

# THE FUTURE IS THIS EASY.

## DIRECT DRIVE LINEAR TRANSFER SYSTEM LS ONE

DISCOVER MORE [LSONE.WEISS-WORLD.COM](http://LSONE.WEISS-WORLD.COM)

### 01 INCREASING PRODUCTIVITY

The combination of speed, precision and high loads on workpiece carriers allow for a variety of processes. And as a complete system, LS One ensures a fast production start.

- ✓ Acceleration of 30m/s<sup>2</sup>
- ✓ Speed of 4 m/s
- ✓ Repeatability of  $\pm 0.03$  mm
- ✓ Loading up to 5 kg
- ✓ Pre-parameterized, pre-programmed and pre-commissioned

### 03 INCREASING FLEXIBILITY

The "easy to combine and easy to integrate" concept of WEISS solutions reduces system complexity and makes it possible to set up productive overall systems quickly.

- ✓ Customer-specific configuration through modular design
- ✓ Long-term system extensions and changes possible
- ✓ Freely programmable workpiece carriers

### 02 USING EFFICIENCY

LS One brings flexibility. Existing systems can be adapted to changed processes by adding or removing motor segments to adapt the system length or by reprogramming the motion of the workpiece carrier.

- ✓ Easy-to-use-Software
- ✓ Modular design
- ✓ Prepared movement scenarios for workpiece carriers
- ✓ High adaptability and high reconfigurability

### 04 ENABLING CONNECTIVITY

LS One is equipped with most of the common interfaces in the market. It can be combined with other components from WEISS to create a functional subsystem from a single source.

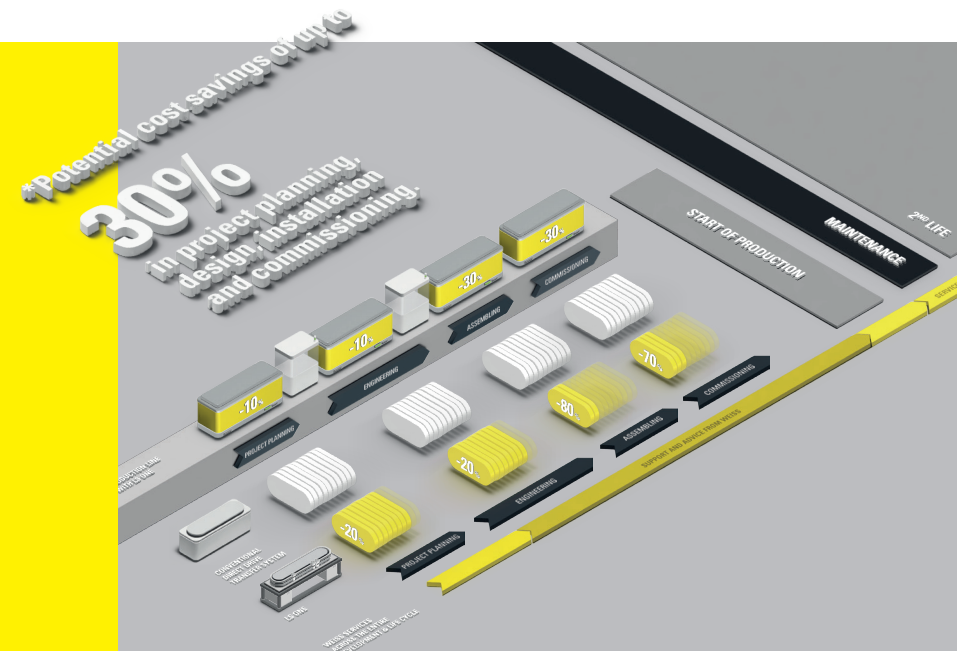
- ✓ Interfaces: Ethernet Powerlink, EtherCAT, EtherNet/IP and PROFINET
- ✓ Includes W.A.S. LS control package for fast and easy start-up and integration.

