

Quick User Manual

Mixing pump duo-mix connect

TT Professorship Digital Fabrication
School of Engineering and Design
Department of Architecture
Technical University of Munich

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1. Introduction

This manual contains important information regarding use and safety, which must be read and understood before the mixing pump is powered on for the first time.

Any use or application deviating from intended use is deemed to be impermissible misuse. This includes, but is not limited to:

- Use in potentially explosive environments
- Use in medical and life critical applications
- Use before performing a risk assessment
- Use outside of stated specifications
- Use as a climbing aid
- Operation outside the permissible operating parameters

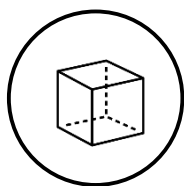
2. Description of the mixing pump duo-mix connect

The duo-mix can be used as a mixing pump, continuous mixer or mortar pump. The use of various digital and analogue interfaces allows it to quickly connect it with almost any external system, from the sensor to the robot. The machine can be fed with bagged material, silo material as well as with bucket coat materials. Two main sections of the machine serve for mixing and pumping, operating separately. The mixing section consists of two chambers. The dry material is added to water and mixed in the first chamber and remixed again in the second chamber to achieve a homogenous mixture. The ready-to-use material is then pumped away by a worm pump.

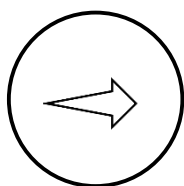
Mixing Pump Quick Facts:



WEIGHT
260 kg



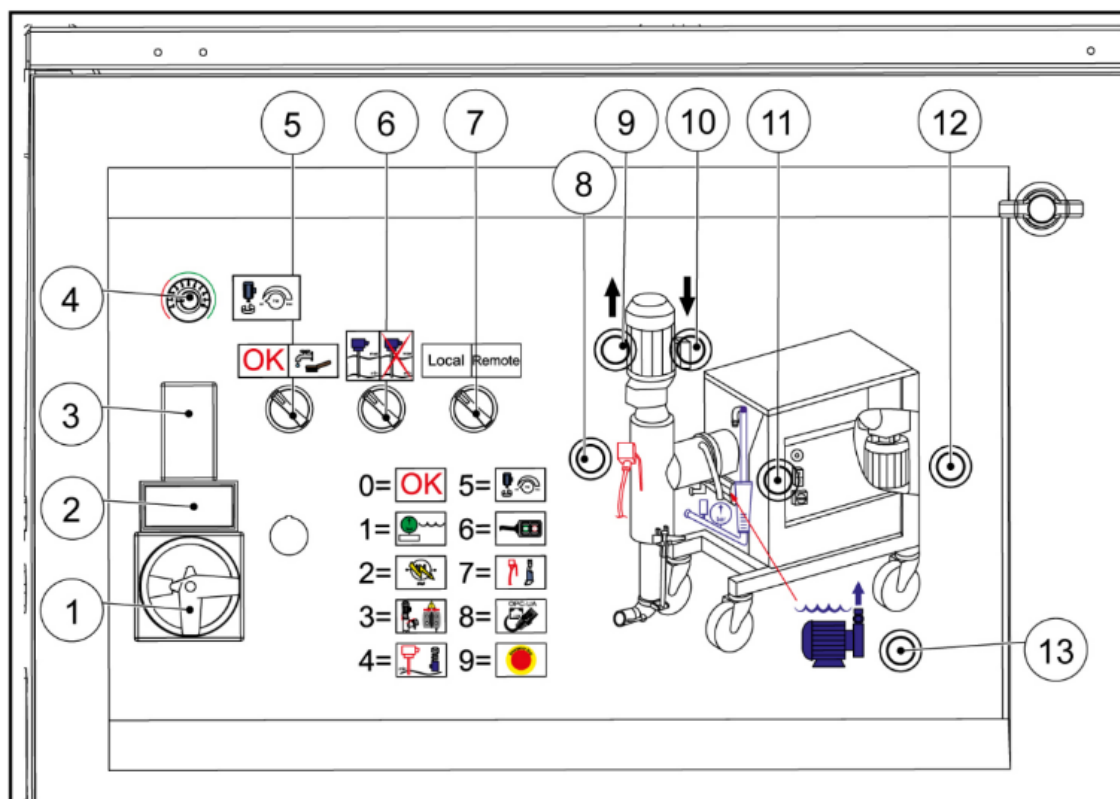
DIMENSION
1350 x 640 x 1390 mm



DELIVERY
22 l/min



Control / Indicator elements:



1	Main switch / Emergency stop switch
2	Display (info "OK", error code display)
3	Double push button "On/Off"
4	Speed controller - pump motor
5	Rotary switch "Water pump automatic/manual"
6	"Dry material probe On/Off" rotary switch
7	"Local/Remote" rotary switch
8	Signal lamp wet mortar probe, red
9	Pushbutton "Pump motor reverse", green
10	Pushbutton "Pump motor forward", green
11	Pushbutton "Water supply", green
12	Pushbutton "Mixer motor", green
13	Pushbutton "Water pump", green

3. Generelle Warnungen und Hinweise (de)



Unsachgemäße Bedienung kann zu schweren Personen- oder Sachschäden führen. Darum:

- Beachtung aller allgemeinen Arbeitsschutz- und Sicherheitsbestimmungen
- Gebrauch von Arbeitsschutzkleidung, Sicherheitsschuhe, Schutzbrille, Staubschutz, ggf. Gehörschutz
- Verwendung der Maschine ausschließlich durch unterwiesenes Personal
- Vor Beginn der Arbeiten sicherstellen, dass alle Abdeckungen und Schutzeinrichtungen installiert sind und ordnungsgemäß funktionieren
- während des Betriebes keine Schutzeinrichtungen außer Betrieb setzen
- Bei Beschädigungen der Maschine selbst oder deren Anbauteilen ist kein Gefahrloser Betrieb möglich
- Vor dem Einschalten auf korrekten Zusammenbau der Maschine achten
- Bei Arbeiten an der Maschine vor Wiedereinschalten sichern
- Bei Defekten sofort die Maschine außer Betrieb setzen und vom Netz trennen
- Maschine vor dem Umstürzen und Wegrollen sichern!(Radbremsen verwenden)
- Auf sicheren Wasserzufluss achten - Druckerhöhungspumpe darf nicht trocken laufen
- Beim Betrieb auf ungewöhnliche Geräusche oder Maschinenverhalten achten. Dies könnte auf Defekte hinweisen
- Beim beschicken der Maschine Vorsicht beim Sacköffner - Verletzungsgefahr
- Auf korrekte Materialkonsistenz achten - Verstopfungsgefahr. Eventuelle Verstopfungen sofort beseitigen
- Vorsicht beim öffnen von Schlauch-Kupplungen oder Maschinenteilen! Auf Drucklosigkeit achten!
- Auf allgemeine Ordnung und Sauberkeit achten
- Nach Benutzung die Maschine vollständig entleeren und reinigen. Entsprechende Teile ggf. Trocknen und vor Korrosion schützen

4. General Warnings and Cautions (en)



Inappropriate handling can lead to serious physical injury or damage to machinery. Therefore:

- Compliance with all general work protection and safety regulations
- Use of safety clothing, safety shoes, safety eyewear, dust protection, if applicable ear protection.
- Use of the machine only by authorized and trained staff.
- Before starting work, ensure that all covers and protective devices are properly mounted and operating.
- do not disable any protective devices during operation
- A safe operating use is not permitted if the machine itself or its components are damaged.
- Before powering on, make sure that the machine is assembled correctly
- When working on the machine, secure it to prevent it from being switched on again.
- In case of defects, immediately put the machine out of service and unplug it from the power supply
- Protect the machine from tipping over and rolling away (use wheel brakes).
- Ensure proper water supply - pressure boosting pump must not run dry
- During operation, pay attention to unusual noises or machine behavior. This could indicate defects
- When loading the machine, be careful with the bag opener - risk of injury
- Ensure correct material consistency - risk of clogging. Remove any clogging immediately
- Be careful when opening hose couplings or machine parts! Ensure that there is no pressure!
- Pay attention to general organization and cleanliness
- Empty and clean the machine completely after use. If necessary, dry the corresponding parts and protect them against corrosion.

5. How to set-up

- ✓ Assemble and fix the mixer-motor



- ✓ Connect the interface



- ✓ Put in the mixing shaft (dry) and the probe



✓ Assemble the screw conveyor

- Spray the screw conveyor
- Insert from the side of the bigger opening



✓ Attach the screw conveyor

- Fix the screw conveyor with a hammer
- Tighten the screws (top - once, middle - three times, bottom - five times)



✓ Insert the pump-mixing spiral



✓ Let water flow through

- Connect the water supply
- Deaerate the water hose
- Connect to electricity



6. How to use

✓ Flush the hoses

- Pour approx. 10 l of lubricant into the pump-mixing tube
- Set the main switch (1) to "1" and the pushbutton "On/Off" (3) to "1"
- Set "local/remote" switch (7) to "local"
- Press the "Pump motor forward" (10) pushbutton and allow the pump to run until the slurry is completely pumped out
- Press the "Pump motor forward" pushbutton (10) again to switch the pump motor off

