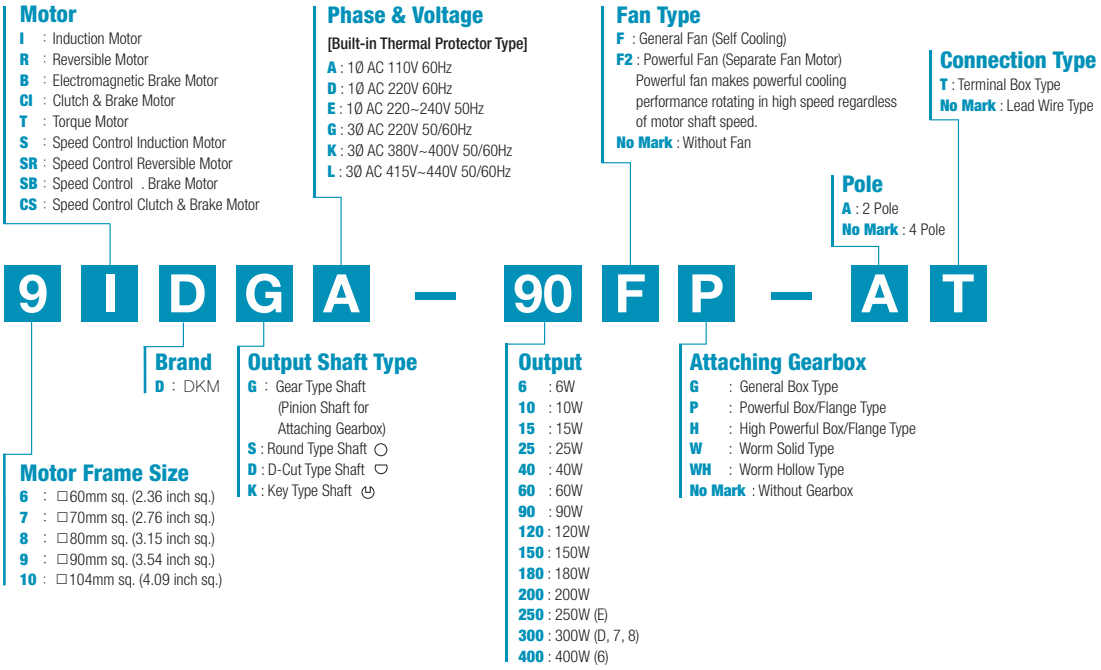
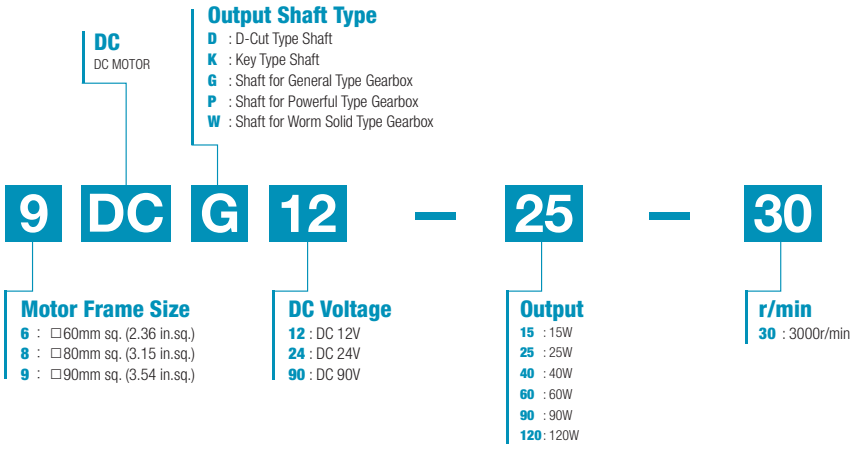
A Information

Product Coding System

AC Motors



DC Motors



Parallel Gearbox

Gearbox Frame Size
- **6** : □60mm sq. (2.36 in.sq.)
- **7** : □70mm sq. (2.76 in.sq.)
- **8** : □80mm sq. (3.15 in.sq.)
- **9** : □90mm sq. (3.54 in.sq.)

