



D.I.D.[®]

CATALOG

POWER TRANSMISSION & CONVEYOR CHAIN
PRODUCTS GUIDE

X-RING

最強。

X-Ring Chain.



DRIVEN TO SOLUTIONS The D.I.D Brand

Known for its **D**urability and Dependability **I**n **D**esign.
As established technical innovator in the world chain drive market, serving a
broad spectrum of industries with quality products for over 85 years.
That is **D.I.D.** Our technology turns timely ideas into productive realities.
D.I.D a professional partnership you can count on for your optimum drive
system solutions.

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D.I.D *New Tech Chain Series*

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DID is a brand you can depend on.

Certified Management System in Conformity with World Standards

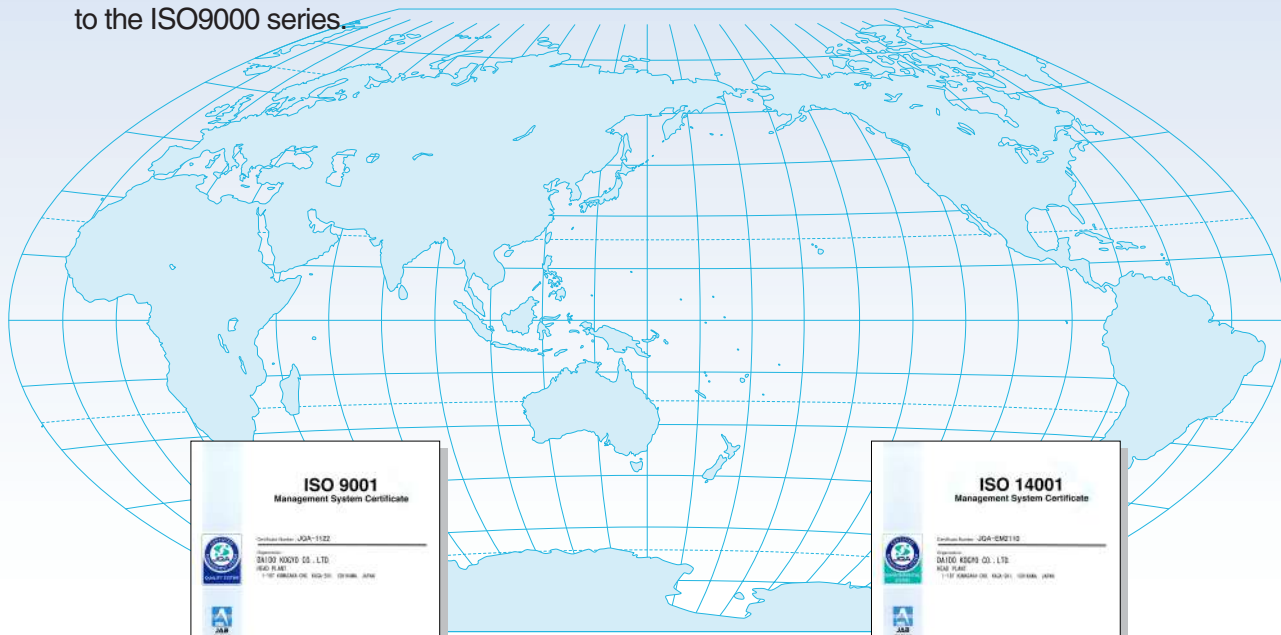
Quality assurance and environmental management system authorized by domestic and overseas standards.

DID's Quality Assurance

- Customer satisfaction is our priority.
- All DAIDO members are committed to quality.
- Quality control based on facts is assured.

With activities based on these quality policies, our quality assurance system is internationally authorized to state that our products conform to the ISO9000 series.

Proud of
MADE IN JAPAN
Quality



ISO9001/2000 Certification

It is indispensable to obtain the certification of ISO9001/2000 for supplying products to overseas markets - not only Europe and the US but also other countries. Our entire production system, including design, development, manufacturing, installation and technical assistance for all of our products including various chains, conveyor systems and welfare equipment, has been certified by the Japan Quality Assurance Organization (JQA).



ISO14001 Certification

ISO14001 was established in 1996 by the International Organization for Standardization, to set requirements for environmental management systems. In order to preserve the global environment, reverse contamination and enhance the health of human beings and ecosystems, DAIDO declared our policies for environmental preservation. As a result, our management system for our activities, products and service for environmental protection was certified by the organization. We have been engaged in various activities for environmental preservation and improvement, such as reduction of waste and classification of waste for recycling, in accordance with our environmental policies.

Worldwide standard chains complying with ISO and ANSI

The 14 sizes of DID standard roller chains are available ranging from DID25 to DID240 including those in conformity with ANSI (American National Standard Institute), and ISO (International Organization for Standardization).

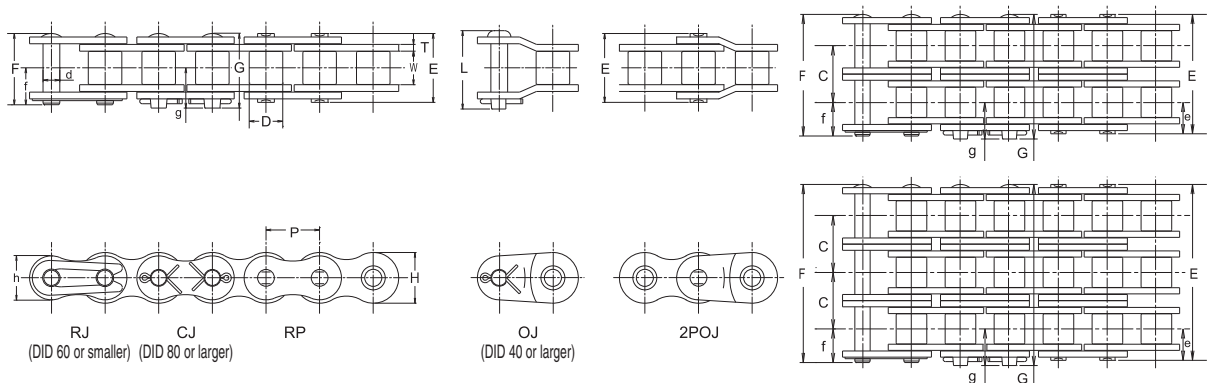
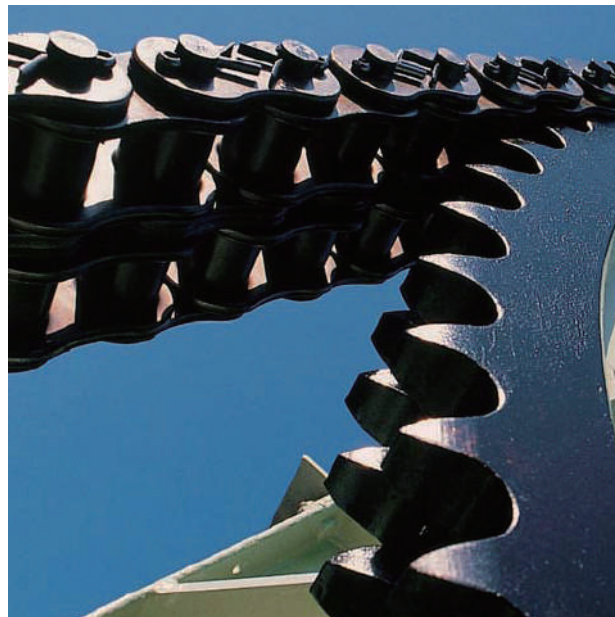
The chains not only meet the requirements for the minimum tensile strength prescribed by ANSI and ISO, but they also provide the top class quality in the world including a high allowable load.

Suitable uses

- General use for driving and lifting equipment.

Examples

- Driving transfer units and other equipment.

