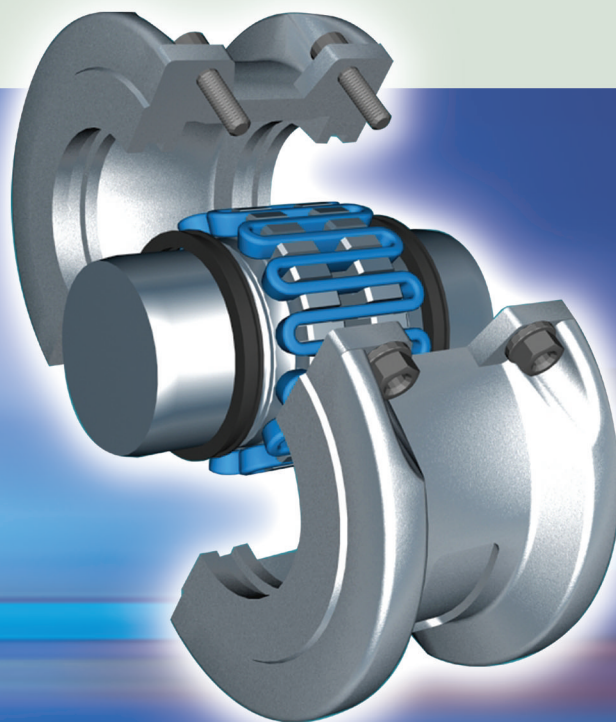


GRID

COUPLING





GRID COUPLING

특징 / Characteristics

1) 평행오차

축이 편심 상태일 때 Grid가 Grease를 칠한 홈 안에서 작동함으로써 진동이나 충격을 완화시켜 무리함이 없는 동력전달을 한다.(허용치 2mm~3mm)

2) 각도오차

축이 편각($2^{\circ} \sim 3^{\circ}$) 상태에서도 곡면으로 파여진 Hub의 홈(Groove) 안에서, Grid가 미끌어지는 윤활작용과 탄력으로 동력이 손실없이 전달, 작동된다.

3) 축 유동오차

구동축과 종동축이 상하진동과 좌우 유동되더라도 Grease를 칠한 Hub의 홈 안에서 Grid가 구부러진 안쪽까지 자유로이 작동함으로써 진동의 전달을 방지하고 동력을 전달한다.

4) 비틀림에 대한 유연성

기계가 시동시 발생하는 충격·진동·과부하등이 Grid에 작용하게 되면 Grid의 유연성으로 인해 힘의 작용점이 Tooth의 곡면 안에서 진동되므로 진동과 충격부하를 감소시켜준다.

1) PARALLEL

The movement of the grid in the lubricated grooves accommodates parallel misalignment and permits full functioning of the grid-groove action in damping out shock and vibration.

2) ANGULAR

Under angular misalignment, 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 because the grid slides freely in the lubricated grooves. It can also be limited to any required amount.

4) TORSIONAL FLEXIBILITY

When shock, vibration, and overload occurring at start act with the grid, which are reduced by the flexibility of grid that makes power point move to the tooth face.

GRID의 작동상태 / Torsional Flexibility

① 경하중 작용시 Grid상태

Grid가 Hub의 Tooth외각에서 힘을 받아 직선인 상태로 작동됨으로 부하가 발생하면 Tooth의 곡면과 Grid의 탄력작용으로 Vibration과 Shocking을 없애준다.

② 정상부하에서의 Grid상태

부하가 발생하면 힘의 걸림점이 Hub의 Tooth중간으로 이동되어 Grid가 휘어지는 탄력으로 충격하중을 완화시켜 준다.

③ 시동시 충격부하에서의 Grid상태

순간적인 과부하로 힘의 걸림점이 Hub의 Tooth 제일 안쪽으로 이동되어 Grid가 비틀리는 탄력의 범위내에서 극도의 충격을 유연하게 완화시켜 Starting된다.

① LIGHT LOAD

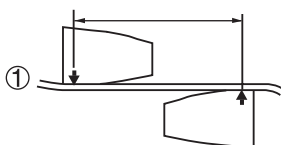
The grid bears near the outer edges of the hub teeth. The long span between the points of contact remains free to flex under load variations

② NORMAL LOAD

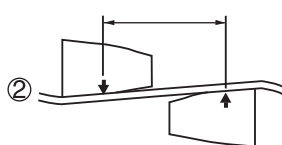
As the load increases, the distance between the contact points on the hub teeth is shortened, but a free span still remains to cushion shock loads.

