SY Roller Chain

FINERPOWER TRANSMISSIONS

S.Y

Premium SBR®

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SY (Japan) Sugiyama Chain Co., Ltd.

Since 1946, SUGIYAMA CHAIN CO., LTD. has successfully marketed its chain in many industrial countries. They have been taking many opportunities for technical innovation and then aggressively incorporated the advanced technology into our manufacturing method of power transmission chain. In 1987, they became the first manufacturer in the world to develop SBR (Solid Bush and Roller) chain.

Their solid bushings and solid rollers are cold-forged from steel rod. The process allows them to design these parts with a totally cylindrical inside diameter and finely finished surfaces. This enhanced chain means much longer life as a result of the improved wear resistance.

www.sychain.com

NB: Most chain sizes listed in this section are stocked items although some are not.
Please confirm availability with your Finer Representatives.

Premium SBR®

The highest quality roller chain in the world just got stronger PREMIUM SBR ROLLER

Patented in: USA, Europe, Australia, Canada.

The Strongest Maximum Allowable Load

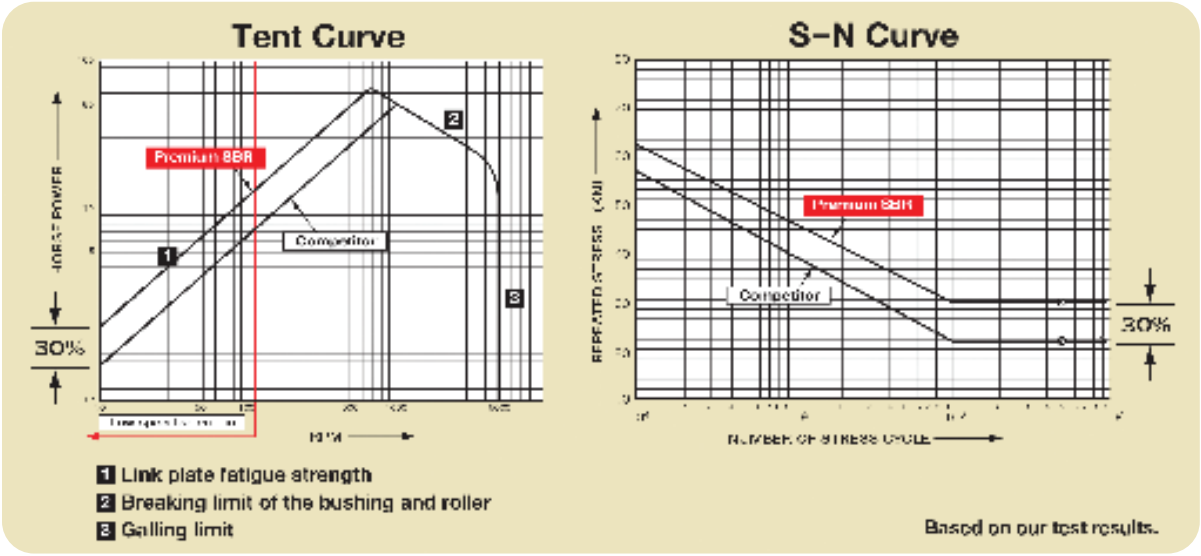
* Astounding Maximum Allowable Loads
* World's First Chain With 30% Higher Fatigue Strength
* Higher safety factor is gained.
* Downsizing to smaller chain is possible in some applications.
* Cost Savings

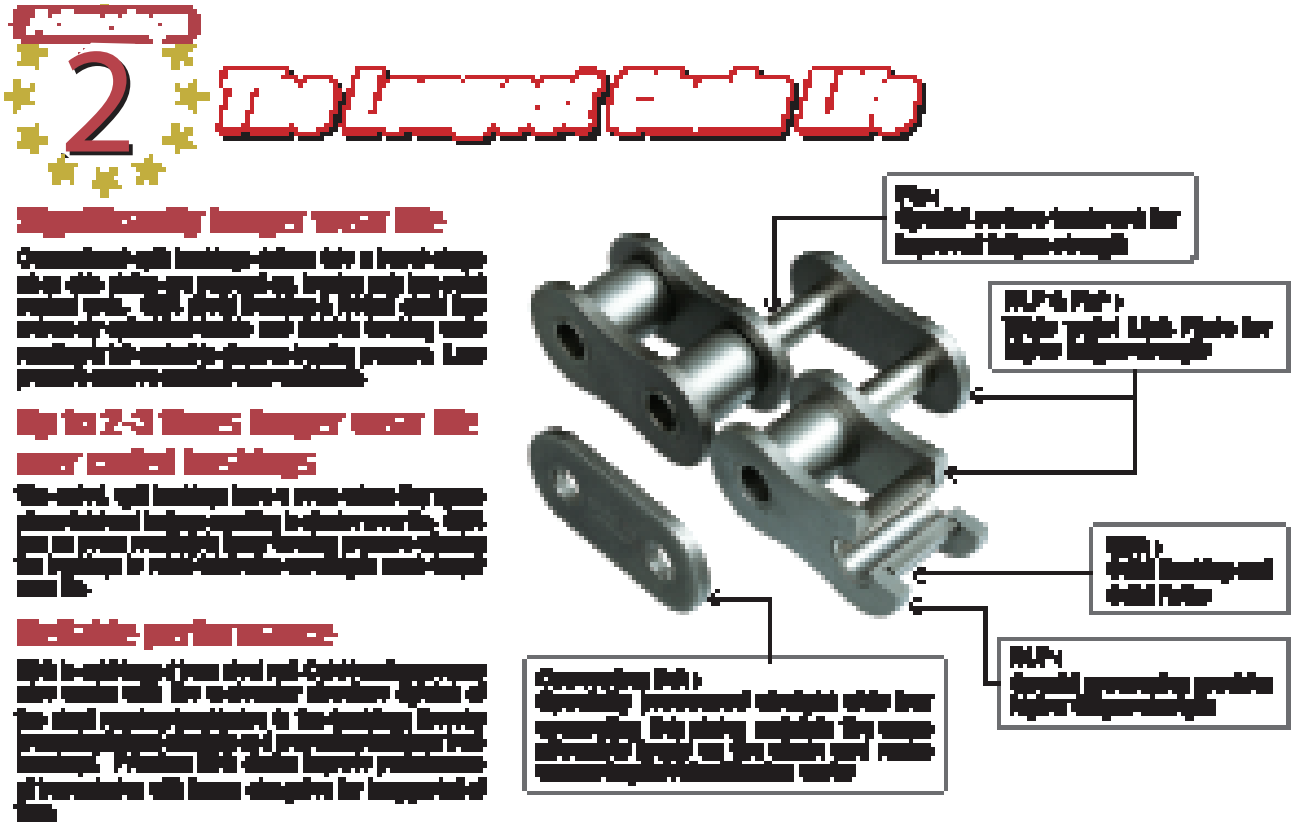
BS Standard
Maximum Allowable Loads

Chain No.	Competitor [kN]	Premium SBR [kN]
SY16B	12.8	16.4
SY20B	19.6	25.5
SY24B	27.5	35.7
SY28B	34.0	44.5
SY32B	39.2	51.0

ANSI Standard
Maximum Allowable Loads

Chain No.	Competitor [kN]	Premium SBR [kN]
SY 60	14.7	19.1
SY100	22.8	29.4
SY120	30.4	39.5
SY140	40.2	52.0
SY160	53.0	69.0
SY180	60.8	79.0
SY200	71.4	93.0
SY240	99.0	129.0





How To Order Chain

Premium SBR®

RUN BETTER WITH SY SPECIFY YOUR REQUIREMENTS

HOW TO ORDER

Chain number, type:riveted or cottered, length and quantity are the necessary information for us to fill in your order. At the very least, the chain pitch, roller diameter and roller link inside width should be given if the chain number is unknown.

STANDARD PACKING

SY roller chains are packed for convenient handling and storing. Each 10feet length is packed in a carton. 50fext length and more are wound on reel.

specifically as possible when ordering a cut length of chain.

NOMENCLATURE

SY120-2(R) 2L A-2

- A-2: Type of att.
- 2L: Space of att. (L=Pitch)
- (R): Type of pin link.
- 2: strand
- SY120: SY chain No

Plain chain consists of "SY chain No" and "Type of pin link". Attachment chain has one space between "Type of pin link" and "Space of attachment".

CHAIN PARTS

Roller Link (Type R/L)

Pin Link Riveted (Type R)

Pin Link Cottered (Type C)

CHAIN CONNECTION PARTS

Spring Clip (Type Sp CL)

Cottered (Type C)

Offset (Type O/L)

"S" Pin (Type S)

Through"S" Pin (Type TS)

Roll Pin

CHAIN CONSTRUCTION

RIVETED

Riveted chain is assembled by staking the pin heads on both sides of the chain

COTTERED

Cottered chain is assembled by staking the pin heads on one side of the chain and drilling a hole in the other end to accommodate a cotter pin. This type of chain is easily assembled and disassembled in the field.

SINGLE AND MULTIPLE

On multiple-strand types, all center plates are slip fitted(clearance-fitted) unless otherwise specified.

Roller chain with connecting link (C/L)

Ordinarily even number of pitches includes a C/L on one end.

Roller chain with offset link (O/L)

When an odd number of pitches is required,a C/L and an O/L are usually used.

Roller chain with connecting links (C/L's)on both ends.

For odd pitches(not endless),2C/L's are incorporated on request.

Roller chain endless

Usually chains are furnished unendless. If an endless chain assembly is required, specify whether it is to be riveted endless or cotter-connected.

It is important to select the most suitable roller chains and sprockets for the job by careful study of power transmission requirements.

The following basic factors should be considered when selecting roller chains for transmission needs through there may be other factors.

ATMOSPHERIC CONSIDERATION

The input power ratings appearing on the pages of 80 to 84, have been worked out under the following conditions.

1) To be driven in normal atmosphere of -10° F to 60° C free from ill effect of abrasive dust, corrosive gas, high humidity etc.
2) Sprockets should be aligned and mounted on parallel horizontal shafts.
3) Recommended method of lubrication and recommended kind of lubricant should be used.
4) Should be driven at even load or small load variations.

Power rating of multiple strand chain is not simply calculable by multiplying the power rating of one strand by the number of strand because of uneven load distribution onto each strand. So, multiple strand factor should be used for expected service life.

A service life of 15,000 hrs, can be expected when chain length is 100 pitches and the above conditions are met.

POINT IN SELECTION ROLLER CHAIN AND SPROCKET

The following factors must be taken into consideration in selecting proper chain drive, depending on chain speed-normal or low speed. Also correction factors should be used, fully grasping the conditions of use.

a) Driven machine
b) Type of load: smooth light or heavy shock
c) Source of power
d) kW to be transmitted [kW_0:kW]
e) RPM and diameter of high speed shaft[n_1:rpm]
f) RPM and diameter of low speed shaft[n_2:rpm]
g) Center distance of shaft [m]
h) Chain-driving speed [S:m/min]

SELECTION PROCEDURE ACCORDING TO CHAIN SPEED

IN CASE OF NORMAL SPEED

S=50~250m/min

To obtain corrected power kW_1 multiply kW_0 by corrected factor f1 applied according to condition of use

$kW_1 = kW_0 \cdot f_1$
$= kW_0 \cdot f_1 \cdot f_2$

To obtain chain and high-speed sprocket teeth N1 use roller chain quick selection chart and power rating chart according to RPM of high speed shaft and corrected power kW_1

N1

Determine low speed sprocket teeth N2 from speed ratio R

$R = n_1/n_2$
$N_2 = R \cdot N_1$

See if each sprocket shaft diameter and mounting space satisfy specifications of machi-

*Check

Make special sprocket

Obtain corrected power kW_1 of single strand by referring to multiple strand factor f2

OK

Finally determined

Economical sprockets for general industrial use are recommended except when special sprockets are made due to unavoidable circumstances.

IN CASE OF LOW SPEED

S=Less than 50m/min.
Divided into two cases dep-ending on chain driving conditions

1) For low speed drive with few stops and starts, make the chain selection in a way to satisfy the following formula:
$T \times f1 \times f3 \leqq$ Max. allowable chain load.
2) For low speed drive with frequent stops and starts.
$T \times f1 \times f3 \times f4 \leqq$ Ave. ultimate strength.

