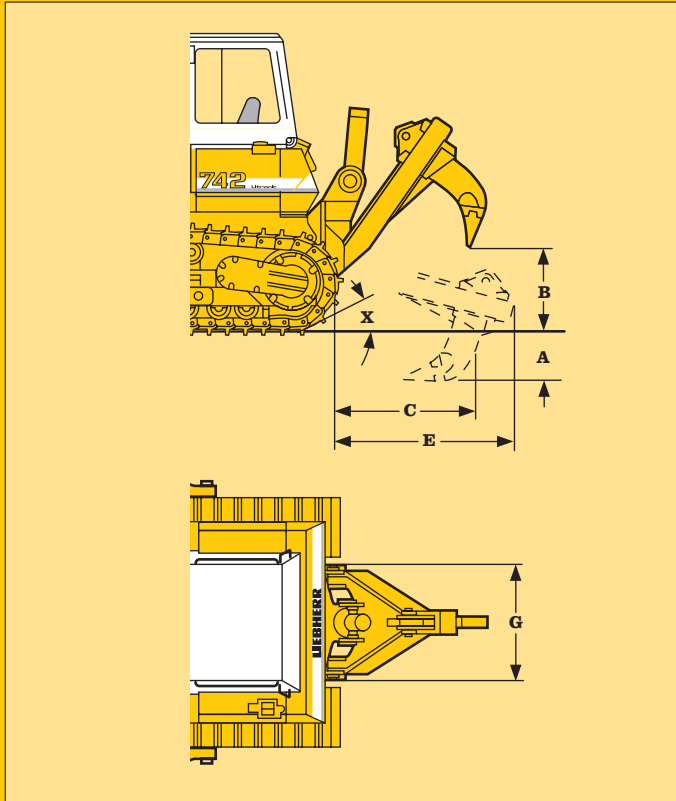


# Angle Blade With Hydraulic Tilt Device

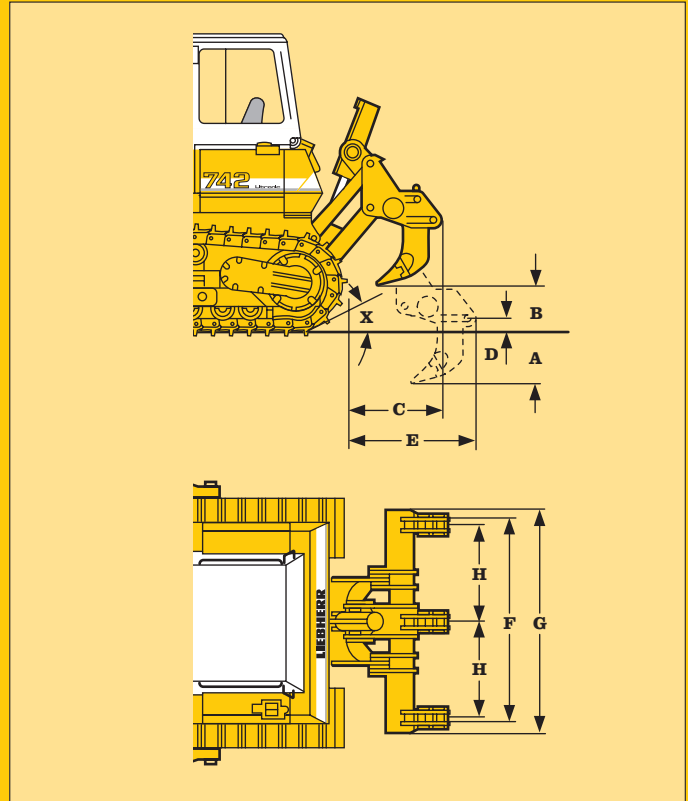


	PR 742 B	PR 742 B-L
Blade capacity (ISO 9246)	6.41 cu.yd./4.9 m <sup>3</sup>	6.41 cu.yd./4.9 m <sup>3</sup>
<b>Dimensions</b>	<b>ft-in/mm</b>	<b>ft-in/mm</b>
A Height of blade	3'11"/1200	3'11"/1200
B Width of blade	15'1"/4590	15'1"/4590
B1 Transport width	14'0"/4175	14'0"/4175
H Blade lifting height	4'0"/1210	4'0"/1285
K Blade drop below ground	1'11"/580	1'11"/645
P Max. blade pitch	10°	10°
Y Blade angled	25°	25°
T Max. blade tilt	2'5"/735	2'5"/735
G Width over frame mounting trunions	9'9"/2974	9'9"/2974
R Width over C-frame	10'6"/3200	10'6"/3200
U Overall length, blade straight	19'1"/5810	20'1"/6125
U1 Overall length with blade angled	22'0"/6700	23'0"/7015
N Track pad width	20"/24"/28"/508/610/710	20"/24"/28"/508/610/710
<b>Operating Weights *</b>	<b>lb/kg</b>	<b>lb/kg</b>
Basic machine with blade and trackpads 20"/508 mm	51,000/23,150	52,500/23,800
24"/610 mm	51,900/23,550	53,350/24,200
