



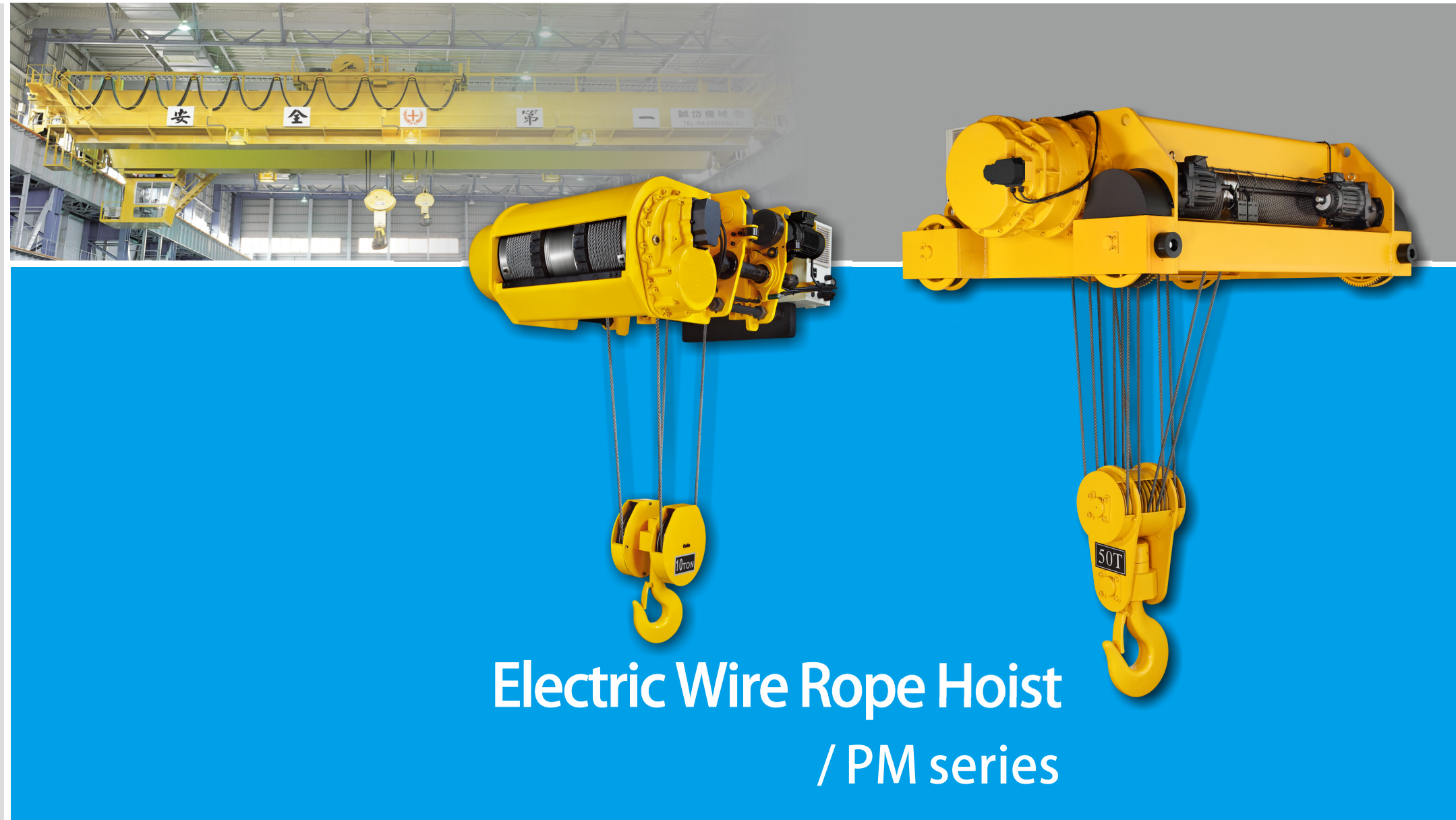
Professional cranes & hoists for lifting



CHENG DAY MACHINERY WORKS CO., LTD.

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- Revision of November, 2022(Edition No.2) #950288
- No further notice while sizes and dimensions update;
Quotations are based on practical dimensions.
- Due to the printing factors, the color of the products is
subject to minor deviation from the physical objects.



Electric Wire Rope Hoist
/ PM series



CHENG DAY MACHINERY WORKS CO., LTD.

Multipurpose and Multifunction

1. Permanent Magnetic Motor :

1.5 times of starting current. 230% high starting torque.
Compared with traditional squirrel cage motor which has 6-8 times starting current, PM motor VVVF Lift Drive, save energy at least 30~50%. Very limited temperature rising, stable.
Motor brake system triggers when motor rotation approach stop which makes brake lining with longer life span. Speed adjustment, the ratio of max. speed 1/10. The range of low/high speed can be adjustable. Two-steps switch to select low/high speed. Soft start / stop function can reduce swaying of the lifting objects.

2. Rope Guide :

adjustable type, fit different drums' size. Patents applied.

3. Planetary Geared Limit Switch Assembly:

3 steps or 4 steps setting. Patents applied.

