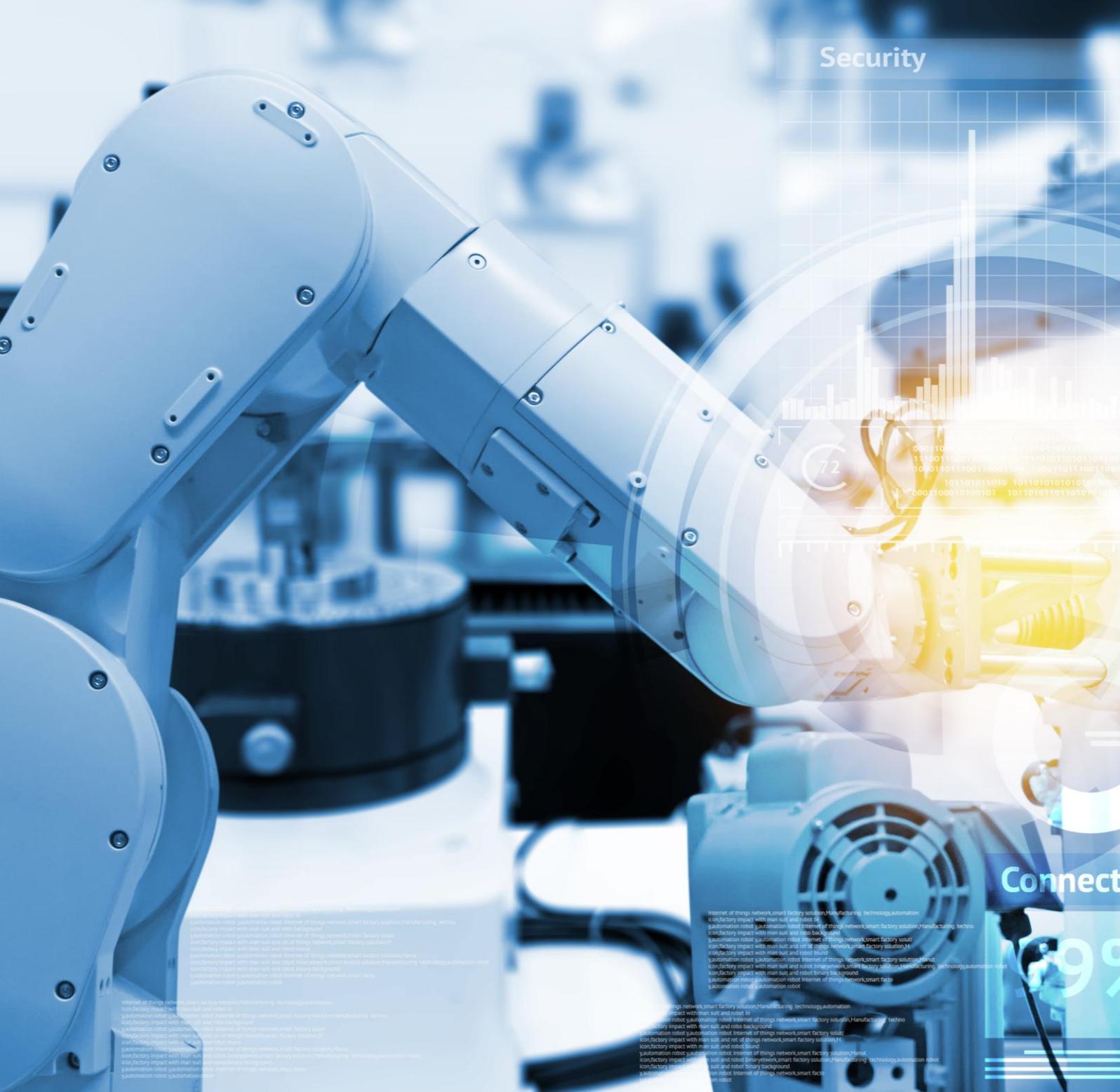


Security



Connect

9%

AUTOMATION ENGINEERING & INDUSTRIAL SUPPLIES

Stockiest & Distribution Factory Automation Solution Customized Gear Reducer
Precision Servo Drive Precision ServoBox AC Gear Motor & Inverter

AUTHORISED DISTRIBUTOR AND AGENCY :





ABOUT US : **ORIENTAL DM SDN BHD**

(891429-K)



Sales & Distribution of industrial products since 2010

LDS High Precision Servobox, Servo Motor, AC Gear Motor, Frequency Inverter, Motorised Roller, Rigid Chain, Automation and Engineering services, and Middleware Integration.

1

2

Subang USJ 1: Dedicated Personnel for Sales & Technical Support

Business Philosophy :
Integrity + Professional + Sharing

3

Industrial Stockiest & Distributor

Final QC @ USJ 1
In-house assembly + functional testing before delivery + product repair + engineering advice and solution

4

Comprehensive design + Wide configuration + accessories

Standard + Customized Solution
Gear reduction ratio to 1/24,400

5

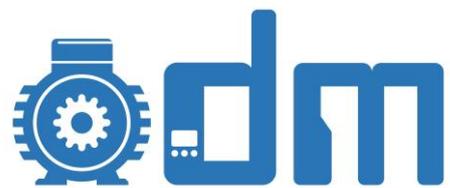
Provide Quick-Start Guideline for ease of use and setting of Inverter

Step by step guidance in Parameter Setting and Wiring to control devices and switches

6

LDS entitled to 12-month Manufacturer Warranty

- * LDS products are compatible with major industry players
- * Competitive product supply + Cost saving solution
- * In-house technical support team readily available to serve our clients



ORIENTAL DM SDN BHD

SUBANG JAYA, SELANGOR

TEL : 012-380 9960

www.oriental-dm.com



ABOUT OUR PRODUCTS & SERVICES

SERVO



Pg.5
Pg.29

LDS Precision Servo Gear Reducer (for up to 30kW Servo Motor)

Helical Planetary Gear ServoBox ▪ Hypoid Gear Servobox ▪ Spiral Bevel ServoBox
Rotary Flange Servobox ▪ Rotary Actuator ServoBox
Robonic Drive (Harmonic Drive) ▪ Cyko Drive (Cyclo Drive)
Worm Gearbox (Non-precision) ▪ Helical Hypoid GearBox (Non-precision)

Nidec Precision Servo Motor [Digitax-SF]

Power Rating 100W to 2kW (17bit Encoder)
Interface : Analogue ▪ Pulse Train ▪ EtherCAT
* Ball Screw Driven Precision Linear Actuator
* Belt Driven Precision Linear Actuator

COMPACT



Pg.33

LDS Compact Gear Motor 6W to 250W

Induction & Reversible Motor ▪ Speed Control Motor ▪ Inverter Motor ▪ Electromagnetic Brake Motor ▪ Clutch & Brake Motor
Water & Dust Resistant Motor (IP55) ▪ 2Pole, 4Pole and 6Pole Motor ▪ 1phase and 3phase
Come with Parallel Shaft Gearhead ▪ Spiral Bevel Gearhead ▪ Worm Gearhead

SMALL GEAR



Pg.45

LDS Small Gear Motor 0.2kW to 2.2kW ▪ Heavy Duty Gear Motor up to 160kW ▪ Marelli Motori Motor

1phase Induction Motor ▪ 3phase Asynchronous Motor ▪ Electromagnetic Brake Motor ▪ Clutch & Brake Motor
Come with Helical Gearhead ▪ Helical Bevel Gearhead ▪ Worm Gearhead ▪ Helical Hypoid Gearhead

INVERTER



Pg.53

NIDEC NE200 & NE300 Inverter

Power Rating 0.4kW to 900kW

Control Techniques Commander S100 Inverter

Power Rating 0.4kW to 4kW - Mobile NFC enabled (Android / iOS)

DRUM MOTOR



Pg.63
Pg.85

LDS AC Drum Motor (1phase and 3phase) – IP66

Roller Dia. 82mm, 113mm, 138mm, 165mm and 216mm.

LDS BLDC Motorised Roller (DC24V and DC48V)

Roller Dia. 38mm, 50mm, 60mm and 76mm

RIGID CHAIN

Rigid Chain Actuator

Lift + Push + Pull System
For lifting applications and material handling operation
Up to 6ton Load
Up to 6meter lifting height
Up to 9m/min output speed



Pg.106

ENGINEERING

Industrial Engineering and Factory Automation Services

Gear Reducer Customisation
Servo Drive Conversion and upgrade
Middleware Integration (PC base)
Belt Conveyor Service and Repair

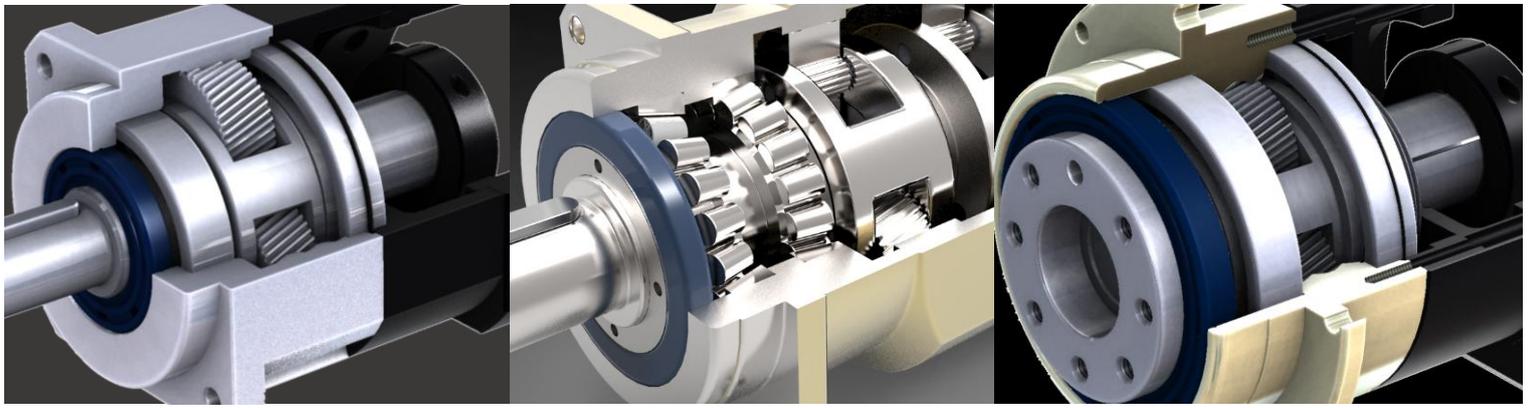




LDS
LEADERDRIVES



LDS PRECISION SERVO GEAR REDUCER
DESIGN FOR SERVO MOTOR UP TO 30KW | IP65



INLINE PRECISION SERVOBOX SERIES

FOR SERVO MOTOR RATING 50W TO 30KW

BENEFITS OF USING PRECISION SERVOBOX

- Enhances output torque level to achieve optimal performance.
- Energy-saving when smaller servo motor capacity is applied.
- Increases level of inertia output (reduces inertia mismatch).
- Absorbs higher radial or axial forces of the application.
- Achieves more stable operation at low-speed setting.

LDS SERVOBOX FEATURES

- Compatible with major servo motor makers globally : Mitsubishi, Nidec, Omron, OrientalMotor, Panasonic, Yaskawa, Allen Bradley, Beckhoff, B&R, Festo, Kuka, Siemens Simotics.
- Offer direct replacement for servobox : Apex Dynamics, Nidec Shimpo, Neugart, Wittenstein, ATG and ABB.
- Precision servobox design : Backlash : $1 \leq 12$ arcmin.
- Gear reduction ratio from 1/1 to 1/1000.
- Rated output torque up to 8790Nm.
- High repeatability accuracy.
- IP65 enclosure protection.
- Maintenance-free design.



DB | CSB Series
Helical Planetary Gear ServoBox



SE Series
Helical Planetary Gear ServoBox (Foot Mount)



LM ROBONIC Series
Compact Zero Backlash Strain Wave Gear ServoBox



LM CYKO DRIVE Series
Cyclo Gear ServoBox (High Shock-Load Capacity)



SD | CSD Series
Rotary Flange Helical Planetary Gear ServoBox



PE Series
Ultra Compact Helical Planetary Gear ServoBox



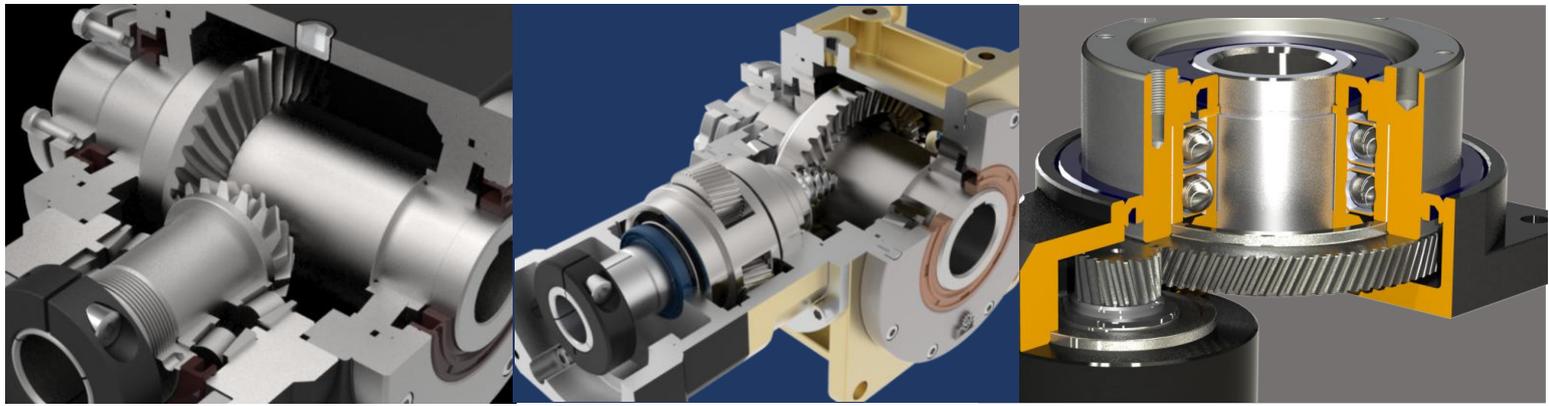
SN Series
Helical Planetary Gear ServoBox



FA Series
Helical Planetary Gear ServoBox



SF Series
High Radial & Axial Force ServoBox



RIGHT ANGLE PRECISION SERVOBOX SERIES

FOR SERVO MOTOR RATING 50W TO 30KW



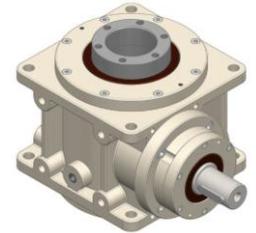
PBT | CSBT Series
Helical Planetary and
Spiral Gear ServoBox



DBL | CSBL Series
Helical Planetary Gear
ServoBox



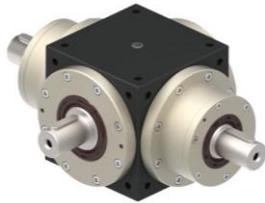
HY Series
Hypoid Gear ServoBox
(Alloy Steel Housing)



HY-DP Series
Hypoid Gear ServoBox
(for ball screw operation)



ST | CST Series
Spiral Bevel Gear ServoBox
(Hollow or Solid Output Shaft)



ST-YV Series
Spiral Bevel Gear ServoBox
with Multiple Axis



FT Series
Ultra Compact Spiral Bevel
Gear ServoBox



SDH Series
Rotary Output Flange
Helical Hypoid ServoBox



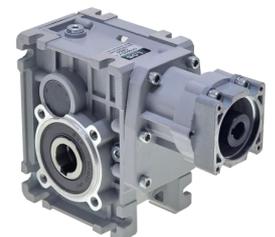
GT Series
Hollow Rotary Actuator
(Hollow Table) ServoBox



HK Series
Hollow Rotary Flange
(Hollow Table) ServoBox



DMRS-CM Series*
Worm Gearbox
(Non-Precision)



OTS-CM Series*
Helical Hypoid Gearbox
(Non-Precision)



PLANETARY SERVOBOX

DB SERIES UNIVERSAL DESIGN HIGH PRECISION



High Precision Planetary ServoBox in compact design and universal housing with precision bearings and planetary gearing provides high torque density while offering high positioning performance.

- DB Series 1-Stage Planetary ServoBox in Gear Reduction Ratio 1/3 to 1/10
- DB-A Series 2-Stage Planetary ServoBox in Gear Reduction Ratio 1/15 to 1/100
- DB Series 3-Stage Planetary ServoBox in Gear Reduction Ratio 1/125 to 1/1000

GENERAL SPECIFICATIONS	Unit	Ratio	Model : DB Series (1-Stage Gear Reduction)								
			DB44	DB62	DB90	DB120	DB142	DB180	DB220	DB270	DB330
Frame Size	MM	3~10	44x44	62x62	90x90	120x120	142x142	180x180	220x220	270x270	330x330
Mounting PCD	MM	3~10	∅50	∅70	∅100	∅130	∅165	∅215	∅250	∅300	∅380
Output Shaft Diameter	MM	3~10	∅13	∅16	∅22	∅32	∅40	∅55	∅75	∅85	∅100
Output Shaft Length	MM	3~10	20	28	36	50	74	82	104	130	140
Input Shaft Size Dia.	MM	3~10	∅8~11	∅11~19	∅14~24	∅24~35	∅32~38	∅38~55	∅42~55	∅48~70	∅55~75
DB Series Rated Output Torque Capacity (1-Stage ServoBox)	Nm	Ratio 3	19	59	165	335	625	1,206	2,030	4,770	8,790
		Ratio 4	16	51	146	300	555	1,069	1,804	4,730	8,730
		Ratio 5	16	48	160	333	618	1,189	2,010	4,680	8,660
		Ratio 6	15	45	151	311	583	1,118	1,911	--	--
		Ratio 7	15	45	149	309	573	1,108	1,870	4,570	8,520
		Ratio 8	14	43	143	298	553	1,070	1,824	--	--
		Ratio 9	13	44	145	278	516	993	1,694	--	--
		Ratio 10	14	43	141	294	549	1,059	1,779	4,420	8,310
Max. Acceleration Torque	Nm	3~10	1.8 Times of Rated Output Torque								
Max. Output Torque Emergency Stop Torque	Nm	3~10	3 Times of Rated Output Torque								
Rated Input Speed	RPM	3~10	3,000	3,000	3,000	3,000	3,000	3,000	2,000	2,000	2,000
Maximum Input Speed	RPM	3~10	6,000	6,000	6,000	6,000	6,000	6,000	4,000	3,000	3,000
Backlash (arcmin)	PS	3~10	-	-	≤ 1arcmin ≤ 1arcmin ≤ 1arcmin ≤ 1arcmin ≤ 1arcmin ≤ 3arcmin ≤ 3arcmin						
	P0 / P1 / P2	3~10	P0 ≤ 3arcmin ▪ P1 ≤ 5arcmin ▪ P2 ≤ 7arcmin								
Torsional Rigidity	Nm/arcmin	3~10	3	6	14	27	60	140	240	140	220
Maximum Radial Force	N	3~10	380	1180	3,200	6,800	9,300	15,600	51,000	107,100	224,910
Maximum Axial Force	N	3~10	190	590	1,600	3,400	4,650	7,800	25,500	53,550	112,455
Service Life	Hr	3~10	Intermittent Periodic Duty S5 > 30,000 hours Continuous Duty S1 > 15,000 hours								
Efficiency	%	3~10	1-stage : ≥ 97%								
Operating Temperature	°C	3~10	-25°C ~ +90°C								
Lubrication		3~10	Synthetic oil								
Degree of Protection		3~10	IP65								
Mounting Position		3~10	Any								
Noise Level	dB(A)	3~10	≤ 56	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67	≤ 70	≤ 72	≤ 74
Weight ± 3%	Kg	3~20	0.8	1.3	3.6	8	14.3	28.3	42.5	97	140



PLANETARY SERVOBOX

DB-A SERIES

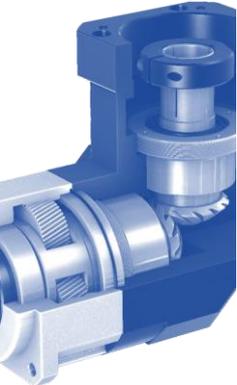
UNIVERSAL DESIGN
HIGH PRECISION



High Precision Planetary ServoBox in compact design and universal housing with precision bearings and planetary gearing provides high torque density while offering high positioning performance.

- DB Series 1-Stage Planetary ServoBox in Gear Reduction Ratio 1/3 to 1/10
- DB-A Series 2-Stage Planetary ServoBox in Gear Reduction Ratio 1/15 to 1/100
- DB Series 3-Stage Planetary ServoBox in Gear Reduction Ratio 1/125 to 1/1000

GENERAL SPECIFICATIONS	Unit	Ratio	Model : DB-A Series (2-Stage Gear Reduction)								
			DB44A	DB62A	DB90A	DB120A	DB142A	DB180A	DB220A	DB270A	DB330A
Frame Size	MM	15~100	44x44	62x62	90x90	120x120	142x142	180x180	220x220	270x270	330x330
Mounting PCD	MM	15~100	∅50	∅70	∅100	∅130	∅165	∅215	∅250	∅300	∅380
Output Shaft Diameter	MM	15~100	∅13	∅16	∅22	∅32	∅40	∅55	∅75	∅85	∅100
Output Shaft Length	MM	15~100	20	28	36	50	74	82	104	130	140
Input Shaft Size Dia.	MM	15~100	∅8~11	∅8~19	∅14~24	∅19~24	∅24~32	∅32~38	∅38~55	∅42~55	∅48~70
DB-A Series Rated Output Torque Capacity (2-Stage ServoBox)	Nm	Ratio 15	19	59	165	335	625	1,206	2,030	4,770	8,790
		Ratio 20	16	51	146	300	555	1,069	1,804	4,730	8,730
		Ratio 25	16	48	160	333	618	1,189	2,010	4,680	8,660
		Ratio 30	15	45	151	311	583	1,118	1,911	4,620	8,610
		Ratio 35	15	45	149	309	573	1,108	1,870	4,570	8,520
		Ratio 40	14	43	143	298	553	1,070	1,824	4,520	8,440
		Ratio 50	16	48	160	333	618	1,189	2,010	4,680	8,660
		Ratio 60	15	45	151	311	583	1,118	1,911	--	--
		Ratio 70	15	45	149	309	573	1,108	1,870	4,570	8,520
		Ratio 80	14	43	143	298	553	1,070	1,824	--	--
Ratio 90	13	44	145	278	516	993	1,694	--	--		
Ratio 100	14	43	141	294	549	1,059	1,779	4,420	8,310		
Max. Acceleration Torque	Nm	15~100	1.8 Times of Rated Output Torque								
Max. Output Torque Emergency Stop Torque	Nm	15~100	3 Times of Rated Output Torque								
Rated Input Speed	RPM	15~100	3,000	3,000	3,000	3,000	3,000	3,000	2,000	2,000	2,000
Maximum Input Speed	RPM	15~100	6,000	6,000	6,000	6,000	6,000	6,000	4,000	3,000	3,000
Backlash (arcmin)	PS	15~100	-	-	≤ 3arcmin						
	P0 / P1 / P2	15~100	P0 ≤ 5arcmin ▪ P1 ≤ 7arcmin ▪ P2 ≤ 9arcmin								
Torsional Rigidity	Nm/arcmin	15~100	3	6	14	27	60	140	240	140	220
Maximum Radial Force	N	15~100	380	1180	3,200	6,800	9,300	15,600	51,000	107,100	224,910
Maximum Axial Force	N	15~100	190	590	1,600	3,400	4,650	7,800	25,500	53,550	112,455
Service Life	Hr	15~100	Intermittent Periodic Duty S5 > 30,000 hours Continuous Duty S1 > 15,000 hours								
Efficiency	%	15~100	2-stage : ≥ 94%								
Operating Temperature	°C	15~100	-25°C ~ +90°C								
Lubrication		15~100	Synthetic oil								
Degree of Protection		15~100	IP65								
Mounting Position		15~100	Any								
Noise Level	dB(A)	15~100	≤ 56	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67	≤ 70	≤ 72	≤ 74
Weight ± 3%	Kg	3~20	1.2	1.8	4.6	9.5	17.5	34.5	57.5	137	186



PLANETARY SERVOBOX

DBL SERIES

RIGHT ANGLE PLANETARY SOLUTION UNIVERSAL DESIGN



High Precision Planetary ServoBox in right-angle solution and universal housing with precision bearings planetary gearing provides high torque density while offering high positioning performance.

- DBL Series 1-Stage Planetary ServoBox in Gear Reduction Ratio 3 ~ 20.
- DBL-A Series 2-Stage Planetary ServoBox in Gear Reduction Ratio 25 ~ 200.

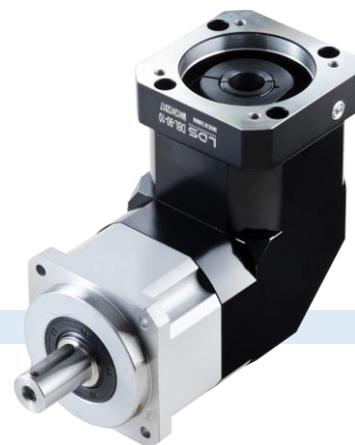
GENERAL SPECIFICATIONS	Unit	Ratio	Model : DBL (1-Stage Gear Reduction)						
			DBL44	DBL62	DBL90	DBL120	DBL142	DBL180	DBL220
Frame Size	MM	3~20	44 x 44	62 x 62	90 x 90	120 x 120	142 x 142	180 x 180	220 x 220
Mounting PCD	MM	3~20	∅50	∅70	∅100	∅130	∅165	∅215	∅250
Output Shaft Diameter	MM	3~20	∅13	∅16	∅22	∅32	∅40	∅55	∅75
Output Shaft Length	MM	3~20	20	28	36	50	74	82	104
Input Shaft Size Dia.	MM	3~20	∅8~11	∅11~19	∅14~24	∅24~35	∅32~38	∅38~55	∅42~55
DBL Series Rated Output Torque Capacity (1-Stage ServoBox)	Nm	Ratio 3	19	59	165	335	625	1,206	2,030
		Ratio 4	16	51	146	300	555	1,069	1,804
		Ratio 5	16	48	160	333	618	1,189	2,010
		Ratio 6	15	45	151	311	583	1,118	1,911
		Ratio 7	15	45	149	309	573	1,108	1,870
		Ratio 8	14	43	143	298	553	1,070	1,824
		Ratio 9	13	44	145	278	516	993	1,694
		Ratio 10	13	43	141	294	549	1,059	1,179
		Ratio 12	15	45	151	311	583	1,118	1,911
		Ratio 14	15	45	149	309	573	1,108	1,870
		Ratio 16	14	43	143	298	553	1,070	1,824
		Ratio 18	13	44	145	278	516	993	1,694
Ratio 20	14	43	141	294	549	1,059	1,779		
Max. Acceleration Torque	Nm	3~20	1.8 Times of Rated Output Torque						
Max. Output Torque Emergency Stop Torque	Nm	3~20	3 Times of Rated Output Torque						
Rated Input Speed	RPM	3~20	3,000	3,000	3,000	3,000	3,000	3,000	2,000
Maximum Input Speed	RPM	3~20	6,000	6,000	6,000	5,000	5,000	4,000	3,000
Backlash (arcmin)	PS	3~20	-	-	≤ 2arcmin				
	P0 / P1 / P2	3~20	P0 ≤ 4arcmin ▪ P1 ≤ 6arcmin ▪ P2 ≤ 8arcmin						
Torsional Rigidity	Nm/arcmin	3~20	3	6	14	27	60	140	240
Maximum Radial Force	N	3~20	360	1,120	3,040	6,460	8,830	14,820	48,450
Maximum Axial Force	N	3~20	180	560	1,520	3,230	4,410	7,410	24,225
Service Life	Hr	3~20	Intermittent Periodic Duty S5 > 30,000 hours Continuous Duty S1 > 15,000 hours						
Efficiency	%	3~20	≥ 94%						
Operating Temperature	°C	3~20	-25°C ~ +90°C						
Lubrication		3~20	Synthetic oil						
Degree of Protection		3~20	IP65						
Mounting Position		3~20	Any						
Noise Level	dB(A)	3~20	≤ 65	≤ 68	≤ 70	≤ 72	≤ 74	≤ 76	≤ 78
Weight ± 3%	Kg	3~20	1	2.3	6.6	13.8	22.3	50	75.2



PLANETARY SERVOBOX

DBL-A SERIES

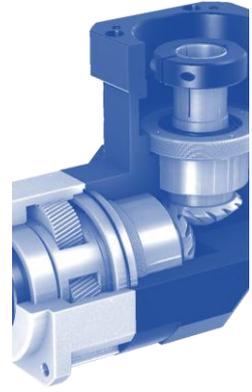
RIGHT ANGLE PLANETARY SOLUTION UNIVERSAL DESIGN



High Precision Planetary ServoBox in right-angle solution and universal housing with precision bearings planetary gearing provides high torque density while offering high positioning performance.

- DBL Series 1-Stage Planetary ServoBox in Gear Reduction Ratio 3 ~ 20.
- DBL-A Series 2-Stage Planetary ServoBox in Gear Reduction Ratio 25 ~ 200.

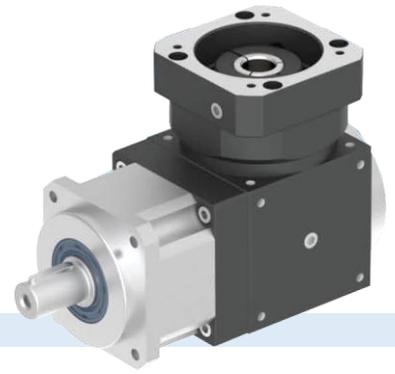
GENERAL SPECIFICATIONS	Unit	Ratio	Model : DBL-A (2-Stage Gear Reduction)						
			DBL44A	DBL62A	DBL90A	DBL120A	DBL142A	DBL180A	DBL220A
Frame Size	MM	15~200	44 x 44	62 x 62	90 x 90	120 x 120	142 x 142	180 x 180	220 x 220
Mounting PCD	MM	15~200	∅50	∅70	∅100	∅130	∅165	∅215	∅250
Output Shaft Diameter	MM	15~200	∅13	∅16	∅22	∅32	∅40	∅55	∅75
Output Shaft Length	MM	15~200	20	28	36	50	74	82	104
Input Shaft Size Dia.	MM	15~100	∅8~11	∅11~19	∅14~24	∅19~24	∅24~32	∅32~38	∅38~55
DBL-A Series Rated Output Torque Capacity (2-Stage ServoBox)	Nm	Ratio 15	19	59	165	335	625	1,206	2,030
		Ratio 20	16	51	146	300	555	1,069	1,804
		Ratio 25	16	48	160	333	618	1,189	2,010
		Ratio 30	15	45	151	311	583	1,118	1,911
		Ratio 35	15	45	149	309	573	1,108	1,870
		Ratio 40	14	43	143	298	553	1,070	1,824
		Ratio 50	16	48	160	278	516	993	2,010
		Ratio 60	15	45	151	294	549	1,059	1,911
		Ratio 70	15	45	149	311	583	1,118	1,870
		Ratio 80	14	43	143	309	573	1,108	1,824
		Ratio 90	13	44	145	298	553	1,070	1,694
		Ratio 100	14	43	141	278	516	993	1,179
		Ratio 120	15	45	151	311	549	1,059	1,911
		Ratio 140	15	45	149	309	583	1,118	1,870
Ratio 160	14	43	143	298	573	1,108	1,824		
Ratio 180	13	44	145	278	553	1,070	1,694		
Ratio 200	14	43	141	294	516	993	1,779		
Max. Acceleration Torque	Nm	15~200	1.8 Times of Rated Output Torque						
Max. Output Torque Emergency Stop Torque	Nm	15~200	3 Times of Rated Output Torque						
Rated Input Speed	RPM	15~200	3,000	3,000	3,000	3,000	3,000	3,000	2,000
Maximum Input Speed	RPM	15~200	6,000	6,000	6,000	5,000	5,000	4,000	3,000
Backlash (arcmin)	PS	15~200	-	-	≤ 4arcmin				
	P0 / P1 / P2	15~200	P0 ≤ 7arcmin ▪ P1 ≤ 9arcmin ▪ P2 ≤ 12arcmin						
Torsional Rigidity	Nm/arcmin	15~200	3	6	14	27	60	140	240
Maximum Radial Force	N	15~200	380	1180	3,200	6,800	9,300	15,600	51,000
Maximum Axial Force	N	15~200	190	590	1,600	3,400	4,650	7,800	25,500
Service Life	Hr	15~200	Intermittent Periodic Duty S5 > 30,000 hours Continuous Duty S1 > 15,000 hours						
Efficiency	%	15~200	≥ 92%						
Operating Temperature	°C	15~200	-25°C ~ +90°C						
Lubrication		15~200	Synthetic oil						
Degree of Protection		15~200	IP65						
Mounting Position		15~200	Any						
Noise Level	dB(A)	15~200	≤ 65	≤ 68	≤ 70	≤ 72	≤ 74	≤ 76	≤ 78
Weight ± 3%	Kg	15~200	1.2	2.5	7	14.8	23.9	52	77.8



PLANETARY SERVOBOX

PBT SERIES

RIGHT ANGLE PLANETARY SOLUTION HELICAL GEAR & SPIRAL BEVEL GEAR



Spiral Bevel Gear ServoBox offer more compact right-angle solution and universal housing with precision bearings planetary gearing provides high torque density while offering high positioning performance.

- PBT Series in Gear Reduction Ratio 1/3 to 1/50.

GENERAL SPECIFICATIONS	Unit	Ratio	Model : PBT						
			PBT44	PBT62	PBT90	PBT120	PBT142	PBT180	PBT220
Frame Size	MM	3~50	44x44	62x62	90x90	120x120	142x142	180x180	220 x 220
Mounting PCD	MM	3~50	∅50	∅70	∅100	∅130	∅165	∅215	∅250
Output Shaft Diameter	MM	3~50	∅13	∅16	∅22	∅32	∅40	∅55	∅75
Output Shaft Length	MM	3~50	20	28	36	50	74	82	104
Input Shaft Size Dia.	MM	15~100	∅8~11	∅11~19	∅14~24	∅19~24	∅24~35	∅32~38	∅38~55
PBT Series Rated Output Torque Capacity	Nm	Ratio 3	17	54	145	301	553	1,067	1,786
		Ratio 4	15	48	128	269	491	940	1,587
		Ratio 5	14	45	132	278	510	1,050	1,770
		Ratio 6	13	41	125	252	466	985	1,680
		Ratio 7	13	41	123	258	473	975	1,645
		Ratio 8	12	39	115	241	442	942	1,605
		Ratio 9	11	40	120	227	412	875	1,490
		Ratio 10	14	45	132	278	510	1,050	1,565
		Ratio 15	14	45	132	278	510	1,050	1,786
		Ratio 20	14	45	132	278	510	1,050	1,587
		Ratio 25	14	45	132	278	510	1,050	1,770
		Ratio 30	13	41	125	252	466	965	1,680
		Ratio 35	13	41	123	258	473	975	1,645
		Ratio 40	12	39	115	241	442	942	1605
Ratio 50	12	40	116	246	452	930	1,565		
Max. Acceleration Torque	Nm	3~50	1.8 Times of Rated Output Torque						
Max. Output Torque Emergency Stop Torque	Nm	3~50	3 Times of Rated Output Torque						
Rated Input Speed	RPM	3~50	3,000	3,000	3,000	2,500	2,500	2,000	2,000
Maximum Input Speed	RPM	3~50	6,000	6,000	5,000	4,500	3,500	3,000	3,000
Backlash (arcmin)	P2	3~50	P2 ≤ 10arcmin						
Torsional Rigidity	Nm/arcmin	3~50	3	6	14	27	60	140	240
Maximum Radial Force	N	3~50	360	1,120	3,040	6,460	8,830	14,820	48,450
Maximum Axial Force	N	3~50	180	560	1,520	3,230	4,410	7,410	24,225
Service Life	Hr	3~50	Intermittent Periodic Duty S5 > 20,000 hours Continuous Duty S1 > 10,000 hours						
Efficiency	%	3~50	≥ 95%						
Operating Temperature	°C	3~50	-25°C ~ +90°C						
Lubrication		3~50	Synthetic oil						
Degree of Protection		3~50	IP65						
Mounting Position		3~50	Any						
Noise Level	dB(A)	3~50	≤ 65	≤ 68	≤ 70	≤ 72	≤ 74	≤ 76	≤ 76
Weight ± 3%	Kg	3~50	1.4	2.2	7.1	13	24	48	78



PLANETARY SERVOBOX

PE SERIES E-SERIES DESIGN PRECISION SERVOBOX



E-Series ServoBox

PE Series 1-Stage ServoBox in Gear Ratio 3 ~ 10

PE Series 2-Stage ServoBox in Gear Ratio 12 ~ 64

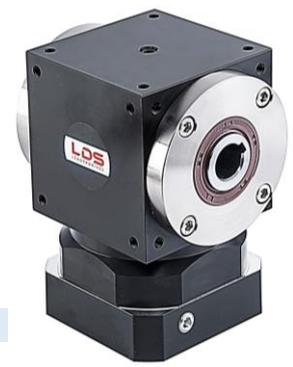
GENERAL SPECIFICATION	Unit	Ratio	PE32	PE40	PE60	PE80
Output Flange Frame Size	MM	3~64	Ø32	Ø40	Ø60	Ø122
Mounting PCD	MM	3~64	Ø26	Ø32	Ø52	Ø105
Output Shaft Diameter	MM	3~64	Ø8	Ø10	Ø14	Ø32
Output Shaft Length	MM	3~64	16	23	29.5	50
Input Shaft Size Dia.	MM	3~64	Ø6	Ø8	Ø8~11	Ø11~14
PE Series Rated Output Torque Capacity (1-Stage ServoBox)	Nm	Ratio 3	8	12	30	90
		Ratio 4	10	16	38	120
		Ratio 5	11	17	41	130
		Ratio 7	9	--	32	110
		Ratio 8	--	12	--	--
		Ratio 9	7	--	--	--
		Ratio 10	--	10	25	80
PE Series Rated Output Torque Capacity (2-Stage ServoBox)	Nm	Ratio 12	--	11	30	90
		Ratio 15	8	11	30	90
		Ratio 20	10	16	38	120
		Ratio 25	11	17	41	130
		Ratio 32	--	16	--	--
		Ratio 35	9	--	32	110
		Ratio 40	--	16	38	120
		Ratio 45	7	--	--	--
		Ratio 50	--	N/A	41	130
		Ratio 63	9	--	--	--
Ratio 64	--	17	--	--		
Max. Acceleration Torque	Nm	3~63	1.8 Times of Rated Output Torque			
Max. Output Torque Emergency Stop Torque	Nm	3~63	3 Times of Rated Output Torque			
Rated Input Speed	RPM	3~63	3,000	3,000	3,000	3,000
Maximum Input Speed	RPM	3~63	5,000	5,000	5,000	5,000
Backlash	Arcmin	3~9	≤ 12arcmin			
		12~64	≤ 20arcmin			
Torsional Rigidity	Nm/arcmin	3~64	0.8	1	2.3	6
Maximum Radial Force	N	3~64	130	300	689	1,750
Maximum Axial Force	N	3~64	65	150	340	875
Service Life	Hr	3~64	Intermittent Periodic Duty S5 > 20,000 hours Continuous Duty S1 > 10,000 hours			
Efficiency	%	3~9	≥ 96%			
		12~64	≥ 94%			
Operating Temperature	°C	3~64	-25°C ~ +90°C			
Lubrication		3~64	Synthetic Grease			
Degree of Protection		3~64	IP54			
Mounting Position		3~64	Any			
Noise Level	dB(A)	3~10	≤ 56	≤ 58	≤ 58	≤ 60
		12~64	≤ 58	≤ 60	≤ 60	≤ 62
Weight ± 3%	Kg	3~10	0.2	0.35	0.9	2.1
		12~64	0.3	0.45	1.1	2.6



SPIRAL BEVEL GEAR SERVOBOX

ST-FO/RO SERIES

**COMPACT RIGHT ANGLE SOLUTION
HIGHEST EFFICIENCY DESIGN**



FT-FO SERIES
Ultra Compact Design Series

Features :

- Employ high precision grinded and carburized spiral bevel gears to meet standard AGMA12.
- High efficiency design (≥98%) to transmit rotational motion at right angles
- Max gear reduction ratio up to 1/500.
- Hollow output shaft / single output shaft / double outputs shaft and multiple shaft configurations are available.

Ball Bearing Design (ST-FO-B / ST-RO-B) / Taper Bearing Design (ST-FO-T / ST-RO-T)

- ST-FO: 1-Stage ServoBox in Gear Ratio 1, 2, 3, 4 and 5.
- ST-RO: 2-Stage ServoBox in Gear Ratio 10, 15, 20, 25, 30, 40 and 50.

* FT Series – Ultra Compact Spiral Bevel Gear ServoBox

GENERAL SPECIFICATIONS	Unit	Ratio	Model : ST-FO (1-Stage Gear Reduction) ST-RO (2-Stage Gear Reduction)								
			ST65	ST75	ST90	ST110	ST140	ST170	ST210	ST240	ST280
Frame Size	MM	1~50	65 x 65	75 x 75	90 x 90	110 x 100	140 x 140	170 x 170	210 x 210	240x240	280x280
Mounting Dimension	MM	1~50	52 x 52	60 x 60	72 x 72	88 x 88	110 x 110	134 x 134	170 x 170	190 x 190	220x220
Hollow Output Shaft Bore Diameter	MM	1~50	∅14	∅14	∅18	∅22	∅32	∅40	∅50	∅55	∅60
Input Shaft Size Dia.	MM	1~5	∅8~14	∅14~19	∅14~24	∅24~35	∅32~38	∅38~55	∅42~55	∅42~60	∅48~75
		10~50	∅8~9	∅11~14	∅11~19	∅14~24	∅19~32	∅19~38	∅24~50	∅32~55	∅38~60
ST-FO Series Rated Output Torque Capacity (1-Stage ServoBox)	Nm	Ratio 1	25	45	78	150	360	585	1,300	1,688	2,110
		Ratio 2	24	42	68	150	330	544	1,220	1,510	2,666
		Ratio 3	18	33	54	120	270	450	1,020	1,266	2,213
		Ratio 4	13	28	52	100	224	376	860	1,048	2,026
		Ratio 5	12	25	40	85	196	320	740	1,022	1,826
ST-RO Series Rated Output Torque Capacity (2-Stage ServoBox)	Nm	Ratio 10	24	42	68	150	330	544	1,220	1,510	2,666
		Ratio 15	18	33	54	120	270	450	1,020	1,266	2,213
		Ratio 20	13	28	48	100	224	376	860	1,048	2,026
		Ratio 25	12	25	40	85	196	320	740	1,022	1,888
		Ratio 30	18	33	54	120	270	450	1,020	1,266	2,213
		Ratio 40	13	28	52	100	224	376	860	1,048	2,026
Max. Acceleration Torque	Nm	1~50	1.5 Times of Rated Output Torque								
		1~50	3 Times of Rated Output Torque								
Rated Input Speed	RPM	1~5	3,000	3,000	3,000	2,500	2,500	2,000	2,000	2,000	2,000
		10~50	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	2,500
Maximum Input Speed	RPM	1~5	6,000	6,000	5,500	4,500	3,500	3,000	3,000	3,000	3,000
		10~50	6,000	6,000	6,000	6,000	6,000	5,000	5,000	4,000	4,000
Backlash (arcmin)	Arcmin	1~5	P0 ≤ 2 arcmin / P1 ≤ 5 arcmin / P2 ≤ 9 arcmin								
		10~50	P0 ≤ 4 arcmin / P1 ≤ 7 arcmin / P2 ≤ 10 arcmin								
Maximum Radial Force	N (Ball Bearing)	1~50	700	1,050	1,500	2,360	3,080	4,800	6,400	8,200	9,500
	N (Taper Bearing)	1~50	--	2,400	3,200	5,000	6,500	9,100	13,000	17,000	19,200
Maximum Axial Force	N (Ball Bearing)	1~50	350	525	750	1,180	1,540	2,400	3,200	4,100	4,750
	N (Taper Bearing)	1~50	--	1,200	1,600	2,500	3,250	4,550	6,500	8,500	9,650
Service Life	Hr	1~50	Intermittent Periodic Duty S5 > 30,000 hours Continuous Duty S1 > 20,000 hours								
		1~5	94% ~ 98%								
Efficiency	%	10~50	90% ~ 94%								
		1~5	1.7	2.4	4.3	7.1	14.9	24.5	46	60.7	100
Weight ± 3%	Kg	10~50	2	3.6	4.8	8.5	14.2	24	52	74	118

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.

