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# AM 1 / AM-2 OWNER MANUAL

Part Number: 6-119815  
Version 2.0  
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## Preliminary Remarks

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First of all, we would like to thank you for selecting the AM 1/ AM 2. Should any defects arise or should you need further information concerning the application of the machine, please do not hesitate to contact us.

The manual on hand corresponds to the regulations in enclosure 1, 1.7.4 of the EC Machinery Directive 98/37/EG dated August 12, 1998

The manual is an important part of the supplied machine and should be kept near the machine for quick access.

The manual has been structured chronologically and shows the necessary adjustments of the machine parameters, the safety devices etc. step by step. Thus, it considerably facilitates the safe work with the machine.

**Before you put the AM 1 / AM 2 into use**, you have to study the manual carefully. It is important that the remarks in the manual are comprehensible. **Please take care that each machine operator knows and acts according to the descriptions in the manual, especially to the remarks concerning the safety devices in chapter 3.4.2.**

If you should not understand the function descriptions, remarks, technical explanations etc. in the manual, please contact **Artos Engineering Co.**

**ARTOS ENGINEERING CO.  
W229 N 2792 DUPLAINVILLE RD.  
WAUKESHA WI.53186  
phone 262-524-6600  
Fax 262-524-0400**

The machine is equipped with all necessary safety devices.

**Important!!** Always insure the safety devices are functioning properly before putting the AM in use. Check daily.

For spare part orders, please give the item number of the part and whether it is for an AM 1 or AM 2..

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# 1 Technical Data

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Machine type	<b>pneumatic stripping and cutting machine</b>
Type name	<b>AM STRIP</b>
Sold by	<b>ARTOS ENGINEERING CO. W229 N 2792 DUPLAINVILLE RD. WAUKESHA WI.53186 phone 262-524-6600 fax 262-524-0400</b>
Sound level	<b>&lt; 70 dB(A)</b>
Operating pressure	<b>3 - 7 bar</b>
Air consumption/stroke	<b>1,8 l at 6 bar</b>
Machine location	<b>table, work bench or similar</b>

## **AM 1**

## **AM 2**

Stripping length (total stripping)	<b>up to 65 mm (2.5")</b>	<b>120mm (4.7")</b>
Stripping diameter	<b>0,5 - 15 mm (.02 to .6")</b>	<b>1,- 25 mm (.04- .98)</b>
Local necessities (in mm) W x D x H	<b>340x440x200 mm (13.4x17.3x7.9")</b>	<b>430x650x245 (16.9x25.6x9.6")</b>
Weight (without accessories)	<b>12,0 kg (26.4#)</b>	<b>27.5kg (60.5#)</b>
Standard blades	<b>"V" blades</b>	
Special blades	<b>Die or Radius style</b>	
Start impulse	<b>with foot switch</b>	

## 2 Short Description of the Machine

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Please check the shipment for completeness, for visible or covered transportation damages etc. immediately after delivery of the new AM.STRIP.1. Please contact the responsible carrier in case of possible transportation damages.

### 2.1 *Appropriate Use*

The AM 1/ AM 2 is a semi-automatic stripping and cutting machine for stripping (and cutting) of round or flat cables with insulations made of different materials like synthetics, rubber, PUR, Teflon etc. for cables and wires.

The use of special blades that are adapted to the cable in process, allows the processing of nearly all common cables. The blades can be changed within seconds and without any further tools.

### 2.2. *Non-appropriate Use*

The AM 1/ AM 2 is not made for the processing of materials other than those, which are normally used for insulation and jacket materials of cables and electric conductors, or for other works as those described in chapter 2.1.

The machine is also not made for the processing of massive shields made of copper or harder materials, steel wire networks etc.

Non-appropriate use makes all guarantee and liability regulations ineffective.

### 2.3 *Location/Room Climate*

The AM 1/ AM 2 has been constructed as a table instrument. Please take care that the room climate corresponds to the usual factory conditions. The machine is not intended to be operated in humid or wet rooms, in rooms with excessive dust production or in an environment containing explosives.

No liquids or parts may enter the casing of the AM.STRIP

## 2.4 *Functional Process*

The round cable is put through the red cable guide. A flat cable is put through the slot in the slotted front plate up to the adjustable stop dog. The cycle is initiated by the foot switch.