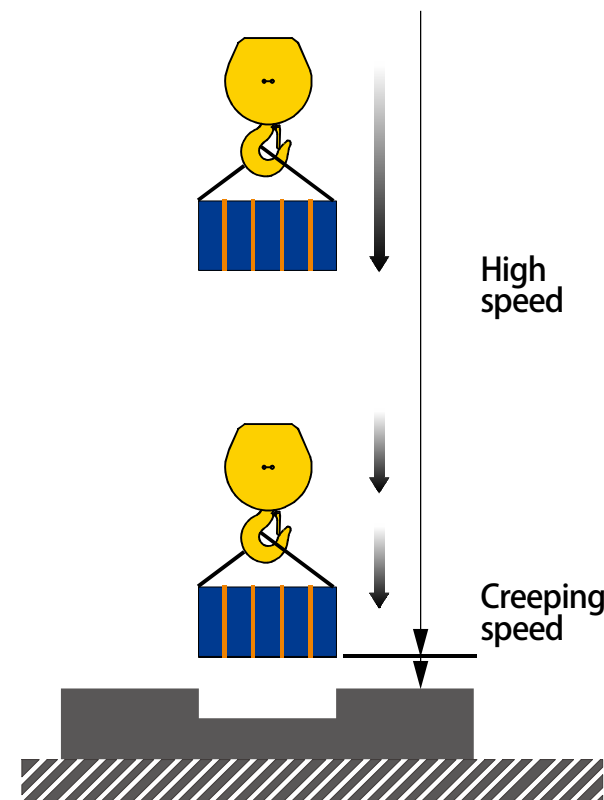
4. High Strength :

more than 6 times factor of safety

5. With Inverter

6. Low headroom shape designed, compact.

Function of VVVF Lift Drive Use in Hoisting Control



Product Guide

Capacity (ton)	Monorail Type	Top Running Type
3.2	TEAH-320PM	SEAH-320PM
5	TEA1H-500PM TEBH-500PM	SEA1H-500PM SEBH-500PM
6.3	TEB1H-630PM	SEB1H-630PM
8	TECH-800PM	SECH-800PM
10	TEC1H-1000PM	SEC1H-1000PM
12.5	TEC2H-1250PM	SEC2H-1250PM
16	-	SEDH-1600PM
20	-	SEDH-2000PM
30	-	SEFJ-3000PM
40	-	SEF1J-4000PM
50	-	SEFR-5000PM

Wire Rope

Rope Dia (mm)d	Mode Being Used	Construction	Specified Breaking Load (kN)
Ø8	TEAH-320PM SEAH-320PM	S.IWRC 8xP.WS(26)-S	68
Ø10	TEA1H-500PM SEA1H-500PM TEBH-500PM SEBH-500PM TEB1H-630PM SEB1H-630PM	S.IWRC 8xP.WS(26)-S	103
Ø12.5	TECH-800PM SECH-800PM TEC1H-1000PM SEC1H-1000PM	S.IWRC 8xP.WS(26)-S	160
Ø14	TEC2H-1250PM SEC2H-1250PM	S.IWRC 8xP.WS(26)-S	203
Ø18	SEDH-1600PM SEFR-5000PM SEFJ-3000PM	IWRC 6xPi(29)-H	234
Ø20	SEDH-2000PM SEF1J-4000PM	IWRC 6xP.Fi(29)-H	331

Product Code

T	EA	H	-	500	PM
Model	Gear Box	Reeving/Falling		Capacity	Permanent Magnetic Motor
T : Monorail Trolley S : Saddle Trolley	EA : 5kw (i=102) EA1 : 6.5kw (i=138.7) EB : 9kw (i=86.5) EB1 : 9kw (i=100) EC : 13kw (i=112.5) EC1 : 13kw (i=128.3) EC2 : 13kw (i=165.2) ED : 16kw ; 18kw (i=262.1) EF : 30kw ; 36kw (i=147.5) EF1 : 33kw (i=173.4)	H : 2/4 J : 2/8 R : 2/12		320 : 3.2ton 500 : 5ton 630 : 6.3ton 800 : 8ton 1000 : 10ton 1250 : 12.5ton 1600 : 16ton 2000 : 20ton 3000 : 30ton 4000 : 40ton 5000 : 50ton	



Classification of Hoist : FEM 2m / ISO M5

12 (Optional) Pulse wave drive Micro speed control knob

11 High Strength Wire Rope

S.I.WRC 8 X P.WS(26)-S
The safety factor and strength are more than 6 times to ensure the lifting safety.

8 Guide Wheel

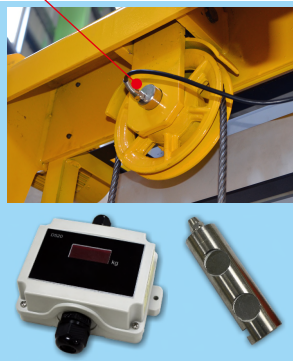
Guide wheel equips on both side of traversing beam to ensure the stability of traversing trolley.

9 Balance Supporter

Support balance weight of drum side as well as both side balance during the unload traversing.

10 Motor

Trolley motor : direct drive. Eliminate the noise while traversing.



4 Load Cell

Check the load weight from detector. Prevent overload to ensure the safety.

5 Control Box

- 1). VVVF Lift Drive : Saving 30% of power consumption compares to traditional control.
- 2). Speed adjustment : the ratio of max. speed 1/10. The range of low/high speed can be adjustable. Two-steps switch to select low/high speed.

7 Timer

Count the starting times of motor and electrical device for repair and maintenance record.

