



**Electronically controlled  
instantaneous water heaters**



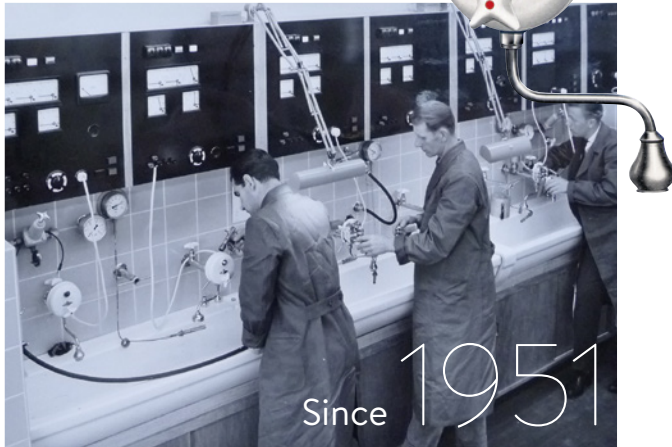
**Made in Germany**

**Simply efficient.**

# More than 69 years of technology experience



Made in Germany



## Made in Germany

In 1951, Claus-Holmer Gerdes started selling mini instant water heaters. Today, we are a second-generation, owner-operated mid-size company in the northern German Hanseatic city of Lüneburg.

More than 280 employees are responsible for development, design, production and distribution of the energy-efficient hot water heaters with a high standard of quality.



Today

## Strong international presence with leading distributors

As a specialist for decentralised warm water supply, we offer a large product range with many individual solutions. As market leader in the mini instant water heater sector, we are committed to the constant search for new solutions and innovation in all areas of decentralised hot water preparation.

That's why we were named "Innovation Ambassador" by the Chamber of Commerce and Industry.

In 2017, CLAGE was awarded as one of the top 100 most innovative companies of Germany's small and medium-sized enterprises!



CLAGE – Corporate movie

# Decentral is ideal

## The benefits



### Short water lines

for water and energy conservation



### Hot water at the temperature you want

Temperature can be set on the unit



### Instantly the right temperature

On demand, right away



### Saves water

No more adding cold water



### Saves operating costs

by avoiding stored water heat losses



### Saves space

No space needed for tanks

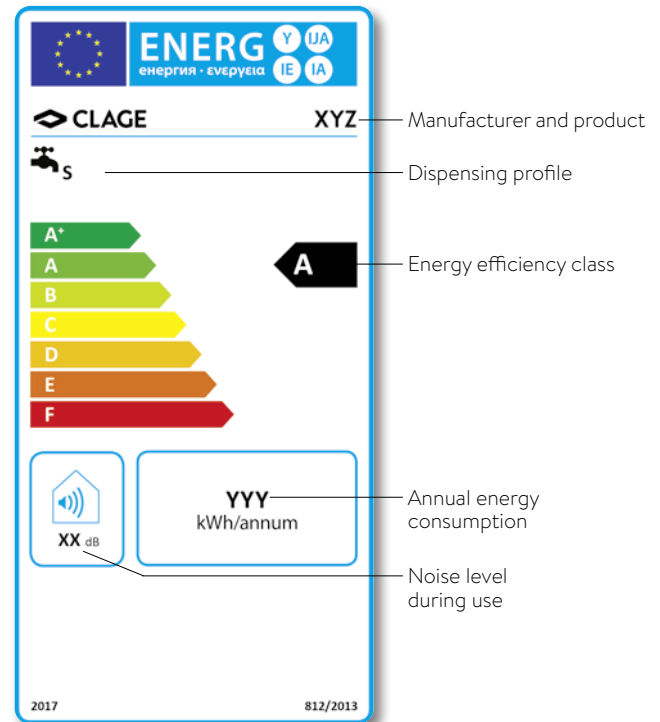


### Protects the environment

because less water and energy are used

# Energy efficiency label

## At a glance



The new energy labels for hot water units confirm that decentralised hot water supply with electronically controlled instant water heaters is one of the most energy-efficient technologies.



## E-mini instant water heaters – energy savers at the washbasin

An E-mini instant water heater is the most efficient hot water supply solution at the washbasin. The water is not preheated but is heated directly at the sink as it flows through the unit. This consistently avoids water line and heat losses.





### Lowers operating costs

Energy savings at the washbasin



### Saves space

Can hide away under any basin: 19 × 14 × 9 cm



### Instantly the right temperature

On demand, right away



### More hygiene

due to short water lines



### Installation video

### Hot water requirement:

	10 s	2 l/min	35 °C



## E-mini instant water heater MCX



- > **Electronically controlled instant water heater** with a compact design for energy-efficient hot water supply of a basin or a kitchen sink
- > **The heating output is electronically controlled.** This provides an ideal hot water temperature without the need to add cold water at the tap
- > **Touch button controls** with colour LEDs to set the outlet temperature to 35 °C, 38 °C or max. 45 °C
- > Connection kit (T-piece and flexible pressure hose) for an angle valve is included

