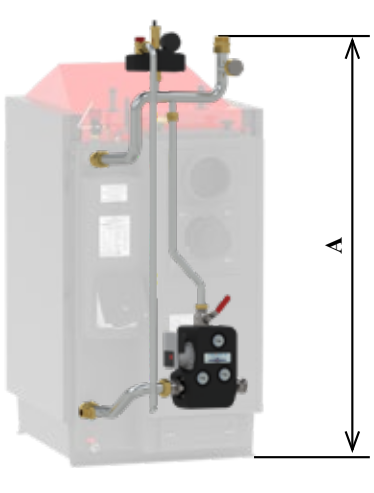
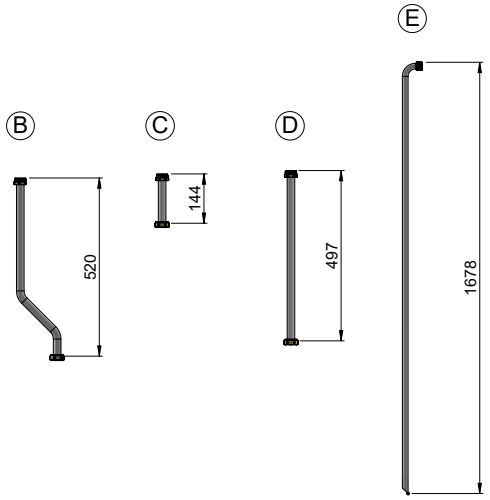
Connection of ATMOS boilers
up to 40 kW with manual stoking

Description: Professional **stainless steel connection based on 35 × 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, Laddomat 22, set of pipes for different variants of boilers and unconnected separate pump group ESBE type GRA211 with manually operated three-way valve and pump.

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.



ESBE GRA211



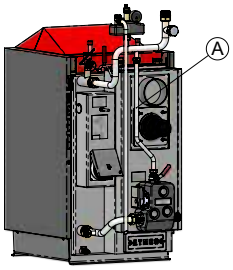
Connection
ATMOS F12 Laddomat - code: P0612

Connection height (for boilers)	**A** height	**B** depth of connection behind the boiler
1 - ATMOS F12 Laddomat - production design (DC32S, DC40SX, DC15GS, DC20GS, DC25GS, DC32GS, DC18GD, DC25GD, DC30GD) **(A)**	1405	280 - 340
2 - ATMOS F12 Laddomat - with pipe B in the boiler circuit (DC18S, DC22S, DC22SX, DC25S, DC30SX, C15S, C18S, AC16S, AC25S) **(B)**	1331	280 - 340
3 - ATMOS F12 Laddomat - with pipes A + C in the boiler circuit (C25ST, C32ST) **(A+C)**	1576	280 - 340
4 - ATMOS F12 Laddomat - with pipes B + D in the boiler circuit and pipe E on the safety valve (DC18SP, DC25SP, DC30SPX) **(B+D and E)**	1831	280 - 340
5 - ATMOS F12 Laddomat - with pipes A + D in the boiler circuit and pipe E on the safety valve (DC32SP) **(A+D and E)**	1903	280 - 340

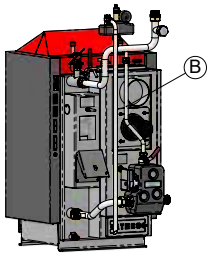
- dimensions (mm)

* height of the pump group 400 mm / ** manifold height 170 mm

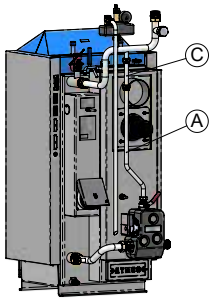
***length of pipe A is 616 mm - production design



