MODELO : AY – 180 KT BWD



Pressure Washer Specifications

Specification	AY – 180 KT BWD
Model	AY – 180 KT BWD
AYERBE part number	5419435
Equipment type	Cold-water pressure washer, petrol engine
Maximum working pressure	190 bar
Maximum flow rate	690 L/h (11.5 L/min)
Pump speed	3,400 rpm
Engine	Petrol, 4-stroke, 168 cm^3
Pump	COMET BWD-K triplex, 3 ceramic pistons
Engine-pump coupling	Direct, hollow shaft Ø 3/4"
Starting	Manual, recoil
Maximum inlet water temperature	60 °C
Thermal safety valve	Included
High-pressure hose	8 m
Lance	700 mm
Gun	AL 55
Nozzle type	Single nozzle, quick coupling
Detergent intake	YES, low-pressure siphon
Frame	Tubular with pneumatic wheels
Guaranteed sound power level	95 dB(A) LwA
Sound pressure level	72 dB(A) LpA at 7 m
Weight	37 kg.

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Engine Specifications



Petrol engine	
Model	KT 168
Type	4-stroke, single cylinder
Displacement	168 cm³
Catalogue output	6.5 HP (4.8 kW) at 3,600 rpm
Working speed of the unit	3,400 rpm
Cooling system	Forced air
Aspiration	Natural
Speed governor	Mechanical, centrifugal weight
Starting system	Manual, recoil starter
Fuel	Unleaded petrol
Tank capacity	3.1 L.
Consumption at 75 % load	1.1 L/h.
Engine oil type	SAE 10W-40
Oil capacity	0.58 L.

About the declared output

- The 6.5 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 pressure washer works at 3,400 rpm, which is the pump drive speed. What defines the performance of the machine is 190 bar and 690 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	BWD-K
Flow rate	690 L/h
Maximum pressure	190 bar
Type	Triplex piston, three plungers
Pistons	Ceramic
Head	Forged brass
Inlet and outlet valves	Stainless steel
Unloader valve	Integrated uniflow, with fixed chemical injector
Crankcase	Anodised
Crankcase oil capacity	0.30 L. (10 fl.oz)
Drive shaft	Hollow, Ø 3/4", for petrol engine
Seals	Double, high and low pressure
Maximum speed	3,400 rpm
Water inlet	1/2" FBSP
High-pressure outlet	3/8" MNPT
Maximum water temperature	60 °C
COMET warranty	5 years
Thermal safety valve	Included
Pump weight	6 kg.

Why this pump matters

- The BWD-K is a triplex piston pump: three plungers driven by a crankshaft with three eccentrics.
- The pistons are ceramic, the head is forged brass and the crankcase is anodised. This is the construction used in COMET's professional-duty pumps.
- The uniflow unloader valve and the chemical injector are built in, so there are no external accessories to fit or adjust.
- The double seal system, high and low pressure, is what allows continuous work without water reaching the oil crankcase.
- COMET gives a five-year warranty on the BWD-K. It is the same pump fitted to the HONDA-powered version of this machine.

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Dimensions and Weight

Dimensions	
Length (L)	650 mm.
Height (H)	750 mm.
Width (W)	480 mm.
Packing volume	0.23 m³
Weight	37 kg.
Transport	Tubular frame and pneumatic wheels



Fuel and water supply

Fuel and water	
Tank capacity	3.1 L.
Fuel type	Unleaded petrol, 95 or 98 octane
Consumption at 75% load	1.1 L/h.
Running time at 75% load	2.8 hours
Water inlet pressure	2.8 – 5 bar
Minimum supply hose length	3.5 m

What 190 bar and 690 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: 190 bar by 11.5 L/min gives 2,185 points.
- A typical domestic pressure washer of 130 bar and 450 L/h gives 975 points. This machine more than doubles that figure.
- At 690 L/h water consumption is 11.5 litres per minute: the supply must guarantee that flow continuously.

