



**Electronically controlled
instantaneous water heaters**



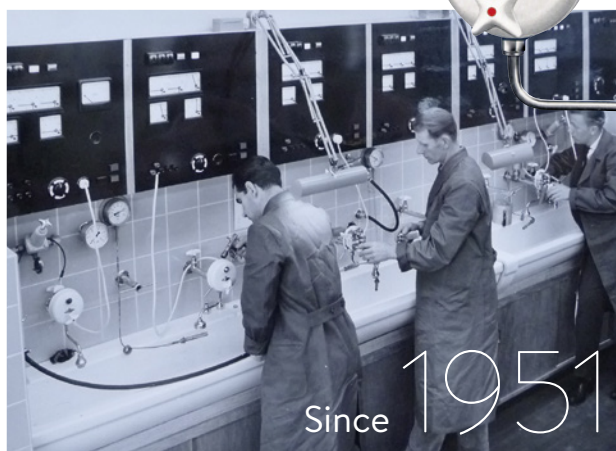
Made in Germany

Simply efficient.

More than 65 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 270 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

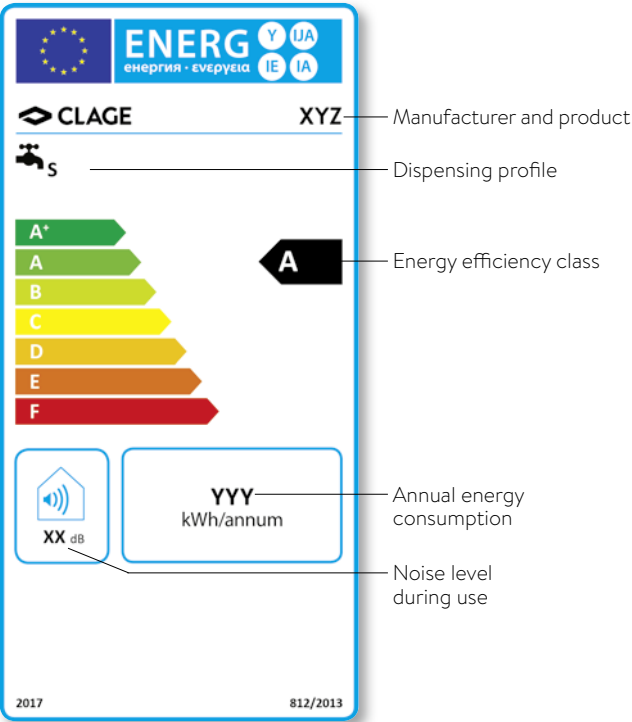


Protects the environment

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



product
design award
2012



- > **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:	MCX 3	MCX 4	MCX 6
Energy efficiency class (scale: A+ to F):	A		A
Part number:	1500-15003	1500-15004	1500-15006
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾		
Water connections (thread connections):	G 3/8"		
Hot water output at $\Delta t = 25 K$ ²⁾ [l/min]:	2.0	2.5	3.3
Switch-on flow rate / max. flow rate ³⁾ [l/min]:	1.2 / 2.0	1.5 / 2.5	1.5 / 3.3
Nominal power rating [kW]:	3.5	4.4	5.7
Voltage [V AC]:	1~ 220 – 240 ⁴⁾		
Nominal current [A]:	15	19	25
Required cable diameter [mm ²]:	1.5	2.5	4.0
Protection class:	IP 25		
Specific water resistance at 15 °C [Ωcm] \geq :	1100	800	800

