

TECHNICAL GUIDE

NOVA BLACKLINE 50Hz

SI

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1 UPDATE HISTORY

Section	Changes	Date	Handled by
All	First version	18.2.2015	TUISKSA
2, 3.3, 4.3, 4.4, 5.3, 5.4	Frame sizes updated regarding technical characteristics.	7.4.2015	TUISKSA
2.1, 2.4, 2.9, 2.14, 2.15, 2.16	Added information on double girder trolley.	2/2016	TUISKSA
2.1, 2.5, 2.10	Standard features: Added information on capacity and duty rating regarding hook.	2/2016	TUISKSA
2.2, 2.6, 2.11	Optional features: Added anti-jump catches (for double girder trolleys)	2/2016	TUISKSA
5	Added information on product codes.	2/2016	TUISKSA

2 SUMMARY OF TECHNICAL CHARACTERISTICS

Hoists for single girder cranes

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds			Traveling Speeds				
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
2000	B	04	M5	A	6	A	F	134.2	P1	0.8	5	10	MF06MA104	5	20	80
				C	9.5											
2500	B	04	M6	A	6	A	F	134.2	P2	0.8	5	12.5	MF06MA104	5	20	80
				C	9.5											
3200	B	04	M5	A	6	A	F	134.2	P2	0.8	5	16	MF06MA104	5	20	80
				C	9.5											
4000	C	04	M6	B	6	D	F	160.3	P3	0.8	5	20	MF06MA104	5	20	100
				C	9											
5000	C	04	M5	B	6	D	F	160.3	P3	0.8	5	25	MF06MA104	5	20	100
				C	9											
6300	C	04	M4	B	6	D	E	192.6	P3	0.7	4	25	MF06MA104	5	20	125
				C	9											
8000	D	04	M6	D	9	G	F	185.3	P5	0.8	5	40	2pcs MF06MA104	5	20	125
				E	12											
10000	D	04	M5	D	9	G	F	185.3	P5	0.8	5	50	2pcs MF06MA104	5	20	125
				E	12											
12500	D	04	M4	D	9	G	E	223.8	P5	0.7	4	50	2pcs MF06LA104	6	24	150
				E	12											

Hoists for double girder cranes

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		fm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
2000	B	04	M5	A	6	A	F	134.2	P1	0.8	5	10	MF06MA104	5	20	90
				C	9.5											
2500	B	04	M6	A	6	A	F	134.2	P2	0.8	5	12.5	MF06MA104	5	20	90
				C	9.5											
3200	B	04	M5	A	6	A	F	134.2	P2	0.8	5	16	MF06MA104	5	20	90
				C	9.5											
4000	C	04	M6	B	6	D	F	160.3	P3	0.8	5	20	MF06LA104	5	20	90
				C	9											
5000	C	04	M5	B	6	D	F	160.3	P3	0.8	5	25	MF06LA104	5	20	90
				C	9											
6300	C	04	M4	B	6	D	E	192.6	P3	0.7	4	25	MF06LA104	5	20	90
				C	9											
8000	D	04	M6	D	9	G	F	185.3	P5	0.8	5	40	2pcs MF06LA104	5	20	110
				E	12											
10000	D	04	M5	D	9	G	F	185.3	P5	0.8	5	50	2pcs MF06LA104	5	20	110
				E	12											
12500	D	04	M4	D	9	G	E	223.8	P5	0.7	4	50	2pcs MF06LA104	6	24	110
				E	12											
12000	D	06	M6	F	10	H	F	185.3	P5	0.5	3.2	38	2pcs MF06LA104	6	24	140
				G	13											
15000	D	06	M5	F	10	H	F	185.3	P5	0.5	3.2	48	2pcs MF06LA104	6	24	140
				G	13											
16000	D	08	M5	F	8	H	F	185.3	P5	0.4	2.5	40	2pcs MF06LA104	6	24	140
				G	10											
20000	D	08	M4	F	8	H	F	185.3	P5	0.4	2.5	50	2pcs MF06LA104	6	24	140
				G	10											

BB

2.1 BB Standard Features

Features for...	
Hoisting	<ul style="list-style-type: none"> • Mechanical limit switch as overload protector • 4-step hoisting limit switch
Hoist motor	<ul style="list-style-type: none"> • Two-speed pole-change hoisting motor, 6:1 speed ratio • 60 % ED • F class insulation • IP55 protection • Klixon type bimetal switch for thermal protection
Hook	<ul style="list-style-type: none"> • Hook forging strength class V (DIN15400) • Hook forging type HBC with hand grip, size 1.6 (DIN15401) • Capacity and duty rating EN13001-3-5, ISO 17440 (ASME B30.10) • Safety latch
Rope reeving	<ul style="list-style-type: none"> • Rope Type A • EN-GJS-700-3 cast iron rope guide incl. pressure roller for slack rope protection. • EN-GJS-500-7 rope sheaves • Rope sheave / rope diameter ratio according to ISO M6 duty class as minimum
Traveling	<ul style="list-style-type: none"> • Low headroom trolley flange width range 80–410 mm • Double girder trolley rail gauge 1200 mm • One travel motor in trolley • EN-GJS-500-7 cast iron flanged rail wheels, 2 driven by traveling machinery. • 4 pcs rubber buffers • Jump-off protection • Axle failure protection
Travel machinery	<ul style="list-style-type: none"> • Two-speed pole-change motor with DC brake • Gear type GEK106PT1B0 (low headroom trolley) • Gear type GES342 (double girder trolley) • 40 % ED • IP55 protection • Klixon type bimetal switch for thermal protection
Electrical outfit	<ul style="list-style-type: none"> • Standard 3-phase voltages 50Hz: 380V, 400V, 415V • Standard control voltage: 48V / 50Hz • Assembly according to IEC standards • IP 55 / NEMA 3R steel control panel • Electrics for single hoist use in crane application (main contactor nor control voltage transformer not included) • Plug in connectors for power supply and control cables
Environment	<ul style="list-style-type: none"> • Ambient temperature +5°C...+40°C
Surface treatment	<ul style="list-style-type: none"> • Corrosivity Class 3L according to EN ISO 12944
Marking	<ul style="list-style-type: none"> • Hoist type plate incl. CE mark • Rope code sticker • Hoist stickers: brand name and type designation • Hook stickers: brand name and load
Documents	<ul style="list-style-type: none"> • 1 pcs Hoist Owner's Manual • Hoist test certificate • Wire rope certificate • Hook certificate
Delivery	<ul style="list-style-type: none"> • Wooden crate packing. Size according to the trolley • Anticorrosion plastics around the hoist

2.2 BB Optional Features

<ul style="list-style-type: none"> • Hook-operated ultimate hoisting limit • Trolley travel limit switch, 2-step (slow+stop) • Light and horn for overload indication • Anti-jump catches (for double girder trolleys)
--

2.3 Low Headroom Hoist BB, REEVING 04

Technical Characteristics

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
2000	B	04	M5	A	6	A	F	134.2	P1	0.8	5	10	MF06MA104	5	20	80
				C	9.5											
2500	B	04	M6	A	6	A	F	134.2	P2	0.8	5	12.5	MF06MA104	5	20	80
				C	9.5											
3200	B	04	M5	A	6	A	F	134.2	P2	0.8	5	16	MF06MA104	5	20	80
				C	9.5											

Hoist dimensions

HOL (m)	Length code	M1 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	TL (mm)	BUF (mm)	Weight (kg)
6	A	316	158	45	486	527	227	363	180
9.5	C	346	158	72	486	527	355	493	200

