



Line Shaft

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COUPLINGS

SEHWAENG Co., LTD.



kpc
ISO 9001 CERTIFIED

KS Q ISO 9001:2009인증업체



kpc
ISO 14001 CERTIFIED

KS Q ISO 14001:2009인증업체





대한민국 **동력 전달 장비**의 미래를 열겠습니다

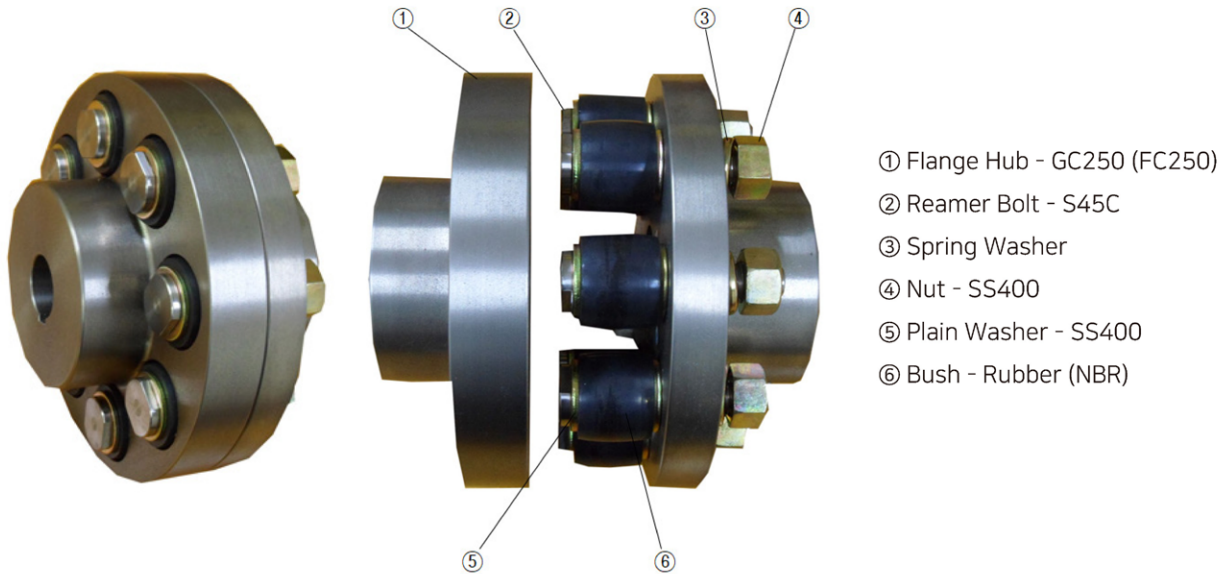
최상의 제품과 서비스 제공을 위해 꾸준히 기술 연구와 품질 향상에 모든 임직원이
최선을 다하고 있습니다

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FLANGE FLEXIBLE COUPLING

1. 구 조 (STRUCTURE)



2. 특 징 (CHARACTERISTIC)

축과 축을 연결할 때 사용되는 Flange Flexible Coupling은 간단하고 쉬운 분해조립, 저렴한 가격 등 필요한 여러가지 조건을 갖고 있다.

또한 Flange Flexible Coupling은 KS B 1551/1552의 규격에 준하여, 근대적인 생산설비와 진보적인 관리 기술을 구사하여 만들어진 우수한 제품이어서, 국내는 물론 해외에서도 널리 호평을 받고 있다.

When connecting the line shaft, flange flexible coupling has many requirements with simple assembly / disassembly and extremely lowest price.

Moreover, Flange flexible coupling is the superior quality products made with modern production facilities and advanced management technique according to KS B 1551/1552(Korean Standard), it has been enjoyed a good reputation from local line as well as foreign customers.

3. 장 점 (ADVANTAGE)

- 1) 장착 및 분해 등 정비가 간단하고 쉽다.
- 2) 동력을 원활하게 전달한다.
- 3) 진동과 충격의 흡수능력이 우수하다.
- 4) 무급유이며 보수비용이 들지 않는다.
- 5) Coupling에서 Shaft를 누르는 힘이 발생하지 않는다.
- 6) 기계의 직결상태(배열상태)를 측정할 수 있으며 외부에서 손으로 회전시킬 수 있다.
- 7) 운전 중 특별한 Protection Cover가 없어도 안전하다.
- 8) 구조가 간단하고 유연성이 탁월하다.
- 9) 호환성이 좋다.

- 1) Easy and simple installation and disassembly and maintenance.
- 2) It transmits power smoothly.
- 3) It has available absorption of shock load and vibration.
- 4) Need no lubrication, no maintenance.
- 5) The power to be pressed shaft from coupling does not occur.
- 6) It can be measure from side as directly connected. It is possible to rotate it as directly connected from outside by hand.
- 7) It is safely operating without any particular guard cover.
- 8) Simple construction and completely flexibility.
- 9) interchangeable coupling.

4. 용 도 (APPLICATION)

- | | |
|--|--|
| <ol style="list-style-type: none"> 1) 진동, 충격의 전달을 방지해야 하는 지점. 2) 편심 또는 편각이 발생한 상태 혹은 편심, 편각이 동시에 발생한 상태에서 동력을 전달해야 하는 경우. 3) 축 유동이 발생하는 연결 부위에서 정상적으로 동력을 전달하고자 할 때. 4) 정, 역회전이 이루어지는 지점. 5) 충격 부하를 감소시켜 작동하려고 하는 경우. | <ol style="list-style-type: none"> 1) When we need to prevent the transmission of vibration and shock. 2) When we need adequate power transmission under parallel misalignment or angular misalignment or parallel and angular misalignment. 3) When we need adequate power transmission under end floating. 4) When reverse revolution is required. 5) When we need smooth starting. |
|--|--|

5. 주요 사용처 (PRINCIPAL USE)

펌프, 압축기, 변속기, 송풍기, 감속기, 권상기, 화학기계, 운반기, 기중기, 시멘트 Mixer, 건설기계, 금속 가공기계, 압연기, 트랙터, 섬유기계, 염색사상기, Bending Machine, 방직기 등.

Pump, Compressor, Speed change gear, Air blower, Reducer, Hoist, Chemical machine, Conveyor, Crane, Cement mixer, Construction machine, Metal processing machine, Rolling mill, Tractor, Textile machine, Bending machine, Spinning and weaving machinery

6. 규격선정방법 (SELECTION METHOD OF SIZE)

- | | |
|--|---|
| <ol style="list-style-type: none"> 1) 사용 Torque를 구한다. | <ol style="list-style-type: none"> 1) From the following formula, obtain torque is required for selection. |
|--|---|

$$T \text{ (unit: kg} \cdot \text{m)} = 974 \times \frac{KW}{N} \times S \cdot F \quad \text{or} \quad T = 716.2 \times \frac{HP}{N} \times S \cdot F$$

T = 사용 Torque (kg·m)

KW = 전달부하

HP = 전달마력

N = 회전수 (r.p.m)

S·F = 안전계수 (Service Factor)

T = Selected torque (kg·m)

KW = Transmitted load

HP = Transmitted load

N = Working revolution (r.p.m)

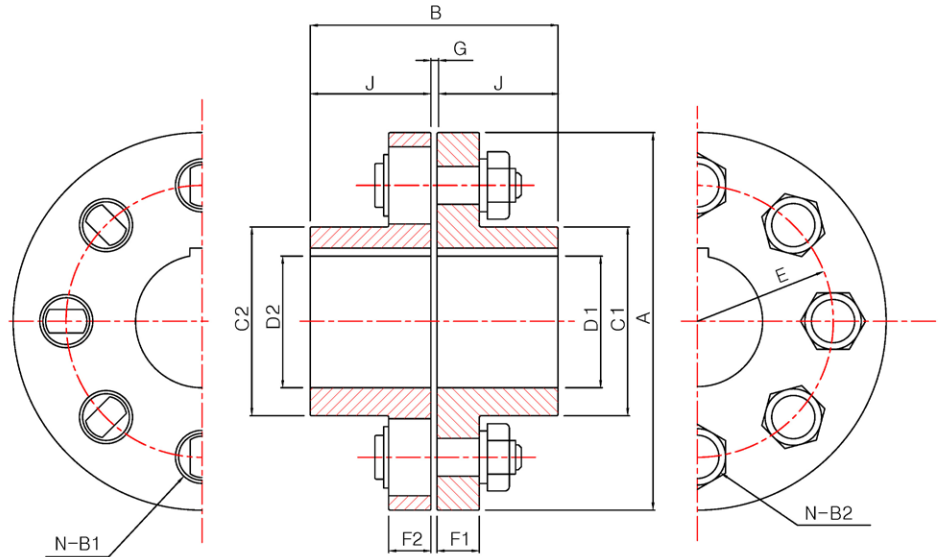
S·F = Service Factor

- | | |
|--|---|
| <ol style="list-style-type: none"> 2) 산출된 Torque를 각 Size의 Basic Torque와 비교하여 크거나 같은 수치를 찾아 1차 선정한 후 사용기계의 Shaft와 Coupling의 최대내경을 비교 검토한 다음 선정한다. 3) 상용 rpm과 최저 rpm이 있을 때에는 최저 rpm으로 계산한다. 4) 상시 역회전이나 거듭되는 반복부하 또는 불연속적 작동을 하는 곳의 부하는 정상의 경우보다 2배가 되어야 한다. 5) 한 System내 상용마력과 Peak HP이 존재하는 경우 Peak HP으로 계산한다. | <ol style="list-style-type: none"> 2) First Select from comparing with basic torque, and find to adopt the same or greater value. And then conclude it's suitability for application of boring driver. 3) Adopt the minimum rpm when there are common transmitting rpm and also minimum rpm. 4) Be careful about the load where there are reverse revolution repetition and irregular operation can be double normal condition. 5) Adopt the peak HP, when there are common transmitted power of peak HP in a system. |
|--|---|

FLANGE FLEXIBLE COUPLING

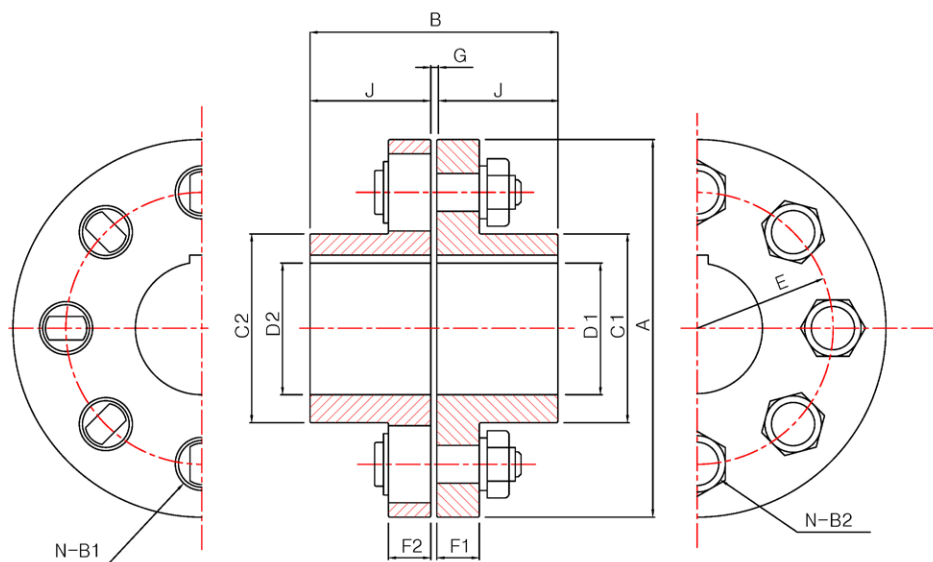
7. 치수표 (DIMENSIONS)

1) FFC (재질:FC250) Type



Size A	Rated torque (kg*m)	Max. Speed (rpm)	Max. Bore (mm)		Min. Bore (mm)	Dimensions (mm)										Cplg WT (kgf)	GD ² (kg·m ²)	
			D1	D2		B	C1	C2	E	F1	F2	J	G	Bolt Hole				
														N	B1			B2
112	7	5,000	28		16	83	50		75	16		40	3	4	23	10	2.7	0.0152
125	13	5,000	32	28	18	93	56	50	85	18		45	3	4	32	14	3.5	0.0258
140	23	4,900	38	35	20	103	71	63	100	18		50	3	6	32	14	4.9	0.0422
160	35	4,300	45		25	115	80		115	18		56	3	8	32	14	6.8	0.0741
180	40	3,800	50		28	129	90		132	18		63	3	8	32	14	9.6	0.121
200	80	3,400	56		32	146	100		145	22.4		71	4	8	41	20	13.2	0.241
224	90	3,000	63		35	164	112		170	22.4		80	4	8	41	20	18.4	0.384
250	150	2,700	71		40	184	125		180	28		90	4	8	51	25	26.0	0.720
280	270	2,400	80		50	204	140		200	28	40	100	4	8	57	28	36.5	1.29
315	400	2,100	90		63	228	160		236	28	40	112	4	10	57	28	49.1	2.12
355	630	1,900	100		71	255	180		260	35.5	56	125	5	8	72	35.5	74.9	4.42
400	900	1,700	110		80	255	200		300	35.5	56	125	5	10	72	35.5	94.3	7.10
450	1,300	1,500	125		90	285	224		355	35.5	56	140	5	12	72	35.5	127.8	11.5
560	2,000	1,200	140		100	325	250		450	35.5	56	160	5	14	72	35.5	206.3	27.3
630	3,000	1,050	160		110	365	280		530	35.5	56	180	5	18	72	35.5	277	44.1
710	8,000	950	200		110	466	330		580	80		230	6	20	87	45	640	116
800	10,000	850	220		125	506	360		670	80		250	6	22	87	45	836	189
850	12,000	800	240		135	546	390		720	80		270	6	24	87	45	994	266
900	14,000	750	260		140	586	430		740	90		290	8	18	122	50	1,264	355
1,000	18,000	680	280		150	626	460		840	90		310	8	20	122	50	1,583	542
1,120	25,000	600	300		160	687	500		960	100		340	9	24	122	54	2,153	939
1,250	34,000	550	330		180	747	540		1,090	100		370	9	26	122	54	2,738	1,455
1,400	53,000	490	380		200	867	620		1,220	120		430	10	26	140	63	4,109	2,733

2) FFCH (재질: S45C) Type

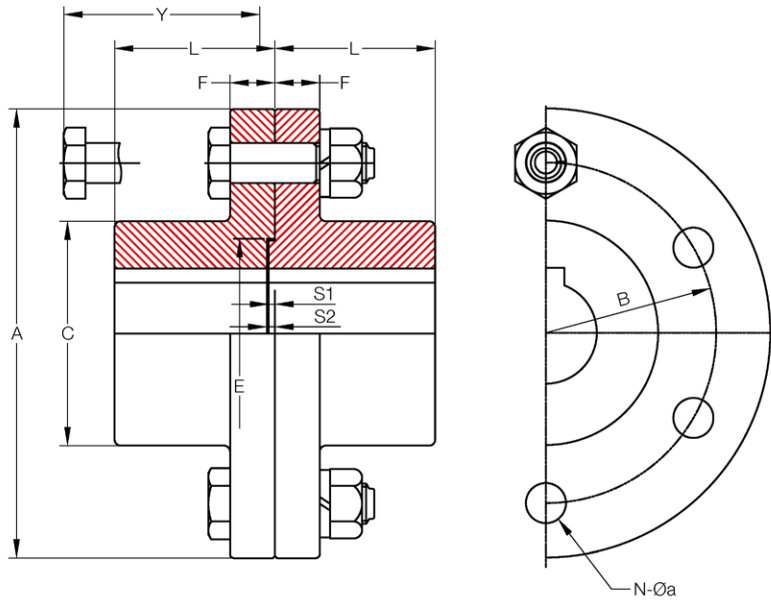


Size A	Rated torque (kg*m)	Max. Speed (rpm)	Max. Bore (mm)		Min. Bore (mm)	Dimensions (mm)										Cplg WT (kgf)	GD ² (kg·m ²)	
			D1	D2		B	C1	C2	E	F1	F2	J	G	Bolt Hole				
														N	B1			B2
112	7	5,000	32		16	83	50		75	16		40	3	4	23	10	2.7	0.0152
125	13	5,000	35	32	18	93	56	50	85	18		45	3	4	32	14	3.5	0.0258
140	23	5,000	45	42	20	103	71	63	100	18		50	3	6	32	14	4.9	0.0422
160	35	5,000	55		25	115	80		115	18		56	3	8	32	14	6.8	0.0741
180	40	4,900	60		28	129	90		132	18		63	3	8	32	14	9.6	0.121
200	80	4,600	65		32	146	100		145	22.4		71	4	8	41	20	13.2	0.241
224	90	4,400	75		35	164	112		170	22.4		80	4	8	41	20	18.4	0.384
250	150	4,200	85		40	184	125		180	28		90	4	8	51	25	26.0	0.720
280	270	3,900	95		50	204	140		200	28	40	100	4	8	57	28	36.5	1.29
315	400	3,500	110		63	228	160		236	28	40	112	4	10	57	28	49.1	2.12
355	630	3,100	120		71	255	180		260	35.5	56	125	5	8	72	35.5	74.9	4.42
400	900	2,800	135		80	255	200		300	35.5	56	125	5	10	72	35.5	94.3	7.10
450	1,300	2,500	150		90	285	224		355	35.5	56	140	5	12	72	35.5	127.8	11.5
560	2,000	2,000	170		100	325	250		450	35.5	56	160	5	14	72	35.5	206.3	27.3
630	3,000	1,800	190		110	365	280		530	35.5	56	180	5	18	72	35.5	277	44.1
710	8,000	1,600	220		110	466	330		580	80		230	6	20	87	45	640	116
800	10,000	1,400	240		125	506	360		670	80		250	6	22	87	45	836	189
850	12,000	1,300	260		135	546	390		720	80		270	6	24	87	45	994	266
900	14,000	1,250	280		140	586	430		740	90		290	8	18	122	50	1,264	355
1,000	18,000	1,100	300		150	626	460		840	90		310	8	20	122	50	1,583	542
1,120	25,000	1,000	330		160	687	500		960	100		340	9	24	122	54	2,153	939
1,250	34,000	900	360		180	747	540		1,090	100		370	9	26	122	54	2,738	1,455
1,400	53,000	800	410		200	867	620		1,220	120		430	10	26	140	63	4,109	2,733

FLANGE FLEXIBLE COUPLING

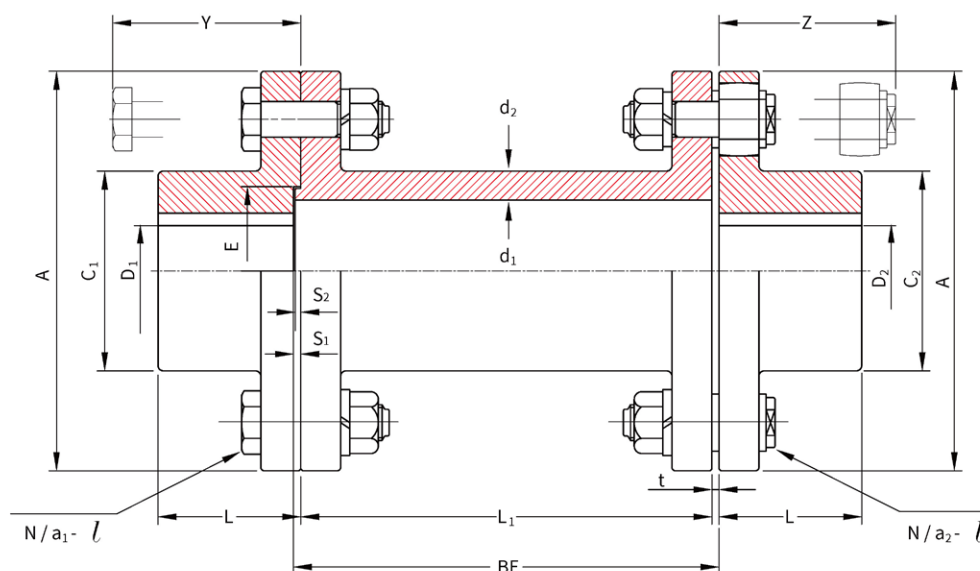
7. 치수표 (DIMENSIONS)

3) RFC (재질: FC250) Type



Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Min Bore (mm)	Cplg Weight (Kg)	GD (Kg.m ²)	Dimensions (Millimeters)							Spigot and Socket		
							A	L	C	B	F	Y	N-Øa	E	S1	S2
112	58	5,000	28	16	2.78	0.0163	112	40	50	75	16	70	4-Ø10	40	3	2
125	130	5,000	28	18	3.76	0.0276	125	45	56	85	18	81	4-Ø14	45	3	2
140	230	4,900	35	20	5.06	0.0449	140	50	71	100	18	81	6-Ø14	56	3	2
160	350	4,300	45	25	6.98	0.0788	160	56	80	115	18	81	8-Ø14	71	3	2
180	400	3,800	50	28	9.23	0.1290	180	63	90	132	18	81	8-Ø14	80	3	2
200	580	3,400	56	32	14.40	0.2550	200	71	100	145	22.4	103	8-Ø16	100	4	3
224	680	3,000	63	35	18.40	0.4050	224	80	112	170	22.4	103	8-Ø16	100	4	3
250	1,100	2,700	71	40	27.80	0.7630	250	90	125	180	28	126	8-Ø20	112	4	3
280	1,200	2,400	80	50	38.90	1.3700	280	100	140	200	28	126	8-Ø20	125	4	3
315	1,800	2,100	90	63	51.20	2.2300	315	112	160	236	28	126	8-Ø25	140	4	3
355	2,500	1,900	100	71	81.40	4.6700	355	125	180	260	35.5	157	10-Ø20	160	4	4