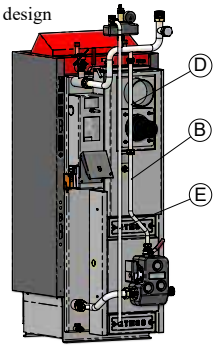
1. ATMOS F12 Laddomat



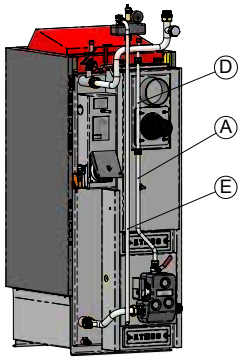
2. B



3. A + C

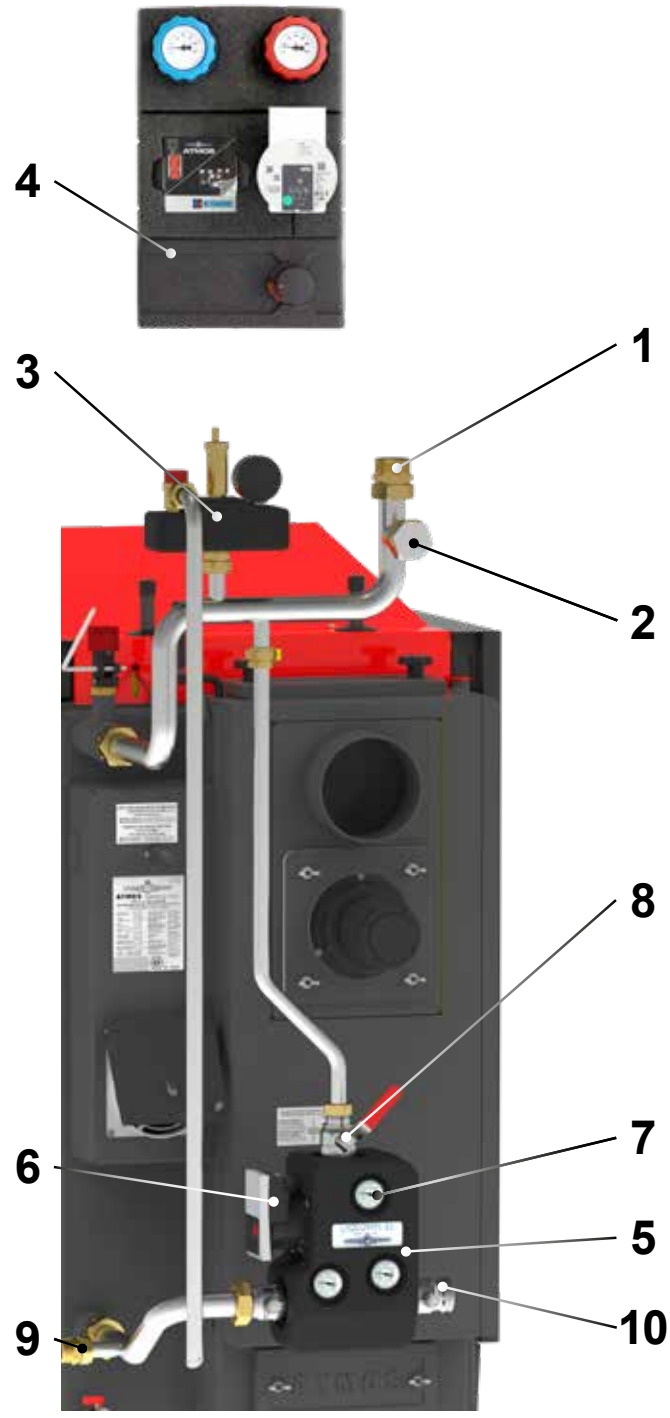


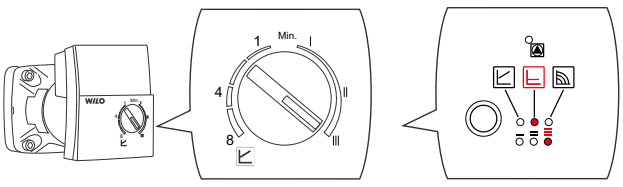
4 . B + D and E



5. A + D and E

ATMOS F12 Laddomat





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

1 - vertical hot water outlet from the boiler to the akumulation tank (heating system - pump groups)

2 - horizontal hot water outlet from the boiler to the akumulation tank (heating system - pump groups)

3 - safety set (safety valve 2,5 bar, vent valve and pressure gauge)

4 - ESBE GRA211 pump group with manually operated three-way valve for one heating circuit

5 - Laddomat X22 for one boiler circuit (with special ball valves)

6 - pump in the boiler circuit (part of Laddomat X22)

7 - thermometers (part of Laddomat X22)

8 - ball valve fitting – male thread (part of Laddomat X22)

9 - expansion tank output (1“)

10 - return from the accumulation tank (heating circuit) (inlet to the Laddomat - 6/4” male thread)

Accessories in the package

- 3/4” - 3 mm flat sealing	1 pc
- 1” - 3 mm flat sealing	7 pcs
- 6/4” - 3 mm flat sealing	4 pcs
- 2” - 3 mm flat sealing	2 pcs
- thermometer for Laddomatu 22	3 pcs
- nipple 6/4”	1 pc
- plug 1“	1 pc

Pipes in the package

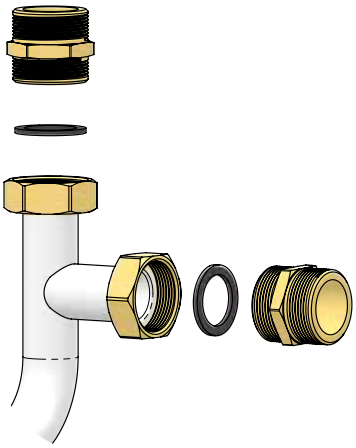
- boiler circuit pipe (B) Ø 22 x 1,5 x 520	1 pc
- boiler circuit extension (C) Ø 22 x 1,5 x 144	1 pc
- boiler circuit extension (D) Ø 22 x 1,5 x 497	1 pc
- safety valve pipe (E) Ø 22 x 1,5 x 1678	1 pc

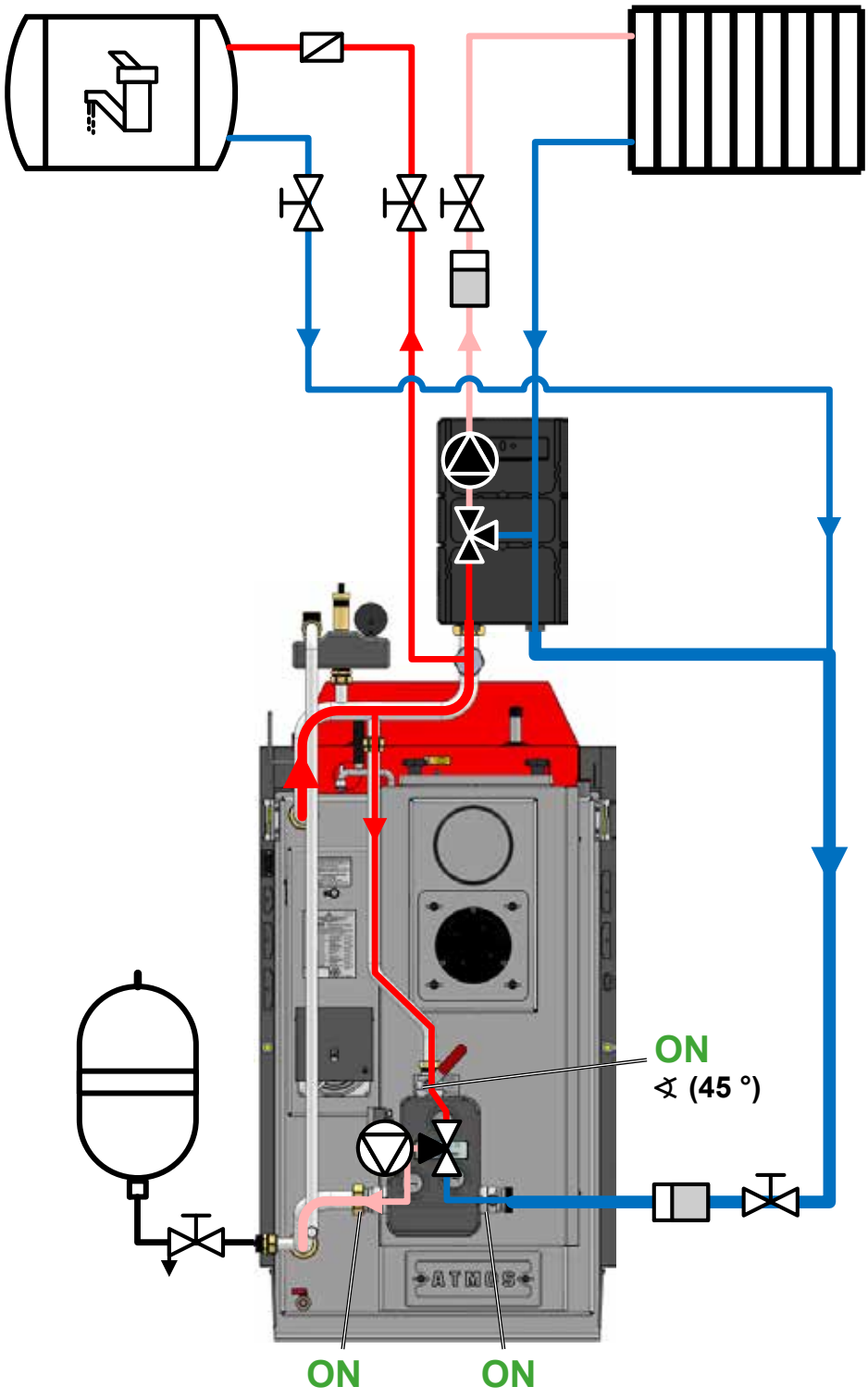
Example of connection without accumulation tank (one heating circuit + DHW heating circuit)

