

metos

Bear Varimixer

MK-IS
MK-IS ERGO

TYPE: AR30, AR40, AR60, AR80, AR100

Installation and Operation Manual



S/N:

Rev.: 2.0

Dear Customer,

Congratulations on deciding to choose a Metos appliance for your kitchen activities. You made an excellent choice. We will do our best to make you a satisfied Metos customer like thousands of customers we have around the world.

Please read this manual carefully. You will learn correct, safe and efficient working methods in order to get the best possible benefit from the appliance. The instructions and hints in this manual will give you a quick and easy start, and you will soon note how nice it is to use the Metos equipment.

All rights are reserved for technical changes.

You will find the main technical data on the rating plate fixed to the equipment. When you need service or technical help, please let us know the serial number shown on the rating plate. This will make it easier to provide you with correct service.

For your convenience, space is provided below for you to record your local Metos service contact information.

METOS TEAM

Metos service phone number:.....

Contact person:.....

1. General	1
1.1 Symbols used in the manual	1
1.2 Symbols used on the appliance	1
1.3 Checking the relation of the appliance and the manual	1
2. Safety	2
2.1 Safety instructions in case of malfunction	2
3. Functional descriptions	3
3.1 The adjusting knob	3
4. Operation instructions	4
4.1 Operation of the mixer	4
4.1.1 Procedure for start after emergency stop	5
4.1.2 Overload	5
4.1.3 Recommended maximum speeds:	6
4.1.4 The maximum capacity of the mixer:	6
4.1.5 Correct use of tools	7
4.2 Cleaning	7
5. Installation	8
5.1 Prepare the installation	8
5.2 Installation	8
5.3 Electrical connections	8
6. Technical specifications	9

1. General

Carefully read the instructions in this manual as they contain important information regarding proper, efficient and safe installation, use and maintenance of the appliance.

Keep this manual in a safe place for eventual use by other operators of the appliance.

The installation of this appliance must be carried out in accordance with the manufacturer's instructions and following local regulations. The connection of the appliance to the electric and water supply must be carried out by qualified persons only.

Persons using this appliance should be specifically trained in its operation.

Switch off the appliance in the case of failure or malfunction. The periodical function checks requested in the manual must be carried out according to the instructions. Have the appliance serviced by a technically qualified person authorized by the manufacturer and using original spare parts.

Not complying with the above may put the safety of the appliance in danger.

1.1 Symbols used in the manual



This symbol informs about a situation where a safety risk might be at hand. Given instructions are mandatory in order to prevent injury.



This symbol informs about the right way to perform in order to prevent bad results, appliance damages or hazardous situations.



This symbol informs about recommendations and hints that help to get the best performance out of the appliance.

1.2 Symbols used on the appliance



This symbol on a part informs about electrical terminals behind the part. The removal of the part must be carried out by qualified persons only.

1.3 Checking the relation of the appliance and the manual

The rating plate of the appliance indicates the serial number of the appliance. If the manuals are missing, it is possible to order new ones from the manufacturer or the local representative. When ordering new manuals it is essential to quote the serial number shown on the rating plate.

2. Safety

The mixer is designed for manufacture of products which do not during processing cause reactions or emit substances which may be detrimental for the user.

To the attachment drive should only be connected attachments produced by A/S Wodschow & Co. or products sold by Hackman Metos Oy Ab.

Check that the bowl is in the working position before starting the mixer.



Do NOT put your fingers in the bowl while the mixer is running.

2.1 Safety instructions in case of malfunction

Before any service operations the appliance must be disconnected from the electric network.

3. Functional descriptions

3.1 The adjusting knob

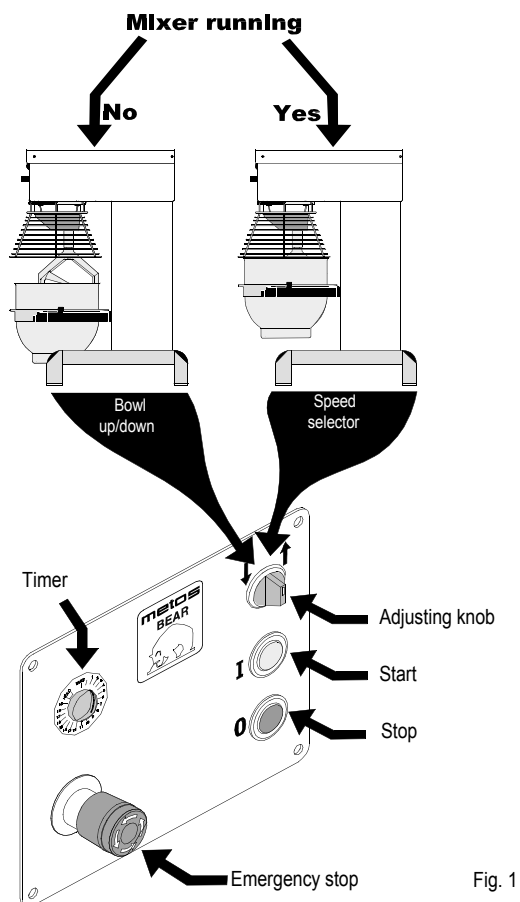


Fig. 1

The operation panel is provided with an adjusting knob with two functions (fig.1):

- Bowl up/down
- Speed selector

The function of the knob is determined by the mixer running or not

- If the mixer is not running, the knob is used for bowl lift
- If the mixer is running, the knob is used as speed selector.
- When STOP is activated after the work, and the tool stands still, the adjusting knob will again get its up/down function.

