

Clevises

Connecting links, end links, and inner links can all be used for Leaf Chain end fittings. When connecting end links (outer link, inner link), use the types of clevises shown below. AL8 and BL8 and larger are also available. Contact a Tsubaki representative.

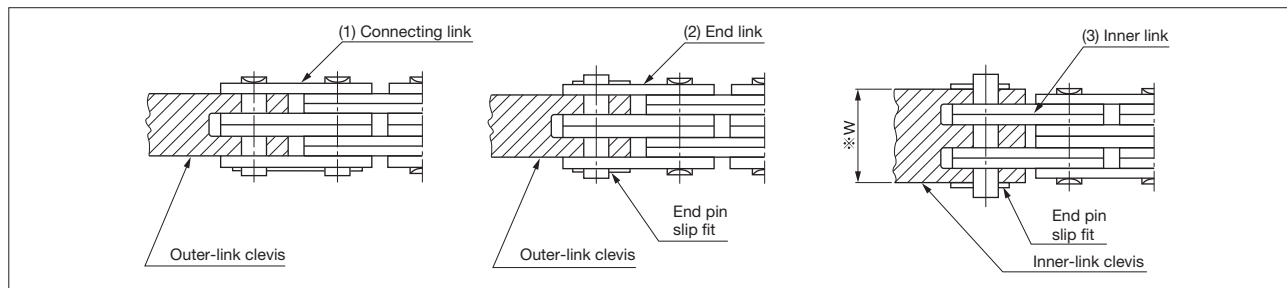
◆ Connecting Leaf Chain to a clevis

1. Connecting the chain end to a (1) connecting link or (2) end link.

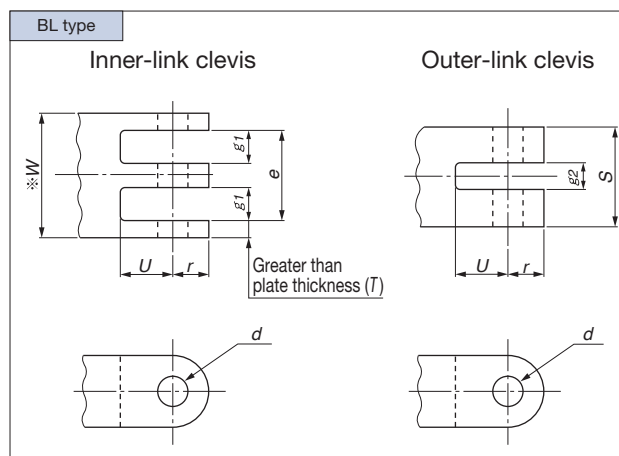
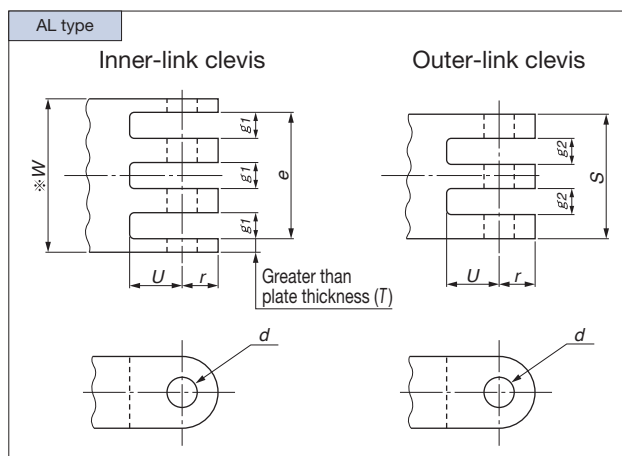
Connect an outer-link clevis to the connecting link or end link.

2. Connecting the chain end to a (3) inner link.

Connect an inner-link clevis to the end pin. The end pin length varies according to the external width (W) of the clevis. Tsubaki can also manufacture end pins to your specifications. When requesting a quote, specify the W dimension (total width when parts other than metal fittings are sandwiched in-between).



