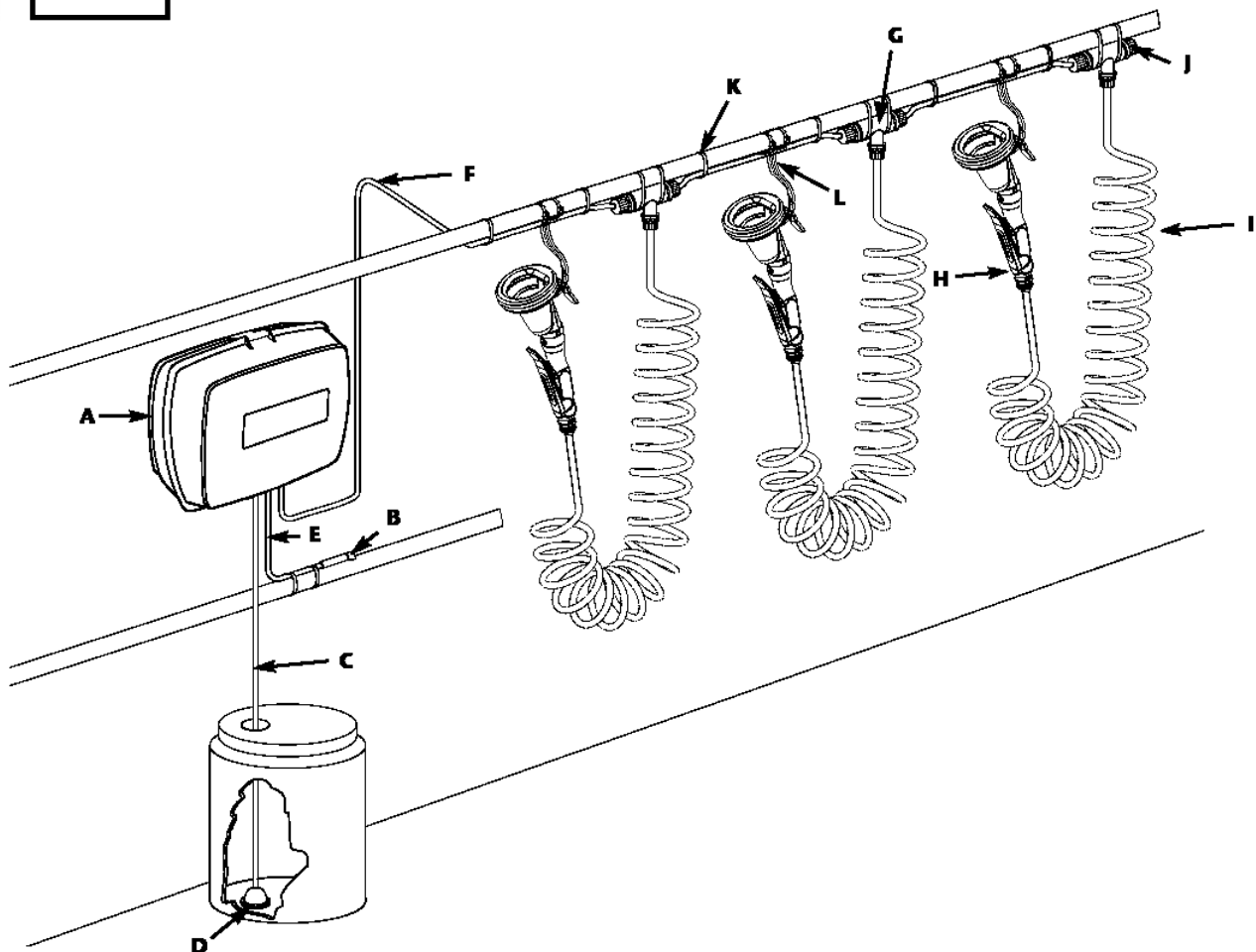


# AMBIC®

## EasiDipper™

Fig. 1



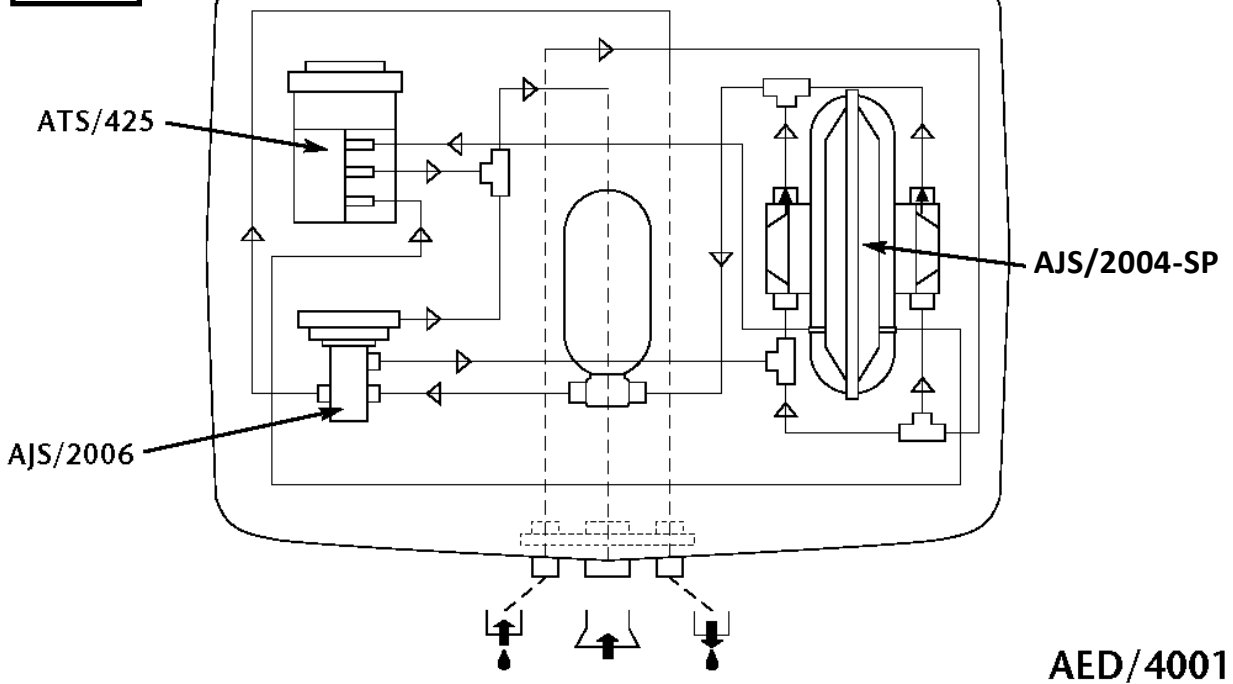
SP12

## OPERATING INSTRUCTIONS

Mode d'emploi • Istruzioni • Anleitung  
Instructies • Instrucciones

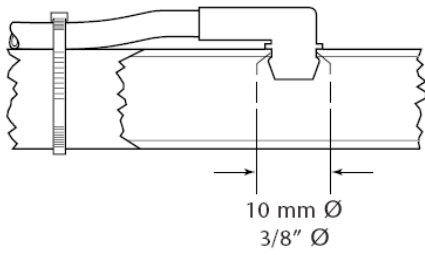
*leading best practice in livestock health management*

**Fig. 2**

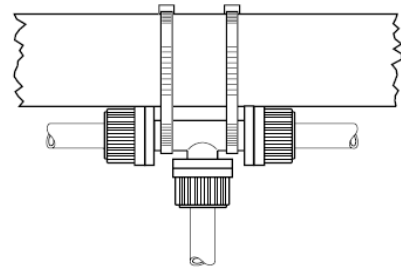


**AED/4001**

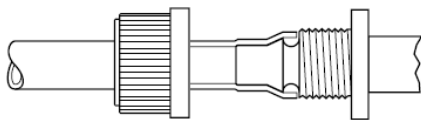
**Fig. 3**



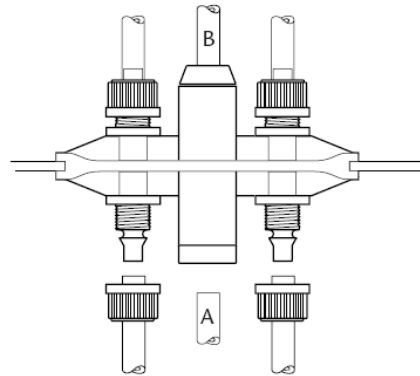
**Fig. 4**



**Fig. 5**



**Fig. 6**



## 1. INSTALLATION

### SAFETY

The EasiDipper Teat Dipping System is designed exclusively for use in milking installations. Any application outside the use described in this operating manual will be taken to be not in accordance with the intended purpose. The manufacturer/supplier will not be held responsible for any losses arising as a result of such use. The user will take full responsibility for use. USE IN ACCORDANCE WITH THE INTENDED PURPOSE ALSO INCLUDES COMPLYING WITH THE OPERATING MANUAL AND THE CONDITIONS FOR INSPECTION AND MAINTENANCE.

