

# **COMPRESSOR TECHNOLOGY TRAINING**

# TRAINING INFORMATION FOR LABY®

Training Location: 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 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. (*Hands-on training is only available in Winterthur, Switzerland*).

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.









### Options for operation and maintenance training

- 2 days (only theory)
- optional + 2 days of Prognost training. Theory & computer hands on.



| Target Group         |          | <ul> <li>Maintenance supervisors</li> <li>Superintendents</li> <li>Operator and maintenance personnel</li> <li>Service engineers, chief engineers, cargo engineers</li> <li>Process managers, control specialists</li> </ul>   |
|----------------------|----------|--|
| Participants         |          | Maximum 10 recommended: or to be defined on customer's classroom infrastructures. Classroom features: Beamer, flipchart, whiteboard.   |
| Training Days        | Laby®    | 2 days (adjustment of topics and further duration can to be determined)  |
| Training Options     | Prognost | 2-day training in addition to the Laby 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**®

### 2-Day training program (Theory only)

TRAINING

- 1. INTRODUCTION
- 2. GENERAL LABY® INTRODUCTION
- 3. DETAILS & DESIGN FEATURES

In depth understanding of the component functions of your compressor. Focuses on cylinder, piston, valves, crank gear, bearings, guide bearings, oil scraper rings and crankshaft seal.

- 4. INSTRUCTION MANUAL
- 5. COMISSIONING
  - Pre-commissioning
  - Start-up
- 6. OPERATION
  - Project information
  - Compressor operating range
  - Discuss the process and the P
     & ID's of gas, oil, coolant

- Capacity control
- Controls and logic
- Controls description. Start/Stop, continuous operation

- 7. MAINTENANCE
  - a. Overhaul preparation and procedures
- 8. COOLING AND LUBRICATION
  - Overview of compressors cooled parts
  - Cooling water requirements
  - Crank gear lubrication

- Lubricating oil overview and requirements
- Lubrication systems
- 9. TROUBLE SHOOTING AND FAILURE ANALYSIS
  - Discuss possible problem
  - Learning what to do in case of emergency situations
- 10. VALVES AND UNLOADERS

Removal and installation of valves and other key components

- 11. FINAL DISCUSSION AND Q&A
- 12. TEST



# **PROGNOST SYSTEM**

### 2-Day optional training program (Theory and computer hands on)

#### 1. INTRODUCTION

#### 2. START UP

- Start of VISU
- Systems connection
- Windows and desktop

#### 3. ONLINE DATA

- Basic knowledge
- Online diagram
- Scaling

#### 4. TREND DATA

- · Basic knowledge
- Trend diagram
- Scaling

#### 5. RINGBUFFER

- · Basic knowledge
- View data
- Using data trend compositions
- 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

- Machine status
- Warning and alarm colors
- DSC data
- Using online compositions
- Daily snapshot
- Using trend compositions
- 3D trend effects
- Triggering user ring buffer
- Specific ring buffer analysis

- 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**

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

#### For more information

Please contact:

Mr. Alex Blickenstorfer Tel.: + 41 52 261 56 08

 $a lex. b licken stor fer @\,burck hard tcompression.com$ 

www.burckhardtcompression.com