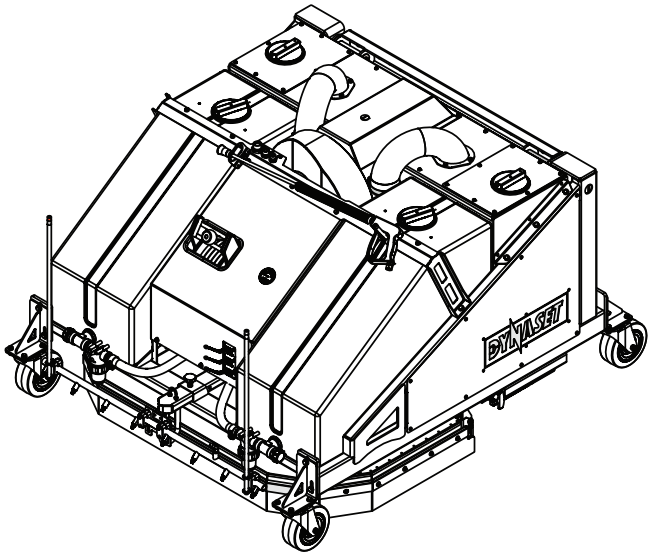
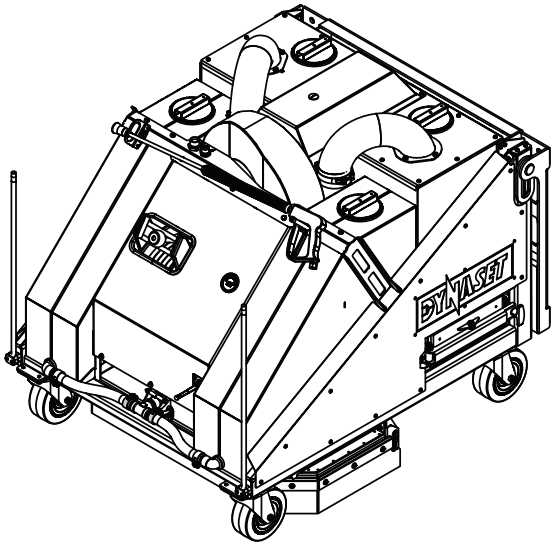
v.1.2
06/2026
SUK

DYNASET

PARTNER OF YOUR MACHINE





USER MANUAL

SCU Surface Cleaning Unit

SCU220-1500
SCU250-1200

1. GENERAL 5

1.1 PRODUCT INFORMATION 5
1.2 PRODUCT IDENTIFICATION KEY 6
1.3 TYPE PLATE 6
1.4 MAIN COMPONENTS 7

2. SAFETY 9

2.1 SAFETY PRECAUTIONS 9
2.2 SAFETY EQUIPMENT 10
2.3 OPERATING SAFETY 11
2.4 MAINTENANCE SAFETY 14
2.5 WARNING LABELS 16

3. OPERATING PRINCIPLES 17

3.1 OPERATING DESCRIPTION 17
3.2 WASHING OPTIONS 18
3.3 WASHING METHODS 20

4. INSTALLATION OF THE SCU UNIT 22

4.1 INSTALLATION TO A HYDRAULIC TOOL LINE 22
4.2 INSTALLING THE CONTROL UNIT 23
4.3 HYDRAULIC OILS 23
4.4 INSTALLATION ON A MACHINE 24
4.5 SETTING SCU UP FOR OPERATION / STORAGE 25

5. OPERATION 27

5.1 BEFORE OPERATING THE SCU UNIT 27
5.2 FLOATING 34
5.3 WASHING FUNCTIONS 35
5.4 STARTING AND STOPPING THE SCU 36
5.5 WASHING WITH WASHING NOZZLES AND SUCTION FUNCTION 36
5.6 WASHING WITHOUT SUCTION FUNCTION 37
5.7 EMPTYING THE COLLECTION TANK 38
5.8 EMPTYING THE CLEAN WATER TANK 39
5.9 WORKING IN COLD CONDITIONS 41

6. MAINTENANCE 42

6.1 GENERAL 42
6.2 MAINTENANCE INTERVAL 43
6.3 HYDRAULIC FLUIDS 44
6.4 CLEANING THE SUCTION FILTER 45

6.5 CLEANING THE NOZZLE FILTER 46
6.6 TROUBLESHOOTING 47

7. MANUFACTURER'S LIMITED WARRANTY 49

7.1 WARRANTY COVERAGE 49
7.2 BEGINNING OF WARRANTY PERIOD 49
7.3 WARRANTY PERIOD 49
7.4 WARRANTY PROCEDURES 49
7.5 WARRANTY REPAIRS 50
7.6 DELIVERY TERMS OF WARRANTY REPAIR 50
7.7 WARRANTY OF REPAIRED PRODUCT 50
7.8 EXCLUSIONS FROM WARRANTY 51

8. DYNASET PRODUCT AND ENVIRONMENT 52

8.1 GENERAL INFORMATION 52

9. DECLARATION OF CONFORMITY 56

10. TECHNICAL SPECIFICATIONS 57

10.1 DIMENSIONS SCU 57
10.2 CONNECTIONS 58
10.3 QUICK ATTACHMENT FASTENING POINTS 59
10.4 TECHNICAL SPECIFICATIONS 60

11. SCHEMATICS 62

1. GENERAL

This manual contains general information about assembly, installation, operation and maintenance of the equipment.



WARNING

Read this user manual before the installation, use or maintenance of the product to ensure proper handling, operation and maintenance right from the beginning. Pay attention to warnings and safety instructions, read chapter 2 Safety.

1.1 PRODUCT INFORMATION

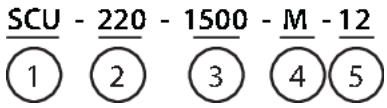
DYNASET SCU Hydraulic Surface Cleaning Unit is a powerful washing equipment. It uses Dynaset's HPW High Pressure Water Pump to convert the hydraulic power into high pressure water, and a Dynaset HCF Hydraulic Centrifugal Fan to produce vacuum suction.

High-pressure water jets combined with a vacuum suction clean dust and sand from the pores of asphalt, concrete and other flat surfaces so that the surface does not become dusty when dry. Thanks to low water consumption, even large surfaces can be washed efficiently with less water. The vacuum suction also collects the water with debris in a separate container, thus avoiding unnecessary pollution of the environment.

The surface cleaner increases the versatility of the machine. The SCU is easy to attach to machines with a quick attachment. It ensures optimal utilization and the best working results.

Thanks to the SCU's washing gun, hose reel and hose (20m (66ft)), cleaning entrances, corners and other confined spaces is easy and efficient. The washing gun can also be used to wash statues, benches and other structures without prior preparation.

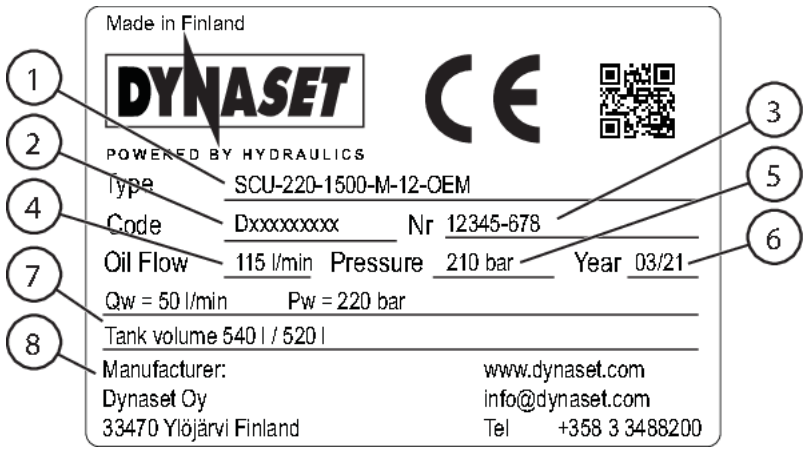
1.2 PRODUCT IDENTIFICATION KEY



Picture 1: Identification key for SCU units

1. Product ID. SCU Surface cleaning unit.
2. HPW pump model HPW220
3. Washing width 1'500 mm (59.06 in)
4. Mode of operation of the street washing pipe's turning device. Manual
5. Voltage system 12VDC

1.3 TYPE PLATE

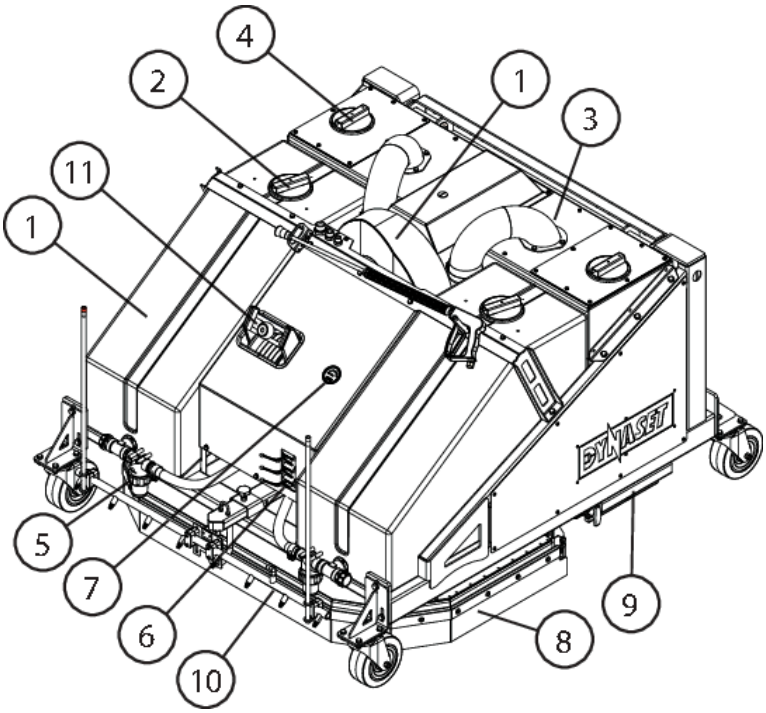


Picture 2: Type plate

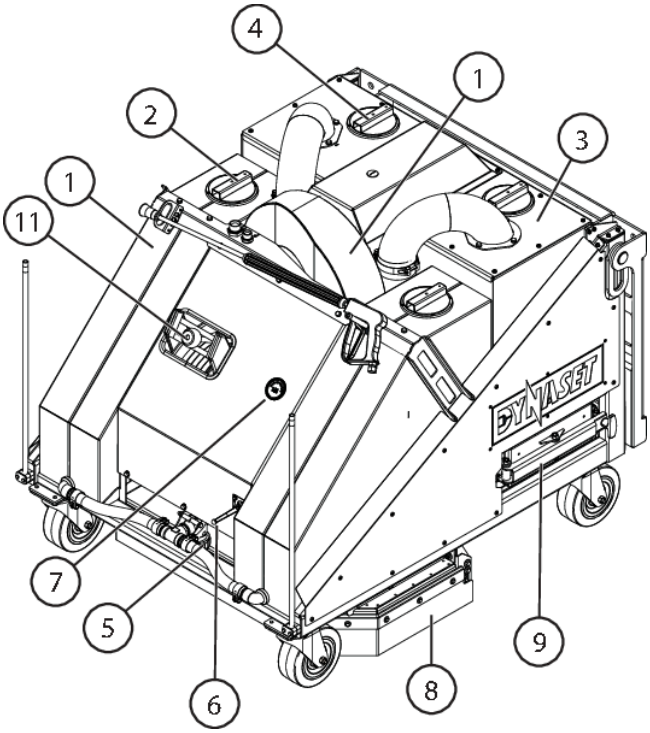
The products type plate shows the following information.

1. Product identification key
2. Product code
3. Serial number
4. Nominal hydraulic oil flow rate
5. Maximum hydraulic pressure
6. Month/year of manufacture
7. Water flow, pressure and tank sizes
8. Manufacturer contact details

1.4 MAIN COMPONENTS



Picture 3: Main components of SCU220



Picture 4: Main Components of SCU250

1. HCF Hydraulic Centrifugal Fan
2. Clean water tank fill hatch
3. Collection tank
4. Collection tank inspection hatch
5. Water filter
6. Washing function selection
7. Water pressure gauge
8. Suction housing and washing nozzles
9. Drain hatch
10. Street washing pipe
11. Washing gun and hose reel

2. SAFETY

2.1 SAFETY PRECAUTIONS

WARNING

Operators and maintenance personnel must always comply with local safety regulations and precautions in order to close out the possibility of damages and accidents.

The hydraulic oil and water circuits of the SCU are under high pressure. Check the condition of the equipment and hydraulic system before use.



Ensure tightness and cleanliness of connections, valves and hoses to prevent leaks. Leaks in the hydraulic system must be repaired immediately to prevent injuries from high-pressure leaks.

To avoid accidents, do not clean or check the equipment when the hydraulic circuit is pressurized. Stop the hydraulic system of the machine and depressurize all hydraulic oil circuits before you do any cleaning, checking or maintenance work.

Prevent nozzles, water circuit and piping from freezing. Drain and vent the water circuits before the ambient temperature decreases to 0 °C (32 °F) or below.

⚠ CAUTION

PREVENT FROM FREEZING!

Freezed water inside the unit can permanently damage the unit. Always make sure the unit is properly drained and flushed after use in cold weather. In case this is not possible, mix environment friendly anti-freeze liquid to the water.



2.2 SAFETY EQUIPMENT

When operating close to the SCU unit, wear appropriate clothing and safety equipment such as safety goggles, safety shoes and ear protection.



