

# Technical Specification

## Dieta MI-MX kettles

- **MX** Mixer kettle
- **MI** Mixer kettle

### Net volumes

- 40, 60, 80 and 100 L
- 100, 150 and 200 L
- 300, 400 and 470

### Heating

- Electric
- Direct steam [option]

### Installations:

#### 40 to 300 L:

- Freestanding, FS
- Floor-mounted, FL [option]
- Floor-mounted [600mm tilting height], FL K600 [option]
- Wall-mounted [option]

#### 400 and 470 L:

- Floor-mounted, FL1200

### Mixer:

- Mixing speeds 10 to 200
- 7 mixing modes with auto-reverse
- Pulse switch for mixing when the lid is open
- Three-piece mixer tool with removable scrapers

### Construction:

- Electronic tilting
- Water nozzle is located on the kettle rim allowing water filling while lid is closed
- Jacket max. pressure 1.5 bar [128 °C]
- Kettle interior AISI 316 stainless steel, outer body AISI304L
- Removable stainless steel lid with grid
- Spring-loaded lid hinge
- Water and electrical components in separate legs

### Functional Options

- Weighing [MX only]
- GSM module for online troubleshooting [MX only]
- HACCP data collection [MI only, included in MX]
- Circulated water cooling
  - CH5: Integrated return pump and intermediate tank in the kettle for ice bank
  - CH4: Water circulated with the ice bank pump

### Other options

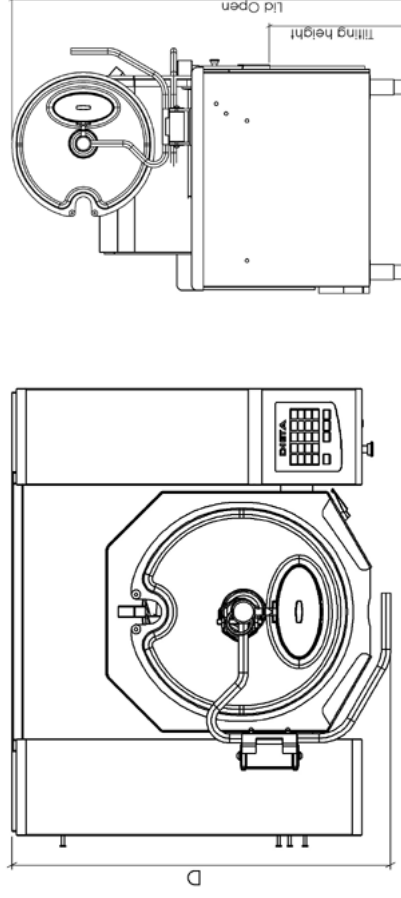
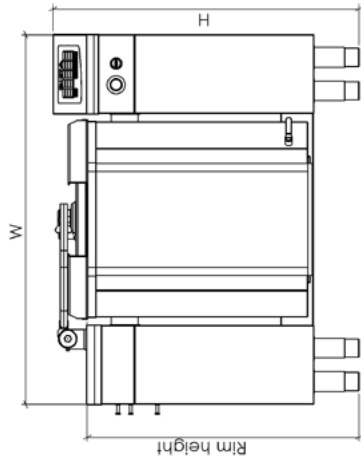
- Soft water connection
- Hot food water connection
- Draw-off valve
- Washing hose
- PT100 connection for an external HACCP system



### Control system

- 7-inch touchscreen
- Icon-based user interface
- Cooking controlled by the food temperature; set value 0...125 °C
- Automatic cooking water supply
- Automatic jacket water supply & control

Controller Properties	MI	MX
Quick access function	Yes	Yes
EASY function	Yes	Yes
Programmable	Yes	Yes
Programme slots	120	1,000
AutoCook programming	No	Yes
Programme steps	1-6	1-6
Programme notes	Yes	Yes
FAVOURITES programs	No	Yes
Quick access to wash prg.	No	Yes
Timer, fully programmable	1	2
HACCP memory,	Opt.	Yes
Scale	No	Opt.
User profiles	1	4
Diagnostics, event log	Yes	Yes
Instructions, help	Yes	Yes
GSM maintenance link	No	Opt.
Power cut protection	Yes	Yes



