

Technical Description Welding Tractor

SR 712 BM
Litronic®

Engine output 120 kW / 163 HP

Hydrostatic travel drive with electronic steering control

Operating weight 16,920 - 17,490 kg / 37,309 - 38,565 lbs



LIEBHERR

The Better Machine.

The decisive economical factors of the SR 712 BM:

1. The construction machine engine
 - High operational safety
 - Low engine RPM
 - Low fuel consumption
 - Low emissions
2. The hydrostatic travel drive
 - Permanently high ratio of efficiency
 - Optimal overload protection
 - Excellent precision controls
 - Stepless regulation of speed
 - Exact straight travel
 - High manoeuvrability including turning on the spot
3. The innovative track frame concept
 - Low ground pressure
 - High stability
 - Excellent climbing ability
 - High shock absorption
4. The economical working attachments
 - Hydraulically driven generator
 - Hydraulically driven compressor
 - Hydraulically driven loading crane
 - All aggregates are driven by the standard diesel engine of the welding tractor.
 - Up to 6 modular welding positions
 - Welding and power cable premounted to crane
5. The practical and comfortable working environment
 - Available with canopy as well as with fully enclosed cab
 - Optimal visibility of work area
 - Single joystick control of basic machine
 - Control for crane and compressor located next to operator's seat
 - Electrical isolation monitoring



The Advantage: Total economical efficiency.

Functional design

The modern SR 712 BM welding tractor is especially remarkable due to its functionality as carrier machine for the equipment necessary for pipeline welding.

The standard diesel engine of the welding tractor is used for driving the welding generator, the hydraulic crane and the air compressor - an additional diesel engine is not necessary for this purpose. Thus noise emissions are reduced, fuel consumption made more efficient and maintenance work on additional components is eliminated.

The long tracks and the high ground clearance also make it possible to use the machine in difficult ground conditions optimally. The added, extremely low ground pressure guarantees safe operation even on soft ground, as is especially the case on pipeline sites.

Easy and safe operation

One decisive aspect when operating a crawler welder is easy control. Above all the hydrostatic travel drive is remarkable due to its single lever control. This lever controls all travel movements of the machine.

Control of the generator, loading crane as well as the compressor are located next to the operator's seat. The operator can concentrate fully on the work area from the operator's seat and can guarantee safe handling of the machine even at construction sites with tight quarters.



Single joystick control as well as the possibilities of a canopy and a fully enclosed cab make the Liebherr operator post remarkable.



Control of the loading crane and the compressor is ergonomically located next to the operator's seat.



A hydraulically driven air compressor fills the large air tank.



The electric generator is driven hydraulically for constant weld quality.



The welding tractor can be equipped with 6 welding positions.



The SR 712 BM Welding Tractor: Versatile, precise and economical.



Engine

Liebherr-Diesel Engine	D 924 T-E
Rating per ISO 3046	163 HP (120 kW) at 2000 RPM
Displacement	6,7 l (409 cu.in)
Bore/stroke	122/142 mm (4.8/5.9 in)
Design	4 cylinder, in-line, water-cooled, turbo-charged, engine individual cylinder heads, wet cylinder bushings, maintenance-free drive for fan and water pump
Injection	direct fuel injection with distributor injection pump, mechanical regulator
Fuel filtration	pre-filter with water separator and fine filter micro element
Air filtration	combustion air pre-filter with automatic dust ejection, dry air filter system with main and safety element
Lubrication	pressurized lubrication system with main flow filters 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 A DC
Starter	5,4 kW (7.3 HP)
Central fuse box	35 A



Travel Drive

Design	independent hydrostatic drive of travel gear
Pump flow	max. 125 l/min (32 gpm)
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 with hydraulic travel motor



Track Frame

Design	maintenance-free crawler travel gear
Mount	fixed over pre-mounted support axles and bridge
Chains	sealed, chain tension via spring loaded tensioner and hydraulic cylinders, single grouser pads
Chain links	44
Sprockets	2 replaceable segments
Track rollers	7
Carrier rollers	2



Travel Control

1 Joystick lever	with electronic control for all travel functions: travel direction, speed, steering and counter-rotation
Low speed range	for the total joystick deflection range for the travel speed from 0-5 km/h (0-3.1 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 hydraulic circuit and automatically activates the 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 generator drive and separate circuits for compressor- and crane drive
Max. pump flow	max. 300 + 38 + 38 l/min
Pressure limitation	adjusted to 280 bar
Filter system	return filter with magnetic rod in hydraulic tank



Operator's Platform

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	310 l
Cooling system	52 l
Engine oil	18 l
Splitterbox	2,5 l
Hydraulic tank	178 l
Final drive, each	5,5 l



Generator

Design	hydraulic powered Stamford electric generator in protection skid (IP 45)
Rating	125 kVA
Voltage	231/400 V - 50 Hz
Switch box	integrated switch box with Amp., Hz., and Volt gauges and service hour indicator; insulation monitoring device
Plug sockets	4 x shuko 231 V 4 x CEE 400 V
Operation	push button on instrument panel



