



CE SGS

BERGCHAI

CRANE MOTOR PROJECT CASES

This product is widely used in:

Single Girder Overhead Crane ,Double Girder Overhead Crane ;
Gantry Crane and Crane End Carriages etc.



CRANE GEARED MOTOR

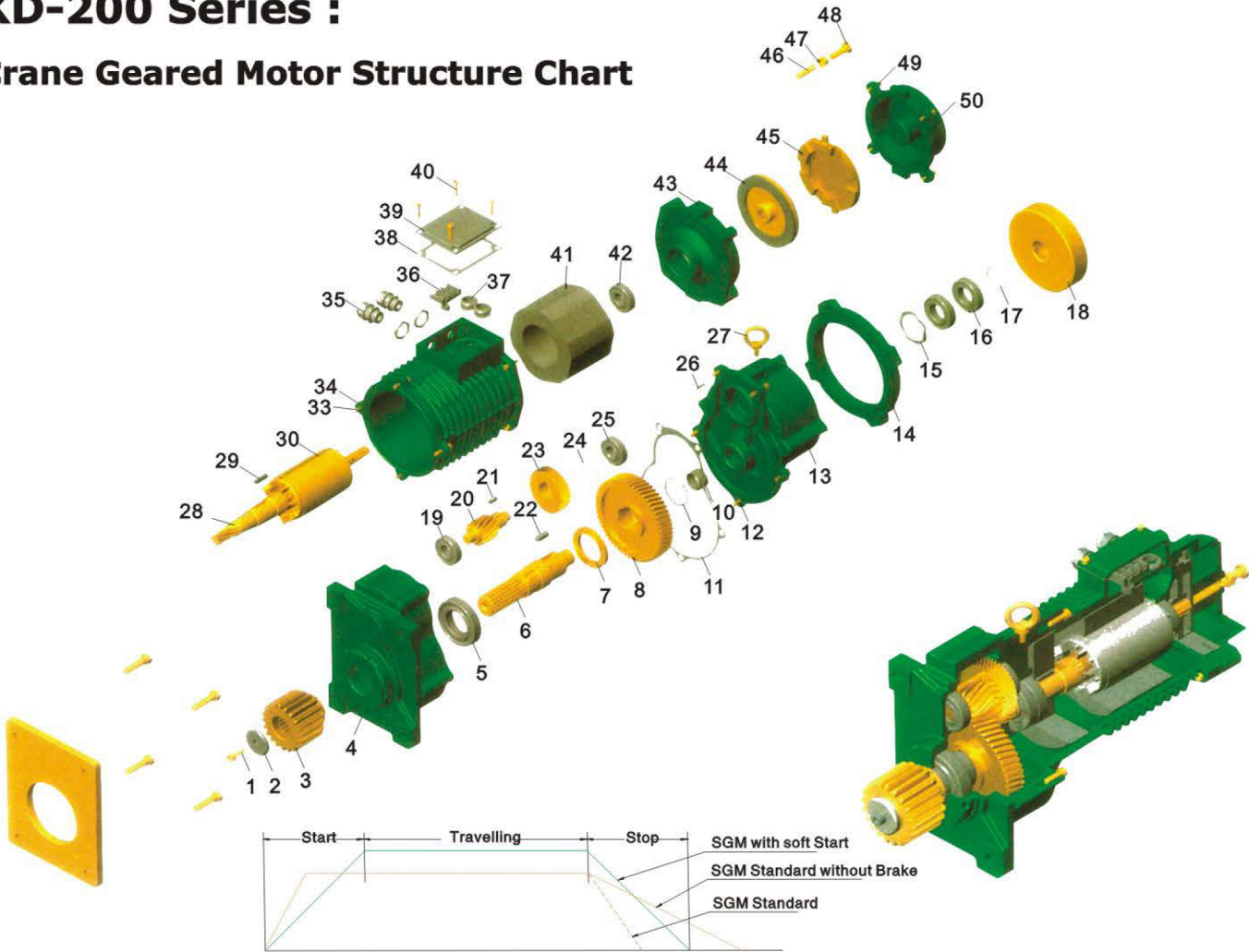
Easy heat dissipation
Low noise/High security



NOTES:

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KD-200 Series :
Crane Geared Motor Structure Chart



☒ Reduction gear

The gear box is made of cast iron(FC25) with high tension, and manufactured by computer numerical control machinery(CNC LATHE&CNC machining center), which lead it to accurate precision. The gear is made of Ni-Cr-Mo alloy steel (SNCM220&SCM415) with heat treatment of vacuum and carbonitriding. The shaft is manufactured by alignment and grinding, which make it high accurate. It possesses high abrasion and strike resistance. The safety factor is up to 5 times or more. The service life is long.

☒ Buffer

Adopting soft starting and fly wheel buffer to produce high inertia movement. Both starting and braking are stable and smooth, which makes goods not shaking.

☒ Motor

With high performance, high torque, motor ensures quick heat dissipation and resistance to high voltage ranks more than 1500v.And it is also provided with other advantages: low current, small size, strong output power, and high operation frequency.