- pump group ESBE GRA211 with manually operated three-way valve - code: P0538

ATTENTION - With this connection, the DHW boiler is charged by a pump in the boiler circuit (Laddomat X22). The water temperature in the boiler matches the boiler temperature.

Example of using nipple by both outlets



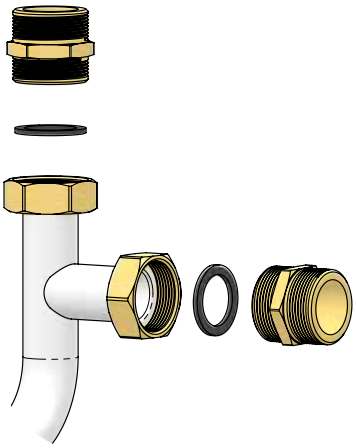


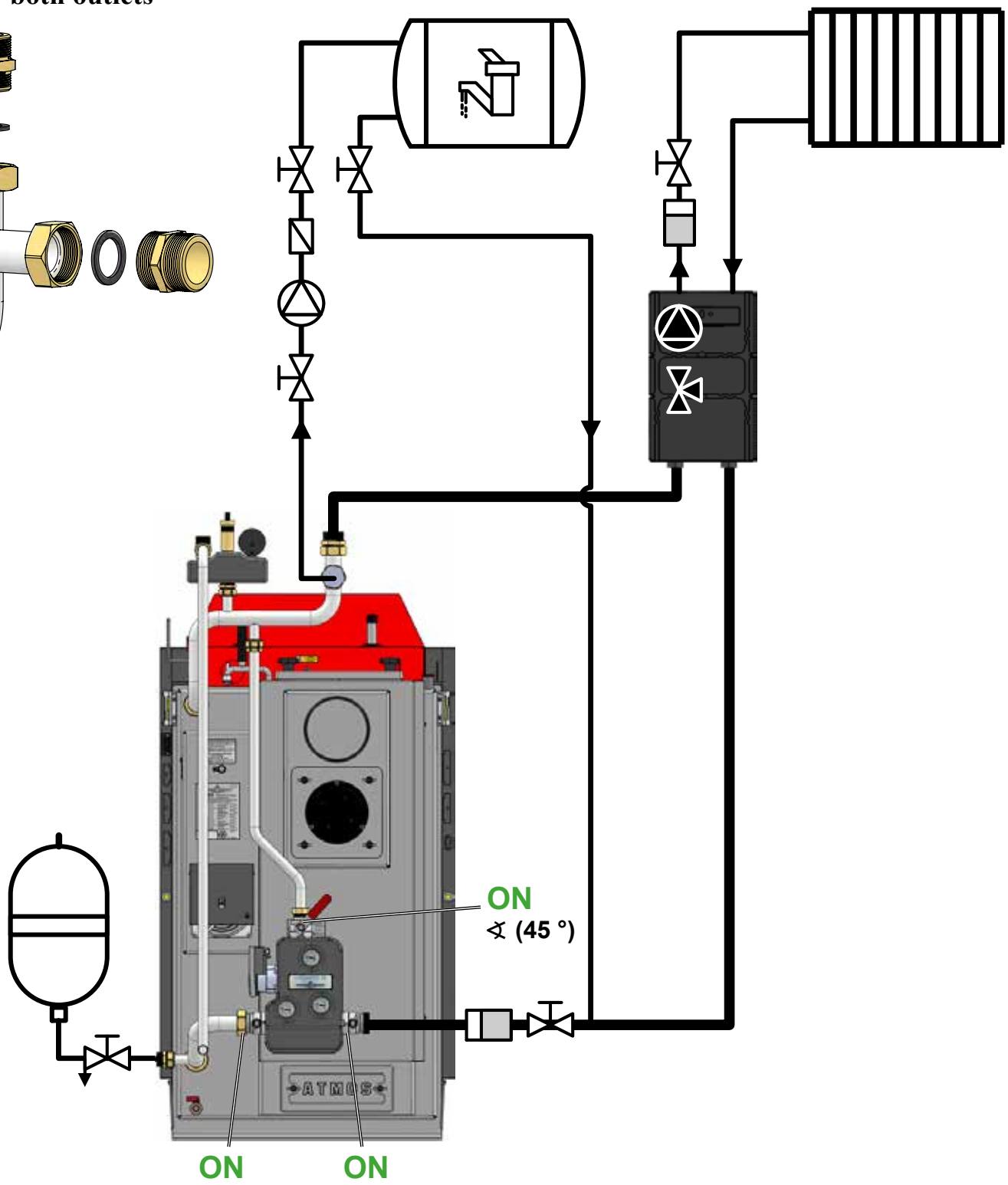
Example of connection without accumulation tank (one heating circuit + DHW heating circuit)

- pump group ESBE GRA211 with manually operated three-way valve - code: P0538

ATTENTION - With this connection, the DHW boiler is charged by a separate pump. The DHW temperature is controlled by a thermostat located in the boiler, which controls the charging pump.