2.3 OPERATING SAFETY

The SCU unit creates a considerable vacuum under the vacuum housing. Do not place hands, feet or objects under the vacuum housing of the machine. This can result in serious injury and damage to the machine.

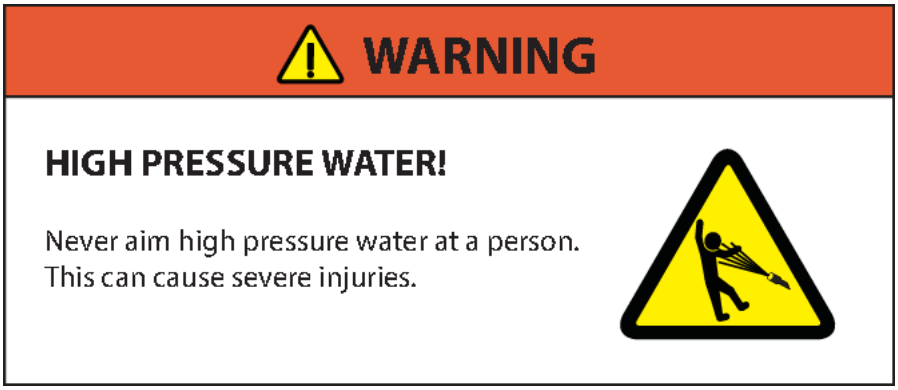
The unit produces high-pressure water. Do not aim it at people.



When you operate the SCU unit, beware of the unit parts warmed by hot hydraulic oil.



Never aim a high-pressure water jet towards a person.



WARNING

Do not press against the float while you drive or use the device. This can damage the unit.

WARNING

Do not exceed the maximum allowable pressure, temperature or load.

WARNING

Always detach the SCU unit on to a firm and level surface for storage. Always remove and store the SCU unit on a hard and level surface. Store the SCU so that it cannot fall over or cause damage. Lock the wheels in place and also prevent the equipment from moving.

WARNING

Always make sure that the SCU unit is properly coupled to the mobile machine. Dropping the SCU can damage the unit or cause injury.

WARNING

Do not lift the SCU from its nozzle housing with forklift trucks or similar! Do not store the appliance with the weight of the appliance resting on the nozzle housing. Storing on or lifting from the nozzle housing damages the device.

WARNING

Always attach the SCU to the machine before you use it. Dropping it can damage the unit or cause serious injury.

WARNING

SCU unit's street washing pipe can propel small rocks and objects to its surrounding. Make sure that no one is in close range when you use the street washing pipe.

WARNING

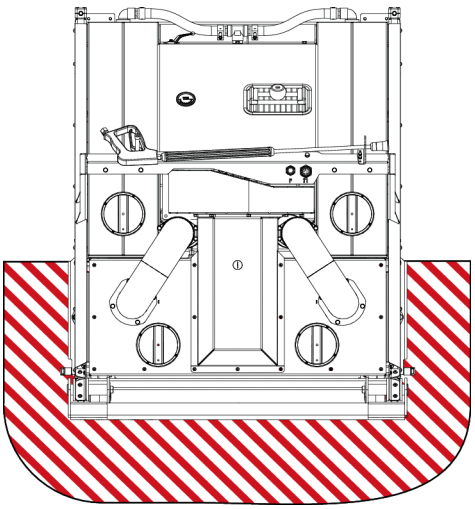
When you use the SCU unit, do not leave fingers or anything else between wheels, attachment frame, frame or washing pipe.

2.4 MAINTENANCE SAFETY

WARNING

Preventing the crushing hazard while doing maintenance:

- **Before any maintenance make sure that the hydraulic system is depressurized and all the electrics are shut off.**
- **When you do maintenance, make sure that you do not enter the device's range of motion or crushing hazard zone.**
- **Always place the SCU unit on to a firm and level surface when you do maintenance.**
- **Under any circumstances do not go under the SCU.**
- **Shut down the base machine to prevent it from unintentionally starting or moving.**
- **Never go between the quick attachment of the base machine and the device.**



Picture 5: Crushing Hazard Zone

WARNING

Installation and service of hydraulic equipment must be done by qualified and experienced personnel only.

WARNING

Do not perform any maintenance or adjusting to the device when the base machine is on. Shut down the base machine before you do any maintenance or adjusting.

NOTE!

When you do any maintenance to the SCU unit, keep the components of the system clean. This ensures safe, reliable and long-life operation of your equipment.

Hydraulic system of the base machine must be maintained according to the service program.

Always wear eye protection when you use high pressure air in maintenance. Do not aim compressed air at people or yourself, it can cause serious injury.



2.5 WARNING LABELS

Product recipient is obligated to place warning labels on the DYNASET product.Attach labels to visible and appropriate place onto or close to DYNASET product where it's easily seen.

Attach labels to visible and appropriate place onto or close to DYNASET product where it’s easily seen. Clean surface with solvent detergent before attaching labels.



READ MANUAL



USE EAR AND EYE PROTECTION



PREVENT FROM FREEZING



BEWARE HIGH PRESSURE JETS



BEWARE HOT SURFACES



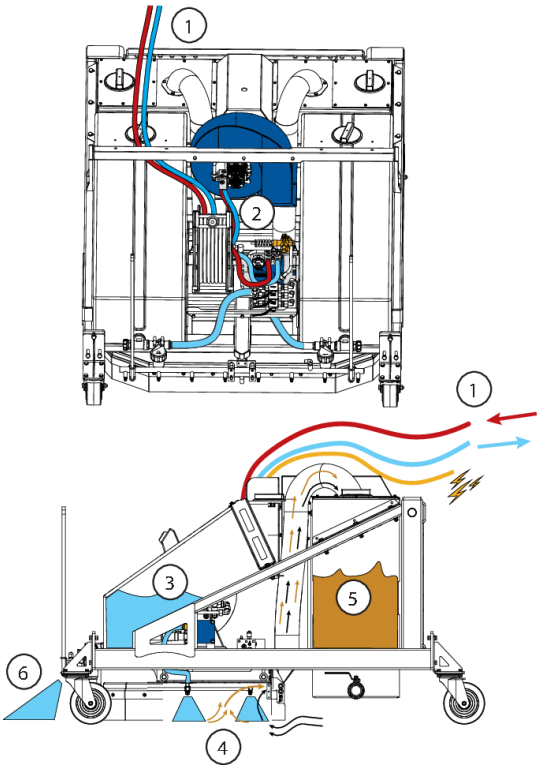
BEWARE VACUUM SUCTION



BEWARE CRUSH HAZARD

3. OPERATING PRINCIPLES

3.1 OPERATING DESCRIPTION



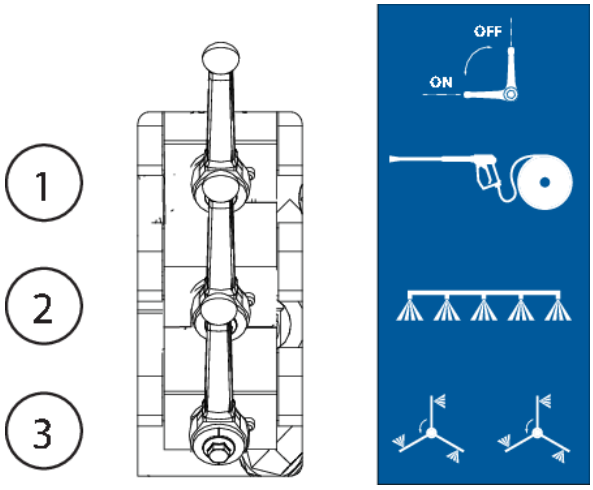
Picture 6: Operating description of SCU220 unit

HPW pump and HCF fan of the SCU are driven by the hydraulic power from the machine (1). Hydraulic oil flows to the SCU's HMV valve located behind the hose reel (2). From there, the hydraulics are distributed to the various actuators.

HPW pump draws the water from the water tank (3), and the high-pressure water flows through washing nozzles to the surface to be washed (4). The vacuum of HCF sucks the water, dirt and dust bound to it into the collection tank (5). Selecting the street washing pipe, high pressure washes the surface and directs the used water to desired direction (6). The unit also comes with a washing gun for hand held power washing applications.

3.2 WASHING OPTIONS

3.2.1 SCU220

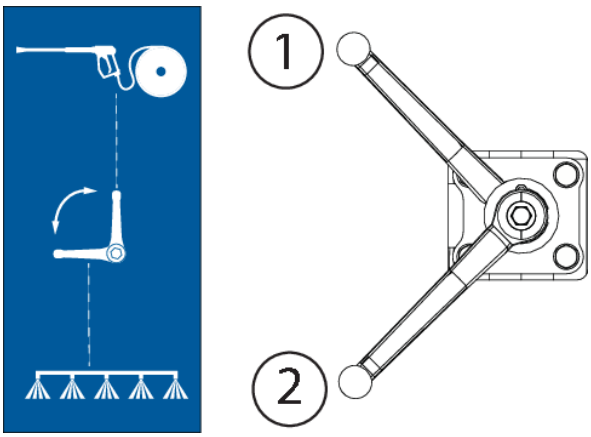


Picture 7: Washing Options for SCU220

There are three different options to wash with SCU220:

1. Washing gun
2. Street washing pipe without the water suction function
3. Rotating high pressure nozzles with suction function

3.2.2 SCU250



Picture 8: Washing Options for SCU250

There are two different options to wash with SCU250:

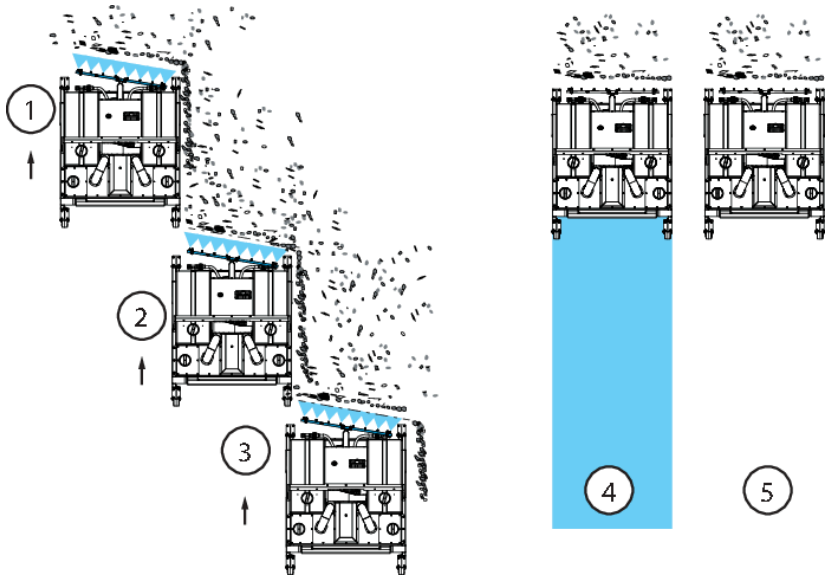
1. Washing gun
2. Washing nozzles with suction function

3.3 WASHING METHODS

Using a combination of rotating nozzle arms and a suction vacuum, the SCU unit washes the surface with high-pressure water and collects the dirty water into a collection tank. Washing with the vacuum function leaves behind only a damp surface. It also doesn't throw stones or water around, which is an excellent advantage when washing for example car parks.

When you use rotating nozzles without suction, the SCU system washes the surface and binds dust from the surface pores but does not collect water. The advantage of this function is that it prevents water and stones from being ejected.

Street washing pipe washes the surface with high-pressure water, removing dirt and dust from deep within the pores of the surface. The pipe can also be used to direct, or "drain", the wash water away from the surface.



Picture 9: Washing methods

WASHING WITH A STREET WASHING PIPE (SCU220)

When you wash large areas with a street washing pipe, start at the highest point of the area.

1. When you clean the first lane, the dirt flows with the wash water to the next lane.

2. Continue washing the area one lane at a time.

3. Until the whole area has been washed.

WASHING METHOD WITH WASHING NOZZLES

You can wash with rotating nozzle arms without suction (4) or with suction (5).

4. When you wash without the suction function, the SCU washes the surface with high-pressure water, removing dirt and dust from deep within the surface pores.

5. When you wash with the suction function, the SCU works in the same way as in step 4 but collects the used water in the collection tank, leaving the surface wet.

4. INSTALLATION OF THE SCU UNIT

4.1 INSTALLATION TO A HYDRAULIC TOOL LINE

Install the SCU on the existing hydraulic power line of the machine. No further installation is usually required and the SCU can be used with existing controls. However, a sufficient hydraulic flow must be ensured for the SCU.

Connect the pressure line (P) and return line (T) of the hydraulic power line to the corresponding SCU connections.

Make sure that the hydraulic oil flow of the machine is sufficient to operate the equipment. To achieve maximum washing performance, at least the nominal hydraulic oil flow must be available. Lower hydraulic oil flow reduces washing and suction power.