Type:	MCX3	MCX4	MCX6	MCX7
Energy efficiency class (scale: A+ to F):	A			
Part number:	1500-15003	1500-15004	1500-15006	1500-15007
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>			
Water connections (thread connections):	G 3/4"			
Hot water output at $\Delta t = 25\text{K}$ <sup>2)</sup> [l/min]:	2.0	2.5	3.3	3.7
Switch-on flow rate / max. flow rate <sup>3)</sup> [l/min]:	1.2 / 2.0	1.5 / 2.5	1.5 / 3.3	1.5 / 3.7
Nominal power rating <sup>4)</sup> [kW]:	3.5	4.4	5.7	6.5
Voltage [1~ 220 – 240 V AC]:	with plug <sup>5)</sup>   perm. connection			
Voltage [2~ 400 V AC]:	perm. con.			
Nominal current <sup>4)</sup> [A]:	15	19	25	16
Required cable diameter [mm <sup>2</sup> ]:	1.5	2.5	4.0	2.5
Protection class:	IP 25			
Specific water resistance at 15 °C [ $\Omega\text{cm}$ ] $\geq$ :	1100	800	800	1100

1) Also approved for pressureless operation 2) Temperature increase for example from 15 °C to 40 °C  
3) Limited flow amount for optimal temperature increase by water flow adjustment 4) Related to rated voltage 230 V 5) MCX3 with plug, also available as type MCX3 (E) (part number 1500-15013) with power supply cable for permanent connection

## E-mini instant water heater set MCX Blue



- > Electronically controlled instant water heater **with innovative single-lever mixing tap** for energy-efficient hand-washing
- > Intuitive operation with perfect water temperature at the middle position of the control lever
- > Saves water because of intelligent flow technology and very short water supply lines
- > **Meets the highest requirements for drinking water hygiene** by separating water lines from the tap body as well as nickel- and lead-free materials
- > **Touch button sensor controls** at the instant water heater to set the outlet temperature to 35 °C, 38 °C or max. 45 °C
- > Very fast and simple system installation
- > Low pressure tap with **EASY FIX mounting system** and pull-up drain stopper

Type:	MCX Blue
Energy efficiency class (scale: A+ to F):	A
Part number:	1500-15133
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>
Water connections (thread connections):	G 3/4"
Hot water output at $\Delta t = 25\text{K}$ <sup>2)</sup> [l/min]:	2.0
Switch-on flow rate / max. flow rate <sup>3)</sup> [l/min]:	1.2 / 2.0
Nominal power rating <sup>4)</sup> [kW]:	3.5
Voltage [1~ 220 – 240 V AC]:	with plug
Nominal current <sup>4)</sup> [A]:	15
Required cable diameter [mm <sup>2</sup> ]:	1.5
Protection class:	IP 25
Specific water resistance at 15 °C [ $\Omega\text{cm}$ ] $\geq$ :	1100

1) Also approved for pressureless operation 2) Temperature increase for example from 15 °C to 40 °C  
3) Limited flow amount for optimal temperature increase by water flow adjustment 4) Related to rated voltage 230 V 5) With plug, also available as type MCX (E) Blue (part number 1500-151332) with power supply cable for permanent connection

## E-mini instant water heater set MBX Lumino



- > Electronically controlled instant water heater **with sensor tap** for hygienic and efficient hand-washing
- > An infrared touch-free sensor at the tap turns the water on and off. **The water temperature can be continuously adjusted with a lever at the tap**
- > The temperature is controlled electronically by the instant water heater without having to add cold water
- > A **colour LED ring** visualises the chosen temperature from red = warm to blue = cold
- > **Optional hygiene flush** (automatic flush every 12, 24 or 48 hours)
- > The integrated electronic controls of the instant water heater ensure ideal temperatures and **economical energy use**

Type:	MBX 3 Lumino	MBX 7 Lumino
Energy efficiency class (scale: A+ to F):	A	<b>A</b>
Part number:	1500-15113	1500-15117
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>	
Water connections (thread connections):	G 3/4"	
Hot water output at $\Delta t = 25\text{ K}$ <sup>2)</sup> [l/min]:	2.0	3.7
Switch-on flow rate / max. flow rate <sup>3)</sup> [l/min]:	1.2 / 2.0	1.5 / 3.7
Nominal power rating <sup>4)</sup> [kW]:	3.5	6.5
Voltage [1~ 220 – 240 V AC]:	with plug <sup>5)</sup>	
Voltage [2~ 400 V AC]:		perm. connection
Voltage sensor tap [1~ 220 – 240 V AC]:	with power supply	
Nominal current <sup>4)</sup> [A]:	15	16
Required cable diameter [mm <sup>2</sup> ):	1.5	2.5
Protection class:	IP 25	
Specific water resistance at 15 °C [ $\Omega\text{cm}$ ] $\geq$ :	1100	

1) Also approved for pressureless operation 2) Temperature increase for example from 15 °C to 40 °C  
 3) Limited flow amount for optimal temperature increase by water flow adjustment 4) Related to rated voltage 230 V or 400 V 5) MBX 3 Lumino with plug, also available as type MBX 3 (E) Lumino (part number 1500-151132) with power supply cable for permanent connection

## E-mini instant water heater MBH



- > **Hydraulically controlled instant water heater** (undersink model) with compact design for the energy-efficient hot water supply for a sink
- > **The full heating capacity turns on automatically** as soon as water flows through the unit
- > Connection kit (T-piece and flexible pressure hose) for an angle valve is included