**ATTENTION!** Whilst in operation the installation is under an operating pressure of 2 to 4 bar! Do NOT spray chemical into your eyes! If you do, rinse with copious amounts of water and seek medical attention!

For general parlour layout refer to Fig. 1. Position Power Unit (A) not more than 3 metres (10ft) above the base of the Chemical Container, preferably in a dust free environment, close to a regulated Vacuum Line. The unit will slot onto some existing Wall Brackets. If this is a new system, fix using 2 x screws and rawplugs. Using the drilling template on page 10, fit one screw first then carefully mark and drill the other. Accuracy between centres is most important.

**VACUUM SUPPLY** Drill a 10mmØ (3/8"Ø) hole in the top of a regulated main vacuum line (Fig. 3). Remove burrs, lubricate Pipe Adaptor (B) and twist into hole. Secure Tube (E) with cable ties (K). Do not over-tighten and avoid sharp bends. Cut tube to correct length and push firmly into Manifold rubber sleeve (Fig. 6 'A').

**CHEMICAL INTAKE** Unscrew Nut and remove Blanking Plug from intake port (Fig. 2). Cut tube (C) to correct length ensuring that the Intake Filter (D) rests on the bottom of the Chemical Container. Insert tube through nut, warm end of tube to ease assembly and push fully onto port. Tighten nut firmly with fingers. or AmbiSpanner - do not use pliers or other tools. This method (Fig. 5) should be used when connecting all such fittings on EasiDipper.

**PRESSURE LINE** (Fig. 2) The maximum length to which the coiled tube will stretch is 3 metres, so T-pieces should be positioned along the parlour to enable all cows to be easily dipped without over-stretching coils. Determine position of 'T's (G) and strap loosely to a suitable support (Fig.4). Cut suitable lengths of Tubing (F) and strap and connecting to 'T's (G) and outlet port. Attach Coils (I) and Applicators (H). Seal open end of last 'T' with Blanking Plug (J) and Nut. Finally, once positions are correct, fully tighten Cable Ties. Do not over-tighten on tubing and avoid sharp bends. The straight connector (S in Fig. 7) attached to the short length of flexible tube (T), supplied with each Applicator, should be connected to the coil (I); use the nut supplied to secure the other end of this tube to the nipple on the Applicator (H).

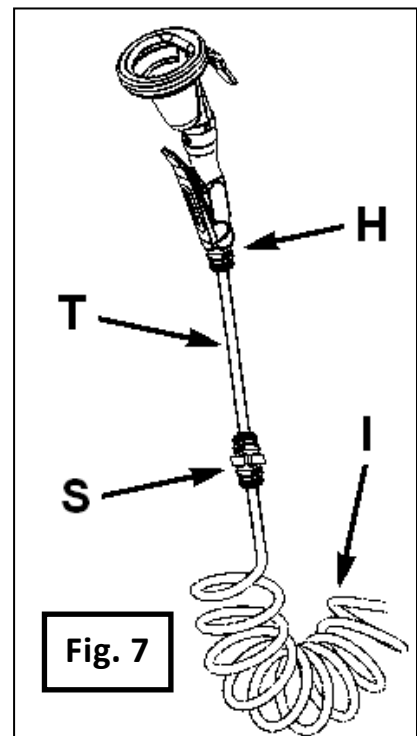
Plastic Hanging Hook (L) may be fitted to a suitable horizontal tube using 2 cable ties (K), or can be drilled with 2 holes and fitted (by 2 screws or bolts) to a flat surface.