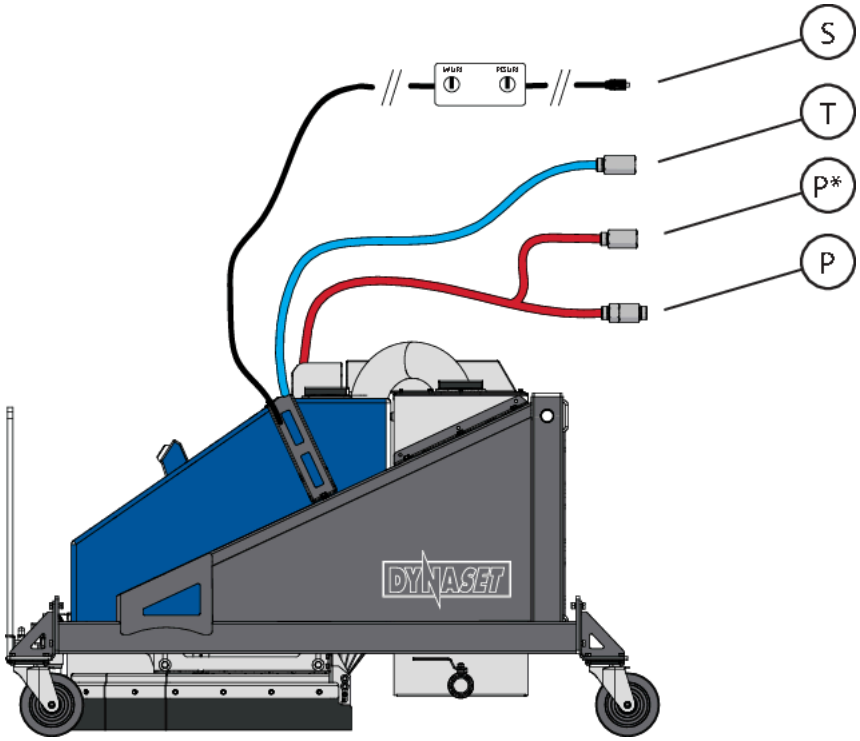
Make sure that the hydraulic flow of the base machine is sufficient to run the unit. At least the nominal hydraulic flow must be available to get the maximum washing power. Lower hydraulic flow reduces washing power.

⚠ WARNING

Make sure that the filtering degree and cooling capacity of the hydraulic system are sufficient. READ CHAPTER „10. TECHNICAL SPECIFICATIONS “

⚠ WARNING

The pressure in the return line must not exceed 10 bar. Exceeding pressure may damage the equipment. READ CHAPTER „10. TECHNICAL SPECIFICATIONS “



Picture 10: SCU Connections

S = Electrical connection to control unit

P = Hydraulic pressure line

P* = Only in SCU220, additional hydraulic pressure line

T = Hydraulic return line

4.2 INSTALLING THE CONTROL UNIT

SCU is equipped with a control unit. The centre requires 12V and 5A power to operate. Power plug on the cigarette lighter of the machine is used for power supply.

NOTE!

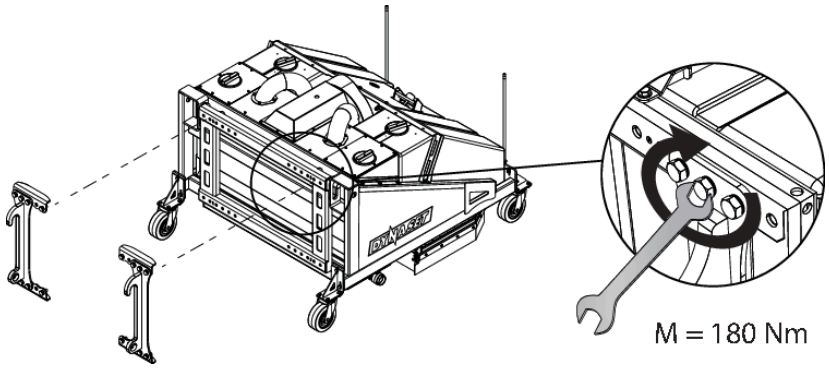
READ CHAPTER „11. SCHEMATICS “ to see the electrical diagram.

4.3 HYDRAULIC OILS

To use the correct hydraulic fluid, READ CHAPTER „6.3 HYDRAULIC FLUIDS “.

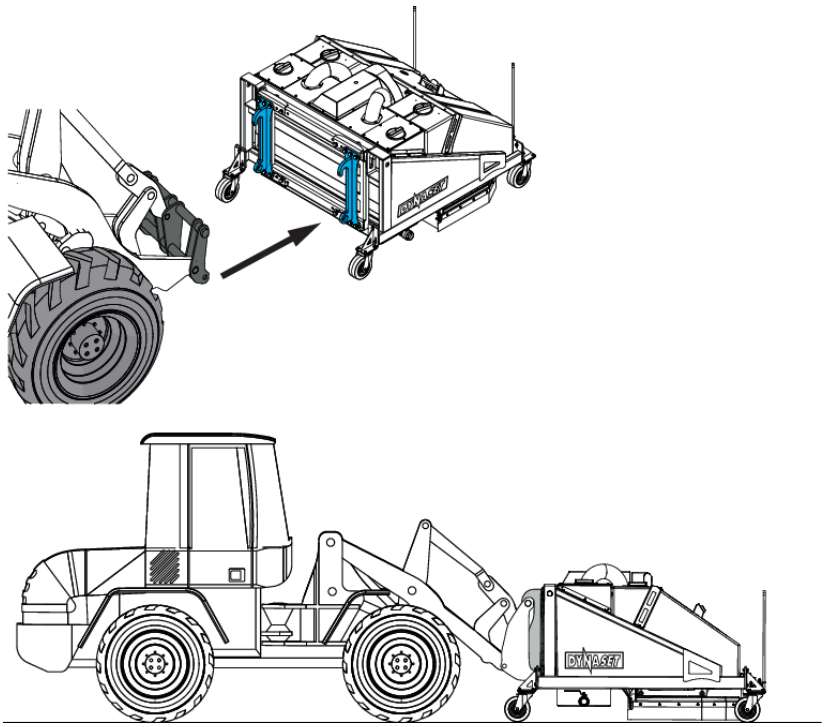
4.4 INSTALLATION ON A MACHINE

Attach the SCU to the machine by fitting the SCU with the appropriate quick attachment.



Picture 11: Quick attachments and adapter

Attach the SCU to the quick attachment of the machine.



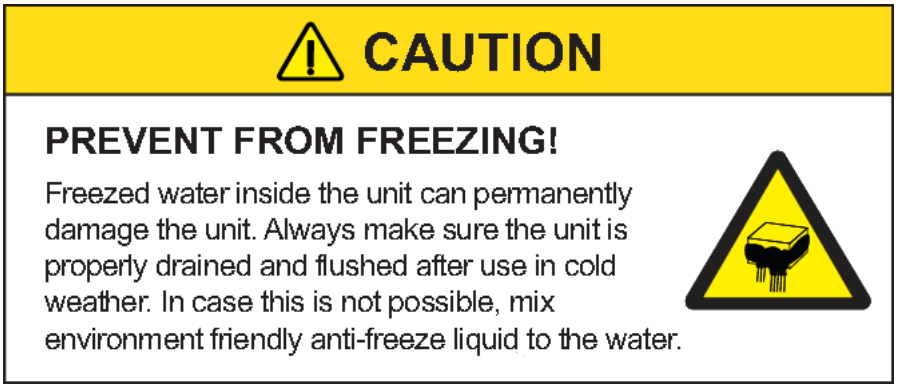
Picture 12: Attaching the SCU to the machine

Connect the hydraulic hoses and the electric cable, after which the machine is ready for operation.

4.5 SETTING SCU UP FOR OPERATION / STORAGE

⚠ WARNING

Attach the SCU to the machine before you use it. Dropping it can damage the unit or cause serious injury.



Prevent nozzles, water circuit and piping from freezing. Drain and vent the water circuits before the ambient temperature decreases to 0 °C (32 °F) or below.

Store the SCU on a flat and stable surface so that it cannot move. Prevent the wheels from moving, for example by using wedges or tying the device to the chassis. The SCU can also be stored by placing it on its frame beams so that the wheels do not hit the ground. Do not store the appliance so that the weight of the appliance rests on the nozzle housing. Storing on or lifting from the nozzle housing will damage the device.

⚠ WARNING

When you use the SCU unit, do not leave fingers or anything else between wheels, attachment frame, frame or washing pipe.

⚠ WARNING

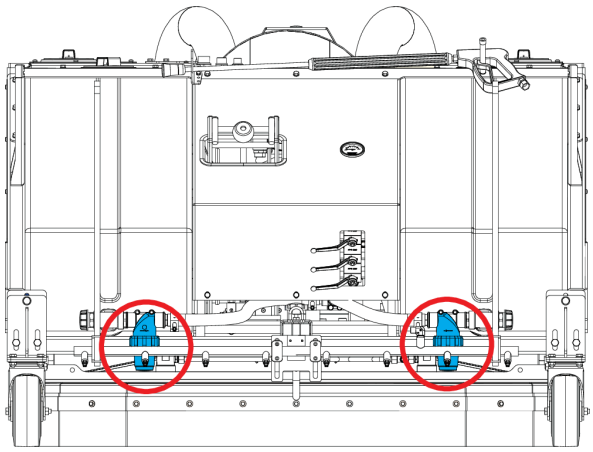
Remove and store the SCU unit on a stable and level surface. Store the unit so that it cannot fall or cause damage.

⚠ WARNING

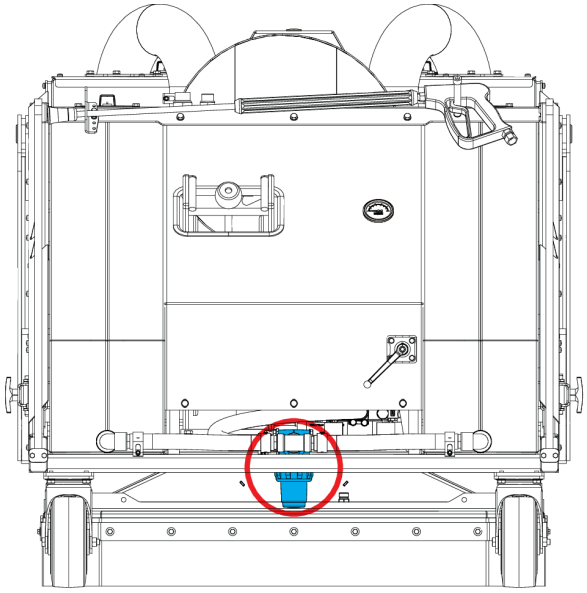
Do not store the appliance so that the weight of the appliance rests on the nozzle housing. Storing on or lifting from the nozzle housing will damage the device.

⚠ WARNING

Before you set up SCU for storage, make sure that there is no water inside the suction filters. If there is water inside the filters, it will freeze and brake down.



Picture 13: Suction Filters, SCU220



Picture 14: Suction Filter, SCU250

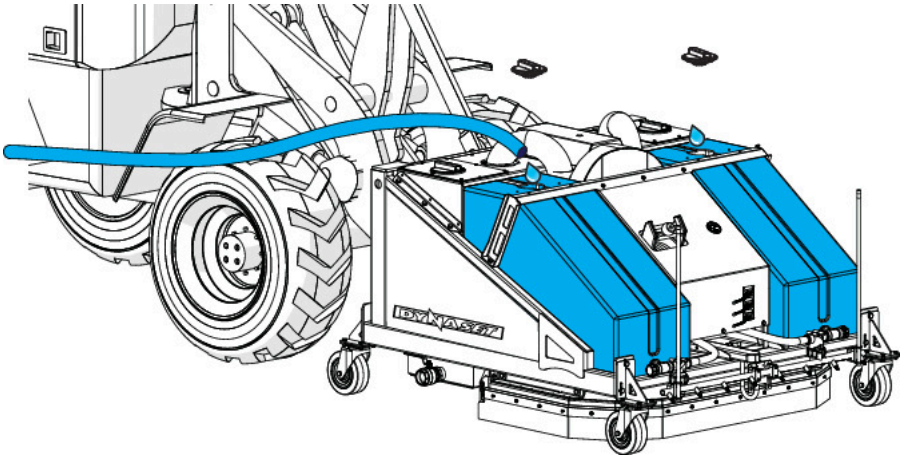
5. OPERATION

5.1 BEFORE OPERATING THE SCU UNIT

When you have verified that the mechanical and hydraulic installation is correct, SCU Unit is ready for use.

5.1.1 FILLING THE CLEAN WATER TANKS

1. Fill both clean water tanks with clean water and make sure that the collection tank is empty.

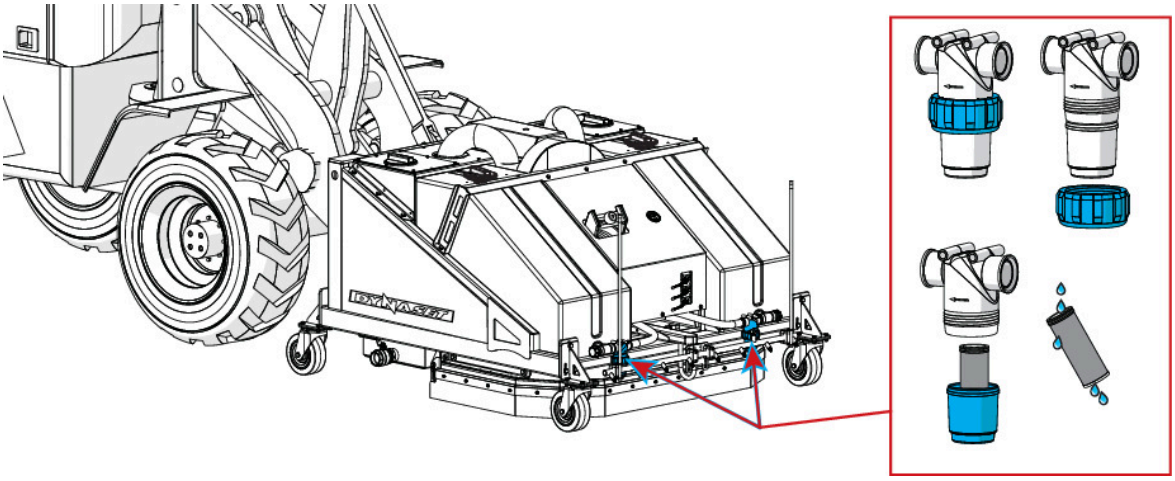


Picture 15: Filling of clean water tanks

NOTE!

