

GAS

FLOOR-STANDING GAS CONDENSING BOILERS, FOR HEATING ONLY

PROJECT

Elidens C140

C140-45/65/90/115 From 8.9 to 114 kW



Floor-standing gas condensing solution for small collector or tertiary applications



up to
A



- Equipped to run on natural gas
- Gas supply pressure: 20/25 mbar
- Option to connect with a horizontal forced flue, vertical forced flue, chimney, or in bi-flow
- Low pollutant emissions
- One-piece aluminium/silicon heating body
- Stainless steel pre-mixed gas burner with surface made from woven metal fibres
- Modulating range from 18 to 100 % of the output
- Fan with silencer on the air intake
- Choice of 2 control panels: DIEMATIC Evolution with electronic control system, programmable based on the outdoor temperature or IniControl 2 (only in

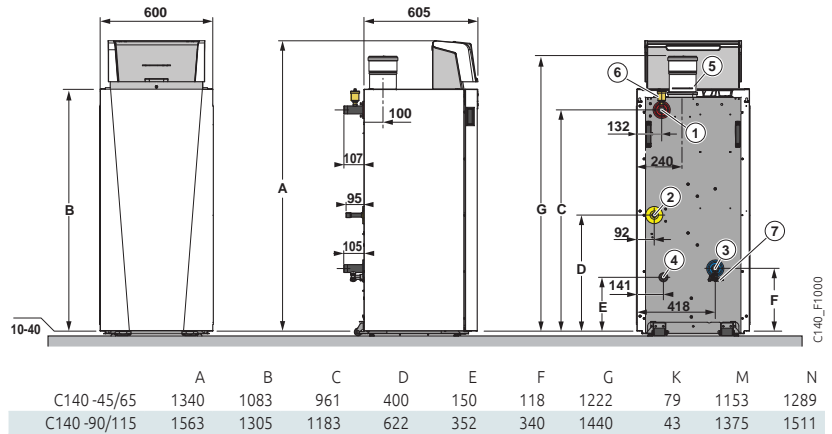
- combination with DIEMATIC Evolution in cascade installations, or in installations with a 0-10 V control cabinet in the boiler room)
- Hydraulic connection kits (option)
- Packaging: 2 packages

N° CE 0085CT0009

OPTIONS: see following pages

MAIN DIMENSIONS (mm and inches)

- Heating flow: - C140-...: R 1" 1/4
- C140-...EP: G 1" 1/4
- C140-...SH: G 2"
 - Gas inlet G 3/4"
 - Heating return: - C140-...: R 1" 1/4
- C140-...EP: G 1" 1/4
- C140-...SH: G 2"
 - Condensates drain (Ø 22 mm inlet)
 - Evacuation of combustion products and air inlet pipe (measuring sleeve delivered): - C140-45: Ø 80/125 mm
- C140-65/90/115: Ø 100/150 mm
 - Automatic air vent
 - Drain tap connection for pipe
 - Threading
- R: External cylindrical threading water tightness by flat gasket.



TECHNICAL SPECIFICATIONS

Condensing

- Max. operating temperature: 90°C
- Max. operating pressure: 4 bar
- Protection index: X1B
- NOx classification: 6
- Classification: B₃₃, B₂₃, B_{23P}, C_{13(x)}, C_{33(x)}, C_{43(x)}, C_{53(x)}, C_{63(x)}, C_{83(x)}, C_{93(x)}
- Power supply: 230 V/50 Hz

