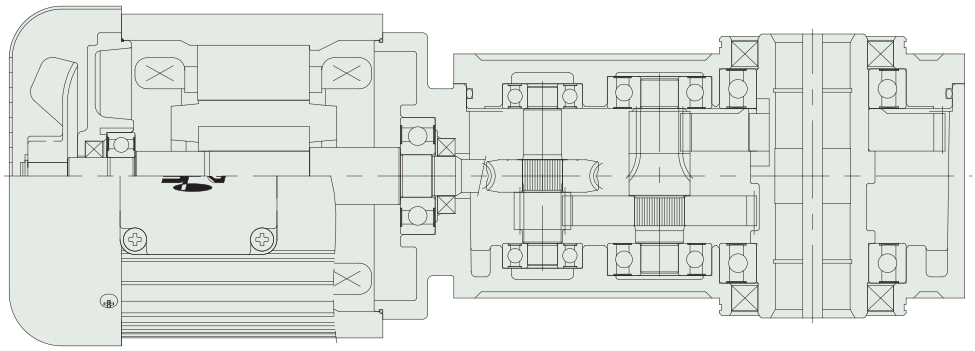
INDUSTRIAL GEARED MOTOR

PC
Series

- ▶ Compact Size, Satisfying Minimum Efficiency System
- ▶ Maximum Allowable Torque 610 N · m
- ▶ High Reliability and Low Noise
- ▶ Waterproof and Anti-Vibration Grade : IP55(or IP40)
- ▶ Insulation Grade : F

PC Series GEARED MOTOR

■ Product Structure



■ Product feature

Motor Output	0.2kW, 0.4kW, 0.75kW, 1.5kW, 2.2kW
Rated Voltage and Frequency	3Ph 220/380V 60Hz, 200V 50Hz, 200/220V 60Hz, 380/400V 50Hz, 400/440V 60Hz
Inner Diameter for Output Shaft (PCH Type)	Ø25, Ø30, Ø35, Ø45, Ø55
Outer Diameter for Output Shaft (PCS Type)	Ø22, Ø28, Ø32, Ø40, Ø50
Motor Efficiency	71.5%, 74.1%, 82.8%, 85.0%, 88.8%
Reduction Gear Ratio	0.2~0.75kW : 1/5~240, 1.5~2.2kW : 1/5~60
Allowable Torque	55.9, 111, 208, 415, 610 N · m
Degrees of Protection	IP55 (BRAKE MODEL: IP40 & IP55)
Insulation Classification	Class F

■ Product Coding

SERIES	MOUNTING	FRAME NO	SIDE		RATIO		EFFICIENCY	TYPE	OUTPUT	VOLTAGE	LOCATION
PC	S	22	R	—	30	—	M	A	020	R4	L

Series Name		
PC	Right Angle Shaft Type	

Frame No		
S	H	Outer diameter for output shaft
22	25	
28	30	
32	35	
40	45	
50	55	

Motor Efficiency Grade		
M	Standard efficiency	0.2kW
		0.4kW
E	High efficiency	0.75kW
		1.5kW
		2.2kW

Motor Output	
020	0.2kW
040	0.4kW
075	0.75kW
150	1.5kW
220	2.2kW

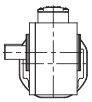
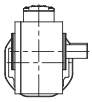
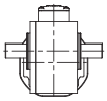
Rated Voltage and Frequency	
R4	3Ph, 220/380V 60Hz
W6	3Ph, 200V 50Hz 200/220V 60Hz
X6	3Ph, 380/400V 50Hz 400/440V 60Hz

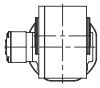
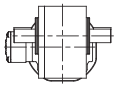
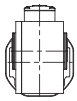
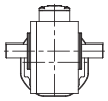
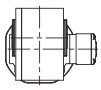
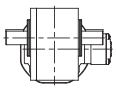
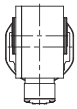
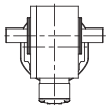
EX)

Reduction Gear Ratio	
5	1/5
10	1/10
30	1/30
100	1/100
200	1/200

Motor Option		
A	Lead wire Box Type	IP55
B	Terminal Box Type	IP55
C	Terminal Box + Brake Type	IP40
D	Terminal Box + Brake 방수 Type	IP55

Installation Structure		
H	Hollow Shaft	
S	Solid Shaft	

Direction for Output Shaft		
Blank		Hollow Shaft
L	Left	
R	Right	
B	Both	

Direction of Terminal Box			
Type		Hollow Shaft	Solid Shaft
L	Direction of 9 o'clock		
T	Direction of 12 o'clock		 Standard
R	Direction of 3 o'clock		
B	Direction of 6 o'clock	 Standard	

※ Some of the above product codes are subject to change depending on continuous release of new products and/or new features.

