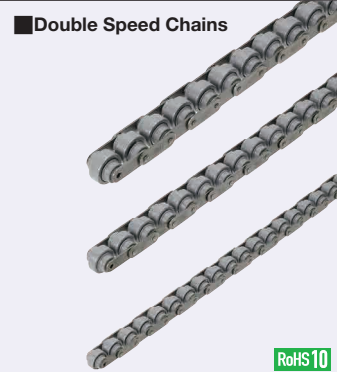


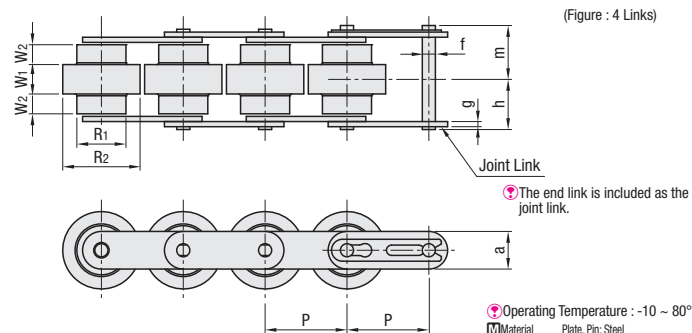
Double Speed Chains & Sprockets / Aluminum Extrusions / Return Guides

■ **Features:** Mixed structure of Small and Large Diameter Rollers enables a workpiece to be conveyed approx. 2.5 times faster than the chain speed. Suitable for free flow conveyors.

■ Double Speed Chains



WCHE



For Double Speed Chain selection information materials, see **P2251**

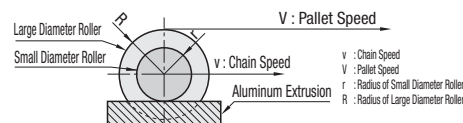
Part Number		Number of Links Specification (Specify Even Number)	Pitch		Roller			Plate		Pins			Max. Allowable Tension (kN)	Speed Multiplier	Approx Mass kg/m	Unit Number of Links
Type	Nominal		P	R ₁	R ₂	W ₁	W ₂	a	g	f	h	m				
(Chain) WCHC	3	4~550	19.05	11.91	18.3	7.0	4.1	8.8	1.2	3.28	11.2	12.95	0.55	2.54	0.4	161 (Circumference Length 3.048mm)
	4	4~410	25.40	15.88	24.6	9.0	6.0	11.7	1.5	3.97	15.2	16.75	0.88	2.55	0.8	129 (Circumference Length 3.048mm)
	5	4~350	31.75	19.05	30.0	11.4	7.0	14.6	2.0	5.08	19.45	20.90	1.37	2.57	1.3	126 (Circumference Length 3.048mm)

Part Number		Unit Price 1 ~ 2 pc(s).		Cutting Charge (+ Unit Price)
Type	Nominal	Number of Links less than 1 Unit	Number of Links 1 Unit or More	
(Chain) WCHE	3	120 x Number of Links	100 x Number of Links	
	4	120 x Number of Links	100 x Number of Links	
	5	150 x Number of Links	130 x Number of Links	

📌 No cutting charge when placing orders by Unit Number of Links



■ Principle of the Double Speed Chains



When a chain runs at v speed, circumferential velocity of the small diameter roller is v . At this time circumferential velocity of the large diameter roller becomes $(R/r) \cdot v$ due to ratio of radius.

Therefore, Pallet Speed V becomes a value that chain speed V and $(R/r) \cdot v$ are combined.

$$V = (R/r) \cdot v + v$$

$$V = (R/r + 1) \cdot v$$

Since the ratio of radius of the large diameter roller and the small diameter roller is approximately 1.5:1

