

PA SERIES

Planetary Gearboxes

High Precision

High Speed

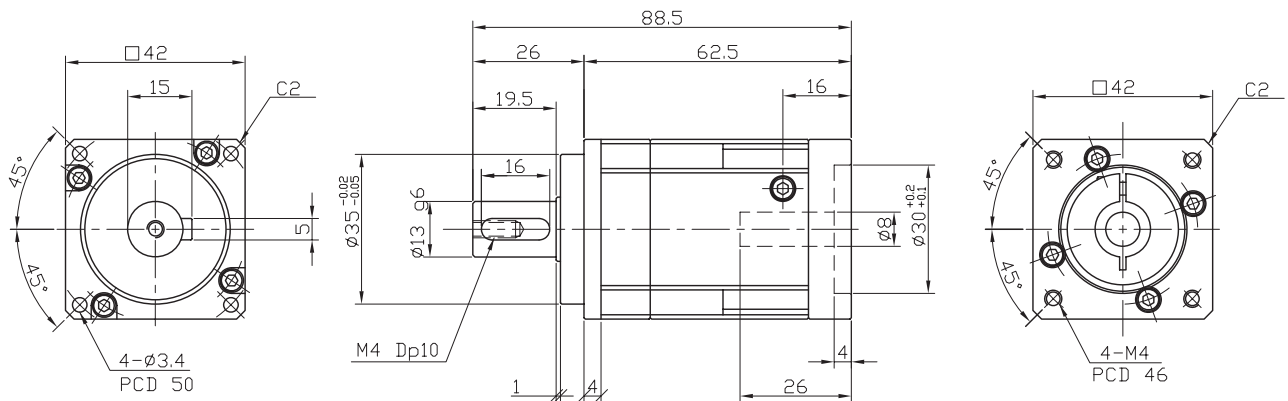
- 고강성, 고토크, 저소음, 구조개선을 통한 경량화 실현
- 오일리크를 방지하기 위하여 입력부의 오일씰 부분 개선
- PAR타입 베벨기어를 적용한 Angle 구조로 공간활용 극대화
- 고강성 하우징 채용으로 어떠한 모터든 대응 가능



PAS42-1 Stage

Ratio : 3, 4, 5, 9

Applicable Motor : 50 W ~ 100 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

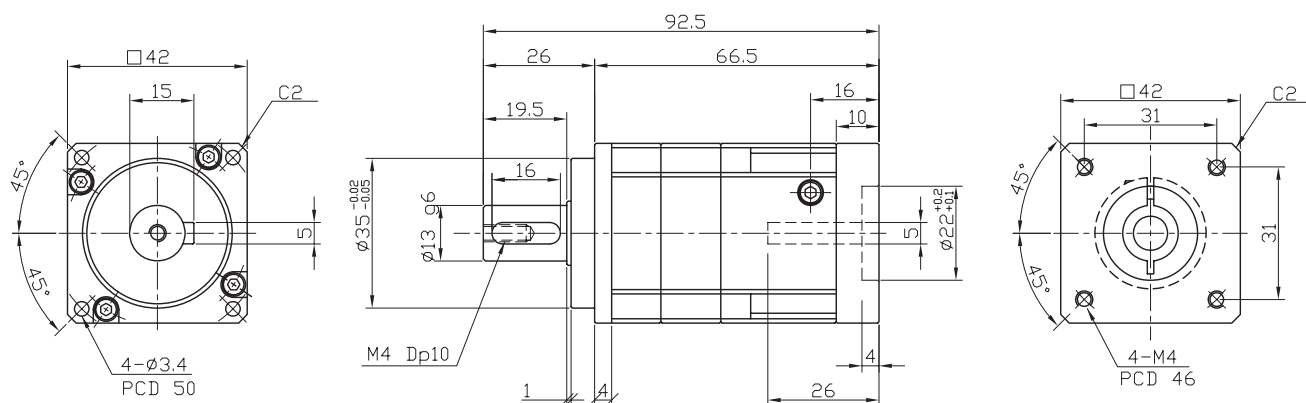
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
42	1	3	3	18	54	3000	6000
		4	4	19	57		
		5	5	17	51		
		9	9	14	42		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
0.4	650	350	0.333 ~ 0.044	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAS42-1 Stage 10대1

Ratio : 10

Applicable Motor : 50 W ~ 100 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

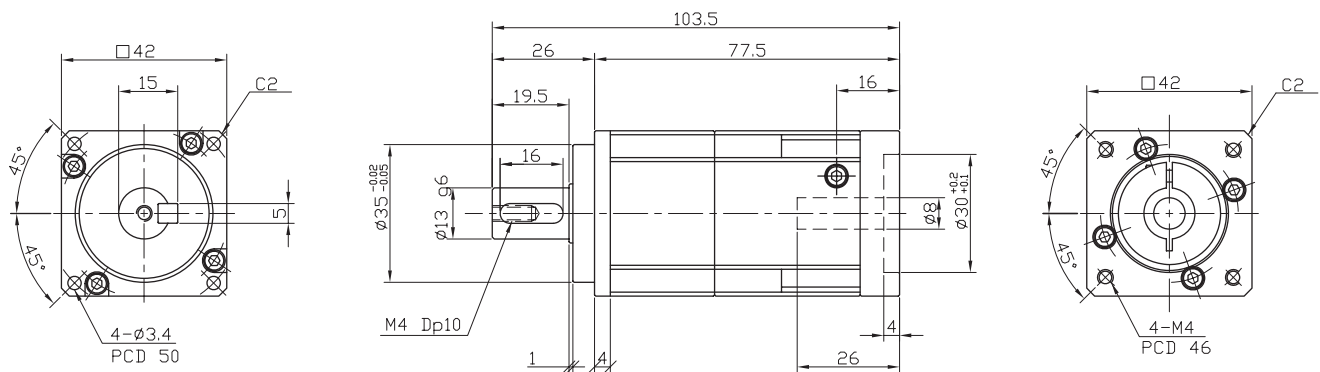
Outline (mm)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
42	1	10	1	14	42	3000	6000
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinal Life)	
0.4	650	350	0.333 ~ 0.044	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAS42-2 Stage

Ratio : 12 ~ 81

Applicable Motor : 50 W ~ 100 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

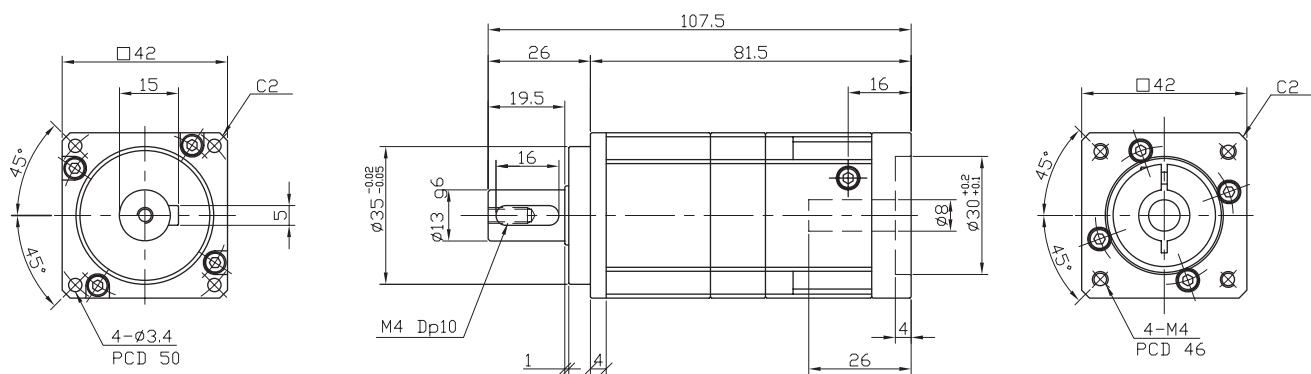
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
42	2	12	3*4	19	57	3000	6000
		15	3*5	18	54		
		16	4*4	19	57		
		20	4*5	19	57		
		25	5*5	17	51		
		27	3*9	18	54		
		36	4*9	19	57		
		45	5*9	17	51		
		81	9*9	14	42		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
0.5	650	350	0.3	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS42-2 Stage 10대1

Ratio : 30 ~ 90

Applicable Motor : 50 W ~ 100 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

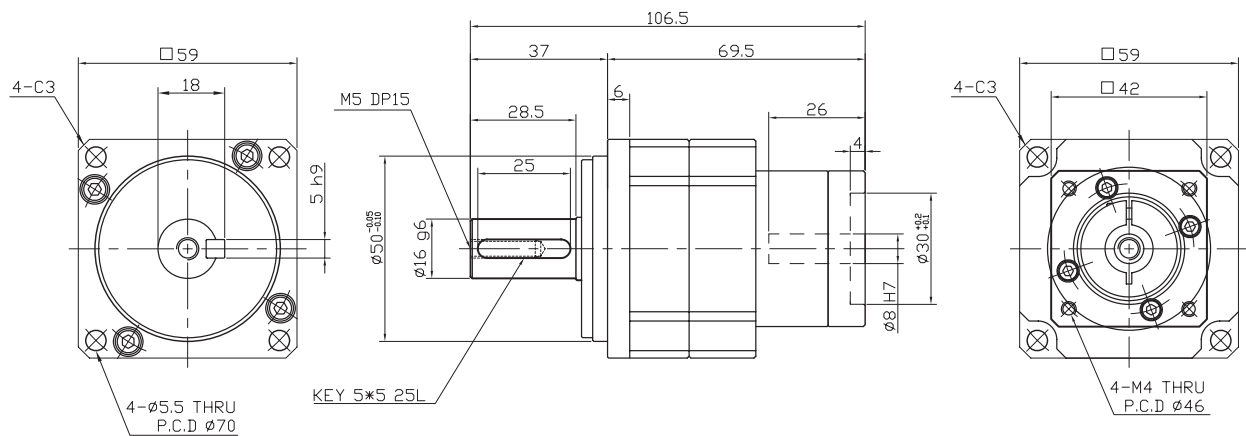
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
42	2	30	3*10	18	54	3000	6000
		40	4*10	19	57		
		50	5*10	17	51		
		90	9*10	14	42		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
0.5	650	350	0.333	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS60-42-1 Stage

Ratio : 3, 4, 5, 9

Applicable Motor : 50~100 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

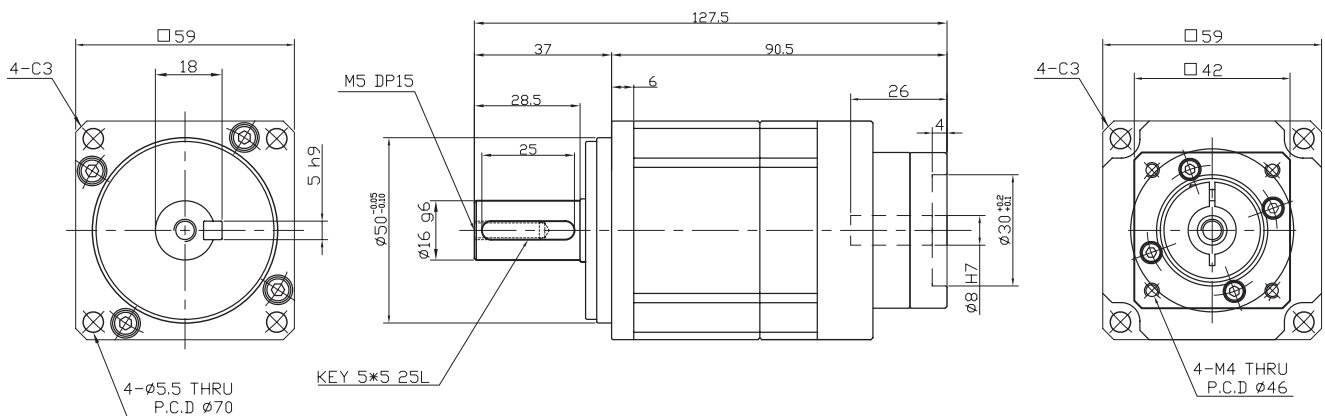
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
59	1	3	3	48	144	3000	6000
		4	4	60	180		
		5	5	42	126		
		9	9	36	108		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
0.9	955	515	0.016	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS60-42-2 Stage 10대1

Ratio : 30 ~ 90

Applicable Motor : 50~100 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

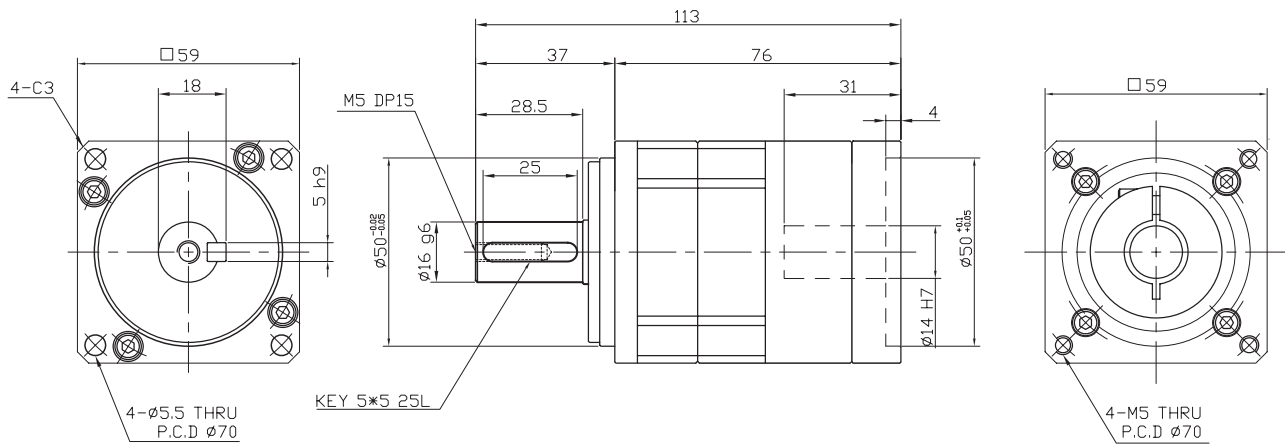
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
59	2	30	3*10	48	144	3000	6000
		40	4*10	60	180		
		50	5*10	42	126		
		90	9*10	36	108		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
1.3	955	515	0.106	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS60-1 Stage