GENERAL SPECIFICATIONS	Unit	Ratio	Model : ST-FO (1-Stage Gear Reduction) ST-RO (2-Stage Gear Reduction)								
			ST65	ST75	ST90	ST110	ST140	ST170	ST210	ST240	ST280
Operating Temperature	°C	1~50	-10°C ~ +90°C								
Lubrication		1~50	Synthetic oil								
Degree of Protection		1~50	IP65								
Mounting Position		1~50	Any								
Noise Level	dB(A)	1~5	≤ 65	≤ 67	≤ 71	≤ 73	≤ 74	≤ 75	≤ 77	≤ 80	≤ 82
		10~50	≤ 68	≤ 69	≤ 73	≤ 74	≤ 75	≤ 76	≤ 78	≤ 78	≤ 78

SPIRAL BEVEL GEAR SERVOBOX DESIGNS

INPUT TYPE

F

Input Flange
Ratio 1 ~ 5

R

Input Flange
Ratio 10 ~ 50

D

Single Input Shaft

Y

Double Input Shaft

O

Hollow Output Shaft



FO



RO



DO



YO

N

Hollow Output Shaft with Single Clamping



FN



RN



DN



YN

M

Hollow Output Shaft with Double Clamping



FM



RM



DM



YM

S

Single Output Shaft



FS



RS



DS



YS

V

Double Output Shaft



FV



RV



DV



YV

P

For Ball Screw



FP



RP



DP



YP

OUTPUT TYPE

LIFTING APPLICATION : ST SERIES / JT SERIES



INPUT TYPE

Max. Output Torque Emergency Stop Torque : 2 Times of Rated Output Torque

OUTPUT TYPE

V
Double Output Shaft



FV



RV



DV

P1
Ball Screw + 1 Output Shaft



FP1



RP1



DP1

P2
Ball Screw + 2 Output Shaft



FP2



RP2



DP2

P3
Ball Screw + 3 Output Shaft



FP3

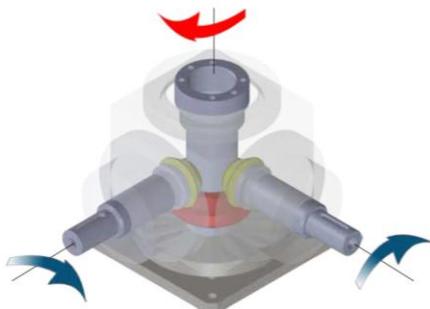


RP3

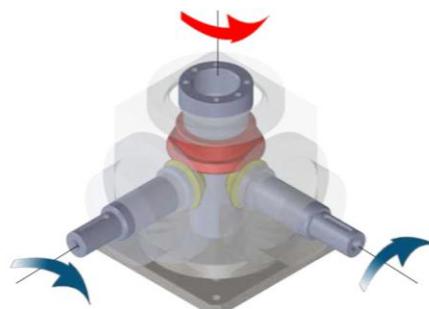


DP3

SPIRAL BEVEL GEAR SERVOBOX - ROTATING DIRECTION



L-Shaft
Rotating Direction
(Default Design)

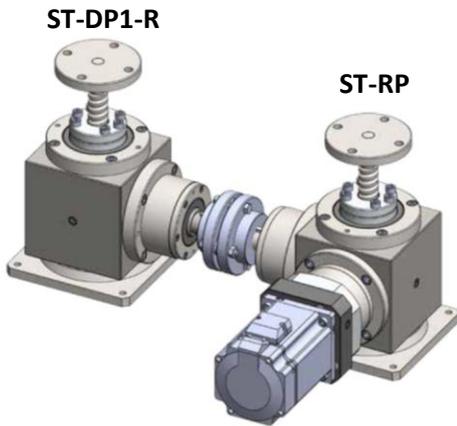


R-Shaft
Rotating Direction
(Optional)

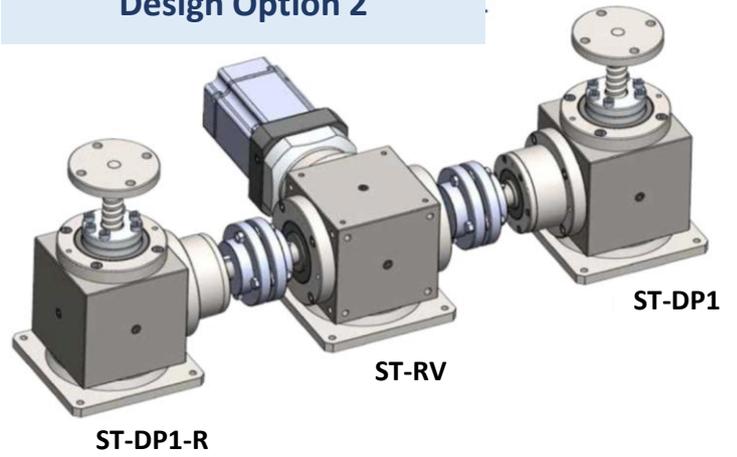
NOTE :
Default design is L-Shaft Rotating Direction.
R-Shaft Rotating Direction is available upon request.

LIFTING APPLICATION METHODS

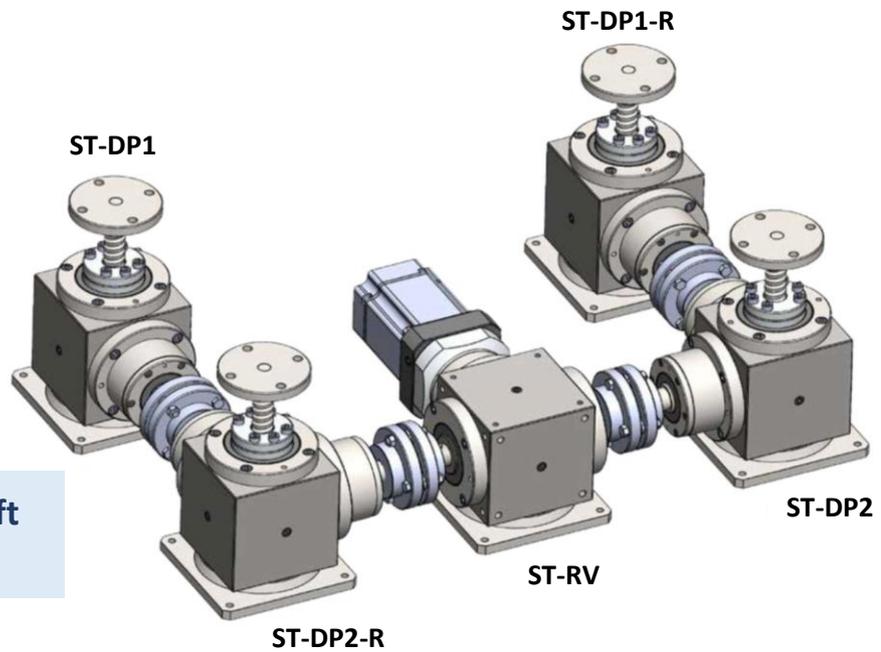
**2-point Synchronous Lift
Design Option 1**



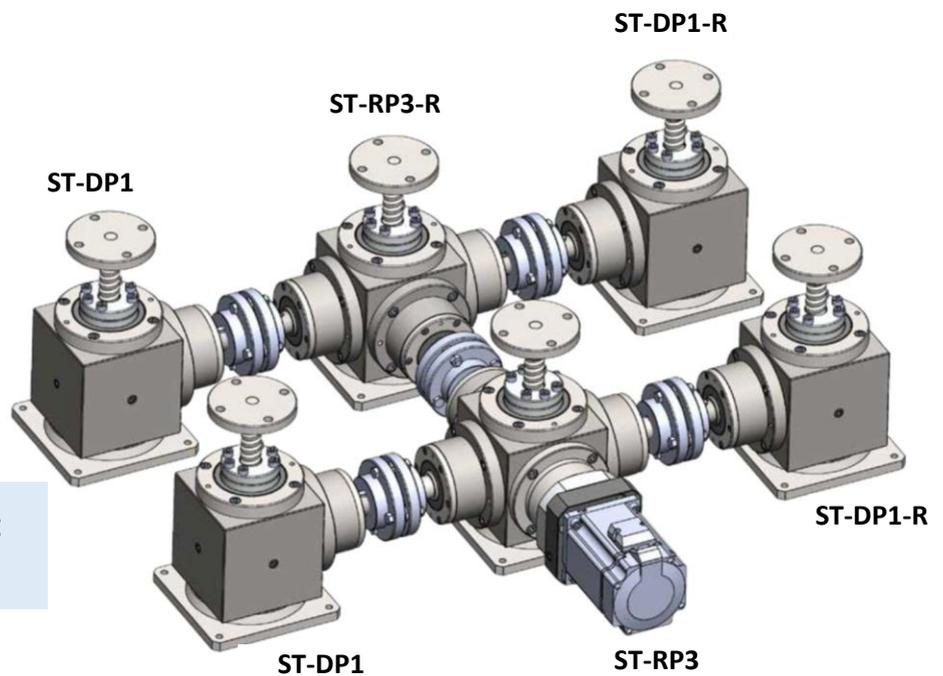
**2-point Synchronous Lift
Design Option 2**



**4-point Synchronous Lift
Design Option 1**



**6-point Synchronous Lift
Design Option 1**





SPIRAL BEVEL GEAR SERVOBOX

FT SERIES

ULTRA COMPACT RIGHT ANGLE SOLUTION HIGHEST EFFICIENCY DESIGN



FT-FO SERIES

Features :

- Employ high precision grinded and carburized spiral bevel gears to meet standard AGMA12.
- High efficiency design (90% ~ 98%) to transmit rotational motion at right angles
- Hollow output shaft / single output shaft / double outputs shaft and multiple shaft configurations are available.
- Ball Bearing Design
- ST-FS/FV: 1-Stage ServoBox in Gear Ratio 2, 3, 4 and 5 (with single output shaft).
- ST-FO/FV: 1-Stage ServoBox in Gear Ratio 2, 3, 4 and 5.
- ST-RO/RV: 2-Stage ServoBox in Gear Ratio 10, 15, 20, 25, 30, 40 and 50.



FT-FS SERIES

GENERAL SPECIFICATIONS	Unit	Ratio	FT42-FS	FT50-FS	FT60-FO FT60-RO	FT70-FO FT60-RO
Frame Size	MM	2~50	42 x 42	50 x 50	60 x 60	75 x 75
Output Shaft Bore Diameter	MM	2~50	Solid Shaft Ø12mm	Solid Shaft Ø13mm	Hollow Shaft Bore Ø14mm	Hollow Shaft Bore Ø14mm
Input Shaft Size Dia.	MM	2~50	Ø8mm	Ø8~11mm	Ø8~11mm	Ø8~14mm
FT Series Rated Output Torque Capacity (1-Stage ServoBox)	Nm	2	10	13	15	22
		3	9	11	13	18
		4	7	9	13	18
		5	6	8	12	16
		10	--	13	15	22
FT Series Rated Output Torque Capacity (2-Stage ServoBox)	Nm	15	--	11	13	18
		20	--	9	13	18
		25	--	8	12	16
		30	--	11	13	18
		40	--	9	13	18
		50	--	8	12	16
		Max. Output Torque Emergency Stop Torque	Nm	2~50	1.5 Times of Rated Output Torque	
Rated Input Speed	RPM	2~50	2,000	3,000	3,000	3,000
Maximum Input Speed	RPM	2~50	6,000	6,000	7,000	7,000
Backlash (arcmin)	Arcmin	2~5	≤ 10 arcmin	≤ 10 arcmin	≤ 10 arcmin	≤ 10 arcmin
		10~50	--	--	≤ 12 arcmin	≤ 12 arcmin
Maximum Radial Force	N	2~5	300	488	600	800
		10~50	--	--	600	800
Maximum Axial Force	N	2~5	150	244	300	400
		10~50	--	--	300	400
Service Life	Hr	2~50	Intermittent Periodic Duty S5 > 20,000 hours Continuous Duty S1 > 10,000 hours			
Efficiency	%	2~5	94% ~ 98%			
		10~50	90% ~ 94%			
Operating Temperature	°C	1~50	-10°C ~ +90°C			
Lubrication		1~50	Synthetic oil			
Degree of Protection	IP	1~50	IP65			
Mounting Position		1~50	Any			
Noise Level	dB(A)	1~5	≤ 64	≤ 66	≤ 68	≤ 70
		10~50	--	--	≤ 70	≤ 72



HOLLOW ROTARY ACTUATOR SERVOBOX

GT SERIES

HOLLOW ROTARY TABLE PRECISE POSITIONING AND REPEATABILITY



Features :

- Solid hollow output table that allows simple wiring and piping on your equipment design.
- Ball bearing and crossed roller bearing option.
- Repetitive Positioning Accuracy ± 10 arcsec (0.0028°).
- Lost Motion 2arcmin (0.033°).
- Torsional Backlash ≤ 2 arcmin.

Ball Bearing Design (GT-B) / Crossed Roller Bearing Design (GT-C)

- 1-Stage ServoBox in Gear Ratio 5, 10 and 18.
- 2-Stage ServoBox in Gear Ratio 25, 50 and 100 (fitted with planetary gear).



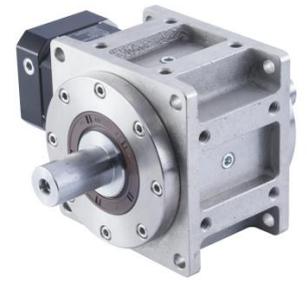
GENERAL SPECIFICATIONS	Unit	Bearing Type (Ratio 5, 10, 18) (Ratio 25, 50, 100)	Model : GT (1-Stage and 2-Stage Gear Reduction)				
			GT60-B GT60-C	GT85-B CT85-C	GT110-B GT110-C	GT135-B GT135-C	GT200-B GT200-C
Frame Size	MM	Ball / Crossed Roller	60 x 60	85 x 85	110 x 110	135 x 135	200 x 200
Mounting Dimension	MM	Ball / Crossed Roller	50 x 50	70 x 70	90 x 90	110 x 110	170 x 170
Rotary Flange Diameter	MM	Ball / Crossed Roller	Ø45	Ø70	Ø95	Ø115	Ø170
Hollow Rotary Flange Dia.	MM	Ball / Crossed Roller	Ø20	Ø22	Ø30	Ø50	Ø75
Input Shaft Size Dia.	MM	Ratio 5~ 18	Ø8mm	Ø8~14mm	Ø8~14mm	Ø11~19mm	Ø14~24mm
		Ratio 25 ~ 100	Ø8mm	Ø8~14mm	Ø8~14mm	Ø11~14mm	Ø14~19mm
Rated Output Torque Capacity (1-Stage ServoBox) (Ball & Crossed Roller Type)	Nm	Ratio 5	5	18	33	43	142
		Ratio 10	4	14	26	34	112
		Ratio 18	3	10	19	25	85
Rated Output Torque Capacity (2-Stage ServoBox) (Ball & Crossed Roller Type)	Nm	Ratio 25	5	18	33	43	142
		Ratio 50	4	14	26	34	112
		Ratio 100	4	14	26	34	112
Max. Acceleration Torque	Nm	Ball / Crossed Roller	1.5 Times of Rated Output Torque				
Max. Output Torque Emergency Stop Torque	Nm	Ball / Crossed Roller	2 Times of Rated Output Torque				
Inertia Moment	Kg.m ²	Ball	777×10^{-7}	1268×10^{-6}	1562×10^{-6}	2918×10^{-6}	29072×10^{-6}
		Crossed Roller	735×10^{-7}	1203×10^{-6}	1483×10^{-6}	2772×10^{-6}	27619×10^{-6}
Permissible Output Speed	RPM	Ball	300 RPM				
		Crossed Roller	200 RPM				
Torsional Backlash	Arcmin	Ball / Crossed Roller	Ratio 5, 10, 18 : ≤ 1 arcmin Ratio 25, 50, 100 : ≤ 3 arcmin				
Lost Motion	Arcmin	Ball / Crossed Roller	2 (0.033°)				
Repetitive Positioning Accuracy	Arcsec	Ball / Crossed Roller	± 10 (0.0028°)				
Permissible Thrust Load	N	Ball Bearing	350	600	800	1,450	2,500
		Crossed Roller Bearing	500	900	1,200	2,200	4,000
Permissible Moment Load	Nm	Ball Bearing	7	12	16	30	50
	Nm	Crossed Roller Bearing	10	18	24	45	80
Runout of Output Table Surface	MM	Ball / Crossed Roller	0.01	0.01	0.015	0.015	0.02
Runout of Output Table Inner / Outer Diameter	MM	Ball / Crossed Roller	0.01	0.01	0.015	0.015	0.02
Parallelism of Output Table	MM	Ball / Crossed Roller	0.02	0.02	0.025	0.025	0.03
Protection Class		Ball / Crossed Roller	IP 65				
Weight $\pm 3\%$	Kg	Ratio 5~ 18	0.6	1.2	2.6	3.9	10.1
		Ratio 25 ~ 100	1.1	1.8	3.8	5	12



HYPOID GEAR SERVOBOX

HY-FV/RV SERIES

PRECISION HYPOID GEAR DESIGN
HEAVY DUTY CAST ALLOY HOUSING



HY-FV SERIES

Features :

- Compact design to transmit rotational motion at right angles with higher torque capability
- Ball bearing and taper bearing option
- Heavy duty housing in aluminium die-cast alloy to withstand highest operating temperature
- Single stage gear ratio 1/20 and 1/60 available upon request.
- Hollow output shaft / single output shaft / double outputs shaft and multiple shaft configurations are available.



HY-FO SERIES

Ball Bearing Design (HY-FV/RV-B) / Taper Bearing Design (HY-FV/RV-T)

- 1-Stage ServoBox in Gear Ratio 1/5, 1/10 and 1/15 (with double output shaft).
- 2-Stage ServoBox in Gear Ratio 1/25, 1/50, 1/75, 1/100 and 1/150 (with double output shaft).

GENERAL SPECS	Unit	Ratio	Model : HY-FV (1-Stage Gear Reduction) HY-RV (2-Stage Gear Reduction)									
			HY55	HY75	HY90	HY115	HY130	HY140	HY160	HY190	HY230	HY270
Frame Size	MM	5~150	90 x 90	115 x 115	140 x 140	170 x 170	192 x 192	215 x 215	240 x 240	264 x 264	300 x 300	350 x 350
Mounting Dimension	MM	5~150	78 x 78	98 x 98	118 x 118	144 x 144	164 x 164	182 x 182	206 x 206	224 x 224	260 x 260	300 x 300
Hollow Output Shaft Bore Size	MM	5~150	Ø20	Ø24	Ø32	Ø40	Ø48	Ø55	Ø60	Ø70	Ø80	Ø90
Solid Output Shaft Size	MM	5~150	Ø20x 35mmL	Ø24x 40mmL	Ø32x 50mmL	Ø40x 60mmL	Ø48x 70mmL	Ø55x 80mmL	Ø60x 100mmL	Ø70x 110mmL	Ø80x 120mmL	Ø90x 130mmL
Input Shaft Size Dia.	MM	5~15 25~150	Ø8~14 Ø8~14	Ø11~19 Ø11~19	Ø14~24 Ø14~19	Ø19~24 Ø16~24	Ø22~35 Ø22~35	Ø32~38 Ø28~35	Ø35~38 Ø28~35	Ø42~55 Ø35~50	Ø42~60 Ø35~55	Ø42~65 Ø38~55
HY-FV Series Rated Output Torque Capacity (1-Stage ServoBox)	Nm	Ratio 5	35	70	140	260	430	720	1,100	1,440	2,090	2,720
		Ratio 10	30	60	117	220	365	615	957	1,230	1,710	2,200
		Ratio 15	25	50	95	180	300	510	815	1,020	1,418	1,906
HY-FV Series Rated Output Torque Capacity (2-Stage ServoBox)	Nm	Ratio 25	35	70	140	260	430	720	1,100	1,440	2,090	2,720
		Ratio 50	35	70	140	260	430	720	1,100	1,440	2,090	2,720
		Ratio 75	25	50	95	180	300	510	815	1,020	1,710	2,200
		Ratio 100	25	50	95	180	300	510	815	1,020	1,418	1,906
		Ratio 150	25	50	95	180	300	510	815	1,020	1,418	1,906
Max. Acceleration Torque	Nm	5~150	1.5 Times of Rated Output Torque									
Max. Output Torque Emergency Stop Torque	Nm	5~150	2 Times of Rated Output Torque									
Rated Input Speed	RPM	5~15	3,000	3,000	3,000	3,000	2,500	2,500	2,000	2,000	2,000	2,000
		25~150	3,000	3,000	3,000	3,000	2,500	2,500	2,000	2,000	2,000	2,000
Maximum Input Speed	RPM	5~15	6,000	6,000	6,000	6,000	5,000	5,000	4,000	4,000	4,000	4,000
		25~150	6,000	6,000	6,000	6,000	5,000	5,000	4,000	4,000	4,000	4,000
Backlash (arcmin)	Arcmin	5~15	P0 ≤ 3 arcmin / P1 ≤ 6 arcmin / P2 ≤ 9 arcmin									
		25~150	P0 ≤ 4 arcmin / P1 ≤ 7 arcmin / P2 ≤ 10 arcmin									
Maximum Radial Force	N (Ball Bearing)	5~150	1,495	2,366	2,691	4,797	5,837	7,020	9,490	12,337	15,500	17,360
	N (Taper Bearing)	5~150	--	5,000	6,545	9,100	12,320	14,420	18,620	24,080	30,800	33,600
Maximum Axial Force	N (Ball Bearing)	5~150	748	1,183	1,346	2,399	2,919	3,510	4,745	6,169	7,750	8,680
	N (Taper Bearing)	5~150	--	2,500	3,273	4,550	6,160	7,210	9,310	12,040	15,400	16,800
Service Life	Hr	5~150	Intermittent Periodic Duty S5 > 30,000 hours Continuous Duty S1 > 15,000 hours									
Efficiency	%	5~15	93% ~ 96%									
		25~150	90% ~ 92%									
Operating Temperature	°C	5~150	-10°C ~ +90°C									

Note: The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.

GENERAL SPECIFICATIONS	Unit	Ratio	Model : HY-FV (1-Stage Gear Reduction) HY-RV (2-Stage Gear Reduction)									
			HY55	HY75	HY90	HY115	HY130	HY140	HY160	HY190	HY230	HY270
Lubrication		5~150	Synthetic oil									
Degree of Protection		5~150	IP65									
Mounting Position		5~150	Any									
Noise Level	dB(A)	5~150	≤ 67	≤ 67	≤ 69	≤ 69	≤ 71	≤ 71	≤ 72	≤ 72	≤ 74	≤ 76
Weight ± 3%	Kg	Ratio 5~ 15	3	4.6	8.3	12.3	18.2	26.6	37.6	60	--	--
		Ratio 25 ~ 150	3.5	5.8	10	16	26.8	41.5	52.5	86.5	--	--

HYPOID GEAR SERVOBOX DESIGNS

INPUT TYPE

F
Input Flange
Ratio 3 ~ 15

R
Input Flange
Ratio 20 ~ 150

D
Single Input Shaft

O
Hollow Output Shaft



FO



RO



DO

N
Hollow Output Shaft with Single Clamping



FN



RN



DN

M
Hollow Output Shaft with Double Clamping



FM



RM



DM

S
Single Output Shaft



FS



RS



DS

V
Double Output Shaft



FV



RV



DV

P
For Ball Screw



FP



RP



DP

OUTPUT TYPE



PLANETARY SERVOBOX

SD SERIES

HIGH PRECISION ROTARY OUTPUT FLANGE OPTIMUM RADIAL LOAD



SDH Series

Features :

- Precise in-line planetary system with rotary flange design.
- Low backlash between 1~12arcmin.
- Ball bearing and taper bearing option.
- Universal housing and is suitable for rotary and turntable applications.

Ball Gearing Design (SD-B) / Taper Bearing Design (SD-T)

- 1-Stage ServoBox in Gear Ratio 1/4, 1/5, 1/7 and 1/10.
- 2-Stage ServoBox in Gear Ratio 1/20, 1/25, 1/35, 1/40, 1/50, 1/70 and 1/100.

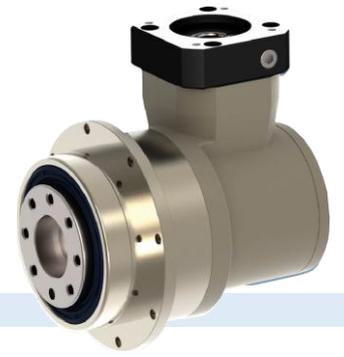
GENERAL SPECIFICATIONS	Unit	Ratio	Model : SD (1 Stage and 2 Stage Gear Reduction)						
			SD47	SD64	SD90	SD110	SD140	SD200	SD255
Frame Size Ø	MM	4~100	Ø72	Ø86	Ø118	Ø146	Ø179	Ø248	Ø300
Mounting PCD	MM	4~100	Ø67	Ø79	Ø109	Ø135	Ø168	Ø233	Ø280
Rotary Mounting PCD	MM	4~100	Ø20	Ø31.5	Ø50	Ø63	Ø80	Ø125	Ø140
Input Shaft Size Dia.	MM	4~10	Ø8~11	Ø11~19	Ø14~24	Ø22~35	Ø28~38	Ø35~55	Ø38~55
		15~100	Ø8~11	Ø8~19	Ø11~24	Ø16~24	Ø22~35	Ø28~38	Ø35~55
Rated Output Torque Capacity (1-Stage ServoBox)	Nm	Ratio 4	22	60	160	335	650	1,200	2,020
		Ratio 5	20	50	155	333	618	1,189	2,010
		Ratio 7	19	47	142	309	573	1,108	1,870
		Ratio 10	16	43	136	294	549	1,059	1,779
Rated Output Torque Capacity (2-Stage ServoBox)	Nm	Ratio 20	22	60	160	335	650	1,200	2,020
		Ratio 25	20	50	155	333	618	1,189	2,010
		Ratio 35	19	47	142	309	573	1,108	1,870
		Ratio 40	22	60	160	335	650	1,200	2,020
		Ratio 50	20	50	155	333	618	1,189	2,010
		Ratio 70	19	47	142	309	573	1,108	1,870
Max. Acceleration Torque	Nm	4~100	1.8 Times of Rated Output Torque						
		4~100	3 Times of Rated Output Torque						
Max. Output Torque Emergency Stop Torque	Nm	4~100	3 Times of Rated Output Torque						
Rated Input Speed	RPM	4~100	3,000	3,000	3,000	3,000	3,000	3,000	2,000
Maximum Input Speed	RPM	4~100	6,000	6,000	6,000	6,000	5,000	4,000	3,000
Backlash	Arcmin	4~10	Ps ≤ 1arcmin ▪ P0 ≤ 3arcmin ▪ P1 ≤ 5arcmin ▪ P2 ≤ 7arcmin						
		20~100	Ps ≤ 3arcmin ▪ P0 ≤ 5arcmin ▪ P1 ≤ 7arcmin ▪ P2 ≤ 9arcmin						
Torsional Rigidity	Nm/arcmin	4~100	6	14	30	86	155	450	1,126
Maximum Axial Force	N (Ball Bearing)	4~100	1,020	1,260	4,230	6,360	7,035	17,600	19,800
	N (Taper Bearing)	4~100	--	--	7,330	11,500	18,600	36,800	53,600
Maximum Radial Force	N (Ball Bearing)	4~100	2,040	2,520	8,460	12,720	14,070	35,200	39,600
	N (Taper Bearing)	4~100	--	--	14,660	23,000	37,200	73,600	107,200
Service Life	Hr	15~200	Intermittent Periodic Duty S5 > 30,000 hours Continuous Duty S1 > 15,000 hours						
		4~10	≥ 97%						
Efficiency	%	20~100	≥ 94%						
		15~200	-25°C ~ +90°C						
Operating Temperature	°C	15~200	-25°C ~ +90°C						
Lubrication		15~200	Synthetic Grease						
Degree of Protection		15~200	IP65						
Mounting Position		15~200	Any						
Noise Level	dB(A)	4~10	≤ 56	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67	≤ 70
		20~100	≤ 58	≤ 60	≤ 63	≤ 65	≤ 67	≤ 70	≤ 72
Weight ± 3%	KG	4~10	0.7	1.4	4.2	7.4	13.9	32.4	55
		20~100	1	1.9	4.8	9.4	16.7	40.2	64



HELICAL HYPOID SERVOBOX

SDH SERIES

HIGH PRECISION ROTARY OUTPUT FLANGE



Features :

- Precise right angle helical hypoid gear system with rotary flange design.
- Low backlash between 4~10arcmin.
- Ball bearing and taper bearing option.
- Universal housing and is suitable for rotary and turntable applications.

Ball Gearing Design (SDH-B) / Taper Bearing Design (SDH-T)

- 2-Stage ServoBox in Gear Ratio 1/20, 1/25, 1/35, 1/40, 1/50, 1/70, 1/100 and 1/150.

GENERAL SPECIFICATIONS	Unit	Ratio	Model : SDH (2-Stage Gear Reduction)						
			SDH47	SDH64	SDH90	SDH110	SDH140	SDH200	SDH255
Frame Size ϕ	MM	20~150	--	ϕ 86	ϕ 118	ϕ 146	ϕ 179	ϕ 248	ϕ 300
Mounting PCD	MM	20~150	--	ϕ 79	ϕ 109	ϕ 135	ϕ 168	ϕ 233	ϕ 280
Rotary Mounting PCD	MM	20~150	--	ϕ 31.5	ϕ 50	ϕ 63	ϕ 80	ϕ 125	ϕ 140
Input Shaft Size Dia.	MM	20~150		ϕ 8~11	ϕ 14~19	ϕ 16~24	ϕ 22~35	ϕ 28~38	ϕ 35~55
Rated Output Torque Capacity (2-Stage ServoBox)	Nm	Ratio 20	--	60	160	335	650	1,200	2,020
		Ratio 25	--	50	155	333	618	1,189	2,010
		Ratio 35	--	47	142	309	573	1,108	1,870
		Ratio 40	--	60	160	335	650	1,200	2,020
		Ratio 50	--	50	155	333	618	1,189	2,010
		Ratio 70	--	47	142	309	573	1,108	1,870
		Ratio 100	--	43	136	294	549	1,059	1,779
		Ratio 150	--	43	136	294	549	1,059	1,779
Max. Acceleration Torque	Nm	20~150	1.8 Times of Rated Output Torque						
Max. Output Torque Emergency Stop Torque	Nm	20~150	3 Times of Rated Output Torque						
Rated Input Speed	RPM	20~150	--	3,000	3,000	3,000	3,000	3,000	2,000
Maximum Input Speed	RPM	20~150	--	6,000	6,000	6,000	5,000	4,000	3,000
Backlash	Arcmin	20~150	P0 \leq 4arcmin ▪ P1 \leq 7arcmin ▪ P2 \leq 10arcmin						
Torsional Rigidity	Nm/arcmin	20~150	--	14	30	86	155	450	1,126
Maximum Axial Force	N (Ball Bearing)	20~150	--	1,260	4,230	6,360	7,035	17,600	19,800
	N (Taper Bearing)	20~150	--	--	7,330	11,500	18,600	36,900	53,600
Maximum Radial Force	N (Ball Bearing)	20~150	--	2,520	8,460	12,720	14,070	35,200	39,600
	N (Taper Bearing)	20~150	--	--	14,660	23,000	37,200	73,600	107,200
Service Life	Hr	20~150	Intermittent Periodic Duty S5 > 30,000 hours Continuous Duty S1 > 15,000 hours						
Efficiency	%	20~150	\geq 95%						
Operating Temperature	$^{\circ}$ C	20~150	-25 $^{\circ}$ C ~ +90 $^{\circ}$ C						
Lubrication		20~150	Synthetic Grease						
Degree of Protection		20~150	IP65						
Mounting Position		20~150	Any						
Noise Level	dB(A)	20~150	--	\leq 68	\leq 70	\leq 72	\leq 74	\leq 76	\leq 78



NON PRECISION

DMRS-CM SERIES

**WORM GEAR REDUCER
SERVO MOTOR COMPATIBLE**



The Worm Gear Reducer is designed with high thermal capacity die-cast aluminium housings for exceptional heat dissipation. It uses high efficiency gear design to create maximum torque output in a highly compact package. The housings come with a rust-free powder coat paint finishing.

General Specification

Backlash :	Non-precision
Max. Output Torque (Emergency Stop Torque) :	2 Times of Rated Output Torque
Rated Input Speed :	Servo motor speed < 1400rpm
Service Life :	Intermittent Periodic Duty S5 > 6,000 hours Continuous Duty S1 > 3,000 hours
Efficiency :	55% ~ 85%
Degree of Protection :	IP54
PAM (Servo Motor Power) :	0.2kW to 3kW

Worm Gear Reducer Ratio and Rated Output Torque

Model No	DMRS 040-CM	DMRS 050-CM	DMRS 063-CM
Hollow Output Shaft Bore Size (mm)	Ø18 x 78mmL	Ø25 x 92mmL	Ø25 x 112mmL
Input Shaft Bore Size (mm)	Ø11, Ø14	Ø11, Ø14, Ø19	Ø14, Ø19, Ø24
Gear Reduction Ratio (1/X)	Output Torque (Nm)	Output Torque (Nm)	Output Torque (Nm)
5	28	51	77
7.5	32	60	108
10	33	59	111
15	14	63	116
20	27	61	111
25	21	72	110
30	35 (SSL)	83 (SSL)	139 (SSL)
40	33 (SSL)	62 (SSL)	119 (SSL)
50	31 (SSL)	60 (SSL)	127 (SSL)
60	14 (SSL)	29 (SSL)	59 (SSL)
80	11 (FSL)	28 (FSL)	52 (FSL)
100	-	25 (FSL)	45 (FSL)
WG Input Adapter Model	CM06	CM06 / CM08	CM06 / CM08 / CM12



Remark :
SSL (Semi-self-locking)
FSL (Full-self-locking)

Model No	DMRS 075-CM	DMRS 090-CM	DMRS 110-CM	DMRS 130-CM
Hollow Output Shaft Bore Size (mm)	Ø28 x 120mmL	Ø35 x 140mmL	Ø42 x 165mmL	Ø42 x 170mmL
Input Shaft Bore Size (mm)	Ø19, Ø24, Ø28	Ø19, Ø24, Ø28	Ø24, Ø28	Ø28, Ø38
Gear Reduction Ratio (1/X)	Output Torque (Nm)	Output Torque (Nm)	Output Torque (Nm)	Output Torque (Nm)
5	-	-	-	-
7.5	152	245	374	611
10	165	263	417	683
15	174	293	565	779
20	182	305	479	733
25	171	280	478	806
30	194 (SSL)	359	593	900
40	180 (SSL)	281 (SSL)	532 (SSL)	878 (SSL)
50	175 (SSL)	276 (SSL)	511 (SSL)	1036 (SSL)
60	182 (SSL)	283 (SSL)	486 (SSL)	786 (SSL)
80	141 (FSL)	237 (SSL)	411 (SSL)	680 (SSL)
100	137 (FSL)	227 (FSL)	394 (SSL)	805 (FSL)
WG Input Adapter Model	CM08 / CM12	CM08 / CM12	CM12 / CM14	CM12 / CM14



NON PRECISION

OTS-CM SERIES

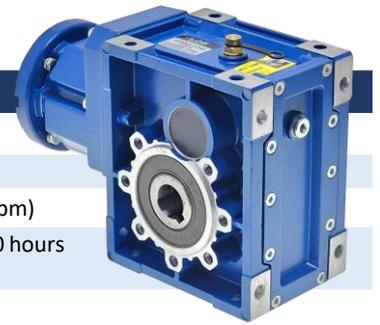
HELICAL HYPOID GEAR REDUCER SERVO MOTOR COMPATIBLE



The Helical Hypoid Gear Reducer offers higher transmission efficiency and longer lifespan compared to conventional IEC worm gear reducer. Having compactible design with IEC Worm Gear Reducer, it comes with high thermal capacity die-cast aluminium housings and offers gear reduction ratio up to 1/300.

Features:

- Helical Hypoid Gear design offer higher higher transmission efficiency and longer lifespan compared to conventional worm gear reducer.
- Higher Gear Reduction Ratio from 1/7.5 ~ 1/300.
- More energy-saving and lower operating temperature.
- Smooth running operation with lower noise compared to worm gear reducer.



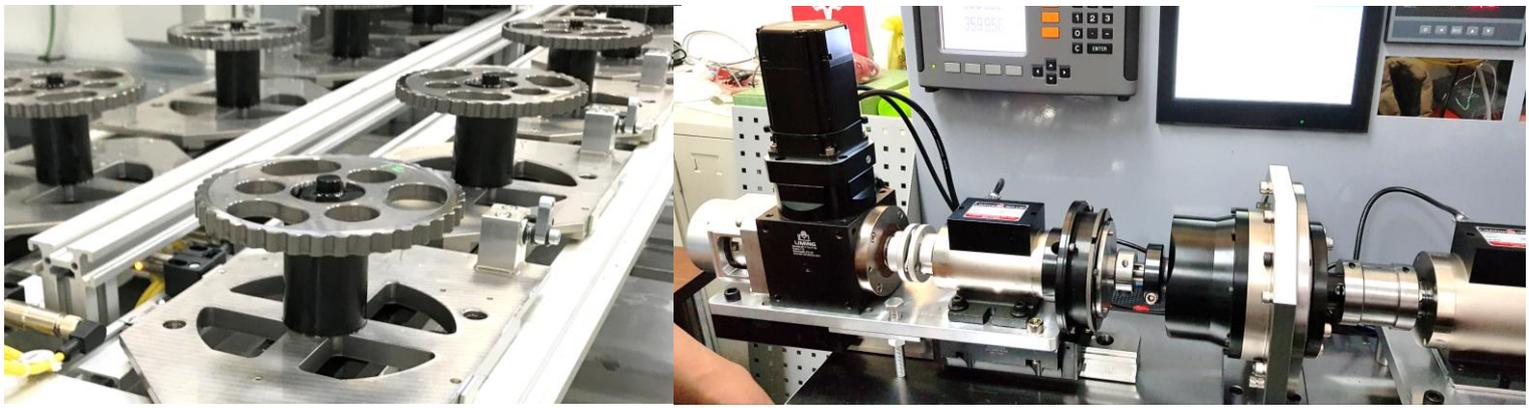
General Specification

Backlash :	Non-precision
Max. Output Torque (Emergency Stop Torque) :	2 Times of Rated Output Torque
Rated Input Speed :	Servo motor speed < 2000rpm (2500rpm)
Service Life :	Intermittent Periodic Duty S5 > 12,000 hours Continuous Duty S1 > 6,000 hours
Efficiency :	80% ~ 90%
Degree of Protection :	IP54
PAM (Servo Motor Power) :	0.2kW to 3kW

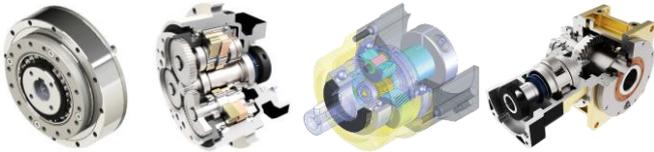
Helical Hypoid Gear Reducer Ratio and Permissible Output Torque

	Model No	OTS 050-2		OTS 063-2		OTS 075-2		OTS 090-2		OTS 110-2	
2-stage Helical Hypoid Gear	Hollow Output Shaft Size	Ø25 x 92mmL (Ø20 Customised)		Ø25 x 112mmL		Ø28 x 120mmL		Ø35 x 140mmL		Ø42 x 155mmL	
	Nominal Gear Ratio (1/X)	Actual Gear Ratio (1/X)	Output Torque (Nm)	Actual Gear Ratio (1/X)	Output Torque (Nm)	Actual Gear Ratio (1/X)	Output Torque (Nm)	Actual Gear Ratio (1/X)	Output Torque (Nm)	Actual Gear Ratio (1/X)	Output Torque (Nm)
	7.5	7.73	40	7.6	55	7.48	100	7.48	150	7.49	260
	10	10.47	50	10.5	75	9.84	120	9.84	190	10.27	325
	12.5	12.47	65	12.67	90	12.49	150	12.49	240	12.84	375
	15	14.92	40	14.67	55	15.09	100	15.09	150	15.11	260
	20	20.21	50	20.25	75	19.84	120	19.84	190	20.73	325
	25	24.07	65	24.44	90	25.19	150	25.19	240	25.90	375
	30	29.33	65	30.31	100	30.24	175	30.24	250	30.67	375
	40	40.09	65	39.29	90	40.13	150	40.13	240	41.26	375
50	48.86	65	48.71	100	48.18	175	48.18	250	48.86	375	
60	58.36	65	60.50	100	59.44	175	59.04	250	59.22	375	
Adapter	CM06 / CM08		CM06 / CM08 / CM12		CM06 / CM08 / CM12		CM08 / CM12 / CM14		CM12 / CM14		

	Model No	OTS 050-3		OTS 063-3		OTS 075-3		OTS 090-3		OTS 110-3	
3-stage Helical Hypoid Gear	Hollow Output Shaft Size	Ø25 x 92mmL (Ø20 Customised)		Ø25 x 112mmL		Ø28 x 120mmL		Ø35 x 140mmL		Ø42 x 155mmL	
	Nominal Gear Ratio (1/X)	Actual Gear Ratio (1/X)	Output Torque (Nm)	Actual Gear Ratio (1/X)	Output Torque (Nm)	Actual Gear Ratio (1/X)	Output Torque (Nm)	Actual Gear Ratio (1/X)	Output Torque (Nm)	Actual Gear Ratio (1/X)	Output Torque (Nm)
	75	74.62	40	73.33	55	75.45	100	75.45	150	75.55	260
	100	101.04	50	101.27	75	99.22	120	99.22	190	103.64	325
	125	120.34	65	122.22	75	125.95	150	125.95	240	129.48	375
	150	146.67	65	151.56	100	151.20	175	151.20	250	153.33	375
	200	200.44	65	196.43	90	200.66	150	200.66	240	206.29	375
	250	--	--	243.57	100	240.89	175	240.89	250	244.29	375
	300	--	--	--	--	297.21	175	295.18	250	296.10	375
	Adapter	CM06		CM06 / CM08		CM06 / CM08		CM08 CM12		CM12/CM14	



FEATURES & BENEFITS



DIVERSE RANGES OF PRECISION SERVOBOX

- With over 60 years of experience manufacturing of gear reducer, our talented team of engineers are eager to provide our very best, cost effective precision servo box solution.
 - Comprehensive ranges of servobox design : Strain wave gear (Harmonic Drive), Cycloidal gear, Helical planetary gear, Spiral bevel gear, Hypoid gear
 - Designed for heavy duty application with precision level (low backlash) up to 0-arcmin*, high torque density, high positioning performance (repetitive positioning accuracy), any mounting direction, and mostly maintenance-free and IP65 enclosure protection.



