LIEBHERR RL 42 B Litronic

50 tons lift capacity pipelayer

Liebherr Diesel engine - 172 KW (234 HP)

D7G chain, single grouser track pads 914/711 mm

ROPS canopy or ROPS cabin with heater / air-conditioning

6.010 mm boom made of highly resilient, grain refined steel

50 tons lift capacity - Hydraulic driven hoist winch

Operating weight 34.500 kg - Ground pressure 0,65 kg/cm^2

Extractable counterweight 8.186 kg (removable weight 6.150 kg)

Hydr. drive for pipe facing machine and welding generator (optional)

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Technical Description
Pipe Layer

RL 42 B
Litronic®

Engine output 234 HP/172 kW
Max. lift capacity 50 tons/110,250 lbs
Operating weight 34.500 kg/76,073 lbs

LIEBHERR

The Better Machine.

The decisive economical factors of the RL 42 B Litronic:

1. The construction machine engine

The heart of the RL 42 B pipe layer is the Liebherr diesel engine, with reduced emissions, specially designed for construction site applications. In addition to a high level of reliability, the engine also offers exemplary performance and it does so while achieving a low level of fuel consumption previously unattained. The pipe layer's cooling system is specially adapted to high ambient temperatures. The cooler's extremely large distance between ribs provides for high reliability and longer periods between service intervals.

2. The hydrostatic travel drive

The outstanding characteristic of the pipe layer is its modern drive concept. In contrast to conventional systems, this drive offers decisive advantages in pipeline construction, like e.g.

- Stepless speed regulation
- Single lever operation
- Constant drawbar force on both tracks preventing the machine from sinking on soft ground
- Exact positioning of the pipe due to the ability to turn on the spot
- Maximum drawbar force is available to the operator as soon as the machine starts travel
- Low operating costs due to wear-free brakes and a low number of drive components.

3. The innovative undercarriage

The asymetrical undercarriage makes it possible to work specially on the load side while ground pressure is reduced considerably. At the same time, the machine's off-centered center of gravity, provides the pipe layer unimagined lift force.

4. The simple and comfortable operation

Operating elements, proven in on site experience, make the Liebherr pipe layer remarkable. All travel functions, all boom functions as well as the load hook are controlled by one joystick respectively. Optimal for safe and easy handling of the machine.

5. The economical working attachments

Above all, the pipe layer's working attachments are convincing due to their functionality with:

- the hydraulically driven winch
- the hydraulically adjustable boom
- the standard working hydraulics can be used to drive a pipe facing machine or a welding generator.

The boom can be adjusted precisely and without sudden jerks with a hydraulic cylinder.

The hydraulically driven cable winch offers stepless and precise control of the load hook. Lowering the load occurs while stress flows constantly. If the cable winch is not being used, the automatic safety brake is applied immediately and thus guarantees secure holding of the load.

The pipe layer can also be equipped both with a canopy and a fully enclosed operator's cab.

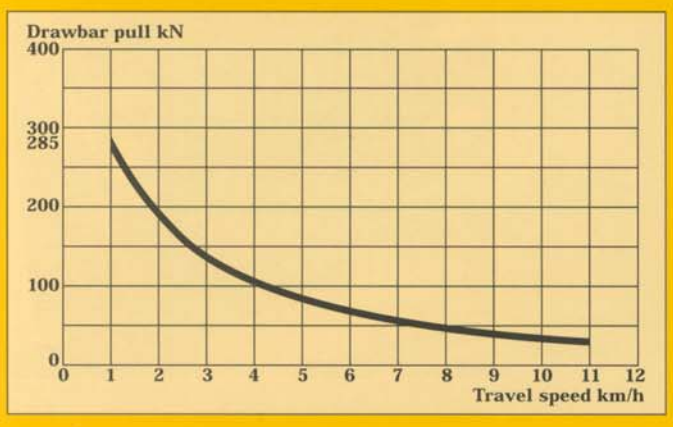
The RL 42 B Pipe Layer: Versatile, precise and economical.