Ratio : 3, 4, 5, 9

Applicable Motor : 200~400 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

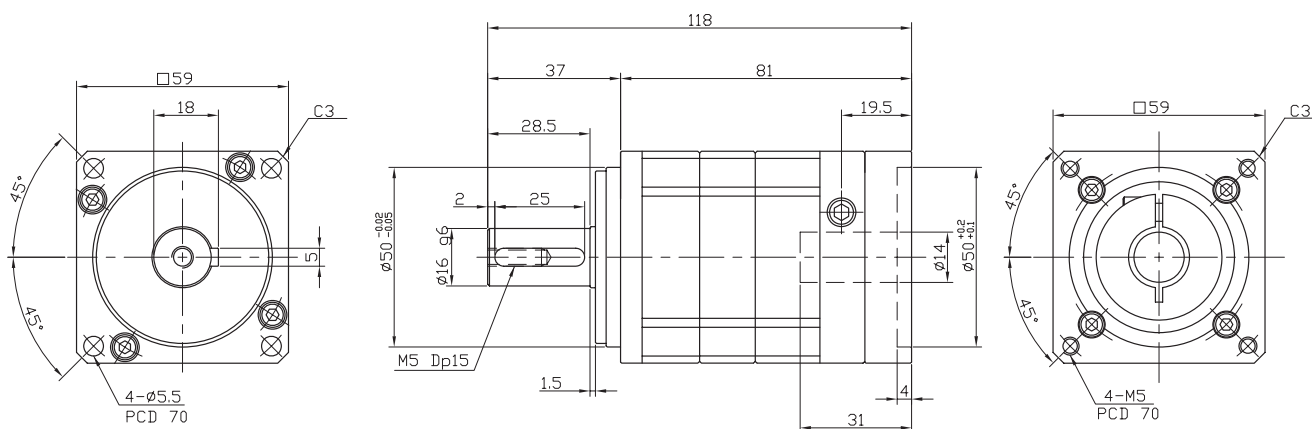
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
59	1	3	3	48	144	3000	6000
		4	4	60	180		
		5	5	42	126		
		9	9	36	108		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
0.9	955	515	0.106	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS60-1 Stage 10대1

Ratio : 10

Applicable Motor : 200~400 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

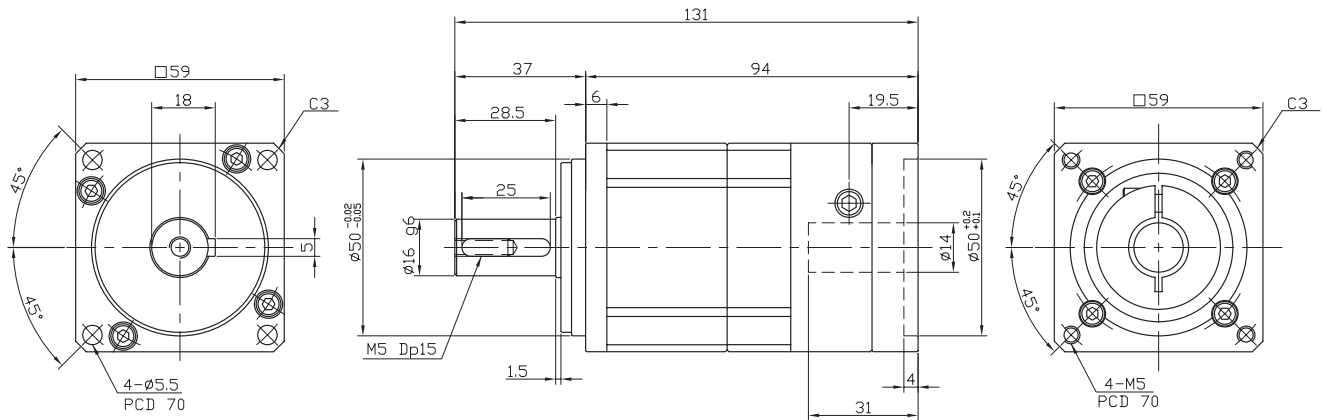
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
59	1	10	1*10	38	114	3000	6000
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinal Life)	
1	955	515	0.106	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAS60-2 Stage

Ratio : 12 ~ 81

Applicable Motor : 200~400 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

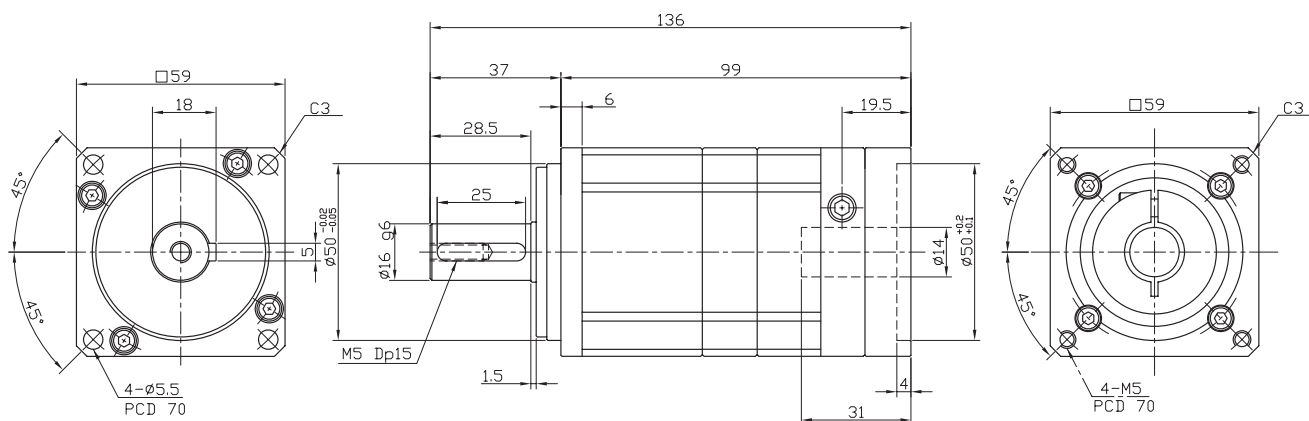
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
59	2	12	3*4	60	180	3000	6000
		15	3*5	48	144		
		16	4*4	60	180		
		20	4*5	60	180		
		25	5*5	42	126		
		27	3*9	48	144		
		36	4*9	60	180		
		45	5*9	42	126		
		81	9*9	36	108		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
1.1	955	515	0.116	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS60-2 Stage 10대1

Ratio : 30 ~ 90

Applicable Motor : 200~400 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

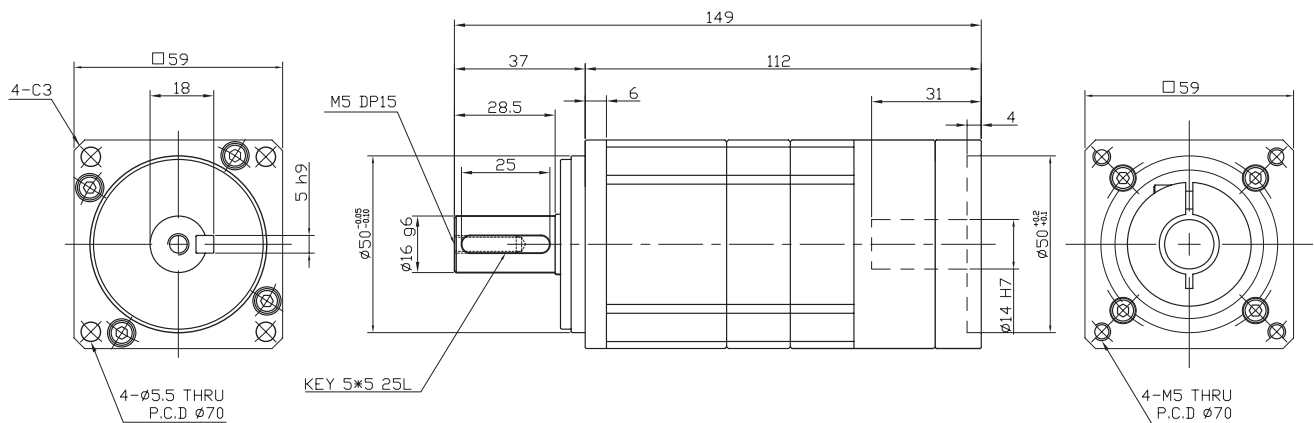
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
59	2	30	3*10	48	144	3000	6000
		40	4*10	60	180		
		50	5*10	42	126		
		90	9*10	36	108		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
1.3	955	515	0.106	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS60-3 Stage

Ratio : 27 ~ 729

Applicable Motor : 200~400 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

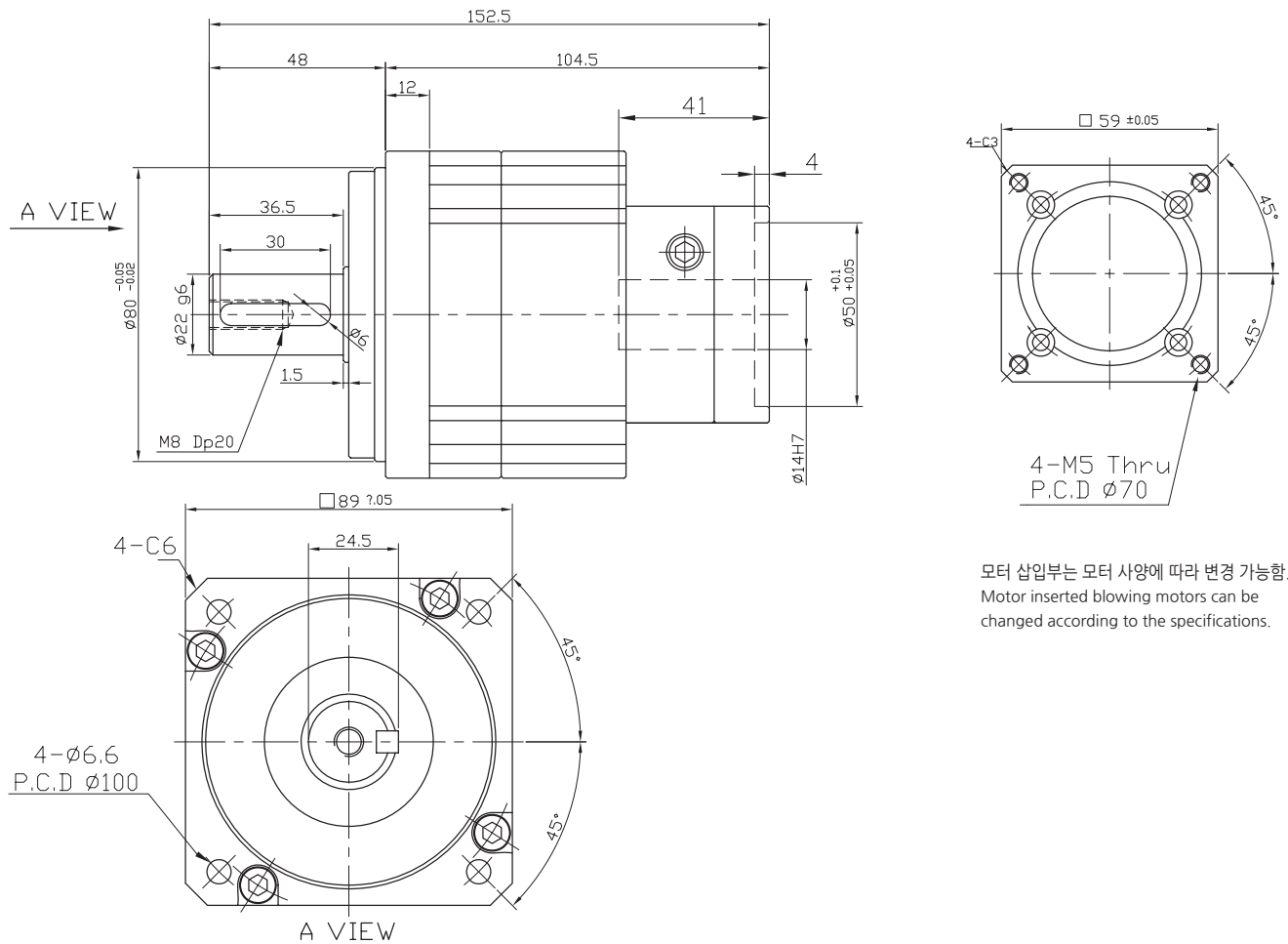
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
59	3	27	3*3*3	48	144	3000	6000
		48	3*3*4	60	180		
		64	4*4*4	60	180		
		125	5*5*5	42	126		
		225	9*5*5	42	126		
		405	9*9*5	42	126		
		729	9*9*9	36	108		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinal Life)	
1	955	515	0.106	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS90-60-1 Stage