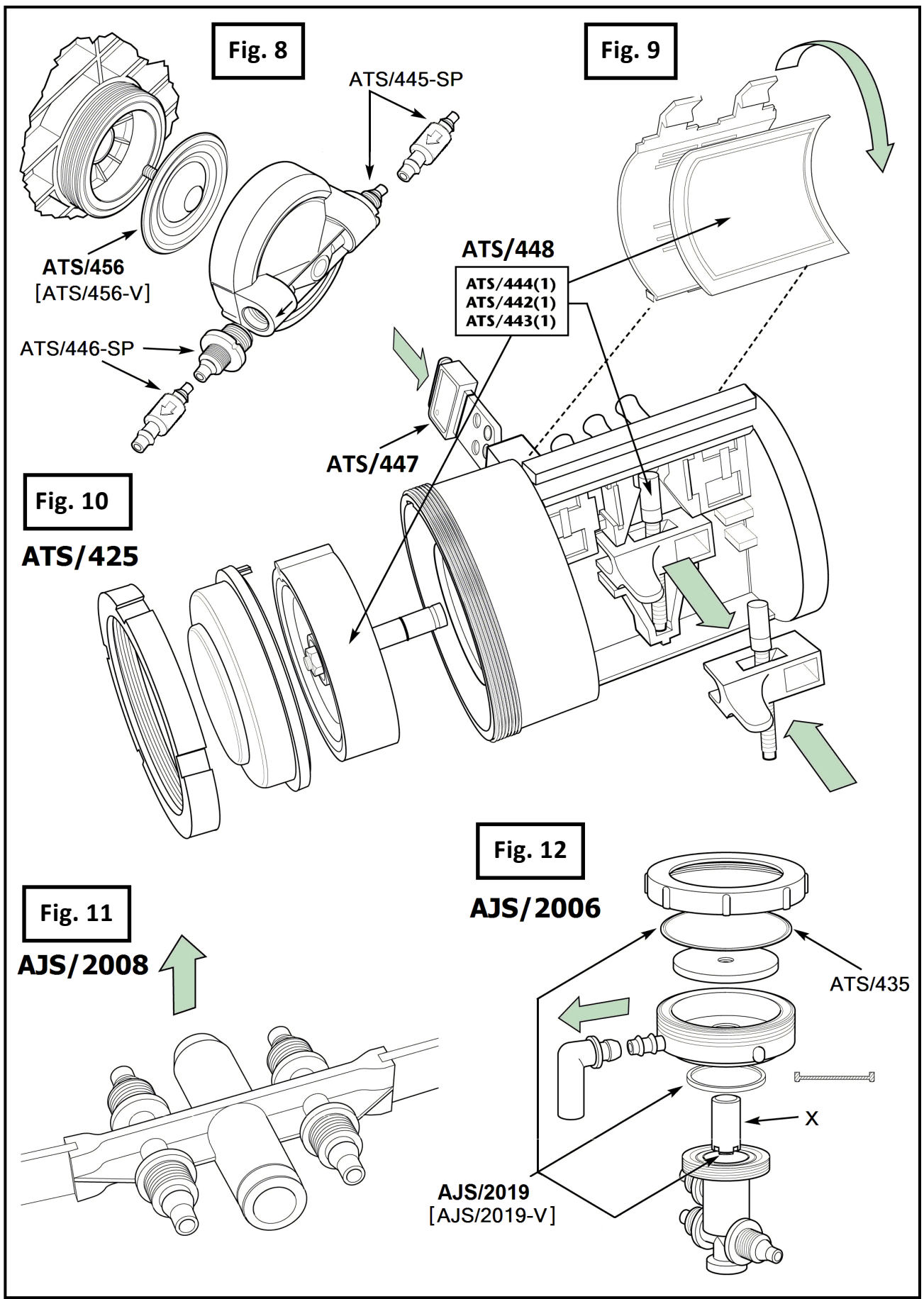
## 2. INITIAL START UP

When installation is complete, turn on the Vacuum Pump. Power Unit will automatically start, reaching full pressure within one minute. There will be some air in the system. To expel this, hold each applicator above the Delivery Line vertically at arm's length pointing away from face. Press the lever until air bubbles are no longer apparent. EasiDipper is suitable for most chemicals approved for teat-dipping EXCEPT for some thickened (barrier) dips and those containing Chlorine Dioxide\*, Lactic Acid\*, or Hypochlorite; its use with these and certain other chemicals may invalidate warranty – please check with your Ambic dealer (\* Use the VITON version of EasiDipper e.g. AED/4001-V for Chlorine Dioxide or Lactic Acid based chemicals). When diluting concentrated chemical, ensure that the chemical manufacturer's instructions are followed precisely.

**Important:** Replenish disinfectant supply before it runs out to prevent air entering the system.

In order to arrive at the best operating pressure for the chemical being used, the EasiDipper is supplied with 2 pressure modules – to correctly adjust these modules please refer to 3. Operation on page 5.





### 3. OPERATION

**DIPPING with EasiDipper** is carried out by depressing and holding the lever on the Applicator (Fig. 7 H) until the internal cup fills with chemical to the top of the teat-shaped white cup. To avoid wastage, **DO NOT FILL THE CUP RIGHT TO THE BRIM**, as this will result in chemical overflowing the cup when applied to the teat. This filling of an empty cup should take about 2 seconds and can be changed by varying the pumping pressure (see next paragraph). Use the Applicator to dip each teat carefully into the cup so that the lower 5cm of all teats is evenly coated with chemical. Depress the lever briefly between teats to replenish the level of chemical in the cup. After dipping, it is advisable to hang up the cup on the bracket supplied – the Applicator can be left hanging from the coils, but this will result in residual chemical dripping from the cup onto the floor.

