

Seminar Program

Tower Service Lift TBA6000-3



We have established a training device on the premises of our factory in Weilheim especially for our customers in the WIND sector. In a seminar room we have the possibility for you to convey theoretic knowledge in an interesting and clear way using modern media technology.

For practical training, we have set up various opportunities to demonstrate the necessary activities in their original form. The participants also have the opportunity to carry out and practice the activities learned themselves.



At our training stand, we offer the chance to commission as well as operate an original tower service lift TBA6000-3.

The system travels on an original fixed ZARGES climbing ladder with a ZARGES fall arrester system and appropriate fittings (break platforms, e-boxes, lighting, mechanical locking mechanism at the door).



In addition, we have rebuilt a second tower service lift TBA6000-2 in such a way that the electric control is located outside the cabin and thus offers the possibility of executing troubleshooting on the electric equipment simultaneously with several training participants.

Because of our new training device, we can offer our training participants a professional equipment in a practice-oriented environment. Our trainers are specialized in our products and bring in a lot of practical experience due to their years of activity in the field of various tower service lifts and wind energy systems. The training participants will profit from all of this knowledge and experience.

It is our objective to offer the training participants professional instruction which provides the cornerstone for subsequent authorization for specific activities.



We currently offer the following modules for our tower service lift TBA6000-3



Module 1B – Initial commissioning and operation according to MRL 2006 incl. Service (maintenance of the TBA)

Module 3 – Review training / changes, innovations and exchange of experience

Module 4 – Training Winch and Blocstop by company Greifzug



Module 1B

Initial commissioning and operation TBA according to MRL 2006 incl. Service (maintenance of the TBA)



Participation requirements:

- § Age of 18 (verification necessary)
- § **Electrical specialist**
- § Basic knowledge of mechanics
- § Physical as well as intellectual abilities, skills and characteristics to observe occupational safety regulations.
- § Medical verification of ability to work at heights
(In the Federal Republic of Germany, in accordance with the employers' liability insurance association general principles G41)
- § Basic knowledge of the statutory regulations and employers' liability insurance association guidelines.

Educational objective Module 1B:

All theoretic and practical knowledge necessary to commission and operate as well as maintain the system in accordance with the manufacturer's operating instructions will be trained to seminar participants.

Upon successful participation and passing a control of educational objectives in the form of a theoretical and practical test, the participant may be authorized for executing by his/her company to realize the activities listed above. In addition, he is authorized to instruct other people in the system's operation.

With successful attendance and passed conclusion in form of a theoretic and practical test and a specialist-instruction* by the manufacturer of the winch as well, he can be nominated to a qualified person by his company.

*** The attendance on a specialist-instruction by the manufacturer of the winch (Module 4 or a training by company DUAL) is independent necessary from Module 1B.**

Seminar 1B contents:

- § **TECHNICAL DATA**
- § General information
- § Operating speeds
- § Track bridging steps
- § Means of support
- § Drives
- § Electrical equipment
- § Special components
- § Storage conditions
- § Operating conditions



§ GENERAL

- § Introduction
- § Manufacturer total system
- § Date of issue
- § Copyright and protected rights
- § Regulations and technical rules
- § Approval fundamentals of the unit
- § Installation and commissioning
- § Carrying capacities, bearing strength
- § Overview and description of the service lift
- § Terms and definitions

§ OBLIGATION, LIABILITY, AND WARRANTY

- § Warranty

§ SAFETY REGULATIONS

- § Safety symbols
- § Operating Instructions
- § Warning symbols on the system
- § Safety features
- § Proper use
- § Misuse
- § Working with electrical units
- § Personal protective equipment PPE
- § Duties of owner
- § Expert testing
- § Conditions of use regarding building
- § Conditions of use dependent on weather and environment
- § Operational test prior to commissioning
- § Doors, floor/ceiling doors
- § Operations on electrical equipment

§ AUTHORIZED USERS

- § Owner
- § Operator
- § Unauthorized people

§ OPERATION

- § Commissioning
- § Operation of the system
- § Safety circuit monitoring
- § Moving above the platforms
- § Shutting down the system