Ratio : 3, 4, 5, 9

Applicable Motor : 200~400 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

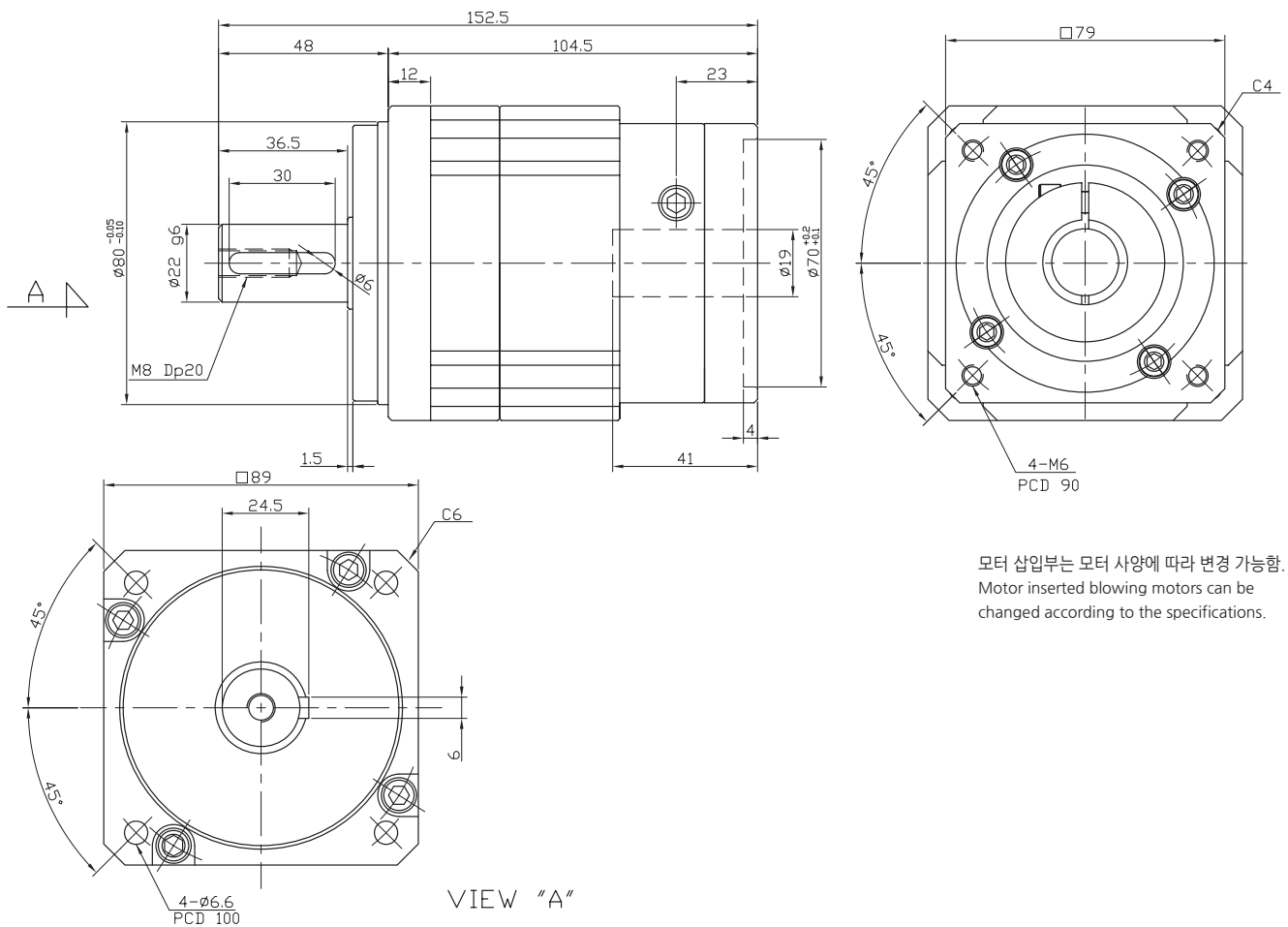
Outline (㉔)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
89	1	3	3*1	118	354	2000	4000
		4	4*1	154	462		
		5	5*1	110	330		
		9	9*1	98	294		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
2.8	1980	1150	0.422 ~ 0.655	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAS90-1 Stage

Ratio : 3, 4, 5, 9

Applicable Motor : 750 W



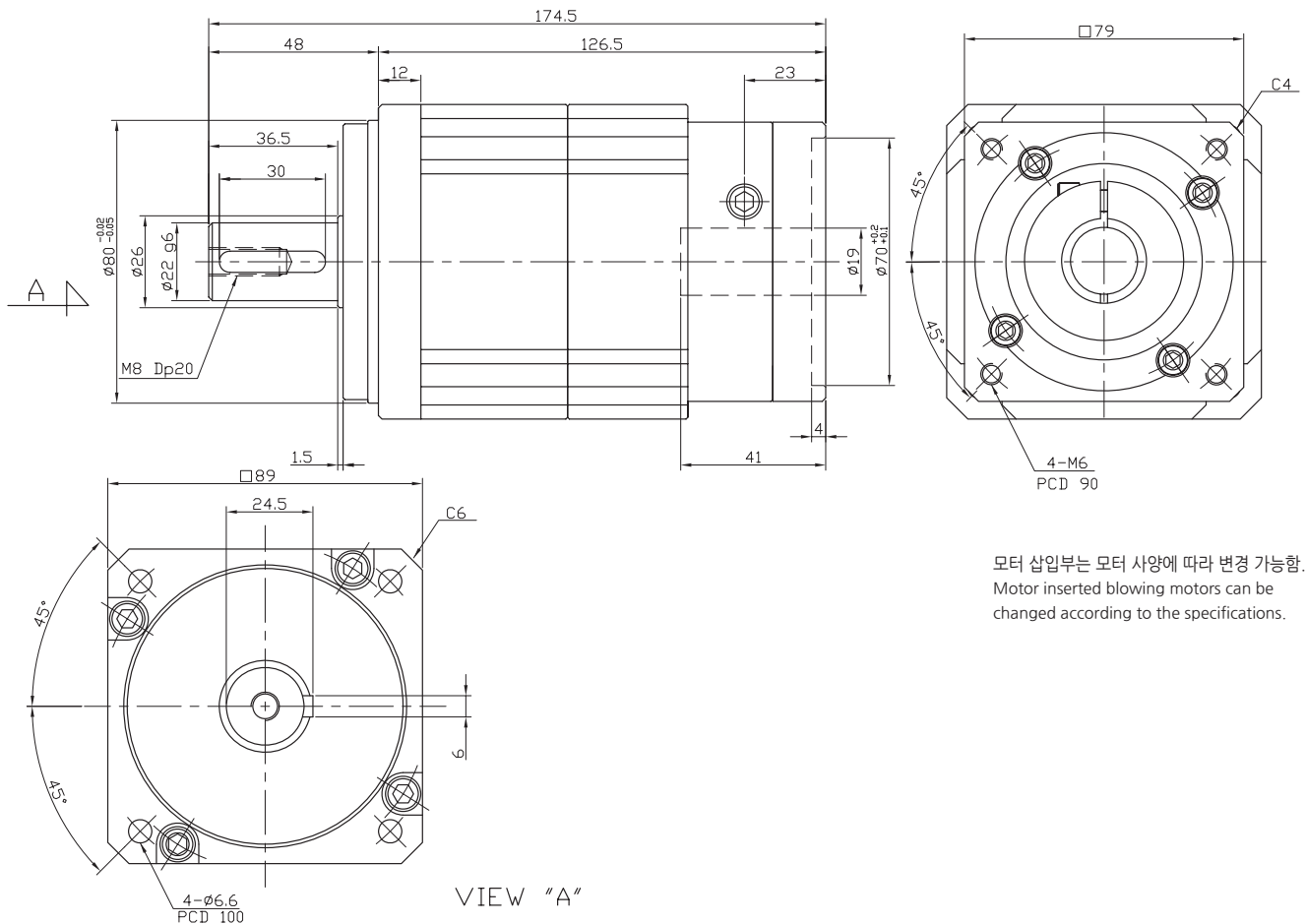
Outline (㉔)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
89	1	3	3	130	390	3000	6000
		4	4	165	495		
		5	5	140	420		
		9	9	130	390		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
2.6	1980	1150	0.438~0.873	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAS90-2 Stage

Ratio : 12 ~ 81

Applicable Motor : 750 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

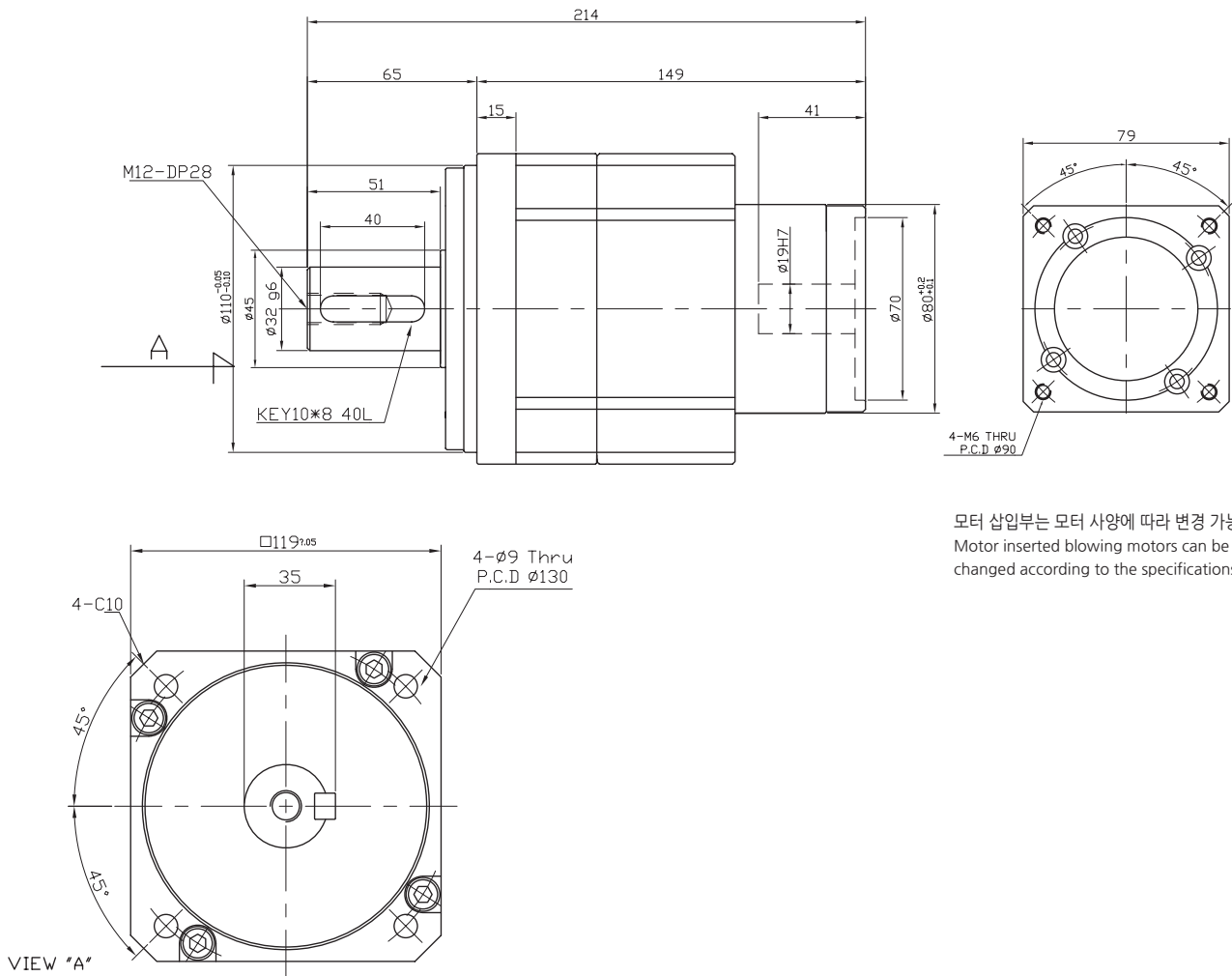
Outline (mm)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
89	2	12	3*4	165	495	3000	6000
		15	3*5	140	420		
		16	4*4	165	495		
		20	4*5	165	495		
		25	5*5	130	390		
		27	3*9	165	495		
		36	4*9	140	420		
		45	5*9	100	300		
		81	9*9	98	294		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
3.3	1980	1150	0.438	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS120-80-2 Stage

