Innovation in Motion
TSUBAKI

CABLEVEYOR®

Cleanroom Series

TSUBAKI ECO LINK

The Cleanroom Series contributes to

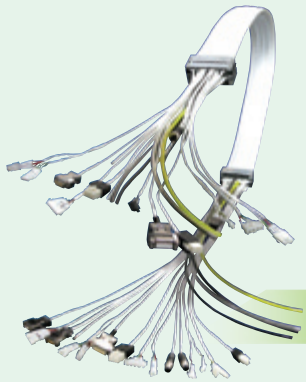
Cleanliness class
(ISO14644-1)

ISO Class 1

CLEANVEYOR®

Lowest debris generation in the Cleanroom Series

Low noise - 38 dB or less



P3

ISO Class 2 *1

FLATVEYOR®

Free-standing flat cable

Minimizes bouncing

*1 Based on in-house test results in accordance with ISO 14644-1.

P11

ISO Class 3 *1

CABLEVEYOR®
(TKR Series)

Smooth bending and low vibration

Easy to cut and join

*1 Based on in-house test results in accordance with ISO 14644-1.

P17

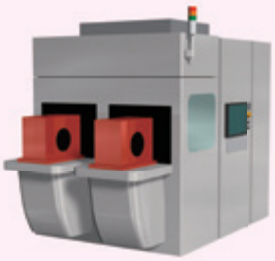
Debris generation ISO and FED

Cleanliness class ISO 14644-1	US federal standard FED STD 209E Abolished in 2001	Upper limit concentration (particles/m^2)		
		0.1 μm	0.5 μm	5.0 μm
ISO Class 1	–	10	-	-
ISO Class 2	–	100	-	-
ISO Class 3	Class 1	1,000	35	-
ISO Class 4	Class 10	10,000	352	-
ISO Class 5	Class 100	100,0000	3,520	-
ISO Class 6	Class 1000	1,000,0000	35,200	293

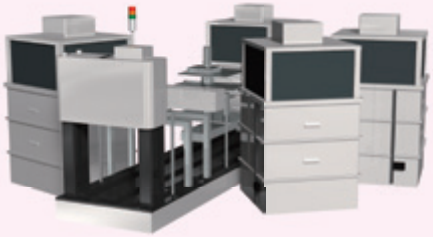
reducing the amount of debris generated.

Typical applications

Exposure machines

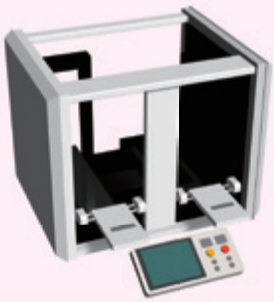


Wafer (chip) inspection machines



Flat-panel display production equipment

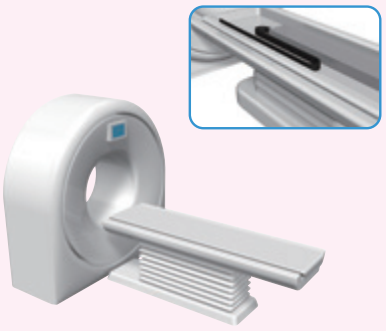
Chip capacitor production equipment



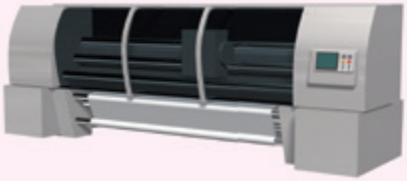
Wafer (chip) transport machines

Bonders

Mounters



Medical equipment

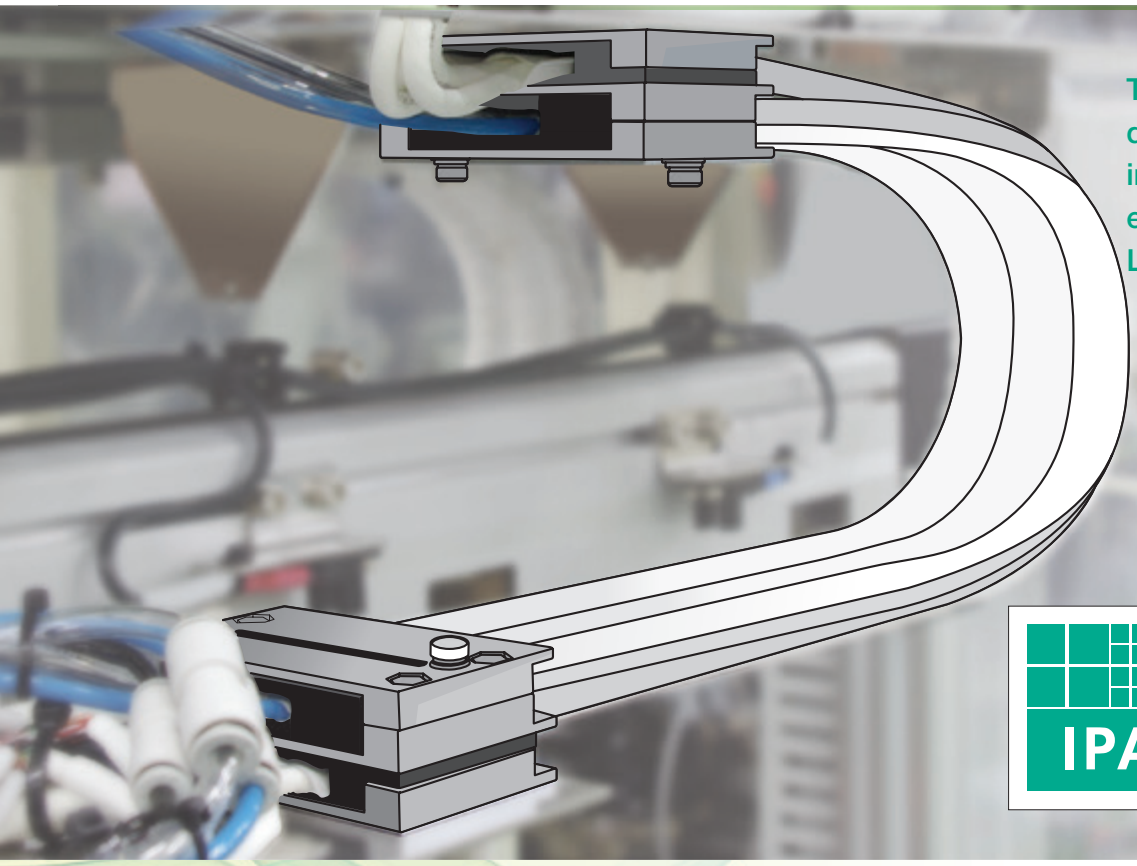


Printers

CLEANVEYOR® -Special cable system for cleanrooms-

A cable solution that achieves zero debris generation*1

Introducing a system that incorporates special cables and tubes for cleanroom operating conditions.



The optimal product for low debris generation requirements in production and inspection equipment for semiconductors, LEDs, and OLEDs.

IPA Fraunhofer Institut Production technology and automation

CLEANVEYOR features

Clean
Clean class
ISO Class 1 certified*2

Long-Life
No. of cycles
Over 10 million cycles*3

Silent
Noise level
Less than 38 dB (A)*4

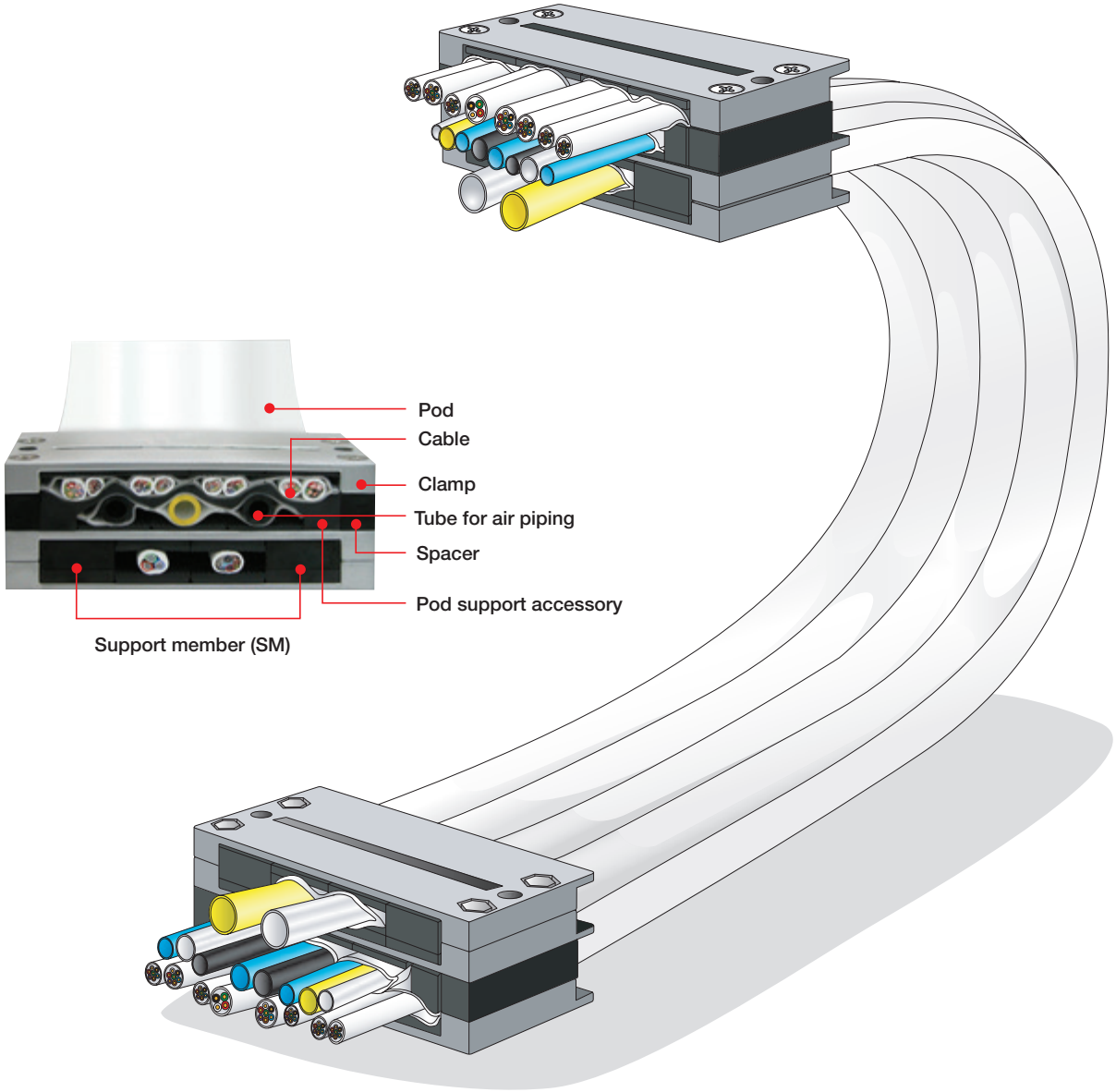
*1 Based on test results from Germany's Fraunhofer Institute for Manufacturing Engineering and Automation (IPA).
*2 Based on IPA test results in accordance with ISO 14644-1 Cleanrooms and Associated Controlled Environments.
*3 Based on in-house test results.
*4 Based on in-house test results at a travel speed of 100 m/min and noise tested 500 mm from source.

Sample applications

The best solution for cleanrooms!



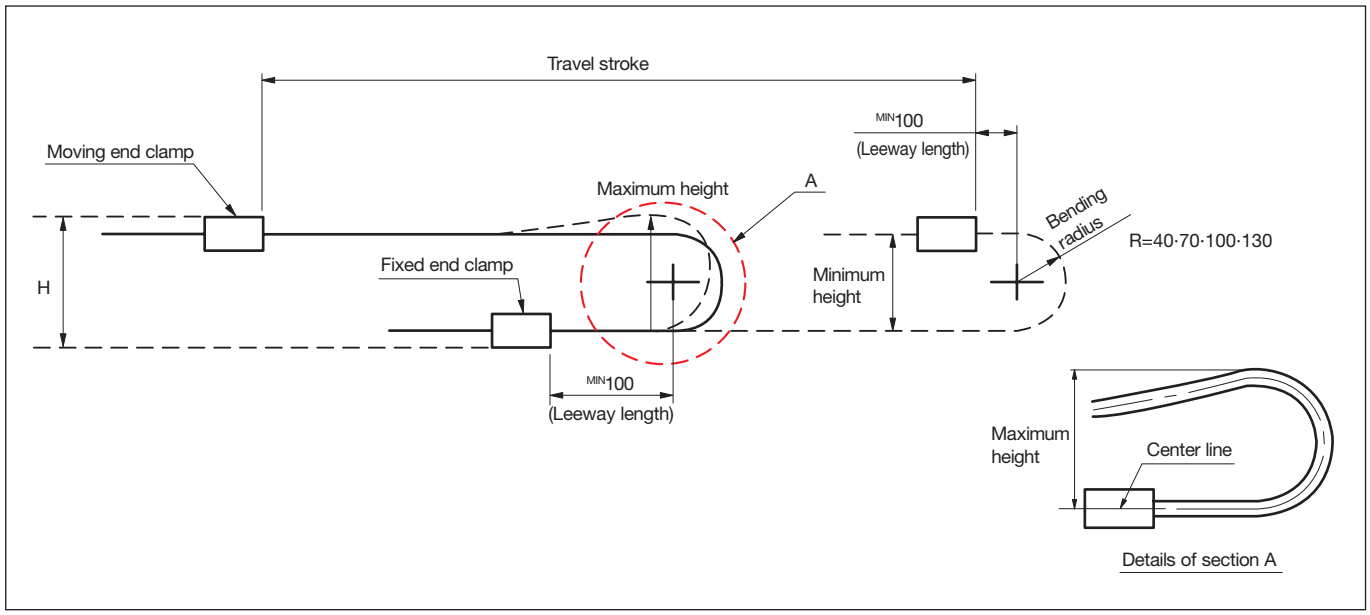

Construction



Materials

Pod		Fluoroplastic (ePTFE)
Cable	Conductor	Tinned annealed copper wire or annealed copper wire
	Insulator	Fluoroplastic (FEP, ETFE, PFA) or thermoplastic polyester elastomer (TPEE)
	Binder	Fluoroplastic (ePTFE)
	Shield	Tinned annealed copper wire
	Sheath	PVC LF (lead free)
Support member		Engineering plastic
Clamp		Aluminum
Spacer		Engineering plastic

Basic specifications and performance



Maximum travel stroke	Support member bending radius R40: 1200 mm Support member bending radius R70: 2400 mm Support member bending radius R100: 3000 mm Support member bending radius R130: 3000 mm
Minimum bending radius	R40 mm
Maximum travel speed	2 m/sec
Maximum acceleration	4G
Operating temperature range	-10°C to 80°C
Cable diameter	3 to 10 mm
Cable types	I/O, Encoder, IEEE1394, Ethernet, Power, Video, Tube for air piping
Cable certifications and standards	CE & UL*

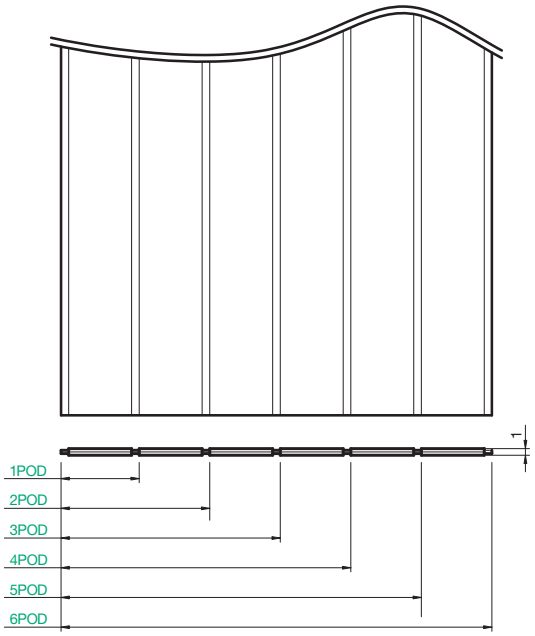
* Contact a Tsubaki representative regarding UL certified products.

Bending radius R	Installation height H'
40	H+10 mm to 30 mm
70	H+60 mm to 80 mm
100	H+60 mm to 80 mm
130	H+60 mm to 80 mm

Product selection

Cleanveyor products are entirely made to order. Submit your operating conditions and the appropriate specifications will be selected by Tsubaki.

