

JDN AIR HOISTS

FOR SHIPYARD APPLICATIONS



J. D. NEUHAUS
powered by air!

PROGRESS THROUGH INNOVATIVE TECHNOLOGY

We have been writing history in the field of hoisting technology for over 260 years and have been responsible for many substantial innovations. Today, J.D. Neuhaus is the global market leader in air operated lifting technology for both moving heavy and light loads.

JDN air hoists have been used successfully in the shipyard and offshore industry for decades. They have set new standards in hoisting technology applying individual product solutions for remarkable applications. An example is an order for the US aircraft carrier Enterprise. The 34 ton starboard propeller had to be replaced underwater. This underwater operation was successfully mastered for the first time in the San Francisco bay using three JDN air hoists, PROFI 50 TI, each with a carrying capacity of 50 tonnes.

Compared with electrical hoists JDN air hoists have a wide application range. This is an advantage in shipbuilding whether used for the installation or disassembly of propellers, drive shafts or general installation work on new ships and maintenance work.

You will reach our team of specialists under

➔ shipyard-support@jdn.de

■ TYPICAL APPLICATIONS

- ➔ Installing and disassembling rudder blades and shafts
- ➔ Installing and disassembling propellers
- ➔ Installation work in the engine room, e.g. fitting and removing heavy components of the drive machine
- ➔ Installing and disassembling the drive shaft
- ➔ General installation work

■ THE ADVANTAGES AT A GLANCE

- ➔ Very robust and low-maintenance, ideal for shipyard operations.
- ➔ Compact design, low weight with easy handling.
- ➔ Air pressure 4 bar to 6 bar.
- ➔ Easy installation.
- ➔ Overload protected motor.
- ➔ 100% duty rating.
- ➔ Sensitive positioning of loads when using the relevant controls.
- ➔ Nonpolluting by operation with oil-free air.
- ➔ Durable due to high quality materials.
- ➔ Suitable for use in dusty and damp locations.
- ➔ Can be used for oblique hoisting when special safety precautions are observed.
- ➔ Insensitive to temperatures ranging from -20°C up to +70°C.
- ➔ Suitable for application in hazardous areas as standard.



Carrying capacities: 250 kg up to 100t Air pressure: 4 bar or 6 bar

JDN Air Hoists PROFI Series are very robust and therefore suitable for tough shipyard applications even in continuous working processes. According to your requirements there are various control systems available. For traversing loads different trolley designs meet your particular demands.

STANDARD FEATURES

- Sensitive infinitely variable speed control for the precise positioning of loads
- Load chain and hooks manufactured from high quality tempered steels with a breaking strength of five times the nominal load
- Patented, permanent motor lubrication during operation, using a high-performance grease. No additional motor lubrication required.
- Suited For Application In Hazardous Areas According to EC Directive on Hazardous Locations 94/9/EEC
As standard: Ex II 2 GD IIA T4(X) / II 3 GD IIB T4(X)
With increased spark protection: Ex II 2 GD IIC T4(X)

TECHNICAL DATA

Type		025 TI		05 TI		1 TI		2 TI	
Air pressure	PSI	65	85	65	85	65	85	65	85
	bar	4	6	4	6	4	6	4	6
Carrying capacity	mt	0.16	0.25	0.32	0.5	0.63	1	1.25	2
Number of chain strands		1		1		1		2	
Lifting speed at full load	ft/min	65.6	32.8	36.1	16.4	18	8.2	8.9	
	m/min	20	10	11	5	5.5	2.5	2.7	
Lowering speed at full load	ft/min	124.7	55.8	55.8	32.8	36.1	16.4	18	
	m/min	38	17	17	10	11	5	5.5	
Air consumption at full load – lifting	cfm	24.7	42.4	24.7	42.4	24.7	42.4	24.7	42.4
	m ³ /min	0.7	1.2	0.7	1.2	0.7	1.2	0.7	1.2
Weight with 10ft/3m standard lift, rope control	lbs	59.5		59.5		61.6	61.7 ¹		75 ¹
	kg	27		27		27.5	28 ¹		34 ¹
Smallest headroom	inch.	17.7		17.7		17.7			19.6
	mm	450		450		450			498