INTERNATIONAL SERVOBOX DESIGNS

DIRECT REPLACEMENT WITHOUT ANY MODIFICATION

- LDS servobox has same servobox frame design and mounting dimension with the market leading brands, hence direct replacement without any modification to the original setup is possible
 - Same category of Servobox as below :

APEX Servobox model	SHIMPO Servobox model	LDS Servobox model
AB / ABR		DB / DBL
AE		SA
PA II	VRB	FB
PE II	VRL	SN
VRS		SF
	VRSF	FA
AD / ADR	VRT / EVT	SD / SDL
	STH	GT
AT-FH/AT-L	PX	ST/ST-DV
	DynaGear	HY



BECKHOFF **Orientalmotor** **Panasonic**
Allen-Bradley **FESTO** **OMRON** **YASKAWA**

DESIGN FOR MAJOR BRANDS OF SERVO MOTOR

- LDS Servobox's universal adapter is compatible with servo motors and stepper motors from all manufacturers in the market.
 You can assemble the servobox with your motor easily.



- 2D/3D drawing (AUTOCAD and STEP file format) are available for LDS precision servobox to simulate, test and validate your designs to reduce costs from quality problems, errors etc.



COMPETITIVE SERVOBOX SOLUTION

- In-house technical support and service available, including selection of servobox for your automation and motion control requirement (PLC, HMI and SCADA)

ROBONIC DRIVE ZERO-BACKLASH* SERVOBOX FOR ROBOTICS

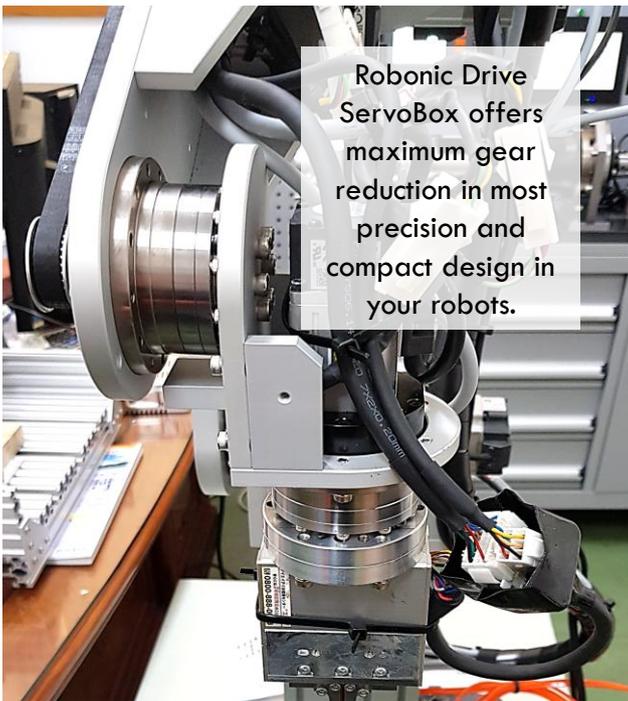
ROBONICDRIVE servobox (*Zero-Backlash design concept as Harmonic Drive)

is very commonly implemented in robotics and aerospace nowadays. DSF / DHF servobox series offer the ultimate in design flexibility and can be tightly integrated into your machine design. These are well suited for applications where high torque density is of paramount importance

- Model available #14 ▪ #17 ▪ #20 ▪ #25 ▪ #32 ▪ #40
- Backlash : $5 \leq 20$ arcsec
($0.08\text{arcmin} \leq 0.33\text{arcmin}$) ($0.0013^\circ \sim 0.0055^\circ$)
- Gear Reduction Ratio $1/50$ ▪ $1/80$ ▪ $1/100$ ▪ $1/120$
- Rated Output Torque up to 300Nm
- Max. Output Torque : 2-times of Rated Torque
- Max. Emergency Stop Torque : 3-times of Rated Torque
- Nominal Input Speed : 2000rpm
- Service Life : S5 Duty > 6,000 hours (Not for continuous running)
- Outer Frame Size : max 73mm ~ 160mm (PCD : 65 ~ 144mm)
Height : 38mm ~ 73.5mm



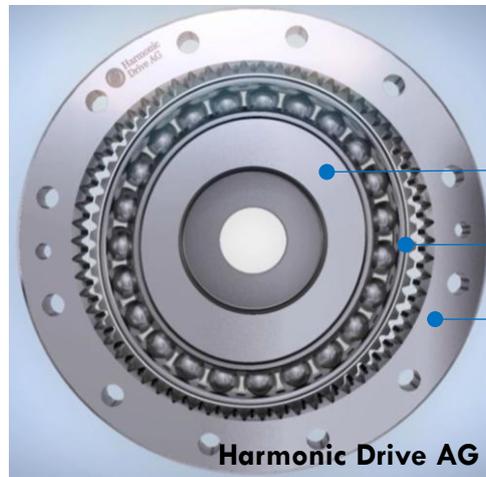
DSF-M Series
with servo motor adapter



Robonic Drive ServoBox offers maximum gear reduction in most precision and compact design in your robots.

ServoBox Design :

Strain Wave Gear enables no backlash, high compactness, light weight, and high gear ratios within compact housing



- Wavegear
- Flexspline
- Fixed-ring gear

Harmonic Drive AG

RobonicDrive Design Option :



DSF-AC Series
Input Collet Locking
Mechanism Type



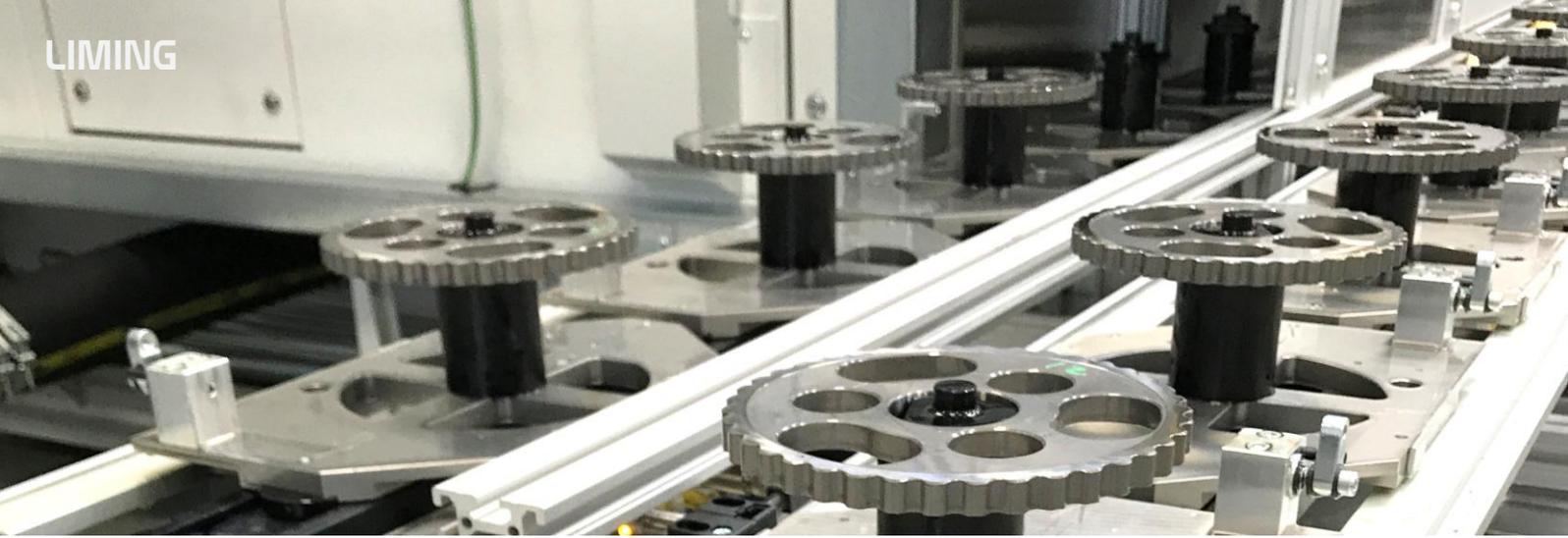
DSF-AK Series
Input Hollow Shaft Type
(Key-way)



DSF-M Series
with Servo Motor
Adapter Type



DSF-S Series
with Solid Input Shaft
Type



CYKO DRIVE HIGH SHOCK-LOAD CAPABILITY

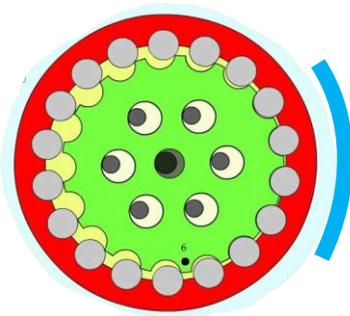
CYKODRIVE servobox (Precision High Shock-Load Cyclo Drive Design)



- Model available #6 ~ #320
- Output rotary flange supported by Angular Contact Ball Bearing
- Backlash : $1 \leq 6$ arcmin
- Gear Reduction Ratio : 1/41 ~ 1/171
- Rated Output Torque : up to 3,200Nm
- Max. Output Torque : 5-times of Rated Torque
- Max. Emergency Stop Torque : 5-times of Rated Torque
- Max. Acceleration Stop Torque : 2.5-times of Rated Torque
- Nominal Input Speed : 3000rpm
- Max Radial Force : up to 19,000N
- Max Axial Force : up to 15,000N
- Torsional Rigidity : up to 3,00Nm/arcmin
- Efficiency : $\geq 85\%$
- Service Life : S5 Duty > 6,000 hours • S1 Duty > 3000 hours



RSM Series
with servo motor adapter



CykoDrive Design :
Large number of teeth come in contact simultaneously

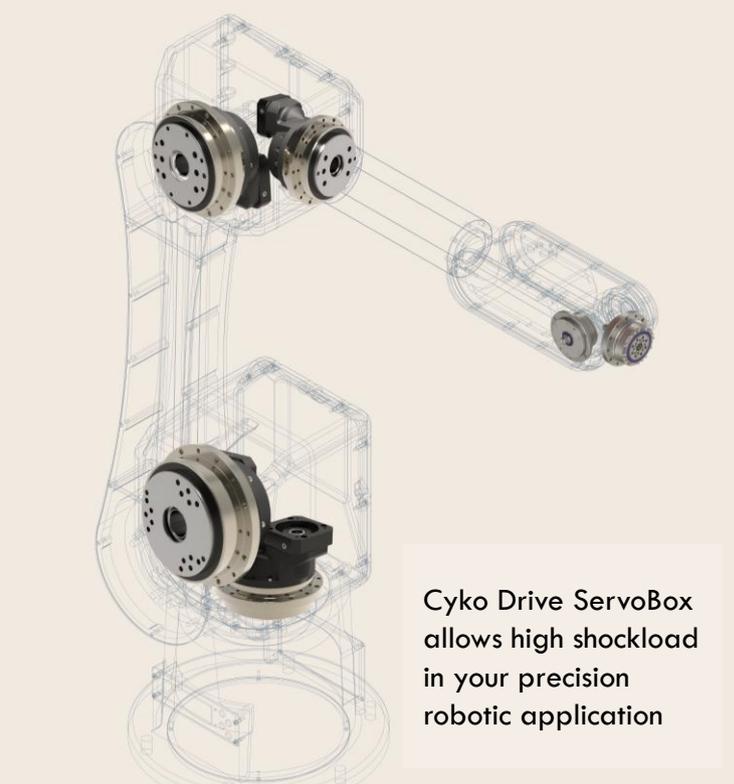
CykoDrive Design Option :



RSE Series
with Solid Input Shaft
Type



RCM Series
with Hollow Rotary
Flange Type



Cyko Drive ServoBox allows high shockload in your precision robotic application



Pulse Train
EtherCAT®

DIGITAX SF

LOW POWER, EASY TO USE SERVO SOLUTIONS

AC DRIVES, SERVO

NEW

DRIVE OBSESSED



DIGITAX-SF EtherCAT®
SERVO MOTOR RATING 50W TO 2KW
INCREMENTAL 17BIT

SERVO DRIVE SPECIFICATIONS

Origin : Nidec / Sankyo Japan (Made in China)

Servo 50W ● 100W (3000rpm)

Capacity 200W ● 400W ● 750W (3000rpm)

& Speed : 1kW ● 1.5kW ● 2kW (2000rpm)

Driver 1phase 220V 50Hz/60Hz (50W~1kW)

Input 3phase 220V 50Hz/60Hz (1kW~2kW)

Voltage : (DC24V for digital display on Amplifier)

CONTROL MODES

Pulse Train Command : Position

Internal Command : Position | Velocity

Analogue Command : Velocity | Torque

STANDARDS

Approvals : CE, EU/EC Directive, UL, KC, CCC

MOTOR ENCLOSURE PROTECTION

IP Rating : Motor Enclosure IP65 or IP67



Motion Waveform with graph and FFT frequency analysis enables easy-monitoring of servo motor operation condition and status.

Power	AMPLIFIER MODEL		SERVO MOTOR MODEL (INERTIA LEVEL)		
	Pulse Train	EtherCAT	Low	Medium	High
50W	DA2Y2Z3	DB6Y24*	--	MY500	--
100W	DA2Z123	DB6Z14*	--	MY101	--
200W	DA21223	DB6124*	MX201	--	MZ201
400W	DA22423	DB6244*	MX401	--	MZ401
750W	DA23823	DB6384*	MX751	--	MZ751
1kW	DA24A23	DB64A4*	--	MM102	MH102
1.5KW	DA26B23	DB66B4*	--	MM152	MH152
2KW	DA28C23	DB68C4*	--	MM202	--

COMMUNICATION

License Free Software :



Windows 10 compatible

[Digitax-SF Connect] Software for Pulse Train servo.

[S-Tune II] Software for EtherCAT servo.

PC-USB interface for parameter settings, tuning, and status display.

RS-485 : host remote control communication (multi-drop compatible).

Interface : EtherCAT® | Pulse Train | Analogue

Power & Encoder Cable : High flexible dynamic cable type - cable length from 1m, 3m, 5m, 10m, 15m and 20meter.

Connector : 26-pin / 50-pin connector for CN1

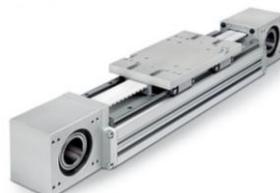
SERVO DRIVE SOLUTIONS & PACKAGES



CT50P-S & CT50P-1M
CN1 Terminal Block with cable (50pin)



Ball Screw Driven
Precision Linear Actuator



Belt Driven
Precision Linear Actuator



Electrical Control Panel
Complete Package with Servo Motors, HMI and PLC

Point Table

No.	Position	Rotation speed [r/min]	Acceleration time [ms]	Deceleration time [ms]	Dwell time [ms]	Command method	Running operation	Positioning complete [pulse]	Valid or Invalid
1	0	1	30	30	1	Relative...	continu...	40	Disable
2	0	1	30	30	1	Relative...	continu...	40	Disable
3	0	1	30	30	1	Relative...	continu...	40	Disable
4	0	1	30	30	1	Relative...	continu...	40	Disable
5	0	1	30	30	1	Relative...	continu...	40	Disable
6	0	1	30	30	1	Relative...	continu...	40	Disable
7	0	1	30	30	1	Relative...	continu...	40	Disable
8	0	1	30	30	1	Relative...	continu...	40	Disable
9	0	1	30	30	1	Relative...	continu...	40	Disable
10	0	1	30	30	1	Relative...	continu...	40	Disable
11	0	1	30	30	1	Relative...	continu...	40	Disable
12	0	1	30	30	1	Relative...	continu...	40	Disable
13	0	1	30	30	1	Relative...	continu...	40	Disable
14	0	1	30	30	1	Relative...	continu...	40	Disable
15	0	1	30	30	1	Relative...	continu...	40	Disable

9 Digitax-SF Connect Software – Point Table Operation

Built-in 16-point positioning table for simple machine control without PLC.

* 8-point inputs / 8-point outputs



State Item

Display	State Item	Value 1
<input checked="" type="checkbox"/>	Speed command	0
<input checked="" type="checkbox"/>	Speed feedback	
<input checked="" type="checkbox"/>	Position command	-29818
<input type="checkbox"/>	Position feedback	

Parameter

Parameter	Unit	Value	Chang
Inertia ratio	[%]	250	
Damping ratio	[%]	100	
Control gain set	[-]		Disa...
Inertia condition	[-]	2	
Control gain 1	[rad/s]	700	
Control gain 2	[rad/s]	700	
Gain FF compensatio...	[0.01%]	10000	
Integral gain	[rad/s]	500	
Position command s...	[-]	25	
smoothing 2 moving av...	[-]	10	

File data

Parameter	Unit	Value
Inertia ratio	[%]	250
Damping ratio	[%]	100
Control gain set	[-]	15
Inertia condition	[-]	2
Control gain 1	[rad/s]	700
Control gain 2	[rad/s]	700
Gain FF compensatio...	[0.01%]	10000
Integral gain	[rad/s]	500
Position command s...	[-]	25
smoothing 2 moving av...	[-]	10

10 Digitax-SF Commissioning – Motion Waveform Monitor

Motion waveform graphic data include :

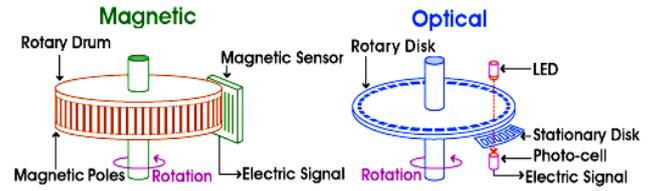
Position Deviation, Speed Command, Speed Feedback and Torque Command.



FEATURES & BENEFITS



- 1 **Digitax SF Connect is license-free commissioning software**, and Windows 10 compatible. It offers simple parameter setting, tuning and diagnostics.
- 2 **Parameters sharing among DSF servo amplifiers 50W to 2kW.** (Re-enter of parameters in the software is not required).
- 3 **Motion Waveform with graph and FFT frequency analysis** enable easy-monitoring of servo operation condition and status.
*Motion waveform graphic data include :
Position Deviation, Speed Command,
Speed Feedback and Torque Command.*



- 6 **Nidec servo motor come with Magnetic type encoder** rugged and copes very well with shock and vibration, while being unaffected by the ingress of oil, dirt, and moisture.



- 7 **In-house technical support** and service available, including selection of servo drives for your application, and motion control requirement (PLC, HMI and SCADA)
- 8 **Standard 12month product warranty**
- **Extended product warranty to 18months** available on Project basis for Nidec Servo Digitax-SF Series



- 4 **Servo Demo set, Briefing and Training sessions** are available to demonstrate the servo's core features and capabilities, including the Digitax-SF Connect commissioning software.



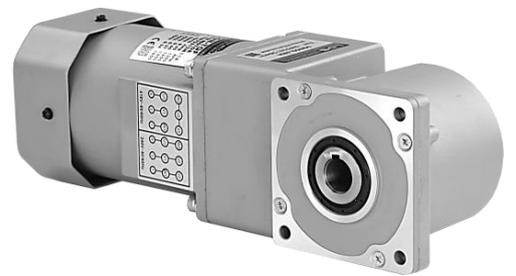
- 9 **Diverse ranges of precision servobox** compatible with Nidec Servo Motor are readily available. Servobox designs include inline shaft, right-angle, rotary flange, hollow actuator, spiral bevel, hypoid gear, cycloidal drive and strain wave gear designs.
- **Servobox improves your output torque and inertia level**, instead of using an expensive higher power servo motor. (Cost-saving and energy saving benefits).



- 5 **2D/3D drawing (AUTOCAD and STEP file format)** are available for Nidec Servo Drives to simulate, test and validate your designs to reduce costs from quality problems, errors etc.



- 10 **Full ranges of Digitax SF Servo Drives** are available exstock for your immediate production requirement.



LDS
LEADERDRIVES

COMPACT GEAR MOTOR

HIGH PERFORMANCE | MINI DRIVE

WATERTIGHT PROTECTION OPTION (IP55)





COMPACT GEAR MOTOR SERIES



Motor Rating : 6W ● 15W ● 25W ● 40W ● 60W ● 90W
120W ● 150W ● 180W ● 200W ● 250W

MOTOR DESIGN

- Induction Motor
- Reversible Motor
- Speed Control Motor
- Inverter Motor
- ElectroMagnetic Brake Motor
- Clutch and Brake Motor

MOTOR INPUT VOLTAGE

- 1ph100V (110V)
- 1ph220V (240V)
- 3ph200V (220V)
- 3ph400V (415V)

MOTOR OUTPUT SPEED

- 2-Pole (2780RPM)
- 4-Pole (1350RPM)
- 6-Pole (950RPM)

GEARHEAD TYPE

- Parallel Shaft Gearhead
- Hinge Type Gearhead
- Spiral Bevel Gearhead
- Worm Gearhead

MOTOR ENCLOSURE PROTECTION

- IP20
- IP55 (WP Series – Water and Dust-Resistance Performance)

LDS COMPACT GEAR MOTOR FEATURES

- Compact drive design with wide range of configurations as above.
- Offer direct replacement for major compact motor makers : Oriental Motor, Panasonic, Japan Servo, SPG, DKM, GGM, Excel-M and TWT.
- Motor enclosure protection : IP20 or IP55 Fanless (Watertight Protection).
- Motor output speed option : 950rpm, 1350rpm and 2780rpm,
- Gear reduction ratio from 1/2.1 to 1/24,000. (0.056rpm to 650rpm)
- Compact IGBT Inverter and FC400 frequency controller with 3phase motor offer optimum performance and it solves motor overheat and vibration issue of speed control motor.
- Quick user-guide manual available for IGBT-K100 and FC400 controller, for ease of common parameter settings by junior user. Such as sensor and timer control, acceleration and deceleration speed, multispeed setting, thermal overload protection, error code listing, zero speed detection etc.



Compact Electric Motor
Output Power 6W to 250W
Output Speed :
950rpm / 1350rpm / 2780rpm



IP55 Compact Gear Motor
Water and Dust-Resistance Performance
For indoor wet area application



**Parallel Shaft Gearhead
(Helical Gear Design)**
Single Gear Reduction
Ratio 1/2.1 to 1/240



**Hinge Type Parallel Shaft
Gearhead (Helical Gear)**
Single Gear Reduction
Ratio 1/2.1 to 1/240



**Spiral Bevel Gearhead
(Right Angle - Hollow)**
Single Gear Reduction
Ratio 1/6 to 1/225



**Worm Gearhead
(Right Angle - Hollow)**
Single Gear Reduction
Ratio 1/5 to 1/80 (1/100)



Compact Electric Motor with Parallel Shaft Gearhead
Output Power 6W to 250W
Gear Ratio 1/2.1 to 1/24,000



Compact Motor with Hinge Type Parallel Shaft Gearhead
Output Power 40W to 180W
Gear Ratio 1/2.1 to 1/24,000



Compact Motor with Right Angle Spiral Bevel Gearhead
Output Power 25W to 250W
Gear Ratio 1/6 to 1/22,500



Compact Motor with Right Angle Worm Gearhead
Output Power 40W to 250W
Gear Ratio 1/5 to 1/19,200



Compact Electric Motor with Electro-Magnetic Brake
Brake operation < 6x/minute
Output Power 6W to 250W



Compact Electric Motor with Clutch & Brake (DC24)
Brake operation < 60x/minute
Output Power 40W to 180W



Compact Electric Motor with Decimal Gearhead and Parallel Shaft Gearhead
(Double Gear Reduction)



Compact Electric Motor with Parallel Shaft Gearhead and Worm Gearhead
(Double Gear Reduction)



Compact IGBT Series
1phase Compact Inverter
Panel Mount Design
(For 3phase 220V Motor)



Compact FC400 Series
1phase Frequency Controller
Panel Mount Design
(For 3phase 220V Motor)



USM Analogue Series
1phase Speed Controller
Panel Mount Design
(For 1phase Motor)



USP Digital Display Series
1phase Speed Controller
Panel Mount Design
(For 1phase Motor)



DSC72 Digital Display Series
1phase Speed Controller
Din-rail Mount Design
(For 1phase Motor)



SS32-PL Analogue Series
1phase Speed Controller
Din-rail Mount Design
(For 1phase Motor)



SS32-PL-VR Analogue Series
1phase Speed Controller
Din-rail Mount Design
(For 1phase Motor)



SD62-SK Digital Display Series
1phase Speed Controller with Brake-pack (Din-rail Mount)
(For 1phase Motor)



FEATURES & BENEFITS



DIVERSE RANGES OF COMPACT MOTOR

- 1 Started manufacturing in Taiwan since 1969.
- Comprehensive ranges of compact motor
 - * 6W to 250W
 - * Input voltage range 110V, 200V and 415V,
- Motor output speed 2800rpm, 1400rpm and 950rpm
- Motor enclosure protection IP55 (Watertight Protection) available
- 3 key gearhead designs with grease filled for long-hour and heavy-duty operations : Parallel shaft helical gearhead, Spiral bevel gearhead and worm gearhead
- Special single gearhead ratio (Parallel shaft gear) : 1/2.1 (643rpm), 1/4.2 (321rpm), and 1.240 (5.6rpm)



UPGRADING FROM SPEED CONTROL MOTOR TO 1-PHASE IGBT INVERTER MOTOR FOR ENERGY SAVING AND MORE CONTROL FEATURES

- 4 **Energy saving = Electricity cost saving**, especially when motor is running at low-speed operation
- IGBT inverter provides **protection from motor over-current or overload** (Motor overload protection 150% - Heavy duty)
- Allows **acceleration and deceleration** speed control between 0 second to 3600 seconds
- **More control features** : 6x Multi-speeds operation, Zero-speed detection, DC braking, DC10V supply etc.
* **IGBT User Quick-guide manual** is available for new beginner (step-by-step instruction manual for parameter setting and troubleshooting)
- **More flexible output speed** : IGBT inverter increase motor output speed if the standard rated speed is not enough (E.g. 4pole motor from standard output speed 1400rpm increase to 2000rpm)
- **Higher starting torque** up to 200% of rated torque
- **Cooling motor operation** especially at low running speed, and it further improves product lifespan
Motor temperature at 45-50 Degree Celsius
- **Use of sensor and timer without any relay switch**
- Direct replacement without any modification

Orientalmotor

Panasonic



LDS
LEADERDRIVES

INTERNATIONAL MOTOR DESIGNS DIRECT REPLACEMENT WITHOUT ANY MODIFICATION

- 2 LDS compact gear motor has same frame design and mounting dimension with the market leading brands, hence direct replacement without any modification to the original setup is possible



- 3 **2D/3D drawing (AUTOCAD and STEP file format)** are available for LDS Gear Motor and Controller to simulate, test and validate your designs to reduce costs from quality problems, errors etc.



COMPETITIVE COMPACT MOTOR SOLUTION

- 5 Competitive price and plenty of stock available for immediate delivery from our factory
- Site installation & troubleshooting service are available



COMPACT AC GEAR MOTOR

K SERIES

KEY SPECIFICATIONS OF COMPACT MOTOR



Specification of Compact Electric Motor with Parallel Shaft Gearhead

Motor Power (Watt)	Motor Frame Size	Motor Output Shaft Dia. (Round Shaft or Key-way Shaft)	Rated Torque (1phase) (4P - 50Hz)	Rated Torque (3phase) (4P - 50Hz)	Motor Type					
					Induction (optional WP)	Reversible	Variable Speed	Inverter / Asynchronous (optional WP)	Electro-Magnetic Brake	Clutch & Brake
6W	60x60mm	6mm	0.45kgcm	--	•	•	•		•	
15W	70x70mm	6 or 8mm	1.22kgcm	--	•	•	•		•	
25W	80x80mm	8mm	1.87kgcm	2.06kgcm	•	•	•	• (WP)	•	
40W	90x90mm	10 or 11mm	3.00kgcm	3.17kgcm	• (WP)	•	•	• (WP)	•	•
60W	90x90mm	11 or 12mm	4.40kgcm	4.90kgcm	• (WP)	•	•	• (WP)	•	•
90W	90x90mm	11 or 12mm	6.20kgcm	6.50kgcm	• (WP)	•	•	• (WP)	•	•
120W	90x90mm	11 or 12mm	8.50kgcm	8.90kgcm	• (WP)	•	•	• (WP)	•	•
150W	90x90mm	11 or 12mm	10.0kgcm	10.7kgcm	•	•	•	• (WP)	•	•
180W	90x90mm	11 or 12mm	11.3kgcm	12.3kgcm	•	•	•	• (WP)	•	•
200W	104x104mm	14mm	15.6kgcm	15.7kgcm	•	•	•	•	•	
250W	104x104mm	14mm	17.0kgcm	17.3kgcm	•	•	•	•	•	

Motor Power (Watt)	Motor with Terminal Box	Motor Input Voltage (50Hz / 60Hz)				Motor Output Speed @ 50Hz (±5%)*			Parallel Shaft Gearhead Model	Parallel Shaft Gearhead Output Shaft Size Diameter (Optional)
		1ph110V	1ph240V	3ph220V	3ph415V	2750rpm (2P)	1350rpm (4P)	950rpm (6P)		
6W		•	•				•		2GN	8mm
15W		•	•				•		3GN	10mm
25W	•	•	•	•	•	•	•		4GN	10mm
40W	•	•	•	•	•	•	•	•	5GN (5GU)	12mm (15mm)
60W	•	•	•	•	•	•	•	•	5GU (5GN)	15mm (12mm)
90W	•	•	•	•	•	•	•	•	5GU (5GN)	15mm (12mm)
120W	•	•	•	•	•	•	•	•	5GU (5GN)	15mm (12mm)
150W	•	•	•	•	•	•	•	•	5GU (5GN)	15mm (12mm)
180W	•	•	•	•	•	•	•	•	5GU (5GN)	15mm (12mm)
200W	•		•	•	•		•		6GU (6GN)	18mm (15mm)
250W	•		•	•	•		•		6GU (6GN)	18mm (15mm)

Note : 1kgcm = 0.098Nm (1Nm = 10.2kgcm)

COMPACT PARALLEL SHAFT GEAR MOTOR

6W ~ 250W | Gear Reduction Ratio 2.1 ~ 2,400



Motor output power : 6W to 250W.

Motor Model :

- > Induction Motor
- > Reversible Motor
- > Speed Control Motor
- > Inverter Motor
- > Electromagnetic Brake Motor
- > Clutch Brake Motor
- > IP55 Motor (Fanless – Water and Dust Resistance)



Compact Electric Motor with Parallel Shaft Gearhead

Output Power 40W to 250W
Gear Ratio 1/2.1 to 1/2,400

Motor output speed

- > 2Pole (2750rpm)
- > 4Pole (1350rpm)
- > 6Pole (950rpm)



Compact Electric Motor with Parallel Shaft Gearhead

Output Power 6W to 25W
Gear Ratio 1/3 to 1/300



Compact Motor with Double Gearhead

Output Power 40W to 180W
Gear Ratio 1/300 to 1/24,000



Compact Electric Motor with Parallel Shaft Gearhead and Terminal Box

Output Power 25W to 250W



Compact Motor with Hinge Type Parallel Shaft Gearhead

Output Power 40W to 180W
Gear Ratio 1/2.1 to 1/24,000

PARALLEL SHAFT GEAR REDUCER – GEAR REDUCTION RATIO



Standard Gear Reducer
(Square Frame Size)

2GN-K • 3GN-K • 4GN-K • 5GN-K • 5GU-KB • 5GU-K • 6GN-K • 6GU-KB-S18

Parallel Shaft Gear Reducer Ratio and Output Shaft Rotation Speed Guideline (Based on 4Pole Motor, 50Hz)

Gear Reduction Ratio	[2.1]	3	[3.6]	[4.2]	5	6	7.5	9	10	12.5	15	18
Output Speed - RPM	643	450	375	321	270	225	180	150	135	108	90	75

Gear Reduction Ratio	20	25	30	36	40	50	60	75
Output Speed - RPM	67	54	45	37.5	33.7	27	22.5	18

Gear Reduction Ratio	90	100	120	150	180	200*	240*	<300>	(360 ~ 24,000)
Output Speed - RPM	15	13.5	11.3	9	7.5	6.7	5.6	4.5	(0.05~ 3.75rpm)



5GU-K
Hinge Type
Gear Reducer

Note [] Gear Reduction Ratio 2.1, 3.6 and 4.2 in installed with motor with 9T shaft (40W ~ 180W).
* Ratio 200 and 240 is not available for 200W and 250W motor.
<> Ratio 1/300 is available for 6W and 25W motor only.
() Double Gear Reduction for 40W to 180W motor only.
(Parallel Shaft Gear Reducer + Decimal Gear Reducer)

COMPACT SPIRAL BEVEL GEAR MOTOR

25W ~ 250W | Gear Reduction Ratio 7.5 ~ 225



Motor output power : 25W to 250W.

Motor Model :

- > Induction Motor
- > Electromagnetic Brake Motor
- > Speed Control Motor
- > Clutch Brake Motor
- > Inverter Motor
- > IP55 Motor (Water & Dust Resistance)



Spiral bevel gear design offers constant backlash throughout the service life of the gearbox.

- * Quiet operation and longer lifespan
- * Higher efficiency and output torque
- * Lower operating temperature



Gearbox design with smooth and clean surface without any protrusions.

Ideal design for sanitary environment with quicker and easier cleaning process. It reduces operating costs specially in food processing applications.

Compact Right Angle Spiral Bevel Gear Reducer Model :

Motor Rating (Watt)	Frame Size	Mounting PCD	Hollow Output Shaft Bore Dia. x Length
25W	80x80mm	94mm	Dia.15mm x 82mmL
40W~180W	90x90mm	104mm	Dia.17mm x 86mmL
200W~250W	104x104mm	120mm	Dia. 22mm x 103mmL



Gearbox Engineering



Technical Support And Collaboration



High Efficiency Performance



1 Year Product Warranty

SPIRAL BEVEL GEAR REDUCER – GEAR REDUCTION RATIO

4GN-RH (4IK – 25W) ▪ 5GN-RH ▪ 5GU-RH (5IK – 40W ~ 180W)

Spiral Bevel Gear Reducer Ratio and Output Shaft Rotation Speed Guideline (Based on 4Pole Motor, 50Hz)

Gear Reduction Ratio	6*	9	15	18	22.5	27	37.5	45	54	75	90
Output Speed - RPM	225	150	90	75	60	50	36	30	25	18	15

Gear Reduction Ratio	108	150	180	225	(270)	(375)	(450)	(540 ~ 22,500)
Output Speed - RPM	12.5	9	7.5	6	5	3.6	3	(0.06 ~ 2.5rpm)

Note : () – Double Gear Reduction Ratio (Parallel Shaft Gearhead + Decimal Gearhead)



6GU-RH (6IK – 200W ~ 250W)

Spiral Bevel Gear Reducer Ratio and Output Shaft Rotation Speed Guideline (Based on 4Pole Motor, 50Hz)

Gear Reduction Ratio	7.5	9	12.5	15	18	25	30	37.5	45	63
Output Speed - RPM	180	150	108	90	75	54	45	36	30	21

Gear Reduction Ratio	75	95	120
Output Speed - RPM	18	14	11



COMPACT WORM GEAR MOTOR

40W ~ 250W | Gear Reduction Ratio 5 ~ 100



Motor output power : 40W to 250W.

- > Induction Motor
- > Speed Control Motor
- > Inverter Motor
- > Electromagnetic Brake Motor
- > Clutch Brake Motor

Worm gears are utilized as a part of applications where vast gear reductions, torque, and braking are important.

- > The most common worm gears made with a brass wheel and a steel worm.
- > Motion transfer of 90 Degrees
- > Ability to handle large gear reduction ratios
- > Self locking feature for high reduction ratio
- > An economical gear solution with lower upfront cost
- > Low noise operation



Motor with worm gear head
(Single reduction ratio 1/5 to 1/80)



Motor with double gear reduction
Gear Ratio from 1/100 to 1/19,200
(Parallel shaft + Worm Gearhead)

Right Angle Worm Gear Reducer Model :

Motor Rating (Watt)	Frame Size (W x H)	Mounting PCD	Hollow Output Shaft Bore Dia. x Length
8MRV030/DMRS030	80 x 97mm	65mm	Dia. 14mm x 63mmL
8MRV040/DMRS040	100 x 122mm	75mm	Dia. 18mm x 78mmL
8MRV050/DMRS050	120 x 144mm	85mm	Dia. 25mm x 92mmL
8MRV063/DMRS063	145 x 174mm	95mm	Dia. 25mm x 112mmL



Double Gear Reduction
(Conventional Design)

WORM GEAR REDUCER – GEAR REDUCTION RATIO



Worm Gearhead with CM type input adapter

8MRV030 - 8MRV040 - 8MRV050 - 8MRV063 | DMRS030 - DMRS040 - DMRS050 - DMRS063 Worm Gear Reducer Ratio and Output Shaft Rotation Speed Guideline (Based on 4Pole Motor, 50Hz)

Gear Reduction Ratio	5	7.5	10	15	20	25	30	40	50	60
Output Speed - RPM	270	180	135	90	67.5	54	45	33.7	27	22.5



Worm gearhead with CG type input adapter

Gear Reduction Ratio	80	[100]	(135)	(150)	(180)	(225)	(270)	(300 ~ 19,200)
Output Speed - RPM	16.8	13.5	10	9	7.5	6	5	(0.07 ~ 4.5rpm)

Note : [] – Ratio 1/100 is available for #050 and #063 series only
() – Double Gear Reduction Ratio (Worm Gearhead + Parallel Shaft Gearhead)

COMPACT IGBT INVERTER

LDS 1-Phase IGBT-K100 / IGBT-K200 Series (Panel Mount Type)

- > Motor Rating : Maximum Up to 250W (1/3HP)
- > Input Voltage : AC 1phase 240V, 50Hz/60Hz
- > Output Voltage : AC 3phase 240V
- > Frequency Range : 0.1 ~ 400Hz.
- > 150% Overload Protection
- > Same dimension and mounting with Unit Type AC Speed Controller (USM series).



IGBT Inverter



COMPACT IGBT INVERTER FEATURES & ADVANTAGES * Compared to Speed Control Motor

1	LED Digital Display	Display of Running Frequency "0 ~ 400Hz" ▪ Output Ampere ▪ Motor RPM ▪ Machine Output Speed
2	Energy Saving Operation	YES
3	Low Motor Running Temperature	Approx. 40°C to 55°C after 30min
4	Motor Starting Torque	Higher (150%)
5	Motor Efficiency	Higher (75%~85%)
6	FWD / REV Running Direction	YES
7	Motor Overload Protection	YES - (150% / Adjustable by User)
8	Acceleration & Deceleration Speed	YES - Adjustable btw 0.1 ~ 3200 seconds
9	FWD / REV Running Direction	YES (Multiple Terminal or SPEC Key)
10	Quick-Stop Operation	YES (From 0.1 Second)
11	Flexible Running Speed Range	YES (0.1 ~400Hz)
12	Multiple Speed Setting	YES (Max 3 to 6 Speed Controls)
13	Multiple Speed Setting at Different Running Direction	YES (Max 2 Speeds)
14	Switching Frequency (PWM)	YES
15	External VR Control/Quick-REV Key	YES
16	Alarm Signal to PLC	YES
17	DC10V Supply	YES
18	Modbus Communication	YES



Portable Keypad with Ethernet cable



Enable space & cost saving control panel and easier monitoring of inverter operation



COMPACT GEARHEAD OPTIONS



Parallel Shaft Gearhead
(Helical Gear)
Single Gear Reduction Ratio
1/2.1 : 1/240



Hinge Type Parallel Shaft Gearhead
Single Gear Reduction Ratio
1/2.1 : 1/240



Spiral Bevel Gearhead (Right Angle)
Single Gear Reduction Ratio
1/6 : 1/225



Worm Gearhead (Right Angle)
Single Gear Reduction Ratio
1/5 : 1/100

* Double Gear Reduction from 1/300 to 1/19200 available upon request



LDS[®]
LEADERDRIVES
IGBT INVERTER
25W ~ 200W

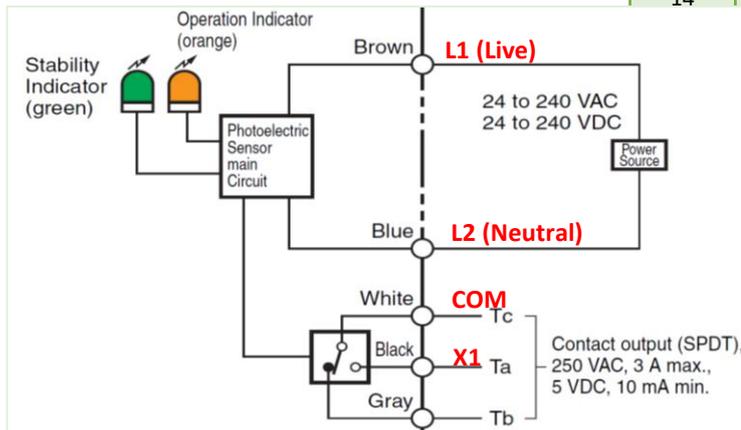
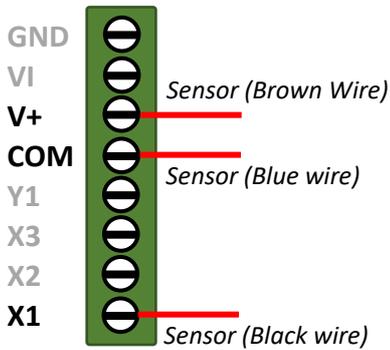
IGBT User Quick Guide

Easy operation via
Step-by-Step Guide
for Parameter setting,
wiring method,
error troubleshooting.