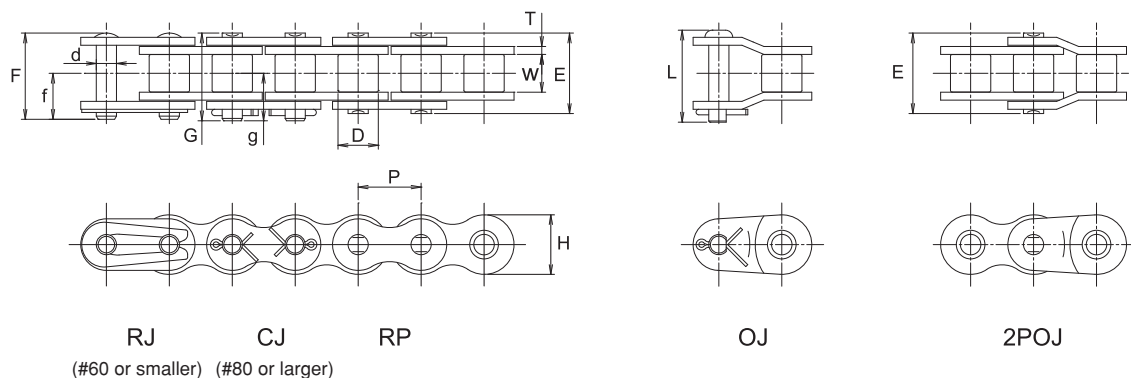


D.I.D

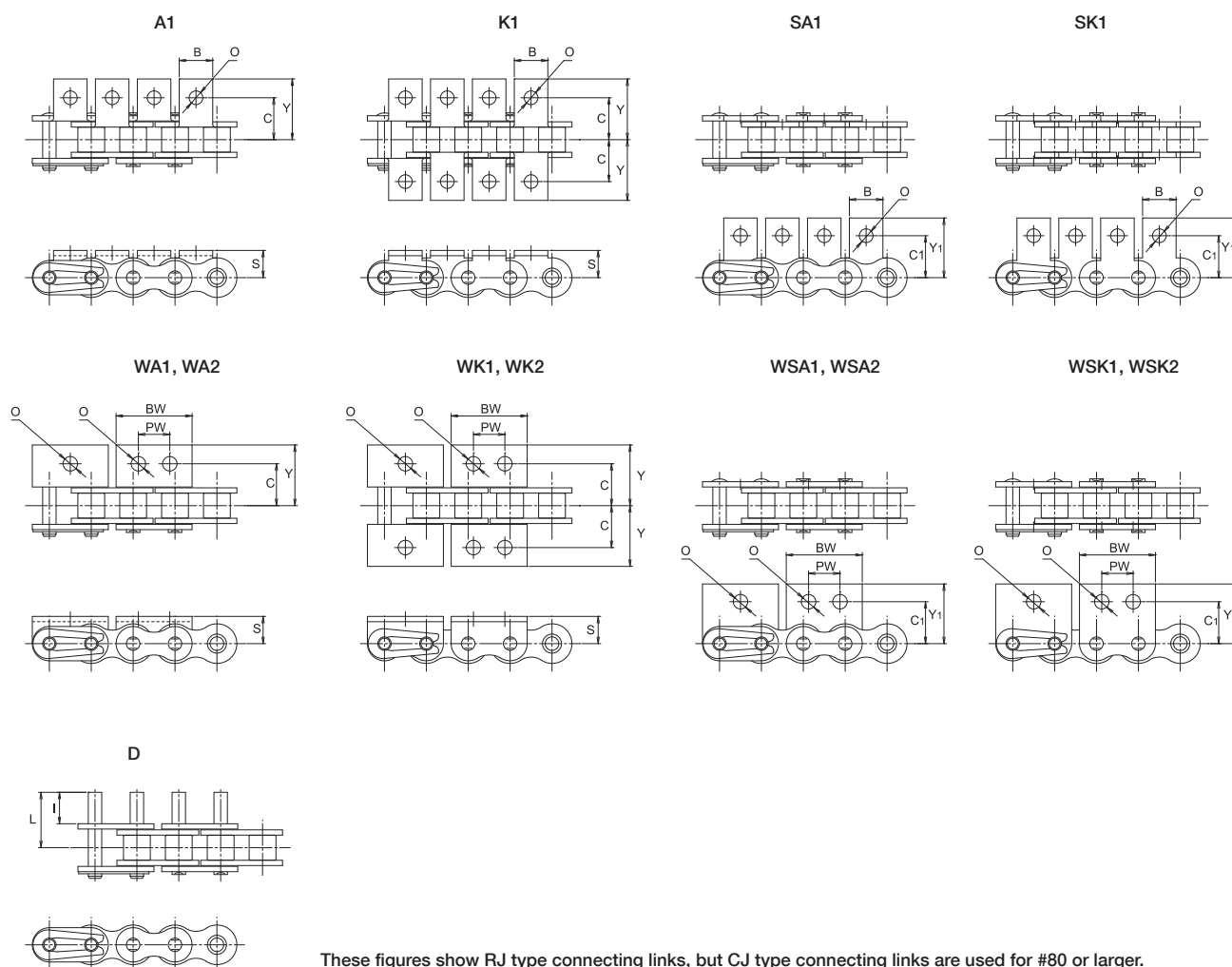
Unit (mm)

3

Chain



Attachment



Standard Roller Chain (with Attachment)



Dimensions of Standard Roller Chain (Single pitch)

• Dimensions of Chain

Unit (mm)

Chain No.	Pitch	Roller link width	Roller (bushing) dia.	Pin							Plate		Avg. tensile strength		Max. allowable load		Approx. weight without attachments (kg/m)
	P	W	D	d	E	F	G	L	f	g	T	H	kN	kgf	kN	kgf	
* DID 25	6.35	3.18	(3.30)	2.31	7.8	8.5	—	—	4.7	—	0.72	5.9	4.02	410	0.63	65	0.13
* DID 35	9.525	4.78	(5.08)	3.59	12.0	13.1	—	—	7.3	—	1.25	9.0	9.31	950	1.47	150	0.32
DID 41	12.70	6.38	7.77	3.59	13.7	14.6	—	15.5	7.9	—	1.20	9.6	10.1	1,030	1.67	170	0.39
DID 40	12.70	7.95	7.92	3.97	16.5	17.6	18.1	19.1	9.5	10.1	1.50	12.0	16.6	1,700	2.64	270	0.63
DID 50	15.875	9.53	10.16	5.09	20.3	21.9	22.1	23.2	11.6	12.1	2.00	15.0	27.9	2,850	4.41	450	1.06
DID 60	19.05	12.70	11.91	5.96	25.4	26.9	27.9	29.8	14.3	15.1	2.40	18.1	40.2	4,100	6.37	650	1.44
DID 80	25.40	15.88	15.88	7.94	32.6	—	35.4	37.1	—	19.0	3.20	24.0	78.4	8,000	10.7	1,100	2.55
DID100	31.75	19.05	19.05	9.54	39.5	—	42.5	45.2	—	22.7	4.00	29.9	118	12,100	17.1	1,750	3.79
DID120	38.10	25.40	22.23	11.11	49.7	—	53.0	54.0	—	28.2	4.80	35.9	166	17,000	24.5	2,500	5.49
DID140	44.45	25.40	25.40	12.71	53.6	—	58.4	59.6	—	31.6	5.60	41.9	215	22,000	32.3	3,300	7.11
DID160	50.80	31.75	28.58	14.29	63.6	—	68.2	69.7	—	36.5	6.40	47.8	269	27,500	41.2	4,200	9.82
DID200	63.50	38.10	39.68	19.85	77.9	—	85.0	87.3	—	45.9	8.00	60.0	470	48,000	68.6	7,000	16.50

• Dimensions of attachment

Chain No.	Pitch	A1, K1			SA1, SK1		Common dimensions		D		Approx. additional weight per attachment (kg)		
	P	C	Y	S	C ₁	Y ₁	B	O	I	L	A,SA	K,SK	D
* DID 25	6.35	7.15	10.7	4.76	7.94	11.50	5.56	3.4	6.00	9.3	0.0003	0.0006	0.00002
* DID 35	9.525	9.52	14.4	6.35	9.52	14.70	7.94	3.5	9.52	14.6	0.001	0.002	0.0009
DID 41	12.70	11.91	17.5	7.14	12.30	17.50	9.53	3.5	9.52	15.4	0.0015	0.003	0.0009
DID 40	12.70	12.70	17.6	7.92	12.70	17.50	9.53	3.5	9.52	16.8	0.002	0.004	0.001
DID 50	15.875	15.88	23.0	10.31	15.88	22.60	12.70	5.2	11.91	21.0	0.003	0.006	0.002
DID 60	19.05	19.05	27.0	11.91	18.26	26.20	15.88	5.2	14.27	25.7	0.006	0.012	0.003
DID 80	25.40	25.40	34.9	15.88	24.61	34.05	19.05	6.8	19.05	33.9	0.011	0.022	0.007
DID100	31.75	31.75	43.3	19.84	31.75	42.75	25.40	8.7	23.83	41.9	0.024	0.048	0.012
DID120	38.10	38.10	53.2	23.01	36.53	50.30	28.58	10.3	28.58	51.4	0.037	0.074	0.02
DID140	44.45	44.45	61.9	28.58	44.45	62.40	34.92	12.3	33.32	57.8	0.068	0.136	0.03
DID160	50.80	50.80	69.9	31.75	50.80	68.10	38.10	14.3	38.10	67.4	0.091	0.182	0.045
DID200	63.50	63.50	90.0	42.87	63.50	84.50	47.60	17.0	47.62	83.4	0.186	0.372	0.106

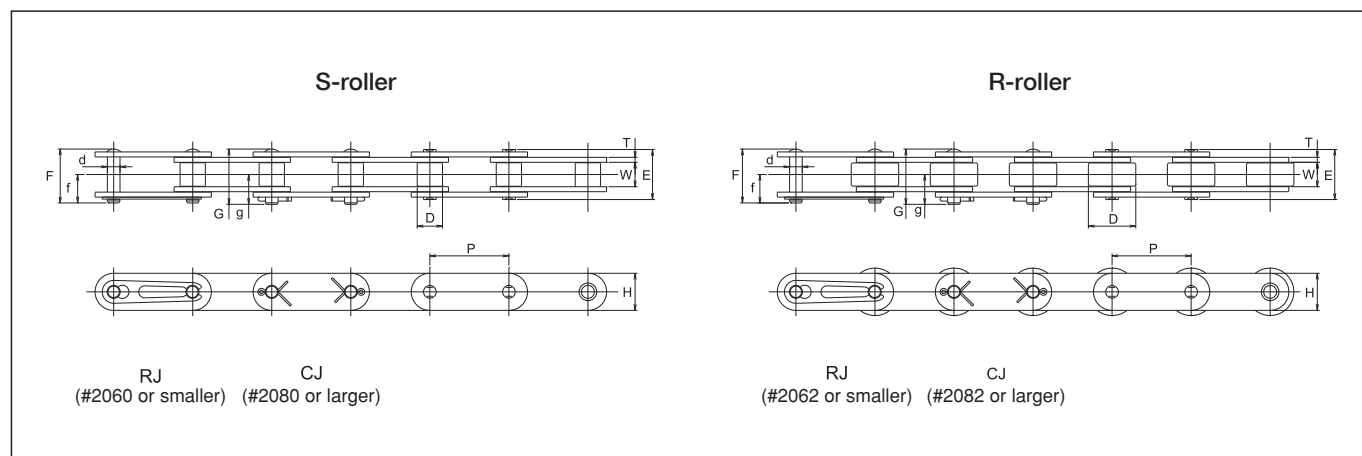
• Dimensions of wide attachment

Chain No.	Pitch	WA1, WA2, WK1, WK2			WSA1, WSA2, WSK1, WSK2		Common dimensions			Approx. additional weight per attachment (kg)	
	P	C	Y	S	C ₁	Y ₁	O	Bw	Pw	WA,WSA	WK,WSK
DID 40	12.70	12.70	17.6	7.92	12.70	17.5	4.5	23.0	9.5	0.003	0.006
DID 50	15.875	15.88	23.0	10.31	15.88	22.6	5.5	28.8	11.9	0.007	0.014
DID 60	19.05	19.05	27.0	11.91	18.26	26.2	6.6	34.6	14.3	0.012	0.024
DID 80	25.40	25.40	34.9	15.88	24.61	34.1	9.0	46.1	19.1	0.026	0.052
DID100	31.75	31.75	43.3	19.84	31.75	42.8	11.0	57.8	23.8	0.051	0.102

