



WIRE ROPE HOISTS

XM Series

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THE COMPANY



Misia has manufactured an extensive range of hoists for more than 25 years. Over 50.000 wire rope units have been sold worldwide and are operational in every sector of industry.



The XM series range consists of 7 sizes with capacities between 1000 Kg and 25000 Kg. The hoist units are available in different configurations: Low headroom monorail, standard headroom monorail, foot mounted (fixed or suspended), double rail "crab" units (supported or inverted). With these configurations, this standard range allows the XM series to meet any requirements or application: capacity, hook travel, travel and hoisting speed, load spectrum based on the FEM classification (FEM section IX). All MISIA hoists comply with the Machine Directive 98/37/EEC.



QUALITY AND CERTIFICATIONS



The commercial documentation, together with the technical instruction manuals for the installation, use and maintenance of electric rope hoists, which accompany the sale of every machine, have been drawn up in accordance with unified standards UNI EN 292 – parts 1 and 2. The XM series electric rope hoists are produced in accordance with the Machine Directive 89/392/EEC, with the Italian law DPR 459 dated July 24th, 1996 and the Directive 98/37/EEC.

The components of the hoist comply with the requirements of the Directive and CE Mark confirms the conformity of the whole equipment.

MISIA produces and sells the electric rope hoists under a registered quality control system approved to UNI EN ISO 9002, with issue from the Certification Company BVQI of following international certificates: SINCERT - ITALY.



CE MARK

The leadership and reliability of MISIA as an electric rope hoist manufacturer are confirmed and guaranteed by our taking on the responsibilities resulting from the CE mark.

Before being made available for sale and CE marked, each hoist has all its parts and/or components thoroughly inspected and tested. In addition to the CE declaration of conformity, all the machines have an internal test certificate and are guaranteed for 2 YEARS FROM DELIVERY.

 MISIA PARANCHI S. r.l. VIA DEI LAVORATORI, 8/11 20092 CINISELLO B (MI) MILANO ITALY		
PARAMETRI ELETTRICI A FINE	N°	TIPO
POTENZA CAPACITÀ CORSA LANCIO VELOCITÀ SELEZIONE VELOCITÀ VELOCITÀ VELOCITÀ	m m m/min m/min	ANNO DI FABBRICAZIONE MANIFATTURA GRUPPO POTENZA FEM ALIMENTAZIONE SUPPLI

MISIA WIRE ROPE HOISTS XM SERIES



THE RANGE

Manufacture of the **standard** version of XM series wire rope hoists accounts for over 90% of the company's production.

This confirms the flexibility of the MISIA product in adapting to many industrial lifting applications without subjecting the user to a bespoke product.

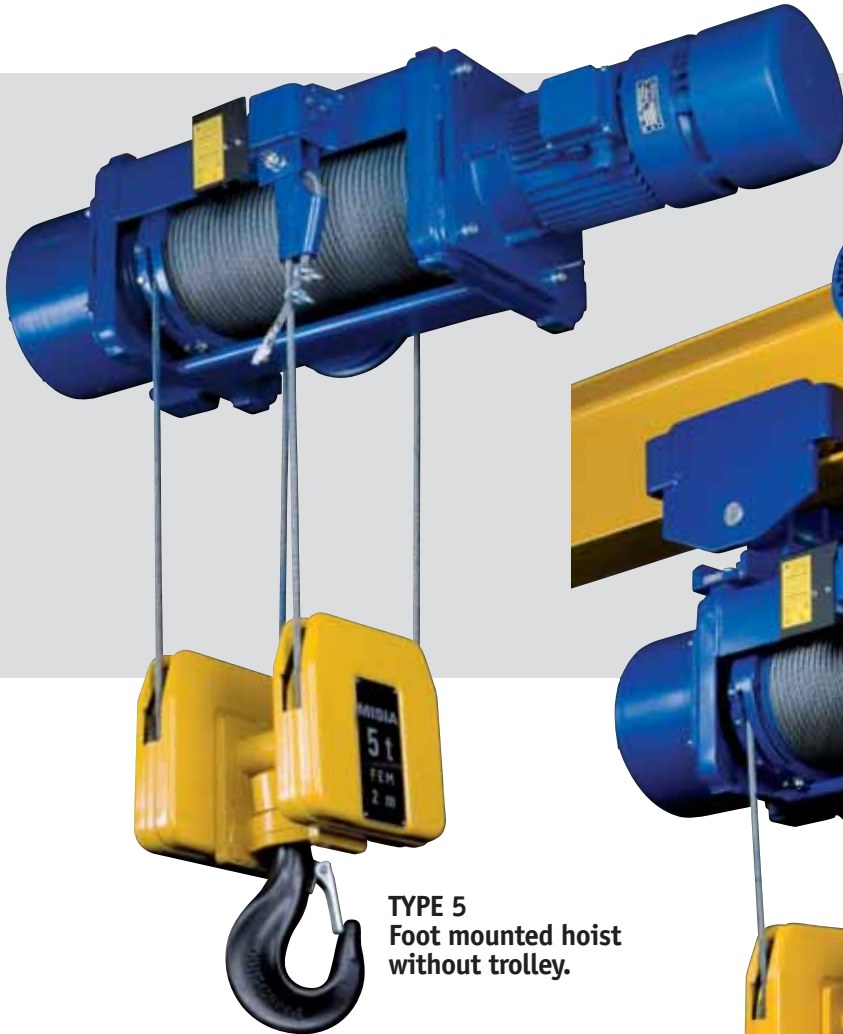
The production of the new XM series includes 7 construction sizes for capacities between 1000 Kg and 25000 Kg, 2 or 4 rope falls, lifting speeds ranging from 2,5 m/min to 12 m/min, feet mountings allowing "supported" or "suspended" fixing (for foot mounted or double rail "crab" units).

A wide range of travelling trolleys are also available in either double or monorail version, with the option of low or standard headroom.

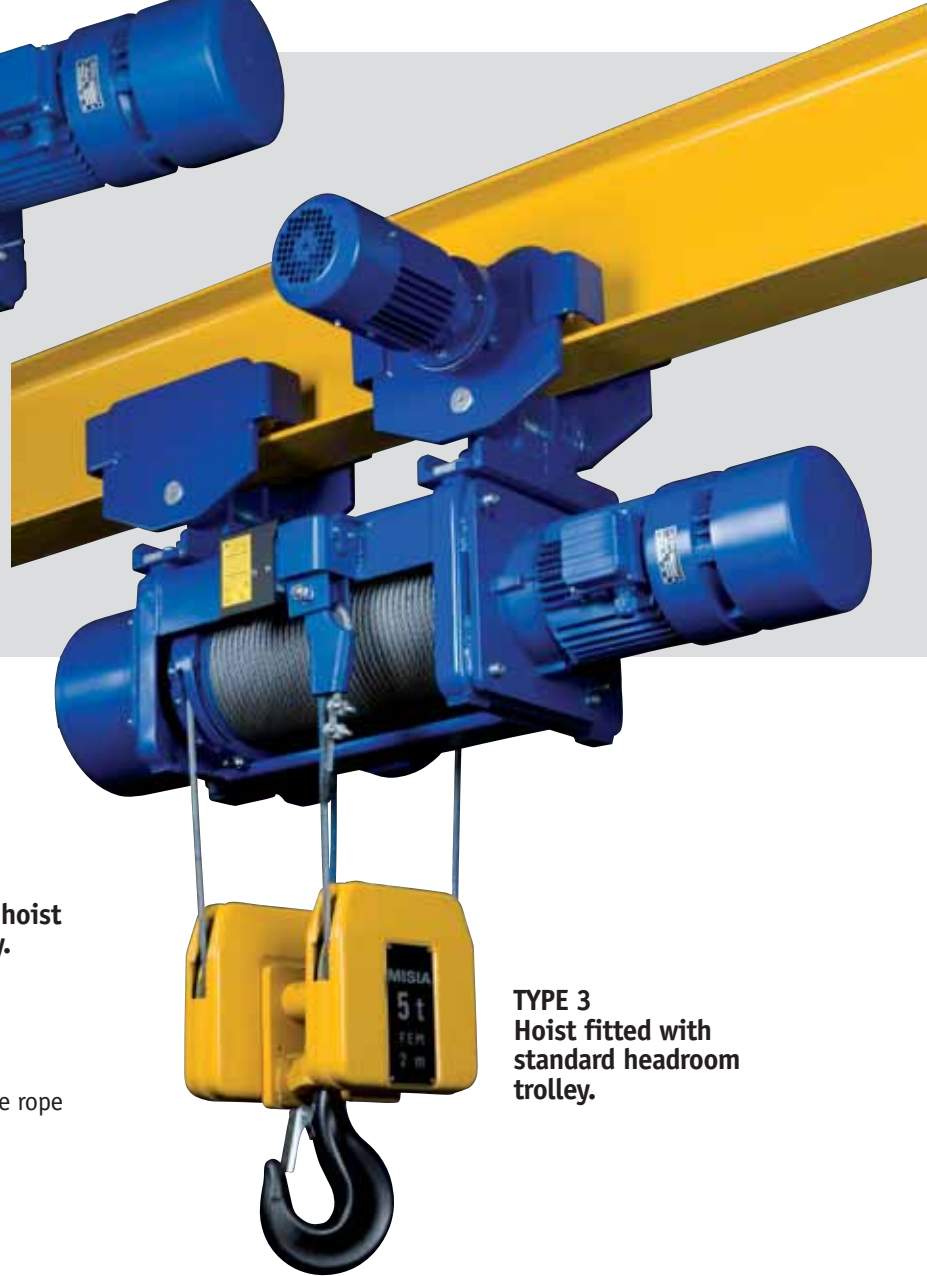


MISIA WIRE ROPE HOISTS XM SERIES

Standard configurations



TYPE 5
Foot mounted hoist
without trolley.



TYPE 3
Hoist fitted with
standard headroom
trolley.

