



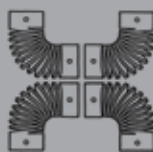
DEYANG

INTERNATIONAL CORP.

www.cplg.co.kr

An End Connecting Capability

**Flexible Coupling
Universal Joint
Machined Spring**



HELICAL
PRODUCTS KOREA





An End Connecting Capability
Connecting Dreams with Design Solutions
Imagine Unlimited Flexibility

대양상사는 1990년 미국 HELICAL PRODUCTS의 한국 대표로 지정되어, 25년째 HELICAL제품을 한국에 독점 공급하고 있습니다.

HELICAL은 1958년부터 단일몸체구조의 플렉시블커플링, 유니버설조인트 및 머신티스프링을 제조하고 있습니다.

다양한 재질 및 주문자사양으로 제작되는 HELICAL의 고정밀 부품들은 반도체장비, 의료기기, 군사장비, 항공/우주장비(NASA의 화성 탐사로봇) 등 정밀기기 전 분야에 걸쳐 사용되며 세계 최고의 품질과 성능을 자랑합니다.



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Helical Flexible Couplings

Connecting Dreams with Design Solutions

1.

One piece from Material

- No Backlash
- No Maintenance
- No Lubrication



2.

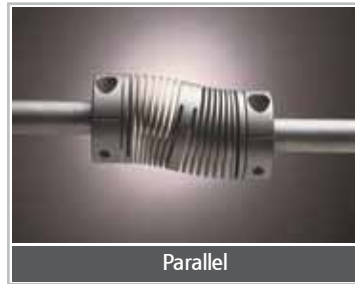
Freedom of Design

- 원하는 형태, 사양, Material로 제작 가능
- 다양한 연결부위 및 내경형태(핀, 기아, 분리형 캡, 플랜지, 육각형 등)



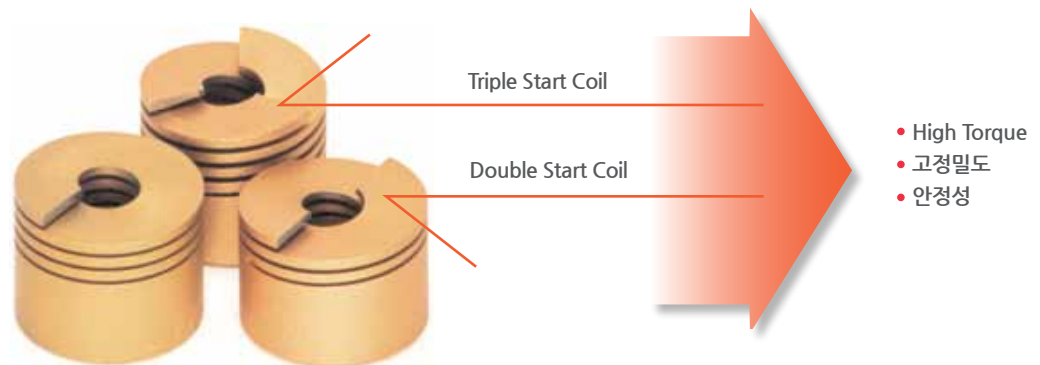
3. Misalignment Compensation

- Angular, Parallel, Skewed, Axial 오차를 최대한 흡수 → 모터 및 정밀부품 보호



4. Number of Coil Starts

- High Torque
- 고정밀도
- 안정성



5. Material

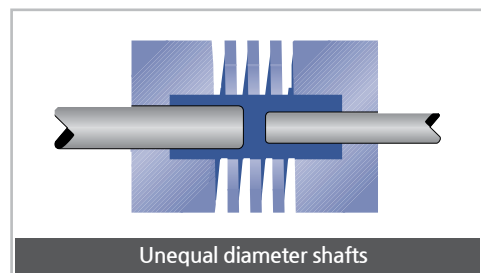
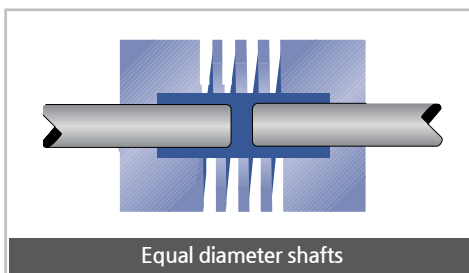
- 7075-T6 Aluminum
- 17-4PH, 15-5PH H900, 303, Corrosion Resistant Steel(CRES)
- 특수재질: C300, BETA C Titanium, Ultem, Peek, Delrin 등

6.

Coil내부 및 다양한 내경 형태

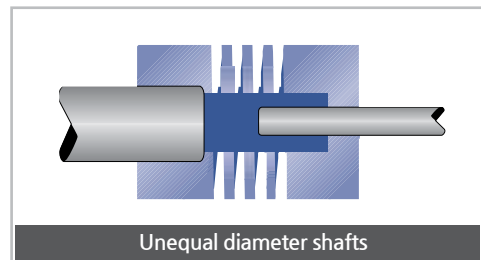
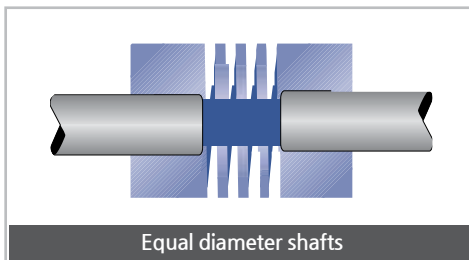
- Relief, Non-relief, Type별 주문자사양의 내부/내경 형태 제작 가능.
- 1.5mm에서 44mm까지의 내경 범위로 선택의 폭이 다양.