**SETTING EasiDipper OUTLET PRESSURE** – the outlet pressure directly affects the fill rate of the cup and can be adjusted to minimise over-filling and splashing when using dips of low viscosity. Pressure can be varied by changing, or adjusting, the pressure modules supplied - one Module is ready-fitted in the Pressure Relief Valve (AJS/2006 in Fig. 2) within the power unit. To fit a different Pressure Relief Module 'X' (Fig. 12), first disconnect the vacuum from the power unit and depress trigger on an Applicator to depressurise system. Remove rubber elbow in direction of arrow 2 (Fig. 13). Unscrew the complete top, inclusive of Spigot section, to expose the Module, which can be lifted out.

The "standard" Black module (AJS/2016) fitted at the factory operates the unit at about 50psi (3.4Bar) and is probably only suitable for thickened (higher viscosity) dips.

For low viscosity dips, fit the optional Green Adjustable module (AED/4016, or Blue Viton version AED/4016-V) and set it to operate the unit at 28, 34 or 40 psi (1.8-2.7 bar) by using a small (3mm blade) screwdriver to turn the recessed adjuster screw (in the centre of the top) to one of the three "click" positions (factory set at 1.8 bar). The screw will turn continuously in either direction, but is easiest to turn Anti-clockwise using a slight downward pressure on the screwdriver – **DO NOT FORCE** the adjuster, you risk damaging the screw slot. When the desired pressure setting has been selected, replace the module in the Pressure Relief Valve, refit and tighten (hand tight only) the top and reconnect the vacuum to test the applicator for correct operation.

**END OF MILKING** When the main Vacuum Supply is turned off, the Power Unit automatically returns pressurised disinfectant to the Chemical Container. This ensures immediate safety and also flushes any debris from the Intake Filter (D).

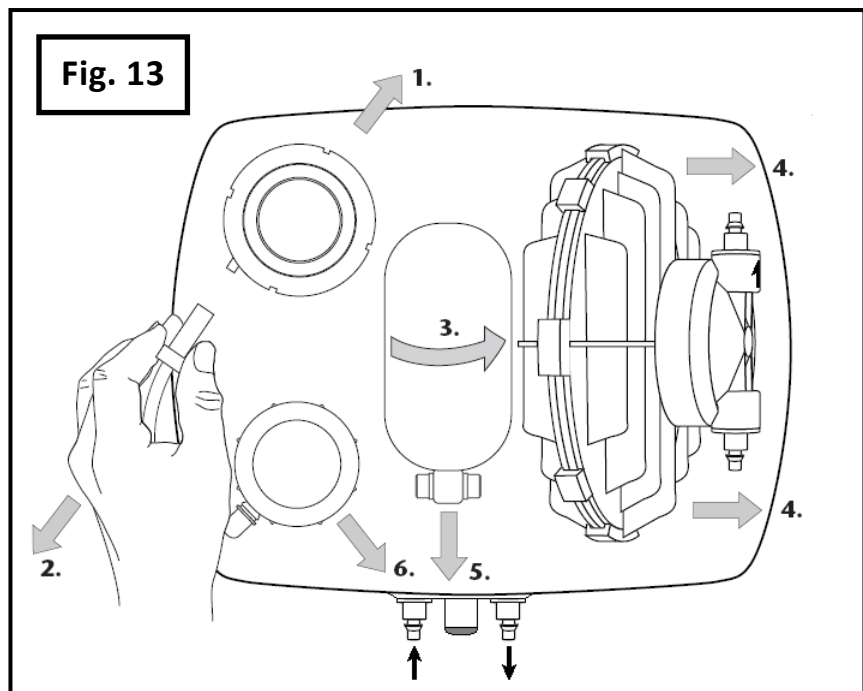
Make sure that each applicator cup is washed out, using warm water, immediately after the end of the milking; failure to do this with thickened chemicals may lead to the cup becoming blocked with congealed chemical.

### 4. MAINTENANCE

**DIRECTIONAL VALVE ATS/425** is located at the top left of the Power Unit (Fig. 2).

**NOTE:** Most maintenance can be carried out with the Valve in place. If complete removal is required, slide out of clips using a twisting action (Arrow 1 Fig. 13). Grasp Valve Manifold and gently pull away from the Valve (Arrow 2 Fig. 13). To refit, reverse the operation.

