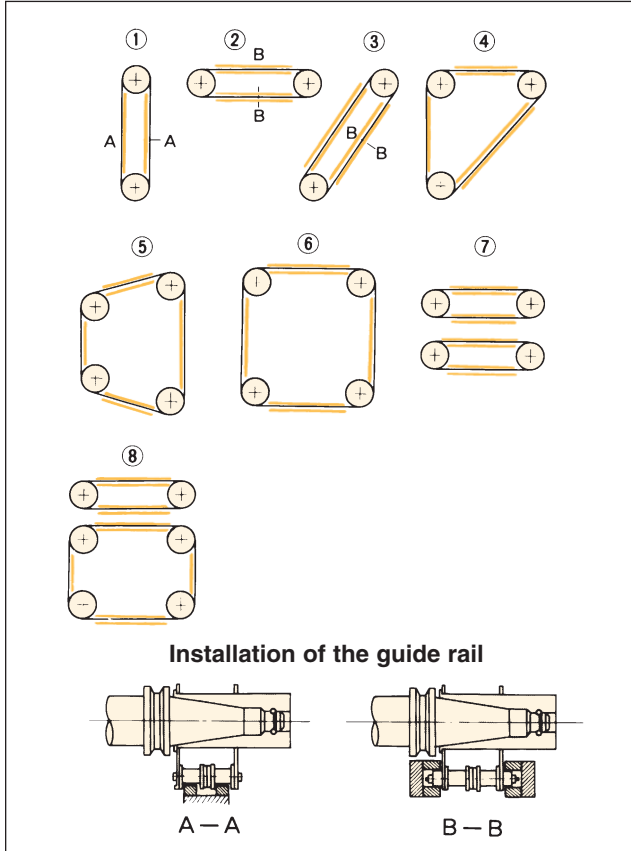
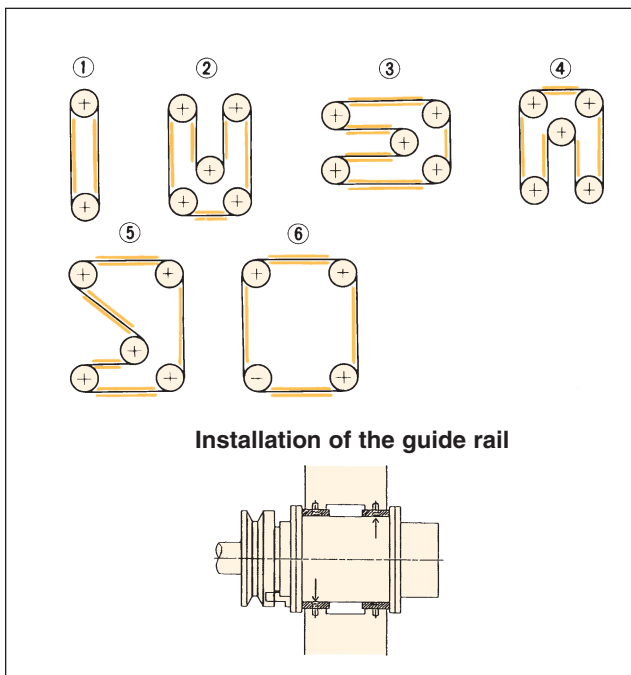


