



## VIETZ GmbH

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### **VIETZ** ARCOTRAC 1100-4

#### TECHNICAL SPECIFICATIONS



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The ARCOTRAC is the most advantaged P-Welder suitable for all kind of pipeline construction as well as rehabilitation applications. Due to the well chosen components made by well known manufactures we guarantee the highest possible quality level in design, construction and reliability.



### The ARCOTRAC 1100-2 is capable of:

- For four welding stations in simultaneous operation
- Hydraulic crane for lifting of welding shelters with lifting capacity of 720 kg at 6 m reach
- **OPTION:** Supplying 930 l/min at 15 bar pressure for operating an internal pneumatic line-up clamp
- Provision of sufficient auxiliary power for site operation of electrical equipment.
- Continuous operation under  $-20^{\circ}\text{C}$  up to  $55^{\circ}\text{C}$

### Technical description

#### **Engine:**

The unique design of the ARCOTRAC 1100-2 is based on one large-size, heavy duty diesel engine which runs the generator, the hydraulic crane and the drive system of the undercarriage. The installed DEUTZ TCD 2013 TIR 3 water-cooled engine belongs to the latest generation of direct injected turbo diesel engines and is equipped with single cylinder injection pumps. The electronic EMR - governor combined with a large air to air intercooler and a 4.8 litre displacement develops a 110 KW at 1500 rpm. The high engine output secures excellent welding features of multiple power source welding under all load conditions.

A large radiator combined with an efficient silencing system keeps the noise emission of the ARCOTRAC 1100-2 down. Full operation ability is kept until  $55^{\circ}\text{C}$  ambient temperature. A two stage diesel filter with a water separator allows the machine to be run with low quality fuel without any limitations. An oil drainage tap facilitates oil changes significantly. A two stage air filter element combined with a cyclone dust separator allows operation in extremely dusty desert environment.

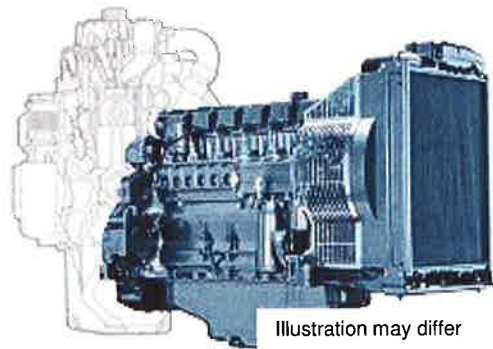


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#### **Transmission:**

ARCOTRAC Welding Tractors are equipped with a two speed transmission in each drive direction. Maximum speed forward and rearward is 5.0 km/h. The maximum travel speed allows the machine to travel fast along side the right of way and to keep up with other crawler machinery. All two speeds can be electronically shifted from the panel inside the cabin while travelling under positive and negative full load conditions. In case of backwards moving an acoustic alarm sounds to prevent accidents.



### **Undercarriage:**

A heavy-duty bulldozer type undercarriage with oil-lubricated chain segments and oil-lubricated rollers guarantees longevity in even very abrasive soil conditions. The 5.5 m long overall track length gives the ARCOTRAC superior static and dynamic stability. 30° hill climbing ability is being achieved through strong final drives, combined with an excellent traction. "Counter-rotation" makes on-the-spot turns possible resulting in a very handy and versatile piece of equipment.

Almost 400 mm ground clearance combined with low ground pressure ensures that the ARCOTRAC is a machine which is able to operate in most severe and even swampy ground conditions. The machine is equipped with 500 mm wide heavy-duty shoes. If the travel mode is not engaged a wet disc type parking brake is automatically activated to secure parking position of the machine.



### **Air compressor (OPTION)**

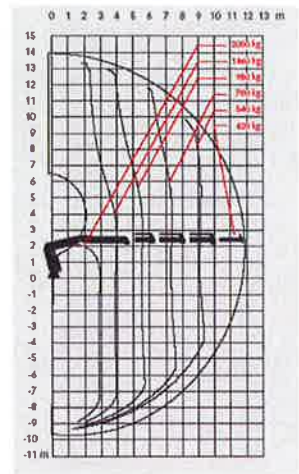
The electric driven ATLAS Copco two-stage piston compressor, LT 15-20 E, supplies 930 l / min at 15 bar pressure. Two 150 l air receivers are installed underneath the machine tail to recharge even large diameter pneumatic internal clamps in a short time. The compressor is driven by the 11 kW electric motor and is linked to a pressure sensor, the compressor only being activated as additional compressed air supply is needed. The compressed air outlet is mounted in front of the machine at the crane foot to guarantee a proper compressed air supply to the pneumatic internal line-up clamp.





