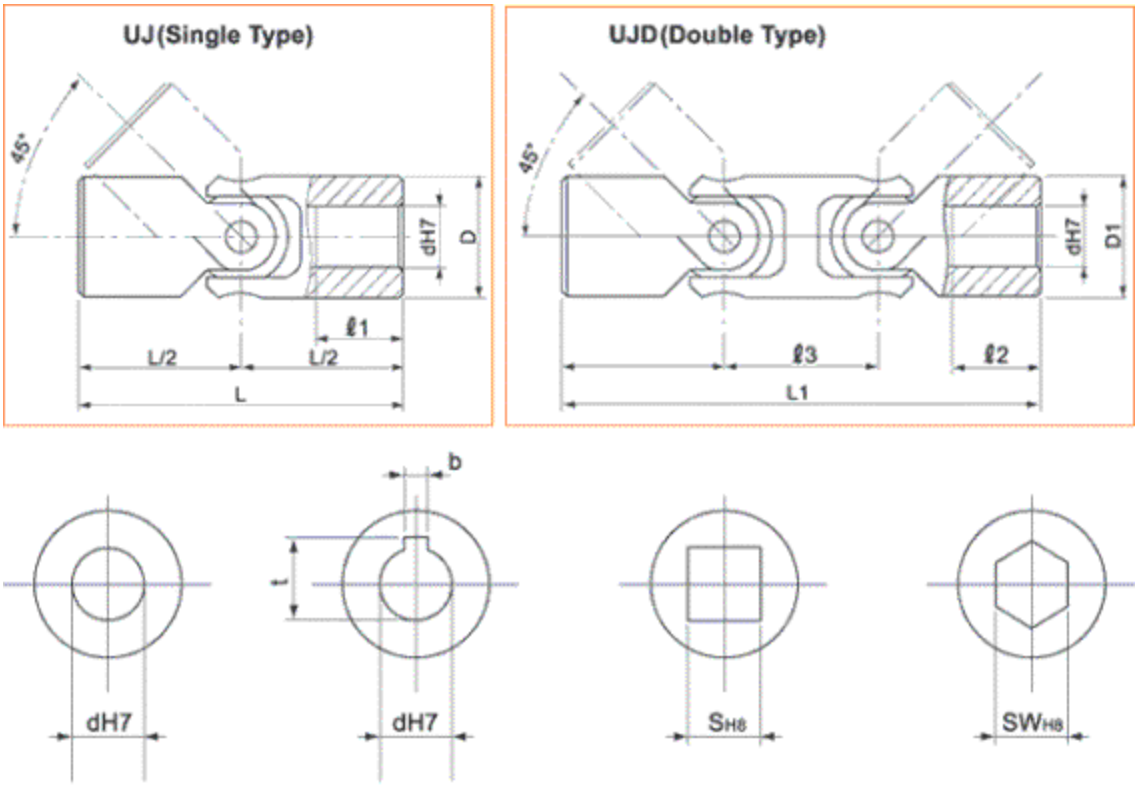
Universal Joints

General Light Series Joints



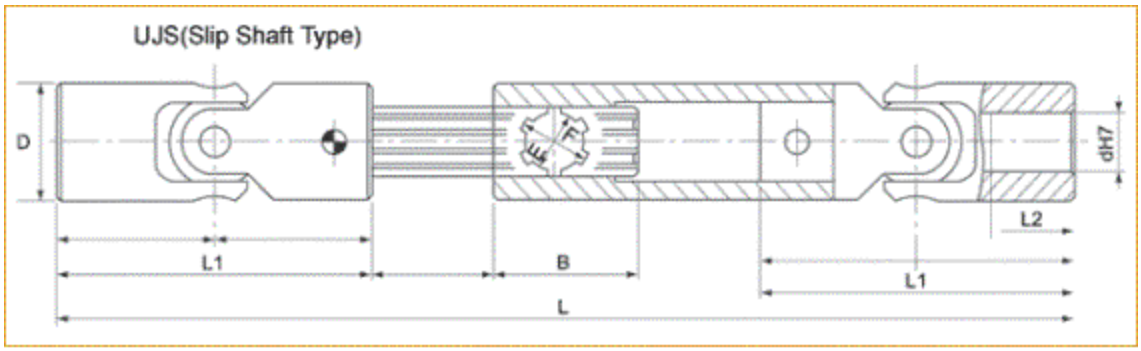
◈ **Dimensions**

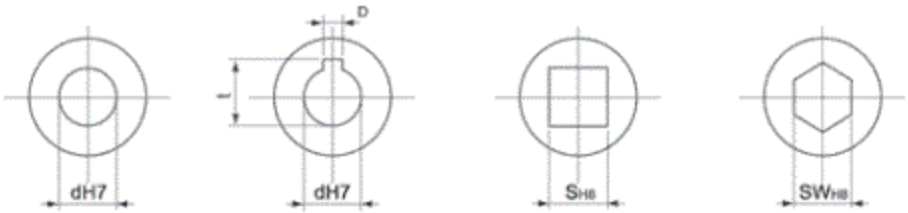
Normal execution is with circular bore keyways – square – hexagon – or request

