



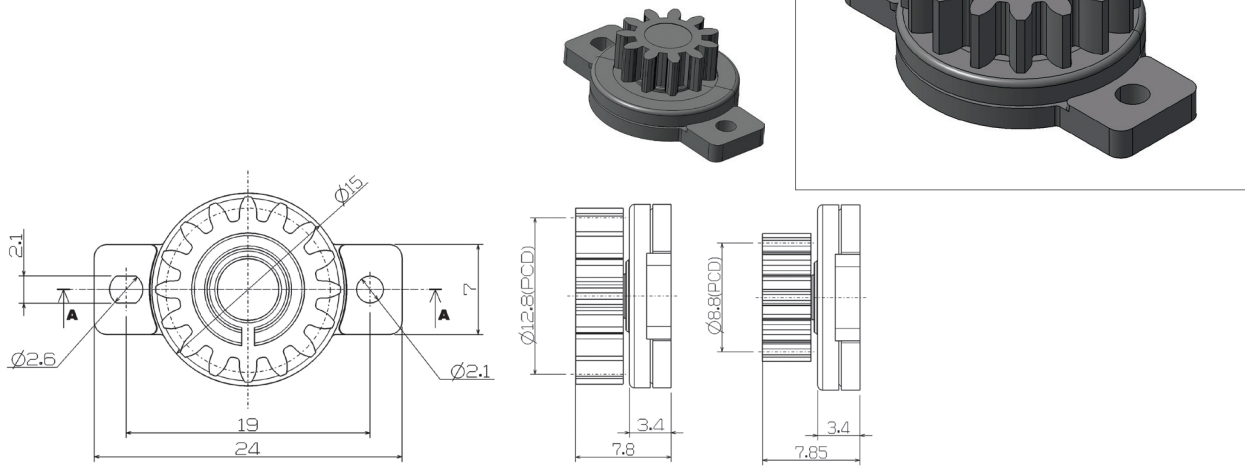
Engineering Plastic!
A Leading Company in the Precision production field

MOTION CONTROL DEVICE

FINE TECH DAMPER | STANDARD OIL DAMPER | STANDARD OIL DAMPER RIB TYPE | STANDARD OIL DAMPER HOOK 1 | STANDARD OIL DAMPER HOOK 2 | MICRO DAMPER | ONE WAY CLUTCH DAMPER | MID TORQUE DAMPER | MID TORQUE ONE WAY DAMPER | BARREL DAMPER | AIR DAMPER | HEAVY LOAD AIR DAMPER | HEAVY LOAD AIR DAMPER HOOK | HIGH HOLD LATCH | DC LATCH | BIG LATCH-1 | BIG LATCH-2 | MINI SIDE LATCH | SWITCH LATCH | HEAVY LOAD LATCH | LARGE MOUTH LATCH | MAGNET LATCH | FREE STOP HINGE

NIFECO

FINE TECH DAMPER



TORQUE SPECIFICATION

No	Big Gear	Standard Gear	Rotor Color	Torque
1	DP1281	DP1331	Red	25±10gf·cm
2	DP1291	DP1341	Blue	40±12gf·cm
3	DP1301	DP1351	Yellow	70±14gf·cm
4	DP1311	DP1361	White	100±16gf·cm
5	DP1321	DP1371	Black	140±18gf·cm

※ Regular Torque : Room temp 3hr, 20rpm → 1sec Torque after rotating for 3sec
 ※ Room temp : 23±2°C, Relative humidity : 50±5%

CHARACTERISTICS

Gear removal force	Min. 10kgf
Cover removal force	Min. 10kgf

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Test Condition	Room Temp : 23±2°C, Relative humidity : 50±5%
Durability	50,000Cycle 1Cycle : 1.5 revolutions forward → 1.5 revolutions backward(20rpm)

GEAR SPECIFICATION

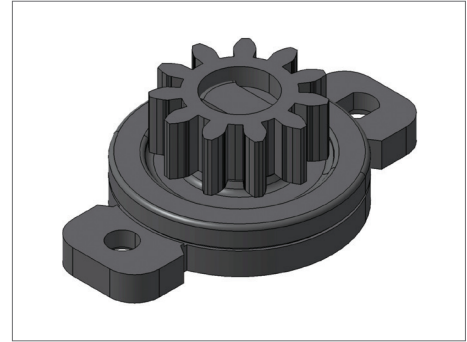
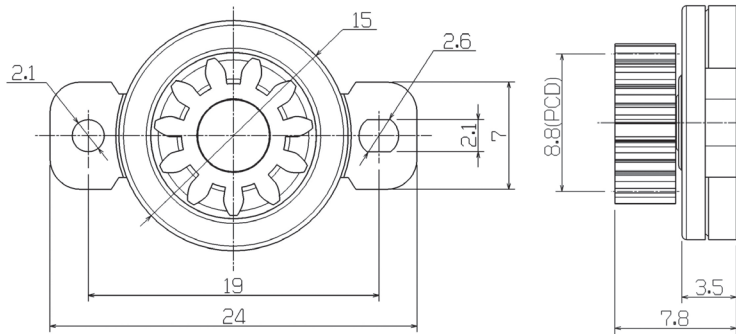
Gear	Type	Teeth Profile	Module	Pressure Angle	Pitch Diameter	No. of Teeth	KS Grade
Big Gear	Standard Spur Gear	Involute Full Depth	0.8	20°	Ø 12.8	16	6th
STD Gear			0.8	20°	Ø 8.8	11	6th

MATERIALS

No	Part Name	Material
1	Case	PC
2	Cap	PC
3	Rotor	POM
4	Gear	POM
5	O-Ring	Silicone Rubber
6	Silicone Oil	Silicone Oil

※ Specification may be changed without prior notice.

STANDARD OIL DAMPER



TORQUE SPECIFICATION

No	Part No	Rotor Color	Torque
1	DP1191	Brown	15±7gf·cm
2	DPR030	Red	25±10gf·cm
3	DPC010	Blue	35±10gf·cm
4	DPC050	Yellow	60±15gf·cm
5	DPC060	White	80±20gf·cm
6	DPG030	Black	120±20gf·cm

※ Regular Torque : Room temp, 20rpm → 3sec Torque after rotating for 6sec

※ Room temp : 23±2°C, Relative humidity : 50±5%

CHARACTERISTICS

Gear removal force	Min. 3kgf
Cover removal force	Min. 10kgf

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Test Condition	Room Temp : 23±2°C, Relative humidity : 50±5%
Durability	50,000Cycle 1Cycle : 2.5 revolutions forward → 2.5 revolutions backward(20rpm)

GEAR SPECIFICATION

Type	Teeth Profile	Module	Pressure Angle	Pitch Diameter	No. of Teeth	KS Grade
Standard Spur Gear	Involute Full Depth	0.8	20°	Ø 8.8	11	8th

