



<http://www.kowa-kasei.co.jp/>



KOWA KASEI CO.,LTD.

Sales Department TEL (052) 821-7710 FAX (052) 821-6232
17-22 Shioiri-cho, Mizuho-ku, Nagoya-shi,
Aichi 467-0851 Japan

Tokyo Office TEL (03) 5450-6671 FAX (03) 5450-6675
1-20-2 Setagaya, Setagaya-ku, Tokyo 154-
0017 Japan

Osaka Office TEL (06) 6993-8335 FAX (06) 6993-8336
1-7-4 Toyohide-cho, Moriguchi-shi, Osaka
570-0082 Japan

Hiroshima Office TEL (082) 296-9613 FAX (082) 296-9614
1-10-12 Kusunoki-cho, Nishi-ku, Hiroshima-shi,
Hiroshima 733-0002 Japan

Togo Factory TEL (0561) 38-3015 FAX (0561) 38-3016
50 Kosaka, Haruki, Togo-cho, Aichi-gun, Aichi
470-0162 Japan



Sales Department/Togo Factory Head office/Togo Factory



Distributor

*The product specifications are subject to change without notice.

PRODUCTS
Electric Materials
Tools
ECO
EMI



KOWA KASEI CO.,LTD.

Sales Department 17-22,Shioiricho Mizuho-ku Nagoya-shi Aichi 467-0851 Japan
Togo Factory 50,Kosaka Haruki Togo-cho Aichi-gun Aichi 470-0162 Japan
Office : Tokyo · Osaka · Hiroshima

INDEX

pages 3 ▶ 13

Electric Materials

- P.3 Wiring Duct
- P.7 Connect Lock Duct Separator
- P.8 Wiring Bracket
- P.9 Snap Tube
Snap Tube, Clear Type
- P.10 Magic Tube
Slide Lock Tube
- P.11 Corrugate Tube
Through Tube
- P.12 Spiral Tube
Rubber Sponge
- P.13 Base Rail
Assist Fittings



pages 14 ▶ 15

Tools

- P.14 Base Rail Cutter
- P.15 Duct Nippers
Birdie Cutter



pages 16 ▶ 17

ECO

- P.16 ECO Wiring Duct
ECO Separator
- P.17 ECO Snap Tube
ECO Noise Protecting Tube



pages 18 ▶ 22

EMI

- P.18 Noise Protecting Tube, Snap Type
Noise Protecting Tube, Magic Type
- P.19 Noise Protecting Tube, Slide Lock Type
Noise Protecting Tube, for Flat Cables
- P.20 Noise Protecting Sleeve
Noise Protecting Mesh
- P.21 Conductive Shielding Gaskets (Square)
- P.22 Conductive Copper Foil Tape
Conductive Fabric Tape
Aluminum Foil Tape with Masking Film



Electric-Materials

Tools

ECO

EMI

PRODUCTS CATALOGUE

Electric Materials

Electric Materials



Wiring Duct



- Material** ● Rigid vinyl chloride (Self-extinguishing material rated 94V-0)
- Color** ● Gray
- Length** ● 2m
- Designation Format** ● KD-(Type)-(Length)-(Side Holes)
Example: Type 26, length 2m, and H type side holes > KD-26-20-H

Type	23	53	N23	33	24	34
Cross Section						
Length (mm)	2,000	2,000	2,000	2,000	2,000	2,000
Wire Capacity(AWG14)	15	50	20	30	40	55
Quantity (sets)	50	40	50	40	40	40

Type	44	64	74	26	36	46
Cross Section						
Length (mm)	2,000	2,000	2,000	2,000	2,000	2,000
Wire Capacity(AWG14)	60	100	105	60	65	90
Quantity (sets)	40	20	20	40	30	30

Type	56	66	76	86	106	156
Cross Section						
Length (mm)	2,000	2,000	2,000	2,000	2,000	2,000
Wire Capacity(AWG14)	110	130	150	190	240	310
Quantity (sets)	20	20	20	20	10	6

Type	67	87	137	28	38	48
Cross Section						
Length (mm)	2,000	2,000	2,000	2,000	2,000	2,000
Wire Capacity(AWG14)	150	190	340	70	90	120
Quantity (sets)	16	16	6	24	24	18

Type	58	68	88	108	210	310
Cross Section						
Length (mm)	2,000	2,000	2,000	2,000	2,000	2,000
Wire Capacity(AWG14)	160	200	260	320	100	110
Quantity (sets)	12	12	14	8	20	20

Type	410	610	810	1010	1510	1015
Cross Section						
Length (mm)	2,000	2,000	2,000	2,000	2,000	2,000
Wire Capacity(AWG14)	160	240	270	340	510	510
Quantity (sets)	18	12	12	6	6	4

Physical Characteristics

Item	Unit	Standard Value
Specific gravity	JIS K-7112	— 1.47
Tensile strength	JIS K-7113	Mpa 35 or more
Elongation	JIS K-7113	% 100 or more
Charpy impact	JIS K-7111	KJ/m ² 8.8 or more
Flexibility temperature	JIS K-6745	°C 73±3
Rockwell hardness	JIS K-7202	— 112
Volume resistivity	ASTM D257	Ω-m >10 ¹³
Withstand voltage	JIS-C8430	KV/mm >40
Permittivity		PF/m 29
Specific		J/(kg·K) 1,200
Thermal expansion coefficient		7×10 ⁻⁵

UL Approved Component 94V-0 No.E139917
UL Approved Resin Used 94V-0 No.E171549

Positioning Devices-Component

See General Information for Positioning Devices-Component

KOWA KASEI CO. LTD
SHOIRI-CHO MIZUHO-KU NAGOYA-SHI
AICHI-KEN 467-0851, JAPAN E139917

Plastic wiring ducts (channels), Cat. Nos. + KDCR-A, KDCR-B, KDCR-W. For use at temperatures not exceeding 50C.
Cat. Nos. + #KD-23, -N23, -24, -26, -28, -33, -34, -36, -38, -44, -46, -48, -53, -56, -58, -64, -66, -67, -68, -74, -76, -86, -87, -88, -106, -108, -137, -156, -210, -410, -610, -810, -1010, -1015, -1510. For use at temperatures not exceeding 50C.
+ - May be suffixed with one or two numbers denoting the product length in (mm).
- May be suffixed with one or two letters "L, H or T" denoting the side slot opening (perforations) shape on the side walls.

KD-310 submitted for UL approval

■ECO wiring duct



*For more info, see EOC Wiring Duct (P.16).

■Cutoff tool: Duct nippers



*For more info, see Duct Nippers (P.14).

■Cutoff tool: Birdie cutter



*For more info, see Birdie Cutter (P.14).

Electric Materials

Electric Materials

(Unit: mm)

Side Hole Specs

Type Hole Type	23·53	N23·33 () = Type N23	24·34·44·64·74	26·36·46·56 66·76·86·106
H	<p>(No setting for Type 53)</p>			
T				
L				
LL				

Bottom Hole Specs

Type	23·N23	33·53·24·34·44 26·36·46·56·28·38 48·58·210·310·410	64·74·66·76·86 106·67·87·68·88 108·610·810	137

Side Hole Specs

Type Hole Type	67·87·137	28·38·48·58 68·88·108	210·310·410·610 810·1010·1015	156·1510
H			<p>() = Type 1015</p>	
T		<p>(No setting for Type 28)</p>	<p>(No setting for Type 210,310)</p>	
L		<p>(No setting for Type 28)</p>	<p>(No setting for Type 210,310)</p>	<p>() = Type 156</p>
LL		<p>(No setting for Types 28 and 108)</p>		

Bottom Hole Specs

Type	1010·1015	156·1510

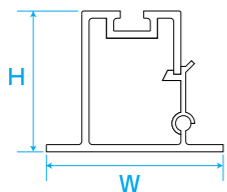
*Also available without side and bottom holes upon request.

