

MAINTENANCE AND ENGINEERING | COURSE BROCHURE

Shaft Alignment and Balancing

5 days | Classroom training | English

SMART HORIZON

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Course content

Why attend

Misalignment and imbalance are leading causes of vibration and premature failure in rotating equipment. This practical course covers shaft alignment methods including laser alignment, soft foot, thermal growth, tolerances, rotor imbalance, static and dynamic balancing, field balancing procedures and verification.

Correct alignment and balancing extend bearing and seal life significantly. You will learn practical techniques to do both correctly.

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

Hands-on alignment demonstrations, calculation exercises, case studies and procedure development.

Course objectives

By the end of this course, participants will be able to:
• Explain effects of misalignment and imbalance
• Prepare machines for alignment including soft foot
• Perform dial and laser alignment
• Apply tolerances and thermal growth corrections
• Understand static and dynamic balancing
• Carry out field balancing procedures

Target audience

This course is suitable for:
• Maintenance technicians and mechanics
• Rotating equipment engineers
• Reliability engineers
• Condition monitoring staff
• Maintenance supervisors



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Target competencies

Participants will develop competencies in:

- Alignment techniques
- Measurement
- Balancing
- Precision maintenance
- Procedure writing

Course outline

Day 1: Precision Maintenance

09:00–10:08	Effects of misalignment
10:08–11:00	Vibration symptoms
11:00–11:30	**Coffee break**
11:30–11:45	Vibration symptoms (continued)
11:45–12:53	Standards
12:53–14:00	Exercise

Day 2: Preparation

09:00–10:08	Soft foot
10:08–11:00	Pipe strain
11:00–11:30	**Coffee break**
11:30–11:45	Pipe strain (continued)
11:45–12:53	Measurement basics
12:53–14:00	Demonstration

Day 3: Alignment Methods

09:00–10:08	Dial indicator methods
10:08–11:00	Laser alignment
11:00–11:30	**Coffee break**



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11:30–11:45	Laser alignment (continued)
11:45–12:53	Tolerances and thermal growth
12:53–14:00	Exercise

Day 4: Balancing

09:00–10:08	Causes of imbalance
10:08–11:00	Static and dynamic balance
11:00–11:30	**Coffee break**
11:30–11:45	Static and dynamic balance (continued)
11:45–12:53	Field balancing
12:53–14:00	Demonstration

Day 5: Procedures

09:00–10:08	Verification
10:08–11:00	Records
11:00–11:30	**Coffee break**
11:30–11:45	Records (continued)
11:45–12:53	Procedure development
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)
Cape Town Confirmed dates	23 Nov 2026	27 Nov 2026	**€3,780.–**
Online Confirmed dates	23 Nov 2026	27 Nov 2026	**€1,250.–**
Rome Confirmed dates	14 Dec 2026	18 Dec 2026	**€4,900.–**
Online Confirmed dates	14 Dec 2026	18 Dec 2026	**€1,250.–**
Kuala Lumpur Confirmed dates	18 Jan 2027	22 Jan 2027	**€2,900.–**
Online Confirmed dates	18 Jan 2027	22 Jan 2027	**€1,250.–**
Cape Town Confirmed dates	1 Feb 2027	5 Feb 2027	**€3,780.–**
Online Confirmed dates	1 Feb 2027	5 Feb 2027	**€1,250.–**
Barcelona Confirmed dates	22 Feb 2027	26 Feb 2027	**€5,680.–**



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.–**
Vienna Confirmed dates	15 Mar 2027	19 Mar 2027	**€5,880.–**
Online Confirmed dates	15 Mar 2027	19 Mar 2027	**€1,250.–**
Frankfurt Confirmed dates	5 Apr 2027	9 Apr 2027	**€5,300.–**
Online Confirmed dates	5 Apr 2027	9 Apr 2027	**€1,250.–**
Rome Confirmed dates	26 Apr 2027	30 Apr 2027	**€4,900.–**
Online Confirmed dates	26 Apr 2027	30 Apr 2027	**€1,250.–**
London Confirmed dates	10 May 2027	14 May 2027	**€4,900.–**
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)
Istanbul Confirmed dates	31 May 2027	4 Jun 2027	**€5,300.-**
Online Confirmed dates	31 May 2027	4 Jun 2027	**€1,250.-**
Cape Town Confirmed dates	21 Jun 2027	25 Jun 2027	**€3,780.-**
Online Confirmed dates	21 Jun 2027	25 Jun 2027	**€1,250.-**
Barcelona Confirmed dates	12 Jul 2027	16 Jul 2027	**€5,680.-**
Online Confirmed dates	12 Jul 2027	16 Jul 2027	**€1,250.-**
Dubai Confirmed dates	2 Aug 2027	6 Aug 2027	**€6,300.-**
Online Confirmed dates	2 Aug 2027	6 Aug 2027	**€1,250.-**
Paris Confirmed dates	16 Aug 2027	20 Aug 2027	**€5,720.-**



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.-**
Amsterdam Confirmed dates	6 Sept 2027	10 Sept 2027	**€5,080.-**
Online Confirmed dates	6 Sept 2027	10 Sept 2027	**€1,250.-**
Rome Confirmed dates	27 Sept 2027	1 Oct 2027	**€4,900.-**
Online Confirmed dates	27 Sept 2027	1 Oct 2027	**€1,250.-**
Dubai Confirmed dates	18 Oct 2027	22 Oct 2027	**€6,300.-**
Online Confirmed dates	18 Oct 2027	22 Oct 2027	**€1,250.-**
Vienna Confirmed dates	8 Nov 2027	12 Nov 2027	**€5,880.-**
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)
Dubai Confirmed dates	22 Nov 2027	26 Nov 2027	**€6,300.-**
Online Confirmed dates	22 Nov 2027	26 Nov 2027	**€1,250.-**
London Confirmed dates	13 Dec 2027	17 Dec 2027	**€4,900.-**
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

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View the latest course details online