



swiss lifting solutions

TRANSLATION OF THE ORIGINAL INSTRUCTION MANUAL ELECTRIC CHAIN HOIST TYPE LPM

The LPM (D8 / D8 Plus) operating instructions are based on the operating instructions for the GPM models (9500.9000.1). This supplement is a constituent of the operating instructions. Only chapters that have been added to or corrected are included.



www.gis-ag.ch

03.19 Translation 9500.9001.1

Table of contents

0	General instructions	4
0.4	Instructions for hazard protection	4
0.4.3	Sound pressure level	4
0.5	Technical status	4
0.6	Intended use	4
1	Description	5
1.2	General description.....	5
2	Start-up.....	5
2.1	Transport and assembling.....	5
2.2	Connecting.....	5
2.2.1	Electrical connection	5
3	Care and maintenance	5
3.3	Ordering spare parts	5
5	Appendix	6
5.1	Technical data	6
5.2	Electrical parameters	7
5.3	EC Declaration of conformity.....	8
5.4	EC Declaration of incorporation.....	9
5.5	Notes	10

0 General instructions

0.4 Instructions for hazard protection

0.4.3 Sound pressure level

Tests on the chain hoist sound level are performed at a range of 1, 2, 4, 8 and 16 metres from the centre of the chain hoist motor to the measuring device. Measurement of SPL according to DIN 45 635.

The SPL was measured:

- a) During operation of electric chain hoists on factory site.
- b) During open-air operation of electric chain hoists.

Table 0-1 Sound level

Measuring distance		1 m	2 m	4 m	8 m	16 m
Types	Measurement type	dBA				
LPM 250	a	65	62	59	56	53
	b	65	59	53	47	41



NOTE

When working in a noisy environment an appropriate ear protection is recommended.

0.5 Technical status

The LPM models are designed with a shock factor of 1.4 in operation, in accordance with DIN EN 818-7. Incidents investigated by the Employers Liability Insurance Association generate lower shock factors than those occurring in normal operation.

0.6 Intended use

The LPM series of electric chain hoists are intended for use in setting up events. Events include such items as concerts, shows, conferences, meetings, exhibitions, presentations, demonstrations, film or television shoots and similar. The location of such events include, amongst other places, theatres, multipurpose halls, studios, film sets, television and radio broadcasting, concert halls, conference centres, schools, exhibitions, fairs, museums, discotheques, vaudeville, recreational parks, sports facilities, open air theatres and meetings.

This standard differentiates between three types of electric chain hoists:

D8 Hoist

Electric chain hoist according to BGV D8/GUV-V D8 "Winches, lifting and pulling devices" for use as a chain hoist for lifting loads in construction.

D8 Plus Hoist

Electric chain hoist based on BGV D8/GUV-V D8 "Winches, lifting and pulling devices" for use as a chain hoist for lifting loads in construction with the special characteristic of being able to hold loads statically above personnel, without the use of secondary safety devices.

C1 Hoist (scenery hoist)

Electric chain hoist according to BGV C1/GUV-V C1 "Staging and production facilities for the entertainment industry" for holding and moving loads above personnel.

The types of electric chain hoists specified above can be operated both individually and in groups.

Electric chain hoists are offered in a multiplicity of designs and feature options, as well as with different safety devices. This means that the choice of chain hoist is extremely important. Here consideration must be given to risks arising from the nature of the operational use and the specific operating conditions.

The choice of the type of electric chain hoist depends on the operating conditions:

Table 0-2 Operating conditions

In the presence of persons under the load				
Use	D8	D8 with secondary safety device	D8 Plus	C1
Assembly and dismantling, set up mode	inadmissible	inadmissible	inadmissible	permissible
Holding loads	inadmissible	permissible	permissible	permissible
Scenic movement	inadmissible	inadmissible	inadmissible	permissible

Where equipment is permanently installed in locations where events take place, electric chain hoists according to BGV C1/GUV-V C1 should be provided, on account of the mode of operation and the anticipated risks.

Excessive inching operations, ground mooring and driving against the limit stops should be avoided. The manufacturer accepts no responsibility for damage to equipment and third parties ensuing from such action.

1 Description

The LPM series comprises the following models: D8, D8 Plus.

1.2 General description

When the equipment is commissioned, and periodically thereafter, the functionality of both brakes must be examined. The periodic examination should be carried out by competent personnel annually and by an expert every four years.

The verifiability of the individual brakes is to be provided by a control engineer. A sample control scheme for a D8 Plus electric chain hoist can be obtained from GIS.

