

## Weightless guiding and positioning of loads

Demag E-Balancer



## Safe, reliable and convenient positioning of the load

Sensitive parts need to be handled smoothly and gently, workpieces have to be positioned with maximum precision. The Demag E-Balancer is a solution for these demanding tasks. The E-Balancer acts like an extension to the operator's arm for maximum safety and ergonomics.

The E-Balancer is the ideal tool for special applications that require load guidance with positioning accuracy down to the last millimetre.

### Simple electronic control

The electronic control system provides various operating modes to allow the E-Balancer to be matched to any application. It enables all load pick-up, transport and positioning applications to be implemented to meet your exact needs. The operating mode can be selected via the D-Grip operating handle or provided automatically.



**Load positioning**  
Direct contact with the load  
for precise positioning

### Precise assembly

Workpieces can be precisely assembled. The unit acts like an extension to the operator's arm and helps him to position parts with high precision – both vertically and horizontally.

## Loads precisely held in balance



- ❶ The load handling attachment is placed on the workpiece in the jig
- ❷ Load pick-up mode is activated. The E-Balancer automatically takes the weight of the load
- ❸ Maximum precision when the workpiece is removed – the load does not drop
- ❹ Weightless positioning – via the handle or the load



### Safely held in balance

The E-Balancer holds loads in perfect balance – without any specific position tolerances. Thanks to its unique load pick-up mode, unmatched by any product worldwide, workpieces can be fitted into or removed from jigs with ease, for example. Thanks to its dedicated assembly mode, components can be positioned quickly and efficiently.



### Ergonomic positioning

The unit can be pre-positioned by its handle – the load can then be positioned direct without the need to use the handle. The E-Balancer unit automatically detects the operator's lifting and lowering motions, which provides for weightless guiding and positioning of the load. In assembly mode, the unit assists the operator for exact positioning of components.





## Perfect ergonomics: Demag E-Balancer

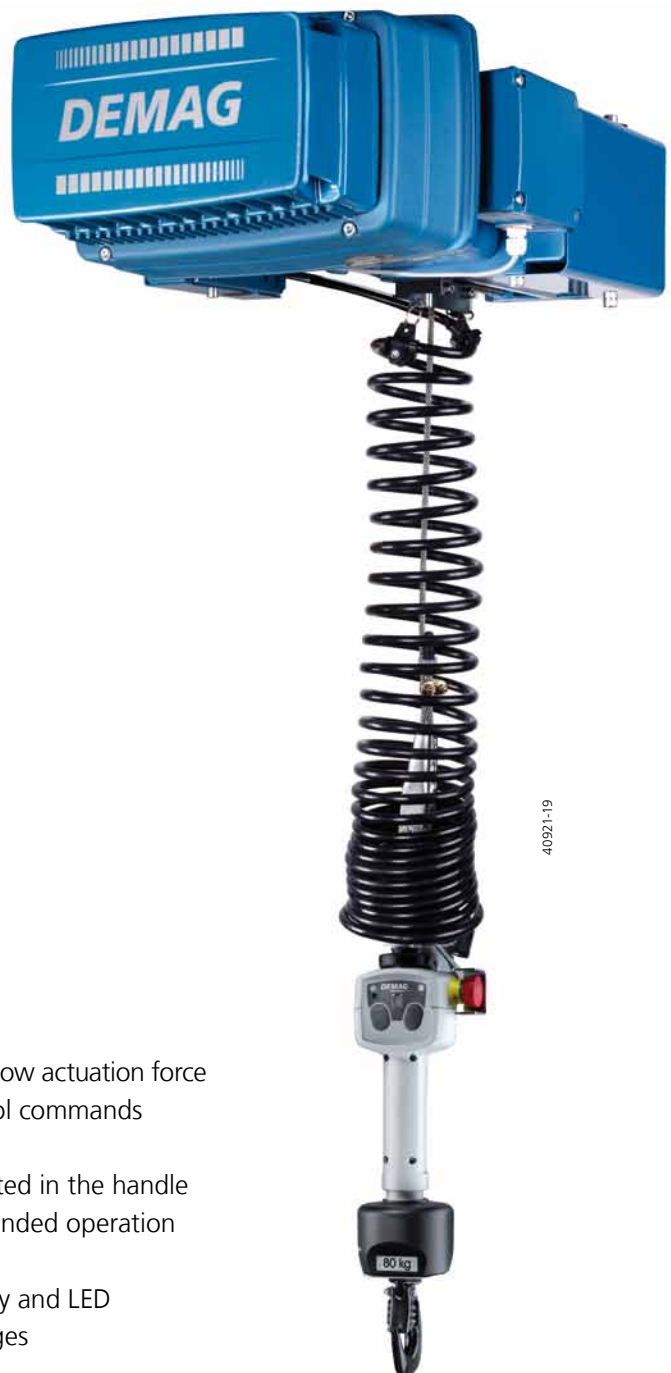
Featuring electronic load detection, the microprocessor controls of the E-Balancer safely keep loads in perfect balance. A slight movement of the hand in the required direction is sufficient to guide the load gently in a fluid motion and to position it with millimetre precision. The E-Balancer consists of a tough, die-cast aluminium housing which is connected to the D-Grip operating handle by a helical cable.

