

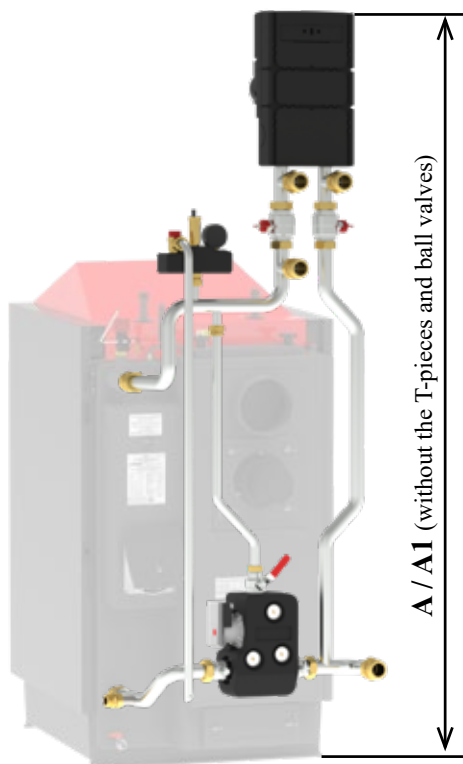


# ATMOS

## Connection of ATMOS boilers up to 40 kW with manual stoking

**Description:** Professional stainless steel connection based on  $35 \times 1.5$  mm diameter pipe, designed to maintain a minimum temperature of return water to the boiler and quickly connect the boiler using two 6/4" flat seal fittings. The connection includes all the necessary components required by the manufacturer (safety valve 2.5 bar, vent valve, manometer, two pumps, two shut-off valves, three-way valve and, for variants F7 and F8, two servo actuators).

**Info:** The connection is ready to connect the boiler directly to the heating system or to connect the boiler to accumulation tanks. In the case of a larger heating system, the connection can be extended to two or three heating circuits by purchasing a special distributor and the necessary pump group.



### Connection

#### ATMOS F5 Laddomat - code: P0605

for boilers (DC18S, DC22S, DC22SX, DC25S, DC30SX, KC16S, KC25S, C15S, C18S, AC16S, AC25S)

#### ATMOS F6 Laddomat - code: P0606

for boilers (DC32S, DC40SX, DC15GS, DC20GS, DC25GS, DC32GS, GS15, GS20, GS25, GS32, DC18GSE, DC22GSE, DC25GSE, DC30GSE, DC18GD, DC25GD, DC30GD)

Connection type	A height	A1 height	B connection depth behind the boiler
ATMOS F5 Laddomat	1890	1670	280 - 340
ATMOS F6 Laddomat	1965	1745	280 - 340
ATMOS F7 ESBE	1890	1670	245 - 305
ATMOS F8 ESBE	1965	1745	245 - 305

- dimension in mm

\* manifold height 170 mm



### Connection

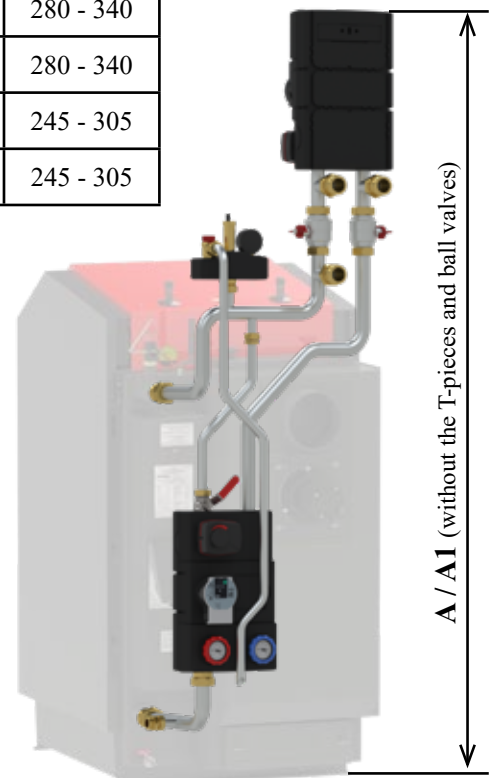
#### ATMOS F7 ESBE - code: P0607

for boilers (DC18S, DC22S, DC22SX, DC25S, DC30SX, KC16S, KC25S, C15S, C18S, AC16S, AC25S)

#### ATMOS F8 ESBE - code: P0608

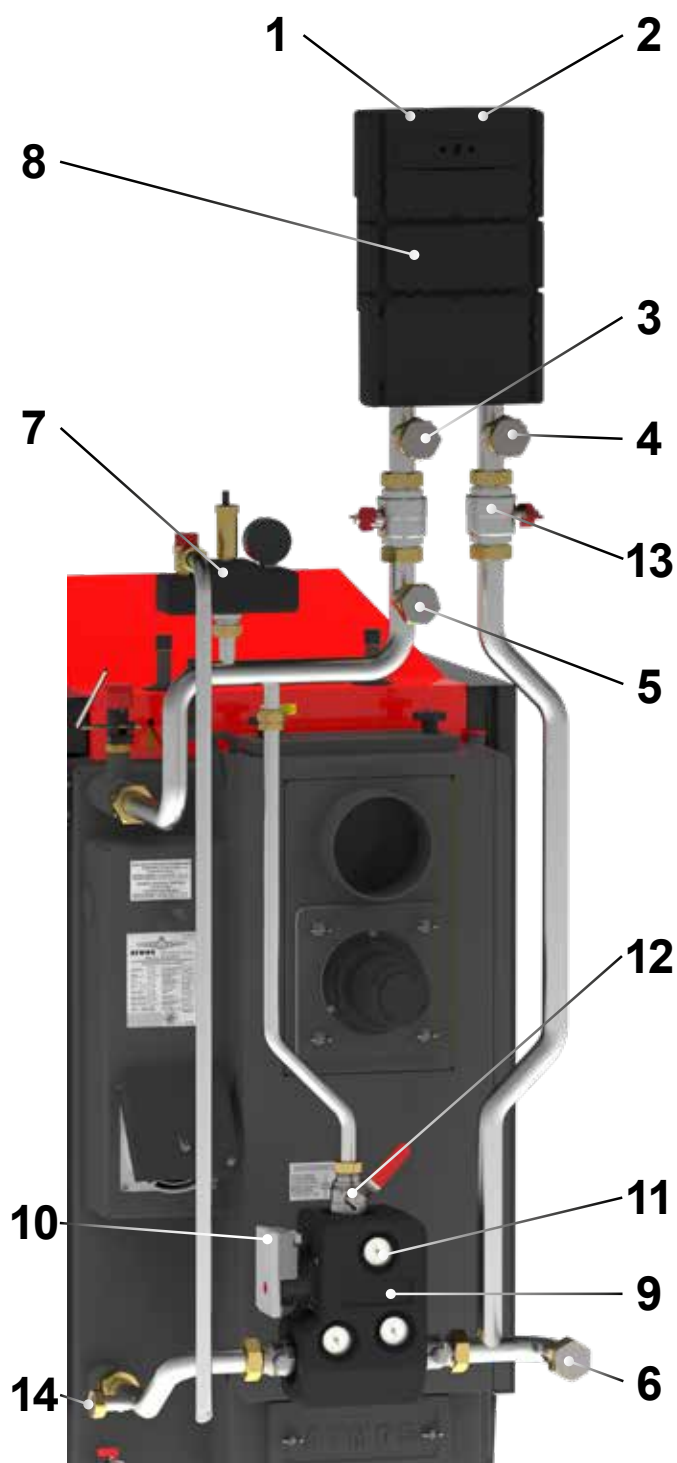
for boilers (DC32S, DC40SX, DC15GS, DC20GS, DC25GS, DC32GS, GS15, GS20, GS25, GS32, DC18GSE, DC22GSE, DC25GSE, DC30GSE, DC18GD, DC25GD, DC30GD)

(recommended for boilers with ATMOS ACD 03/04 controller)

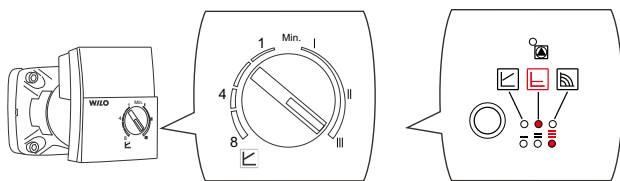


**INFO** - If the boiler is installed without an accumulation tank, the connection height can be reduced by removing the T-pieces and ball valves to height A1 (below the system circulation unit).

