

LIEBHERR RL 22 B Litronic **- multipurpose edition -** *20 tons lift capacity pipelayer & welding tractor*



Liebherr Diesel engine - 97 KW (132 HP)

D5B chain, single grouser track pads 914/560 mm

ROPS canopy or ROPS cabin with heater / air-conditioning

4.740 mm fixed or hinged boom made of highly resilient, grain refined steel

20 tons lift capacity - Hydraulic driven hoist winch

Operating weight 23.000 kg - Ground pressure 0,53 kg/cm²

Counterweight 5.400kg (removable weight 2.580 kg)

**Hydr. drive for pipe facing machine and 72,5 kVA welding generator
2 until 3 Lincoln DC 400 Idealarc - other manufacturers/models possible**

HIAB crane - 70.6 kNm - full hydraulic - max. reach 7.2 meter

Quincy 340 LVD hydr. driven air compressor (optional) with 250 liter air receiver



Welding and pipe facing.

With regards to economy, it is more important than ever for a construction machine to be in operation as many hours as possible each year. What could be better than using a pipe layer for additional tasks in pipelaying applications.

Through their innovative concept, Liebherr can equip the RL 22 B with a few additional attachments and turn it into the ideal machine for welding and pipefacing applications.

Welding

The RL 22 B Litronic load sensing working hydraulics can also be used for driving a welding generator – no additional diesel engine is required. Noise emissions are thereby reduced, fuel consumption is improved and maintenance of additional components is eliminated. The pipe layer boom can be equipped with a jib for a welding tent.

Pipefacing.

The RL 22 B Litronic was also designed as a basic machine for pipefacing. The special component for this task can also be driven by the installed working hydraulics. The hydrostatic travel drive and the single joystick control ensure precise and exact placement of pipes. The easy and inexpensive alternative to operate the RL 22 B Litronic as a pipefacing machine adds an important aspect to its functionality.



Welding generator.

The welding generator is powered by the pipelayer's nominal output.



Pipefacing.

The hydrostatic travel drive and the single joystick control allows exact placement of pipes.



Great economy: through versatile utilization.

Quick transportation.

A pipelayer in the RL 22 B Litronic class frequently changes job sites. Here, Liebherr also presents a unique concept. With folding boom and counterweight, no auxiliary devices are required for assembly or disassembly of the machine. Just the hydraulic boom has to be folded in, which can be done by the operator alone. The pipelayer with folding boom is ready to be loaded and moved.



More flexibility: with quicker job site transfer.



Engine

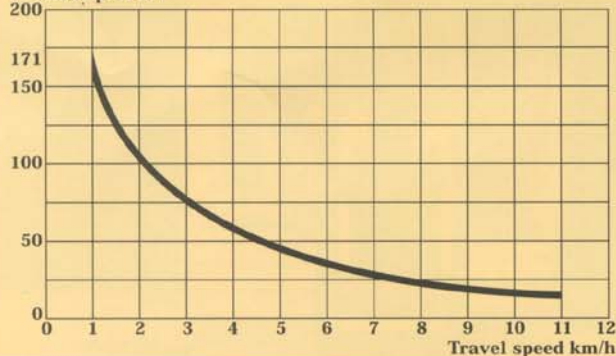
Liebherr Diesel engine	D 924 T-E
Output per ISO 9249	97 kW (132 HP) at 2000 RPM
Displacement	6.7 l (409 cu.in)
Bore/stroke	122/142 mm (4.8/5.59 in)
Design	4 cylinder in-line, water-cooled, turbo-charged engine, individual cylinder heads, wet cylinder bushings, maintenance-free drive for fan and water pump
Injection	direct fuel injection with distributor injection pump, mechanical regulator
Fuel filtration	prefilter 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	6.6 kW (9 HP)
Central fuse box	35 A



