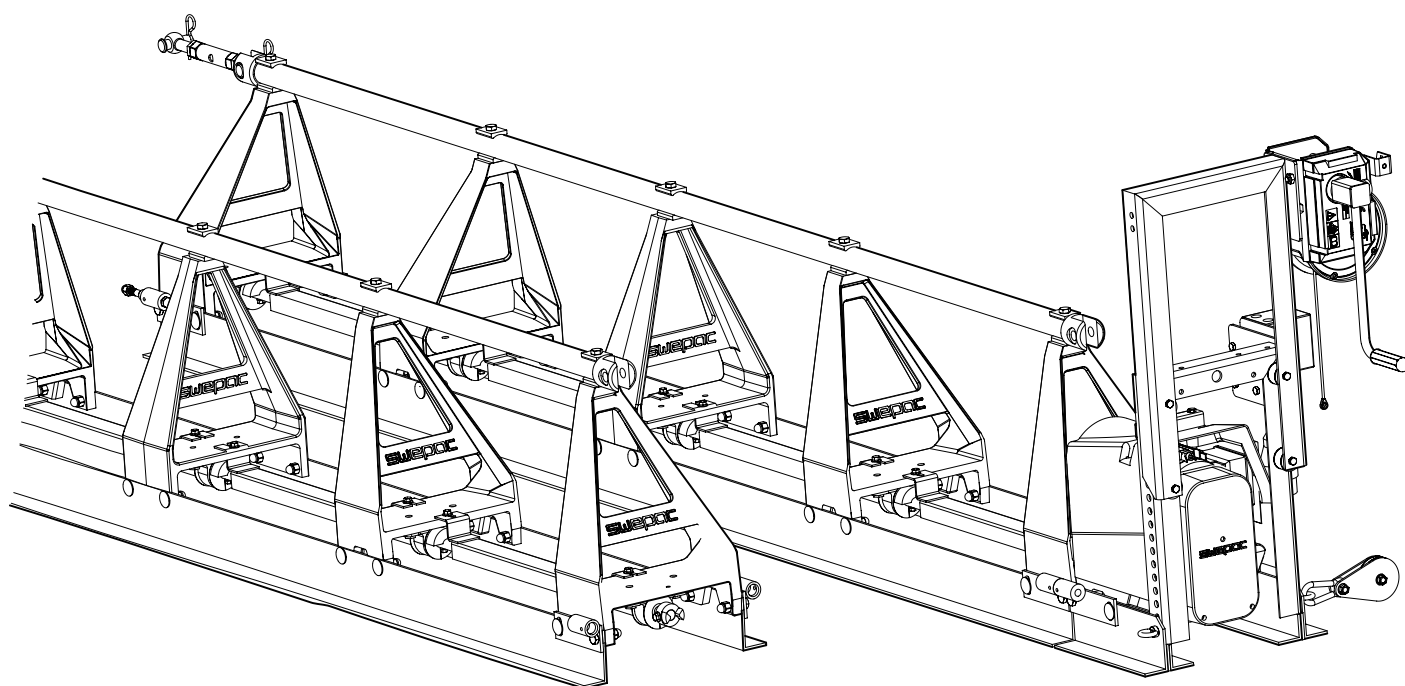

USER MANUAL IN ORIGINAL



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TECHNICAL DATA**SVM 25**

Engine,	3-phase, 400 V
Sealing class	IP 65
Engine output.....	2.2 kW
Speed, (engine shaft) rpm.....	2830 rpm
Centrifugal force	500 N/m

Weights

Weight el. drive unit incl. electrical winch set.....	61 kg
Weight end unit incl. manual winch	25 kg
Weight module 3 m	64 kg
Weight module 2 m	42 kg
Weight module 1 m.....	26 kg
Weight module 0.75 m	24 kg
Weight module 0.50 m	22 kg

Dimensions

Max. length of modular screed.....	25 mm
Drive unit, L x W x H	300x400x950 mm
End section, L x W x H.....	50x400x950 mm
Modules, W x H	400x556 mm
Hand/arm vibrations ahv according to ISO 5349 on fresh concrete	4,5 m/s ²
Guaranteed sound-power level, LWA.....	06 dB(A)
Sound pressure level (at operators ear).....	95 dB(A)

SAFETY INSTRUCTIONS

To reduce the risk of serious injury or death to yourself or others read and understand the Safety and operating instruction before installing, operating, repairing, maintaining, or changing accessories on the machine.

Post this Safety and operating instruction at work locations, provide copies to employees, and make sure that everyone reads the Safety and operating instruction before operating or servicing the machine.

In addition, the operator or the operator's employer must assess the specific risks that maybe present as a result of each use of the machine.

Additional instructionst for the engine can be found in the manufacturer's engine manual.

Personal precautions and qualifications

Only qualified and trained persons may operate or maintain the machine. They must be physically able to handle the bulk, weight, and power of the machine. Always use your common sense and good judgement.

