

OPERATION MANUAL

HIGH-LIFT SCISSOR LIFT TABLES

DHS · THS · CHS SERIES



CAPACITY RANGE

400 to 5,000 kg

RAISED HEIGHT

Up to 5,100 mm

INSTALLATION

Above floor or in a prepared pit

CONTROL

24 V pendant with emergency stop

Read this manual completely before installation or first use. Installation, electrical connection, commissioning, operation and maintenance may only be carried out by trained and authorised personnel.

Edition 1.0 | 2026

ABOUT THIS DOCUMENT

These instructions apply to DELACCO DHS (double scissor), THS (triple scissor) and CHS (quadruple scissor) stationary electric-hydraulic lift tables with rated capacities from 400 to 5,000 kg. They have been prepared from the supplied technical documentation and adapted to DELACCO model designations. The identification plate, project-specific drawings and documentation delivered with the unit take precedence if the supplied version differs.

Contents

- 1 Description, intended use and construction — page 3
- 2 Technical data — pages 4-5
- 3 Operating conditions and safety instructions — page 6
- 4 Load distribution — page 7
- 5 Installation and commissioning — pages 8-9
- 6 Operation — page 10
- 7 Inspection and maintenance — page 11
- 8 Hydraulic and electrical system — page 12
- 9 Troubleshooting — page 13
- 10 Technical support and safety reminder — page 14

WARNING

Indicates a potentially hazardous situation that may cause serious injury.

OWNER RESPONSIBILITY

Ensure the manual is available to operators, installers and service personnel, and record all inspections and repairs.

CAUTION

Indicates a risk of equipment damage or unsafe operation.

TRANSFER OF OWNERSHIP

Pass this manual and all project-specific documentation to the next owner or user.

! Document priority

The identification plate, project-specific drawings and electrical/hydraulic diagrams supplied with the delivered unit take precedence over generic information in this manual.

1 DESCRIPTION, INTENDED USE AND CONSTRUCTION

DHS, THS and CHS lift tables are intended to lift and lower stable goods within the rated capacity, reaching raised heights of up to 5,100 mm. They are used in production, warehousing, logistics, assembly, maintenance and multi-level transfer applications. Every model may be installed above floor level or recessed into a prepared pit, and must be anchored to the foundation before operation.

Principal assemblies

- steel load platform with aluminium perimeter safety edge and integrated micro-switches
- welded base frame with two (DHS), three (THS) or four (CHS) vertical scissor pairs
- electric-hydraulic power pack (BUCHER pump) with one or two cylinders
- 24 V pendant control with UP, DOWN and emergency stop
- relief, compensated flow-control and hose-burst valves
- upper limit switch and safety-edge switches
- mechanical maintenance prop and removable lifting eyes

RAISE

The electric motor drives the hydraulic pump and oil is delivered to the cylinder(s).

LOWER

The solenoid and flow-control valves release oil for controlled platform descent.

HOLD

Check and hose-burst protection valves retain the platform when movement stops.

STOP

The emergency stop and the safety edge interrupt movement immediately.

! Intended use

The lift table is designed for goods only. Standing, sitting, climbing or carrying people on the platform is prohibited. Do not modify the table without the manufacturer's written approval and use only designated spare parts.

2 TECHNICAL DATA - DHS AND THS MODELS

All dimensions are nominal. Confirm the delivered unit data plate and project drawing before installation.

DHS - double scissor models

Two vertical scissor pairs, raised heights of 1,780-2,050 mm, capacities of 1,000-4,000 kg.



Model	Capacity (kg)	Lowered height (mm)	Raised height (mm)	Platform L x W (mm)	Base frame L x W (mm)	Lift time (s)	Power pack	Net weight (kg)
DHS1000	1000	305	1780	1300 x 820	1240 x 640	35-45	380V/50Hz AC 1.1 kW	210
DHS2000	2000	360	1780	1300 x 850	1220 x 785	35-45	380V/50Hz AC 1.5 kW	295
DHS4000	4000	400	2050	1700 x 1200	1600 x 900	55-65	380V/50Hz AC 2.2 kW	520

THS - triple scissor models

Three vertical scissor pairs, raised heights of 3,000-5,100 mm, capacities of 1,000-5,000 kg.



Model	Capacity (kg)	Lowered height (mm)	Raised height (mm)	Platform L x W (mm)	Base frame L x W (mm)	Lift time (s)	Power pack	Net weight (kg)
THS1000	1000	470	3000	1700 x 1000	1600 x 1000	35-45	380V/50Hz AC 2.2 kW	450
THS2000	2000	560	3000	1700 x 1000	1606 x 1010	50-60	380V/50Hz AC 2.2 kW	750
THS4000	4000	625	3200	1700 x 1200	1610 x 1140	70-85	380V/50Hz AC 3.0 kW	910
THS5000	5000	890	5100	2980 x 2000	2980 x 2000	90-105	380V/50Hz AC 3.0 kW	2500

Pit planning: add 30 mm to the platform length and width; pit depth equals the lowered table height + 5 mm. Verify final dimensions against the delivered unit.