Motor dimensions

Motor	P1	P2
MOT (mm)	383	443
Weight (kg)	21	31

Trolley dimensions

B min.	B max.	ØWD	ØBU	BU	BUH	E1	GEA	TD	TF
80	410	80	40	47	28	302	123	153	32
TH	TW								
248	29								

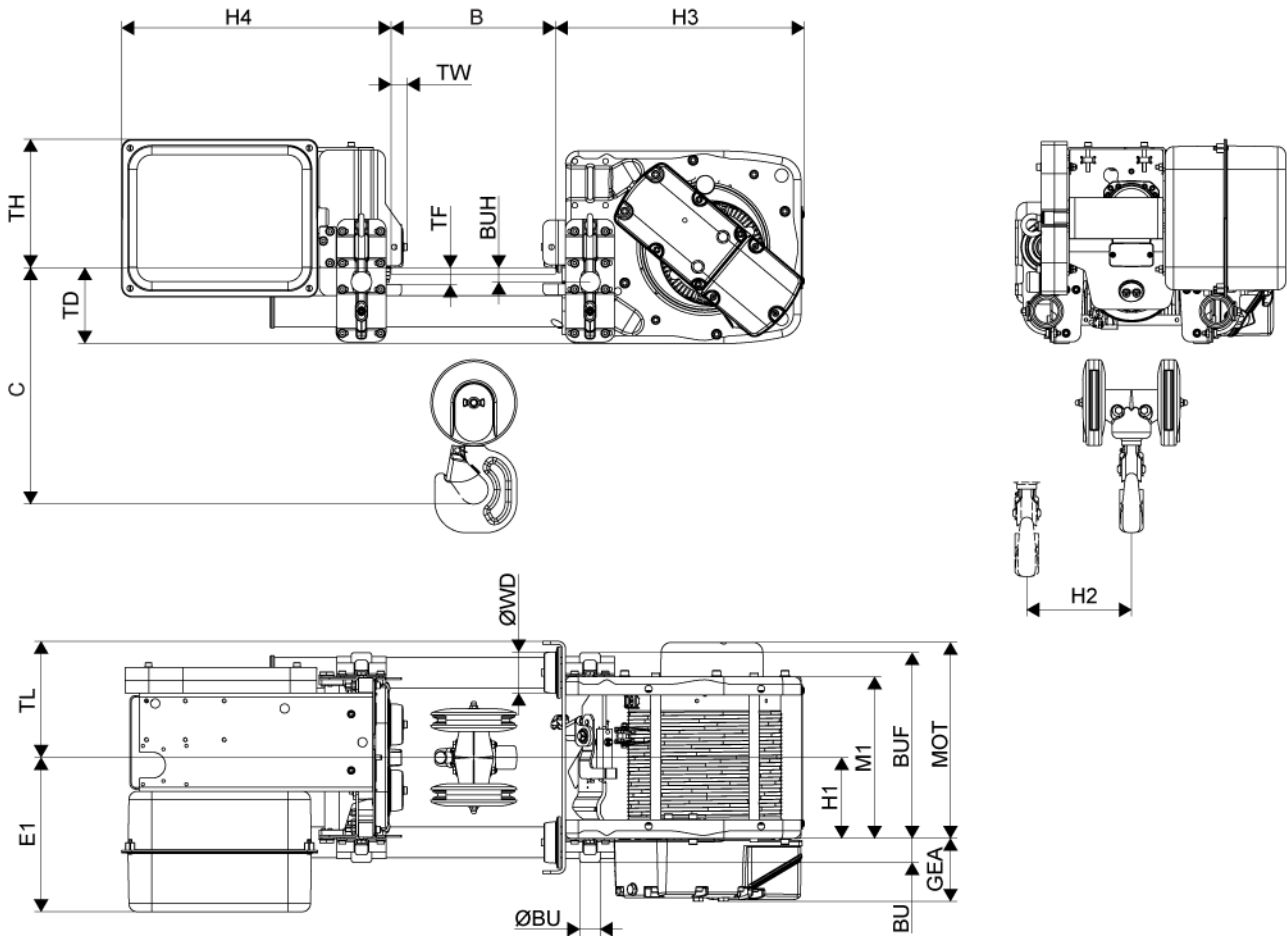
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C-dimensions

B			C
80	-	270	350
271	-	320	380
321	-	370	410
371	-	410	435

Note: All dimensions are in (mm).

Note: Weight is calculated with P1 motor.



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2.4 Double Girder Hoist BB, REEVING 04

Technical Characteristics

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
2000	B	04	M5	A	6	A	F	134.2	P1	0.8	5	10	MF06MA104	5	20	90
				C	9.5											
2500	B	04	M6	A	6	A	F	134.2	P2	0.8	5	12.5	MF06MA104	5	20	90
				C	9.5											
3200	B	04	M5	A	6	A	F	134.2	P2	0.8	5	16	MF06MA104	5	20	90
				C	9.5											

Hoist dimensions

HOL m	Length code	M1 mm	M2 mm	H1 mm	H2 mm	R mm	Weight kg
6	A	316	434	574	45	1200	225
9.5	C	446	434	574	72	1200	235

Motor dimensions

Motor	P1	P2
MOT (mm)	383	443
Weight (kg)	21	31

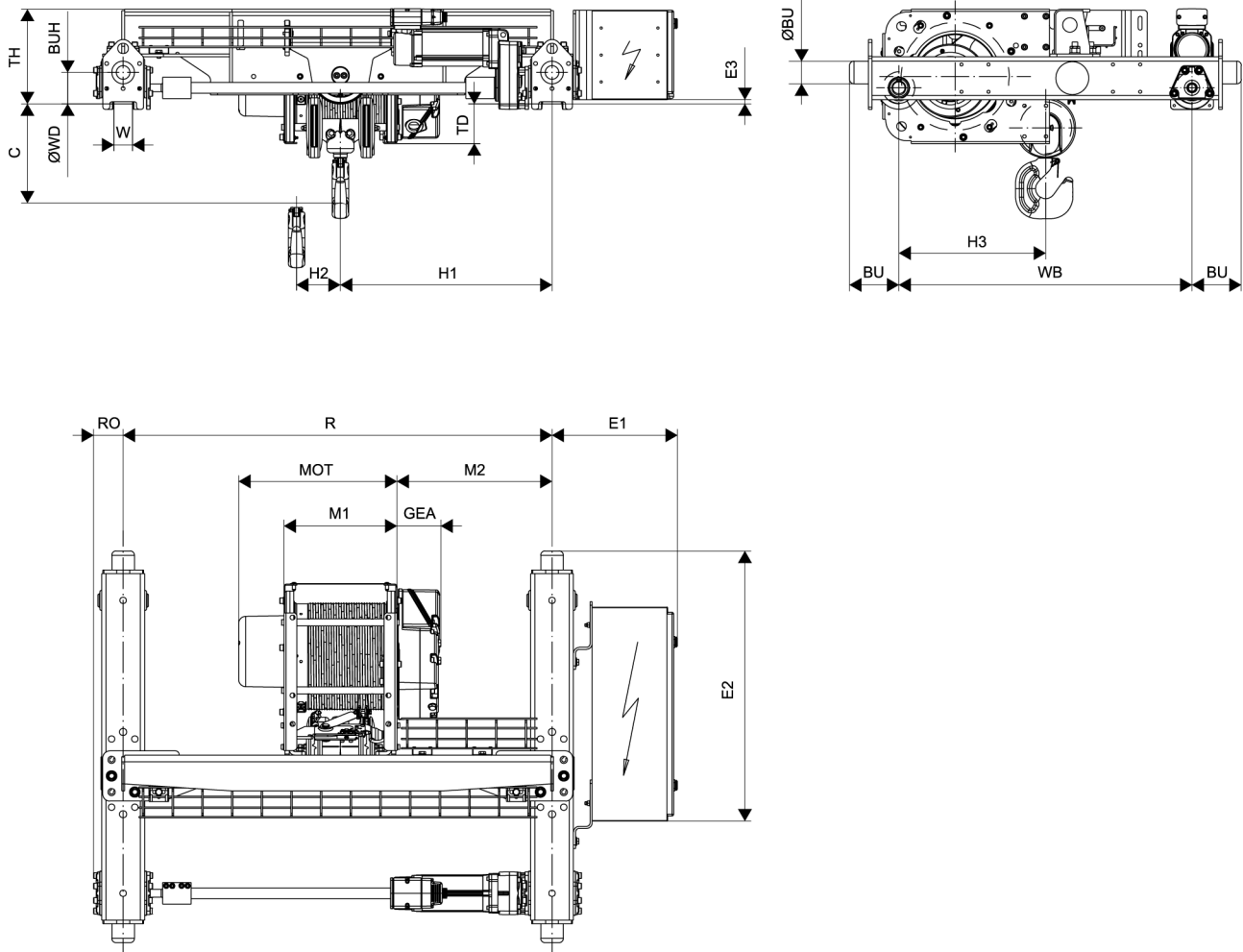
Trolley dimensions

C	ØBU	BU	BUH	E1	E2	E3	GEA	H3	WB
270	63	138	90	327	714	15	123	411	820
ØWD	W min	W max	RO	TD	TH				
90	50	70	83	113	268				

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Note: All dimensions are in (mm).

Note: Weight is calculated with P1 motor.



