Table Top Conveyor Chains, Sprockets, Idlers

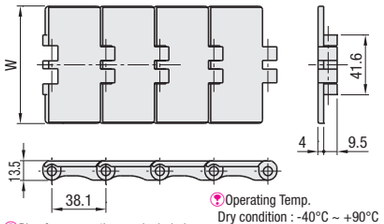
Features: Plate is flat and wide. Workpiece can be put directly on plate for conveyance. Suitable for accumulation conveyance.

Table Top Conveyor Chains

RoHS 10

TPCH

(Figure : 4 Links)



- Pins for connection are included.
- Operating Temp.
  Dry condition : -40°C ~ +90°C
  Wet condition : -40°C ~ +60°C

M Material Chain : Low Friction Polyacetal
Pin : EN 1.4016 Equiv.

Chains

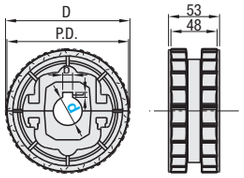
Part Number Type	Part Number Nominal	Number of Links Specified	W	Max. Allowable Tension (kN)	Mass (kg/m)	Number of Links per Unit	Unit Price
TPCH	826	20~360	82.6	1.65	0.85	160 (Circumference Length 6,096mm)	
	1143		114.3		1.03		

- The chain can be made longer than 360 links by connecting them with a pin included.
- Sprockets and Idlers are common, regardless of the Chain models.
- For Top Chains selection information materials and Frictional Coefficient Table, refer to P2251.
- When the ordered number of links exceeds the given number of links per unit, the qty. of links per unit and the extra qty. of links are packaged separately.
  Ex.) For TPCH826-240, 2 separate packages: 160 links x 1 unit + 80 links

Table Top Conveyor Chain Sprockets

RoHS 10

TPSP



- Shaft Bore Specifications for Sprockets

Shaft Bore Nominal	d	b	t	Recommended Shaft
25	24.9	8	3.4	Ø25h9
30	29.9			Ø30h9
40	39.9	12		Ø40h9

M Material
Sprockets : Glass Reinforced Nylon

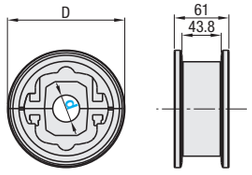
Sprockets

Part Number Type	Number of Teeth	Shaft Bore Dia. d	D	P.D.	Unit Price
TPSP	21	25 30 40	128.9	129.3	
	23		142.0	141.2	
	25		153.8	153.2	

Table Top Conveyor Chain Idlers

RoHS 10

TPDR



- Shaft Bore Specifications for Idlers

Shaft Bore Nominal	d	Recommended Shaft
25	25.3	025h9
30	30.3	030h9
40	40.3	040h9

M Material
Idler : Glass Reinforced Nylon

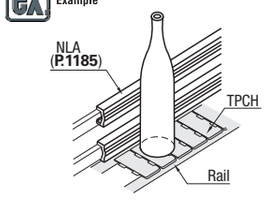
Idlers

Part Number Type	Part Number Nominal	Shaft Bore Dia. d	D	Unit Price
TPDR	21	25 30 40	130.0	
	23		142.5	
	25		154.5	

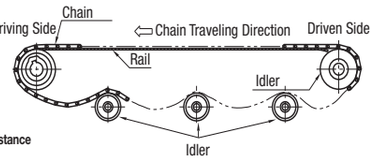
Ordering Example

- Chain — Part Number: TPCH826 - Number of Links: 100
- Sprocket — Part Number: TPSP21 - Shaft Bore Dia.: 25
- Idler — Part Number: TPDR23 - Shaft Bore Dia.: 30

