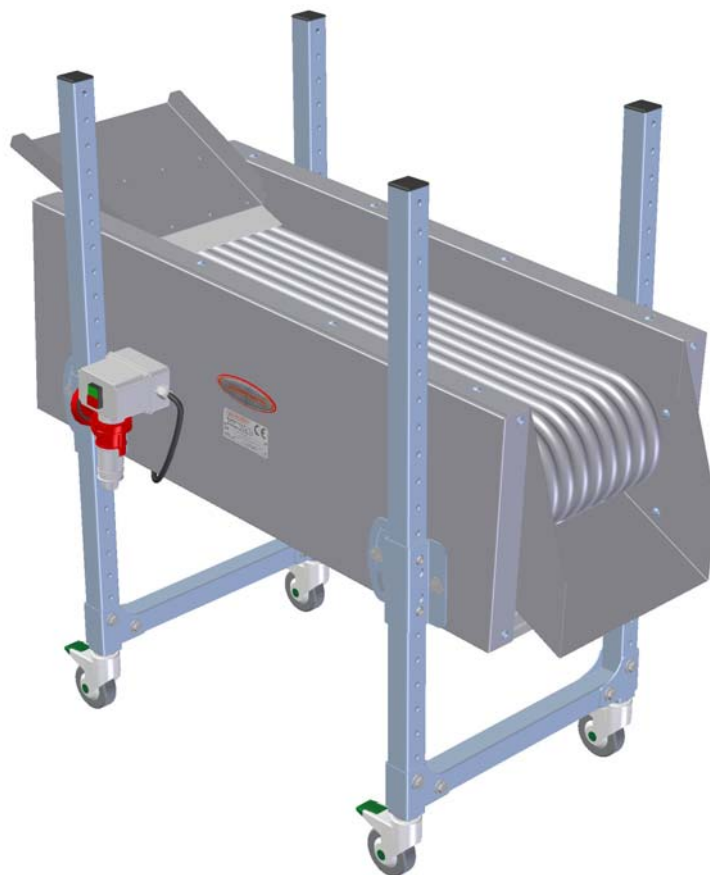


# VIBRATION SEPARATOR SAV 1 Series

User and maintenance manual



## DECLARATION OF CONFORMITY

VIRGINIO NASTRI S.R.L., Via Seconda Strada, 161 - 36071 Arzignano (Vicenza) Italy Tel. +39 - 0444 - 45.06.20, fax +39 - 0444 - 61.18.40

declares under its own responsibility that the following machine:

Type: **Vibration separator, Mod. SAV/1**

Serial number: **21905/13**

Year of production: **2013**

- is **IN CONFORMITY** with the essential safety requirements dictated by Machines Directive nr. **2006/42/CE**.
- is **IN CONFORMITY** with the **2004/108/CE** and **2006/95/CE** Directives.

The following harmonised norms have been applied:

EN 50081 - 2                      electromagnetic compatibility – Generic emission standard, part 2 industrial environment

EN 50082 - 2                      electromagnetic compatibility – Generic emission standard, part 2 industrial environment

The signer of the declaration is:

Surname:                      Virginio

Name:                          Domenico

Position in the company:    PRESIDENT of VIRGINIO NASTRI S.R.L.

Place and date:                Arzignano, 04/02/2013

Signature:



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## INTRODUCTION

### P.1 MACHINE DATA

Producer:  
 VIRGINIO NASTRI srl  
 Via Seconda Strada, 161 - Z.I.  
 36071 ARZIGNANO (VI)

Technical data regarding the SAV 1 series vibration separator (refer to the drawing on page 8)

<b>SAV Series</b>	<b>1</b>
Electric supply voltage (Volt)	400
Installed power (KW)	0.37
<b>DIMENSIONS AND MASS</b>	
Length (mm)	1040
Useful width (mm)	410
Pipe diameter (mm)	30
Total mass (Kg)	148
Noise level at the operator's position in dB(A)	< 70