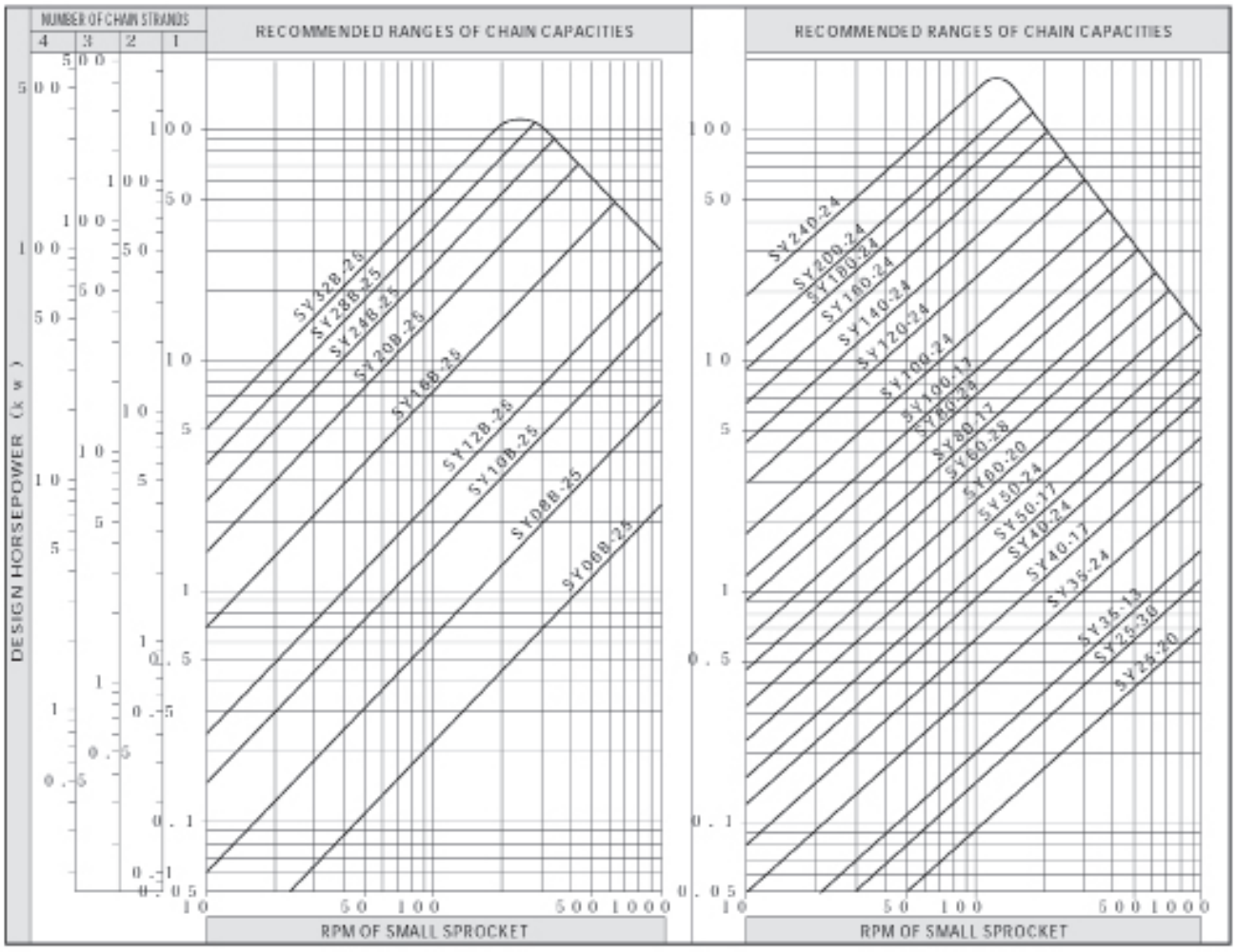
Select the chain by substituting the values of chain speed and max working load into formulas (1)&(2), after chain selected tentatively in the general way.

N1[—] = Number of teeth on small sprocket.
N2[—] = Number of teeth on large sprocket.
P [mm] = Chain pitch
S [m/min] = Chain speed

$= N1 \cdot P \cdot n1/1000$
T [kN] = Max. working load.
$= 60$

f2 : MULTI-STRAND FACTOR

Number of roller chain strands	f2
2	1.7
3	2.5
4	3.3
5	3.9
6	4.6
8	6.2
10	7.5



CONCISE SELECTION DATA

SY Chain No.	SY Standard(ANSI)		Each Series				
	Max. Allowable Load	Ave. Ultimate Strength	Ave.Ultimate Strength(kN)				
			E	U	H	HE	HU
35	2.48	10.8					
40	4.17	19.1					
50	7.22	31.9					
60	10.7	43.1	47.1		54.9	53.9	
80	19.1	78.5	79.4	84.3	60.2	93.2	98.1
100	29.4	118	119	127	137	142	145
120	39.5	167	174	186	186	191	196
140	52.3	216	227	245	241	252	255
160	69.0	275	294	314	306	319	324
180	79.0	353		412	373		
200	93.0	451		490	520		
240	129.0	677		726	726		

f1: SERVICE FACTOR

Driven Load Condition	Interval Combustion Engine		Motor or Turbine
	Hydraulic Drive	Mechanical Drive	
Uniform Smooth	1.1	1.3	1.0
Moderate Shock	1.5	1.7	1.4
Heavy Shock	1.9	2.1	1.8

f3: SPEED COEFFICIENT

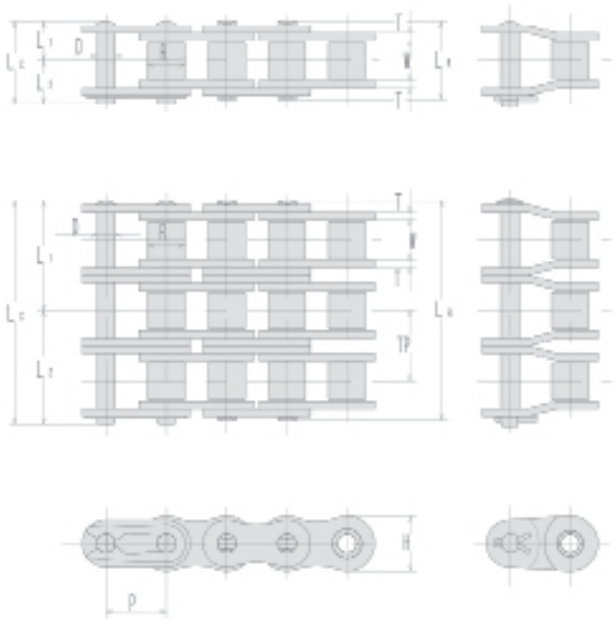
Chain Speed	f3
15m/min.	1.0
15－30	1.2
30－50	1.4

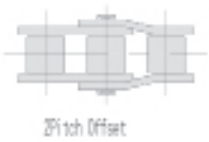
f4: SAFETY FACTOR

Chain Speed	f4
25m/min.	7≦
25－50	8≦

ANSI Roller Chain

Premium SBR®





Item	See Page
Attachment Chain	66 67
Rust Less	36 40 43
SL Self-Lube Chain	49
SLR Self-Lube Chain	52 53
Drive Chain Selection	76 77
Horsepower Rating	82

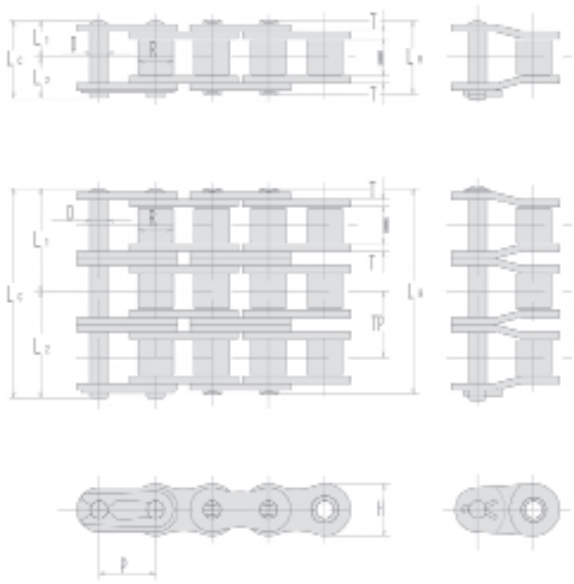
Standard Packing	SY35	SY40
1 Unit (10')	320P	240P
On a Reel	250'	200'

35 (Bushed Chain).....

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain" Weight
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY35	9.53	4.78	5.08	3.58	12	12.90	6.0	6.9	9.0	1.25	-	10.80	2.48	0.34
SY35-2					22.1	23.00	11.1	11.9			10.1	21.60	3.67	0.63
SY35-3					32.2	33.10	16.1	17.0				32.40	5.40	0.92
SY35-4					42.3	43.2	21.2	22.0				43.2	7.13	1.22
SY35-5					52.4	53.2	26.2	27.0				54.00	8.42	1.56
SY35-6					62.5	63.5	31.3	32.2				64.80	9.94	1.89

40

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain" Weight
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY40	12.7	7.95	7.92	3.96	16.5	17.9	8.3	9.6	11.7	1.5	-	19.1	4.17	0.60
SY40-2					30.8	32.2	15.4	16.8			14.4	38.2	6.17	1.22
SY40-3					45.0	46.6	22.5	24.1				57.3	9.08	1.85
SY40-4					60.0	60.8	30.0	30.8				76.4	12.0	2.46
SY40-5					74.6	75.6	37.3	38.3				95.5	14.2	3.14
SY40-6					89	89.9	44.5	45.4				115.0	16.7	3.31



Item	See Page
Attachment Chain	60 67
Rust Less	36 40 43
SL Self-Lube Chain	49
SLR Self-Lube Chain	52 53
Drive Chain Selection	76 77
Horsepower Rating	82 83

Standard Packing	SY50	SY60
1 Unit (10')	192P	160P
On a Reel	100'	100'

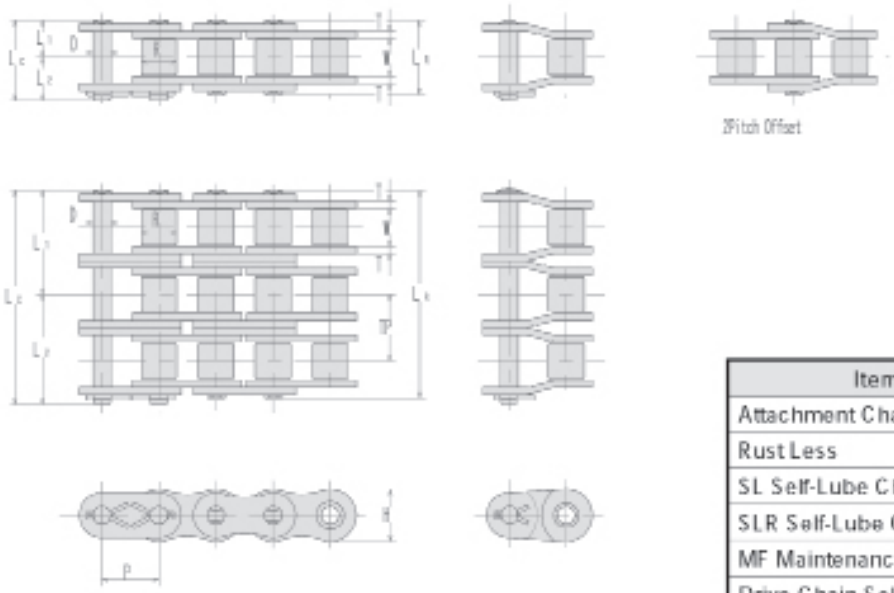
50

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY50	15.875	9.53	10.16	5.08	20.4	22.0	10.2	11.8	14.6	2.0	-	31.9	7.22	0.98
SY50-2					38.4	40.0	19.2	20.8			18.1	63.8	10.7	2.00
SY50-3					56.7	58.2	28.4	29.8				95.7	15.7	3.07
SY50-4					75.0	75.7	37.5	38.2				128	20.7	3.97
SY50-5					93.2	94.1	46.6	47.5				160	24.5	5.02
SY50-6					111.4	112.5	55.7	56.8				191	28.9	6.01

60

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY60	19.05	12.70	11.91	5.95	25.5	26.9	12.8	14.1	17.5	2.4	-	43.1	10.7	1.46
SY60-2					48.2	49.7	24	25.7			22.8	86.2	14.7	2.95
SY60-3					71.2	72.6	35.2	37.4				129	21.6	4.43
SY60-4					94.4	95.4	47.2	48.2				172	28.5	5.92
SY60-5					117	118.2	58.5	59.7				216	33.7	7.41
SY60-6					140	140.9	70.1	70.8				259	39.7	8.90
SY60-8					185	186.6	92.5	94.1				345	53.5	13.36
SY60-10					230.8	232.2	115.4	116.8				431	64.7	16.34

ANSI Roller Chain



Item	See Page
Attachment Chain	66 67
Rust Less	36 40 43
SL Self-Lube Chain	49
SLR Self-Lube Chain	52 53
MF Maintenance Free	57
Drive Chain Selection	76 77
Horsepower Rating	83

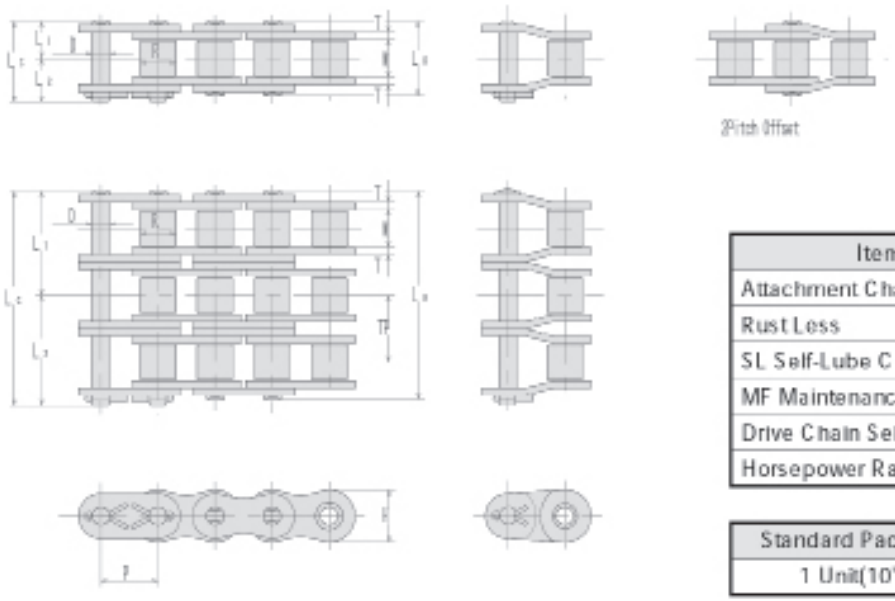
Standard Packing	SY80	SY100
1 Unit (10')	120P	96P

