LX CHAIN HOIST

POWER AND DURABILITY

www.streetcrane.co.uk

Street

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MADE IN ENGLAND

"PERFORMANCE THROUGH EVOLUTION AND INNOVATION"

"To achieve the highest possible levels of per formance and reliability it is necessary to continuously learn from experience...

...invest in R&D and pay attention to even the smallest possibility for improvement. Only then can new bench marks for efficient performance and operating reliability be set. Only then can a technology be said to be truly proven."

LX CHAIN HOIST : power and durability

Most of our lifting and transportation solutions for light loads are powered by the Street LX electric chain hoist which provides precision lifting and durability at surprisingly attractive prices.
The LX hoist is designed to meet the need for ultra efficient lifting and material handling in today's competitive world.

This new generation hoisting technology is based on a highly modular and versatile concept with a huge number of hoist and trolley constructions.

The LX range is available in capacities from 125kg up to 5 tonne in almost every world supply voltage with single and dual speed options. Hoists are available in standard headroom construction or low headroom with chain diverter. LX hoists are designed for applications with eye suspension or powered, push, or hand geared trolley. All capacities are available at M5 (FEM 2m) with a wide variety of hoist speeds. All standard models are manufactured with rated capacities in metric tonnes or U.S. tons.

"A hoist for tomorrow's world in which, only the most produtive will prosper."

Street

Hoist motor

- Powerful 3 phase motor
- Improved ventilation to protect against overheating
- Single or dual speed
- Class ˝F˝ insulation
- I.P 54 or I.P 55 protection (depending on model).
- 50 or 60 Hz solutions
- Available in almost every world supply voltage

Hoist brake

- Heavy duty long life hoist disc brake
- Low maintenance
- High efficiency
- Asbestos free linings
- Easy adjustment

CNC Manchinened Hoist Gearbox

- High performance low noise
- Hardened and heat treated gears
- Compact design
- Operates efficiently from -20 to +50°C (-4 to 122°F)

Overload protection/hoist and lower limit switches

- Friction type torque limiting slipping clutch
- Prevents over hoisting and over lowering
- Easy adjustment
- Prevents operator overloading the hoist
- Effective protection of the hoist motor

Durable chain, drive sprocket and guide

- High accuracy CNC machined drive sprocket
- Geometrically precise chain
- High tensile zinc coated
- High resistance to wear and corrosion
- Precision calibrated chain guide

Chain collection

- Compact durable chain collection container
- Various sizes depending on chain length

LX HOIST

LX CHAIN HOIST :
impressive range of standard safety and operating features plus optional equipment.

Solo or integrated, pendant or remote control

- Standard 48 Volt push-button pendant for solo hoists
- Solo radio remote control
- Integrated pendant or remote radio for bridge crane and jib solutions

Optional equipment and specifications

- Quick release electrics with plug and sockets for crane applications
- Trolley limit switch
- I.P 55 and I.P 65 electrical enclosures
- Upper and lower limit switches (standard on all LX3 models)
- Single phase 230v and 110v solutions.
- Inverter on trolley motion

LX series chain hoists

capacities up to 5 tonnes

LX EYE SUPENSION HOIST

LX STANDARD HEADROOM HOIST WITH PUSH TROLLEY

LX STANDARD HEADROOM HOIST WITH POWERED TROLLEY

Standard or low headroom construction

The Street LX chain hoist is one of the most comprehensive ranges of electric chain hoist in the market with global distribution. All models and capacities are available in standard headroom construction with a range of adjustable powered or push trolleys. These are designed for monorail or single beam applications such as bridge cranes or jib cranes but twin beam solutions are also possible. Additionally eye suspension models for stationary hoist applications or applications with suspension trolley such as light crane and profile track systems are included in the range.

Standard headroom and eye suspension models optimise side hook approaches but for those applications where upper hook position is critical in a restricted roof height the Street low headroom hoist with chain diverter trolley provides an unbeatable compact solution.