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BC

2.5 BC Standard Features

Features for...	
Hoisting	<ul style="list-style-type: none"> • Mechanical limit switch as overload protector • 4-step hoisting limit switch
Hoist motor	<ul style="list-style-type: none"> • Two-speed pole-change hoisting motor, 6:1 speed ratio • 60 % ED • F class insulation • IP55 protection • Klixon type bimetal switches for thermal protection
Hook	<ul style="list-style-type: none"> • Hook forging strength class V (DIN15400) • Hook forging type HBC with hand grip, size 2.5 (DIN15401) • Capacity and duty rating EN13001-3-5, ISO 17440 (ASME B30.10) • Safety latch
Rope reeving	<ul style="list-style-type: none"> • Rope Type D • EN-GJS-700-3 cast iron rope guide incl. pressure roller for slack rope protection. • EN-GJS-500-7 rope sheaves • Rope sheave / rope diameter ratio according to ISO M6 duty class as minimum
Traveling	<ul style="list-style-type: none"> • Low headroom trolley flange width range 100–490 mm • Double girder trolley rail gauge 1200 mm • One travel motor in trolley • EN-GJS-500-7 cast iron flanged rail wheels, 2 driven by traveling machinery. • 4 pcs rubber buffers • Jump-off protection • Axle failure protection
Travel machinery	<ul style="list-style-type: none"> • Two-speed pole-change motor with DC brake • Gear type GEK106PT1B0 (low headroom trolley) • Gear type GES342 (double girder trolley) • 40 % ED • IP55 protection • Klixon type bimetal switches for thermal protection
Electrical outfit	<ul style="list-style-type: none"> • Standard 3-phase voltages 50Hz: 380V, 400V, 415V • Standard control voltage: 48V / 50Hz • Assembly according to IEC standards • IP 55 / NEMA 3R steel control panel • Electrics for single hoist use in crane application (main contactor or control voltage transformer not included) • Plug in connectors for power supply and control cables
Environment	<ul style="list-style-type: none"> • Ambient temperature +5°C...+40°C
Surface treatment	<ul style="list-style-type: none"> • Corrosivity Class 3L according to EN ISO 12944
Marking	<ul style="list-style-type: none"> • Hoist type plate incl. CE mark • Rope code sticker • Hoist stickers: brand name and type designation • Hook stickers: brand name and load
Documents	<ul style="list-style-type: none"> • 1 pcs Hoist Owner's Manual • Hoist test certificate • Wire rope certificate • Hook certificate
Delivery	<ul style="list-style-type: none"> • Wooden crate packing. Size according to the trolley • Anticorrosion plastics around the hoist

2.6 BC Optional Features

<ul style="list-style-type: none"> • Hook-operated ultimate hoisting limit • Trolley travel limit switch, 2-step (slow+stop) • Light and horn for overload indication • Anti-jump catches (for double girder trolleys)
--

2.7 Low Headroom Hoist BC, REEVING 04

Technical Characteristics

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
4000	C	04	M6	B	6	D	F	160.3	P3	0.8	5	20	MF06MA104	5	20	100
				C	9											
5000	C	04	M5	B	6	D	F	160.3	P3	0.8	5	25	MF06MA104	5	20	100
				C	9											

Hoist dimensions

HOL (m)	Length code	M1 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	TL (mm)	BUF (mm)	Weight (kg)
6	B	346	338	49	578	536	354	519	330
9	C	446	338	74	578	536	454	619	350

Motor dimensions

Motor	P3
MOT (mm)	468
Weight (kg)	35

Trolley dimensions

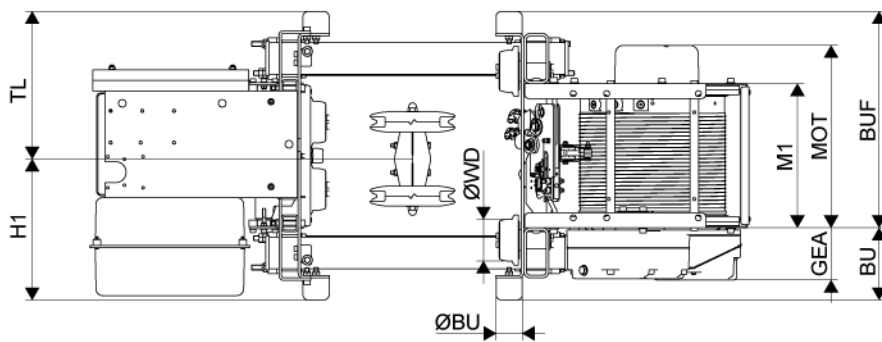
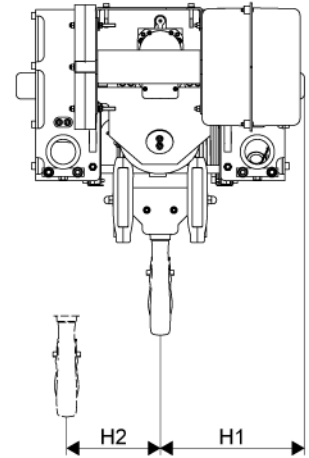
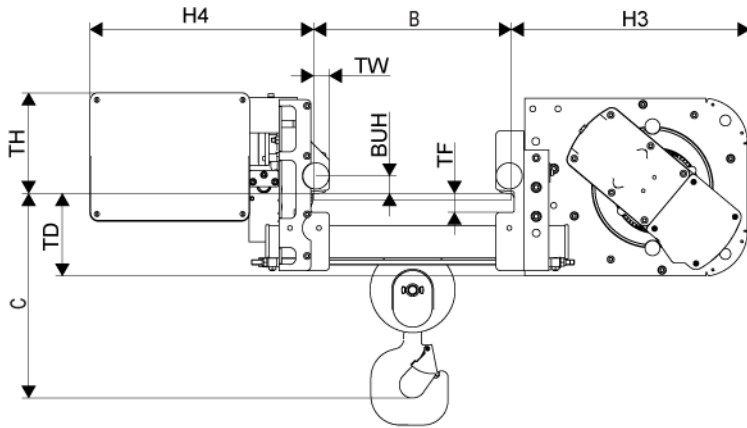
B min.	B max.	ØWD	ØBU	BU	BUH	GEA	TD	TF	TH	TW
100	490	100	63	173	42	126	203	45	241	38

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C-dimensions

B		C
100	-	199
200	-	249
250	-	300
301	-	350
351	-	400
401	-	450
451	-	490

Note: All dimensions are in (mm).



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2.8 Low Headroom Hoist BC, REEVING 04, extended load

Technical Characteristics

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
6300	C	04	M4	B	6	D	E	192.6	P3	0.7	4	25	MF06MA104	5	20	125
				C	9											

Hoist dimensions

HOL (m)	Length code	M1 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	TL (mm)	BUF (mm)	Weight (kg)
6	B	346	366	49	578	538	380	546	330
9	C	446	366	74	578	538	480	646	350

Motor dimensions

Motor	P3
MOT (mm)	468
Weight (kg)	35

Trolley dimensions

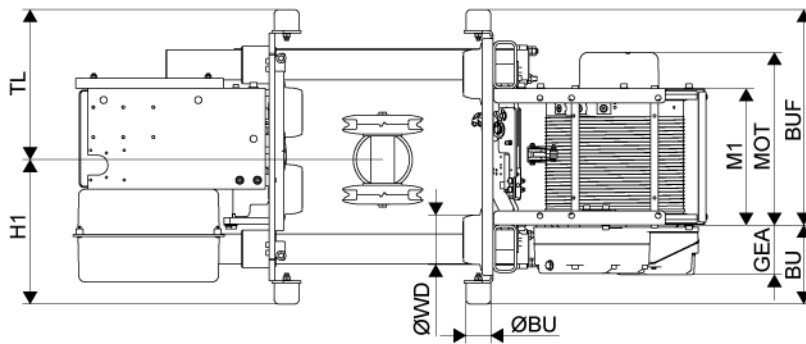
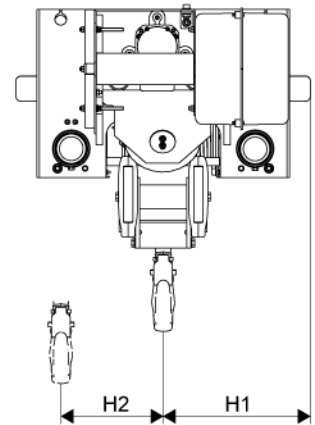
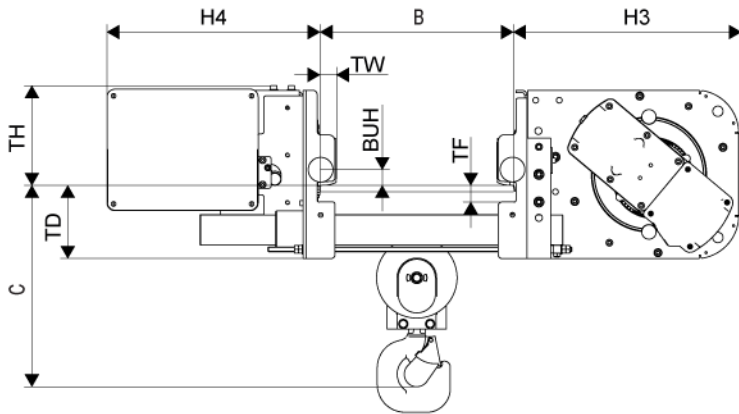
B min.	B max.	ØWD	ØBU	BU	BUH	GEA	TD	TF	TH	TW
100	490	125	63	200	41	126	190	42	253	42

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C-dimensions

B			C
100	-	199	505
200	-	249	470
250	-	300	440
301	-	350	475
351	-	400	505
401	-	450	540
451	-	490	570

Note: All dimensions are in (mm).