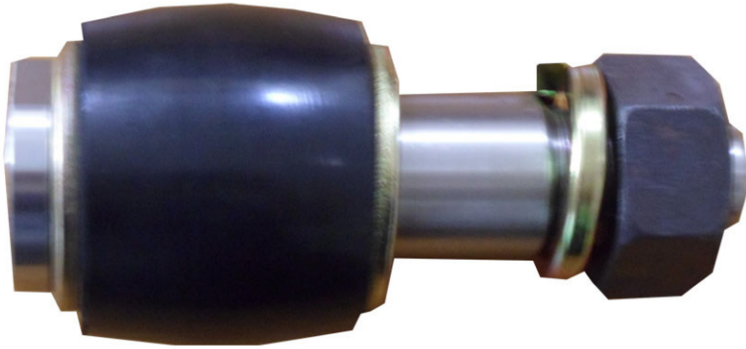
4) SFFC (재질:FC250), SPACE (재질:S45C) Type



Size	Basic Torque (kgf.m)	Max. Speed (rpm)	Dimensions (mm)									Bolt			
			Bore D			Bore d		A	BE	L1	t	For rigid		For flexible	
			Min.	Max.								N	Size a ₁ × f	N	Size a ₂ × f
				D1	D2	d1	d2								
125S×BE	13	5,000	18	32	28	39	50	125	100	97	3	4	14×54(#R2)	4	14×64(#3)
140S×BE	23	4,900	20	38	35	48	63	140	100, 140	97, 137	3	6	14×54(#R2)	6	14×64(#3)
160S×BE	35	4,300	25	45		63	80	160	100, 140	97, 137	3	8	14×54(#R2)	8	14×64(#3)
180S×BE	40	3,800	28	50		70	90	180	100, 140, 180	97, 137, 177	3	8	14×54(#R2)	8	14×64(#3)
200S×BE	80	3,400	32	56		80	100	200	140, 180, 220	136, 176, 216	4	8	16×69(#R3)	8	20×85(#4)
224S×BE	90	3,000	35	63		90	112	224	140, 180, 220	136, 176, 216	4	8	16×69(#R3)	8	20×85(#4)
250S×BE	150	2,700	40	71		100	125	250	140, 180, 220, 260	136, 176, 216, 256	4	8	20×85(#R4)	8	25×100(#5)
280S×BE	270	2,400	50	80		112	140	280	180, 220, 260, 300	176, 216, 256, 296	4	8	20×85(#R4)	8	28×116(#6)
315S×BE	400	2,100	63	90		125	160	315	180, 220, 260, 300	176, 216, 256, 296	4	10	20×85(#R4)	10	28×116(#6)

FLANGE FLEXIBLE COUPLING

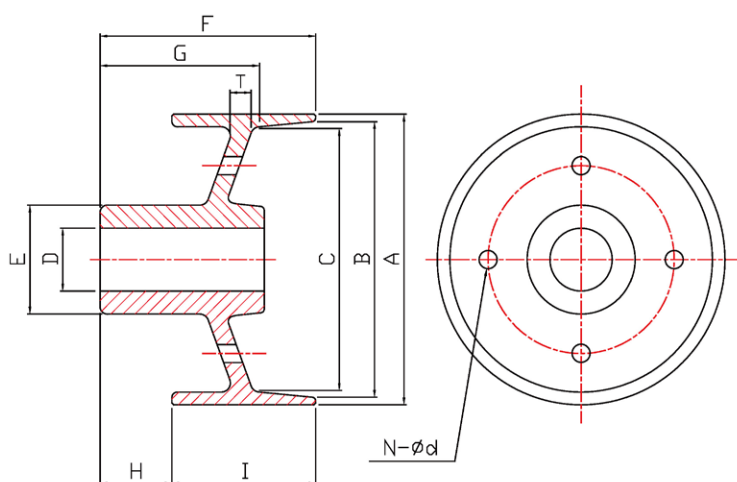
8. 카플링 볼트 (COUPLING BOLT)



Reamer Bolt Size	
#R1	M10 x 10 x 47 ℓ
#R2	M12 x 14 x 54 ℓ
#R3	M16 x 16 x 69 ℓ
#R4	M20 x 20 x 85 ℓ
#R5	M24 x 25 x 105 ℓ

Coupling Bolt No.	Coupling Size	Bolt Quantity per set	Bolt Size
#2	FFC 112	4	M10 x 10 x 56 ℓ
#3	FFC 125	4	M12 x 14 x 64 ℓ
	FFC 140	6	
	FFC 160	8	
	FFC 180	8	
#4	FFC 200	8	M20 x 20 x 85 ℓ
	FFC 224	8	
#5	FFC 250	8	M24 x 25 x 100 ℓ
#6	FFC 280	8	M24 x 28 x 116 ℓ
	FFC 315	10	
#7	FFC 355	8	M30 x 35.5 x 150 ℓ
	FFC 400	10	
	FFC 450	12	
	FFC 560	14	
	FFC 630	18	
#10			M30 x 35.5 x 174 ℓ
#12	FFC 710	20	M42 x 45 x 240 ℓ
	FFC 800	22	
	FFC 850	24	

BRAKE DRUM (BD)



Size A	Dimensions (mm)												Weight (kg)	GD ² (kgf.m)
	Bore dia (D)		A	B	C	E	F	G	H	I	T	N-Ød		
	Min	Max												
BD 160	20	37	160	145	140	63	112	82	32	80	16	2-19	6	0.07
BD 200	28	48	200	184	178	80	132	112	32	100	16	4-21	10	0.21
BD 250	35	60	250	230	224	100	157	112	32	125	16	4-30	18	0.57
BD 315	40	60	315	292	285	100	195	112	35	160	20	4-30	29	1.70
BD 355	50	67	355	330	320	112	220	142	40	180	20	4-40	40	3.10
BD 400	63	75	400	374	362	125	240	142	40	200	25	4-40	60	5.50
BD 450	71	96	450	422	410	160	279	172	55	224	25	4-40	85	9.40
BD 500	80	108	500	462	445	180	310	212	60	250	28	4-40	130	18
BD 560	90	120	560	516	495	200	345	212	65	280	28	4-40	180	33
BD 762	110	135	762	710	690	224	442	212	80	362	35	4-40	340	124

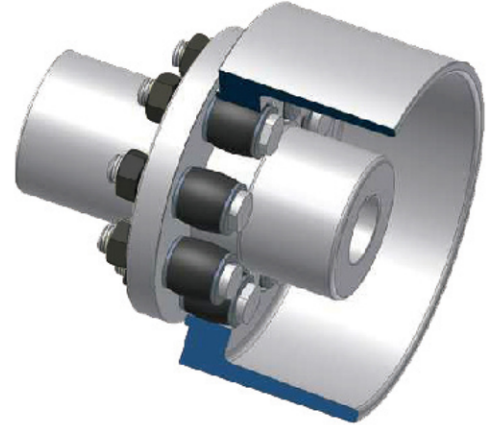
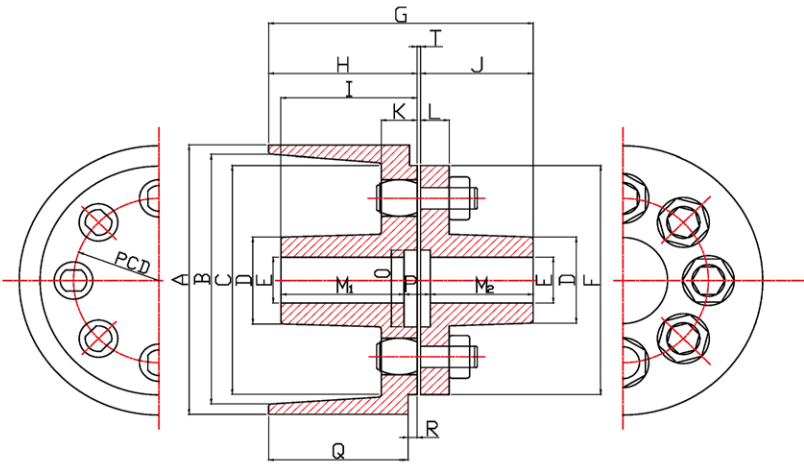
1. 재질 : GCD450 (FCD450)

2. 진동을 고려하여 전 부위에 정밀 가공을 실시하였으므로 별도의 바란싱은 필요 없다.

1. Material : GCD450(FCD450)

2. Balancing is not required

BRAKE DRUM COUPLING (BDC)



Size A	Dimensions (mm)																	Weight (kg)	GD ² (kgf.m)	
	Bore dia (E)		A	B	C	D	G	H	I	J	M1	M2	O	P	Q	R	T			F
	Min	Max																		
BDC 160	20	37	160	145	140	63	182	84	76	95	63	82	43	29	80	4	3	140	9	0.20
BDC 200	28	53	200	184	178	90	235	104	96	128	80	112	60	35	100	4	3	180	19	0.30
BDC 250S	35	66	250	230	224	112	261	129	106	128	90	112	75	36	125	4	4	224	34	0.80
BDC 250L	35	66	250	230	224	112	291	129	106	158	90	142	75	36	125	4	4	224	36	0.81
BDC 315	40	75	315	292	285	125	326	164	128	158	112	142	85	36	160	4	4	250	57	2.40
BDC 355	50	84	355	330	320	140	348	184	130	160	112	142	95	40	180	4	4	280	80	4.30
BDC 400	63	95	400	374	362	160	398	204	158	165	140	172	105	40	200	4	4	315	110	6.80
BDC 450	71	105	450	422	410	180	428	228	163	195	140	172	125	51	224	4	5	355	160	13.60
BDC 500	80	115	500	462	445	200	494	254	183	235	160	212	135	51	250	4	5	400	250	26
BDC 560	90	130	560	516	495	224	529	284	188	240	160	212	150	61	280	4	5	450	310	42
BDC 762	110	165	762	710	690	280	611	366	208	240	180	212	190	61	362	4	5	630	580	160

1. 치수 K, L, PCD 및 볼트 세트는 Flange Flexible Coupling 치수표의 치수와 같다. (플랜지 외경치수 "F" 치수가 동일할 때)
2. 재질 : GCD450 (FCD450)
3. 허용토크는 Flange Flexible Coupling 치수표의 토크와 같다. (플랜지 외경치수 "F" 치수가 동일할 때)
4. 진동을 고려하여 전 부위에 정밀 가공을 실시하였으므로 별도의 바란싱은 필요 없다.

1. Flange flexible coupling dimensions and dimension table are dimension K, L, PCD and bolt set. (When the coupling OD "F" have identical dimensions)
2. Material : GCD450(FCD450) ---> Drum and Flange
3. Allowable torque is equal to coupling flange flexible dimension torque table.
4. Balancing is not required

DISC FLEXIBLE COUPLING

Disc Flexible Coupling Types



F3 Type



F4 Type (Spacer)



S3 Type



S4 Type (Spacer)



E4 Type (Spacer)

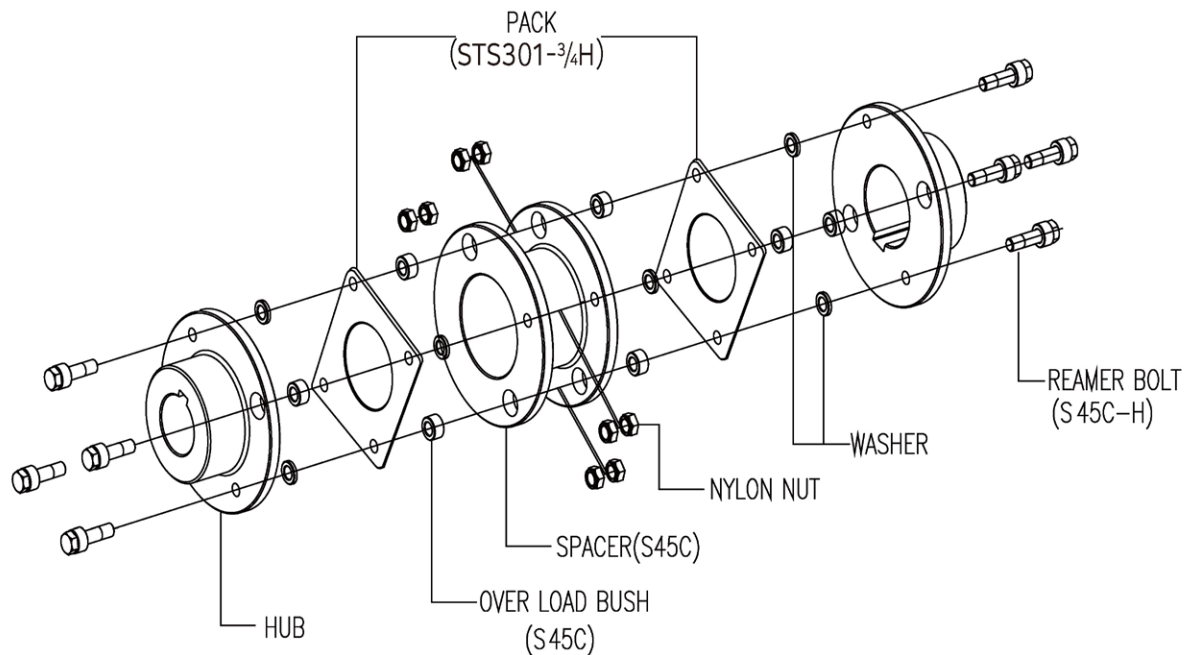


71 Type (Spacer)

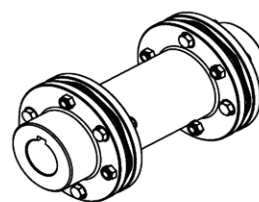
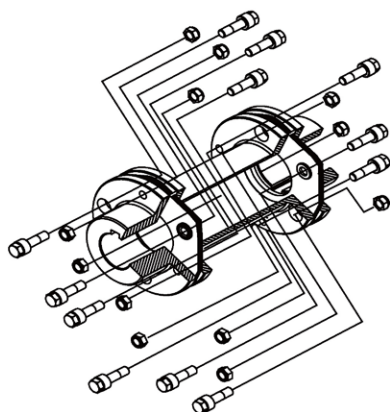
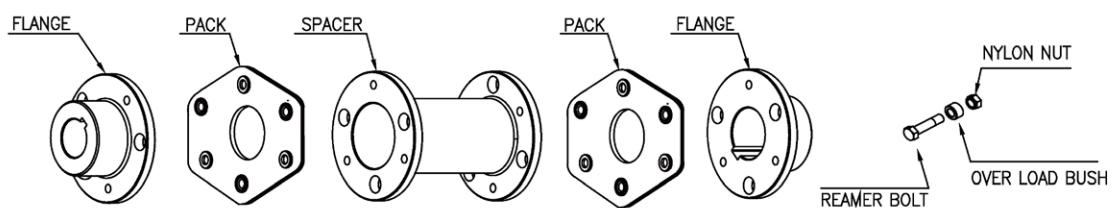
DISC FLEXIBLE COUPLING

1. 구조 (STRUCTURE)

F - Type (4 BOLT)

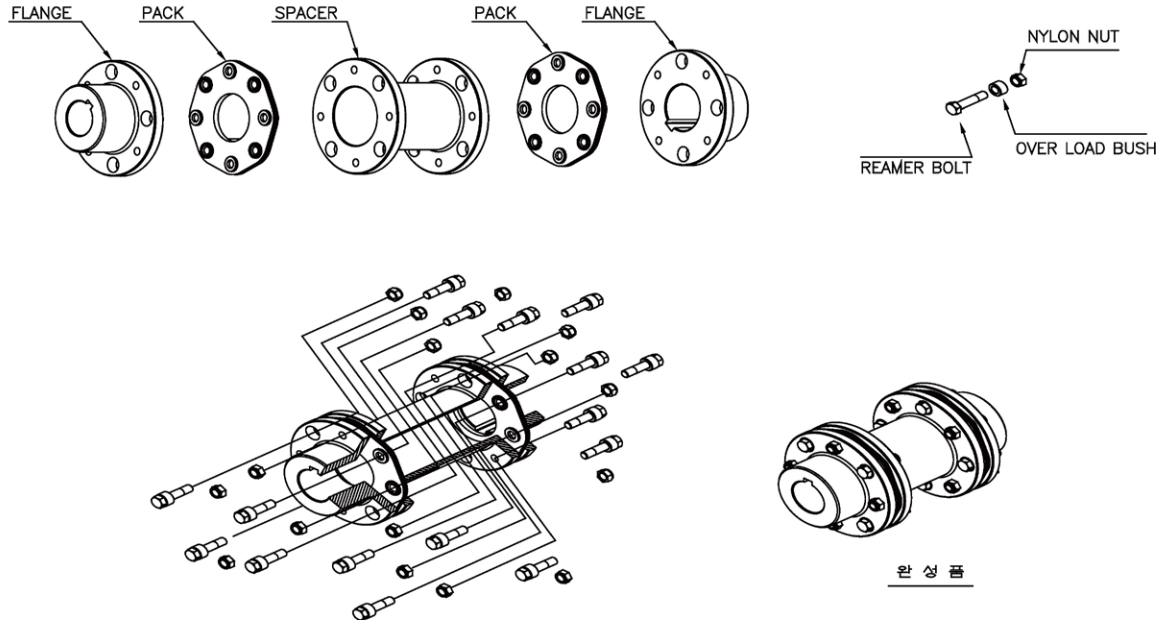


S-Type (6 BOLT)



완성품

E-Type (8 BOLT)



2. 특 징 (CHARACTERISTIC)

1) 윤활유가 필요 없다.

- 마찰 및 전동부분이 없기 때문에 윤활유가 필요 없으며, 따라서 소음 및 마모가 없고 청결하다.

2) 정비가 필요 없다.

- 장착오차 한계 이내로 장착하고 사용시 초기상태에 변화가 없으면 영구적인 수명을 갖는다.
- 축간 오차가 다소 있다 하더라도 축간 변위가 허용되며, 마모가 거의 없기 때문에 장착오차를 최소화하여 설치하면 사용시간을 무한히 늘릴 수 있다. 따라서 장시간 사용이 필요한 곳에 매우 유리하다.

3) 구조가 간단하고 가벼우며 소형으로도 큰 토오르크를 전달할 수 있다.

- 다양한 Size가 있으며 토오르크(Torque)는 3.4(kg·m)에서 18,160(kg·m)까지 전달할 수 있다.

4) 장착오차의 허용범위가 크다.

- 장착오차의 허용범위가 크기 때문에 다양한 시스템에 유연하게 적용할 수 있다. 또한 특수 설계에 의해 더욱 큰 장착오차의 허용이 가능하다.

1) The lubricant is not required.

- The Lubricants do not need, because the friction and electric parts, no noise and wear and is clean.

2) Maintenance free

- All metal construction and no wearing parts need no maintenance.
- Axis and axis errors, even if the displacement is allowed because there is little wear if you install using assembled by minimizing the error can increase index
- finitely. Therefore, it is suitable for long-term use.

3) Simple design, lightweight and high torque.

- Disc flex couplings are manufactured for torque from 3.4(kg·m) to 18,160(kg·m), in various size available.

4) Disc flex couplings are able to absorb axial, angular and parallel misalignment.

- Flexible couplings prevent problems by absorbing shaft misalignment while transmitting torque : this puts an opposing load on the shaft

DISC FLEXIBLE COUPLING

2. 특 징 (CHARACTERISTIC)

5) 백래시가 없으며 비틀림 강성이 크다.

- NC장치가 붙은 공작기계, 분할장치, 인쇄기 등의 기계와 같이 정확한 축의 회전이나 위치제어가 필요한 곳에 사용할 경우에 적합하다.

6) 악 조건에 대해서 탁월한 성능을 발휘한다.

- 무 윤활이므로 표준 재질로서도 고온환경(Max 150℃)에서 사용이 가능하다,

7) 장착 및 분해가 용이하다.

- 부품수가 적고, 소형 경량화 되어 있으므로 신속하고 확실한 장착 및 분리가 가능하며 점검도 용이하다.

8) 사고 시 안전장치

- 과 부하나 돌발사태로 인하여 Disc Plate가 파손되더라도 Over Load Bush를 통하여 회전을 계속하는 안전 장치형도 있다.

5) No backlash and high torsional stiffness.

- This coupling has given outstanding service for instance in regulating and control drives. For equipment such as machine tools with numerical controllers, indexing systems, and printing machine. Pan-flex couplings are better than other couplings.

6) High performance.

- High temperature (Max 150℃) does not affect the all metal construction.

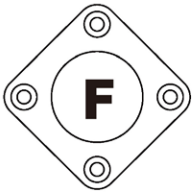
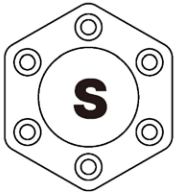
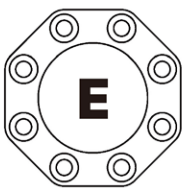
7) Easy to mount and dismount.

- Disc flex couplings has small number of parts and simple constructions which allow quick and easy mounting and dismounting work.

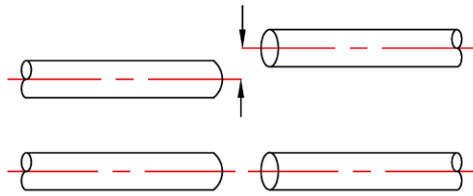
8) Safety measure.

- When a severe over load may damage the disc plate the transmitting rotation will be possible through over load bush.

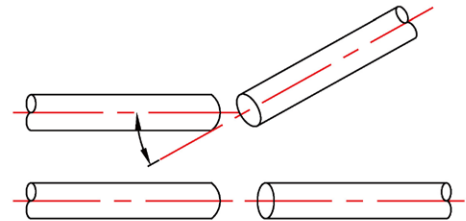
3. Disk Pack 모양에 따른 분류 및 호칭 (TYPE OF DISC PACK)

구 분 (Distribution)				
Single Type		F3	S3	E3
Double	표준 Space형 (Standard space)	F4	S4	E4
허 용 각 도 (Allowable Angle)		1 °	0.7 °	0.5 °
허용 Torque 범위 (kg.m) (Torque range (kg.m))		3.4 ~ 650kg·m	58 ~ 13,070kg·m	392 ~ 18,150kg·m

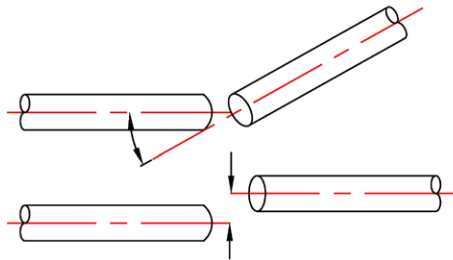
4. 성능 (MISALIGNMENT)



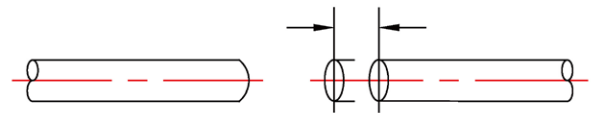
편심 (Parallel Misalignment)



편각 (Angular Misalignment)



편각 및 편심 (Angular & Parallel Misalignment)



축 방향 변위 (End Float)

▶ 축은 여러가지 요인에 의해 편심 및 편각이 발생한다.