The maximum permissible water temperature is 45 °C (113 °F). Do not exceed the maximum permissible temperature. Also make sure that both clean water tanks are full before starting work.

2. Make sure the suction filters are clean and in place. READ CHAPTER „6.4 CLEANING THE SUCTION FILTER “.



Picture 16: Location of the suction filter

5.1.2 ADJUSTING THE HEIGHT OF THE SUCTION UNIT

There should be a gap of about 5 mm (0.20 in) between the surface to be washed and the front of the suction equipment, but in such a way that the front prevents water from splashing. The height of the suction unit can be adjusted in two ways. Coarse adjustment by changing the height of the wheels or fine adjustment of the height and angle of the nozzle housing.

NOTE!

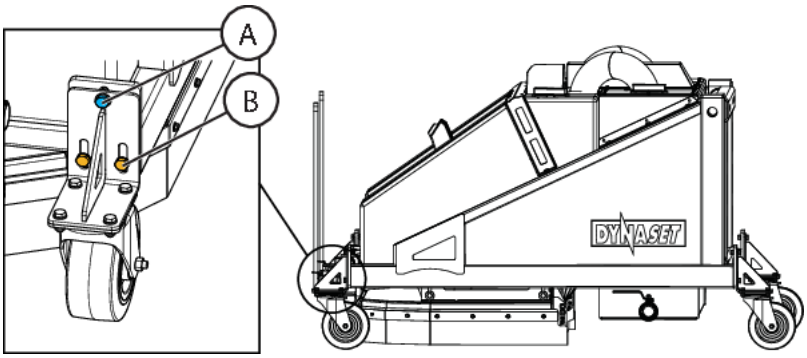
The size of the gap may vary when you drive on different soil and material.

WARNING

When you adjust the SCU, the unit and its hydraulic system must be switched off so that it cannot accidentally start itself. The device must also be supported so that it cannot move or cause a dangerous situation.

TYRE HEIGHT ADJUSTMENT

The height is adjusted by four wheel height adjusters at a time. The height can be set to four preset heights in 15 mm (0.59 in) increments.



Picture 17: Wheel Adjustments

1. Lift and support the SCU unit.
2. Remove the locking screw A and open the adjusting screws B.
3. Move the wheel to the desired height.
4. Pre-tighten the adjusting screw and tighten the locking and adjusting screws.

NOTE!

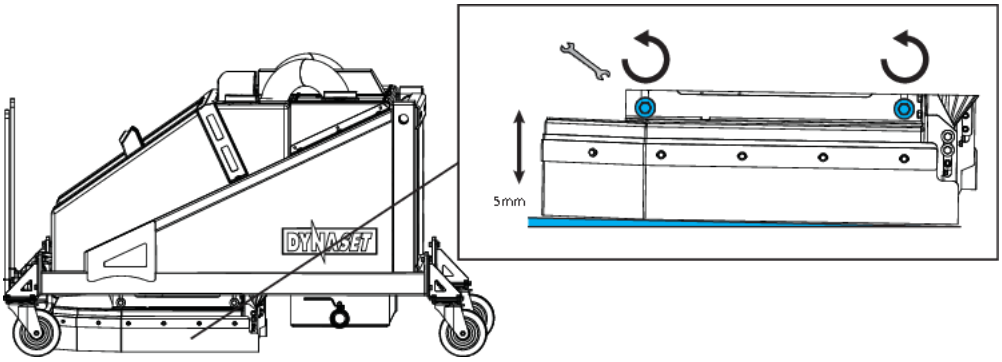
The height adjustment of each wheel must be at the same height!

NOZZLE HOUSING HEIGHT ADJUSTMENT

The height of the enclosure is adjusted on both sides of the unit. When you adjust the height, leave a gap of about 5 mm (0.20 in) between the front edge of the housing and the surface for best washing results. Adjust the back of the housing so that it just touches the surface to be washed, to minimize water splashing.

WARNING

Support the SCU unit before maintenance and adjustment work so that it cannot move. Do not lift the SCU from its nozzle housing with forklift trucks or similar! Lifting the nozzle housing from the nozzle housing will damage the device. Always support the device from the frame.

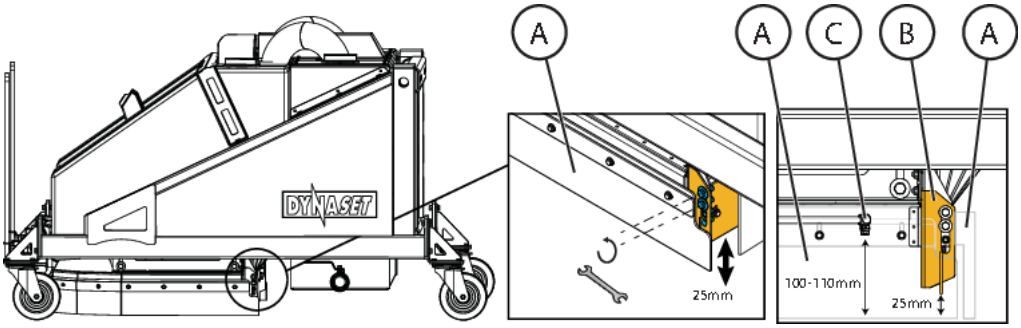


Picture 18: Nozzle housing adjustment

1. Open the clamping screws on both sides of the nozzle housing.
2. Adjust the housing to the desired height at the front and rear.
3. Tighten the screws.

SUCTION NOZZLE HEIGHT ADJUSTMENT

The suction nozzle should be adjusted so that there is a 25 mm (0.98 in) gap between it and the surface to be washed for suction flow.



Picture 19: Suction nozzle height adjustment

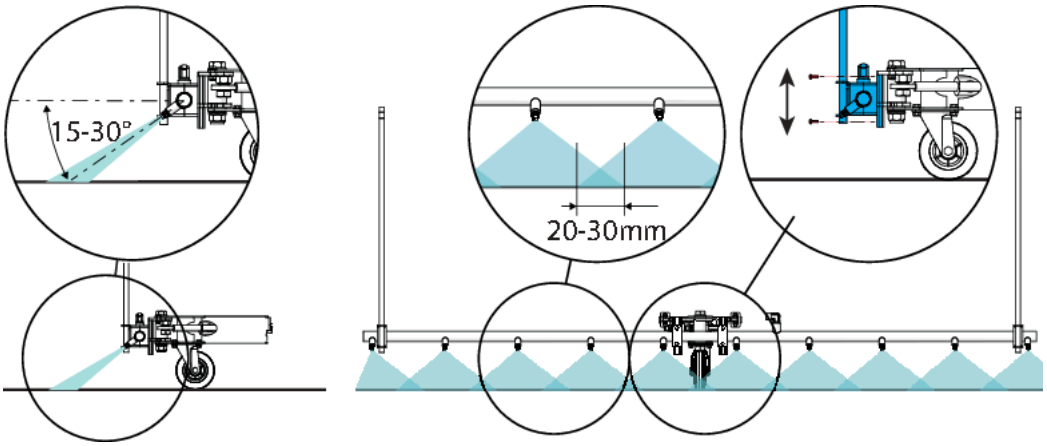
A=Rubber plate, B= Suction nozzle, C= Nozzle arm and nozzle

1. Open the locking screws on both sides of the enclosure.
2. Lower or raise the plate to the desired level.
3. Tighten the locking screws in place.

5.1.3 ADJUSTMENT OF NOZZLE WASHING ANGLE AND HEIGHT

When you use the street washing pipe, the washing angle of the pipe should be 15 - 30 degrees. The height of the street washing pipe should be positioned so that the water jets intersect on the ground by 20--30 mm (0.79--1.18in).

1. To adjust the height, loosen the height adjustment screws.
2. Place the street washing pipe at the desired height.
3. Tighten the screws.



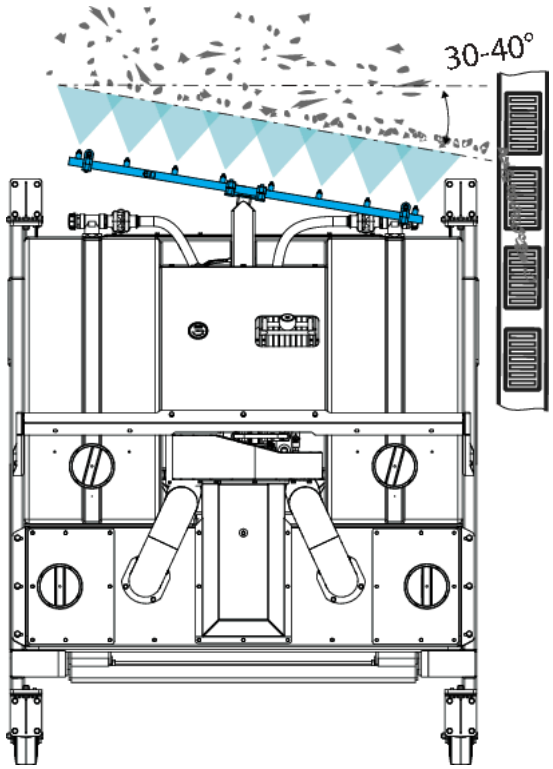
Picture 20: Washing angle

NOTE!

An incorrectly positioned street washing pipe can reduce washing performance by up to 50%.

5.1.4 ADJUSTING THE HEADING ANGLE

The angle of the street washing pipe determines the direction in which the dirt is removed. The most effective angle is 30 - 40 degrees. The high-pressure water jets act like a buffer plate, pushing the dirt ahead of it along the street washing pipe to the end of the pipe and then off to the side

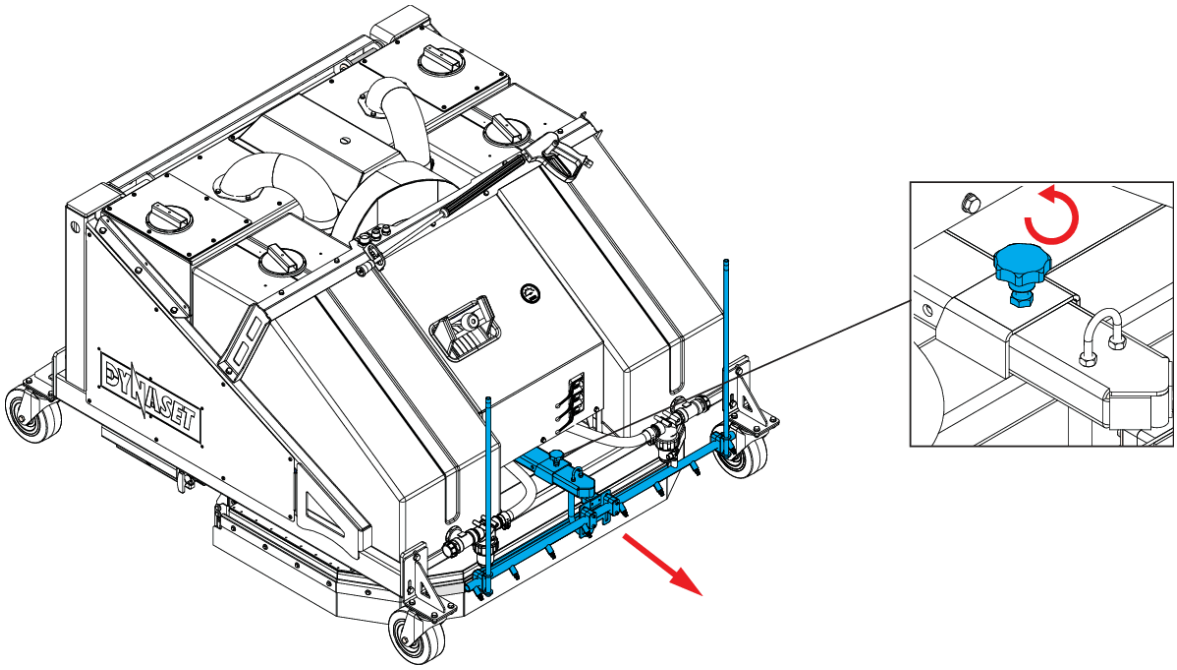


Picture 21: Heading angle

NOTE!

Always lock the street washing pipe in place with a locking screw.