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) 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) ¹⁾
Water connections (thread connections):	G 3/8"
Hot water output at $\Delta t = 25 \text{ K}$ ²⁾ [l/min]:	2.0
Switch-on flow rate / max. flow rate ³⁾ [l/min]:	1.2 / 2.0
Nominal power rating [kW]:	3.5
Voltage [V AC]:	1~ 220 – 240 ⁴⁾
Nominal current [A]:	15
Required cable diameter [mm ²]:	1.5
Protection class:	IP 25
Specific water resistance at 15 °C [Ωcm] \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) 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	
Part number:	1500-15113	1500-15117
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾	
Water connections (thread connections):	G 3/8"	
Hot water output at $\Delta t = 25\text{ K}$ ²⁾ [l/min]:	2.0	3,7
Switch-on flow rate / max. flow rate ³⁾ [l/min]:	1.2 / 2.0	1.5 / 3.7
Nominal power rating [kW]:	3.5	6.5
Voltage [V AC]:	1~ 220 – 240 ⁴⁾	
Nominal current [A]:	15	16
Required cable diameter [mm ²]:	1.5	2.5
Protection class:	IP 25	
Specific water resistance at 15 °C [Ωcm] \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) 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
Energy efficiency class (scale: A ⁺ to F):	A		
Part number:	1500-16003	1500-16004	1500-16006
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾		
Water connections (thread connections):	G 3/8"		
Hot water output at Δt = 25 K ²⁾ [l/min]:	2.0	2.5	3.3
Switch-on flow rate / max. flow rate ³⁾ [l/min]:	1.3 / 2.0	1.8 / 2.5	2.2 / 3.3
Nominal power rating [kW]:	3.5	4.4	5.7
Voltage [V AC]:	1~ 220 – 240 ⁴⁾		
Nominal current [A]:	15	19	25
Required cable diameter [mm ²]:	1.5	2.5	4.0
Protection class:	IP 25		
Specific water resistance at 15 °C [Ωcm] ≥ : 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



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



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

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

CSP3 (< 2l/min): Part no. 0010-00421

CSP6 (< 3.5l/min): Part no. 0010-00461



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

CSP3a (< 2l/min): Part no. 0010-0043

CSP6a (< 3.5l/min): Part no. 0010-0047

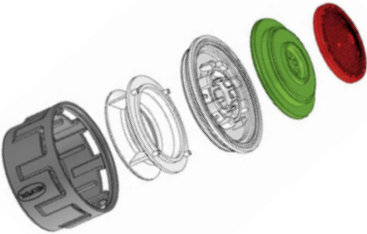








Aerator insert for tap adapter
M22/24i at the tap

CSP3i (< 2l/min): Part no. 0010-0042

CSP6i (< 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				
Aerator Guide	MCX3	MBH6	MCX6	C-Series
	MCX4			
	MBH3			
	MBH4			
				
CSP 3 	✓		✓	
CSP 6 		✓	✓	✓

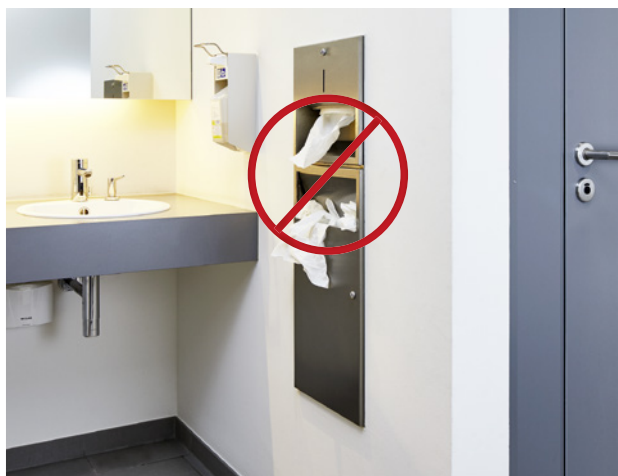
Hand dryer

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 [kW]:	1.0
Voltage [V AC]:	1~ 220 – 240 ¹⁾
Nominal current [A]:	4.3
Motor output:	1000 W
Noise level:	69 dB
Air flow:	38 l/s
Relative drying time:	approx. 17 s
Protection class:	IP 23
Test symbols:	   

1) With plug







E-compact instant water heater – always efficient

An E-compact instant water heaters 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
CXH: Part no. 0300-0086



Type:	CEX 9		CEX	
Energy efficiency class (scale: A ⁺ to F):	A		A	
Part number:	2400-26239		2400-26233	
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾			
Water connections (thread connections):	G ½"			
Hot water output at Δt = 33 K ^{2) 3)} [l/min]:	2.9	3.8	4.8	5.8 ⁴⁾
Switch-on flow rate / max. flow rate ⁵⁾ [l/min]:	2 / 5			
Nominal power rating [kW]:	6.6	8.8	11.0	13.5
Voltage [V AC]:	1~ 220–240		 3~ 380–415	
Nominal current ³⁾ [A]:	29	38	16	20
Required cable diameter ³⁾ [mm ²]:	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			