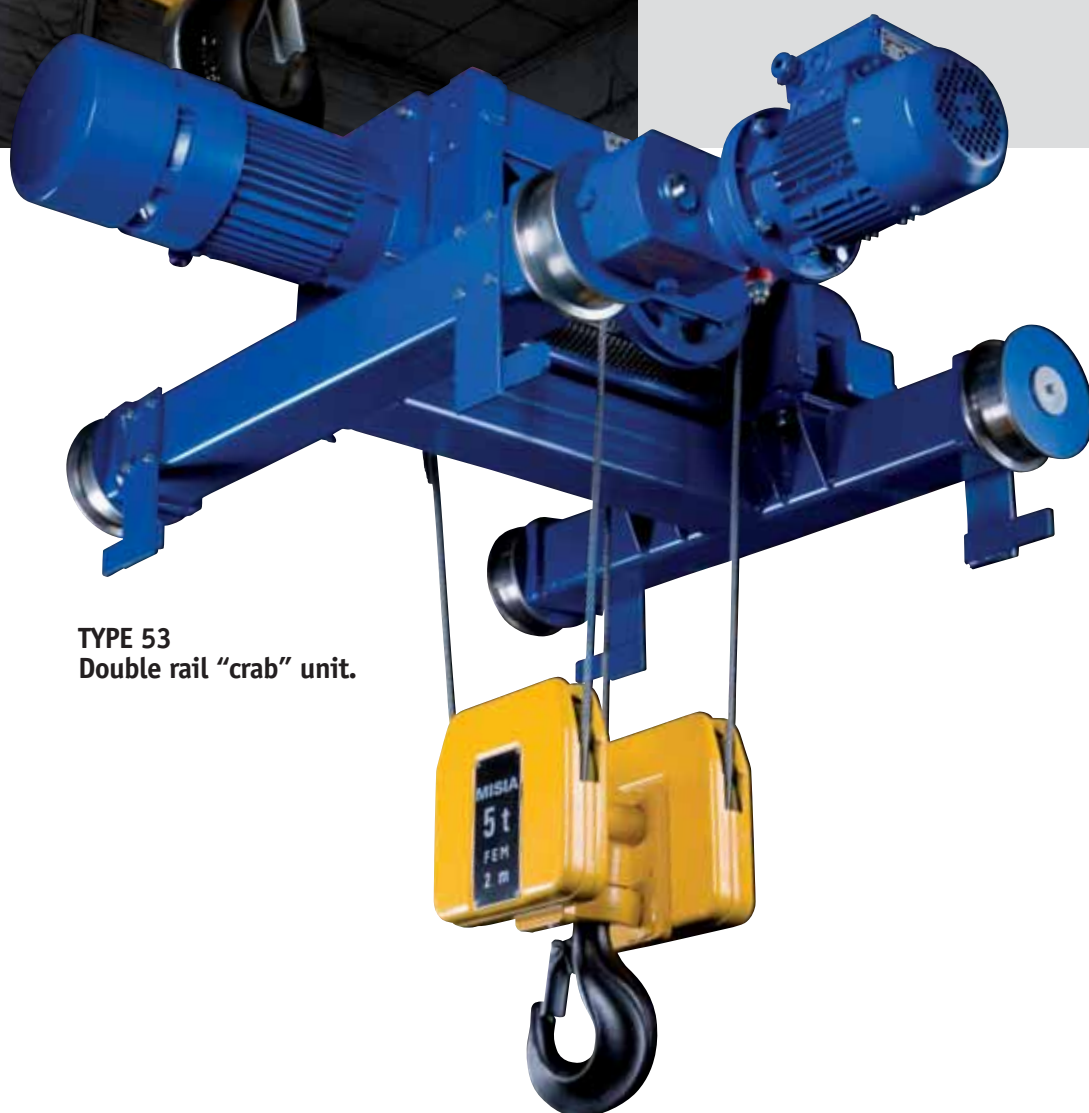
The XM series of Misia wire rope hoist are available in the followings configurations:

S2 version (2 rope falls)
Lifting capacity
from 1000 Kg to 12500 Kg
either supported or suspended.

S4 version (4 rope falls)
Lifting capacity
from 2000 Kg to 25000 Kg
either supported or suspended.



TYPE 83
Low headroom
monorail hoist.



TYPE 53
Double rail "crab" unit.

MISIA WIRE ROPE HOISTS XM SERIES Components



Hoist gearbox

The 2 or 3 stage planetary gearbox reduces the speed of the electric motor to the required rpm of the drum.

Each individual planetary gear is manufactured using heat-treated high quality steel.

Self braking cylindrical lifting motor

The three-phase asynchronous electric motor with cylindrical rotor and disc brake is available in both single or dual speed option.

The single polarity motor allows inverter control to be fitted offering further speed control to suit the application requirements.





Rope guide

The rope guide consists of two parts: the guide ring and pressure spring.

The pressure spring ensures that the rope sits correctly into the drum groove whilst the guide ring always maintains the rope in the correct position preventing the rope from coming off the drum groove.

The guide is a robust steel design fitted with high quality bearings. Movement of the guide across the drum activates the up/down limit switch.

Load limiter

All "XM" series hoists with 2 and 4 rope falls are equipped with a load limiter with 2 reaction thresholds. The load limiter consists of an electric-mechanical system with pre-set springs acting on two microswitches located in the auxiliary circuit. These microswitches stop all movements, exception made for the lowering of the load. The first threshold activates a WARNING, the 2nd stops the function.



Low headroom trolleys

The low headroom trolley consists of two electric trolley motors fitted onto planetary gearboxes. The trolley is of a live axel design with the gearboxes fitting directly onto the drive shaft of the wheels removing the need of external gears.

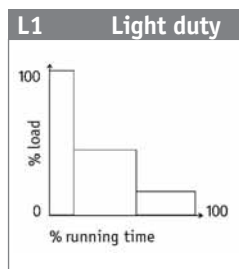
Standard headroom trolleys

The standard headroom monorail design enables the hoist to operate directly under and parallel with the crane or runway beam. The hoist is suspended via drive trolley.

MISIA WIRE ROPE HOISTS XM SERIES Performance



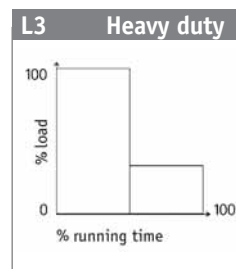
Selection of the FEM group is determined by two parameters:
a) running time;
b) duty.



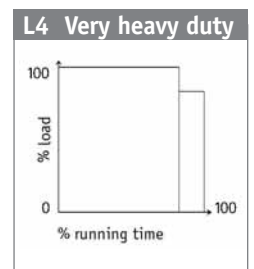
Hoist seldom lifting the maximum load and mostly light loads.



Hoist lifting maximum-medium and light loads at an even ratio.



Hoists frequently lifting the maximum load and normally medium loads.



Hoists regularly lifting loads near the maximum capacity.

Comparison FEM-ISO Groups

Duty class	Running time "T"	
L1 - Light duty	6300	12500
L2 - Medium duty	3200	6300
L3 - Heavy duty	1600	3200
L4 - Very heavy duty	800	1600
FEM	1A m	2 m

FEM sez. IX	ISO
1BM	M3
1Am	M4
2m	M5
3m	M6
4m	M7
5m	M8



MISIA WIRE ROPE HOISTS

XM SERIES

Characteristics



The design of Misia wire rope hoist units is complemented by the use of quality components. All gearboxes are of planetary gear type, 2 or 3 stages and lubricated for life. Motors can be supplied either with cylindrical type with disc brake or tapered rotor conical motors, depending on application or customer preference. The rope guide is manufactured using high quality materials and bearings. Ropes are of high endurance class and galvanized. Monorail low headroom trolleys utilize our twin drive live axel design with planetary geared motors and gearboxes fitted directly onto the drive shaft of the trolley wheels eliminating the need of external gears.



ABBREVIATION OF THE XM RANGE OF MISIA WIRE ROPE HOIST

XM	312	N	S4	H7	A(A1)	/5 a
Series	Hoist size	N Normal lifting speed (single) V Fast lifting speed (single)	Versions: S2 - 2 Rope falls S4 - 4 Rope falls	Height of lift	Second lifting speed (wherever requested) A - cylindrical motor (A1) - conical motor	Type: 5 foot mounted supported 5C1 foot mounted suspended 3 standard headroom monorail trolley 83 low headroom monorail trolley 53 double rail "crab" trolley with supported hoist 53C1 double rail "crab" trolley with suspended hoist

Technical data													
Capacity (Kg)	FEM Group	Hoist type XM	Rope falls	Hook travel (m)				1 speed		Lifting speed (m/min.) 2 speed			
				H	H	H	H	N	V	Cylindrical motor		Conical motor	
										N/A	V/A	N/A1	V/A1
1000	3 m	308	2/1	10	14	20	26	8	12	8/2,6	12/4	8/1,3	12/2
1600	2 m	308	2/1	10	14	20	26	8	12	8/2,6	12/4	8/1,3	12/2
2000	3 m	308	4/1	-	7	10	13	4	6	4/1,3	6/2	4/0,7	6/1
2000	3 m	312	2/1	10	14	20	26	8	12	8/2,6	12/4	8/1,3	12/2
2500	3 m	308	4/1	-	7	10	13	4	6	4/1,3	6/2	4/0,7	6/1
2500	2 m	312	2/1	10	14	20	26	8	12	8/2,6	12/4	8/1,3	12/2
3200	2 m	308	4/1	-	7	10	13	4	6	4/1,3	6/2	4/0,7	6/1
3200	2 m	316	2/1	10	14	20	26	8	12	8/2,6	12/4	8/1,3	-
3200	3 m	525	2/1	10	14	20	26	8	12	8/2,6	12/4	8/1,3	12/2
4000	3 m	312	4/1	-	7	10	13	4	6	4/1,3	6/2	4/0,7	6/1
4000	3 m	525	2/1	10	14	20	26	8	12	8/2,6	12/4	8/1,3	12/2
5000	2 m	312	4/1	-	7	10	13	4	6	4/1,3	6/2	4/0,7	6/1
5000	2 m	525	2/1	10	14	20	26	8	12	8/2,6	12/4	8/1,3	12/2
6300	2 m	316	4/1	-	7	10	13	4	6	4/1,3	6/2	4/0,7	-
6300	3 m	525	4/1	-	7	10	13	4	6	4/1,3	6/2	4/0,7	6/1
6300	2 m	740	2/1	14	19	26	33	8	-	8/2,6	-	8/2	-
8000	3 m	525	4/1	-	7	10	13	4	6	4/1,3	6/2	4/0,7	6/1
8000	2 m	740	2/1	14	19	26	33	8	-	8/2,6	-	8/2	-
10000	2 m	525	4/1	-	7	10	13	4	6	4/1,3	6/2	4/0,7	6/1
10000	2 m	950	2/1	20	32	48	-	6	-	-	-	6/1,5	-
12500	2 m	740	4/1	7	9,5	12	16,5	4	-	4/1,3	-	4/1	-
12500	1Am	963	2/1	20	32	48	-	5	-	-	-	5/1,2	-
16000	1Am	740	4/1	7	9,5	13	16,5	4	-	4/1,3	-	4/1	-
20000	2 m	950	4/1	10	16	24	-	3	-	-	-	3/0,7	-
25000	1Am	963	4/1	10	16	24	-	2,5	-	-	-	2,5/0,6	-