TYPE		d	D	D1	L	L1	l1	l2	l3	S	SW	bxt
Single	Double											
WCC-UJ05	-	5	13	-	40	-	13	-	-	-	-	-
WCC-UJ06	-	6	13	-	40	-	13	-	-	6	-	-
WCC-UJ08	-	8	16	-	40	-	10	-	-	8	-	2*9
WCC-UJ10	-	10	20	-	62	-	19	-	-	10	10	3*11.4
WCC-UJ12	UJD-12	12	25	25	74	86	23	19	33	12	12	4*13.9
WCC-UJ14	UJD-14	14	29	25	74	95	23	21	33	14	14	5*16.3

WCC-UJ16	UJD-16	16	32	32	86	104	26	21	35	16	16	5*18.3
WCC-UJ18	UJD-18	18	37	37	120	180	41	54	39	18	18	6*20.8
WCC-UJ20	UJD-20	20	40	40	108	128	32	21	46	20	20	6*22.8
WCC-UJ22	UJD-22	22	47	47	130	200	41	54	46	22		6*24.8
WCC-UJ25	UJD-25	25	50	50	132	163	41	25	59	25	25	8*28.3
WCC-UJ30	UJD-30	30	58	58	166	182	52	30	66	30	30	8*33.8
WCC-UJ35	UJD-35	35	70	70	140/200	212/310	35/65	30/79	78	AS ON REQUEST		
WCC-UJ40	UJD-40	40	80	80	160/228	245/350	42/76	38/90	95			
WCC-UJ50	UJD-50	50	95	95	190/270	290/426	54/94	50/118	120			

Slip Shafts Series Joints





◈ Dimensions

Nomal execution is with circular bore keyways- square - hexagon – or request

TYPE	d	D	L1	L2	B	E/F	S	SW	bxt
WCC-UJS 10	10	22	45	10	40	11/14	10	10	3*11.4
WCC-UJS 12	12	25	50	11	45	13/16	12	12	4*13.8
WCC-UJS 14	14	29	56	13	48	13/16	14	14	5*16.3
WCC-UJS 16	16	32	65	15	50	16/20	16	16	5*18.3
WCC-UJS 18	18	37	72	17	51	16/20	18	18	6*20.8

WCC-UJS 20	20	40	82	19	56	18/22	20	20	6*22.8
WCC-UJS 22	22	47	95	22	60	21/25	22	22	6*24.8
WCC-UJS 25	25	50	108	27	69	23/28	25	25	8*28.3
WCC-UJS 30	30	58	122	30	70	26/32	30	30	8*33.8
WCC-UJS 35	35	70	140	35	70	28/35	35	35	10*38.3
WCC-UJS 40	40	80	160	42	75	33/40	40	40	12*43.3
WCC-UJS 50	50	95	190	54	80	43/50	50	50	14*53.8