28"/710 mm	52,600/23,850	54,100/24,550
<b>Ground Pressures</b>	<b>PSI/kg/cm<sup>2</sup></b>	<b>PSI/kg/cm<sup>2</sup></b>
Basic machine with blade and trackpads 20"/508 mm	10.95/0.77	10.24/0.72
24"/610 mm	9.25/0.65	8.53/0.60
28"/710 mm	8.11/0.57	7.54/0.53

## Single Shank Ripper



## 3-Shank Ripper



### 1-shank rigid type

#### Dimensions

	ft-in/mm
A Ripping depth	2'8"/1'10"/805/565
B Lifting height	2'9"/3'4"/840/1010
C Overall length attachment raised	5'6"/4'11"/1680/1490
E Overall length attachment lowered	6'8"/2030
G Width	3'8"/1115
X Slope angle	25°/32°

#### Weight

	lb/kg
Ripper complete	4400/2000

### 3-shank rigid type

#### Dimensions

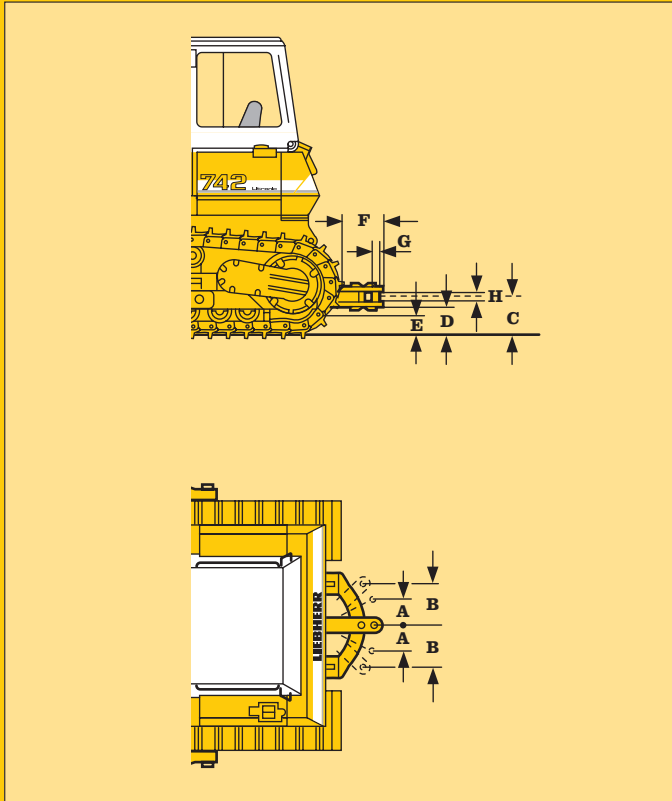
	ft-in/mm
A Ripping depth	2'1"/1'5"/625/425
B Lifting height	1'9"/2'5"/540/740
C Overall length attachment raised	3'8"/1130
D Ground clearance below toolbar	10"/260
E Overall length attachment lowered	5'6"/1675
F Ripping width	6'9"/2070
G Toolbar width	7'10"/2400
H Distance between teeth	3'3"/1000
X Slope angle	29°/36.5°

