

**TL**  
series steel cable chains  
TL系列钢制拖链

## TL系列钢制拖链

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### 功能特点 Features & Benefits

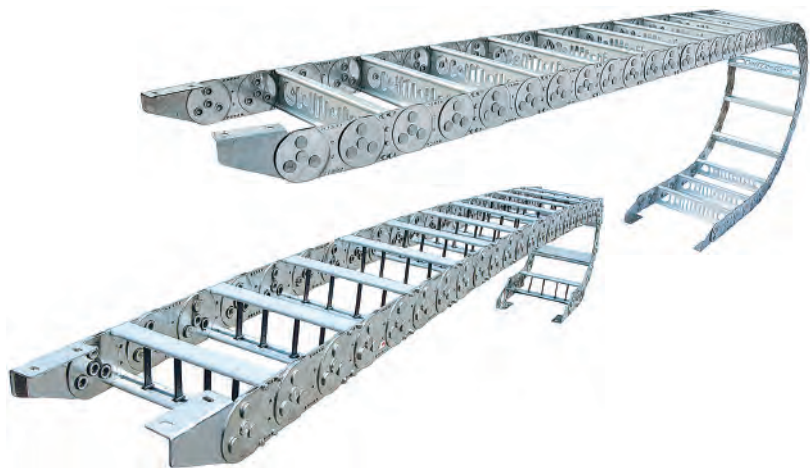
TL系列拖链的主体是由链板(优质钢板镀铬)、支撑板(挤拉铝合金)、轴销(合金钢)等部件组成,使电缆或橡胶管与拖链之间产生相对运动,不产生扭曲变形,链板经镀铬处理外形效果新颖,结构合理,灵巧强度高,刚性好不易变形,拆装方便,可靠性高;尤其是本产品采用了高强度耐磨材料,采用合金钢材质的轴销使产品的耐磨强度更高,弯曲更灵活,阻力更小,噪音更低,从而可保证长时间使用不变形,不下垂。  
由于本产品外观精美,可在较大程度上增强机床设备的整体艺术效果,增强机床、机械设备等在国际市场的竞争力。

- 钢制拖链可适应最大移动速度40m/min
- 钢制拖链在运行时,噪声声压级不大于68分贝
- 钢制拖链的安全使用寿命不小于100万次往复运动

TL towline series the subject is made up of parts by the chain plate (high quality chrome plated steel sheet), support plate (pultruded aluminum alloy) shaft pin alloy steel etc., to produce relative movement between the cable or a rubber tube and chain, no distortion, the chain plate by chrome treatment shape effect novel, reasonable structure, flexible and high strength, rigid and not easy to deformation, convenient assembly and disassembly, high reliability; especially the product with high strength and wear resistant material, the alloy steel material of the shaft pin to wear of the product strength higher, bending more flexible, less resistance, lower noise, in ensure no deformation for a long time use, not pendulous.

Due to the appearance of this product is exquisite, it can enhance the overall artistic effect of machine tools, and enhance the competitiveness of machine tools, machinery and equipment in the international market.

- Steel drag chain can adapt to the maximum speed of 40m/min
- Steel drag chain at run time, noise sound pressure level is not more than 68 decibels
- Steel drag chain security service life not less than 1 million reciprocating motion

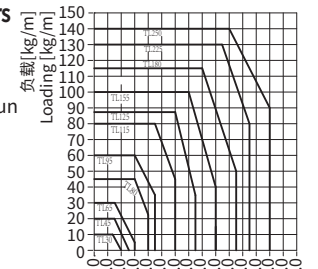
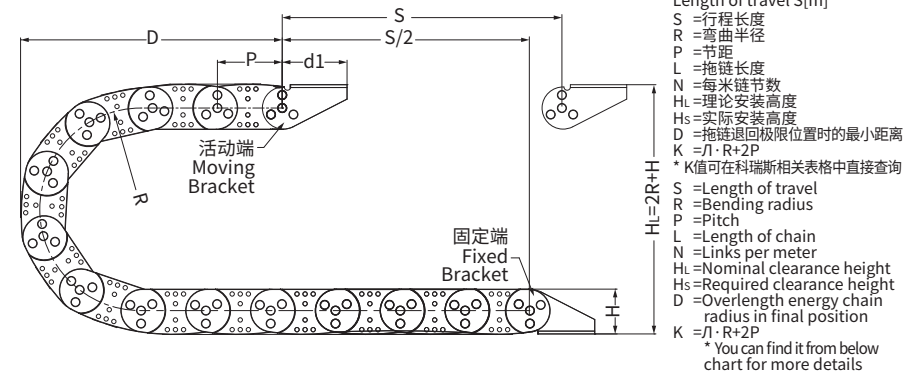
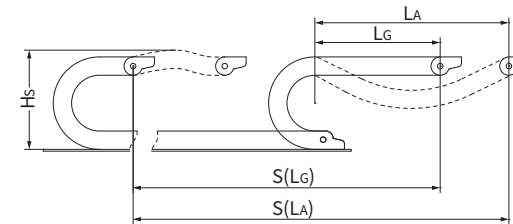


