

Technical data – selection criteria

The size of the hoist is determined by the

- Load spectrum
- Average operating time
- Load capacity
- Reeving method

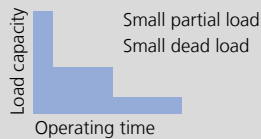
1. What are the operating conditions?
2. What is the specified safe working load?
3. To what height must the load be lifted?
4. What is the required lifting speed?
5. Do the loads need to be lifted and lowered with great accuracy?
6. Is horizontal load travel necessary?
7. How is the hoist to be controlled?

THE LOAD SPECTRUM

(in most cases estimated) can be evaluated according to the definitions below:

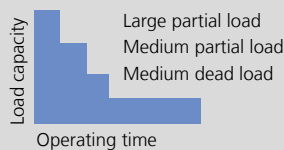
1 Light

Hoist units which are usually subject to very small loads and only in exceptional cases to maximum loads.



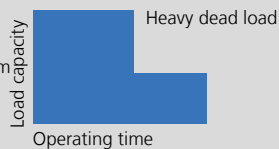
2 Medium

Hoist units which are usually subject to small loads but often to maximum loads.



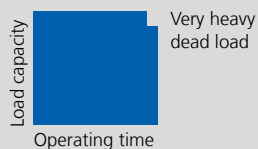
3 Heavy

Hoist units which are usually subject to medium loads but frequently to maximum loads.



4 Very heavy

Hoist units which are usually subject to maximum or almost maximum loads.



EXAMPLE: →

Load capacity	250 kg
Load spectrum from table	Medium
Lifting speed	8 m/min
Reeving method	1/1
Average hook path	4 m
Number of cycles/hour	20
Working time/day	8 hours

The average operating time per working day is estimated or calculated as follows:

$$\text{Operating time per day} = \frac{2 \cdot \text{average hook path} \cdot \text{no. of cycles/h} \cdot \text{working time/day}}{60 \cdot \text{lifting speed}}$$

$$\text{Operating time/day} = \frac{2 \cdot 4 \cdot 20 \cdot 8}{60 \cdot 8} = 2.66 \text{ hours}$$

For the medium load spectrum and an average daily operating time of 2.66 hours, the table shows group 2m+. For a load capacity of 250 kg, the diagram shows size DC-Pro 2 – 250.

DC-Com chain hoist with 2 lifting speeds and electronic control

Load capacity [kg]	Chain hoist Type/size	Hook path from [m]	Lifting speed		Group of mechanisms FEM/ISO	Reeving	Weight [kg]
			at 50 Hz [m/min]	at 60 Hz [m/min]			
80	DC-Com 1		8/2	9.6/2.4	4m/M7	1/1	21
100/125					3m/M6		
160	DC-Com 2		6/1.5	7.2/1.8	3m/M6	1/1	27
200/250					2m/M5		
315	DC-Com 5	4	4.5/1.1	5.4/1.3	3m/M6	1/1	47
400/500					2m/M5		
630	DC-Com 10		4/1	4.8/1.2	3m/M6	2/1	63
800/1,000					2m/M5		
1,250	DC-Com 10		4/1	4.8/1.2	3m/M6	2/1	63
1,600/2,000					2m/M5		

The chain hoist group of mechanisms is determined by the load spectrum and operating time.

Load spectrum		Average operating time per working day in hours			
L1	Light	2-4	4-8	8-16	more than 16
L2	Medium	1-2	2-4	4-8	8-16
L3	Heavy	0.5-1	1-2	2-4	4-8
L4	Very heavy	0.25-0.5	0.5-1	1-2	2-4
Group of mechanisms to DIN EN 14492		1Am	2m+	3m	4m

