

# AVA Foam Cannon

AVA Foam Cannon has been delivered in several different varieties:

- PN30 for pressure washers with up to 145 bar. Green dot.
- PN31 for pressure washers with up to 160 bar. Blue dot.
- PN35 for pressure washers with up to 160 bar w. high water pressure. Purple dot.
- PN38 for pressure washers with up to 160 bar including the V6 models.



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## Which Foam Cannons work with the different pressure washers?

PN30 (green) for AVA Go, Smart, Evolution and Master P30-P60.

PN31 (blue) for AVA Go, Smart, Evolution and Master P40-P80.

PN35 (purple) for Master, Evolution and V6 P60-P90.

PN38 for all AVA pressure washers.

## Why several different models?

To ensure that the soap and foam consumption are more or less the same between the different machines. Therefore, have several types of foam cannons that are optimized for different pressures.

## What happens if you use the "wrong" foam cannon?

PN30 is optimized for a working pressure of 140 bar. When used on AVA P60, the water / soap mixing ratio will be about 0.5% at minimum and about 20% at maximum.

### PN31 (Blue)

If you use PN31 (blue) on AVA P80, the mixing ratio water / soap will be about 0.5% at minimum and about 20% at maximum. If you reduce the performance of the washer P30-P60, the soap consumption will increase and the uptake of air will decrease. It is in no way harmful to the washers and in practice you will notice little difference in the foaming.

## Why doesn't the foam cannon work?

The foam cannon is the most complex product on a modern pressure washer. As a direct result of this, there are several things that can make it not give the desired result or not work.

**Symptom: There is no water or the machine "chases"**

### Cause

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1. The foam cannons nozzle is partially or completely blocked.
2. The foam cannons nozzle is too small.

Solution:

1. Remove the blockage. The nozzle is made of brass and sits about 6 cm into the foam cannon. If the foam cannon needs to be disassembled. *See chapter Assembly/disassembly.*
2. Switch to a foam cannon with a larger nozzle.

**Symptom: The foam cannon does not absorb soap**

Cause:

1. The Soap intake is partially or completely blocked.
2. There is damage on the adjustment.
3. The hose has fallen off.
4. Problems with the pressure nozzle.

Solution:

1. Inspect the hose and look for blockage or other damages. Clean the hose, connect the hose to a foam cannon and try to blow air through (the adjustment must be on max). If no air passes through, the foam cannon must be dismantled for inspection. *See chapter Assembly/disassembly.*
2. The foam gun must be disassembled for inspection of the soap adjustment. Make sure that the adjustment valve has an even drop shape and that there are no foreign bodies on it or in the chamber it is in. Remove any foreign matter, mount the foam gun and try again.
3. Connect the hose.
4. If the pressure nozzle is damaged or ruined, the foam cannon must be replaced with a new one. This can often be determined by visual inspection.

**Symptom: The foam that is produced is not good enough quality.**

Cause:

1. The foam cannon doesn't absorb enough soap.
2. The foam cannon doesn't get enough air.
3. The soap/mixture lacks foaming properties.
4. The mesh filter is ruined/blocked/missing.

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### Solution:

1. See the previous solution under the previous section “The foam cannon does not absorb soap”.
2. Check that there is no foreign element blocking the air supply on the front of the foam cannon. Remove the foam cannon for visual inspection of the nozzle, remove any foreign elements that may block the four inlet holes of the nozzle.
3. Not all soaps / chemicals have equally good properties when it comes to foaming. Most of AVA's chemical products have been developed so that one is able to use them with foam cannons and work well from about 4% mixture and upwards. Try mixing ratios before embarking on a major job.
4. Make sure the mesh filter is placed correct (visual inspection from the front). The mesh filter can become clogged due to soap residues or impurities in the water. Disconnect the chemistry and let the pressure washer rinse with clean water for about a minute, connect the chemistry and try again. If the problem persists, the foam cannon must be disassembled and the mesh filter removed for a visual inspection. The mesh filter does not last forever, and should be replaced once a year.

### **Symptom: The spread of the foam is uneven.**

#### Cause:

1. Damage to the nozzle fan.
2. Damage to the mesh filter.

#### Solution:

1. Inspect the nozzle fan for damage, bumps, or foreign items. If any foreign items are found, remove them. Damage to the nozzle can be repaired with a sharp knife, but it is recommended to replace the nozzle with a new one.
2. See the solution under point 4 in the section above.