Electric Materials

Connect Lock Duct ■UL Approved Component

Ro Product in compliance with RoHS Directive

● Cross Section



Material

- Rigid vinyl chloride (Self-extinguishing material rated 94V-0)

Color

- Gray

Quantity

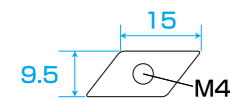
- 10 pieces

(Unit: mm)

Type	W	H	Length
KDCR-A	72	58	1,200

*With side and bottom holes

Exclusive nut for KDCR **Ro** Product in compliance with RoHS Directive



Type	Quantity
KDN-4	200

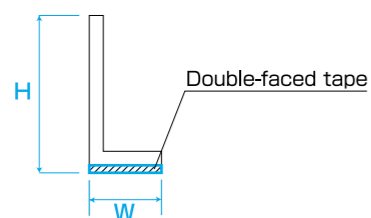
Surface Treatment

- Trivalent chromate treatment

Separator ■UL Approved Resin Used

Ro Product in compliance with RoHS Directive

● Cross Section



Material

- Rigid vinyl chloride (Self-extinguishing material rated 94V-0)

Color

- Gray

Quantity

- 10 pieces

■ Separator without side hole ■ H type separator with side hole

Type	W	H	Length	Type	W	H	Length
KDS-60	12	55	1,000	KDS-60H	12	55	1,000
KDS-80	15	75		KDS-80H	15	75	
KDS-100	15	95		KDS-100H	15	95	

(Unit: mm)

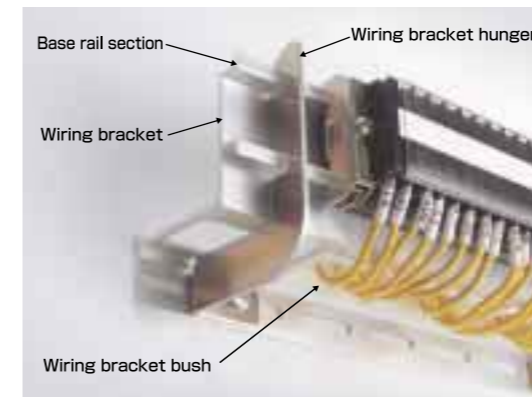
*Standard product: Includes mounting hole and double-faced tape.

*Also available without mounting hole or tape upon request.

Electric Materials

Wiring Bracket

Ro Product in compliance with RoHS Directive



Example of use

Features

- One-piece assembly of a base rail and a bracket with wire space.
- The front of the wire space accepts various control parts (e.g., terminal box), allowing space-saving wiring in a board.
- Integral design of base rail and wire space permits one-time installation into a board, reducing man hour.
- IN/OUT wiring is accomplished through wiring holes and openings.
- Wiring holes are chamfered.

How to Use

- Secure the bracket to the installation face with screws through the mounting holes.
- Install wires through wiring holes and openings.

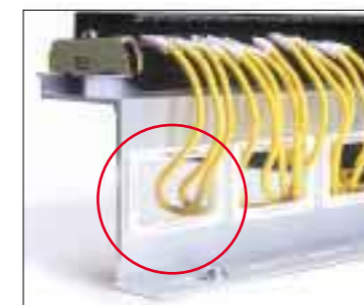
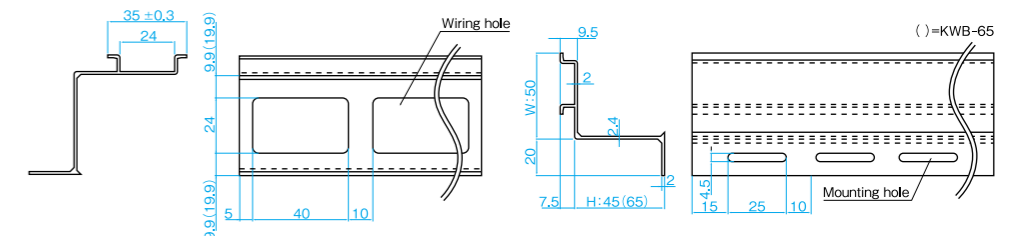
Color

- Silver

(Unit: mm)

Part No.	W	H	Length	Material	Quantity
KWB-45	50	45	1,000	Aluminum	14
KWB-65	50	65			

● Cross Section



Wiring bracket bush (KWB-B)/Optional

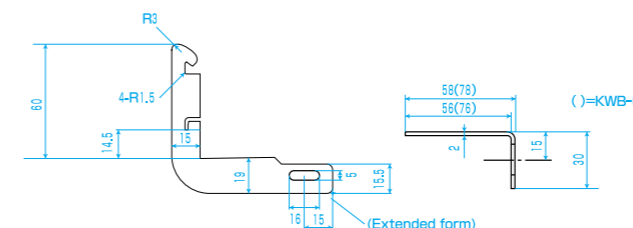
Part No.	H × W	Material	Quantity
KWB-B	39.8 × 23.8	66 nylon	300

UL Approved Resin Used UL94-V0

Wiring Bracket Hunger

Ro Product in compliance with RoHS Directive

● Cross Section



Part No.	Corresponding Part No.
KWB-H45	KWB-45
KWB-H65	KWB-65

Application

- Designed to support a wiring bracket

Material

- Steel sheet

Surface Treatment

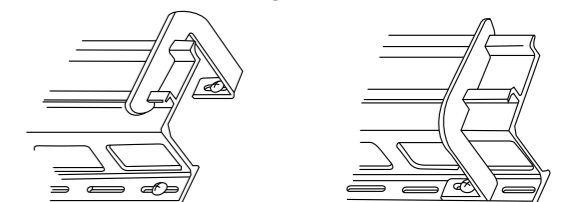
- Trivalent chromate treatment

Features

- Fitting to a wiring bracket improves shock resistance.
- Allows for upward and downward installation.
- The hangers can be fit even after wiring work is done.
- Wiring work can be done even after the hangers are fit.

How to Use

- Upward installation
- Downward installation



Quantity

- 50 sets (1 set: one piece for right and left each)

Notes for Use

- Downward installation may loosen the mounting screws due to vibrations from transportation etc. To prevent this, use spring washers etc.
- Do not use the product for applications other than the above.

Electric Materials

Electric Materials



Snap Tube

Ro Product in compliance with RoHS Directive

Passed Railway Vehicle Materials Fire Test (Certified level: Fire-retardant)

Features

- Snap type that can be fit and released easily without using a tool.
- Available in 9 sizes from 10φ to 100φ, the tube ensures ideal installation for different wiring needs.
- The snap design makes it easy to change or check the wiring.
- The material is so flexible that it can fit any shape and help produce a neat appearance.
- Partially detachable, the tube permits the branching of wiring.
- The reversible type (black and gray) flexibly meets application purposes.
- The reversible type (black and gray) flexibly satisfies inventory needs, contributing a lot to inventory reduction.

Part No.	Nominal Size	Length	Material/Characteristics
KST-10	10φ	25m	· Sheet section: Fire-resistant vinyl chloride with polyester fabric · Interlock section: Snap buttons (Polyacetalresin)
KST-15	15φ		
KST-20	20φ		
KST-25	25φ		
KST-30	30φ		
KST-40	40φ		
KST-50	50φ		
KST-70	70φ		
KST-100	100φ		

Sheet section: VTM-O

Part No.	Nominal Size	Length	Material/Characteristics
KSTL-10	10φ	50m	· Sheet section: Fire-resistant vinyl chloride with polyester fabric · Interlock section: Snap buttons (Polyacetalresin)
KSTL-15	15φ		
KSTL-20	20φ		
KSTL-25	25φ		
KSTL-30	30φ		
KSTL-40	40φ		
KSTL-50	50φ		
KSTL-70	70φ		
KSTL-100	100φ		

Sheet section: VTM-O

Color

- Reversible type (black & gray)
- Gray

Packaging and Packaging Unit

<25m>

- Tube is packed in a compact cardboard case. When using the tube, you can just pull out the required length from the slot of the case.

<50m>

- Tube is wound on a bobbin and packed in a cardboard case. When using the tube, you can just pull out the required length from the slot of the case.

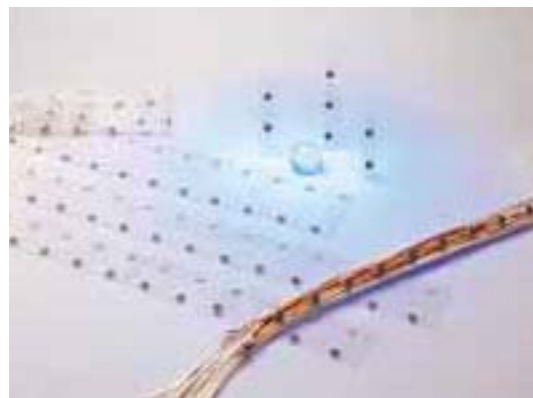
Designation Format

<25m>

- Reversible type (R): KST-(Nominal Size)R. Example: Nominal size of 20φ > KST-20R
- Gray type (G): KST-(Nominal Size)G. Example: Nominal size of 30φ > KST-30G

<50m>

- Reversible type (R): KSTL-(Nominal Size)R. Example: Nominal size of 20φ > KSTL-20R
- Gray type (G): KSTL-(Nominal Size)G. Example: Nominal size of 30φ > KSTL-30G



Snap Tube Clear Type

Ro Product in compliance with RoHS Directive

Features

- The clear sheet permits the wireway interior to be checked.
- Like conventional snap tubes, the tube requires no special tool for binding plus is quick and easy to fit and release.
- The snap design makes it easy to change or check the wiring.
- The material is so flexible that it can fit any shape and help produce a neat appearance.
- Available in a variety of sizes, the tube ensures ideal installation for different wiring needs.

