

Low-Temperature Resistant Chain (TK)



Chain made of specialized material for extreme low-temperature down to -40°C.

Standard roller chains often become susceptible to brittle fracture when used in temperatures under -10°C. We recommend using this chain made of specialized material with high resistance to cold brittleness when using chains in extremely low temperatures. By setting the conditions according to the below table of maximum allowable load, the chain can be used in temperatures down to -40°C.

Recommended uses

- Inside freezers, conditions of high altitude or cold climates

Maximum allowable load

| Chain No. | +80°C~ -10°C | | -11°C~ -30°C | | -31°C~ -40°C | |
|------------------|--------------|-------|--------------|-------|--------------|-------|
| | kN | kgf | kN | kgf | kN | kgf |
| DID 40TK | 3.72 | 380 | 2.54 | 260 | 2.15 | 220 |
| DID 50TK | 6.86 | 700 | 4.8 | 490 | 3.92 | 400 |
| DID 60TK | 9.31 | 950 | 6.47 | 660 | 5.39 | 550 |
| DID 80TK | 14.7 | 1,490 | 10.3 | 1,050 | 8.53 | 870 |
| DID 100TK | 22.5 | 2,280 | 15.8 | 1,600 | 13 | 1,320 |
| DID 120TK | 30.4 | 3,090 | 21.3 | 2,160 | 17.6 | 1,790 |
| DID 140TK | 40.2 | 4,080 | 28.1 | 2,850 | 23.2 | 2,360 |
| DID 160TK | 53 | 5,380 | 37.1 | 3,770 | 30.7 | 3,120 |



Selection of chains

The maximum allowable load of Low-temperature Resistant chains differ by temperature. Please refer to the table in the previous page for chain selection. Please refer to P120~122 for other criteria. If used in normal temperature, better shock resistance can be expected compared to standard roller chains.

Connecting links and offset links

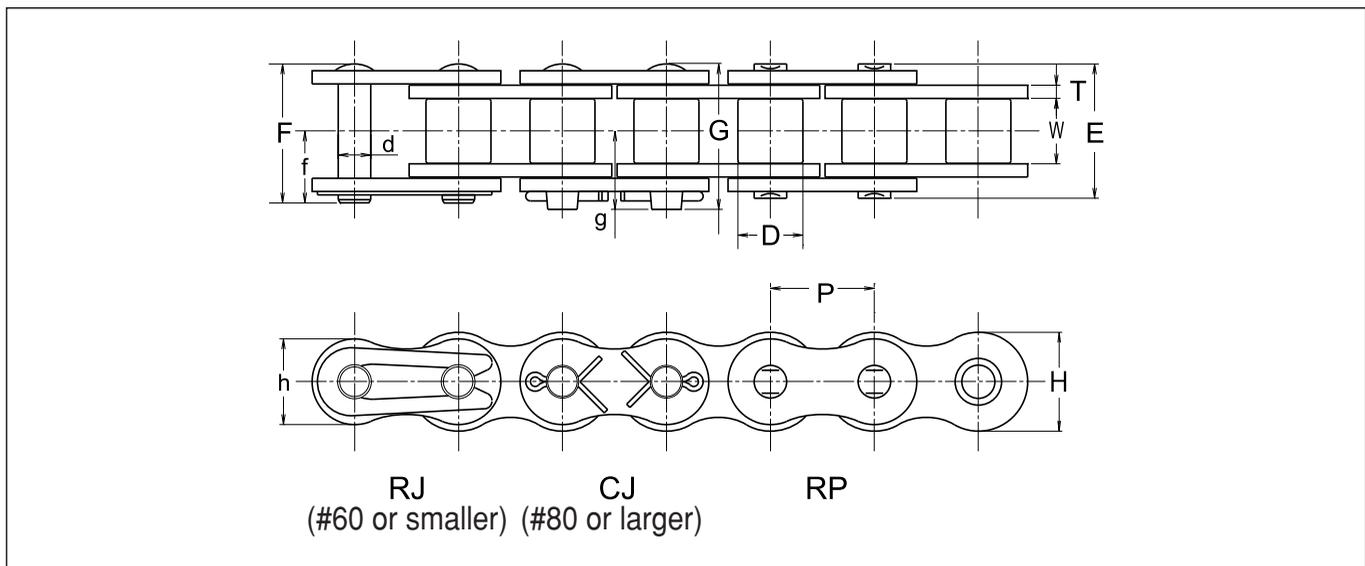
R connecting links are used for Low-temperature Resistance chains #60 or smaller and C connecting links for #80 or larger. There are no offset links.

Sprockets

Standard sprockets can be used for Low-temperature Resistance Chain as their dimensions are equivalent to standard roller chains.

Caution

Please use lubrication oil for cold resistance for the maintenance of the chain.



Dimensions

Unit (mm)

| Chain No. | Pitch P | Roller link width W | Roller (Bush) dia. D | Pin | | | | | | Plate | | | Approx. weight (kg/m) |
|------------------|------------|------------------------|-------------------------|-------|------|------|------|------|------|-------|------|------|-----------------------|
| | | | | d | E | F | G | f | g | T | H | h | |
| DID 40TK | 12.70 | 7.95 | 7.92 | 3.97 | 16.5 | 17.6 | — | 9.5 | — | 1.50 | 12.0 | 10.4 | 0.63 |
| DID 50TK | 15.875 | 9.53 | 10.16 | 5.09 | 20.3 | 21.9 | — | 11.6 | — | 2.00 | 15.0 | 13.0 | 1.06 |
| DID 60TK | 19.05 | 12.70 | 11.91 | 5.96 | 25.4 | 26.9 | — | 14.3 | — | 2.40 | 18.1 | 15.6 | 1.44 |
| DID 80TK | 25.40 | 15.88 | 15.88 | 7.94 | 32.6 | — | 35.5 | — | 19.0 | 3.20 | 24.0 | 20.8 | 2.55 |
| DID 100TK | 31.75 | 19.05 | 19.05 | 9.54 | 39.5 | — | 42.6 | — | 22.7 | 4.00 | 29.9 | 26.0 | 3.79 |
| DID 120TK | 38.10 | 25.40 | 22.23 | 11.11 | 49.7 | — | 53.8 | — | 28.9 | 4.80 | 35.9 | 31.2 | 5.49 |
| DID 140TK | 44.45 | 25.40 | 25.40 | 12.71 | 53.6 | — | 58.4 | — | 31.7 | 5.60 | 41.9 | 36.3 | 7.11 |
| DID 160TK | 50.80 | 31.75 | 28.58 | 14.29 | 63.6 | — | 63.6 | — | 36.5 | 6.40 | 47.8 | 41.4 | 9.82 |