## TL 拖链-安装尺寸及技术参数

TL Cable Chain-Installation Dimensions and Technical Parameters

### 架空长度 Unsupported length

- $L_G$  = 直线架空长度 ·  $L_G$  = Unsupported with straight upper run
- $L_A$  = 安全塌架架空长度 ·  $L_A$  = Unsupported with permitted sag



行程长度  $S$  [m]  
Length of travel  $S$  [m]  
 $S$  = 行程长度  
 $R$  = 弯曲半径  
 $P$  = 节距  
 $L$  = 拖链长度  
 $N$  = 每米链节数  
 $H_L$  = 理论安装高度  
 $H_S$  = 实际安装高度  
 $D$  = 拖链退限位位置时的最小距离  
 $K = J \cdot R + 2P$   
\*  $K$ 值可在科瑞斯相关表格中直接查询  
 $S$  = Length of travel  
 $R$  = Bending radius  
 $P$  = Pitch  
 $L$  = Length of chain  
 $N$  = Links per meter  
 $H_L$  = Nominal clearance height  
 $H_S$  = Required clearance height  
 $D$  = Overlength energy chain radius in final position  
 $K = J \cdot R + 2P$   
\* You can find it from below chart for more details

### 支撑板形式 Support plate type

I型整体式、II型上下分体式  
Type I integral, II type upper and lower split type

III型框架式  
III framework



### 技术参数 Technical Parameters

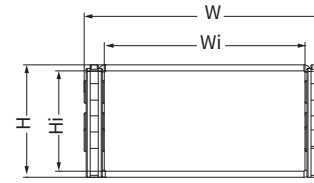
速度/加速度 $L_G$	Speed/acceleration $L_G$
速度/加速度 $L_A$	Speed/acceleration $L_A$
滑行速度/加速度	Gliding speed/acceleration

视情况而定  
It depends on the situation

附表一 (TL系列拖链技术参数表)  
Table 1 (Technical parameter)

