

MOTOR-DRIVEN GREASE LUBRICATION PUMP

GM Type Grease Pump

Installation, operation, and maintenance guide for the GM Series motor-driven grease pump — 2L / 4L reservoir, three-phase, for use with 35-type pressurized volume distributors.



MODEL	RESERVOIR	RATED PRESSURE	DISCHARGE
GM-3204	2L or 4L	15–17 kgf/cm ²	260–300 cc/min

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§ Before You Begin

Thank you for choosing the AMAG GM Type motor-driven grease pump. The GM Series delivers metered grease to centralized lubrication systems on plastic-machinery, construction, textile, machine-tool, printing, chemical, woodworking, and food-machinery equipment — anywhere consistent grease delivery extends service life and machining precision.

The pump forms a complete grease lubrication system when paired with a 35-type pressurized volume distributor, raising system pressure to 35 kgf/cm² for reliable, metered dosing at every lubrication point. It can also be run with a resist-type distributor for proportionate oiling across all points. Please read this manual fully before installation.

Read before wiring. Confirm motor rotation direction against the arrow on the motor housing before connecting the main tube — see Section V. Running the pump backwards on first power-up is the most common commissioning mistake with this model.

I Application & Features

The GM motor-driven grease pump series is built for small-sized machinery across plastic-moulding, construction, textile, machine-tool, printing, chemical, woodworking, and food-machinery industries. Paired with a 35-type pressurized volume distributor, it raises system pressure to 35 kgf/cm² to inject grease into every lubrication point with reliable, metered dosing. It can also run with a resist-type distributor for proportionate oiling across all points instead.

Product Features

- Fast, simple installation and wiring
- Special alloy-steel gear pump for stable output pressure, low noise, long service life
- Grease level sensor with inadequate-liquid detection and alarm
- Inching switch for on-demand lubrication at any time
- Optional pressure switch reports system pressure to a host controller for automatic operation
- Built-in pressure take-off — paired with the 35-type distributor, delivers full lubrication performance at moderate system pressure

Typical Applications

- Plastic injection-moulding machines
- Construction machinery
- Textile and spinning machinery
- Machine tools
- Printing presses
- Woodworking and food-processing equipment

II Product Specifications

MODEL	VOLTAGE	RATED SPEED	MOTOR POWER	CURRENT	RATED PRESSURE	MAX PRESSURE	OIL TANK VOLUME	DISCHARGE CAPACITY	VISCOSITY RANGE
GM-3204	380V	2750 rpm / 50Hz	90 W	0.32 A	15–17 kgf/cm ²	5 kgf/cm ²	2 or 4 L	260 cc/min	NLGI 00# – 000#
		3300 rpm / 60Hz		0.29 A				300 cc/min	

GM-3214 and GM-3234 are the same pump fitted with a key-type or NK-3 digital-display computer timer respectively.

Pressure figures in this manual. The table above gives the pump's rated and maximum pressure. Separately, the operating instructions in Section V refer to a system working pressure of 35 kgf/cm² and a pressure-switch action pressure of 30 kgf/cm² — those describe the complete lubrication system when the pump is paired with a 35-type pressurized volume distributor, not the pump's own rating. Set your pressure switch to the value stamped on your pump's nameplate.

III Model Code Reference

Every GM pump model number encodes its full configuration. Use this table to decode a nameplate, or to specify a pump when ordering.



①	Discharge capacity — 2 = 100–200 ml/min · 3 = 200–300 ml/min · 4 = 300–400 ml/min
②	Motor poles — 2P
③	Timer module — 0 = none · 1 = built-in dual-timer · 3 = NK-3 digital-display dual-timer with press buttons
④	Motor type — 1 = single-phase 100V · 2 = single-phase 220V · 3 = three-phase 200V · 4 = three-phase 380V
⑤	Oil tank volume — 2 = 2 litres · 4 = 4 litres
⑥	Pressure switch action pressure — 10 = 10 kgf/cm ² · 05 = 5 kgf/cm ² · 00 = no pressure switch
⑦	Pressure take-off — X = built-in (for use with dosing volume-type distributor) · T = none (for use with resist-type distributor)