※ The output of single phased motor is limited from 0.2kW to 0.4kW.

PC Series GEARED MOTOR

■ PCH SERIES MODEL LINEUP

Motor output(4Poles)	Frame	Reduction gear ratio										
3-Phase 0.2kW	25	1/5	1/7.5	1/10	1/12.5	1/15	1/20	1/25	1/30	1/40	1/50	1/60
	30	1/80	1/100	1/120	1/160	1/200	1/240					
3-Phase 0.4kW	30	1/5	1/7.5	1/10	1/12.5	1/15	1/20	1/25	1/30	1/40	1/50	1/60
	35	1/80	1/100	1/120	1/160	1/200	1/240					
High Efficiency Motor: 3-Phase 0.75kW	35	1/5	1/7.5	1/10	1/12.5	1/15	1/20	1/25	1/30	1/40	1/50	1/60
	45	1/80	1/100	1/120	1/160	1/200	1/240					
High Efficiency Motor: 3-Phase 1.5kW	45	1/5	1/7.5	1/10	1/12.5	1/15	1/20	1/25	1/30	1/40	1/50	1/60
High Efficiency Motor: 3-Phase 2.2kW	55	1/5	1/7.5	1/10	1/12.5	1/15	1/20	1/25	1/30	1/40	1/50	1/60

■ PCS SERIES MODEL LINEUP

Motor output(4Poles)	Frame	Reduction gear ratio										
3-Phase 0.2kW	22	1/5	1/7.5	1/10	1/12.5	1/15	1/20	1/25	1/30	1/40	1/50	1/60
	28	1/80	1/100	1/120	1/160	1/200	1/240					
3-Phase 0.4kW	28	1/5	1/7.5	1/10	1/12.5	1/15	1/20	1/25	1/30	1/40	1/50	1/60
	32	1/80	1/100	1/120	1/160	1/200	1/240					
High Efficiency Motor: 3-Phase 0.75kW	32	1/5	1/7.5	1/10	1/12.5	1/15	1/20	1/25	1/30	1/40	1/50	1/60
	40	1/80	1/100	1/120	1/160	1/200	1/240					
High Efficiency Motor: 3-Phase 1.5kW	40	1/5	1/7.5	1/10	1/12.5	1/15	1/20	1/25	1/30	1/40	1/50	1/60
High Efficiency Motor: 3-Phase 2.2kW	50	1/5	1/7.5	1/10	1/12.5	1/15	1/20	1/25	1/30	1/40	1/50	1/60

PC Series

BASIC MODEL

GEARED MOTOR

PC Series

Basic Model & Brake Model

Hollow Shaft

PCH Type

- Output range : 3phase 0.2~2.2kW
- Rated reduction gear ratio : 1/5~1/240

P.77

P.77

Solid Shaft

PCS Type

- Output range : 3phase 0.2~2.2kW
- Rated reduction gear ratio : 1/5~1/240

P.89

P.89

PC Series GEARED MOTOR

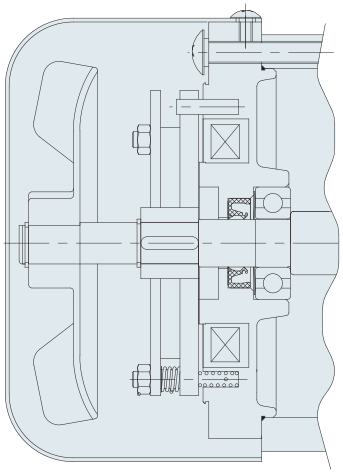
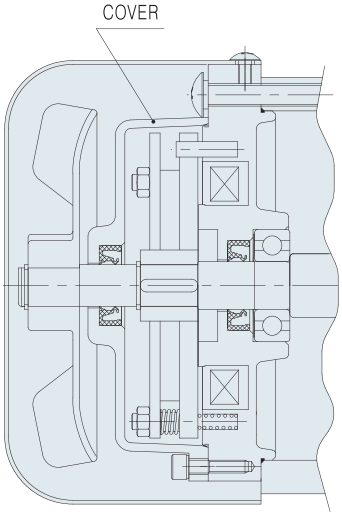
■ Product Coding