Frame Type
- **B** : Box Type□
- **F** : Flange Type
  (Only available for powerful and high powerful type Gearbox)

Bearing Type
- **B** : Ball Bearing
- **BM** : Ball Bearing + Metal Bearing
- **M** : Metal Bearing

9 P B K 36 B H

Gear Type
- **G** : General Gear
- **P** : Powerful Gear
- **H** : High Powerful Gear

Output Shaft Type
- **K** : Key Type
- **D** : D-Cut Type

Gear Ratio
- **36** : 1/36

Input Gear Type
- **H** : Helical Gear

Worm Solid Gearbox

Gearbox Type
- **W** : Worm Solid Type
- **WH** : Worm Hollow Type

Gear Ratio
- **30** : 1/30

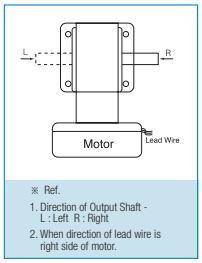
Direction of Output Shaft
- **L** : Left
- **R** : Right
- **RL** : Bi-directional
- ※ No mark in Worm Hollow Type Gearbox

9 W D 30 B L

Gearbox Frame Size
- **8** : □ 80mm sq. (3.15 in.sq.)
- **9** : □ 90mm sq. (3.54 in.sq.)

Brand
- **D** : DKM

Bearing Type
- **B** : Ball Bearing
- ※ No mark in Worm Hollow Type Gearbox



※ Ref.
1. Direction of Output Shaft - L : Left R : Right
2. When direction of lead wire is right side of motor.

Worm Hollow Gearbox

Gearbox Type
- **WH** : Worm Hollow Gearbox

Gear Ratio
- **30** : 1/30

9 WH D 30 — 030

Gearbox Frame Size
- **9** : □ 90mm sq. (4.09 inch.sq.)
- **10** : □ 104mm sq. (4.09 inch.sq.)

Brand
- **D** : DKM

Center Distance between Worm Wheel and Shaft
- **030** : 30mm
- **040** : 40mm

Inter-decimal Gearbox

X10 Inter-decimal Gearbox

9 X D 10 G Z

Gearbox Frame Size
- **8** : □ 80mm sq. (3.15 in.sq.)
- **9** : □ 90mm sq. (3.54 in.sq.)

Brand
- **D** : DKM

Gear Ratio
- **10** : 1/10

- **G** : "G" Type Shaft Motor (40W)
- **P** : "P" Type Shaft Motor (60~120W)

Attaching Gearbox
- **G** : General Type (Helical)
- **P** : Powerful Type
- **H** : High Powerful Type
- **Z** : Worm Hollow Type
- **W** : Worm Solid type

In case of requiring high gear reduction ratio that cannot be generated by single Gearbox, please use Inter-decimal Gearbox with general Gearbox. And please be advised that in this case only revolution speed of output shaft will reduce by 10:1 without increasing of maximum permissible torque.

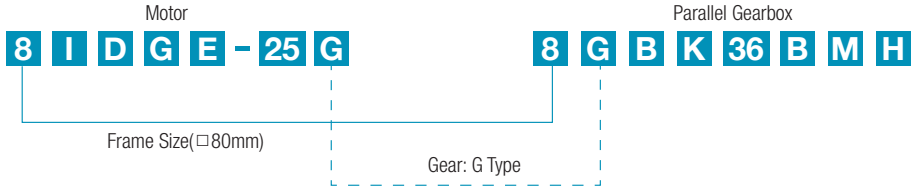
A Information

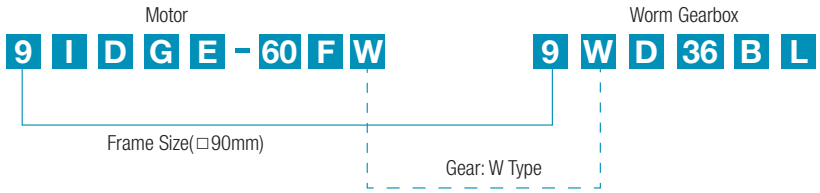
Product Coding System

Assembly of Motor and Gearbox

Motor + Gearbox

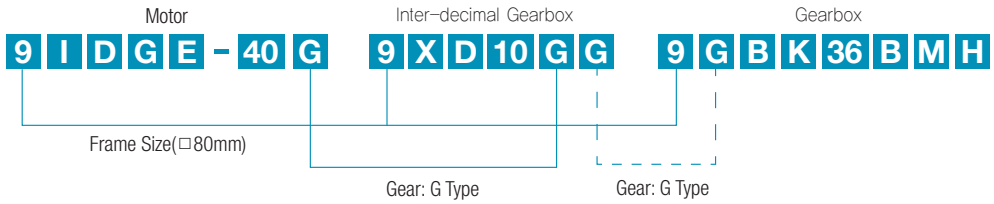
- As shown in the following scheme, motor and Gearbox which have same frame size and gear type could be assembled.





