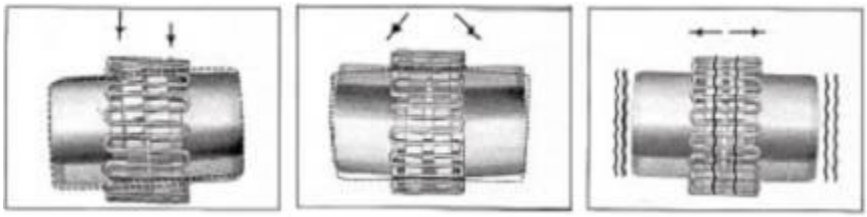
We can get more favorable convenience and cost down by using the WCC Taper Grid Steel Flexible Coupling.



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.

2) ANGULAR

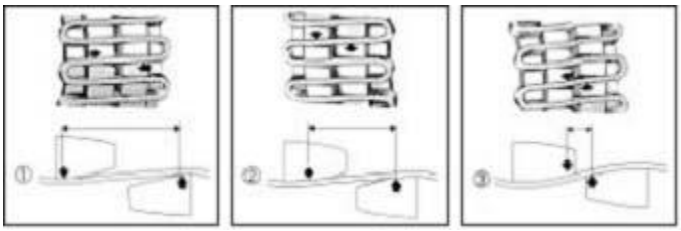
Under angular misalignment, the grid groove design permits a rocking and sliding action of the lubricated grid and hubs without any loss of power through the resilient grid.

3) AXIAL

End Float for both driving and driven members is permitted because the grid slides freely in the lubricated grooves.

4) TORSIONAL FLEXIBILITY

Torsional flexibility is the advantage of WCC Taper Grid Coupling, Providing flexible accommodation to changing load conditions.



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.

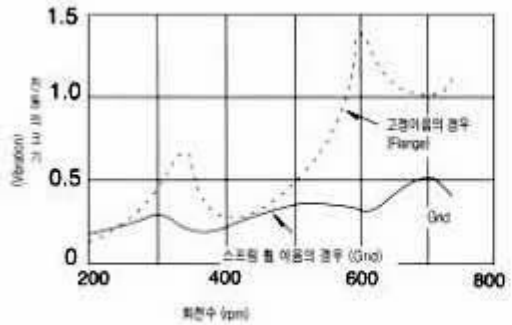
Normal Load

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.

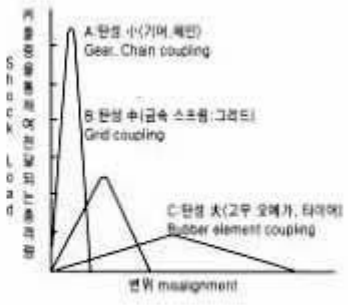
Shock Load

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

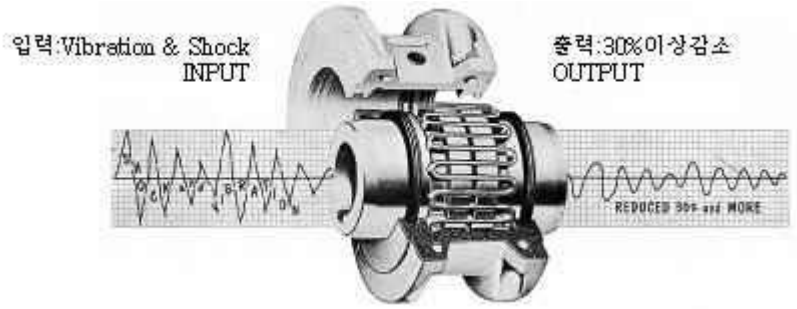
WCC Taper Grid coupling demonstrate the excellent performance as shown below.



축축 이음을 이용한 기계진동의 감소
(Virbration absorption)



각종 카플링에 있어서 충격의 흡수효과
(Shock load absorption)



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MERITS

1. When overload occur, grid breaks and prevents breaking of the shaft or machinery part connected.

2. When the parallel misalignment is too severe, the relating machine is protected by the virtue of shearing Grid or Tooth.

3. The life of parts (Mechanical Seal and Bearing, etc) can be extends to twice or more.

4. Quick installation and easy maintenance reduce labor cost and downtime costs.

5. WCC Grid coupling is interchangeable with international industry standard.

6. It always transmits the power full(100%) under low noise.

7. You can use it continually at cheaper replacement cost by changing damaged parts only.

Application

Pin-Bush Flange coupling and Chain couplings have usually used, but now using the WCC Taper Grid Coupling we will get many benefits.