Type:	MBH 3	MBH 4	MBH 6	MBH 7
Energy efficiency class (scale: A+ to F):	A			<b>A</b>
Part number:	1500-16003	1500-16004	1500-16006	1500-16007
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>			
Water connections (thread connections):	G 3/4"			
Hot water output at $\Delta t = 25\text{ K}$ <sup>2)</sup> [l/min]:	2.0	2.5	3.3	3.7
Switch-on flow rate / max. flow rate <sup>3)</sup> [l/min]:	1.3 / 2.0	1.8 / 2.5	2.2 / 3.3	2.4 / 3.7
Nominal power rating [kW]:	3.5	4.4	5.7	6.5
Voltage [1~ 230 V AC]:	with plug <sup>4)</sup>   perm. connection			
Voltage [2~ 400 V AC]:				
				perm. con.
Nominal current [A]:	15	19	25	16
Required cable diameter [mm <sup>2</sup> ):	1.5	2.5	4.0	2.5
Protection class:	IP 25			
Specific water resistance at 15 °C [ $\Omega\text{cm}$ ] $\geq$ :	1100			

1) Also approved for pressureless operation 2) Temperature increase for example from 15 °C to 40 °C  
 3) Limited flow amount for optimal temperature increase by water flow adjustment 4) MBH 3 with plug, also available as type MBH 3 (E) (part number 1500-160032) with power supply cable for permanent connection.

## E-mini instant water heater sets with matching tap



### **M / END**

Undersink model with single-lever mixer tap, with EASY FIX mounting system and pull-up drain stopper

**M 3 / END:** Part no. 1500-17243  
**M 3 (E) / END:** Part no. 1500-172432



### **M / SNM**

Undersink model with two-handle mixer tap, with swivel spout and eyelet chain

**M 3 / SNM:** Part no. 1500-17203  
**M 3 (E) / SNM:** Part no. 1500-172032



### **MCX Blue**

Undersink model with single-lever mixing tap and touch button sensor controls

**MCX Blue:** Part no. 1500-15133  
**MCX (E) Blue:** Part no. 1500-151332



### **MBX Lumino**

Undersink model with sensor tap for hygienic and efficient handwashing

**MBX 3 Lumino:** Part no. 1500-15113  
**MBX 3 (E) Lumino:** Part no. 1500-151132  
**MBX 7 Lumino:** Part no. 1500-15117



### **M / SMB**

Oversink model with two-handle mixer tap and 16 cm swivel spout

**M 3 / SMB:** Part no. 1500-17103  
**M 3 (E) / SMB:** Part no. 1500-171032  
**M 4 / SMB:** Part no. 1500-17104  
**M 7 / SMB:** Part no. 1500-17107



### **MBX Shower**

Shower system with wall rail and shower set

**MBX 4 Shower:** Part no. 1500-15314  
**MBX 6 Shower:** Part no. 1500-15316  
**MBX 7 Shower:** Part no. 1500-15317



GERMAN  
DESIGN  
AWARD  
NOMINEE  
2020

### **Accessories**

The special mixer taps are also available individually as a useful accessory:

**EWT:** Part no. 1100-04420  
**END:** Part no. 1100-04410  
**SNM:** Part no. 1100-04200  
**SMB / LS:** Part no. 1100-04100



## Aerators for any tap

perfectly shape the water stream



Aerator insert for tap adapter  
M22/24 at the tap

**CSP 3** (< 2l/min): Part no. 0010-00421  
**CSP 6** (< 3.5l/min): Part no. 0010-00461



Aerator with chrome tap adapter  
M24a (suitable for taps with  
female threads at the outlet)

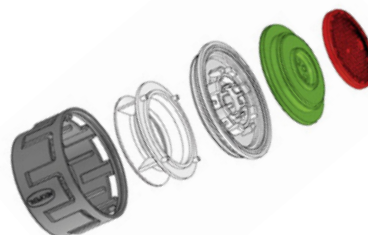
**CSP 3a** (< 2l/min): Part no. 0010-0043  
**CSP 6a** (< 3.5l/min): Part no. 0010-0047



Aerator insert for tap adapter  
M22/24i at the tap

**CSP 3i** (< 2l/min): Part no. 0010-0042  
**CSP 6i** (< 3.5l/min): Part no. 0010-0046







Using the correct aerator at the tap is particularly important for electric instant water heaters. The new special CSP aerators mix air into the water and thus create a uniform water stream that does not splatter but softly cascades down. The aerated water stream supports the energy- and water-saving operation of the mini instant water heater. The aerators are manufactured with high-precision plastics technology and are available as inserts or complete with a fitting tap adapter.



