FFD-25FS/FW/SS/SW Series

Friction Damper [Uni-Directional]

Fixed

Damping direction

Clockwise

Counter-clockwise

Clockwise

Counter-clockwise

Clockwise

Counter-clockwise

Clockwise

Counter-clockwise

Clockwise

Counter-clockwise

Clockwise

Counter-clockwise



Soft Silent Safety

RoHS Compliant

<Specifications>

Model	Max. torque	Damping direction	Model
FFD-25FS-R102	0.1±0.01[N·m]	Clockwise	FFD-25SS-R102
FFD-25FS-L102	(1±0.1kgf·cm)	Counter-clockwise	FFD-25SS-L102
FFD-25FS-R502	0.5±0.05[N·m]	Clockwise	FFD-25SS-R502
FFD-25FS-L502	(5±0.5kgf⋅cm)	Counter-clockwise	FFD-25SS-L502
FFD-25FS-R103	1±0.1[N·m]	Clockwise	FFD-25SS-R103
FFD-25FS-L103	(10±1kgf⋅cm)	Counter-clockwise	FFD-25SS-L103
FFD-25FW-R103	1±0.1[N·m]	Clockwise	FFD-25SW-R103
FFD-25FW-L103	(10±1kgf⋅cm)	Counter-clockwise	FFD-25SW-L103
FFD-25FW-R153	1.5±0.15[N⋅m]	Clockwise	FFD-25SW-R153
FFD-25FW-L153	(15±1.5kgf⋅cm)	Counter-clockwise	FFD-25SW-L153
FFD-25FW-R203	2±0.2[N·m]	Clockwise	FFD-25SW-R203
FFD-25FW-L203	(20±2kgf⋅cm)	Counter-clockwise	FFD-25SW-L203

*) Rated torque is measured at a rotation speed of *Weight 20rpm at 20~25°C

*Max. rotation speed

*Max. cycle rate

*Operating temperature

30rpm 13 cycle/min

-10~60°C(90%RH)

FFD-25FS 13±2g

FFD-25FW 24±2g FFD-25SS 12±2g FFD-25SW 23±2g

Max. torque

0.1±0.01[N·m]

(1±0.1kgf·cm)

0.5±0.05[N·m]

(5±0.5kgf·cm)

1±0.1[N·m]

(10±1kgf⋅cm)

 $1\pm0.1[N\cdot m]$

(10±1kgf⋅cm)

1.5±0.15[N·m]

(15±1.5kgf⋅cm)

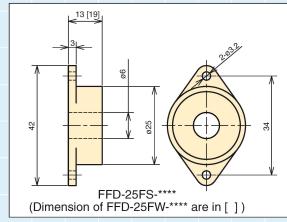
2±0.2[N·m]

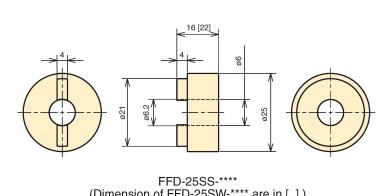
(20±2kgf·cm)

*Body and cap material POM

*Cap colour

R: Black L: White





(Dimension of FFD-25SW-**** are in [])

How to Use the Damper

- 1. The damper generates torque in both the clockwise and counter-clockwise directions. (A one-way clutch is built in inside the damper.)
- 2. Please make sure that the shaft attached to a damper has a bearing, as the damper itself is not fitted with one.
- 3. It can be used as a free-stop for a load that is smaller than the rated torque

the fated torque.							
Shaft's external dimensions		ø6_{)).03				
Surface hardness	Н	RC55 o	r highe	r			
Quenching depth	0.	5mm o	r highe	r			
Surface roughness		1.0Z or	lower				
Chamfer end						\neg	
(Damper insertion side)			_	-		/ -	
		00	0 000			\bigcup	
				//			
	Shaft's external dimensions Surface hardness Quenching depth Surface roughness Chamfer end	Shaft's external dimensions Surface hardness H Quenching depth 0. Surface roughness Chamfer end	Shaft's external dimensions Ø6_{Surface hardness HRC55 of Quenching depth 0.5mm of Surface roughness 1.0Z or Chamfer end (Damper insertion side)	Shaft's external dimensions Ø6_0.03 Surface hardness HRC55 or highe Quenching depth 0.5mm or highe Surface roughness 1.0Z or lower Chamfer end (Damper insertion side)	Shaft's external dimensions Ø6_8.03 Surface hardness HRC55 or higher Quenching depth 0.5mm or higher Surface roughness 1.0Z or lower Chamfer end (Damper insertion side)	Shaft's external dimensions Ø6_8.03 Surface hardness HRC55 or higher Quenching depth 0.5mm or higher Surface roughness 1.0Z or lower Chamfer end (Damper insertion side)	Shaft's external dimensions Ø6 _8.03 Surface hardness HRC55 or higher Quenching depth 0.5mm or higher Surface roughness 1.0Z or lower Chamfer end (Damper insertion side)

- 4. Please refer to the recommended dimensions below when creating a shaft for attachment to the damper. Using a shaft outside of the recommended dimensions may cause the shaft to slip out.
- 5. To insert a shaft into the damper, insert the shaft while spinning it in the opposite direction of the damper's direction of torque generation. (Do not force the shaft in from a regular direction. This may damage the built-in oneway clutch.)