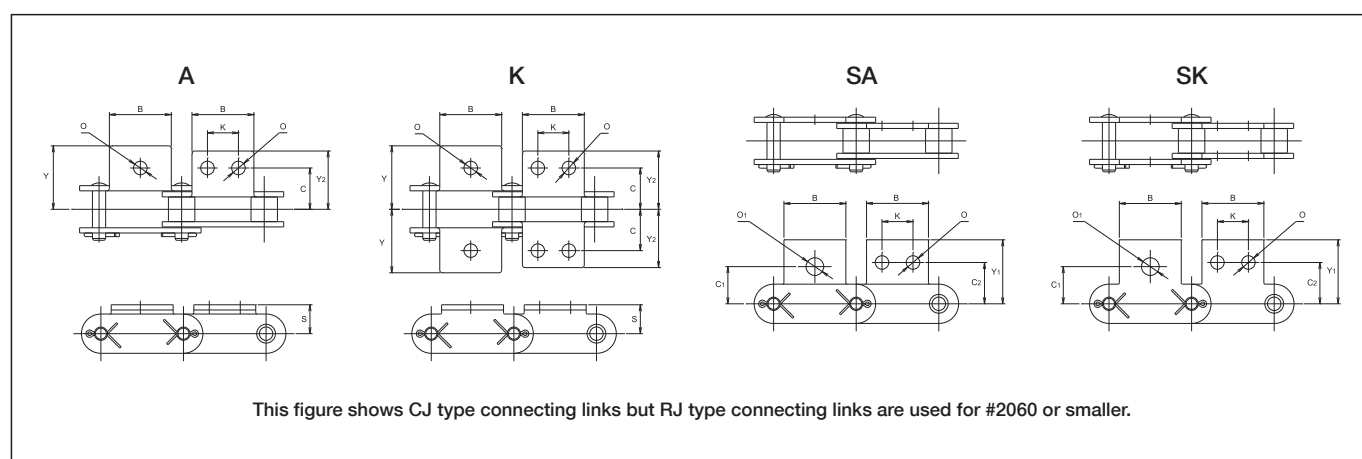
Note: 1. Those marked with * indicate Bushing Chain.

2. The values of the Avg. tensile strength and Max. allowable load are for the chain body (attachments aren't included).

Chain



Attachment



[Type indication]

Indicates that the thickness of plates is larger by one size, that is, equal to the thickness of the plates of DID100. If there is no symbol, the thickness is equal to the thickness of the plates of DID80.

DID C 2 082 H

082 indicates that the base is DID80, and that rollers with a large outer diameter (R-roller) are used. In the case of regular rollers, 080 is stated here.

Indicates that the chain is a double pitch chain.

Indicates that the chain is for a conveyor system.

Indication that the chain is a DAIDO product.

Double Pitch Chain (with Attachment)



Dimensions of Standard Roller Chain (Double pitch)

• Dimensions of Chain

Chain No.	Pitch P	Roller link width W	Roller (bush) dia. D	Pin						Plate		Avg. tensile strength		Max. allowable load		Approx. weight without attachments (kg/m)
				d	E	F	G	f	g	T	H	kN	kgf	kN	kgf	
DID C2040 DID C2042	25.40	7.95	7.92 15.88	3.97	16.5	17.6	—	9.5	—	1.5	11.7	17.0	1,740	2.64	270	0.49 0.86
DID C2050 DID C2052	31.75	9.53	10.16 19.05	5.09	20.3	21.9	—	11.6	—	2.0	15.1	28.7	2,930	4.4	450	0.84 1.32
DID C2060H DID C2062H	38.10	12.70	11.91 22.23	5.96	28.7	30.1	—	15.8	—	3.2	17.2	40.2	4,100	6.47	660	1.45 2.17
DID C2080H DID C2082H	50.80	15.88	15.88 28.58	7.94	35.9	—	38.7	—	20.6	4.0	23.3	68.6	7,000	11.2	1,150	2.46 3.53
DID C2100H DID C2102H	63.50	19.05	19.05 39.68	9.54	42.7	—	45.8	—	24.4	4.8	28.8	112	11,500	18.6	1,900	3.60 5.81
DID C2120H DID C2122H	76.20	25.40	22.23 44.45	11.11	53.2	—	56.5	—	29.9	5.6	33.8	156	16,000	25.5	2,600	5.09 8.09
DID C2160H DID C2162H	101.60	31.75	28.58 57.15	14.29	67.0	—	71.6	—	38.2	7.1	47.4	259	26,500	42.1	4,300	8.91 13.60

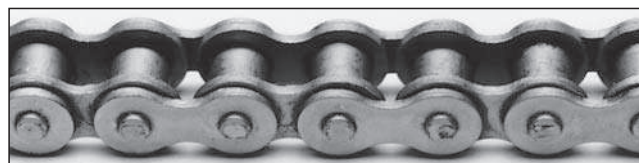
Note: The values of the avg. tensile strength and max. allowable load are for the chains (attachments aren't included).

• Dimensions of attachment

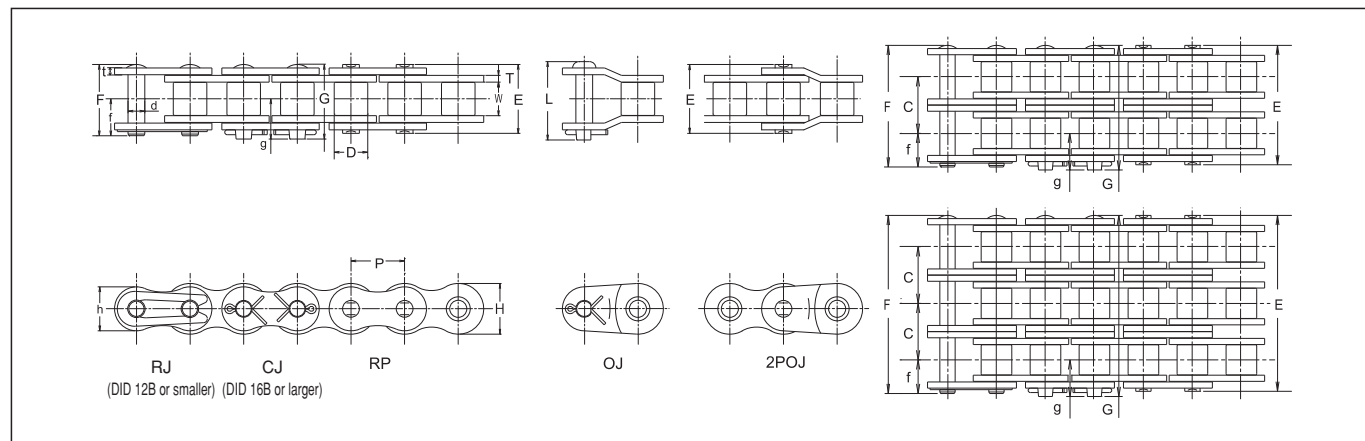
Chain No.	Pitch P	A, K				SA, SK				Common dimensions			Approx. additional weight per attachment (kg)	
		C	Y	Y ₂	S	C ₁	C ₂	Y ₁	O ₁	K	B	O	A,SA	K,SK
DID C2040 DID C2042	25.40	12.70	19.4	19.4	9.13	11.11	13.50	19.8	5.2	9.53	19.1	3.5	0.003	0.006
DID C2050 DID C2052	31.75	15.88	24.4	24.4	11.11	14.29	15.88	24.6	6.8	11.91	23.8	5.2	0.006	0.012
DID C2060H DID C2062H	38.10	21.43	33.3	33.3	14.68	17.46	19.05	30.6	8.7	14.29	28.6	5.2	0.016	0.032
DID C2080H DID C2082H	50.80	27.78	40.8	36.6	19.05	22.23	25.40	40.5	10.3	19.05	38.1	6.8	0.034	0.068
DID C2100H DID C2102H	63.50	33.34	51.6	46.6	23.42	28.58	31.75	50.4	14.3	23.81	47.6	8.7	0.064	0.128
DID C2120H DID C2122H	76.20	39.69	62.9	57.1	27.78	33.34	37.31	59.9	16.0	28.58	57.1	10.3	0.108	0.216
DID C2160H DID C2162H	101.60	52.39	79.0	71.6	36.51	44.45	50.80	78.6	22.0	38.10	76.2	14.3	0.246	0.492

Note: Attachments with one hole are indicated as SA1, SK1, A1, K1, and those with two holes are indicated as SA2, SK2, A2, K2.

DID BS Roller Chains conform to the ISO (International Organization for Standardization) "B series", and they are manufactured in conformity with the British Standard or German Standard. For sprockets, use those in conformity with the BS standard.