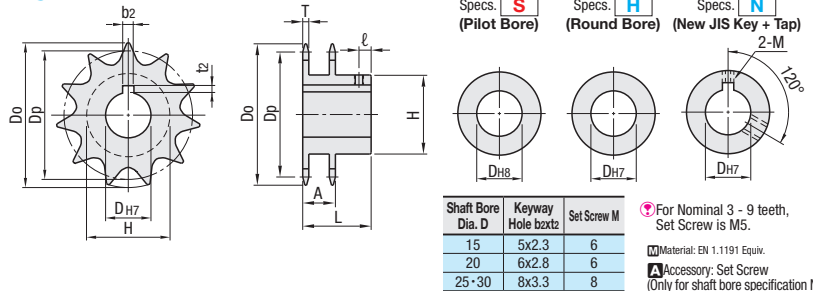
$$V = (1.5 + 1) \cdot v$$

$$\approx 2.5v$$

■ Double Speed Sprockets



WESP

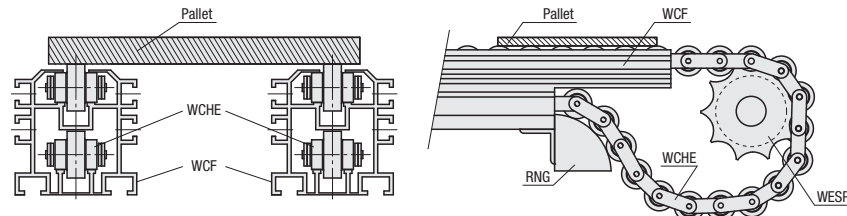


Part Number	Number of Teeth	Shaft Bore Dia.			Dp	Do	T	H	L	ℓ	A	Unit Price 1 ~ 10 pc(s).		
Type	Nominal	S Specification (Din)	H Specification (Din7)	N Specification (Din7)								Shaft Bore Spec.S	Shaft Bore Spec.H	Shaft Bore Specification N
(Sprocket) WESP	3	9	14	15 20	15 20	55.70	63	3	33	22	4	15.3		
		10	14	15 20	15 20	61.65	68	3	37	25	5	15.3		
		4 10	19	20 25	20 25	82.20	93	4	52	40	8	21.5		
		5 10	24	25 30	25 30	102.75	117	5	66	45	9	27.0		

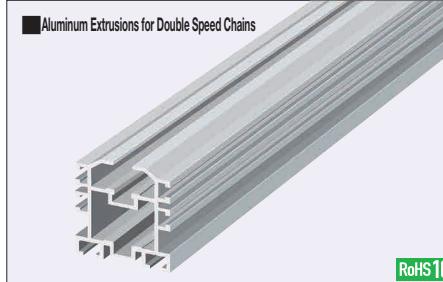
 **Ordering Example** **Part Number** - **Number of Teeth** - **Shaft Bore Specifications, I.D.**
WESP3 - **10** - **H15**



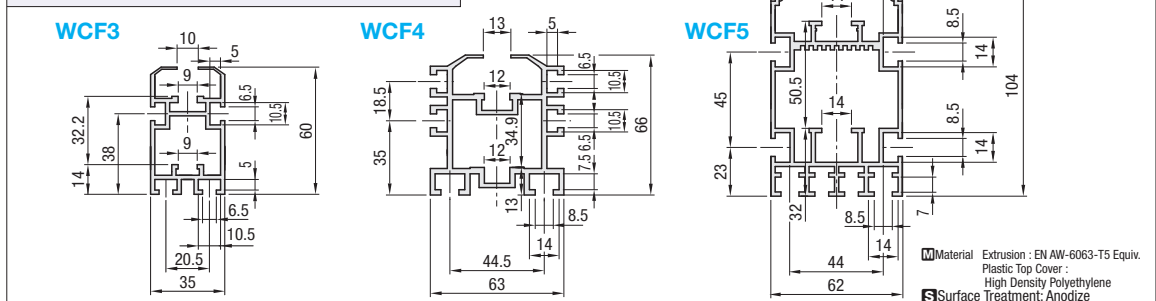
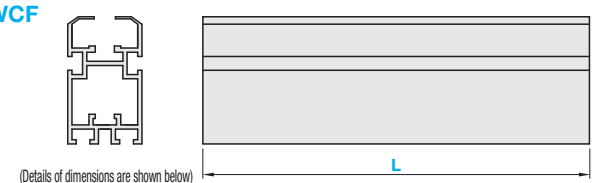
Example



Aluminum Extrusions for Double Speed Chains



WCF



⚠ General purpose hex nut is applicable.

