

Revolution of Crossed Roller Table!!

ABSOLUTLY NO CREEP

Crossed Roller Table (CRT, CRU series)

Types **QZAK**

■CRT



■CRU



Structure and Features **QZAK**

■No Creep

ACS table unit has ACS crossed roller guides between a table and a base. Therefore the roller cage never slip off. This series can supply stable operation despite condition is no good (high speed, vibration, partial load, etc.)

■High Rigidity

ACS crossed roller guides is designed as larger roller diameter and longer roller length than usual guides. As the contact area between the roller and race way is wider, this series has high rigidity.

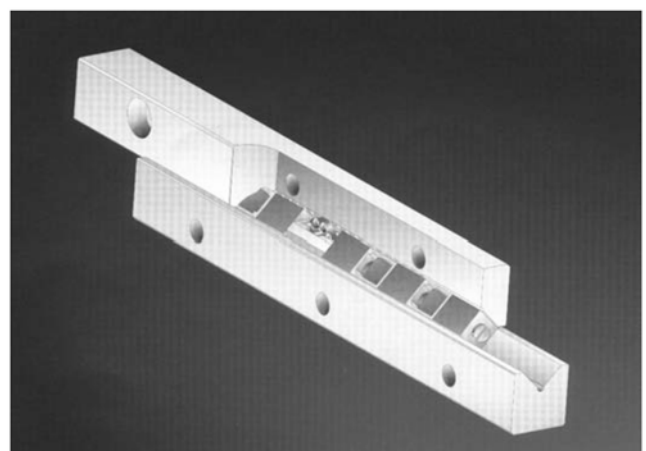
■Long life design

ACS table unit has high load capacity since ACS crossed roller guides has bigger roller. Eccentric load doesn't act to rollers from the structure. Therefore this series has reliability by prevention of skew.

■Easy Installation

ACS table unit is adjusted to proper preload condition. Customers can install simply this unit into a machine.

ACS crossed roller guides



Precision Standards

The following table 114 and 115 shows precision standards for the CRT and CRU series.

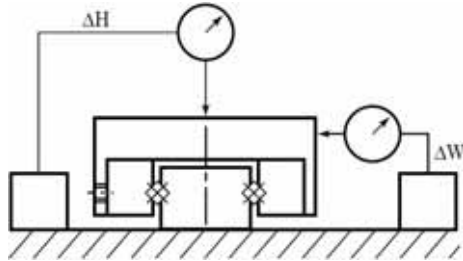


Table 114: CRT Precision standards unit:mm

Table length		H	W
over	Include or less		
-	80	2	5
80	200	3	6

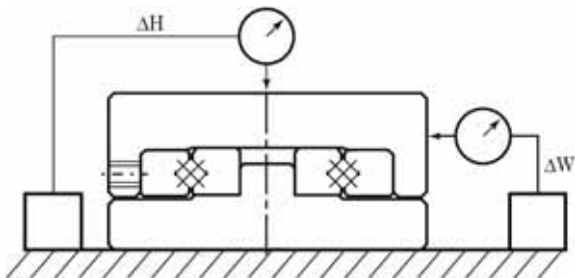


Table 115: CRU Precision standards unit:mm

Table length		H	W
over	Include or less		
-	75	2	5
75	150	3	6
150	250	3	7
250	400	4	8

Rated Life

The rated life of the CRT and CRU series can be calculated by the following formula.

$$L_{10} = \left(\frac{C}{f_s \cdot P} \right)^{\frac{10}{3}} \cdot 100 \text{ km} \quad (12)$$

L_{10} : 90% Rated Life [km]

C: Basic dynamic load rating [N]

P: Acting radial load [N]

f_s : Impulse, vibration and/or speed factor; see table 116

Table 116: Impulse, vibration and speed factor

Conditions	f_s
When the reciprocating motion speed is $V=300\text{mm/sec}$ or less without impact or vibration	1 ~ 1.5
When the reciprocating motion speed is $V=1000\text{mm/sec}$ or less with slight impact or vibration	1.5 ~ 2.0
When the reciprocating motion speed is $V=1000\text{mm/sec}$ or more with heavy impact or vibration	2.0 ~ 4.0

When an operating stroke and number of cycle per one minute are constant, the rated life L_{km} by distance can be converted into L_h by hour by following equation.

$$L_h = \frac{L_{10} \cdot 10^6}{2 \cdot \ell_s \cdot n \cdot 60} \text{ hr} \quad (13)$$

L_{10} : 90% Rated Life [km]

ℓ_s : stroke [mm]

n: Cycle number per one minute [cpm]

Lubrication

ACS table unit CRT and CRU are applied lithium soap grease. While it's recommended to apply grease periodically after installation into a machine.