Diesel Engine

Liebherr-Diesel Engine	D 926 TI-E
Rating per ISO 9249	172 kW (234 HP) at 1800 RPM
Displacement	10 l / 610 cu.in.
Bore/stroke	122/142 mm / 4.8"/5.6"
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 fine filters
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 HP
Main fuse	35 A

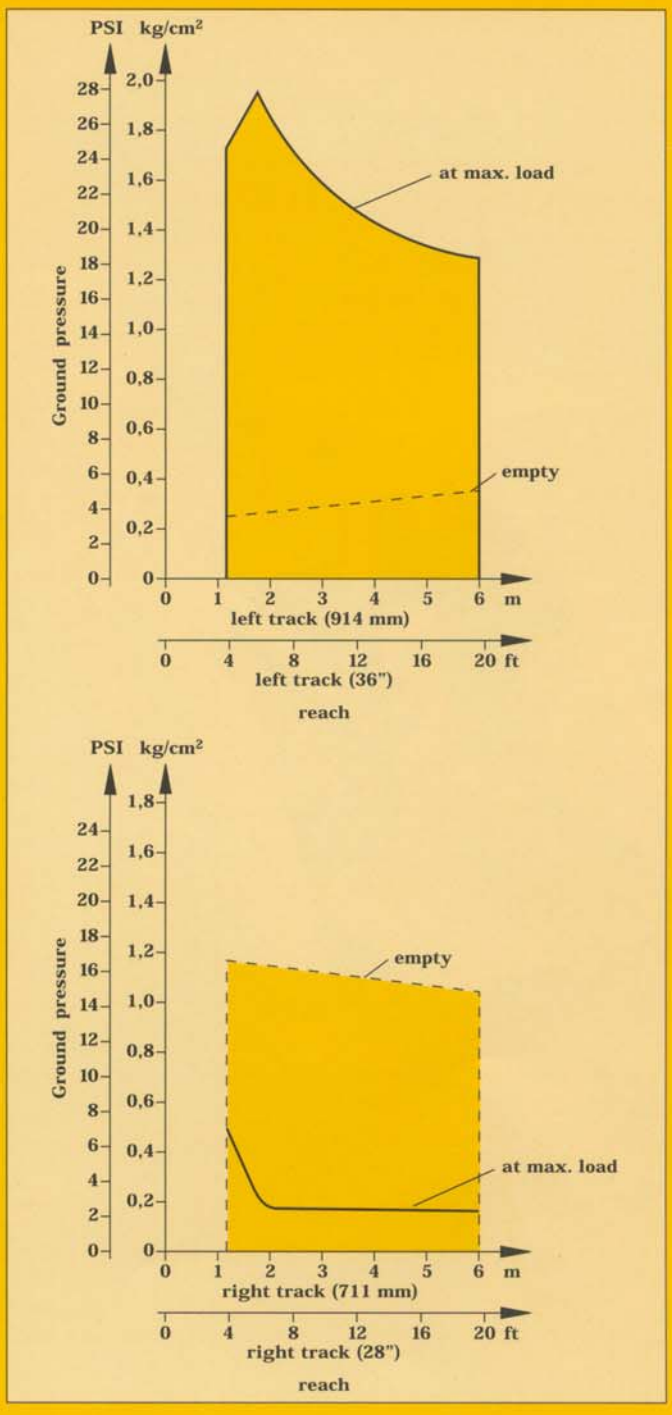
Travel Drive

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 / 71.8 gal /min
Max. pressure	adjusted to 420 bar / 6090 PSI
Travel speed	0–11 km/h / 0–6.8 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 fine filters in the cooling circuit
Final Drive	2-stage planetary reduction gear



