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Bedienungsanleitung / Operation manual / Mode d'emploi / Manual de instrucciones / Istruzioni per l'uso

Alfra AHP 03-1

GB Hydraulic Pump

Art.-Nr. 03853



Safety instructions



Only persons who have read and understood the operation manual and are appropriately qualified to handle the pump and tools may be tasked with operating the AHP 03-1 hydraulic pump unsupervised.



Before putting the pump into operation, the safety devices must always be checked to make sure that they are working properly.



The occupational health and safety regulations that apply at the place of operation must be observed.



Operators must ensure that they do not put either themselves or other persons at risk.



If operational safety is jeopardised by faults or damage to the hydraulic pump, it must be taken out of operation immediately and may not be used again until after all potential hazards have been remedied by an authorised expert / workshop.



The pump must be set up on a horizontal surface to prevent the pump falling accidentally during operation. Oil can leak from the ventilation screw. Risk of slipping.



Increased risk of injury when machining long busbars.



Using the pump on transport equipment (lifting platforms, vehicles) is permissible only if suitable safety measures have been implemented, e.g. securing against overturning, falling, etc.



Adequate lighting must be provided when operating the hydraulic pump and connected tools.



If the hydraulic pump is left unsupervised, it must be secured to prevent unauthorised used.

Safety devices

The hydraulic pump is equipped with the following safety devices:

Overload protection



If the maximum operating pressure set at the factory is reached the pressure build-up is interrupted and the pump continues to operate at a constant pressure.

Thermal overload protection



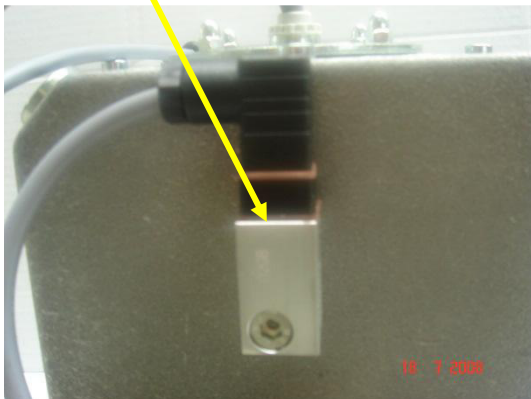
If there is an overload and associated strong heating, the pump is automatically switched off. It cannot be restarted until it has cooled down.

Pressure-relief valve on the hydraulic pump

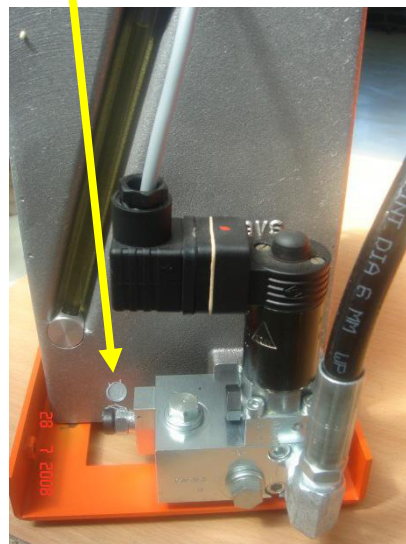


This is set to the maximum permissible pressure and lead-sealed by the manufacturer. Unauthorised adjustment can result in damage to the pump and the connected tools and injuries to the operator. This shall void any warranty.

Thermal overload protection



Pressure-relief valve / overload protection



Specified conditions of use

It is not suitable for punching and bending materials with a high strength

The AHP 03-1 Alfra hydraulic pump can be used for all single-acting cylinders from the Alfra range up to 700 bar. A control unit is also incorporated in the pump. The unit can be used as a drive unit for the busbar bending and punching machine Art. No. 03200 and for the busbar cutting units Art. No. 03250 and 03253.

It can also be used for other single-acting cylinders, which are deployed as lifting, pressure or spreading cylinders.

The unit is designed to machine copper and aluminium materials with maximum dimensions of 160 mm x 15 mm in the pressure range up to maximum 700 bar.

