Industry Specific Products

We've changed the model numbering of large size conveyor chains. Using a combination of codes, a chain can be identified without having to specify its configuration.

Model Numbering Example

RF12200	S	–	FBBT	–	2L	GA4	+	400L	–	PR	–	H
①	②		③		④	⑤		⑥		⑦		⑧

See page 19 for ④⑥⑦⑧.

Code	Industry/ Application			See page
① Size	Indicates the basic shape of the chain. Enter chain size in the □.			
	General	RF□	Basic conveyor chain shape	
	Cement	B□	Bucket elevator conveyor chain	P67
		WD□	Drag chain	P72
	Steel	NF□	Block chain	P75
		NFX□	Block chain for flow conveyors	P76
		CT□	Coil transfer conveyor chain	P78
	Water treatment	ACP□	Collector (plastic)	P89
		ACR8□	Collector (steel)	P90
		ACS□	Sediment collector, conveyor	P91
		JAC□	Water screen	P93
		WAC□	Water screen	P97
② Roller type	May or may not be available depending on the series and size.			
	Powder conveyance	M N	Better wear resistance than S rollers Added strength between pin–bush (RF26 and larger)	P12
	Clean, low noise	RP/FP	Plastic rollers	P12
	Automotive	VR	Double Plus conveyor chain	P105
		WDR/WDF	Shower tester and final inspection line	P108

Tsubaki offers a line-up of industry specific products that have a proven track record in conveyors in a variety of industries. Contact a Tsubaki representative about how you can put these specifications to work in other industries as well.


See pg. 59
Cement Industry


See pg. 73
Steel Industry (super heavy load conveyance)


See pg. 79
Biomass Power Generation


See pg. 81
Waste Disposal Facilities


See pg. 84
Food Industry


See pg. 87
Water Treatment Industry

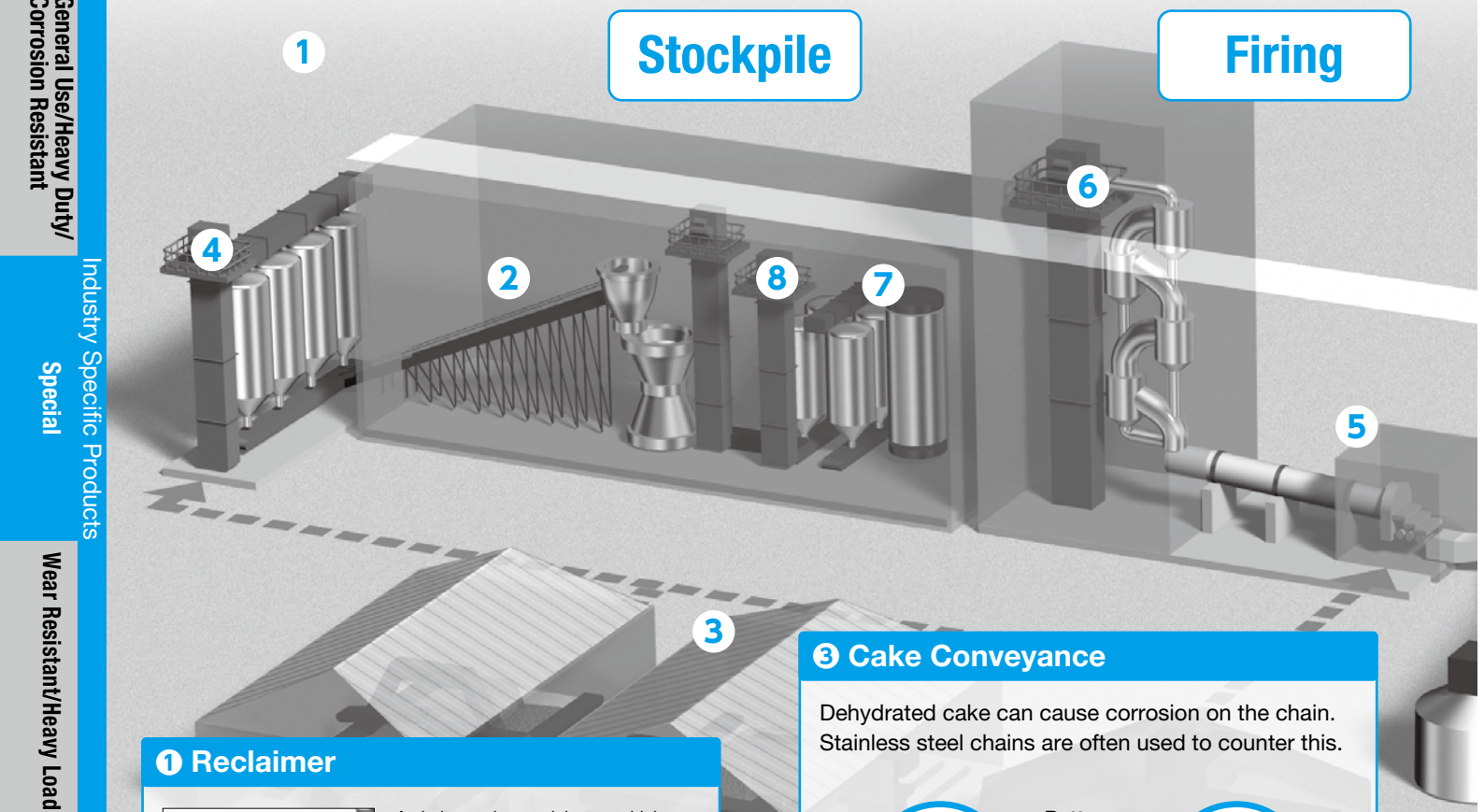

See pg. 101
Automotive Industry

Code	Industry/ Application			See page
③ Series	Enter the series of the base chain in the □.			
	Cement	FA	FA Series	P64
		FB□	FB Series	P69
	Steel, other	DL□	Deep Link conveyor chain	P77
	Waste disposal, biomass power generation	KG•KA	Intake/feed conveyor	P82
		AG•AA/AM•AP	Ash conveyor	P82
		FG/FP	Fly ash conveyor	P82
		YP	Molten slag conveyor	P82
	Food	LMC	Lambda chain (lube-free)	P86
	Automotive	NB	Bearing bush conveyor chain	P103
⑤ Attachment type	Cement, food	L■•KL■•W■•BM■•BK■, etc.	Flow attachment (horizontal) Enter case inner width in the ■.	P61
		UM■	Flow attachment (inclined) Enter case inner width in the ■.	P63
	Food	C•K	With cleaner and sweeping board	P85
	Waste disposal	CA2	For pan conveyors	P128
	Water treatment	SF4	Flight attachment for collectors	P89
		LA1/LONGPIN	Bucket attachment for sediment collector	P91
	Automotive	SR	Outboard rollers	P106
		TR	Top rollers	P107

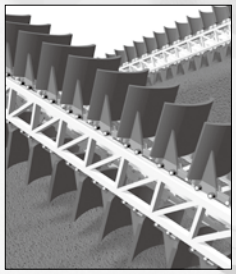
Industry Specific Products

Cement Industry

Conveyor chains specially designed for the stockpile, firing, and finishing processes



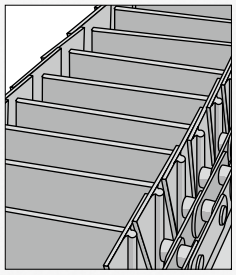
❶ Reclaimer



A chain used on reclaimers, which continually scrape stockpiled aggregate to supply to the next process. Heavy loads act on the chain, which can cause premature roller wear. Reclaimer chains are specially designed for use with various materials and in various conditions.

Contact a Tsubaki representative.

❷ Apron Conveyor



A chain used on conveyors that convey raw material and fuel on an apron. Dust can have a huge influence on roller wear.

	Basic Model	Advanced Model
Short conveyors	DT Series	DTA Series
Long conveyors	AT Series	ATA Series

When even longer life is needed…

Bearing Roller Conveyor Chain Anti-Dust Specifications

See pg. 115

❸ Cake Conveyance

Dehydrated cake can cause corrosion on the chain. Stainless steel chains are often used to counter this.

Basic SS Series → Better protection → Advanced SSA Series

See pg. 4, 7

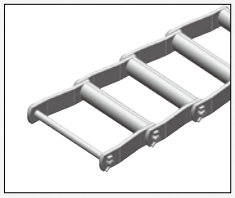
❹ Outdoor Conveyor

Ideal chain for use outdoors.

Basic GS Series → Better protection → Advanced GSA Series

See pg. 4, 7

❺ Clinker Conveyor (Drag Conveyor)



A drag chain for conveying clinker. Conveys by pushing the conveyed material with the leading face of the bush.

◆ **WD Series Drag Conveyor Chain**

See pg. 72

⑥ Fuel Conveyance

A chain that conveys fuel such as coal, coal dust, and other highly abrasive material.

Basic GS Series → Better protection → Advanced GSA Series

◆ **Y Series: Coal dust conveyance**

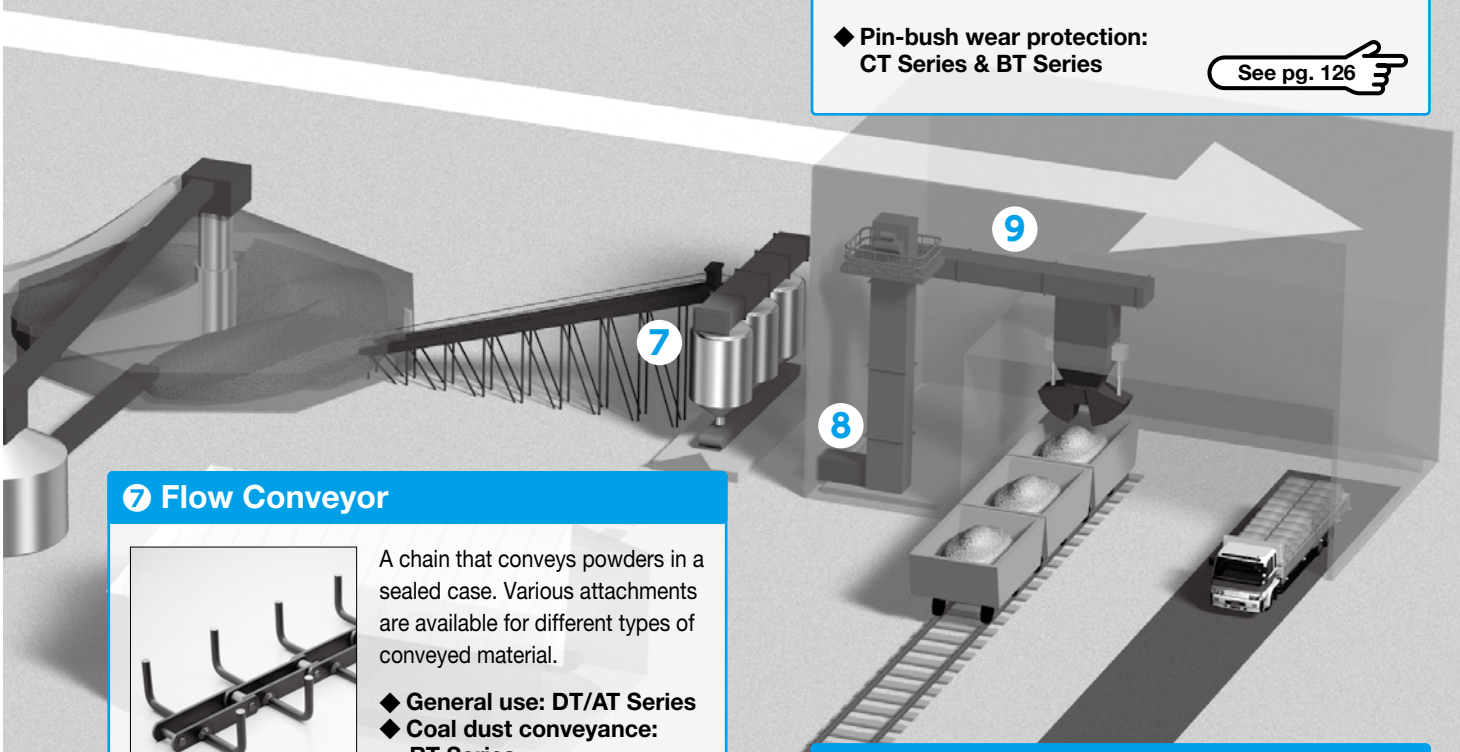
Finishing

⑨ Product Conveyance

A chain that conveys cement products. Cement products can infiltrate chain joints, so protection against wear is necessary.

◆ **Pin-bush wear protection: CT Series & BT Series**

See pg. 126



⑦ Flow Conveyor

A chain that conveys powders in a sealed case. Various attachments are available for different types of conveyed material.

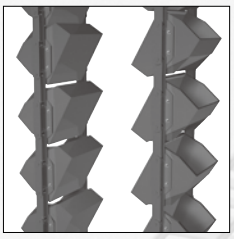
◆ **General use: DT/AT Series**
◆ **Coal dust conveyance: RT Series**

See pg. 61

◆ **Fly ash conveyance: FA Series**

See pg. 64

⑧ Bucket Elevator



A chain that lifts up and conveys powders in a sealed case. The focus is on wear protection and fatigue strength.

◆ **General use: CT/BT Series**
◆ **Coal dust conveyance: RT/YT Series**

See pg. 67

◆ **Fly ash conveyance: FB Series**

See pg. 69

Dust Collector Conveyor

A conveyor chain that collects dust generated in various processes.

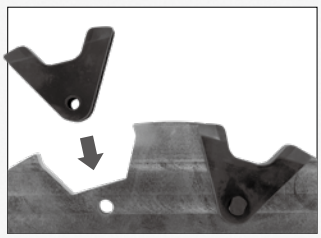
◆ **General use: CT/BT Series**
◆ **For corrosive environments**
Poor articulation protection: MT Series
Poor roller rotation protection: RT Series

See pg. 126

Tsubaki offers the ideal clearance for any material.

Contact a Tsubaki representative.

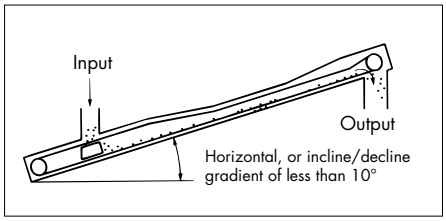
Special Block Tooth Insert Sprockets



Special sprockets used in highly wear inducing environments or when sprocket replacement is difficult.

See pg. 71

Flow Conveyor Chain



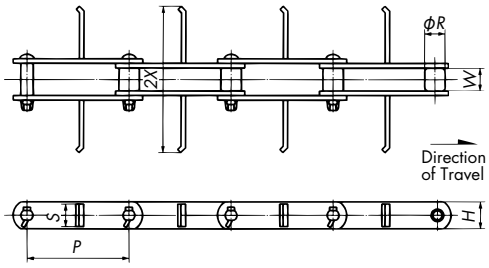
■ Horizontal Flow Conveyor Chain

Flow Conveyor Chain conveys powders in a sealed case, which prevents dispersal, making it optimal for conveying loose materials safely.

This attachment chain is designed just for flow conveyors, and boasts Tsubaki's advanced technology and numerous examples of success. Tsubaki offers different attachment types to match any application requirement.
Carbon steel attachments are standard, but stainless steel attachments can be manufactured upon request.
The base chain is either standard conveyor chain or reinforced AT Series, but users can select other specifications to match the nature of the conveyed material.

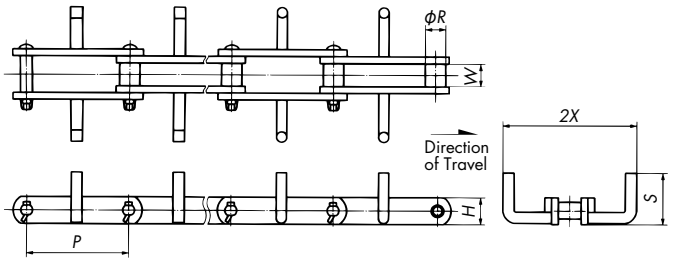
- ◆ **Consider replaceable tooth sprockets (p51) as well.**
- ◆ **Coal Dust Chain:** Tsubaki recommends the RT Series for conveying corrosive coal dust.
- ◆ **In terms of price and delivery, W attachments are recommended over U2V and U2VN attachments.**

L Attachment

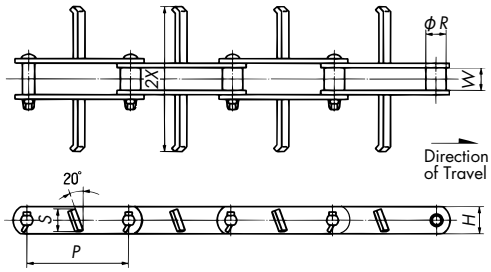


BK (Square) Attachment
Wing Width (2X) over 500

BM (Round) Attachment
Wing Width (2X) less than 500

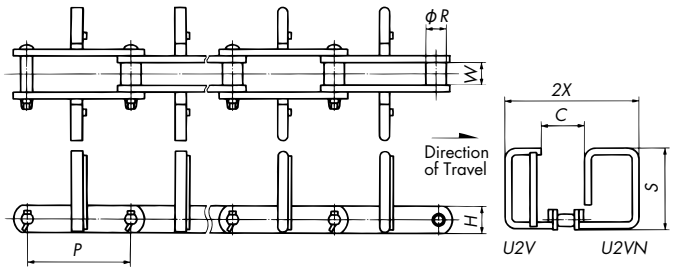


KL Attachment



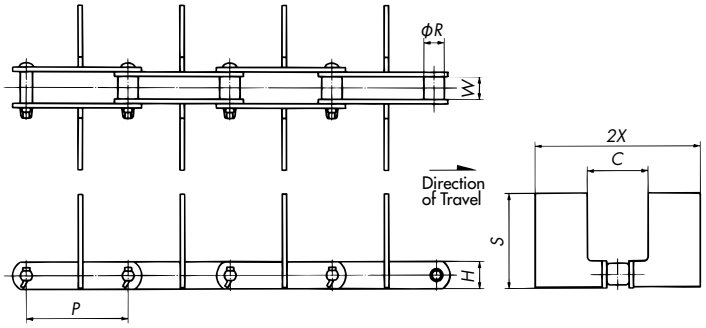
U2VK (Square) Attachment
U2VNK (Square) Attachment
Wing Width (2X) over 500

U2VM (Round) Attachment
U2VN (Round) Attachment
Wing Width (2X) under 500



Note that U2V attachments are for RF450WM and RF08125WM chains, while U2VN attachments are for RF10125M chains and above.

W Attachment



When a flow attachment is installed on every other link, it is normally mounted on an inner link. In this case, append the suffix RL to the end of the model number (example: 2LKL45RL).

Size and Roller Type	Former Chain Number	Case Inner Width	Pitch *P*	Roller Diameter *R*	Inner Link Inner Width *W*	Plate Height *H*	DT Series		AT Series	
							Max. Allowable Load kN{kgf}	Min. Tensile Strength kN{kgf}	Max. Allowable Load kN{kgf}	Min. Tensile Strength kN{kgf}
RF450WM	F4•FW4	150	101.6	25.4	27	31.8	15.4{1570}	93.5{9500}	20.3{2070}	127{13000}
RF08125WM		200	125	25.4	27	31.8	15.4{1570}	93.5{9500}	20.3{2070}	127{13000}
RF10125M		200	125	31.8	30	38.1	17.6{1790}	107{11000}	32.3{3290}	200{20500}
RF10150M		270	150							
RF6205M	F6•FA6	270	152.4	38.1	37.1	44.5	26.6{2710}	160{16500}	39.9{4060}	249{25500}
RF12200M		350	200	38.1	37.1	44.5	26.6{2710}	160{16500}	39.9{4060}	249{25500}
RF17200M		350	200	44.5	51.4	50.8	35.0{3570}	213{22000}	55.3{5640}	336{34500}
RF17250M		450	250							
RF26200M	F8•FA8	410	200	50.8	57.2	63.5	44.9{4580}	285{29000}	74.3{7580}	448{45500}
RF26250N		450	250				–	–	80.6{8220}	551{56000}
RF26300N		580	300							
RF36300M	F12•FA12	580	300	57.2	66.7	76.2	68.0{6930}	457{46500}	97.4{9440}	614{62500}
RF36300N							–	–	124{12600}	777{79000}

Size and Roller Type	Wing Width *2X*	L Attachment		KL Attachment		B Attachment		U2V (U2VN) Attachment			W Attachment		
		Height *S*	Mass kg/m	Height *S*	Mass kg/m	Height *S*	Mass kg/m	Height *S*	*C*	Mass kg/m	Height *S*	*C*	Mass kg/m
RF450WM	135	28.6	6.5	28.6	6.5	55	7.4	80	60	9.1	80	80	8.1
RF08125WM	185	28.6	6.5	28.6	6.5	80	8.2	115	85	10.1	115	85	10.3
RF10125M	185	31.8	8.1	31.8	8.1	80	8.9	115	85	10.1	115	85	11.3
RF10150M	250					100	9.8	140	105	12	140	105	13.0
RF6205M	250	38.1	12	38.1	12	100	14.4	140	105	18.5	140	105	17.2
RF12200M	330	40	12	40	12	125	16.3	185	130	20	185	130	22.6
RF17200M	330	46	17	46	17	125	18.7	185	130	23	185	130	26.3
RF17250M	430					160	19.3	230	135	23.7	230	135	31.5
RF26200M	390	58	28	58	28	150	25	233	100	33.4	233	100	41.7
RF26250N	430		23		23	160	25	230	135	29	230	135	35.7
RF26300N	560		23		23	200	27	290	160	30.6	290	160	53.0
RF36300M	560	70	34	70	34	200	27	290	160	40	290	160	61.3
RF36300N													

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

■ Attachment Types and Applications

Attachment Type	Application
L	Conveying grain or cement
KL	Conveying adhesive powder
W	Conveying powder that flashes easily
BM (Round)	Conveying loose material like flour or cement with higher conveying efficiency than L attachments
BK (Square)	Conveying massive, loose, or adhesive materials that are hard to convey with B (Round) attachments
U2VM (Round), U2VNM (Round)	For use on larger or inclined conveyors
U2VK (Square), U2VNK (Square)	Conveying massive, loose, or adhesive materials that are hard to convey with U2V(U2VN)M attachments

Ordering Horizontal Flow Conveyor Chain (Made to Order)

Model Numbering Example

RF17250M-DT-1L KL45+400L-PR

- RF17250 — Size
- M — Roller Type
- DT — Series
- 1L — Attachment Spacing
- KL45 — Attachment Type
- 400 — No. of Links
- L — End Link
- PR

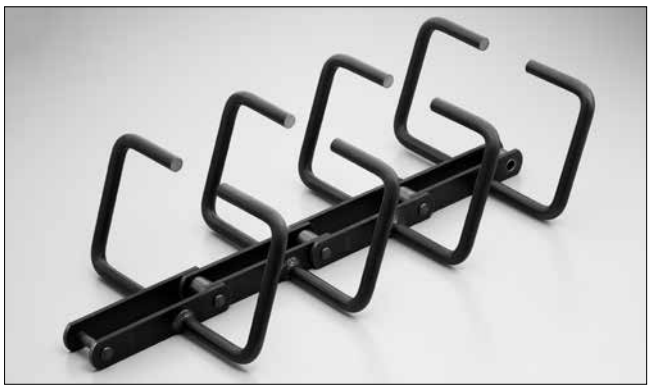
Ordering Example

Size: RF17 Pitch: 250mm Roller Type: M Roller
Product: Standard DT Series
Attachment Spacing/Type: KL every link
Case Inner Width: 450mm
Quantity: 400 links per chain

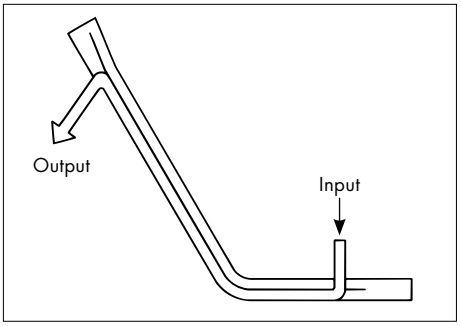
Chain Number	Quantity	Unit
RF17250M-DT-1LKL45+400L-PR	1	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Flow Conveyor Chain

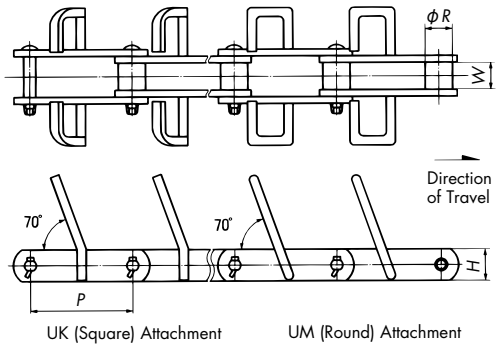


■ Inclined Flow Conveyor Chain



UK (Square) Attachment (Wing width 2X: over 500)

UM (Round) Attachment (Wing width 2X: under 500)



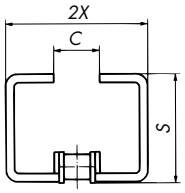
UK (Square) Attachment UM (Round) Attachment

When a flow attachment is installed on every other link, it is normally mounted on an inner link. In this case, append the suffix RL to the end of the model number (example: 2LUM32RL).

■ Attachment Types and Applications

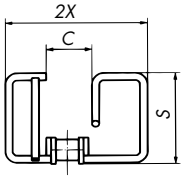
Attachment Type	Application
UM (Round)	Conveying general loose materials
UK (Square)	Conveying massive, loose, or adhesive materials
U2M (Round), U2NM (Round)	Conveying materials at a higher efficiency than UM
U2K (Square), U2NK (Square)	Conveying materials at a higher efficiency than UK

U Attachment



U2 Attachment (For RF450WM)

U2N Attachment (For RF10125M and over)



Size and Roller Type	Case Inner Width	Pitch P	Roller Dia. R	Inner Link Inner Width W	Plate Height H	Wing Width 2X	U Attachment			U2(U2N) Attachment			DT Series		AT Series	
							Height S	C	Mass kg/m	Height S	C	Mass kg/m	Max. Allowable Load kN{kgf}	Min. Tensile Strength kN{kgf}	Max. Allowable Load kN{kgf}	Min. Tensile Strength kN{kgf}
RF450WM	160	101.6	25.4	27	31.8	145	110	50	10.1	110	50	10.9	15.4{1570}	93.5{9500}	20.3{2070}	127{13000}
RF10125M	240	125	31.8	30	38.1	225	140	65	14.3	140	65	15.7	17.6{1790}	107{11000}	32.3{3290}	200{20500}
RF6205M	320	152.4	38.1	37.1	44.5	300	175	80	20.1	175	80	21.7	26.6{2710}	160{16500}	39.9{4060}	249{25500}
RF17200M	410	200	44.5	51.4	50.8	390	220	100	27.9	220	100	30.3	35.0{3570}	213{22000}	55.3{5640}	336{34500}
RF26200M	410	200	50.8	57.2	63.5	390	220	100	30.9	220	100	33.3	44.9{4570}	285{29000}	74.3{7580}	448{45500}
RF26200N													–	–	80.6{8220}	551{56000}
RF36300M	500	300	57.2	66.7	76.2	480	260	120	42.5	260	120	44.8	68.0{6930}	457{46500}	97.4{9940}	614{62500}
	600					580	305	140	47	305	140	48.1				
RF36300N	500	300	57.2	66.7	76.2	480	260	120	42.5	260	120	44.8	–	–	124{12600}	777{79000}
	600					580	305	140	47	305	140	48.1				

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Inclined Flow Conveyor Chain (Made to Order)

Model Numbering Example

RF6205M-DT-1LUM32+400L-PR

- RF6205M: Size, Roller Type
- DT: Series
- 1: Attachment Spacing
- LUM32: Attachment Type, Case Inner Width
- 400L: No. of Links
- PR: End Link

Ordering Example

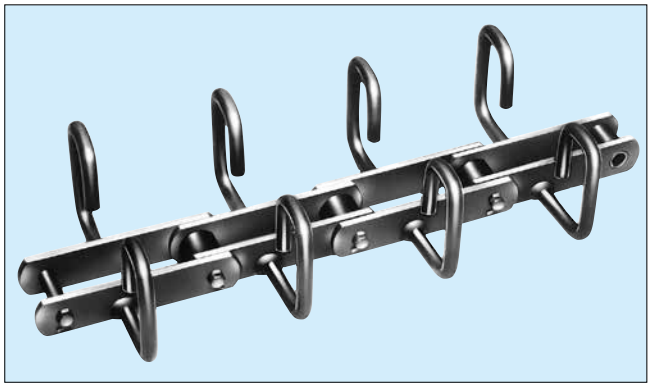
Size: RF6205 Pitch: 152.4mm Roller Type: M Roller
Product: Standard DT Series
Attachment Spacing/Type: UM every link
Case Inner Width: 320mm
Quantity: 400 links per chain

Chain Number	Quantity	Unit
RF6205M-DT-1LUM32+400L-PR	1	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

FA Series Fly Ash Conveyor Chain

Series: FA



When Wear Is a Problem

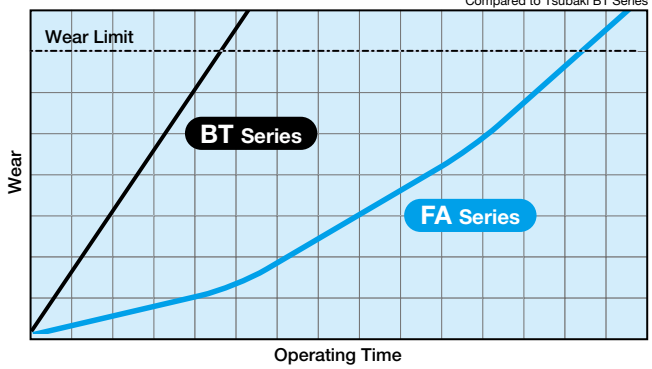
Coal fly ash, a highly abrasive constituent of cement, has seen increasing use in recent years. In order to extend the wear life of our Fly Ash Conveyor Chain, we further improved our popular Anti-Wear Series and implemented a special hardening treatment that gives remarkable strength to the rollers' anti-wear properties, greatly increasing wear life.