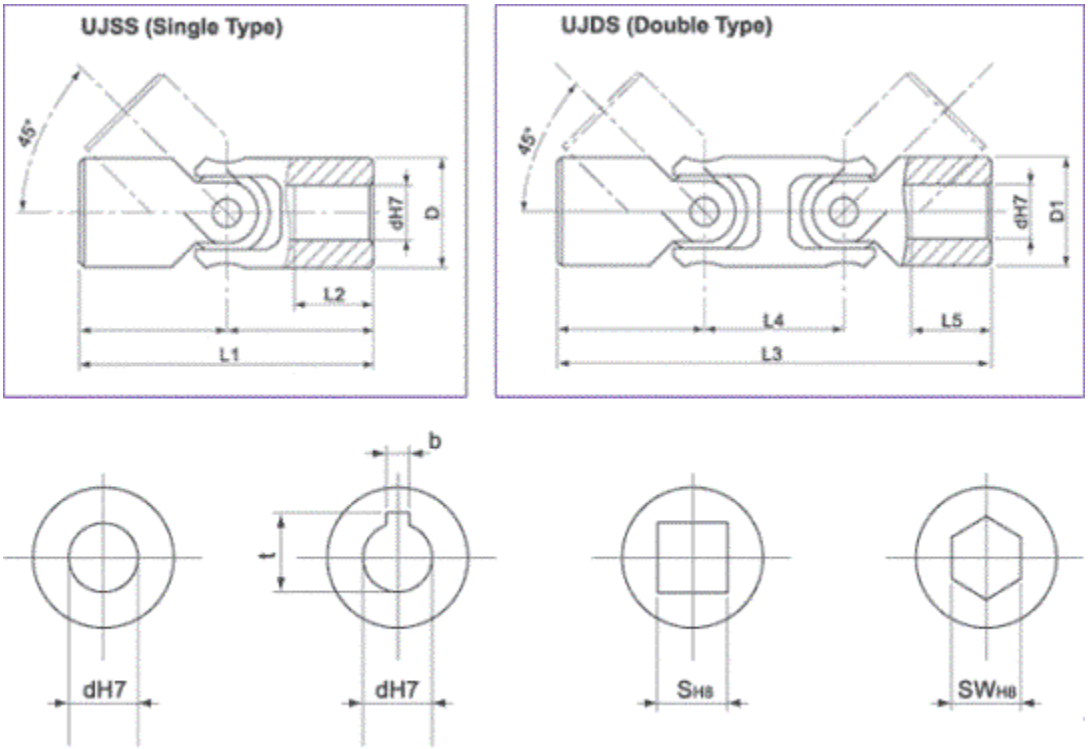
◈"L" length or request

min.L = (2 * L1) + B + C

max.L= (2 * L1) + B + (2 * C)

C – max.L – min.L

High Precision Cardan Joints Stainless Steel



◈**Demensions**

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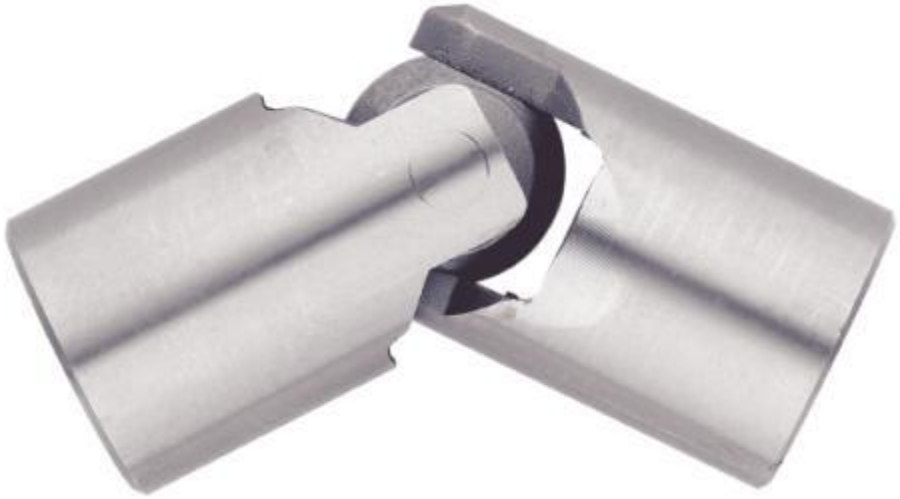
Normal execution is with circular bore keyways – square – hexagon –or request.

SINGLE JOINTS					DOUBLE JOINTS						BORES ON REQUEST		
TYPE	dH7	D	L1	L2	TYPE	dH7	D1	L3	L4	L5	S	SW	bxt
WCC-UJSS5	5	13	40	13	-	-	-	-	-	-	-	-	-
WCC-UJSS6	6	13	40	13	-	-	-	-	-	-	6	-	-
WCC-UJSS8	8	16	40	10	-	-	-	-	-	-	8	-	2*9
WCC-UJSS10	10	20	62	19	-	-	-	-	-	-	10	10	3*11.4
WCC-UJSS12	12	25	74	23	WCC-UJDS12	12	25	86	33	19	12	12	4*13.8
WCC-UJSS14	14	29	74	23	WCC-UJDS14	14	25	95	33	21	14	14	5*16.3
WCC-UJSS16	16	32	86	26	WCC-UJDS16	16	32	104	35	21	16	16	5*18.3
WCC-UJSS18	18	37	120	41	WCC-UJDS18	18	37	180	39	54	18	18	6*20.8
WCC-UJSS20	20	40	108	32	WCC-UJDS20	20	40	128	46	21	20	20	6*22.8
WCC-UJSS22	22	47	130	41	WCC-UJDS22	22	47	200	46	54	22	22	6*24.8
WCC-UJSS25	25	50	132	41	WCC-UJDS25	25	50	163	59	25	25	25	8*28.3
WCC-UJSS30	30	58	166	52	WCC-UJDS30	30	58	182	66	30	30	30	8*33.8
WCC-UJSS35	35	70	140	35	WCC-UJDS35	35	70	212	78	30	AS ON REQUEST		
WCC-UJSS40	40	80	160	42	WCC-UJDS40	40	80	245	95	38			
WCC-UJSS50	50	95	190	54	WCC-UJDS50	50	95	290	120	50			