2 Start-up

2.1 Transport and assembling

Check the identification plate as to whether the electric chain hoist corresponds to the type ordered (D8 / D8 Plus).

The electric chain hoist must display the following markings:

Electric chain hoist D8 : Triangle

Electric chain hoist D8 Plus : Square

2.2 Connecting

2.2.1 Electrical connection

The appropriate electrical diagram can be found in the cover of the electric chain hoist. In the case of the D8 Plus electric chain hoists, once the device is in position the power must be disconnected using a lockable switch.

The principles according to BGG 912/GUV-G 912 are to be applied. A test log is to be created, consisting of the installation documentation from the manufacturer and the test records. Plans and descriptions for electrical installation are specific projects complemented by the appropriate control engineer.

3 Care and maintenance

3.3 Ordering spare parts

The appropriate assembly diagram is considered to be a supplement to the parts catalogue.

5 Appendix

5.1 Technical data

Table 5-1 Technical data LPM D8

ISO (FEM) classification		M5 (2m) 240 s/h, 40% duty				M6 (3m) 300 s/h, 50% duty				M6 (3m) 300 s/h, 50% duty				Lifting speed 50 Hz	Lifting speed 60 Hz	Motor type	No. of chain falls	Mains fuse (delayed)
Types	Dead weight	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist					
LPM 250/1NL.D8	12	250	238	250	8.0	200	188	200	10.0	160	148	160	12.5	4	4.8	71 A 4	1	6
LPM 250/1SL.D8	12	125	113	125	8.0	100	88	100	10.0	80	68	80	12.5	8	9.6	71 A 4	1	6

Table 5-2 Technical data LPM D8

ISO (FEM) classification		M5 (2m) 240 s/h, 40% duty				M6 (3m) 300 s/h, 50% duty				M6 (3m) 300 s/h, 50% duty				Lifting speed 50 Hz	Lifting speed 60 Hz	Motor type	No. of chain falls	Mains fuse (delayed)
Types	Dead weight	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist					
LPM 250/1NL.D8	12	125	113	125	16.0	100	88	100	20.0	-	-	-	-	4	4.8	71 A 4	1	6

Table 5-3 Technical data LPM D8 Plus

ISO (FEM) classification		M5 (2m) 240 s/h, 40% duty				M6 (3m) 300 s/h, 50% duty				M6 (3m) 300 s/h, 50% duty				Lifting speed 50 Hz	Lifting speed 60 Hz	Motor type	No. of chain falls	Mains fuse (delayed)
Types	Dead weight	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist					
LPM 250/1NL.D8 Plus	13	250	237	250	8.0	200	187	200	10.0	160	147	160	12.5	4	4.8	71 A 4	1	6
LPM 250/1SL.D8 Plus	13	125	112	125	8.0	100	87	100	10.0	80	67	80	12.5	8	9.6	71 A 4	1	6

Table 5-4 Technical data LPM D8 Plus

ISO (FEM) classification		M5 (2m) 240 s/h, 40% duty				M6 (3m) 300 s/h, 50% duty				M6 (3m) 300 s/h, 50% duty				Lifting speed 50 Hz	Lifting speed 60 Hz	Motor type	No. of chain falls	Mains fuse (delayed)
Types	Dead weight	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist	Capacity normal hoist	Capacity climbing hoist	Total capa- city clim- bing hoist	Chain secu- rity normal/ climbing hoist					
LPM 250/1NL.D8 Plus	13	125	112	125	16.0	100	87	100	20.0	-	-	-	-	4	4.8	71 A 4	1	6

5.2 Electrical parameters

Table 5-5 Electrical parameters LPM

Types	Motor type	No. of poles	P _N [kW]	n _N [1/min]	min. / max. currents and start-up current														
					3 x 400 V, 50 Hz					3 x 230 V, 50 Hz									
					I _{N 380} [A]	I _{N 415} [A]	I _{max.} [A]	I _Δ /I _{N 415}	cos phi _N	I _{N 220} [A]	I _{N 240} [A]	I _{max.} [A]	I _Δ /I _{N 240}	cos phi _N					
LPM 250	71 A 4	4	0.25	1385	1.6	2.0	2.6	1.65	0.55	2.8	3.4	4.4	1.65	0.55					