	MI-MX 40	MI-MX 60	MI-MX 80	MI-MX 100n	MI-MX 100	MI-MX 150	MI-MX 200	MI-MX 300	MI-MX 400	MI-MX 470
<b>MEASUREMENTS / WEIGHTS</b>										
<b>Volume</b> <i>net/gross (L)</i>	40/52	60/70	80/90	100/110	100/120	150/165	200/215	300/325	400/425	470/500
<b>Freestanding installation, FS / Floor mounted installation FL</b>										
<b>Main measurements</b> <i>WxDxH/ Lid open (mm)</i>	1220x1034x1013/1657	1220x1034x1013/1657	1220x1034x1013/1657	1220x1034x1013/1657	1370x1177x1013/1808	1370x1177x1013/1808	1370x1177x1013/1808	1620x1279x1013/2027	-	-
<b>Weight</b> <i>net/ with transport package (kg)</i>	250/295	260/305	270/315	280/325	300/360	320/380	345/405	400/470	-	-
<b>Tilting height</b> <i>(mm) from the bottom of the spout</i>	575	575	575	575	425	425	425	315	-	-
<b>Rim Height</b> <i>(mm)</i>	900	900	900	900	900	900	900	900	-	-
<b>Transport package</b> <i>WxDxH (mm)</i>	1400x1245x1220	1400x1245x1220	1400x1245x1220	1400x1245x1220	1550x1375x1220	1550x1375x1220	1550x1375x1220	1800x1455x1220	-	-
<b>Floor mounted 600mm tilting height installation, FL K600</b>										
<b>Main measurements</b> <i>WxDxH/ Lid open (mm)</i>	1310x977x1138/1657	1310x977x1138/1657	1310x977x1138/1657	1310x977x1138/1657	1460x974x1138/1808	1460x974x1138/1808	1460x974x1138/1808	1710x1161x1138/2027	1710x1232x1313/2327	1710x1232x1313/2327
<b>Weight</b> <i>net/ with transport package (kg)</i>	290/335	300/345	310/365	320/365	340/400	360/420	385/445	415/485	520/590	545/615
<b>Tilting height</b> <i>(mm) from the bottom of the spout</i>	600	600	600	600	600	600	600	600	615	615
<b>Rim Height</b> <i>(mm)</i>	900	900	900	900	900	900	900	900	1200	1200
<b>Transport package</b> <i>WxDxH (mm)</i>	1490x1195x1455	1490x1195x1455	1490x1195x1455	1490x1195x1455	1640x1195x1455	1640x1195x1455	1640x1195x1455	1890x1355x1455	1900x1530x1630	1900x1530x1630

	MI-MX 40	MI-MX 60	MI-MX 80	MI-MX 100n	MI-MX 100	MI-MX 150	MI-MX 200	MI-MX 300	MI-MX 400	MI-MX 470
<b>HEATING CONNECTIONS</b>										
<b>MI and MX [Mixer kettles]</b>										
<b>Electric</b>	400/50/3, 14,5 kW 25A	400/50/3, 19,0 kW 32A	400/50/3, 23,0 kW 40A	400/50/3, 29,0 kW 40A	400/50/3, 24,0 kW 40A	400/50/3, 29,5 kW 50A	400/50/3, 37,5 kW 63A	400/50/3, 52,0 kW 80A	400/50/3, 52,0 kW 80A	400/50/3, 52,0 kW 80A
<b>Steam flow rate [Steam]</b> kg/h	25	30	35	35	40	55	70	95	100	110
<b>Electric [Steam]</b>	400/50/3, 1,1 kW 10A	400/50/3, 1,1 kW 10A	400/50/3, 1,1 kW 10A	400/50/3, 1,1 kW 10A	400/50/3, 2,2 kW 10A	400/50/3, 2,2 kW 10A	400/50/3, 2,2 kW 10A	400/50/3, 3,0 kW 16A	400/50/3, 3,0 kW 16A	400/50/3, 3,0 kW 16A
<b>WATER CONNECTIONS</b>										
<b>Cold Water</b> <i>2...8 bar, Filt. To 15 µm, *</i>	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"
<b>Warm Water [Option]</b>	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"
<b>Softened Water [Option]</b> <i>1...8 bar, Filt. To 15 µm, *</i>	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"
<b>Hot Water [Option]</b> <i>max 80 °C, 2...8 bar, Filt. To 15 µm</i>	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"
<b>Steam [Option]</b> <i>1,5 - 2 bar</i>	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"
<b>Condensate [Option]</b> <i>Counter pressure. Max 0 bar</i>	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"	DN 20, G3/4"
<b>Chill in CH4 [Option]</b> <i>+0,1 - +1 °C, 3...5 bar</i>	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 20, G3/4"	DN 20, G3/4"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"
<b>Chill Out CH4 [Option]</b> <i>Counter pressure. Max 0 bar</i>	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"
<b>Chill in CH5 [Option]</b> <i>+0,1 - +1 °C, 3...5 bar</i>	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 15, G1/2"	DN 20, G3/4"	DN 20, G3/4"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"
<b>Chill Out CH5 [Option]</b> <i>Counter pressure Max 1 bar</i>	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"	DN 25, G1"

\* Water for steam generator: 0...40 °C, max 6 °dH, conductivity 30...1000 µS/cm, chloride <100 mg/l, chlorine <0,25 mg/l

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## Installation

- Free Standing Installation without the need for floor bolting (Standard 40...300 L)
- Directly bolted to floor or bolted to floor with installation frame (Standard 400...470L, Optional configuration 40...300 L)
- Mounted to the wall (Optional configuration 40...300L)

