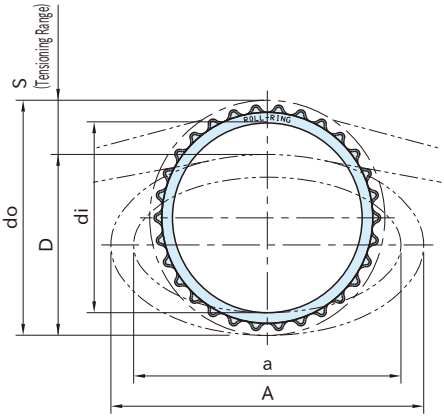
906～920 ROLL-RING CHAIN TENSIONERS

RoHS

ROLL-RING®



Body
Special elastic plastic

Part Number	Chain No.	Teeth	Max. Static Expansive Force (N)	do	di	A	a	S *)	
								min.	max.
906-030-01	35	30	5.7	89.8	76.8	113	101	4	27
908-026-01	40	26	13.4	105.5	87.5	135.8	102	4.5	27
908-030-01		30	14.2	121.5	101.6	161.6	117	5	30
908-034-01		34	22	137.5	115.4	165	138.8	6	30
908-430-01	41	30	16.8	121.5	98	161.6	117	5	28
910-026-01	50	26	28.2	128.4	105	153	130	5.5	
910-030-01		30	23	148	124.6	177	153	6.5	33
910-034-01		34	45.1	170	141	217	166	7.5	38
912-026-01	60	26	39.2	155	127.6	209.5	150	6.5	35
912-030-01		30	32.2	182.2	153.1	242	173	7.5	45
912-034-01		34	70.5	207.5	169.5	265	206	8.5	45
916-026-01	80	26	95.7	207	167	269	200	9	45
916-030-01		30	103	242	200	315	231	10.5	50
920-030-01	100		80.5	303.7	256.4	390	280	12.5	65

*) Ensure that tensioning is done in the stated range.

品　番	D=do-S max.	Allowable Chain Speed (m/s)	Weight (g)
906-030-01	62.8	5.2	7
908-026-01	78.5	7.5	12
908-030-01	91.5	8.6	19
908-034-01	107.5	8.8	26
908-430-01	91.5	7.5	19
910-026-01	100.4	4.2	24
910-030-01	115	8.8	30
910-034-01	132		55
912-026-01	120	5.4	46
912-030-01	137.2	6.2	65
912-034-01	162.5	6.4	93
916-026-01	162	5.7	116
916-030-01	192	6.6	150
920-030-01	238.7	7	340

Technical Information

Working temperature :
-20 to 70℃

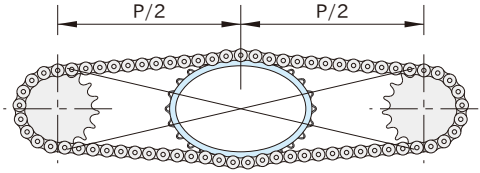
Features

・Provides tension automatically and dampens vibrations
・Ensures smooth chain drive with a small amount of tension.
・No need of mounting arrangements.
・Can be installed in a matter of seconds with no tools. No adjustments are needed after installation.
・Allows reducing driving noise, preventing damage to chains, sprockets, bearings, etc., and prolonging the lifetime of the drive unit.
・No need of lubrication.
・Can be used for both normal and reverse chain rotations.
・Can be used in both horizontal and vertical chain drive applications.
・Can be used even in watery or dusty environments, for a wide variety of applications.

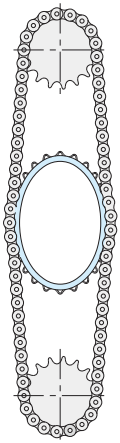
Application Examples

・Roll-Ring Chain Tensioners are almost as long in lifetime as chains.
It is recommended that these Tensioners be replaced when chains are replaced.
・Ensure that a Roll-Ring Chain Tensioner

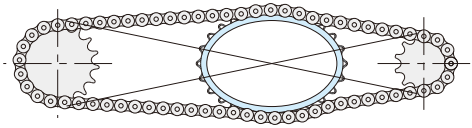
〈Center Installation for Transmission Ratio of 1:1〉



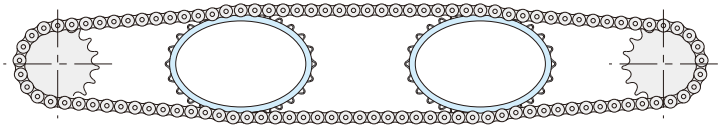
〈Vertical Installation〉



〈Asymmetric Installation for Transmission Ratio Greater Than 1: 1〉



〈Double Installation for Long Axial Distance Drive〉
・Use 2 Roll-Ring Chain Tensioners.



〈Parallel Installation for Multirow-chain Drive〉
・Roll-Ring Chain Tensioners can be installed parallel to each other.

