



# Koine 35 Quick User Guide

## IMER USA



Thank you for choosing IMER USA for your mixing and pumping needs. This is a quick user guide intended to be used as a reference and not intended to replace the operating manual. A full understanding of the systems and operation is required for anyone using this pump.

The following pages will list the basic steps assuming that the power requirements and water connections are satisfactory for the performance of the pump.

Bagged materials present many different characteristics when mixing, spraying or pumping. Please consult with the material producers or IMER to learn if the Koine 35 is the right pumping system for the material to be used.

The Koine 35 is a continuous pump / mixer that can only be used with pre-blended materials. It is not suitable for use with bulk sand and cement. It should not be used after the product has been mixed with an external mixer. The product to be used should be preblended with sand and cement which is uniform in consistency and quality.

Materials that require longer mixing times are not suitable for the Koine 35. Mortars with more than 2.5 parts sand to 1 part cement / lime should not be used unless additives are mixed into the dry powder at the time of blending.

Grouts less than 3500 PSI are not recommended. Aggregate sizes and concentrations should be minimal. Concrete sand is about as course of an aggregate to use.

## Content

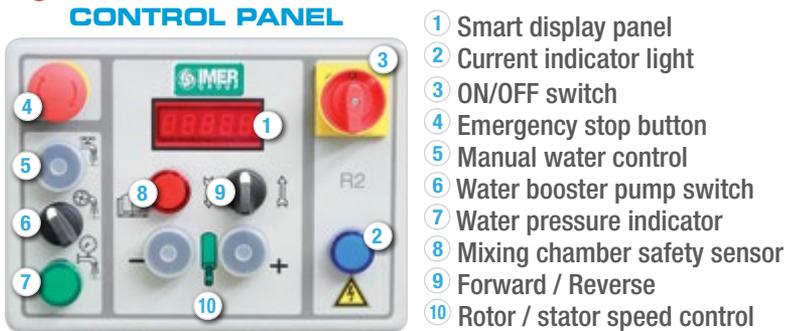
Setup	—3
Priming and Calibrating	—5
Pumping and Spraying	—9
Momentary Stoppage	—9
Clean-Up	—9
Error Codes	—12

## Setup

**Step 1:** Plug the 220V, single phase connection into the plug and switch “ON” the main on/off switch (3) as shown on the control panel (Fig. 1). A blue light (2) indicates that the power is on.

*Note: A flashing blue light indicates that the power exceeds 240V and the panel is shutting down as power is outside of the normal operating range.*

Fig. 1



**Step 2:** Attach the water supply line to the bottom port of the booster pump (Fig. 2). Water can be supplied by either a water supply source or from a water tank with clean water. Water booster pump switch must be turned on (Fig. 3) Pull out the switch to enable. To use without the air compressor, remove compressor plug (Fig. 3). The air compressor is used for spraying applications only.

*Note: To use water from a water tank, the hose must be primed first by filling the hose completely with water.*

Fig. 2

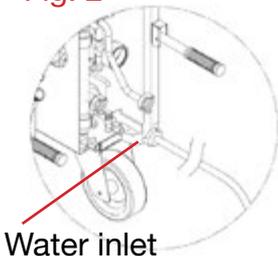


Fig. 3



Water booster and air compressor switch.

Air compressor plug.

## Setup (Continued)

**Step 4 (For Spraying):** Attach the air hose to the air port (Fig. 4) and to the spray wand. Open the air valve on the spray wand. (Fig. 5)

There are different spray nozzle tips, the sizes depend upon the application, spray pattern and volume desired. Try the different nozzles and pick the one that is best for your application

*Note: Air compressor and spray wand are used only for spraying applications such as fireproofing, plastering or stucco. The air compressor (if supplied) can be removed from it's cradle simply by pulling out the unit. You should use only IMER supplied air hose and couplers. Using smaller diameter hose or couplers will affect the operation of the compressor or pump.*