### Heater models

MCX3	MBH6	MCX6	C-series
MCX4	MBH7	MCX7	
MBH3			
MBH4			

### Aerator Guide


						
<b>CSP 3</b>	✓				✓	
<b>CSP 6</b>			✓	✓	✓	✓

## Hand dryer WHT

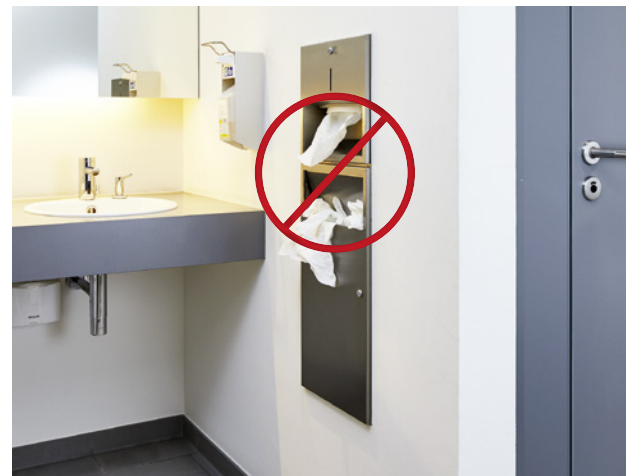


- > **Hand dryer** for washroom facilities
- > **Touchless on / off function**
- > Safety shut-off after approx. 35 seconds continuous use (e.g. in the event of chewing gum vandalism)
- > **Low noise level:** max. 69 dB (A)
- > The impact-resistant ABS case and the quiet, no-maintenance motor ensure a long service life
- > Easy, maintenance-friendly wall installation with integrated mounting plate (without having to open the unit)
- > Rating 1.0 kW 230 V (air flow: 38 l / s)
- > Dimensions (H × W × D): 30.4 × 26.8 × 18.2 cm



Type:	WHT
Part number:	7000-70300
Nominal power rating <sup>1)</sup> [kW]:	1.0
Voltage <sup>1)</sup> [1~ / N / PE 220 - 240 V AC]:	with plug
Nominal current <sup>1)</sup> [A]:	4.3
Motor output [W]:	1000
Noise level [dB]:	69
Air flow [l/s]:	38
Relative drying time [s]:	approx. 17
Protection class:	IP 23
Test symbols:	

<sup>1)</sup> Related to rated voltage 230 V





## E-compact instant water heater – always efficient

An E-compact instant water heater is the smart solution for energy-efficient hot water supply at several outlets. The unit heats the water only when it is needed – directly at the tap.

The compact unit allows for space-saving installation under the sink, with wireless remote control for convenient temperature adjustment. This avoids water line and heat losses.



### Lowers operating costs

Saves energy at the kitchen sink



### Saves space

Fits under any sink: 29 × 18 × 11 cm



### Instantly the right temperature

On demand, right away








### Adjustable ideal temperature

No addition of cold water



### Installation video

### Hot water requirement:

			
	2 min	5 l/min	48 °C
	5 min	5 l/min	38 °C



## E-compact instant water heater CEX



TWIN TEMPERATURE



- > **Electronically controlled instant water heater** with compact design for several applications
- > **Push-button operation with LCD indicator** for precise temperature setting between 20 °C and 60 °C (CEX) / 20 °C and 55 °C (CEX 9)
- > Two programming buttons for individual preset temperatures, optional temperature limits as well as function indicators
- > **Adding cold water is no longer necessary**
- > With the Multiple Power System MPS®, the maximum power rating is set at the time of installation
- > **Accessory recommendation for shower use:**

Adjustable shower set CXH and head shower CXX

**CXH:** Part no. 0300-0086

**CXX:** Part no. 0300-00880

CEX 9 combined in a set with CHX available as “CEX 9 Plus”

**CEX 9 Plus:** Part no. 2400-26270



Type:	CEX 9	CEX		
Energy efficiency class (scale: A+ to F):	A	<b>A</b>		
Part number:	2400-26239	2400-26233		
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>			
Water connections (thread connections):	G ½"			
Hot water output at Δt = 33 K <sup>2)3)</sup> [l/min]:	2.9	3.8	4.8	5.8 <sup>4)</sup>
Switch-on flow rate / max. flow rate <sup>5)</sup> [l/min]:	2 / 5			
Nominal power rating <sup>6)</sup> [kW]:	6.6	8.8	11.0	13.5
Voltage [1~ 220–240 V AC]:	perm. connection			
Voltage [3~ 380–415 V AC]:				perm. connection
Nominal current <sup>3)6)</sup> [A]:	29	38	16	20
Required cable diameter <sup>3)</sup> [mm <sup>2</sup> ]:	4–6	6	1.5	2.5
Protection class:	IP 25			
Specific water resistance at 15 °C [Ωcm] ≥:	1100		1000	
Maximum inlet temperature:	70 °C			

<sup>1)</sup> Also approved for pressureless operation <sup>2)</sup> Temperature increase for example from 12 °C to 45 °C  
<sup>3)</sup> Depending on the selected power rating <sup>4)</sup> Mixed water <sup>5)</sup> Limited flow amount for optimal temperature increase <sup>6)</sup> Related to rated voltage 230 V or 400 V

## E-compact instant water heater CEX-U



TWIN TEMPERATURE



- > **Electronically controlled instant water heater** with compact design for **undersink installation**
- > **Push-button operation with LCD indicator** for precise temperature setting between 20 °C and 60 °C (CEX-U) / 20 °C and 55 °C (CEX 9-U)
- > Two programming buttons for individual preset temperatures, optional temperature limitation as well as function indicators
- > **Adding cold water is no longer necessary**
- > Easy installation under the kitchen sink
- > With the Multiple Power System MPS®, the maximum power rating is set at the time of installation
- > Connection kit (T-piece and flexible connecting hose) for an angle valve is included (CEX-U only)