Personal protective equipment

Always use approved protective equipment. Operators and all other persons in the working area must wear protective equipment, including at a minimum:

- Protective helmet
- Hearing protection
- Impact resistant eye protection with side protection
- Respiratory protection when appropriate
- Protective gloves
- Proper protective boots
- Appropriate work overall or similar clothing (not loose-fitting) that covers your arms and legs.

Drugs, alcohol or medication

Drugs, alcohol or medication may impair your judgment and powers of concentration. Poor reactions and incorrect assessments can lead to severe accidents or death.

Never use the machine when you are tired or under the influence of drugs, alcohol or medication.

No person who is under the influence of drugs, alcohol or medication may operate the machine.

OPERATION, PRECAUTIONS

DANGER Explosion hazard

If a warm machine or exhaust pipe comes into contact with explosives, an explosion could occur. During operating with certain materials, sparks and ignition can occur. Explosions will lead to severe injuries or death.

Never operate the machine in any explosive environment.

Never use the machine near flammable materials, fumes or dust.

Make sure that there are no undetected sources of gas or explosives.

Avoid contact with the warm exhaust pipe or the bottom of the machine.

DANGER Fire hazard

If a fire starts in the machine, it can cause injury.

If possible use an ABE-class powder extinguisher, otherwise use a BE-type carbon dioxide fire extinguisher.

DANGER Fuel hazard

The fuel is flammable and fuel fumes can explode when ignited, causing serious injury or death.

Protect your skin from contact with the fuel. If fuel has penetrated the skin, consult a qualified health professional.

Never remove the filler cap, or fill the fuel tank when the machine is hot.

Fill the fuel tank outdoors or in a clean and well ventilated place, free from sparks and open flames. Fill the fuel tank at least ten meters (30 feet) from the place where the machine is to be used.

Release the filler cap slowly to let pressure escape.

Never over fill the fuel tank.

Make sure the filler cap is screwed on when the machine is used.

Avoid spilling fuel on the machine, wipe off any spilled fuel.

Check regularly for fuel leaks. Never use the machine if it is leaking fuel.

Never use the machine in the proximity of material that can generate sparks. Remove all hot or spark-generating devices before starting the machine.

Never smoke when filling the fuel tank or when working with the machine or servicing it.

Only store fuel in a container that is specially constructed and approved for the purpose.

Consumed fuel and oil containers must be taken care of and returned to the retailer.

Never use your fingers to check for fluid leaks.

WARNING Unexpected movements

The machine is exposed to heavy strains during operation. If the machine breaks or gets stuck, there may be sudden and unexpected movements that can cause injuries.

Always inspect the machine prior to use. Never use the machine if you suspect that it is damaged.

Make sure that the handle is clean and free of grease and oil.

Keep your feet away from the machine.

Never sit on the machine.

Never strike or abuse the machine.

Pay attention and look at what you are doing.

WARNING Dust and fume hazard

Dusts and /or fumes generated or dispersed when using the machine may cause serious and permanent respiratory disease, illness, or other bodily injury (for example, silicosis or other irreversible lung disease that can be fatal, cancer, birth defects, and /or skin inflammation). Some dusts and fumes created by compaction work contain substances known to cause respiratory disease, cancer, birth defects, or other reproductive harm.

Dust and fumes in the air can be invisible to the naked eye, so do not rely on eye sight to determine if there is dust or fumes in the air. To reduce the risk of exposure to dust and fumes, do all of the following:

Perform site-specific risk assessment. The risk assessment should include dust and fumes created by the use of the machine and the potential for disturbing existing dust.

Wear, maintain and correctly use respiratory protection as instructed by your employer and as required by occupational health and safety regulations. Respiratory protection must be effective for the type of substance at issue (and if applicable, approved by relevant governmental authority).

Work in a well ventilated area.

If the machine has an exhaust, direct the exhaust so as to reduce disturbance of dust in a dust filled environment.

Operate and maintain the machine as recommended in the operating and safety instructions.

Wear washable or disposable protective clothes at the worksite, and shower and change in to clean clothes before leaving the work site to reduce exposure of dust and fumes to your self, other persons, cars, homes, and other areas.

Avoid eating, drinking, and using tobacco products in areas where there is dust or fumes.

Wash your hands and face thoroughly as soon as possible upon leaving the exposure area, and always before eating, drinking, using tobacco products, or making contact with other persons.

Comply with all applicable laws and regulations, including occupational health and safety regulations.

Participate in air monitoring, medical examination programs, and health and safety training programs provided by your employer or trade organizations and in accordance with occupational health and safety regulations and recommendations. Consult with physicians experienced in relevant occupational medicine.

Work with your employer and trade organization to reduce dust and fume exposure at the work site and to reduce the risks. Effective health and safety programs, policies and procedures for protecting workers and others against harmful exposure to dust and fumes should be established and implemented based on advice from health and safety experts. Consult with experts.