4. Operation instructions

4.1 Operation of the mixer

- A Place the mixing tool in the bowl.
- B Open the safety guard.
- C Place the bowl in the bowl arms. OBS: The bowl arms must be in lowest position and the bowl must be pushed all the way into the bowl arms. The “centre ear of the bowlring must be facing the mixer. Place the mixing tool in the bayonet shaft. The pin on the tool must be turned into the bayonet hole (fig.2).
- D Close the safety guard.
- E To lift up the bowl, turn the adjusting knob clockwise (arrow up) (fig.1). The bowl will stop in its top position.
- F Set the timer to TIME or HOLD (fig.1).
- G Press start (fig.1).
- H Turn the adjusting knob (fig.1) until the required speed has been found, the speed can be read from the indicator on the side of the mixer.
- I When the working process has been completed, the mixer can be stopped by pressing STOP, or by the fact that the timer goes into its stop position, in both cases the speed of the tool is automatically lowered to its minimum, and will then stop.
- J When the tool has stopped, the bowl can be lowered by turning the adjusting knob counter clockwise (arrow down).



You can mix the ingredients in “steps”, e.g. in order to reduce the ejection of dust.

- Set the timer to TIME or HOLD
- Keep STOP pressed and at the same time “step” with the start button. The mixer runs as long as the start button is being pressed.
- Lower the bowl by turning the adjusting knob clockwise



Use the emergency stop only in emergencies

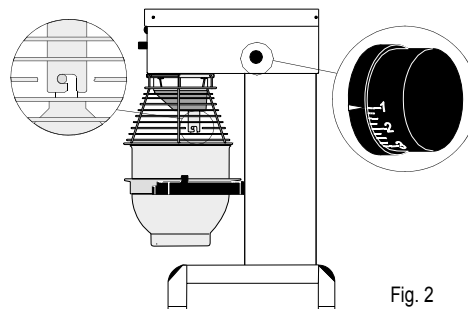


Fig. 2

4.1.1 Procedure for start after emergency stop

If the emergency stop is activated during lifting or lowering of the bowl:

- Release the emergency stop (fig.1) by turning it counter clockwise.
- Lifting/lowering of the bowl can be reactivated.

If the emergency stop is activated while the mixer is running, and you do NOT want to start up in the same speed:

- First lower the bowl, this is done by releasing the emergency stop, remove the lid from the mixer and push a small red button on the upper side of the front plate and then turn the adjusting knob counter clockwise (arrow-down)
- Remove the tool from the bayonet.
- Close the safety guard, raise the bowl arms (empty or with the bowl) to its top position, start the mixer and go back to the lowest speed by turning the adjusting knob counter clockwise.
- Stop the mixer. Now the mixer can be operated in the normal way.

If the emergency stop is activated while the mixer is running in low speed, and you want to start up in the same speed.

- Release the emergency stop (fig.1) by turning it counter clockwise.
- Press START and the mixer will start in the speed, in which it was stopped. The speed can now be adjusted by the adjusting knob.

4.1.2 Overload

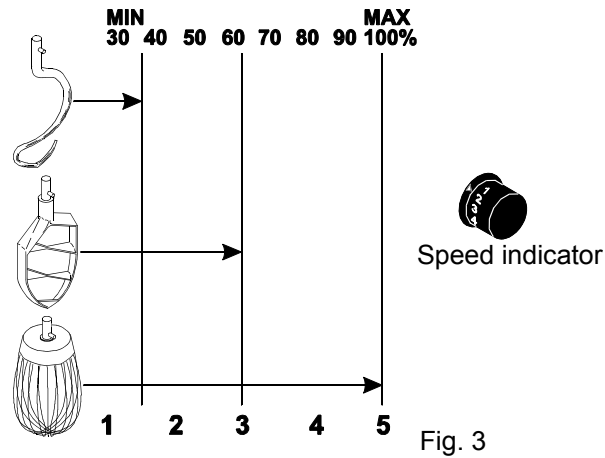


Do not overload the mixer. Sticky and heavy doughs may reduce the capacity of the bowl by 75 %. The capacity is further reduced if the speed of the mixing tool is increased beyond the recommended values or if a wrong mixing tool is used. Large lumps of fat or cooled ingredients must be cut into small parts before they are placed in the bowl.

