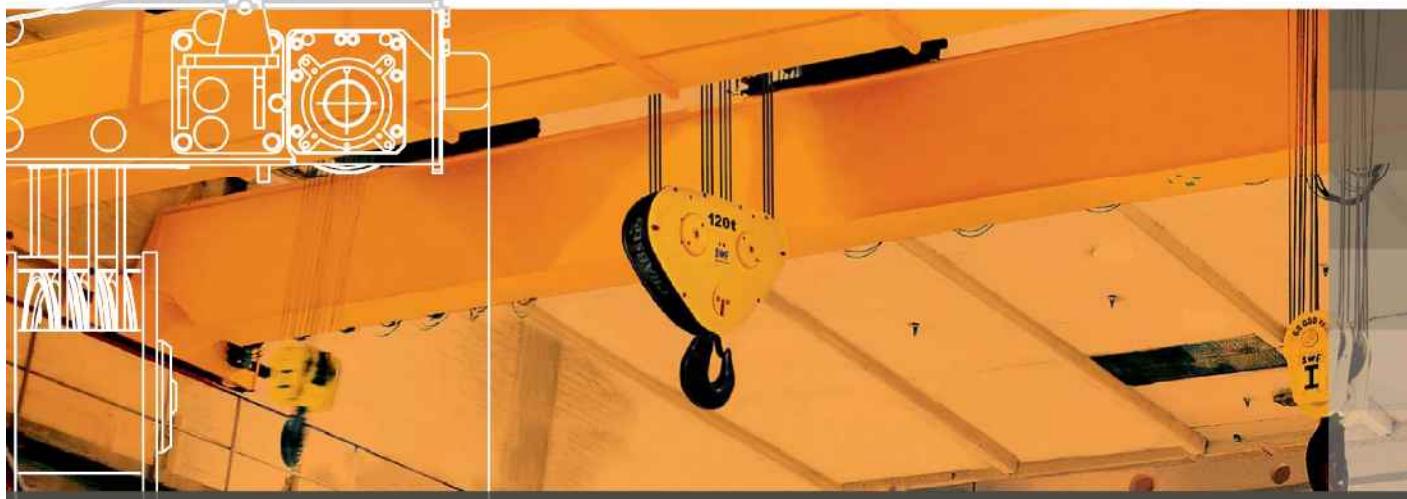


partner of



Look ahead!



ENGLISH

CRABster

partner of



ABOUT US

Hefei Huayuan Crane Works Co. Ltd., (HWC) has been founded since 1995. With growing demand for industrial crane expertise, HWC has developed into a fully integrated crane equipment and service provider, offering new manufactured crane systems, Engineering, Inspections, Service, Modernizations and Training. HCW now becomes a partner of SWF, one of the leading companies in crane and lifting equipment in the world.

Quality, reliability, experience, and service are the corner stones of our business. From design to installation, Huayuan Crane Works is equipped with the expertise to handle all your material handling needs.

The products of HCW have Grade A Manufacture License of Special Equipment and Grade A Installation, Remaking and Servicing License for Special Equipment issued by the State General Administration of Quality Supervision, Inspection and

Quarantine, China. Meanwhile, our company has ISO9001 Quality Management System Certificate, ISO14001 Environmental Management System Certificate and OSHAS18000 Occupation Health Safety Management System Certificate. Our products are widely applied in Automobile, Construction Machinery, Electric Power, Steel, Aluminum, and Ship Building plant. Our clients include many famous enterprises, such as JAC, Chery, HITACHI, KOBELCO, ABB, HELI, METALONE etc.

We dedicate to satisfy our customers' needs, provide you with the best products and services. We sincerely look forward to serving you.

CRABster winch

Modular winch for
efficient heavy load handling



- Loads up to 160t
- Two frame sizes
- Available as a solo winch or with a crane kit
- Double girder trolley or fixed hoist
- True vertical lift – no horizontal hook movement
- Compact design
- Optimal approach dimensions
- Stepless crane and trolley travelling
- Ambient temperatures from -20°C up to +40°C

- **Precise and safe operation**

Hoist condition monitoring system NovaMaster as overload protection with strain gauge load measuring, hoisting frequency inverter with closed loop, hoisting motor with encoder, frequency inverter controlled travelling machineries

- **Optimal usage of space and equal wheel load distribution**

Compact design and optimal approach dimensions, no horizontal hook movement

- **Various design options**

Well thought-out construction based on standardized components, calculation support via CraneMaster software

- **Lower maintenance costs and short downtimes**

New hook block design with tilted sheaves for reduced rope wear, easy accessible central lubrication, just one type of hoisting motor, gear and frequency inverter per frame size

Advantage: highest possible efficiency and optimal usage of space



Well thought-out technology and powerful components guarantee maximum safety and efficiency.