Ratio : 12 ~ 81

Applicable Motor : 750 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

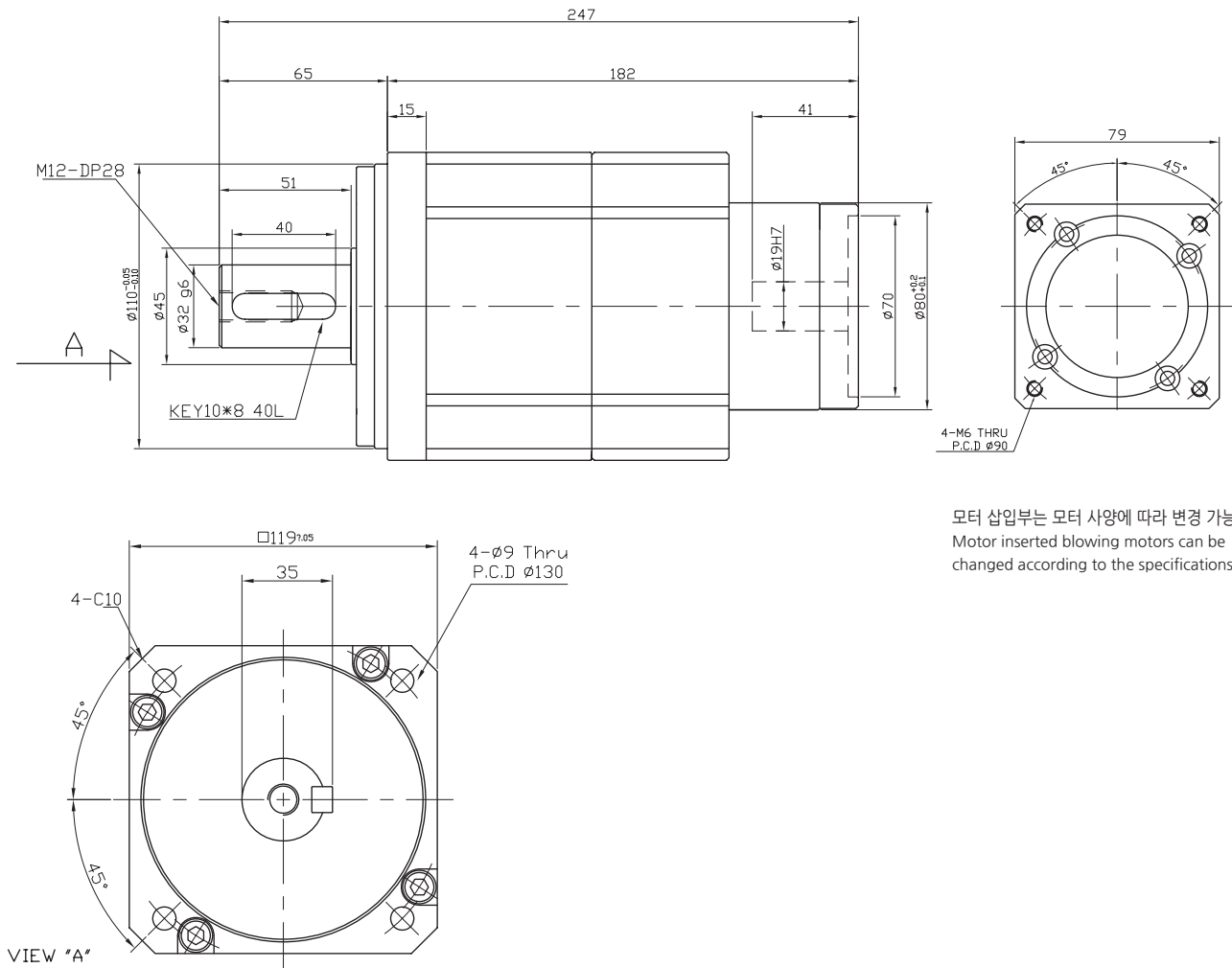
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
119	2	12	3*4	249	747	3000	6000
		15	3*5	300	900		
		16	4*4	340	1020		
		20	4*5	200	600		
		25	5*5	300	900		
		27	3*9	249	747		
		36	4*9	340	1020		
		45	5*9	300	900		
		81	9*9	200	600		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinal Life)	
7.5	3350	2080	3.074~3.806	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS120-80-3 Stage

Ratio : 27 ~ 729

Applicable Motor : 750 W



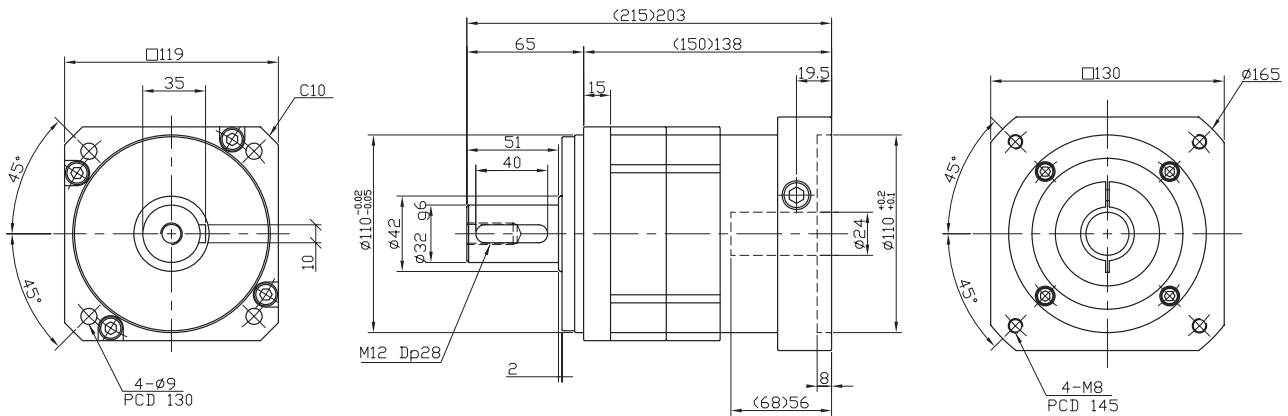
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
119	3	27	3*3*3	249	747	3000	6000
		48	3*3*4	300	900		
		64	4*4*4	300	900		
		125	5*5*5	340	1020		
		225	9*5*5	340	1020		
		405	9*9*5	340	1020		
		729	9*9*9	200	600		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
8.3	3350	2080	3.074~3.806	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS120-130-1 Stage

Ratio : 3, 4, 5, 9

Applicable Motor : 1000~3000 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

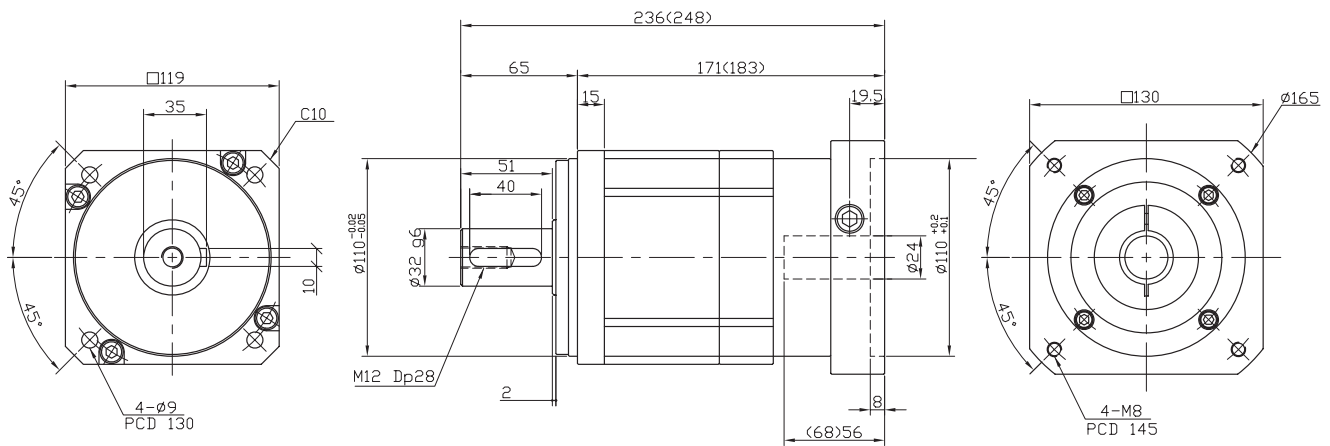
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
119	1	3	3	249	747	3000	6000
		4	4	300	900		
		5	5	340	1020		
		9	9	200	600		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
6.9	3350	2080	3.074	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAS120-130-2 Stage

Ratio : 12 ~ 81

Applicable Motor : 1000~3000 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

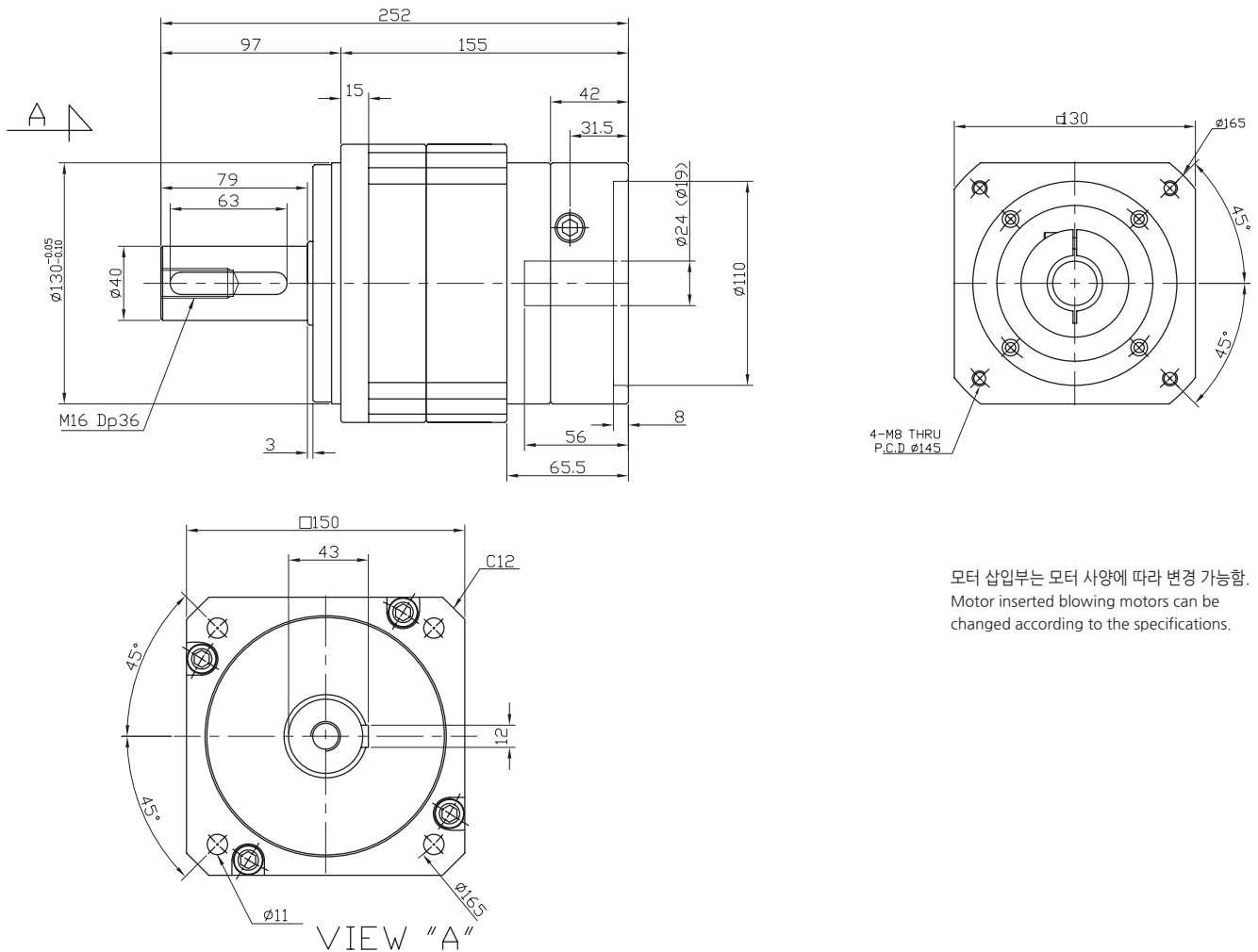
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
119	2	12	3*4	249	747	3000	6000
		15	3*5	300	900		
		16	4*4	340	1020		
		20	4*5	200	600		
		25	5*5	300	900		
		27	3*9	249	747		
		36	4*9	340	1020		
		45	5*9	300	900		
81	9*9	200	600				
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinal Life)	
7.5	3350	2080	3.074~3.806	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS150-120-1 Stage