### **Symptom: The foam cannon is heavy to adjust**

#### Cause:

1. Lack of grease on the gaskets.
2. Damaged gaskets.
3. Foreign items in the moving parts of the foam cannon..

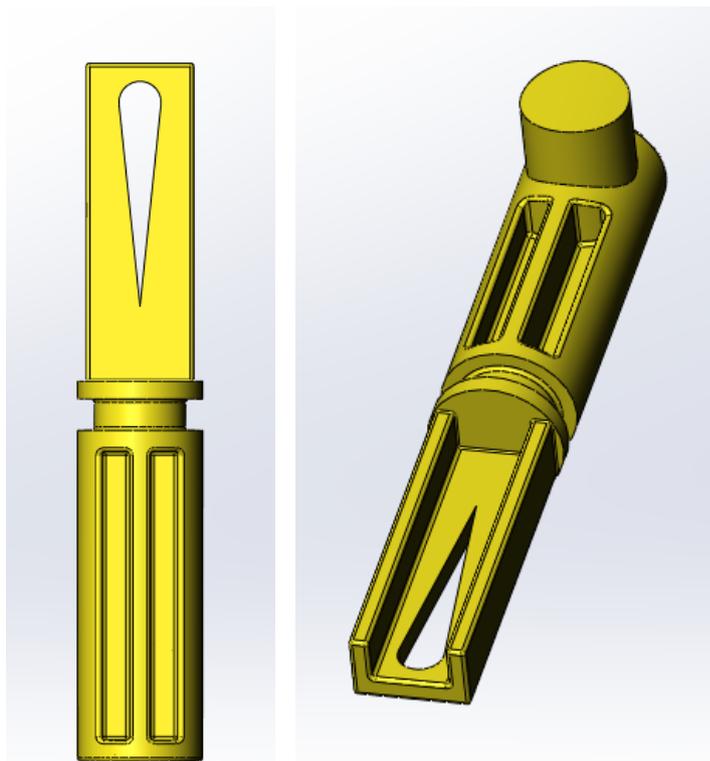
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### Solution:

1. Disassemble the foam cannon for an inspection. Apply grease to gaskets and parts as indicated in the chapter "Service and maintenance"
2. Disassemble the foam cannon for an inspection. Look for damaged O-rings. Replace defective or damaged O-rings with new ones. Apply grease as mentioned in the point above.
3. Disassemble the foam cannon for an inspection. Look for and remove any foreign objects.



This is what an undamaged adjustment nozzle should look like..

## Information on chemical consumption and foaming

### The principle behind the foam cannon

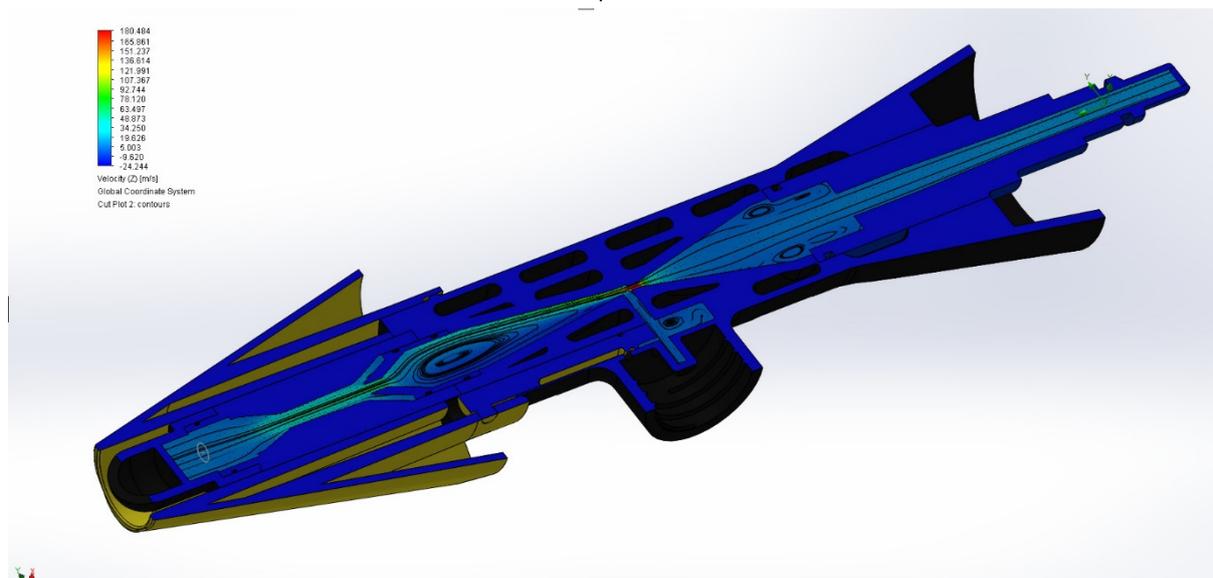
As mentioned earlier, a foam cannon is one of the most complex equipment you can use on a pressure washer. The principle of energy conservation, The "energy principle", is what is used to draw in both chemistry / soap and air through a series of pressure drops and changes in speed. This is done via the