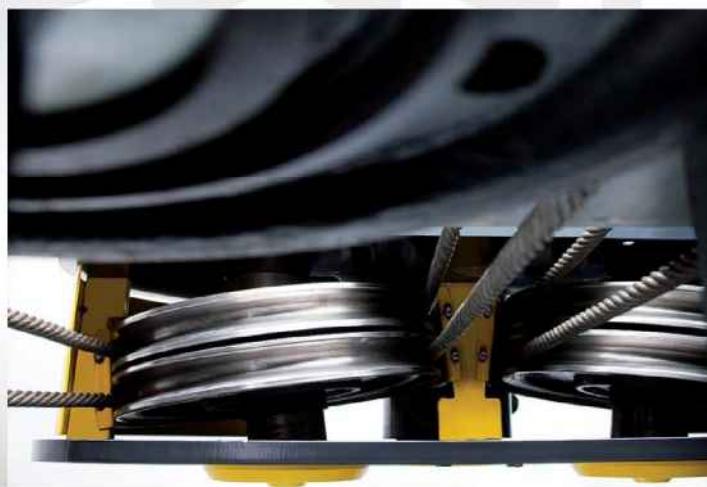


State-of-the-art electrics.

The CRABster winch is delivered complete with 6 control panels, all of which are pre-bolted and pre-wired accordingly. Standardised modules are used depending upon the performance features of the crane or of the individual winch. In the case of an individual winch, one control panel remains free for the individual equipment. The main components of the control panel are the frequency inverters for crane and trolley travelling, as well as lifting and lowering, the hoist condition monitoring system NovaMaster, the main contactor and the control transformer. There is also space for the optional radio remote control. Each control panel is equipped with 15W interior lighting. A 230V socket can be found on the narrow outer side of the standing unit.

Standard PLIOTEX cable markings guarantee the sustainable and quick overview of the wiring.

Stainless steel control panels, rain protection covers, heaters and air conditioning systems for operation in adverse conditions are available as optional extras.



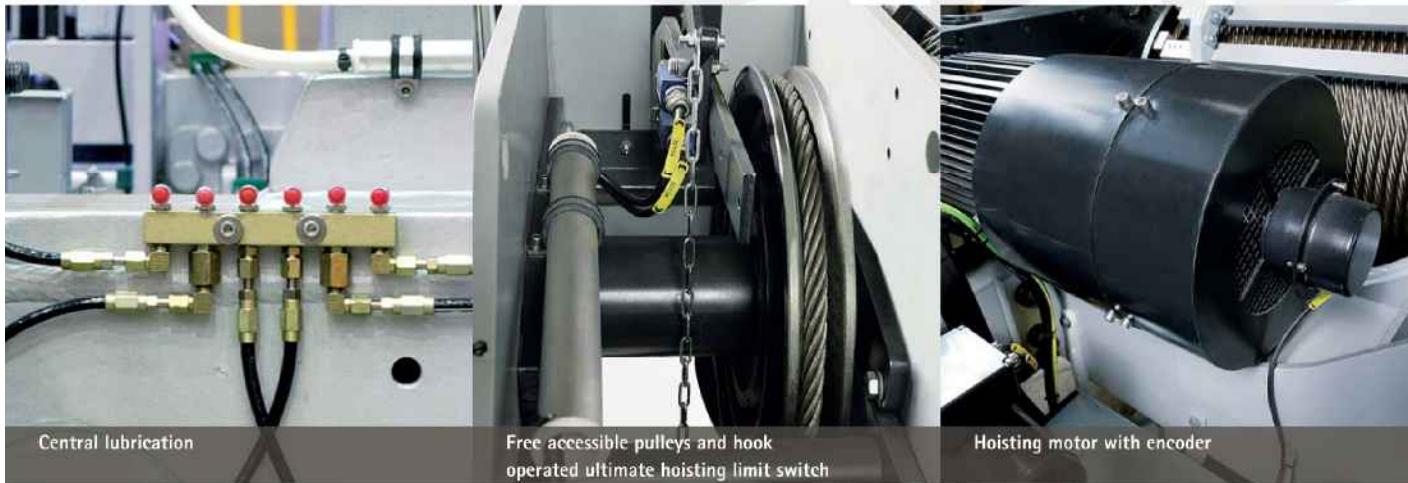
Gentle inclination as standard.