6 Brake Resistor

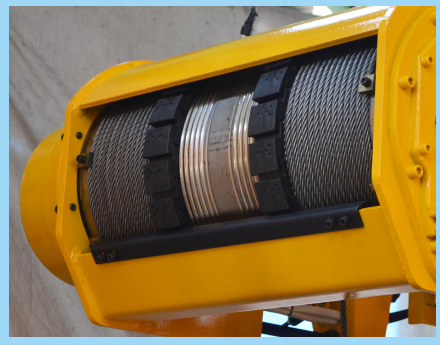
1 Hoisting Motor & DC Brake Assembly

- 1). Permanent magnetic motor design : 1.5 times of starting current. 230% high starting torque. Compared with traditional insulation motor which has 6-8 times starting current, PM motor save energy at least 30~50%.
- 2). Permanent magnetic motor : during the loading operation, temperature rising balance 55°~60°.
- 3). Permanent magnetic motor: motor brake system triggers when motor rotation approach stop which makes brake lining with longer life span compared with traditional motor.
- 4). New (DC) magnetic brake system and motor operate synchronously which makes the brake with stronger brake force.
- 5). Brake force design at 150%, Max. 200%.



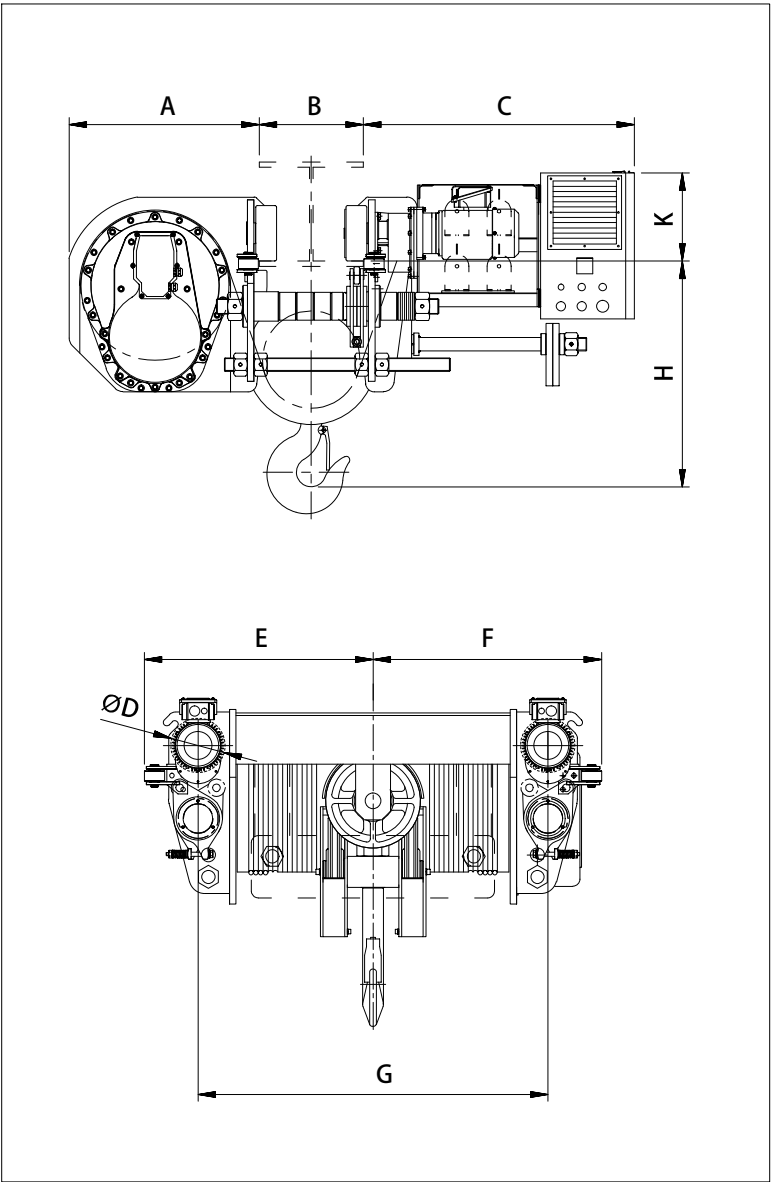
2 Rope Guide (Piece by Piece)

- 1). To ensure positive winding of wire rope; Prevent rope overlapping.
- 2). Patents :
Taiwan patent no. M482583
German patent no. Nr. 20 2014 002 972.5
Japan patent no. 3191390
China patent no. ZL 2014 2 0036251.0
United States patent no.US 91814069



3 Planetary Geared Limit Switch Assembly

- 1). Up & down are with auto stop limit switch device. Prevent rope over-roll.
- 2). Able to setup / stop location according to working environment.
- 3). Patents :
Taiwan patent no. M466909
German patent no. Nr. 20 2014 006 109.2
Japan patent no. 3193570
China patent no. ZL 2014 2 0395985.8
United States patent no.US 9263201



