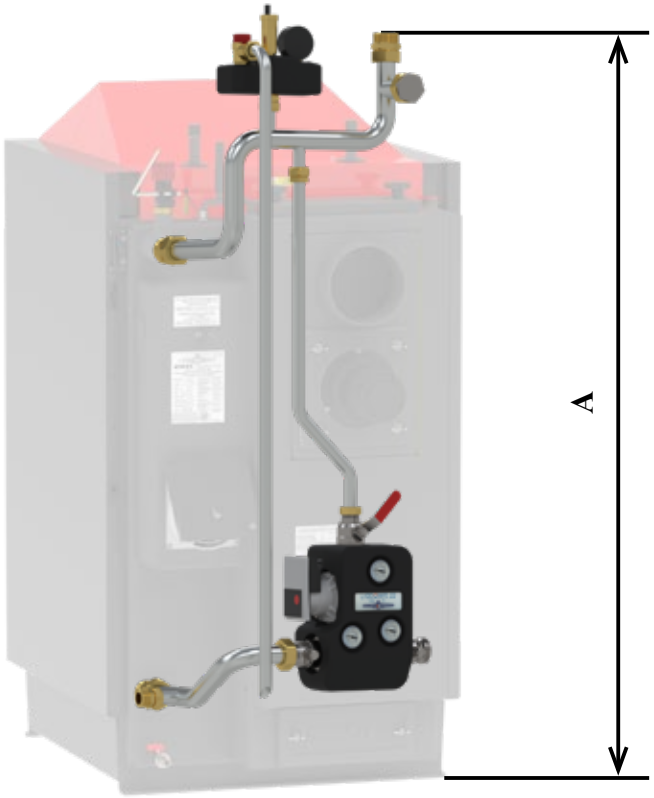
Connection (only boiler circuit) of ATMOS boilers

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 (boiler circuit) is ready to connect the boiler directly to the heating system or to connect the boiler to accumulation tanks.
The connection can be used with ATMOS/ESBE circulation units, which can be expanded to two or three heating circuits for a larger heating system by purchasing a special manifold and the necessary circulation unit.
The connection can also be connected to a standard separate three-way valve and pump in the heating system circuit.



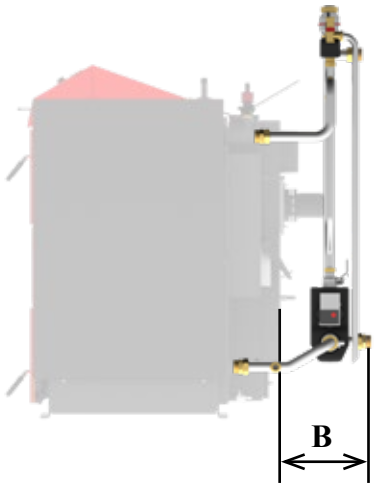
The connection

ATMOS F21 Laddomat - code: P0621
for boilers (DC18S, DC22S, DC22SX, DC25S, DC30SX, C15S, C18S, AC16S, AC25S)

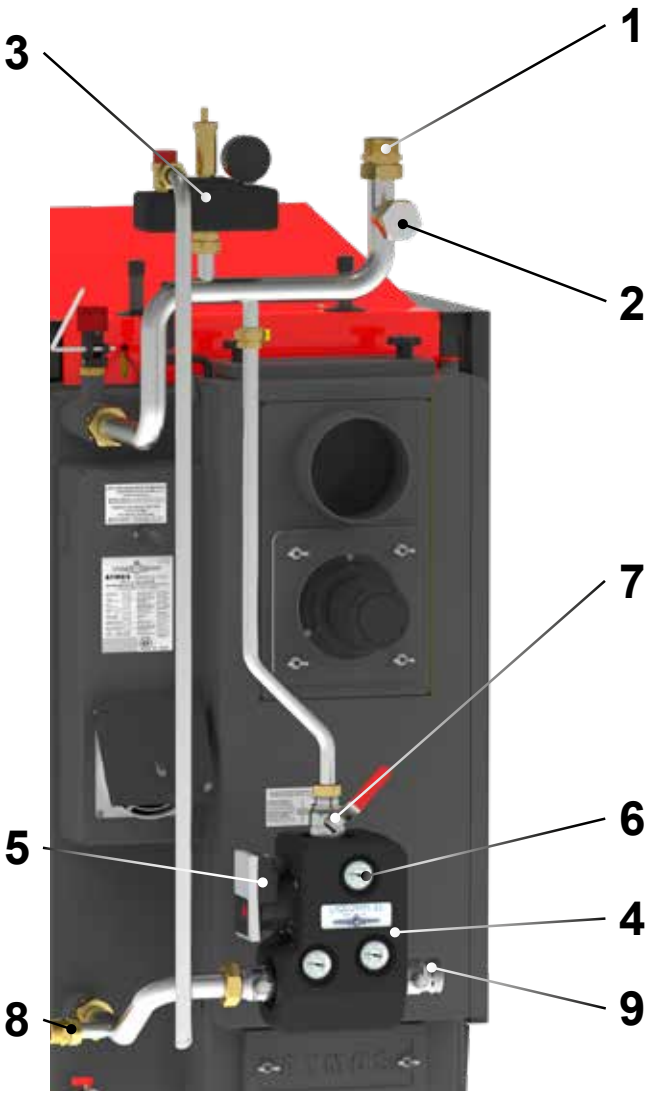
ATMOS F22 Laddomat - code: P0622
for boilers (DC32S, DC40SX, DC15GS, DC20GS, DC25GS, DC32GS, DC18GD, DC25GD, DC30GD)

The connection type	A height	B Connection depth behind the boiler
ATMOS F21 Laddomat	1331	280 - 340
ATMOS F22 Laddomat	1405	280 - 340