Color

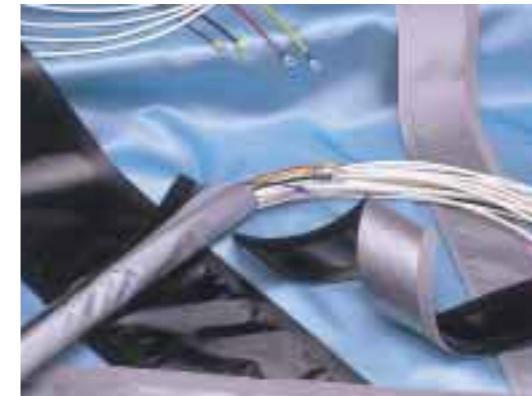
- Clear

Part No.	Nominal Size	Length	Material/Characteristics
KST-10C	10φ	25m	· Sheet section: Fire-resistant vinyl chloride · Interlock section: Snap buttons (Polyacetal resin)
KST-15C	15φ		
KST-20C	20φ		
KST-25C	25φ		
KST-30C	30φ		
KST-40C	40φ		
KST-50C	50φ		
KST-70C	70φ		
KST-100C	100φ		

ECO Snap Tube



*For more info, see ECO Snap Tube (P.17).



Magic Tube

Ro Product in compliance with RoHS Directive

Passed Railway Vehicle Materials Fire Test (Certified level: Fire-retardant)

AAA

- The magic fasteners permit the tube to be fit and released quickly without using a tool.
- Available in 8 sizes from 15φ to 100φ, the tube ensures ideal insulation for different wiring needs.
- Quick and easy to fit and release, the tube makes it easy to change or check the wiring.
- The material is so flexible that it can fit any shape and help produce a neat appearance.
- Partially detachable, the tube permits the branching of wiring.
- The reversible type (black and gray) flexibly meets application purposes.
- The reversible type (black and gray) flexibly satisfies inventory needs, contributing a lot to inventory reduction.

Color

- Reversible type (black & gray)
- Gray

Packaging and Packaging Unit

- Every 25m of a tube is packed in a compact cardboard case. When using the tube, you can just pull the required length out of the slot of the case.

Designation Format

- Reversible type (R): KMT-N(Nominal Size)R. Example: Nominal size of 20φ > KMT-N20R
- Gray type (G): KMT-N(Nominal Size)G. Example: Nominal size of 20φ > KMT-N20G

Part No.	Nominal Size	Length	Materials/Characteristics
KMT-N15	15φ	25m	· Sheet section: Fire-resistant vinyl chloride with polyester fabric · Interlock section: Hook-and-loop fasteners Width of hook and loop fasteners 15φ-20φ: 12mm 25φ-100φ: 16mm
KMT-N20	20φ		
KMT-N25	25φ		
KMT-N30	30φ		
KMT-N40	40φ		
KMT-N50	50φ		
KMT-N70	70φ		
KMT-N100	100φ		

Sheet portion: Equivalent to VTM-O specification complied product



Slide Lock Tube

Ro Product in compliance with RoHS Directive

Passed Railway Vehicle Materials Fire Test (Certified level: Fire-retardant)

Features

- Extra workability is ensured by the material of the interlock section that changes its hardness little even at a low temperature.
- The interlock section provides excellent air-tightness to prevent the inclusion of external dust.
- Available in 10 sizes from 10φ to 100φ, the tube ensures ideal insulation for different wiring needs.
- The material is so flexible that it can fit any shape and help produce a neat appearance.

How to Interlock

- The tube can be interlocked easily using the exclusive slider (optional).

Color

- Black
- Gray

Packaging

- The external case has a slot from which you can pull the tube out to use.
- Not using any metallic parts, the bobbin and the external case can be readily disposed of.

Part No.	Nominal Size	Length	Materials/Characteristics
KSL-10	10φ	50m	· Sheet section: Fire-resistant vinyl chloride with polyester fabric · Interlock section: Fire-resistant semi-rigid vinyl chloride
KSL-15	15φ		
KSL-20	20φ		
KSL-25	25φ		
KSL-30	30φ		
KSL-35	35φ		
KSL-40	40φ	25m	
KSL-50	50φ		
KSL-70	70φ		
KSL-100	100φ		

Sheet section: VTM-O



Exclusive slider (optional)

Designation Format

- Black type: KSL-(Nominal Size). Example: Nominal size of 10φ > KSL-10
- Gray type: KSL-(Nominal Size)G. Example: Nominal size of 25φ > KSL-25G

Electric Materials



Corrugate Tube

Ro Product in compliance with RoHS Directive

Features

- The slit design permits wires to be trapped with ease.
- Easily cut with a knife.
- Lightweight, highly impact-resistant, and excellent in stability.

Color

- Black
- * Other colors are also available upon request.

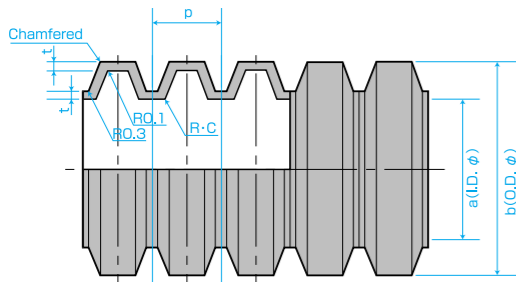
Material

- Made from fire-resistant polypropylene (Self-extinguishing material)

Specifications

- Small box type
- Wrap roll type
- * Available to choose from according to the required quantity to use.

Dimension Table of Corrugate Tube



Nominal Size	a	b	p	t
05	5.0	7.1	1.6	0.25
07	7.3	10.7	2.1	0.27
11	11.1	14.5	2.5	0.27
14	14.5	18.7	2.5	0.27
16	16.8	21.4	2.7	0.27
19	19.6	23.6	2.9	0.27
22	22.3	27.4	3.3	0.30
24	24.2	29.7	3.4	0.30
28	28.2	33.6	3.5	0.30

Fire-resistant Black Corrugate Tube with a Slit

Small Box Type	m/case	Wrap Roll Type	m/roll
KCTNS-N05	50	KCTNL-N05	500
KCTNS-N07	50	KCTNL-N07	500
KCTNS-N11	50	KCTNL-N11	400
KCTNS-N14	50	KCTNL-N14	300
KCTNS-N16	50	KCTNL-N16	200
KCTNS-N19	25	KCTNL-N19	200
KCTNS-N22	20	KCTNL-N22	100
KCTNS-N24	20	KCTNL-N24	100
KCTNS-N28	20	KCTNL-N28	100



Through Tube

Ro Product in compliance with RoHS Directive

Features

Passed Railway Vehicle Materials Fire Test (Certified level: Fire-retardant)

- Excellent in elasticity, the tube can stretch about 1.5 to 4 times if compressed.
- Available in 8 sizes from 15φ-100φ, the tube ensures ideal insulation for different wiring needs.
- The material is so flexible that it can fit any shape and help produce a neat appearance.
- Provides excellent abrasion resistance.
- Mesh type that prevents the accumulation of moisture and heat.

Application

- Binding and protection of wiring from robots, FA equipment, etc.
- Binding and protection of wiring in control panel, distribution panel, and cabinet panel.
- Binding and protection of wiring around OA equipment and computer terminals.

Part No.	Min Size	Max Size Enlarged	Width	Length	Part No.
KPT-3	3φ	12φ	6mm	200m	KPT-3N
KPT-6	6φ	24φ	15mm	150m	KPT-6N
KPT-10	10φ	28φ	19mm	150m	KPT-10N
KPT-12	12φ	33φ	22mm	100m	KPT-12N
KPT-19	19φ	45φ	30mm	100m	KPT-19N
KPT-30	30φ	55φ	35mm	100m	KPT-30N
KPT-40	40φ	75φ	55mm	25m	KPT-40N
KPT-50	50φ	90φ	60mm	25m	KPT-50N

Nonflammable Component

- Material**
- Polyester

- Color**
- Black

How to Use

- Fold the tip portion back to open the insertion hole.
- Draw an electric wire etc. through the insertion hole you opened.