Table 5-6 Electrical parameters LPM

Types	Motor type	No. of poles	P _N [kW]	n _N [1/min]	min. / max. currents and start-up current														
					3 x 460 V, 60 Hz					3 x 380 V, 60 Hz					3 x 208-230/460 V, 60Hz				
					I _{N 460} [A]	I _{N 480} [A]	I _{max.} [A]	I _Δ /I _{N 480}	cos phi _N	I _{N 380} [A]		I _{max.} [A]	I _Δ /I _{N 380}	cos phi _N	I _{N 208} [A]	I _{N 460} [A]	I _{max.} [A]	I _Δ /I _{N 460}	cos phi _N
LPM 250	71 A 4	4	0.30	1685	1.6	1.8	2.2	1.65	0.54	1.8		2.4	1.65	0.54	2.1	1.2	2.6	1.65	0.54

5.3 EC Declaration of conformity

Declaration for a machinery according to the EU directives 2006/42/EC, Annex II A, 2014/30/EU, Annex I and 2014/35/EU, Annex III



Hereby we,

GIS AG, Swiss Lifting Solutions, Luzernerstrasse 50, CH-6247 Schötz

declare that the machinery

**GIS electric chain hoist, series
with a load capacity of
serial number range**

**LPM
100 kg to 250 kg
1000001 to 2000000**

developed for lifting and lowering loads, is, in standard production and from the 2014 model year, inclusive of load control, meets the essential requirements of the following EC directives, as applicable to the scope of the delivery:

EC Machinery Directive	2006/42/EC
EC Directive on Electromagnetic Compatibility	2014/30/EU
EC Low Voltage Directive	2014/35/EU

Harmonized standards applied:

ISO 2374	Lifting appliances; Range of maximum capacities for basic models
DIN EN 818-7	Short link chain for lifting purposes; Part 7: Grade T
DIN EN ISO 13849-1	Safety-related parts of control systems; Part 1: General principles for design
DIN EN 14492-2	Cranes, power driven winches and hoists; Part 2: Power driven hoists
DIN EN 60204-32	Electrical equipment of machines; Part 32: Requirements for hoisting machines

Standards and technical specifications applied:

FEM 9.751	Power driven lifting device series; safety
FEM 9.755	Measure for achieving safe working periods
DIN 56950	Event technology
IGVV SQ P2	Standards for event technology

Authorized to compile relevant technical documentation:
GIS AG, Luzernerstrasse 50, CH-6247 Schötz

Schötz, 01.01.2017

GIS AG

I. Muri
Director

E. Widmer
Sales Manager

The completion, installation and start-up as per instruction manual is documented in the inspection pass.

5.4 EC Declaration of incorporation

Declaration for the incorporation of a partly completed machinery according to the EU directives 2006/42/EC, Annex II B, 2014/30/EU, Annex I and 2014/35/EU, Annex III



Hereby we,

GIS AG, Swiss Lifting Solutions, Luzernerstrasse 50, CH-6247 Schötz

declare that the partly completed machinery

GIS electric chain hoist, series with a load capacity of serial number range	LPM 100 kg to 250 kg 1000001 to 2000000
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developed for lifting and lowering loads, is, in standard production and from the 2014 model year, inclusive of load control, intended for installation in machinery and meets the essential requirements of the following EC directives, as applicable to the scope of the delivery:

EC Machinery Directive	2006/42/EC
EC Directive on Electromagnetic Compatibility	2014/30/EU
EC Low Voltage Directive	2014/35/EU

We also declare that the technical documentation has been compiled in accordance with Annex VII, Part B of Directive 2006/42/EC. We undertake to submit the specific documents relating to the lifting device to national authorities on receipt of a reasonable request. The information will be supplied by electronic means.

Harmonized standards applied:

ISO 2374	Lifting appliances; Range of maximum capacities for basic models
DIN EN 818-7	Short link chain for lifting purposes; Part 7: Grade T
DIN EN ISO 13849-1	Safety-related parts of control systems; Part 1: General principles for design
DIN EN 14492-2	Cranes, power driven winches and hoists; Part 2: Power driven hoists
DIN EN 60204-32	Electrical equipment of machines; Part 32: Requirements for hoisting machines

Standards and technical specifications applied:

FEM 9.751	Power driven lifting device series; safety
FEM 9.755	Measure for achieving safe working periods
DIN 56950	Event technology
IGVV SQ P2	Standards for event technology

This declaration only refers to the lifting device. A start-up is prohibited until it has been proven that the entire system where the lifting device is built in corresponds with the above EC Directives.

Authorized to compile relevant technical documentation:
GIS AG, Luzernerstrasse 50, CH-6247 Schötz

Schötz, 01.01.2017

GIS AG

I. Muri
Director

E. Widmer
Sales Manager

The completion, installation and start-up as per instruction manual is documented in the inspection pass.