◆ Clevis dimensions



■ AL type dimensions

Size	d	r (max.)	U (min.)	e $^{+0.2}_{0}$	g_1 $^{+0.1}_{0}$	S $^{0}_{-0.2}$	g_2 $^{+0.1}_{0}$
AL422				—		3.1	—
AL444	$^{+0.05}_{0}$ 4.02	6.3	6.0	9.8	3.4	9.5	3.4
AL466				16.2		15.9	3.4
AL522				—		4.1	—
AL544	$^{+0.05}_{0}$ 5.13	7.9	7.2	12.9	4.4	12.6	4.4
AL566				21.3		21.0	4.4
AL622				—		4.8	—
AL644	$^{+0.05}_{0}$ 6.00	9.5	9.0	15.0	5.1	14.7	5.1
AL666				24.8		24.5	5.1
AL822				—		6.4	—
AL844	$^{+0.1}_{0}$ 7.97	12.7	11.5	20.3	6.9	19.8	6.9
AL866				33.7		33.2	6.9
AL1022				—		8.0	—
AL1044	$^{+0.1}_{0}$ 9.57	15.8	14.5	25.1	8.5	24.6	8.5
AL1066				41.7		41.2	8.5
AL1222				—		9.6	—
AL1244	$^{+0.1}_{0}$ 11.14	19.0	17.5	29.9	10.1	29.4	10.1
AL1266				49.7		49.2	10.1
AL1444	$^{+0.1}_{0}$ 12.74	22.2	20.0	35.1	11.9	34.5	11.9
AL1466				58.3		57.7	11.9
AL1644	$^{+0.1}_{0}$ 14.32	25.4	23.0	39.9	13.5	39.2	13.5
AL1666				66.3		65.6	13.5

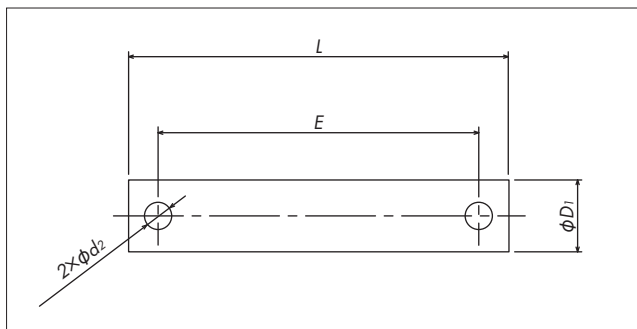
Note: Use an alloy steel material (SCM435, etc.) and sufficiently heat-treat to the core to attain a hardness of HRC40 to 45. For clevises with screws, however, the hardness must be HRC30 to 35 in order to reduce any hazard due to delayed fractures.

■ BL type dimensions

Size	d	r (max.)	U (min.)	e $^{+0.2}_{0}$	g_1 $^{+0.1}_{0}$	S $^{0}_{-0.2}$	g_2 $^{+0.1}_{0}$
BL423				—	6.5	6.2	—
BL434	$^{+0.05}_{0}$ 5.13	6.3	6.3	10.7	4.4	10.4	2.3
BL446				17.1	6.5	16.8	4.4
BL523				—	7.6	7.3	—
BL534	$^{+0.05}_{0}$ 6.00	7.9	7.9	12.5	5.1	12.2	2.6
BL546				19.9	7.6	19.6	5.1
BL623				—	10.3	9.8	—
BL634	$^{+0.1}_{0}$ 7.97	9.5	9.5	17.0	6.9	16.5	3.6
BL646				27.0	10.3	26.5	6.9
BL823				—	12.7	12.2	—
BL834	$^{+0.1}_{0}$ 9.57	12.7	12.7	21.0	8.5	20.5	4.4
BL846				33.4	12.7	32.9	8.5
BL1023				—	15.1	14.6	—
BL1034	$^{+0.1}_{0}$ 11.14	15.8	15.8	25.0	10.1	24.5	5.2
BL1046				39.8	15.1	39.3	10.1
BL1223				—	17.7	17.1	—
BL1234	$^{+0.1}_{0}$ 12.74	19.0	19.0	29.3	11.9	28.7	6.1
BL1246				46.7	17.7	46.1	11.9
BL1423				—	20.1	19.4	—
BL1434	$^{+0.1}_{0}$ 14.32	22.2	22.2	33.3	13.5	32.6	6.9
BL1446				53.1	20.1	52.4	13.5
BL1623				—	23.1	22.1	—
BL1634	$^{+0.1}_{0}$ 17.49	25.4	25.4	38.2	15.6	37.2	8.0
BL1646				60.9	23.1	59.9	15.6

Note: For sizes not listed in this table, contact a Tsubaki representative.