MODEL

| | C140 | -45 | -65 | -90 | -115 | |
|---|--|-------------------|-------------|------------|------------|-------|
| Energy efficiency class (heating) | | A | A | - | - | |
| Nominal output P _n (50/30°C) | kW | 41 | 62 | 84 | 104 | |
| Efficiency at...% | - 100% average temp. 70°C - 100% return temp. 30°C - 30% return temp. 30°C | % | 99.1 | 99.2 | 97.9 | 97.1 |
| output and...°C | | % | 102.9 | 104.6 | 104.1 | 103.4 |
| water temp. | | % | 110.6 | 110.4 | 108.1 | 108.0 |
| Seasonal space heating energy efficiency (without contribution of regulation) | % | 95 | 94 | - | - | |
| Seasonal space heating energy efficiency (with outdoor sensor) | % | 97 | 96 | - | - | |
| Useful efficiency at 100 % of rated heat output | % | - | - | 88.2 | 87.5 | |
| Useful efficiency at 30 % of rated heat output | % | - | - | 97.4 | 96.5 | |
| Water flow at P _n and ΔT = 20 K | m ³ /h | 1.75 | 2.65 | 3.62 | 4.47 | |
| Stand-by losses at ΔT = 30 K | W | 105 | 114 | 119 | 119 | |
| Auxiliary electrical power at P _n (except circul. pump) | W | 68 | 92 | 124 | 180 | |
| Min.-max. useful output at 50/30°C | kW | 9-42.4 | 13.5-65.0 | 15.8-89.5 | 21.2-109.7 | |
| Min.-max. useful output at 80/60°C | kW | 8-40.8 | 12-61.5 | 14.1-84.2 | 18.9-103.9 | |
| Min.-max. flue gas mass flow rate | kg/h | 14.0-69.1 | 20.8-/104.0 | 28.1-137.9 | 36.0-177.8 | |
| Flue gas pressure available | Pa | 150 | 100 | 160 | 220 | |
| Water content | l | 5.2 | 7.1 | 10.2 | 10.1 | |
| Minimum flow rate | l/h | 195 | 290 | 340 | 455 | |
| Gas flow (max.) | - natural gas H - propane | m ³ /h | 4.4 | 6.6 | 9.10 | 11.7 |
| (15°C-1013 mbar) | | m ³ /h | 1.7 | 2.5 | 3.5 | 4.5 |
| Net weight | kg | 87 | 98 | 109 | 109 | |

MODEL

| | C140 | -45 | -65 | -90 | -115 |
|--------------------------|------|---------|---------|---------|---------|
| C140- IniControl 2 | Ref. | 7709264 | 7709262 | 7709260 | 7709158 |
| C140- DIEMATIC Evolution | Ref. | 7709265 | 7709263 | 7709261 | 7709159 |

GAS

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Elidens C140

C140-45/65/90/115 SH from 8.9 to 114 kW



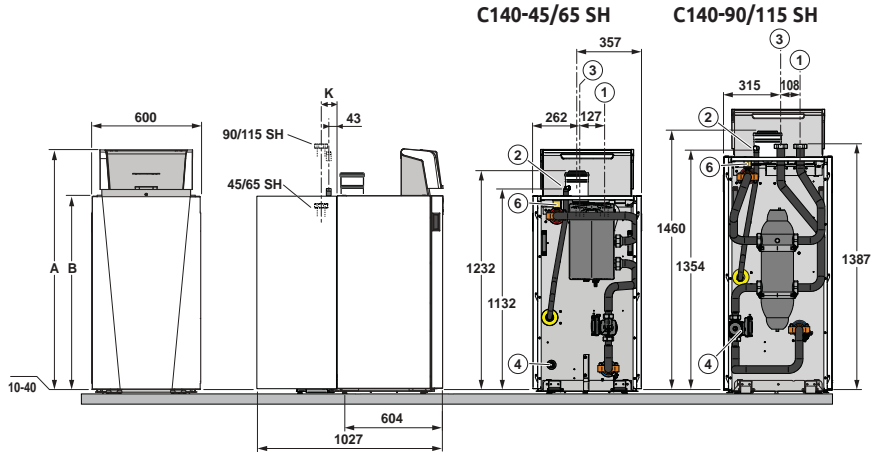
Fully-equipped compact versions
Easy connection
Hydraulic low-loss header
Degassing system+magnetic rod



C140-45/65/90/115 SH boiler equipped with a pre-dimensioned hydraulic low-loss header kit comprising:

- A modulating pump actuated via PWM signal
- An insulated low-loss header with magnetic rod and aerator

- Connection pipes to the boiler with a non-return valve and a safety valve. Secondary side pipes leading to the top of the boiler for easy connection
- Packaging: 3 packages



C140_F1002

MODEL

C140 SH DIEMATIC Evolution

| C140- | 45 SH | 65 SH | 90 SH | 115 SH |
|-------|---------|--------------|--------------|--------------|
| Ref. | 7721423 | Ref. 7721424 | Ref. 7721425 | Ref. 7721426 |