열 변동, 베어링마모, 진동, 기초공사의 침전 등으로 인하여 축 정렬이 정확하지 못한 상태에서 카플링에 과부하가 발생하며 편심응력을 흡수할 여력이 없어서 기대한 운전 수명을 갖지 못하게 된다. 위의 그림은 편심 및 편각, 축 유동오차 변위를 나타낸 것으로 실제로는 이 모든 변위가 복합적으로 발생한다.

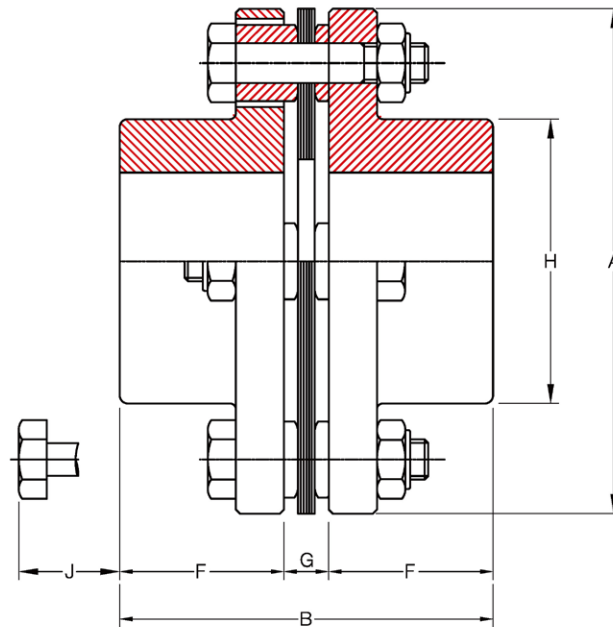
▶ The shaft may be misaligned by various causes.

Such as the effects of heat, settling foundation, vibration and worm bearing etc. The initial alignment is not correct and heavy stress is imposed on the coupling it will cause reduction of coupling life due to small capacity of absorbing misalignment. Any or all of the misalignment shown in the above illustrations are presented in all connected drives.

DISC FLEXIBLE COUPLING

5. 치수표 (DIMENSIONS)

1) F3 (4-Bolt Single) Type

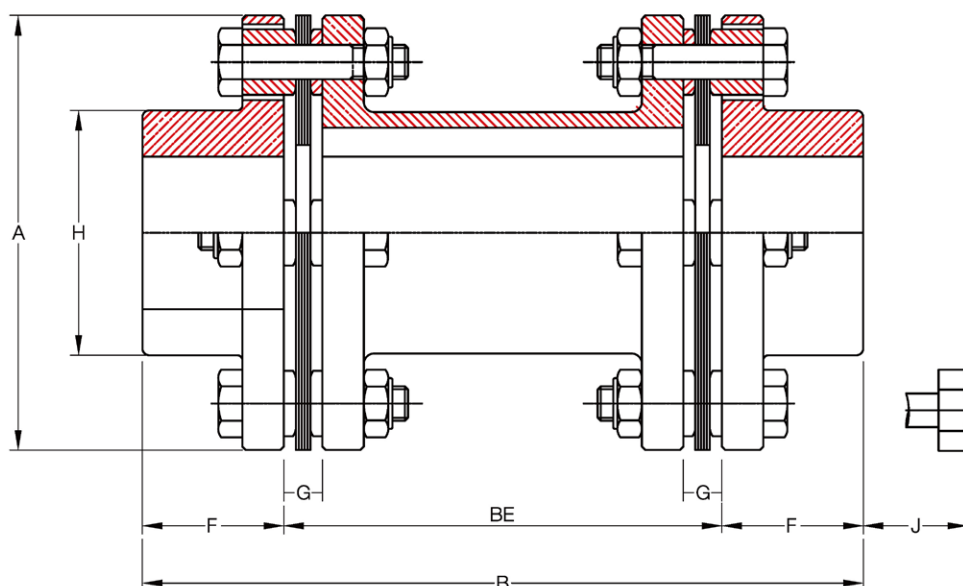


Angular Misalignment = 1.0°
4 Bolt Holes

Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Cplg Weight (Kg)	Bolt Torque (Kg.m)	GD ² (Kg.m ²)	Dimensions (Millimeters)					
							A	B	F	G	H	J
05	3.4	47,000	23	0.6	0.9	0.0008	67	55.8	25	5.8	33	16
10	9.2	39,000	32	1.1	0.9	0.0024	81	57.1	25	7.1	46	16
15	18	34,000	35	1.7	2.2	0.0048	93	66.4	29	8.4	51	24
20	25	30,000	42	2.5	2.2	0.0080	104	79.0	34	11.0	61	30
25	43	25,000	50	4.3	4.2	0.0224	126	93.2	41	11.2	71	27
30	79	22,000	58	6.9	7.3	0.0440	143	108.5	48	12.5	84	28
35	130	19,000	74	11.3	7.3	0.1080	168	130.0	57	16.0	106	26
40	210	16,000	83	16.7	15.9	0.2080	194	145.0	64	17.0	118	30
45	340	15,000	95	22.7	15.9	0.3520	214	174.8	76	22.8	137	34
50	500	13,000	109	35.4	22.1	0.7200	246	202.0	89	24.0	157	26
55	650	11,000	118	52.0	55.3	1.2800	276	230.0	102	26.0	169	42

* Coupling Weight is without Bore Machining

2) F4 (4-Bolt Double) Type



Angular Misalignment = 1.0°
4 Bolt Holes

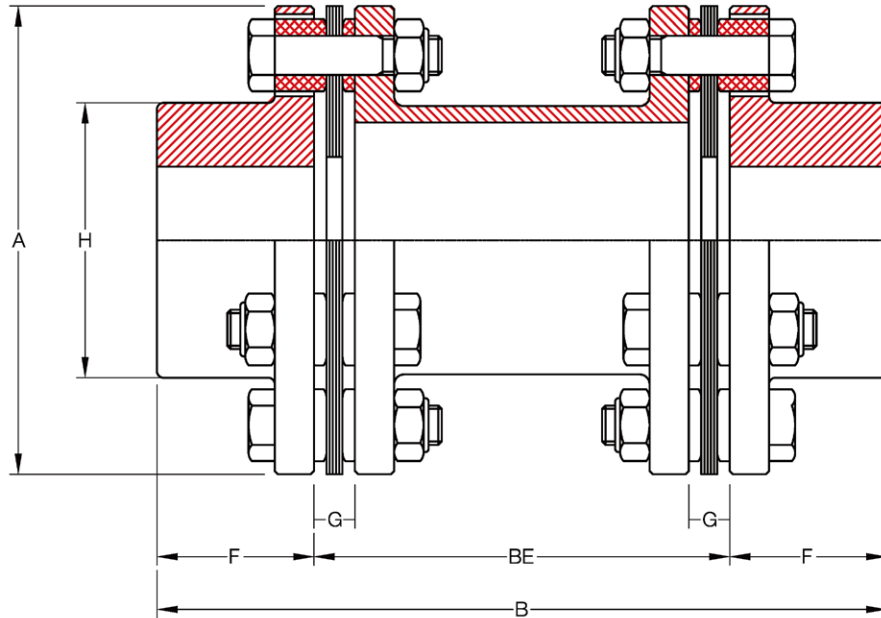
Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Cplg Weight (Kg)	Bolt Torque (Kg.m)	GD ² (Kg.m ²)	Dimensions (Millimeters)						
							A	B	F	G	H	J	BE
05	3.4	47,000	23	1.2	0.9	0.0018	67	138.9	25	5.8	33	16	88.9
10	9.2	39,000	32	1.9	0.9	0.0044	81	138.9	25	7.1	46	16	88.9
15	18	34,000	35	2.9	2.2	0.0084	93	159.6	29	8.4	51	24	101.6
20	25	30,000	42	4.1	2.2	0.0148	104	195.0	34	11.0	61	30	127.0
25	43	25,000	50	7.1	4.2	0.0396	126	209.0	41	11.2	71	27	127.0
30	79	22,000	58	10.8	7.3	0.0800	143	223.0	48	12.5	84	28	127.0
35	130	19,000	74	16.3	7.3	0.1680	168	241.0	57	16.0	106	26	127.0
40	210	16,000	83	24.7	15.9	0.3400	194	267.7	64	17.0	118	30	139.7
45	340	15,000	95	32.5	15.9	0.5600	214	304.4	76	22.8	137	34	152.4
50	500	13,000	109	50	22.1	1.1200	246	355.8	89	24.0	157	26	177.8
55	650	11,000	118	75	55.3	2.0400	276	381.8	102	26.0	169	42	177.8

* Coupling Weight is without Bore Machining

DISC FLEXIBLE COUPLING

5. 치수표 (DIMENSIONS)

3) S4 (6-Bolt Double) Type

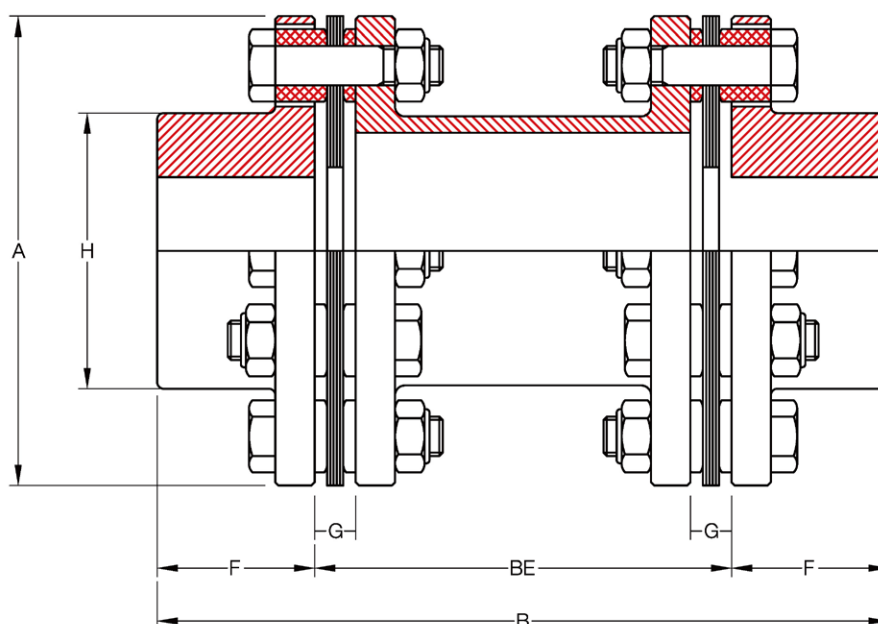


Angular Misalignment = 0.7°
6 Bolt Holes

Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Cplg Weight (Kg)	Shaft Line Displacement (mm)	Bolt Torque (Kg.m)	GD ² (Kg.m ²)	Dimensions (Millimeters)					
								A	B	F	G	H	BE
00	58	26,000	51	6.0	3.0	2.2	0.03	119	168	54	10.3	74	60
01	94	23,000	55	9.1	3.4	4.2	0.06	137	198	63	11.0	81	72
02	174	19,000	67	16.9	3.6	7.3	0.14	161	238	74	12.0	97	90
03	341	17,000	72	21.6	4.2	15.9	0.26	180	269	80	14.0	104	109
04	500	15,000	85	35.1	4.5	22.1	0.59	212	308	95	17.0	124	118
05	620	11,600	125	73.3	3.9	22.1	1.80	276	377	112	17.5	180	153
10	840	11,600	125	74.3	3.9	22.1	1.90	276	377	112	19.0	180	153
15	1,090	10,300	140	107.8	4.2	45.0	3.70	308	440	134	19.0	200	172
20	1,820	9,200	158	156.1	4.8	52.0	6.70	346	497	153	22.5	228	191
25	2,690	8,500	165	211.8	5.2	110.0	10.60	375	553	165	28.0	240	223
30	3,410	7,800	178	274.5	5.4	150.0	16.50	410	610	178	31.0	258	254
35	4,070	7,200	187	333.3	5.6	170.0	23.90	445	646	188	31.0	272	270
40	4,720	6,800	205	399.2	6.3	170.0	30.70	470	686	206	34.0	297	274
45	6,100	6,200	231	525.3	6.7	180.0	48.00	511	749	231	35.5	334	287
50	7,620	5,700	254	676.3	7.3	300.0	72.90	556	800	254	37.0	364	292
55	9,440	5,400	263	803.4	7.8	350.0	100.60	587	839	264	37.5	382	311
60	10,920	5,100	275	954.1	8.7	370.0	137.60	629	895	276	38.0	399	343

* Coupling Weight is without Bore Machining

4) E4 (8-Bolt Double) Type



Angular Misalignment = 0.5°
8 Bolt Holes

Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Cplg Weight (Kg)	Shaft Line Displacement (mm)	Bolt Torque (Kg.m)	GD ² (Kg.m ²)	Dimensions (Millimeters)					
								A	B	F	G	H	BE
01	392	15,000	95	38.0	2.1	7.3	0.64	214	333	108	12.2	137	117
03	726	13,000	115	60.0	2.1	15.9	1.36	246	369	121	13.7	165	127
05	915	11,600	125	82.3	2.1	22.1	2.30	276	421	134	17.5	180	153
10	1,100	11,600	125	83.3	2.1	22.1	2.30	276	421	134	19.0	180	153
15	1,570	10,300	140	119.7	2.4	45.0	3.70	308	492	160	19.0	200	172
20	2,610	9,200	158	174.3	2.9	52.0	6.80	346	557	183	22.5	228	191
25	3,850	8,500	165	233.8	3.1	110.0	10.80	375	619	198	28.0	240	223
30	4,810	7,800	178	305.3	3.3	150.0	16.70	410	682	214	31.0	258	254
35	5,820	7,200	187	367.4	3.6	170.0	25.00	445	720	225	31.0	272	270
40	6,570	6,800	205	447.5	4.0	170.0	31.10	470	768	247	34.0	297	274
45	8,530	6,200	231	591.6	4.5	180.0	48.00	511	843	278	35.5	334	287
50	10,530	5,700	254	761.4	5.0	300.0	74.70	556	902	305	37.0	364	292
55	15,200	5,400	263	901.9	5.2	350.0	101.60	587	945	317	37.5	382	311
60	18,160	5,100	275	1,068.0	5.6	370.0	137.00	629	1,005	331	38.0	399	343

* Coupling Weight is without Bore Machining

GEAR COUPLING

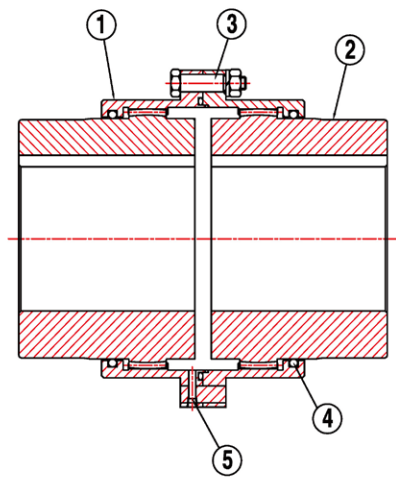


1. 특 징 (Characteristic)

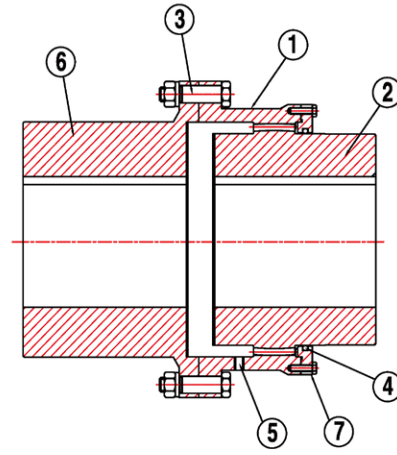
- 1) 기아카프링은 전달마력에 비하여 소형, 경량 이며 고속회전 시에도 소음 및 진동이 거의 없으며 긴 수명을 유지하여 전달 동력의 손실을 최소한으로 줄일 수 있도록 설계되어 있다.
- 2) 외치차는 Crown 형태로 가공 되어 있어 면 접촉이 아닌 곡선을 따라 점 접촉으로 동력을 전달함으로써 평행오차, 각도오차, 축 유동 오차를 해결할 수 있으며 축심 오차 발생시 자체 조절 흡수되므로 정상적인 동력 전달이 가능하며 내부 윤활로 기어의 내마모성이 증대된다.
- 3) 사용조건에 따라 대형 및 특수형 제작도 가능하다.
- 4) 축간 거리가 넓어 중간 축으로 연결하여야 하는 경우에 적용이 용이하며 슬라이딩 작동을 하면서 회전하는 경우에도 사용한다.

- 1) With the capacity of handling heavy loads, gear coupling are much smaller and lighter than any other couplings.
Noise or vibrations is hardly produced even in high speed operation.
- 2) The tooth of outer gear is manufactured in crown shape.
So even when the axial misalignment occurs it provides good operation.
- 3) It is possible to make large and various special type you want to use for multiple purpose.
- 4) The place where we need intermediate shaft to connect the long distance between shaft ends.
The shaft to motivate sliding and also resolve.

2. 구조 (STRUCTURE)



Type SS / CC



Type SE / CE

No.	Name	Material (SS/SE)	Material (CC/CE)
①	SLEEVE (INTERNAL GEAR)	S45C-N	S45C-N
②	HUB (CROWN GEAR)	S45C-N	S45C-N
③	REAMER BOLT	S45C-H	S45C-H
④	O-RING	NBR	NBR
⑤	OIL PLUG	SS400	SS400
⑥	FLANGE	S45C-N	S45C-N
⑦	SIDE COVER	-	SS400

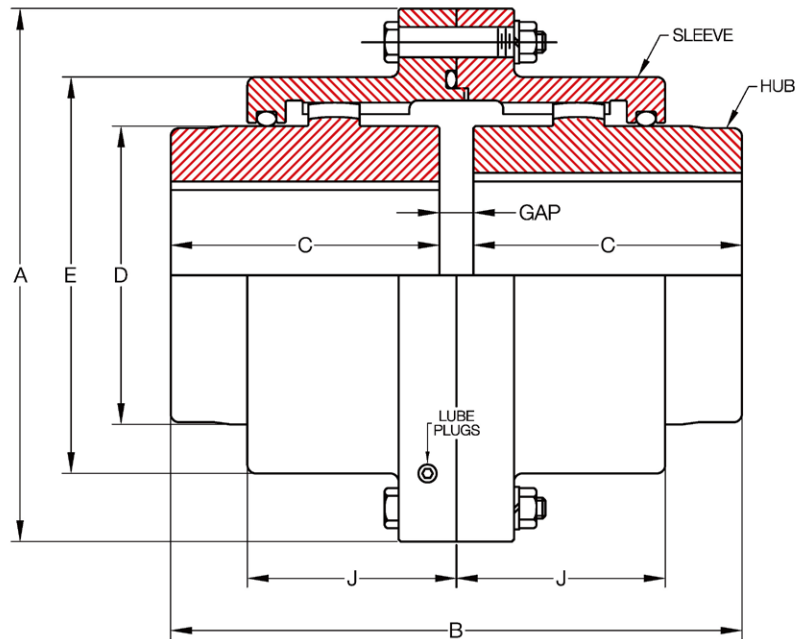
- 1) 기아카플링은 허브(Crown Gear)의 내치차 부분이 크라운잉(Crowning) 으로 가공 되어 있으며 치산 (Tooth Top)은 축 방향으로 둥글게 맞물려 슬리브 (Internal Gear)와 허브(Crown Gear) 사이에 약간의 경사가 생겨도 치 부분의 간섭을 제거 해 주기 때문에 편심, 편각, 축 이동 변위가 생겨도 부드럽게 동력을 전달 하게 된다.
- 2) 기아카플링이 어떤 변위량을 가지지 않고 정확하게 설치 되었다면 외치차의 크라운잉 가공된 치형의 중심에서 내치차와 접촉 하지만 편심, 편각의 변위량이 있다면 치형의 중심점에 일정 거리 떨어진 곳에서 접촉 하게 된다.

- 1) Gear coupling consists of the internal spur gears in its sleeves and the external spur gears with crowned teeth on its hubs, both of which are in mesh when assembled.
- 2) If it is properly without any displacement the external tooth comes in contact with the mating internal tooth at the middle of the crowned portion and if it is mounted with offset and angular displacement, the former will come in contact with the latter at a point distant from the middle of the crowned portion.