型号 Type	R	H <sub>L</sub>	D	K	P	N	d1	支撑板最大孔径 Max. hole diameter of support plate	支撑板形式 Support plate type
TL30	20 (0.79)	65 (2.56)	50 (1.97)	120 (4.72)	30 (1.18)	33 (1.30)	47.5 (1.87)	-	III
	50 (1.97)	132 (5.20)	110 (4.33)	245 (9.65)					
	75 (2.95)	182 (7.17)	160 (6.30)	325 (12.80)					
	90 (3.54)	212 (8.35)	190 (7.48)	370 (14.57)	45 (1.77)	22 (0.87)	65 (2.56)	-	III
TL45	115 (4.53)	262 (10.31)	240 (9.45)	450 (17.72)					
	145 (5.71)	322 (12.68)	300 (11.81)	545 (21.46)					
	75 (2.95)	194 (7.64)	160 (6.30)	365 (14.37)					
	90 (3.54)	224 (8.82)	190 (7.48)	410 (16.14)					
TL65	115 (4.53)	274 (10.79)	240 (9.45)	490 (19.29)	65 (2.56)	15 (0.59)	95 (3.74)	32 (1.26)	I / II / III
	125 (4.92)	294 (11.57)	260 (10.24)	520 (20.47)					
	145 (5.71)	334 (13.15)	300 (11.81)	585 (23.03)					
	185 (7.28)	414 (16.30)	380 (14.96)	710 (27.95)					
TL80	100 (3.94)	256 (10.08)	210 (8.27)	475 (18.70)					
	115 (4.53)	286 (11.26)	240 (9.45)	520 (20.47)					
	125 (4.92)	306 (12.05)	260 (10.24)	550 (21.65)	80 (3.15)	13 (0.51)	80 (3.15)	35 (1.38)	II / III
	145 (5.71)	346 (13.62)	300 (11.81)	615 (24.21)					
TL95	185 (7.28)	426 (16.77)	380 (14.96)	740 (29.13)					
	200 (7.87)	456 (17.95)	410 (16.14)	790 (31.10)					
	250 (9.84)	556 (21.89)	510 (20.08)	945 (37.20)					
	300 (11.81)	656 (25.83)	610 (24.02)	1100 (43.31)					
TL115	115 (4.53)	300 (11.81)	240 (9.45)	550 (21.65)					
	145 (5.71)	360 (14.17)	300 (11.81)	645 (25.39)	95 (3.74)	11 (0.43)	130 (5.12)	50 (1.97)	I / II / III
	200 (7.87)	470 (18.50)	410 (16.14)	820 (32.28)					
	250 (9.84)	570 (22.44)	510 (20.08)	975 (38.39)					
TL125	300 (11.81)	670 (26.38)	610 (24.02)	1130 (44.49)					
	145 (5.71)	376 (14.80)	300 (11.81)	685 (26.97)					
	200 (7.87)	486 (19.13)	410 (16.14)	860 (33.86)	115 (4.53)	9 (0.35)	110 (4.33)	63 (2.48)	II / III
	225 (8.86)	536 (21.10)	460 (18.11)	935 (36.81)					
TL155	250 (9.84)	586 (23.07)	510 (20.08)	1015 (39.96)					
	300 (11.81)	686 (27.01)	610 (24.02)	1170 (46.06)					
	350 (13.78)	786 (30.94)	710 (27.95)	1330 (52.36)					
	200 (7.87)	500 (19.69)	410 (16.14)	880 (34.65)					
TL180	250 (9.84)	600 (23.62)	510 (20.08)	1035 (40.75)					
	300 (11.81)	700 (27.56)	610 (24.02)	1190 (46.85)					
	340 (13.39)	680 (30.71)	690 (27.17)	1320 (51.97)	125 (4.92)	8 (0.31)	155 (6.10)	75 (2.95)	I / II / III
	470 (18.50)	1040 (40.94)	950 (37.40)	1725 (67.91)					
TL225	500 (19.69)	1100 (43.31)	1010 (39.76)	1820 (71.65)					
	575 (22.64)	1250 (49.21)	1160 (45.67)	2055 (80.91)					
	700 (27.56)	1500 (59.06)	1410 (55.51)	2450 (96.46)					
	750 (29.53)	1600 (62.99)	1510 (59.45)	2605 (102.56)					
TL250	200 (7.87)	520 (20.47)	410 (16.14)	940 (37.01)					
	250 (9.84)	620 (24.41)	510 (20.08)	1095 (43.11)	155 (6.10)	7 (0.28)	160 (6.30)	97 (3.82)	II / III
	300 (11.81)	720 (28.35)	610 (24.02)	1250 (49.21)					
	350 (13.78)	820 (32.28)	710 (27.95)	1410 (55.51)					
TL250	450 (17.72)	1020 (40.16)	910 (35.83)	1725 (67.91)					
	500 (19.69)	1120 (44.09)	1010 (39.76)	1880 (74.02)					
	600 (23.62)	1320 (51.97)	1210 (47.64)	2195 (86.42)					
	250 (9.84)	644 (25.35)	510 (20.08)	1145 (45.08)					
TL250	300 (11.81)	744 (29.29)	610 (24.02)	1300 (51.18)					
	350 (13.78)	844 (33.23)	710 (27.95)	1460 (57.48)					
	450 (17.72)	1044 (41.10)	910 (35.83)	1775 (69.88)	180 (7.09)	6 (0.24)	210 (8.27)	110 (4.33)	II / III
	490 (19.29)	1124 (44.25)	990 (38.98)	1900 (74.80)					
TL250	600 (23.62)	1344 (52.91)	1210 (47.64)	2245 (88.39)					
	650 (25.59)	1444 (56.85)	1310 (51.57)	2400 (94.49)					
	400 (15.75)	1000 (39.37)	810 (31.89)	1705 (67.15)					
	450 (17.72)	1100 (43.31)	910 (35.83)	1865 (73.43)					
TL250	600 (23.62)	1400 (55.12)	1210 (47.64)	2335 (91.93)					
	750 (29.53)	1700 (66.93)	1510 (59.45)	2805 (110.43)	225 (8.86)	5 (0.20)	295 (11.61)	146 (5.75)	II / III
	800 (31.50)	1800 (70.87)	1610 (63.39)	2965 (116.73)					
	850 (33.46)	1900 (74.80)	1710 (67.32)	3120 (122.83)					
TL250	1000 (39.37)	2200 (86.61)	2010 (79.13)	3590 (143.31)					
	400 (15.75)	1020 (40.16)	810 (31.89)	1755 (69.09)					
	450 (17.72)	1120 (44.09)	910 (35.83)	1915 (75.39)					
	500 (19.69)	1220 (48.03)	1010 (39.76)	2070 (81.50)					
TL250	600 (23.62)	1420 (55.91)	1210 (47.64)	2385 (93.90)					
	750 (29.53)	1720 (67.72)	1510 (59.45)	2855 (112.40)					
	800 (31.50)	1820 (71.65)	1610 (63.39)	3015 (118.70)	250 (9.84)	4 (0.16)	295 (11.61)	166 (6.54)	II / III
	1000 (39.37)	2220 (87.40)	2010 (79.13)	3640 (143.31)					