Dimensional drawing



Dimensions

Dimensions																					Unit (mm)							
Chain No.		Pitch	Roller link width	Roller dia.	Pin							Transverse pitch	Plate				JIS		DID		Approx. weight (kg/m)							
					d	E	F	G	L	f	g		C	T	t	H	h	Min. tensile strength		Avg. tensile strength								
DID	JIS B	P	W	D													kN	kgf	kN	kgf								
DID 04B	—	6.00	2.80	4.00	1.85	6.7	7.35	—	—	4.15	—	—	0.63	0.63	4.9	4.9	—	—	3.33	340	0.12							
DID 05B	05B	8.00	3.00	5.00	2.31	7.75	8.60	—	—	4.80	—	5.64	0.75	0.75	7.1	6.2	4.4	449	5.68	580	0.18							
DID 05B-2	05B-2					13.45	14.25	—	—								7.8	795	9.21	940	0.34							
DID 06B	06B	9.525	5.72	6.35	3.28	13.15	13.6	—	—	7.4	—	10.24	1.3	1.0	8.2	8.2	8.9	908	10.4	1,070	0.39							
DID 06B-2	06B-2					22.75	23.9	—	—								16.9	1,720	19.4	1,980	0.74							
DID 06B-3	06B-3					33.0	34.3	—	—								24.9	2,539	27.4	2,800	1.10							
DID 08B	08B	12.70	7.75	8.51	4.45	16.7	18.1	—	19.45	9.9	—	13.92	1.5	1.5	11.9	10.4	17.8	1,815	19.6	2,000	0.67							
DID 08B-2	08B-2					30.7	32.0	—	33.25								31.1	3,170	34.3	3,500	1.30							
DID 08B-3	08B-3					44.6	46.0	—	47.25								44.5	4,537	49.0	5,000	1.92							
DID 10B	10B	15.875	9.65	10.16	5.08	18.9	20.4	—	22.1	10.9	—	16.59	1.5	1.5	14.7	13.0	22.2	2,260	25.4	2,600	0.86							
DID 10B-2	10B-2					35.5	37.0	—	38.7								44.5	4,537	50.9	5,200	1.68							
DID 10B-3	10B-3					52.2	53.7	—	55.25								66.7	6,800	76.4	7,800	2.54							
DID 12B	12B	19.05	11.68	12.07	5.72	22.2	23.6	—	26.45	12.7	—	19.46	1.8	1.8	16.1	14.6	28.9	2,946	31.3	3,200	1.14							
DID 12B-2	12B-2					41.7	43.1	—	45.9								57.8	5,890	62.7	6,400	2.28							
DID 12B-3	12B-3					61.3	62.7	—	65.45								86.7	8,840	94.1	9,600	3.46							
DID 16B	16B	25.40	17.02	15.88	8.28	35.7	—	38.2	40	—	20.7	31.88	4.0	3.2	21.0	21.0	60	6,118	63.7	6,500	2.56							
DID 16B-2	16B-2					67.6	—	70.3	71.9								—	20.7	31.88	4.0	3.2	21.0	21.0	106	10,808	127	13,000	5.12
DID 16B-3	16B-3					99.5	—	102.2	103.8								—	20.7	31.88	4.0	3.2	21.0	21.0	160	16,315	191	19,500	7.59
DID 20B	20B	31.75	19.56	19.05	10.19	41.2	—	44.0	45.1	—	23.5	36.45	4.5	3.5	26.4	26.4	95	9,687	98.0	10,000	3.81							
DID 20B-2	20B-2					77.7	—	80.5	82.7								—	23.5	36.45	4.5	3.5	26.4	26.4	170	17,335	196	20,000	7.57
DID 20B-3	20B-3					114.2	—	117.0	119.2								—	23.5	36.45	4.5	3.5	26.4	26.4	250	25,490	294	30,000	11.3
DID 24B	24B	38.10	25.40	25.40	14.63	53.4	—	58.7	59.4	—	32.0	48.36	6.0	5.0	33.4	33.4	160	16,315	166	17,000	7.08							
DID 24B-2	24B-2					101.8	—	107.1	109.1								—	32.0	48.36	6.0	5.0	33.4	33.4	280	28,550	333	34,000	13.9
DID 24B-3	24B-3					150.2	—	155.5	157.5								—	32.0	48.36	6.0	5.0	33.4	33.4	425	43,337	500	51,000	20.7

Note: 1. 2POJ offset links are used for DID04B and DID05B.

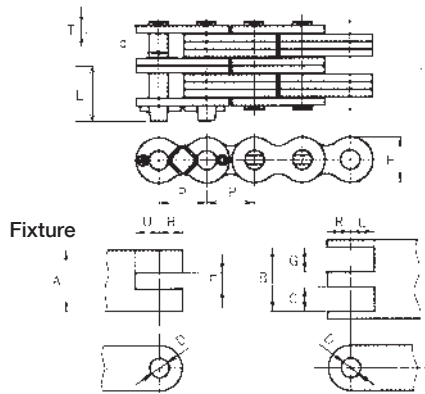
2. DID06B has flat oval-shaped plates.

3. RJ type connecting links are used for DID06B-12B and CJ type connecting links for DID16B-24B.

Leaf Chain



Leaf chains consist of pins and plates only and are higher in strength than roller chains. They are suitable for tasks like hoisting and pulling. Leaf chains conform to ANSI and have two types: AL and BL.



Dimensions

Unit (mm)

Chain No.	Pitch	Plate		Pin			Min. tensile strength		Max. allowable load		Approx. weight (kg/m)	Fitting						
	P	H (Max)	T	d	L (Max)	L1 (Max)	kN	kgf	kN	kgf		b (Min)	R	U (Min)	F (Min)	G (Min)	A (Max)	B (Min)
DID AL 422	12.59	10.4	1.5	3.97	8.1	6.0	16.6	1,690	1.86	190	0.40	4.00	6.3	6.3	—	—	3.0	3.3
DID AL 444					14.6	9.8	33.3	3,380	3.43	350	0.77				3.3	3.3	9.3	9.7
DID AL 466					21.1	12.6	50	5,080	3.92	400	1.14				3.3	3.3	15.7	16.1
DID AL 522	15.75	13.0	2.0	5.09	10.5	7.3	27.9	2,830	3.04	310	0.65	5.12	7.9	7.9	—	—	4.0	4.3
DID AL 544					19.0	11.5	55.8	5,660	5.29	540	1.26				4.3	4.3	12.3	12.7
DID AL 566					27.5	15.8	83.8	8,510	6.27	640	1.85				4.3	4.3	20.7	21.1
DID AL 622	19.05	15.6	2.4	5.96	12.5	8.8	38.2	3,880	4.41	450	0.90	6.00	9.5	9.5	—	—	4.8	5.1
DID AL 644					22.7	13.9	76.4	7,760	7.45	760	1.75				5.1	5.1	14.7	15.1
DID AL 666					32.6	19.0	114	11,570	8.72	890	2.59				5.1	5.1	24.7	25.1
DID AL 822	25.19	20.8	3.2	7.94	16.4	11.0	66.6	6,760	7.35	750	1.55	8.00	12.7	12.7	—	—	6.4	6.8
DID AL 844					29.7	17.8	133	13,500	13.2	1,340	3.04				6.8	6.8	19.8	20.1
DID AL 866					43.1	24.5	200	20,300	15.3	1,550	4.51				6.8	6.8	32.9	33.4
DID AL 1022	31.64	26.0	4.0	9.54	19.9	13.1	100	10,150	11.5	1,170	2.46	9.60	15.8	15.8	—	—	8.0	8.4
DID AL 1044					36.4	21.3	200	20,300	20.5	2,080	4.80				8.4	8.4	24.4	24.9
DID AL 1066					53.1	29.7	300	30,460	24	2,440	7.15				8.4	8.4	40.9	41.4
DID AL 1222	37.98	31.2	4.8	11.11	23.8	15.3	141	14,310	16.4	1,660	3.32	11.20	19.0	19.0	—	—	9.6	10.0
DID AL 1244					43.4	25.2	282	28,630	29.1	2,950	6.50				10.0	10.0	29.2	29.7
DID AL 1266					63.4	35.1	423	42,940	34.2	3,470	9.68				10.0	10.0	48.9	49.4
DID AL 1444	44.32	36.3	5.6	12.71	50.6	30.1	372	37,770	38.9	3,950	10.0	12.80	22.2	22.2	11.6	11.6	34.0	34.5
DID AL 1446					73.6	41.6	558	56,650	46	4,670	14.6				11.6	11.6	56.9	57.4
DID AL 1644	50.62	41.4	6.4	14.29	57.5	33.4	470	47,720	49.9	5,070	12.7	14.40	25.4	25.4	13.2	13.2	38.8	39.4
DID AL 1666					83.6	46.4	706	71,680	58.8	5,970	19.6				13.2	13.2	64.9	65.5
DID BL 423	12.70	12.0	2.0	5.09	12.5	8.5	24.5	2,490	4.51	460	0.86	5.12	6.3	6.3	—	—	6.0	6.3
DID BL 434					16.9	10.6	37.2	3,780	5.29	540	1.16				2.2	4.3	10.3	10.7
DID BL 446					23.2	13.7	49	4,970	5.98	610	1.69				4.3	6.4	16.3	16.8
DID BL 523	15.875	15.0	2.4	5.96	15.0	9.9	39.2	3,980	6.86	700	1.30	6.00	7.9	7.9	—	—	7.2	7.5
DID BL 534					20.2	12.5	58.8	5,970	8.33	850	1.73				2.6	5.1	12.3	12.7
DID BL 546					27.7	16.3	78.4	7,960	9.41	960	2.44				5.1	7.6	19.5	20.0
DID BL 623	19.05	18.1	3.2	7.94	19.8	12.6	68.6	6,960	9.8	990	2.08	8.00	9.5	9.5	—	—	9.7	10.0
DID BL 634					26.7	16.2	103	10,460	12.2	1,240	2.85				3.4	6.8	16.2	16.9
DID BL 646					36.7	21.1	127	12,890	13.7	1,390	4.07				6.8	10.1	26.0	26.6
DID BL 823	25.40	24.0	4.0	9.54	24.0	15.3	102	10,360	16.9	1,720	3.25	9.60	12.7	12.7	—	—	12.1	12.4
DID BL 834					32.4	19.3	154	15,630	20.5	2,080	4.50				4.2	8.4	20.2	20.9
DID BL 846					44.8	25.5	205	20,810	23.5	2,390	6.39				8.4	12.5	32.4	33.0
DID BL 1023	31.75	29.9	4.8	11.11	28.6	17.7	141	14,310	25.9	2,630	4.33	11.20	15.8	15.8	—	—	14.4	14.8
DID BL 1034					38.6	22.7	220	22,340	31.3	3,180	6.03				5.0	10.0	24.2	24.9
DID BL 1046					53.9	30.2	282	28,630	36.2	3,680	8.53				10.0	14.9	38.8	39.4
DID BL 1223	38.10	35.9	5.6	12.71	33.3	21.5	193	19,590	36.7	3,730	6.06	12.80	19.0	19.0	—	—	16.8	17.3
DID BL 1234					44.8	27.2	313	31,780	44.1	4,480	8.45				5.9	11.6	28.0	28.8
DID BL 1246					61.7	36.1	386	39,190	50.5	5,130	12.0				11.6	17.4	45.2	45.9
DID BL 1423	44.45	41.9	6.4	14.29	37.6	23.4	254	25,790	49	4,970	8.74	14.40	22.2	22.2	—	—	19.2	19.7
DID BL 1434					50.7	30.0	421	42,740	58.8	5,970	10.9				6.7	13.2	32.0	32.8
DID BL 1446					70.4	39.8	509	51,680	67.6	6,860	20.3				13.2	19.8	51.6	52.3
DID BL 1623	50.80	47.8	7.1	17.46	41.7	26.7	353	35,840	58.8	5,970	11.9	17.60	25.4	25.4	—	—	21.3	21.8
DID BL 1634					56.4	34.0	554	56,240	70.6	7,170	16.6				7.4	14.6	35.5	36.3
DID BL 1646					78.0	44.8	706	71,680	80.4	8,160	23.6				14.6	11.9	57.2	57.9

Note: 1. Except for AL 60 series, the pitch of AL type chains is slightly different to that of ANSI standard.

