

COMPRESSOR TECHNOLOGY TRAINING

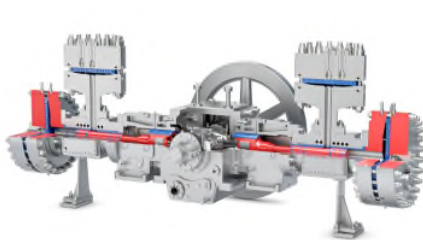
TRAINING INFORMATION FOR BCS DIAPHRAGM COMPRESSORS

Training Location: Winterthur Switzerland, Customer Site or Online

Training is essential for the safe operation and maintenance of compressors. In order to minimize downtime and maximize profit, these complicated machines need the attention of competent, professionally trained people.

Burckhardt's Education Campus offers you training in our modern well, equipped training center or at your site. Our professional trainers with many years of field service experience will travel to your site to teach your staff the theory of compressor function.

Burckhardt Compressor Technology Training prepares your staff in every aspect of compressor handling; Compression theory, preventive maintenance, reliable operation, maximizing mechanical availability and maintenance planning are just some of the key topics covered that will enhance your compressors life cycle.



Part of the Burckhardt Compression Group

Options for operation and maintenance training

- 2 days. (only theory)
- Optional 1 or 2-day Prognost training. (theory & computer hands on)

Target Group		<ul style="list-style-type: none"> • Maintenance supervisors • Operator and maintenance personnel • Service engineers • Process managers, control specialists
Participants		Maximum 10 recommended: or to be defined on customer's classroom infrastructures. Classroom features: Beamer, flipchart, whiteboard.
Training Days	BCS Diaphragm Compressors	2 days (adjustment of training duration will be determined by the format of the training)
Training Options	Prognost	1 to 2 days training in addition to the compressor training
Languages		English, German
Training Dates		To be agreed
Tailor-made training		Customized training courses can be developed to suit your exact requirements. Please contact the Training Center for further Information.
Travel to job site		Burckhardt Compression specialist arrives at the closest airport to the job site. Customer is asked to arrange pick-up from the airport to the hotel. Daily pick-up to and from the job site will be provided by the customer.

Training is not limited to Burckhardt compressors. Training on Non-Burckhardt compressors can also be provided.

Other available trainings

Laby®-GI compressor training

General reciprocating compressor training

Process gas compressor training

Hyper compressor training

Laby compressor Training

BCS DIAPHRAGM COMPRESSOR

2-Day training program (Theory only)



1. COMPANY INTRODUCTION
2. PRE-TRAINING COMPRESSOR KNOWLEDGE TEST
3. HAZARDS ASSOCIATED WITH RECIPROCATING COMPRESSORS AND PRESSURE SYSTEMS
4. DESIGN ASPECTS AND COMPARISON
5. TYPICAL MACHINE LAYOUT & GENERAL CONFIGURATION
6. COMPONENT IDENTIFICATION AND FUNCTION
7. OPERATION, CRANKSHAFT, BEARINGS, DESIGN, FAILURE MODES
8. DIAPHRAGM DESIGN, MANUFACTURE, OPERATION
9. PISTON & ROD SEALING, OIL CYLINDER, OIL DISTRIBUTION PLATE
10. OIL PUMP & LUBRICATION PRINCIPLE AND ROUTING
11. OIL COMPENSATION SYSTEM AND MONITORING VALVES
12. VALVE DESIGN AND FUNCTION
13. CAPACITY CONTROL
14. MAINTENANCE PROCEDURES AND PRACTICE
 - MAINTENANCE INTERVALS
 - VALVES: REMOVAL, INSPECTION AND REPLACEMENT
 - OIL COMPENSATION SYSTEM MAINTENANCE & SETUP
 - BEARINGS: DESIGN, FUNCTION AND FITTING
 - CRITICAL MEASUREMENTS
15. STARTING / STOPPING, NORMAL RUNNING, EMERGENCY PROCEDURES
16. REPORT WRITING AND MAINTENANCE PROCEDURES
17. FAULT FINDING AND TROUBLE SHOOTING (VISIT PLANT / OBSERVATIONS IF POSSIBLE)



PROGNOST SYSTEM

1 to 2 days optional training program (Theory and computer hands on)

1. INTRODUCTION

2. START UP

- Start of VISU
- Systems connection
- Windows and desktop
- Machine status
- Warning and alarm colors
- DSC data

3. ONLINE DATA

- Basic knowledge
- Online diagram
- Scaling
- Using online compositions
- Daily snapshot

4. TREND DATA

- Basic knowledge
- Trend diagram
- Scaling
- Using trend compositions
- 3D trend effects

5. RINGBUFFER

- Basic knowledge
- View data
- Using data trend compositions
- Triggering user ring buffer
- Specific ring buffer analysis

6. LOGBOOK

- Logbook
- One Click-fast check

7. PRESENTING OF SIGNALS ANALYSIS

- Basic knowledge
- Type: Vibration (acceleration and velocity)
- Type: Dynamic pressure (time based and pV)
- Type: Displacement (Proximity – rod/plunger position)
- Machine depending analysis (power, hours, losses, rotation and torque)

8. ADDITIONAL TOPICS

- Signal plausibility
- Operations conditions
- Warning thresholds
- Safety limits
- VISU options

GENERAL INFORMATION

Travel to Switzerland

Participants arriving at Zürich Airport are kindly requested to travel by train to Winterthur.

The railway station is located in the airport building itself.

Direct trains to Winterthur are available every 15 minutes. Travelling time is approx. 15 minutes.

Recommended hotels in Winterthur

<u>Hotel Banana City</u> www.bananacity.ch/en Schaffhauserstrasse 8 CH - 8400 Winterthur Tel. +41 52 268 16 16 E-Mail: info@bananacity.ch	<u>Hotel Wartmann</u> www.wartmann.ch/en Am Bahnhof Winterthur Rudolfstrasse 15 8400 Winterthur Tel. +41 52 260 07 07 Fax +41 52 213 30 97 E-Mail: wartmann@wartmann.ch
<u>Park Hotel Winterthur</u> phwin.ch/en Stadthausstrasse 4 CH-8400 Winterthur Tel +41 52 265 02 65 Fax +41 52 265 02 75 E-Mail:welcome@phwin.ch	<u>Plaza Hotel Winterthur</u> www.plazahotel.ch Technikumstrasse 12, 8400 Winterthur Tel. +41 52 212 15 15 E-Mail: info@plazahotel.ch

For more information

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