- dimensions in mm



ATMOS F21 Laddomat / ATMOS F22 Laddomat



1 - vertical hot water outlet from the boiler to the accumulation tank (heating system - circulation units)

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

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

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

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

6 - thermometers (part of Laddomat X22)

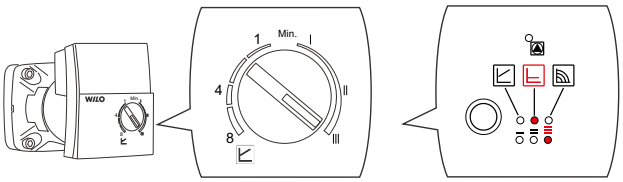
7 - ball valve fitting – male thread (part of Laddomat X22)

8 - expansion tank output (1“)

9 - 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



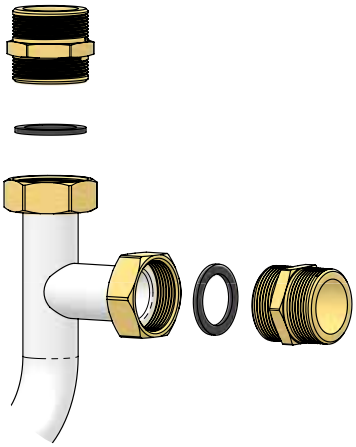
Předepsané nastavení čerpadla v kotlovém okruhu
- na maximum a konstantní výtlačnou výšku
Doporučujeme neměnit

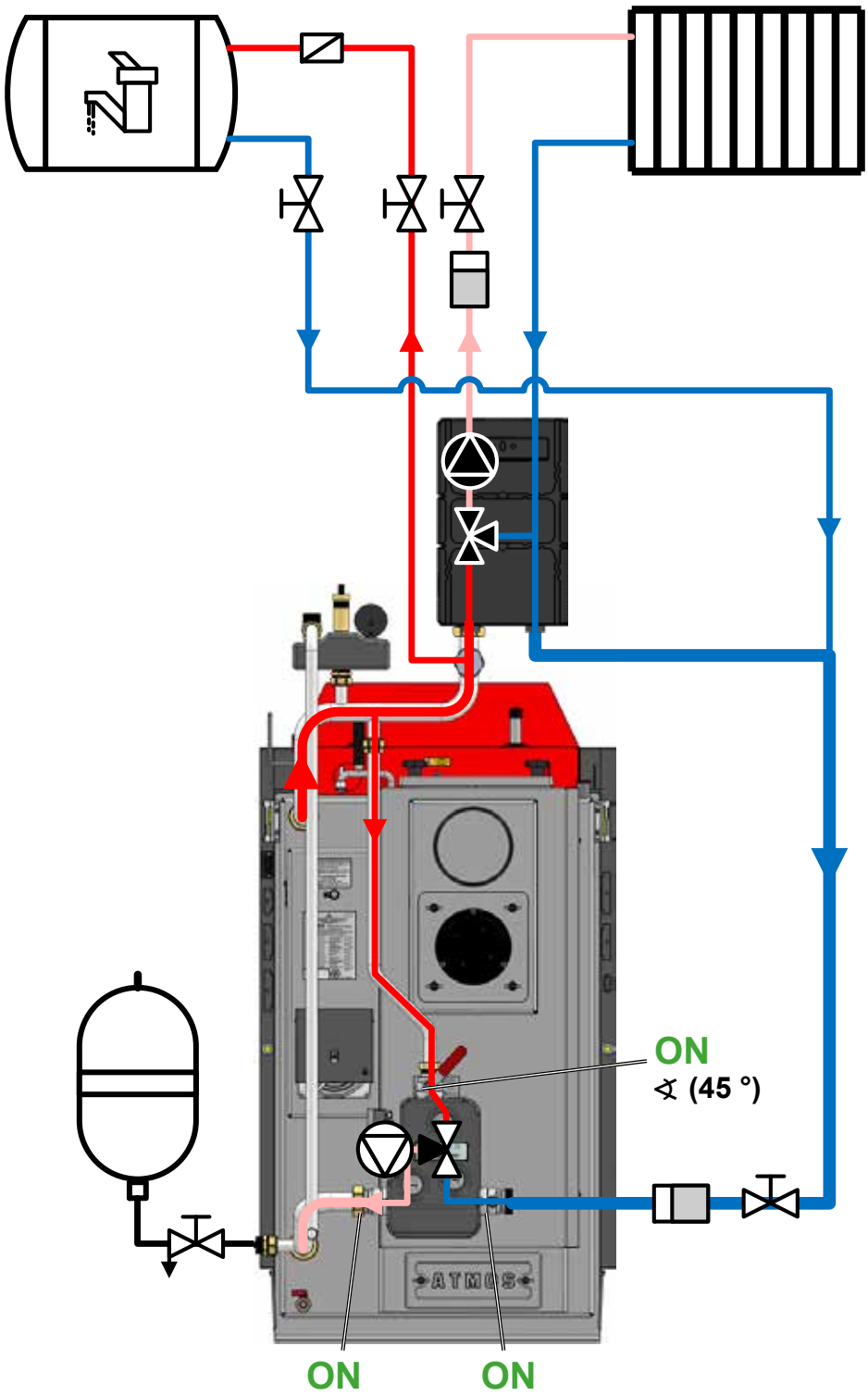
Example of connection ATMOS F21 / F22 Laddomat without accumulation tank (boiler circuit + one heating circuit + DHW heating circuit)

The connection ATMOS F21 / F22 Laddomat extended o:
- heating circuit - circulation unit 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