2. The values of max. allowable tension are not applied to connecting links.

Features

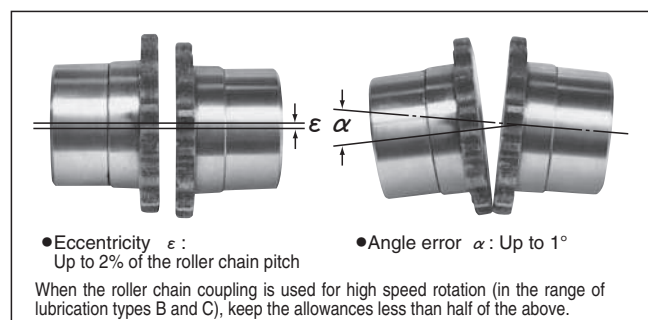
1. Simple structure

A roller chain coupling consists of one duplex roller chain and two sprockets for a simplex chain. Handling is very simple as both the shafts (driving shaft and driven shaft) can be connected and disconnected by inserting or removing connecting pins (cotter type).



2. Easy alignment

Owing to the play between the respective components of the chain and the play between the roller chain and the sprockets, the eccentricity and angle error can be generally allowed as follows:



3. Small but powerful

Since a powerful roller chain is engaged with the sprockets at all the teeth, a large torque can be transmitted, though the coupling itself is smaller than other kinds of couplings.

4. Excellent durability

The roller chain is made of heat-treated steel and manufactured precisely and solidly to the highest manufacturing standard. The durability is outstanding and little time is required for maintenance as the sprockets have induction-hardened special teeth, and are always engaged with the roller chain.

5. Protection of machine

Rational flexibility decreases vibration, overheating and wear of the bearings caused by the eccentricities and angle errors of the shafts.

Standard housing

The standard housings for No. 8022 or smaller are made of aluminum alloy die casting, and those for No. 10020 or larger are made of aluminum alloy casting. Installation of housings has the following advantages.



1. Advantages of housing

●Holding of lubrication

Since a roller chain coupling rotates with flexibility, the teeth of the roller chain and sprockets slide slightly during operation. So, they must be kept lubricated for prevention of wear as much as possible. The housing functions as a grease box for the lubrication.

●Prevention of grease scattering

Especially in high speed rotation, grease may be scattered by centrifugal force. The housing functions as a protector that prevents this.

●Protection from dust and moisture (corrosive atmosphere)

When a roller chain coupling is used in a wear-causing or corrosive circumstances, the chain life is extremely shortened unless the coupling is perfectly shielded from the circumstances. The housing functions to protect the roller chain coupling, preventing the shortening of life.

●High safety and neat appearance

Since the housing has no protrusions outside, it is safe even if it rotates with the roller chain coupling. It is also neat in appearance. (To avoid possible injury, do not touch the housing when rotating.)

2. Structure

The roller chain coupling can be split in the direction perpendicular to the shafts. The hole on the driving shaft side of the housing firmly holds the coupling's sprocket hub. The hole on the driven shaft side keeps a clearance of 1 mm or more from the sprocket hub to maintain flexibility of the coupling. Oil leakage from this portion is prevented by a seal ring.



Cautions

For safe work

- Always wear clothing suitable for work and proper protection (safety glasses, safety shoes, etc.).
- Strictly observe Section 1 "General standards (prevention of danger by motors, revolving shafts, etc.), Chapter 1, Part 2 of Occupational Safety and Health Regulations.
- Be sure to switch off the electric power source or any other power source before starting maintenance work, and ensure that the power is never accidentally switched on. Furthermore, make sure not to allow your clothes or any parts of the body to be caught by the chain or sprockets, or by any other nearby equipment.

Housings and safety covers

- Be sure to install a chain housing for type C and type B (see "Table of Lubrication Types").
- For installing the roller chain coupling into a high-speed machine or heavily vibrating machine, coat the bolts with a loosening preventive.
- Install a safety cover to prevent any unexpected flying of loosened bolts, or scattering of a broken housing or chain.

Inhibition of modification, re-use, and partial replacement

- Never partially replace or re-use the coupling as its strength will be lowered, causing damage or destruction. Furthermore, since the coupling is heat-treated, never modify the cotter holes or any other parts. When replacement is necessary, replace the roller chain coupling or housing as a set respectively.

Noise

- Noise during operation may be caused by malfunction and the unit may need to be replaced. Immediately switch off the power, and check the cause.

Roller Chain Coupling

D.I.D

Lubrication of roller chain coupling

The lubrication of a roller chain coupling belongs to the following three types: A, B and C, depending on the speed of rotation used.

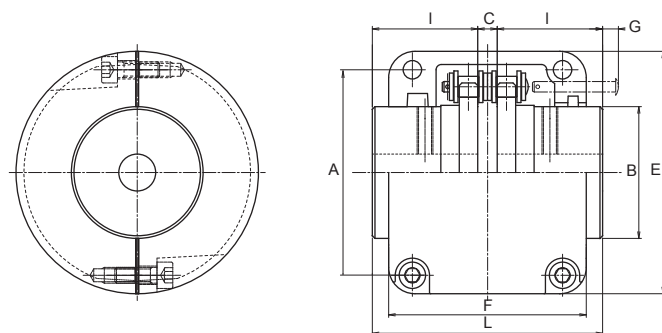
1. Lubrication types

Type A	Greasing once a month.
Type B	Greasing every 1 ~ 2 weeks, or install a housing.
Type C	Be sure to install a housing, and replace grease every 3 months.

2. Greasing

Since a roller chain coupling is usually used at high speed for a long time, greasing must satisfy the following conditions.

- Excellent in mechanical stability, oxidation stability and adhesion.
- Grease based on metallic soap: For low speed operation, grease based on sodium soap, i.e., fiber grease can be used, however for high speed operation (lubrication type B and C), be sure to use grease based on lithium soap.



3. Greasing amount

Fill appropriate amount of grease in the housing in accordance with the following table.

Roller chain coupling No.	Required amount of grease (kg)
DID C-4012	0.10
DID C-4014	0.13
DID C-4016	0.17
DID C-5014	0.22
DID C-5016	0.26
DID C-5018	0.36
DID C-6018	0.5
DID C-6022	0.7
DID C-8018	0.9
DID C-8022	1.2

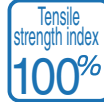
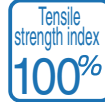
Dimensions

Roller chain coupling No.		Applicable range of shaft dia.	Prepared hole dia.	E	F	A (max.)	L	R	C	B	G	Set screw	Max. allowable torque of under 50rpm		Allowable rotation (r/min)	Approx. weight (kg)	Moment of inertia $\times 10^{-3}$ kg·m	GD ² $\times 10^{-3}$ kgf·m ²
DID	JIS												kN·m	kgf·m				
DID C-4012	4012	11~ 22	10	75	75	61	79.4	36	7.4	35	9	M 6	0.249	25.4	4,800	1.1	0.55	2.20
DID C-4014	4014	14~ 28	10	84	75	69	79.4	36	7.4	43	9	M 6	0.329	33.6	4,800	1.3	0.97	3.85
DID C-4016	4016	16~ 32	14	92	75	77	87.4	40	7.4	50	6	M 6	0.419	42.8	4,800	1.85	1.44	5.76
DID C-5014	5014	16~ 35	14	102	85	86	99.7	45	9.7	53	11	M 8	0.620	63.3	3,600	2.7	2.80	11.2
DID C-5016	5016	18~ 40	14	111	85	96	99.7	45	9.7	60	11	M 8	0.791	80.7	3,600	3.25	3.70	14.8
DID C-5018	5018	18~ 45	14	122	85	106	99.7	45	9.7	70	11	M 8	0.979	99.9	3,000	4.25	5.63	22.5
DID C-6018	6018	22~ 56	18	142	106	128	123.5	56	11.5	85	15	M10	1.81	185	2,500	7.3	13.73	54.9
DID C-6022	6022	28~ 75	18	167	106	152	123.5	56	11.5	110	15	M10	2.61	267	2,500	11.6	29.5	118
DID C-8018	8018	32~ 80	23	186	130	170	141.2	63	15.2	115	27	M12	3.92	400	2,000	16.15	52.0	208
DID C-8022	8022	40~100	28	220	130	203	157.2	71	15.2	140	19	M12	5.64	576	1,800	24.3	111	444

Note: 1. Dimension G indicates the required margin for assembling and de-assembling of the roller chain coupling.
2. Allowable rotation is applicable only when the housing is mounted.