DANGER Exhaust gas hazard

The exhaust gas from the machine's combustion engine contains carbon monoxide which is poisonous, and chemicals which cause cancer, birth defects, or other reproductive harm. Inhalation of exhaust fumes can cause serious injury, illness, or death.

Never inhale exhaust fumes.

Ensure good ventilation (extraction of air by fan if necessary).

WARNING Projectiles

Failure of the work piece, of accessories, or even of the machine itself may generate high velocity projectiles. During operating, splinters or other particles from the compacted material may become projectiles and cause personal injury by striking the operator or other persons. To reduce these risk:

Use approved personal protective equipment and safety helmet, including impact resistant eye protection with side protection.

Make sure that no unauthorised persons trespass into the working zone.

Keep the work place free from foreign objects.

WARNING Rotating blades hazards

There is a risk of hands and feet getting caught by the rotating blades when the machine is running. This can cause personal injury.

Never place your hands or feet inside the protection ring when the machine is running

WARNING Motions hazards

When using the machine to perform work-related activities, you may experience discomfort in the hands, arms, shoulders, neck, or other parts of the body.

Adopt a comfortable posture whilst maintaining secure footing and avoiding awkward off-balanced postures.

Changing posture during extended tasks may help avoid discomfort and fatigue.

In case of persistent or recurring symptoms, consult a qualified health professional.

WARNING Vibrations hazards

Normal and proper use of the machine exposes the operator to vibration. Regular and frequent exposure to vibration may cause, contribute to, or aggravate injury or disorders to the operator's fingers, hands, wrists, arms, shoulders and/or nerves and blood supply or other bodyparts, including debilitating and/or permanent injuries or disorders that may develop gradually over periods of weeks, months, or years. Such injuries or disorders may include damage to the blood circulatory system, damage to the nervous system, damage to joints, and possibly damage to other body structures.

If numbness, persistent recurring discomfort, burning sensation, stiffness, throbbing, tingling, pain, clumsiness, weakened grip, whitening of the skin, or other symptoms occur at any time, when operating the machine or when not operating the machine, stop operating the machine, tell your employer and seek medical attention. Continued use of the machine after the occurrence of any such symptom may increase the risk of symptoms becoming more severe and /or permanent.

Operate and maintain the machine as recommended in these instructions, to prevent an unnecessary increase in vibration.

The following may help to reduce exposure to vibration for the operator:

If the machine has vibration absorbing handles, keep them in a central position, avoid pressing the handles into the end stops.

When the percussion mechanism is activated, the only body contact with the machine you should have are your hands on the handle or handles. Avoid any other contact, for example supporting any part of the body against the machine or leaning onto the machine trying to increase the feed force.

Make sure that the machine is well-maintained and not worn out.

Immediately stop working if the machine suddenly starts to vibrate strongly. Before resuming the work, find and remove the cause of the increased vibrations.

Participate in health surveillance or monitoring, medical exams and training programs offered by your employer and when required by law.

When working in cold conditions wear warm clothing and keep hands warm and dry.

See the "Noise and vibration declaration statement" for the machine, including the declared vibration values. This information can be found at the end of these Safety and operating instructions.

WARNING Trapping hazards

There is a risk of neck ware, hair, gloves, and clothes getting dragged into or caught by rotating machine parts. This may cause choking, scalping, lacerations, or death. To reduce the risk:

Never grab or touch a rotating machine part.

Avoid wearing clothing, neck ware or gloves that may get caught.

Cover long hair with a hair net.

DANGER Electrical hazard

The machine is not electrically insulated. If the machine comes in to contact with electricity, serious injuries or death may result.

Never operate the machine near any electric wire or other source of electricity.

Make sure that there are no concealed wires or other sources of electricity in the working area.

DANGER Concealed object hazard

During operating, concealed wires and pipes constitute a danger that can result in serious injury.

Check the composition of the material before operating.

Watch out for concealed cables and pipes for example electricity, telephone, water, gas, and sewage lines.

If the machine seems to have hit a concealed object, switch off the machine immediately.

Make sure that there is no danger before continuing.

WARNING Involuntary start

Involuntary start of the machine may cause injury.

Keep your hands away from the start and stop device until you are ready to start the machine.

Learn how the machine is switched off in the event of an emergency.

WARNING Noise hazard

High noise levels can cause permanent and disabling hearing loss and other problems such as tinnitus (ringing, buzzing, whistling, or humming in the ears). To reduce risks and prevent an unnecessary increase in noise levels:

Risk assessment of these hazards and implementation of appropriate controls is essential.

Operate and maintain the machine as recommended in these instructions.

If the machine has an interlock, check that it is in place and in good working condition.

Always use hearing protection.

