

# ELECTRIC CHAIN HOISTS ENTERTAINMENT





## Sydney Opera House

**Stephen Batten, CEO, Hasemer Materials Handling.** «The GIS hoist provides the perfect solution for the entertainment industry. Its quiet operation, lightweight size and wide range of options enable us to tailor the hoist to exactly what our customers require. Furthermore, if a customer's solution changes, in many situations the GIS hoist can be modified rather than replaced, increasing the productivity of our customers' fleet of hoists.»

## References

Opera House Sydney, Australia | Entertainment Centre Sydney, Australia | Exhibition Centre, Sydney, Australia | Perth Arena, Australia | Burswood Casino, Perth, Australia | Entertainment Centre, Brisbane, Australia | O2 Arena Berlin, Germany | ISS Dome Düsseldorf, Germany | New Music House, Helsinki, Finland | Exhibition Centre, Helsinki, Finland | YLE TV Broadcast Company, Helsinki and Tampere, Finland | Finnish National Opera House, Helsinki, Finland | Energiehuis, Dordrecht, Holland | Het Rijksmuseum, Amsterdam, Holland | Lindab Arena, Ängelholm, Sweden | Małopolski Ogród Sztuk, Cracow, Poland | Baltic Philharmonic, Danzig, Poland | O2 Arena Prague, Czech Republic | Schauspielhaus, Zurich, Switzerland | Opernhaus Zurich, Switzerland | Stadttheater Basel, Switzerland | Samsung Hall, Zurich, Switzerland | Stadttheater Basel, Switzerland | Cheongshim World Peace Center, Gyeonggi-do, South Korea | O<sub>2</sub> Arena Prag, Czech Republic | Cardington Studios, Milton Keynes, United Kingdom | Media City TV Studios, Manchester, United Kingdom | Kensington Palace, London, United Kingdom | Royal Opera House, London, United Kingdom | Banc of California Stadium, Los Angeles, USA



# LIGHT AND POWERFUL

Simple and easy to use – reliable and safe in operation – long-lasting and easy to maintain. In theatres, schools, sports centres, event venues, multifunction event venues, arenas, congress centres, TV studios or on concert tours, GIS chain hoists are in use worldwide. Developed and manufactured in Switzerland – for the world market.

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GIS Entertainment Electric Chain Hoists – safe in all weather

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# LP



## Reliable and long-lasting

- 3 year warranty
- Made in Switzerland
- Self-contained gearbox with permanent lubrication
- Reliable spring-loaded DC brake
- High safety in operation
- No sensitive electronics
- Housing and cover made of aluminum
- Excellent synchronisation of motors
- Corrosion resistant profile steel chain with increased service life
- Dry-running slipping clutch
- Load hook with dampening system
- TÜV certified

## Easy to operate

- Low dead weight from 12 kg
- Modular in design
- Use as stationary or climbing hoist without modification
- Geared limit switch with high positioning accuracy
- Quiet running with 3-step drive and helical gearing
- Protection class IP65 for outdoor use
- Liquid drain as standard
- Load hook rotates through 360°
- No special tools for maintenance needed
- Easy to maintain, wearing parts can be changed easily and quickly

## Customer specific

- Three- or single-phase power
- Direct or contactor control
- Worldwide operating and control voltages
- Special controls
- Special speeds
- Eyebolt or hook suspension
- Lifting heights up to 200m
- Hook path with upper and lower end position individually adjustable
- Load and path measurement
- Push trolleys and motorised trolleys
- Wide range of accessories and options (see pages 12 / 13)

## YOUR BENEFITS

With a weight of only 12 kg and a lifting capacity of 250 kg and 23 kg lifting 500 kg, the LPM250 and the LP500 are the lowest-weight among the D8 Plus motors in the entertainment industry. Through the modular design and compact construction, both motors are very handy and perfectly suited for mobile applications. They can be used flexibly without modification as stationary or climbing hoists.





## Light

LPM250, the smallest chain hoist of the LP-family, weighing only 12 kg, lifts up to 250 kg as a D8 Plus motor. LP500 D8 Plus, weighing only 23 kg, lifts 500 kg. The LP motors are modular in design and is even with a second brake compact in construction. Thus, they can be transported in flight cases for mobile use, saving space and costs.