Relief



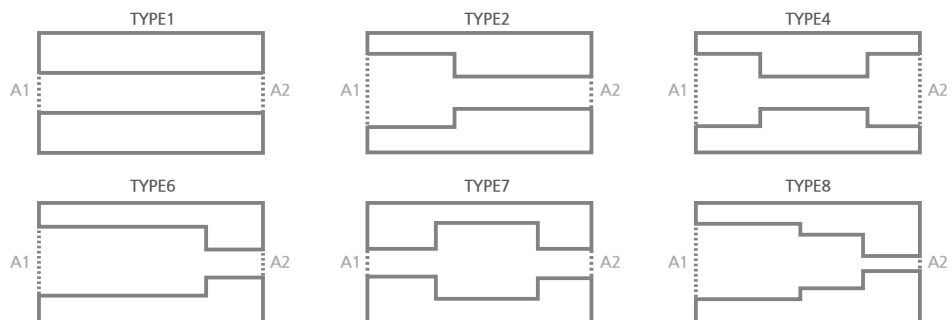
- Helical Coupling의 표준 제품은 Coil내부를 축 간섭이 없는 Type7의 Relief형태로 제작.
Non-Relief 요청 시 Type1처럼 Shaft 두께와 Coil내부 크기를 동일하게 제작(High Torque가능)

Shaft가 Relief보다 클 경우





- Type4 또는 Type2와 같이 Shaft의 삽입이 Coil시작점 직전으로 제한.

내경형태



Helical Flexible Couplings

Basic Products Summary

MODEL	재질	Torque범위	SPEED	Angular Parallel Axial Motion	내경 범위	한계 온도	적용	Page
 A Series	7075-T6 Aluminum	0.13~5.8 Nm	10,000rpm	5° 0.25mm ±0.25mm	1.5~19.05mm	100°C	엔코더, Pump, Lead Screw, 경모터	8
 H Series	17-4PH CRES	0.27~11.3 Nm	10,000rpm	5° 0.25mm ±0.25mm	1.5~19.05mm	300°C	Pump, Ball Screw, Servo Motor, 기아Box	9
 WA Series	7075-T6 Aluminum	0.59~20 Nm	10,000rpm	5° 0.25mm ±0.25mm	3~20mm	100°C	엔코더, Pump, Lead Screw, 경모터	10
 W7 Series	17-4PH CRES	1.2~39 Nm	10,000rpm	5° 0.25mm ±0.25mm	3~20mm	300°C	Pump, Ball Screw, Servo Motor, 기아Box	11
 DS Series	7075-T6 Aluminum or 17-4PH CRES	1.35~51.2 Nm	10,000rpm	3° 0.25mm ±0.20mm	4.78~32mm	100°C	Servo Motor, Step Motor, Ball Screw	12
 DSD Series	7075-T6 Aluminum or 17-4PH CRES	1.76~73.9 Nm	10,000rpm	3° 0.15mm ±0.15mm	4~38.10mm	100°C	고정밀 위치 결정용 Servo Motor, Step Motor, Ball Screw	13
 MCA Series	7075-T6 Aluminum	2.26~32.3 Nm	3,600rpm	5° 0.76mm ±0.25mm	3~38mm	100°C	엔코더, Resolver, Pump, Lead Screw	14
 MC7 Series	17-4PH CRES	4.5~62.8 Nm	3,600rpm	5° 0.76mm ±0.25mm	3~38mm	300°C	Pump, Conveyor System	15
 PF Series	7075-T6 Aluminum or 15-5PH CRES	28~205 Nm	6,000rpm	4° 0.65~0.85mm ±0.50mm	12~44mm	100~ 300°C	Pump, 강력Servo Motor, Conveyor System	16
 X Series	7075-T6 Aluminum or 17-4PH CRES	0.6~20 Nm	10,000rpm	3° 0.1~0.2mm ±0.25mm	3~22mm	100~ 300°C	Servo Motor, Step Motor, 엔코더	17

* CRES : Corrosion Resistant Steel

Torque 환산표

단위	N cm	N m	kg cm	kg m	lb in
1 N cm	1	0.01	0.1	0.001	0.088
1 N m	100	1	10	0.1	0.008
1 kg cm	9.81	0.098	1	0.01	0.868
1 kg m	981	9.81	100	1	86.8
1 lb in	11.301	0.113	1.152	0.011	1

A Series

- 재 질: 7075-T6 Aluminum
- Rated Speed: 10,000rpm
- Non-magnetic
- 적 용: Encoder, Lead Screw, Small Pump, Feed Roller 등

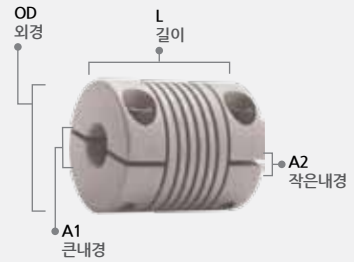


주문방법

ACRD(ARD) 112 - 9mm - 6mm

Model - 큰내경 (A1) - 작은내경 (A2)

Dimension



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
ACRD 037	9.53	14.22	2.00~2.39	0.14	37.17	5	0.25	± 0.25
ACRD 050	12.70	19.05	2.29~3.18	0.42	8.67	5	0.25	± 0.25
ACRD 062	15.88	20.32	2.29~5.00	0.80	4.51	5	0.25	± 0.25
ACRD 075	19.05	22.86	3.00~6.35	1.13	2.57	5	0.25	± 0.25
ACRD 087	22.23	26.92	3.50~8.00	2.15	1.77	5	0.25	± 0.25
ACRD 100	25.40	31.75	3.96~9.53	3.05	1.50	5	0.25	± 0.25
ACRD 112	28.58	38.10	4.78~13.00	4.86	0.83	5	0.25	± 0.25
ACRD 125	31.75	41.15	7.94~16.00	5.42	0.97	5	0.25	± 0.25