How to use Sensor Relay to stop operation by using Jog Speed Setting (Motor rotation is stopped in shorter time compared to Coast to Stop function)

F2.16 set to [0]
F2.19 set to [0.1]
F5.19 set to [1]

Sensor Relay between Terminal X1 and Com



Step	Action	Screen Display (after action)	Remark
		0.00	When Inverter is powered on. (Initial Screen Display)
1	Press tekan	F0.00	Press [MODE] to display Operation Status [F0.00] System Parameter
2	Press tekan	F2.00	Press [Δ] to parameter [F2.00] Frequency Parameter
3	Press tekan	F2.00	Press [<<] to shift digit of Parameter : [F2.00]
4	Press tekan	F2.16	Press [Δ] to parameter [F2.16] Jog Speed (Refer to Page 20)
5	Press tekan	6.00	Press [FUNC/DATA] to enter Parameter F2.16 Default Setting [6.00] Hertz
6	Press tekan	6.00	Press [<<] twice to shift digit of frequency command : [6.00]
7	Press tekan	0.00	Press [∇] to new command [0.00] JogSpeed at Zero Hertz Refer to page 20
8	Press tekan	F2.16	Press [FUNC/DATA] to complete the new parameter change.
9	Press tekan	F2.19	Press [Δ] to parameter [F2.19] Primary Deceleration Time (Refer to Page 21)
10	Press tekan	2.0	Press [FUNC/DATA] to enter Parameter F2.19 Default Setting [2.0]
11	Press tekan	0.1	Press [∇] to new command [0.1] Deceleration time at 0.1second
12	Press tekan	F2.19	Press [FUNC/DATA] to complete the new parameter change.
13	Press tekan	F2.19	Press [<<] to shift digit of frequency command : [F2.19] Frequency Parameter
14	Press tekan	F5.19	Press [Δ] to parameter [F5.19] Multi-Function Input Terminal X1 (Refer to Page 29)
	Press tekan	22	Press [FUNC/DATA] to enter Parameter F5.19 Default Setting [22]
	Press tekan	1	Press [∇] to new command [1] Jog Speed Command Refer to page 29
	Press tekan	F5.19	Press [FUNC/DATA] to complete the new parameter change.
	Press tekan	0.00	Press [PROG] to return to Initial Display Screen

VARIABLE SPEED MOTOR

Compact Motor Rating : 6W ▪ 15W ▪ 25W ▪ 40W ▪ 60W ▪ 90W
120W ▪ 150W ▪ 180W ▪ 200W ▪ 250W

- Controller Input Voltage : AC 1ph 100V~110V / 1ph 220V~240V, 50Hz/60Hz
Motor Input Voltage : AC 1ph 100V~110V / 1ph 220V~240V, 50Hz/60Hz

- **Key features of Variable Speed Motor with DSC Speed Controller**

- > Din Rail Type Digital Display Speed Controller with external VR / Din Rail Mounting
- > Compact size / Space-saving slim design for adjustable speed operation with digital display
- Size : 35mmW x 82mmL x 125mmH
- > Digital output terminal (for brake control (on/off), alarm / output signal when motor stop running).
- > Allow acceleration and deceleration operation for soft-starting and soft-stopping.
- > Allow pre-set of Maximum/Minimum speed range between 150~1350rpm.
- > External Potentiometer (VR) enables long distance speed adjustment from controller.



USM71 Series ▪ USM72 Series (Speed Range 90~1350rpm)

- > Unit Type Analogue Speed Controller (Non-LED display) / Panel Mounting
- > Input Voltage : 1phase 100V~110V / 1phase 220V~240V, 50Hz/60Hz.

Key Features :

- > Simplest configuration and operation for all users.
- > Forward and Reverse operation via CW-Com / CCW-Com connection.
- > Offers basic functions : Adjustable speed, Forward/Reverse Running, On-off operation.



USP72 Series (Speed Range 150~1350rpm)

- > Unit Type Analogue Speed Controller (Non-LED display) / Panel Mounting
- > Input Voltage : 1phase 110V / 1phase 220V~240V, 50Hz/60Hz.

Key Features :

- > Offer direct replacement to other brand of speed controller with simple wiring modification.
- > Digital display shows real time motor speed (rpm) (optional setting) for ease of operation monitoring.
- > Allow acceleration and deceleration operation for soft-starting and soft-stopping.
- > Allow pre-set of Maximum/Minimum speed range between 150~1350rpm.



SS32-PL Series (8pin) (Speed Range 90~1350rpm)

- > Din Rail Type Analogue Speed Controller / Din Rail Mounting
- > Input Voltage : 1phase 220V~240V, 50Hz/60Hz.

Key Features :

- > Compact design / space saving adjustable speed controller.
- > Separated Potentiometer (VR) enables long distance speed adjustment from controller.
- > Size : SS32-PL : 40mmW x 80mmL x 50mmH / SD62 : 40mmW x 91mmL x 50mmH



SS32-PL-VR Series (8pin) (Speed Range 90~1350rpm)

- > Din Rail Type Analogue Speed Controller / Din Rail Mounting
- > Input Voltage : 1phase 220V~240V, 50Hz/60Hz.

Key Features :

- > Compact design / space saving adjustable speed controller with built-in External Potentiometer (VR)
- > Size : SS32-PL : 40mmW x 100mmL x 50mmH / SD62 : 40mmW x 91mmL x 50mmH



SS62-SK Series (Speed Range 90~1350rpm)

- > Mounting : Din Rail / Screw Type
- > Input Voltage : 1phase 110V / 1phase 220V~240V, 50Hz/60Hz

Key Features :

- > Allow 2nos multiple speed setting via M1 and M2
- > Allow acceleration and deceleration operation for soft-starting and soft-stopping.
- > Allow pre-set of Maximum/Minimum speed range between 150~1350rpm.
- > Size : SS62 : 60mmW x 70mmL x 96mmH



COMPACT GEAR MOTOR

K SERIES

ACCESSORIES COMPREHENSIVE SELECTIONS



Mounting Bracket (Type-H)
Stainless Steel Made
For IGBT Inverter, FC400
USM & USP Speed Controller

Mounting Bracket (Type-V)
Stainless Steel Made
For Compact IGBT Inverter

Mounting Bracket (Type-U)
Stainless Steel Made
For IGBT Inverter, FC400
USM & USP Speed Controller

Acrylic Protective Cover
Design For IGBT Inverter
Acrylic Made



SCM & USM Extension Cable
for Variable Speed Motor &
Speed Controller, available in
1m • 1.5m • 2m • 3m length

Mounting Bracket (Type-F)
Foot mounting bracket for
6W ~ 250W Gear Motor
F2#2 • F2#3 • F2#4 • F2#5 • F2#6

**Axial AC Powerful Cooling Fan
and Fan Guard**
Input voltage: AC / DC
Protection Degree : IP20 / IP55

Capacitor – 4pin
0.8uF ~ 24uF Microfarad
250V • 400V



Protective Enclosure
For Aluminium Worm Gear
Reducer
8MRV030 • 8MRV040

Torque Arm
for Worm Gear Reducer
Option : Nylon Bush

Low Speed Output Shaft
SS (Single Shaft) •
DS (Double Shaft)

Protective Enclosure
For Aluminium Worm Gear
Reducer
8MRV030 • 8MRV040



Terminal Box
with cable gland IP54
for compact gear motor
25W ~ 250W

VR / Potentiometer
Variable Resistor/Potentiometer
c/w Dial Plate and Knob

**ABS & PVC Made Enclosure Box
Indoor Use**
For IGBT Inverter • Nidec •
Control Techniques • Mitsubishi

SS304 / Metal Made Panel Box
Indoor or Outdoor use
For IGBT Inverter • Nidec •
Control Techniques • Mitsubishi



SMALL GEAR MOTOR

FH | FV SERIES

INTEGRAL HELICAL GEAR MOTOR UNIVERSAL DESIGN



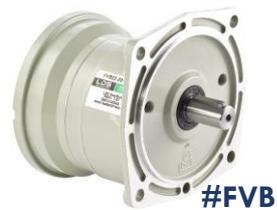
Integral Gear Motor design enables motor and gear reducer permanently coupled together. Its pinion gear driving the gearbox is directly mounted to the drive shaft of the motor to achieve shorter in axial length and lower weight.

Features:

- Its pinion gear driving the gearbox is directly mounted to the drive shaft of the motor offers perfect, permanent alignment between motor and gearbox with zero loss in mechanical efficiency.
- Shorter in axial length and Lower weight.
- Option to add integrated brake or encoder is available upon request.

GENERAL SPECIFICATIONS

Output Power :	0.2kW ~ 2.2kW (IE1)
Power Source:	1phase 220V~240V 3phase 220V ▪ 3ph380V~415V (440V)
Insulation Class:	F
Protection:	IP44 / IP54
Number of Pole :	4 Pole (1420rpm) ▪ 6Pole (900rpm)
Rating :	Continuous Rating
Gear Reduction Method:	Helical Gear
Lubrication:	Grease Lubrication (Maintenance Free)
Output Shaft :	New JIS Key (JIS 1301-1976 Class)
Output Shaft Material :	S43C
Case Material :	Aluminium Die-cast
Ambient Temperature:	-10°C ~ +40°C
Ambient Humidity :	85% Maximum
Environment :	Well-ventilated place (In door use)
Mounting Direction :	Any direction
Electromagnetic Brake (DC) :	Brake with Rectifier 220V (Optional)
Conformity Certification :	CE / CCC



Small Gear Motor Model and Output Torque (4Pole)

Gear Ratio		3	5	7.5	10	15	20	25	30	40	50	60	80	100	120	150
Output Speed (RPM)		467	280	186	140	93	70	56	47	35	28	23	17.5	14	11.7	9.3
Output Power	Model	Rated Output Torque (Nm) – 3-phase Motor, 4Pole, 50Hz														
0.2kW (1/4HP)	#18	2.9	5.9	8.8	11.8	17.7	23.5	29	35	45	45	45	45	45	45	45
	#22	2.9	5.9	8.8	11.8	17.7	23.5	29	35	52	60	72	93	98	98	98
	#28	--	--	--	--	--	--	--	--	52	60	72	93	130	156	195
0.4kW (1/2HP)	#22	7.4	11.8	23.5	35.3	47.1	55	65	78	98	98	98	98	98	98	98
	#28	7.4	11.8	23.5	35.3	47.1	55	65	78	104	130	156	208	230	230	230
	#32	--	--	--	--	--	--	--	--	--	--	--	--	228	274	343
0.75kW (1HP)	#28	15.7	22.6	33.3	44.1	67	89	110	133	176	220	230	230	230	230	230
	#32	15.7	22.6	33.3	44.1	67	89	110	133	171	214	257	322	343	343	343
	#40	--	--	--	--	--	--	--	--	--	--	--	--	440	440	440
1.5kW (2HP)	#28	24.5	44.1	66.2	88.3	133	133	133	--	--	--	--	--	--	--	--
	#32	24.5	44.1	66.2	88.3	133	176	223	264	343	343	343	343	343	343	343
	#40	24.5	44.1	66.2	88.3	133	176	223	264	352	440	440	440	440	440	440
2.2kW (3HP)	#32	39.2	65.7	98.1	131	196	262	329	343	343	343	343	343	343	--	--
	#40	39.2	65.7	98.1	131	196	262	329	392	440	440	440	440	440	--	--

Note: 1kgm = 9.8Nm (1Nm = 10.2kgm)

The contents of this data sheet are subject to change without prior notice for the purpose of continuous product improvement.



SMALL GEAR MOTOR

LDVF

SERIES
ASYNCHRONOUS MOTOR
IEC DESIGN



GENERAL SPECIFICATIONS

Output Power :	0.2kW ~ 2.2kW (IE1)
Power Source:	1phase 220V~240V 3phase 220V ▪ 3ph380V~415V (440V)
Insulation Class :	F
Protection :	IP44 / IP54 / IP54
Number of Pole :	2Pole (2800rpm) ▪ 4 Pole (1420rpm) ▪ 6Pole (900rpm)
Rating :	Continuous Rating
Output Shaft :	New JIS Key (JIS 1301-1976 Class)
Output Shaft Material :	S43C
Case Material :	Aluminium Die-cast / Cast Iron
Ambient Temperature:	-10°C ~ +40°C
Ambient Humidity :	85% Maximum
Environment :	Well ventilated place (Indoor use)
Mounting Direction :	Any direction
Electromagnetic Brake (DC) :	Brake with Rectifier 220V (Optional)
Conformity Certification :	CE / CCC

Efficiency Classes:

IE1	Standard Efficiency
-----	---------------------

Mounting Type :

B5	Flange Mounted
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LDVF-WP Series
Watertight Enclosure Design
IP55 - Fanless

GEAR REDUCER, VARIATOR AND BRAKE OPTIONS



FHB Series Helical Gear Reducer
Foot Mount
Gear Reduction Ratio : 1/3 ~ 1/150



FVB Series Helical Gear Reducer
Flange Mount
Gear Reduction Ratio : 1/3 ~ 1/150



DMRV / DMRS Series
Worm Gear Reducer
Gear Reduction Ratio : 1/5 ~ 1/100



OTS Series
Helical Hypoid Gear Reducer
Gear Reduction Ratio : 1/5 ~ 1/300



R Series Helical Gear Reducer
Foot Mount
Gear Reduction Ratio : 1/5 ~ 1/220



SV Series Speed Variator
(a.k.a Mechanical Variator)
(Reduction Ratio 1/1.4 ~ 1/7)



EFVF-Z Series
Clutch & Brake DC24V
(High frequency brake operation)



Electro-Magnetic Brake
Power-off-activated-type 220V
(AC-TO-DC Rectifier included)



HELICAL GEAR MOTOR

RKS

SERIES

HEAVY DUTY GEAR MOTOR

MODELS AND PERMISSIBLE OUTPUT TORQUE



RX-Series
Helical Gear Motor
with solid output shaft
Foot Mount



RXF-Series
Helical Gear Motor
with solid output shaft
B5 Flange Mount

RX series / RXF series Helical Gear Motor
Motor Rating : 0.18kW to 45kW (4Pole) and Gear Ratio 1/1.3 to 1/6)

MODEL	RX57 RXF 57	RX67 RXF 67	RX77 RXF 77	RX87 RXF 87	RX97 RXF 97	RX107 RXF 107
Permissible Output Torque (Nm)	70Nm	135Nm	215Nm	400Nm	600Nm	830Nm
RX / RXF-series Output Shaft Size	Solid Ø20 x 40mmL	Solid Ø25 x 50mmL	Solid Ø30 x 60mmL	Solid Ø40 x 80mmL	Solid Ø50 x 100mmL	Solid Ø60 x 120mmL



R-Series Helical Gear Motor
with solid output shaft
Foot Mounting



RF-Series Helical Gear Motor
with solid output shaft
B5 Flange Mounting



R-Series (B5) Helical Gear Reducer
with solid output shaft
Foot Mount

R series / RF series Helical Gear Motor
Motor Rating : 0.18kW to 160kW (4Pole) and Gear Ratio 1/4 to 1/280)

MODEL	R17 RF 17	R27 RF 27	R37 RF 37	R47 RF 47	R57 RF 57	R67 RF 67	R77 RF 77
Permissible Output Torque (Nm)	85Nm	130Nm	200Nm	300Nm	450Nm	600Nm	820Nm
R / RF-series Output Shaft Size	Solid Ø20 x 40mmL	Solid Ø25x 50mmL	Solid Ø25 x 50mmL	Solid Ø30 x 60mmL	Solid Ø35 x 70mmL	Solid Ø35 x 70mmL	Solid Ø40 x 80mmL

MODEL	R87 RF 87	R97 RF 97	R107 RF 107	R137 RF 137	R147 RF 147	R167 RF 167
Permissible Output Torque (Nm)	1550Nm	3000Nm	4300Nm	8000Nm	13000Nm	18000Nm
R / RF-series Output Shaft Size	Solid Ø50 x 100mmL	Solid Ø60 x 120mmL	Solid Ø70 x 140mmL	Solid Ø90 x 170mmL	Solid Ø110 x 210mmL	Solid Ø120 x 210mmL



HELICAL GEAR MOTOR

RKS

SERIES

HEAVY DUTY GEAR MOTOR

MODELS AND PERMISSIBLE OUTPUT TORQUE



K-Series
Helical Bevel Gear Motor
with solid output shaft
Foot Mounting



KAZ-Series
Helical Bevel Gear Motor
with hollow output shaft
B14 Flange Mount

K series / KAZ series Helical Bevel Gear Motor

Motor Rating : 0.18kW to 200kW (4Pole) and Gear Ratio 1/5 to 1/196)

MODEL	K37 KAZ 37	K47 KAZ 47	K57 KAZ 57	K67 KAZ 67	K77 KAZ 77	K87 KAZ 87
Permissible Output Torque (Nm)	200Nm	400Nm	600Nm	820Nm	1550Nm	2700Nm
K-Series Output Shaft Size	Solid $\varnothing 25$ x 50mmL	Solid $\varnothing 30$ x 60mmL	Solid $\varnothing 35$ x 70mmL	Solid $\varnothing 40$ x 80mmL	Solid $\varnothing 50$ x 100mmL	Solid $\varnothing 60$ x 120mmL
KAZ-Series Hollow Output Shaft Bore Size	Hollow $\varnothing 30$ x 120mmL	Hollow $\varnothing 35$ x 150mmL	Hollow $\varnothing 40$ x 166mmL	Hollow $\varnothing 40$ x 180mmL	Hollow $\varnothing 50$ x 210mmL	Hollow $\varnothing 60$ x 240mmL

MODEL	K97 KAZ 97	K107 KAZ 107	K127 KAZ 127	K157 KAZ 157
Permissible Output Torque (Nm)	4300Nm	8000Nm	13000Nm	18000Nm
K-Series Output Shaft Size	Solid $\varnothing 70$ x 140mmL	Solid $\varnothing 90$ x 170mmL	Solid $\varnothing 110$ x 210mmL	Solid $\varnothing 120$ x 210mmL
KAZ-Series Hollow Output Shaft Bore Size	Hollow $\varnothing 70$ x 300mmL	Hollow $\varnothing 90$ x 350mmL	Hollow $\varnothing 100$ x 410mmL	Hollow $\varnothing 120$ x 500mmL



S-Series
Helical Worm Gear Motor
with solid output shaft
Foot Mount



SAZ-Series
Helical Worm Gear Motor
with hollow output shaft
B14 Flange Mount

S series / SAZ series Helical Worm Gear Motor

Motor Rating : 0.18kW to 160kW (4Pole) and Gear Ratio 1/6.8 to 1/211)

MODEL	S37 SAZ 37	S47 SAZ 47	S57 SAZ 57	S67 SAZ 67	S77 SAZ 77	S87 SAZ 87	S97 SAZ 97
Permissible Output Torque (Nm)	90Nm	170Nm	300Nm	520Nm	1270Nm	2280Nm	4000Nm
S-Series Output Shaft Size	Solid $\varnothing 20$ x 40mmL	Solid $\varnothing 25$ x 50mmL	Solid $\varnothing 30$ x 60mmL	Solid $\varnothing 35$ x 70mmL	Solid $\varnothing 45$ x 90mmL	Solid $\varnothing 60$ x 120mmL	Solid $\varnothing 70$ x 140mmL
SAZ-Series Hollow Output Shaft Bore Size	Hollow $\varnothing 20$ x 139mmL	Hollow $\varnothing 30$ x 120mmL	Hollow $\varnothing 35$ x 150mmL	Hollow $\varnothing 45$ x 168mmL	Hollow $\varnothing 60$ x 210mmL	Hollow $\varnothing 70$ x 250mmL	Hollow $\varnothing 90$ x 290mmL



SMALL GEAR MOTOR

DMRV (DMRS) SERIES

WORM GEAR REDUCER UNIVERSAL DESIGN



The Worm Gear Reducer is designed with high thermal capacity die-cast aluminium housings for exceptional heat dissipation. It uses high efficiency gear design to create maximum torque output in a highly compact package. The housings come with a rust-free powder coat paint finishing.



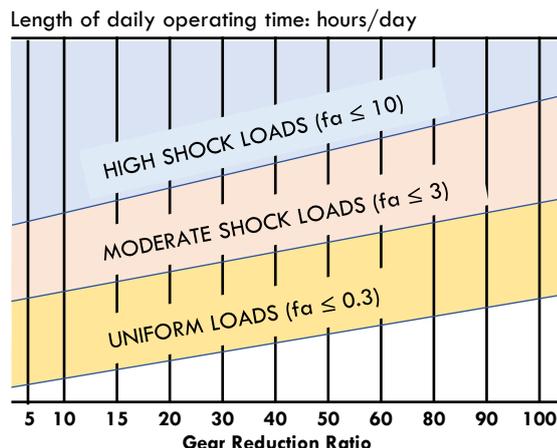
Aluminium Worm Gear Reducer Ratio and Output Torque (Single Reduction, Based on 4Pole Motor, 50Hz)

Gear Reduction ratio (i)	Output Speed (RPM)	# 030 Series			# 040 Series			# 050 Series			# 063 Series			Gear Reduction ratio (i)	Output Speed (RPM)
		Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)	Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)	Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)	Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)		
5	284	0.2	5.3	3.4	0.4	11.2	3	0.75	22.8	2.7	1.5	46	2.0	5	284
7.5	189	0.2	7.8	2.3	0.4	16	2.4	0.75	34	2.1	1.5	68	1.9	7.5	189
10	142	0.2	10	1.8	0.4	21	1.9	0.75	44	1.6	1.5	89	1.5	10	142
15	95	0.2	14	1.3	0.4	31	0.8	0.75	63	1.2	1.5	127	1.1	15	95
20	71	0.2	18	1.0	0.4	39	1.0	0.75	81	0.9	1.5	166	0.8	20	71
25	57	0.2	21	1.0	0.4	47	0.8	0.75	96	0.9	1.1	146	0.9	25	57
30	47	0.2	24	0.8	0.4	53	0.8	0.75	110	0.9	1.1	167	1.0	30	47
40	36	0.12	19	0.9	0.2	44	0.9	0.4	68	1.1	0.75	143	1.0	40	36
50	28	0.12	23	0.8	0.2	47	0.8	0.4	80	0.9	0.75	169	0.9	50	28
60	24	0.09	19	0.9	0.18	43	0.8	0.4	89	0.8	0.4	102	1.2	60	24
80	18	0.06	14	0.9	0.12	34	1.0	0.25	57	1.1	0.4	124	1.1	80	18
100	14	-	-	-	-	-	-	0.2	60	0.9	0.4	139	0.9	100	14

Gear Reduction ratio (i)	Output Speed (RPM)	# 075 Series			# 090 Series			# 110 Series			# 130 Series			Gear Reduction ratio (i)	Output Speed (RPM)
		Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)	Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)	Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)	Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)		
5	284	-	-	-	-	-	-	-	-	-	-	-	-	5	284
7.5	189	4	182	1.0	4	184	1.6	7.5	345	1.3	7.5	349	2.1	7.5	189
10	142	3	180	1.1	4	243	1.3	7.5	455	1.1	7.5	455	1.8	10	142
15	95	3	261	0.8	4	352	1.0	5.5	484	1.4	7.5	668	1.4	15	95
20	71	1.5	168	1.3	4	458	0.8	5.5	638	0.9	7.5	880	1.0	20	71
25	57	1.5	205	1.0	3	420	0.8	4	573	1.0	7.5	1074	0.9	25	57
30	47	1.5	233	1.0	3	479	0.9	4	647	1.1	5.5	900	1.2	30	47
40	36	1.1	216	1.0	2.2	307	1.1	3	638	1.0	5.5	1171	0.9	40	36
50	28	0.75	175	1.2	2.2	368	0.9	3	767	0.8	4	1036	1.2	50	28
60	24	0.75	199	1.1	1.5	424	0.8	2.2	648	0.9	4	1179	0.8	60	24
80	18	0.4	130	1.3	0.75	258	1.1	1.5	548	0.9	2.2	816	1.0	80	18
100	14	0.4	149	1.1	0.75	302	0.9	1.1	473	1.0	2.2	966	1.0	100	14

Gear Reduction ratio (i)	Output Speed (RPM)	# 150 Series		
		Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)
5	284	-	-	-
7.5	189	-	-	-
10	142	15	921	1.3
15	95	11	990	1.3
20	71	11	1291	1.0
25	57	7.5	1074	1.1
30	47	7.5	1274	0.9
40	36	5.5	1171	1.3
50	28	5.5	1426	1.0
60	24	4	1195	1.1
80	18	4	1434	0.8
100	14	2.2	960	1.0

SERVICE FACTOR	SERVICE FACTOR			
	24Hr	16Hr	8Hr	2Hr
2.3	2	1.8	1.6	1.6
2.2	1.9	1.7	1.5	1.5
2.1	1.8	1.6	1.4	1.4
2.0	1.7	1.5	1.3	1.3
1.9	1.6	1.4	1.2	1.2
1.8	1.5	1.3	1.1	1.1
1.7	1.4	1.2	1.0	1.0
1.6	1.3	1.1	0.9	0.9
1.5	1.2	1.0	0.8	0.8





SMALL GEAR MOTOR

OTS SERIES

HELICAL HYPOID GEAR REDUCER UNIVERSAL DESIGN



The Helical Hypoid Gear Reducer offers higher transmission efficiency and longer lifespan compared to conventional IEC worm gear reducer. Having compactible design with IEC Worm Gear Reducer, it comes with high thermal capacity die-cast aluminium housings and offers gear reduction ratio up to 1/300.

Features:

- Helical Hypoid Gear design offer higher higher transmission efficiency and longer lifespan compared to conventional worm gear reducer.
- Higher Ratio Ranges from 1/7.5 ~ 1/300.
- More energy-saving and lower operating temperature.
- Smooth running operation with lower noise compared to worm gear reducer.
- Compactible mounting with IEC worm gear reducer.



Aluminium Helical Hypoid Gear Reducer Ratio and Permissible Output Torque (Single Reduction, Based on 4Pole Motor, 50Hz)

	Gear Reduction ratio (i)	Output Speed (RPM)	OTS #050(2) Series			OTS #063(2) Series			OTS #075(2) Series		
			Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)	Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)	Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)
2-Stage Gear Reduction	7.5	189	0.75	36	2.7	1.5	74	1.4	3	149	1.9
	10	142	0.75	47	2.5	1.5	96	1.4	3	205	1.7
	12.5	114	0.75	61	2.1	1.5	120	1.3	2.2	182	1.8
	15	95	0.75	73	1.8	1.5	142	1.3	2.2	221	1.5
	20	71	0.4	53	2.0	1.5	199	1.1	2.2	307	1.1
	25	57	0.4	60	1.6	0.75	114	1.7	1.5	239	1.5
	30	47	0.4	80	1.3	0.75	147	1.3	1.5	288	1.3
	40	36	0.4	104	1.0	0.75	193	1.0	0.75	206	1.7
	50	28	0.2	63	2.2	0.4	118	1.3	0.75	233	1.4
60	24	0.2	75	1.8	0.4	143	1.2	0.75	289	1.2	

	Gear Reduction ratio (i)	Output Speed (RPM)	OTS #050(3) Series			OTS #063(3) Series			OTS #075(3) Series		
			Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)	Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)	Rated Power (kW)	Output Torque (Nm)	Service Factor (SF)
3-Stage Gear Reduction	75	18.9	0.2	93	1.6	0.2	87	1.8	0.75	349	1.1
	100	14.2	0.2	120	1.1	0.2	115	1.7	0.4	246	2.1
	125	11.4	0.12	90	1.4	0.2	141	1.3	0.4	293	1.7
	150	9.5	0.12	113	1.2	0.2	176	1.2	0.4	353	1.3
	200	7.1	0.12	151	0.9	0.2	226	1.0	0.4	480	1.0
	250	5.7	0.12	185	0.7	0.12	188	1.1	0.2	277	1.2
	300	4.7	-	-	-	-	-	-	0.2	336	1.0

Worm Gear Reducer and Hypoid Gear Reducer Accessories



Low Speed Output Shaft
S : Single Output shaft (Left/Right)
D: Double Output Shaft

Torque Arm
Option : Nylon Bush

Aluminium Output Flange
#30F • #130F

Protective Cover

MARELLI MOTORI – MAA Series | A1C Series
Three Phase Squirrel Cage Induction Motor up to 18.5kW
 Frame Size and Rated Output Torque



MarelliMotori
 Inspired solutions



B3
Foot Mounting



B5
Flange Mounting



B35
Foot & Flange Mounting



B34
Foot & Small Flange Mounting



B14
Small Flange Mounting

MOTOR FRAME SIZE		#63	#71	#80	#90	#100	#112	#132	#160		
Motor Output Shaft Size Shaft Dia. x Length (mm)		Ø11 x 21mmL	Ø14 x 27mmL	Ø19 x 37mmL	Ø24 x 47mmL	Ø28 x 56mmL	Ø28 x 56mmL	Ø38 x 76mmL	Ø42 x 110mmL		
B3 Foot Mounting LxW Mounting Hole (mm)		PCD 80x100	PCD 90x112	PCD 100x125	PCD 100x140 125x140	PCD 140x160	PCD 140x190	PCD 140x216 178x216	PCD 210x254 254x254		
B5 Flange Mounting Flange Size Dia. (PCD)		Ø140mm (PCD115)	Ø160mm (PCD130)	Ø200mm (PCD165)	Ø200mm (PCD165)	Ø250mm (PCD215)	Ø250mm (PCD215)	Ø300mm (PCD265)	Ø350mm (PCD300)		
B14 Small Flange Mounting Flange Size Dia. (PCD)		Ø90mm (PCD75)	Ø105mm (PCD85)	Ø120mm (PCD100)	Ø140mm (PCD115)	Ø160mm (PCD130)	Ø160mm (PCD130)	Ø200mm (PCD165)	N/A		
MOTOR POWER (4P)	RATED TORQUE	RATED AMPERE		MOTOR FRAME SIZE							
		3ph220V	3ph400V	#63	#71	#80	#90	#100	#112	#132	#160
0.12kW-4P	0.85Nm	0.81A	0.47A	63B5 63B14	--	--	--	--	--	--	--
0.18kW-4P	1.27Nm	1.18A	0.68A	63B5 63B14	--	--	--	--	--	--	--
0.25kW-4P	1.77Nm	1.45A	0.85A	63B5 63B14	71B5 71B14	--	--	--	--	--	--
0.37kW-4P	2.6Nm	1.93A	1.1A	--	71B5 71B14	--	--	--	--	--	--
0.55kW-4P	3.8Nm	2.74A	1.6A	--	71B5 71B14	80B5 80B14	--	--	--	--	--
0.75kW-4P	5.2Nm	3.5A	1.9A	--	--	80B5 80B14	--	--	--	--	--
1.1kW-4P	7.5Nm	4.7A	2.7A	--	--	80B5 80B14	90B5 90B14	--	--	--	--
1.5kW-4P	10.2Nm	6.2A	3.5A	--	--	--	90B5 90B14	--	--	--	--
2.2kW-4P	14.8Nm	8.5A	4.9A	--	--	--	90B5 90B14	100B5 100B14	--	--	--
3kW-4P	20.2Nm	--	6.5A	--	--	--	--	100B5 100B14	--	--	--
4kW-4P	26.7Nm	--	8.4A	--	--	--	--	100B5 100B14	112B5 112B14	--	--
5.5kW-4P	36.2Nm	--	11.2A	--	--	--	--	--	112B5 112B14	132B5 132B14	--
7.5kW-4P	49.4Nm	--	14.6A	--	--	--	--	--	--	132B5 132B14	--
11kW-4P	71.9Nm	--	20.9A	--	--	--	--	--	--	--	160B5
15kW-4P	98.2Nm	--	28.2A	--	--	--	--	--	--	--	160B5
18.5kW-4P	121Nm	--	34.5A	--	--	--	--	--	--	--	160B5

* MAA, A1C, A2C, A3C motors are made of aluminium frame, available from 63 to 180 frame size.
 * B1C, B2C, B3C motors are made of cast iron frame, available from 63 to 355 frame size.
 (Up to 500kW)

* IE1 Efficiency : MAA / A1C / A2C / B1C Series
 * IE2 High Efficiency : B2C Series
 * IE3 Premium Efficiency : A3C / B3C Series



LDVF Series
LDS 1phase and 3phase
Electric Motor



Mechanical Speed Variator
For 0.2kW to 4kW Motor
Speed Range 1.4 to 7



Marelli Motori Electric Motor
Power 0.18kW to 18kW
Foot mount and Flange Mount



Marelli Motori Motor with Worm Gearhead
Ratio 1/5 to 1/100



LM - HMW Series
Heavy Duty Cast Alloy
Worm Gear Reducer



LM - LOW
Heavy Duty Cast Alloy
Worm Gear Reducer



LM - VMW
Heavy Duty Cast Alloy
Worm Gear Reducer



LM - UW
(Heavy Duty Cast Alloy
Worm Gear Reducer



LM - VJ Screwjack
Multiple-Axis Shaft
#35 to #80 Series



LM - VJM Screwjack
For 0.2kW to 2.2kW motor
#35 to #80 Series



LM - TH-AW Series
Bevel Gear Reducer
Gear Ratio 1/1 and 1/2



LM - TH-BW Series
Bevel Gear Reducer
Gear Ratio 1/1 and 1/2



Compact IGBT Series
1phase Compact Inverter
Panel Mount Design



Compact FC400 Series
1phase Frequency Controller
Panel Mount Design



NE200 Series
Nidec Frequency Inverter
Input 1ph220V/3ph415V



Commander S100 Series
Control Techniques Inverter
Input 110V/220V/415V/480V



DOWNLOAD
DOCUMENT



**CONTROL
TECHNIQUES**



Nidec
All for dreams

NE300 & NE200

HIGH PERFORMANCE VECTOR CONTROL DRIVE

0.4KW to 900KW 220V/400VAC 0HZ to 550HZ



NE300 EXPANSION CARD OPTIONS*

NE200 Series Key Technical Specifications

Power Range	0.4kW to 4kW (0.5hp to 5hp)
Input Voltage	1 \emptyset 220V (50Hz/60Hz) for 0.4kW to 2.2kW 3 \emptyset 415V (50Hz/60Hz) for 0.75kW to 4kW
Duty Rating	Heavy Duty
Output Frequency	0 to 550Hz
Startup Frequency	0 to 60Hz
Overload Capacity	Type G : 150% rated current 1min, 180% rated current 20s (Heavy Duty) Type P : 120% rated current 1min, 150% rated current 1s (Normal Duty)

Motor Control

Vector Control without PG (SVC)	Starting Torque : 0.5Hz 150% Speed Adjust Range : 1:100 Speed Stabilization Precision : \pm 0.2% Torque Control : Yes Torque Precision : \pm 10% Torque Response Time : <20ms
V/F Control	Starting Torque : 1.5Hz 150% Speed Adjust Range : 1:150 Speed Stabilization Precision : \pm 0.5% Torque Control : Yes Torque Precision : (N/A) Torque Response Time : (N/A)
Stopping Mode	Dynamic braking, DC injection braking, Magnetic flux braking

Communication

Communication	RJ45 for Modbus RTU (Default)
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Inputs & Outputs (NPN Logic)

Analogue	2 x Analogue inputs (AI1 : 0~10V) (AI2 : 0~10V or 0~20mA) 1 x Analogue output (AO : 0~10V or 0~20mA)
Digital	5 x Digital inputs (X1~X5) 2 x Digital inputs (AI1 and AI2) 1 x Digital output (Y1)
Pulse (Frequency)	1 x Pulse Input (X4 or X5 : 0~200Hz) 1 x Pulse Output (Y1 : 0~50kHz or 0~500Hz)
Relay	1x Relay (Single pole, double throw relay)

Key Functions

Key Function	Torque/speed control mode switching, Multi-function input/output terminals, Under voltage regulation, Torque limit, AC operation grounding switching, Multi step operation, Slip compensation, PID regulation, Simple PLC, Manual/automatic torque boost, Current control, Current limit, AVR function.
--------------	---

Options

Communication Card	N/A
--------------------	-----

Keypad Holder	Keypad Holder
---------------	---------------

NE200 & NE300 Series Standards

Approvals	CE, EU Directive, EAC
-----------	-----------------------

Mounting & Environment

IP Rating	IP20
Mounting	Click on/click off Din rail mount / Screw mount
Ambient Temperature	Operation : -10°C to 40°C (14°F to 104°F) Storage : -40°C to 60°C (-40°F to 140°F)

NE300 Series Key Technical Specifications

Power Range	1.5kW to 900kW (2hp to 1200hp)
Input Voltage	3 \emptyset 415V (50Hz/60Hz) for 1.5kW to 900kW
Duty Rating	Heavy Duty
Output Frequency	0 to 550Hz
Startup Frequency	0 to 60Hz
Overload Capacity	Type G : 150% rated current 1min, 180% rated current 20s (Heavy Duty) Type P : 120% rated current 1min, 150% rated current 1s (Normal Duty)

Motor Control

Vector Control with PG (VC)	Starting Torque : 0.00Hz 180% Speed Adjust Range : 1:1000 Speed Stabilization Precision : \pm 0.02% Torque Control : Yes Torque Precision : \pm 5% Torque Response Time : <10ms
Vector Control without PG (SVC)	Starting Torque : 0.5Hz 150% Speed Adjust Range : 1:100 Speed Stabilization Precision : \pm 0.2% Torque Control : Yes Torque Precision : \pm 10% Torque Response Time : <20ms
V/F Control	Starting Torque : 1.5Hz 150% Speed Adjust Range : 1:150 Speed Stabilization Precision : \pm 0.5% Torque Control : Yes Torque Precision : (N/A) Torque Response Time : (N/A)
Stopping Mode	Dynamic braking, DC injection braking, Magnetic flux braking

Communication

Communication	RJ45 for Modbus RTU (Default)
---------------	-------------------------------

Inputs & Outputs (Input logic NPN)

Analogue	2 x Analogue inputs : (AI1 : 0~10V) (AI2 : 0~10V or 0~20mA) 1 x Analogue output (AO1 : 0~10V, 0~20mA or 4~20mA)
Digital	5 x Digital inputs (X1~X5) 1 x Digital input (AI1) 2 x Digital outputs (Y1 and D0)
Pulse (Frequency)	1 x Pulse Input (X4 or X5 : 0~50kHz) 1 x Pulse Output (D0 : 0~50kHz or 0~500Hz)
Relay	1 x Relay (Single pole, double throw relay)

Key Functions

Key Function	Torque/speed control mode switching, Multi-function input/output terminals, Under voltage regulation, Torque limit, AC operation grounding switching, Multi step operation, Slip compensation, PID regulation, Simple PLC, Manual/automatic torque boost, Current control, Current limit, AVR function, Autotune, S curve Acc/Dec, Fix length control.
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Options

Communication Card	NE300 Expansion Card : I/O extension card, +/- 10V extension card, Injection molding machine extension card, Speed tracking extension card, Modbus TCP, ProfiNet, ProfiBus DP, CC-Link, EtherCAT and EtherNet/IP.
Keypad Holder	Keypad Holder

CONTROL TECHNIQUES



0.4kW to 11kW

COMMANDER 5

MAKING SIMPLE APPLICATIONS, SIMPLE.

AC DRIVES, GENERAL PURPOSE

DRIVE OBSESSED



COMMANDER S INVERTER

0.18 to 4 kW (0.25 to 5 hp)
1Ø 100 & 200 V, 3Ø 200 & 400 V
Linear V to F, square V to F, resistance compensation

Take charge of control and energy savings with the latest addition to the Control Techniques portfolio. With a feature set optimised for simple motion cycles, Commander S provides a cost-effective solution for applications that require plug and play control convenience straight from the box.

Commander S is the first drive to come with an app interface as a standard feature. The Marshal app is our revolutionary way to interface with the drive covering commissioning, monitoring, diagnostic and support.



Free 5 year warranty*

Our Commander S series is built to cope with harsh environments. In fact, it is so reliable we are confident enough to supply it with a free five-year warranty.

*Warranty terms and conditions apply.



COMMANDER S100

Easy to install

The sleek curved design of Commander S optimises component layout for a small footprint and easy access to terminals. The click-on/click-off DIN rail mount makes installation remarkably easy.

CONTROL TECHNIQUES

NEW



Easy to use

Using our new Marshal app (Android/iOS) your drive will be up and running in under 60 seconds



Reliable

Durability is at the core of Commander S' design, guaranteeing performance throughout its whole life cycle.



Cost effective

Equipped with unique features designed to save you time, energy and money



JUST BRING YOUR PHONE NEAR THE NFC LOGO TO CONNECT TO THE INVERTER.



KEY USABILITY FEATURES

COMMANDER S100 INVERTER

Accessible NFC location for pairing with mobile app MARSHAL

Fixed display with 4 control buttons for quick and easy commissioning and for monitoring drive performance

Drive identification info clearly marked

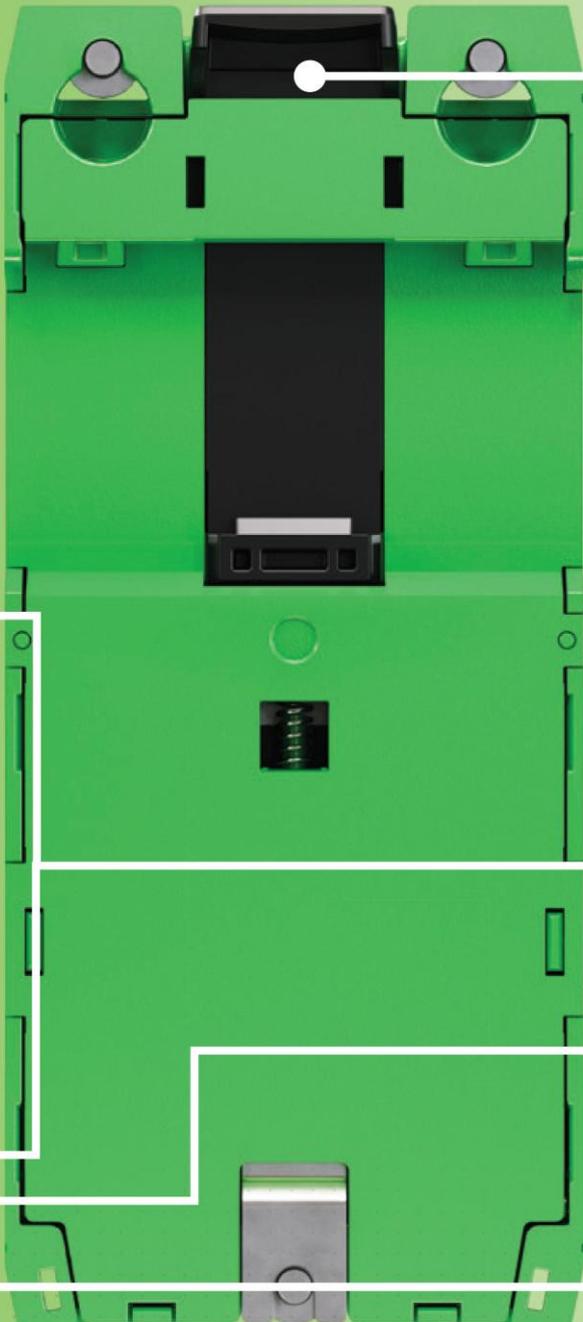
Rating info laser printed on the side of the drive

RJ-45 connector for ModbusRTU communication

Angled and offset screw terminal connectors for easy access

Internal EMC filter for C3 or C1 requirements. C3 filter can be disconnected if necessary.