End Pins (For End Links)



AL type dimensions

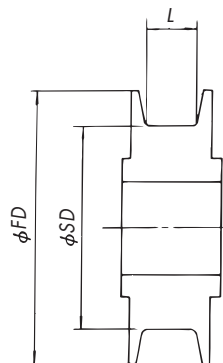
Size	E (min.)	L (max.)	D ₁ (max.)	d ₂
AL422	7.4	11.2	3.96	1.2
AL444	13.9	17.7		
AL466	20.4	24.2		
AL522	10.0	14.0	5.06	1.6
AL544	18.5	22.5		
AL566	27.0	31.0		
AL622	11.8	16.5	5.92	2.0
AL644	21.7	26.4		
AL666	31.6	36.3		
AL822	15.85	22.1	7.88	2.5
AL844	29.25	35.5		
AL866	42.7	49.0		
AL1022	19.05	26.6	9.48	2.5
AL1044	35.7	43.3		
AL1066	52.3	59.9		
AL1222	22.7	31.5	11.04	3.0
AL1244	42.55	51.4		
AL1266	62.35	71.2		
AL1444	50.25	60.3	12.64	4.0
AL1466	73.45	83.5		
AL1644	56.65	68.0	14.21	4.0
AL1666	83.05	94.4		

BL type dimensions

Size	E (min.)	L (max.)	D ₁ (max.)	d ₂
BL423	12.15	16.1	5.06	1.6
BL434	16.4	20.4		
BL446	22.75	26.8		
BL523	14.3	19.0	5.92	2.0
BL534	19.25	24.0		
BL546	26.65	31.4		
BL623	19.2	25.5	7.88	2.5
BL634	25.9	32.2		
BL646	36.0	42.3		
BL823	23.2	30.8	9.48	2.5
BL834	31.5	39.1		
BL846	44.0	51.6		
BL1023	27.65	36.4	11.04	3.0
BL1034	37.6	46.4		
BL1046	52.45	61.3		
BL1223	32.8	42.9	12.64	4.0
BL1234	44.45	54.6		
BL1246	61.85	72.0		
BL1423	36.85	48.2	14.21	4.0
BL1434	50.05	61.4		
BL1446	69.85	81.2		
BL1623	42.6	56.5	17.38	5.0
BL1634	57.7	71.6		
BL1646	80.35	94.3		

Note: Contact a Tsubaki representative for dimensions for BL_22, BL_44, and BL_66 Leaf Chain.

Sheaves



SD = Minimum external sheave diameter = chain pitch x 5
 L = Minimum groove width = pin length x 1.05
 FD = Flange external diameter
 = SD + maximum plate height (H)

AL type dimensions (examples)

Chain pitch	Min. external sheave dia. SD	Flange external dia. FD	Min. groove width L		
			2x2	4x4	6x6
12.70	63.50	73.90	8.85	15.60	22.40
15.875	79.38	92.38	11.40	20.35	29.20
19.05	95.25	110.85	13.30	23.70	34.10
25.40	127.00	147.80	17.20	31.30	45.40
31.75	158.75	184.75	21.10	38.55	56.00
38.10	190.50	221.70	25.45	46.20	67.05
44.45	222.25	258.65	—	53.90	78.30
50.80	254.00	295.60	—	61.00	88.70

Note: 1. Dimensions for L in the table above assume that only the chain riveting pin is wound around the sheave. If a connecting link pin is wound around the sheave, use $L \geq 2 (L_2) \times 1.05$. Design L with an appropriate width while minding the installation precision of the sheave.

2. Use sheaves made of machine-structural carbon copper. (S45C, etc.)
3. Use heat-treated HRC (35 to 40) for high-repetition applications.

BL type dimensions (examples)

Chain pitch	Min. external sheave dia. SD	Flange external dia. FD	Min. groove width L		
			2x2	4x4	6x6
12.70	63.50	75.50	13.60	18.10	24.80
15.875	79.38	94.38	15.90	21.15	28.90
19.05	95.25	113.35	20.75	27.80	38.35
25.40	127.00	151.10	25.45	34.20	47.25
31.75	158.75	188.85	30.35	40.80	56.40
38.10	190.50	226.70	35.60	47.80	66.10
44.45	222.25	264.45	40.15	54.00	74.85
50.80	254.00	302.20	45.45	61.35	85.15

Note: 1. Contact a Tsubaki representative for dimensions for BL_22, BL_44, and BL_66 Leaf Chain.

2. Dimensions for L in the table above assume that only the chain riveting pin is wound around the sheave. If a connecting link pin is wound around the sheave, use $L \geq 2 (L_2) \times 1.05$. Design L with an appropriate width while minding the installation precision of the sheave.
3. Use sheaves made of machine-structural carbon copper. (S45C, etc.)
4. Use heat-treated HRC (35 to 40) for high-repetition applications.