Pod



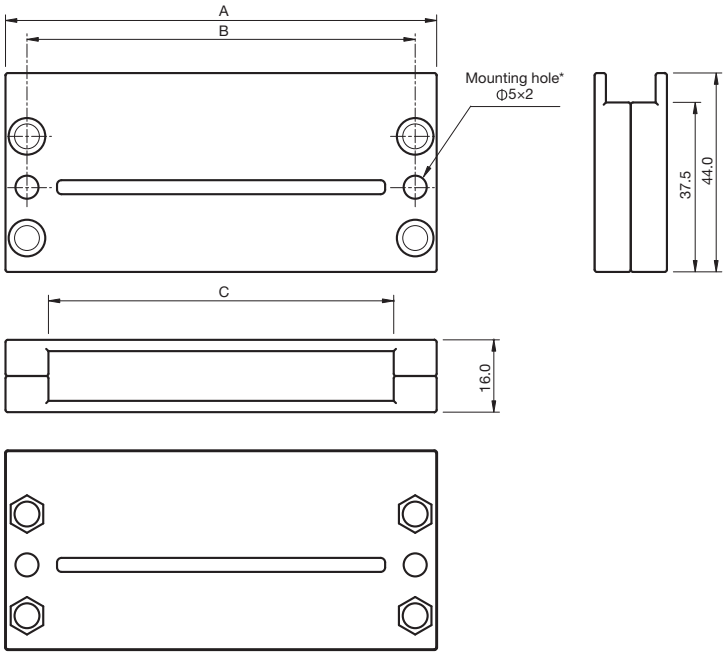
Standard specifications

Pod model no.	No. of pods	Pod thickness mm	Pod width mm	Connection width mm	Total width mm
20305-1	1Pod	1.0	19.0	2.3	23.6
20305-2	2Pod				44.9
20305-3	3Pod				66.2
20305-4	4Pod				87.5
20305-5	5Pod				108.8
20305-6	6Pod				130.1

Special specifications

Pod model no.	No. of pods	Pod thickness mm	Pod width mm	Total width mm
20306-1	1Pod	1.0	30.0	34.5
20332-1			39.0	43.4
20348-1			61.7	67.0
20349-1			83.1	88.0
20326-1			105.0	110.0
20327-1			126.0	131.0

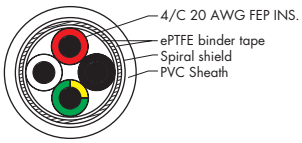
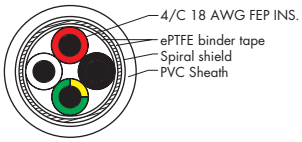
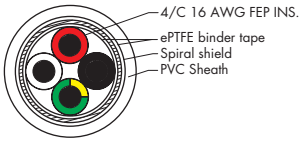
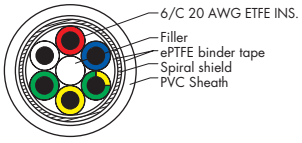
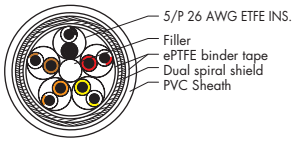
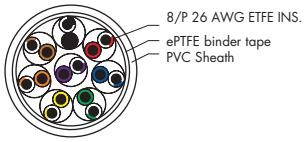
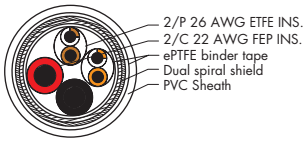
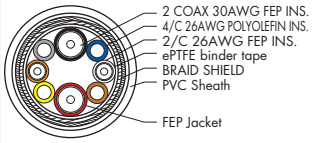
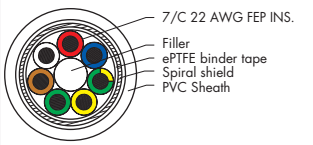
Clamp



Clamp model no.	No. of pods	A mm	B mm	C mm
ECL-2	2Pod	57.2	47.7	38.2
ECL-3	3Pod	76.3	66.8	57.3
ECL-4	4Pod	95.4	85.9	76.4
ECL-5	5Pod	114.5	105.0	95.5
ECL-6	6Pod	133.6	124.1	114.6

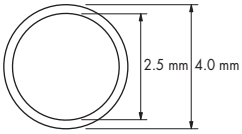
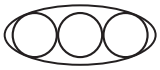
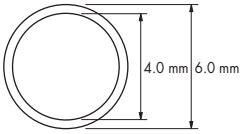
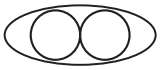
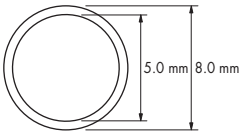
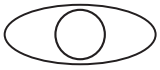
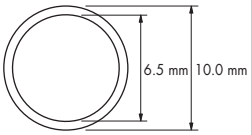
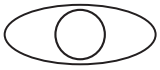
* Use M4 bolts for attaching the clamp to the equipment.

Cables

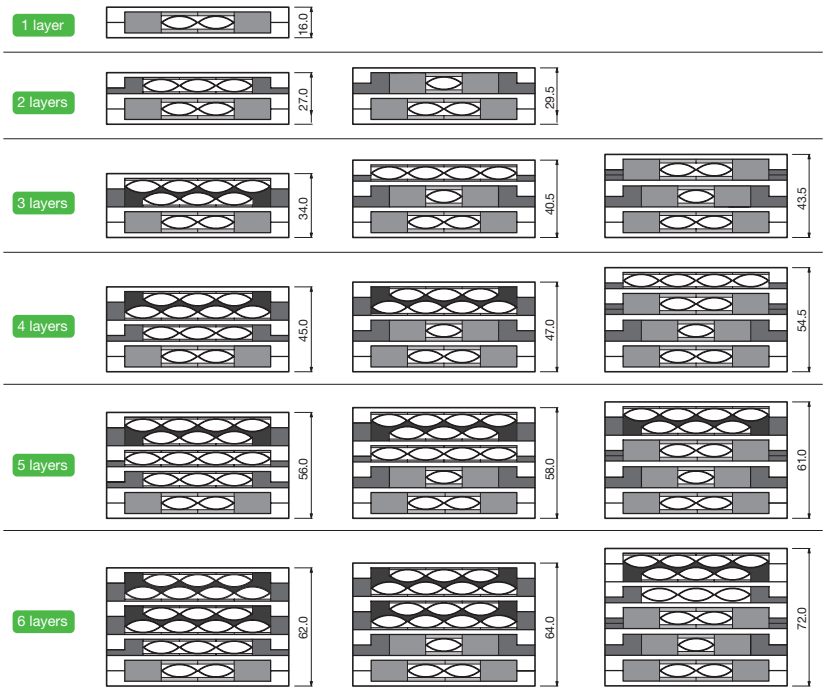
No.	Cable code	Certification status UL	Certification status CE	Rated voltage (V)	Rated temperature (°C)	Cross section	Specifications	Configuration		Outer diameter	No. of cables per pod
1	A		○				HCM-41074/4 4×20AWG w/shield servomotor power supply	Conductor Insulator Binder tape Sheath	Annealed copper wire FEP ePTFE PVC LF	5.4 mm	
2	B		○				HCM-41073/4 4×18AWG w/shield servomotor power supply	Conductor Insulator Binder tape Sheath	Annealed copper wire FEP ePTFE PVC LF	6.0 mm	
3	C		○				HCM-41072/4 4×16AWG w/shield servomotor power supply	Conductor Insulator Binder tape Sheath	Annealed copper wire FEP ePTFE PVC LF	6.8 mm	
4	D	○	○				HCM-41074/6 6×20AWG w/shield servomotor power supply	Conductor Insulator Binder tape Sheath	Annealed copper wire FEP ePTFE PVC LF	6.3 mm	
5	E	○	○	30	80		HCM-41426/10 5P×26AWG w/shield servomotor encoder signals and control	Conductor Insulator Binder tape Sheath	Tinned annealed copper wire ETFE ePTFE PVC LF	5.1 mm	
6	F	○	○	30	80		HCM-41410/16 8P×26AWG Signals I/O	Conductor Insulator Binder tape Sheath	Tinned annealed copper wire ETFE ePTFE PVC LF	5.6 mm	
7	G						HCM-41427/6 2×22AWG + 2P×26AWG w/shield servomotor encoder signals and control	Conductor Insulator Binder tape Sheath	Tinned annealed copper wire FEP/ETFE ePTFE PVC LF	5.1 mm	
8	CA			300	80		HCM-41224/8 2×30AWG (75-Ω coaxial) + 4×26AWG + 2×26AWG w/shield Video, machine vision	Conductor Insulator Binder tape Jacket Sheath	Tinned annealed copper wire POLYOLEFIN/FEP ePTFE FEP PVC LF	5.7 mm	
9	Q	○	○	30	80		HCM-41414/7 7×22AWG w/shield Signals I/O	Conductor Insulator Binder tape Sheath	Tinned annealed copper wire FEP ePTFE PVC LF	5.9 mm	

Contact a Tsubaki representative for more information on using cables not listed here.

Tubes for air piping

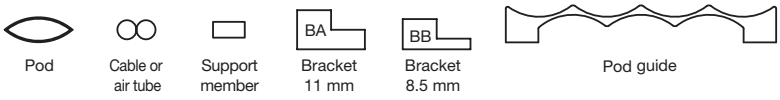
No.	Tube code	Cross section	Specifications	Configuration	Outer diameter	No. of cables per pod
10	A4		Air tube Outer diameter : 4.0 mm Inner diameter : 2.5 mm 0.8 Mpa (20°C)	Materials Polyurethane Color : Black, yellow, blue, : green, transparent, and white	4.0 mm	
11	A6		Air tube Outer diameter : 6.0 mm Inner diameter : 4.0 mm 0.8 Mpa (20°C)	Materials Polyurethane Color : Black, yellow, blue, : green, transparent, and white	6.0 mm	
12	A8		Air tube Outer diameter : 8.0 mm Inner diameter : 5.0 mm 0.8 Mpa (20°C)	Materials Polyurethane Color : Black, yellow, blue, : green, transparent, and white	8.0 mm	
13	A10		Air tube Outer diameter : 10.0 mm Inner diameter : 6.5 mm 0.8 Mpa (20°C)	Materials Polyurethane Color : Black, yellow, blue, : green, transparent, and white	10.0 mm	

Layering examples

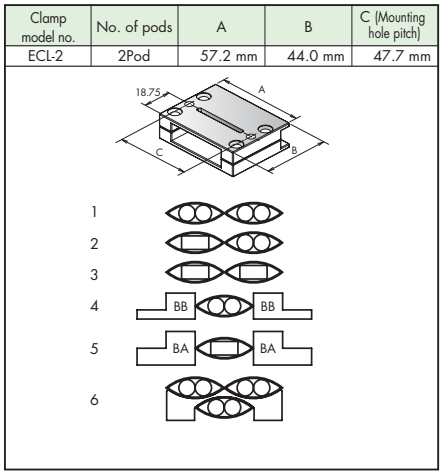


Cable and support member construction for each clamp model

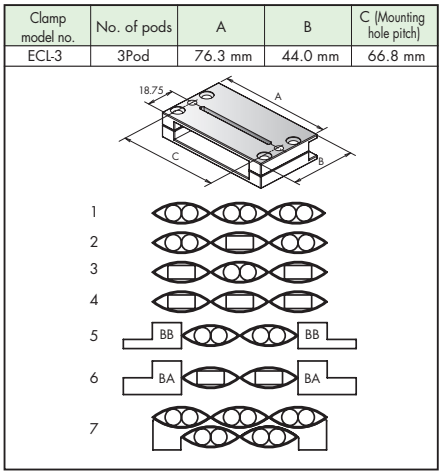
Diagram key



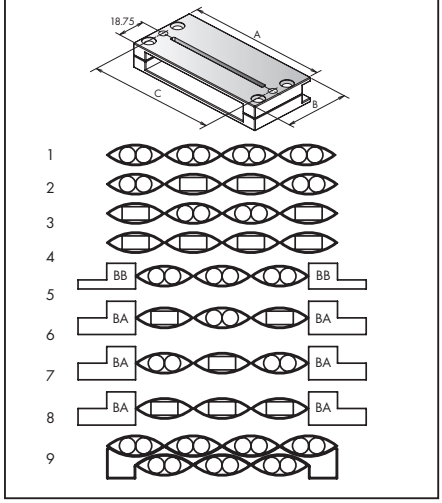
Clamp model no.	No. of pods	A	B	C (Mounting hole pitch)
ECL-2	2Pod	57.2 mm	44.0 mm	47.7 mm



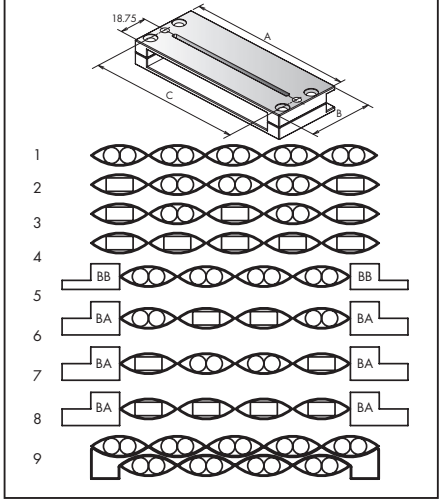
Clamp model no.	No. of pods	A	B	C (Mounting hole pitch)
ECL-3	3Pod	76.3 mm	44.0 mm	66.8 mm



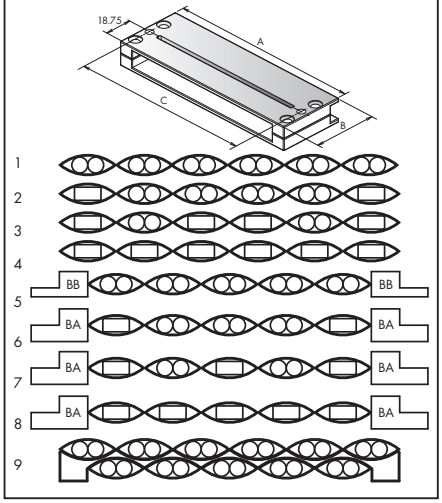
Clamp model no.	No. of pods	A	B	C (Mounting hole pitch)
ECL-4	4Pod	95.4 mm	44.0 mm	85.9 mm



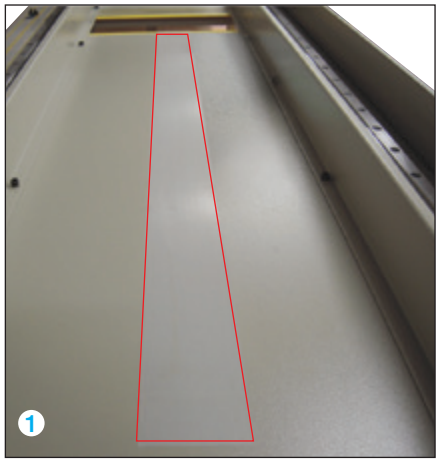
Clamp model no.	No. of pods	A	B	C (Mounting hole pitch)
ECL-5	5Pod	114.5 mm	44.0 mm	105.0 mm



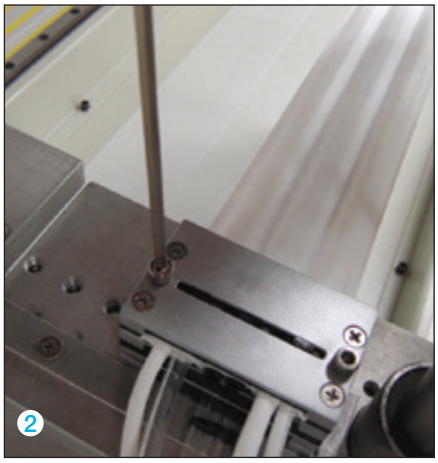
Clamp model no.	No. of pods	A	B	C (Mounting hole pitch)
ECL-6	6Pod	133.6 mm	44.0 mm	124.1 mm



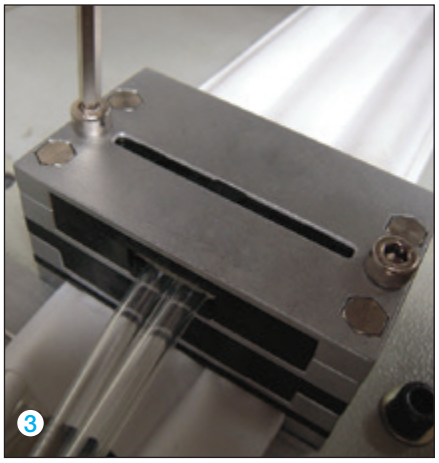
Installation steps



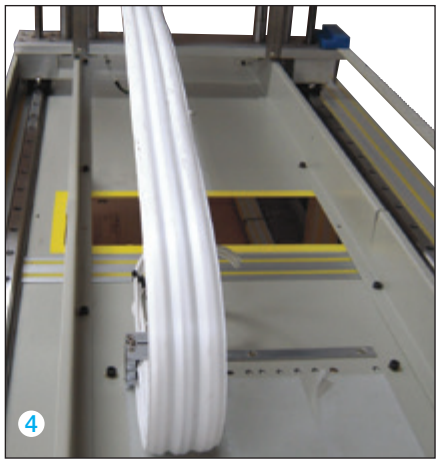
1. Attach a fluoroplastic sheet to the floor where the Cleanveyor will be installed.



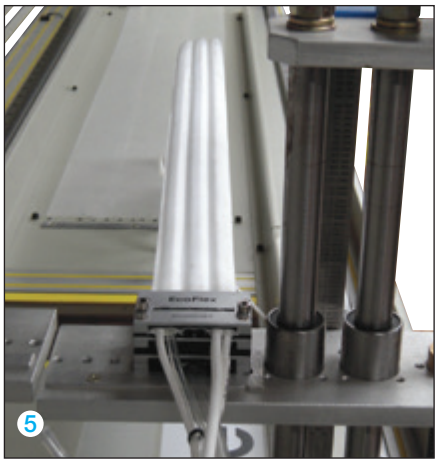
2. Temporarily tighten the moving end clamp.



3. Temporarily tighten the fixed end clamp.



4. With the moving and fixed end clamps temporarily tightened, run the moving end one cycle to confirm operation.

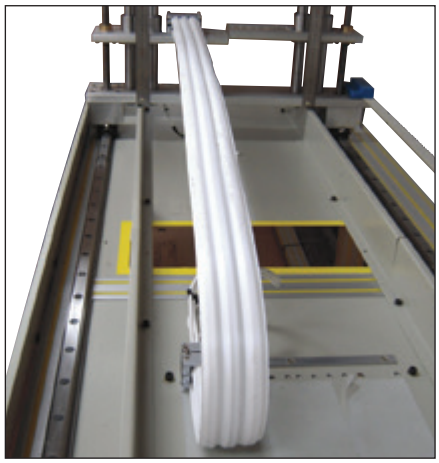


5. Once proper operation has been confirmed, tighten the moving and fixed ends.
* If the Cleanveyor is twisted, adjust the position of the moving or fixed end clamp to remove the twist.

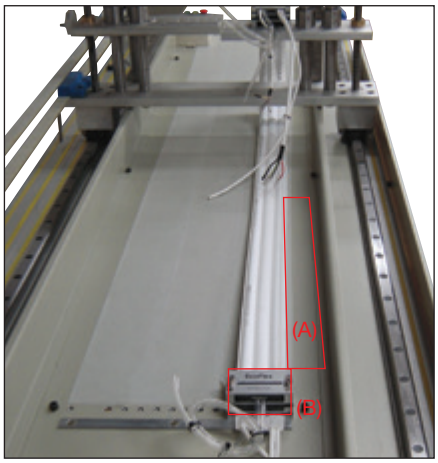
Operating precautions

- Remove any debris on the installation surface, and allow the Cleanveyor to slide on top of the included fluoroplastic sheet.
- Do not allow organic solvents that affect PTFE, PVC, and polyurethane to come into contact with the Cleanveyor.

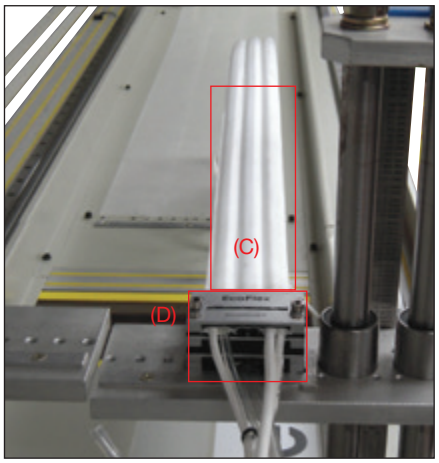
Installation instructions



1. Run the moving end to the shortest point along the travel length.
* Be sure to loosely tighten the mounting bolts.
* Always attach the Cleanveyor from the fixed end.