Load capacity for reeving		Product type and size	Lifting speed at 50 Hz [m/min]	
1/1 [kg]	2/1 [kg]			
80/100/125		DC-Pro 1	8/2	80
		DC-Pro 2	16/4	80
		DC-Pro 5	24/6	80
160		DC-Pro 2	8/2	160
		DC-Pro 5	16/4	160
		DC-Pro 5	24/6	160
200		DC-Pro 2	8/2	200
		DC-Pro 5	16/4	200
		DC-Pro 10	24/6	200
250		DC-Pro 2	8/2	250
		DC-Pro 5	16/4	250
250		DC-Pro 10	24/6	250
		DC-Pro 5	8/2	315
		DC-Pro 10	12/3	315
315		DC-Pro 10	24/6	315
		DC-Pro 5	8/2	400
		DC-Pro 10	12/3	400
400		DC-Pro 10	24/6	400
		DC-Pro 5	8/2	500
		DC-Pro 10	12/3	500
500		DC-Pro 10	24/6	500
		DC-Pro 10	6/1.5	630
		DC-Pro 10	12/3	630
630		DC-Pro 10	6/1.5	800
		DC-Pro 10	12/3	800
		DC-Pro 10	6/1.5	1,000
1,000		DC-Pro 15	8/2	1,000
		DC-Pro 10	12/3	1,000
		DC-Pro 10	8/2	1,250
1,250		DC-Pro 15	8/2	1,250
		DC-Pro 16	12/3	1,250
	1,250	DC-Pro 10	6/1.5	1,250
1,600		DC-Pro 15	8/2	1,600
		DC-Pro 16	12/3	1,600
	1,600	DC-Pro 10	6/1.5	1,600
2,000		DC-Pro 25	8/2	2,000
		DC-Pro 10	6/1.5	2,000
	2,000	DC-Pro 15	4/1	2,000
2,500		DC-Pro 25	8/2	2,500
		DC-Pro 10	4/1	2,500
	2,500	DC-Pro 15	4/1	2,500
3,200		DC-Pro 16	6/1.5	2,500
		DC-Pro 15	4/1	3,200
		DC-Pro 16	6/1.5	3,200
4,000		DC-Pro 25	4/1	4,000
5,000		DC-Pro 25	4/1	5,000