#### Weight

	lb/kg
Ripper complete	5750/2600

# Attachments

## Swinging Drawbar



## Swivelling Design

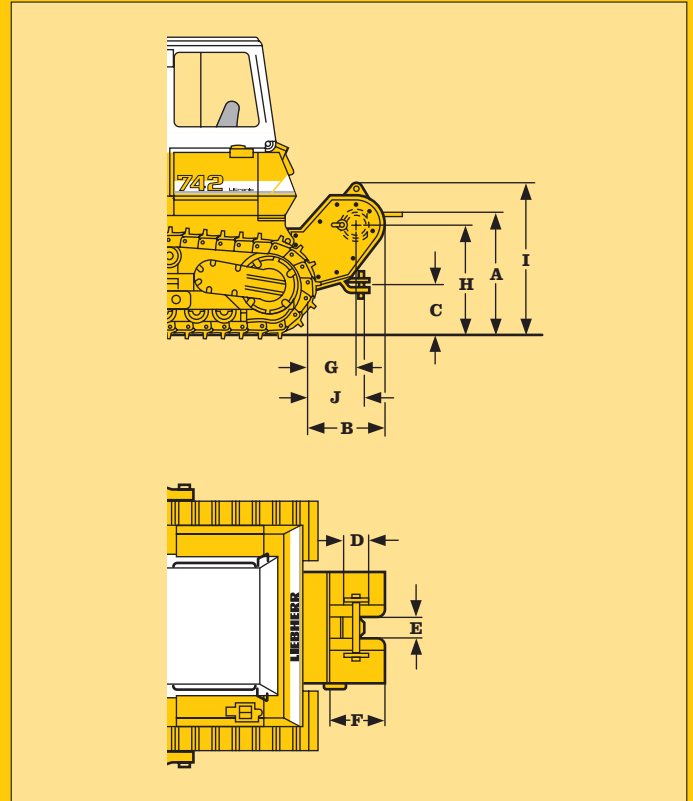
### Dimension

	ft-in/mm
A Swing angle min.	8 <sup>1</sup> / <sub>2</sub> "/210
B Swing angle max.	1'4"/400
C Height of drawbar	1'10"/565
D Ground clearance below drawbar	1'7"/475
E Ground clearance below drawbar suspension	1'4"/410
F Overall length	1'5"/425
G Pin diameter	2"/50
H Size of opening	3 <sup>1</sup> / <sub>2</sub> "/95

### Weight

	lb/kg
Swinging drawbar	1100/500

## Winch



Max. line pull: 520 kN/53,0 t/116,800 lb  
 Max. line speed: 0 - 80 m/min./0 - 262 ft/min.  
 Cable size: 28 mm/1<sup>1</sup>/<sub>8</sub>"  
 Cable length: 60 m/197 ft

### Dimensions

	ft-in/mm
A Height, cable exit	4'4"/1325
B Overall length	2'5"/740
C Height drawbar	1'8"/510
D Drum diameter	11 <sup>1</sup> / <sub>2</sub> "/290
E Coiling width	11 <sup>1</sup> / <sub>2</sub> "/290
F Flange diameter	2'0"/600
G Distance to center of drum	1'5"/440
H Height of drum center	3'10"/1170
I Total height	5'3"/1600
J Hook radius of winch	1'5"/425

### Weight

	lb/kg
Winch complete	5620/2550

## Basic machine

	Standard	Option
Cover engine hood		●
Cover oil cooler		
Exhaust catalyst		
Tow switch	NEW!	●
Towing hitch rear	●	●
Towing lug front	●	
Forestry equipment		●
Woodchip handling equipment		●
Coal handling equipment		●
Landfill equipment		●
Battery compartment lockable	●	
Filling with environmental friendly oil		●
Filling with oil SAE 10		●
Filling with oil SAE 30		●
Tank guard complete		●
Tank guard bottom		●
Refuelling pump electrical		●
Belly pans heavy duty	●	
Fire supression system engine compartment		●
Connector external electric power		●
Cold start device ether		●
Cold start device glow plug	●	
Radiator coarse mesh	●	
Radiator guard 2-piece, hinged	●	
Liebherr Diesel engine	●	
Fan - hydraulically driven	NEW!	●
Fan guard	NEW!	●
Engine oil cooler	●	
Engine doors perforated		●
Engine doors hinged, lockable	●	
Lugs for crane lifting		●
Platform rear		●
Special paint		●
Settling pund equipment		●
Fuel water separator	●	
Fuel water separator with electric heater		●
Air filter dry-type, dual step	●	
Wear guard for radiator		●
Precleaner with automatic dust ejector	●	
Preheater for engine electric		●
Tool kit in batteries compartment	●	