#### THE COMPLETE SYSTEM FOR EASY INTEGRATION

As a complete system, LS One is pre-parameterized, pre-programmed and pre-commissioned when delivered. This makes integration into the overall system and start-up easy.

#### FREEDOM IN PROCESS DESIGN

LS One is specially designed for tasks that demand the highest levels of precision and flexibility. The linear motors make high dynamics and a freely selectable motion profile possible.



#### SAVE TIME AND MONEY WITH A COMPLETE SYSTEM

LS One is pre-programmed when shipped. The basic programming required for linear transfer systems is done in-house at WEISS. This is how system integrators and users receive a prepared system. This simplifies setup and start-up. During the process design phase, only the motion parameters of speed, acceleration and stop positions need to be defined.

Pre-programming, pre-parameterization and pre-commissioning shorten the system development times significantly compared to conventional systems. The modular concept of LS One and the use of W.A.S. WEISS application software make valuable savings possible during the system development cycles.

\* Can vary depending on conditions.  
Depending on the framework conditions of the user.



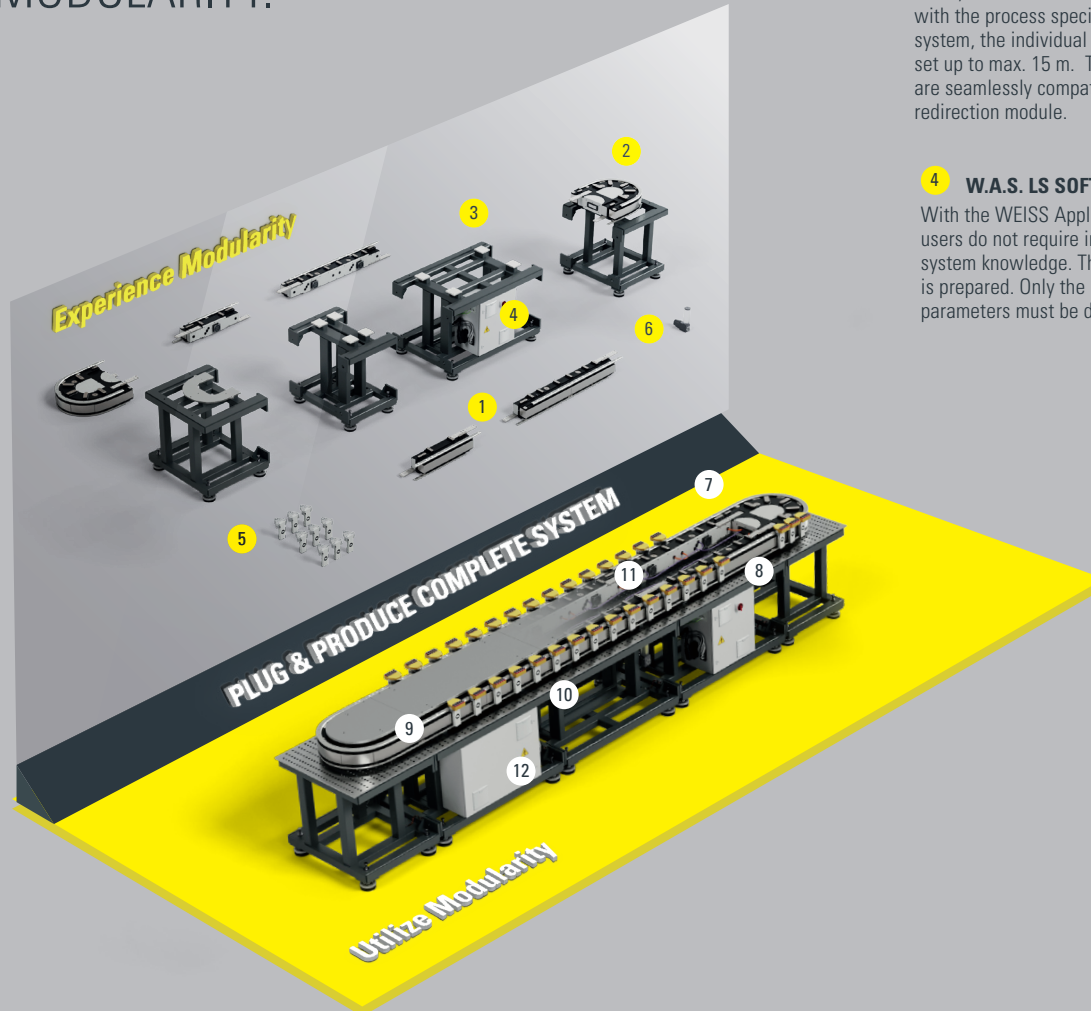
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» Questions? Scan me!