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2.9 Double Girder Hoist BC, REEVING 04

Technical Characteristics

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
4000	C	04	M6	B C	6 9	D	F	160.3	P3	0.8	5	20	MF06LA104	5	20	90
5000	C	04	M5	B C	6 9	D	F	160.3	P3	0.8	5	25	MF06LA104	5	20	90
6300	C	04	M4	B C	6 9	D	E	192.6	P3	0.7	4	25	MF06LA104	5	20	90

Hoist dimensions

HOL m	Length code	M1 mm	M2 mm	H1 mm	H2 mm	R mm	Weight kg
6	B	346	372	537	49	1200	315
9	C	446	372	537	74	1200	325

Motor dimensions

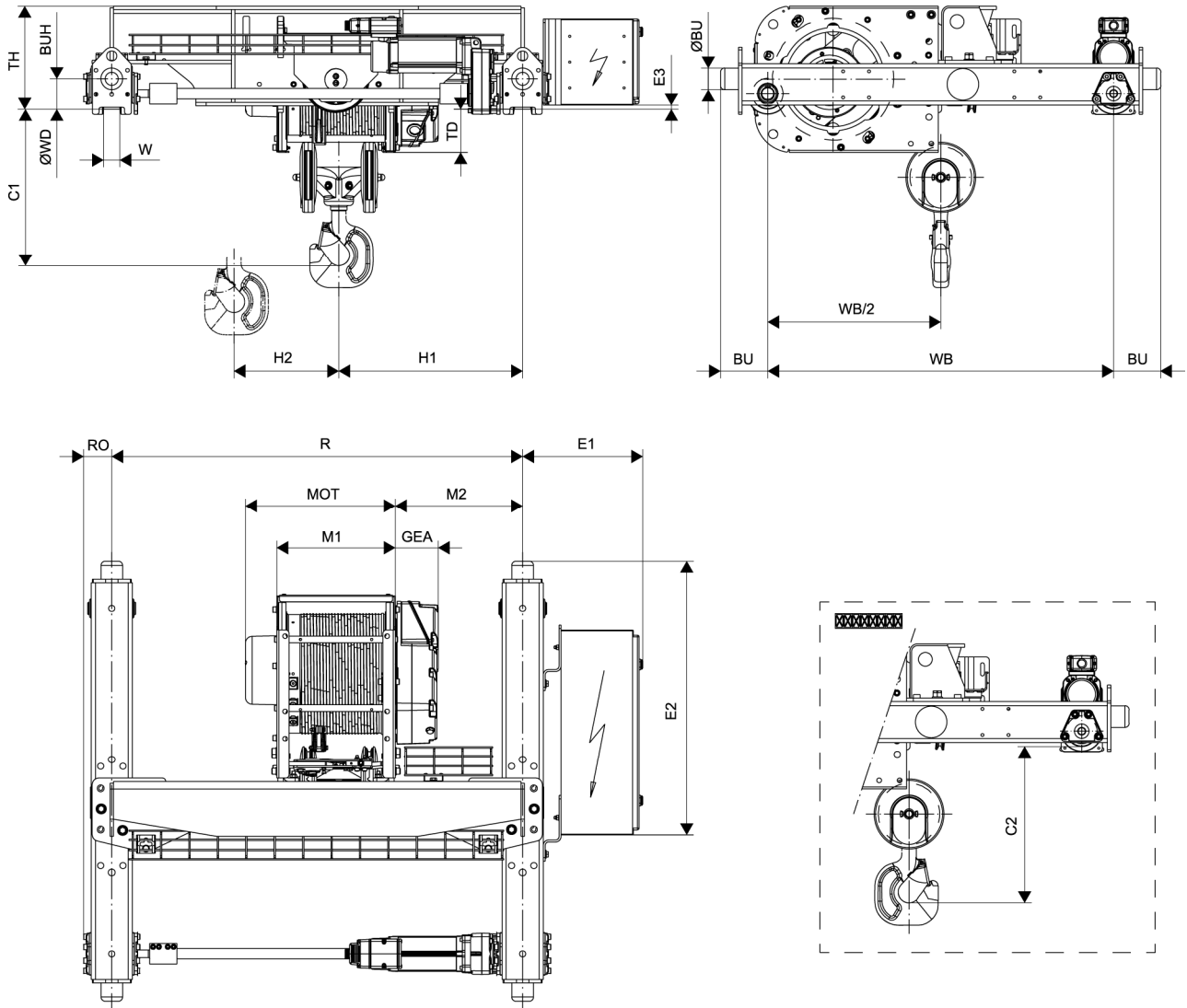
Motor	P3
MOT (mm)	468
Weight (kg)	35

Trolley dimensions

C1	C2	ØBU	BU	BUH	E1	E2	E3	GEA
400	416	63	138	90	327	758	12	125
H3	WB	ØWD	W min	W max	RO	TD	TH	
482	1010	90	50	70	83	126	304	

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Note: All dimensions are in (mm).



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BD

2.10 BD Standard Features

Features for...	
Hoisting	<ul style="list-style-type: none"> • Mechanical limit switch as overload protector • 4-step hoisting limit switch
Hoist motor	<ul style="list-style-type: none"> • Two-speed pole-change hoisting motor, 6:1 speed ratio • 60 % ED • F class insulation • IP55 protection • Klixon type bimetal switches for thermal protection
Hook	<ul style="list-style-type: none"> • Hook forging strength class V (DIN15400) • Hook forging type HBC with hand grip, size 5 (DIN15401) • Capacity and duty rating EN13001-3-5, ISO 17440 (ASME B30.10) • Safety latch
Rope reeving	<ul style="list-style-type: none"> • Rope Type G • EN-GJS-700-3 cast iron rope guide incl. pressure roller for slack rope protection • EN-GJS-500-7 rope sheaves • Rope sheave / rope diameter ratio according to ISO M6 duty class as minimum
Traveling	<ul style="list-style-type: none"> • Low headroom trolley flange width range 100 – 610 mm. Factory settings max. width or package size • Double girder trolley rail gauge 1400 mm (reeving 04) or 2000 mm (reevings 06 and 08) or 2400 mm (reevings 06 and 08) • Two travel motors • EN-GJS-500-7 cast iron flanged rail wheels, 2 driven by traveling machinery. • 4 pcs rubber buffers • Jump-off protection • Axle failure protection
Travel machinery	<ul style="list-style-type: none"> • Two speed pole-change motors with DC brake • Gear type GEK106PT1B0 (low headroom trolley) • Gear type GES342 (double girder trolley, reeving 04) • Gear type GES350 (double girder trolley, reevings 06 and 08) • 40 % ED • IP55 protection • Klixon type bimetal switches for thermal protection
Electrical outfit	<ul style="list-style-type: none"> • Standard 3-phase voltages 50Hz: 380V, 400V, 415V • Standard control voltage: 48V / 50Hz • Assembly according to IEC standards • IP 55 / NEMA 3R steel control panel • Electrics for single hoist use in crane application (main contactor or control voltage transformer not included) • Plug in connectors for power supply and control cables
Environment	<ul style="list-style-type: none"> • Ambient temperature +5°C...+40°C
Surface treatment	<ul style="list-style-type: none"> • Corrosivity Class 3L according to EN ISO 12944
Marking	<ul style="list-style-type: none"> • Hoist type plate • Rope code sticker • Hoist stickers: brand name and type designation • Hook stickers: brand name and load
Documents	<ul style="list-style-type: none"> • 1 pcs Hoist Owner's Manual • Hoist test certificate • Wire rope certificate • Hook certificate
Delivery	<ul style="list-style-type: none"> • Wooden crate packing. Size according to the trolley • Anticorrosion plastics around the hoist