Type:	CEX 9-U	CEX-U		
Energy efficiency class (scale: A+ to F):	A	<b>A</b>		
Part number:	2400-26249	2400-26213		
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>			
Water connections (thread connections):	G ½"	G ¾"		
Hot water output at Δt = 33 K <sup>2)3)</sup> [l/min]:	2.9	3.8	4.8	5.8 <sup>4)</sup>
Switch-on flow rate / max. flow rate <sup>5)</sup> [l/min]:	2 / 5			
Nominal power rating <sup>6)</sup> [kW]:	6.6	8.8	11.0	13.5
Voltage [1~ 220–240 V AC]:	perm. connection			
Voltage [3~ 380–415 V AC]:				perm. connection
Nominal current <sup>3)6)</sup> [A]:	29	38	16	20
Required cable diameter <sup>3)</sup> [mm <sup>2</sup> ]:	4–6	6	1.5	2.5
Protection class:	IP 24			
Specific water resistance at 15 °C [Ωcm] ≥:	1100		1000	
Maximum inlet temperature:	70 °C			

<sup>1)</sup> Also approved for pressureless operation <sup>2)</sup> Temperature increase for example from 12 °C to 45 °C  
<sup>3)</sup> Depending on the selected power rating <sup>4)</sup> Mixed water <sup>5)</sup> Limited flow amount for optimal temperature increase <sup>6)</sup> Related to rated voltage 230 V or 400 V

## E-compact instant water heater CFX-U



TWIN TEMPERATURE



- > **Electronically controlled instant water heater** with compact design and wireless remote control for **undersink installation**
- > Temperature setting from 20 °C to 60 °C **via bidirectional wireless remote control**
- > **Adding cold water is no longer necessary**
- > Easy installation under the kitchen sink facilitated by **small dimensions** and external  $\frac{3}{8}$ " water connectors for unvented or vented installation
- > With power cable for permanent electrical connection
- > With the Multiple Power System MPS®, the maximum power rating is set at the time of installation
- > Connection kit (T-piece and flexible connecting hose) for an angle valve is included

Type:	CFX-U	
Energy efficiency class (scale: A+ to F):	A	<b>A</b>
Part number:	2400-26313	
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>	
Water connections (thread connections):	G $\frac{3}{8}$ "	
Hot water output at $\Delta t = 33\text{K}$ <sup>2)3)</sup> [l/min]:	4.8	5.8 <sup>4)</sup>
Switch-on flow rate / max. flow rate <sup>5)</sup> [l/min]:	2 / 5	
Nominal power rating <sup>6)</sup> [kW]:	11.0	13.5
Voltage [3~ 380 – 415 V AC]:	permanent connection	
Nominal current <sup>6)</sup> [A]:	16	20
Required cable diameter <sup>3)</sup> [mm <sup>2</sup> ]:	1.5	2.5
Protection class:	IP 24	
Specific water resistance at 15 °C [ $\Omega\text{cm}$ ] $\geq$ :	1000	
Maximum inlet temperature:	70 °C	

1) Also approved for pressureless operation 2) Temperature increase for example from 12 °C to 45 °C  
3) Depending on the selected power rating 4) Mixed water 5) Limited flow amount for optimal temperature increase 6) Related to rated voltage 400V

## E-compact instant water heater CDX-U



- > **Electronically controlled instant water heater** with compact design and without user controls for **undersink installation**
- > Automatic heating adjustment based on flow rate and inlet temperature (adjustable internally)
- > The maximum outlet temperature is factory-set to 50 °C, **temperature setting as usual by mixing cold water at the tap**
- > Easy installation under the sink facilitated by **small dimensions** and external  $\frac{3}{8}$ " water connectors for unvented and vented installation
- > With power cable for permanent electrical connection
- > With the load shedding module (available as an accessory), the instant water heater can be operated along with the electric cooker at the cooker terminal outlet box
- > Connection kit (T-piece and flexible connecting hose) for an angle valve is included

Type:	CDX7-U	CDX11-U
Energy efficiency class (scale: A+ to F):	A	<b>A</b>
Part number:	2400-26107	2400-26113
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>	
Water connections (thread connections):	G $\frac{3}{8}$ "	
Hot water output at $\Delta t = 33\text{K}$ <sup>2)</sup> [l/min]:	3.0	4.8
Switch-on flow rate / max. flow rate <sup>3)</sup> [l/min]:	2 / 4	2 / 5
Nominal power rating <sup>4)</sup> [kW]:	6.9	11.0
Voltage [3~ 380 – 415 V AC]:	permanent connection	
Nominal current <sup>4)</sup> [A]:	10	16
Required cable diameter [mm <sup>2</sup> ]:	1.0	1.5
Protection class:	IP 24	
Specific water resistance at 15 °C [ $\Omega\text{cm}$ ] $\geq$ :	1000	
Maximum inlet temperature:	30 °C	

1) Also approved for pressureless operation 2) Temperature increase for example from 12 °C to 45 °C  
3) Limited flow amount for optimal temperature increase 4) Related to rated voltage 400V





# E-comfort instant water heater for shower and bath

E-comfort instant water heaters are the perfect hot water solution for shower and bath. The units can be installed on a wall, inside bathroom furniture or concealed behind a panel. E-comfort instant water heaters provide comfortable convenience with low energy and water use.