# ATMOS F5 Laddomat / ATMOS F6 Laddomat



- 1 - outlet (of hot water) to the heating system
- 2 - return from the heating system
- 3 - (hot water) inlet from the accumulation tank to the pump group of the heating circuit  
(when connecting without accumulation tank, it is necessary to block it off)
- 4 - return to the accumulation tank from the pump group of the heating circuit  
(when connecting without accumulation tank, it is necessary to block it off)
- 5 - hot water outlet from the boiler to the accumulation tank  
(when connecting without accumulation tank, it is necessary to block it off)
- 6 - return from the accumulation tank to the boiler  
(when connecting without accumulation tank, it is necessary to block it off)
- 7 - safety set (safety valve 2,5 bar, vent valve and pressure gauge)
- 8 - ESBE GRA211 pump group with manually operated three-way valve for one heating circuit
- 9 - Laddomat X22 for one boiler circuit  
(with special ball valves)
- 10 - pump in the boiler circuit  
(part of Laddomat X22)
- 11 - thermometers  
(part of Laddomat X22)
- 12 - ball valve fitting – male thread  
(part of Laddomat X22)
- 13 - ball valves for switching when connection with and without the accumulation tank  
(for flow adjustment)
- 14 - expansion tank output (1")

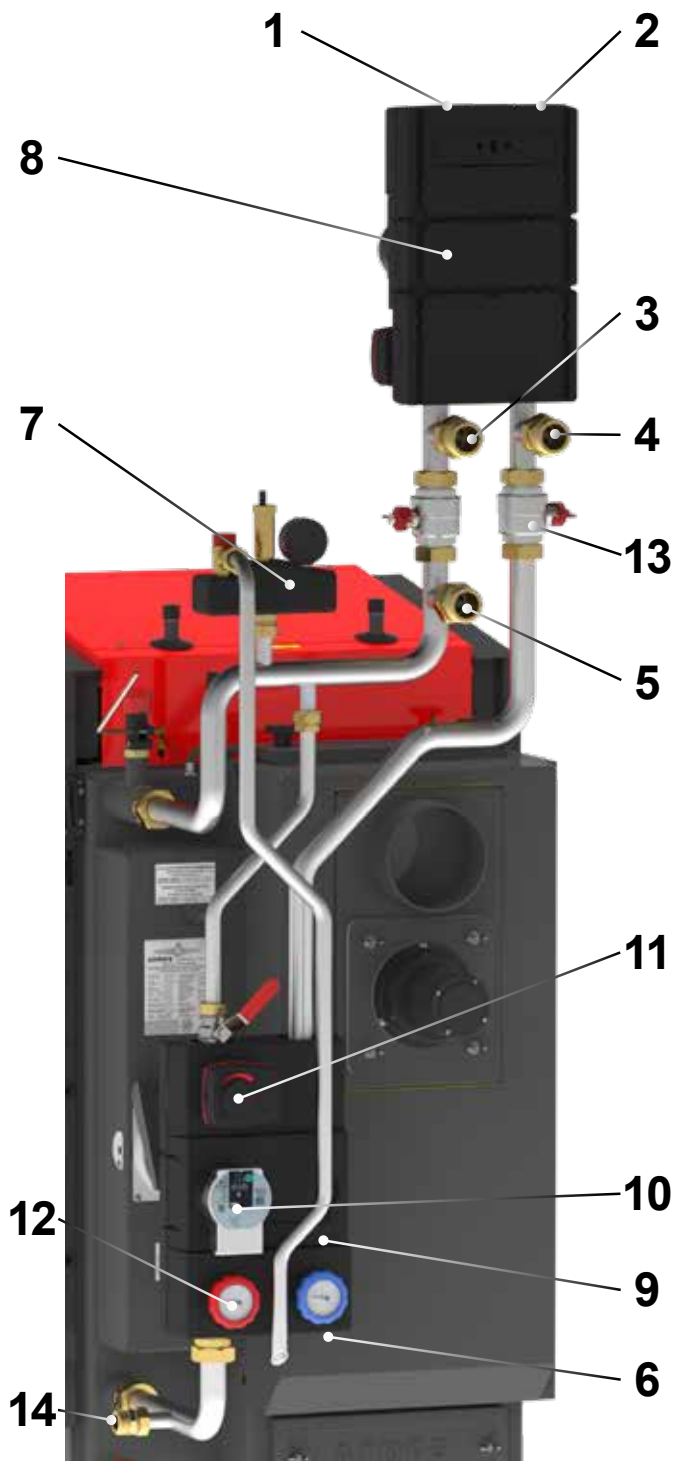


Prescribed pump setting in the boiler circuit  
**- to maximum and constant displacement height**  
 We recommend not to change it

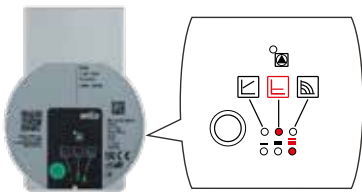
## Accessories in the package

- 3/4" - 3 mm flat sealing	2 pcs
- 1" - 3 mm flat sealing	3 pcs
- 6/4" - 3 mm flat sealing	6 pcs
- 2" - 3 mm flat sealing	1 pc
- 1" plug	1 pc
- 6/4" plug	4 pcs
- thermometer for Laddomatu 22	3 pcs

# ATMOS F7 ESBE / ATMOS F8 ESBE



- 1 - outlet (of hot water) to the heating system
- 2 - return from the heating system
- 3 - (hot water) inlet from the accumulation tank to the pump group of the heating circuit  
(when connecting without accumulation tank, it is necessary to block it off)
- 4 - return to the accumulation tank from the pump group of the heating circuit  
(when connecting without accumulation tank, it is necessary to block it off)
- 5 - hot water outlet from the boiler to the accumulation tank  
(when connecting without accumulation tank, it is necessary to block it off)
- 6 - return from the accumulation tank to the boiler  
(when connecting without accumulation tank, it is necessary to block it off)
- 7 - safety set (safety valve 2,5 bar, vent valve and pressure gauge)
- 8 - ESBE GRA211 pump group with servo actuator (230 V / 50 Hz / 120 s) for one heating circuit
- 9 - ESBE GSA211 pump group with servo actuator (230 V / 50 Hz / 60 s) for one boiler circuit
- 10 - pump in the boiler circuit  
(part of the ESBE GSA211 pump group)
- 11 - servo actuator (230 V / 50 Hz / 60 s)
- 12 - ball valve with thermometer (return to the boiler)
- 13 - ball valves for switching when connection with and without the accumulation tank  
(for flow adjustment)
- 14 - expansion tank output (1")



