

KODIAK

Operating Instructions And Spareparts



V20K KODIAK

Valid from machine number:
20019000



Varimixer

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EN

DRN: 20020-1636
2022 01 12

Limited Mixer Warranty - 10 qt to 150 qt

VARIMIXER warrants to the original purchaser of new equipment that said equipment, when installed in accordance with our instructions within North America and subjected to normal use, is free from defects in material or workmanship for a period of 4 years. Wear parts, such as belts, are excluded. Hub attachments, such as shredders, slicers and grinders have a 1 year warranty that only covers parts. Warranty begins on date of factory shipment to an end user, or up to 6 months after factory shipment to a dealer or distributor. Payment by VARIMIXER for service under this warranty requires that service be authorized in advance. Contact VARIMIXER Technical Support to arrange for service.

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This warranty is given only to the first purchaser from a retail dealer. No warranty is given to subsequent transferees.

This warranty does not cover product failures caused by: failure to maintain, neglect, abuse, damage due to excess water, fire, normal wear, improper set up and use. Periodic maintenance is not covered.

Example of items not covered under warranty, but not limited to just these items:

1. Acts of God, fire, water damage, vandalism, accident, theft.
2. Freight damage.
3. Improper installation or alteration of equipment.
4. Use of generic or after market parts.
5. Repairs made by anyone other than a VARIMIXER designated servicer.
6. Lubrication.
7. Expendable wear parts. (This includes the bowl, flat beater, wire whip, spiral dough hook, and the pastry knife.)
8. Cleaning of equipment.
9. Misuse or abuse.

This warranty is not in force until such time as a properly completed, digitally signed Installation/Warranty Registration has been received by VARIMIXER within 30 days from the date of installation.
Register online at www.varimixerusa.com/support/warranty-registration-form.

THE FOREGOING WARRANTY PROVISIONS ARE A COMPLETE AND EXCLUSIVE STATEMENT BETWEEN THE BUYER AND SELLER. VARIMIXER NEITHER ASSUMES NOR AUTHORIZES ANY PERSONS TO ASSUME FOR IT ANY OTHER OBLIGATION OR LIABILITY IN CONNECTION WITH SAID EQUIPMENT.

WARRANTY REGISTRATION
GO TO VARIMIXERUSA.COM
TO FILL OUT AND SUBMIT YOUR WARRANTY REGISTRATION.
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Caution -READ BEFORE OPERATING- Caution
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Varimixer recommends that mixer operators must be at least 18 years of age and be thoroughly trained on the use, cleaning and lubrication of the mixer.

This manual should be seen as an integral part of the mixer and should be kept by the machine throughout its working life.

Before the machine is commissioned, it is important to read these instructions thoroughly.

The manufacturer may update the product manual without updating this copy of the manual.

Varimixer recommends that the following precautions be adopted to help make the mixer operation safer and more efficient.

- All operators must be at least 18 years of age.
- All operators must be thoroughly trained before being allowed to operate the mixer.
- NEVER reach into the bowl when the mixer is running.
- Do not wear loose clothing or rings while operating the mixer.
- Stop the mixer and lower the bowl before adding ingredients, scraping the bowl, removing the agitator, or removing the product.
- Stop the mixer before removing or installing attachments into the drive hub.
- Do not attempt to assemble or disassemble attachments while mounted into the drive hub.
- Always use the pusher plate with the slicer/meat grinder attachments.
- NEVER bypass the safety mechanisms supplied on the mixer. Doing so can cause injury and is the responsibility of the user to ensure these safety mechanisms are operating properly.

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GENERAL:

This manual should be seen as an integral part of the mixer and should be kept by the machine throughout its working life.
 Before the machine is commissioned, it is important to read these instructions thoroughly, particularly the section on user safety.
 The manufacturer may update the product manual without updating this copy of the manual.
 The manufacturer will not be liable for faults caused by:

- Careless, improper or incorrect use of the mixer
- Nonstandard use (not for the purposes described in the manual)
- Incorrect installation
- Incorrect power supply to the machine
- Failure to comply with maintenance instructions
- Modifications to the machine
- Spare parts and accessories that are not original or specified for this model
- Failure to comply with instructions in this manual

In case of faults with the mixer, please contact the Local Authorized Service Agency.
 The guarantee does not cover damage caused by misuse, overloading or the user's failure to comply with the maintenance instructions.

UNPACKING:

The machine should be unpacked and the packaging disposed of according to regulations applicable in the country concerned.
 Before the mixer is removed from the pallet, check that all parts are present with the machine:

- Safety guard and filling chute
- Power cable
- 32 mm fixed spanner for legs.
- Bowl trolley for floor model
- Bowl, whip, beater, hook and scraper with blade, if these were selected with the order.

The machine can be released from the pallet by cutting the strips.

TRANSPORT:



Lifting equipment should always be used to move the machine.
The machine must not be pulled or lifted by the bowl lift handle.
When the machine is moved, it should be in a vertical position at all times.

INSTALLATION, ADJUSTMENTS AND SECURING:

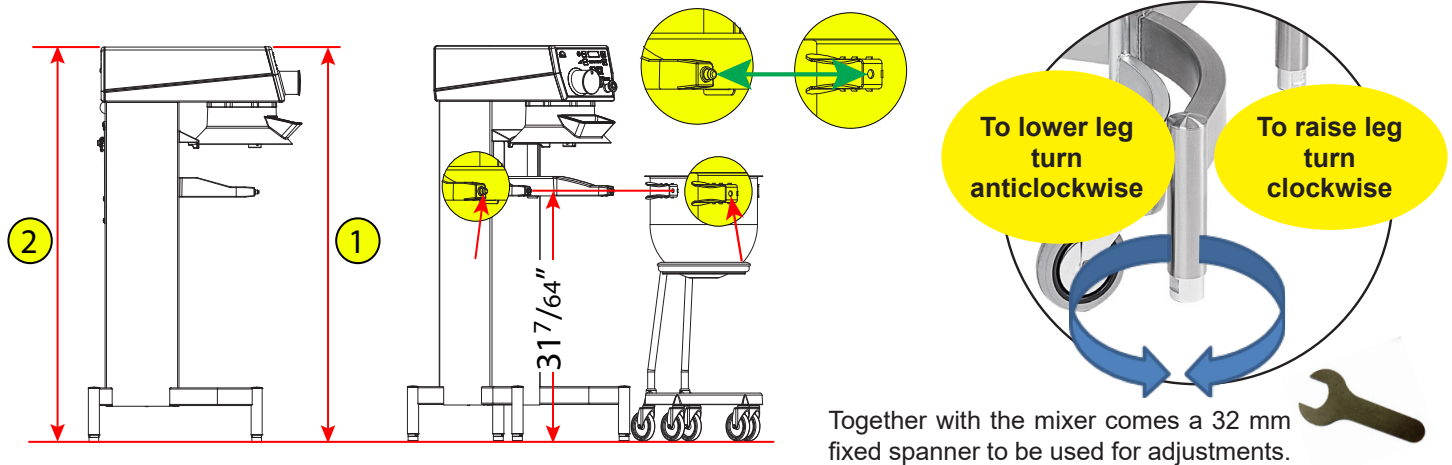
The ambient temperature around the machine must not exceed 113°F.

Especially for floor model - Adjustments:



The height of the legs should be adjusted so that the bowl on the bowl trolley fits perfectly into the bowl arms.
The bowl arms should be at the correct height above the floor before the machine is taken into use – see “**Condition 1**” and **Condition 2**.

It is of the utmost importance that the machine's legs are adjusted so that the conditions described by the following sketch are met:



Condition 1:

The top of the mixer must be parallel to the floor. To ensure this you must measure the distance from the top of the machine to the floor:

The dimension must be the same when measured at the front of the mixer **1** and at the rear of the mixer: **2**

Condition 2

The mixer must be height adjusted so that the bowl on the bowl trolley fits exactly in the bowl arms:

Basically, the dimension from floor to center of the knobs on the bowl arms must be 31 7/64". If the bowl on the bowl trolley does not fit exactly in the bowl arms at this dimension, adjust slightly on the front legs of the mixer.

Especially for table model - fixing and adjustment:



Kodiak 20 table model must be fixed to the table it is placed on.

Kodiak 20 table model is fixed with bolts in the two hind legs.

Bolts with dimensions M10 x 20 mm + table top thickness and a washer are used.

The table must be suitable for machine's weight and operation.

Height adjustment:

If the table is not fully even, justifications can be made by adjusting the two front legs.

The adjustment is made as described for the floor model - see above.



ELECTRICAL CONNECTION:

Before the machine is connected to the power grid, check that the voltage and frequency printed on the name plate are correct for the installation location.

The name plate is positioned uppermost on the back of the machine.
The machine must be grounded. Failure to do so may cause injury.
 If there is no ground connection, the EMC filter will not work, with the risk of damage to the frequency converter.

NOTE

The machine must be protected by a Residual Current Device: RCD with SI type leakage current protection.

Voltage ratio at site

**100V - 240V, 1 phase =
User can connect machine**



Cable with plug is delivered with the machine
 Only this cable must be used for the connection
 The machine must only be connected to an grounded supply

The cable is fixed to the machine in the plug made of silicone, see "Components of the machine" page 9

The machine is protected by a 10A fuse built into the socket on the back of the machine.