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foam cannon's various nozzles as indicated in the picture below.



For an ideal foam, the relationship between soap, water and air is very important. When we have these factors in place, it is the mesh filter and the nozzle fan that determine the consistency of the foam. The mesh filter ensures that air, water and soap are mixed into a very fine foam. Then the design of the nozzle fan ensures that additional air is mixed in so that the foam does not become too heavy. This makes the foam hang better and longer on vertical surfaces.

The chemical consumption of the AVA foam cannon will vary depending on which washer it is used on. As a general rule, it can be said that smaller washers draw more soap in relation to the amount of water. Other things that can also affect soap uptake are the soap's viscosity. It is therefore recommended to try before starting a larger job.

A tip for better control of the foaming is to add water to the soap / chemical mixture. If you use, for example, 50/50 soap and water in the container, the regulation will change from 0.5% -20% to 0.25% -10%. This is common when using car care products or other chemistry where there is no need for such strong concentrations.

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## Service and maintenance

### Easy maintenance of AVA Foam Cannon

- After foaming, it is recommended to disconnect the chemistry / soap and connect it to a 1 liter container with clean water. Turn the foam cannon up to the max and let it run until it has emptied the container of water. Then you will clean both the chemical adjustment and the mesh filter. This in turn will extend the life of both the gaskets and the mesh filter, and ensure a smooth start-up at the next use.
- Alternatively, you can put the foam cannon in a container of lukewarm water. This will dissolve the chemistry and soap residue in a simple and gentle way. Leave it for 10 minutes or longer and rinse with clean water.
- It is recommended to store the foam cannon without chemistry or soap in the container. This extends the life of the mesh filter and PVC hose that picks up soap / chemistry from the container.

### Disassembly of AVA Foam Cannon

1. Use a screwdriver or similar tool to push out the locking pin front (18) from the main housing.
2. Then pull the front cover (13) out of the main housing.
3. Nozzle fan (12), mesh filter (5), and the air nozzle (4) will remain in the front cover. These can be pushed out by applying pressure to the nozzle fan.
4. For access to the chemical adjustment, pull out the adjustment ring (11) from the main housing. The adjustment nozzle will follow.
5. To reach the pressure nozzle (2), push the locking pin at the rear (19) out from the main housing. AVA male bayonet can now be pulled out of the main housing.
6. To access the O-ring (16) in the AVA male bayonet (14), use a large flat-blade screwdriver or similar tool on the yellow O-ring lock (3). Turn the O-ring lock 60 degrees counterclockwise and pull it out of the bayonet.

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## Assembly of AVA Foam Cannon

*Before assembling, make sure that all O-rings are undamaged and have grease or fat on them. We recommend applying grease to all O-rings again before mounting. Make sure all parts are clean and free of foreign matter.*

### Front:

1. Start by inserting the adjustment valve (10) into the corresponding hole in the main housing. Let the small round pin at the end stick slightly out. Then take the adjusting ring (11) and make sure that the small pin on the adjusting valve (10) enters the diagonal slot on this (See illustration on the next page). Push in the adjustment ring (11) and the adjustment valve (10) until they reach the bottom of the main housing.
2. Then put on the air nozzle (4). Make sure that the three slots on this corresponds to the three braces in the main house.
3. Place the mesh filter (5) into the nozzle fan (12) and insert it into the front of the foam cannon.
4. Finally, you can install the front cover (13). The front cover (13) has three cuts in the rear edge that should correspond to three elevations on the adjusting ring. The easiest way to get these in the correct position is to push the front cover (13) all the way into the main housing until it meets the adjustment ring (11), then put a light pressure on the front cover (13) simultaneously as you turn it clockwise. When the front cover (13) and the adjusting ring (11) are correctly positioned, the front cover (13) will slide half a centimeter further into the main housing.
5. If everything is assembled correctly, you can now insert the lock pin front (18).