Motor + Inter-decimal Gearbox + Gearbox

- When using an inter-decimal Gearbox together, give attention to the gear types of motor, Gearbox and inter-decimal Gearbox.



- When attaching inter-decimal Gearbox, the output shaft type of the motor is always G Type.
  For example, when using P/H/W/WH type Gearbox, only the gear type of inter-decimal Gearbox is identical with attached Gearbox and the output shaft type of the motor is G type. (Refer to the scheme below.)

AC Motors

Frame Size	Voltage / Output	Induction Motor						Page
		A 1Ø 110V 60Hz	D 1Ø 220V 60Hz	E 1Ø 220~240V 50Hz	G 3Ø 220V 50/60Hz	K 3Ø 380V~400V 50/60Hz	L 3Ø 415V~440V 50/60Hz	
60mm	6W	6ID*A–6□(–T)	6ID*D–6□(–T)	6ID*E–6□(–T)	–	–	–	B-09
70mm	6W	7ID*A–6□(–T)	7ID*D–6□(–T)	7ID*E–6□(–T)	–	–	–	B-11
	10W	7ID*A–10□(–T)	7ID*D–10□(–T)	7ID*E–10□(–T)	–	–	–	B-13
	15W	7ID*A–15□(–T)	7ID*D–15□(–T)	7ID*E–15□(–T)	–	–	–	B-15
80mm	15W	8ID*A–15□(–T)	8ID*D–15□(–T)	8ID*E–15□(–T)	8ID*G–15□(–T)	8ID*K–15□(–T)	8ID*L–15□(–T)	B-17
	25W	8ID*A–25□(–T)	8ID*D–25□(–T)	8ID*E–25□(–T)	8ID*G–25□(–T)	8ID*K–25□(–T)	8ID*L–25□(–T)	B-20
90mm	40W	9ID*A–40□(–T)	9ID*D–40□(–T)	9ID*E–40□(–T)	9ID*G–40□(–T)	9ID*K–40□(–T)	9ID*L–40□(–T)	B-23
	60W	9ID*A–60F□(–T)	9ID*D–60F□(–T)	9ID*E–60F□(–T)	9ID*G–60F□(–T)	9ID*K–60F□(–T)	9ID*L–60F□(–T)	B-26
	90W	9ID*A–90F□(–T)	9ID*D–90F□(–T)	9ID*E–90F□(–T)	9ID*G–90F□(–T)	9ID*K–90F□(–T)	9ID*L–90F□(–T)	B-30
	120W	9ID*A–120F□(–T)	9ID*D–120F□(–T)	9ID*E–120F□(–T)	9ID*G–120F□(–T)	9ID*K–120F□(–T)	9ID*L–120F□(–T)	B-34
	150W	–	–	–	9ID*G–150F□(–T)	9ID*K–150F□(–T)	9ID*L–150F□(–T)	B-38
	180W	–	9ID*D–180F□(–T)	9ID*E–180F□(–T)	–	–	–	B-41
	200W	–	–	–	9ID*G–200F□(–T)	9ID*K–200F□(–T)	9ID*L–200F□(–T)	B-44
104mm	250W	–	–	10IDGE–250F□–T	–	–	–	B-47
	300W	–	10IDGD–300F□–T	–	–	10IDG7–300F□–T	10IDG8–300F□–T	B-50
	400W	–	–	–	10IDG6–400F□–T	–	–	B-53