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
ARD 037	9.53	9.53	2.00~2.39	0.14	37.17	5	0.25	± 0.25
ARD 050	12.70	12.70	2.29~3.18	0.42	8.67	5	0.25	± 0.25
ARD 062	15.88	15.88	2.29~5.00	0.80	4.51	5	0.25	± 0.25
ARD 075	19.05	19.05	3.00~6.35	1.13	2.57	5	0.25	± 0.25
ARD 087	22.23	22.23	3.50~8.00	2.15	1.77	5	0.25	± 0.25
ARD 100	25.40	25.40	3.96~9.53	3.05	1.50	5	0.25	± 0.25
ARD 112	28.58	28.58	4.78~13.00	4.86	0.83	5	0.25	± 0.25
ARD 125	31.75	31.75	7.94~16.00	5.42	0.97	5	0.25	± 0.25

* Working Torque

- 한 방향 회전일 경우 : 최대Torque ÷ 2
- 양 방향 회전일 경우 : 최대Torque ÷ 4

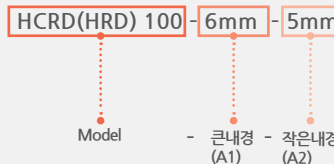
* AED, ACD모델(Non Relief) 주문 가능: High Torque

H Series



- 재 질: 17-4PH Corrosion resistant Steel(CRES)
- Rated Speed: 10,000rpm
- High Torque
- High fatigue resistance
- 적 용: Drive Systems, Small Pumps, Gear box 등

주문방법



Dimension



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
HCRD 037	9.53	14.22	2.00~2.39	0.27	13.28	5	0.25	± 0.25
HCRD 050	12.70	19.05	2.29~3.18	0.85	3.19	5	0.25	± 0.25
HCRD 062	15.88	20.32	2.29~5.00	1.58	1.68	5	0.25	± 0.25
HCRD 075	19.05	22.86	3.00~6.35	2.37	0.97	5	0.25	± 0.25
HCRD 087	22.23	26.92	3.50~8.00	4.18	0.64	5	0.25	± 0.25
HCRD 100	25.40	31.75	3.96~9.53	5.88	0.55	5	0.25	± 0.25
HCRD 112	28.58	38.10	4.78~13.00	9.38	0.31	5	0.25	± 0.25
HCRD 125	31.75	41.15	7.94~16.00	10.62	0.36	5	0.25	± 0.25



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
HRD 037	9.53	9.53	2.00~2.39	0.27	13.28	5	0.25	± 0.25
HRD 050	12.70	12.70	2.29~3.18	0.85	3.19	5	0.25	± 0.25
HRD 062	15.88	15.88	2.29~5.00	1.58	1.68	5	0.25	± 0.25
HRD 075	19.05	19.05	3.00~6.35	2.37	0.97	5	0.25	± 0.25
HRD 087	22.23	22.23	3.50~8.00	4.18	0.64	5	0.25	± 0.25
HRD 100	25.40	25.40	3.96~9.53	5.88	0.55	5	0.25	± 0.25
HRD 112	28.58	28.58	4.78~13.00	9.38	0.31	5	0.25	± 0.25
HRD 125	31.75	31.75	7.94~16.00	10.62	0.36	5	0.25	± 0.25

* Working Torque

- 한 방향 회전일 경우 : 최대Torque ÷ 2
- 양 방향 회전일 경우 : 최대Torque ÷ 4

*HED, HCD모델(Non Relief) 주문 가능: High Torque

WA Series

- 재 질: 7075-T6 Aluminum
- Rated Speed: 10,000rpm
- Non-magnetic
- 적 용: Encoder, Lead Screw, Small Pump, Feed Roller 등
- Metric 디자인

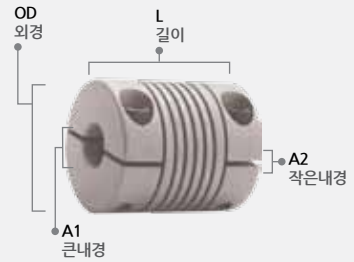


주문방법

WAC(WA) 30 - 12mm - 9mm

Model - 큰내경 (A1) - 작은내경 (A2)

Dimension



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
WAC 15	15.00	22.00	3.00~5.00	0.71	5.10	5	0.25	± 0.25
WAC 20	20.00	28.00	4.00~6.35	1.30	2.70	5	0.25	± 0.25
WAC 25	25.00	30.00	6.00~10.00	2.90	1.50	5	0.25	± 0.25
WAC 30	30.00	38.00	9.00~12.70	4.90	1.10	5	0.25	± 0.25
WAC 40	40.00	50.00	12.00~16.00	12.00	0.45	5	0.25	± 0.25
WAC 50	50.00	54.00	14.00~20.00	19.00	0.25	5	0.25	± 0.25



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
WA 15	15.00	20.00	3.00~5.00	0.71	5.10	5	0.25	± 0.25
WA 20	20.00	20.00	4.00~6.35	1.30	2.70	5	0.25	± 0.25
WA 25	25.00	24.00	6.00~10.00	2.90	1.50	5	0.25	± 0.25
WA 30	30.00	30.00	9.00~12.70	4.90	1.10	5	0.25	± 0.25
WA 40	40.00	50.00	12.00~16.00	12.00	0.45	5	0.25	± 0.25
WA 50	50.00	54.00	14.00~20.00	19.00	0.25	5	0.25	± 0.25

