ROEMHELD

Issue 6-09 E

M 4.501

Lifting Module Twin-Strong

Max. lifting force 6,000 N, stroke from 200 to 400 mm, manual-hydraulic and electro-mechanical version

Advantages:

- Lifting force up to 6,000 N
- Extreme load due to double steel guides
- Very high section modulus
- Rigid guiding system without clearance
- Sturdy and tough
- Compact design
- Modular standard design, easy to combine
- Ergonomic design
- Safe and precise handling

Application

Lifting module for extreme loads.

Principal use

- Industrial production with difficult application conditions
- Automotive industry
- Assembly of car seats
- Drive technology, axes, cardan shafts
- Compressors, hydraulic elements, pumps
- Turbines, motors, gearbox construction
- Applications with frequent load changes and high torque loads

Fixing and installation

For fixing of *modulog* modules or other components of the user at the top plate the lifting module has a triple interface 140 x 140.

For fixing of the lifting module on a flat level floor the lifting module has a double interface 200 x 200. For fixing 6 screws M10 of property class 10.9 as well as heavy-duty plugs are to be used.

Description

The lifting module Twin-Strong has two high-tensile cylinder tube profiles with chromium-plated surfaces. The design with solid profiles allows a stable guiding system with perfect smooth running. The high precision of the tube profiles permits a guiding system without clearance and perfect smooth running.
The guiding system works without fat and oil lubrication. High-quality materials for plain bearings are used.
Characteristic are applications with indifferent, dynamically swelling rotating motions and shock motions.

Material

Double guiding system, top and bottom plates are made of steel. Materials for plain bearings are made on the base of polymers.

modulog Lifting module

Part-no. 8914-06-X0-X

Technical characteristics

Max. lifting force:	6,000 and 10,000 N
Max. torque:	2,000 Nm
Stroke:	200 to 400 mm

Operational modes

- Foot pedal
- Foot switch
- Hand panel



Combinable with the modules

- Rotating module - horizontal axis DMH 200 as per data sheet M 1.101

- Tilting module KMB 100 as per data sheet M 2.101

- Rotating module - vertical axis DMV 1000 as per data sheet M 3.101

modulog interfaces

- Top plate: 140 x 140 - Ø 10.5 mm
- Bottom plate: 200 x 200 - Ø 10.5 mm

Accessories

- Foot switch and hand panel as per data sheet M 8.200
- Electrical supply unit as per data sheet M 8.200
- Base and adaptor plates as per data sheet M 8.100 and M 8.110
- Table plates as per data sheet M 8.130 and M 8.131

ROEMHELD

Manual-hydraulic version
operation with foot pedal

Description

The stroke movement is obtained by a hydraulic linear unit with single-lever actuation with oil being pumped by means of a piston pump into a plunger cylinder.

During retraction the oil returns due to the weight of the load from the cylinder back to the reservoir. A defined speed reduction is effected.

The manual-hydraulic variant is particularly sturdy and durable. This variant meets high safety demands and withstands jerking and knocking loads in applications.

Code for part numbers

Part-no. **8914-06-X0-H**

Stroke

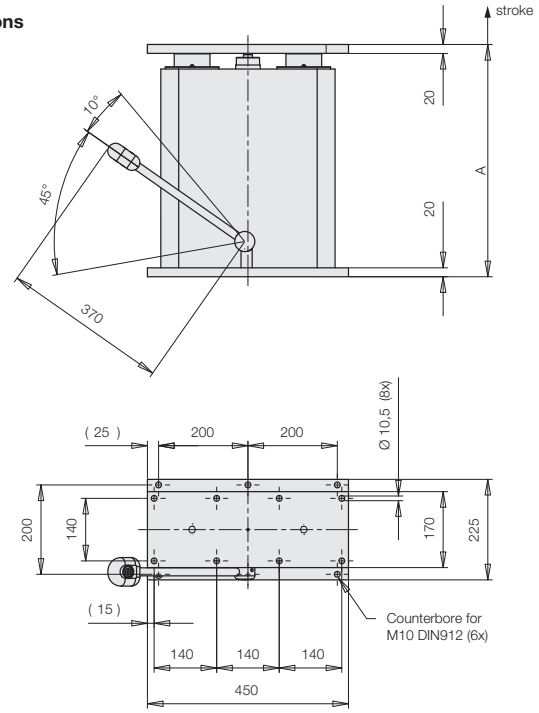
2 = 200 mm
3 = 300 mm
4 = 400 mm

Operation

To lift the load, the foot pedal has to be depressed by approx. 45° several times. The pedal returns to its off-position by means of a return spring.
To lower the load, the foot pedal has to be moved upwards by approx. 10°.

Per 100 mm stroke 10 pump motions are required.