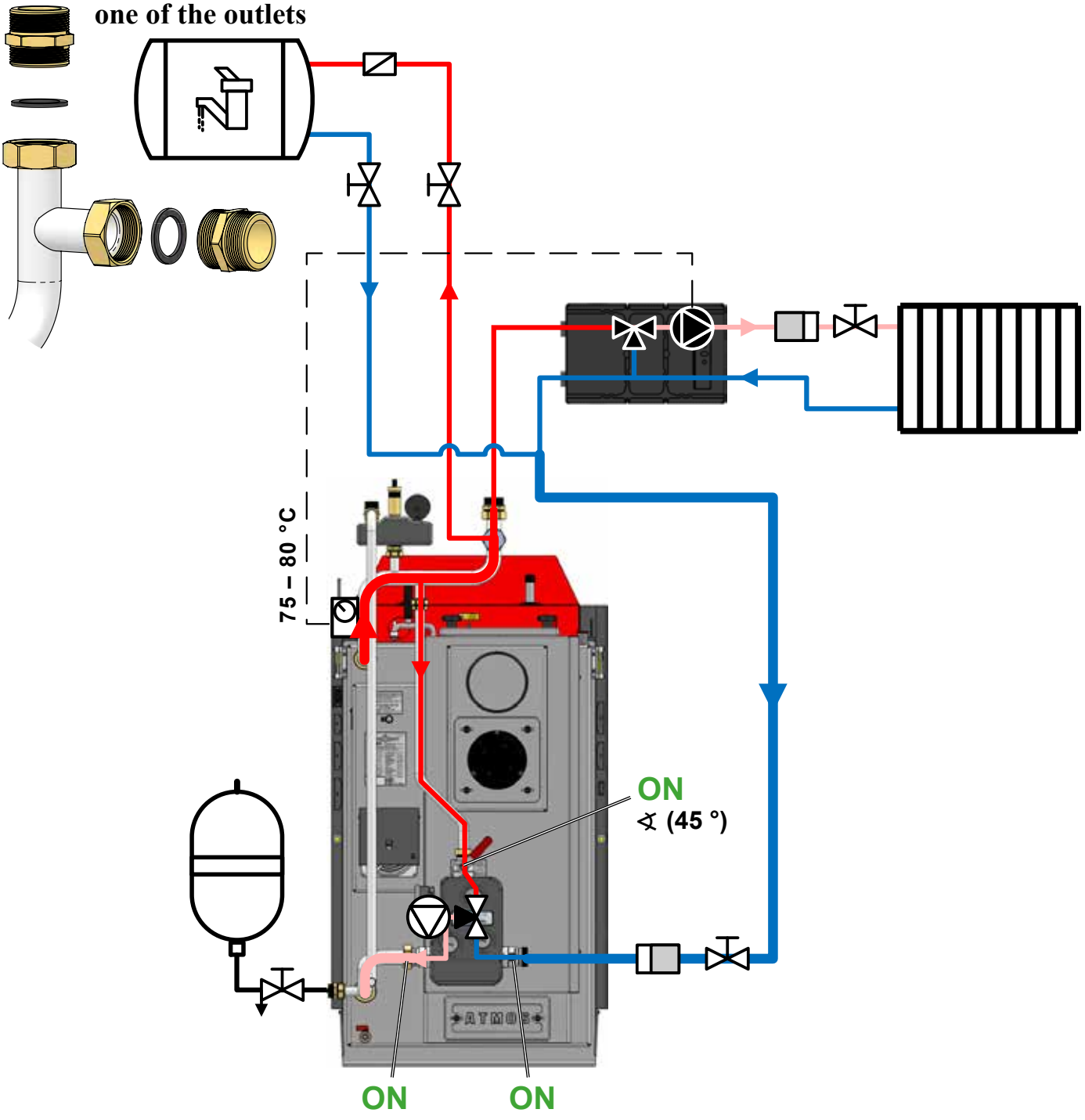


Example of connection ATMOS F21 / F22 Laddomat without accumulation tank (boiler circuit + one heating circuit + DHW heating circuit)

The connection ATMOS F21 / F22 Laddomat extended o:

- **heating circuit - circulation unit ESBE GRA211 with manually operated three-way valve - code: P0538**
- **manifold ATMOS ESBE GMA421 (two circuit) - code: P0515**
- **DHW heating circuit - circulation unit ATMOS ESBE GDA211 - direct - code: P0512**

Example of blocking off one of the outlets

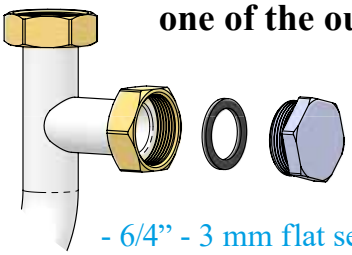


Example of connection ATMOS F21 / F22 Laddomat without accumulation tank (boiler circuit + one heating circuit + DHW heating circuit)