## Quiet

All LP motors are equipped with a 3-stage self-contained gear. The helical gearing with geometric optimisation and the chain wheel with minimum 5 pockets ensure extremely quiet running. This allows the quiet handling of loads during events. Thanks to the sound absorption of the transmission the sound pressure level of the LP500 is only 60 dB.

## Powerful

The case hardened and manganese phosphated profile steel chain provides about 15 % more capacity at an identical nominal diameter when compared to the traditional round steel chain. The larger cross-sectional area reduces wear and increases the lifetime of the chain. The load hook with stable, guided hook latch and safety rubber buffer provides maximum safety.

## Weatherproof

A feature of the hoist motor is the protection class IP65. It is dust proof and protected against water jets. The LP is perfectly suitable for outside use, even under the most arduous conditions. On open-air events or on concert tours, the rigging professional will appreciate the weather resistance and reliability of these electric chain motors.



# HOLDING LOADS ABOVE PEOPLE WITH SECONDARY SAFETY COMPONENT

The D8 motor corresponds to a standard industrial electric chain hoist in accordance with EN14492-2 and IGWV SQP2:2018 with the difference that the D8 motor is usually used without a handheld controller and in mobile event technology climbing on its chain. As an additional securing measure, the installation of a secondary safety component is required to fix the load.

GIS motors in D8 execution are applicable as climbing or stationary hoists without modification up to 3200 kg lifting capacity in single fall operation or 6300 kg in double fall operation. A second, independent brake can be assembled to the hoist in a few simple steps.



## YOUR BENEFITS

The cathodic dip-paint coating (KTL coating) offers good protection against mechanical wear and high UV resistance. Due to this special coating of the housing and protection class IP65, the chain hoists are ideal for mobile and outdoor use. The manganese phosphating of the chain improves its corrosion resistance and dry running properties.





## Standard version

D8 motor in accordance with EN14492-2, SQP2:2018, DIN56950, EN17206

Lifting capacities (chain safety factor minimum 5:1):

1-fall up to 3200 kg

2-fall up to 6300 kg

Standard voltages:

3 × 400V / 50Hz, 3 × 230V / 50Hz

1 × 230V / 50Hz, 1 × 115V / 50Hz

Direct control

1 or 2 lifting speeds

Suitable for frequency inverted operation

Housing and cover made of aluminum

Housing, chain and equipping parts black

Eyebolt or hook suspension

Usable as stationary or climbing hoist

Protection class IP65

Liquid drain for outdoor use

Isolation class F (motor)