TRANSPORT, PRECAUTIONS

WARNING Loading and unloading hazard

When the machine is lifted by a crane and similar appliance, this can lead to injury.

Use marked lifting points.

Make sure that all lifting devices are dimensioned for the weight of the machine.

Never remain under or in the immediate vicinity of the machine.

MAINTENANCE, PRECAUTIONS

WARNING Unexpected start hazard

During maintenance or when changing blades on the machine, there is a risk that the engine backfires or that the machine unexpectedly starts. This applies especially when the engine is hot and if the switch is in position ON. This can result in serious personal injury.

Always let the engine cool down.

Always turn the switch to position OFF.

Always take the cap off the spark plug.

WARNING Unexpected start hazard

Any machine modification may result in bodily injuries to yourself or others.

Never modify the machine. Modified machines are not covered by warranty or product liability.

Always use original parts, insertion tools, and accessories.

Change damaged parts immediately.

Replace worn components in good time.

CAUTION High temperature

The machine's engine exhaust pipe, and bottom become hot during operation. Touching them can lead to burns.

Never touch a hot machine.

Never touch the bottom of the machine when its hot.

Wait until the engine, exhaust pipe, and bottom of the machine have cooled down before carrying out maintenance work.

STORAGE, PRECAUTIONS

Keep the machine in a safe place, out of the reach of children and locked up.

FIELD OF APPLICATION

The Swepac SVM 25 is a modular screed used for levelling horizontal concrete surfaces after casting. The machine is pulled on screed rails by means of manual winches or Swepac electric winches.

The Swepac SVM 25 can also be run on Swepac track rails if there is a rigid reinforcement or other steady base available.

Important! There must not be any big overhangs when placing track rails or screed rails. The modular screed is designed for compressive forces on the upper, rectangular tube of the screed.

Two men are needed to operate the machine. The one handling the start/stop as well as one manual switch. This operator walks on the drive unit side. The other operator guides the winch on the opposite side.

ASSEMBLY OF MODULAR SECTIONS

See the illustration below.

Place the modular sections on a level base, and always use short edge boards as trestles in order to get the sections as straight as possible at assembly.

A Unscrew the domed nuts (1) from the screws (2).

B Check that the arrow markings (3) on the protective covers (4) have the same direction.

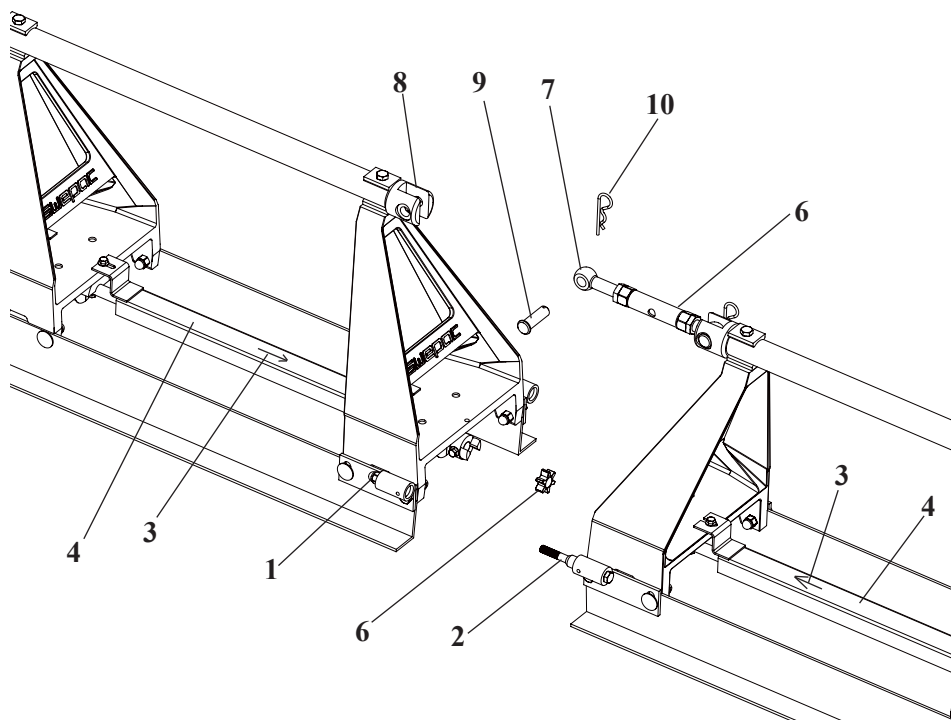
C Fasten the rubber cross (5) on one of the couplings.

D Press the sections together.

E Tighten the domed nuts (1)

F Screw on the turnbuckle (6) so that the hole in the link screw (7) comes to the middle of the hole into the fork (8) and assemble the bolt (9) and lock it with the cotter key (10).

G screw the turnbuckle only by hand and leave the locking nuts untightened.