* Working Torque

- 한 방향 회전일 경우 : 최대Torque ÷ 2
- 양 방향 회전일 경우 : 최대Torque ÷ 4

W7 Series



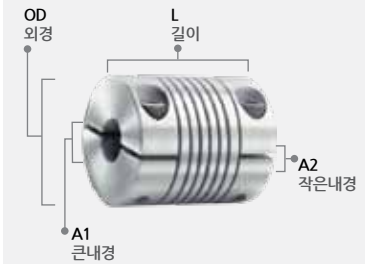
- 재 질: 17-4PH Corrosion resistant Steel(CRES)
- Rated Speed: 10,000rpm
- High Torque
- High fatigue resistance
- 적 용: Drive Systems, Small Pumps, Gear box 등
- Metric 디자인

주문방법

W7C(W7) 30 - 12mm - 9mm

Model - 큰내경 (A1) - 작은내경 (A2)

Dimension



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
W7C 15	15.00	22.00	3.00~5.00	1.40	1.90	5	0.25	± 0.25
W7C 20	20.00	28.00	4.00~6.35	2.60	0.99	5	0.25	± 0.25
W7C 25	25.00	30.00	6.00~10.00	5.70	0.54	5	0.25	± 0.25
W7C 30	30.00	38.00	9.00~12.70	9.50	0.40	5	0.25	± 0.25
W7C 40	40.00	50.00	12.00~16.00	23.00	0.16	5	0.25	± 0.25
W7C 50	50.00	54.00	14.00~20.00	37.00	0.09	5	0.25	± 0.25



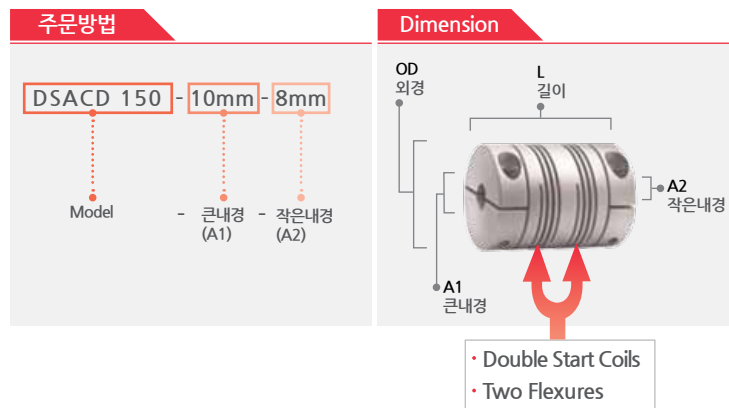
MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
W7 15	15.00	20.00	3.00~5.00	1.40	1.90	5	0.25	± 0.25
W7 20	20.00	20.00	4.00~6.35	2.60	0.99	5	0.25	± 0.25
W7 25	25.00	24.00	6.00~10.00	5.70	0.54	5	0.25	± 0.25
W7 30	30.00	30.00	9.00~12.70	9.50	0.40	5	0.25	± 0.25
W7 40	40.00	50.00	12.00~16.00	23.00	0.16	5	0.25	± 0.25
W7 50	50.00	54.00	14.00~20.00	37.00	0.09	5	0.25	± 0.25

* Working Torque

- 한 방향 회전일 경우 : 최대Torque ÷ 2
- 양 방향 회전일 경우 : 최대Torque ÷ 4

DS Series

- 재 질: 7075-T6 Aluminum or 17-4PH CRES (DS7CD200)
- Rated Speed: 10,000rpm
- Double Start Coils and Two Flexures
- High torsional Stiffness, High Torque
- 적 용: High speed motion control System(Lead and Ball Screws, Encoder 등)



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
DSACD 075	19.05	31.75	2.00~6.35	1.58	2.66	3	0.25	± 0.2
DSACD 100	25.40	38.10	2.50~10.00	3.50	1.15	3	0.25	± 0.2
DSACD 125	31.75	44.45	3.00~16.00	6.89	0.55	3	0.25	± 0.2
DSACD 150	38.10	57.15	4.00~22.00	14.69	0.27	3	0.25	± 0.2
DSACD 200	50.80	63.50	5.00~32.00	26.44	0.14	3	0.25	± 0.2
DS7CD 200	50.80	63.50	5.00~32.00	51.27	0.06	3	0.25	± 0.2

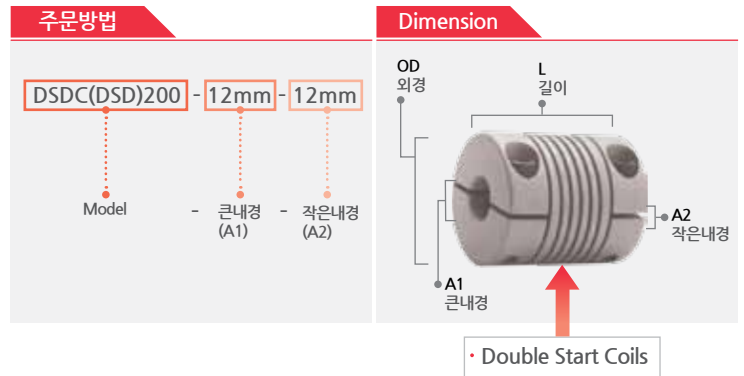
*** Working Torque**

- 한 방향 회전일 경우 : 최대Torque ÷ 2
- 양 방향 회전일 경우 : 최대Torque ÷ 4

DSD Series



- 재 질: 7075-T6 Aluminum or 17-4PH CRES (DSD7C 200)
- Rated Speed: 10,000rpm
- **Double Start Coils**
- **High torsional Stiffness, High Torque**
- 적 용: 고정밀 위치결정용 (Servo Motor, Step Motor, Ball Screw 등)



