

DBC Leaf Chain



■ Application

Leaf Chain consists of only Link Plates and Pins, and is generally used in lifting applications such as Lifting Machinery, Forklift Truck, Hydraulic & Pneumatic Jack Fittings, Counterweight Balancing for Sliding Doors, which move at slow speed.

■ Structure

• Link Plate

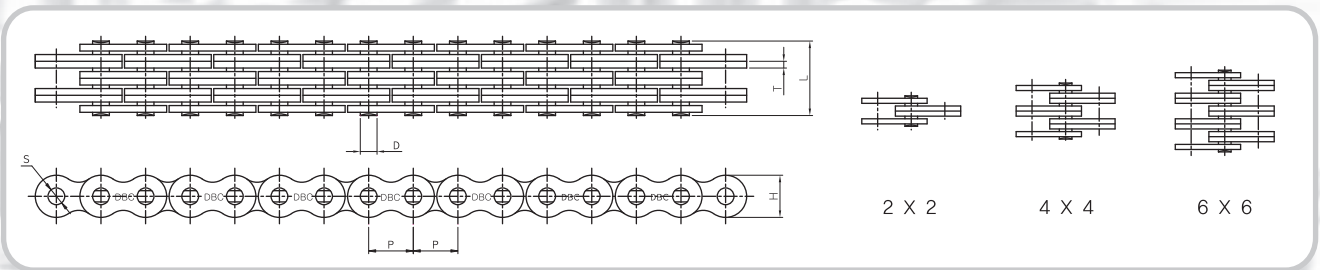
Plates are made from a special steel (Carbon Steel or Alloy Steel) which withstand a sudden loads and provide maximum resistance to breakage by special heat treatment.

• Bearing Pin

Pins are manufactured from special steel (Alloy Steel) which has an excellent resistance to bending by case hardened treatment or thru hardened treatment, it can be additionally made by induction treatment to improve hardness.

• AL Series (Light Duty, American Standard ANSI B29-8)

The Pin link plates have the contour, pitch and thickness of the pin link plates of corresponding ANSI standard roller chain.



Dimension for AL series

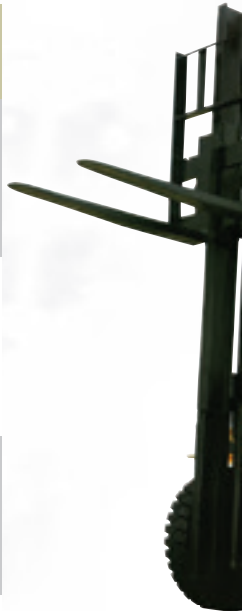
ANSI Chain NO.	Pitch	Lacing	Tensile Strength (Min.) kgf	Plate		Pin		Approx. Weight kg/m
	P mm			Thickness T mm	Height H mm	Dia. D mm	Length L mm	
AL 422	12.7	2 x 2	1,500	1.5	10.4	3.98	8.1	0.38
AL 444		4 x 4	3,000				14.4	0.74
AL 466		6 x 6	4,500				20.6	1.10
AL 522	15.875	2 x 2	2,500	2.0	13.0	5.09	10.7	0.62
AL 544		4 x 4	5,000				19.3	1.22
AL 566		6 x 6	7,600				27.9	1.81
AL 622	19.05	2 x 2	3,400	2.4	15.6	5.96	12.9	0.87
AL 644		4 x 4	6,900				22.9	1.71
AL 666		6 x 6	10,000				33.1	2.54
AL 688		8 x 8	16,000				43.2	3.49
AL 822	25.4	2 x 2	6,000	3.2	20.8	7.94	16.6	1.51
AL 844		4 x 4	12,000				29.8	2.98
AL 866		6 x 6	17,900				43.1	4.44
AL 1022	31.75	2 x 2	8,700	4.0	26.0	9.54	20.7	2.69
AL 1044		4 x 4	17,500				37.3	5.31
AL 1066		6 x 6	26,300				53.8	7.93
AL 1222	38.1	2 x 2	12,400	4.8	31.2	11.11	23.6	3.57
AL 1244		4 x 4	24,900				42.1	7.07
AL 1266		6 x 6	37,400				61.1	10.56
AL 1288		8 x 8	58,000				84.8	14.30
AL 1444	44.45	4 x 4	31,400	5.6	36.4	12.70	51.1	10.34
AL 1466		6 x 6	47,200				73.9	15.16
AL 1644	50.8	4 x 4	39,700	6.4	41.6	14.29	59.5	12.98
AL 1666		6 x 6	59,600				85.5	19.41