SERIES	MOUNTING	FRAME NO		RATIO		EFFICIENCY	TYPE	OUTPUT	VOLTAGE	LOCATION
PC	□	□	—	□	—	□	A &B	□	□	□

Motor Option

BASIC MODEL	A	**Lead wire Box Type** - Basic model without additional devices attached. Lead wires in the lead box to protect contact points. - Connect the lead wires provided on the motor to the power supply - Protection grade : IP55	
	B	**Terminal Box Type** - Basic model without additional devices attached. A model with a built-in terminal strip in the lead box. - Connect power supply to the terminals to start operation - Protection grade : IP55	

BRAKE Attached MODEL

C	D
Terminal Box + Brake Type - Brake attached model with terminal box - Enables immediate stop the motor and accurately hold the load - Protection grade : IP40	**Terminal Box + Brake Closed Type** - Brake attached model with terminal box - Enables immediate stop the motor and accurately hold the load - Brake cover is added - Protection grade : IP55
	

PCH Series

HOLLOW SHAFT TYPE

Basic Model & Brake Model

PCH TYPE

- Output range : 3phase 0.2~2.2kW
- Rated reduction gear ratio: 1/5~1/240

■ Product Coding

SERIES	MOUNTING	FRAME NO		RATIO		EFFICIENCY	TYPE	OUTPUT	VOLTAGE	LOCATION
PC	H	□	—	□	—	□	A&B C&D	□	□	□

PCH Series 3-Phase 0.2kW

■ SPECIFICATION

■ MOTOR

Output (kW)	Model Name	Poles	Voltage (V)	Freq. (Hz)	Rated Load			Duty	Degrees of protection	Insulation Classification	Protective Cooling System
					Current (A)	Speed (r/min)	Efficency (%)				
0.2	PCH□-□-M□020**R4**□	4	220/380	60	1.10/0.60	1715	71.5	CONT.	IP55	F	Totally Enclosed Fan-Cooled
	PCH□-□-M□020**W6**□	4	200	50	1.10	1415	71.7				
			200/220	60	1.00/1.00	1690/1715	72.8/73.2				
	PCH□-□-M□020**X6**□	4	380/400	50	0.60/0.60	1410/1420	71.0/67.2				
			400/440	60	0.50/0.50	1700/1720	70.8/73.4				

- The Brake Geared Motor is divided into 2 models: one is a non-water proof product with IP40 while the other is a waterproof product with IP55.
- The Models with IP40 and IP55 have the same electric characteristics.

■ GEARED MOTOR - 50Hz

Frame No.		25											30					
Reduction gear ratio		5	7.5	10	12.5	15	20	25	30	40	50	60	80	100	120	160	★200	★240
Rotation speed (r/min)		300	200	150	120	100	75	60	50	37.5	30	25	18.8	15	12.5	9.4	7.5	6.3
Allowable torque	kgf · m	0.56	0.83	1.10	1.41	1.70	2.29	2.79	3.40	4.50	5.60	6.79	8.79	11.1	13.3	17.4	17.4	19.7
	N · m	5.49	8.15	10.8	13.8	16.7	22.5	27.4	33.3	44.1	54.9	66.6	86.2	109	130	171	171	193
Allowable O.H.L	kgf	160	175	190	205	220	240	260	270	290	310	310	320	320	320	320	320	320
	N	1568	1715	1862	2009	2156	2352	2548	2646	2842	3038	3038	3136	3136	3136	3136	3136	3136