Voltage ratio at site

**380 - 480 V, 2 or 3 phases, neutral or not =
Technician must connect machine**



Cable without plug is connected to the machine
 the cable must be mounted in the wall socket
 The machine must only be connected to an grounded supply

When the machine is connected, **phase + neutral + ground** or **phase + phase + ground** should be used. In both cases, it is important to ensure that the voltage between the two live pins matches the name plate.

TECHNICAL DATA:

Kodiak 20	Gross weight	Net weight	hp	Volts	Amps	Variable speed, tool
Model	lbs	lbs	hp	V	A	rpm
Floor model	407	363	1.6	115	10.3	64 - 353
Table model	200	176				

LAYOUT DRAWINGS:

Floor model:

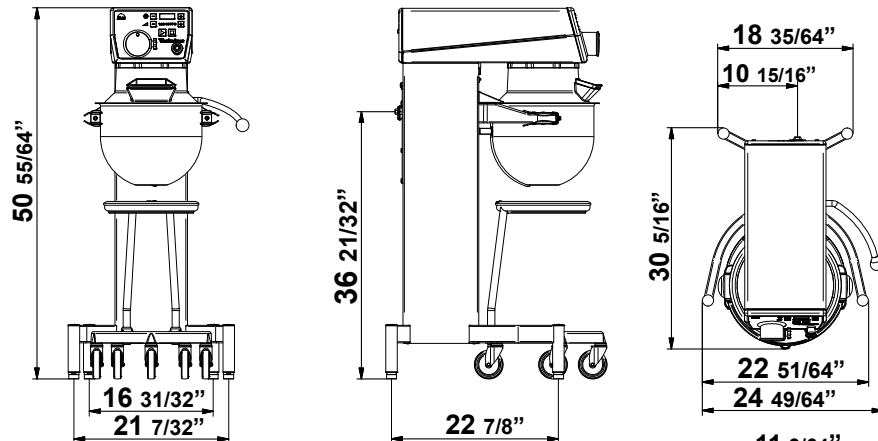
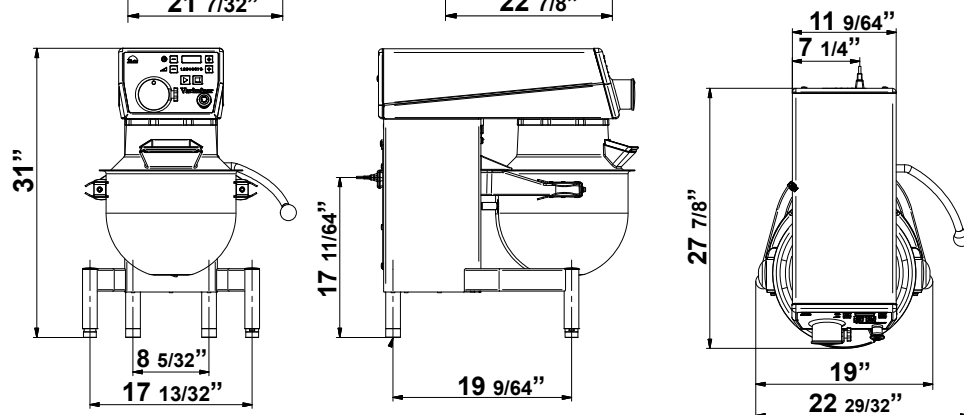


Table model:



FIRST USE:

Bowl, tools, safety guard and filling chute should be cleaned before use – see section on “**Cleaning**”, page 12.

Floor model: The bowl arms **must** be at the correct height above the floor before the machine is taken into use – see “**Installation, adjustments and fixing**”, page 5.

Table model: The machine **must** be fixed to the table, see “**Installation, adjustments and fixing**” page 5.

RECOMMENDED USE OF THE MACHINE:



The machine is designed for the manufacture of products that do not trigger any reactions or release substances that may be harmful to the user when in use.

The machine must not be used in an explosive atmosphere.

The machine must only be operated by staff who have been trained in the use of the machine according to these instructions. Users must be over 18 years of age.

The machine is designed for commercial use in kitchens, catering outlets and bakeries.

The machine may only be used as specified in this manual.

Only bowls designed for Kodiak 20 may be used.

Tools should be used in conjunction with the corresponding bowl – a 20 Q tool with the 20 Q bowl and a 20/12 Q tool with the 20/12 Q bowl.

Unless the change is recommended by the manufacturer, modifying the machine is prohibited.

If the machine is fitted with an attachment drive, only accessories produced or recommended by manufacturer should be attached.

SAFETY:



The machine is designed for the manufacture of products that do not trigger any reactions or release substances that may be harmful to the user when in use.

Users must be over 18 years of age and trained in the use of the machine according to these instructions.

User safety is assured as follows:

- Tools can only rotate when the safety guard is in place and the bowl is lifted.
- The safety guard is made of polycarbonate. It is not possible to attach the safety guard incorrectly.
- No access to rotating tools.
- The spread of flour dust is inhibited.
- Equipped with emergency stop - The tool stops rotating in less than 4 seconds (also for normal shut-down and stop via safety guard).
- Clearance between safety guard/stand and lifting handle at least 1 31/32".
- Noise level under 70 dB.
- Machine remains stable on a slope of up to 10°.

The machine is protected against overvoltage.

Non-ionising radiation is not produced intentionally, but rather technically conditioned by electrical equipment (e.g. electric motors, live power lines or solenoids). The machine is equipped with strong permanent magnets. By maintaining a safe distance (between the field source and implant) of 11 13/16", any impact on active implants (e.g. pacemakers, defibrillators) can likely be prevented.

The machine should be positioned to allow space for normal use and maintenance.

Good ergonomics for the user is ensured by the accompanying bowl trolley, which eliminates heavy lifting of the bowl and maintains the right working height.



There is a risk of injury if the machine is not grounded.

The machine must only be connected to an grounded supply. See also ‘**Electrical Connection**’ page 6.

Placing your hands in the bowl while the machine is running may cause physical injury.

The following recommendations apply to work with powdery ingredients:

- Powdery ingredients should not be poured into the bowl from a great height.
- Bags of e.g. flour should be opened at the bottom, down in the bowl.
- Do not run up to the maximum speed too quickly.

WORKING WITH HOT INGREDIENTS:

When working with hot ingredients which are added via the filling hole in the safety guard, it is necessary to use the filling chute. The filling chute is made of FDA-grade silicone, and is able to withstand hot ingredients up to 392° F. The filling chute can be used for ingredients as hot as this for as long as necessary.

If the filling chute is **not** used, ingredients which are added via the filling hole in the safety guard must not be more than 140° F.

MAX. CAPACITY OF THE MACHINE:

Capacity pr. mix	Tool	Kodiak 20	AR = absorption ratio (%AR) (liquid as % of dry matter) E.g. a basic recipe includes 2.2 lbs dry matter and 1.3 lbs liquid: this gives AR = $\frac{1.3 \text{ lbs} \times 100}{2.2 \text{ lbs}} = 60\%$ If, for example, the maximum capacity of the mixer is required, the calculated AR = 60% is used to determine the amount of dry matter and liquid in the dough: Maximum capacity of the machine = 24.2 lbs for dough with AR = 60% Now the weight of the dry matter in this dough is calculated as follows: Dry matter = $\frac{\text{max. capacity} \times 100}{\text{AR} + 100} = \frac{24.2 \text{ lbs} \times 100}{60 + 100} = 15.16 \text{ lbs}$ Weight of liquid = $24.2 \text{ lbs} - 15.16 \text{ lbs} = 9.09 \text{ lbs}$ Local variations in the quality of the raw materials may affect water absorption, volume, baking characteristics etc., and hence capacity.
Egg white	Whip	2.5 qts	
whipped cream	Whip	5.3 qts	
Mayonnaise *	Whip	16.9 qts	
Herb butter	Beater	22 lbs	
Mashed potatoes *	Beater/Whip	26.5 lbs	
Yeast dough (50% AR) **	Hook	22 lbs	
Yeast dough (60% AR)	Hook	24.25 lbs	
Ciabatta dough (70%AR)	Hook	26.5 lbs	
Muffins *	Beater	30.9 lbs	
Cake base	Whip	11 lbs	
Meat ball mix *	Beater	33 lbs	
Icing	Beater	30.9 lbs	
Doughnut (50%AR)	Hook	27.6 lbs	

EQUIPMENT:

Standard equipment, as follows:
Bowl 20 Q
Hook, whip and beater for 20 Q bowl
A silicone filling-chute for hot ingredients
Optional accessories:
Scraper for 20 Q bowl, if mixer is fitted for a scraper
Bowl 12 Q
Hook, whip and beater for 12 Q bowl
Scraper for 12 Q bowl, if mixer is fitted for a scraper
Standard equipment for floor model
Bowl trolley



MAGNETS:



Warning for users with implants (e.g. pacemakers, defibrillators).