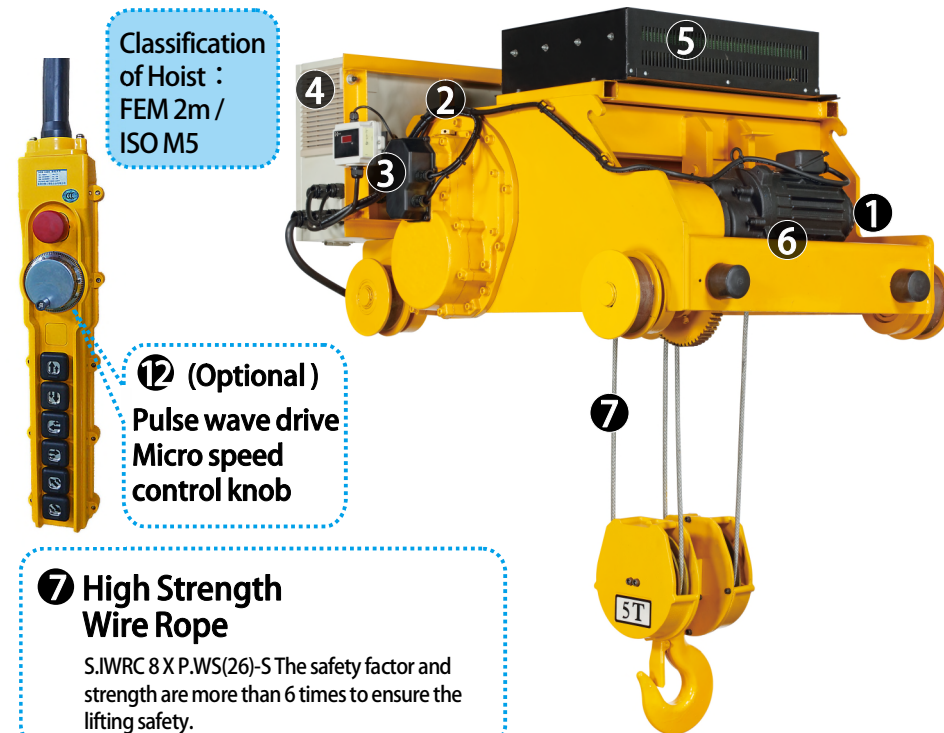
Specification

Model	Capacity (ton)	Lift (m)	Hoisting		Traversing			Wire rope	
			Speed (m/min)	Motor kw x pole	Speed (m/min)		Motor kw x pole x set	Ømm	R/F
					60Hz	50Hz			
TEAH-320PM	3.2	6 9 12	8/0.8	5 x 8	20 20/5	17 17/4.3	0.37 x 2 x 1 0.37/0.09 x 2/8 x 1	8	2/4
TEA1H-500PM	5	6 9 12	6/0.6	6.5 x 8	20 20/5	17 17/4.3	0.6 x 2 x 1 0.6/0.15 x 2/8 x 1	10	2/4
TEBH-500PM	5	9 12	8/0.8	9 x 8	20 20/5	17 17/4.3	0.6 x 2 x 1 0.6/0.15 x 2/8 x 1	10	2/4
TEB1H-630PM	6.3	9 12	7.2/0.7	9 x 8	20 20/5	17 17/4.3	0.6 x 2 x 1 0.6/0.15 x 2/8 x 1	10	2/4
TECH-800PM	8	9 12	7.2/0.7	13 x 8	18 18/4.5	15 15/3.8	0.6 x 2 x 2 0.6/0.15 x 2/8 x 2	12.5	2/4
TEC1H-1000PM	10	9 12	6/0.6	13 x 8	18 18/4.5	15 15/3.8	0.6 x 2 x 2 0.6/0.15 x 2/8 x 2	12.5	2/4
TEC2H-1250PM	12.5	9 12	5/0.5	13 x 8	18 18/4.5	15 15/3.8	0.6 x 2 x 2 0.6/0.15 x 2/8 x 2	14	2/4

※ Rating Duty ED% : Dual speed 40/20% (Hoisting) ; Dual speed 40/20% (Traversing).

Model	Dimensions (mm)									N.W. (kg)
	H	A	B	C	D	E	F	G	K	
TEAH-320PM	400	406	150~300	693	100	505 570 635	500 551 616	712 842 972	225	470 490 510
TEA1H-500PM	500	403	150~300	690	125	545 620 695	524 599 674	792 942 1092	225	505 530 555
TEBH-500PM	500	471	150~300	712	125	589 649	589 649	888 1008	225	705 730
TEB1H-630PM	500	471	150~300	712	125	589 649	589 649	888 1008	225	715 740
TECH-800PM	580	547	200~400	820	140	647 707	659 719	965 1085	265	1100 1134
TEC1H-1000PM	580	547	200~400	820	160	647 707	659 719	965 1085	265	1106 1140
TEC2H-1250PM	650	547	200~400	820	160	707 777	719 789	1085 1225	265	1125 1160

※ Option of traversing single speed or dual speed, please remark your request on each formal order.



Classification of Hoist :
FEM 2m /
ISO M5

12 (Optional)
Pulse wave drive
Micro speed
control knob

7 High Strength Wire Rope

S.I.WRC 8 X P.WS(26)-5 The safety factor and strength are more than 6 times to ensure the lifting safety.

6 Load Cell

Check the load weight from detector.
Prevent overload to ensure the safety.



4 Control Box

- 1). VVVF Lift Drive : Saving 30% of power consumption compares to traditional control.
- 2). Speed adjustment : the ratio of max. speed 1/10. The range of low/high speed can be adjustable. Two-steps switch to select low/high speed.

5 Brake Resistor

3 Planetary Geared Limit Switch Assembly

- 1). Up & down are with auto stop limit switch device. Prevent rope over-roll.
- 2). Able to setup / stop location according to working environment.
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Japan patent no. 3193570
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United States patent no.US 9263201