1. When we need to reduce vibration and shock load.

2. When we need adequate power transmission underline misalignment.

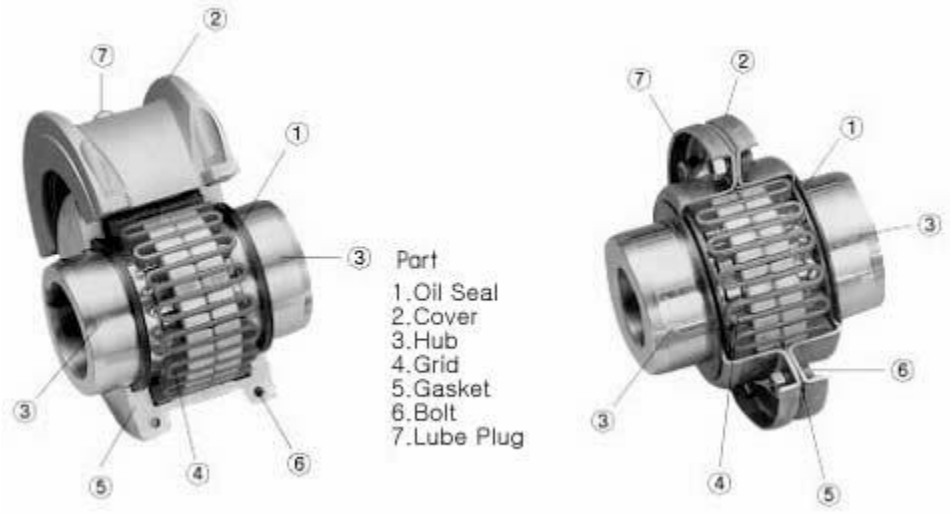
3. When we need adequate power transmission angular misalignment.

4. When we need adequate power transmission under-end floating.

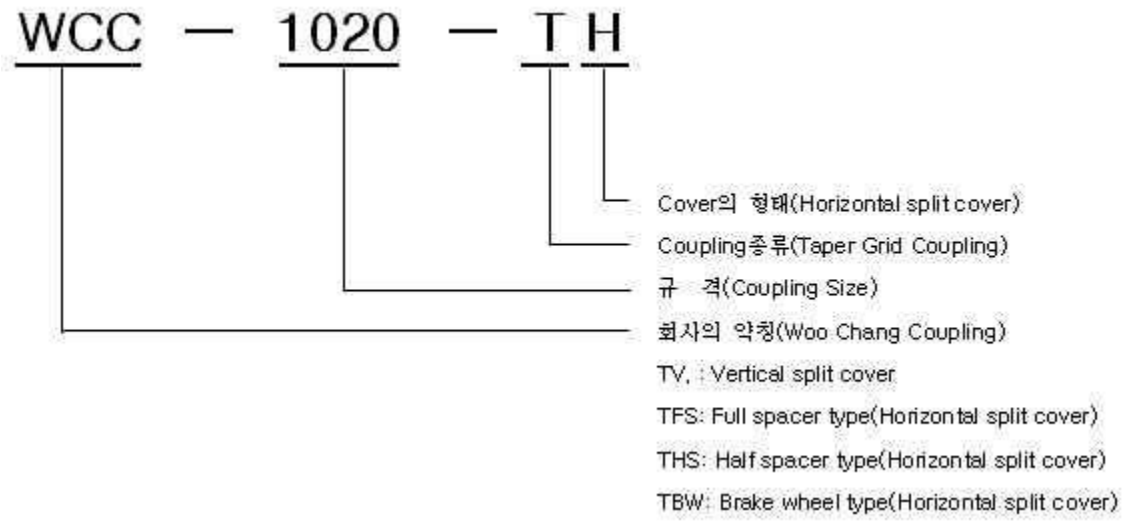
5. When we need to prevent breaking of the machinery parts under over load.

6. When reverse revolution is required.
When we need smooth starting.

Structure



Designation



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Selection Method

1) Selection Process

① By using the following formula, obtain Design Torque required.

$$T = 97{,}400 \frac{H'}{N} \times S \cdot F \quad \text{또는} \quad T = 71{,}620 \frac{H'}{N} \times S \cdot F$$

T = Design Torque (Kg · cm) H' = Power (kw)
H = Power (HP) N = Working revolution (rpm) S · F = Recommended service factor

② Select the size with the same or with the greater value at the Basic Torque column. Refer to the maximum speed allowed to the size selected, and then compare the shaft diameters of the application with the max. Bore dia of the size selected. If the coupling bore size is not suitable, select the larger coupling.

③ Special requirements
a. on calculating the torque required, use the lowest operating speed(N) of the application.
b. If there are reverse motions repeatedly or frequent irregular load changes, make service factor twice.