2 TECHNICAL DATA - CHS MODELS

CHS - quadruple scissor models

Four vertical scissor pairs, raised heights of 4,100-4,800 mm, capacities of 400-2,000 kg.



Model	Capacity (kg)	Lowered height (mm)	Raised height (mm)	Platform L x W (mm)	Base frame L x W (mm)	Lift time (s)	Power pack	Net weight (kg)
CHS400	400	600	4100	1700 x 1000	1600 x 1000	30-40	380V/50Hz AC 2.2 kW	550
CHS800	800	710	4100	1700 x 1000	1606 x 1010	75-85	380V/50Hz AC 2.2 kW	860
CHS1600	1600	800	4250	1700 x 1200	1610 x 1140	50-65	380V/50Hz AC 2.2 kW	1045
CHS2000	2000	950	4800	2000 x 1200	2000 x 1200	90-95	380V/50Hz AC 3.0 kW	1200

Standard supply is shown as 380 V / 50 Hz. Always verify the actual voltage, frequency, motor power and circuit requirements on the delivered unit and electrical diagram.

If platform dimensions differ from the standard sizes listed, the raised height, motor power and net weight may differ from the nominal values. Custom configurations are documented in the order confirmation and project drawing.

! Heavy-duty installation

The foundation, anchoring, pit and electrical supply must be engineered for the selected model, rated load and operating duty.

3 OPERATING CONDITIONS AND SAFETY INSTRUCTIONS

Operating conditions

- Install and use the lift table on a structurally adequate, firm and level foundation, anchored with expander bolts or equivalent.
- Use in a dry industrial environment. The standard unit is not waterproof and is not designed for explosive or flammable atmospheres.
- The electrical supply must match the data plate; supply voltage must remain within $\pm 10\%$ of the rated voltage.
- Keep the working area well illuminated and free from obstructions over the full travel height.
- The control position must provide the operator with a clear view of the platform, load and surrounding danger zone.

Safety instructions

- Read and understand the complete manual before installation, operation or maintenance.
- Only trained, qualified and authorised personnel may operate or service the table.
- Do not exceed the rated capacity shown on the identification plate.
- Use only stable, adequately secured loads. Do not lift loads that may fall, roll or spill.
- Keep hands, feet, clothing and objects clear of the scissor mechanism and the area below the platform.
- Never enter beneath a raised platform unless it is unloaded and secured by the mechanical maintenance prop.
- Do not adjust the safety valve, flow valve, limit switches or safety-edge switches without authorisation.
- Do not operate a table with structural deformation, cracks, damaged hoses, oil leakage, defective controls or abnormal noise - even minor distortion prohibits operation.
- While the platform is moving, do not adjust or reposition the load.

! Crushing hazard

The aluminium safety edge is an additional protective device. It does not replace safe working distances or the mechanical prop during maintenance.

4 LOAD DISTRIBUTION

In accordance with EN 1570, the rated capacity applies to the permitted load cases below. Avoid impact loads, side loading, concentrated point loads and loads extending beyond the platform unless the application has been specifically engineered and approved.

- 100% of rated capacity uniformly distributed over the full platform area.
- 50% of rated capacity uniformly distributed over half the platform length.
- 33% of rated capacity uniformly distributed over half the platform width.

AVOID POINT LOADS

Use suitable load-spreading plates where the load has small contact areas.

SECURE THE LOAD

Prevent rolling, sliding, tipping or falling during movement - especially important at large travel heights.

AVOID SIDE LOADS

Do not drag or push loads sideways across a raised platform.

NO PARTIAL OVERLOAD

Do not load partially or concentrically beyond the permitted load cases.

Loading checklist

- Confirm the load mass before placing it on the platform.
- Position the centre of gravity as close as practical to the platform centre.
- Do not add load to a raised platform unless the total mass and distribution remain within the permitted load case.
- Stop operation immediately if the platform tilts, binds, deforms or moves abnormally.

! No persons

Never lift or transport people. Do not stand on the platform or use the lift table as an access lift.

5 INSTALLATION - FOUNDATION AND PIT

Installation must be performed by competent personnel in accordance with the project drawing, local regulations and the requirements of the building structure. The base frame is not self-supporting as standard: the flooring must be flat and stable and, for pit installation, well drained. Double, triple and quadruple scissor tables must be fixed to the floor with expander bolts or equivalent fasteners.