Frame Size	Voltage / Output	2 Pole Motor						Page
		A 1Ø 110V 60Hz	D 1Ø 220V 60Hz	E 1Ø 220~240V 50Hz	G 3Ø 220V 50/60Hz	K 3Ø 380V~400V 50/60Hz	L 3Ø 415V~440V 50/60Hz	
80mm	15W	8ID*A–15–A(–T)	8ID*D–15–A(–T)	8ID*E–15–A(–T)	8ID*G–15–A(–T)	–	–	B-57
	25W	8ID*A–25–A(–T)	8ID*D–25–A(–T)	8ID*E–25–A(–T)	8ID*G–25–A(–T)	–	–	B-59
90mm	40W	9ID*A–40–A(–T)	9ID*D–40–A(–T)	9ID*E–40–A(–T)	9ID*G–40–A(–T)	9ID*K–40–A(–T)	9ID*L–40–A(–T)	B-61
	60W	9ID*A–60F–A(–T)	9ID*D–60F–A(–T)	9ID*E–60F–A(–T)	9ID*G–60F–A(–T)	9ID*K–60F–A(–T)	9ID*L–60F–A(–T)	B-63
	90W	9ID*A–90F–A(–T)	9ID*D–90F–A(–T)	9ID*E–90F–A(–T)	9ID*G–90F–A(–T)	9ID*K–90F–A(–T)	9ID*L–90F–A(–T)	B-65
	120W	9ID*A–120F–A(–T)	9ID*D–120F–A(–T)	9ID*E–120F–A(–T)	9ID*G–120F–A(–T)	9ID*K–120F–A(–T)	9ID*L–120F–A(–T)	B-67
	150W	–	–	–	9ID*G–150F–A(–T)	9ID*K–150F–A(–T)	9ID*L–150F–A(–T)	B-69
	200W	–	–	–	9ID*G–200F–A(–T)	9ID*K–200F–A(–T)	9ID*L–200F–A(–T)	B-71

Frame Size	Voltage / Output	Reversible Motor						Page
		A 1Ø 110V 60Hz	D 1Ø 220V 60Hz	E 1Ø 220~240V 50Hz	G 3Ø 220V 50/60Hz	K 3Ø 380V~400V 50/60Hz	L 3Ø 415V~440V 50/60Hz	
60mm	6W	6RD*A–6□(–T)	6RD*D–6□(–T)	6RD*E–6□(–T)	–	–	–	B-75
70mm	6W	7RD*A–6□(–T)	7RD*D–6□(–T)	7RD*E–6□(–T)	–	–	–	B-77
	10W	7RD*A–10□(–T)	7RD*D–10□(–T)	7RD*E–10□(–T)	–	–	–	B-79
	15W	7RD*A–15□(–T)	7RD*D–15□(–T)	7RD*E–15□(–T)	–	–	–	B-83
80mm	15W	8RD*A–15□(–T)	8RD*D–15□(–T)	8RD*E–15□(–T)	–	–	–	B-85
	25W	8RD*A–25□(–T)	8RD*D–25□(–T)	8RD*E–25□(–T)	–	–	–	B-88
90mm	40W	9RD*A–40□(–T)	9RD*D–40□(–T)	9RD*E–40□(–T)	–	–	–	B-91
	60W	9RD*A–60F□(–T)	9RD*D–60F□(–T)	9RD*E–60F□(–T)	–	–	–	B-94
	90W	9RD*A–90F□(–T)	9RD*D–90F□(–T)	9RD*E–90F□(–T)	–	–	–	B-98
	120W	9RD*A–120F□(–T)	9RD*D–120F□(–T)	9RD*E–120F□(–T)	–	–	–	B-102

1. Enter the output shaft type of motor (G: Gear Type/S: Round Type/D: D-Cut Type/K: Key Type) in the place * within the motor model name.
2. Enter the model type of attaching Gearbox (G Type/P Type/H Type/W Type/WH Type) in the box (□) within the motor model name.
3. When using terminal box type motor, '-T' is added to the end of the motor model name.
4. All models contain a built-in thermal protector.

A Information

Products Lineup

AC Motors

Frame Size	Voltage / Output	Brake Motor						Page
		A 1Ø 110V 60Hz	D 1Ø 220V 60Hz	E 1Ø 220~240V 50Hz	G 3Ø 220V 50/60Hz	K 3Ø 380V~400V 50/60Hz	L 3Ø 415V~440V 50/60Hz	
70mm	6W	7BD*A–6□(–T)	7BD*D–6□(–T)	7BD*E–6□(–T)	–	–	–	B-107
	10W	7BD*A–10□(–T)	7BD*D–10□(–T)	7BD*E–10□(–T)	–	–	–	B-109
	15W	7BD*A–15□(–T)	7BD*D–15□(–T)	7BD*E–15□(–T)	–	–	–	B-111
80mm	15W	8BD*A–15□(–T)	8BD*D–15□(–T)	8BD*E–15□(–T)	8BD*G–15□(–T)	8BD*K–15□(–T)	8BD*L–15□(–T)	B-113
	25W	8BD*A–25□(–T)	8BD*D–25□(–T)	8BD*E–25□(–T)	8BD*G–25□(–T)	8BD*K–25□(–T)	8BD*L–25□(–T)	B-115
90mm	40W	9BD*A–40□(–T)	9BD*D–40□(–T)	9BD*E–40□(–T)	9BD*G–40□(–T)	9BD*K–40□(–T)	9BD*L–40□(–T)	B-116
	60W	9BD*A–60F□(–T)	9BD*D–60F□(–T)	9BD*E–60F□(–T)	9BD*G–60F□(–T)	9BD*K–60F□(–T)	9BD*L–60F□(–T)	B-121
	90W	9BD*A–90F□(–T)	9BD*D–90F□(–T)	9BD*E–90F□(–T)	9BD*G–90F□(–T)	9BD*K–90F□(–T)	9BD*L–90F□(–T)	B-124
	120W	9BD*A–120F□(–T)	9BD*D–120F□(–T)	9BD*E–120F□(–T)	9BD*G–120F□(–T)	9BD*K–120F□(–T)	9BD*L–120F□(–T)	B-128
	150W	–	–	–	9BD*G–150F□(–T)	9BD*K–150F□(–T)	9BD*L–150F□(–T)	B-132
	180W	–	9BD*D–180F□(–T)	9BD*E–180F□(–T)	–	–	–	B-136
	200W	–	–	–	9BD*G–200F□(–T)	9BD*K–200F□(–T)	9BD*L–200F□(–T)	B-142