3. The weight of the housing and grease is included in Approx. weight and GD².
4. Ask us for the delivery time.

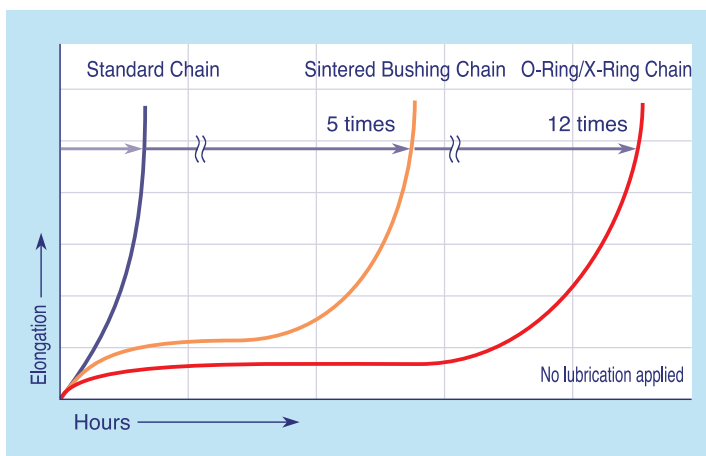
Dependable in severe conditions

Name	X-Ring Chain(LX)/O-Ring Chain(LD)	Fit X-Ring Chain(LF)
		
Features	1. DID X-Ring chain is the best value of maintenance-free chain available. 2. The patented X-Ring design has half the friction of normal O-Ring chain and provides great sealing performance. It keeps the dirt out and the grease in much better than any other O-rings. 3. Up to 2 times longer wear resistance performance compared to normal O-Ring chains. 4. Great cost savings can be achieved through longer life and less down time. 5. British Standard X-ring Chain(BLX) available	1. Strength is equivalent to existing X-Ring Chain/LX. 2. Attachment can be designed using the same dimensions as JIS/ANSI standard. 3. Standard JIS/ANSI sprockets can be used for even multiplex.
Functions	    	    
Main uses	        	        

※ LX: Temp. -10°C~120°C, LD/BLX: Temp. -10°C~80°C

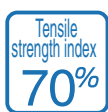
Chain No.		O-Ring/X-Ring	Sinterd Bushing
DID 25		-	-
DID 35		LD	-
DID 41		-	-
DID 40	08B	LX, LF	UR, URN
DID 50		LX, LF	UR, URN
DID 60	12B	LX, LF	UR, URN
DID 80	16B	LX, LD	UR, URN
DID 100		LD	-
DID 120		LD	-
DID 140		LD	-
DID 160		LD	-
DID 200		LD	-
DID 240		LD	-

Note: British standard type (JIS B) to be only X-ring available.

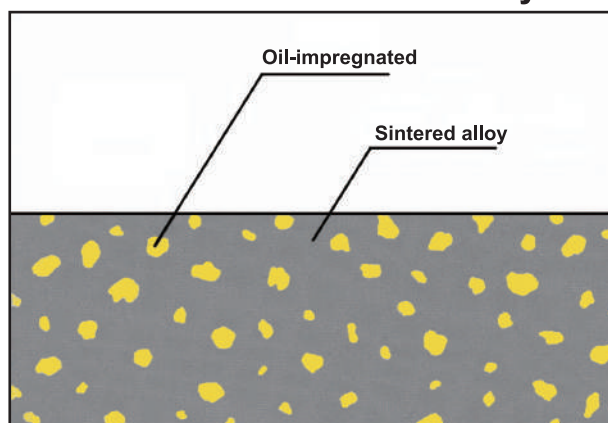


Sintered Bushing Roller Chain (UR), (URN)	
	Name
	Features
	Functions
	Main uses

1. Sintered bushing is incorporated.
2. Ultimate Life Chain for low speed and light load applications.
3. Up to 5 times longer wear life than standard chain.



Sectional view of sintered alloy



■ Symbols

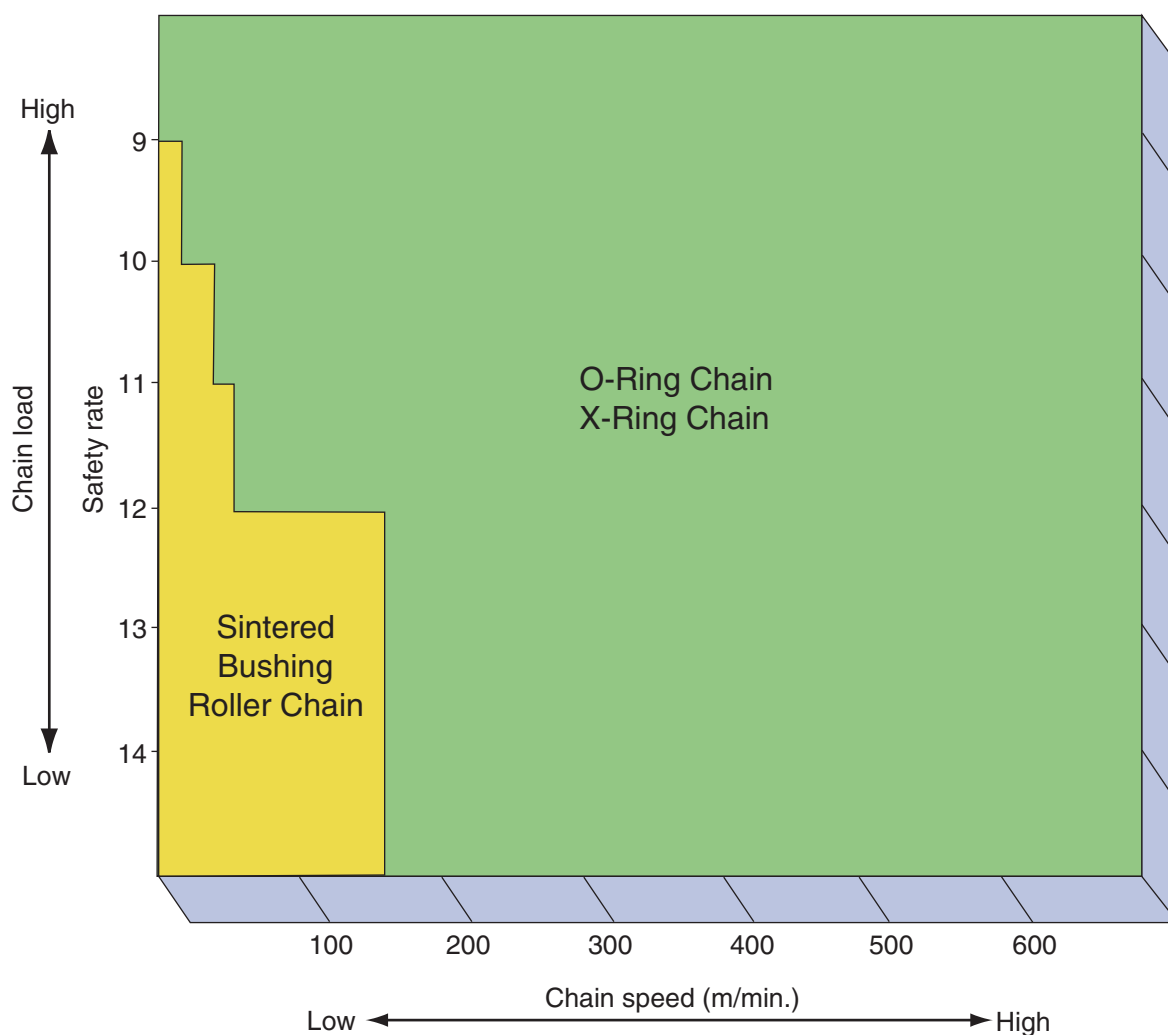
Functions	 Resistant against contaminated or deteriorated oil	 No lubrication or maintenance	 Allowable ambient temperature
	 Resistant against dusty circumstances	 Tensile strength index (Compared to standard roller chains)	
Main uses	 Feed and drive in food processing machines	 Feed and drive in packaging machines	 Feed and drive in textile machines
	 Feed and drive in printing machines	 Feed and drive in the conveyors and transfer equipment	 Feed and drive in can conveyors and for painting and drying cans
	 Feed and drive in construction machines	 Feed and drive of home appliances	 Drive of agricultural machines

Wide range of product line-up

O-Ring/X-Ring Chain and Sintered Bushing Roller Chain applicable for use under various conditions

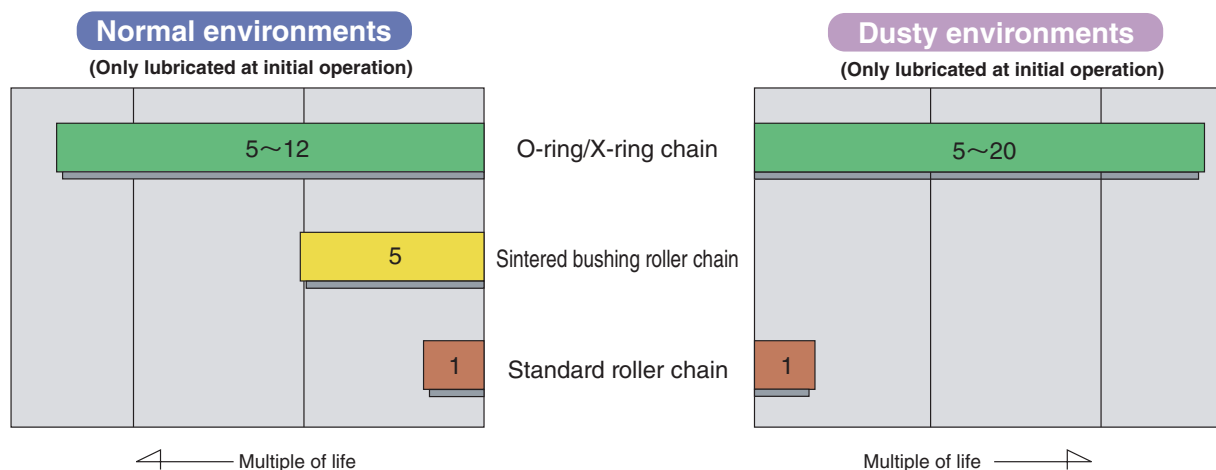
Two types of maintenance-free chains

The Ultimate Life Chain Series includes two types of maintenance-free chains, O-Ring/X-Ring Chain and Sintered Bushing Roller Chain. They can be applied in various conditions from low-speed to high-speed operation, or from low-load to high-load operation as you can see in the chart below.