For technical assistance and information:  
 VIRGINIO NASTRI srl  
 Via Seconda Strada, 161 - Z.I. ARZIGNANO (VI)  
 Tel. 0444/450620 - 451520  
 Fax 0444/671840

**Nota Bene:** The user instruction manual is an integral part of the machine itself. Familiarity with the points contained in this manual is essential for safe machine use. This booklet is the Instruction Manual of the previously identified machine and was compiled in accordance with the EEE 89/392 Directive, Annex I, par.1.7.4

### P.2 HOW TO USE AND KEEP THE INSTRUCTION MANUAL

This instruction manual describes machine use as forecasted by design hypothesis, supplies information on how to transport, use, carry out maintenance on and dismantle the machine, and also how to order spare parts.

The instruction manual is a part of the machine and must be kept "for future reference" until final dismantling. It must be kept in the most opportune manner in the place where the vibratin separator is used, and must always be easily reachable.

This manual mirrors the technical state of the machine at the machine marketing date.

VIRGINIO NASTRI srl reserves the right to update production and manuals without the obligation to update previous production and manuals.

A new manual can be requested if the one supplied with the machine is lost or damaged, or if another copy is necessary. When requesting a new copy, please refer to the data given on the CE plate on the machine.

### **P.3 SAFETY WARNINGS**

In order to ensure maximum working reliability, VIRGINIO NASTRI srl accurately selects the materials and components used to produce the machine, and regularly tests it before shipment. Good machine return through time depends on correct use and suitable maintenance, in accordance with the instructions indicated in this manual.

All the construction elements, as well as the connection and command organs, have been designed and produced with a safety level that permits resistance to stress that is abnormal or at least above those levels indicated in this manual. The materials are of the best quality and their entry into the company, their storage and their use is constantly controlled in order to guarantee the absence of damage, deterioration and malfunctions.

It should, however, be remembered that:

- 1) THE MACHINE MUST NOT BE USED NOR INTERVENTIONS CARRIED OUT ON IT IF THIS MANUAL AND ALL ITS PARTS HAVE NOT BEEN FULLY READ AND UNDERSTOOD.
- 2) IT IS NECESSARY TO USE ALL THE PRECAUTIONS LISTED IN SECTION A: “SAFETY PRESCRIPTIONS AND INFORMATION”.
- 3) IT IS FORBIDDEN TO USE THE MACHINE IN CONDITIONS OR MANNERS THAT ARE DIFFERENT FROM THOSE INDICATED IN THE MANUAL. VIRGINIO NASTRI SRL CANNOT BE HELD RESPONSIBLE FOR FAULTS, INCONVENIENCES OR INJURY CAUSED BY THE NON-OBSERVANCE OF THIS POINT.

This manual has been divided into three parts:

SECTION A: which looks at “SAFETY PRESCRIPTIONS AND INFORMATION”

SECTION B: in which the MACHINE CHARACTERISTICS – OPERATION – TRANSPORTATION aspects are indicated.

SECTION C: which describes the MAINTENANCE AND LUBRICATION INTERVENTIONS with an annexed LIST AND DESCRIPTION OF THE SPARE PARTS

To make reading easier, the following terms have been used:

#### **DANGER**

The term DANGER is used in situations where not respecting the regulations or tampering with organs can cause serious injury to people.

#### **ATTENTION**

The term ATTENTION is used in situations where not respecting the instructions can damage the machine or other elements associated with it or the surrounding environment.

## SECTION A

### *General information on how to use the machine safely*

#### **A.1 AUTHORISED MACHINE USE**

This series of separators should be used prevalently to separate plastic parts coming from the moulding machines and going towards the accumulation area

The separator angle can be varied and the following adjustments are possible:

- height and angle of the separator;
- regulation of the distance between one pipe and the other.