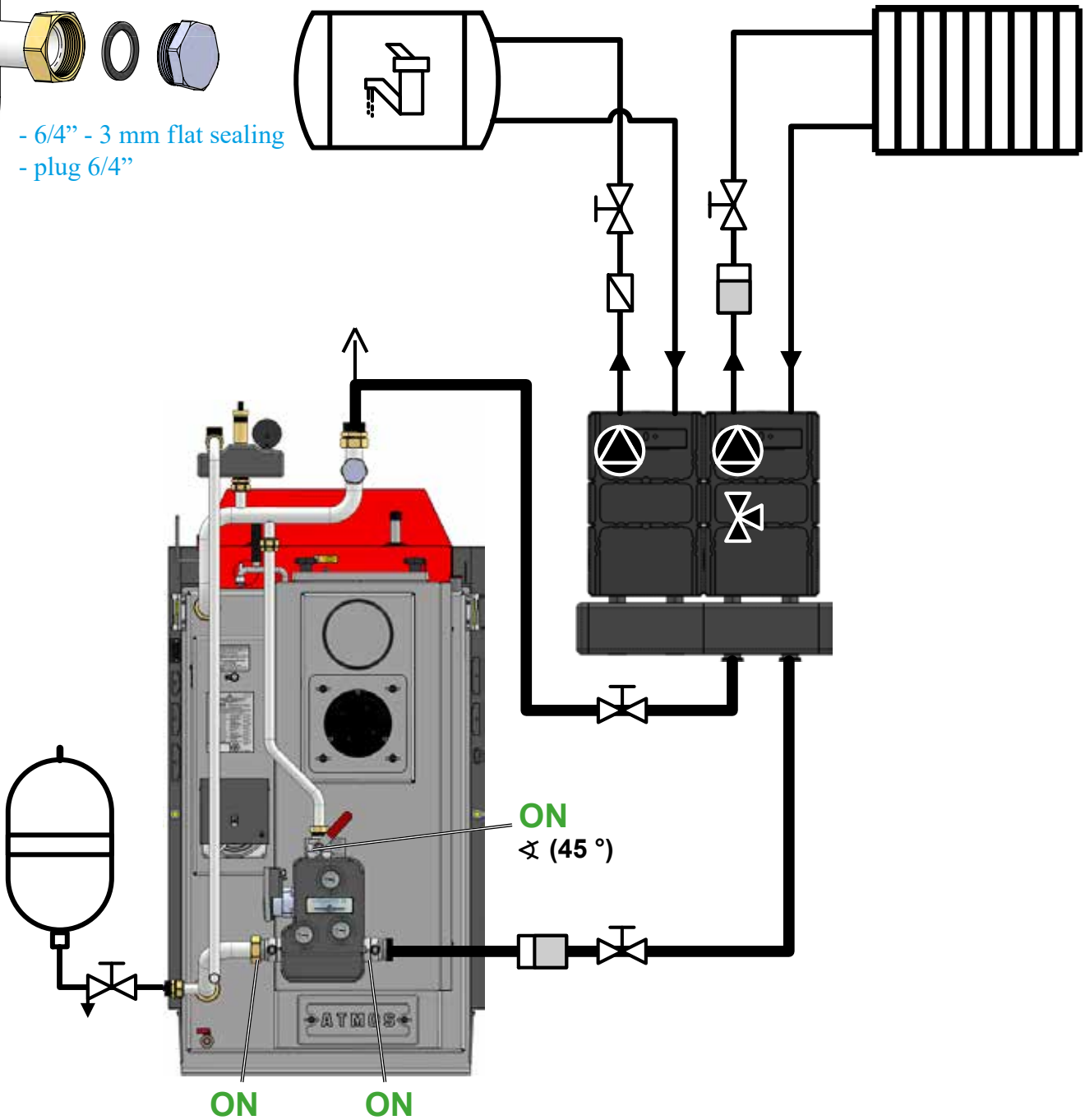
Connection ATMOS F21 / F22 Laddomat extended by:

- **heating circuit - circulation unit ESBE GRA211 with manually operated three-way valve - code: P0538**
- **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”

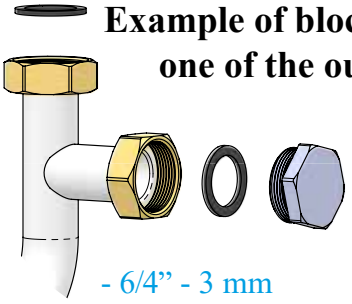


Example of connection ATMOS F21 / F22 Laddomat with accumulation tank

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

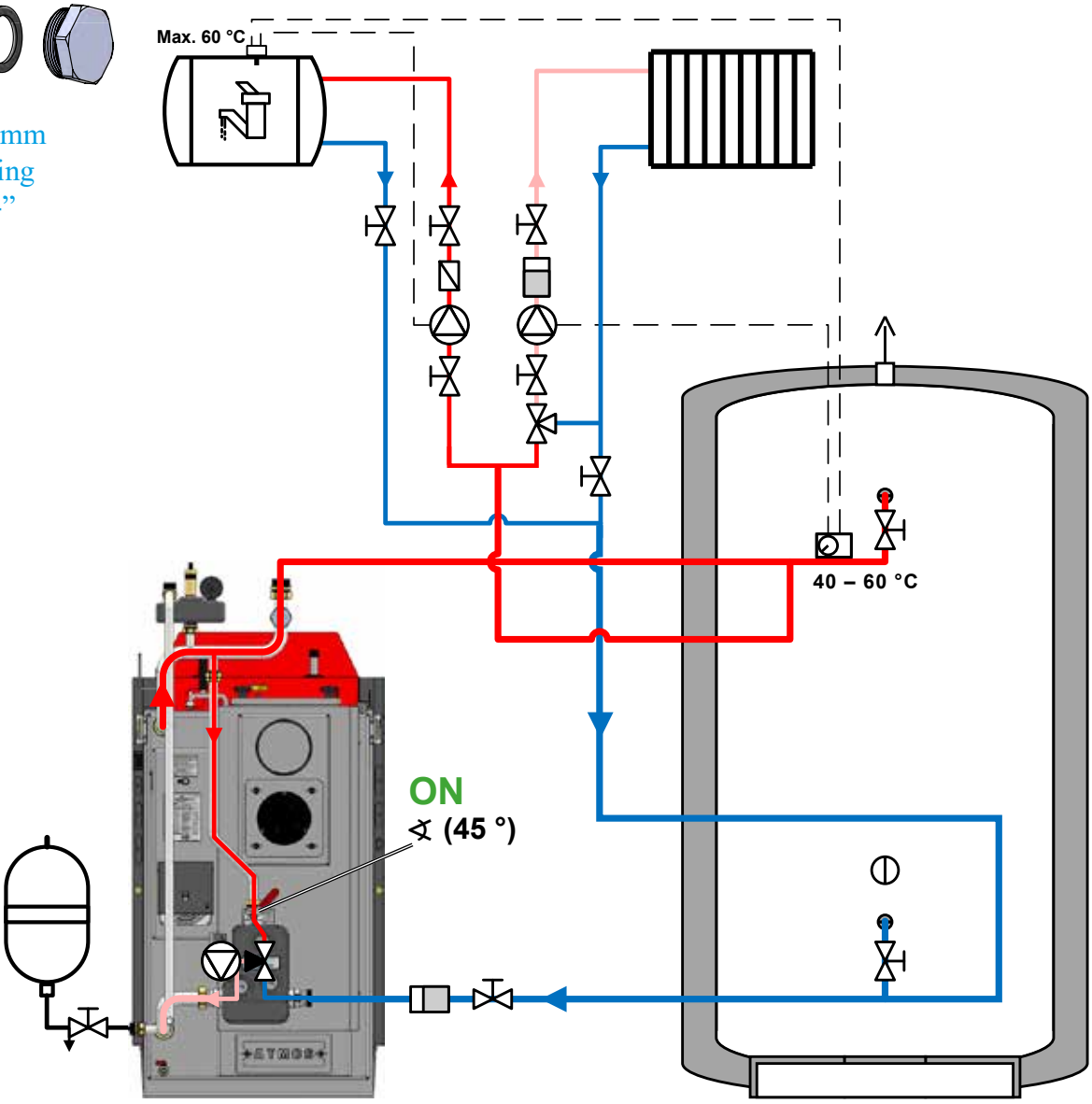
Connection ATMOS F21 / F22 Laddomat extended by:

- **heating circuit - three-way mixing valve and circulation pump**
- **DHW heating circuit - circulation (charging) pump**



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 F21 / F22 Laddomat with accumulation tank

(boiler circuit + one heating circuit + DHW heating)

Connection ATMOS F21 / F22 Laddomat
- production design

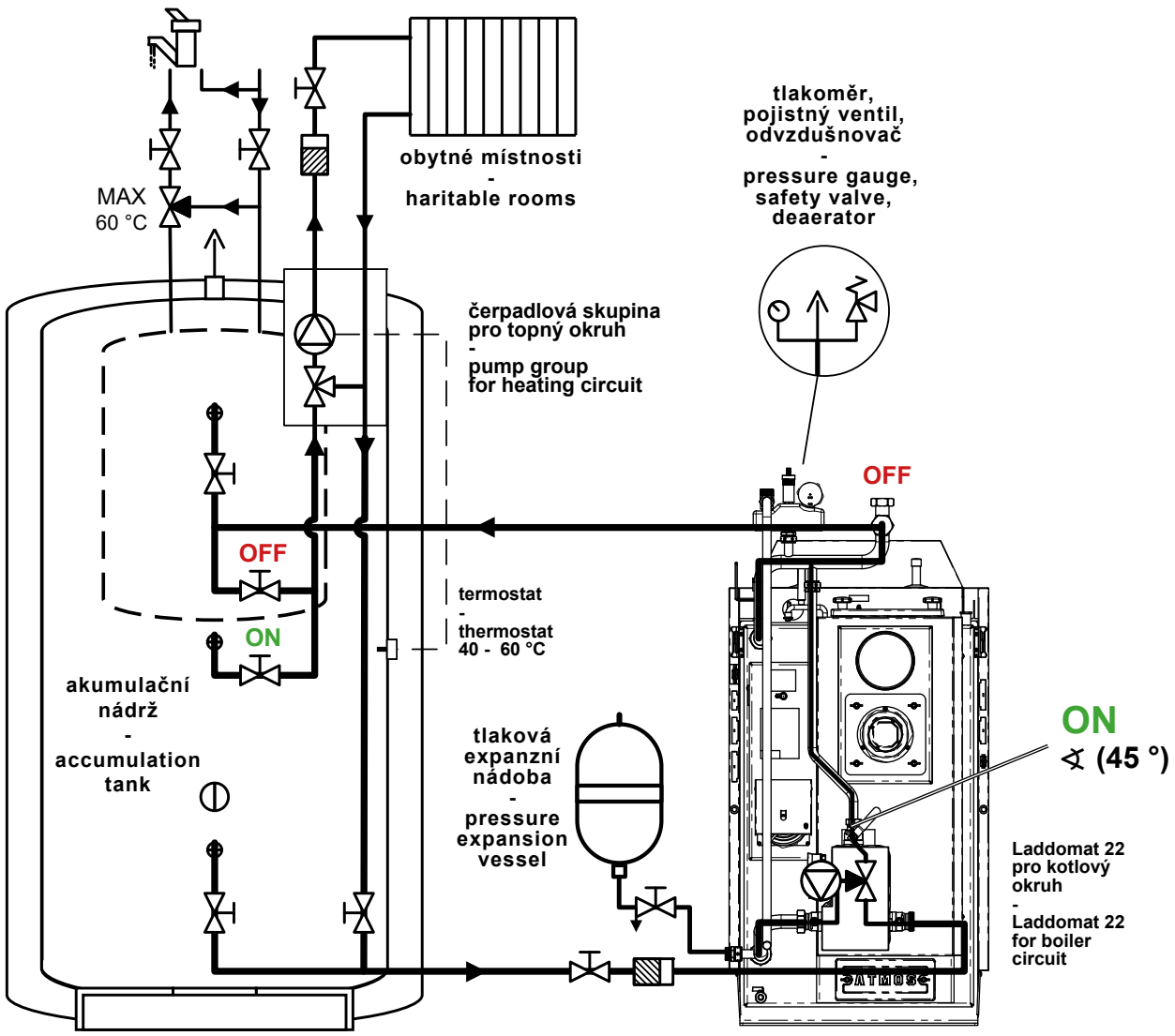
Boiler circuit
Laddomat X22 (code: P0247)
(thermoregulatory 78 °C (72 °C))