Optimal for Fly Ash Conveyance

3x the chain life

■ Chain Life Comparison (Bushing/Roller Wear)

Compared to Tsubaki BT Series



◆ Bush Wear Comparison after Use

BT Series

Fly ash has infiltrated between bush and roller, causing abrasive wear on the bush outer diameter.

FA Series

Fly ash has infiltrated between bush and roller, but the special hardening on the bush outer diameter has greatly reduced wear.

Applications

Fly ash conveyor lines in cement tankers and cement factories, and on other extremely abrasive conveyor lines.

Application Example

This Flow Chain with W attachments is finding use in this fly ash conveyor line.

Note: 1. Sprocket teeth must be hardened steel.
2. Take measures to prevent wear on rails.

Ordering Fly Ash Flow Conveyor Chain (Made to Order)

Model Numbering Example

RF36300N-FA-1LU2M60+400L-PR

- RF — Size
- 300N — Roller Type
- FA — Series
- 1LU2M60 — Attachment Spacing
- 400 — Case Inner Width
- L — Attachment Type
- PR — End Link
- 400 — No. of Links

Ordering Example

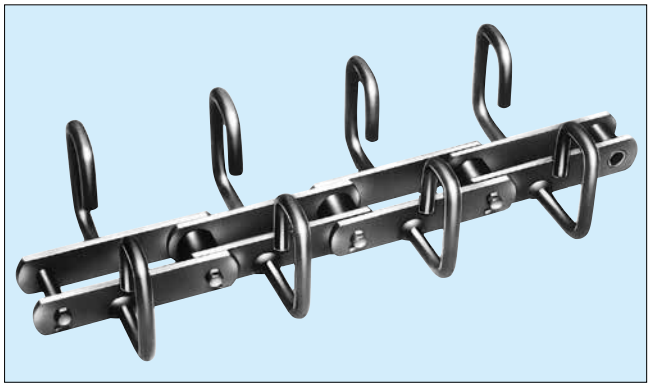
Size: RF36 Pitch: 300mm Roller Type: N Roller
Product: FA Series
Attachment Spacing/Type: U2M every link
Case Inner Width: 600mm
Quantity: 400 links per chain

Chain Number	Quantity	Unit
RF36300N-FA-1LU2M60+400L-PR	1	H

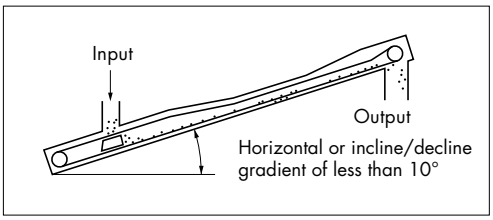
Note: Please consult a Tsubaki representative.

FA Series Fly Ash Conveyor Chain

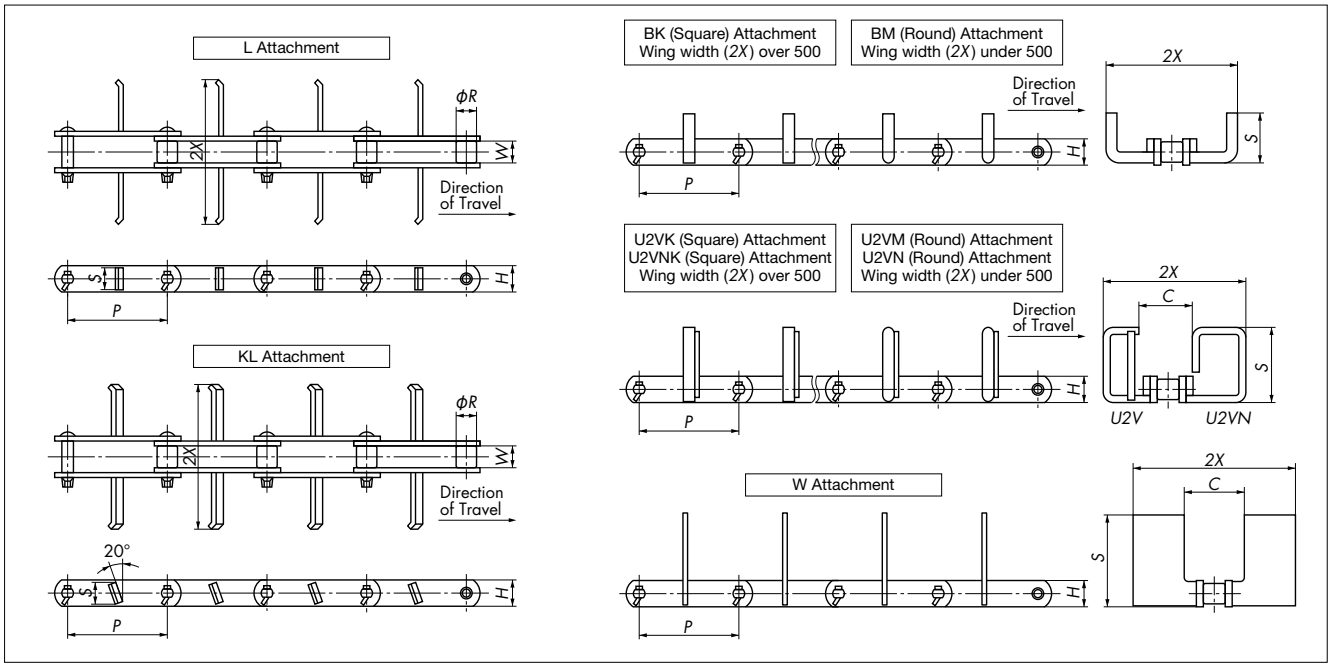
Series: FA



■ FA Series Fly Ash Conveyor Chain (Horizontal Conveyance)



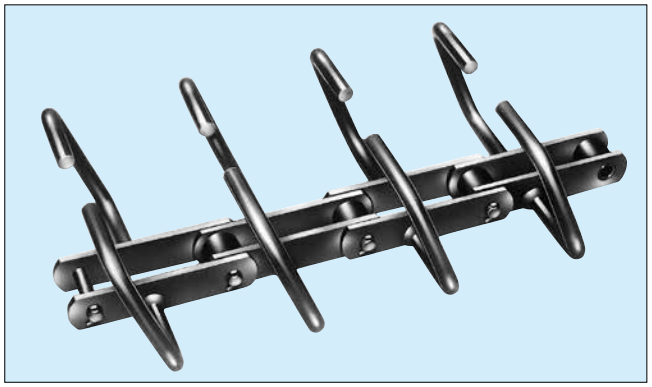
When a flow attachment is installed on every other link, it is normally mounted on an inner link. In this case, append the suffix RL to the end of the model number (example: 2LKL45RL).



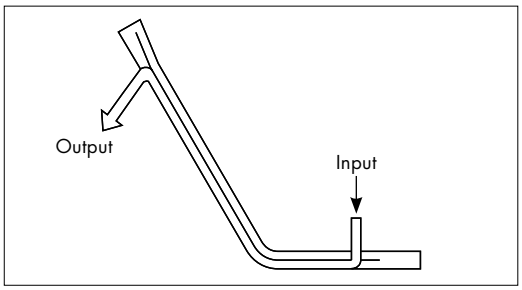
Size and Roller Type	Nominal Size	Case Inner Width	Pitch *P*	Roller Diameter *R*	Inner Link Inner Width *W*	Plate Height *H*	FA Series	
							Max. Allowable Load kN{kgf}	Min. Tensile Strength kN{kgf}
RF17200M	35	350	200	44.5	51.4	50.8	55.3{5640}	348{35500}
RF17250M	45	450	250					
RF26200M	41	410	200	50.8	57.2	63.5	74.3{7580}	464{47500}
RF26250N	45	450	250				80.6{8220}	551{56000}
RF26300N	58	580	300					
RF36300N	58	580	300	57.2	66.7	76.2	124{12500}	777{79000}
RF36350N	75	750	350					
RF60350N	75	750	350	70	77	90	149{15000}	1010{103000}

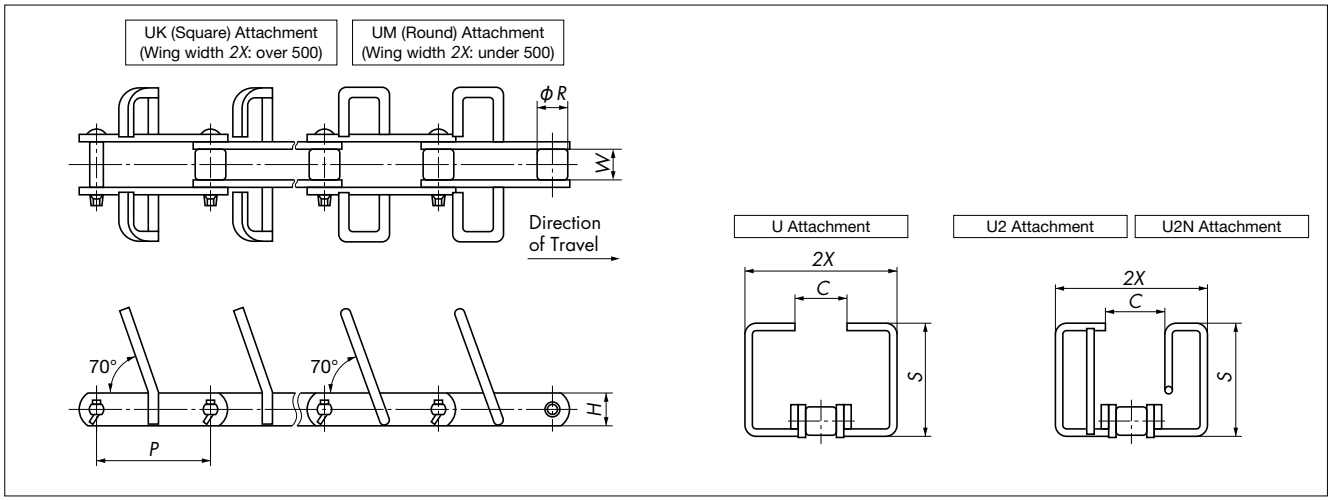
Size and Roller Type	Wing Width 2X	L Attachment		KL Attachment		B Attachment		U2V(U2VN) Attachment			W Attachment		
		Height *S*	Mass kg/m	Height *S*	Mass kg/m	Height *S*	Mass kg/m	Height *S*	*C*	Mass kg/m	Height *S*	*C*	Mass kg/m
RF17200M	330	46	17	46	17	125	18.7	185	130	23	185	130	26.3
RF17250M	430					160	19.3	230	135	23.7	230	135	31.5
RF26200M	390	58	28	58	28	150	25	233	100	33.4	233	100	41.7
RF26250N	430		23		23	160		230	135	29	230	135	35.7
RF26300N	560					200	27	290	160	30.6	290	160	53.0
RF36300N	560	70	34	70	34	200	37	290	160	40	290	160	61.3
RF36350N	720		36		36	240	47	350	180	67	350	180	76.3
RF60350N	720	84	46	84	46	240	54	350	180	75	350	180	85

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.



■ FA Series Fly Ash Conveyor Chain (Inclined Conveyance)

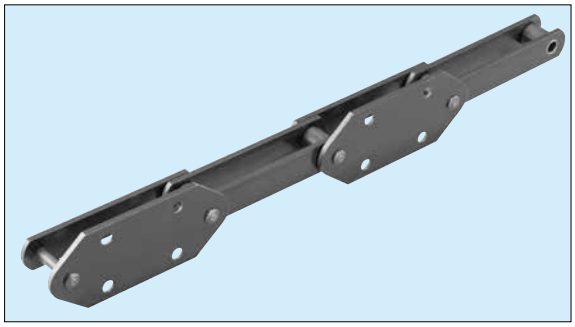




Size and Roller Type	Nominal Size	Case Inner Width	Pitch *P*	Roller Diameter *R*	Inner Link Inner Width *W*	Plate Height *H*	Wing Width *2X*	U Attachment			U2(U2N) Attachment			FA Series	
								Height *S*	*C*	Mass kg/m	Height S	*C*	Mass kg/m	Max. Allowable Load kN{kgf}	Min. Tensile Strength kN{kgf}
RF17200M	41	410	200	44.5	51.4	50.8	390	220	100	27.9	220	100	30.3	55.3{5640}	348{35500}
RF26200M	41	410	200	50.8	57.2	63.5	390	220	100	30.9	220	100	33.3	74.3{7580}	464{47500}
RF26200N														80.6{8220}	551{56000}
RF36300N	50	500	300	57.2	66.7	76.2	480	260	120	42.5	260	120	44.8	124{12600}	777{103000}
	60	600					580	305	140	47	305	140	48.1		

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

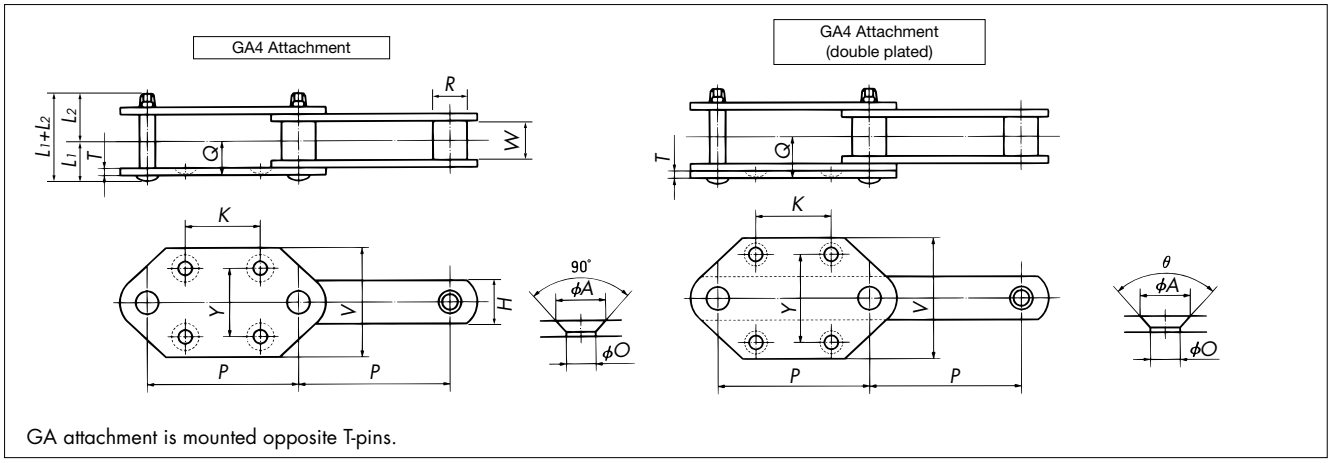
Bucket Elevator Conveyor Chain



Specialty chain with high wear resistance and fatigue strength.

◆ **Standard Wear Resistant Series** ····· **CT or BT Series**
This chain focuses on highly wear inducing cement, with optimal part material, hardness, and spacing for cement conveyance.

◆ **Coal Dust Series** ····· **RT or Y Series**
Specially designed chain for conveying corrosive coal dust.
Y Series: Offers both strength and toughness.



GA attachment is mounted opposite T-pins.

Size	Pitch P	Roller Diameter R	Inner Link Inner Width W	Plate Height H	Pin			Max. Allowable Load							
					L1+L2	L1	L2	CT Series		BT Series		RT Series		Y Series	
								kN	{kgf}	kN	{kgf}	kN	{kgf}	kN	{kgf}
B10150S	150	29	30	38.1	69	33	36	17.6	{1790}	32.3	{3290}	17.6	{1790}	17.7	{1800}
B12006S	152.4	34.9	37.1	44.5	83.5	40.5	43	26.6	{2710}	39.9	{4060}	26.5	{2700}	26.5	{2700}
B12200S	200														
B17200S	200	40.1	51.4	50.8	109.5	51.5	58	35.0	{3570}	55.3	{5640}	35.0	{3570}	35.8	{3650}
B17250S	250														
B26200N	200	50.8	57.2	63.5	117	56	61	42.7	{4350}	80.6	{8220}	42.7	{4350}	43.6	{4450}
B26250N	250														
B26300N	300				129.5*	68.5*									
B36250N	250	57.2	66.7	76.2	147	69	78	64.4	{6570}	127	{13000}	–	–	72.6	{7400}
B36300N	300				159*	81*									
B36350N	350														
B60300N	300	70	77	90	172*	88*	84	–	–	149	{15200}	–	–	79.9	{8150}
B60350N	350														
B60400N	400				177*	93*									
B90350N	350	85	88	110	197.5*	102*	95.5	–	–	233	{23700}	–	–	125	{12750}
B90400N	400				201.5*	106*									
B120400N	400	100	100	130	227.5*	119.5*	108	–	–	316	{32200}	–	–	179	{18250}

Note: *indicates GA4 attachment (double plated) dimensions. The above dimensions are nominal dimensions and may differ from actual dimensions.

■ GA4 Attachment

Size and Roller Type	*P*	*V*	*K*	*Y*	*T*	*Q*	*A*	*O*	*θ*	Bolt Used	Mass with Attachment Every 2 Links kg/m
B10150S	150	110	75	70	6.3	28.5	26	15	90°	M12	7.5
B12006S	152.4	110	75	70	7.9	35.5	26	15	90°	M12	11
B12200S	200	120	100	80						M14	10
B17200S	200	120	100	80	9.5	45.5	26	15	90°	M14	14
B17250S	250	150	140	100			32	19		M16	15
B26200N	200	120	100	80	9.5	48.5	26	15	90°	M14	20
B26250N	250	150	140	100			32	19		M16	19
B36250N	250	150	140	100	12.7	60	32	19	90°	M16	30

■ GA4 Attachment (Double Plated)

Size and Roller Type	*P*	*V*	*K*	*Y*	*T*	*Q*	*A*	*O*	*θ*	Bolt Used	Mass with Attachment Every 2 Links kg/m
B26300N	300	200	170	140	12	60	38	24	90°	M20	24
B36300N	300	200	170	140	12	72	38	24	90°	M20	33
B36350N	350	240	200	170	12	72	40	28	60°	M24	34
B60300N	300	200	170	140	12	77	38	24	90°	M20	41
B60350N	350	240	200	170	12	77	40	28	60°	M24	43
B60400N	400	280	230	200	16	81	50	35	60°	M30	46
B90350N	350	240	200	170	12	89.5	40	28	60°	M24	60
B90400N	400	280	230	200	16	93.5	50	35	60°	M30	64
B120400N	400	280	230	200	16	105.5	50	35	60°	M30	85

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Bucket Elevator Conveyor Chain (Made to Order)

Model Numbering Example

B12200S-CT-2LGA4+200L-PR-H

- Size
- Roller Type
- Series
- Attachment Spacing
- Attachment Type
- No. of Links
- End Link
- Option

Ordering Example

Size: B12 Pitch: 200mm Roller Type: S Roller
Product: CT Series
Attachment Spacing/Type: GA4 every 2nd link
Quantity: 200 links x 2 parallel strands, half assembled in mirror image

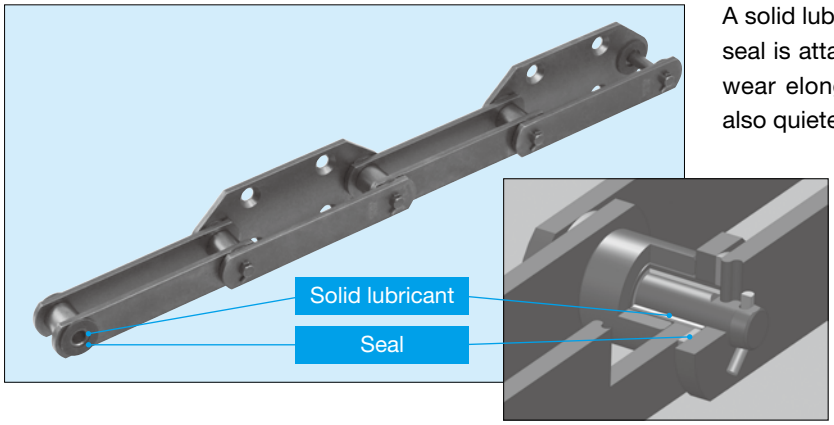
Chain Number	Quantity	Unit
B12200S-CT-2LGA4+200L-PR-H	2	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Industry Specific Products Cement Industry

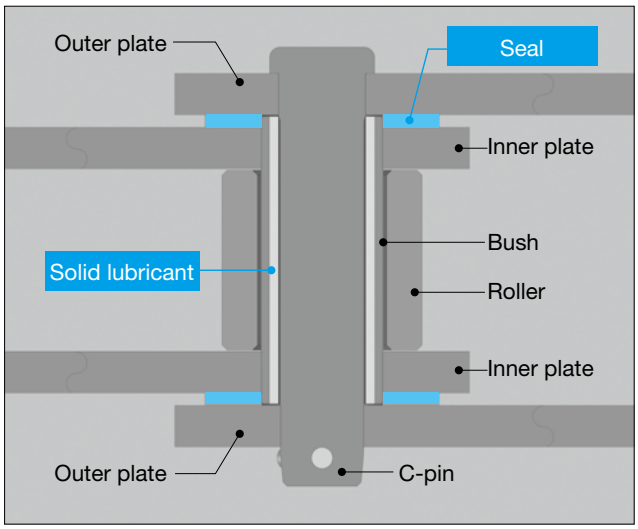
FB Series Conveyor Chain

Series: FB□



A solid lubricant is bonded between pin and bush, and a seal is attached between links to provide over twice the wear elongation life of previous BT Series chain. It is also quieter (-2dB(A)).

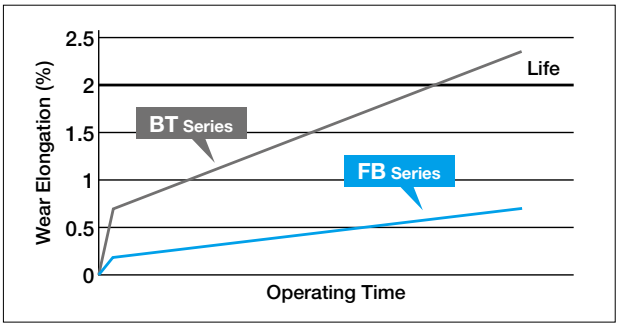
Construction



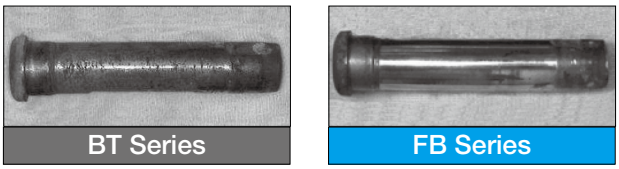
1. Solid lubricant ensures lubrication
2. Seal structure shuts conveyed material out
3. Seal structure retains solid lubricant

Can reduce conveyor chain wear elongation
(pin–bush wear)

Wear Life Comparison



◆ Comparison of Pins after Testing



Test results show FB Series has TWICE the life of BT Series
- ◆ In-house test comparison
- ◆ Results may differ depending on operating conditions

Be aware that FB Series is effective against chain wear elongation, but not against roller play and other forms of bush–roller wear.

Ordering FB Series Conveyor Chain (Made to Order)

Model Numbering Example

RF12200S-FBBT-2LGA4+200L-PR-H

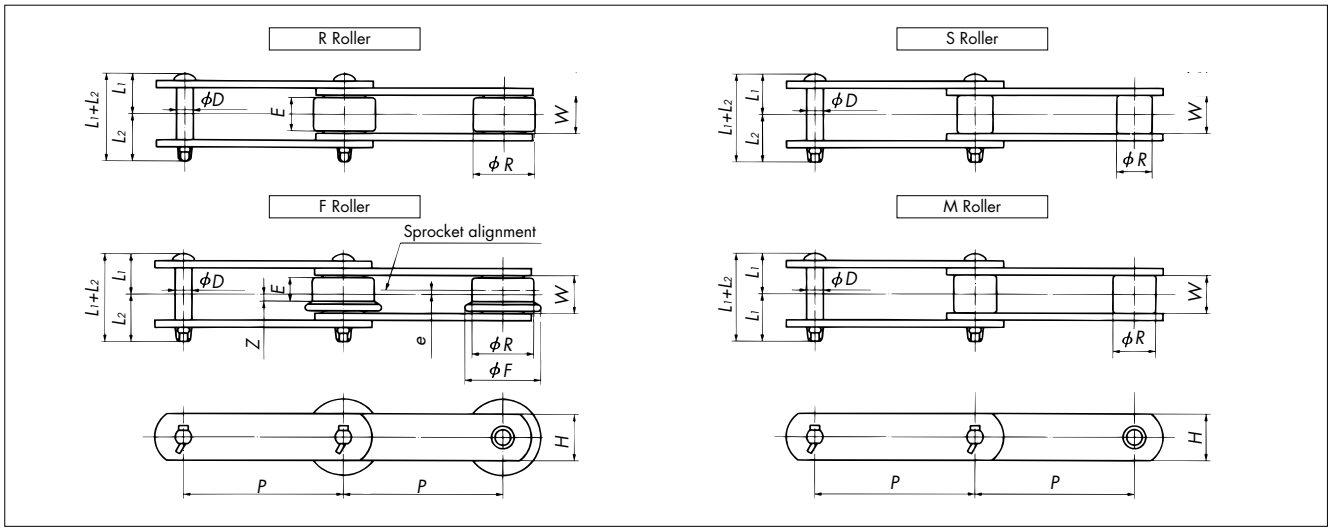
- Size: RF12
- Roller Type: 200
- Series: S
- Attachment Spacing: FBBT
- Attachment Type: 2LGA4
- No. of Links: 200L
- End Link: PR
- Option: H

Ordering Example

Size: RF12 Pitch: 200mm Roller Type: S Roller
Product: FB Series (base chain BT Series)
Attachment Type/Spacing: GA4 every 2nd link
Quantity: 200 links x 2 parallel strands, half assembled in mirror image

Chain Number	Quantity	Unit
RF12200S-FBBT-2LGA4+200L-PR-H	2	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

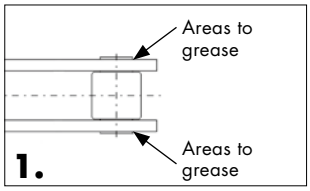


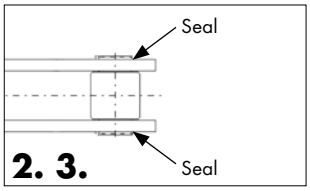
■ Base Chain Dimensions

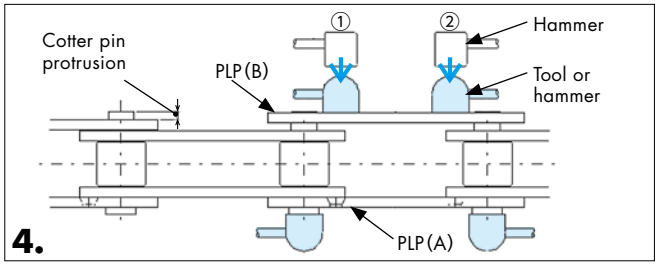
Size	Roller Type	Max. Allowable Load CT Series kN{kgf}	Max. Allowable Load BT Series kN{kgf}	Pitch P	Inner Link Inner Width W	Plate Height H	Pin L1+L2	Pin L1	Pin L2	Roller R Roller Dia. R	Roller R Roller Contact Face Width E	Roller F Foller Dia. R	Roller F Foller Flange Dia. F	Roller F Foller Contact Face Width E	Roller F Foller Offset e	Roller F Foller Z	Roller S Roller Dia. R	Roller M Roller Dia. R
RF08125	R/F/S	11.2 {1140}	14.0 {1430}	125	25.6	28.6	65.5	34.5	31.0	44.5	23.0	44.5	55.0	18.0	2.5	6.5	22.2	–
RF08150	R/F/S			150														
RF10100	R/S/M	17.6 {1790}	32.3 {3290}	100	27.6	38.1	69.0	36.0	33.0	50.8	25.0	50.8	65.0	19.0	3.0	6.5	29.0	31.8
RF10125	R/F/S/M			125														
RF10150	R/F/S/M			150														
RF12200	R/F/S/M	26.6 {2710}	39.9 {4060}	200	34.8	44.5	83.5	43.0	40.5	65.0	30.0	65.0	80.0	23.0	4.0	7.5	34.9	38.1
RF12250	R/F/S/M			250														
RF17200	R/F/S/M	35.0 {3570}	55.3 {5640}	200	49.2	50.8	109.5	58.0	51.5	80.0	42.0	80.0	100.0	33.0	5.0	11.5	40.1	44.5
RF17250	R/F/S/M			250														
RF17300	R/F/S/M			300														
RF26200	R/S/M	44.9 {4570}	74.3 {7580}	200	54.9	63.5	116.5	61.0	55.5	100.0	48.0	100.0	125.0	37.0	6.0	12.5	44.5	50.8
RF26250	R/F/S/M			250														
RF26300	R/F/S/M			300														
RF26450	R/F/S/M			450														

Note: 1. The W dimension on FB Series differs from other large size conveyor chains. FB Series can be used as is with RF conveyor chain sprockets, but be sure that the plates do not contact the sprocket teeth. Contact a Tsubaki representative regarding connecting FB Series with other chain series.
2. Refer to the relevant product pages for more information on attachment types.
3. Sizes other than those shown above available (including inch pitches). Contact a Tsubaki representative for more information.
4. Be aware that thrust loads on the chain may cause the seal to break and promote wear.
5. Contact a Tsubaki representative regarding use when the operating temperature range is greater than 80°C.