Electric Materials



Spiral Tube ■ Polyethylene/Nylon

Ro Product in compliance with RoHS Directive

Features

- Highly elastic, the tube will not be broken even if it is bent.
- Excellent in heat resistance and abrasion resistance, the nylon spiral tube is perfect for protection of electric wires.
- Provides excellent electrical insulation and superior resistance to different chemicals.

Color

- Natural
- Black

Material

- Polyethylene
- Nylon

Designation Format

- Polyethylene
 - Natural: KS-(I.D.)
 - Black: KS-(I.D.)B
 - Example: I.D. of 6 > KS-6
- Nylon
 - Natural: KNS-(I.D.)
 - Black: KNS-(I.D.)B
 - Example: I.D. of 6 > KNS-6

■ Polyethylene

Part No.	I.D. (mm)	O.D. (mm)	Thickness (mm)	Pitch (mm)	Length (m)
KS-2.6	2.6	4.0	0.7	8.0	100
KS-4	4.0	5.4	0.7	8.0	100
KS-6	6.0	7.4	0.7	10.0	100
KS-8	8.0	9.4	0.7	12.0	50
KS-9	9.0	10.6	0.8	12.0	50
KS-10	10.0	11.6	0.8	12.0	50
KS-12	12.0	14.0	1.0	15.0	50
KS-15	15.0	17.4	1.2	16.0	50
KS-20	20.0	22.8	1.4	20.0	25
KS-25	25.0	27.8	1.4	25.0	20
KS-30	30.0	34.0	2.0	35.0	10
KS-40	40.0	44.6	2.3	45.0	10
KS-50	50.0	55.0	2.5	55.0	10

■ Nylon

Part No.	I.D. (mm)	O.D. (mm)	Thickness (mm)	Pitch (mm)	Length (m)
KNS-2.6	2.6	3.6	0.5	6.0	100
KNS-4	4.0	5.0	0.5	8.0	100
KNS-6	6.0	7.6	0.8	10.0	100
KNS-9	9.0	10.6	0.8	12.0	50
KNS-12	12.0	13.6	0.8	14.0	50
KNS-15	15.0	16.6	0.8	16.0	25
KNS-20	20.0	21.6	0.8	20.0	25
KNS-25	25.0	27.4	1.2	22.0	20

UL approved materials are used.



Rubber Sponge

Ro Product in compliance with RoHS Directive

Features

- NR (Natural Rubber)
 - ...Most popular black sponge that is light in weight and excellent in tensile strength, elasticity, and abrasion resistance.
- CR (Chloroprene Rubber)
 - ...Excellent in oil, heat, and weather resistance and ideal for outside use.
- ERP (Ethylene Propylene Rubber)
 - ...Excellent especially in weather, ozone, and heat resistance.
- NEO (Neo Latex)
 - ...NR sponge is coated with CR rubber.

Designation Format

- (Material)-(Thickness)-(Width)-(Spec/S: 1m type or L: 20m roll type)
 - (Example) NR-5-20-S ...Natural rubber 5mm thick, 20mm wide, and 1m long
 - CR-3-30-L ...Chloroprene rubber 3mm thick, 30mm wide, and 20m roll
 - NEO-10-20 ...Neo latex 10mm thick and 20mm wide

*There is no specification of length for neo latex, for which only the 30m roll type is available.

Performance

	NR	CR	EPR
Abrasion resistance	◎	○	○
Weather resistance	△	○	◎
Ozone resistance	△	○	◎
Heat resistance	Cut 120°C	130°C	150°C
	Normal 70°C	100°C	110°C
Electrical insulation	◎	○	◎
Oil/gasoline resistance	×	○	×

◎Excellent ○Good △Acceptable ×Unacceptable

Specs

Material	Thickness	Width (mm)	Specification
NR	2mm	10 20 25	1m x 100 pieces 20m roll Adhesive
CR	3mm	15 20 25 30	
EPR	5mm	20 25 30 40	
NEO	5mm	10 15 20 25 30 35 40	30m roll with a double-faced tape
	8mm	10 20	
	10mm	10 15 20 25 30	
	20mm	40	

*For other sizes, feel free to contact us.

- The rubber sponge satisfies your needs with its wide variation that takes full advantage of different types of natural and synthetic rubber.
 - Applications include: door packing, gaskets, vibration-proof materials, water-/moisture-proof packing, buffering materials, heat-insulating seals, and sound-insulating materials.
 - For custom orders such as specified colors, irregular shapes, and secondary fabrication, feel free to contact us.

Electric Materials

Tools



Base Rail

Ro Product in compliance with RoHS Directive

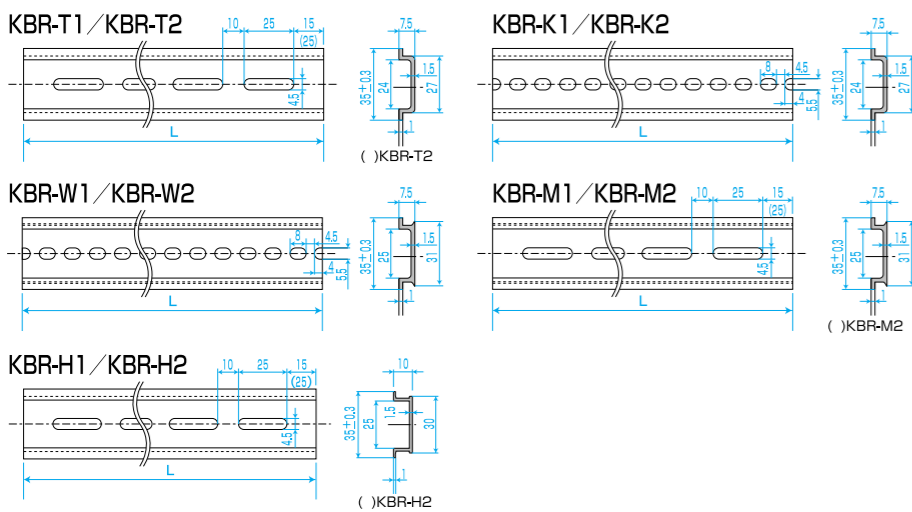
Features

- Aluminum rail to DIN Standard (35mm wide).
- Any DIN device (35mm wide) can be attached and detached in any position desired.
- The Type KBR-H is 10mm high for easier attachment/detachment of devices.

Part No.	Quantity (pieces)	Length (mm)
KBR-T1	100	1,000
KBR-T2	50	2,000
KBR-W1	100	1,000
KBR-W2	50	2,000
KBR-K1	100	1,000
KBR-K2	50	2,000
KBR-M1	100	1,000
KBR-M2	50	2,000
KBR-H1	100	1,000
KBR-H2	50	2,000

Material	Surface Treatment
Aluminum	Alumite treatment

Cross Section



■ Cutoff tool: Base rail cutter



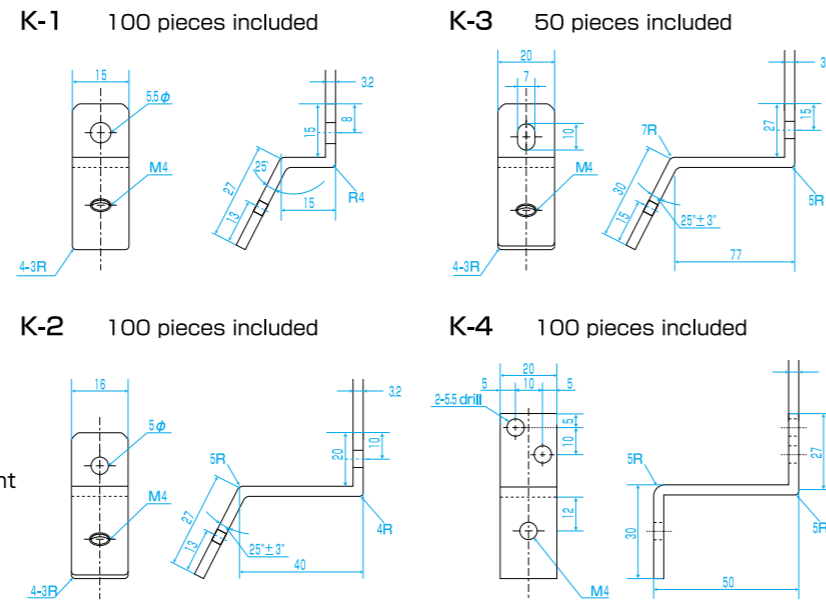
*For more info, see Base Rail Cutter (P.15).



Assist Fittings

Ro Product in compliance with RoHS Directive

Cross Section



Features

- Useful fittings to support the installation of base rails.