Connection extended by:

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 F21 / F22 Laddomat with accumulation tank

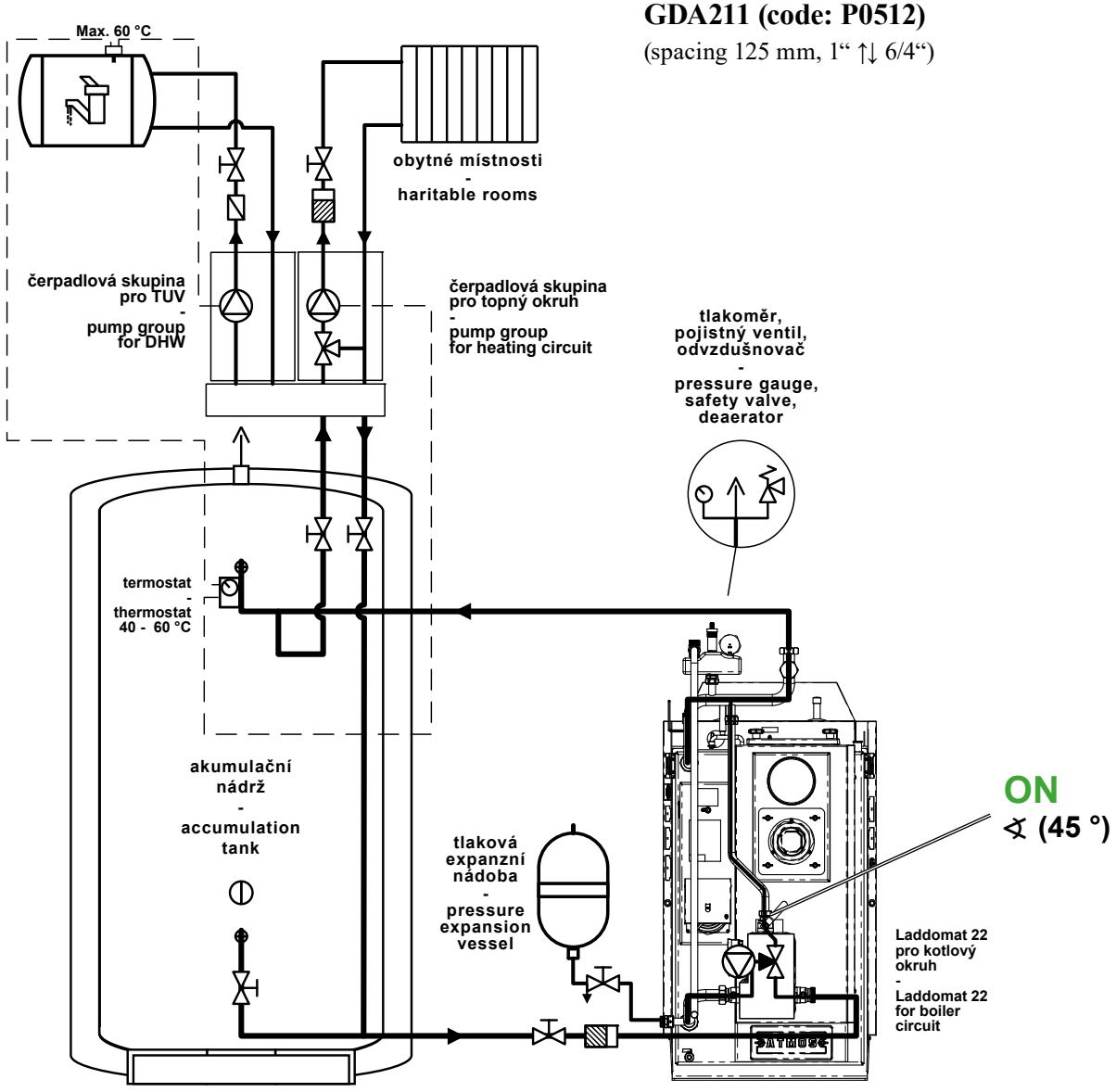
(boiler circuit + one heating circuit + DHW heating)

Connection ATMOS F21 / F22 Laddomat
- production design

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

Connection extended by:

Heating circuit
GRA211 (code: P0538)
(mixing – three-way valve without servo actuator)
+
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 F21 / F22 Laddomat with two accumulation tanks (parallel connection)