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
DSDC 075	19.10	22.90	4.00~9.90	1.76	1.63	3	0.15	± 0.15
DSDC 100	25.40	31.80	5.00~14.31	4.51	0.66	3	0.15	± 0.15
DSDC 112	28.60	38.10	7.00~16.00	6.17	0.73	3	0.15	± 0.15
DSDC 125	31.80	38.10	8.00~17.00	9.51	0.42	3	0.15	± 0.15
DSDC 150	38.10	41.30	9.00~23.00	13.72	0.29	3	0.15	± 0.15
DSDC 200	50.80	50.80	12.00~32.50	40.38	0.08	3	0.15	± 0.15
DSD7C 200	50.80	50.80	12.00~32.50	73.89	0.03	3	0.15	± 0.15



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
DSD 075	19.10	19.10	4.00~13.00	1.76	1.63	3	0.15	± 0.15
DSD 100	25.40	25.40	5.00~16.00	4.51	0.66	3	0.15	± 0.15
DSD 112	28.60	28.60	7.00~17.38	6.17	0.73	3	0.15	± 0.15
DSD 125	31.80	31.80	8.00~19.00	9.51	0.42	3	0.15	± 0.15
DSD 150	38.10	38.10	9.00~25.40	13.72	0.29	3	0.15	± 0.15
DSD 200	50.80	50.80	12.00~38.10	40.38	0.08	3	0.15	± 0.15

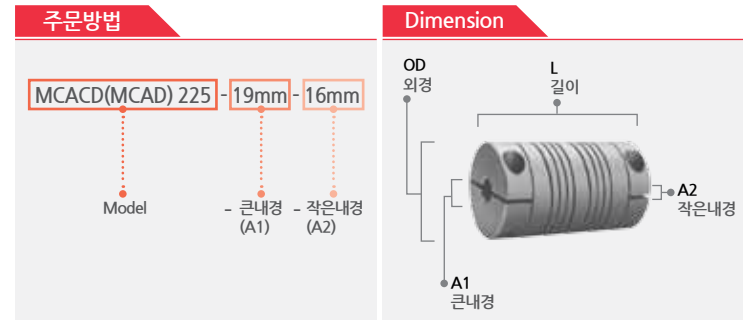
*** Working Torque**

- 한 방향 회전일 경우 : 최대Torque ÷ 2
- 양 방향 회전일 경우 : 최대Torque ÷ 4

MCA Series



- 재 질: 7075-T6 Aluminum
- Rated Speed: 3,600rpm
- **Large Parallel Capacity(0.76mm)**
- High Torque
- Large Shaft Diameters(최대38mm)
- Keyway가능
- 적 용: Resolver, Pump, Lead Screw, Encoder 등



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
MCACD 100	25.40	44.45	3.00~14.00	2.94	2.39	5	0.76	± 0.25
MCACD 125	31.75	60.20	4.00~19.05	5.76	1.15	5	0.76	± 0.25
MCACD 150	38.10	66.55	4.80~25.00	11.30	0.58	5	0.76	± 0.25
MCACD 200	50.80	76.20	6.00~32.00	20.11	0.31	5	0.76	± 0.25
MCACD 225	57.15	88.90	6.40~35.00	32.32	0.21	5	0.76	± 0.25



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
MCAC 100	25.40	44.45	3.00~16.00	2.94	2.39	5	0.76	± 0.25
MCAC 125	31.75	60.20	4.00~19.05	5.76	1.15	5	0.76	± 0.25
MCAC 150	38.10	66.55	4.80~25.00	11.30	0.58	5	0.76	± 0.25
MCAC 200	50.80	76.20	6.00~32.00	20.11	0.31	5	0.76	± 0.25
MCAC 225	57.15	88.90	6.40~38.00	32.32	0.21	5	0.76	± 0.25

*** Working Torque**

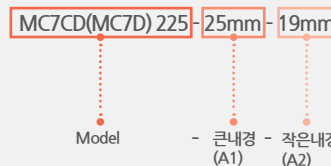
- 한 방향 회전일 경우 : 최대Torque ÷ 2
- 양 방향 회전일 경우 : 최대Torque ÷ 4

MC7 Series



- 재 질: 17-4PH Corrosion resistant Steel(CRES)
- Rated Speed: 3,600rpm
- Large Parallel Capacity(0.76mm)
- High Torque
- Large Shaft Diameters(최대38mm)
- Keyway가능
- 적 용: Pump, Conveyor System 등

주문방법



Dimension



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
MC7CD 100	25.40	44.45	3.00~14.00	5.76	0.87	5	0.76	± 0.25
MC7CD 125	31.75	60.20	4.00~19.05	11.07	0.42	5	0.76	± 0.25
MC7CD 150	38.10	66.55	4.80~25.00	21.92	0.21	5	0.76	± 0.25
MC7CD 200	50.80	76.20	6.00~32.00	39.21	0.12	5	0.76	± 0.25
MC7CD 225	57.15	88.90	6.40~35.00	62.83	0.08	5	0.76	± 0.25



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
MC7CD 100	25.40	44.45	3.00~16.00	5.76	0.87	5	0.76	± 0.25
MC7CD 125	31.75	60.20	4.00~19.05	11.07	0.42	5	0.76	± 0.25
MC7CD 150	38.10	66.55	4.80~25.00	21.92	0.21	5	0.76	± 0.25
MC7CD 200	50.80	76.20	6.00~32.00	39.21	0.12	5	0.76	± 0.25
MC7CD 225	57.15	88.90	6.40~38.00	62.83	0.08	5	0.76	± 0.25