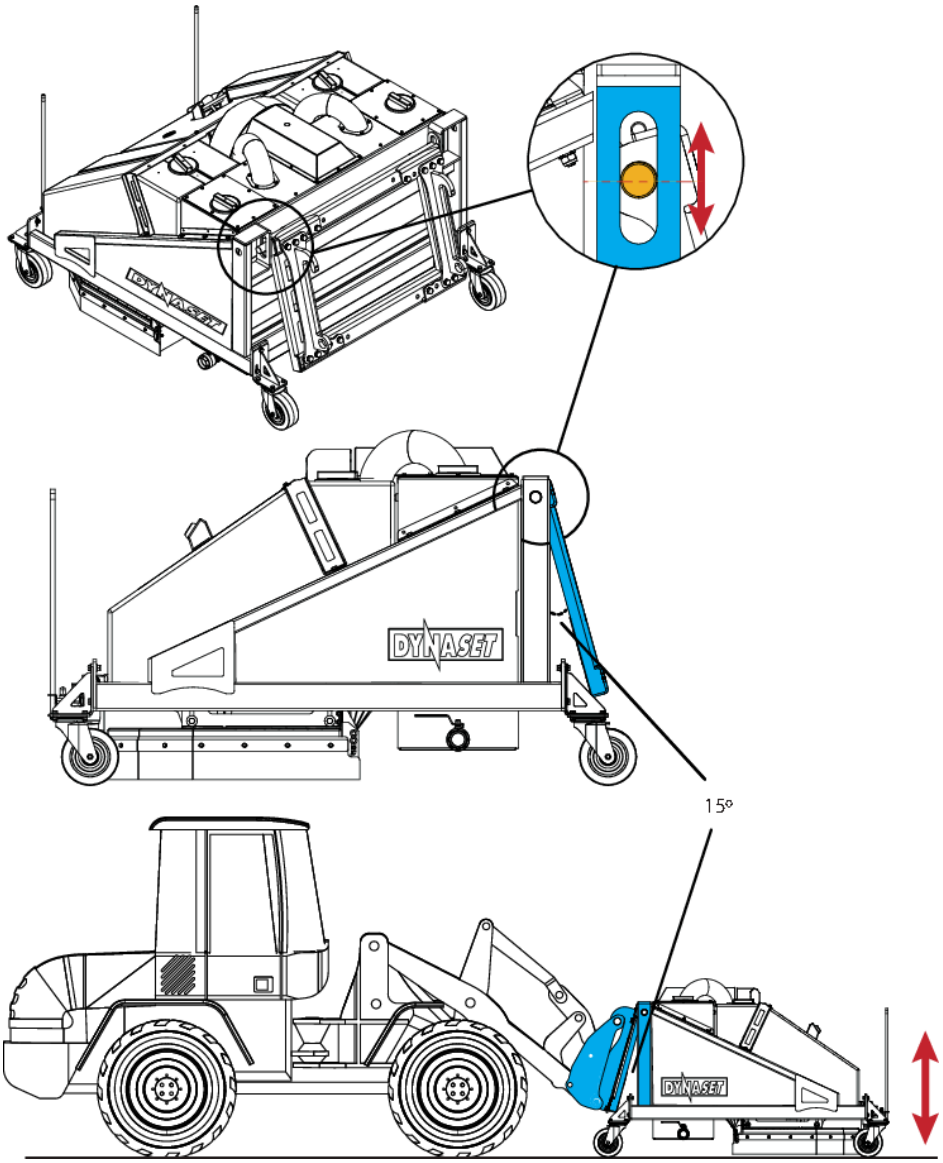
In the SCU, the angle of rotation is adjusted manually. To adjust the washing angle, bring the street washing pipe forward.



Picture 22: Heading angle

5.2 FLOATING

The SCU is equipped with a 150 mm (5.91 in) float. Do not press the SCU unnecessarily. The correct operating position is when the float is in the middle. This will ensure the correct functioning of the float. The correct driving position is that the quick attachment is slightly tilted, about 15 degrees, as shown in the picture below.

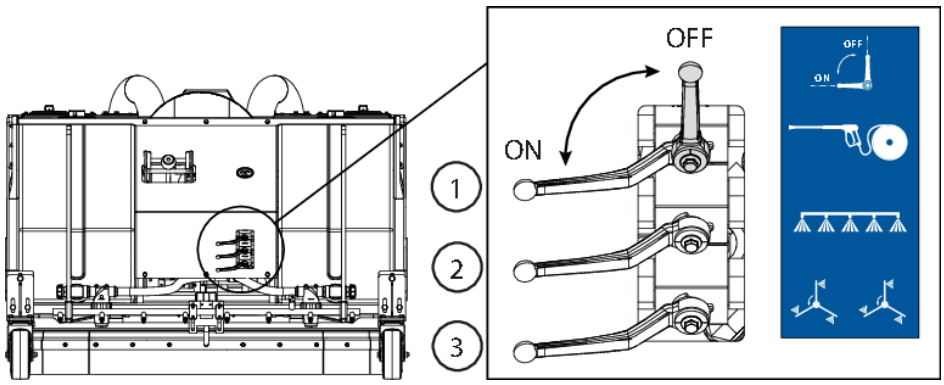


Picture 23: SCU Floating

5.3 WASHING FUNCTIONS

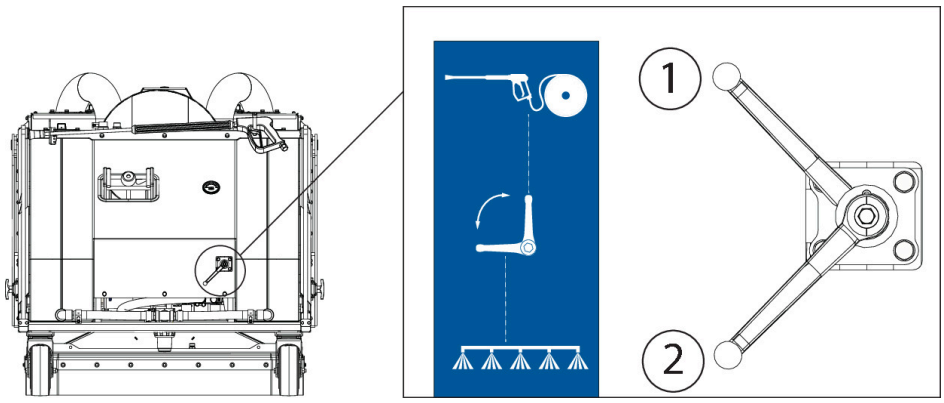
In SCU220 you can choose between three washing functions: washing gun, washing nozzles and rotating nozzle arms. In SCU250 you can choose between washing gun and washing nozzles.

Select the washing function by turning the lever.



Picture 24: Choice of washing function, SCU220

1. Washing gun
2. Street washing pipe
3. Rotating nozzle arms



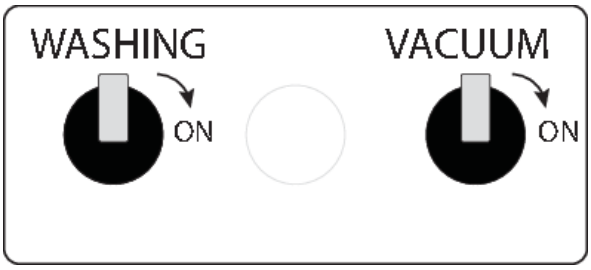
Picture 25: Choice of washing function, SCU250

1. Washing gun
2. Washing nozzles

5.4 STARTING AND STOPPING THE SCU

The SCU device is controlled by switching on the hydraulic system of the machine by selecting washing and vacuum from the control unit.

1. Connect the hydraulic supply of the machine to the SCU.
2. Switch on the desired function on the control unit's selector switches; Washing and Vacuum.
3. Start working.



Picture 26: Selecting the hydraulics on

5.5 WASHING WITH WASHING NOZZLES AND SUCTION FUNCTION

1. Make sure that the SCU device is connected correctly.
2. Make sure that both clean water tanks are full, and the collection tank is empty.
3. For washing functions, turn the lever of the washing nozzle to the ON position.
4. Switch both the washer and the vacuum ON from the control unit.
5. Start driving. Recommended driving speed is max. 5 km/h. Speed has a significant impact on the washing result.
6. After using the unit, empty the collection tank by opening the drain hatches. If there is still sand or debris at the bottom of the tanks, wash them with washing gun.

NOTE!

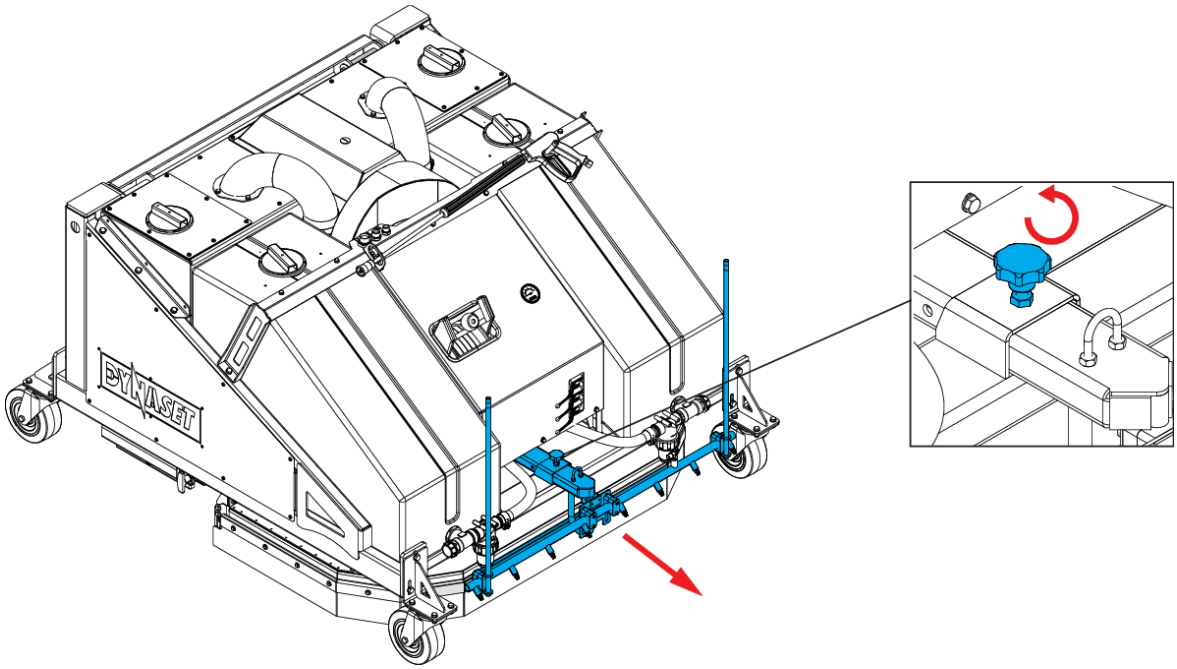
Do not press the SCU device. The floatation is intended to operate freely while driving. Lifting or pushing the device while driving will prevent the float from working properly. Read chapter "5.2 Floating" for more information.

NOTE!

The SCU device has a surface limit switch that stops the suction function when the collection tank is full and must be emptied. The surface limit switch is automatically deactivated when the tank is emptied.

5.6 WASHING WITHOUT SUCTION FUNCTION

1. Make sure that the SCU device is connected correctly.
2. Make sure that both clean water tanks are full.
3. Select either the street washing pipe or the washing nozzles and turn the selected handle to the ON position.
4. When you wash with street washing pipe (SCU220), pull out the street washing pipe and turn it in the direction you want to wash. When you wash with washing nozzles (SCU220/SCU250), you can continue with step 5.
5. Switch on the hydraulics from the control unit to the wash position.
6. Start driving. Recommended driving speed max. 5 km/h. Speed has a significant impact on the washing result.



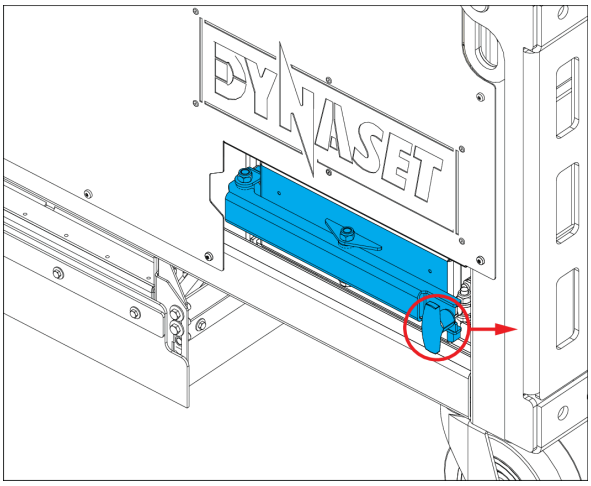
Picture 27: Preparing street washing pipe

5.7 EMPTYING THE COLLECTION TANK

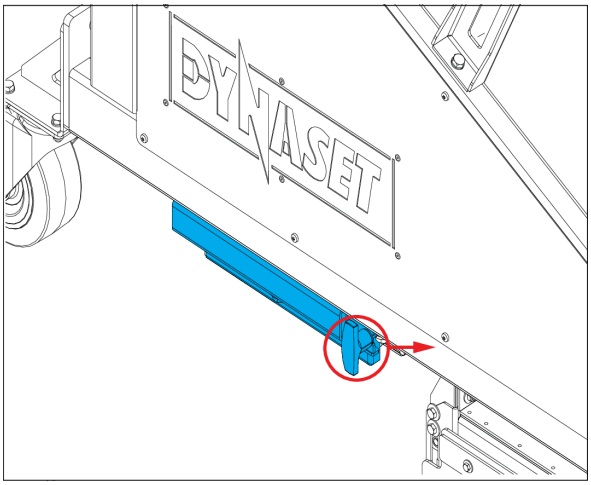
NOTE!

Empty the collection tanks after every use.

1. Open the hatches that are located on the sides of the collection tanks: loosen the handle and move it to the side.
2. When the tank is empty, check if there is still sand or debris at the bottom of the tank. If so, wash the tank with washing gun.
3. Close the hatches and hand tighten the handle. Do not tighten it too much.