1. Guide Applications

■ SK and SK-W type Chains

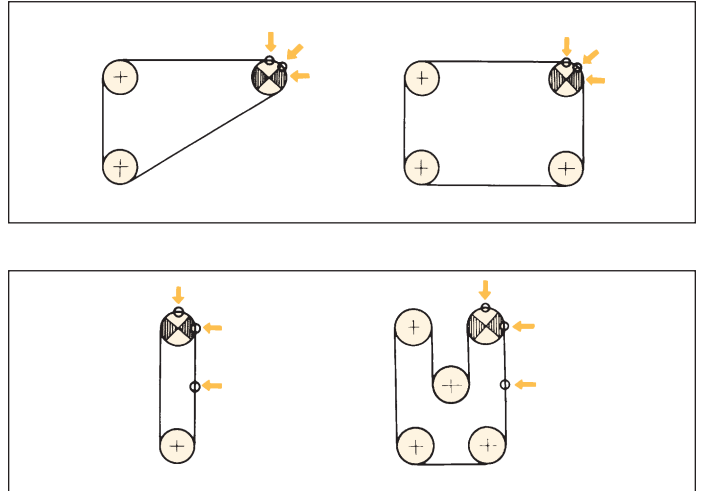


■ HP-T Chains



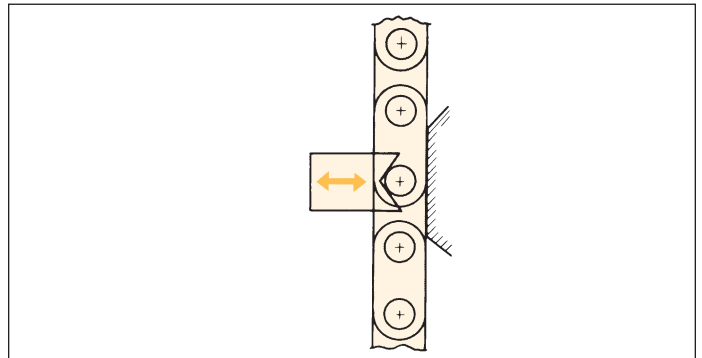
2. Positions for Picking Up Tools

The best position to pick up a tool is at the drive sprocket, especially in the case of SK type ATC chain.



3. Picking Up Tools with the Clamping Method

Clamping equipment is necessary for HP-T and HP type ATC chain.



4. Initial Chain Tension

Please apply initial tension up to 1/2 of the working load of the ATC chain and adjust the chain tension to avoid chain vibration.

5. Chain Tension and Driving Power

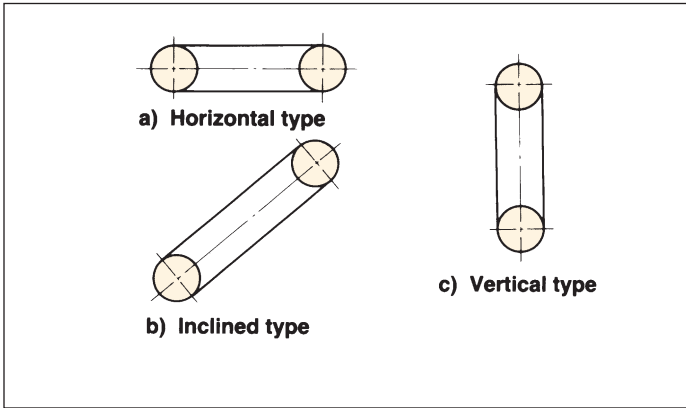
1) Please refer to table below:

Chain layout	Chain tension	Driving power
a) Horizontal	Low	High
b) Inclined	Medium	Medium
c) Vertical	High	Low

U.S. TSUBAKI ATC CHAIN

2) Tool layout and driving power:

Layout should be designed for optimal tool balance to reduce the driving power required and the chain tension.

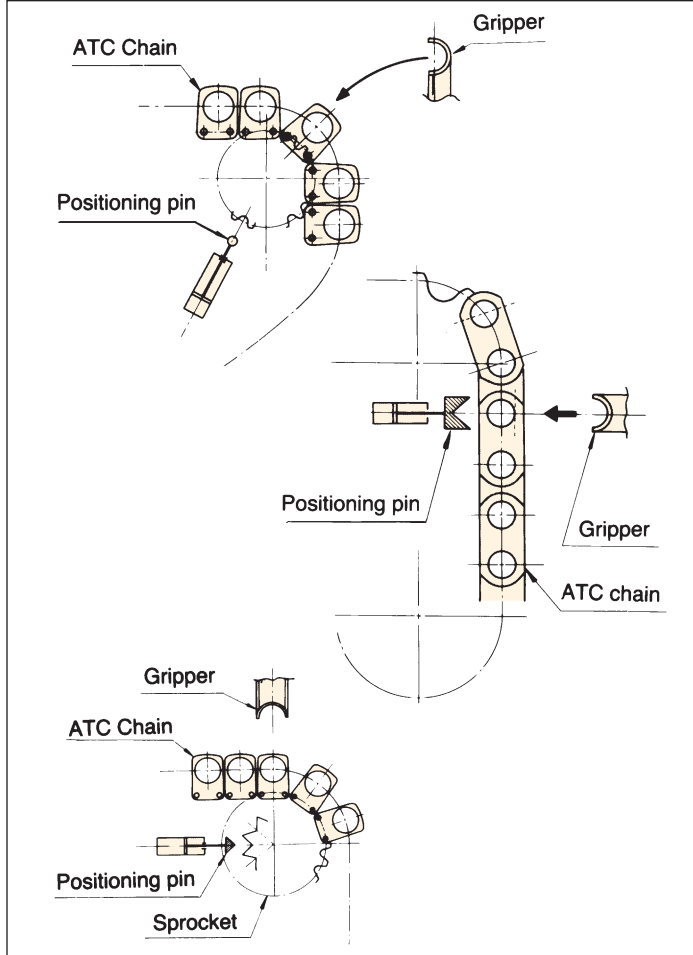


6. Tool Weight and Chain Type

Please check:

- 1) Thrust load when picking up or setting tools into the pot.
- 2) Eccentric load due to overhang of the tools.