The working cycle for the stripping process functions as follows:

- A Initial position the blades are open and the long cylinder is fully extended.
- B After depressing the foot switch: the cross cylinders move together - and accordingly the clamp jaws and the stripping blades close. The cable is clamped and the blades cut into the insulation.
- C The long cylinder moves back - the insulation is removed by the blades.
- D In the final position the foot switch is released, the long cylinder returns, and the stripping blades and the clamp jaws open again.
- E Remove the cable

### **Important**

In the standard version of the stripping machine AM 1/ AM 2 the working cycle is only completed after the release of the foot switch. The release of the foot switch causes the working cycle to stop and the machine moves back to the initial position.

# 3 Operation and Adjusting Possibilities

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## 3.1 *Preparing Works*

First check the machine for completeness and visible transportation damages.

In order to avoid reaching into the working area of the AM 1/ AM 2 from below, please screw the machine on a fixed working bench. In addition, a scrap hole may be cut under the unit. The unit may be attached to the with two 8 mm screws.

### 3.1.1 **Connection for Foot Switch**

First connect the tubes of the foot switch.

The connection points on the machine are marked with the corresponding colors.

### 3.1.2 **Connection for Compressed Air**

Using the proper connector connect the air to the regulator unit. Please take care that only properly prepared (clear and dry) compressed air is used.

### 3.1.3 Working Pressure

The working pressure is adjusted to 3 - max. 7 bar. The pressure is displayed on the gage on the right back side of the machine (seen from above).

### 3.1.4 Protection Devices

The machine is ready to use when the Plexiglas cover and the front plate are in place and engaging there respective safety switches.

## 3.2 Operation Mode of the AM 1 / AM 2

The AM 1/ AM 2 can be used to strip with "V" type, Radius type, OR Die type blades. It can also do multiple stage stripping or cut to length functions.

## 3.3 Machine Adjusting Possibilities

You can - indirectly - adjust the cable diameter (3.3.1 ff.), the stripping length (3.3.2), the removal length (3.3.3) and the pressing power of the clamp jaws (3.3.4) on the AM 1 / AM 2

An optimum adjustment of the machine guarantees optimum stripping results.

### 3.3.1 Diameter

The operation mode of the machine also allows stripping (up to approx. 6 mm<sup>2</sup>) with V- blades. However, it is not common use. It is more recommended to use adapted die blades for stripping.

#### 3.3.1.1 Adjustment Diameter for the Use of V-Blades

Our standard machines are supplied with V-blades  
In order to strip cables with V-blades, please proceed as follows:

- A Connect machine to compressed air supply according to chapter 3.1 ff. - take care that the protection devices function correctly.

**Caution!! Cylinders moves to open position when air is applied.**

- B The clamp jaws have been adjusted ex works such that they clamp the cable centered to the blades. **Take care that this central position is kept while you change diameters.**

start a working cycle with the foot switch -without any cable inserted into the machine. Take care that the opening, formed by the V-blades, is larger than the inner cable- to be processed, in order to avoid that the blades cut into the cable and are exposed to unnecessary wear. Chapter 2.4 B describes the status of the machine when checked.

In order to change the diameter, set the adjusting screws on the clamp jaws accordingly. Make the adjustment **evenly** right and left. Continue this process until the blade opening is larger than the cable core diameter.

- C When the opening in the V-blades is large enough, Insert the cable and reverse the process until the cable strips properly.

**After the cable insulation has been stripped. Pull back on the cable as the footswitch is released to remove the cable. This will keep the returning blades from damaging the end of the cable.**

**Caution!! MISS ADJUSTMENT MAY RESULT IN THE CABLE FOLLOWING THE BLADES INTO THE MACHINE. IN THIS EVENT RELEASE YOUR GRIP ON THE CABLE AND RELEASE THE FOOT SWITCH. DO NOT TRY TO HOLD IT BACK BY HAND. INJURY MAY RESULT.**

### 3.3.1.2 Adjustment Diameter for the Use of Die Blades

Die blades do not by pass. They butt against each other. This forms an opening predetermined by the core diameter of the cable. In order to use optimum die blades, we recommend to send cable samples (approx. 0,5-1 m) for sizing to the supplier or directly to us.

Take care that the machine is adjusted properly so the clamp jaws do not clamp the cable too tightly. Over clamping may cause cable damage and will not allow the Die blades to close completely.

### 3.3.2 Stripping Length

You can adjust the stripping length with the stop plate which protrudes from the strip cylinder shaft. Remove the front plate and the Plexiglas cover. Unscrew the clamp thumbscrew on the piston rod of the stripping cylinder and adjust the stop dog to the required length.

### 3.3.3 Removal Length

The stripping cylinder always makes the complete stroke movement of 65 mm. However It will return whenever the foot switch is released.



