

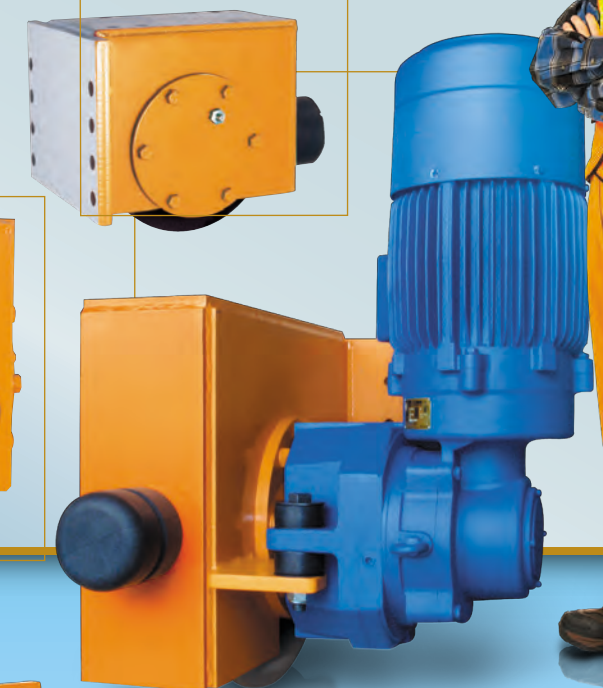
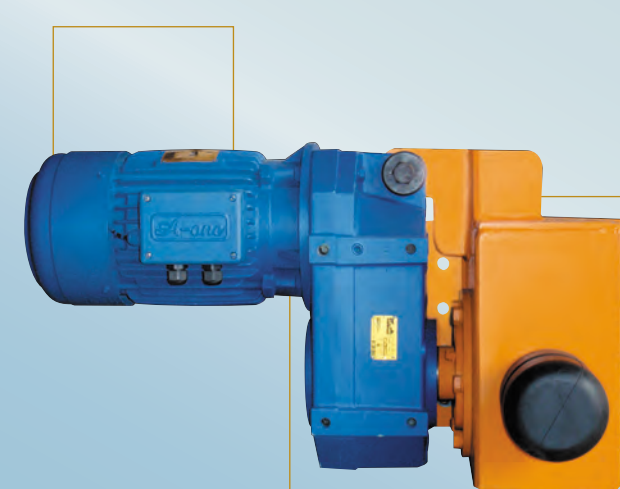
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A-ONECRANES

A-one, a professional cranemaker

Crane Components



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A-ONE Crane Co., Ltd.

No. 123, Desheng Rd., Daya Township,

Taichung County 428, Taiwan, R.O.C.

TEL : 886-4-25602355-7 FAX : 886-4-25600999

E-mail : chec123@ms25.hinet.net

Website : www.a-onecrane.com

AGENT:

AG Design 04-27071159

ISO 9001

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Product Model Introduction

1.Order No. example: EC160-06.30 / 60

EC	160	-	06	.	30	/	60
Type	Wheel		Code of wheel base		Shaft dia.		Groove width

2.Order No. example: BW16.30 / 60

BW	16	.	30	/	60
Type	Wheel		Shaft dia.		Groove width

Type:

EC : End carriage
BW: Wheel block travel unit

Wheel:

Wheel diameter in mm for EC
Wheel diameter in cm for BW
Ex.
12: 125, 16: 160, 20: 200,
25: 250, 32: 320, 40: 400,
50: 500, 63: 630

Code of wheel base:

Code of wheel base for EC
04: 1200 05: 1400
06: 1600 08: 2200
10: 2500 12: 3100
14: 3600 15: 4000

Wheel groove:

Width of wheel groove in mm
Blank for standard
Remarkd if customization

Shaft dia.:

Output shaft diameter.
Ex.
30: Φ30mm with keyway
30S: Φ30mm with spline

3.Order No. example: GM3-18 HA30 / VF71-L4 / B 5-38

GM	3	-	18	H	A	30	/	VF	71	-	L4	/	B	5	-	38
Type	Size	Ratio	Fixing	Connection	Diameter	Motor type	Frame size	Pole	Option	Frequency	Voltage					