✓ Fill bagged material

- Fill the material container with bagged material through the protective grid

✓ Set material consistency

- Make sure that the main switch (1) is set to "1" and that the machine is switched off (3)
- Remove the water hose from the mixing tube
- Swing the pump-mixing tube away from the mixing tube
- Place a collecting container under the outlet of the now open mixing tube
- Set the "local/remote" switch (7) to "local"
- Switch on the machine using the pushbutton "On/Off" (3) and the "Mixer motor" (12) at the same time
- Press the "Water supply" pushbutton (11)
- Check the material consistency and change it with the fine adjustment valve if necessary
- Switch off the machine using the pushbutton "On/Off" (3) and set the main switch (1) to "0"
- Swing the pump-mixing tube back to the mixing tube and lock it in place

✓ Mixing and pumping

- Set main switch (1) to "1", machine ready for operation when display (2) shows "0"

Operating mode "local"

- Set "local/remote" switch (7) to "local"
- Press the "Pump motor forward" pushbutton (10) once - pump motor runs
- Press "Mixer motor" pushbutton (12) once - mixer is running and the machine can be operated manually

Operating mode "remote"

- Set "local/remote" switch (7) to "remote"
- Press the "Pump motor forward" pushbutton (10) once - pump motor runs and the "Pump motor forward" (10) pushbutton lights up
- Press "Mixer motor" pushbutton once (12) - mixer is running

Work breaks

Short work breaks

- The water pump, mixer motor and pump motor are automatically switched off. The machine is still ready for operation and can be restarted at any time - display (2) shows "6"

Work breaks longer than 10 minutes

- Set the machine to "O" with the pushbutton "On/Off" (3)

In case of high outside temperatures or work breaks of more than 30 minutes

- Empty mortar hoses and set the main switch (1) to "0"

Indication on the display

Display / Description

- - -	Main switch on - displayed during start-up of the control unit (approx. 15 sec.)
0	The machine is ready for operation
1	No or low water supply pressure
2	A motor protection switch (Q1-Q5) released
1 3	Mixing pump safety switch open
2 3	Mixer safety switch open
4	The dry material probe reports dry material shortage
5	Frequency converter error
6	The machine is in automatic mode and has been switched to "Stand-by"
8	Error OPC-UA (Life-Bit)
9	External emergency stop activated

Each of the above-mentioned errors (except display "6") switches the pushbutton "On/Off" (3) to "O". After the error has been corrected, the pushbutton "On/Off" (3) must be switched back to "I".

7. How to clean

✓ Disconnect mortar hoses

- Press and hold down the "Pump motor reverse" pushbutton (9) until the mortar hoses are depressurized
- Disconnect the mortar hoses from the machine
- Dismantle the pump-end piece and clean with water, remove buildup with a spatula if necessary
- Reassemble the pump-end piece

✓ Clean pump section

- Connect the water hose and spray gun to the cleaning tap
- Set main switch (1) to "1" and double pushbutton "On/Off" (3) to "1"
- Switch on the water pump using the "Water pump" pushbutton (13)
- Open the cleaning tap and spray the pump mixing tube with water
- Release the lock of the pump motor and lift the pump motor off
- Roughly spray out the pump section with the spray gun
- Switch off the water pump with the "Water pump" pushbutton (13)
- Remove and clean the pump mixing spiral
- Fold the pump motor back again and lock it in place
- Reconnect the plug of the pump motor
- Switch on the pump motor with the "Pump motor forward" pushbutton (10)
- Allow the pump to run until all water has been pumped out of the pump section
- Switch off the pump motor with the "Pump motor forward" pushbutton (10)

✓ Clean mortar hoses

- Insert a suitable sponge ball into the mortar hose disconnected on both sides
- Connect one end of the mortar hose to the cleaning tap of the water armature using the corresponding reducer (M35/GEKA)
- Open the cleaning tap
- Set the main switch (1) to "1" and press the "On/Off" pushbutton (3)
- Switch on the water pump with the "Water pump" pushbutton (13) and run until the sponge ball comes out of the other end of the hose
- Repeat the process until clear water comes out of the mortar hose
- Switch off the water pump with the "Water pump" pushbutton (13)

✓ Clean mixing tube

- Loosen the lock of the pump section and swing the pump section away from the mixing tube
- Place a container under the mixing tube
- Release the lock of the mixing tube and uncouple the mixing tube from the machine
- Pull out the mixing shaft
- Roughly clean the mixing shaft and mixing tube with a spatula and then rinse with water
- Clean the water inlet in the mixing tube thoroughly
- Remove the plug from the dosing section

✓ Clean the doser in the material container

- Clean the doser with a dry spatula, don't use any water!

✓ Mixing shaft / screw conveyor

- Insert the mixing shaft pin into the socket on the screw conveyor
- Securely reattach the mixing tube