The standard rope drive of our CRABster winch with its thought-out rope angles and tilted sheaves in the newly constructed hook block, ensures a considerably longer lifetime of the load rope and the sheaves. In addition, the rope guides are made of cast iron, which also has a positive effect on the service life. Maintenance costs and downtimes are noticeably reduced.

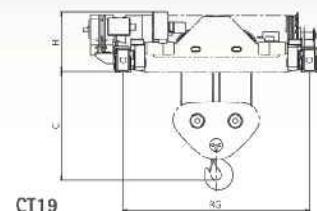
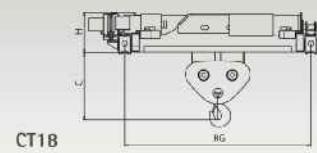
Due to the use of two ropes, CRABster lifts without horizontal hook movement. The low C-dimension is the result of the optimised headroom of the winch and enables the user to efficiently use space with respect to the lifting height. The innovative design of the CRABster makes access to the upper sheaves and the overload protection easier.

For loads up to 160 t

CRAB



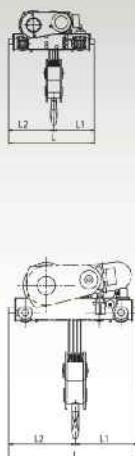
Type CT...	Load t	FEM ISO	Lifting speed m/min	ESR*	H mm	L mm	L1 mm	L2 mm	C (mm)			Lifting height (m)		
									RG Rail gauge 2400	3400	4200	RG Rail gauge 2400	3400	4200
18-22	16	3m/M6	19.5	25	851	1842	921	921	1425	1335	1335	38.6	61.8	80.3
	20	2m/M5	14.4	25										
18-23	25	3m/M6	12.5	16.6	851	1842	921	921	1395	1215	1335	25.7	41.2	53.6
	32	2m/M5	8.8	16.6										
18-24	32	3m/M6	9	15	851	1842	906	936	1395	1215	1215	19.3	30.9	40.2
	50	1Bm/M3	6.4	12										
18-25	40	3m/M6	7	12	923	1917	929	989	1520	1340	1340	15.4	24.7	32.1
	63	1Bm/M3	5	9.6										
18-26	50	3m/M6	6	10.6	923	1917	909	1009	1520	1340	1340	12.9	20.6	26.8
	75	1Bm/M3	4	8.2										
18-28	80	2m/M5	3.6	6.1	923	1917	874	1044	1586	1406	1406	9.7	15.4	20.1
	100	1Bm/M3	3.2	6.1										



Standard equipment:

- Robust rope guides made of cast iron
- Central lubrication
- 4-step gear limit switch
- Additional safeguard by hook operated ultimate hoisting limit switch
- Hoist condition monitoring system NovaMaster
- 2-step trolley travel limit switch
- Frequency inverter for travelling machineries
- Hoisting inverter with closed loop technology, hoisting motor with encoder
- Hoisting and travel motors with disk brakes
- Thermal protection for hoisting and travel motors
- High duty time for both frame sizes
- "Ready to use" bridge panels
- PLIOTEX type wire marking
- Bridge panels with inner light, 230V plug outside
- Horn 108 dB
- IP55 protection
- Epoxy paint, 120 µm