Prolonged overload will make the mixer's motor protection disconnect the mixer. Leave the mixer for approx. 3 minutes and restart it again as described under "Procedure for starting the mixer after emergency stop".

Operation instructions

4.1.3 Recommended maximum speeds:



4.1.4 The maximum capacity of the mixer:

Dough	AR30	AR40	AR40P	AR60	AR60P	AR80	AR100	AR140
AR=60%	17 kg	25 kg	27 kg	37 kg	41 kg	54 kg	68 kg	85 kg
AR=50%	10 kg	15 kg	20 kg	30 kg	36 kg	44 kg	55 kg	67 kg
AR=40%	7 kg	9 kg	14 kg	23 kg	27 kg	28 kg	45 kg	58 kg

AR=Weight of the liquid x 100 / Weight of the solids

Example: A basic recipe contains 1 kg of solids and 0,4 kg of liquid $0,4 \text{ kg} \times 100 = 40\%$ 1 kg

If for example a AR30 mixer is used, and a dough with AR=40% is to be kneaded, the maximum capacity is according to the table above = 7 kg. The weight of the solids in this dough is calculated:

Weight of solids = Max. capacity x AR = $7 \text{ kg} \times 40 = 2,8 \text{ kg}$

Weight of liquid = $7 \text{ kg} - 2,8 \text{ kg} = 4,2 \text{ kg}$

Other products	Max. capacity							
	AR30	AR40	AR40P	AR60	AR60P	AR80	AR100	AR140
Egg white 1l=30 eggs	4 l	6 l	6 l	9 l	9 l	12 l	14 l	14,5 l
Whipped cream	6 l	9 l	9 l	12 l	12 l	17 l	20 l	26 l
Mayonnaise (1 = oil)	11 l	12 l	14 l	19 l	20 l	24 l	38 l	43 l
Mashed potatoes	18 kg	24 kg	28 kg	36 kg	36 kg	48 kg	60 kg	81 kg
Dough (l = liquid)	4 l	6 l	8 l	9 l	12-15 l	12 l	15 l	20 l
Sponge cake	18 kg	24 kg	30 kg	36 kg	48 kg	48 kg	60 kg	81 kg

4.1.5 Correct use of tools

Recommended applications for tools:

Whip	Beater	Hook
Cream Egg whites Mayonaise and the like.	Cacke dough Butter cream Waffle dough Minced meat and the like.	Bread dough Dark bread and the like.



Whips should not be struck against hard objects as e.g. the edge of the bowl. This will make the life shorter due to increasing deformity. For production of mashed potatoes the special whing whip should be used, not the standard whip.

4.2 Cleaning

The mixer should be cleaned daily or after use. The mixer should be cleaned with a soft cloth and clean water. Sulphonated soaps should be used with caution as they destroy the mixer's lubricants.



Bowls and tools of aluminium must not be washed with strong alkaline detergents .

Never use high pressure cleaning for the mixer.

5. Installation

5.1 Prepare the installation

Check that all loose parts are delivered with the mixer such as bowl, tools, grease gun and, for the floor models, the rubber feet and adjusting.

5.2 Installation

The mixer is placed directly on the floor. Foundation bolts on the floor are only necessary under special conditions, e.g. on ships.

The mixer must be mounted on rubber feet, which neutralize both shaking and rusting. Spacers can be inserted under the mixer's feet, if the floor is not completely even

5.3 Electrical connections

Check before the mixer is connected that the voltage and frequency printed on the machine's rating plate is correct in relation to the place of installation. The rating plate is placed on the top right side of the mixer.



Before taking the mixer into use, direction of rotation of the planetary head must be checked: Lift up the bowl arms to normal working position and start the mixer without bowl and tools. Check the direction of rotation of the planetary head: the planetary head must rotate in the direction as stated by the arrow above the planetary head. If the direction is wrong, 2 of the phase wires of the connecting cable must be inverted.