1) Also approved for pressureless operation
3) Depending on the selected power rating
temperature increase

2) Temperature increase for example from 12 °C to 45 °C
4) Mixed water 5) Limited flow amount for optimal temperature increase

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:	CEX9-U		CEX-U	
Energy efficiency class (scale: A ⁺ to F):	A		A	
Part number:	2400-26249		2400-26213	
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾			
Water connections (thread connections):	G ½"		G ¾"	
Hot water output at Δt = 33 K ^{2) 3)} [l/min]:	2.9	3.8	4.8	5.8 ⁴⁾
Switch-on flow rate / max. flow rate ⁵⁾ [l/min]:	2 / 5			
Nominal power rating ³⁾ [kW]:	6.6	8.8	11.0	13.5
Nominal voltage [V AC]:	1~ 220–240		 3~ 380–415	
Nominal current ³⁾ [A]:	29	38	16	20
Required cable diameter ³⁾ [mm ²]:	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			

1) Also approved for pressureless operation
3) Depending on the selected power rating
temperature increase

2) Temperature increase for example from 12 °C to 45 °C
4) Mixed water 5) Limited flow amount for optimal
temperature increase


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	
Part number:	2400-26313	
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾	
Water connections (thread connections):	G $\frac{3}{8}$ "	
Hot water output at $\Delta t = 33 \text{ K}$ ^{2) 3)} [l/min]:	4.8	5.8 ⁴⁾
Switch-on flow rate / max. flow rate ⁵⁾ [l/min]:	2 / 5	
Nominal power rating ³⁾ [kW]:	11.0	13.5
Voltage [V AC]:	3~ 380 – 415	
Nominal current ³⁾ [A]:	16	20
Required cable diameter ³⁾ [mm ²]:	1.5	2.5
Protection class:	IP 24	
Specific water resistance at 15 °C [Ωcm] \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

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	
Part number:	2400-26107	2400-26113
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾	
Water connections (thread connections):	G $\frac{3}{8}$ "	
Hot water output at $\Delta t = 33 \text{ K}$ ²⁾ [l/min]:	3.0	4.8
Switch-on flow rate / max. flow rate ³⁾ [l/min]:	2 / 4	2 / 5
Nominal power rating [kW]:	6.9	11.0
Voltage [V AC]:	3~ 380 – 415	
Nominal current [A]:	10	16
Required cable diameter [mm ²]:	1.0	1.5
Protection class:	IP 24	
Specific water resistance at 15 °C [Ωcm] \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





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:**

			
	1 min	4 l/min	40 °C
	5 min	8 l/min	38 °C
	12 min	10 l/min	40 °C



E-comfort instant water heater

DSX Touch

(new 2020)



reddot award 2019
winner

TWIN TEMPERATURE



- > **Fully electronically controlled high tech instantaneous water heater with real glass touch display and Bluetooth remote control** for convenient and economical hot water supply to one or more taps
- > Temperature always accurate to the degree between 20 °C and 60 °C thanks 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 switch-off and 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) ¹⁾			
Water connections (thread connections):	G ½"			
Hot water output at $\Delta t = 28 K$ ^{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 ⁵⁾			
Nominal power rating [kW]:	18	21	24	27
Voltage [V AC]:	3~ 380 – 415			3~ 400
Nominal current ³⁾ [A]:	26	30	35	39
Required cable diameter ³⁾ [mm²]:	4	4	6	6
Protection class:	IP 25			
Specific water resistance at 15 °C [Ω 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

E-comfort instant water heater

DEX Next

(new 2020)



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:	DEX Next			
Energy efficiency class (scale: A+ to F):	A			
Part number:	3200-36400			
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾			
Water connections (thread connections):	G ½"			
Hot water output at $\Delta t = 28 K$ ^{2) 3) 4)} [l/min]:	9.2	10.7	12.3	13.8
Switch-on flow rate / max. flow rate [l/min]:	1.5 / 8.0 ⁵⁾			
Nominal power rating [kW]:	18	21	24	27
Voltage [V AC]:	3~ 380 – 415			3~ 400
Nominal current ³⁾ [A]:	26	30	35	39
Required cable diameter ³⁾ [mm²]:	4	4	6	6
Protection class:	IP 25			
Specific water resistance at 15 °C [Ω 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) Limited flow amount for optimal temperature increase