# MODULAR COMPLETE SOLUTION.

## EXPERIENCE AND UTILIZE MODULARITY.



### 1 LINEAR MOTOR SECTION

Motor sections with lengths of 660 mm and 1,320 mm are available. In line with the process specifications in the system, the individual modules can be set up to max. 15 m. The motor segments are seamlessly compatible with the redirection module.

### 2 REDIRECTION MODULE

The redirection module supports the motion speed of the workpiece carrier. Process stations and the exact positioning of the workpiece carrier are also possible in the curved area.

### 3 BASE FRAME

The matching frame is used as a rack with space for control cabinets and the power supply.

### 4 W.A.S. LS SOFTWARE

With the WEISS Application Software, users do not require in-depth control system knowledge. The control system is prepared. Only the individual parameters must be defined.

### 5 WORKPIECE CARRIER

Individually controllable and can bear payloads of up to 5 kg. Process forces of up to 500 N are possible. A maximum of 64 workpiece carriers can be integrated.

### 6 CENTRAL LUBRICATION

The automatic lubrication system extends the service life of the guide concept. The lubrication pump emits a signal if the lubricant has fallen below the minimum level.

### 7 RECONFIGURABILITY

When the assembly process or workpiece changes or there are new workpieces, LS One can be adapted to the new circumstances at any time, both in terms of software and hardware.

### 8 ADJUSTABLE SYSTEM LENGTH

During the planning phase or when the product changes, motor segments can be removed to adjust the system layout and the linear transfer system can be converted, extended or shortened.

### 9 DISCONNECTABLE GUIDE RAIL

To replace motor segments quickly and reliably, the guide rails can be separated.

### 10 LINEAR MOTOR REPLACEMENT

In the case of service, LS One motors are easily accessible from the outside. This minimizes service call duration and in turn, dwell times.

### 11 WORKPIECE CARRIERS

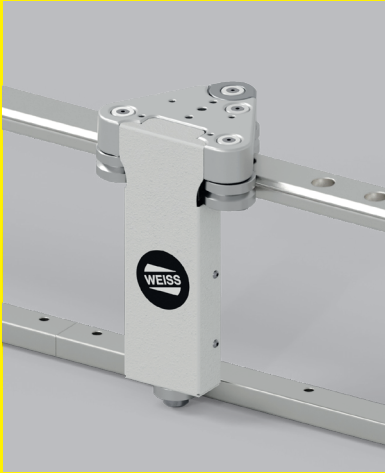
Workpiece carriers can be added or removed. The guide rails and the design of the workpiece carriers themselves facilitate their mechanical replacement. New workpiece carriers can be integrated and processes adjusted within the control system.

### 12 ADAPTATION WITH W.A.S. SOFTWARE

Changes in the layout from adding or removing linear motor segments or workpiece carriers can be easily mapped and implemented on the software side with W.A.S. Very little time is needed for programming and adjustment.