③ SHOCK LOAD

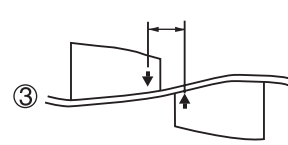
The coupling is flexible within its rated capacity. Under extreme overloads, the grid bears fully on the hub teeth and transmits full load directly.



경하중 작용시 Grid상태
(LIGHT LOAD)



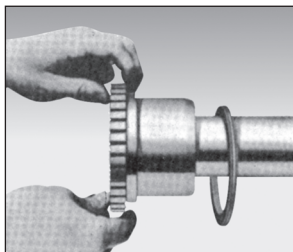
정상부하에서의 Grid상태
(NORMAL LOAD)



충격부하에서의 Grid상태
(SHOCK LOAD)

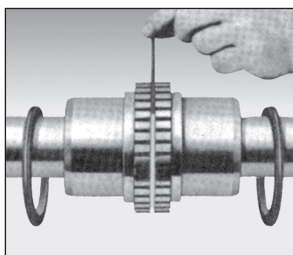
조립장착 / Instruction for Installation

- 1) 모든 금속부품을 닦은 후 oil seal에 그리스를 칠해 끼운 후 허브를 축에 장착한다.



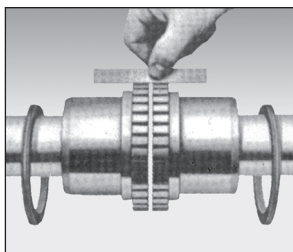
- 1) Clean all metal parts using nonflammable solvent. Lightly coat oil seals with grease and place on shaft before mounting Hub.

- 2) 간격 게이지를 이용하여 원주상의 틈새가 같도록 조절한다.



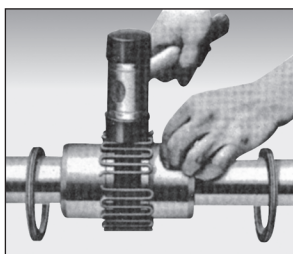
- 2) Using a spacer bar, make the gap equal in thickness.

- 3) 곧은 자로 원주 90°마다 평행오차를 조정하고 다이얼 게이지로 축심오차를 더 정확히 조정하여 명시된 한계를 넘지 않게 한다.



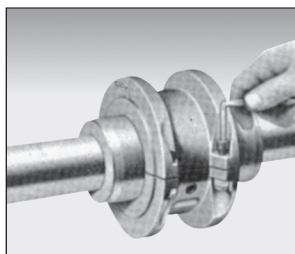
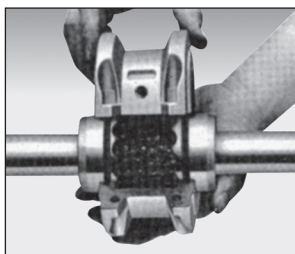
- 3) Align so that a straight edge rests squarely on both hubs as shown fig.
The clearance must not exceed the limit specified in table 2.

- 4) 허브의 tooth홈에 그리스를 칠한 후 그리드를 같은 방향으로 하여 끼워 넣는다.



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

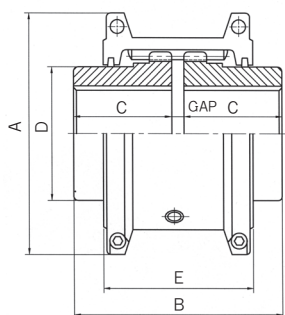
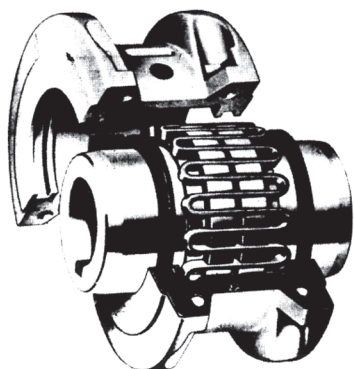
- 5) 그리드 주위에 그리스를 충분히 칠하고 가스켓을 아래쪽 커버의 조립면에 놓은 후 매치 마크가 필히 같은 방향으로 오도록 하여 조립한다.