How To Determine Installation Location

■Install to existing chain drive

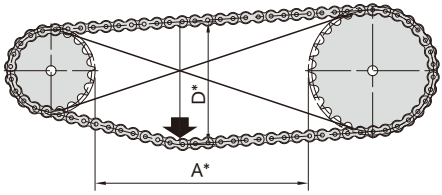
[Step 1] Check the chain type

Before ckecking the chaing type, turn a switch or a power source off of the existing chain drive to work under safe conditions.

[Step 2] Measure max distance of the chain strands

Measure max distance between the chain strands (with one side of the strands is tensioned) at the intersection of tangent lines to the sprockets' pitch circle. : D*
D* > D and D* < d

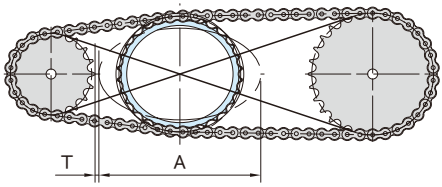
D:Height at max compression
do:Height without compression



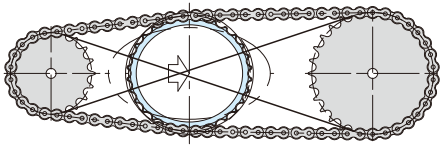
[Step 3] Check if there is a conflict between the Roll Ring and the smaller sprocket

Measure the inner distance between O.D. of the sprockets (A*)
A* ≧ A + 2P

A:Max working area
P:Chain pitch



If there is a conflict between the Roll Ring and the smaller sprocket or the clearance is shorter than one pitch of the chain, adjust the location of the Roll Ring.



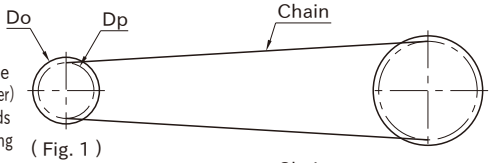
How To Determine Installation Location

■Install to new chain drive

[Step 1]Checking to see from the amount of tension given to a Roll Ring if it can be used.
Note) Draw a figure along the calculated design based on required center distance of the sprockets, chain length.

1 Draw a pitch circle of both the driving and driven sprockets, and a chain.

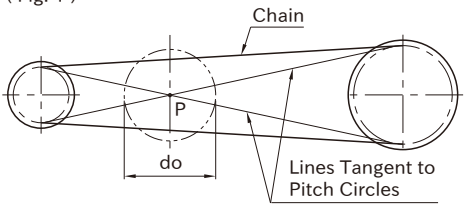
A : "A" dimension shown in chart on the previous page
do : "do" dimension shown in chart (Roll Ring's pitch-circle diameter)
H : Roll Ring's centerline length between the chain strands
T : Clearance between the smaller sproket and the Roll Ring



(Fig. 1)

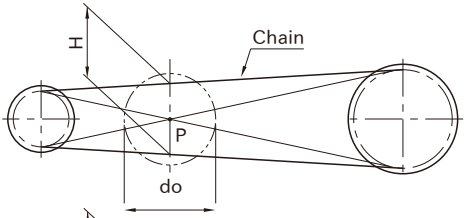
2 Draw two crossed lines tangent to the above pitch circles, and a circle with a diameter of Roll Ring's pitch circle("do" dimension) setting its center at the intersection (P) of the tangent lines.

(Fig. 2)



3 If a value of "do" minus "H" is in the "S" range shown in chart on the previous page, moderate tension can be applied.
(do − H) ≦ S

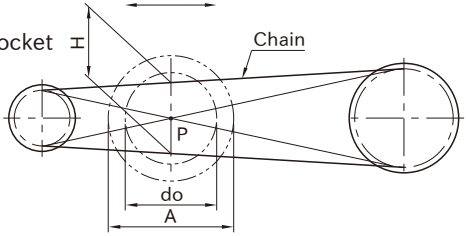
(Fig. 3)



[Step 2]Checking on a possible conflict between the Roll Ring and the smaller sprocket

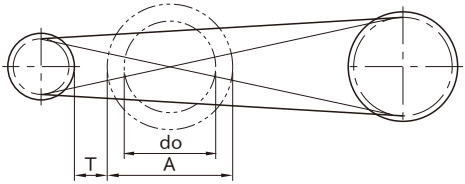
1 Draw a circle with a diameter of "A" dimension setting its center at the intersection (P) shown in Figure 3.

(Fig. 4)



2 Check to see if there is enough clearance (T) between the O.D. of the smaller sprocket and the Roll Ring. This clearance must be as long as or longer than one pitch of the chain.

(Fig. 5)



[Step 3]Correcting Roll Ring's location if there is a conflict between the Roll Ring and the smaller sprocket

1 If the clearance (T) is shorter than one pitch of the chain, adjust the location of the Roll Ring by moving the intersection (P) in Figure 4 toward the larger sprocket. Redraw a circle with a diameter of Roll Ring's pitch circle ("do" dimension) and check again on the clearance (T).Considering the elongation of chain, the installation near side of the S max. value in the table is recommended.

Note)The installation instructions are just for reference to see the possibility of using Roll Rings and check on installation locations.We prepare 1 to 3 sizes of Roll Ring depending on chain types. Please note the prepared Roll Rings may not be used for some usage conditions.