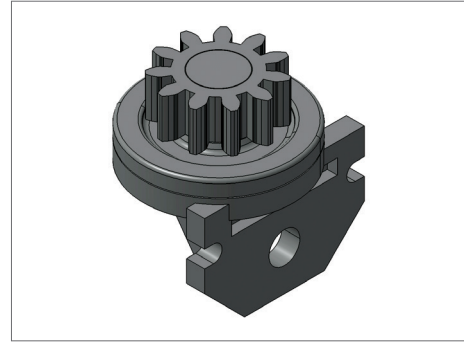
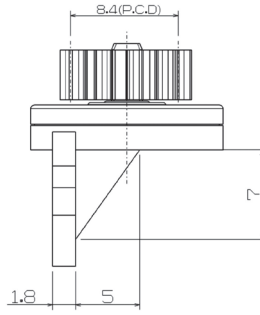
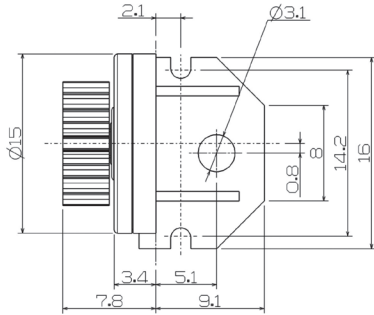
MATERIALS

No	Part Name	Material
1	Housing	PC
2	Cover	PC
3	Rotor	POM
4	Gear	POM
5	O-Ring	Silicone Rubber
6	Silicone Oil	Silicone Oil

※ Specification may be changed without prior notice.

STANDARD OIL DAMPER

RIB TYPE



TORQUE SPECIFICATION

No	Part No	Rotor Color	Torque
1	DP0131	Red	25±12gf·cm
2	DP0141	Blue	40±15gf·cm
3	DP0151	Yellow	70±20gf·cm
4	DP0161	White	90±23gf·cm
5	DP0171	Black	120±25gf·cm
6	DP0711	Green	200±30gf·cm

※ Regular Torque : Room temp, 20rpm → 3sec Torque after rotating for 6sec

※ Room temp : 23±2°C, Relative humidity : 50±5%

CHARACTERISTICS

Gear removal force	Min. 3kgf
Cover removal force	Min. 10kgf

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Test Condition	Room temp : 23±2°C, Relative humidity : 50±5%
Durability	30,000Cycle 1Cycle : 2.5 revolutions forward → 2.5 revolutions backward(20rpm)

GEAR SPECIFICATION

Type	Teeth Profile	Module	Pressure Angle	Pitch Diameter	No. of Teeth	KS Grade
Standard Spur Gear	Involute Full Depth	0.8	20°	Ø 8.8	11	8th

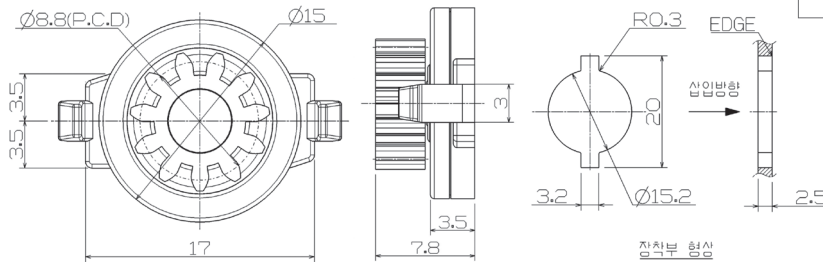
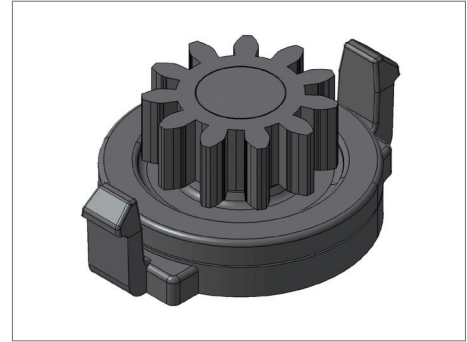
MATERIALS

No	Part Name	Material
1	Housing	PC
2	Cover	PC
3	Rotor	POM
4	Gear	POM
5	O-Ring	Silicone Rubber
6	Silicone Oil	Silicone Oil

※ Specification may be changed without prior notice.

STANDARD OIL DAMPER

HOOK-1



TORQUE SPECIFICATION

No	Part No	Rotor Color	Torque
1	DPY050	Red	25±10gf-cm
2	DPY060	Blue	35±10gf-cm
3	DPY070	Yellow	60±15gf-cm
4	DPY080	White	80±20gf-cm
5	DPY010	Black	120±20gf-cm

※ Regular Torque : Room temp, 20rpm → 3sec Torque after rotating for 6sec

※ Room temp : 23±2°C, Relative humidity : 50±5%

CHARACTERISTICS

Gear removal force	Min. 3kgf
Cover removal force	Min. 10kgf

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Test Condition	Room temp : 23±2°C, Relative humidity : 50±5%
Durability	50,000Cycle 1Cycle : 2.5 revolutions forward → 2.5 revolutions backward(20rpm)

GEAR SPECIFICATION

Type	Teeth Profile	Module	Pressure Angle	Pitch Diameter	No. of Teeth	KS Grade
Standard Spur Gear	Involute Full Depth	0.8	20°	Ø 8.8	11	8th

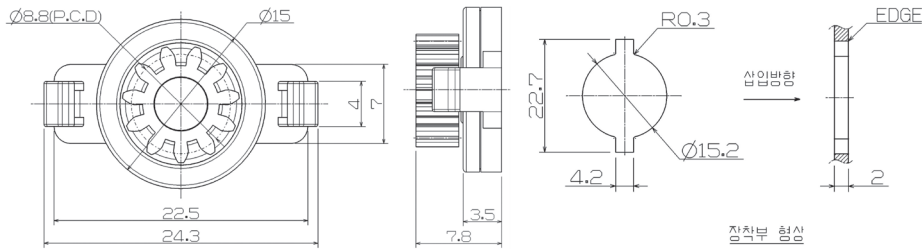
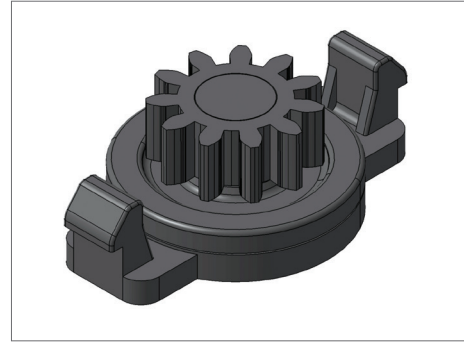
MATERIALS

No	Part Name	Material
1	Housing	PC
2	Cover	PC
3	Rotor	POM
4	Gear	POM
5	O-Ring	Silicone Rubber
6	Silicone Oil	Silicone Oil

※ Specification may be changed without prior notice.

