MODELO : AY – 300 / 4 KT



Pressure Washer Specifications

Specification	AY – 300 / 4 KT
Model	AY – 300 / 4 KT
AYERBE part number	5419465
Equipment type	Cold-water pressure washer, petrol engine
Maximum working pressure	280 bar
Maximum flow rate	900 L/h (15 L/min)
Pump speed	1,450 rpm
Engine	Petrol, 4-stroke, 390 cm^3
Pump	COMET RW PF, in-line pistons
Engine-pump coupling	Through mechanical reduction gear, 1,450 rpm
Starting	Manual, recoil
Maximum inlet water temperature	60 °C
Thermal safety valve	Included
High-pressure hose	10 m
Lance	700 mm
Gun	GH 351
Nozzle type	Double nozzle, quick coupling
Frame	Tubular with pneumatic wheels
Guaranteed sound power level	97 dB(A) LwA
Sound pressure level	74 dB(A) LpA at 7 m
Weight	70 kg.

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Engine Specifications



Petrol engine	
Model	KT 420
Type	4-stroke, overhead valve (OHV), single cylinder
Displacement	390 cm^3
Catalogue output	13 HP at 3,600 rpm
Working speed of the unit	3,600 rpm engine / 1,450 rpm pump
Cooling system	Forced air
Aspiration	Natural
Speed governor	Mechanical, centrifugal weight
Starting system	Manual, recoil starter
Fuel	Unleaded petrol
Tank capacity	6.5 L.
Consumption at 75 % load	2.1 L/h.
Engine oil type	SAE 10W-40
Oil capacity	1.1 L.

About the declared output

- The 13 HP figure is the catalogue output of the engine, measured on the bench at 3,600 rpm. It refers to the engine alone, not to the complete unit.
- The engine turns at 3,600 rpm and drives the pump through a mechanical reduction gear, so the pump works at 1,450 rpm. What defines the performance of the machine is 280 bar and 900 L/h, not the horsepower figure.
- Available output falls by roughly 3.5 % for every 300 m of altitude above sea level. High ambient temperature also reduces it, because warm air is less dense.

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Pump Specifications



COMET pump	
Make	COMET
Model	RW PF
Type	In-line piston, three plungers
Flow rate	900 L/h (15 L/min)
Maximum pressure	280 bar
Drive	Mechanical engine-pump reduction gear
Pump speed	1,450 rpm
Maximum water temperature	60 °C
Thermal safety valve	Included

Why this pump matters

- The RW PF is an in-line piston pump: three plungers driven by a crankshaft, not an axial swash-plate unit.
- It is coupled to the engine through a mechanical reduction gear, so the pump turns at 1,450 rpm while the engine runs at 3,600.
- Turning at less than half the speed is what extends the life of seals, valves and pistons, and what allows continuous work at 280 bar.
- That reduction gear is also the reason the machine weighs 70 kg and comes on a frame with pneumatic wheels.
- The thermal safety valve releases water when the lance stays closed with the engine running, which is the situation that damages a high-pressure pump most.

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Dimensions and Weight

Dimensions	
Length (L)	770 mm.
Height (H)	720 mm.
Width (W)	630 mm.
Packing volume	0.35 m³
Weight	70 kg.
Transport	Tubular frame and pneumatic wheels



Fuel and water supply

Fuel and water	
Tank capacity	6.5 L.
Fuel type	Unleaded petrol, 95 or 98 octane
Consumption at 75% load	2.1 L/h.
Running time at 75% load	3.1 hours
Water inlet pressure	2.8 – 5 bar
Minimum supply hose length	3.5 m

What 280 bar and 900 L/h mean

- Cleaning capacity does not come from pressure alone, but from pressure and flow together. Pressure breaks the dirt loose; flow carries it away.
- The usual figure for comparing machines is the product of both: 280 bar by 15 L/min gives 4,200 points.
- A typical domestic pressure washer of 130 bar and 450 L/h gives 975 points. This machine is more than four times that figure.
- At 900 L/h water consumption is 15 litres per minute: the supply must guarantee that flow continuously.

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Performance: applications

Indicative guide to what this machine handles with 280 bar and 900 L/h.