7. Tool Gripping Method

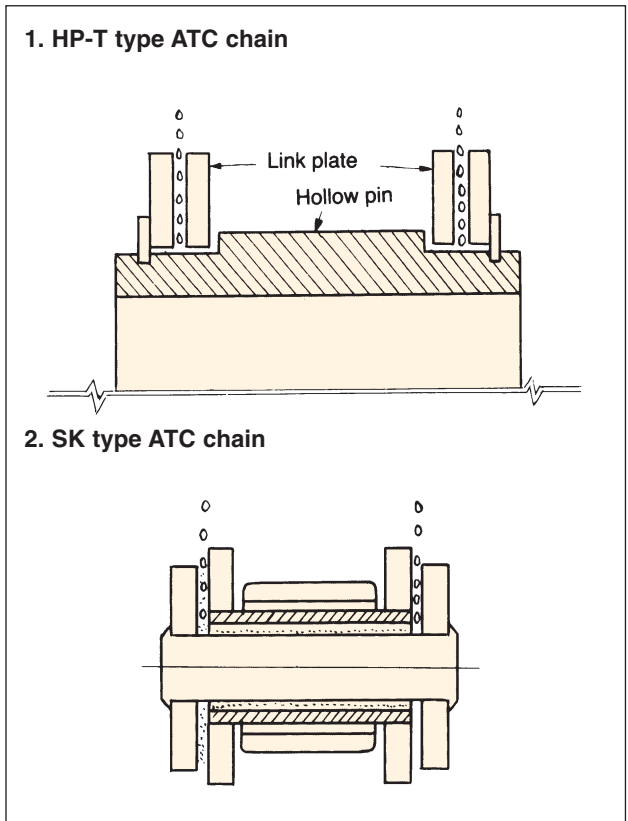


8. ATC Chain Lubrication

Because precision is essential, lubrication is very important for ATC chain. Proper lubrication forms an oil film which reduces chain wear, chain friction, and noise. The chain lubrication should be maintained as follows:

1) Lubrication Points

Lubrication should be applied and maintained between the chain link plates and the bearing area. Apply the lubricant manually or automatically using a drip lubrication system.



2) Lubricant Selection

General purpose oil is acceptable for lubrication, but the higher the quality the better. If the viscosity of the lubricant is too low, it will leak away and have to be replaced often and if the viscosity is too high, it will not reach the critical parts, and the lubrication will not be effective.

The following lubricants are suggested:
Lubrication oil: Mobil® SAE #30 ~ 40 machine oil or equivalent.

Frequency and amount of lubrication:

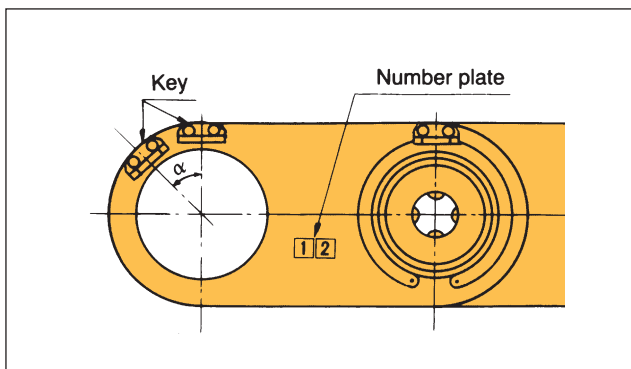
Ensure that the bearing portion is always moist with lubricant. The amount of lubricant should be enough to ensure that lubricant reaches all critical points. If the tools are heavily used or the number of bending cycles of the chain is very high, increase the frequency of lubrication.

9. Specification

We will manufacture ATC chain in exact accordance with your specifications. When making an inquiry please supply as much information as is possible. We need the following information to quote your ATC chain.

1) ATC chain

1. Tool shank size
Tool shank number: #25, 30, 35, 40, 45, 50, 60
Standard code: MAS, ANSI (CAT), ISO (DIN)
If a tool other than the above is used, please send us a drawing of the tool.
2. Retention knob
Standard Code: MAS, ISO-A, ISO-B, ANSI
If a tool other than the above is used, please send us a drawing of the retention knob.
3. Number of tools to be used with the chain: (pcs.)
4. Maximum weight of the tool: (lbs.)
5. Key installation angle (determined by the tool keyway)
Please specify the keyway position or angle α of the tool as shown below.



6. Number plate position
Indicate the position and direction of the number plates and the order of numbers required.

2) Sprocket

1. Type of ATC chain to be used such as HP-T, SK, SKW, HP, Special type.
2. Number of teeth
In the case of SK or SKW types, please indicate clearly the actual number of teeth or the working number of teeth.
3. Please supply us with information regarding the shaft bore dimensions, boss shape, etc., and all other information necessary for manufacturing.
4. Induction hardened teeth
We suggest using sprockets with hardened teeth.