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2) Example

When you select a Coupling to connect a 30HP, 1,750rpm motor to rotary type pump. Motor shaft dia is 48mm and pump's 52mm.

① service factor of pump is 1.8(Refer to page 58).

② Normal transmitting power is 30HP

$$\text{Torque(kg} \cdot \text{cm)} = \frac{30 \times 71{,}620 \times 1.8}{1{,}750} = 2{,}210$$

The coupling size 1040 accepts the calculated torque 2210kg · cm. And then compare the application shaft size(52mm) to the maximum bore of the selected coupling size 1040(43mm).

You will select the coupling size 1060 accepting up to 55mm shaft diameter. The size also accept the application motor speed 1750rpm. Either TH or TV cover is available. Finally, the coupling size 1060 is selected.

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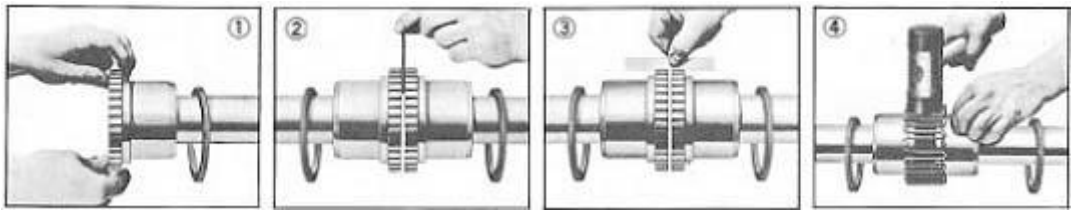
Instruction for Installation

The performance and the life of the coupling depend on how you install and service them. This page helps you how to assemble the coupling for the best performance and for the trouble free operation.
TH Taper Grid Coupling is designed to be operate in either the horizontal or vertical position without modification.

※ Simple standard mechanical tools such as wrenches, a straight edge and feeler gauge or dial gauge are required to install the Taper Grid Coupling.



1) In case of TH Type

① Clean all metal parts using nonflammable solvent. Lightly coat seals with grease and place on shaft, before mounting hub Mounting hubs on the shafts.

② Using a spacer bar, equal in thickness to the normal gap. The difference in maximum measurements must be not exceed the angular limit.

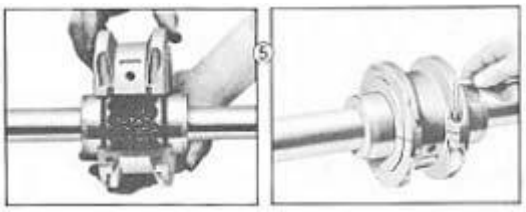
③ Align so that a straight edge rests squarely on both hubs as shown fig. And also at 90° interval. The clearance must not exceed the limit specified in table 3.

④ After greasing the tooth of groove hub, fix the Grid in the same direction

⑤ Grease fully upon the Grid. Place oil seals on the hubs, put gaskets and fasten the cover halves correctly by bolts.

** Coupling disassembly and Grid removal.

Whenever it is necessary to disconnect the coupling, remove the cover halves and grid. A round rod or screw driver can be a convenient tool to remove the grid.



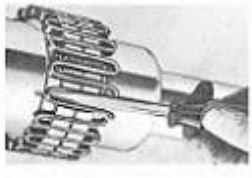
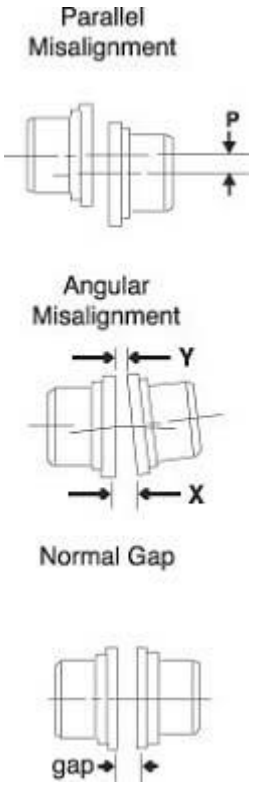
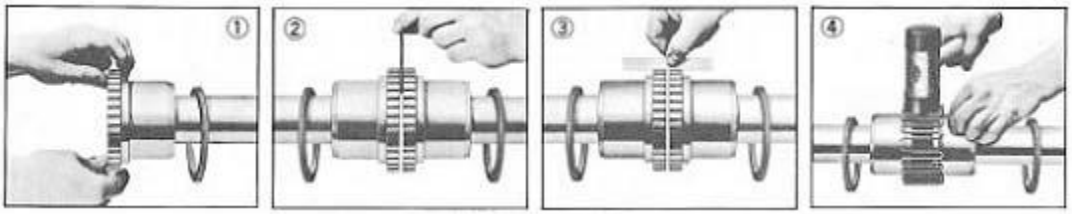