LX LOW HEADROOM HOIST WITH POWER TROLLEY

Finish

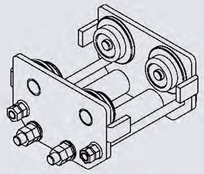
- Durable polyurethane powder coating

Lifting hook

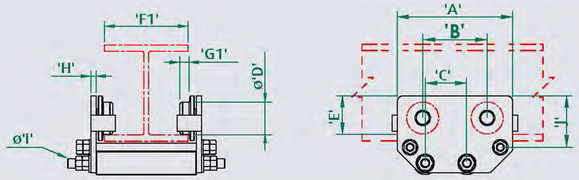
- DIN standard hook with safety catch Spring loaded safety catch fitted as standard

LX CHAIN HOIST DIMENSIONS

- **MODEL : LX011 PLAIN TROLLEY**
  Capacity : 0.125 Tons
  : 0.250 Tons
  : 0.500 Tons
  : 1 Tons

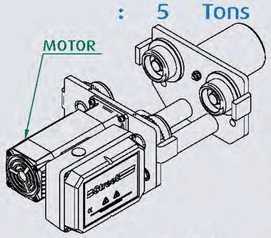


PLAIN TROLLEY

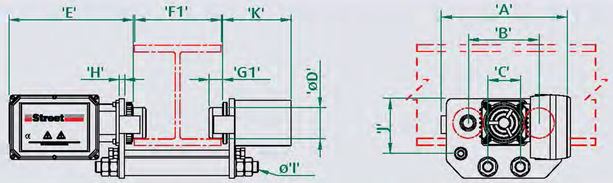


Steet Crane Model	Capacity kg.	A mm	B mm	C mm	D mm	E mm	F1 min mm	F1 max mm	G1 mm	H mm	I mm	Wheel Ø	Weight kg.
LX011.125.PUSH TROLLEY	0.125	180	100	65	50	60	46	200	15	8	14	50	33
LX011.250.PUSH TROLLEY	0.250	180	100	65	50	60	46	200	15	8	14	50	33
LX011.500.PUSH TROLLEY	0.500	172	100	65	50	60	46	200	15	8	14	50	41
LX011.1000.PUSH TROLLEY	1000	260	162	73	70	90	73	200	29	12	18	70	57

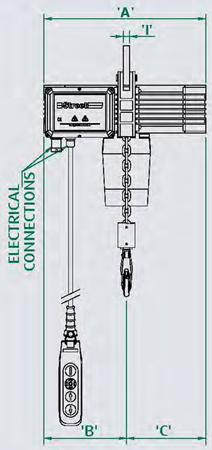
- **MODEL : LX011, 031, 032 MOTOR TROLLEY**
  Capacity : 0.125 Tons
  : 0.250 Tons
  : 0.500 Tons
  : 1 Tons
  : 2 Tons
  : 3.2 Tons
  : 5 Tons

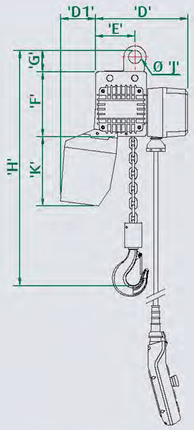


MOTOR TROLLEY

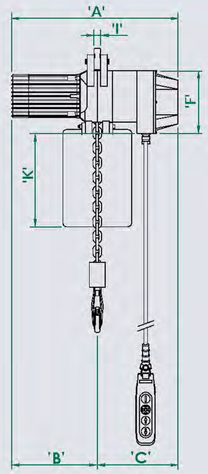


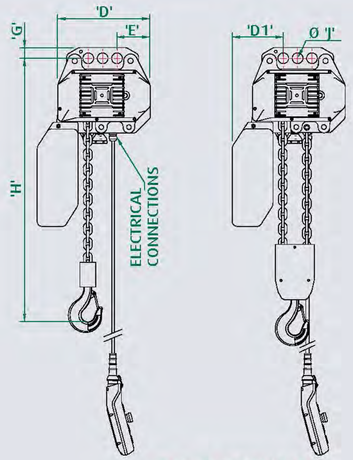
Steet Crane Model	Capacity kg.	A mm	B mm	C mm	D mm	E mm	F1 min mm	F1 max mm	G1 mm	H mm	I mm	J mm	Wheel Ø	Weight kg.
LX011.125.MOTOR TROLLEY	0.125	289	158	65	65	279	64	200	24	12	14	-	65	57
LX011.250.MOTOR TROLLEY	0.250	289	158	65	65	279	64	200	24	12	14	-	65	57
LX011.500.MOTOR TROLLEY	0.500	289	158	65	65	279	64	200	24	12	14	-	65	65
LX011.1000.MOTOR TROLLEY	1000	260	162	73	70	280	73	200	30	12	18	-	70	74
LX031.2000.MOTOR TROLLEY	2000	260	162	73	70	282	200	300	30	12	14	154	70	115
LX032.3200.MOTOR TROLLEY	3200	320	176	108	80	313	200	300	34	14	14	165	80	140
LX032.5000.MOTOR TROLLEY	5000	320	176	108	80	318	200	300	34	14	14	165	80	158