E-comfort instant water heater DSX



TWIN TEMPERATURE



- > **Fully electronically controlled high-tech instant water heater**
- > **Multifunction colour display**
- > Energy efficiency monitor with plain text display
- > Four temperature memory buttons
- > **Always precise temperatures** between 20 °C and 60 °C with TWIN TEMPERATURE Control TTC® and SERVOTRONIC®
- > **dynamic flow rate control**
- > With the Multiple Power System MPS®, the maximum power rating is set at the time of installation: 18, 21, 24 or 27 kW
- > **Remote control module included**

Type:	DSX			
Energy efficiency class (scale: A+ to F):	A			
Part number:	3200-34327			
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾			
Water connections (thread connections):	G ½"			
Hot water output at $\Delta t = 28 K$ ^{2) 3) 4)} [l/min]:	9.2	10.7	12.3	13.8
Switch-on flow rate / max. flow rate [l/min]:	2.5 / automatic ⁵⁾			
Nominal power rating [kW]:	18	21	24	27
Voltage [V AC]:	3~ 380 – 415			3~ 400
Nominal current ³⁾ [A]:	26	30	35	39
Required cable diameter ³⁾ [mm²]:	4	4	6 ⁵⁾	6
Protection class:	IP 25			
Specific water resistance at 15 °C [Ωcm] \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
selected temperature and inlet temperature

4) Mixed water

5) Depending on water flow pressure,


E-comfort instant water heater DEX



TWIN TEMPERATURE



- > **Electronically controlled E-comfort instant water heater**
- > **Large backlit LCD display** for temperature display
- > Two temperature memory buttons
- > **Precise temperatures** between 20 °C and 60 °C with TWIN TEMPERATURE Control TTC® up to the full rated power output (DEX12 ≤ 55 °C)
- > With the Multiple Power System MPS®, the maximum power rating is set at the time of installation:
DEX12: 8.8 or 11.5 kW 230 V
DEX: 18, 21, 24 or 27 kW 400 V
- > Remote control module available as accessory

Type:	DEX12	DEX				
Energy efficiency class (scale: A+ to F):	A					
Part number:	3200-34212	3200-34227				
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾					
Water connections (thread connections):	G ½"					
Hot water output at Δt = 28 K ^{2) 3) 4)} [l/min]:	4.5	5.9	9.2	10.7	12.3	13.8
Switch-on flow rate / max. flow rate [l/min]:	2.5 / 5.0 ⁵⁾		2.5 / 8.0 ⁵⁾			
Nominal power rating [kW]:	8.8	11.5	18	21	24	27
Voltage [V AC]:	1~ 220–240		3~ 380–415		3~ 400	
Nominal current ⁴⁾ [A]:	38	50	26	30	35	39
Required cable diameter ⁴⁾ [mm²]:	10		4	4	6	6
Protection class:	IP 25					
Specific water resistance at 15 °C [Ωcm] ≥ :	1300		1100			
Maximum inlet temperature:	70 °C					

1) Also approved for pressureless operation 2) Temperature increase for example from 12 °C to 40 °C
3) Mixed water 4) Depending on the selected power rating 5) Limited flow amount for optimal temperature increase

E-comfort instant water heater DCX



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® 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®, the maximum power rating is set at the time of installation:
DCX13: 11 or 13.5 kW 400 V
DCX: 18, 21, 24 or 27 kW 400 V


Type:	DCX13	DCX
Energy efficiency class (scale: A+ to F):	A	A
Part number:	3200-34233	3200-34217
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾	
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 ⁵⁾	2.5 / 8.0 ⁵⁾
Nominal power rating [kW]:	11 13.5	18 21 24 27
Voltage [V AC]:	3~ 380 – 415	3~ 400
Nominal current ⁴⁾ [A]:	16 20	26 30 35 39
Required cable diameter ⁴⁾ [mm²]:	1.5 2.5	4 4 6 6
Protection class:	IP 25	
Specific water resistance at 15 °C [Ωcm] \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) Mixed water 4) Depending on the selected power rating 5) Limited flow amount for optimal temperature increase