#### **ATTENTION:**

The maximum weight of the parts to be separated should not exceed a total of 20 Kg. The vibration separators are not suitable for separating loose material, such as liquids and powders in general.

The vibratin separators can be easily used by all people who operate the plant in which they are installed, and if used correctly do not present any risks for the operator.

We recommend reading this manual, however, before using the machine.

VIRGINIO NASTRI srl declines any responsibility in the following cases:

- if the separators are used in evident contrast to the manner indicated in this instruction booklet;
- if there are supply faults;
- if the necessary maintenance is not carried out as indicated;
- if unauthorised modifications are made;
- if unauthorised spare parts or spare parts that are not specifically for the model are used;
- in cases of exceptional events.

#### **A.2 INFORMATION ON RESIDUE RISKS**

Residue risk: a risk that remains in spite of all the precautions adopted, or a potential risk that is not evident (Directive 89/392/par.1.7.2.).

This series of separators does not present residue risks for the operator, as long as the instructions given in this manual are followed. In spite of this, however, the following indications are valid according to usage conditions:

High temperature: the vibration separator should be used to separate newly moulded parts which are hot. Should it be necessary to intervene, use protective gloves (in particular regarding the piece fall point).

#### **A.3 REFERENCE STANDARDS AND PROVISIONS**

- The separators of this series were designed and manufactured to satisfy the Essential Safety requirements as dictated by the 89/392 Directive, Annex I.
- Reference is made to the EN 60204 – 1 Standard, September 1993 edition, for electric equipment.

## **SECTION B**

### *Information on how to use the separator*

**WARNING:** Before reading this section you must be familiar with what is indicated in section A, an integral part of the user manual which must be understood for using the machine SAFELY.

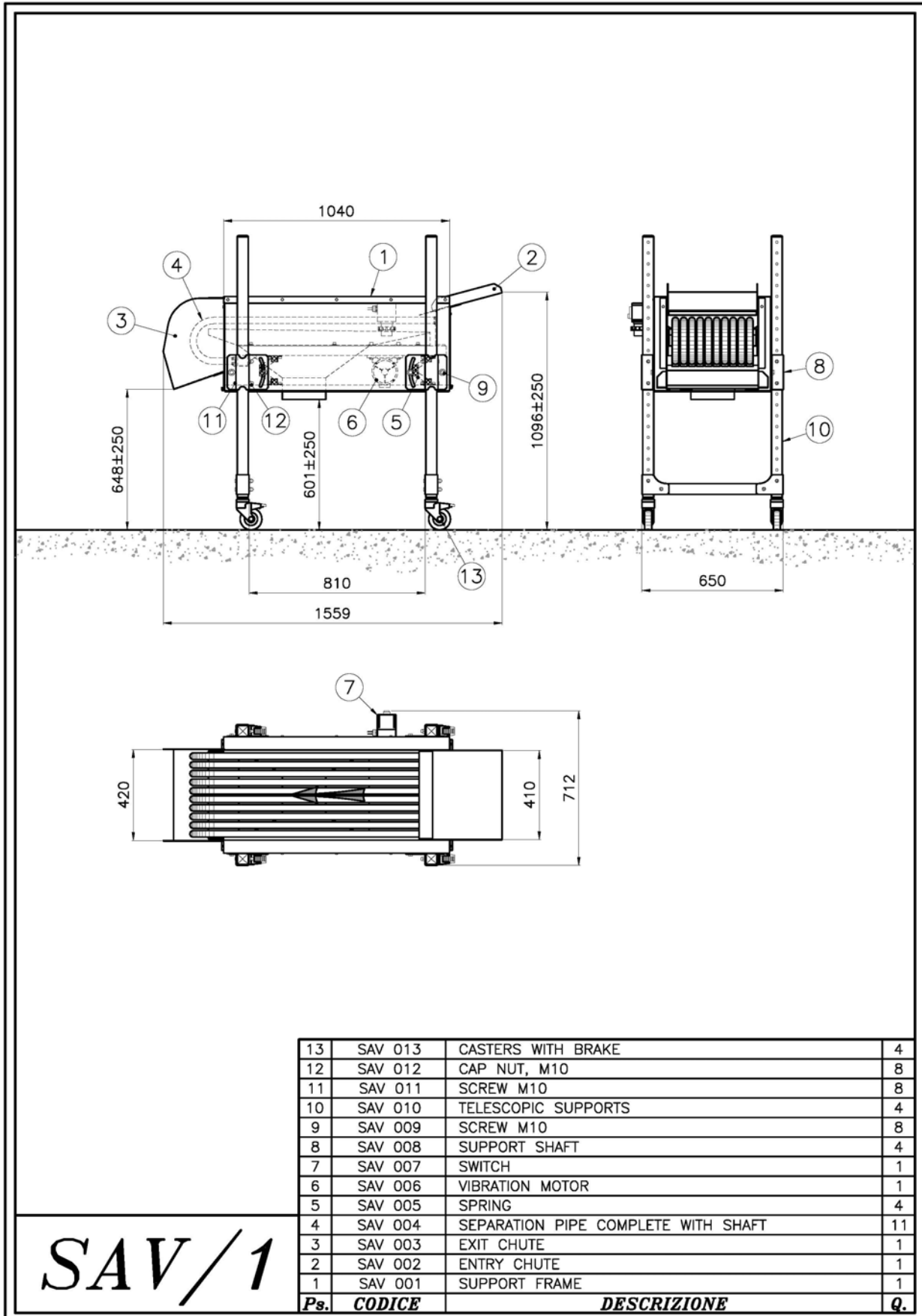
#### **B.1 MACHINE TECHNICAL DESCRIPTION AND LAYOUT**

