



Lifting Module Shop-Floor

Max. lifting force 1,000 to 6,000 N, stroke from 200 to 600 mm, manual-hydraulic and electro-mechanical version



Advantages

- Simple and intuitive operation
- Working in ergonomically optimum height
- Sturdy industrial design
- Increase of quality in manufacturing and assembly processes
- Short amortisation time
- Increase of assembly throughput and productivity
- High level of safety against static overloads

Application

Lifting module for workshop applications in the industry.

Principal use

- Industrial assembly working places
- Height adjustment of assembly working places in workshops
- Service
- Assembly fixtures
- Adjusting systems in supply processes of mid-sized objects
- Handling systems for product packing and transfer

Fixing and installation

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

For fixing of modulog modules at the bottom plate the lifting module has an interface 200 x 200. This plate can also be used to fix the lifting module on a flat level floor. For fixing 4 screws M10 of property class 10.9 as well as heavy-duty plugs are to be used.

For increased stability also a base plate, which can be delivered as accessory, can be fixed at the bottom plate.

Description

The lifting module Shop-Floor is particularly suitable for lifting and lowering assembly fixtures, working tables and demonstration objects in industrial applications as well as for medical treatment equipments in medical applications.

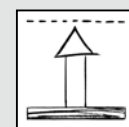
In general, lifting modules are used as base unit of devices for controlled lifting and lowering of loads or for height adjustment only.

Material

Lifting profile: aluminium, naturally anodised
 Top and bottom plate: aluminium, black anodised

modulog

Lifting module



Part-no. 8915-0X-X0-X

Technical characteristics

Max. lifting force: 1,000 to 6,000 N
 Max. bending moment: 500 Nm
 Stroke: 200 up to 600 mm

Operations

- Foot pedal
- Foot switch
- Hand panel



Combinable with the modules

- Rotating module – horizontal axis
 DMH 200 as per data sheet M 1.101 / M 1.201



- Tilting module
 KMB 100 as per data sheet M 2.101 / M 2.201



- Rotating module – vertical axis
 DMV 600 as per data sheet M 3.101 / M 3.201



- Cart modules
 WMS as per data sheet M 5.101



- Floor modules
 FMS as per data sheet M 6.101
 FMD as per data sheet M 6.201



modulog interfaces

- Top plate: 140 x 140 – Ø 10.5 mm
- Base plate: 200 x 200 – Ø 10.5 mm

Accessories

- Foot switch and hand panel extension cable electrical supply units for 1, 2, 3 or 4 lifting modules 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

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, independent of the load.

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

According to the application 3 different force levels can be selected. The number of pump strokes depends on the force level.

Code for part numbers

Part-no. 8915-0X-X0-H

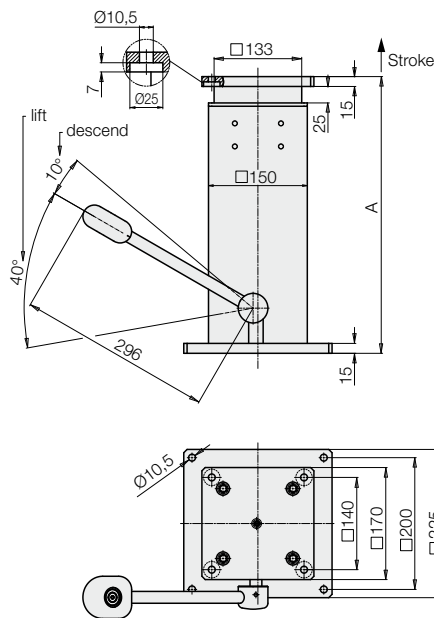
Maximum lifting force

2 = 2,000 N
4 = 4,000 N
6 = 6,000 N

Stroke

2 = 200 mm
3 = 300 mm
4 = 400 mm
5 = 500 mm
6 = 600 mm

Dimensions

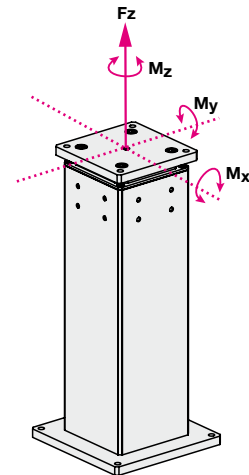


Operation

To lift the load, the foot pedal has to be depressed by approx. 40° 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°.