Material

- Steel sheet

Surface Treatment

- Trivalent chromate treatment

Base Rail Cutter ■ Exclusive scale included

Features

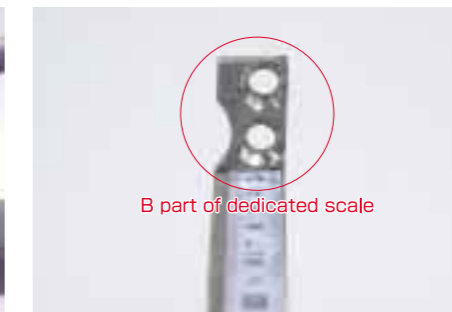
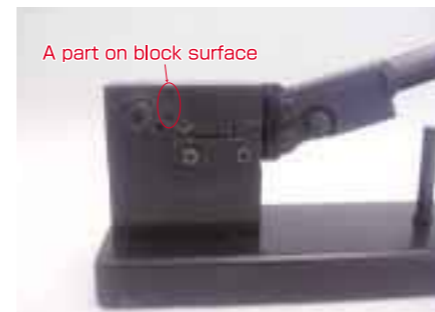
- The burr-free cutter eliminates the need to deburr the cut surface with a file etc. after cutting.
- Reduces cutting time and saves man hour.
- So easy and simple to handle that anyone can cut DIN rails readily.
- Using the exclusive scale permits just the required length to be cut off with ease.

Part No	Applicable rail
KC-1S	KBR-T·KBR-K
KC-2S	KBR-W·KBR-M
KC-3S	KBR-H

*Maximum length to measure with the exclusive scale: 65cm



How to Attach the Exclusive Scale



- ① Remove the screws from the part A on the block surface.
- ② Align the B part of the exclusive scale with the A part on the block surface from which the screws have been removed.
- ③ Secure the B part of the exclusive scale to the A part on the block surface by screws.

How to Use

- 1) Raise the handle.
- 2) Insert a rail piece along the guide through the insertion hole. The rail can be inserted from either side of left and right.
- 3) Set the piece to cut off the right length as shown below.
When using the exclusive scale:
 Before cutting, check the required length with the scale.
When not using the exclusive scale:
 Take the length 20mm shorter than required and align it with the end face of the block at the opposite side of insertion.
 There is no distinction in the way a piece is set whether it is inserted from left or right.
- 4) Push down the handle to cut the piece.

Notes for Use

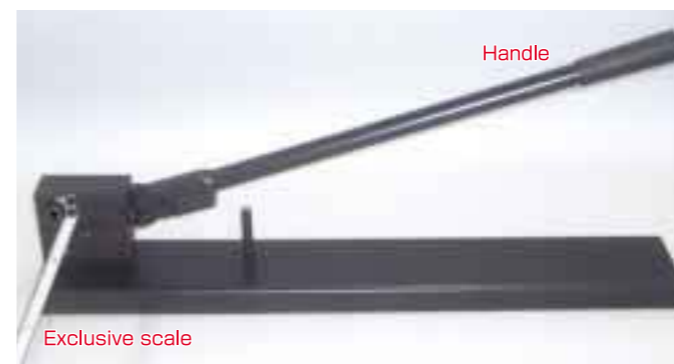
- Do not use the product for any applications other than cutting aluminum DIN rails.

Specifications

- Weight: 5.5kg
- Length: 650mm

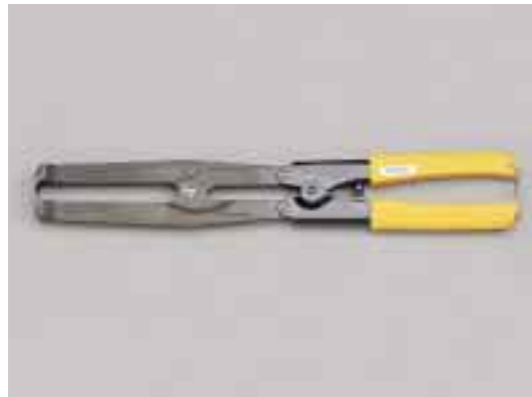
*The specifications are subject to change without notice.

Part Names



Tools

ECO



Duct Nippers

Features

- The duct nippers can cut the pillar section (up to 100mm long) between the side holes (wiring holes) of a wiring duct.
- The spring-operated handles require no pulling them back manually.
- The cutting edges are of pinching-off type that provides a smooth cut surface.
- The advantage in producing a cutting force permits a duct to be cut with a minimum force.

Application

- The duct nippers are designed to cut the pillar section between the side holes (wiring holes) of a wiring duct. Besides, it can be used to cut the gates deep inside a resin product.

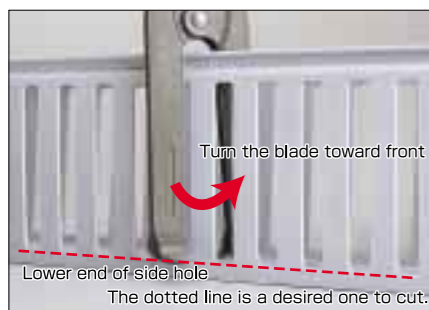
Part name	Part No.	Length	Depth	Width of Cutting Edge	Weight
Duct Nippers 100	DN-100	327mm	96mm	18.5mm	460g

⚠ Safety Instructions

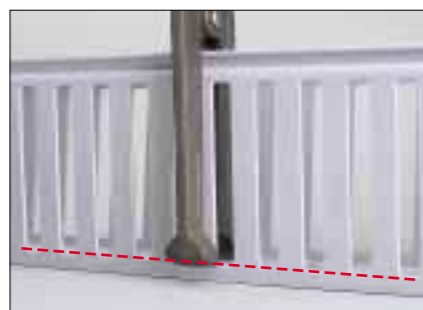
- Before using, be sure to read the instruction manual to ensure proper use of the product.

How to Use

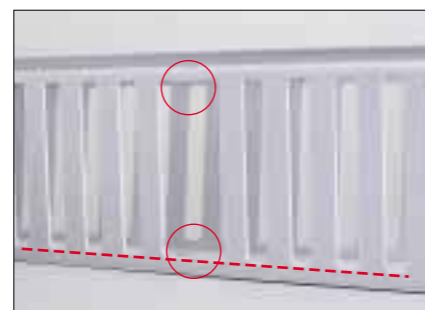
To cut in alignment with the lower ends of side holes:



1. Apply the tip of one blade to the lower end of a side hole. Turn the blade toward front while lightly gripping the handles.



2. Cut the pillar with the outer side of the blade facing straight in front.



3. The pillar can be cut in line with the lower ends of side holes.



Birdie Cutter

Features

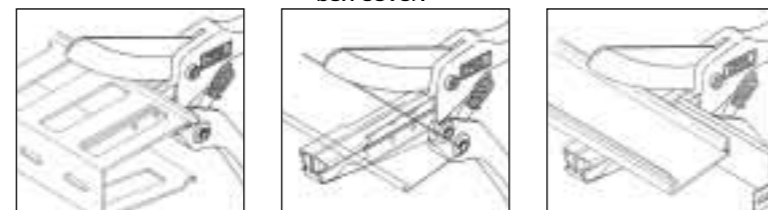
- The birdie cutter is a cutoff tool whose cutting part has an optimal shape for cutting hard and soft plastics.
- A combination of the concaves on the receiving part with the slide cover or the square attachment permits various plastic materials to be cut easily, such as wiring ducts and terminal box covers.

Application

- Designed to cut plastic materials such as wiring ducts, terminal box covers, and laces/braids for telecommunications.

Example of Use

1. Cutting of wiring duct.
2. Cutting of terminal box cover.
3. Cutting of duct cover.



Part No.	Length	Length of Cutting Blade	Attachments
KC-100	270mm	115mm	Slide cover A, slide cover B, and square attachment

*Each of the attachments is sold separately as a replacement part.

⚠ Safety Instructions

- Before using, be sure to read the instruction manual to ensure proper use of the product.



ECO Wiring Duct



UL approved resin used (UL-94-0) Product registered with Japan Switchboard Industries Association Type II Heat Resistance, Heat-resistant Duct KDE-26-64 submitted for approval

Material

- Modified PPE (Polyphenylether)

Features

- Made from non-halogen eco-friendly material.
- About 20% lighter than the conventional PVC duct.
- Provides better heat resistance than the conventional PVC duct.