80

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY80	25.4	15.88	15.88	7.93	32.8	35.5	16.4	19.1	23.4	3.2	-	78.5	19.1	2.52
SY80-2					61.6	64.5	30.8	33.7			29.3	157	25	5.1
SY80-3					90.9	94.1	45.5	48.6				236	36.8	7.68
SY80-4					120.4	123.5	60.2	63.3				314	48.5	10.25
SY80-5					149.8	152.8	74.9	77.9				393	57.3	12.84
SY80-6					179.1	182.1	89.6	92.5				471	67.6	15.42
SY80-8					237.6	240.6	118.8	121.8				628	91.1	20.58
SY80-10					296.2	299.2	148.1	151.1				785	110	25.81

100

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY100	31.75	19.05	19.05	9.53	39.4	43.0	19.7	23.3	29.3	4	-	118	29.4	3.91
SY100-2					75.1	78.8	37.6	41.2			35.8	236	29.4	7.74
SY100-3					110.9	114.6	55.5	59.1				354	56.5	11.58
SY100-4					147.4	150.8	73.7	77.1				472	74.6	15.4
SY100-5					183	186.6	91.5	95.1				590	88.1	19.26
SY100-6					218.8	222.4	109.4	113				708	104	23.1
SY100-8					290.4	294.1	145.2	148.9				944	140	30.81
SY100-10					362	365.7	181	184.7				1180	170	38.54



Item	See Page
Attachment Chain	66 67
Rust Less	36 40
SL Self-Lube Chain	49
MF Maintenance Free	57
Drive Chain Selection	76 77
Horsepower Ratings	84

Standard Packing	SY120	SY140
1 Unit(10')	80P	68P

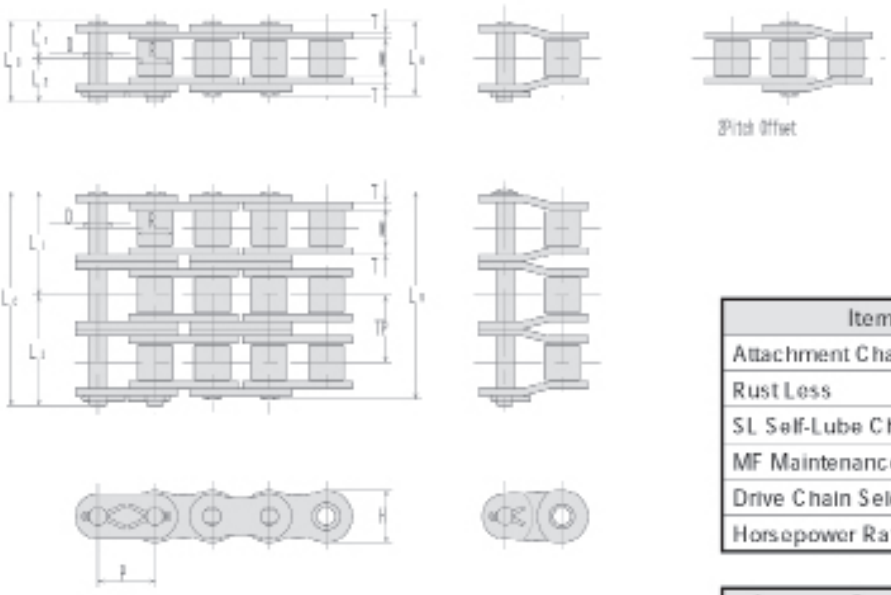
120

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY120	38.10	25.40	22.23	11.10	49.5	53.4	24.8	28.6	35.10	4.80	-	167.00	39.5	5.76
SY120-2					94.9	98.8	47.5	51.3			45.4	334	51.7	11.49
SY120-3					140.3	144.2	70.2	74				501	76	17.2
SY120-4					186.1	190	93.1	96.9				668	100	22.92
SY120-5					231.5	235.4	115.8	119.6				835	119	28.65
SY120-6					276.9	280.8	138.5	142.3				1002	140	34.36
SY120-8					367.5	371.7	183.8	187.9				1336	188	45.81
SY120-10					458.3	462.5	229.2	233.3				1670	228	57.38

140

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY140	44.45	25.4	25.4	12.7	54.0	58.3	27.0	31.3	40.9	5.6	-	216	52.3	7.41
SY140-2					102.9	107.2	51.5	55.7			48.9	432	68.3	14.63
SY140-3					151.7	156.3	75.9	80.4				648	101	21.91
SY140-4					201.2	205.5	100.6	104.9				864	133	29.17
SY140-5					250.1	254.4	125.1	129.3				1080	157	36.45
SY140-6					299	303.3	149.5	153.8				1296	185	43.72
SY140-8					396.5	401.1	198.3	202.8				1728	249	58.28
SY140-10					494.3	498.9	247.2	251.7				2160	302	72.82

ANSI Roller Chain



Item	See Page	
Attachment Chain	66	67
Rust Less	36	40
SL Self-Lube Chain	49	
MF Maintenance Free	57	
Drive Chain Selection	76	77
Horsepower Ratings	84	85

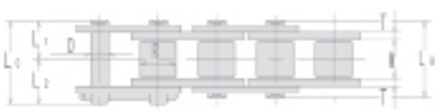
Standard Packing	SY160	SY180
1 Unit(10')	60P	54P

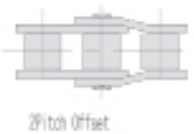
160

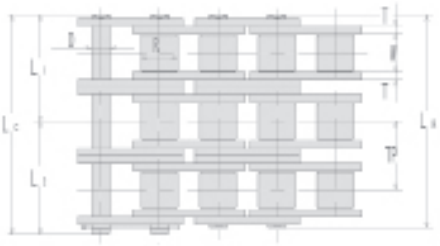
"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY160	50.8	31.75	28.58	14.28	64.3	68.7	32.2	36.5	46.7	6.4	-	275	69.0	9.79
SY160-2					122.8	127.2	61.4	65.8			58.5	550	90.1	19.45
SY160-3					181.3	185.7	90.7	95				825	133	29.17
SY160-4					240.3	244.7	120.2	124.5				1100	175	38.77
SY160-5					298.8	303.3	149.4	153.9				1375	207	48.43
SY160-6					357.4	361.7	178.7	183				1650	244	58.08
SY160-8					474.4	478.8	237.2	241.6				2200	329	77.39
SY160-10					591.4	595.8	295.7	300.1				2750	398	102.86

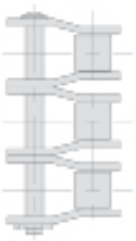
180

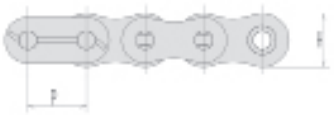
"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY180	57.15	35.7	35.7	17.45	72.5	78.4	36.3	42.1	52.5	7.2	-	353	79.0	13.39
SY180-2					138.2	144.0	69.1	74.9			65.8	706	98.4	26.62
SY180-3					204.5	210.2	102.3	107.9				1059	145	39.85
SY180-4					270.2	275.9	135.1	140.8				1412	191	53.08
SY180-5					336	341.6	173.6	173.7				1765	226	66.31
SY180-6					401.8	407.3	200.9	206.4				2118	266	79.54











Item	See Page
Rust Less	40
MF Maintenance Free	57
Drive Chain Selection	76 77
Horsepower Ratings	85

Standard Packing	SY200	SY240
1 Unit(10')	48P	40P

200

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY200	63.5	38.1	39.67	19.83	78.5	87.0	39.3	47.7	59.8	8.0	-	451	93	16.93
SY200-2					150.2	158.7	75.1	83.6			71.6	902	122	33.73
SY200-3					221.7	230.2	110.9	119.3				1353	179	50.53
SY200-4					293.3	302.4	146.7	155.7				1804	236	67.34
SY200-5					365.5	374	182.8	191.2				2255	279	84.14
SY200-6					437.1	445.6	218.6	227				2706	329	100.94

240

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY240	76.2	47.63	47.63	23.78	96.4	104.1	48.2	55.9	70.3	9.5	-	677	129	23.64
SY240-2					184.2	191.8	92.1	99.7			87.8	1354	167	47.13
SY240-3					272	279.6	136.0	143.6				2031	245	70.61
SY240-4					359.8	367.4	179.9	187.5				2708	324	94.09
SY240-5					447.6	455.2	223.8	231.4				3385	383	117.56
SY240-6					535.5	543	267.8	275.2				4062	451	141.06

Feature

Excellent corrosion resistance without plating same strength and working load values as standard chain No hydrogen embrittlement by surface treatment.

Results of corrosion resistant tests

Salt spray test

CHAINS	Hour for Rust developed(hours)
Special surface treated	1000 No rust
Glossy chromating	72~96
Colored chromating	120~240
Molten zinc plating	120~240

Salt spray test

CHAINS	Hour for Rust developed(hours)
Nickel plated	48
Special surface treated	600~840
Made of SUS304 stainless steel	above 840 No rust

Applications

Outdoor service
Sea water applications
Stacking crane, Car parking

Applicable Chains

#40~#240
Attachment chain is available.

Purpose of Special surface treatment

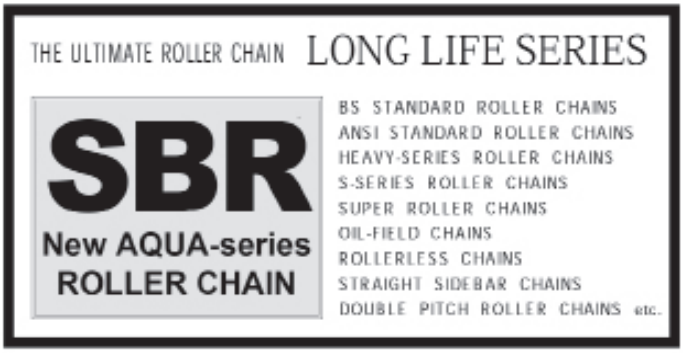
Linkplate : for anticorrosion
Other parts : for anticorrosion and to reduce friction

Caution

For the food products industry where the chain may be exposed to direct food contact, stainless steel chain is recommended.

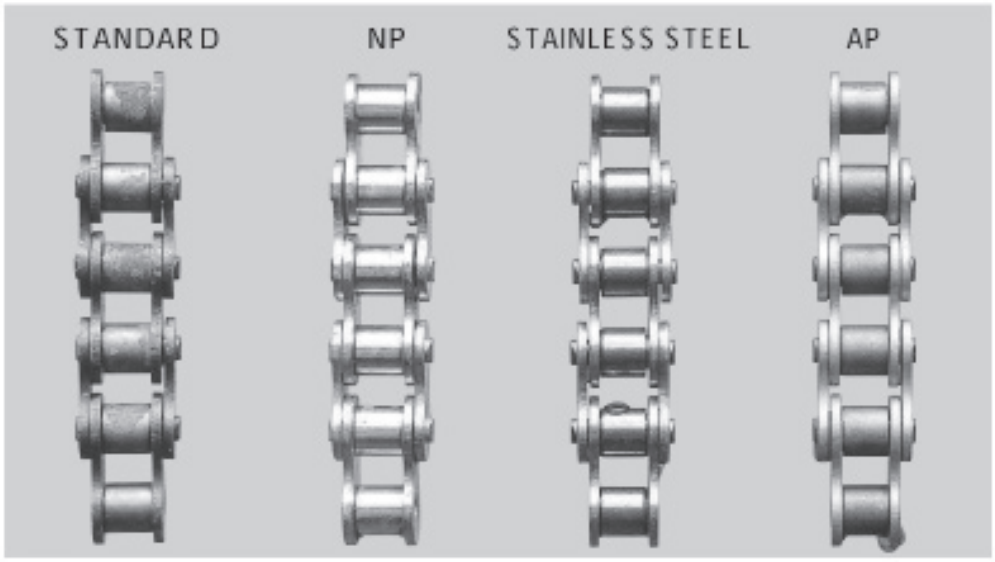
Applicable Chains

SY40AP-SY240AP
Attachment chain is available.
For identification, a suffix is added to the chain numbers.