Compressor

Design	hydraulic powered heavy duty Quincy air compressor, skid mounted
Model	QR-25 basic two-stage compressor model 370 LVD
Rating	1.245 l/min @ 14 bar
Airreceiver	500 l; 16 bar
Operation	control lever at operator's platform



Crane

Design	fully hydraulic powered HIAB crane with 400° slewing angle; front mounted; complete with service lead supports and hook for lifting of welding tent
Model	071 AW
Capacity	70,6 kNm (7.2 tm)
Max. reach	7,2 meter (full hydraulic)
Operation	control levers and emergency switch at operator's platform



Welding Equipment

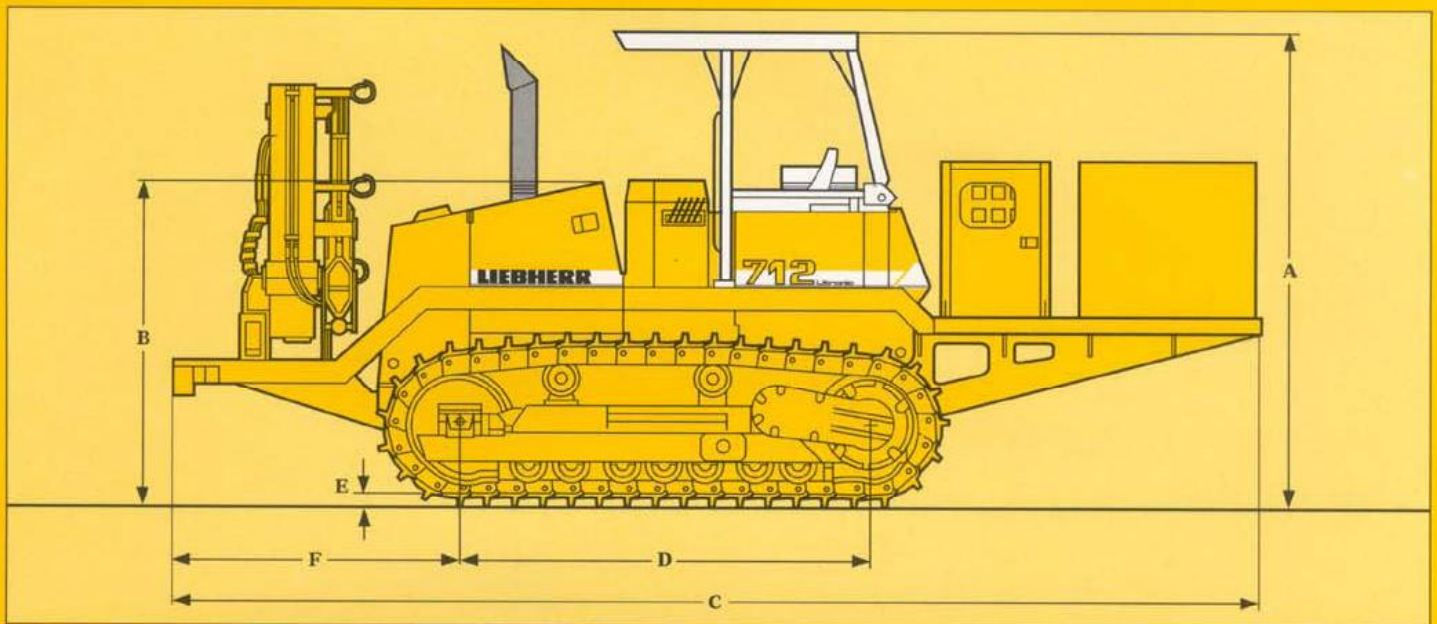
Design	4 pos. electric powered welding sources mounted in protection housings
Model	on customers request
Operation	remote control on welding spot, service lead two meters longer than max. reach of crane

Working Attachment

- Lockable toolbox
- Gasbottle support for two propane gasbottles
- Working lights at front, left and rear side of the machine

Optionals

- Cabin
- Airconditioning
- Trackguard
- Swamp undercarriage
- Air compressor Quincy 390 LVD
- 6 welding positions
- Preparation for automatic welding
- Salt chains
- Different Generator
- Different Compressor
- Different Crane



Dimensions

A	Height over canopy
B	Height over engine cover
C	Overall length
D	Distance idler/sprocket center
E	Height of grouser
F	Additional length frontside from idler cutter
	Overall width with
	pad size 24"/610 mm
	28"/711 mm
	30"/762 mm
	34"/864 mm

ft-in/mm

10'2"/3100
6'11"/2100
22'9"/6934
8'7"/2615
2"/56
5'8"/1719
4944 sq.in/3.19 m ²
5766 sq.in/3.72 m ²
6184 sq.in/3.99 m ²
7006 sq.in/4.52 m ²

Technical Data/Dimensions

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