¹ With overload protection

Type		3 TI		6 TI		10 TI		16 TI	
Air pressure	PSI	65	85	65	85	65	85	65	85
	bar	4	6	4	6	4	6	4	6
Carrying capacity	mt	3.2		6.3		10		16	
Number of chain strands		1		2		2		3	
Lifting speed at full load	ft/min	8.2	16.4	3.9	8.2	2.6	5.2	1.6	3.3
	m/min	2.5	5	1.2	2.5	0.8	1.6	0.5	1
Lowering speed at full load	ft/min	24.6	35.4	11.8	17.7	8.2	11.2	5.3	6.9
	m/min	7.5	10.8	3.6	5.4	2.5	3.4	1.6	2.1
Air consumption at full load – lifting	cfm	71	142	71	142	71	142	71	142
	m ³ /min	2	4	2	4	2	4	2	4
Weight with 10ft/3m standard lift, rope control	lbs	189.6		242.5		343.9		529.1	
	kg	86		110		156		240	
Smallest headroom	inch.	23.3		26.5		32.0		35.4	
	mm	593		674		813		898	



Concentrated power with sensitive controls. The dismantling of the propeller was completed with several JDN air hoists PROFI 50 TI.

Type		20 TI		25 TI		37 TI		50 TI		100 TI	
Air pressure	PSI	65	85	85	65	85	65	85	65	85	85
	bar	4	6	6	4	6	4	6	4	6	6
Carrying capacity	mt	20		25	37.5		50		100		
Number of chain strands		4		2	3		4		4		
Lifting speed at full load	ft/min	1.3	2.3	3.6	1.3	2.3	0.9	1.6	1.3		
	m/min	0.4	0.7	1.1	0.4	0.7	0.3	0.5	0.4		
Lowering speed at full load	ft/min	3.9	5.3	6.2	3.3	4.9	2.9	4.6	2.6		
	m/min	1.2	1.6	1.9	1.0	1.5	0.9	1.4	0.8		
Air consumption at full load – lifting	cfm	71	142	194.8	166.4	194.8	166.4	194.8	389.5		
	m ³ /min	2	4	5.5	4.7	5.5	4.7	5.5	11		
Weight with 10ft/3m standard lift, rope control	lbs	627		1098	1936		1885		5423		
	kg	285		498	880		855		2460		
Smallest headroom	inch.	40.6		49.6	55.1		66.9		86.6		
	mm	1030		1260	1400		1700		2200		

4 bar versions for PROFI 25 TI and PROFI 100 TI on request.

Carrying capacities: up to 20 t



JDN air hoists in trolleys are used on ships for installation work in the machine room.

JDN trolleys are available for all hoists of the PROFI series:

- As manual trolleys (LN) for pushing or pulling the trolleys by hand
- As reel chain trolleys (LH) for moving the trolleys by operating the reel chain mechanism
- As motorised trolley (LM) powered by an air motor

STANDARD FEATURES

- Easy to install
- With anti-climb and anti-drop devices
- Robust manufacture requiring little maintenance
- Able to negotiate curves

OPTIONS

- Rack and pinion drive
- Locking device
- Spark-resistant package
- Offshore paint
- Energy feeding systems

JDN LOW HEADROOM TROLLEYS



Carrying capacities: from 0.5 t up to 6.3 t

Where headroom is restricted and standard trolleys can't meet the lifting height requirements we recommend JDN Low Headroom Trolleys whereby our air hoists are horizontally mounted.



For use in the ship engine room: JDN-PROFI 6 TI in a hand chain trolley.

JDN AIR HOISTS *mini*

The JDN mini Series for General Duty
 Carrying capacities: 125 kg, 250 kg, 500 kg, 980 kg
 Air pressure: 6 bar

The mini widens the range of applications in the light duty sector as a handy, flexible and universally deployable hoist making it an ideal tool for a wide range of light/medium shipyard applications. For heavier duty applications we recommend the JDN PROFI series.