Ratio : 3, 4, 5, 9

Applicable Motor : 1000~3000 W



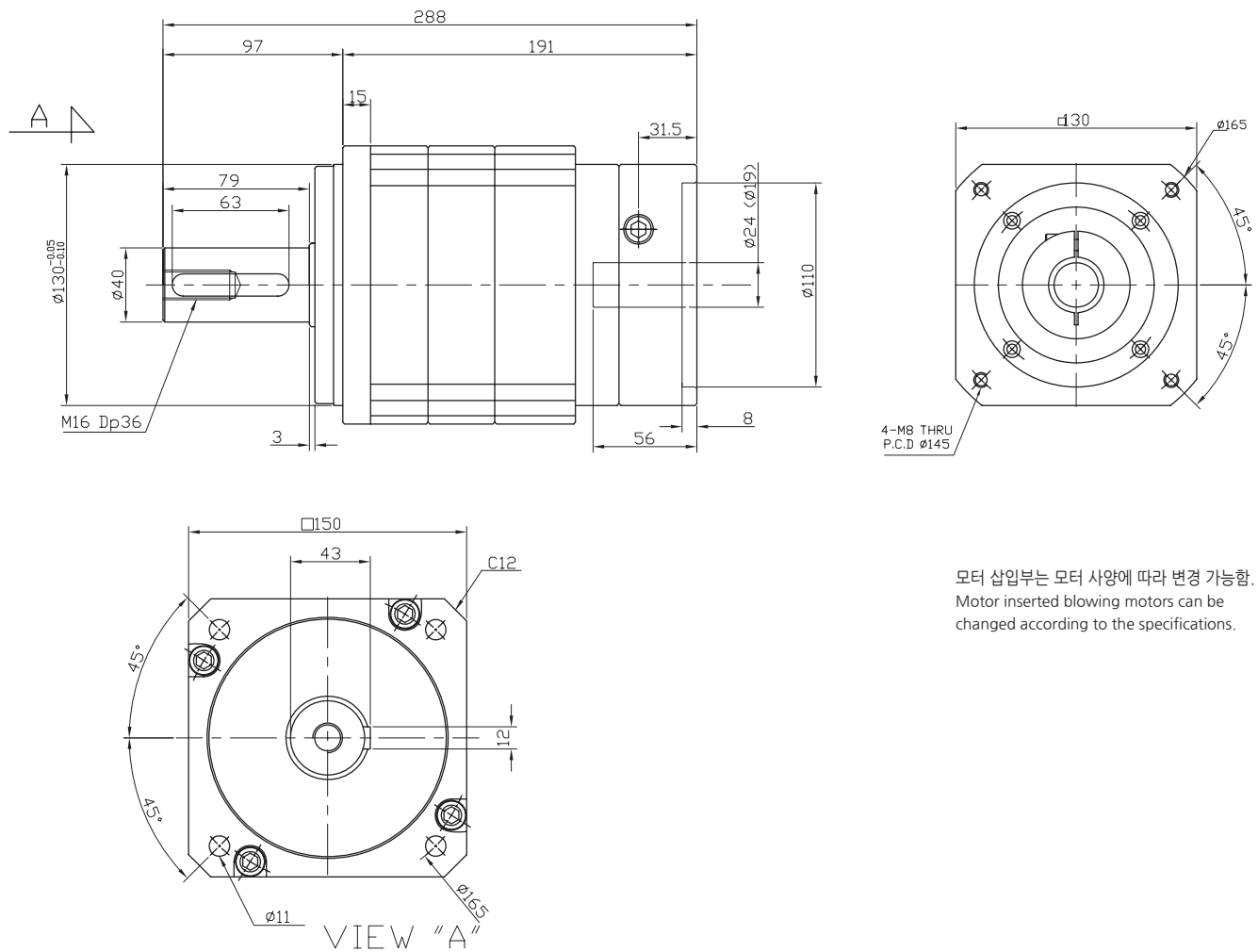
Outline (㉔)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
150	1	3	3	351	1053	3000	6000
		4	4	556	1668		
		5	5	676	2028		
		9	9	420	1260		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
13.6	3600	2370	7.552~8.841	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAS150-120-2 Stage

Ratio : 12 ~ 81

Applicable Motor : 1000~3000 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

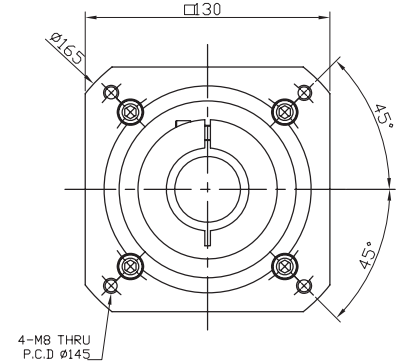
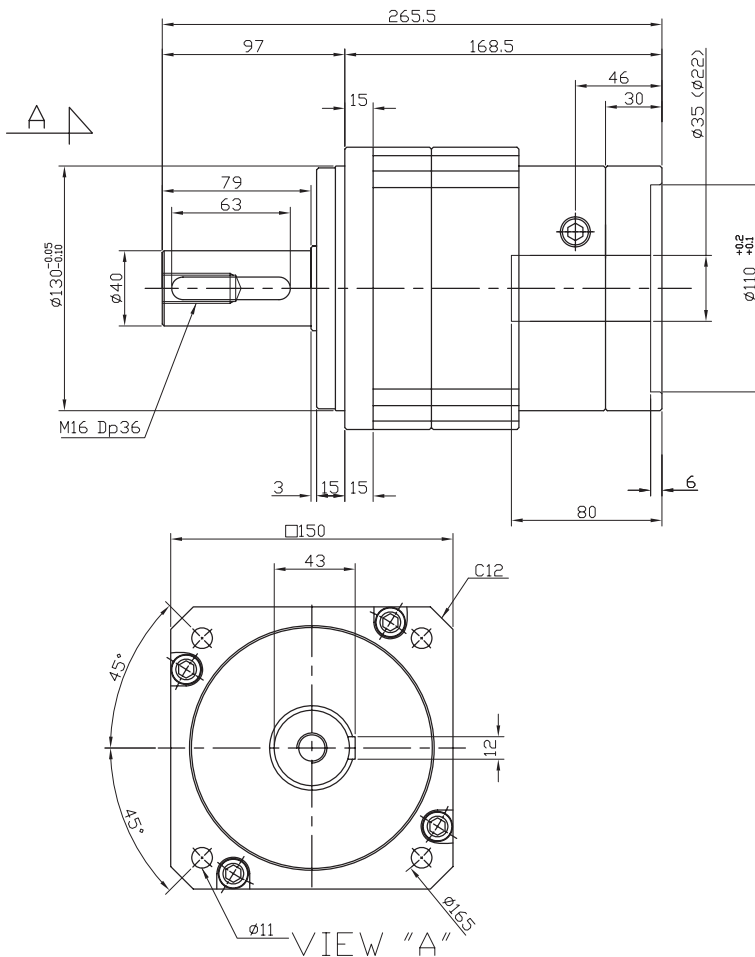
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
150	2	12	3*4	351	1053	3000	6000
		15	3*5	676	2028		
		16	4*4	556	1668		
		20	4*5	676	2028		
		25	5*5	676	2028		
		27	3*9	351	1053		
		36	4*9	556	1668		
		45	5*9	556	1668		
		81	9*9	420	1260		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
15	3600	2370	7.552~8.841	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS150-130-1 Stage

Ratio : 3, 4, 5, 9

Applicable Motor : 2000~5000 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

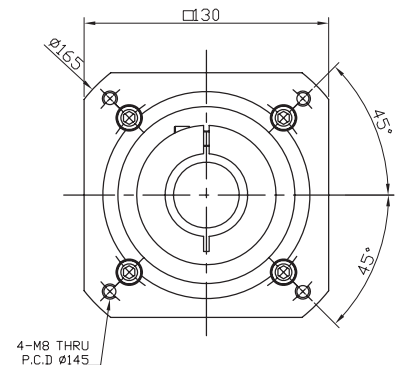
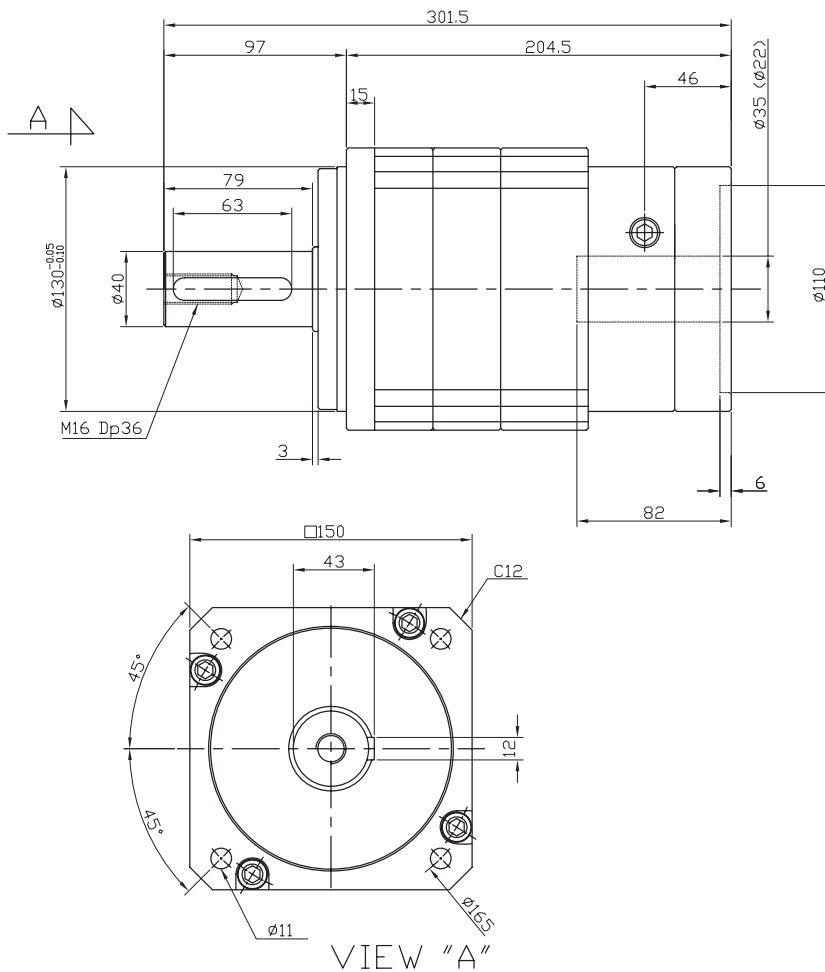
Outline (㉔)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
150	1	3	3	351	1053	3000	6000
		4	4	556	1668		
		5	5	676	2028		
		9	9	420	1260		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
13.6	3600	2370	7.552~8.841	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAS150-130-2 Stage

Ratio : 12 ~ 81

Applicable Motor : 2000~5000 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

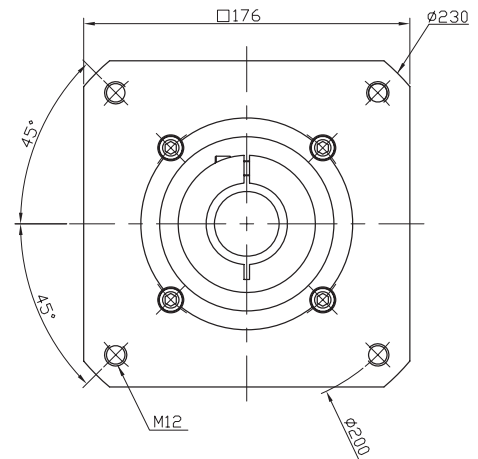
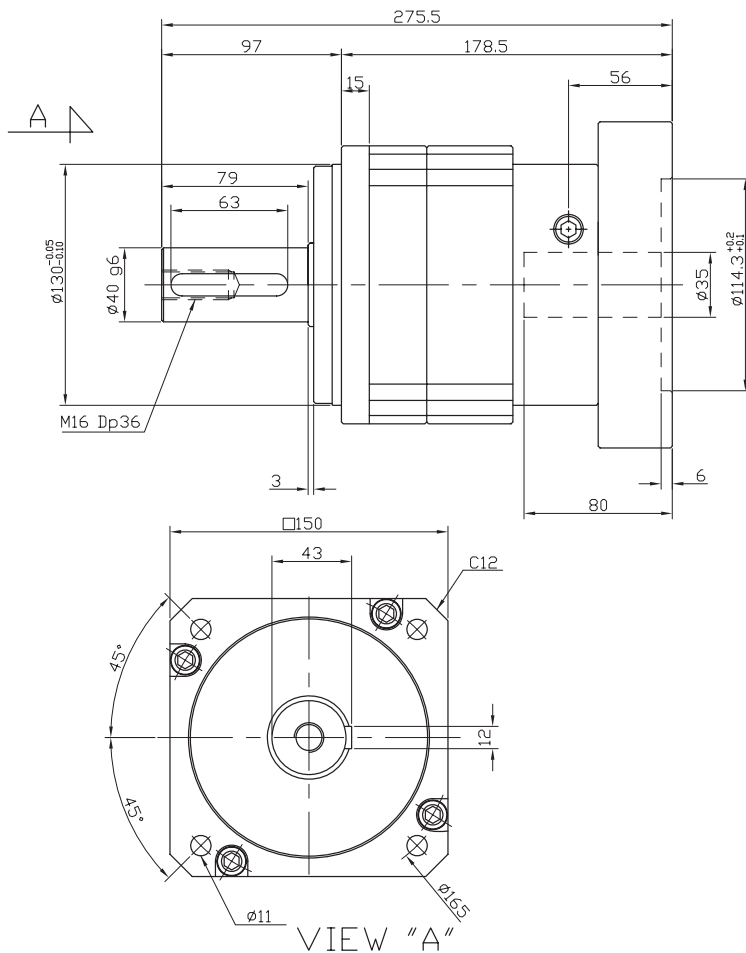
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
150	2	12	3*4	351	1053	3000	6000
		15	3*5	676	2028		
		16	4*4	556	1668		
		20	4*5	676	2028		
		25	5*5	676	2028		
		27	3*9	351	1053		
		36	4*9	556	1668		
		45	5*9	556	1668		
		81	9*9	420	1260		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
15	3600	2370	7.552~8.841	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS150-1 Stage

Ratio : 3, 4, 5, 9

Applicable Motor : 2000~5000 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