Track Frame

Design	maintenance-free tractor-type track frames
Mount	elastic components at a separate pivot shaft
Chains	lubricated, track chain tension with grease tensioner, single grouser pads
Chain links	43
Sprockets	5 replaceable segments
Track rollers	8
Carrier rollers	2
Ground contact area	5,32 m² / 8,246 sq.in.
Ground pressure	0,65 kg/cm² / 9.24 PSI



Technical Data

Travel Control

1 Joystick lever	with electronic control for all travel functions: travel direction, speed, steering and counter-rotation
Speed range 1	0 – 5 km/h / 0 – 3.5 mph
Speed range 2	0 – 11 km/h / 0 – 6.8 mph
Electronic engine speed sensing control	electronic regulation assures a constant balance between travel speed and neccessary 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

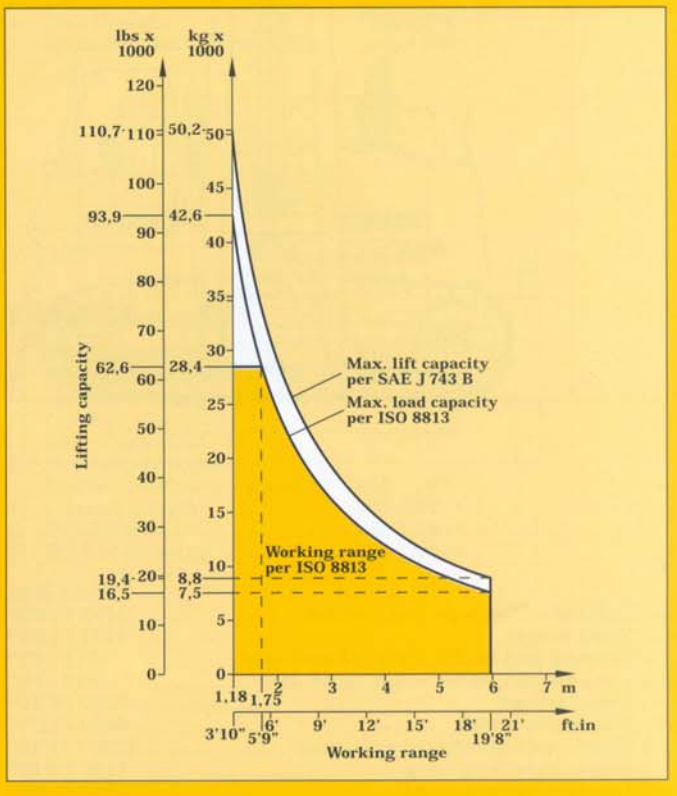
Implement Hydraulic

Hydraulic system	on demand (load sensing) control, swash plate type variable displacement pump and pressure cut-off for hoist winch and adj. boom and counterweight cylinder drive
Max. pump flow	max. 292 l/min / 77.1 gal/min
Pressure limitation	adjusted to 280 bar / 4060 PSI
Control valve	3 spool segments
Filter system	return filter with magnetic rod in hydraulic tank
Control	single servo-assisted joystick lever for hoist winch and adj. boom cylinder, safety lever prevents inadvertent movement, free fall device makes it possible to lower the load in case of danger servo-assisted joystick lever for adj. counterweight cylinders

Working Attachment

Hoist winch	driven by variable flow hydraulic pump, control valve block and variable oil motor in open circuit. Brake valve helps to sensitively lower the load over total speed range, when the control lever is in neutral, a spring-loaded disk brake holds the load safely in any position
Drum diameter	305 mm / 1'0"
Drum length	254 mm / 10"
Flange diameter	566 mm / 1'10"
Cable diameter	20 mm / 0.8"
Cable length	65 m/71.1 yards
Hook block	4 sheave
Hook speed in 1. cable position	up 0 – 25 m/min / 27.3 yards/min stepless down 0 – 25 m/min / 27.3 yards/min stepless
Safety device	free fall control
Adjustable boom control	through hydraulic cylinder, the lifting and lowering speed of the boom and the hook block can be changed steplessly, drives are fully independent and can be actuated at the same time. A check valve keeps the boom leakage free in any position and prevents uncontrolled boom drop in case of loss of pressure

