MODEL : AY – 200 KT EWD



Pressure Washer Specifications

Specification	AY – 200 KT EWD
Model	AY – 200 KT EWD
AYERBE reference	5419505
Equipment type	Cold water pressure washer, petrol engine
Maximum working pressure	207 bar
Maximum flow rate	850 L/h (14.2 L/min)
Pump speed	3,400 rpm
Engine	KIOTSU KT 420
Pump	COMET EWD triplex, 3 ceramic plungers
Engine-pump coupling	Direct, by Ø 1" hollow shaft
Starting	Manual, recoil
Maximum inlet water temperature	60 °C
Thermal safety valve	Fitted
High pressure hose	10 m
Lance	700 mm
Gun	AL 55
Nozzle type	Single nozzle, quick coupling
Detergent pick-up	Yes, by low pressure siphon
Frame	Tubular, with pneumatic wheels
Guaranteed sound power level	97 dB(A) LwA
Sound pressure level	74 dB(A) LpA at 7 m
Weight	55 kg

ISO 9001
BUREAU VERITAS Certification

AYERBE INDUSTRIAL DE MOTORES, S.A.

C/Oilamendi 8 -10 01015 VITORIA (SPAIN)
Tel. +(34) 945 292 297 FAX +(34) 945 292 298
E-mail: ayerbe@ayerbe.net www.ayerbe.net

MODEL : AY – 200 KT EWD

Engine Specifications



KIOTSU Engine	
Manufacturer	KIOTSU
Model	KT 420
Type	4-stroke, overhead valve, single cylinder
Displacement	420 cm³
Declared power	13 HP at 3,600 rpm
Cooling system	Forced air
Starting system	Manual, recoil starter
Fuel	Unleaded petrol
Tank capacity	6 L
Engine oil type	SAE 20W40
Oil capacity	1.1 L
Engine protection	Low oil level alert system

About the declared power

- The 13 HP AYERBE declares for the KT 420 is the engine output at 3,600 rpm. The pump does not turn at that speed: the idle-down device runs it at 3,400 rpm.
- KIOTSU does not publish net power to SAE J1349 as HONDA does, so this figure is not directly comparable with the 11.1 HP net declared for the GX 390 fitted to the 270 H ZWD.
- Output falls by roughly 3.5 % for every 300 m of altitude above sea level, and at altitude there may also be harder starting, higher consumption and spark plug fouling.

ISO 9001 BUREAU VERITAS Certification

AYERBE INDUSTRIAL DE MOTORES, S.A.

C/Oilamendi 8 -10 01015 VITORIA (SPAIN)

Tel. +(34) 945 292 297 FAX +(34) 945 292 298

E-mail: ayerbe@ayerbe.net www.ayerbe.net

MODEL : AY – 200 KT EWD

Pump Specifications



COMET Pump	
Brand	COMET
Model	EWD
Flow rate	850 L/h
Maximum pressure	207 bar
Type	Triplex plunger pump, three plungers
Plungers	Ceramic, abrasion resistant
Manifold	Brass
Inlet and outlet valves	Stainless steel, removable
Connecting rods	Aluminium alloy, one-piece
Crankcase	Aluminium alloy, reversible
Crankcase oil capacity	0.33 L (11 fl.oz)
Drive shaft	Hollow, Ø 1", for petrol engines
Piston guides	Hardened stainless steel
Maximum speed	3,400 min^{-1}
Water inlet	1/2" FBSP
High pressure outlet	3/8" MNPT
Maximum water temperature	60 °C
Sealing system	Double sealing
Thermal safety valve	Fitted
Pump weight	6.6 kg

Why this pump matters

- The EWD is a triplex plunger pump, not an axial one: three plungers driven by a crankshaft, just like the ZWD on the 270. What separates them is the materials.
- The crankcase and connecting rods are aluminium alloy, whereas the ZWD has oversized bronze rods and a reinforced, larger crankcase. That is why the EWD weighs 6.6 kg against the ZWD's 7.9 kg.
- The plungers are ceramic and the stainless steel check valves are removable, as on the ZWD: what wears is replaced without reassembling loose springs and seats.
- The pump couples directly to the engine through a Ø 1 inch hollow shaft, with no belts or pulleys, and the crankcase is reversible, so it can be mounted right or left hand.
- At 207 bar and 850 L/h it sits one step below the 270 KT ZWD, whose pump, with more oil and bronze rods, takes longer working days.

ISO 9001 BUREAU VERITAS Certification

AYERBE INDUSTRIAL DE MOTORES, S.A.