DC spring-loaded brake

Slipping clutch not in the flow of forces

Wear plate as additional chain guidance

Load hook with interlocking hook lug, dampening system

Detailed specifications according to technical data sheet

## Accessories and options

42 V low voltage control with geared limit switch

Worldwide operating and control voltages

Second, independent brake

Lifting speeds up to 32 m/min. at 50 Hz

Safety load locking hook

Geared limit switch with two additional emergency stops

Safety radio remote control

Ergonomic control switch on cable

Preparation for encoder on chain wheel or rotor shaft

Incremental encoder for path measurement

Eyebolt or hook suspension for load sensor

Load sensor 0 - 10 V or 4 - 20 mA, mechanical protection

Chain container for various lifting heights

Handles

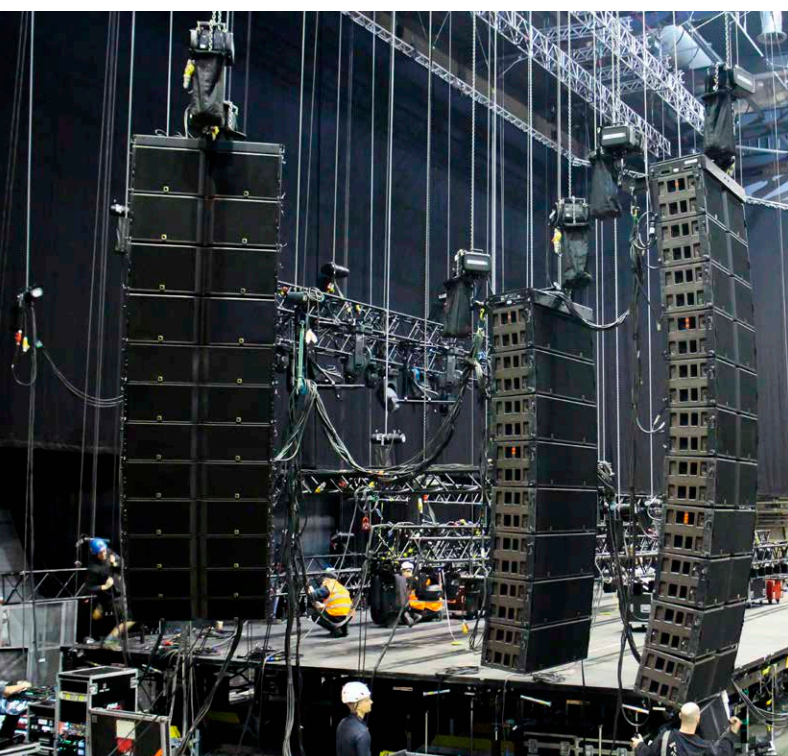
Flight cases

Briefcase controller 2- or 4-ways

Power and control cable with plug

Push and motorised trolleys

See pages 12 / 13 for more accessories and options



# HOLDING LOADS ABOVE PEOPLE WITHOUT SECONDARY SAFETY COMPONENT

The GIS motor in D8 Plus version is an electric chain hoist which is specifically developed, rated and designed for holding loads above people. It is light and compact in design and thus perfectly suited for mobile use. All components which are in the flow of forces are statically dimensioned for the double of the nominal rated capacity.

D8 Plus motors are suitable for climbing and stationary hoists without any modifications. The maximum lifting capacity in single fall execution is 2500 kg at a chain safety factor of minimum 8:1 in accordance with EN14492-2, IGWV SQP2:2018 and EN17206.



## YOUR BENEFITS

The load is secured by two independent DC-spring loaded brakes. The GIS motor is designed as standard for mounting a second brake without the need for a housing extension. The second brake can be assembled on the existing shaft in just a few simple steps. This concept means that the motor is light and compact.







## Standard version

D8 Plus motor in accordance with EN14492-2, SQP2:2018, DIN56950, EN17206

Lifting capacities (chain safety factor minimum 8:1):

1-fall up to 2500 kg

2-fall up to 3200 kg

Standard voltages:

3 × 400V / 50Hz, 3 × 230V / 50Hz

1 × 230V / 50Hz, 1 × 115V / 50Hz

Direct control

1 or 2 lifting speeds

Suitable for frequency inverted operation

Housing and cover made of aluminum

Housing, chain and equipping parts black

Eyebolt or hook suspension

Usable as stationary or climbing hoist

Protection class IP65

Liquid drain for outdoor use

Isolation class F (motor)