Table 3 – misalignment capacity

Size	Recommended installation		Operating		Normal
	Parallel Offset p	Angular(1/16°) X – Y	Parallel Offset p	Angular(1/4°) X – Y	Gap ±10%
1020	0.15	0.06	0.3	0.24	3
1030	0.15	0.07	0.3	0.29	3
1040	0.15	0.08	0.3	0.32	3
1050	0.20	0.10	0.4	0.39	3
1060	0.20	0.11	0.4	0.45	3
1070	0.20	0.12	0.4	0.50	3
1080	0.20	0.15	0.4	0.61	3
1090	0.20	0.17	0.4	0.70	3
1100	0.25	0.20	0.5	0.82	4.5
1110	0.25	0.22	0.5	0.90	4.5
1120	0.28	0.25	0.56	1.01	6
1130	0.28	0.30	0.56	1.19	6
1140	0.28	0.33	0.56	1.34	6
1150	0.30	0.39	0.6	1.56	6
1160	0.30	0.44	0.6	1.77	6
1170	0.30	0.50	0.6	2.00	6
1180	0.38	0.56	0.76	2.26	6
1190	0.38	0.61	0.76	2.44	6
1200	0.38	0.68	0.76	2.72	6





2) In case of TV Type

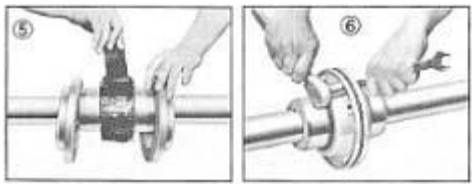
① Clean all metal parts using nonflammable solvent. Lightly coat seals with grease and place on shaft, before mounting hub Mounting hubs on the shafts.

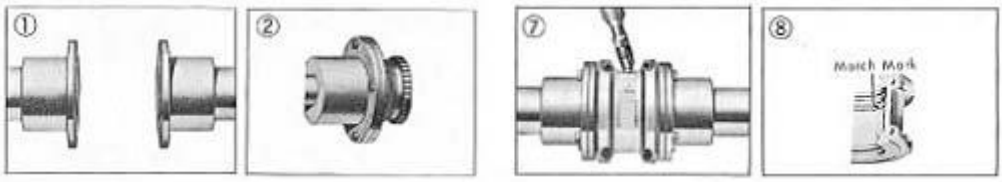
② Using a spacer bar, make the gap between the hubs equal to the value stated in the table #3

③ 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 in page 12 table #3.

④ After greasing the tooth of groove hub, fix the Grid in the same direction.

⑤⑥ Grease fully upon the grid.
Place oil seals on the hubs, put gaskets and fasten the vertical halves, locating lube plug at 180 degree. (note : 90° from the size 1150)





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3) In case of TFS THS Type

①Mount flange hubs on the shafts to be aligned correctly.

②Carefully position each half spacer on the concave-convex and fasten bolts

⑦ After assembly. Adequate lubrication is essential for a successful operating and ensure long life.

⑧ You can mount vertically or horizontally. As per the application.

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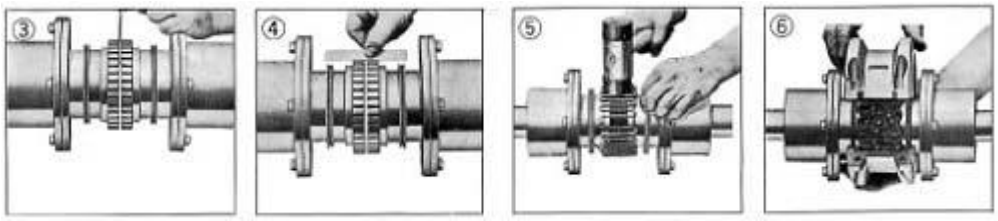
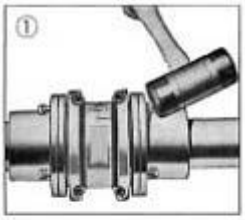
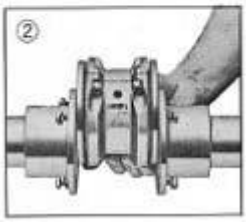


③ ~ ⑥ Refer to the instruction of installation of TH Grid Coupling as shown on Page 11.