* Working Torque

- 한 방향 회전일 경우 : 최대Torque ÷ 2
- 양 방향 회전일 경우 : 최대Torque ÷ 4

PF Series(Power Flex)

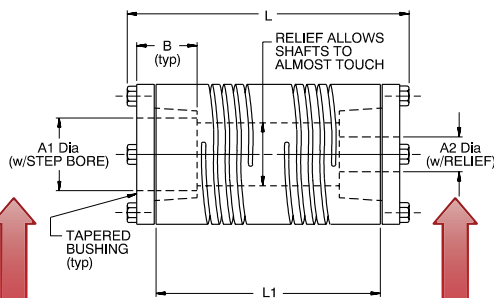
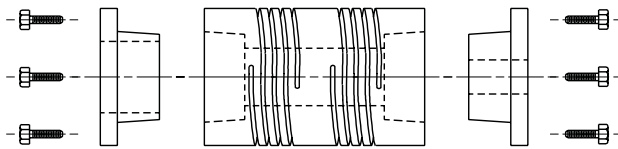
No Backlash
No Mainnance
No Lubrication



- 재 질 PFA: 7075-T6 Aluminum
PFS: Coupling - 15-5PH CRES H900
Bushing - 303 CRES
- High Torque(205 Nm)
- Large Parallel Capacity(0.85mm)
- Tapered Bushing ⇒ Keyway가 필요없음.
(PowerLock)

주문방법

PFA(PFS) 300 - 44mm - 35mm
Model - 큰내경 (A1) - 작은내경 (A2)

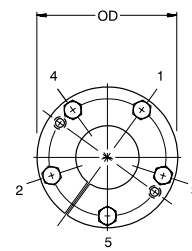


Note 1

Shaft가 Relief보다 클 경우,
Bushing(B)까지만 삽입

Note 2

Shaft가 Relief보다 작거나 같을 경우,
Coupling 중앙까지 삽입가능



Note 3

Screw 체결순서

MODEL		DIMENSION				내경 (+0.05 / - .00 mm)			PERFORMANCE DATA			ATTACHMENT SCREW(Note3)			WEIGHT [kg]
		외 경 (OD) [mm]	길이 (L) [mm]	길이 (L1) [mm]	Bushing 길이(B) [mm]	Max with Relief [mm] (Note2)	Max [mm] (Note1)	Min [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Parallel Offset [mm]	Size	수량	체결 Torque [Nm]	
7075-T6 Aluminum	PFA200	50.8	101.6	79.2	20.8	22.00	25.00	12.00	28	0.24	0.65	M5	4	6.2	0.39
	PFA250	63.5	120.7	94.0	25.4	28.00	35.00	12.00	55	0.12	0.75	M6	5	10	0.76
	PFA300	76.2	139.7	113.5	28.7	35.00	44.00	16.00	95	0.071	0.85	M6	5	10	1.22
15-5PH CRES	PFS200	50.8	101.6	79.2	20.8	22.00	25.00	12.00	60	0.085	0.65	M5	4	7.3	1.05
	PFS250	63.5	120.7	94.0	25.4	28.00	35.00	12.00	115	0.045	0.75	M6	5	12	2.02
	PFS300	76.2	139.7	113.5	28.7	35.00	44.00	16.00	205	0.026	0.85	M6	5	12	3.32

* Angular: 4 degrees Axial: ± 0.50 mm Rated Speed: 6,000 rpm

* Working Torque

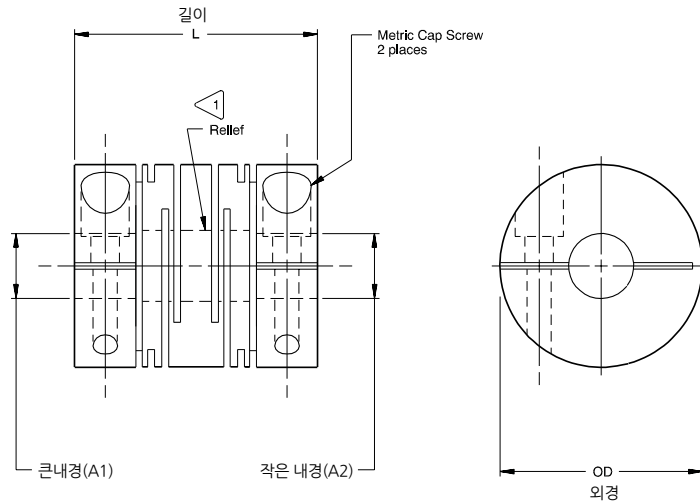
- 한 방향 회전일 경우 : 최대Torque ÷ 2
- 양 방향 회전일 경우 : 최대Torque ÷ 4

X Series



- 재 질: 7075-T6 Aluminum or 17-4PH CRES
- Rated Speed: 10,000rpm
- High Torque
- 적 용: Motion Control System, Servo motor
- Keyway가능(XCA40~50)

주문방법



MODEL	DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
	외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
XCA 15	15	24	3.00~6.00	0.6	1.13	3	0.10	± 0.25
XCA 20	20	28	4.00~8.00	1	0.46	3	0.10	± 0.25
XCA 25	25	30	6.00~10.00	2	0.22	3	0.15	± 0.25
XCA 30	30	38	9.00~12.70	4	0.13	3	0.15	± 0.25
XCA 40	40	60	10.00~17.00	10	0.066	3	0.20	± 0.25
XCA 50	50	65	12.00~22.23	20	0.029	3	0.20	± 0.25

* High Torque로 Steel사양인 XCS 주문가능.