Two independent DC spring-loaded brakes

Slipping clutch not in the flow of forces

Wear plate as additional chain guidance

Load hook with interlocking hook lug, dampening system

Detailed specifications according to technical data sheet

## Accessories and options

42 V low voltage control with geared limit switch

Worldwide operating and control voltages

Lifting speeds up to 32 m/min. at 50 Hz

Safety load locking hook

Geared limit switch with two additional emergency stops

Safety radio remote control

Ergonomic control switch on cable

Preparation for encoder on chain wheel or rotor shaft

Incremental encoder for path measurement

Eyebolt or hook suspension for load sensor

Load sensor 0 - 10 V or 4 - 20 mA, mechanical protection

Chain container for various lifting heights

Handles

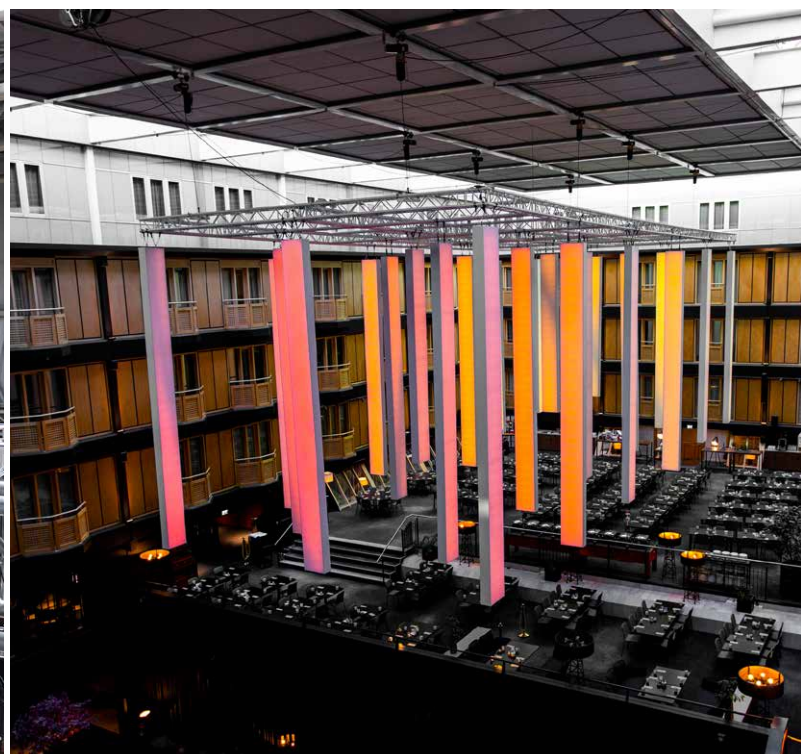
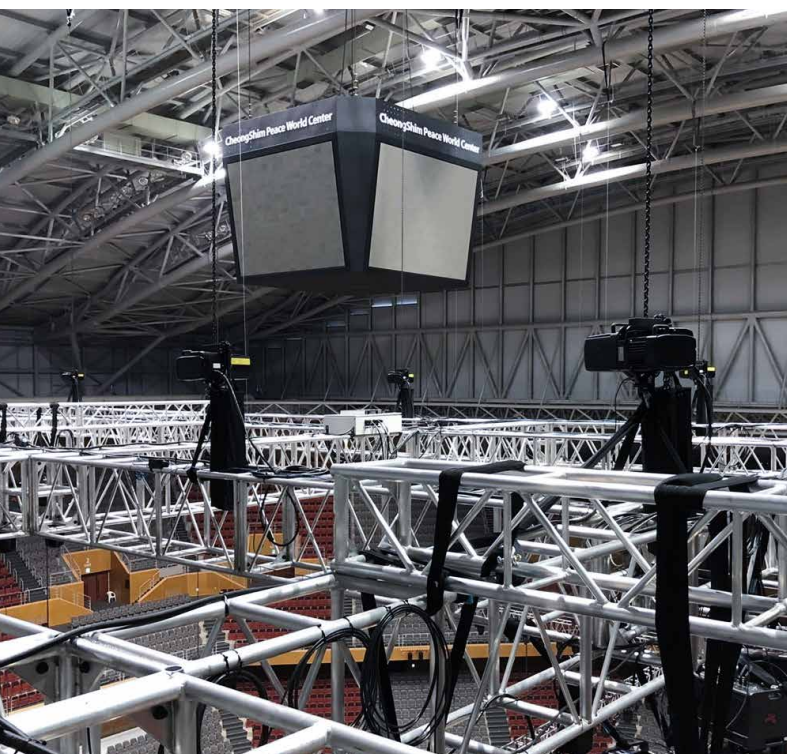
Flight cases

Briefcase controller 2- or 4-ways

Power and control cable with plug

Push and motorised trolleys

See pages 12 / 13 for more accessories and options



# HOLDING AND MOVING LOADS ABOVE PEOPLE

The GIS motor in C1 version is an electric chain hoist which is specifically developed, rated and designed for holding and moving loads above people. It is light and compact in design and thus perfectly suited for mobile use and responds to the requirements in accordance with EN14492-2, IGWV SQP2:2018 and EN17206.