ster



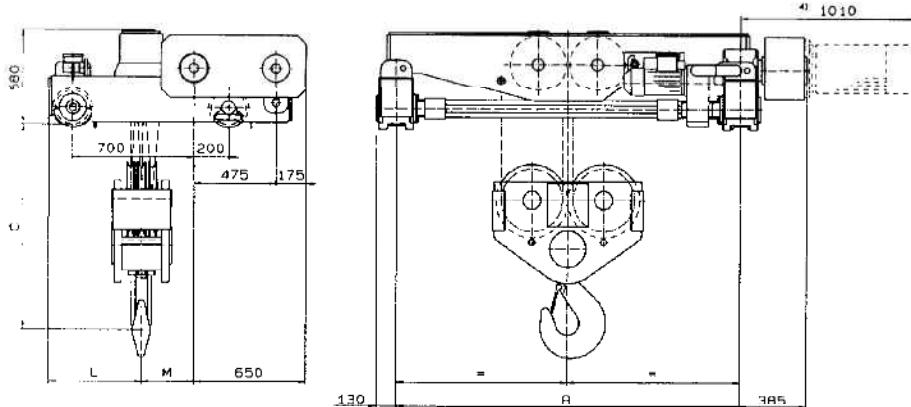
Type CT...	Load t	FEM ISO	Lifting speed m/min	ESR*	H mm	L mm	L1 mm	L2 mm	C (mm) RG Rail gauge				Lifting height (m) RG Rail gauge			
									2700	3400	4200	5300	2700	3400	4200	5300
19-22	25	3m/M6	20	25.1	1045	2178	1134	1044	1895	1585	1585	1735	42.6	59	77.8	104
	32	2m/M5	14.4	25.1												
19-23	40	3m/M6	12.8	16.7	1045	2178	1114	1064	1865	1465	1585	1585	28.4	39.4	51.8	69
	50	2m/M5	9	16.7												
19-24	50	3m/M6	9	15	1045	2178	1074	1104	1865	1465	1465	1585	21.3	29.5	38.9	51.8
	80	1Bm/M3	6.4	12												
19-25	63	3m/M6	7	12	1045	2178	1064	1114	1930	1530	1530	1530	17.0	23.6	31.1	41.4
	100	1Bm/M3	5	9.6												
19-26	80	3m/M6	6.3	8.3	1113	2417	1164	1254	1980	1635	1635	1635	14.2	19.7	25.9	34.5
	125	1Bm/M3	4	8.3												
19-28	125	2m/M5	3.6	6	1113	2417	1126	1292	2065	1720	1720	1720	10.6	14.8	19.4	25.9
	160	1Bm/M3	3.2	6												

* ESR = faster lifting speed with light loads, maximum ESR speed with 20% load

Options:

- Radio remote control
- Maintenance platform
- ESR overspeed for faster lifting speeds with lower loads
- Second hoisting brake
- Ramshorn hook
- Rope pressure roller
- Guide rollers for trolley frame
- Standby heating for bridge panels and motors
- Air condition for bridge panels
- Stainless steel bridge panel
- Rain protection cover
- Crane light
- Horn, 120 dB
- Derailment catches and storm lock for hoist and crane

QD 600 WINCH DATA



	Dimensions (mm)			Rope drum Dd	Rail Wheel Dw
	C ³	L	M		
QD604	785 - 1220	604	237		
QD608	715 - 1050	571	270	369	230
QD612	700 - 1005	581	280		

¹ includes hoisting motor MF15

² N4, N5 are 2-speed motors, others are frequency controlled motors

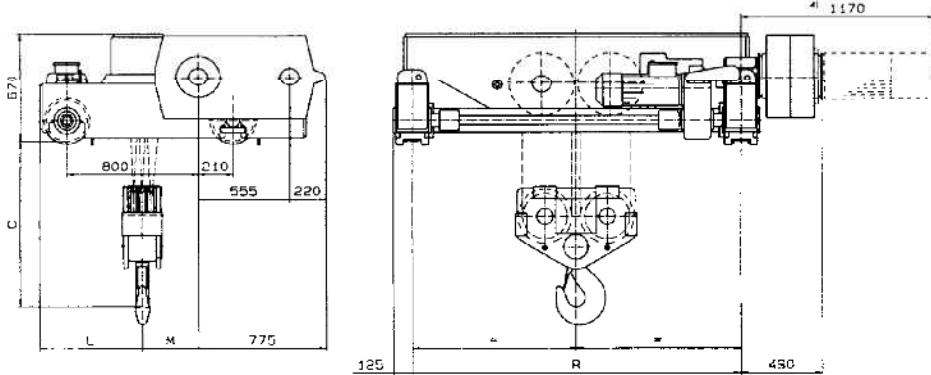
³ depends on hoisting speed and FEM group

⁴ 2 x E6 motors

- large variety of winch travelling speeds exists

Winch Number of ropes	Load (t)	Group FEM ISO	Lifting height (m)						Typical hoisting speed ² (m/min)						Rope pulley (mm)	Rope (mm)		
			Winch weight (t) ¹						Winch rail gauge R (mm)									
			1700	2000	2400	2700	3100	3400	N4	2xN4	F4	E6	F6	2xE6				
QD604	8	2m M5	22,2	28,0	36,2	42,0	50,2	56,0	7,5/ 1,2	16/ 2,6	9,5	14	24		293	13		
	6,3	3m M6							7,5/ 1,2	16/ 2,6	9,5	19	30	32	293			
	5	4m M7	1,8	1,9	2,0	2,1	2,2	2,3			9,5	22	30	36	364			
	4	5m M8									24	36	45		364			
QD608	16	2m M5	11,1	14,1	18,1	21,1	25,1	28,1	3,8/ 0,6	8/1,3	4,8	7,1	12		293	13		
	12,5	3m M6							3,8/ 0,6	8/1,3	4,8	9,5	15	16	293			
	10	4m M7	1,9	2,0	2,1	2,2	2,3	2,4			4,8	11	15	18	364			
	8	5m M8									12	18	22		364			
QD612	25	2m M5	7,2	9,2	11,7	13,7	16,7	18,7	2,5/ 0,4	5/0,8	3,2	4,8	8,0		293	13		
	20	3m M6							2,5/ 0,4	5/0,8	3,2	6,0	10	11	293			
	16	4m M7									3,2	7,5	10	12	364			
	12,5	5m M8	2,1	2,2	2,3	2,4	2,5	2,6			8,0	12	15		364			