## Control system

- Electronic controller for automated Cook-Mix-Chill operation
- The controller is a single board controller featuring a 800x480 resolution TFT 7-inch high brightness LCD display with a resistive touch screen
- Operating buttons connected directly to the hardware interface and are operational at all times, regardless of the state of the controlling software
- Cooking water measurement. Valve is activated from control panel. Three functions:
  - Valve opening + measurement of water amount
  - Set water amount and open valve
  - Water amount a part of the cooking program parameters
- Food temperature measurement by food temperature probe (PT100). Display resolution 1°C, internal resolution 0.1 °C
- Kettle cooking function is controlled by the food temperature. Set value for cooking 0...125 °C. Display resolution 1°C, control resolution  $\pm 0.5$  °C, internal resolution 0.1 °C. NOTE! Jacket temperature is set automatically based on the food temperature set value
- Auto-Cook operational aid with 50 ready recipes/ cooking programs
- User programmable; 1 - 6 steps/program each step with up to 6 parameters
- Memory for up to MX/1000, MI/120 programs. Each with editable names
- MX; 1...16 program folders, each with editable name. Folders can be assigned as Favorites
- USB Connection; Copying of program parameters from one kettle to another, software upgrades and HACCP Reporting for all programs which run for more than 15 min
- Fully programmable timer (date and time) and "egg timer".NOTE! Kettle can be used normally also when timer is activated
- For fast cleaning separate wash programs (MX 3, MI 1) to be used together with optional wash tool
- Customer specific basic settings
- Diagnostics, hour counter and service indicator
- Ethernet for connection to external computer

## Mixer

- Integrated mixer in the bottom of the kettle. Mixer drive shaft in a protective pipe sleeve. Shaft bearing above kettle rim
- Mixer shaft sleeve is heated and cooled
- Mixer Tool (included) with removable Teflon scrapers is a patented 3-piece design. Up to 200 L kettles the tool parts can be placed in standard 500 x 500 basket
- The tools is mechanically locked into the drive shaft
- Speeds; 10 ... 200 [40 ... 80 L = 200 rpm, 100...200 L = 155 rpm, 300 ... 470 = 120 rpm]
- 7 mixing modes incl. auto reverse
- Mixer can be activated with a pulse switch when kettle is tilted or kettle is tilting

## Chilling

- Activated from controller or as part of a cooking program.
- Chilling temperature can be set. Once set temperature is reached a Chill-Hold function is activated.
- Chilling stopped by pressing the controller or as defined in the program (MI-MX)
- Automatic emptying of jacket to drain before next cooking. Pump assisted jacket emptying in sizes 300...470 L (CH4/CH5: 100...470L)
- Standard:
  - CH3: Fully automatic chilling performed with tap water (food water) which flows to drain
- Optional:
  - CH4: Fully automatic chilling with ice-water in a closed circuit.
    - Ice water generated by customer's ice bank which is located next to the mixer kettle.
    - Chilled center axis that increases chilling surface
    - Pump assisted jacket emptying in sizes 100...470 L

- CH5: Fully automatic chilling with ice-water in a closed circuit with a return pump.
  - Kettle equipped with an integral chill media return break tank and pump.
  - Ice water generated by customer's ice bank which is located in a separate room.
  - Chilled center axis that increases chilling surface
  - Pump assisted jacket emptying in sizes 100...470 L

## Construction

- Kettle volumes are informed as net. In accordance with DIN18855-1 there is 40 mm safety level
- Jacket max pressure is 1,5 bar (128 °C)
- Kettle inner parts AISI 316 stainless steel
- Kettle lid is mirror polished stainless steel equipped with spring loaded hinge
- Lid has a safety grid (incl. separate lid) for adding ingredients (only Soupper)
- The lid is easily removable for cleaning
- Water nozzle is located on the kettle rim allowing water filling while lid is closed
- Water and electrical components in separate legs. Main leg with controller and electrical components.
- Outer kettle body and stand are AISI 304 stainless steel
- The control panel is slanted and integrated into the main leg construction.
- Volume measuring stick included
- Tilting by electrical motor. The brake function of the motor ensures an immediate stopping of the movement when tilt button is released. No need for "tilt-back"

## Compliance

- The kettle fulfills DIN18855-1 standard for Rapid Kettle
- Compliant to CE requirements for safety
- Prevention of water pollution by backflow in accordance with EN 1717

## Main safety features

- Automatic water fill of steam jacket
- Mixer functions only when lid is closed/tilting functions only when lid is open
- Maintenance switch (disconnection switch)
- Emergency off switch
- Safety valve
- Pressure switch
- Level switch
- Overcurrent/overheating protection for electrical tilting- and mixing motor
- Contactor malfunction; "CONTACTOR ERROR"

## Factory installed main options

- Heating with direct steam from customer house steam generator
- MX; Integral scale with load measurement components connected to the controller. Total weight and tare displayed simultaneously. Measurement accuracy and display resolution 0,1 kg
- MX; GSM Module for on-line troubleshooting and data transfer. A certified service organization has on-line connection to the kettle with faster and accurate service support as result
- MI; HACCP data collection
- Additional PT100 for connection to customer HACCP data collection system
- NITO was hose with cold alternatively cold/hot water
- Emptying valve 2" (alt. 3"). Standard valve is Echtermann [2"]. Other valves & configurations available on request
- Control panel in a separate box installed with pillar above the main leg. Control panel is slanted.

## Main Accessories

- Strainer plate
- Special mixing tools: Whipping tool and mixing hook
- Washing tools
- GN-tray holder
- Trolley for kettle accessories