The separators of this series are made up of a support sheet (1), with an entry chute (2) at one end. The chute moves the moulded pieces above the separation pipes (4) that are supported by springs (5) which transmit the vibration of the motor (6). The motor is commanded by a switch (7).

The vibrating pipes separate the pieces: the smallest pieces are collected under the separator, while the bigger pieces exit from the unload chute (3).

The separator is supported by telescopic supports (10) complete with casters with locking device (13), which make it easier to move the machine in the work area.

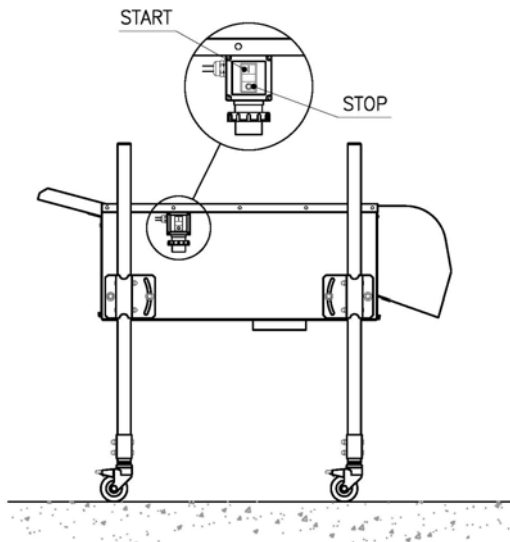
*The noise level at the operator's work place is < 70 dB(A).*



## SAV/1



## B.2 COMMANDS



Pic. A

The control commands are positioned in the piece loading area. The switch complete with starting pushbutton and stop pushbutton can be found here. (fig. A)

Emergency stop: when necessary remove the blender power plug.

## B.3 REGULATIONS

### Regulating the height of the separator (fig. B)

#### **ATTENTION:**

This operation should be carried out by at least two people.