Travel Drive

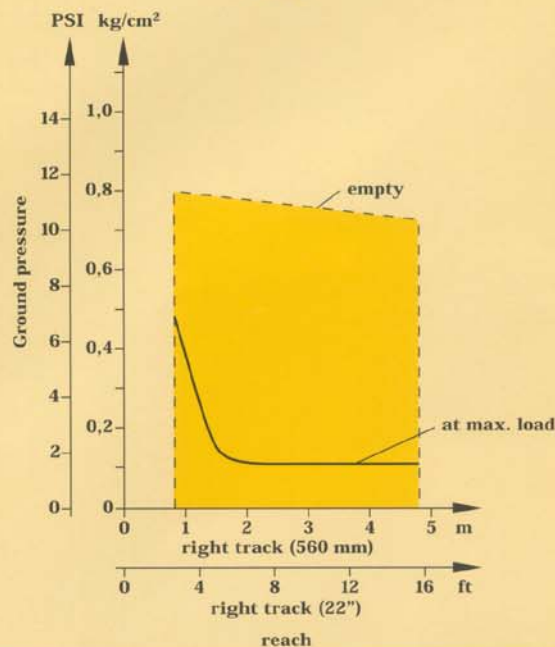
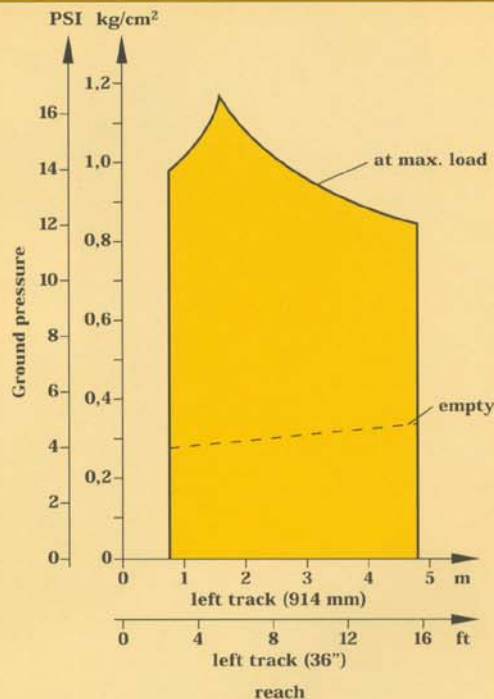
Design	independent hydrostatic drive of travel gear
Pump flow	max. 154 l/min (40 gpm)
Max. pressure	adjusted to 420 bar (6090 PSI)
Travel speed	0 - 11 km/h (0 to 6.8 mph) infinitely variable, forward and reverse
Steering	hydrostatic
Service brake	hydrostatic
Parking/emergency brake	automatic multi disc brake in final drives
Cooling system	hydraulic oil cooler with separate cooling circuit with gear pump and front mounted cooler
Filter system	cartridge fine filters in the cooling circuit
Final Drive	2-stage planetary reduction gear

Drawbar pull kN



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	47
Sprockets	9 replaceable segments
Track rollers	8
Carrier rollers	2
Ground contact area	4.31 m ² (6,680 sq.in.)
Ground pressure	0.48 kg/cm ² (6.83 PSI)





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 to 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 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 displacement pump and pressure cut-off for hoist winch and adj. boom cylinder drive
- Max. pump flow _____ max. 156 l/min (41 gpm)
- Pressure limitation _____ adjusted to 280 bar (4060 PSI)
- Control valve _____ 2 spool segments
- Filter system _____ return filter with magnetic rod in hydraulic tank
- Control _____ single servo-assisted joystick level 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