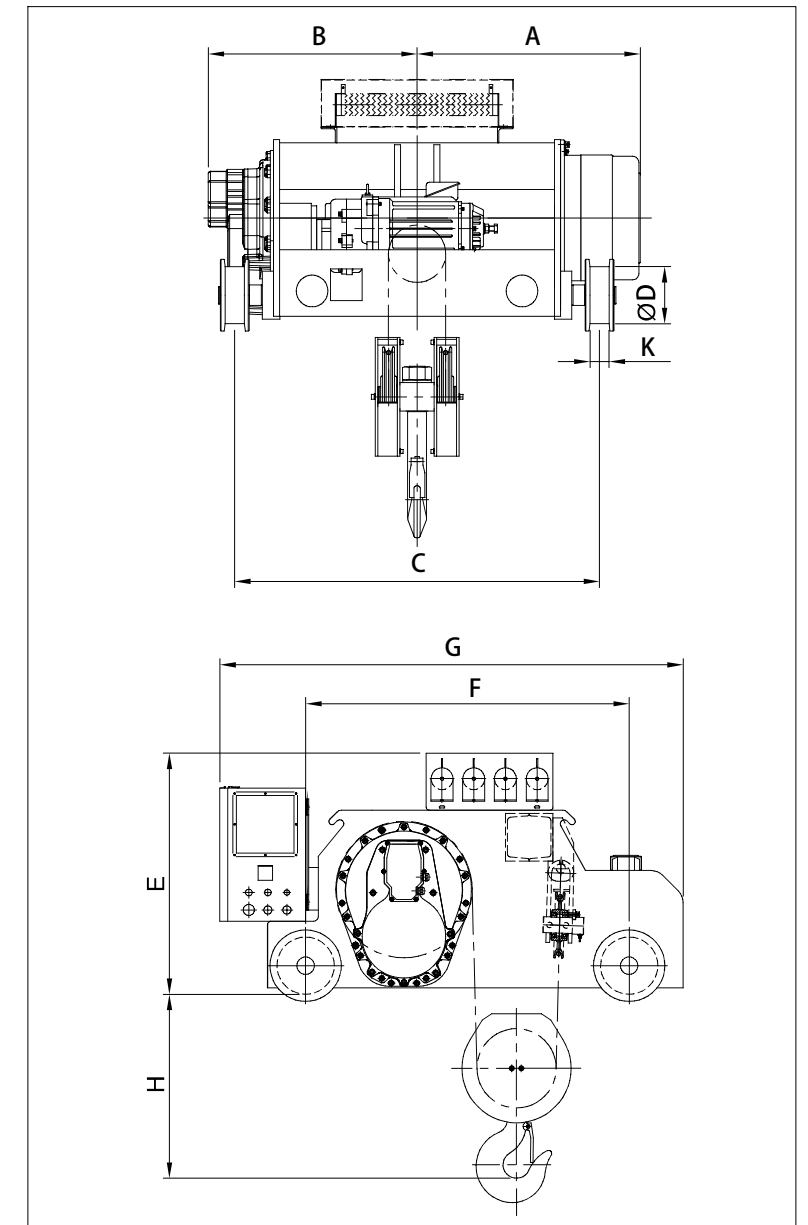
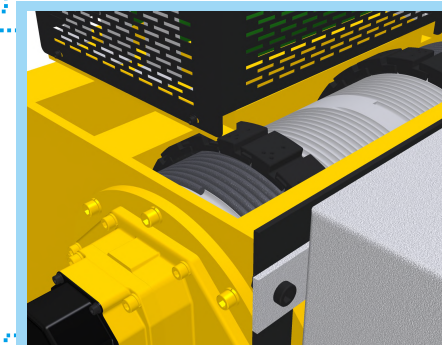
1 Hoisting Motor & DC Brake Assembly

- 1). Permanent magnetic motor design : 1.5 times of starting current. 230% high starting torque. Compared with traditional insulation motor which has 6-8 times starting current, PM motor save energy at least 30~50%.
- 2). Permanent magnetic motor : during the loading operation, temperature rising balance 55°~ 60°.
- 3). Permanent magnetic motor: motor brake system triggers when motor rotation approach stop which makes brake lining with longer life span compared with traditional motor.
- 4). New (DC) magnetic brake system and motor operate synchronously which makes the brake with stronger brake force.
- 5). Brake force design at 150%, Max. 200%.



2 Rope Guide (Piece by Piece)

- 1). To ensure positive winding of wire rope; Prevent rope overlapping.
- 2). Patents :
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Specification

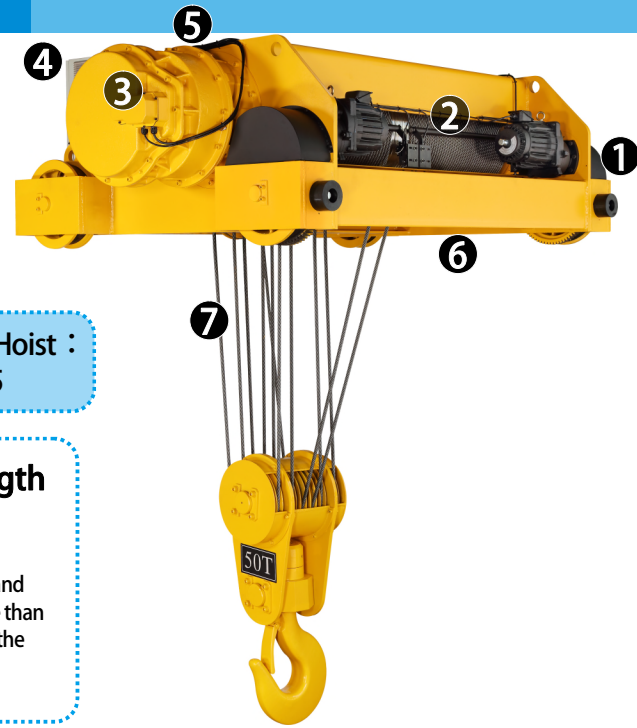
Model	Capacity (ton)	Lift (m)	Hoisting		Traversing			Wire rope	
			Speed (m/min)	Motor kw x pole	Speed (m/min)		Motor kw x pole x set	Ømm	R/F
					60Hz	50Hz			
SEAH-320PM	3.2	6 9 12	8/0.8	5 x 8	21 21/7	18 18/6	0.4 x 4 x 1 0.4 / 0.13 x 4 / 12 x 1	8	2/4
SEA1H-500PM	5	6 9 12	6/0.6	6.5 x 8	21 21/7	18 18/6	0.75 x 4 x 1 0.75 / 0.25 x 4 / 12 x 1	10	2/4
SEBH-500PM	5	9 12	8/0.8	9 x 8	21 21/7	18 18/6	0.75 x 4 x 1 0.75 / 0.25 x 4 / 12 x 1	10	2/4
SEB1H-630PM	6.3	9 12	7.2/0.7	9 x 8	21 21/7	18 18/6	0.75 x 4 x 1 0.75 / 0.25 x 4 / 12 x 1	10	2/4
SECH-800PM	8	9 12	7.2/0.7	13 x 8	17 17/5.7	14 14/4.7	1.1 x 4 x 1 1.1 / 0.37 x 4 / 12 x 1	12.5	2/4
SEC1H-1000PM	10	9 12	6/0.6	13 x 8	17 17/5.7	14 14/4.7	1.1 x 4 x 1 1.1 / 0.37 x 4 / 12 x 1	12.5	2/4
SEC2H-1250PM	12.5	9 12	5/0.5	13 x 8	17 17/5.7	14 14/4.7	1.1 x 4 x 1 1.1 / 0.37 x 4 / 12 x 1	14	2/4