Example of using nipple by both outlets





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

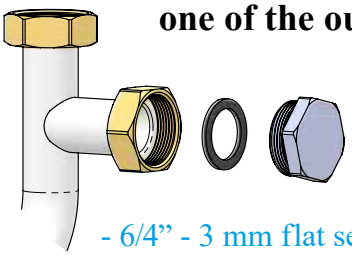
- pump group ESBE GRA211 with manually operated three-way valve - code: P0538

Connection ATMOS F12 Laddomat extended by:

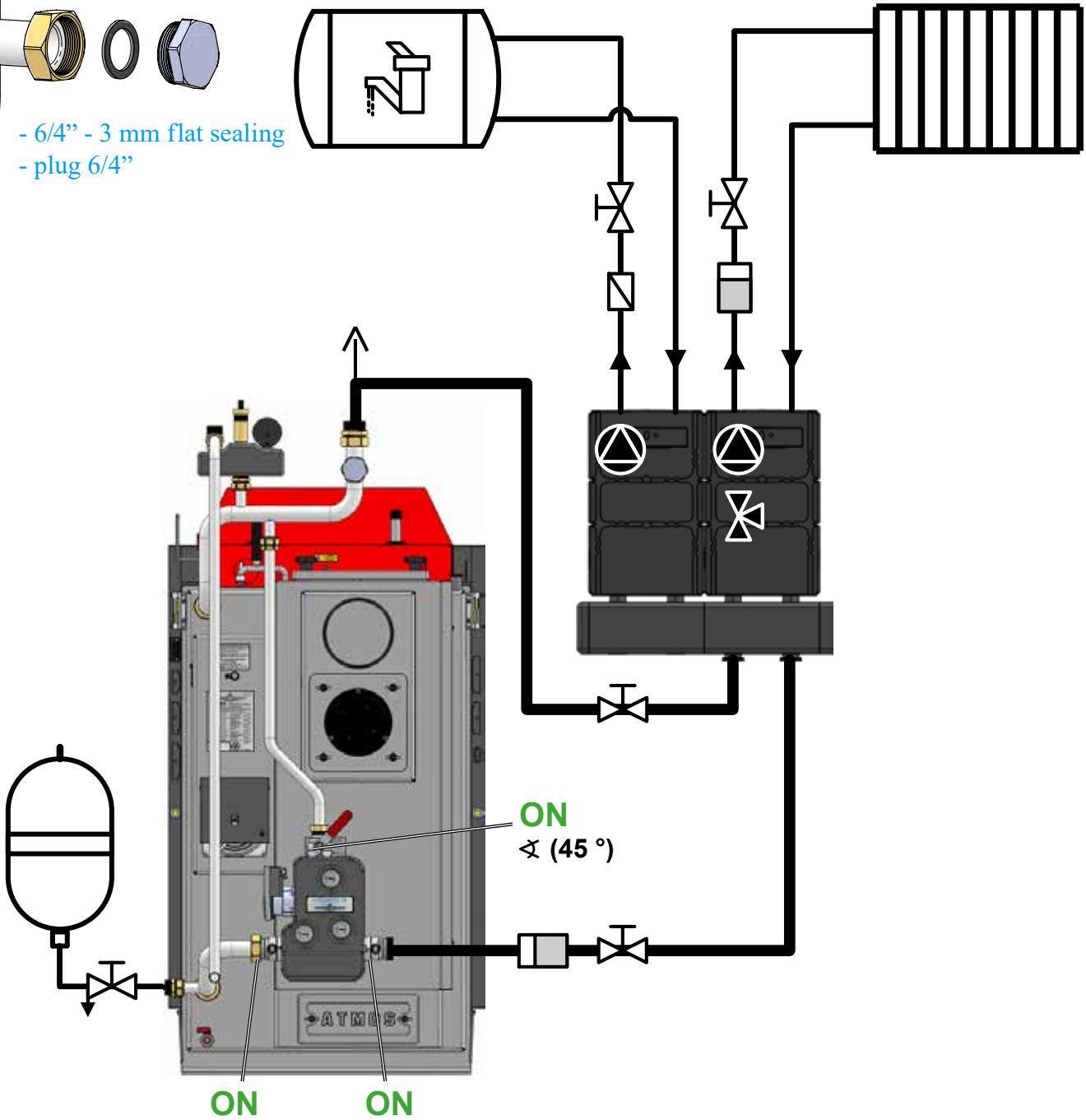
- ATMOS ESBE GMA421 manifold (double-circuit) - code: P0515

- circuit for DHW heating – ATMOS ESBE GDA211 pump group – direct - code: P0512

Example of blocking off one of the outlets



- 6/4” - 3 mm flat sealing
- plug 6/4”



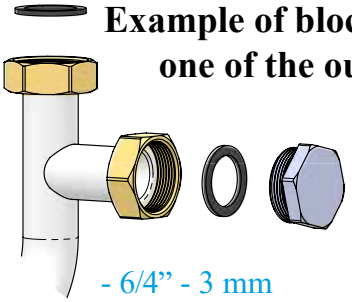
Example of connection ATMOS F12 Laddomat with accumulation tank

- pump group ESBE GRA211 with manually operated three-way valve - code: P0538

(boiler circuit + one heating circuit + DHW heating)