2. Push the moving end by hand all the way back.
3. Confirm that area (A) is level.
4. If (A) is level, firmly attach fixed end clamp (B).
* If the Cleanveyor is twisted at point (A), adjust the position of fixed end clamp (B), ensure that (A) is level, and then attach it.



5. Run the Cleanveyor to the longest point in travel length (C), confirm that it is level, and then attach moving end clamp (D).
* If the Cleanveyor is twisted at point (C), adjust the position of moving end clamp (D), ensure that (C) is level, and then attach it.

FLATVEYOR® is a free-standing flat cable system

Problems

Can I use just a flat cable instead of a cable carrier?

I need a longer travel stroke and greater speeds.

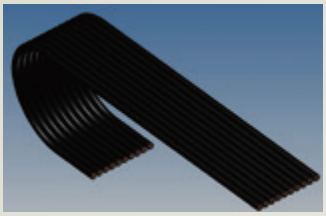
I need help with debris and noise.

Usable with long strokes

Internal support members give it up to a 3-m travel stroke.*1

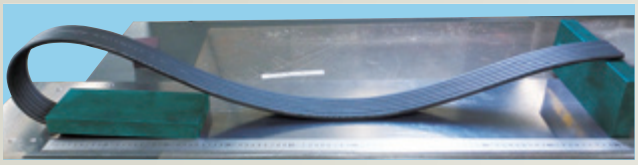
Support member

Built-in



Flat cable

Free-standing



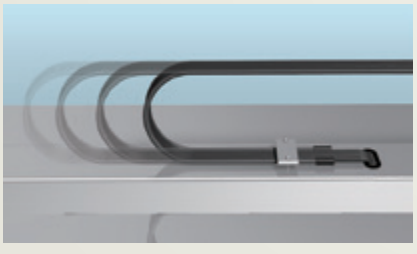
Flat cable (competitor)

FLATVEYOR (Tsubaki)

Minimizes bounce

Travels along the minimum bending radius of the cables for smooth running with no bouncing.

Flat cable (competitor)



FLATVEYOR (Tsubaki)

Low debris generation

ISO Clean Class 2*2 with little wear debris generation.

Low noise

Uses a unique short pitch construction to reduce noise during operation.

Variety of cables available

Tsubaki cables for motion and a wide variety of other cables to choose from.*3

Lightweight

Simple, lightweight construction.

Space savings

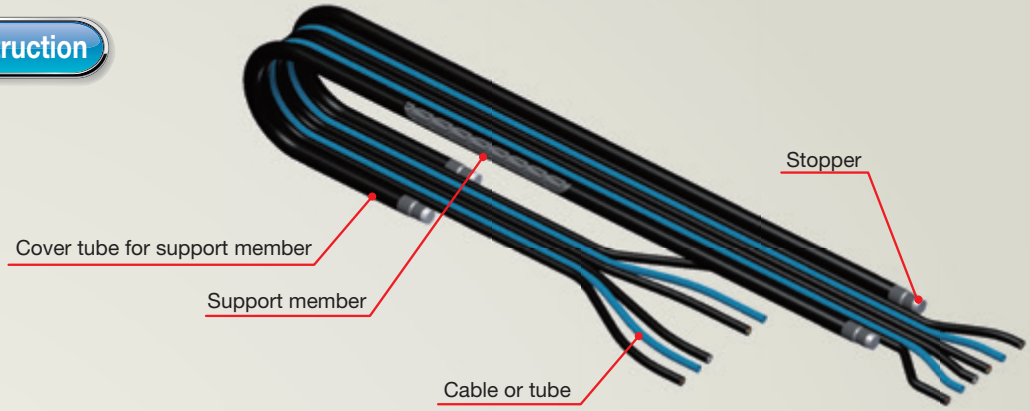
Uses the same shape as flat cables to save on installation space. Can be installed deep within equipment with no relays.

*1 Depending on operating conditions.
*2 Based on in-house test results.
*3 Depending on cable and tube specifications and conditions.

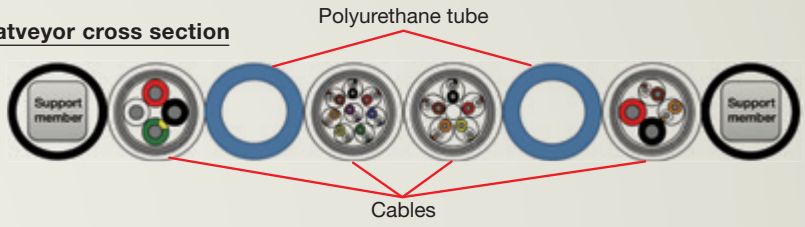
that makes full use of cable carrier technology.

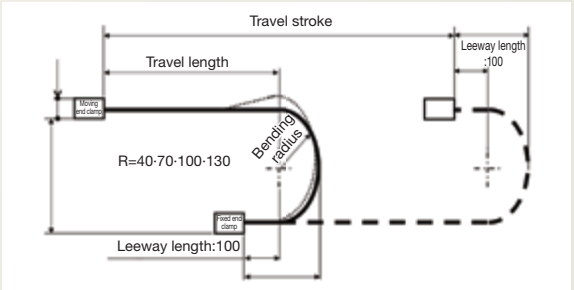
FLATVEYOR the solution to your problems

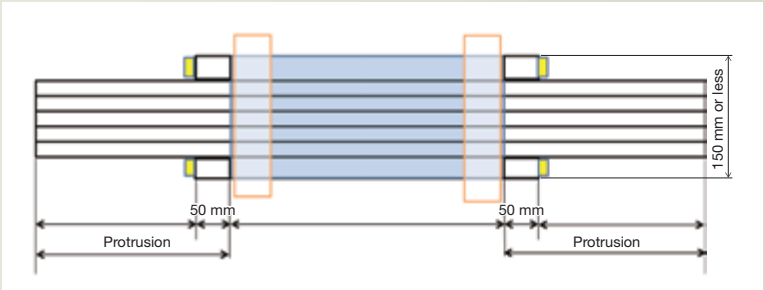
Construction



Sample Flatveyor cross section







Basic specifications and performance

Maximum travel stroke	Support member Bending radius R40: 1200 mm	
	Support member Bending radius R70: 2400 mm	
	Support member Bending radius R100: 3000 mm	
	Support member Bending radius R130: 3000 mm	
Maximum travel speed	2 m / sec	
Maximum acceleration	4 G	
Operating temperature range	-10 to 80°C	
Maximum cable or tube outer diameter	16 mm or less	
Minimum bending radius of Tsubaki recommended cables	Unshielded: Outer diameter x 6, shielded: Outer diameter x 8	
Estimated maximum width	150 mm or less (see above diagram)	
Materials	Support member	Engineering plastic
	Cover tube for support member	PVC
	Stopper	P E

Recommended 300-V rated cables

UL STYLE No.	2464
Rated temperature	80°C
Rated voltage	300 V
Operating temperature range	-10 to 80°C

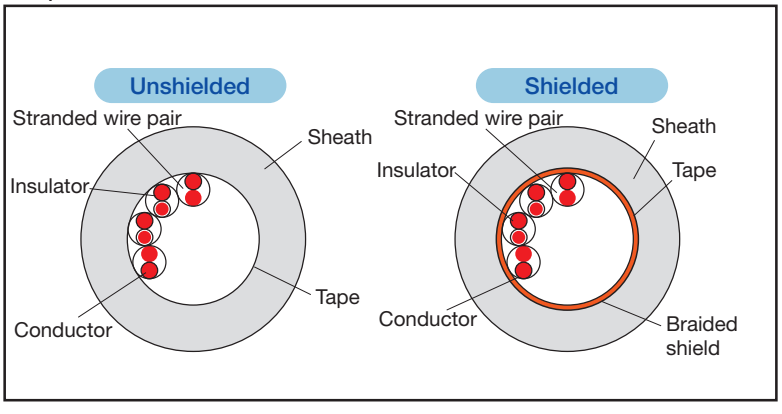
Conductor	Tinned annealed and stranded copper wire
Insulator	Special elastomer
Shield	Tinned copper wire braid
Sheath	Oil resistant PVC (black)

With/without shield	Minimum bending radius
Unshielded	6-times outer diameter of cable or higher
Shielded	8-times outer diameter of cable or higher

No.	Conductor			Core diameter mm	Pairs	Unshielded				Shielded				Permissible current* A (30°C)
	SQmm²	AWG size	Configuration			Outer diameter mm	Approximate mas kg/km	Approximate mas kg/m	Minimum bending R Outer diameter x 6	Outer diameter mm	Approximate mas kg/km	Approximate mas kg/m	Minimum bending R Outer diameter x 8	
S1	0.1	28	49/0.05	0.74	1	3.3	13	0.013	20	3.8	21	0.021	31	2.4
S2					2	4.4	20	0.020	27	4.8	30	0.030	39	1.8
S3					3	4.7	23	0.023	29	5.1	34	0.034	41	1.6
S4					4	5.0	27	0.027	30	5.4	38	0.038	44	1.4
S5					5	5.3	32	0.032	32	5.7	43	0.043	46	1.3
S6					6	5.6	36	0.036	34	6.0	48	0.048	48	1.2
S7					7	5.6	39	0.039	34	6.0	50	0.050	48	1.2
S8					8	6.0	43	0.043	36	6.4	56	0.056	52	1.1
S9					10	6.6	52	0.052	40	7.0	66	0.066	56	1.0
S10	0.2	25	102/0.05	0.93	1	3.7	17	0.017	23	4.2	25	0.025	34	3.8
S11					2	5.0	27	0.027	30	5.4	37	0.037	44	3.0
S12					3	5.3	34	0.034	32	5.7	45	0.045	46	2.6
S13					4	5.7	39	0.039	35	6.3	51	0.051	51	2.3
S14					5	6.1	47	0.047	37	6.5	60	0.060	52	2.1
S15					6	6.6	54	0.054	40	7.1	69	0.069	57	2.0
S16					7	6.6	58	0.058	40	7.1	73	0.073	57	1.9
S17					8	7.1	65	0.065	43	7.6	80	0.080	61	1.8
S18					10	7.8	80	0.080	47	8.2	97	0.097	66	1.7
S19	0.3	23	108/0.06	1.09	1	4.0	20	0.020	24	4.4	28	0.028	36	5.2
S20					2	5.5	36	0.036	33	5.9	44	0.044	48	4.0
S21					3	5.9	42	0.042	36	6.4	54	0.054	52	3.5
S22					4	6.3	51	0.051	38	6.7	64	0.064	54	3.2
S23					5	6.9	61	0.061	42	7.3	76	0.076	59	2.9
S24					6	7.4	72	0.072	45	7.8	87	0.087	63	2.7
S25					7	7.4	78	0.078	45	7.8	94	0.094	63	2.5
S26					8	8.0	88	0.088	48	8.4	105	0.105	68	2.4
S27					10	8.8	110	0.110	53	9.2	130	0.130	74	2.3
S28	0.5	21	100/0.08	1.5	1	5.0	32	0.032	30	5.5	46	0.046	44	7.8
S29					2	7.9	62	0.062	48	8.4	80	0.080	68	6.0
S30					3	8.5	84	0.084	51	9.0	110	0.110	72	5.2
S31					4	9.5	105	0.105	57	10.0	125	0.125	80	4.7
S32					5	10.6	125	0.125	64	11.1	150	0.150	89	4.3
S33					6	11.2	145	0.145	68	11.7	175	0.175	94	4.0
S34					8	13.4	195	0.195	81	13.9	230	0.230	112	3.6
S35					10	15.8	260	0.260	95	16.3	300	0.300	131	3.4

* Permissible current is for reference and not a guaranteed value.

Sample cross section



Identification of insulators

Pair no.	Color	
	Core 1	Core 2
1	Blue	White
2	Yellow	Purple
3	Green	Black
4	Red	Gray
5	Purple	Orange
6	Blue	Brown
7	Yellow	Black
8	Green	Gray
9	Orange	Orange
10	Purple	White

Available support member

	R40
	R70
	R100
	R130

Recommended 600-V rated cables

UL STYLE No.	2586
Rated temperature	105°C
Rated voltage	600 V
Operating temperature range	-10 to 105°C

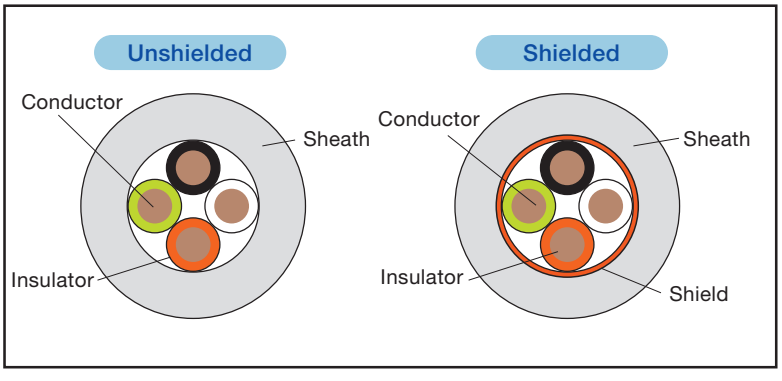
Conductor	Tinned annealed and stranded copper wire
Insulator	Special elastomer
Shield	Tinned copper wire braid
Sheath	Oil resistant PVC (black)

With/without shield	Minimum bending radius
Unshielded	6-times outer diameter of cable or higher
Shielded	8-times outer diameter of cable or higher

No.	Conductor			Core diameter mm	Cores	Unshielded				Shielded				Permissible current* A (30°C)
	SQmm²	AWG size	Configuration			Outer diameter mm	Approximate mas kg/km	Approximate mas kg/m	Minimum bending R Outer diameter x 6	Outer diameter mm	Approximate mas kg/km	Approximate mas kg/m	Minimum bending R Outer diameter x 8	
P1	0.5	21	100/0.08	1.52	2	5.3	34	0.034	32	5.7	45	0.045	46	9.2
P2					3	5.5	41	0.041	33	5.9	53	0.053	48	8.0
P3					4	5.9	49	0.049	36	6.3	61	0.061	51	7.2
P4					5	6.3	58	0.058	38	6.7	72	0.072	54	6.7
P5					6	6.8	66	0.066	41	7.2	83	0.083	58	6.2
P6					8	8.0	90	0.090	48	8.4	110	0.110	68	5.6
P7					10	8.9	110	0.110	54	9.3	130	0.130	75	5.1
P8	0.75	19	150/0.08	1.73	2	5.7	41	0.041	35	6.1	53	0.053	49	12.0
P9					3	5.9	51	0.051	36	6.3	62	0.062	51	10.5
P10					4	6.4	63	0.063	39	6.8	75	0.075	55	9.4
P11					5	6.9	74	0.074	42	7.3	88	0.088	59	8.7
P12					6	7.4	87	0.087	45	7.8	105	0.105	63	8.1
P13					8	8.8	120	0.120	53	9.3	145	0.145	75	7.3
P14					10	9.7	145	0.145	59	10.3	175	0.175	83	6.7
P15	1.25	17	7/36/0.08	2.2	2	6.6	58	0.058	40	7.0	72	0.072	56	17.3
P16					3	7.0	75	0.075	42	7.4	89	0.089	60	15.1
P17					4	7.5	92	0.092	45	7.9	110	0.110	64	13.5
P18					5	8.1	110	0.110	49	8.7	135	0.135	70	12.6
P19					6	8.8	130	0.130	53	9.3	155	0.155	75	11.7
P20					8	10.5	180	0.180	63	11.1	210	0.210	89	10.6
P21					10	11.6	220	0.220	70	12.1	250	0.250	97	9.7
P22	2	15	7/57/0.08	2.6	2	7.4	79	0.079	45	7.8	94	0.094	63	23.6
P23					3	7.8	105	0.105	47	8.2	120	0.120	66	20.6
P24					4	8.5	130	0.130	51	9.0	155	0.155	72	18.4
P25					5	9.2	155	0.155	56	9.7	185	0.185	78	17.2
P26					6	10.0	185	0.185	60	10.5	220	0.220	84	15.9
P27					8	12.0	250	0.250	72	12.5	290	0.290	100	14.4
P28					10	13.2	310	0.310	80	13.7	350	0.350	110	13.2
P29	3.5	12	7/64/0.1	3.4	2	9.3	125	0.125	56	9.8	155	0.155	79	35.5
P30					3	9.8	165	0.165	59	10.3	195	0.195	83	30.9
P31					4	10.7	210	0.210	65	11.2	240	0.240	90	27.6
P32					5	11.9	270	0.270	72	12.4	280	0.280	100	25.8
P33					6	12.9	290	0.290	78	13.4	330	0.330	108	23.9
P34					8	15.5	430	0.430	93	16.0	470	0.470	128	21.6
P35	5.5	10	7/100/0.1	4.15	2	11.2	190	0.190	68	11.7	220	0.220	94	48.7
P36					3	11.8	250	0.250	71	12.3	280	0.280	99	42.4
P37					4	12.9	290	0.290	78	13.4	320	0.320	108	38.0
P38					5	14.3	390	0.390	86	14.8	430	0.430	119	35.4
P39					6	15.5	470	0.470	93	16.0	510	0.510	128	32.9

* Permissible current is for reference and not a guaranteed value.