Picture 28: Emptying the tank, SCU250

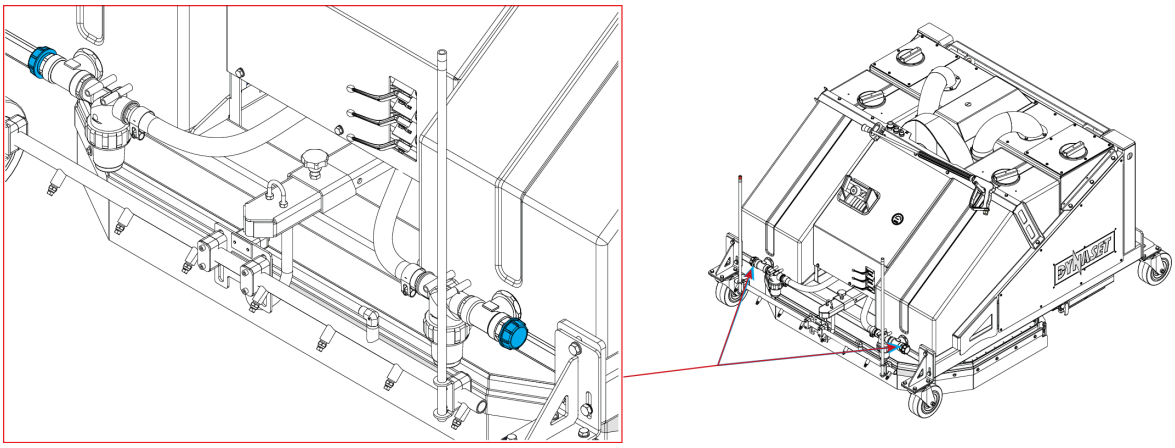


Picture 29: Emptying the tank, SCU220

5.8 EMPTYING THE CLEAN WATER TANK

5.8.1 SCU220

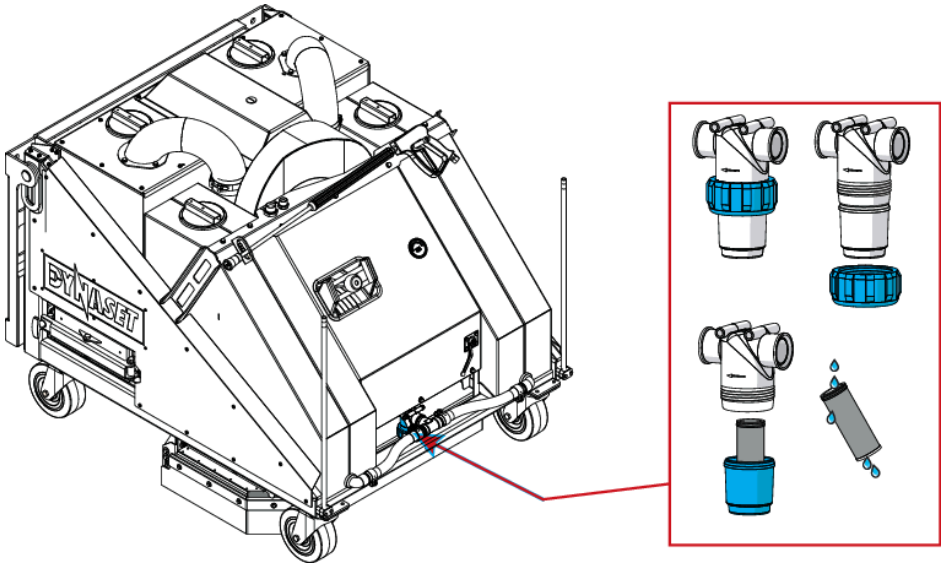
1. Remove the plugs between the clean water tank and suction filters.
2. Water will drain out from the clean water tank. Wait for the tank to be empty.
3. Put the plugs back in and hand tighten them.



Picture 30: Emptying the clean water tank, SCU220

5.8.2 SCU250

1. Remove the suction filter from the front of SCU.
2. Water will drain out from the clean water tank. Wait for the tank to be empty.
3. Put the filter back in.



Picture 31: Emptying the fresh clean tank, SCU250

5.9 WORKING IN COLD CONDITIONS

To prevent pipes and SCU from freezing in cold air, drain the pump, water lines, water tanks and suction filters of water at the end of the shift. When the tanks are empty, run the pump dry until all the water has drained from the water circuit. Also, pull the washing gun hose completely from the reel and switch on the washing gun function. Use the washing gun after all the water has left the hose.

⚠ WARNING

Do not let the SCU freeze. Freezing can damage the water pump.

⚠ WARNING

Before you set up SCU for storage, make sure that there is no water inside the suction filters. If there is water inside the filters, it will freeze and brake down.

6. MAINTENANCE

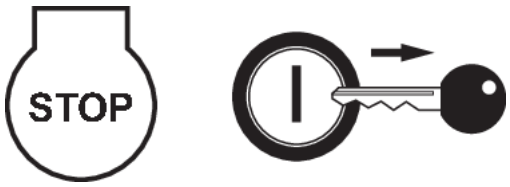
6.1 GENERAL

WARNING

All installations and maintenance must be done according to this manual. All electric installations and maintenance should only be done by a qualified electrician depending on the jobs requirements.

WARNING

Before you do any maintenance or repair, always make sure that the hydraulic system is turned off and depressurized. Make sure that the system does not turn on while doing maintenance.



WARNING

Preventing the crushing hazard while doing maintenance:

- **Before any maintenance make sure that the hydraulic system is depressurized and all the electrics are shut off.**
- **When you do maintenance, make sure that you do not enter the device's range of motion or crushing hazard zone.**
- **Always place the SCU unit on to a firm and level surface when you do maintenance.**
- **Under any circumstances do not go under the SCU.**
- **Shut down the base machine to prevent it from unintentionally starting or moving.**
- **Never go between the quick attachment of the base machine and the device.**

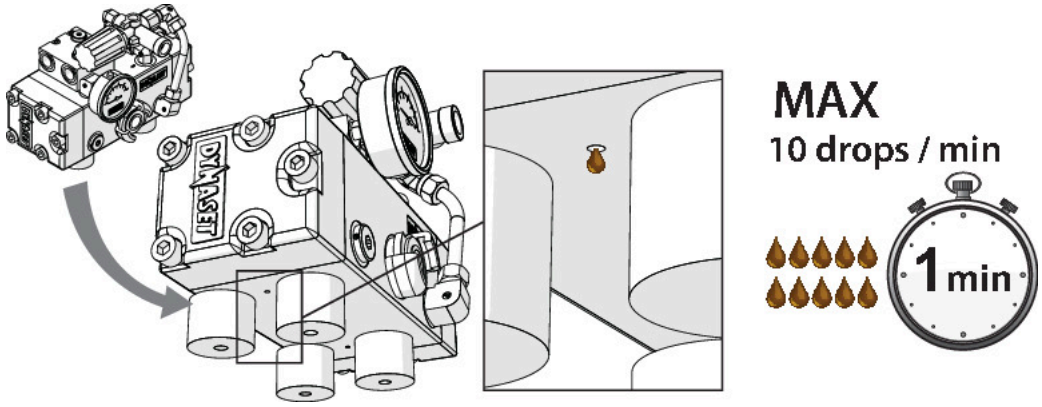
6.2 MAINTENANCE INTERVAL

All maintenance must be done as they are scheduled in this manual.

The following table provides maintenance schedule for DYNASET SCU unit.

Check points	Daily	After daily use	Every 1500 hours or if necessary
Observe HPW pump's leakage detectors	x		
Clean the SCU unit		x	
Clean the water intake filter	x	x	
Change the water intake filter			x
Change filter of nozzles			x
Change HPW pump sealings			x

Check constantly whether the fluid amount dropping from pump's leakage detectors is increasing. Replace sealing in proper time to exclude intermixing of hydraulic oil and pumping fluid. Sealings replace instructions can be found in HPW User Manual.



Picture 32: Location of leakage detectors in HPW

6.3 HYDRAULIC FLUIDS

A wide range of standard hydraulic fluids can be used with the DYNASET hydraulic é. Depending on the operating temperature, the following mineral hydraulic oils are recommended:

Mineral hydraulic oil	Operation temperature up to
ISO VG 32S	60 °C (140 °F)
ISO VG 46S	70 °C (158 °F)
ISO VG 68S	80 °C (176 °F)

WARNING

Recommended oil viscosity is between 10 and 35 cSt when operating at normal operating temperature.

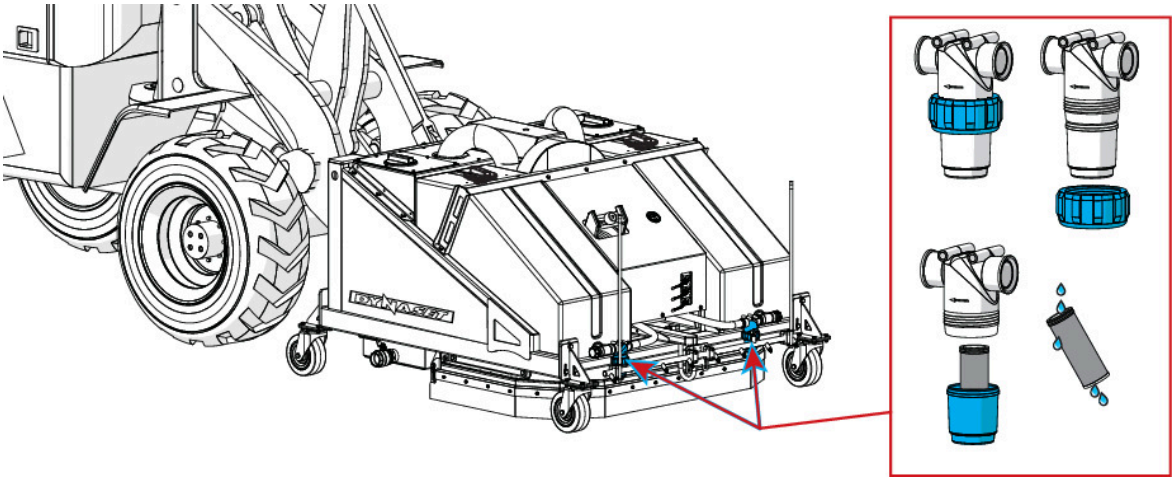
Synthetic and bio-oils can also be used if their viscosity characteristics and lubricating efficiency are similar to mineral oils. Automatic transmission fluids and even engine oils can be used, provided that they are allowed to be used in hydraulic system of your base machine.

For the hydraulic fluid change interval, obey the base machine's maintenance instructions.

To use special hydraulic fluids with DYNASET equipment, contact the nearest DYNASET representative for more information.

6.4 CLEANING THE SUCTION FILTER

Suction filters are located in front of the clean water tank. SCU220 has two suction filters, SCU250 has one.

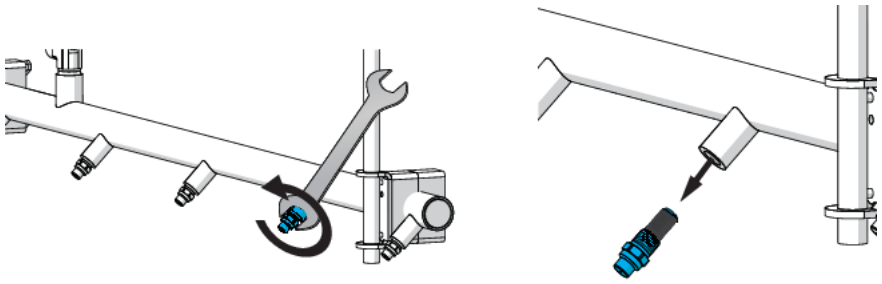


Picture 33: Location of water filters on SCU

Wash all soil and dirt off the suction filter with clean water. Reinstall a clean and intact filter in the SCU.

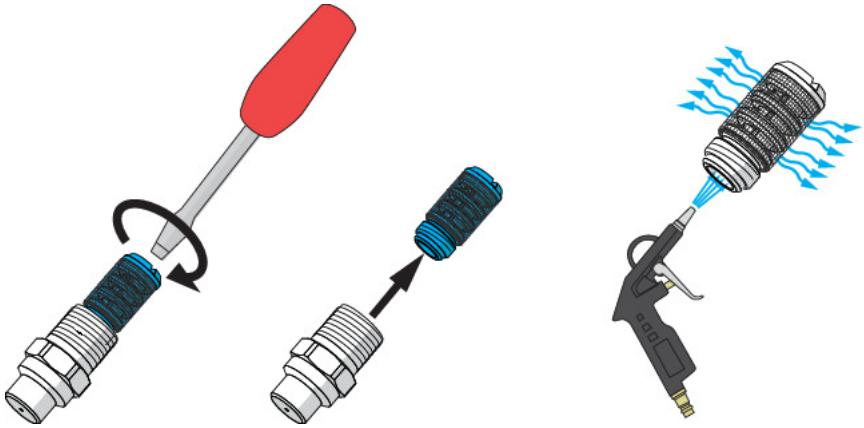
Check and clean the SCU suction filters regularly and replace if necessary.

6.5 CLEANING THE NOZZLE FILTER



Picture 34: Removing nozzles

Remove the nozzle from the street washing pipe.



Picture 35: Removing and cleaning nozzle filter

Remove the nozzle filter from the nozzle. Clean the clogged nozzle filter with a compressed air gun. Reinstall the clean the nozzle filter back into the nozzle and the street washing pipe.

Wear protective goggles when you use compressed air. Do not point or direct high-pressure air towards people. It can cause serious injury.



6.6 TROUBLESHOOTING

NOTE!

Troubleshooting for HPW pump is in HPW User Manual.

NOTE!

Troubleshooting for HCF pump is in HCF Installation Manual.

A trained mechanic is required to repair the following faults. Contact your authorized DYNASET dealer if you need further information on maintenance or troubleshooting.