☒ Electromagnetic brake

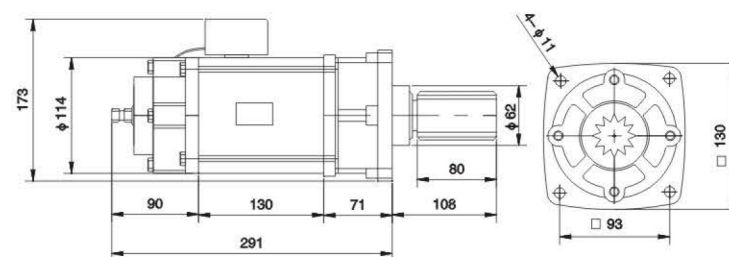
Direct current brake possesses strong braking force. Bolt controls braking force directly, and adopts braking pad with high wear resistance to make it with high safety, long service life, and strong stability



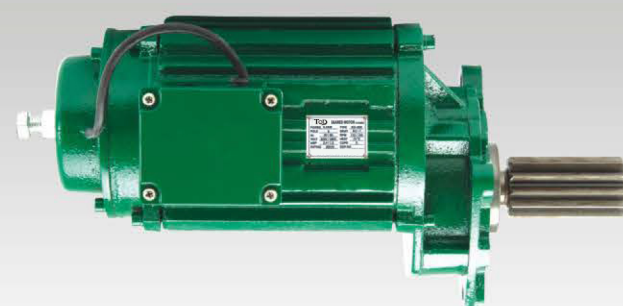
Weight : 13kg Length: 30cm

KD-030 SERIES

Motor without Buffer



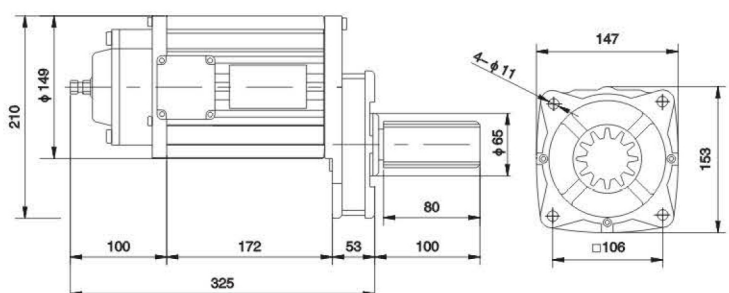
Model	Power	Number of poles	Output Gear Module	Reduction Ratio	Rotation Speed		Voltage
					50Hz	60Hz	
KD-030 No Buffer	0.25KW	4 P	M3	10:1	133R/MIN	176R/MIN	200V-600V/ 3Phase/50/60Hz
	0.25KW	6 P	M3.5		90R/MIN	120R/MIN	
	0.4KW	4 P	M4		133R/MIN	176R/MIN	



Weight : 25kg Length: 33cm

KD-050 SERIES

Motor with Buffer



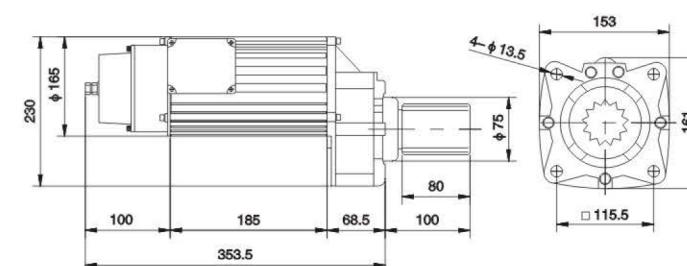
Model	Power	Number of poles	Output Gear Module	Reduction Ratio	Rotation Speed		Voltage
					50Hz	60Hz	
KD-050 With Buffer	0.4KW	4P	M3	8.5:1	176R/MIN	210R/MIN	200V-600V/ 3Phase/50/60Hz
	0.37KW	6P	M3.5 M4		112R/MIN	134R/MIN	



Weight : 30kg Length: 35cm

KD-100 SERIES

Motor with Buffer



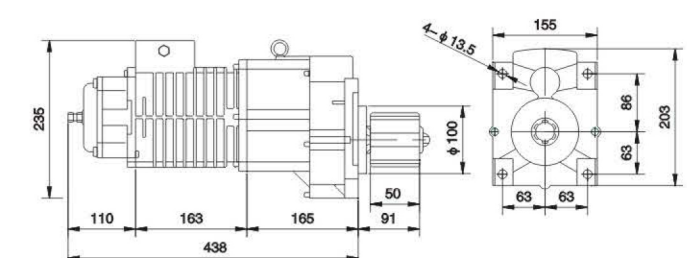
Model	Power	Number of poles	Output Gear Module	Reduction Ratio	Rotation Speed		Voltage
					50Hz	60Hz	
KD-100 With Buffer	0.75KW	4 P	M3	7.7:1	189R/MIN	228R/MIN	200V-600V / 3Phase/50/60Hz
	0.6KW	6 P	M3.5		123R/MIN	148R/MIN	
	0.4/0.13KW	4/12P	M4 M5		189/62R/MIN	228/75R/MIN	



Weight : 43kg Length: 43cm

KD-150 SERIES

Motor with Buffer

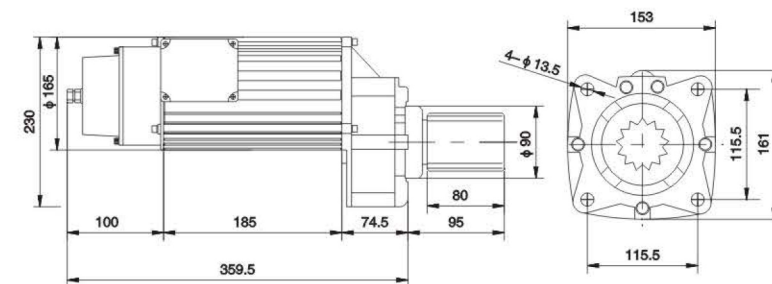


Model	Power	Number of poles	Output Gear Module	Reduction Ratio	Rotation Speed		Voltage
					50Hz	60Hz	
KD-150 With Buffer	1.1KW	4 P	M3.5	13:1	112R/MIN	135R/MIN	200V-600V / 3Phase/50/60Hz
	0.75KW	6 P	M4		67R/MIN	92R/MIN	
	0.6/0.2KW	4/12P	M5		112/33R/MIN	137/45R/MIN	