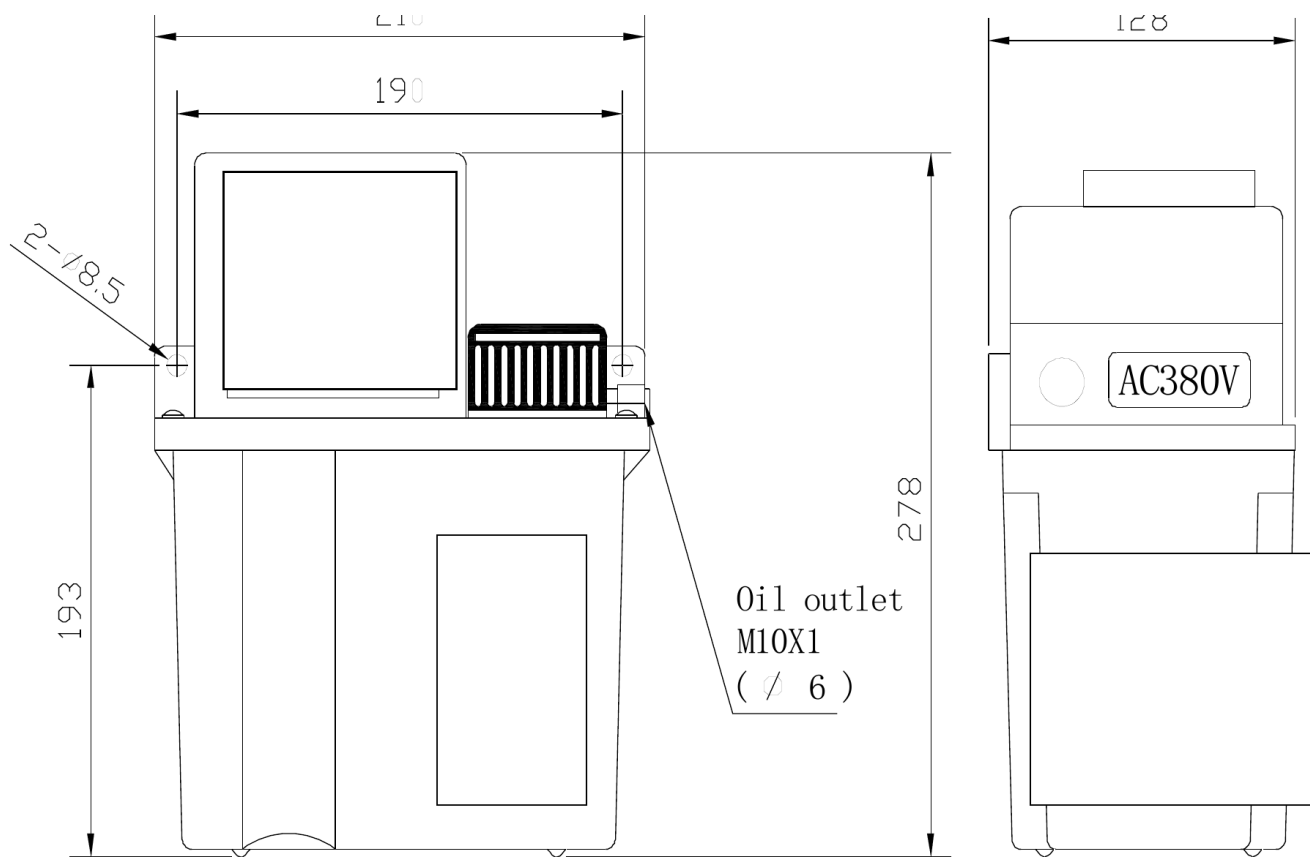
Example — **GM-3204-230X**: three-phase 380V pump, 30 kgf/cm² pressure switch, built-in pressure take-off mechanism, 2L oil tank.

Pairing With a Distributor

The GM pump is designed to pair with AMAG's 35-type pressurized volume distributor for a complete metered grease system. For proportionate (rather than fixed-volume) delivery across all points, pair it with a resist-type distributor instead — see Section V for the wiring and setup differences between the two.

