OCM BAI-SPEED CHAIN SELECTION

PROCEDURE FOR SELECTING OCM BAI-SPEED CHAIN

STEP 1

CONFIRM THE OPERATING CONDITIONS

1 Material weight, dimension and quality of the conveyed goods incl. pallet

- 2 Conveyor speed
- ③ Conveyor length for accumulating and transferring portion respectively
- ④ Environment

STEP 2

SPECIFICATIONS OF CHAIN AND CENTER ROLLER

Specifications of the chain size and engineering plastic center roller are determined from operating condition and atmosphere.

STEP 3

CALCULATION OF MAX. CHAIN TENSION (T)



 $T = (W_H + m) L_H \cdot f_1 + W_A \cdot L_A \cdot f_2 + (W_A + m) L_A \cdot f_3 + 1.1$ m · L · f_1 Calculation of Required Power $kW = \frac{TS}{5565n}$

- T : Maximum chain tension (kgf)
- L : Center distance (m)
- L_H : Conveying portion (m)
- $W_{\text{H}}\!:\!Weight$ of conveyed goods in conveying portion (kg/m)
- L_A : Length of accumulating portion (m)
- W_A : Weight of conveyed goods in accumulating portion (kg/m)
- f1 : Friction coefficient between chain and rail when conveying
 f2 : Friction coefficient between chain and conveyed goods when accumulating
- f₃ : Friction coefficient between chain and rail when accumulating
- m :Weight of chain (kg/m)
- kW: Power requirements (kW)
- S : Chain speed (m/min)
- η $\,$: Transmission efficiency of drive unit

1. OPERATING TEMPERATURE

Use Engineering Plastic Roller at temperatures of -10°C to +80°C. Use Steel Roller at temperatures of 10°C to +150°C.

2. CHAIN SPEED

Use the chain in 5 m/min to 15 m/min.

STEP 4

CHAIN SIZE DETERMINATION



Since the chain is used in matched pairs, the Maximum Tension (T) is divided in half.

In case the Maximum Tension exceeds the allowable load, select the chain of one size larger or divide the machine length and then make re-calculation.

Table 1 Friction Coefficient

Friction Coefficient	Types of Engineering Plastic Roller			
	VS-A•C	VS-B•D		
f1	0.08	0.08		
f ₂	0.1	0.15		
f3	0.2	0.25		

Table 2 Maximum Allowable Roller Load for Conveyed GoodsFollowing table is the load at 2 strands for the chain.Unit: kg/m

Chain No.	Aluminum Guide Rail	
C2030-VS	40	
C2040-VS	60	
C2050-VS	80	
C2060-VS	100	

Table 3 Maximum Allowable Chain Tension

	Base Chain	Types of Engineering Plastic Roller			
Chain No.		VS-A•C		VS-B•D	
		kN	kgf	kN	kgf
C2030-VS	Steel	0.55	56	-	-
	Stainless Steel	0.28	28	-	-
C2040-VS	Steel	0.88	90	0.44	45
	Stainless Steel	0.44	45	0.44	45
C2050-VS	Steel	1.37	140	0.69	70
	Stainless Steel	0.69	70	0.69	70
C2060-VS	Steel	2.06	210	1.03	105
	Stainless Steel	1.03	105	1.03	105

3. OPERATING CONDITION

Do NOT use the chain in places where water or oil is splashed.

4. LUBRICATION

When the sprocket portion causes unusual noise during operation, drip lubricating oil between the outer link plates and inner link plates.



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