Click-on/click-off DIN rail mounting

AND / OR

Installation with 3 x bolts with washer.

Drive drops down into position for a secure installation

Finger proof input and output power connections & relay screw terminals

Labelled power terminals

Ground / protective earth connections

COMMANDER S100

Inverter with NFC & Marshal App

**CONTROL
TECHNIQUES**

Nidec
All for dreams



Just bring your phone near the NFC logo to connect to the S100 inverter

DOWNLOAD MARSHAL APP



COMMANDER S100 ACCESSORIES



EXTERNAL KEYPAD
IP65 Enclosure Protection

STANDARDS

Approvals	CE, UKCA, cUL, C-Tick, EAC, KC
Emission Compliance	C3 internal EMC filters C1 & C2 with external EMC filters C1 internal EMC filter, for selected 1Ø200V variants

POWER & CONTROL



Origin	UK (United Kingdom)
Power Range	Commander S100 [0.18kW to 11kW]
Input Voltage (50Hz/60Hz)	1Ø 100V for 0.18kW to 1.1kW 1Ø 240V for 0.18kW to 2.2kW 3Ø 220V for 0.18kW to 2.2kW 3Ø 400V~480V for 0.37kW to 11kW
Duty Rating	Heavy Duty (150% Overload Capability)
Output Frequency	0 to 300Hz Startup Frequency : 0 to 50Hz
Motor Control	Linear V to F, Square V to F, Resistance Compensation
Stopping Modes	Coast, Ramp & DC Injection Braking, DC Braking with 0Hz detect, Timed DC Braking, Distance Stop
Braking Unit	Not available for S100 series*
Input Logic	NPN (Sink) and PNP (Source)

COMMUNICATION

Communications	RJ45 for Modbus RTU NFC for MARSHAL app interface
User Software Tools	CONNECT (PC commissioning tool) MARSHAL (Mobile app)

INPUTS & OUTPUTS

Analogue	2 x Analog input (can be used as digital inputs) * (T2 and T4 : 0-10V, 0-20mA or 4-20mA) 1 x Analog output * (T5 : 0-10V, 0-20mA or 4-20mA)
Digital	4 x Digital inputs (T12, T13, T14 and T15) * (T15 can be used as Pulse/Frequency input) 1 x Digital input/output (T11) * (T11 can be used as a Frequency or PWM output to represent analog value). * (T11as Digital output only work in PNP logic). ** Positive or Negative input logic (PNP or NPN sensors)
Pulse/Frequency	1 x Frequency input (T15 : 0~100kHz) 1 x Frequency output (T11 : 1~10kHz) * (T11 as Frequency output only work in PNP logic)
PWM	1 x PWM output (T11 : 1kHz) * (T11 as PWM output only work in PNP logic)
Relay	1 x Relay (Single pole, double throw relay)

MOUNTING AND ENVIRONMENT

Mounting	0mm side by side mount Click on/click off Din rail mount Screw mount
IP Rating	IP20

COMMANDER S100

Inverter with NFC & Marshal App

FEATURES & BENEFITS



1 Commissioning even in the box with no power to the inverter.



2 Easy Parameter Cloning - Use Marshal App to tap to write as many inverters as you want



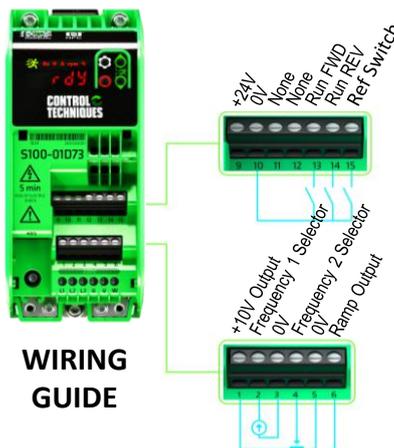
3 0mm side-by-side mounting - Space saving in Panel Box



4 NFC technology enables easy-commissioning and retrieval of parameter even when the S100 is in power-off mode (or malfunction condition)

Commander S100		CONTROL TECHNIQUES	
Drive Overview			
Name	S100		
Type	Commander S100		
Model	S100-03D13		
Voltage	200V		
Frame Size	3		
Rated Current	10.6A		
Power	2.2kW		
Serial Number	12345678		
Firmware	V1.0.10.4		

Drive Parameters		
#	Caption	Value
P0.01	Min Frequency Limit	0.0Hz
P0.02	Max Frequency Limit	60.0Hz
P0.03	Acceleration Rate 1	2.0s
P0.04	Deceleration Rate 1	2.0s
P0.05	Frequency Ref Config	Preset (4)



WIRING GUIDE



7 2-year product warranty

5-year Manufacturer warranty Subject to terms and conditions. Customer must register your drive on Control Techniques [website](#) or via the Marshal app within 6months of the date of purchase.

5 Use Marshal App to generate report (PDF format) on inverter data, model and serial number, firmware version, parameter's original value and changed value, list of alarm record, running time and wiring diagram.



6 Save database and sharing of inverter configurations (PARFILE format) via communication apps, email & messenger.





01_F101_S100 (04) JPEG.jpg

Commander S Ordering guide

How to select a drive

Electrical Considerations

- What is the supply voltage?
- Single or three phase input power?
- What is the motor rating?
- Continuous current – FLA (Full Load Amps)



Frame 01

Frame 02

Frame 03

Frame 04

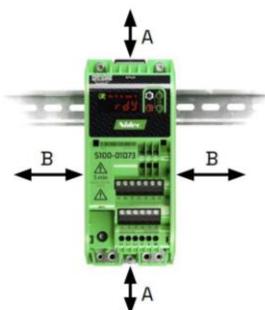
Dimensions

Model Number	Overall Dimensions (± 0.5 mm)				Mounting Dimensions (± 0.5 mm)						
	Height	Width	Depth	Weight	DIN*	M1	M2	M3	M4	Φ	
S100-01	156 mm 6.14 in	68 mm 2.70 in	130 mm 5.12 in	0.7 kg 1.54 lb	46 mm 1.81 in	145 mm 5.71 in	45 mm 1.77 in	22.5 mm 0.89 in	22.5 mm 0.89 in	4.8 mm 0.19 in	
S100-02	192 mm 7.56 in	68 mm 2.70 in	132 mm 5.20 in	0.8 kg 1.76 lb	46 mm 1.81 in	180 mm 7.11 in	45 mm 1.77 in	22.5 mm 0.89 in	22.5 mm 0.89 in	4.8 mm 0.19 in	
S100-03	192 mm 7.56 in	90 mm 3.54 in	132 mm 5.20 in	1.0 kg 2.2 lb	46 mm 1.81 in	180 mm 7.11 in	65 mm 2.56 in	37.5 mm 1.48 in	27.5 mm 1.08 in	4.8 mm 0.19 in	
S100-04	264 mm 10.40 in	115 mm 4.53 in	160 mm 6.30 in	3.81 kg 8.39 lb	46 mm 1.81 in	253 mm 9.96 in	99 mm 3.90 in	N/A	N/A	4.8 mm 0.19 in	



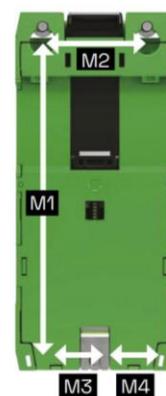
* No screws are required when mounting the drive onto a DIN rail.

Drive Clearances



Drive Clearances	S100-01x13, S100-01x23	All other drives
A	100 mm (3.94 in)	45 mm (1.77 in)
B	0 mm (0 in)	

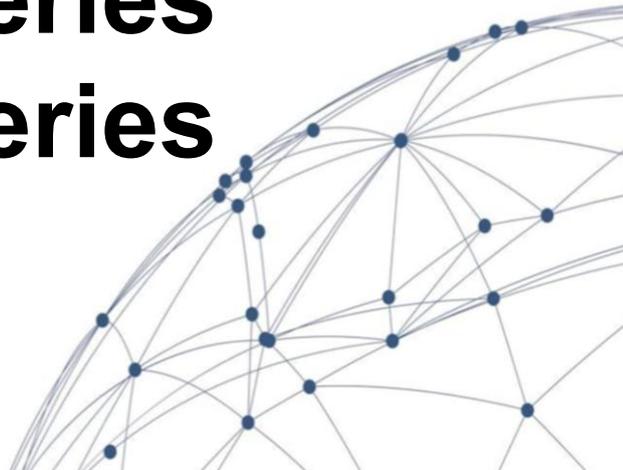
Mounting Dimensions



AC DRUM MOTOR

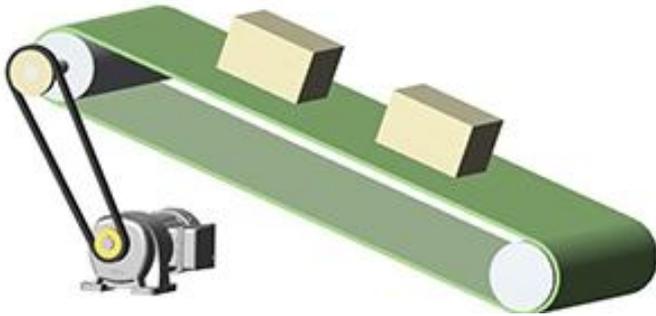


DM82 series
DM113 series
DM138 series
DM165 series
DM216 series



CONVEYOR DRIVE DESIGNS

Conveyor driven by Chain/Sprocket

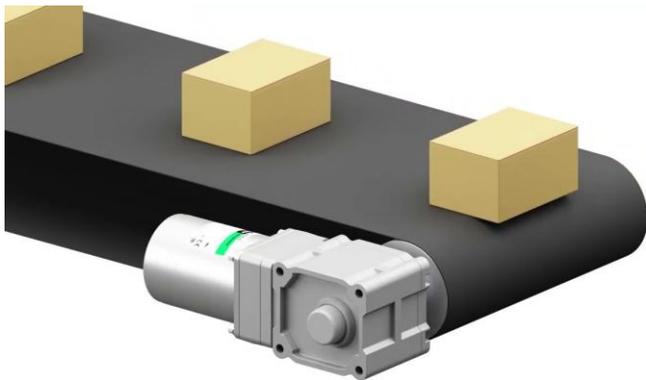


Key Features & Advantages :

- Most common design
- Most cost-effective solution
- Versatile Applications



Direct Drive Conveyor – Right Angle



Key Features & Advantages :

- Relatively less component in the setup
- More quiet operation
- Relatively less external parts required.



Drum Motor Driven Conveyor – Inline Built-in



Key Features & Advantages :

- Space saving as no chain and bracket
- IP66 design for sanitary Washdown
- Food grade design in SS304 construction
- Easier setup
- Relatively easier maintenance





Drum Motor Features and Advantages

- 1) Standard input voltage (1phase & 3phase) – Easily plug and run operation
- 2) Space-saving roller design with built-in gear motor (No external gear reducer and electric motor)
- 3) Fully enclosed stainless steel housing IP66 for washdown design (Compliant with hygiene standards)
- 4) Well protected against dust and dirt (No dust or dirt accumulation)
- 5) Hardened steel cylindrical helical gears offer longer life expectancy operation,
- 6) Proven design with low noise operation and low maintenance (maintenance-free)
- 7) Customised roller length available upon request
- 8) Roller Options : Crowned Roller / Knurled Roller / PU lagging Roller / Rubber Lagging Roller /
 Taper Roller / V-guided Roller
- 9) Optional accessories : VFD frequency Inverter / Thermal Protection / Encoder.
- 10) Motor with Class-F Insulation (a maximum operating temperature of 155°C)
- 11) Operating environment : Ambient temperature -5°C to +40°C
- 12) Shaft seals, inner lip seals : FPM (Fluorinated Polypropylene) is a material often used for
 their sealing lips due to its excellent resistance to high temperatures and various chemicals.

Drum Motor Applications

- > Airport and Postal Conveyor (Baggage conveyor / X-ray conveyor / Sorter conveyor / Diverting conveyor)
- > Metal Detector Conveyor / Checkweigher Conveyor
- > Telescopic Conveyor (Loading and unloading operation)
- > General flat belt conveyor and cleat belt conveyor (general transport of goods)
 E.g. Food and beverage processing and filling conveyor

DM	82	80W	3ph220V	400mm	18.8	SS304	KN/CR	SS
Model	Drum Motor Diameter (mm)	Power (Watt)	Input Voltage	Roller Length (mm)	Line Speed (m/min)	Tube Material	Tube Finishing	Shaft End
DM	82mm 113mm 138mm 165mm 216mm	50W* 90W 120W 150W 180W 205W 230W* 250W 370W 550W 750W 1.1kW 1.5kW 2.2kW 3.0kW 4.0kW	1ph220V 3ph220V 3ph415V	Min 330mm	2.39m/ min to 167m/ min	GS: Galvanized Steel CC: Chrome Coating RU: Rubber Lagging PU: PU Lagging	KN: Knurling CR: Crowning	SC: Straight Copper SS: Straight Stainless Steel ES: Elbow Stainless Steel
						SS304: SUS304 SS201: SUS201		

Drum Motor Summary

Roller Dia (mm)	Motor Power (Watt)	Belt Speed (meter per minute)	Rated Torque (Nm)	Min Roller Length (RL)	Max Roller Length (RL)	Extended Length (EL)	Overall Length (AGL)
Ø82	50W* (1phase)	7.2 to 75.2 M/min	17.1Nm to 1.6Nm	330mm	800mm	RL+17mm	RL+67mm
Ø113	230W (1phase)	10.9 to 74.1 M/min	77.4Nm to 11Nm	330mm	1000mm	RL+17mm	RL+67mm
Ø82 (3ph)	90W to 120W	9.0 to 79.2 M/min	31.4Nm to 1.99Nm	300mm to 320mm	800mm	RL+17mm	RL+67mm
Ø113 (3ph)	120W to 550W	5.3 to 148.2 M/min	77Nm to 8Nm	330mm to 370mm	1000mm	RL+17mm	RL+67mm
Ø138 (3ph)	370W to 1100W	2.4 to 167.3 M/min	175Nm to 27Nm	330mm to 380mm	1500mm	RL+17mm	RL+67mm
Ø165 (3ph)	750W to 2200W	3.0 to 104.6 M/min	365Nm to 36Nm	410mm to 450mm	2000mm	RL+40mm	RL+120mm
Ø216 (3ph)	3kW to 4kW	24.6 to 157.9 M/min	701Nm to 164Nm	430mm	2000mm	RL+40mm	RL+120mm

DM82 Drum Motor : 1PHASE 220V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
50W	4Pole		7.2	27.9	17.1	449.0	330mm	800mm
50W	4Pole		8.8	34.3	13.9	364.8	330mm	800mm
50W	4Pole		10.9	42.2	11.3	296.4	330mm	800mm
50W	4Pole		14.3	55.5	8.6	225.3	330mm	800mm
50W	4Pole		18.8	73.1	6.5	171.2	330mm	800mm
50W	4Pole		24.8	96.2	4.9	130.1	330mm	800mm
50W	4Pole		29.5	114.7	4.3	112.3	330mm	800mm
50W	4Pole		35.3	137.2	3.5	91.2	330mm	800mm
50W	4Pole		43.5	168.8	2.8	74.1	330mm	800mm
50W	4Pole		57.2	222.1	2.1	56.3	330mm	800mm
50W	4Pole		75.3	292.3	1.6	42.8	330mm	800mm

Note :
Customised roller length available upon request

DM82 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
90W	2Pole	3	9.0	34.9	23.60	560.0	300mm	800mm
90W	2Pole	3	12.0	46.6	17.70	420.0	300mm	800mm
90W	2Pole	3	15.0	58.2	14.16	336.0	300mm	800mm
90W	2Pole	3	18.0	69.9	11.80	280.0	300mm	800mm
90W	2Pole	3	20.4	79.2	10.41	247.0	300mm	800mm
90W	2Pole	3	24.0	93.2	8.85	210.0	300mm	800mm
90W	2Pole	2	30.0	116.4	7.08	168.0	300mm	800mm
90W	2Pole	2	39.6	153.7	5.37	128.0	300mm	800mm
90W	2Pole	2	51.0	197.9	4.16	99.0	300mm	800mm
90W	2Pole	2	60.0	232.9	3.54	84.0	300mm	800mm
90W	2Pole	2	67.2	260.8	2.84	75.0	300mm	800mm
90W	2Pole	2	79.2	307.4	1.99	64.0	300mm	800mm

DM82 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
120W	2Pole	3	9.0	34.9	31.47	747.0	320mm	800mm
120W	2Pole	3	12.0	46.6	23.60	560.0	320mm	800mm
120W	2Pole	3	15.0	58.2	18.88	448.0	320mm	800mm
120W	2Pole	3	18.0	69.9	15.73	373.0	320mm	800mm
120W	2Pole	3	20.4	79.2	13.88	329.0	320mm	800mm
120W	2Pole	3	24.0	93.2	11.80	280.0	320mm	800mm
120W	2Pole	3	30.0	116.4	9.44	224.0	320mm	800mm
120W	2Pole	3	39.6	153.7	7.16	170.0	320mm	800mm
120W	2Pole	3	51.0	197.9	5.55	132.0	320mm	800mm
120W	2Pole	3	60.0	232.9	4.72	112.0	320mm	800mm
120W	2Pole	3	67.2	260.8	3.21	100.0	320mm	800mm
120W	2Pole	3	79.2	307.4	2.58	85.0	320mm	800mm

DM113 Drum Motor : 1PHASE 220V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
230W	4Pole	3	10.9	30.8	77.4	1372.0	330mm	1000mm
230W	4Pole	3	12.9	36.3	66.0	1164.0	330mm	1000mm
230W	4Pole	3	14.7	41.4	58.0	1021.0	330mm	1000mm
230W	4Pole	3	18.1	51.1	47.0	827.0	330mm	1000mm
230W	4Pole	3	21.4	60.3	40.0	701.0	330mm	1000mm
230W	4Pole	3	24.4	68.7	35.0	615.0	330mm	1000mm
230W	4Pole	3	32.2	90.8	26.0	466.0	330mm	1000mm
230W	4Pole	3	38.0	107.0	22.0	395.0	330mm	1000mm
230W	4Pole	2	47.5	133.9	18.0	316.0	330mm	1000mm
230W	4Pole	2	62.8	177.0	13.0	239.0	330mm	1000mm
230W	4Pole	2	74.1	208.7	11.0	203.0	330mm	1000mm

Note :
Customised roller length available upon request

DM113 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
120W	4Pole	4	5.6	15.8	73.0	1284.0	330mm	1000mm
120W	4Pole	4	6.6	18.6	62.0	1089.0	330mm	1000mm
120W	4Pole	3	8.3	23.3	49.0	870.0	330mm	1000mm
120W	4Pole	3	10.9	30.8	37.0	659.0	330mm	1000mm
120W	4Pole	3	12.9	36.3	32.0	559.0	330mm	1000mm
120W	4Pole	3	14.7	41.4	28.0	490.0	330mm	1000mm
120W	4Pole	3	18.1	51.1	22.0	397.0	330mm	1000mm
120W	4Pole	3	21.4	60.3	19.0	337.0	330mm	1000mm
120W	4Pole	3	24.4	68.7	17.0	295.0	330mm	1000mm
120W	4Pole	3	32.2	90.8	13.0	223.0	330mm	1000mm
120W	4Pole	3	38.0	107.0	11.0	190.0	330mm	1000mm
120W	4Pole	2	47.5	133.9	9.0	151.0	330mm	1000mm
120W	4Pole	2	62.8	177.0	6.0	115.0	330mm	1000mm
120W	4Pole	2	74.1	208.7	5.0	97.0	330mm	1000mm

DM113 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
150W	4Pole	4	2.4	6.7	77.0	1363.0	330mm	1000mm
150W	4Pole	4	3.7	10.5	77.0	1363.0	330mm	1000mm
150W	4Pole	4	5.6	15.8	77.0	1363.0	330mm	1000mm
150W	4Pole	4	6.6	18.6	77.0	1363.0	330mm	1000mm

Note :
Customised roller length available upon request

DM113 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
180W	4Pole	3	8.3	23.3	74.0	1305.0	330mm	1000mm
180W	4Pole	3	10.9	30.8	56.0	988.0	330mm	1000mm
180W	4Pole	3	12.9	36.3	47.0	838.0	330mm	1000mm
180W	4Pole	3	14.7	41.4	42.0	735.0	330mm	1000mm
180W	4Pole	3	18.1	51.1	34.0	595.0	330mm	1000mm
180W	4Pole	3	21.4	60.3	29.0	505.0	330mm	1000mm
180W	4Pole	3	24.4	68.7	25.0	443.0	330mm	1000mm
180W	4Pole	3	32.2	90.8	19.0	335.0	330mm	1000mm
180W	4Pole	3	38.0	107.0	16.0	284.0	330mm	1000mm
180W	4Pole	2	47.5	133.9	13.0	227.0	330mm	1000mm
180W	4Pole	2	62.8	177.0	10.0	172.0	330mm	1000mm
180W	4Pole	2	74.1	208.7	8.0	146.0	330mm	1000mm

DM113 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
205W	4Pole	3	10.9	30.8	64.0	1133.0	330mm	1000mm
205W	4Pole	3	12.9	36.3	54.0	956.0	330mm	1000mm
205W	4Pole	3	14.7	41.4	47.0	832.0	330mm	1000mm
205W	4Pole	3	18.1	51.1	38.0	673.0	330mm	1000mm
205W	4Pole	3	21.4	60.3	32.0	566.0	330mm	1000mm
205W	4Pole	3	24.4	68.7	29.0	513.0	330mm	1000mm
205W	4Pole	3	32.2	90.8	22.0	389.0	330mm	1000mm
205W	4Pole	3	38.0	107.0	18.0	319.0	330mm	1000mm
205W	4Pole	2	47.5	133.9	15.0	265.0	330mm	1000mm
205W	4Pole	2	62.8	177.0	11.0	195.0	330mm	1000mm
205W	4Pole	2	74.1	208.7	9.0	159.0	330mm	1000mm

DM113 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
250W	4Pole	3	10.9	30.8	78.0	1381.0	330mm	1000mm
250W	4Pole	3	12.9	36.3	66.0	1168.0	330mm	1000mm
250W	4Pole	3	14.7	41.4	58.0	1027.0	330mm	1000mm
250W	4Pole	3	18.1	51.1	47.0	832.0	330mm	1000mm
250W	4Pole	3	21.4	60.3	40.0	708.0	330mm	1000mm
250W	4Pole	3	24.4	68.7	35.0	619.0	330mm	1000mm
250W	4Pole	3	32.2	90.8	19.0	335.0	330mm	1000mm
250W	4Pole	3	38.0	107.0	16.0	284.0	330mm	1000mm
250W	4Pole	2	47.5	133.9	13.0	227.0	330mm	1000mm
250W	4Pole	2	62.8	177.0	10.0	172.0	330mm	1000mm
250W	4Pole	2	74.1	208.7	8.0	146.0	330mm	1000mm

DM113 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
370W	4Pole	3	18.1	51.1	69.0	1221.0	370mm	1000mm
370W	4Pole	3	21.4	60.3	59.0	1044.0	370mm	1000mm
370W	4Pole	3	24.4	68.7	51.0	903.0	370mm	1000mm
370W	4Pole	3	32.2	90.8	39.0	690.0	370mm	1000mm
370W	4Pole	3	38.0	107.0	33.0	584.0	370mm	1000mm
370W	4Pole	2	47.5	133.9	26.0	460.0	370mm	1000mm
370W	4Pole	2	62.8	177.0	20.0	354.0	370mm	1000mm
370W	4Pole	2	74.1	208.7	17.0	301.0	370mm	1000mm

Note :
Customised roller length available upon request

DM113 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
550W	2Pole	3	25.8	72.6	72.0	1274.0	340	1000mm
550W	2Pole	3	29.4	82.8	63.0	1115.0	340	1000mm
550W	2Pole	3	36.3	102.3	51.0	903.0	340	1000mm
550W	2Pole	3	42.8	120.5	44.0	779.0	340	1000mm
550W	2Pole	3	48.8	137.3	38.0	673.0	340	1000mm
550W	2Pole	3	64.5	181.5	29.0	513.0	340	1000mm
550W	2Pole	3	76.0	214.0	25.0	442.0	340	1000mm
550W	2Pole	2	95.1	267.8	20.0	354.0	340	1000mm
550W	2Pole	2	125.5	353.4	15.0	265.0	340	1000mm
550W	2Pole	2	148.2	417.3	13.0	230.0	340	1000mm

Note :
Customised roller length available upon request

DM138 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
370W	4Pole	4	2.4	5.6	175.0	9116.0	350mm	1500mm
370W	4Pole	4	3.1	7.1	175.0	9116.0	350mm	1500mm
370W	4Pole	4	4.3	9.8	175.0	9116.0	350mm	1500mm
370W	4Pole	4	5.4	12.4	175.0	9116.0	350mm	1500mm
370W	4Pole	4	6.4	14.9	175.0	9116.0	350mm	1500mm

DM138 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
550W	4Pole	3	14.9	34.4	153.0	2212.0	330mm	1500mm
550W	4Pole	3	18.7	43.2	121.0	1761.0	330mm	1500mm
550W	4Pole	3	22.6	52.0	101.0	1464.0	330mm	1500mm
550W	4Pole	3	27.7	63.8	82.0	1193.0	330mm	1500mm
550W	4Pole	3	34.8	80.2	65.0	949.0	330mm	1500mm
550W	4Pole	3	41.8	96.5	54.0	789.0	330mm	1500mm
550W	4Pole	2	55.4	127.7	41.0	596.0	330mm	1500mm
550W	4Pole	2	69.5	160.4	33.0	475.0	330mm	1500mm
550W	4Pole	2	83.7	193.0	27.0	394.0	330mm	1500mm

Note :
Customised roller length available upon request

DM138 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
750W	4Pole	3	18.7	43.2	166.0	2401.0	350mm	1500mm
750W	4Pole	3	22.6	52.0	138.0	1996.0	350mm	1500mm
750W	4Pole	3	27.7	63.8	112.0	1627.0	350mm	1500mm
750W	4Pole	3	34.8	80.2	89.0	1294.0	350mm	1500mm
750W	4Pole	3	41.8	96.5	74.0	1076.0	350mm	1500mm
750W	4Pole	2	55.4	127.7	56.0	813.0	350mm	1500mm
750W	4Pole	2	69.5	160.4	45.0	647.0	350mm	1500mm
750W	4Pole	2	83.7	193.0	37.0	538.0	350mm	1500mm

DM138 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
1.1kW	2Pole	3	29.8	68.8	153.0	2212.0	380mm	1500mm
1.1kW	2Pole	3	37.5	86.5	121.0	1761.0	380mm	1500mm
1.1kW	2Pole	3	45.1	104.0	101.0	1464.0	380mm	1500mm
1.1kW	2Pole	3	55.4	127.7	82.0	1193.0	380mm	1500mm
1.1kW	2Pole	3	69.5	160.4	65.0	949.0	380mm	1500mm
1.1kW	2Pole	3	83.7	193.0	54.0	789.0	380mm	1500mm
1.1kW	2Pole	2	110.7	255.3	41.0	596.0	380mm	1500mm
1.1kW	2Pole	2	139.1	320.8	33.0	475.0	380mm	1500mm
1.1kW	2Pole	2	167.3	385.9	27.0	394.0	380mm	1500mm

Note :
Customised roller length available upon request

DM165 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
750W	4Pole	4	3.0	5.7	365	4427	450mm	2000mm
750W	4Pole	4	4.0	7.8	365	4427	450mm	2000mm
750W	4Pole	4	5.0	9.6	365	4427	450mm	2000mm
750W	4Pole	4	6.8	13.2	365	4427	450mm	2000mm
750W	4Pole	3	13.3	25.7	279	3384	410mm	2000mm
750W	4Pole	3	16.4	31.6	226	2745	410mm	2000mm
750W	4Pole	3	18.9	36.5	196	2377	410mm	2000mm
750W	4Pole	3	25.7	49.5	145	1754	410mm	2000mm
750W	4Pole	3	32.1	61.9	116	1402	410mm	2000mm
750W	4Pole	3	43.5	84.0	85	1034	410mm	2000mm
750W	4Pole	3	53.7	103.5	69	839	410mm	2000mm
750W	4Pole	2	62.6	120.7	59	719	410mm	2000mm
750W	4Pole	2	84.9	163.7	44	530	410mm	2000mm
750W	4Pole	2	104.6	201.7	36	430	410mm	2000mm

DM165 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
1100W	4Pole	3	16.4	31.6	332	4026	410mm	2000mm
1100W	4Pole	3	18.9	36.5	288	3486	410mm	2000mm
1100W	4Pole	3	25.7	49.5	212	2572	410mm	2000mm
1100W	4Pole	3	32.1	61.9	170	2056	410mm	2000mm
1100W	4Pole	3	43.5	84.0	125	1517	410mm	2000mm
1100W	4Pole	3	53.7	103.5	102	1230	410mm	2000mm
1100W	4Pole	2	62.6	120.7	87	1055	410mm	2000mm
1100W	4Pole	2	84.9	163.7	64	778	410mm	2000mm
1100W	4Pole	2	104.6	201.7	52	631	410mm	2000mm

DM165 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
1500W	4Pole	3	25.7	49.5	289	3507	450mm	2000mm
1500W	4Pole	3	32.1	61.9	231	2803	450mm	2000mm
1500W	4Pole	3	43.5	84.0	171	2068	450mm	2000mm
1500W	4Pole	3	53.7	103.5	138	1678	450mm	2000mm
1500W	4Pole	2	62.6	120.7	119	1438	450mm	2000mm
1500W	4Pole	2	84.9	163.7	88	1061	450mm	2000mm
1500W	4Pole	2	104.6	201.7	71	861	450mm	2000mm

DM165 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
2200W	2Pole	3	16.4	31.6	332	4026	450mm	2000mm
2200W	2Pole	3	18.9	36.5	288	3486	450mm	2000mm
2200W	2Pole	3	25.7	49.5	212	2572	450mm	2000mm
2200W	2Pole	3	32.1	61.9	170	2056	450mm	2000mm
2200W	2Pole	3	43.5	84.0	125	1517	450mm	2000mm
2200W	2Pole	3	53.7	103.5	102	1230	450mm	2000mm
2200W	2Pole	2	62.6	120.7	87	1055	450mm	2000mm
2200W	2Pole	2	84.9	163.7	64	778	450mm	2000mm
2200W	2Pole	2	104.6	201.7	52	631	450mm	2000mm

Note :
Customised roller length available upon request

DM216 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

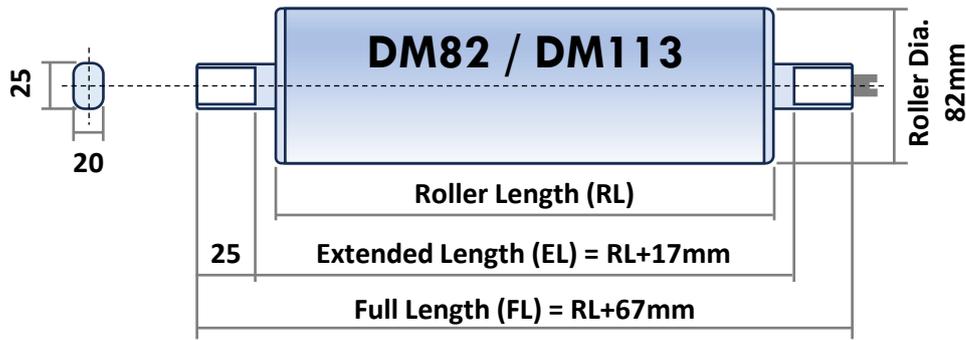
Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
3000W	2Pole	3	24.6	36.3	530	4941	430mm	2000mm
3000W	2Pole	3	30.9	45.6	530	4941	430mm	2000mm
3000W	2Pole	3	37.0	54.5	526	4871	430mm	2000mm
3000W	2Pole	3	48.6	71.6	400	3705	430mm	2000mm
3000W	2Pole	3	61.0	89.9	319	2950	430mm	2000mm
3000W	2Pole	3	72.9	107.4	267	2470	430mm	2000mm
3000W	2Pole	2	105.3	155.1	185	1710	430mm	2000mm
3000W	2Pole	2	132.2	194.8	147	1362	430mm	2000mm
3000W	2Pole	2	157.9	232.7	123	1140	430mm	2000mm

DM216 Drum Motor : 3PHASE 220V / 3PHASE 415V, 50Hz

Motor Power	Motor Pole	Gear Stage	Belt Speed	Rotation Speed	Rated Output Torque	Traction Force	Roller Length (Min)	Roller Length (Max)
Watt	No. of Pole	No of Stage	Meter/min	RPM	Nm	N	mm	mm
4000W	2Pole	3	37.0	54.5	701	6495	430mm	2000mm
4000W	2Pole	3	48.6	71.6	534	4940	430mm	2000mm
4000W	2Pole	3	61.0	89.9	425	3933	430mm	2000mm
4000W	2Pole	3	72.9	107.4	356	3293	430mm	2000mm
4000W	2Pole	2	105.3	155.1	246	2280	430mm	2000mm
4000W	2Pole	2	132.2	194.8	196	1816	430mm	2000mm
4000W	2Pole	2	157.9	232.7	164	1519	430mm	2000mm

Note :
Customised roller length available upon request

DIMENSION



Dimension : DM82 Drum Motor Roller Diameter 82mm [Crowned Roller – 81mm]

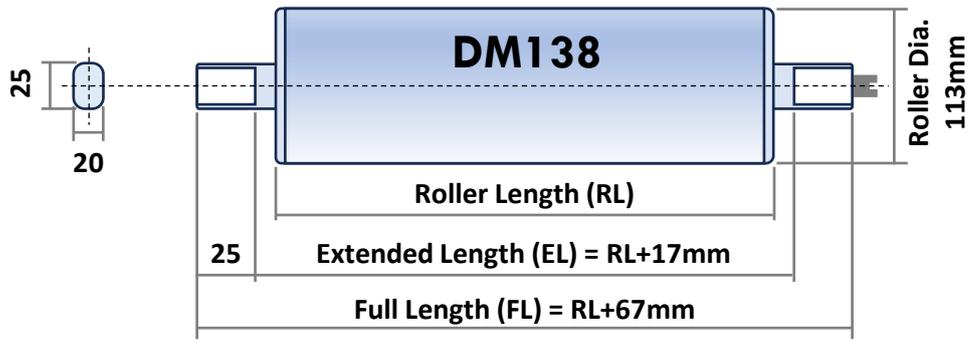
Motor Power	Belt Speed (meter per minute)	Rated Torque (Nm)	Min Roller Length (RL)	Max Roller Length (RL)	Extended Length (EL)	Full Length (FL)
50W* (1ph)	7.2 to 75.3 M/min	17.1Nm to 1.6Nm	330mm	800mm	RL+17mm	RL+67mm
90W	9.0 to 79.2 M/min	1.9Nm to 23.6Nm	300mm	800mm	RL+17mm	RL+67mm
120W	9.0 to 79.2 M/min	2.5Nm to 31.4Nm	320mm	800mm	RL+17mm	RL+67mm

Dimension : DM113 Drum Motor Roller Diameter 113mm [Crowned Roller – 111.5mm]

Motor Power	Belt Speed (meter per minute)	Rated Torque (Nm)	Min Roller Length (RL)	Max Roller Length (RL)	Extended Length (EL)	Full Length (FL)
230W* (1ph)	10.9 to 74.1 M/min	77.4Nm to 11Nm	330mm	1000mm	RL+17mm	RL+67mm
120W	5.6 to 74.1 M/min	73Nm to 5Nm	330mm	1000mm	RL+17mm	RL+67m
150W	2.4 to 6.6 M/min	77Nm	330mm	1000mm	RL+17mm	RL+67m
180W	8.3 to 74.1 M/min	74Nm to 8Nm	330mm	1000mm	RL+17mm	RL+67m
205W	10.9 to 74.1 M/min	64Nm to 9Nm	330mm	1000mm	RL+17mm	RL+67m
250W	10.9 to 74.1 M/min	78Nm to 8Nm	330mm	1000mm	RL+17mm	RL+67m
370W	18.1 to 74.1 M/min	69Nm to 17Nm	370mm	1000mm	RL+17mm	RL+67m
550W	25.8 to 148.2 M/min	72Nm to 13Nm	340mm	1000mm	RL+17mm	RL+67m

Note :
Customised roller length available upon request

DIMENSION



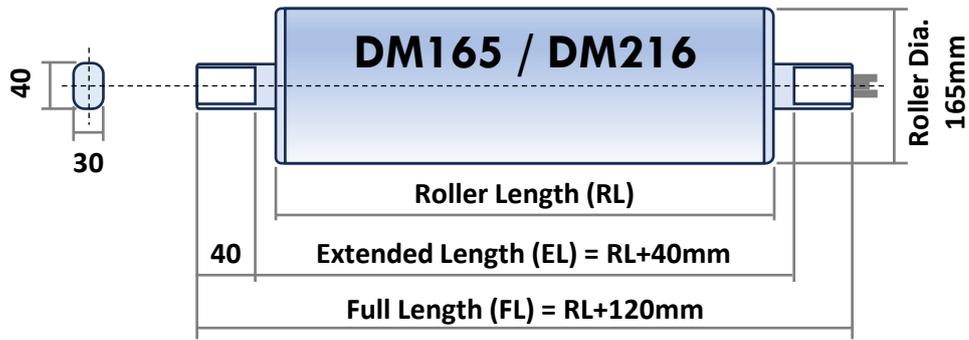
Dimension : DM138 Drum Motor Roller Diameter 138mm [Crowned Roller – 136.5mm]

Motor Power	Belt Speed (meter per minute)	Rated Torque (Nm)	Min Roller Length (RL)	Max Roller Length (RL)	Extended Length (EL)	Full Length (FL)
370W	2.4 to 6.4 M/min	175Nm	350mm	1500mm	RL+17mm	RL+67mm
550W	14.9 to 83.7 M/min	153Nm to 27Nm	330mm	1500mm	RL+17mm	RL+67mm
750W	18.7 to 83.7 M/min	166Nm to 37Nm	350mm	1500mm	RL+17mm	RL+67mm
1100W	29.8 to 167.3 M/min	153Nm to 27Nm	380mm	1500mm	RL+17mm	RL+67mm

Note :

Customised roller length available upon request

DIMENSION



Dimension : DM165 Drum Motor Roller Diameter 165mm [Crowned Roller – 163mm]

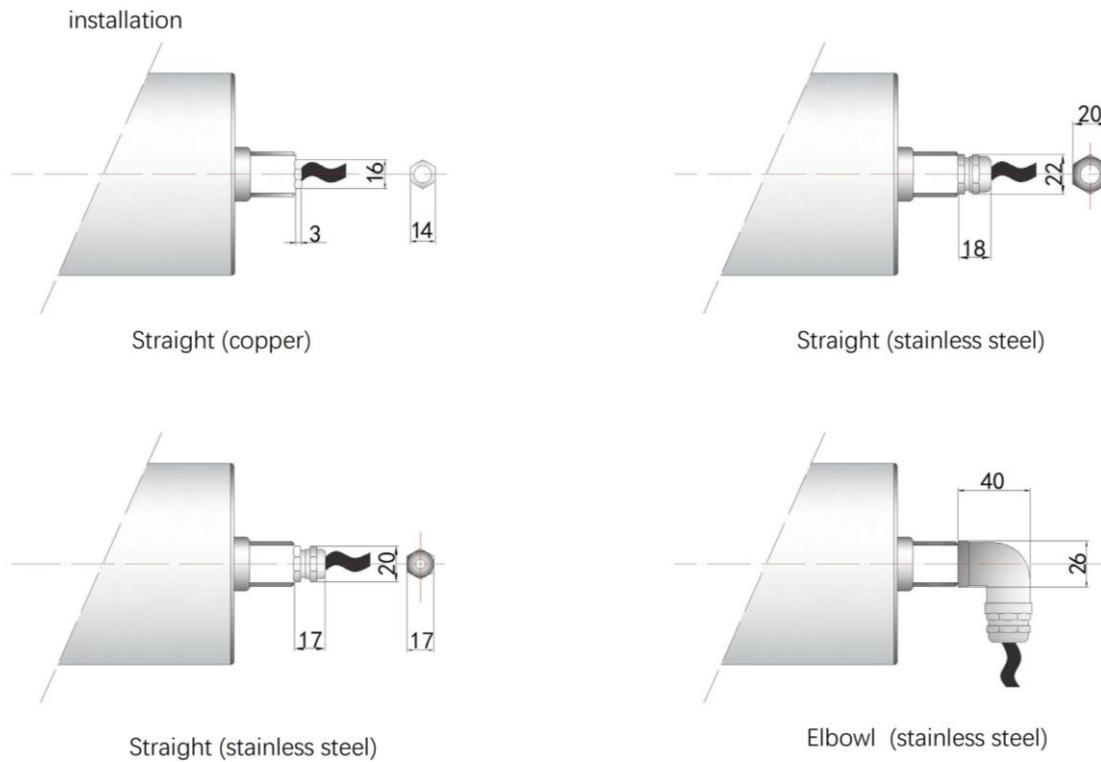
Motor Power	Belt Speed (meter per minute)	Rated Torque (Nm)	Min Roller Length (RL)	Max Roller Length (RL)	Extended Length (EL)	Full Length (FL)
750W	3.0 to 104.6 M/min	365Nm to 36Nm	410mm 450mm	2000mm	RL+40mm	RL+120mm
1100W	16.4 to 104.6 M/min	332Nm to 52Nm	410mm	2000mm	RL+40mm	RL+120mm
1500W	25.7 to 104.6 M/min	289Nm to 71Nm	450mm	2000mm	RL+40mm	RL+120mm
2200W	16.4 to 104.6 M/min	332Nm to 52Nm	450mm	2000mm	RL+40mm	RL+120mm

Dimension : DM216 Drum Motor Roller Diameter 216mm [Crowned Roller – 214.5mm]