### 3.3.4 Clamp Jaws Force

The force of the clamp jaws is a combination of air pressure and jaw position adjustment.

## 3.4 Setting into Use

### 3.4.1 Preparation

- A Preparation of the working bench (see chapter 3.1)
- B Connect foot switch according to color code (3.1.1)
- C Connect air cable (to max. 10 bar; 3.1.2)
- D Adjust working pressure at pressure regulator to 6-7 bar.

**Attention**      **Cylinders now move to the initial position<sup>1</sup>**

### 3.4.2 Safety Devices

The AM 1/ AM 2 is equipped with all necessary safety devices. However, no system can be completely protected against misuse. All modifications or amendments that are not made ex works by the manufacturer, or other measures that are not given in writing, will cease all guarantee and liability claims to be in force.

**Attention**      **Never reach hands into the working area of the machine from below.**

Because the insulation waste drops down from the machine, the AM 1/ AM 2 is consequently not equipped with a bottom sheet. But since the machine is only 12 kg, the danger of an operator reaching his hand into the working area of the machine is given. To exclude such an accident, you have to fix the machine on the working bench.

The individual safety functions and elements are described in the following:

#### 3.4.2.1 Safety Switch - Plexiglas Safety Cover

A micro ram valve is placed at the end of the nut, where the Plexiglas safety cover is put in. A correct function of the valve should then stop the air immediately after having been released by the safety cover - but only if the front plate has been adjusted correctly.

#### 3.4.2.2 Safety Switch - Front Plate

A small pin at the back side of the front plate causes a ram to release a second safety switch.

**The machine is ready to use only if both safety switches are activated.**

**Attention**      **It should not be possible to start the machine while the front plate or safety cover are removed. Please check regularly whether the necessary safety measures of the machine work correctly, and whether any danger for the operator is excluded.**

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<sup>1</sup> also see chapter 2.4

## 4 Basic Construction and Modification Possibilities

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### 4.1 *Basic Construction*

The basic construction corresponds to the standard delivery state of the AM 1/ AM 2

### 4.2 *Modification/Change of Blades*

- A Pull out the front plate after unscrewing the knurled nuts from the front of the machine.
- B Remove Plexiglas cover forwards.
- C Remove long cylinder upwards after disconnecting the air connection-plug couplings.
- D Pull out the two blade heads backwards.

**Important!! Do not put down the blade heads on the running surface because they are finely ground. Even slightest dirt could cause unnecessary wear.**

- E Put in necessary blades

**See Cut-to-length 6.2**

## 5 Maintenance/Service

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### 5.1 *General Remarks*

To comply with the legitimate claims to optimum operating and machine security we recommend a regular safety check of all construction parts and function cycles, according to the frequency of their use.

You can easily check the safety devices of the AM 1/ AM 2 by testing whether the compressed air is immediately shut off, if one of the safety devices described above is removed.

**Attention** Never operate the machine, while the safety devices do not work correctly.

### 5.2 *Slide Guides*

Clean and grease the blade head-slide guides and their running surfaces once a week. We recommend additional cleaning in dirty environments due to talcum and stripping residue.

### 5.3 *Clamp Adjustments*

Oil the clamp adjustment screws once a month with medium heavy machine oil.

### 5.4 *Pneumatics*

The control valves and cylinders have been durably oiled with pneumatic oil and do not need further maintenance. For maintenance and service references of the regulator valve see also chapter 9.5 of the FESTO-manual.

### 5.5 *Machine Interior*

Clean the working area of the machine from time to time carefully with brush and duster, depending on its condition. We recommend an intermediate cleaning in dirty environments due to talcum and stripping residue

Take care that no foreign parts or liquids get into the casing openings.

**Attention** Do not use compressed air in order to clean the working area! Foreign parts or talcum could get into unwelcome places and spoil the function.

## 6 Accessories

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### 6.1 *Blades*

The standard versions of the AM 1/ AM 2.-machines are fitted with V-blades. However, we recommend die blades, adapted to the cable, for optimum stripping results.

### 6.2 *Cut-To-Length*

The AM 1/ AM 2 can also be used to cut cable to length. You must install cut-off blades, remove the strip cylinder and install the cut-off guide tube.

- A Pull out the front plate after unscrewing the knurled nuts from the front of the machine.
- B Remove Plexiglas cover forwards.
- C Remove long cylinder upwards after disconnecting the air connection-plug couplings.
- D Pull out the two blade heads backwards.