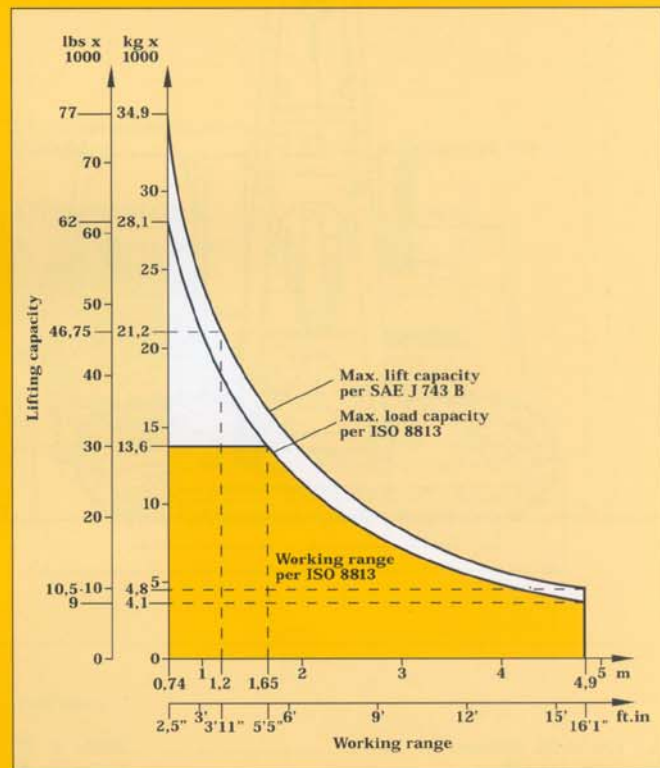


Working Attachment

- Hoist winch _____ driven by variable flow hydraulic pump, control valve block and variable oil motor. 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 _____ 248 mm (10")
- Drum length _____ 349 mm (1' 2")
- Flanged wheel diameter _____ 416 mm (1' 4")
- Cable diameter _____ 16 mm (5/8")
- Cable length _____ 55 m (180 ft)
- Hook block _____ 3 sheave
- Hook speed in 1. cable position _____ up - 33 m/min. stepless (0 to 108 ft) down 0 - 33 m/min. stepless (0 to 108 ft)
- 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 _____ 120 mm (4.5")
- Rod diameter _____ 60 mm (2.5")
- Stroke _____ 1080 mm (3' 4")
- Boom Design _____ box-type welded structure made of highly resilient, grain refined steel
- Fixed boom _____ length 4740 mm (15' 7") welded box sectioned
- Hinged boom _____ length 4740 mm (15' 7") welded box sectioned center hinge for transport, in working position, hinge is hydraulically locked, it is folded in or out by an auxiliary cylinder, hook block does not have to be removed for transport
- Counterweight _____ installed on the right hand side of the machine. It serves as the base for the hoist winch. Fixed mounted weight 2850 kg (6300 lbs.), 6 individual weights, each 430 kg (950 lbs.), total weight 5400 kg (11,900 lbs.) removable



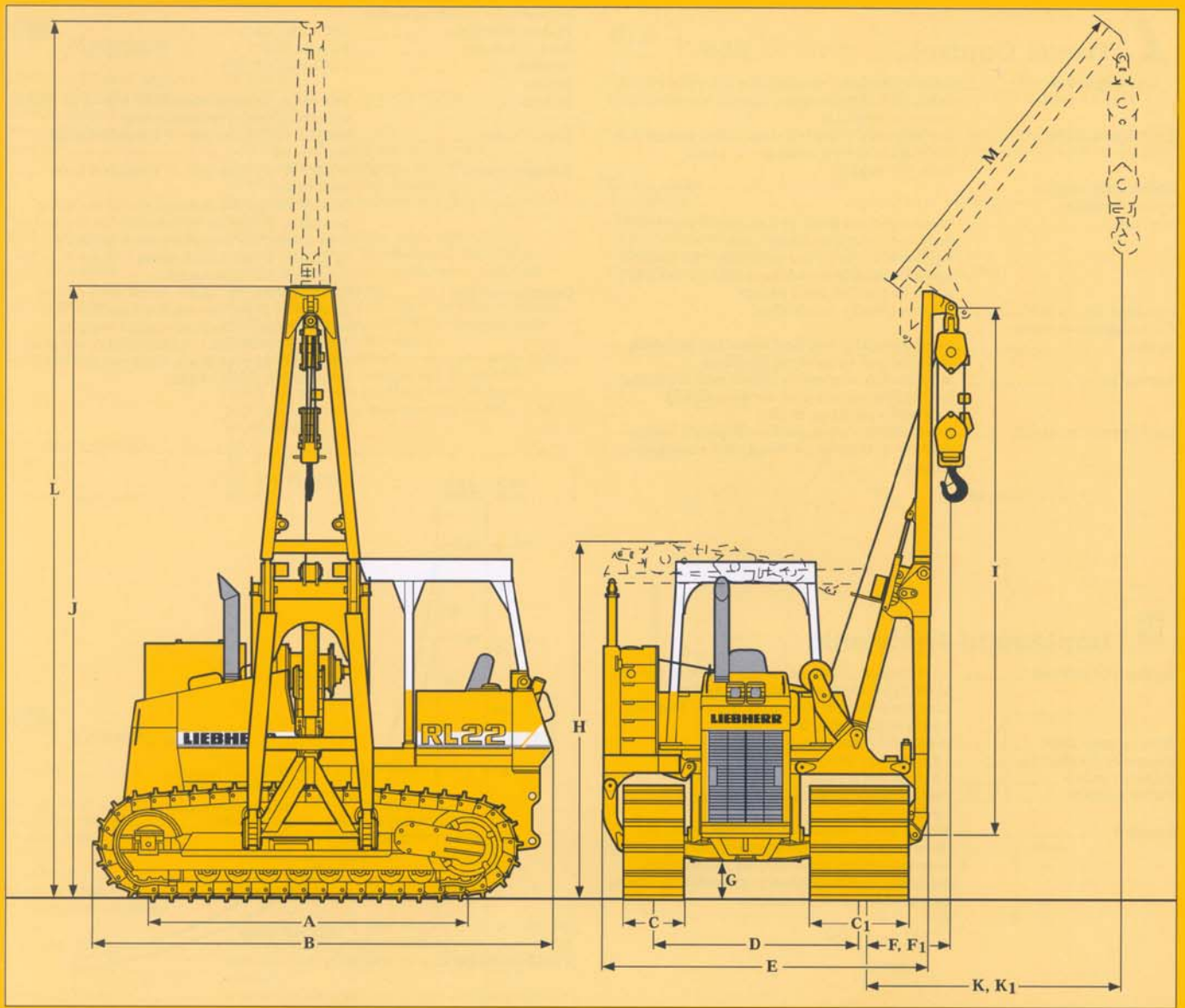
Operator's Platform

- 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



Service Fluids

- Fuel tank _____ 310 l (82 gal)
- Cooling system _____ 52 l (14 gal)
- Engine oil _____ 18 l (5 gal)
- Gear box _____ 2.5 l (0.6 gal)
- Hydr. tank _____ 178 l (47 gal)
- Final drives, each _____ 13 l (3.5 gal)