**Crane (HIAB or TEREX)**

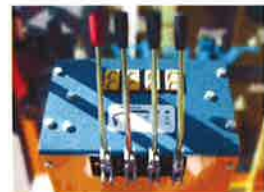
The HIAB 066 B-2 CLX full-hydraulic cranes are heavy-duty versions, which have proven their sturdiness in numerous operations worldwide. The two hydraulic telescope elements lead to a maximum reach of more than 7.20 m. The operator can fully concentrate on the work area from his seat as the crane is being operated from inside the cabin. A maximum lifting capacity of 2000 kg makes the ARCOTRAC 1100-2 an ideal machine for carrying and lifting a welding shelter over the joint area. The crane is equipped with cable holders to keep the welding cables along side the crane in a properly supported position.



Lifting capacity chart  
Remark: Max. reach 7200 mm

**Cabin:**

To ensure a proper overview of the working area the ARCOTRAC has the operator's cabin mounted at the left side in drive direction, thus giving the driver a perfect overview of the entire operating and welding process. The cabin is equipped with air condition and a heating unit. The easy lever motion control is very comfortable for the operator. In case of any malfunctioning an automatic shut-off function prevents damage of any components. An acoustic warning signal indicates critical working parameters. The ARCOTRAC is equipped with a certified ROPS protected cabin. A safety switch to inactivate machine motion is integrated in the operator's seat.





### **Power Source Lincoln DC 400 (Option)**

This heavy-duty, three-phase multi-process power source from Lincoln Electric scores big in MIG, flux-cored, submerged arc, stick and DC TIG welding. And flexibility doesn't mean complicated – the DC-400 is easy to set-up and use. Changeover between processes is as simple as turning a switch with the factory or field installed multi-process switch. On-board ammeter and voltmeter make monitoring of key welding parameters a snap. Inductance and arc force controls allow the operator to efficiently refine the arc for the job at hand.



### **Main technical Data:**

Input: 400 V / 63 A / 50 Hz  
Output: 60-500 A  
Duty Cycle: 400 A at 100% duty cycle  
450 A at 60% duty cycle  
500 A at 50% duty cycle  
Dimensions: 698 x 566 x 840 mm  
215 kg



In addition to the most famous and thousands times used welding power source we supply a remote control and welding cable set. Both are equipped with a 25 m long heavy duty cables. Depending on the welding job the cables can be fixed on the crane boom to end inside the welding shelter or they can be put down on ground. In addition to the 25 m welding cable we supply a 3 m ultra high flexible cable connected with the electrode holder. This additional cable guarantees a 100% flexibility during pipeline welding. The large size remote control is equipped with a magnet to be fixed on the pipe and one large size knob to adjust the welding power.



- Large, conveniently located switch makes it easy to change between CC and CV
- Arc force control adjusts short circuit current for a soft arc or a forceful driving arc in the CC (Stick/TIG) mode
- Solid state circuitry provides extra long life for repetitive welding applications
- Outstanding welding performance with a single range full output control potentiometer
- $\pm 10\%$  input line voltage compensation for maintaining weld consistency
- Fan cooled for long life expectancy. Electronic and thermostatic protection safeguard DC-400 from current overload and excessive temperatures
- Windings and rectifiers protected against moisture and corrosive environments
- Both 14 pin MS-style cable connection and terminal strip access for remote control and wire feeder connections and output studs for weld cables
- Circuit breaker protected on-board power for a wire feeder
- Durable powder paint system protects both sides of all painted surfaces for along lifetime



### Generator / Electric power

The brushless-type, self-excited, damper-wound, 125 kVA AC SK 250 SM B34 generator is specifically designed for heavy-duty pipeline applications and provides sufficient electric power for up to four welding posts as well as sufficient auxiliary power for site tools, pumps, illumination etc. The generator is fulfilling the insulation class H requirements and the control section meets the IP 54 standard.