### Instantly the right temperature

On demand, right away



### Adjustable ideal temperature

No addition of cold water









### More hygiene

Due to short water lines



### Installation video

### Hot water requirement:

			
	2 min	3 l/min	38 °C
	5 min	8 l/min	38 °C
	12 min	10 l/min	42 °C



## E-comfort instant water heater DSX Touch

**mps**




reddot award 2019  
winner

**TWIN TEMPERATURE**



- > Fully electronically controlled high-tech instant water heater with **real glass touch display** for convenient and economical hot water supply to one or more tap(s)
- > **Always precise temperatures** between 20 °C and 60 °C due to TWIN TEMPERATURE Control TTC® and SERVOTRONIC® **dynamic flow rate control**
- > Function for thermal treatment with 70 °C for more hygiene
- > Suitable for water-saving taps due to particularly low switch-on water quantity from 1.5 l/min thanks to **innovative water flow technology**
- > Electronic safety system with air bubble detection, temperature and pressure cut-off as well as water stop function
- > Integrated WLAN and Bluetooth® function for connection with **voice control, smartphone and tablet**

Type:	DSX Touch			
Energy efficiency class (scale: A+ to F):	A 			
Part number:	3200-36600			
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>			
Water connections (thread connections):	G ½"			
Hot water output at $\Delta t = 28 \text{ K}^{2)3)4)}$ [l/min]:	9.2	10.7	12.3	13.8
Switch-on flow rate / max. flow rate [l/min]:	1.5 / automatic <sup>5)</sup>			
Nominal power rating <sup>6)</sup> [kW]:	18	21	24	27 <sup>7)</sup>
Voltage [3~ 380 – 415 V AC]:	permanent connection			
Nominal current <sup>3)6)</sup> [A]:	26	30	35	39
Required cable diameter <sup>3)</sup> [mm <sup>2</sup> ]:	4	4	6	6
Protection class:	IP 25			
Specific water resistance at 15 °C [ $\Omega\text{cm}$ ] $\geq$ :	1100			
Maximum inlet temperature:	70 °C			

1) Also approved for pressureless operation 2) Temperature increase for example from 12 °C to 40 °C  
3) Depending on the selected power rating 4) Mixed water 5) Depending on line pressure, selected temperature and inlet temperature 6) Related to rated voltage 400V 7) Only approved for rated voltage of 400V

## E-comfort instant water heater DEX Next


**mps**



**TWIN TEMPERATURE**



- > **Electronically controlled comfort instantaneous water heater with real glass e-paper display** and sensor keys for high ease of use
- > **The Multiple Power System MPS®** determines the maximum power consumption during installation: 18, 21, 24 or 27 kW
- > TWIN TEMPERATURE Control TTC® for **temperatures accurate to the degree** between 20 °C and 60 °C up to the performance limit
- > **Suitable for water-saving taps** due to particularly low switch-on water quantity from 1.5 l/min thanks to innovative water flow technology
- > Module for remote control available as an accessory
- > Can also be operated via tablet or smartphone (from iOS 9 / Android-OS 4.4) (this requires a FXE 3 wireless adapter and the "Smart Control" app)

Type:	DEX12 Next*		DEX Next	
Energy efficiency class (scale: A+ to F):	A 			
Part number:	3200-36412		3200-36400	
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>			
Water connections (thread connections):	G ½"			
Hot water output at $\Delta t = 28 \text{ K}^{2)3)4)}$ [l/min]:	4.5	5.9 <sup>4)</sup>	9.2 <sup>4)</sup>	10.7 <sup>4)</sup>   12.3 <sup>4)</sup>   13.8 <sup>4)</sup>
Switch-on flow rate / max. flow rate [l/min]:	1.5 / 5.0 <sup>5)</sup>		1.5 / 8.0 <sup>5)</sup>	
Nominal power rating <sup>6)</sup> [kW]:	8.8	11.5	18	21   24   27 <sup>7)</sup>
Voltage [1~ 220 – 240 V AC]:	perm. con.			
Voltage [3~ 380 – 415 V AC]:			perm. connection	
Nominal current <sup>4)6)</sup> [A]:	38.3	50.0	26	30   35   39
Required cable diameter <sup>4)</sup> [mm <sup>2</sup> ]:	10	10	4	4   6   6
Protection class:	IP 25			
Specific water resistance at 15 °C [ $\Omega\text{cm}$ ] $\geq$ :	1100			
Maximum inlet temperature:	70 °C			

\* ) The DEX12 Next can only be connected with the power connection at the bottom 1) Also approved for pressureless operation 2) Temperature increase for example from 12 °C to 40 °C 3) Depending on the selected power rating 4) Mixed water 5) Limited flow amount for optimal temperature increase 6) Related to rated voltage 230V or 400V 7) Only approved for rated voltage of 400V

## E-comfort instant water heater DCX Next

MPS

TWIN TEMPERATURE



- > **Electronically controlled instant water heater** with simple operation
- > One-button operation for fast and easy **five-level temperature selection**: 35 °C, 38 °C, 42 °C, 48 °C and 55 °C
- > Temperature stable up to the full rated power output. TWIN TEMPERATURE Control TTC<sup>®</sup> provides precise temperature control even if the water pressure fluctuates.
- > Electronic safety system with air bubble detection, temperature and pressure shut-off
- > With the Multiple Power System MPS<sup>®</sup>, the maximum power rating is set at the time of installation:  
DCX13 Next: 11 or 13.5 kW 400 V  
DCX Next: 18, 21, 24 or 27 kW 400 V