※ Rating Duty ED% : Dual speed 40/20% (Hoisting) ; Dual speed 40/20% (Traversing).

Model	Dimensions (mm)									N.W. (kg)
	H	A	B	C	D	E	F	G	K	
SEAH-320PM	400	500 522 587	505 570 635	850 850 1000	150	665	760	1085	45	576 600 623
SEA1H-500PM	500	497 572 647	545 620 695	850 1000 1150	150	665	800	1125	45	603 630 658
SEBH-500PM	500	583 643	547 607	850 1000	150	695	857	1199	45	730 760
SEB1H-630PM	500	583 643	547 607	850 1000	150	695	857	1199	45	730 760
SECH-800PM	600	694 754	598 658	1000 1150	180	780	1020	1435	60	1190 1230
SEC1H-1000PM	600	694 754	598 658	1000 1150	180	780	1020	1435	60	1190 1230
SEC2H-1250PM	650	754 824	658 728	1150 1300	180	780	1020	1435	60	1250 1300

※ Option of traversing single speed or dual speed, please remark your request on each formal order.

Top Running Type 16 ton~50 ton (ED/EF series)



Classification of Hoist :
FEM 2m / ISO M5

⑦ High Strength Wire Rope

IWRC 6 X Fi(29)-H
The safety factor and strength are more than 6 times to ensure the lifting safety.

⑥ Load Cell

Check the load weight from detector.
Prevent overload to ensure the safety.



④ Control Box

- 1). VVVF Lift Drive : Saving 30% of power consumption compares to traditional control.
- 2). Speed adjustment : the ratio of max. speed 1/10. The range of low/high speed can be adjustable. Two-steps switch to select low/high speed.

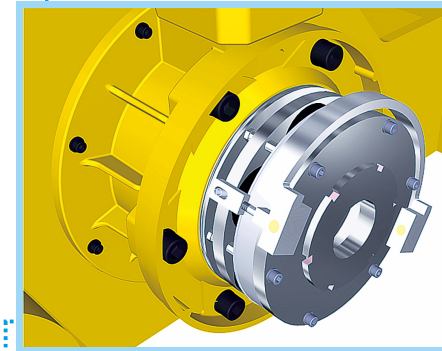
⑤ Brake Resistor

③ Planetary Geared Limit Switch Assembly

- 1). Up & down are with auto stop limit switch device. Prevent rope over-roll.
- 2). Able to setup / stop location according to working environment.
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United States patent no.US 9263201