The electrical connections must be following local regulation

6. Technical specifications

Construction

AR30 installation drawing

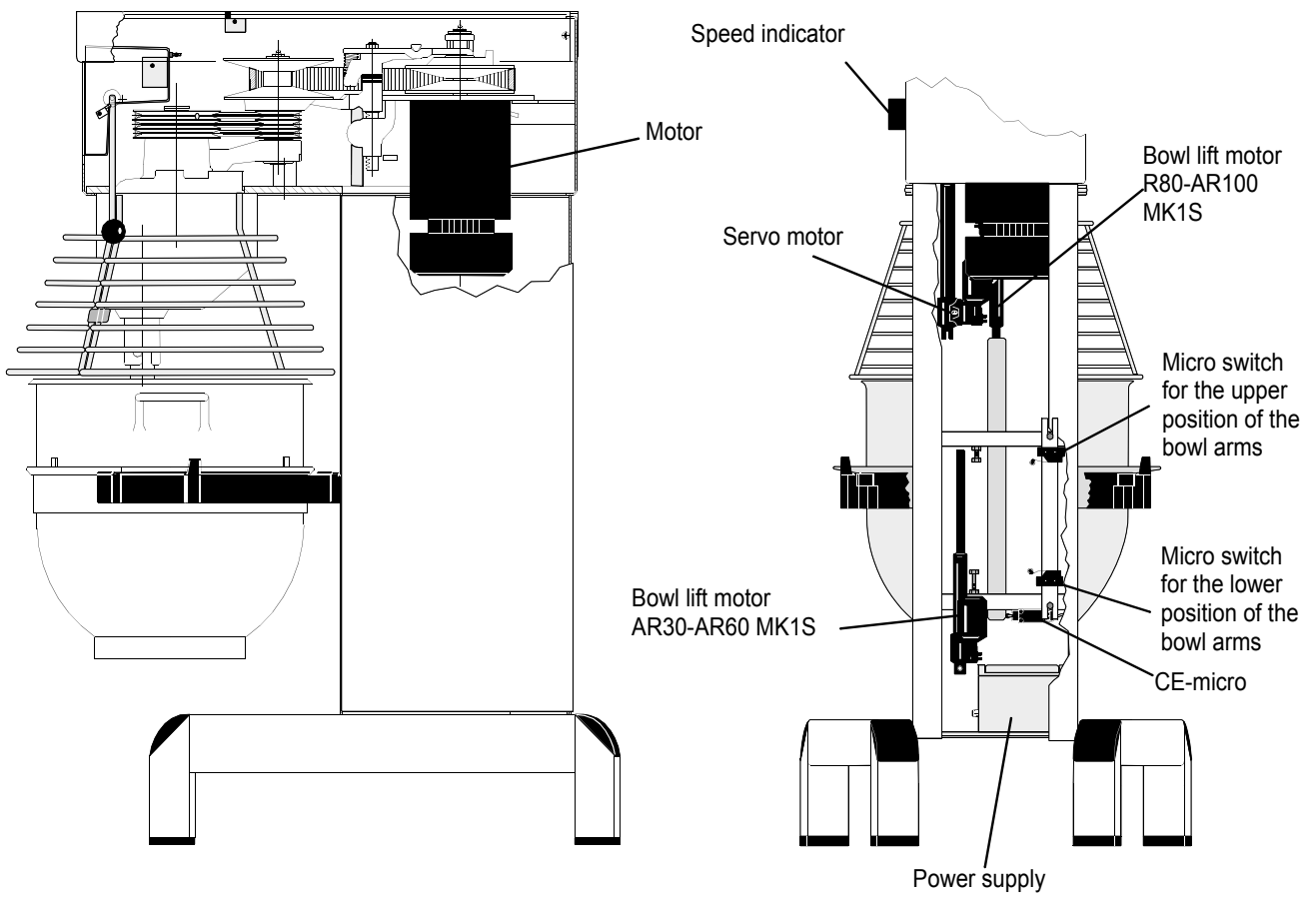
AR40 installation drawing

AR60 installation drawing

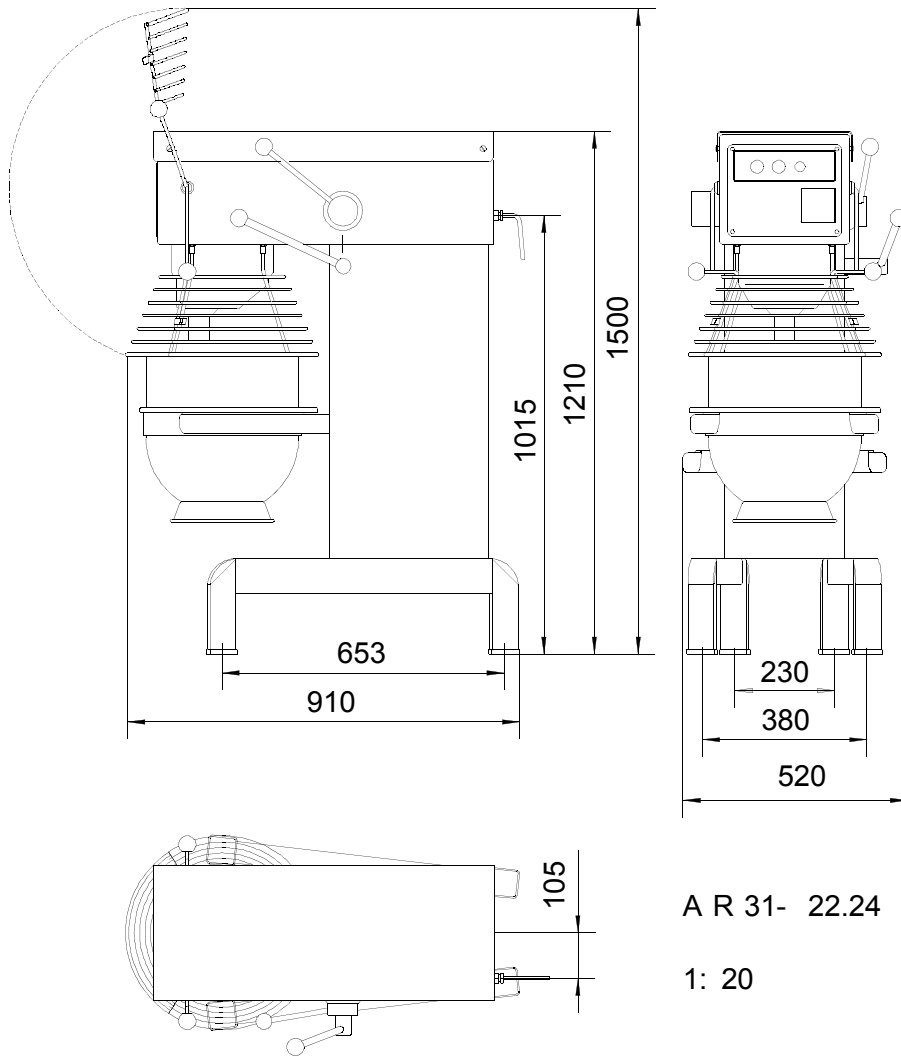
AR80 installation drawing

AR100 installation drawing