### At a glance

- Rugged technology to meet industrial demands
- Rope guided on grooved drum
- Controls can be programmed to meet specific needs (as required)
- Motor protective switch
- High level of safety and reliability thanks to slipping clutch
- Continuous load monitoring
- Service-friendly thanks to plug-&-play connections

### E-Balancer control

- Ergonomic handle for fatigue-free operation
- Intuitive control of lifting and lowering motions without the need to press buttons
  - Load pick-up mode (rope tensioned)
  - Assembly mode (precise load-handling mode)
  - Servo mode (load positioning)
- Sealed keys with low actuation force for various control commands
- Photocell integrated in the handle to prevent unintended operation
- 7-segment display and LED for status messages
- Protected emergency-stop button



## At a glance: All benefits

### Convenient

Load handling operations can be conveniently controlled in "Grip control" mode using the D-Grip handle. The load can be handled and guided direct by means of slight movements by switching over to "Load control" mode.

### Ergonomic

Workplaces can also be equipped with particularly ergonomic solutions with the E-Balancer. It enables effort and fatigue to be minimised and reduces the risk of absenteeism due to accidents and work-related injuries. This improves precision in assembly and enhances the quality of your products.

### Safe and reliable

The E-Balancer ensures that the load is safely braked. Automatic monitoring functions, such as limit switches and lifting force limitation, are integrated. The load is also safely held in the event of a power failure.

### Unique user-friendly design

The drive technology incorporated in the E-Balancer provides for high operating speeds for high handling rates. Two unique operating modes provide the operator with effective support.

#### Load pick-up mode

Load handling attachments can be lifted and pre-tensioned, allowing the load to be removed from a chuck without dropping or being suddenly pulled upwards, for example. Jigs and machinery can be protected at the same time, since the balancer lifts the load with a previously specified force.

#### Assembly mode

High level of safety and precision for assembly operations, since any oscillation and uncontrolled load movements are suppressed.

### Versatile application

The E-Balancer ensures that the load is safely braked. Besides a series of standardised modules, such as load hooks and box and shaft grippers, load handling attachments that are designed to meet specific customer needs can also be employed.

### Efficient

The E-Balancer requires only an electric power supply; thanks to its plug-&-play connections, it can be quickly put into operation. Any complicated installation and maintenance of an additional media supply are eliminated.

### Easy to service

Status messages can be shown on 7-segment displays on the housing and on the control unit for a high level of system transparency. The selected parameters can be saved as a data record on a PC. This enables them to be uploaded into a replacement unit or to be used for new units that are set up for similar workplaces.



## Including all system benefits

The Demag E-Balancer extends the range of convenient load handling methods and enables parts to be positioned precisely. As a newly developed compact hoist unit, the Demag E-Balancer product range is compatible with the comprehensive Demag modular system.

This enables it to travel easily along the KBK light crane system rails of single-girder suspension cranes, pillar and wall-mounted slewing jibs and suspension monorail systems.

### Programming parameters

#### for specific applications using a terminal/PC

- Lifting speeds (min./max.)
- Acceleration/deceleration
- Ramps for start-up/stopping (gradient/limit value)
- Speed limitation
- Minimum and maximum torque for balancer operation
- Function assignment of the buttons
- Load limitation
- Parameters can be saved as a data record on a PC



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		E-Balancer 80	E-Balancer 125	E-Balancer 160
Load capacity	[kg]	80	125	160
Max. lifting speed	[m/min]	35		
Lifting height	[mm]	2,200		
Rope diameter	[mm]	5		
FEM group of mechanisms		3m	2m	1Am
Supply voltage	[V AC]	380 - 480		
Frequency	[Hz]	50/60		
Control	[V DC]	24		
Output	[kW]	0.94		
Hoist motor duty factor	[%]	60	30	
Noise at a distance of 1m	[dbA]	< 79		
Housing dimensions (W/L/H)	[mm]	335 / 640 / 205		
Weight	[kg]	30		
Temperature range	°C	- 10 to + 40		
Type of enclosure		IP 55		

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