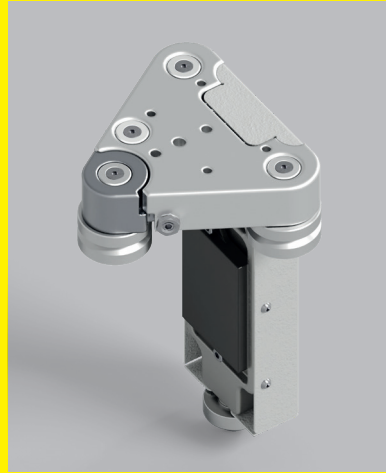


# ACHIEVING TARGETED PRECISION. FOR HIGH-QUALITY END PRODUCTS.



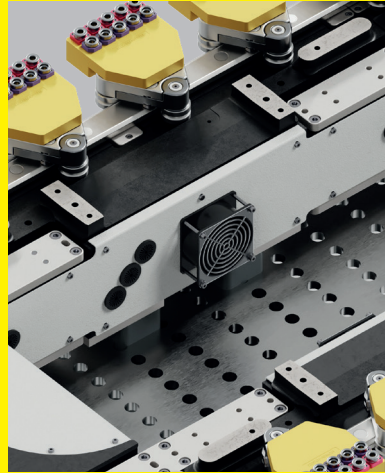
## GUIDE RAILS

With the LS One, the workpiece carriers are guided on V-rails made of steel. At the same time, the carriers run on steel rollers. This steel-on-steel solution is robust and coordinated, making it low-wear and therefore highly precise over the entire service life.



## PRE-TENSION

The constant pre-tensioning of the inner workpiece carrier rollers on the entire transport section causes constant friction during motion. This extends the service life of the linear transfer system.



## HIGH-PERFORMANCE AIR COOLERS

Heat is generated when operating electric motors. This can lead to thermal movement in a steel structure. To avoid this, air coolers are integrated into LS One on the motor modules and redirection module as standard.



## EXHAUST AIR OUTLETS

WEISS planned the exhaust air outlets above and below the motor position. This allows air to circulate freely. This is how LS One achieves its maximum constant performance in terms of acceleration, cycle times and load capacity.



## CENTRAL LUBRICATION

Central lubrication extends the service life of the guide concept by reducing the friction between the workpiece carrier rollers and the guide rails. At the same time, it lowers maintenance and service costs because a signal indicates the level.

## THE STRENGTHS OF LS ONE.



### FASTER START OF PRODUCTION

LS One is delivered pre-parameterized and pre-programmed as a complete system. Users must only define the customer-specific parameters.



### HIGH ADAPTABILITY

Thanks to the W.A.S. LS control package, LS One is reconfigurable and can be flexibly adapted to changes.



### EASY-TO-USE SOFTWARE

The W.A.S. LS application software control system solutions simplify more than just start-up. They can also be used without in-depth control system knowledge.



### PRECISION

The high degree of repeatability and speed of LS One make it a solution provider for many industries.



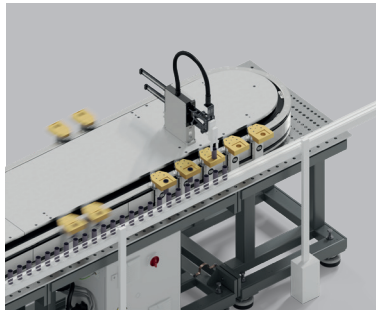
### MODULARITY

LS One consists of just three modules. They provide the basis for customizing transport segments and motion profiles.



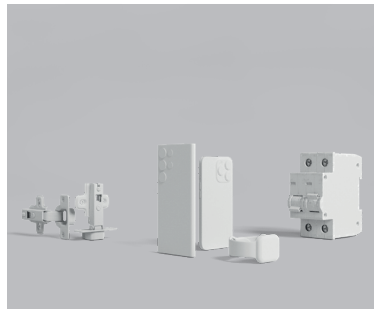
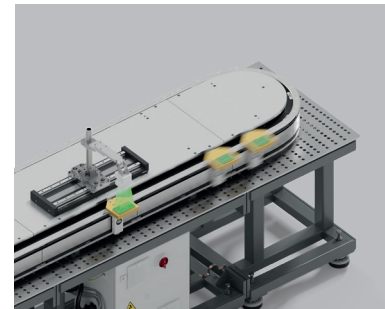
# EXPERIENCE FREEDOMS. EASILY SOLVE DIVERSE APPLICATIONS IN ONE SYSTEM.