ASSEMBLY OF THE END PIECE WITH DRIVE UNIT

A-E The end piece with drive unit is assembled according to A-E under the heading "Assembly of modules" See illustration, page 3

F. Screw off the right-threaded link screw (3) and replace it by an entirely threaded bar (1). Lock with the locking nuts (2)

See illustration below to the left

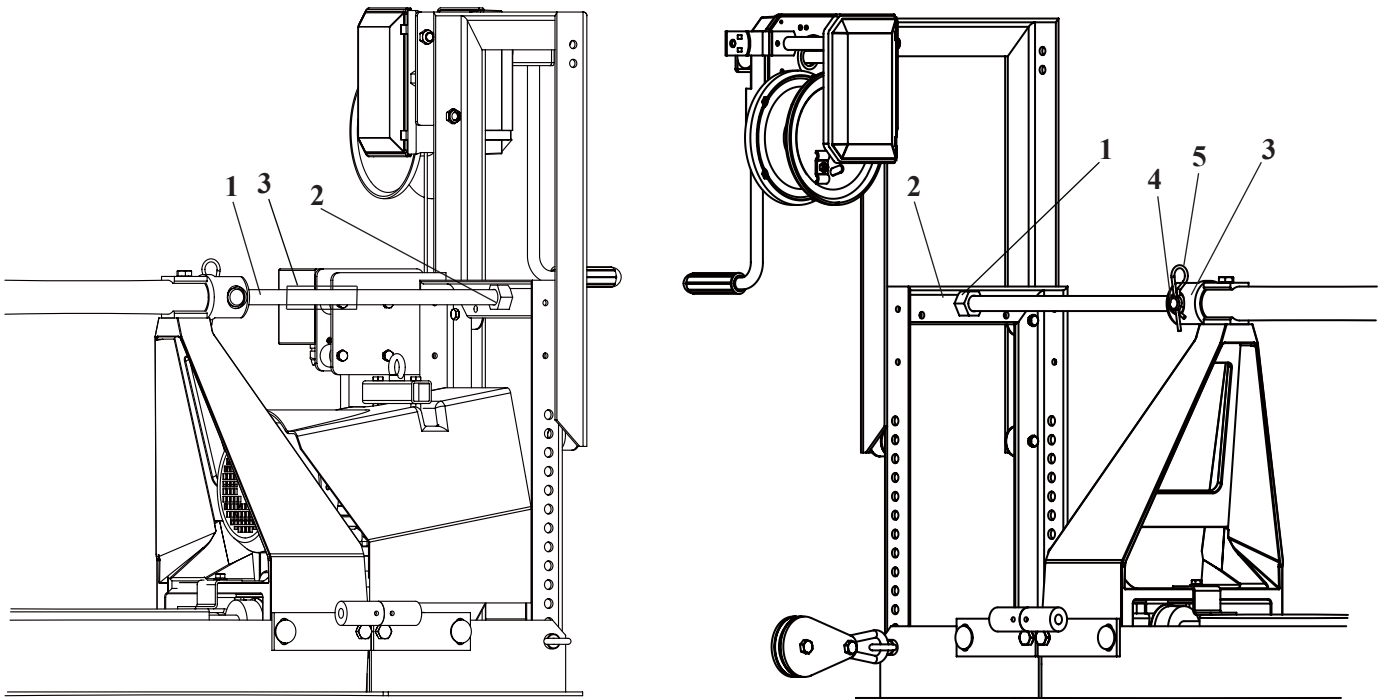
ASSEMBLY OF THE END PIECE

A. The end piece is assembled in the same way as the modules according to points A,D and E above.

F. Unscrew the nuts (1) and fit the link screw (2) in the fork (3), press the bolt (4) and lock with the cotter key (5).

G. Check that the end piece is in an right angle towards the screed and lock it with the nuts (1).

See illustration below to the right



ADJUSTMENT OF STRAIGHTNESS

- A. Place a trestle or other support at each end of the assembled machine so that the bottom edge is free. Tension a string along the bottom edge of the screed.
- B. Unscrew the locking nuts (1) and adjust the tensioning at each jointing with the turnbuckle (2) till the entire screed is straight according to the string.
- C. Lock the turnbuckles with the locking nuts (1) so that the tensioning will not change when the screed is in operation.
- D. Check the straightness

See the illustration below.

CROWN ON THE FLEX SCREED

The SVM 25 can be given a crown of $\pm 5\%$ at each joint. Exceptionally, a crown of $\pm 7\%$ may be achieved but this would shorten the life of the shaft coupling.