Pit dimensions

- Pit length = platform length + 30 mm.
- Pit width = platform width + 30 mm.
- Pit depth = lowered height of the selected lift table + 5 mm.
- Drainage hole where required.
- Tube for external cables and hoses Ø 60 mm.

ABOVE-FLOOR INSTALLATION

Anchor the base frame to a level, structurally adequate foundation.

LOADING SIDE

Turn the fixed scissor arm end to the side where the load is moved on or off at the upper level.

PIT INSTALLATION

Keep the platform flush with the finished floor and provide safe edge clearances.

CABLE ROUTING

Protect electrical and control cables from impact, moisture and moving parts.

! Verify the delivered unit

Measure the delivered table and confirm the approved installation drawing before constructing the pit. Ensure the foundation is level and provide drainage where required.

5 INSTALLATION AND COMMISSIONING

- Inspect the delivery for transport damage and verify the model, rated capacity and electrical data.
- Use lifting equipment and slings of adequate capacity. Utilise a lifting sling through the scissor package and tie the base frame to the platform or scissor mechanism; attach only to the designated lifting eyes or approved lifting points.
- Position the table on the prepared foundation with the fixed scissor arm end towards the principal loading side.
- Level the base frame and securely anchor the lift table with expander bolts. Do not pull a distorted base frame flat using anchor bolts.
- Install the control station where the operator has a complete view of the table and load.
- Connect the electrical supply and protective earth through a suitable isolator. Electrical work must be carried out by a qualified electrician.
- Check phase rotation. If the motor runs but the table does not rise, isolate the supply and correct the phase sequence.
- Remove transport bolts and lifting eyes only where the product instructions require their removal before operation.
- Check the operation of the safety frame on all sides of the platform.
- Test the platform without load: UP, DOWN, emergency stop, upper limit switch and the aluminium perimeter safety edge.
- Carry out a controlled load test in accordance with applicable local requirements before putting the table into service.

FUNCTION TEST

Verify UP, DOWN, emergency stop, limit switches and perimeter safety edge.

INSTALLATION CHECK

Confirm level, anchoring, clearances, drainage and cable protection.

COMMISSIONING RECORD

Record model, serial number, test results and responsible personnel.

OPERATOR TRAINING

Document handover and operator training before first productive use.

! Electrical safety

Isolate, lock out and verify absence of voltage before opening the electrical enclosure or working on the motor, wiring or controls.

6 OPERATION

Before each cycle

- Confirm that the platform, scissor area and the space above the table are clear.
- Check that the load is stable and correctly distributed.
- Release the emergency stop and switch on the main isolator.

RAISING

Press and hold the UP button; the power pack lifts the platform. Release the button at the required height. The table stops automatically at the upper limit switch.

LOWERING

Press and hold the DOWN button; release it to stop. If the aluminium safety edge contacts an obstruction, lowering stops - remove the obstruction, inspect the table and press UP briefly before resuming.

EMERGENCY STOP

Press the emergency-stop button, or push the aluminium safety frame upward: both stop the movement immediately. Correct the unsafe condition before resetting.

TRANSPORT

If relocation is necessary, transport the table using the attached lifting eyes and lifting equipment of adequate capacity.

! Motor duty

The motor may operate for a maximum of approximately 9 minutes per hour. With the optional S1-rated drive this may be extended up to 45 minutes per hour - see the delivered unit data plate.

After operation

- Lower the platform to a safe resting position whenever the process permits.
- Switch off and isolate the table when it is not in use or before cleaning.
- Report abnormal noise, leakage, damaged labels or defective safety functions before the next use.

7 INSPECTION AND MAINTENANCE

Maintenance must be performed by competent personnel with the table unloaded, electrically isolated and secured with the mechanical prop. Never rely on hydraulic pressure to support a raised platform.

Daily checks

- Check warning labels, safety edge micro-switches and control functions.
- Check platform, base frame, scissor arms, pins and welds for damage or deformation.
- Check hydraulic hoses, fittings, cylinders and power pack for leakage.
- Check anchor bolts and structural fasteners; check smooth vertical movement and vertical creep of the platform.

Recommended maintenance intervals

- **First 10 operating hours:** replace the hydraulic oil for the first time; inspect all connections.
- **Every 500 operating hours or 3 months:** check oil level, oil filter, pressure hoses, hydraulic cylinders, micro-switches and fasteners; check the overall working state; lubricate all joints and pivot points.
- **Every 2,000 operating hours or annually:** replace the hydraulic oil, check axial bushings for wear and check for internal/external leakage.
- **After repair:** perform functional and safety tests before return to service. A load test may be required by local regulations.