EYE SUSPENSION





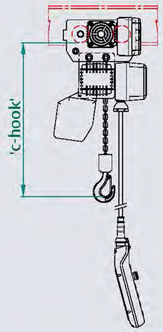
EYE SUSPENSION

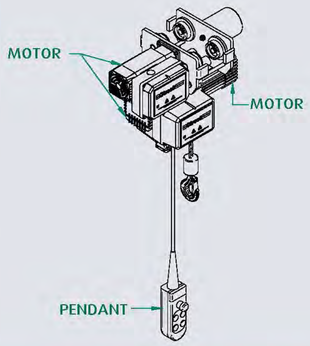
EYE SUSPENSION

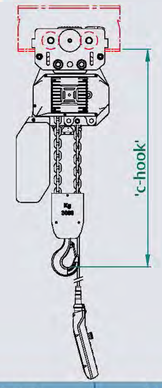
- **MODEL : LX011 EYE SUSPENSION**
  Capacity : 0.125 Tons
  : 1 Tons
- **MODEL : LX031, 032 EYE SUSPENSION**
  Capacity : 2 Tons
  : 3.2 Tons
  : 5 Tons

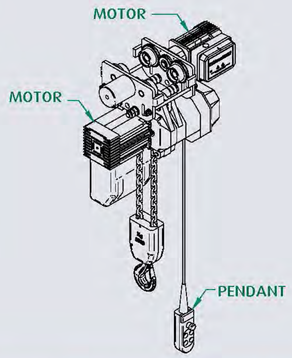
Steet Crane Model	Capacity kg.	A mm	B mm	C mm	D mm	D1 mm	E mm	F mm	G mm	H mm	I mm	J mm	K mm
LX011.125.EYE SUSPENSION	0.125	430	200	152	256	96	104	174	36	355	12	31	164
LX011.250.EYE SUSPENSION	0.250	430	200	152	256	96	104	174	36	355	12	31	164
LX011.500.EYE SUSPENSION	0.500	459	255	159	263	96	104	184	36	380	12	31	182
LX011.1000.EYE SUSPENSION	1000	492	219	158	274	103	116	200	62	445	18	38	219
LX032.2000.EYE SUSPENSION	2000	660	310	350	305	124	132	168	20	466	25	40	293
LX032.3200.EYE SUSPENSION	3200	657	353	190	657	193	125	236	20	670	25	40	353
LX032.5000.EYE SUSPENSION	5000	687	353	335	348	193	125	236	20	685	25	40	353