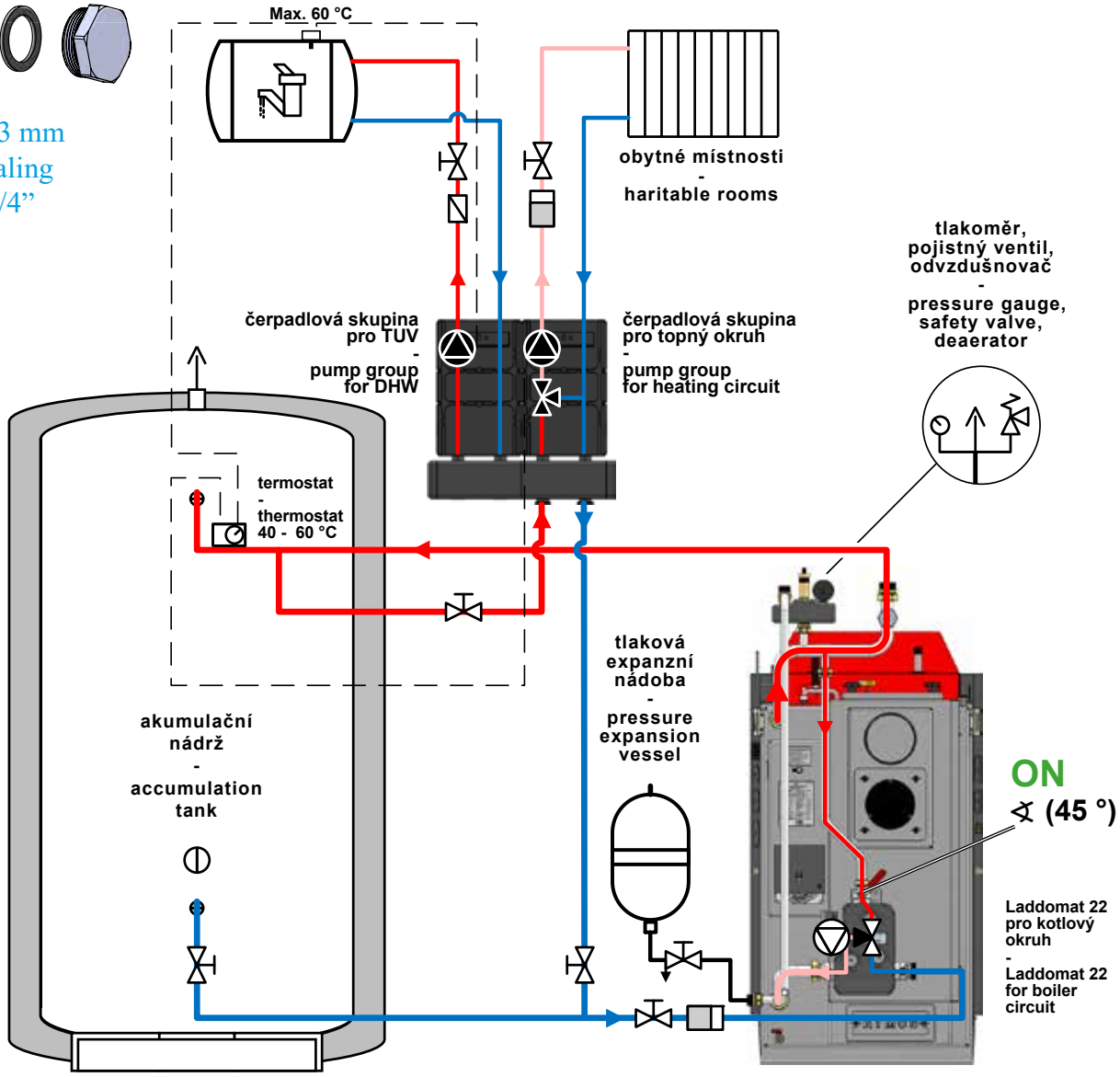
Connection ATMOS F1 Laddomat extended by:

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



Example of blocking off one of the outlets

- 6/4” - 3 mm flat sealing
- plug 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 connection ATMOS F12 Laddomat with accumulation tank

(boiler circuit + one heating circuit + DHW heating)

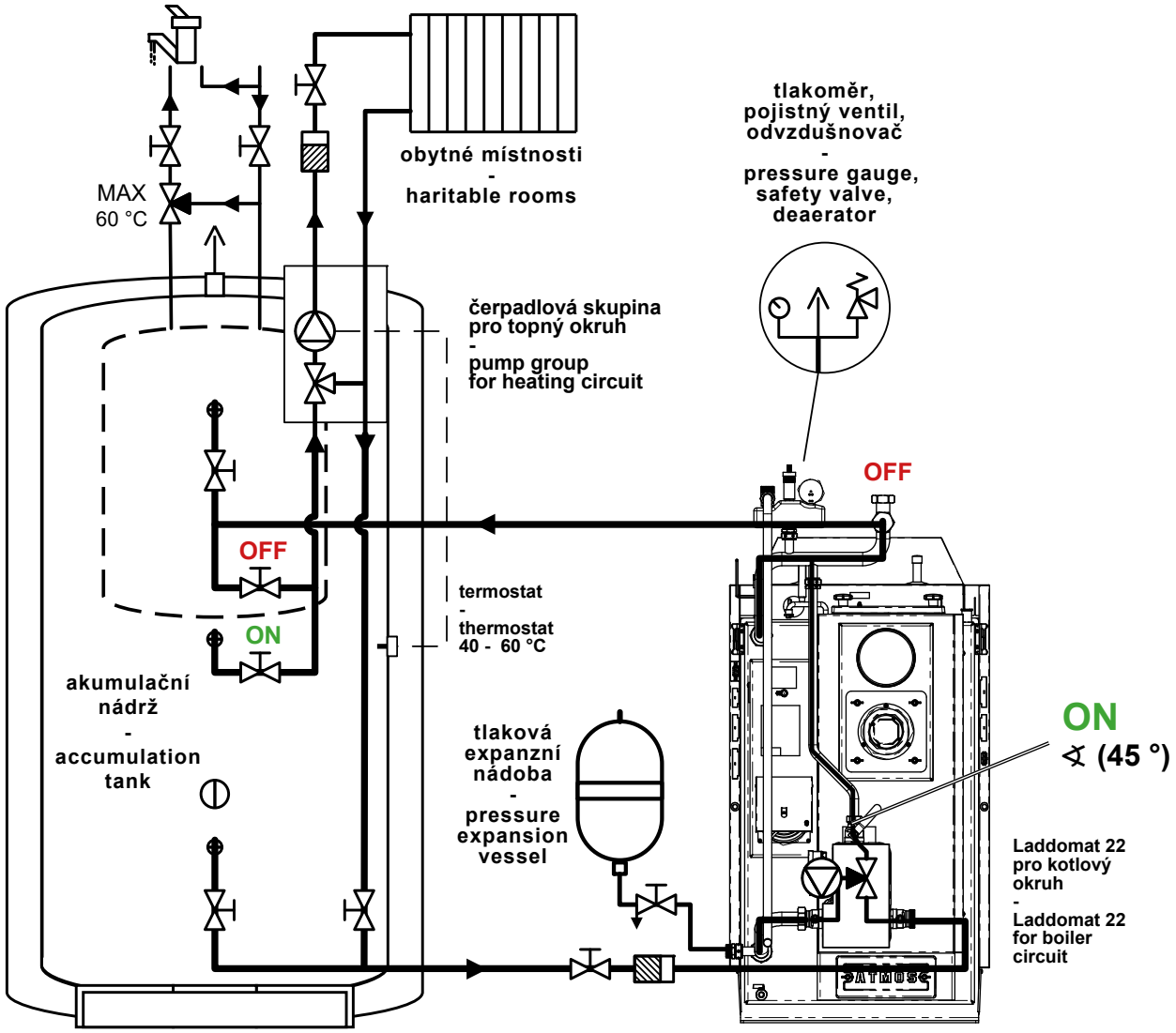
Connection ATMOS F12 Laddomat
- production design

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°.