§ FAULTS EMERGENCIES

- § Fault/emergency lift
- § Emergency lowering in case of fault or power failure
- § Emergency raising of the lift
- § Emergency escape
- § Emergency escape from hold points
- § Emergency stop in automatic operation
- § Emergency rescue of an operator
- § Release of the catch device
- § Remedy of damage and defects
- § Service and spare parts
- § Maintenance

§ INSPECTION LIST

§ INSPECTION – MAINTANCE – REPAIRS

- § Common maintenance information
- § Duty of care and verification
- § Time cycle of operations
- § execution of operations
- § maintenance and verification plan
- § Spare Parts
- § Inspection before initial commissioning
- § Maintenance and repair
- § References to maintenance and verification
- § periods for a general reconditioning



§ CONSTRUCTIONAL PREREQUISITES

- § Read and understand assembly instructions
- § Suspension design carrying and catch cable
- § Guide rails = ladder and connection
- § Guiding of the car/guiding rollers
- § Distance to building components/built-in equipment
- § Lower bridging steps
- § Upper bridging steps and intermediate stations
- § Lighting
- § Power supply
- § Transport
- § Operations with electrical equipment



§ ASSEMBLY OF THE TOWER MANUFACTURER

- § Checking / receiving the delivery of the system
- § Delivery of the system
- § Controlling inside corners
- § controlling chassis beams
- § assembly of the horizontal ladder
- § assembly of the lift wire
- § assembly of the power supply tba
- § assembly of the round cable overhead clamp to the tower
- § assembly of the platform, guard rail and entry doors
- § assembly of the door unlocking device to the platform
- § assembly of the control spacer door unlocking device
- § assembly of the lift beam and wire
- § transportation to the wind farm
- § controlling after assembly towermanufacturer



Seminar schedule Module 1B

Number of participants: 4 persons
Duration of the training: 2 days
Beginning at 7:30 a.m.
End at approx. 5:00 p.m.



Personal protective equipment Module 1B

To carry out practical instruction and the control of educational objectives, the following personal protective equipment will be provided:

- § Personal protective equipment against falls
- § Protective helmet

We point out that safety footwear must be compellingly brought along and worn by the training participant.

Should additional personal protective equipment be necessary due to your statutory or employers' liability insurance association regulations, it must also be brought along and used by the participant.

Seminar price Module 1B

Please ask for a quote.

The seminar price includes:

- § Provision of food and drinks during the seminar
- § Seminar documents

The costs for traveling as well as overnight accommodations are not included in the price.

Refresh course:

2 years after first training / last refresh course

Training location

ZARGES Aluminum Systems GmbH

Zargesstraße 7
D-82362 Weilheim
Germany

Seminar registration

You can register:

- § by telephone at +49 (0)881 / 687-347
- § by fax to +49 (0)881 / 687-296
- § by email to Training-ZAS@zarges.de

Our General Terms and Conditions as well as directions and accommodation recommendations are available on our webpage.

If you have any questions, please get in touch with our contact people directly.



Module 3

Review training / changes, innovations and exchange of experience



Participation requirements:

- § Age of 18 (verification necessary)
- § **Electrical specialist**
- § Basic knowledge of mechanics
- § Physical as well as intellectual abilities, skills and characteristics to observe occupational safety regulations.
- § Medical verification of ability to work at heights
(In the Federal Republic of Germany, in accordance with the employers' liability insurance association general principles G41)
- § Basic knowledge of the statutory regulations and employers' liability insurance association guidelines.
- § **Module 1 according to MRL 1998 or Module 1A according to MRL 2006**

Educational objective:

The seminar participant will review all theoretic and practical knowledge, which he/she has already learned in Modules 1 (1A) and 2 and needs in accordance with the manufacturer's operating instructions.

In addition, technical innovations will be announced to the seminar participants. The training entitles to the commissioning of the servicelifts TBA 6000-3 to MRL 2006 (with both: Greifzug- and DUAL-Component)

An important component of the seminar is the exchange of knowledge between the manufacturer and the commissioners, operators as well as the service staff.

Participation in this seminar is necessary every two years.