LX CHAIN HOIST SINGLE GIRDER SPECIFICATION









	Hoist Model Reference	S.W.L. Tons	Duty BS	Duty FEM	Lifting Height m.	Hoist 2 Speeds (m/min)	Hoist Motor (Kw.)	Chain Dia (mm.)	Chain Reeving	Traverse 2 Speeds (m/min)	Traverse Motor (Kw.)	C Hook	Weight kg.
LX011	LX011.125.EYE SUSPENSION	0.125	M5	2m	6	4/1	0.5/0.2	4	1 : 1	-	-	355	27
	LX011.125.PUSH TROLLEY	0.125	M5	2m	6	4/1	0.5/0.2	4	1 : 1	-	-	467	33
	LX011.125.MOTOR TROLLEY	0.125	M5	2m	6	4/1	0.5/0.2	4	1 : 1	7/14	0.1/0.2	375	57
	LX011.125.LOW HEADROOM	0.125	M5	2m	6	4/1	0.5/0.2	4	1 : 1	7/14	0.1/0.2	299	61
	LX011.250.EYE SUSPENSION	0.250	M5	2m	6	4/1	0.5/0.2	4	1 : 1	-	-	355	27
	LX011.250.PUSH TROLLEY	0.250	M5	2m	6	4/1	0.5/0.2	4	1 : 1	-	-	467	33
	LX011.250.MOTOR TROLLEY	0.250	M5	2m	6	4/1	0.5/0.2	4	1 : 1	7/14	0.1/0.2	375	57
	LX011.250.LOW HEADROOM	0.250	M5	2m	6	4/1	0.5/0.2	4	1 : 1	7/14	0.1/0.2	299	63
	LX011.500.EYE SUSPENSION	0.500	M5	2m	6	4/1	1.0/0.25	5	1 : 1	-	-	380	35
	LX011.500.PUSH TROLLEY	0.500	M5	2m	6	4/1	1.0/0.25	5	1 : 1	-	-	586	41
	LX011.500.MOTOR TROLLEY	0.500	M5	2m	6	4/1	1.0/0.25	5	1 : 1	7/14	0.1/0.2	400	65
	LX011.500.LOW HEADROOM	0.500	M5	2m	6	4/1	1.0/0.25	5	1 : 1	7/14	0.1/0.2	307	66
	LX011.1000.EYE SUSPENSION	1000	M5	2m	6	4/1	1.8/0.4	7	1 : 1	-	-	445	44
	LX011.1000.PUSH TROLLEY	1000	M5	2m	6	4/1	1.8/0.4	7	1 : 1	-	-	670	57
	LX011.1000.MOTOR TROLLEY	1000	M5	2m	6	4/1	1.8/0.4	7	1 : 1	7/14	0.1/0.2	440	74
	LX011.1000.LOW HEADROOM	1000	M5	2m	6	4/1	1.8/0.4	7	1 : 1	7/14	0.1/0.2	312	89
LX031	LX031.2000.EYE SUSPENSION	2000	M5	2m	6	4/1	2.0/0.5	10	1 : 1	-	-	466	90
	LX031.2000.PUSH TROLLEY	2000	M5	2m	6	4/1	2.0/0.5	10	1 : 1	-	-	685	113
	LX031.2000.MOTOR TROLLEY	2000	M5	2m	6	4/1	2.0/0.5	10	1 : 1	7/14	0.1/0.2	685	115
	LX031.2000.LOW HEADROOM	2000	M5	2m	6	4/1	2.0/0.5	10	1 : 1	7/14	0.1/0.2	388	126
LX032	LX032.3200.EYE SUSPENSION	3200	M5	2m	6	4/1	3.0/0.7	10	2 : 1	-	-	670	113
	LX032.3200.PUSH TROLLEY	3200	M5	2m	6	4/1	3.0/0.7	10	2 : 1	-	-	715	143
	LX032.3200.MOTOR TROLLEY	3200	M5	2m	6	4/1	3.0/0.7	11	2 : 1	7/14	0.1/0.2	715	140
	LX032.3200.LOW HEADROOM	3200	M5	2m	6	4/1	3.0/0.7	11	2 : 1	7/14	0.1/0.2	495	155
	LX032.5000.EYE SUSPENSION	5000	M5	2m	6	4/1	3.5/0.8	11	2 : 1	-	-	685	123
	LX032.5000.PUSH TROLLEY	5000	M5	2m	6	4/1	3.5/0.8	11	2 : 1	-	-	735	153
	LX032.5000.MOTOR TROLLEY	5000	M5	2m	6	4/1	3.5/0.8	11	2 : 1	7/14	0.1/0.2	735	158
	LX032.5000.LOW HEADROOM	5000	M5	2m	6	4/1	3.5/0.8	11	2 : 1	7/14	0.1/0.2	505	163

** **Remark :** Excerpt from our product portfolio. Above are standard model, Special specification is available for buyer, Please contact Distributor.

LX Chain Hoist Features features Include The Follwing :

- 400V (+/-10%) 3ph / 50Hz , - 48V Control voltage
- Suitable for indoor use with tempererature range of -20C to + 50C at an altitude less than 1000m above sea level and in an atmosphere of normal humidity (5-95% non condensing) free of contamination and harmful deposits.
- Standard for 6m height of lift complete with chain bucket. Where greater height of lift is required use price/metre add-on up to max. 10m height of lift. Add on price includes larger chain bucket to suit height of lift specified up to max.
- Load Limiting device (rated capacity limiter) by means of a slipping clutch
- Hoist upper and lower limit switch by means of a slipping clutch (standard on LX03 models, optional on LX01 models)
- Fully sealed compact hoist gearbox - oil bath lubricated. In line hardened & treated helical gears for smooth & smooth & quiet operation
- Eegonmic hook forging to DIN15401 fitted with spring operated safety catch
- High tensile galvanised load chain
- Finish - RAL 7021 black grey