**Replacement of spacer

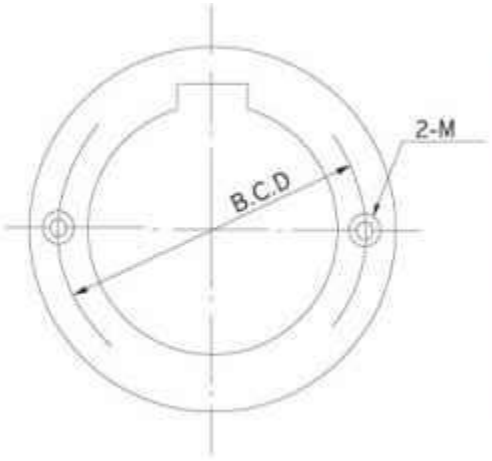


① Remove all bolts except two fasteners. Loosening the two bolts every 5mm, tap them with a mallet to disengage, Spacer apart from the shaft hubs.



② Insert spacer tightly between shaft hubs. Refer to ② of TFS type installation.

Selection of Puller Holes



CPLG Size	B.C.D. (mm)	Bolt Size	CPLG Size	B.C.D. (mm)	Bolt Size
1070	74	M8	1140	205	M16
1080	89.5	M8	1150	227.5	M20
1090	106	M10	1160	260	M20
1100	121.5	M10	1170	306	M24
1110	136.5	M10	1180	341	M30
1120	150.5	M12	1190	393	M30
1130	185	M16	1200	414	M30

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Lubrication and handling

You should choose the high quality lubricant for a good performance and long life.

1) Grease Lubrication

Grease on the grid before assembling covers. Fill up grease through the lube plugs after assembled coupling.

2) Supplement and Replacement

Every three months or every 240 ~ 250 hours operating, you should add grease, Every 3 months, or every 4,000 hours operating, you should replace all the deteriorated grease.

3) Selection

You can choose grease according to the ambient temperature range in table 5.

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Common Industraial Lubricants(NLGI Grade #2)

Manufacturer	Ambient Temperature Range: 0°F to 150°F(-18℃ to 66℃)	-30°F to 100°F(-34℃ to 38℃)
Amoco Oil Co. Atlantic Richfield co. Chevron U.S.A Inc. Cities Service Co. Conoco Inc. Exxon Company, USA Gulf Oil Corp.	Amolith Grease #2 Litholene HEP 2 Chevron Dura - Lith EP-2 Citgo HEP-2 EP Conolith #2 Ronex MP Gulfcrown Grease #2 Cosmolube #2	Amolith Grease #2 Litholene HEP 2 Chevron Dura - Lith EP 2 Citgo HEP 2 EP Conolith #2 Ronex MP Gulfcrown Grease #2 Cosmolube #1 Lotemp EP

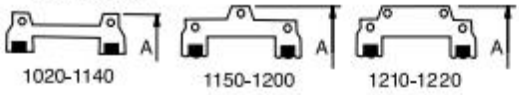
E.F.Houghton & Co. Ompenrial Oil Corp. Keystone Div.(Pennwalt) Mobil Oil Corp. Phillips Petroleum Co. Shell Oil Co. Standard Oil Co.(OH0 Sun Oil Company Texaco Lubricants Union Oil Co.(CA) Valvoline Oil Co.	Esso MP Grease H #81 Light Mobilux EP111 IB & RB Grease Alvania Grease #2 Factran #2 Prestige 42 Starplex HD2 Union Unoba #2 Val - Lith EP #2	#84 Light Mobilux #1 Philube IB & RB Grease Alvania Grease #2 Factran #2 Prestige 42 Multifak EP2 Union Unoba #2 Val - Lith EP #2

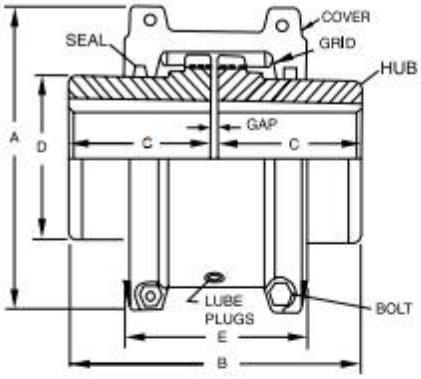
** Note : Check with lube manufacture for approved lubricants to use in the food processing industry

. .Dimensions

Type TH (Horizontal Split Aluminum Cover)