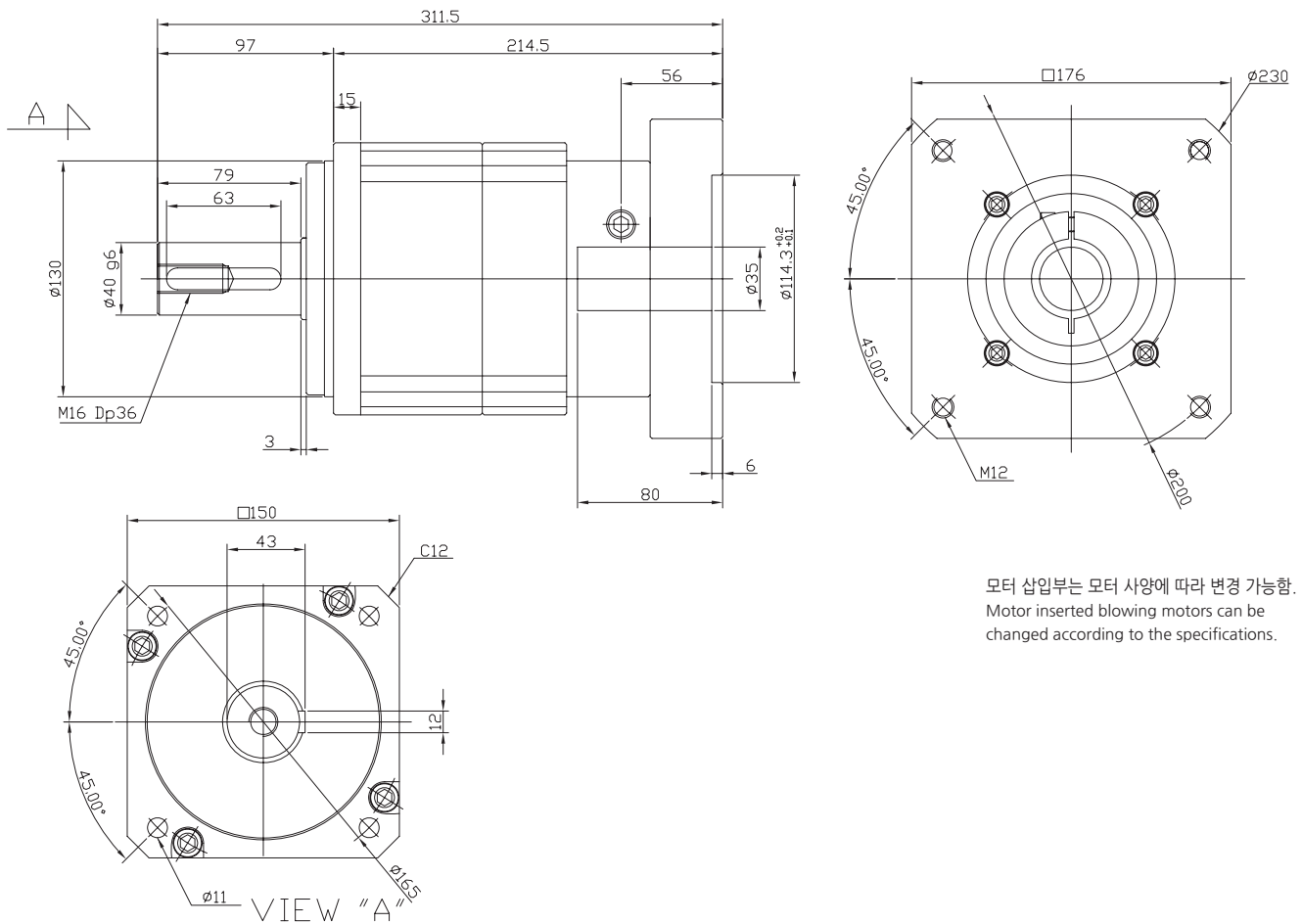
Outline (㉔)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
150	1	3	3	351	1053	3000	6000
		4	4	556	1668		
		5	5	676	2028		
		9	9	420	1260		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
13.6	3600	2370	7.552~8.841	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAS150-2 Stage

Ratio : 12 ~ 81

Applicable Motor : 2000~5000 W



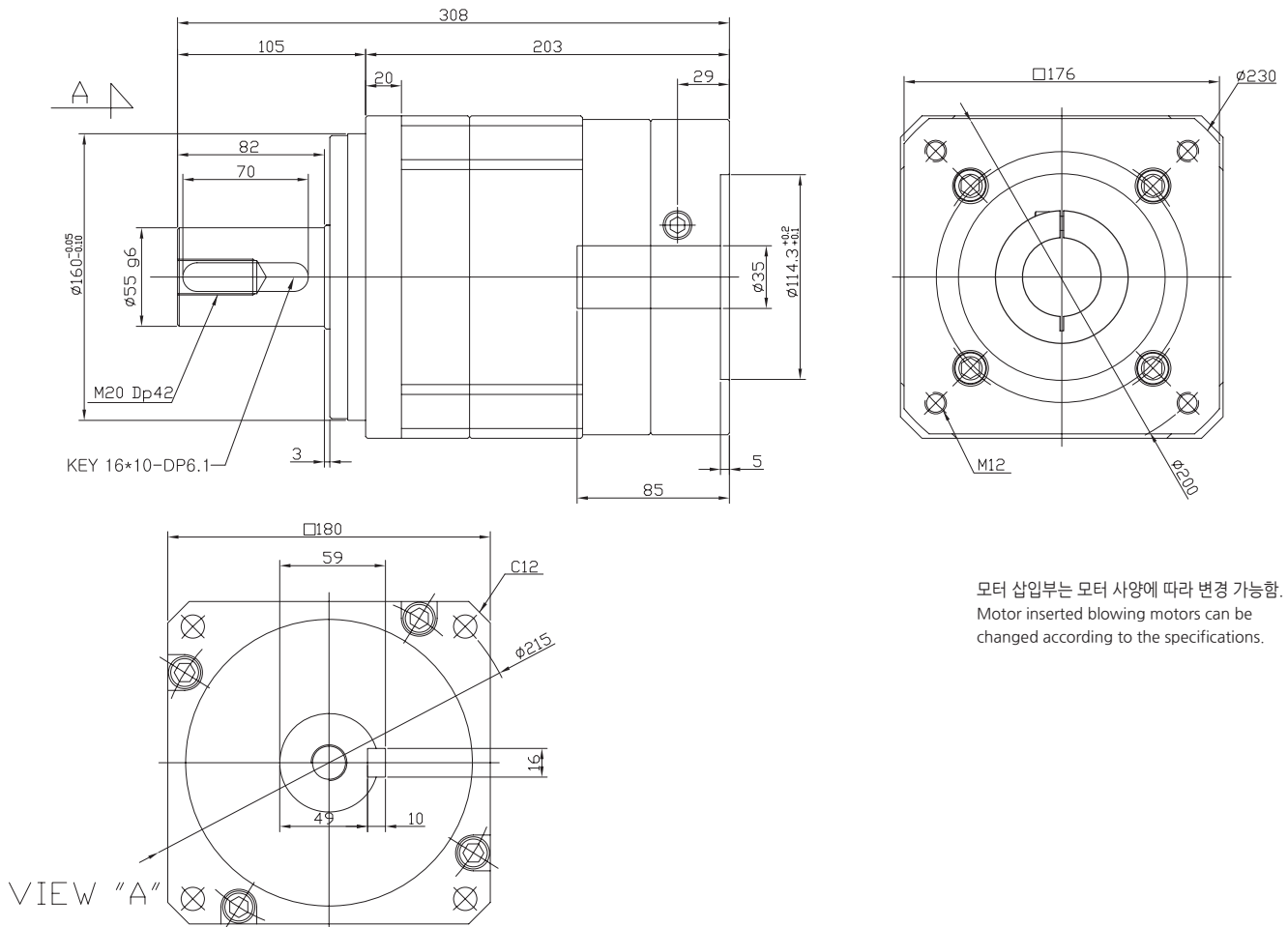
Outline (≡)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
150	2	12	3*4	351	1053	3000	6000
		15	3*5	676	2028		
		16	4*4	556	1668		
		20	4*5	676	2028		
		25	5*5	676	2028		
		27	3*9	351	1053		
		36	4*9	556	1668		
		45	5*9	556	1668		
		81	9*9	420	1260		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
15	3600	2370	7.552~8.841	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAS180-1 Stage

Ratio : 3, 4, 5, 9

Applicable Motor : 2000~7000 W



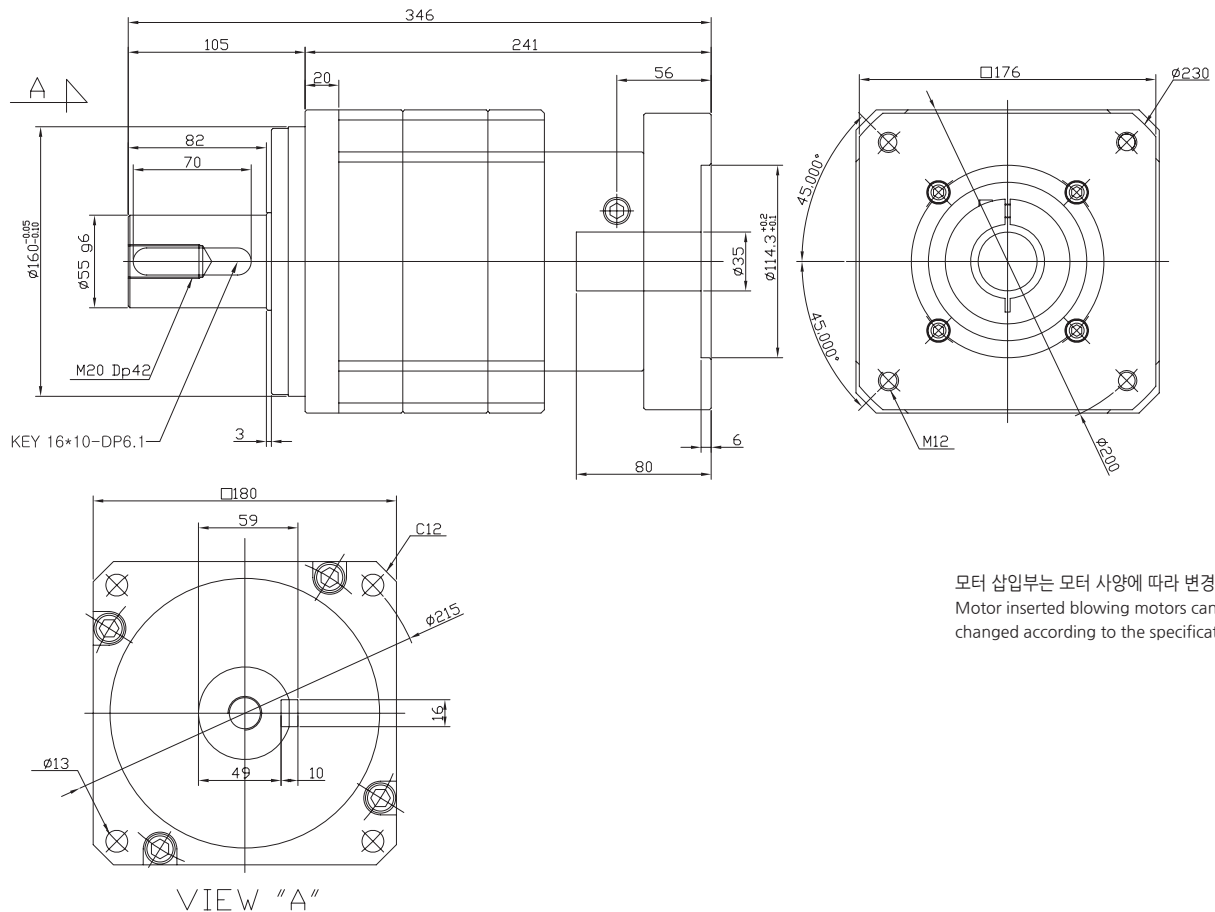
Outline (㉔)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
180	1	3	3	611	1833	2000 ~ 3000	4000
		4	4	1092	3276		
		5	5	1248	3744		
		9	9	850	2550		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
20	5850	4100	7.552~8.841	BL1 : 5 min이하 BL2 : 10 min이하	95	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAS180-2 Stage

Ratio : 12 ~ 81

Applicable Motor : 2000~7000 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