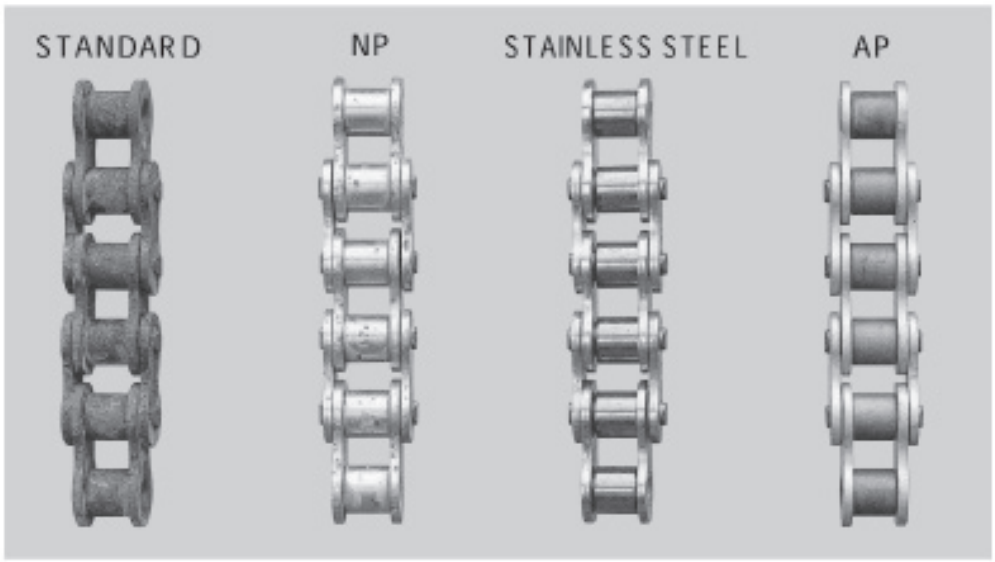
Stocking:

BS Simplex	BS-Duplex	AS-Simplex	AS-Duplex	Double Pitch
08B-1AQUA	08B-2AQUA	40-1AQUA	40-2AQUA	C2040-AQUA
100-1AQUA	10B-2AQUA	50-1AQUA	50-2AQUA	
10B-1AQUA	12B-2AQUA	60-1AQUA	60-2AQUA	C2060H-AQUA
12B-1AQUA	16B-2AQUA	80-1AQUA	-	-
16B-1AQUA	-	-	-	-
20B-1AQUA	-	-	-	-



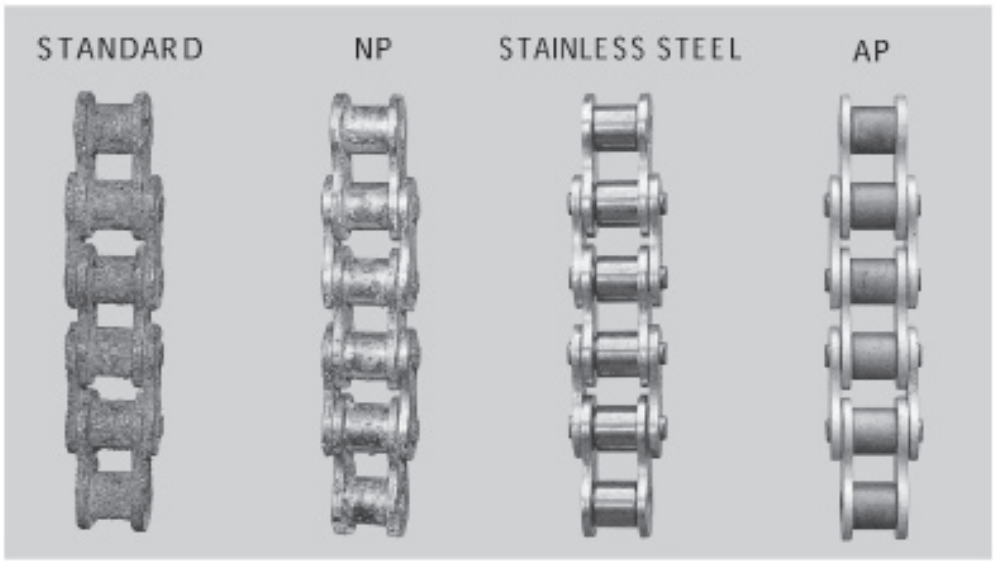
Open air,
splashed water
morning&evening

3days after



Open air,
splashed water
morning&evening

15days after



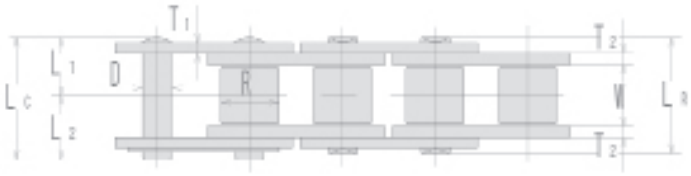
Indoors,
splashed
5%salty water
morning&evening

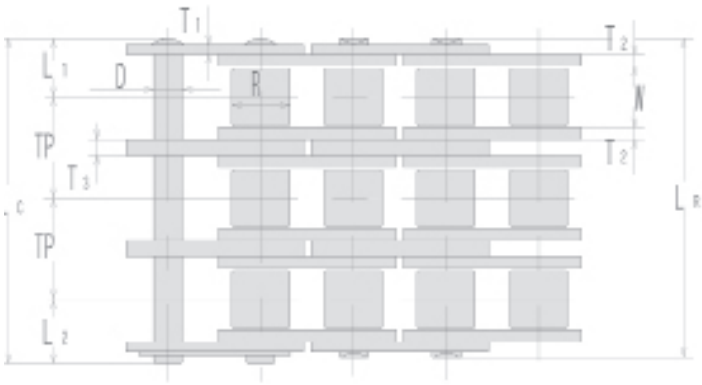
15days after

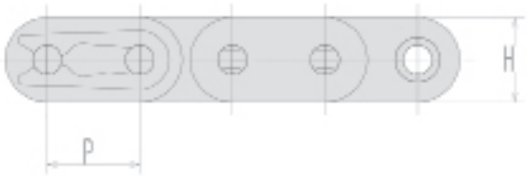
BS Roller Chain

Premium SBR®

SY BS standard roller chains are standardized in accordance with ISO 606 B and fully inter-changeable with chains manufactured according to BS 228 and DIN 8187.
Supplied, in rivet type, to European countries as well as replacement on machinery employing BS standard chains.







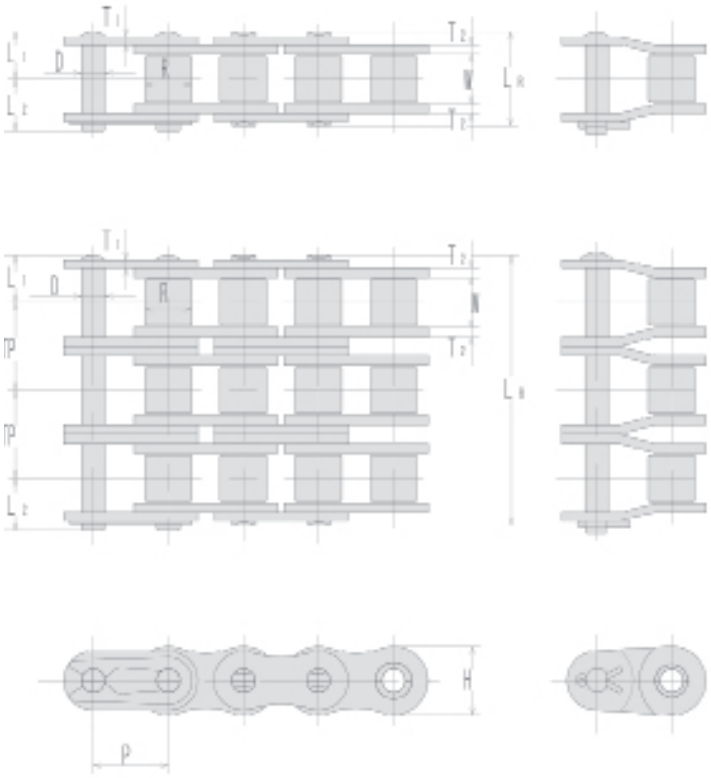
Item	See Page
Rust Less	36 40 42
Drive Chain Selection	76 77

Standard Packing	06B
1 Unit (10')	320P
1 Unit (5m)	526P

06B

"SY Chain No. (ANSI)"	Dimensions - mm													Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate				"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.						
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	T3	TP	Kn	kN	kg/m
06B	9.525	5.72	6.35	3.28	12.6	13.4	6.3	7.1	8.2	1.0	1.25	1.6	10.24	8.92	1.7	0.41
-2					22.9	23.7								16.9	2.9	0.78
-3					33.2	33.7								24.9	4,2	1.18

NB - Also stocking SY05B-1 & SY05B-2 Chain.



Item	See Page
Attachment Chain	64 65
Rust Less	36 40 42
SLR Self-Lube Chain	51
Drive Chain Selection	76 77

Standard Packing	08B	10B
1 Unit (10')	240P	192P
1 Unit (5m)	394P	316P

08B

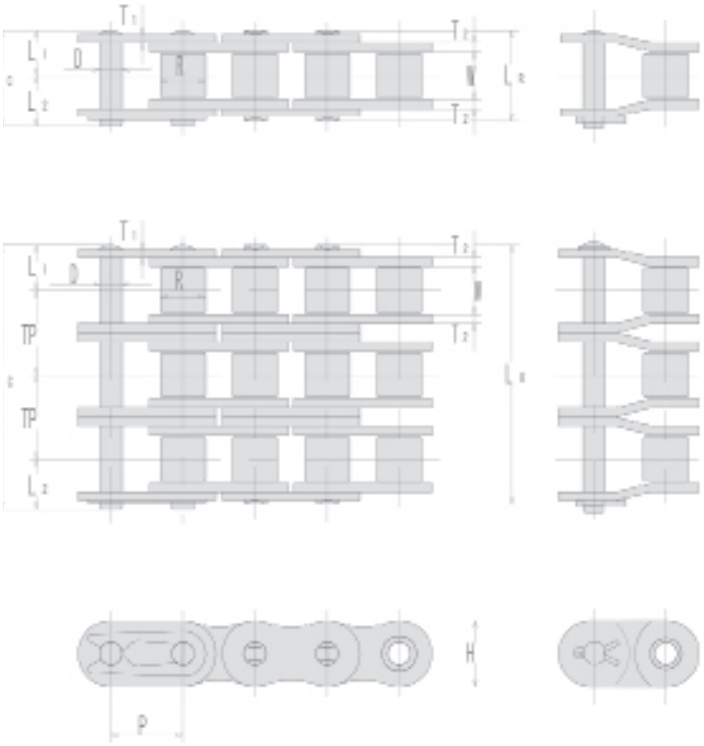
"SY Chain No. (ANSI)"	Dimensions - mm													Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate				"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.						
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	T3	TP	Kn	kN	kg/m
08B	12.7	7.75	8.51	4.45	16.7	18.2	8.4	9.8	11.8	1.5		13.92	17.8	3.14	0.61	0.41
-2					30.6	31.9							31.1	5.35	1.26	0.78
-3					44.5	45.8							44.5	7.85	1.88	1.18

10B

"SY Chain No. (ANSI)"	Dimensions - mm													Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate				"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.						
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	T3	TP	Kn	kN	kg/m
10B	15.875	9.65	10.16	5.08	19	20.7	9.5	11.2	14.7	1.65		16.59	22.2	4.9	0.89	0.41
-2					35.6	37.3							44.5	8.33	1.79	0.78
-3					52.4	54.4							66.7	12.2	2.66	1.18

BS Roller Chain

Premium SBR®



Item	See Page
Attachment Chain	64 65
Rust Less	36 40 42
SLR Self-Lube Chain	51
MF Maintenance Free	56 76
Drive Chain Selection	76 77

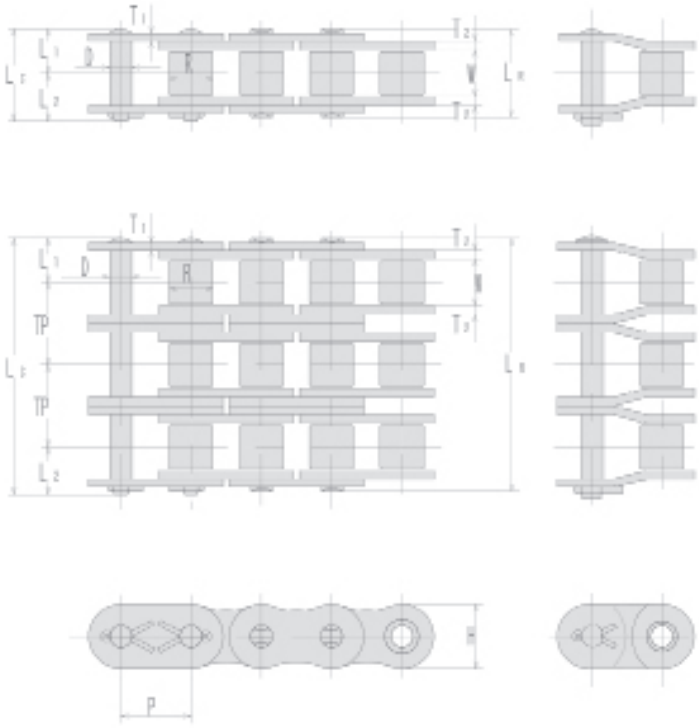
Standard Packing	12B	16B
1 Unit (10')	160P	120P
1 Unit (5m)	262P	198P

12B

"SY Chain No. (ANSI)"	Dimensions - mm												"Trans. Pitch"	Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin	Length				Plate							
		Width	Dia.	Dia					Height	Thick.						
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	T3	TP	Kn	kN	kg/m
1 2 B	19.05	11.68	12.07	5.72	22	23.6	11.0	12.6	16.1	1.8		19.46	28.9	7.06	1.14	0.41
-2					41.6	43.1							57.8	12..0	2.28	0.78
-3					61.1	62.7							86.7	17.6	3.36	1.18