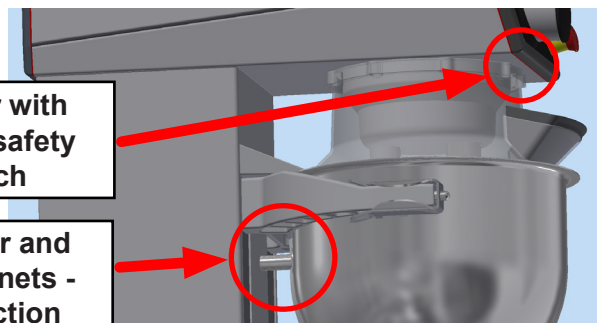
Mixer and safety guard equipped with strong magnets

Area on safety guard with magnets

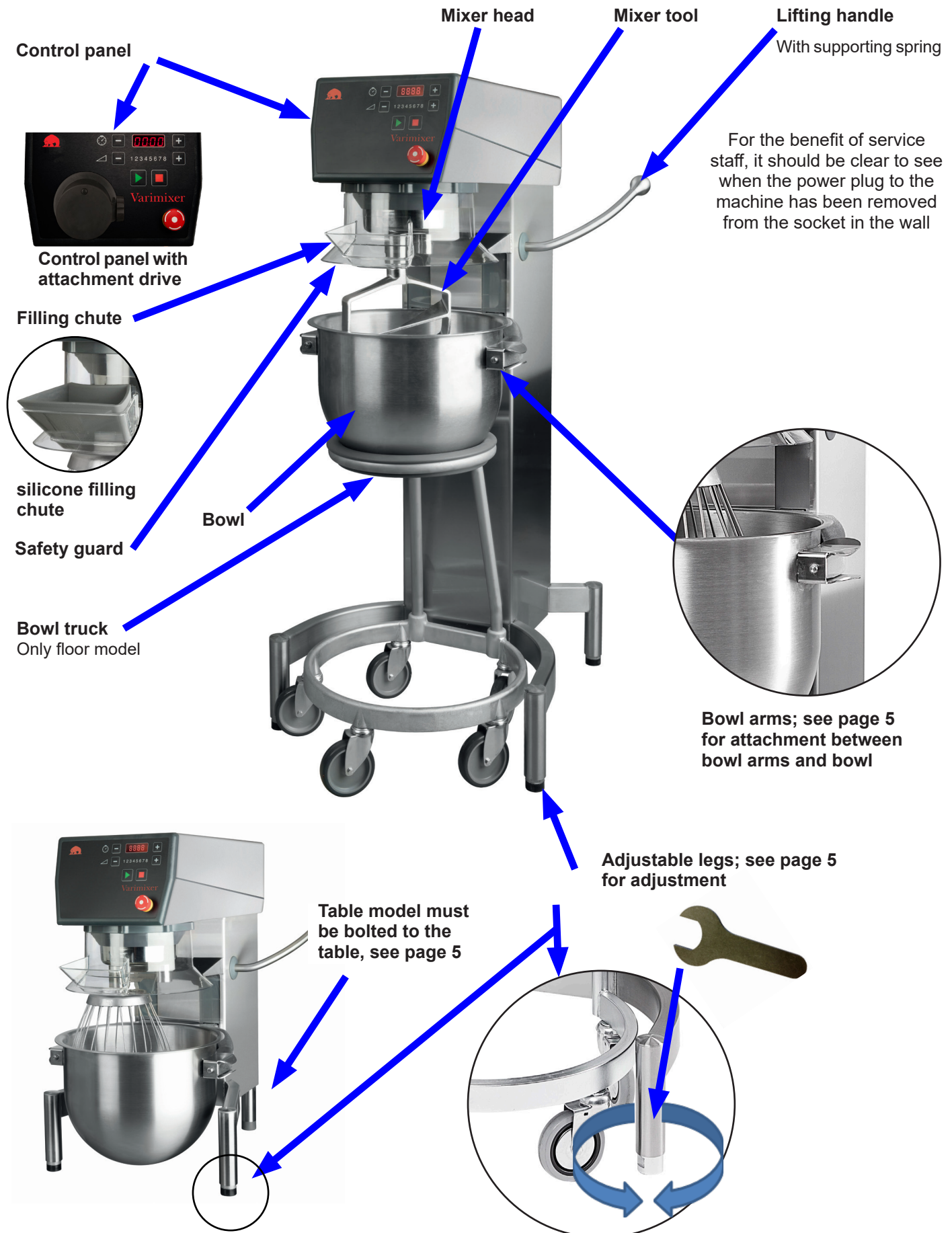


Area on mixer with magnets - for safety guard switch

Areas on mixer and bowl with magnets - for bowl detection



COMPONENTS OF THE MACHINE:



KODIAK USER-FRIENDLINESS:

KODIAK has been designed in partnership with kitchen and bakery staff, which has resulted in a number of user benefits:

The machine itself:

Can be connected to the power grid by the user (100V-240V).

Is made of stainless steel.

The floor model has height-adjustable feet to ensure that the high bowl trolley works properly.

Is easy to clean, with large surfaces and a removable safety guard which can be machine-washed.

The power cord is connected to a waterproof silicone plug and can not be shaken from the machine (100V-240V).

The inclined control panel combined with the large bowl diameter provides a good view of the contents of the bowl.

The machine is equipped with a spring that helps to lift and lower the bowl.

Control panel:

The control panel is simple and intuitive, with large push buttons.

The speed can be increased/decreased continuously by holding down **+** and **-**. It is also possible to 'step' between the predefined speeds **12345678**.

The panel is inclined at the ergonomically correct height, making it very comfortable to use.

The panel is easy to clean with a damp cloth.

There is a built-in timer function with a display, which can also be used to show the number of operating hours.

Safety guard:

The one-piece safety guard is made of transparent plastic. The safety guard is easy to remove and clean. The safety guard can be machine-washed at up to 140° F and can withstand up to 194° F for short periods.

The loose silicone filling chute withstands being exposed to hot ingredients up to 392° F, and is dishwasher-safe.

The safety guard is made of a special impact-resistant material which can withstand daily use in a commercial kitchen.

The safety guard is held in place by magnets, so there are no loose parts that can break or collect dirt.

It is not possible to attach the safety guard incorrectly.

A force corresponding to 6.6 lbs or 30 N should be used to remove the safety guard.

The filling hole in the safety guard can be turned to suit the user's needs.

Bowl and bowl trolley (bowl trolley only floor model):

The bowl is not very deep but has a large diameter, which makes it easier to see the contents while working.

The bowl does not have to be lifted into place in the bowl arms, but can be wheeled directly into position.

The bowl trolley is used for transfer from mixer to workbench, dishwasher, stores etc.

The bowl trolley provides an ergonomically correct working height.

The bowl trolley spares the user any heavy lifting.

The bowl can be tilted in the rubber ring on the bowl trolley.

Tools:

The machine whip is very compact in design, which provides for a long service life. It must be handled according to these instructions.

The bowl, beater, hook and whip are made of stainless steel.



OPERATING THE MACHINE:



Before starting the machine:

Floor model: Place the bowl in the bowl trolley. Put the desired tool into the bowl and wheel it into position between the bowl arms. Ensure that the bowl is correctly engaged with the bowl arms; see “Installation, adjustments and fixing”, page 5.

Table model: Put the desired tool into the bowl and place the bowl in the bowl arms.

Fit the safety guard and turn it so the filling hole is accessible when the machine is running. The loose filling chute must be used if it is necessary to add hot ingredients during the process (i.e. ingredients at temperatures above 140° F).

Turn the tool to lock it into the bayonet fitting.

Lift the bowl with the aid of the lifting handle.

The mixer is now ready to start.

It is possible to set both the running time and speed before starting the machine; see next section:

Start the machine:

Press to start the machine.

Press next to to increase the speed.

Press next to to reduce the speed.

The speed is shown as a number on the scale 12345678.

The display 12345678 represents the lowest speed, approx. 64 rpm.

The display 12345678 represents the highest speed, approx. 353 rpm.

If a specific start speed is wanted, you set the speed and then start the machine by pressing .

Display of running time – Timer function:

Select a running time for the machine by pressing next to . The running time is shown in minutes and seconds in the timer field between and .

Running times of up to 90 minutes are available.

When the machine is running, the running time will not be reset if is pressed once; press once more and it will be reset.

If no running time is selected, the display will show the time elapsed since the machine was started.

If the time set on the timer runs out while the mixer is running, the machine stops and you hear a beep.

Inspection of ingredients while in use:

If the machine needs to be stopped temporarily without affecting the running time, press . The machine will slow down and then stop and the running time will stop too.

The bowl can now be lowered and the ingredients checked.

Lift the bowl and press , and the machine will start and the running time will resume.

Stop the machine:

To stop the machine:

- Press . Running time not reset.
- Press twice. Running time reset.
- Press the emergency stop - the running time will be reset.
- Lower the bowl - the running time will be reset.

In all cases the machine can be restarted by pressing . It will start at the lowest speed.

OVERLOADING:



The machine must not be overloaded.

Possible overload situations:

- Working with excessively tough and heavy dough
- Mixer tool exceeding the recommended speed
- Wrong mixer tool being used.

Larger lumps of fat or chilled ingredients must be reduced before they are placed in the bowl.


Overloading will cause the frequency converter to stop the machine.

OL:1, **OL:2** or **OL:3** will be displayed in the timer field.

Follow the description under “**Procedure in case of overloading**”.

PROCEDURE IN CASE OF OVERLOADING:

Spot the error code in the section “**Error codes and possible solutions**”, **page 14** and follow the suggestion for a solution.