Greasing points and hydraulic oil

Grease the piston rod bearings, running wheels, arm fixings and arm centre pivots with the table unloaded. Recommended hydraulic oil grade: ISO HL32 (e.g. Rando R&O 32, DTE Light, Turbo 32). The oil tank holds the greatest amount when the table is fully lowered. Used hydraulic oil must be treated as hazardous waste.

! Safe maintenance

Before any intervention, secure the platform with the mechanical prop (or the lifting bolts where specified) to prevent accidental lowering.

8 HYDRAULIC AND ELECTRICAL SYSTEM

The electric-hydraulic system comprises the oil tank with filters, motor-driven hydraulic pump, check valve, relief valve, solenoid lowering valve, compensated flow-control valve, hose-burst valves at the cylinders and one or two lifting cylinders. The control circuit uses a 24 V transformer supply, contactor/relay logic, UP and DOWN push-buttons, emergency stop, upper limit switch and the safety-edge micro-switches.

LIFTING

Pump supplies oil to the cylinders through the check valve.

LOWERING

Solenoid and flow-control valves provide controlled descent.

HOLDING

Check and hose-burst valves retain the platform position.

PROTECTION

Relief valve limits system pressure in case of overload.

Typical control components: 24 V control transformer (JBK3 series), fuses, bridge rectifier, AC contactor, intermediate relays, oil-pump solenoid valve (DC 24 V), emergency-stop and UP/DOWN push-buttons, upper limit switch and two safety-edge protection switches. The exact configuration is shown on the electrical diagram supplied with the delivered unit.

! Do not adjust valves without authorisation

Incorrect adjustment can cause overload, uncontrolled lowering, equipment damage or serious injury. Only the diagrams supplied with the delivered table are authoritative for service work.

BEFORE ENERGISING

Check cable routing, terminals, protective earth and enclosure condition.

FUNCTION TEST

Test emergency stop, UP/DOWN buttons, limit switches and safety-edge switches after any electrical work.

PHASE SEQUENCE

If the motor runs but the platform does not rise, isolate the supply before correcting phase rotation.

QUALIFIED PERSONNEL

Only qualified electricians may connect or service the electrical system.

9 TROUBLESHOOTING

Before any intervention: unload the platform, isolate the electrical supply and secure the platform with the mechanical prop. If a fault cannot be corrected safely using the checks below, stop using the table and contact qualified service personnel.

Fault	Possible cause	Corrective action
Table does not rise while the motor runs normally	Lifting eyes/transport bolts not removed; incorrect phase sequence; solenoid valve fault; overload	Remove the specified transport devices; correct phase sequence; check and repair the valve; reduce load
Table does not rise and motor does not run	Emergency stop engaged; lower limit switch damaged; isolator or fuse open; motor protection tripped	Reset only after checking the cause; replace the limit switch; restore supply; inspect fuses and contactor
Table does not lower	Safety edge activated or its micro-switch damaged; lowering solenoid fault; circuit board fault	Press UP briefly, remove the obstruction and inspect; replace switch; check valve and circuit board
Platform drifts down / scissors pass limit position	Internal leakage in solenoid valve; damaged cylinder packing or seals	Secure the platform mechanically; repair or replace the valve; check and replace packing/seals
Table does not reach full height	Low oil level; upper limit switch incorrectly set or defective; overload	Check for leaks and refill oil; inspect, adjust or replace the switch; reduce load

IDENTIFICATION

Model, serial number, year of manufacture and rated capacity.

FAULT DESCRIPTION

What happened, when it occurred and whether the fault is repeatable.

OBSERVATIONS

Motor sound, indicator status, oil leakage, unusual movement or damage.

EVIDENCE

Provide clear photographs or video where safe and permitted.

10 TECHNICAL SUPPORT AND QUICK SAFETY REMINDER

RATED LOAD

Never exceed the capacity shown on the identification plate.

GOODS ONLY

Never lift or carry people.

LOAD DISTRIBUTION

Centre and distribute the load according to the permitted load cases.

DANGER ZONE

Keep clear of the scissor mechanism and area below the platform.

ANCHORING

Operate only tables that are securely anchored to an adequate foundation.

MAINTENANCE

Isolate and mechanically support the platform before service.

Technical support, service and replacement parts

delacco.com | sales@delacco.com

When requesting support, provide the DELACCO model, serial number, year of manufacture, rated capacity and a clear description or photograph of the issue.

DELACCO - equipment for safe lifting and material handling

delacco.com | sales@delacco.com

This manual is based on the supplied technical documentation. The identification plate, electrical/hydraulic diagrams, order confirmation and documentation supplied with the delivered unit take precedence.