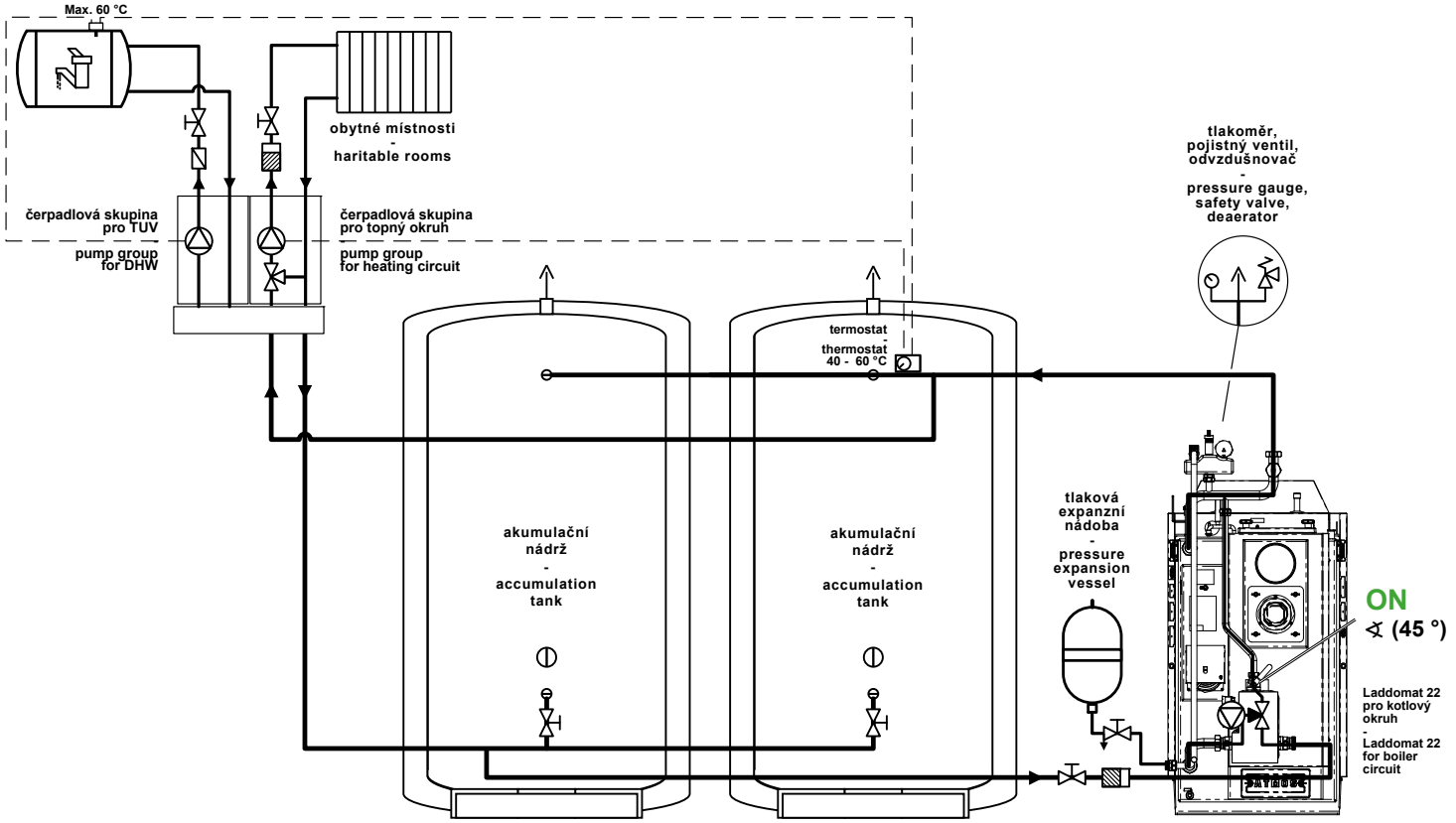
(boiler circuit + one heating circuit + DHW heating circuit)

Connection ATMOS F21 / F22 Laddomat
- production design

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

Connection extended by:

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

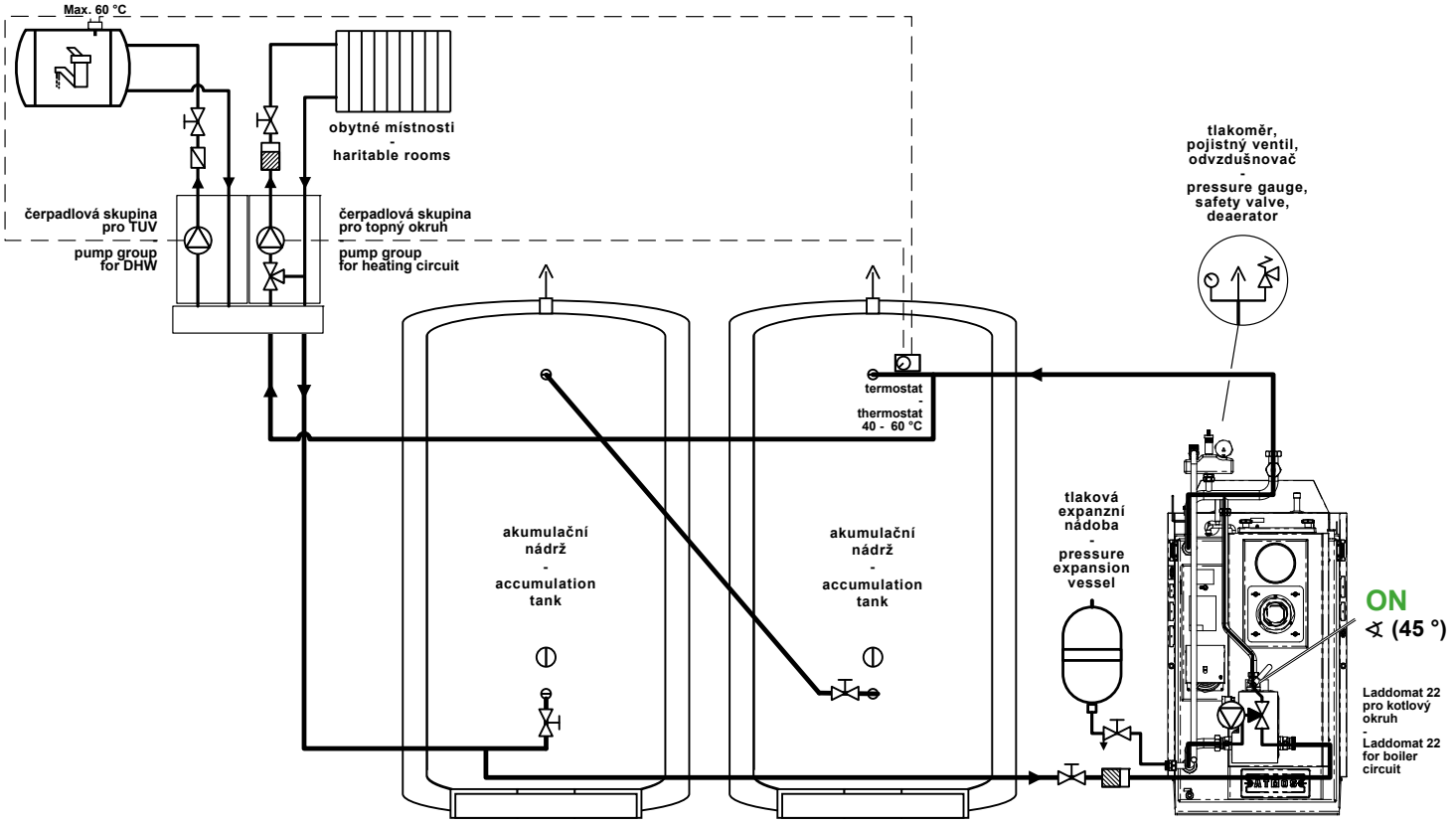
(boiler circuit + one heating circuit + DHW heating)