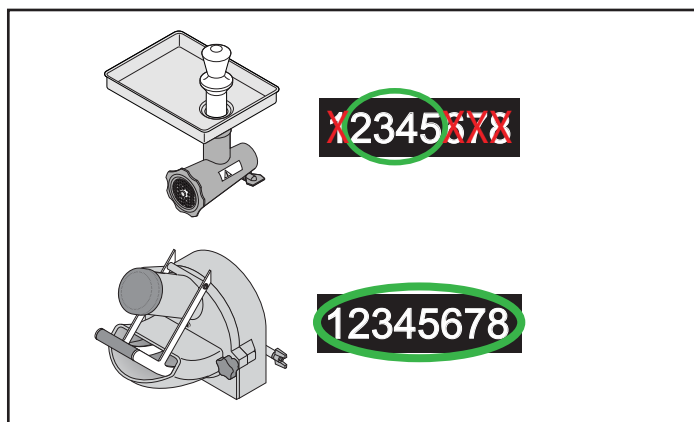
When done, remove the error code by pressing .

The mixer can now be restarted by pressing .

RECOMMENDED SPEEDS:



RECOMMENDED SPEEDS FOR ATTACHMENT DRIVE:



CORRECT USE OF TOOLS:

Recommended uses of tool:

Whip	Beater	Hook
Cream Egg whites Mayonnaise etc.	Cake mix Butter cream Waffle mix Forcemeat etc.	Bread dough Rye bread etc.



The whip should not be struck against hard objects such as the edge of the bowl. This will shorten the life of the tool because of increasing deformation.

To make mashed potato, use the beater and then the standard whip.

CLEANING:



The machine may only be cleaned by trained staff over 18 years of age.

The machine should be cleaned daily after use. It should be wiped with a soft brush and clean water. Sulphonated soaps should be used with care, as they destroy the lubricants in the machine.



The machine should never be rinsed with a hose.

The machine parts made of aluminium, bowl arms and bowl trolley, must not be washed with very alkaline cleaning agents (pH must be between 5.0 and 8.0).

Please note that the plastic safety guard may be damaged if it is exposed to high temperatures for a prolonged period. (**Max. temperature 140° F**)

The filling chute is dishwasher-safe.

The soap suppliers may be able to help by recommending the right type of soap.

LUBRICATION AND GREASE TYPES:



Lubrication and other servicing may only be carried out by trained staff over 18 years of age.

The lid of the mixer may only be removed when the cable to the power supply has been removed.

When repairs are made to the mixer head, the gear wheel and internal gear should be lubricated with **Molykote G-1502** the needle bearings in the mixer head can also be lubricated with this type of grease.

If the machine is supplied with an attachment drive, the gear for the attachment drive should be lubricated with **Statoil Grease-Way LiCa 80**.

Do not use any other grease types than those specified above.

ATTACHMENT DRIVE:




The machine may be fitted with an attachment drive into which optional accessories, such as meat mincers and vegetable cutters, can be attached.

For further information on the assembly and use of optional accessories, please refer to the manual that comes with the accessory.



The machine must be shut down when the accessory is fitted to the attachment drive.

SYSTEMATIC MAINTENANCE:

Part	Action	Frequency	Note
Safety guard	Check the safety of the safety guard: Does the tool stop rotating when the safety guard is tilted/removed?	Regularly	 If the tool does not immediately stop rotating on tilting/removal of the safety guard, the machine must not be used. Call the servicer
Emergency stop	Test the emergency stop: Does the tool stop rotating when the emergency stop is activated?	Regularly	 If the tool does not immediately stop rotating on activation of the emergency stop, the machine must not be used. Call the servicer
Mixer head	The mixer head should only be lubricated on repair, see the section “ Lubrication and grease types ” page 12.	During repairs	
The machine's other moving parts	The moving parts that belong to the bowl's lifting mechanism all run in maintenance-free plain bearings and should not therefore be lubricated.	Never	
Attachment drive	The rubber plug for covering the opening of the attachment drive should be on the machine and be intact.	Daily	 The rubber plug must cover the opening on the attachment drive when the latter is not in use.
Cleaning	Follow the instructions in the section “ Cleaning ” page 12	Follow the instructions in the section “Cleaning”	







READING THE MACHINES DATA:

Press the stop button for 5 sec. The machine's data will then be displayed as alternating text in the display. There are five readings corresponding to the five data sets described below:

- **Data set 1:** States firmware version, displayed as “F” followed by three figures, e.g. **F003** = firmware version 3.
- **Data set 2:** States the machine's running time, displayed as “t” followed by three figures, which indicate the number of 9.999-minute cycles, e.g. **t002** = 2 x 9.999 min., or 19.998 min.
- **Data set 3:** Displays four figures, which indicate the number of minutes the current cycle has been running, e.g. **1234** = 1.234 min. I.e., if **t002** is displayed followed by **1234**, the machine has been running for 19.998 min. + 1.234 min., or a total running time of 21.232 min.
- **Data set 4:** States the number of times the machine has been disconnected from the power supply (plug pulled out of the machine/power outage/switched off) and restarted, displayed as “r” followed by three figures, which indicate the number of restarts, e.g. **r002** = 2 x 9,999 restarts, or 19,998 restarts.
- **Data set 5:** Displays four figures, which indicate the number of restarts which have happened in the current cycle, e.g. **1234** = 1234 times. In other words, if **r002** is displayed followed by **1234**, the machine has restarted a total of 19,998 + 1,234 times, or 21,232 times.


READING THE ERROR LOG:

It is possible to display a log of the errors that have occurred:

- Hit emergency stop and press  next to .
- The display shows the latest error first.
- To scroll back through the errors, press  next to ; to scroll forward, press  next to .
- The last eight errors can be displayed.
- Deactivate emergency stop to cancel the display.

ERROR CODES AND POSSIBLE SOLUTIONS:

For some errors, the control system will show an error code in the display:

EE: 1 User pressed  without raising the bowl to working height.

Solution: Raise bowl to working height.

EE: 2 User pressed  without fitting the safety guard.

Solution: Fit the safety guard.

EE: 4 The Thermal sensor in the motor has overheated.

Solution: The error will disappear when the temperature has dropped to an acceptable level.

Stop the machine and reduce the quantity of ingredients in the bowl. When it starts again, select a lower speed.

EE: 6 There is an error in communication between the control panel and the frequency converter.

Solution: Call the engineer.

EE: 7 Error in frequency converter.

Solution: Call the engineer.

EE: 8 Thermal sensor in the frequency converter has cut out.

Solution: The error will disappear when the temperature has dropped to an acceptable level.

EE: 9 Intermittent low voltage in the power supply.

Solution: The power supply to the machine should be checked by an expert.

EE: 10 Intermittent high voltage in the power supply.


Solution: The power supply to the machine should be checked by an expert.

EE: 14 [EE:14] Wrong parameter in frequency converter

Solution: Call the engineer, reference - Varimixer instruction 23020-1602


OL:1 The machine is overloaded - continuously for 50 seconds.

Solution: Reduce the quantity in the bowl; alternatively, the product may need to be divided into smaller parts or diluted before the machine is restarted. When restarted, select a lower speed, if speed was the problem.

The error code is removed by pressing 


OL:2 The machine is overloaded - momentarily (overloaded 8 times within 20 seconds).

Solution: Reduce the quantity in the bowl; alternatively, the product may need to be divided into smaller parts or diluted before the machine is restarted. When restarted, select a lower speed, if speed was the problem.

The error code is removed by pressing 

OL:3 Blockage.

Solution: Remove the object that caused the blockage.

The error code is removed by pressing 

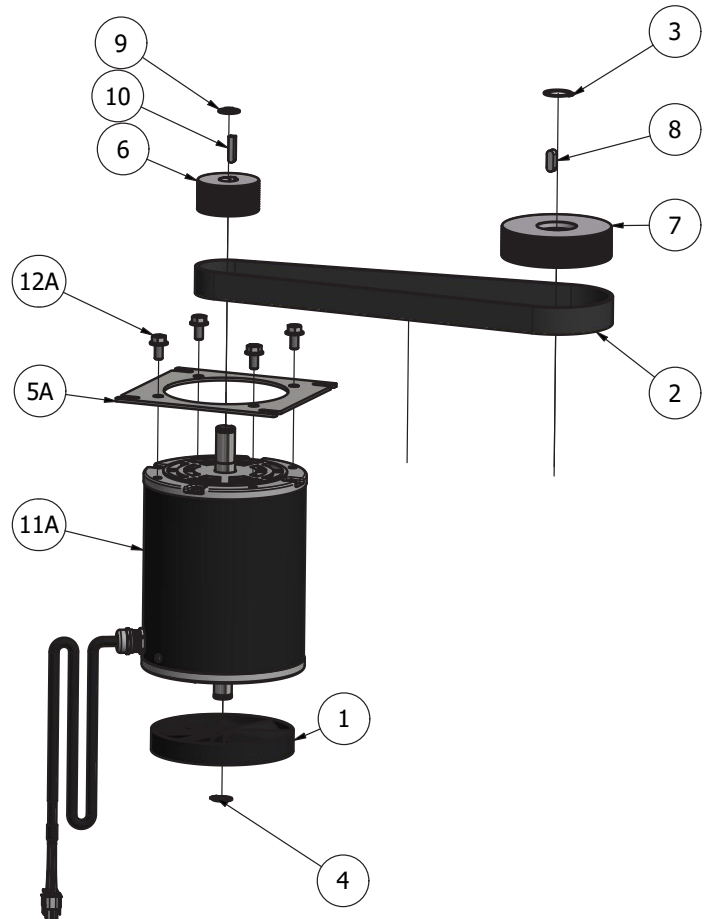
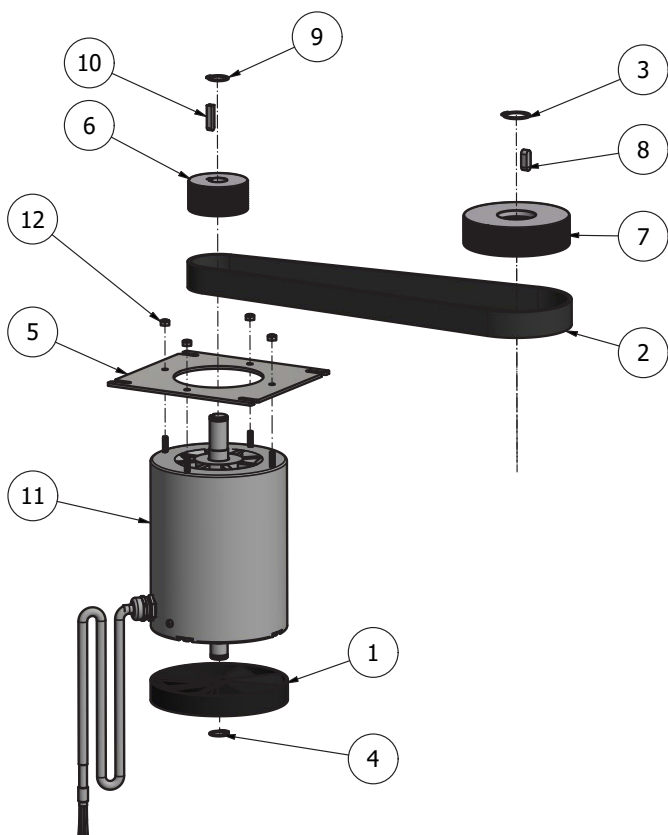
OL:1, **OL:2** and **OL:3** can also occur when using the attachment drive.