## Travel drive

Parking brake automatic	●	
Function control automatic	●	
Control - single lever	●	
Load limit control electronic	●	
Travel control electronic	●	
Travel control 2-speed		
Travel control 3-speed	NEW!	●
Hydrostatic travel drive	●	
Emergency stop	●	
Oil cooler	●	
Final drives planetary gear	●	
Safety lever	●	

## Undercarriage

Resilient mounting	●	
Track shoes extreme service (ESS)		●
Track frame closed	●	
Sprocket segments bolt-on	●	
Master link 2 piece	●	
Track shoes with relief holes		●
Tracks oil lubricated	●	
Track guide center part		●
Track guard		●
Undercarriage extented		●
Undercarriage low ground pressure		●
Undercarriage standard	●	
Undercarriage extra wide tracks		
Track frames oscillating +/- 3°	●	
Pivot shaft separate	●	
Sprocket segments with recesses		●

## Electrical system

Starter motor 6,6 kW	●	
Starter motor 9 kW		●
Working lights rear 2 units	●	
Working lights front 2 units	●	
Battery main switch electric	●	
Batteries, heavy duty cold start	●	
On-board system 24 V	●	
Alternator 24 V	●	
Alternator 55 A	●	
Alternator 80 A		●
Back-up alarm	●	
Beacon		●
Horn	●	
Start lock electronic		●
Lights additional rear 2 units	●	
Lights additional on lift cylinders	●	
Lights additional on engine hood	●	

## Operator's cab

	Standard	Option
Stowing box	●	
Armrest adjustable	NEW!	●
Ash tray	●	
Rear mirror outside left		●
Pressurizer with air filter	●	
Operator's seat 6-way adjustable	●	
Operator's seat air suspended		●
Fire extinguisher		●
Dome light	●	
Coat hook	●	
Air conditioner		●
FM radio		●
Radio installation kit		●
ROPS-canopy	●	
ROPS/FOPS-cab sound supressed		●
Rear mirror inside	●	
Windscreen washer	●	
Windscreen wipers front, rear, doors	●	
Sliding windows	●	
Protective grids for windows		●
Safety glass tinted	●	
Sun blinds		●
Extra cab heater		●
Cabin heater warm water	●	

## Instruments - Indicators

Battery charging	●	
Hour meter	●	
Electronic control	●	
Speed range	●	
Engine oil pressure	●	
Water temperature	●	
Oil pressure cooling circuit	●	
Oil level final drives	●	
Float position blade	●	
Fuel level	●	
Contamination hydraulic filter	●	
Contamination air filter	●	
Cold start Diesel engine	●	

## Implement hydraulic

Hydraulic control 6-way-blade		
Hydraulic control ripper		●
Hydraulic control winch		●
Variable flow pump, load sensing	●	
Oil filter with strainer in hydraulic tank	●	
Blade quick drop	●	
Blade float position	●	
Control block for 2 circuits	●	
Hydraulic tank oil level control	●	
Hydraulic servo control		●

## Attachments

Mounting plate rear for external tools		●
Drawbar rear hinged		●
Drawbar rear rigid		●
Counterweight rear		●
Ripper single shank		●
Ripper 3 shank		●
Ripper 5 shank		●
Bumper rear		
Rake for landclearing		●
6-way-blade inside mounted		
6-way-blade outside mounted		
6-way-blade with hinged corners		
Blade - straight blade		
Blade - semi-U-blade		●
Blade - trimming blade		
Blade - U-blade		●
Blade - angle blade		●
Blade - woodchip-U-blade		●
Blade - coal-U-blade		●
Blade - landfill blade		●
Push plate		●
Winch		●
Rock guard for semi-U-blade		●
Spill plate		●
Wear plates for push arms		●
Wear plates for blades		●

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