GEAR COUPLING

3. 치수표 (DIMENSIONS)

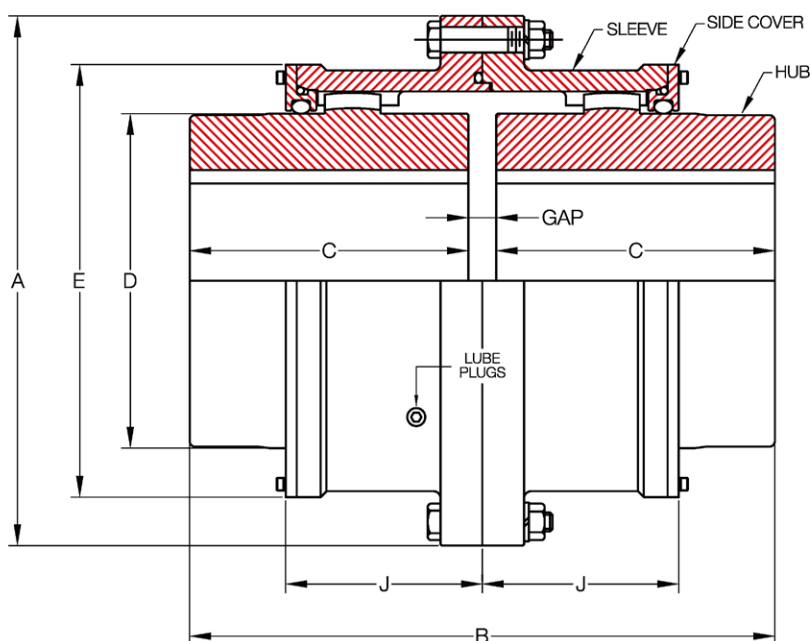
1) SHC - SS Type



Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Min Bore (mm)	Cplg Weight (Kg)	Lube Weight (Kg)	Dimensions (Millimeters)							GD ² (kg·m ²)
							A	B	C	D	E	J	GAP	
112	80.3	4,000	40	17	4.3	0.05	112	108	50	58	79	40	8	0.0198
125	142	4,000	50	25	6.6	0.06	125	134	63	70	92	43	8	0.0353
140	205	4,000	56	25	9.3	0.09	140	150	71	80	107	47	8	0.0612
160	314	4,000	65	28	14.0	0.12	160	170	80	95	120	52	10	0.113
180	482	4,000	75	35	19.0	0.15	180	190	90	105	134	56	10	0.191
200	689	3,810	85	35	26.0	0.20	200	210	100	120	149	61	10	0.315
224	1,000	3,410	100	42	39.0	0.31	224	236	112	145	174	65	12	0.599
250	1,470	3,050	115	42	55.0	0.45	250	262	125	165	200	74	12	1.08
280	2,340	2,720	135	45	81.0	0.59	280	294	140	190	224	82	14	2.06
315	3,680	2,420	160	100	129.0	0.94	315	356	170	225	260	98	16	4.24
355	5,550	2,150	180	125	177.0	1.11	355	396	190	250	288	108	16	7.13
400	7,790	1,900	200	140	242.0	1.70	400	418	200	285	329	114	18	12.50

* Coupling Weight is without Bore Machining

2) SHC - CC Type



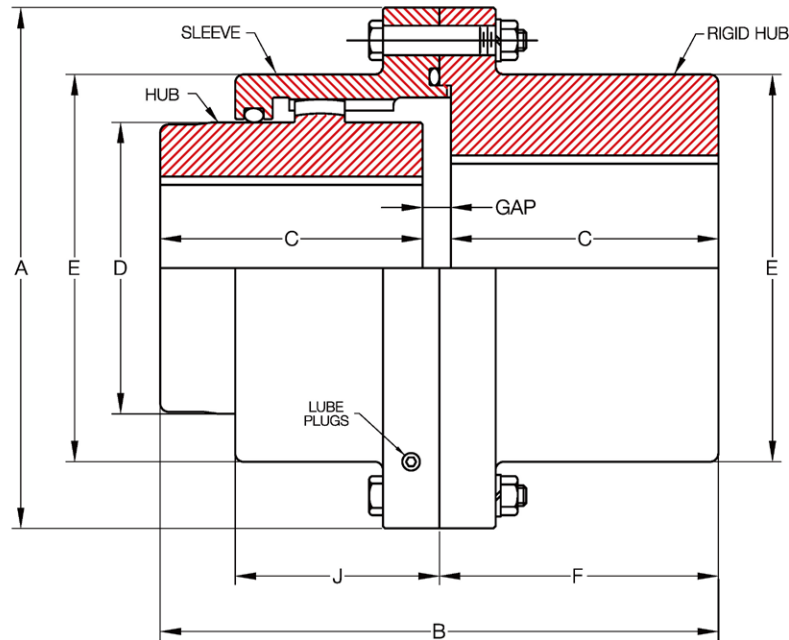
Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Min Bore (mm)	Cplg Weight (Kg)	Lube Weight (Kg)	Dimensions (Millimeters)							GD ² (kg·m ²)
							A	B	C	D	E	J	GAP	
450	11,000	1,690	205	140	298	2.11	450	418	200	290	372	151	18	16.60
500	16,600	1,520	236	170	446	3.23	500	494	236	335	425	168	22	36.90
560	26,500	1,360	275	190	642	3.91	560	552	265	385	475	187	22	67.60
630	42,000	1,210	325	224	1,010	5.70	630	658	315	455	548	213	28	137
710	61,200	1,070	360	250	1,440	7.99	710	738	355	510	622	242	28	250
800	87,500	950	405	280	2,030	11.01	800	832	400	570	690	267	32	441
900	125,000	840	475	315	3,030	14.40	900	932	450	670	792	295	32	860
1000	171,000	760	510	355	4,120	19.50	1,000	1,040	500	720	858	322	40	1,380
1120	240,000	682	600	400	5,920	26.30	1,120	1,160	560	840	990	360	40	2,650
1250	331,000	610	710	500	9,410	38.20	1,250	1,460	710	960	1,126	399	40	5,290

* Coupling Weight is without Bore Machining

GEAR COUPLING

3. 치수표 (DIMENSIONS)

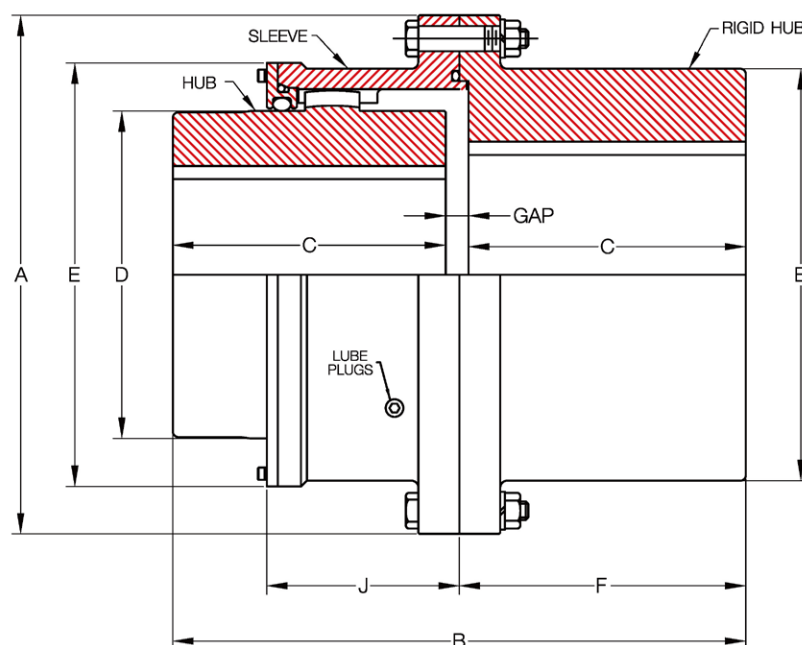
3) SHC - SE Type



Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore		Min Bore (mm)	Cplg Weight (Kg)	Lube Weight (Kg)	Dimensions (Millimeters)								GD ² (kg·m ²)
			Flex (mm)	Rigid (mm)				A	B	C	D	E	F	J	GAP	
112	80.3	4,000	40	50	16	4.6	0.04	112	108	50	58	79	54	40	8	0.0197
125	142	4,000	50	56	31	6.7	0.05	125	134	63	70	92	67	43	8	0.0348
140	205	4,000	56	63	31	9.3	0.07	140	150	71	80	107	75	47	8	0.0591
160	314	4,000	65	75	31	14.0	0.09	160	170	80	95	120	85	52	10	0.111
180	482	4,000	75	80	45	19.0	0.12	180	190	90	105	134	95	56	10	0.183
200	689	3,810	85	95	45	26.0	0.15	200	210	100	120	149	105	61	10	0.317
224	1,000	3,410	100	105	51	38.0	0.25	224	236	112	145	174	118	65	12	0.579
250	1,470	3,050	115	125	51	56.0	0.35	250	262	125	165	200	131	74	12	1.08
280	2,340	2,720	135	150	51	83.0	0.48	280	294	140	190	224	147	82	14	2.14
315	3,680	2,420	160	180	112	135.0	0.77	315	356	170	225	260	178	98	16	4.55
355	5,550	2,150	180	200	125	184.0	0.94	355	396	190	250	288	198	108	16	7.5
400	7,790	1,900	200	236	140	261.0	1.36	400	418	200	285	329	209	114	18	14.1

* Coupling Weight is without Bore Machining

4) SHC - CE Type



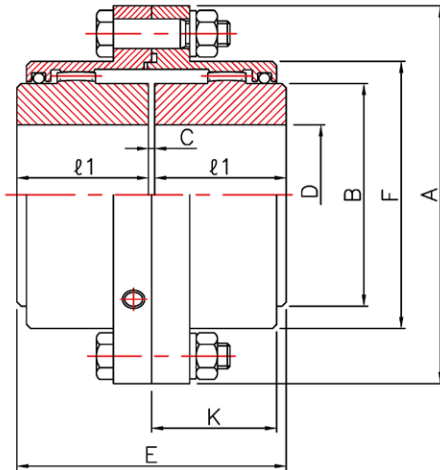
Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore		Min Bore (mm)	Cplg Weight (Kg)	Lube Weight (Kg)	Dimensions (Millimeters)								GD ² (kg·m ²)
			Flex (mm)	Rigid (mm)				A	B	C	D	E	F	J	GAP	
450	11,000	1,690	205	250	140	304	1.79	450	418	200	290	372	209	151	18	18.2
500	16,600	1,520	236	265	170	458	2.64	500	494	236	335	425	247	168	22	37
560	26,500	1,360	275	300	190	664	3.23	560	552	265	385	475	276	187	22	70
630	42,000	1,210	325	355	224	1,020	4.93	630	658	315	455	548	329	213	28	139
710	61,200	1,070	360	400	250	1,460	6.63	710	738	355	510	622	369	242	28	252
800	87,500	950	405	450	280	2,090	9.35	800	832	400	570	690	416	267	32	451
900	125,000	840	475	510	315	3,020	11.90	900	932	450	670	792	466	295	32	743
1000	171,000	760	510	570	355	4,130	17.00	1,000	1,040	500	720	858	520	322	40	1,440
1120	240,000	682	600	640	400	5,970	22.10	1,120	1,160	560	840	990	580	360	40	2,810
1250	331,000	610	710	800	500	9,820	31.40	1,250	1,460	710	960	1,126	730	399	40	5,630

* Coupling Weight is without Bore Machining

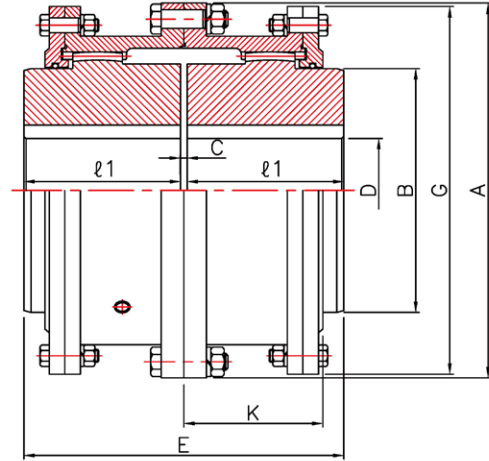
GEAR COUPLING

3. 치수표 (DIMENSIONS)

5) SHC - GD / GDL Type



GD Type - 외경 $\Phi 457$ 이하
(Outer diameter of less than $\Phi 457$)

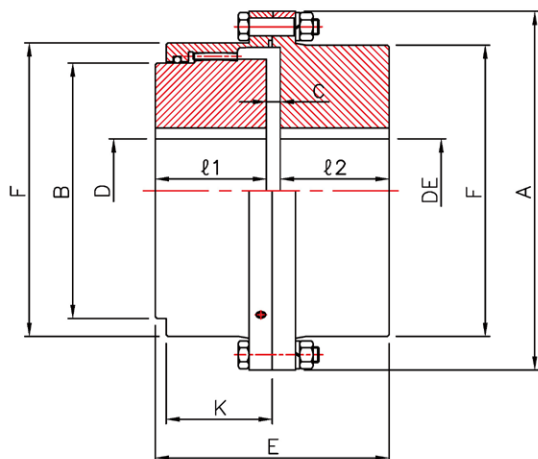


GDL Type - 외경 $\Phi 527$ 이상
(Outer diameter of more than $\Phi 527$)

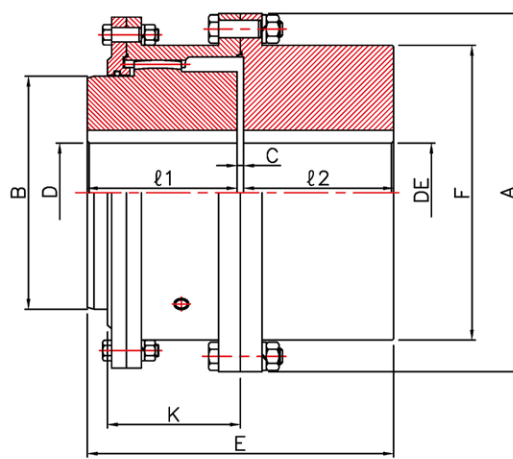
Size	Torque Rating (kgf.m)	Max. Speed (rpm)	Bore Dia D (mm)		Dimensions(mm)								Grease (Lube) (kg)	Weight (kg)
			Max.	Min.	A	E	l1	B	F	K	G	C		
GD 10	116.3	8,000	48	13	116	89	43	69	84	39	-	3	0.04	4.5
GD 15	239.8	6,500	60	19	152	101	49	86	105	48	-	3	0.07	9.1
GD 20	435.7	5,600	73	25	178	127	62	105	126	59	-	3	0.11	15.9
GD 25	762.2	5,000	92	32	213	159	77	131	155	72	-	5	0.23	29.5
GD 30	1,234.7	4,400	105	38	240	187	91	152	180	84	-	5	0.36	43.1
GD 35	1,887.8	3,900	124	51	279	218	106	178	211	98	-	6	0.54	68.0
GD 40	3,122.4	3,600	146	64	318	248	121	210	245	111	-	6	0.91	97.5
GD 45	4,285.7	3,200	165	76	346	278	135	235	274	123	-	8	1.04	136.1
GD 50	5,714.8	2,900	178	89	389	314	153	254	306	141	-	8	1.77	191
GD 55	7,551.0	2,650	197	102	425	344	168	279	334	158	-	8	2.22	249.5
GD 60	9,224.5	2,450	222	114	457	384	188	305	366	169	-	8	3.18	306
GDL 70	13,776	2,150	254	89	527	452	221	343	-	196	517	9.5	4.35	485
GDL 80	17,300	1,750	267	102	591	508	249	356	-	243	572	9.5	9.53	703
GDL 90	23,000	1,550	286	114	660	565	276	394	-	265	641	13	12.25	984.3
GDL 100	31,600	1,450	324	127	711	623	305	445	-	294	699	13	14.97	1,302.0
GDL 110	42,100	1,330	356	140	775	679	333	495	-	322	749	13	17.69	1,678.3
GDL 120	56,600	1,200	387	152	838	719	353	546	-	341	826	13	20.87	2,113.8

* Coupling Weight is without Bore Machining

6) SHC - GS / GSL Type



GS Type - 외경 $\Phi 457$ 이하
(Outer diameter of less than $\Phi 457$)



GSL Type - 외경 $\Phi 527$ 이상
(Outer diameter of more than $\Phi 527$)

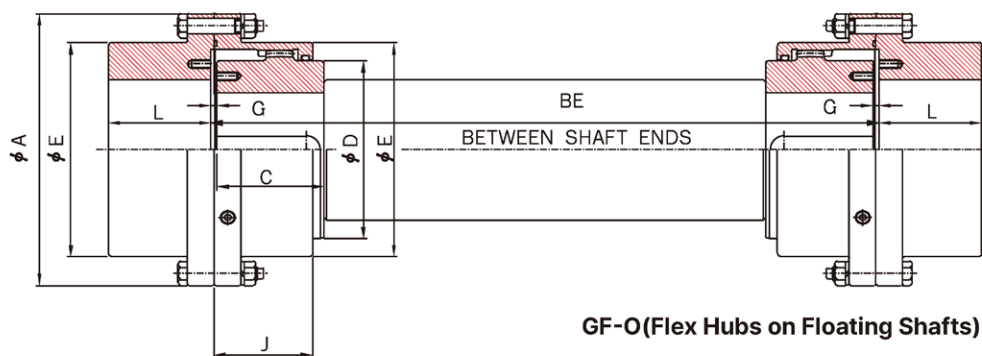
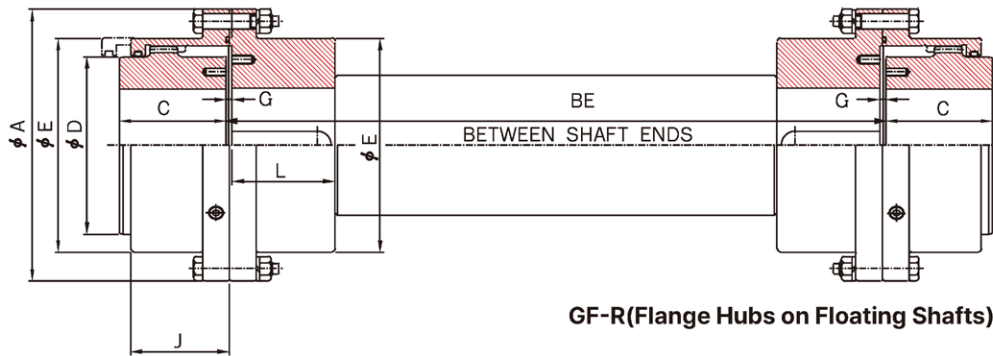
Size	Torque Rating (kgf.m)	Max. Speed (rpm)	Bore Dia D (mm)		Dimensions(mm)								Grease (Lube) (kg)	Weight (kg)
			Bore D (Min/Max)	Bore DE (Min/Max)	A	E	l1	l2	B	F	K	C		
GS 10	85.9	8,000	13 / 48	13 / 60	116	87	43	40	69	84	39	3	0.02	4.5
GS 15	193.4	6,500	19 / 60	19 / 75	152	99	49	46	86	105	48	3	0.04	9.1
GS 20	358.1	5,600	25 / 73	25 / 92	178	124	62	58	105	126	59	3	0.07	15.9
GS 25	644.6	5,000	32 / 92	32 / 111	213	156	77	74	131	155	72	5	0.12	29.5
GS 30	1,074.3	4,400	38 / 105	38 / 130	240	184	91	88	152	180	84	5	0.18	43.1
GS 35	1,647.3	3,900	51 / 124	51 / 149	279	213.5	106	102	178	211	98	6	0.27	68
GS 40	2,506.7	3,600	64 / 146	64 / 171	318	243	121	115	210	245	111	6	0.47	97.5
GS 45	3,437.8	3,200	76 / 165	76 / 194	346	274	135	131	235	274	123	8	0.57	136.1
GS 50	4,653.3	2,900	89 / 178	89 / 222	389	309	153	147	254	306	141	8	0.91	191
GS 55	6,087.7	2,650	102 / 197	102 / 248	425	350	168	173	279	334	158	8	1.13	249.5
GS 60	7,878.2	2,450	114 / 222	114 / 267	457	384	188	186	305	366	169	8	1.70	306.2
GSL 70	11,459	2,150	89 / 254	89 / 305	527	454	221	220	343	425	196	10	2.27	485
GSL 80	15,040	1,750	102 / 267	102 / 337	591	511	249	249	356	451	243	10	4.99	699
GSL 90	20,412	1,550	114 / 286	114 / 381	660	566	276	276	394	500	265	13	6.35	984
GSL 100	28,648	1,450	127 / 324	127 / 394	711	626	305	305	445	530	294	13	7.71	1,252
GSL 110	39,394	1,330	140 / 356	140 / 438	775	682	333	333	495	584	322	13	9.07	1,637
GSL 120	50,134	1,200	152 / 387	152 / 483	838	722	353	353	546	648	341	13	10.89	2,077

* Coupling Weight is without Bore Machining

GEAR COUPLING

3. 치수표 (DIMENSIONS)

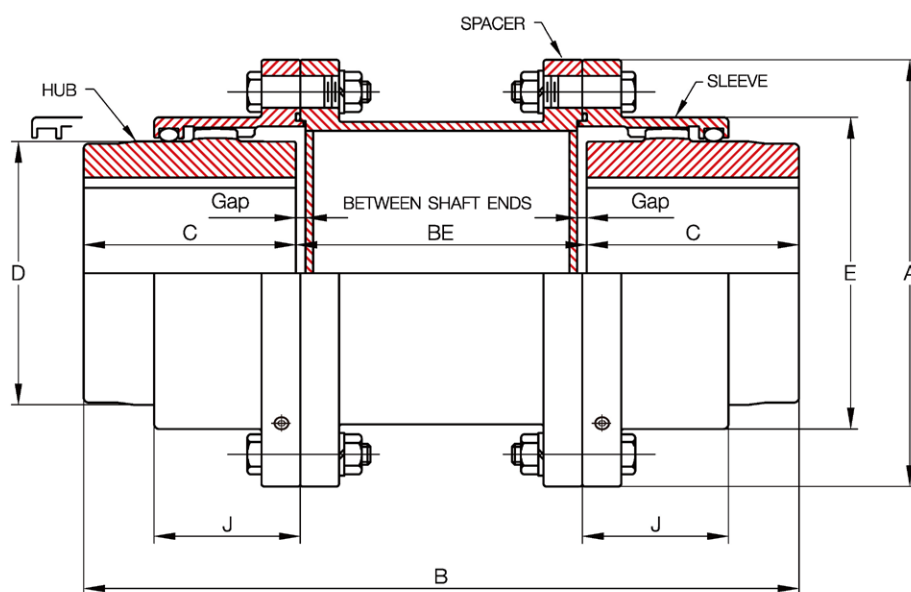
7) GF Type (With Floating Shaft)