Prescribed pump setting in the boiler circuit  
**- to maximum and constant displacement height**  
 We recommend not to change it

## Accessories in the package

- 3/4" - 3 mm flat sealing	2 pcs
- 1" - 3 mm flat sealing	3 pcs
- 6/4" - 3 mm flat sealing	6 pcs
- 1" plug	1 pc
- 6/4" plug	3 pcs
- 6/4" brass nut	1 pc
- stainless steel sealing washer	1 pc
- 1"/ 6/4" brass nipple	1 pc

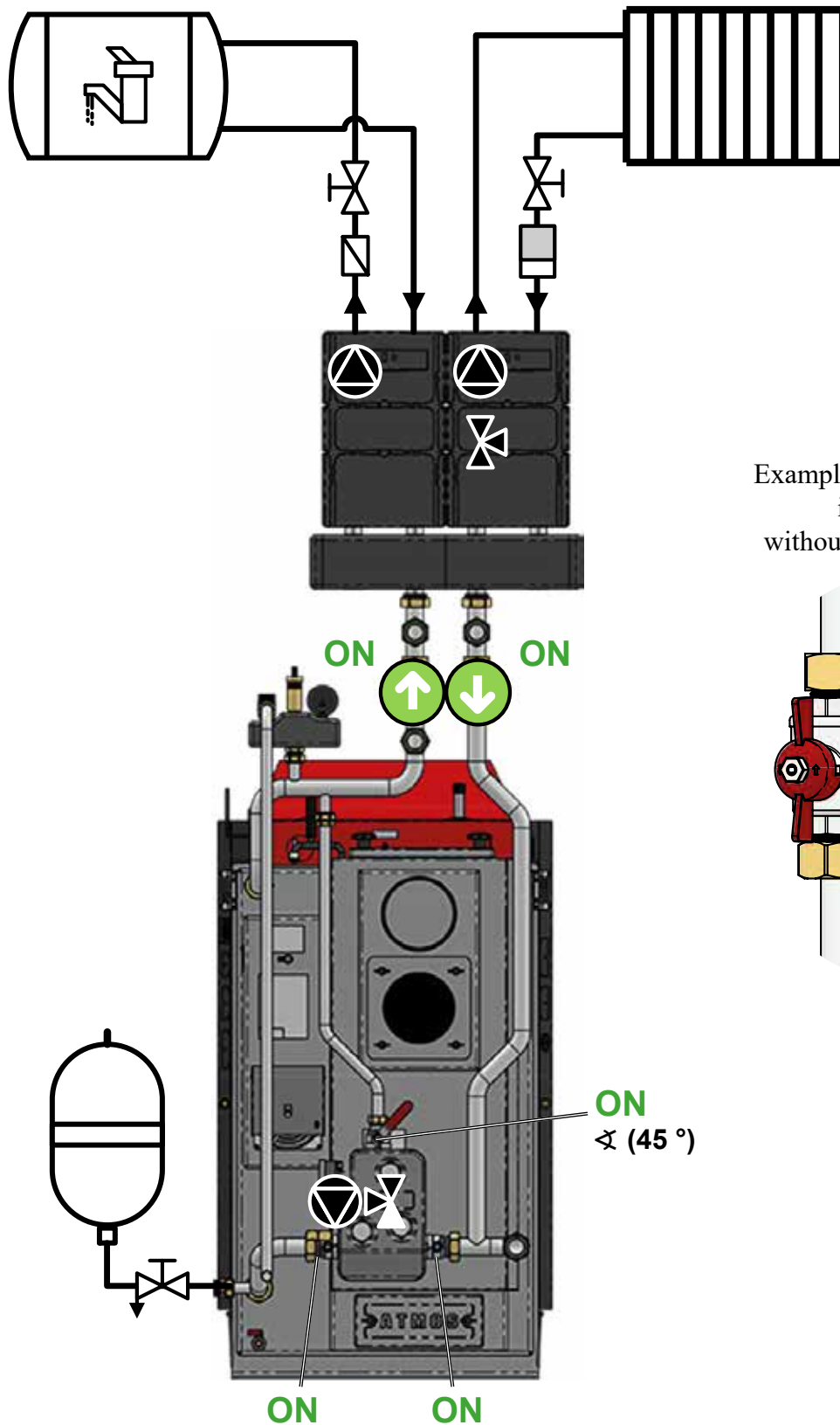


**ATTENTION** – To ensure the correct control of the pump groups with servo actuators in the boiler and heating circuits, ATMOS F7 ESBE / ATMOS F8 ESBE connection must be installed together with an electronic controller (e.g. ATMOS ACD 03/04).

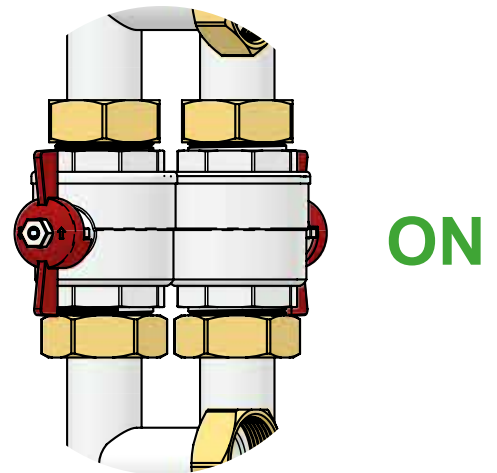
## Example of connection without accumulation tank (one heating circuit + DHW heating circuit)

Connection of ATMOS F5 Laddomat extended by:

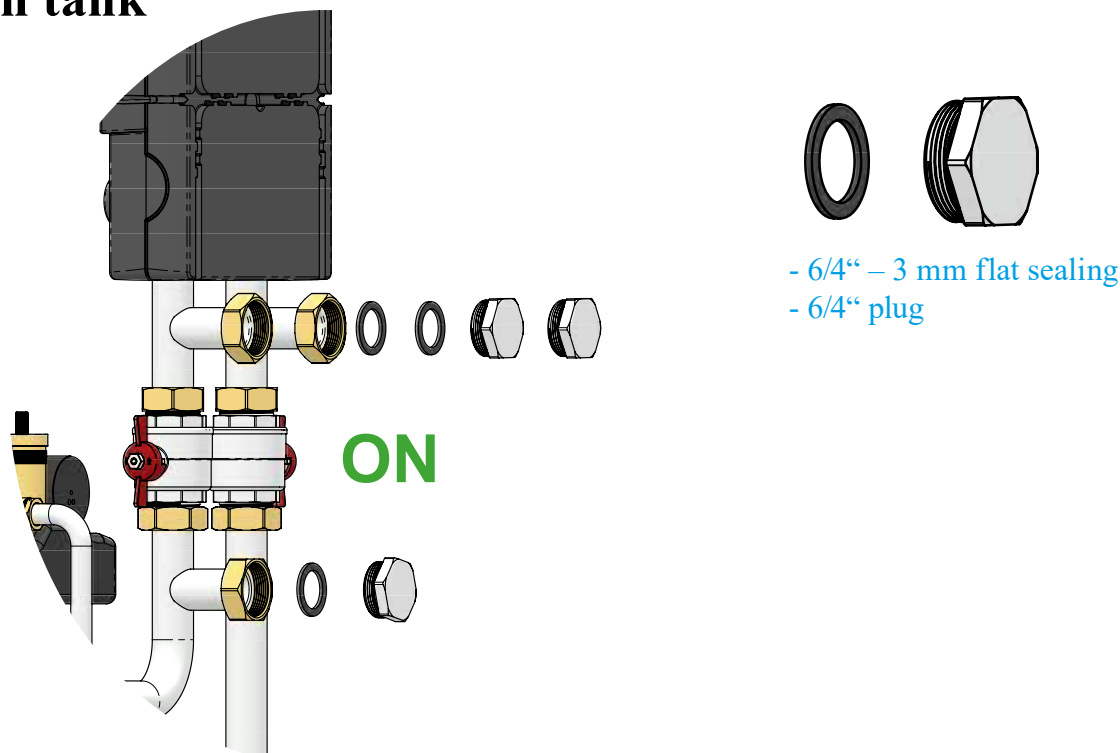
- ATMOS ESBE GMA421 manifold (double-circuit) - code: P0515
- circuit for DHW heating – ATMOS ESBE GDA211 pump group – direct - code: P0512