Type:

GM

SIZE:

2, 3, 3.5, 4, 5, 6, 7, 8

Ratio: (Nominal)11, 14, 18, 22, 28, 36, 45, 56,
71, 90, 112, 140, 180, 224**Fixing:**

H: Torque arm

Connection:A: Hollow shaft with keyway
B: Hollow shaft with spline**Output diameter:**

Diameter in mm

Motor type:VF: Vertical AC 3 phase
motors**Frame size:**63, 71, 80, 90L, 112M, 132S,
132M, 160M, 160L, 180M,
180L...**Pole:**2: 2P, 4: 4P, 208: 2/8P
412: 4/12P**Option:**B: Brake
F: Forced cooling fan
S: Space heater
T: Thermal protector
H: Manual release of brake**Frequency:**5: 50Hz
6: 60Hz**Voltage:**22: 220V 38: 380V 42: 415V
44: 440V 46: 460V 48: 480V
53: 525V 58: 575V 20: 200V

About A-ONE

The A-ONE end carriage (EC) or wheel block travel unit (BW) system is an advanced design of rail mounting assembly for moving loads at variable speed, and it is the ideal choice for most lifting operations.

The EC and BW are precisely engineered for outstanding performance and minimal maintenance proven under fully dynamic load tests. The strict testing and multi-stage quality control under the toughest conditions have ensured the maximum safety and reliability. A-ONE EC or BW works perfectly with A-ONE GM-SERIES products.

- Size ranges for wheel load up to 35000 Kg.
- Drive shaft material: alloy steel.
- Wheel material: carbon steel with wheel surface hardness.
- Bearing housing material: spherical graphite cast iron; long life anti-friction bearing is applied.
- Torque arms, connecting parts and buffers are easily fitted.
- Designed to allow for ease of installation, disassembly and maintenance.





RAIL WHELL SELECTION

Classification of mechanisms Acc. with F.E.M.									
Load spectrum	Definition	Average operating time per day in hours							
		≤0.25	≤0.5	≤1	≤2	≤4	≤8	≤16	> 16
Light	Mechanisms, or parts thereof, usually subject to light loads and occasional maximum loads	--	1Dm (M1)	1Cm (M2)	1Bm (M3)	1Am (M4)	2m (M5)	3m (M6)	4m (M7)
Medium	Mechanisms, or parts thereof, usually subject to light loads, but with a higher incidence of maximum loads	1Dm (M1)	1Cm (M2)	1Bm (M3)	1Am (M4)	2m (M5)	3m (M6)	4m (M7)	5m (M8)
Heavy	Mechanisms, or parts thereof, usually subject to medium loads, and frequently to maximum loads	1Cm (M2)	1Bm (M3)	1Am (M4)	2m (M5)	3m (M6)	4m (M7)	5m (M8)	--
Very heavy	Mechanisms, or parts thereof, usually subject to maximum or almost maximum loads	1Bm (M3)	1Am (M4)	2m (M5)	3m (M6)	4m (M7)	5m (M8)	--	--