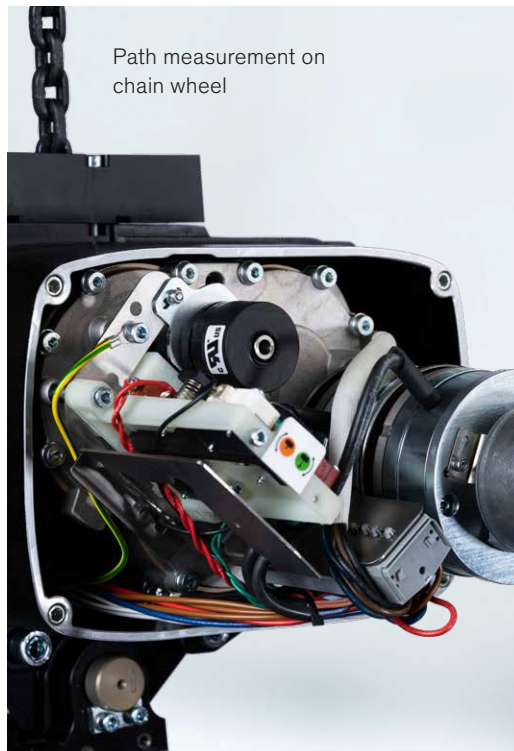
Due to the modular design of the GIS chain hoist, the path and load measurement can be implemented in a simple way. Encoders for path measurement can be mounted on the chain wheel or on the rotor shaft. Due to the high power reserve of the motors, the chain hoists have an excellent synchronisation during group movements. GIS motors in C1 version also cover high lifting speeds up to 32 m/min. (50 Hz).



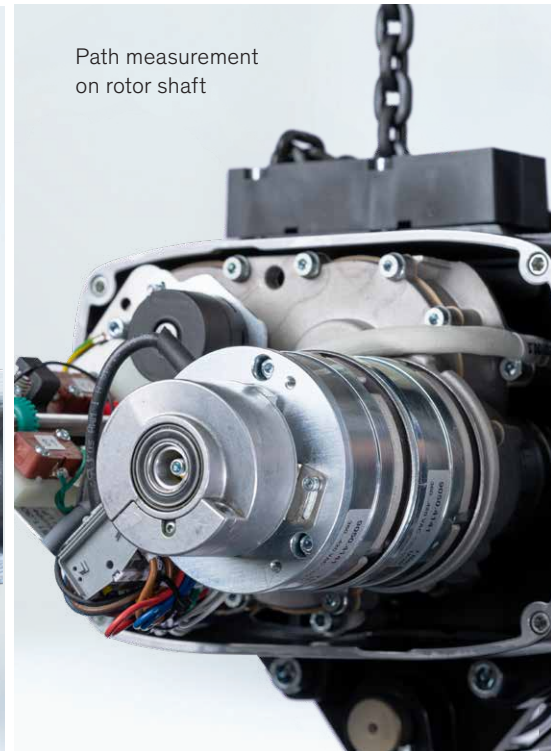
## YOUR BENEFITS

For both path and load measurement, additional components and electrical parts can be easily integrated in the chain hoist. On the drive shaft and / or the chain wheel, the installation of incremental or absolute encoders is prepared for path measurement. Special eyebolt and hook suspensions allow easy installation of a load measuring pin for load measurement. Our partners who develop and supply the control for multiple hoists value this highly.

Path measurement on chain wheel



Path measurement on rotor shaft





## Standard version

C1 motor in accordance with EN14492-2, SQP2:2018, DIN56950, EN17206

Lifting capacities (chain safety factor minimum 10:1):  
1-fall up to 2000 kg

Standard voltages:  
3 × 400V/50Hz, 3 × 230V/50Hz

Interface for control system provided by the customer

1 or 2 lifting speeds

Suitable for frequency inverted operation

Housing, chain and equipping parts black

Load measurement: eyebolt or hook suspension  
with load sensor, output signal 0 - 10 V

Path measurement with incremental encoder on chain wheel

Protection class IP65

Isolation class F (motor)

Two independent DC spring-loaded brakes

Slipping clutch not in the flow of forces

Geared limit switch with two additional emergency stops

Wear plate as additional chain guidance

Detailed specifications according to technical data sheet

## Accessories and options

Worldwide operating and control voltages

Lifting speeds up to 32 m/min. at 50 Hz

Load sensor: output signal 4 - 20 mA

Mechanical protection for load sensor

Preparation for path measurement with absolute encoder on chain wheel (without encoder)