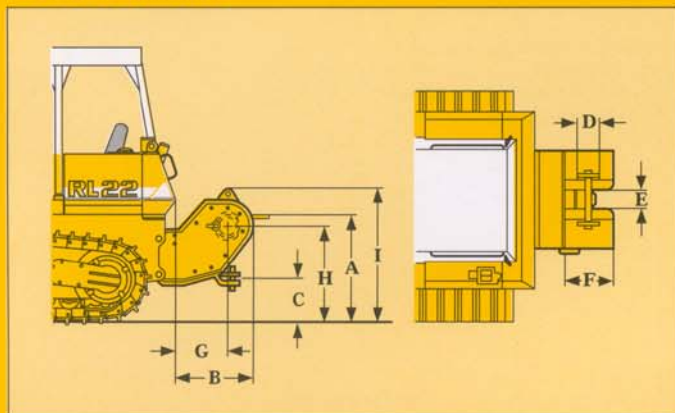
mm/ft-in

A	Track on ground	2925/ 9' 7"
B	Total length	4175/13' 8"
C	Ground pad width - right hand side	560/ 24"
C1	Ground pad width - left hand side	914/ 36"
D	Track gauge	1882/ 6' 2"
E	Transport width	2980/ 9' 9"
F	Hook radius, min.	735/ 2' 5"
F1	Hook radius, max.	4810/15' 9"
G	Ground clearance	370/ 1' 3"
H	Transport height	3265/10' 2"
I	Boom length	4740/15' 7"
J	Total height, max.	5490/18' 0"
K	Hook radius w. boom head member, min.	2485/ 8' 2"
K1	Hook radius w. boom head member, max.	7770/25' 6"
L	Total height w. boom head member, max.	8084/26' 6"
M	Length boom head member	3000/ 9'10"

Basic Machine Contents

- Pipe layer RL 22 with Liebherr Diesel engine D 924 T-E
- Chain D5B, single grouser track pads 914/560 mm (36"/24") 47 links, sealed
- Canopy
- Hoist winch
- Counter weight 5,400 kg (11,900 lb)
- Installation kit for boom
- Boom fixed, hinged 4,740 mm (15' 7")

Cable winch



Pulling power, max.:
Cable speed:

300 kN (30.6 t)/67,500 lb
0 - 96 m/min. (0 - 315 ft)
stepless

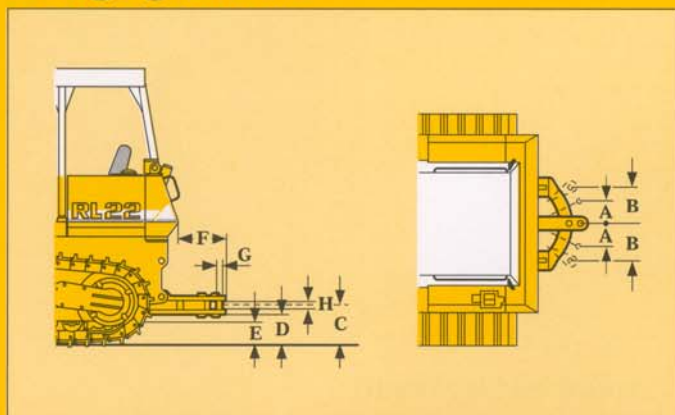
Cable thickness:
Cable length:
Weight:

22 mm (7/8")
50 m (164 ft)
1200 kg (2650 lb)

Dimensions

	mm/ft-in
A Height, cable run	1140/3' 9"
B Added length	670/2' 2"
C Height, towing device	530/1' 9"
D Drum diameter	210/ 8.5"
E Coiling width	230/ -9"
F Flange diameter	460/1' 6"
G Radius, drum center	440/1' 5"
H Height, drum center	1025/3' 4"
I Total height	1355/4' 5"

Swinging drawbar



Movable version
Weight:

200 kg (441 lb)

Dimensions

	mm/ft-in
A Off-center, min.	230/ 9"
B Excentre, max.	439/1' 5"
C Hook height	439/1' 5"
D Ground clearance	
Lower edge of tow hook	364/1' 2"
E Ground clearance	
Tow hook suspension	317/1' 0"
F Added length	375/1' 3"
G Pin diameter	45/ 1.5"
H Jaw width	90/ 3.5"

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	●	
Liebherr 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	●	

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	●	

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	●	

Operator's cab

	Standard	Option
Operator's seat 6-way adjustable	●	
ROPS-canopy	●	
ROPS/FOPS-cab sound suppressed		●
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	●	

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	●	

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		●

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