STANDARD OIL DAMPER

HOOK-2



TORQUE SPECIFICATION

No	Part No	Rotor Color	Torque
1	DPY090	Black	140±25gf·cm
2	DP0451	Yellow	60±15gf·cm

※ Regular Torque : Room temp, 20rpm → 3sec Torque after rotating for 6sec

※ Room temp : $23 \pm 2^{\circ}\text{C}$, Relative humidity : $50 \pm 5\%$

➤ CHARACTERISTICS

Gear removal force	Min. 3kgf
Cover removal force	Min. 10kgf

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Test Condition	Room temp : 23±2 °C, Relative humidity : 50±5%
Durability	50,000Cycle 1Cycle : 2.5 revolutions forward → 2.5 revolutions backward(20rpm)

➤ GEAR SPECIFICATION

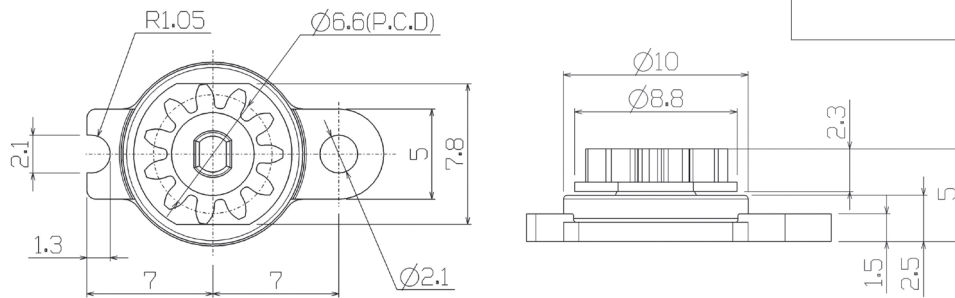
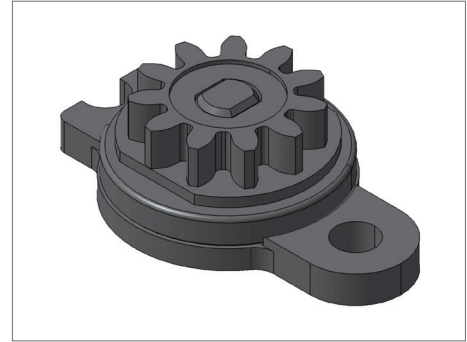
Type	Teeth Profile	Module	Pressure Angle	Pitch Diameter	No. of Teeth	KS Grade
Standard Spur Gear	Involute Full Depth	0.8	20°	Ø 8.8	11	8th

➤ MATERIALS

No	Part Name	Material
1	Housing	PC
2	Cover	PC
3	Rotor	POM
4	Gear	POM
5	O-Ring	Silicone Rubber
6	Silicone Oil	Silicone Oil

※ Specification may be changed without prior notice.

MICRO DAMPER



TORQUE SPECIFICATION

No	Part No	Rotor Color	Torque
1	DP1381	Brown	12±7gf·cm
2	DP0531	Gray	15±7gf·cm
3	DPQ020	Red	20±7gf·cm
4	DPQ030	Yellow	25±8gf·cm
5	DPQ040	Blue	32±9gf·cm
6	DPQ050	White	42±10gf·cm
7	DPN140	Black	65±12gf·cm

※ Regular Torque : Room temp, 20rpm → 3sec Torque after rotating for 4sec

※ Room Temp : 23±2°C, Relative humidity : 50±5%

CHARACTERISTICS

Gear removal force	Min. 1.5kgf
Cover removal force	Min. 1.5kgf

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Test Condition	Room temp : 23±2°C, Relative humidity : 50±5%
Durability	20,000Cycle 1Cycle : 1 revolutions forward → 1 revolutions backward(20rpm)

GEAR SPECIFICATION

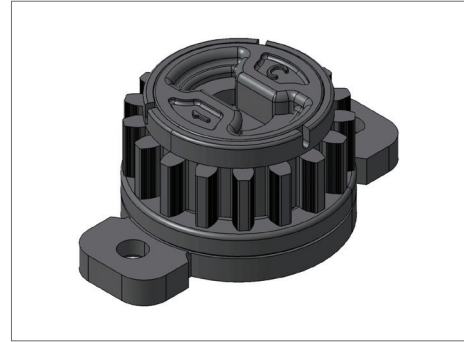
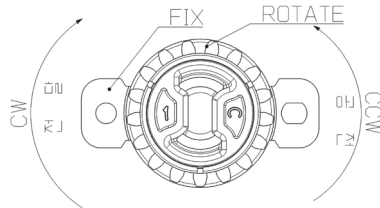
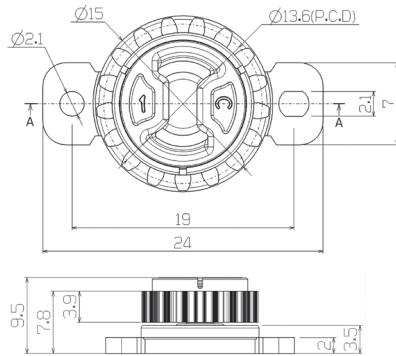
Type	Teeth Profile	Module	Pressure Angle	Pitch Diameter	No. of Teeth	KS Grade
Standard Spur Gear	Full Depth	0.6	20°	Ø 6.6	11	8th

MATERIALS

No	Part Name	Material
1	Housing	PC
2	Cover	PC
3	Rotor	POM
4	Gear	POM
5	O-Ring	NBR
6	Silicone Oil	Silicone Oil

※ Specification may be changed without prior notice.

ONE WAY CLUTCH DAMPER



TORQUE SPECIFICATION

No	Part No	Rotor Color	Torque
1	DP13G1	Red	25±10gf·cm
2	DP13H1	Blue	35±10gf·cm
3	DP13J1	Yellow	60±15gf·cm
4	DP13K1	White	80±20gf·cm
5	DP13L1	Black	120±20gf·cm

※ Regular Torque : Room temp, 20rpm → 3sec Torque after rotating for 6sec

※ Room temp : 23±2°C, Relative humidity : 50±5%

CHARACTERISTICS

Gear removal force	Min. 3kgf
Cover removal force	Min. 10kgf

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Test Condition	Room Temp : 23±2°C, Relative humidity : 50±5%
Durability	50,000Cycle 1Cycle : 2.5 revolutions forward → 2.5 revolutions backward(20rpm)