QD 700 WINCH DATA



	Dimensions (mm)			Rope drum	Rail Wheel
	C ⁴	L	M	Dd	Dw
QD704	845 - 1290	692	2/4		
QD708	970 - 1285	653	313	444	
QD712	1065 - 1410	634	332		
QD716	1080	6:5	394		250

¹ includes hoisting motor MF16

² N4, N5 are 2-speed motors, others are frequency controlled motors

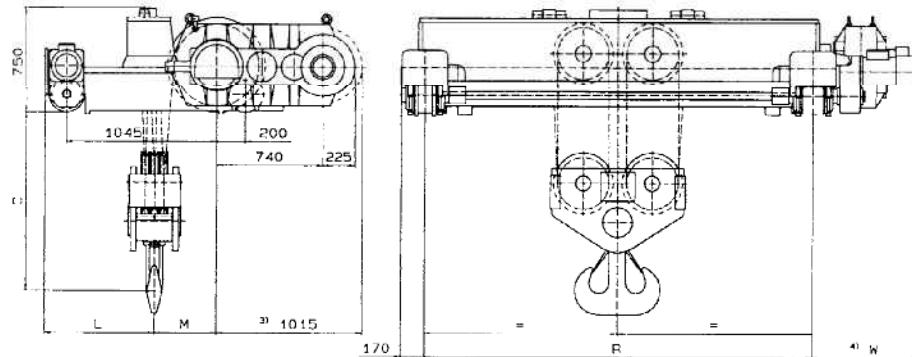
³ depends on hoisting speed and FEM group

2 x E6 motors

large variety of winch travelling speeds exists.

Winch Number of ropes	Load (t)	Group	Lifting height (m)						Typical hoisting speed ² (m/min)						Rope pulley (mm)	Rope (mm)		
			Winch weight (t) ¹						N4 = 12/2 kW	S3-40%	N5 = 25/4 kW	S3-40%	F4 = 15 kW	S3-40%	E0 = 22 kW	S3-60%		
			Winch rail gauge R (mm)						N5	F4	E6	F8	2xE6	2xF8				
		FEM ISO	2000	2400	2700	3100	3400	3800	4200	2xN4	F4	E6	F8	2xE6	2xF8			
QD704	16	2m M5	28,0	36,0	42,0	50,0	56,0	64,0	72,0	7,5/ 1,2	4,5	7,1	12		24	360	16	
	12,5	3m M6	2,9	3,1	3,2	3,3	3,5	3,7		7,5/ 1,2	4,5	9,0	15	17	30			
	10	4m M7							3,9		4,5	11	15	19	30	450		
	8	5m M8										12	17	24	34			
QD708	32	2m M5	14,0	18,0	21,0	25,0	28,0	32,0	36,0	3,8/ 0,6	2,3	3,6	6,3		12	360	16	
	25	3m M6	3,0	3,2	3,4	3,5	3,7	3,9		3,8/ 0,6	2,3	4,5	7,5	8,5	15			
	20	4m M7							4,1		2,3	5,6	7,5	9,5	15	450		
	16	5m M8										6,3	8,5	12	17			
QD712	50	2m M5	9,4	12,1	14,1	16,8	18,8	21,4	24,0	2,5/ 0,4	1,5	2,4	4,0		8,0	360	16	
	40	3m M6	3,4	3,6	3,7	3,9	4,1	4,3		2,5/ 0,4	1,5	3,0	5,0	5,6	10			
	32	4m M7							4,5		1,5	3,8	5,0	6,3	10	450		
	25	5m M8										4,2	5,6	8,0	11			
QD716	65	1Am M4	8,1	10,2	12,0	15,2	16,0	18,1	20,4	2,3/ 0,38	1,1	1,8	3,0		6,0	358	14	
			3,5	3,7	3,8	4,0	4,2	4,4	4,6									