2.11 BD Optional Features

- | |
|--|
| <ul style="list-style-type: none"> • Hook-operated ultimate hoisting limit • Trolley travel limit switch, 2-step (slow+stop) • Light and horn for overload indication • Anti-jump catches (for double girder trolleys) |
|--|

2.12 Low Headroom Hoist BD, REEVING 04

Technical Characteristics

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
8000	D	04	M6	D	9	G	F	185.3	P5	0.8	5	40	2pcs MF06MA104	5	20	125
10000	D	04	M5	D	9	G	F	185.3	P5	0.8	5	50	2pcs MF06MA104	5	20	125

Hoist dimensions

HOL (m)	Length code	M1 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	BUF (mm)	Weight (kg)
9	D	546	489	88	668	618	802	610
12	E	666	489	118	668	618	922	660

Motor dimensions

Motor	P5
MOT (mm)	572
Weight (kg)	58

Trolley dimensions

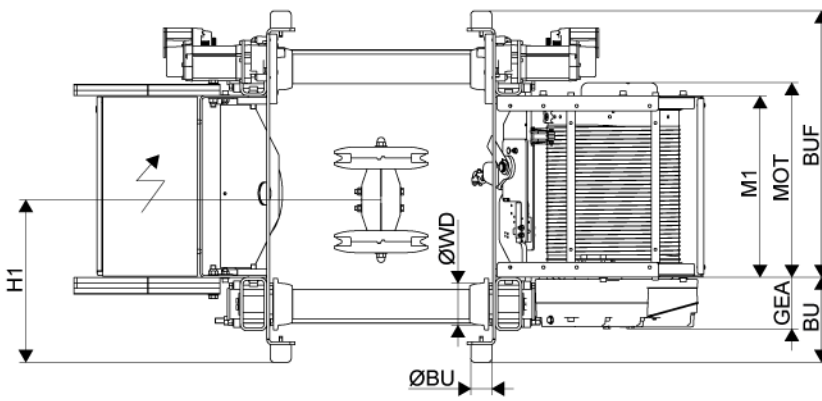
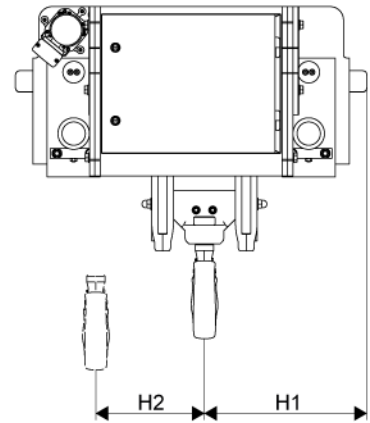
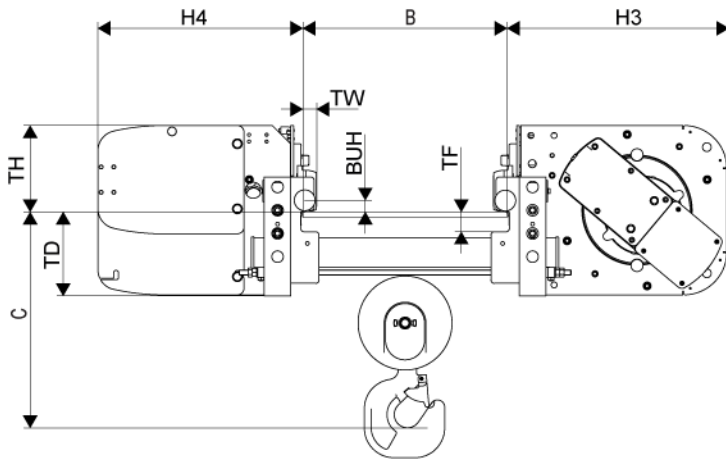
B min.	B max.	ØWD	ØBU	BU	BUH	GEA	TD	TF	TH	TW
100	610	125	63	256	35	155	256	60	266	42

D007560_A

C-dimensions

B	C
100 - 199	660
200 - 289	630
290 - 530	600
531 - 610	650

Note: All dimensions are in (mm).



D007560_A

2.13 Low Headroom Hoist BD, REEVING 04, extended load

Technical Characteristics

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
12500	D	04	M4	D	9	G	E	223.8	P5	0.7	4	50	2pcs MF06LA104	6	24	150
				E	12											

Hoist dimensions

HOL (m)	Length code	M1 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	BUF (mm)	Weight (kg)
9	D	546	488	88	671	618	802	610
12	E	666	488	118	671	618	922	660

Motor dimensions

Motor	P5
MOT (mm)	572
Weight (kg)	58

Trolley dimensions

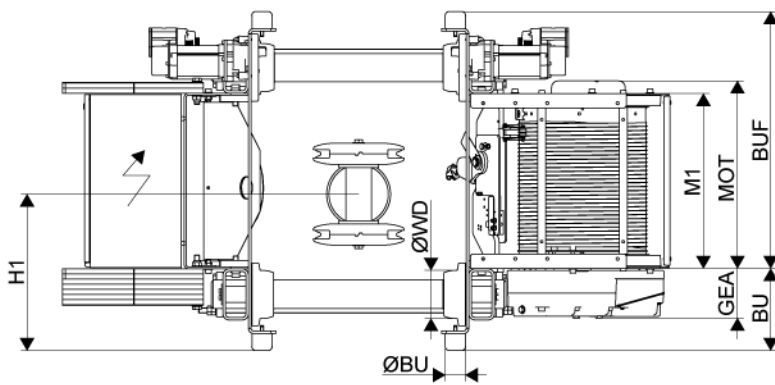
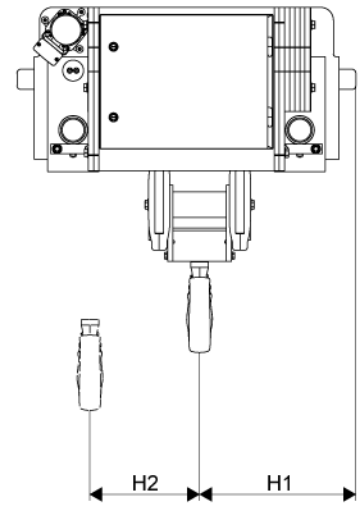
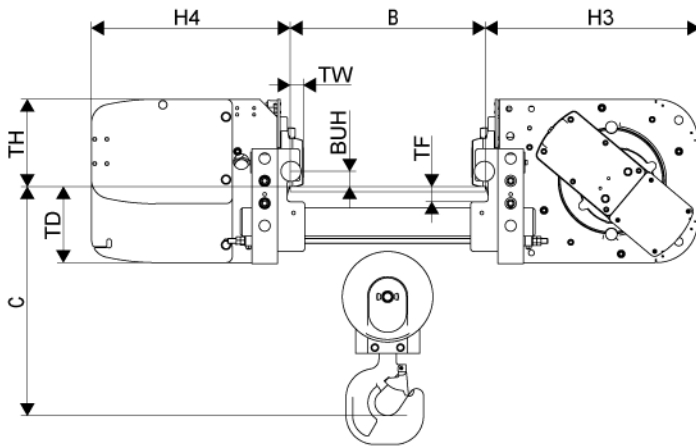
B min.	B max.	ØWD	ØBU	BU	BUH	GEA	TD	TF	TH	TW
100	610	150	63	256	48	155	245	47	277	44

D007561_A

C-dimensions

B			C
100	-	199	715
200	-	289	685
290	-	530	655
531	-	610	705

Note: All dimensions are in (mm).



