

LS ONE DIRECT-DRIVE LINEAR TRANSFER SYSTEM TECHNICAL DATA



INSPIRING PEOPLE
GREAT SOLUTIONS

LS One is the direct-drive linear transfer system in the WEISS linear transfer product family. The system is specially designed for tasks that demand the highest levels of precision and flexibility. Thanks to the linear motors, high dynamics and a freely selectable motion profile are possible. This makes LS One the most flexible linear transfer system in the WEISS portfolio.

The high flexibility is already demonstrated by the motion of the workpiece carrier as early as setup. Each workpiece carrier can be controlled and moved individually and separately. Thanks to individual control, grouping procedures and buffer processes are easy to implement in a wide range of constellations. For start-up, the workpiece carriers can be freely programmed in the WEISS application software W.A.S. LS ONE or individually taught to position via the jog operating mode.

LS One is delivered wired, operational, preconfigured and preprogrammed as a complete system consisting of the transfer system incl. control cabinet and WEISS Control System. The system is prepared via WEISS Application Engineering in consultation with the customer. This way, users must only attach the individual motor control system of LS One as a complete system. As part of functional integration, the sensors and control system are already integrated into the linear motors. This is why daisy chain wiring is easy to implement. This reduces installation costs and possible service costs as well.

LS One has a repeat accuracy of ± 0.03 mm in x/y/z directions. A fully metallic, rolling element-based high-precision rail guide supports the precision of the linear motors. The work-piece carriers are pretensioned and guided by a rail guide. Additionally they are supported by a metallic, rolling element-based flat track. Alongside the stop positions of the workpiece carriers, the acceleration, speed and direction of movement are also freely programmable. The workpiece carriers are designed for loads of up to 5 kg and can handle process forces of up to 300 N without support.

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For more details on LS One please visit
weiss-world.com

**Subject to technical modifications
and other changes.**

Downloads

WEISS CAD Download Portal



LS ONE DIRECT-DRIVE LINEAR TRANSFER SYSTEM

TECHNICAL SPECIFICATIONS



SPECIFICATIONS	
Max. load	5 kg
Process forces (without support) ¹	300 N
Mounting position	Horizontal
Structure	Oval with 180° corner
Direction of movement	Counterclockwise (CCW), clockwise (CW)
Workpiece carrier (WC) plate length	Min. 114 mm (multiple nests possible)
Availability	> 95%
Linear motor module positioning accuracy ²	± 0.03 mm (x, y & z directions)
Corner module positioning accuracy ²	± 0.03 mm (x, y & z directions)
Acceleration ²	Up to 3 g = 30 m/s ²
Speed ²	Up to 4 m/s
Max. number of workpiece carriers per system	Up to 64 WC
Expandability	Modular design

OPERATING OPTIONS	
Linear motor module	<ul style="list-style-type: none"> – Multiprocessing: simple changes to process stations (number of stations and position of stations) – Steel-on-steel solution for rollers and guide rail – Constant bearing pretensioning (WC) – Maintenance friendly system, main components easy to replace – Modular design - very easy option for expanding the existing system – Integrated air cooling – Freely programmable positioning (freely definable process station) – WC grouping (fast in-feed and ejection in multiple process stations) – Individual processing of nests (each process station processes a nest, even if several are on one WC) – Parallel processing of nests (multiple process stations process multiple nests at the same time on one WC) – Interim buffering of WCs (equalizing different process times)

CONNECTIONS	
Power supply	200 - 480 V, 50 - 60 Hz
Fieldbus interfaces	EtherCAT PROFINET EtherNet/IP Ethernet POWERLINK
WC identification	RFID (optional)
SOFTWARE & SERVICES	
W.A.S. (WEISS Application Software)	Yes
Software Features	<ul style="list-style-type: none"> – Extensive monitoring functions – Integrated manual teach options (automatic positioning on a master WC; offline teach position of each WC) – STO (SIL2, PLd) – STO function can be applied to individual or multiple motor segments to ensure safe manual operation of the WC – Remote maintenance
Services	Service worldwide

PHYSICAL DATA	
Linear motor module _{W x H x D}	<ul style="list-style-type: none"> – Length 660 mm: 660 mm x 170 mm x 632 mm – Length 1,320 mm: 1,320 mm x 170 mm x 632 mm
Corner module _{W x H}	– 638,5 mm x 170 mm x 632 mm
Workpiece carrier (WC) plate length	– 114 mm
Base frame _{W x H x D}	<ul style="list-style-type: none"> – Linear motor module length 660 mm: 660 mm x 805 mm x 870 mm – Linear motor module length 1,320 mm: 1,320 mm x 805 mm x 870 mm – Redirection module: 760 mm x 805 mm x 870 mm

The specified technical data may vary depending on the application.



You can find more details about your LS One at:
weiss-world.com/LS-One

¹ Depending on the application, the maximum process forces may deviate.