GEAR SPECIFICATION

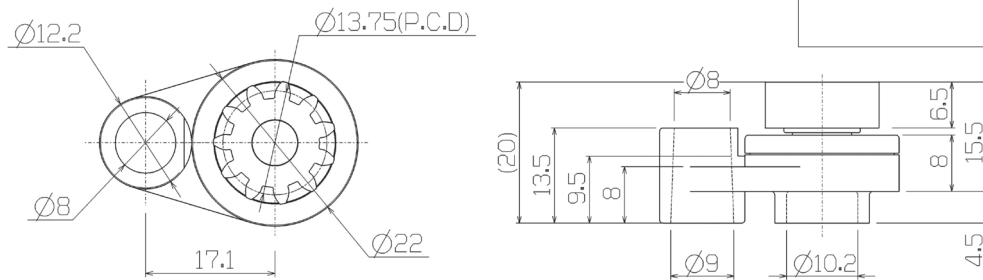
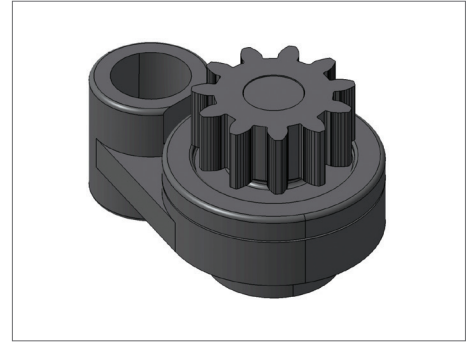
Type	Teeth Profile	Module	Pressure Angle	Pitch Diameter	No. of Teeth
Standard Spur Gear	Stup tooth	0.8	20°	Ø 13.6	17

MATERIALS

No	Part Name	Material
1	Housing	PC
2	Cover	PC
3	Rotor	POM
4	O-Ring	Silicone Rubber
5	Silicone Oil	Silicone Oil
6	Housing CW	PBT
7	Gear Cap	POM
8	Planet Gear	PA66
9	Grease	Grease

※ Specification may be changed without prior notice.

MID TORQUE DAMPER



TORQUE SPECIFICATION

No	Part No	Rotor Color	Torque
1	DPI010	Blue	310±40gf·cm
2	DPF020	White	800±100gf·cm
3	DPF060	Black	1,100±100gf·cm 1,100-150gf·cm

※ Regular Torque : Room temp, 20rpm → 3sec Torque after rotating for 6 sec

※ Room temp : 23±2°C, Relative humidity : 50±5%

CHARACTERISTICS

Gear removal force	Min. 5kgf
Cover removal force	Min. 10kgf

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Test Condition	Room Temp : 23±2°C, Relative humidity : 50±5%
Durability	30,000Cycle 1Cycle : 2.5 revolutions forward → 2.5 revolutions backward(20rpm)

GEAR SPECIFICATION

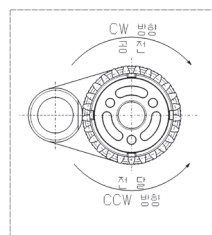
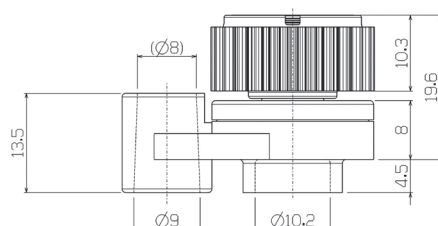
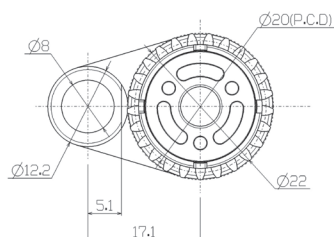
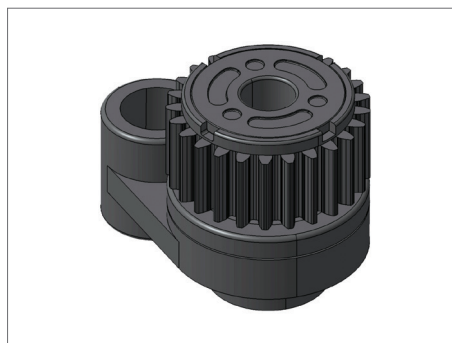
Type	Teeth Profile	Module	Pressure Angle	Pitch Diameter	No. of Teeth	KS Grade
Standard Spur Gear	Involute Full Depth	1.25	20°	Ø 13.75	11	8th

MATERIALS

No	Part Name	Material
1	Housing	PC
2	Rotor	POM
3	Cover	PC
4	Gear	POM
5	O-Ring	Silicone Rubber
6	Silicone Oil	Silicone Oil

※ Specification may be changed without prior notice.

MID TORQUE ONE WAY DAMPER



CHARACTERISTICS

Part No	Category	Standard		
DP14J1	Torque	Ton	1100	+100 gf-cm
				-150 gf-cm
	Cover removal force	Toff	Max. 10 gf-cm	
			Min. 3kgf	

- ※ Room Temp : 23±2°C, Relative humidity : 50±5%
- ※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs
- ※ Ton : Revolution CCW
- ※ Toff : Revolution CW

DURABILITY

Test Condition	Room temp: 23±2°C, Relative humidity: 50±5%
Durability	1 Cycle : 2.5 revolutions forward → 2.5 revolutions backward(20rpm) Total Cycle : 30,000

GEAR SPECIFICATION

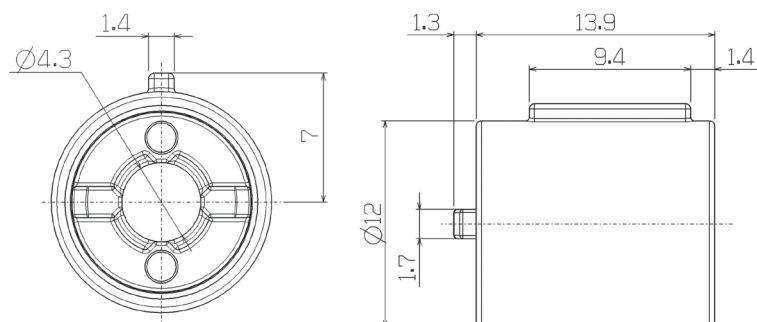
Type	Teeth Profile	Module	Pressure Angle	Pitch Diameter	No. of Teeth	KS Grade
Standard Spur Gear	Involute Full Depth	0.8	20°	Ø 20	25	6th

MATERIALS

No	Part Name	Material
1	Housing	PC
2	Rotor	POM
3	Cover	PC
4	O-Ring	Silicone Rubber
5	Silicone Oil	Silicone Oil
6	Gear Housing	PBT
7	Gear Cap	POM
8	Planet Gear	PA66
9	Grease	-

※ Specification may be changed without prior notice.