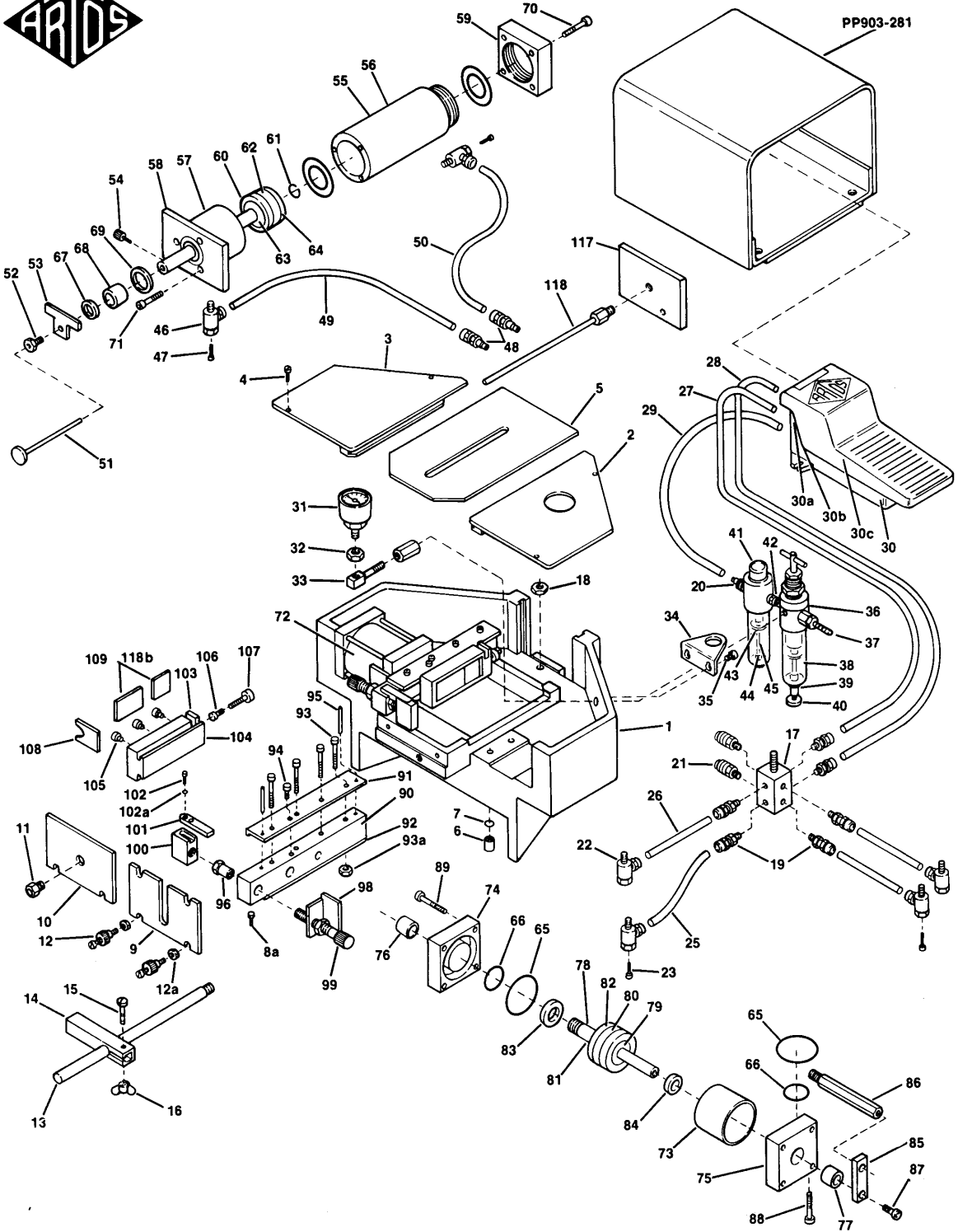
**Important** Do not put down the blade heads on the running surface because they are finely ground. Even slightest dirt could cause unnecessary wear.

- E Put in cutoff blades at the front end of the tool holders.

- F Slide the toolholders all the way to the front of the machine.
- G Pull the heads together to insure proper blade engagement.
- H Lock the tool holders in place using the Socket Head Screws that protrude thru the top plate of the slide.
- I Install the Cut-To-Length guide in the Strip Cylinder slot with the end of the tube at the cut off blades.
- J Replace the Plexiglas and front guard.

To operate, insert the material supply through the back and out the front to the desired length.(For shorter lengths the striker rod and plate assembly can be used) Depress the foot switch.