Application	Typical work	Suitability
Agricultural and public works machinery	mud, soil and dried grease	YES
Degreasing engines, chassis and underbody	baked-on grease and oil	YES
Stables, farms and livestock buildings	manure and organic residue	YES
Industrial vehicle, truck and trailer	exterior washing	YES
Concrete paving and workshop floors	grease, rubber and ingrained dirt	YES
Brick and stone facades	mould, algae and pollution	YES
Boat hull	algae and marine growth	YES
Removal of loose paint and light rust	surface preparation	YES
Painted car bodywork	washing	WITH CARE
Timber, mortar joints and render	surface cleaning	WITH CARE
Electrical installations and panels	any work	NO

Distance matters as much as pressure

- At 280 bar the energy of the jet is concentrated on a few square centimetres. Bringing the nozzle closer multiplies the effect and also the risk of damaging the surface.
- On concrete, steel and machinery you can work close in. On paint, timber, mortar joints or thin aluminium it is better to stand back and open the angle, or the machine will mark the surface.
- Before starting on an unknown surface, test on a low-visibility area and move closer gradually.

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Equipment supplied

- 10-metre high-pressure hose.
- 700 mm lance with quick coupling.
- GH 351 gun with safety trigger.
- Double nozzle and nozzle-cleaning needle.
- Male and female connector for the supply hose.
- Thermal safety valve built into the pump.
- Mechanical engine-pump reduction gear, 1,450 rpm.
- Tubular frame with pneumatic wheels and push handle.
- Operator's manual.

The machine is supplied without engine oil and without fuel. Before the first start-up, both the engine oil level and the pump oil level must be checked.

Water supply and commissioning

- The supply must maintain 15 litres per minute continuously, with an inlet pressure between 2.8 and 5 bar. To check the flow, time the filling of a 10-litre bucket: it must fill in under 40 seconds.
- The supply hose must be at least 3.5 metres between the tap and the machine.
- Inlet water temperature must not exceed 60 °C.
- Check and clean the water inlet strainer before every use. Sand and suspended particles are the first cause of valve and piston wear, and that wear is not covered by the warranty.
- Bleed the air by operating the gun with the water on and the engine stopped before starting. Never start without water supply.
- With the engine running, do not leave the lance unused for more than three minutes at a time: the pump is cooled by the water flowing through it.
- If connected to the drinking water mains, a type BA system separator complying with EN 12729 must be fitted.

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Working equipment: gun, lance and hose



1 Gun with trigger and safety lock

2 Threaded gun connection, in brass

3 Extension with insulating grip

4 Stainless steel lance tube

5 Double nozzle with rubber protector

6 10-metre high-pressure hose

7 Anti-kink protector and connecting fitting

The hose has an anti-kink protector at both ends, which is what prevents it from being crushed right at the fitting, the point where most hoses fail. The gun safety lock must be engaged every time the trigger is released.

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Safety devices of the machine

Unloader valve

When the gun trigger is released, it diverts the water and returns it to the suction side of the pump instead of blocking it.

Safety valve

If the permissible pressure is exceeded, it opens and releases water to reduce the pressure inside the pump.

Thermal valve

Prevents overheating and premature pump wear when the engine is running and the lance is not being used.

None of these devices may be disabled or modified by the user.

Equipment Maintenance

Interval	Operation
Before every use	Check the engine oil level and the pump oil level. Check the water inlet strainer and clean it if blocked. Check the high-pressure hose and the gun. Remove accumulated debris.
First 5 hours	Change the engine oil.
Every 25 hours or yearly	Service the engine air filter.
Every 50 hours or yearly	Change the engine oil. Service the spark arrester.
Every 100 hours or yearly	Service the spark plug. Clean the cooling system.
After every use	Shut off the water, release the pressure with the gun and purge the pump by pulling the starter six times with the engine switch OFF.
Storage over 30 days	Drain the tank and the carburettor or add stabiliser. Protect the pump with specific antifreeze fluid. Store in a frost-free area.

Indicative schedule taken from the operator's manual of the machine. The pressure washer works continuously and under high load, so the schedule is more demanding than that of an intermittent-duty engine.

Safety Instructions

- Never direct the jet at people, animals, the machine itself, electrical sockets or live installations. At 280 bar water penetrates the skin and causes serious injury even when there is no visible wound.
- In the event of any high-pressure water injection under the skin, seek medical attention immediately and state that it is a high-pressure injection injury.
- Hold the gun with both hands and with a firm stance: the recoil of the jet is considerable when the trigger is opened.
- Engage the gun trigger lock every time it is released, even for a moment.
- Do not run the engine indoors, in garages or in enclosed spaces. Exhaust gases contain carbon monoxide, odourless and lethal.
- Do not run the pump dry or with the water supply closed, and do not exceed 60 °C in the inlet water.
- Depressurise the circuit by operating the gun before disconnecting the hose or any accessory. Never repair a leak with sealant: replace the seal or the hose.
- Wear safety glasses with side shields, non-slip safety footwear and clothing covering arms and legs. Hearing protection is recommended for prolonged use.
- Do not work from ladders, scaffolding or uneven surfaces, and always refuel with the engine stopped and cold.
- Water that has passed through the machine is not drinkable.