**DC-Pro chain hoist with 2 lifting speeds
and electronic control or conventional direct/contactor control (DC/CC)**

Load capacity [kg]	Chain hoist		Hook path from [m]	Lifting speed		Group of mechanisms FEM/ISO	Reeving	Weight [kg]	
	Type/size			at 50 Hz [m/min]	at 60 Hz [m/min]				
80	DC-Pro 1	DCM-Pro 1 ¹⁾	3	DCM: 2.8 & 4.3	8/2	9.6/2.4	4m/M7	22	
	DC-Pro 2	DCM-Pro 2 ¹⁾			16/4	19.2/4.8			
	DC-Pro 5				24/6 ⁶⁾	28.8/7.2			
100	DC-Pro 1		3		8/2	9.6/2.4	4m/M7	22	
	DC-Pro 2				16/4	19.2/4.8			
	DC-Pro 5				24/6 ⁶⁾	28.8/7.2			
125	DC-Pro 1	DCM-Pro 1 ¹⁾	3	DCM: 2.8 & 4.3	8/2	9.6/2.4	4m/M7	22	
	DC-Pro 2	DCM-Pro 2 ¹⁾			16/4	19.2/4.8			
	DC-Pro 5				24/6 ⁶⁾	28.8/7.2			
160	DC-Pro 2		3		8/2	9.6/2.4	4m/M7	22	
	DC-Pro 5				16/4	19.2/4.8			
					24/6 ⁶⁾	28.8/7.2			
200	DC-Pro 2	DCM-Pro 2 ¹⁾	3	DCM: 2.8 & 4.3	8/2	9.6/2.4	3m/M6	22	
	DC-Pro 5	DCM-Pro 5 ¹⁾			16/4	19.2/4.8	4m/M7	28	
	DC-Pro 10				24/6 ⁶⁾	28.8/7.2		48	
250	DC-Pro 2	DCM-Pro 2 ¹⁾	3	DCM: 2.8 & 4.3	8/2	9.6/2.4	2m+ ²⁾ /M5+	22	
	DC-Pro 5	DCM-Pro 5 ¹⁾			16/4	19.2/4.8		28	
	DC-Pro 10				24/6 ⁶⁾	28.8/7.2		48	
315	DC-Pro 5		3		8/2	9.6/2.4	4m/M7	28	
	DC-Pro 10				12/3	14.4/3.6		48	
					24/6 ⁶⁾	28.8/7.2		56	
400	DC-Pro 5		3		8/2	9.6/2.4	3m/M6	28	
	DC-Pro 10				12/3	14.4/3.6	4m/M7	48	
					24/6 ⁶⁾	28.8/7.2	3m/M6	56	
500	DC-Pro 5		3		8/2	9.6/2.4	2m+ ²⁾ /M5+	28	
	DC-Pro 10				12/3	14.4/3.6	4m/M7	48	
					24/6 ⁶⁾	28.8/7.2	2m+ ²⁾ /M5+	56	
630	DC-Pro 10		3		6/1.5	7.2/1.8	4m/M7	48	
					12/3	14.4/3.6		56	
					6/1.5	7.2/1.8	3m/M6	48	
800	DC-Pro 10		3		12/3	14.4/3.6		56	
					6/1.5	7.2/1.8	2m+ ²⁾ /M5+	48	
					12/3	14.4/3.6	2m+ ²⁾³⁾ /M5+	56	
1,000	DC-Pro 10		3		8/2	9.6/2.4	4m ⁴⁾ /M7	71	
					6/1.5	7.2/1.8	4m/M7	2/1	65
					8/2	9.6/2.4	1Am ⁵⁾ /M4		56
1,250	DC-Pro 10		3		8/2	9.6/2.4	3m ⁴⁾ /M6	1/1	71
	DC-Pro 15				12/3	14.4/3.6	3m ³⁾ /M6		111
	DC-Pro 16				6/1.5	7.2/1.8	3m/M6	2/1	65
1,600	DC-Pro 10		3		8/2	9.6/2.4	2m+ ²⁾⁶⁾ /M5+	1/1	71
	DC-Pro 15				12/3	14.4/3.6	2m+ ²⁾⁵⁾ /M5+		111
	DC-Pro 16				6/1.5	7.2/1.8	2m+ ²⁾³⁾ /M5+		65
2,000	DC-Pro 10		3		4/1	4.8/1.2	4m ⁷⁾ /M7	2/1	83
	DC-Pro 15				8/2	9.6/2.4	2m+ ²⁾	1/1	113
	DC-Pro 25				4/1	4.8/1.2	1Am ⁵⁾ /M4		65
2,500	DC-Pro 10		3		8/2	9.6/2.4	1Am/M4	1/1	113
	DC-Pro 15				6/1.5	7.2/1.8	3m/M6	2/1	83
	DC-Pro 16				4/1	4.8/1.2	2m+ ²⁾³⁾ /M5+		83
3,200	DC-Pro 15		3		6/1.5	7.2/1.8	2m+ ²⁾⁶⁾ /M5+	2/1	110
	DC-Pro 16				4/1	4.8/1.2	2m+ ²⁾ /M5+		110
	DC-Pro 25				4/1	4.8/1.2	1Am/M4	2/1	125
4,000	DC-Pro 25		3		4/1	4.8/1.2	1Am/M4		

¹⁾ DCM-Pro only with electronic control, ²⁾ 2m+ corresponds to 1,900 hours at full load, ³⁾ Chain drive FEM 1Am according to DIN EN 818-7, ⁴⁾ Chain drive FEM 2m according to DIN EN 818-7, ⁵⁾ Chain drive FEM 1Cm according to DIN EN 818-7, ⁶⁾ Chain drive FEM 1Bm according to DIN EN 818-7, ⁷⁾ Chain drive FEM 3m according to DIN EN 818-7, ⁸⁾ Only with operating limit switch for lifting motion