16B

"SY Chain No. (ANSI)"	Dimensions - mm												"Trans. Pitch"	Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin	Length				Plate							
		Width	Dia.	Dia					Height	Thick.						
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	T3	TP	Kn	kN	kg/m
1 6 B	25.4	17.02	15.88	8.26	35.1	38.2	17.6	20.6	21.0	3.2	4.0	31.88	60	16.4	2.59	0.41
-2					67.2	70.1							106	21.4	5.13	0.78
-3					99.2	102.5							160	31.5	7.68	1.18



Item	See Page
Attachment Chain	64 65
Rust Less	36 40 42
SLR Self-Lube Chain	51
MF Maintenance Free	56 76
Drive Chain Selection	76 77

Standard Packing	20B	24B
1 Unit (10')	96P	80P
1 Unit (5m)	158P	132P

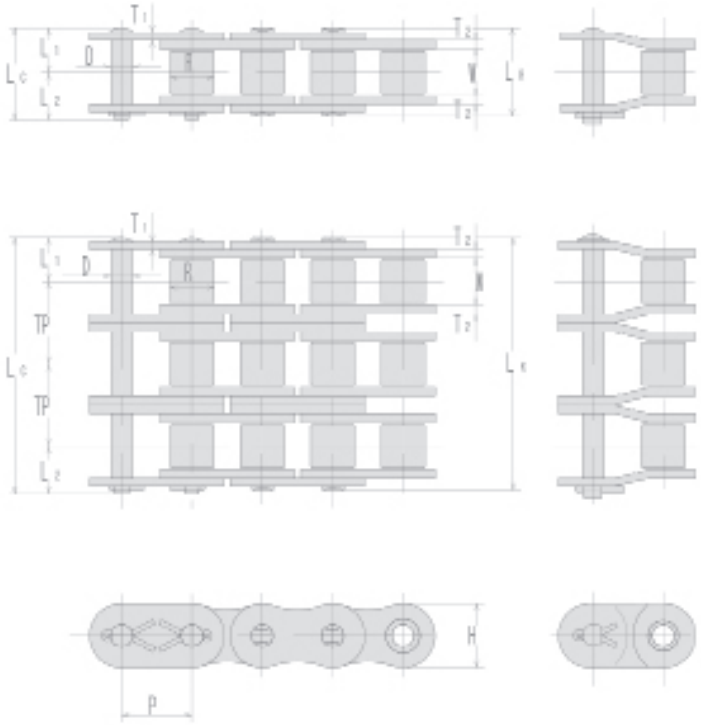
20B

"SY Chain No. (ANSI)"	Dimensions - mm													Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate				"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.						
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	T3	TP	Kn	kN	kg/m
20B	31.75	19.56	19.05	10.16	40.2	44	20.1	23.9	26.4	3.5	4.5	36.45	95	25.5	3.76	0.41
-2					76.8	80.6							170	33.3	7.26	0.78
-3					113.3	117.2							250	49.0	10.86	1.18

24B

"SY Chain No. (ANSI)"	Dimensions - mm													Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate				"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.						
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	T3	TP	Kn	kN	kg/m
24B	38.1	25.4	25.4	14.63	53.4	58.1	26.7	31.4	33.4	4.8	5.9	48.36	160	35.7	7.29	0.41
-2					101.8	106.5							280	46.8	14.53	0.78
-3					150.2	154.9							425	68.8	21.76	1.18

BS Roller Chain



Item	See Page
Rust Less	36 40 42
SLR Self-Lube Chain	51
MF Maintenance Free	56 76
Drive Chain Selection	76 77

Standard Packing	2BB	3ZB
1 Unit (10')	68P	60P
1 Unit (5m)	114P	100P

28B

"SY Chain No. (ANSI)"	Dimensions - mm													Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate				"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.						
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	T3	TP	Kn	kN	kg/m
2 8 B	44.45	31	27.94	15.88	65.1	70.5	32.6	37.9	37.0	6.3	7.4	59.56	200	44.5	9.26	0.41
-2					124.7	130							360	58.3	18.45	0.78
-3					184.2	189.6							530	85.8	27.65	1.18

32B

"SY Chain No. (ANSI)"	Dimensions - mm													Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate				"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.						
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	T3	TP	Kn	kN	kg/m
3 2 B	50.8	31.00	29.21	17.81	65.0	71.1	32.5	38.6	42.2	6.3	6.9	58.55	250	51	9.92	0.41
-2					123.4	129.7							450	66.6	19.76	0.78
-3					182	188.3							670	98	29.61	1.18

SY Double Capacity roller chains possess

Twice the number of link plates and provide almost twice the ultimate strength of standard single strand roller chains. They are primarily designed for high load hoist, pull down, or other tension linkage applications, and operate on standard ASME/ANSI single strand sprockets with hardened teeth.

Good for ecology: Lesser number of component parts
Operates in smaller space
Lighter weight
(in comparison with double strand roller chain)

Available for

ANSI / BS Type
&
Double Pitch
Roller Chain

	Double Capacity	Double Strand
Pitch	Same	
Sprocket	Single	Double
Space	Small	Large
Weight	Light	Heavy

All 33 men trapped 2,060 ft below ground were winched to the surface by the rescue capsule.

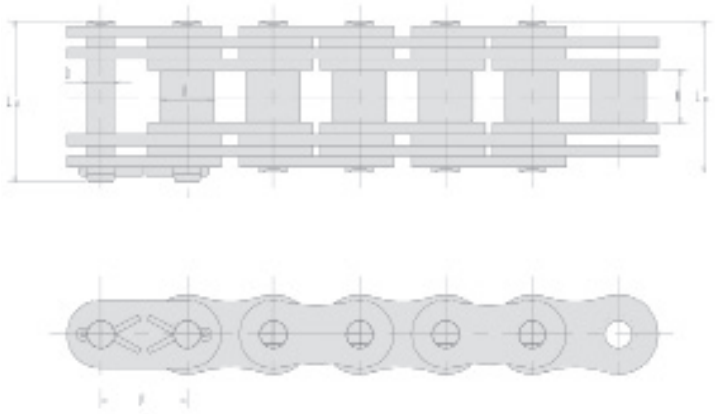
Drilled hole 2,060 ft down to rescue the miners.

A drilling machine installed with SY 180 Double Capacity chain was utilized to drill 6" holes dia the 2,060 ft. or so down that found the 33 miners in Chile.

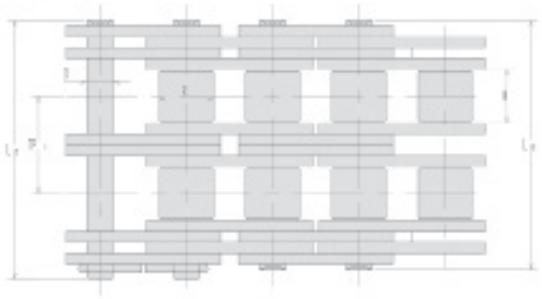
SY Double Capacity Roller Chain(#180)

Double Capacity Chain is a single strand chain that offers the same ultimate tensile strength as a double strand chain with a saving of 50%.
Double Capacity Chain consists of twice the amount of side plates as single strand chain.

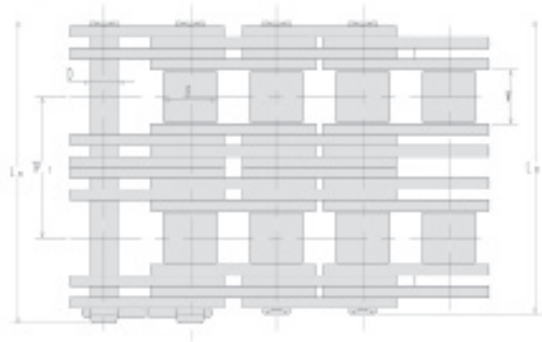
DC (×2)



TC (×3)



FC (×4)

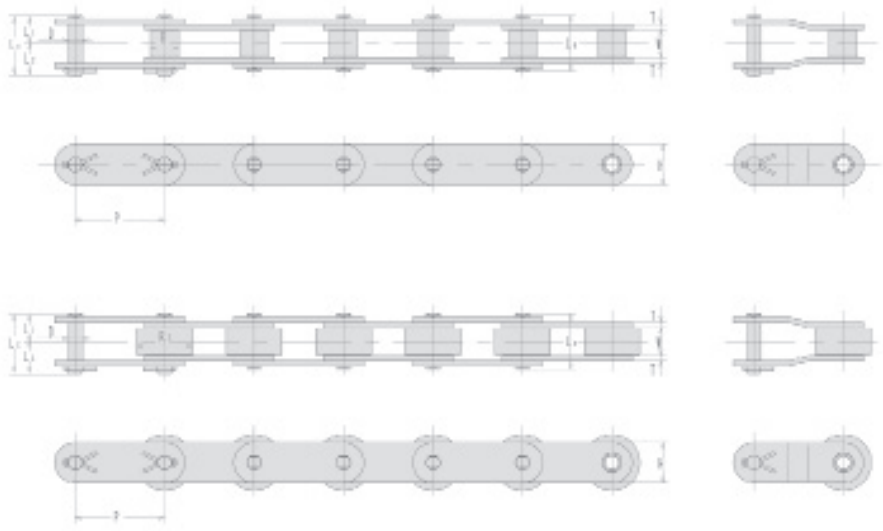


LR2 = LR1 + TP1
LC2 = LC1 + TP1
LR3 = LR1 + TP2
LC3 = LC1 + TP2

"SY Chain No. (ANSI)"	Dimensions - mm								Average Ultimate Strength (KN)			Maximum Allowable Load (kN)
	Pitch	Roller		Pin			"Transverse Pitch"					
		Width	Dia.	Dia	Length							
	P	W	R	D	LR1	LC1	TP1	TP2	DC	TC	FC	DC
100 DC.TC.FC	31.75	19.05	19.05	9.53	55.8	59.5	35.8	51.8	235	352	470	33.5
120 DC.TC.FC	38.1	25.40	22.23	11.10	69.0	73.3	45.4	64.2	343	514	685	49
140DC.TC.FC	44.45	25.40	25.40	12.70	76.4	81.1	48.9	71.3	451	676	902	64.4
160 DC.TC.FC	50.8	31.70	28.58	14.28	90.0	95.1	58.5	84.1	559	838	1118	79.8
180 DC.TC.FC	57.15	35.70	35.70	17.45	101.6	107.7	65.8	94.6	726	1089	1452	103

Double Pitch (Conveyor) Roller Chain

Premium SBR®

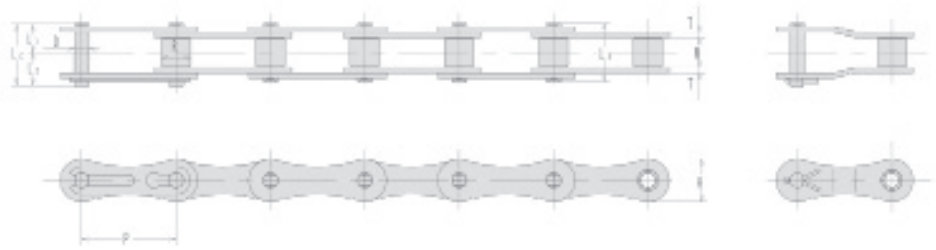


Standard Roller Type . . . . . .

"SY Chain No. (ANSI)"	Dimensions - mm										Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate				
		Width	Dia.	Dia	Length				Height	Thick.			
	P	W	R	D	LR	LC	L1	L2	H	T1	Kn	kN	kg/m
C 2 0 4 0	25.40	7.95	7.92	3.96	16.5	18.5	8.2	10.3	11.4	1.5	16.9	3.63	0.48
C 2 0 5 0	31.75	9.53	10.16	5.08	20.4	22.0	10.2	11.8	15.0	2.0	27.5	6.28	0.82
C 2 0 6 0H	38.10	12.70	11.91	5.95	28.7	31.0	14.4	16.6	17.0	3.2	40.2	8.63	1.38
C 2 0 8 0H	50.80	15.88	15.88	7.93	35.5	38.8	17.8	21.0	22.6	4.0	68.6	14.7	2.32
C 2 1 0 0H	63.50	19.05	19.05	9.53	42.2	45.7	21.1	24.6	28.6	4.8	107.9	22.6	3.46
C 2 1 2 0H	76.20	25.40	22.23	11.1	52.6	57.0	26.3	30.7	34.9	5.6	151	30.4	4.92

Carrier Roller Type. . . . . .