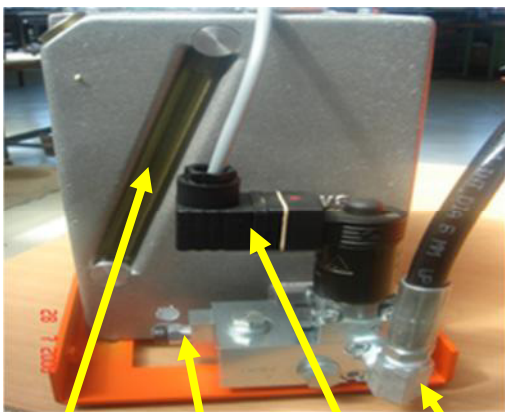
It is not suitable for punching and bending materials with a high strength.



If special tools, materials or dimensions are required, the manufacturer must be consulted and his written approval obtained.

Brief description

- The hydraulic components are integrated in a compact aluminium housing.
- They are driven by an oil-immersed motor.
- The pump is mounted in a sheet metal housing in order to prevent transport damage and as a transport aid.
- The working pressure required is generated by means of radial piston units.
- The pump has an overpressure safeguard and protection against overheating.
- The electronic controller is a separate assembly and is mounted accordingly.
- The connection for the control cable is situated in an easily accessible location on the outside of the housing opposite the hydraulic hose outlet.

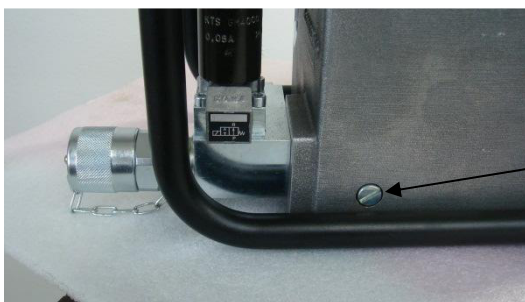


Ölschauglas
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- The oil level can be monitored through a hole in the housing for the oil level window.



- The hydraulic hose is 2 m in length and is fitted with a Cejn quick coupling.
- The oil drainage screw is located at the bottom of the unit, which can be accessed by removing the housing. Oil can also be drained using the filler or ventilation screw.



- An orange ventilation screw is located in a hole on the bottom of the housing. This must be replaced with a sealing plug when the pump is operated.



Replace the sealing plug when transporting or sending the pump to prevent hydraulic oil from leaking out of the pump.

Technical data

Length:	330 mm
Width:	180 mm
Height:	350 mm
Weight: approximately:	18 kg
Working pressure:	max. 700 bar
Hydraulic oils:	HL, HLP DIN 51524
Filling volume:	2.5 l
Useable volume:	1.5 l
Electrical connection:	230V 50 Hz
Motor:	$n_N = 3320 \text{ min}^{-1}$ $P_N 0.55 \text{ kW}$ $I_N 4.14 \text{ A}$
Running capacitor:	$C_B = 16\mu\text{F} / 240 \text{ VDB}$
Delivery volume:	0.52 l/min
Controller PCB:	Control voltage 12 VDC Voltage INPUT 230V/115V 50 Hz/60 ; max.10 VA OUTPUT 12 VDC
Noise:	below 75 dbA

Operation and function

Before putting the AHP 03-1 pump into operation, the hydraulic hose and the control cable must be correctly connected to the pump and the punching or cutting unit.



Before connecting to the power supply, check that the mains connection corresponds to the pump's connection values.

The Alfra AHP 03-1 hydraulic pump is switched on by using the manual switch (included in delivery) or the pedal (optional), Art. No. 03866.



Manual switch



Pedal

Maintenance and care

The AHP 03-1 hydraulic pump is basically maintenance-free when it is operated under the defined conditions of use.

However, in order to ensure continual operational readiness, it is recommended that the following precautionary care measures be performed regularly:

- Check the oil level regularly with a dipstick.
- First oil change after approx. 500 operating hours (approx. 3 - 5 months, depending on intensity)
- The next oil change is recommended after 1 - 1½ years.