Example of open ball valves  
in connection  
without accumulation tank

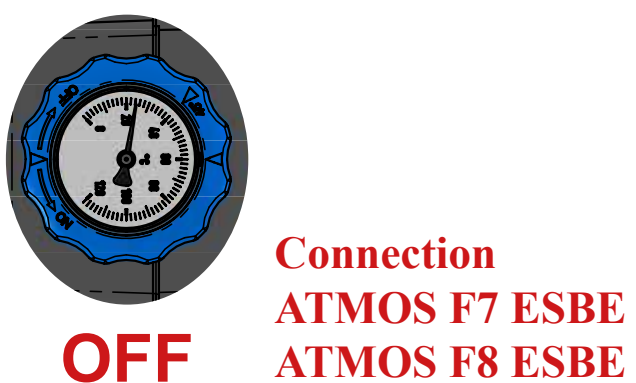
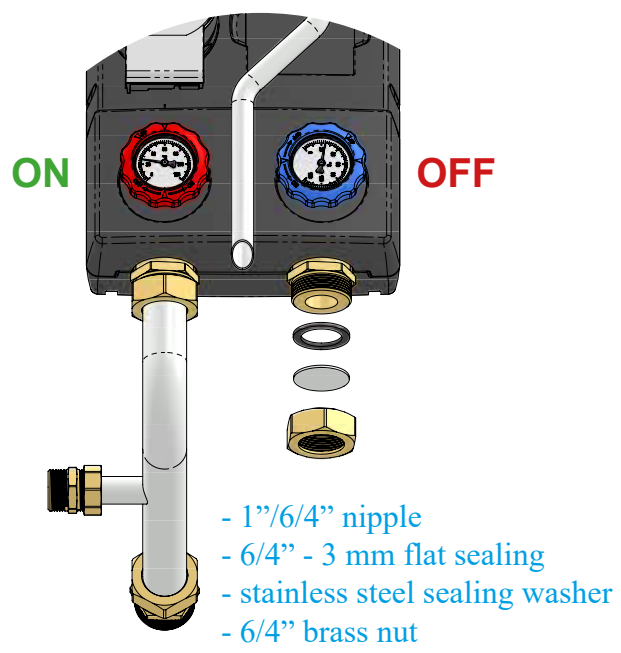
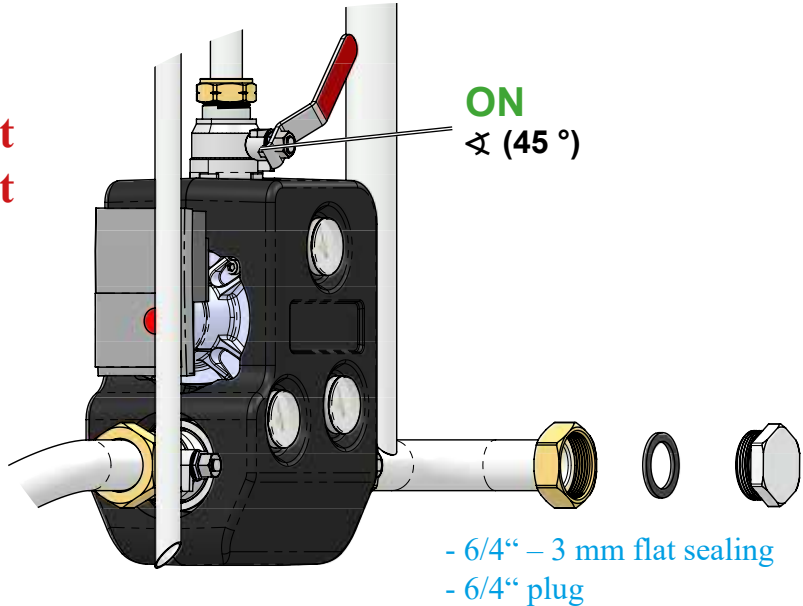


**Example of blocking off outlets with connection without accumulation tank**



**Example of blocking off the return from the accumulation tank when connected without an accumulation tank**

**Connection**  
**ATMOS F5 Laddomat**  
**ATMOS F6 Laddomat**





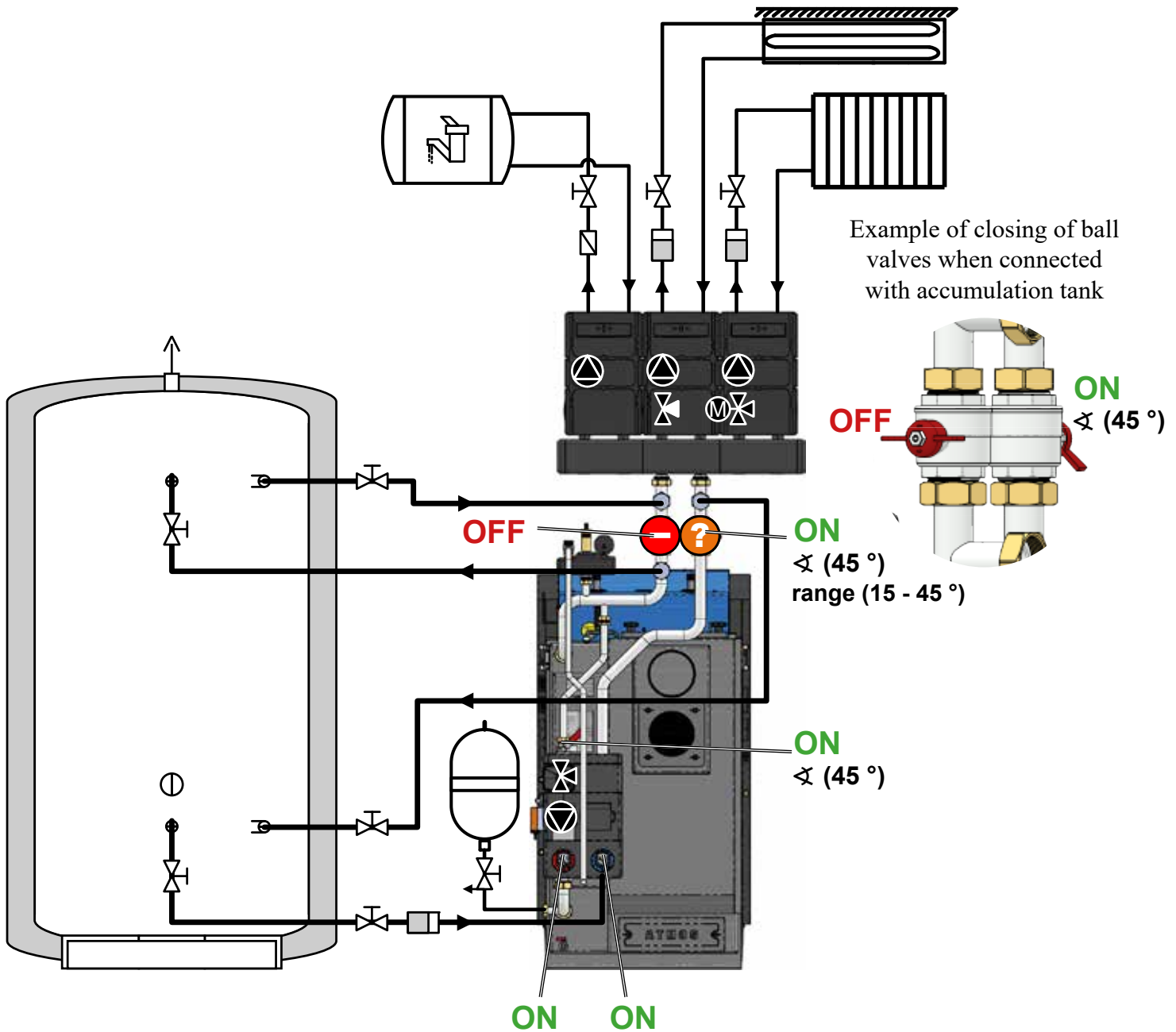
## Example of connection with accumulation tank (two heating circuits + DHW heating circuit)