Example of connection ATMOS F12 Laddomat with accumulation tank

(boiler circuit + one heating circuit + DHW heating)

Connection ATMOS F12 Laddomat
- production design

Boiler circuit
Laddomat X22 (code: P0247)
(thermoregulatory 78 °C (72 °C))

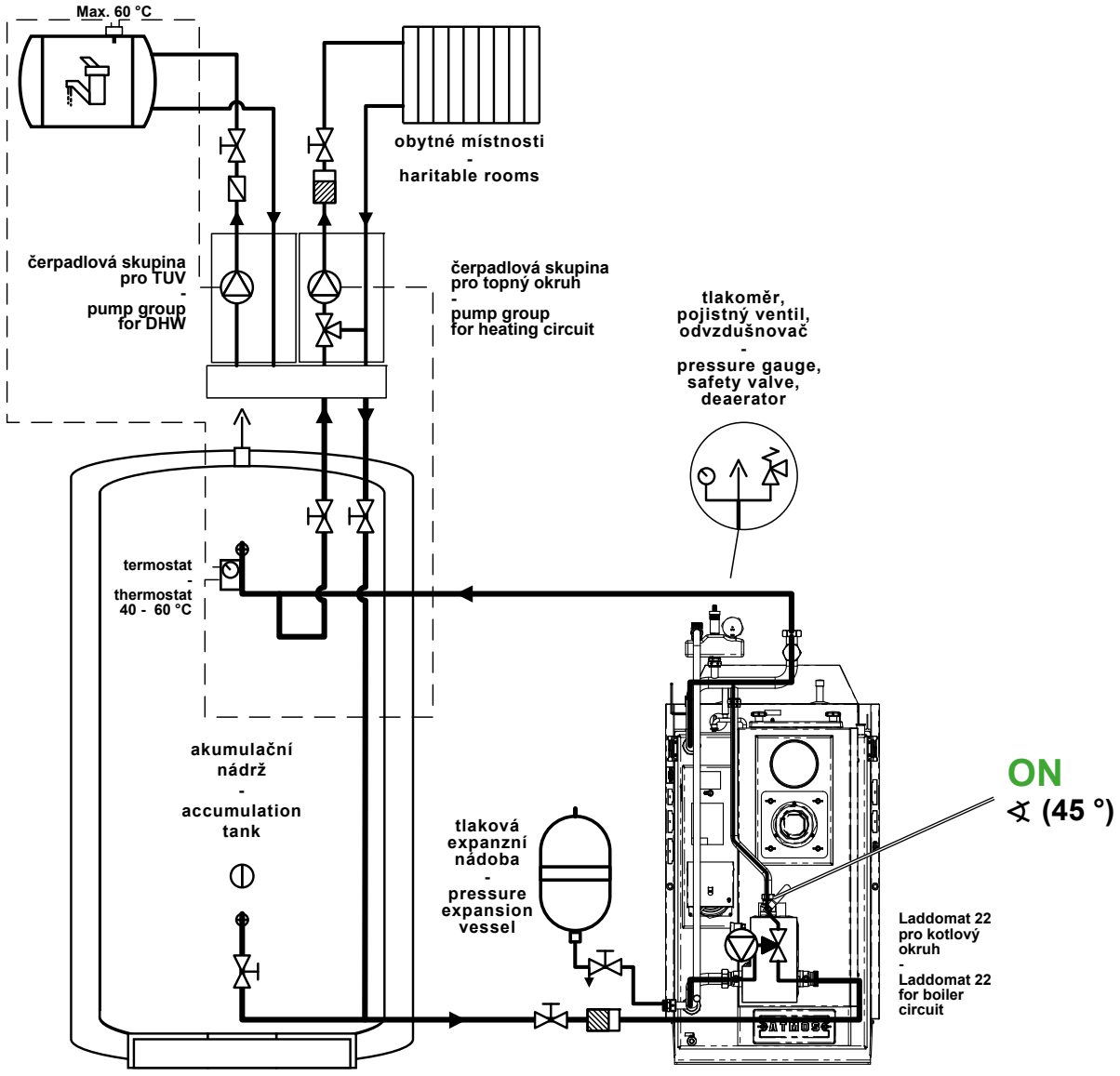
Heating circuit
GRA211 (code: P0538)
(mixing – three-way valve without servo actuator)

Connection extended by:

Manifold for two circuits
GMA421 (code: P0515)
(spacing 125 mm, 6/4“ ↑↓ 6/4“)

+

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 connection ATMOS F12 Laddomat with two accumulation tanks (parallel connection)

(boiler circuit + one heating circuit + DHW heating)

Connection ATMOS F12 Laddomat
- production design

Boiler circuit
Laddomat X22 (code: P0247)
(thermoregulatory 78 °C (72 °C))