BARREL DAMPER



TORQUE SPECIFICATION

No	Part No	Torque
1	DP1491	490±90gf·cm

※ Regular Torque : Room Temp, 20rpm → 1sec Torque after rotating for 6 sec

※ Room Temp : 23±2°C, Relative humidity : 50±5%

DURABILITY

Durability	80±2°C/3hr → Room Temp/1hr → 5,000Cycle → -30±2°C/3hr → Room Temp/1hr → 5,000Cycle → 38±2°C @95%RH/16hr → Room Temp/1hr → 5,000Cycle
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MATERIALS

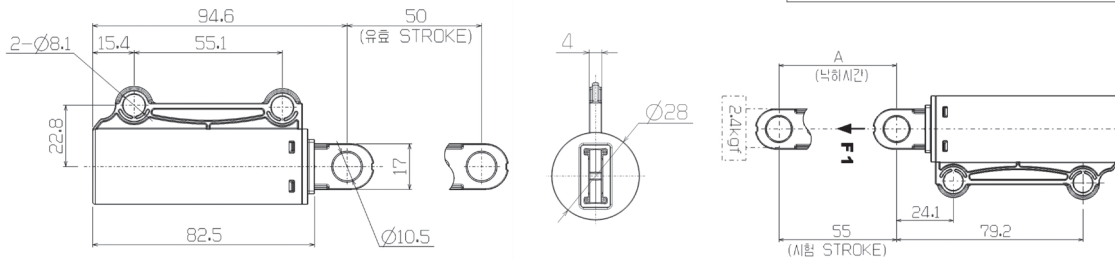
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1	Housing	POM
2	Rotor	POM
3	O-Ring	EPDM
4	O-Ring	EPDM
5	Silicone Oil	Silicone Oil

HOUSING COLOR LIST

No	ASSY No.	Color Name	Color Code
1	DP1491-6T	Gray	TX
2	DP1491-2A	Dark Beige	YDA
3	DP1491-2N	Beige	J7
4	DP1491-20	Khaki	MCH
5	DP1491-61	Soft Gray	SG2
6	DP1491-60	Dark Gray	H9
7	DP1491-21	Dark Beige	WYB
8	DP1491-04	Soft Beige	VYC
9	DP1491-02	Black	BK

※ Specification may be changed without prior notice.

AIR DAMPER



SPECIFICATION

No	Part No	Cap Color	Stroke Time
1	DP15L1	Dark Khaki	0.8±0.20sec
2	DP15K	Gray	1.15±0.20sec
3	DP15J1	Black	1.45±0.25sec
4	DP15H1	Blue	1.9±0.25sec

※ Stroke Time: Automatic Falling(Static load 2.4kgf, 55mm Stroke)

CHARACTERISTICS

No	Category	Standard
1	Stroke	50±5mm
2	Removal force	Over 15kgf (Cylinder ↔ Cap)

※ Room Temp : 23±2°C, Relative humidity : 50±5%

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

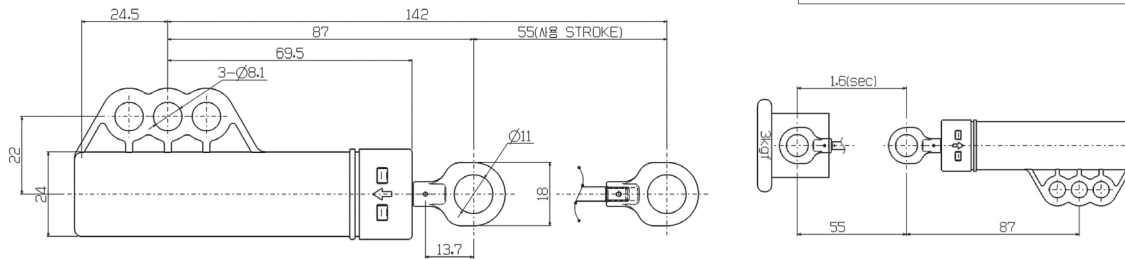
Heat Cycle	90°C/4hr → Room temp/0.5hr → -40°C/4hr → Room temp/0.5hr = 1Cycle No damage, malfunction, noise after 10Cycle
Durability	Reciprocating 1Cycle, 10Cycle/MIN. No damage, malfunction after 15,000Cycle

MATERIALS

No	Part Name	Material
1	Cylinder	POM
2	Cap	POM
3	Piston	PP
4	O-Ring	Silicone Rubber
5	Grease	-

※ Specification may be changed without prior notice.

HEAVY LOAD AIR DAMPER



SPECIFICATION

No	Part No	Cap Color	Stroke Time	
1	DPK06	Yellow	1.6	+0.2sec -0.1sec

※ Stroke Time: Automatic Falling(Static load 3kgf, 55mm Stroke)

※ 23±2°C, 50±5%RH

CHARACTERISTICS

No	Category	Standard
1	Stroke	55±5mm
2	Removal force	Over 15kgf (Cylinder ↔ Cap)

※ Room Temp : 23±2°C, Relative humidity : 50±5%

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

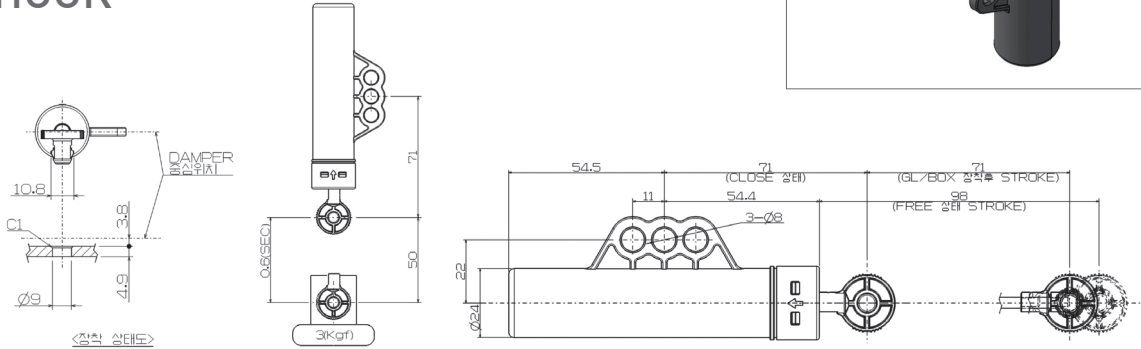
Test Condition	Reciprocating 1Cycle, 24Cycle/MIN. (23±2°C, 55%RH)
Durability	No damage, malfunction after 10,000Cycle

MATERIALS

No	Part Name	Material
1	Cylinder	POM
2	Piston	POM
3	Cap	POM
4	Hook	POM
5	Holder	POM
6	Shaft	SUM24L
7	O-Ring-A	Silicone Rubber
8	O-Ring-B	NBR
9	O-Ring-C	Silicone Rubber
10	Spring Pin	SUS
11	Grease	-

※ Specification may be changed without prior notice.