Adjustable boom cylinder	
Piston diameter	170 mm / 6.7"
Rod diameter	90 mm / 3.5"
Stroke	1260 mm / 4'2"
Boom	
Design	box-type welded structure made of highly resilient, grain refined steel
Fixed boom	length 6010 mm / 19'9" welded box sectioned
Counterweight	installed on the right hand side of the machine, total weight extractable (8186 kg / 18,050 lbs) removable weight of 6150 kg / 13.561 lbs

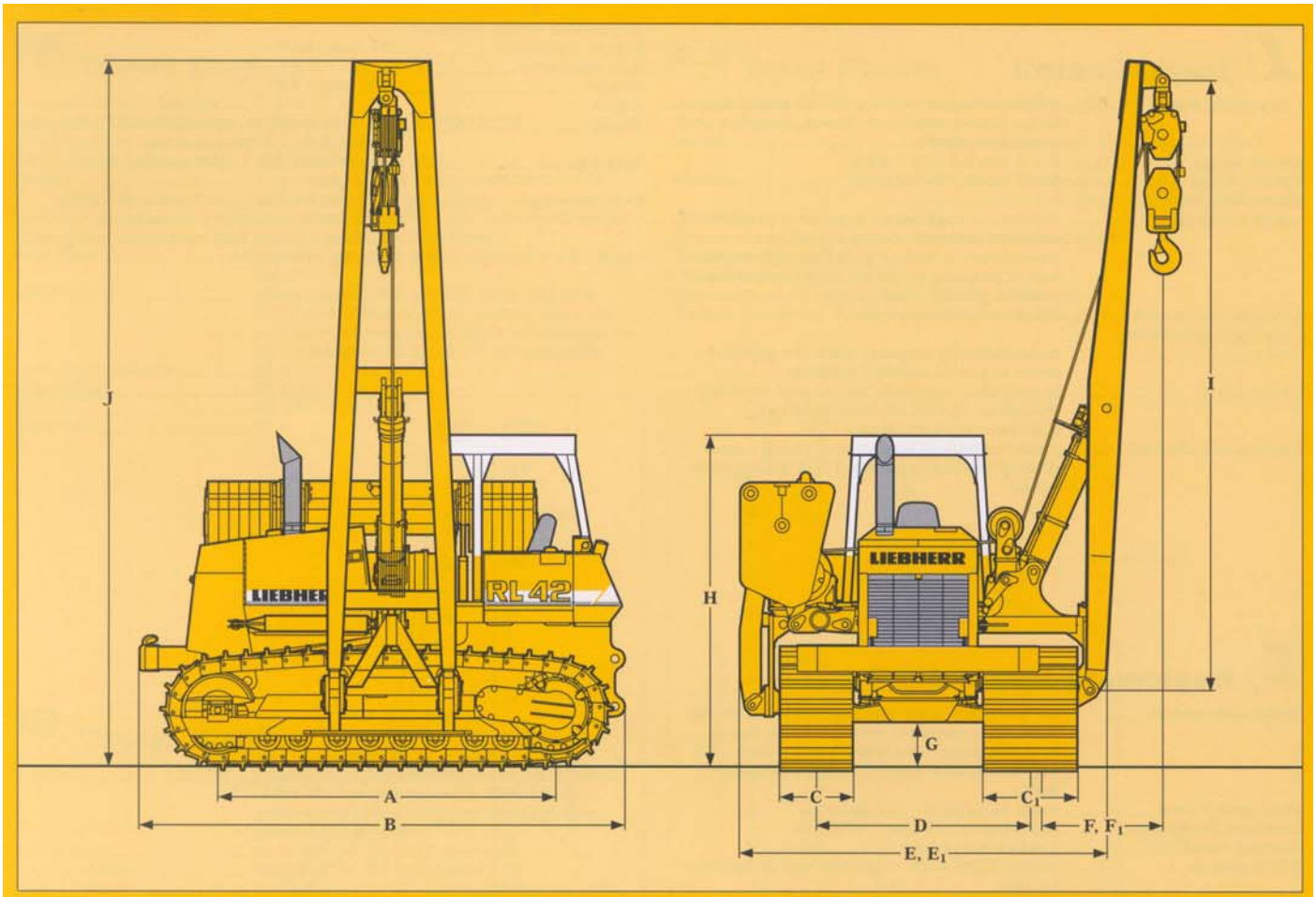


Operator's Compartment

Mount	resiliently mounted
Operator's seat	fully adjustable swing seat, adjustable to operator weight
Monitor	comprehensive instrument panel on the right hand side of the operator's seat

Refill Capacities

Fuel tank	450 l / 118.8 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 / 6.1 gal



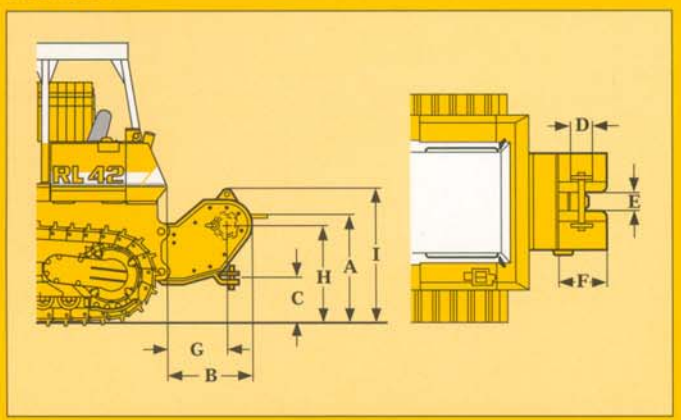
		mm / ft-in
A	Distance idler/sprocket center	3275 / 10'9"
B	Total length	4741 / 15'7"