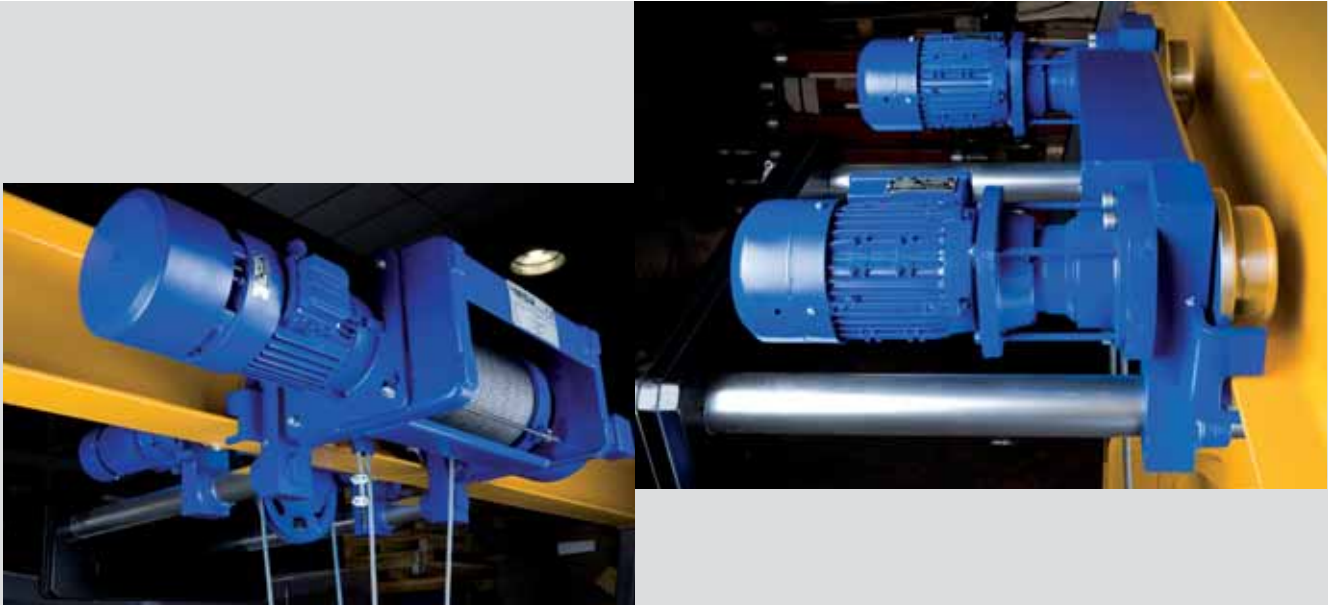
The lifting and travel speeds refer to a frequency of 50Hz.

Hoists travel speed (m/min.)													
Type	1 speed							2 speed					
3 - monorail standard headroom	18							18/6					
83 - monorail low headroom	20-10							20/5					
53 - double rail	20	16	12	10	-	20/6,5	-	16/5,3	-	12/4	-	10/3,3	-

For double beam trolley with 25.000 kg capacity, the max. available speed is 16 or 16/5,3 m/min.

MISIA WIRE ROPE HOISTS XM SERIES

Lifting and trolley motors



PERFORMANCES AND CHARACTERISTICS

Standard voltages:

- 230 V - 400 V a 50 Hz
- For single pole motors, Δ/Y or Y/Δ changeover is always possible.
- For twine pole motors specify the exact supply voltage.
- The drawings shown in the charts refer to 400V 50Hz.

Standard protection class: Motors IP54-
Brake IP23.

Special Voltages:

On demand, special voltages are available.



Technical data of the lifting motors with cylindrical rotor (No. of starts/h=240 - I.R. 40% - Aux. speed I.R. 15%)

XM hoist	1 speed				2 speeds			
	N		V		N/A		V/A	
	kw	A	kw	A	kw	A	kw	A
308	2,5	7,5	4,0	9,5	2,5/0,8	6,0/5,5	4,0/1,33	9,5/7
312	4,0	9,5	5,8	12,5	4,0/1,33	9,5/7,0	5,8/1,9	15/10
316	5,0	12,5	8,0	17	5,0/1,70	13/10	8,0/2,6 - 18/13,5	
525	8,0	17,0	12,0	32	8/2,6	18/13,5	12/4 - 15/28	
740	12	23,0	-	-	12/4	24/15	-	-

Technical data of the lifting motors with conical rotor (No. of starts/h=240 - I.R. 40% - Aux. speed I.R. 15%)

XM hoist	N		V		N/A1		V/A1	
	kw	A	kw	A	kw	A	kw	A
308	2,5	7,8	4,0	13,1	2,9/0,48	8,1/4,8	4/0,70	10/8,0
312	4,0	13,1	5,8	16,5	4/0,70	10/8,0	5,8/1,0	14,5/7,0
316	5,8	16,5	8,0	19,2	5,8/1,0	14,5/7,0	-	-
525	8,0	19,2	12,0	30,0	8/1,3	16/14,3	12/2,0	34/42
740	12,5	38,5	-	-	13/3	32/40	-	-
950	12,5	38,5	-	-	13/3	32/40	-	-
963	12,5	38,5	-	-	13/3	32/40	-	-

Technical data of the monorail trolley motors type 3 (No. of starts/h=120 - I.R. 40% - Aux. speed I.R. 15%)

Max. capacity (kg)	1 speed		2 speeds	
	kw	A	kw	A
5000	0,37	1,7	0,37/0,12	1,7/1,4
10000	0,55	1,9	0,55/0,18	1,9/1,7

Technical data of the monorail trolley motors type 83 (No. of starts/h=120 - I.R. 40% - Aux. speed I.R. 15%)

Max. capacity (kg)	1 speed		2 speeds	
	kw	A	kw	A
Up to 4000	2x 0,18	2x 0,75	2x 0,18/0,045	2x 0,75/0,75
Up to 6300	2x 0,24	2x 0,85	2x 0,24/0,060	2x 0,85/1,10
Up to 10000	2x 0,30	2x 1,20	2x 0,30/0,060	2x 1,20/1,20
Up to 16000	2x 0,60	2x 1,80	2x 0,50/0,130	2x 1,80/1,00

Technical data of the monorail trolley motors type 53 (No. of starts/h=120 - I.R. 40% - Aux. speed I.R. 15%)

Max. capacity (kg)	1 speed		2 speeds	
	kw	A	kw	A
Up to 4000	0,25	0,85	0,25/0,08	0,90/0,95
Up to 6300	0,37	1,30	0,37/0,12	1,40/1,40
Up to 10000	0,55	1,70	0,55/0,18	1,80/1,90
Up to 16000	0,75	2,00	0,75/0,25	2,10/2,50
Up to 20000	1,10	3,40	1,10/0,37	3,50/3,50
Up to 25000	1,50	3,90	1,50/0,55	3,80/3,80

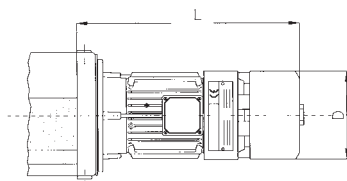
The Amps of the above chart refer to 400 V - 50 Hz.

MISIA WIRE ROPE HOISTS XM SERIES Lifting motors

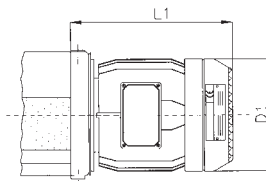


Lifting motors - Dimensions																		
Hoist XM	Capacities (t)		Cylindrical motors								Conical motors							
	S2 (2/1)	S4(4/1)	N		V		NA		VA		N		V		N...A1		V...A1	
			L	D	L	D	L	D	L	D	L1	D1	L1	D1	L1	D1	L1	D1
308	1-1,6	2-2,5-3,2	450	220	450	220	530	260	530	260	320	230	350	280	330	275	380	280
312	2-2,5	4-5	450	220	450	220	530	260	530	260	350	280	380	290	380	280	420	330
316	3,2	6,3	450	220	610	320	550	260	610	320	380	290	-	-	420	330	-	-
525	3,2-4-5	6,3-8-10	610	320	610	320	610	320	670	320	390	290	460	390	455	370	510	420
740	6,3-8	12,5-16	-	-	-	-	-	-	-	-	480	380	-	-	510	470	-	-
950	10	20	-	-	-	-	-	-	-	-	480	380	-	-	520	470	-	-
963	12,5	25	-	-	-	-	-	-	-	-	490	380	-	-	520	470	-	-

Self braking motor
cylindrical rotor



Self braking motor
conical rotor

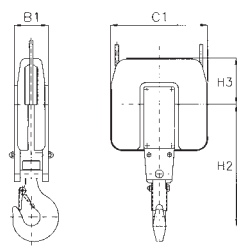


MISIA WIRE ROPE HOISTS XM SERIES Hook blocks

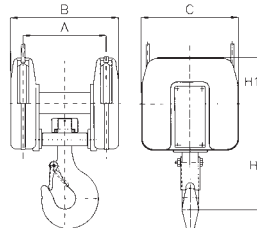


Hook blocks - Dimensions																
Hoist		Hook blocks S2(2/1)							Hook blocks S4(4/1)							
XM	Rope diam.	Capacity (t)	H2	H3	C1	B1	Hook n°	Weight (kg)	Capacity (t)	H	H1	A	B	C	Hook n°	Weight (kg)
308	7	1-1,6	330	122	243	95	1	15	2-2,5-3,2	280	120	155	225	243	1,6	30
312	10	2-2,5	375	144	287	105	1,6	25	4-5	325	144	250	325	287	2,5	40
316	10	3,2	375	144	287	105	1,6	25	6,3	345	144	250	325	287	4	45
525	12	3,2-4-5	440	170	341	125	2,5	35	6,3-8-10	355	170	300	390	341	4	80
740	15	6,3-8	522	216	435	145	4	60	12,5-16	510	216	350	460	435	6	110
950	20	10	665	265	520	165	6	90	20	505	265	440	575	520	10	130
963	20	12,5	665	265	520	165	6	95	25	505	265	440	575	520	10	135

S2 (2/1)



S4 (4/1)