General Type and Shaft Slip Type TORSION MOMENT



TYPE		100	200	300	400	500	700	800
-	WCC-UJ5	5.5	5	4.2	3.8	3.5	-	-
-	WCC-UJ6	6.6	6.6	5.3	4.8	4.4	-	-
-	WCC-UJ8	13	9	8	7	6	5.2	4.7
WCC-UJS10	WCC-UJ10	23	15	13.5	12	11	10	7
WCC-UJS12	WCC-UJ12	40	23	18.5	16	14	11	9
WCC-UJS14	WCC-UJ14	60	40	35	33	30	26	22
WCC-UJS16	WCC-UJ16	80	80	68	55	50	43	34
WCC-UJS18	WCC-UJ18	150	110	90	68	58	54	-
WCC-UJS20	WCC-UJ20	200	160	110	90	80	72	-
WCC-UJS22	WCC-UJ22	280	180	130	110	93	-	-
WCC-UJS25	WCC-UJ25	350	220	160	140	115	-	-
WCC-UJS30	WCC-UJ30	400	250	185	150	128	-	-

for double joints use the nalue equivalent to 90% of the mentioned torsion moments. (Unit:Nm)

1Kgm = 9.80665Nm

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Stainless Steel TORSION MOMENT

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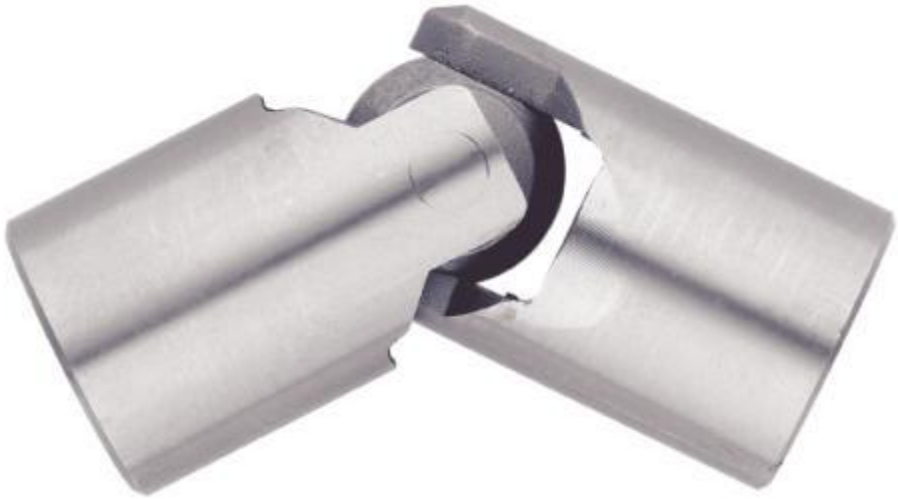

TYPE	100	200	300	400	500	700	800
WCC-UJSS5	3.6	3.3	2.8	2.5	2.3	-	-
WCC-UJSS6	4.4	4.4	3.5	3.2	2.9	-	-
WCC-UJSS8	8.6	6	5.3	4.6	4	3.4	3.1
WCC-UJSS10	12.3	8.3	7	6.4	5.8	5.2	3.5
WCC-UJSS12	21	12.6	10	8	7.3	6.3	5.8
WCC-UJSS14	33	21.3	19.3	17.6	16.3	13.3	12.6
WCC-UJSS16	45	42	35.3	28	25.3	20	17.3
WCC-UJSS18	76	60	46.6	35.3	29.3	23.3	-
WCC-UJSS20	117	84	58.6	46.6	41.3	29.3	-
WCC-UJSS22	146	96	70	58.6	46.6	35.3	-
WCC-UJSS25	192	120	84	72	60	48	-
WCC-UJSS30	219	132	96	78	66	-	-

for double joints use the nalue equivalent to 90% of the mentioned torsion moments. (Unit:Nm)

1Kgm = 9.80665Nm

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CRITERIA FOR SELECTION OF JOINTS

The tables give the maximum allowable torque(expressed in Kgm.)caculated on the basis with an angle of inclination of 10˚ and continuous use.