D007561_A

2.14 Double Girder Hoist BD, REEVING 04

Technical Characteristics

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
8000	D	04	M6	D	9	G	F	185.3	P5	0.8	5	40	2pcs MF06LA104	5	20	110
10000	D	04	M5	D	9	G	F	185.3	P5	0.8	5	50	2pcs MF06LA104	5	20	110
12500	D	04	M4	D	9	G	E	223.8	P5	0.7	4	50	2pcs MF06LA104	5	20	110

Hoist dimensions

HOL (m)	Length code	M1 (mm)	M2 (mm)	H1 (mm)	H2 (mm)	R (mm)	Weight (kg)
9	D	548	408	640	88	1400	670
12	E	668	408	640	118	1400	700

Motor dimensions

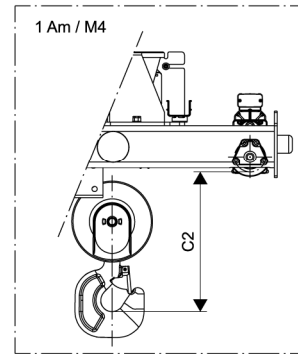
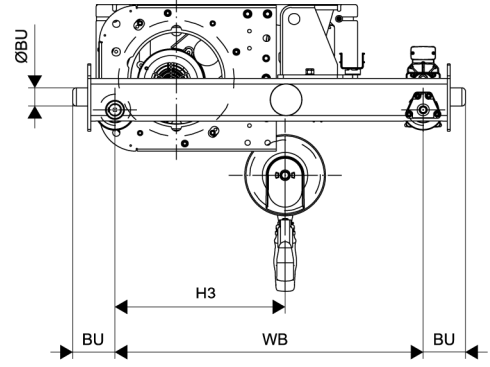
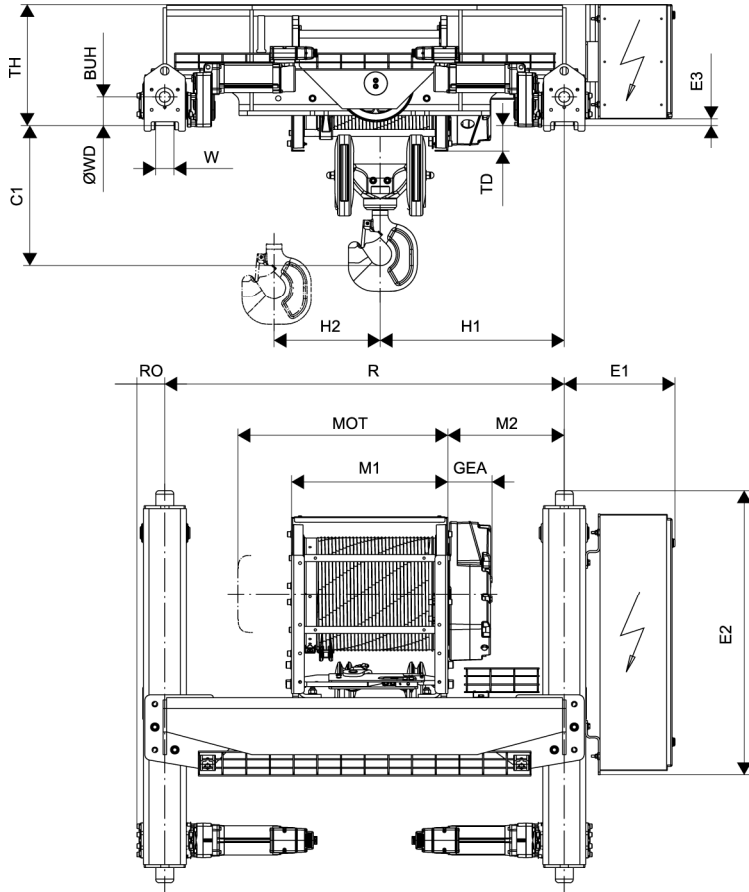
Motor	P5
MOT (mm)	573
Weight (kg)	58

Trolley dimensions

C1	C2	ØBU	BU	BUH	E1	E2	E3	GEA
465	521	63	148	100	382	1028	15	155
H3	WB	ØWD	W min	W max	RO	TD	TH	
585	1080	110	52	87	98	90	426	

D007571_A

Note: All dimensions are in (mm).



D007571_A

2.15 Double Girder Hoist BD, REEVING 06

Technical Characteristics

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
12000	D	06	M6	F	10	H	F	185.3	P5	0.5	3.2	38	2pcs MF06LA104	6	24	140
15000	D	06	M5	F	10	H	F	185.3	P5	0.5	3.2	38	2pcs MF06LA104	6	24	140

Hoist dimensions

HOL (m)	Length code	M1 (mm)	M2 (mm)	H1 (mm)	H2 (mm)	R (mm)	Weight (kg)
10	F	818	918	880	98	2000	850
13	G	1008	1128	1090	132	2400	915

Motor dimensions

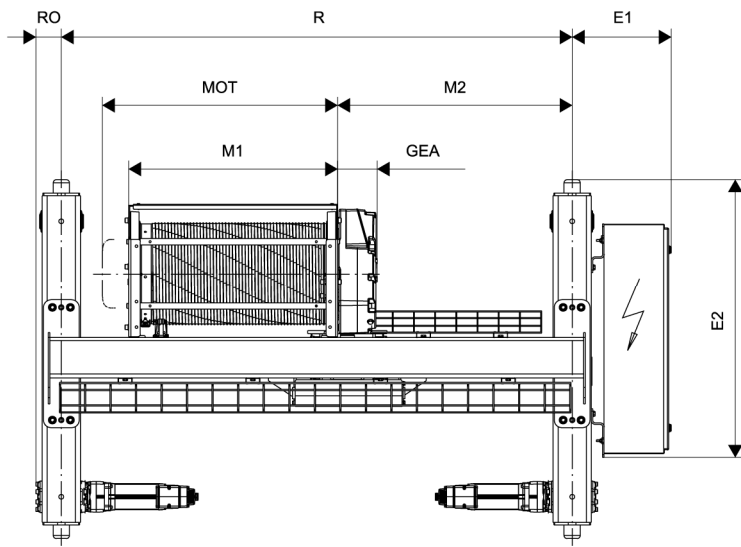
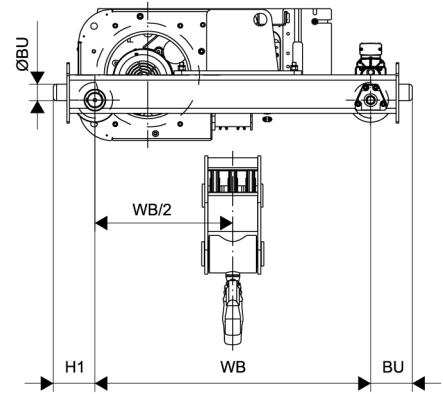
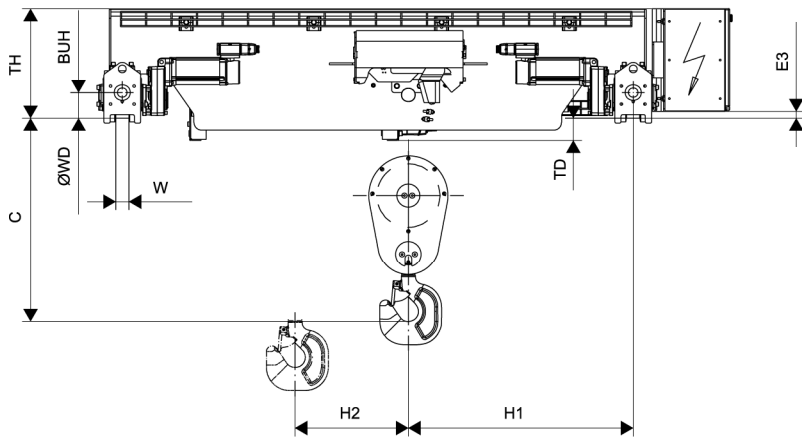
Motor	P5
MOT (mm)	573
Weight (kg)	58

Trolley dimensions

C	ØBU	BU	BUH	E1	E2	E3	GEA	WB
790	63	163	100	382	1343	18	155	1080
ØWD	W min	W max	RO	TD	TH			
140	54	84	98	94	430			

D007572_A

Note: All dimensions are in (mm).