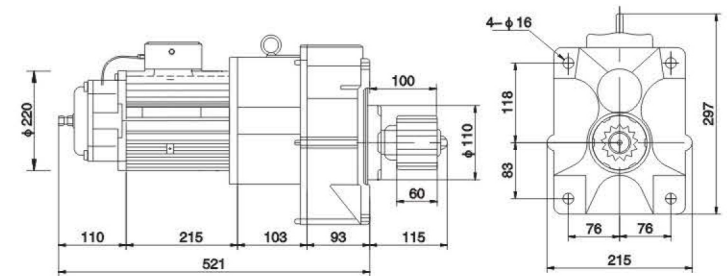
KD-150A SERIES

Motor with Buffer



KD-300 SERIES

Motor with Buffer



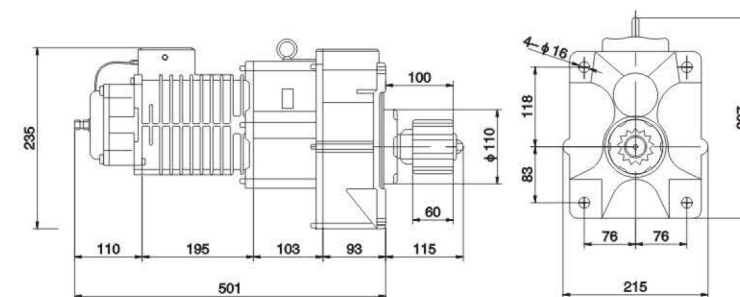
Model	Power	Number of poles	Output Gear Module	Reduction Ratio	Rotation Speed		Voltage
					50Hz	60Hz	
KD-150A With Buffer	1.1KW	4 P	M3	7.7:1	189R/MIN	228R/MIN	200V-600V / 3Phase/50/60Hz
	0.75KW	6 P	M3.5		123R/MIN	148R/MIN	
	0.6/0.2KW	4/12P	M5		189/62R/MIN	228/75R/MIN	

Model	Power	Number of poles	Output Gear Module	Reduction Ratio	Rotation Speed		Voltage
					50Hz	60Hz	
KD-300 With Buffer	2.2KW	4 P	M4	16:1	92R/MIN	110R/MIN	200V-600V / 3Phase/50/60Hz
	1.5KW	6 P	M5		61R/MIN	73R/MIN	
	1.5/0.5KW	4/12P	M6		92/31R/MIN	110/37R/MIN	



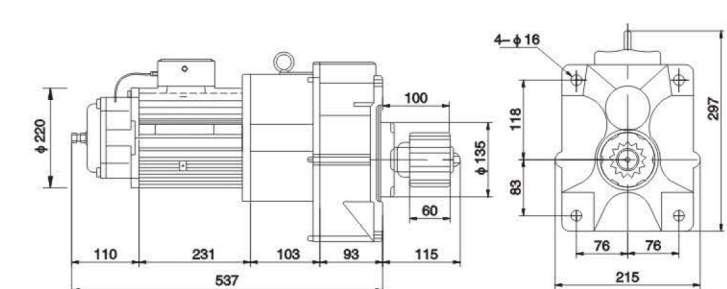
KD-200 SERIES

Motor with Buffer



KD-500 SERIES

Motor with Buffer



Model	Power	Number of poles	Output Gear Module	Reduction Ratio	Rotation Speed		Voltage
					50Hz	60Hz	
KD-200 With Buffer	1.5KW	4 P	M3.5	16 : 1	92R/MIN	110R/MIN	200V-600V / 3Phase/50/60Hz
	1.1KW	4 P	M4		92R/MIN	110R/MIN	
	1.1KW	6 P	M5		61R/MIN	73R/MIN	
	0.75/0.25KW	4/12P	M6		92/30R/MIN	110/36R/MIN	

Model	Power	Number of poles	Output Gear Module	Reduction Ratio	Rotation Speed		Voltage
					50Hz	60Hz	
KD-500 With Buffer	3.75KW	4 P	M5	16:1	92R/MIN	110R/MIN	200V-600V / 3Phase/50/60Hz
	3.75KW	6 P	M6		61R/MIN	73R/MIN	
	2.2KW	6 P	M7		61R/MIN	73R/MIN	
	2.2/0.75KW	4/12P			92/30R/MIN	110/36R/MIN	



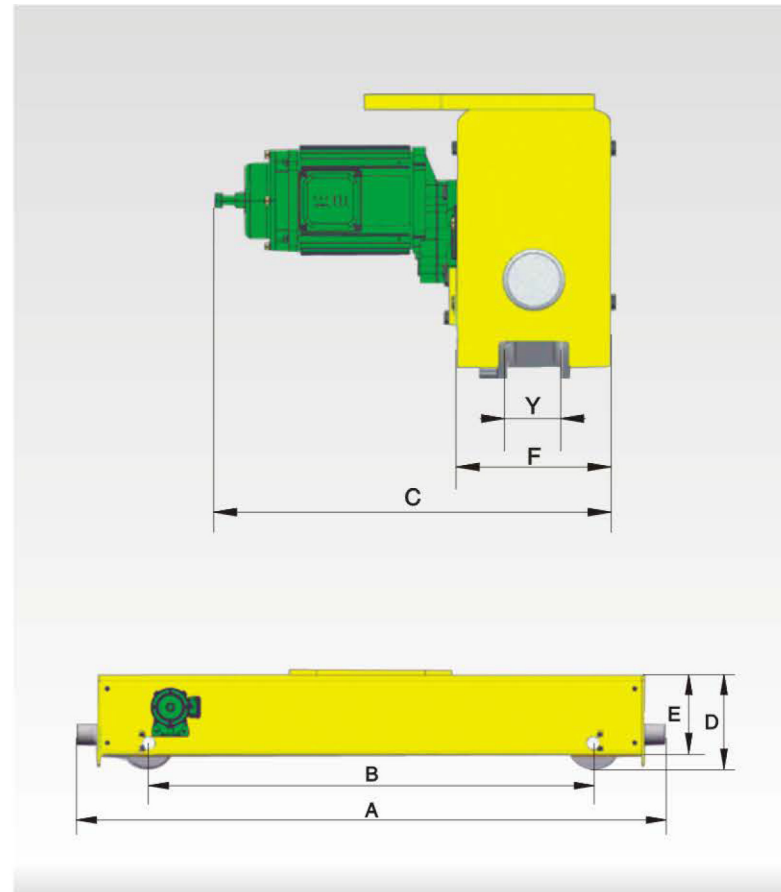
Crane Geared Motor Speed Parameters (4 Poles Speed)