Type:	DCX13 Next	DCX Next
Energy efficiency class (scale: A* to F):	A <span style="float: right;">A</span>	
Part number:	3200-36313	3200-36300
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>	
Water connections (thread connections):	G ½"	
Hot water output at $\Delta t = 28 \text{ K}^{2)3)4)}$ [l/min]:	5.6   6.9	9.2   10.7   12.3   13.8
Switch-on flow rate / max. flow rate [l/min]:	2.5 / 5.0 <sup>5)</sup>	2.5 / 8.0 <sup>5)</sup>
Nominal power rating <sup>6)</sup> [kW]:	11   13.5   18   21   24   27 <sup>7)</sup>	
Voltage [3~ 380 – 415 V AC]:	permanent connection	
Nominal current <sup>3)6)</sup> [A]:	16   20   26   30   35   39	
Required cable diameter <sup>4)</sup> [mm <sup>2</sup> ]:	1.5   2.5   4   4   6   6	
Protection class:	IP 25	
Specific water resistance at 15 °C [ $\Omega\text{cm}$ ] $\geq$ :	1100	
Maximum inlet temperature:	30 °C	

1) Also approved for pressureless operation 2) Temperature increase for example from 12 °C to 40 °C  
3) Depending on the selected power rating 4) Mixed water 5) Limited flow amount for optimal temperature increase 6) Related to rated voltage 400 V 7) Only approved for rated voltage of 400 V

## E-instant water heater DBX Next



- > **Electronically controlled basic instant water heater** without user controls
- > Particularly low switch-on water volume from 1.5 l/min thanks to innovative water flow technology
- > Particularly air-resistant heating system thanks to innovative heating duct arrangement
- > Automatic heating adjustment based on flow rate and inlet temperature is factory-set to 50 °C (adjustable internally)
- > The outlet temperature can be adjusted by a professional between 30 °C and 60 °C in the unit\*
- > Electronic safety system with air detection, temperature and pressure shut-off
- > Easy installation due to accessible mounting area and variable connection options

Type:	DBX18 Next	DBX21 Next	DBX24 Next
Energy efficiency class (scale: A* to F):	A <span style="float: right;">A</span>		
Part number:	3200-36118	3200-36121	3200-36124
Maximum operating pressure [MPa (bar)]:	1 (10) <sup>1)</sup>		
Water connections (thread connections):	G ½"		
Hot water output at $\Delta t = 28 \text{ K}^{2)3)}$ [l/min]:	9.2	10.7	12.3
Switch-on flow rate / max. flow rate [l/min]:	1.5 / 7.0 <sup>4)</sup>	1.5 / 8.0 <sup>4)</sup>	1.5 / 8.0 <sup>4)</sup>
Nominal power rating <sup>5)</sup> [kW]:	18	21	24
Voltage [3~ 380 – 415 V AC]:	permanent connection		
Nominal current <sup>5)</sup> [A]:	26	30	35
Required cable diameter [mm <sup>2</sup> ]:	4	4	6
Protection class:	IP 25		
Specific water resistance at 15 °C [ $\Omega\text{cm}$ ] $\geq$ :	1300		
Maximum inlet temperature:	30 °C		

\* ) Only to be carried out by a specialist 1) Also approved for pressureless operation 2) Temperature increase for example from 12 °C to 40 °C 3) Mixed water 4) Limited flow amount for optimal temperature increase 5) Related to rated voltage 400 V

## References

Public buildings



The **Elbphilharmonie** in Hamburg was officially opened in January 2017. At this magnificent concert hall's hand basins, **148 MCX 4** E-mini instant water heaters provide energy-efficient hot water in the numerous bathrooms – and for more than 2,000 concert visitors per event.



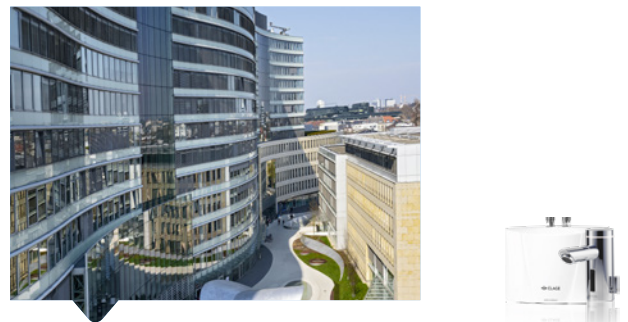
**Hong Kong-Zhuhai-Macau Bridge** – since October 2018 it has been considered the longest sea bridge in the world with 65 km and is known worldwide as one of the "seven wonders of the modern world". Our equipment is installed at the Hong Kong Boundary Crossing Facilities: **DBX18, DBX24** E-comfort instant water heaters and **MBH6** E-mini instant water heaters.

## References

Trade- and office buildings



The **Jungheinrich AG** corporate headquarters is a modern, attractive working environment at the traditional company location of Hamburg. The energy-efficient hot water supply also plays an important role here, in total **39 MCX7** E-mini instant water heaters, **20 CFX-U**, **2 CEX** E-compact instant water heaters and **DEX** E-comfort instant water heaters.



The building complex "**die Welle**" (The Wave) in Frankfurt, Germany, has 80,000 square meters of rentable space. As part of a modernisation targeting the LEED Gold Certification for sustainable buildings, all **450** small storage tanks at the wash hand basin were replaced with efficient **MBX Lumino** E-mini instant water heaters from CLAGE.

## References

Trade- and office buildings



**adidas AG** is an internationally active German sporting goods manufacturer that has opened a branch on the Champs-Élysées in Paris. Here, **8 MCX3** E-mini instantaneous water heaters were installed.