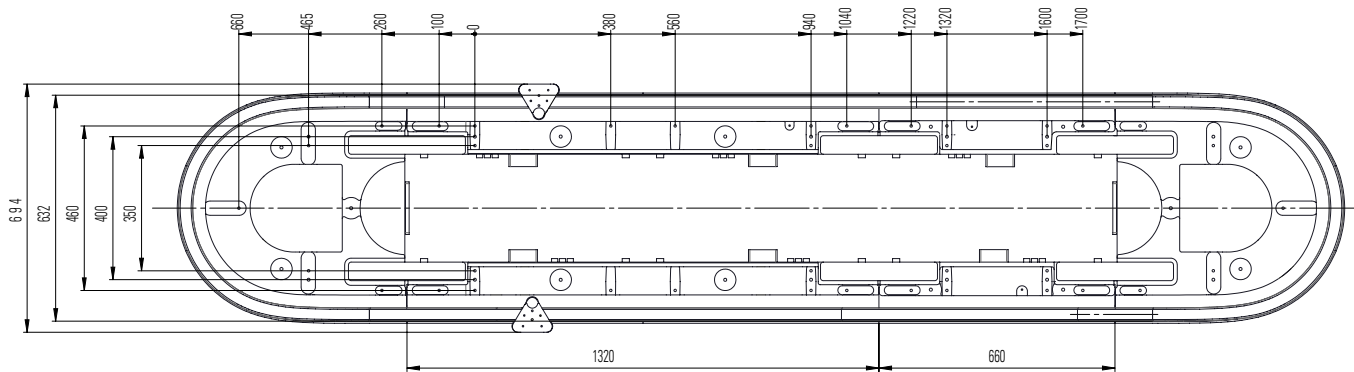
² Data valid for systems in warmed-up state. The final motion data depends on the respective customer load.

LS ONE DIRECT-DRIVE LINEAR TRANSFER SYSTEM

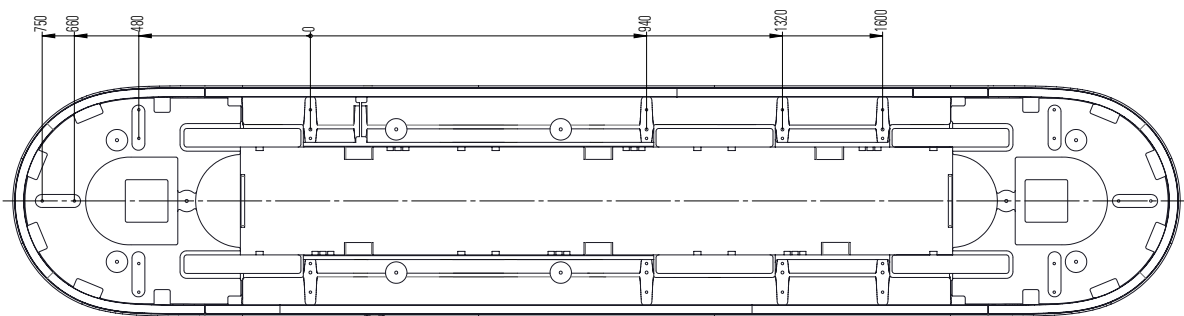
PHYSICAL DATA



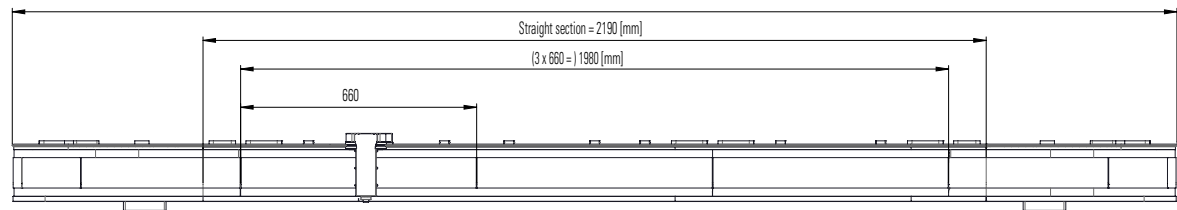
Top view without base frame



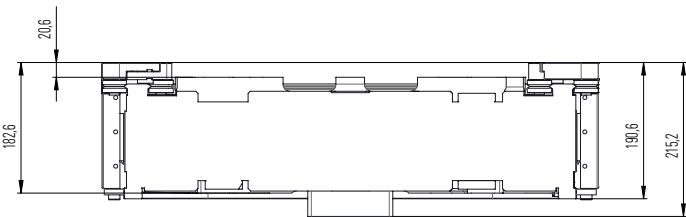
Bottom view without base frame



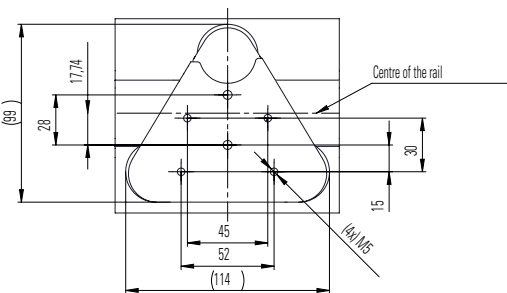
Side view from right and left without base frame