Chain Connection





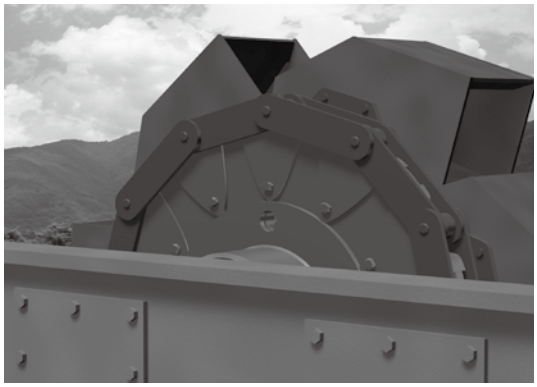


1. Lightly grease around the ends of the bushes (both sides) protruding from the end of the inner link plate on each chain formation.
   Note: Be careful that grease does not get into the inner diameters of the bushes.
2. Attach a seal to the protruding areas of the bushes (both sides).
3. Insert the outer link into the inner link of the chain you want to connect, taking care that the seal does not fall off or shift.
4. Set a tool or hammer against the cotter pin on the T-pin side as shown in the diagram above. Fix the hammer securely on the head of the cotter pin and tap the hammer or tool on the T-pin side with the hammer to press fit the cotter pin into the link pin. Alternate tapping cotter pins ① and ② on both sides of the link. Tap the cotter pins so that they protrude an amount specified in the chart to the right.
   Note: Be careful so that the seal does not fall off or shift from the impact of hammering.
5. Insert a T-pin and use a T-pin bending tool to bend the T-pin so that it does not fall out.
   Note: A monkey wrench can be used in place of a T-pin bending tool.

Size	Amount of Cotter Pin Protrusion on T-pin Side mm
RF08 / RF10 / RF12	7.5
RF17 / RF26	12.0

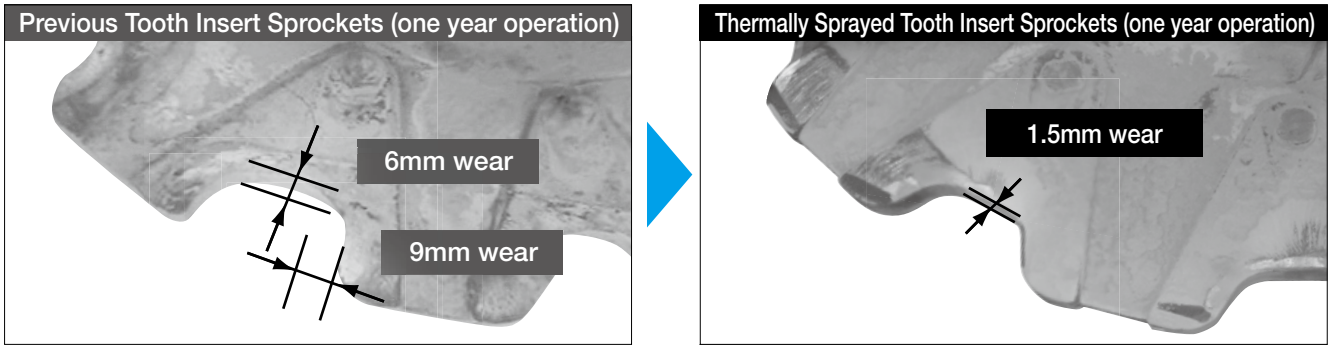
Industry Specific Products Cement Industry

Smart Series Thermally Sprayed Replaceable Tooth Insert Sprockets



Ideal for sprockets used in conveying powders that are subject to severe wear

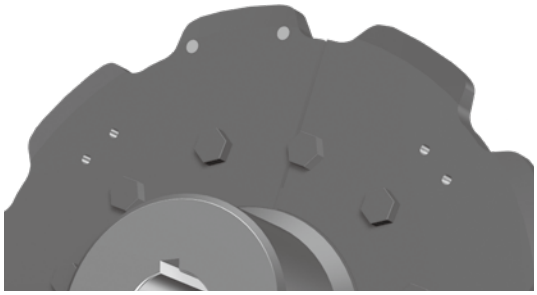
Thermally sprayed replaceable tooth insert sprockets undergo a special hardening treatment that imparts outstanding wear resistance, thereby dramatically extending wear life. When combined with the FB Series, the service life of bucket elevator chains and sprockets is significantly lengthened.



While normal replaceable tooth insert sprockets suffered on average 6.0 to 9.0mm of wear in one year of operation, thermally sprayed tooth insert sprockets suffered only 1.5mm of wear.

See p51 for Smart Series

Indicator Pins



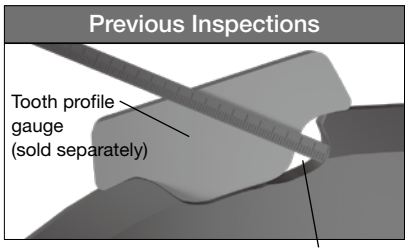
Sprocket tooth wear is usually difficult to judge, but Indicator Pins let you know when to replace your sprockets with just a glance. (Patented)

Ordering Indicator Pins

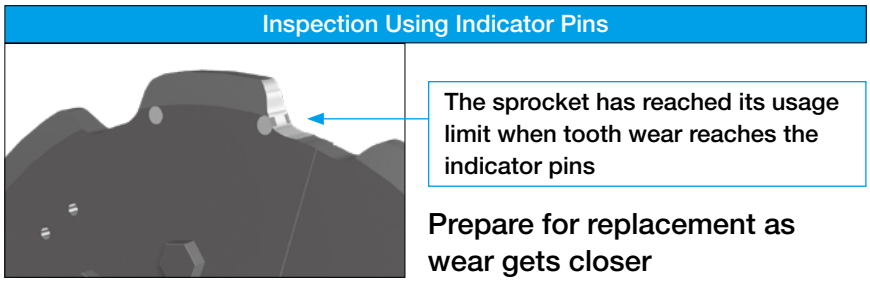
Ordering Example

RF12250S12T-BW1Q-SRK-E

E: Indicator pins



Measures the gap between the worn tooth and the tooth profile gauge



The sprocket has reached its usage limit when tooth wear reaches the indicator pins

Prepare for replacement as wear gets closer

Features

Lets you know when to replace your sprockets with just a glance

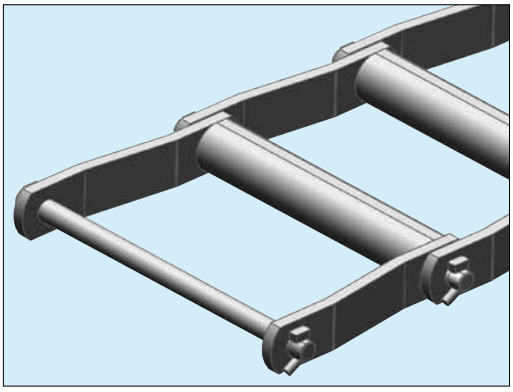
- Greatly reduces inspection time and labor
- Inspections can be done safely
- No need for tooth profile gauges or other specialty tools

Specifications

Sprocket color : Blue lacquer
Indicator pin : Embedded brass pin
Location : Embedded in two places on both sides of the sprocket tooth at 0° and 180°. When shaft holes are finished, indicator pins will be embedded in the tooth above the keyway.

WD Series Drag Chain

Drag chains are solid steel chains with plates and bushes welded together. The leading face of the bush is flat so it can push conveyed material, while the trailing face of the bush is round so it can smoothly engage with the sprocket. It has superior tensile strength, wear resistance, and impact resistance compared to cast iron chains, while the chain pitch is set so as to accurately and reliably engage the sprocket.



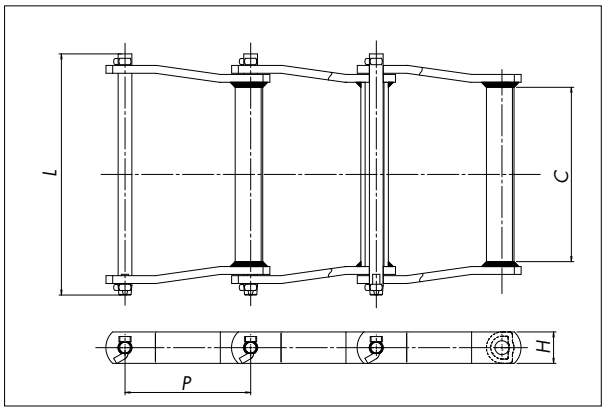
Applications

Cement industry:	Clinker conveyance
Papermaking industry:	Wood chip conveyance
Power generation industry:	Biomass fuel conveyance, withdrawing coal from silos

◆ Features

1. Both ends of the cotter pin are secured with a T-pin for a simple construction.
2. Heavy Duty specs with a higher tensile strength and corrosion resistant specs also available.
3. Unique attachments also available (MTO item).

Base Chain



Size	Pitch P	C	H	Average Tensile Strength kN{kgf}	Pin L_1	Approx. Mass kg/m
WD480	203.2	274	50.8	353 {36000}	390	30
WD122	203.2	212.5			328.5	28
WD120	152.4	212.5			328.5	33
WD110	152.4	227	38.1	167 {17000}	312	18
WD102	127	160			245	16.4

Note: 1. Contact a Tsubaki representative regarding sprockets.
2. The above dimensions are nominal dimensions and may differ from actual dimensions.

Attachments

Scrapers

Better ability to scrape up conveyed material. Also useful in preventing chain floating.

Attachment type: SCR

Guide shoes

Minimizes wear from adjacent chains and guide rails.

Attachment type: GS ▭

Note: Consult a Tsubaki representative when mounting attachments.

Ordering WD Series Drag Chain (Made to Order)

Ordering Example

Size: WD480
Quantity: 400 links

Chain Number	Quantity	Unit
WD480+400L	1	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Industry Specific Products Steel Industry

Conveyor chains that can handle massive items, heavy loads, high speeds, and high temperatures

❶ ❷ Stockyard

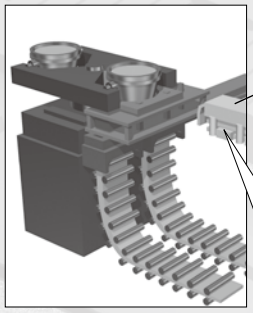
❸ Sintering Plant

❹ Pig Iron Plant

Blast Furnace

❺ Hot Strip Mill

❹ Continuous Casting



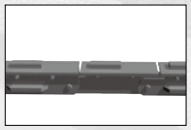
Tsubaki offers chains that fit the shape of dummy bars.

Dummy bar

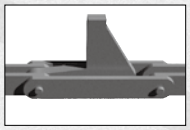
Dummy Receiver Chain

Contact a Tsubaki representative.

❺ Hot Rolling



Slab conveyance



Billet conveyance

Chains designed for the shape, temperature, and conveyance environment of the conveyed material.

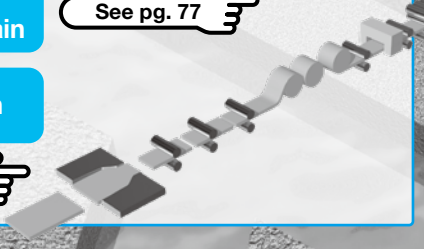
Direct conveyance

Deep Link Conveyor Chain

See pg. 77

Block Chain

See pg. 75



High Temp. Material (steel mill/hot strip)

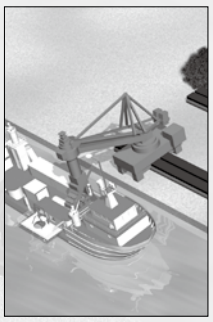
Conveyed material exceeds 400°C

Tsubaki offers special conveyor chains for high temperatures using optimal clearances and material to match the conveyed material or temperature.

Contact a Tsubaki representative.

Cold Mill

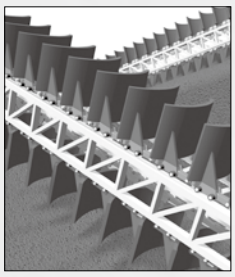
❶ Continuous Unloader Chains



A continuous unloader continuously unloads loose material from a ship using a chain with buckets attached. High unloading speeds mean heavy wear, so they use Tsubaki Unloader Chains to minimize wear elongation.

Contact a Tsubaki representative.

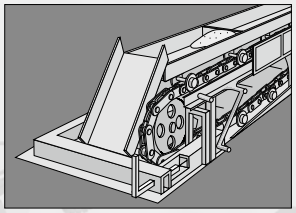
❷ Scraper Reclaimers



A chain used on reclaimers, which continually scrape stockpiled aggregate to supply to the next process. Heavy loads act on the chain, which can cause premature roller wear. Reclaimer chains are specially designed for use with various materials and in various conditions.

Contact a Tsubaki representative.

❸ Sintered Ore Pan Conveyors



A large, specially shaped conveyor chain used to convey high temperature materials. Available in various types to meet the needs of conveyed materials or corrosive environments.

Contact a Tsubaki representative.

Coking Plant

❻ Product Yard

Ambient Temperature
(Steelmaking, hot strip mill)

Conveying billets, coils, and other heavy loads

Bearing Roller Conveyor Chain

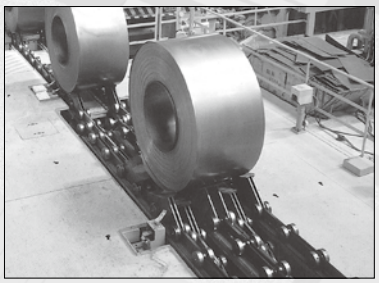
See pg. 111

Premature roller wear from billet and steel rod onveyance

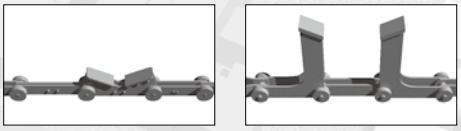
Advanced DTA Series — Short conveyors

Basic ATA Series — Heavy loads/ long lengths

❻ Coil Transfer



Uses cylindrical bearings between rollers and bushes to minimize running resistance. This allows it to convey heavy loads.

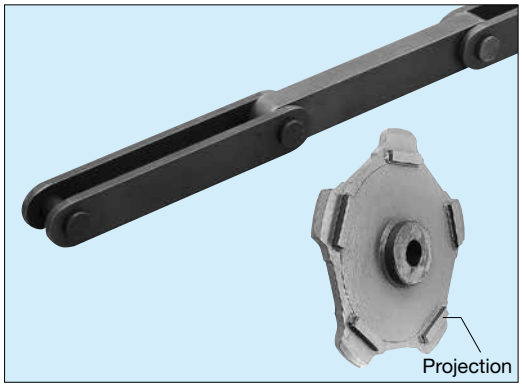


Saddles designed to fit the shape of the conveyed material.

Coil Transfer Conveyor Chain

See pg. 78

Block Chain



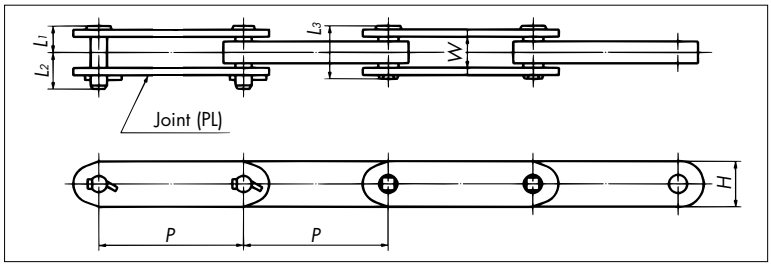
Simple, Yet Tough

This chain, consisting of two outer plates, one or two inner plates, and pins, offers structurally superior rigidity with the largest tensile strength by chain mass for toughness. The main parts use tempered steel for outstanding wear and heat resistance. Dogs are attached as per the diagrams below.

Applications

1. Shuttle traction
2. Conveying high temperature items (loaded directly on chain)
3. Draw benches

◆ Please use an outer plate support to reduce inner chain tension on the sprocket.

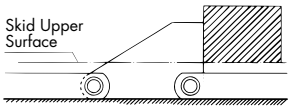


Size	Pitch P	Link Height H	Pin			Outer Link Inner Width W	Approx. Mass kg/m	Min. Tensile Strength	
			L1	L2	L3			kN	{kgf}
NF30150	150	38.1	24.5	32	49	23.3	7.0	263	{27000}
NF30200	200						6.6		
NF40150	150	44.5	25.5	33.5	52	26.5	9.0	337	{34500}
NF40200	200						8.5		
NF56200	200	54	29.5	40.5	60	29.5	12.3	471	{48000}
NF56250	250						12.0		
NF63200	200	57	30.5	41.5	62	31.5	13.7	525	{53500}
NF63250	250						13.0		
NF70200	200	63.5	31.5	42.5	64	33.5	16.2	613	{62500}
NF70250	250						15.5		
NF90200	200	72	34.5	45.5	70	38	21.0	771	{78500}
NF90250	250						20.0		
NF115250	250	76.2	38	49	77	40	25.0	952	{97000}
NF115300	300						24.0		
NF140250	250	85	44	54	88	47.5	32.0	1190	{121500}
NF140300	300						31.0		
NF180300	300	95	48.5	58.5	97	52.5	39.0	1480	{151000}
NF180350	350						37.8		
NF210300	300	110	51.5	61.5	103	59	50.0	1830	{186500}
NF210350	350						48.3		
NF250300	300	112	58.5	68.5	117	66	58.8	2070	{211000}
NF250350	350						56.7		
NF280300	300	122	58.5	68.5	117	67	66.0	2310	{235000}
NF280350	350						62.3		

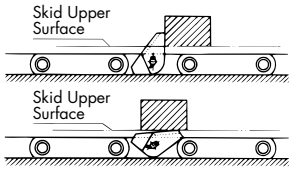
Note: 1. Contact a Tsubaki representative regarding delivery.
2. The above dimensions are nominal dimensions and may differ from actual dimensions.

There are many types of dogs, but the following outlines some of the most common ones.

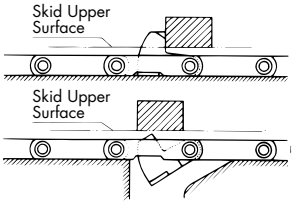
1. Fixed Dog
The inner or outer plate is heightened to push conveyed items.



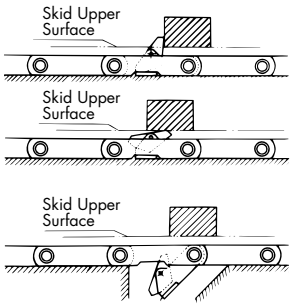
2. Tilting Dog
Conveyed items in front are pushed along as with the fixed dog, but when items come from behind the dog tilts forward to allow the item to pass by. Once the item has passed, the dog automatically returns to its former position.



3. Ducking Dog
This dog conveys items traveling on the guide rail, but when there is a break in the guide rail the dog ducks and the conveyed item is lowered as is.



4. Tilting Ducking Dog
This dog combines both the functions of tilting and ducking dogs. Conveyed items running on the guide rail are pushed along, while items coming from behind are allowed to pass. When there is a break in the guide rail the conveyed item is lowered as is.



Ordering Block Chain (Made to Order)

Model Numbering Example

NF56200+400L-PR

Size — Pitch — No. of Links — End Link

Ordering Example

Size: NF56 Pitch: 200mm
Quantity: 400 links

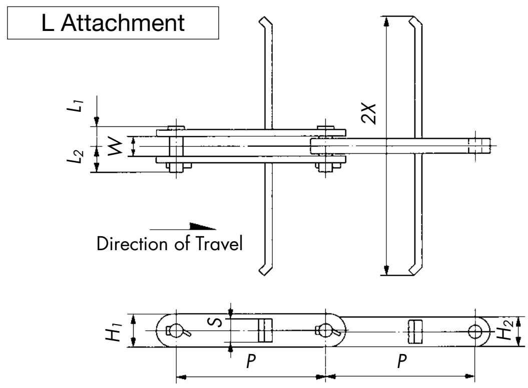
Chain Number	Quantity	Unit
NF56200+400L-PR	1	H

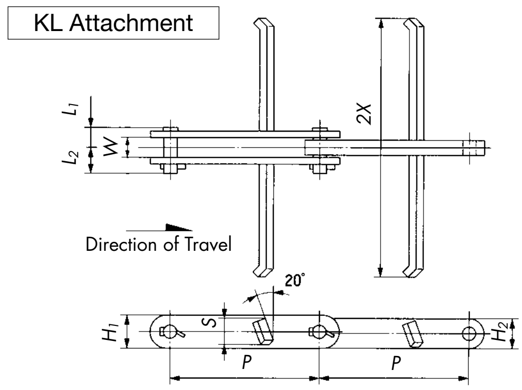
Note: Specify the model number and contact a Tsubaki representative for a quote.

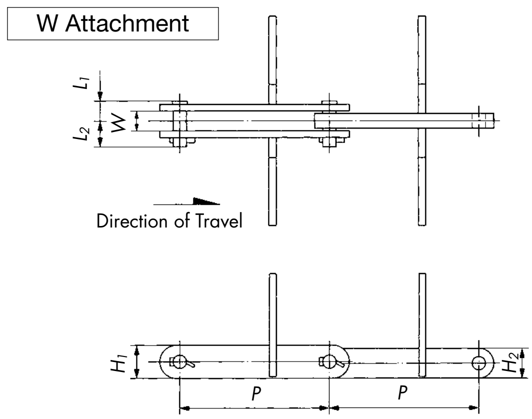
Block Chain for Flow Conveyors

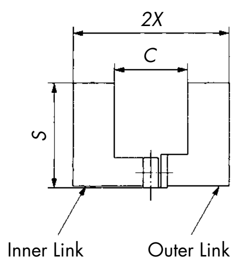
Block Chain for Flow Conveyors consists of two outer plates, one inner plate, and pins, with one of various attachments for flow conveyors added. Special alloy steel gives the chain toughness, and its high allowable wear makes it perfect for conveying highly abrasive items, relatively damp items, and high temperature items.

◆ Please use an outer plate support to reduce inner chain tension on the sprocket.









When a flow attachment is installed on every other link, it is normally mounted on an inner link. In this case, append the suffix RL to the end of the model number (example: 2LKL15RL).

Size	Pitch P	Link Height		Pin Length		Outer Plate Inner Width W	Approx. Mass {kg/m}	Min. Tensile Strength kN{kgf}	Wing Width $2X$	L Attachment		KL Attachment		W Attachment			Case Inner Width (mm)
		H_1	H_2	L_1	L_2					Height S	Additional Mass/Each (kg)	Height S	Additional Mass/Each (kg)	Height S	C	Additional Mass/Each (kg)	
NFX30150	150	44.5	38.1	24.5	32	23.3	7.9	263{27000}	135	Contact a Tsubaki representative	0.18	Contact a Tsubaki representative	0.18	80	60	0.33	150
									185		0.26		0.26	115	85	0.68	200
									250		0.36		0.36	140	105	1.12	270
NFX30200	200						7.6		330		0.74		0.74	185	130	2.94	350
									430		0.98		0.98	230	135	5.14	450
NFX56200	200	63.5	54.0	29.5	40.5	29.5	14.7	471{48000}	390		1.3		1.3	233	100	5.0	410
									430		1.44		1.44	230	135	5.2	450
NFX56250	250						14.5		560		1.92		1.92	290	160	8.6	580

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Block Chain for Flow Conveyors (Made to Order)

Model Numbering Example

NFX30150-1LKL15+400L-PR

- Size
- Pitch
- Attachment Spacing
- Attachment Type
- Case Inner Width
- No. of Links
- End Link

Ordering Example

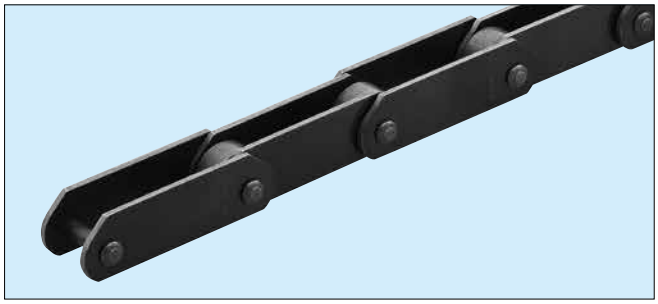
Size: NFX30 Pitch: 150mm
Attachment Spacing/Type: KL every Link
Case Inner Width: 150mm Quantity: 400 links

Chain Number	Quantity	Unit
NFX30150-1LKL15+400L-PR	1	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

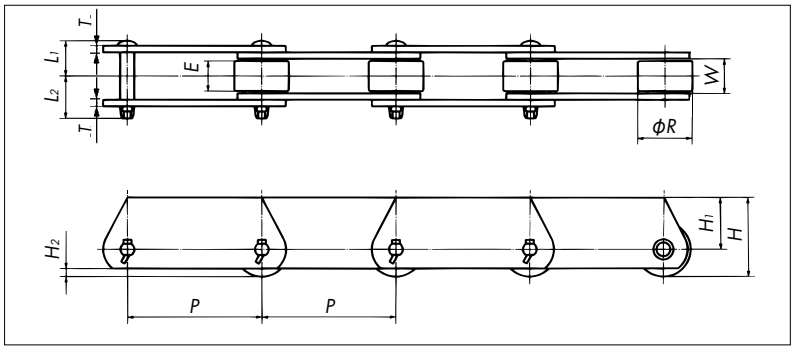
Deep Link Conveyor Chain (Direct Conveyance)

Series: DL□



Wide link plates and R rollers with low frictional resistance are added to a base conveyor chain to allow for direct conveyance on the chain links.

1. Tsubaki also manufactures Deep Link Conveyor Chain with R rollers from Bearing Roller Conveyor Chains. These rollers will give the chain a low coefficient of friction and a higher roller allowable load, allowing users to go down two chain sizes. (It will be necessary to check allowable tension.)
2. Tsubaki can also manufacture Deep Link Conveyor Chains with top plates.
3. Tsubaki can manufacture Deep Link Chains to any specification.



Applications

1. Sheet or shaped steel conveyor lines at steelworks.
2. Automotive assembly lines, container assembly lines, etc.

Size, Roller Type, Series	Pitch P	Roller		Inner Link Inner Width W	Chain Height H	Plate			Pin		Approx. Mass kg/m	Roller Allowable Load kN{kgf}/each			Max Allowable Load kN{kgf}	
		Dia. R	Contact Width E			H1	H2	Thickness T	L1	L2		DT Series	AT Series	Bearing Roller	DT Series	AT** Series
RF03075R-DL□	75	31.8	15.5	16.1	36.9	21	4.9	3.2	18	20	3.2	0.54{55}	0.88{90}	1.96{200}	4.20{430}	9.95{1010}
RF03100R-DL□	100										2.8					
RF05100R-DL□	100	40	19	22	44	24	4	4.5	25	28.5	5.9	1.03{105}	1.72{175}	3.04{310}	9.80{1000}	20.3{2070}
RF05150R-DL□	150										4.9					
RF08150R-DL□	150	44.5	24	27	50.3	28	8	6.3	31	34.5	7.0	1.27{130}	2.11{215}	4.12{420}	11.2{1110}	20.3{2070}
RF10150R-DL□	150	50.8	27	30	57.4	32	6.4	6.3	33	36	9.7	1.77{180}	2.94{300}	5.49{560}	17.6{1790}	32.3{3290}
RF10200R-DL□	200										8.5					
RF6205R-DL□	152.4	57.2	32	37.1	63.6	35	6.1	7.9	40.5	43	14.0	2.50{255}	4.17{425}	–	26.6{2710}	39.9{4060}
RF12200R-DL□	200	65	32	37.1	73.5	41	10	7.9	40.5	43	14.9	2.50{255}	4.17{425}	8.34{850}	26.6{2710}	39.9{4060}
RF12250R-DL□	250										13.5					
RF17250R-DL□	250	80	44	51.4	90	50	13.8	9.5	51.5	58	22.5	4.02{410}	6.67{680}	14.1{1440}	35.0{3570}	55.3{5640}
RF17300R-DL□	300										21.5					
RF26300R-DL□	300	85*	50	57.2	95.5	53	10.5	9.5	55.5	61	24.3	5.30{540}	8.83{900}	16.7{1700}	44.9{4570}	74.3{7580}
RF36300R-DL□	300	100*	56	66.7	112	62	12	12.7	68	78	39.0	7.45{760}	12.4{1260}	22.0{2240}	68.0{6930}	97.4{9930}
RF36400R-DL□	400										34.2					
RF52450R-DL□	450	110*	65	77	125	70	17	16	82	90	46.0	9.81{1000}	16.6{1690}	–	71.4{7280}	147{15000}

Note: 1. Enter conveyor chain series in the blank □. Contact a Tsubaki representative regarding delivery.
2. Roller diameters marked with* are different from RF conveyor chain diameters and require a special sprocket.
3. Refer to page 114 for the maximum allowable loads of AT Series bearing roller conveyor chain (marked with ** above).
4. The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Deep Link Conveyor Chain (Made to Order)

Model Numbering Example

RF12200R-DLDT+400L–PR

- RF12200R: Size / Roller Type
- DLDT: Chain Specs
- 400L: No. of Links
- PR: End Link

Chain Specs
DLDT : Deep Link DT Series
DLAT : Deep Link AT Series
DLDTA : Deep Link DTA Series
DLATA : Deep Link ATA Series

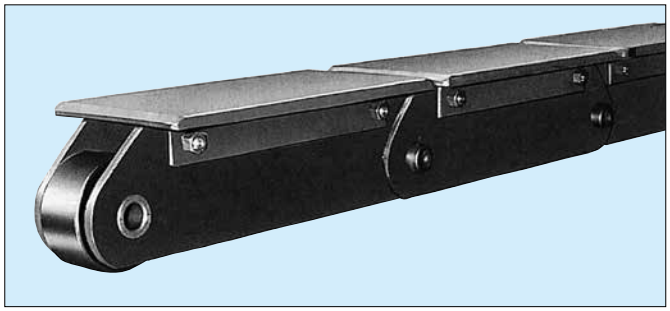
Ordering Example

Size: RF12 Pitch: 200mm Roller Type: R Roller
Chain Specs: Deep Link conveyor chain (base chain DT Series)
Quantity: 400 links

Chain Number	Quantity	Unit
RF12200R-DLDT+400L-PR	1	H

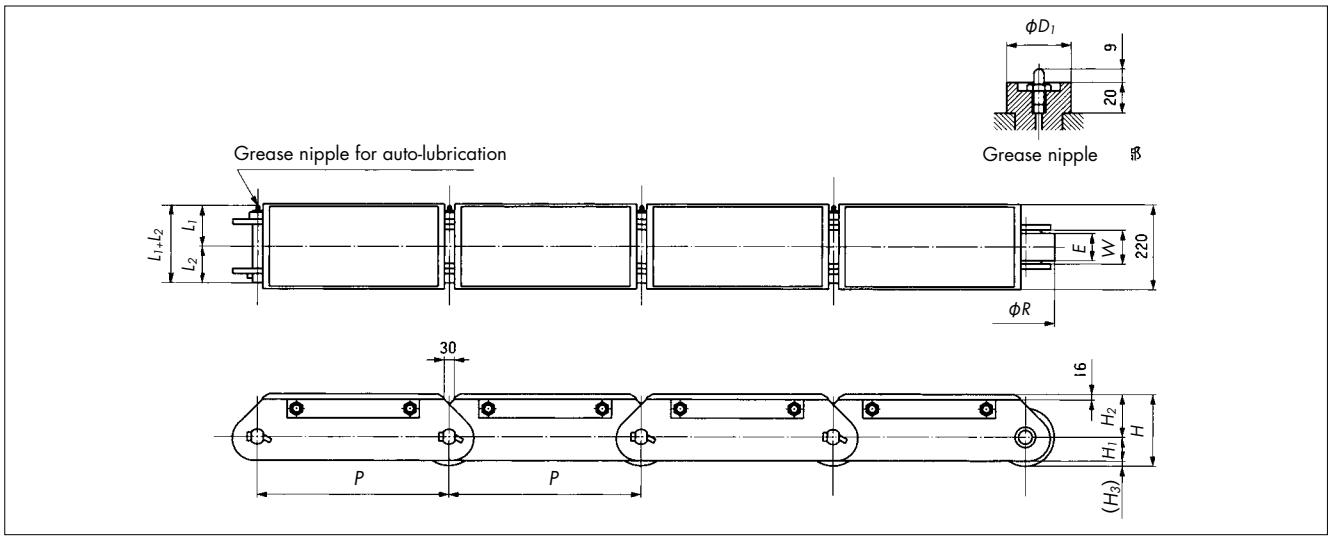
Note: Specify the model number and contact a Tsubaki representative for a quote.