Example



Installation Example



Chemical Resistance

○ : Resistant Δ : Partly Resistant × : Not Resistant

Chemical Name	Ambient Temperature (20°C)	Ambient Temperature (60°C)
Acetic Acid: 5% or More	△	×
Acetic Acid: Less than 5%	○	-
Acetone	△	△
Alcohol (All Types)	○	△
Ammonia	○	○
Aniline	-	△
Beer	○	-
Benzene	△	△
Soft Drink	○	○
Salt Water 10%	○	○
Butter	○	-
Carbon Tetrachloride	○	△
Cheese	○	-
Chlorine Gas	×	×
Liquefied Chlorine	×	×
Chlorine Water 0.4%	×	×
Chlorobenzene	△	△
Chloroform	×	×
Chocolate	○	-

Chemical Name	Ambient Temperature (20°C)	Ambient Temperature (60°C)
Chromic Acid 50%	×	×
Chromic Acid 3%	△	△
Citric Acid	○	×
Orange Juice	○	-
Coconut Oil	○	-
Corn Oil	○	-
Cotton Oil	○	-
Neutral Detergent	○	-
Diethyl Ether	△	△
Acetic ether	△	×
Ethylene Glycol	○	△
Iron Compounds	△	×
Formaldehyde	○	○
Chlorofluorocarbon	△	△
Heavy Oil	△	△
Fruit Juice	○	-
Gasoline	○	○
Glucose	○	○
Heptane	○	○

Chemical Name	Ambient Temperature (20°C)	Ambient Temperature (60°C)
Hexane	○	-
Hydrobromic Acid	×	×
Hydrofluoric Acid	×	×
Oxygenated Water 3%	○	○
Oxygenated Water 90%	△	×
Crystal of Iodine	×	×
Isopropyl Alcohol	○	○
Jet Fuel	○	○
Kerosene	○	○
Methyl Isobutyl Ketone	△	△
Petroleum	○	○
Mineral Spirits	○	○
Naphtha	○	○
Nitric Acid	×	×
Nitrobenzene	×	×
Olive Oil	○	○
Palmitin Hydrochloric Acid	×	×
Peanut Oil	○	○
Phenol 5% or Less	×	×

Chemical Name	Ambient Temperature (20°C)	Ambient Temperature (60°C)
Phosphoric Acid Less Than 30%	×	×
Potassium Hydrate	○	○
Potassium Iodide 3%	○	○
Seawater	△	-
Sodium Hydroxide 60%	○	○
Stearic Acid	×	×
Sulfuric Acid Less Than 20%	△	-
Solution of Sulfate	×	×
Dilute Sulfuric Acid Less Than 10%	×	×
Acidum Tartaricum	×	×
Toluene	△	△
Transformer Oil	△	×
Cresyl Phosphate	△	△
Urea	○	-
Wine	○	○
Whiskey	○	-
Xylene	○	○

Idler Sprockets

Single Bearing, Double Bearing

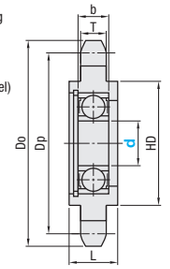
Features: Can retain tension of a chain and, thus prevents the chain from generating vibration or noise and the sprocket part from malfunctioning in engagement.

RoHS 10

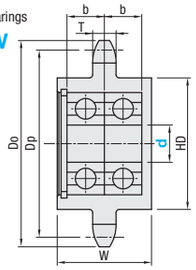
Type: Single Bearing	Type: Double Bearings	M Material: Main Body	M Material: Bearing	S Surface Treatment
DRC	DRCW	EN 1.1181 Equiv. (Induction Hardened Teeth Tip)	Steel	Black Oxide
DRCS	-	Stainless Steel	Stainless Steel	-

- The bearing is located at the center of the sprocket.