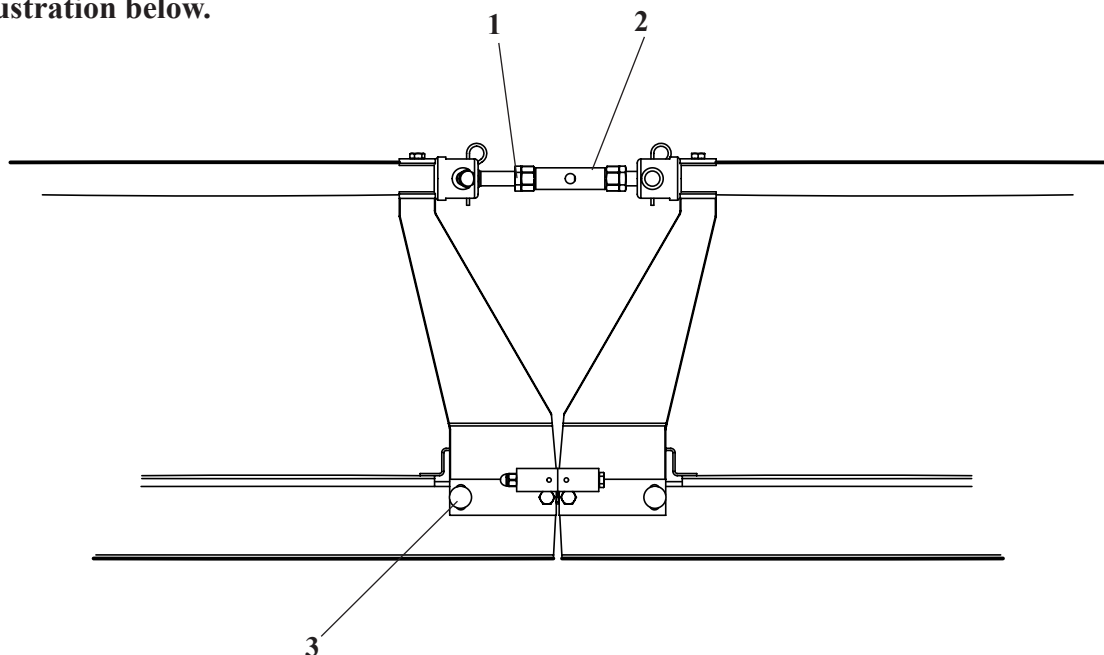
In order to get a crown at a joint, proceed as follows:

- A- E Assemble the modular sections according to A-F under the heading "Assembly of modular sections"
- F. Unscrew the nuts (4 pcs) on the inside (3) about one turn.

Important! If the screed has been in action earlier check that there is no concrete incrustation in the thread of the screws (3).

- G. Adjust to proper crown with the turnbuckle (2).
- H. Tighten the four nuts (3).
- I. Lock the turnbuckle (2) with the locking nut (1).

See the illustration below.



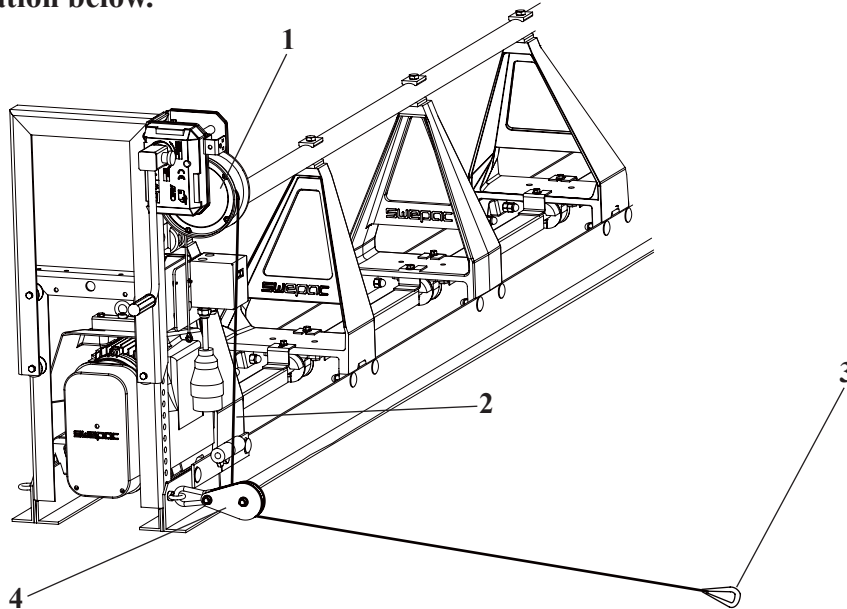
FORWARD MOTION

The end pieces are equipped with manual winches (1), steel cable (2) and eye bolt hook (3).

The cable is pulled through the pulley-block(4) and fastened at the remote end of the casting bay. Check that the cable is in an right angle towards the beam. If the cable runs obliquely it may get the screed draw laterally.

Keep the cable tensioned and without kinks. In this way it will function better and get a longer life. Check now and then that the cable is evenly coiled around the drum. An irregular winding causes unnecessary wear on the cable and would fill the drum too quickly.

See the illustration below.