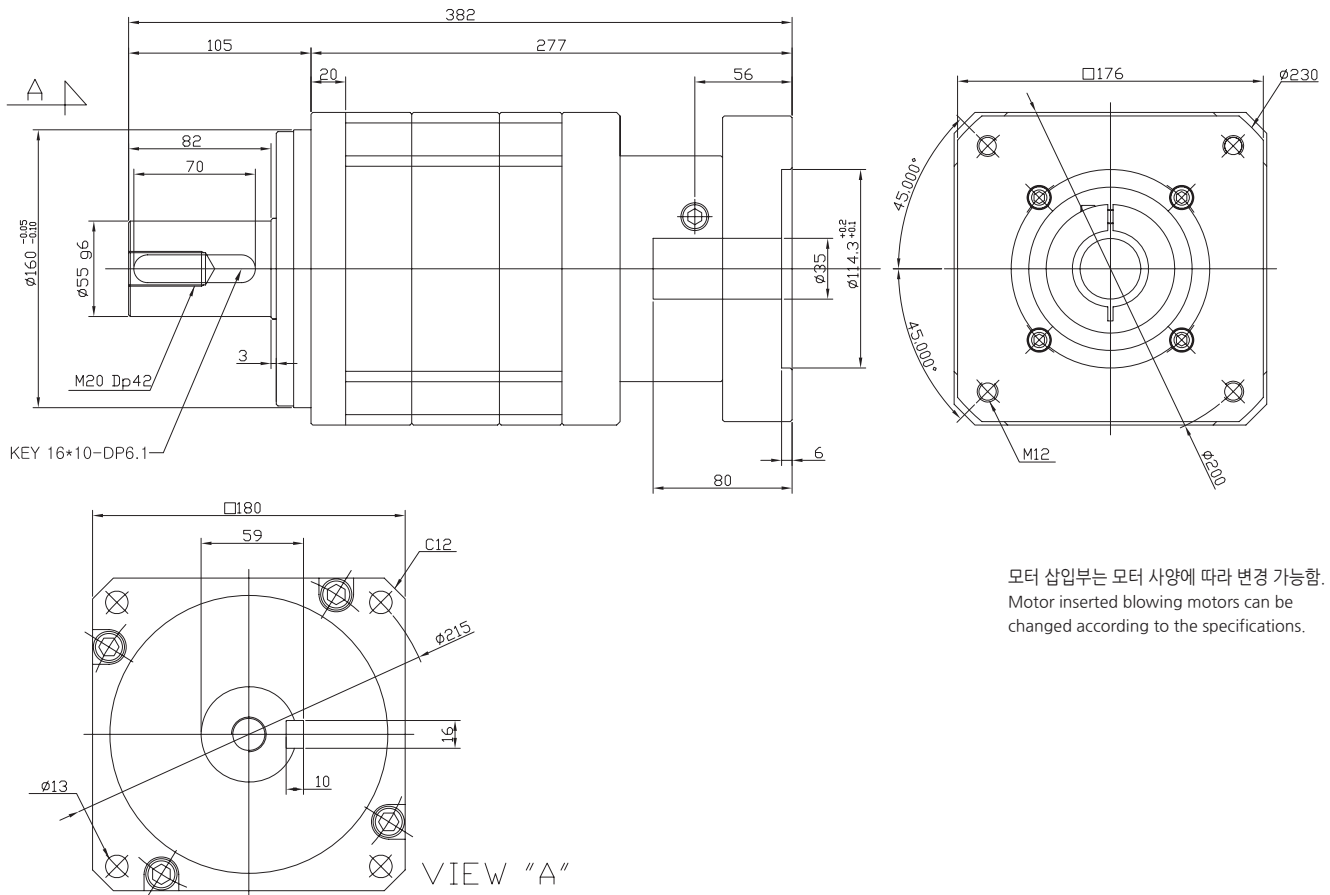
Outline (㉑)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
180	2	12	3*4	611	1833	3000	4000
		15	3*5	611	1833		
		16	4*4	1092	3276		
		20	4*5	1092	3276		
		25	5*5	1248	3744		
		27	3*9	611	1833		
		36	4*9	1092	3276		
		45	5*9	1248	3744		
		81	9*9	850	2550		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
25	5850	4100	7.552~8.841	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 가구특성 안전율 미적용 수치임.

PAS180-3 Stage

Ratio : 27 ~ 729

Applicable Motor : 2000~7000 W



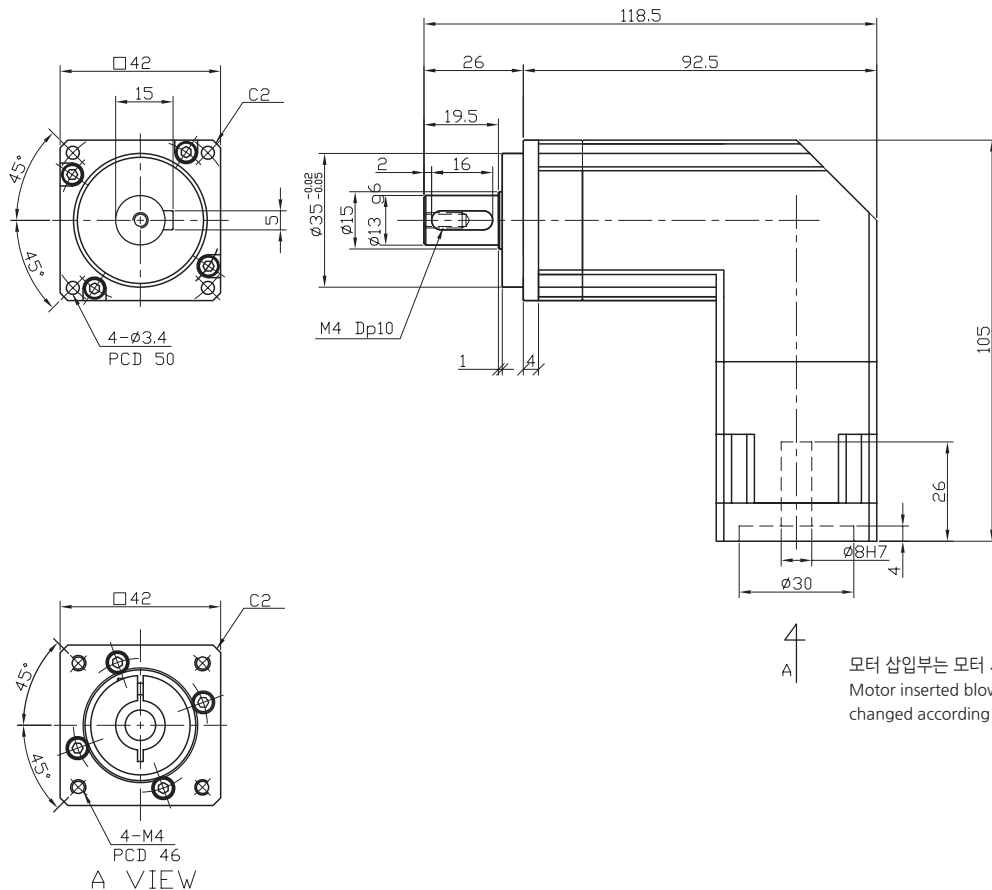
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
150	3	27	3*3*3	611	1833	3000	6000
		48	3*3*4	911	2733		
		64	4*4*4	1092	3276		
		125	5*5*5	1248	3744		
		225	9*5*5	1248	3744		
		405	9*9*5	1248	3744		
		729	9*9*9	850	2550		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
8.3	20433	10217	7.552~8.841	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAR42-1,2 Stage

Ratio : 3 ~ 81

Applicable Motor : 50~100 W



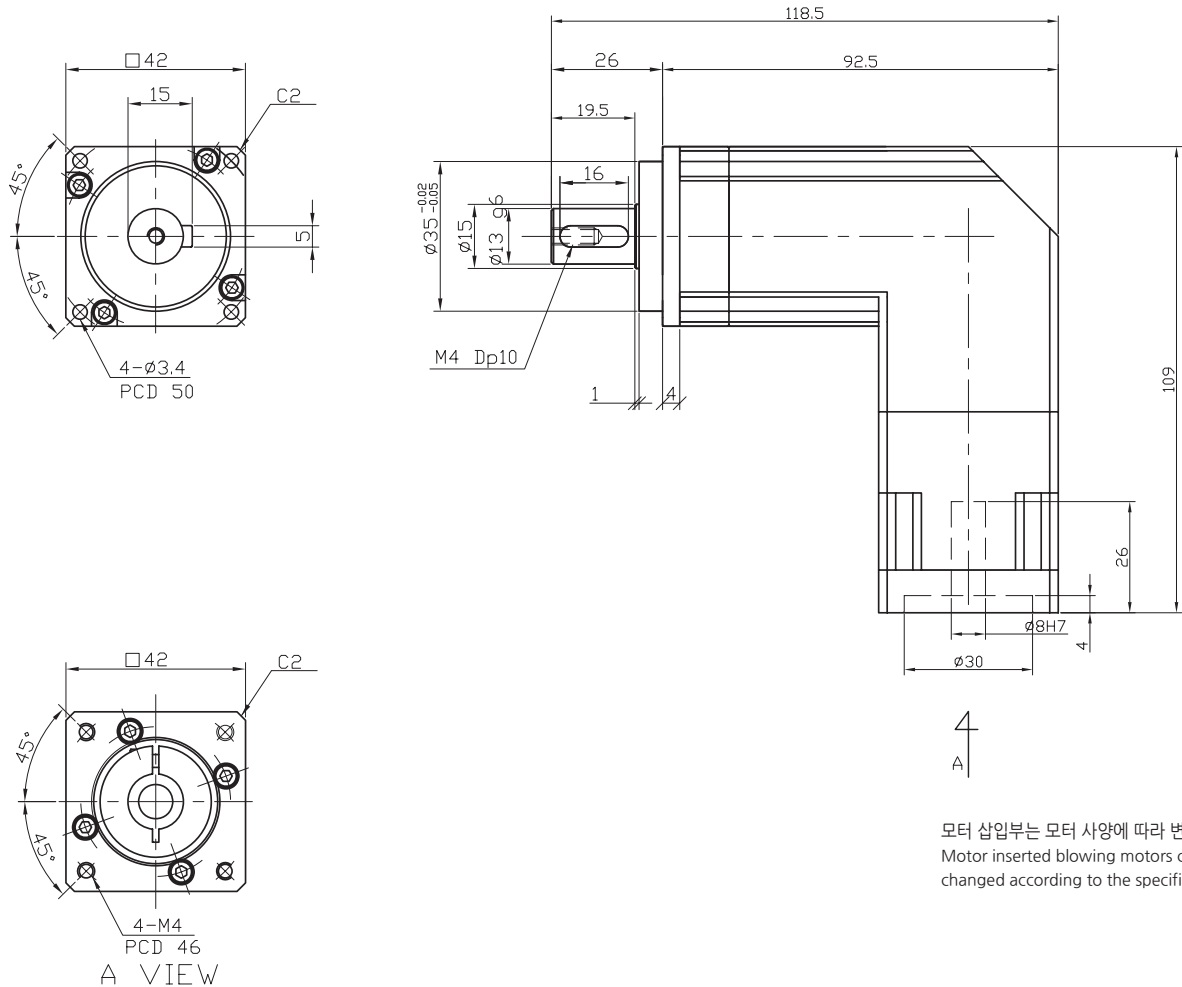
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
42	1	3	3	19.2	57.6	3000	6000
		4	4	18	54		
		5	5	22.8	68.4		
		9	9	13.2	39.6		
	2	12	3*4	19.2	57.6		
		15	3*5	19.2	57.6		
		16	4*4	18	54		
		20	4*5	22.8	68.4		
		25	5*5	22.8	68.4		
		27	3*9	19.2	57.6		
		36	4*9	18	54		
		45	5*9	22.8	68.4		
		81	9*9	13.2	39.6		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
0.4 ~ 0.5	650	350	0.3	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAR42-1,2 Stage 10대1

Ratio : 10 ~ 90

Applicable Motor : 50~100 W



모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

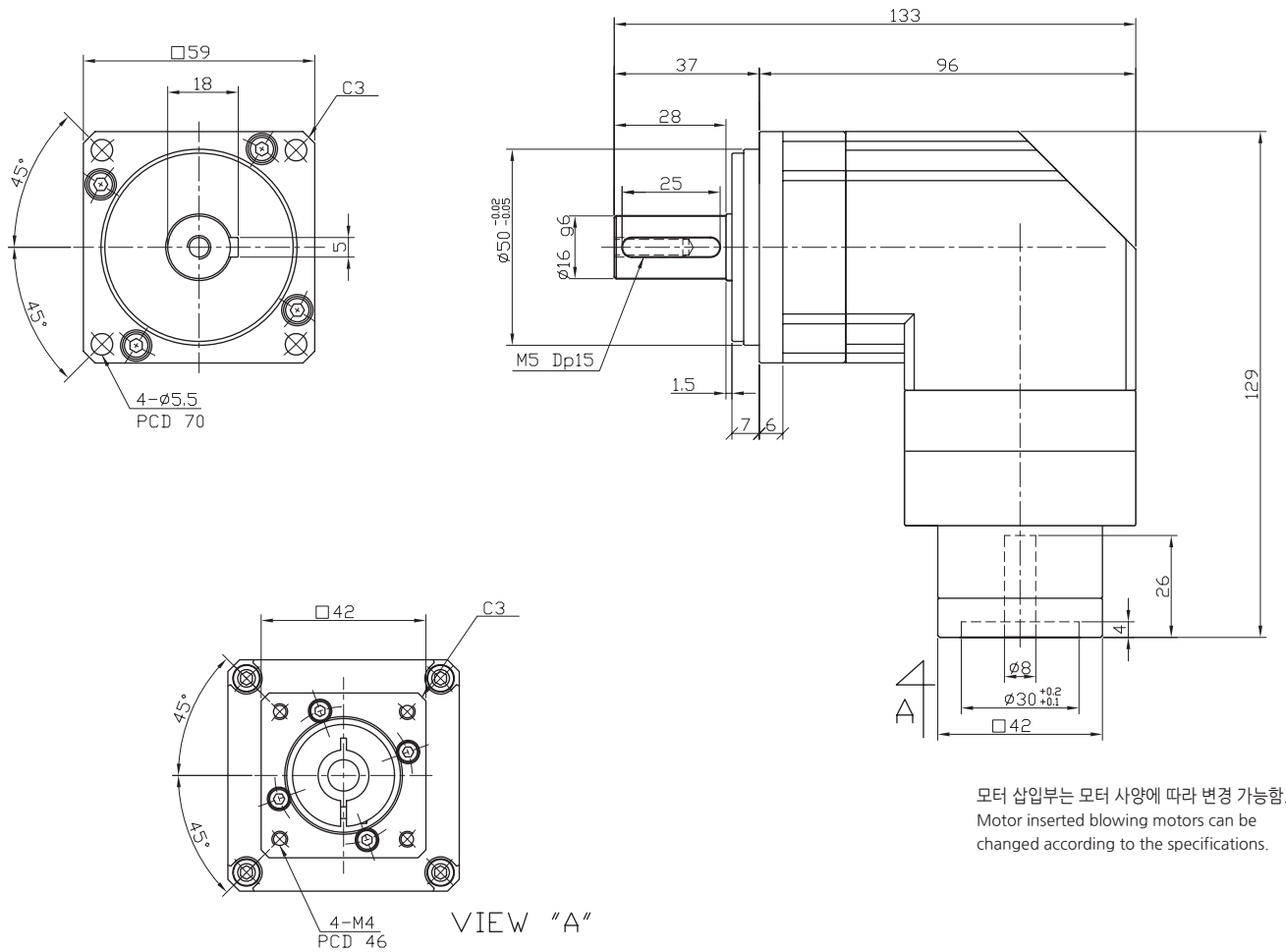
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
42	1	10	1*10	15.6	46.8	3000	6000
	2	30	3*10	19.2	57.6		
		40	4*10	18	54		
		50	5*10	22.8	68.4		
		90	9*10	13.2	39.6		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinal Life)	
0.5	780	390	0.333	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAR60-42-1,2 Stage 10대1