Connection diagram



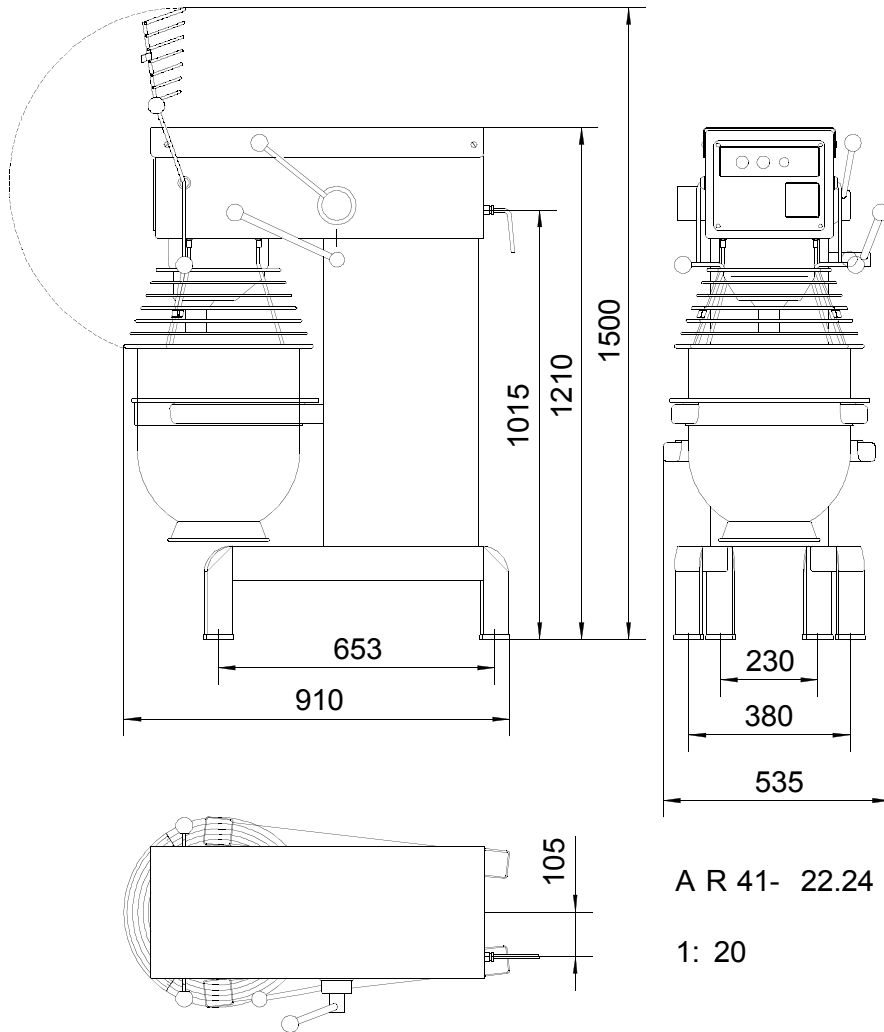
AR30



A R 31- 22.24

1: 20

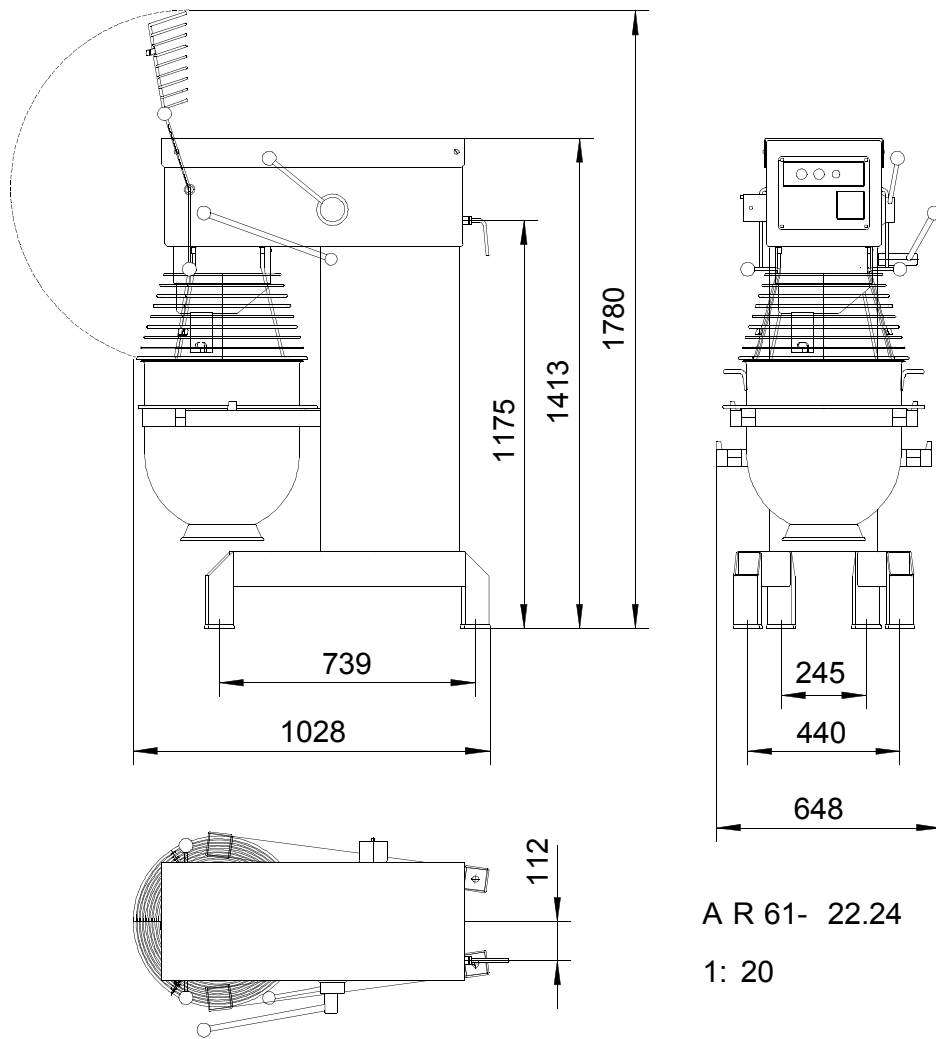
AR40



A R 41- 22.24

1: 20

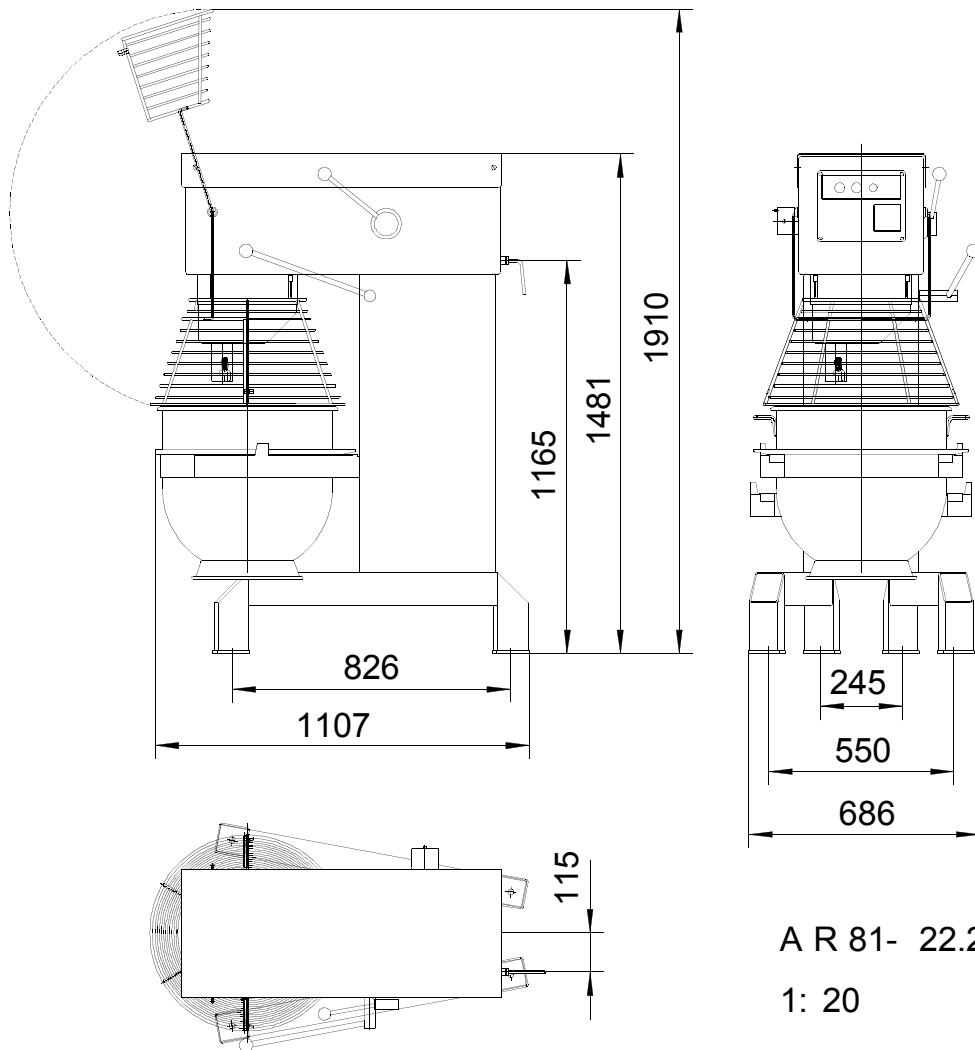
AR60



A R 61- 22.24

1: 20

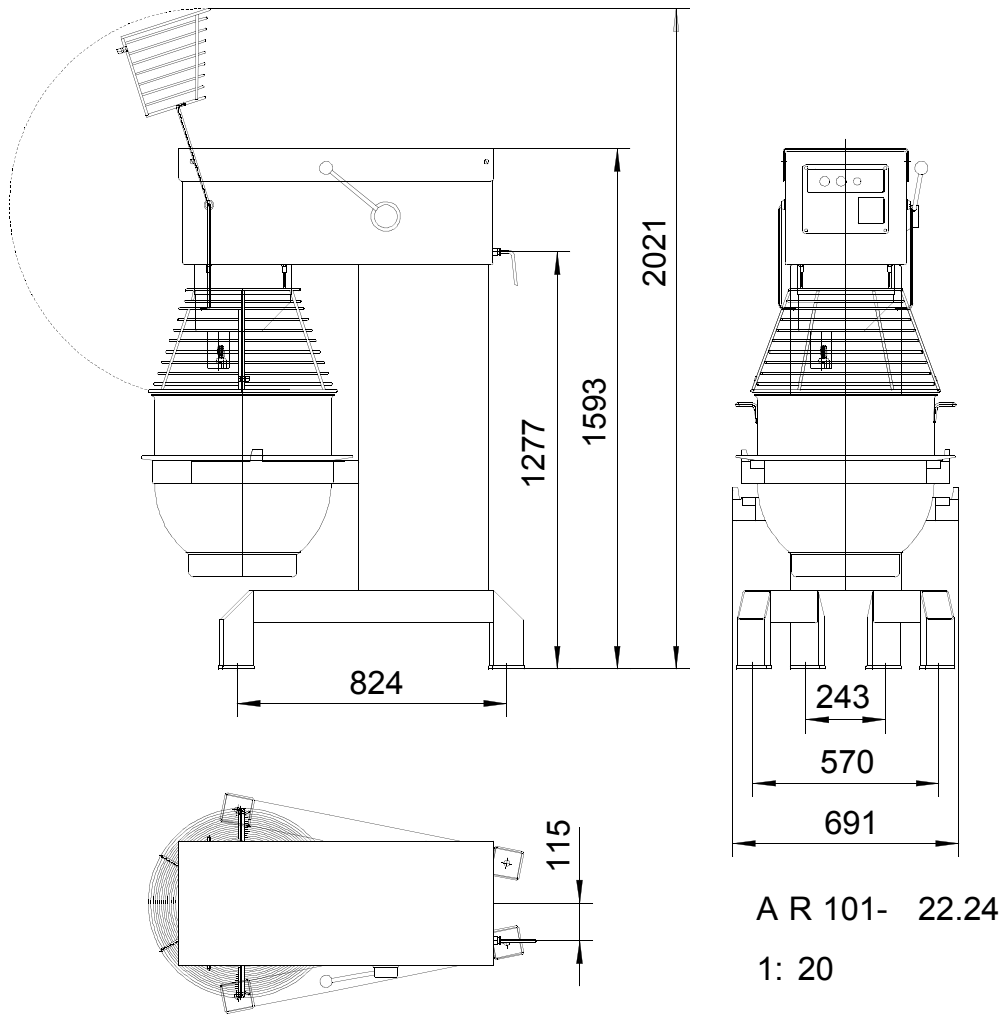
AR80



A R 81- 22.24

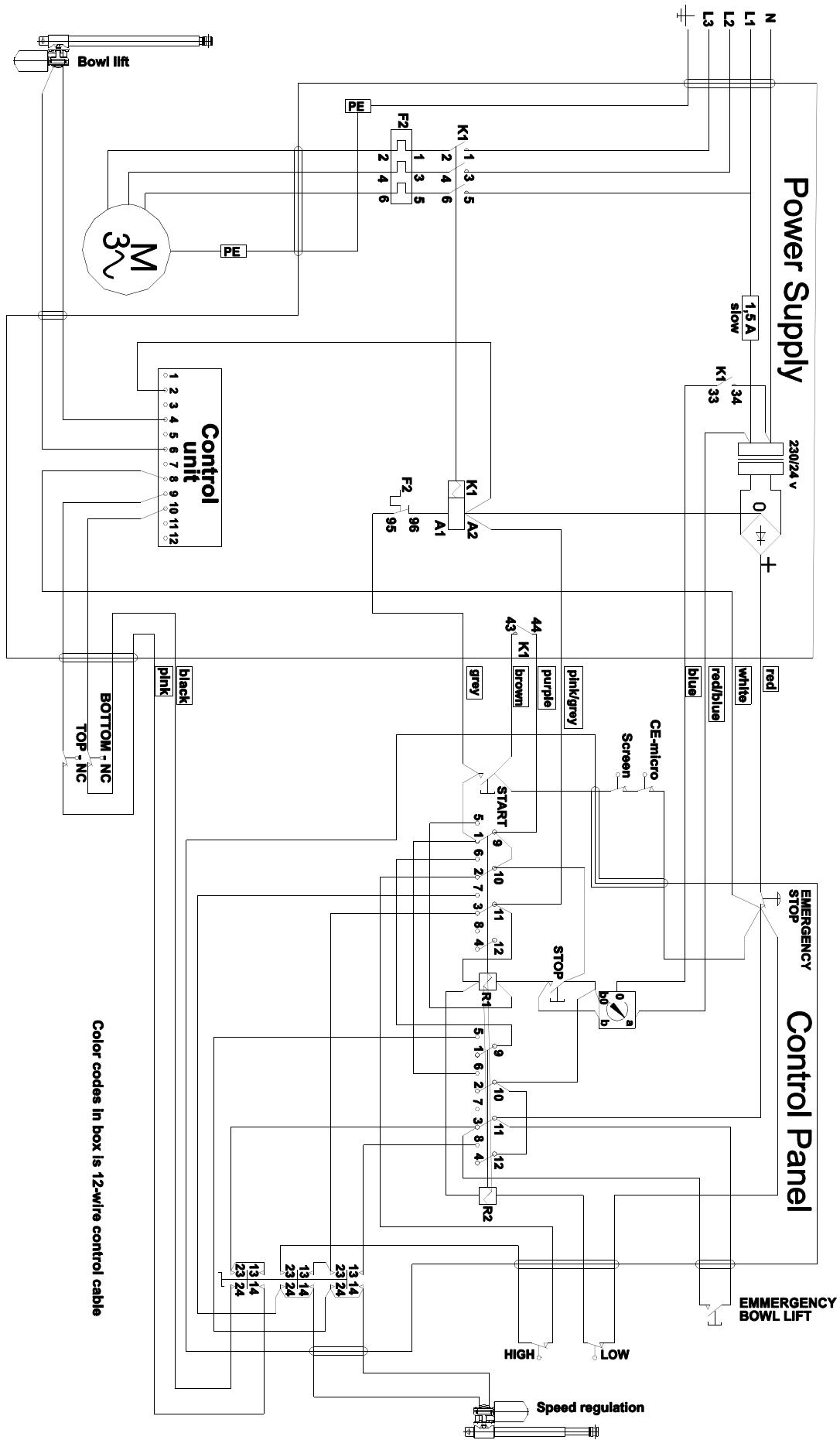