PULLING OF THE CABLE

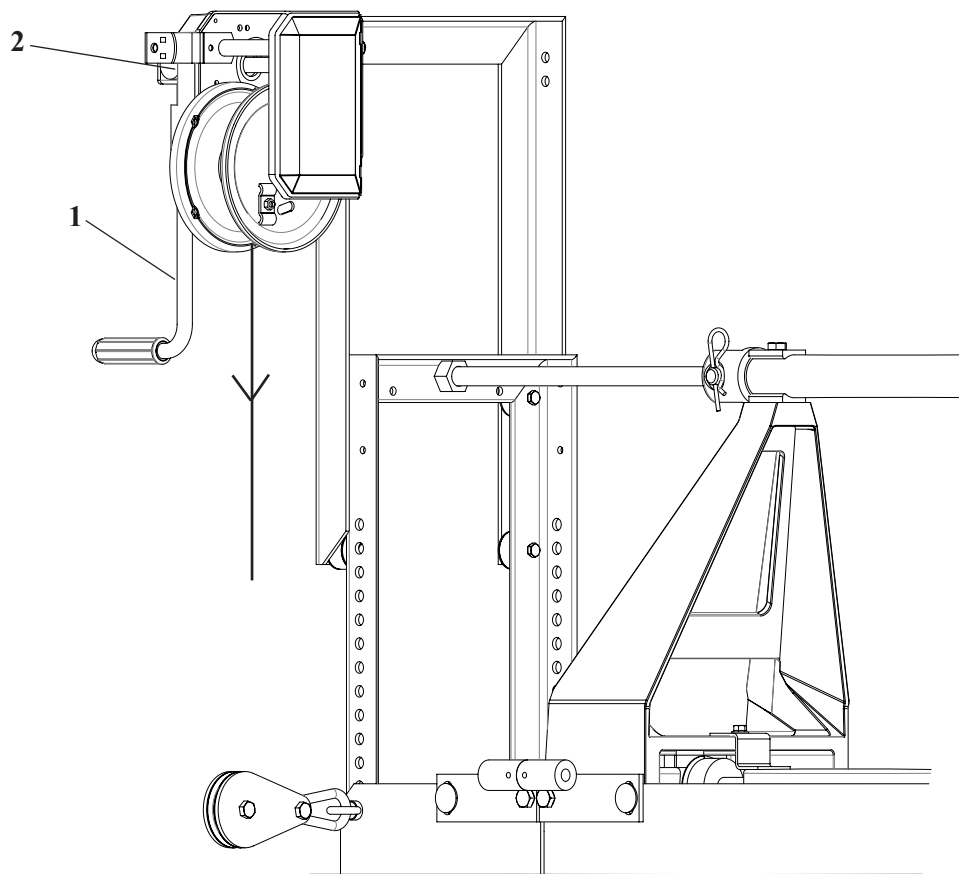
In order to let the cable run freely, the manual winches can be disengaged in the following way:

- A. Turn the crank (1) backwards 2 turns without load.
- B. Remove the crank and fasten it on the fastening device (2).
- C. Unwind the cable.
- D. Put the crank back and crank the cable. See illustration on next page.

Warning! The manual winches are intended for horizontal pulling. They do not meet safety requirements for vertical lifting tackles. It is very dangerous to have load hanging on the manual winches as they do not have a safe function for lowering weights.

For lengths exceeding 18 m it is advisable to use a third winch placed on the end piece. The cable is drawn via three pulley-blocks to a fixing point centrally placed in the casting bay.

See illustration on next page.



CLEANING

All surfaces except the T-profiles are powder-lacquered or galvanized in order to facilitate cleaning. In order to further simplify the cleaning, the screed may be sprayed with silicone oil or form oil before casting.

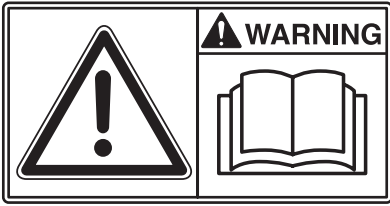
The Swepac SVM 25 may be flushed with a high pressure washer but then the engine has to be covered so that no water comes on the carburettor, fuel tank or generator. Also clean the shaft but avoid flushing the bearings. Tilt it so the underside can be cleaned. It is important to clean the machine carefully after each operation in order to ensure a long-lasting and safe function.

MAINTENANCE

The bearings are permanently lubricated and need not be after-greased. Check before each assembly that the rubber crosses in the shaft couplings are without damage. Replace, if necessary.

SIGNS

Warning Signs



Before use, carefully read the manual and its safety instructions so that you can handle the machine safely. Ensure that the manual is always accessible.



Engine and silencer: to avoid burns or discomfort, do not touch hot engine parts when the engine is on or when the machine has recently been used.



Belt drive: Keep hands, tools and other objects away from the belt drive when the machine is on to avoid injury and damage. See the safety instructions in the manual.