HEAVY LOAD AIR DAMPER HOOK



SPECIFICATION

No	Part No	Cap Color	Stroke Time
1	DP1211	Yellow	1.0±0.2sec

※ Stroke Time: Automatic Falling(Static load 3kgf, 55mm Stroke)

※ 23±2°C, 50±5%RH

CHARACTERISTICS

No	Category	Standard
1	Stroke	50±5mm
2	Removal force	Over 15kgf (Cylinder ↔ Cap)

※ Room Temp : 23±2°C, Relative humidity : 50±5%

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

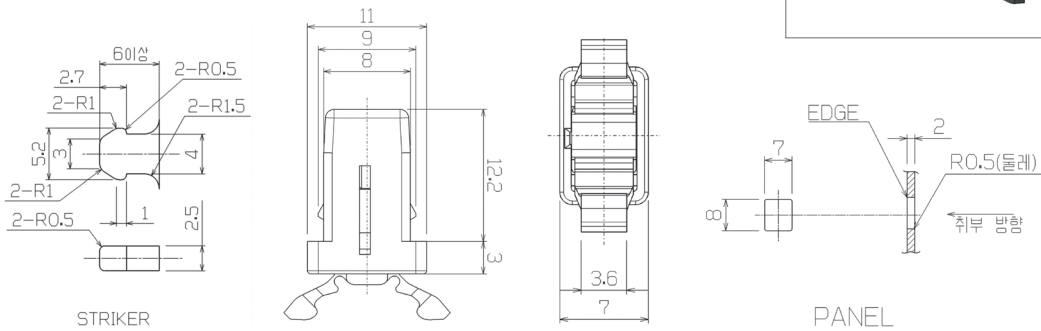
Test Condition	Reciprocating 1Cycle(23±2°C, 55%RH)
Durability	No damage, malfunction after 12,000Cycle

MATERIALS

No	Part Name	Material
1	Cylinder	POM
2	Piston	POM
3	Cap	POM
4	Hook	POM
5	Holder	POM
6	Shaft	SUM24L
7	O-Ring-A	Silicone Rubber
8	O-Ring-B	NBR
9	O-Ring-C	Silicone Rubber
10	Spring Pin	S65CM
11	Grease	-

※ Specification may be changed without prior notice.

DC LATCH



SPECIFICATION

No	Part No	Piston
1	LA0251	270±120gf
2	LAA010	400±120gf
3	LAF010	570±120gf

CHARACTERISTICS

No	Category	Standard
1	Open Stroke	4.6±0.4
2	Overstroke	0.8~1.4
3	Striker Removal Force(Room temp)	Min. 2kgf
4	Striker Removal Force(80°C)	Min. 1kgf
5	Latch Breaking Strength(Lock Condition in Room temp)	Min. 5kgf
6	Temp. Range(No dew)	-30°C ~ 80°C

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Test Conditon	Max. 1kgf weight
Durability	No damage after 30,000Cycle(Room Temp.)
	No damage after 5,000Cycle(80°C)
Wetproof	No damage(60°C/95%RH, 120Hr)

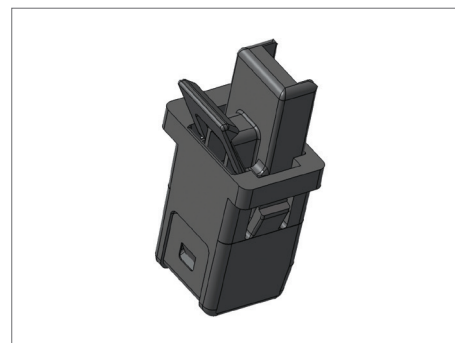
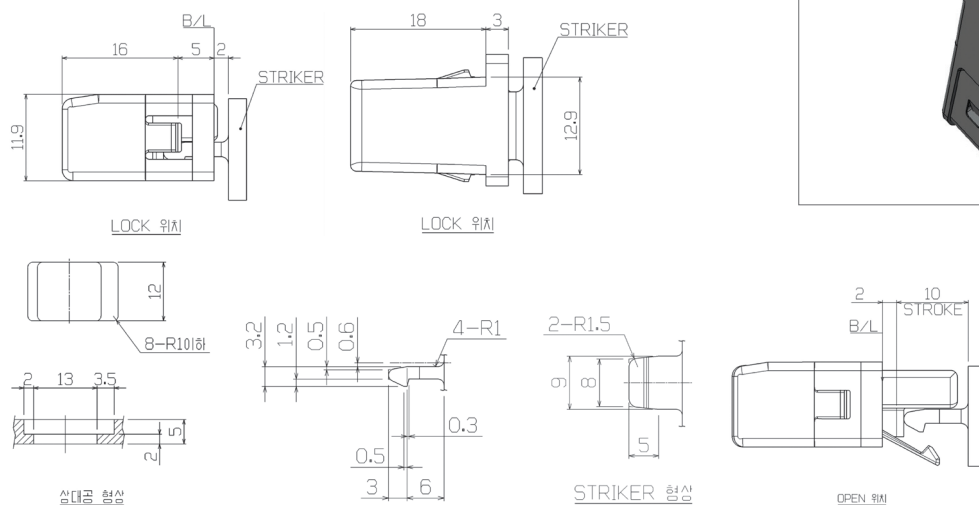
※ 1Cycle : Lock → Open/2~3sec

MATERIALS

No	Part Name	Material
1	Case	POM
2	Latch	PA66
3	Guide Pin	SUS
4	Spring	SUS

※ Specification may be changed without prior notice.

BIG LATCH-1



SPECIFICATION

No	Part No	Force	Division
1	LA0030	230±50gf	NO Marking
2	LAW010	500±60gf	White Marking on the bottom
3	LA02B1	770±80gf	Red Marking on the bottom

CHARACTERISTICS

No	Category	Standard
1	Panel Insertion Force	Max. 8kgf
2	Panel Removal Force	Min. 10kgf
3	Striker Removal Force	Room Temp : Min. 4kgf
4		80°C : Min. 3kgf

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

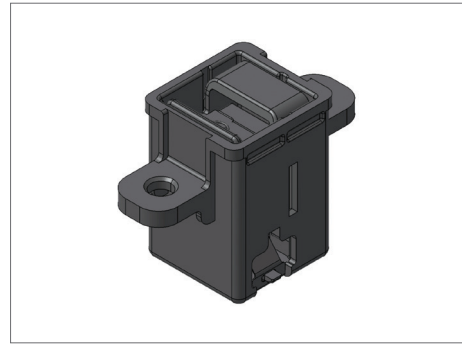
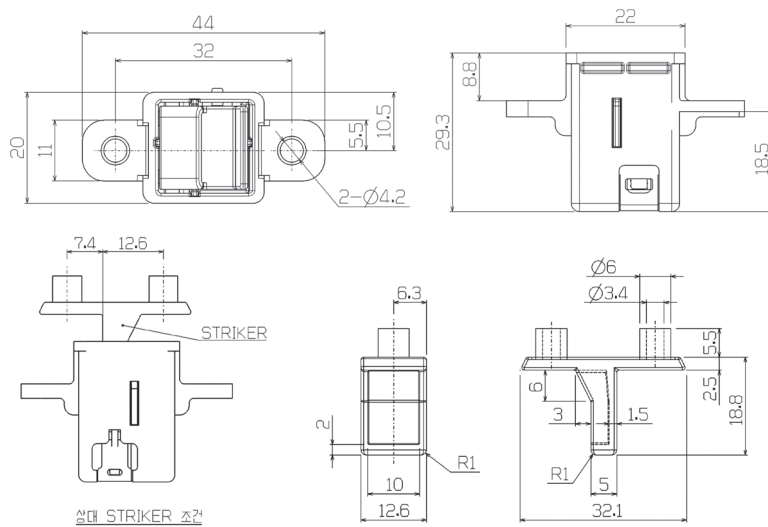
Test Condition	Room Temp : 23±2°C, Relative humidity : 50±5%
Durability	No damage(30,000cycle)

MATERIALS

No	Part Name	Material
1	Case	PC
2	Latch	POM
3	Press Spring	SUS301
4	Spring	SWPB
	Spring	SUS
5	Guide Pin	SUS

※ Specification may be changed without prior notice.