Color

- Ivory

Length

- 2m

Designation Format

- KDE-(Type)-(Length)-(Side Holes)
Example: Type 88, length 2m, and side holes H type > KDE-88-20H

Type	KDE-23	KDE-24	KDE-44	KDE-64	KDE-26	KDE-36	KDE-46	KDE-66
Cross Section								
Length (mm)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Wire Capacity(AWG14)	15	40	60	100	60	65	90	130
Quantity	10	10	10	10	10	10	10	10

Type	KDE-38	KDE-48	KDE-68	KDE-88	KDE-410	KDE-610	KDE-810	KDE-1010
Cross Section								
Length (mm)	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Wire Capacity(AWG14)	90	120	200	260	160	240	270	340
Quantity	10	10	10	10	10	10	10	6

Side Hole Specs (H type only)

Type	KDE-23	KDE-24·44·64	KDE-26·36·46·66	KDE-38·48·68·88	KDE-410·610·810·1010

Bottom Hole Specs

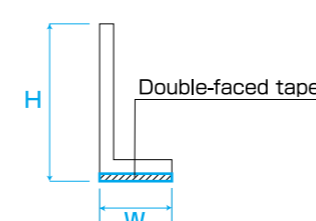
Type	KDE-23	KDE-24·44·26·36·46·38·48·410	KDE-64·66·68·88·610·810·1010

Physical Characteristics

Item	Unit	Testing Method	Requirements	Test Value
Physical Property	Specific gravity	ASTM D 792	23°C	1.08
Thermal Property	Detection temperature under test	ASTM D 648	1.82MPa	90-100
Flammability		UL94		VO
Electrical Property	Permittivity	F/m	ASTM D 150	23°C/50%RH/60Hz 2.9
	Volume resistivity	Ω-cm	ASTM D 257	23°C/50%RH/10 ¹² Hz 2.9
	Surface resistivity	Ω	ASTM D 257	23°C/50%RH 10 ¹⁸
	Tensile strength	MPa	ASTM D 638	23°C/50%RH 52-64
	Elongation (after fracture)	%	ASTM D 638	23°C/50%RH 40-50
	Bending strength	MPa	ASTM D 790	23°C/50%RH 78-98
	Bend elastic constant	MPa	ASTM D 790	23°C/50%RH 2.400
	Impact strength	J/m	ASTM D 256	23°C with 6.4mm notch 127-147
	Rockwell hardness	R	ASTM D 785	R scale 110

ECO Separator

UL Approved Resin Used (UL 94V-0)



Separator without side hole				H type separator with side hole			
Type	W	H	Length	Type	W	H	Length
KDES-60	12	55	1,000	KDES-60	12	55	1,000
KDES-80	15	75		KDES-80	15	75	
KDES-100	15	95		KDES-100	15	95	

(Unit: mm)
*Standard product: Includes mounting hole and double-faced tape.
*Also available without mounting hole or tape upon request.

Material

- Rigid vinyl chloride (Self-extinguishing material rated 94V-0)

Color

- Ivory

Quantity

- 10 pieces

ECO



ECO Snap Tube

Ro Product in compliance with RoHS Directive

Features

Passed Railway Vehicle Materials Fire Test (Certified level: Fire-retardant)

- Made from non-halogen eco-friendly material.
- Snap type that can be fit and released easily without a tool.
- Available in 8 sizes from 15φ to 100φ, the tube ensures perfect insulation for different wiring needs.
- The snap design makes it easy to change or check the wiring.
- Partially detachable, the tube permits the branching of wiring.

Color

- Gray

Packaging

- The external case has a slot from which you can pull the tube out to use.
- Not using any metallic parts, the bobbin and the external case can be readily disposed of.

Part No.	Nominal Size	Length	Materials/Characteristics
KSTE-15	15φ	25m	· Sheet section: Film with non-halogen fire retardant (Olefin EVA contained) Polyester fiber · Interlock section: Snap buttons Polyacetal resin
KSTE-20	20φ		
KSTE-25	25φ		
KSTE-30	30φ		
KSTE-40	40φ		
KSTE-50	50φ		
KSTE-70	70φ		
KSTE-100	100φ		



Eco Noise Protecting Tube

Ro Product in compliance with RoHS Directive

Snap-on Type

Features

- Made from non-halogen eco-friendly material.
- Non-vinyl chloride material is used.
- Snap-on tube that uses aluminum foil with high shielding effects to control noise.
- The snap-on design permits the tube to be fit and released easily without using a tool.
- Available in 9 sizes from 10φ to 100φ, the tube ensures ideal insulation for different wiring needs.
- The material is so flexible that it can fit any shape and help produce a neat appearance.

カラー

- Black

梱包

- The external case has a slot from which you can pull the tube out to use.
- Not using any metallic parts, the bobbin and the external case can be readily disposed of.

Part No.	Nominal Size	Length	Materials/Characteristics
KATSE-10	10φ	25m	· Sheet section: Olefin elastomer + Aluminum foil + 1.25sq mesh texture (Plainly braided tinned copper mesh) · Interlock section: Snap buttons (Polyacetal resin)
KATSE-15	15φ		
KATSE-20	20φ		
KATSE-25	25φ		
KATSE-30	30φ		
KATSE-40	40φ		
KATSE-50	50φ		
KATSE-70	70φ		
KATSE-100	100φ		

* For the cross section and table of shielding effects, see page 18.

EMI



Noise Protecting Tube Snap Type

Ro Product in compliance with RoHS Directive

Features

Passed Railway Vehicle Materials Fire Test (Certified level: Fire-retardant)

- Snap tube that uses aluminum foil with high shielding effects to control noise.
- The snap design permits the tube to be fit and released easily without using a tool.
- Available in 9 sizes from 10φ to 100φ, the tube ensures ideal insulation for different wiring needs.
- The material is so flexible that it can fit any shape and help produce a neat appearance.

Color

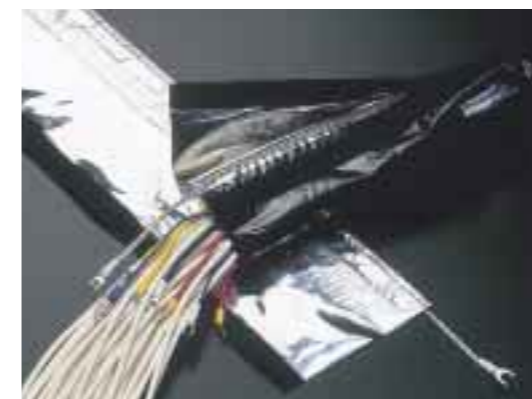
- Black

Packaging

- The external case has a slot from which you can pull the tube out to use.
- Not using any metallic parts, the bobbin and the external case can be readily disposed of.

Part No.	Nominal Size	Length	Materials/Characteristics
KATS-10	10φ	25m	· Sheet section: Fire-resistant flexible vinyl chloride + PET + Aluminum foil + 1.25sq mesh texture (Plainly braided tinned copper mesh) · Interlock section: Snap buttons (Polyacetal resin)
KATS-15	15φ		
KATS-20	20φ		
KATS-25	25φ		
KATS-30	30φ		
KATS-40	40φ		
KATS-50	50φ		
KATS-70	70φ		
KATS-100	100φ		

Sheet portion: Equivalent to V-O specification complied product



Noise Protecting Tube Magic Type

Ro Product in compliance with RoHS Directive

Features

Passed Railway Vehicle Materials Fire Test (Certified level: Fire-retardant)

- Magic fastener tube that uses aluminum foil with high shielding effects to control noise.
- The magic design permits the tube to be fit and released quickly without using a tool.
- Available in 7 sizes from 20φ to 100φ, the tube ensures ideal insulation for different wiring needs.
- The material is so flexible that it can fit any shape and help produce a neat appearance.

Color

- Black

Packaging

- The external case has a slot from which you can pull the tube out to use.
- Not using any metallic parts, the bobbin and the external case can be readily disposed of.

Part No.	Nominal Size	Length	Materials/Characteristics
KAT-20	20φ	25m	· Sheet section: Fire-resistant flexible vinyl chloride + PET + Aluminum foil + 1.25sq mesh texture (Plainly meshed tinned copper mesh) · Interlock section: Magic fasteners Width of hook and loop fasteners each: 16mm
KAT-25	25φ		
KAT-30	30φ		
KAT-40	40φ		
KAT-50	50φ		
KAT-70	70φ		
KAT-100	100φ		

Sheet portion: Equivalent to V-O specification complied product

How to Use

- Wrap the tube around pieces in such manner that the aluminum foil comes inside, and interlock the tube such that the mesh texture contacts with the aluminum foil.
- The mesh texture can serve as a ground wire.