Preparation for path measurement with incremental or absolute encoder on rotor shaft (without encoder)

Safety load locking hook

Temperature monitoring

Brake surveillance independent for first and second brake

Additional rectifier

Chain container for various lifting heights

Handles

Customised adjustments for cable connections

Flight cases

Push and motorised trolleys

See pages 12 / 13 for more accessories and options

Load measurement with  
eyebolt suspension



Load measurement with  
hook suspension



Mechanical protection for  
load sensor



# ACCESSORIES & OPTIONS

## Second brake

Each D8 chain hoist can be optionally equipped with a second, independent brake. In a few simple steps, it is mounted on the existing drive shaft just behind the first brake. It is optionally available with brake surveillance.



## Safety load locking hook

The mechanical interlocking of the hook lug of the 360° rotatable and 180° swivelling safety load locking hook secures the transported goods. The load hook closes automatically under load and must be manually unlocked for opening.



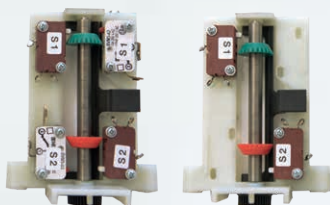
## Handles

As a climbing hoist, the electric chain hoist can be lifted out of the transport packaging with its own chain. If the rigger has no electricity available on site, the chain hoist can be lifted using comfortable handles.



## Geared limit switch

With the integrated geared limit switch the upper and lower end position of the load hook can be set easily and precisely. To increase safety, two additional emergency stop contacts are available.



## Safety radio remote control

The 295 gram lightweight, very rugged handheld transmitter is powered by a rechargeable lithium ion battery and has a protection class of IP66. The receiver which is integrated in a stable housing has a protection class of IP65. With its certified STOP function the receiver meets the requirements of SIL 3 Performance Level PL e.



## Textile chain container

The textile chain containers are hard-wearing and flame retardant. They are suitable for universal use in the entertainment industry. The chain hoist can be operated stationary or as a climbing hoist without any conversion work.





## Push trolleys

GIS push trolleys are simple to set up and enable the manual shifting of loads up to 6300 kg on steel beams. The flange width is infinitely variable due to a new adjusting system and can be fixed easily using the interlocking function.

## Motorised trolleys

GIS motorised trolleys offer one or two travel speeds. The standard integrated fall and climbing protection made of solid cast steel offers maximum safety. The flange width can be infinitely varied in the same way as with the push trolleys.

## Manual chain hoist

The manual chain hoist is characterised by a compact design and easy handling. It offers excellent corrosion protection and is equipped with an overload protection as standard from 500 kg.



## Flight cases

Four of the 12 kg LPM250 motors can be stored in a space saving and solid transport box for transporting safely. For the larger model LP500, a flight case for two motors is available.

## Cable

The connection, control and extension cables are sturdy and yet flexible so that the rigging professional can connect the motors in a quick and easy manner. All cables have CEE plug connections and are suitable for operating temperatures from -25 °C to + 55 °C.

## Briefcase controller

The 2 or 4 channel controllers in a light plastic briefcase enable the simultaneous controlling of 2 or 4 motors. The briefcase controllers are available for direct or low-voltage controlled motors, on request with connection and control cables.