C/Oilamendi 8 -10 01015 VITORIA (SPAIN)

Tel. +(34) 945 292 297 FAX +(34) 945 292 298

E-mail: ayerbe@ayerbe.net www.ayerbe.net

MODEL : AY – 200 KT EWD

Dimensions and Weight

Dimensions	
Length (L)	770 mm
Height (H)	720 mm
Width (W)	630 mm
Packing volume	0.35 m^3
Weight	55 kg
Transport	Tubular frame and pneumatic wheels



Fuel and water supply

Fuel and water	
Tank capacity	6 L
Fuel type	Unleaded petrol, 95 or 98 octane
Consumption at 75% load	2.1 L/h
Running time at 75% load	2.9 hours
Inlet water pressure	2.8 – 5 bar
Minimum supply hose length	3.5 m

What 207 bar and 850 L/h mean

- Cleaning capacity does not come from pressure alone but from pressure and flow together. Pressure lifts the dirt; flow carries it away.
- The usual figure for comparing machines is the product of the two: 207 bar by 14.2 L/min gives 2,939 points.
- A typical domestic washer of 130 bar and 450 L/h gives 975 points. This machine is three times that.
- At 850 L/h the machine uses 14.2 litres a minute: the supply must sustain that flow continuously.

ISO 9001 BUREAU VERITAS Certification

AYERBE INDUSTRIAL DE MOTORES, S.A.

C/Oilamendi 8 -10 01015 VITORIA (SPAIN)

Tel. +(34) 945 292 297 FAX +(34) 945 292 298

E-mail: ayerbe@ayerbe.net www.ayerbe.net

MODEL : AY – 200 KT EWD

Performance: applications

Indicative guide to what this machine handles with 207 bar and 850 L/h.

Application	Typical work	Suitability
Agricultural and construction 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
Commercial vehicles, trucks and trailers	exterior washing	YES
Concrete floors and warehouse slabs	grease, rubber and ingrained dirt	YES
Brick and stone façades	mould, green algae and grime	YES
Boat hulls	algae and fouling	YES
Removing loose paint and light rust	surface preparation	YES
Painted car bodywork	washing	WITH CARE
Wood, mortar joints and render	surface cleaning	WITH CARE
Electrical installations and panels	any work	NO

Distance matters as much as pressure

- At 207 bar the energy of the jet is concentrated into 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, wood, 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 unfamiliar surface, test on an inconspicuous area and move closer gradually.

ISO 9001 BUREAU VERITAS Certification

AYERBE INDUSTRIAL DE MOTORES, S.A.

C/Oilamendi 8 -10 01015 VITORIA (SPAIN)

Tel. +(34) 945 292 297 FAX +(34) 945 292 298

E-mail: ayerbe@ayerbe.net www.ayerbe.net

MODEL : AY – 200 KT EWD

Equipment supplied

- 10 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 connectors for the supply hose.
- Thermal safety valve and regulating valve built into the pump.
- Automatic idle-down.
- Trolley kit: tubular frame with pneumatic wheels and push handle.
- Operator's manual.

The machine is supplied without engine oil and without fuel. Before first use, check both the engine oil level and the pump oil level.

Water supply and commissioning

- The supply must sustain 14.2 litres a minute continuously, at an inlet pressure between 2.8 and 5 bar. To check the flow, time the filling of a 10 litre bucket: it should fill in under 42 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 leading cause of valve and plunger wear, and that wear is not covered by warranty.
- Bleed the air by squeezing the gun with the water on and the engine stopped before starting. Never start without a 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 backflow preventer to EN 12729 must be fitted.

ISO 9001 BUREAU VERITAS Certification

AYERBE INDUSTRIAL DE MOTORES, S.A.