Fig. 4

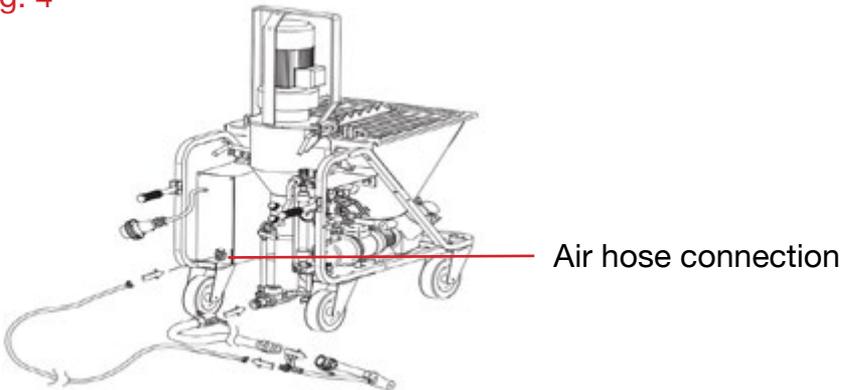


Fig. 5



## Priming and Calibrating

**Step 5:** Fill the mixing chamber with water (Fig. 6) by removing the water feed hose and directing water into the port allowing the mixing chamber to overflow. Press the manual water control switch (5) shown in (Fig. 7) to allow water to flow. If the green light (7) is not lit then then you do not have enough water pressure. If that is the case you must switch on the booster pump (6) shown in (Fig 7).

*Note: Water pressure must be more than 40 PSI for the green light (7) to be on. Using the water booster is recommended to keep the pressure at the correct level.*

Fig. 6



Fig. 7

### CONTROL PANEL



- ① Smart display panel
- ② Current indicator light
- ③ ON/OFF switch
- ④ Emergency stop button
- ⑤ Manual water control
- ⑥ Water booster pump switch
- ⑦ Water pressure indicator
- ⑧ Mixing chamber safety sensor
- ⑨ Forward / Reverse
- ⑩ Rotor / stator speed control

## Priming and Calibrating (Continued)

**Step 6:** Load the feeding hopper (Fig. 8) with the bags of material to be pumped or sprayed and switch on the hopper feeding wheel (Fig. 9). The feeding wheel will not start spinning until (9) “forward” (Fig. 7) is turned on.

*Note: Water pressure must be more than 40 PSI for the green light (7) to be on. Switching on the water booster (6) in (Fig. 7) is recommended to keep the pressure elevated.*

Fig. 8



Fig. 9



Hopper feeding wheel switch.

## Priming and Calibrating (Continued)

**Step 7:** Once the switch (9) in (Fig. 7) is engaged to forward, the system will start to feed material into the mixing chamber and material will start to flow from the material hose outlet (Fig. 10).

While the material is flowing out, use the valve on the water column to fine tune the water ratio (Fig. 11). Make small adjustments. When the material coming out is the consistency that you like, that is your water setting.

*Note: A good starting point for the water column is at 600 LPH (159 gallons per hour) for most materials such as fireproofing and grout. Better to start too wet than too dry. Pumping speed and rotor/stator type will also affect the ratio. Make incremental adjustments until you have the appropriate material consistency.*

Fig. 10



35 to 25mm  
adapter

Waste material  
bag

Fig. 11



Water column /  
volume adjust-  
ment valve

Top of float  
indicates water  
volume

## Priming and Calibrating (Continued)

**Step 8:** Prime the material hose with portland cement slurry by mixing a small bucket of straight portland cement and water, mixing to a flowable “pancake batter” consistency free of lumps. A good rule of thumb is about 1 gallon per every 100’ of hose.

Pour the slurry into the hose to prime it (Fig. 12). If this step is skipped there is a high probability that the material will not make it through the hose as the hose will absorb the cement from the material and leave behind sand which plug up the hose. The longer the hose, the more cement that will be needed to prime the hose. The cement slurry coats the inside of the hose to fill in the pores and slick the line. This priming method is used for every type of cement pump.

*Note: This process can be skipped if using a product with high cement content such as a grout with 28 day break strength of 6500 PSI or more, self-leveling underlayments and also fireproofing. If unsure if the process is needed then better to err on the side of caution and prime the hose.*

*After priming the hose, allow the slurry to run out into a bucket. You should visibly be able to see when the slurry runs out and the good material begins.*

*This priming step must be performed each time the hose is flushed out, before commencement of pumping or spraying.*

**Fig. 12**



Pour the portland cement slurry into the hose

Cam lock fitting female side of material hose

## Pumping and Spraying

**Step 9:** Once the material hose is connected after you have calibrated and primed the pump you may commence operation of the pump. Ensure that the feeding wheel is set to “on”, the water booster switch is “on”. Engage the “forward / reverse” switch to forward. If the word “STOP” flashes then open the air valve at the end of the spray wand.