Motor Power	Belt Speed (meter per minute)	Rated Torque (Nm)	Min Roller Length (RL)	Max Roller Length (RL)	Extended Length (EL)	Full Length (FL)
3kW	24.6 to 157.9 M/min	530Nm to 123Nm	430mm	2000mm	RL+40mm	RL+120mm
4kW	37 to 157.9 M/min	701Nm to 164Nm	430mm	2000mm	RL+40mm	RL+120mm

Note :
Customised roller length available upon request

Drum Motor Cable and Bracket



Note :
Standard cable length 1meter. (Customised cable length available upon request)

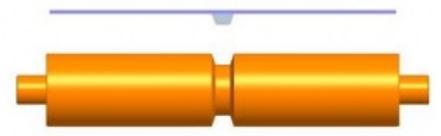
Roller Tube Finishing



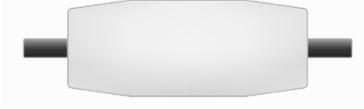
No Knurling



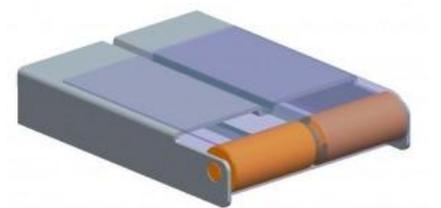
Standard Roller



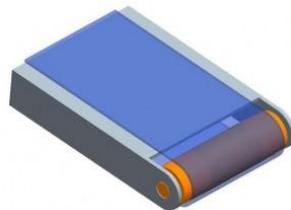
Straight Knurling



Crowned Roller



Diamond Knurling



Standard Cylindrical Roller
Crowned Roller

Knurling Roller

Roller with V-groove Guide
(Roller with V-guide)

Fig. 1-1) Wiring Diagram : Input Voltage 1phase 220V (Forward Operation)

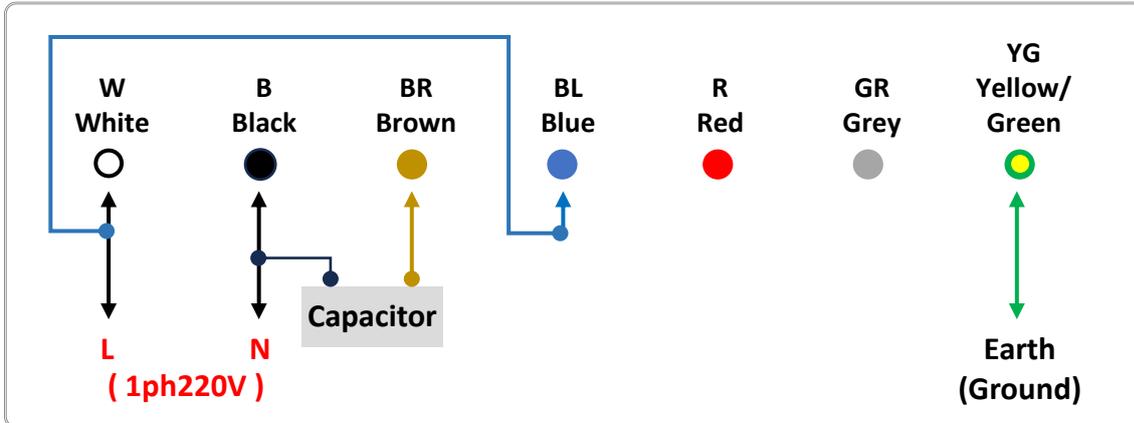
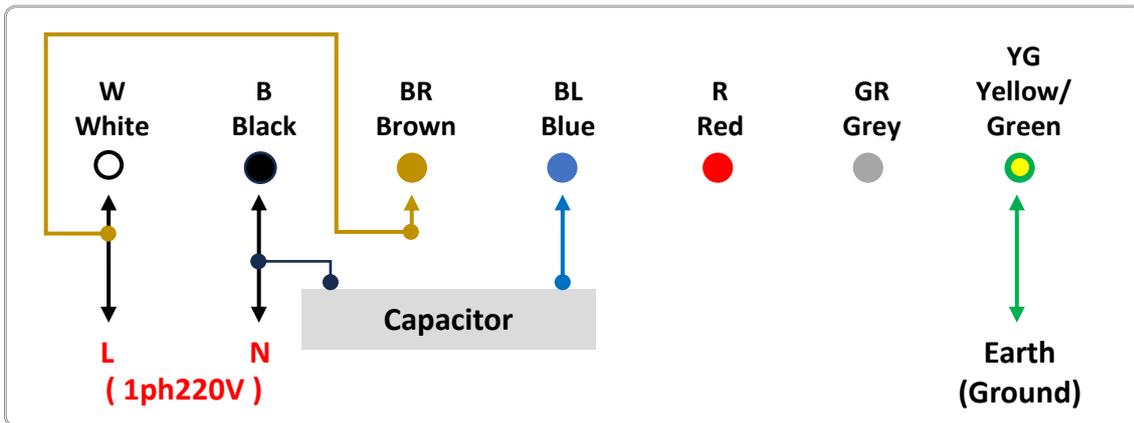


Fig. 1-2) Wiring Diagram : Input Voltage 1phase 220V (Reverse Operation)



Note :
Standard cable length 1meter. (Customised cable length available upon request)

1-PHASE CONTROLLER



Type G Controller
Input : 1ph220V
Output : 1ph220V
Rating : Max 120W
* For DM82 only

Fig. 2-1) Wiring Diagram : Input Voltage 3phase 220V/415V (Forward Operation)

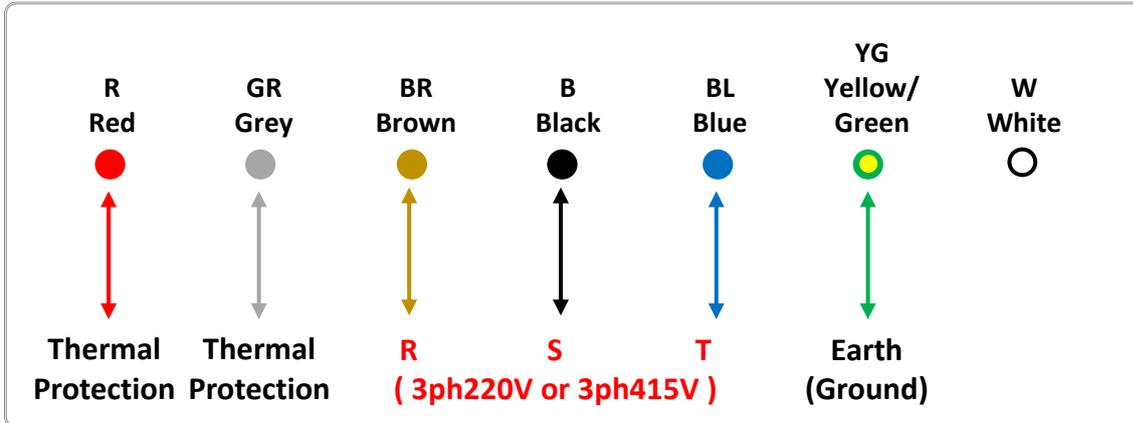
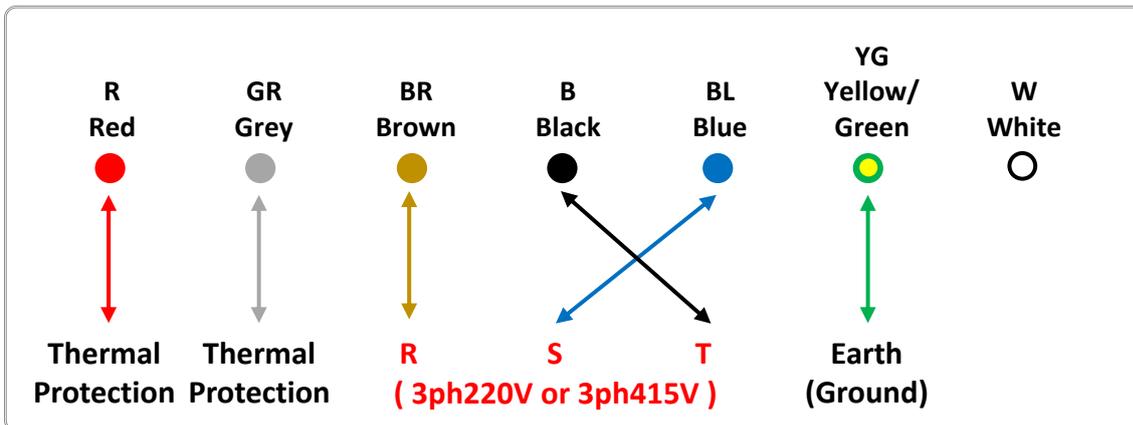


Fig. 2-2) Wiring Diagram : Input Voltage 3phase 220V/415V (Reserve Operation)



Note :

Standard cable length 1meter. (Customised cable length available upon request)

Thermal Protection (signal type) available upon request

FREQUENCY INVERTER OPTION



IGBT Series
LDS Compact Inverter
Input : 1ph220V
Output : 3ph220V
Rating : Max 250W



FC400 Series
LDS Compact
Frequency Controller
Input : 1ph220V
Output : 3ph220V
Rating : Max 400W



NE200 Series
Nidec Inverter
Input / Output:
1ph220V / 3ph220V
3ph415V / 3ph415V
Rating : Max 4kW



Commander S100
Series
Control Techniques Inverter
Input / Output:
1ph110V / 3ph220V
1ph220V / 3ph220V
3ph220V / 3ph220V
3ph415V / 3ph415V
Rating : Max 4kW

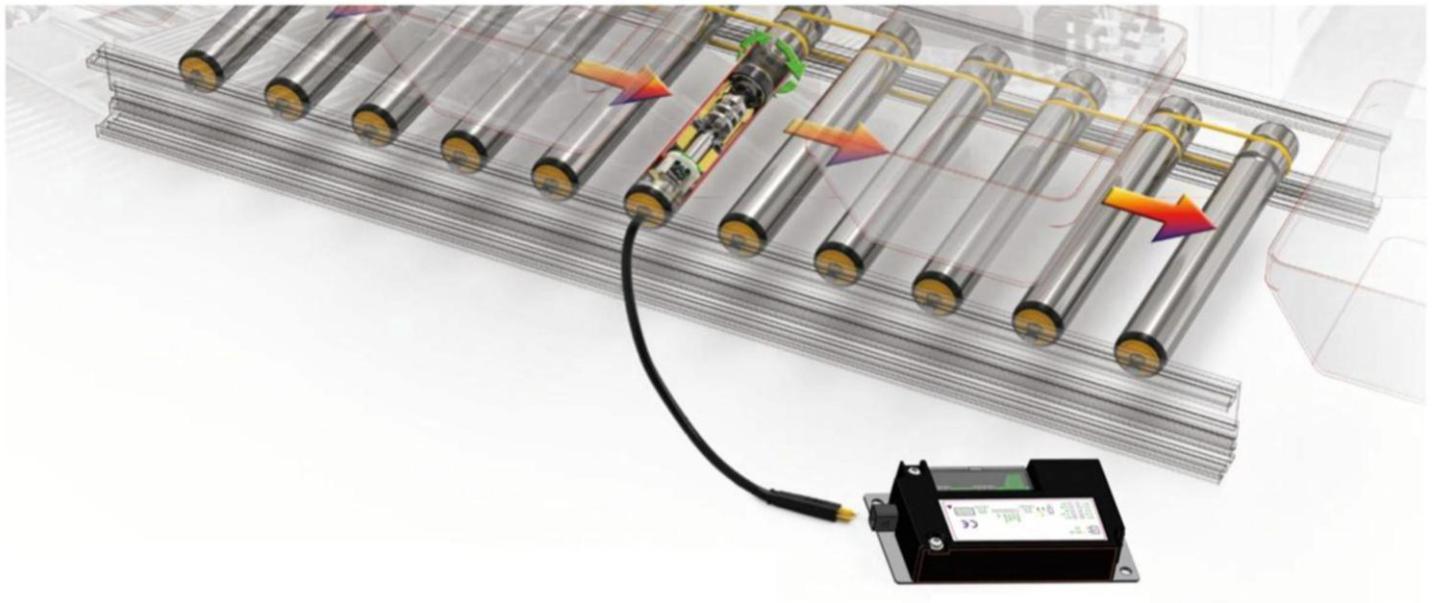
BLDC MOTORISED ROLLER



DMBL38 series
DMBL60 series

DMBL50 series
DMBL76 series





DMBL Motorised Roller [Power Moller]

Motorised Roller is a roller with its own power, which is reasonably installed inside the steel pipe after integrating the motor, gear reducer and sensor. Therefore, these conventional electric motor, sprocket chain, intermediate shaft and other auxiliary drive components are not needed in your conveyor. No need big gear reducer. Just setup the motorised rollers on the frame, connect the wire to the power supply, and the work is completed. The conveying system is more simple, compact, intelligent, neat, safe and reliable,

Motorised Roller [Power Moller] is widely used in food processing, pharmaceutical production, electronic assembly, airport logistics, postal services, distribution and various industries

FEATURES

Large Torque

The brushless DC Motor (BLDC) in compact design offer larger torque than AC motor.

High Velocity

Speed range between 1m/min to 300m/min.

Space Saving

Compact design with easy installation and low maintenance.

Functional and Control

The advanced driver card provides many efficient functions for selection, including dynamic braking and variable speed settings, constant speed control (when in variable load), acceleration and deceleration time adjustment functions etc.

Low Noise

More quiet operation compared to chain and sprocket design.

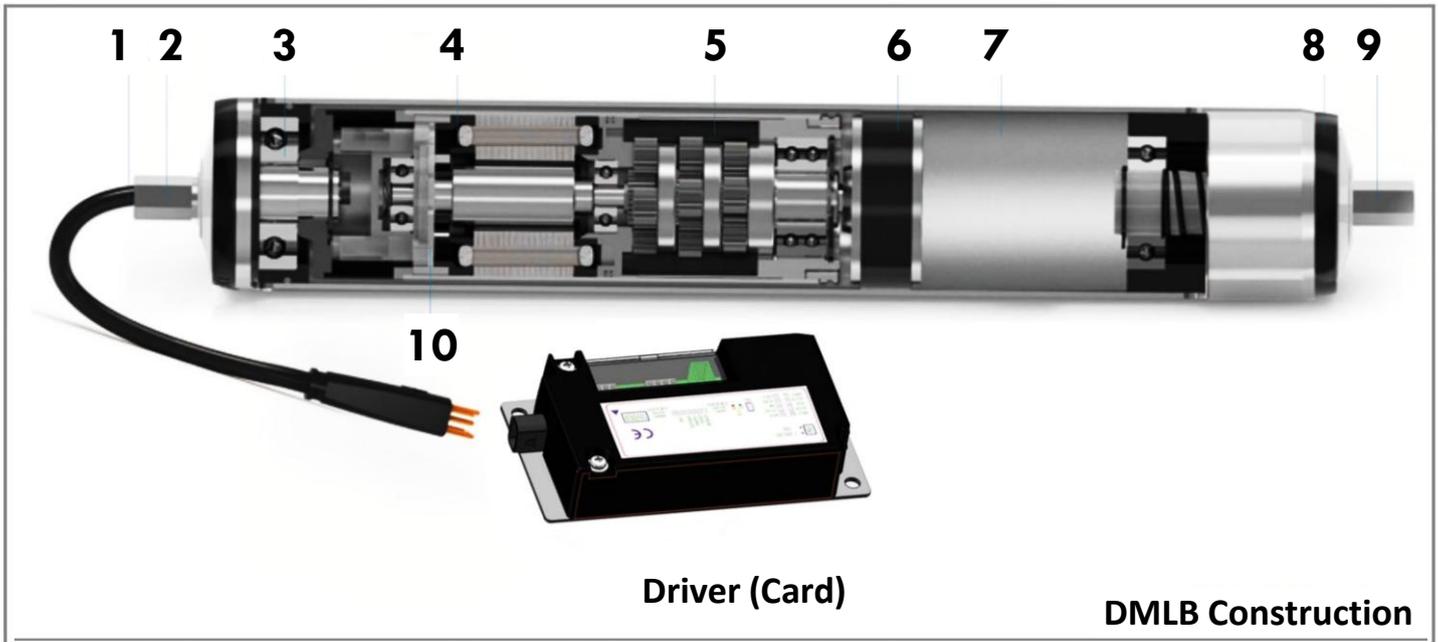
Safety Voltage

Motorised Roller [Power Moller] available in DC24V and 48V input voltage.

BRUSHLESS DC MOTORISED ROLLER

DMBL series motorized roller is design for speed control of medium and light load application. Built-in with high efficiency energy saving BLDC gear motor, it is integrated with Driver (card) in DC24V and DC48V voltage. Speed range between 1m/min to 300m/min. It offers wide speed range from 10% to 150%.

DMBL series Driver offers I/O control, RS485, EtherCAT interfaces. Roller materials available in galvanized carbon steel and stainless steel. Roller length can be customized based on customer request. The roller tube can be grooved or with O-pulley, V-pulley, Synchronous pulley, Poly-Vee pulley, Sprockets etc. DMBL is designed to offer simple and convenient installation, with space saving and maintenance free operation



1	2	3	4	5	6	7	8	9	10
Cable	Wire Clip	Bearing	Motor	Gear Reducer	Fixed Flange	Shell (Tube)	Bearing	Shaft	Hall Clip



BLDC Motorised Roller



AC Drum Motor



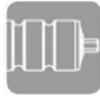
Zinc (Zn) coating



Chrome coating



Rubber / PU Lagging

DMBL	60	60W	B	48V	20	300	ZN	L	C2	N
Model	Dia.	Power	Controller	Input Voltage	Line Speed	Roller Length	Tube Material	Drive Head	Shaft End (Wire)	Shaft End
DMBL	38mm 50mm 60mm 76mm	20W 30W 60W 80W 100W 200W 300W	Type A Type B Type F	24VDC 48VDC	1m/ min To 238m/ min	Min 220 mmL to 1000 mmL	ZN: Zink Coating	Q: Poly-Vee 	H1 : D12 Machined8 	H : D12 machined8 
							CC: Chrome Coating	V: V-pulley 	H2 : M12 machined8 	N : M8 Female 
							RU: Rubber Lagging	T: Sync Wheel 		
							PU: PU Lagging	E: O-wheel 	C1 : D12 Hex11 	C : D12 Hex11 
							SS304: SUS304	L: Sprocket 	C2 : M12 Hex11 	N : M8 Female 
							SS201: SUS201	O: Groove 		
							KN: Knurled		D1 : D12 Machined10 	D : D12 Machined10 
							I: Straight			N : M8 Female 
							A: Tapered			
							U: Crowned			

Note :

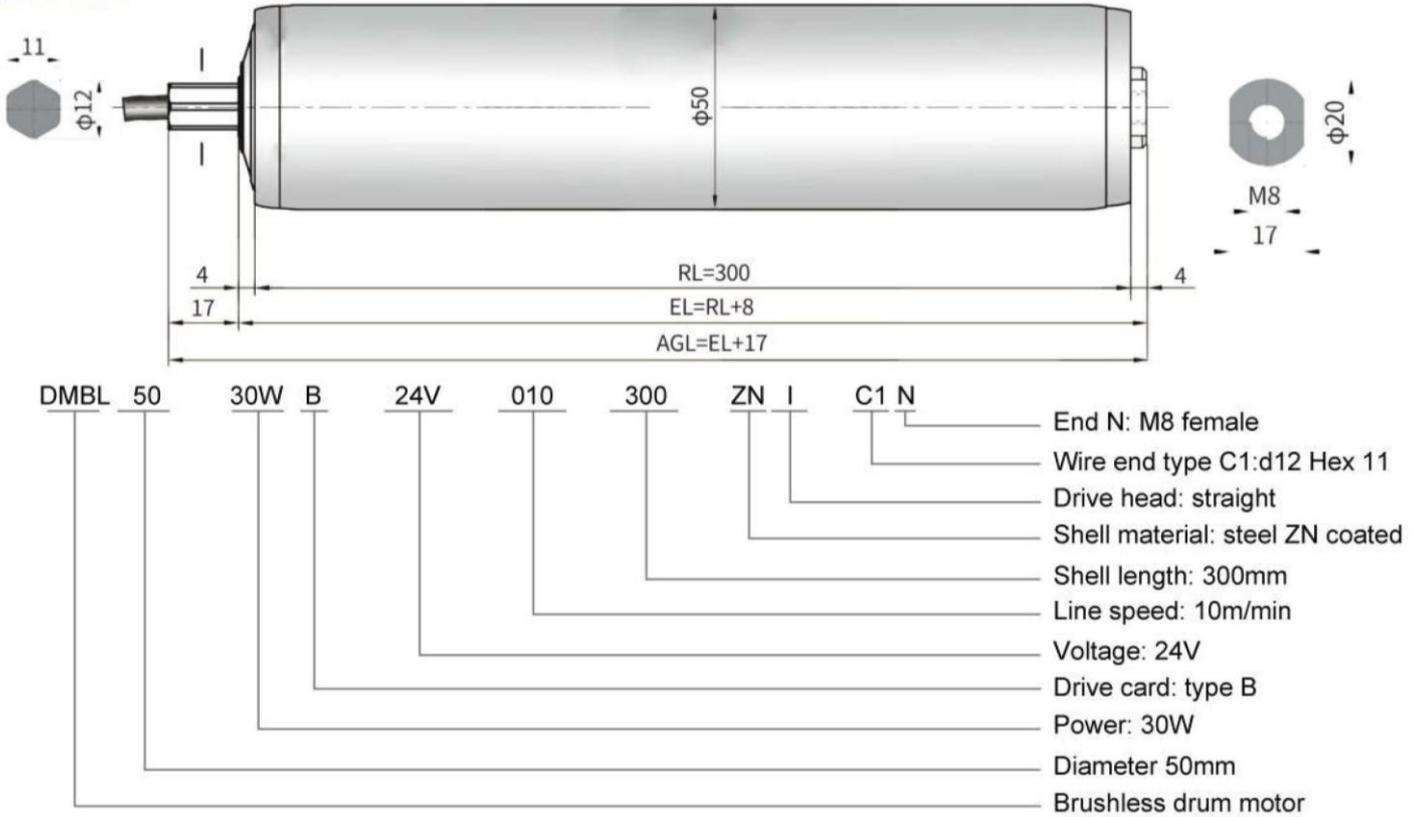
1) Optional designs available upon request :

- IP65 : Waterproof / Dustproof
- HS Brake : Mechanical Brake
- Z : Accumulation (adjustable)
- AU : Spring Shaft – TX

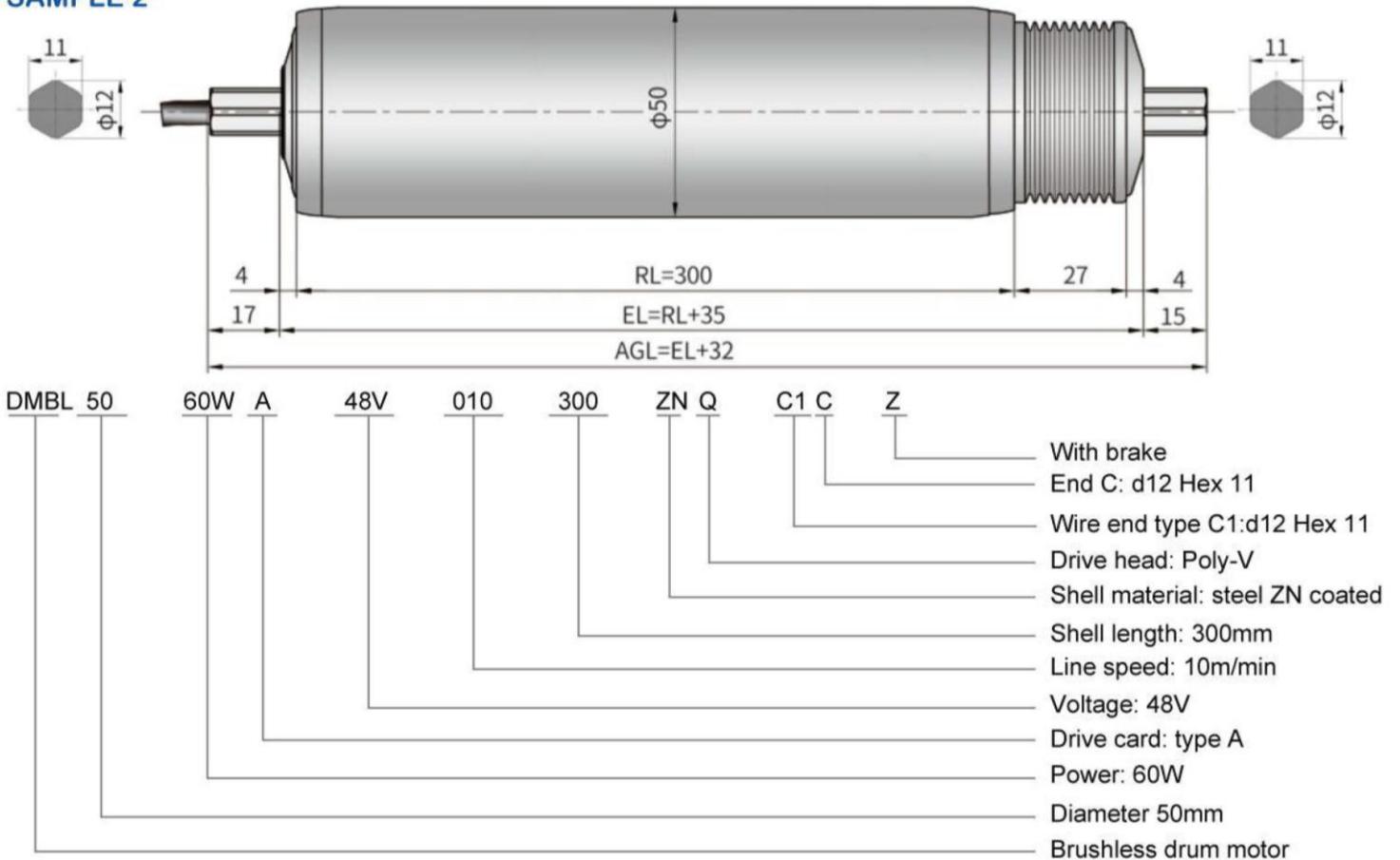
2) Other voltages and customised shape available upon request :

Rubber coated, Zinc plated, Chromium plated, PU Coated

SAMPLE 1



SAMPLE 2



DMBL50-30W : DC24V / DC48V Specification

	Input Power	Output Power	Belt Speed	Rotation Speed	Rated Output Torque	Starting Torque	Rated Traction Force	Starting Force
Model	Watt	Watt	Meter/min	RPM	Nm	Nm	N	N
DMBL50	50W	30W	7.9	50.0	5.8	17.3	230.4	691.2
DMBL50	50W	30W	10.5	67.0	4.3	13.0	172.7	518.2
DMBL50	50W	30W	11.8	75.0	3.8	11.5	153.5	460.6
DMBL50	50W	30W	15.7	100.0	2.9	8.6	115.2	345.6
DMBL50	50W	30W	20.9	133.0	2.2	6.5	86.4	259.2
DMBL50	50W	30W	23.6	150.0	1.9	5.7	76.8	230.4
DMBL50	50W	30W	47.1	300.0	1.0	2.9	38.4	115.2
DMBL50	50W	30W	62.8	400.0	0.7	2.2	28.8	86.4

DMBL50-60W : Controller : Type B (DC24V / DC48V)

DMBL50-60W : DC24V / DC48V Specification

	Input Power	Output Power	Belt Speed	Rotation Speed	Rated Output Torque	Starting Torque	Rated Traction Force	Starting Force
Model	Watt	Watt	Meter/min	RPM	Nm	Nm	N	N
DMBL50	86W	60W	7.9	50.0	--	--	--	--
DMBL50	86W	60W	10.5	67.0	--	--	--	--
DMBL50	86W	60W	11.8	75.0	7.7	23.0	307.1	921.2
DMBL50	86W	60W	15.7	100.0	5.8	17.3	2304.0	691.2
DMBL50	86W	60W	20.9	133.0	4.3	13.0	172.8	518.5
DMBL50	86W	60W	23.6	150.0	3.8	11.4	153.6	460.8
DMBL50	86W	60W	47.1	300.0	1.9	5.8	76.8	230.4
DMBL50	86W	60W	62.8	400.0	1.4	4.3	57.6	172.8

DMBL50-86W : Controller : Type B (DC24V / DC48V)

DMBL60-60W : DC24V / DC48V Specification

	Input Power	Output Power	Belt Speed	Rotation Speed	Rated Output Torque	Starting Torque	Rated Traction Force	Starting Force
Model	Watt	Watt	Meter/min	RPM	Nm	Nm	N	N
DMBL60	86W	60W	9.4	50.0	--	--	--	--
DMBL60	86W	60W	12.6	67.0	--	--	--	--
DMBL60	86W	60W	14.1	75.0	7.7	23.0	307.1	921.2
DMBL60	86W	60W	18.9	100.0	5.8	17.3	2304.0	691.2
DMBL60	86W	60W	25.1	133.0	4.3	13.0	172.8	518.5
DMBL60	86W	60W	28.3	150.0	3.8	11.4	153.6	460.8
DMBL60	86W	60W	56.6	300.0	1.9	5.8	76.8	230.4
DMBL60	86W	60W	75.4	400.0	1.4	4.3	57.6	172.8

DMBL60-86W : Controller : Type B (DC24V / DC48V)

DMBL60-100W : DC24V Specification

	Input Power	Output Power	Belt Speed	Rotation Speed	Rated Output Torque	Starting Torque	Rated Traction Force	Starting Force
Model	Watt	Watt	Meter/min	RPM	Nm	Nm	N	N
DMBL60	160W	100W	14.4	76.6	9.4	28.2	195.8	587.5
DMBL60	160W	100W	23.9	126.8	5.7	17.0	118.3	355.0
DMBL60	160W	100W	52.2	276.9	2.6	7.8	54.2	162.5
DMBL60	160W	100W	159.7	847.0	0.9	2.6	17.7	53.1
DMBL60	160W	100W	188.5	1,000.0	0.7	2.2	15.0	45.0

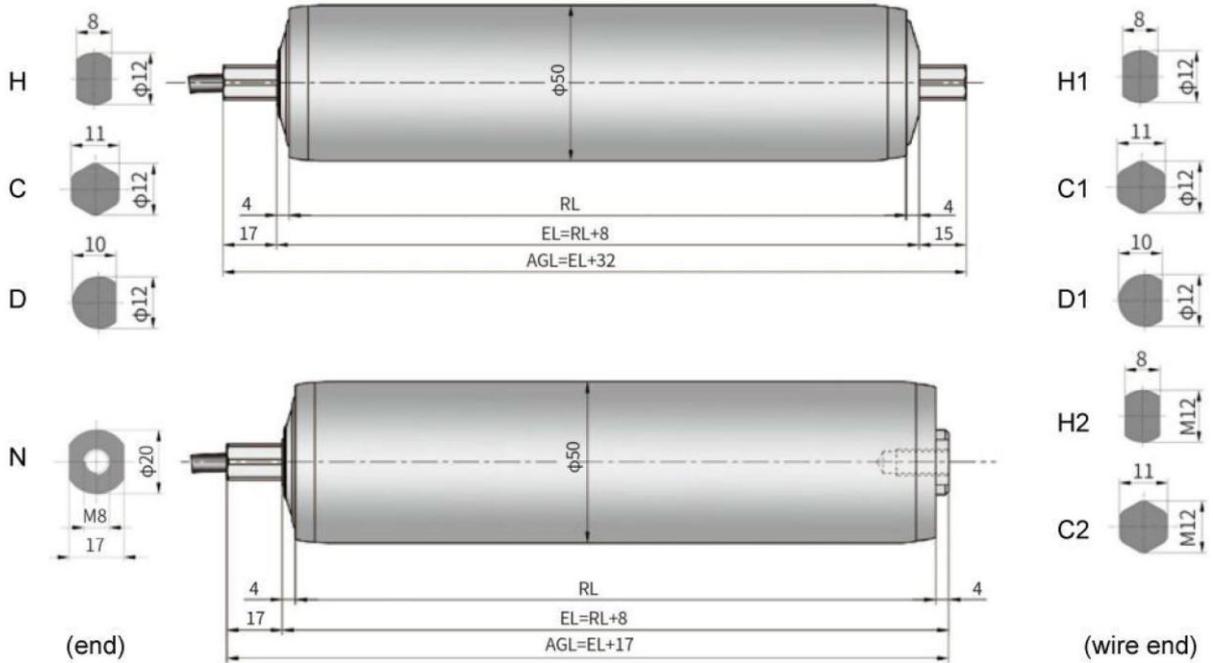
DMBL60-160W : Controller : Type D (DC24V / DC48V)

Minimum Roller Dimension		Output Power : 30W				Output Power : 60W			
Model : DMBL50 / DMBL60		Belt Speed 8 to 24 meter / min		Belt Speed 25 to 64 meter / min		Belt Speed 13 to 24 meter / min		Belt Speed 25 to 64 meter / min	
Model	Shaft Type	End : Female Threaded	End : Spring	End : Female Threaded	End : Spring	End : Female Threaded	End : Spring	End : Female Threaded	End : Spring
DMBL50 DMBL60	Standard	220	250	210	240	245	275	235	265
DMBL50 DMBL60	O-Wheel	235	235	225	225	260	260	250	250
DMBL50 DMBL60	Sync Wheel	235	235	225	225	260	260	250	250
DMBL50 DMBL60	Poly-V	235	235	225	225	260	260	250	250
DMBL50 DMBL60	Sprocket	220	220	205	205	245	245	230	230
DMBL50 DMBL60	V-groove in shell	280	280	270	270	305	305	295	295
DMBL50 DMBL60	O-groove in shell	Minimum roller length vary due to pressure groove position and spring shaft.							





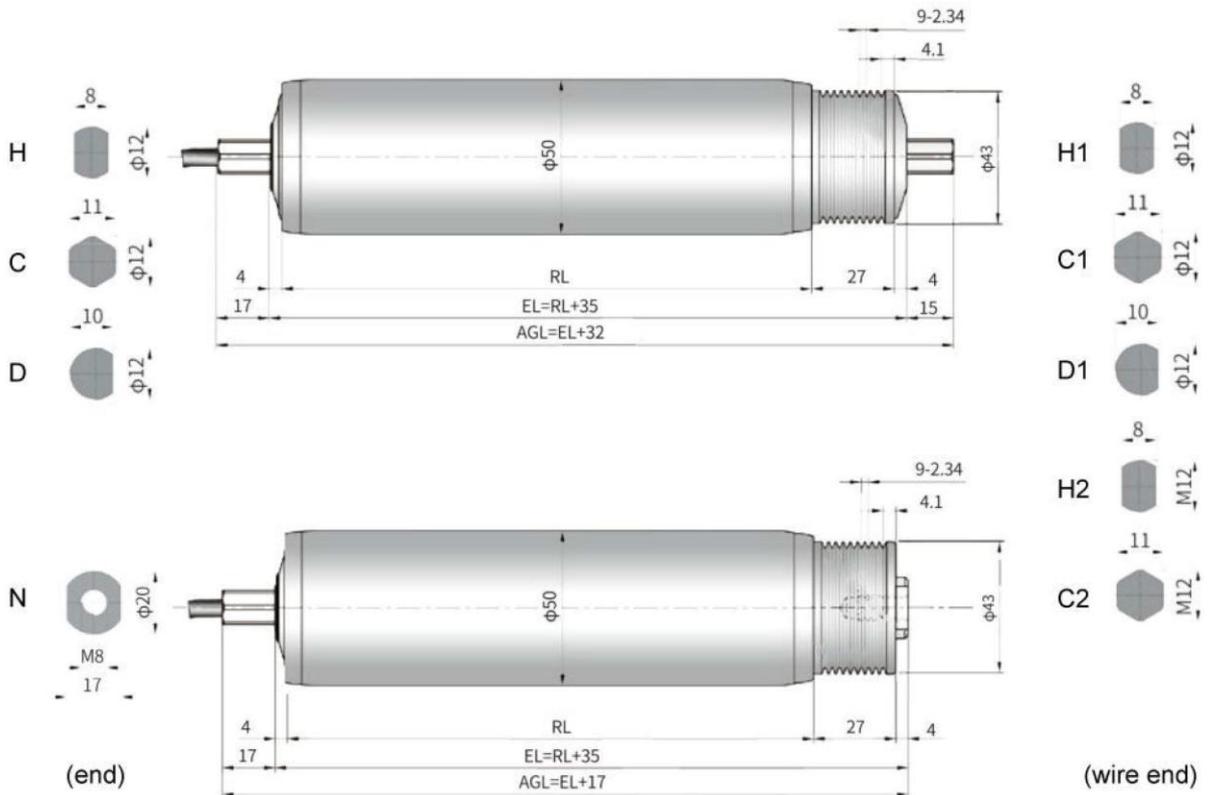
I: straight



※ Straight: D50*1.5mm steel pipe. Material: steel zinc coated, chrome coated, SUS201 or SUS304



Q: Poly-V



※ Poly-V material: stainless steel, Aluminium or Plastic. 9 grooves with PJ belts, the maximum loading 100Kg

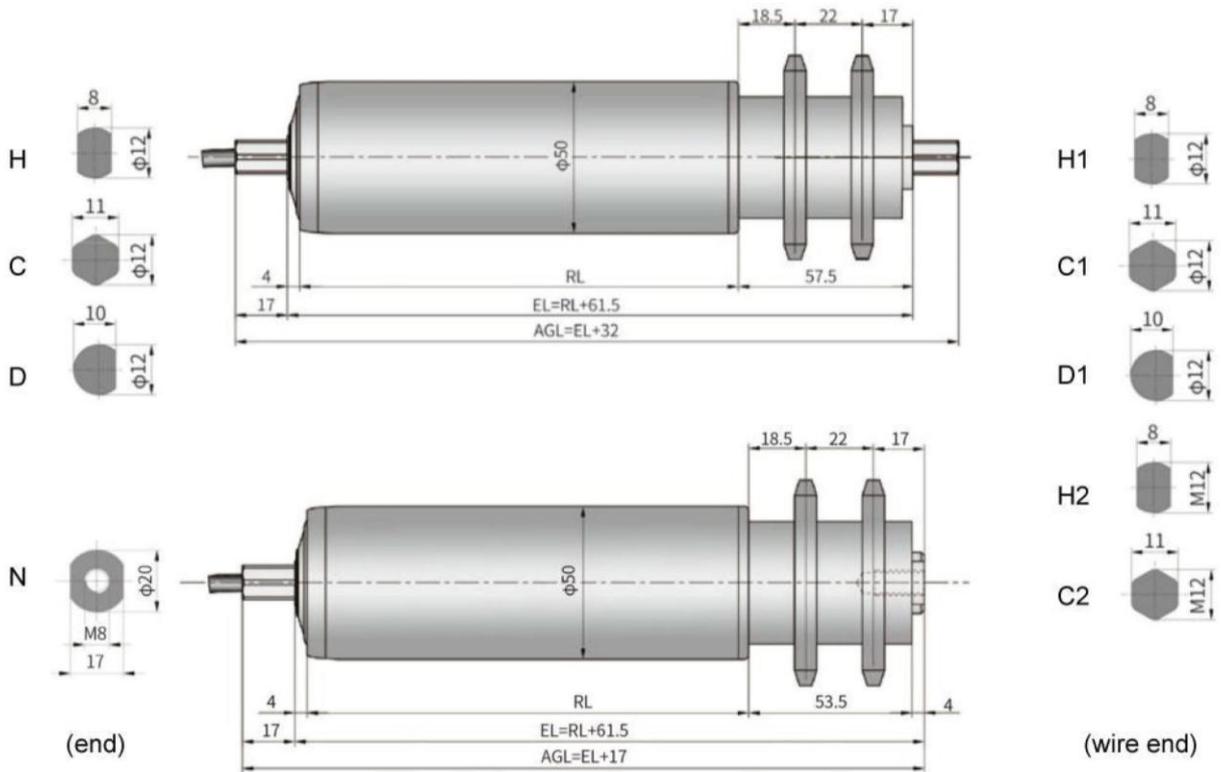
※ RL= shell length / order length (with covers)

EL= installation length

AGL= Shaft length



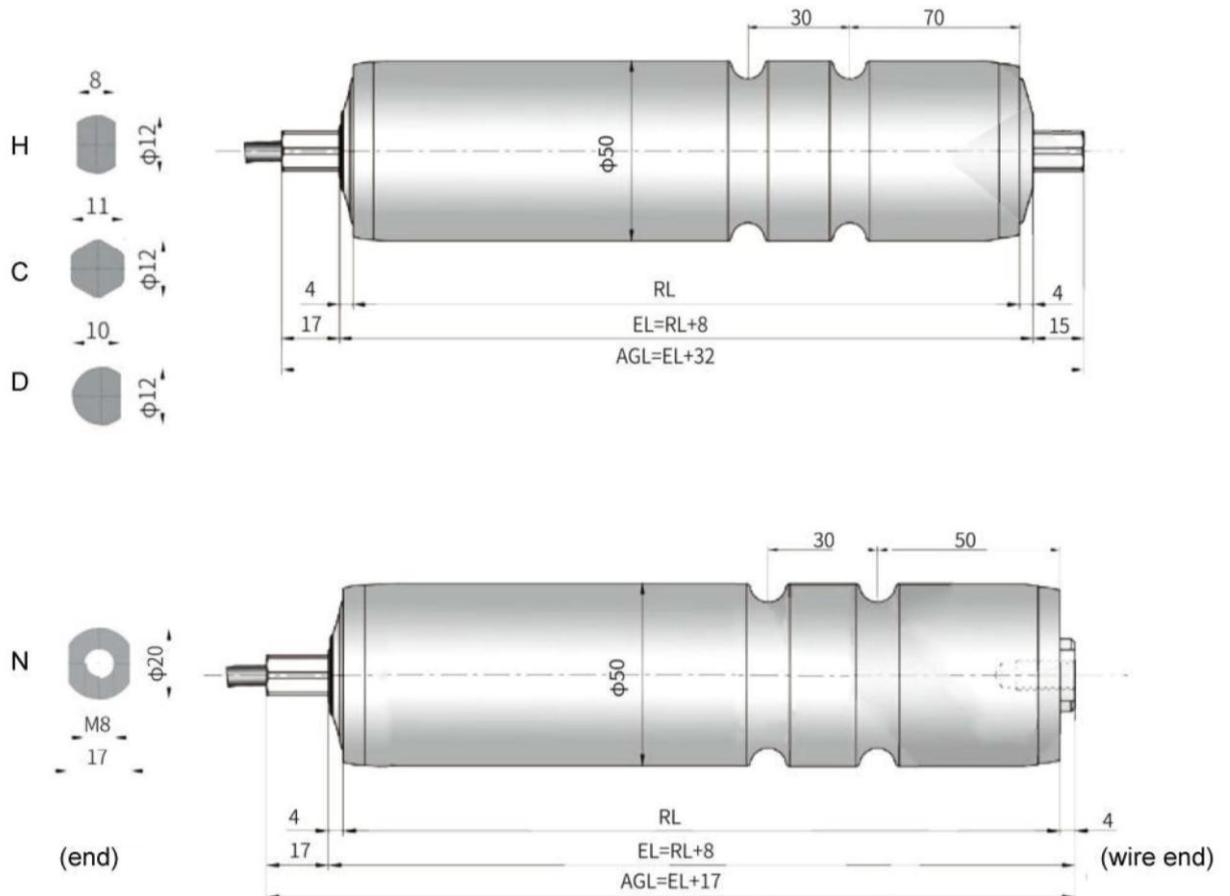
L: sprocket



※ Sprocket: used for heavy-duty application, 08B14T double sprocket. Material: carbon steel, stainless steel



O: O grooves



※ O groove: connected each other with polyurethane belts, it is quiet, used for light duty application, maximum 35Kg.