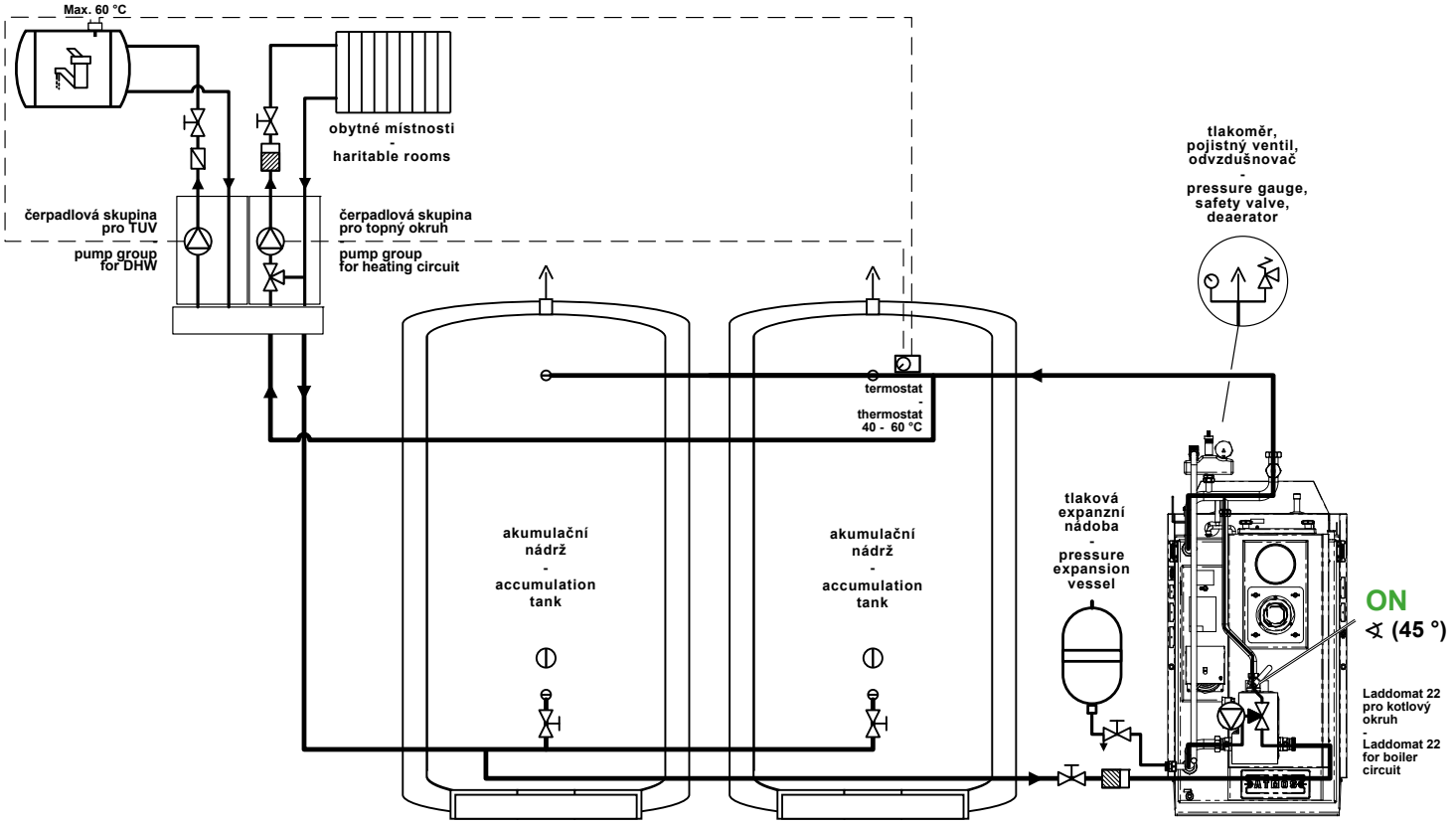
Heating circuit
GRA211 (code: P0538)
(mixing – three-way valve without servo actuator)

Connection extended by:

Manifold for two circuits
GMA421 (code: P0515)
(spacing 125 mm, 6/4“ ↑↓ 6/4“)

+

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 connection ATMOS F12 Laddomat with two accumulation tanks (serial connection)

(boiler circuit + one heating circuit + DHW heating)

Connection ATMOS F12 Laddomat
- production design

Boiler circuit
Laddomat X22 (code: P0247)
(thermoregulatory 78 °C (72 °C))

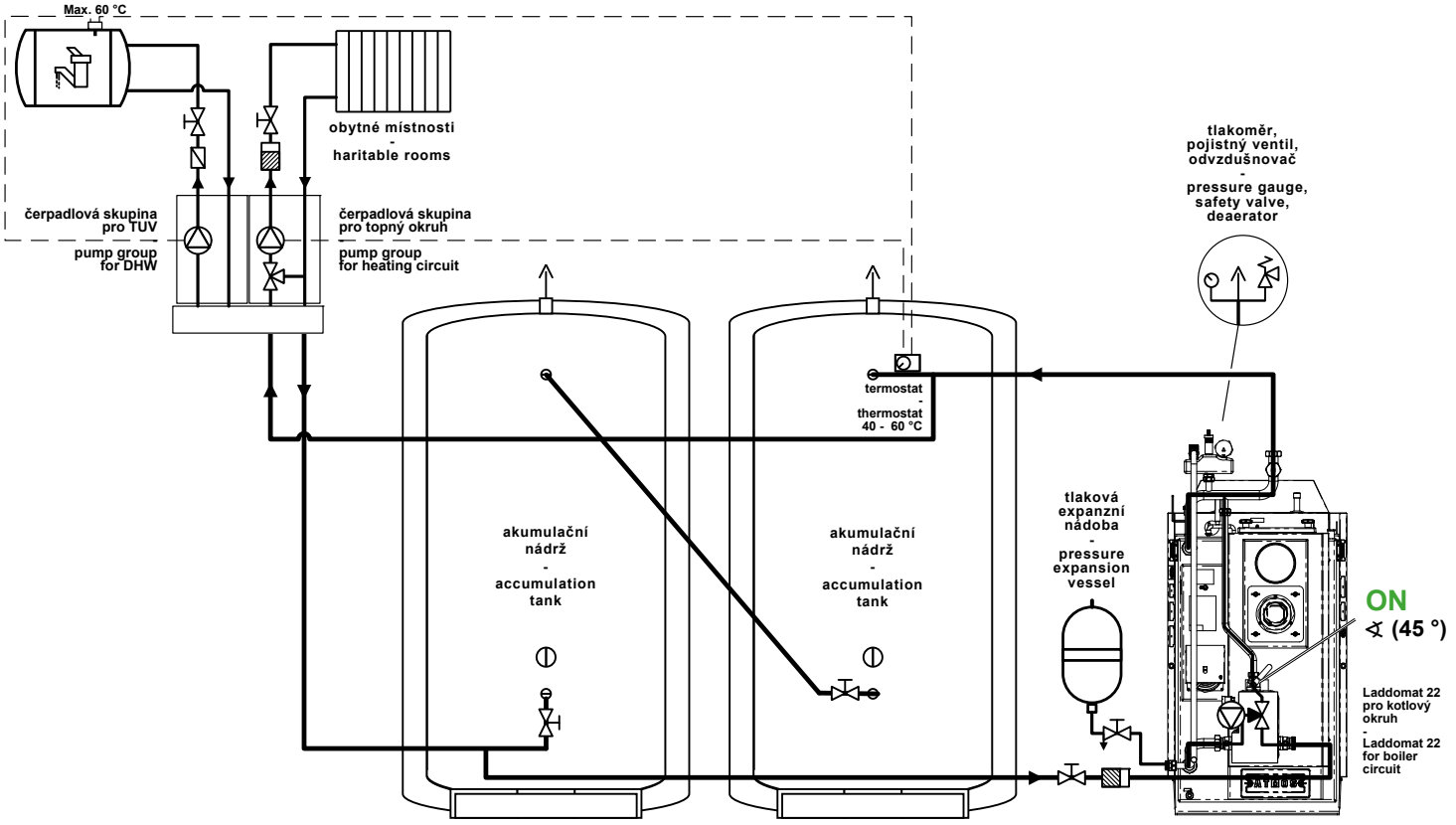
Heating circuit
GRA211 (code: P0538)
(mixing – three-way valve without servo actuator)