### Connection of ATMOS F7 ESBE extended by:

- **ATMOS ESBE GMA431 manifold (three-circuit) - code: P0516**
- **heating circuit (underfloor) – ATMOS ESBE GFA211 pump group**
  - **thermostatic 20 - 55 °C - code: P0513**
- **circuit for DHW heating – ATMOS ESBE GDA211 pump group – direct - code: P0512**

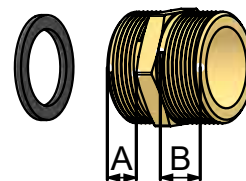
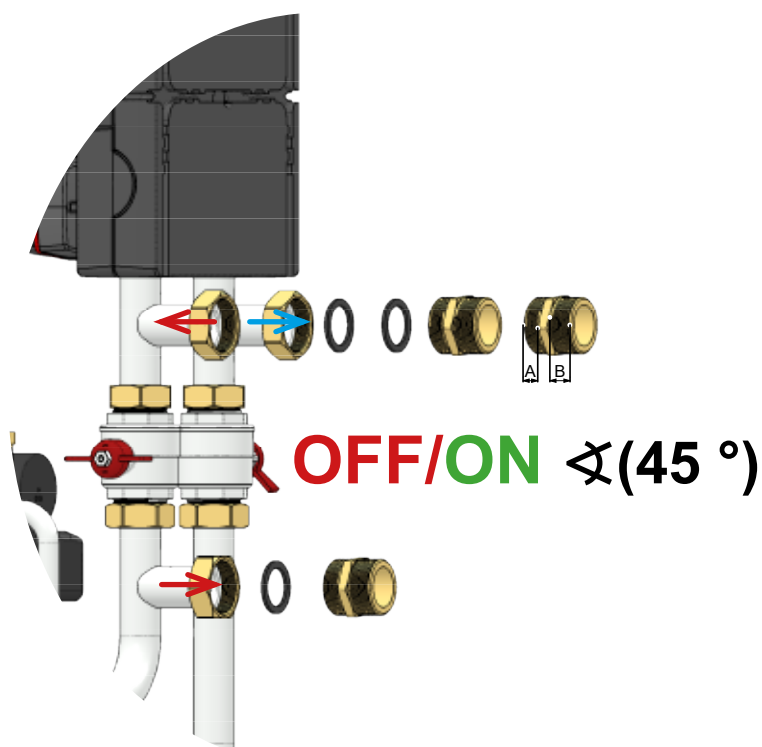


**INFO - To ensure correct control of pump groups with servo actuators in the boiler and heating circuit, this type of connection must be installed together with an electronic controller (e.g. ATMOS ACD 03/04).**



**ATTENTION** – When connecting a boiler with an output higher than 25 kW with an accumulation tank connected as a hydraulic pressure equalizer (2× outlet, 2× inlet), it is necessary to throttle the valve on the return from the heating circuit  (from the distributor) to 45° for better hydraulic balance. At the same time, always tighten the upper valve on the ESBE in the boiler circuit (short circuit) to 45°.

## Example of the outlets to and from the accumulation tank



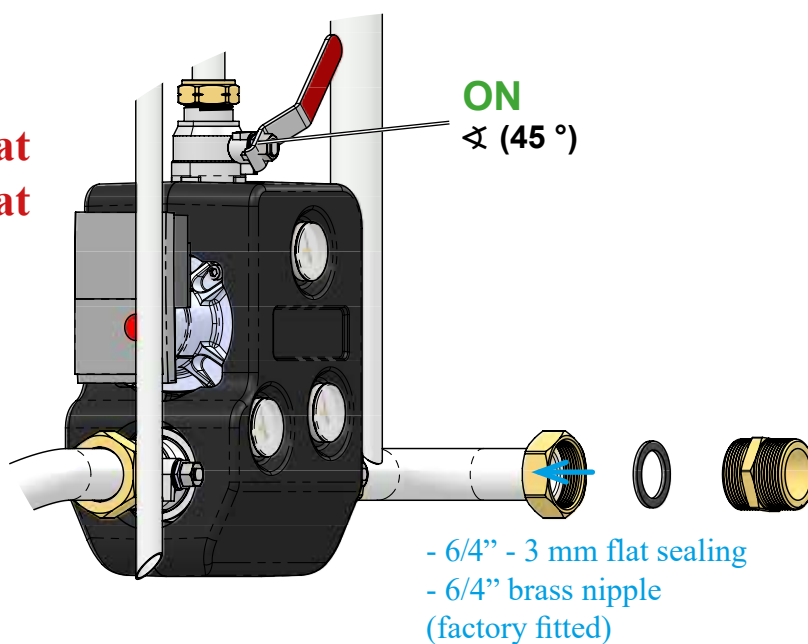
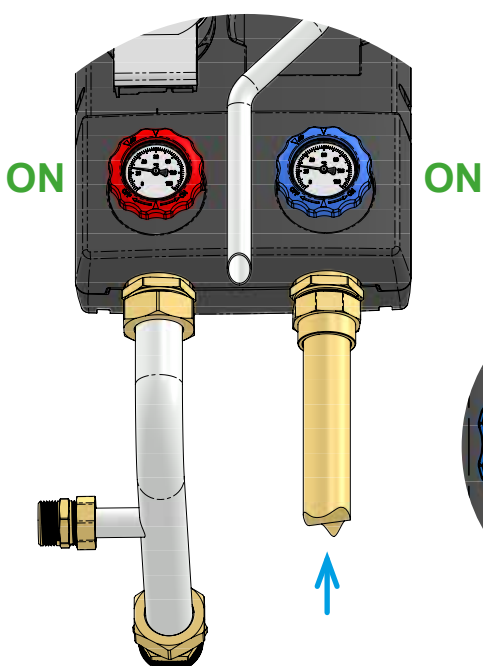
- 6/4" - 3 mm flat sealing
- 6/4" brass nipple (factory fitted)