※ remark: when the end is spring shaft, need to confirm with us the O groove dimension.

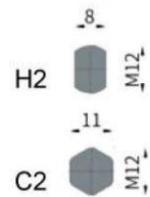
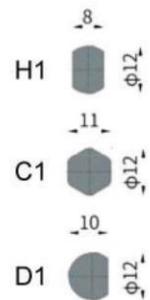
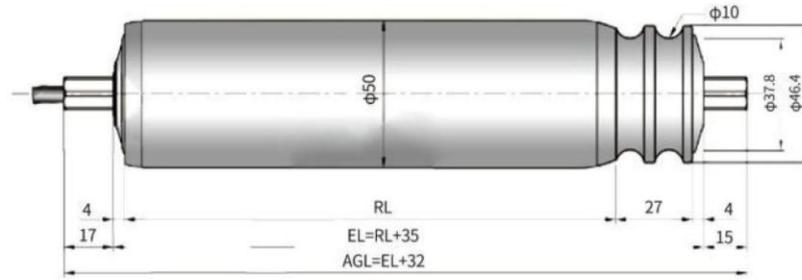
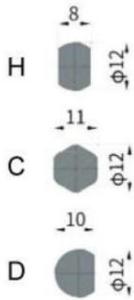
※ RL= shell length / order length (with covers)

EL= installation length

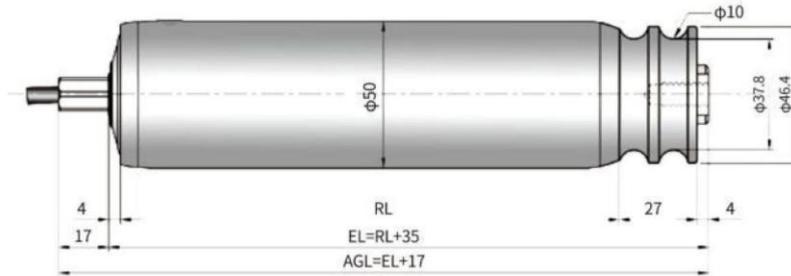
AGL= Shaft length



E: O pulley



(end)

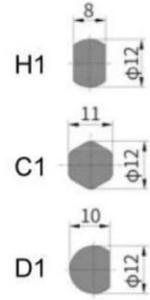
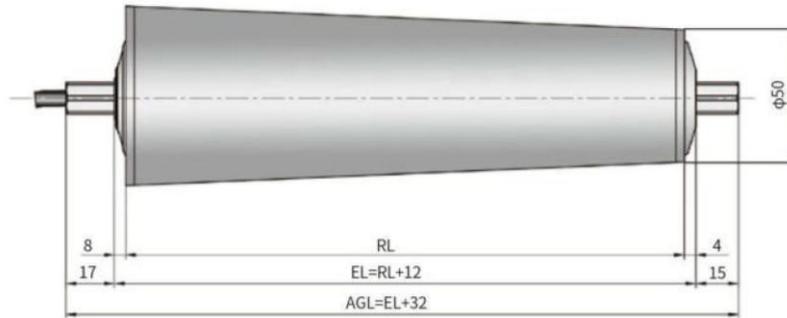
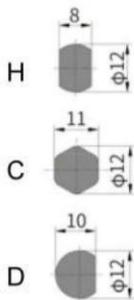


(wire end)

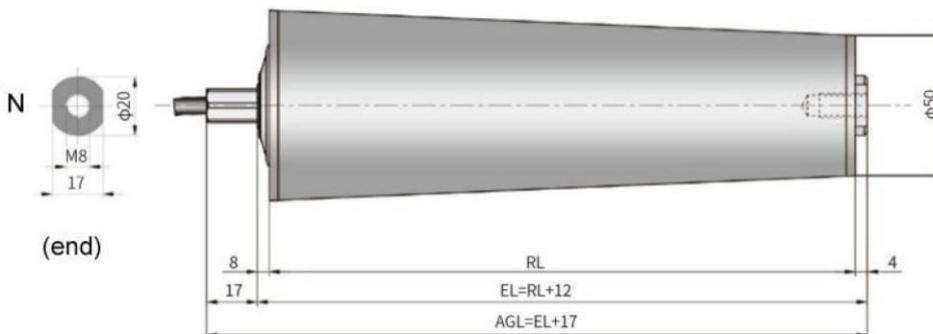
※ O pulley: connected with polyurethane O belts. Material: Nylon, Aluminium, stainless steel.



A: tapered



it can be customized, plastic sleeves 3.6 degrees



(end)

(wire end)

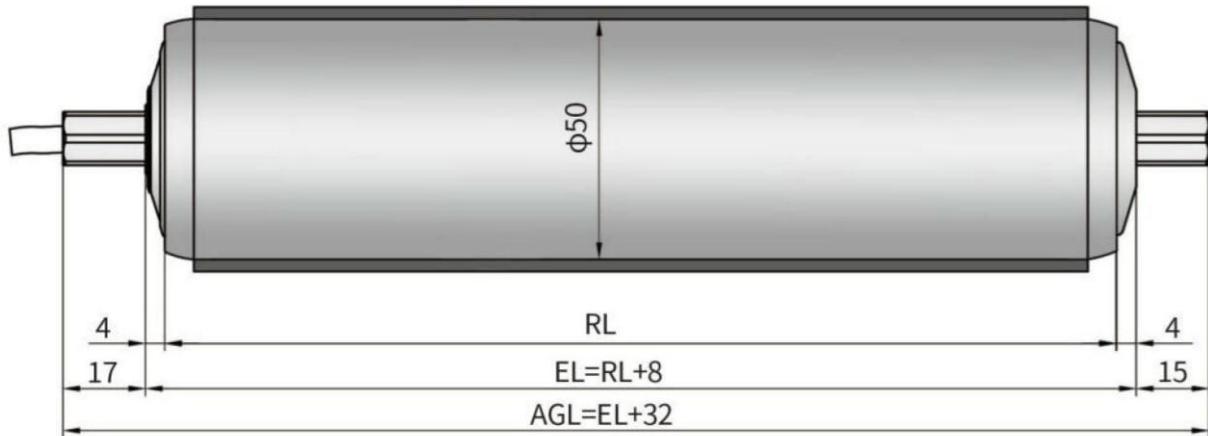
※ tapered roller used for turning conveyors. It can be made by several plastic sleeves or complete steel. Material: steel, SUS

※ RL= shell length / order length (with covers)

EL= installation length

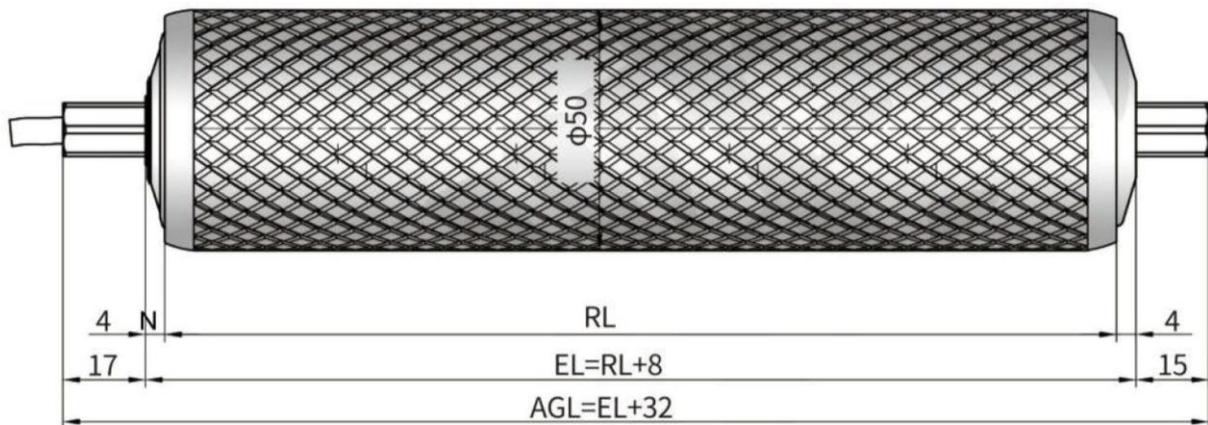
AGL= Shaft length

Shell coated with Rubber / PU



In order to effectively improve the operation of conveyor system and to prevent skidding (such as speed increase at specific station, or small angle incline etc), it is necessary to generate great friction between roller contact surface and the conveyor belt.

Shell knurled - KN



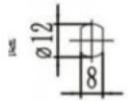
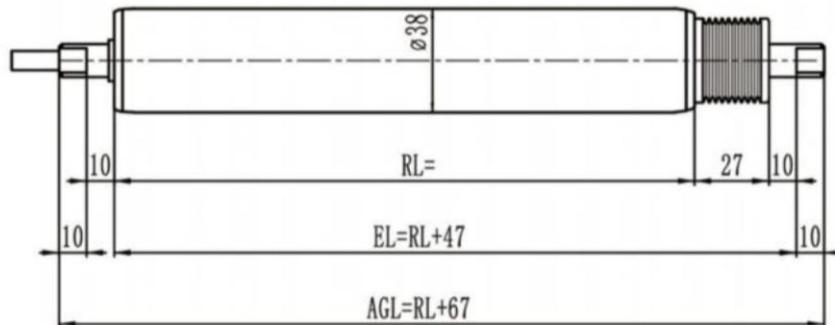
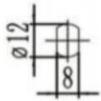
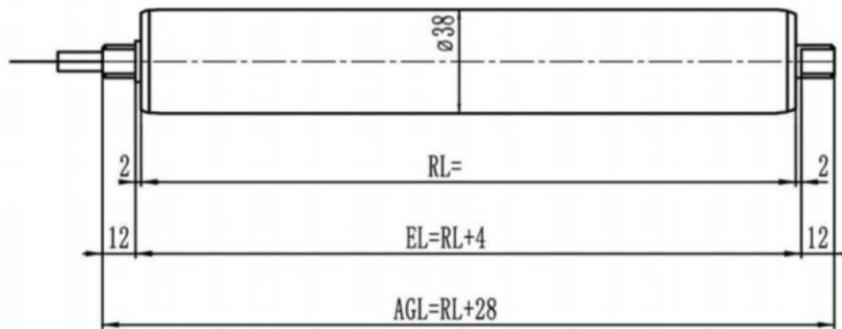
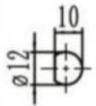
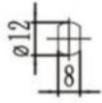
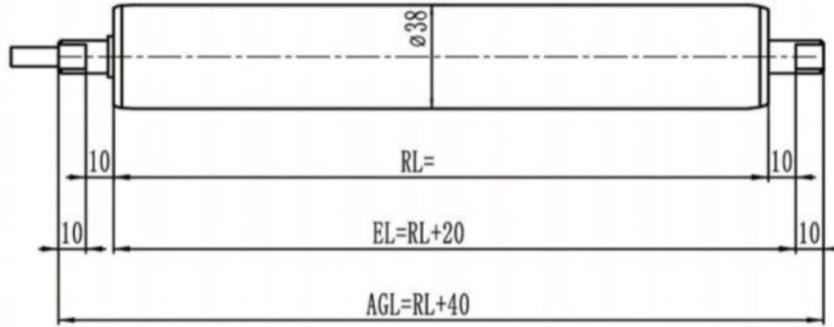
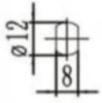
Knurling on the roller surface : it increases the friction between the roller and conveyor belt. Standard knurling in diamond shape or straight knurling available upon request/

DMBL38-20W : DC24V / DC48V Specification

	Input Power	Output Power	Belt Speed	Rotation Speed	Rated Output Torque	Starting Torque	Rated Traction Force	Starting Force
Model	Watt	Watt	Meter/min	RPM	Nm	Nm	N	N
DMBL38	32W	20W	8.4	70.6	2.0	6.1	42.5	127.5
DMBL38	32W	20W	15.9	133.3	1.1	3.2	22.5	67.5
DMBL38	32W	20W	22.6	189.5	0.8	2.3	15.8	47.5
DMBL38	32W	20W	30.7	257.1	0.6	1.7	11.7	35.0
DMBL38	32W	20W	82.7	692.3	0.2	0.6	4.3	13.0
DMBL38	32W	20W	116.2	973.0	0.1	0.4	3.1	9.2

DMBL38-32W : Controller : Type B (DC24V / DC48V)

Minimum Roller Dimension		Output Power : 20W					
Model : DMBL38		Belt Speed 3 to 15 meter / min		Belt Speed 16 to 31 meter / min		Belt Speed 38 to 116 meter / min	
Model	Shaft Type	End : Female Threaded	End : Spring	End : Female Threaded	End : Spring	End : Female Threaded	End : Spring
DMBL38	Standard	215	230	208	223	201	216
DMBL38	O-Wheel	--	--	--	--	--	--
DMBL38	Sync Wheel	200	200	193	193	186	186
DMBL38	Poly-V	200	200	193	193	186	186
DMBL38	Sprocket	--	--	--	--	--	--
DMBL38	V-groove in shell	--	--	--	--	--	--
DMBL38	O-groove in shell	Minimum roller length vary due to pressure groove position and spring shaft.					



DMBL76-100W : DC24V / DC48V Specification

	Input Power	Output Power	Belt Speed	Rotation Speed	Rated Output Torque	Starting Torque	Rated Traction Force	Starting Force
Model	Watt	Watt	Meter/min	RPM	Nm	Nm	N	N
DMBL76	160W	100W	9.0	37.5	19.2	57.6	400.0	1199.9
DMBL76	160W	100W	11.2	46.8	15.4	46.2	320.8	962.3
DMBL76	160W	100W	18.3	76.6	9.4	28.2	195.8	587.5
DMBL76	160W	100W	30.3	126.8	5.7	17.0	118.3	355.0
DMBL76	160W	100W	66.1	276.9	2.6	7.8	54.2	162.5
DMBL76	160W	100W	202.3	847.0	0.9	2.6	17.7	53.1
DMBL76	160W	100W	238.8	1,000.0	0.7	2.2	15.0	45.0

DMBL76-160W : Controller : Type D (DC24V / DC48V)

DMBL76-200W : DC24V / DC48V Specification

	Input Power	Output Power	Belt Speed	Rotation Speed	Rated Output Torque	Starting Torque	Rated Traction Force	Starting Force
Model	Watt	Watt	Meter/min	RPM	Nm	Nm	N	N
DMBL76	320W	200W	9.0	37.5	38.4	115.2	400.0	1199.9
DMBL76	320W	200W	11.2	46.8	30.8	92.4	320.8	962.3
DMBL76	320W	200W	18.3	76.6	18.8	56.4	195.8	587.5
DMBL76	320W	200W	30.3	126.8	11.4	34.1	118.3	355.0
DMBL76	320W	200W	66.1	276.9	5.2	15.6	54.2	162.5
DMBL76	320W	200W	202.3	847.0	1.7	5.1	17.7	53.1
DMBL76	320W	200W	238.8	1,000.0	1.4	4.3	15.0	45.0

DMBL76-320W : Controller : Type D (DC24V / DC48V)

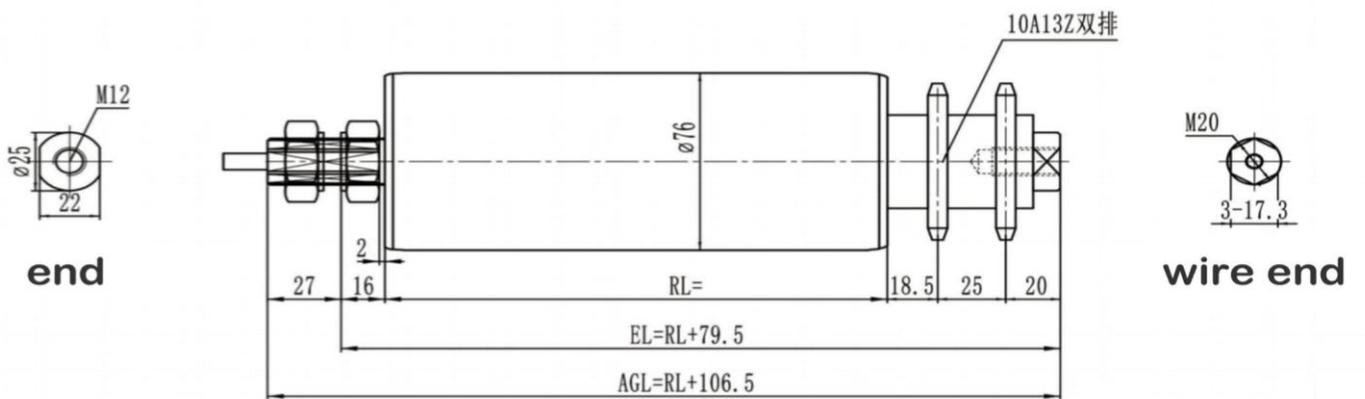
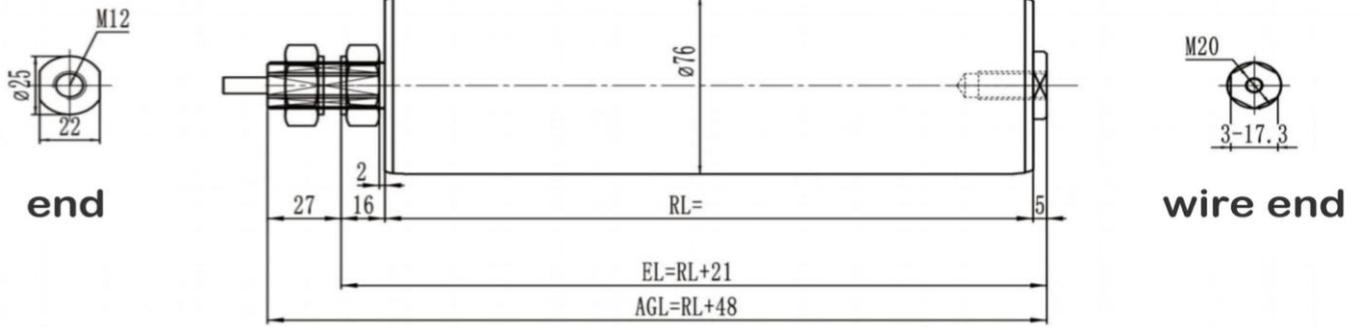
DMBL76-300W : DC24V / DC48V Specification

	Input Power	Output Power	Belt Speed	Rotation Speed	Rated Output Torque	Starting Torque	Rated Traction Force	Starting Force
Model	Watt	Watt	Meter/min	RPM	Nm	Nm	N	N
DMBL76	480W	300W	9.0	37.5	76.8	230.4	402.0	1206.1
DMBL76	480W	300W	11.2	46.8	61.6	184.8	322.4	967.3
DMBL76	480W	300W	18.3	76.6	37.6	112.8	196.0	590.5
DMBL76	480W	300W	30.3	126.8	22.7	68.2	119.0	356.9
DMBL76	480W	300W	66.1	276.9	10.4	31.2	54.5	163.4
DMBL76	480W	300W	202.3	847.0	3.4	10.2	17.8	53.4
DMBL76	480W	300W	238.8	1,000.0	2.9	8.6	15.1	45.2

DMBL76-480W : Controller : Type D (DC24V / DC48V)

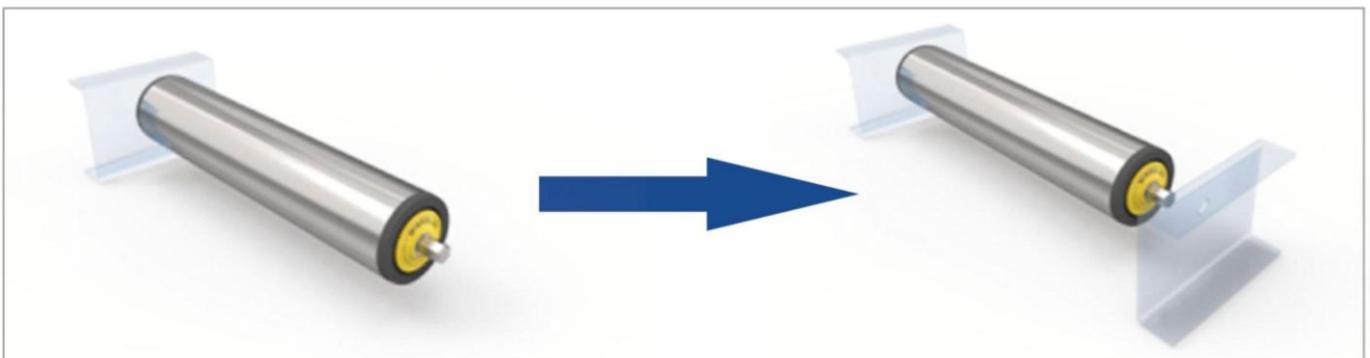
Minimum Roller Dimension		Output Power : 100W				Output Power : 200W			
Model : DMBL76		Belt Speed 8 to 24 meter / min		Belt Speed 25 to 64 meter / min		Belt Speed 13 to 24 meter / min		Belt Speed 25 to 64 meter / min	
Model	Shaft Type	End : Female Threaded	End : Spring	End : Female Threaded	End : Spring	End : Female Threaded	End : Spring	End : Female Threaded	End : Spring
DMBL76	Standard	290	340	290	340	320	370	320	370
DMBL76	O-Wheel	295	295	295	295	330	330	330	330
DMBL76	Sync Wheel	295	295	295	295	330	330	330	330
DMBL76	Poly-V	295	295	295	295	330	330	330	330
DMBL76	Sprocket	295	295	295	295	330	330	330	330
DMBL76	V-groove in shell	295	295	295	295	330	330	330	330
DMBL76	O-groove in shell	Minimum roller length vary due to pressure groove position and spring shaft.							

Minimum Roller Dimension		Output Power : 400W			
Model : DMBL76		Belt Speed 8 to 24 meter / min		Belt Speed 25 to 64 meter / min	
Model	Shaft Type	End : Female Threaded	End : Spring	End : Female Threaded	End : Spring
DMBL76	Standard	320	370	320	370
DMBL76	O-Wheel	330	330	330	330
DMBL76	Sync Wheel	330	330	330	330
DMBL76	Poly-V	330	330	330	330
DMBL76	Sprocket	330	330	330	330
DMBL76	V-groove in shell	330	330	330	330
DMBL76	O-groove in shell	Minimum roller length vary due to pressure groove position and spring shaft.			

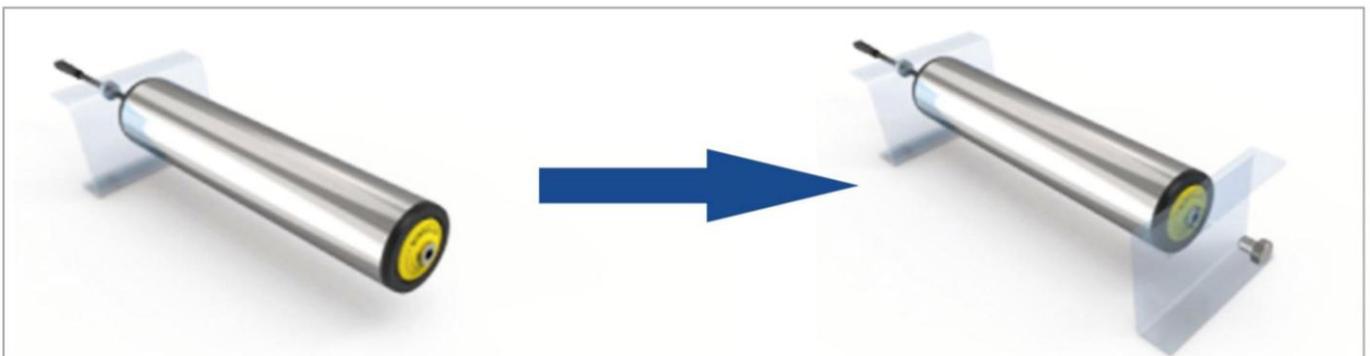


DMBL SERIES – END SHAFT TYPE (DMBL38, DMBL50, DMBL60 and DMBL76)

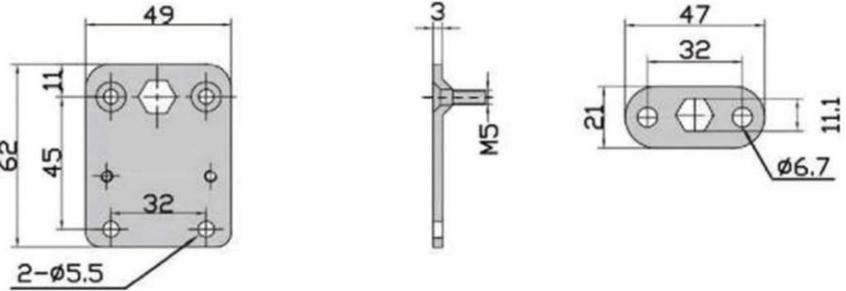
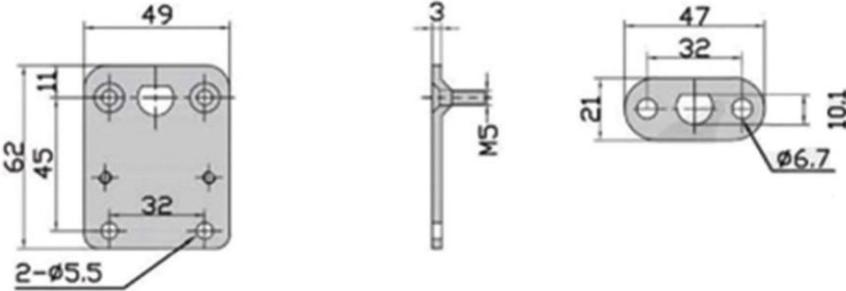
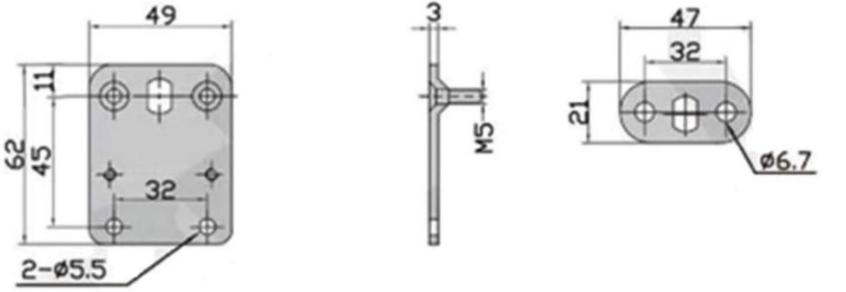
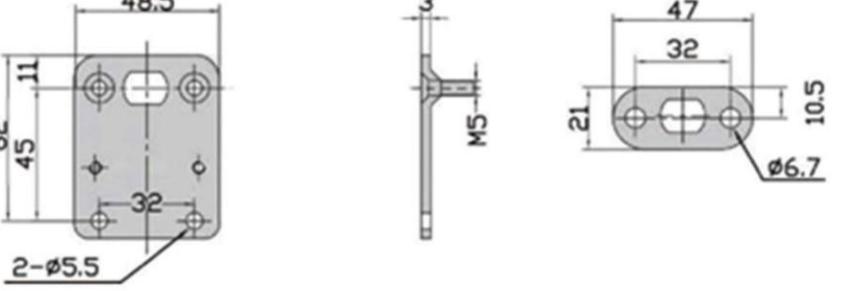
End Shaft – Spring Shaft



End Shaft – M8 Female Thread



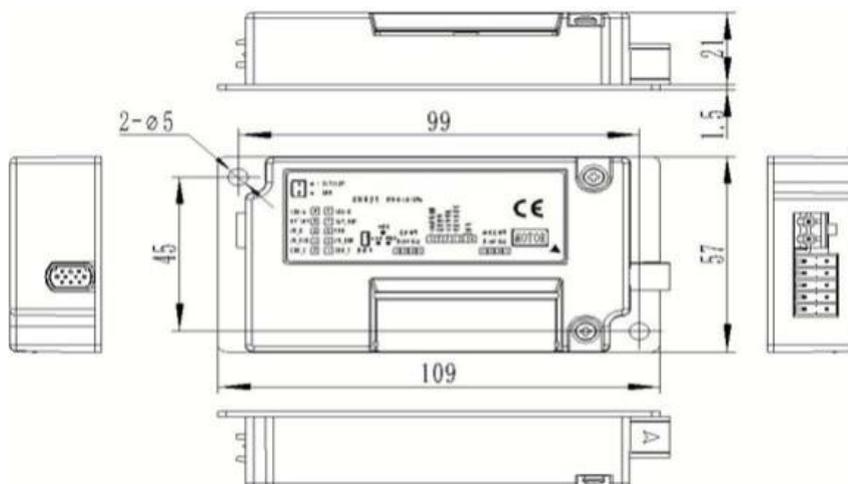
Fixing hardware: use standard fixing bracket to fix the shaft of the cable end

Information	Standard size
<p>C-type base plate and fixing piece ★ Material: 3mm steel plate galvanized ★ The wire end shaft must be locked and cannot be loosened</p>	
<p>D-type base plate and fixing piece ★ Material: 3mm steel plate galvanized ★ The wire end shaft must be locked and cannot be loosened</p>	
<p>H-12 base plate and fixing piece ★ Material: 3mm steel plate galvanized ★ The wire end shaft must be locked and cannot be loosened</p>	
<p>H-15 base plate and fixing piece ★ Material: 3mm steel plate galvanized ★ The wire end shaft must be locked and cannot be loosened</p>	

Type : B (DC24V/48V-120A) and Type D (DC24V/48V-300A)

* Brushless motor roller controller MODBUS-RTU

- Overheating and overcurrent protection of drive card and drum motor
- Internal 10A chip fuse
- Removable power and signal terminals
- 3 status LEDs
- Error and alarm output signal with LED indication
- External switching between NPN and PNP logics
- EBS/Servo brake support
- Support 485 communication
- Selection of default rotation direction (Forward/Reverse)
- Restore the operation signal again
- Open/Closed loop operation for speed control
- PID and rotary speed control mode, 32 dial speed options
- 16 level of acceleration and deceleration speed
- 0~10V external voltage stepless speed regulation
- Multi segment speed can be customized
- Power polarity access error protection
- Standard input voltage range (DC24V/48V). Voltage protection features available (<DC18V and >DC60V)



Rigid chain P-Series



Efficient lifting and easy transportation

The first choice to improve production efficiency

RIGID CHAIN LIFTING PLATFORM

To achieve efficient lifting solutions

Rigid chains, as a key component of modern industrial automation, provide reliability and efficiency for lifting equipment. It is the heart of a large-load, long-stroke lifting platform. It is precisely designed and manufactured with high-quality materials, with high stability and long life.

Features and Benefits

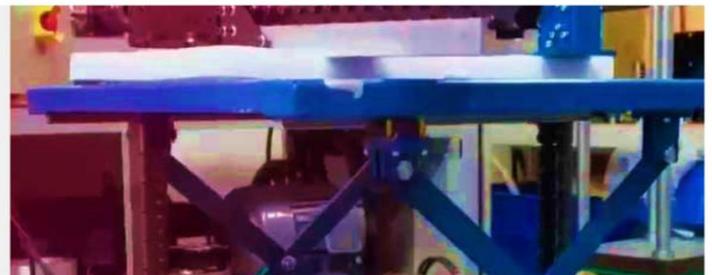
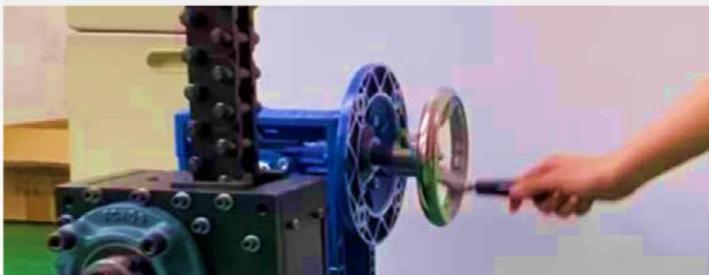
- Heavy load, long stroke
- High stability and high rigidity
- Fully automatic
- Collapse freely and save space
- Tensile strength
- Good repeat positioning Accuracy, which by millimeter control
- The maximum standard speed is 200mm/s, and Customized speed available
- Precise positioning without displacement
- Smooth movement and stable speed
- Strong reliability, long life and low maintenance
- Flexible configuration and easy installation



Application examples

Horizontal direction

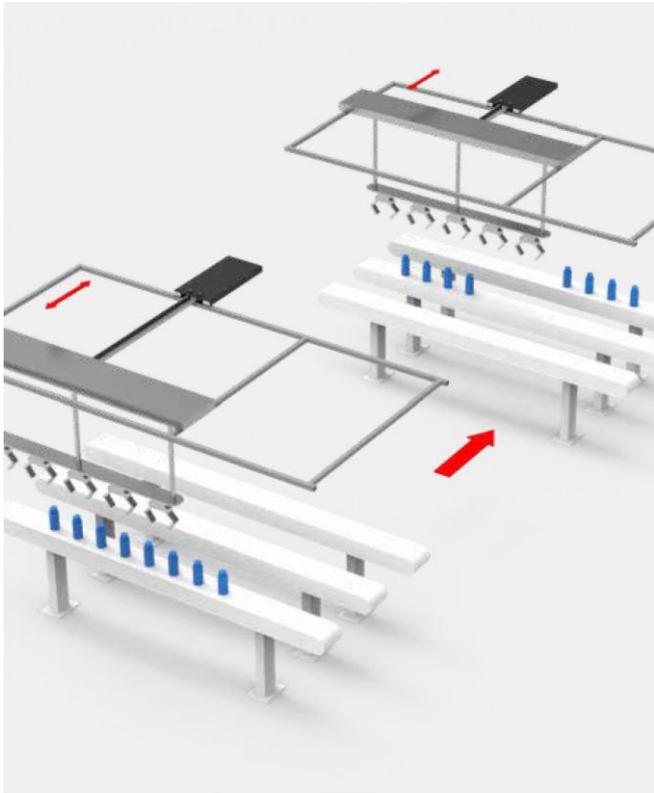
- Maintenance of machine head push and pull
- Mold push and pull
- Cinema screen moves horizontally
- Automatic packaging production line stacking



Vertical direction

- Industrial lifting platform
- Logistics conveyor line stack loading
- Lifting warehouse
- Stereoscopic garage
- Electric vehicle battery swapping platform