C	Ground pad width – right hand side	711 / 28"
C1	Ground pad width – left hand side	914 / 36"
D	Track gauge	2080 / 6'10"
E	Transport width	3490 / 11'5"
E1	Width counterweight extended	5130 / 16'10"
F	Boom overhang, min.	1180 / 3'10"
F1	Boom overhang, max.	5985 / 19'8"
G	Ground clearance	482 / 1'7"
H	Transport height	3305 / 10'10"
I	Boom length	6010 / 19'9"
J	Total height, max.	6890 / 22'7"

Basic Machine Contents

- Pipe layer RL 42 B with Liebherr Diesel engine D 926 TI-E
- Chain D7G, single grouser track pads 914/711 mm / 28"/36", 43 links, lubricated
- Canopy
- Hoist winch
- Counter weight 8186 kg / 18,050 lbs
- Boom 6010 mm / 19'9"

Dimensions

Winch

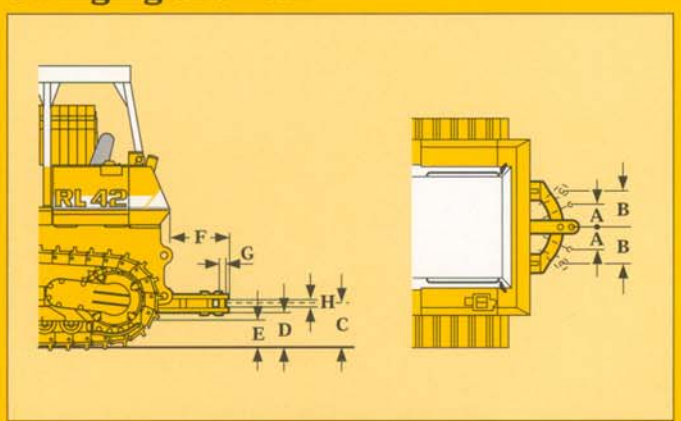


Max. line pull:	520 kN (53,0 t) / 116,865 lbs
Max. line speed:	0 – 80 m/min / 87.49 yards/min
Cable size:	28 mm / 1.1"
Cable length:	60 m / 65.62 yards
Weight:	2550 kg / 5,623 lbs