FAILURE	REASON	CORRECTIVE ACTION
The SCU device is not working.	Hydraulic oil flow is insufficient or non-existent.	Start or adjust the hydraulic oil flow.
	The hydraulic pressure is too low.	Adjust the hydraulic pressure.
	The hydraulic oil flow is reversed.	Check and reconnect the hydraulic hoses. The pressure hose must be connected to the P-connector and the return hose to the T-connector.
	The device is not receiving electricity	Check the fuses. The power lines are damaged or there is a problem with the electricity supply. Check the wiring diagram for correct connections and the condition of the wires

FAILURE	REASON	CORRECTIVE ACTION
No water comes out of the SCU.	There is no water in the tanks.	Check and fill the water tank.
	The suction hose is loose or leaking.	Check and repair the hose and fittings.
	The water supply line is blocked.	Check the intake filter and clean it thoroughly.
	The nozzle is blocked.	Check and clean the nozzle filter.

FAILURE	REASON	CORRECTIVE ACTION
Extra sounds coming from the device SCU.	There is something loose in the equipment, the suction mechanism may be damaged, or the motor bearings may be worn out	Stop the machine and investigate the source of the sound. Contact Dynaset Oy.

7. MANUFACTURER'S LIMITED WARRANTY

7.1 WARRANTY COVERAGE

All accessories manufactured by DYNASET OY are subject to the terms and conditions of this limited warranty. Products are warranted to the original purchaser to be free from defects in materials or workmanship. Exclusions from warranty are explained in item Exclusions from warranty.

7.2 BEGINNING OF WARRANTY PERIOD

Warranty period begins from the delivery date of the product. Delivery is considered to be done on the date when installation has been accomplished or purchaser has taken the product in use. Product is considered as taken in use at the date when DYNASET OY has delivered the product to purchaser, unless separately agreed otherwise by written agreement.

7.3 WARRANTY PERIOD

Warranty period is twenty-four (24) months based on maximum of 2000 hours usage during this time period. In cases where the system is provided complete with certain special components (e.g. drive unit), those components are considered as a subject to their manufacturer's warranty.

7.4 WARRANTY PROCEDURES

Immediately upon identifying a problem which purchaser believes to be a failure subject to the product's limited warranty, purchaser must contact primary to the seller of the product. Contact must be made as soon as possible, the latest thirty (30) days after the problem was identified. Seller and/or manufacturer technical staff determines the nature of the problem primarily by phone or e-mail. Purchaser commits to give necessary information and to perform routine diagnostic procedures in order to determine the nature of the problem and necessary procedures.

7.5 WARRANTY REPAIRS

If the product is found to be defective during the warranty period, DYNASET OY will, at its option, either repair the product, author it to be repaired at its authorized workshop or exchange the defective product. If the product must be repaired elsewhere than premises of DYNASET OY or authorized workshop, all costs excluded from this warranty (travelling and waiting hours, daily allowance, travelling expenses and uninstallation/ reinstallation costs) will be charged from the purchaser. If the problem is not covered by this limited warranty, DYNASET OY has the right to charge purchaser of troubleshooting and repairing.

7.6 DELIVERY TERMS OF WARRANTY REPAIR

If the product is found possible to be defective under this limited warranty, and it needs to be repaired, DYNASET OY gives Warranty Return Number (WRN). Items being returned must be shipped, at the purchaser's cost, adequately packed for shipment, to the DYNASET OY or to other location authored by DYNASET OY.

Shipment documents must contain:

- Purchaser's name and contact information
- Receipt of original purchase
- WRN code
- Problem description

7.7 WARRANTY OF REPAIRED PRODUCT

Warranty period of the product repaired under this limited warranty continues to the end of original warranty period.

7.8 EXCLUSIONS FROM WARRANTY

This warranty shall not apply to:

- Failures due to normal wear and tear, improper installation, misuse, abuse, negligence, purchaser selection of improper product to intended use, accident, improper filtration of hydraulic oil or intake water or lack of maintenance.
- Cost of maintenance, adjustments, installation or startup.
- Coating, hydraulic oil, quick couplings and interconnection hoses (internal or external to system assemblies).
- Products altered or modified in a manner not authorized by DYNASET OY in writing.
- Products which have been repaired during warranty period by others than DYNASET OY or its authorized workshop.
- Costs of any other damage or loss, whether direct, indirect, incidental, special or consequential, arising out of the use of, or the inability to use, the product.
- Telephone or other communications expense.
- Product that is used in exceptional conditions, considered to cause excessive wear and tear.
- Faults caused by nature phenomenon like flood, thunder, etc.

© DYNASET OY, all rights reserved

8. DYNASET PRODUCT AND ENVIRONMENT

8.1 GENERAL INFORMATION

This chapter contains an environmental impact assessment for DYNASET hydraulic and electrical products. The assessment considers the recyclability of the products, the reuse of materials, as well as possible environmental impacts.

8.1.1 ENVIRONMENTAL DESIGN

Material Selection and Composition:

DYNASET takes great care in minimizing the environmental impact of both hydraulic and electrical products throughout their lifecycle, from design and material selection to manufacturing and end-of-life management. This commitment is reflected in several key areas:

- **Environmentally Friendly Materials:** We prioritize the use of environmentally friendly materials and substances in both hydraulic and electrical product lines. This includes exploring and implementing alternatives to hazardous materials wherever feasible. For hydraulic systems, this may involve investigating and recommending the use of bio-based or readily biodegradable hydraulic fluids. For electrical products, this means carefully selecting components with minimal environmental impact.
- **Compliance with Regulations:** All products, both hydraulic and electrical, are designed and manufactured to comply with relevant environmental regulations, including RoHS (Restriction of Hazardous Substances), REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) and other applicable international and local regulations. We maintain up-to-date knowledge of regulatory changes and proactively adapt our processes and materials to ensure ongoing compliance.
- **Recyclability and Reusability:** We consider material recyclability and reusability as a key factor in material selection. Designs are optimized to facilitate disassembly and separation of materials for efficient recycling streams. For hydraulic products, this includes using readily recyclable metals in the construction of housings and components. For electrical products, this involves selecting components with known recycling pathways and minimizing the use of composite materials that can be difficult to recycle. We strive to use materials that can be easily recovered and reused or recycled at the end of the product's life.

Energy Efficiency:

Beyond material selection and composition, the manufacturer also prioritizes energy efficiency in the design and manufacturing of both hydraulic and electrical products to minimize their operational environmental impact. This focus is implemented through the following strategies:

- **Design for Energy Efficiency:** For both hydraulic and electrical product lines, we strive to minimize power consumption during manufacturing and in their use. This involves careful component selection, optimized system design, and the integration of energy-saving technologies. For exmple in our manufacturing we recycle the water used in test processes and use automated test processes to minimize human error and maximize efficiency. Also our manufacturing facilities are partly powered by renewable energysources.
- **Optimization of Hydraulic Components and Systems:** For hydraulic products, we employ advanced engineering techniques to optimize the performance of components such as pumps, valves, and actuators. This includes minimizing friction losses, optimizing flow characteristics, and employing efficient hydraulic circuits. We also consider the overall system design to reduce energy losses and improve efficiency. This may involve incorporating features like load-sensing hydraulics or regenerative braking systems where appropriate.
- **Integration of Energy-Saving Technologies:** Both hydraulic and electrical products benefit from the integration of energy-saving technologies. For electrical products, this may involve using highly efficient electronic components, implementing power management systems, and incorporating features like automatic shut-off functions. For hydraulic systems, this could include the use of variable displacement pumps, electro-hydraulic servo valves for precise control, or the implementation of hybrid power systems that combine hydraulic power with electric drives. We continuously explore and evaluate new technologies that can further improve the energy efficiency of our products.

8.1.2 PACKAGING AND TRANSPORTATION

Beyond material selection, energy efficiency, and regulatory compliance, DYNASET also prioritizes minimizing the environmental impact of product packaging. This commitment is demonstrated through the following practices:

- **Recyclable and Reusable Packaging Materials:** We are committed to using recyclable and reusable packaging materials whenever possible for our products. This includes exploring alternatives to traditional packaging materials, such as using recycled cardboard, biodegradable packing peanuts, and reusable containers. We prioritize materials that can be easily recycled through existing infrastructure. Where reusable packaging is feasible, we encourage its return and reuse through partnerships or incentives.

- **Optimization of Packaging Size and Weight:** We continuously optimize packaging size and weight to minimize material usage and reduce transportation impacts. This involves careful consideration of product dimensions and fragility to design packaging that provides adequate protection while minimizing waste. The focus on packaging optimization not only reduces material consumption but also contributes to lower shipping costs and reduced fuel consumption during transportation. We strive to balance product protection with minimal environmental impact.

8.1.3 END-OF-LIFE MANAGEMENT

Beyond material selection, energy efficiency, packaging, and regulatory compliance, DYNASET prioritizes responsible end-of-life management for its products, including disposal, recycling, reuse, and refurbishment. This commitment is reflected in the following practices:

Disposal and Recycling:

- **Information on Proper Disposal and Recycling:** We provide information to end-users on proper disposal and recycling methods for both hydraulic and electrical products. This information is typically included in in this manual and on our website. We strive to make it easy for customers to understand how to handle end-of-life products responsibly.
- **Compliance with Waste Management Regulations:** We request users to follow and adhere to all relevant waste management regulations concerning the disposal and recycling of our products. This includes compliance with local, national, and international regulations regarding hazardous waste disposal and electronic waste recycling.

Reuse and Refurbishment:

- **Encouragement of Reuse and Refurbishment:** We actively encourage reuse and refurbishment options to extend the lifespan of our products. This includes designing products for durability and ease of repair, as well as promoting the benefits of refurbishment over replacement.
- **Support for Repair and Maintenance Services:** We support repair and maintenance services to facilitate product longevity. This includes providing spare parts, offering repair training, and also establishing authorized service centers. We strive to make it easy for customers to access repair services and keep their products functioning optimally for as long as possible. We believe that extending product life through reuse and refurbishment is a key component of minimizing environmental impact.

8.1.4 HYDRAULIC PRODUCTS

Hydraulic products mainly consist of metal components, which are generally highly recyclable. However, the oils and other fluids used in the manufacture of products can cause environmental harm if they leak. The fluids of decommissioned hydraulic products must always be handled properly so that they do not end up in nature.

The life cycle of hydraulic products can be long if they are properly maintained. The environmental impact of the products depends mainly on their use and possible leaks.

8.1.5 ELECTRICAL PRODUCTS

Electrical products contain electronics, which may contain harmful substances such as heavy metals. Recycling products is important so that these substances do not end up in the environment. Electrical products should always be delivered to an appropriate recycling point.

The life cycle of electrical products is usually shorter than that of hydraulic products. The environmental impact of the products depends on their manufacture, use and recycling.

8.1.6 PRODUCTS CONTAINING BATTERIES

Products containing batteries and other energy sources may contain substances harmful to the environment, such as heavy metals and acids. Recycling these products is particularly important so that they do not cause environmental damage. Batteries and other energy sources should always be removed from the products and delivered to a separate recycling point.

The life cycle of products containing batteries and other energy sources can be short, especially if the batteries are not properly maintained and charged. The environmental impact of the products depends on their manufacture, use and recycling.

9. DECLARATION OF CONFORMITY

We hereby declare that the design and manufacture of the product stated below are in conformity with the provisions of the European Parliament and Councils on the harmonization of the laws of Member States on the safety of machines.

Machine directive 2006/42/EC

LVD directive 2014/35/EU

EMC directive 2014/30/EU

RoHS directive 2015/863

Applied conformity standards:

EN ISO 4413:2010 Hydraulic fluid power - General rules and safety requirements for systems and their components.

EN60204-1:2018 Safety of machinery – Electrical equipment of machines.

Manufacturer:	DYNASET Oy Menotie 3, FI-33470 Ylöjärvi, Finland
Product group:	SCU SURFACE CLEANING UNIT
Product:	SCU Surface Cleaning Unit

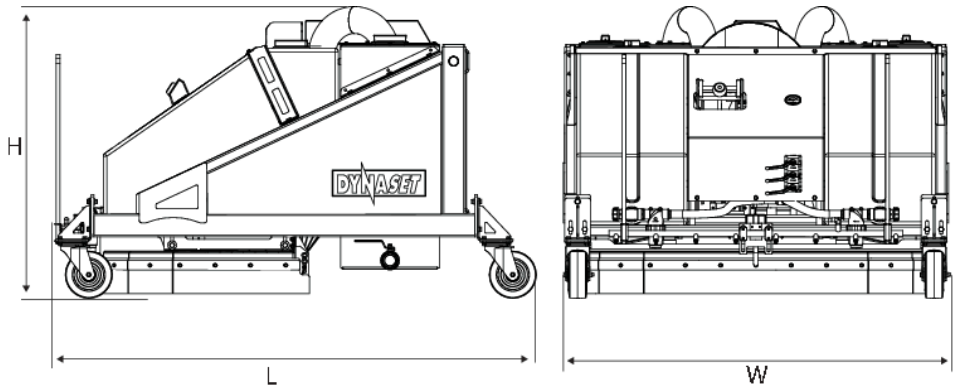
If the device has been modified by someone other than the manufacturer or without the manufacturer's permission, this declaration is not valid.



