

Table Top Conveyor Chains, Sprockets, Idlers

Idler Sprockets Single Bearing, Double Bearing

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

Table Top Conveyor Chains

TPCH (Figure : 4 Links)

Operating Temp.
Dry condition : -40°C ~ +90°C
Wet condition : -40°C ~ +60°C

Pins for connection are included.

Material Chain : Low Friction Polyacetal
Pin : SUS430 Equivalent

RoHS 10

Table Top Conveyor Chain Sprockets

TPSP

Shaft Bore Specifications for Sprockets

Shaft Bore Nominal	d	b	t	Recommended Shaft
25	24.9	8	3.4	Ø25H9
30	29.9	8	3.4	Ø30H9
40	39.9	12	3.4	Ø40H9

Material Sprockets : Glass Reinforced Nylon

RoHS 10

Table Top Conveyor Chain Idlers

TPDR

Shaft Bore Specifications for Idlers

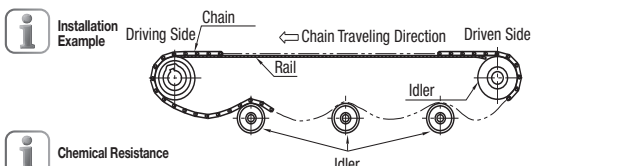
Shaft Bore Nominal	d	Recommended Shaft
25	25.3	Ø25H9
30	30.3	Ø30H9
40	40.3	Ø40H9

Material Idler : Glass Reinforced Nylon

RoHS 10

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**



Chemical Resistance

○ : Resistant △ : Partly Resistant × : Not Resistant

Chemical Name	Ambient Temperature (20°C)	Ambient Temperature (60°C)	Chemical Name	Ambient Temperature (20°C)	Ambient Temperature (60°C)	Chemical Name	Ambient Temperature (20°C)	Ambient Temperature (60°C)	Chemical Name	Ambient Temperature (20°C)	Ambient Temperature (60°C)
Acetic Acid: 5% or More	△	×	Chromic Acid 50%	×	×	Hexane	○	-	Phosphoric Acid Less Than 30%	×	×
Acetic Acid: Less Than 5%	○	-	Chromic Acid 3%	△	△	Hydrobromic Acid	×	×	Potassium Hydroxide	○	○
Acetone	△	△	Citric Acid	○	×	Hydrofluoric Acid	×	×	Potassium Iodide 3%	○	○
Alcohol (All Types)	○	○	Orange Juice	○	○	Oxygenated Water 3%	○	○	Seawater	△	-
Ammonia	○	○	Coconut Oil	○	×	Oxygenated Water 90%	△	×	Sodium Hydroxide 60%	○	○
Aniline	-	△	Corn Oil	○	-	Crystal of Iodine	×	×	Stearic Acid	×	×
Beer	○	-	Cotton Oil	○	-	Isopropyl Alcohol	○	-	Sulfuric Acid Less Than 20%	△	-
Benzene	△	△	Neutral Detergent	○	-	Jet Fuel	○	○	Solution of Sulfate	×	×
Soft Drink	○	○	Diethyl Ether	△	△	Kerosene	○	○	Dilute Sulfuric Acid Less Than 10%	×	×
Salt Water 10%	○	○	Acetic ether	△	×	Methyl Isobutyl Ketone	△	△	Acidum Tartaricum	×	×
Butter	○	-	Ethylene Glycol	○	○	Petroleum	○	○	Toluene	△	△
Carbon Tetrachloride	○	△	Iron Compounds	△	×	Mineral Spirits	○	○	Transformer Oil	△	△
Cheese	○	-	Formaldehyde	○	○	Naphtha	○	○	Cresyl Phosphate	△	×
Chlorine Gas	×	×	Chlorofluorocarbon	△	△	Nitric Acid	×	×	Urea	○	-
Liquefied Chlorine	×	×	Heavy Oil	△	△	Nitrobenzene	×	×	Wine	○	-
Chlorine Water 0.4%	×	×	Fruit Juice	○	-	Olive Oil	○	○	Whiskey	○	-
Chlorobenzene	△	△	Gasoline	○	○	Palmitin Hydrochloric Acid	×	×	Xylene	○	-
Chloroform	×	×	Glucose	○	○	Peanut Oil	○	○			
Chocolate	○	-	Heptane	○	○	Phenol 5% or Less	×	×			

Chains

Part Number	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	0.85	160	
	1143		114.3	1.03	(Circumference Length 6,096mm)	

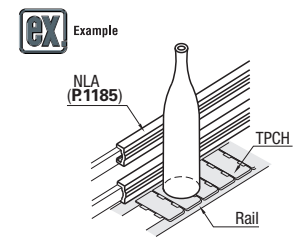
① The chain can be made longer than 360 links by connecting them with a pin included.
② Sprockets and Idlers are common, regardless of the Chain models.
③ For Top Chains selection information materials and Frictional Coefficient Table, refer to P2251.
④ When the ordered number of links exceeds the given 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

Sprockets

Part Number	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	

Idlers

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



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.

Idler Sprockets

Type	Material	Surface Treatment
Single Bearing	Main Body	Bearing
DRC	S55C Equivalent Induction Hardened Teeth Tip	Steel
DRCW	-	Black Oxide
DRCS	Stainless Steel	Stainless Steel

① The bearing is located at the center of the sprocket.

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

① Please use Cantilever pins for the models without applicable idler pin listings. P883-906

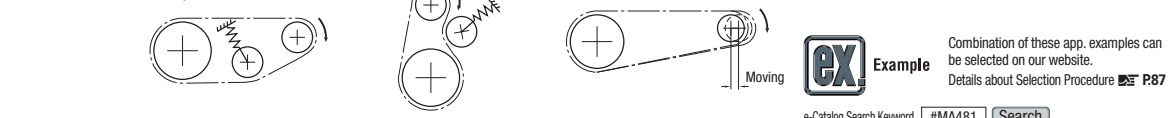
Features of Double Bearing Type (DRCW)

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.

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 to 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.
 - When the chain is severely vibrating.
- There are following two types of chain stretch compensation mechanisms.
- 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 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 P2243.)

Example

Combination of these app. examples can be selected on our website. Details about Selection Procedure P87

e-Catalog Search Keyword #MA481 Search

Enter the search keyword in the search box on e-Catalog. The search result will be shown in "Modular Assembler" area.

DRC