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Soft Silent Safety

FFD-28FS/FW/SS/SW Series

RoHS Compliant

Friction Damper [Uni-Directional]

Fixed

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wise



<Specifications>

Model	Max. torque	Damping direction	Мо	del	Max. torque	Damping direction
FFD-28FS-R102	0.1±0.01[N·m]	Clockwise	FFD-285	SS-R102	0.1±0.01[N·m]	Clockwise
FFD-28FS-L102	(1±0.1kgf-cm)	Counter-clockwise	FFD-285	SS-L102	(1±0.1kgf⋅cm)	Counter-clockwise
FFD-28FS-R502	0.5±0.05[N·m]	Clockwise	FFD-285	SS-R502	0.5±0.05[N·m]	Clockwise
FFD-28FS-L502	(5±0.5kgf⋅cm)	Counter-clockwise	FFD-285	SS-L502	(5±0.5kgf⋅cm)	Counter-clockwise
FFD-28FS-R103	1±0.1[N·m]	Clockwise	FFD-285	SS-R103	1±0.1[N·m]	Clockwise
FFD-28FS-L103	(10±1kgf⋅cm)	Counter-clockwise	FFD-285	SS-L103	(10±1kgf⋅cm)	Counter-clockwise
FFD-28FW-R103	1±0.1[N·m]	Clockwise	FFD-285	SW-R103	1±0.1[N·m]	Clockwise
FFD-28FW-L103	(10±1kgf⋅cm)	Counter-clockwise	FFD-285	SW-L103	(10±1kgf⋅cm)	Counter-clockwise
FFD-28FW-R153	1.5±0.15[N⋅m]	Clockwise	FFD-285	SW-R153	1.5±0.15[N⋅m]	Clockwise
FFD-28FW-L153	(15±1.5kgf⋅cm)	Counter-clockwise	FFD-285	SW-L153	(15±1.5kgf·cm)	Counter-clockwise
FFD-28FW-R203	2±0.2[N·m]	Clockwise	FFD-285	SW-R203	2±0.2[N·m]	Clockwise
FFD-28FW-L203	(20±2kgf⋅cm)	Counter-clockwise	FFD-285	SW-L203	(20±2kgf·cm)	Counter-clockwise

- *) Rated torque is measured at a rotation speed of *Weight 20rpm at 20~25°C
- *Max. rotation speed

30rpm

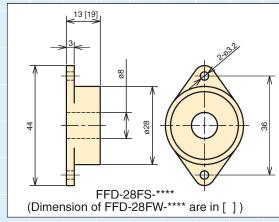
*Max. cycle rate 13 cycle/min *Operating temperature

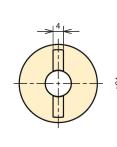
-10~60°C(90%RH)

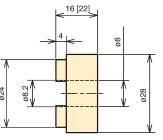
FFD-28FS 14±2g FFD-28FW 27±2g FFD-28SS 14±2a

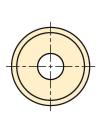
FFD-28SW 25±2g POM *Body and cap material

R: Black L: White *Cap colour









FFD-28SS-**** (Dimension of FFD-28SW-**** are in [])

How to Use the Damper

- 1. The damper generates torque in both the clockwise and counter-clockwise directions. (A one-way clutch is built in inside the damper.)
- 2. Please make sure that the shaft attached to a damper has a bearing, as the damper itself is not fitted with one.
- 3. It can be used as a free-stop for a load that is smaller than the rated torque

the fateu torque.							
Shaft's external dimensions		ø8_{	0.03				
Surface hardness	Н	HRC55 or higher					
Quenching depth	0.	5mm o	r highe	r			
Surface roughness		1.0Z or	lower				
Chamfer end						\neg	
(Damper insertion side)						/ -	
						V	
			2~CO.3	1			
		(or HO).2~RO.3)				

- 4. Please refer to the recommended dimensions below when creating a shaft for attachment to the damper. Using a shaft outside of the recommended dimensions may cause the shaft to slip out.
- 5. To insert a shaft into the damper, insert the shaft while spinning it in the opposite direction of the damper's direction of torque generation. (Do not force the shaft in from a regular direction. This may damage the built-in oneway clutch.)