**Puma SE Headquarter** is a listed sporting goods supplier and one of the world's largest sporting goods manufacturers. In the buildings are **65 MBX7 Lumino** E-mini instant water heaters, **11 CEX-U** E-compact instant water heaters with the fitting **EAK**, **14 CEX** E-compact instant water heaters with the fitting **SSO** and **5 DSX Touch** E-comfort instant water heaters.

## References

Residential buildings



At 253 metres high, **HighCliff Tower in Hong Kong** is one of the highest and most luxurious residential buildings around. **426 DSX** E-comfort instant water heaters, **71 DCX** E-comfort instant water heaters and **80 Home Servers** with Smart Controls provide convenient hot water throughout the building.



The **Glenalva Terrace** in Enoggera Australia was completed in October 2018. The development provides one-bedroom units for people with a disability. There are **11 DEX** E-comfort instant water heaters.

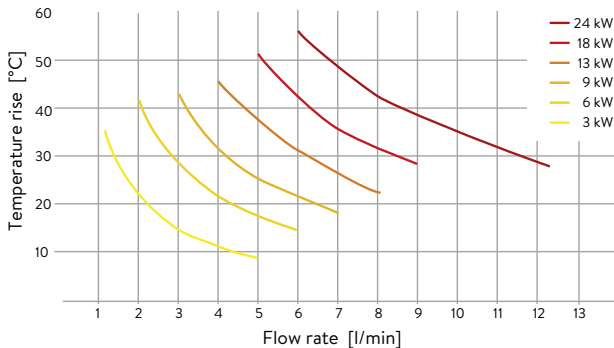


# General data and useful calculations for water heating

## Power conversion table

220 V	230 V	240 V	380 V	400 V	415 V
3.2 kW	3.5 kW	3.8 kW	12.2 kW	13.5 kW	14.5 kW
4.0 kW	4.4 kW	4.8 kW	16.2 kW	18.0 kW	19.4 kW
5.2 kW	5.7 kW	6.2 kW	19.0 kW	21.0 kW	22.6 kW
6.0 kW	6.6 kW	7.2 kW	21.6 kW	24.0 kW	25.8 kW
8.0 kW	8.8 kW	9.6 kW	24.4 kW	27.0 kW	

## Instantaneous performance chart



## Instantaneous performance calculations

$$\text{Temperature rise [}^{\circ}\text{C]} = \frac{\text{Nominal power rating [kW]} \times 14.3}{\text{Flow per minute [litres]}}$$

$$\text{Temperature rise [}^{\circ}\text{F]} = \frac{\text{Nominal power rating [kW]} \times 5.7}{\text{Flow per minute [gallons]}}$$

$$\text{Flow per minute [litres]} = \frac{\text{Nominal power rating [kW]} \times 14.3}{\text{Temperature rise [}^{\circ}\text{C]}}$$

$$\text{Flow per minute [gallons]} = \frac{\text{Nominal power rating [kW]} \times 5.7}{\text{Temperature rise [}^{\circ}\text{F]}}$$

## Mean temperature of mixed water

$$\text{Mean temperature [}^{\circ}\text{C]} = \frac{(\text{Hot water [litres]} \times \text{Hot water temperature [}^{\circ}\text{C]}) + (\text{Cold water [litres]} \times \text{Cold water temperature [}^{\circ}\text{C]})}{\text{Hot water [litres]} + \text{Cold water [litres]}}$$

$$\text{Mean temperature [}^{\circ}\text{F]} = \frac{(\text{Hot water [gallons]} \times \text{Hot water temperature [}^{\circ}\text{F]}) + (\text{Cold water [gallons]} \times \text{Cold water temperature [}^{\circ}\text{F]})}{\text{Hot water [gallons]} + \text{Cold water [gallons]}}$$

## General site requirements

- > Electric instantaneous water heaters may only be installed **by a plumber and/or electrician.**
- > The installation must comply with current **IEC and national local regulations** or any particular regulations, specified by the local electricity supply company.
- > Material of water pipes must be **stainless steel or copper.** Plastic pipes may only be used if they conform to the relevant standard.
- > Best performance is guaranteed at a **flow pressure between 2 and 4 bar** (30–60 psi), avoiding the maximum pressure stated on the appliance rating plate.
- > Electrical water heaters **must be connected to the protective earth conductor!**
- > An all-pole disconnecting device (e.g. via fuses) with a contact opening width of at least 3 mm per pole should be provided at the installation end.
- > To protect the appliance, **a fuse element must be fitted** with a tripping current commensurate with the nominal current of the appliance.
- > For maintenance work, **a shut-off valve** should be installed in the supply line. The appliance must be accessible for maintenance work.



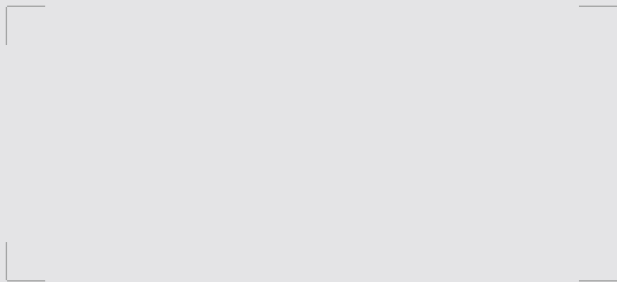
**Made in Germany**

**Energy efficiency class A:** Electronically controlled instantaneous water heaters for washbasins, the kitchen, shower and bathroom.



(Scale: A+ to F)

Dealer stamp



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