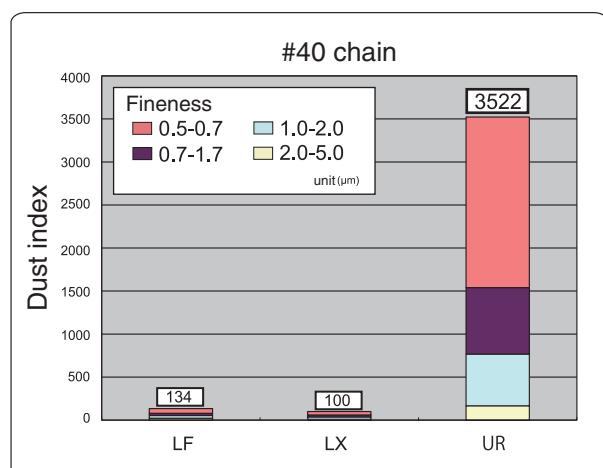


Life Comparison Test

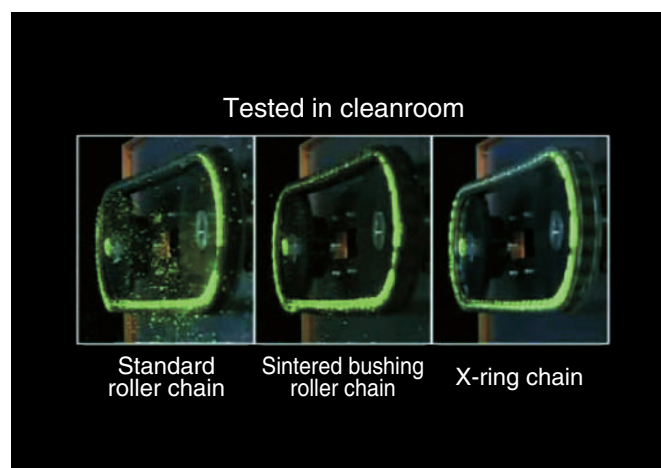
Chain life comparison without lubrication (Compared with standard roller chain as the bench mark)



Comparison of oil dust



Comparison of dusty visualization data



Applicable for many different environments

Name	Nickel Plated Chain (N)	Hi-Guard Chain (E)	Double Guard Chain (WG)
Features	1. Special nickel plated finish. 2. Where brilliance and cleanliness are required. 3. Strong corrosion resistance (highly resistant to salt water spray and acid atmosphere).	1. High corrosion resistant film coating. 2. Suitable for circumstances needing long term rust protection. 3. Outstanding resistance to rusting or corrosion, particularly in salt water environments.	1. Twice as tough as DID Hi-Guard Chain in rust protection. 2. Amazing performance in acidic and alkaline atmospheres. 3. The tensile strength and working load is the same as ANSI standard chain. It makes the downsizing possible where stainless steel chain is used.
Functions			
Main uses	TEXTILE CONVEYOR^{*1} FOOD CHEMICALS PRINT PARKING	TEXTILE CONVEYOR PARKING WATER TREATMENT CONSTRUCTION OUTDOOR	TEXTILE CONVEYOR PARKING WATER TREATMENT^{*2} OUTDOOR CONSTRUCTION^{*2} FOOD^{*2} CHEMICALS^{*2} PHARMACEUTICAL

Environment Resistant Series: Chain No. and Indicating

Chain No.	Nickel Plated	Hi-Guard	Double Guard	Stainless Steel				Low Temperature
				SUS304	SSK	SN	X-Ring	
DID 25	N	-	-	SS	-	-	-	-
DID 35	N	E	-	SS	-	-	-	-
DID 41	N	-	-	-	-	-	-	-
DID 40	N	E	WG	SS	SSK	SN	SSLT	TK
DID 50	N	E	WG	SS	SSK	SN	SSLT	TK
DID 60	N	E	WG	SS	SSK	SN	SSLT	TK
DID 80	N	E	WG	SS	SSK	SN	SSLT	TK
DID 100	N	E	-	SS	SSK	-	-	-
DID 120	N	E	-	SS	SSK	-	-	-
DID 140	N	-	-	SS	-	-	-	-
DID 160	N	-	-	SS	-	-	-	-
DID 180	-	-	-	-	-	-	-	-
DID 200	-	-	-	SS	-	-	-	-
DID 240	-	-	-	-	-	-	-	-

Stainless Steel Chain			Stainless Steel X-Ring Chain (SSLT)	Low Temperature (TK)	Name
(SS)	(SSK)	SN Treatment			
1. SUS304 2. Where chains is exposed to chemicals, water and high temperature. 3. The best resistance to corrosion and heat.	1. Where chain is exposed to chemicals, water and high temperature. 2. 1.5 times higher max allowable load than SS type.	1. Excellent wear resistance for stainless steel chain. 2. Same corrosion resistance as SSK type.	1. Up to 10 times greater wear resistance performance compared to standard stainless steel chain. 2. Great cost saving can be achieved through longer life and less down time. 3. The patented X-ring design provides great sealing performance at half the friction of standard O-ring.	1. Using material suitable for low temperature and specialized grease. 2. Suitable for circumstances where temperatures drop down to -40 °C. 3. Excellent low temperature strength.	Features
					Functions
					Main uses

■ Symbols

Functions	Resistant against				Resistant against			
	Corrosive Atmosphere	Resistant against corrosive gas (by CASS test)	Moisture, Salt Water	Resistant against rain, moisture or sea water	Alkaline Environment	Resistant against alkali liquid	Acidic Environment	Resistant against acid liquid
Main uses	Clean Areas	Suitable for circumstances required hygiene	Temperature Range in Use -**°C ~ **°C	Allowable ambient temperature	Allowable Load 100%	Allowable tension index (Compared to standard roller chains)	Dirty Environment	Resistant against contaminated or deteriorated oil
	Maintenance-Free	No lubrication or maintenance	Dusty	Resistant against dusty circumstances	Great Savings	Running cost and maintenance cost can be saved		
Main uses	PACK	Feed and drive in packaging machines	TEXTILE	Feed and drive in textile machines	CONVEYOR	Feed and drive in the conveyors and transfer equipment	FOOD	Feed and drive in food processing machines
	CHEMICALS	Feed and drive in chemicals facilities	PRINT	Feed and drive in printing machines	PARKING	Feed and drive in multilevel parking machines	WATER TREATMENT	Feed and drive in water treatment equipment
	OUTDOOR	Feed and drive in outdoor equipment	CONSTRUCTION	Feed and drive in construction machines	PHARMA-CEUTICAL	Feed and drive in medical facilities		

* 1. Consult us when you use chains for hoisting.
 * 2. Consult us when you use chains for these particular uses.

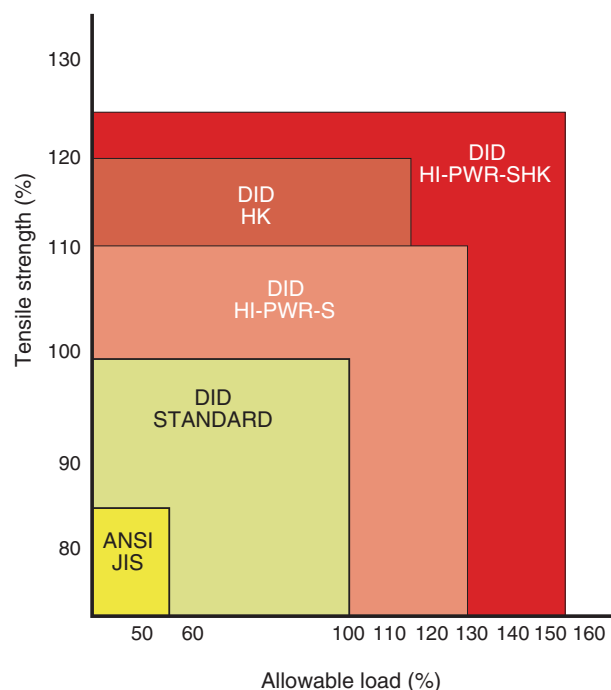
Ultimate Power Chain Series suitable for use in various conditions

Name	HI-PWR-S Roller Chain	HK Roller Chain
		
Features	1. Higher tensile strength and allowable load are provided without changing dimensions from standard roller chain. 2. Oval figured link-plates	1. Thickness of inner and outer plates are the same as one size larger standard chain. 2. Allows the selection of a chain one size smaller than would be necessary.
Functions	Allowable Load 130% Tensile strength index 110% Temperature Range in Use -10°C ~ 80°C	Allowable Load 115% Tensile strength index 120% Temperature Range in Use -10°C ~ 80°C
Main uses	CONST- RUCTION AGRICULTURE OUTDOOR	OIL FIELD CONST- RUCTION LUMBER AGRICULTURE

■ Table of Ultimate Power Chain Series

Chain No.	HI-PWR-S	HK	HI-PWR-SHK
DID 50	-	HK	-
DID 60	-	HK	-
DID 80	HI-PWR-S	HK	HI-PWR-SHK
DID 100	HI-PWR-S	HK	HI-PWR-SHK
DID 120	HI-PWR-S	HK	HI-PWR-SHK
DID 140	HI-PWR-S	HK	HI-PWR-SHK
DID 160	HI-PWR-S	HK	HI-PWR-SHK
DID 180	HI-PWR-S	HK	HI-PWR-SHK
DID 200	HI-PWR-S	HK	HI-PWR-SHK
DID 240	HI-PWR-S	HK	HI-PWR-SHK

HI-PWR-SHK Roller Chain	
	Name
1. Both thicker link plates and oval figured link plates are provided. 2. Having the greatest tensile strength and allowable load.	Features
Allowable Load 150% Tensile strength index 125% Temperature Range in Use -10°C ~ 80°C	Functions
CONST- RUCTION MINING	Main uses



■ Symbols

Functions	Allowable Load 130% Allowable load index (Compared to standard roller chains)	Tensile strength index 110% Tensile strength index (Compared to standard roller chains)	Temperature Range in Use -10°C ~ 80°C Allowable ambient temperature
Main uses	CONST- RUCTION Feed and drive in construction machines	OUTDOOR Feed and drive in outdoor equipment	OIL FIELD Feed and drive of oilfield-related equipment
	LUMBER Feed and drive of lumber-related equipment	AGRICULTURE Drive of agricultural machines	MINING Feed and drive of mining equipment

- To order for DID60LX with 160 links including RJ type connecting link as a loop.

