

Demag D-BE E-Balancer



**Weightless guiding
and positioning of loads**

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 D-BE 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.

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.



Direct contact with the load
for precise positioning

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.

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

- 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



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All benefits at a glance

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.

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.

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 by the integrated brake in the event of a power failure. Hazards that can arise when loads are snatched or if the rope is slack are simply avoided.

High level of safety: the unit is stopped if the load tolerance limits are exceeded or the load suddenly changes, e.g. if the load is suddenly set down.

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.

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.



- 1 The load handling attachment is placed on the workpiece in the jig
- 2 Load pick-up mode is activated: The E-Balancer automatically takes the weight of the load
- 3 Maximum precision when the workpiece is removed – the load does not drop
- 4 Weightless positioning – via the handle or the load

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. Specific adjustment of the speed for all operating modes.

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.



Precise load positioning

BOTH VERTICALLY AND HORIZONTALLY

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Loads held precisely in balance



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.

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.

Speed control to meet specific requirements by selecting between two characteristics:

- **Progressive characteristic:** gentle starting and precise positioning thanks to particularly fine control at low speeds
- **Linear characteristic:** direct and faster response for immediate rapid motions

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



Size		D-BE 80	D-BE 125	D-BE 160
Load capacity	[kg]	80	125	160
Maximum 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 1 m	[dB(A)]	< 79		
Housing dimensions (W/L/H)	[mm]	335 / 640 / 205		
Weight	[kg]	40		
Temperature range	°C	- 10 to + 40		
Type of enclosure		IP 54		

DEMAG

A TEREX BRAND



TEREX CORPORATION

Terex Corporation is one of the world's leading suppliers of crane technology with Demag industrial cranes and crane components. The core competence of the Terex Material Handling business group lies in the development, design and production of technically sophisticated cranes, hoists and components and the provision of sales support and services for these products. The business group manufactures in 16 countries on five continents and is present in more than 60 countries, reaching customers in more than 100 countries.

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