Coil Transfer Conveyor Chain (For Low Friction/Heavy Load Applications)



This extremely rigid reinforced chain is used for conveying especially heavy objects, such as containers, steel structures, and cold/hot coils and slabs at steelworks.

1. Uses Tsubaki's unique bearing system of cylindrical bearings between the roller and bush.
2. This solid chain has low running resistance (coefficient of friction: 0.03) , and the top plate can be easily attached or removed, making maintenance a snap.
3. Rollers are designed with extremely high fracture resistance.



Size	Pitch P	Roller Dia. R	Roller Contact Width E	Inner Link Inner Width W	Chain Height H	Chain Height H1	Chain Height H2	Chain Height H3	Pin Head Dia. D1	Pin L1+L2	Pin L1	Pin L2	Approx. Mass (kg/m)	Max. Allowable Load Tension kN{kgf}	Roller Allowable Load kN{kgf/each}
CT60300	300	125	60	65	171	42.5	108.5	20	36	165	88	77	90	83.3 {8500}	29.4 {3000}
CT60400	400												82		
CT60500	500												78		
CT90300	300	135	65	79	182.5	54	115	13.5	36	179	95	84	99	126 {12800}	35.3 {3600}
CT90400	400												91		
CT90500	500												87		
CT130300	300	150	70	84	195	61	120	14	46	197	104	93	123	181 {18500}	42.2 {4300}
CT130400	400												112		
CT130500	500												105		
CT160400	400	175	80	91	227	69	139.5	18.5	46	205	108	97	135	224 {22800}	55.9 {5700}
CT160500	500												126		
CT160600	600												118		
CT200600	600	180	90	102.6	225	76	135	14	50	229	119	110	141	279 {28500}	64.7 {6600}

Note: 1. Contact a Tsubaki representative regarding delivery.
2. Roller allowable load values are when rail tensile strength is 400N/mm2{41kgf/mm2}.
3. Top plate widths over 220 available upon request. Contact a Tsubaki representative for more information.
4. The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Coil Transfer Conveyor Chain (Made to Order)

Model Numbering Example

CT90300+400L-PR

Size | Pitch | No. of Links | End Link

Ordering Example

Size: CT90 Pitch: 300mm
Quantity: 400 links

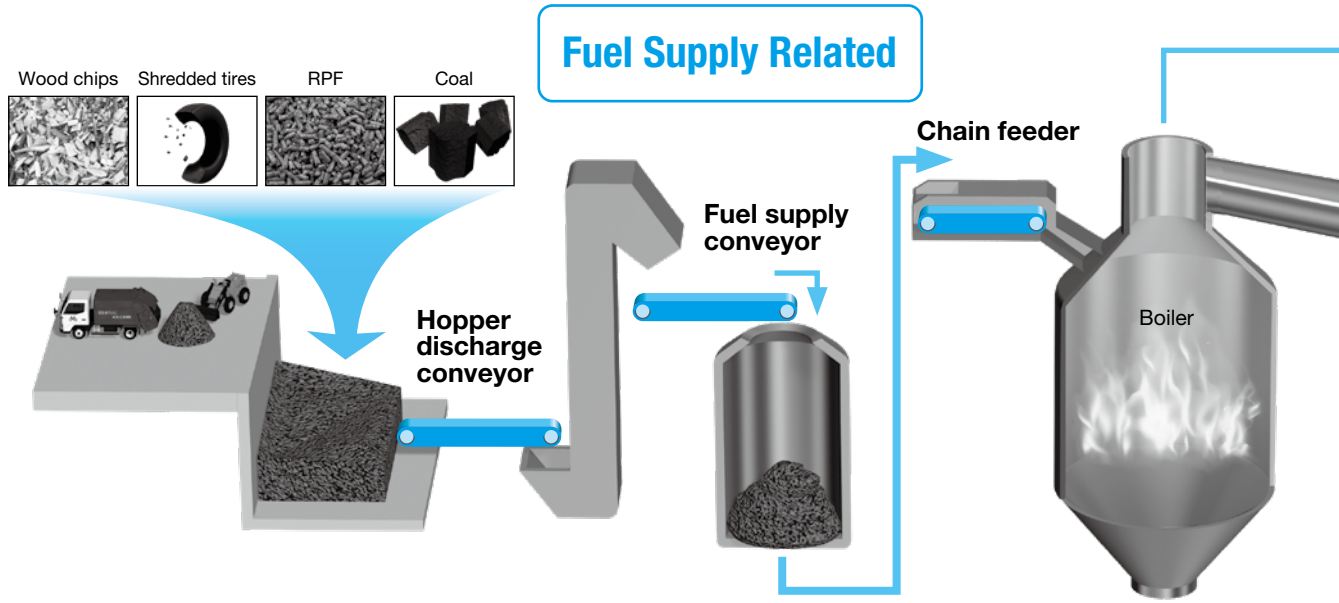
Chain Number	Quantity	Unit
CT90300+400L-PR	1	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Industry Specific Products

Biomass Power Generation Facilities

Conveyor chains for even the harshest biomass power generation processes



Fuel Supply Conveyor

Basic **DT Series** **AT Series**

DT Series
Most versatile chain

AT Series
Higher allowable load and roller wear resistance

Corrosive environment

◆ **Premature chain elongation**

For better pin-bush corrosion resistance **MT Series***

See pg. 126

*Tsubaki offers an MT Series with an optimal clearance to combat poor articulation.

◆ **Heavy bush-roller wear**

For better bush-roller corrosion resistance **RT Series***

See pg. 126

*Tsubaki offers an RT Series with an optimal clearance to combat poor roller rotation.

◆ **Rust corrosion**

Basic **GS Series**

Infiltration of material

◆ **Premature chain elongation**

For better pin-bush corrosion resistance **CT/BT Series***

See pg. 126

*Tsubaki offers specs with an optimal clearance to combat poor articulation.

◆ **Heavy bush-roller wear***

Advanced **DTA Series** — For short conveyors

Basic **AT Series** — For long conveyors

*Tsubaki offers an AT Series with an optimal clearance to combat poor roller rotation.

◆ For better wear resistance

For better corrosion and wear resistance
Advanced **GSA Series**

◆ For better wear resistance

Over twice the wear life of CT/BT Series
Conveyor chain **FB Series**

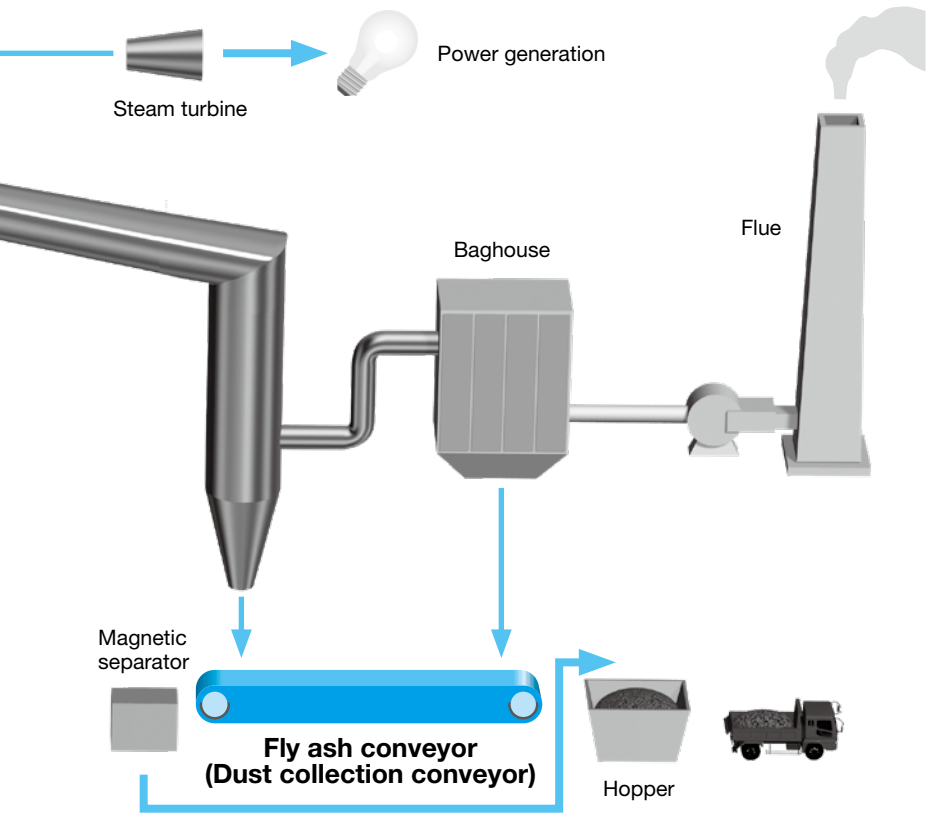
See pg. 69

Twice the roller wear resistance of AT Series
Advanced **ATA Series**

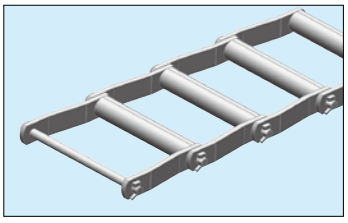
◆ For extremely harsh environments

Triple the roller wear resistance of AT Series
Conveyor chain **FA Series**

See pg. 64



Wood Chip Conveyance



◆ **WD Series Drag Chain**

Conveys by pushing material with the leading face of the bush. Very effective in wood chip conveyance. Chains with better corrosion and wear resistance through a combination of materials and heat treatment are also available. Contact a Tsubaki representative for details.

See pg. 72

Ash Conveyors

Wet Ash Conveyance

◆ **Premature chain elongation**

For better pin-bush corrosion resistance **MT Series***

See pg. 126

*Tsubaki offers an MT Series with an optimal clearance to combat poor articulation.

→ ◆ For better wear resistance

Conveyor Chain FBMT Series

- Material with corrosion resistance
- Uses optimal clearance

◆ **Heavy bush-roller wear**

For better bush-roller corrosion resistance **RT Series***

See pg. 126

*Tsubaki offers an RT Series with an optimal clearance to combat poor roller rotation.

→ **Conveyor Chain AM/AP Series**

See pg. 82

- Material with corrosion resistance
- Uses optimal clearance

Dry Ash Conveyance

◆ **Premature chain elongation**

For better pin-bush corrosion resistance **CT/BT Series***

See pg. 126

*Tsubaki offers specs with an optimal clearance to combat poor articulation.

→ **Conveyor Chain FG Series**

See pg. 82

- Uses optimal clearance
- Effective against poor articulation and poor roller rotation

→ **Conveyor Chain FB Series**

See pg. 69

- Over twice the wear life of BT Series

◆ **Heavy bush-roller wear***

Advanced **ATA*** Series

- Offers twice the bush-roller wear resistanc of AT Series

*Tsubaki offers AT/ATA Series with an optimal clearance to combat poor roller rotation.

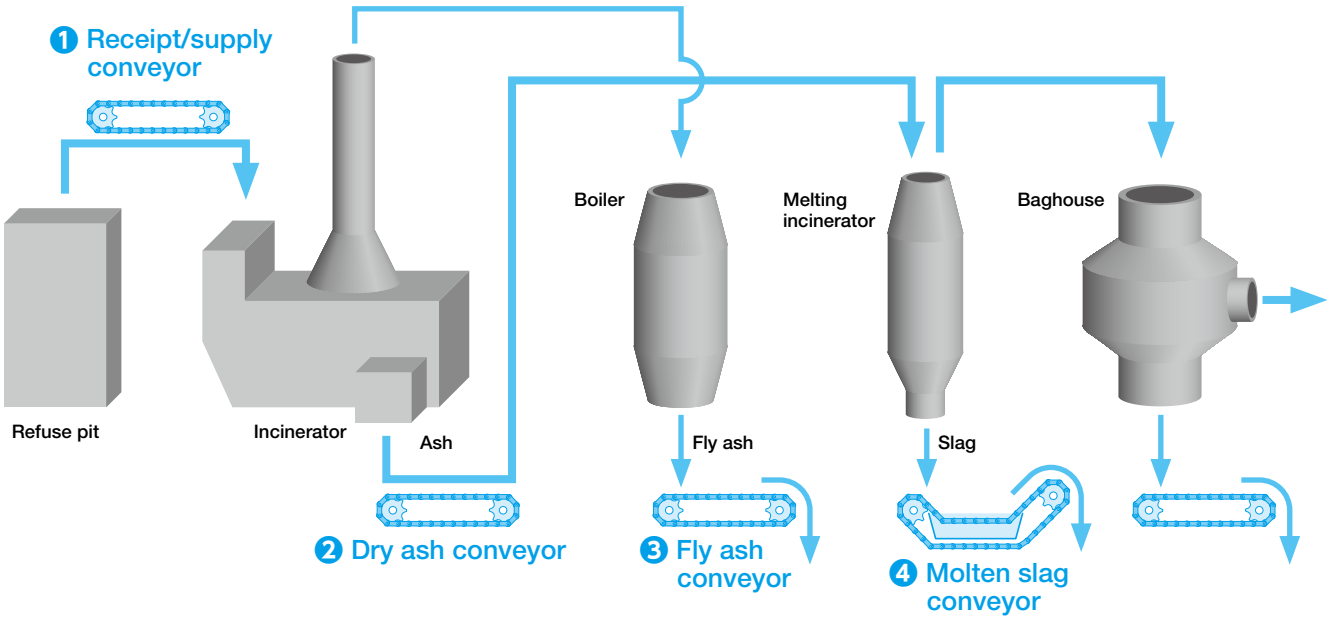
→ **Conveyor Chain AA/AG Series**

See pg. 82

- Uses optimal clearance
- Effective against poor articulation and poor roller rotation

Waste Disposal Facilities

The optimal conveyor chain for the harsh conditions facing each process



1 Receipt/Supply Conveyor

The first line to convey the collected waste. The received waste can cause impacts and high loads on the chain here.

For receipt/supply conveyors

KG/KA Series

◆ Conveyed material:
Collected waste

2 Ash Conveyor

This line conveys ash from the incinerator. In some instances, ash that has been cooled by being dropped in water is also onveyed.

For dry ash conveyance

AG/AA Series

◆ Conveyed material:
Incinerator ash

For wet ash conveyance

AM/AP Series

◆ Conveyed material:
Incinerator ash (wet)

3 Fly Ash Conveyor

This line conveys the fly ash that has been created by the incinerator, boiler, etc. The chain is completely enveloped in fly ash here. Chemically treated fly ash is also sometimes conveyed here.

For general fly ash conveyors

FG Series

◆ Conveyed material:
Fly ash

For corrosive fly ash conveyance

FP Series

◆ Conveyed material:
Fly ash directly after treatment

4 Molten Slag Conveyor

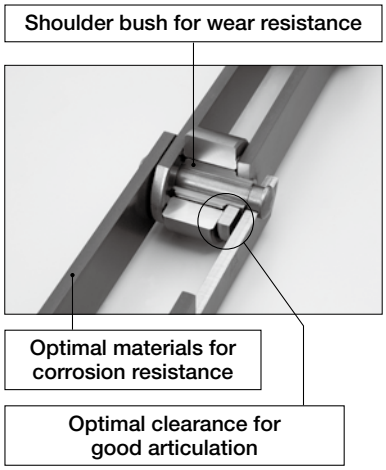
This line conveys the slag produced by the melting incinerator. The slag will sometimes turn the cooling water into a strong alkaline or acid.

For molten slag conveyors

YP Series

◆ Conveyed material:
Molten slag

Conveyor Chains for Waste Incineration

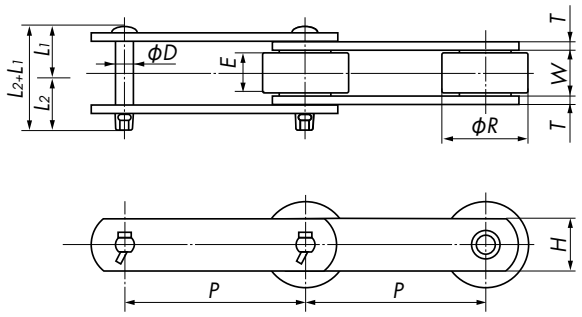


■ Waste Treatment Chain Series

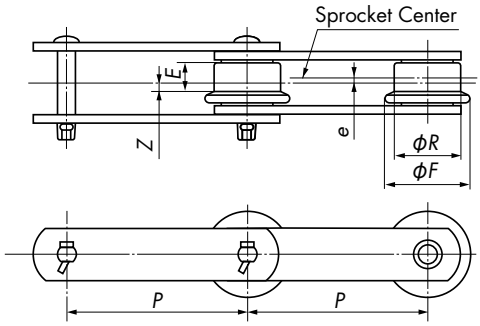
Conveyor Type		Chain Series		Features Required for Each Process			
				Wear Resistance	Corrosion Resistance	Good Articulation	Good Roller Rotation
Intake/feed conveyor		KG	KA	◎		○	○
Bottom ash conveyor	Dry	AG	AA	○		○	○
	Wet	AM			○	○	○
		AP			◎	○	○
Fly ash conveyor	Normal	FG		○		◎	○
	Corrosive	FP			◎	◎	○
Slag conveyor		YP		◎	◎	○	○

Legend ◎:Ideal ○:Suitable
- Each series has features suited to the different waste treatment processes.
- KA and AA Series are stronger versions of the KG, AG, and AM Series.

R Roller



F Roller

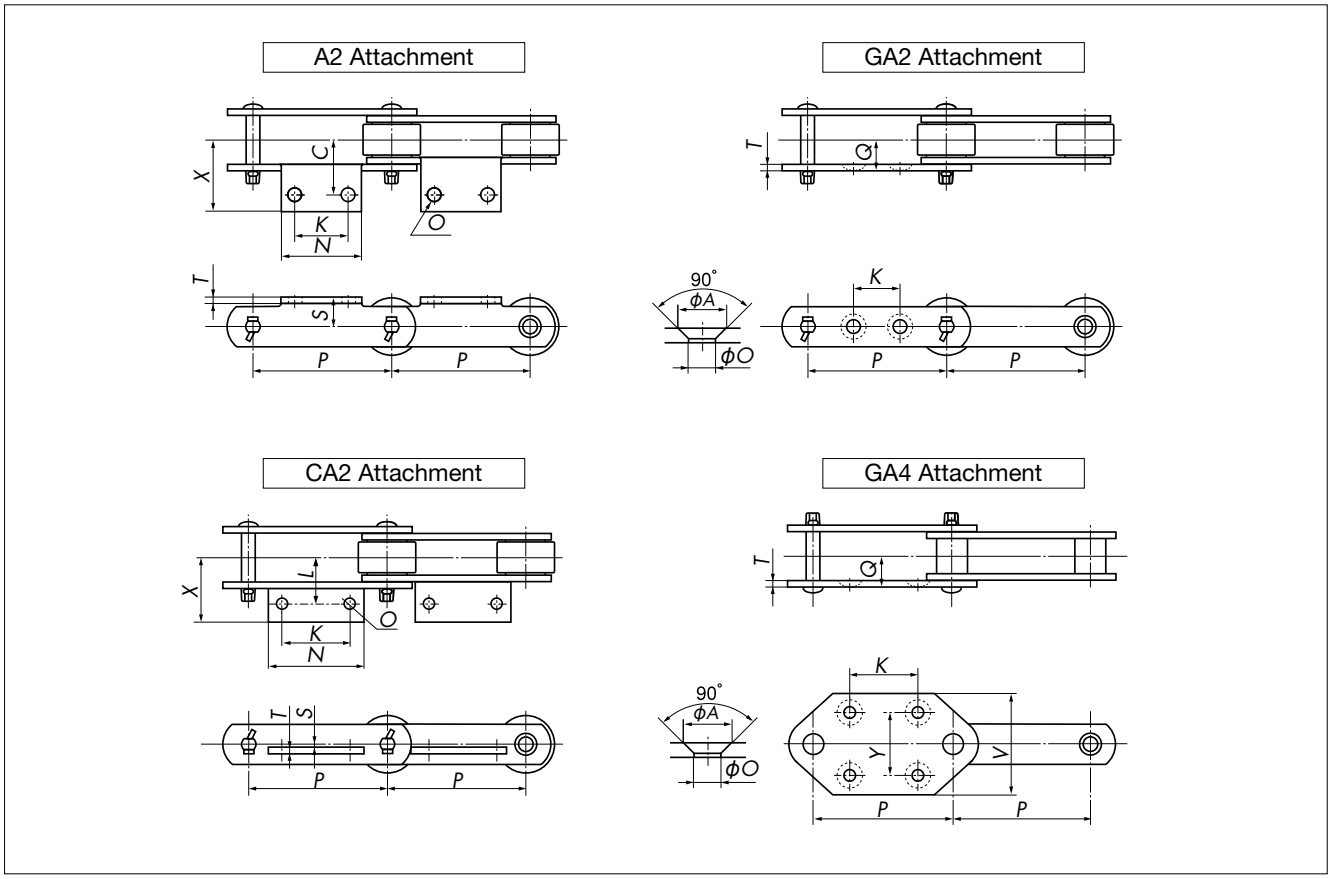


■ Chain Dimensions

Size	Roller Type	Pitch P	Roller Type							Inner Width W	Plate Width H	Pin			Max. Allowable Load KN{kgf}				
			R Roller		F Roller										KG	FG	KA	AP	YP
			R	E	R	F	E	e	Z			L1+L2	L1	L2	AG	AM	AA	FP	
RF03075	R/F	75	31.8	14.5	31.8	42	11	1.8	3.8	15.1	22	38	18	20	4.20 {430}		9.95 {1010}	5.40 {550}	
RF03100	R/F	100																	
RF05100	R/F	100	40	19	40	50	14	2.5	4.5	21	32	53.5	25	28.5	9.80 {1000}		20.3 {2070}	10.8 {1100}	
RF05125	R/F	125																	
RF05150	R/F	150																	
RF10100	R	100	50.8	25	50.8	65	19	3	6.5	28	38.1	69	33	36	17.6 {1790}		32.3 {3290}	17.7 {1800}	
RF10125	R/F	125																	
RF10150	R/F	150																	
RF12200	R/F	200	65	32	65	80	24	4	8	35.1	44.5	83.5	40.5	43	26.6 {2710}		39.9 {4060}	26.5 {2700}	
RF12250	R/F	250																	
RF17200	R/F	200	80	44	80	100	34	5	12	49.4	50.8	109.5	51.5	58	35.0 {3570}		55.3 {5640}	35.8 {3650}	
RF17250	R/F	250																	
RF26250	R/F	250	100	50	100	125	38	6	13	55.2	63.5	116.5	55.5	61	44.9 {{4570}		74.3 {7580}	46.1 {4700}	
RF26300	R/F	300																	

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

Conveyor Chains for Waste Incineration



■ Attachment Dimensions

Size	Roller Type	Attachment Thickness	A2 Attachment					CA2 Attachment					A2 CA2	GA2	GA4 Attachment			GA2 GA4		
		T	C	X	K	N	S	C	X	K	N	S	O	K	V	Y	K	A	O	Q
RF03075	R/F	3.2	30	46	30	55	20	35	46	30	55	0	10	30	—	—	—	13.5	8	15.5
RF03100	R/F				40	65				40	65			50	—	—	—			
RF05100	R/F	4.5	35	47	40	65	22	40	52	40	65	3	10	40	—	—	—	15	10	21
RF05125	R/F				50	75				50	75			50	—	—	—			
RF05150	R/F				60	85				60	85			60	—	—	—			
RF10100	R	6.3	50	67	40	70	28	50	65	40	70	4	12	30	—	—	—	20	12	28.5
RF10125	R/F				50	80				50	80			40	—	—	—			
RF10150	R/F				60	90				60	90			60	110	70	75			
RF12200	R/F	7.9	60	79	80	120	38	60	79	80	120	5	15	80	110	70	100	26	15	35.5
RF12250	R/F				125	170				125	165			125	—	—	—			
RF17200	R/F	9.5	75	100	80	120	45	75	98	80	120	6	15	70	120	80	100	26	15	45.5
RF17250	R/F				125	170				125	165			110	150	100	140			
RF26250	R/F	9.5	80	108	125	170	55	80	105	125	165	6	15	—	150	100	140	26	15	48.5
RF26300	R/F				180	220				180	220			140	150	100	180			

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Waste Treatment Conveyor Chain (Made to Order)

Model Numbering Example

RF12250F-KG-1LCA2+200L-PR-H

- RF12250F: Size
- F: Roller Type
- KG: Series
- 1LCA2: Attachment Spacing
- 200L: No. of Links
- PR: End Link
- H: Option
- Attachment Type

Ordering Example

Size: RF12 Pitch: 250mm Roller Type: F Roller
Chain Specs: KG Series Attachment Type/Spacing: A2 every link
Quantity: 400 links (200 links x 2 parallel strands, half assembled in mirror image

Chain Number	Quantity	Unit
RF12250F-KG-1LCA2+200L-PR-H	2	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Conveyor chains that satisfy various food industry needs

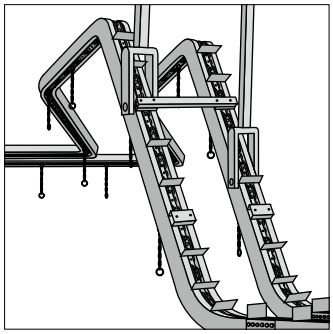
Grains and Feed

Flow Conveyor Chain for Grains

Flow Conveyor Chains are designed not to crush the grains during conveyance or to leave any grains behind in the case.

See pg. 85

Meat

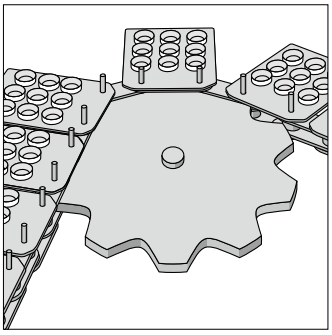


3D Overhead Conveyor Chain for Meat

Specially designed chain to accommodate 3D layouts. Driven by sprockets with special tooth profiles.

Contact a Tsubaki representative.

Frozen Treats / Ice Cream

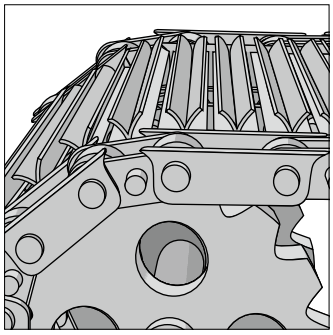


Cold Resistant Chain

Chain designed to minimize wear elongation down to -30°C. Circulates in freezers in a spiral fashion.

Contact a Tsubaki representative.