Elidens C140

C140-45/65/90/115 EP from 8.9 to 114 kW



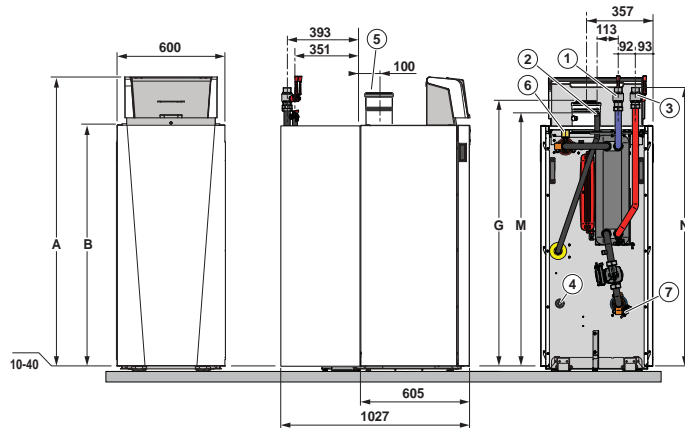
Fully-equipped compact versions
Easy hydraulic connection
Protects against sludge+ 16-bar operating pressure



C140-45/65/90/115 EP boiler equipped with a pre-dimensioned hydraulic low-loss header kit comprising:

- A modulating pump actuated via PWM signal, a non-return valve
- An automatic degassing device (primary side)
- An expansion vessel

- A plate heat exchanger with insulated low-loss header
- Connection pipes to the boiler with a non-return valve and a 4-bar safety valve (primary side). Secondary side pipes with isolation valves leading to the top for easy connection.
- Packaging: 3 packages



C140_F1001

MODEL

C140 EP DIEMATIC Evolution

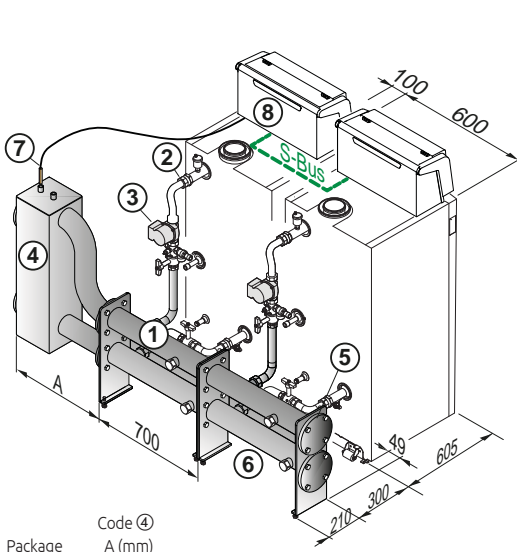
| C140- | 45 EP | 65 EP | 90 EP | 115 EP |
|-------|---------|--------------|--------------|--------------|
| Ref. | 7721427 | Ref. 7721428 | Ref. 7721429 | Ref. 7721430 |

OPTIONS

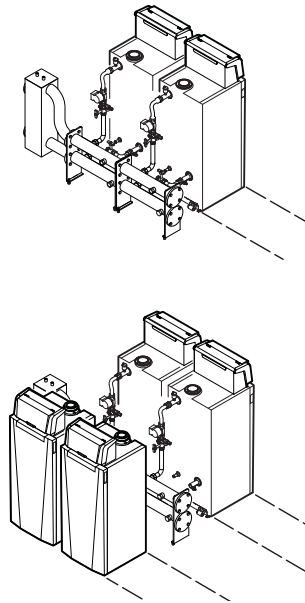
FOR ELIDENS C140

CASCADE SYSTEMS WITH 2 TO 4 BOILERS, TO BE PUT TOGETHER ACCORDING TO THE CHOSEN COMBINATION ...

MAIN DIMENSIONS (mm and inches)



| Package | Code ④ A (mm) |
|---------|------------------|
| HC222 | 279 |
| HC200 | 619 |



C140-45 to 115 cascade systems can be put together by the installer based on the components listed below.
It is possible for form cascades:
- Of 2 to 4 boilers mounted back to back.
- The boilers must be ordered separately.