Connection extended by:

Manifold for two circuits
GMA421 (code: P0515)
(spacing 125 mm, 6/4“ ↑↓ 6/4“)

+

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 connection ATMOS F12 Laddomat with two accumulation tanks and equithermal regulation ACD 03/04

(boiler circuit + two heating circuits + DHW heating)

Connection ATMOS F12 Laddomat
- production design

Boiler circuit
Laddomat X22 (code: P0247)
(thermoregulatory 78 °C (72 °C))

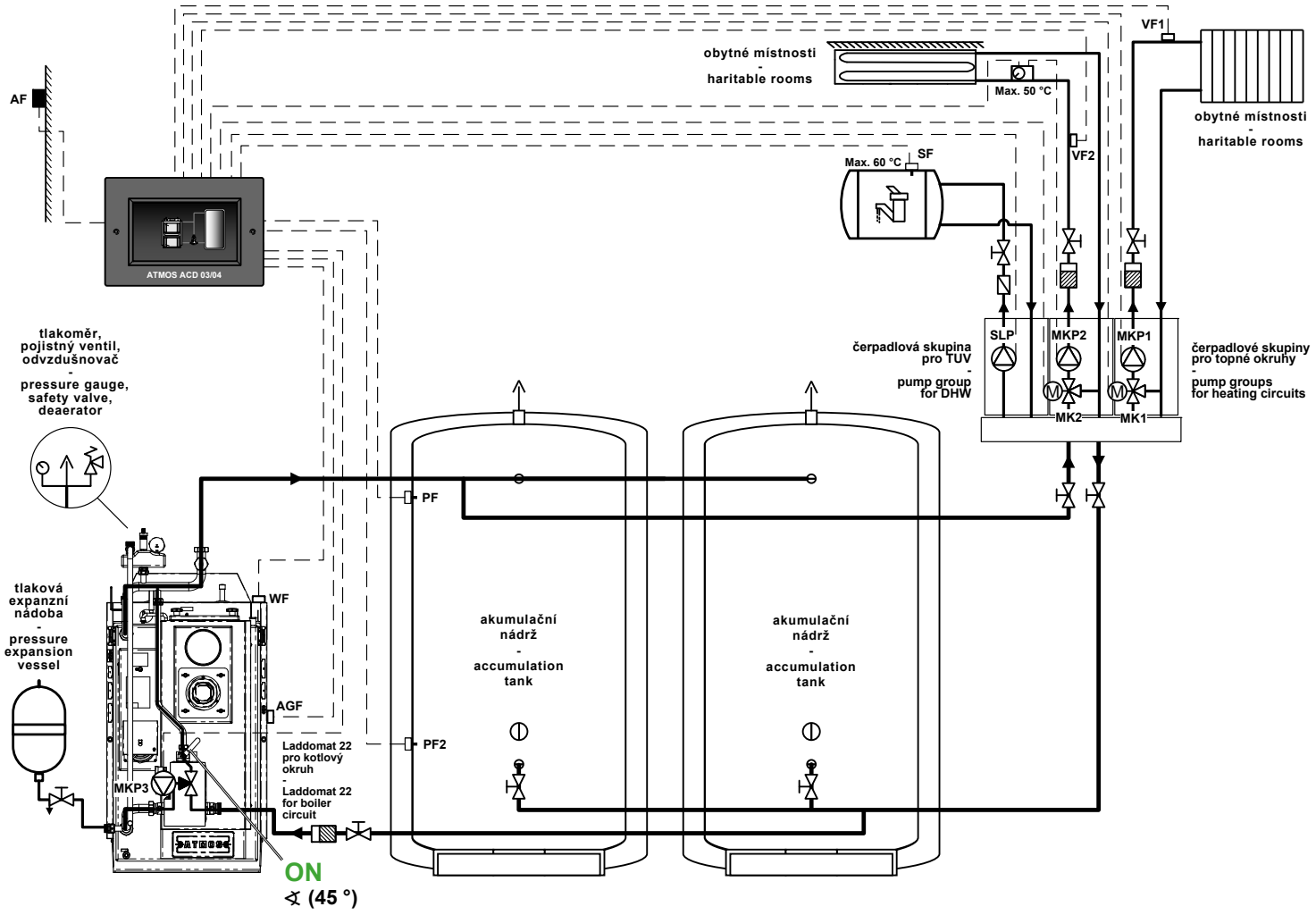
Heating circuit
GRA211 (code: P0538)
(mixing – three-way valve without servo actuator)

Boiler supplemented by:

Regulace ATMOS ACD 03 AGF
with accessories (code: S0103)

Connection extended by:

Manifold for three circuits
GMA431 (code: P0516)
(spacing 125 mm, 6/4“ ↑↓ 6/4“)
+
Circulation unit
- direct (for DHW)
GDA211 (code: P0512)
(spacing 125 mm, 1“ ↑↓ 6/4“)
+
Circulation unit
- controlled - actuator 120 s
GRA211 (code: P0514)
(spacing 125 mm, 1“ ↑↓ 6/4“)
+
Servo actuator (for GRA211)
230 V - 120 s - 6 Nm
ESBE ARA 661 (code: P0415)



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°.

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)

Servo actuator
ESBE ARA 661
230 V - 120 s - 6 Nm
(order code: P0415)