**VALVE FILTER ATS/444** Replace every 1000 hours or sooner if heavily contaminated. Manually release Valve Filter Cover Clips by levering with fingers (Fig. 9). Carefully remove Valve Filter taking care not to drop dust into the working parts. Fit new Valve Filter by reversing the process.



**BLEED INSERT ATS/447** Pull out of main body taking care not to dislodge the 4 'O' Rings. Inspect two small holes near the end (Fig. 10). Clean every 1000 hours or sooner if heavily contaminated. Use strand of wire attached to bleed insert.

#### 4. MAINTENANCE (continued)

**DIAPHRAGM ASSEMBLY ATS/443** Replace every 3000 hours. First remove Valve Filter (see above). Remove Spring ATS/442. Pull Drive Box in direction of Arrow (Fig. 10) using pliers on lug. Unscrew large black ring nut, gently prise off red cap, using a screwdriver in slot provided. Pull out Rubber Diaphragm by grasping outer rim. Re-fit Diaphragm Assembly ATS/443 taking care not to remove the pre-lubrication on the shaft. If the Spring, ATS/442, shows any sign of corrosion replace it. Fit new Diaphragm Assembly by reversing the operation, ensuring that the semi-circular location engages in the recess on the main body. When replacing the Drive Box push hard until a click is heard indicating proper engagement. Prior to fitting the Filter and Cover, push Drive Box from end to end. An audible click should be heard, indicating proper operation.

**DIAPHRAGM PUMP AJS/2004-SP** The Pump is located on the right of the Power Unit 'A' (Fig. 2). It needs no maintenance but, in the rare event of failure, it is removed by first unscrewing the Pressure Bottle ATS/436 in the direction of arrow 3 (Fig. 13). Remove transit fixings. Tilt Pump AJS/2004-SP and unclip by sliding in the direction of arrows 4 (Fig. 13). Remove both rubber elbows. Unscrew 4 Nuts, on the Pump Head, ATS/445-SP and ATS/446-SP (Fig. 8), warm Tube ends and pull off gently, noting their positions. When replacing the Pump, make sure that the arrows on the Pump Heads point towards the top of the Power Unit. Occasionally, debris may enter the Non Return Valves ATS/445-SP and ATS/446-SP (Fig. 8). These can be unscrewed using the AmbiSpanner provided, or long nosed pliers. Wash out and blow through. These components can be replaced if damaged.

**RELIEF VALVE AJS/2006** is located at bottom left of Power Unit (Fig. 2). To replace Diaphragm ATS/435, unscrew top with moulded lugs, this will expose Diaphragm for replacement. To fit a different Pressure Relief Module 'X' (Fig. 12), AJS/2016, remove rubber elbow in direction of arrow. Unscrew the complete top inclusive of Spigot section, this will expose the existing Relief Module. To replace or remove complete Relief Valve, first remove the Pump as described under Diaphragm Pump. Then tilt and slide Bottle Holder in direction of arrow 5 (Fig. 13), unclip the Relief Valve in direction of arrow 6. Unscrew 3 nuts on the Relief Valve, warm tube ends and pull off gently noting their positions.

**MANIFOLD ASSEMBLY AJS/2008** is located by friction fit in the skirt of the Case Base (Fig. 11). If it is damaged it can be replaced. Unscrew 4 Nuts and remove tubes. Pull out Vacuum Pipe 'A'. Cut Vacuum Pipe 'B' (Fig. 6) close to rubber bush as it is glued for transportation. Lever Manifold from Case Base. Replace with new unit. Both Vacuum Pipes 'A' & 'B' need only be pushed in.