QD 800 WINCH DATA



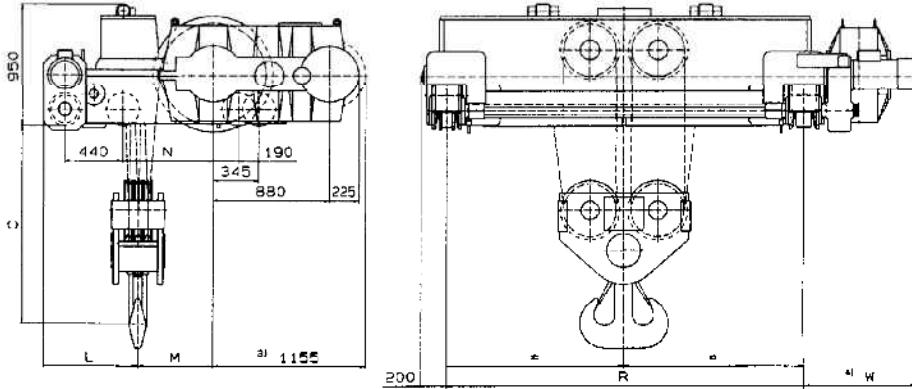
	Dimensions (mm)				Rope drum Dd	Rail Wheel Dw
	C ²	4-wheel L ⁷	6-wheel L	M		
QD808	1085 - 1200	800	575	395		
QD812	1245 - 1550	765	540	430	590	200 ¹⁸
QD816	1280 - 1600	730	595	465		

¹ class M4 w/o hoisting motor and platforms² C dimension depends on rail gauge and FEM group of winch³ with biggest hoisting motor alternative⁷ W depends on size of winch travelling machinery¹⁸ with variabile frequency control, other control systems and speeds available on request¹⁶ rope reeving 2x2, 2x3, 2x5 available¹⁷ four wheel construction available up to 80 t loads¹⁸ four wheel construction has 250 mm wheels

- large variety of winch travelling speeds exists

Winch Number of ropes ⁶	Load (t)	Group FEM ISO	Lifting height (m) Winch weight (t) ¹									Typical hoisting speed ⁵ (m/min)						Rope pulley (mm)	Rope (mm)
			Winch rail gauge R (mm)									N5	F30	F37	F55	F75	F110		
			2000	2400	2700	3100	3400	3800	4200	4800	5300	3,0/ 0,5	3,0	3,6	5,6	7,5	11		
QD808	50	1Am M4	14,6	18,8	21,9	26,2	29,3	33,5	37,7	44,1	49,1	3,0/ 0,5	3,0	3,6	5,6	7,5	11	360	20
	40	2m M5										3,0/ 0,5	3,6	4,5	6,7	9,5	14		
	32	3m M6										3,0/ 0,5	4,5	6,0	8,5	12	17		
	25	4m M7											6,0	7,5	11	15	21	504	20
	20	5m M8											6,7	8,0	12	17	24		
QD812	80	1Am M4	9,7	12,5	14,5	17,4	19,5	22,3	25,1	29,4	32,7	2,0/ 0,3	2,0	2,4	3,6	5,0	7,1	360	20
	63	2m M5										2,0/ 0,3	2,4	3,0	4,5	6,3	9,0		
	50	3m M6										2,0/ 0,3	3,0	4,0	5,6	8,0	11		
	40	4m M7											4,0	5,0	7,1	10	14	504	20
	32	5m M8											4,5	5,3	8,0	11	16		
QD816	100	1Bm M3	8,1 4,6	10,4 4,9	12,1 5,1	14,5 5,5	16,2 5,8	18,5 6,1	20,8 6,6	24,3 7,2	27,2 7,6	1,5/ 0,25	1,5	1,8	2,8	3,8	5,3	360	18

QD 900 WINCH DATA



	Dimensions (mm)				Rope drum Dd	Rail Wheel Dw
	C ²	L	M	N		
QD908	1235 - 1400	765	520	630		
QD912	1500 - 2150	720	565	680	800	250
QD916	1675 - 2300	785	600	780		