Classification of Mechanisms

FEM 9.511	$1D_m$	$1C_m$	$1B_m$	$1A_m$	2_m	3_m	4_m	5_m
BS 2573 P2	M1	M2	M3	M4	M5	M6	M7	M8
Hoist	Intermittent ratio (R1%)		25	30	40	50	60	>60
	No. of starts per hour (S/h)		150	180	240	300	360	>360
	No. of cycles per hours (C/h)		25	30	40	50	60	>60
Trolley	Intermittent ratio (R1%)		20	25	30	40	50	60
	No. of starts per hour (S/h)		120	150	180	240	300	360
	No. of cycles per hours (C/h)		20	25	30	40	50	60
Two-Speed Double polarity motor								
No. of starts per hour (S/h)	Main speed		1/3 (33.3% of total starts per hour)					
	Slow speed		2/3 (66.7% of total starts per hour)					
Operating time per day	Main speed		2/3 (66.7% of average operating time per day)					
	Slow speed		1/3 (33.3% of average operating time per day)					
Used in temporary duty	Operating time at main speed (min.)		15	15	30	30	60	>60
	Operating time at slow speed (min.)		2,5	3	3,5	4	5	6
	Maximum number of starts per hour (s/h)		10	10	10	10	10	10

For applying to the hoist mechanisms are classified into the groups depending on operating conditions
The group into which a mechanism is classified is determined by the following factor :

- Class of operating time
- Load spectrum

Class of operating time

The class of operating time indicates the average period per day during which a mechanism is in operation (see table 1). A
mechanism is considered to be in operation when it is in motion.

For mechanisms not regularly used during the year the average operating time per day is determined by the ratio of the annual operating time to 250 working days per year.

The higher classes of operating time apply only in such cases where a mechanism is operated during more than one shift per day.

Table 1

Average operating time per day (hours)

$$\text{Operating time/day (h)} = \frac{\text{2 x lifting height (m) x number of cycles per hour x working time/day (h)}}{\text{60 (minutes per hour) x lifting speed (m/min)}}$$

Lifting height = The average hook travel under actual operating conditions (meter)
Cycles per hour = The average number of complete ascent/decent operations in an hour
Working time/day = The time during which the hoist is used on a working day (hour)
Lifting speed = The average lifting speed (normally the maximum lifting speed) at which the load cycles are performed. (Meter per minute)

Class of operating time		Average operating time per day	Calculated total operating time
FEM	BS	(hours)	(hours)
V0.06	T0	≤ 0.12	200
V0.12	T1	≤ 0.25	400
V0.25	T2	≤ 0.5	800
V0.5	T3	≤ 1	1600
V1	T4	≤ 2	3200
V2	T5	≤ 4	6300
V3	T6	≤ 8	12500
V4	T7	≤ 16	25000
V5	T8	≤ 16	50000

Load spectrum

The load spectrum indicates to what extent a mechanism or part thereof is subject to maximum stress or whether it is subject to smaller load only.

For an exact classification into groups the cubic mean value k referred to the safe working load is required. It is calculated by using the following formula :

$$k = \sqrt[3]{(\beta_1+\Upsilon)^3.t_1+(\beta_2+\Upsilon)^3.t_2+...+\Upsilon^3.t_\Delta}$$

Where :

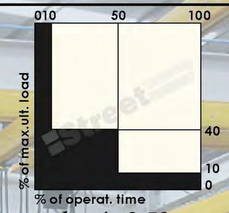
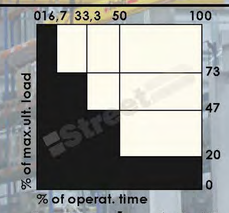
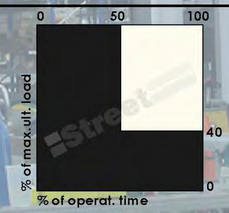
$$ß = \frac{\text{useful or partial load}}{\text{safe working load}}$$

$$\gamma = \frac{\text{dead load}}{\text{safe working load}}$$

$$t = \frac{\text{operating time under useful or partial load and dead load}}{\text{total operating time}}$$

$$t_\Delta = \frac{\text{operating time under dead load only}}{\text{total operating time}}$$