• **BL(LH) Series(Heavy Duty, American Standard B29-8)**

Heavy-Duty Leaf Chain has the contour and pitch of the roller link plates of equivalent ANSI standard roller chain but the side plates have the thickness of the next larger pitch ANSI standard roller chain.

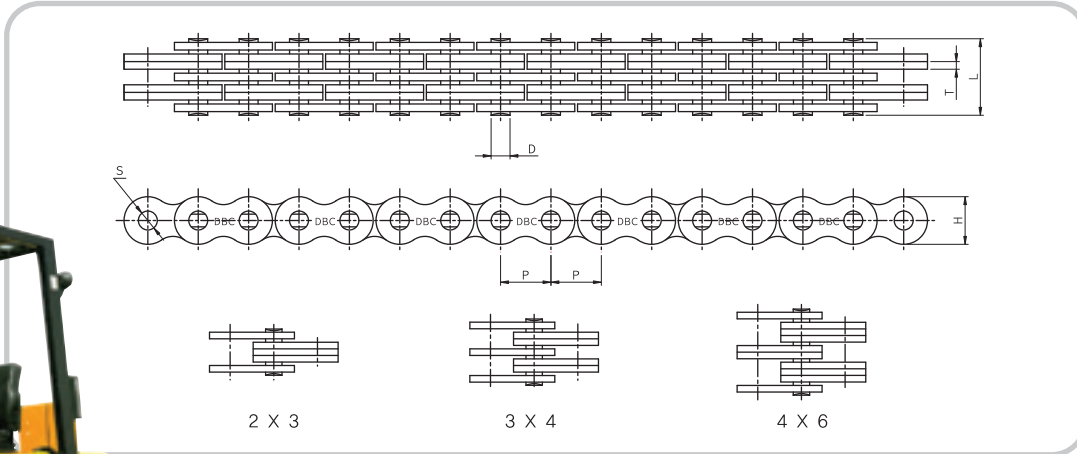
Dimension for BL series

ANSI Chain NO.	ISO Chain NO.	Pitch P mm	Lacing	Tensile Strength (Min.) kgf	Plate		Pin		Approx. Weight kg/m
					Thickness T mm	Height H mm	Dia. D mm	Length L mm	
BL 422	LH 0822	12.7	2 x 2	2,300	2.0	12.0	5.08	10.9	0.68
BL 423	LH 0823		2 x 3	2,300				12.9	0.84
BL 434	LH 0824		3 x 4	3,400				17.2	0.84
BL 444	LH 0844		4 x 4	4,500				19.4	1.28
BL 446	LH 0846		4 x 6	4,500				23.6	1.65
BL 466	LH 0866		6 x 6	6,800				27.8	1.96
BL 522	LH 1022	15.875	2 x 2	3,400	2.4	15.0	5.94	12.7	1.07
BL 523	LH 1023		2 x 3	3,400				15.1	1.27
BL 534	LH 1034		3 x 4	5,000				20.1	1.69
BL 544	LH 1044		4 x 4	6,800				22.6	1.89
BL 546	LH 1046		4 x 6	6,800				27.5	2.40
BL 566	LH 1066		6 x 6	10,200				32.5	2.80
BL 588	LH 1088	8 x 8	15,000	43.2	3.50				
BL 622	LH 1222	19.05	2 x 2	5,000	3.2	18.1	7.9	16.4	1.68
BL 623	LH 1223		2 x 3	5,000				19.8	2.04
BL 634	LH 1234		3 x 4	7,700				26.5	2.83
BL 644	LH 1244		4 x 4	10,000				29.8	3.18
BL 646	LH 1246		4 x 6	10,000				36.5	4.01
BL 666	LH 1266		6 x 6	15,000				43.2	4.73
BL 822	LH 1622	25.4	2 x 2	8,600	4.0	24.1	9.48	20.2	2.59
BL 823	LH 1623		2 x 3	8,600				24.2	3.20
BL 834	LH 1634		3 x 4	13,200				32.6	4.44
BL 844	LH 1644		4 x 4	17,300				36.9	5.04
BL 846	LH 1646		4 x 6	17,300				45.0	6.32
BL 866	LH 1666		6 x 6	25,900				53.3	7.54
BL 888	LH 1688	8 x 8	37,900	70.6	8.60				