Hooks DIN 15401

**STANDARD
HOISTS**

XM SERIES

S2 two rope falls (2/1)

S4 4 rope falls (4/1)

5 Supported – 5C1 Suspended

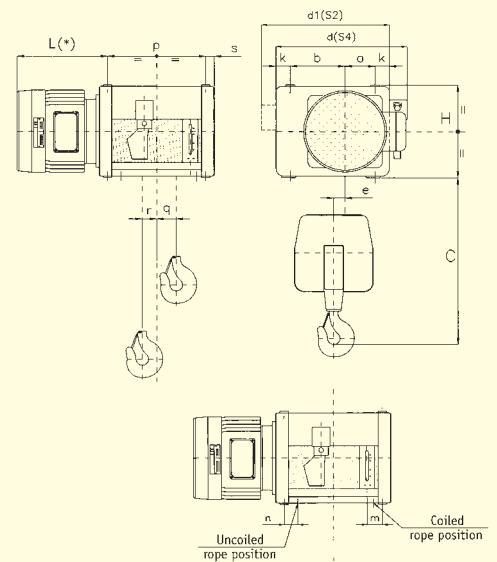
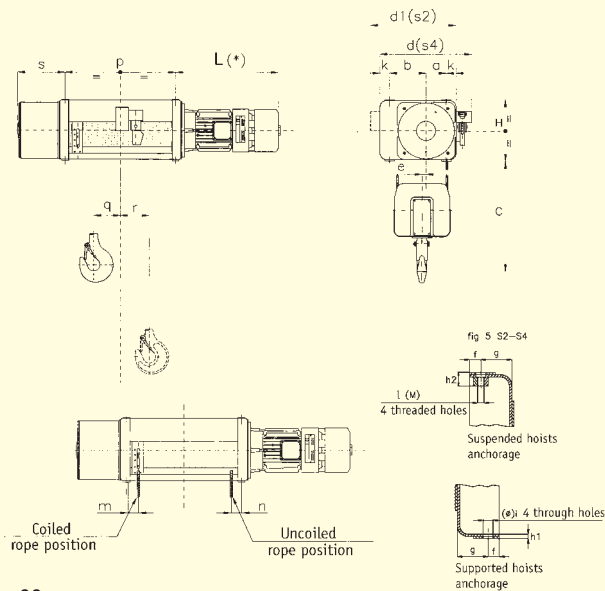


Capacities
from 1 t
to 10 t

- XM 308**
- XM 312**
- XM 316**
- XM 525**

Capacities
from 6,3 t
to 25 t

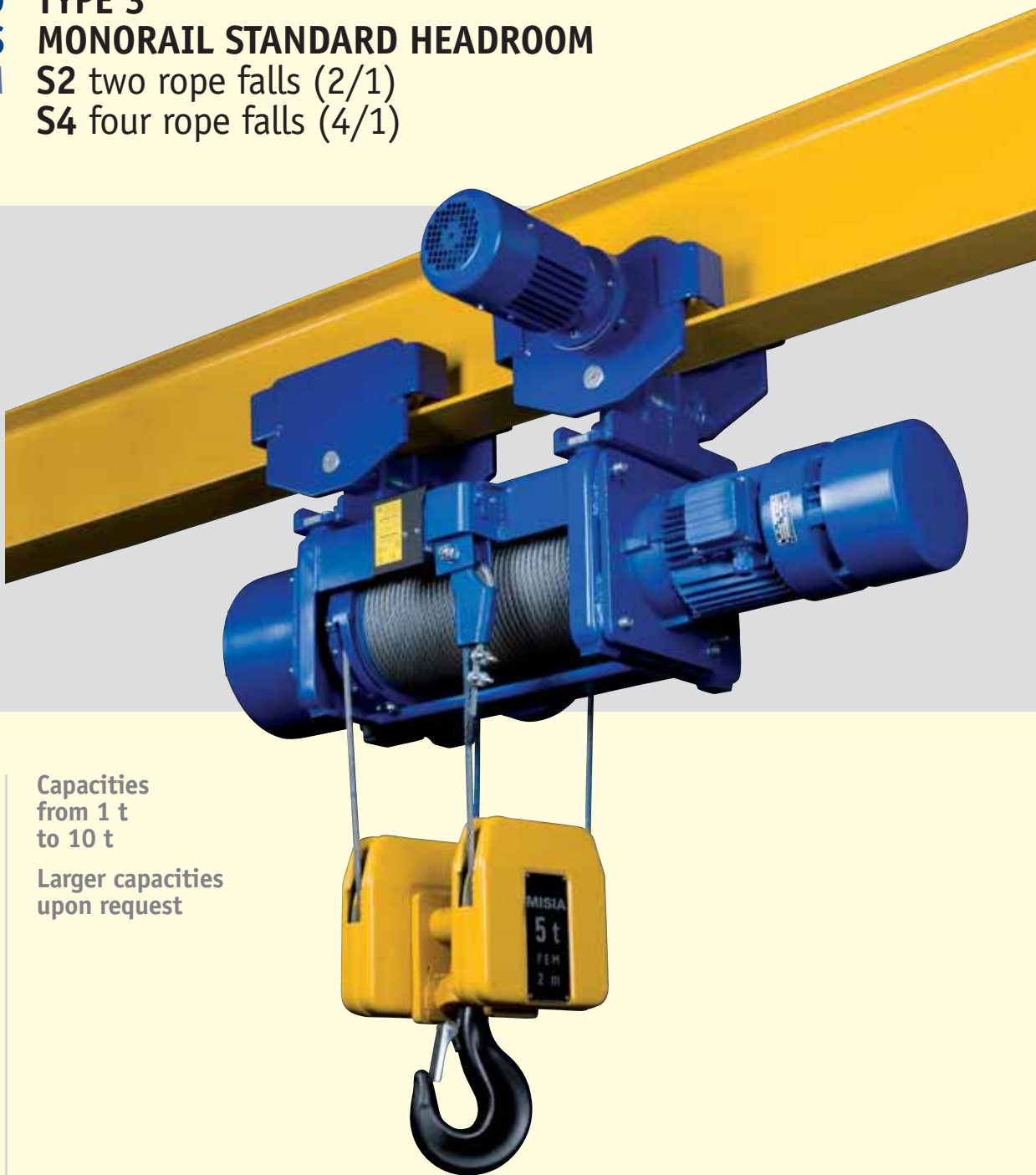
- XM 740**
- XM 950**
- XM 963**



**STANDARD
TROLLEYS
Series XM**

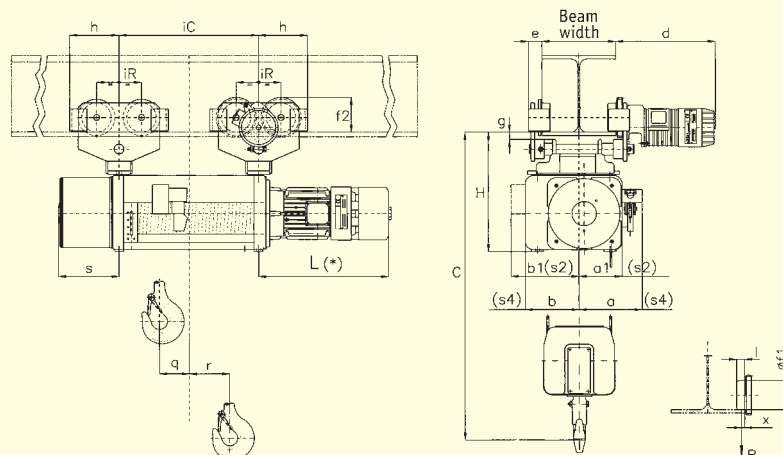
**TYPE 3
MONORAIL STANDARD HEADROOM**

S2 two rope falls (2/1)
S4 four rope falls (4/1)



Capacities
from 1 t
to 10 t

Larger capacities
upon request



S2 WITH 2 ROPE FALLS (2/1)

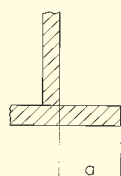
Hoist XM	Capacity t	Hook travel m	C mm	H mm	a1 mm	b1 mm	g mm	e mm	d mm	l mm	x mm	f1 mm	f2 mm	i2 mm	h mm	ic mm	q mm	r mm	s mm	Weight kg
308	1-1,6	10	1080	500	155	305	30	55	410	35	20	120	145	183	215	500	91	61	150	290
308	1-1,6	14	1080	500	155	305	30	55	410	35	20	120	145	183	215	520	154	61	200	300
308	1-1,6	20	1080	500	155	305	30	55	410	35	20	120	145	183	215	700	244	61	200	320
308	1-1,6	26	1080	500	155	305	30	55	410	35	20	120	145	183	215	885	337	61	200	335
312	2-2,5	10	1140	510	155	305	30	55	410	35	20	120	145	183	215	500	90	77	220	350
312	2-2,5	14	1140	510	155	305	30	55	410	35	20	120	145	183	215	570	155	77	250	370
312	2-2,5	20	1140	510	155	305	30	55	410	35	20	120	145	183	215	775	258	77	250	390
312	2-2,5	26	1140	510	155	305	30	55	410	35	20	120	145	183	215	975	358	77	250	415
316	3,2	10	1140	510	155	325	30	55	410	35	20	120	145	183	215	500	90	77	220	375
316	3,2	14	1140	510	155	325	30	55	410	35	20	120	145	183	215	570	155	77	250	400
316	3,2	20	1140	510	155	325	30	55	410	35	20	120	145	183	215	775	258	77	250	425
316	3,2	26	1140	510	155	325	30	55	410	35	20	120	145	183	215	975	358	77	250	450
525	3,2-4-5	10	1180	560	186	325	30	55	410	35	20	120	145	183	215	500	90	78	245	460
525	3,2-4-5	14	1180	560	186	325	30	55	410	35	20	120	145	183	215	590	157	78	270	480
525	3,2-4-5	20	1180	560	186	325	30	55	410	35	20	120	145	183	215	795	260	78	270	520
525	3,2-4-5	26	1180	560	186	325	30	55	410	35	20	120	145	183	215	995	360	78	270	560

S4 WITH 4 ROPE FALLS (4/1)

Hoist XM	Capacity t	Hook travel m	C mm	H mm	a mm	b mm	g mm	e mm	d mm	l mm	x mm	f1 mm	f2 mm	i2 mm	h mm	ic mm	q mm	r mm	s mm	Weight kg
308	2-2,5-3,2	7	1020	500	230	240	30	55	410	35	20	120	145	183	215	520	132	-25	200	320
308	2-2,5-3,2	10	1020	500	230	240	30	55	410	35	20	120	145	183	215	700	222	-69	200	340
308	2-2,5-3,2	13	1020	500	230	240	30	55	410	35	20	120	145	183	215	885	314	-115	200	360
312	4-5	7	1120	520	230	240	30	55	410	35	20	120	145	183	215	570	137	-19	250	390
312	4-5	10	1120	520	230	240	30	55	410	35	20	120	145	183	215	775	240	-72	250	420
312	4-5	13	1120	520	230	240	30	55	410	35	20	120	145	183	215	975	340	-122	250	450
316	6,3	7	1130	520	230	240	30	70	430	40	25	140	165	207	225	570	137	-19	250	480
316	6,3	10	1130	520	230	240	30	70	430	40	25	140	165	207	225	775	240	-72	250	510
316	6,3	13	1130	520	230	240	30	70	430	40	25	140	165	207	225	975	340	-122	250	550
525	6,3-8-10	7	1240	600	280	265	30	70	430	40	25	140	165	207	225	590	133	-15	270	580
525	6,3-8-10	10	1240	600	280	265	30	70	430	40	25	140	165	207	225	795	236	-67	270	620
525	6,3-8-10	13	1240	600	280	265	30	70	430	40	25	140	165	207	225	995	336	-117	270	660

* "L" dimensions of lifting motors and hook blocks, see pages 20-21.