**Attention** – the shorter part of the thread of the nipple is intended for screwing into the swivel nut

- - hot water flow direction
- - cold water flow direction

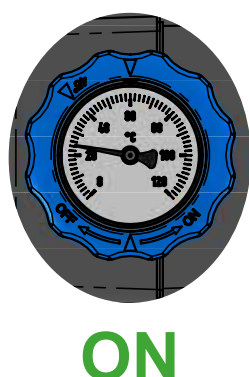
## Example of design of return from the accumulation tank

**Connection**  
**ATMOS F5 Laddomat**  
**ATMOS F6 Laddomat**



- 6/4" - 3 mm flat sealing
- 6/4" brass nipple (factory fitted)

**Attention** – the shorter part of the thread of the nipple is intended for screwing into the swivel nut



**Connection**  
**ATMOS F7 ESBE**  
**ATMOS F8 ESBE**

# Example of ATMOS F5 / F6 Laddomat connection with accumulation tank

(boiler circuit + one heating circuit + DHW heating)

## ATMOS F5 / F6 Laddomat connection

- manufacturing design

### Boiler circuit

**Laddomat X22 (code: P0247)**

(thermoregulatory 78 °C (72 °C))

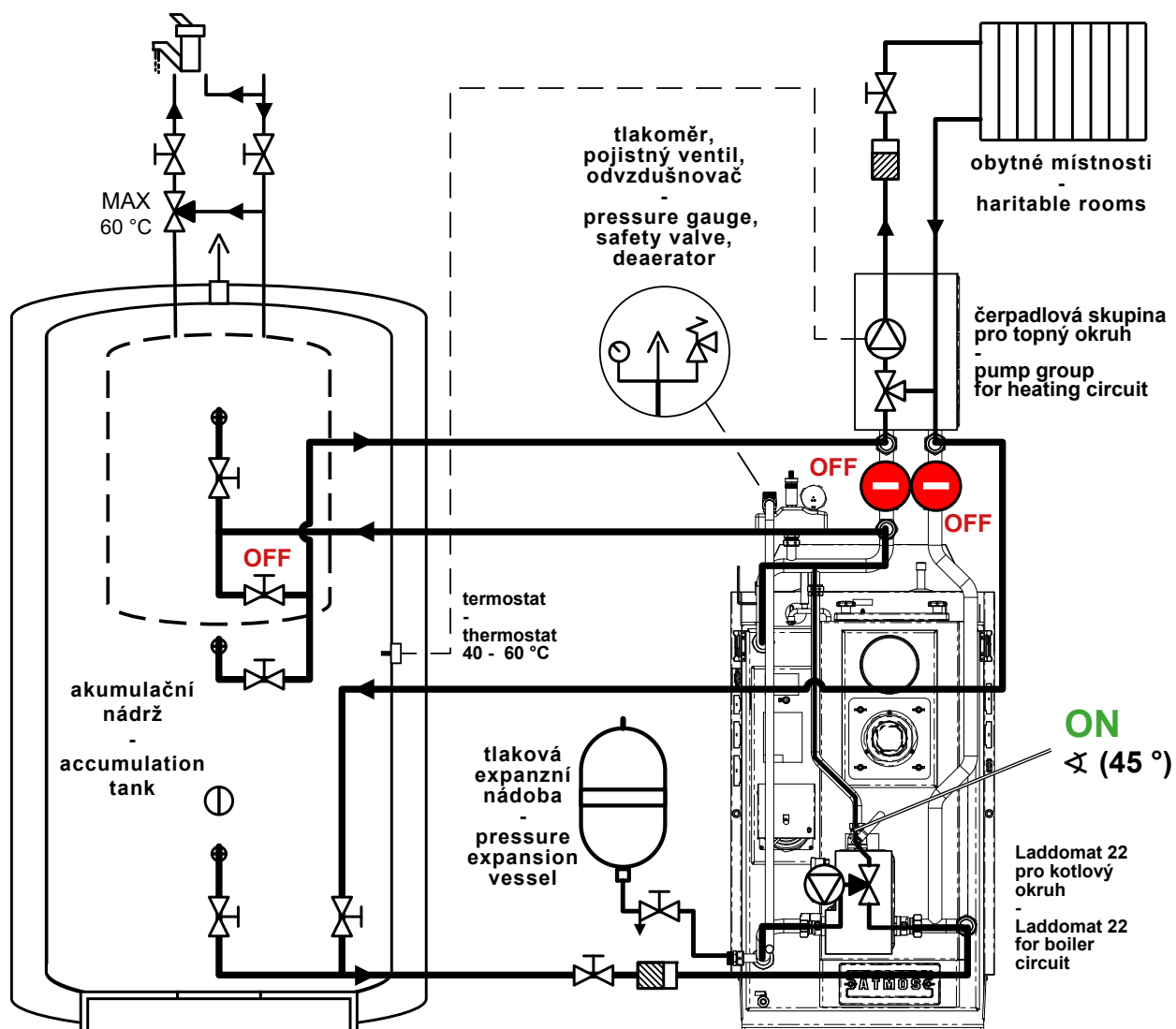
### Heating circuit

**GRA211 (code: P0538)**

(mixing – three-way valve without servo actuator)

**ATTENTION** – DHW heating is provided by a floating boiler in the accumulation tank.

The output from the accumulation tank to the heating system is connected in such a way that it does not discharge the top of the accumulation tank with the floating boiler for DHW heating.



**WARNING** – Pump in the boiler circuit set to maximum and constant displacement height. Turn the top valve on the Laddomat X22 in the boiler circuit (at the short circuit) to 45°.



# ATMOS F7 / F8 ESBE connection example with accumulation tank and ATMOS ACD 03 controller

## (boiler circuit + distributor + one heating circuit + DHW heating circuit)

### ATMOS F7 / F8 ESBE connection

- manufacturing design

#### Boiler circuit

**GSA211 (code: P0511)**

(three-way valve with servo actuator (ARA 661) 60 s)

#### Heating circuit

**GRA211 (code: P0514)**

(three-way valve with servo actuator (ARA 661) 120 s)

+

#### ATMOS ACD 03 AGF controller

with accessories (code: S0103)

### Connection extended by:

#### Manifold for two circuits

**GMA421 (code: P0515)**

(spacing 125 mm, 6/4"  $\updownarrow$  6/4")