BL 1022	LH 2022	31.75	2 x 2	11,800	4.8	30.1	11.04	24.0	3.76
BL 1023	LH 2023		2 x 3	11,800				28.9	4.69
BL 1034	LH 2034		3 x 4	18,600				38.9	6.55
BL 1044	LH 2044		4 x 4	23,600				43.4	7.48
BL 1046	LH 2046		4 x 6	23,600				53.7	9.29
BL 1066	LH 2066		6 x 6	35,500				63.9	11.16
BL 1088	LH 2088	8 x 8	52,200	84.8	13.80				
BL 1222	LH 2422	38.1	2 x 2	15,500	5.6	36.2	12.74	28.0	4.83
BL 1223	LH 2423		2 x 3	15,500				33.9	6.54
BL 1234	LH 2434		3 x 4	25,000				45.5	9.10
BL 1244	LH 2444		4 x 4	30,900				51.3	10.39
BL 1246	LH 2446		4 x 6	30,900				63.0	12.01
BL 1266	LH 2466		6 x 6	46,400				74.6	14.58
BL 1288	LH 2488	8 x 8	68,600	97.0	18.60				
BL 1422	LH 2822	44.45	2 x 2	19,500	6.4	42.2	14.32	31.6	7.31
BL 1423	LH 2823		2 x 3	19,500				38.2	9.06
BL 1434	LH 2834		3 x 4	32,300				51.4	11.32
BL 1444	LH 2844		4 x 4	39,100				58.1	12.96
BL 1446	LH 2846		4 x 6	39,100				71.3	18.00
BL 1466	LH 2866		6 x 6	59,100				84.5	22.51
BL 1488	LH 2888	8 x 8	86,800	97.0	24.30				
BL 1622	LH 3222	50.8	2 x 2	29,500	7.2	48.2	17.49	35.6	9.84
BL 1623	LH 3223		2 x 3	29,500				43.3	12.16
BL 1634	LH 3234		3 x 4	45,000				58.4	16.95
BL 1644	LH 3244		4 x 4	59,100				62.9	18.97
BL 1646	LH 3246		4 x 6	59,100				81.1	24.09
BL 1666	LH 3266		6 x 6	88,600				96.2	28.73
BL 1688	LH 3288	8 x 8	126,500	127.5	32.00				
BL 2022	LH 4022	63.5	2 x 2	44,300	9.5	60.3	23.84	47.9	14.43
BL 2023	LH 4023		2 x 3	44,300				57.9	17.95
BL 2034	LH 4034		3 x 4	66,400				77.8	24.95
BL 2044	LH 4044		4 x 4	88,600				87.8	28.45
BL 2046	LH 4046		4 x 6	88,600				107.7	35.44
BL 2066	LH 4066		6 x 6	133,000				127.6	42.01
BL 2088	LH 4088	8 x 8	193,700	166.0	63.20				



• LL Series(Light Duty, ISO R606 Recommendation, European Standard)