- Static values of reactions, see pages 32-34.



MINIMUM NECESSARY WIDTH OF THE FLAT SIDE OF THE BEAM TO ALLOW THE WHEELS RUN	
Wheels diameter	Min. width
120	45
140	50

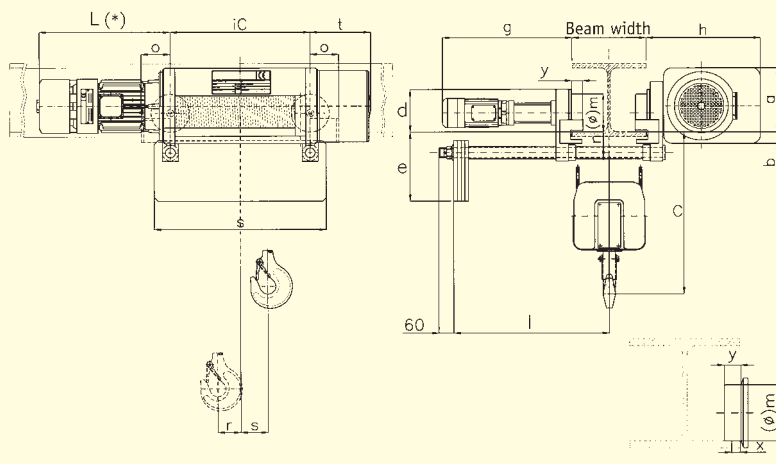
**STANDARD
TROLLEYS
Series XM**

**TYPE 83
MONORAIL LOW HEADROOM**
S2 two rope falls (2/1)
S4 four rope falls (4/1)



Capacities
from 1 t
to 10 t

Larger capacities
upon request



S2 WITH 2 ROPE FALLS (2/1)

Hoist XM	Capacity t	Hook travel m	C ⁽³⁾ mm	a	b	d	e	g	h	l	n	m	y	x	t	o	ic	q	r	s	Weight kg
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
308	1-1,6	10	700	240	70	140	285	430	470	550	75	125	40	22	200	100	395	91	61	600	310
308	1-1,6	14	700	240	70	140	285	430	470	550	75	125	40	22	200	100	520	154	61	720	340
308	1-1,6	20	700	240	70	140	285	430	470	550	75	125	40	22	200	100	700	244	61	940	380
308	1-1,6	26	700	240	70	140	285	430	470	550	75	125	40	22	200	100	885	337	61	1120	430
312	2-2,5	10	680	240	70	140	285	430	470	550	75	125	40	22	250	100	440	90	77	600	450
312	2-2,5	14	680	240	70	140	285	430	470	550	75	125	40	22	250	100	570	155	77	720	470
312	2-2,5	20	680	240	70	140	285	430	470	550	75	125	40	22	250	100	775	258	77	940	510
312	2-2,5	26	680	240	70	140	285	430	470	550	75	125	40	22	250	100	975	358	77	1120	560
316	3,2	10	680	240	70	140	285	430	470	550	75	125	40	22	250	100	440	90	77	600	500
316	3,2	14	680	240	70	140	285	430	470	550	75	125	40	22	250	100	570	155	77	720	520
316	3,2	20	680	240	70	140	285	430	470	550	75	125	40	22	250	100	775	258	77	990	590
316	3,2	26	680	240	70	140	285	430	470	550	75	125	40	22	250	100	975	358	77	1120	620
525	3,2-4-5	10	730	285	70	140	335	485	525	590	70	125	40	22	270	100	455	90	78	620	610
525	3,2-4-5	14	730	285	70	140	335	485	525	590	70	125	40	22	270	100	590	157	78	750	660
525	3,2-4-5	20	730	285	70	140	335	485	525	590	70	125	40	22	270	100	795	260	78	960	740
525	3,2-4-5	26	730	285	70	140	335	485	525	590	70	125	40	22	270	100	995	360	78	1160	820

S4 WITH 4 ROPE FALLS (4/1)

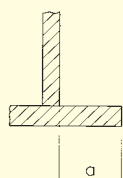
Hoist XM	Capacity t	Hook travel m	C ⁽³⁾ mm	a	b	d	e	g	h	l	n	m	y	x	t	o	ic	q	r	s	Weight kg
				mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	
308	2-2,5-3,2	7	680	240	70	140	285	430	470	550	75	125	40	22	200	100	520	132	-25	720	360
308	2-2,5-3,2	10	680	240	70	140	285	430	470	550	75	125	40	22	200	100	700	222	-69	940	400
308	2-2,5-3,2	13	680	240	70	140	285	430	470	550	75	125	40	22	200	100	885	314	-115	1120	480
312	4-5	7	620	240	70	140	285	475	470	590	70	125	40	22	250	100	570	137	-19	720	490
312	4-5	10	620	240	70	140	285	475	470	590	70	125	40	22	250	100	775	240	-72	940	540
312	4-5	13	620	240	70	140	285	475	470	590	70	125	40	22	250	100	975	340	-122	1120	590
316	6,3	7	640	265	50	175	285	530	480	580	55	155	45	25	250	125	570	137	-19	720	540
316	6,3	10	640	265	50	175	285	530	480	580	55	155	45	25	250	125	775	240	-72	940	600
316	6,3	13	640	265	50	175	285	530	480	580	55	155	45	25	250	125	975	340	-122	1120	660
525	6,3-8-10	7	700	305	50	175	335	535	550	685	50	155	45	25	270	125	590	133	-15	750	660
525	6,3-8-10	10	700	305	50	175	335	535	550	685	50	155	45	25	270	125	795	236	-67	960	750
525	6,3-8-10	13	700	305	50	175	335	535	550	685	50	155	45	25	270	125	995	336	-117	1160	840

Note:

- 1) For beam sizes wider than those shown, the "C" dimension (encumbrance of the hook) increases of 12 mm every 10 mm of wider beam size.
- 2) The dimension "L" shown is valid for beam size 300 mm; with different beam size it increases or decreases of half of the difference of the beam size.
- 3) The values shown are for maximum beam size 300 mm.

* "L" dimensions of lifting motors and hook blocks, see pages 20-21.

- Static values of reactions, see pages 33-35.

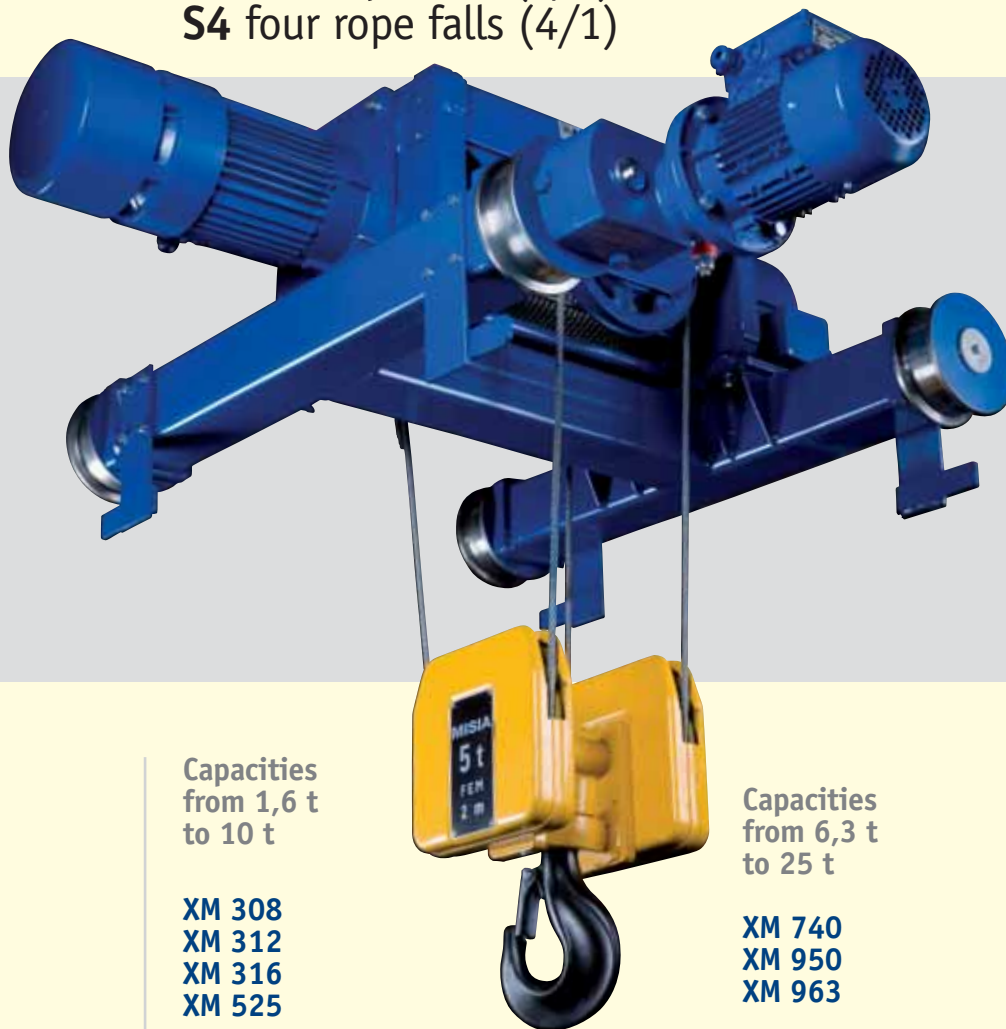


MINIMUM NECESSARY WIDTH OF THE FLAT SIDE OF THE BEAM TO ALLOW THE WHEELS RUN	
Wheels diameter	Min. width
125	50
155	55