D007572_A

2.16 Double Girder Hoist BD, REEVING 08

Technical Characteristics

Load (kg)	Frame	Falls	Duty ISO	Drum		Rope	Gear		Lifting Speeds				Traveling Speeds			
				Code	HOL (m)		Type	Ratio	Motor	Fixed speed (m/min)		tm / min	Motor	Fixed speed (m/min)		Wheel Diameter (mm)
										Low	High			Low	High	
16000	D	08	M5	F	8	H	F	185.3	P5	0.4	2.5	40	2pcs MF06LA104	6	24	140
20000	D	08	M4	F	8	H	F	185.3	P5	0.4	2.5	50	2pcs MF06LA104	6	24	140

Hoist dimensions

HOL (m)	Length code	M1 (mm)	M2 (mm)	H1 (mm)	H2 (mm)	R (mm)	Weight (kg)
8	F	818	918	880	76	2000	865
10	G	1008	1128	1090	98	2400	925

Motor dimensions

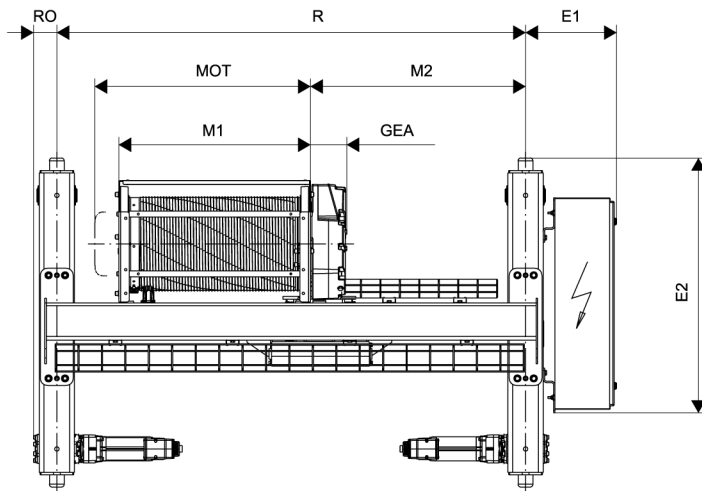
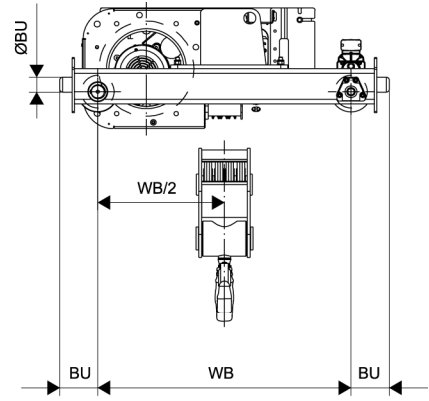
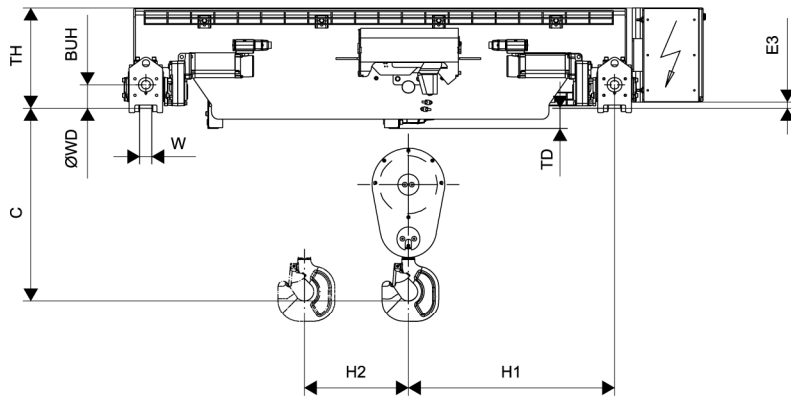
Motor	P5
MOT (mm)	573
Weight (kg)	58

Trolley dimensions

C	ØBU	BU	BUH	E1	E2	E3	GEA	WB
790	63	163	100	382	1343	18	155	1080
ØWD	W min	W max	RO	TD	TH			
140	54	84	98	94	430			

D007573_A

Note: All dimensions are in (mm).



D007573_A

3 HOISTING MOTORS

3.1 Hoisting motor data, Two-speed pole change motors

Duty Group ISO	Q motor data	Characteristic	Unit	P1		P2		P3		P5	
				MF10M-106		MF10Z-106		MF10X-106		MF11X-106	
				High	Low	High	Low	High	Low	High	Low
		Rated power	kW	1.8	0.25	3.6	0.5	4.5	0.7	9	1.4
		Synchronous speed	rpm	3000	500	3000	500	3000	500	3000	500
		Brake torque	Nm	21		21		42		54	
		Max el. br. torque	Nm		32		63		77		107
		El. br. torque	Nm		12.6		25		38		57
		Power fact. start		0.8	0.83	0.83	0.78	0.84	0.77	0.77	0.69
		Starting torque	Nm	12.4	10.7	25	22	34	28	67	56
		Weight	kg	22.6		30.6		35		59	
		Brake inertia	kgm ²	0.00017		0.00017		0.00045		0.0007	
		Inertia w/o brake	kgm ²	0.0027		0.0049		0.0059		0.0116	
M4		Load	tm/min	10		20		25		50	
180	300	Nominal power	kW	1.8	0.25	3.6	0.5	4.5	0.7	9	1.4
Starts/h	Starts/h	Nominal torque	Nm	6.1	6.1	12.3	12.3	15.3	15.3	30	30
30 % ED	50 % ED	Nominal speed	rpm	2780	420	2800	400	2750	415	2680	335
15/3 min		Short time duty	min	60	15	60	15	30	15	30	10
		Power factor		0.82	0.67	0.87	0.63	0.92	0.61	0.90	0.61
		Efficiency		0.66	0.24	0.73	0.30	0.72	0.30	0.72	0.28
M5		Load	tm/min	10		20		25		50	
240	300	Nominal power	kW	1.8	0.25	3.6	0.5	4.5	0.7	9	1.4
Starts/h	starts/h	Nominal torque	Nm	6.1	6.1	12.3	12.3	15.3	15.3	30	30
40 % ED	60 % ED	Nominal speed	rpm	2780	420	2800	400	2750	415	2680	335
30/3.5 min		Short time duty	min	60	15	60	15	30	15	30	10
		Power factor		0.82	0.67	0.87	0.63	0.92	0.61	0.90	0.61
		Efficiency		0.66	0.24	0.73	0.30	0.72	0.30	0.72	0.28
M6		Load	tm/min	8		16		20		40	
300	300	Nominal power	kW	1.5	0.2	2.9	0.4	3.6	0.5	7.5	1.2
Starts/h	starts/h	Nominal torque	Nm	4.9	4.9	9.8	9.8	12.3	12.3	24	24
50 % ED	60 % ED	Nominal speed	rpm	2830	435	2850	420	2830	430	2760	370
30/4 min		Short time duty	min								
		Power factor		0.78	0.64	0.84	0.58	0.89	0.56	0.87	0.56
		Efficiency		0.64	0.22	0.76	0.29	0.74	0.29	0.79	0.28
		Load	tm/min	6.3		12.5		16		32	
	300	Nominal power	kW	1.2	0.16	2.4	0.35	2.9	0.4	6	1
	starts/h	Nominal torque	Nm	3.9	3.9	7.7	7.7	9.8	9.8	19.2	19.2
	60 % ED	Nominal speed	rpm	2860	445	2890	435	2870	440	2820	400
		Short time duty	min								
		Power factor		0.73	0.61	0.77	0.53	0.85	0.51	0.84	0.52
		Efficiency		0.61	0.18	0.75	0.26	0.73	0.27	0.79	0.28
		Load	tm/min	5		10		12.5		25	
	300	Nominal power	kW	0.9	0.12	1.8	0.25	2.4	0.35	4.5	0.7
	starts/h	Nominal torque	Nm	3	3	6.1	6.1	7.7	7.7	15.3	15.3
	60 % ED	Nominal speed	rpm	2890	460	2920	450	2900	450	2870	425
		Short time duty	min								
		Power factor		0.66	0.58	0.69	0.50	0.81	0.48	0.80	0.47
		Efficiency		0.58	0.15	0.73	0.23	0.72	0.24	0.79	0.25

3.2 Hoisting motor currents, Two-speed pole change motors

Nominal voltage		400 V		
Used in voltage range		380...415 V		
		tm/min	Current (Amps)	
			High	Low
P1 MF10M-106	Starting current	-	20	3.6
	Nominal current	10	4.9	2.8
		8	4.3	2.5
		6.3	4	2.5
		5	3.8	2.5
	No-load current	-	3.6	2.8
P2 MF10Z-106	Starting current	-	39	6.7
	Nominal current	20	8.2	4.1
		16	7	3.8
		12.5	6	3.7
		10	5.3	3.8
	No-load current	-	4.5	4.3
P3 MF10X-106	Starting current	-	44	8.6
	Nominal current	25	9.9	5.5
		20	8.4	5
		16	7	5
		12.5	6.1	5.1
	No-load current	-	4.4	5.5
P5 MF11X-106	Starting current	-	83	16
	Nominal current	50	19	11
		40	16	9
		32	13.5	8.9
		25	11.1	8.9
	No-load current	-	7.8	10

4 TRAVELING MOTORS

These motors are driven with fixed voltages and frequencies with the below specified line voltages. Motor nameplate data is the same for all line voltages. Other voltage/frequency versions are not available for these motors.