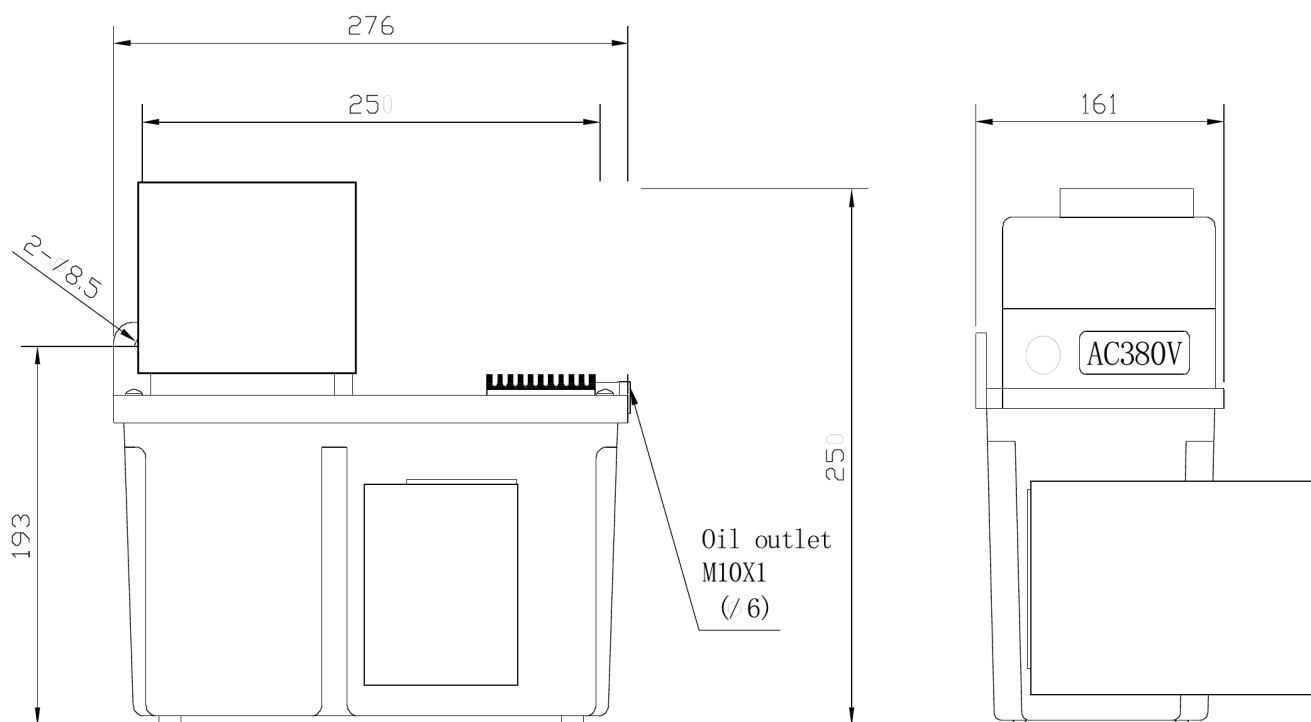
IV Overall & Installation Dimensions

All dimensions in millimetres. Oil outlet is M10x1 thread, for Ø6mm tube. Mounting holes are 2x Ø8.5mm.



2L RESERVOIR – 210 × 278 × 128 MM ENVELOPE

IV Overall & Installation Dimensions — continued



4L Lubrication Pump

4L RESERVOIR — 276 × 250 × 161 MM ENVELOPE

Wiring differs by motor/timer variant — follow the diagram printed inside the pump's terminal cover for your specific model, not a generic schematic. If that label is missing or unreadable, contact AMAG with your model number before wiring.

V Operation Instructions & Adjustment

Form a complete lubrication system by pairing the pump with a pressurized volume-type distributor.