Cross Section

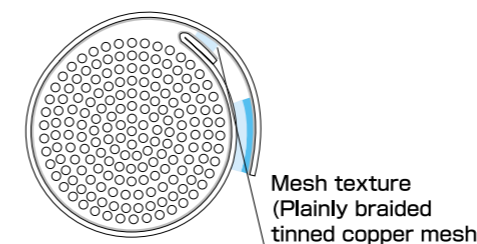
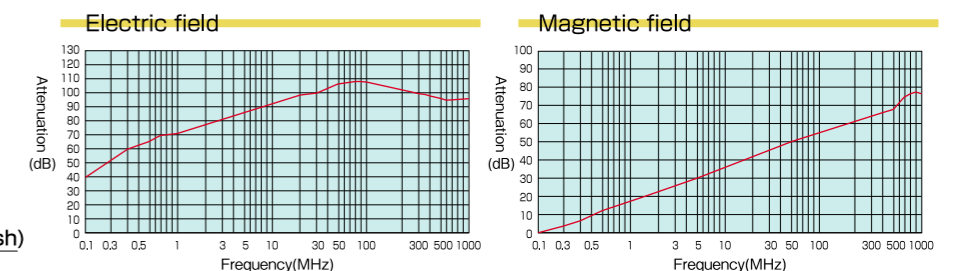


Table of Shielding Effects



*The above table of shielding effects shows the data on noise protecting tubes of snap and magic types. The data are not guaranteed but measured values.

EMI

EMI



Noise Protecting Tube

Slide lock Type Product in compliance with RoHS Directive

Features

- Slide lock tube that uses aluminum foil with high shielding effects to control noise.
- The material is so flexible that it can fit any shape and produce a neat appearance.
- The interlock section provides excellent air-tightness to prevent the inclusion of external dust.
- Available in 9 sizes from 15φ to 100φ, the tube ensures ideal insulation for different wiring needs.

Packaging

- The external case has a slot from which you can pull the tube out to use.
- Not using any metallic parts, the bobbin and the external case can be readily disposed of.

How to Use

- Wrap the tube around pieces in such manner that the aluminum foil comes inside, and interlock the tube such that the mesh texture contacts with the aluminum foil.
- The mesh texture can serve as a ground wire.

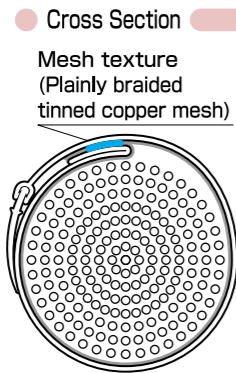
Passed Railway Vehicle Materials Fire Test (Certified level: Fire-retardant)

How to Interlock

- The tube can be interlocked easily using the exclusive slider (optional).

Color

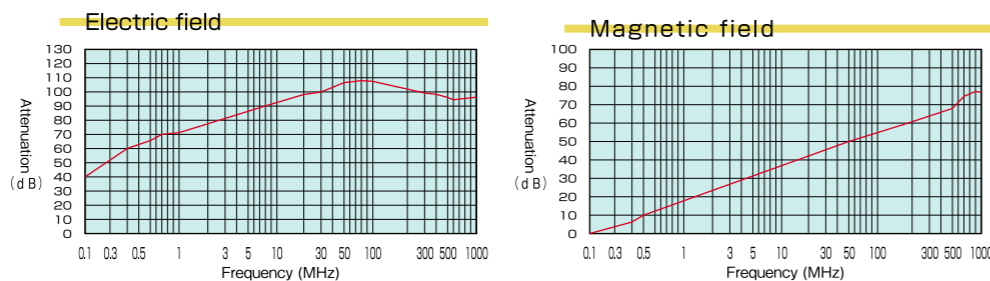
- Black



Part No.	Nominal Size	Length	Materials/Characteristics
KSLA-15	15φ	25m	· Sheet section: Fire-resistant flexible vinyl chloride + PET + Aluminum foil + 1.25sq mesh texture (Plainly braided tinned copper mesh)
KSLA-20	20φ		
KSLA-25	25φ		
KSLA-30	30φ		
KSLA-35	35φ		
KSLA-40	40φ		· Interlock section: Semi-rigid fire-resistant vinyl chloride
KSLA-50	50φ		
KSLA-70	70φ		
KSLA-100	100φ		

Sheet portion: Equivalent to V-O specification complied product

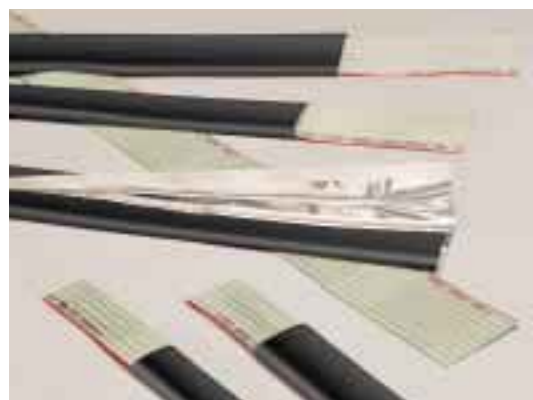
Table of Shielding Effects



*The above table of shielding effects shows the data on noise protecting tubes of slide lock types and for flat cable. The data are not guaranteed but measured values.



Exclusive slider (optional)



Noise Protecting Tube for Flat Cable

Product in compliance with RoHS Directive

Features

- Perfect for shielding of flat cables and ribbon cables.
- The aluminum foil interior sheathes cables to ensure the shielding effects.
- The material is so flexible that it can fit any shape and help produce a neat appearance.

Color

- Black

Packaging

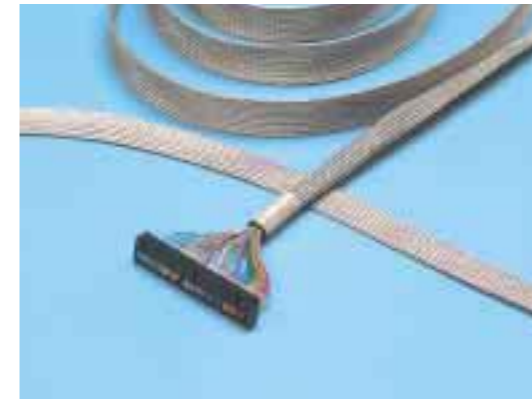
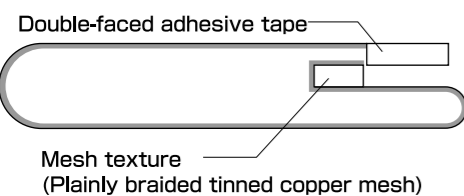
- The external case has a slot from which you can pull the tube out to use.
- Not using any metallic parts, the bobbin and the external case can be readily disposed of.

Passed Railway Vehicle Materials Fire Test (Certified level: Fire-retardant)

Part No.	Applicable Cable Size	Product Length	Materials/Characteristics
	Conductors Cable width	Width	
KATF-10	10 12.8mm	15.0mm	· Sheet section: Fire-resistant flexible vinyl chloride + PET + Aluminum foil + 1.25sq mesh texture (Plainly braided tinned copper mesh)
KATF-16	16 20.3mm	22.5mm	
KATF-20	20 25.4mm	27.5mm	
KATF-26	26 33.0mm	35.0mm	
KATF-34	34 43.2mm	45.5mm	
KATF-40	40 50.8mm	55.5mm	
KATF-50	50 63.5mm	65.5mm	· Interlock section: Double-faced adhesive tape Tape width KATF-10 5mm KATF-16to60 10mm
KATF-60	60 76.2mm	78.5mm	

Sheet portion: Equivalent to V-O specification complied product

Cross Section



Noise Protecting Sleeve

Product in compliance with RoHS Directive

Features

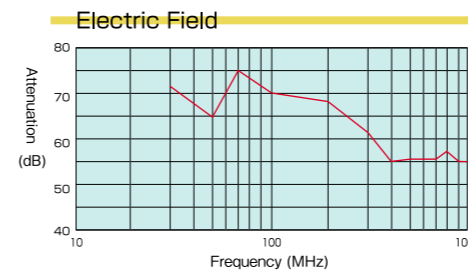
- Excellent in elasticity, the sleeve can stretch about 1.5 to 4 times if compressed.
- Highly flexible and ideal for shielding of movable parts.
- The braided conductive threads provide excellent shielding effects.
- Available in 4 sizes from 3φ to 19φ, the sleeve ensures ideal insulation for different wiring needs.
- The material is so flexible that it can fit any shape and help produce a neat appearance.
- Mesh type that prevents the accumulation of moisture and heat.