Food



Sterilizer Chain

Chain designed to resist stress corrosion cracking and wear elongation in steam, cold water, and harsh atmospheres on long length conveyors. They have minimal differences when used in parallel as a set.

Contact a Tsubaki representative.

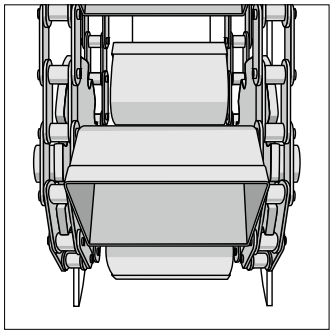
Bread Making

Tunnel Oven Conveyor Chain

Chain with excellent wear performance between bushes and rollers for use on long length, low speed conveyors at 200°C.

Contact a Tsubaki representative.

Sugar Refining

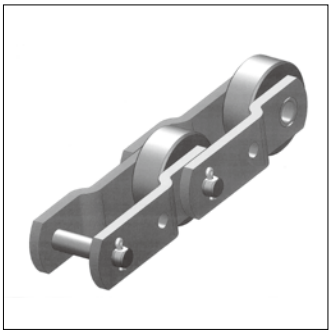


Bucket Elevator Chain for Refined Sugar Conveyance

Bucket Elevator Conveyor Chain that minimizes rusting and metallic debris from wear. Uses clean specifications to minimize chain grime.

See pg. 170

Beverages



Conveyor Chain for Bottle Washers

Chain designed to minimize wear from detergents and contact with water. Customers have praised our combination of materials and heat treatments to match their usage environment.

Contact a Tsubaki representative.

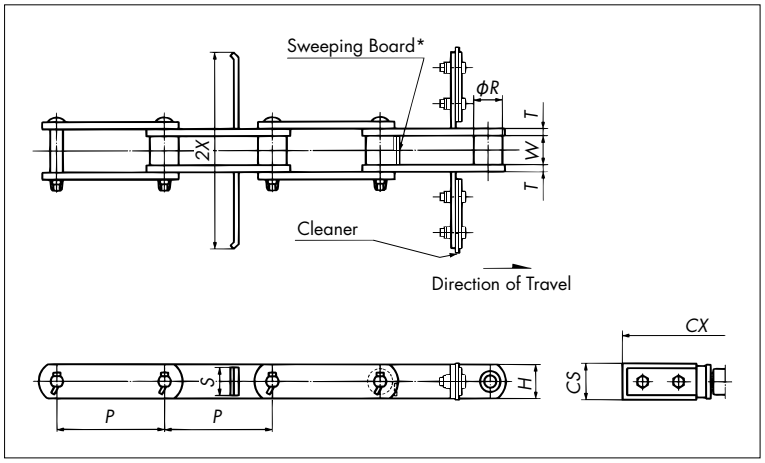
Food Packaging

Lambda Plastic Roller Conveyor Chain for Food Packaging Conveyors

Conveyor chain that can be used without additional lubrication. Helps maintain a clean work environment.

See pg. 86

Flow Conveyor Chain for Grain



These chains are specially designed for grain conveying horizontal flow conveyors (incline/decline gradient less than 10°).

The sweeping board prevents material on the rail from being crushed, while the cleaner prevents grain from remaining in the case.
Cleaner attachment spacing is every 6m.
Attachments are normally spaced every two links.

* Sweeping boards are not attached for forward and reverse operation.

Size and Roller Type	Case Inner Width	Pitch *P*	Roller Diameter *R*	Inner Link Inner Width *W*	Plate Height *H*	Attachment		Cleaner		Approx. Mass kg/m	DT Series	
						Wing Width *2X*	Height *S*	Width *CX*	Height *CS*		Max. Allowable Load kN{kgf}	Min. Tensile Strength kN{kgf}
RF03075S	110	75	15.9	16.1	22.0	95	20	105	28	2.1	4.20{430}	32.4{3300}
RF430S	150	101.6	20.1	22.6	25.4	135	22	145	32	3.4	7.70{790}	49.7{5100}
RF450S	150	101.6	22.2	27.0	28.6	135	25	145	34	5.0	11.2{1140}	74.6{7600}
RF08125S	200	125	22.2	27.0	28.6	185	25	195	34	5.0	11.2{1140}	74.6{7600}}
RF10125S	200	125	29	30.0	38.1	185	31.8	195	47	6.8	17.6{1790}	107{11000}
	240					225		235		7.3		
RF10150S	270	150				250		265		6.9		
	320					300		315		7.2		
RF6205S	270	152.4	34.9	37.1	44.5	250	38.1	265	53	10.5	26.6{2710}	160{16500}
RF12200S	350	200	34.9	37.1	44.5	330	40	345	53	10.3	26.6{2710}	160{16500}
RF17200S	350	200	40.1	51.4	50.8	330	46	345	58	14.0	35.0{3570}	213{22000}
	450					430		445		16.0		
RF26200S	450	200	44.5	57.2	63.5	430	58	445	68	21.0	44.9{4570}	285{29000}

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Flow Conveyor Chain for Grain (Made to Order)

Model Numbering Example

RF12200S-DT-L35RL*-CK-TK+400L-PR

- RF12200S: Size
- DT: Roller Type
- L35RL: Series
- CK: Attachment Type
- TK+400L: No. of Links
- PR: End Link
- L35RL-CK: Cleaner/Sweeping Board

*Attachment spacing: L35 every 2nd link, CK every link

Ordering Example

Size: RF12 Pitch: 200mm Roller Type: S Roller
Chain Specs: Standard DT Series
Attachment Spacing/Type: L every 2nd link, Cleaner/sweeping board every 20 link
Case Inner Width: 350mm Quantity: 400 links

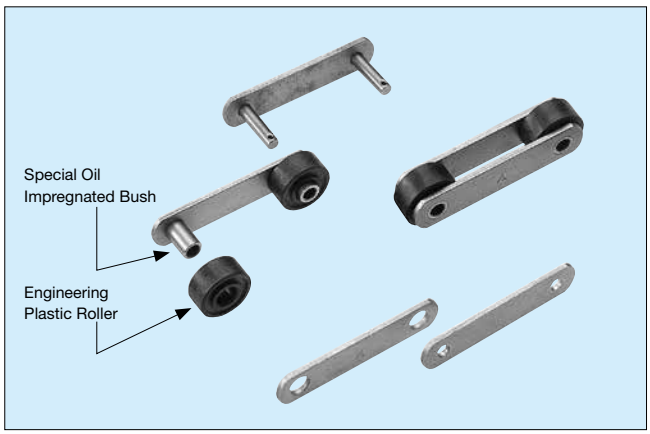
Chain Number	Quantity	Unit
RF12200S-DT-L35RL-CK-TK+400L-PR	1	H

L attachment every 2nd link, CK attachment every link

Note: 1. When two different types of attachments will be installed, specify the attachment spacing for each.
2. Specify the model number and contact a Tsubaki representative for a quote.

Lambda Plastic Roller Conveyor Chain

Series: LMC



1. **Lube-free, long life**
   Wear life between pin-bush and bush-roller is seven times that of DT Series while being lube-free.
2. **Low noise**
   5-7db quieter than steel rollers. No grating sound when rollers rotate.
3. **Low running resistance**
   55% lower than steel rollers. (Unlubricated)
4. **Clean**
   Suppresses generation of metal wear dust.
5. **Lightweight**
   30% lighter than steel rollers.
6. **Compatible**
   Dimensionally compatible with conveyor chains.
   Users can switch to Lambda Plastic Roller Conveyor Chain with no additional changes.
   (It is necessary to check strength and other factors.)

■ Specifications

Material			Usage Temp.	Roller Rotational Coefficient of Friction	Chain Speed	Sprocket
Roller	Bush	Other Parts				
Engineering Plastic	Special Oil Impregnated Bush	Steel	0°C to 50°C	0.07 (lube-free)	25m/min or less	RF Standard Sprocket

Note: 1. Link plates are black-coated carbon steel.
2. Roller coefficient of friction values assume a low dust, room temperature, indoor environment.

■ Max. Allowable Load

Unit: kN{kgf}

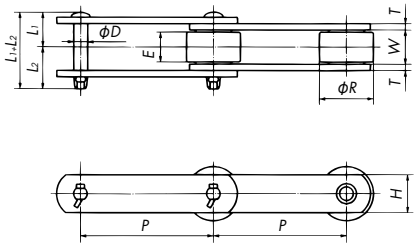
Chain Size \ Sprocket Teeth No.	6		7		8		9		10	
	kN	{kgf}	kN	{kgf}	kN	{kgf}	kN	{kgf}	kN	{kgf}
RF03075-LMC	1.47	{150}	1.86	{190}	1.96	{200}	1.96	{200}	1.96	{200}
RF03100-LMC	1.86	{190}	1.96	{200}						
RF05100-LMC	2.65	{270}	3.33	{340}	4.21	{430}	5.20	{530}	5.20	{530}
RF05125-LMC	3.74	{380}	4.71	{480}	5.20	{530}				
RF05150-LMC	4.90	{500}	5.20	{530}						

Note: 1. R roller max. allowable tension values shown above are for chain speeds under 25m/min.
2. F rollers have 70% of the above values.
3. Refer to selection pages for chain tension calculations.

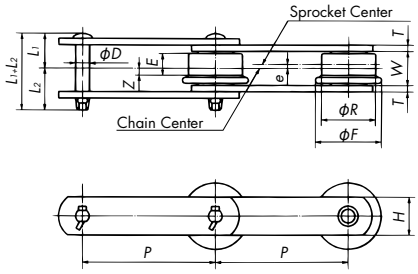
■ Dimensions

Base chain and attachments are the same as RF Conveyor Chain.

RP Roller



FP Roller



Size	Pitch P	RP Roller		FP Roller					Inner Link Inner Width W	Plate Height H	Pin			Roller Allowable Load (each)		Approx. Mass kg/m	Attachment Type
		Dia. R	Contact Width E	Dia. R	Flange Dia. F	Flange Dia. F	Off-center e	Z			L1+L2	L1	L2	kN	{kgf}		
RF03075-LMC	75	31.8	15.5	31.8	42	12	1.8	4.3	16.1	22	38	18	20	0.49	{50}	1.9	A
RF03100-LMC	100															1.7	K
RF05100-LMC	100	40	19	40	50	14	2.5	4.5	22	32	53.5	25	28.5	0.83	{85}	3.6	SA
RF05125-LMC	125															3.4	SK
RF05150-LMC	150															3.2	G

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Lambda Plastic Roller Conveyor Chain (Made to Order)

Model Numbering Example

RF03100RP-LMC-1LK2+400L-PR

- Size
- Roller Type: RP: Engineering Plastic R Roller; FP: Engineering Plastic F Roller
- Chain Series: LMC: Lambda Plastic Roller Conveyor Chain
- Attachment Spacing
- Attachment Type
- No. of Links
- End Link

Ordering Example

Chain Size: RF03 Pitch: 100mm
Roller Type: Engineering plastic R roller
Quantity: 400 links

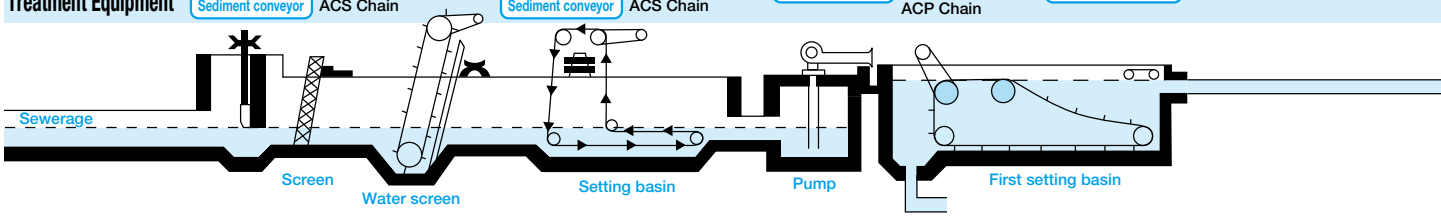
Chain Number	Quantity	Unit
RF03100RP-LMC+400L-PR	1	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Industry Specific Products Water Treatment Plants

Diagram of Water Treatment Equipment

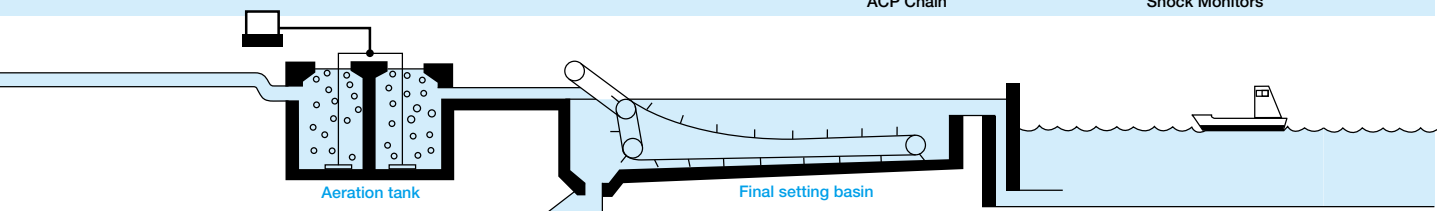
Water screen — JAC Chain
Sediment conveyor — ACS Chain
Sediment collector — ACS Chain
Sediment conveyor — ACS Chain
Collector — ACS Chain, ACR Chain, ACP Chain
Scum skimmer — Power Cylinder



Water Treatment Conveyor Chain

Application	Chain Type	Series	Material	Size	Attachment Type	Avg. Tensile Strength kN{kgf} (avg. fracture strength)	Min. Tensile Strength kN{kgf} (guaranteed fracture strength)
Collector	ACP	—	Engineering plastic	ACP04152	SF4 ◆ Attachment hole-related dimensions can be changed.	39.2 { 4000}	35.3 { 3600}
				ACP04152P		29.4 { 3000}	24.5 { 2500}
	ACP (with rollers)	—	SUS400 series	ACR810		98.1 {10000}	88.3 { 9000}
				ACR815		147 {15000}	132 {13500}
				ACR816		157 {16000}	142 {14500}
				ACR819		186 {19000}	172 {17500}
		SS	SUS300 series	ACR810SS		58.8 { 6000}	52.9 { 5400}
Sediment collectors and conveyors	ACS (bushed)	—	SUS400 series	ACS13078W	SF4 LA1 Extended pin ◆ LA1 uses alloy steel.	132 {13500}	123 {12500}
				ACS13103W			
				ACS13152W			
				ACS15152W		147 {15000}	137 {14000}
				ACS19152W		186 {19000}	172 {17500}
				ACS19152WT		186 {19000}	172 {17500}
				ACS25152W		245 {25000}	226 {23000}
				ACS35152W		343 {35000}	314 {32000}
Water screens	JAC (with rollers)	NVJ	Pin/bush: SUS400 series Roller/plate: Alloy steel	JAC08152□-NVJ	Y A2T1 (type 1) A2T2 (type 2) Attachments can be alloy steel or SUS400/300 stainless steel.	147 {15000}	127 {13000}
				JAC10152□-NVJ		216 {22000}	196 {20000}
				JAC6205□-NVJ		275 {28000}	250 {25500}
				JAC21152□-NVJ		382 {39000}	343 {35000}
				JAC26152□-NVJ		510 {52000}	461 {47000}
		PJ (PJH)	SUS400 series	JAC08152□-PJ		142 {14500}	132 {13500}
				JAC10152□-PJ		167 {17000}	152 {15500}
				JAC10152□-PJH		186 {19000}	172 {17500}
				JAC6205□-PJ		235 {24000}	216 {22000}
				JAC6205□-PJH		265 {27000}	245 {25000}
				JAC21152□-PJ		353 {36000}	324 {33000}
				JAC26152□-PJ		490 {50000}	451 {46000}
		PJW (PJWH)	SUS400 series	JAC10152F-PJW		167 {17000}	152 {15500}
				JAC10152F-PJWH		186 {19000}	172 {17500}
				JAC6205F-PJW		235 {24000}	216 {22000}
				JAC6205F-PJWH		265 {27000}	245 {25000}
		SJ	SUS300 series	JAC08152□-SJ		68.6 { 7000}	58.8 { 6000}
				JAC10152□-SJ		108 {11000}	93.2 { 9500}
				JAC6205□-SJ		132 {13500}	113 {11500}
				JAC21152□-SJ		186 {19000}	157 {16000}
				JAC26152□-SJ		250 {25500}	211 {21500}
		SJW	SUS300 series	JAC10152F-SJW		108 {11000}	93.2 { 9500}
				JAC6205F-SJW		132 {13500}	113 {11500}
				JAC21152F-SJW		186 {19000}	157 {16000}
				JAC26152F-SJW		250 {25500}	211 {21500}
		SJW	F roller: Plastic Pin/bush/plate: SUS300 series	JAC10152FP-SJW		108 {11000}	93.2 { 9500}
				JAC6205FP-SJW		132 {13500}	113 {11500}
				JAC21152FP-SJW		186 {19000}	157 {16000}
Drive	ACRD (with rollers)	—	SUS400 series	ACRD08		142 {14500}	132 {13500}
				ACRD10		186 {19000}	172 {17500}
				ACRD12		235 {24000}	216 {22000}
				ACRD17		353 {36000}	324 {33000}
	BF (bushed)	—	SUS400 series	BF120N		108 {11000}	99.0 {10100}
				BF140		137 {14000}	127 {13000}
				BF140E		147 {15000}	132 {13500}
				BF160		181 {18500}	167 {17000}
				BF160E		233 {23800}	196 {20000}
				BF200		309 {31500}	284 {29000}
				BF200E		353 {36000}	324 {33000}
				BF240		392 {40000}	363 {37000}
				ACS4124		186 {19000}	167 {17000}
				BF2120		147 {15000}	137 {14000}
	EPCD	—	Engineering plastic	EPC78D		19.6 { 2000}	17.7 { 1800}
				EPC90D		37.3 { 3800}	32.4 { 3300}

Drive chains: RS Roller Chain, BF Chain, ACRD Chain, EPCD Chain
Collector chains: ACS Chain, ACR Chain, ACP Chain
Power actuators: Miter Gear Boxes for underwater use, Shock Relays, Shock Monitors



	Features	Coating*
	Rolling contact is made possible through chains with rollers and block tooth sprockets, increasing wear resistance. Lightening the chain will also result in cost savings by reducing the necessary drive power.	–
	Using together with a plastic sprocket will result in superior wear and corrosion resistance. And as plastic chains are lighter than steel chains, the lower power requirement will result in lower costs.	○
		–
	This chain was the first in the industry to use tempered stainless steel for increased wear and corrosion resistance. Also available in SUS300 series stainless steel. ACS19152WT uses Tokyo Specifications with a bush diameter of ϕ30.	○
		○
	The right combination of material will give you the right chain for any application. NVJ Series: Most economical chain, has high strength PJ Series: Provides excellent wear resistance SJ Series: Provides superb corrosion resistance PJW Series: Same as the PJ Series but with alternating flanges SJW Series: Same as the SJ Series but with alternating flanges ◆ PJW and SJW are wider than standard chains. Low Noise Series: Less running noise due to plastic F Roller ◆ The rollers on attachment links are steel. ◆ Uses special sprockets. Be sure to indicate chain specifications. ◆ Insert the roller type code in the □ area. ◆ NVJ Series is equivalent to VJ Series with different material for some components. ◆ Chain size –H indicates heavy duty specifications.	○
		○
		–
		–
		–
	Rolling contact is made possible through chain with rollers and sprockets to increase wear resistance.	○
	Uses stainless steel for increased wear and corrosion resistance. ◆ Also available in SUS300 series	○
	This special plastic drive chain for collectors combines engineering plastic and SUS300 series stainless steel.	–

Water Treatment Sprockets

Tsubaki provides sprockets that can satisfy the type, material, or dimensional requirements of any main or drive chain.

■ Collector Parts

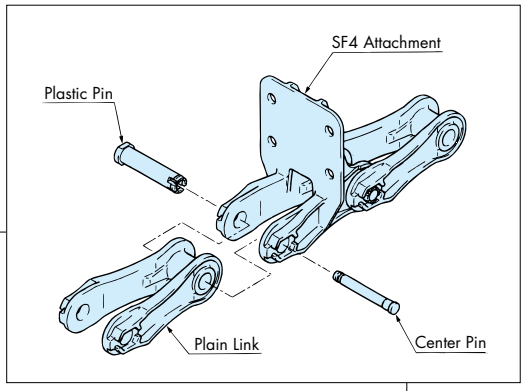
See pg. 98

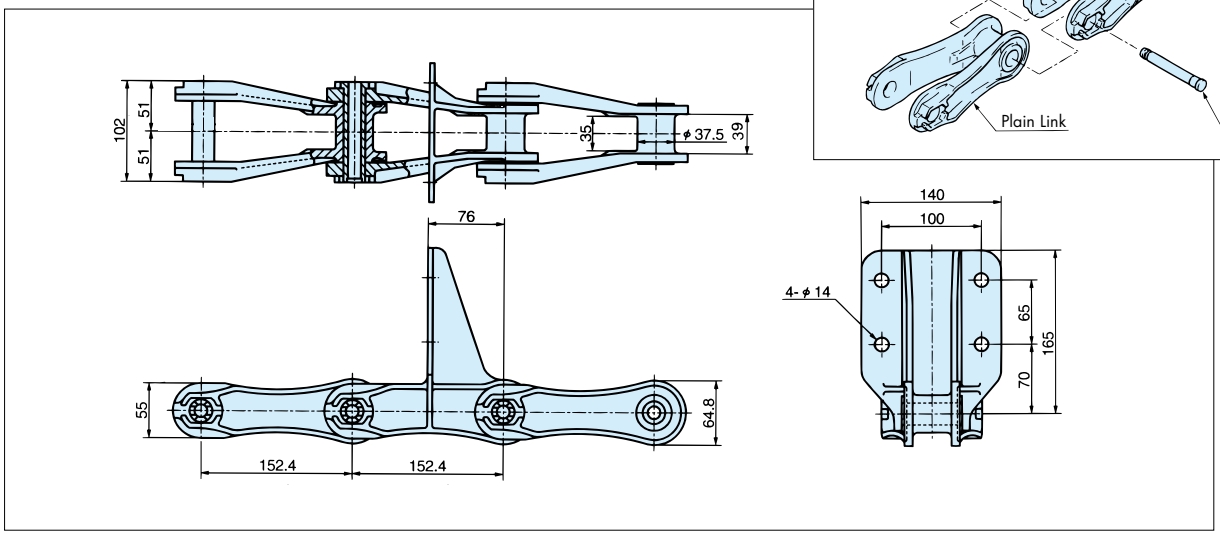
Part Name	Material
Flight	FRP
Shoe	Plastic, FCD, SCS
Distance spacer	Plastic

Note: Coatings
Chains designated with this mark ○ are manufactured with a coating of epoxy resin paint as standard. Contact a Tsubaki representative if a different coating is required.

ACP Non-Metallic Collector Chain

ACP Chains do not suffer corrosion wear, and in combination with ultrahigh molecular polyethylene sprockets they offer unsurpassed wear resistance. They are also lighter than steel chains (chain: 1/4–1/2 lighter, sprocket: 1/3 lighter), making them easy to handle.





Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

Size	Avg. Tensile Strength kN{kgf}	Min. Tensile Strength kN{kgf}	Chain Mass kg/m	Attachment Mass kg/each set	Specific Gravity
ACP04152-SF4	39.2{4000}	35.3{3600}	2.9	0.25	1.75
ACP04152P-SF4	29.4{3000}	24.5{2500}	2.4	0.25	1.45

Model Numbering Example (Made to Order)

Chain: **ACP04152 P-20LSF4+400L**
- Size
- P: Plastic Center Pin / No code: SUS Center Pin
- Attachment Spacing
- Attachment Type
- No. of Links

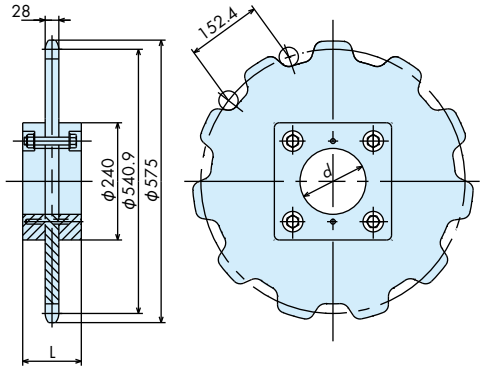
Chain Attachment: **ACP04152P-OL**, **ACP04152P-SF4-OL**

Sprocket: **ACP04152-1C□T-□**
- Type
- No. of Teeth
- No code: Solid (Square hub assembly)
- RK: Ring Replaceable Teeth (D-split)

Note: Specify the model number and contact a Tsubaki representative for a quote.

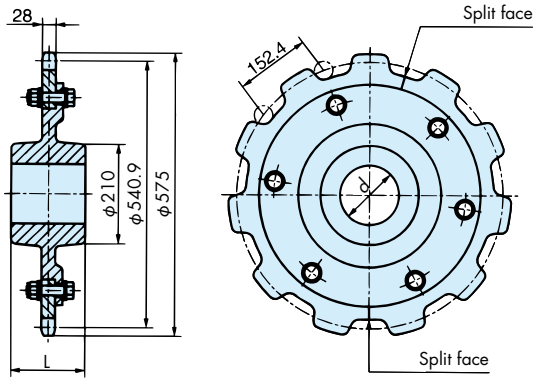
ACP Sprockets for Non-Metallic Collector Chain

Solid (Square Hub Assembly)



Driven shaft

Ring Replaceable Teeth (D-split/Teeth: Plastic Hub: FCD600)



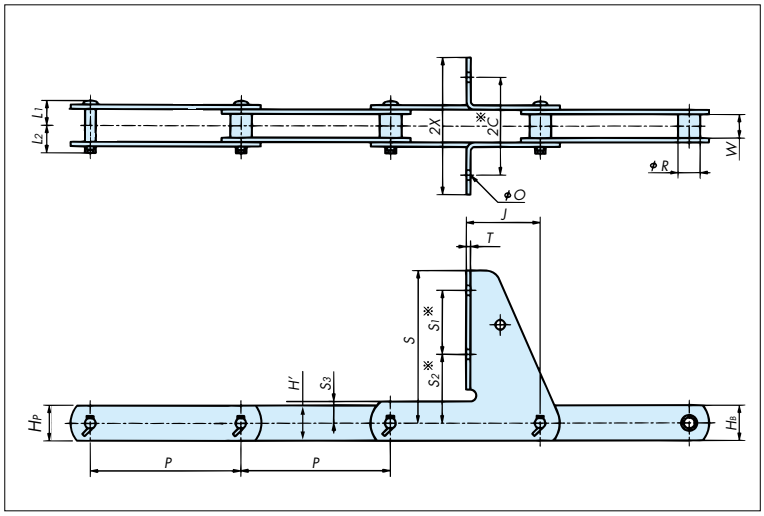
Drive shaft

Applicable Size	Chain Pitch	No. of Teeth	Outer Dia.	Pitch Dia.	Tooth Width	Hub Dim.		Pilot Bore Dia. *d*	Max. Shaft Dia	Type/Material	Approx. Mass kg
						Dia. *DH*	Length *L*				
ACP04152	152.4	11	575	540.9	28	240	140	—	—	Square hub assembly	—
ACP04152P		11	575	540.9	28	210	140	90	130	Ring replaceable teeth (plastic)	64

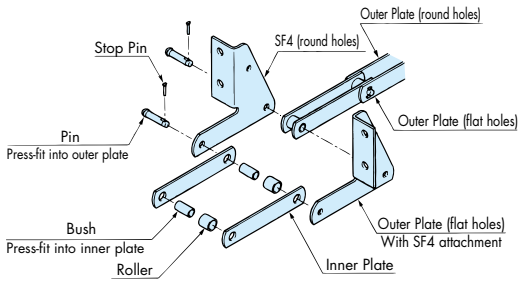
Note: 1. Indicate drive shaft diameter and key dimensions, driven shaft sleeve outer diameter, and hub dimensions when ordering.
2. Standard number of teeth is listed. Tsubaki can manufacture sprockets with teeth numbers other than listed above. Contact a Tsubaki representative for more details.
3. ▭ Shaded items are for reference and not standard dimensions. Indicate dimensions and number of teeth on your inquiry, or attach a drawing.
4. Please indicate finished bores on square hub assembly sets. Finished bores available up to 160mm.
5. The above dimensions are nominal dimensions and may differ from actual dimensions.

ACR Non-Metallic Collector Chain

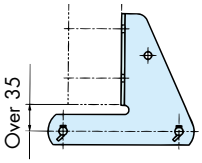
The Japan Sewage Works Corporation Examination for Privately Developed Technology (Certificate No. 109)



Flights that do not have standard attachment dimensions (※) can be made to order.



Ensure that flights do not interfere with sprockets when designing.



