

MAINTENANCE AND ENGINEERING | COURSE BROCHURE

Boiler Operation and Maintenance

5 days | Classroom training | English

SMART HORIZON

info@smart-horizon.eu
Amsterdam
The Netherlands

Explore current programmes

https://smart-horizon.eu



Course content

Why attend

Boilers are high-energy systems that require skilled operation and careful maintenance. This course covers boiler types and components, combustion, water treatment, safe start-up and shutdown, controls and safety devices, inspection and maintenance, efficiency and common failures.

Boiler failures can be dangerous and costly. You will learn to operate and maintain boilers safely and efficiently.

Professional Problems This Course Is Designed to Solve

- Difficulty translating subject knowledge into practical workplace decisions.
- Inconsistent approaches to the activities covered in the course outline.
- Lack of a structured plan for applying and reviewing new skills.

Course methodology

Technical briefings, combustion and efficiency calculations, case studies of boiler incidents and maintenance planning.

Course objectives

By the end of this course, participants will be able to:
- Explain boiler types and components
- Understand combustion and burner management
- Manage boiler water treatment
- Apply safe start-up and shutdown procedures
- Maintain controls and safety devices
- Improve boiler efficiency and prevent failures

Target audience

This course is suitable for:
- Boiler operators
- Maintenance technicians
- Utility and plant engineers
- Facility managers
- Energy managers



Course content

Target competencies

Participants will develop competencies in:

- Boiler operation
- Combustion management
- Water treatment
- Safety devices
- Efficiency improvement

Course outline

Day 1: Boiler Fundamentals

09:00–10:08	Fire-tube and water-tube boilers
10:08–11:00	Components
11:00–11:30	**Coffee break**
11:30–11:45	Components (continued)
11:45–12:53	Steam systems
12:53–14:00	Exercise

Day 2: Combustion

09:00–10:08	Fuels and burners
10:08–11:00	Air-fuel ratio
11:00–11:30	**Coffee break**
11:30–11:45	Air-fuel ratio (continued)
11:45–12:53	Burner management
12:53–14:00	Exercise

Day 3: Water Treatment

09:00–10:08	Water chemistry
10:08–11:00	Scaling and corrosion
11:00–11:30	**Coffee break**



Course content

11:30–11:45	Scaling and corrosion (continued)
11:45–12:53	Blowdown
12:53–14:00	Case study

Day 4: Operation and Safety

09:00–10:08	Start-up and shutdown
10:08–11:00	Safety valves and trips
11:00–11:30	**Coffee break**
11:30–11:45	Safety valves and trips (continued)
11:45–12:53	Inspections
12:53–14:00	Workshop

Day 5: Maintenance and Efficiency

09:00–10:08	Maintenance tasks
10:08–11:00	Efficiency losses
11:00–11:30	**Coffee break**
11:30–11:45	Efficiency losses (continued)
11:45–12:53	Improvement
12:53–14:00	Action plan

The timings provided are estimates and may vary depending on the number of participants and the discussions taking place during the sessions. They are indicative only and do not constitute a binding commitment.



Course content

Dates, venues and fees

Current published course plans. Fees are per participant in EUR, excluding unconfirmed taxes.

Venue	Start date	End date	Fee (EUR)
Barcelona Confirmed dates	23 Nov 2026	27 Nov 2026	**€5,680.-**
Online Confirmed dates	23 Nov 2026	27 Nov 2026	**€1,250.-**
Frankfurt Confirmed dates	14 Dec 2026	18 Dec 2026	**€5,300.-**
Online Confirmed dates	14 Dec 2026	18 Dec 2026	**€1,250.-**
Rome Confirmed dates	18 Jan 2027	22 Jan 2027	**€4,900.-**
Online Confirmed dates	18 Jan 2027	22 Jan 2027	**€1,250.-**
Vienna Confirmed dates	1 Feb 2027	5 Feb 2027	**€5,880.-**
Online Confirmed dates	1 Feb 2027	5 Feb 2027	**€1,250.-**
Rome Confirmed dates	22 Feb 2027	26 Feb 2027	**€4,900.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	22 Feb 2027	26 Feb 2027	**€1,250.–**
Paris Confirmed dates	15 Mar 2027	19 Mar 2027	**€5,720.–**
Online Confirmed dates	15 Mar 2027	19 Mar 2027	**€1,250.–**
Istanbul Confirmed dates	5 Apr 2027	9 Apr 2027	**€5,300.–**
Online Confirmed dates	5 Apr 2027	9 Apr 2027	**€1,250.–**
Dubai Confirmed dates	26 Apr 2027	30 Apr 2027	**€6,300.–**
Online Confirmed dates	26 Apr 2027	30 Apr 2027	**€1,250.–**
Cape Town Confirmed dates	10 May 2027	14 May 2027	**€3,780.–**
Online Confirmed dates	10 May 2027	14 May 2027	**€1,250.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
London Confirmed dates	31 May 2027	4 Jun 2027	**€4,900.-**
Online Confirmed dates	31 May 2027	4 Jun 2027	**€1,250.-**
Rome Confirmed dates	21 Jun 2027	25 Jun 2027	**€4,900.-**
Online Confirmed dates	21 Jun 2027	25 Jun 2027	**€1,250.-**
Cape Town Confirmed dates	12 Jul 2027	16 Jul 2027	**€3,780.-**
Online Confirmed dates	12 Jul 2027	16 Jul 2027	**€1,250.-**
London Confirmed dates	2 Aug 2027	6 Aug 2027	**€4,900.-**
Online Confirmed dates	2 Aug 2027	6 Aug 2027	**€1,250.-**
Cape Town Confirmed dates	16 Aug 2027	20 Aug 2027	**€3,780.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	16 Aug 2027	20 Aug 2027	**€1,250.-**
Vienna Confirmed dates	6 Sept 2027	10 Sept 2027	**€5,880.-**
Online Confirmed dates	6 Sept 2027	10 Sept 2027	**€1,250.-**
Dubai Confirmed dates	27 Sept 2027	1 Oct 2027	**€6,300.-**
Online Confirmed dates	27 Sept 2027	1 Oct 2027	**€1,250.-**
Amsterdam Confirmed dates	18 Oct 2027	22 Oct 2027	**€5,080.-**
Online Confirmed dates	18 Oct 2027	22 Oct 2027	**€1,250.-**
Kuala Lumpur Confirmed dates	8 Nov 2027	12 Nov 2027	**€2,900.-**
Online Confirmed dates	8 Nov 2027	12 Nov 2027	**€1,250.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Barcelona Confirmed dates	22 Nov 2027	26 Nov 2027	**€5,680.-**
Online Confirmed dates	22 Nov 2027	26 Nov 2027	**€1,250.-**
Dubai Confirmed dates	13 Dec 2027	17 Dec 2027	**€6,300.-**
Online Confirmed dates	13 Dec 2027	17 Dec 2027	**€1,250.-**

Plan your next step

Dates, availability, exact venue, taxes, inclusions and payment terms require written confirmation. This brochure is not a quotation, registration, booking confirmation or visa invitation. Participants receive a Smart Horizon certificate of attendance; programmes are not externally accredited and do not award a professional qualification or designation. Confirm arrangements before booking travel.

For group or in-house training, contact our learning team to discuss your objectives and delivery arrangements.

Contact Smart Horizon

info@smart-horizon.eu
Amsterdam
The Netherlands

View the latest course details online