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Performance: applications

Indicative guide to what this machine handles with 190 bar and 690 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 190 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

- 8-metre high-pressure hose.
- 700 mm lance with quick coupling.
- AL 55 gun with safety trigger.
- Single nozzle and nozzle-cleaning needle.
- Male and female connector for the supply hose.
- Thermal safety valve and regulating valve built into the pump.
- Uniflow unloader valve and chemical injector built into the pump.
- Trolley kit: 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 11.5 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 55 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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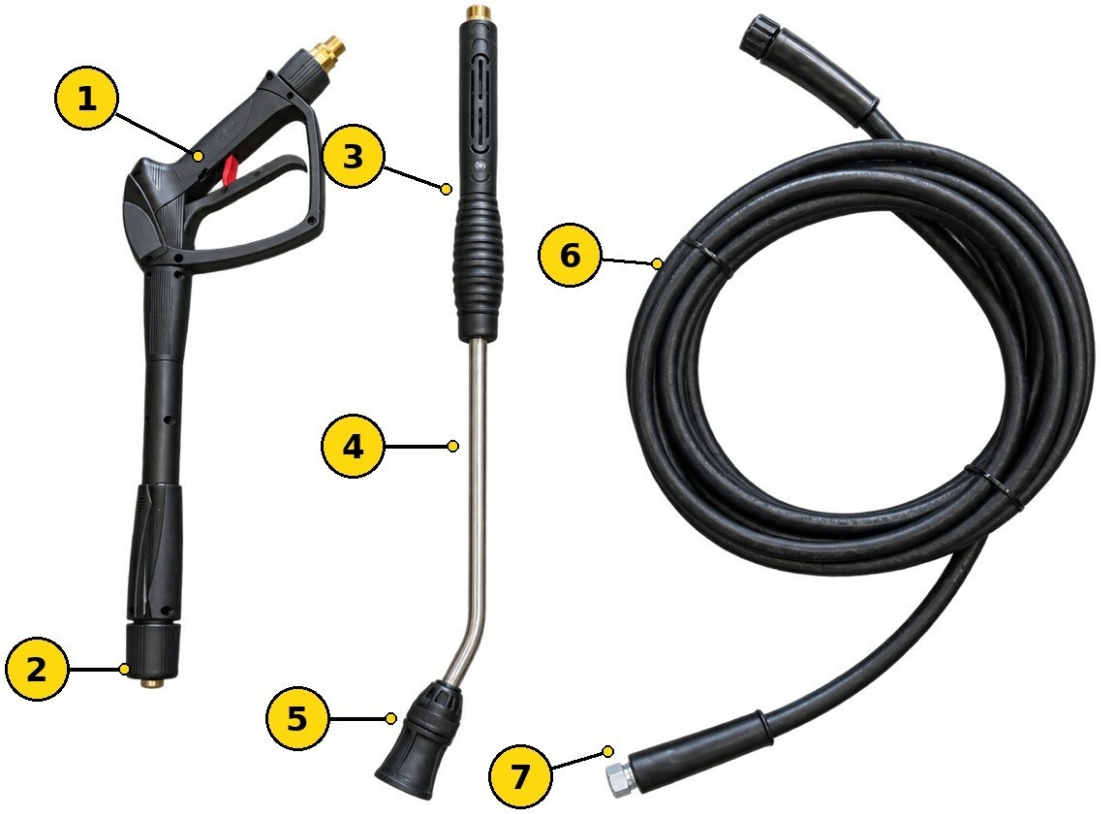
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Working equipment: gun, lance and hose



1	Gun with trigger and safety lock
2	Threaded gun connection, in brass
3	Extension with insulating grip
4	Stainless steel lance tube
5	Nozzle with rubber protector
6	8-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. Check the water inlet strainer and clean it if blocked. Check the high-pressure hose, the gun and the detergent siphon tube and filter. 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 190 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.