Size	HP RER 100 rpm	Max. Speed (rpm)	Basic Torque (kg.m)	Bore Dia. (mm)			Dimensions(mm)										One Cplg Wt (kg)	Lube Wt (kg) per Cplg
				Max.		Min.	A	BE Min		C	D	L	E	J	G			
				Gear	Flange			GF-R	GF-O									
10GF	12	8,000	86	48	60	13	116	92	133	43	69	40	84	39	3	5	0.02	
15GF	27	6,500	193	60	75	19	152	105	159	49	86	46	105	48	3	9	0.04	
20GF	50	5,600	358	73	92	25	178	129	197	62	105	58	126	59	3	16	0.07	
25GF	90	5,000	644	92	111	32	213	162	241	77	131	74	155	72	5	27	0.12	
30GF	150	4,400	1,074	105	130	38	240	189	279	91	152	88	180	84	5	43	0.18	
35GF	230	3,900	1,647	124	149	51	279	219	324	106	178	102	211	98	6	61	0.27	
40GF	350	3,600	2,507	146	171	64	318	248	419	121	210	115	245	111	6	100	0.47	
45GF	480	3,200	3,437	165	194	76	346	281	508	135	235	131	274	123	8	136	0.57	
50GF	650	2,900	4,655	178	222	89	389	316	533	153	254	147	306	141	8	195	0.91	
55GF	850	2,650	6,088	197	248	102	425	367	572	168	279	173	334	158	8	263	1.13	
60GF	1,100	2,450	7,878	222	267	114	457	397	597	188	305	186	366	169	8	324	1.70	
70GF	1,600	2,150	11,459	254	305	127	527	470	673	221	356	220	425	196	10	508	2.27	

* Coupling Weight is without Bore Machining

8) SHC - SAM Type



Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Min Bore (mm)	Lube Weight (Kg)	Dimensions (Millimeters)								
						A	BE	B	C	D	E	F	J	GAP
112	80.3	4,000	40	16	0.05	112	CUSTOM	2C + BE	50	58	79	54	40	8
125	142	4,000	50	31	0.06	125			63	70	92	67	43	8
140	205	4,000	56	31	0.09	140			71	80	107	75	47	8
160	314	4,000	65	31	0.12	160			80	95	120	85	52	10
180	482	4,000	75	45	0.15	180			90	105	134	95	56	10
200	689	3,810	85	45	0.20	200			100	120	149	105	61	10
224	1,000	3,410	100	51	0.31	224			112	145	174	118	65	12
250	1,470	3,050	115	51	0.45	250			125	165	200	131	74	12
280	2,340	2,720	135	51	0.59	280			140	190	224	147	82	14
315	3,680	2,420	160	112	0.94	315			170	225	260	178	98	16
355	5,550	2,150	180	125	1.11	355			190	250	288	198	108	16
400	7,790	1,900	200	140	1.70	400			200	285	329	209	114	18

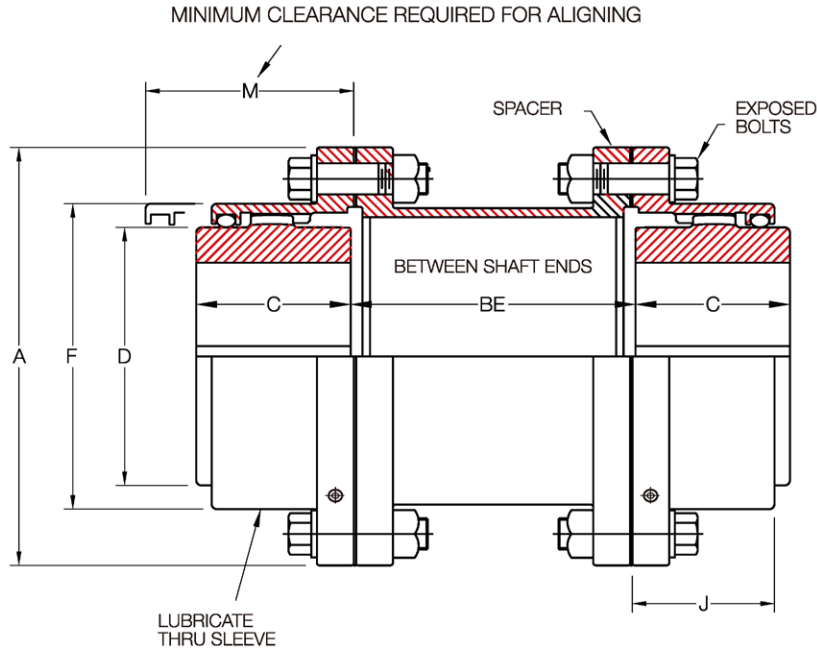
* Coupling Weight is without Bore Machining

* Refer to KCP for size 450 ~ 1250

GEAR COUPLING

3. 치수표 (DIMENSIONS)

9) SHC - GDS Type



Size	Torque Rating (kgf·m)	Allow Speed RPM	Max Bore (mm)	Min Bore (mm)	Cplg Weight (Kg)		Lube Weight (Kg)		Dimensions (Millimeters)						
					Cplg (Kg)	Spacer (Kg)	Less Spacer (Kg)	Add Spacer mm (Kg)	A	BE Min	C	D	F	J	M
10	116.3	7,000	48	13	6.8	0.0120	0.0408	-	116	82	43	69	84	39	48
15	239.8	5,500	60	19	13.6	0.0127	0.0726	-	152	82	49	86	105	48	56
20	435.7	4,600	73	25	20.4	0.0166	0.1130	0.00054	178	82	62	105	126	59	69
25	762.2	4,000	92	32	38.6	0.0205	0.2270	0.00107	213	108	77	131	155	72	81
30	1,234.7	3,600	105	38	54.4	0.0236	0.3630	0.00107	240	108	91	152	180	84	94
35	1,887.8	3,100	124	51	88.5	0.0359	0.5440	0.00214	279	130	106	178	211	98	107
40	3,122.4	2,800	146	64	122.5	0.0500	0.9070	0.00357	318	130	121	210	245	111	122
45	4,285.7	2,600	165	76	166.0	0.0736	1.0400	0.00357	346	130	135	235	274	123	135
50	5,714.8	2,400	178	89	238.0	0.0814	1.7700	0.00357	389	184	153	254	306	141	152
55	7,551.0	2,200	197	102	306.0	0.0895	2.2200	0.00357	425	184	168	279	334	158	173
60	9,234.5	2,100	222	114	358.0	0.1170	3.1800	0.00357	457	-	188	305	366	169	183

* Plus Spacer Weight is Plus per Millimeters of Spacer Length

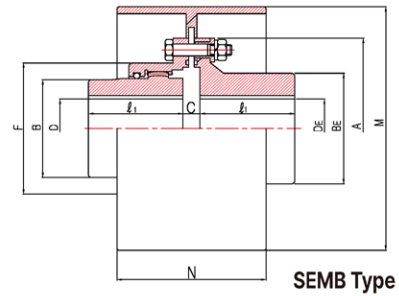
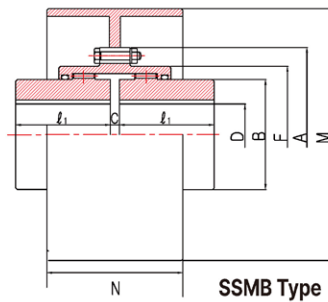
* Coupling Weight is without Bore Machining

* Spacer Weight is Extra Spaer Weight per Millimeters of Length

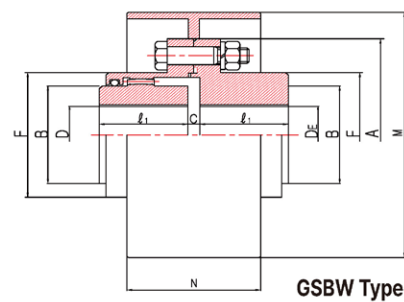
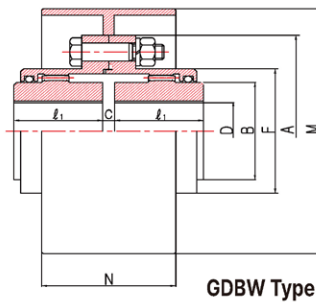
* Less Spacer Weight is Minimum Weight Less Spacer

4. 특수형 (SPECIAL TYPE)

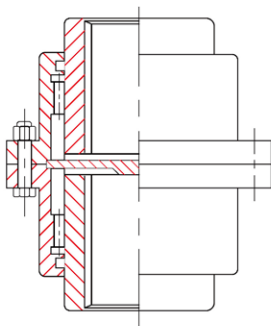
1) SSMB / SEMB - Brake Drum Type



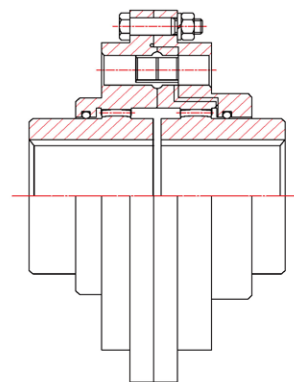
2) GDBW / GSBW - Brake Drum Type



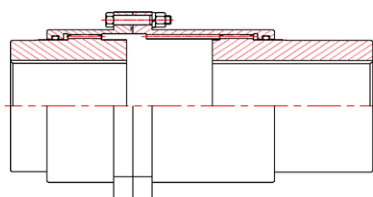
3) SV type - 수직설치형 (Vertical type)



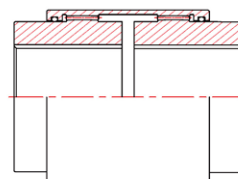
4) SHEAR PIN type - 과부하 방지형



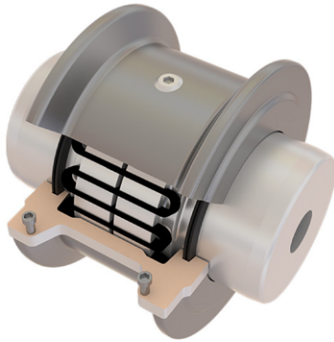
5) SLIDING type - 축 방향으로 슬라이딩형 (Axis in the direction of sliding-type)



6) SLEEVE type



TAPER GRID COUPLING



Type H (T10 type)
(Horizontal Split Aluminum Cover)



Type V (T20 type)
(Vertical Split Steel Cover)



Type SAS (T31 type)
(Full Spacer)

1. 특 징 (CHARACTERISTIC)

1) 평행오차

축이 편심 상태일 때 Grid가 Grease를 칠한 홈 안에서 작동 함으로써 진동이나 충격을 완화시켜 무리 없이 동력 전달을 한다. (허용치 2mm~3mm)

2) 각도오차

편각($2^{\circ} \sim 3^{\circ}$) 상태에서도 곡면으로 파여진 Hub의 홈 (Groove)안에서, Grid가 미끄러지는 윤활 작동과 탄력으로 동력이 손실 없이 전달, 작동 된다.

3) 축 유동오차

구동축과 종동축이 상하 진동과 좌우 유동 되더라도 Grease를 칠한 Hub의 홈 안에서 Grid가 구부러진 안쪽 까지 자유로이 작동함으로 진동의 전달을 방지하고 동력을 전달 한다.

4) 비틀림에 대한 유연성

기계가 시동시 발생하는 충격, 진동, 과부하 등이 Grid에 작용하게 되면 Grid의 유연성으로 인해 힘의 작용점이 Tooth의 곡면 안에서 진동되므로 진동과 충격부하를 감소 시켜 준다.

① 경하중 작용시 Grid 상태

Grid가 Hub Tooth 외각에서 힘을 받아 직선인 상태로 작동됨으로 부하(Load)가 발생하면 Tooth의 곡면과 Grid의 탄력작용으로 Vibration 과 Shocking을 없애준다.

1) Parallel

The movement of the grid in the lubricated grooves accommodates parallel misalignment and steel permits full functioning of the grid-groove action in damping out shock and vibration. (Allowed dimensions 2mm~3mm)

2) Angular

Under angular misalignment($2^{\circ} \sim 3^{\circ}$), the grid-groove design permits a rocking and sliding action of the lubricated grid and hubs without any loss of power through the resilient grid.

3) End float

Unrestrained end float for both driving and driven members is permitted to the grid slides freely in the lubricated grooves. It can also be limited to any required amount.

4) Torsional flexibility

Torsional flexibility is the ability of taper grid couplings to torsionally deflect when subjected to normal, shock or vibratory vibratory loads, providing flexible accommodation to changing load conditions.

① Light load

the grid bears near the outer edges of the hub teeth. Thelong span between the points of contact remains free to flex under load variations.

② 정상부하에서의 Grid 상태

부하가 발생하면 힘의 걸림점이 Hub의 Tooth중간으로 이동되어 Grid가 휘어지는(Bending) 탄력으로 충격하중을 완화시켜 전동한다.

② Normal load

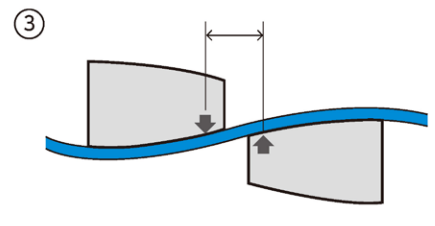
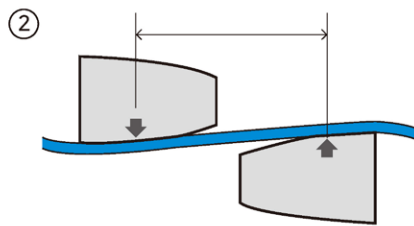
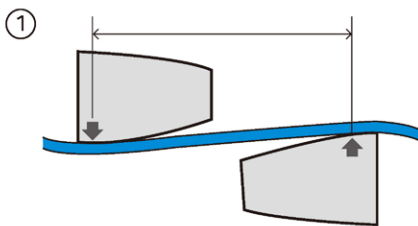
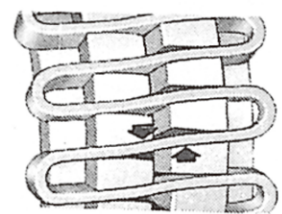
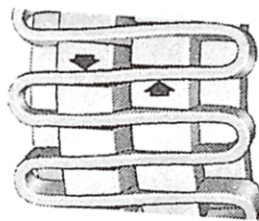
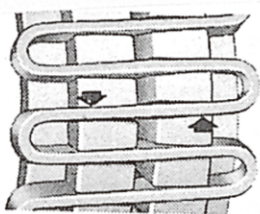
As the load increases, the distance between the supports on the hub teeth is shortened, but a free span still remains to cushion shock loads.

③ 시동 시 충격부하에서의 Grid 상태

순간적인 과부하로 힘의 걸림점이 Hub의 Tooth 제일 안쪽으로 이동되어 Grid가 비틀리는(Torsion) 탄력의 범위 내에서 극도의 충격을 유연하게 완화시켜 Starting된다.

③ Shock load

The coupling is flexible within its rated capacity. Under extreme overloads, the grid bears fully on the hub teeth transmits full load directly..



2. 장 점 (ADVANTAGE)

- 1) 사용 중 과부하가 발생하면 Grid가 Cutting됨으로 안전 핀 역할을 하여 Shaft나 기계의 파손을 방지한다.
 - 2) Center의 오차가 심할 때 Grid나 Cover 혹은 Tooth가 먼저 Shearing되어 연관기계를 보호한다.
 - 3) Mechanical Seal, Bearing등 모든 부품의 수명을 2배이상 연장한다.
 - 4) 수리점검이 거의 필요 없고 수리시간이 단축된다.
 - 5) Center Misalignment를 없애줌으로써 설치, 조립, 정비 작업 등이 손쉽고 빨라진다.
 - 6) 어떠한 경우에도 동력을 100% 전달하고 소음이 없다.
 - 7) 부분품만 교체하면 계속하여 사용할 수 있다.
- 1) When overload, grid is assigned a part of safety pin and prevents breaking of the shaft or machinery part by cutting of grid.
 - 2) When the centering misalignment excessive much, it can protect the relating machine by the virtue of shearing of grid or cover or tooth.
 - 3) The life of all parts (Mechanical seal and bearing, etc...) can extend as a double or more.
 - 4) Repair and check is needed scarcely, it costs short repairing time.
 - 5) Establishment, assembly and maintenance easy by getting rid of center misalignment.
 - 6) It always transmits the power fully(100%) and makesno noise.
 - 7) You can use it continually by changing accessories only.

TAPER GRID COUPLING

3. 용 도 (APPLICATION)

축 연결에 종전에는 Flange 또는 Chain Coupling을 사용하여 왔으나, 이제는 Taper Grid Coupling 을 사용함으로 많은 혜택을 얻을 수 있다.

- 1) 진동, 충격의 전달을 방지해야 하는 경우
- 2) 편심이 발생하는 상태에서 정상적으로 동력을 전달해야 하는 경우
- 3) 편각이 이루어진 상태에서 정상적으로 동력을 전달해야 하는 경우
- 4) 축 유동이 발생하는 연결부위에서 정상적으로 동력을 전달하고자 할 때
- 5) 주기적인 과부하가 발생하는 장소에서 연관 기계의 손상을 방지해야 하는 경우
- 6) 정, 역회전이 요구 되는 경우
- 7) 충격부하를 완화시켜 시동하고자 하는 경우

Connecting the line shaft, we have early used the flange or chain coupling but now using the taper grid coupling we will get many benefits.

- 1) When we need to prevent the transmission of vibration and shock, etc...
- 2) When we need adequate power transmission under line misalignment.
- 3) When we need adequate power transmission angular misalignment.
- 4) When we need adequate power transmission under end floating.
- 5) When we need to prevent breaking of the machinery parts under over load.
- 6) When reverse revolution is required.
- 7) When we need smooth starting

4. 윤활과 취급 (LUBRICATION AND HANDLING)

1) Grease 윤활

Grid를 Hub와 조립한 후 Grease를 발라주고 Cover를 조립한 후 Grease 주입구를 통해 Grease를 주입 한다.

2) 보충 및 교환

Grease 보충은 매3개월, 또는 240~250시간 가동 후 보충하고 매 3개월, 혹은 4,000시간 사용 후 Coupling을 완전 분해하여 변질된 것을 새 Grease로 완전 보충 한다.

3) Grease의 선택

Grease의 사용온도는 -17 ~ 70 ° C이고 사용 rpm과 주위 여건에 알맞게 선택해야 한다.

4) 추천 Grease

1) Grease lubrication

Pack the spaces between and around the grid. After assemble the covers, fill up grease through the lube plugs.

2) Supplement & replacement

Every three month or 240~250 hours later operating you should supply grease. Every 3 months or 4,000 hours later operating you should replace after get rid of deteriorated grease.

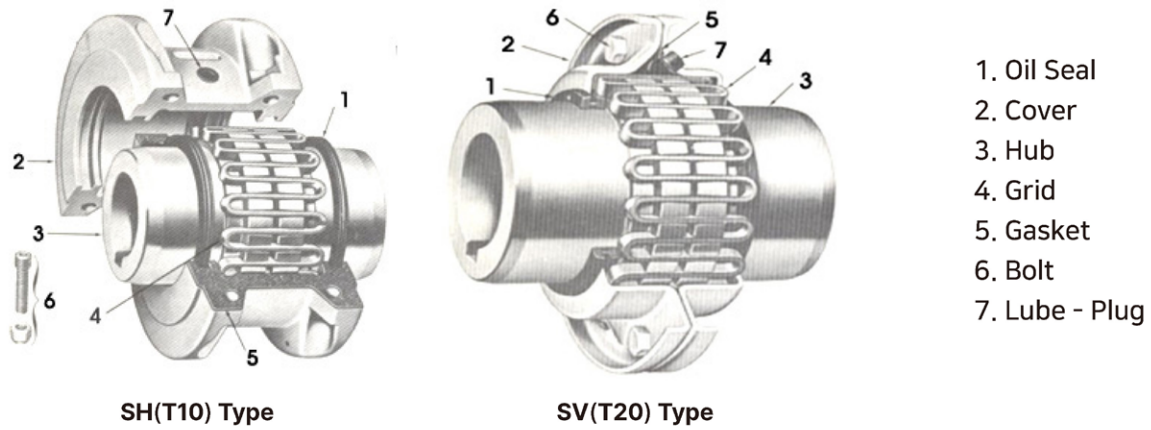
3) Selection of grease

The handling of temperature for grease is from -17~70 ° C. You choose grease according to the rpm and circumstance.

4) Recommendation grease

Maker	Grease	Maker	Grease
GULF	Gulf Crown Grease #2	TEXACO	Marfak Heavy Duty #2
SHELL	Alvania Grease #2	MOBIL	Mobilux #2

5. 구조 및 축 장착 허용오차(STRUCTURE AND MISALIGNMENT CAPACITY)

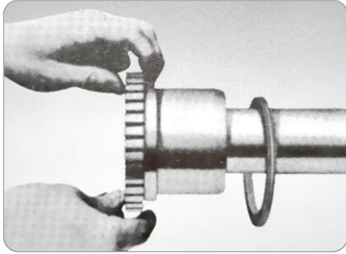


* 그리드 카플링의 축 장착 허용오차표(Misalignment capacity)

Size	설치시 권장 허용오차 (Recommended installation)		운전시 허용오차 (Operating)		Normal Gap (±10%)
	평행오차 (Parallel Offset) (unit: mm)	각도오차 (Angular) (unit: °)	평행오차 (Parallel Offset) (unit: mm)	각도오차 (Angular) (unit: °)	
1020	0.15	0.08	0.30	0.25	3
1030	0.15	0.08	0.30	0.30	3
1040	0.15	0.08	0.30	0.33	3
1050	0.20	0.10	0.40	0.41	3
1060	0.20	0.13	0.40	0.46	3
1070	0.20	0.13	0.40	0.51	3
1080	0.20	0.15	0.40	0.61	3
1090	0.20	0.18	0.40	0.71	3
1100	0.25	0.20	0.50	0.84	5
1110	0.25	0.23	0.50	0.91	5
1120	0.28	0.25	0.56	1.02	6
1130	0.28	0.30	0.56	1.19	6
1140	0.28	0.33	0.56	1.35	6
1150	0.30	0.41	0.60	1.57	6
1160	0.30	0.46	0.60	1.78	6
1170	0.30	0.51	0.60	2.01	6
1180	0.38	0.56	0.76	2.26	6
1190	0.38	0.61	0.76	2.46	6
1200	0.38	0.69	0.76	2.72	6

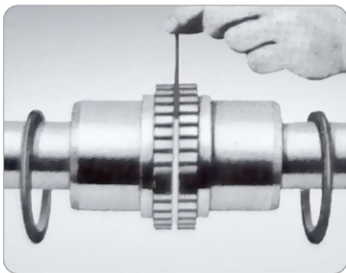
TAPER GRID COUPLING

6. 조립 및 장착(Instruction for installation)



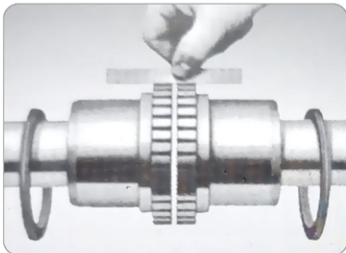
- 1) 모든 부품을 세척유로 닦은 후 Oil Seal에 Grease를 칠하여 끼운 후 Hub를 Shaft에 장착 한다.