Frame Size	Voltage / Output	Clutch & Brake Motor						Page
		A 1Ø 110V 60Hz	D 1Ø 220V 60Hz	E 1Ø 220~240V 50Hz	G 3Ø 220V 50/60Hz	K 3Ø 380V~400V 50/60Hz	L 3Ø 415V~440V 50/60Hz	
80mm	15W	8CID*A–15□(–T)	8CID*D–15□(–T)	8CID*E–15□(–T)	8CID*G–15□(–T)	8CID*K–15□(–T)	8CID*L–15□(–T)	B-149
	25W	8CID*A–25□(–T)	8CID*D–25□(–T)	8CID*E–25□(–T)	8CID*G–25□(–T)	8CID*K–25□(–T)	8CID*L–25□(–T)	B-151
90mm	40W	9CID*A–40□(–T)	9CID*D–40□(–T)	9CID*E–40□(–T)	9CID*G–40□(–T)	9CID*K–40□(–T)	9CID*L–40□(–T)	B-153
	60W	9CID*A–60F2□(–T)	9CID*D–60F2□(–T)	9CID*E–60F2□(–T)	9CID*G–60F2□(–T)	9CID*K–60F2□(–T)	9CID*L–60F2□(–T)	B-155
	90W	9CID*A–90F2□(–T)	9CID*D–90F2□(–T)	9CID*E–90F2□(–T)	9CID*G–90F2□(–T)	9CID*K–90F2□(–T)	9CID*L–90F2□(–T)	B-157
	120W	9CID*A–120F2□(–T)	9CID*D–120F2□(–T)	9CID*E–120F2□(–T)	9CID*G–120F2□(–T)	9CID*K–120F2□(–T)	9CID*L–120F2□(–T)	B-159

Frame Size	Voltage / Output	Torque Motor						Page
		A 1Ø 110V 60Hz	D 1Ø 220V 60Hz	E 1Ø 220~240V 50Hz	G 3Ø 220V 50/60Hz	K 3Ø 380V~400V 50/60Hz	L 3Ø 415V~440V 50/60Hz	
70mm	6W	7TD*A–6□(–T)	7TD*D–6□(–T)	7TD*E–6□(–T)	–	–	–	B-165
80mm	10W	8TD*A–10□(–T)	8TD*D–10□(–T)	8TD*E–10□(–T)	–	–	–	B-167
90mm	20W	9TD*A–20F2□(–T)	9TD*D–20F2□(–T)	9TD*E–20F2□(–T)	–	–	–	B-169
	30W	9TD*A–30F2□(–T)	9TD*D–30F2□(–T)	9TD*E–30F2□(–T)	–	–	–	B-171
	40W	9TD*A–40F2□(–T)	9TD*D–40F2□(–T)	9TD*E–40F2□(–T)	–	–	–	B-173

1. Enter the output shaft type of motor (G: Gear Type/S: Round Type/D: D-Cut Type/K: Key Type) in the place * within the motor model name.
2. Enter the model type of attaching Gearbox (G Type/P Type/H Type/W Type/WH Type) in the box (□) within the motor model name.
3. All models contain a built-in thermal protector.