**DCS chain hoist with variable lifting speed
and integrated inverter control (DCS) or prepared for customer's own control system (FC)**

Load capacity [kg]	Chain hoist		Hook path		Lifting speed for 50/60 Hz		Group of mechanisms	Reeving	Weight [kg]
	Type/size		from [m]		Min. – rated~ [m/min]	Max. ~ ⁸⁾ [m/min]	FEM/ISO		
80	DCS-Pro 1	DCMS-Pro 1 ¹⁾ DCRS-Pro 1 ¹⁾	3	DCMS: DCRS: 2.8 & 4.3					
100	DCS-Pro 1		3		0.15–30	30	4m/M7		25
125	DCS-Pro 1	DCMS-Pro 1 ¹⁾ DCRS-Pro 1 ¹⁾	3	DCMS: DCRS: 2.8 & 4.3					
160	DCS-Pro 2		3						
200	DCS-Pro 2	DCMS-Pro 2 ¹⁾ DCRS-Pro 2 ¹⁾	3	DCMS: DCRS: 2.8 & 4.3	0.15–16	30	2m+ ^{2)/} M5+		25
250									
315	DCS-Pro 5				0.08–8	15	2m+ ^{2)/} M5+	1/1	29
	DCS-Pro 10				0.11–12	22	4m/M7		54
400	DCS-Pro 5				0.08–8	15	2m+ ^{2)/} M5+	1/1	29
	DCS-Pro 10				0.11–12	22	4m/M7		54
500	DCS-Pro 5		3		0.08–8	15	2m+ ^{2)/} M5+		29
					0.11–12	22	4m/M7		54
630			3		0.06–6	11	4m/M7		54
					0.11–12	22			59
800	DCS-Pro 10		3		0.06–6	11	3m/M6		54
					0.11–12	22			59
1,000			3		0.06–6	11	2m+ ^{2)/} M5+		54
					0.11–12	22	2m+ ^{2)3)/} M5+		59
1,250	DCS-Pro 15		3		0.08–8	15	4m ^{4)/} M7		74
	DCS-Pro 10		3		0.04–4	7	1Am ^{5)/} M4		54
1,600	DCS-Pro 10	DCMS-Pro 10 ¹⁾ DCRS-Pro 10 ¹⁾	3		0.06–6	11	3m/M6	2/1	68
					0.08–8	15	3m ^{3)/} M6		74
2,000	DCS-Pro 10	DCMS-Pro 10 ¹⁾ DCRS-Pro 10 ¹⁾	3		0.06–6	11	2m+ ^{2)3)/} M5+	1/1	68
					0.08–8	15	2m+ ^{2)6)/} M5+		74
2,500	DCS-Pro 10	DCMS-Pro 10 ¹⁾ DCRS-Pro 10 ¹⁾	3		0.06–6	11	2m+ ^{2)3)/} M5+		68
							4m ^{7)/} M7		86
3,200	DCS-Pro 15	DCMS-Pro 15 ¹⁾ DCRS-Pro 15 ¹⁾	3		0.04–4	7	1Am ^{5)/} M4	2/1	68
							3m ^{4)/} M6		86
							2m+ ^{2)3)/} M5+		86

¹⁾ DCMS/DCRS-Pro only with electronic control, ²⁾ 2m+ corresponds to 1,900 hours at full load, ³⁾ Chain drive FEM 1Am to DIN EN 818-7, ⁴⁾ Chain drive FEM 2m to DIN EN 818-7, ⁵⁾ Chain drive FEM 1Cm to DIN EN 818-7, ⁶⁾ Chain drive FEM 1Bm to DIN EN 818-7, ⁷⁾ Chain drive FEM 3m to DIN EN 818-7
⁸⁾ Max. lifting speed in the partial load range/without load



DC-Com

40343



DC-Pro

39040-1



DCS-Pro

39313



DCM-Pro
DCMS-Pro

39085



DCRS-Pro

39029