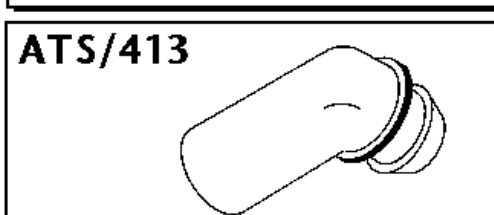
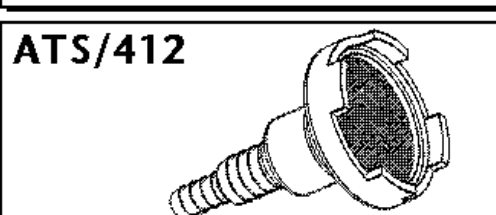
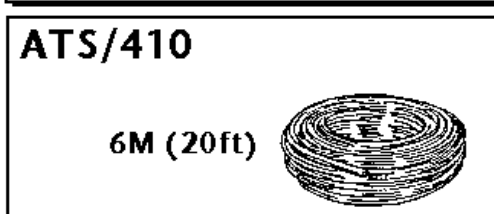
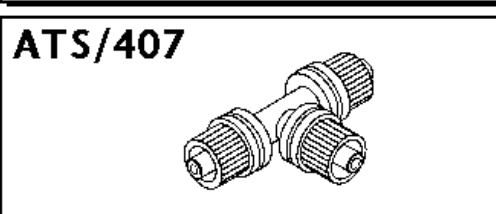
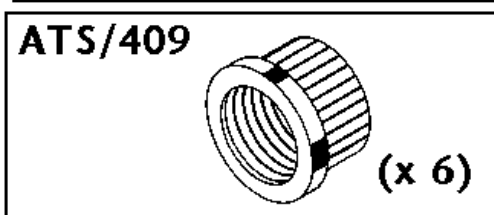
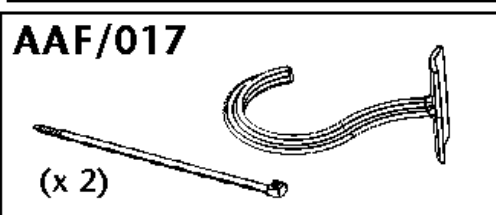
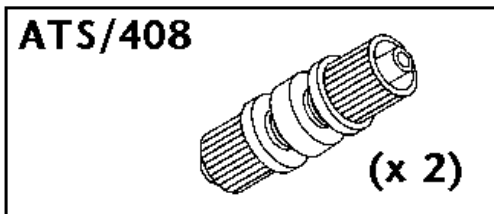
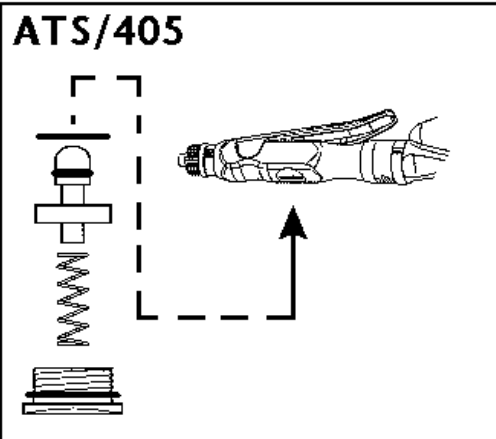
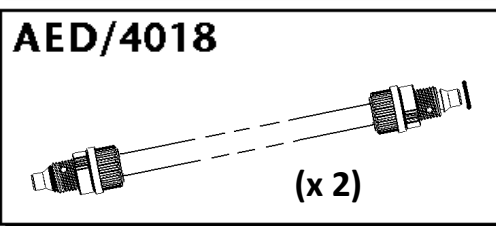
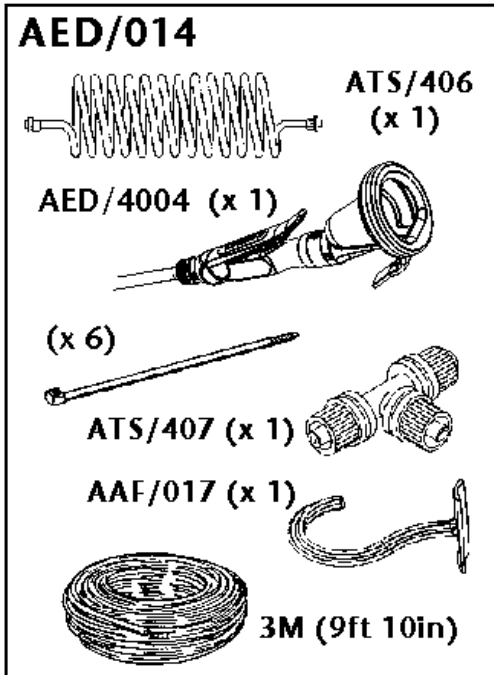
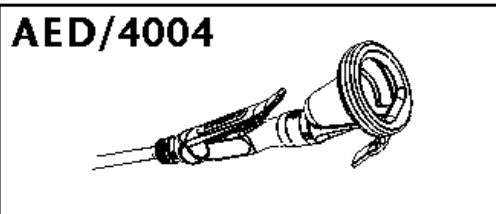
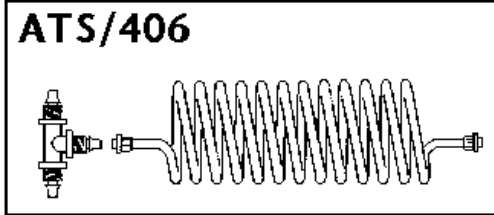
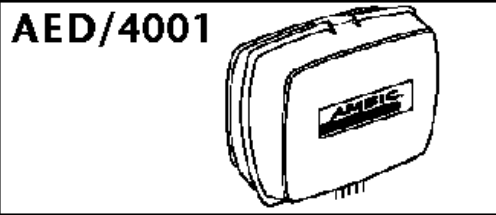
## 5. TROUBLE SHOOTING