Connection ATMOS F21 / F22 Laddomat
- production design

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

Connection extended by:

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

Connection ATMOS F21 / F22 Laddomat
- production design

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

Boiler supplemented by:

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

Connection extended by:

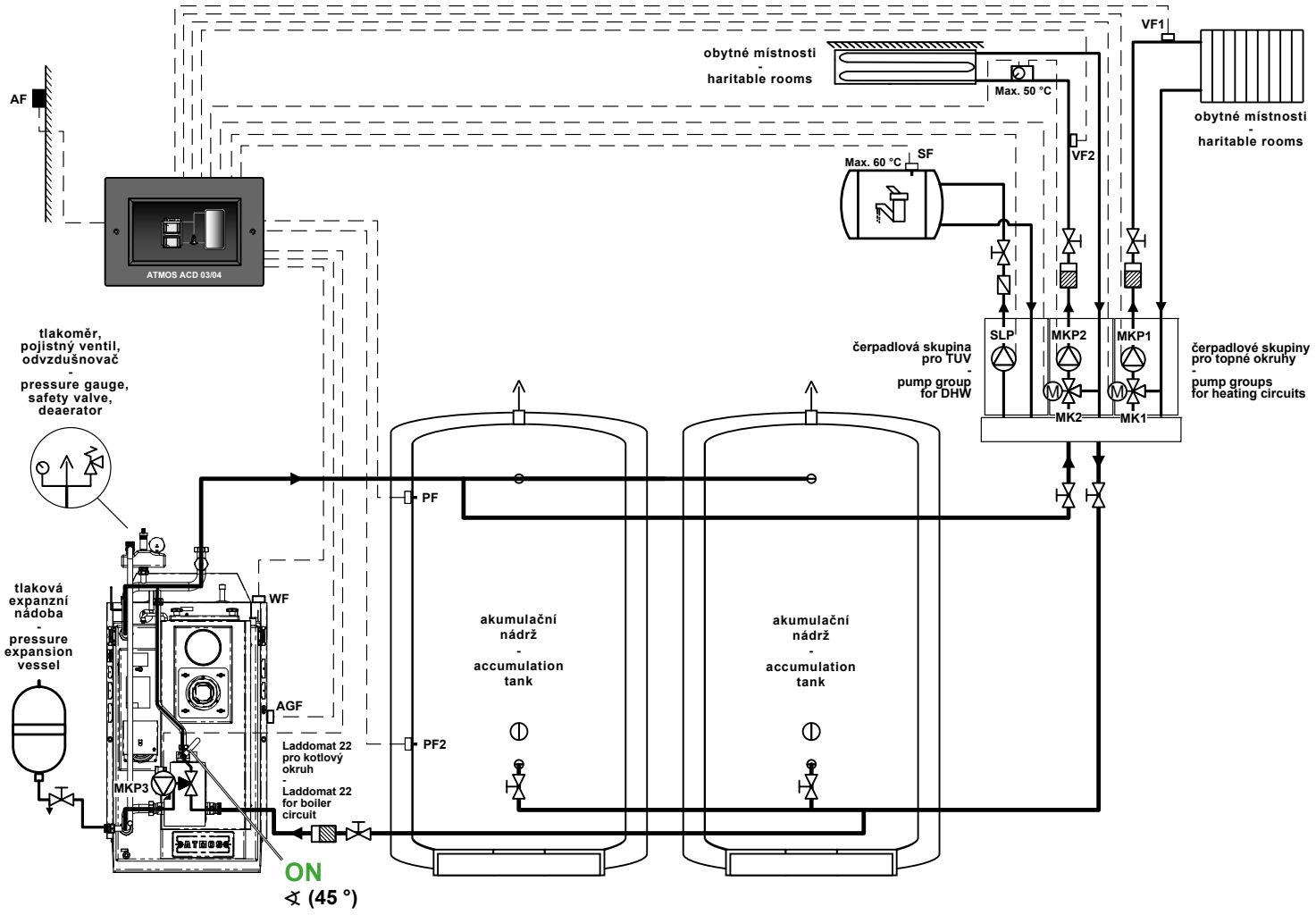
Heating circuits
2x Circulation unit
- controlled - actuator 120 s
GRA211 (code: P0514)
(spacing 125 mm, 1“ ↑↓ 6/4“)

+

Circulation unit
- direct (for DHW)
GDA211 (code: P0512)
(spacing 125 mm, 1“ ↑↓ 6/4“)

+

Manifold for three circuits
GMA431 (code: P0516)
(spacing 125 mm, 6/4“ ↑↓ 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°.

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)

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

Manifold for two circulation units (two circuits)
ATMOS ESBE GMA421
Spacing 125 mm - 6/4“ ↑↓ 6/4“
(order code: P0515)