# 7 PARTS LIST





## AM-1 AND AM-2 EXPLODED VIEW AND PARTS LIST

Index No.	Description	Index No.	Description	Index No.	Description
1	Main Frame	43	Oil Glass	95	Tension Hull or Housing
2	Right Sheetmetal Cover	44	Holding Screw for Oil Glass	96	Guide Bushing
3	Left Sheetmetal Cover	45	Oil Filling	97	Clamp Screw
4	Flat Heat Screw	46	Pivot Quick Change Screw Lock LCK-1/4 - PK4	98	Safety Angle
5	Plexiglas Cover	47	Air Flow Control Screw	99	Hexagon Nut
6	Threaded Bushing	48	Coupling Plug KS-PK4 - 1/8	100	Clamp Piece
7	Ring Gasket	49	Air Pressure Hose PK4 x 200 mm, White	101	Guide Gib
8a	Clamp Screw	50	Air Pressure Hose PK4 x 200 mm, Blue	102	Socket Head Cap Screw
9	Front Plate with Slot	51	Striker Rod with Plate	102a	Safety Ring
10	Front Plate with Guide Bushing	52	Knockout Screw	103	Knife Head
11	Round Cable Guide Bushing	53	Knockout	104	Knife Head Guide Rail
12	Castellated Nut	54	Locking Screw	105	Socket Head Cap Screw
12a	Hexagon Nut	55	Length Cylinder, Complete	106	Clamp Head
13	Striker Rod	56	Housing	107	Clamp Screw
14	Striker Plate	57	Head Plate	108	Knife
15	Fillister Head Screw	58	Front Plate	<b>SPACERS FOR AM-1 ONLY</b>	
16	Wing Nut	59	Base Plate	109	.078 x .472 x .984
17	Air Distributor Block	60	Piston Road	110	.472 x .984 x .984
18	Hex Nut	61	Safety Ring	111	.472 x .984 x 1.574
19	Quick Change Screw Lock CK-1/8 - PK4	62	Spacer Ring or Ring Spacer	112	Blade Holder Spacer H-64650
20	Quick Change Screw Lock CK-1/8 - PK6	63	Take-up Ring	<b>SPACERS FOR AM-2 ONLY</b>	
21	Coupling	64	Collar	113	1/16" x 5/8" x 5/8"
22	Pivot Quick Change Screw Lock 6 CK-1/8 - PK4	65	Housing Ring Gasket	114	1/8" x 5/8" x 5/8"
23	Air Flow Control Screw	66	Piston Striker Ring	115	1/4" x 5/8" x 5/8"
24	Quick Change Screw Lock CK-1/4 - PK6	67	Strip Off Ring	116	1/2" x 5/8" x 5/8"
25	Air Pressure Hose PK4 x 200 mm, White	68	Bushing	117	Front Plate
26	Air Pressure Hose PK4 x 150 mm, White	69	Piston Rod Ring Gasket	118	Guide Tube with Castellated Screw
27	Air Pressure Hose PK6 x 1500 mm, Blue	70	Socket Head Cap Screw	PP903-281 Foot Pedal Guard	
28	Air Pressure Hose PK6 x 1500 mm, White	71	Socket Head Cap Screw		
29	Air Pressure Hose PK6 x 1500 mm, Black	72	Cross Cylinder, Complete		
30	Foot Valve, Complete F4 - 1/4	73	Housing		
30a	Safety Ring	74	Head Plate		
30b	Axle	75	Base Plate		
30c	Valve Insert	76	Bushing for Head Plate		
31	Air Regulator 40 0, 0-10 bar, R 1/4	77	Bushing for Base Plate		
32	Hex Nut R 1/8	78	Piston Rod		
33	Holding Frame	79	Threaded Ring		
34	Bracket	80	Spacer Ring or Ring Spacer		
35	Socket Head Cap Screw	81	Take Up Ring		
36	Air Regulator, Complete FRC-1/8	82	Collar		
37	Hose Socket	83	Ring Gasket for Piston Rod and Head Plate		
38	Water Collecting Glass	84	Ring Gasket for Piston Rod and Base Plate		
39	Holding Screw for Water Collection Glass	85	Cross Connection Plate		
40	Water Release Screw	86	Hexagon Pin		
41	Oil Sight Glass	87	Socket Head Cap Screw		
42	Oil Filter Screw	88	Socket Head Cap Screw		
		89	Socket Head Cap Screw		
		90	Clamp Jaws		
		91	Upper Guide Rail		
		92	Lower Guide Rail		
		93	Socket Head Cap Screw		
		93a	Hexagon Nut		
		94	Socket Head Cap Screw		

**NOTE: When ordering spare parts, please designate whether Model AM-1 or AM-2.**