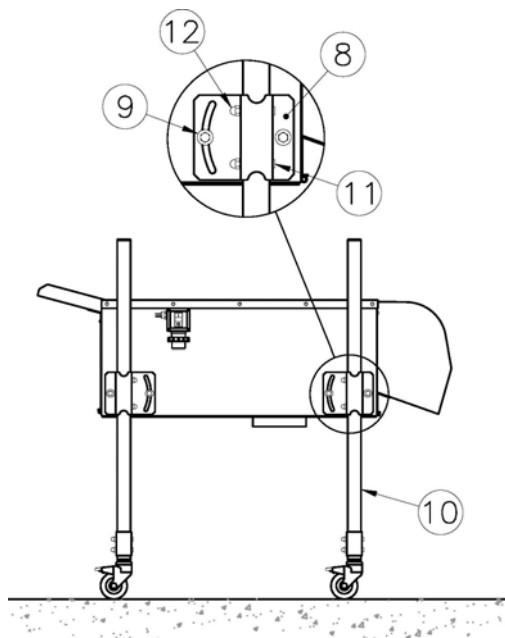
Loosen the nuts (12), extract the screws (11) and raise or lower the telescopic supports (10). When the necessary height has been reached, rethread the screws (11) and tighten the nuts (12).

### Regulating the separator angle (fig. B)

#### **ATTENTION:**

The separator does not remain balanced when the stop nuts (9) are loosened.

Two people are necessary for carrying out this operation, one to hold and regulate the separator, the other to loosen and tighten the stop nuts (9).



Pic. B



## B.4 TRANSPORTATION AND INSTALLATION

### Transportation

The vibration separators are packed using stretch film and the electric panel and gearmotor are also protected by sponge rubber.

### **ATTENTION**

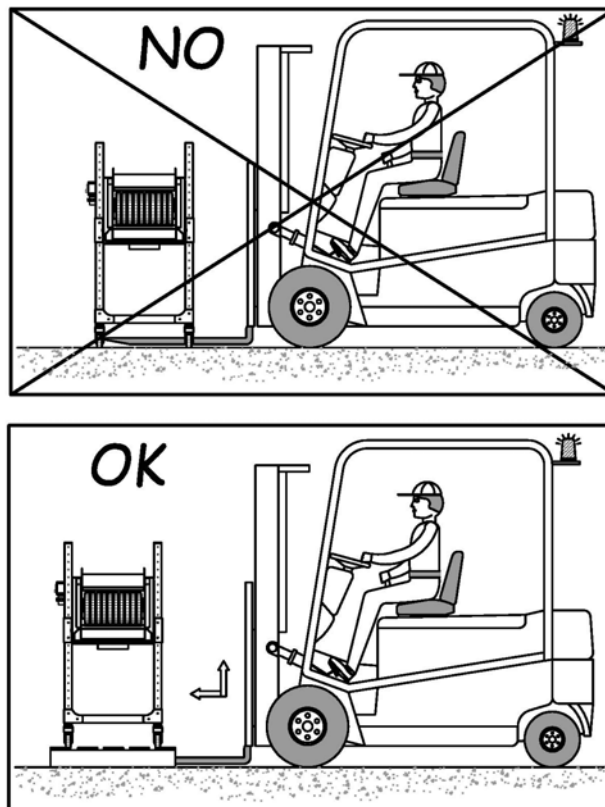
The packaging material (plastic film and sponge rubber) should not be disposed of in the environment but in accordance with current norms.

The vibration separators should be raised using a fork lift truck. The overall dimensions and mass of the separators in this series are given in para. P1.

### **DANGER**

For operator safety and machine integrity, please refer to fig. D, which shows where to insert the forks in order to raise the separator in a stable manner.

Once on the lorry loading surface, the machine should be fixed using levers to block the wheels. Suitable slings or fixing methods should also be prepared to ensure stability during transportation.



Pic. D

### Installation

No particular preliminary operations are necessary when starting the vibration separator for the first time.

The separator should be connected to an outlet having suitable characteristics. Use the supplied plug.

When laying the cables, please make sure that they are protected against damage and that they cannot trip the operators.