Sample cross section



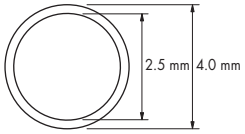
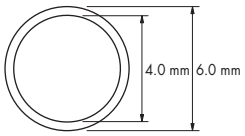
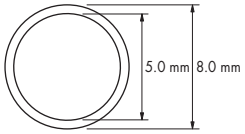
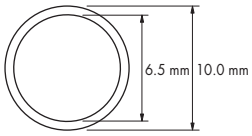
Identification of insulators

Core no.	Color
1	Black
2	White
3	Red
4	Green
5	Yellow
6	Brown
7	Blue
8	Gray
9	Orange
10	Purple

Available support member

	R40
	R70
	R100
	R130

Tubes for air piping

No.	Tube code	Cross section	Specifications	Configuration	Outer diameter
10	A4		Air tube Outer diameter: 4.0 mm Inner diameter: 2.5 mm 0.8 Mpa (20°C)	Material Polyurethane Color : Black, yellow, blue, : green, transparent, and white	4.0 mm
11	A6		Air tube Outer diameter: 6.0 mm Inner diameter: 4.0 mm 0.8 Mpa (20°C)	Material Polyurethane Color : Black, yellow, blue, : green, transparent, and white	6.0 mm
12	A8		Air tube Outer diameter: 8.0 mm Inner diameter: 5.0 mm 0.8 Mpa (20°C)	Material Polyurethane Color : Black, yellow, blue, : green, transparent, and white	8.0 mm
13	A10		Air tube Outer diameter: 10.0 mm Inner diameter: 6.5 mm 0.8 Mpa (20°C)	Material Polyurethane Color : Black, yellow, blue, : green, transparent, and white	10.0 mm

Product selection

Flatveyor products are entirely made to order. Submit your operating conditions and the appropriate specifications will be selected by Tsubaki.

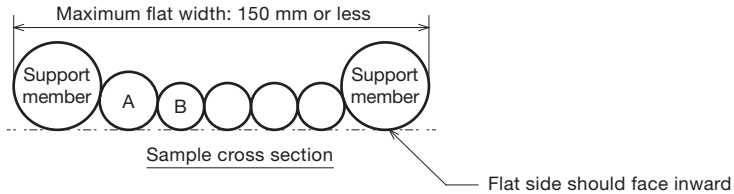
Precautions regarding cable and tube bonding

Materials

Only cables with outer jackets made of PVC or polyurethane, or tubes made of the same, can be bonded.
Contact a Tsubaki representative to use cables other than those recommended by Tsubaki.

Differences in outer diameters

The ideal permissible difference between the outer diameters of adjacent cables and tubes should be less than approx. 30%. However, there is no limit for cover tubes for support members. Contact a Tsubaki representative regarding a difference in outer diameters greater than this.



Options

With connectors

If you provide us with the name of a specific connector manufacturer, the connector model number, the terminal number, and connection information Tsubaki will confirm its usability for you.

Using cables that are not recommended by Tsubaki

If you provide us with the specifications and a sample of a specified cable, we will confirm its minimum bending radius, whether it can be bonded, etc., and let you know whether it can be used. However, be advised that any cable damage falls outside the scope of the Tsubaki warranty.

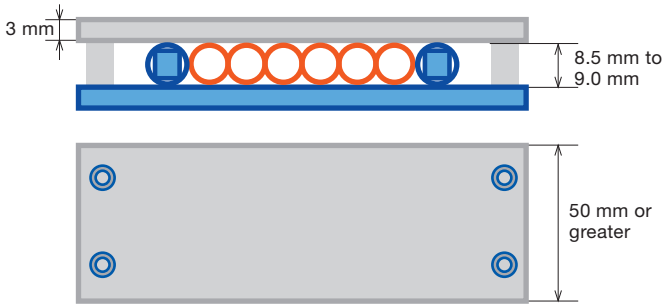
Clamp

Tsubaki can also offer clamps. If you will manufacture your own clamps, please follow the recommended dimensions below.

Handling Flatveyor attachment clamps

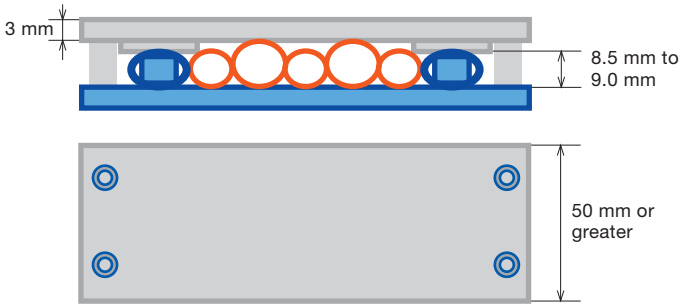
Outer diameter of cable less than 10 mm

Ensure that the clamp has a length over 50 mm, thickness over 3 mm, and height between 8.5 mm to 9.0 mm as shown below. Tighten the clamp with M6 bolts in four locations.



Outer diameter of cable greater than 10 mm

Ensure that the clamp has a length over 50 mm, thickness over 3 mm, and use a spacer or similar part to make the height of the area for cover tubes for support members between 8.5 mm to 9.0 mm as shown below. Tighten the clamp with M6 bolts in four locations.



Precautions

Be advised that the support member will deform and may break if the height of the area for its cover tube is less than 8.5 mm.

CABLEVEYOR® TSUBAKI ECO LINK TKR Series

Low noise
40 dB (A) or less*1

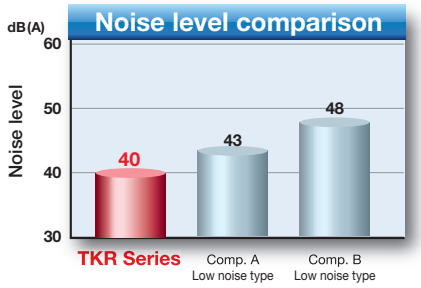
Featuring unique Tsubaki technology

Low noise and low debris generation to help the environment.

Low debris generation
Clean class ISO Class 3*2

Low noise

The unique bending structure, utilizing a short pitch and plastic sag, provides the best quietness in its class.



In-house test conditions
- Installation: Standard (with floor)
- Noise measuring distance: 500 mm
- Travel speed: 100 m/min

Low debris generation

There is no sliding wear between pins and pin holes, and its use of highly wear resistant material gives it the ultimate in low debris generation.

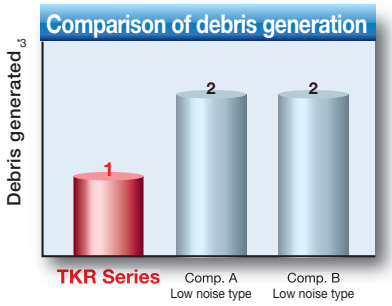
* Flame resistance standard: Plastics that conform to UL 94HB are used.

IPA

Evaluated by IPA as ISO Clean Class 1!

Fraunhofer
Institute for Manufacturing
Engineering and Automation

IPA test conditions
- Travel speed: 120 m/min *No supports
- Acceleration: 5.0 m/s²



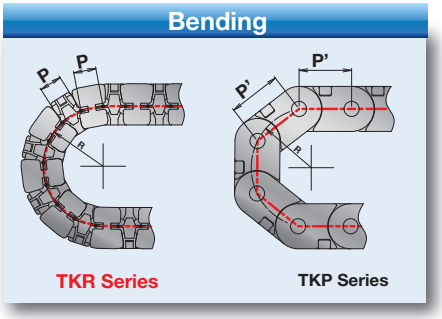
In-house test conditions
- Installation: Standard (with floor)
- Travel speed: 120 m/min
  *No supports

*3 Number of 0.1-μm or larger particles in one cubic foot.

Smooth bending and low vibration

A nearly circular bending arc gives it extremely smooth, low vibration travel.

(Maximum travel speed: 300 m/min)



Easy to cut and join

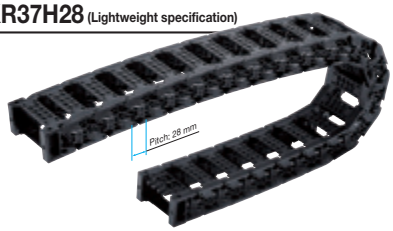
Uses a unique snap fit link structure that makes it just as easy to cut and join as traditional plastic cable carriers.

*1 Based on in-house test results. (TKR15H22-30W40R40, travel speed less than 100 m/min)

*2 In-house test results according to ISO 14644-1 "Classification of air cleanliness by particle concentration". (Travel speed 120 m/min)

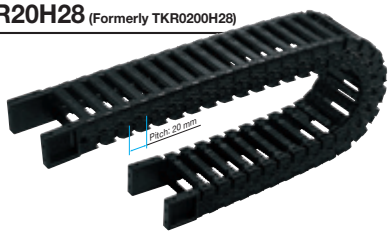
TKR15H22 (Formerly TKR0150)

TKR37H28 (Lightweight specification)



TKR28H52 (Formerly TKR0280)

TKR20H28 (Formerly TKR0200H28)



TKR26H40 (Formerly TKR0260)

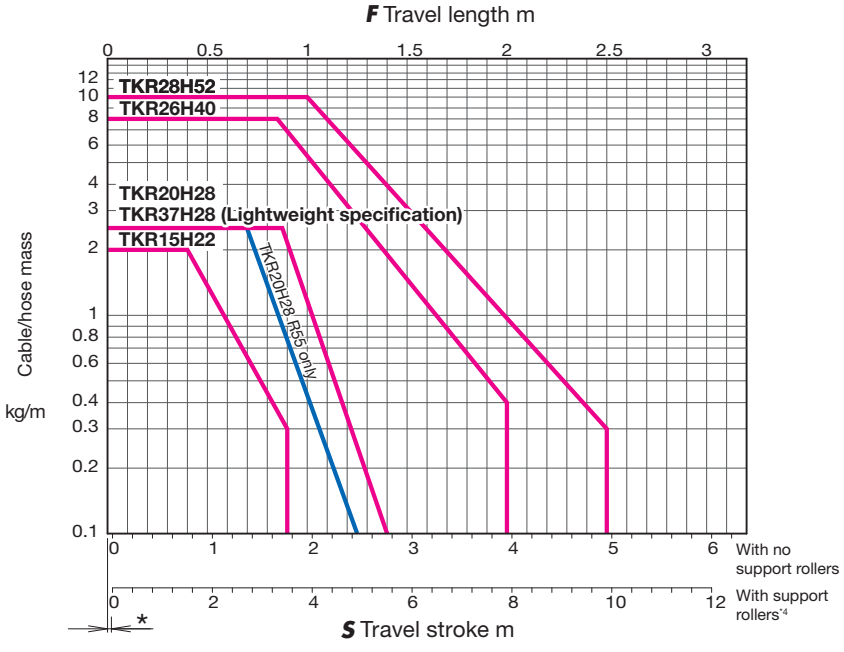
List of specifications

* Longer strokes can be supported by installing support rollers (see the load graph)

Model	Inner height *H* mm	Inner width *W* mm	Bending radius *R* mm	Maximum travel stroke m ☆1	Maximum cable and hose outer diameter mm ☆2	Maximum cable and hose mass kg/m	Materials: Body and plastic bracket	Pitch	Divider system: Vertical divider	Divider system: Total (DSA type)	Divider system: Partial (DSB type)
TKR15H22 (Formerly TKR0150)	22	20 40 60	40 50 75	1.77*	19	2	Engineering plastic (black)	15	●	●	
TKR20H28 (Formerly TKR0200H28)	28	30 40 50 60 80 100 120	55 75 95 150	2.76*	25	2.4		20	●	●	
TKR37H28 (Lightweight specification)	28	40 50 60 70 80	55 75 100	2.76*	25	2.4		37	●	●	●
TKR26H40 (Formerly TKR0260)	40	50 62 75 87 100 125 150 200	75 100 125 150	3.95*	36	8		26	●	●	●
TKR28H52 (Formerly TKR0280)	52	50 62 75 87 100 125 150 200	75 100 150 200	4.94*	46	10		28	●	●	●

☆1. Table values shown are for standard series. Contact a Tsubaki representative regarding our Dry Environment Series.
☆2. The maximum cable and hose outer diameter for the bending radius will vary by cable or hose. Contact your cable or hose manufacturer for more information.

Load graph



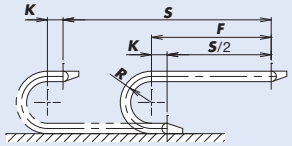
* Includes leeway length.

Note: The above load graph shows loads for the standard series.
Contact a Tsubaki representative regarding loads for our Dry Environment Series.

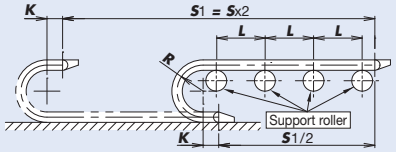
▶ Contact a Tsubaki representative regarding travel lengths greater than 2.5 m.

■With no support rollers

S : Travel stroke
F : Travel length
S : Bending radius
K : Leeway length



■With support rollers (*S*1 : Travel stroke)



Note: Leeway length K when using support rollers will differ from when not using support rollers.

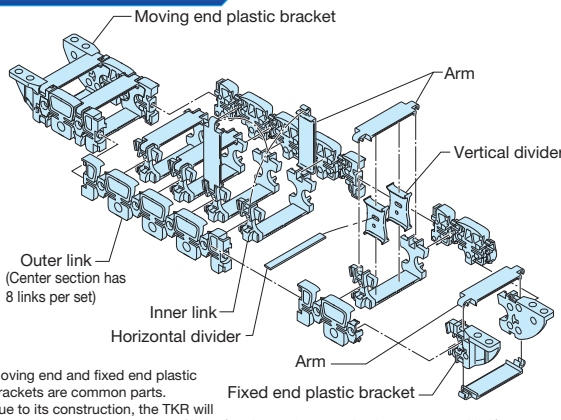
*4 Set the installation distance L between support rollers as follows:

TKR15H22 : ***L*** = 0.4 m or less	TKR26H40 : ***L*** = 0.85 m or less
TKR20H28 : ***L*** = 0.7 m or less	TKR28H52 : ***L*** = 1.0 m or less
TKR37H28 (Lightweight specification) : ***L*** = 0.7 m or less	

TKR15H22

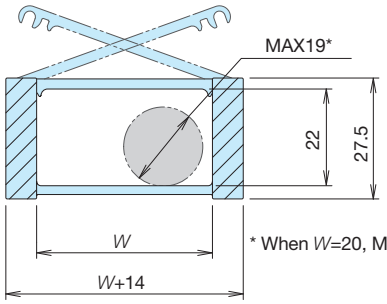
(Formerly TKR0150)

Construction



- Moving end and fixed end plastic brackets are common parts.
- Due to its construction, the TKR will always have an even number of links (cutting and connecting is on every 2nd link).

Cross-section



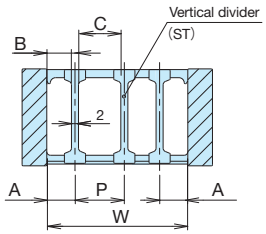
* When *W*=20, MAX18

W = 20, 40, 60

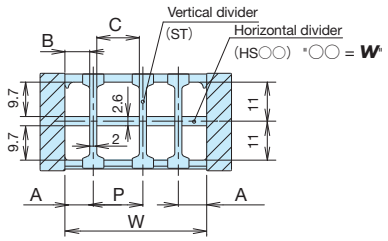
Ⓐ—Ⓐ arrows

Divider dimensions

[When using only vertical dividers]



[When using both horizontal and vertical dividers (DSA type)]



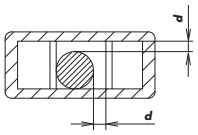
Vertical divider type	Inner width *W*	*A*	*B*	*P*	*C*
ST (sliding)	Common *W*	5 to 21	4 to 20	6 to 50	4 to 48
ST (locking)	20	6, 8	5, 7	6, 8	4, 6
	40	6 to 20 Every 2 mm	5 to 19 Every 2 mm	6 to 28 Every 2 mm	4 to 26 Every 2 mm
	60	6 to 20	5 to 19	6 to 48	4 to 46

* The maximum values for A, B, P, and C are applied when using horizontal dividers.

Notes:

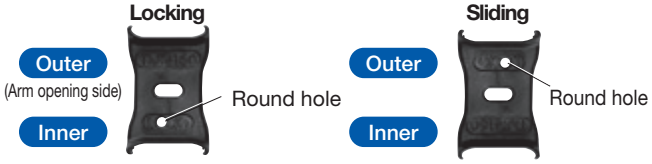
A: Distance from center of vertical divider to end face of link
B: Gap between vertical divider and link
P: Distance between the centers of neighboring vertical dividers
C: Gap between neighboring vertical dividers

Note: Make the gap between cables/hoses and the divider or link (d in the figure to the right) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



Assembling vertical dividers

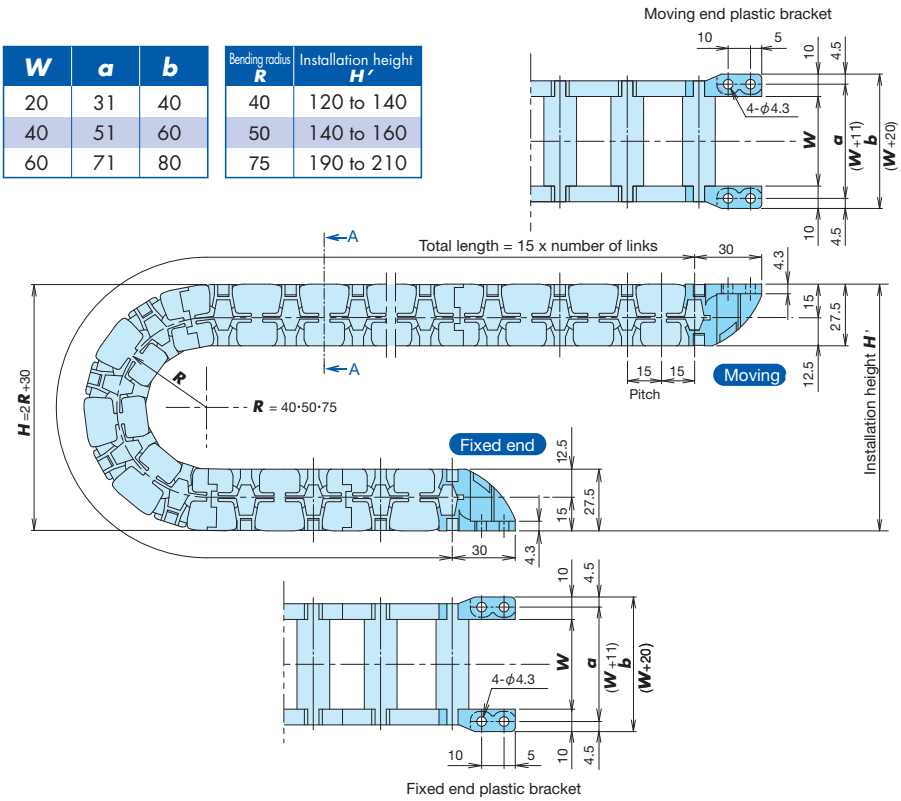
***The direction the divider is assembled will determine whether the part can lock or slide.**



Dimensions & brackets

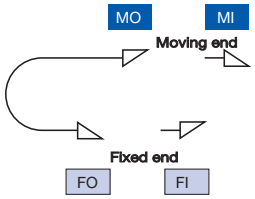
W	*a*	*b*
20	31	40
40	51	60
60	71	80

Bending radius *R*	Installation height *H'*
40	120 to 140
50	140 to 160
75	190 to 210



- MO and FO brackets are common parts.
- MI and FI brackets are common parts.