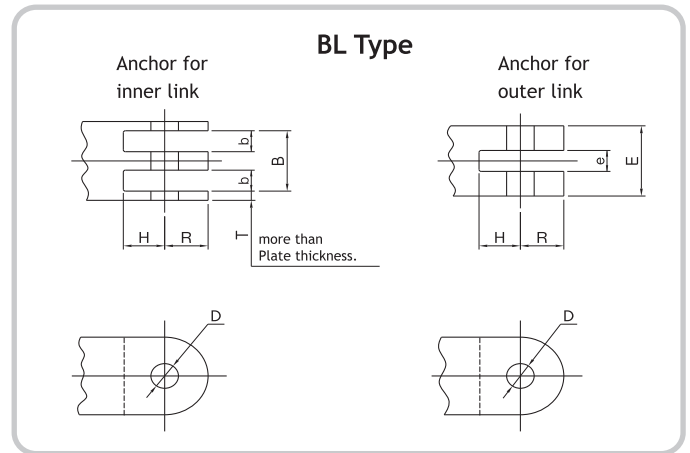
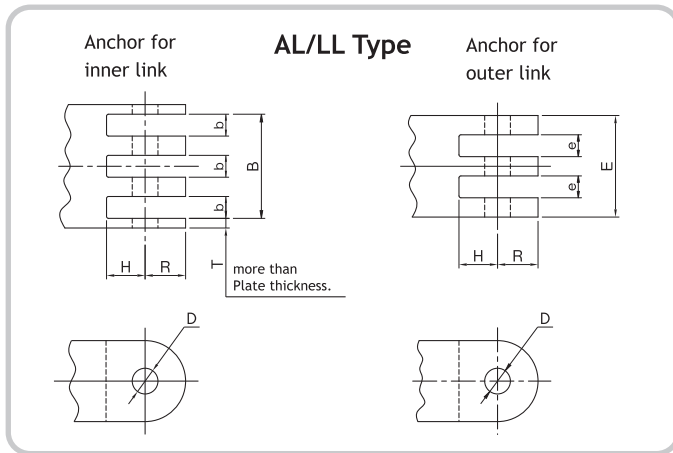
The Pin link plates have the contour, pitch and thickness of the pin link plates of corresponding European (BS type) standard roller chain.



Dimension for LL series

ISO Chain NO.	Pitch	Lacing	Tensile Strength (Min.) kgf	Plate		Dia. D mm	Pin Length L mm	Approx. Weight kg/m
	P mm			Thickness T mm	Height H mm			
LL 0822	12.7	2 x 2	1,820	1.55	10.4	4.45	8.7	0.41
LL 0844		4 x 4	3,170				14.4	0.69
LL 0866		6 x 6	4,540				22.1	0.97
LL 1022	15.876	2 x 2	2,260	1.50	13.72	5.08	9.2	0.59
LL 1044		4 x 4	4,540				15.5	1.13
LL 1066		6 x 6	6,800				21.0	1.67
LL 1222	19.05	2 x 2	2,950	1.80	16.0	5.72	10.4	0.64
LL 1244		4 x 4	5,890				17.9	1.26
LL 1266		6 x 6	8,840				25.5	1.88
LL 1622	25.4	2 x 2	5,910	3.00	20.8	8.28	17.2	1.52
LL 1644		4 x 4	11,830				27.4	2.98
LL 1666		6 x 6	17,740				36.2	4.44
LL 1688		8 x 8	28,400				49.0	5.71
LL 2022	31.75	2 x 2	9,690	3.50	26.0	10.19	17.8	2.33
LL 2044		4 x 4	19,370				32.9	4.56
LL 2066		6 x 6	29,060				47.2	6.79
LL 2088		8 x 8	44,400				61.4	8.90
LL 2422	38.1	2 x 2	17,340	5.20	33.4	14.60	26.9	4.47
LL 2444		4 x 4	34,670				46.8	8.67
LL 2466		6 x 6	52,010				66.9	12.87
LL 2488		8 x 8	79,100				87.4	16.30
LL 2822	44.45	2 x 2	20,390	6.00	37.0	15.85	32.2	5.10
LL 2844		4 x 4	40,790				50.0	9.90
LL 2866		6 x 6	61,180				74.9	14.60
LL 2888		8 x 8	91,400				105.0	19.40
LL 3222	50.8	2 x 2	26,510	6.30	42.0	17.81	33.2	6.20
LL 3244		4 x 4	53,030				59.2	12.30
LL 3266		6 x 6	79,540				85.6	18.30
LL 3288		8 x 8	106,100				111.0	24.00
LL 4022	63.5	2 x 2	38,300	8.00	52.7	22.89	42.2	10.30
LL 4044		4 x 4	76,500				74.4	20.00
LL 4066		6 x 6	114,800				106.5	30.00
LL 4088		8 x 8	178,300				140.0	39.10
LL 4822	76.2	2 x 2	58,300	10.00	63.9	29.25	54.6	18.50
LL 4844		4 x 4	116,600				92.6	35.70
LL 4866		6 x 6	174,900				133.4	53.00
LL 4888		8 x 8	256,000				174.2	70.40