Model		Output Module	Voltage : 200V-600V/3Phase/50Hz; Poles : 4P ; Output gear						Reduction Ratio
KD-030	M3	Teeth	12T	14T	15T	16T	17T		Reduction Ratio: 10:1 Output Shaft: 133 Rotate
		Speed	14.1m/min	16.5m/min	17.7m/min	19m/min	20m/min		
	M3.5	Teeth	10T	11T	12T	13T	14T		
		Speed	13.4m/min	15.4m/min	16.9m/min	18.3m/min	19.4m/min		
	M4	Teeth	10T						
		Speed	15m/min						
KD-050	M3	Teeth	12T	13T	14T	15T	16T	17T	Reduction Ratio: 8.5:1 Output Shaft: 176 Rotate
		Speed	18.3m/min	19.8m/min	21.3m/min	22.8m/min	24.4m/min	25.9m/min	
	M3.5	Teeth	10T	11T	12T	13T	14T	15T	
		Speed	16.7m/min	18.5m/min	20.1m/min	21.7m/min	23.5m/min	25.1m/min	
	M4	Teeth	9T	10T	11T	12T	13T		
		Speed	17.3m/min	19.3m/min	21.2m/min	23.1m/min	25m/min		
KD-100 KD-150A	M3	Teeth	13T	14T	15T	16T			Reduction Ratio: 7.7:1 Output Shaft: 189 Rotate
		Speed	19m/min	21m/min	23m/min	24.4m/min			
	M3.5	Teeth	10T	11T	12T	13T	14T	15T	
		Speed	17.9m/min	19.6m/min	21.5m/min	23.8m/min	25.7m/min	27.5m/min	
	M4	Teeth	9T	10T	11T	12T	13T		
		Speed	18.8m/min	21m/min	23m/min	25.1m/min	27.2m/min		
KD-150	M5	Teeth	7T	8T	9T	10T	11T	12T	Reduction Ratio: 13:1 Output Shaft: 112 Rotate
		Speed	18.8m/min	21.5m/min	24.2m/min	26.8m/min	29.5m/min	32.2m/min	
	M3.5	Teeth	15T	16T	18T	20T	22T	24T	
		Speed	16.6m/min	17.7m/min	19.9m/min	22m/min	24.3m/min	26.5m/min	
	M4	Teeth	14T	15T	16T	17T	18T	20T	
		Speed	17.9m/min	19.2m/min	20.5m/min	21.8m/min	23.1m/min	25.5m/min	
KD-200 KD-300	M5	Teeth	12T	13T	14T	15T	16T	17T	Reduction Ratio: 16:1 Output Shaft: 92 Rotate
		Speed	19.7m/min	21.4m/min	23m/min	24.7m/min	26.3m/min	28m/min	
	M3.5	Teeth	19T	21T	23T	25T	27T		
		Speed	17m/min	18.8m/min	20.5m/min	22.3m/min	24.2m/min		
	M4	Teeth	16T	17T	18T	19T	20T	21T	
		Speed	16.5m/min	17.5m/min	18.6m/min	19.6m/min	20.7m/min	21.7m/min	
KD-500	M5	Teeth	13T	14T	15T	16T	17T	18T	Reduction Ratio: 16:1 Output Shaft: 92 Rotate
		Speed	16.7m/min	18m/min	19.3m/min	20.6m/min	21.9m/min	23.2m/min	
	M6	Teeth	11T	12T	13T	14T	15T		
		Speed	17.4m/min	19m/min	20.5m/min	22.2m/min	23.7m/min		
	M7	Teeth	17T	18T	19T	20T	21T	22T	
		Speed	21.9m/min	23.2m/min	24.5m/min	25.8m/min	27.1m/min	28.3m/min	

Crane Geared Motor Speed Parameters (6 Poles Speed)