¹ class M4 w/o hoisting motor and platforms

² C dimension depends on rail gauge and FEM group of winch

³ with biggest hoisting motor alternative

⁴ W depends on size of winch travelling machine

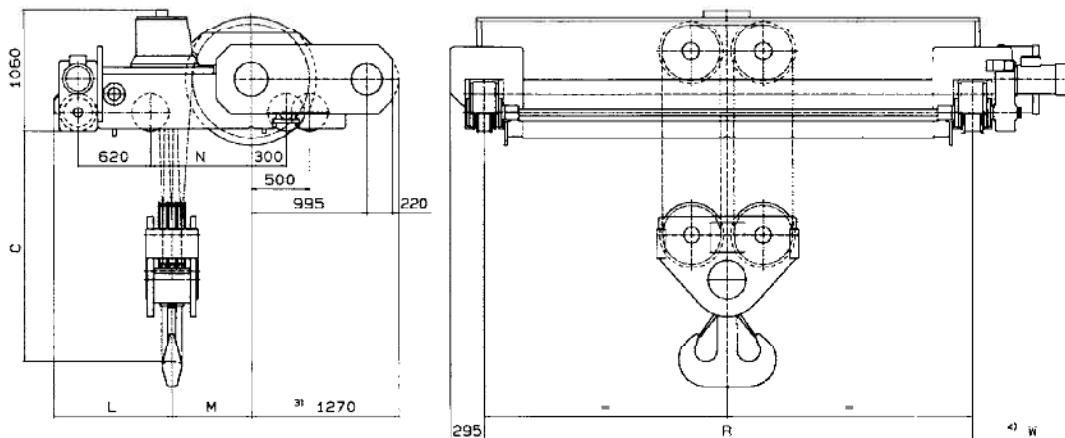
⁵ with variable frequency control, other control systems and speeds available on request

- large variety of winch travelling speeds exists

Winch Number of ropes	Load (t)	Group FEM ISO	Lifting height (m)										Typical hoisting speed ⁵ (m/min)						Rope pulley (mm)	Rope (mm)		
			Winch weight (t) ¹										Winch rail gauge R (mm)									
			2000	2400	2700	3100	3400	3800	4200	4900	5300	5800	N5	F30	F37	F55	F75	F132				
QD908	80	18m M3											2,0/ 0,32	1,3	2,3	3,4	4,8	6,5	400	448		
	63	1Am M4	15,3	20,2	23,8	28,6	32,2	37,1	41,8	49,2	55,2	61,2	89,7	2,2/ 0,36	2,3	2,8	4,2	6,0	11			
	50	2m M5												2,2/ 0,36	2,8	3,6	5,3	7,5	13			
	40	3m M6	6,8	7,3	7,7	8,0	8,5	8,9	9,4	10,2	10,8	11,5	12,4	2,2/ 0,36	3,6	4,5	6,7	9,5	17			
	32	4m M7												4,5	5,6	8,5	12	21				
	25	5m M8												5,0	6,0	9,5	13	24				
QD912	125	18m M3												1,3/ 0,22	1,2	1,5	2,3	3,2	5,6	400	448	
	100	1Am M4	10,2	13,4	15,8	19,0	21,4	24,7	27,6	32,7	36,7	40,7	48,7	1,6/ 0,25	1,5	1,9	2,8	4,0	7,1			
	80	2m M5												1,5/ 0,25	1,9	2,4	3,4	5,0	9,0			
	63	3m M6	7,2	7,7	8,0	8,5	8,9	9,5	10,0	10,9	11,5	12,4	13,3	1,5/ 0,25	2,4	3,0	4,2	6,3	11			
	50	4m M7												3,0	3,8	5,6	8,0	14				
	40	5m M8												3,4	4,0	6,3	9,0	16				
QD916	160	18m M3												1,0/ 0,16	0,9	1,1	1,7	2,4	4,2	400	448	
	125	1Am M4	7,6	10,1	11,9	14,3	16,1	18,5	20,9	24,6	27,6	30,6	34,8	1,1/ 0,18	1,1	1,4	2,1	3,0	5,3			
	100	2m M5												1,1/ 0,18	1,4	1,8	2,6	3,8	6,7			
	80	3m M6	7,6	8,1	8,6	9,0	9,4	10,2	10,7	11,5	12,5	13,2	14,2	1,1/ 0,18	1,8	2,2	3,2	4,8	8,5			
	63	4m M7												2,2	2,8	4,2	6,0	10				
	50	5m M8												2,5	3,0	4,8	6,7	12				

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QD 1000 WINCH DATA



	Dimensions (mm)				Rope drum	Rail Wheel
	C ²	L	M	N	Dd	Dw
QD1008	1655 - 1900	1055	635	860		
QD1012	1980 - 2550	1010	680	860	1000	320
QD1016	1945 - 2700	1050	720	940		