• Dimensional Table for Chain Anchor



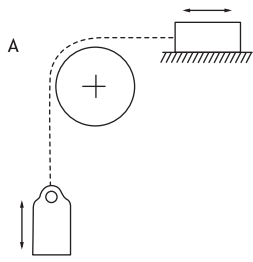
AL - Type	D	R _{max}	H _{min}	B ^{+0.2} ₀	b ^{+0.1} ₀	E ⁰ _{-0.2}	e ^{+0.1} ₀
AL 422	4.02 ^{+0.05} ₀	6.3	6.0	-	3.4	3.1	-
AL 444				9.8		9.5	3.4
AL 466				16.2		15.9	3.4
AL 522	5.13 ^{+0.05} ₀	7.9	7.2	-	4.4	4.1	-
AL 544				12.9		12.6	4.4
AL 566				21.3		21.0	4.4
AL 622	6.00 ^{+0.05} ₀	9.5	9.0	-	5.1	4.8	-
AL 644				15.0		14.7	5.1
AL 666				24.8		24.5	5.1
AL 822	7.97 ^{+0.1} ₀	12.7	11.5	-	6.9	6.4	-
AL 844				20.3		19.8	6.9
AL 866				33.7		33.2	6.9
AL 1022	9.57 ^{+0.1} ₀	15.8	14.5	-	8.5	8.0	-
AL 1044				25.1		24.6	8.5
AL 1066				41.7		41.2	8.5
AL 1222	11.14 ^{+0.1} ₀	19.0	17.5	-	10.1	9.6	-
AL 1244				29.9		29.4	10.1
AL 1266				49.7		49.2	10.1
AL 1444	12.74 ^{+0.1} ₀	22.2	20.0	35.1	11.9	34.5	11.9
AL 1466				58.3		57.7	11.9
AL 1644	14.32 ^{+0.1} ₀	25.4	23.0	39.9	13.5	39.2	13.5
AL 1666				66.3		65.6	13.5

BL - Type	D	R _{max}	H _{min}	B ^{+0.2} ₀	b ^{+0.1} ₀	E ⁰ _{-0.2}	e ^{+0.1} ₀
BL 423	5.13 ^{+0.05} ₀	6.3	6.3	-	6.5	6.2	-
BL 434				10.7		10.4	2.3
BL 446				17.1		16.8	4.4
BL 523	6.00 ^{+0.05} ₀	7.9	7.9	-	7.6	7.3	-
BL 534				12.5		12.2	2.6
BL 546				19.9		19.6	5.1
BL 623	7.97 ^{+0.1} ₀	9.5	9.5	-	10.3	9.8	-
BL 634				17.0		16.5	3.6
BL 646				27.0		26.5	6.9
BL 823	9.57 ^{+0.1} ₀	12.7	12.7	-	12.7	12.2	-
BL 834				21.0		20.5	4.4
BL 846				33.4		32.9	8.5
BL 1023	11.14 ^{+0.1} ₀	15.8	15.8	-	15.1	14.6	-
BL 1034				25.0		24.5	5.2
BL 1046				39.8		39.3	10.1
BL 1223	12.74 ^{+0.1} ₀	19.0	19.0	-	17.7	17.1	-
BL 1234				29.3		28.7	6.1
BL 1246				46.7		46.1	11.9
BL 1423	14.32 ^{+0.1} ₀	22.2	22.2	-	20.1	19.4	-
BL 1434				33.3		32.6	6.9
BL 1446				53.1		52.4	13.5
BL 1623	17.49 ^{+0.1} ₀	25.4	25.4	-	23.1	22.1	-
BL 1634				38.2		37.2	8.0
BL 1646				60.9		59.9	15.6