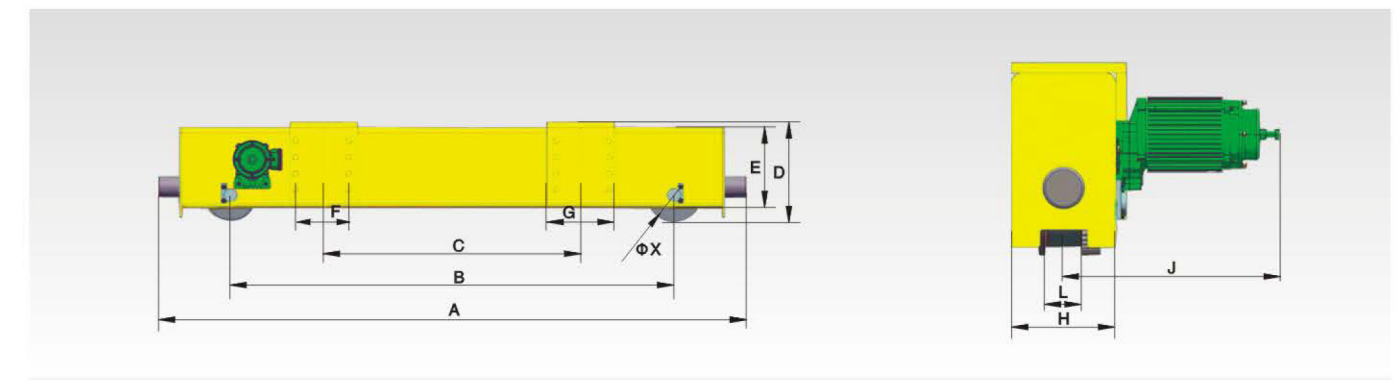
Model		Output Module	Voltage : 200V-600V/3Phase/50Hz; Poles : 6P ; Output gear						Reduction Ratio
KD-030	M3	Teeth	12T	14T	15T	16T	17T		Reduction Ratio: 10:1 Output Shaft: 90 Rotate
		Speed	9.5m/min	11m/min	11.8m/min	12.9m/min	13.8m/min		
	M3.5	Teeth	10T	11T	12T	13T	14T		
		Speed	9.5m/min	10.5m/min	11.5m/min	12.4m/min	13.3m/min		
	M4	Teeth	10T						
		Speed	11m/min						
KD-050	M3	Teeth	12T	13T	14T	15T	16T	17T	Reduction Ratio: 8.5:1 Output Shaft: 112 Rotate
		Speed	10.8m/min	11.7m/min	12.6m/min	13.5m/min	14.5m/min	15.4m/min	
	M3.5	Teeth	10T	11T	12T	13T	14T	15T	
		Speed	10.9m/min	12m/min	13.1m/min	14.2m/min	15.3m/min	16.4m/min	
	M4	Teeth	9T	10T	11T	12T	13T		
		Speed	11.3m/min	12.6m/min	13.9m/min	15.1m/min	16.4m/min		
KD-100 KD-150A	M3	Teeth	13T	14T	15T	16T			Reduction Ratio: 7.7:1 Output Shaft: 123 Rotate
		Speed	13m/min	14m/min	15m/min	16m/min			
	M3.5	Teeth	10T	11T	12T	13T	14T	15T	
		Speed	12m/min	13m/min	14.3m/min	15.5m/min	16.7m/min	17.9m/min	
	M4	Teeth	9T	10T	11T	12T	13T		
		Speed	12.3m/min	13.7m/min	15m/min	16.4m/min	17.8m/min		
KD-150	M5	Teeth	7T	8T	9T	10T	11T	12T	Reduction Ratio: 13:1 Output Shaft: 67 Rotate
		Speed	12.1m/min	13.8m/min	15.6m/min	17.3m/min	19m/min	20.7m/min	
	M3.5	Teeth	15T	16T	18T	20T	22T	24T	
		Speed	9.7m/min	10.4m/min	11.8m/min	13m/min	14.3m/min	15.6m/min	
	M4	Teeth	14T	15T	16T	17T	18T	20T	
		Speed	10.6m/min	11.4m/min	12.1m/min	12.9m/min	13.6m/min	15.1m/min	
KD-200 KD-300	M5	Teeth	12T	13T	14T	15T	16T	17T	Reduction Ratio: 16:1 Output Shaft: 61 Rotate
		Speed	11.6m/min	12.5m/min	13.5m/min	14.5m/min	15.4m/min	16.4m/min	
	M3.5	Teeth	19T	21T	23T	25T	27T		
		Speed	11.2m/min	12.4m/min	13.6m/min	14.8m/min	16m/min		
	M4	Teeth	16T	17T	18T	19T	20T	21T	
		Speed	11m/min	11.7m/min	12.4m/min	13.1m/min	13.7m/min	14.4m/min	
KD-500	M5	Teeth	13T	14T	15T	16T	17T	18T	Reduction Ratio: 16:1 Output Shaft: 61 Rotate
		Speed	11.3m/min	12.1m/min	13m/min	13.9m/min	14.7m/min	15.6m/min	
	M6	Teeth	11T	12T	13T	14T	15T		
		Speed	11.4m/min	12.5m/min	13.5m/min	14.5m/min	15.6m/min		
	M7	Teeth	17T	18T	19T	20T	21T	22T	
		Speed	14.7m/min	15.6m/min	16.3m/min	17.1m/min	18m/min	18.8m/min	