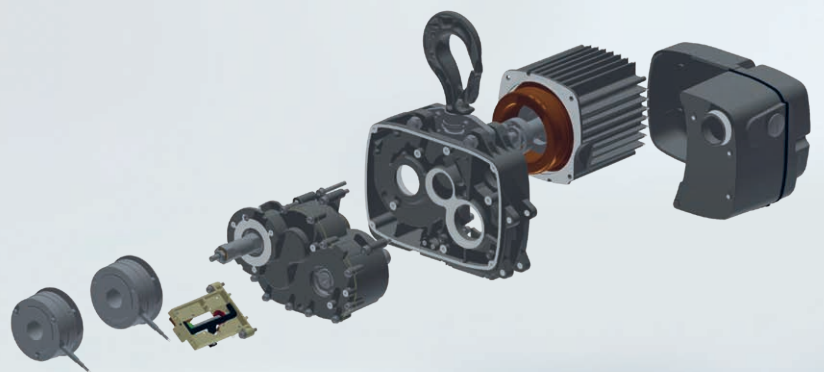
# SERVICE & MAINTENANCE

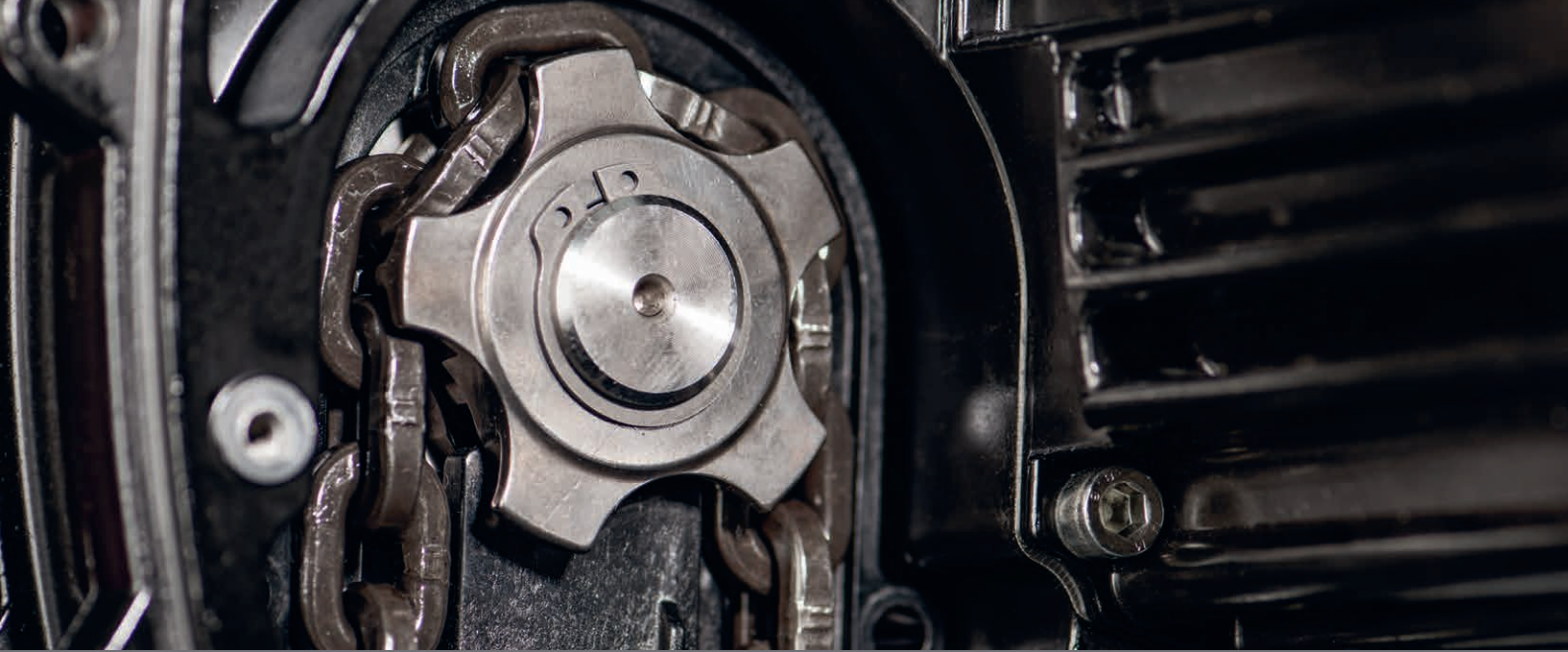


The LP is simple in construction and is distinguished by low weight and a high lifting capacity. It is designed to be low in wear and tear and has a long service life. Repair and maintenance work can be done quickly and efficiently. The easy accessibility of parts and ease of maintenance make the electric chain hoist economical to maintain. The LP series has a 3 year warranty.

## YOUR BENEFITS

The LP series has an overall modular structure. Wearing parts, such as the two-part wear plate, are replaced in a simple manner. The electric chain hoist can be quickly disassembled and reassembled thanks to the polygonal connections. This saves time and costs, which both service technicians as well as the customers appreciate. Our certified partners acquire their expertise during a qualified service training in our premises.