TL 拖链-产品规格范围  
TL Cable Chain-Product specifications



产品代码结构  
Part Number Structure

**TL80III\*R\*Wi\*L\*n**

- 数量 (Quantity)
- 拖链长度 (Length of Cable chains)
- 内宽 (Inner Width)
- 弯曲半径 (Bending Radius)
- 支撑板类型 (Supporting board type)
- 型号 (Type)

**订购示例-整条拖链 Order details-complete chain**

请注明拖链长度或者链节数 如：1米或12节  
Please mark the length or link number, such as 1 meter or 12 links

**TL80III\*R200\*200\*1000\*2**  
(2条长度1米的TL80钢制拖链, 半径为200mm, 内宽为200mm, 选用III型支撑板)  
**TL80III\*R200\*200\*1000\*2**  
(2pcs TL80 steel chain with L 1m ,bending radius 200, inner width 200mm with III supporter structure.)

附表二 (TL系列拖链规格表)  
Table 2 (TL series steel drag chain specification)

型号 Type	弯曲半径<R> Bending radius	内高<Hi> Inner height	内宽<Wi> Inner width	外高<H> Outer height	外宽<W> Outer Width	重量<G> Weight	备注 Remark
	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)	kg/m (lbs/ft)	
TL30		10 (0.39)		25 (0.98)	(Wi+8mm)		
TL45		16 (0.63)		32 (1.26)	(Wi+12mm)		
TL65		24 (0.94)		44 (1.73)	(Wi+18mm)		
TL80		32 (1.26)		56 (2.20)	(Wi+18mm)		
TL95	参照附表一 See Table 1	47 (1.85)	可订制 Customized	70 (2.76)	(Wi+20mm)		以实际 称重为准 Please according to the actual weight
TL115		58 (2.28)		86 (3.39)	(Wi+24mm)		
TL125		68 (2.68)		100 (3.94)	(Wi+24mm)		
TL155		86 (3.39)		120 (4.72)	(Wi+26mm)		
TL180		112 (4.41)		144 (5.67)	(Wi+26mm)		
TL225		154 (6.06)		200 (7.87)	(Wi+26mm)		
TL250		172 (6.77)		220 (8.66)	(Wi+28mm)		



TL 系列钢制拖链  
TL series steel cable chains

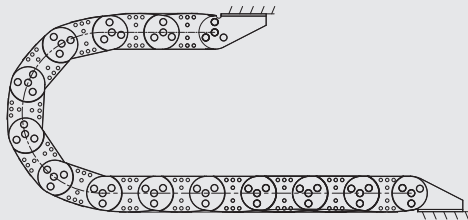


## TL 拖链-拖链接头 TL Cable Chain-Mounting Bracket

### 钢制接头, 分体式 Steel Mounting Bracket, Splited structure

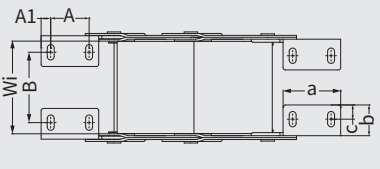
- 双侧独立式钢制接头 · Independent Steel mounting bracket on the two end
- 耐腐蚀及耐摩擦 · Anti-corrosion, Rub-resistance
- 可实现内外连接 · Can realize the internal and external connections