1. Purchase a pump variant with built-in pressure take-off mechanism.
2. Fill the oil tank with an adequate amount of clean, unused 00# or 000# grease.
3. Wire according to the electrical diagram on the pump's top cover.
4. **Pressure switch operation.** Action pressure is 30 kgf/cm². There are two ways to use it:
 - a. From switch on/off state, judge whether system working pressure is above 30 kgf/cm² and therefore whether the system is operating normally. Oil-charging time is then set on the host controller: the time for system pressure to reach the rated 35 kgf/cm², plus 5–10 seconds, is set as the charging time. Intermittent (pause) time is set from oil-consumption interval or cycle count.
 - b. Alternatively, let the pressure switch itself control charging time: once action pressure (~30 kgf/cm²) is reached, a signal tells the controller to stop the pump — with roughly a 10-second stop delay built in so overall system pressure reaches the rated 35 kgf/cm² for full distributor dosing action.
5. Ground the pump reliably to prevent shock or fire.
6. Power on and inch the motor to confirm rotation direction matches the arrow on the rear of the motor housing. If it runs backwards, swap any two of the three-phase supply leads before connecting the main tube.
7. Pre-oil by inching to bleed all air from the pump before connecting the main tube. Then open the plug at the tail of the system, inch the pump to bleed air from the main tube, confirm no leaks, and charge until every lubrication point shows grease out.

Pressure take-off and relief time. As system pressure rises, the system forces stored grease out to the lubrication points; at pressure take-off, oil is replenished to prepare the next metered dose. Because tube length affects take-off, there must be a relief-time pause between charging cycles — otherwise greasing will be incomplete or fail entirely.

PIPE / GREASE GRADE	COPPER OR ALUMINIUM – LENGTH (M)			HIGH-PRESSURE PIPE – LENGTH (M)		
	5 m	10 m	15 m	1 m	2 m	3 m
000# grease	0.25 min	0.5 min	0.75 min	0.05 min	0.1 min	0.15 min
00# grease	8 min	12 min	16 min	7.5 min	15 min	22.5 min

Relief (pressure take-off) time required, by main-tube length and grease grade. If time is short, branch tubes can be pre-charged individually with the grease pump before connecting to the distributor.

VI Maintenance

1. Use clean 000#–00# grease and keep it clean for the life of the system.
2. Check and clean the oil tank and intake filter every month to prevent inadequate discharge or pressure from a blocked filter.
3. Check daily that the system charges grease on schedule. If the timer fails and the motor keeps running, stop it immediately to prevent motor damage or serious loss.
4. Never open the pump cover while powered on — risk of electric shock or fire.

VII Troubleshooting

#	SYMPTOM	LIKELY CAUSE	REMEDY
1	Motor does not run	Wrong voltage	Correct the supply voltage
		Wrong wiring	Rewire to the electrical diagram
		Gears jammed by fine debris	Have the gear pump disassembled and cleaned by a professional
2	No grease discharge	Air not fully bled	Pump several more times; loosen the outlet first if needed
		Motor not running	See item 1
3	Inadequate discharge	Suction entry blocked	Clean the suction filter
		Overflow valve not sealed	Disassemble and clean it
4	Pressure switch inactive	System pressure too low	Confirm pipeline pressure exceeds 30 kgf/cm ²
		Wrong wiring	Rewire to the electrical diagram
5	Grease level sensor inactive	Wrong wiring	Rewire to the electrical diagram
		24VDC interference	Check/replace the 24VDC supply
	Sensitivity drifted	Have it adjusted by a professional	
6	Computerized pump motor won't stop	Charging time set too long, or button 5 set to "1"/ON	Re-set charging time correctly
		Digital timer misconfigured	Re-set charging time correctly

VIII Packing List

ITEM	SPEC	QTY	REMARKS
Grease lubrication pump	—	1 set	
Bolt	M8 × 16	2 pcs	
Washer	M8	2 pcs	
Owner's manual	—	1 copy	This document

§ Need Help?

If you run into an issue this manual doesn't resolve — an unusual symptom, a spec you need confirmed, or a part number for a replacement fitting — our team can help directly. Have your model number and, if possible, a photo of the pump's nameplate ready when you reach out.

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