Lifter for air-cooled drive modules
User’s guide

Introduction
This User’s guide applies to the product “Drive module lifter air-cooled”. Verify from the type label on the unit to make sure that you have the correct document.

In this document, the unit is referred to as the drive module lifter.

Safety instructions
Read the safety instructions in Safety instructions for ACS580 multishake cabinets and modules (3AU080001023521).

WARNING! Obey these safety instructions to prevent physical injury or death, or damage to the equipment.

- Read and make sure that you understand the operating instructions before you operate the unit.
- Use only the equipment and the safety devices that are indicated in the Safety instructions.
- Do not exceed the rated lifting capacity.
- Do not exceed the rated lifting capacity on the data plate of the drive module lifter.
- Make sure that the load is not heavier than the rated lifting capacity on the data plate of the drive module lifter.
- Make sure that both of the brakes are on when you lift or lower the lifting platform, and when the drive module lifter is not moved.

Operation
Use the drive module lifter to:
1. Lift a drive module to the correct height for cabinet installation.
2. Remove a drive module from a cabinet that is 90 mm to 580 mm from the floor.
3. Move a drive module to a new location with the lifting platform lowered.

To move a drive module to a cabinet:
1. Attach the assembled loading ramp to the drive module lifter. To attach the loading ramp, refer to Loading ramp.
2. Install the first stopper bar on the side opposite from which you will load the drive module. Select the position of the stopper bar based on the size of the drive module.
3. Carefully move the drive module onto the platform of the drive module lifter.
4. Install the second stopper bar to hold the drive module on the lifting platform. Adjust the positions of the stopper bars to make sure that the drive module is balanced and centered on the lifting platform.
5. Release the loading ramp from the drive module lifter. Refer to Loading ramp.
6. Release the wheel brakes and carefully move the drive module lifter to the drive cabinet.
7. Engage the wheel brakes. Refer to Wheel brakes.
8. Attach the correct bridge plate set to the drive cabinet. Refer to Bridge plates.
9. Lift the lifting platform to 20 mm above the cabinet floor height, move the drive module lifter to the drive cabinet, and lower the lifting platform to lock it to the bridge plate. Make sure that the drive module lifter is secured by both of the braking systems.
10. Release the wheel brakes and remove the drive module lifter.

- Wheel brakes

WARNING! Make sure that both of the brakes are on when you lift or lower the lifting platform, and when the drive module lifter is not moved.

Lifting
The drive module lifter has wheel brakes on the two rear caster wheels. To engage the wheel brakes, push the brake pedal down on both rear caster wheels.
To release the wheel brakes, lift the brake pedal up on each caster wheel.
Note that the operation and appearance of the wheel brakes can differ from this presentation. Before you use the drive module lifter, make sure that you know how the wheel brakes operate.

■ Lifting

WARNING! Make sure that the load is not heavier than the rated lifting capacity on the data plate of the drive module lifter. Make sure that the load is as balanced and centered on the lifting platform as possible. The load must be distributed on a minimum of 80 % of the lifting platform area.
Do not lift the lifting platform higher than 600 mm.
Do not move the drive module lifter when it is loaded.
Make sure that both of the brakes are on when you lift or lower a drive module.

The maximum permitted height of the lifting platform is 600 mm. The usable cabinet height is up to 580 mm from the floor.

The lifting mechanism of the drive module lifter operates like a hydraulic jack. It has a lifting pedal to pump pressure into the lifting cylinder and a lowering knob to operate the release valve.

Before you start to lift the lifting platform of the drive module lifter, turn the lifting mechanism to the horizontal position.
To lift the lifting platform and its load, push the lifting pedal downward several times to reach the correct height.
Note that the lifting platform can lower slightly after it reaches the highest position.

Package contents
Content of the drive module lifter package:
- Drive module lifter
- Loading ramp
- Side support rails for the loading ramp (2 pcs.)
- Stopper bars (2 pcs.)
- Bridge plate sets (2 pcs.)
- Documentation (User’s guide)

Assembly instructions
The drive module lifter is fully assembled.
Attach the side support rails to the loading ramp before use. You can remove the side support rails when the loading ramp is not in use.

To attach the side support rails to the loading ramp:
1. Slide the legs of each side support rail into the brackets on the ramp plate. Note that the legs of the side support rails are not equal in length. Install the side support rails so that you put the longer legs where the ramp is higher. Refer to the illustration.
2. On each leg, pull the spring-loaded locking pin up and push the leg to the bottom of the bracket. Make sure that the locking pin locks fully into the hole on the leg.
3. Make sure that the side support rails are fully in position and cannot be pulled out of the ramp plate.

Hardware overview
Overview of the parts and controls of the drive module lifter.