STANDARD FEATURES

- Price competitive alternative when compared to other types of powered hoists.
- Minimum components for ease of maintenance.
- Wear resistant motor braking system.
- Also suitable for horizontal moving of loads.
- Extremely sensitive lever control with emergency shut-off valve.
- Insensitive to temperatures ranging from -20°C up to +50°C.
- With chain box as standard.
- Also available with manual trolley.



mini 125



mini 1000
in manual trolley



JDN air hoist mini 1000 handling an oil pump.

TECHNICAL DATA

Type		mini 125	mini 250	mini 500	mini 1000
Air pressure	PSI	85	85	85	85
	bar	6	6	6	6
Carrying capacity	lbs	275	550	1100	2160
	kg	125	250	500	980
Number of chain strands		1	1	1	1
Lifting speed at full load ¹	ft/min	49.5	26	33	16
	m/min	15	8	10	5
Lowering speed at full load	ft/min	99	52	59	33
	m/min	30	16	18	10
Air consumption at full load – lifting	cfm	17.5	17.5	42.5	42.5
	m ³ /min	0.5	0.5	1.2	1.2
Weight with 10 ft / 3 m lift	lbs	21	23.1	46.2	50.6
	kg	9.5	10.5	21	23
Height of lift	ft	10 / 16 / 26			
	m	3 / 5 / 8			
Length of control at standard lift	ft	6.5 / 13 / 20			
	m	2 / 4 / 6			
Smallest headroom	inch.	12.9	12.9	18.0	18.0
	mm	328	328	458	458

¹ Lifting speed at 2 m length of control. Longer control hoses decrease the lifting speeds.



JDN AIR WINCHES PROFI

J.D. Neuhaus has been the market leader in compressed air powered lifting equipment for decades. In our latest milestone we have added a series of air winches to our product line.

Our delivery program covers lifting winches (PROFI LIFTER) with carrying capacities of 500 kg to 2000 kg and pulling winches (PROFI PULLER) with capacities of 800 kg to 3000 kg. We recommend the PROFILIFTER 500-1 and PROFIPULLER 800-1 with a weight of approx. 30 kg as a mobile and cost-effective all-rounder for standard applications.

The PROFILIFTER 1200-2,2 / 2000-2,6 and PROFIPULLER 1800-2,2 / 3000-2,6 are robust and very compact with carrying capacities of 1200 kg and 2000 kg respectively pulling capacities of 1800 kg and 3000 kg. They are also available with increased motor power (6 kW). Typical applications include the opening and closing of hatches, moving loading arms and pulling loads.



PROFI LIFTER 500-1



PROFI PULLER 800-1 with pulling frame

TECHNICAL DATA

Type	PROFI	LIFTER 500-1	PULLER 800-1	LIFTER 1200-2,2	LIFTER 2000-2,6	PULLER 1800-2,2
Nominal pressure	PSI	85	85	85	85	85
(required static pressure)	bar	6	6	6	6	6
Capacity (nominal load for lifting winches) in the last layer	lbs	1100	–	2600	4400	–
	kg	500	–	1200	2000	–
Pulling capacity (nominal load for Pulling winches) in the first layer	lbs	–	1750	–	–	4000
	kg	–	800	–	–	1800
Max. number of rope layers		5	5	4	4	4
Max. motor power	kW	1	1	2.2	2.6	2.2
Weight (without rope and additional devices) short drum version	lbs	64.6	68.8	304.2	518.1	304.2
	kg	29.3	31.2	138	235	138
Max. rope length (ft / m)		191.3 / 58.3	191.3 / 58.3	262.2 / 79.9	335.6 / 102.3	262.2 / 79.9
with rope diameter (inch. / mm)		0.24 / 6	0.24 / 6	0.35 / 9	0.47 / 12	0.35 / 9