Bracket attachment directions and models



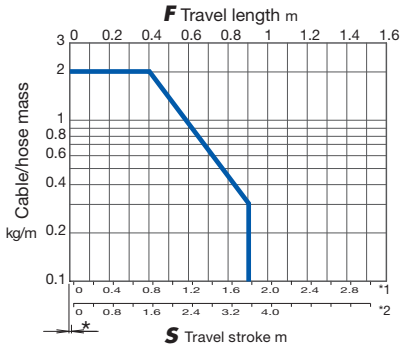
Note: Design and installation as per installation height H'.

Basic specifications

Maximum travel speed		300 m/min*1
Operating temperature range		-40 to 80°C
Materials	Body	Engineering plastic (black)
	Plastic bracket	
	Vertical divider	
	Horizontal divider	Engineering plastic (white)

Notes: 1. 150 m/min with support rollers.
2. Contact a Tsubaki representative regarding maximum acceleration.
3. Cannot be used in acidic or alkaline environments.

Load graph



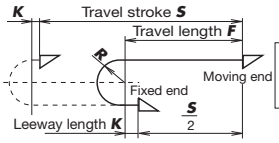
* Includes leeway length.

*1: No support rollers
*2: With support rollers

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Number of links: When fixed end is at the center of the stroke.
Round up all decimals, no matter how small, to get an even number.
* Due to its construction, the TKR Series requires an even number of links.



S : Travel stroke mm
R : Bending radius mm
P : Pitch = 15 mm
K : Leeway length = 15 mm or higher

* Set leeway length K over 23 mm when there are support rollers.
Support rollers should be spaced less than 400 mm apart.

Model numbering

Ex. TKR15H22-30W20R40 24 links × 1 set, vertical dividers every 4 links

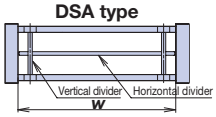
	Model	Inner height	Inner width	Bending radius	Quantity	Unit
Body	TKR15	H22	-30 W20	R40	24	[L (links)]
Fixed end bracket	TKR15 H22		W20-	FO	1	[K (pcs)]
Moving end bracket	TKR15 H22		W20-	MO	1	[K (pcs)]
Vertical divider *	TKR15 H22-			ST	6	[K (pcs)]
Configuration	(24L+FO+MO)×1 set					

Note: 1. Moving end and fixed end plastic brackets are common parts.
2. Dividers are delivered unassembled.
3. Plastic brackets are delivered assembled
4. Required number of vertical dividers:
(when normally spaced every 4 links = skips one arm part)
• Number of links N for attaching vertical dividers
= Total number of links (even) ÷ 4 N: Integer (round down decimals)
• Required number of vertical dividers
= N x n n: Number of vertical dividers attached per spot on the link
5. Attach vertical dividers from second arm on the moving end.

***Divider**

Type	Model No.	Part	Unit
1. Vertical divider	TKR15H22-ST	1 vertical divider	K (pcs)
2. Horizontal divider(for DSA type)	TKR15H22-HS (Dimension W) W = 20·40·60	1 horizontal divider	K (pcs)

DSA type



Note: Requires 2 or more vertical dividers.

Model No.

- Body -

Model No.	Inner width W	Bending radius R	Mass kg/m
TKR15H22-30W20R40	20	40	0.3
TKR15H22-30W20R50		50	
TKR15H22-30W20R75		75	
TKR15H22-30W40R40	40	40	0.4
TKR15H22-30W40R50		50	
TKR15H22-30W40R75		75	
TKR15H22-30W60R40	60	40	0.5
TKR15H22-30W60R50		50	
TKR15H22-30W60R75		75	

- Body (extension) -

Model No.	Inner width W	Bending radius R	Mass kg/m
TKR15H22-30W20R40ETL	20	40	0.3
TKR15H22-30W20R50ETL		50	
TKR15H22-30W20R75ETL		75	
TKR15H22-30W40R40ETL	40	40	0.4
TKR15H22-30W40R50ETL		50	
TKR15H22-30W40R75ETL		75	
TKR15H22-30W60R40ETL	60	40	0.5
TKR15H22-30W60R50ETL		50	
TKR15H22-30W60R75ETL		75	

- Bracket -

Model No.	For Cableveyor model no.	Mass g/each
TKR15H22W20-MO	TKR15H22-30W20Rxxx	11
TKR15H22W20-MI		
TKR15H22W20-FO		
TKR15H22W20-FI		
TKR15H22W40-MO	TKR15H22-30W40Rxxx	12
TKR15H22W40-MI		
TKR15H22W40-FO		
TKR15H22W40-FI		
TKR15H22W60-MO	TKR15H22-30W60Rxxx	14
TKR15H22W60-MI		
TKR15H22W60-FO		
TKR15H22W60-FI		

- Vertical divider -

Model No.	For Cableveyor model no.	Mass g/each
TKR15H22-ST	TKR15H22-30WxxxRxxx	1

- Horizontal divider -

Model No.	For Cableveyor model no.	Mass g/each
TKR15H22-HS20	TKR15H22-30W20Rxxx	1
TKR15H22-HS40	TKR15H22-30W40Rxxx	2
TKR15H22-HS60	TKR15H22-30W60Rxxx	3

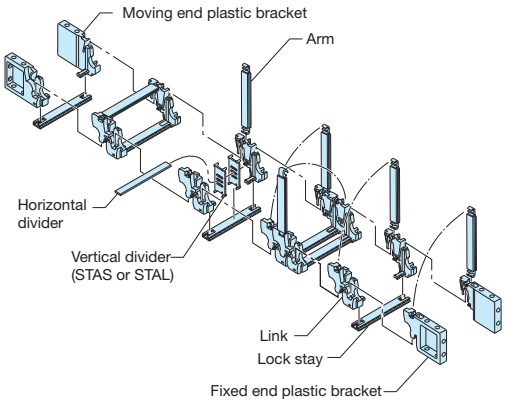
Adding additional links

1) Ordering
When ordering, be sure that the unit and extension model numbers are for an even number of links.
2) Delivery: 1, 2, and 3 below will be delivered unassembled in the following quantities.
(i) Outer links (8 links = 1 set): {Body quantity (number of links) ÷ 8 (round up) × 2 (left/right)} × Number of sets
(ii) Inner links: {Body quantity (number of links) ÷ 2} × Number of sets
(iii) Arms: {Body quantity (number of links) ÷ 2} × Number of sets
* Outer links are common parts for both left and right sides. 8 links = 1 set and are delivered uncut.
Ex. 1 **TKR15H22-30W20R40** 2 links x 1 set
①Outer links: 2
②Inner links: 1
③Arm: 1
Ex. 2 **TKR15H22-30W20R40** 10 links x 2 sets
①Outer links: 8
②Inner links: 10
③Arms: 10

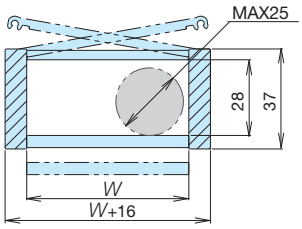
TKR20H28

(Formerly TKR0200H28)

Construction



Cross-section

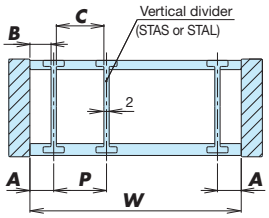


W = 30, 40, 50, 60, 80, 100, 120

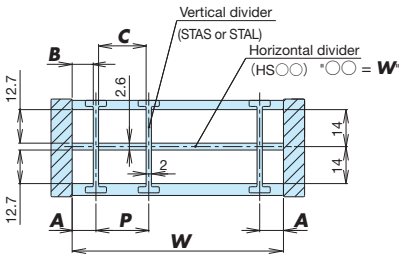
Ⓐ—Ⓐ arrows

Divider dimensions

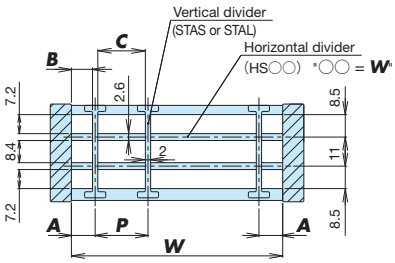
[When using only vertical dividers]



When dividing into 2 levels **[When using both horizontal and vertical dividers (DSA type)]**



When dividing into 3 levels



Vertical divider type	Inner width *W*	*A*	*B*	*P*	*C*
STAS (sliding type)	Common *W*	4 to 21	3 to 20	8 to 82	6 to 80
STAL (locking type)	30	7 to 15	6 to 14	8 to 16	6 to 14
	40	4 to 20	3 to 19	8 to 32	6 to 30
	50	5 to 21	4 to 20	8 to 40	6 to 38
	60	6 to 18	5 to 17	8 to 48	6 to 46
	80	4 to 20	3 to 19	8 to 72	6 to 70
	100	6 to 18	5 to 17	8 to 80	6 to 82
	120	4 to 20	3 to 19	8 to 80	6 to 82

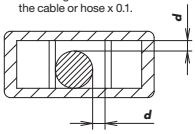
Every 4 mm

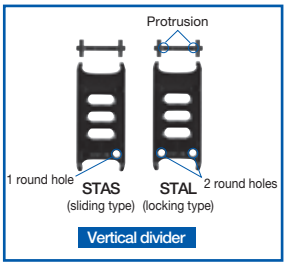
* The maximum values for A, B, P, and C are applied when using horizontal dividers.

Notes:

A: Distance from center of vertical divider to end face of link
B: Gap between vertical divider and link
P: Distance between the centers of neighboring vertical dividers
C: Gap between neighboring vertical dividers

Note: Make the gap between cables/hoses and the divider or link (d in the figure below) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



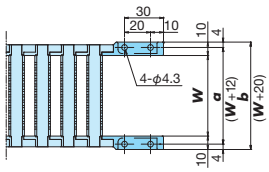


Dimensions & brackets

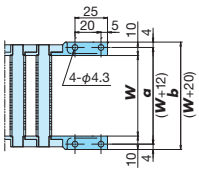
W	*a*	*b*
30	42	50
40	52	60
50	62	70
60	72	80
80	92	100
100	112	120
120	132	140

Bending radius *R*	Installation height *H'*
55	182 to 202
75	222 to 242
95	262 to 282
150	372 to 392

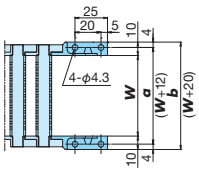
Moving end plastic bracket MU

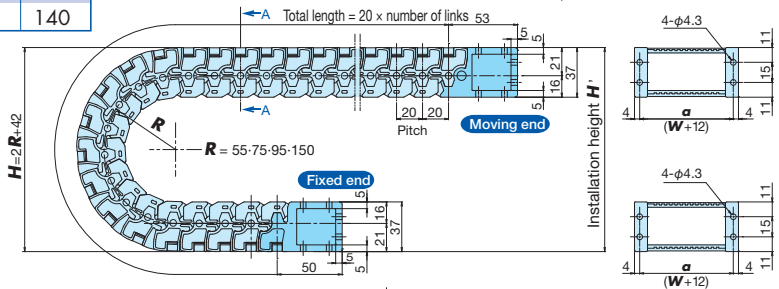


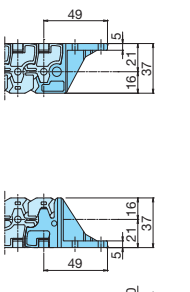
Moving end plastic bracket MO

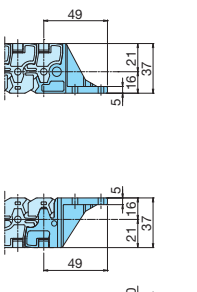


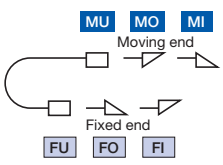
Moving end plastic bracket MI

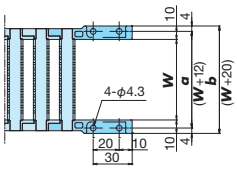






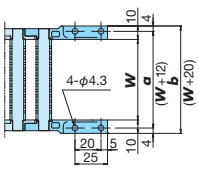




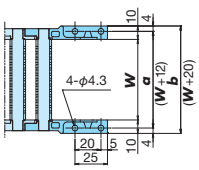


Fixed end plastic bracket FU

Note: Design and installation as per installation height H'.



Fixed end plastic bracket FO



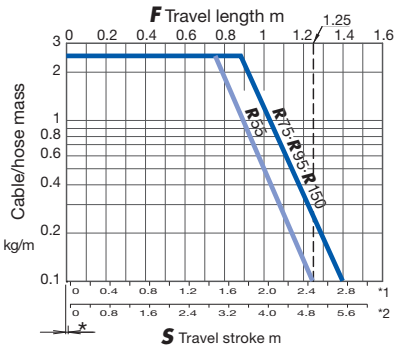
Fixed end plastic bracket FI

Basic specifications

Maximum travel speed		300 m/min*1
Operating temperature range		-40 to 80°C
Materials	Body	Engineering plastic (black)
	Plastic bracket	
	Vertical divider	
	Horizontal divider	Engineering plastic (white)
Standard length		100 links

Notes: 1. 150 m/min with support rollers.
2. Contact a Tsubaki representative regarding maximum acceleration.
3. Cannot be used in acidic or alkaline environments.

Load graph



* Includes leeway length.

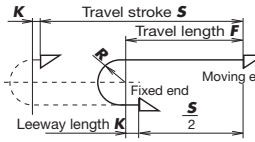
*1: No support rollers
*2: With support rollers

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Number of links: When fixed end is at the center of the stroke.

Round up all decimals no matter how small, to get a whole number.



S : Travel stroke mm
R : Bending radius mm
P : Pitch = 20 mm
K : Leeway length = 40 mm or higher

* Set leeway length K over 60 mm when there are support rollers.
Support rollers should be spaced less than 700 mm apart.

Model numbering

Ex. TKR20H28W40R55 20 links x 1 set, vertical dividers every 2 links

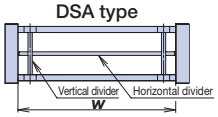
	Model	Inner height	Inner width	Bending radius	Quantity	Unit
Body	TKR20	H28	W40	R55	20	[L (links)]
Fixed end bracket	TKR20 H28 W40 – FU				1	[K (pcs)]
Moving end bracket	TKR20 H28 W40 – MU				1	[K (pcs)]
Vertical divider *	TKR20 H28 – STAS				10	[K (pcs)]
Configuration	(20L + FU + MU) × 1 set					

Note: 1. Dividers are delivered unassembled.
2. Plastic brackets are delivered assembled.
3. Required number of vertical dividers: (normally attached every 2 links)
Number of links N for attaching vertical dividers = (Total number of links + 1) ÷ 2
N: Integer (round down decimals)
Required number of vertical dividers = N x n
n: Number of vertical dividers attached per spot on the link

***Divider**

Type	Model No.	Part	Unit
1. Vertical divider (sliding type)	TKR20H28-STAS	1 vertical divider	K (pcs)
2.Vertical divider (locking type)	TKR20H28-STAL	1 vertical divider	K (pcs)
3. Horizontal divider(for DSA type)	TKR20H28-HS (Dimension W) W = 30·40·50·60·80·100·120	1 horizontal divider	K (pcs)

DSA type



Note: Requires 2 or more vertical dividers.

Model No.