**STANDARD
TROLLEYS
Series XM**

**TYPE 53 - TYPE 53C1
DOUBLE BEAM TROLLEY "CRAB" WITH HOIST SUPPORTED OR
SUSPENDED**

S2 two rope falls (2/1)
S4 four rope falls (4/1)

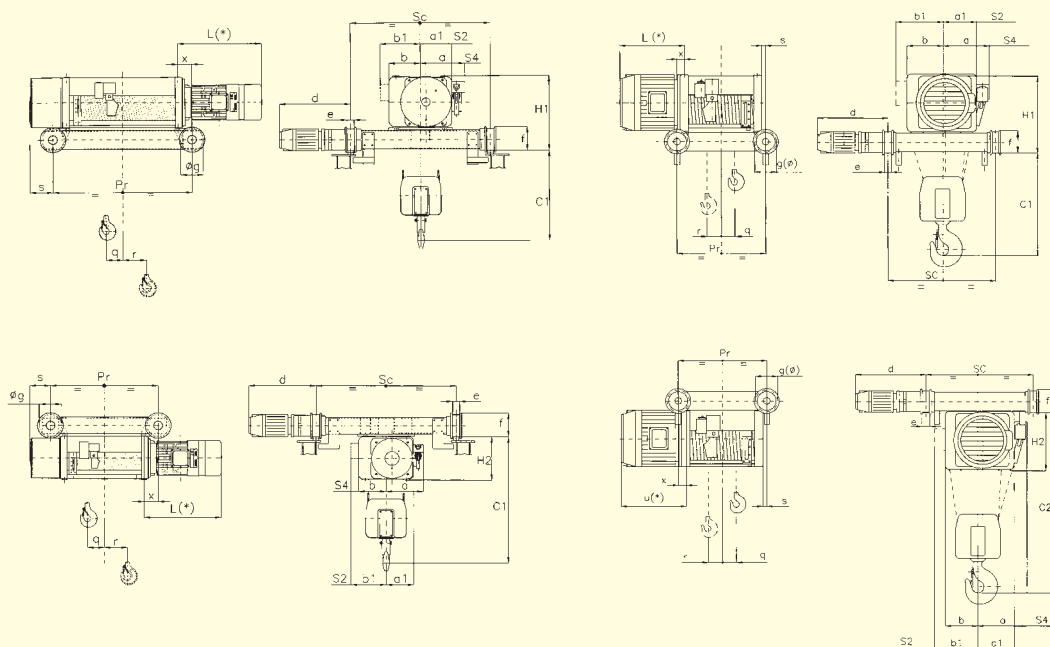


Capacities
from 1,6 t
to 10 t

- XM 308**
- XM 312**
- XM 316**
- XM 525**

Capacities
from 6,3 t
to 25 t

- XM 740**
- XM 950**
- XM 963**



S2 WITH 2 ROPE FALLS (2/1)

Hoist XM	Capacity	Hook travel	Sc	C1	H1	C2	H2	d	e	f	g	a1	b1	s	Pr	q	r	x	Weight
	t	m																	mm
308	1,6	14	1000	570	490	950	325	480	50	175	160	155	305	100	720	154	61	100	400
308	1,6	20	1000	570	490	950	325	480	50	175	160	155	305	100	900	244	61	100	430
308	1,6	26	1000	570	490	950	325	480	50	175	160	155	305	100	1085	337	61	100	450
312	2-2,5	14	1000	640	490	965	325	480	50	175	160	155	305	150	770	155	77	100	475
312	2-2,5	20	1000	640	490	965	325	480	50	175	160	155	305	150	975	258	77	100	500
312	2-2,5	26	1000	640	490	965	325	480	50	175	160	155	305	150	1175	358	77	100	530
316	3,2	14	1000	640	490	965	325	480	50	175	160	155	325	150	770	155	77	100	505
316	3,2	20	1000	640	490	965	325	480	50	175	160	155	325	150	975	258	77	100	535
316	3,2	26	1000	640	490	965	325	480	50	175	160	155	325	150	1175	358	77	100	565
525	3,2-4-5	14	1000	730	550	1110	380	510	50	175	160	186	325	170	790	157	78	100	600
525	3,2-4-5	20	1000	730	550	1110	380	510	50	175	160	186	325	170	995	260	78	100	650
525	3,2-4-5	26	1000	730	550	1110	380	510	50	175	160	186	325	170	1195	360	78	100	695
740	6,3-8	14	1200	840	740	1370	535	540	60	215	200	315	410	95	833	130	133	140	1080
740	6,3-8	19	1200	840	740	1370	535	540	60	215	200	315	410	95	993	160	133	140	1130
740	6,3-8	26	1200	840	740	1370	535	540	60	215	200	315	410	95	1108	268	133	140	1190
740	6,3-8	33	1200	840	740	1370	535	540	60	215	200	315	410	95	1423	375	133	140	1240
950	10	20	1400	1100	880	1700	630	570	60	270	250	360	450	100	1160	230	135	160	1750
950	10	32	1400	1100	880	1700	630	570	60	270	250	360	450	100	1575	438	135	160	1930
950	10	48	1400	1100	880	1700	630	570	60	270	250	360	450	100	2075	688	135	160	2145
963	12,5	20	1400	1100	880	1700	630	570	60	270	250	360	450	100	1160	230	135	160	1760
963	12,5	32	1400	1100	880	1700	630	570	60	270	250	360	450	100	1575	438	135	160	1940
963	12,5	48	1400	1100	880	1700	630	570	60	270	250	360	450	100	2075	688	135	160	2160

S4 WITH 4 ROPE FALLS (4/1)

Hoist XM	Capacity	Hook travel	Sc	C1	H1	C2	H2	d	e	f	g	a	b	s	Pr	q	r	x	Weight
	t	m																	mm
308	2-2,5-3,2	7	1000	520	490	845	325	480	50	175	160	230	240	100	720	132	-25	100	420
308	2-2,5-3,2	10	1000	520	490	845	325	480	50	175	160	230	240	100	900	222	-69	100	450
308	2-2,5-3,2	13	1000	520	490	845	325	480	50	175	160	230	240	100	1085	314	-115	100	475
312	4-5	7	1000	590	490	920	325	480	50	175	160	230	240	150	770	137	-19	100	495
312	4-5	10	1000	590	490	920	325	480	50	175	160	230	240	150	975	240	-72	100	530
312	4-5	13	1000	590	490	920	325	480	50	175	160	230	240	150	1175	340	-122	100	565
316	6,3	7	1000	610	490	940	325	480	50	175	160	230	240	150	770	137	-19	100	525
316	6,3	10	1000	610	490	940	325	480	50	175	160	230	240	150	975	240	-72	100	560
316	6,3	13	1000	610	490	940	325	480	50	175	160	230	240	150	1175	340	-122	100	600
525	6,3-8-10	7	1000	650	550	1030	380	510	50	175	160	280	265	170	790	133	-15	100	640
525	6,3-8-10	10	1000	650	550	1030	380	510	50	175	160	280	265	170	995	236	-67	100	690
525	6,3-8-10	13	1000	650	550	1030	380	510	50	175	160	280	265	170	1195	336	-117	100	735
740	12,5-16	7	1200	830	740	1360	535	540	60	215	200	410	360	95	833	35	71	140	1130
740	12,5-16	9,5	1200	830	740	1360	535	540	60	215	200	410	360	95	993	115	31	140	1180
740	12,5-16	13	1200	830	740	1360	535	540	60	215	200	410	360	95	1108	223	-22	140	1240
740	12,5-16	16,5	1200	830	740	1360	535	540	60	215	200	410	360	95	1423	330	-76	140	1290
950	20	10	1400	1000	880	1630	630	570	60	270	250	455	405	100	1160	130	52	160	1810
950	20	16	1400	1000	880	1630	630	570	60	270	250	455	405	100	1575	338	-51	160	1990
950	20	24	1400	1000	880	1630	630	570	60	270	250	455	405	100	2075	588	-177	160	2210
963	25	10	1400	1000	880	1630	630	570	60	270	250	455	405	100	1160	130	52	160	1820
963	25	16	1400	1000	880	1630	630	570	60	270	250	455	405	100	1575	338	-51	160	2010
963	25	24	1400	1000	880	1630	630	570	60	270	250	455	405	100	2075	588	-177	160	2225

* "L" dimensions of lifting motors and hook blocks, see pages 20-21.
- Static values of reactions, see pages 33-35.

**HOISTS AND
TROLLEY
Series XM**

EXAMPLES OF APPLICATIONS





DESTRA
INDIETRO
AVANTI
SINISTRA

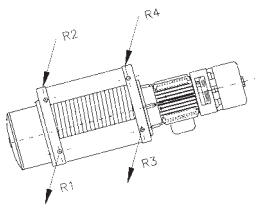


STANDARD HOISTS Series XM

S2 (two rope falls) Statical values (daN)

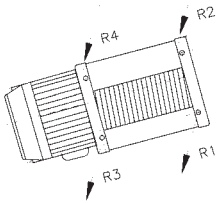
SUPPORTED OR SUSPENDED FIG. 5 - 5C1

XM 308
XM 312
XM 316
XM 525



Hoist XM	Capacity kg	Hook travels															
		H10				H14				H20				H26			
		R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4
308	1000	381	440	164	190	415	478	136	156	444	512	115	134	463	534	104	119
308	1600	585	675	239	276	637	734	192	222	681	784	158	182	708	817	137	158
312	2000	781	756	360	348	856	827	296	286	924	893	238	230	965	934	209	202
312	2500	960	929	435	421	1052	1017	354	342	1135	1098	281	271	1186	1146	243	235
316	3200	1218	1177	547	528	1334	1290	443	428	1441	1393	349	337	1503	1454	299	289
525	3200	1201	1221	566	577	1315	1338	462	470	1423	1447	374	381	1488	1515	328	334
525	4000	1477	1504	686	698	1619	1647	555	564	1751	1781	443	450	1830	1862	383	390
525	5000	1823	1855	836	851	1999	2033	670	683	2161	2198	528	538	2257	2297	451	460