Part Number		L	Approx. Mass	Unit Price
Type	Nominal	10mm Increment	kg/m	/m
WCF	3	500~3000	1.39	
	4		2.49	
	5		3.17	

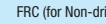
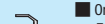


Ordering Example

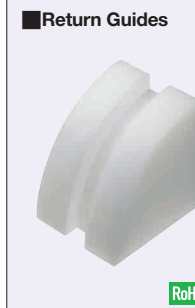
Part Number	-	L
WCF3	-	1000



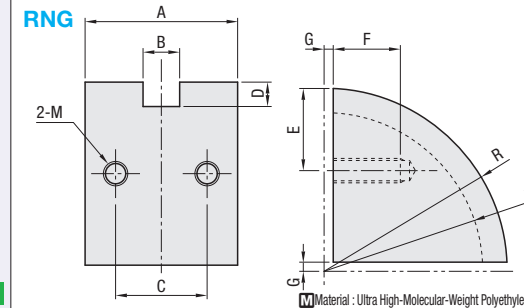
Alterations  Part Number - L - (FLC, FRC, YA, YB, ZA, ZB)
WCF3 - 1000 - FLC

Alterations	Extrusion Cut				Counterbore on the Side Slots																																			
Code	FLC · FRC				YA, YB, ZA, ZB																																			
Spec.	The extrusion ends are cut.				Adds counterbored holes for nuts on desired positions of the side slots.																																			
					Use YA or YB as the code intended to specify the distance from the left end (on Plane Y) and ZA or ZB as the code intended to specify the distance from the right end (on Plane Z).																																			
	FLC (for Driving Side)		FRC (for Non-drive Side)		Ordering Example ZA50-ZB200		1mm Increment Ordering Code ZA150 ZA100-ZB250																																	
							④ YA, ZA≥10 ④ L-YA, L-ZA≥10 ④ L-YB, L-ZB≥10 ④ YB-YA, ZB-ZA≥10																																	
	<table><tr><th>Nominal</th><th>X</th><th>Y</th><th>S</th></tr><tr><td>3</td><td>210</td><td>80</td><td>25</td></tr><tr><td>4</td><td>300</td><td>100</td><td>25</td></tr><tr><td>5</td><td>340</td><td>120</td><td>45</td></tr></table> Ordering Code FLC, FRC ④ L-X-Y≥10				Nominal	X	Y	S	3	210	80	25	4	300	100	25	5	340	120	45	<table><tr><th>Part Number</th><th>Series</th><th>Machine</th><th>Applicable Nut (JIS Class 1)</th></tr><tr><td>WCF3</td><td>Ø12</td><td>M6 or M5</td><td></td></tr><tr><td>WCF4</td><td>Ø12</td><td>M6 or M5</td><td></td></tr><tr><td>WCF5</td><td>Ø16</td><td>M8</td><td></td></tr></table>				Part Number	Series	Machine	Applicable Nut (JIS Class 1)	WCF3	Ø12	M6 or M5		WCF4	Ø12	M6 or M5		WCF5	Ø16	M8	
Nominal	X	Y	S																																					
3	210	80	25																																					
4	300	100	25																																					
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Part Number	Series	Machine	Applicable Nut (JIS Class 1)																																					
WCF3	Ø12	M6 or M5																																						
WCF4	Ø12	M6 or M5																																						
WCF5	Ø16	M8																																						

Return Guides



RNG



Part Number		A	B	C	D	E	M	r	R	F	G	Unit Price
Type	Nominal											
RNG	3	34	9	22	6	31	M6	54	60	25	3	
	4	50	12	30	8	30	M8	52	60	25	3	
	5	44	14	20	10	52	M8	54	64	25	3	



Ordering Example	Part Number RNG3
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Alterations Part Number - (SET)
RNG3 - SET

Alterations

Code

Bracket Set

SET

Bracket set is shipped with Return Guide.

(Ordering Code) SET

Spec.

2-d₂

F

G

L

d₁

S

P

d

2-d₁

⚡ Screws are not included.

Material : A6063T5

Normal	L	F	G	d ₁	d ₂	S	P	Q	t
3	34	6.75	6	6.5	6.5	25	18	17	3
4	60	7.75	15	8.5	8.5	30	20	17	3
5	62	9	21	8.5	8.5	35	24	20	4