Cover Profiles

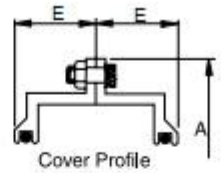




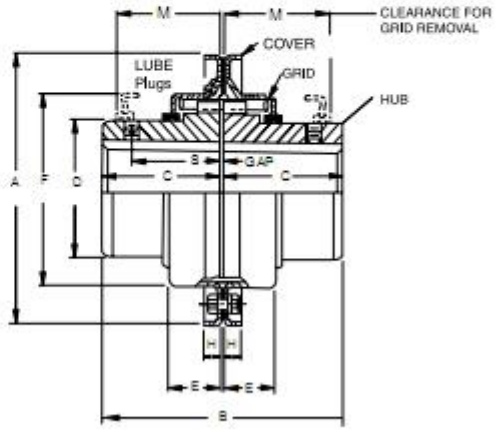
Size	Max. Speed (rpm)	Basic Torque (kg · cm)	Bore Dia (mm)		Dimensions(mm)					Gap (mm)	Cplg wt(kg)	Lube wt (kg)	Size
			Max.	Min.	A	B	C	D	E				
1020	4,500	486	28	12.7	101.6	98.0	47.5	39.7	66.5	3	1.9	0.03	1020
1030	4,500	1,383	35	12.7	110.0	98.0	47.5	49.2	68.3	3	2.6	0.03	1030
1040	4,500	2,304	43	12.7	117.5	104.6	50.8	57.1	70.0	3	3.4	0.05	1040
1050	4,500	4,033	50	12.7	138.0	123.6	60.3	66.7	79.5	3	5.4	0.05	1050
1060	4,350	6,337	56	19.1	150.5	130.0	63.5	76.2	92.0	3	7.3	0.09	1060
1070	4,125	9,217	67	19.1	161.9	155.4	76.2	87.3	95.0	3	10	0.11	1070
1080	3,600	19,010	80	27.0	194.0	180.8	88.9	104.8	116.0	3	18	0.17	1080
1090	3,600	34,564	95	27.0	213.0	199.8	98.4	123.8	122.0	3	25	0.25	1090
1100	2,400	58,183	110	41.3	250.0	245.7	120.6	142.0	155.5	4.5	42	0.43	1100
1110	2,250	86,411	120	41.3	270.0	258.5	127.0	160.3	161.5	4.5	54	0.51	1110
1120	2,025	126,736	140	60.3	308.0	304.4	149.2	179.4	191.5	6	81	0.73	1120
1130	1,800	184,343	170	66.7	346.0	329.8	161.9	217.5	195.0	6	121	0.91	1130
1140	1,650	264,993	200	66.7	384.0	374.2	184.1	254.0	201.0	6	178	1.13	1140
1150	1,500	368,686	215	108	453.1	371.8	182.9	269.2	271.3	6	234	1.95	1150
1160	1,350	518,465	240	120.7	501.4	402.2	198.1	304.8	278.9	6	317	2.81	1160
1170	1,225	691,286	280	133.4	566.4	437.8	215.9	355.6	304.3	6	448	3.49	1170
1180	1,100	958,584	300	152.4	629.9	483.6	238.8	393.7	321.1	6	619	3.76	1180
1190	1,050	1,267,358	335	152.4	675.6	524.2	259.1	436.9	325.1	6	776	4.40	1190
1200	900	1,728,216	360	177.8	756.9	564.8	279.4	497.8	355.6	6	1,058	5.62	1200
1210	820	2,539,000	390	178	844.5	622.3	304.8	533.4	431.8	12.7	1,424	10.5	1210
1220	730	3,426,200	420	203	920.7	662.9	325.1	571.5	490.2	12.7	1,785	16.1	1220

※ Coupling 중량은 내경 가공이 없는 상태의 수치임.