XM 740
XM 950
XM 963



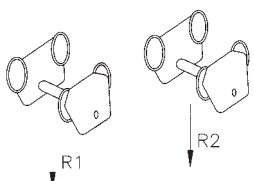
Hoist XM	Capacity kg	Hook travels															
		H14				H19				H26				H33			
		R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4
740	6300	2552	2426	1019	968	2527	2403	1064	1011	2750	2614	867	824	2891	2748	751	715
740	8000	3192	3035	1250	1188	3158	3003	1304	1240	3437	3268	1051	999	3612	3435	901	857

Hoist XM	Capacity kg	Hook travels															
		H20				H32				H48							
		R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4				
950	10000	4218	4095	1414	1373	4641	4505	1067	1037	4907	4764	893	866				
963	12500	5200	5047	1701	1652	5718	5551	1259	1222	6038	5863	1030	999				

MONORAIL STANDARD HEADROOM FIG. 3

Gearbox side

Motor side



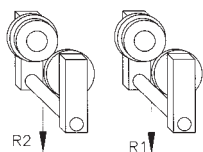
Load on the single wheel = $\frac{R1}{4}$ $\frac{R2}{4}$

Hoist XM	Capacity kg	Hook travels							
		H10		H14		H20		H26	
		R1	R2	R1	R2	R1	R2	R1	R2
308	1000	837	468	958	357	1021	314	1062	288
308	1600	1246	659	1436	479	1530	405	1590	360
312	2000	1552	823	1748	647	1882	533	1964	476
312	2500	1892	983	2134	761	2298	617	2397	543
316	3200	2381	1219	2689	936	2899	751	3022	653
525	3200	2430	1265	2718	997	2935	820	3068	727
525	4000	2974	1521	3331	1184	3597	958	3757	838
525	5000	3654	1841	4097	1418	4424	1131	4619	976

MONORAIL LOW HEADROOM FIG. 83

Motor side

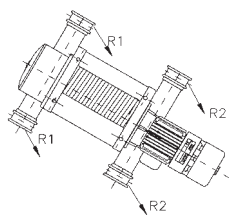
Gearbox side



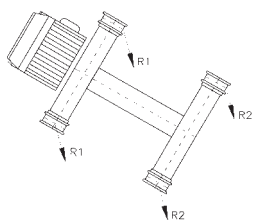
Hoist XM	Capacity kg	Hook travels							
		H10		H14		H20		H26	
		R1 m	R2 m	R1 m	R2 m	R1 m	R2 m	R1 m	R2 m
308	1000	896	429	978	377	1051	344	1109	336
308	1600	1335	590	1456	499	1560	435	1637	408
312	2000	1652	823	1798	697	1942	593	2036	549
312	2500	2004	971	2184	811	2358	677	2470	615
316	3200	2522	1203	2749	996	2981	834	3107	738
525	3200	2562	1283	2808	1087	3045	930	3198	857
525	4000	3121	1524	3421	1274	3707	1068	3887	968
525	5000	3818	1827	4187	1508	4534	1241	4749	1106

Load on the single wheel =

$$\frac{R1}{2} \quad \frac{R2}{2}$$

DOUBLE BEAM TROLLEY CRAB FIG. 53-53C1
XM 308
XM 312
XM 316
XM 525


Hoist XM	Capacity kg	Hook travels					
		H14		H20		H26	
		R1 m	R2 m	R1 m	R2 m	R1 m	R2 m
308	1600	677	331	730	293	767	266
312	2000	829	421	899	364	947	331
312	2500	1004	496	1091	422	1149	379
316	3200	1257	608	1367	514	1439	456
525	3200	1280	638	1394	549	1470	495
525	4000	1560	758	1699	644	1791	575
525	5000	1909	909	2079	764	2191	674

XM 740
XM 950
XM 963


Hoist XM	Capacity kg	Hook travels							
		H14		H19		H26		H33	
		R1 m	R2 m	R1 m	R2 m	R1 m	R2 m	R1 m	R2 m
740	6300	2357	1364	2385	1360	2657	1119	2738	1062
740	8000	2914	1656	2947	1648	3288	1338	3387	1263

Hoist XM	Capacity kg	Hook travels					
		H20		H32		H48	
		R1 m	R2 m	R1 m	R2 m	R1 m	R2 m
950	10000	3961	1960	4408	1602	4732	1386
963	12500	4836	2340	5383	1882	5775	1601

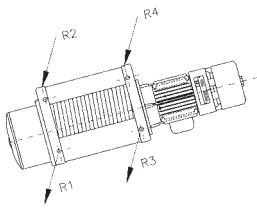


STANDARD HOISTS Series XM

S4 (four rope falls) Statical values (daN)

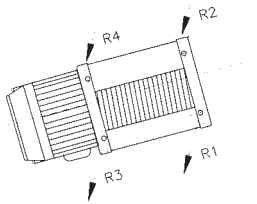
SUPPORTED OR SUSPENDED FIG. 5 - 5C1

XM 308
XM 312
XM 316
XM 525



Hoist XM	Capacity kg	H7				Hook travels H10				H13			
		R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4
		m	m	m	m	m	m	m	m	m	m	m	m
308	2000	898	727	329	266	975	789	263	213	1022	828	226	184
308	2500	1106	896	397	321	1200	972	314	254	1258	1020	267	215
308	3200	1398	1132	492	398	1516	1228	384	312	1589	1287	323	261
312	4000	1788	1333	675	504	1957	1459	524	390	2056	1533	442	329
312	5000	2212	1649	824	615	2421	1805	633	471	2542	1896	528	394
316	6300	2774	2069	1027	765	3035	2262	783	585	3188	2377	653	487
525	6300	2726	2097	1100	847	2995	2304	854	657	3154	2425	718	553
525	8000	3423	2633	1364	1050	3761	2893	1049	807	3959	3045	874	672
525	10000	4243	3264	1675	1288	4662	3585	1279	984	4905	3774	1058	813

XM 740
XM 950
XM 963



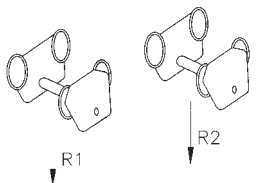
Hoist XM	Capacity kg	H7				Hook travels H9,5				H13				H16,5			
		R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4
		m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m
740	12500	4355	3073	3419	2413	5091	3593	2707	1909	5690	4015	2137	1508	6063	4278	1794	1265
740	16000	5511	3889	4316	3044	6449	4549	3402	2400	7209	5087	2670	1884	7681	5420	2227	1572

Hoist XM	Capacity kg	H10				Hook travels H16				H24			
		R1	R2	R3	R4	R1	R2	R3	R4	R1	R2	R3	R4
		m	m	m	m	m	m	m	m	m	m	m	m
950	20000	7899	5816	4311	3174	9270	6826	3026	2228	10084	7425	2316	1705
963	25000	9786	7206	5306	3907	11488	8459	3691	2717	12491	9198	2791	2055

MONORAIL STANDARD HEADROOM FIG. 3

Gearbox side

Motor side

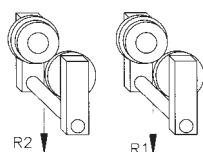


Load on the single wheel = $\frac{R1}{4} \frac{R2}{4}$

Hoist XM	Capacity kg	H7		Hook travels H10		H13	
		R1	R2	R1	R2	R1	R2
		m	m	m	m	m	m
308	2000	1690	660	1829	541	1915	475
308	2500	2067	783	2237	633	2343	547
308	3200	2595	955	2809	761	2941	649
312	4000	3186	1244	3481	979	3654	836
312	5000	3926	1504	4291	1169	4503	987
316	6300	4938	1887	5392	1463	5660	1235
525	6300	4918	2042	5394	1606	5674	1366
525	8000	6151	2509	6749	1951	7099	1641
525	10000	7602	3058	8342	2358	8774	1966

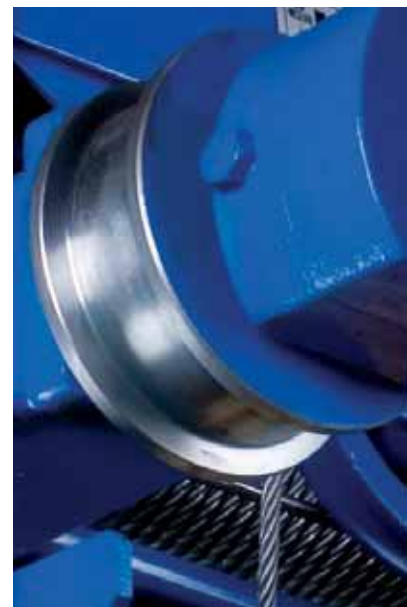
MONORAIL LOW HEADROOM FIG. 83

Motor side Gearbox side

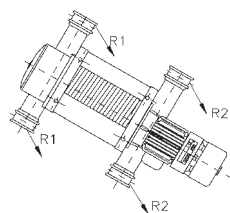


$$\text{Load on the single wheel} = \frac{R1}{2} \quad \frac{R2}{2}$$

Hoist XM	Capacity kg	H7		H10		H13	
		R1	R2	R1	R2	R1	R2
		m	m	m	m	m	m
308	2000	1710	680	1859	571	1975	535
308	2500	2087	803	2267	663	2403	607
308	3200	2615	975	2839	791	3001	709
312	4000	3236	1294	3541	1039	3724	906
312	5000	3976	1554	4351	1229	4573	1057
316	6300	4968	1917	5437	1508	5715	1290
525	6300	4958	2082	5459	1671	5764	1456
525	8000	6191	2549	6814	2016	7189	1731
525	10000	7642	3098	8407	2423	8864	2056

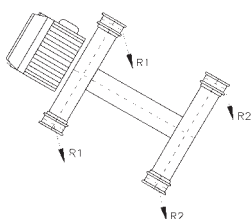

DOUBLE BEAM TROLLEY CRAB FIG. 53-53C1

XM 308
XM 312
XM 316
XM 525



Hoist XM	Capacity kg	H7		H10		H13	
		R1	R2	R1	R2	R1	R2
		m	m	m	m	m	m
308	2000	799	427	871	370	920	333
308	2500	955	521	1033	457	1090	413
308	3200	1190	636	1288	553	1358	495
312	4000	1493	775	1640	646	1736	567
312	5000	1821	947	2001	785	2118	685
316	6300	2268	1168	2492	961	2639	834
525	6300	2292	1218	2524	1011	2676	882
525	8000	2825	1535	3153	1233	3429	979
525	10000	3151	2209	4121	1265	4409	999

XM 740
XM 950
XM 963



Hoist XM	Capacity kg	H14		H19		H26		H33	
		R1	R2	R1	R2	R1	R2	R1	R2
		m	m	m	m	m	m	m	m
740	12500	3700	3170	4178	2718	4732	2194	4937	2013
740	16000	4649	3972	5256	3390	5959	2717	6218	2482

Hoist XM	Capacity kg	H20		H32		H48	
		R1	R2	R1	R2	R1	R2
		m	m	m	m	m	m
950	20000	6613	4357	7690	3370	8437	2733
963	25000	8147	5331	9484	4089	10402	3279

**MISIA WIRE
HOIST
Series XM**

SPECIAL APPLICATIONS AVAILABLE

Lifting heights exceeding those of the standard range
S2 two rope falls (2/1)



Hoist units with a requirement for extra lifting height can be manufactured in foot mounted, standard monorail, low headroom monorail or double beam trolley versions.
Capacities ranging from 1000 kg up to 4000 kg with a lifting height between 33-40 metres.
Capacities ranging from 5000 kg up to 6300 kg with a lifting height between 32-48 metres.