Clean all metal parts using nonflammable solvent. Lightly coat oil seals with grease and place on shaft before mounting hub. Mount hubs on the shafts.



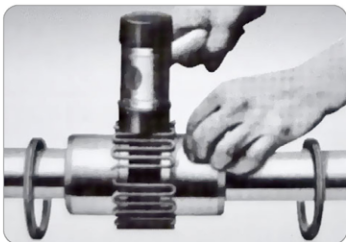
- 2) 간격 Gauge를 이용하여 원주 네곳의 Gap과 각도오차를 조정 한다.

Using a spacer bar, make the gap equal in thickness to the normal gap. The difference in maximum measurements must be not exceeded the angular limit.



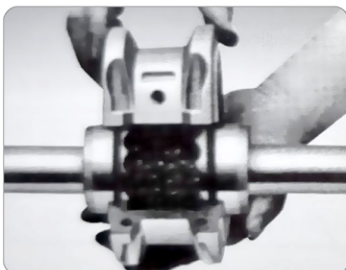
- 3) 곧은 자로 원주 90도마다 평행오차를 조정하고 Dial Gauge로 축심 오차를 더 정확히 조정하여 명시한계를 넘지 않도록 유의 한다.

Align so that a straight edge rests squarely on both hubs as shown fig. And also at 90 ° interval. The clearance must not exceed the limit specified.



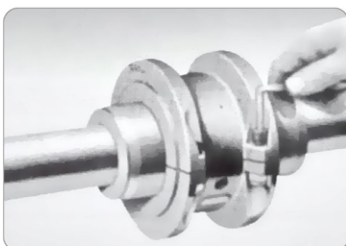
- 4) Hub의 Tooth홈에 Grease를 충전 후 Grid를 같은 방향이 되도록 끼워 넣는다.

After greasing the tooth groove hub, fix the grid in the same direction.



- 5) Grid 주위에 Grease를 충분히 칠하고 Oil Seal이 Cover의 홈에 잘 들어갈 수 있는 위치에 놓고 Gasket을 끼운 후 Cover 안쪽에 있는 Match Mark가 필히 같은 방향으로 오도록 하여 Cover를 조립.

Pack the spaces between and around the grid with as much lubricants as possible and position gaskets on half assembled lower cover so that the match marks are on the same side.



7. 규격 선정 방법 (SELECTION METHOD OF SIZE)

1) 사용 Torque를 구한다.

1) From the following formula, obtain torque is required for selection.

$$T \text{ (unit: kg} \cdot \text{m)} = 974 \times \frac{KW}{N} \times S \cdot F \quad \text{or} \quad T = 716 \times \frac{HP}{N} \times S \cdot F$$

T = 사용 Torque (kg·m)

KW = 전달부하

HP = 전달마력

N = 회전수 (r.p.m)

S·F = 안전계수 (Service Factor)

T = Selected torque (kg·m)

KW = Transmitted load

HP = Transmitted load

N = Working revolution (r.p.m)

S·F = Service Factor

2) 산출된 Torque를 각 Size의 Basic Torque와 비교하여 크거나 같은 수치를 찾아 1차 선정한 후 사용기계의 Shaft와 Coupling의 최대내경을 비교 검토한 다음 선정한다.

2) First select from comparing with basic torque and find to adopt the same or greater value. And then conclude it's suitability for application of boring driver.

3) 상용 rpm과 최저 rpm이 있을 때에는 최저 rpm으로 계산한다.

3) Adopt the minimum rpm when there are common transmitting rpm and also minimum rpm.

4) 상시 역회전이나 거듭되는 반복부하 또는 불연속적 작동을 하는 곳의 부하는 정상인 경우보다 2배가 되어야 한다.

4) The load where there are reverse revolution and repetition and irregular operation can double normal condition.

5) 한 System내 상용마력과 Peak HP이 존재하는 경우 Peak HP으로 계산한다.

5) Adopt the peak HP, when there are common transmitted power of peak HP in a system

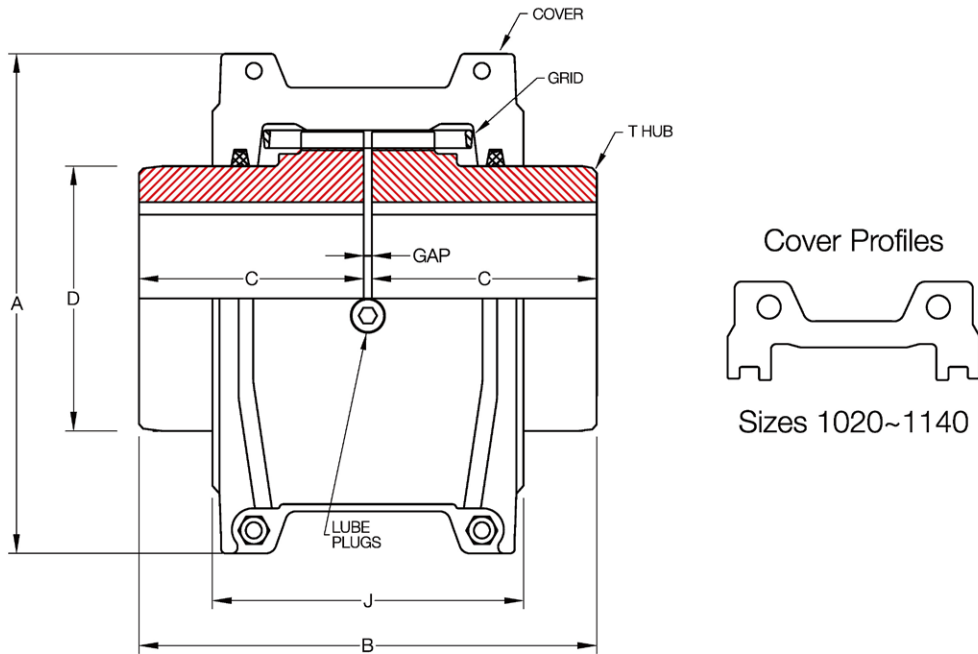
6) 인명과 관계되는 곳의 사용은 당사 직원과 협의 후 사용.

6) Refer to the factory all applications used to lift or transport people. Such as conveyors, cranes, elevators, hoists, lifts or escalators for application of dual load path type couplings and gear drive selections to meet existing safety codes.

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8. 치수표 (DIMENSIONS)

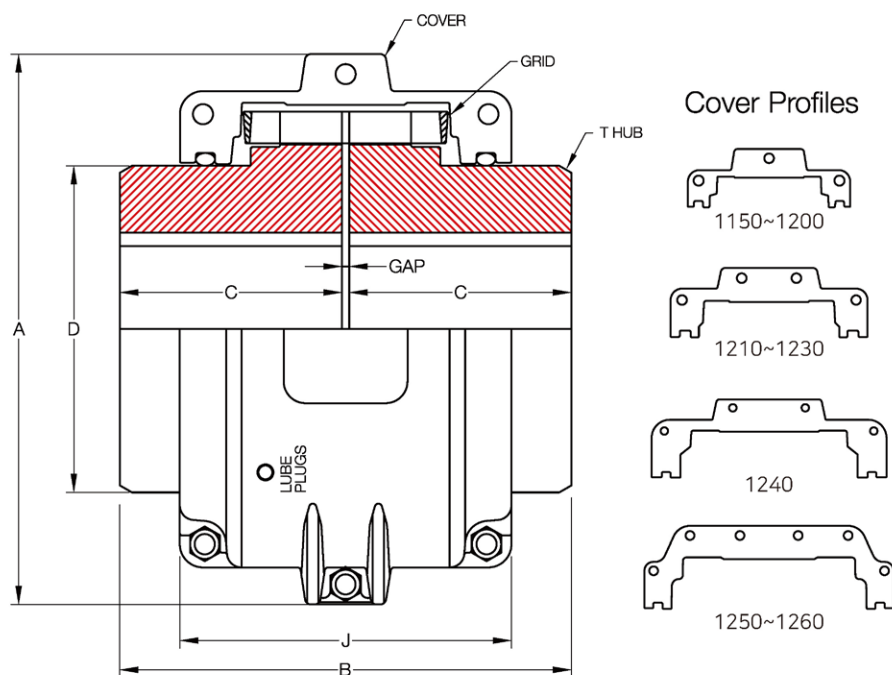
1) H(Horizontal Split Aluminum Cover / T10) Type



Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Min Bore (mm)	Cplg Weight (Kg)	Lube Weight (Kg)	Dimensions (Millimeters)					
							A	B	C	D	J	GAP
1020	5	4,500	30	13	1.92	0.0272	101.0	98.2	47.6	39.7	67.8	3
1030	15	4,500	35	13	2.58	0.0408	109.0	98.2	47.6	49.2	71.9	3
1040	25	4,500	43	13	3.34	0.0544	116.0	104.6	50.8	57.2	72.0	3
1050	44	4,500	50	13	5.44	0.0680	137.8	123.6	60.3	66.7	81.6	3
1060	70	4,350	57	20	7.44	0.0862	147.0	130.0	63.5	76.2	97.9	3
1070	100	4,125	68	20	10.40	0.113	162.2	155.4	76.2	87.3	99.2	3
1080	210	3,600	80	27	17.90	0.172	193.0	180.8	88.9	104.8	118.4	3
1090	380	3,600	95	27	25.60	0.254	212.0	199.8	98.4	123.8	127.4	3
1100	640	2,440	107	42	42.00	0.426	250.7	246.2	120.6	142.1	156.6	5
1110	950	2,250	117	42	54.30	0.508	270.0	259.0	127.0	160.3	162.6	5
1120	1,400	2,025	136	61	81.20	0.735	306.4	304.4	149.2	179.4	191.7	6
1130	2,000	1,800	165	67	121.00	0.907	343.8	329.8	161.9	217.5	195.5	6
1140	2,900	1,650	184	67	178.00	1.130	383.8	374.4	184.2	254.0	201.7	6

* Coupling Weight is without Bore Machining

2) H(Horizontal Split Aluminum Cover / T10) Large Type



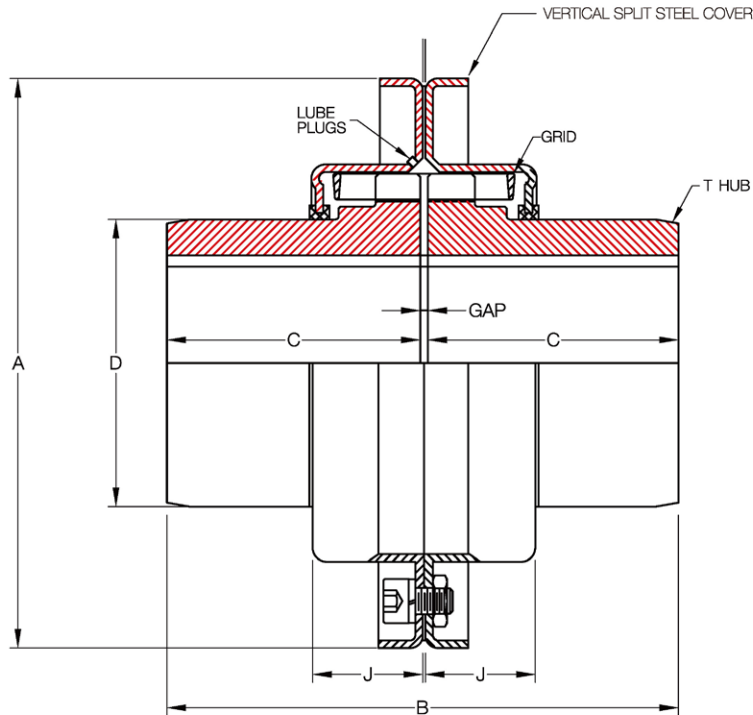
Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Min Bore (mm)	Cplg Weight (Kg)	Lube Weight (Kg)	Dimensions (Millimeters)					
							A	B	C	D	J	GAP
1150	4,000	1,500	203	108	234	1.95	453.1	371.8	182.9	269.2	271.5	6
1160	5,700	1,350	228	121	317	2.81	501.9	402.2	198.1	304.8	278.4	6
1170	7,600	1,225	280	134	448	3.49	566.9	437.8	215.9	355.6	307.3	6
1180	10,500	1,100	311	153	619	3.76	629.9	483.6	238.8	393.7	321.1	6
1190	14,000	1,050	339	153	776	4.40	675.6	524.2	259.1	436.9	325.1	6
1200	19,000	900	361	178	1058	5.62	756.9	564.8	279.4	497.8	355.6	6
1210	25,000	820	390	178	1424	10.50	844.6	622.6	304.8	533.4	431.8	13
1220	34,000	730	420	203	1785	16.10	920.8	663.2	325.1	571.5	490.2	13
1230	44,000	680	450	203	2267	24.00	1,003.3	703.8	345.4	609.6	546.1	13
1240	57,000	630	480	254	2950	33.80	1,087.1	749.6	368.3	647.7	647.7	13
1250	76,000	580	510	254	3833	50.10	1,181.1	815.6	401.3	711.2	698.5	13
1260	95,000	540	540	254	4682	67.20	1,260.9	876.6	431.8	762.0	762.0	13

* Coupling Weight is without Bore Machining

TAPER GRID COUPLING

8. 치수표 (DIMENSIONS)

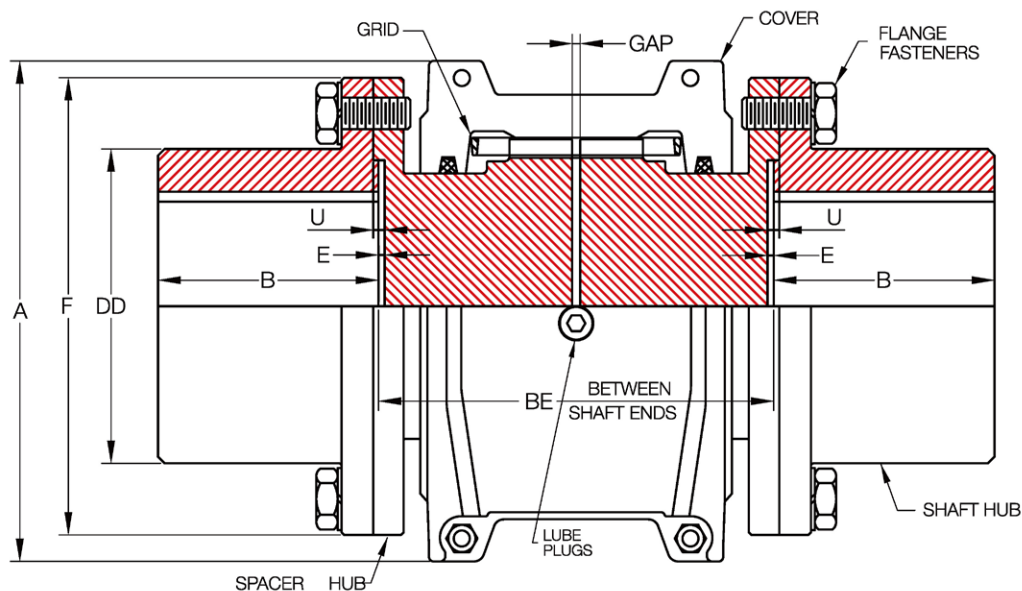
3) V(Vertical Split Steel Cover / T20) Type



Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Min Bore (mm)	Cplg Weight (Kg)	Lube Weight (Kg)	Dimensions (Millimeters)					
							A	B	C	D	J	GAP
1020	5	6,000	30	13	1.94	0.0272	112.3	98.2	47.6	39.7	23.9	3
1030	15	6,000	35	13	2.58	0.0408	121.8	98.2	47.6	49.2	24.9	3
1040	25	6,000	43	13	3.35	0.0544	129.8	104.6	50.8	57.2	25.9	3
1050	44	6,000	50	13	5.32	0.0680	148.8	123.6	60.3	66.7	30.5	3
1060	70	6,000	57	20	7.01	0.0862	163.1	130.0	63.5	76.2	31.8	3
1070	100	5,500	68	20	10.20	0.1130	174.2	155.4	76.2	87.3	33.5	3
1080	210	4,750	80	27	17.60	0.1720	201.2	180.8	88.9	104.8	43.7	3
1090	380	4,000	95	27	25.40	0.2540	232.9	199.8	98.4	123.8	47.0	3
1100	640	3,600	107	42	42.00	0.4260	267.9	246.2	120.6	142.1	59.7	5
1110	950	3,000	117	42	54.40	0.5080	286.9	259.0	127.0	160.3	62.7	5
1120	1,400	2,700	136	61	81.80	0.7350	320.2	304.4	149.2	179.4	73.7	6
1130	2,000	2,400	165	67	122.00	0.9070	379.0	329.8	161.9	217.5	74.9	6
1140	2,900	2,200	184	67	180.00	1.1300	417.1	374.4	184.2	254.0	78.2	6
1150	4,000	2,000	203	108	230.00	1.9500	476.2	371.8	182.9	269.2	107.3	6
1160	5,700	1,750	228	121	321.00	2.8100	533.4	402.2	198.1	304.8	115.3	6
1170	7,600	1,600	280	134	448.00	3.4900	584.2	437.8	215.9	355.6	120.1	6
1180	10,500	1,400	311	153	591.00	3.7600	630.0	483.6	238.8	393.7	130.0	6
1190	14,000	1,300	339	153	761.00	4.4000	685.0	524.2	259.1	436.9	135.0	6
1200	19,000	1,100	361	178	1021.00	5.6200	737.0	564.8	279.4	497.8	145.0	6

* Coupling Weight is without Bore Machining

4) SAS Type (Full Spacer)



Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Min Bore (mm)	Cplg Weight (Kg)	Lube Weight (Kg)	Dimensi ons (Millimeters)										Flange Fasteners	
							A	B	BE		DD	E	F	U	GAP	No. per Flange	Dia (mm)	
									Min	Max								
1020	5	4,500	36	13	3.85	0.0272	101.0	34.9	88.9	203	52.4	0.8	85.7	1.8	5	4	6.3	
1030	15	4,500	44	13	5.21	0.0408	109.0	41.3	88.9	216	59.5	0.8	93.7	1.8	5	8	6.3	
1040	25	4,500	57	13	8.43	0.0544	116.0	54.0	88.9	216	78.6	0.8	112.7	1.8	5	8	6.3	
1050	44	4,500	64	13	12.80	0.0680	137.8	60.3	111.1	216	87.3	0.8	125.4	1.8	5	8	7.9	
1060	70	4,350	79	20	20.50	0.0862	147.0	73.0	122.2	330	103.2	1.8	144.5	2.8	5	8	9.5	
1070	100	4,125	83	20	24.80	0.1130	162.2	79.4	127.0	330	109.5	1.8	152.4	2.8	5	12	9.5	
1080	210	3,600	95	27	40.00	0.1720	193.0	88.9	155.5	406	122.2	1.8	177.8	2.8	5	12	12.7	
1090	380	3,600	108	27	60.10	0.2540	212.0	101.6	163.5	406	142.9	1.8	209.6	2.8	5	12	15.8	
1100	640	2,440	127	39	90.20	0.4260	250.7	90.4	203.2	406	171.4	1.6	250.8	3.2	6	12	19.0	
1110	950	2,250	149	51	119.00	0.5080	270.0	104.1	209.6	406	196.8	1.6	276.2	3.2	6	12	19.0	
1120	1,400	2,025	165	64	178.00	0.7350	306.4	119.4	246.1	406	225.4	1.6	319.1	4.0	10	12	22.2	
1130	2,000	1,800	178	77	237.00	0.9070	343.8	134.6	257.1	406	238.1	1.6	346.1	4.0	10	12	25.4	
1140	2,900	1,650	203	89	327.00	1.1300	383.8	152.4	266.7	406	266.7	1.6	385.8	4.0	10	12	28.5	
1150	4,000	1,500	254	102	462.00	1.9500	453.1	172.7	344.5	371.3	334.3	5.1	425.4	-	10	14	22.2	
1160	5,700	1,350	279	115	566.00	2.8100	501.4	186.4	355.6	406.4	366.0	6.6	457.2	-	10	14	22.2	
1170	7,600	1,225	310	127	856.00	3.4900	566.4	220.2	384.2	444.5	424.9	8.4	527.0	-	10	16	25.4	
1180	10,500	1,100	330	102	1,135.00	3.7600	629.9	248.9	400.1	490.5	450.8	5.1	590.6	8.1	10	16	28.5	
1190	14,000	1,050	362	115	1,525.00	4.4000	675.6	275.8	411.2	530.4	508.0	5.1	660.4	8.1	10	18	31.7	
1200	19,000	900	381	127	1,910.00	5.6200	756.9	305.3	444.5	574.5	530.4	6.1	711.2	9.1	10	18	31.7	