Carriage of Single Girder Crane



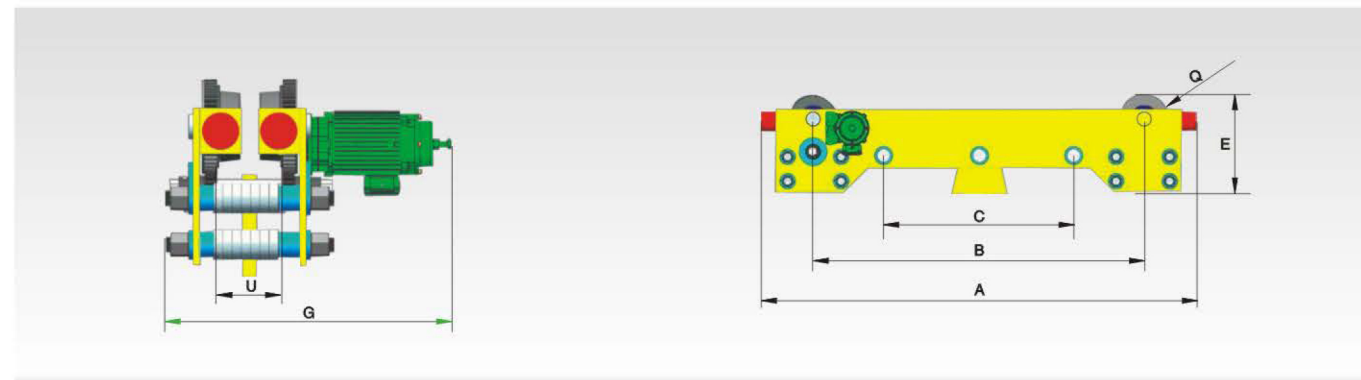
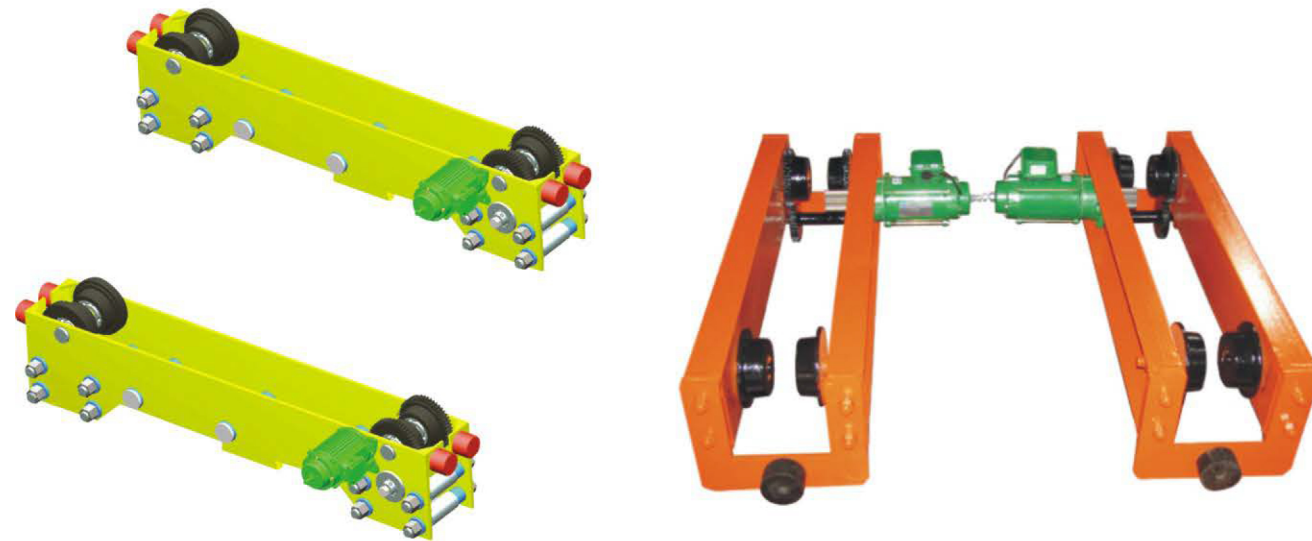
Parameter Model	Capacity (T)	Span (m)	Total Length (A/mm)	Wheel Base (B/mm)	Total Height (D/mm)	Girder Height (E/mm)	Total Width (C/mm)	Girder Width (F/mm)	Wheel Groove (Y/mm)	Wheel Dia. (mm)	Buffer Motor Power (Kw)
DLTC-1.0-150	≤2	≤7	1500	1000	265	250	495	150	60	φ 150	0.4X2
DLTC-1.5-150	≤2	≤11	2000	1500	265	250	495	150	60	φ 150	0.4X2
DLTC-1.5-200	≤5	≤11	2000	1500	330	300	543	200	70	φ 200	0.75X2
DLTC-2.0-200	≤5	≤14	2500	2000	330	300	543	200	70	φ 200	0.75X2
DLTC-2.5-200	≤5	≤17.5	3000	2500	330	300	543	200	70	φ 200	0.75X2
DLTC-2.0-250	≤10	≤14	2500	2000	435	400	543	200	70	φ 250	0.75X2
DLTC-2.5-250	≤10	≤17.5	3000	2500	435	400	543	200	70	φ 250	0.75X2
DLTC-3.0-250	≤10	≤21.5	3500	3000	435	400	628	200	70	φ 250	1.1X2
DLTC-2.0-300	≤16	≤14	2500	2000	450	400	648	200	70	φ 300	1.1X2
DLTC-2.5-300	≤16	≤17.5	3000	2500	500	450	648	250	70	φ 300	1.1X2
DLTC-3.0-300	≤16	≤21.5	3500	3000	500	450	711	250	70	φ 300	1.5X2
DLTC-3.5-300	≤16	≤25	4000	3500	500	450	711	250	70	φ 300	1.5X2
DLTC-2.5-350	≤32	≤17.5	3200	2500	550	500	771	250	90	φ 350	2.2X2
DLTC-3.0-350	≤32	≤21.5	3700	3000	550	500	771	250	90	φ 350	2.2X2
DLTC-3.5-350	≤32	≤25	4200	3500	550	500	771	250	90	φ 350	2.2X2
DLTC-4.0-350	≤32	≤31.5	4700	4000	550	500	771	250	90	φ 350	2.2X2