LIFTING SYSTEM APPLICATIONS



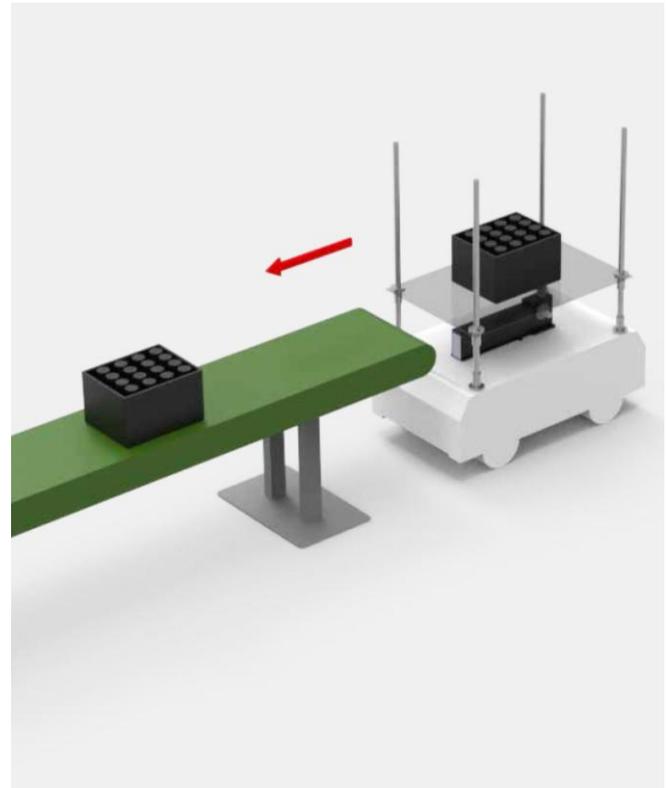
Industrial Push & Pull mechanism



Industrial Push & Pull mechanism



Skylight Sliding mechanism

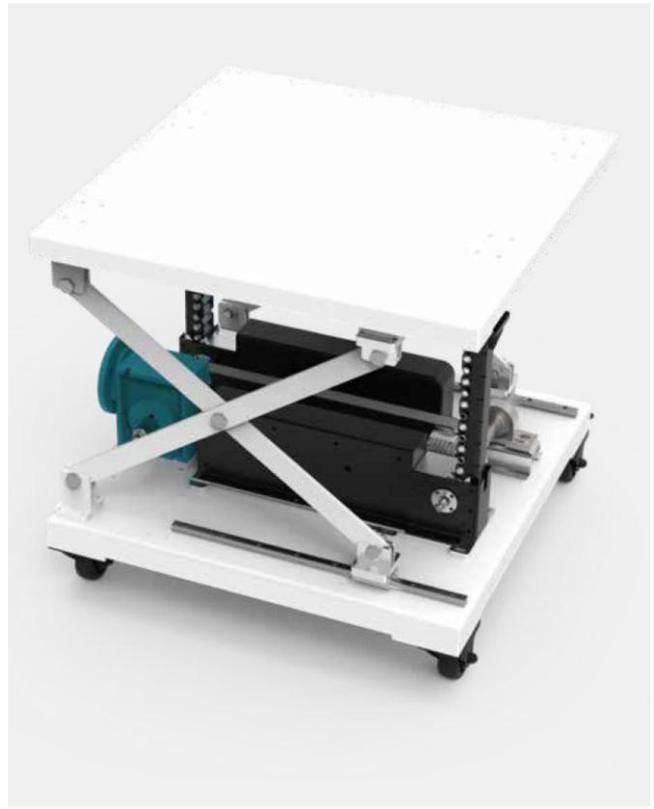


Industrial Lift Table with side support

LIFTING SYSTEM APPLICATIONS



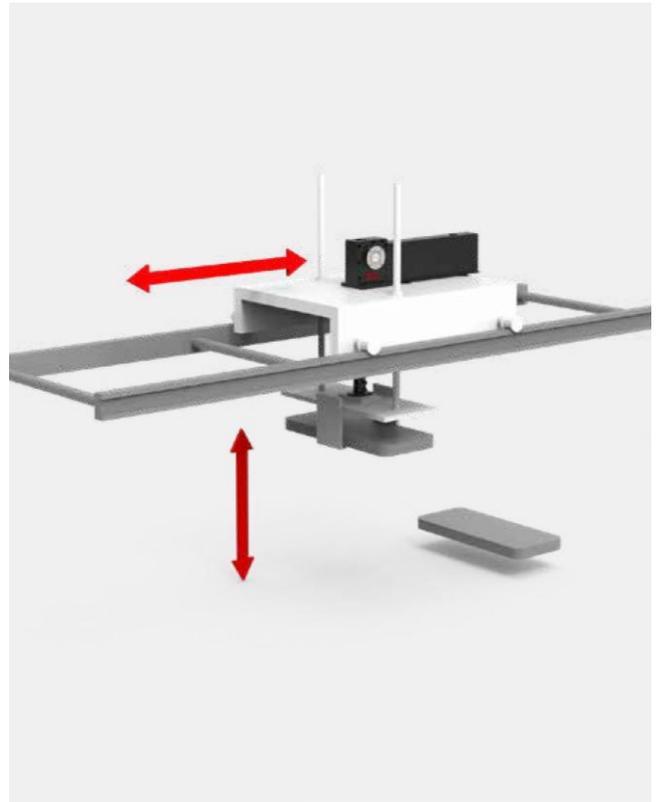
Industrial Lift Table – Heavy Duty



Industrial Lift Table – Standard Duty

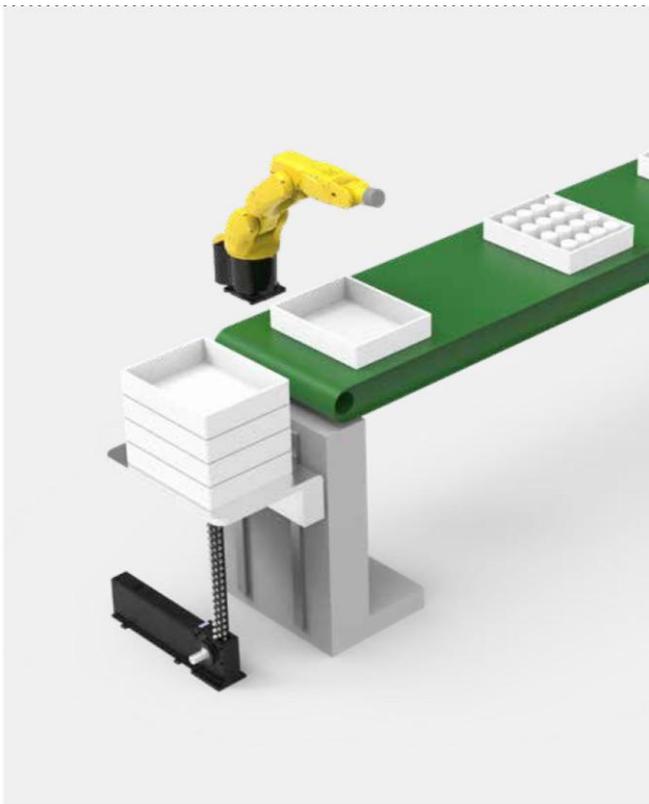


Lifting Platform – Wall Rail Type

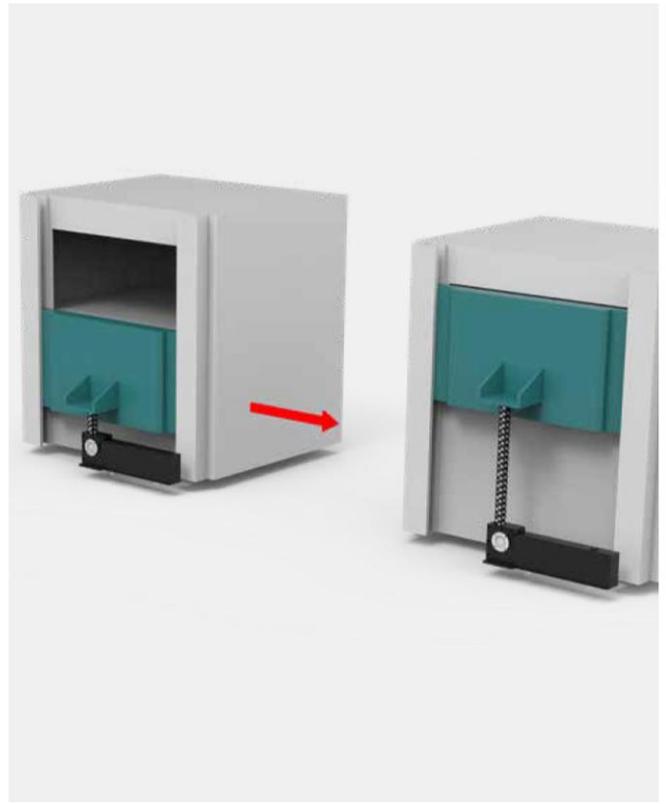


Industrial Lift Table – Light Duty

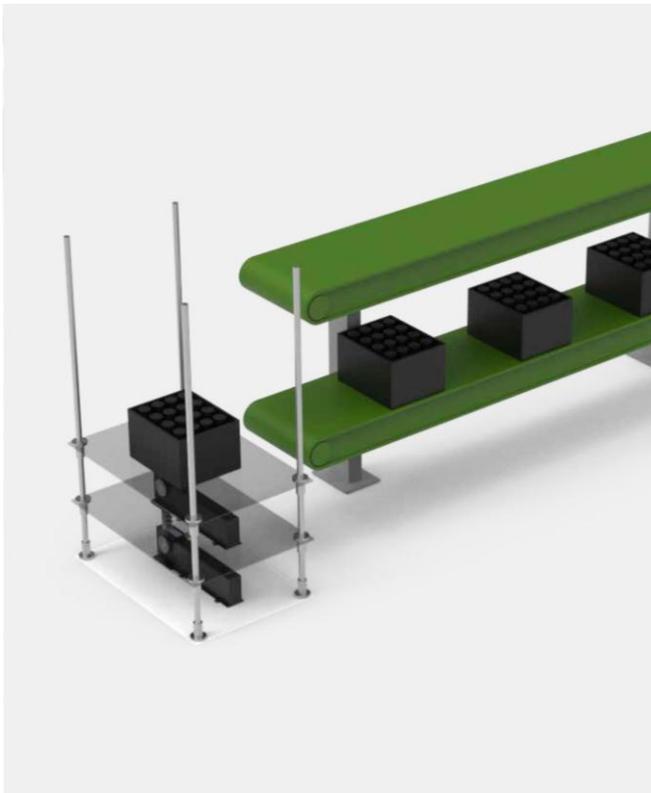
PRODUCTION LINE APPLICATIONS



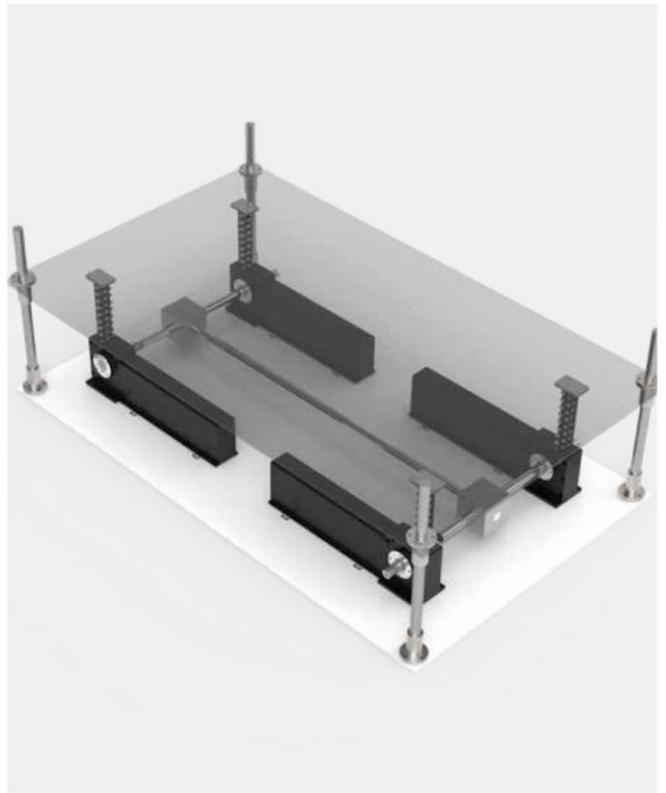
Lifting mechanism for Robotic System



Automatic Door Lifting

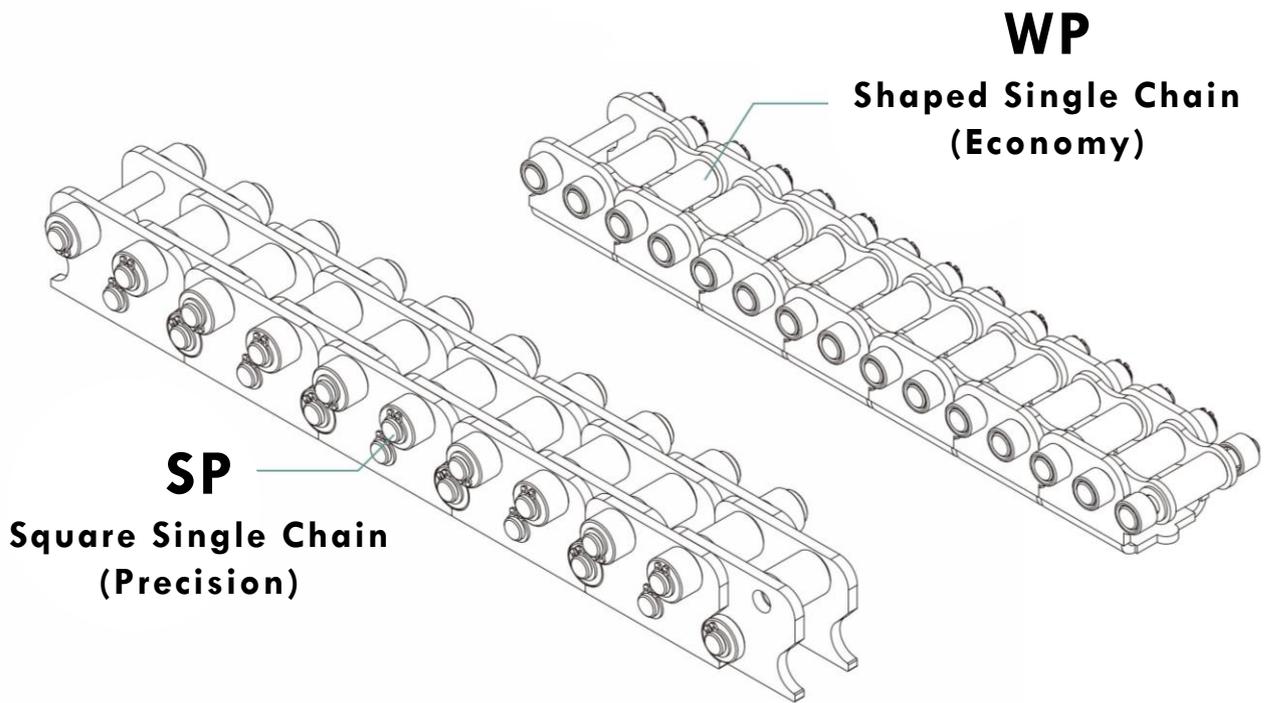


**Lifting mechanism with side support
(Standard Duty)**



**Lifting mechanism with side support
(Heavy Duty)**

CHAIN TYPE : SP / WP



WP	P20	150kg	2000mm	D	840mm
Chain Series	Pitch	Load (kg)	Stroke (mm)	Chain Box (No. of Layer)	Chain Box Length
WP : Economy	P20: Sprocket PCD 36.4mm	50kg to 6000kg	50mm to 5000mm	S : 1-layer box	50mm to 5000mm
SP : Precision	P30: Sprocket PCD 57.3mm			D : 2-layer box	
	P40: Sprocket PCD 76.4mm			T : 3-layer box	
	P50: Sprocket PCD 95.5mm				
PK : Compact Dual Input Shaft	#10: 10mm	50KG	380mm	Default	Default
PKG : Compact + Inline GearMotor	#15: 15mm	100KG	480mm	Default	Default
PKW : Compact + Right Angle Gear Motor	#20: 20mm	300KG	520mm	Default	Default

Note :

P-Series (WP/SP) : Customised Solution is available based on customer requirement

PK-Series : PK-series design is compact and no customization option available.

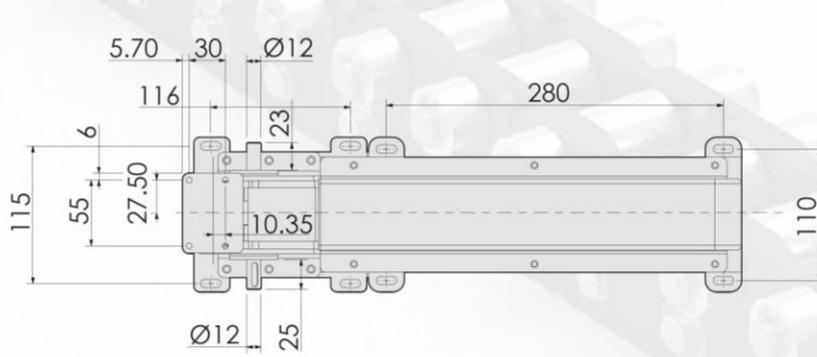
RIGID CHAIN SPECIFICATION

Rigid Chain Service Life : Continuous Duty S1 : 10,000hours

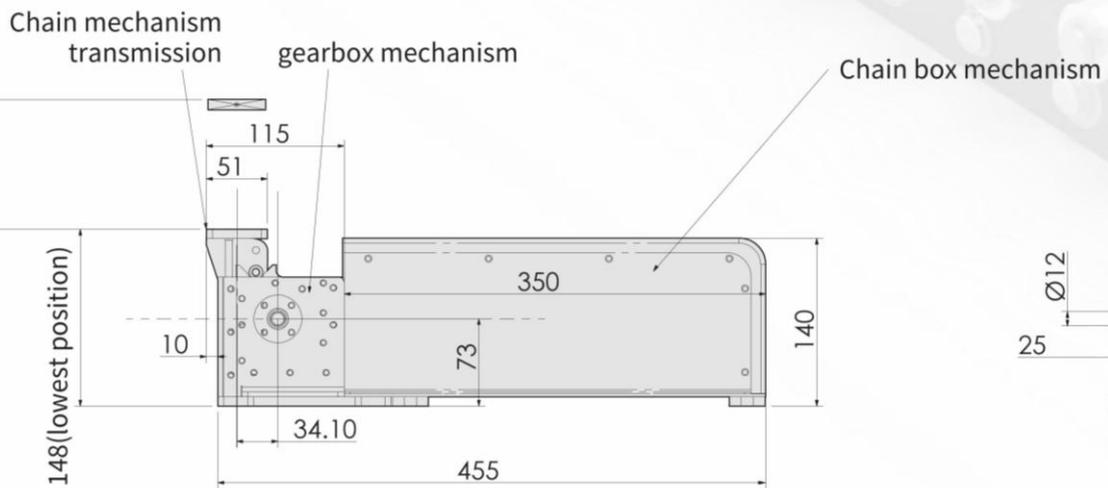
Model	Specification	Unit	Value			
P20	◎ Sprocket PCD	mm	36.4 mm			
	◎ Chain weight	kg/m	6 kg/m			
	◎ Transmission efficiency	%	75 %			
	◎ Repeat positioning accuracy	mm	SP ($\leq \pm 1$ mm) / WP ($\leq \pm 3$ mm)			
	Acceleration allowed	m/s ²	≤ 0.1 m/s ²			
		Stroke m	Dynamic Load Kg	Maximum allowed operating speed (m/s)		
				single layer box	Double layer box	Three-layer box
		≤ 0.25 m	200 kg	0.1 m/s	0.1 m/s	0.075 m/s
		≤ 0.5 m	200 kg	0.1 m/s	0.1 m/s	0.075 m/s
		≤ 0.75 m	200 kg	0.1 m/s	0.1 m/s	0.075 m/s
	≤ 1 m	200 kg	0.1 m/s	0.1 m/s	0.075 m/s	
	≤ 1.25 m	150 kg	0.1 m/s	0.1 m/s	0.075 m/s	
	≤ 1.5 m	150 kg	0.1 m/s	0.1 m/s	0.075 m/s	
	≤ 2 m	150 kg	0.1 m/s	0.1 m/s	0.075 m/s	
	≤ 3 m	150 kg	0.1 m/s	0.1 m/s	0.075 m/s	
P30	◎ Sprocket PCD	mm	57.3 mm			
	◎ Chain weight	kg/m	14 kg/m			
	◎ Transmission efficiency	%	75 %			
	◎ Repeat positioning accuracy	mm	SP ($\leq \pm 1$ mm) / WP ($\leq \pm 3$ mm)			
	Acceleration allowed	m/s ²	≤ 0.1 m/s ²			
		Stroke m	Dynamic Load Kg	Maximum allowed operating speed (m/s)		
				single layer box	Double layer box	Three-layer box
		≤ 0.25 m	1000 kg	0.1 m/s	0.1 m/s	0.075 m/s
		≤ 0.5 m	1000 kg	0.1 m/s	0.1 m/s	0.075 m/s
		≤ 0.75 m	1000 kg	0.1 m/s	0.1 m/s	0.075 m/s
	≤ 1 m	1000 kg	0.1 m/s	0.1 m/s	0.075 m/s	
	≤ 1.25 m	1000 kg	0.1 m/s	0.1 m/s	0.075 m/s	
	≤ 1.5 m	1000 kg	0.1 m/s	0.1 m/s	0.075 m/s	
	≤ 2 m	700 kg	0.1 m/s	0.1 m/s	0.075 m/s	
	≤ 3 m	500 kg	0.1 m/s	0.1 m/s	0.075 m/s	
P40	◎ Sprocket PCD	mm	76.4 mm			
	◎ Chain weight	kg/m	21 kg/m			
	◎ Transmission efficiency	%	80 %			
	◎ Repeat positioning accuracy	mm	SP ($\leq \pm 1$ mm) / WP ($\leq \pm 3$ mm)			
	Acceleration allowed	m/s ²	≤ 0.15 m/s ²			
		Stroke m	Dynamic Load Kg	Maximum allowed operating speed (m/s)		
				single layer box	Double layer box	Three-layer box
		≤ 1 m	3000 kg	0.15 m/s	0.15 m/s	0.15 m/s
		≤ 1.5 m	3000 kg	0.15 m/s	0.15 m/s	0.15 m/s
		≤ 2 m	2550 kg	0.15 m/s	0.15 m/s	0.15 m/s
	≤ 2.5 m	2040 kg	0.15 m/s	0.15 m/s	0.1 m/s	
	≤ 3 m	1500 kg	0.15 m/s	0.15 m/s	0.1 m/s	
P50	◎ Sprocket PCD	mm	95.5 mm			
	◎ Chain weight	kg/m	31 kg/m			
	◎ Transmission efficiency	%	80 %			
	◎ Repeat positioning accuracy	mm	SP ($\leq \pm 1$ mm) / WP ($\leq \pm 3$ mm)			
	Allow acceleration	m/s ²	≤ 0.15 m/s ²			
		Stroke m	Dynamic Load Kg	Maximum allowed operating speed (m/s)		
		≤ 1 m	5000 kg	0.15 m/s		
	≤ 2 m	3000 kg	0.15 m/s			
	≤ 3 m	1000 kg	0.1 m/s			

RIGID CHAIN DIMENSION

P20

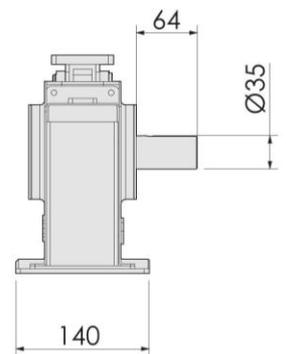
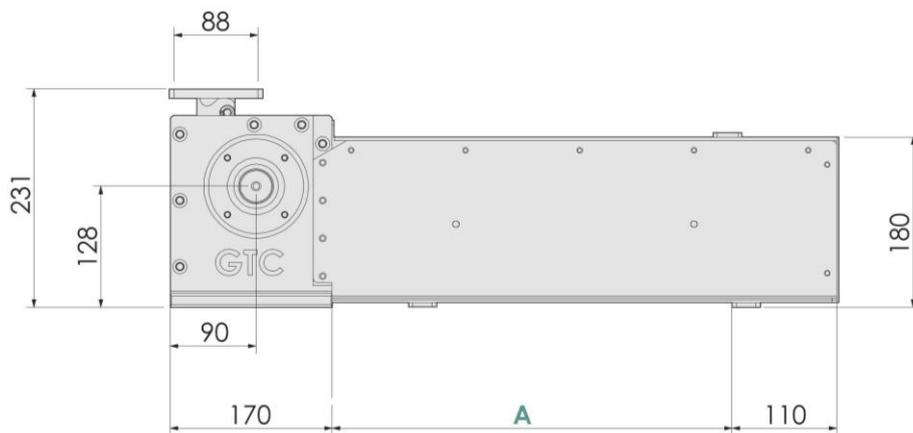
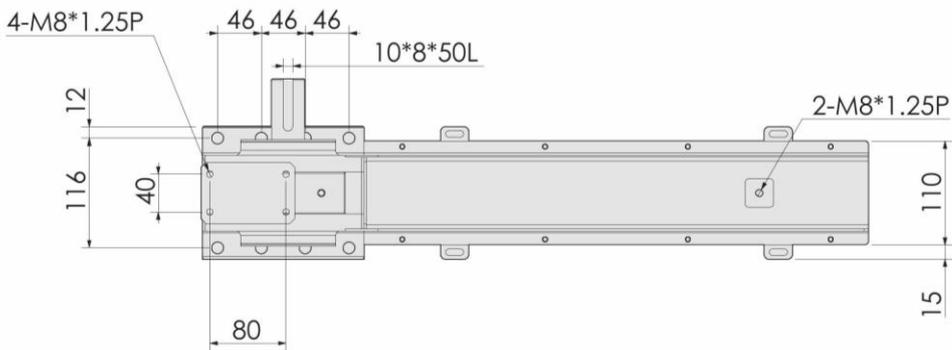


Requires support mechanism
(Maximum stroke 1.5 meters)



RIGID CHAIN DIMENSION

P30

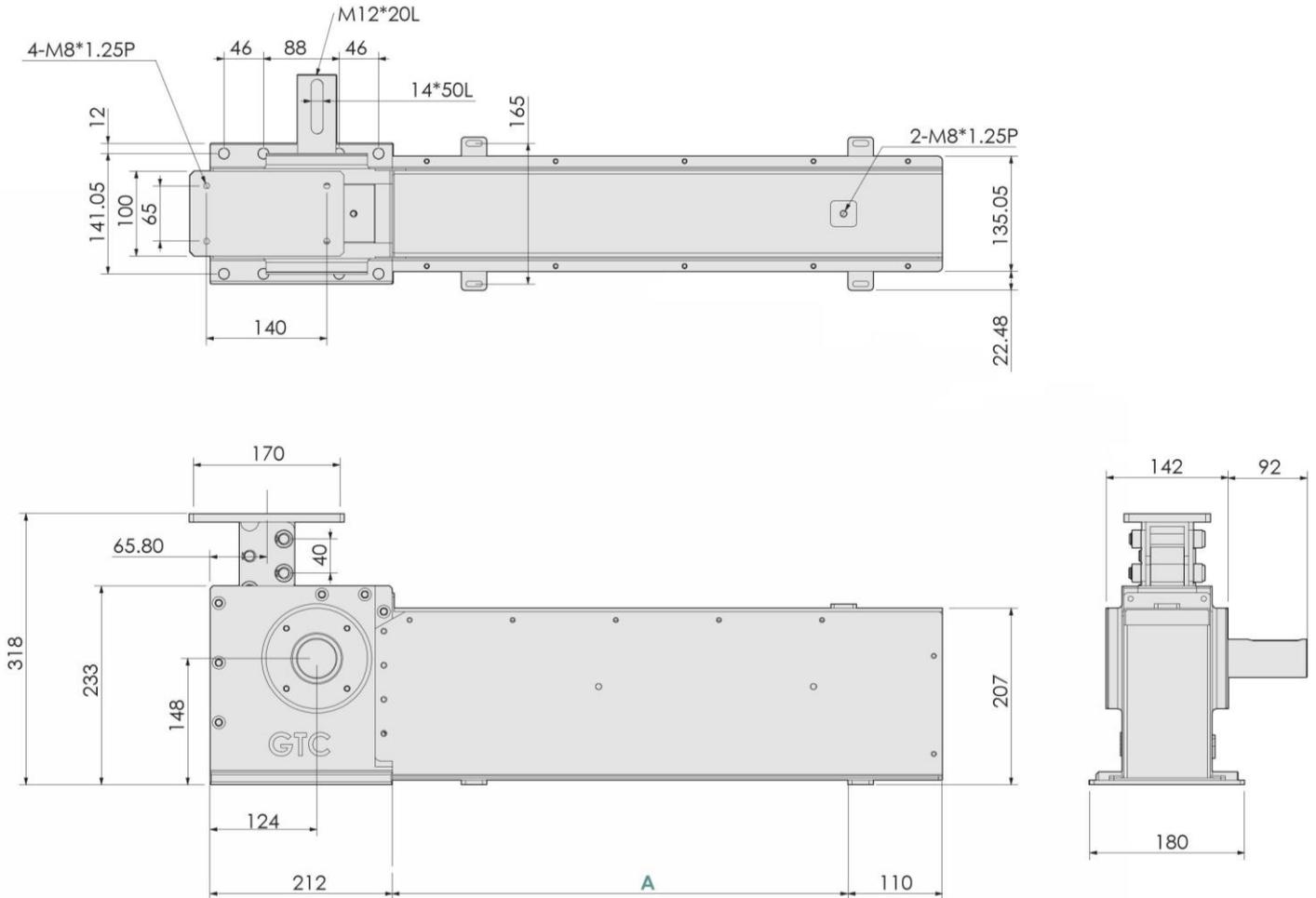


P30 Chain Box Length

Stroke (mm)	500	1000	1500	2000	2500	3000
A (mm)	210	420	630	840	1050	1260

RIGID CHAIN DIMENSION

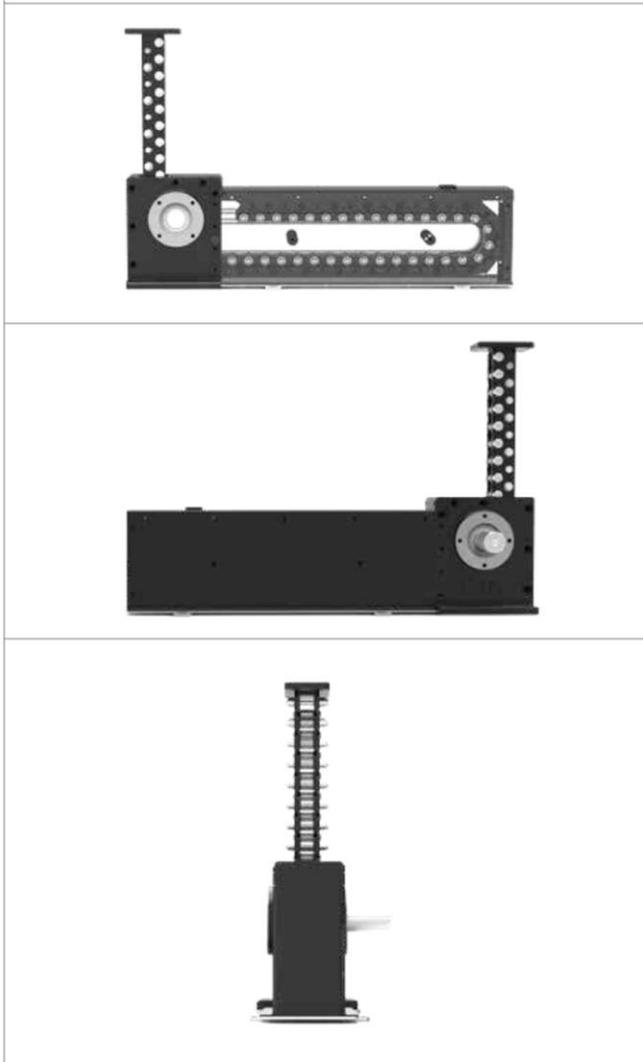
P40



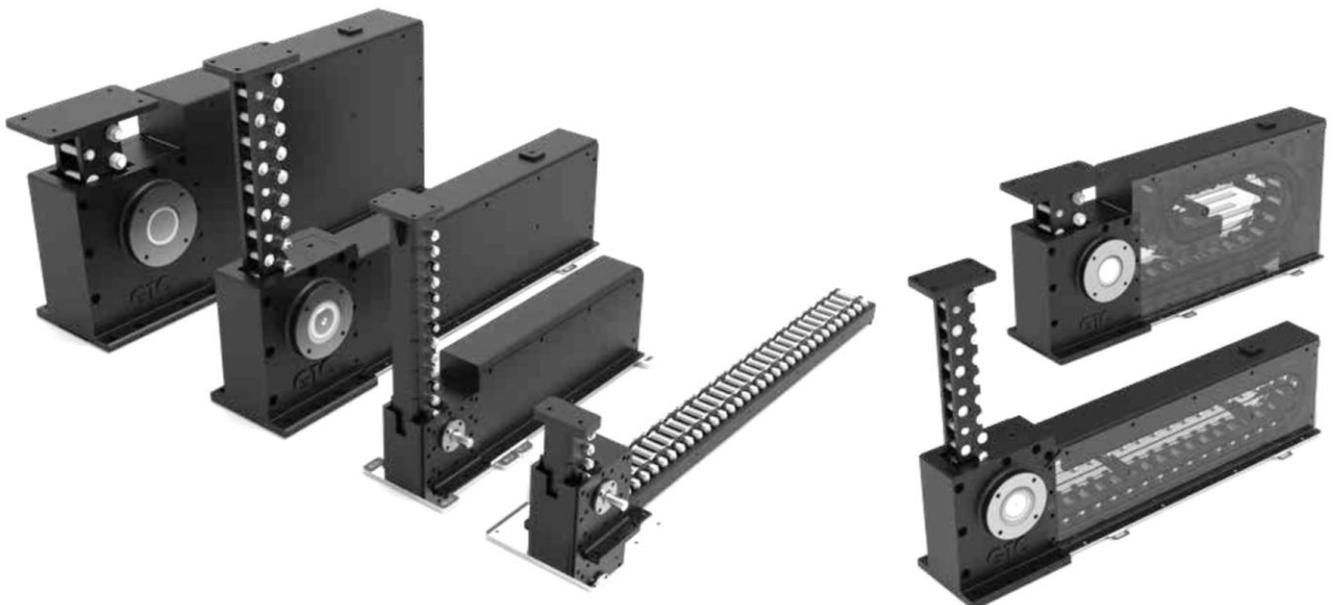
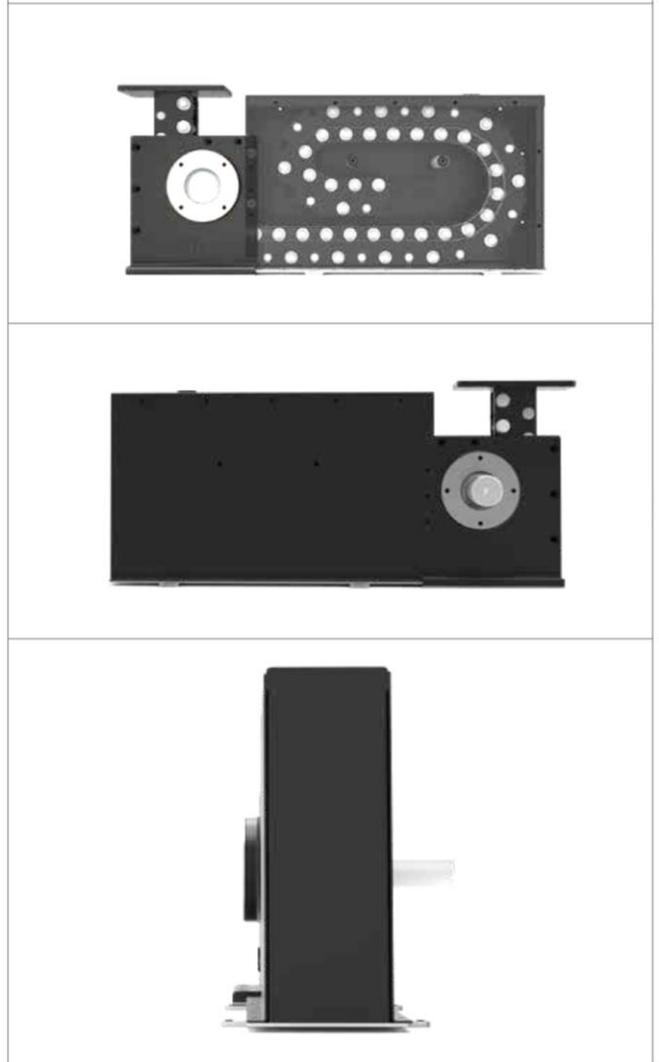
P40 Chain Box Length

Stroke (mm)	500	1000	1500	2000	2500	3000
A (mm)	265	530	795	1060	1325	1590

2-Layer Box



3-Layer Box



PK Series - Compact Rigid Chain Package



**PKW Package
Integrated with
Right Angle
Gear Motor**

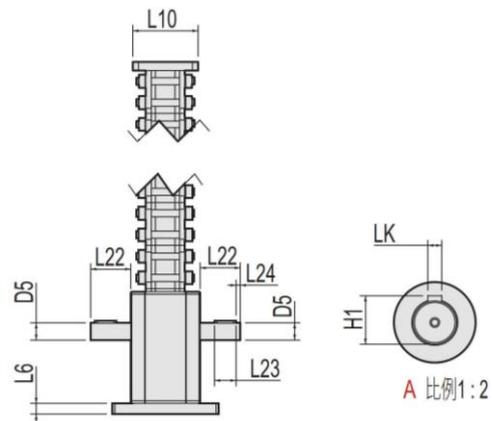
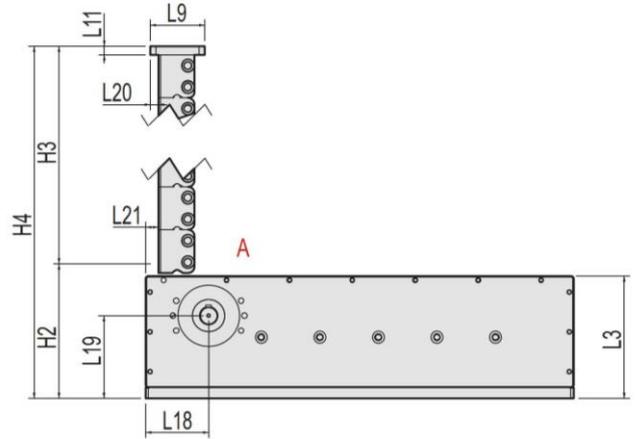
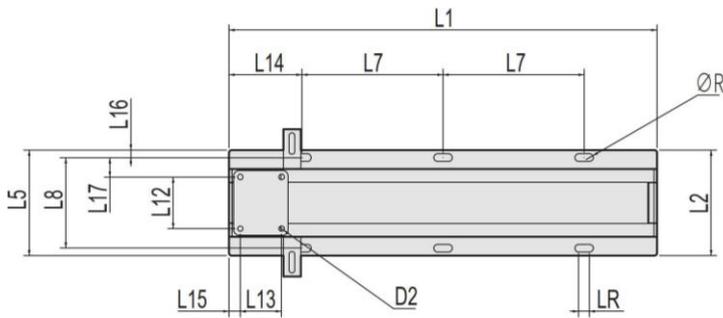
**PKG Package
Integrated with
Inline Gear Motor**

**PK Package
with
Dual Input Shaft**

Specifications											Unit : mm
主要 型號	配置 減速機 規格	最低 高度	最高 高度	行程	節距	節圓 半徑	負重	速度	總比速	配置 電機 功率	淨重
Main Model	Drive Model	Min Height	Max Height	Stroke	Pitch	Pitch Radius	Load Capacity	Speed	Gear Reduction	Motor Power	Net Weight
		(mm)	(mm)	(mm)	(mm)	(mm)	(Kg)	(m/min)	Ratio	(w)	(Kg)
PK10	-	78 mm	458 mm	380mm	10	9.55	50 kg	N/A	N/A	N/A	4 kg
PKG10	GNP40	78 mm	458 mm	380mm	10	9.55	50 kg	0.8 ~ 4 m/min	1/40	100W	6 kg
PKW10	WS42 + GNP40	78 mm	458 mm	380mm	10	9.55	50 kg	0.8 ~ 4 m/min	1/40	100W	5.4 kg
PK15	-	89 mm	569 mm	480mm	15	14.32	100 kg	N/A	N/A	N/A	6 kg
PK15G	GNP60	89 mm	569 mm	480mm	15	14.32	100 kg	1 ~ 6 m/min	1/40	400W	11.5 kg
PK15W	WS60 + GNP60	89 mm	569 mm	480mm	15	14.32	100 kg	1 ~ 6 m/min	1/40	400W	10.3 kg
PK20	-	125 mm	645 mm	520mm	20	19.1	300 kg	N/A	N/A	N/A	1.5 kg
PKG20	GNP90	125 mm	645 mm	520mm	20	19.1	300 kg	6m/min	1/50	750W	24.5 kg
PK20W	WS90 + GNP90	125 mm	645 mm	520mm	20	19.1	300 kg	6m/min	1/50	750W	23 kg

PK10 / PK15 / PK20 (Dual Input Shaft)

Compact Dimension

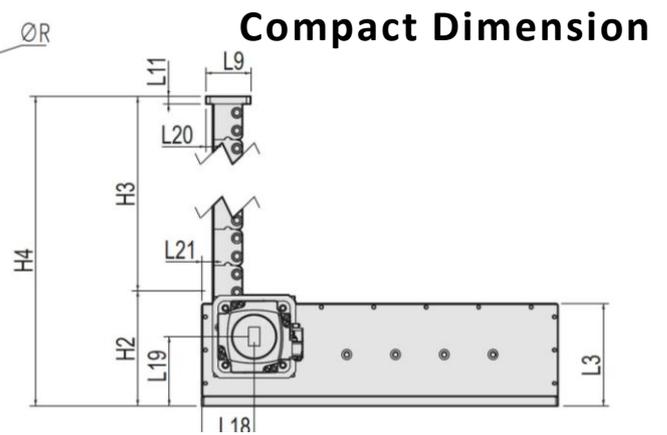
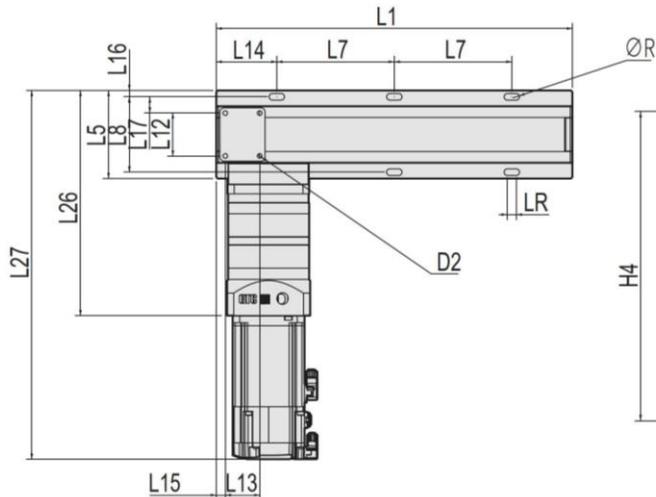


	PK10	PK15	PK20
L1 (L)	280	325	394.5
L2	44	-	-
L3 (H)	64	81	114
L4	120	325	394.5
L5 (W)	88	70	98
L6	4	5	10
L7	100	125	130
L8	68	60	84
L9	35	30	50
L10	35	35	60
L11	6	6	8
L12	28	28	48
L13	25	18	38
L14	10	37.5	67.25
L15	10.65	9.23	10.35
L16	10	5	7
L17	19.75	17	18
L18	40	38	58
L19	38	53.5	77
L20	12	5	7.5
L21	17.65	8.73	11.85
L22	18	18.9	37
L23	10	10	20
L24	2	3	4
L25	-	-	-
L26	-	-	-
L27	-	-	-
LK	3	3	5
R	7	7	7
LR	10	10	10
D1	7	5.5	7
D2	M4*0.7	M4*0.7	M6*1.0
D5 (S)	8	8	16
H1	9.2	9.2	18
H2	78	89	125
H3	380	480	520
H4	458	569	645

Unit : mm

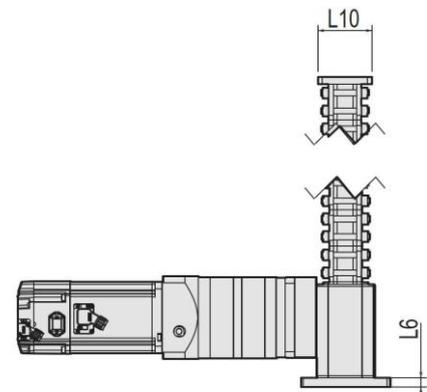


PKG10 / PKG15 / PKG20 (Inline Gear Motor)



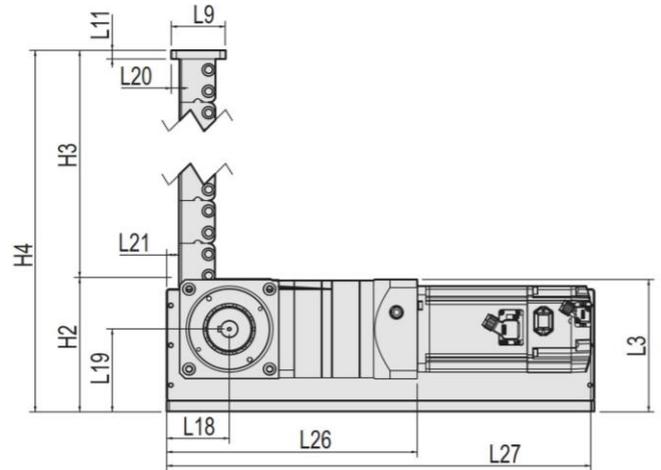
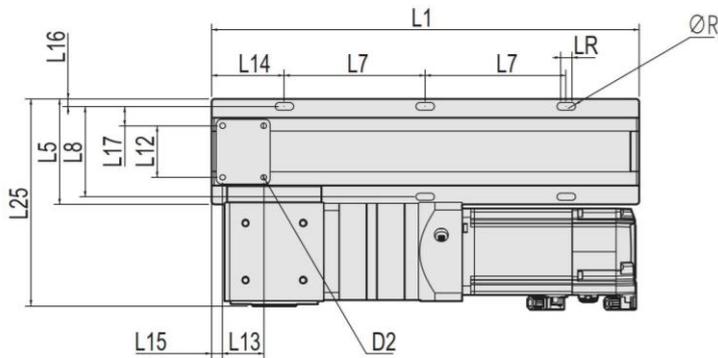
	PKG10	PKG15	PKG20
L1 (L)	280	325	394.5
L2	44	-	-
L3 (H)	64	81	114
L4	120	325	394.5
L5 (W)	127	70	98
L6	4	5	10
L7	100	125	130
L8	107	60	84
L9	35	30	50
L10	35	35	60
L11	6	6	8
L12	28	28	48
L13	25	18	38
L14	10	37.5	67.25
L15	10.65	9.23	10.35
L16	10	5	7
L17	17.75	17	18
L18	40	38	58
L19	38	53.5	77
L20	12	-	7.5
L21	17.65	8.73	11.85
L22	-	-	-
L23	-	-	-
L24	-	-	-
L25	122	167	160
L26	161	174	250.9
L27	283	341	411
LK	-	-	-
R	7	7	7
LR	10	10	10
D1	7	5.5	7
D2	M4*0.7	M4*0.7	M6*1.0
D5 (S)	-	-	-
H1	-	-	-
H2	78	89	125
H3	380	479	520
H4	458	568	645

Unit : mm



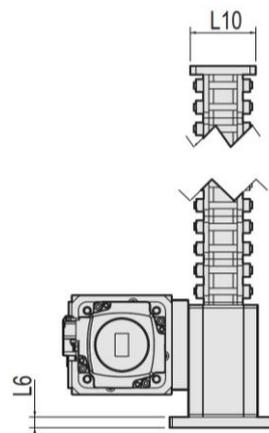
PKW10 / PKW15 / PKW20 (Right-Angle Gear Motor)

Compact Dimension



	PKW10	PKW15	PKW20
L1 (L)	280	325	394.5
L2	44	-	-
L3 (H)	64	83	123
L4	120	325	394.5
L5 (W)	129	70	84
L6	4	5	10
L7	100	125	130
L8	107	60	84
L9	35	30	50
L10	35	35	60
L11	6	6	8
L12	28	28	48
L13	25	18	38
L14	10	37.5	66.93
L15	10.65	9.23	10.35
L16	10	5	7
L17	17.75	17	18
L18	40	38	58
L19	38	53.5	77
L20	12	5.5	7.5
L21	17.65	8.73	11.85
L22	-	-	-
L23	-	-	-
L24	-	-	-
L25	458	569	645
L26	164	164	231
L27	286	331	391
LK	-	-	-
R	7	7	7
LR	10	10	10
D1	7	5.5	7
D2	M4*0.7	M4*0.7	M6*1.0
D5 (S)	-	-	-
H1	-	-	-
H2	78	89	125
H3	380	480	520
H4	458	569	645

Unit : mm



**PKW Package
integrated with
Right Angle
Gear Motor**

STANDARD OR CUSTOMIZE, WE HAVE BOTH!

We serve realistic and even customised products and solutions to meet specific demand of your business including competitive product, technical support, effective after sales services & global product sourcing. These are our commitments toward your business, don't you like it!



MAJOR INDUSTRIAL SUPPLIES & ENGINEERING SERVICES



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Omron • Mitsubishi



PLC & PROGRAMMING
Siemens • Mitsubishi • Siemens



INVERTER (VFD)
Panasonic • Mitsubishi • Siemens



STEPPER MOTOR & DRIVE
Oriental Motor



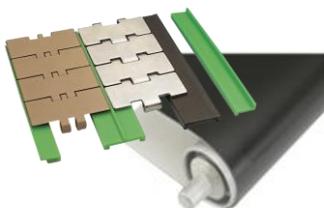
SPEED CONTROL GEAR MOTOR
Oriental Motor • Panasonic • LDS



BEVEL & HYPOID GEARMOTOR
Sumitomo • Nissei • LDS



CLUTCH & BRAKE UNIT
Miki Pulley • Yan Co



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TEFLON & ROUGH TOP BELT
PLASTIC & STAINLESS STEEL
CHAIN**



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