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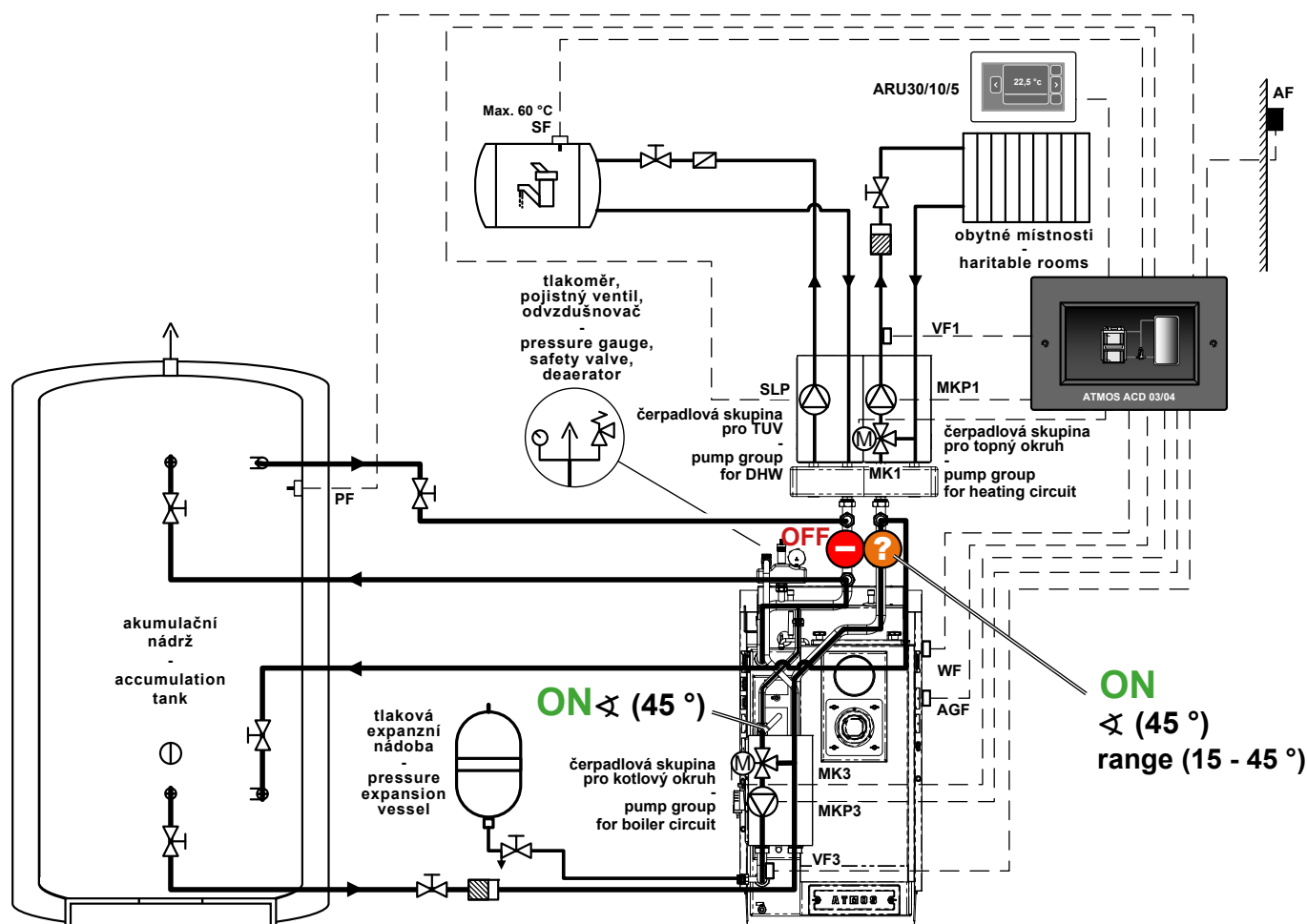
#### Circulation unit

- direct (for DHW)

**GDA211 (code: P0512)**

(spacing 125 mm, 1"  $\updownarrow$  6/4")

**ATTENTION** – Connection of the accumulation tank as a hydraulic bypass (2x inlet, 2x outlet).



**ATTENTION** – When connecting a boiler with an output higher than 25 kW with an accumulation tank connected as a hydraulic pressure equalizer (2× outlet, 2× inlet), it is necessary to throttle the valve on the return from the heating circuit ? (from the distributor) to 45° for better hydraulic balance. Pump in boiler circuit set to maximum and constant displacement height. At the same time, always tighten the upper valve on the ESBE in the boiler circuit (short circuit) to 45°.

# Example of ATMOS F5 / F6 Laddomat connection with accumulation tank

(boiler circuit + manifold + two heating circuits  
+ DHW heating circuit)

## ATMOS F5 / F6 Laddomat connection

- manufacturing design

### Boiler circuit

**Laddomat X22 (code: P0247)**

(thermoregulatory 78 °C (72 °C))

### Heating circuit

**GRA211 (kód: P0538)**

(mixing – three-way valve without servo actuator)

## Connection extended by:

### Manifold for two circuits

**GMA421 (code: P0515)**

(spacing 125 mm, 6/4" ↑↓ 6/4")

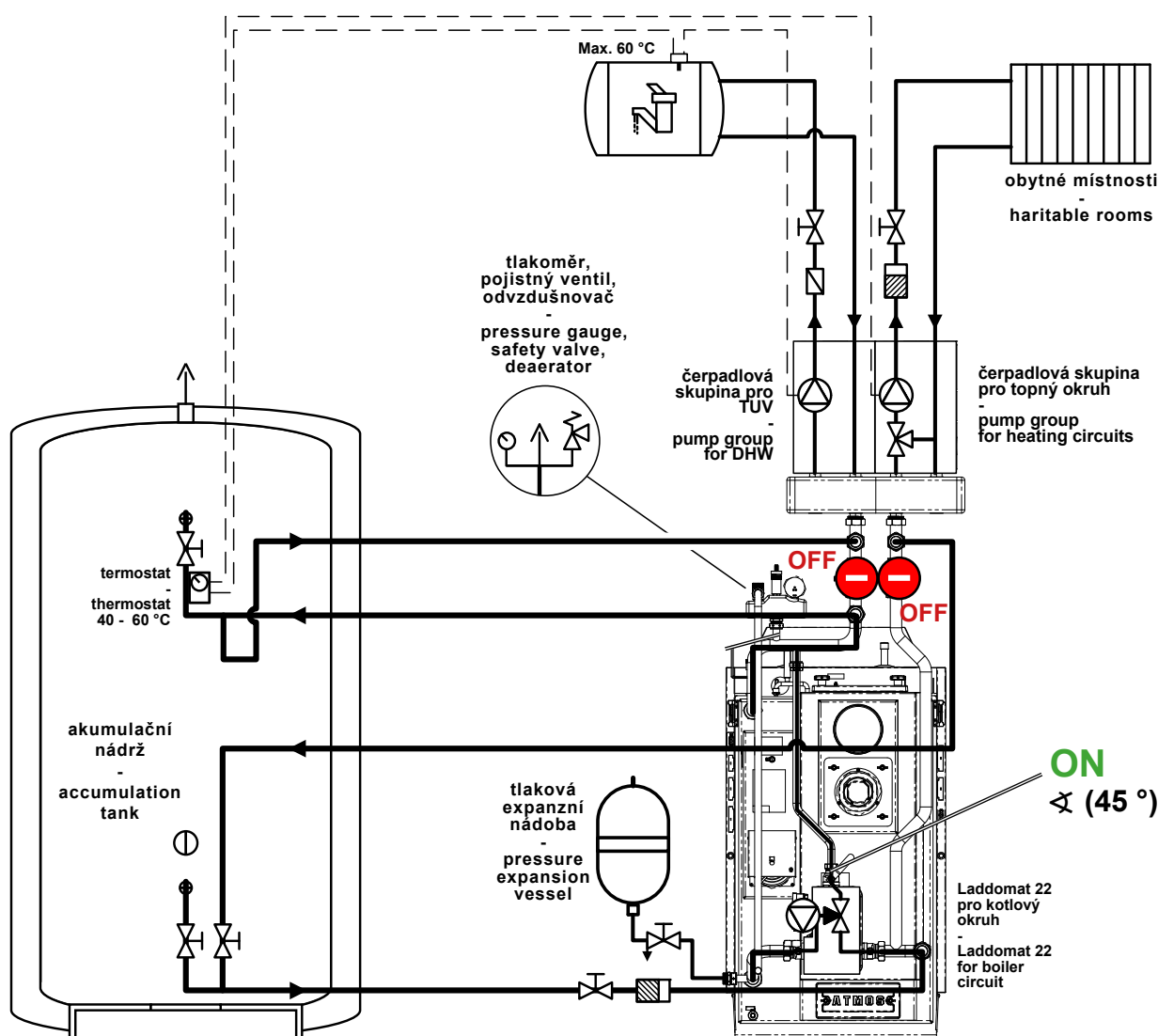
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### Circulation unit