Carriage of Double Girder Crane



Parameter Model	Capacity (T)	Span (m)	Total Length (A/mm)	Wheel Base (B/mm)	Gauge (C/mm)	Total Height (D/mm)	Girder Height (E/mm)	Connect Plate Hole (F/mm)	Connect Plate Width (G/mm)	Wheel Dia. (X/mm)	Girder Width (H/mm)	Total Width (J/mm)	Wheel Groove Width (L/mm)	Buffer Motor Power (Kw)
SLTC-2.5-250	≤5	≤13.5	3000	2500	1100	370	300	540	600	250	200	454	70	0.75×2
SLTC-3.0-250	≤5	≤19.5	3500	3000	1600	370	300	540	600	250	200	454	70	0.75×2
SLTC-3.5-300	≤5	≤25.5	4000	3500	1650	470	400	610	650	300	200	540	70	1.1×2
SLTC-4.0-350	≤5	≤31.5	4500	4000	2150	470	400	640	700	350	200	540	90	1.1×2
SLTC-2.5-300	≤10	≤13.5	3000	2500	1100	370	300	540	600	300	200	454	70	1.1×2
SLTC-3.0-300	≤10	≤19.5	3500	3000	1600	470	400	610	650	300	200	610	70	1.5×2
SLTC-3.5-350	≤10	≤25.5	4100	3500	1650	470	400	610	650	350	200	610	90	1.5×2
SLTC-4.0-400	≤10	≤31.5	4600	4000	2150	470	400	640	700	400	200	630	90	2.2×2
SLTC-2.5-350	≤25	≤13.5	3100	2500	1100	470	400	540	600	350	200	610	90	1.5×2
SLTC-3.0-350	≤25	≤19.5	3600	3000	1600	470	400	540	600	350	200	610	90	2.2×2
SLTC-3.5-400	≤25	≤25.5	4100	3500	1800	470	400	610	650	400	200	610	90	2.2×2
SLTC-4.0-400	≤25	≤31.5	4700	4000	2150	520	450	640	700	400	250	675	90	3.75×2
SLTC-2.5-350	≤32	≤13.5	3100	2500	1100	470	400	540	600	350	200	610	90	2.2×2
SLTC-3.0-400	≤32	≤19.5	3600	3000	1600	520	450	610	650	400	250	675	90	3.75×2
SLTC-3.5-400	≤32	≤25.5	4200	3500	1800	520	450	640	700	400	250	675	90	3.75×2
SLTC2-1.8-400	≤32	≤31.5	1900×2	1100	2200	470	400	8 Wheels Add Middle Shaft		400	200	650	90	2.2×4

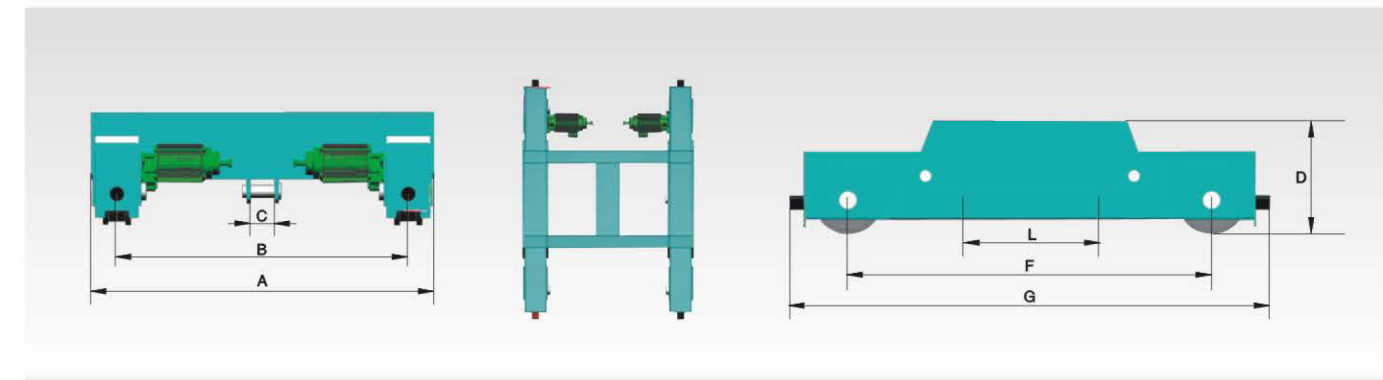
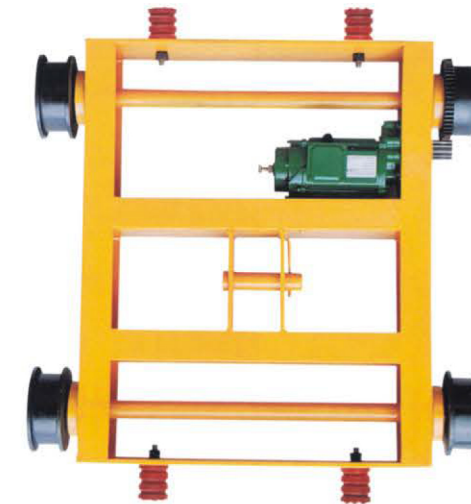
Underhung End Carriage of Single / Double Girder Crane