Frame Size	Voltage / Output	Speed Control Induction Motor						Page
		A 1Ø 110V 60Hz	D 1Ø 220V 60Hz	E 1Ø 220~240V 50Hz	G 3Ø 220V 50/60Hz	K 3Ø 380V~400V 50/60Hz	L 3Ø 415V~440V 50/60Hz	
60mm	6W	6SD*A-6□(-T)	6SD*D-6□(-T)	6SD*E-6□(-T)	-	-	-	B-187
70mm	6W	7SD*A-6□(-T)	7SD*D-6□(-T)	7SD*E-6□(-T)	-	-	-	B-189
	10W	7SD*A-10□(-T)	7SD*D-10□(-T)	7SD*E-10□(-T)	-	-	-	B-192
	15W	7SD*A-15□(-T)	7SD*D-15□(-T)	7SD*E-15□(-T)	-	-	-	B-195
80mm	15W	8SD*A-15□(-T)	8SD*D-15□(-T)	8SD*E-15□(-T)	-	-	-	B-198
	25W	8SD*A-25□(-T)	8SD*D-25□(-T)	8SD*E-25□(-T)	-	-	-	B-201
90mm	40W	9SD*A-40□(-T)	9SD*D-40□(-T)	9SD*E-40□(-T)	-	-	-	B-204
	60W	9SD*A-60F2□(-T)	9SD*D-60F2□(-T)	9SD*E-60F2□(-T)	-	-	-	B-207
	90W	9SD*A-90F2□(-T)	9SD*D-90F2□(-T)	9SD*E-90F2□(-T)	-	-	-	B-211
	120W	9SD*A-120F2□(-T)	9SD*D-120F2□(-T)	9SD*E-120F2□(-T)	-	-	-	B-215
	180W	-	9SD*D-180F2□(-T)	9SD*E-180F2□(-T)	-	-	-	B-219

Frame Size	Voltage / Output	Speed Control Reversible Motor						Page
		A 1Ø 110V 60Hz	D 1Ø 220V 60Hz	E 1Ø 220~240V 50Hz	G 3Ø 220V 50/60Hz	K 3Ø 380V~400V 50/60Hz	L 3Ø 415V~440V 50/60Hz	
70mm	6W	7SRD*A-6□(-T)	7SRD*D-6□(-T)	7SRD*E-6□(-T)	-	-	-	B-223
	10W	7SRD*A-10□(-T)	7SRD*D-10□(-T)	7SRD*E-10□(-T)	-	-	-	B-225
	15W	7SRD*A-15□(-T)	7SRD*D-15□(-T)	7SRD*E-15□(-T)	-	-	-	B-227
80mm	15W	8SRD*A-15□(-T)	8SRD*D-15□(-T)	8SRD*E-15□(-T)	-	-	-	B-229
	25W	8SRD*A-25□(-T)	8SRD*D-25□(-T)	8SRD*E-25□(-T)	-	-	-	B-232
90mm	40W	9SRD*A-40□(-T)	9SRD*D-40□(-T)	9SRD*E-40□(-T)	-	-	-	B-235
	60W	9SRD*A-60F2□(-T)	9SRD*D-60F2□(-T)	9SRD*E-60F2□(-T)	-	-	-	B-238
	90W	9SRD*A-90F2□(-T)	9SRD*D-90F2□(-T)	9SRD*E-90F2□(-T)	-	-	-	B-242
	120W	9SRD*A-120F2□(-T)	9SRD*D-120F2□(-T)	9SRD*E-120F2□(-T)	-	-	-	B-246

Frame Size	Voltage / Output	Speed Control Brake Motor						Page
		A 1Ø 110V 60Hz	D 1Ø 220V 60Hz	E 1Ø 220~240V 50Hz	G 3Ø 220V 50/60Hz	K 3Ø 380V~400V 50/60Hz	L 3Ø 415V~440V 50/60Hz	
80mm	15W	8SBD*A-15□(-T)	8SBD*D-15□(-T)	8SBD*E-15□(-T)	-	-	-	B-251
	25W	8SBD*A-25□(-T)	8SBD*D-25□(-T)	8SBD*E-25□(-T)	-	-	-	B-254
90mm	40W	9SBD*A-40□(-T)	9SBD*D-40□(-T)	9SBD*E-40□(-T)	-	-	-	B-257
	60W	9SBD*A-60F2□(-T)	9SBD*D-60F2□(-T)	9SBD*E-60F2□(-T)	-	-	-	B-260
	90W	9SBD*A-90F2□(-T)	9SBD*D-90F2□(-T)	9SBD*E-90F2□(-T)	-	-	-	B-264
	120W	9SBD*A-120F2□(-T)	9SBD*D-120F2□(-T)	9SBD*E-120F2□(-T)	-	-	-	B-268
	180W	-	9SBD*D-180F2□(-T)	9SBD*E-180F2□(-T)	-	-	-	B-272

1. Enter the output shaft type of motor (G: Gear Type/S: Round Type/D: D-Cut Type/K: Key Type) in the place * within the motor model name.
2. Enter the model type of attaching Gearbox (G Type/P Type/H Type/W Type/WH Type) in the box (□) within the motor model name.
3. All models contain a built-in thermal protector.