Size	Avg. Tensile Strength kN{kgf}	Min. Tensile Strength kN{kgf}	Pitch P	Roller Dia R	Inner Link Inner Width W	Pin		Inner Plate Width HB	Outer Plate Width HP	Mass kg/m
						L1	L2			
ACR810	98.1 {10000}	88.3 {9000}	152.4	22.2	22	25	28.5	33	33	3.2
ACR815	147 {15000}	132 {13500}	152.4	22.2	27.6	31	34.5	38	38	5
ACR816	157 {16000}	142 {14500}	152.4	25	26	30	34	38	38	5
ACR819	186 {19000}	172 {17500}	152.4	29	30.6	33	36	44	38	6
ACR810SS	58.8 {6000}	52.9 {5400}	152.4	22.2	22	25	29	29	25	2.9

Size	Attachment Dimensions									Mass kg/each
	2C	2X	J	S	S1	S2	S3	O	T	
ACR810-SF4	100	140	76	155	65	70	22	14	4.5	1.0
ACR815-SF4	100	140	76	157	65	70	22	14	6	1.4
ACR816-SF4	100	138	76	157	65	70	22	14	6	1.4
ACR819-SF4	100	142.5	76	157	65	70	22	14	6	1.4
ACR810SS-SF4	100	140	76	155	65	70	22	14	4.5	1.0

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

Model Numbering Example (Made to Order)

Chain: **ACR810-SS-20LSF4+400L-PR**

- ACR810: Size
- SS: SUS300 series; No code: SUS400 series
- 20LSF4: Attachment Spacing
- 400L: Attachment Type
- PR: End Link

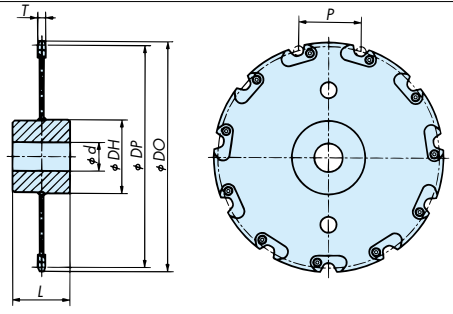
Sprocket: **ACR810-1C□TQ-□**

- 1C: Type
- □: No. of Teeth
- TQ: Hardened Teeth
- □: BK: Block Replaceable Teeth (Block teeth); No code: Solid; RK: Ring Replaceable Teeth (D-split)

Note: Specify the model number and contact a Tsubaki representative for a quote.

ACR Sprockets for Non-Metallic Collector Chain

Block Replaceable Teeth (Block Teeth)

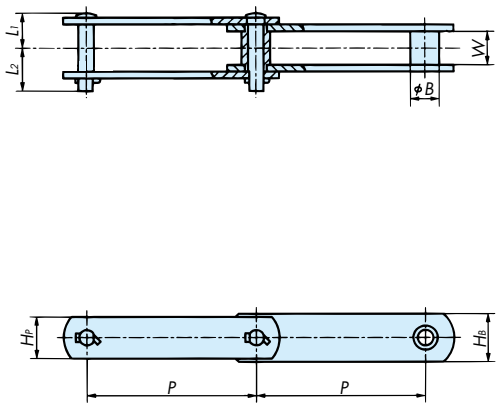


Applicable Size	Chain Pitch	No. of Teeth	Outer Dia.	Pitch Dia.	Tooth Width	Hub Dim.		Pilot Bore Dia. d	Max. Shaft Dia	Type/Material	Approx. Mass kg
						Dia. DH	Length L				
ACR810	152.4	11	565	540.9	18	210	140	90	130	Block replaceable teeth: SS400 or FCD600 (arm, hub), SCS2 (teeth) Solid: SCS2 or SCS13	47
ACR815		11	567	540.9	22	210	140	90	130		53
ACR816		11	566	540.9	22	210	140	90	130		53
ACR819		11	570	540.9	22	210	140	90	130		53
ACR810SS		11	565	540.9	18	200	130	80	125		55

Note: 1. Indicate drive shaft diameter and key dimensions, driven shaft sleeve outer diameter, and hub dimensions when ordering.
2. Standard number of teeth is listed. Tsubaki can manufacture sprockets with teeth numbers other than listed above. Contact a Tsubaki representative for more details.
3. Chains using SUS300 Series stainless steel rollers require special sprockets.
4. Shaded items are for reference and not standard dimensions. Indicate dimensions and number of teeth on your inquiry, or attach a drawing.
5. The above dimensions are nominal dimensions and may differ from actual dimensions.

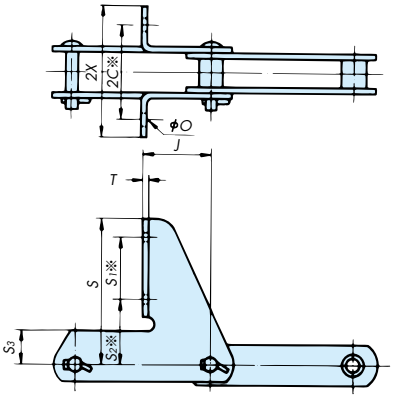
ACS Heavy Duty Collector Chain

Main Chain



SF4 Attachment

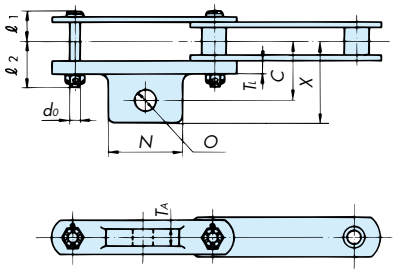
Flight attachment for grit and sediment collectors.



Flight dimensions marked with ※ available in other non-standard dimensions.

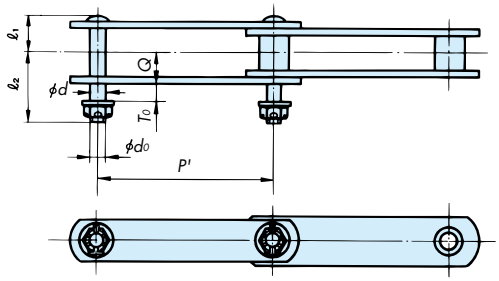
LA1 Attachment

Bucket attachment for sediment collector.
Buckets attach easily.



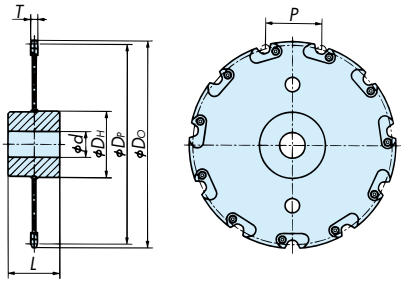
Long Pin Attachment

Bucket attachment for sediment collector.
Buckets attach easily.

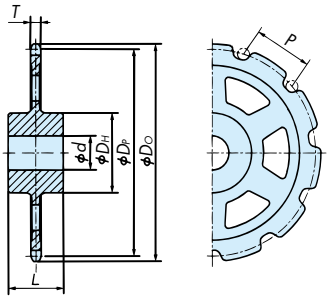


ACS Sprockets for Heavy Duty Collector Chain

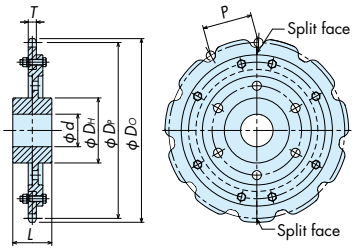
Block Replaceable Teeth (1C)



Solid (C)



Ring Replaceable Teeth (D-split)



Model Numbering Example **(Made to Order)**

Chain: **ACS13078W-20LSF4+400L-PR**

- Size
- Attachment Spacing
- Attachment Type
  - SF4 : SF4 Attachment
  - LA1 : LA1 Attachment
  - LONGPIN : Longpin Attachment
- End Link
- No. of Links

Sprocket: **ACS13078W-1C□TQ-□**

- Type
- No. of Teeth
- Hardened Teeth
- No code: Solid
- BK: Block Replaceable Teeth (Block teeth)
- RK: Ring Replaceable Teeth (D-split)

Note: Specify the model number and contact a Tsubaki representative for a quote.

■ ACS Main Chain

Size	Avg. Tensile Strength kN{kgf}	Min. Tensile Strength kN{kgf}	Pitch *P*	Bush Dia. *B*	Inner Link Inner Width *W*	Pin		Outer Plate Width H_P	Inner Plate Width H_B	Approx. Mass kg/m
						L_1	L_2			
ACS13078W	132{13500}	123{12500}	78.11	23	26	28	32	33	36	5.2
ACS13103W			103.2							4.6
ACS13152W			152.4							3.6
ACS15152W	147{15000}	137{14000}	152.4	24	26	29	33	36	38	4.8
ACS19152W	186{19000}	172{17500}	152.4	26	30	32	39.5	38	44	5.8
ACS19152WT*			152.4	30						6.8
ACS25152W	245{25000}	226{23000}	152.4	29	30	35	41	44	54	7.9
ACS35152W	343{35000}	314{32000}	152.4	35	38	41	46	54	60	10.9

Note: 1. Offset links available.
2. * Indicates Tokyo specifications.
3. All sizes also available in SUS300 series stainless steel.

■ SF4 Attachment for ACS Chain

Size		Attachment Dimensions									Additional Mass per Set kg
		2C	*2X*	*J*	*S*	S_1	S_2	S_3	*O*	*T*	
ACS13078W-SF4	78.11	90	131.5	38	110	35	55	28	14	5	0.6
ACS13103W-SF4	103.2			52							0.7
ACS13152W-SF4	152.4			76							1.0
ACS15152W-SF4	152.4	100	143.5	76	155	65	70	35	14	5	1.2
ACS19152W-SF4	152.4	100	141.5	76	157	65	70	38	14	6	1.4
ACS19152WT-SF4											
ACS25152W-SF4	152.4	100	143.5	76	154	65	70	38	14	6	1.4
ACS35152W-SF4	152.4	110	152.0	76	160	65	75	40	14	7.9	1.6

■ LA1 Attachment for ACS Chain

Size		Attachment Dimensions									Additional Mass per Set kg
		d_0	ℓ_1	ℓ_2	*C*	*X*	*N*	*O*	*TA*	*TL*	
ACS13078W-LA1	78.11	M10	29.5	41.5	55	77	40	19	16	12	0.4
ACS13103W-LA1	103.2						56				0.6
ACS15152W-LA1	152.4	M12	30.5	44.5	55	77	68	19	16	12	0.8
ACS19152W-LA1	152.4	M12	33.5	51.5	65	90	80	24	20	16	1.2
ACS25152W-LA1	152.4	M14	36.5	53.5	65	90	80	24	20	16	1.4
ACS35152W-LA1	152.4	M16	42.5	61.5	75	102	80	26	24	19	2.0

■ Long Pin Attachment for ACS Chain

Size	Attachment Dimensions								Additional Mass per Set kg
	P	*P'*	*d*	d_0	ℓ_1	ℓ_2	*Q*	T_0	
ACS13078W-LONGPIN	78.11	77.7	12	M10	28	49	24	12	0.06
ACS13103W-LONGPIN	103.2	102.8							
ACS15152W-LONGPIN	152.4	152.0	13	M12	29	51	25	12	0.10
ACS19152W-LONGPIN	152.4	151.9	14	M12	32	59	28	16	0.11
ACS25152W-LONGPIN	152.4	151.9	15.5	M14	35	62	29	16	0.14
ACS35152W-LONGPIN	152.4	151.8	18.5	M16	41	72	34.2	19	0.20

Note: P: Nominal dimensions P': Actual dimensions

■ ACS Sprockets

Applicable Size	Chain Pitch	No. of Teeth	Outer Dia.	Pitch Dia.	Tooth Width	Hub Dim.		Pilot Bore Dia. *d*	Max. Shaft Dia	Type/Material	Approx. Mass kg
						Dia. D_H	Length *L*				
ACS13078W	78.11	11	300	277.3	22	140	110	60	85	C, C-split: FCD600 or SCS2 D-split: FCD600 (hub, arm) SCS2 (teeth) 1C (block teeth): SS400 or FCD600 (hub, arm) SCS2 (teeth)	15
ACS13103W	103.2		390	366.3		150	110	50	90		22
ACS13152W	152.4		565	540.9		150	130	60	90		36
ACS15152W	152.4	11	565	540.9	22	170	130	60	105		44
ACS19152W	152.4	11	565	540.9	25	210	140	80	130		51
ACS25152W	152.4	11	570	540.9	25	210	140	80	130		51
ACS35152W	152.4	11	570	540.9	32	210	140	80	130		62

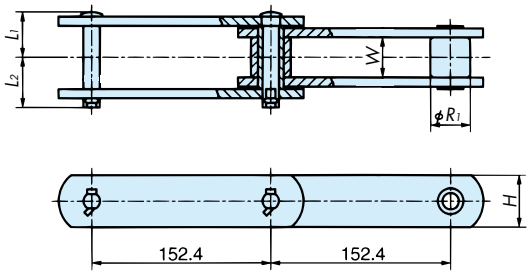
Note: 1. Standard number of teeth is listed. Tsubaki can manufacture sprockets with teeth numbers other than listed above. Contact a Tsubaki representative for more details.
2. Shaded items are for reference and not standard dimensions. Indicate dimensions and number of teeth on your inquiry, or attach a drawing.
3. The above dimensions are nominal dimensions and may differ from actual dimensions.

JAC Water Screen Chain

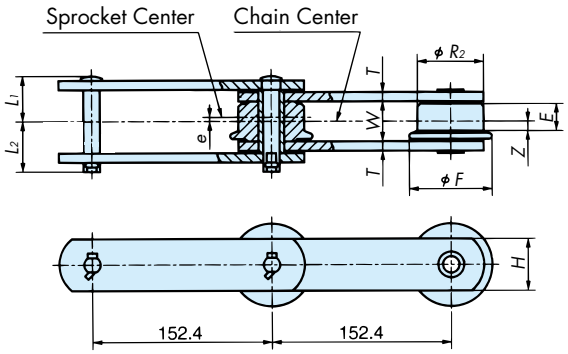
NVJ Series	Tsubaki's most economical chain. Highly durable and wear resistant.
PJ (PJH) Series	Offers superb wear and corrosion resistance.
SJ Series	Our most corrosion resistant chain.
PJW (PJWH) Series	A PJ Series chain with alternating flanges, preventing chain from falling off of guide rail.
SJW Series	An SJ Series chain with alternating flanges, preventing chain from falling off of guide rail.
FP-SJW Series (Low Noise Series)	Reduced running noise thanks to engineering plastic F rollers.

PJH and PJWH are heavy duty versions of PJ and PJW, respectively.

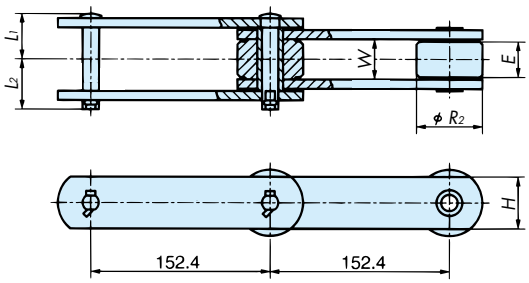
S Roller



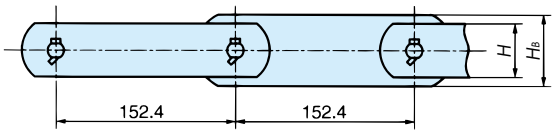
F Roller



R Roller

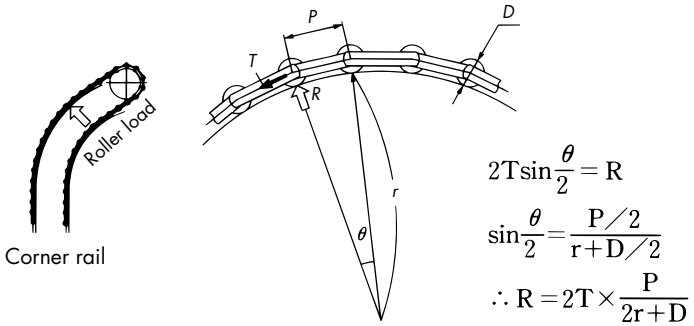


Heavy Duty Specs (Same for S, R, and F Rollers)



Note: Has a wider inner plate for more strength.

Note: The following needs to be considered for FP-SJW Series (low noise type).
Use the following formula to calculate the rail reactive force R generated by chain tension T on the corner rail area.



$$2T\sin\frac{\theta}{2}=R$$

$$\sin\frac{\theta}{2}=\frac{P/2}{r+D/2}$$

$$\therefore R=2T\times\frac{P}{2r+D}$$

Model Numbering Example

JAC10152F-PJH
Mounting one A2 (type 1) attachment somewhere along the 100 links

1 **JAC10152F-PJH-20LA2T1+20L-PR**

2 **JAC10152F-PJH+80L-PR**

Note: You can also specify chain configuration using a diagram.

Next, use the following formula to calculate the Hertz stress Q (contact compression stress) from the rail reactive force.

$Q=0.591\sqrt{R/L\times[E_1+E_2/(E_1+E_2)\times(r-d)/(r\times d)]}$

$Q\leqq 49\ [N/mm^2]$

d: Roller radius (D/2) [mm]

L: Rail width [mm]

E_1: Roller Young modulus (plastic: $3.43\times10^3 N/mm^2$) E_2: Rail Young modulus (SUS304: $1.89\times10^5 N/mm^2$)

■ Water Screen Chain Dimensional Chart

Series	Material	Size	Avg. Tensile Strength kN{kgf}	Min. Tensile Strength kN{kgf}	Roller Type	Inner Link Inner Width W	S Roller Dia. R_1	R Roller Dia. R_2	R Roller Contact Width E	F Roller Dia. R_2	F Roller Flange Dia. F	F Roller Contact Width E	F Roller Contact Width E_2	F Roller Off-center e	F Roller Z	Pin L_1	Pin L_2	Plate H	Plate H_B	Approx. Mass kg/m S Roller	Approx. Mass kg/m F Roller	Approx. Mass kg/m R Roller
NVJ	*1	JAC08152□-NVJ	147 {15000}	127 {13000}	S	26.2	22.2	–	–	–	–	–	–	–	–	31	34.5	28.6	–	3.9	–	–
		JAC10152□-NVJ	216 {22000}	196 {20000}	SRF	29.0	29.0	50.8	26	50.8	65	20	20	3	7	33	36	38.1	–	5.9	8.0	7.6
		JAC6205□-NVJ	275 {28000}	250 {25500}	SRF	35.9	34.9	65	32	65	85	24	24	4	8	40.5	43	44.5	–	9.3	14.5	13.5
		JAC21152□-NVJ	382 {39000}	343 {35000}	SRF	35.7	40.1	70	32	70	90	24	24	4	8	44.5	51	50.8	–	12.6	18.1	17.1
		JAC26152□-NVJ	510 {52000}	461 {47000}	SRF	55.6	44.5	80	52	80	95	40	40	5	15	55.5	61	63.5	–	17.8	29.3	28.0
PJ (PJH)	SUS400 series	JAC08152□-PJ	142 {14500}	132 {13500}	S	27	22.2	–	–	–	–	–	–	–	–	31	34.5	38	–	5.0	–	–
		JAC10152□-PJ	167 {17000}	152 {15500}	SRF	30	29	50.8	26	50.8	65	20	20	3	7	33	36	38	–	5.6	7.9	7.5
		JAC10152□-PJH	186 {19000}	172 {17500}	SRF													38	44	6.0	8.3	7.9
		JAC6205□-PJ	235 {24000}	216 {22000}	SRF	37.1	34.9	65	32	65	85	24	24	4	8	39.5	42	44.5	–	8.2	13.3	12.3
		JAC6205□-PJH	265 {27000}	245 {25000}	SRF													44.5	54	8.9	14	13
		JAC21152□-PJ	353 {36000}	324 {33000}	SRF	37.1	40.1	70	32	70	90	24	24	4	8	44	50	54	–	12.8	19.0	18.1
		JAC26152□-PJ	490 {50000}	451 {46000}	SRF	55.2	44.5	80	52	80	95	40	40	5	15	56	61.5	63.5	–	18.6	30.0	28.7
PJW (PJWH)	SUS400 series	JAC10152F-PJW	167 {17000}	152 {15500}	F	36.2	–	–	–	50.8	65	26	20	–	10	36.5	39.5	38	–	–	8.3	–
		JAC10152F-PJWH	186 {19000}	172 {17500}	F			–	–										44	–	8.7	–
		JAC6205F-PJW	235 {24000}	216 {22000}	F	44.5	–	–	–	65	85	32	24	–	12	43	45.5	44.5	–	–	14.4	–
		JAC6205F-PJWH	265 {27000}	245 {25000}	F			–	–										54	–	15.1	–
SJ	SUS300 series	JAC08152□-SJ	68.6 { 7000}	58.8 { 6000}	S	27	22.2	–	–	–	–	–	–	–	–	31	34.5	28.6	–	3.8	–	–
		JAC10152□-SJ	108 {11000}	93.2 { 9500}	SRF	30	29	50.8	26	50.8	65	20	20	3	7	33	36	38.1	–	5.6	7.9	7.5
		JAC6205□-SJ	132 {13500}	113 {11500}	SRF	37.1	34.9	65	32	65	85	24	24	4	8	40.5	43	44.5	–	9.1	14.2	13.2
		JAC21152□-SJ	186 {19000}	157 {16000}	SRF	37.1	40.1	70	32	70	90	24	24	4	8	44.5	52	50.8	–	13.3	18.2	17.2
		JAC26152□-SJ	250 {25500}	211 {21500}	SRF	57.2	44.5	80	52	80	95	40	40	5	15	55.5	62	63.5	–	18.8	30.0	28.7
SJW	SUS300 series	JAC10152F-SJW	108 {11000}	93.2 { 9500}	F	36.0	–	–	–	50.8	65	26	20	–	10	36	39	38.1	–	–	8.3	–
		JAC6205F-SJW	132 {13500}	113 {11500}	F	44.5	–	–	–	65	85	32	24	–	12	44.5	46.5	44.5	–	–	15.3	–
		JAC21152F-SJW	186 {19000}	157 {16000}	F	44.5	–	–	–	70	90	32	24	–	12	49	55.5	50.8	–	–	19.1	–
		JAC26152F-SJW	250 {25500}	211 {21500}	F	57.2	–	–	–	80	95	38	26	–	13	56.5	62	50.8	63.5	–	28.6	–
FP-SJW	*2	JAC10152FP-SJW	108 {11000}	93.2 { 9500}	F	36	–	–	–	50.8	65	26	20	–	10	36	39	38.1	–	–	6.0	–
		JAC6205FP-SJW	132 {13500}	113 {11500}	F	44.5	–	–	–	65	85	32	24	–	12	44.5	46.5	44.5	–	–	9.5	–
		JAC21152FP-SJW	186 {19000}	157 {16000}	F	44.5	–	–	–	70	90	32	24	–	12	49	55.5	50.8	–	–	12.2	–

*1: NVJ Series material: Pin/bush use SUS400 series stainless steel, while roller/link plate use alloy steel. (NVJ Series is equivalent to the VJ Series using different material for some parts.)

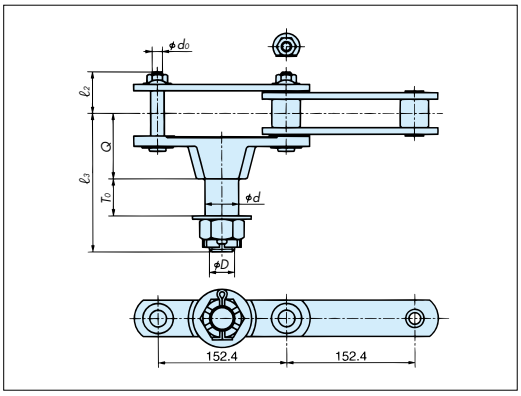
*2: SJW Plastic Series material: F roller uses plastic, while pin/bush/link plate use SUS300 series stainless steel. The rollers on the attachments on engineering plastic F roller chains (low noise chains) are stainless steel.

Note: 1. Offset link available.
2. Contact a Tsubaki representative regarding tensile strengths, chain pitches, and so on not shown above.
3. Enter roller type in the □ box.
4. The E dimension is the rolling contact width. E2 is the length of the roller (real rolling contact width) when there are alternating flanges (SJW, PJW).
5. The above dimensions are nominal dimensions and may differ from actual dimensions.

Y Attachment for JAC Chain

◆ For rotating-rake water screens

Attachment type: Y

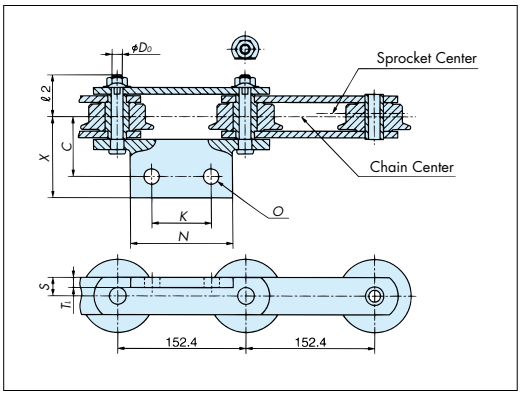


Series	Size	Roller Type	d	do	D	ℓ2	ℓ3	Q	To	Add. Mass per Set kg/set
NVJ/PJ	JAC08152	S	25	M10	M20	38	120	60	30	1.1
	JAC10152	R/S	35	M12	M27	42	148.5	70	40	1.9
	JAC6205	R/S	40	M12	M30	49	164.5	78	44	2.7
	JAC21152	S	45	M16	M36	55	174	78	46	3.2
	JAC26152	S	50	M16	M45	65	204	95	50	5.1

A2 Attachment (Type 1) for JAC Chain

◆ For fixed-rake water screens

Attachment type: A2T1

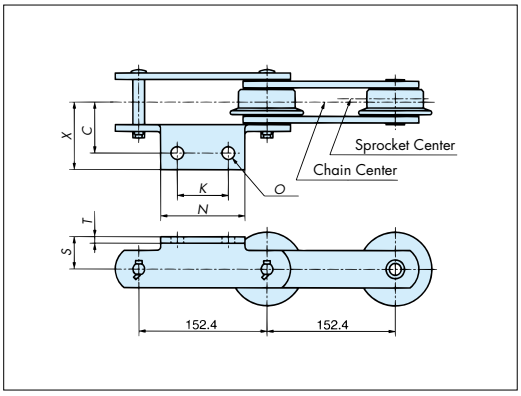


Series	Size	Roller Type	do	ℓ2	C	X	K	N	S	O	Tl	Add. Mass per Set kg/set
NVJ/PJ/ SJ/PJH	JAC10152	R/F	M12	42	60	80	65	110	19.0	15	9.5	0.6
	JAC6205	R/F	M12	49	70	95	70	120	22.2	18	12	0.9

A2 Attachment (Type 2) for JAC Chain

◆ For sediment conveyors

Attachment type: A2T2



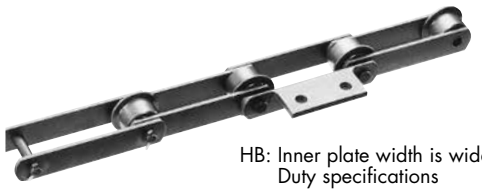
Series	Size	Roller Type	C	X	K	N	S	O	T			Add. Mass per Set kg/set
									NVJ Series	PJ Series	SJ Series	
NVJ/PJ/ SJ/PJH	JAC10152	R/F	50	65	60	90	32	12	6.3	6	6	0.20
	JAC6205	R/F	60	79	60	100	38	15	7.9	7	8	0.37

Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

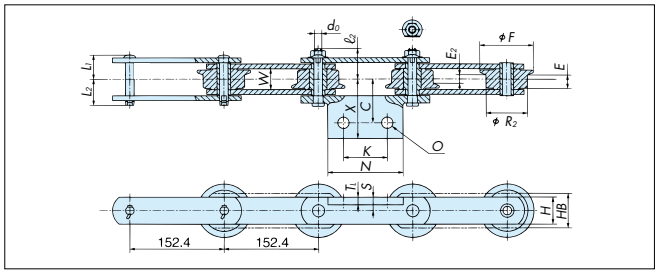
PJW/SJW Series A2 Attachment (Type 1) for JAC Chain

◆ For fixed-rake water screens

Attachment type: A2T1



HB: Inner plate width is wider on Heavy Duty specifications



■ PJW Series

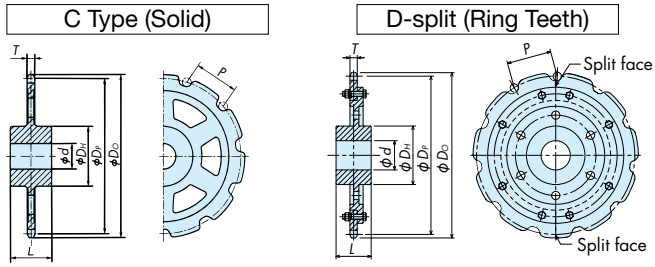
Size and Roller Type	Attachment Dimensions									Contact Width		Add. Mass per Set kg/set
	d_0	ℓ_2	C	X	K	N	S	O	T_L	E	E_2	
JAC10152F	M12	45	63	83	65	110	19.0	15	9.5	26	20	0.6
JAC6205F	M12	51.5	74	99	70	120	22.2	18	12	32	24	0.9

■ SJW Series

Size and Roller Type	Attachment Dimensions									Contact Width		Add. Mass per Set kg/set
	d_0	ℓ_2	C	X	K	N	S	O	T_L	E	E_2	
JAC10152F	M12	45	63	83	65	110	19.0	15	9.5	26	20	0.6
JAC6205F	M12	53	74	99	70	120	22.2	18	12	32	24	0.9
JAC21152F	M16	61	80	105	70	120	25.4	23	12	32	24	1.4
JAC26152F	M16	66	90	120	70	120	31.75	23	16	38	26	1.7

Note: 1. Attachment dimensions are the same with plastic F rollers.
2. E dimension is the contact width. E2 dimension is roller length (actual contact width) when two flanges alternate (SJW, PJW).
3. The above dimensions are nominal dimensions and may differ from actual dimensions.