MIXER SPARE PARTS

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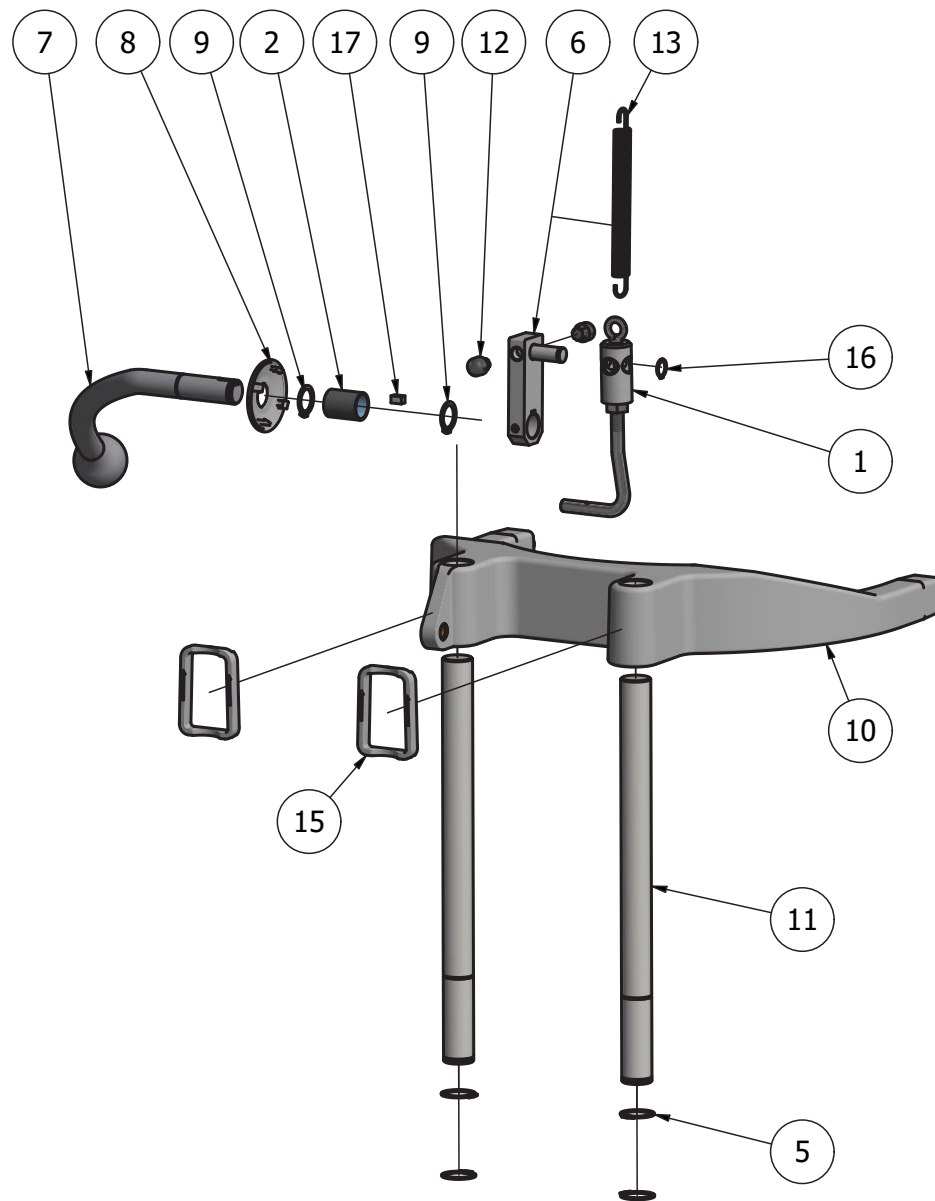
TRANSMISSION	17
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ITEM	Part number	Name	Used for
1	RN20-87	Fan	
2	CR30-90	Micro-V	
3	STA3410	Circlip	
4	STA3413	Circlip	
5	CR20-61.3	Mounting plate motor	100/115/120/230/400/440/480V
5A	CR30-61.3	Mounting plate motor	200/208V
6	CR20-128	Pulley ø63	
7	CR20-129	Pulley ø112	
8	STA2037	Feather key	
9	STA3407	Circlip	
10	STA2004	Feather key	
11	CR20-85	Motor 700W	100/115/120/230/400/440/480V
11A	CR30-85.1	Motor 1500W	200/208V
12	STA5834	Hexagon lock nut	
12A	STA5751	Hexagon cap screw	200/208V



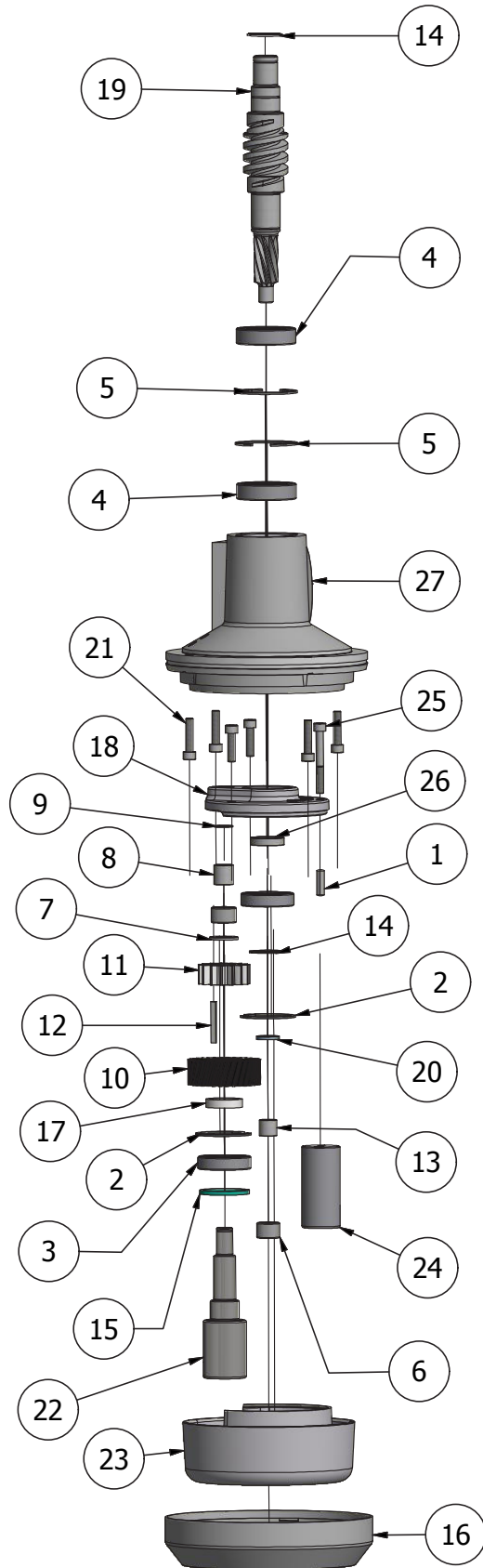
LIFTING SYSTEM

ITEM	Part number	Name
1	CR30-83.1M	Lifting bolt
2	STA2515	Bearing bushing
5	STA3410	Circlip
6	CR30-63M	Crankshaft
7	CR20-62M	Lifting arm
8	CR30-62.9	Cover
9	STA3408	Circlip
10	CR20-23M	Bowl arm
11	CR20-68.5	Shaft
12	CR30-63.3	Absorber plug
13	CR20-110	Spring
15	CR20-23.5	Gasket
16	STA3403	Circlip
17	STA2019	Feather Key