### **ATTENTION:**

Before starting the vibration separator:

- make sure that the supply voltage corresponds to the one indicated on the plate. The plate can be found next to the overload cutout;
- make sure that the motors are rotating in the correct direction.

### **ATTENTION:**

When the machine has been installed, lock the casters using the levers on each wheel.

## **SECTION C**

### *Information on maintenance and repairs*

#### **C.1 MAINTENANCE INSTRUCTIONS**

##### *GENERAL NOTES*

The operator must ensure that the machine is kept clean of foreign material such as deposits, oil or others.  
The machine should therefore be cleaned at the end of each work shift when it has stopped and is in a stable condition.

##### **ATTENTION:**

Before starting, the operator should switch off the separator and extract the mains plug to avoid any possibility of accidental starting.

If compressed air is used to clean the machine, protective goggles with additional mask should be used. Any people in the surrounding area should also be removed to avoid the danger of being hit and injured by material and dust.

Do not use pressurised water directly on the electric apparatus.

It is forbidden to use flammable liquids for cleaning.

Periodically check the state of the plates and replace them if necessary.

Once the machine has been cleaned, the operator should make sure that there are no parts that are worn or damaged (if there are, immediately request the intervention of the maintenance technician) or parts that are not solidly fixed (do as much as possible).

The operator and possible maintenance technician must wear suitable working clothes that do not fly about, and should not wear chains, bracelets or other items that could easily catch in the moving mechanical organs. Operators with long hair should use a hairnet to prevent the risk of entanglement.

The protection and safety devices must not be removed unless a repair and/or maintenance operation is to be carried out.

These devices must be replaced as soon as the reason for their temporary removal has been corrected, and in any case before the machine is started again.

##### **ATTENTION:**

At the end of each machine intervention, use the relative levers to lock the wheels.

This series of separators does not require particular maintenance operations, just some simple interventions.

Inspect to ensure that:

- the motors are not leaking lubricant;
- the electric cable insulation sheath is in good condition (approx. every 2000 working hours).

##### **ATTENTION:**

Before carrying out this operation the machine must be put out of service. In order to do this disconnect the plug from the mains socket after switching off the separator.

## C.2 PLATES AND WARNINGS

The following danger symbol is present on the wrapping of terminal boards that can be powered:



The plate shown below is also present on the blender:

			
Via Seconda strada,161 –Z.I. 36071 Arzignano(Vicenza) – ITALY Tel. ++39.0444.450620–451520 Fax ++39.0444.671840			
MODELLO MODEL	<input type="text"/>		
MATRICOLA SERIAL NUMBER	<input type="text"/>	ANNO COSTRUZIONE YEAR OF MANUFACTURE	<input type="text"/>

### C.3 SPARE PARTS

Whenever it is necessary to order spare parts, please refer to the address given in para. P1. When ordering, always give the part code and the requested quantity of each part ordered.

Note: Only original spare parts supplied by VIRGINIO NASTRI srl guarantee operation reliability.

It should be noted, in particular, that some components have safety characteristics for the personnel, therefore these pieces should only be replaced with the parts recommended by VIRGINIO NASTRI srl.

#### SPARE PARTS AND CODES

SAV CODE                      VIBRATION SEPARATOR

<u>CODE</u>	<u>DESCRIPTION</u>
SAV 001	SUPPORT FRAME
SAV 002	ENTRY CHUTE
SAV 003	EXIT CHUTE
SAV 004	SEPARATION PIPE COMPLETE WITH SHAFT
SAV 005	SPRING
SAV 006	VIBRATION MOTOR
SAV 007	SWITCH
SAV 008	SUPPORT SHAFT
SAV 009	SCREW M10
SAV 010	TELESCOPIC SUPPORTS
SAV 011	SCREW M10
SAV 012	CAP NUT, M10
SAV 013	CASTERS WITH BRAKE

## C.4 WIRING DIAGRAM