¹ class M4 w/o hoisting motor and platforms² C-dimension depends on rail gauge and FEM group of winch³ with biggest hoisting motor alternative⁴ W depends on size of winch travelling machinery⁵ N5 is 2-speed motor, others are frequency controlled motors

- other control systems and speeds available on request

- SM1000 winches into heavy FEM groups on request

- large variety of winch travelling speeds exists

Winch Number of ropes	Load (t) FEM ISO	Group	Lifting height (m) Winch weight (t) ¹									Typical hoisting speed ⁵ (m/min)					Rope pulley (mm)	Rope (mm)
			Winch rail gauge R (mm)									N5	F37	F55	F75	F110		
			2700	3100	3400	3800	4200	4800	5300	5800	6500	1,2/ 0,2	1,6	2,0	3,2	4,5		
QD1008	125	1Bm M3										1,2/ 0,2	1,6	2,0	3,2	4,5	504	28
	100	1Am M4	24,4	29,6	33,6	38,8	44,0	51,9	58,4	65,0	74,1	1,6/ 0,26	1,6	2,5	4,0	6,0		
	80	2m M5	12,6	13,2	13,7	14,4	15,1	16,1	17,0	18,0	19,2	1,6/ 0,26	2,4	3,6	4,5	6,7		
QD1012	180	1Bm M3										0,8/ 0,13	1,1	1,3	2,2	3,0	504	28
	150	1Am M4	16,2	19,7	22,3	25,8	29,3	34,5	38,9	43,2	49,3	1,1/ 0,18	1,1	1,7	2,6	4,0		
	120	2m M5	13,5	14,2	14,7	15,4	16,3	17,3	18,2	19,3	20,5	1,1/ 0,18	1,6	2,4	3,0	4,5		
QD1016	250	1Bm M3										0,6/ 0,1	0,8	1,0	1,6	2,3	504	28
	200	1Am M4	12,2	14,8	16,0	19,4	22,0	26,0	29,2	32,5	37,1	0,8/ 0,13	0,8	1,2	2,0	3,0		
	160	2m M5	14,5	15,3	15,8	16,7	17,5	18,9	20,0	21,3	22,7	0,8/ 0,13	1,2	1,8	2,3	3,2		

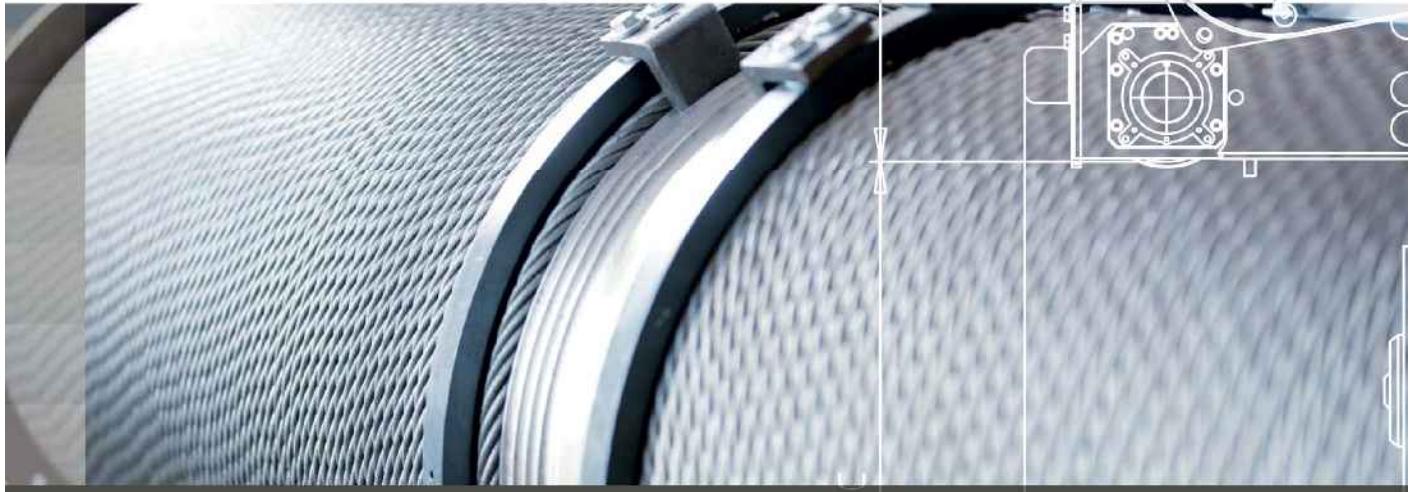
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