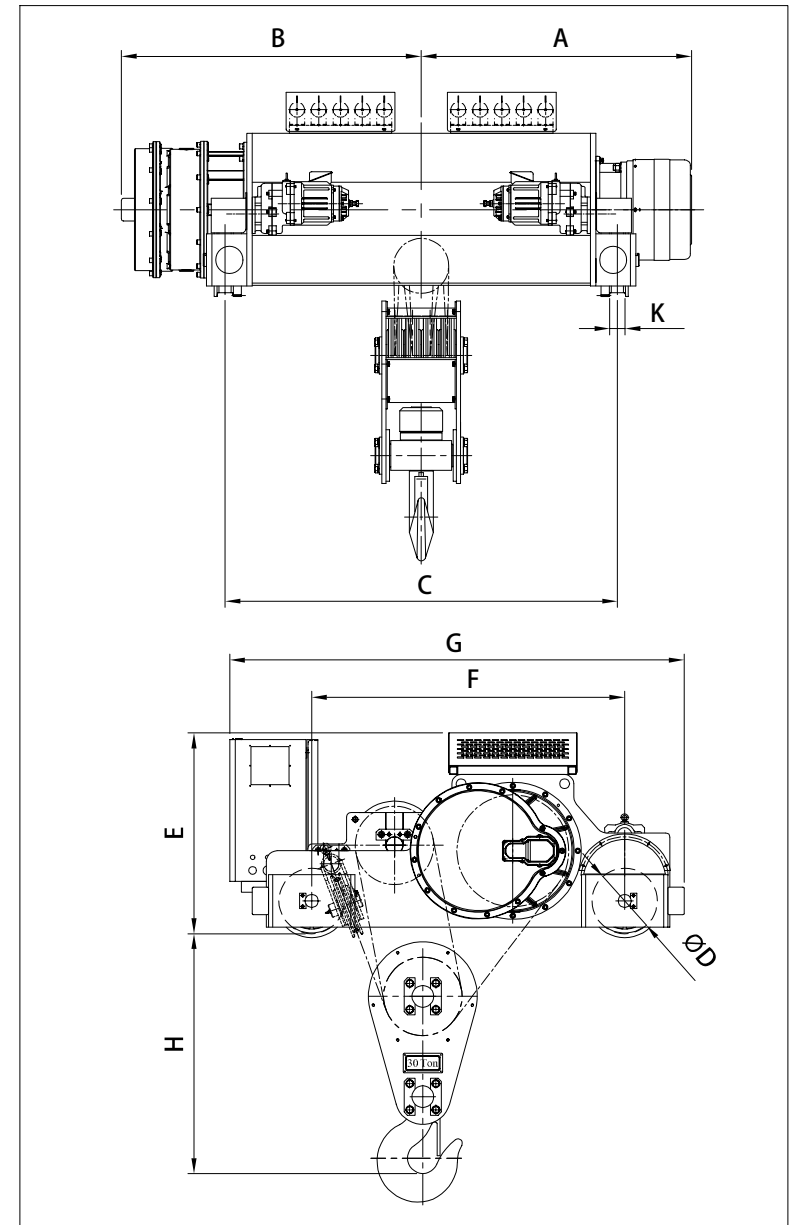
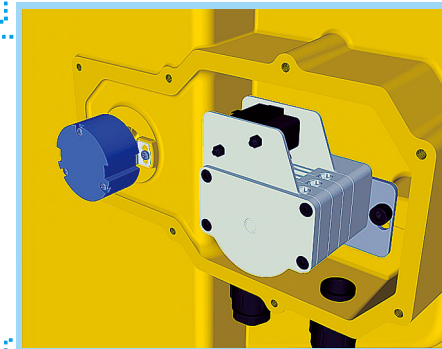
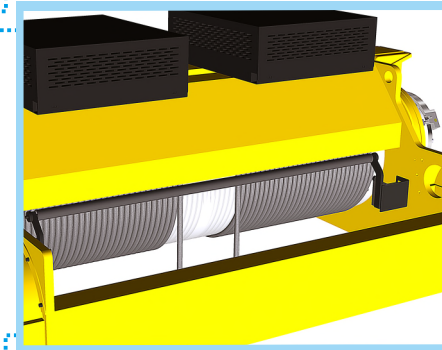
① Hoisting Motor & DC Brake Assembly

- 1). Permanent magnetic motor design : 1.5 times of starting current. 230% high starting torque. Compared with traditional insulation motor which has 6-8 times starting current, PM motor save energy at least 30~50%.
- 2). Permanent magnetic motor : during the loading operation, temperature rising balance 55°~60°.
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- 4). New (DC) magnetic brake system and motor operate synchronously which makes the brake with stronger brake force.
- 5). Brake force design at 150%, Max. 200%.



② Rope Guide (Lever)

To ensure positive winding of wire rope;
Prevent rope overlapping.



■ Specification

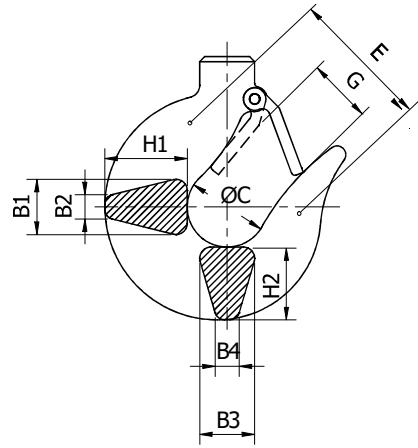
Model	Capacity (ton)	Lift (m)	Hoisting		Traversing			Wire rope	
			Speed (m/min)	Motor kw x pole	Speed (m/min)		Motor kw x pole x set	Ømm	R/F
					60Hz	50Hz			
SEDH-1600PM	16	8	5.0/0.5	16 x 8	18	15	0.75 x 4 x 2 0.75/0.25 x 4/12 x 2	18	2/4
		10			18/6	15/5			
		12							
SEDH-2000PM	20	8	4.5/0.5	18 x 8	18	15	0.75 x 4 x 2 0.75/0.25 x 4/12 x 2	20	2/4
		10			18/6	15/5			
		12							
SEFJ-3000PM	30	8	5.0/0.5	30 x 8	21	18	1.5 x 4 x 2 1.5/0.5 x 4/12 x 2	18	2/8
		10			21/7	18/6			
		12							
SEF1J-4000PM	40	8	4.2/0.4	33 x 8	18	15	1.5 x 4 x 2 1.5/0.5 x 4/12 x 2	20	2/8
		10			18/6	15/5			
		12							
SEFR-5000PM	50	8	3.6/0.4	36 x 8	18	15	2.2 x 4 x 2 2.2/0.73 x 4/12 x 2	18	2/12
		10			18/6	15/5			
		12							

※ Rating Duty ED% : Dual speed 40/20% (Hoisting) ; Dual speed 40/20% (Traversing).