### Polygonal connection

The inner part of the modularly designed chain hoist embodies real innovation. All shaft-hub connections are built to a polygonal design. This allows significantly faster disassembly and assembly during maintenance. The service cost can be considerably reduced due to time savings.

### Chain guidance

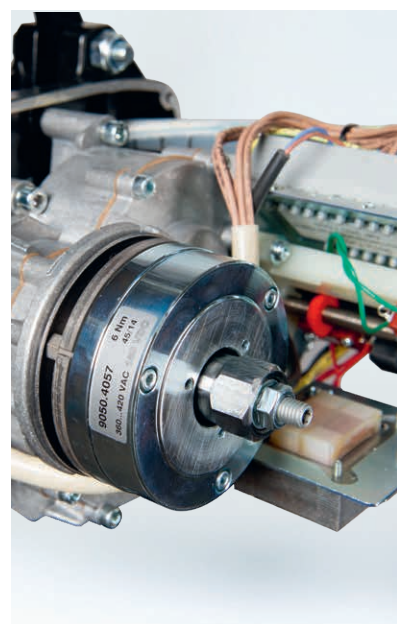
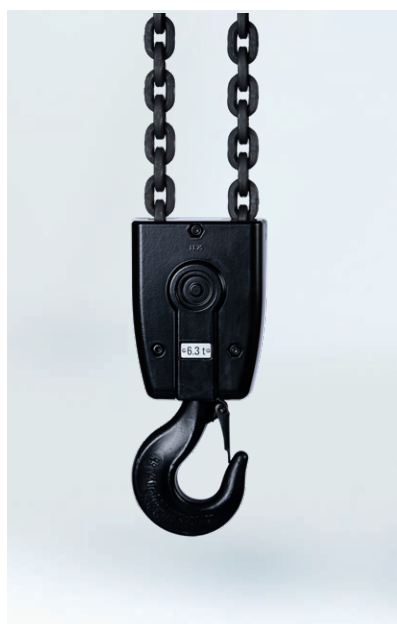
When used as a climbing hoist, the two-part wear plate is used as an additional chain guidance which allows the chain to run smoothly into the hoist and out of it. This even works if the chain gets entangled, for example when pulling the chain into a transport case. Wear plate, chain and chain guidance are wearing parts, which have to be regularly checked and replaced if necessary.

### Spare parts

The modular design of the electric chain hoist and the accessibility of the components means that wearing parts can quickly and easily be removed and replaced. This requires no special tools. We guarantee our customers rapid availability of spare parts through our worldwide distribution partners.

### Brake

The DC spring-loaded brake allows safe braking of the load with optimum braking efficiency. The second brake can be mounted on the existing shaft and independently monitored. This proven brake system is highly reliable and easy to maintain.





### LPM250 - the lightweight

With a weight of only 12 kg and a lifting capacity of 250 kg, the LPM250 in D8 Plus version is the light-weight among the motors in the entertainment industry. It is usable as climbing or stationary hoist without modification and perfectly suited for mobile outdoor use due to its protection class IP65. Four LPM250 fit perfectly into the compact flight case.

### LP500 - the versatile

The LP500 was developed as a D8 Plus motor for a lifting capacity of 500 kg. The dead weight is only 23 kg and even with a lifting height of 18 m the overall weight remains less than 40 kg. We offer the LP500 in the versions D8, D8 Plus, C1 or customised and with a large variety of accessories and options. Two LP500 fit into the flight case.

### LP2500 - the powerful

The heavy worker among the GIS motors lifts a remarkable 2500 kg as a D8 Plus chain hoist in single fall operation. The maximum lifting capacities in D8 version are 3200 kg (1 fall) respectively 6300 kg (2 falls). For scenic applications, the LP2500 is available as a C1 motor with a maximum lifting capacity of 2000 kg.

**GIS AG – the specialist for electric chain hoists and crane systems** Founded in 1957 | With own subsidiary in Germany and England | Development and production of electric chain hoists in Switzerland for over 55 years | Certified to ISO 9001 since 1994 | International sales network with over 30 qualified partners worldwide