"SY Chain No. (ANSI)"	Dimensions - mm										Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate				
		Width	Dia.	Dia	Length				Height	Thick.			
	P	W	R	D	LR	LC	L1	L2	H	T1	Kn	kN	kg/m
C 2 0 4 2	25.4	7.95	15.88	3.96	16.5	18.5	8.2	10.3	11.4	1.5	16.9	3.63	0.82
C 2 0 5 2	31.75	9.53	19.05	5.08	20.4	22.0	10.2	11.8	15.0	2.0	27.5	6.28	1.26
C 2 0 6 2H	38.1	12.7	22.23	5.95	28.7	31	14.4	16.6	17.0	3.2	40.2	8.63	2.08
C 2 0 8 2H	50.8	15.88	28.58	7.93	35.5	38.8	17.8	21	22.6	4.0	68.6	14.7	3.36
C 2 1 0 2H	63.5	19.05	39.67	9.53	42.2	45.7	21.1	24.6	28.6	4.8	107.9	22.6	5.64
C 2 1 2 2H	76.2	25.4	44.45	11.1	52.6	57	26.3	30.7	34.9	5.6	151	30.4	7.87

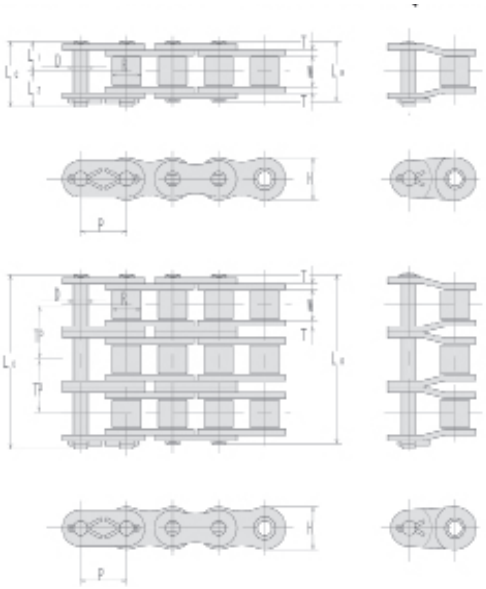


Drive Series

"SY Chain No. (ANSI)"	Dimensions - mm										Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight
	Pitch	Bushing		Pin					Plate				
		Width	Dia.	Dia	Length				Height	Thick.			
	P	W	R	D	LR	LC	L1	L2	H	T1	Kn	kN	kg/m
A 2040	25.4	7.95	7.92	3.96	16.5	17.9	8.3	9.6	11.4	1.5	16.9	3.63	0.43
A 2050	31.75	9.53	10.16	5.08	20.4	22	10.2	11.8	15.0	2.0	27.5	6.28	0.73
A 2060	38.1	12.7	11.91	5.95	25.5	26.9	12.8	14.1	17.0	2.4	40.2	8.63	1.03

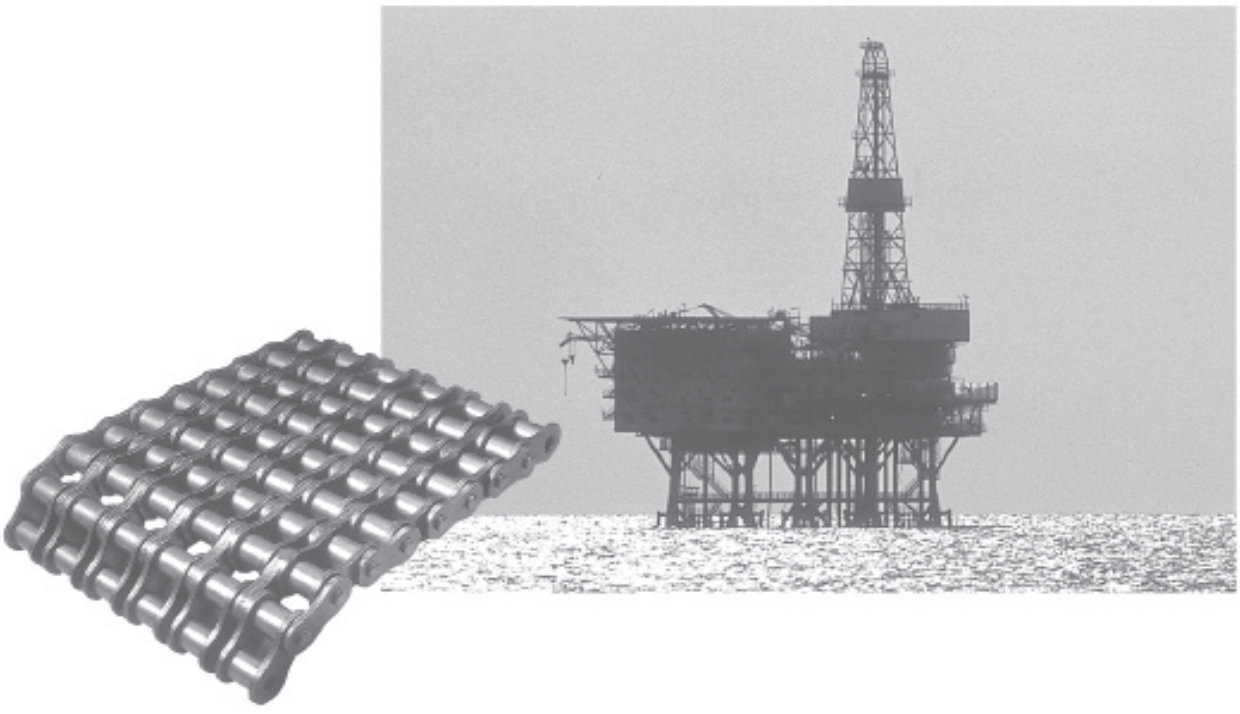
ANSI HE Extra Heavy Series Chain

Premium SBR®

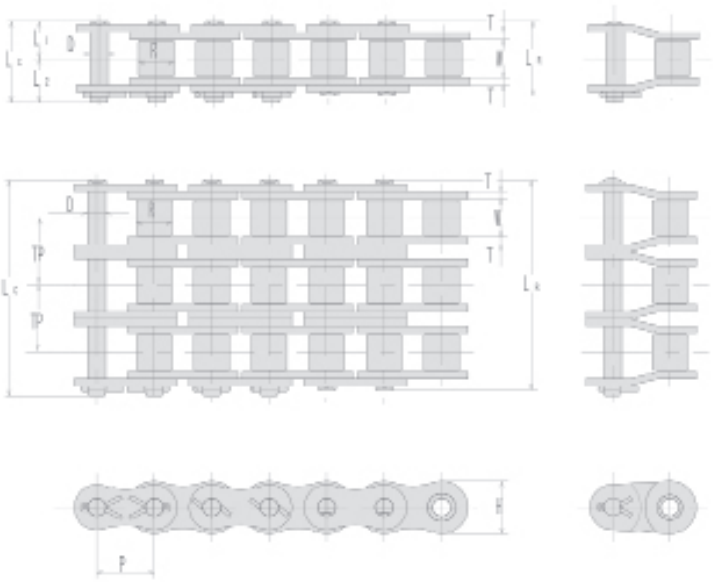


SY Heavy series roller chains are designed with thicker side plates to insure greater capacity for absorbing shock loads without fatigue failure of side plates. Also manufactured to close tolerances in accordance with ANSI specifications and are mainly used for applications where space and design limitations prohibit the use of a large size roller chain, and yet greater load carrying capacities are needed in oil-field drilling operations.

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY 60HE	19.05	12.7	11.91	5.95	54.9	57.0	27.4	29.6	17.5	3.2	26.1	110	15.2	".59
SY 80HE	25.4	15.88	15.88	7.93	68.4	71.3	34.2	37.1	23.4	4	32.6	180	25.8	5.54
SY 100HE	31.75	19.05	19.05	9.53	81.6	85.0	40.8	44.2	29.3	4.8	39.1	274	39.1	8.20
SY 120HE	38.10	25.40	22.23	11.1	102.0	106.1	51.0	55.1	35.1	5.6	48.9	372	53.4"	11.56
SY 140HE	44.45	"25.40	"25.40	12.70	109.4	114.0	54.7	59.3	40.9	6.4	52.2	482	70.0	16.59
SY 160HE	50.80	31.75	28.58	14.28	129.8	134.9	64.9	70.0	46.7	7.2	61.9	612	93.3	21.21



SY H-series roller chains are provided with greater shock and wear resistance and high breaking strength for general purpose applications. The side plate thickness is equal to the next larger ANSI roller chains and through-hardened high-tensile structural steel pins realize strong power transmission in limited equipment space, showing excellent shock absorption and fatigue strength and high ultimate strength of as much as 110-120 percent.
Single roller chains of this series run on standard single roller chain sprockets.



SINGLE STRANDS

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
S Y 6 0H	19.05	12.7	11.91	5.95	28.8	30.8	14.4	16.4	17.5	3.2	54.9	10.7	1.8	
S Y 8 0H	25.4	15.88	15.88	7.93	35.7	38.7	17.9	20.8	23.4	4	90.2	18.4	2.81	
S Y 1 0 0H	31.75	19.05	19.05	9.53	42.4	45.9	21.2	24.7	29.3	4.8	137	28.3	4.14	
S Y 1 2 0H	38.1	25.4	22.23	11.1	52.8	57.2	26.4	30.8	35.1	5.6	186	38	5.83	C
S Y 1 4 0H	44.45	25.4	25.4	12.7	57.2	61.8	28.6	33.2	40.9	6.4	241	50.3	8.41	
S Y 1 6 0H	50.8	31.75	28.58	14.28	67.9	73	34	39	46.7	7.2	306	66.3	10.86	
S Y 1 8 0H	57.15	35.7	35.7	17.45	75.6	81.5	37.8	43.7	52.5	8	373	70.6	15.18	

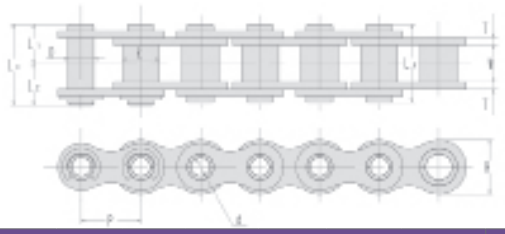
MULTIPLE STRANDS

"SY Chain No. (ANSI)"	Dimensions - mm											Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate		"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T	TP	Kn	kN	kg/m
SY 100H -2	31.75	19.05	19.05	9.53	81.6	85.0	40.8	44.2	29.3	4.8	39.1	274	39.1	8.20
SY 120H-2	38.10	25.40	22.23	11.1	102.0	106.1	51.0	55.1	35.1	5.6	48.9	372	53.4	11.56
SY 140H -2	44.45	25.40	25.40	12.70	109.4	114.0	54.7	59.3	40.9	6.4	52.2	482	70.0	16.59

Hollow Pin Chain

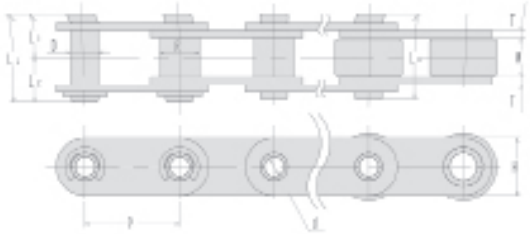
Premium SBR®

SY Hollow pin chains are identical to ANSI roller chains, and run on standard ANSI sprockets. The unique hollow pin feature provides unlimited conveyor versatility, allowing easy insertion of cross rods or attachments to pre-assembled chain at desired spacing.
For identification, the suffix HP is added to the chain numbers.



"SY Chain No. (ANSI)"	Dimensions - mm										Transverse Pitch	Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate					
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T1	TP	Kn	kN	kg/m
SY 40-HP	12.70	7.95	7.92	6.63	4.03	16.7	17.6	8.4	9.2	12	1.5	12.7	1.77	58
SY 50-HP	15.875	9.53	10.16	7.09	5.13	20.1	21.3	10.1	11.2	15	2	19.6	3.14	0.97
SY 60-HP	19.05	12.7	11.91	8.29	6.04	26	27.2	13	14.2	18.1	2.4	28.4	4.22	1.46
SY 80-HP	25.40	15.88	15.88	11.34	8.08	32.4	34.3	16.2	18.1	24.1	3.2	51	7.65	2.47

SY Hollow pin chains with oil less parts are quality chains functioning rationally, combining both advantages of hollow pin chains and self-lube chains. Available on the same sprockets as double-pitch roller chains.



"SY Chain No. (ANSI)"	Dimensions - mm										Transverse Pitch	Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate					
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T1	TP	Kn	kN	kg/m
C 2040 -HP	25.40	7.95	7.92	5.63	4.03	16.7	17.6	8.4	9.2	12.0	1.5	12.7	1.77	0.46
C 2050 -HP	31.75	9.53	10.16	7.09	5.13	20.1	21.3	10.1	11.2	15	2.0	19.6	3.14	0.76
C 2060 - HP	38.1	12.7	11.91	8.29	6.04	26	27.2	13	14.2	18.1	2.4	28.4	4.22	1.12
C 2080 -HP	50.8	15.88	15.88	11.34	8.08	32.4	34.3	16.2	18.1	24.1	3.2	51.0	7.65	1.98
C 2042 -HP	25.40	7.95	15.88	5.63	4.03	16.7	17.6	8.4	9.2	12.0	1.5	12.7	1.77	0.81
C 2052 -HP	31.75	9.53	19.05	7.09	5.13	20.1	21.3	10.1	11.2	15.0	2.0	19.6	3.14	1.25
C 2062 -HP	38.10	12.70	22.23	8.29	6.04	26.0	27.2	13	14.2	18.1	2.4	28.4	4.22	1.79
C 2082 -HP	50.80	15.88	28.58	11.34	8.08	32.4	34.3	16.2	18.1	24.1	3.2	51.0	7.65	3.17
C 2082H -HP	50.80	15.88	28.58	11.34	8.08	35.8	37.7	17.9	19.8	24.1	4.0	58.0	7.65	3.22

SY Leaf chains are well suited for any application requiring flexible, high strength linkage for reciprocating motion or lift at relatively low speed. For their low cost and long life, widely used for lift trucks, masts and other lifting as construction and mining machines and excellent as balance and counterweights of machine tools and so forth.

CONSTRUCTION AND LACING COMBINATIONS

Built of interlaced plates held together by riveted pins. The chain nomenclature indicates the lacing combinations.