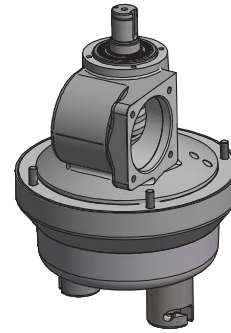


PLANETARY HEAD

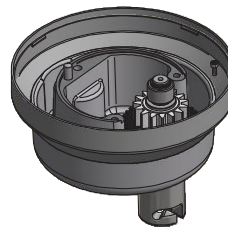
ITEM	Part number	Name
1	STA6460	Dowel pin
2	STA3515	Retaining ring
3	6006 2RS	Ball bearing
4	6206 2RS	Ball bearing
5	STA3518	Retaining ring
6	HK1816	Needle bearing
7	R20-235	Axial washer
8	LR17	Bushing
9	STA3470	Circlip
10	R20-32	Tooth wheel 1
11	R20-31	Tooth wheel
12	STA2008	Shaft key
13	LR15	Bushing
14	STA3414	Circlip
15	CR30-108R	Sealing ring
16	RN20-272.1	Shell
17	CR30-34	Distance ring
18	CR30-36	Eccentric disc
19	CR30-30.5	Main shaft
20	RN20-108R	Shaft gasket
21	STA5638	Socket head screw
22	CR20-33.6	Bayonet shaft
23	CR30-2.1	Lower head
24	42CR20-105	Bayonet shaft scraper
25	STA5729	Socket head screw
26	CR30-37	Distance ring
27	CR20-1	Planetary gear - machined
27	CR20-1.1	Planetary gear attachment drive
	42CR20-105Z	Bayonet shaft for scraper complete
	CR20-1.1Z	Upper part planetary head, attachment drive
	CR20-1Z	Upper part planetary head
	CR20-2.10Z	Eccentric head mounted
	CR20-2.11Z	Eccentric head for scraper mounted
	CR20-2.1Z	Planetary head scraper
	CR20-2.2Z	Planetary head attachment drive
	CR20-2.3Z	Planetary head scraper+attachment drive
	CR20-33.6Z	Bayonet shaft complete
	CR30-2.1Z	Eccentric head for scraper complete
	CR30-2Z	Eccentric Main complete
	CR30-30.5Z	Main Shaft for attachment drive
	CR30-30.6Z	Main shaft
	CR30-36Z	Eccentric disc mounted
	RN20-101Z	Needle bearing complete



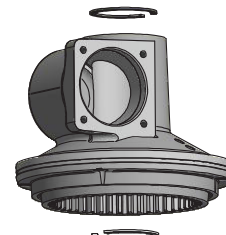
CR20-2Z
CR20-2.1Z
CR20-2.2Z
CR20-2.3Z



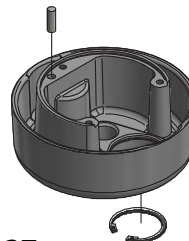
CR20-2.10Z
CR20-2.11Z



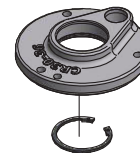
CR20-1Z
CR20-1.1Z



CR30-2Z
CR30-2.1Z



CR30-36Z



RN20-101Z



42CR20-105Z



CR30-30.6Z



CR30-30.5Z



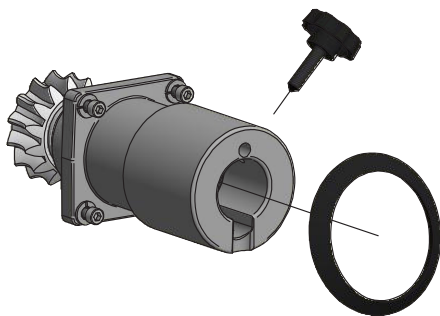
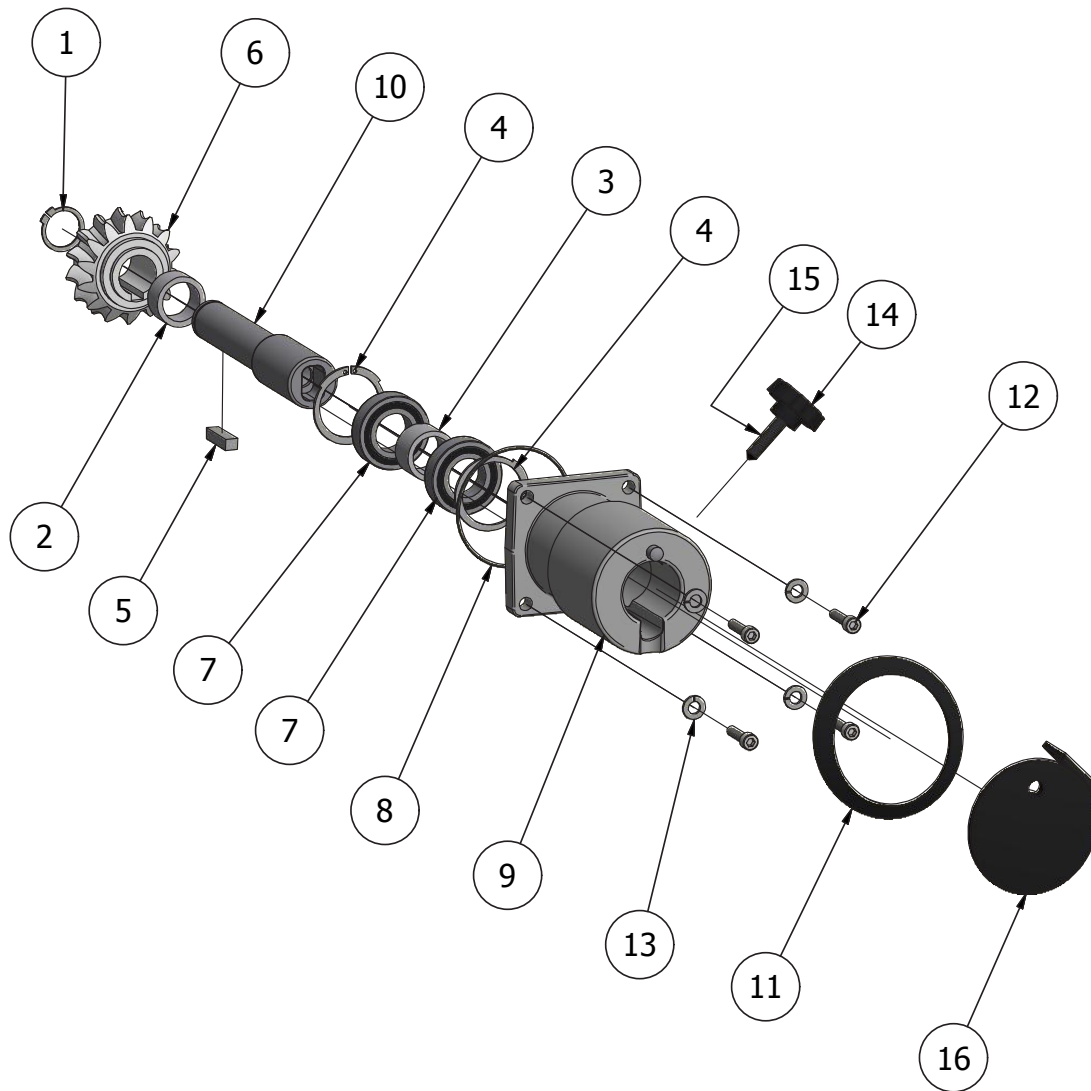
CR20-33.6Z



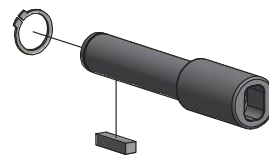
ATTACHMENT DRIVE

ITEM	Part number	Name
1	STA3410	Circlip
2	R100-143	Spacer
3	RN20-37	Distance bushing
4	STA3512	Circlip
5	STA2031	Feather Key
6	RN20-9	Worm wheel
7	6005 2RS	Ball bearing
8	STA3127	O-ring
9	CR20-8.6M	Bearing house machined
10	CR30-50.6R	Attachment drive shaft #12
11	CR30-211	Attachment drive collar
12	STA5625	Socket head screw
13	STA6038	Spring lock washer
14	STA5562	Hand screw
15	STA5682	Screw
16	312C	Blind cover #12