■ GEARED MOTOR - 60Hz

Frame No.		25											30					
Reduction gear ratio		5	7.5	10	12.5	15	20	25	30	40	50	60	80	100	120	160	★200	★240
Rotation speed (r/min)		360	240	180	144	120	90	72	60	45	36	30	22.5	18	15	11.3	9	7.5
Allowable torque	kgf · m	0.47	0.70	0.92	1.16	1.40	1.90	2.29	2.79	3.79	4.70	5.70	7.29	9.29	11.1	14.5	14.5	16.4
	N · m	4.61	6.82	9.02	11.4	13.7	18.6	22.5	27.4	37.2	46.1	55.9	71.5	91.1	109	142	142	161
Allowable O.H.L	kgf	160	175	190	205	220	240	260	270	290	310	310	320	320	320	320	320	320
	N	1568	1715	1862	2009	2156	2352	2548	2646	2842	3038	3038	3136	3136	3136	3136	3136	3136

Note)
- Permissible Torque is limited for products with a mark "★" of reduction gear ratio
- Permissible O.H.L (allowable overhung load) is based on the central part of the outlet length for output shaft
- Rotation direction of color ■ is opposite of other color □
- Self Locking is unavailable.

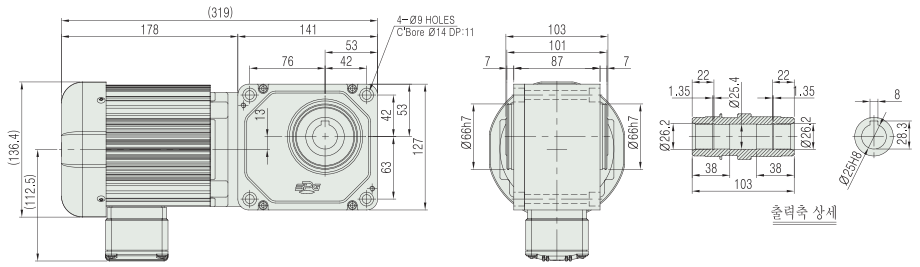
Model Name Coding ➡ 36Page
Specification for output shaft ➡ 70Page
Technological Data ➡ 101Page

■ PCH TYPE DIMENSIONS [Lead wire Box Type]

UNIT = mm

25 Frame

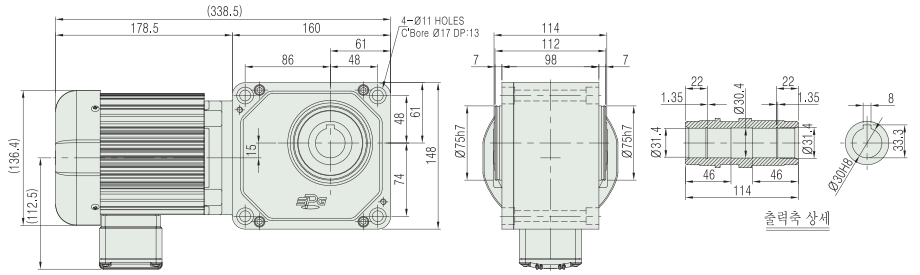
PCH25-5~60-MA020①



Weight : 9 Kg

30 Frame

PCH30-80~240-MA020①



Weight : 11.5 Kg

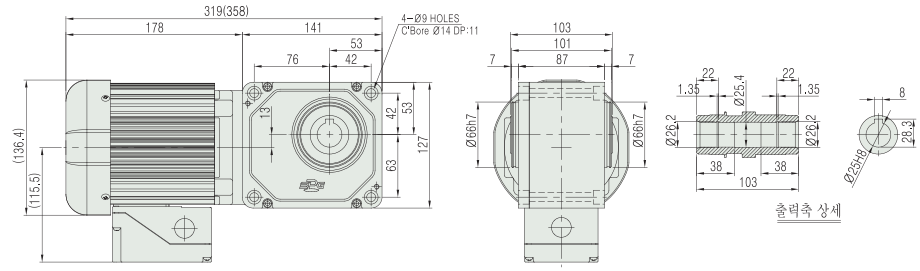
■ PCH TYPE DIMENSIONS [Terminal Box Type]

Note) • Dimensions for IP40 model and IP55 model are the same.
• The brake-attached model is applied to the Terminal Box Type for basic features, but does not apply to the lead wire box type.
• () dimension and weight in dimensions is for brake attached model specification