Four load spectra are distinguished which are determined by the definitions given and by the ranges covered by the cubic mean values k as listed in table 2

Load spectrum FEM	Load spectrum BS	Definitions	Cubic mean value
1 (light)	L1	Mechanisms or parts thereof, Usually subject to very small Loads and in exceptional cases Only to maximum loads	 $k \leq 0.50$
2 (medium)	L2	Mechanisms or parts thereof, Usually subject to small loads But rather often to maximum loads	 $0.50 < k \leq 0.63$
3 (heavy)	L3	Mechanisms or parts thereof, Usually subject to medium Loads but frequently to Maximum loads	 $0.63 < k \leq 0.80$
4 (very heavy)	L4	Mechanisms or parts thereof, Usually subject to maximum or almost maximum loads	$0.80 < k \leq 1.00$

The formular given above for the cubic mean value k excludes the weight of the load carrying means. This is acceptable if the ratio

$$\frac{\text{Weight of the load carrying means}}{\text{safe working load}} \leq 0.05$$

****

By applying the classes of operating times and the load spectra, the mechanisms are classified into 8 groups :

Table 3 Classification of mechanisms into groups

Load spectrum			Class of operation time								
			V 0.06	V 0.12	V 0.25	V 0.5	V 1	V 2	V 3	V 4	V 5
			T 0	T 1	T 2	T 3	T 4	T 5	T 6	T 7	T 8
			Average operating time per day in hours								
FEM	BS	Cubic mean value	≤ 0.12	≤ 0.25	≤ 0.5	≤ 1	≤ 2	≤ 4	≤ 8	≤ 16	≤ 16
1	L1	$k \leq 0.50$			$1\,D_m$	$1\,C_m$	$1\,B_m$	$1\,A_m$	2_m	3_m	4_m
(Light)					M1	M2	M3	M4	M5	M6	M7
2	L2	$0.50 < k \leq 0.63$		$1\,D_m$	$1\,C_m$	$1\,B_m$	$1\,A_m$	2_m	3_m	4_m	5_m
(medium)				M1	M2	M3	M4	M5	M6	M7	M8
3	L1	$0.63 < k \leq 0.80$	$1\,D_m$	$1\,C_m$	$1\,B_m$	$1\,A_m$	2_m	3_m	4_m	5_m	
(heavy)			M1	M2	M3	M4	M5	M6	M7	M8	
4	L4	$0.80 < k \leq 1.00$	$1\,C_m$	$1\,B_m$	$1\,A_m$	2_m	3_m	4_m	5_m		
(very heavy)			M2	M3	M4	M5	M6	M7	M8		

The result of the classification of mechanism into groups according to table 3 is that the same life, expressed in years, may be expected for these machines under all load spectra and average operating times per day. This applies on condition that the life of the individual component depends on the third power of the load.

The average daily operating time with in the classes of operating times are doubled as follows:

1. Within a group by passing into a lower load spectrum (progression 1.25), because $1.25^3 = 2$.
2. Within a load spectrum by passing into a higher group and derating the SWL by the factor of 1.25, because $1.25^3 = 2$.

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LX Chain Hoist Applicatioons : Street 'LCS profile' crane

Street 'bridge crane'

Street LX chain hoists are designed and built to give reliability and endurance in a wide range of industrial applications such as manufacturing, service and maintenance but our customers and distributors continually surprise us with new and innovative ways to use our products. We therefore have installations in sports, entertainment, scientific and military applications. For bespoke applications with curved monorail beams, the standard LX is suitable for a min. 900mm radius.

LX Chain Hoist Applications :
Street slewing jib crane

LX HOISTS :
Robust construction
Long service life

Street LX chain hoists are designed and built to give reliability and endurance in a wide range of industrial applications such as manufacturing, service and maintenance but our customers and distributors continually surprise us with new and innovative ways to use our products. We therefore have installations in sports, entertainment, scientific and military applications.

The LX chain hoist is the smallest member of a successful family of Street hoists. The Street electric wire rope hoists are available in capacities up to 200t. LX is the product of meticulous research and development using advanced design methods including the latest solid modelling and finite element analysis.