[Type indication]

DID 60LX × **160** **R E**

DAIDO's product
Size of chain
Type of chain (LX indicates an O-ring chain)

Chain No.

Indicates that the overall length of chain is 160 links.

Length

Supply of connecting link

- Connecting link packed separately ----- B :
- Looped chain with connecting link ----- E :
- Connecting link attached to one end ----- T :

Chain direction

Packaging

• Clip type ----- R : Clearance fit, F : Interference fit
• Cotter pin type -- C : Clearance fit, H : Interference fit

Some are inapplicable, depending on the chain size.

Type of connecting link.

- To order for DID80CP with 121 links including three offset links and CJ type connecting link as a straight chain.

DID 80CP × **117LL** + **OJ × 3** + **CJ** +

DAIDO's product
Size of chain
Type of chain
Method for connecting pins and plates
Rivet : RP
Cotter pin : CP
(No expression means RP)

Chain No.

Indicates that the number of inner links from one end to the other end of a chain is 117.

Length

Indicates that 3 offset links (OJ) are required.

If the components stated before and after this symbol position are to be connected when the chain is delivered, [+] (plus) sign is used, and if not connected, [,] (comma) sign is used.

This symbol means that the last link is connected with the first link (to form a loop).

Indicates a CJ type connecting link.

- To order DID C2050 with 96 links, with bent attachments (one-hole) on both sides every two links, with a connecting link attached (in straight shape).

DID C2050 **2P** **K1 × 96** **RT**

DAIDO's product
Type of chain

Chain No.

Attachment interval

Indicates that the overall length of chain is 96 links.

Number of holes on attachment.
Types of attachments.
K : Bent attachments are installed on both sides.
A : Bent attachments are installed on one side.
SK : Straight attachments are installed on both sides.
SA : Straight attachments are installed on one side.

Attachments

Type of connecting link.
R : Clip type (DID60 or DIDC2060H or smaller)
C : Cotter type (DID80 or DIDC2080H or larger)

Connecting Link

• A part from the chain. ----- : B
• Connected with the chain to form a loop. ----- : E
• Connected with the chain to form a straight shape. -- : T

•To order for a cotter type connecting link of DID80, in which the pins are clearance-fitted with the upper plate:

DID 80 • **CJ**

Chain No.

Type of connecting link

Indicates a connecting link.

•To order for an offset link of DID60:

DID 80 • **OJ**

Chain No.

Indicates an offset link.
One-pitch type: OJ
Two-pitch type: 2POJ

•To order for a cotter type connecting link of DID80HK, in which the pins are interference fitted with the upper plate:

DID 80HK • **HJ**

Chain No.

Type of connecting link

Indicates a connecting link.

Caution (Read this section carefully prior to making a chain selection) Improper selection and/or improper installation or maintenance of a chain may result in abnormal wear and/or breakage, which may lead to damage to machines and injury. Strictly observe the following recommendation for chain selection, and the steps and notes for handling and maintenance of chains shown in this catalog.

1. Service Factor

If service factors are set forth in technical recommendations or standards published by relative official organizations, adopt such service factors. If our recommended steps of chain selection give a different service factor, use the higher factor of the two for safety.

2. Maximum Allowable Load

The maximum allowable load on a chain should be the value to be gained from dividing the minimum tensile strength of the chain by the service factor, or the maximum allowable load to be computed in our recommended calculation formula. Use the smaller value if they differ.

The maximum allowable load of a chain to be used for lifting and moving a pallet in a mechanical multistory parking operation, various loads like uneven load due to weight of a car and dynamic load upon run and stop must be taken into consideration to compute the right maximum allowable load.

3. Connecting Link

Connecting link is generally designed to connect by a clearance fit, and as a result, the fatigue strength of the chain drops at the joint portion. When it is required to use a stronger connecting link, for example : a chain used for lifting, use our recommended connecting links to be interference-fit or riveted, and do not use an offset link.

4. Connection of Chain Terminal Clevis

Accidents may often happen at the connected portion of chain and clevis attachment. The strength of the joint pin will drop drastically due to increased bending movement caused on the pin, particularly when the clevis is improperly sized (length or diameter of the pin), also when the hole ends where the clevis fits get bigger in use. Pin strength drops remarkably, so it is necessary to harden the hole of the clevis attachment by heat treatment or to press-fit a solid bushing into the hole.

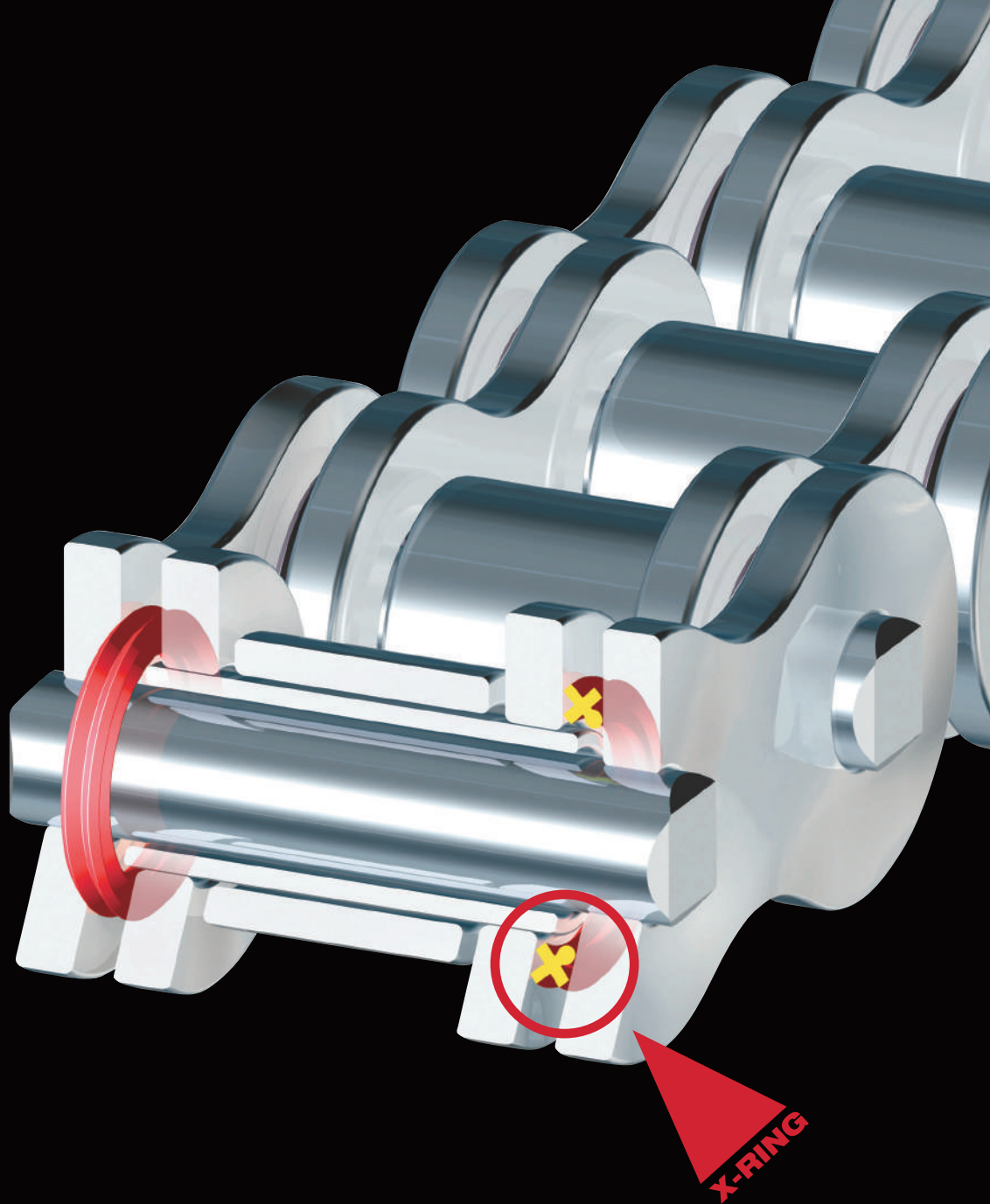
Warning : For any application requiring lifting, hoisting, or similar usage, we have a special sales clause. Please consult with us before designing chain selection and purchase.

5. Surrounding Conditions

1. Cold makes chain strength drop dramatically. Use our cold resistance chain in cold operations. Ice and frost also cause chain to reduce flexibility. Lubricate the chain with special low temperature oil or grease.
2. Where snow is present, the weight of snow may increase the load on the chain. Consider this factor fully when selecting a chain.
3. When chain corrodes, the chain strength is substantially reduced. Corrosive conditions must be taken into full consideration in selecting a chain.

6. Installation and Maintenance

1. Installation
 - a. Chain casing is recommended to be used to protect chain from corrosion by rain and snow.
 - b. Coat connecting link fully with grease when it is assembled.
 - c. After fitting chain, coat chain and clevis attachment fully with grease and oil to prevent rust.
 - d. The accuracy of installing chain, sprocket and clevis attachment should follow our recommended values. Consult with us for more information.
2. Maintenance
 - a. Periodic lubrication between inner plate and outer plate should be performed.
 - b. The rusting of chain causes chain strength to drop. Replace the chain as soon as rust appears.
 - c. Periodic inspection must be given to the link plate of the chain, If any crack is found on the link plate, the chain should be immediately replaced with a new chain.



D.I.D.[®]
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