Single Bearing
DRC
DRCS
(Stainless Steel)



Double Bearings
DRCW



Part Number Type	No.	Number of Teeth	d	Dp	Do	T	HD	L	W	Bearing Part No.	Bearing b	Idler Pin Applicable Size: Single Bearing	Idler Pin Applicable Size: Double Bearing	Approx. Mass (kg): DRC	Approx. Mass (kg): DRCS	Approx. Mass (kg): DRCW	Unit Price: DRC	Unit Price: DRCS	Unit Price: DRCW
Single Bearing **DRC** **DRCS** Double Bearings **DRCW**	25	17	6	34.56	38	2.8	27	12	-	606ZZ	6	-	-	0.04	-	-		-	-
		19	8	38.58	42		31	13		608ZZ	7			0.08					
			10				31	13		6900ZZ	6			0.08					
		20	12	40.59	44		33	13		6901ZZ	6			0.08					
	35	16	10	48.82	54	4.3	38	14	-	6000ZZ	8	IDP6000S	-	0.11	0.12	-			-
			12							6001ZZ	8	IDP6001S		0.1	0.11				
		18	15	54.85	60		44	17		6202ZZ	11	IDP6202S		0.16	0.17				
		21	17	63.91	69		53	19		6203ZZ	12	IDP6203S		0.24	0.25				
		25	20	76	81		60	21		6204ZZ	14	IDP6204S		0.33	0.34				
	40	13	10	53.07	59	7.2	38	14	-	6000ZZ	8	IDP6000S	-	0.15	0.16	-			-
			12						22	6001ZZ	8	IDP6001S	IDP6001W	0.14	0.15	0.19			
		15	15	61.08	67		44	17	28	6202ZZ	11	IDP6202S	IDP6202W	0.19	0.2	0.29			
		17	17	69.12	76		53	19	31	6203ZZ	12	IDP6203S	IDP6203W	0.3	0.31	0.45			
		19	20	77.16	84		60	21	35	6204ZZ	14	IDP6204S	IDP6204W	0.4	0.41	0.62			
	50	12	12	61.34	69	8.7	43	16	26	6201ZZ	10	IDP6201S	IDP6201W	0.21	0.22	0.31			
		13	15	66.34	74		44	17	28	6202ZZ	11	IDP6202S	IDP6202W	0.23	0.24	0.34			
		15	17	76.35	84		53	19	31	6203ZZ	12	IDP6203S	IDP6203W	0.37	0.38	0.51			
		17	20	86.39	94		60	21	35	6204ZZ	14	IDP6204S	IDP6204W	0.49	0.5	0.72			
	60	11	12	67.62	76	11.7	44	16	-	6201ZZ	10	IDP6201S	-	0.26	-	-		-	-
			15				44	17		6202ZZ	11	IDP6202S		0.27					
		13	17	79.6	89		53	19		6203ZZ	12	IDP6203S		0.46					
		14	20	85.61	95		60	21		6204ZZ	14	IDP6204S		0.56					
	80	9	15	74.27	85	14.6	44	17	-	6202ZZ	11	IDP6202S	-	0.38	-	-		-	-
		10	17	82.2	93		52	19		6203ZZ	12	IDP6203S		0.57					
		11	20	90.16	102		60	21		6204ZZ	14	IDP6204S		0.69					

Please use Cantilever pins for the models without applicable idler pin listings. P.883~906

Features of Double Bearing Type (DRCW)

Since double bearings are installed, this type of idler sprocket can withstand heavier load than the Single Type can and is suitable for adjusting tension on the driven side.

Ordering Example

Part Number: DRC50 - Number of Teeth: 13 - d: 15

When Using Idlers

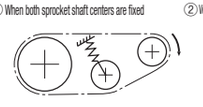
Chain elongation decreases transmission efficiency and accelerates wear, resulting in short life. Adjustment mechanism is required for the following power transmission conditions.

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

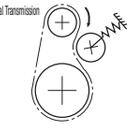
There are following two types of chain stretch compensation mechanisms.

1. 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)
2. Moving either of the shafts (It may be the easiest way for regular transmission applications.)

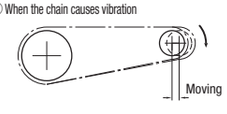
① When both sprocket shaft centers are fixed



② Vertical Transmission



③ When the chain causes vibration



Example

Combination of these app. examples can be selected on our website.
Details about Selection Procedure P.87

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 that 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: 1. eccentric shaft system, 2. arm system, 3. sliding system. (Please refer to "Chain Drive Mechanism" on P.2243.)