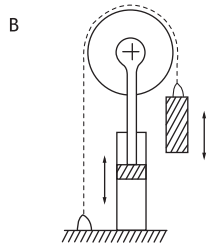
LL - Type	D	R _{max}	H _{min}	B ^{+0.2} ₀	b ^{+0.1} ₀	E ⁰ _{-0.2}	e ^{+0.1} ₀	
LL 0822	4.5 ^{+0.05} ₀	6.0	6.0	-	2.8	2.7	2.8	
LL 0844				8.4		8.1		2.8
LL 0866				13.8		13.5		2.8
LL 1022	5.15 ^{+0.05} ₀	7.9	8.0	-	3.4	3.3	3.4	
LL 1044				10.5		10.2		3.4
LL 1066				17.3		17.0		3.4
LL 1222	5.8 ^{+0.05} ₀	9.5	9.0	-	3.9	3.8	3.9	
LL 1244				11.9		11.6		3.9
LL 1266				19.7		19.4		3.9
LL 1622	8.4 ^{+0.1} ₀	12.7	12.0	-	6.5	6.2	6.5	
LL 1644				19.6		19.2		6.5
LL 1666				32.4		32.2		6.5
LL 2022	10.31 ^{+0.1} ₀	15.8	14.0	-	7.7	7.4	7.7	
LL 2044				22.8		22.4		7.7
LL 2066				37.8		37.4		7.7
LL 2422	14.75 ^{+0.1} ₀	19.0	18.0	-	10.6	10.0	10.6	
LL 2444				31.4		31.0		10.6
LL 2466				52.4		52.0		10.6
LL 2822	16.5 ^{+0.1} ₀	22.0	20.0	-	13.0	12.0	13.0	
LL 2844				38.5		38.0		13.0
LL 2866				64.5		64.0		13.0
LL 3222	18.0 ^{+0.1} ₀	25.4	23.0	-	13.0	12.0	13.0	
LL 3244				38.5		38.0		13.0
LL 3266				64.5		64.0		13.0



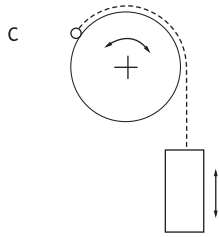
APPLICATION



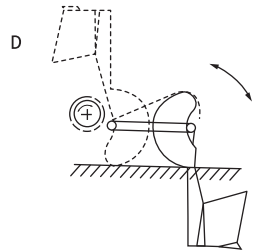
Use for counterweights of heavy machine tools-planer, multi-spindle drills, etc.



Use for increase of travel distance on hydraulic lifting.



Use for suspension of a counterweight for the arm of a drill or similar machine tool element.



Use for transmitting reciprocating motion or lifting.

SELECTION

Step 1

From the Application table below, determine the Type of Chain and Service Factor.

Application Table

Type of Chain	Shock	Applications	Service Factor	Chain Speed m/min
AL series	Light	Suspension of counterweight	1.0	Less than 30
AL and LL series		Fork lift	1.3	
BL series	Heavy	Mining machine Construction equipment	1.5	

Step 2

Multiply the required working load by Service Factor and Safety Factor below to obtain the design tensile strength