CR20-10.6Z	Attachment drive #12 complete
CR20-50.6Z	Shaft #12 complete



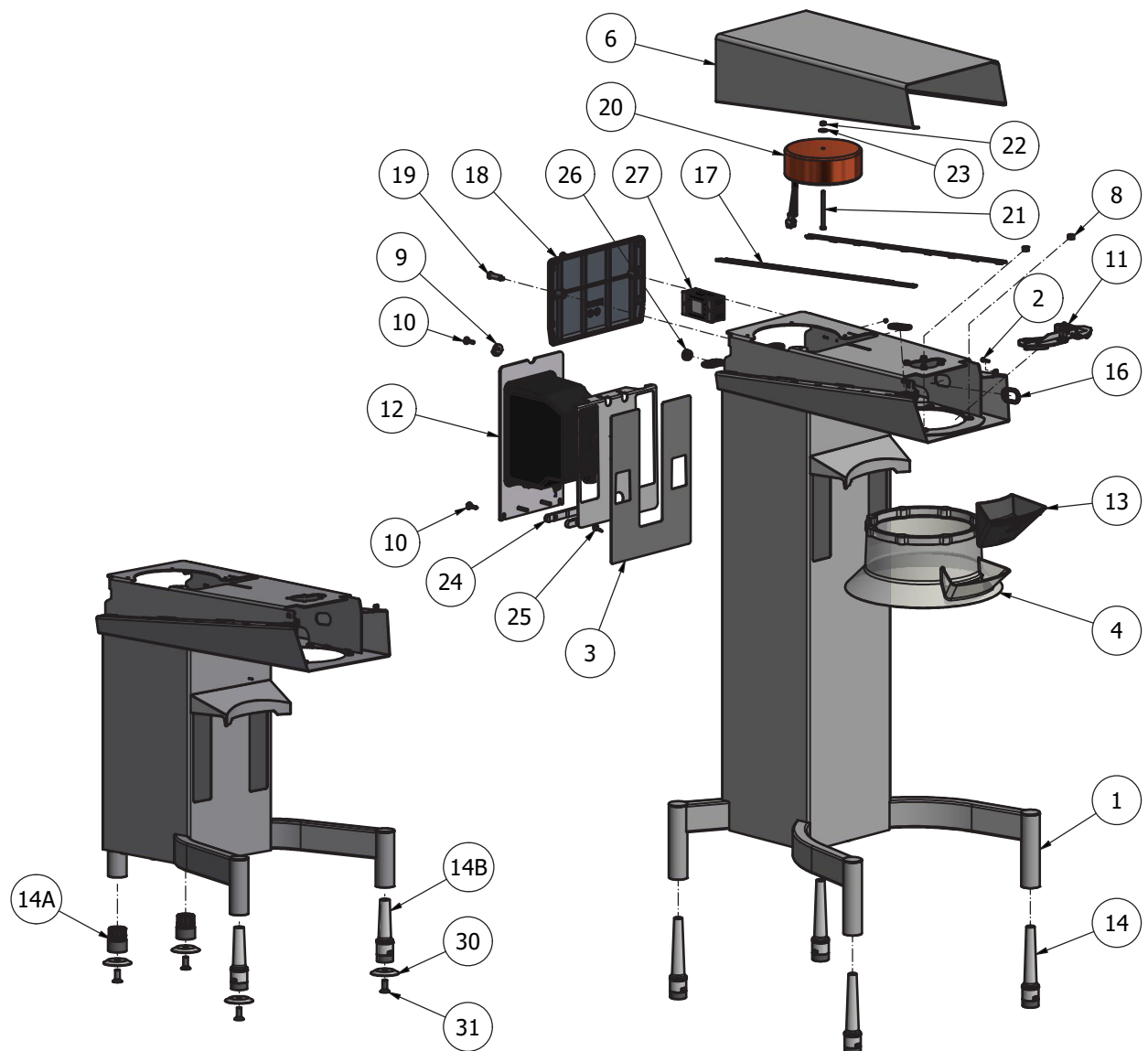
CR20-10.6Z



CR30-50.6Z

MACHINE COLUMN

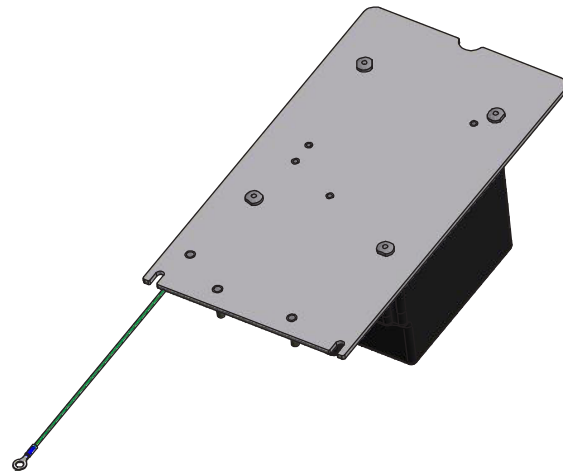
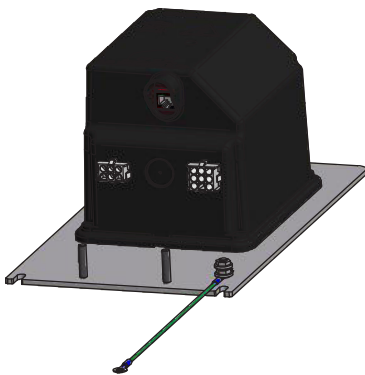
ITEM	Part number	Name	Used for
1		Machine frame	
2	STA5707	Socket head screw	
3	CR30-304	Cover plate	
4	56CR20P-22	Safety guard	
5	56CR30-109	Micro switch ring	
6	CR20-21.1R	Top cover	
7	STA5750	Hex cap screw	
8	STA5842	Hexagon locknut	
9	CR30-22.18	Wring	
10	STA5028	Captive marine screw	
11	56CR20-110M	Switch bracket complete	
12	See page 26	Frequency converter	
13	56WR20-280	Filling tray	
14	CR20-218	Adjustable leg	Floor model
14A	CR20-218.1	Rubber foot	Table model
14B	CR20B-218	Adjustable leg	Table model
15	56CR20-111M	Bowl detection bracket floor	
16	STA3175	Grommet oval	
17	CR20-551	Gasket top cover	
18	CR20-291M	Back panel with seal	
19	STA9008	O-ring Marine screw	
20	CR20-430.3	Isolating transformer	400/440/480V
21	STA5373	Hex cap screw	
22	STA5837	Lock Nut	
23	STA6014	Flat washer	
24	CR30-602	Shield bracket	
25	STA5803	Wing nut	
26	STA6517	Plug black	
27	CR30-602	EMC filter	
30	CR20B-219R	Welding foot	Marine model
31	STA5798	Hexagon socket screw	Marine model
	CR20-218R	Adjustable leg	Marine Floor model



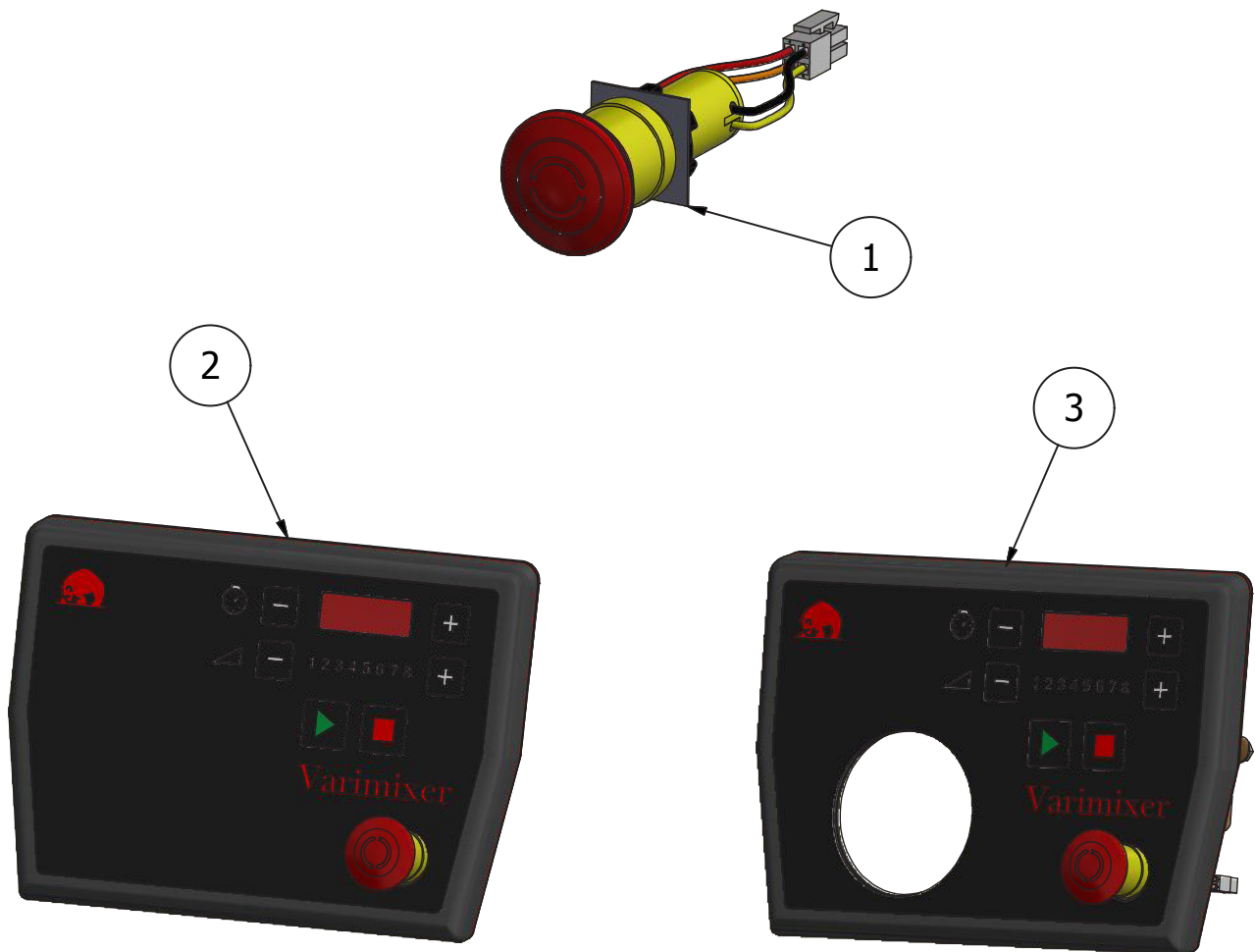
56CR20-110M	CR20-218R	56CR20-111M	56CR20-280 56CR20P-22