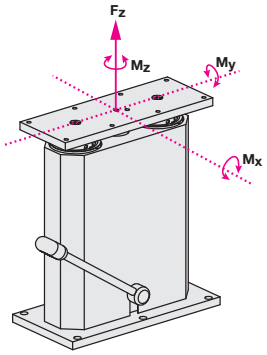
Dimensions



Technical characteristics

Stroke [mm]	A [mm]	A + stroke [mm]	Weight [kg]
200	420	620	95
300	520	820	100
400	620	1020	105

Maximum lifting force and maximum admissible torque load



Maximum lifting force F_Z: 6,000 N

Maximum torque load:

M_X: 2,000 Nm or **My**: 1,200 Nm
M_Z : 600 Nm

In the case of eccentric loads, it is recommended to compensate these by counterweights.
In off-position the indicated maximum torques may occur.
The forces and torques have to be considered by the operator. During the lifting motion only 50% of the maximum values are admitted.

Important notes!

To descend the lifting module a minimum load of approx. 200 N is required.
The lifting module must only be pressure loaded. The centre of gravity should be within the traverse of the fixing screws.
If the centre of gravity is outside, the dowelled joint with the floor has to be dimensioned correspondingly. In such cases it is recommended to use a larger base plate.

In case of eccentric load of more than 250 mm there is the danger of locking of the lifting module and an automatic descent will no longer be possible.

The lifting module is designed for applications within closed rooms.

ROEMHELD

Electro-mechanical version
operation with foot switch or hand panel

Description
The lifting motion is generated by an electric motor with a spindle lifting gear.

The electrically operated variant is particularly suitable for positioning and adjusting tasks of working tables as well as for material supply and transport.

These lifting units excel by a smooth running.

Operation
Lifting and lowering is triggered by push-buttons with touch control contact. After release of the push-button, the motion will be immediately stopped.

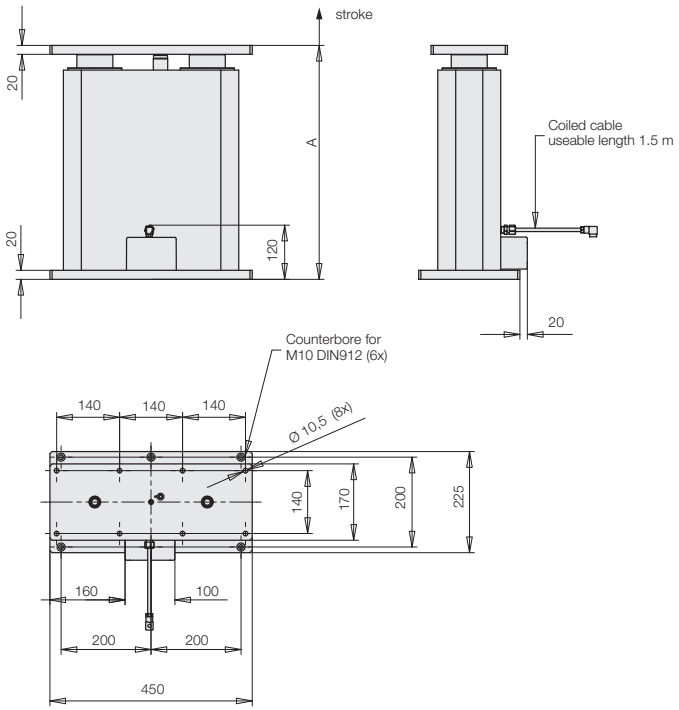
Code for part numbers
Part-no. **8914-06-X0-E**

Stroke
2 = 200 mm
3 = 300 mm
4 = 400 mm

Maximum lifting force Fz: 6,000 N

Admissible torque load and important notes
As per manual-hydraulic version (see page 2).

Dimensions



Technical characteristics

Lifting speed: (load dependent)	6....4 mm/s
Electric connection:	Plug
Duty cycle:	15 % ED
Code class	IP 54
Control voltage	24 VDC
Power input	144 W

Delivery
The lifting modules are delivered ready for connection. Foot switches or hand panels as well as supply units and a mains cable have to be ordered seperately as accessory.

Electrical accessories
See data sheet M 8.200

● **Foot switch**
with connecting cable 1.5 m
Part-no. 3823-029

● **Hand panel**
with connecting cable 1.6 m
Part-no. 3823-025

● **Supply unit**
with control
for one lifting module
Part-no. 3821-246

● **Mains cable 230 VAC**
with earthing type plug for supply units
Mains cable, smooth 3.0 m
part-no. 3823-040
Mains cable, coiled 2.3 m
part-no. 3823-041

Accessory
Base plate for increased stability
Part-no. 6311-460
See data sheet M 8.100