### 接头安装方式 Installation methods

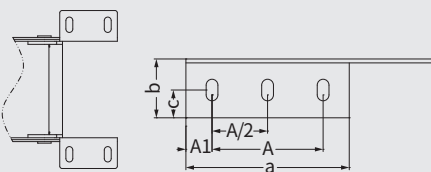


连接方式一  
Connection way 1

连接方式二  
Connection way 2



TL30 / TL45 / TL65 / TL80 / TL95 / TL115 /  
TL125 / TL155 / TL180 接头示意图  
TL30 / TL45 / TL65 / TL80 / TL95 / TL115 /  
TL125 / TL155 / TL180 mounting bracket sketch



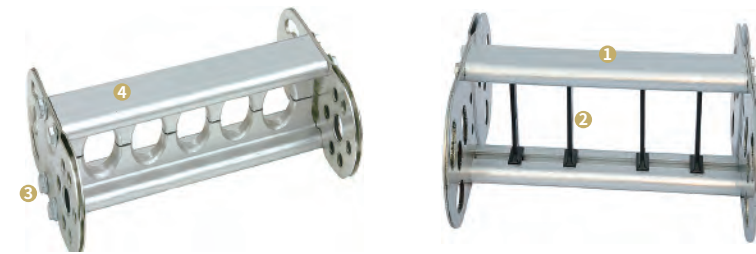
TL225 / TL250  
接头示意图  
TL225 / TL250  
mounting bracket sketch

附表三 (TL系列拖链接头参数表)  
Table 3 (TL series drag chain sub parameter table)

拖链型号 Type	孔尺寸 Hole Dimension	A尺寸 Dimension A	B尺寸 Dimension B	A1尺寸 Dimension A1	a尺寸 Dimension a	b尺寸 Dimension b	c尺寸 Dimension c
		mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)	mm (in.)
TL30	Ø6.4	25 (0.98)	(Wi-10mm)	7.5 (0.30)	40 (1.57)	15 (0.59)	7 (0.28)
TL45	Ø6.4*10	25 (0.98)	(Wi-25mm)	10 (0.39)	45 (1.77)	22.5 (0.89)	10 (0.39)
TL65	Ø7*17	45 (1.77)	(Wi-27mm)	15 (0.59)	75 (2.95)	30 (1.18)	13 (0.51)
TL80	Ø9*18	40 (1.57)	(Wi-29mm)	15 (0.59)	70 (2.76)	35 (1.38)	17 (0.67)
TL95	Ø9*18	65 (2.56)	(Wi-42mm)	20 (0.79)	105 (4.13)	45 (1.77)	20 (0.79)
TL115	Ø12*22	75 (2.95)	(Wi-53mm)	22.5 (0.89)	120 (4.72)	45 (1.77)	20 (0.79)
TL125	Ø11*20	80 (3.15)	(Wi-50mm)	25 (0.98)	130 (5.12)	55 (2.17)	25 (0.98)
TL155	Ø15*30	90 (3.54)	(Wi-54mm)	25 (0.98)	157 (6.18)	60 (2.36)	27.5 (1.08)
TL180	Ø13*23	115 (4.53)	(Wi-60mm)	30 (1.18)	175 (6.89)	60 (2.36)	25 (0.98)
TL225	Ø18*33	170 (6.69)	(Wi-83mm)	40 (1.57)	250 (9.87)	90 (3.54)	42.5 (1.67)
TL250	Ø18*33	170 (6.69)	(Wi-83mm)	40 (1.57)	250 (9.87)	90 (3.54)	42.5 (1.67)

## TL 拖链-元件 TL Cable Chain-Elements

- 1 III型支撑板—材质为挤拉铝合金
  - 2 隔条—材质为尼龙
  - 3 轴销—合金钢
  - 4 I型/II型支撑板—材质为挤拉铝合金  
I型为整体式  
II型为上下分开式
- 1 III type support plate - material for extruded aluminum alloy
  - 2 Spacing sticker material for nylon
  - 3 Shaft pin - alloy steel
  - 4 I/II type I type support plate - material is extruded aluminum alloy I type for the integral type II type for the upper and lower type



此元件均可以根据客户实际的要求进行订制  
Element can be customized according to customer's actual requirements