Pasi Yli-Kätkä
R&D Director
Menotie 3, 33470
Ylöjärvi, Finland 02.01.2023

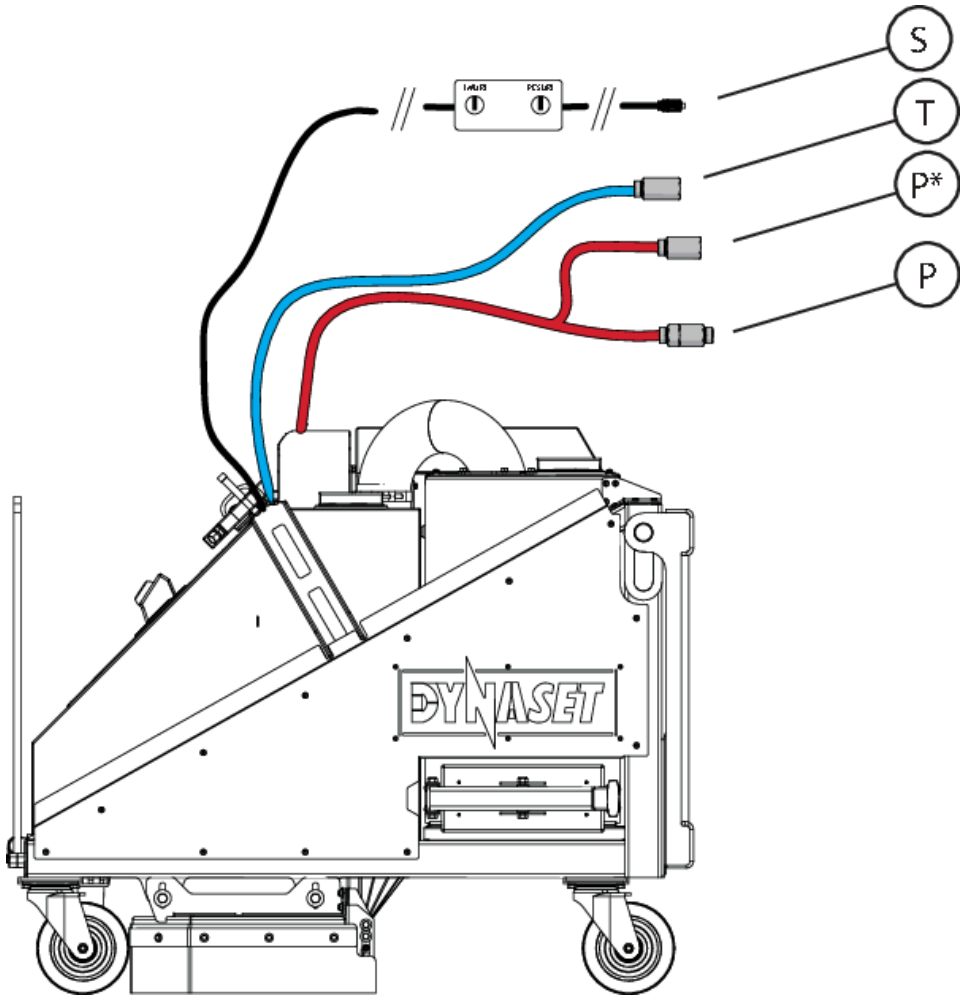
10. TECHNICAL SPECIFICATIONS

10.1 DIMENSIONS SCU



Model	Dimensions, mm (in)			Weight
	Lenght, L	Width, W	Height, H	kg (lbs)
SCU220-1500	2'043 (80.4)	1'638 (64.5)	1'237 (48.7)	720 (1'589)
SCU250-1200	1'479 (58.2)	1'272 (50.1)	1'284 (50.6)	495 (1'093)

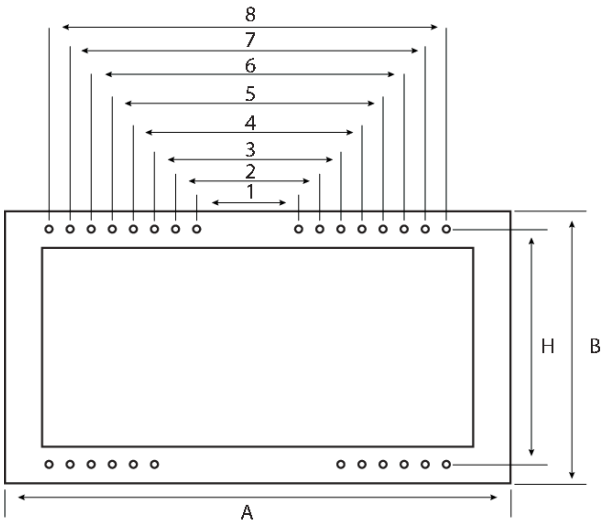
10.2 CONNECTIONS



Model	Connections		Electrical Connection
	Pressure Line, P, P*	Returnline, T	S
SCU220-1500	P = TEMA 10021 (F)	T = TEMA 10011 (M)	+12VDC SAE J563
SCU250-1200	P = TEMA 7510 (F)	T = TEMA 7520 (M)	+12VDC SAE J563

P* = additional

10.3 QUICK ATTACHMENT FASTENING POINTS

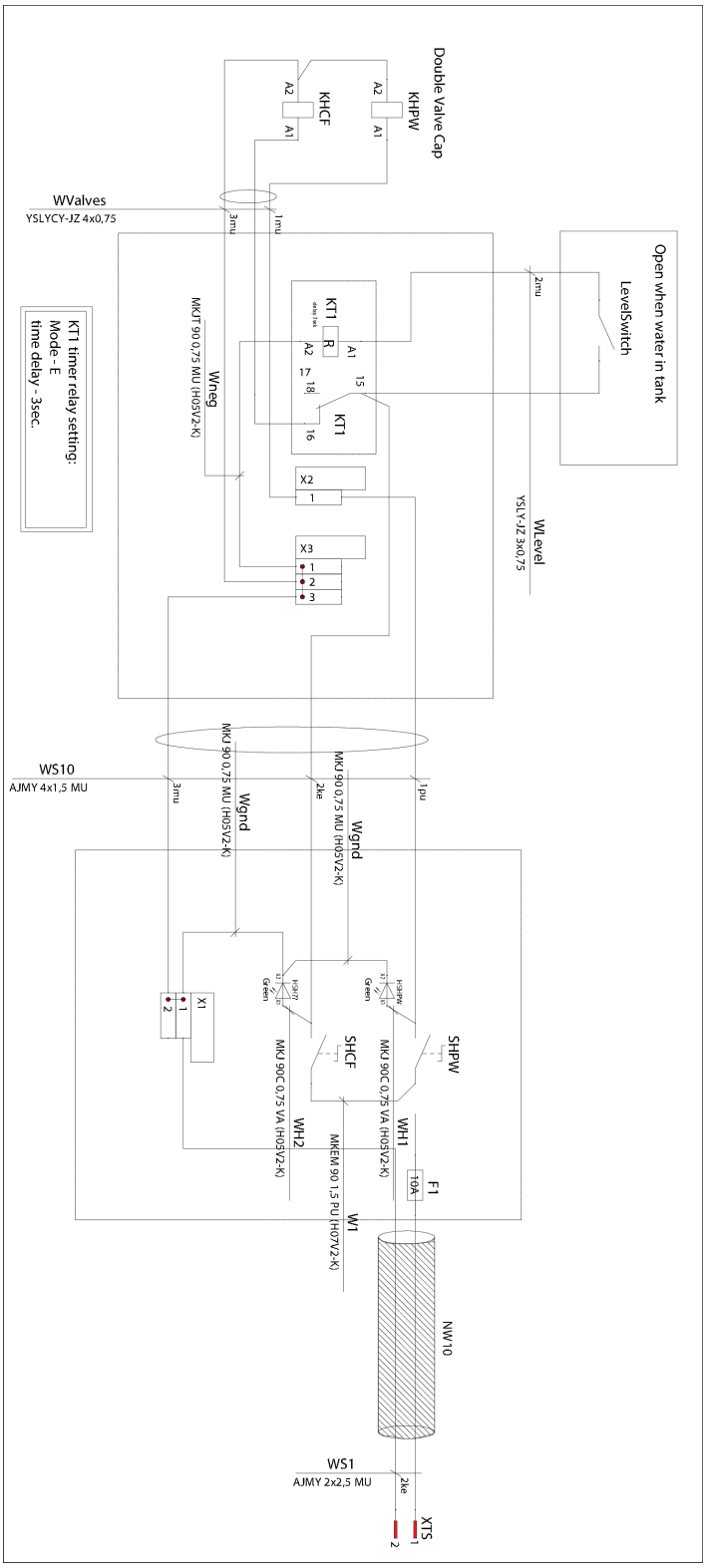


Bolt Distance, mm (in)								
1	2	3	4	5	6	7	8	H
270 (10.6)	390 (15.4)	510 (20.1)	630 (24.8)	750 (29.5)	870 (34.3)	990 (39.0)	1'110 (43.7)	675 (26.6)

10.4 TECHNICAL SPECIFICATIONS

		SCU220-1500	SCU250-1200
WATER POWER			
Flow max.	**l/min (gpm)**	47 (12.42)	19 (5.02)
Pressure max.	**bar (psi)**	220 (3'191)	200 (2'901)
Working width	**mm (in)**	1'500 (59.1)	1'100 (43.3)
Water tank	**liter (gal.)**	540 (142.67)	240 (63.41)
Water filter size	**in**	R1	R1
Water filter mesh	**mesh**	<80	<80
NOISE LEVEL			
Sound Pressure Level (ISO), LWA	**dB(A)**	94	94
WASHING EQUIPMENT			
Washing nozzles	**mm (in)**	6 rotating	5 fixed
Working width	**mm (in)**	1500	1100
STREET WASHING PIPE			
Washing pipe width	**mm (in)**	1'250 (49.2)	( )
Washing nozzles		8 fixed	-
WASHING PISTOL			
Hose diameter	**in**	3/8	3/8
Hose length	**m (ft)**	20 (66)	20 (66)
Washing pistol		ST2300-SW-800-2508	ST2300-SW-800-2508
HYDRAULIC POWER REQUIREMENTS			
Flow nom.	**l/min (gpm)**	84 (22.19)	41 (10.83)
Flow max.	**l/min (gpm)**	150 (39.63)	70 (18.49)
Pressure max.	**bar (psi)**	210 (3'046)	210 (3'046)
HYDRAULIC OIL REQUIREMENTS			
Viscosity	**cSt**	10-200 / optimum 25-35	10-200 / optimum 25-35
Temperature max.	**°C (°F)**	70 (158)	70 (158)
Filter ratio	**µm**	25	25
Cooling capacity requirement	**kW**	7	4

11. SCHEMATICS



Picture 1: Identification key for SCU units 6
Picture 2: Type plate 6
Picture 3: Main components of SCU220 7
Picture 4: Main Components of SCU250 7
Picture 5: Crushing Hazard Zone 14
Picture 6: Operating description of SCU220 unit 17
Picture 7: Washing Options for SCU220 18
Picture 8: Washing Options for SCU250 19
Picture 9: Washing methods 20
Picture 10: SCU Connections 23
Picture 11: Quick attachments and adapter 24
Picture 12: Attaching the SCU to the machine 24
Picture 13: Suction Filters, SCU220 26
Picture 14: Suction Filter, SCU250 26
Picture 15: Filling of clean water tanks 27
Picture 16: Location of the suction filter 28
Picture 17: Wheel Adjustments 29
Picture 18: Nozzle housing adjustment 30
Picture 19: Suction nozzle height adjustment 30
Picture 20: Washing angle 31
Picture 21: Heading angle 32
Picture 22: Heading angle 33
Picture 23: SCU Floating 34
Picture 24: Choice of washing function, SCU220 35
Picture 25: Choice of washing function, SCU250 35
Picture 26: Selecting the hydraulics on 36
Picture 27: Preparing street washing pipe 37
Picture 28: Emptying the tank, SCU250 38
Picture 29: Emptying the tank, SCU220 38
Picture 30: Emptying the clean water tank, SCU220 39
Picture 31: Emptying the fresh clean tank, SCU250 40
Picture 32: Location of leakage detectors in HPW 43
Picture 33: Location of water filters on SCU 45
Picture 34: Removing nozzles 46
Picture 35: Removing and cleaning nozzle filter 46

DYNASET

PARTNER OF YOUR MACHINE

Menotie 3
FI-33470 Ylöjärvi, Finland
tel: +358 3 3488 200
info@DYNASET.com



ELECTRICITY

HG Hydraulic Generator
HGV POWER BOX Variable Hydraulic Generator System
HGV Variable Hydraulic Generator System
HWG Hydraulic Welding Generator
HGG Hydraulic Ground Power Generator



HIGH PRESSURE WATER

HPW Hydraulic High Pressure Water Pump
HPW Hydraulic Power Washer
KPL High Pressure Street Washing Unit
KPL-WEED Weed Killing Unit
SCU Surface Cleaning Unit
HPW-DUST High Pressure Dust Suppression System
PPL High Pressure Pipe Cleaning Unit
HPW-FIRE High Pressure Firefighting System
FP Fire Fighting Piercing Kit
HDF Hydraulic Drilling Fluid Pump
JPL High Pressure Bin Washing System
HSP Hydraulic Submersible Pump



COMPRESSED AIR

HK Hydraulic Piston Compressor
HKL Hydraulic Rotary Vane Compressor
HKR Hydraulic Screw Compressor



MAGNET POWER

HMG PRO Hydraulic Magnet Generator
MAG Lift Magnet
HMAG PRO Hydraulic Magnet



VIBRATION

HVB Hydraulic Vibration Pump
HVD Hydraulic Directional Vibra
HRC Hydraulic Reversal Cylinder



POWER BOOSTING

HPI Hydraulic Pressure Intensifier
HPIC Hydraulic Pressure Intensifier for Cylinder



VACUUM

HCF Hydraulic Centrifugal Fan
HRVB Hydraulic Recycling Vacuum Bucket



KNOW-HOW

Hydraulic Power Take-off (PTO)
Hydraulic Power Unit Technology
HEU Hydraulic Expansion Unit
HRU Hydraulic Rescue Units
De-Icing Technology
Installation Valves
HHK Hydraulic Grinder
HV/HVY Hydraulic Winch / Winch Unit

www.DYNASET.com



/dynaset



/dynasetoy



/Dynaset_ofcl



/dynaset_official