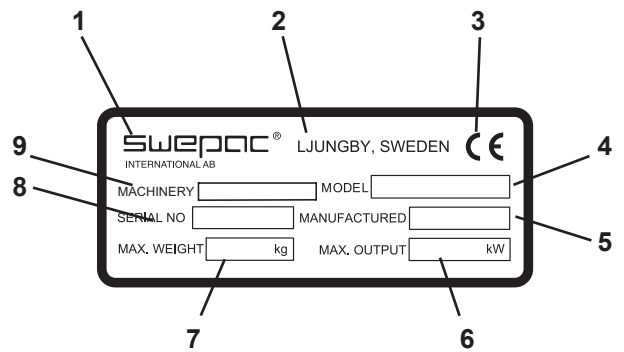


As the sound pressure level at the operator's ears exceeds 80 dB (A), ear protectors must be used when working with the machine to prevent hearing damage.



NOTE! Use only the machine's lifting eye to lift the machine.

Machine Signs



1. Manufacturer
2. Place, country of manufacture.
3. CE mark.
4. Model name.
5. Year of manufacture.
6. Max. engine power.
7. Max. weight.
8. Serial number.
9. Machine type

V-belt Drive

Check the tension and condition of the V-belt regularly. Replace a damaged V-belt with the new type according to the table below

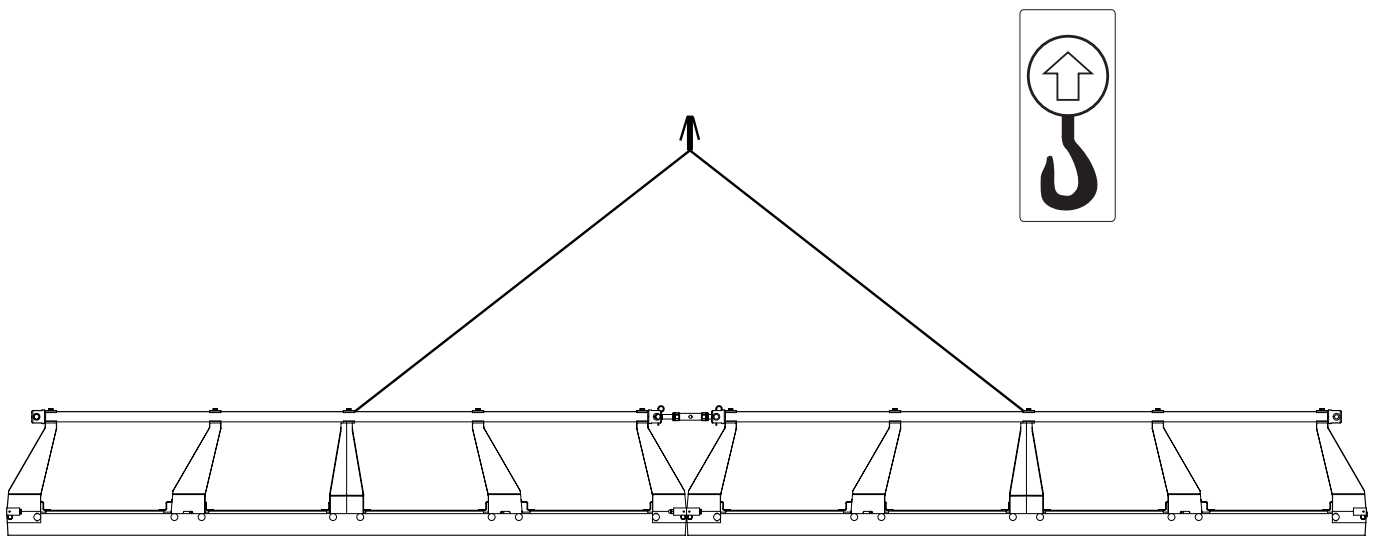
Machine type	V-belt type
SVM 25	Optibelt Omega 565 5M

LIFTING BY CRANE

At greater lengths (>10 m) it is important to use lifting straps. The strap ends are fixed at a distance of about 1/3 of the screed length from each other.

Warning! The screed may get deformed, if it is raised in the middle only.

See the illustration below.





EC-declaration of conformity

Manufacturer

**Swepac AB
Blockvägen 3
34132 Ljungby**

1. Category: Surface Vibrator
2. Type: SVM 25
3. Engine output.:
SVM 25.....2,2kW

The product complies with the following directives:

2006 / 42 / EG

2000 / 14 /EG

2004 / 108 / EG

EN 500-1

EN 500-4

EN 12649:2008+A1:2011

ISO 11201

ISO 5349-2:2001

Technical documentation held by:

Swepac AB, Blockvägen 3 SE-34132 Ljungby
Hans Holmlund / Product Manager

SWEPAC

SWEPAC AB

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Internet **www.swepac.se**