This should ensure a constant up-to-date level of knowledge which is the prerequisite for our authorization as manufacturer.

Seminar contents Module 3:

- § Review of Module 1/1A – Initial commissioning and operation
- § Technical innovations (e.g. MRL 2006 / verifying and measuring / assembling door unlocking device / overload adjustment, new winches and safety gear components, new forms aso.)
- § Exchange of knowledge

Seminar schedule Module 3

Number of participants at most 4 persons (1 day training)
Beginning at 7:30 a.m.
End at approx. 4:00 p.m.



Personal protective equipment

To carry out practical instruction and the control of educational objectives, the following personal protective equipment will be provided:

- § Personal protective equipment against falls
- § Protective helmet

We point out that safety footwear must be compellingly brought along and worn by the training participant.

Should additional personal protective equipment be necessary due to your statutory or employers' liability insurance association regulations, it must also be brought along and used by the participant.



Seminar price

Please ask for a quote.

The seminar price includes:

- § Provision of food and drinks during the seminar
- § Seminar documents

The costs for traveling as well as overnight accommodations are not included in the price.



Training location Module 3

Zarges Aluminium Systeme GmbH

Zargesstraße 7
D-82362 Weilheim
Germany



Seminar registration Module 3

You can register:

- § by telephone at 0049 (0)881 / 687-347
- § by fax to 0049 (0)881 / 687-296
- § by email to Training-ZAS@zarges.de

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Module 4

Training Winch and Blocstop by company Greifzug at Zarges Aluminium GmbH



Participation requirements:

- § Age of 18 (verification necessary)
- § **Electrical specialist**
- § Basic knowledge of mechanics
- § Physical as well as intellectual abilities, skills and characteristics to observe occupational safety regulations.
- § Basic knowledge of the statutory regulations and employers' liability insurance association guidelines.

Educational objective:

The seminar participant will review all theoretic and practical knowledge, which he/she will need for maintenance and repairs, according the operation manual of the manufacturer.

Seminar contents:

- § Unmounting
- § Repair and maintenance
- § Expert opinion of wear- and spare parts
- § Assembly
- § Overload testing
- § Alignment of the overload-deactivation

Advice

This training by the company Greifzug (head office in Bergisch-Gladbach) will be organized by ZARGES Aluminium Systems GmbH and takes place in the plant Weilheim

Please order at least 4 weeks before desired training date because of Greifzug.



Seminar schedule Module 4

Number of participants at most 4 persons

Beginning at 7:30 a.m.

End at approx. 4:00 p.m.



Personal protective equipment

We point out that safety footwear must be compellingly brought along and worn by the training participant.

(The training takes place in the factory)

Should additional personal protective equipment be necessary due to your statutory or employers' liability insurance association regulations, it must also be brought along and used by the participant.



Seminar price

Please ask for a quote.

The seminar price includes:

- § Provision of food and drinks during the seminar
- § Seminar documents

The costs for traveling as well as overnight accommodations are not included in the price.



Training location Module 4

Zarges Aluminium Systems GmbH

Zargesstraße 7

D-82362 Weilheim

Germany

Seminar registration

You can register:

- § by telephone at 0049 (0)881 / 687-347
- § by fax to 0049 (0)881 / 687-296
- § by email to Training-ZAS@zarges.de



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If you have any questions, please get in touch with our contact people directly.

Please order at least 4 weeks before desired training date because of Greifzug.



General information about the seminars

Please refer to our General Terms and Conditions.

Here we would like to advise you that there are different regulations to be observed for seminar participants without statutory accident insurance in the Federal Republic of Germany.

Please contact your accident insurance company regarding insurance coverage.

Please ensure before your arrival that you have appropriate health insurance coverage in the Federal Republic of Germany.

Declared and confirmed seminars can be canceled completely for free up to 3 weeks before the start-date of the training . Any canceling after this date is not possible, cause of organizational reasons and need to be invoiced completely.

Any decrease of the number of participants after declaration and confirmation of the seminar is generally not possible respectively dispensed participants will be regardless invoiced.

If there will be one or more declared and confirmed participants do not appear to the seminar, we will regardless invoice the completely price of the seminar.