* Working Torque

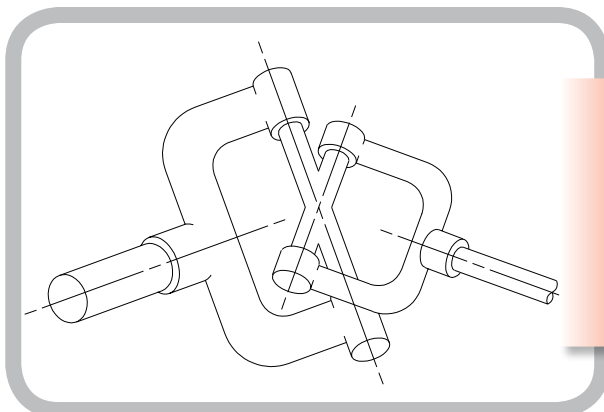
- 한 방향 회전일 경우 : 최대Torque ÷ 2
- 양 방향 회전일 경우 : 최대Torque ÷ 4

Helical Universal Joints

Imagine Unlimited Flexibility!

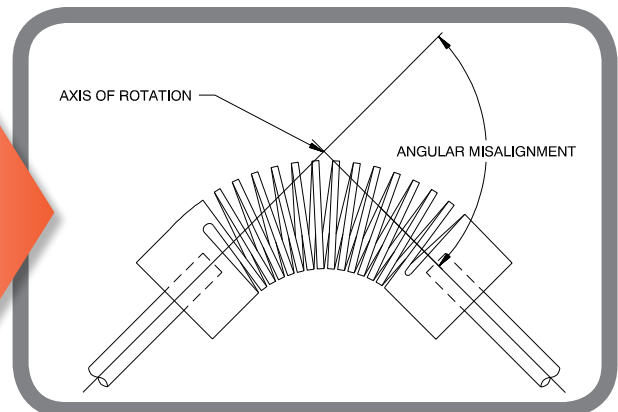


- One Piece
- No Backlash No Maintenance No Lubrication
- Max 90° Angular



Cardan Universal Joint

- 제한된 편각흡수 (Angular)
- 마찰에 의한 부식
- Parallel 및 Axial movement에 취약
- Backlash 발생
- 정기적 유지보수/기름칠 필요



Helical Universal Joint

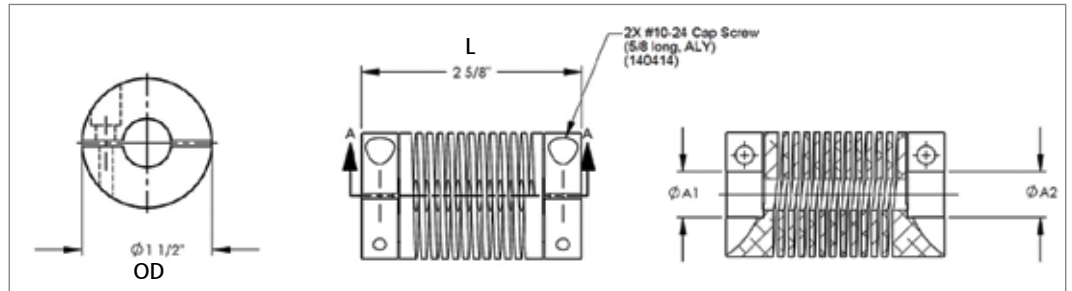
- 최대 90도 편각흡수
- Parallel 및 Axial movement에 탁월
- 주문자 사양의 U-Joint제작
- 다양한 연결부위 가능
- 다양한 재질의 선택

- 재 질: UA Series: 7075-T6 Aluminum
U7 Series: 17-4PH Corrosion resistant Steel(CRES)

주문방법



Dimension



UAD
Set Screw Type
UACD
Clamp Type

MODEL		DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
		외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
7075-T6 Aluminum	UAD 075	19.1	65	3~10	0.9	21.8	90°	10.00	± 10.00
	UAD 100	25.4	70	6~14	2.2	15.7	90°	10.00	± 10.00
	UACD 100								
	UAD 112	28.6	76.2	8~16	2.5	13.1	90°	10.00	± 10.00
	UACD 112								
	UAD 150	38.1	100	8~23	4.1	14.4	90°	10.00	± 10.00
	UACD 150								
	UACD 1530	38.1	66.7	8~23	7.9	9.2	30°	3.17	± 3.17
	UAD 200	50.8	150	10~32	6.5	11.5	90°	10.00	± 10.00
	UACD 200								

U7D
Set Screw Type
U7CD
Clamp Type

MODEL		DIMENSION			PERFORMANCE DATA		MISALIGNMENT 보정		
		외경(OD) [mm]	길이(L) [mm]	내경(A1/A2) [mm]	최대 Torque [Nm]	Torsional rate [degree/Nm]	Angular [degree]	Parallel [mm]	Axial Motion [mm]
17-4PH CRES	U7D 100	25.4	70	6~14	4.3	5.68	90°	10.00	± 10.00
	U7CD 100								
	U7D 125	31.8	130	8~17	9.8	2	90°	12.00	± 12.00
	U7D 150	38.1	100	8~23	7.9	5.21	90°	10.00	± 10.00
	U7CD 150								
	U7D 1530	38.1	66.7	8~23	15.3	3.46	30°	3.17	± 3.17
	U7D 200	50.8	150	10~32	13	4.16	90°	10.00	± 10.00
	U7CD 200								
	U7CD 2030	50.8	82.6	10~32	33.6	0.31	30°	8.89	± 8.89
	U7CD 2060	50.8	146.1	10~32	72.5	0.12	60°	4.77	± 4.77

- * U-Joint 내경은 Type 1, 2, 4, 6로 제작 가능.(6페이지 참조)
- * 주문자 사양(Size, Angular, Torque 등) 제작 가능.