### Back:

1. Insert the O-ring (16) into the AVA male bayonet, and lock it with the O-ring lock (3).
2. Make sure that the O-ring (15) is in place in the spot in the main housing.
3. Then insert the AVA male bayonet into the corresponding hole in the main housing.

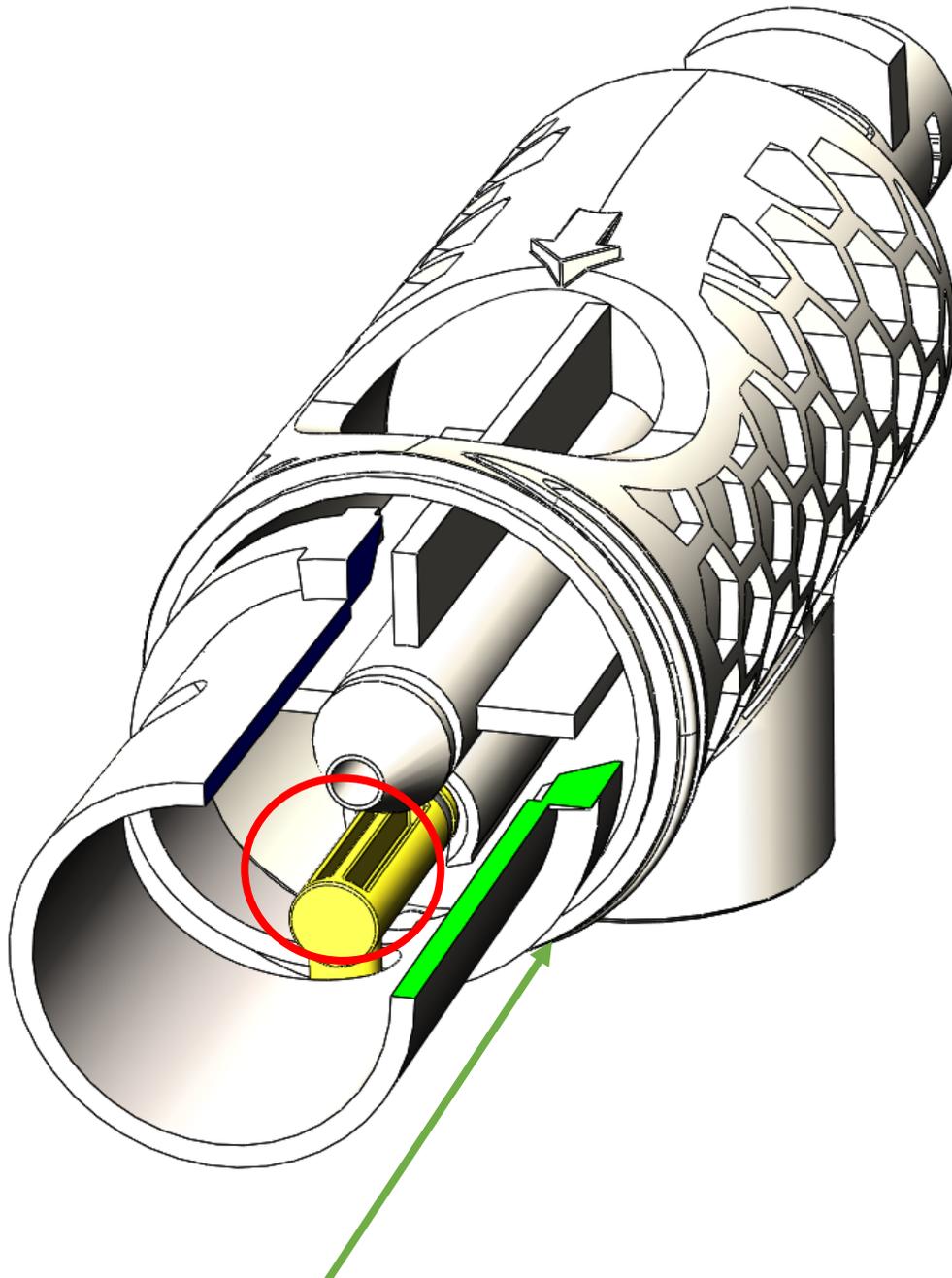
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4. Due to the O-ring (15) it may be necessary to press the main housing and AVA male bayonet slightly together before the locking pin at the back (19) is put in place in the main housing.