JAC Sprockets (Water Screen)



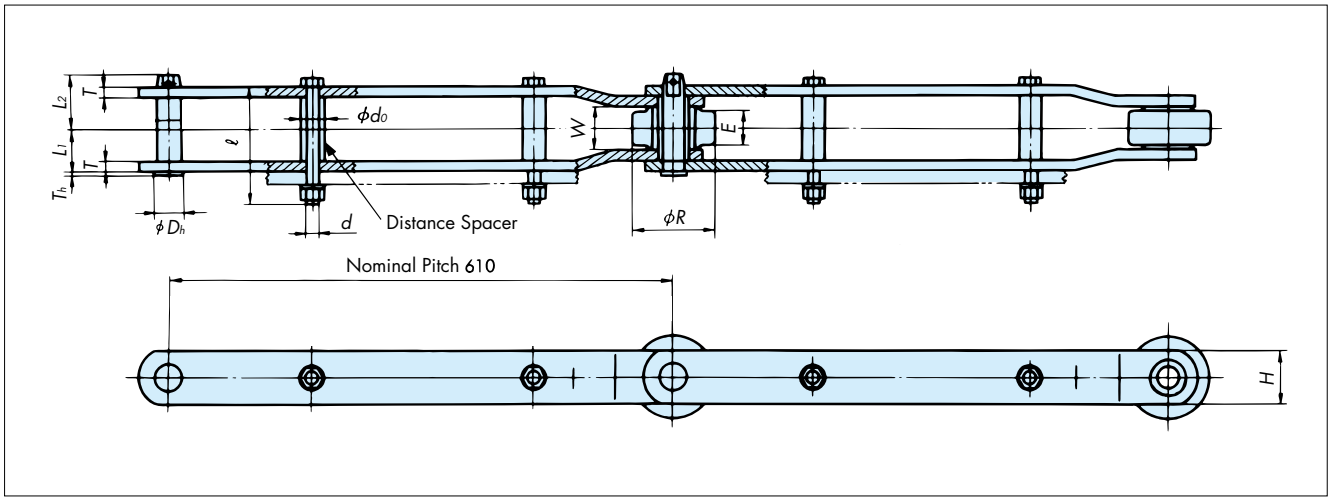
Size and Roller Type	Pitch	No. of Teeth	Outer Dia.	Pitch Dia.	Tooth Width	Boss Dim. Dia. D_H	Boss Dim. Length L	Pilot Bore Dia. d	Max. Shaft Dia	Type/Material	Approx. Mass kg
JAC08152S	152.4	11	556	540.9	21	180	130	90	110	C: SCS13, FCD600, or SCS2 Note: Indicate sprocket specs when ordering, if chain rollers are SUS300 series stainless steel or plastic.	51
JAC10152S	152.4	11	561	540.9	24	190	130	90	115		45
JAC10152F	152.4	10	528	493.2	16	170	120	80	105		36
		11	576	540.9		180	130	90	110		46
JAC6205S	152.4	11	565	540.9	30	220	170	110	135		80
JAC6205F	152.4	10	539	493.2	21	180	130	90	110		47
		11	586	540.9		220	160	110	135		65
JAC21152S	152.4	11	569	540.9	30	230	170	110	140		78
JAC21152F	152.4	10	542	493.2	21	170	120	80	105		41
		11	590	540.9		230	170	110	140		68
JAC26152S	152.4	11	572	540.9	48	260	190	120	160		110
JAC26152F	152.4	10	549	493.2	24	230	170	110	140		68
		11	597	540.9		260	190	120	160		98
JAC10152F-PJW	152.4	10	528	493.2	16	170	120	80	105		35
		11	576	540.9		180	130	90	110		42
JAC6205F-PJW	152.4	10	539	493.2	21	180	130	90	110		43
		11	586	540.9		220	160	110	135		62
JAC10152F-SJW JAC6205FP-SJW (Plastic roller)	152.4	10	528	493.2	16	170	120	80	105		35
		11	576	540.9		180	130	90	110		42
JAC6205F-SJW JAC6205FP-SJW (Plastic roller)	152.4	10	539	493.2	21	180	130	90	110		43
		11	586	540.9		220	160	110	135		62
JAC21152F-SJW JAC21152FP-SJW (Plastic roller)	152.4	10	542	493.2	21	180	120	80	110		41
		11	590	540.9		220	160	110	135		68

Note: 1. Indicate drive shaft diameter and key dimensions, driven shaft sleeve outer diameter, and hub dimensions when ordering.
2. Standard number of teeth is listed. Tsubaki can manufacture sprockets with teeth numbers other than listed above. Contact a Tsubaki representative for more details.
3. Sprockets must be made to order if chain rollers are SUS300 series stainless steel or plastic.
4. Shaded items are for reference and not standard dimensions. Indicate dimensions and number of teeth on your inquiry, or attach a drawing.
5. The above dimensions are nominal dimensions and may differ from actual dimensions.

Water Treatment Plants

WAC Chain for Water Screens

WAC Chain for water screens is used for automatic water screens, such as those found in water intakes at thermal power plants. The pins, bushes, and rollers use tempered SUS400 series stainless steel, giving them the corrosion and wear resistance necessary to operate continuously in both seawater and air. There are special plastic bearings in the roller inner diameter, allowing for lube-free operation in seawater for easy maintenance.



Size	Avg. Tensile Strength kN{kgf}	Min. Tensile Strength kN{kgf}	Roller		Inner Width W	Plate		Pin				Distance Spacer			Approx. Mass kg/m
			Dia. R	E		T	H	L1	L2	Th	Dh	d0	d	R	
WAC25610	245 {25000}	216 {22000}	100	41	50	9.5	63.5	45.0	57.0	4	28	27.2	M16	130	17.0
WAC32610	314 {32000}	275 {28000}	100	41	50	12.7	63.5	51.5	65.5	4	32	27.2	M16	140	20.5
WAC45610	441 {45000}	382 {39000}	100	41	50	12.7	76.2	51.5	65.5	4	32	27.2	M16	145	23.8
WAC55610	539 {55000}	461 {47000}	100	41	50	12.7	76.2	51.5	65.5	4	32	27.2	M16	140	23.8
WAC65610	637 {65000}	549 {56000}	110	41	50	16	76.2	58.7	76.3	4	38	27.2	M20	165	30.0
WAC75610	735 {75000}	628 {64000}	110	58	66.7	16	80	67.0	84.0	4	38	27.2	M20	180	34.0
WAC100610	981{100000}	834 {85000}	130	58	66.7	22	100	79.0	98.5	8	40	34	M22	210	53.1
WAC120610	1180{120000}	1000{102000}	150	62	70	22	115	80.7	100	8	46	34	M22	210	64.5

Note: Please indicate plate coating. Dimensions are for reference only. Specify dimensions in a drawing when making your inquiry.
The above dimensions are nominal dimensions and may differ from actual dimensions.

Model Numbering Example **(Made to Order)**

Base Chain: **WAC25610+400L 1 H**
(Size / No. of Links / Quantity / Unit (strand))

Link: **WAC25610+OL 1 K**
(Size / Part / Quantity / Unit (piece))

Note: Specify the model number and contact a Tsubaki representative for a quote.

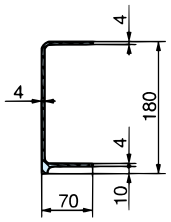
Accessories for Collection Tank Chains

■ F Type Flight

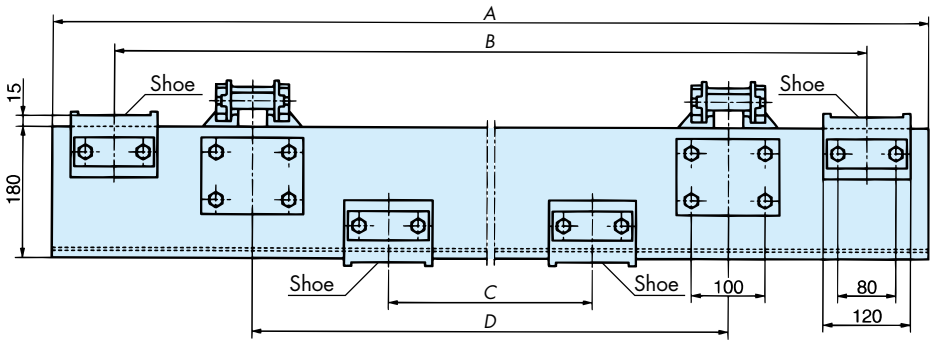
Specific Gravity: 1.9
Mass: 2.4kg/m
Material: FRP
Color: Blue

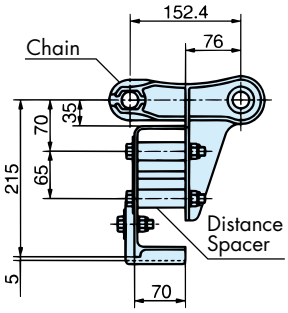
Model Numbering Example

AC-FL (A dimensions)-(B dimensions)-(C dimensions)-(D dimensions)



Flight Cross-section





Note: 1. Add A, B, C, D dimensions (unit: mm) to the model number when ordering flights, and ask a Tsubaki representative for a quote.
Attach the SF4 attachment, distance spacer, flight, and retainer plate, or flight and shoe, with SUS300 bolts, nuts, washers, spring washers, etc. (Flights do not include shoes or distance spacers.)
2. Contact a Tsubaki representative when minimum order quantity is under 100m.

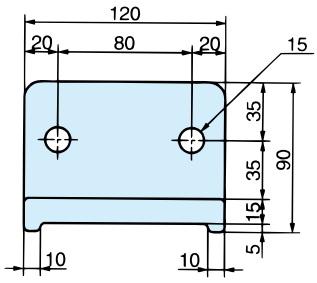
■ Shoe

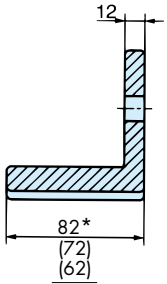
Dual Collars

Specific Gravity: 1.14
Mass: 260g (when width is 70mm)
Material: Plastic
Color: Black

Model Numbering Example

AC-FL-SHD82
Shoe
Dual Collars
A Dimension





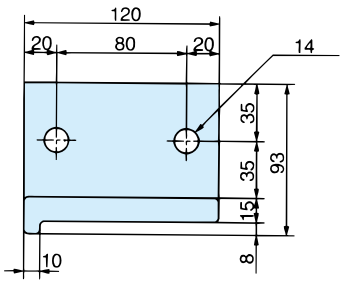
* Flights in 50 & 60mm widths available.
Other dimensions are the same as above.

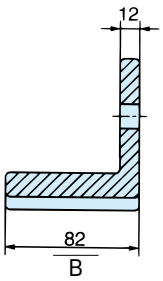
Single Collar

Specific Gravity: 1.17
Mass: 290g
Material: Polyurethane
Color: Black

Model Numbering Example

AC-FL-SHS82
Shoe
Single Collar
B Dimension





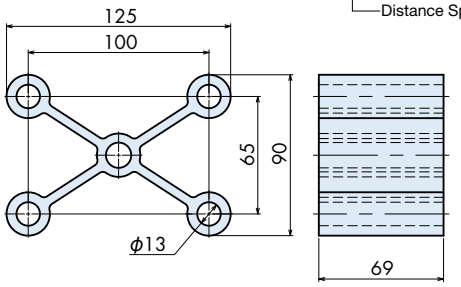
Note: Tsubaki can custom make shoes in other dimensions.
Contact a Tsubaki representative for further details.

■ Distance Spacer

Specific Gravity: 1.4
Material: Plastic
Mass: 240g
Color: Black

Model Numbering Example

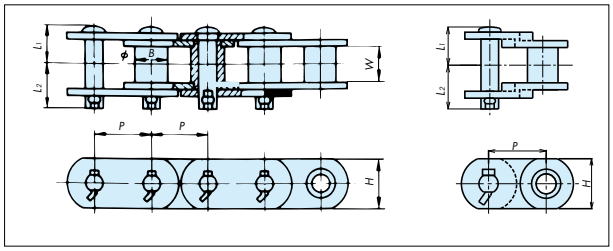
AC-FL-DIS
Distance Spacer



Note: The above dimensions are nominal dimensions and may differ from actual dimensions.

Industry Specific Products Water Treatment Plants

BF Drive Chain



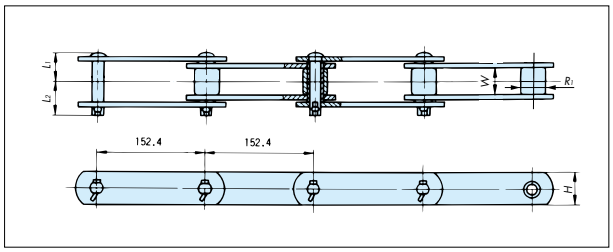
All parts use tempered SUS400 series stainless steel, giving BF chains high strength and resistance to pitting.
JIS roller chain sprockets can be used as is.

Model Numbering Example **BF140E+100L-PR**

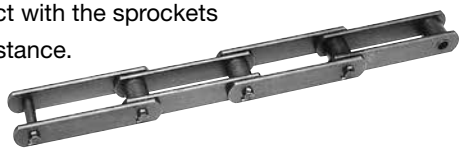
Size	Avg. Tensile Strength kN{kgf}	Min. Tensile Strength kN{kgf}	Pitch *PB*	Bush Dia. *B*	Inner Link Inner Width *W*	Plate Height *H*	Pin		Approx. Mass kg/m
							L1	*L2*	
BF120N*	108 {11000}	99 {10100}	38.1	22.23	25.4	33.0	27.5	31.5	6.8
BF140*	137 {14000}	127 {13000}	44.45	25.40	25.4	38.0	29.5	37.0	9.5
BF140E	147 {15000}	132 {13500}				44.0			10.6
BF160*	181 {18500}	167 {17000}	50.8	28.58	31.7	44.0	34.5	40.5	10.9
BF160E	233 {23800}	196 {20000}				44.5	35.5	38.5	12.5
BF200	309 {31500}	284 {29000}	63.5	39.69	38.1	54.0	45.5	50.5	20.7
BF200E	353 {36000}	324 {33000}					44.0		20.9
BF240	392 {40000}	363 {37000}	76.2	47.62	47.6	63.5	53.5	57.5	27.8
ACS4124	186 {19000}	167 {17000}	103.2	43.7	37.0	44.0	37.0	39.5	10.5
BF2120*	147 {15000}	137 {14000}	76.2	22.23	26.0	38.0(36.0)	29.0	33.0	5.9

Note: Values in parentheses ( ) are outer plate dimensions. The above dimensions are nominal dimensions and may differ from actual dimensions.
* BF120N, BF140, BF160, and BF2120 links resemble offset links and look different from the above.

ACRD Drive Chain



A chain with rollers made of tempered SUS400 series stainless steel. Rolling contact with the sprockets increases wear resistance.

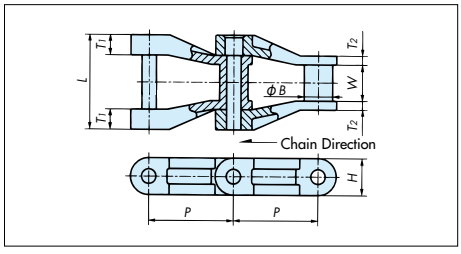


Model Numbering Example **ACRD10+100L-PR**

Size	Pitch *P*	Avg. Tensile Strength kN{kgf}	Min. Tensile Strength kN{kgf}	Inner Width *W*	Rollew Dia. *R1*	Pin		Plate Height *H*	Approx. Mass kg/m
						L1	*L2*		
ACRD08	101.6	142 {14500}	132 {13500}	27.6	22.2	31	34.5	38	6
ACRD10	127	186 {19000}	172 {17500}	30.6	29	33	36	44(38)	6.4
ACRD12	152.4	235 {24000}	216 {22000}	38.9	34.9	39.4	42	44.5	8.2
ACRD17	152.4	353 {36000}	324 {33000}	38.1	40.1	44	50	54	12.8

Note: Values in parentheses ( ) are outer plate dimensions. The above dimensions are nominal dimensions and may differ from actual dimensions.

EPCD Drive Chain



A plastic drive chain for collectors.

Model Numbering Example
Base Chain **EPC78D+100L**
Link **EPC78D-OL**

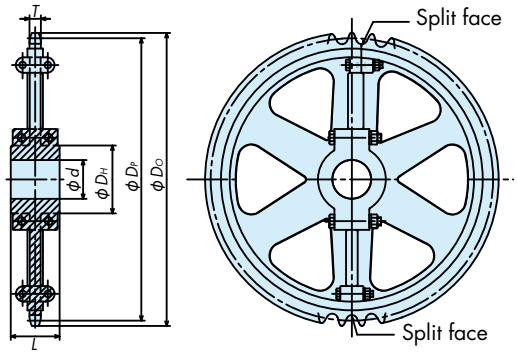
Note: This model differs from EPC chain.

Size	Avg. Tensile Strength kN{kgf}	Min. Tensile Strength kN{kgf}	Pitch *P*	Barrel Dia. *B*	Link Inner Width *W*	Outer Width *L*	Plate Height *H*	Approx. Mass kg/m
EPC78D	19.6 {2000}	17.7 {1800}	66.27	22.2	27.4	74.3	28.6	2.3
EPC90D	37.3 {3800}	32.4 {3300}	90	35	30	82.9	40.0	2.9

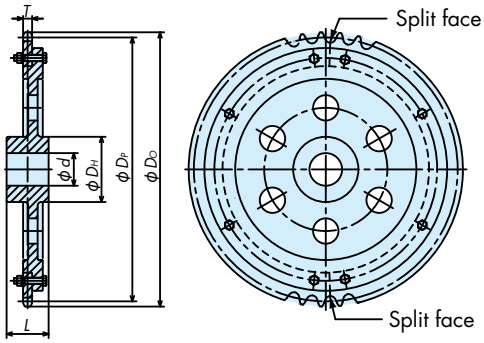
Note: 1. Plastic links are black and highly corrosion resistant.
2. The above dimensions are nominal dimensions and may differ from actual dimensions.

Drive Sprockets

C-split (Split Solid)



D-split (Ring Teeth)



Applicable Size	Pitch	No. of Teeth	Outer Dia.	Pitch Circle Dia.	Tooth Width	Hub Dim.		Pilot Bore Dia.	Max. Shaft Dia.	Type/Material	Approx. Mass
						Dia. D_H	Length L	d			kg
ACRD08	101.6	12	419	392.6	22	140	115	50	85	1C (block teeth): SS400 (hub) SCS2 (teeth)	26
		24	561	778.4		160	135	60	95		77
ACRD10	127	10	528	411	25	150	125	50	90		29
		18	576	731.4		180	150	70	110		74
ACRD12	152.4	9	565	445.6	30	160	135	60	95		40
		15	539	733		190	160	80	115		90
ACRD17	152.4	9	542	445.6	30	180	150	70	110		45
		15	590	733		230	200	100	140		110

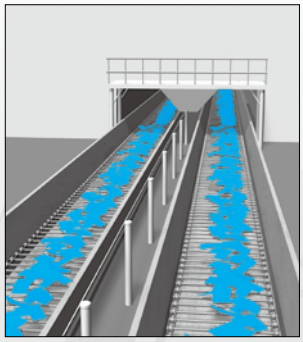
Applicable Size	Pitch	No. of Teeth	Outer Dia.	Pitch Circle Dia.	Tooth Width	Hub Dim.		Pilot Bore Dia.	Max. Shaft Dia.	Type/Material	Approx. Mass
						Dia. D_H	Length L	d			kg
BF120N	38.10	15	202	183.25	24	110	100	55	65	C, C-split: SCS2 D-split : FCD600 (hub) SCS2 (teeth) Only C Type is available with 25 or fewer teeth.	9
		23	300	279.8		120	100	55	75		17
		40	507	485.6		170	130	80	105		49
		45	568	546.19		170	130	75	105		50
BF140 BF140E	44.45	11	178	157.78	24	100	100	40	60		8
		17	350	326.44		120	100	55	70		21
		35	521	495.88		150	100	50	90		45
		40	591	566.54		170	110	60	105		60
		45	662	637.22		170	110	60	105		73
		50	733	707.91		170	110	60	105		87
BF160 BF160E	50.80	11	204	180.31	30	115	120	40	70		12
		17	302	276.46		130	120	65	80		18
		23	400	373.07		130	120	55	80		29
		25	433	405.32		190	170	80	115		55
		30	514	485.99		170	110	60	105		55
		35	595	566.71		170	110	60	105		71
		40	676	647.47		200	130	70	125		98
		45	757	728.25		200	130	70	125		119
		50	838	809.04		200	130	70	125		142
BF200 BF200E	63.50	11	254	225.39	36	145	120	50	85		21
		24	520	486.49		160	110	70	95		61
		35	744	708.39		250	160	90	155		150
		40	845	809.34		250	160	90	155		185
		45	946	910.31		280	180	100	175		242
BF240	76.20	11	305	270.47	45	150	120	50	90		29
		37	941	898.52		250	150	125	155		250
		40	1014	971.21		250	160	125	155		293

Note: 1. Standard number of teeth is listed. Tsubaki can manufacture sprockets with teeth numbers other than listed above. Contact a Tsubaki representative for more details.
2. ▭ Shaded items are for reference and not standard dimensions. Indicate dimensions and number of teeth on your inquiry, or attach a drawing.
3. The above dimensions are nominal dimensions and may differ from actual dimensions.

Conveyor chains that satisfy needs for wear resistance,

Press

Cutting, casting, forging, sheet metal presses, plastic molding, etc.



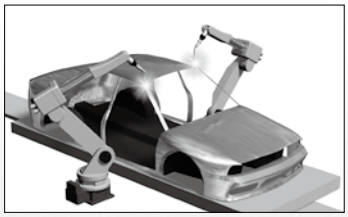
- Impact on conveyor
- Heavy wear on bush-roller interface

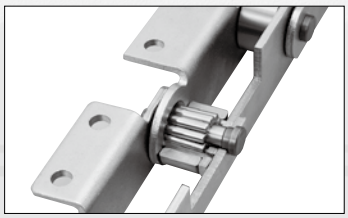
Advanced ATA Series

- Better bush-roller wear resistance
- Longer wear life

See pg. 7

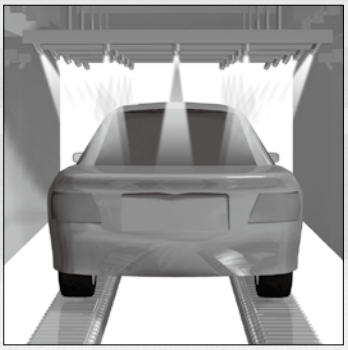
Body Welding





Inspection

Shower testers and final inspection wiping line (optional)



Shower tester/washer line

Constantly showered with water
→ Poor roller rotation
→ Abnormal bush-roller wear
→ Rusting

Bearing Roller Conveyor Chain Water Resistant Specs

- Long life in contact with water

Final inspection wiping line (optional)

Heavy loads, long conveyor
→ Poor roller rotation
→ Abnormal bush-roller wear

Bearing Roller Conveyor Chain

- Minimizes wear and stick-slipping

See pg. 111

Shower testers and final inspection lines Roller type: WDR/WDF

Can be used without lubrication in both wet and dry conditions

See pg. 108

	Roller type WDR/WDF	Bearing Roller Conveyor Chain		Reference: RT Series (base chain)
		Lube-free/water resistant series	Standard series	
Shower tester	○	◎	×	△
Inspection line	◎	△ (Requires water lubrication)	◎ (Not exposed to water)	△ (Requires lubrication)
Rolling friction coefficient	0.12	0.03	0.03	0.15
Note	Capable of wet and dry usage without lubrication	Optimal for shower tester applications	Not suitable for applications with exposure to water	SUS corrosion resistant chain

◎ : Excellent ○ : Can be used △ : Can be used under certain conditions × : Cannot be used

index positioning, accumulation, heavy loads, countering stick-slip (surging), and long length conveyors

Welding and assembly of roofs and body panels

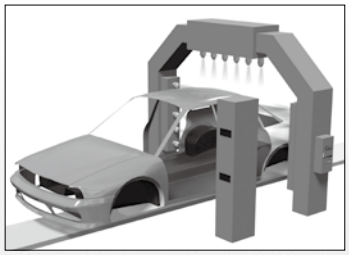
◆Accurate indexing conveyance is required

Bearing Bush Conveyor Chain

◆Features needle bearings between the pin and bush

See pg. 103

Coating

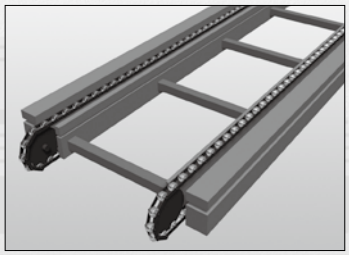


Coating of bodies, doors, and other components

◆Cart traction conveyance

Conveyor chains for towing (with dogs)

See pg. 133



◆Conveyor chains for pallet stacking (Accumulation)

Free Flow Conveyor Chain

◆Double Plus Conveyor Chain

See pg. 105

◆Outboard Roller Conveyor Chain

See pg. 106

◆Top Roller Conveyor Chain

See pg. 107

Assembly

Vehicle conveyance, manconveyors

◆Heavy localized loads
◆Long conveyor
→ Heavy bush-roller wear

◆Stick-slipping → Low productivity

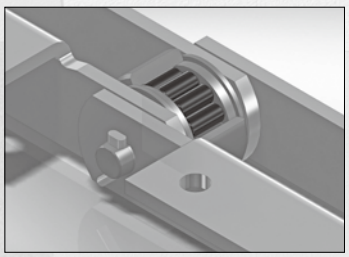
Bearing Roller Conveyor Chain

◆Uses cylindrical bearings between bushes and rollers

◆Better bush-roller wear resistance

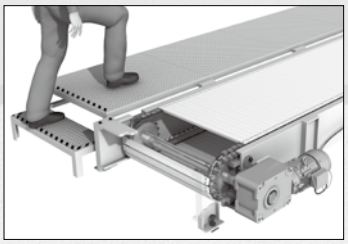
◆Stable thanks to 1/3 the coefficient of rolling friction for saving energy when conveying heavy loads

See pg. 111



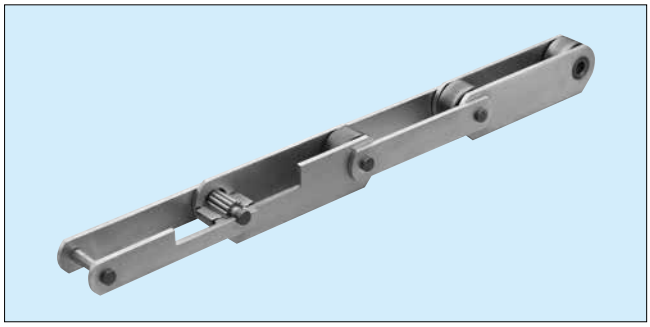
Low-floor (less than 300mm) conveyor chains for long conveyors and heavy loads are also available.

Contact a Tsubaki representative.

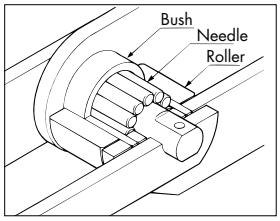


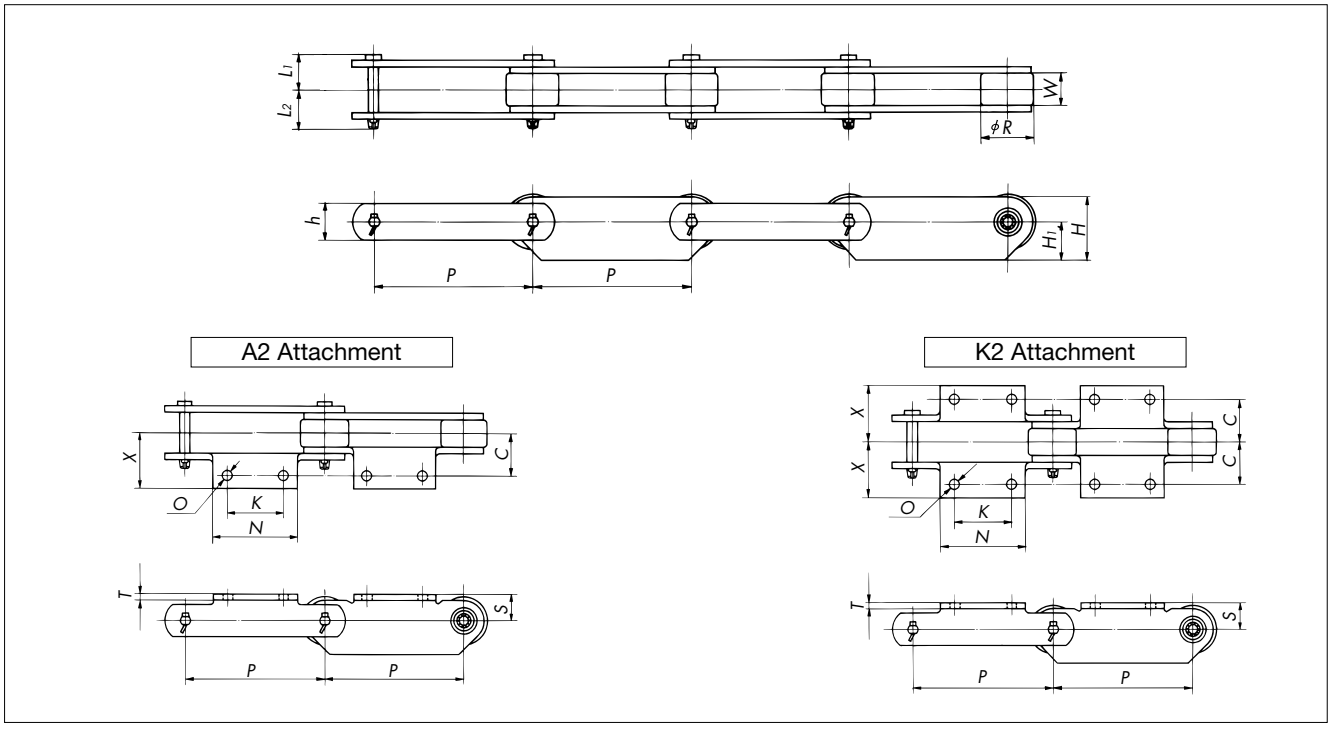
Bearing Bush Conveyor Chain

Series: NB



Features needle bearings between the pin and bush.
Reduces wear elongation to the absolute minimum possible.
Suitable for index positioning and tact conveyance.