Maximum lifting force and maximum admissible torque load



Stroke [mm]	A [mm]	A + Stroke [mm]	Weight [kg]
200	420	620	15
300	520	820	20
400	620	1,020	25
500	720	1,220	30
600	820	1,420	35

Lifting force [N]	Pump strokes per 100 mm	Descent speed [mm/s]
2,000	5	approx. 45
4,000	7	approx. 22
6,000	9	approx. 22

Maximum lifting force Fz:

Optionally 2,000 N, 4,000 N or 6,000 N (1,000 N only for the electro-mechanical version)

Maximum torque load:

Total M_{x/y}: 500 Nm
M_z: 300 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.**

Accessories

Base plate for increased stability

Part-no. 6311-412

See data sheet M 8.100

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, the column cannot descend automatically because of too high friction forces.

The lifting module is designed for applications within closed rooms.

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.

They 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.

Synchronization

Up to 4 lifting modules can be operated with synchronization control by a corresponding supply unit.

For example complete lifting platforms can be designed.

For operation with synchronization control only lifting modules with identification letter G are suitable.

Supply units with synchronization control for 2, 3, or 4 lifting modules are available.

Technical characteristics

Electric connection	Plug
Duty cycle	15 % ED
Code class	IP 54
Control voltage	24 VDC

Variant E

Lifting force	Lifting speed	Current consumption
[N]	[mm/s]	[A]
1,000	32...28	7
2,000	18...16	6
4,000	10...8	6
6,000	7...5	7.5

(load-dependent) (load dependent)

Variant G

Lifting force	Lifting speed	Current consumption
[N]	[mm/s]	[A]
2,000	18...16	6
4,000	8...6	4.5
6,000	6...4	5.5

(load-dependent) (load dependent)

Maximum lifting force, maximum admissible torque load and important notes

As per manual-hydraulic version (see page 2).

The maximum pull force of the electro-mechanical version is 80 % of the push force!

Code for part numbers

Part-no. 8915-0X-X0-X

Maximum lifting force

- 1 = 1,000 N (only for variant E)
- 2 = 2,000 N
- 4 = 4,000 N
- 6 = 6,000 N

Stroke

- 2 = 200 mm
- 3 = 300 mm
- 4 = 400 mm
- 5 = 500 mm
- 6 = 600 mm

Synchronization control

- E = not suitable for synchronization with coiled connecting cable, 1.5 m
- G = suitable for synchronization, with smooth connecting cable, 2.5 m

Delivery

The lifting modules are delivered ready for connection. The connecting cable from the lifting module to the supply unit is included in the delivery. Foot switch or hand panel as well as supply units and a mains cable have to be ordered separately as accessory.

Electrical accessories

• Foot switch

with connecting cable 3.0 m

Part-no. 3823-038



• Hand panel

with connecting cable 1.6 m

Part-no. 3823-025



• Supply unit

with control

for one lifting module

Part-no. 3821-246



• Supply unit

with synchronization control

and/or memory function,

see data sheet M 8.200



• Mains cable 230 VAC

with earthing type plug for supply units

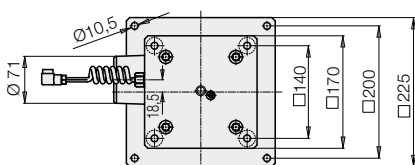
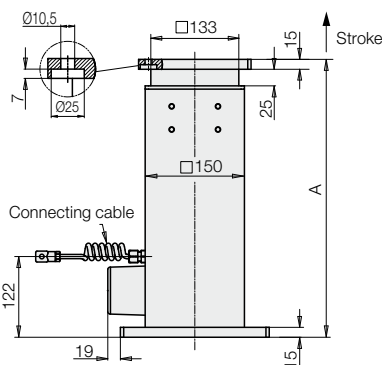
Mains cable smooth, 3.0 m

Part-no. 3823-040

Further accessory

See data sheet M 8.200

Dimensions



Accessories

Base plate for increased stability

Part-no. 6311-412

See data sheet M 8.100