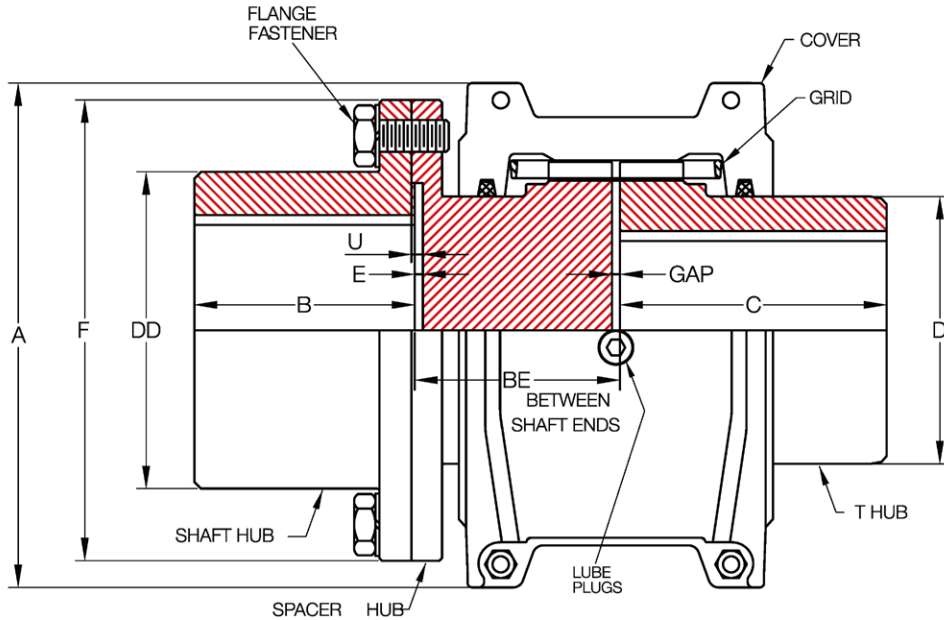
* Min BE Weight is Added Weight per Millimeters of BE over Minimum

* Coupling Weight is with no Bore and Minimum BE

TAPER GRID COUPLING

8. 치수표 (DIMENSIONS)

5) SFS Type (Half Spacer)

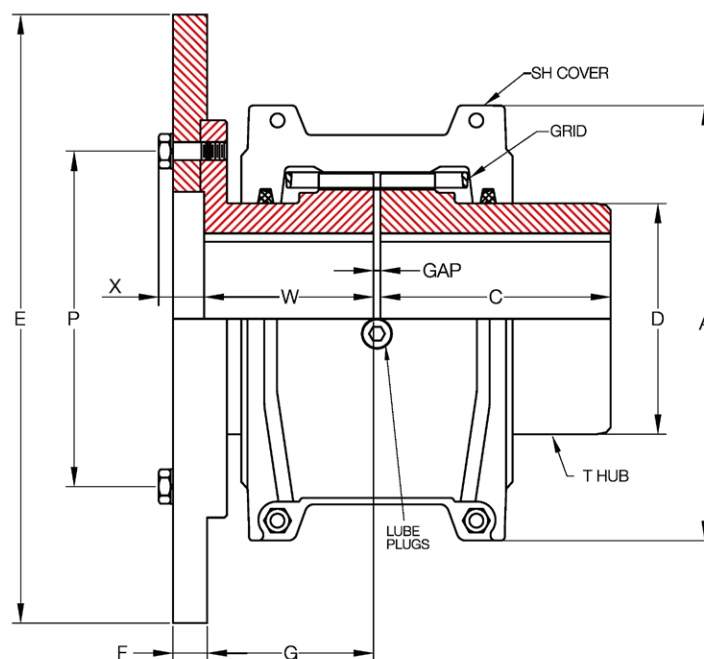


Size	Torque Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)				Cplg Weight (Kg)	Lube Weight (Kg)	Dimensi ons (Millimeters)												Flange Fasteners	
			Shaft Hub		T Hub				A	B	BE		A	B	DD	E	F	U	GAP	No.per Flange	Dia (mm)	
			Max	Min	Max	Min					Min	Max										
1020	5	4,500	36	13	30	13	2.89	0.0272	97.0	34.9	45.2	102	47.6	39.7	52.4	0.8	85.7	1.8	3	4	6.3	
1030	15	4,500	44	13	35	13	3.89	0.0408	105.7	41.3	45.2	109	47.6	49.2	59.5	0.8	93.7	1.8	3	8	6.3	
1040	25	4,500	57	13	43	13	5.88	0.0544	114.3	54.0	45.2	109	50.8	57.2	78.6	0.8	112.7	1.8	3	8	6.3	
1050	44	4,500	64	13	50	13	9.12	0.0680	135.1	60.3	56.3	109	60.3	66.7	87.3	0.8	125.4	1.8	3	8	7.9	
1060	70	4,350	79	20	57	20	13.90	0.0862	147.8	73.0	61.9	166	63.5	76.2	103.2	1.8	144.5	2.8	3	8	9.5	
1070	100	4,125	83	20	68	20	17.60	0.1130	158.8	79.4	64.3	166	76.2	87.3	109.5	1.8	152.4	2.8	3	12	9.5	
1080	210	3,600	95	27	80	27	28.90	0.1720	190.5	88.9	78.6	204	88.9	104.8	122.2	1.8	177.8	2.8	3	12	12.7	
1090	380	3,600	108	27	95	27	42.80	0.2540	211.1	101.6	82.6	204	98.4	123.8	142.9	1.8	209.6	2.8	3	12	15.8	
1100	640	2,440	127	42	107	42	66.10	0.4260	251.0	90.4	103.2	205	120.6	142.1	171.4	1.6	250.8	3.2	5	12	19.0	
1110	950	2,250	149	42	117	42	84.60	0.5080	269.7	104.1	106.4	205	127.0	160.3	196.8	1.6	276.2	3.2	5	12	19.0	
1120	1,400	2,025	165	61	136	61	129.00	0.7350	307.8	119.4	124.6	205	149.2	179.4	225.4	1.6	319.1	4.0	6	12	22.2	
1130	2,000	1,800	178	67	165	67	179.00	0.9070	345.9	134.6	130.1	205	161.9	217.5	238.1	1.6	346.1	4.0	6	12	25.4	
1140	2,900	1,650	203	67	184	67	252.00	1.1300	384.0	152.4	134.9	205	184.2	254.0	266.7	1.6	385.8	4.0	6	12	28.5	
1150	4,000	1,500	254	102	203	108	348.00	1.9500	453.1	172.7	174.5	187.5	182.9	269.2	334.3	5.1	425.4	-	6	14	22.2	
1160	5,700	1,350	279	115	228	121	441.00	2.8100	501.4	186.4	179.6	204.7	198.1	304.8	366.0	6.6	457.2	-	6	14	22.2	
1170	7,600	1,225	310	127	280	134	652.00	3.4900	566.4	220.2	194.1	223.8	215.9	355.6	424.9	8.4	527.0	-	6	16	25.4	
1180	10,500	1,100	330	102	311	153	877.00	3.7600	629.9	248.9	201.7	246.9	238.8	393.7	450.8	5.1	590.6	8.1	6	16	28.5	
1190	14,000	1,050	362	115	339	153	1,150.00	4.4000	675.6	275.8	207.3	266.7	259.1	436.9	508.0	5.1	660.4	8.1	6	18	31.7	
1200	19,000	900	381	127	361	178	1,484.00	5.6200	756.9	305.3	223.8	289.1	279.4	497.8	530.4	6.1	711.2	9.1	6	18	31.7	

* Min BE Weight is Added Weight per Millimeters of BE over Minimum

* Coupling Weight is with no Bore and Minimum BE

6) SDB Type (Disk Brake)



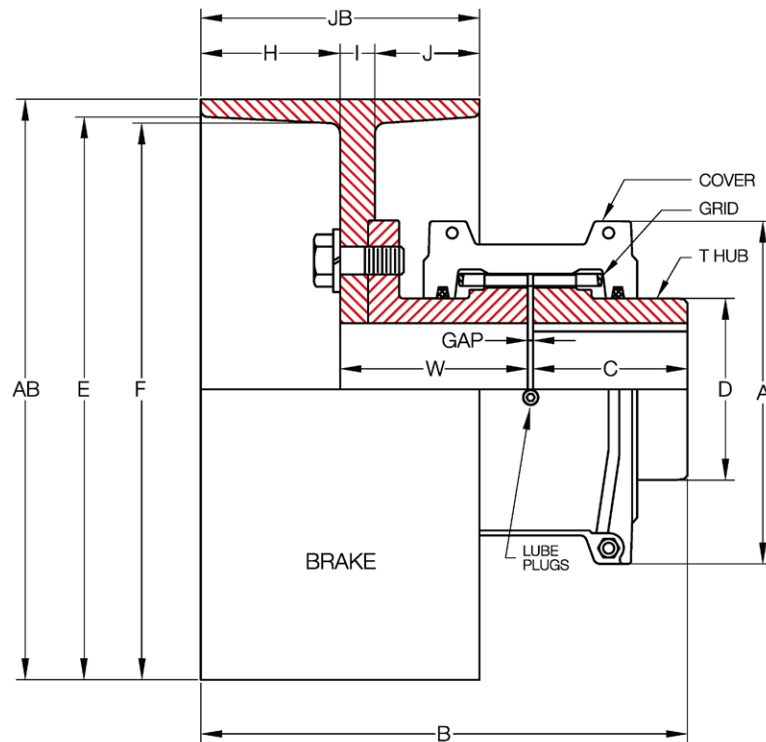
Size	Brake Rating (kgf.m)	Allow Speed RPM	Max Bore (mm)	Min Bore (mm)	Cplg Weight (Kg)	Lube Weight (Kg)	Dimensions (Millimeters)								Disc Brake Dia x Thickness (E x F)
							A	C	D	G	P	W	X	GAP	
1020	1.1	4,500	30	13	2.55	0.0272	97.0	47.6	39.7	59.9	71.4	60.5	11.7	3	203 x 6.4
1030	3.5	4,500	35	13	3.31	0.0408	105.7	47.6	49.2	59.9	79.4	60.5	11.7	3	254 x 6.4
1040	6.5	4,500	43	13	4.26	0.0544	114.3	50.8	57.2	59.9	98.4	60.5	11.7	3	254 x 6.4
1050	18	4,150	50	13	6.35	0.0680	135.1	60.3	66.7	59.9	108.0	60.5	13.2	3	254 x 6.4
1060	21	3,800	57	20	9.57	0.0862	147.8	63.5	76.2	88.6	125.4	88.1	15.2	3	305 x 6.4
1070	33	3,250	68	20	12.30	0.1130	158.8	76.2	87.3	88.6	133.4	88.1	15.2	3	305 x 6.4
1080	64	2,850	80	27	19.80	0.1720	190.5	88.9	104.8	88.6	152.4	88.1	18.0	3	305 x 6.4
1090	109	2,700	95	27	28.40	0.2540	211.1	98.4	123.8	87.9	179.4	88.1	26.9	3	407 x 12.7
1100	190	2,400	107	42	47.70	0.4260	251.0	120.6	142.1	119.1	215.9	119.1	29.5	5	407 x 12.7
1110	285	2,250	117	42	64.90	0.5080	269.7	127.0	160.3	146.0	241.3	146.0	29.5	5	458 x 12.7
1120	434	2,025	136	61	92.10	0.7350	307.8	149.2	179.4	150.1	276.2	149.4	33.0	6	509 x 12.7
1130	601	1,800	165	67	132.0	0.9070	345.9	161.9	217.5	153.4	295.3	152.4	35.6	6	509 x 12.7
1140	881	1,650	184	67	185.0	1.1300	384.0	184.2	254.0	159.8	330.2	158.8	38.1	6	610 x 12.7
1150	1,220	1,500	203	108	253.0	1.9500	453.1	182.9	269.2	179.8	368.3	182.9	31.5	6	763 x 12.7
1160T	1,694	1,350	228	121	336.0	2.8100	501.9	198.1	304.8	195.1	400.0	198.1	31.5	6	915 x 12.7

* Coupling Weight is without Disc and Bore Machining

TAPER GRID COUPLING

8. 치수표 (DIMENSIONS)

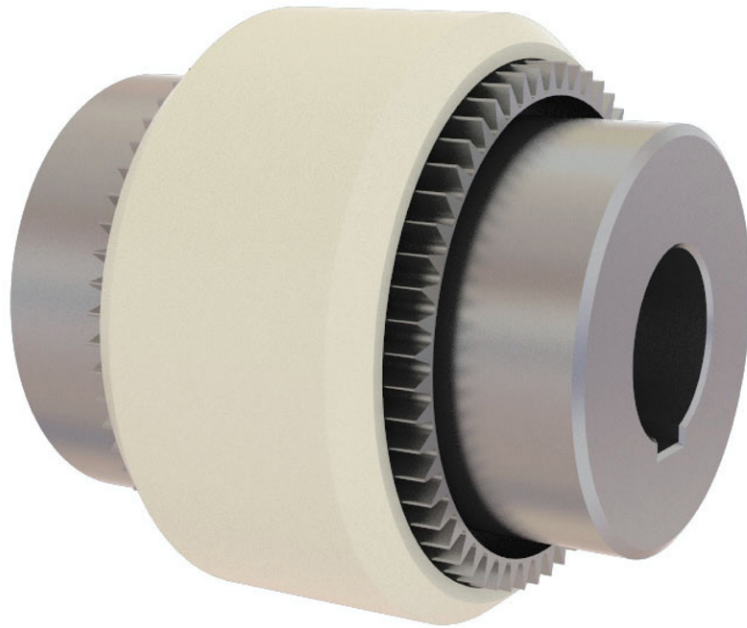
7) SBW Type (Break Wheel)



Size	Brake Rating (kgf.m)	Max Bore (mm)	Min Bore (mm)	Lube Weight (Kg)	Dimensions (Millimeters)									Brake Wheel Size	
					A	C	D	E	F	H	I	J	GAP	AB (mm)	JB (mm)
1020	1.1	30	12.7	0.03	101.0	47.6	39.7	-	-	-	-	-	3	-	-
1030	3.5	35	12.7	0.03	109.0	47.6	49.2	-	-	-	-	-	3	-	-
1040	6.5	43	12.7	0.05	116.0	50.8	57.2	145.0	140.0	40.0	12.0	28.0	3	160	80
1050	18	50	12.7	0.05	137.8	60.3	66.7	184.0	178.0	50.0	17.0	33.0	3	200	100
1060	21	57	19.1	0.09	147.0	63.5	76.2	184.0	178.0	50.0	17.0	33.0	3	200	100
1070	33	68	19.1	0.11	162.2	76.2	87.3	230.0	224.0	62.5	22.0	40.5	3	250	125
1080	64	80	27.0	0.17	193.0	88.9	104.8	292.0	285.0	80.0	23.0	57.0	3	315	160
1090	109	95	27.0	0.25	212.0	98.4	123.8	330.0	320.0	90.0	26.0	64.0	3	355	180
1100	190	107	41.3	0.43	250.7	120.6	142.1	374.0	362.0	100.0	28.0	72.0	5	400	200
1110	285	117	41.3	0.51	270.0	127.0	160.3	422.0	410.0	112.0	32.0	80.0	5	450	224
1120	434	136	60.3	0.73	306.4	149.2	179.4	462.0	445.0	125.0	35.0	90.0	6	500	250
1130	649	165	66.7	0.91	343.8	161.9	217.5	516.0	495.0	140.0	45.0	95.0	6	560	280
1140T	881	184	66.7	1.13	383.8	184.2	254.0	516.0	495.0	140.0	45.0	95.0	6	560	280

* Coupling Weight is without Bore Machining

NYLON COUPLING



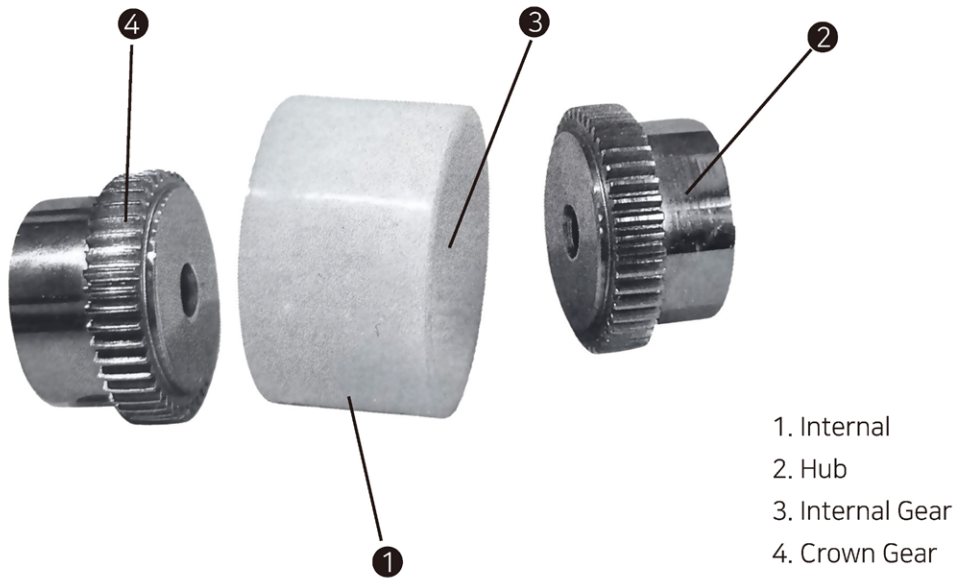
1. 특징 및 장점 (CHARACTERISTIC AND MERIT)

- 1) 평행오차, 각도오차, 복합오차에 대해 원활하게 대응하여 작동되며 어떠한 경우에도 동력을 100% 전달할 수 있다.
- 2) 양 Cardanic 형식이기 때문에 각속도에 주기적인 파동이 없고 일정하여 작동효율이 높다.
- 3) Internal이 특수재질로 되어 있기 때문에 수명이 길다.
- 4) 장착시간이 절약되고 보수 및 부품 교환이 간단하다.
- 5) 주유가 필요없다.
- 6) 소음이 적다.
- 7) 내유성, 내열성이 좋다.

- 1) It always transmits the power fully (100%) under parallel, angular, complex misalignment with flexibility.
- 2) With angular and parallel displacements the reactive forces may be neglected, thanks to the twin cardanic method of operation, and there, are no periodic fluctuations in angular velocity.
- 3) Internals have longer life by using special materials.
- 4) Assembly is extremely simple and time saving. it is simple to mend and exchange parts.
- 5) Not Require lubrication.
- 6) Low noise.
- 7) Oil and heat resistance.

NYLON COUPLING

2. 구조 (Structure)



3. 규격 선정방법 (Selection Method of Size)

1) 사용 Torque를 아래의 식으로 구한다.

1) From the following formula, obtain torque required for selection

$$T = 97,400 \frac{KW}{N} \times S \cdot F \quad \text{또는} \quad T = 71,620 \times \frac{HP}{N} \times S \cdot F$$

N=회전수(Working revolution) rpm

S·F=안전계수(Service Factor)

52페이지 참조(Refer to page 52)

① 구동 기계의 최대 Torque 가 Coupling 의 최대 Torque를 초과하지 않도록 안전하게 Coupling 을 선택한다.

② Shaft의 조정이 잘되고 작용부하가 일정하게되면 Coupling은 Torque의 최대치까지도 수용 할 수가 있다.

③ 만약 Torque의 특성이 불규칙하면, H.S.T.Coupling 은 규정 Torque의 3배에 달하는 일시 적인 과부하를 받게 될지도 모른다.

2) 산출된 Torque를 각 규격의 Basic Torque 와 비 교하 여 크거나 같은 수치를 찾아 1차 규격을 선 정한 후, 내 경 가공의 적합 유무를 확인한다.

① The coupling should be selected in such a way as to ensure that the maximum starting torque of the driving or driven machine will not exceed the maximum torque for the coupling.

② With uniform loading and well aligned shafts the coupling can be employed at all torque values up to maximum.

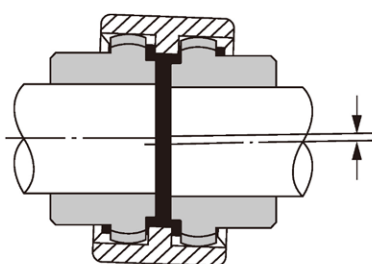
③ If the torque characteristic is irregular the H.S.T Nylon Coupling may be subjected to transient peak loads corresponding to 3 times the listed rated torque.

2) First select same or greater size from comparing with basic torque of each size and calculated torque, and then suitability of boring driver.

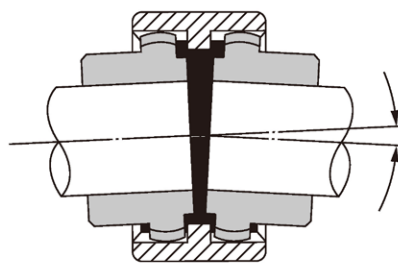
4. 조립시 참조사항 (Reference in Assembling)

Size	*** overall Length of assembled oupling (mm)	Distance between shaft 'E' (mm)	Max. axial displacement (mm)	* *Max. permissible displacements		Size
				radial (mm)	angular (a °)	
14NS	50	4	±1	±0.3	±1 per hub	14NS
19NS	54					19NS
24NS	56			±0.4		24NS
28NS	84					28NS
32NS						32NS
38NS						38NS
42NS	88					42NS
48NS	104					48NS
65NSL	144	±0.6		65NSL		
80NSL	186	±0.7		80NSL		
100NSL	228	±0.8		100NSL		
125NSL	290	±1.1		125NSL		

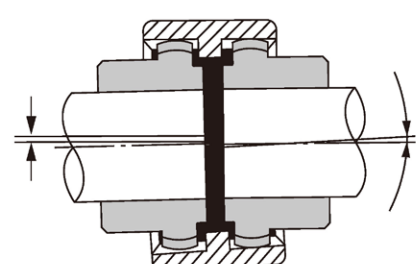
- 1) Hub를 조립할 때는 반드시 Shaft끝을 청결히 해야 한다.
 - 2) 'E'값을 결정하기 어려우면 Shaft 끝이 Hub의 안쪽 목 부분까지 닿을때의 전체길이를 이용한다.
 - 3) * Coupling 마다 정해진 'E'값은 지켜져야 하며, 특히 평행변위 또는 각도 변위가 존재할 때는 반드시 지켜야 한다.
 - 4) ** 허용변위치는 속도, 출력 그리고 용량에 따라 다르다.
 - 5) *** Coupling Sleeve는 실제 축 방향으로 움직인다.
 - 6) Shaft Alignment의 정확도는 Coupling의 수명을 연장시킨다.
- 1) The assembled hubs must in all cases be flush with the shaft ends.
 - 2) If the dimension 'E' is difficult to determine, the overall length can be used if the shaft ends finish at the inner collar of the hub.
 - 3) * The stated dimension 'E' for the individual couplings must be maintained, especially in the presence of parallel or angular misalignment.
 - 4) ** The permissible misalignment values are dependent on speed and power outputs and capacity.
 - 5) *** It is essential that the coupling sleeves slide easily in the axial direction
 - 6) Accurate alignment of shaft lengthens the life of the coupling.