## Installation of adjustment nozzle and adjustment ring

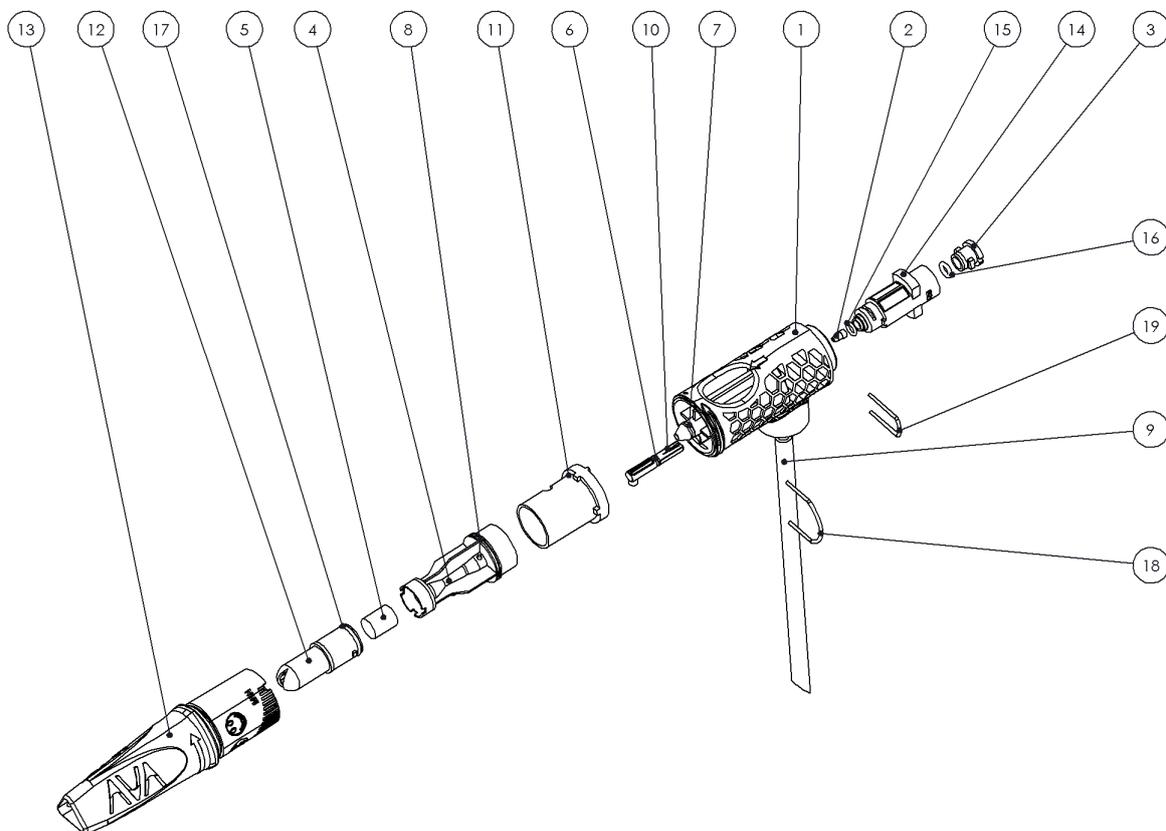


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ITEM NO.	PART NUMBER	QTY.
1	Hoved hus	1
2	Hyøtrykksdyse	1
3	O-ring Lås	1
4	Luftdyse	1
5	Stålfiler	1
6	O-ring 4,5x1,2mm NBR 90	1
7	O-ring 8x1,5mm NBR 90	1
8	O-ring 28x1,8mm NBR 70	1
9	Sugeslange	1
10	Justeringsventil	1
11	Justeringskrans	1
12	Viftedyse	1
13	Front deksel	1
14	AVA hann bayonett	1
15	O-ring 8x1,5 NBR 90	1
16	O-ring 8x1,8 NBR 90	1
17	O-ring 14x2 NBR 90	1
18	Låsepin front	1
19	Låsepin bak	1



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