FAULT	CAUSE	REMEDY
<b>1. Chemical does NOT fill dip cup when lever pressed (or fills very slowly)</b>	a. Vacuum Pump not switched on	a. Switch on Vacuum Pump
	b. Vacuum line not airtight	b. Check that Vacuum is reaching Power Unit by pulling Supply Pipe out and test with finger. Check Vacuum Pipe adaptor is correctly installed
	c. Constricted Vacuum Supply Pipe (E)	c. Check for kinks and overtightened Cable Ties
	d. Chemical Container is empty	d. Fill Container
	e. Intake Filter (D) blocked	e. Clean Filter
	f. Pressure Line (F) blocked	f. Clear blockage, check for constrictions, kinks and tight Cable Ties
	g. Inlet to cup assembly (AED/4004) restricted or blocked	g. Check inlet underneath top rim and clean, using warm water, if chemical residues apparent (see Fig. 7).
	h. Operating pressure TOO LOW for viscosity of chemical	h. INCREASE operating pressure
	i. Unsuitable chemical being used	i. Change to appropriate Disinfectant
	j. Pump AJS/2004 faulty	j. Check Pump and repair or replace
	k. Directional Valve ATS/425 faulty	k. Check Valve and repair or replace
	l. Relief Valve AJS/2006 faulty	l. Check Valve and clean, repair or replace
<b>2. Applicator cup continues to fill after trigger released</b>	a. Air in pressure Line (F)	a. Vent as described under "2. Initial start up"
	b. Control Valve ATS/405 dirty or damaged	b. Clean or replace Control Valve
<b>3. Chemical running out of Power Unit</b>	a. Loose Connector Nut	a. Locate leak and tighten Nut
	b. Defective Pump or Relief Valve	b. Check Units and repair or replace
<b>4. Unit pressurised when Vacuum switched off</b>	Relief Valve faulty	Repair or replace
<b>5. Chemical leaks into Vacuum line</b>	Relief Valve or Pump faulty	Immediately disconnect Vacuum line & plug it. Repair or replace defective parts.

## 6. TECHNICAL DATA

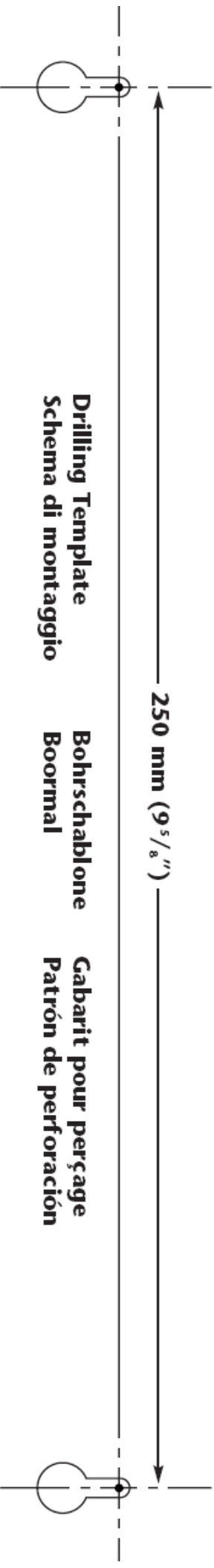
Power Source:	Vacuum 12-15 in Hg (40-50 kPa)	Maximum No. of applicators operated simultaneously:	3
Chemical Consumption:	8-15 ml/s per applicator	Maximum No. of applicators per Power Unit:	50
Air Consumption:	50 l/min (1.8cfm Atmospheric Air @ 50kPa)	Maximum length of Pressure Line:	25 m 80 ft
Output Pressure (Max.):	50 psi (3.4 Bar) @ 46kPa (13.5 in Hg)	Operating Temperature :	(min.) 5 °C (max.) 40 °C

7. SPARE PARTS • PIÈCES DÉTACHÉES  
ERSATZTEILE • RECAMBIOS









**Drilling Template**  
**Schema di montaggio**

**Bohrschablone**  
**Boormal**

**Gabarit pour perçage**  
**Patrón de perforación**

**250 mm (9 5/8")**



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