Safety Factor

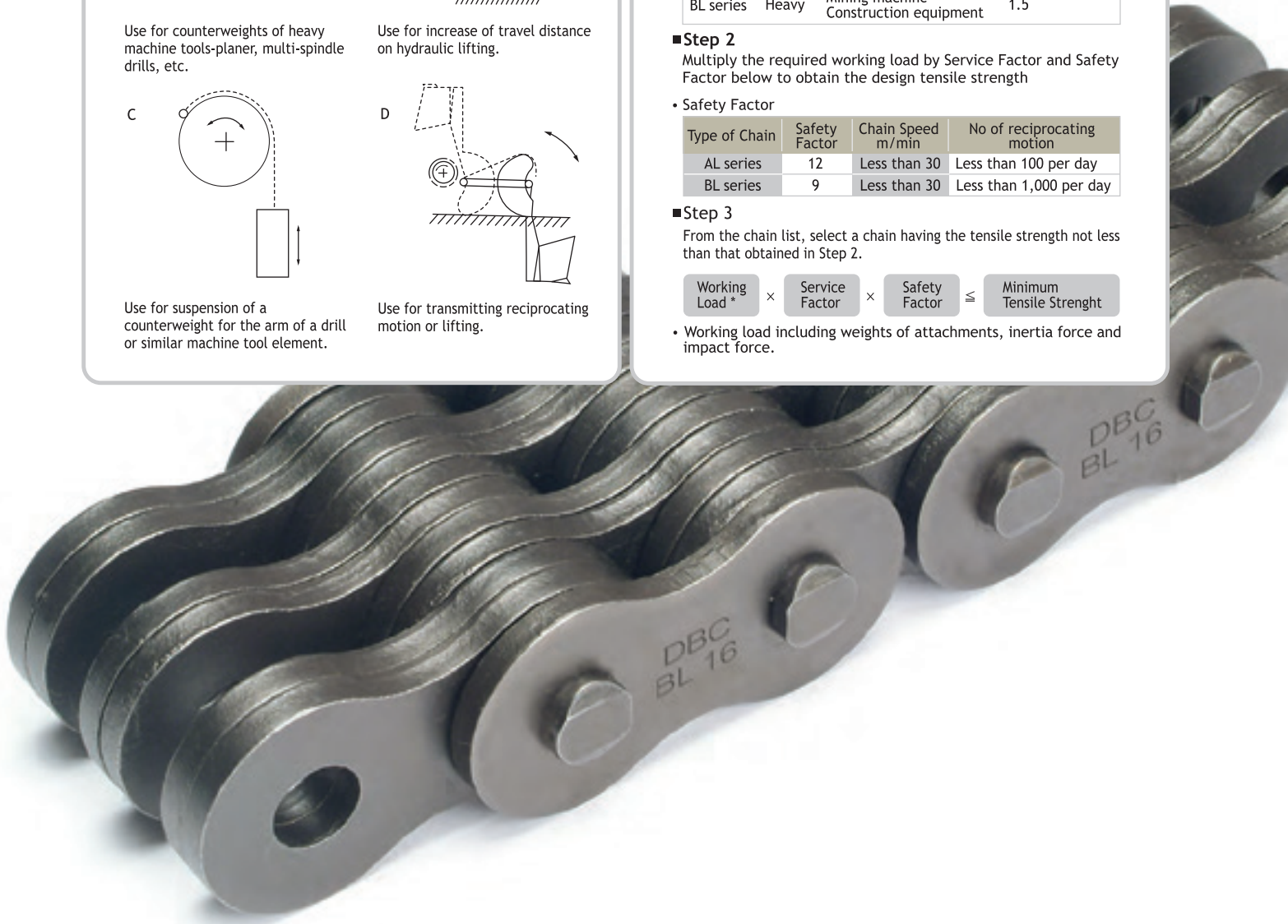
Type of Chain	Safety Factor	Chain Speed m/min	No of reciprocating motion
AL series	12	Less than 30	Less than 100 per day
BL series	9	Less than 30	Less than 1,000 per day

Step 3

From the chain list, select a chain having the tensile strength not less than that obtained in Step 2.

$$\text{Working Load}^* \times \text{Service Factor} \times \text{Safety Factor} \leq \text{Minimum Tensile Strength}$$

- Working load including weights of attachments, inertia force and impact force.



Quality Guaranteed

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