- direct (for DHW)

**GDA211 (code: P0512)**

(spacing 125 mm, 1" ↑↓ 6/4")



**WARNING – Pump in the boiler circuit set to maximum and constant displacement height.  
Turn the top valve on the Laddomat X22 in the boiler circuit (at the short circuit) to 45°.**

# Example of ATMOS F7 / F8 ESBE connection with accumulation tank

## (boiler circuit + one heating circuit + DHW heating)

### ATMOS F7 / F8 ESBE connection

- výrobní provedení

#### Boiler circuit

**GSA211 (code: P0511)**

(three-way valve with servo actuator - ARA 661 - 60 s)

#### Heating circuit

**GRA211 (code: P0514)**

(three-way valve with servo actuator - ARA 661 - 120 s)

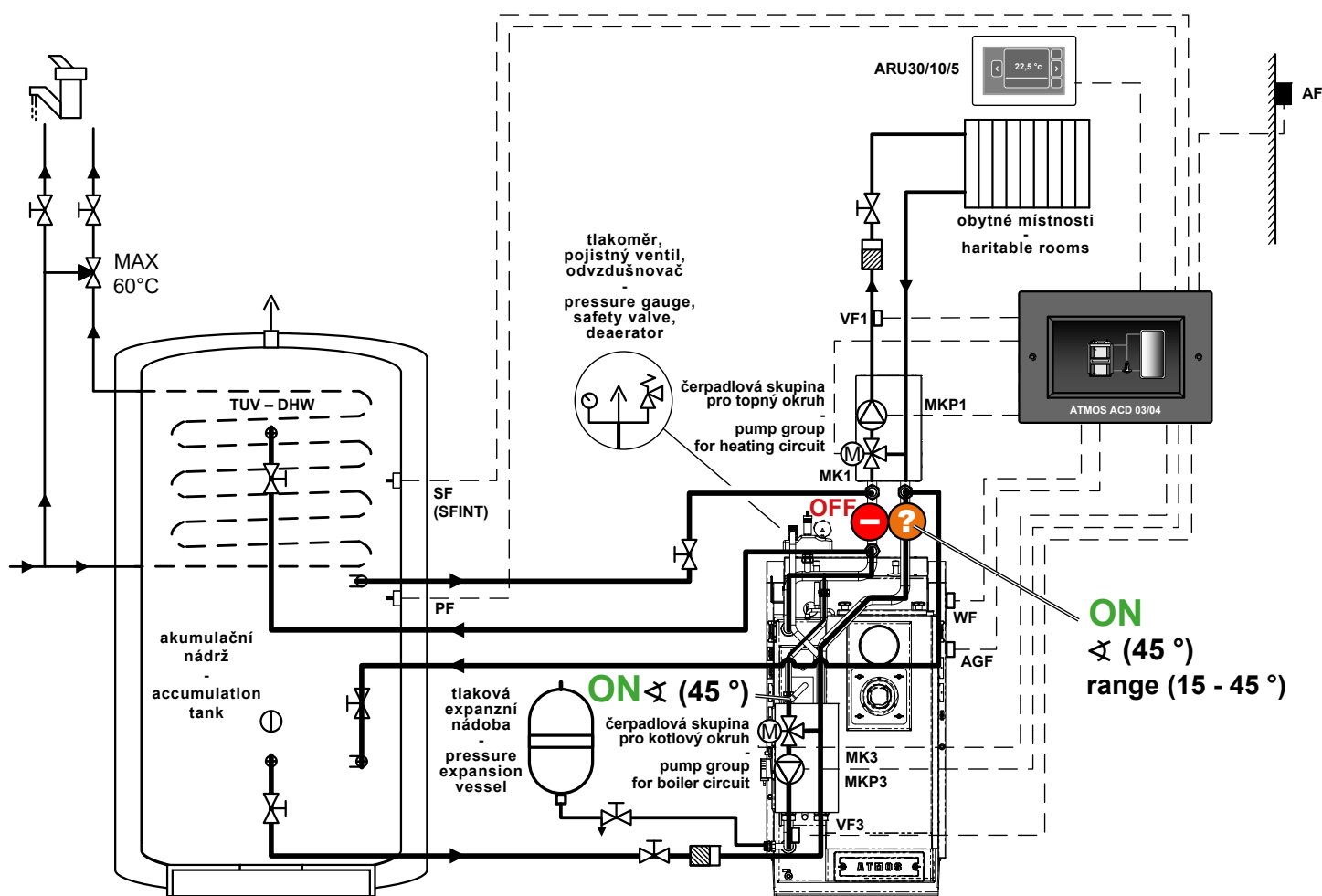
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**ATMOS ACD 03 AGF controller  
with accessories (code: S0103)**

**ATTENTION** – Connection of the accumulation tank as a hydraulic bypass (2x inlet, 2x outlet).

**ATTENTION** – DHW heating is provided by a flow exchanger in the accumulation tank.

The outlet from the accumulation tank to the heating system is connected in such a way that it does not discharge the upper part of the accumulation tank for DHW heating.



**ATTENTION** – When connecting a boiler with an output higher than 25 kW with an accumulation tank connected as a hydraulic pressure equalizer (2× outlet, 2× inlet), it is necessary to throttle the valve on the return from the heating circuit (from the distributor) to 45° for better hydraulic balance. Pump in boiler circuit set to maximum and constant displacement height. At the same time, always tighten the upper valve on the ESBE in the boiler circuit (short circuit) to 45°.

# Accessories for extension of the basic connection

**Circulation unit**  
**ATMOS ESBE GRA211**  
 Controlled - actuator 120 s  
 Spacing 125 mm - 1" ↑ ↓ 6/4"  
 Recommended  
 for **radiators/underfloor heating**  
 (order code: P0514)

**Circulation unit**  
**ATMOS ESBE GFA211**  
 Thermostatic 20 - 55 °C  
 Spacing 125 mm - 1" ↑ ↓ 6/4"  
 Recommended  
 for **underfloor heating**  
 (order code: P0513)

**Circulation unit**  
**ATMOS ESBE GDA211**  
 Direct  
 Spacing 125 mm - 1" ↑ ↓ 6/4"  
 Recommended  
 for **domestic hot water**  
 (order code: P0512)



**Manifold for three circulation units (three circuits)**

**ATMOS ESBE GMA431**  
 Spacing 125 mm - 6/4" ↑ ↓ 6/4"  
 (order code: P0516)

**Circulation unit**  
**ATMOS ESBE GRA211**  
 Mixing  
 Spacing 125 mm - 1" ↑ ↓ 6/4"  
 Recommended  
 for **radiators**  
 (order code: P0538)

**Circulation unit**  
**ATMOS ESBE GDA211**  
 Direct  
 Spacing 125 mm - 1" ↑ ↓ 6/4"  
 Recommended  
 for **domestic hot water**  
 (order code: P0512)



**Manifold for two circulation units (two circuits)**

**ATMOS ESBE GMA421**  
 Spacing 125 mm - 6/4" ↑ ↓ 6/4"  
 (order code: P0515)