FREQUENCY CONVERTER

Part number	Name	Used for
WR20-552.5M	Frequency converter 700W	100/115/120/
WR30-552.4M	Frequency converter 1500W	200/208V
WR20-552.4M	Frequency converter 700W	400/440/480V



No.	Part number	Name
1	CR10-174.35Z	Emergency stop complete
2	CR20-501.13M	Front panel mounted
3	CR20-501.14M	Front panel Attachment drive mounted

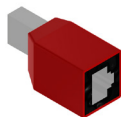


CABLES

Part number	Name	
CR10-194.10	Communication cable	
STA7256	Crossover adapter	
CR20-194.5M	Earth cable short	
CR20-194.6M	Earth cable long	
CR30-194.7M	Earth cable	
CR20-194.25M	Cable for contactor	
CR20-194.26M	Cable security input	
CR20-194.27M	Cable for frequency converter to front	

		Used for
CR20-542	Main cable	
CR20-543	Security cable main cable	200/208/230V
CR20-543.2	Security cable main cable, transformer	400/440/480V
WR20-543	Security cable main cable 120V	100/115/120V
CR20-194.7M	Cable for trafo	400/440/480V

STA7256



CR10-194.10



CR20-194.5M



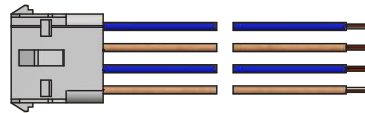
CR20-194.6M



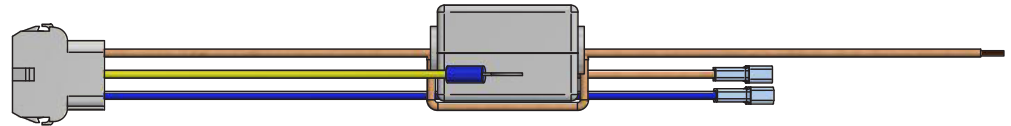
CR30-194.7M



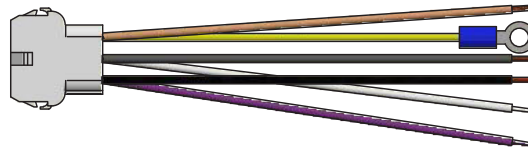
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CR20-194.26M



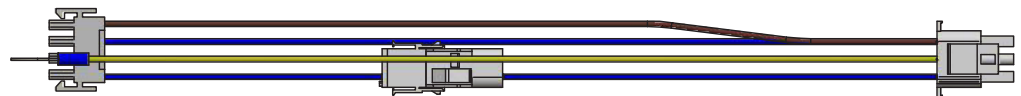
CR20-194.27M



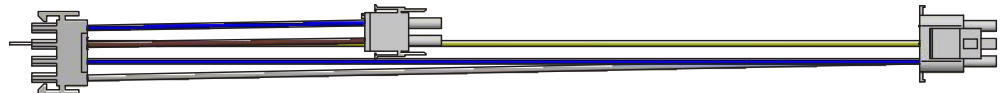
CR20-542



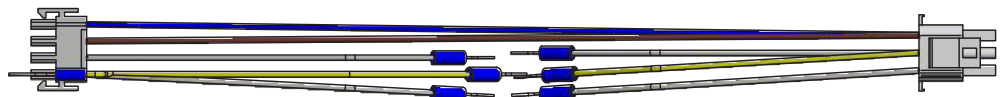
CR20-543



CR20-543.2



WR20-543

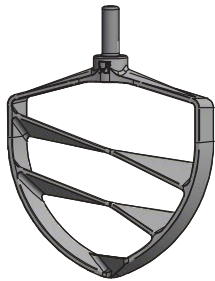


CR20-194.7M



ACCESSORIES

ITEM	Part number	Name	Sold As
1	CR20-27.2M	Beater 20K	VBEAT-20K
2	CR20-28M	Whip 20K	VWHIP-20K
3	CR20-78M	Hook 20K	VHOOK-20K
4	CR20-75M	Bowl 20K	VBOWL-20K
5	CR20-27A2M	Flat Beater 20/12	VBEAT12-20K
6	CR20-28AM	Whip 20/12	VWHIP12-20K
7	RN20-78AM	Hook 20/12	VHOOK12-20K
8	CR20-75AM	Bowl 20/12	VBOWL12-20K
9	42CR20P	Scraper complete	VSCRP-20K
10	42CR20AP	Scraper complete 20/12	VSCRP12-20
11	42CR20-204	Scraper blade 20	VSCRP-20K
12	42CR20-204A	Scraper blade 20/12	VSCRP12-20
13	22CR20	Bowl trolley	VBTRUCK-30K



1+5



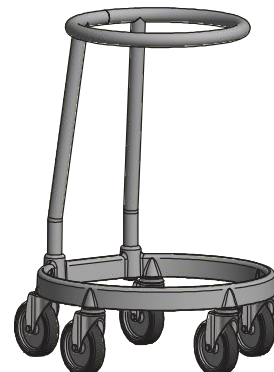
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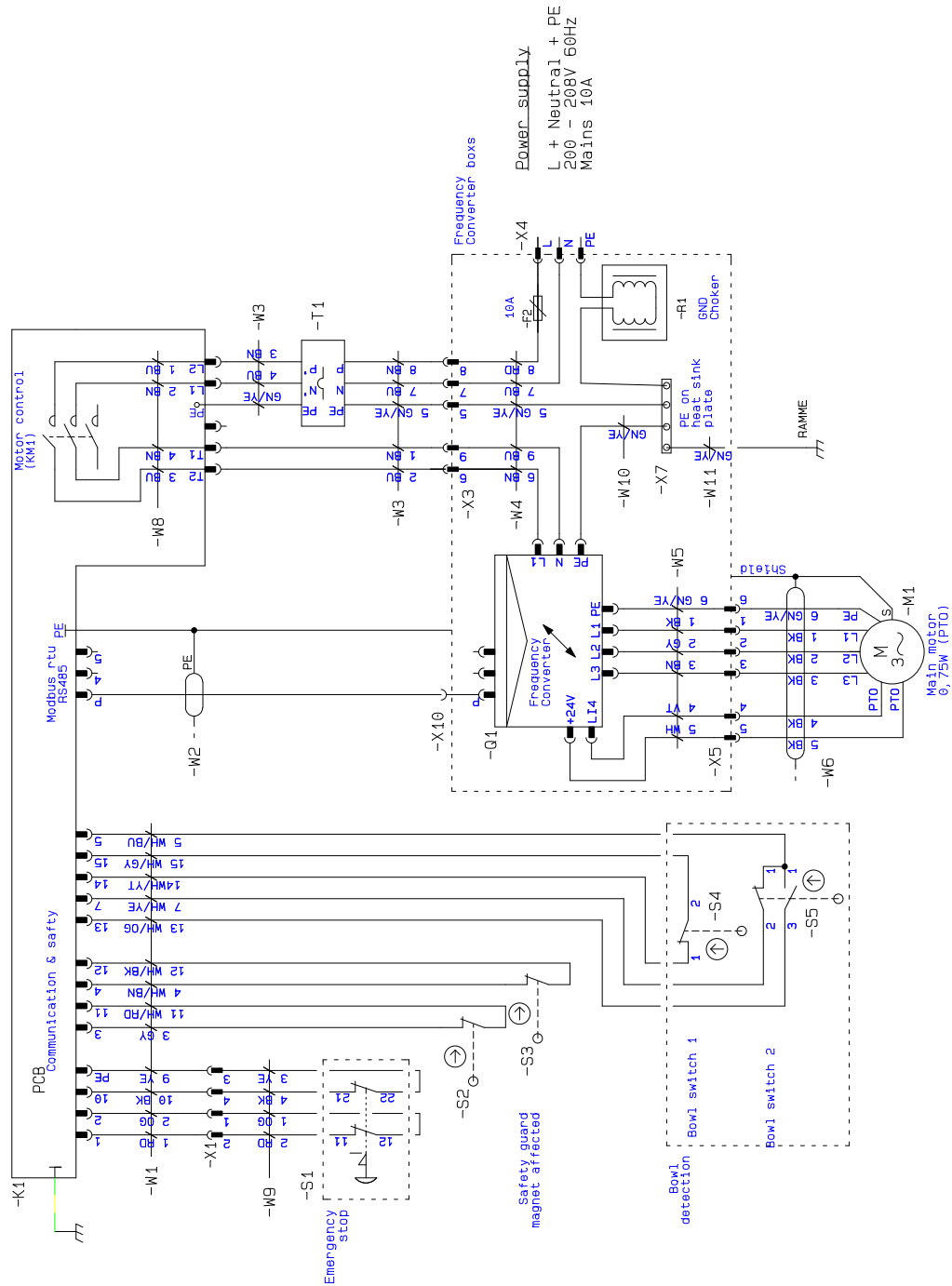
3+7



4+8

9
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12

13





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