Dimensions

		mm / ft-in
A	Height, cable exit	1325 / 4'4"
B	Overall length	1090 / 3'7"
C	Height drawbar	510 / 1'8"
D	Drum diameter	290 / 11.42"
E	Coiling width	290 / 11.42"
F	Flange diameter	600 / 2"
G	Distance to center of drum	790 / 2'7"
H	Height of drum center	1170 / 3'10"
I	Total height	1600 / 5'3"
J	Overall length of drawbar	960 / 3'2"

Swinging drawbar



Weight:	500 kg

Dimensions

		mm / ft-in
A	Swing angle min.	210 / 8.3"
B	Swing angle max.	400 / 1'4"
C	Height of drawbar	565 / 1'10"
D	Ground clearance below drawbar	475 / 1'7"
E	Ground clearance below drawbar suspension	410 / 1'4"
F	Overall length	775 / 2'7"
G	Pin diameter	50 / 1.97"
H	Size of opening	95 / 3.74"

Attachments

Basic machine

	Standard	Option
Towing hitch rear	●	
Towing lug front	●	
Battery compartment lockable	●	
Filling with oil SAE 10		●
Filling with oil SAE 30		●
Refuelling pump electrical		●
Belly pans heavy duty	●	
Cold start device ether		●
Cold start device glow plug	●	
Radiator coarse mesh	●	
Radiator guard 2-piece, hinged	●	
Liehberr Diesel engine	●	
Fan – hydraulically driven		
Fan – gear drive	●	
Fan guard		●
Engine oil cooler	●	
Engine doors perforated		●
Engine doors hinged, lockable	●	
Lugs for crane lifting		●
Bumper front	●	
Special paint		●
Fuel water separator	●	
Fuel water separator with electric heater		●
Air filter dry-type, dual step	●	
Precleaner with automatic dust ejector	●	
Preheater for engine electric		●
Tool kit in batteries compartment	●	

Operator's cab

	Standard	Option
Operator's seat 6-way adjustable	●	
ROPS-canopy	●	
ROPS/FOPS-cab sound supressed		●
Protective grid for canopy rear		

Instruments – Indicators

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

Travel drive

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

Implement hydraulic

Control group boom	●	
Control group hoist winch	●	
Control group rear winch		●
Control group generator 75 kVA		●
Control group generator + pipe facing		●
Variable flow pump, load sensing	●	
Oil filter with strainer in hydraulic tank	●	
Hydraulic servo control	●	

Undercarriage

Track shoes extreme service (ESS)		●
Track frame closed	●	
Sprocket segments bolt-on	●	
Master link 2 piece	●	
Track guide center part		●
Tracks oil lubricated	●	
Undercarriage standard	●	
Pivot shaft separate	●	

Electric system

Starter motor 6,6 kW	●	
Starter motor 9 kW		●
Working lights rear 2 units	●	
Working lights front 2 units	●	
Working lights side 2 units	●	
Battery main switch electric	●	
Batteries, heavy duty cold start	●	
On-board system 24 V	●	
Alternator 55 V	●	
Alternator 80 A		●
Back-up alarm		●
Horn	●	

Attachments

Drawbar rear hinged		●
Drawbar rear rigid		●
Boom 2-piece foldable 4750 mm		
Boom single piece 4750 mm		
Boom single piece 6000 mm		●
Boom single piece 7000 mm		
Boom single piece 7320 mm		●
Boom jib		
Counter weight		●
Rear winch		●

LWT/VM 8434315-2-04.01 Printed in Germany by Gerstmayer.

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