※ Coupling weight, without bore machining



Cover Profile
Size 1150-1200

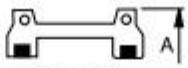


Size	Max. Speed (rpm)	Basic Torque (kg · cm)	Bore Dia (mm)		Dimensions(mm)					Gap (mm)	Cplg wt(kg)	Lube wt (kg)	Size
			Max.	Min.	A	B	C	D	E				
1020	6,000	486	28	12.7	111.1	98.0	47.5	39.7	24.2	3	2.0	0.03	1020
1030	6,000	1,383	35	12.7	120.7	98.0	47.5	49.2	25.0	3	2.6	0.03	1030
1040	6,000	2,304	43	12.7	128.5	104.6	50.8	57.1	25.7	3	3.4	0.05	1040
1050	6,000	4,033	50	12.7	147.6	123.6	60.3	66.7	31.2	3	5.4	0.05	1050
1060	6,000	6,337	56	19.1	162.0	130.0	63.5	76.2	32.2	3	7.3	0.09	1060
1070	5,500	9,217	67	19.1	173.0	155.4	76.2	87.3	33.7	3	10.4	0.11	1070
1080	4,750	19,010	80	27.0	200.0	180.8	88.9	104.8	44.2	3	17.7	0.17	1080
1090	4,000	34,564	95	27.0	231.8	199.8	98.4	123.8	47.7	3	25.4	0.25	1090
1100	3,250	58,183	110	41.3	266.7	245.7	120.6	142.0	60.0	4.5	42.2	0.43	1100
1110	3,000	86,411	120	41.3	285.8	258.5	127.0	160.3	64.2	4.5	54.4	0.51	1110
1120	2,700	126,736	140	60.3	319.0	304.4	149.2	179.4	73.4	6	81.6	0.73	1120
1130	2,400	184,343	170	66.7	377.8	329.8	161.9	217.5	75.1	6	122.5	0.91	1130
1140	2,200	264,993	200	66.7	416.0	374.2	184.1	254.0	78.2	6	180.1	1.13	1140
1150	2,000	368,686	215	108.0	476.3	371.8	182.9	269.2	106.9	6	230.0	1.95	1150
1160	1,750	518,465	240	120.7	533.4	402.2	198.1	304.8	114.3	6	321.1	2.81	1160
1170	1,600	691,286	280	133.4	584.2	437.8	215.9	355.6	119.4	6	448.2	3.49	1170
1180	1,400	958,584	300	152.4	630.0	483.6	238.8	393.7	130.0	6	591.0	3.76	1180
1190	1,300	1,267,358	335	152.4	685.0	524.2	259.1	436.9	135.0	6	761.0	4.40	1190
1200	1,100	1,728,216	360	177.8	737.0	564.8	279.4	497.8	145.0	6	1,021.0	5.62	1200

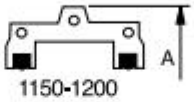
※ Coupling 중량은 내경 가공이 없는 상태의 수치임.

※ Coupling weight, without bore machining

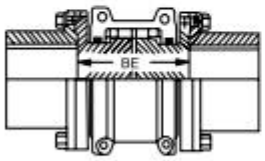
Cover Profiles



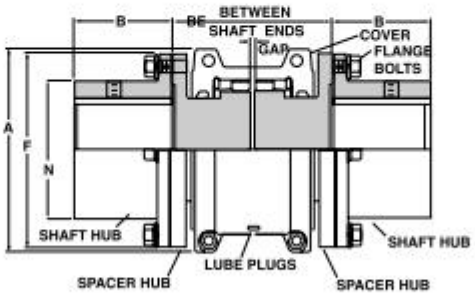
1020-1140

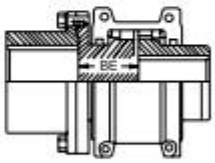


1150-1200



(FULL SPACER)

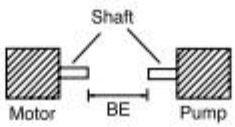




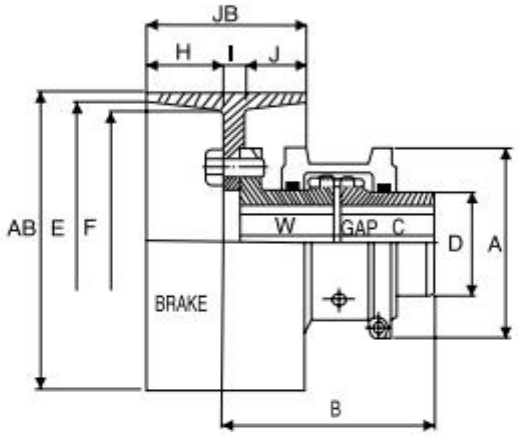
(HALF SPACER)