Ratio : 10 ~ 90

Applicable Motor : 50~100 W



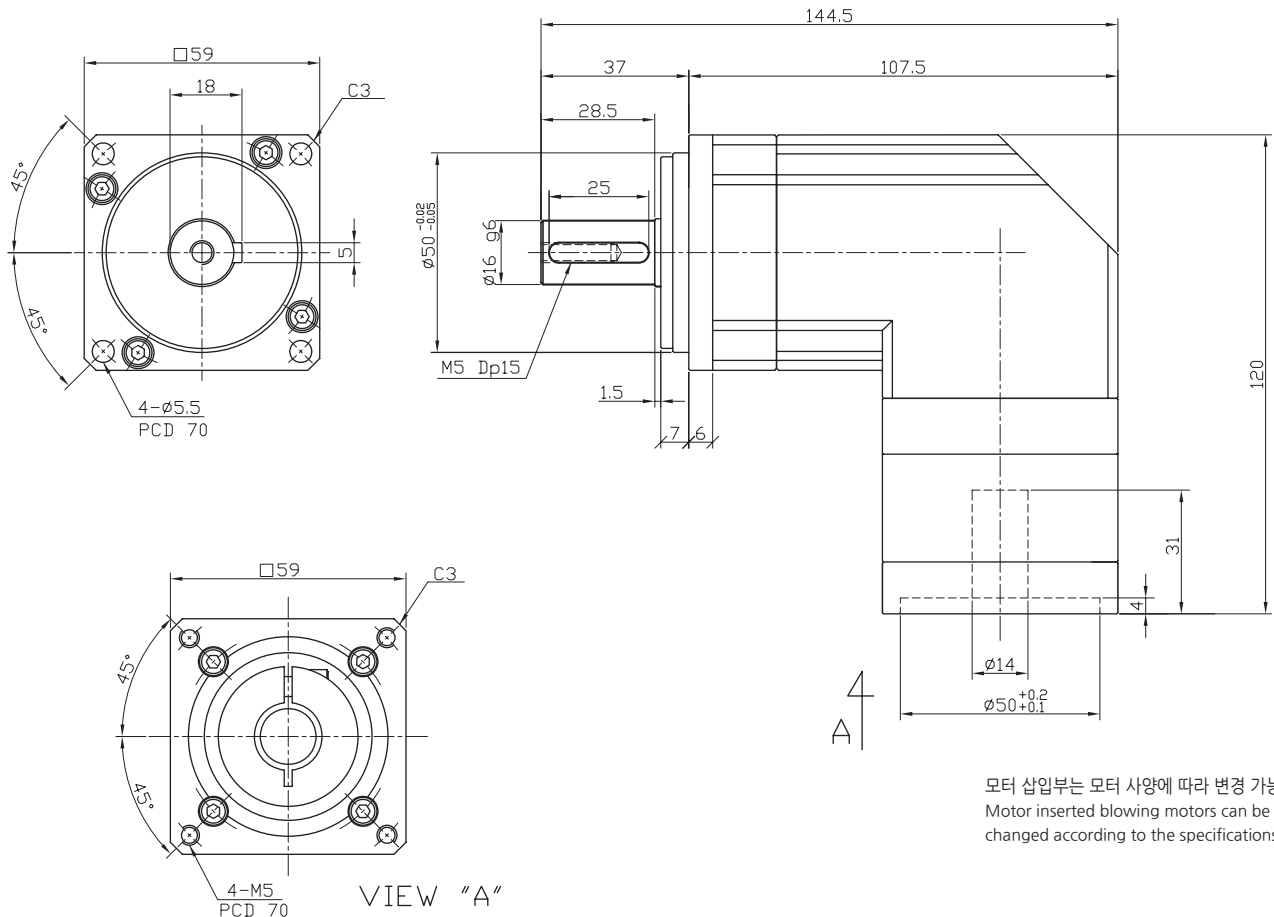
Outline (㉔)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
59	1	10	1*10	38	114	3000	6000
	2	30	3*10	48	144		
		40	4*10	60	180		
		50	5*10	42	126		
		90	9*10	36	108		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinal Life)	
1.4	1530	765	0.106	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAR60-1,2 Stage

Ratio : 3 ~ 81

Applicable Motor : 200~400 W



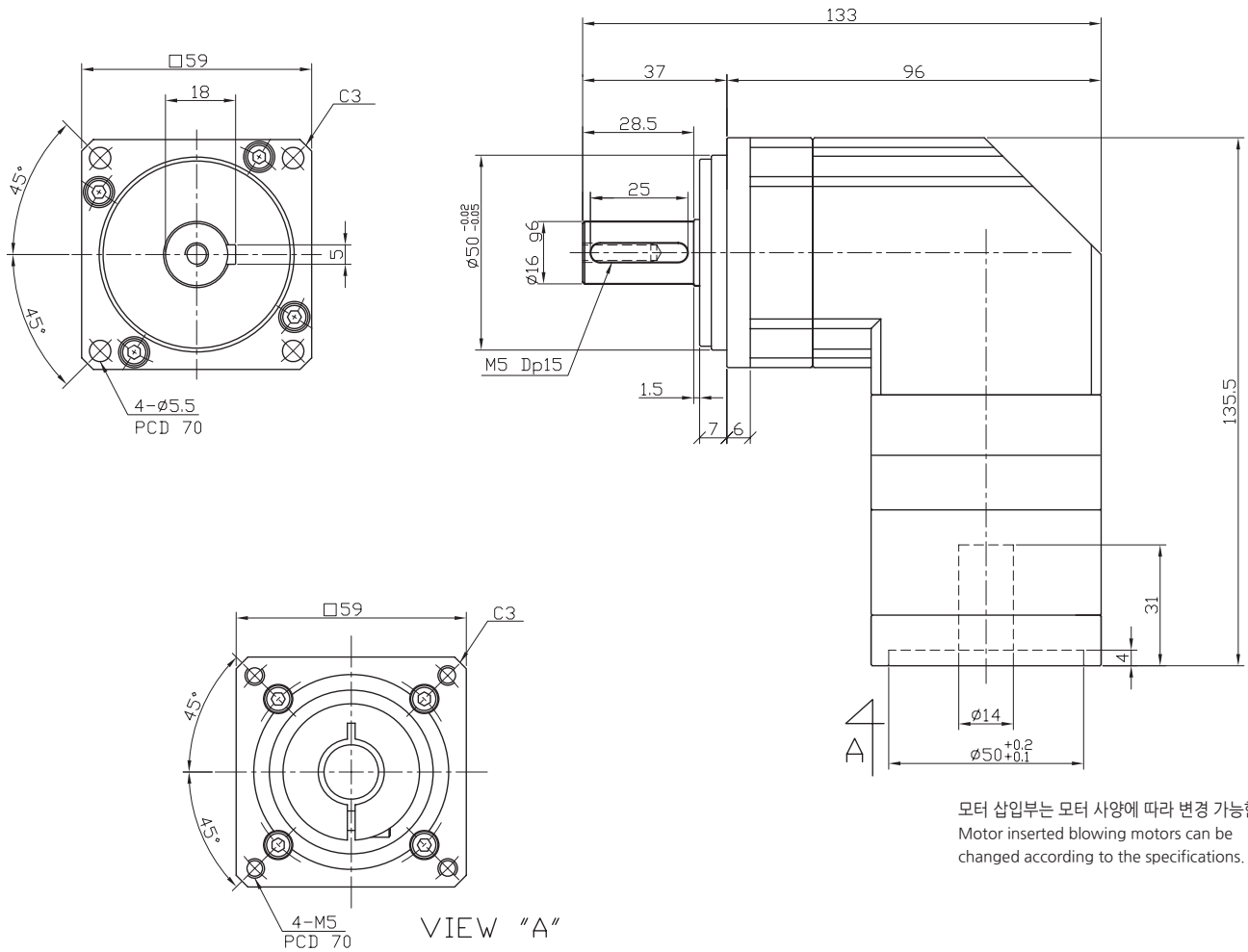
Outline (㉔)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
59	1	3	3	48	72	2000~ 3000	6000
		4	4	60	90		
		5	5	42	63		
		9	9	36	54		
	2	12	3*4	48	144		
		15	3*5	48	144		
		16	4*4	60	180		
		20	4*5	60	180		
		25	5*5	42	126		
		27	3*9	48	144		
		36	4*9	60	180		
		45	5*9	42	126		
	81	9*9	36	108			
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
1.4	1530	765	0.016	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.

PAR60-1,2 Stage 10대1

Ratio : 10 ~ 90

Applicable Motor : 200~400 W



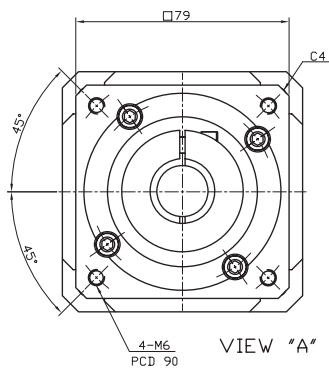
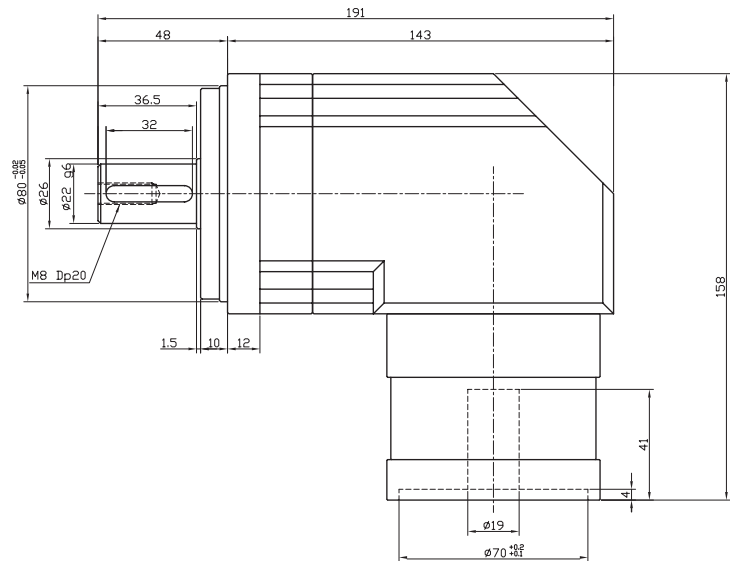
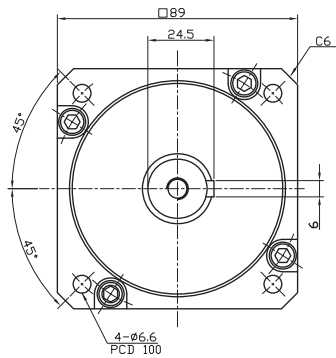
Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
59	1	10	1*10	35	57	3000	6000
	2	30	3*10	48	144		
		40	4*10	60	180		
		50	5*10	42	126		
		90	9*10	36	108		
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinal Life)	
1.4	1530	765	0.106	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전을 미적용 수치임.

PAR90-80-1,2 Stage

Ratio : 3 ~ 81

Applicable Motor : 750 W



4
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모터 삽입부는 모터 사양에 따라 변경 가능함.
Motor inserted blowing motors can be changed according to the specifications.

Outline (□)	Stages	Rtio	Gear combinations	Nominal output torque (Nm)	Maximum output torque (Nm)	Nominal input speed (rpm)	Maximum input speed (rpm)
89	1	3	3	118	354	3000	6000
		4	4	154	462		
		5	5	110	330		
		9	9	98	294		
	2	12	3*4	118	354		
		15	3*5	118	354		
		16	4*4	154	462		
		20	4*5	154	462		
		25	5*5	110	330		
		27	3*9	118	354		
		36	4*9	154	462		
		45	5*9	110	330		
	81	9*9	98	294			
무게(Weight) ±3%	축직각(Radial load) (N)	축방향(Axial load) (N)	Moment of inertia (kg.m ²)	Backlash (arc min)	효율(Efficiency) (%)	수명(Machinical Life)	
3	3250	1625	0.438	BL1 : 5 min이하 BL2 : 10 min이하	92	20000 hr	

* 주의 : 위 도표에 표기된 Output torque 수치는 기구특성 안전율 미적용 수치임.