Size, Roller Type, Series	Max. Allowable Tension		Roller Allowable Load		Pitch *P*	Roller Dia. *R*	Inner Link Inner Width *W*	Plate			Pin		Approx. Mass kg/m
	kN	{kgf}	kN	{kgf}				Height *h*	Height *h*	Height *H1*	*L1*	*L2*	
RF03075R-NB	2.45	{250}	0.54	{ 55}	75	31.8	16.1	22	35	20	18	20	3.0
RF05100R-NB	4.90	{500}	1.03	{105}	100	40	22	32	47	26	25	28.5	5.8
RF10150R-NB	7.85	{800}	1.77	{180}	150	50.8	30	38.1	61	35	33	36	8.7
RF12200R-NB	9.81	{1000}	2.50	{255}	200	65	37.1	44.5	71	40	40.5	43	13.0
RF17200R-NB	12.7	{1300}	4.02	{410}	200	80	51.4	50.8	85	51	51.5	58	21.5
RF26250R-NB	19.6	{2000}	5.30	{540}	250	100	57.2	63.5	105	64	55.5	61	28.5
RF36300R-NB	24.5	{2500}	7.45	{760}	300	125	66.7	76.2	125	75	68	78	41.5

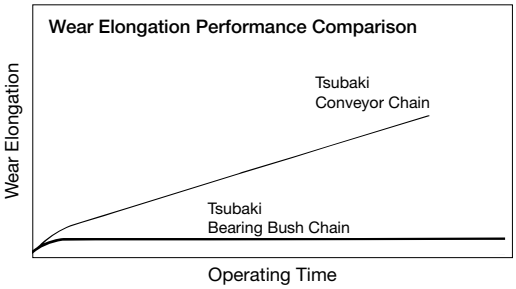
Size, Roller Type, Series	Pitch *P*	Attachment							Load Mass Per Attachment kg	
		S	*C*	*X*	*K*	*N*	*T*	*O*	*A2*	*K2*
RF03075R-NB	75	20	30	46	30	55	3.2	10	0.05	0.10
RF05100R-NB	100	22	35	47	40	65	4.5	10	0.08	0.16
RF10150R-NB	150	28	50	67	60	90	6.3	12	0.20	0.40
RF12200R-NB	200	38	60	79	80	120	7.9	15	0.45	0.90
RF17200R-NB	200	45	75	100	80	120	9.5	15	0.66	1.32
RF26250R-NB	250	55	80	108	125	170	9.5	15	1.07	2.14
RF36300R-NB	300	70	100	135*	150*	220*	12.7	19	1.8	3.6

Note: 1. Attachment dimensions marked with * differ from the attachment dimensions of RF Conveyor Chain.
2. Roller allowable load values given are for lubricated chain.
3. The above dimensions are nominal dimensions and may differ from actual dimensions.

Bearing Bush Conveyor Chain Selection

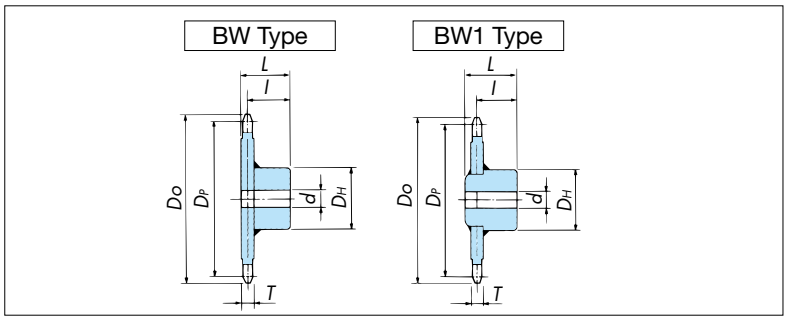
1. R roller rotational coefficient of friction: 0.21
2. Chain speed: max. 30m/min
3. Operating temperature: -10℃ to 60℃
4. Needles in the bearing area may fall out when pin is extracted during chain connection or other operations. Follow handling instructions carefully.

- ◆ The basic three dimensions (chain pitch, R roller diameter, inner link inner width) are the same as standard conveyor chain.
- ◆ Space between pin and bush have already been lubricated.
- ◆ Plates are nickel plated.
- ◆ Not for use in dusty environments.
- ◆ Consult a Tsubaki representative for specifications with a simple seal along the needle area.



Sprockets for Bearing Bush Conveyor Chain

Sprocket teeth are precision machined to maximize performance of the chain. Teeth are machined for minimum clearance with the roller.



◆ Sprocket Hole Processing

Tsubaki will process shaft holes and keyways upon request. Please include the following information in your request.

1. Shaft hole diameter and clearance:
   Hole dimensions and processing precision.
2. Keyway dimensions:
   New JIS (JISB1901-1976) or old JIS (JISB1901-1959) parallel or tapered keys, processing clearance (normal or precise).
3. Used parallel in strands:
   Specify number of strands for parallel use.
4. Standard processing specifications for Bearing Bush Conveyor Chain sprockets are H7 holes and new JIS key. Customers wishing to perform their own hole processing should use the sprocket outer circumference as a base.

Size, Roller Type, Series	No. of Teeth	Series	Pitch Diameter *Dp*	Outer Diameter *Do*	Tooth Width T	Shaft Diameter d		Hub Diameter D_H	Hub Length *L*	Center Distance to Shaft *l*	Approx. Mass kg	Material
						Pilot Hole	Max.					
RF03075R-NB	8	BW	196.0	209	11.9	18	55	83	62	56	4.8	Machine structural carbon steel
RF03075R-NB	10		242.7	259		18	60	93	67	61	7.1	
RF03075R-NB	12		289.8	308		18	60	93	67	61	9.0	
RF05100R-NB	8	BW	261.3	272	18.0	28	75	107	86	77	12.0	
RF05100R-NB	10		323.6	340		33	80	117	94	85	17.4	
RF05100R-NB	12		386.4	405		33	85	127	104	95	24.4	
RF10150R-NB	8	BW	392.0	408	22	38	100	147	123	112	33.2	
RF10150R-NB	10		485.4	506		38	110	157	133	122	47.6	
RF10150R-NB	12		579.6	601		38	115	167	144	133	65.2	
RF12200R-NB	8	BW1	522.6	551	28	60	120	177	150	125	67.4	
RF12200R-NB	10		647.2	682		65	130	187	160	135	96.6	
RF12200R-NB	12		772.7	810		75	145	207	180	155	136.9	
RF17200R-NB	8	BW1	522.6	562	40	75	145	207	180	148	98.1	
RF17200R-NB	10		647.2	691		75	145	207	180	148	134.0	
RF17200R-NB	12		772.7	821		80	160	227	200	168	190.1	
RF26250R-NB	8	BW1	653.3	703	45	80	160	227	200	164	159.7	
RF26250R-NB	10		809.0	864		85	175	247	240	204	244.1	
RF26250R-NB	12		965.9	1026		85	175	247	240	204	321.4	
RF36300R-NB	8	BW1	783.9	853	55	95	190	267	240	198	276.2	
RF36300R-NB	10		970.8	1046		95	190	267	270	228	398.9	
RF36300R-NB	12		1159.1	1234		100	210	297	260	218	550.8	

Note: 1. Tsubaki also manufactures other sprockets with hardened tooth tips besides those listed here.
2. Sprockets with a mass over 30kg may be drilled with a hanging hole near the teeth.
3. The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Bearing Bush Conveyor Chain (Made to Order)

Model Numbering Example

RF05100R-NB-1LA2+400L-PR

- RF05100R: Size
- Roller Type (For R rollers only)
- NB: Series — Bearing Bush Conveyor Chain
- 1LA2: Attachment Spacing / Attachment Type
- 400L: No. of Links
- PR: End Link

Ordering Example

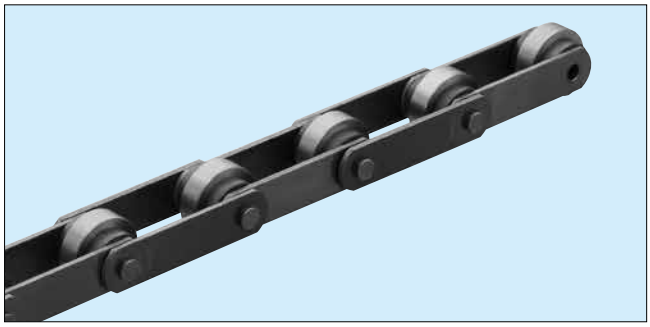
Chain Size: RF05 Pitch: 100mm Roller Type: R Roller
Series: Bearing Bush Conveyor Chain (NB)
Attachment Spacing/Type: A2 every link
Quantity: 400 links

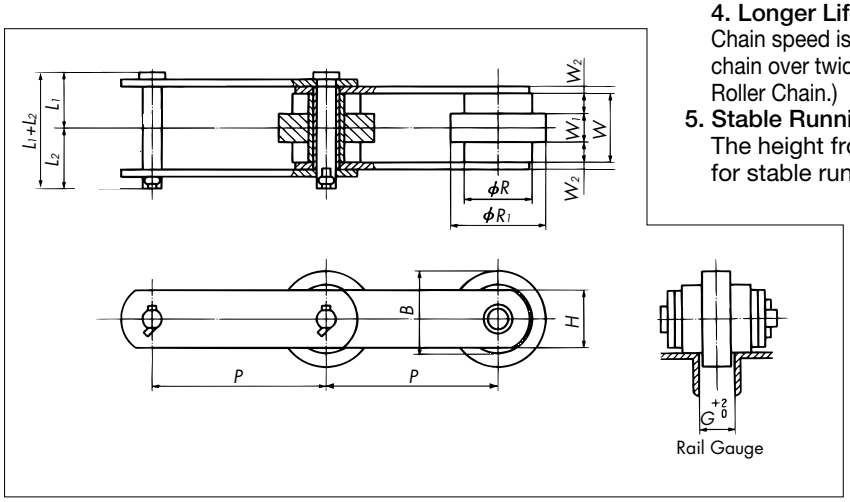
Chain Number	Quantity	Unit
RF05100R-NB-1LA2+400L-PR	1	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Double Plus Conveyor Chain

Roller Type: VR





1. **Conveying**
   The frictional force between the large and small diameter rollers cause them to rotate in unison, and the difference in the roller diameters allow for items to be conveyed at 2.3 times the speed of the base chain.
2. **Accumulating**
   As there is a braking force acting on the large diameter roller, slip occurs between the large and small diameter rollers, allowing for free flow conveyance.
3. **Energy Savings/Lower Costs**
   The small coefficient of friction means low required energy, reducing necessary chain size and costs.
4. **Longer Life**
   Chain speed is 1/2.3 with a large roller allowable load, giving the chain over twice the life of standard chains. (Compared to Top Roller Chain.)
5. **Stable Running**
   The height from rail to conveyed goods is low, allowing for stable running.

◆ Cannot use standard sprockets. Use Double Plus Conveyor Chain Sprockets. Contact a Tsubaki representative for more information.

Size and Roller Type	Pitch P	Roller		Width			Plate Width H	Pin			B	G	Max. Allowable Load kN{kgf}	Roller Allowable Load kN{kgf/each}	Approx. Mass (kg/m)
		R1	R	W1	W2	W		L1+L2	L1	L2					
RF03075VR	75	42.0	31.8	12	8.5	30	22	51.5	24.5	27	36.9	14.5	4.20 {430}	1.27 {130}	4.7
RF03100VR	100														4
RF05100VR	100	53.0	40.0	16	11	39	32	70.5	33.5	37	46.5	18.5	9.80{1000}	2.35 {240}	8
RF05125VR	125														7
RF05150VR	150														6
RF10125VR	125	67.0	50.8	20	14	54	38.1	93	45	48	58.9	25	17.6 {1790}	3.43 {350}	14
RF10150VR	150														12
RF6205VR	152.4	75.5	57.2	22	16	62	44.5	108.5	53	55.5	66.3	28	26.6 {2710}	4.90 {500}	18
RF12200VR	200														15
RF17200VR	200	86.0	65.0	25	18	69	50.8	127	60.5	66.5	75.5	31	35.0 {3570}	6.08 {620}	20

Note: Contact a Tsubaki representative regarding delivery. The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Double Plus Conveyor Chain (Made to Order)

Model Numbering Example

RF05100VR+400L-PR

- RF05100 — Size
- VR — Roller Type: VR: Double Plus Conveyor Chain
- 400L — No. of Links
- PR — End Link

Ordering Example

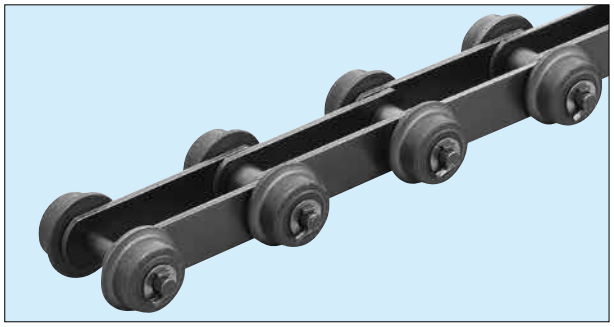
Size: RF05 Pitch: 100mm
Roller Type: Double Plus Conveyor Chain
Quantity: 400 links

Chain Number	Quantity	Unit
RF05100VR+400L-PR	1	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Outboard Roller Conveyor Chain (Free Flow Conveyance)

Attachment Type: SR



This chain features an outboard roller on the S roller of a base conveyor chain. The sprocket engages the center S rollers, while the outboard rollers handle running. Tsubaki can manufacture outboard rollers for any chain series.

Applications

1. For special attachments to the plate. (Fig. 1)
2. For when supporting loads on the center S roller is difficult.
3. For when having a guide on the chain's return side is difficult.
4. For giving double speed and accumulation capabilities to R roller outboard rollers. (Fig. 2)

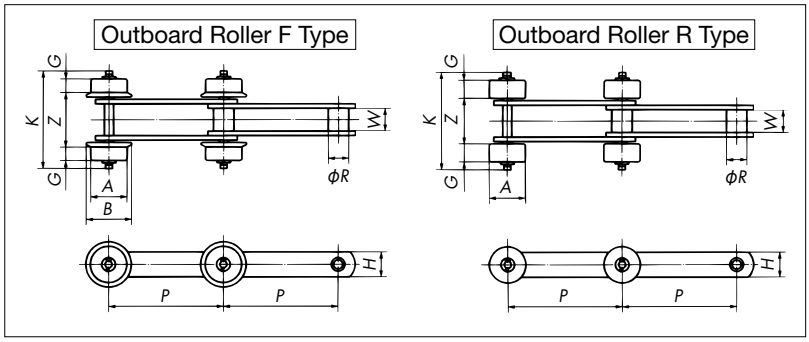


Fig.1 With Special Attachment

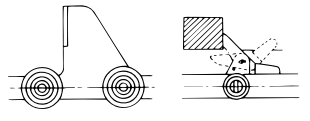
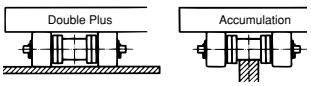
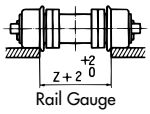


Fig.2 Double Plus/Accumulation



Chain Guide Method



Size and Roller Type	Pitch P	Roller Dia. R	Inner Link Inner Width W	Plate Height H	Total Width K	Outboard Roller F Type				Outboard Roller R Type			Additional Mass of Outboard Rollers (both sides) kg	Outboard Roller Allowable Load (both sides) kN{kgf}	
						A	B	G	Z	A	G	Z		Outboard Rollers Non-heat Treated	Outboard Rollers Hardened
RF03075S	75	15.9	16.1	22	76	31.8	42	12	38	31.8	15.5	31	0.3	0.69 {70}	1.08{110}
RF03100S	100														
RF430S	101.6	20.1	22.6	25.4	104	38.1	50	15	56.5	38.1	20	46.5	0.5	0.98{100}	1.57{160}
RF05075S	75	22.2	22	32	102	40	50	14	55	40	19	45	0.5	1.17{120}	1.96{200}
RF05100S	100														
RF05125S	125														
RF05150S	150														
RF450S	101.6	22.2	27	28.6	130	44.5	55	20	70.5	44.5	26	58.5	0.7	1.67{170}	2.35{240}
RF10100S	100	29	30	38.1	136	50.8	65	20	73	50.8	26	61	1.0	1.96{200}	3.24{330}
RF10125S	125														
RF10150S	150														
RF6205S	152.4	34.9	37.1	44.5	167	57.2	70	25	90.5	57.2	32	76.5	1.3	2.75{280}	4.61{470}
RF12200S	200	34.9	37.1	44.5	167	65	80	24	92.5	65	32	76.5	1.8	2.75{280}	4.61{470}
RF12250S	250														
RF17200S	200	40.1	51.4	50.8	189	65	80	24	112.5	65	32	96.5	1.8	3.14{320}	5.30{540}
RF17250S	250														
RF17300S	300														
RF26200S	200	44.5	57.2	63.5	230	80	100	34	124.5	80	44	104.5	3.8	4.90{500}	8.43{860}
RF26250S	250														
RF26300S	300														
RF36250S	250	50.8	66.7	76.2	268	100	125	38	150.5	100	50	126.5	6.9	6.57{670}	11.1{1130}
RF36300S	300														
RF36450S	450														

Note: 1. Outboard rollers allowable load values indicated are under lubricated conditions.
2. Basic chain specifications are the same as RF Conveyor Chain.
3. The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Outboard Roller Conveyor Chain (Made to Order)

Model Numbering Example

RF03075S-DT-1LSRFH+400L-PR

- Size
- Roller Type
- Series
- Attachment Spacing
- Outboard Roller Type
  - SRFN: Outboard Roller Non-heat Treated F Type
  - SRFH: Outboard Roller Hardened F Type
  - SRRN: Outboard Roller Non-heat Treated R Type
  - SRRH: Outboard Roller Hardened R Type
- End Link
- No. of Links

Ordering Example

Please indicate the following when ordering:
1. Chain size and base specifications
2. Outboard roller specifications (hardened/ unhardened)
3. Outboard roller attachment spacing

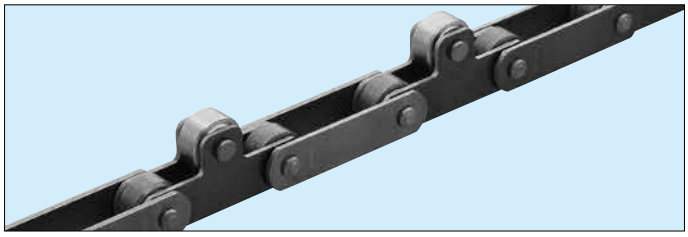
Chain Size: RF17 Pitch: 200mm Roller Type: S Roller
Series: AT Series Attachment Spacing: Every link
Outboard Roller Type: Hardened F Type Outboard Roller
Quantity: 400 links

Chain Number	Quantity	Unit
RF17200S-AT-1LSRFH+400L-PR	1	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Top Roller Conveyor Chain (Free Flow Conveyance)

Attachment Type: TR



Top rollers are attached to a base conveyor chain between pitches, allowing for direct support of conveyed items. Tsubaki can manufacture top rollers for any chain series.

- Tsubaki can manufacture engineering plastic and bearing roller top rollers.
- We can also manufacture attachments to prevent toppling. (Fig. 3)
- Standard sprockets cannot be used as their teeth contact the top rollers. Use only top roller sprockets.

Fig. 1 Conveyed item stopped on conveyor

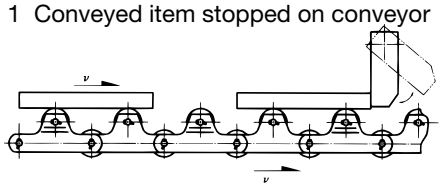


Fig. 2 Alleviates shock impact during transfer

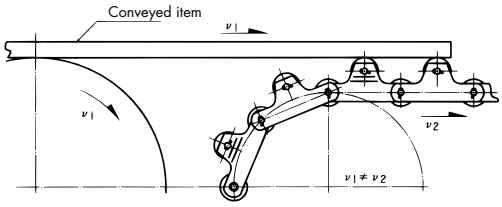
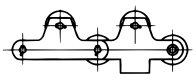


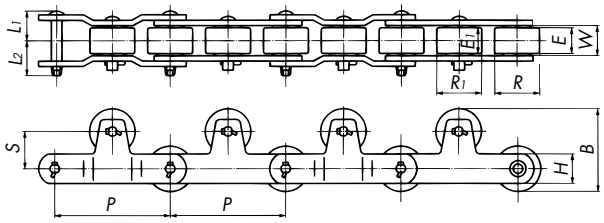
Fig. 3 Example of attachment to prevent toppling



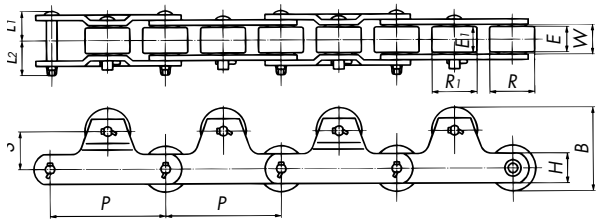
Applications

1. Chain can be run continuously, and conveyed items can be accumulated or temporarily stopped on top of the conveyor through the use of dogs. (Fig 1)
2. Conveying and stopping can be performed simultaneously on top of the same chain. (Fig. 1)
3. Alleviates shock impact during operation. (Fig. 2)

(RF05–RF12)



(RF17)



Size and Roller Type	Pitch P	Roller Dia. R	Roller Contact Width E	Inner Link Inner Width W	Plate Height H	Pin L1	Pin L2	S	Top Roller R1	Top Roller E1	B	Chain Approx. Mass kg/m	Additional Mass per Top Roller kg	Top Roller Allowable Load kN{kgf/each} Non-heat Treated	Top Roller Allowable Load kN{kgf/each} Hardened
*RF03075R-TR	75	31.8	15.5	16.1	22	18	20	23.1	40	PL:20 RL:13	59	2.7	0.18	0.34 {35}	0.59 {60}
*RF03100R-TR	100											2.3			
RF05100R-TR	100	40	19	22	32	25	28.5	30	40	19	70	5.0	0.26	0.64 {65}	1.03{105}
RF05150R-TR	150											4.1			
RF08150R-TR	150	44.5	24	27	28.6	31	34.5	30	40	23	72.2	5.5	0.35	0.78 {80}	1.27{130}
RF10150R-TR	150	50.8	27	30	38.1	33	36	30	50.8	27	80.8	7.9	0.56	1.13{115}	1.91{195}
RF6205R-TR	152.4	57.2	32	37.1	44.5	40.5	43	37.8	57.2	32	95	12.1	0.91	1.47{150}	2.50{255}
RF12200R-TR	200	65	32	37.1	44.5	40.5	43	45	65	32	110	11.4	1.15	1.47{150}	2.50{255}
RF17200R-TR	200	80	44	51.4	50.8	51.5	58	65	80	44	145	19	2.58	2.45{250}	4.12{420}

Note: 1. Sizes marked with * have flat plates. E1 dimensions are PL: 20 (width of roller attached to outer link), PL: 13 (width of roller attached to inner link).
2. Top roller allowable load shows values under lubricated conditions.
3. MoS_2 grease is applied between top roller and top roller pin when shipped.
4. The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Top Roller Conveyor Chain (Made to Order)

Please indicate the following when ordering:
1. Chain size and base specifications
2. Top roller specifications (hardened/unhardened)
3. Top roller attachment spacing

Model Numbering Example

RF17200R-AT-2LTRH+400L-PR

- Size
- Roller Type (R roller only)
- Series
- Top Roller Type: TRN: Top Roller Non-heat Treated; TRH: Top Roller Hardened
- Attachment Spacing
- No. of Links
- End Link

Ordering Example

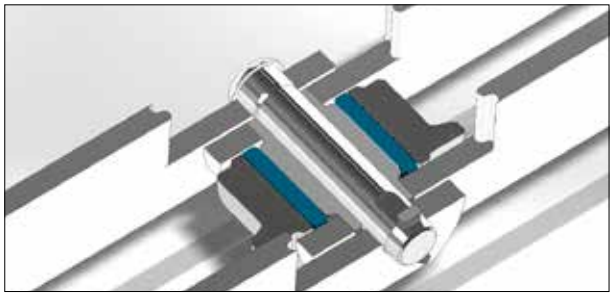
Size: RF17 Pitch: 200mm Roller Type: R Roller
Series: AT Series
Attachment Spacing: Every 2nd link
Attachment Type: Hardened Top Roller Quantity: 400 links

Chain Number	Quantity	Unit
RF17200R-AT-2LTRH+400L-PR	1	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Conveyor Chain for Shower Testers and Final Inspection Lines

Roller Type: WDR/WDF

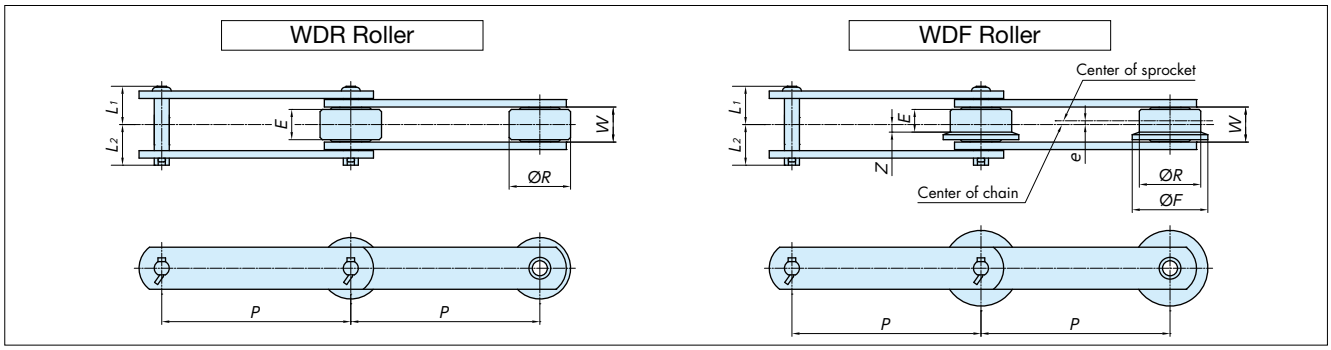


Long-life chain that uses a special plastic on the inner circumference of the rollers, enabling operation without lubrication both under water showers or in the dry state.
Allows combining a shower tester line and inspection line into a single unit, as well as providing a countermeasure against corrosion and wear in the final inspection line.

Features

◎ : Excellent ○ : Can be used
△ : Can be used under certain conditions × : Cannot be used

	Roller type WDR/WDF	Bearing Roller Conveyor Chain		Reference: RT Series (base chain)
		Lube-free/water resistant series	Standard series	
Shower tester	○	◎	×	△
Inspection line	◎	△ (Requires water lubrication)	◎ (Not exposed to water)	△ (Requires lubrication)
Rolling friction coefficient	0.12	0.03	0.03	0.15
Note	Capable of wet and dry usage without lubrication	Optimal for shower tester applications	Not suitable for applications with exposure to water	SUS corrosion resistant chain



Size	Roller Type	Pitch P	R Roller		F Roller					Inner Link Inner Width W	Plate Height H	Pin			Approx. Mass kg/m		Roller Allowable Load kN{kgf/each}
			R Roller Dia. R	R Roller Contact Width E	F Roller Dia. R	F Roller Flange Dia. F	F Roller Contact Width E	F Roller Off-center e	F Roller Z			L1+L2	L1	L2	R Roller	F Roller	
RF10125	WDR/WDF	125	50.8	27	50.8	65	20	3	7	30.0	38.1	69	33	36	8.7	9.0	0.98 {100}
RF10150		150													8.0	8.3	
RF10200		200													6.8	7.1	
RF12200	WDR/WDF	200	65	32	65	80	24	4	8	37.1	44.5	83.5	40.5	43	11.6	12.1	1.47 {150}
RF12250		250													10.5	10.8	
RF12300		300													9.6	9.9	
RF17250	WDR/WDF	250	80	44	80	100	34	5	12	51.4	50.8	109.5	51.5	58	17	18	2.45 {250}
RF17300		300													16	16	
RF26250	WDR/WDF	250	100	50	100	125	38	6	13	57.2	63.5	116.5	55.5	61	26	27	3.19 {325}
RF26300		300													23	24	

Note: 1. The base chain can be selected from RT, GS, or other chain series. Refer to the base chain's strength for maximum allowable load.
2. We can also manufacture chain with outboard rollers. Contact a Tsubaki representative for details.
3. Plate width, pin length, and attachment dimensions are the same as RF conveyor chain.
The above dimensions are nominal dimensions and may differ from actual dimensions.

Ordering Conveyor Chain for Shower Testers and Final Inspection Lines (Made to Order)

Model Numbering Example

RF12200WDF-GS-1L A2+400L-PR

- RF12200: Size
- WDF: Roller Type
- GS: Series
- 1L: Attachment Spacing
- A2: Attachment Type
- 400L: No. of Links
- PR: End Link

Ordering Example

Size: RF12 Pitch: 200mm Roller Type: WDF Roller
Series: GS Series
Attachment Spacing/Type: A2 every link
Quantity: 400 links x 2 strands in parallel

Chain Number	Quantity	Unit
RF12200WDF-GS-1LA2+400L-PR	2	H

Note: Specify the model number and contact a Tsubaki representative for a quote.

Innovation in Motion

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