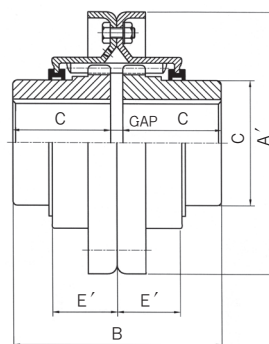
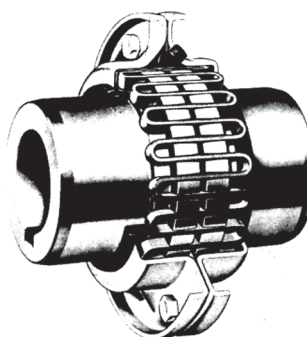
- 5) Pack the spaces between and around the grid with as much lubricants as possible and position gaskets on half assembled lower cover so that the match marks are on the same side.



SH(Horizontal Split aluminum) TYPE



SV(Vertical Split Steel Cover) TYPE



SH(Horizontal Split aluminum cover) TYPE

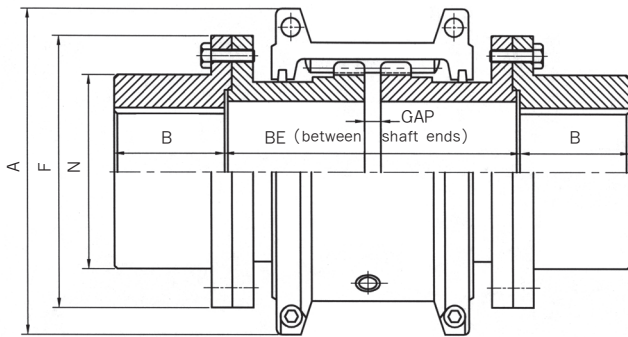
SV(Vertical Split Steel cover) TYPE

Size	HP Per 100 (rpm)	Max Speed (rpm)	Basic torque (kg · cm)	Bore(mm)		Dimensions(mm)							Gap(mm)			Cplg wt(kg)	Lube wt(kg)
				Max	Min	A	A'	B	C	D	E	E'	Min.	Normal	Max.		
20S	0.68	4,500	486	30	12.7	101.6	111.1	98.0	47.5	39.7	66.5	24.2	1.5	3	4.5	1.9	0.03
30S	1.93	4,500	1,383	36	12.7	111.0	120.7	98.0	47.5	49.2	68.3	25.0	1.5	3	4.5	2.6	0.03
40S	3.22	4,500	2,304	44	12.7	117.5	128.5	104.6	50.8	57.1	70.0	25.7	1.5	3	4.5	3.4	0.05
50S	5.63	4,500	4,033	50	12.7	138.0	147.6	123.6	60.3	66.7	79.5	31.2	1.5	3	4.5	5.4	0.05
60S	8.85	4,350	6,337	57	19.1	150.5	162.0	130.0	63.5	76.2	92.0	32.2	1.5	3	4.5	7.3	0.09
70S	13	4,125	9,217	68	19.1	161.9	173.0	155.4	76.2	87.3	95.0	33.7	1.5	3	4.5	10	0.11
80S	27	3,600	19,010	82	27.0	194.0	200.0	180.8	88.9	104.8	116.0	44.2	1.5	3	6	18	0.17
90S	48	3,600	34,564	95	27.0	213.0	232.8	199.8	98.4	123.8	122.0	47.7	1.5	3	6	25	0.25
100S	81	2,440	58,183	107	41.3	250.0	266.7	245.7	120.6	142.0	155.5	60.0	1.5	4.5	9.5	42	0.43
110S	121	2,250	86,411	117	41.3	270.0	285.8	258.5	127.0	160.3	161.5	64.2	1.5	4.5	9.5	54	0.51
120S	177	2,025	126,736	136	60.3	308.0	319.0	304.4	149.2	179.4	191.5	73.4	1.5	6	12.5	81	0.73
130S	257	1,800	184,343	165	66.7	346.0	377.8	329.8	161.9	217.5	195.0	75.1	1.5	6	12.5	121	0.91
140S	370	1,650	265,993	184	66.7	384.0	416.0	371.6	182.8	254.0	201.0	78.2	1.5	6	12.5	178	1.13
150S	515	1,500	368,686	203	10.0	453.1	476.3	371.8	182.9	269.2	271.3	106.9	1.5	6	12.5	234	1.95
160S	724	1,350	518,465	228	120.7	501.4	533.4	403.3	198.1	304.8	278.9	114.3	1.5	6	12.5	317	2.81
170S	965	1,225	691,286	279	133.4	566.4	584.2	437.8	215.9	355.6	304.3	119.4	1.5	6	12.5	448	3.49
180S	1,338	1,100	958,584	311	152.4	629.9	630.0	483.6	238.8	393.7	321.1	130.0	1.5	6	12.5	619	3.76
190S	1,770	1,050	1,267,358	339	152.4	675.5	685.0	524.2	259.1	436.9	325.1	135.0	1.5	6	12.5	776	4.40
200S	2,413	900	1,728,216	361	177.8	756.9	737.0	564.8	279.4	497.8	355.6	145.0	1.5	6	12.5	1,057	5.62