Model	Dimensions (mm)									N.W. (kg)
	H	A	B	C	D	E	F	G	K	
SEDH-1600PM	1000	823	1001	1150	215	900	1000	1625	60	1870
		898	1076	1300						1960
		948	1126	1400						2020
SEDH-2000PM	1100	848	1026	1200	215	900	1000	1625	60	1940
		898	1076	1300						2000
		998	1176	1500						2110
SEFJ-3000PM	1600	1050	1176	1400	300	970	1436	2135	70	3180
		1150	1276	1600						3305
		1250	1376	1800						3430
SEF1J-4000PM	1700	1400	1526	2100	400	1100	1470	2265	80	3620
		1148	1273	1600						4300
		1248	1373	1800						4470
SEFR-5000PM	1800	1348	1473	2000	400	1150	1470	2275	80	4640
		1498	1623	2300						4890
		1248	1373	1800						4550
		1398	1523	2100	400	1150	1470	2275	80	4710
		1498	1623	2300						4950
		1748	1873	2800						5350

※ Option of traversing single speed or dual speed, please remark your request on each formal order.

Hook



Model	Capacity (ton)	Dimension (mm)									Allow Stress (kg/mm ²)	Hook Block Weight (kg)
		H1	B1	B2	H2	B3	B4	C	G	E		
TEAH ; SEAH	3.2	57	38	13	52	38	13	60	42	100	70	30
TEA1H ; TEBH SEA1H ; SEBH	5	75	48	16	68	48	16	75	56	105	70	40
TEB1H ; SEB1H	6.3	75	48	16	68	48	16	75	56	105	100	40
TECH ; SECH	8	85	61	22	77	61	22	85	62	140	70	70
TEC1H ; SEC1H	10	85	61	22	77	61	22	85	62	140	100	70
TEC2H ; SEC2H	12.5	100	70	28	95	65	28	100	70	133	100	150
SEDH	16	120	85	32	110	83	32	120	82	165	70	220
	20	120	85	32	110	83	32	120	82	165	100	250
SEFJ	30	138	98	36	128	93	36	140	105	220	100	420
SEF1J	40	150	115	55	140	110	55	150	112	230	100	510
SEFR	50	193	133	53	178	133	53	180	150	280	70	680

Pendant Control



Power Supply

- Electric wire rope hoist suits majority of the 3 - Phase power in different countries, available in 50Hz or 60Hz, voltage from 220V up to 600V.
- Dual-volt hoist subject to our confirmation.

Lifting Height

- Standard lifting height : Please refer to specifications.
- Optional height available upon request.

Push Button Switch

- 2-point type : up and down.
- 4-point type : up and down ; left and right (trolley).
- 6-point type : up and down ; left and right ; forward and reverse (end carrier)



< Radio Remote Switch (Optional) >

- Use dual security-protection design. When CPU is interference by outer electric wave, all the output will be off automatically for safety.
- Use one phase, common model, floating ground, EMI anti-noise circuit which could prevent the receiver breakdown, make the receiver stay away from the hurt of wrong ground-connecting which caused by working negligence, and it's designed for easy installation.



< Load display (Optional) >

- The large screen size 532 x 158mm is convenient & clear for user to see the capacity number and easy to assemble.

Federation Europeenne De La Manutention

Cubic mean value Definitions		Average operating time per day in hours							
1 (light)	($k \leq 0.50$) Mechanisms or parts thereof, usually subject to very small loads and in exceptional cases only to maximum loads.	0.25-0.5	0.5-1	1-2	2-4	4-8	8-16	>16	
2 (medium)	($0.50 < k \leq 0.63$) Mechanisms or parts thereof, usually subject to small loads but rather often to maximum loads.	0.12-0.25	0.25-0.5	0.5-1	1-2	2-4	4-8	8-16	>16
3 (heavy)	($0.63 < k \leq 0.80$) Mechanisms or parts thereof, usually subject to medium loads but frequently to maximum loads.	≤ 0.12	0.12-0.25	0.25-0.5	0.5-1	1-2	2-4	4-8	8-16
4 (very heavy)	($0.80 < k \leq 1$) Mechanisms or parts thereof, usually subject to maximum or almost to maximum loads.		≤ 0.12	0.12-0.25	0.25-0.5	0.5-1	1-2	2-4	4-8
Classification of Mechanisms FEM 9.511		1 Dm	1 Cm	1 Bm	1 Am	2 m	3 m	4 m	5 m

ISO/FEM (9.511)

Classification of mechanisms into groups

1 Dm	1 Cm	1 Bm	1 Am	2 m	3 m	4 m	5 m
M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8

Class of operation time

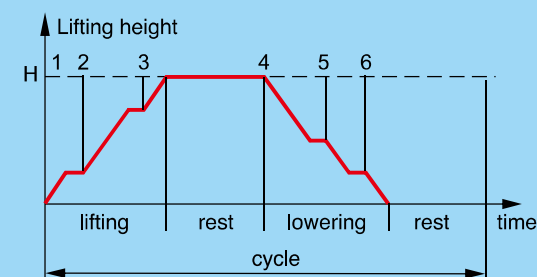
Class of operation time	Average operating time per day (in hours)	Calculated total operating time in hours
V0.06 T0	≤ 0.12	200
V0.12 T1	≤ 0.25	400
V0.25 T2	≤ 0.5	800
V0.5 T3	≤ 1	1600
V1 T4	≤ 2	3200
V2 T5	≤ 4	6300
V3 T6	≤ 8	12500
V4 T7	≤ 16	25000
V5 T8	≤ 16	50000

Classification of mechanisms

Load spectrum	Cubic mean value	Class of operation time									
		V0.06	V0.12	V0.25	V0.5	V1	V2	V3	V4	V5	
		T0	T1	T2	T3	T4	T5	T6	T7	T8	
		Average operating time per day in hours									
1 L1	$k \leq 0.50$										
2 L2	$0.50 < k \leq 0.63$										
3 L3	$0.63 < k \leq 0.80$										
4 L4	$0.80 < k \leq 1.00$										

Operation Cycle

Hoist with one speed



Hoist with two speed