Front and back view without base frame



Top view carrier

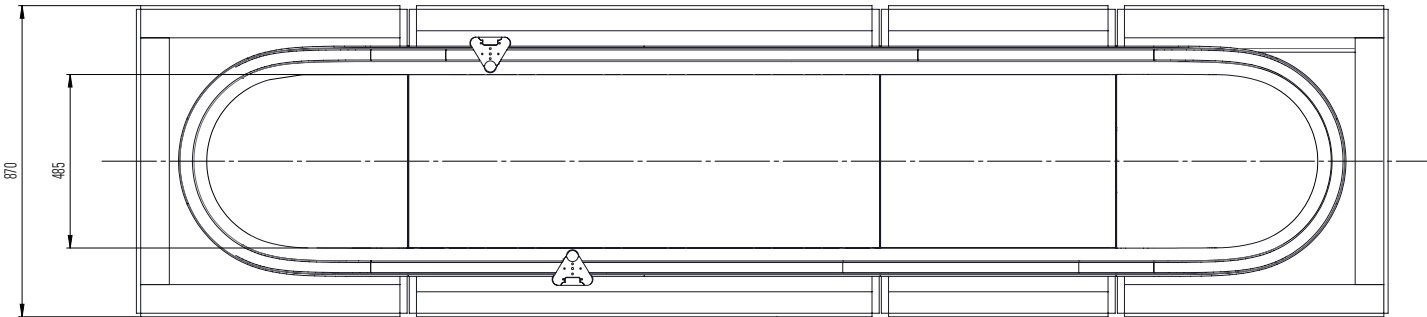


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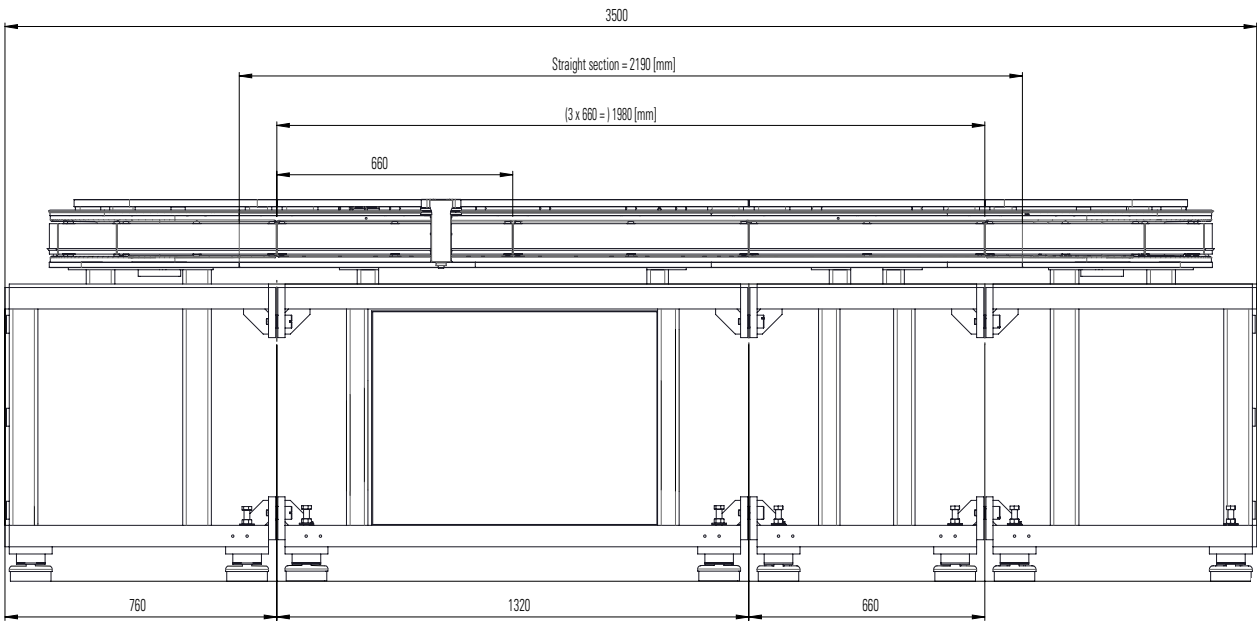
PHYSICAL DATA



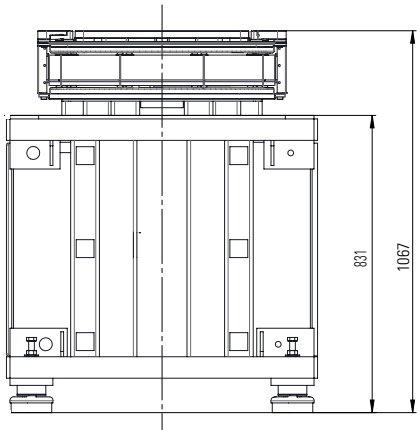
Top view with base frame



Side view from right and left with base frame



Front and back view with base frame



Top view carrier