E-comfort instant water heater DBX



- > **Electronically controlled basic instant water heater without user controls**
- > Automatic heating adjustment based on flow rate and inlet temperature, outlet temperature is factory-set to 50 °C (adjustable internally)
- > Electronic safety system with temperature and pressure shut-off

Type:	DBX18	DBX21	DBX24	DBX27
Energy efficiency class (scale: A+ to F):	A			
Part number:	3200-34118	3200-34121	3200-34124	3200-34127
Maximum operating pressure [MPa (bar)]:	1 (10) ¹⁾			
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	13.8
Switch-on flow rate / max. flow rate [l/min]:	2.5 / 7.0 ⁴⁾	2.5 / 8.0 ⁴⁾	2.5 / 9.0 ⁴⁾	
Nominal power rating [kW]:	18	21	24	27
Voltage [V AC]:	3~ 380 – 415			3~ 400
Nominal current [A]:	26	30	35	39
Required cable diameter [mm²]:	4	4	6	6
Protection class:	IP 25			
Specific water resistance at 15 °C [Ωcm] \geq :	1300			
Maximum inlet temperature:	30 °C			

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

References

Public buildings



The **Elbphilharmonie** in Hamburg was officially opened in January 2017. At this magnificent concert hall's hand basins, **148 MCX4** 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 **Universal Music Group (UMG)** renovated the energy systems at their headquarters in Berlin and installed a total of **70 MCX Blue** E-mini instant water heaters at their wash basins. Hot water is supplied in their various kitchenettes by **15 MCX7** E-mini instant water heaters.

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.



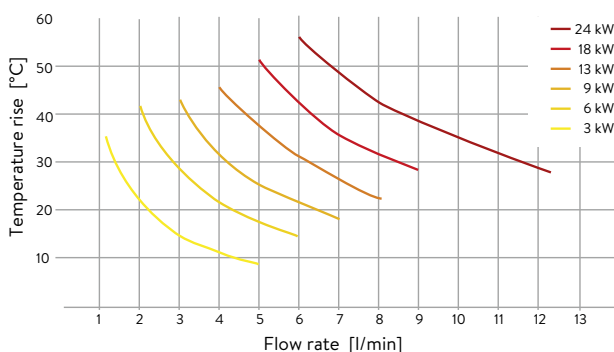
The **Glenalva Terrace** in Enoggera Australia was completed in October 2018. The development provides one-bedroom units for people with a disability. There are **11 DEX** E-comfort instant water heaters.

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

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

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

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

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

Mean temperature of mixed water

$$\begin{array}{lcl} \text{Mean} & & (\text{Hot water [litres]} \times \text{Hot water temperature [}^{\circ}\text{C]}) \\ \text{temperature} = & + & (\text{Cold water [litres]} \times \text{Cold water temperature [}^{\circ}\text{C]}) \\ \text{[}^{\circ}\text{C]} & & \hline & & \text{Hot water [litres]} + \text{Cold water [litres]} \end{array}$$

$$\begin{array}{lcl} \text{Mean} & & (\text{Hot water [gallons]} \times \text{Hot water temperature [}^{\circ}\text{F]}) \\ \text{temperature} = & + & (\text{Cold water [gallons]} \times \text{Cold water temperature [}^{\circ}\text{F]}) \\ \text{[}^{\circ}\text{F]} & & \hline & & \text{Hot water [gallons]} + \text{Cold water [gallons]} \end{array}$$

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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.



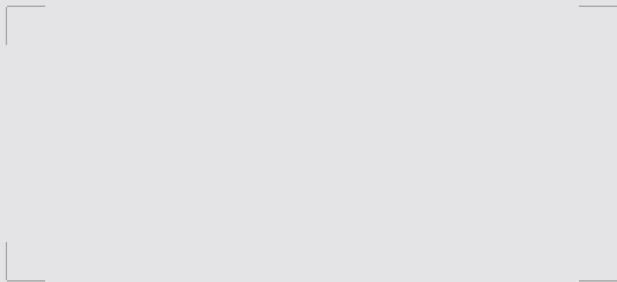
Made in Germany

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



(Scale: A+ to F)

Dealer stamp



CLAGE GmbH
Pirolweg 1–5
21337 Lüneburg
Germany

Phone: +49 4131 8901-38
Fax: +49 4131 83 200
export@clage.de
www.clage.com



Corporate movie