The following configurations are also available:

Fig. 43

Articulated standard headroom monorail hoist units to negotiate radius.

Lifting capacity up to 4000 kg (minimum radius 1500 mm)

Lifting capacity up to 10000 kg (minimum radius 2500 mm)

Fig. 83B

Single rope fall (S1) standard headroom monorail hoist units.
Lifting capacities ranging from 800 kg up to 2500 kg with a lifting height between 41 up to 80 metres.
Lifting capacities ranging from 3200 kg up to 6300 kg with a lifting height between 49 up to 96 metres.

N.B. For the fig. 83B configuration it is necessary to supply a special current reading overload limiter in the electric panel.

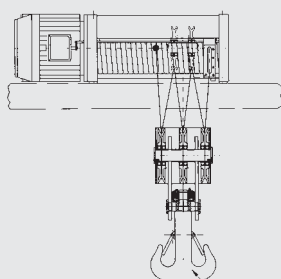
SPECIAL HOIST WITH SINGLE OUTLET FROM THE DRUM

SINGLE HOIST WITH 6-8 ROPE FALLS:

With overload limiter type OL

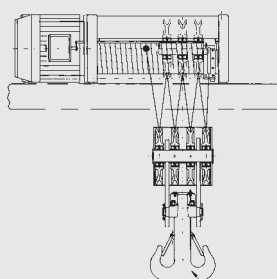
Hoist XM	Motor	Capacity	N° of rope falls
	N	t	
740	NSR6	25	6/1
740	NSR8	32	8/1
950	NSR6	30	6/1
950	NSR8	40	8/1
963	NSR8	50	8/1

SR6



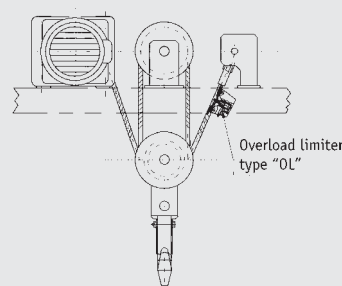
Hook DIN 15402
Upon request DIN 15401

SR8



Hook DIN 15402
Upon request DIN 15401

SR6-SR8

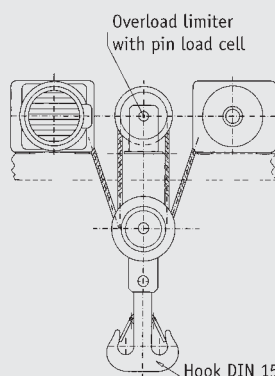


Overload limiter type "OL"

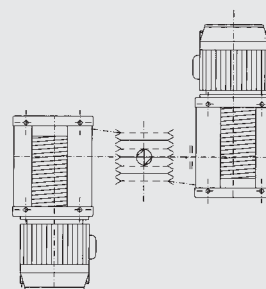
TWIN HOISTS WITH 4+4 ROPE FALLS

With pin load cell

Hoist XM	Motor	Capacity	N° of rope falls
	N	t	
2x740	NSR4	32	4/1+4/1
2x950	NSR4	40	4/1+4/1
2x963	NSR4	50	4/1+4/1



Hook DIN 15402
Upon request DIN 15401



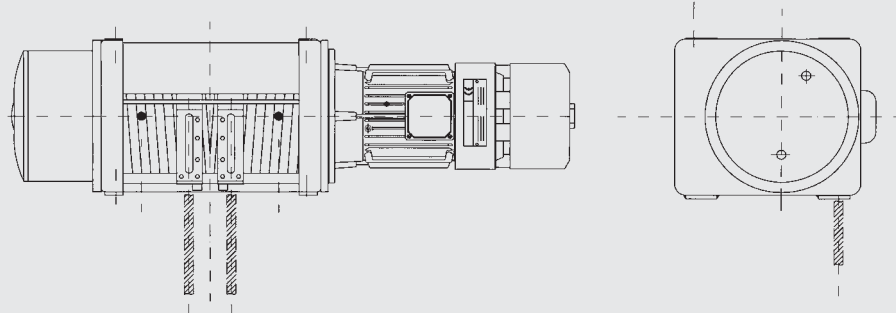
HOISTS SPECIAL APPLICATIONS AVAILABLE

XM Series Hoists with double outlet from the drum

WITH SINGLE-SIDED DOUBLE ROPE OUTPUT

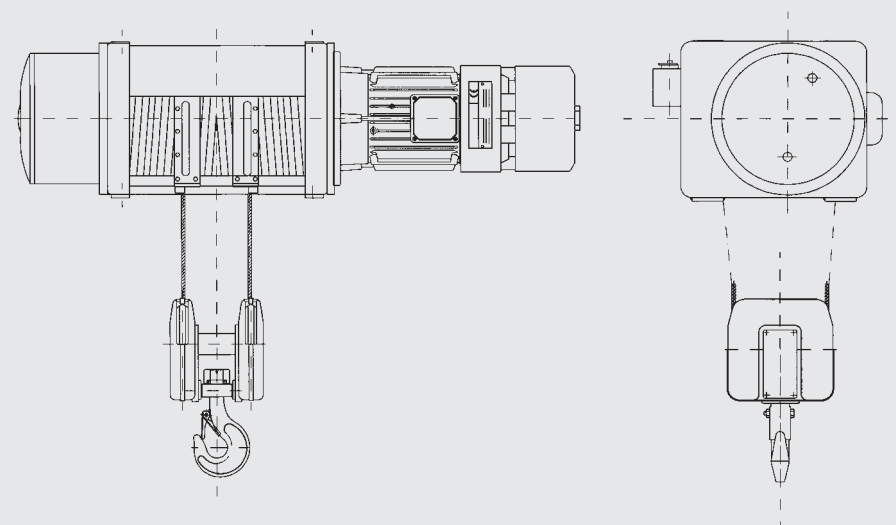
TYPE D1 DOUBLE ROPE OUTPUT WITH 2/1 ROPE FALLS

Capacities
from 0,4+0,4 t
to 3,2+3,2 t



TYPE D2 DOUBLE ROPE OUTPUT WITH 4/2 ROPE FALLS

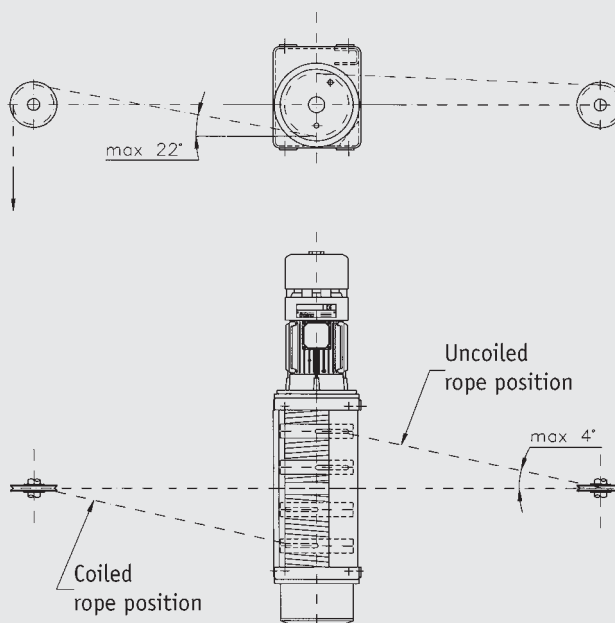
Capacities
from 1 t
to 12,5 t



WITH OPPOSITE DOUBLE ROPE OUTPUT

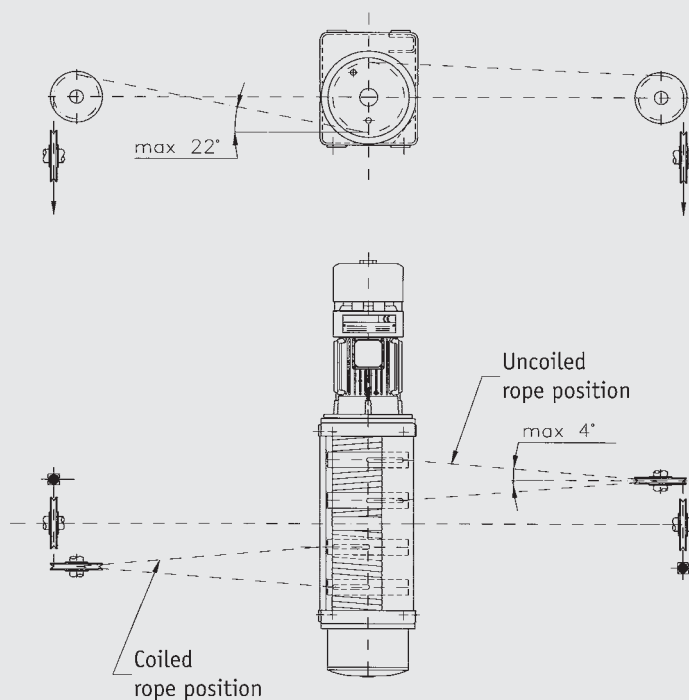
**TYPE DC1
OPPOSITE
DOUBLE ROPE OUTPUT
WITH 2/1+1
ROPE FALLS**

Capacities
from 0,4+0,4 t
to 3,2+3,2 t



**TYPE DC2
OPPOSITE
DOUBLE ROPE OUTPUT
WITH 2/2+2
ROPE FALLS**

Capacities
from 0,8+0,8 t
to 6,3+6,3 t



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