A Information

Products Lineup

AC Motors

Frame Size	Voltage / Output	Speed Control Clutch & Brake Motor						Page
		A 1Ø 110V 60Hz	D 1Ø 220V 60Hz	E 1Ø 220~240V 50Hz	G 3Ø 220V 50/60Hz	K 3Ø 380V~400V 50/60Hz	L 3Ø 415V~440V 50/60Hz	
80mm	15W	8CSD*A–15□(–T)	8CSD*D–15□(–T)	8CSD*E–15□(–T)	–	–	–	B-277
	25W	8CSD*A–25□(–T)	8CSD*D–25□(–T)	8CSD*E–25□(–T)	–	–	–	B-279
90mm	40W	9CSD*A–40□(–T)	9CSD*D–40□(–T)	9CSD*E–40□(–T)	–	–	–	B-281
	60W	9CSD*A–60F2□(–T)	9CSD*D–60F2□(–T)	9CSD*E–60F2□(–T)	–	–	–	B-283
	90W	9CSD*A–90F2□(–T)	9CSD*D–90F2□(–T)	9CSD*E–90F2□(–T)	–	–	–	B-285
	120W	9CSD*A–120F2□(–T)	9CSD*D–120F2□(–T)	9CSD*E–120F2□(–T)	–	–	–	B-287

1. G : Gear type is only available.
2. Enter the output shaft type of motor (G: Gear Type / K: Key Type) in the place * within the motor model name.
3. Enter the model type of attaching Gearbox (G Type/P Type / H Type / WH Type) in the box (□) within the motor model name.
4. All models contain a built-in thermal protector.

DC Motors

Frame Size	Voltage / Output	DC Motor			Page
		DC 12V	DC 24V	DC 90V	
60mm	15W	6DC*12–15–30	6DC*24–15–30	6DC*90–15–30	C-05
80mm	25W	8DC*12–25–30	8DC*24–25–30	8DC*90–25–30	C-07
	40W	8DC*12–40–30	8DC*24–40–30	8DC*90–40–30	C-09
90mm	60W	9DC*12–60–30	9DC*24–60–30	9DC*90–60–30	C-11
	90W	9DC*12–90–30	9DC*24–90–30	9DC*90–90–30	C-13
	120W	9DC*12–120–30	9DC*24–120–30	9DC*90–120–30	C-15

1. Enter the output shaft type of motor in the place * within the motor model name.
(D: D-Cut Type/K: Key Type/G: Shaft for G Type Gearbox/P: Shaft for P Type Gearbox/W: Shaft for W Type Gearbox)

Gearbox

Type		Frame Size	Gearbox Model	Gear Reduction Ratio	Page
Parallel Gearbox	G Type	60mm	6GBD□MH	3/3.6/5/6/7.5/9/10/12.5/15/18/20/25/30/36/40/50/60/75/90/100/120/150/180/200/250	D-07
		70mm	7GBK□BMH	3/3.6/6/7.5/9/12.5/15/18/25/30/36/50/60/75/90/100/120/150/180	D-07
		80mm	8GBK□BMH	3/3.6/5/6/7.5/9/12.5/15/18/25/30/36/40/50/60/75/90/100/120/150/180/200/250/300/360	D-08
		90mm	9GBK□BMH	2/3/3.6/5/6/7.5/9/10/12.5/15/18/25/30/36/40/50/60/75/90/100/120/150/180	D-09
	P Type	90mm	9PBK□BH/9PFK□BH	2/3/3.6/5/6/7.5/9/12.5/15/18/20/25/30/36/40/50/60/75/90/100/120/150/180	D-10
	H Type	90mm	9HBK□BH/9HFK□BH	3/3.6/6/9/12.5/15/18/20/25/30/36/50/60/75/90/100/120/150/180	D-11
	U Type	104mm	10UBK□BH	3/3.6./5/6/7.5/9/10/12.5/15/18/20/25/30/36/40/50/60/75/90/100/120/150/180	D-12
Worm Gearbox	W Type	80mm	8WD□BL/□BR/□BRL	10/12/15/18/25/30/36/50/60	D-13
		90mm	9WD□BL/□BR/□BRL	10/12/15/18/25/30/36/50/60	D-13
	WH Type	90mm	9WHD□–030	7.5/10/15/20/25/30/40/50/60/80	D-14
		90mm	9WHD□–040	50/60/80/100	D-15
		104mm	10WHD□–040	7.5/10/15/20/25/30/40	D-15
Inter-decimal Gearbox		80mm	8XD10□□	10	D-16
		90mm	9XD10□□	10	D-16

