


Idler Sprockets

Single & Double Bearing

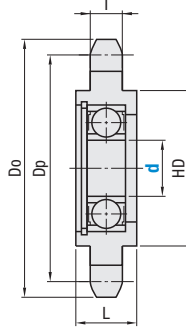
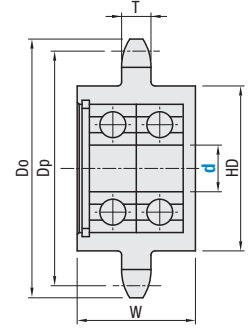
Idler Sprockets – Single & Double Bearing



RoHS 10

Single Bearing
DRC
DRCS (Stainless Steel)

Double Bearings
DRCW

Type		Material			Surface Treatment
Single Bearing	Double Bearings	Main Body		Bearings	Black Oxide
DRC	DRCW	1035 Carbon Steel or Equivalent (Induction Hardened Tooth Tip)		Steel or Equivalent	
DRCS	—	Stainless Steel		Stainless Steel	

⚠ The bearing is located at the center of the sprocket.
 ⚠ Nylon 6 (Black) Operating Temperature: -10~80°C

Part Number		No. of Teeth	d	Dp	Do	T	HD	L	W	Bearing Part No.	Idler Pin Applicable Type		Approximate Mass (kg/m)			Available Types				
Type	No.										Single Bearing	Double Bearing	DRC	DRCS	DRCW	DRC	DRCS	DRCW		
Single Bearing DRC DRCS	25	17	6	34.56	38	2.8	27	12	—	606ZZ	—	—	0.04	—	—	—	—			
		19	8	38.58	42		31	13		608ZZ			0.08							
		20	10	40.59	44		33	6900ZZ		0.08										
		20	12	40.59	44		33	6901ZZ		0.08										
	35	35	16	10	48.82	54	4.3	38	14	—	6000ZZ	—	—	0.11	0.120	—	—	—		
			18	15	54.85	60		44	17		6202ZZ			0.16	0.170					
			21	17	63.91	69		53	19		6203ZZ			0.24	0.250					
			25	20	76	81		60	21		6204ZZ			0.33	0.340					
	40	40	13	12	53.07	59	7.2	38	14	—	6000ZZ	—	—	0.15	0.160	—	—	—		
			15	15	61.08	67		44	17		28			6202ZZ	0.19				0.200	0.29
			17	17	69.12	76		53	19		31			6203ZZ	0.30				0.310	0.45
			19	20	77.16	84		60	21		35			6204ZZ	0.40				0.410	0.62
Double Bearings DRCW	50	12	12	61.34	69	8.7	43	16	—	6201ZZ	—	—	0.21	0.220	0.31	—	—			
		13	15	66.34	74		44	17		28			6202ZZ	0.23	0.240			0.34		
		15	17	76.35	84		53	19		31			6203ZZ	0.37	0.380			0.51		
		17	20	86.39	94		60	21		35			6204ZZ	0.49	0.500			0.72		
60	60	11	12	67.62	76	11.7	44	16	—	6201ZZ	—	—	0.26	—	—	—	—			
		13	17	79.6	89		44	17		28			6202ZZ					0.27		
		14	20	85.61	95		53	19		31			6203ZZ					0.46		
		14	20	85.61	95		60	21		35			6204ZZ					0.56		
80	80	9	15	74.27	85	14.6	44	17	—	6202ZZ	—	—	0.38	—	—	—	—			
		10	17	82.2	93		52	19		31			6203ZZ					0.57		
		11	20	90.16	102		60	21		35			6204ZZ					0.69		
		11	20	90.16	102		60	21		35			6204ZZ					0.69		

⚠ For the target part number, if info about the applicable Idler Pins cannot be found on the table, use Cantilever Shafts instead. **P.912**

Part Number Example

Part Number - **No. of Teeth** - **d**

DRC50 - **13** - **15**

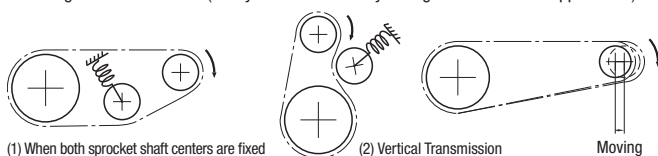
When Using Idlers

Chain elongation decreases transmission efficiency and accelerates wear, resulting in short life. Adjustment mechanism is required for the following power transmission conditions.

- The center distance between shafts is long. (In the case that the shaft center distance exceeds 30~50 times greater than used chain pitch, or 20 times or greater than chain pitch under pulsating loads)
- Relative positioning of the two sprocket shafts is exactly, or nearly, perpendicular to each other.
- Distance between both shaft centers is short, and the upper side is the chain's loose side.
- The chain length is long on multi-shaft transmission.
- The chain causes strong vibration.

There are two ways to adjust for stretch of chain:

- Installing an idler or a tensioner (when (1) the both sprocket shaft centers are fixed; (2) transmission is in vertical direction; or (3) the chain causes vibration)
- Moving either of the shafts (it may be the easiest way for regular transmission applications)



Rollers or guide rails are used as idlers in very low speed operations while sprockets are commonly used for power transmitting chains. The idler should be installed on the chain's loose side span rather than on the tense side, except otherwise needed or in applications that require reversing operation. Installing the idler on the tension side unnecessarily increases the chain tension and makes its service life shorter. Ensure that the number of teeth of idler is designed so the idler does not exceed the max. allowable speed. (Note when the number of teeth is smaller than a small sprocket, speed increases) At least 3 teeth of the idler should contact with chain.

There are several ways of idler adjustment:

- Eccentric shaft system
- Arm system
- Sliding system (Please refer to Chain Drive Mechanism **P.3960**)