평행오차
(Parallel displaced shafts)



각도오차
(Shafts subject to angular displacement)



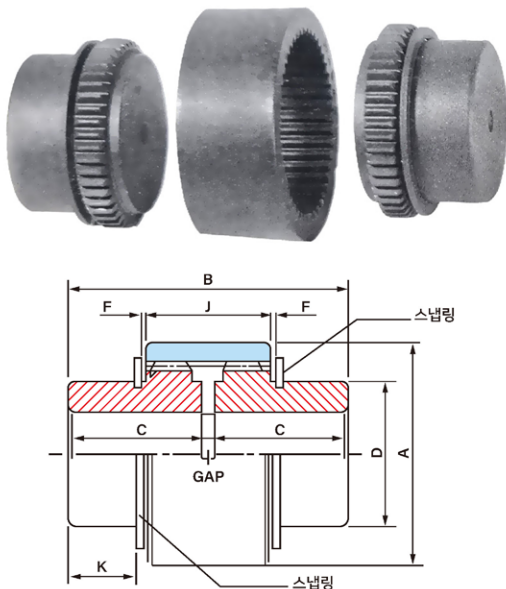
복합오차
(Shafts subject to both Parallel and angular displacement)

NYLON COUPLING

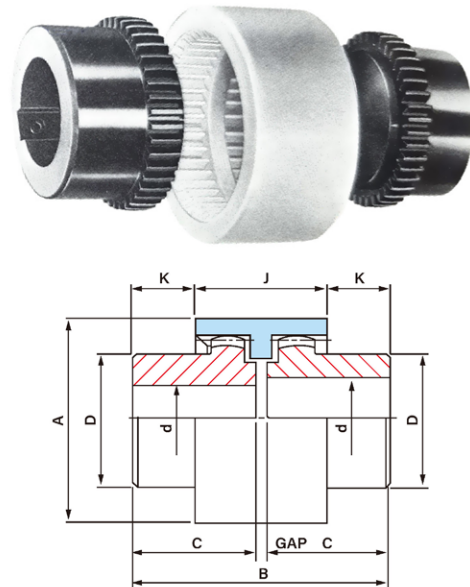
Type HY (Standard HYPER-FLEX Coupling)

Size	HP per 100 rpm	Max. Speed (rpm)	Basic Torque (kg·cm)	Bore Dia (mm)		Dimensions(mm)							
				Max.	Min	A	B	C	D	J	F	K	Gap
14HY	0.24	14,000	175	14	6	40	50	23	25	26	1	9.65	4
19HY	0.43	11,800	306	19	8	48	54	25	32	26	1	11.35	4
24HY	0.52	10,600	374	24	10	52	56	26	36	26	1	12.1	4
28HY	0.98	8,500	701	28	10	66	84	40	45	36	1	21.1	4
32HY	1.28	7,500	916	32	12	76	84	40	50	36	1	20.8	4
38HY	1.81	6,700	1,293	38	14	83	84	40	58	40	1	18.8	4
42HY	2.33	6,000	1,670	42	20	92	88	42	65	40	1	20.3	4
48HY	2.88	5,600	2,064	48	20	100	104	50	68	44	1	26.3	4

Type HY



Type NS

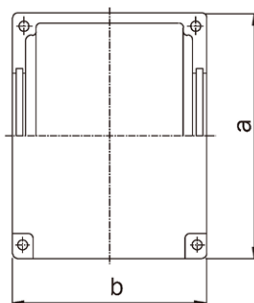
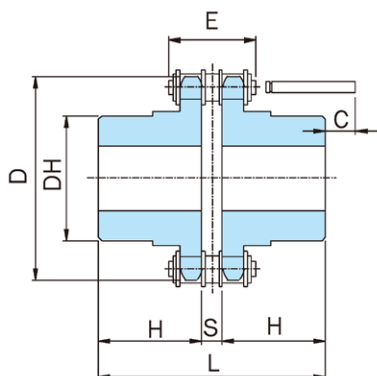


Type NS (Standard HYPER-FLEX coupling)

Size	HP per 100 rpm	Max speed rpm	Basic Torque (kg·cm)	Bore Dia. (mm)		Dimension (mm)							
				Max	Min	A	B	C	D	J	K	Gap	
14NS	0.24	14,000	175	14	6	40	50	23	25	37	6.5	4	
19NS	0.43	11,800	306	19	8	48	54	25	32	37	8.5	4	
24NS	0.52	10,600	374	24	10	52	56	26	36	41	7.5	4	
28NS	0.98	8,500	701	28	10	66	84	40	44	46	19	4	
32NS	1.28	7,500	916	32	12	76	84	40	50	48	18	4	
38NS	1.81	6,700	1,293	38	14	83	84	40	58	48	18	4	
42NS	2.33	6,000	1,670	42	20	92	88	42	65	50	19	4	
48NS	2.88	5,600	2,064	48	20	100	104	50	68	50	27	4	
65NSL	6.22	4,000	4,452	65	25	140	144	70	96	72	36	4	
80NSL	9.86	3,150	7,060	80	30	175	186	90	124	93	46.5	6	
100NSL	18	3,000	12,701	100	40	210	228	110	152	102	63	8	
125NSL	39	2,120	28,055	125	50	270	290	140	192	134	78	10	

CHAIN COUPLING

Type CR



SIZE	HP per 100 rpm	Rated torque (kg·m)	Max speed (rpm)	"Bore Dia (mm)"		Chain		D	DH	L	H	S	C	Cplg Wt (kg)	GD ² (kg·m ²)	Cover		
				Max.	Min.	Pitch	Width (Max.)E									a	b	Wt (kg)
4012	2.37	17	4,800	22	12	12.70	33.1	61	35	79.4	36	7.4	10	0.8	0.0010	75	75	0.38
4014	3.35	24	4,800	28	12	12.70	33.1	69	43	79.4	36	7.4	10	1.1	0.0018	84	75	0.47
4016	4.19	30	4,800	32	16	12.70	33.1	77	50	87.4	40	7.4	6	1.6	0.0032	92	75	0.56
5014	6.28	45	3,600	35	16	15.875	41.0	86	53	99.7	45	9.7	12	2.2	0.0055	101	85	0.64
5016	7.96	57	3,600	40	18	15.875	41.0	96	60	99.7	45	9.7	12	2.8	0.0087	111	85	0.76
5018	10	72	3,000	45	18	15.875	41.0	106	70	99.7	45	9.7	12	3.6	0.0141	122	85	0.92
6018	19	136	2,500	56	22	19.05	51.1	128	85	123.5	56	11.5	15	6.5	0.0373	142	106	1.4
6022	26	183	2,500	71	28	19.05	51.1	152	110	123.5	56	11.5	15	10.3	0.0863	167	106	1.7
8018	42	302	2,000	80	32	25.40	65.3	170	115	141.2	63	15.2	30	13.8	0.145	186	130	2.3
8022	60	433	2,000	100	40	25.40	65.3	203	140	157.2	71	15.2	22	21.7	0.320	220	130	2.7
10020	95	682	1,800	110	45	31.75	80.3	233	160	178.8	80	18.8	30	32.6	0.642	250	148	3.0
12018	143	1,023	1,500	125	50	38.10	101.1	256	170	202.7	90	22.7	50	43.9	1.07	307	181	4.8
12022	185	1,325	1,200	140	56	38.10	101.1	304	210	222.7	100	22.7	40	69.0	2.37	357	181	5.9
16018	309	2,211	1,000	160	63	50.80	129.7	341	224	254.1	112	30.1	68	96.3	4.19	406	250	11
16022	453	3,243	1,000	200	80	50.80	129.7	405	280	310.1	140	30.1	40	166.8	9.99	472	250	12
20018	617	4,422	800	205	88	63.50	159.0	426	294	519.5	241	37.5	0	294.4	18.4	496	280	16
20022	778	5,571	600	260	98	63.50	159.0	507	374	519.5	241	37.5	0	461.6	42.6	578	280	18
24022	1,401	10,032	600	310	120	76.20	194.9	608	420	751.1	353	45.1	0	871.4	108	725	355	45
24026	1,700	12,175	500	380	150	76.20	194.9	705	520	751.1	353	45.1	0	1,276	228	780	355	99
32022	2,774	19,870	400	430	200	101.6	263	806	570	860.1	400	60.1	0	1,791	432	880	384	184
40020	5,358	38,376	400	470	250	127.0	325	932	640	1,099.6	512	75.6	0	2,863	916			
40024	6,528	46,752	300	590	300	127.0	325	1,093	800	1,099.6	512	75.6	0	4,295	1,980			
40028	7,752	55,518	300	700	350	127.0	325	1,255	960	1,099.6	512	75.6	0	6,020	3,790			

안전계수표 (Service Factor)

AERATOR(통풍기)	2.5
AGITATORS(교반기)	
Vertical and Horizontal Screw, Propeller, Paddle	1.5
BARGE HAUL PULLER	3.0
BLOWERS(송풍기)	
Centrifugal	1.5
Lobe or Vane	1.75
CAR DUMPERS	4.0
CAR PULLERS	2.5
CLARIFIER OR CLASSIFIER	1.5
COMPRESSORS(공기압축기)	
Centrifugal	1.1
Rotary, Lobe or Vane	2.0
Rotary, Screw	2.0
With Flywheel and Gear between Compressor and Prime Mover	
1 cylinder, single acting	5.0
1 cylinder, double acting	5.0
2 cylinders, single acting	5.0
2 cylinders, double acting	5.0
3 cylinder, single acting	5.0
3 cylinder, double acting	3.0
4 or more cyl., singl act	3.5
4 or more cyl., double act	3.5
CONVEYOR	
Apron, Assembly, Belt, Chain Flight, Screw	1.5
Bucket	2.0
Live Roll, Shaker and Reciprocation	3.5
CRANES AND HOIST(권양기)	
Main hoist	2.5
Skip Hoist	2.5
Slope	2.25
Bridge, Travel or Trolley	2.5
DYNAMOMETER(동력계)	1.5
ELEVATORS(승강기)	
Bucket, Centrifugal Discharge	2.0
Freight or Passenger (Not Approved) 사용불가 Gravity Discharge	2.0
ESCALATORS(Not Approved)	1.75
EXCITER GENERATOR	
EXTRUDER, PLASTIC	2.25
FANS(송풍기)	
Centrifugal	1.1
Cooling Tower	3.0
Forced Draft-Across the Line start	2.0
Forced Draft Motor Driven thru fluid or electric slip clutch	1.5
Gas Recirculating	2.5
Induced Draft with damper control or blade cleaner	2.0
Induced Draft without controls	3.0
FEEDERS	
Apron, Belt, Disc, Screw	2.0
Reciprocation	3.5
GENERATORS(발전기)	
Even Load	1.1
Hoist or Railway Service	2.0
Welder Load	3.0
HAMMER MILL	2.5
LAUNDRY WASHER OR TUMBLER	3.0
LINE SHAFTS	
Any Processing Machinery	2.0
MACHINE TOOLS(공작기계)	
Auxiliary and Traverse Drive	1.5

Bending Roll, Notching press, Punch Press, Planer, Plate Reversing	2.5
Main Drive	2.0
MAN LIFTS(Not Approved) METAL FORMING MACHINES(금속성형기)	
Draw Bench Carriage and Main Drive	3.0
Extruder	3.0
Forming Machine and Forming Mills	3.0
Slitters	1.5
Wire Drawing of Flattening	2.5
Wire Winder	2.25
Coilers and Uncoilers	2.25
MIXERS(see Agitators)	
Concrete	2.5
Muller	2.5
PRESS, PRINTING(인쇄기)	2.25
PUG MILL	2.5
PULVERIZES(미분쇄기)	
Hammer mill and Hog	2.5
Roller	2.0
WOODWORKING	2.0
MACHINERY(목공기계)	1.5
PUMPS	
Centrifugal Constant Speed	1.1
Frequent Speed Changes under Load	2.0
Descaling, with accumulators	2.0
Gear, Rotary or Vane	1.75
Reciprocating	
1 cyl., single or double act.	3.0
2 cyl., single acting	3.0
2 cyl., double acting	3.0
3 or more cylinders	3.0
SCREENS	
Air Washing	1.5
Grizzly	3.0
Rotary Coal or Sand	2.0
Vibrating	3.5
Water	1.5
STEERING GEAR	1.5
STOKER	1.5
TUMBLING BARREL	1.5
WINCH, MANEUVERING	
Dredge, Marine	2.5
WINDLASS(권상기)	2.0
AGGREGATE PROCESSING, CEMENT, MINING KILNS; TUBE, ROD AND BALL MILLS	
Direct or on L.S shaft of Reducer, with final drive Machined Spur Gears	3.0
Single Helical or Herringbone Gears	2.25
Conveyors, Feeders, Screens, Elevators, See General Listing Crushers, Ore or Stone	3.5
Dryer, Rotary	2.0
Grizzly	3.0
Hammer mill or Hog	2.5
Tumbling Mill or Barrel	2.5
BREWING AND DISTILLING	
Bottle and Can(양조공업) Filling Machines	1.5
Brew Kettle	1.5
Cookers, Continuous Duty	1.75
Lauter Tub	2.25
Mash Tub	1.75
Scale Hopper, Frequent Peaks	2.25
CLAY WORKING INDUSTRY(요업)	
Brick Press, Brequette Machine, Clay Working Machine, Pug Mill	2.25

DREDGES(준설관계)	
Cable Reel	2.25
Conveyors	1.5
Cutter Head, Jig Drive	3.0
Maneuvering Winch	2.5
Pumps(uniform load)	2.0
Screen Drive Stacker	2.5
Utility Winch	2.5
FOOD INDUSTRY(식품공업)	
Beet Slicer	2.5
Bottling, Can Filling Machine Cereal Cooker	1.75
Dough Mixer, Meat Grinder	2.5
LUMBER(제재업)	
Beet Slicer	2.5
Bottling, Can Filling Machine Cereal Cooker	1.75
Dough Mixer, Meat Grinder	2.5
Band Resaw	2.0
Circular Resaw, Cut-off	2.5
Edger, Head Rig, Hog	3.0
Gang Saw(Reciprocating)	3.0
Log Haul	3.0
Planer	2.5
Rolls, Non-Reversing	2.0
Rolls, Reversing	3.0
Sawdust Conveyor	1.75
Slab Conveyor	2.5
Sorting Table	2.0
Trimmer	2.25
METAL ROLLING MILLS(금속성형기)	
Coilers(Up or Down) Cold Mills Only	2.25
Coilers(Up or Down) Hot Mills Only	2.5
Coke Plants Pusher Ram Drive	3.5
Coke Plants Door Opener	3.0
Coke Plants Pusher or Larry Car Traction Drive	4.0
Cooling Beds	2.0
Draw bench	3.0
Feed Rolls Blooming Mills Furnace Pushers	4.0
Hot and Cold Saws	3.0
Manipulators	4.0
Mill Tables	
Roughing Breakdown Mills	4.0
Hot Bed of Transfer, non-reversing	2.25
Run out, reversing	4.0
Run out, non-reversing, non-plugging	3.0
Reel Drives	2.25
Rod Mills Screw down	3.0
Seamless Tube Mills	
Piercer	4.0
Thrust Block	3.0
Tube Conveyor Rolls	3.0
Realer	3.0
Kick Out	3.0
Side guards	4.0
Skelp Mills Slitters, Steel Mill only	2.25
Soaking Pit Cover Drives Lift	1.75
Soaking Pit Cover Drives Travel	2.5
straightener	2.5
Unscramblers(Billet Bundle Busters)	3.0
Wire Drawing Machinery	2.25
OIL INDUSTRY(정유공업)	
Chiller	2.75
Oil well Pumping (not over 15% peak torque)	3.0
Paraffin Filter Press	2.0

Rotary Kiln	3.0
PAPER MILLS(제지업)	
Barker Auxiliary, Hydraulic	3.0
Barker, Mechanical	3.0
Barking Drum L.S. shaft of reducer with final drive-Helical or Herringbone Gear	3.0
Machined Spur Gear	3.5
Cast Tooth Spur Gear	4.0
Beater & Pulpier	2.5
Bleachers, Coaters	1.75
Calendar & Super Calendar	2.5
Chipper	4.0
Converting Machine	1.75
Couch	2.25
Cutter, Felt Whipper	3.0
Cylinder, Dryer	2.25
Felt Stretcher	2.0
Fourdrinier	2.25
Log Haul	3.0
Line Shaft	2.0
Press	2.25
Pulp Grinder	2.25
Reel, Rewinder, Winder	2.0
Stock Chest, Washer, Thickener	2.0
Stock Pumps, Centrifugal Constant Speed	1.5
Frequent Speed Changes Under Load	1.75
Suction Roll	2.5
RUBBER INDUSTRY(고무공업)	
Calendar	3.0
Cracker, Plasticator	3.5
Extruder	2.25
Intensive or Ban bury Mixer	3.5
Mixing Mill, Refiner or sheeteer	
One or two in line	3.5
Three or four in line	3.0
Five or more in line	2.25
Tire Building Machine	3.5
Trie & Tube Press Opener (peak Torque)	1.5
Tuber, Strainer, Pelletizer	2.25
Warming Mill One or two Mills in line	3.0
Warming Mill Three or more Mills in line	2.25
Washer	3.5
SEWAGE DISPOSAL EQUIPMENT (폐수처리장치)	
Bar Screen, Chemical Feeders, Collectors Dewatering Screen, Grit Collector	1.5
SUGAR INDUSTRY(제당공업)	
Cane Carrier & Leveler	2.5
Cane Knife & Crusher	3.0
Mill Stands, Turbine Driven with all helical or herringbone gears	2.0
Electric Drive or Steam Engine Drive with Helical, Herringbone or Spur Gears with any Prime Mover	2.25
TEXTILE INDUSTRY(섬유공업)	
Batcher	1.75
Calendar, Card Machine	2.0
Cloth Finishing Machine	2.25
Dry Can, Loom	2.0
Dyeing Machinery	1.75
Knitting Machine	2.2
Mangle, Napper, Soaper	1.75
Spinner, Tenter Frame, Winder	2.0
Reducer	2.0

안전계수표 (Service Factor)

Coupling Selection

How to Select

Standard Selection

The Standard Selection may be used for engine driven, motor, or turbine applications. The following information is required:

- Application or equipment type (motor to pump, reducer to conveyor, etc.)
- Shaft diameters (mm)
- Gaps between shafts (mm)
- Speed (RPM)
- Horsepower or torque (kg·m)

1. **Rating** : Determine system torque. Torque is calculated as follows :

$$\text{I . Torque (Nm)} = \frac{\text{kW} \times 9,550}{\text{RPM}}$$

$$\text{II . Torque (Kg.m)} = \frac{\text{kW} \times 974}{\text{RPM}}$$

2. **Service Factor** : Determine appropriate service factor from page. 52~53

3. **Minimum Coupling Rating** : Determine the required minimum coupling rating as follows :

$$\text{Minimum Coupling Rating} = \text{Service Factor} \times \text{Torque (kg·m)}$$

4. **Type** : Select the appropriate coupling type

5. **Size** : Trace the Torque column to find the value that is equal or greater than value from Step 3.

6. **Check** : Check speed (RPM), bore, gap and dimensions.

Formula Selection

The Standard Selection should be used for most coupling selections.

The Formula Selection procedure below should be used for:

- High Peak Loads.
- Brake Applications (Brake disc or brake wheel is an integral part of coupling)

Using the Formula Selection and providing system peak torque and frequency, duty cycle, and brake torque rating will allow for a more refined selection.

1. **High Peak Loads** : Use formula A or B for applications which involve motors with higher than normal torque characteristics. Applications should also be those with intermittent operations, including shock loading, inertia effects due to starting and stopping, system-induced repetitive high peak torques. System Peak Torque is the maximum torque that can exist in the system. Select a coupling with a Torque Rating equal or greater than the Selection Torque calculated below:

A. Non-Reversing High Peak Torque : Selection torque (kg·m) = System Peak Torque or

$$\text{System Torque (kg·m)} = \frac{\text{System peak kW} \times 974}{\text{RPM}}$$

B. Reversing High Peak Torque : Selection Torque (kg·m) = 2 x System Peak Torque or

$$\text{System Torque (kg·m)} = \frac{2 \times \text{Peak kW} \times 974}{\text{RPM}}$$

2. **Brake Applications** : If the torque rating of the brake exceeds the motor torque, use brake rating as blow :

$$\text{Selection Torque (kg·m)} = \text{Brake Torque Rating} \times \text{Service Factor}$$

Standard Selection

Service Factors for engine drives are required for applications where good flywheel regulation prevents torque fluctuations greater than $\pm 20\%$. For drives where torque fluctuations are greater or where the operation is near a serious critical or torsional vibration, a mass elastic study is necessary.

Number of Cylinders	4 or 5					6 or more				
Service Factor	1.5	1.75	2	2.25	2.5	1.5	1.75	2	2.25	2.5
Engine Service Factor	2.5	2.75	3	3.25	3.5	2.5	2.75	3	3.25	3.5

To use Engine Drive Service Factors, first determine application Service Factor from page 52~53. When Service Factor is greater than 2.0, or where 1, 2 or 3 cylinder engines are involved, refer complete application details to SEHWA Coupling for engineering review.

Service Factors are a guide, based on experience, of the ratio between coupling catalogue rating and system characteristics. The system characteristics are best measured with a torque meter.

Torque Demands Driven Machine	Typical applications for Driven Equipment	Typical Service Factor
	Constant torque such as Centrifugal Pumps, Blowers and Compressors.	1.0
	Continuous duty with some torque variations including Plastic Extruders, Forced Draft Fans.	1.5
	Light shock loads from Metal Extruders, Cooling Towers, Cane Knife, Log Haul.	2.0
	Moderate shock loading as expected from a Car Dumper, Stone Crusher, Vibrating Screen.	2.5
	Heavy shock load with some negative torques from Roughing Mills, Reciprocating Pumps, Compressors, Reversing Runout Talbes.	3.0
	Applications like Reciprocating Compressors with frequent torque reversals, which do not necessarily cause reverse rotations.	Refer to SHC



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