Material

- Core material: Glass fiber
- Surface: Tinned copper foil

Part No.	Min Size	Max Size	Width	Length
KPTS-3	3φ	12φ	6mm	100m
KPTS-6	6φ	22φ	15mm	
KPTS-12	12φ	28φ	19mm	
KPTS-19	19φ	32φ	25mm	

Table of Shielding Effects



*The above data are not guaranteed but measured values that were obtained by the Absorption clamp method.



Noise Protecting Mesh

Product in compliance with RoHS Directive

Features

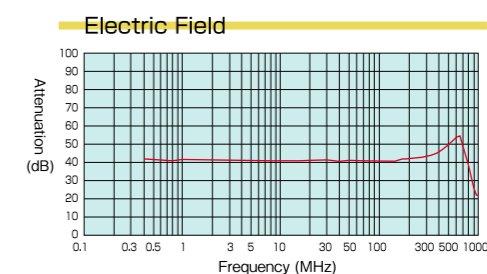
- Superb shielding effects can be expected by twisting the tape up around the cable or wire harness with 1/2 of the width overlapping each other.
- The cylindrically braided thin wires are folded for greater flexibility.
- The plated wires provide excellent corrosion resistance.
- Mesh type that prevents the accumulation of moisture and heat.

Material

- Tinned flexible copper wire (0.12mm)

Part No.	Width	Length
KSMT-13	13mm	10m
KSMT-25	25mm	
KSMT-38	38mm	
KSMT-50	50mm	

Table of Shielding Effects



*The above data are not guaranteed but measured values that were obtained by the KEC method.

EMI



Conductive Shielding Gaskets (Square) Ro Product in compliance with RoHS Directive

Features

- Standard type UL approved component (UL FILE No.E193655)
- Produces the shielding effect of 80dB in range of 30MHz to 1GMHz.
- Uses urethane foam excellent in both flexibility and stability.
- Installation is accomplished easily with an adhesive tape.
- Easy to cut and highly adaptable.

Application

- Designed for computers, peripheral devices, PC, OA equipment, and mobile phones.
- Designed to control electromagnetic waves from telecommunication equipment for professional use, medical equipment, measuring instruments, and other electronic devices.
- Shielding and grounding of equipment enclosures.

Quantity 10 pieces

(Unit: mm)

Part No.	H	W	Length
GBU-1-3	1	3	1,000
GBU-1-4	1	4	
GBU-1-5	1	5	
GBU-1-7	1	7	
GBU-1-10	1	10	
GBU-1-13	1	13	
GBU-2-4	2	4	
GBU-2-5	2	5	
GBU-2-7	2	7	
GBU-2-10	2	10	
GBU-2-21	2	21	
GBU-3-5	3	5	
GBU-3-9	3	9	
GBU-3-13	3	13	
GBU-5-5	5	5	
GBU-5-10	5	10	
GBU-6-6	6	6	
GBU-6-13	6	13	
GBU-7-10	7	10	
GBU-7-13	7	13	
GBU-8-10	8	10	
GBU-10-10	10	10	
GBU-10-13	10	13	

Cross Section

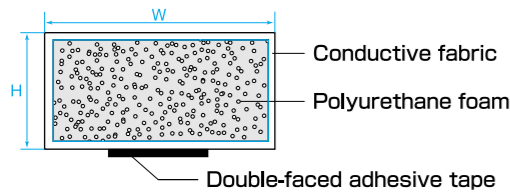
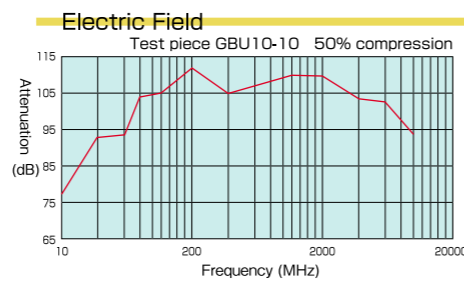
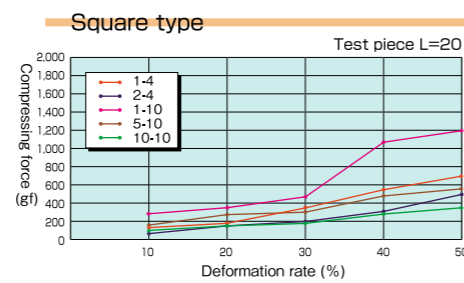


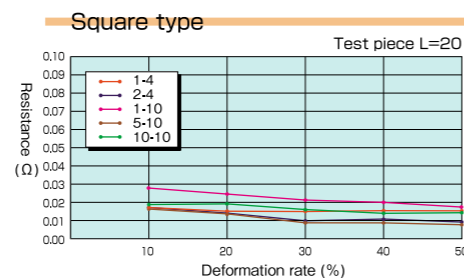
Table of Shielding Effects



Compression-to-Deformation Ratio



Resistance-to-Deformation Ratio



*The above data are not guaranteed but measured values.

EMI



Conductive Copper Foil Tape Ro Product in compliance with RoHS Directive

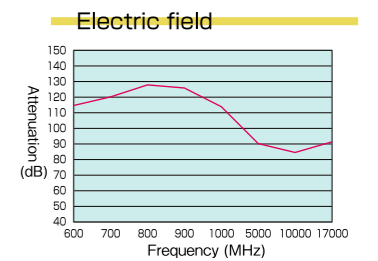
Features

- Conductive, highly adhesive, and as easy to handle as common tapes to produce shielding and grounding effects.
- Punching or half-cutting to special shape is available upon request.

Material

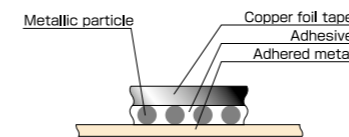
- Base material: Rolled copper foil
- Adhesive: Conductive acrylic adhesive

Table of Shielding Effects



*The above data are not guaranteed but measured values.

Cross Section



Part No.	Width (mm)	Length (m)
8837H-8	8	33
8837H-20	20	33

Thickness	μ
Base Material	35
Adhesive	50
Total	85



Conductive Fabric Tape Ro Product in compliance with RoHS Directive

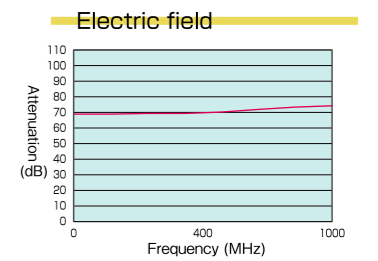
Features

- Conductive, highly adhesive, and as easy to handle as common tapes to produce shielding and grounding effects.
- Punching or half-cutting to special shape is available upon request. (UL 510 FILE NO. E154354)

Material

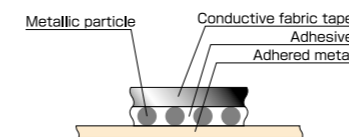
- Base material: Fire-resistant conductive fabric
- Adhesive: Conductive acrylic adhesive

Table of Shielding Effects



*The above data are not guaranteed but measured values.

Cross Section



Part No.	Width (mm)	Length (m)
8269V-12.5	12.5	20
8269V-25	25	20

Thickness	μ
Base Material	100
Adhesive	50
Total	150



Aluminum Foil Tape with Masking Film Ro Product in compliance with RoHS Directive

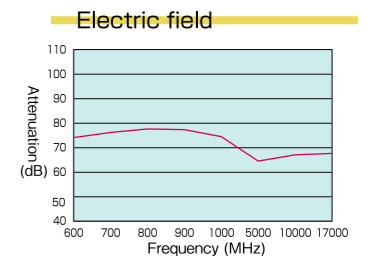
Features

- Aluminum foil tape that is masked with a polyester film.
- You can affix the tape on the unfinished surface of a control panel and then peel off the masking film after applying a baking finish to it.
- The masking film is easy to peel off because it shrinks in drying process (at 160°C or more).
- Using with a noise protecting gasket is recommended.

Material

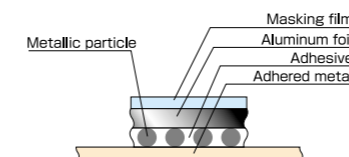
- Base material: Aluminum foil
- Adhesive: Conductive acrylic adhesive
- Masking film: Polyester (shrinkage temperature: 160°C or more)

Table of Shielding Effects



*The above data are not guaranteed but measured values.

Cross Section



Part No.	Width (mm)	Length (m)
1035AD-12.5	12.5	20
1035AD-20	20	20
1035AD-25	25	20

Thickness	μ
Base Material	35
Adhesive	50
Masking film	25
Total	110