Amount of recommended hydraulic oil: 2.5 litres of Renolin B 15 HLP 46 hydraulic oil as defined by DIN 51524 ISO- VG 46.

Similar: Hydraulic oil SAE 15 W 20 W. AGIP 46, ARAL Vitam GF 46, BP Energol HLP-HM 46, DEA Astron HLP 46, ESSO HLPD-OEL 46, SHELL Tellus Oil 46



Mixing different viscosity grades is not permitted!



If you wish to use a different type of suitable hydraulic oil, flush the tank and change all of the oil.

Oil change



After removing the housing, remove the sealing plug or ventilation screw, lay the pump on its side and drain the oil. Put pump upright and fill in new oil.

Ordering spare parts

Please use the spare parts list when ordering spare parts and wear parts. Always quote our order number / article number and the quantity you require.

Decommissioning

The following measures are recommended if you intend to put the pump out of operation for an extended period:

- Protect all metallic parts against corrosion (plastic bag with hydro granulate).
- Put the pump into suitable packaging.
- Store only in dry, warm and well-ventilated rooms.

EC Declaration of Conformity

We,

ALFRA Alfred Raith GmbH
2. Industriestraße 10
68766 Hockenheim

hereby declare that the following product:

Alfra hydraulic pump AHP 03-1

complies with all relevant provisions of the Machine Directive (2006/42/EC) and the Directive on Electro-magnetic Compatibility (2004/108/EC).

The following harmonised standards were applied:

DIN EN 60 034 (IEC 34 – DIN VDE 0530)
DIN VDE 0110

EMV to
EN 20370-1: 2006
EN 50370-2: August 2003

Documentation:

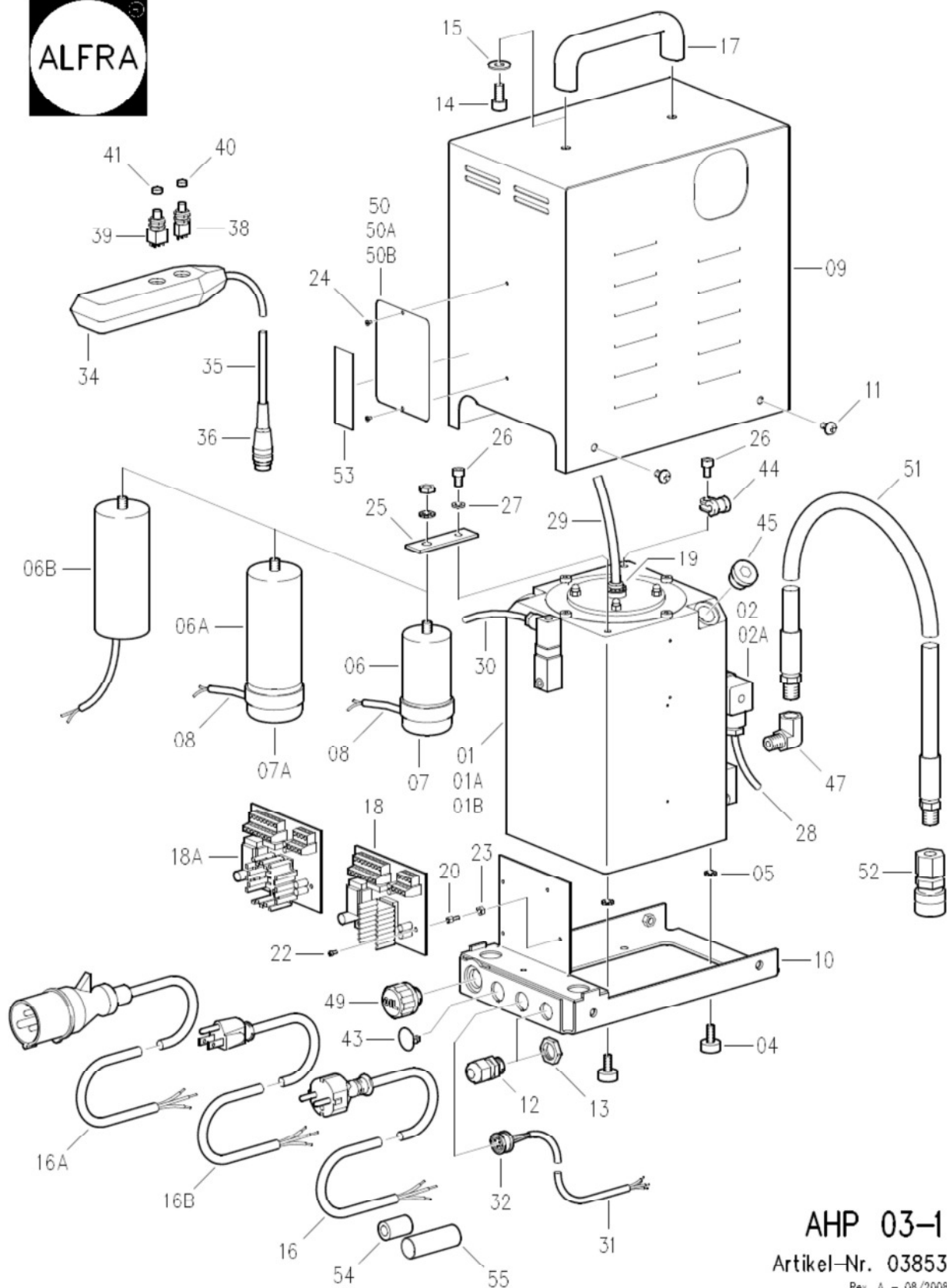


Cornelia Dorn

Hockenheim, 15/02/2012



Markus A. Döring
(General Manager)



AHP 03-1
 Artikel-Nr. 03853
 Rev. A - 08/2008
 Änderungen vorbehalten

Item	Quantity			Unit	Description	Part Number Standard Designation/Abbreviation	Comments
	AHP 03-1 230V 50Hz	AHP 03-1 110V 50Hz	AHP 03-1 110V 60Hz				
1	1			Ea	HCW 22 T1/0.52-B 1/700-0-11 F-WG 230	23006-001	230V 50Hz
1A		1		Ea	HCW 22 T1/0.52-B 1/700-0-11 F-WG 110	23006-001A	110V 50Hz
1B			1	Ea	HCW 22 T1/0.52-B 1/700-0-11 F-WG 110	23006-001B	110V 60Hz
2	1			Ea	Check valve 230V	23006-002	WGS 2-0-WG230
2A		1	1	Ea	Check valve 110V	23006-002A	WGS 2-0-WG110
3							
4	4	4	4	Ea	Bearing pad type D 18x7.5, M6x16 57 Shore	25190-034	
5	4	4	4	Ea	Serrated lock washer DIN 6798 - A 6.4 - FSt	DIN6798-A6.4-Fst	
6	1			Ea	MKP motor condensor 16µF	23006-006	450V/ALU-C8 FD Ø45x80
6A			1	Ea	MKP motor condensor 50µF	23006-006A	450V/Alu-C8 FD Ø50x128
6B		1		Ea	MKA motor condensor 70µF	23006-006B	450V/Pla Cable Ø50x120
7	1			Ea	Cap with rubber funnel Ø45mm	23170-018	
7A			1	Ea	Cap with rubber funnel Ø50mm	23006-007A	
8	1		1	Ea	Condensor connecting cable	03853-008	FLEX JZ 2x1.5³ 200lg
9	1	1	1	Ea	Housing AHP 03-1	03853-009	RAL 2004 matt structure fine
10	1	1	1	Ea	Support AHP 03-1	03853-010	RAL 2004 matt structure fine
11	4	4	4	Ea	Flat head screw ISO 7045 - M6 x 10 - 4.8	DIN7985-M6x10-4.8	
12	1	1	1	Ea	Cable connection M16x1.5	03950-041	
13	1	1	1	Ea	Hexagonal nut M16x1.5	03950-042	
14	2	2	2	Ea	Cylinder screw ISO 4762 – M8 x 16 - 8.8	DIN912-M8x16-8.8	
15	2	2	2	Ea	Washer DIN 522- 8.4 x 20 x 1.5 - St	DIN522-8.4x20x1.5-St	
16	1			Ea	Cable with plug 3000mm long	189480276	
16A		1		Ea	Cable with plug 3000mm long GB	189480276GB	
16B			1	Ea	Cable with plug 3000mm long USA	189480276UL	
17	1	1	1	Ea	Handle	03300-021	GN565-26-128-SW
18	1			Ea	PCB 230V	03852-011A	
18A		1	1	Ea	PCB 110V	03852-011B	