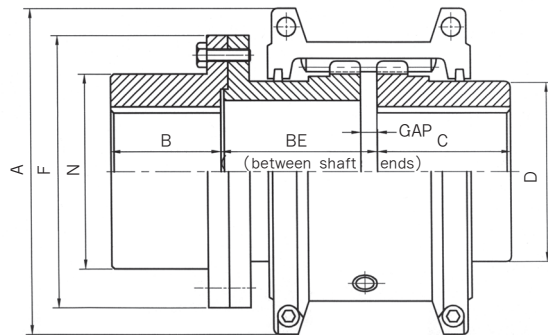
※ Coupling 중량은 내경가공이 없는 상태의 것임

※ Coupling Weight, Without Bore machining.

SPACE TYPE



SAS(Full Space) TYPE



SFS(Half Space) TYPE

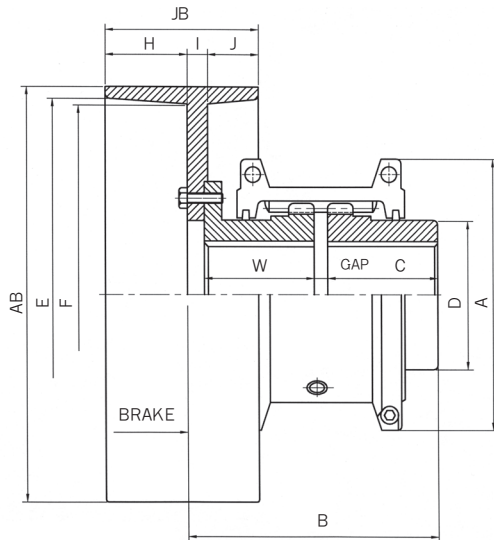
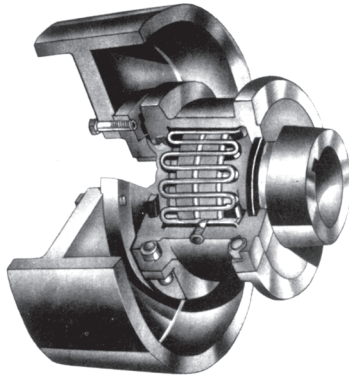
Size	HP Per 100 (rpm)	Max Speed (rpm)	Basic torque (kg · cm)	Bore Dia (mm)		Dimensions(mm)									Flange Bolt No.	Lube WT (kg)
						A	B	BE(SAS)		BE(SFS)		N	F	Gap		
				Min.	Max.			Min.	Max.							
20S	0.68	3,600	486	36	12.7	101.6	35	89	203	45	102	52	86	5	4	0.03
30S	1.93	3,600	1,383	44	12.7	111.0	41	89	216	45	109	59	94	5	8	0.03
40S	3.22	3,600	2,304	57	12.7	117.5	54	89	216	45	109	78	113	5	8	0.05
50S	5.63	3,600	4,033	64	12.7	138.0	60	112	216	57	109	77	126	5	8	0.05
60S	8.85	3,600	6,337	79	19.1	150.5	73	127	330	64	166	103	145	5	8	0.09
70S	13	3,600	9,217	83	19.1	161.9	79	127	330	64	166	109	153	5	12	0.11
80S	27	3,600	19,010	95	27.0	194.0	89	184	406	93	204	122	178	5	12	0.17
90S	48	3,600	34,564	108	27.0	213.0	102	184	406	93	204	142	210	5	12	0.25
100S	81	2,440	58,183	127	38.1	250.0	90	203	406	103	205	171	251	6.5	12	0.43
110S	121	2,250	86,411	149	50.8	270.0	104	210	406	106	205	196	277	6.5	12	0.51
120S	177	2,025	126,736	165	63.5	308.0	119	246	406	125	205	225	319	9.5	12	0.73
130S	257	1,800	184,343	178	76.2	346.0	135	257	406	130	205	238	346	9.5	12	0.91
140S	370	1,650	264,993	203	88.9	384.0	152	267	406	135	205	266	386	9.5	12	1.13
150S	515	1,500	368,686	254	101.6	453.1	173	345	371	175	187	334	425	9.5	14	1.95
160S	724	1,350	518,465	279	114.3	501.4	186	356	406	180	205	366	457	9.5	14	2.81
170S	965	1,225	691,286	330	127.0	566.4	220	384	445	194	224	425	527	9.5	16	3.49
180S	1,338	1,100	958,584	330	101.6	629.9	249	400	490	202	247	451	591	9.5	16	3.76
190S	1,770	1,050	1,267,358	362	114.3	675.6	276	411	530	207	267	508	660	9.5	18	4.40
200S	2,413	900	1,728,216	381	127.0	756.9	305	445	575	224	289	530	711	9.5	18	5.62