- Body -

Model No.	Inner width W	Bending radius R	Mass kg/m
TKR20H28W30R55	30	55	0.7
TKR20H28W30R75		75	
TKR20H28W30R95		95	
TKR20H28W30R150		150	
TKR20H28W40R55	40	55	0.7
TKR20H28W40R75		75	
TKR20H28W40R95		95	
TKR20H28W40R150		150	
TKR20H28W50R55	50	55	0.8
TKR20H28W50R75		75	
TKR20H28W50R95		95	
TKR20H28W50R150		150	
TKR20H28W60R55	60	55	0.8
TKR20H28W60R75		75	
TKR20H28W60R95		95	
TKR20H28W60R150		150	
TKR20H28W80R55	80	55	0.9
TKR20H28W80R75		75	
TKR20H28W80R95		95	
TKR20H28W80R150		150	
TKR20H28W100R55	100	55	1.0
TKR20H28W100R75		75	
TKR20H28W100R95		95	
TKR20H28W100R150		150	
TKR20H28W120R55	120	55	1.1
TKR20H28W120R75		75	
TKR20H28W120R95		95	
TKR20H28W120R150		150	

- Vertical divider -

Model No.	For Cableveyor model no.	Mass g/each
TKR20H28-STAS	TKR20H28WxxxRxxx	1
TKR20H28-STAL		1

- Horizontal divider -

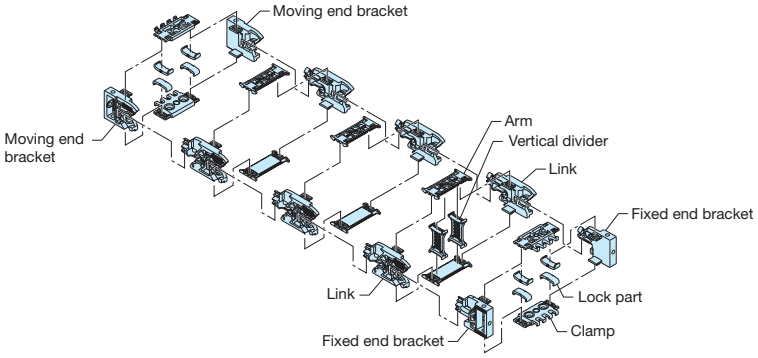
Model No.	For Cableveyor model no.	Mass g/each
TKR20H28-HS30	TKR20H28W30Rxxx	2
TKR20H28-HS40	TKR20H28W40Rxxx	2
TKR20H28-HS50	TKR20H28W50Rxxx	3
TKR20H28-HS60	TKR20H28W60Rxxx	4
TKR20H28-HS80	TKR20H28W80Rxxx	4
TKR20H28-HS100	TKR20H28W100Rxxx	5
TKR20H28-HS120	TKR20H28W120Rxxx	5

- Bracket -

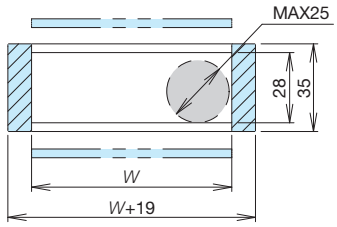
Model No.	For Cableveyor model no.	Mass g/each
TKR20H28W30-MU	TKR20H28W30Rxxx	36
TKR20H28W30-MO		34
TKR20H28W30-MI		34
TKR20H28W30-FU		37
TKR20H28W30-FO		35
TKR20H28W30-FI		35
TKR20H28W40-MU	TKR20H28W40Rxxx	36
TKR20H28W40-MO		34
TKR20H28W40-MI		34
TKR20H28W40-FU		38
TKR20H28W40-FO		36
TKR20H28W40-FI		36
TKR20H28W50-MU	TKR20H28W50Rxxx	37
TKR20H28W50-MO		35
TKR20H28W50-MI		35
TKR20H28W50-FU		38
TKR20H28W50-FO		36
TKR20H28W50-FI		36
TKR20H28W60-MU	TKR20H28W60Rxxx	37
TKR20H28W60-MO		35
TKR20H28W60-MI		35
TKR20H28W60-FU		39
TKR20H28W60-FO		37
TKR20H28W60-FI		37
TKR20H28W80-MU	TKR20H28W80Rxxx	38
TKR20H28W80-MO		36
TKR20H28W80-MI		36
TKR20H28W80-FU		40
TKR20H28W80-FO		38
TKR20H28W80-FI		38
TKR20H28W100-MU	TKR20H28W100Rxxx	39
TKR20H28W100-MO		37
TKR20H28W100-MI		37
TKR20H28W100-FU		41
TKR20H28W100-FO		39
TKR20H28W100-FI		39
TKR20H28W120-MU	TKR20H28W120Rxxx	39
TKR20H28W120-MO		37
TKR20H28W120-MI		37
TKR20H28W120-FU		41
TKR20H28W120-FO		39
TKR20H28W120-FI		39

TKR37H28 Lightweight specification

Construction



Cross-section

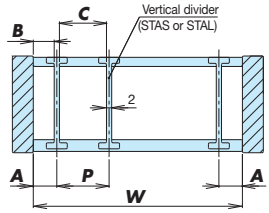


W = 40, 50, 60, 70, 80

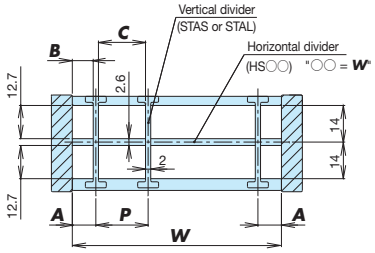
Ⓐ—Ⓐ arrows

Divider dimensions

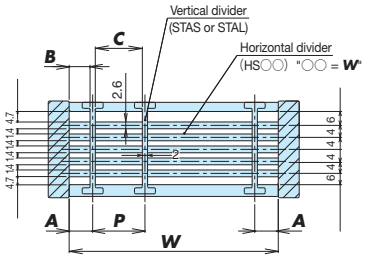
[When using only vertical dividers]



[When using both horizontal and vertical dividers (DSA type)]



[Partial (DSB type)]



Vertical divider type	Inner width W	A	B	P	C	D
STAS (sliding type)	Common W	7.5 to 21	6.5 to 20	8 to 65	6 to 63	
STAL (locking type)	40	8 to 20	7 to 19	8 to 24	6 to 22	
	50	9 to 21	8 to 20	8 to 32	6 to 30	
	60	8 to 20	7 to 19	8 to 44	6 to 42	
	70	9 to 21	8 to 20	8 to 52	6 to 50	
	80	8 to 20	7 to 19	8 to 64	6 to 62	

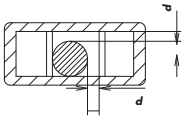
Every 2 mm

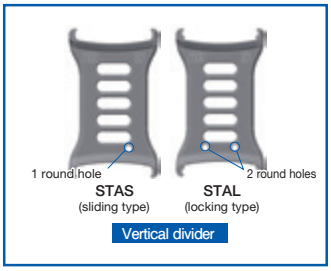
* The maximum values for A, B, P, C, and D are applied when using horizontal dividers.

Notes:

A: Distance from center of vertical divider to end face of link
B: Gap between vertical divider and link
P: Distance between the centers of neighboring vertical dividers
C: Gap between neighboring vertical dividers

Note: Make the gap between cables/hoses and the divider or link (d in the figure below) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



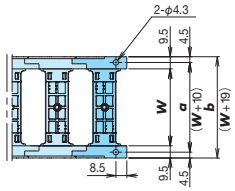


Dimensions & brackets

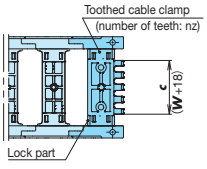
W	a	b
40	50	59
50	60	69
60	70	79
70	80	89
80	90	99

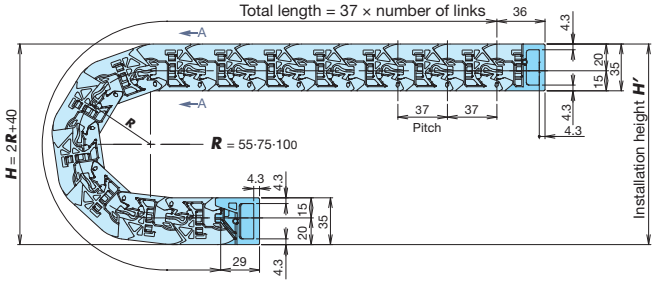
Bending radius R	Installation height H′
55	180 to 200
75	220 to 240
100	270 to 290

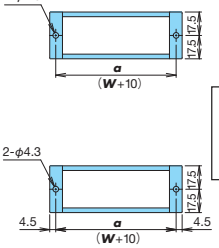
Moving end plastic bracket MU



Moving end plastic bracket MUCL

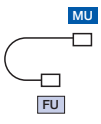


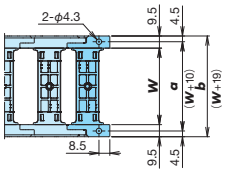




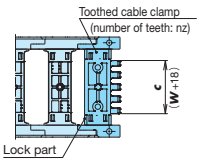
Note: Design and installation as per installation height H'.

▶Both toothed cable clamps and clamp rails can be attached on either the inner or outer sides.
▶MU and FU type plastic brackets cannot be added to toothed cable clamps and clamp rails.





Fixed end plastic bracket FU



Fixed end plastic bracket FUCL

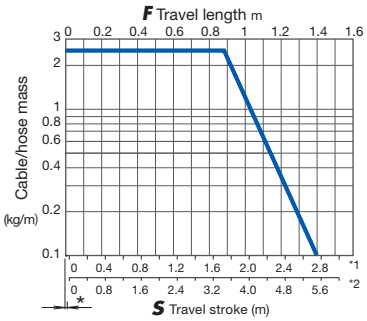
Inner width W	Toothed cable clamp nz (number of teeth)
40	3
50	4
60	5
70	6
80	7

Basic specifications

Maximum travel speed		300 m/min*1
Operating temperature range		-40 to 80°C
Materials	Body	Engineering plastic (black)
	Plastic bracket	
	Vertical divider	
	Horizontal divider	Engineering plastic (white)
	Clamp	Engineering plastic (black)
Standard length		50 links

Notes: 1. 150 m/min with support rollers.
2. Contact a Tsubaki representative regarding maximum acceleration.
3. Cannot be used in acidic or alkaline environments.

Load graph

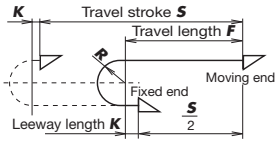


* Includes leeway length.
*1: No support rollers
*2: With support rollers

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Number of links: When fixed end is at the center of the stroke.
Round up all decimals no matter how small, to get a whole number.



S : Travel stroke mm
R : Bending radius mm
P : Pitch = 37 mm
K : Leeway length = 74 mm or higher

* Set leeway length K over 111 mm when there are support rollers. Support rollers should be spaced less than 700 mm apart.

Model numbering

Ex. TKR37H28W40R55 20 links x 1 set, vertical dividers every 2 links

	Model	Inner height	Inner width	Bending radius	Quantity	Unit
Body	TKR37	H28	W40	R55	20	[L (links)]
Fixed end bracket	TKR37	H28	W40	– FUCLO	1	[K (pcs)]
Moving end bracket	TKR37	H28	W40	– MUCLO	1	[K (pcs)]
Vertical divider	TKR37	H28	– STAS		10	[K (pcs)]
Configuration	(20L+FU+MU)×1 set					

Notes: 1. Dividers are delivered unassembled.
2. Plastic brackets are delivered assembled.
3. Attach dividers every 2 links.
4. The model number of the bracket depends on each mounting method of the toothed cable clamp.
··· O : Clamp outer circumference mounting
··· I : Clamp inner circumference mounting
··· B : Clamp inner and outer circumference mounting

Model No.

- Body -

Model No.	Inner width W mm	Bending radius R	質量kg/m
TKR37H28W40R55	40	55	0.53
TKR37H28W40R75		75	
TKR37H28W40R100		100	
TKR37H28W50R55	50	55	0.55
TKR37H28W50R75		75	
TKR37H28W50R100		100	
TKR37H28W60R55	60	55	0.57
TKR37H28W60R75		75	
TKR37H28W60R100		100	
TKR37H28W70R55	70	55	0.59
TKR37H28W70R75		75	
TKR37H28W70R100		100	
TKR37H28W80R55	80	55	0.61
TKR37H28W80R75		75	
TKR37H28W80R100		100	

- Vertical divider -

Model No.	For Cableveyor model no.	Mass g/each
TKR37H28-STAS	TKR37H28WxxRxx	1
TKR37H28-STAL		1

- Horizontal divider -

Model No.	For Cableveyor model no.	Mass g/each
TKR37H28-HS40	TKR37H28W40Rxx	2
TKR37H28-HS50	TKR37H28W50Rxx	3
TKR37H28-HS60	TKR37H28W60Rxx	3
TKR37H28-HS70	TKR37H28W70Rxx	4
TKR37H28-HS80	TKR37H28W80Rxx	4

- Bracket -

Model No.	For Cableveyor model no.	Mass g/each
TKR37H28W40-MU	TKR37H28W40Rxx	21
TKR37H28W40-FU		21
TKR37H28W50-MU	TKR37H28W50Rxx	21
TKR37H28W50-FU		21
TKR37H28W60-MU	TKR37H28W60Rxx	22
TKR37H28W60-FU		22
TKR37H28W70-MU	TKR37H28W70Rxx	23
TKR37H28W70-FU		23
TKR37H28W80-MU	TKR37H28W80Rxx	23
TKR37H28W80-FU		23

- Bracket (with 1 toothed cable clamp) -

Model No.	For Cableveyor model no.	Mass g/each
TKR37H28W40-MUCLO	TKR37H28W40Rxx	25
TKR37H28W40-FUCLO		25
TKR37H28W50-MUCLO	TKR37H28W50Rxx	27
TKR37H28W50-FUCLO		27
TKR37H28W60-MUCLO	TKR37H28W60Rxx	29
TKR37H28W60-FUCLO		29
TKR37H28W70-MUCLO	TKR37H28W70Rxx	31
TKR37H28W70-FUCLO		31
TKR37H28W80-MUCLO	TKR37H28W80Rxx	33
TKR37H28W80-FUCLO		33
TKR37H28W40-MUCLI	TKR37H28W40Rxx	25
TKR37H28W40-FUCLI		25
TKR37H28W50-MUCLI	TKR37H28W50Rxx	27
TKR37H28W50-FUCLI		27
TKR37H28W60-MUCLI	TKR37H28W60Rxx	29
TKR37H28W60-FUCLI		29
TKR37H28W70-MUCLI	TKR37H28W70Rxx	31
TKR37H28W70-FUCLI		31
TKR37H28W80-MUCLI	TKR37H28W80Rxx	33
TKR37H28W80-FUCLI		33

- Bracket (with 2 toothed cable clamps) -

Model No.	For Cableveyor model no.	Mass g/each
TKR37H28W40-MUCLB	TKR37H28W40Rxx	30
TKR37H28W40-FUCLB		30
TKR37H28W50-MUCLB	TKR37H28W50Rxx	33
TKR37H28W50-FUCLB		33
TKR37H28W60-MUCLB	TKR37H28W60Rxx	36
TKR37H28W60-FUCLB		36
TKR37H28W70-MUCLB	TKR37H28W70Rxx	40
TKR37H28W70-FUCLB		40
TKR37H28W80-MUCLB	TKR37H28W80Rxx	43
TKR37H28W80-FUCLB		43

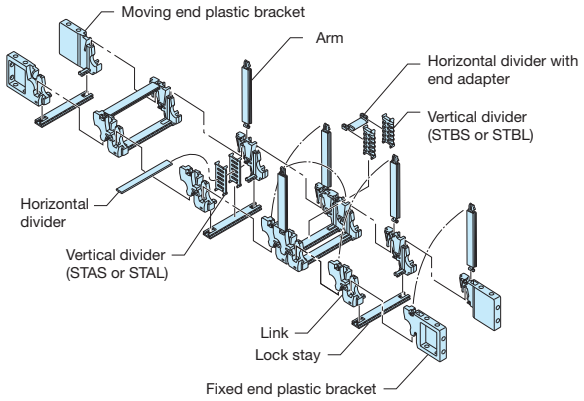
- Toothed cable clamp (plastic) -

Model No.	For plastic bracket model no.	Mass g/each
TKR37H28W40-CL-U	TKR37H28W40Rxx	5
TKR37H28W50-CL-U	TKR37H28W50Rxx	6
TKR37H28W60-CL-U	TKR37H28W60Rxx	7
TKR37H28W70-CL-U	TKR37H28W70Rxx	9
TKR37H28W80-CL-U	TKR37H28W80Rxx	10

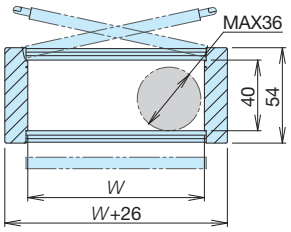
TKR26H40

(Formerly TKR0260)

Construction



Cross-section

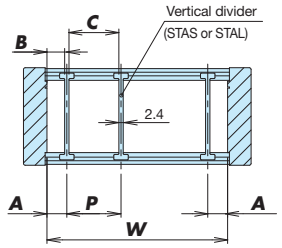


W = 50, 62, 75, 87, 100, 125, 150, 200

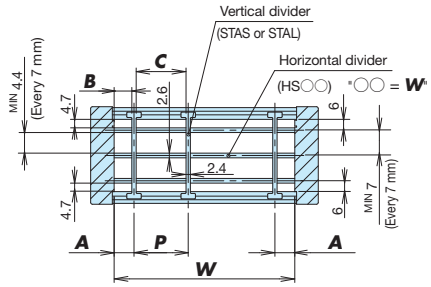
Ⓐ—Ⓐ arrows

Divider dimensions

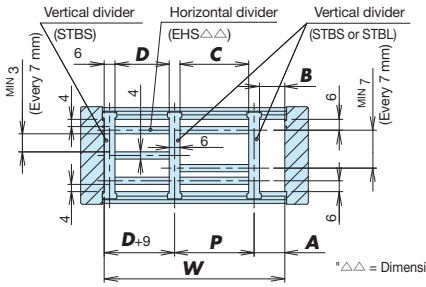
[When using only vertical dividers]



[When using both horizontal and vertical dividers (DSA type)]



[Partial (DSB type)]



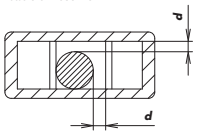
"△△ = Dimension ***C*** or ***D***"

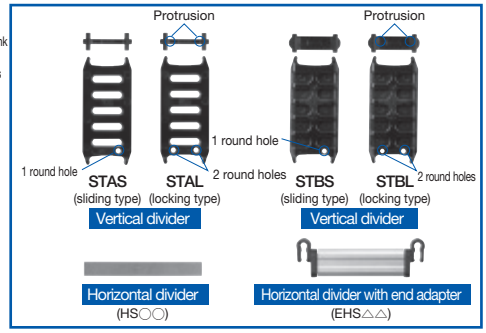
Vertical divider type	Inner width W	A	B	P	C	D
STAS (sliding type)	Common W	3 to 65	1.8 to 63.8	8 to 140	5.6 to 137.6	
STAL (locking type)	50	5 to 37	3.8 to 35.8	8 to 40	5.6 to 37.6	
	62	7 to 47	5.8 to 45.8	8 to 48	5.6 to 45.6	
	75	5.5 to 61.5	4.3 to 60.3	8 to 64	5.6 to 61.6	
	87	3.5 to 63.5	2.3 to 62.3	8 to 80	5.6 to 77.6	
	100	6 to 62	4.8 to 60.8	8 to 88	5.6 to 85.6	
	125	6.5 to 62.5	5.3 to 61.3	8 to 112	5.6 to 109.6	
	150	7 to 63	5.8 to 61.8	8 to 136	5.6 to 133.6	
	200	4 to 64	2.8 to 62.3	8 to 192	5.6 to 189.6	
		Every 4 mm	Every 4 mm	Every 4 mm	Every 4 mm	
STBS (sliding type)	Common W	min 3	min 0	26 to (W-6)	20 to (W-12)	20 to (W-12)
STBL (locking type)	50	min 5	min 2	—	—	20 to 36
	62	min 7	min 4	—	—	20 to 46
	75	min 5.5	min 2.5	28 to 40	22 to 34	20.5 to 60.5
	87	min 3.5	min 0.5	28 to 52	22 to 46	22.5 to 74.5
	100	min 6	min 3	28 to 64	22 to 58	21 to 85
	125	min 6.5	min 3.5	28 to 88	22 to 82	21.5 to 109.5
	150	min 7	min 4	28 to 112	22 to 106	22 to 134
	200	min 4	min 1	28 to 164	22 to 158	23 to 187
		Every 4 mm	Every 4 mm	Every 4 mm	Every 4 mm	Every 4 mm

Notes:

A: Distance from center of vertical divider to end face of link
B: Gap between vertical divider and link
P: Distance between the centers of neighboring vertical dividers
C: Gap between neighboring vertical dividers
D: Gap between neighboring vertical dividers when a vertical divider is attached again

Note: Make the gap between cables/hoses and the divider or link (d in the figure below) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



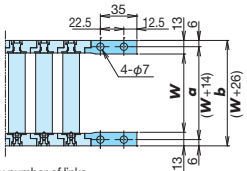


Dimensions & brackets

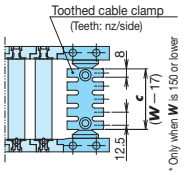
W	a	b	c	Toothed cable clamp n_z (number of teeth)
50	64	76	33	3
62	76	88	45	–
75	89	101	58	5
87	101	113	–	–
100	114	126	83	7
125	139	151	108	9
150	164	176	133	11
200	214	226	–	–

Bending radius R	Installation height H'
75	238 to 258
100	288 to 308
125	338 to 358
150	388 to 408

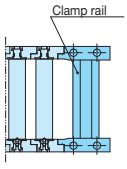
Moving end plastic bracket **MU**

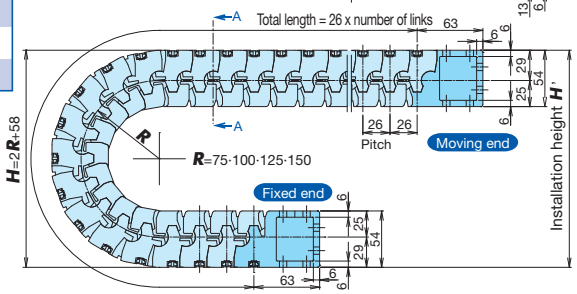


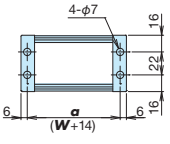
Moving end plastic bracket **MUCL** (with 1 toothed cable clamp)

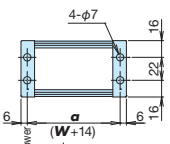


Moving end plastic bracket **MUCR** (with 1 clamp rail)



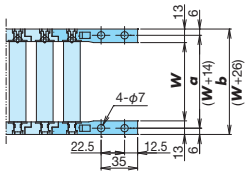




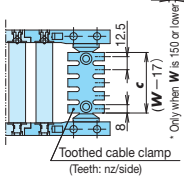


Note: Design and installation as per installation height H'.