19	1	1	1	Ea	Grommet Jac 116 MG		03853-019		
20	4	4	4	Ea	Spacer bolts		23005-111		I/A M3x5 mm
21									
22	4	4	4	Ea	Flat head screw ISO 7045 – M3 x 4 - 4.8		DIN7985-M3x4-4.8		
23	4	4	4	Ea	Hexagonal nut ISO 4032 - M4 -8:		DIN934-M4-8:		
24	2	2	2	Ea	Blind rivet with flat head		DIN7337-A2.4X4-AL-ST		
25	1	1	1	Ea	Condensor support		03853-025		FI 1017 20x3x70mm St 37
26	2	2	2	Ea	Cylinder screw ISO 4762 – M6 x 10 - 8.8		DIN912-M6x10-8.8		
27	1	1	1	Ea	Washer DIN 125-A 6.4 - 140 HV-St		DIN125-A6.4-140HV-St		
28	1	1	1	Ea	Check valve connecting cable		03853-028		FLEX JZ 3x0.75² 470lg
29	1	1	1	Ea	Motor terminal cable		03853-029		FLEX JZ 4x1.5² 310lg
30	1	1	1	Ea	Thermoswitch connecting cable		03853-030		H03VV 2 x 0.5² 230lg
31	1	1	1	Ea	Connecting cable to flange socket		03852-016		LiYY 5x0.5² 320lg
32	1	1	1	Ea	5-pin flange socket		23005-117		680 09 0316 00 05
34	1	1	1	Ea	Housing for manual control		23006-034		
35	1	1	1	Ea	Manual control connecting cable		03853-035		LIYY 5 x 0.5² 2000lg
36	1	1	1	Ea	5-pin cable plug		03200-057A		680 09 0313 00 05
37									
38	1	1	1	Ea	Button MPG 106 F		23004-031		OFF
39	1	1	1	Ea	Button MPG 206 R		23004-073		START/STOP
40	1	1	1	Ea	Plastic cap red CB 509		23004-071A		
41	1	1	1	Ea	Plastic cap black CB 505		23004-072A		
42									
43	1	1	1	Ea	Stoppers 15-17.5 mm		23002-070		
44	1	1	1	Ea	Rubber collar 6 mm		23004-062B		
45	1	1	1	Ea	Sealing plug RV18 VS-ED		23170-007		
46									
47	1	1	1	Ea	Angle adaptor A04NM04NMF90K (IG-AG)		03950-034		
48									
49	1	1	1	Ea	Ventilation screw		23006-049		GN552-31-M18x1.5-A-O
50	1			Ea	Rating plate 03853-230V 50Hz		03853-050		AI99.5 75x100x0.5mm
50A		1		Ea	Rating plate 03853-110V 50Hz		03853-050A		AI99.5 75x100x0.5mm
50B			1	Ea	Rating plate 03853-110V 60Hz		03853-050B		AI99.5 75x100x0.5mm

51	1	1	1	Ea	Hydraulic hose	03200-108	2000lg 2x1/4"NPT AG
52	1	1	1	Ea	Hydraulic coupling series	03200-109	Series 115 1/4" NPT
53	1	1	1	Ea	Sign sealing screw oil	23005-006A	AI99.5 76x25x0.5
54	1			Ea	Ferrite H8FE-1137-NC	23005-114A	Ø17.5,Ø9.5x28.5mm
55	1			Ea	Heat-shrink tubing	23005-114B	MDT-A19/6+B 62 mm lg



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