Soft Silent Safety

FFD-30FS/FW/SS/SW Series

RoHS Compliant

Friction Damper [Uni-Directional]

Fixed

Damping direction

Clockwise

Counter-clockwis

Clockwise

Counter-clockwise



<Specifications>

Model	Max. torque	Damping direction	Model
FFD-30FS-R102	0.1±0.01[N·m]	Clockwise	FFD-30SS-R102
FFD-30FS-L102	(1±0.1kgf⋅cm)	Counter-clockwise	FFD-30SS-L102
FFD-30FS-R502	0.5±0.05[N·m]	Clockwise	FFD-30SS-R502
FFD-30FS-L502	(5±0.5kgf⋅cm)	Counter-clockwise	FFD-30SS-L502
FFD-30FS-R103	1±0.1[N·m]	Clockwise	FFD-30SS-R103
FFD-30FS-L103	(10±1kgf⋅cm)	Counter-clockwise	FFD-30SS-L103
FFD-30FS-R153	1.5±0.15[N·m]	Clockwise	FFD-30SS-R153
FFD-30FS-L153	(15±1.5kgf⋅cm)	Counter-clockwise	FFD-30SS-L153
FFD-30FW-R153	1.5±0.15[N·m]	Clockwise	FFD-30SW-R153
FFD-30FW-L153	(15±1.5kgf⋅cm)	Counter-clockwise	FFD-30SW-L153
FFD-30FW-R203	2±0.2[N·m]	Clockwise	FFD-30SW-R203
FFD-30FW-L203	(20±2kgf⋅cm)	Counter-clockwise	FFD-30SW-L203
FFD-30FW-R253	2.5±0.25[N·m]	Clockwise	FFD-30SW-R253
FFD-30FW-L253	(25±2.5kgf⋅cm)	Counter-clockwise	FFD-30SW-L253
FFD-30FW-R303	3±0.3[N·m]	Clockwise	FFD-30SW-R303
FFD-30FW-L303	(30±3kgf⋅cm)	Counter-clockwise	FFD-30SW-L303

*) Rated torque is measured at a rotation speed of 20rpm at 20~25°C **Weight

*Max. rotation speed

*Max. cycle rate

*Operating temperature

30rpm

−10~60°C(90%RH)

13 cycle/min

*Weight FFD-30FS 17±2g FFD-30FW 31±2g

FFD-30SS 16±2g FFD-30SW 30±2g

Max. torque

0.1±0.01[N·m]

(1±0.1kgf·cm)

0.5±0.05[N·m]

(5±0.5kgf·cm)

1±0.1[N·m]

(10±1kgf·cm)

1.5±0.15[N·m]

(15±1.5kgf·cm)

1.5±0.15[N·m]

(15±1.5kgf·cm)

2±0.2[N·m]

(20±2kgf·cm)

2.5±0.25[N·m]

(25±2.5kgf·cm)

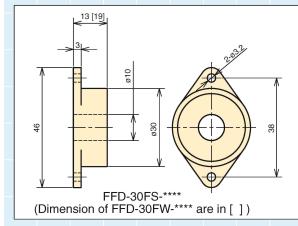
3±0.3[N·m]

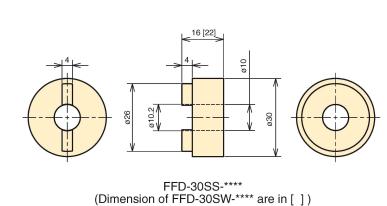
(30±3kgf-cm

*Body and cap material POM

*Cap colour

R: Black L: White





How to Use the Damper

- 1. The damper generates torque in both the clockwise and counter-clockwise directions. (A one-way clutch is built in inside the damper.)
- 2. Please make sure that the shaft attached to a damper has a bearing, as the damper itself is not fitted with one.
- 3. It can be used as a free-stop for a load that is smaller than the rated torque.

the fated torque.	
Shaft's external dimensions	ø10_0 _{.03}
Surface hardness	HRC55 or higher
Quenching depth	0.5mm or higher
Surface roughness	1.0Z or lower
Chamfer end	
(Damper insertion side)	-
	00.2~00.3
	(or RO.2~RO.3)
	Shaft's external dimensions Surface hardness Quenching depth Surface roughness Chamfer end

- 4. Please refer to the recommended dimensions below when creating a shaft for attachment to the damper. Using a shaft outside of the recommended dimensions may cause the shaft to slip out.
- 5. To insert a shaft into the damper, insert the shaft while spinning it in the opposite direction of the damper's direction of torque generation. (Do not force the shaft in from a regular direction. This may damage the built-in oneway clutch.)