UNIT = mm

25 Frame

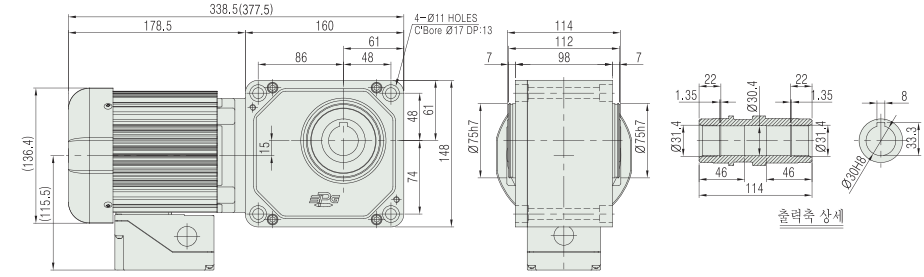
PCH25-5~60-M①020②



Weight : 9 (11) Kg

30 Frame

PCH30-80~240-M①020②



Weight : 11.5 (13) Kg

• **Model type** ① : Motor option (B, C, D)
② : Power (Voltage & Frequency)

Model Name Coding ➡ 36Page
Specification for output shaft ➡ 70Page
Technological Data ➡ 101Page

PCH Series 3-Phase 0.4kW

■ SPECIFICATION

■ MOTOR

Output (kW)	Model Name	Poles	Voltage (V)	Freq. (Hz)	Rated Load			Duty	Degrees of protection	Insulation Classification	Protective Cooling System
					Current (A)	Speed (r/min)	Efficency (%)				
0.4	PCH□-□-M□040**R4**□	4	220/380	60	2.00/1.20	1730	74.1	CONT.	IP55	F	Totally Enclosed Fan-Cooled
	PCH□-□-M□040**W6**□	4	200	50	2.20	1450	74.2				
			200/220	60	1.80/1.90	1735/1745	76.4/75.7				
	PCH□-□-M□040**X6**□	4	380/400	50	1.10/1.10	1425/1430	75.5/74.1				
			400/440	60	1.00/1.00	1710/1725	75.4/75.2				

- The Brake Geared Motor is divided into 2 models: one is a non-water proof product with IP40 while the other is a waterproof product with IP55.
- The Models with IP40 and IP55 have the same electric characteristics.

■ GEARED MOTOR – 50Hz

Frame No.		30											35					
Reduction gear ratio		5	7.5	10	12.5	15	20	25	30	40	50	60	80	100	120	160	★200	★240
Rotation speed (r/min)		300	200	150	120	100	75	60	50	37.5	30	25	18.8	15	12.5	9.4	7.5	6.3
Allowable torque	kgf · m	1.10	1.70	2.29	2.85	3.40	4.50	5.60	6.79	8.99	11.3	13.6	17.6	22.1	26.5	32.7	32.7	35.6
	N · m	10.8	16.7	22.5	27.9	33.3	44.1	54.9	66.6	88.2	111	133	173	217	260	321	321	349
Allowable O.H.L	kgf	200	225	250	265	280	310	330	340	360	360	360	380	380	380	380	380	380
	N	1960	2205	2450	2597	2744	3038	3234	3332	3528	3528	3528	3724	3724	3724	3724	3724	3724

■ GEARED MOTOR – 60Hz

Frame No.		30											35					
Reduction gear ratio		5	7.5	10	12.5	15	20	25	30	40	50	60	80	100	120	160	★200	★240
Rotation speed (r/min)		360	240	180	144	120	90	72	60	45	36	30	22.5	18	15	11.3	9	7.5
Allowable torque	kgf · m	0.92	1.41	1.90	2.35	2.79	3.79	4.70	5.70	7.49	9.39	11.3	14.8	18.4	22.1	27.3	27.3	29.6
	N · m	9.02	13.8	18.6	23	27.4	37.2	46.1	55.9	73.5	92.1	111	145	180	217	268	268	290
Allowable O.H.L□	kgf	200	225	250	265	280	310	330	340	360	360	360	380	380	380	380	380	380
	N	1960	2205	2450	2597	2744	3038	3234	3332	3528	3528	3528	3724	3724	3724	3724	3724	3724

Note) • Permissible Torque is limited for products with a mark "★" of reduction gear ratio
• Permissible O.H.L (allowable overhung load) is based on the central part of the outlet length for output shaft
• Rotation direction of color ■ is opposite of other color □
• Self Locking is unavailable.

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