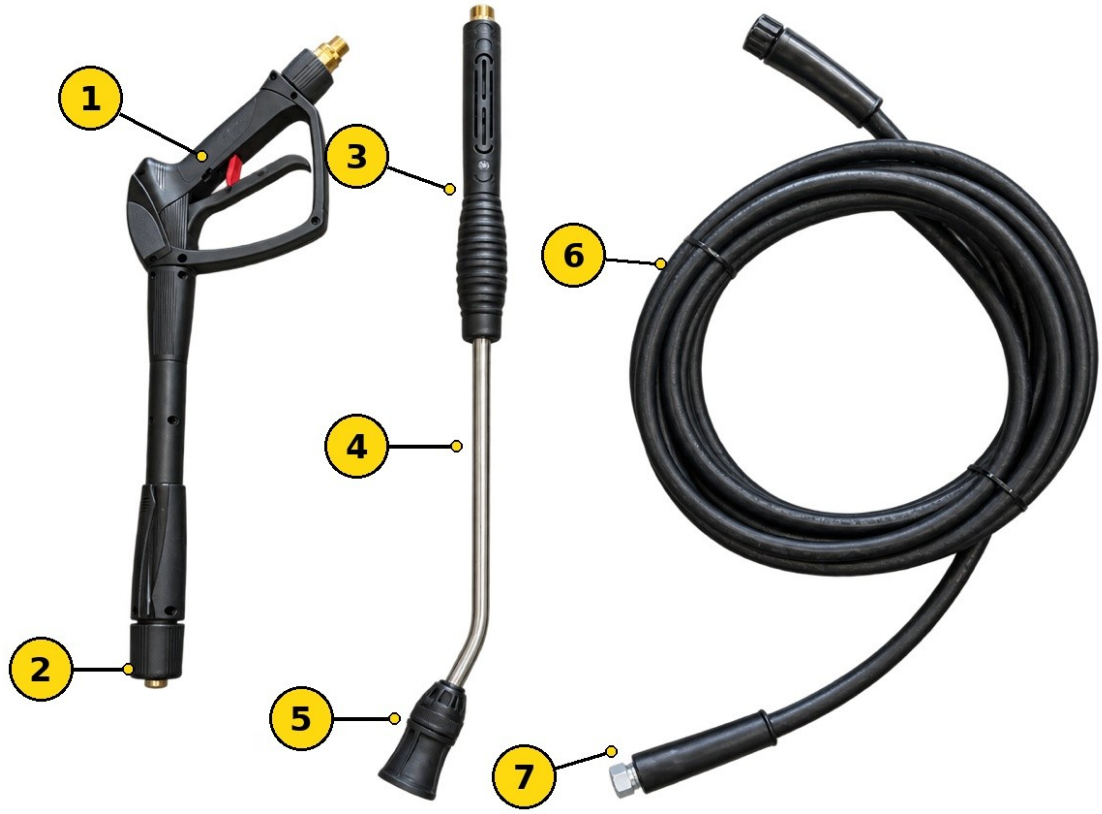
C/Oilamendi 8 -10 01015 VITORIA (SPAIN)

Tel. +(34) 945 292 297 FAX +(34) 945 292 298

E-mail: ayerbe@ayerbe.net www.ayerbe.net

MODEL : AY – 200 KT EWD

Working kit: gun, lance and hose



1	Gun with trigger and locking catch
2	Threaded brass gun connection
3	Extension with insulating grip
4	Stainless steel lance tube
5	Nozzle with rubber guard
6	10 metre high pressure hose
7	Anti-kink protector and coupling

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

ISO 9001 BUREAU VERITAS Certification

AYERBE INDUSTRIAL DE MOTORES, S.A.

C/Oilamendi 8 -10 01015 VITORIA (SPAIN)

Tel. +(34) 945 292 297 FAX +(34) 945 292 298

E-mail: ayerbe@ayerbe.net www.ayerbe.net

MODEL : AY – 200 KT EWD

Safety devices on the machine

Unloader valve

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

Safety valve

If the admissible pressure is exceeded it opens and lets water out 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 in use.

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

Machine Maintenance

Interval	Operation
Before every use	Check the engine oil level. Check the water inlet strainer and clean it if blocked. Inspect the high pressure hose, the gun and the detergent siphon tube and filter. Clear away 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. Check the spark arrester if fitted.
Every 100 hours or yearly	Service the spark plug. Clean the cooling circuit.
After every use	Turn 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 carburettor or add stabiliser. Protect the pump with a proper antifreeze fluid. Store in a frost-free place.

The spark plug should be replaced once a year. This schedule comes from the machine operator's manual and is stricter than the engine's own, because a pressure washer runs continuously and under high load.

ISO 9001 BUREAU VERITAS Certification

AYERBE INDUSTRIAL DE MOTORES, S.A.

C/Oilamendi 8 -10 01015 VITORIA (SPAIN)

Tel. +(34) 945 292 297 FAX +(34) 945 292 298

E-mail: ayerbe@ayerbe.net www.ayerbe.net

Safety Instructions

- Never aim the jet at people, animals, the machine itself, electrical sockets or live installations. At 207 bar water penetrates the skin and causes serious injury even when no wound is visible.
- If pressurised water is injected 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 firm footing: 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, which is odourless and lethal.
- Do not run the pump dry or with the water supply closed, and do not exceed 60 °C inlet water temperature.
- Depressurise the circuit with 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 drinking water.