Size	Max. Speed (rpm)	Basic Torque (kg · cm)	Bore Dia (mm)		Dimensions(mm)								Gap (mm)	Flange Bolt No.	Lube wt (kg)	Size
					A	B	BE(TFS)		BE(THS)		N	F				
			Max.	Min.			Min.	Max.	Min.	Max.						
1020	3,600	486	35	12.7	101.6	35	89	203	45	102	52	86	5	4	0.03	1020
1030	3,600	1,383	43	12.7	111.0	41	89	216	45	109	59	94	5	8	0.03	1030
1040	3,600	2,304	56	12.7	117.5	54	89	216	45	109	78	113	5	8	0.05	1040
1050	3,600	4,033	67	12.7	138.0	60	112	216	57	109	87	126	5	8	0.05	1050
1060	3,600	6,337	80	19.1	150.5	73	127	330	64	166	103	145	5	8	0.09	1060
1070	3,600	9,217	85	19.1	161.9	79	127	330	64	166	109	153	5	12	0.11	1070
1080	3,600	19,010	95	27.0	194.0	89	184	406	93	204	122	178	5	12	0.17	1080
1090	3,600	34,564	110	27.0	213.0	102	184	406	93	204	142	210	5	12	0.25	1090
1100	2,400	58,183	130	38.1	250.0	90	203	406	103	205	171	251	6.5	12	0.43	1100
1110	2,250	86,411	150	50.8	270.0	104	210	406	106	205	196	277	6.5	12	0.51	1110
1120	2,025	126,736	170	63.5	308.0	119	246	406	125	205	225	319	9.5	12	0.73	1120
1130	1,800	184,343	190	76.2	346.0	135	257	406	130	205	238	346	9.5	12	0.91	1130
1140	1,650	264,993	210	88.9	384.0	152	267	406	135	205	266	386	9.5	12	1.13	1140
1150	1,500	368,686	270	101.6	453.1	173	345	371	175	187	334	425	9.5	14	1.95	1150
1160	1,350	518,465	290	114.3	501.4	186	356	406	180	205	366	457	9.5	14	2.81	1160
1170	1,225	691,286	340	127.0	566.4	220	384	445	194	224	425	527	9.5	16	3.49	1170
1180	1,100	958,584	340	101.6	629.9	249	400	490	202	247	451	591	9.5	16	3.76	1180
1190	1,050	1,267,358	380	114.3	675.6	276	411	530	207	267	508	660	9.5	18	4.40	1190
1200	900	1,728,216	400	127.0	756.9	305	445	575	224	289	530	711	9.5	18	5.62	1200

※ BE는 Shaft의 끝과 끝의 거리(Between Shaft Ends)를 말함. 주문할 때에는 BE를 정확히 알려주어야 함.



※ BE means the distants between shaft ends. Do not miss to tell on ordering.



Cplg Size	Standard Brake Wheel	
	Motor Power (40% ED KW)	Brake Torque (kg · m)
1020		
1030		
1040	2.2	5
1050	5.5	10
1060	5.5 7.5 11	10 14 21.2
1070	15	30
1080	30	53
1090	75 90	63 80
1100	45	132
1110	75 90	180
1120	110 132	335
1130	160 200	400 475
1140	160 200	400 475

※ Motor는 권선형 Crane용 기준.

Basic Torque (kg · cm)	Brake wheel Size (mm)		Size	Max.Brake Rating of CPLG(kg·cm)	Bore Dia (mm)		Dimensions(mm)								Gap (mm)	Lube wt (kg)	Size
	AB	JB			Max.	Min.	A	C	D	E	F	H	I	J			
486			1020	110	28	12.7	101.6	47.5	39.7						3	0.03	1020
1,383			1030	359	35	12.7	110.0	47.5	49.2						3	0.03	1030
2,304	160	80	1040	663	43	12.7	117.5	50.8	57.1	145	140	40	12	28	3	0.05	1040
4,033	200	100	1050	1,202	50	12.7	138.0	60.3	66.7	184	178	50	17	33	3	0.05	1050
6,337	200	100	1060	2,129	56	19.1	150.5	63.5	76.2	184	178	50	17	33	3	0.09	1060
9,217	250	125	1070	3,373	67	19.1	161.9	76.2	87.3	230	224	62.5	22	40.5	3	0.11	1070
19,010	315	160	1080	6,497	80	27.0	194.0	88.9	104.8	292	285	80	23	57	3	0.17	1080
34,564	355	180	1090	11,060	95	27.0	213.0	98.4	123.8	330	320	90	26	64	3	0.25	1090
58,183	400	200	1100	19,355	110	41.3	250.0	120.6	142.0	374	362	100	28	72	5	0.43	1100
86,411	450	224	1110	29,032	120	41.3	270.0	127.0	160.3	422	410	112	32	80	5	0.51	1110
126,736	500	250	1120	44,240	140	60.3	308.0	149.2	179.4	462	445	125	35	90	6	0.73	1120
184,343	560	280	1130	66,212	170	66.7	346.0	161.9	217.5	516	495	140	45	95	6	0.91	1130
264,993	560	280	1140	89,862	200	66.7	384.0	182.8	254.0	516	495	140	45	95	6	1.13	1140

※ TBW Type의 제작에는 각사에서 사용하고자 하는 Breake의 Size를 결정한 후 상기 Dimension에 의거 'B'와 'W'를 정한다. 기타 Dimension에 사양이 없는 부분은 당사에 문의하면 당사에서 방문하여 결정함.

Firstly, determine the brake size of you coupling and then check the 'W' dimensions from the above chart. For further information, please contact us.