Average permissible wheel loads Acc. with F.E.M. 1Am (M4) group Loads for Rmin / Rmax = 0.35											
Wheel dia. (mm)	Applied rail head width (mm)	Travelling velocity in m/min									
		12.5	16	20	25	32	40	50	63	80	100
		Unit of Load in kg									
125	30	2940	2850	2760	2670	2550	2410	2260	2110	1940	
	35	3430	3327	3220	3120	2980	2810	2640	2460	2260	
	40	3500*				3410	3210	3010	2820	2580	
160	30	3870	3760	3650	3530	3420	3270	3080	2890	2700	2480
	35	4520	4390	4250	4120	3990	3810	3600	3380	3160	2890
	40	5000*		4860	4710	4560	4360	4110	3860	3610	3310
200	40	6640	6460	6270	6080	5890	5700	5450	5140	4820	4510
	45	7470	7260	7050	6840	6630	6420	6130	5780	5430	5080
	50	8000*		7840	7600	7360	7130	6820	6420	6030	5640
250	40	8540	8310	8070	7840	7600	7360	7130	6820	6420	6030
	45	9610	9340	9080	8820	8550	8290	8020	7670	7230	6790
	50	10000*			9800	9500	9210	8910	8520	8030	7540
320	40	10340	10150	9870	9590	9310	9030	8750	8470	8100	7640
	45	11630	11420	11110	10790	10480	10160	9850	9530	9120	8590
	50	12000*			11990	11640	11290	10940	10590	10130	9550
400	45	14800	14540	14280	13890	13490	13100	12710	12310	11920	11400
	50	16450	16160	15870	15430	14990	14560	14120	13680	13240	12660
	55	18000*	17770	17450	16970	16490	16010	15530	15050	14570	13930
500	45	18670	18500	18180	17850	17360	16870	16380	15880	15390	14900
	50	20740	20560	20200	19830	19290	18740	18200	17650	17100	16560
	55	22500*		22220	21820	21220	20620	20020	19410	18810	18210
630	45	23730	23520	23320	22900	22490	21870	21250	20630	20010	19400
	55	29000	28750	28500	27990	27490	26730	25980	25220	24460	23710
	65	34280	33980	33680	33090	32490	31600	30700	29810	28910	28020

Note: (1) In * means max. wheel load.
(2) If applied wheel load is larger than above table listed, please consult us.

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TRAVEL DRIVING-MOTIONS SELECTION

Combination of travelling wheel & speed.

Motor speed in rpm(50Hz)	Travelling speed in m/min										
	4 pole (1400)	12.5	16	20	25	32	40	50	63	80	100
2 pole (2800)	25	32	40	50	63	80	100	125	160		
Wheel dia.	Nominal ratio										
125	45	36	28	22	18	14	11				
160	56	45	36	28	22	18	14	11			
200	71	56	45	36	28	22	18	14	11		
250	90	71	56	45	36	28	22	18	14	11	
320	112	90	71	56	45	36	28	22	18	14	11
400	140	112	90	71	56	45	36	28	22	18	14
500	180	140	112	90	71	56	45	36	28	22	18
630	224	180	140	112	90	71	56	45	36	28	22

*Other nos. of motor pole and reduction ratio can be on request.

Combination of travelling Wheel & loading limits of the gear units.

Wheel	Type of gear unit	Loading limit of the gear unit (kg)
125	GM2	4000
	GM3	8900
160	GM2	3100
	GM3	7000
200	GM3	5600
	GM3.5	9000
250	GM4	8900
	GM5	17900
320	GM5	14000
400	GM5	11000
	GM6	22900
500	GM6	18000
	GM7	29000
630	GM7	23000
	GM8	53000

*If permissible wheel load > loading limit of gear unit, a larger gear unit must be selected.

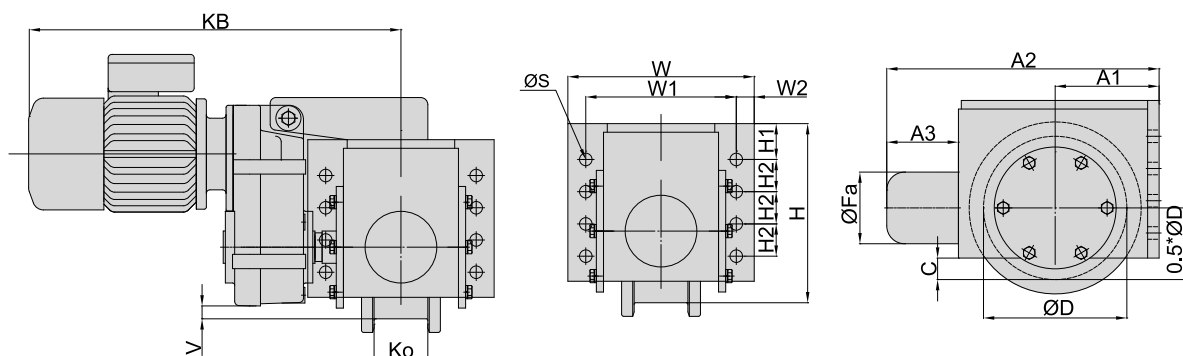
Combination of motor & gear unit.