※ Coupling 중량은 내경가공이 없는 상태의 것임

※ Coupling Weight, Without Bore machining.



SBW(Brake Wheel) TYPE



Cplg Size	Standard Brake Wheel					
	Moter Power (40% ED KW)			Brake Torque (kg, m)		
2020S						
2030S						
2040S	2.2			5		
2050S	5.5			10		
2060S	5.5	7.5	11	10	14	21.2
2070S	15			30		
2080S	30			53		
2090S	37	45		63	80	
2100S	45			132		
2110S	75	90		180		
2120S	110	132		335		
2130S	160	200		400	475	
2140S	160	200		400	475	

※Moter는 권선형 Crane용 기준.

※Baser on crane motor.

Brake wheel Size(mm)		Size	Max,Brake Rating of CPLG(kg,cm)	Bore Dia. (mm)		Dimension (mm)									Lube wt (kg)
AB	JB			Max.	Min.	A	C	D	E	F	H	I	J	Gap	
		20S	110	30	12.7	102	48	39.6						3	0.03
		30S	359	36	12.7	111	48	49						3	0.03
160	80	40S	663	44	12.7	117	51	57	145	140	40	12	28	3	0.05
200	100	50S	1,202	50	12.7	138	60	66	184	178	50	17	33	3	0.05
200	100	60S	2,129	57	19.1	151	63	76	184	178	50	17	33	3	0.09
250	125	70S	3,373	68	19.1	162	76	87	230	224	62.5	22	40.5	3	0.11
315	160	80S	6,497	82	27.0	194	89	105	292	285	80	23	57	3	0.17
355	180	90S	11,060	95	27.0	213	98	124	330	320	90	26	64	3	0.25
400	200	100S	19,355	107	41.3	251	121	142	374	362	100	28	72	5	0.43
450	224	110S	29,032	117	41.3	270	127	160	422	410	112	32	80	5	0.51
500	250	120S	44,240	136	60.3	308	149	179	462	445	125	35	90	6	0.73
560	280	130S	66,212	165	66.7	346	162	218	516	495	140	45	95	6	0.91
560	280	140S	89,862	184	66.7	384	184	253	516	495	140	45	95	6	1.13

※SBW Type에 제작에는 각사에서 사용하고저 하는 Brake의 Size 를 결정한 후 상기 Dimension에 의거 'B' 와 'W' 를 정한다.

※If you need SBW type

First, determine the size of brake of your coupling and then the 'B' and 'W' according to above dimension.