1: 20

AR100



A R 101- 22.24

1: 20



Connection diagram

Technical specifications

Item	Model	Type	Specification
Dimensions	MK-1S	AR30	520x910x2120
Dimensions	MK-1S	AR40	535x910x1210
Dimensions	MK-1S	AR60	650x1028x1413
Dimensions	MK-1S ERGO	AR60	700x1165x1803
Dimensions	MK-1S	AR80	710x1110x1480
Dimensions	MK-1S ERGO	AR81	730x1165x1847
Dimensions	MK-1S	AR100	700x1100x1600
Dimensions	MK-1S ERGO	AR100	730x1165x1980
Electrical connection	MK-1S	AR30	400V 3N~1,0kW 10A
Electrical connection	MK-1S	AR40	400V 3N~1,1kW 10A
Electrical connection	MK-1S	AR60	400V 3N~1,8kW 10A
Electrical connection	MK-1S ERGO	AR60	400V 3N~1,8kW 10A
Electrical connection	MK-1S	AR80	400V 3N~3,0kW 10A
Electrical connection	MK-1S ERGO	AR80	400V 3N~3,0kW 10A
Electrical connection	MK-1S	AR100	400V 3N~3,0kW 10A
Electrical connection	MK-1S ERGO	AR100	400V 3N~3,0kW 10A
Weight	MK-1S	AR30	155 kg
Weight	MK-1S	AR40	165 kg
Weight	MK-1S	AR60	235 kg
Weight	MK-1S	AR80	310 kg
Weight	MK-1S	AR100	375 kg