LIST OF PACKAGES TO ORDER ACCORDING TO THE COMBINATION DESIRED

CODE DESCRIPTION

| CODE | DESCRIPTION | PACKAGE | REF. |
|------|--|----------------|------------------------|
| ① | Collector DN 65 (instal. > 460 kW) | HE35 | 100011703 |
| ② | Boiler connection kit: • C140-45 and 65 • C140-90 and 115 | HE32 HE33 | 100011490 100011491 |
| ③ | Heating pump UPM 25-105 PWM | JJ416 | 7723290 |
| ④ | Decoupling cylinder: • DN 65 (installation > 350 kW) • DN 65 (installation > 350, ≤ 460 kW) | HC222 HC200 | 114311 111712 |
| ⑤ | Blind flanges for water collector (set of 2): • DN 65 • DN 100 | HC198 HC199 | 111701 111703 |
| ⑥ | Set of 2 plugs (in line mounting) | HC195 | 111708 |
| ⑦ | Cascade flow sensor + sensor tube: • for decoupling cylinder HC222 • for decoupling cylinder HC200 | HC223 HC206 | 100013027 100008701 |
| ⑧ | Inter-boiler S-BUS connection cable, length 12 m | AD309 | 7663561 |

HYDRAULIC OPTIONS

| DESCRIPTION | PACKAGE | REF. |
|--|---------|--------|
| Set of elbows DN 65 | HC209 | 111788 |
| Set of elbows DN 100 | HC210 | 111790 |
| Insulation for DN 65 and DN 100 elbows | HC216 | 111167 |
| Set of counter flanges to be welded DN 65 | HC217 | 112632 |
| Set of counter flanges to be welded DN 100 | HC218 | 112633 |
| HC222 decoupling cylinder insulation | HC224 | 115269 |
| HC201 decoupling cylinder insulation | HC215 | 111067 |
| Adjustable foot for collector | HC219 | 111807 |

OTHERS OPTIONS

| DESCRIPTION | PACKAGE | REF. |
|---|---------|----------|
| Gas filter DN 50 | HC255 | S101655 |
| Gas filter DN 65 | HC256 | S101656 |
| Set of 2 weld-on flanges DN 50 for gas filter | HC261 | S103345 |
| Flue gas adapter Ø 80 to 100 mm | DY768 | 84887768 |



OPTIONS

FOR ELIDENS C140

ALL OPTIONS EXCEPT CONTROL UNITS OPTIONS

ACCESSORIES

| | PACKAGE | REF. |
|--|---------|-----------|
| Hydraulic connection kit 1" 1/4 | HC139 | 100002310 |
| Right gas valve 3/4" | HC158 | 100004641 |
| Heating pump UPM 25-105 PWM | JJ416 | 7723290 |
| Condensates neutralization system (without pump): | | |
| • Boilers < 75 kW | SA1 | 7613605 |
| • Boilers < from 75 to 450 kW | SA3 | 7613609 |
| • Boilers from 450 to 1300 kW | - | 7622256 |
| Mural support for neutralization system DN1 | SA2 | 7613606 |
| Condensates neutralization system (with lift pump): | | |
| • Boilers < 120 kW | DU13 | 83877009 |
| • Boilers < from 120 to 300 kW | SA4 | 7613610 |
| • Boilers (cacades) from 300 to 1300 kW | DU15 | 83877011 |
| Neutralization granules (10 kg)* | - | 94225601 |
| Neutralization granules (25 kg) | SA7 | 7613613 |
| Gas pressure regulator 300 bar GDJ 15 (from 40 to 150 kW) Ø 1/2" | SA11 | 7628752 |
| Conversion kit propane for C140-90 | - | 7606993 |
| Decoupling cylinder 60/60 - 1" | GV45 | 100019346 |
| Decoupling cylinder 80/60 - 1" 1/4 | GV46 | 100019347 |
| Decoupling cylinder 120/80-2" | GV47 | 100019348 |
| Elbow 87° Ø 100/150 mm | DY930 | 7715416 |
| Inspection Elbow 87° Ø 100/150 mm | DY931 | 7715445 |

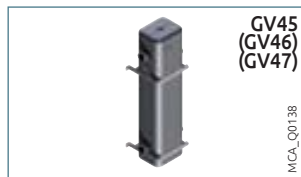
* to be order at the spare parts department

DHW PRODUCTION

| | PACKAGE | REF. |
|-------------------------------------|---------|----------------|
| • with independent calorifier | | see chapter 11 |
| • with solar calorifier | | see chapter 12 |
| Connecting kit C140/calorifier | EA121 | 100007827 |
| G in R connection kit (1" and 3/4") | BH84 | 89557009 |