If the inclination angle is over 10˚ the values shown will be reduced in accordance with the torque factors shown below.

ANGLE UP TO	FACTOR F
5˚	1.25
10˚	1
20˚	0.75
30˚	0.45
40˚	0.30

Example

Criteria for selection of joint after taking into account the power to be transmitted. The speed and the angle of inclination.

Power(N) 3HP speed(n) 2,000rpm angle(α) 20˚

$$\text{TORQUE MOMENT(Mt)} = \frac{716.2 \times N}{n} = \frac{716.2 \times N}{n} = 1,074\text{Kgm.}$$

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The torque to be transmitted is 1074Kgm. But since the joint angle is 20˚ one must select a joint of larger dimensions and torque carrying capacity to compensate.

Since the torque factor for 20˚ is 0.75(as indicated on the table)one divides the Mt by F.

$$\frac{MT}{F} = \frac{1.074}{0.75} \quad MT\ 1,432Kgm.$$

The appropriate joint should have a torque capability of 1.432Kgm. or greater which os selected from the table of joints.

Pay attention that 1Kgm. = 9.80665 Nm.

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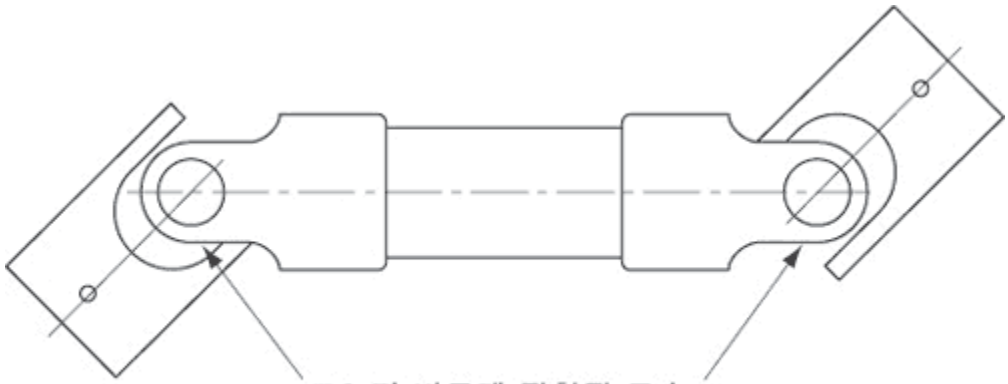
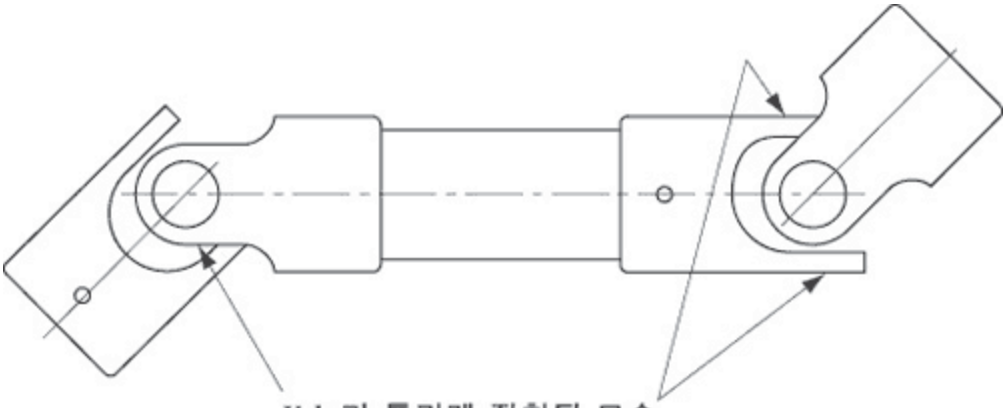
INSTALLATION AND MAINTENANCE

RIGHT



*Yoke*가 바르게 장착된 모습
Yokes on right position

WRONG



*Yoke*가 틀리게 장착된 모습
Yokes in wrong position

CAUTION

The premise for perfect working of shafts with universal joints is the scrupulous observation of the following installation conditions

To obtain uniformity of movement it is essential that the angles of the two shafts should be equal and lie in the same plane.

The input shaft and the driven shaft can only be disposed parallel to each other in order not to produce resulting angular velocity variations which have not been compensated.

The shaft support bearings should situated as close as possible to the joints to reduce radial loads.