



MAINTENANCE AND ENGINEERING | ME-031

Machinery Alignment and Balancing

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Course content

Why Attend

Misalignment and imbalance are leading causes of vibration, bearing and seal failures in rotating machinery. Precision alignment and balancing extend equipment life and reduce energy use.

This Aractech course covers the effects of misalignment and imbalance, measurement methods, dial indicator and laser alignment, soft foot and thermal growth, balancing principles, field balancing and standards. Participants practise alignment calculations and balancing exercises.

Course Methodology

- Technical lectures
- Calculation exercises
- Demonstrations
- Case studies
- Group discussions

Course Objectives

- Explain effects of misalignment and imbalance
- Measure and correct shaft misalignment
- Use dial indicator and laser alignment methods
- Correct soft foot and account for thermal growth
- Apply balancing principles and standards
- Perform field balancing calculations

Target Audience

- Mechanical technicians
- Maintenance engineers

Course content

- Reliability engineers
- Vibration analysts

Course outline

Detailed course outline

Day-by-day outline for Machinery Alignment and Balancing.

Day 1 - Alignment Fundamentals

- 09:00-09:45 | Types of misalignment
- 09:45-10:30 | Effects on machines
- 10:30-11:00 | Tolerances
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Tolerances (continued)
- 11:45-12:30 | Preparation
- 12:30-14:00 | Exercise: Misalignment diagnosis

Day 2 - Alignment Methods

- 09:00-09:45 | Rim and face
- 09:45-10:30 | Reverse dial
- 10:30-11:00 | Laser alignment
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Laser alignment (continued)
- 11:45-12:30 | Corrections
- 12:30-14:00 | Lab: Alignment calculation

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Day 3 - Practical Alignment

- 09:00-09:45 | Soft foot
- 09:45-10:30 | Thermal growth
- 10:30-11:00 | Pipe strain
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Pipe strain (continued)
- 11:45-12:30 | Documentation
- 12:30-14:00 | Demonstration: Laser alignment

Day 4 - Balancing

- 09:00-09:45 | Imbalance types
- 09:45-10:30 | Balancing standards
- 10:30-11:00 | Shop balancing
- 11:00-11:30 | Coffee break
- 11:30-11:45 | Shop balancing (continued)
- 11:45-12:30 | Field balancing
- 12:30-14:00 | Lab: Single-plane balancing

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Day 5 - Precision Maintenance

- 09:00-09:54 | Precision practices
- 09:54-10:48 | Verification
- 10:48-11:00 | Programmes
- 11:00-11:30 | Coffee break
- 11:30-12:12 | Programmes (continued)
- 12:12-13:06 | Benefits
- 13:06-14:00 | Capstone: Precision maintenance plan

Seminar dates

Available seminar dates

Live dates and pricing for Machinery Alignment and Balancing generated from the course details page.

Date	Location	Format	Fee
9 - 13 November 2026	London	Classroom	€2,315
14 - 18 December 2026	Istanbul	Classroom	€1,978
18 - 22 January 2027	Barcelona	Classroom	€2,815
15 - 19 February 2027	London	Classroom	€2,315
15 - 19 March 2027	Rome	Classroom	€3,460
19 - 23 April 2027	Munich	Classroom	€3,225
17 - 21 May 2027	Amsterdam	Classroom	€2,830
21 - 25 June 2027	London	Classroom	€2,315
19 - 23 July 2027	Istanbul	Classroom	€1,978
16 - 20 August 2027	Barcelona	Classroom	€2,815

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