HYDRAULIC KIT

| | PACKAGE | REF. |
|---------------------------------------|---------|---------|
| Low loss header with plate exchanger: | | |
| • for C140- 45/65 | JJ407 | 7720938 |
| • for C140- 90/115 | JJ408 | 7720939 |
| Low loss header with bottle: | | |
| • for C140- 45/65 | JJ409 | 7709269 |
| • for C140- 90/115 | JJ410 | 7709270 |



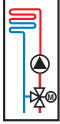
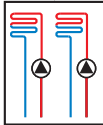
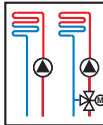




OPTIONS

FOR ELIDENS C140

CONTROL UNITS OPTIONS

CHOICE OF OPTIONS ACCORDING TO THE CONTROL PANEL TYPE AND THE CONNECTED CIRCUITS

| | | Boiler self-standing or boiler 1 of a cascade | | | | | | Boiler 2 to 8 of a cascade by additional boiler: (2) | | | |
|-------------------------|---|---|-----------------|-----------|-----------|------------------------|------------------------|---|-----------|-----------------------------|----|
| Circuit type |  | | | | | | | | | | |
| | DHW | | | | | | | | | | |
| |  | direct | | | | | | | | | |
| | or | | | | | | | | | | |
| |  | valve | | | | | | | | | |
| | or | | | | | | | | | | |
| |  | 2 x direct | | | | | | | | | |
| | | | | | | | | | | | |
| |  | direct + 1 valve | | | | | | | | | |
| | | | | | | | | | | | |
| C140 with control panel |  | no | no | no | no | no | no | no | no | no | no |
| | INIControl 2 (3) | | | | | | | | | | |
| |  | 1 x AD212 | as standard (1) | 1 x AD199 | 2 x AD199 | 1 x AD199 1 x AD249 | 2 x AD199 1 x AD249 | no | no | no | no |
| | DIEMATIC Evolution (3) | | | | | | | • with IniControl 2 control panel | | | |
| | | | | | | | | • with DIEMATIC Evolution control panel (2) | | | |
| | | | | | | | | 1 x AD199 | 2 x AD199 | 2 x AD199 + 1 x AD249 | |

(1) + Package FM46 (outside sensor) to control the boiler alone depending on the outside temperature..

(2) According to the number of heating circuits to be connected, it will be necessary to insert 1 or more C140...Evolution secondary boilers in the cascade, the other boilers of the cascade being fitted with the IniControl 2 control panel.

(3) The IniControl 2 control panel is only for:

- For the slave boilers in a cascade, managed with a master boiler equipped with a DIEMATIC EVOLUTION control panel.
- For systems using the 0-10 V contact to a control cabinet in the boiler room.

CONTROL UNITS OPTIONS

| | PACKAGE | REF. | | PACKAGE | REF. |
|---|---------|-----------|--|---------|---------|
| • for DIEMATIC Evolution control panel | | | | | |
| Outdoor sensor | FM46 | 85757741 | S-BUS cable: | | |
| PCB + sensor for 1 mixing valve (length 2.5m) | AD249 | 100013304 | • 1.5 m with plug | AD308 | 7663618 |
| Sensor for mixing valve (length 2.5m) | AD199 | 88017017 | • 12 m with plug | AD309 | 7663561 |
| Domestic hot water sensor (length 5m) | AD212 | 100000030 | • 20 m with plug | AD310 | 7663619 |
| Sensor for storage tank (length 5m) | AD250 | 100013305 | S-BUS plug | AD321 | 7688305 |
| Roomthermostat: | | | Control unit VM DIEMATIC Evolution, wall-mounted | AD315 | 7676561 |
| • programmable (wire) | AD137 | 88017855 | Communication gateway GTW08 L-BUS-ModBus | AD332 | 7721982 |
| • programmable wireless | AD200 | 88017018 | | | |
| • non programmable | AD140 | 88017859 | | | |