AL SERIES (LIGHT DUTY)

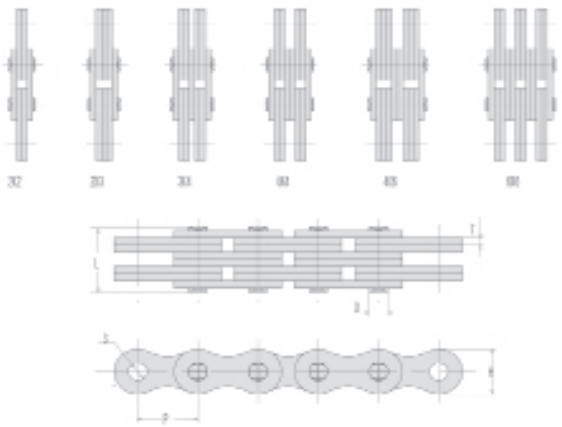
Consisting of link plates of the same contour and thickness as the pin link plates of ANSI roller chains in same pitch. Mainly used for relatively constant, low, medium load with less shock.

BL SERIES (HEAVY DUTY)

Consisting of link plates with next large size pitch chain of ANSI roller chains. Chiefly used for medium load with greater shock.

LL SERIES (ISO 606)

Consisting of link plates of the same contour and thickness as the pin link plates of BS roller chains in same pitch.



"SY Chain No. (ANSI)"	Lacing	Dimensions - mm						Average Ultimate Strength	Maximum Allowable Load	Average Chain Weight
		Pitch	Pin				Hole Dia			
			Dia.	Length	Height	Thickness				
		P	D	L	H	T	S	kN	kN	kg/m
AL 644	4×4	19.05	5.95	22.2	15.2	2.4	6.04	86.3	7.45	1.68
AL 844 AL 866	4×4 6×6	25.4	7.93	29.4 43.0	20.2	3.2	8	145 218	13.2 15.4	2.88 4.23
AL 1066	6×6	31.75	9.53	53.5	24.5	4	9.59	324	24.0	7.24
AL 1244	4×4	38.1	11.1	43.7	29.2	4.8	11.22	304	29.1	6.58
AL 1666	6×6	50.8	14.28	84.8	40.3	6.4	14.47	809	58.8	18.87

BL Series Leaf Chain

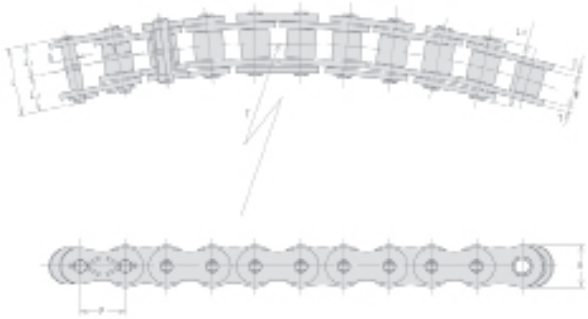
Premium SBR®

"SY Chain No. (ANSI)"	Lacing	Dimensions - mm						Average Ultimate Strength	Maximum Allowable Load	Average Chain Weight
		Pitch	Pin				Hole Dia			
			Dia.	Length	Height	Thickness				
		P	D	L	H	T	S	kN	kN	kg/m
BL 466	6×6	12.7	5.08	27.5	11.7	2.0	5.15	82.5	9.81	1.89
BL 534 BL 544 BL 566	3×4 4×4 6×6	15.875	5.95	20.0 22.2 32.4	14.6	2.4	6.04	64.0 85.3 127	8.33 9.41 15.7	1.61 1.80 2.65
BL 623 BL 634 BL 644 BL 646 BL 666	2×3 3×4 4×4 4×6 6×6	19.05	7.93	19.5 26.2 29.2 36.5 43.0	17.5	3.2	8.00	70.6 106 141 141 212	9.81 12.3 13.7 13.7 24.5	1.89 2.68 3.04 4.15 4.58
BL 822 BL 823 BL 834 BL 844 BL 846 BL 866	2×2 2×3 3×4 4×4 4×6 6×6	25.4	9.53	19.6 23.8 32.5 36.2 45.0 53.5	24.1	4	9.59	114 114 172 228 228 342	17.0 17.0 20.6 23.5 23.5 40.2	2.57 3.17 4.37 4.95 6.23 7.44
BL 1034 BL 1044 BL 1046 BL 1066	3×4 4×4 4×6 6×6	31.75	11.1	38.7 43.7 53.4 63.4	29.3	4.8	11.2	245 314 314 471	31.4 36.3 36.3 58.8	6.50 7.41 9.21 11.07
BL 1234 BL 1244 BL 1246 BL 1266	3×4 4×4 4×6 6×6	38.1	12.7	45.5 51.2 62.6 73.6	35.1	5.6	12.82	332 414 414 621	44.1 50.5 50.5 73.1	9.05 10.27 11.86 14.40
BL 1466	6×6	44.45	14.28	84.8	40.9	6.4	14.39	810	95.1	22.33
BL 1644 BL 1666	4×4 4×6 6×6	50.8	17.45	65.9 96.2	46.7	7.2	17.62	785 1176	80.4 137.3	18.85 28.54

Side Bow Chain

Premium SBR®

SY Side Bow chains provide extra clearance between pins, bushings, and link plates to allow freedom of operation around a curve or twist. The basic dimensions and quality are the same as those of ANSI standard roller chains. Side bow chain is widely used for live roll conveyors, and with attachments to convey material around curves. For identification, the suffix SB is added the number.

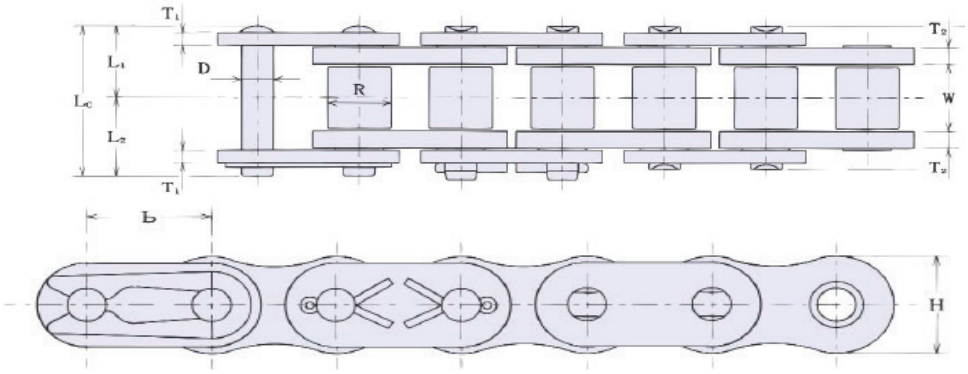


"SY Chain No. (ANSI)"	Dimensions - mm	Dimensions										Min. Curve Radius	Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight
	Pitch	Bushing		Pin					Plate						
		Width	Dia.	Dia	Length				Height	Thick.					
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	r	Kn	kN	kg/m
SY 40SB	12.70	7.95	7.92	3.58	16.9	18.9	8.5	10.4	11.7	1.5	350	14.9	1.77	0.63	0.7

SLR SERIES

Sintered Steel Bushing

Maintenance Free - Self Lubricating Chain



Reduced maintenance costs through oil impregnated sintered steel bush providing self lubrication.
Ideal for chain drives in industries such as food processing, printing, packagin and textile and materials

"SY Chain No. (ANSI)"	Dimensions - mm													Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate				"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.						
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	T3	TP	Kn	kN	kg/m
08B-SLR	12.70	7.75	8.51	4.45	16.7	18.0	8.4	9.6	11.8	1.5	1.5	-	-	16.8	2.9	0.6
10B-SLR	15.875	9.65	10.16	5.08	19.4	20.7	9.7	11.0	14.5	1.65	1.65	-	-	24.6	4.4	0.9
12B-SLR	19.05	11.68	12.07	5.72	22.0	23.6	11.0	12.6	17.4	1.8	1.8	-	-	32.4	6.3	1.1
16B-SLR	25.40	17.02	15.87	8.26	35.2	38.2	17.6	20.6	21.0	3.1	3.9	-	-	74.6	12.2	2.6

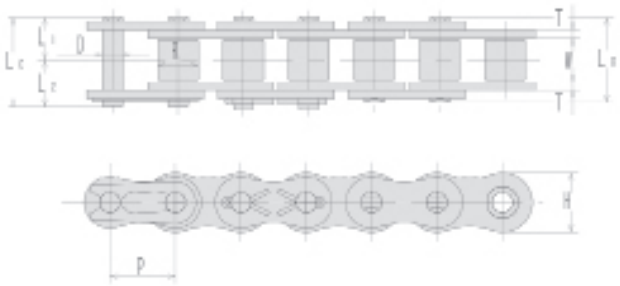
"SY Chain No. (ANSI)"	Dimensions - mm												Average Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Bushing		Pin					Plate			"Trans. Pitch"			
		Width	Dia.	Dia	Length				Height	Thick.					
	P	W	R	D	LR	LC	L1	L2	H	T1	T2	TP	Kn	kN	kg/m
SY40-SLR	2.70	7.95	7.92	3.96	17.5	19.0	8.6	10.2	11.7	1.5	2.0	-	19.1	3.65	0.7
SY50-SLR	15.875	9.53	10.16	5.08	21.3	23.2	10.7	12.6	14.6	2.0	2.4	-	31.9	6.28	1.1
SY60-SLR	9.05	12.70	11.91	5.95	27.4	29.8	13.7	16.1	17.5	2.4	3.2	-	43.1	8.63	1.7
SY80-SLR	25.40	15.88	15.88	7.03	34.1	37.4	17.1	20.3	23.4	3.2	4.0	-	78.5	14.7	2.7

S.Y Premium SBR® ROLLER CHAIN

SS series stainless steel roller chains provide excellent corrosion protection against low or high temperature, acid, alkali, moisture, scale, oil and magnetism.
SS series stainless steel roller chains are manufactured in accordance with the dimensions ANSI standards.

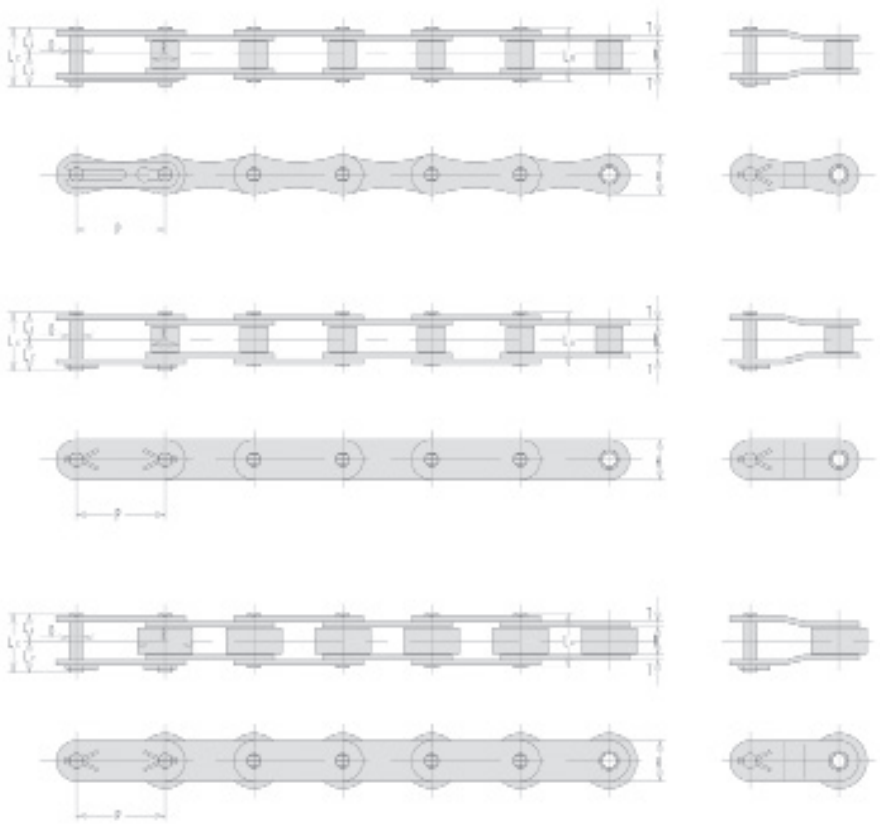
INTRODUCTION OF SY NEW HIGH POWER NEW SSS SERIES PRODUCTS

SSS series stainless steel roller chains with solid rollers.
Anti-magnetic of solid roller has superior permeability than the common curled roller.
High Power New SSS Chain use a specially treated pin and roller.
Extremely long life is engaged by this surface treatment.
SSS series chain life is more than 2 times longer than that of normal SS series Chain.
50% Higher Allowable Loads