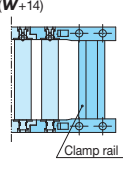
▶Both toothed cable clamps and clamp rails can be attached on either the inner or outer sides.
▶MU and FU type plastic brackets cannot be added to toothed cable clamps and clamp rails.



Fixed end plastic bracket **FU**



Fixed end plastic bracket **FUCL** (with 1 toothed cable clamp)



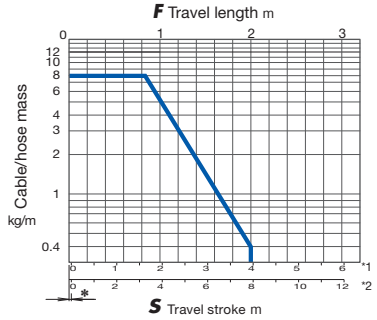
Fixed end plastic bracket **FUCR** (with 1 clamp rail)

Basic specifications

Maximum travel speed			300 m/min*1
Operating temperature range			-40 to 80°C
Materials	Body		Engineering plastic (black)
	Plastic bracket		
	Vertical divider		
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic + aluminum (black)
Standard length			100 links

Notes: 1. 150 m/min with support rollers.
2. Contact a Tsubaki representative regarding maximum acceleration.
3. Cannot be used in acidic or alkaline environments.

Load graph



* Includes leeway length.

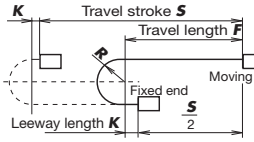
*1: No support rollers
*2: With support rollers

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Number of links: When fixed end is at the center of the stroke.

Round up all decimals no matter how small, to get a whole number.



S : Travel stroke mm
R : Bending radius mm
P : Pitch = 26 mm
K : Leeway length = 52 mm or higher

* Set leeway length K over 78 mm when there are support rollers. Support rollers should be spaced less than 850 mm apart.

Model numbering

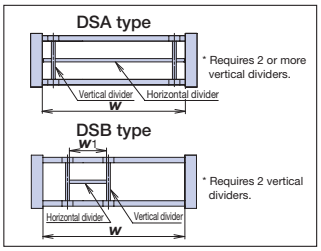
Ex. TKR26H40W50R75 20 links × 1 set, vertical dividers every 2 links

	Model	Inner height	Inner width	Bending radius	Quantity	Unit
Body	TKR26H40W50R75				20	[L (links)]
Fixed end bracket	TKR26H40W50-FUCL				1	[K (pcs)]
Moving end bracket	TKR26H40W50-MUCL				1	[K (pcs)]
Vertical divider *	TKR26H40-STAS				10	[K (pcs)]
Configuration	(20L+FUCL+MUCL)×1 set					
Other parts	Toothed cable clamp TKR26H40W○○-CL-U					[K (pcs)] ○○ = Dimension W of body (W = 50, 75, 100, 125, 150)
	Clamp rail TKR26H40W○○-CRA					[K (pcs)] ○○ = Dimension W of boday

Notes: 1. Dividers, toothed cable clamps, and clamp rails are delivered unassembled.
2. Plastic brackets are delivered assembled.
3. Required number of vertical dividers: (normally attached every 2 links)
Number of links N for attaching vertical dividers =
(Total number of links + 1) ÷ 2 N: Integer (round down decimals)
Required number of vertical dividers =
N x n n: Number of vertical dividers attached per spot on the link

***Divider**

Method	Type		Model No.	Part	Unit
DSA type	Vertical divider	Sliding type (STAS)	TKR26H40-STAS	1 vertical divider	K (pcs)
		Locking type (STAL)	TKR26H40-STAL	1 vertical divider	K (pcs)
	Horizontal divider		TKR26H40-HS (Dimension W) W = 50·62·75·87·100·125·150·200	1 horizontal divider	K (pcs)
DSB type	Vertical divider	Sliding type (STBS)	TKR26H40-STBS	1 vertical divider	K (pcs)
		Locking type (STBL)	TKR26H40-STBL	1 vertical divider	K (pcs)
	End adapter horizontal divider		TKR26H40-EHS (Dimension W) W1 = Dimension C or D of divider dimensions	1 horizontal divider 2 end adapters	K (pcs)



Model No.

- Body -

Model No.	Inner width W	Bending radius R	Mass kg/m
TKR26H40W50R75	50	75	1.5
TKR26H40W50R100		100	
TKR26H40W50R125		125	
TKR26H40W50R150		150	
TKR26H40W62R75	62	75	1.6
TKR26H40W62R100		100	
TKR26H40W62R125		125	
TKR26H40W62R150		150	
TKR26H40W75R75	75	75	1.7
TKR26H40W75R100		100	
TKR26H40W75R125		125	
TKR26H40W75R150		150	
TKR26H40W87R75	87	75	1.8
TKR26H40W87R100		100	
TKR26H40W87R125		125	
TKR26H40W87R150		150	
TKR26H40W100R75	100	75	1.9
TKR26H40W100R100		100	
TKR26H40W100R125		125	
TKR26H40W100R150		150	
TKR26H40W125R75	125	75	2.1
TKR26H40W125R100		100	
TKR26H40W125R125		125	
TKR26H40W125R150		150	
TKR26H40W150R75	150	75	2.3
TKR26H40W150R100		100	
TKR26H40W150R125		125	
TKR26H40W150R150		150	
TKR26H40W200R75	200	75	2.7
TKR26H40W200R100		100	
TKR26H40W200R125		125	
TKR26H40W200R150		150	

- Vertical divider -

Model No.	For Cableveyor model no.	Mass g/each
TKR26H40-STAS	TKR26H40WxxxxRxxx	3
TKR26H40-STAL		3
TKR26H40-STBS		5
TKR26H40-STBL		5

- Horizontal divider -

Model No.	For Cableveyor model no.	Mass g/each
TKR26H40-HS50	TKR26H40W50Rxxx	3
TKR26H40-HS62	TKR26H40W62Rxxx	4
TKR26H40-HS75	TKR26H40W75Rxxx	5
TKR26H40-HS87	TKR26H40W87Rxxx	6
TKR26H40-HS100	TKR26H40W100Rxxx	7
TKR26H40-HS125	TKR26H40W125Rxxx	9
TKR26H40-HS150	TKR26H40W150Rxxx	11
TKR26H40-HS200	TKR26H40W200Rxxx	15

- Horizontal divider with end adapter -

Model No.	For Cableveyor model no.
TKR26H40-EHS□□	□□ : 20 to 35
TKR26H40-EHS△△	△△ : 35 to 55
TKR26H40-EHS▽▽	▽▽ : 55 to 75
TKR26H40-EHS××	×× : 75 to 95
TKR26H40-EHS○○	○○ : 95 to 115
TKR26H40-EHS◇◇	◇◇ :115 to 135
TKR26H40-EHS■■	■■ :135 to 155
TKR26H40-EHS▲▲	▲▲ :155 to 175
TKR26H40-EHS▼▼	▼▼ :175 to 188
	* Minimum 0.5 mm each

- Bracket -

Model No.	For Cableveyor model no.	Mass g/each
TKR26H40W50-MU	TKR26H40W50Rxxx	65
TKR26H40W50-FU		61
TKR26H40W62-MU	TKR26H40W62Rxxx	68
TKR26H40W62-FU		64
TKR26H40W75-MU	TKR26H40W75Rxxx	71
TKR26H40W75-FU		67
TKR26H40W87-MU	TKR26H40W87Rxxx	74
TKR26H40W87-FU		70
TKR26H40W100-MU	TKR26H40W100Rxxx	77
TKR26H40W100-FU		73
TKR26H40W125-MU	TKR26H40W125Rxxx	83
TKR26H40W125-FU		79
TKR26H40W150-MU	TKR26H40W150Rxxx	88
TKR26H40W150-FU		84
TKR26H40W200-MU	TKR26H40W200Rxxx	100
TKR26H40W200-FU		90

- Bracket (with 1 toothed cable clamp) -

Model No.	For Cableveyor model no.	Mass g/each
TKR26H40W50-MUCL	TKR26H40W50Rxxx	74
TKR26H40W50-FUCL		70
TKR26H40W75-MUCL	TKR26H40W75Rxxx	84
TKR26H40W75-FUCL		80
TKR26H40W100-MUCL	TKR26H40W100Rxxx	94
TKR26H40W100-FUCL		90
TKR26H40W125-MUCL	TKR26H40W125Rxxx	104
TKR26H40W125-FUCL		100
TKR26H40W150-MUCL	TKR26H40W150Rxxx	113
TKR26H40W150-FUCL		109

- Bracket (with 1 clamp rail) -

Model No.	For Cableveyor model no.	Mass g/each
TKR26H40W50-MUCR	TKR26H40W50Rxxx	92
TKR26H40W50-FUCR		88
TKR26H40W62-MUCR	TKR26H40W62Rxxx	68
TKR26H40W62-FUCR		64
TKR26H40W75-MUCR	TKR26H40W75Rxxx	111
TKR26H40W75-FUCR		107
TKR26H40W87-MUCR	TKR26H40W87Rxxx	118
TKR26H40W87-FUCR		114
TKR26H40W100-MUCR	TKR26H40W100Rxxx	130
TKR26H40W100-FUCR		126
TKR26H40W125-MUCR	TKR26H40W125Rxxx	148
TKR26H40W125-FUCR		144
TKR26H40W150-MUCR	TKR26H40W150Rxxx	166
TKR26H40W150-FUCR		162
TKR26H40W200-MUCR	TKR26H40W200Rxxx	189
TKR26H40W200-FUCR		190

- Toothed cable clamp (plastic) -

Model No.	For plastic bracket model no.	Mass g/each
TKR26H40W50-CL-U	TKR26H40W50-MUCL/FUCL	9
TKR26H40W75-CL-U	TKR26H40W75-MUCL/FUCL	13
TKR26H40W100-CL-U	TKR26H40W100-MUCL/FUCL	17
TKR26H40W125-CL-U	TKR26H40W125-MUCL/FUCL	21
TKR26H40W150-CL-U	TKR26H40W150-MUCL/FUCL	25

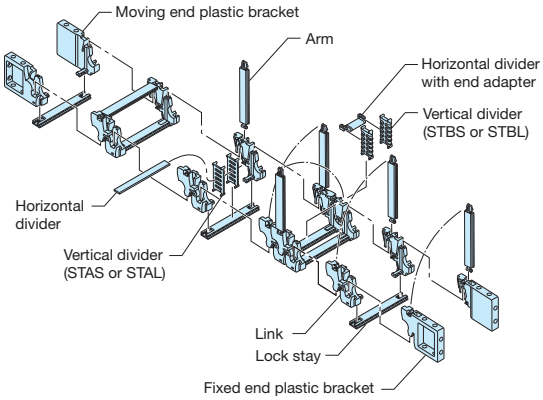
- Clamp rail (steel) -

Model No.	For plastic bracket model no.	Mass g/each
TKR26H40W50-CRA	TKR26H40W50-MUCR/FUCR	27
TKR26H40W62-CRA	TKR26H40W62-MUCR/FUCR	33
TKR26H40W75-CRA	TKR26H40W75-MUCR/FUCR	40
TKR26H40W87-CRA	TKR26H40W87-MUCR/FUCR	47
TKR26H40W100-CRA	TKR26H40W100-MUCR/FUCR	53
TKR26H40W125-CRA	TKR26H40W125-MUCR/FUCR	65
TKR26H40W150-CRA	TKR26H40W150-MUCR/FUCR	78
TKR26H40W200-CRA	TKR26H40W200-MUCR/FUCR	104

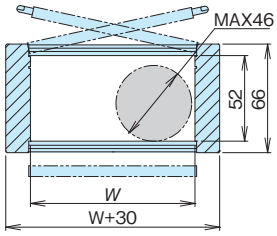
TKR28H52

(Formerly TKR0280)

Construction



Cross-section

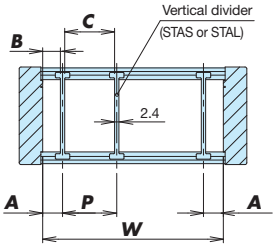


W = 50、62、75、87、100、125、150、200

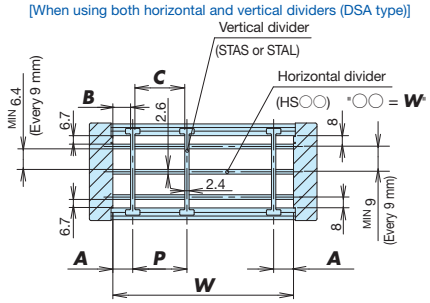
Ⓐ—Ⓐ arrows

Divider dimensions

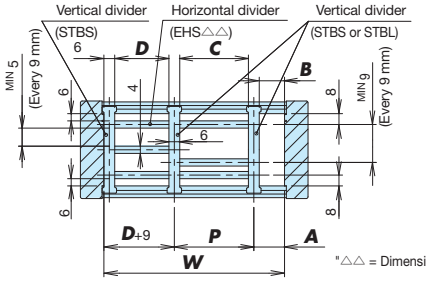
[When using only vertical dividers]



[When using both horizontal and vertical dividers (DSA type)]



[Partial (DSB type)]



"△△ = Dimension **C** or **D**"

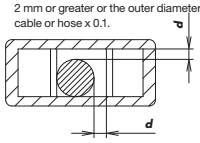
Vertical divider type	Inner width W	A	B	P	C	D
STAS (sliding type)	Common W	3 to 65	1.8 to 63.8	8 to 130	5.6 to 127.6	
STAL (locking type)	50	5 to 37	3.8 to 35.8	8 to 40	5.6 to 37.6	
	62	7 to 47	5.8 to 45.8	8 to 48	5.6 to 45.6	
	75	5.5 to 61.5	4.3 to 60.3	8 to 64	5.6 to 61.6	
	87	3.5 to 63.5	Every 4 mm: 2.3 to 62.3	Every 4 mm: 8 to 80	Every 4 mm: 5.6 to 77.6	Every 4 mm
	100	6 to 62	4.8 to 60.8	8 to 88	5.6 to 85.6	
	125	6.5 to 62.5	5.3 to 61.3	8 to 112	5.6 to 109.6	
	150	7 to 63	5.8 to 61.8	8 to 124	5.6 to 121.6	
	200	4 to 64	2.8 to 62.8	8 to 124	5.6 to 121.6	
STBS (sliding type)	Common W	min3	min0	26 to (W-6)	20 to (W-12)	20 to (W-12)
STBL (locking type)	50	min5	min2	—	—	20 to 36
	62	min7	min4	—	—	22 to 46
	75	min5.5	min2.5	28 to 40	22 to 34	20.5 to 60.5
	87	min3.5	Every 4 mm: min0.5	Every 4 mm: 28 to 52	Every 4 mm: 22 to 46	Every 4 mm: 22.5 to 74.5
	100	min6	min3	28 to 64	22 to 58	21 to 85
	125	min6.5	min3.5	28 to 88	22 to 82	21.5 to 109.5
	150	min7	min4	28 to 112	22 to 106	22 to 134
	200	min4	min1	28 to 164	22 to 158	23 to 187

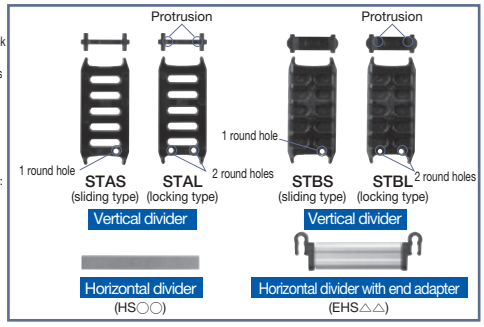
* The maximum values for A, B, P, C, and D are applied when using horizontal dividers.

Notes:

A: Distance from center of vertical divider to end face of link
B: Gap between vertical divider and link
P: Distance between the centers of neighboring vertical dividers
C: Gap between neighboring vertical dividers
D: Gap between neighboring vertical dividers when a vertical divider is attached again

Note: Make the gap between cables/hoses and the divider or link (d in the figure below) to whichever of the following two values is larger: 2 mm or greater or the outer diameter of the cable or hose x 0.1.



