



# Training of Trainers For PSA Medical Oxygen Plants

**Purpose:** The training of trainers (TOT) is designed to prepare an experienced cohort of biomedical engineers and technicians to provide BHI's five-day training on PSA plant maintenance to their colleagues. The TOT can serve as part of a sustainability strategy to develop capacity to provide ongoing maintenance training as a refresher, as well as to new staff tasked with maintaining the PSA plants.

## Who is this course for?

- A cohort of up to ten (10) experienced biomedical engineers and/or technicians with supervisor or training roles.
- **Participants need at least an intermediate level of PSA knowledge to take this course.**

Available in  
English and  
French!

## When to take this course:

*After commissioning, as soon as the trainer candidates are identified.* This two-day TOT should take place during the same visit as the maintenance training. The TOT works best when the BHI team conducts it and then co-implements the five-day maintenance training with the trainer candidates immediately afterward. It is preferable to conduct the maintenance TOT after commissioning to ensure that the knowledge and skills transferred during the maintenance TOT can be immediately put to use. However, the most important criterion for the timing of the maintenance TOT is the selection of a cohort of emerging trainers to train. At least an intermediate level of PSA knowledge is expected.

## What to Expect at the Training of Trainers

This training will familiarize the trainer candidates with all components of the maintenance training agenda, including classroom presentations, practical sessions, workshops, and tests. The TOT requires the trainer candidates to deliver presentations for coaching purposes. Trainer candidates receive the training materials in advance and are expected to familiarize themselves with the concepts as much as possible before the TOT. BHI expects some countries to place greater emphasis on preparing TOT trainers to participate in a cascade training program. Other countries will emphasize that TOT trainers need additional practical, advanced training to be prepared to conduct repairs and advanced maintenance on rotary screw air compressors or high-pressure oxygen booster compressors. Given participants' seniority and the division of roles and responsibilities within the health system, some contexts will request a stronger link between maintenance TOT and management training.

**Topics Include:** Introduction to Medical Oxygen and PSA Plants • Overview of PSA Components and Function • Safety and Hazard Mitigation • Air Compression and Purification • PSA Oxygen Generator • Oxygen Booster Compressor • Principles of PSA Plant Operation • Oxygen Delivery Systems • Find and Fix Observations and Lessons Learned • PSA Plant Maintenance Checklists and Planning



For more detail on the exact topics this course covers or on the other PSA plant training BHI offers, please email

[oxygen@buildhealthinternational.org](mailto:oxygen@buildhealthinternational.org)  
or visit [bhioxygen.org](http://bhioxygen.org)

## Training materials

BHI will provide all trainees with:

- an electronic and hard copy of the training presentation
- PSA daily maintenance checklist
- Preventive maintenance plan
- PSA plant repair log
- Starter-kit of basic tools necessary for maintenance and repairs