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### Switchbox

The ARCOTRAC has a switchbox which is structured as follows: 4 x 63 A, 400 V, 1 x 16 A, 400 V; 4 x 16 A, 230 V. The switch cabinet is equipped with a frequency meter and three amps meter to ensure full control over all electric data during operation as well as insulation surveillance for operation safety and a voltage meter.

In emergency a switch-off button is a standard for quick electric shut-off in case of critical working situations. The switch box is IP 54 insulated; a master switch shuts the machine on and off.



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### Serviceability

All service and maintenance points are within easy access. The filter elements for the hydraulic system, the engine as well as of the compressor can be replaced within 30 minutes. All components are being chosen excellently rated manufacturers as Deutz, Sauer-Danfoss, Hiab etc. that guarantee large service intervals and a long life time.

A 320 l diesel tank volume keeps the machine running for two shifts without refilling. Due to a fuel humidity separator we can guarantee a perfect engine protection also by using low fuel quality.





### **Board Electric System / 24 V**

The electric system to run the welding tractor is based on 24 V. The maintenance-free alternator delivers 740 W electric powers for all required board electric systems. The ARCOTRAC operates with two batteries each with 110 Ah and a 4 kW starter.

### **Gas bottle compartment**

The ARCOTRAC 1100-2 is equipped with a removable gas bottle rack which can contain 4 shielding gas bottles.



### **Scope of supply**

each ARCOTRAC is equipped with the following accessories / features:

- One tool box, including a standard set of hand tools as well as all special tools needed for service, maintenance and repair
- One full set of documentation in English language, including safety instructions, operation manual, service manual and spare parts catalogue

The basic design as well as the construction it regards the best possible flexibility. During the development of the actual version "ARCOTRAC 1100" and based upon our more than 25 years experience we integrated the input and feedback of our customers and the modular concept. This new design concept enables the easy exchange of components of different sizes or suppliers to satisfy the customer demands. To achieve your special requirements we made only some modification of the general set-up.

For a better overview we summarised the main data as in the following table.



### Main technical data (overview)

#### Engine

Engine type	Deutz TCD 2013 TIR 3
Number of cylinders	4
Power output / rpm	110 kW / 1500
Cooling	Water cooled
Emission standard	EPA 3 / COM3
Diesel tank volume	320 l

#### Generator

Generator output	125 kVA
Frequency	50 Hz
generator type	self excitation, brushless, damper winding

#### Switch box

number of 63 A CEE sockets 400V	4
number of 16 A, 230 V sockets	4
Number of 16 A, 400 V sockets	1
Systems	Insulation surveillance, ammeter, voltmeter, frequency display, fuse set, main breaker

#### Welding power sources (Option)

<i>Example</i>	<i>According to customers request</i>
number of welding power sources	See above
Type	Rectifier
Manufacturer	Lincoln
manufacturer type	DC 400 /
max. welding power	500 Amps
2 x 25m cable, earthing, electrode holder, remote control for Amps	Standard / one set per welding station

#### Hydraulic system

Manufacturer:	Sauer Danfoss
General design	closed circuit load sensing
hydraulic tank volume	200 l
hydraulic pumps	2 x 82 l/min axial piston pump & 1 x max 25 l gear pump
hydraulic pressure	max. 300 bar

#### Crane

Crane type	HIAB 066-2
Maximum reach	More than 7,10 m
crane lifting capacity @ 6m reach	720 kg
crane lifting capacity @ 1,9 m reach	2.000 kg
crane operation from inside cabin	Yes
slewing angle	280° (restricted for safety)





**Shielding gas**

shielding gas bottle rag	Standard
Number of shielding gas bottles possible	4

**Drive system / undercarriage**

Design	hydrostatic
number of speeds	2 forward / 2 reverse
travel speed 1st stage	0 – 2,5 km/h
travel speed 2nd stage	0 – 5,0 km/h
Counter rotation possible	Yes
undercarriage size	B 2
hill climbing capacity	30°
track rollers	2 x 10
carrier rollers	2 x 2
Track shoe width in mm	500

**Cabin**

ROPS cabin heated	Standard
Air condition	Standard
motion control	servo controlled hand lever steering
operator seat	with arm rests and seat belt
safety switch to inactivate machine motion	integrated in operator seat

**General data**

Dimensions (L x W x H) in mm	Approx. 5750 x 2750 x 3250
Operation weight	11.000 kg
Max. travel speed	5,0 km/h
Operation temperature	-20°C`unitil +55°C