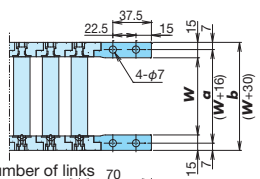


Dimensions & brackets

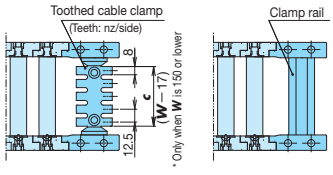
W	a	b	c	Toothed cable clamp n_z (number of teeth)
50	66	80	33	3
62	78	98	–	–
75	91	105	58	5
87	103	117	–	–
100	116	130	83	7
125	141	155	108	9
150	166	180	133	11
200	216	230	–	–

Bending radius R	Installation height H'
75	252 to 272
100	302 to 322
150	402 to 422
200	502 to 522

Moving end plastic bracket **MU**

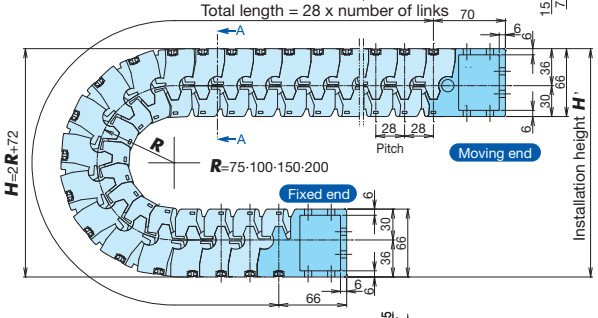


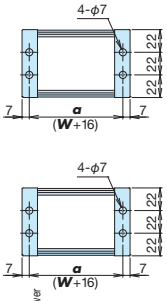
Moving end plastic bracket **MUCL** (with 1 toothed cable clamp)



Moving end plastic bracket **MUCR** (with 1 clamp rail)

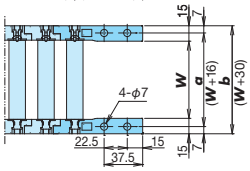
Total length = 28 x number of links

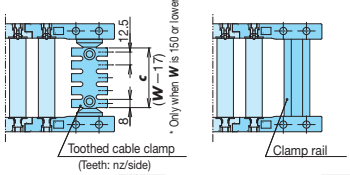




Note: Design and installation as per installation height H'.

▶Both toothed cable clamps and clamp rails can be attached on either the inner or outer sides.
▶MU and FU type plastic brackets cannot be added to toothed cable clamps and clamp rails.





Fixed end plastic bracket **FU**

Fixed end plastic bracket **FUCL** (with 1 toothed cable clamp)

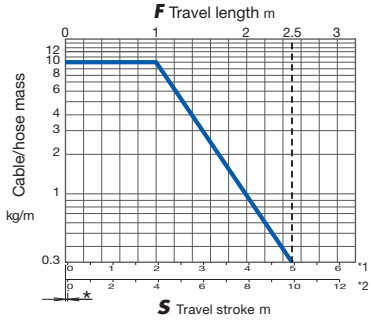
Fixed end plastic bracket **FUCR** (with 1 clamp rail)

Basic specifications

Maximum travel speed			300 m/min*1
Operating temperature range			-40 to 80°C
Materials	Body		Engineering plastic (black)
	Plastic bracket		
	Vertical divider		
	Horizontal divider	For DSA type (HS)	Aluminum
		For DSB type (EHS)	Engineering plastic + aluminum (black)
Standard length			100 links

Notes: 1. 150 m/min with support rollers.
2. Contact a Tsubaki representative regarding maximum acceleration.
3. Cannot be used in acidic or alkaline environments.

Load graph



* Includes leeway length.

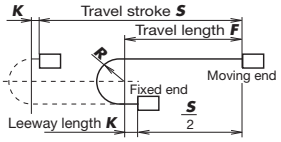
*1: No support rollers
*2: With support rollers

Calculating no. of links

$$\text{Number of links} = \frac{\frac{S}{2} + \pi R + 2K}{P}$$

Number of links: When fixed end is at the center of the stroke.

Round up all decimals no matter how small, to get a whole number.



S : Travel stroke mm
R : Bending radius mm
P : Pitch = 28 mm
K : Leeway length = 56 mm or higher

* Set leeway length K over 84 mm when there are support rollers. Support rollers should be spaced less than 1000 mm apart.

Model numbering

Ex. TKR28H52W50R75 20 links × 1 set, vertical dividers every 2 links

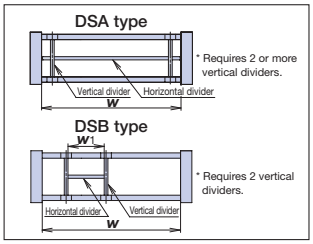
	Model	Inner height	Inner width	Bending radius	Quantity	Unit
Body	TKR28H52W50R75				20	[L (links)]
Fixed end bracket	TKR28H52W50-FUCL				1	[K (pcs)]
Moving end bracket	TKR28H52W50-MUCL				1	[K (pcs)]
Vertical divider *	TKR28H52-STAS				10	[K (pcs)]
Configuration	(20L+FUCL+MUCL)×1 set					
Other parts	Toothed cable clamp TKR28H52W○○-CL-U__					[K (pcs)]
	Clamp rail TKR28H52W○○-CRA__					[K (pcs)]

○○ = Dimension W of body (W = 50, 75, 100, 125, 150)
○○ = Dimension W of boday

*Divider

Method	Type		Model No.	Part	Unit
DSA type	Vertical divider	Sliding type (STAS)	TKR28H52-STAS	1 vertical divider	K (pcs)
		Locking type (STAL)	TKR28H52-STAL	1 vertical divider	K (pcs)
	Horizontal divider		TKR28H52-HS (Dimension W) W = 50·62·75·87·100·125·150·200	1 horizontal divider	K (pcs)
DSB type	Vertical divider	Sliding type (STBS)	TKR28H52-STBS	1 vertical divider	K (pcs)
		Locking type (STBL)	TKR28H52-STBL	1 vertical divider	K (pcs)
	End adapter horizontal divider		TKR28H52-EHS (Dimension W) W1 = Dimension C or D of divider dimensions	1 horizontal divider 2 end adapters	K (pcs)

Notes: 1. Dividers, toothed cable clamps, and clamp rails are delivered unassembled.
2. Plastic brackets are delivered assembled.
3. Required number of vertical dividers: (normally attached every 2 links)
Number of links N for attaching vertical dividers =
(Total number of links + 1) ÷ 2 N: Integer (round down decimals)
Required number of vertical dividers =
N x n n: Number of vertical dividers attached per spot on the link



Model No.

- Body -

Model No.	Inner width W	Bending radius R	Mass kg/m
TKR28H52W50R75	50	75	2.0
TKR28H52W50R100		100	
TKR28H52W50R150		150	
TKR28H52W50R200		200	
TKR28H52W62R75	62	75	2.1
TKR28H52W62R100		100	
TKR28H52W62R150		150	
TKR28H52W62R200		200	
TKR28H52W75R75	75	75	2.2
TKR28H52W75R100		100	
TKR28H52W75R150		150	
TKR28H52W75R200		200	
TKR28H52W87R75	87	75	2.3
TKR28H52W87R100		100	
TKR28H52W87R150		150	
TKR28H52W87R200		200	
TKR28H52W125R75	100	75	2.4
TKR28H52W100R100		100	
TKR28H52W100R150		150	
TKR28H52W100R200		200	
TKR28H52W125R75	125	75	2.6
TKR28H52W125R100		100	
TKR28H52W125R150		150	
TKR28H52W125R200		200	
TKR28H52W150R75	150	75	2.8
TKR28H52W150R100		100	
TKR28H52W150R150		150	
TKR28H52W150R200		200	
TKR28H52W200R75	200	75	3.2
TKR28H52W200R100		100	
TKR28H52W200R150		150	
TKR28H52W200R200		200	

- Vertical divider -

Model No.	For Cableveyor model no.	Mass g/each
TKR28H52-STAS	TKR28H52WxxxRxxx	4
TKR28H52-STAL		4
TKR28H52-STBS		7
TKR28H52-STBL		7

- Horizontal divider -

Model No.	For Cableveyor model no.	Mass g/each
TKR28H52-HS50	TKR28H52W50Rxxx	3
TKR28H52-HS62	TKR28H52W62Rxxx	4
TKR28H52-HS75	TKR28H52W75Rxxx	5
TKR28H52-HS87	TKR28H52W87Rxxx	6
TKR28H52-HS100	TKR28H52W100Rxxx	7
TKR28H52-HS125	TKR28H52W125Rxxx	9
TKR28H52-HS150	TKR28H52W150Rxxx	11
TKR28H52-HS200	TKR28H52W200Rxxx	15

- Bracket -

Model No.	For Cableveyor model no.	Mass g/each
TKR28H52W50-MU	TKR28H52W50Rxxx	88
TKR28H52W50-FU		84
TKR28H52W62-MU	TKR28H52W62Rxxx	92
TKR28H52W62-FU		88
TKR28H52W75-MU	TKR28H52W75Rxxx	94
TKR28H52W75-FU		90
TKR28H52W87-MU	TKR28H52W87Rxxx	96
TKR28H52W87-FU		92
TKR28H52W100-MU	TKR28H52W100Rxxx	100
TKR28H52W100-FU		96
TKR28H52W125-MU	TKR28H52W125Rxxx	106
TKR28H52W125-FU		102
TKR28H52W150-MU	TKR28H52W150Rxxx	111
TKR28H52W150-FU		107
TKR28H52W200-MU	TKR28H52W200Rxxx	135
TKR28H52W200-FU		119

- Bracket (with 1 toothed cable clamp) -

Model No.	For Cableveyor model no.	Mass g/each
TKR28H52W50-MUCL	TKR28H52W50Rxxx	97
TKR28H52W50-FUCL		93
TKR28H52W75-MUCL	TKR28H52W75Rxxx	107
TKR28H52W75-FUCL		103
TKR28H52W100-MUCL	TKR28H52W100Rxxx	117
TKR28H52W100-FUCL		113
TKR28H52W125-MUCL	TKR28H52W125Rxxx	127
TKR28H52W125-FUCL		123
TKR28H52W150-MUCL	TKR28H52W150Rxxx	136
TKR28H52W150-FUCL		132

- Bracket (with 1 clamp rail) -

Model No.	For Cableveyor model no.	Mass g/each
TKR28H52W50-MUCR	TKR28H52W50Rxxx	115
TKR28H52W50-FUCR		111
TKR28H52W62-MUCR	TKR28H52W62Rxxx	127
TKR28H52W62-FUCR		123
TKR28H52W75-MUCR	TKR28H52W75Rxxx	134
TKR28H52W75-FUCR		130
TKR28H52W87-MUCR	TKR28H52W87Rxxx	141
TKR28H52W87-FUCR		137
TKR28H52W100-MUCR	TKR28H52W100Rxxx	153
TKR28H52W100-FUCR		149
TKR28H52W125-MUCR	TKR28H52W125Rxxx	171
TKR28H52W125-FUCR		167
TKR28H52W150-MUCR	TKR28H52W150Rxxx	189
TKR28H52W150-FUCR		185
TKR28H52W200-MUCR	TKR28H52W200Rxxx	239
TKR28H52W200-FUCR		223

- Horizontal divider with end adapter -

Model No.	For Cableveyor model no.
TKR28H52-EHS□□	□□ : 20 to 35
TKR28H52-EHS△△	△△ : 35 to 55
TKR28H52-EHS▽▽	▽▽ : 55 to 75
TKR28H52-EHS××	×× : 75 to 95
TKR28H52-EHS○○	○○ : 95 to 115
TKR28H52-EHS◇◇	◇◇ :115 to 135
TKR28H52-EHS■■	■■ :135 to 155
TKR28H52-EHS▲▲	▲▲ :155 to 175
TKR28H52-EHS▼▼	▼▼ :175 to 188

* Minimum 0.5 mm each

- Toothed cable clamp (plastic) -

Model No.	For plastic bracket model no.	Mass g/each
TKR28H52W50-CL-U	TKR28H52W50-MUCL/FUCL	9
TKR28H52W75-CL-U	TKR28H52W75-MUCL/FUCL	13
TKR28H52W100-CL-U	TKR28H52W100-MUCL/FUCL	17
TKR28H52W125-CL-U	TKR28H52W125-MUCL/FUCL	21
TKR28H52W150-CL-U	TKR28H52W150-MUCL/FUCL	25

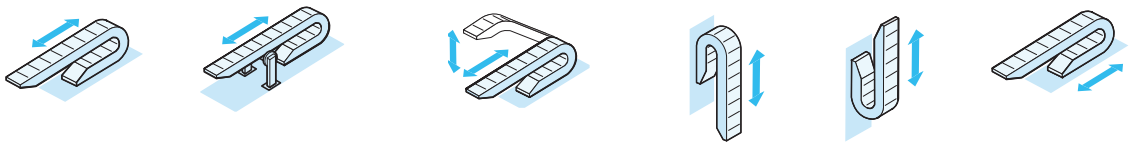
- Clamp rail (steel) -

Model No.	For plastic bracket model no.	Mass g/each
TKR28H52W50-CRA	TKR28H52W50-MUCR/FUCR	27
TKR28H52W62-CRA	TKR28H52W62-MUCR/FUCR	33
TKR28H52W75-CRA	TKR28H52W75-MUCR/FUCR	40
TKR28H52W87-CRA	TKR28H52W87-MUCR/FUCR	47
TKR28H52W100-CRA	TKR28H52W100-MUCR/FUCR	53
TKR28H52W125-CRA	TKR28H52W125-MUCR/FUCR	65
TKR28H52W150-CRA	TKR28H52W150-MUCR/FUCR	78
TKR28H52W200-CRA	TKR28H52W200-MUCR/FUCR	104

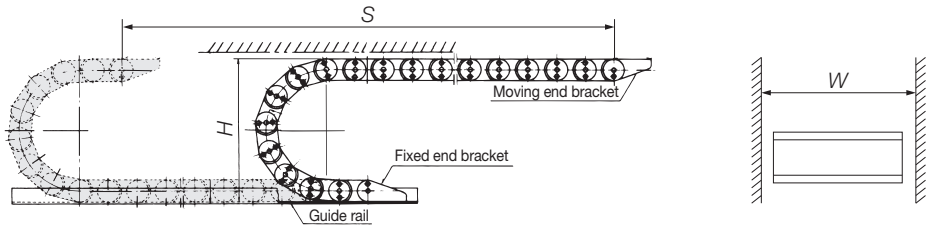
CABLEVEYOR® (TKR Series) Inquiry Sheet

Installation instructions

☐ Standard ☐ With support rollers ☐ Combination ☐ Vertical (reverse U-shape) ☐ Vertical (U-shape) ☐ Fixed upper side



Mounting space



Specifications and conditions

1. Maximum travel stroke *S* _____ mm
2. Allowable installation height *H* _____ mm
3. Allowable installation width *W* _____ mm
4. Machine to be used _____
5. Ambient atmosphere Temperature _____ °C
   Humidity _____ %

● Circle all relevant items.
Dirt / Dust / Chips / Sand / Outdoors / Corrosive environment (acidic or alkaline) / Paint

Combination specifications
Maximum vertical travel stroke _____ mm

6. Maximum acceleration _____ m/s²
7. Travel speed _____ m/s
8. Frequency of use _____ times/day
9. Additional information _____

Cable and hose specifications

	Specifications	Outer diameter	Mass kg/m	Pieces	Allowable bending radius
1	Cable or hose				
2	Cable or hose				
3	Cable or hose				
4	Cable or hose				
5	Cable or hose				
6	Cable or hose				
7	Cable or hose				
8	Cable or hose				
9	Cable or hose				
10	Cable or hose				

* For a multi-level specification, write the specifications of the upper and lower cables and hoses.

Additional information

_____

_____

Company name _____ Department _____

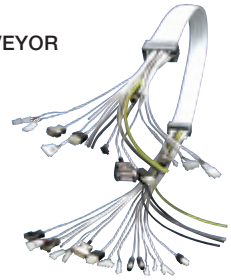
Your name _____ Phone _____

Date _____ Fax _____

Email _____

CLEANVEYOR® and FLATVEYOR® Inquiry Sheet

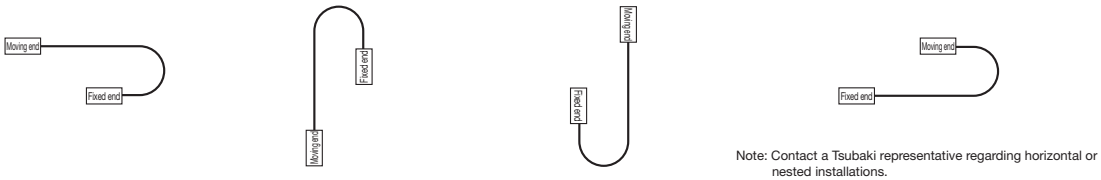
☐ CLEANVEYOR



☐ FLATVEYOR

Installation instructions

☐ Standard ☐ Vertical (reverse U-shape) ☐ Vertical (U-shape) ☐ Fixed upper side (moving lower side)



Note: Contact a Tsubaki representative regarding horizontal or nested installations.

Specifications and conditions

1. Maximum travel stroke _____ mm
2. Allowable installation height _____ mm
3. Allowable installation width _____ mm
4. Machine to be used _____
5. Ambient atmosphere Temperature _____ °C
   Humidity _____ %
6. Maximum acceleration _____ m/s^2
7. Travel speed _____ m/s
8. Frequency of use _____ times/day
9. Additional information _____

Cables and tubes to be used

Cable

Selection no.	Cable code	Rated voltage V	Rated temperature °C	Number of cores C or number of pairs P	Conductor size AWG or SQ	With/without shield	Outer diameter mm	Mass kg/m	Bending radius mm	Pieces	Moving end protrusion mm	Fixed end protrusion mm
(Ex.)	A									1	500	1000
(Ex.)		300	80	4P	26AWG	With	5.8	0.06	45	1	500	1000

Tubes

Selection no.	Tube code	Color	Outer diameter mm	Inner diameter mm	Mass kg/m	Bending radius mm	Pieces	Moving end protrusion mm	Fixed end protrusion mm
(Ex.)	A4	Blue					1	500	1000
(Ex.)		White	6.0	4.0	0.02	55	1	500	1000

Additional information

_____

_____

Company name _____ Department _____

Your name _____ Phone _____

Date _____ Fax _____

Email _____

TSUBAKI

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