Type	PROFI	PULLER 3000-2,6	LIFTER 1200-6	LIFTER 2000-6	PULLER 1800-6	PULLER 3000-6
Nominal pressure	PSI	85	85	85	85	85
(required static pressure)	bar	6	6	6	6	6
Capacity (nominal load for lifting winches) in the last layer	lbs	–	2600	4400	–	–
	kg	–	1200	2000	–	–
Pulling capacity (nominal load for Pulling winches) in the first layer	lbs	6600	–	–	4000	6600
	kg	3000	–	–	1800	3000
Max. number of rope layers		4	4	4	4	4
Max. motor power	kW	2.6	5.5	5.5	6.0	6.0
Weight (without rope and additional devices) short drum version	lbs	518.1	516*	851*	516*	851*
	kg	235	234*	386*	234*	386*
Max. rope length (ft / m)		335.6 / 102.3	515.1 / 157	793.3 / 241.8	515.1 / 157	793.3 / 241.8
with rope diameter (inch. / mm)		0.47 / 12	0.35 / 9	0.47 / 12	0.35 / 9	0.47 / 12

*Standard version with long drum



STANDARD FEATURES

- Drum integrated exhaust air cooled planetary gearbox for minimum maintenance and maximum reliability at a 100% duty cycle.
- High rope capacity.
- Variable speeds.
- Ideal for applications in hazardous areas.
- Also available with hydraulic drive.
- Various options.



Handling a rotor with a JDN air winch PROFI PULLER.

SPECIAL WINCH APPLICATIONS

We have prepared comprehensive information regarding this subject on our web site for your detailed information.

Please visit ➤ www.jdn.de



PROFI LIFTER 1200-2,2



PROFI LIFTER 2000-2,6
with long drum and
mounting frame



PROFI PULLER 3000-6
with wire rope and drum guard

JDN AIR HOISTS WORKING ON SHIPYARDS WORLDWIDE



A & B Athienitis & Vassiliou, Cyprus A/S Bergens, Norway A/S Elme, EstlandA/S Framnäs, Norway AB Falkenbergs Varv, Sweden AB Götaverken, Sweden AB Oskarshamns Varv, Sweden Adrian Volker, Netherlands Aker MTW Shipyard, Germany Amsterdamse Droogdok, Netherlands A.P. Moeller, Denmark Appledore Shipyards, Great Britain Arab. Shipbuilding & Repair Yard Co., Bahrain Arno, France Arsenal de Alfeite, Portugal Arsenale Marina Militare, Italy ASTANO, Astilleros Group, Spain Astilleros de Cadiz, Spain Astilleros Espanoles, Spain Astilleros y Maestranzas (ASMAR), Chile Ats. Francais de l'Ouest, France Ats. Provencaux Rep. Navale, France Avondale Shipyard, USA Baste & Lange, Germany Beihai Shipyard, China Beliard Murdoch, Belgium Belieard Crighton, France Blohm & Voss, Germany Boele's Scheepswerven, Netherlands Bore Line, Finland Bos & Kalis B.V., Netherlands Bremerton Naval S.Y., USA Brodogradiliste Shipyard, Croatia Furwell Ltd, Great Britain Cantiere Navale Breda, Italy Cantiere Navale Rodriguez, Italy Cassens Werft, Germany Cebu Shipyard, Philippines Certex Finland Oy – Latavia branch Chantiers de l'Atlantique, Portuga, France Chantiers de Portugal, Portugal Chantiers Navales de la Ciotat, Portugal Charleston Naval S.Y., USA Cie. Generale de Reparation, France Cityvarvet Öresund, Sweden Cityvarvet, Sweden Commodore Shipping, Great Britain Compagnie Marseillaise de Rep., Portugal Construcciones Navales et Industrielles de la Mediterranee, Portuga Corderie Dor, France Cunard Shipping, Great Britain Curacao Dok en Scheepsbouw, Curacao Daewoo Heavy Ind., Korea Dahan Shipyard, China DCN, Toulon/France Dillingham S.Y., USA Doxford & Sunderland, GB Dramen Slip, Norway Dubai Drydocks, U.A.E Effoa, Finland Electric Boat Co., USA Elefsis' Shipbuilding, Greece Eriksberg Mek VerkstadsAB, Sweden Estaleiros Navaide Viana do Castelo, Portugal Estaleiros Navais do Mendego, PortugalEts. Caillard, France Falmouth Shiprepairs, Great BritainFerrovie dello Stato, Italy Fincantieri, Italy Finnboda Ab, SwedenFinnlines Ltd., Finland, Hensburger Schiffbau, Germany, Gdynska Stocznia Remontowa, PL

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