Helical Machined Springs

What is Helical Machined Spring?

Helical Machined Spring은 하나의 Material로부터 단일몸체(One Piece)로 제작됩니다.

“Machined Spring”의 다양하고 정밀한 성능은 미국 Helical사의 독자적인 Flexure concept, Flexible helix beam 가공 기술로 발명되었습니다.

주문자가 원하는 디자인과 재질, 사양으로 제작되는 “Machined Spring”은 기존 Wire Spring과 달리 모든 Spring Rate가 100% 정확하고 반복적으로 발생하여 최고의 성능을 제공합니다.



Helical Machined Springs


Why Helical Machined Springs?

1.

One Piece Machined Spring

- 여러 부위와 결합된 Wire Spring을 하나의 Material로 디자인/제작
→ 정밀하고 반복적인 Spring Rate(수직, 수평, 굽힘, Axial, Torsion)

Before



3 parts Wire Spring



4 parts Wire Spring

- Only Single Coil Spring
- 부정확하고 일정하지 않은 Spring Rate
- 연결부위 필요 시 추가 작업/시간 발생
- 제품의 변질
- 반복 작동 시 잔여 Stress performance에 영향
- 제한된 Material

Solution



One Piece Compression Spring



One Piece Compression Spring

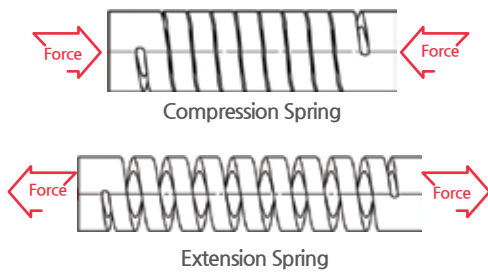
- Multiple Starts Coil로 제작 가능
→ 고정밀 탄성, 안정성
- 100% 정확한 Spring Rate(1% 오차범위)
- 원하는 디자인 및 취부형태로 한 번에 제작
- 지속적인 사용 후에도 제품변질 가능성 낮음
- 반복 작동 시 잔여 Stress가 남지 않음
- 다양한 Material의 선택
(Titanium, CRES, Engineering Plastic 등)

2.

Freedom of Design

- 원하는 크기, 사양, 디자인으로 제작

Compression / Extension Spring



Tapered end

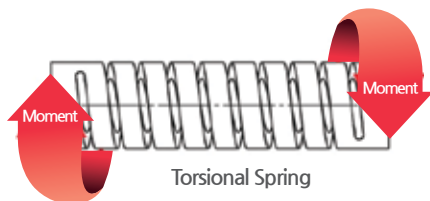


Flanges



Threaded ends

Torsion Spring



Hex

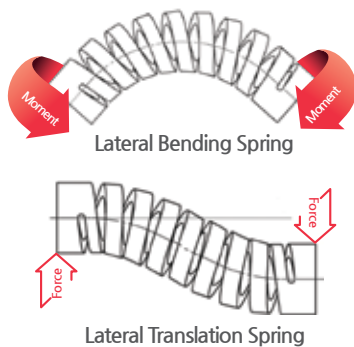


Tangs with pinholes



Slots

Lateral Bending / Translation Spring

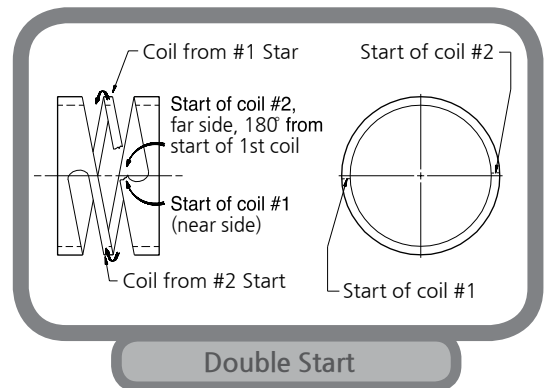
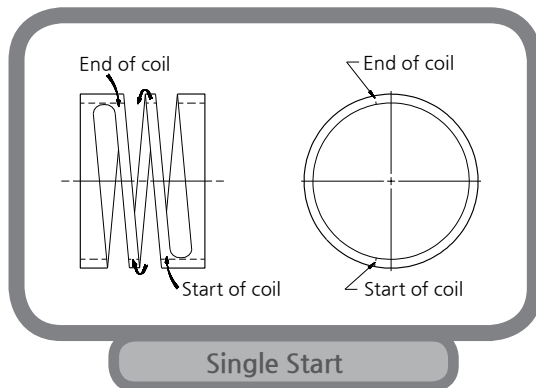


Five Starts Coils with 7075-T6 Aluminum

3.

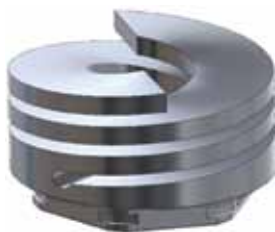
Multiple Coil Start

- Single Start스프링뿐만 아니라 Double, Triple 이상의 Coil로 “고정밀 탄성”의 Machined Spring제작



Multiple Start

Double Start



Triple Start



- “고정밀 탄성”
- High Strength
- 오차범위 최소화

4.

다양한 적용 분야

- 의료기기



- 항공/우주 산업



- 군사장비





DEYANG

INTERNATIONAL CORP.

Flexible Coupling
Universal Joint
Machined Spring

An End Connecting Capability



 **DEYANG** INTERNATIONAL CORP.
대양상사

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