The pump should be feeding material from the hopper to the mixing chamber and material will begin to flow from the end of the hose or spray wand.

*Note: If you encounter any error codes displayed on the display panel, consult the troubleshooting guide in the manual.*

## Momentary Stoppage

**Step 10:** If you need to stop for a short period of time then close the air valve on spray wand if spraying or switch off the forward / reverse switch (9) in (Fig. 7) if you are just pumping. You can resume again by opening air valve in spray wand or switching the switch (9) in (Fig. 7) back to forward.

*Note: If you are going to stop for more than a couple of minutes then you should consider cleaning out the pump and hose, depending on the material used, temperatures and fast setting characteristics of the bagged material being used.*

## Clean-Up

**Step 11:** Material can be left in the hopper as you can switch off the feeding wheel as this material is dry and can be used later. When you switch off the feeding wheel (Fig. 9), material will stop being fed into the mixing chamber. The pump will still pump out what is left in the hose and mixing chamber.

*Note: You can continue to use that material till you notice that the material becomes wetter. This is because no more dry material is being directed into the mixing chamber.*

## Clean-Up (Continued)

**Step 12:** Now you need to run water through the material hose to clear it out. Place a sponge ball into the material hose from the cam lock end and attach it to the supplied 25mm to geka coupler adapter. Then connect this hose onto the the water supply geka fitting (Fig 13). Collect the sponge ball from the other end (Fig. 14).

*Note: You only need to run the ball through the hose one time, it cleans the hose real well.*

Fig. 13



Material hose connected to water supply geka

Fig. 14



Clean-out sponge ball

## Clean-Up (Continued)

**Step 13:** Open the main motor hatch and remove the mixing paddle and insert the clean-out tool (Fig. 15). Insert the tool into the stator end making sure that it is seated properly.

Close the motor hatch gently and make sure to align the motor coupler with the shaft. Switch on the pump in which the clean-out tool will scrape the sides as it lowers down the mixing chamber. You should notice the water coming out clear after a few moments (Fig. 16).

*Note: Completely disassemble the spray wand making sure to clean out the cap and air stem.*

Fig. 15



Scraper cleaning tool

Scraper cleaning shaft

Fig. 16



Clean water after scraper tool

## Koine 35 Error Code Table



These error messages are shown on the inverter display panel when specific situations arise:

- **ERR 00:** The drive motor is open or the mixing chamber is not 90°
  - The main power cord from the motor to the feeding wheel switch disconnected.
  - The emergency stop button is in.
  - The control panel has a malfunction.
- **ERR 01:** The electronic control system (inverter) has over heated, wait for it to cool down and try again.
- **ERR 02:** The mixing paddle and stator/rotor drive motor has over heated, it is running too hard. Wait for it to cool down and try again.
- **ERR 03:** The drive motor is jamming up, it cannot turn the stator/rotor. Check that the material you are pumping is not too stiff a mix. If using a long length of hose, shorten it. Finally, make sure that the mixing chamber does not have dry material built up inside it, the mixing paddle could be binding up
- **ERR 04:** The drive motor is being overloaded. Make sure your material is not too stiff, make sure you have 220 volts of current and 30 amps, slow down your pumping speed.
- **ERR 05:** The water pump and the compressor have been turned on for more than 15 minutes and during this period they have not been used. Or the compressor air hose system is leaking somewhere.
- **ERR 06:** The compressor is seized up or the switch on the compressor has not been turned on.
- **ERR 07:** The unit is shorting out, this is a very dangerous situation. Check for water in the control panel or loose wires. Contact IMER service @ 800-275-5463, or email to: mace@imerusa.com.
- **ERR 08:** Voltage is too low. Inverter is not receiving enough single phase current to power on.
- **ERR 09:** The loading hopper feeding blade is blocked or turning too slowly. Clean out any obstructions. It could also be that water has backed up into the feeding hopper. Clean it and dry it out thoroughly.
- **“BLOC”:** The stator/rotor is jammed up, or the material hose is jammed up, material cannot move through either one.
- **“H2O”:** The volume of water being supplied to the pump is too low to operate the pump correctly. Get a better water supply.
- **“VOLT”:** Blue light switches off rapidly. Voltage too high and the inverter is shutting down to avoid damage.