WARNING! Do not use the drive module lifter if it has a defect or a malfunction. Contact the supplier for assistance.

Examine the drive module lifter for normal operation before each use:
- Visually examine the warning labels on the drive module lifter. Make sure that they are clean, easy to read and fully in position.
- Visually examine the condition and the position of the height-limiting beam and its mounting.
- Examine the drive module lifter for scratches, bending or cracks in the frame or in its components.
- Examine the lifting cylinder for oil leaks.
- Make sure that the spring-loaded lowering knob closes automatically.
- Make sure that the wheel brakes operate correctly.

Device description
The drive module lifter is a device to assist in drive module installation and maintenance tasks. Use the drive module lifter to lift, lower and move a drive module to install it or remove it from a cabinet.

Applicability
The drive module lifter is compatible with the ABB Drives frequency converter modules that follow:
- ACS580-104-PR2
- ACS580-110-PR2
- ACS580-304-PR2
- ACS580-310 PR2
- ACS580-400 PR2
- ACS580-410 PR2
- ACS580-415 PR2
- ACS580-420 PR2
- ACS580-430 PR2
- ACS580-570 PR2

At your own risk, you can use the drive module lifter to lift other modules that are equivalent in size and weight.
Do not use the drive module lifter to lift other types of equipment.

Target audience
This manual is intended for personnel that are qualified and approved to install and service drive modules and to use the drive module lifter.
Moving

**WARNING!** Move the drive module lifter only when the lifting platform and load are in the lowest position.

When you move the drive module lifter, hold the handrail with both hands. Engage the wheel brakes on both castor wheels when you stop and before you release the handrail.

To move the drive module lifter:
1. Lift the lifting platform of the drive module lifter.
2. Move the drive module lifter carefully, especially if there is a heavy load on the lifting platform.
3. When the drive module is on the lifting platform, put the other stopper bar into position.
4. Before you move the drive module lifter, make sure that the stopper bars slide into slots on the front castor wheels. The front wheels do not turn.

To adjust for drive module size

1. Put one stopper bar into position on the side opposite from which the drive module is supplied with stopper bars. The stopper bars are supplied with the drive module lifter.
2. Adjust the position of the stopper bar to make sure that the weight of the drive module is centered on the lifting platform.
3. When the drive module is on the lifting platform, put the other stopper bar into position.
4. Before you move the drive module lifter, make sure that the stopper bars are fully extended and that they prevent the movement of the drive module.

Loading ramp

Use the loading ramp to load or unload a drive module onto the drive module lifter.

To use the loading ramp:
1. Lift the lifting platform of the drive module lifter slightly.
2. Move the loading ramp to the correct position next to the drive module lifter.
3. Lower the lifting platform and make sure that the drive module is on the side of the loading ramp go into the side of the lifting platform.
4. Before you use the loading ramp, make sure that it is securely attached to the lifting platform.
5. Move the drive module to or from the lifting platform.
6. To remove the loading ramp, lift the lifting platform slightly to clear the loading ramp. Then move the loading ramp away from the drive module lifter.

Moving a drive module to and from a cabinet

**WARNING!** Obey these safety instructions to prevent physical injury or death, or damage to the equipment.

- Before you move a drive module, make sure that the brakes of the drive module lifter are on.
- Make sure that the bridge plate is securely attached to the drive module lifter before you move the drive module.
- When you move the drive module, make sure that it cannot tip or fall from the cabinet.
- Lower the lifting platform to the lowest position before you release the wheel brakes and move the drive module.

Carefully push or pull the drive module to or from the cabinet. The drive module has a high center of gravity.

**Maintenance**

Do the routine inspection before each use of the drive module lifter. Refer to Routine inspections.

Make sure that you do the maintenance in a suitable area. Do not do maintenance on the drive module lifter when there is a load on the lifting platform.

Once per month, apply grease to the following parts:
- Wheel axles and wheel bearings
- Links and axles
- Lifting pedal connection point
- Chain roller
- Grease nipples

Make sure that you do the waste disposal according to the local regulations.

**Technical data**

- **Lifting capacity**: 320 kg
- **Dimensions and weights**
  - **Lifting platform height range**: 90...600 mm (practical range up to 580 mm)
  - **Dimensions (LxWxH)**: 1100 x 780 x 1075...1730 mm
  - **Lifting capacity**: 320 kg
  - **Front wheel diameter**: 75 mm
  - **Rear castor wheel diameter**: 127 mm
  - **Lifting platform height range**: 90...600 mm (practical range up to 580 mm)

**Certifications**

The applicable certifications are shown on the product's type label.

**Declaration of conformity**

Machinery Directive 2006/42/EC

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This is an original user's guide that was developed by ABB Oy, Drives. The guide is available only in English.

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