BS AND ANSI STAINLESS STEEL CHAIN

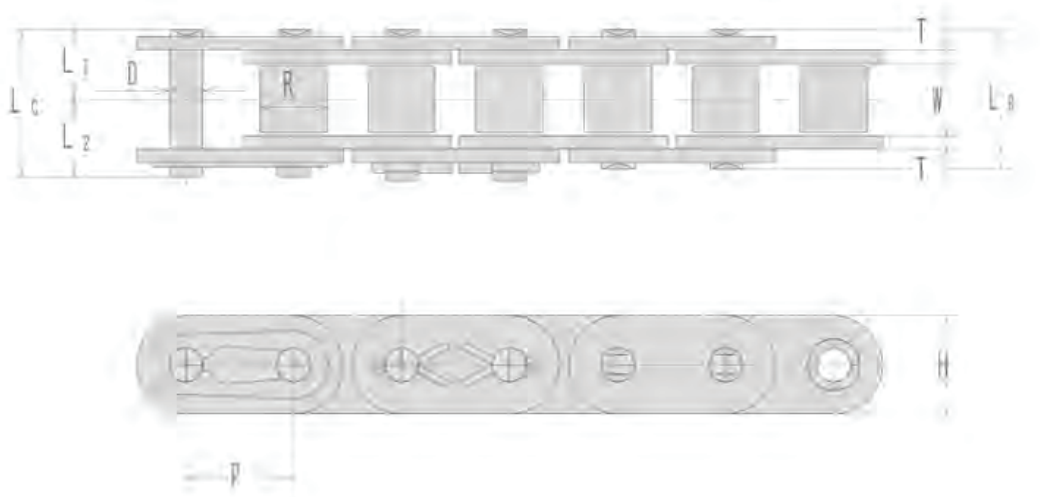
"SY Chain No. (ANSI)"	Dimensions - mm										Minimum Ultimate Strength	Maximum Allowable Load	"Average Chain Weight ""
	Pitch	Roller		Pin					Plate				
		Width	Dia.	Dia	Length				Height	Thick.			
	P	W	R	D	LR	LC	L1	L2	H	T1	Kn	kN	kg/m
06 B -S S	9.525	5.72	6.35	3.28	12.6	13.4	6.3	7.1	8.2	1.0/1.25	6.18	0.27	0.43
08 B -S S	12.7	7.75	8.51	4.45	16.7	18	8.4	9.6	11.8	1.5	10.3	0.52	0.61
10 B -S S	15.875	9.65	10.16	5.08	19	20.7	9.5	11.2	14.7	1.65	15.7	0.68	0.89
12 B -S S	19.05	11.68	12.07	5.72	22	23.6	11	12.6	16.1	1.8	18.1	0.88	1.14
16 B -S S	25.4	17.02	15.88	8.26	35.1	38.2	17.6	20.6	20.3	3.2/4.0	42.2	2.06	2.59
	P	W	R	D	LR	LC	L1	L2	H	T1 / T2	kN	Kn	kg/m
S Y 35 -S S	9.525	4.78	5.08	3.58	12.2	13.7	6.1	7.6	9.0	1.25	5.68	0.26	0.34
S Y 40 -S S	12.70	7.95	7.92	3.96	16.9	18.5	8.5	10	11.7	1.5	11.1	0.44	0.60
S Y 50 -S S	15.875	9.53	10.16	5.08	20.8	22.3	10.4	11.9	14.6	2.0	17.6	0.68	0.98
S Y 60 -S S	19.05	12.7	11.91	5.95	26	27.9	13	14.9	17.5	2.4	24.5	1.03	1.46
S Y 80 -S S	25.40	15.88	15.88	7.93	32.8	35.5	16.4	19.1	23.4	3.2	42.3	1.77	2.52



DOUBLE PITCH STAINLESS STEEL CHAIN

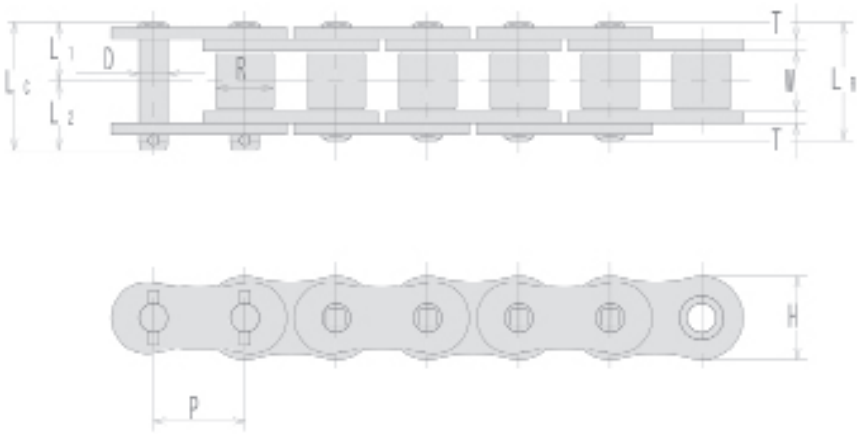
"SY Chain No. (ANSI)"	Dimensions - mm										Minimum Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Roller		Pin					Plate				
		Width	Dia.	Dia	Length				Height	Thick.			
	P	W	R	D	LR	LC	L1	L2	H	T1	Kn	kN	kg/m
C 2040 -S S	25.4	7.95	7.92	3.96	16.9	18.5	8.5	10	11.4	1.5	12.4	0.44	0.48
C 2050 -S S	31.75	9.53	10.16	5.08	20.8	22.3	10.4	11.9	15	2	20.3	0.68	0.82
C 2060H -S S	38.1	12.7	11.91	5.95	28.8	30.9	14.4	16.5	17	3.2	27.4	1.03	1.38
C 2080H -S S	50.8	15.88	15.88	7.93	35.7	38.8	17.9	20.9	22.6	4	47.1	1.77	2.32
C 2042 -S S	25.4	7.95	15.88	3.96	16.9	18.5	8.5	10	11.4	1.5	12.4	0.44	0.82
C 2052 -S S	31.75	9.53	19.05	5.08	20.8	22.3	10.4	11.9	15.0	2.0	20.3	0.68	1.26
C 2062H -S S	38.10	12.70	22.23	5.95	28.8	30.9	14.4	16.5	17.0	3.2	27.4	1.03	2.08

SY Ansi straight side bar chains are identical with ANSI standard chains except for the straight side-plates. Provided with higher fatigue resistance than the standard chains. Sprockets for ANSI standard chains maybe be used for these chains. For identification, a sufflix of F is added to the standard chain numbers listed below.



SY Chain No. (ANSI)	Dimensions - mm										Mini-mum Ultimate Strength	Maximum Allowable Load	Average Chain Weight	Type of Conn link
	Pitch	Roller		Pin					Plate					
		Width	Dia.	Dia	Length				Height	Thick.				
	P	W	R	D	LR	LC	L1	L2	H	T1	Kn	kN	kg/m	spcl
SY 35F	9.525	4.78	5.08	3.58	12.0	12.9	6.0	6.9	9.0	1.25	10.8	2.23	0.38	Spcl
SY 40F	12.7	7.95	7.92	3.96	16.5	17.7	8.3	9.4	11.7	1.5	19.1	4.17	0.67	
SY 50F	15.875	9.53	10.16	5.08	20.4	21.9	10.2	11.7	14.6	2	31.9	7.22	1.1	
SY 60F	19.05	12.7	11.91	5.95	25.5	26.9	12.8	14.1	17.5	2.4	43.1	10.7	1.63	
SY 80F	25.4	15.88	15.88	7.93	32.8	35.0	16.4	18.6	23.4	3.2	78.5	18.4	2.82	C
SY 100F	31.75	19.05	19.05	9.53	39.4	43.0	19.7	23.3	29.3	4.0	118	28.3	4.37	
SY 120F	38.1	25.4	22.23	11.1	49.5	53.4	24.8	28.6	35.1	4.8	167	38	6.45	
SY 140F	44.45	25.4	25.4	12.7	54.0	58.3	27.0	31.3	40.9	5.6	216	50.3	8.29	
SY 160F	50.8	31.75	28.58	14.28	65.3	68.7	32.2	36.5	46.7	6.4	275	66.3	103.96	
SY 200F	63.5	38.1	39.67	19.83	78.5	87.0	39.3	47.7	59.8	8.0	451	82.3	18.96	
SY 200F	76.2	47.63	47.63	23.78	96.4	104.1	48.2	55.9	70.3	9.5	677	112.8	26.47	

SY Super standard series roller chains are developed to offer you longer service life , thus leading to labor-savings. Thorough consideration to fitting portions and the useof high-grade special alloy steel components ensure the chain's greater resistance of fatigue and shock. Operative on standard roller chain sprockets.
SY super heavy series roller chains provided with link plates of next larger chain size promise you higher performance and superior quality.



Note: 1. Offset links are not available.
2. Riveted type chain will be provided unless otherwise specified. Cottered type chain will be provided upon request.
3. Press-fitted type connecting links will be supplied.

SINGLE STRANDS

SY Chain No. (ANSI)	Dimensions - mm										Minimum Ultimate Strength	Maximum Allowable Load	"Average Chain Weight"
	Pitch	Roller		Pin					Plate				
		Width	Dia.	Dia	Length				Height	Thick.			
	P	W	R	D	LR	LC	L1	L2	H	T1	Kn	kN	kg/m
SUPER 80H	25.4	15.88	15.88	7.93	35.9	38.9	18.0	20.9	24.1	4.0	98.1	20.6	3.33
SUPER 100H	31.75	19.05	19.05	9.53	42.6	46.2	21.3	24.9	30.1	4.8	145	32.4	4.88
SUPER 12H	38.1	25.4	2223	11.1	52.8	57.3	26.4	30.9	36.2	5.6	196	42.2	6.94
SUPER 140H	44.45	25.4	25.4	12.7	57.2	61.9	28.6	33.3	42.2	6.4	255	56.9	8.87

LUBRICATION

Proper lubrication of roller chains is a very important factor in getting their best possible performance and longer lifetime. No matter how well a transmission system is designed, if it is not properly lubricated, its service life will be shortened.

Abrasion between the pin and bushing causes roller chains to stretch. Therefore, these parts should be well lubricated.

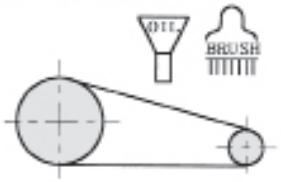
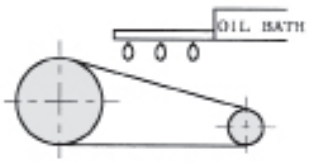
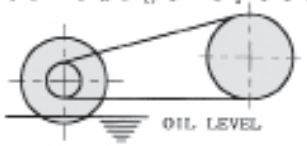
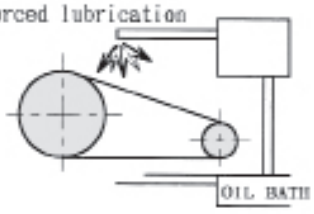
The gap between the pin-link plate and roller-link plate on the slack side of the chain should be filled with lubricant.

The oil forms a film which minimizes wear of the pin and bushing thus increasing the chain service life.

It also reduces noises and cools down the chain running at high speed.

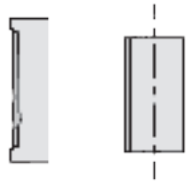
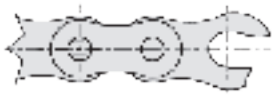
POINTS OF LUBRICATION

1) Fill and change oil periodically.
2) Generally, heavy oil and grease are not suitable as a lubricant.
3) Avoid mix of oil with another kind or other maker's.
4) Adequate lubrication quantity is also essential for a chain's longer service life.

Type	Method	Amount
A	Manual lubrication 	●Periodically to keep chain joints from drying
	Dripping lubrication 	●Usually 4-20 drops of oil per minute. ●Excess oil should be reserved in a simple case.
B	Oil bath lubrication 	●Effective at medium and low speeds. ●To be dipped 6～12 mm.
	Lubrication by slinger disc For large speed ratio 	●Effective at rather high speeds. ●To be dipped 12～25mm at about 200m/min. circumferential speed of slinger disc.
	Lubrication by slinger disc For small speed ratio 	●Case should be cleaned to remove impurities.
C	Forced lubrication 	●Effective for heavy load, high power and high speed. ●Ab 4 ltr/min. should be filled without oil shortage or heating up. ●Closed circulating lubrication system needs a clean tank or case.

SY Chain No.	Temperature[°C]							
	-10 | 0	0 | 40	40 | 50	50 | 60	-10 | 0	0 | 40	40 | 50	50 | 60
Lubrication Type	TYPE A·B				TYPE C			
～SY50	SAE10	SAE20	SAE30	SAE50	SAE10	SAE20	SAE30	SAE40
SY60～SY80	20	30	40	50	10	20	30	40
SY100	20	30	40	50	20	30	40	50
SY120～	30	40	50	50	20	30	40	50

The below chart shows the most common chain failures and causes, but not necessarily the only ones.

Problem	Possible Causes of Problem	Suggested Remedy
 Pin or Bushing Galling	• Overload • Inadequate lubrication	• Proper lubrication • Replace chain when elongation exceeds functional limits
 Turned Pins	• Overload • Inadequate lubrication	• Replace chain as soon as possible
Excessive Noise	• Too little or too much slack • Chain obstruction • Loose chain guard or bearing	• Adjust centers or take-up • Inspect & remove obstruction • Tighten bolts and check bearings
Chain Vibration	• Excessive chain slack • Center distance too long • stiff links	• Adjust chain tensioner • Install idler • Lubricate or replace chain
Wear on inside of link plate and one side of sprocket teeth	• Misalignment	• Realign sprockets and shafts • Replace chain and sprockets if necessary
Chain stiffens	• Excessive load • Misalignment • Inadequate lubrication • Corrosion	• Replace chain with one of suitable strength • Inspect alignment • Clean and establish correct lubrication • Replace with corrosion resistant chain
Chain Climbs Sprockets	• Excessive chain wear • Excessive chain slack • Inadequate lubrication • Sprocket tooth wear	• Replace chain • Install tensioner if necessary • Replace sprocket
 Fractured Plate	• Extreme overload	• Inspect the drive to determine the cause of high load • Redesign drive using a higher capacity chain