LS One is pre-programmed before shipment. The basic programming required for a linear transfer system is done by WEISS in-house. The prepared system simplifies setup and start-up. Only the speed, acceleration and stop positions motion parameters remain to be defined. Four default motion scenarios are saved in the software. Users can adapt and combine them.



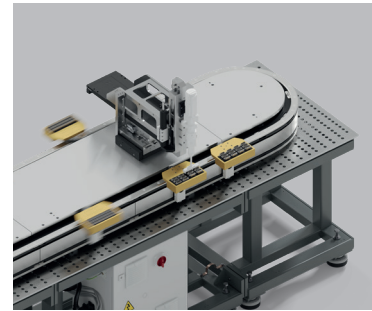
## GROUPING

With grouping, the workpiece carriers are combined into groups at a freely selectable position. These groups can be moved further as a unit and separated again later. The collecting position for the grouping can be freely selected.



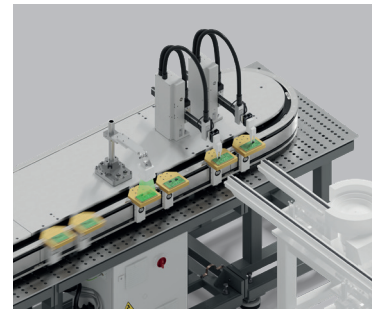
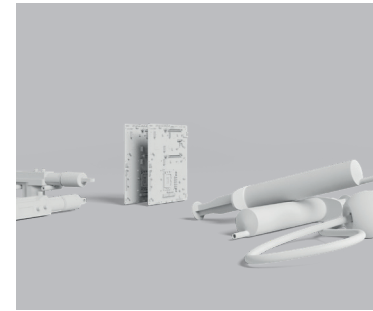
## TRACKING

During tracking, the movement of the workpiece carrier extends the travel path of the tool. The workpiece carrier moves together with a handling unit and expands the processing area.



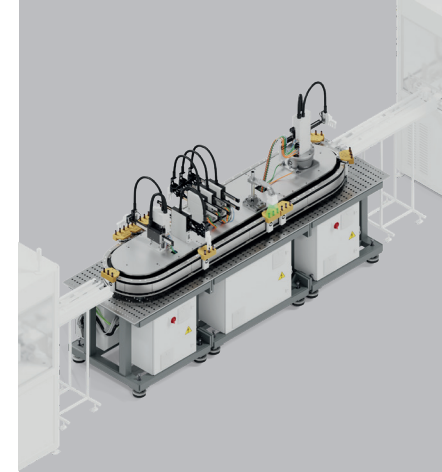
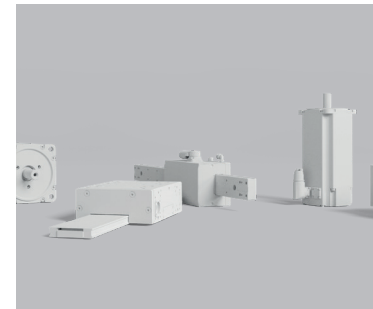
## NESTING

In nesting, the workpiece carrier is only moved slightly forward or backward to position the workpiece for processing in the smallest space with the greatest possible output.



## KOMBINATIONEN

These pre-programmed motion scenarios can be adapted and combined individually to meet the requirements of the application. This makes LS One a system with maximum flexibility that can map different process times in a single system.



**CHANGE IS NOT  
THE QUESTION.  
IT IS THE ANSWER.**  
THE FUTURE IS THIS EASY.

We support you personally or digitally with comprehensive services in order to accelerate your progress. Tools such as design software, configurators and ordering wizards simplify your processes – regardless of which phase you are in, be it product design, procurement or operation.

- ✓ CONSULTING
- ✓ PROCUREMENT
- ✓ DESIGN
- ✓ SIMULATION

Contact us if you would like to learn more about the linear transfer systems from WEISS.



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APPOINTMENT.



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