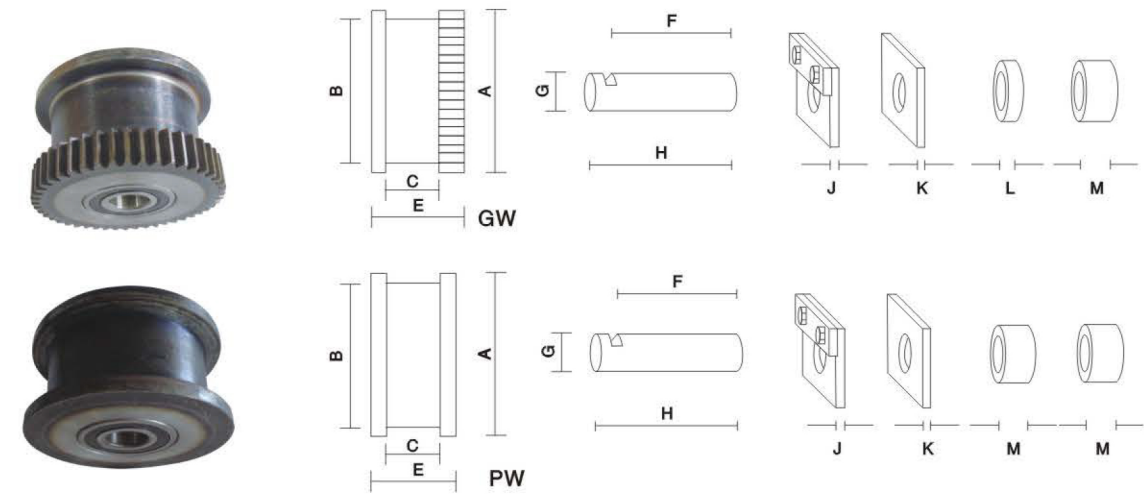
Parameter Model	Capacity (T)	Power (KW)	Speed (m/min)	Total Length (A/m)	Total Width (G/mm)	Total Height (E/mm)	Wheel Base (B/m)	Axle Base (C/mm)	Wheel Dia (Q/mm)	Wheel Distance (U/mm)	Fit Cross Crane Span (m)
XGTC1.0-114	≤1	0.25×2	20-30	1.4	490-660	300	1	0	114	100-300	≤7.5
XGTC1.5-114	≤1	0.25×2	20-30	1.9	490-660	300	1.5	850	114	100-300	≤11.5
XGTC2.0-114	≤1	0.4×2	20-30	2.4	510-680	350	2	1350	114	100-300	≤16.5
XGTC1.0-134	≤3	0.4×2	20-30	1.43	520-690	350	1	0	134	120-300	≤7.5
XGTC1.5-134	≤3	0.6×2	20-30	1.93	520-690	350	1.5	900	134	120-300	≤11.5
XGTC2.0-134	≤3	0.6×2	20-30	2.43	520-690	400	2	1400	134	120-300	≤16.5
XGTC1.0-154	≤5	0.75×2	20-30	1.47	546-716	400	1	0	154	130-300	≤7.5
XGTC1.5-154	≤5	0.75×2	20-30	1.97	546-716	400	1.5	920	154	130-300	≤11.5
XGTC2.0-154	≤5	1.1×2	20-30	2.47	660-830	450	2	1420	154	130-300	≤16.5

Remark: C is the gauge of Double Track Power Trolley ---if need do Double Girder Crane Underhung End Carriage.

Double Track Power Trolley



Parameter Model	Capacity (T)	Power (KW)	Speed (m/min)	Wheel Dia. (φ mm)	Total Width (A/mm)	Total Length (G/mm)	Gauge (B/mm)	Wheel Base (F/mm)	Total Height (D/mm)	Connect Shaft (C/mm)	Connect Shaft Distance (L/mm)
SGTC1.0-0.72	1-3	0.4×2	20	160	1182	1092	1000	725	383	100	0
SGTC1.2-1.0	5-10	0.6×2	20	200	1382	1342	1200	1000	416	180	83
SGTC1.2-1.65	15	0.8×2	20	300	1412	2230	1200	1650	570	180	560
SGTC1.2-1.75	20-25	1.5×2	20	300	1412	2330	1200	1750	600	180	740
SGTC1.4-1.8	30-35	2.2×2	20	350	1640	2330	1400	1750	650	200	440
SGTC1.6-1.8	40-50	3.0×2	20	400	1840	2330	1600	1750	780	230	520



Crane End Carriage Wheel Specification

Model	Items	Bearing	Gear Teeth	Material	HRC Hardness	Wheel Load (Kgs)	Square Bar (mm)
GW95PW95		6203Z	M3.5x25T	S45C	50±5	1000	32
GW120PW120		6206Z	M3.5x32T	S45C	50±5	1600	32
GW150PW150		6306Z	M4x35T	S45C	50±5	2100	32
GW180PW180		6308Z	M4x42T	S45C	50±5	3200	38
GW198PW198		6308Z	M4x 47T	S45C	50±5	4900	38
GW250PW250		6309Z	M4x60T	S45C	50±5	5700	44
GW280PW280		6310Z	M4x67T	S45C	50±5	8100	44
GW300PW300		6311Z	M4x73T	S45C	50±5	8800	44
GW345PW345		6311Z	M4x84T	SC49	45±5	9700	55
GW430PW430		6314Z	M6x69T	SC49	45±5	15000	55
GW545PW545		6316Z	M6x88T	SC49	45±5	19000	63

Dimensions (mm)

Model	A	B	C	E	F	G(φ)	H	J	K	L	Qty (pcs.)	M	Weight (kg)
GW95	95	70	50	85	170	17	185	9	9	5	2	15	13
PW95				75							2		
GW120	120	95	50	85	170	30	185	9	9	5	2	15	21
PW120				75							2		
GW150	150	120	50	90	185	30	200	9	9	5	2	20	37
PW150				75							2		
GW180	180	150	60	100	185	40	200	9	9	5	2	20	57
PW180				85							2		
GW198	198	170	60	105	185	40	200	9	9	5	2	20	72
PW198				90							2		
GW250	249	220	70	115	275	45	290	13	13	10	2	25	136
PW250				100							2		
GW280	280	250	70	115	275	50	290	13	13	10	2	25	175
PW280				100							2		
GW300	300	270	70	120	275	55	290	13	13	10	2	25	222
PW300				105							2		
GW345	345	300	75	140	285	55	300	13	13	10	2	40	319
PW345				110							2		
GW430	430	400	80	150	285	70	300	13	13	10	2	40	542
PW430				120							2		
GW545	545	500	80	150	285	80	300	13	13	10	2	40	872
PW545				120							2		

MANUFACTURING PROCESS