Duty type	Motor code		MF06MA104		MF06LA104	
	Speed control		2-speed		2-speed	
	Voltage		380V - 415V		380V - 415V	
	Frequency		50 Hz		50 Hz	
	Brake type		DC		DC	
		High	Low	High	Low	
	Synchronous speed	rpm	3000	750	3000	750
	Brake torque	Nm	2	2	2	2
	Starting torque	Nm	2.2	1.7	3.3	2.5
	Electric braking torque	Nm		5.6/2.0		8/3.5
	Starting current	A	3.5	1.0	5.0	1.4
	Maximum torque	Nm	2.2	1.8	3.6	2.7
	Speed at max. torque	rpm	2150	400	1620	380
	80% of max. torque	Nm	1.7	1.4	2.8	2.1
	Speed at 80% torque	rpm	2500	570	2100	530
	Current at 80% torque	A	1.5	0.8	2.3	1.3
	Inertia	kgm ²	0.0004	0.0004	0.0006	0.0006
	Inertia with flywheel	kgm ²				
	Power factor, starting		0.94	0.93	0.92	0.93
	Weight with fan	kg				
	Weight	kg	5.7	5.7	7.8	7.8
	No-load current	A	0.9	0.8	1.1	1.2
	Iron losses	W				
Stator resistance at 20 °C	Ω	69	280	50	175	
S3-20%	Speed	rpm	2800	690	2760	660
	Power	kW	0.3	0.05	0.45	0.1
	Current	A	1.0	0.8	1.3	1.2
	Starting burden	kgm ² /h	2		3	
	Power factor		0.7	0.77	0.83	0.67
S3-40%	Speed	rpm	2800	690	2760	660
	Power	kW	0.3	0.05	0.45	0.1
	Current	A	1.0	0.8	1.3	1.2
	Starting burden	kgm ² /h	1.5		2.5	
	Power factor		0.7	0.77	0.83	0.67
S3-60%	Speed	rpm				
	Power	kW				
	Current	A				
	Starting burden	kgm ² /h				
	Power factor					
S3-100%	Speed	rpm				
	Power	kW				
	Current	A				
	Starting burden	kgm ² /h				
	Power factor					
Efficiency						

5 PRODUCT CODES

5.1 SWF code example (SWF: Nova Blackline, Factory: Q CLASSIC)

B	B	04	L	5	A	F	P	2	35	A	P	1	N
1	(GE09) 2	DES27 3,4	(DES01) 5	(DIM01) 6	GE08 7	HS06 8	HM01 9	HM02 10	(DIM03) 11,12	(HS03) 13	(TM01) 14	(EL05) 15	16

Pos.	Code	Feature code	Feature	Available properties																
1	B		Short product name	B Nova Blackline hoist																
2	B	(GE09)	Frame size	<table border="0"> <tr> <td>B</td> <td>303 mm rope drum diameter</td> <td>A</td> </tr> <tr> <td>C</td> <td>355 mm rope drum diameter</td> <td>B</td> </tr> <tr> <td>D</td> <td>406 mm rope drum diameter</td> <td>C</td> </tr> </table>	B	303 mm rope drum diameter	A	C	355 mm rope drum diameter	B	D	406 mm rope drum diameter	C							
B	303 mm rope drum diameter	A																		
C	355 mm rope drum diameter	B																		
D	406 mm rope drum diameter	C																		
3,4	04	DES27	Rope reeving code	<table border="0"> <tr> <td>0</td> <td><u>Reeving code</u></td> <td>4</td> <td><u>Number of rope falls per Rope</u></td> </tr> <tr> <td>0</td> <td>1 rope fixed to drum</td> <td>4</td> <td>4 rope falls per rope</td> </tr> <tr> <td></td> <td></td> <td>6</td> <td>6 rope falls per rope</td> </tr> <tr> <td></td> <td></td> <td>8</td> <td>8 rope falls per rope</td> </tr> </table>	0	<u>Reeving code</u>	4	<u>Number of rope falls per Rope</u>	0	1 rope fixed to drum	4	4 rope falls per rope			6	6 rope falls per rope			8	8 rope falls per rope
0	<u>Reeving code</u>	4	<u>Number of rope falls per Rope</u>																	
0	1 rope fixed to drum	4	4 rope falls per rope																	
		6	6 rope falls per rope																	
		8	8 rope falls per rope																	
5	L	(DES01)	Trolley type	<table border="0"> <tr> <td>L</td> <td>Low headroom trolley</td> <td>L</td> </tr> <tr> <td>M</td> <td>Double girder trolley medium connection</td> <td>M</td> </tr> </table>	L	Low headroom trolley	L	M	Double girder trolley medium connection	M										
L	Low headroom trolley	L																		
M	Double girder trolley medium connection	M																		
6	5	(DIM01)	Hoist duty group	<table border="0"> <tr> <td>4</td> <td>ISO M4</td> <td>M4</td> </tr> <tr> <td>5</td> <td>ISO M5</td> <td>M5</td> </tr> <tr> <td>6</td> <td>ISO M6</td> <td>M6</td> </tr> </table>	4	ISO M4	M4	5	ISO M5	M5	6	ISO M6	M6							
4	ISO M4	M4																		
5	ISO M5	M5																		
6	ISO M6	M6																		
7	A	GE08	Hoist drum length	<table border="0"> <tr> <td>A</td> <td>310 mm rope drum length</td> </tr> <tr> <td>B</td> <td>340 mm rope drum length</td> </tr> <tr> <td>C</td> <td>440 mm rope drum length</td> </tr> <tr> <td>D</td> <td>540 mm rope drum length</td> </tr> <tr> <td>E</td> <td>660 mm rope drum length</td> </tr> <tr> <td>F</td> <td>810 mm rope drum length</td> </tr> <tr> <td>G</td> <td>1000 mm rope drum length</td> </tr> </table>	A	310 mm rope drum length	B	340 mm rope drum length	C	440 mm rope drum length	D	540 mm rope drum length	E	660 mm rope drum length	F	810 mm rope drum length	G	1000 mm rope drum length		
A	310 mm rope drum length																			
B	340 mm rope drum length																			
C	440 mm rope drum length																			
D	540 mm rope drum length																			
E	660 mm rope drum length																			
F	810 mm rope drum length																			
G	1000 mm rope drum length																			
8	F	HS06	Hoisting gear type	<table border="0"> <tr> <td>E</td> <td>Hoist speed 4 m/min</td> <td rowspan="2">Note: Speeds for 4 roped, 50Hz</td> </tr> <tr> <td>F</td> <td>Hoist speed 5 m/min</td> </tr> </table>	E	Hoist speed 4 m/min	Note: Speeds for 4 roped, 50Hz	F	Hoist speed 5 m/min											
E	Hoist speed 4 m/min	Note: Speeds for 4 roped, 50Hz																		
F	Hoist speed 5 m/min																			
9	P	HM01	Hoist motor type	P Pole change motor																
10	2	HM02	Hoisting motor size	# 1-5 as motor power code (see technical guide)																
11,12	35	(DIM03)	Flange width	## i.e. 350 mm = 35																
13	A	(HS03)	Overload device	<table border="0"> <tr> <td>A</td> <td>Mechanical limit switch</td> <td>HS03 value MEC</td> </tr> </table>	A	Mechanical limit switch	HS03 value MEC													
A	Mechanical limit switch	HS03 value MEC																		
14	P	(TM01)	Trolley motor type	<table border="0"> <tr> <td>P</td> <td>Pole change motor</td> <td>TM01 value P</td> </tr> </table>	P	Pole change motor	TM01 value P													
P	Pole change motor	TM01 value P																		
15	1	(EL05)	Electric provisions	<table border="0"> <tr> <td>1</td> <td>Single hoist for crane</td> <td>EL05 value CRANE</td> </tr> </table>	1	Single hoist for crane	EL05 value CRANE													
1	Single hoist for crane	EL05 value CRANE																		
16	N		Special properties	<table border="0"> <tr> <td>N</td> <td>Standard hoist without any options</td> </tr> <tr> <td>F</td> <td>Options selected only from feature list</td> </tr> </table>	N	Standard hoist without any options	F	Options selected only from feature list												
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