Type of motor	Power (kW)-4P	Type of gear unit	Type of motor	Power(kW)2/8P	Type of gear unit
VF63-S4	0.18	GM2 GM3	VF71-S208	0.18/0.04	GM2 GM3
VF63-M4	0.25		VF71-M208	0.25/0.06	
VF71-S4	0.37		VF71-L208	0.37/0.09	GM2 GM3 GM3.5 GM4 GM5 GM6 GM7
VF71-M4	0.55		VF80-L208	0.55/0.12	
VF71-L4	0.75		VF90L-S208	0.75/0.18	
VF80-L4	1.1	GM2 GM3 GM3.5 GM4	VF90L-L208	1.5/0.37	
VF90L-S4	1.5	GM3 GM3.5 GM4 GM5 GM6 GM7	VF112M-208	2.2/0.55	GM4 GM5 GM6 GM7
VF90L-L4	2.2	GM4 GM5 GM6 GM7			
VF112M-4	3.7	GM4 GM5 GM6 GM7	VF132S-208	3.0/0.75	GM4 GM5 GM6 GM7
VF132S-4	5.5	GM5 GM6 GM7 GM8	VF132M-208	3.7/0.9	GM5 GM6 GM7 GM8
VF132M-4	7.5		VF160M-208	5.5/1.4	
VF160M-4	11		VF160L-L208	7.5/1.85	GM6 GM7 GM8
VF160L-S4	15				
VF160L-L4	18.5				
VF180M-4	22	GM7 GM8			
VF180L-4	30				

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WHEEL BLOCK TRAVEL UNITS



ΦD	A1	A2	A3	C	Fa	W	W1	W2	H	H1	H2	S	Ko
125	100	280	80	10	80	190	160	15	160	40	30	14	60
160	120	315	80	20	80	220	190	15	200	50	35	14	65
200	145	380	100	30	100	260	210	25	250	50	45	18	75
250	180	475	125	30	125	280	230	25	290	75	50	18	80
320	225	565	125	35	125	320	260	30	385	75	75	22	80
400	290	740	160	40	160	360	300	30	480	100	100	22	85
500	335	670	---	60	---	420	340	40	590	130	120	26	90

*If Ko < Applied rail, please consult us.

Dimension in mm

Dimension of travel driving motions:

Wheel	Output splined shaft (DIN5480)	Output shaft with keyway	Gear unit type	Motor type	KB (mm)	V (mm)
125	Φ30 x 100 M1.25 x 22T	Φ25 x 95	GM2	VF63 VF71 VF80	458 493 498	-3
			GM3	VF71 VF80	504 509	-20
160	Φ30 x 100 M1.25 x 22T	Φ25 x 95	GM2	VF71 VF80	500 505	15
	Φ35 x 100 M1.25 x 26T	Φ30 x 100	GM3	VF71 VF80 VF90	511 516 614	-2
200	Φ35 x 100 M1.25 x 26T	Φ30 x 100	GM3	VF71 VF80 VF90	521 526 624	18
		Φ40 x 120	GM3.5	VF80 VF90 VF112	534 632 673	2
250	Φ45 x 120 M2 x 21T	Φ45 x 120	GM4	VF80 VF90L VF112M	551 649 690	22
	Φ55 x 160 M2 x 26T	Φ55 x 160	GM5	VF90L VF112M VF132S	653 732 777	-8
320	Φ55 x 160 M2 x 26T	Φ55 x 160	GM5	VF90L VF112M VF132S	660 739 784	27
400	Φ55 x 160 M2 x 26T	Φ55 x 160	GM5	VF90L VF112M VF132S	678 757 802	67
	Φ65 x 180 M2 x 31T	Φ70 x 180	GM6	VF90L VF112M VF132S VF132M	700 778 791 821	49
500		Φ70 x 180	GM6	VF90L VF112M VF132S VF132M	700 795 808 838	99
		Φ80 x 220	GM7	VF112M VF132S VF132M VF160M VF160L	827 840 870 970 1010	65

NOTES: Dimensions are subject to change without notice.

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