BIG LATCH-2



SPECIFICATION

No	Part No	Operating Force
1	LA0051	1.3±0.5kgf

CHARACTERISTICS

No	Category	Standard
1	Striker Removal Force	Min. 3kgf
2	Install direction	Heartcam direction : upper side

※ Room temp : 23±2°C, Relative humidity : 50±5%

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

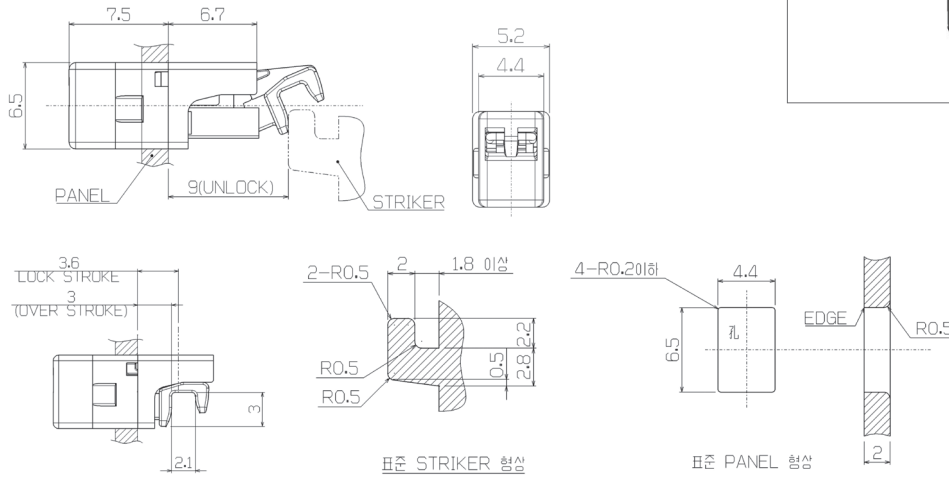
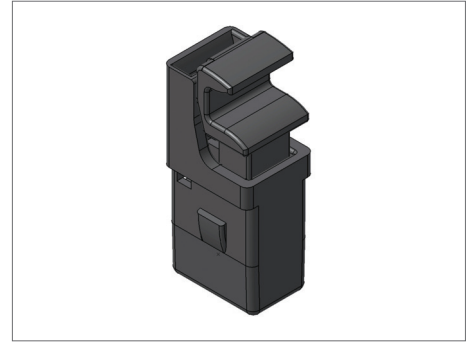
Test Condition	Room temp : 23±2°C, Relative humidity : 50±5%
Durability	No damage : 100,000Cycle

MATERIALS

No	Part Name	Material
1	Case	POM
2	Slider	POM
3	Hook	POM
4	Tension Spring	SUS
5	Rotor Pin	SUS
6	Slider Spring	SUS
7	Hook Spring	SUS
8	Grease	-

※ Specification may be changed without prior notice.

MINI SIDE LATCH



SPECIFICATION

No	Part No	Operating Force
1	LA0221	3±2N

CHARACTERISTICS

No	Category	Standard
1	Striker removal force	Min. 10N (No recycle)

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Test Condition	Room temp : 23±2°C
Durability	No damage : 10,000Cycle

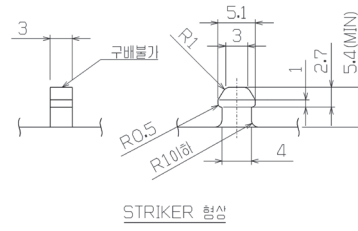
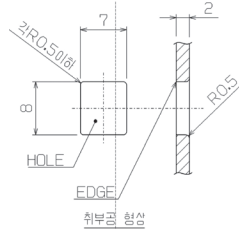
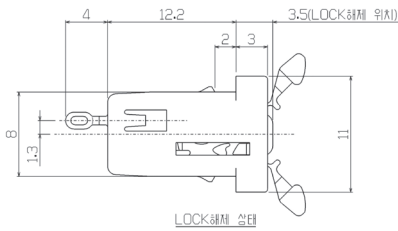
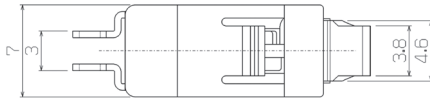
※ 1Cycle : Lock & Unlock/2sec

MATERIALS

No	Part Name	Material
1	Case	POM
2	Latch	PA66
3	Guide Pin	SUS
4	Spring	SUS
5	Grease	-

※ Specification may be changed without prior notice.

SWITCH LATCH



SPECIFICATION

No	Part No	Operating Force
1	LA0021	500±200gf

CHARACTERISTICS

No	Category	Condition	Standard
1	Rating	Resistive load	DC12V 0.1A
2	Contact resistance	Measuring frequency : 1KHz(Lock Condition) Micro ampere : Below 1.5mA	Max. 100mΩ
3	Insulation resistance	DC 500V, 60sec	Min. 100MΩ
4	Withstanding	AC 500V, 60sec	No damage
		Measuring frequency : 50/60Hz	
		Sensitivity Current : 2mA	

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

Operation force	550 ± 200gf(Room Temp)
Durability	30,000Cycle(Room Temp) 1Cycle : Lock&Unlock/3sec
Switch Function	Lock = On, Unlock = Off

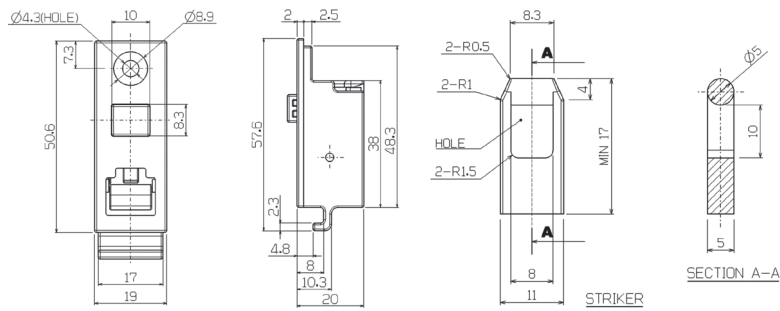
※ Room temp : 23±2°C, Relative humidity : 50±5%

MATERIALS

No	Part Name	Material
1	Latch	PA66
2	Case	PBT + GF
3	Spring	SUS
4	Guide Lever	SUS
5	Terminal	Brass
6	Spring Terminal	Phosphor Bronze
7	Grease	-
8	Connector Grease	-

※ Specification may be changed without prior notice.