AVAILABILITY JULY 2019

EXAMPLES OF INSTALLATIONS

FOR ELIDENS C140

O2

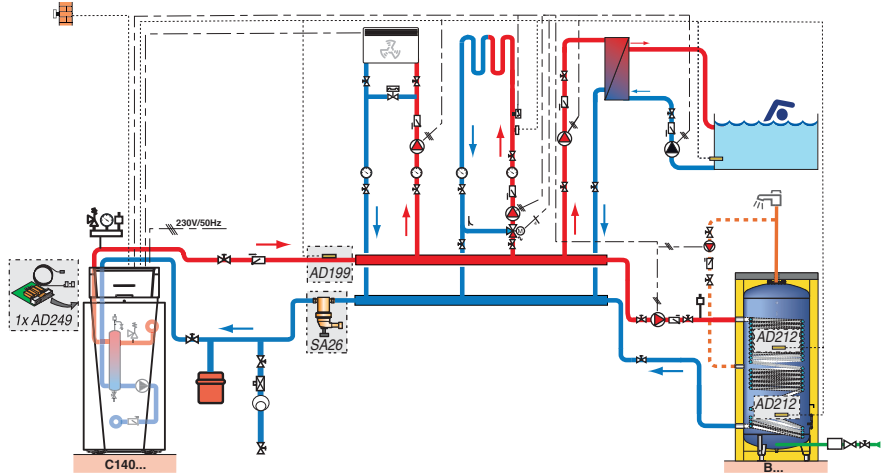
GAS

Elidens C140

C140-45 SH DIEMATIC Evolution



- 1 circuit with fan coil (without mixing valve)
- 1 circuit with mixing valve
- 1 DHW calorifier
- 1 swimming pool circuit



C140_F0003

DESCRIPTION

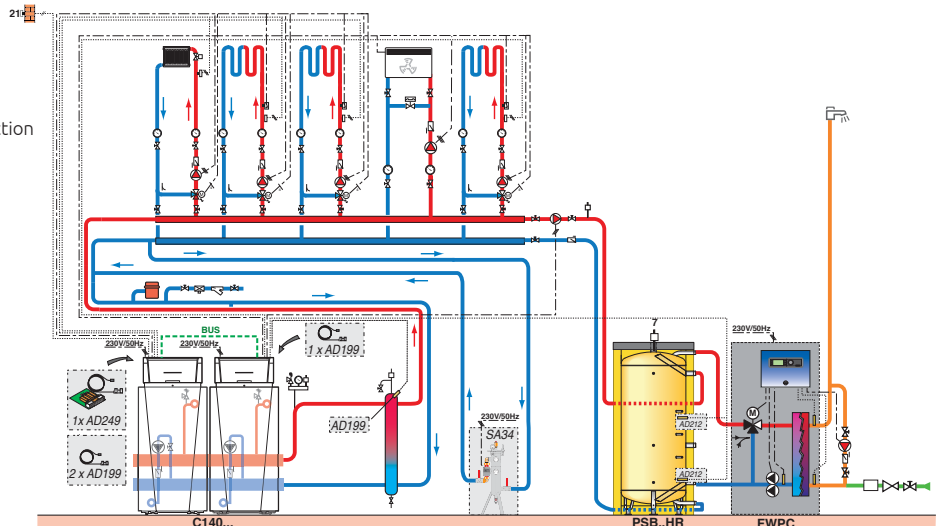
| | PACKAGE | REF. |
|--------------------------------------|-----------|-----------|
| C140-45 SH DIEMATIC Evolution boiler | - | 7721423 |
| PCB + sensor for mixing valve | AD249 | 100013304 |
| Sensor for mixing valve | AD199 | 88017017 |
| 2 x DHW sensor | 2 x AD212 | 100000030 |
| Independent calorifier BPB 501 | EC795 | 7682313 |
| Options | | |
| Brass sludge separator Rp 2" | SA26 | 7650378 |

Elidens C140

Cascade with 2 x C140-45



- 4 circuits with mixing valve
- 1 circuit with fan coil
- 1 circuit with instant DHW production



C140_F0006

DESCRIPTION

| | PACKAGE | REF. |
|---------------------------------------|-----------|-----------|
| 2 x C140-45 DIEMATIC Evolution boiler | - | 7709265 |
| 4 x sensor for mixing valve | 4 x AD199 | 88017017 |
| PCB + sensor for mixing valve | AD249 | 100013304 |
| 2 x DHW sensor | 2 x AD212 | 100000030 |
| PSB 1000 tank | AJ54 | 7650456 |
| Rigid casing HR for PSB 1000 tank | AJ89 | 7650491 |
| Instant DHW production FWPC 3013-100 | EC768 | 7661869 |
| Options | | |
| Stainless steel clarifier unit DN 32 | SA34 | 7651698 |