1. Enter the gear ratio in the box (□) within the Gearbox model name.
2. Enter the model type of attaching Gearbox (G/P/H/W/WH) in the place *.

How to Read Motor Specifications

Model 9IDG*-60F□(-T): Gear Type Shaft 9IDD*-60F(-T): D-Cut Type Shaft 9IDK*-60F(-T): Key Type Shaft														
* % ("	' /* % ("	' / 5						$ P O U						
* % (%	' /* % (%	' / 5						$ P O U						
* % (&	' /* % (&	' / 5						$ P O U						
* % ((	' /* % ((	' / 5						$ P O U						
* % (,	' /* % (,	' / 5						$ P O U						
								$ P O U						
								$ P O U						
								$ P O U						

① Output: The amount of work that can be performed in a given period of time. It can be used as a criterion for motor capability.

② Starting Torque: This term refers to the torque generated the instant the motor starts. If the motor is subjected to a friction load smaller than this torque, it will operate.

③ Speed: This is the speed of the motor when the motor is producing rated torque.

④ Current: The current value used by a motor when the motor is producing rated torque.

⑤ Torque: This is the torque created when the motor is operating most efficiently. Though the maximum torque is far greater, rated torque should, from the standpoint of utility, be the highest torque.

How to Read Gearbox Specifications

60Hz

Motor Model	Gearbox Model	감속비	2	3	3.6	5	6	7.5	9	12.5	15	18	20
		r/min	900	600	500	360	300	240	200	144	120	100	90
9IDG□-60FP	9PBK□BH 9PFK□BH	kgfcm	7.0	10.5	12.5	17.4	20.9	26.1	31.4	39.4	47.3	56.7	57.1
		N.m	0.68	1.02	1.23	1.71	2.05	2.56	3.07	3.86	4.63	5.56	5.60
9IDG□-60FH	9HBK□BH 9HFK□BH	kgfcm	–	10.5	12.5	–	20.9	–	31.4	39.4	47.3	56.7	57.1
		N.m		1.02	1.23		2.05		3.07	3.86	4.63	5.56	5.60

Motor Model	Gearbox Model	감속비	25	30	36	40	50	60	75	90	100	120	150	180
		r/min	72	60	50	45	36	30	24	20	18	15	12	10
9IDG□-60FP	9PBK□BH 9PFK□BH	kgfcm	71.4	85.7	102.8	114.2	142.8	171.4	192.2	200.0	200.0	200.0	200.0	200.0
		N.m	7.00	8.40	10.08	11.20	13.99	16.79	18.83	19.60	19.60	19.60	19.60	19.60
9IDG□-60FH	9HBK□BH 9HFK□BH	kgfcm	71.4	85.7	102.8	–	142.8	171.4	192.2	230.6	256.2	300.0	300.0	300.0
		N.m	7.00	8.40	10.08		13.99	16.79	18.83	22.60	25.11	29.40	29.40	29.40

① Permissible Torque: It refers to the value of load torque driven by the Gearbox's output shaft. Each value is shown for the corresponding gear ratio.

② r/min: This refers to the speed of rotation in the Gearbox output shaft. The speeds, depending on gear ratio, are shown in the permissible torque table when the Gearbox is attached. The speed is calculated by dividing the motor's synchronous speed (50Hz: 1,500r/min, 60Hz: 1,800r/min) by the gear ratio. The actual speed, according to the load condition, is 2~20% less than the displayed value.

③ Direction of Rotation: This refers to the direction of rotation viewed from the output shaft. The colored background areas indicate rotation in the same direction as the motor shaft, while the others rotate in the opposite direction. The direction of Gearbox shaft rotation may differ from motor shaft rotation depending on the gear ratio of the Gearbox.