HEAVY LOAD LATCH



SPECIFICATION

No	Part No	Operating Force
1	LA0271	Max. 1kgf (Locking)

CHARACTERISTICS

No	Category	Standard
1	Locking Force	Max. 1 kgf
2	Switching Force	Max. 1.5 kgf
3	Striker Removal Force	Min. 13 kgf

※ Room Temp : $23 \pm 2^\circ\text{C}$, Relative humidity : $50 \pm 5\%$

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

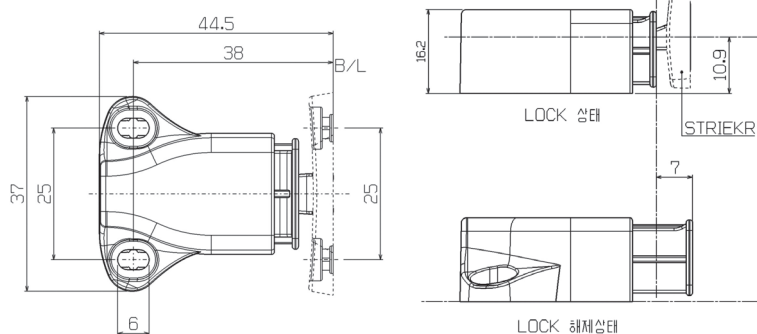
Test Condition	Room Temp : $23 \pm 2^\circ\text{C}$, Relative humidity : $50 \pm 5\%$
Durability	No damage : 50,000Cycle(1Cycle: 2~3Sec)

MATERIALS

No	Part Name	Material
1	Case	POM
2	Latch	POM
3	Switch	PC+ABS
4	Spring_Latch	SUS
5	Spring_Lock	SUS
6	Shaft	SWRCH10A
7	Grease	-

※ Specification may be changed without prior notice.

LARGE MOUTH LATCH



SPECIFICATION

No	Part No	Operating Force
1	LA0141	Min. 5N
2	LA0191	

CHARACTERISTICS

No	Category	Standard
1	Striker removal force(Room temp)	20N ~ 100N
2	Operating force(Lock&Unlock in Room Temp)	Min. 5N
3	Using Temp(No dew condensation)	-10°C ~ 50°C

※ Room Temp : 23±2°C, Relative humidity : 50±5%

※ Do not include Pb, Cd, Hg, Cr+6, Br, PBBs, PBDEs

DURABILITY

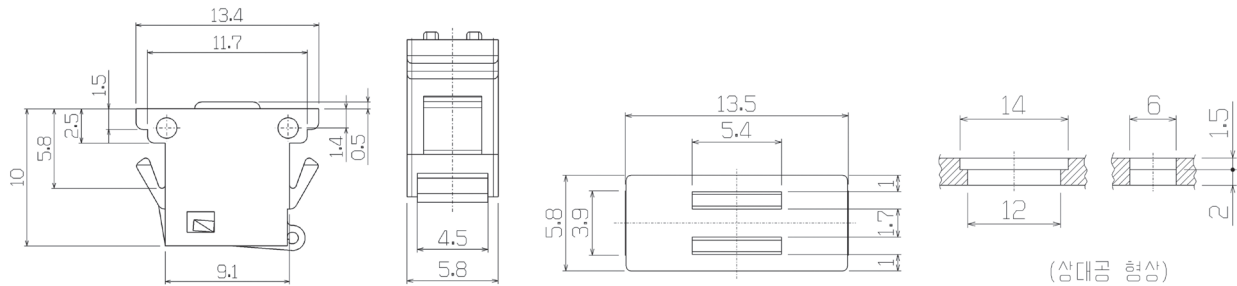
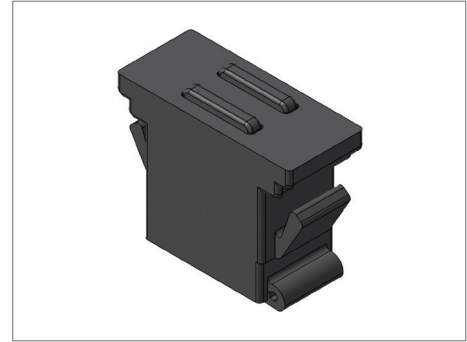
Test Condition	Room temp : 23±2°C, Relative humidity : 50±5%
Durability	No damage : 30,000Cycle

MATERIALS

No	Part Name	Material
1	Latch Case	POM
2	Slider	POM
3	Lock	PBT
4	Lever	SUS
5	Spring	SUS
6	Grease	-

※ Specification may be changed without prior notice.

MAGNET LATCH



CHARACTERISTICS

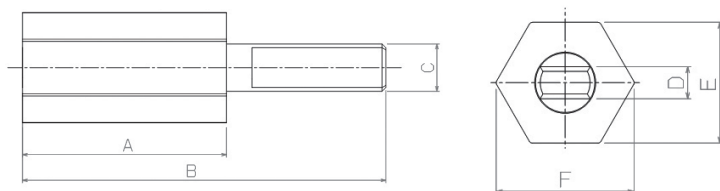
No	Part No	Magnetic Force	Panel
1	LA1040	300~500g	Insert force : Max. 4kgf Removal force : Min. 5kgf
2	LAT010	400~700g	

MATERIALS

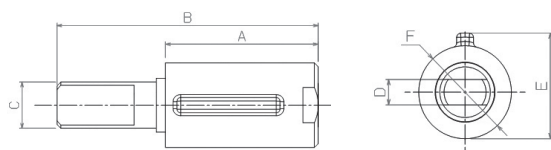
No	Part Name	Material
1	Case	PA6
2	Plate	SPCC
3	Magnet	-

※ Specification may be changed without prior notice.

FREE STOP HINGE



〈ET3981, ET2361, ET4001, ETU14〉



〈ET2261〉



SPECIFICATION

No	P/N	Torque (Kgf)	Dimensions						Material	Remarks
			A	B	C	D	E	F		
1	ET3981	1.0~2.5	18	27.5	Ø 3.7	2.0	7.3	8.4	POM/SUS	Black
2	ET2361	1.2~3.5	18	28.5	Ø 3.7	2.0	7.5	8.6	POM/SUS	
3	ET4001	3.0~4.5	18	27.5	Ø 3.7	2.0	7.3	8.4	POM/SUS	Yellow
4	ETU14	6.0~8.0	21	33.0	Ø 5.0	2.0	8.2	9.46	POM/SUS	
5	ET2261	8.0~12.0	24.1	34.2	Ø 6.0	3.0	12.5	Ø 11	POM/SUS	

※ Torque Test Condition : Measure the MAX Torque after preliminary operation 0.5 rotation (5 ~ 6 sec)

DURABILITY

Durability	Shaft 120 ° rotation (4sec) → stop (3sec) is set to 1Cycle, 3,000Cycle(within ± 50% of initial value)
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※ Specification may be changed without prior notice.