1.7.3 DC-ProFC (variable hoist speed) for control by means of an external frequency inverter

Load capacity [kg]	Chain hoist size DC-ProFC	Reeving	Group of mechanisms DIN EN 14492 FEM / ISO	Chain size [mm]	Hoist speed at 87 Hz vs_{rated} [1] [m/min]	Gearbox transmission ratio i	Standard hook path H [2] [m]	Motor size [3]	Max. weight for hook path 4 m [kg]	5 m [kg]	8 m [kg]
80	1	1/1	4m / M7	4,2x12,2	16,0	25,566	5 and 8	ZNK 71 B 4	-	25	27
100											
125											
160	2										
200			3m / M6								
250			2m+ [4] / M5+								
315	5		4m / M7	5,3x15,2	8,0	54,241		ZNK 80 A 4		30	32
	10			7,4x21,2	12,0	53,073		ZNK 100 A 4		50	54
400	5		3m / M6	5,3x15,2	8,0	54,241		ZNK 80 A 4		30	32
	10		4m / M7	7,4x21,2	12,0	53,073		ZNK 100 A 4		50	54
500	5		2m+ [4] / M5+	5,3x15,2	8,0	54,241		ZNK 80 A 4		30	32
630	10		4m / M7	7,4x21,2	12,0	53,073		ZNK 100 A 4		50	54
					6,0	100,154					
					12,0	53,073					
800			3m / M6		6,0	100,154					
					12,0	53,073					
1000			2m+ [4] / M5+		6,0	100,154					
			2m+ [4] [7] / M5+		12,0	53,073					
	15		4m [5] / M7	8,7x24,2	8,0	91,678	4		73	74	79
1250	10		1Am [6] / M4	7,4x21,2	4,0	100,154	5 and 8		-	58	62
		2/1	4m / M7		6,0	75,672				67	75
	15	1/1	3m [7] / M6	8,7x24,2	8,0	91,678	4		73	74	79
1600	10	2/1	3m / M6	7,4x21,2	6,0	53,073	5 and 8		-	67	75
	15	1/1	2m+ [4] [8] / M5+	8,7x24,2	8,0	91,678	4		73	74	79
2000	10	2/1	2m+ [4] [7] / M5+	7,4x21,2	6,0	53,073	5 and 8		-	67	75
	15		4m [9] / M7	8,7x24,2	4,0	91,678	4		85	88	98
2500	10		1Am [6] / M4	7,4x21,2		75,672	5 and 8		-	67	75
	15		3m [5] / M6	8,7x24,2		91,678	4		85	88	98
3200			2m+ [4] [7] / M5+								

Further special features

The hoist speeds speci ed for the DC-ProFC are nominal hoist speeds. Higher hoist speeds for partial load and/or in the eld weakening range depend on the inverter provided by the customer. The max. hoist speed vs_{max} is reached at 5000 rpm. Note load reduction owing to eld weakening.

Chain sprocket pitch circle diameter d_k:

DC 1 - 2	DC 5	DC 10	DC 15	DC 16	DC 25
46,601	48,383	67,482	77,031	92,437	89,763

$$\text{Increments per mm lifting movement} = \frac{\text{Increments rotary encoder} \times i_{gearbox}}{d_k \times \pi}$$

The precise hoist speed must be calculated according to the following equation:

$$v_H = \frac{d_k \times \pi \times n_{mot}}{i_{gearbox} \times 1000}$$

For control of the DC-ProFC, an appropriate encoder is required. An incremental encoder is tted as standard. See also section 'Pulse generator tting'. Other encoders on request.

For control and speed control of the DC-ProFC we recommend the use of the Demag frequency inverter range Dedrive Compact STO.

1) For vs_{max} at max. 5000 rpm in eld-weakening operation note load reduction owing to eld weakening.
2) Larger hook paths on request.
3) See Electric key data page for key motor data.
4) 2m+ corresponds to 1900 hours at full load.
5) Chain drive FEM 2m according to EN 818-7
6) Chain drive FEM 1Cm according to EN 818-7
7) Chain drive FEM 1Am according to EN 818-7
8) Chain drive FEM 1Bm according to EN 818-7
9) Chain drive FEM 3m according to EN 818-7